NASA CONTRACTOR REPORT 166362

(NASA-CR-166362) INVESTIGATION OF CORRELATION BETWEEN FULL-SCALE AND FIFTH-SCALE WIND TUNNEL TESTS OF A BELL HELICOPTER TEXTRON MODEL 222 Final Report (Bell Helicopter Co.) 401 p HC A18/MF A01 G3/05 N82-29315 Unclas 28567

Investigation of Correlation Between Full-Scale and Fifth-Scale Wind Tunnel Tests of a Bell Helicopter Textron Model 222

Patrick K. Squires
Bell Helicopter Textron

CONTRACT NAS2-10773
June 1982

NASA

NASA CONTRACTOR REPORT 166362

Investigation of Correlation Between Full-Scale and Fifth-Scale Wind Tunnel Tests of a Bell Helicopter Textron Model 222

Patrick K. Squires

Bell Helicopter Textron
P.O. Box 482
Fort Worth, Texas 76101

Prepared for
Ames Research Center
under Contract NAS2-10773

NASA
National Aeronautics and
Space Administration

Ames Research Center
Moffett Field, California 94035

NASA CONTRACTOR REPORT 166362

INVESTIGATION OF CORRELATION BETWEEN FULL-SCALE AND FIFTH-SCALE WIND TUNNEL TESTS OF A BELL HELICOPTER TEXTRON MODEL 222

Patrick K. Squires
Bell Helicopter Textron, Inc.
Fort Worth, Texas

CONTRACT NAS2-10773

NASA

INVESTIGATION OF CORRELATION BETWEEN FULL-SCALE AND FIFTH-SCALE WIND TUNNEL TESTS OF A BELL HELICOPTER TEXTRON MODEL 222

By

Patrick K. Squires
June 1982

Distribution of this report is provided in the interest of information exchange. Responsibility for the contents resides in the author or organization that prepared it.

CR - 166362

Prepared under Contract No. NAS2-10773 by

BELL HELICOPTER TEXTRON INC.
Fort Worth, Texas

For

AMES RESEARCH CENTER
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

TABLE OF CONTENTS

TABLE OF CONTENTS (Concluded)

LIST OF FIGURES

LIST OF FIGURES (Continued)

LIST OF FIGURES (Continued)

LIST OF FIGURES (Continued)

LIST OF FIGURES (Continued)

LIST OF FIGURES (Concluded)

LIST OF TABLES

LIST OF SYMBOLS

D/q	drag/dynamic pressure wind tunnel axis (positive aft), ft^2
L/q	lift/dynamic pressure, wind tunnel axis (positive up), ft^2
PM/q	pitching moment/dynamic pressure wind tunnel axis (positive nose up), ft^3
RM/q	rolling moment/dynamic pressure wind tunnel axis (positive right), ft^3
q	dynamic pressure, lb/ft^2
Y/q	side force/dynamic pressure wind tunnel axis (positive right), ft^2
YM/q	yawing moment/dynamic pressure wind tunnel axis (positive nose right) ft^3
α	angle of attack (positive nose up), deg
ψ	yaw angle (positive nose right), deg

SUMMARY

An experimental investigation has been performed to investigate reasons for lack of correlation between data from a fifth-scale wind tunnel test of the Bell Helicopter Textron Model 222 (Vought LSWT 550 November 1977) and a full-scale test of the Model 222 prototype in the NASA Ames 40-by 80-foot tunnel. (November 1977) This investigation centered around a carefully designed fifth-scale wind tunnel test (Vought LSWT 630 November 1981) of an accurately contoured model of the Model 222 prototype mounted on a replica of the full-scale mounting system. Figures 1 and 2 show the improvement in correlation for drag characteristics in pitch and yaw with the fifth-scale model mounted on the replica system. Interference between the model and mounting system was identified as a significant effect and was concluded to be a primary cause of the lack of correlation in the earlier tests. This conclusion is supported by the results presented in this report. The program documented herein was sponsored by contract (NAS2-10773) with the National Aeronautics and Space Administration, Ames Research Center. The Technical.Monitor was Dr. William Warmbrodt.

1. INTRODUCTION

The Bell Helicopter Textron Model 222 Light Executive Twin prototypes began flight test development in 1976. Actual performance was less than predicted by analysis based on drag data measured during extensive fifth-scale wind tunnel tests. This performance difference called into question the use of fifth-scale wind tunnel tests to provide airframe drag data for performance prediction.

1.1 BACKGROUND

In a joint effort during the fall of 1977, NASA Ames and BHT conducted two wind tunnel tests of the Model 222 directed toward answering this question. The first test, in the 7- by 10-foot low speed wind tunnel at Vought Aeronautics Corporation, during November of 1977, involved a fifth-scale model. The second test also in November of 1977 was conducted in the 40- by 80-foot wind tunnel at NASA Ames Research Center using an actual Model 222 prototype which was removed from flight status, modified for mounting in the test section, and later returned to flight status. References 1 and 2 are reports of the fifth-scale test and the full-scale tests respectively. Tables B-I and B-II of the Appendix present the run schedules of these tests. Figure 3 shows the two models in a side-by-side comparison. One objective of these tests was to provide proof that baseline aerodynamic data obtained in the full-scale test of an actual prototype airframe would correlate well with tests of an accurate model of the prototype, and thereby, validate the method of using fifth-scale tests to predict helicopter airframe aerodynamic characteristics. Secondary objectives were to document the validity of using fifth-scale testing to investigate the aerodynamic effects (particularly drag) of the components of the helicopter airframe and to evaluate the effect of modifications intended to reduce drag. To accomplish these objectives, a number of configurations were tested. These configurations ranged from a basic fuselage, with all major components except the fin removed, to the complete helicopter shown in Figure 3. While data on all six components of force and moment were taken, the major thrust of the tests was to investigate drag.

1.2 CORRELATION BETWEEN FULL-SCALE AND ORIGINAL FIFTH-SCALE (LSWT 550) TESTS

The correlation between full-scale and fifth-scale data from these two tests was rather disappointing. Longitudinal data for both the basic fuselage and complete helicopter showed large discrepancies. Lateral data showed good agreement in side force and yawing moment but compared very poorly in drag.

Figures 4 through 6 compare lift, drag, and pitching moment characteristics of the basic fuselage in pitch for both the fifth-scale test (LSWT 550) and the NASA Ames 40- by 80-foot test (full-scale). The basic fuselage configuration as defined in this investigation included the fuselage, cowling (with inlets, exhausts and cooling screens closed), nose gear door closed, tail rotor hub, production tail rotor gearbox fairing, exhaust ejector fairing and vertical fin with 10 inch cap. The data in these figures are corrected by subtracting tare and interference values obtained in the following ways. For test LSWT 550, T&I corrections originated with a previous test of the Model 222 (LSWT 439 November 1973). The only corrections available for the full scale test were the usual static tares and wind-on tares measured for the support system alone. Figures 7 through 9 compare lift, drag, and pitching moment of the complete helicopter in pitch for the two tests. The complete helicopter configuration as defined in this investigation was identical to the flying prototype except that inlets and exhausts were closed and the main and tail rotor blades were removed. Minor configuration differences between the prototype and the fifth-scale model of LSWT 550 are discussed in Section 2.1. Figures 10 through 12 compare side force, drag, and yawing moment of the complete helicopter in yaw for both tests. Figure 4 shows that the lift curve slope for the LSWT 550 data is approximately two times the full-scale value and the fifth-scale angle of zero lift is some 7 degrees lower. Figure 7 which compares lift data for the complete helicopter shows better agreement at nominal angles of attack (-4 degrees to +6 degrees) where slopes are essentially equal and angles of zero lift differ by only 2 degrees. The full-scale and fifth-scale data show considerable divergence, however, at very high angles of attack. Figure 5 compares drag of the basic fuselage for the two tests. The drag at an angle of attack of zero degrees differs by approximately 2 square feet and the angle of attack for minimum drag is quite different. Figure 8, which compares drag for the complete helicopter, shows better agreement in the location of the drag bucket, but the drag at zero angle of attack differs by almost 4 square feet while the variation of drag with angle of attack is also quite different. Figure 6 shows a disagreement in pitching moment slope and the value of pitching moment at an angle of attack of zero for the basic fuselage. Figure 9 shows similar pitching moment slopes for the complete helicopter in the range of -4 degrees to +4 degrees, although the slopes at higher angles and the values of pitching moment at zero angle of attack are considerably different.

Figures 10 and 12 show much better correlation in side force and yawing moment with yaw angle for the complete helicopter. The drag curves in Figure 11, while showing similar shapes, are different by about 4 square feet in minimum drag.

In general, the differences in the aerodynamic characteristics shown in Figures 4 through 12 are typical of those found in the remainder of the data for the full-scale and LSWT 550 tests tests.

Attempts to explain the lack of correlation have tended to the premise that the fifth-scale data were questionable due to Reynolds Number effects, inaccurate modeling of contours and model details, imperfect testing and data reduction, or a combination of these. Another idea was that because of the unique mounting system used for the full-scale test, a large and undetermined amount of interference was present in the full-scale data, even after the wind-on tare corrections were removed.

1.3 APPROACH TO THIS INVESTIGATION

It was the intent of this correlation study to carefully investigate the various possible causes of disagreement between these tests and measure or mitigate their effects in a second well-designed fifth-scale wind tunnel test. The approach used is detailed in the following sections and consisted of the following steps. First, the data generated during the subject tests were reviewed to check for possible errors in comparisons made or corrections applied. Next, the fifth-scale model was measured in an effort to determine how closely it matched the prototype aircraft used for the full-scale wind tunnel test in contour and detail. As a result of contour discrepancies measured, the model was modified to the full-scale lines. A fifth-scale model of the 40- by 80-foot test mounting system was designed and built to duplicate the full-scale mount in both form and function. Additionally, hardware was designed to allow tare and interference measurements. A 90-hour wind tunnel test was conducted of the corrected fifth-scale model on both a conventional single strut and the fifth-scale replica of the full-scale three-point mounting system. The data from this test (LSWT 630) were analyzed and compared with data from the previous tests and led to conclusions about the reasons for disagreement.

2. DATA REVIEW

2.1 COMPARISON OF TEST CONFIGURATIONS

The data review task began with a comparison of the run schedules and configuration nomenclature of the full-scale and fifth-scale (LSWT 550) tests to determine if comparisons were made using equivalent aircraft configurations. There were virtually no perfect configuration matches. In the case of the basic fuselage configuration comparison (LSWT 550 Run 19 versus full-scale Run 68) the LSWT 550 test used the 15-inch rather than the 10-inch fin extension, had no tail rotor hub, and no exhaust ejector fairing. For the complete helicopter comparison in pitch LSWT 550 Run 22 versus full-scale Run 20 several differences were noted. The LSWT 550 configuration had the main rotor hub fixed rather than rotating, used the 15-inch rather than 10-inch fin extension, no production protuberances, and no open cowling screens. Some of the differences discovered would have no measurable effect on the data. However, it is difficult to make any judgment about many of the configuration comparisons because detailed definition of the parts involved does not exist. An example of this difficulty is the designation P_2 which covers production protuberances. An examination of configuration photos (of Ref. 2) shows that while pitot tubes were included in the definition of P_2 they were not removed with the rest of the P_2 items after Run 28 (Table B-II) in the full-scale test. An additional obstacle to a completely rigorous evaluation of the configurations tested earlier is that many of the components of the prototype and fifth-scale model were one-of-kind items which were documented only by photographs. Consideration of these facts led to the decision, that for the proposed test, an effort would be expended in duplication of only those configurations for which sufficient documentation was available.

2.2 EVALUATION OF CORRECTIONS APPLIED

The corrections applied to the full-scale and fifth-scale data were examined. These corrections were for tare, interference, and flow alignment.

Because of the design of the 40- by 80-foot test section it is not feasible to measure tare and interference (T&I). These measurements require that the model be mounted inverted, as well as upright, and that an image of the support system be suspended from the ceiling of the test section. A detailed discussion of the most widely used methods of obtaining T&I's may be found in Reference 3.

During the full-scale tests a series of runs was made to approximate the tare of the mounting system. These runs (1 through 4 of Table B-II) were made before the aircraft was mounted. Since the vertical strut extended up inside the fuselage to the pylon mounting structure, during the tare runs this portion was removed by fitting a dummy strut which was cut off at the fuselage floor.

Interference effects were expected to be minimized by fairing the vertical strut and placing the faired horizontal strut over seven feet below the model. Since alignment corrections are derived from the same upright and inverted runs used for T&I measurements (see Reference 3), no alignment corrections could be made to the full-scale test data.

The tare and interference corrections used for the LSWT 550 data were made during the original Model 222 fifth-scale test (LSWT 439). These corrections were measured using the conventional upright and inverted runs with and without image system. Alignment corrections were also measured during the original LSWT 439 test. The older corrections were considered to be acceptable because the fifth-scale model had not changed substantially between tests.

Both the full-scale and fifth-scale tests were made with the model on the center line of the test section. No wall corrections were applied in either test.

A check of the data reduction for both tests revealed that the corrections used were applied correctly.

3. EVALUATION OF GEOMETRIC SIMILARITY

Although the original fifth-scale model appeared to accurately represent the Model 222 prototype tested full-scale (Figure 3 shows a side-by-side comparison) this fact was not verified at the time of the LSWT 550 test. This section discusses the procedure used to substantiate the accuracy of the model for this correlation study.

3.1 MEASUREMENT OF FUSELAGE CONTOURS

The differences that existed between the full-scale prototype and the model were determined using a set of templates which represented the fuselage and cowling contours of the prototype. This was done by transferring fifth-scale prototype lines at various station cuts onto aluminum sheets which were then cut to form female templates. These templates were then used to check the model. Figures 13 and 14 show fuselage and cowling contours at several station cuts illustrating the differences between the unmodified model's lines and the prototype lines. These differences are concentrated in the area of the cowling. No contour differences are shown on the basic fuselage because changes to the fifth-scale model for other tests since 1977 made it impossible to determine what the contours had been for the LSWT 550 test.

3.2 MEASUREMENT OF COMPONENT PARTS

Wings were checked and verified to be correctly sized and mounted at the proper incidence.

The horizontal stabilizer used during the LSWT 550 had been destroyed.

The fin used during the LSWT 550 test had been modified and its exact configuration during that test could not be verified. The current configuration did not agree with the prototype.

The main and tail rotor hubs showed evidence of having been modified but the current configuration did agree with the prototype. The configuration for the LSWT 550 test could not be verified.

Endplates were checked and verified to be of the correct size. Configuration photographs of the LSWT 550 test appear to show the endplates mounted with nose left incidence while the correct setting is 3 degrees nose right.

As mentioned in Section 2, the detail items lumped together under the categories of "production protuberances" or "flight test protuberances" were not well documented at the time of the full-scale and LSWT 550 tests and many were later lost or destroyed. The only items remaining in this category were the tail rotor guard, the tail skid, and a set of windshield wipers. These items appeared to represent their prototype counterparts.

The Model 206 type afterbody (full-scale Run 23 and LSWT 550 Run 27), thin wing (full-scale Run 32 and LSWT 550 Run 41) and flotation bags (full-scale Run 5 and LSWT 550 Run 34) are typical of a large group of one-of-a-kind parts which were not documented and no longer could be located for measurement.

4. MODIFICATION OF THE FIFTH-SCALE MODEL

Based on the measurements described in Section 3, which were made to determine the geometric similarity between the fifth-scale model and the prototype, it was necessary to recontour, modify, or completely rebuild certain components of the model. This section describes the modification process.

4.1 MODIFICATION OF FUSELAGE CONTOURS

The largest discrepancies noted were in the basic fuselage and cowling. The fuselage and tailboom were brought to contour by filling and reshaping the original model. The aluminum templates which were used for contour checking served as a guide to ensure accurate duplication of the prototype lines. The cowling was completely new.

4.2 MODIFICATION OF COMPONENT PARTS

A new set of wings, with dummy landing gears in the retracted position, and a set of landing gear doors were constructed.

A new horizontal stabilizer was constructed with a removable leading edge slat.

The lower portion of the fin was modified to match the prototype and the upper portion was fitted with a removable cap which allowed rapid conversion between the V_1 and V_2 configurations.

Other miscellaneous components which had to be made included pitot tubes, exhaust ejector fairing, tail rotor gearbox fairing, fuel sump recesses and covers, and pilots sliding window.

5. DESIGN AND FABRICATION OF FIFTH-SCALE SUPPORT SYSTEM

5.1 REQUIREMENT FOR A REPLICA MOUNTING SYSTEM

A suspected cause of disagreement between the full-scale and fifth-scale aerodynamic data was the unique mounting system in the full-scale test. The full-scale system, which is shown in a side-by-side comparison with the fifth-scale mount in Figure 3, was a rather complicated interface between the 40- by 80-foot tunnel's three-point mounts and the pylon mounting structure of the Model 222 airframe. Figure 15 is a schematic of the full-scale mounting system which shows the general arrangement and indicates the motion of the model in pitch. Figure 16 is a schematic of the single strut mounting system used during both fifth-scale tests. An important part of this correlation study was to evaluate the tare and interference effects of the full-scale mount by modeling it in fifth scale and obtaining complete T&I measurements. A straightforward approach using an image system to duplicate the articulation of the three-point mounting was too costly, and instead, an indirect approach was conceived using two separate mounting systems. First, the model would be mounted on the usual single strut system and tested both upright and inverted, with and without the image system in order to measure T&I corrections in the classical manner. The principal advantage of this method of evaluating T&I's was that the image system for the single strut would be quite simple compared to the image required for the three-point mount. Using the T&I corrections obtained in this fashion the single strut data would be processed to produce a set of "model-alone" aerodynamic data for all representative configurations. Next, the model would be mounted on the fifth-scale three-point system and the runs made on the single strut mount would be repeated. By subtracting the previously obtained model-alone data from the raw data with this replica three-point mount, a set of T&I corrections would be derived for each of the repeated runs.

5.2 DESIGN AND FABRICATION OF MOUNTING HARDWARE

Based on drawings and photographs of the original full-scale mounting system, BHT designed and fabricated a fifth-scale replica system. This replica, shown in Figure 17, duplicated the original very closely in both form and function with the following exceptions. Because the 40- by 80-foot test section would correspond to a fifth-scale 8- by 16-foot section it was necessary to shorten the replica mounting system by 6 inches (2.5 ft full-scale) in order to locate the model on the centerline of the 7- by 10-foot section. The portion removed from the fifth-scale replica was at floor level and not considered to produce a significant contribution to interference because of its distance from the model. The other exception was in the representation of the rear pitch strut of the three-point mount. The pitch strut in the 40- by 80-foot test section is a series of nested lead screws of graduated diameters which are rotated automatically to change overall length and thereby pitch the model. In this replica the pitch strut was represented by a strut of constant diameter.

The replica three-point system was also provided with removable vertical fairings and a dummy vertical strut. The vertical fairings were removed for yaw runs during the full-scale test while the dummy strut was used to represent that portion of the support strut below the belly of the aircraft during wind-on tare runs. In addition to the hardware associated with the three-point mounting system, an image system for the single strut mount was designed and built.

6. WIND TUNNEL TEST

During the period of 29 October to 16 November 1981, Bell Helicopter Textron conducted a wind tunnel test of the refurbished fifth-scale model of the Model 222 helicopter in the 7- by 10-foot test section of the Vought Corporation Low Speed Wind Tunnel. Reference 4 is the Vought Corporation report of that test (referred to as LSWT 630).

6.1 FACILITIES AND EQUIPMENT

The modified model employed a BHT designed and fabricated pitch mechanism and angle of attack readout module which interfaces with Vought tunnel hardware. This system, including actuators, sensors, remote controls, power supply, and readout devices, is independent of the wind tunnel operating and control systems and may be moved from model to model. The purpose of the system is to allow the model to be positioned accurately at a given pitch angle. This device is capable of positioning the model to within ±0.1 degree of the desired pitch angle. Yawing of the model is accomplished by rotating the external balance turntable. The support fairing remains streamlined during yaw. Reference 5 contains more detailed information about the balance system and its capabilities.

Figure 18 shows the Model 222 mounted upright on the single-strut mount. Figure 19 shows the model mounted in the inverted position with the image system in place. This image system consists of the image strut which is attached to the model and the image fairing which is attached to the ceiling of the test section. There is no contact between the image strut and image fairing. Thus, with the image system in place, the tare of the strut, the interference between model and strut, and the interference of the fairing on the strut and model are all included in the measured aerodynamic data.

Figures 20 and 21 show the fifth-scale model mounted on the replica three-point mounting. In Figure 20 the mounting system is in the pitch configuration with both the large stationary vertical fairing and the smaller vertical strut fairing in place. Figure 21 shows the mounting system in the yaw configuration with both vertical fairings removed. Pitch motion is accomplished by moving the rear strut vertically which pivots the model about the trunnion located inside the horizontal fairing. Yaw motion is accomplished by rotating the balance turntable. The large vertical fairings over the main support struts between the floor and horizontal fairing rotate with respect to the turntable to remain streamlined with the airflow.

6.2 TARE AND INTERFERENCE CORRECTIONS

T&I corrections were obtained for Low Speed Wind Tunnel test 630 by first making a series of pitch runs with the model inverted and no image system for ten representative model configurations. These runs were then repeated with the image in place.

By taking the difference between corresponding runs the tare and interference effects of the single strut mounting system were isolated. These T&I effects were then used to correct the runs made with the model upright on the single strut.

6.3 OTHER CORRECTIONS

A flow alignment correction was obtained using the technique outlined in Reference 3, which involved one additional run upright with the image system. The lift data from this run were then compared with the lift data from the corresponding inverted image in run. When these two lift versus angle of attack curves are plotted together (with negative lifts plotted as if positive), the angle of attack variation between the curves is equal to twice the alignment error. The alignment error determined by this method was such that when the indicated angle of attack was zero degrees, the actual angle with respect to the airflow was one quarter degree.

Static weight tares were measured for each significant model change and applied during data reduction.

Following standard practice in the Vought tunnel as detailed in Reference 5, solid and wake blockage and compressibility corrections were combined into one expression, which was then multiplied by the desired test q to obtain a q setting. Thus when a test q of 75 psf was desired, the tunnel was operated at a q setting given by the equation, thereby eliminating the need for blockage and compressibility corrections during data reduction. The cross-sectional areas of the model and three-point mount are 1.78 ft^2 and 2.17 ft^2 respectively which produces approximately 6 percent blockage of the test section. The reduction in q setting which results from this blockage is approximately 3 percent.

6.4 TEST DYNAMIC PRESSURES

The majority of runs during the LSWT 630 test were made at the model design dynamic pressure of 75 psf although a few pitch runs were repeated at q = 100 psf. Yaw runs were made at q = 75 psf and 83 psf.

Pitch runs during the full-scale test were made at q = 62.5 psf rather than 75 psf as originally intended. Yaw runs were conducted at q = 16.2 psf due to structural limitations of the mounting system in yaw. However, it should be noted that this value of dynamic pressure corresponds to a velocity of 70 knots which is realistic for flight at high yaw angles.

Table I presents a comparison of Reynolds numbers for the two tests. There seems to be no generally accepted reference length for helicopters. Therefore, the table uses a unit value or Reynolds number per foot which is quite useful for comparison. Note that this value is expressed in model scale while the RN/ft of the Vought LSWT 630 data (shown in Appendix A) was given as an actual full-scale value. In addition, calculated Reynolds numbers are given for wing, horizontal stabilizer, fin, and mounting strut.

6.5 THREE-POINT MOUNTING SYSTEM TARE RUNS

Table II presents the final run schedule of the LSWT 630 test. Configuration designations are defined in the pictorial nomenclature presented in Figure 22. Table III is a comparison of configuration nomenclature used for the LSWT 630, LSWT 550, and full-scale tests. As shown in Table II the first ten runs were made using the three-point mount installed without the model. Runs 1 through 8 were made in yaw configuration although Run 8 was actually a pitch run. Small changes were made to the model during this series of runs in an effort to match drag levels with Run 1 of the full-scale test. Run 10 was made in the same configuration as Run 3 of the full-scale test. Run 6 supplied wind-on tare corrections in yaw, while Run 10 was used for wind-on tares in pitch for all runs with the model on the three-point mount.

6.6 SINGLE STRUT TARE AND INTERFERENCE RUNS

Next, the single strut mounting system was installed with the model inverted and a series of ten representative configurations were run, beginning with the complete helicopter and concluding with the basic fuselage. Following this series, the image system was installed and the same ten configurations were rerun. By taking the difference between corresponding runs of these two series, T&I corrections were derived for the remainder of the single strut runs. After the T&I runs the model was run upright with the image (Run 31). The data from this run and the previous inverted image-in run were combined to yield the flow alignment correction. Next, the image was removed and normal data runs began with a repeat of the ten representative configurations of the T&I series.

6.7 COMPARISON RUNS IN LSWT 550 CONFIGURATION

After these baseline runs the model was modified by the addition of transition strips and a series of seven runs (42 through 48) made with configurations identical to those of Runs 15 through 20 and Run 24 of the LSWT 550 test. The purpose of these runs was to determine the effects of modifications to the model since the LSWT 550 test.

6.8 COMPONENT BUILDUP ON SINGLE STRUT MOUNTING

Runs 49 through 73 represent a step-by-step process of adding or removing components one at a time to match representative configurations of the full-scale test for which comparisons were desired. The full-scale runs to be matched were Runs 14, 20, 21, 22, 30, 31, 68 and 69. The data from Runs 49 through 73 after correction for T&I and alignment would provide model-alone data to be subtracted from later runs on the three-point mount, yielding T&I corrections for that mounting system.

Two small configuration deviations were necessary. The run schedule called for the addition and removal of the exhaust ejector fairing (F_1) and the production tail rotor gearbox fairing (Y_p). Since these items were modeled of clay, their addition and removal was rather time consuming. Therefore it was decided that after their removal, these two items would remain off and their effects added to or subtracted from the data as each configuration required.

6.9 COMPONENT BUILD-UP ON THREE-POINT MOUNTING

Runs 74 through 124 were made with the model mounted on the replica 40- by 80-foot three-point system. Runs 74 through 76 were made before it was discovered that the model was yawed 0.79 degree nose left. These runs were repeated after the error was corrected. Runs 77 through 107 are repeats of configurations tested on the single strut mount in the series from Runs 32 to 73.

Note that in order to measure the angular deflection of the entire three-point mounting system, the angle of attack readout module (nicknamed the "α bubble") remained installed in the model. By comparing the actual angle of the model, measured by the α bubble, with the indicated angle from the wind tunnel balance the amount of pitch error due to system deflection under airload was determined. The maximum errors were limited to one-quarter of a degree. After verifying that the deflection of the system was very small, the α bubble was removed. Pitch and yaw runs before and after the removal of the bubble (on Run 95) were made to evaluate the effect of external wires associated with control and α readout devices. The effect of the wires proved negligible.

6.10 EVALUATION OF ROUGHNESS AND PROTUBERANCES

Beginning with Run 108 an effort was made to match drag levels of the full-scale test through "tuning" the model by using grit strips as noted in the configuration nomenclature. While grit is normally applied to wind tunnel models for the purpose of assuring transition to realistically turbulent boundary layers, the intent here was also to simulate the characteristically rough surface, as well as multiple joints, cracks, and small protuberances of a prototype helicopter. Run 123 was intended to measure the effect of the more significant protuberances on the prototype aircraft.

6.11 DATA REDUCTION

Six component force and moment data (lift, drag, pitching moment, side force, rolling moment, and yawing moment) were recorded from the external balance during each run in units of pounds and foot pounds. Data reduction was accomplished using Vought computer programs.

In the case of the LSWT 630 test, all the basic force and moment data were divided by the test dynamic pressure, then transferred from balance resolving center to trunnion to model moment reference center, converted to full-scale values and finally corrected for static tares. Blockage and compressibility corrections are automatically applied in the setting of the tunnel q as discussed earlier. Wind axis data in this form (i.e. before tare and interference corrections) for all LSWT 630 runs are presented in Part 1 of Appendix A. Three other sets of data were also supplied by Vought. The first was data for the single support runs corrected for T&I. This could be referred to as "model-alone" data. Second was three-point mounting data with wind-on tares removed, and finally, there was a set of three-point mounting data with the appropriate single strut "model alone" data removed. Wind axis data from these three sets are presented in Parts 2, 3, and 4 of Appendix A.

7. PRESENTATION AND DISCUSSION OF TEST DATA

This section, including Figures 23 through 72, presents selected data from the LSWT 630 test. These data are representative of trends in the data taken during the test, and are discussed in five related groups.

7.1 COMPARISON OF FIFTH-SCALE RESULTS

Figures 23 through Figure 31 present comparisons between the original fifth-scale wind tunnel test (LSWT 550) and the LSWT 630 test. These figures show the effect of modifications that were made to the fifth-scale model. Lift characteristics appear to have changed only slightly for the complete helicopter, while the basic fuselage shows a positive lift increment ranging from almost zero at positive alphas to approximately 2.0 ft^2 at negative alphas. Drag is as much as 1.0 ft^2 less in the LSWT 630 test with the basic fuselage data again showing the greater difference. Pitching moment data showed good agreement at positive angles of attack, while negative angles showed considerable divergence, particularly in the case of the complete helicopter. In addition to differences in the model contours between tests, some of the disagreement may also be due to an improvement in the technique of sealing around the clearance hole where the mounting strut enters the fuselage. This later explanation is quite plausible in the case of drag which is lower in the LSWT 630 test reflecting a better job of sealing. The apparent cause of the large increase in pitching moment discrepancy for the complete helicopter is the difference in stalling characteristics of the horizontal stabilizer, possibly due to a change in the slat configuration between the two tests.

Figures 29 through 31 show that comparisons between the two fifth-scale tests for side force and yawing moment versus yaw angle of the complete helicopter are better than that of longitudinal data. Drag versus yaw angle is approximately 1.0 ft lower.

7.2 COMPARISON OF WIND-ON TARES

Figures 32 through 37 compare fifth-scale versus full-scale wind-on tares for the three-point mounting system in pitch and yaw with the dummy strut (as described in Section 5.2) in place.

Figures 32 through 34 show lift, drag, and pitching moment characteristics versus angle of attack. Lift is seen to be less than the full-scale value and drag is as much as 0.5 ft^2 greater. The direction of these differences is expected considering the disparity in Reynolds number (Table I). Pitching moment compares surprisingly well at positive angles of attack.

The reason for the difference at negative angles may be related to a moment shift in the full-scale data of approximately 4 ft^3 at zero angle of attack.

Figures 35 through 37 show side force, drag, and yawing moment characteristics versus yaw angle. Side force differs by a considerable amount particularly at negative and smaller positive yaw angles. The full-scale data in this case appear questionable because the side force is non-zero at zero yaw angle. Similar comments apply to the yawing moment characteristics. Drag data compare exceptionally well throughout the yaw angle range. This excellent correspondence in drag prompts the thought that the reason for the discrepancies in side force and yawing could be that those quantities were too small, relative to the full-scale balance system's limits, to be accurately measured.

7.3 COMPARISON OF FIFTH-SCALE AND FULL-SCALE DATA ON THREE-POINT SYSTEM

Figures 38 through 58 compare data from the full-scale test with LSWT 630 data for which the model was mounted on the replica three-point system. These data have been corrected by subtracting the wind-on tares of the mounting system alone from the raw data. The configurations selected for comparison were those in which the fifth-scale model could be made to closely match the full-scale aircraft tested. Some of the configurations selected were identical to full-scale. Those which compare with full-scale runs 14, 20, 21, and 22 differ in that the open screens of the prototype could not be duplicated.

Figures 38 through 40 compare lift, drag, and pitching moment versus angle of attack for the basic fuselage. The lift curve slope of the fifth-scale data is greater than that of the full-scale data and the angle of zero lift is displaced 6 degrees. Drag shows better agreement with the maximum difference on the order of 0.6 ft^2 at negative angles and closer agreement at positive angles. The angle for minimum drag and general shape of the curve are also close. Pitching moment curves agree quite well in the mid-angle range. Note that for Run 109, grit was added to the fuselage at several locations in an effort to increase drag by simulating the roughness of the prototype airframe. This roughness produced a small increment in drag with little or no apparent change in lift or pitching moment characteristics.

Figures 41 through 43 show lift, drag, and pitching moment comparisons for the basic fuselage with wings added. In general the agreement between the two tests in terms of slopes and shape of the curves is good. However, the effort to adjust the drag level by simulating the roughness of the wing walk with various grit sizes produced some rather large magnitude changes in lift and drag. These drag level adjustments produced agreement within 0.5 ft^2, although the additional roughness significantly decreased lift. Because of the wings' location, these adjustments had little effect on pitching moment correlation which remained good. In addition, it should be noted that the full-scale data show what is apparently wing stall while all the fifth-scale data are stall free.

Figures 44 through 46 compare lift, drag, and pitching moment versus angle of attack for the complete helicopter minus the wing. Lift differs very slightly in slope and by about 2 degrees in zero lift angle. The fifth-scale lift diverges rapidly at negative angle indicating stall of the horizontal surface. The drag curve shows very good agreement in both shape and angle for minimum drag. Pitching moment slope agrees well, but the angle for zero moment is shifted approximately 1 degree and data at larger negative angles exhibit the same divergence noted in lift. Runs 99 and 100 were made at q = 75 psf and q = 100 psf respectively before the addition of any grit. Runs 120 and 121 were repeats of Runs 99 and 100 after grit had been added. The change in Reynolds number has a noticeable effect in the previously noted stall behavior at negative angles for lift and pitching moment in the smooth condition and very little effect after grit was added. Drag in the smooth condition increases with increased Reynolds number, indicating that a laminar boundary layer existing on the smooth fifth-scale model transitioned to turbulent flow with increasing Reynolds Number producing higher drag. The improvements in lift and pitching moment indicate a reduction in separation which is consistent with a turbulent boundary layer. With the model in the roughened state of Runs 120 and 121 the drag would be higher and change little with Reynolds number.

Figures 47 through 49 compare lift, drag, and pitching moment versus angle of attack for the complete helicopter. Two full-scale runs are plotted. Runs 20 and 21 differ only in that the main rotor hub was rotating in Run 20 and locked at a 60° azimuth in Run 21. Bell Helicopter experience with rotating hubs has shown that a hub locked at 60 degrees exhibits approximately the same aerodynamic characteristics, as is shown by Figures 47 through 49. Lift characteristics of the smooth model agree rather well except for the apparent wing stall behavior at positive alpha in the full-scale data. Runs 122 and 123 with the roughened model and added protuberances differ in angle of zero lift. The drag data show good agreement in the shape of the curve and angle for minimum drag. The drag values of the roughened model are 0.2 ft^2 to 0.8 ft^2 lower than full-scale. Pitching moment data show very little correlation except in the shape of the curves at nominal angles of attack.

Figures 50 through 52 show side force, drag, and yawing moment versus yaw angle. In the case of yaw data the Reynolds number of the fifth-scale data is only different by a factor of 2, due to the lower test q used for full-scale yaw runs (see Table I). Therefore the yaw data show better agreement than the pitch data. The side force compares well. The smooth model drag data of Runs 96 and 106 compare almost perfectly with full-scale. The roughened model has somewhat higher drag at small positive yaw angles. Yaw moment data show very good agreement in the slope and shape of the curves which all exhibit the characteristic unstable region or "flat spot" around zero yaw also noted during flight testing. Yawing moment data for the roughened model exhibit a divergence at large yaw angles.

Figures 53 through 55 show lift, drag, and pitching moments in pitch for the complete helicopter minus the tail rotor hub and mast. This configuration is virtually identical to the smooth model configuration of Figures 47 through 49 and, as might be expected, exhibits very similar characteristics.

Figures 56 through 58 show lift, drag, and pitching moment characteristics for the complete helicopter with the landing gear doors open. The smooth model lift data agree well with full-scale, while the roughened model has less lift throughout the alpha range. Drag data for the smooth model are approximately 1.0 ft^2 less than full-scale. The roughened model data match full-scale drag almost perfectly for $\alpha = 0°$ to $\alpha = 6°$ with some divergence occurring at negative angles. Pitching moment correlation is poor except that the shape of the roughened model data matches full-scale.

7.4 TARE AND INTERFERENCE OF THE THREE-POINT SYSTEM

Figures 59 through 64 illustrate the magnitude of tare and interference effects measured during LSWT 630 for the three-point mounting system. Figures 59 through 61 show lift, drag, and pitching moment versus angle of attack, while Figures 62 through 64 show side force, drag, and yawing moment versus yaw angle. In Figures 59 through 61 four sets of data are shown. First are the wind-on tares measured without the model from Run 10. The remaining curves of each figure are obtained by subtracting model-alone data measured on the single strut from the raw data for the same configuration measured on the three-point mounting. This yields a tare and interference correction for the three-point system which may be compared with the wind-on tare. The three configurations treated in this fashion are the basic fuselage, basic fuselage plus wing, and complete helicopter.

The comparison shows some very striking differences between the wind-on tare curves and the measured T&I curves, implying that interference effects in the full-scale test data were not negligible. In the case of lift corrections the wind-on tare is almost a constant 1.0 ft^2 while the T&I with the basic fuselage is zero at $\alpha = 0°$, but has a considerable negative slope. With the addition of the wing the T&I curve shifts upward approximately 2.0 ft^2 while the negative slope steepens slightly. The curve then shifts downward and steepens for the complete helicopter configuration. T&I corrections for drag are roughly twice the basic wind-on tare values. Most of the difference appears to be due to the fuselage with smaller increments of interference added by the wing and the remainder of the items which make up the complete helicopter configuration. The T&I corrections for pitching moment, unlike those for lift and drag, are much less than the wind-on tares.

Figures 62 through 64 compare wind-on tares and derived T&I corrections for side-force, drag, and yawing moment versus yaw angle. Side force T&I corrections are approximately equal to the wind-on tare values at zero yaw but the variation with yaw is four to five times steeper. The T&I corrections to drag are approximately 60 percent greater than the wind-on tare values, but the variation with yaw angle is almost identical. Yawing moment T&I's, like those for side force, have a much greater variation with yaw and exhibit stall-like behavior at larger angles.

7.5 COMPARISON OF FIFTH-SCALE AND FULL-SCALE COMPONENTS ON THREE-POINT SYSTEM

Figures 65 through 72 compare fifth-scale and full-scale lift, drag, and pitching moment versus angle of attack for the wing, horizontal stabilizer, slat, and end plates. The LSWT runs used for these comparisons were all made with the model mounted on the three-point mounting system.

Figures 65 through 67 compare the lift, drag, and pitching moment characteristics of the wing-alone obtained by taking the difference between runs with and without the wing. The smooth wing data from LSWT 630 have approximately the same slope as the full-scale data, while the angle of zero lift varies by 2 degrees. The full-scale data show a stall, however, which is not evident in any of the fifth-scale wing data. Correlation is poor for the roughened wing in lift. In drag, however, the roughened wing compares very well while the drag of the smooth wing is too low. Pitching moment data are quite scattered for both full-scale and fifth-scale wings. Pitching moment slopes in fifth-scale are lower than full-scale values and there is very little agreement in any of the data.

Figures 68 through 70 compare the full-scale and fifth-scale aerodynamic characteristics of the horizontal stabilizer in pitch. Both lift and pitching moment show very little correlation in slope or zero angle. Drag compares very well except at the larger negative angles.

Figure 71 compares the effect of the slat on aerodynamic characteristics in pitch. Generally, the agreement between full-scale and fifth-scale is good, particularly in the case of drag. There is some divergence at the larger negative angles except in the pitching moment data. While the pitching moment data from the full-scale test shows considerable scatter there is good agreement with fifth-scale particularly in the shape of the curve.

Figure 72 compares the effect of the endplates on aerodynamic characteristics in pitch. Lift, drag, and pitching moment data agree extremely well throughout the range of angle of attack. It should be noted that, because the endplates are vertical surfaces, the data presented in Figure 70 should be considered as endplate effect on the lift, drag, and pitching moment of the horizontal surface. The primary effect of the endplates would be seen as variations in side force, drag, and yawing moment with yaw angle.

8. CONCLUSIONS AND RECOMMENDATIONS

This section discusses the conclusions which were drawn from the data obtained during the fifth-scale testing of the modified Model 222 wind tunnel model and the comparison of that data with full-scale and earlier fifth-scale data. Figures 73 through 81 present these summary comparisons and illustrate the improvements in correlation obtained from testing on the replica three-point mount.

8.1 CONCLUSIONS

The primary cause of the lack of agreement between the fifth-scale data of LSWT 550 and the full-scale data of the Ames test was the effect of interference related to the three-point mounting system used for the full-scale test. The effect of the mounting system was most obvious in the drag data comparisons but was also noticeable in lift and pitching moment data.

When the tare and interference effects measured during this test are applied to the full-scale test data, the drag is seen to be substantially lower than originally believed. The prototype drag value at $\alpha = 0°$ was reported as 13.5 ft^2 (from Run 20) after the full-scale test. If the wind-on tare of 2.84 ft^2 is added back in and then the fifth-scale tare and interference of 5.8 ft^2 is subtracted, the result is a corrected drag of 10.54 ft^2.

Several other conclusions are suggested by comparison of the LSWT 630 test data with the LSWT 550 and full-scale data.

Figures 23 through 31 show that the effects of contour differences were minimal. The differences seen in the data (primarily in lower drag for the LSWT 630 test), could be explained by either the cleaner cowling of the modified model or by an improvement in the sealing of the model in the area of the mounting strut.

Reynolds number effects were concluded to have been a relatively small factor in the lack of correlation, except at large angles of pitch and yaw. In these instances the fifth-scale data exhibit stall-like behavior which might be expected at lower Reynolds number. Runs which were made at dynamic pressures of 100 psf, as well as 75 psf, showed an improvement at the 15 percent higher Reynolds number.

Some of the disagreement between full-scale and fifth-scale drag data was due to the unrealistically smooth surface of the model. While the flow on the model was generally turbulent, it seemed necessary to further increase skin friction by the addition of grit to adequately simulate the rough surface of the prototype. This roughening usually did not improve correlation in lift or pitching moment.

Correlation between full-scale and fifth-scale data for the wing, horizontal stabilizer, slat, and endplates was mixed as shown in Figures 65 through 72. The only obvious Reynolds number effect noted was a premature stall of the model horizontal stabilizer in the negative angle range as shown in Figure 66.

8.2 RECOMMENDATIONS

Based on the major conclusion of this investigation it is recommended that the determination of tare and interference corrections receive greater emphasis in full-scale wind tunnel testing. This greater emphasis is of particular importance when unconventional mounting systems are used. The technique employed in LSWT 630 to evaluate T&I corrections by testing a scale model of the aircraft on a scale model of the mounting system seems to be a promising alternative when full-scale T&I measurements are not feasible.

With regard to the use of small-scale testing to determine T&I corrections, some further recommendations are offered. As with any wind tunnel test, complete documentation of model contours, configurations, test conditions, and data reduction is crucial.

The small-scale test should follow the full-scale test so that all runs and configurations of the full-scale test are known and may be easily duplicated. This is particularly important in a typical development testing situation where unforeseen runs and configurations may be added during the full-scale test based on data from earlier runs. The disadvantage inherent in this testing sequence is that the corrected full-scale data are not available until the small-scale T&I's are measured. This problem could, however, be eased somewhat by running the tests concurrently.

An effort should be made to ensure that several representative full-scale configurations can be duplicated exactly for the tare and interference measurements. In addition to the expected faithfulness of contour, this would also include careful sealing of the full-scale model to eliminate any airflow or leakage which could not be duplicated in the small-scale model.

REFERENCES

1. Oldenbuttel, R. H., A LOW SPEED WIND TUNNEL TEST OF THE 0.20 SCALE BELL HELICOPTER TEXTRON MODEL 222, Vought Corporation Report LSWT 550, 1977.

2. Hester, M. L., RESULTS OF THE FULL-SCALE MODEL 222 WIND TUNNEL TEST, Bell Helicopter Textron Report 222-199-002, 1978.

3. Pope, A., and Harper, J. J., LOW SPEED WIND TUNNEL TESTING, John Wiley and Sons, New York, 1966.

4. Oldenbuttel, R. H., A LOW SPEED WIND TUNNEL TEST OF THE BELL HELICOPTER TEXTRON 0.20 SCALE MODEL 222 INVESTIGATING AERODYNAMIC CHARACTERISTICS, Vought Corporation Report LSWT 630, 1982.

5. Holbrook, J. W., LOW SPEED WIND TUNNEL HANDBOOK, LTV Publication No. AER-EOR-12995-B, November 1979.

ORIGINAL PAGE IS
OF POOR QUALITY

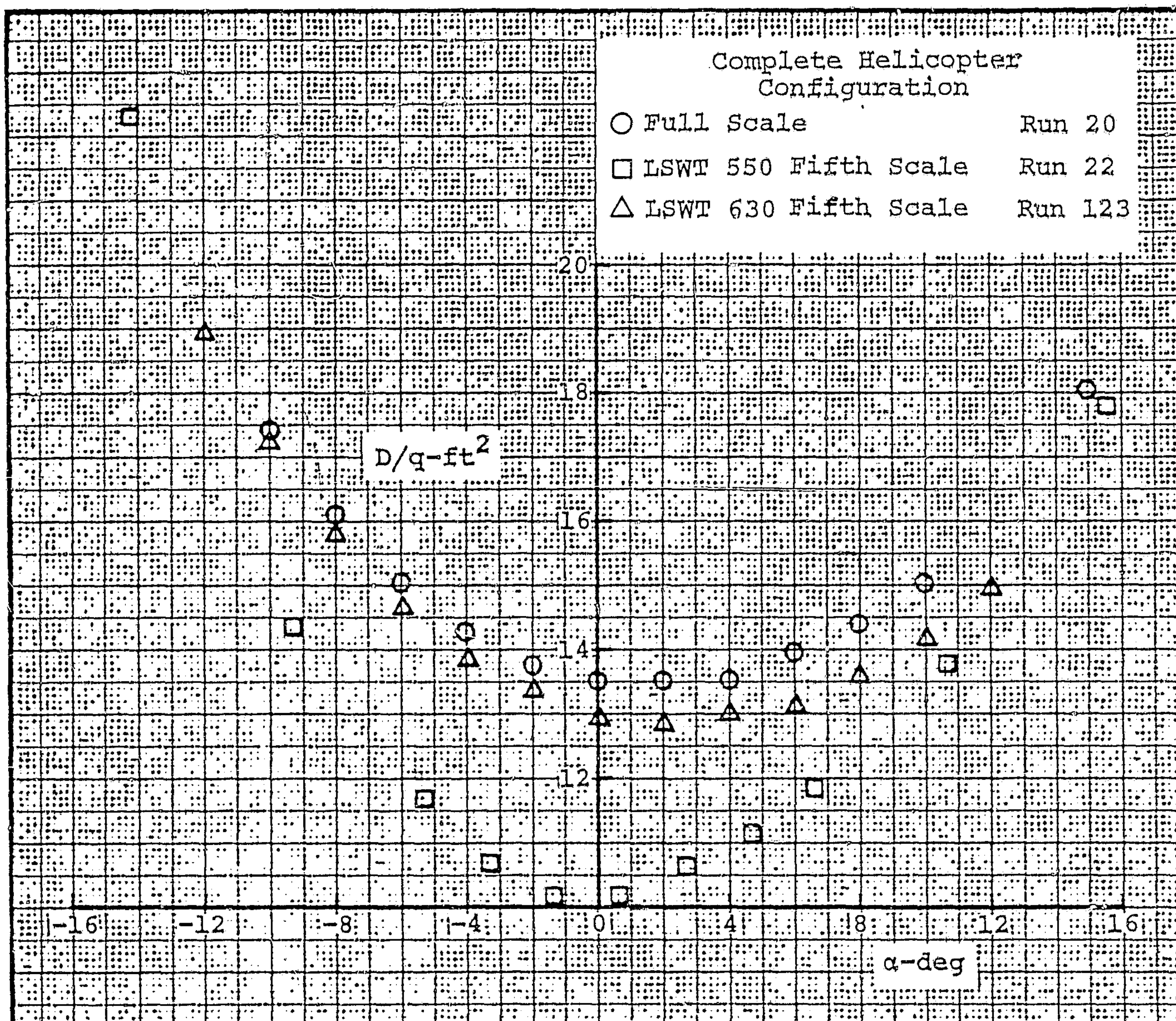


Figure 1. Correlation Improvement for Helicopter Drag Characteristics in Pitch

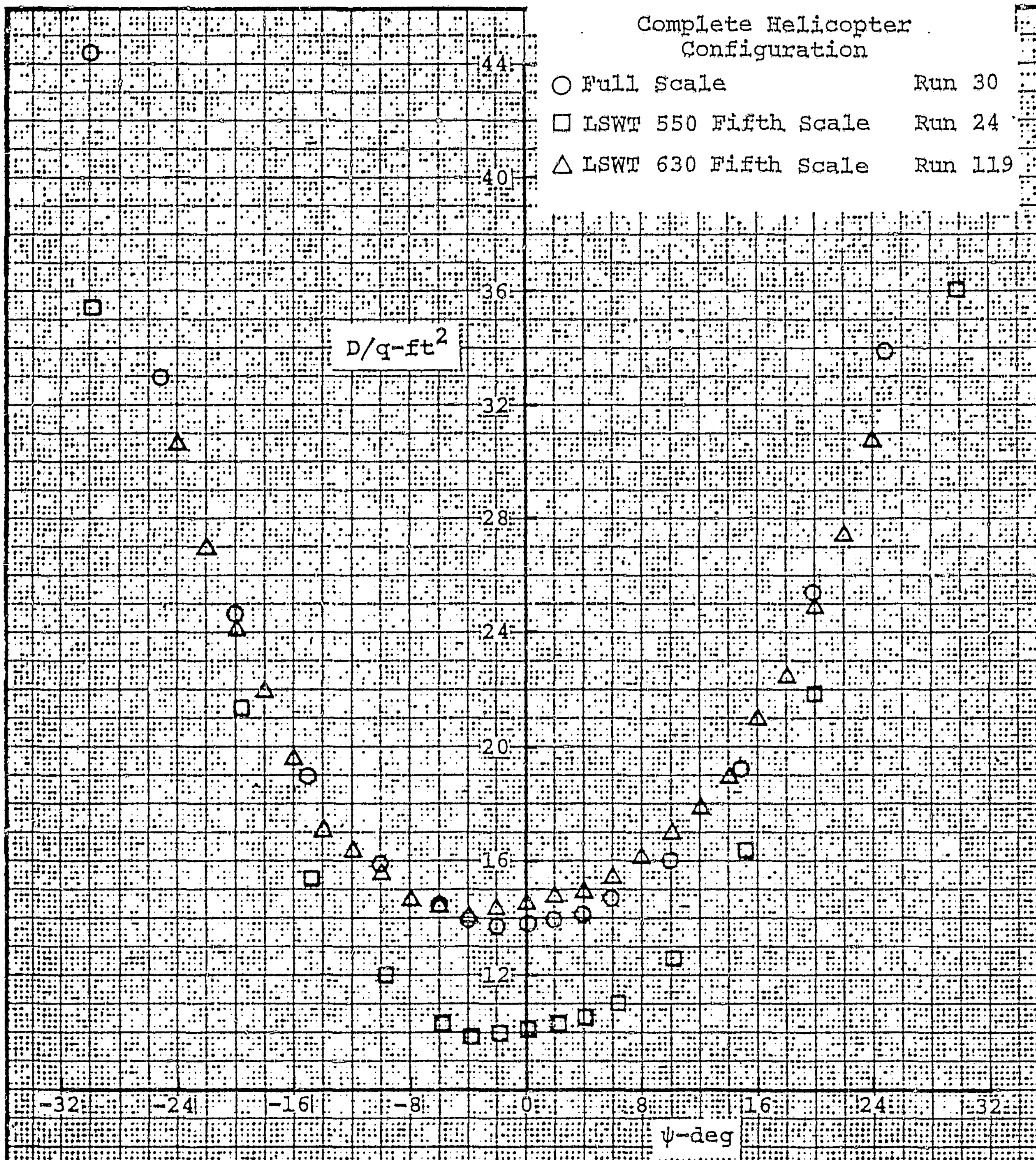
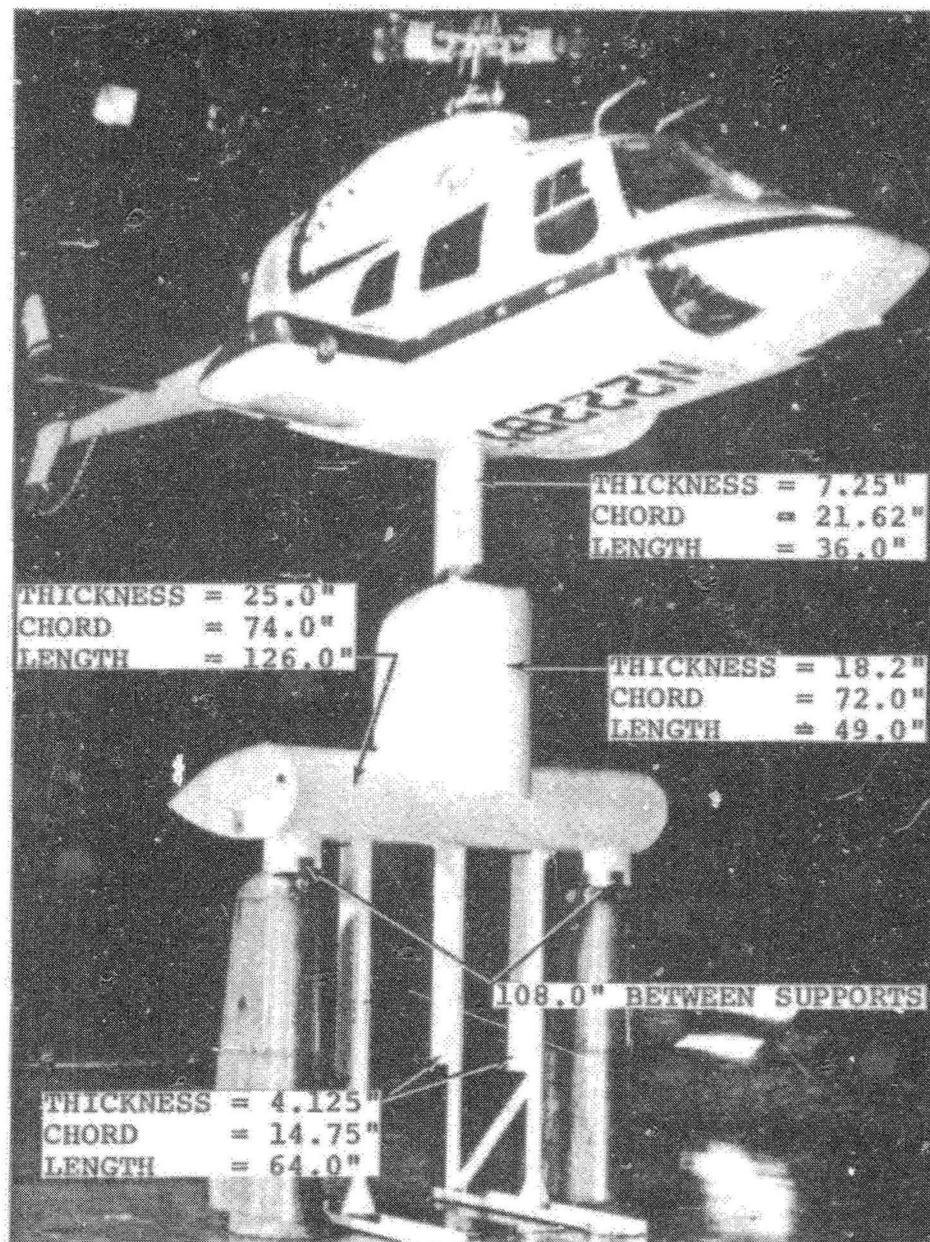
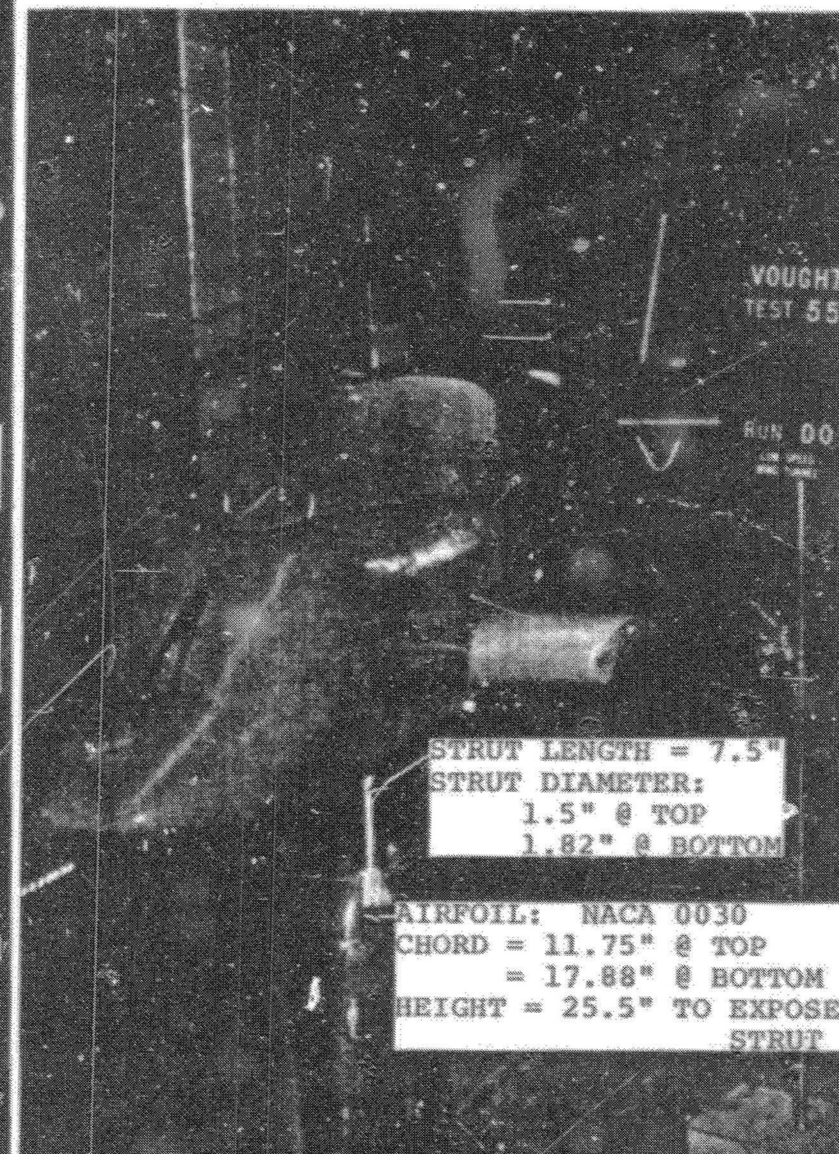


Figure 2. Correlation Improvement for Helicopter Drag Characteristics in Yaw



M222 Prototype in NASA/Ames
40 by 80 Foot Wind Tunnel



Fifth Scale M222 Model in Vought Corp.
7 by 10 Foot Wind Tunnel

Figure 3. Comparison of Prototype and Fifth Scale Model.

ORIGINAL PAGE IS
OF POOR QUALITY

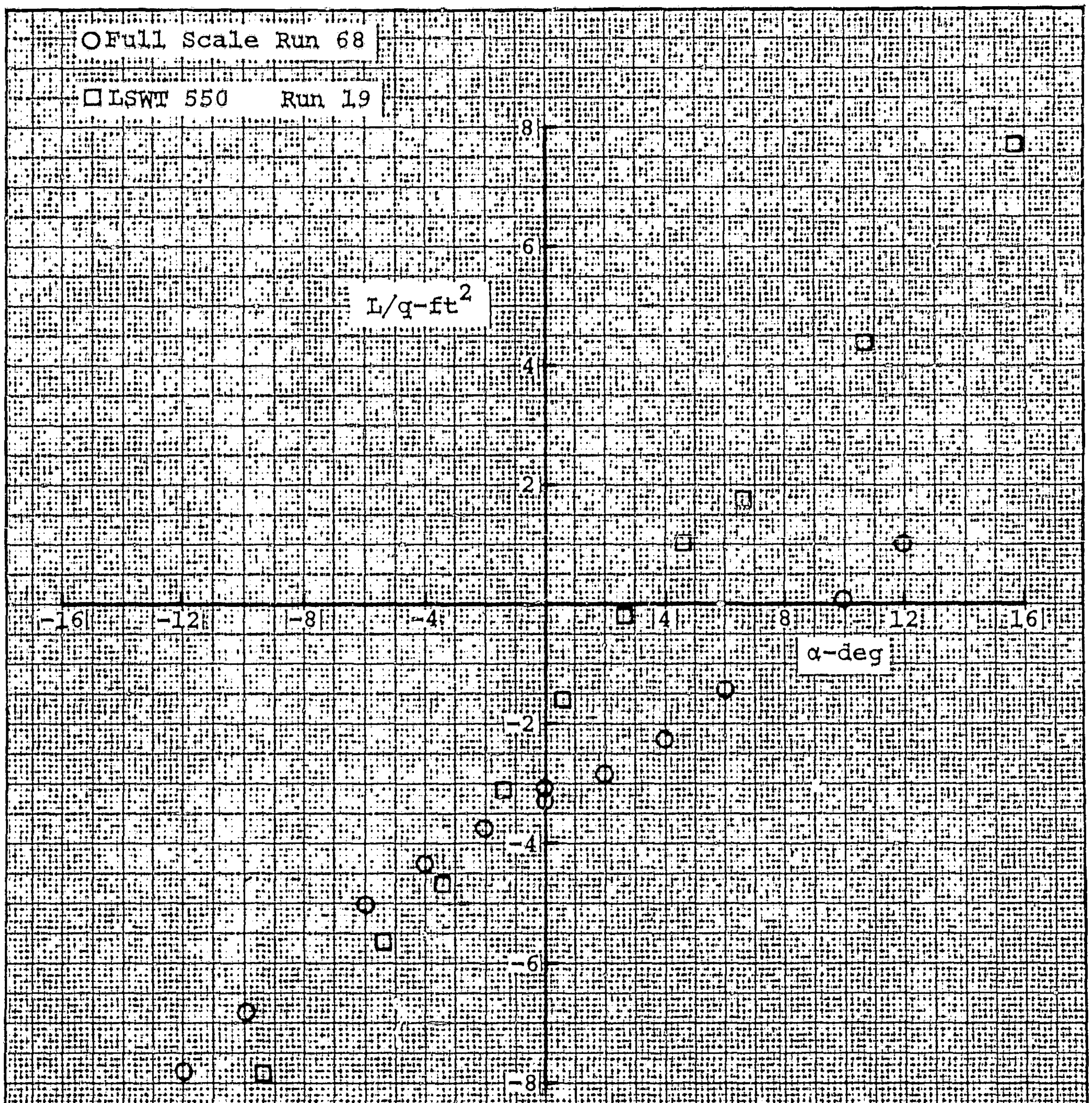


Figure 4. Original Comparison of Lift Characteristics in Pitch for Basic Fuselage

ORIGINAL PAGE IS
OF POOR QUALITY

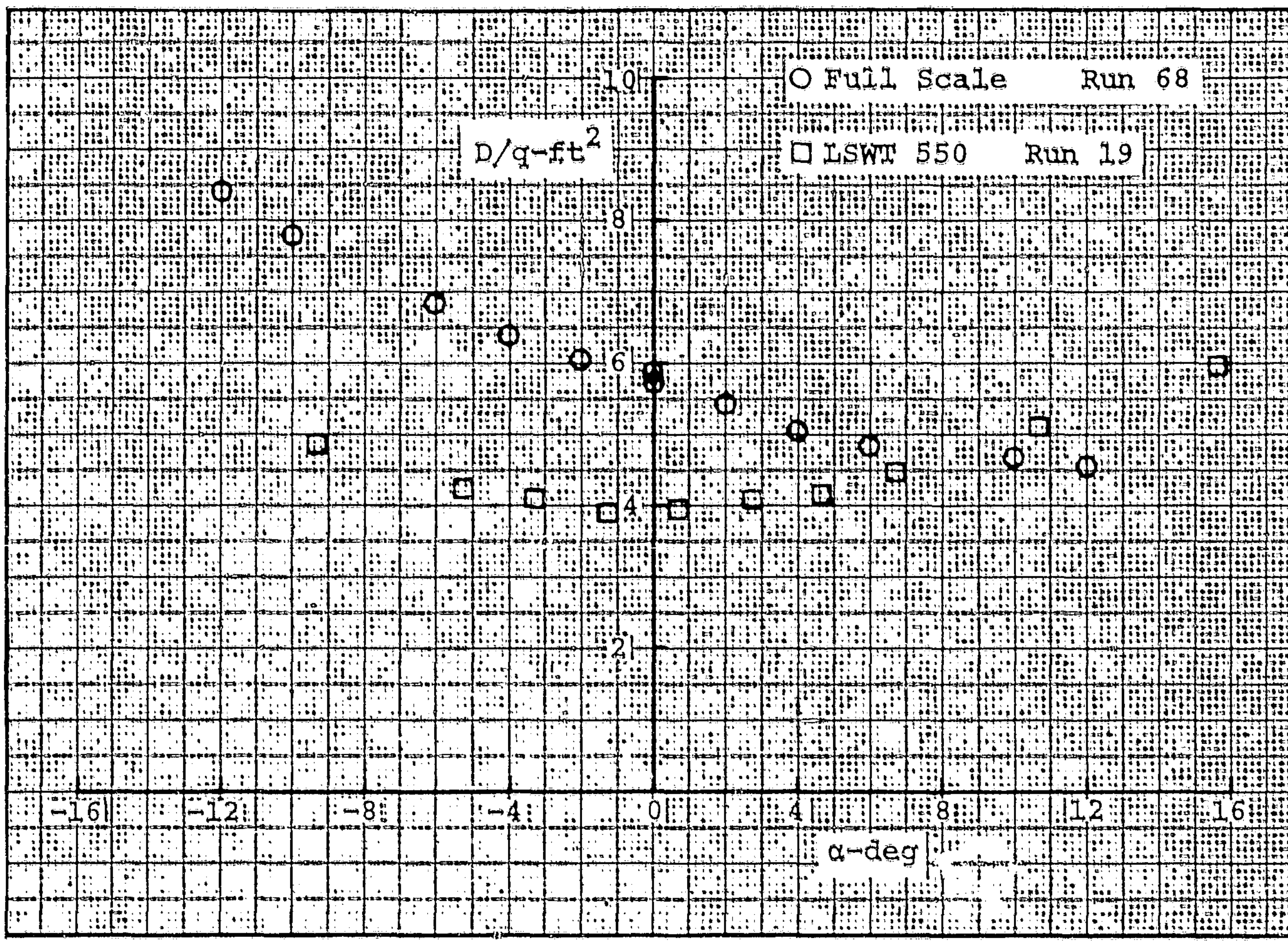


Figure 5. Original Comparison of Drag Characteristics in Pitch for Basic Fuselage

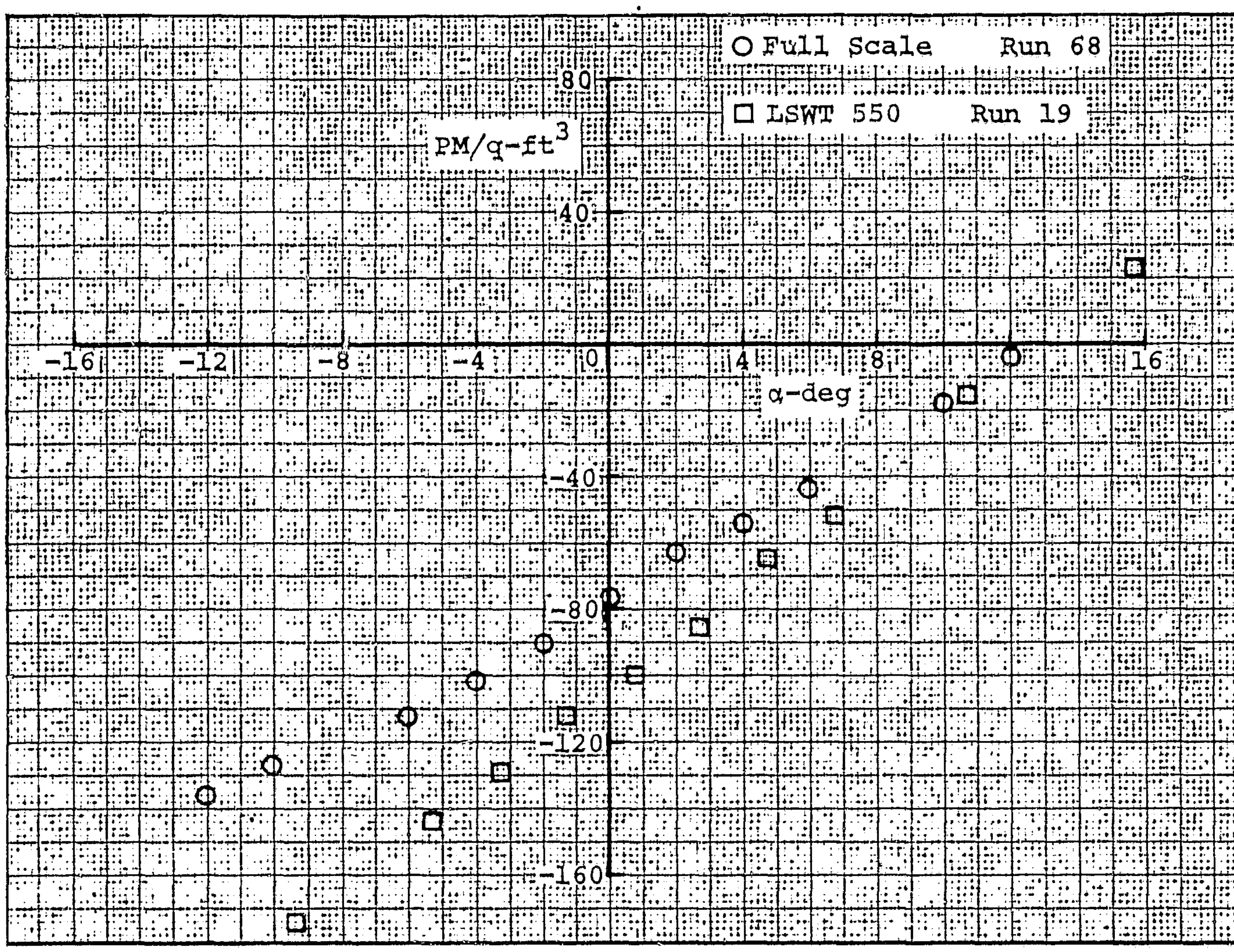


Figure 6. Original Comparison of Pitching Moment Characteristics in Pitch for Basic Fuselage

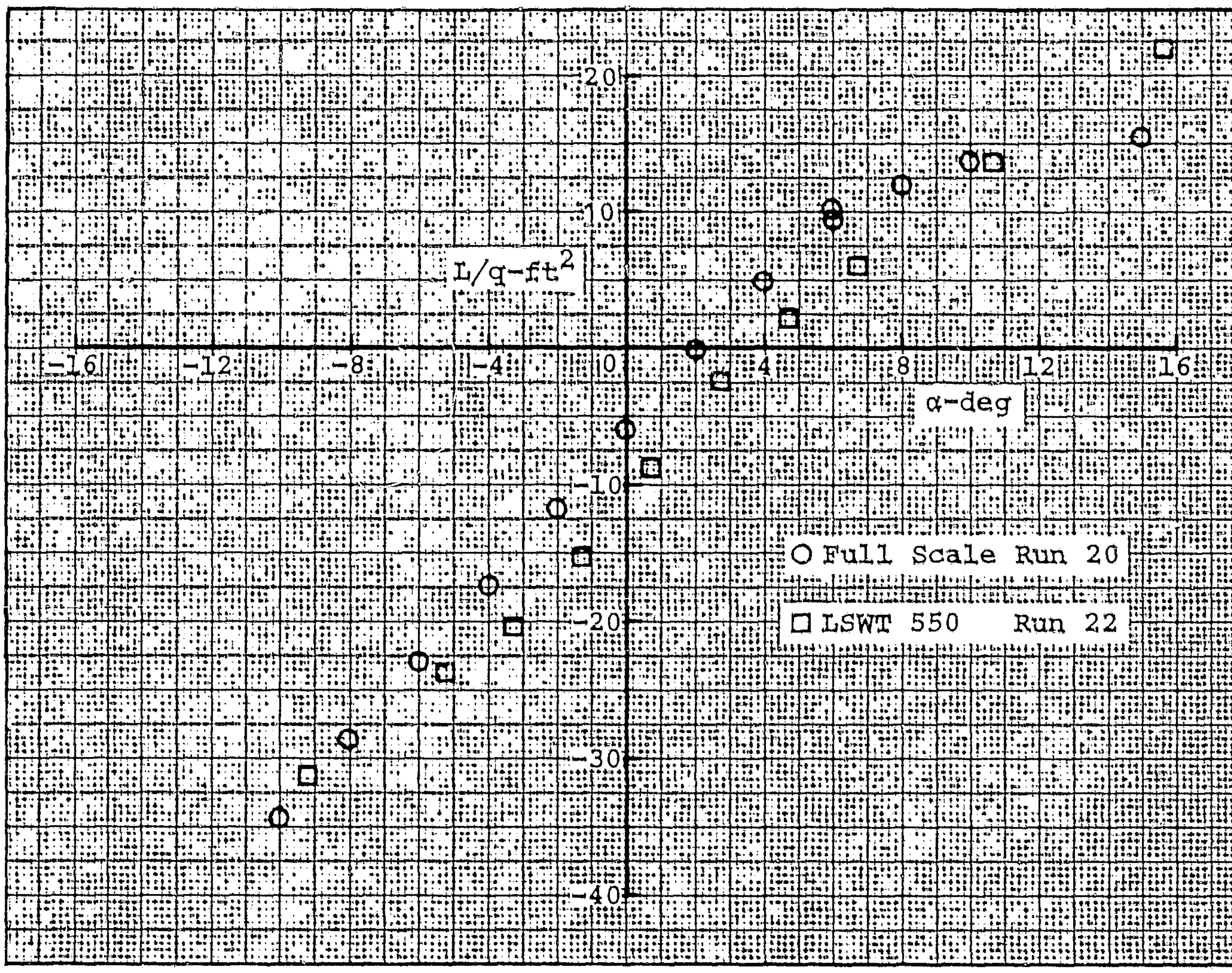


Figure 7. Original Comparison of Lift Characteristics in Pitch for Helicopter

ORIGINAL PAGE IS
OF POOR QUALITY

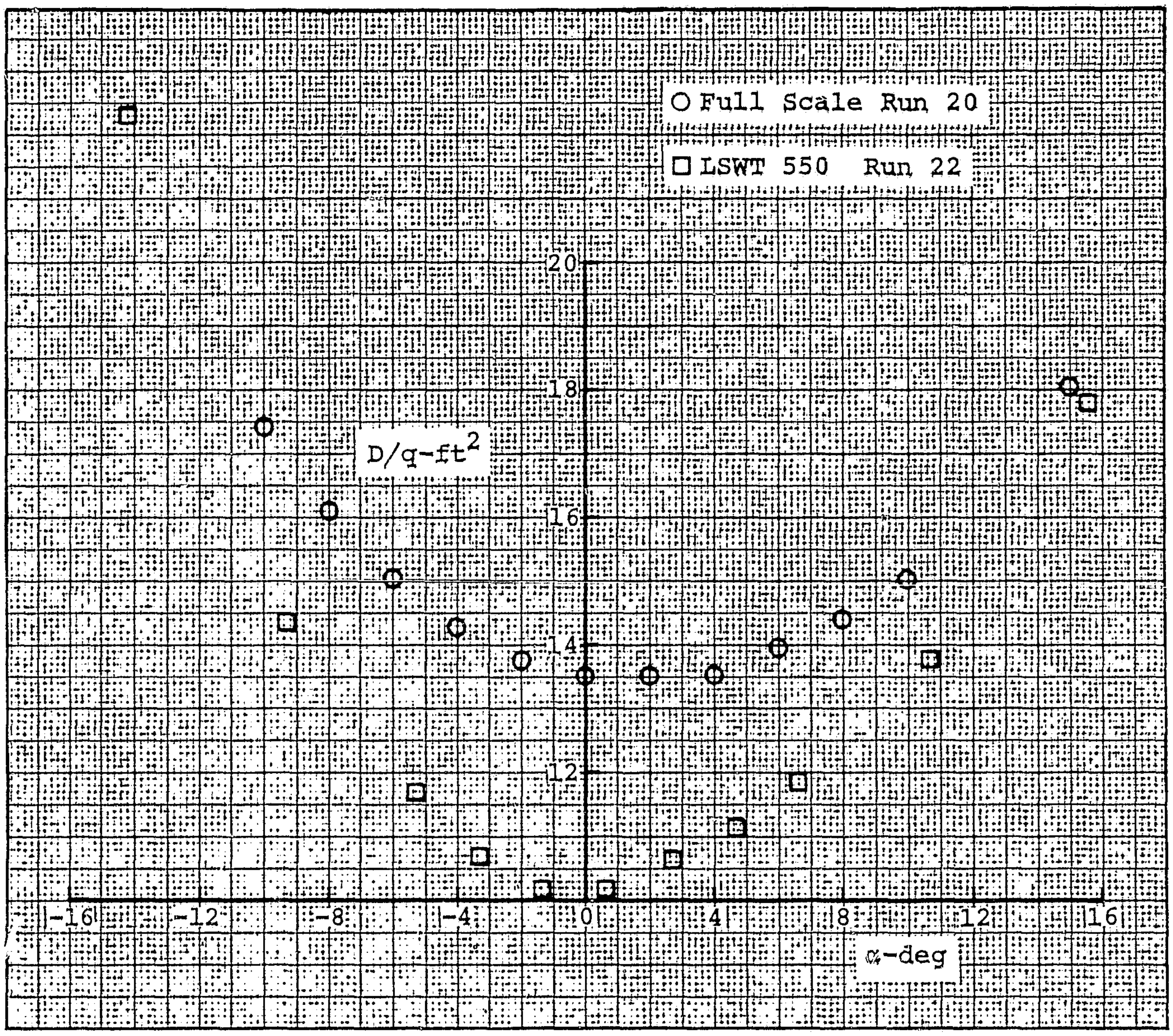


Figure 8. Original Comparison of Drag Characteristics in Pitch for Helicopter

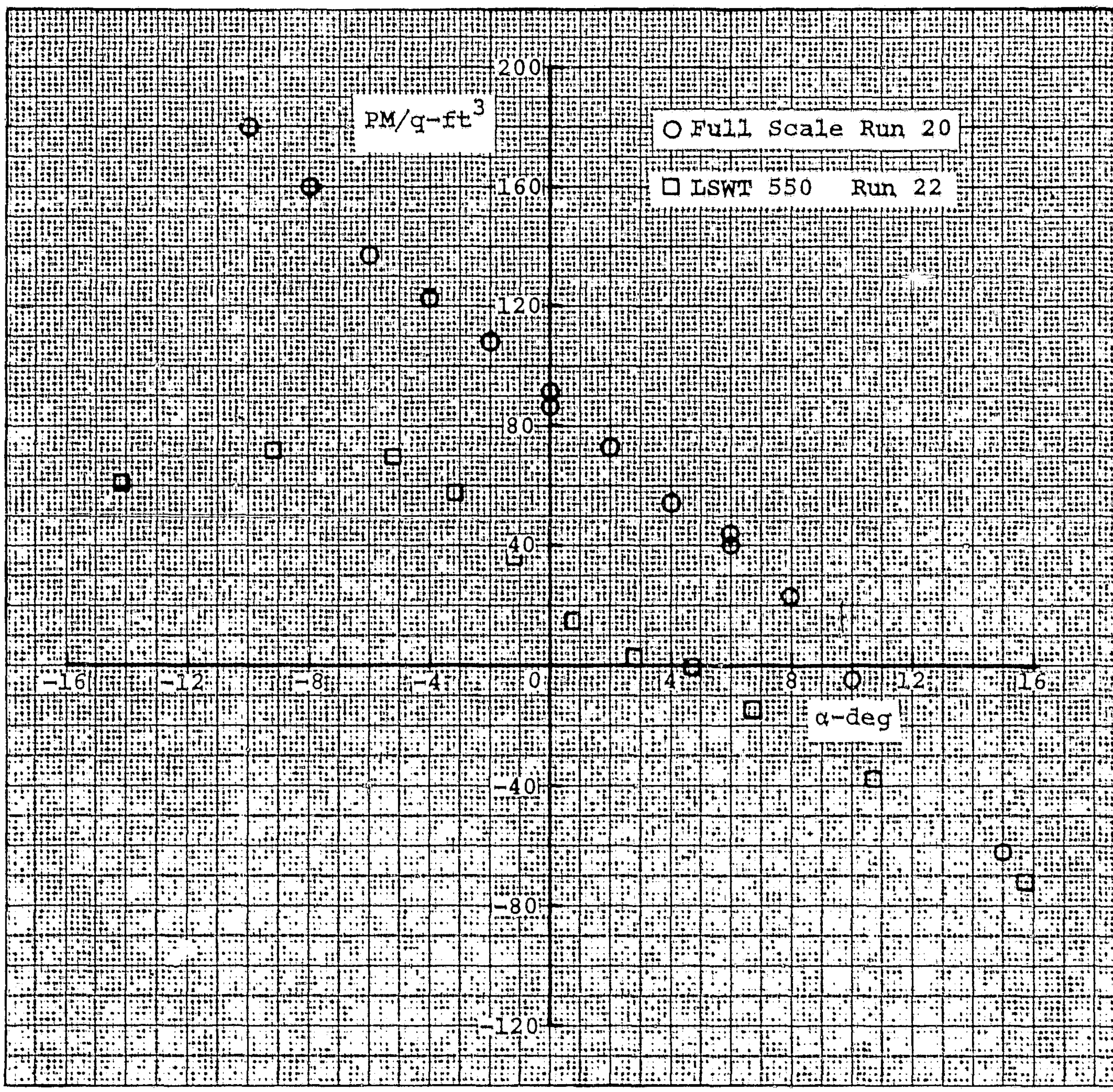


Figure 9. Original Comparison of Pitching Moment Characteristics in Pitch for Helicopter

ORIGINAL PAGE IS
OF POOR QUALITY

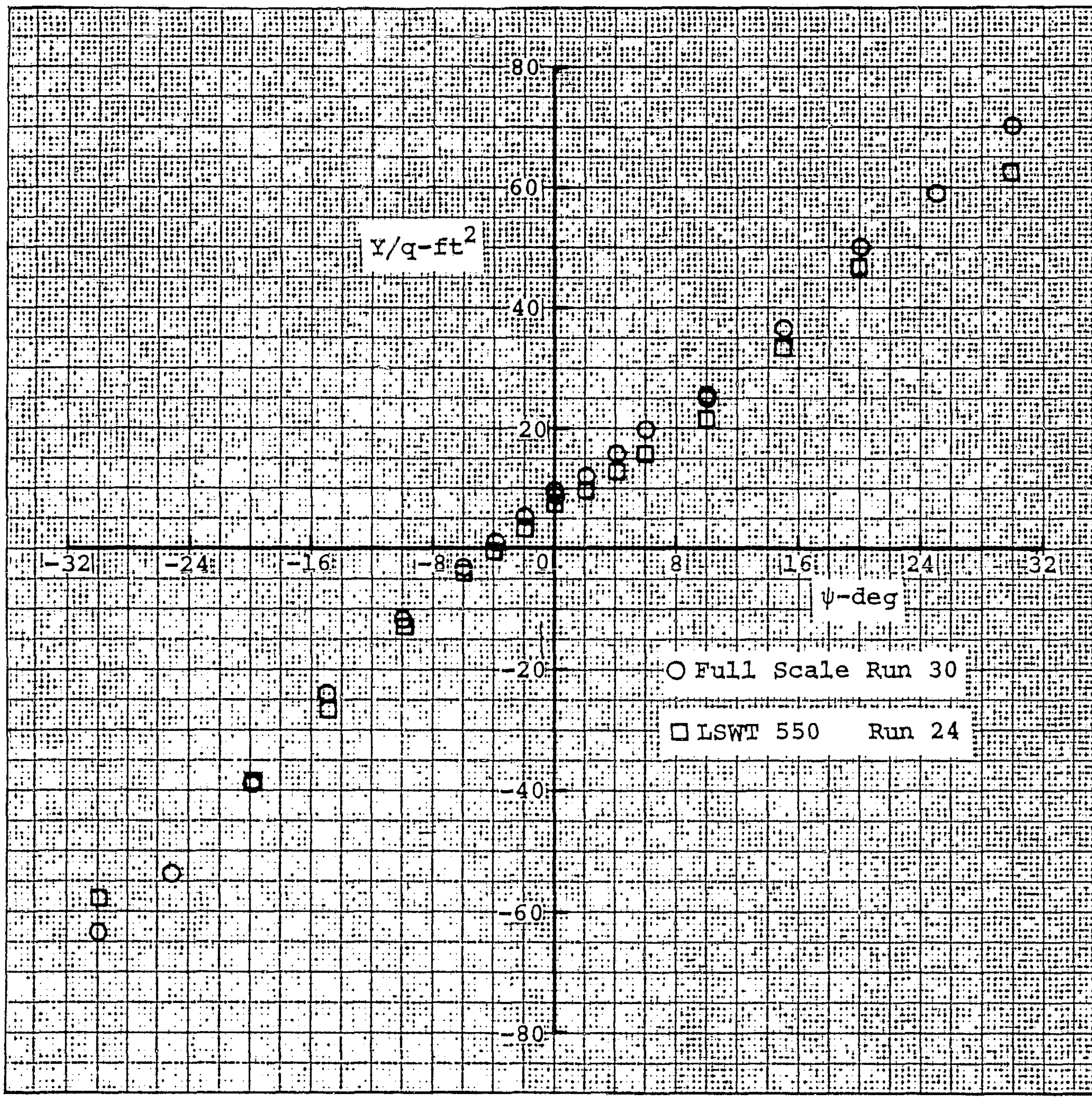


Figure 10. Original Comparison of Side Force Characteristics in Yaw for Helicopter

ORIGINAL PAGE IS
OF POOR QUALITY

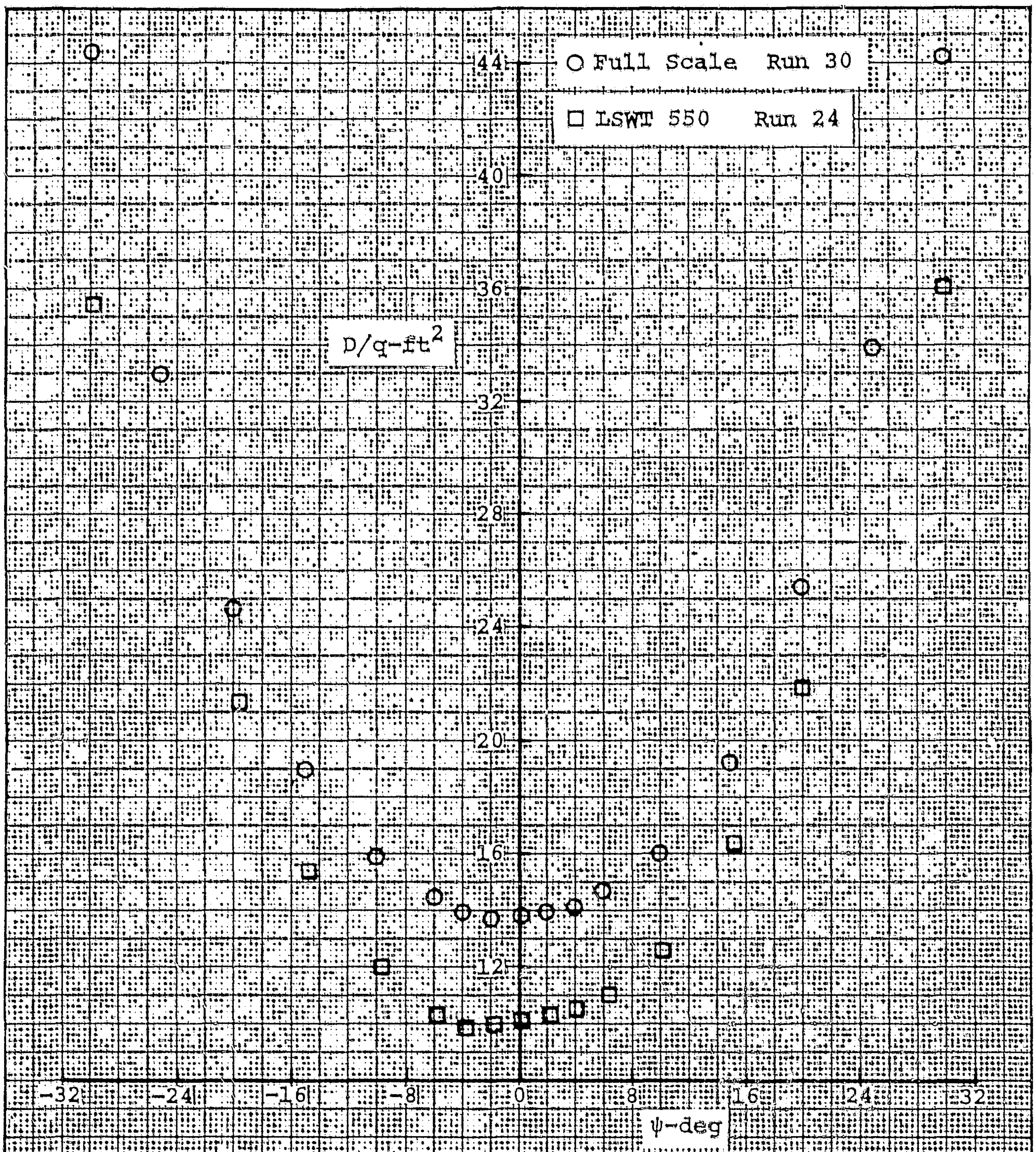


Figure 11. Original Comparison of Drag Characteristics in Yaw for Helicopter

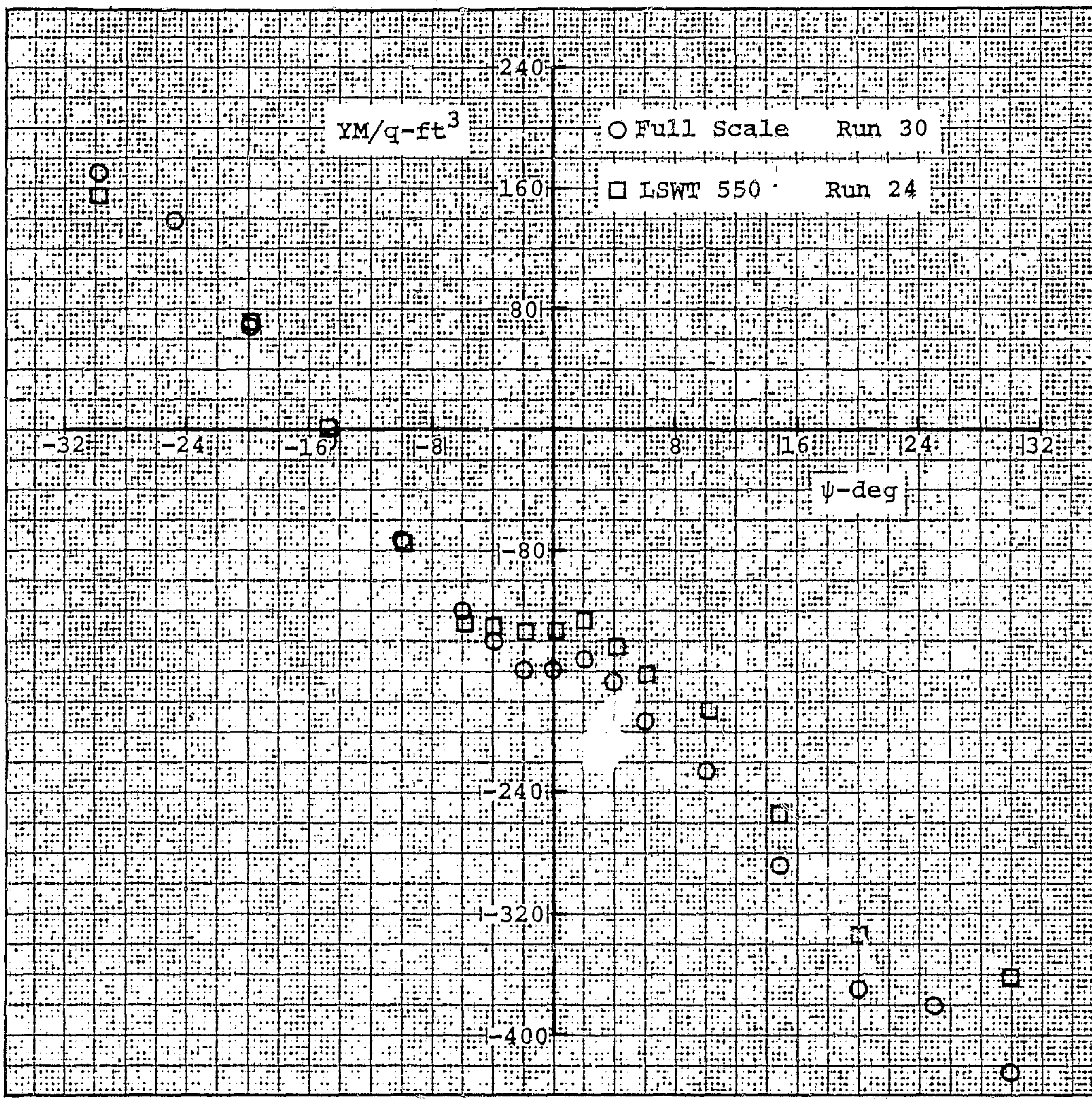


Figure 12. Original Comparison of Yawing Moment Characteristics in Yaw for Helicopter

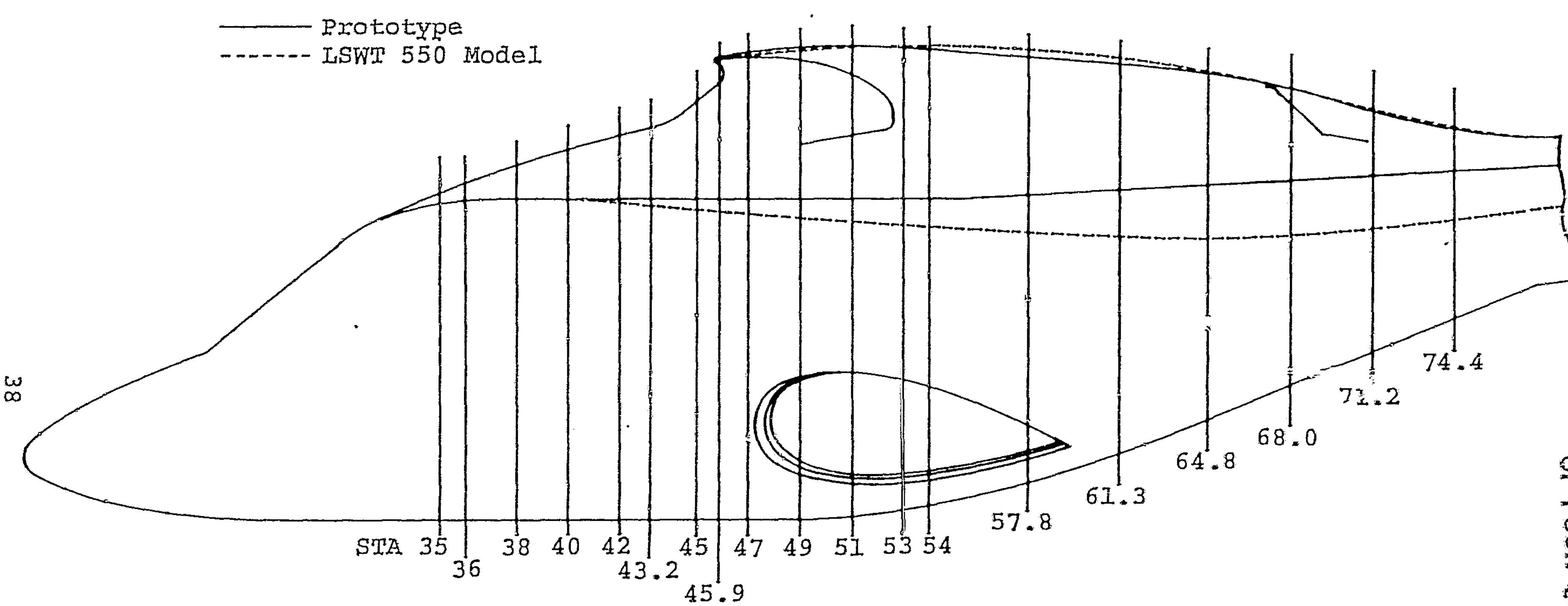


Figure 13. Contour Discrepancies of M222 Model (Sideview)

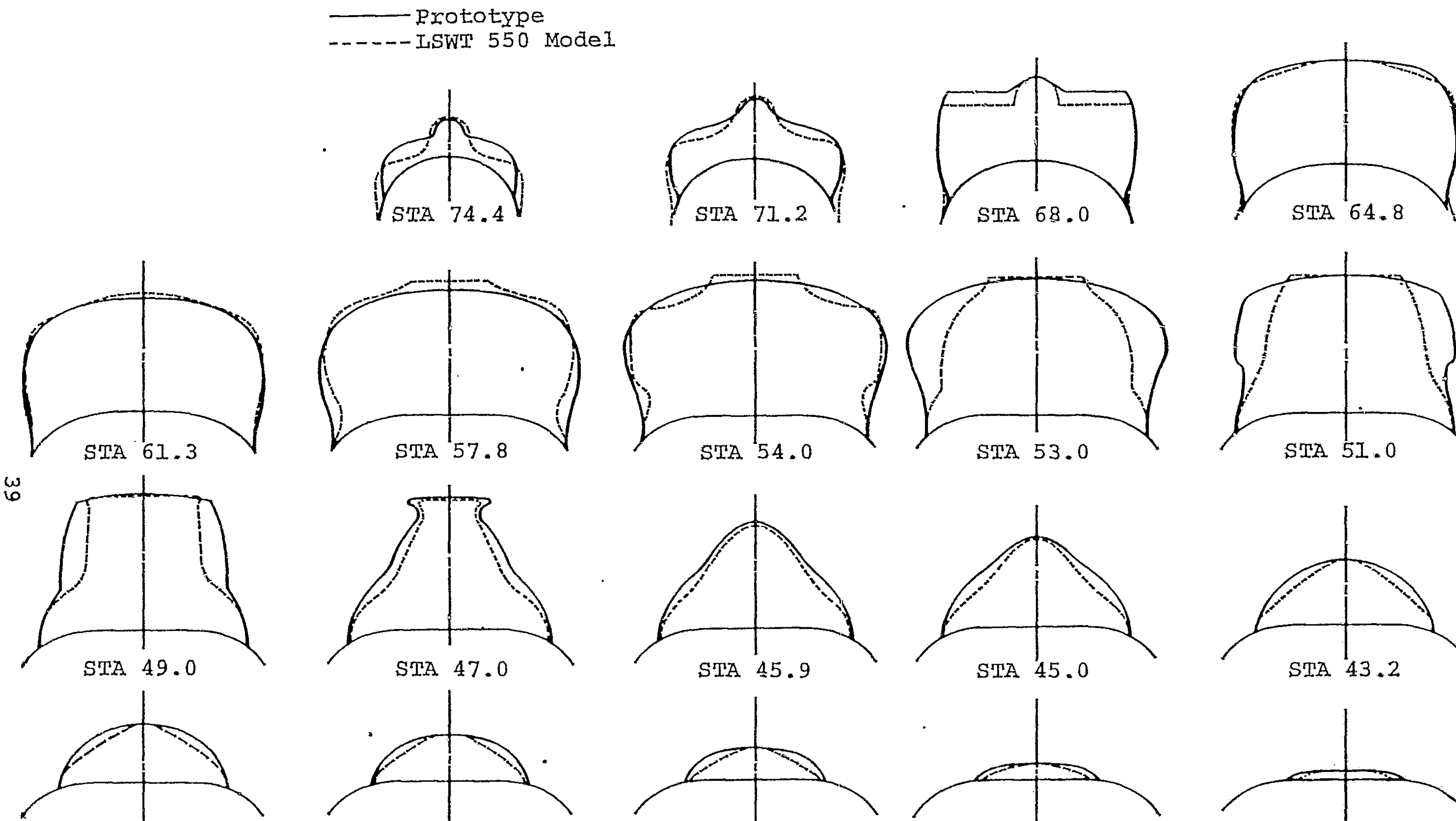


Figure 14. Contour Discrepancies of M222 Model Cowling

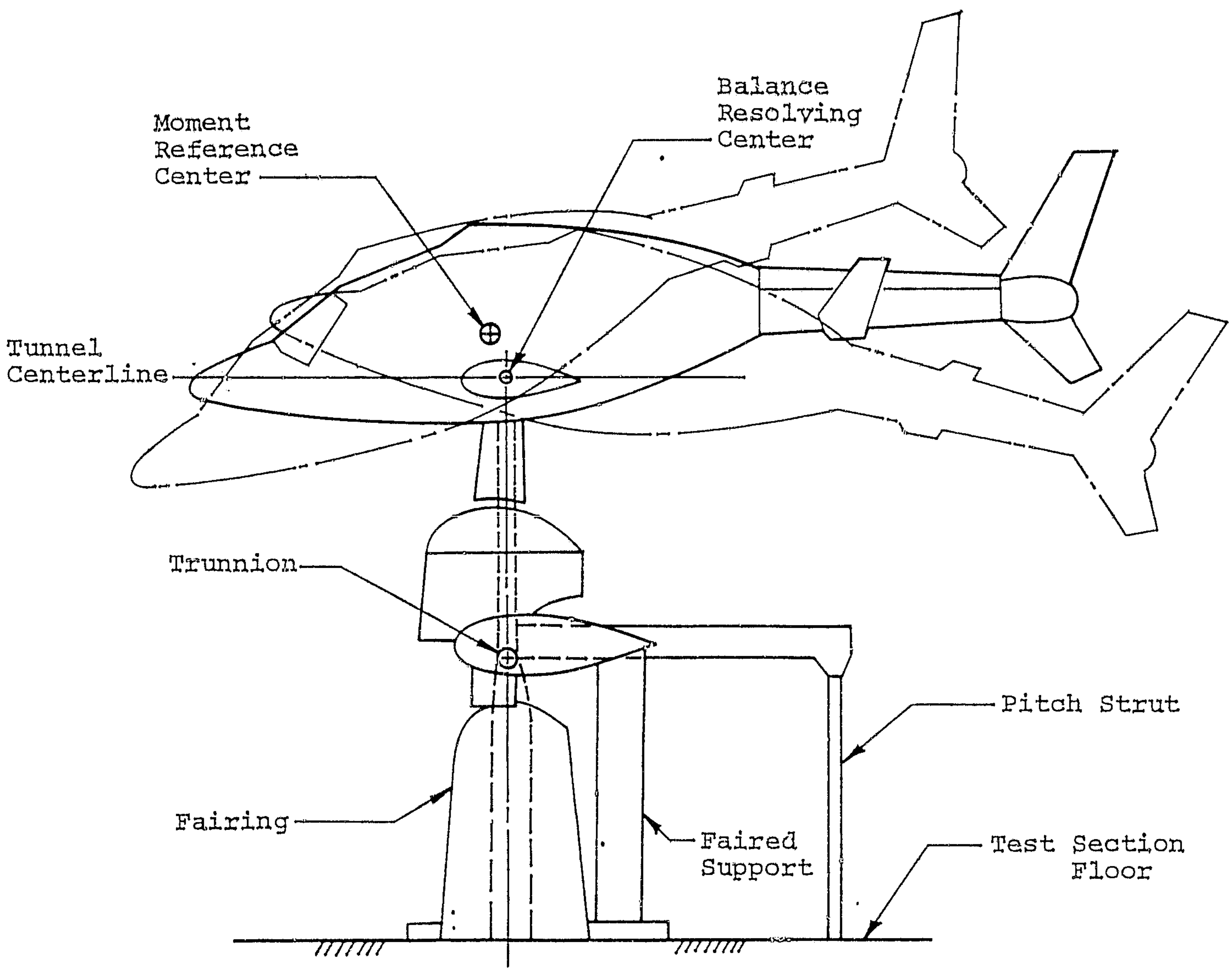


Figure 15. Schematic Drawing of 40 x 80 Mounting

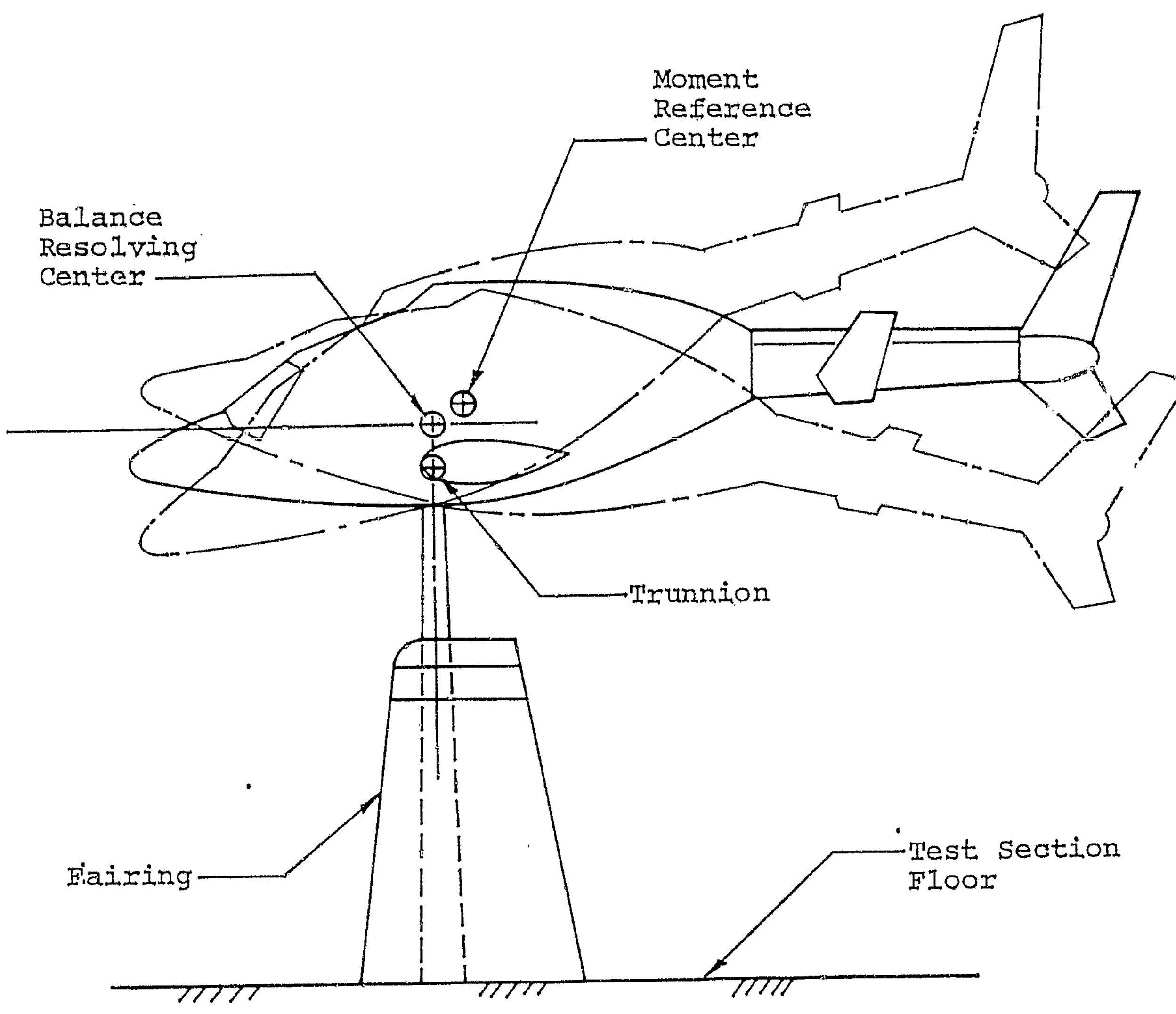
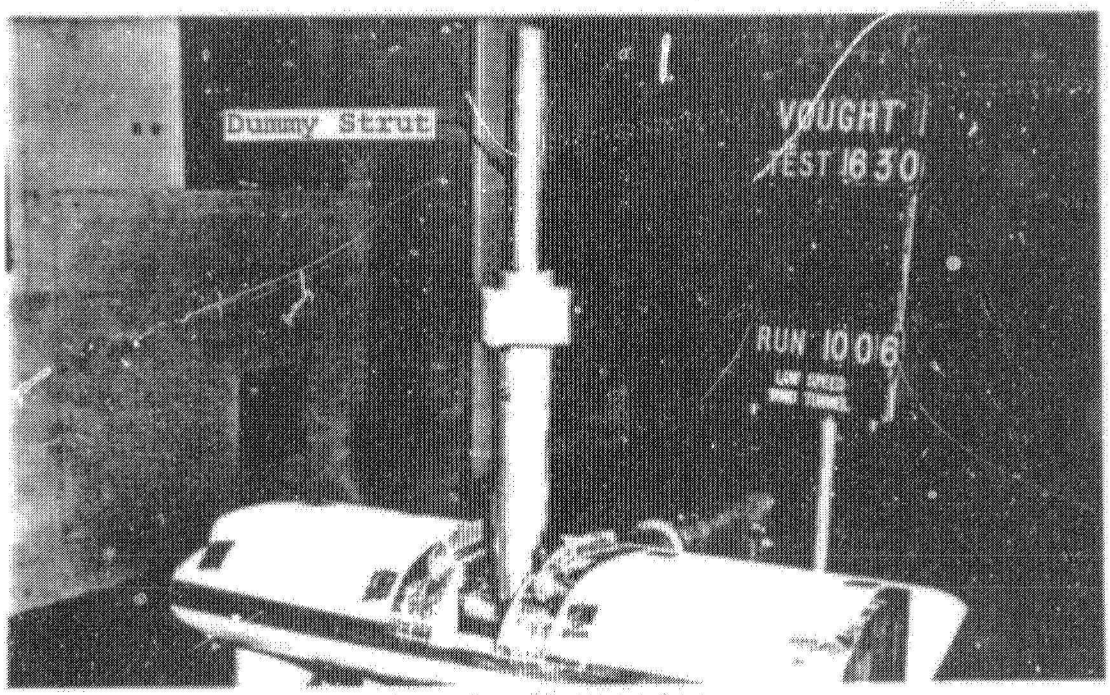
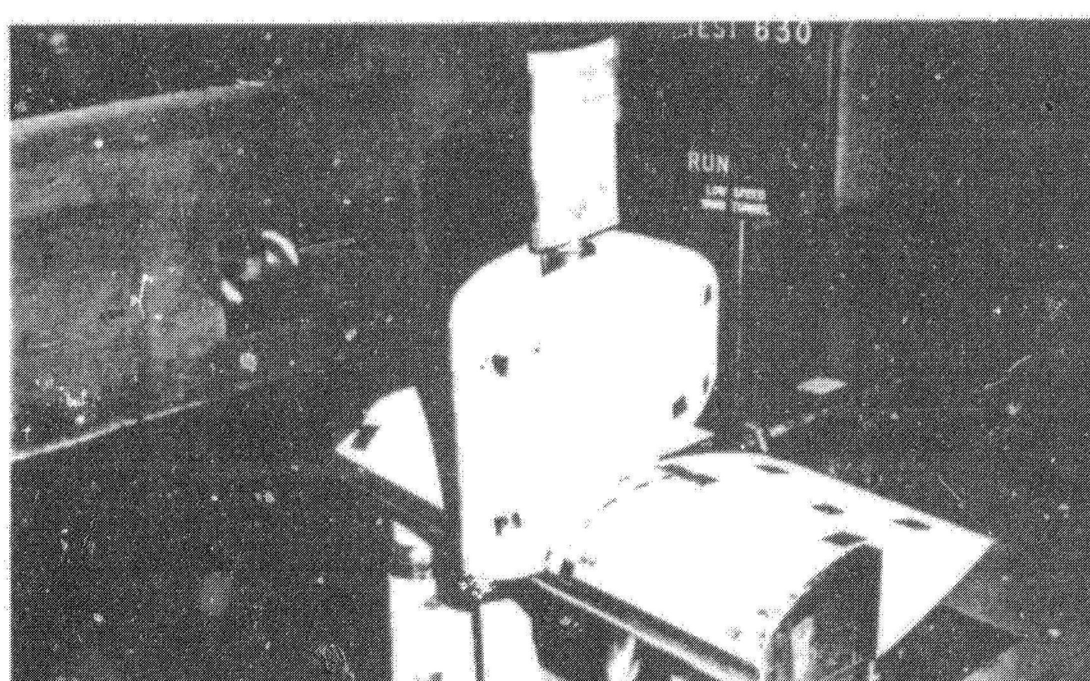


Figure 16. Schematic Drawing of Single Strut Mounting



Yaw Configuration



Pitch Configuration

Figure 17. Three-Point Support Configuration for Yaw and Pitch Run Testing.

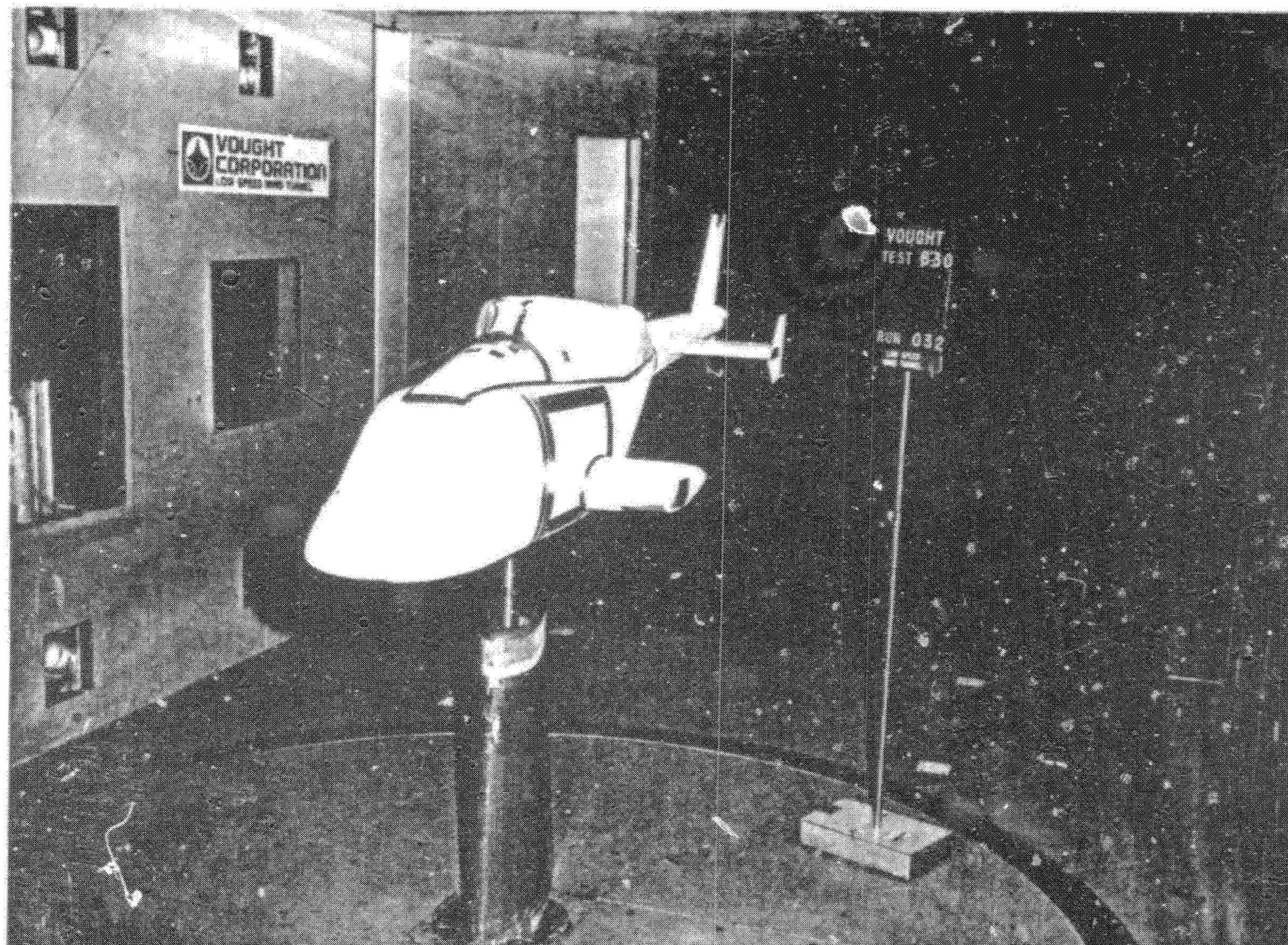


Figure 18. Fifth Scale M222 Model Installed on Single Support.

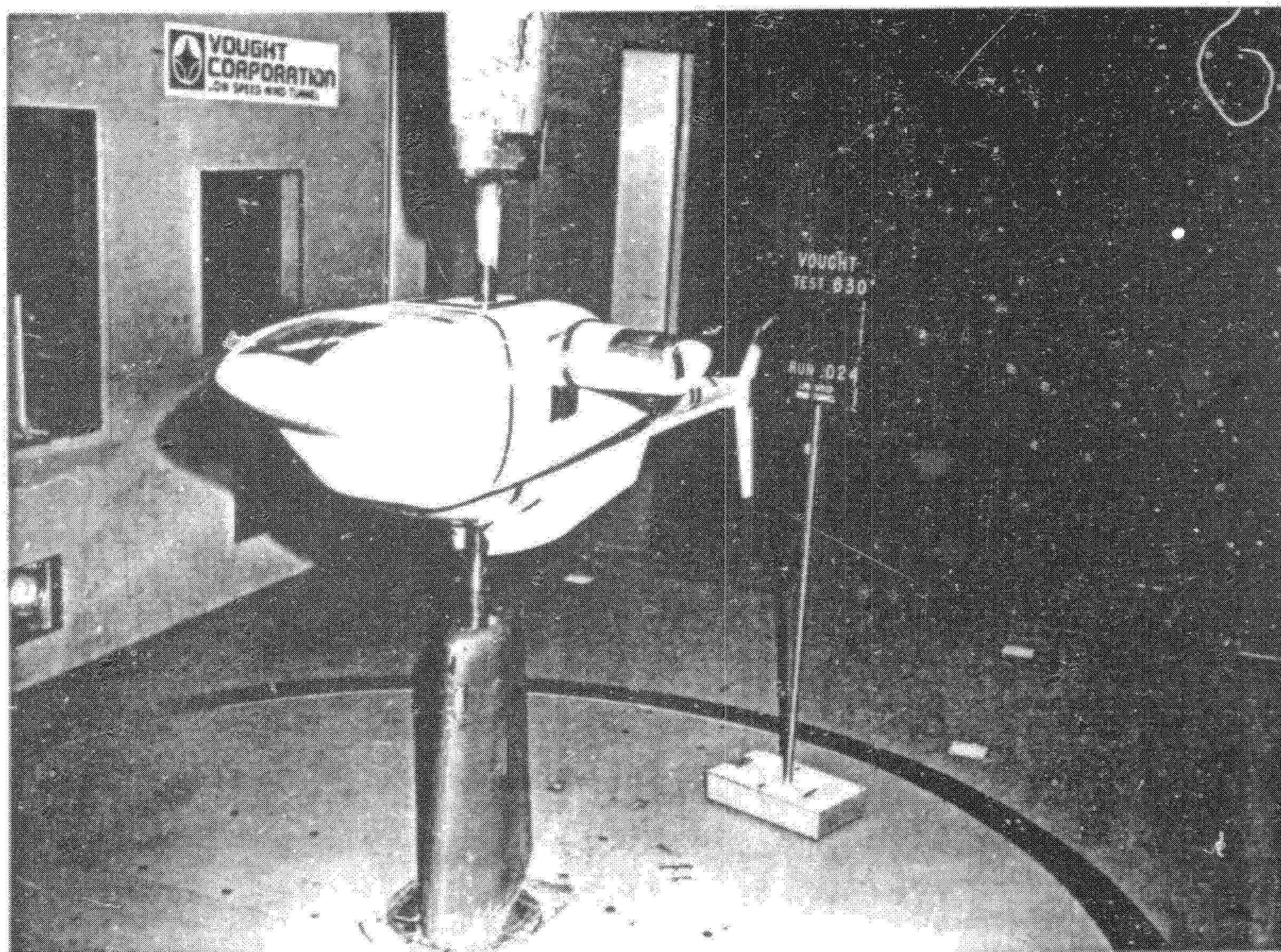


Figure 19. Fifth Scale M222 Model Installed Inverted with Image System

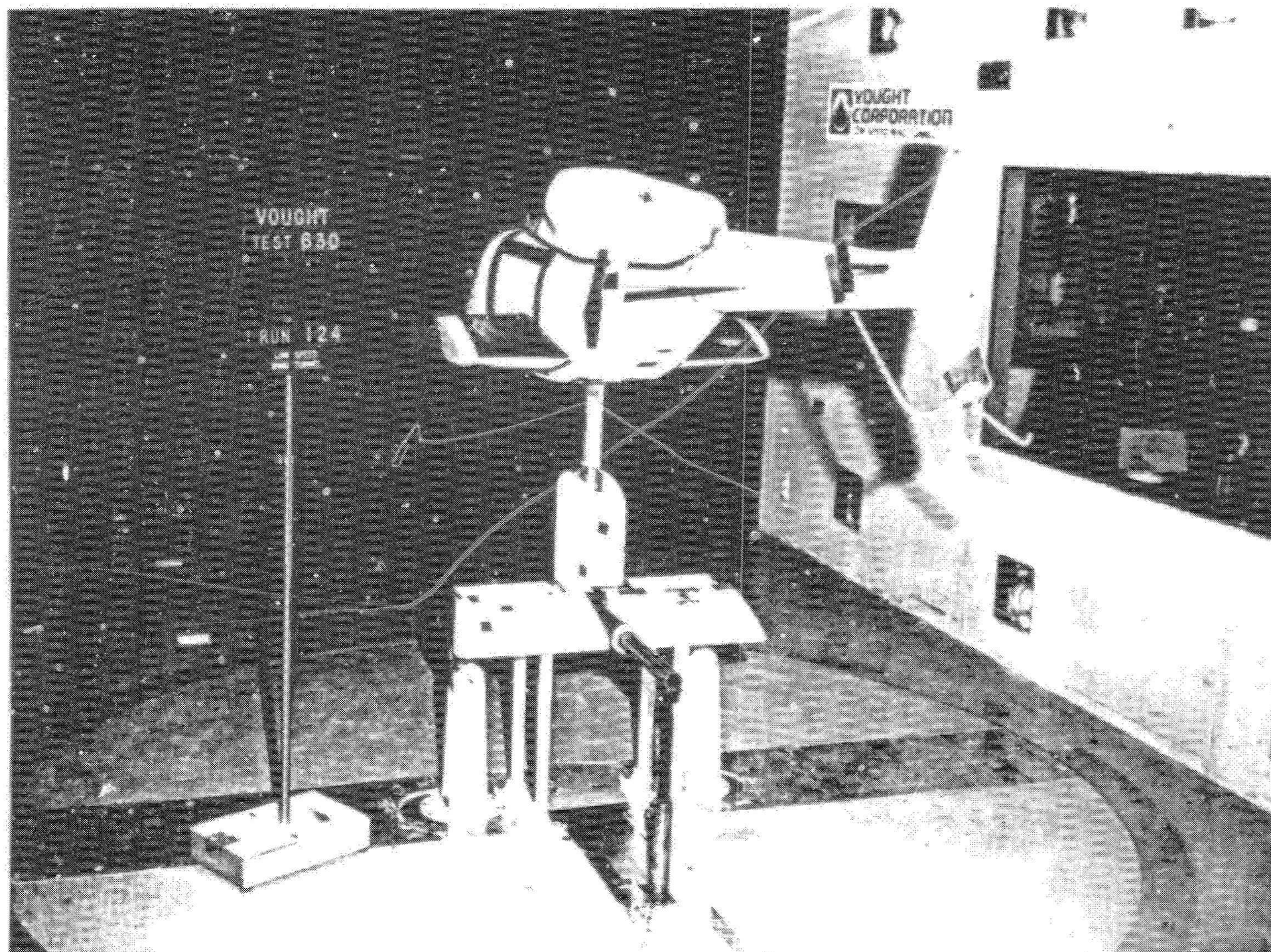


Figure 20. Fifth Scale M222 Model on Three-Point Support (Pitch Run Configuration).

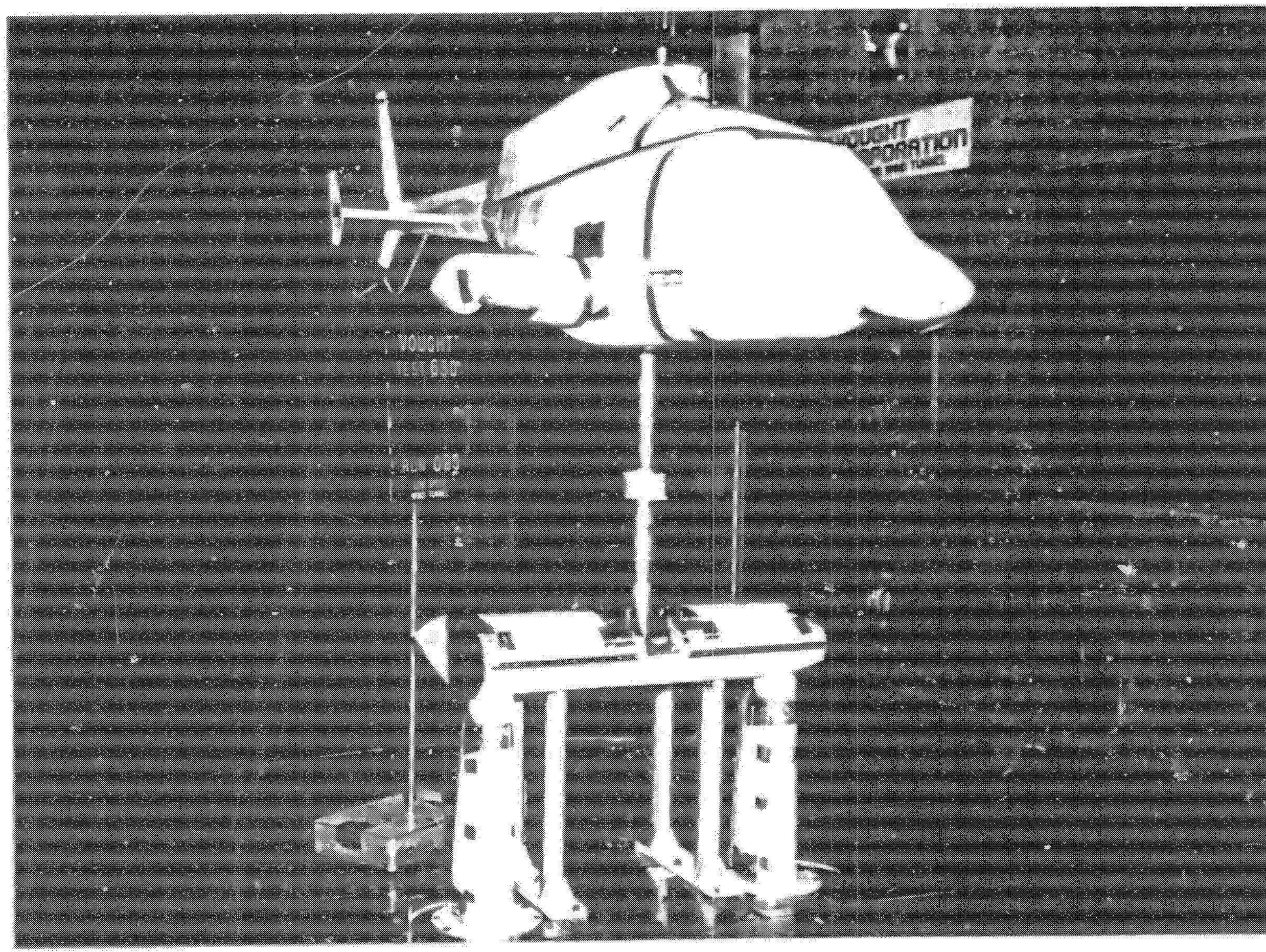
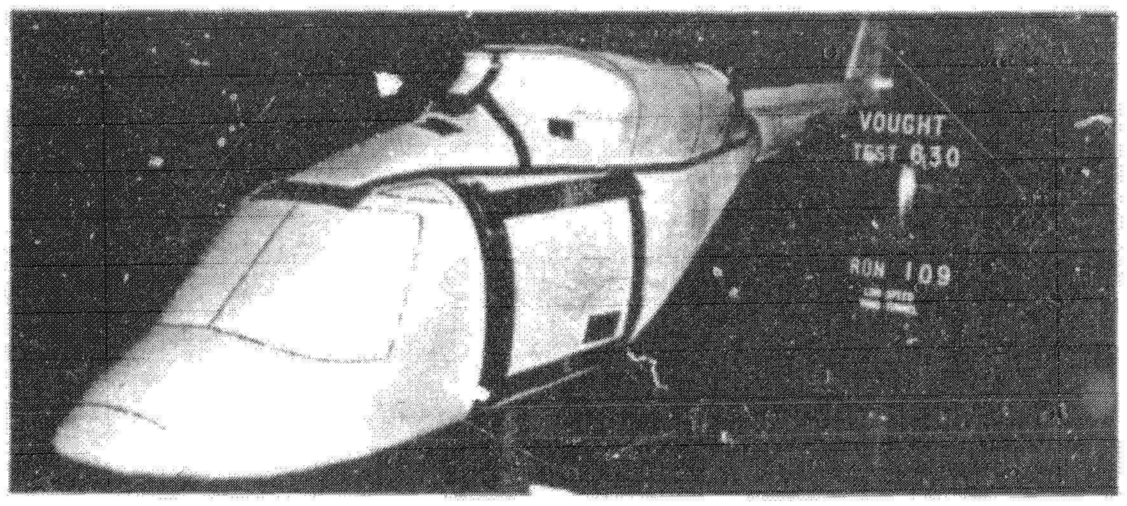


Figure 21. Fifth Scale M222 Model on Three-Point Support (Yaw Run Configuration)

ORIGINAL PAGE
BLACK AND WHITE PHOTOGRAPH

ORIGINAL PAGE
BLACK AND WHITE PHOTOGRAPH

B Smooth fuselage and tail rotor.



C Prototype cowling.

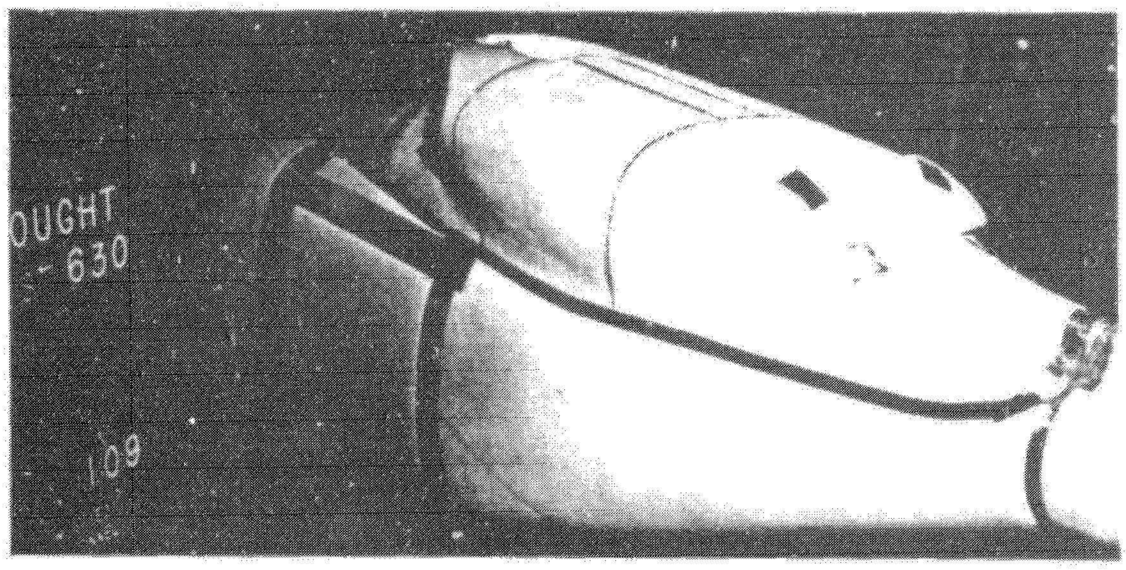
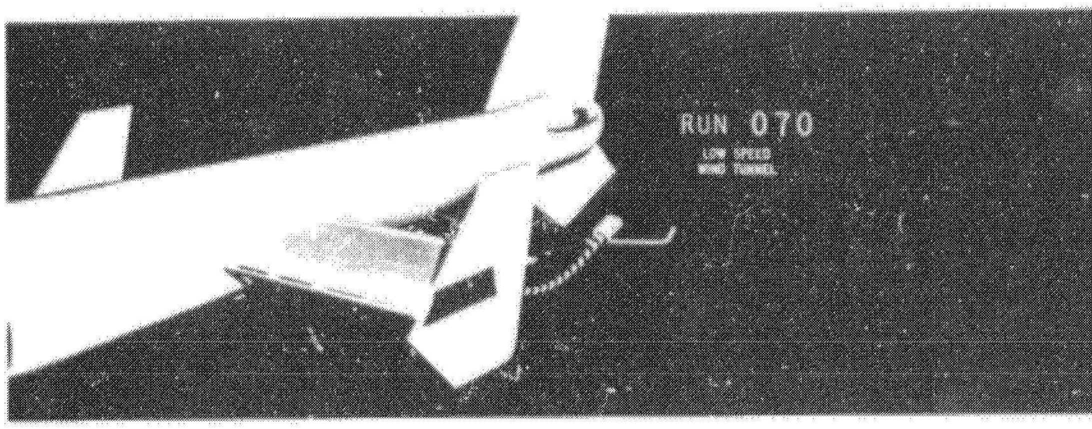


Figure 22. Pictorial Nomenclature.

ORIGINAL PAGE
BLACK AND WHITE PHOTOGRAPH

E Endplates on horizontal stabilizer. Endplates were canted 3° nose right.



E_1 Exhaust ejector fairing.

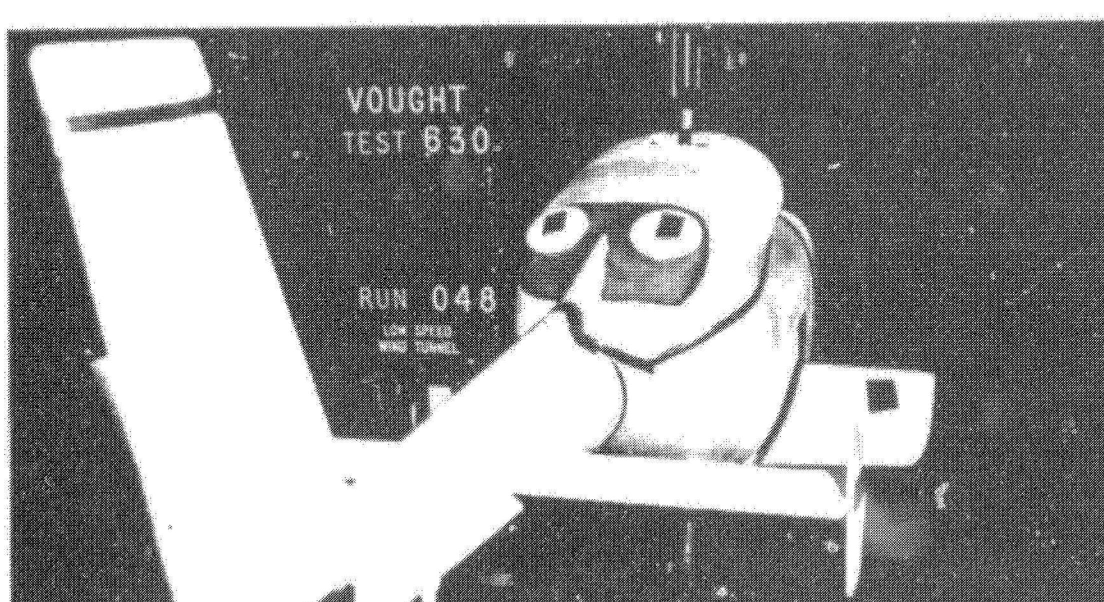
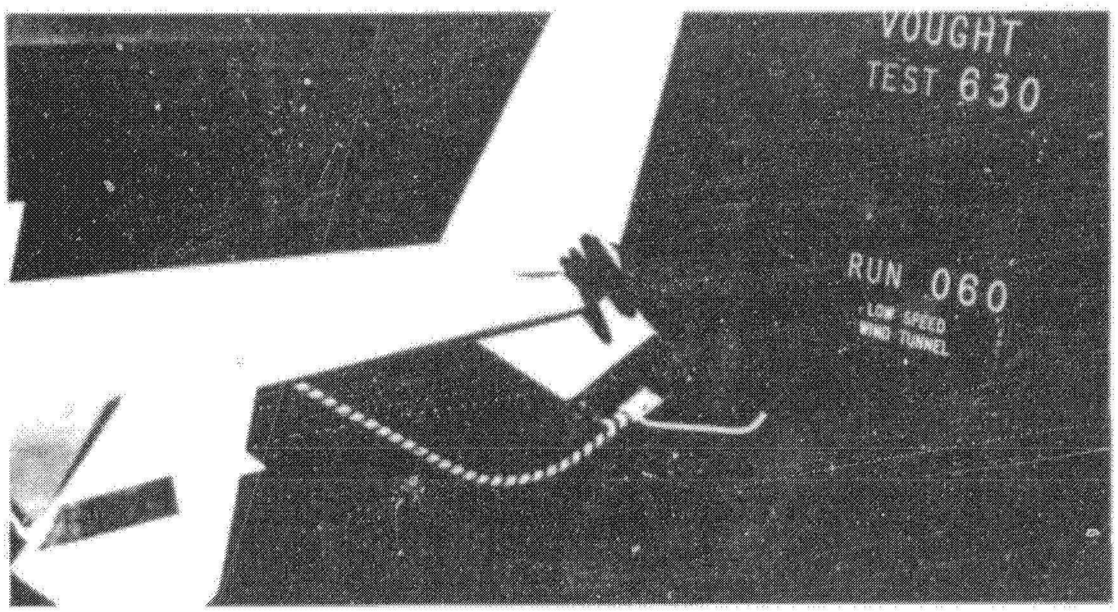


Figure 22. Continued.

G Tail rotor guard antenna.



H^{+} NACA 0015 horizontal stabilizer (with T.E. tab) set at -7° incidence. A (+) superscript indicates that a leading edge slat was installed on the stabilizer.

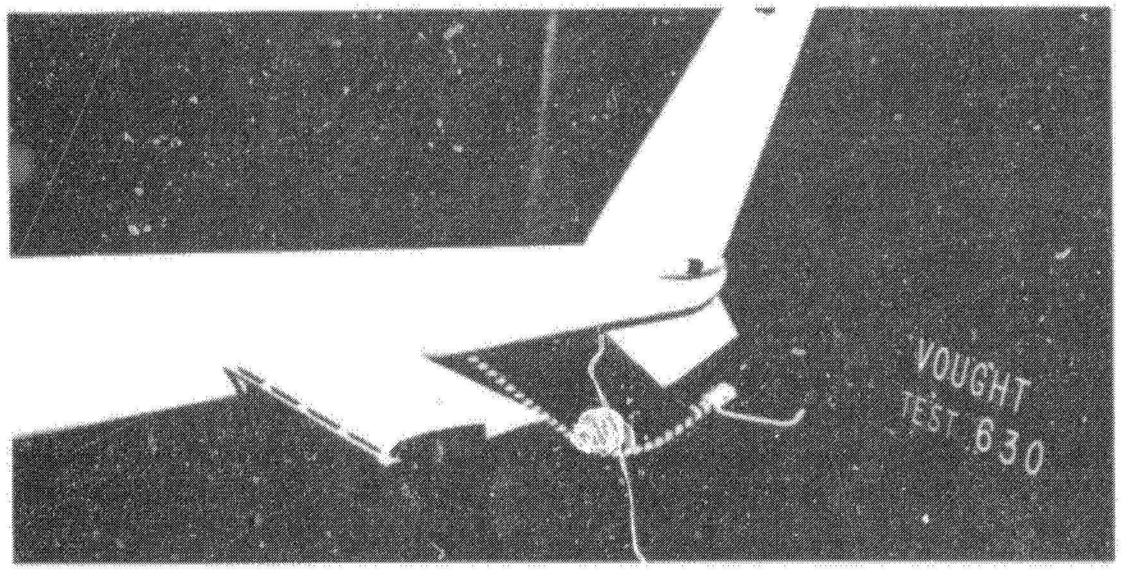
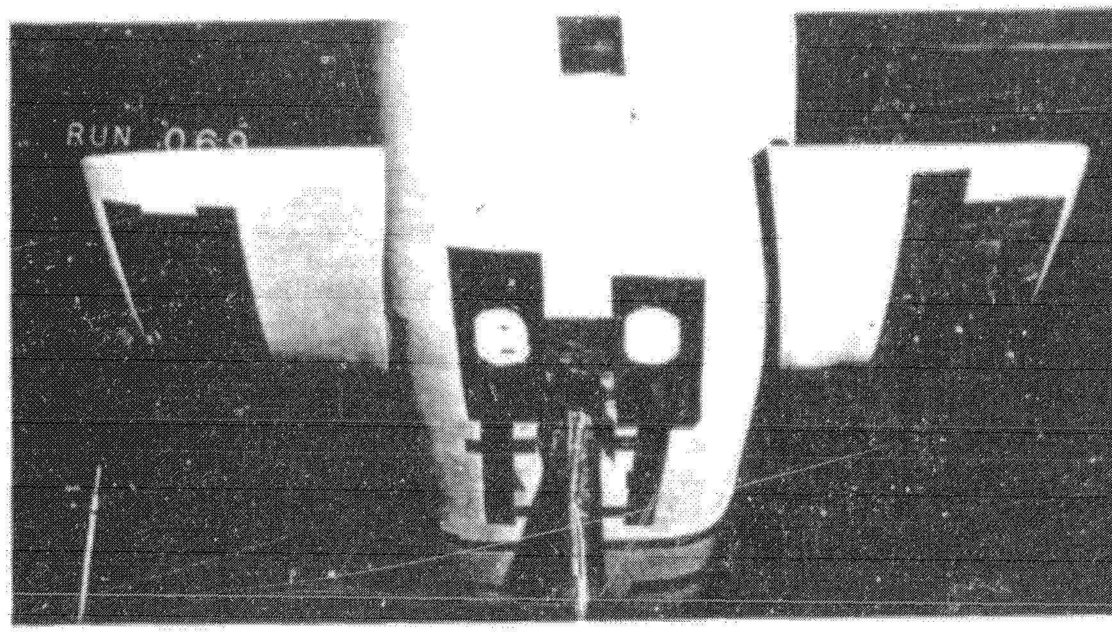


Figure 22. Continued.

ORIGINAL PAGE
BLACK AND WHITE PHOTOGRAPH

M_1 Main landing gear retracted with doors closed.



M_2 Main landing gear retracted with no doors.

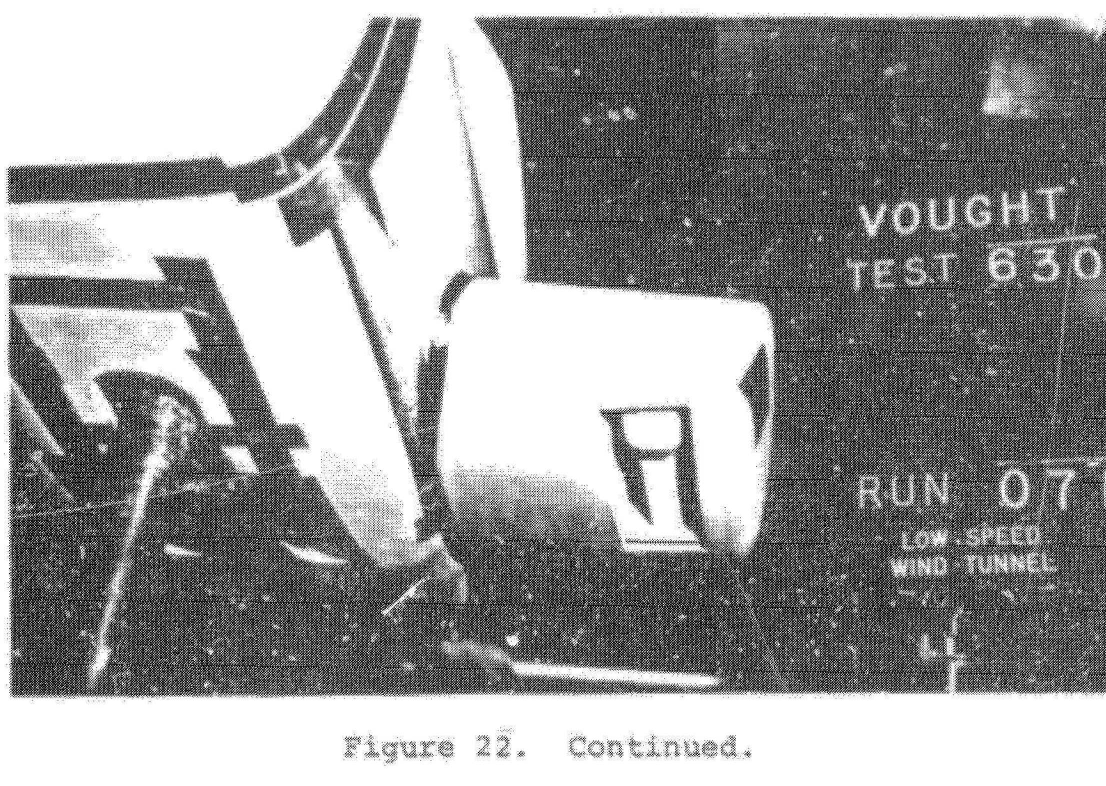
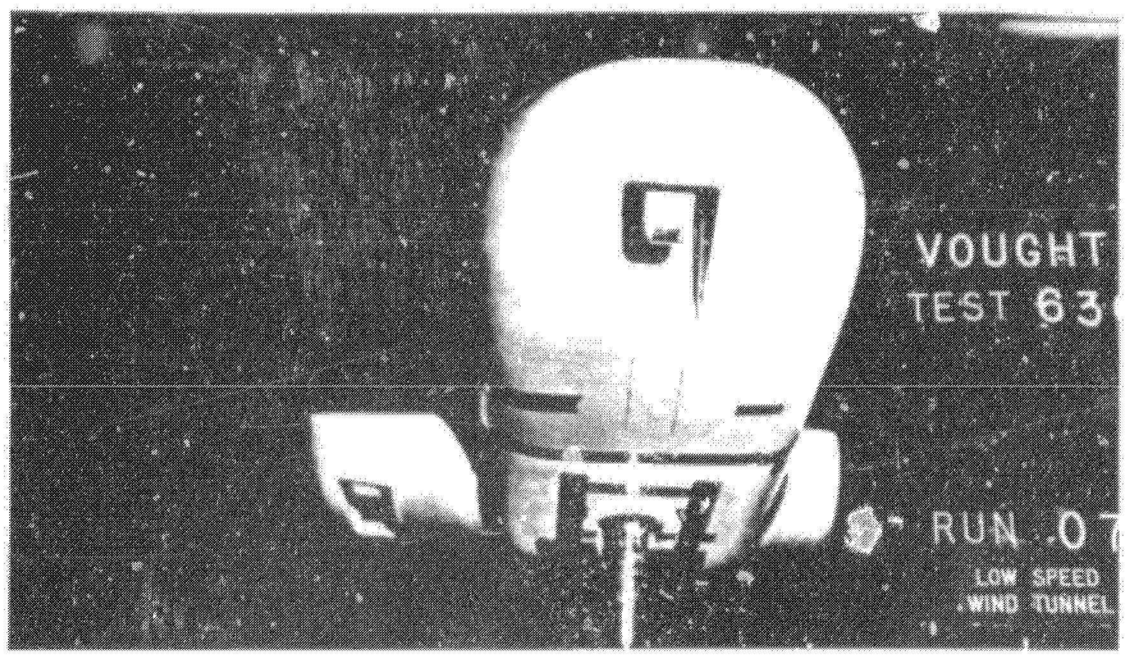


Figure 22. Continued.

N_1 Nose gear retracted with doors closed

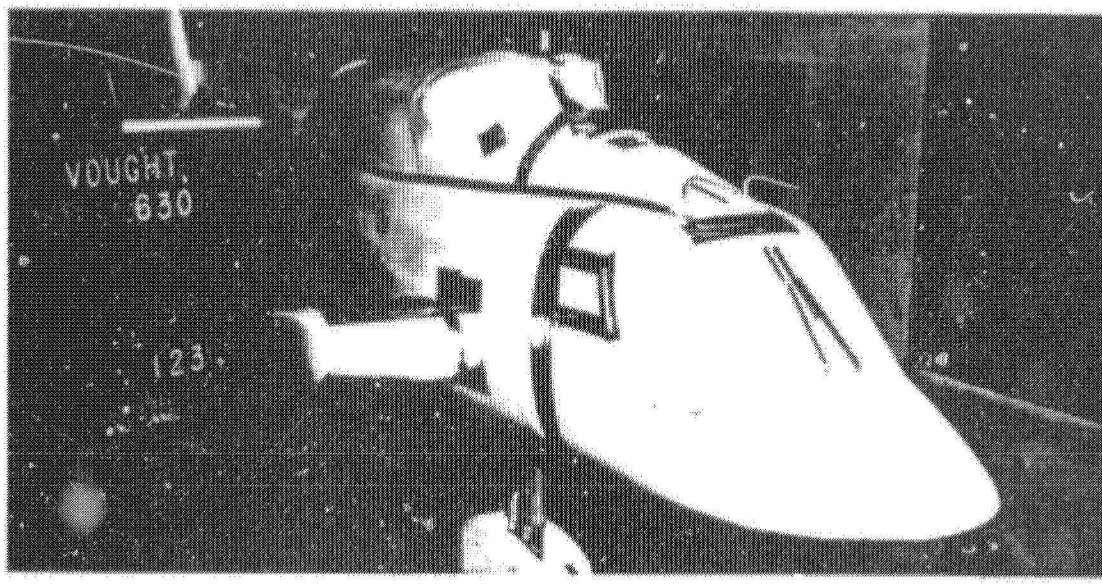


N_2 Nose gear retracted with no doors (shown)

O_4 All screens on cowling closed. See photograph of "C" configuration.

Figure 22. Continued.

P_2 Production protuberances: pitot tubes, windshield wipers and pilot's sliding window on L. H. side.



P_3 Fuel sump recesses covered.

P_4 Fuel sump recesses open.

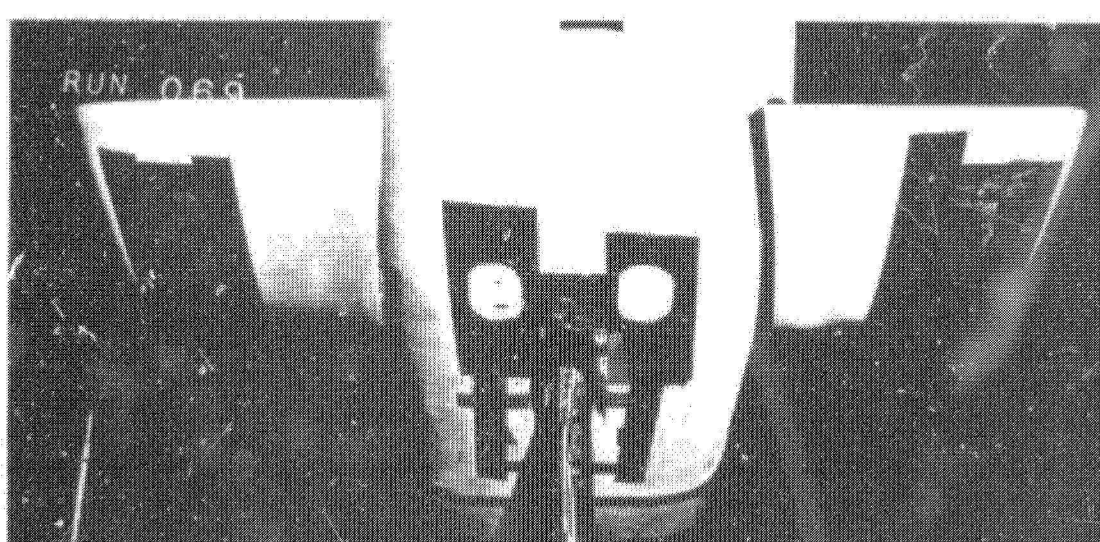
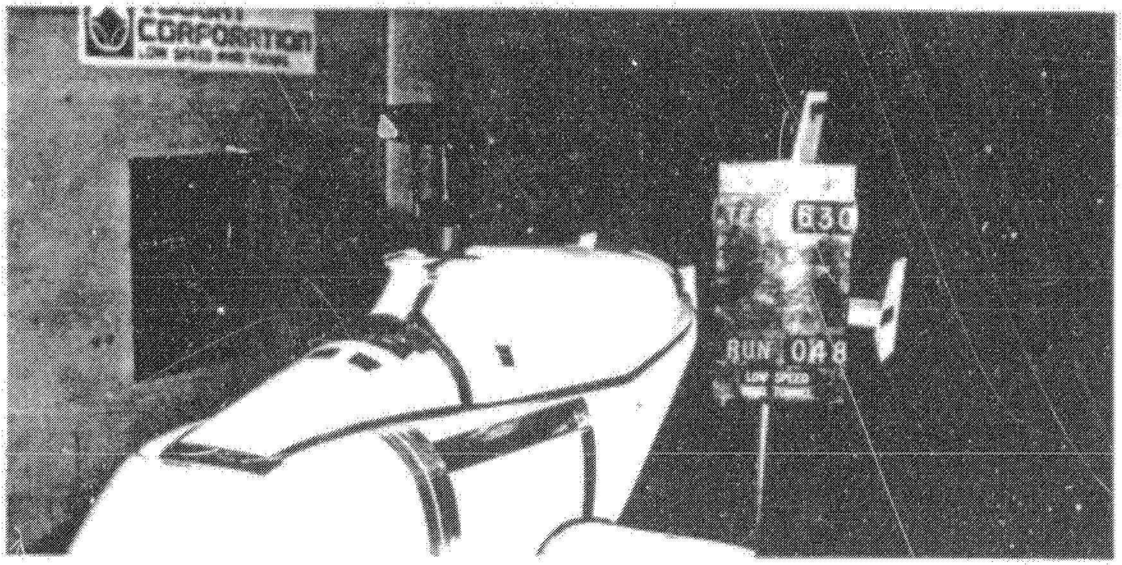


Figure 22. Continued.

Q Plugged inlet and exhaust ejectors on prototype cowling. See photograph of "Q" configuration.

R_1^{60} Main rotor hub; mast controls set at 60° azimuth (fore and aft is 0°).



T Tail rotor hub, mast; controls set at 60° azimuth.

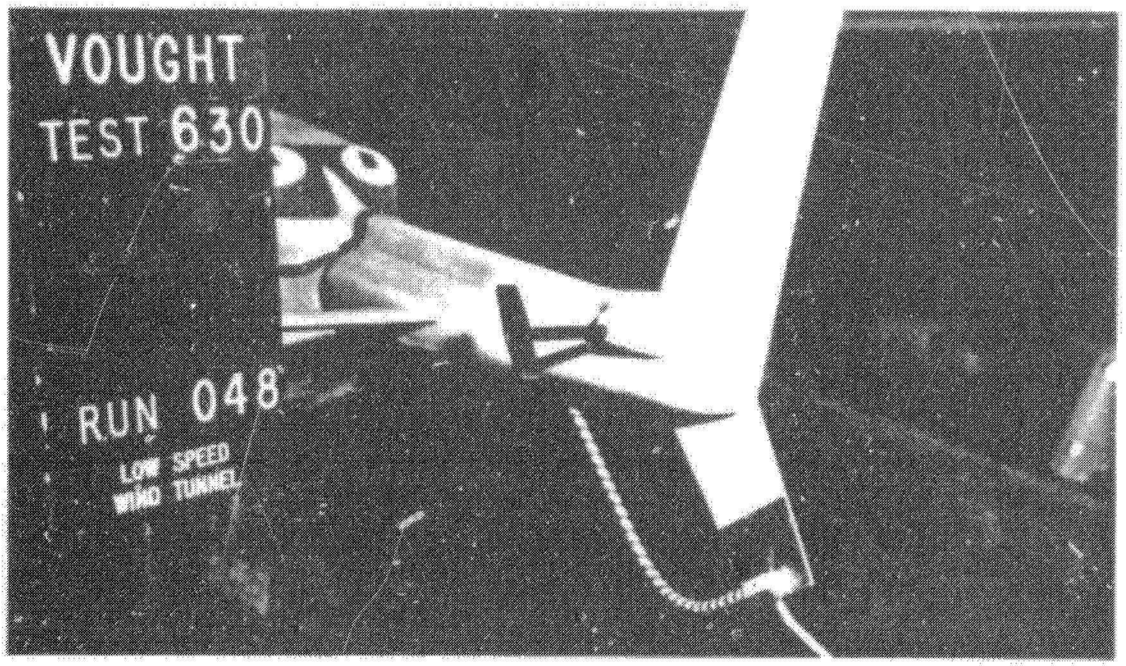
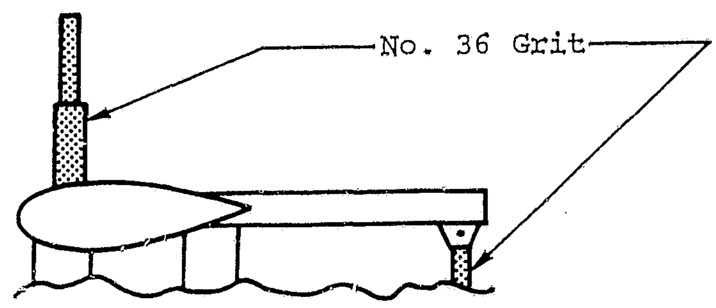


Figure 22. Continued.

$(TS)_1$ No. 36 carborundum grit on forward and rear struts of Ames type supports.



$(TS)_2$ Transition strips of No. 50 carborundum grit applied in 0.125-inch wide bands to the model as follows:

a) nose
b) windshield outline
c) outline of engine inlets on cowl
d) (2) bands on cowl aft of inlets
e) top of cowl parallel to airstream
f) both sides of vertical fin 5% aft of L.E.

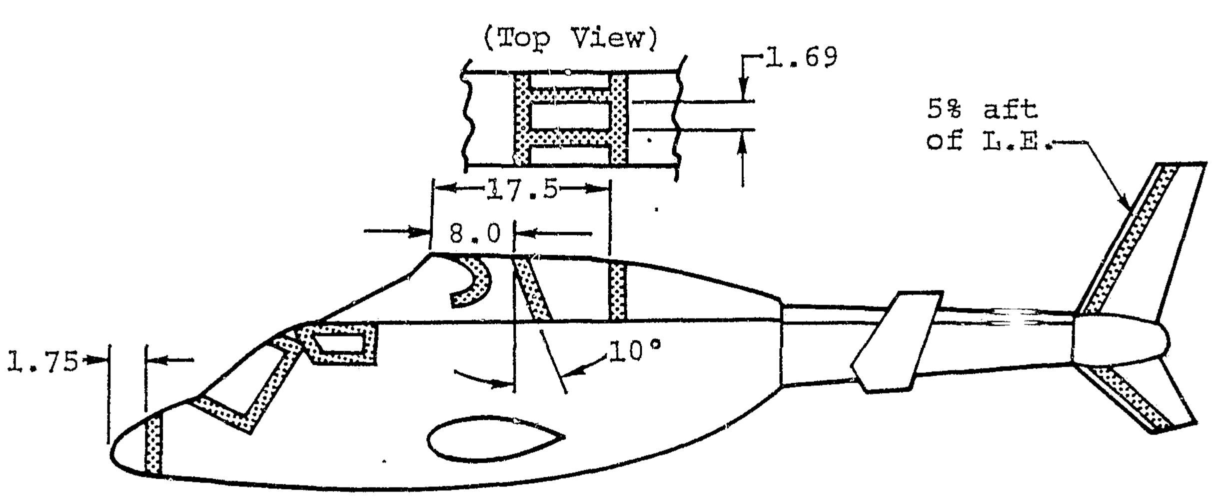
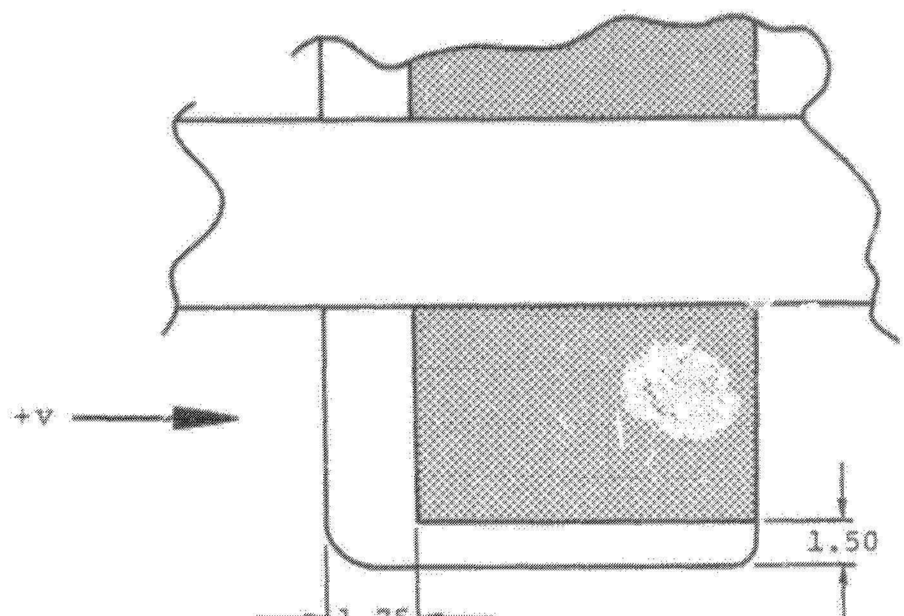


Figure 22. Continued.

$(TS)_3$ $(TS)_2$ plus wing-walks made of No. 80 sandpaper on upper surface of both wings.



(Top View)

$(TS)_4$ $(TS)_2$ plus wing-walks made of No. 180 sandpaper on upper surface of both wings as for $(TS)_3$.

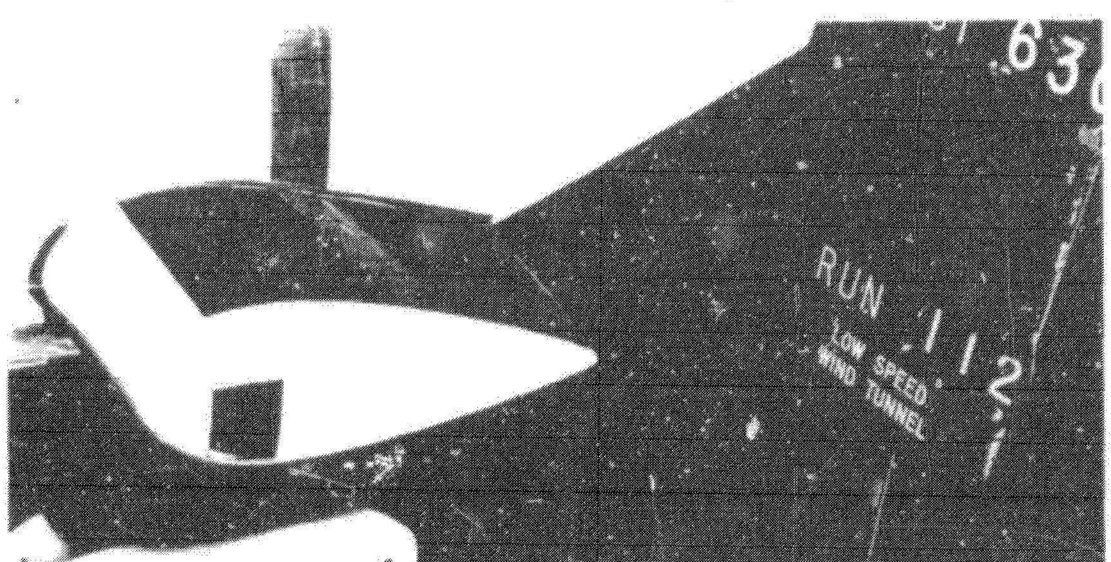


Figure 22. Continued.

$(TS)_5$ Configuration $(TS)_4$ with addition of No. 50 carborundum grit on leading edge of endplates extending back approximately 0.20 inches from the leading edge.

$(TS)_6$ Configuration $(TS)_5$ with 0.10-inch wide strip of No. 50 carborumdum grit applied to lower surface of horizontal stabilizer 0.25 inches back from the leading edge.

$(TS)_7$ Configuration $(TS)_5$ with grit removed from vertical fin.

V_1 Vertical fin with stinger and 15-inch cap (extends to W.L. 156).

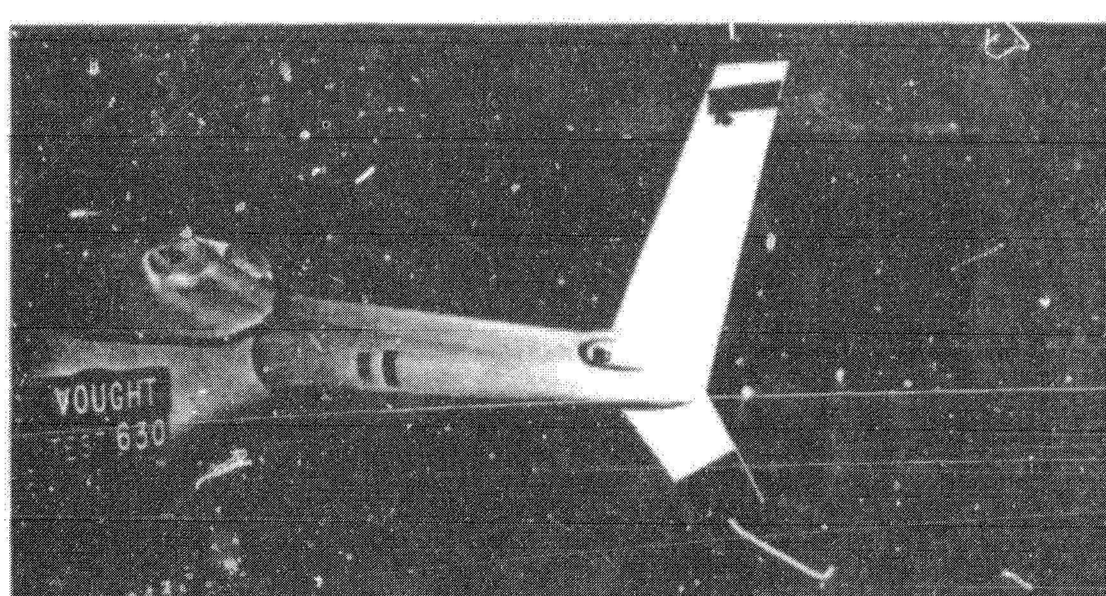
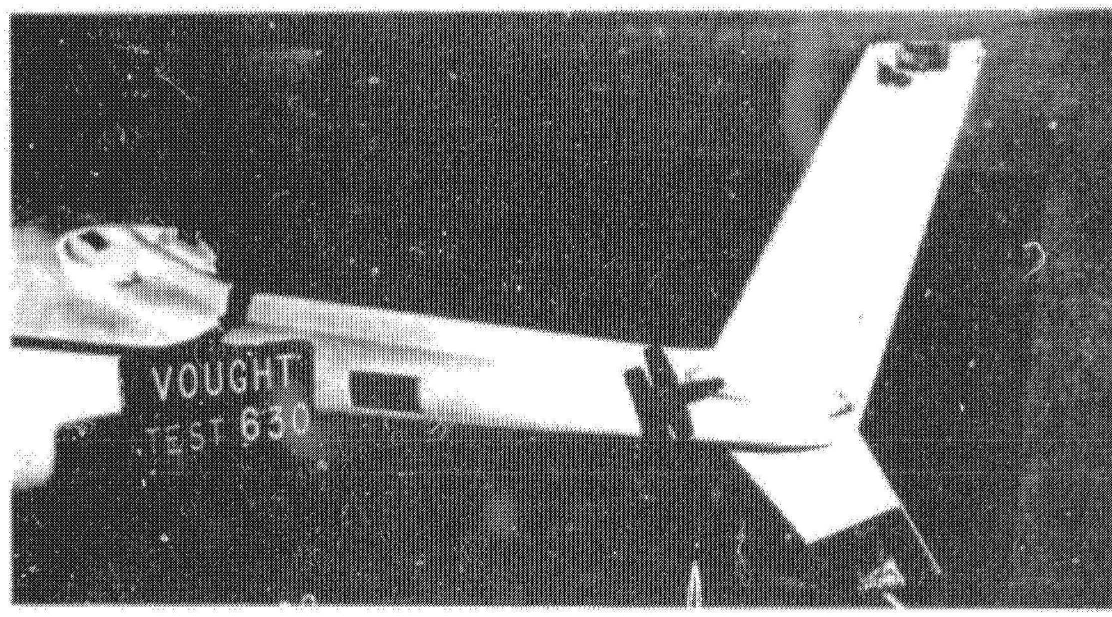


Figure 22. Continued.

V_2 Vertical fin with stinger and 10-inch cap (extends to W.L. 151).



W_1 Prototype NACA 0035 wing with standard tip.

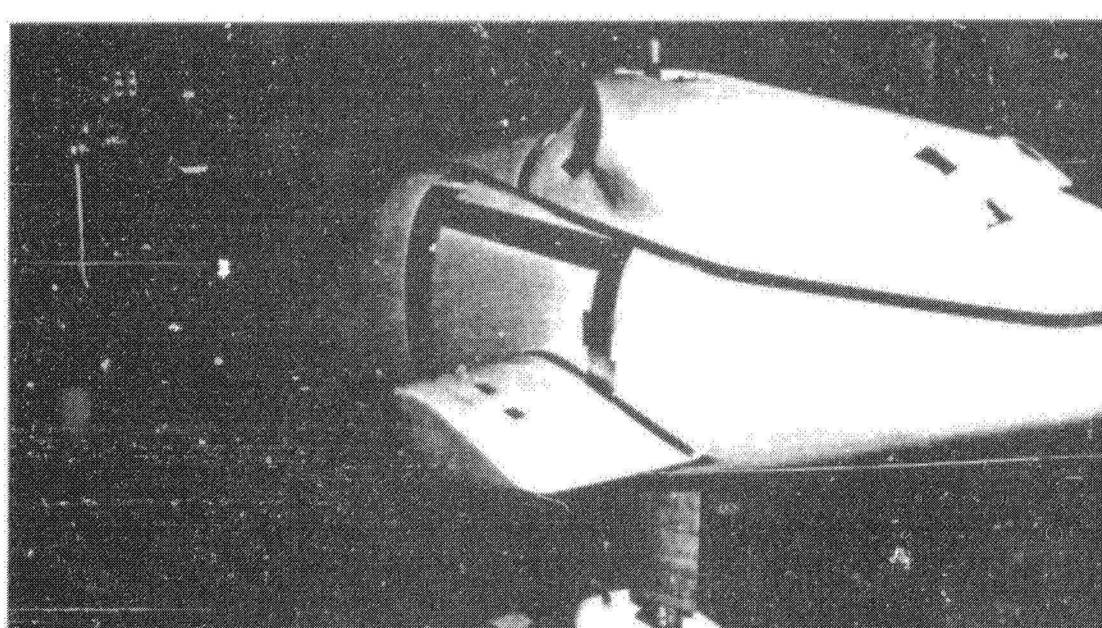
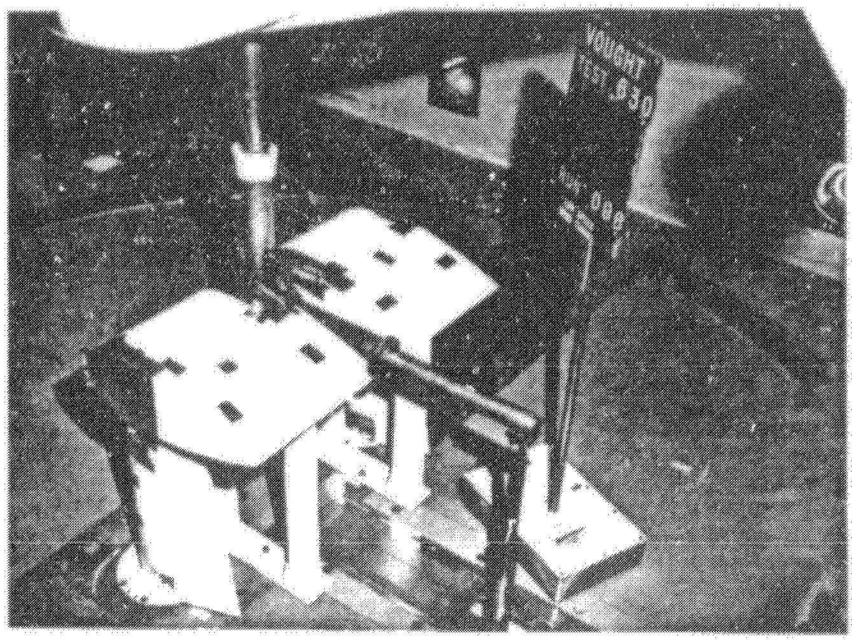


Figure 22. Continued.

X_1^* Ames 40x80 type mount with no fairings on vertical support strut. Asterisk denotes that wiring which was taped to support struts was removed.



X_2^* Ames 40x80 type mount with both fairings for vertical support strut. Asterisk denotes that external wiring for bubble package was removed.

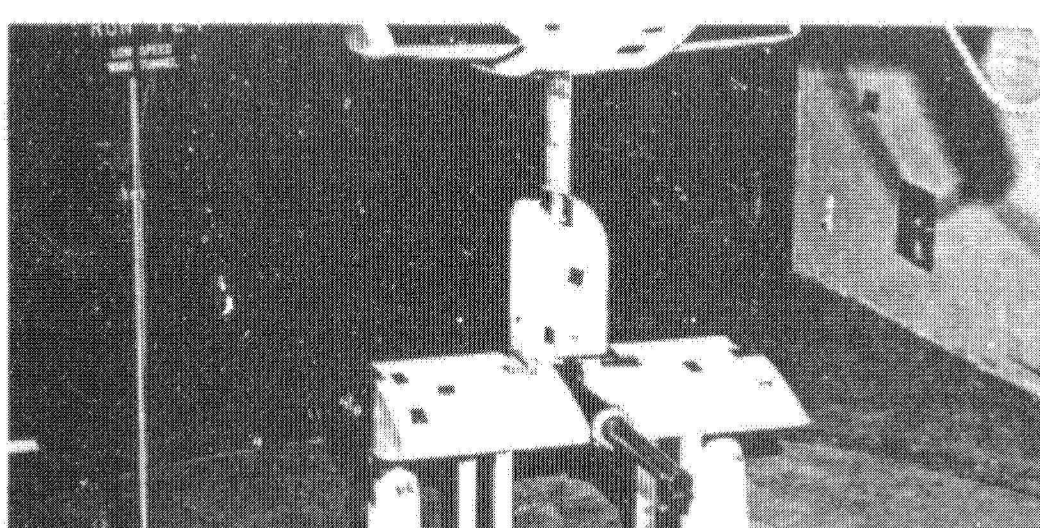
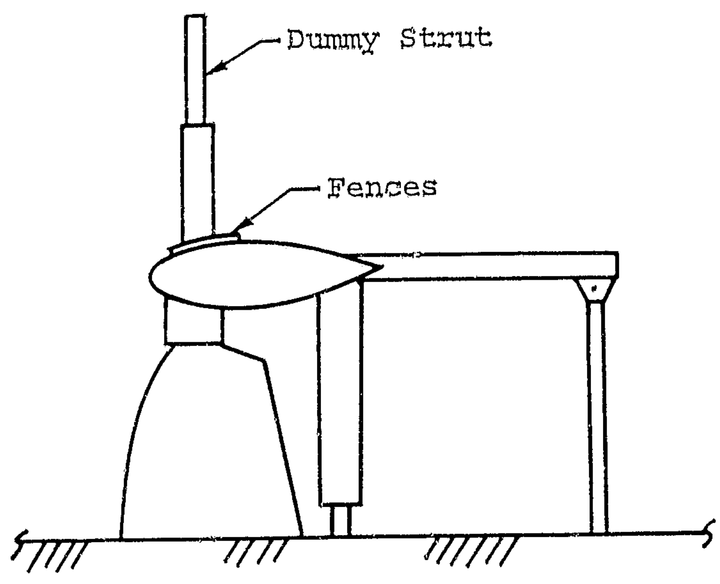


Figure 22. Continued.

X_3 Ames 40x80 type mount with dummy strut and no fairings. Fences mounted on horizontal fairing adjacent to support.



X_3^1 X_3 configuration, but with material removed from horizontal fairing as shown in sketch.

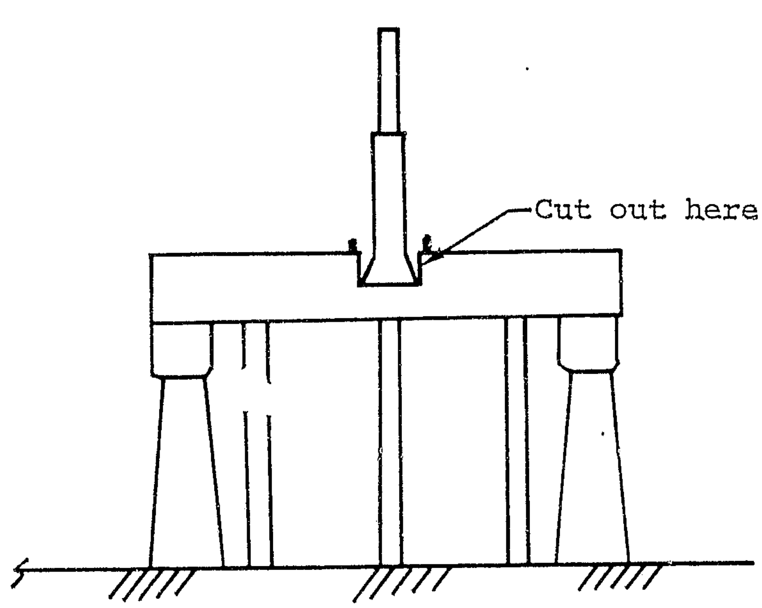
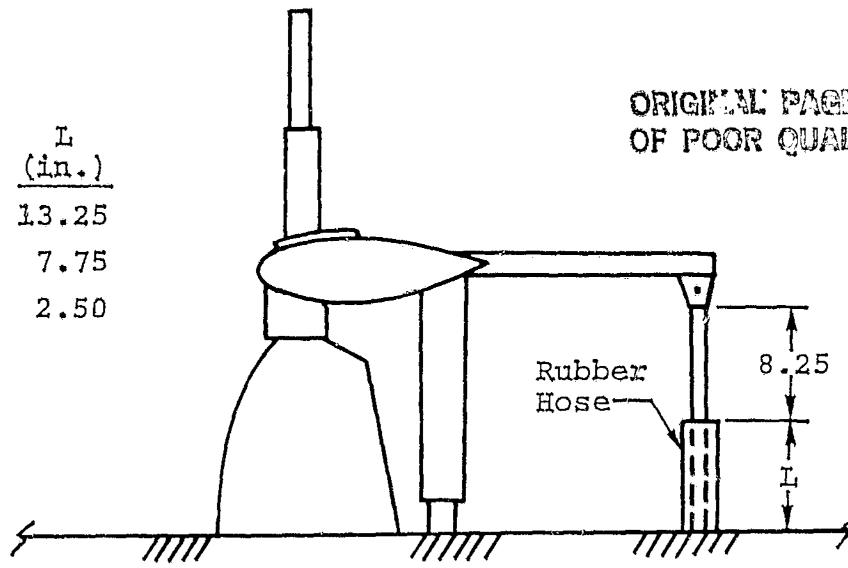


Figure 22. Continued.

X_3^2 Configuration X_3^1 with rubber hose added to rear strut as shown to increase diameter.

α (Deg)	L (in.)
-15	13.25
0	7.75
+15	2.50



(Side View, α=0° Shown)

X_3^3 Configuration X_3^2 with simulated joint at base of dummy strut as shown. Joint was made from foam material.

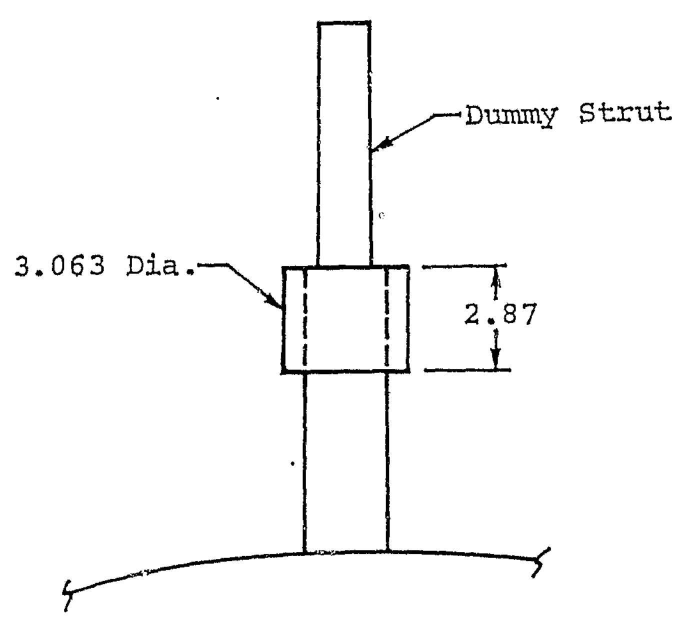
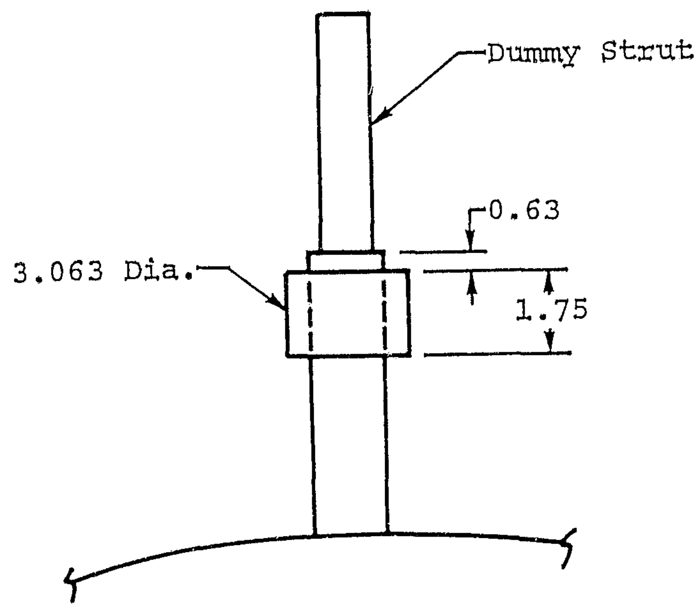


Figure 22. Continued.

X_3^4 Joint of configuration X_3^3 modified as shown in sketch.



X_4 Configuration X_3^4 with dummy strut removed and fences off.

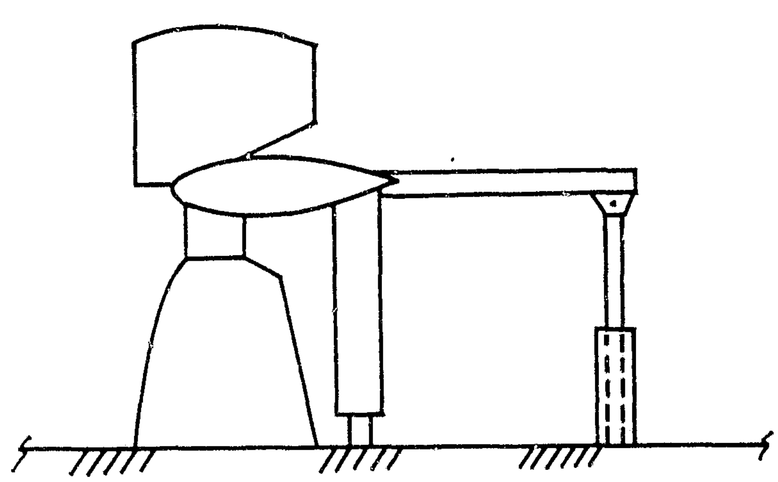
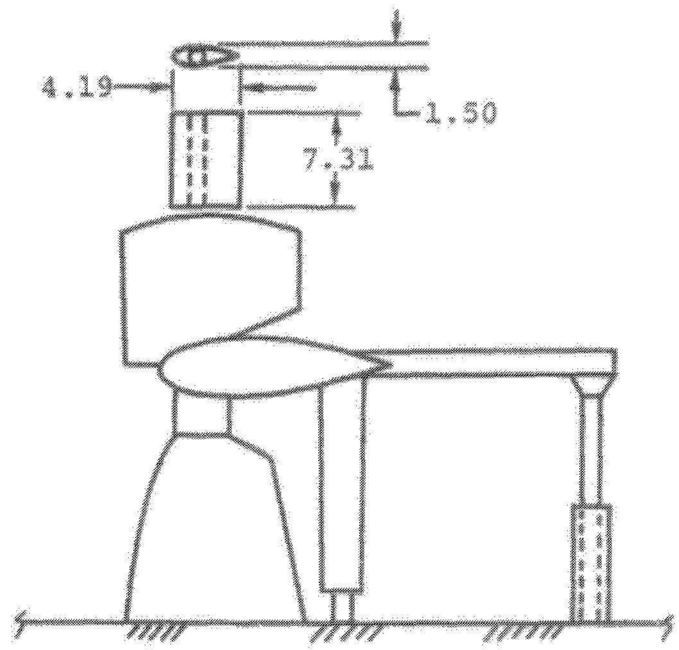


Figure 22. Continued.

ORIGINAL PAGE
BLACK AND WHITE PHOTOGRAPH

X_5 X_4 configuration with dummy strut and small fairing as shown in sketch.



Y_1 Original prototype tail rotor gearbox fairing.

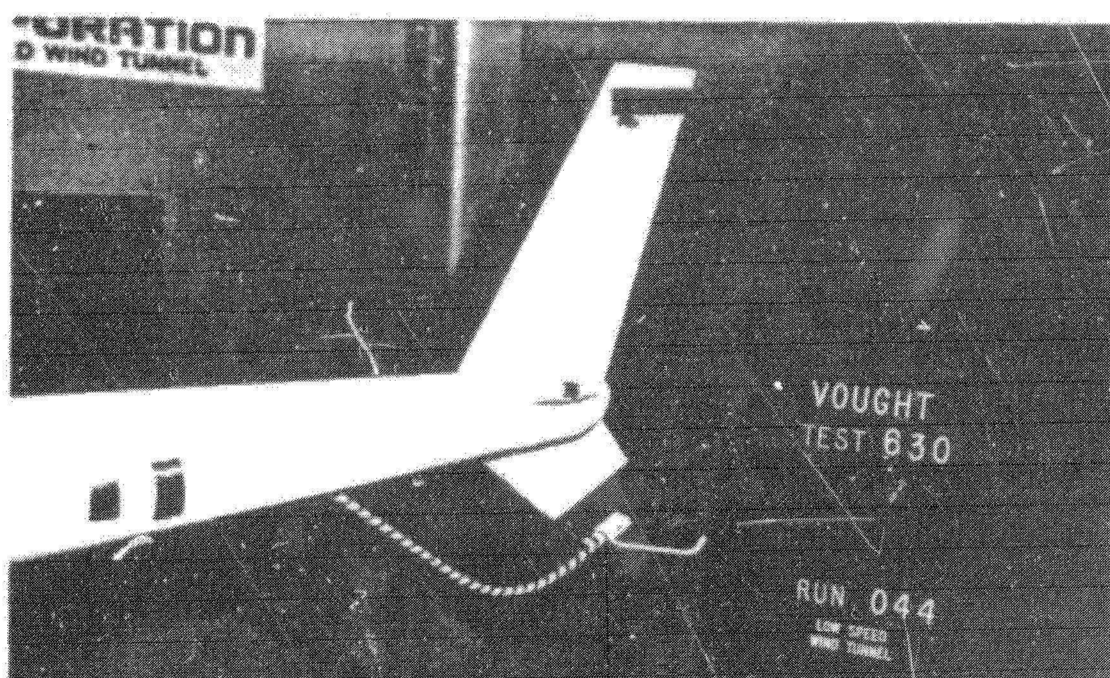
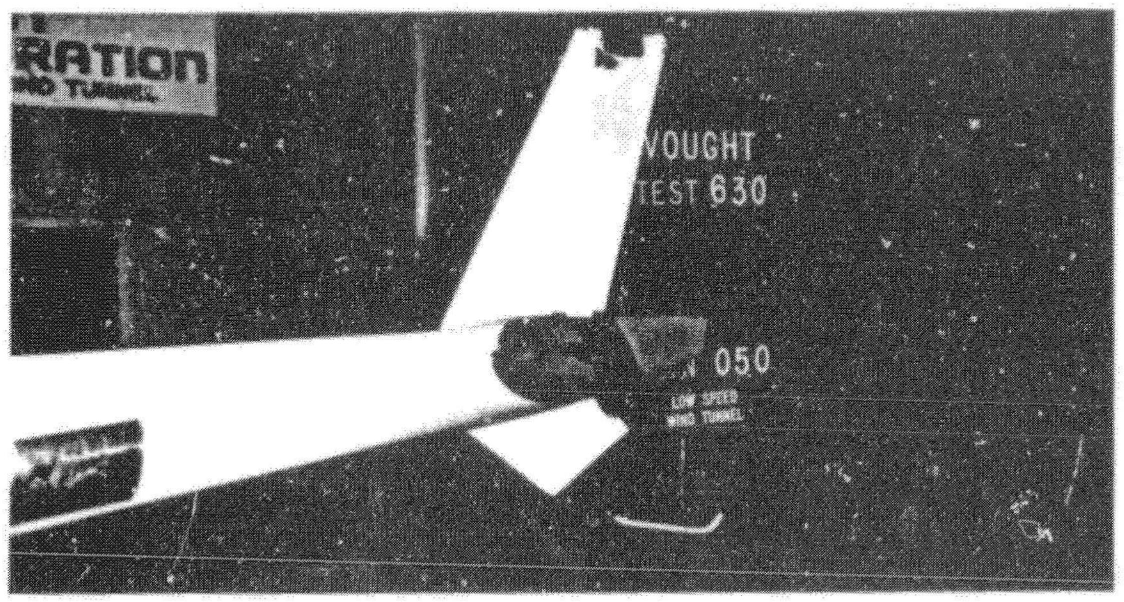


Figure 22. Continued.

Y_P Preliminary "production" tail rotor gearbox fairing.



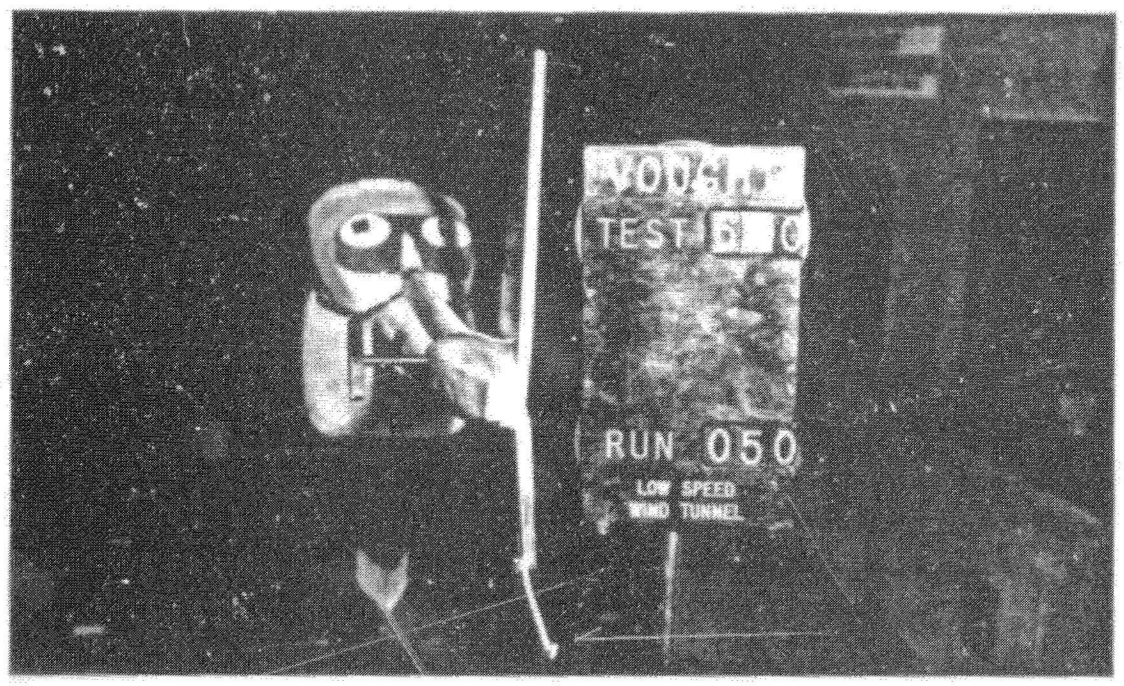


Figure 22. Concluded.

Figure 23. Comparison of Fifth-Scale Lift Characteristics in Pitch for Basic Fuselage

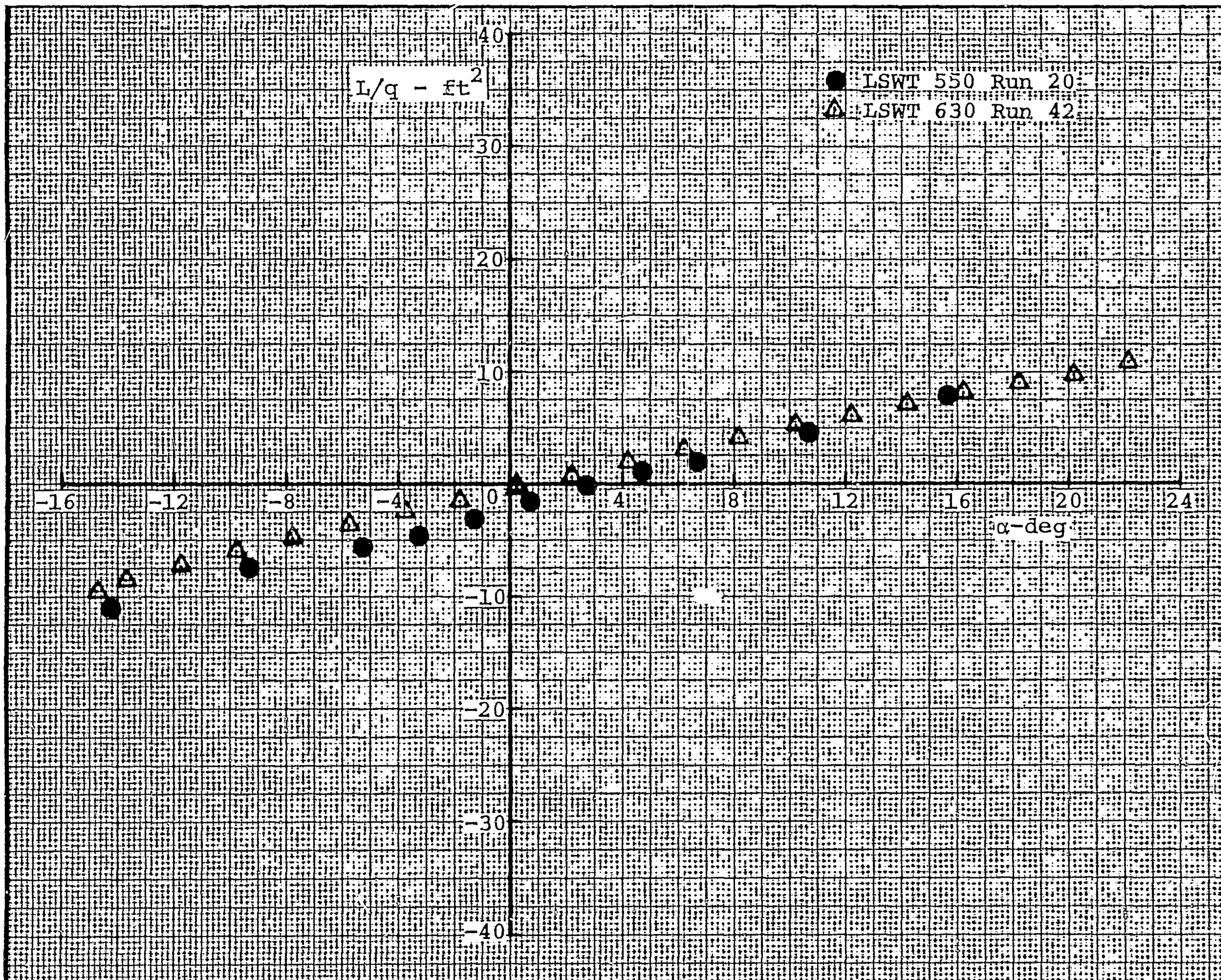


Figure 24. Comparison of Fifth-Scale Drag Characteristics in Pitch for Basic Fuselage

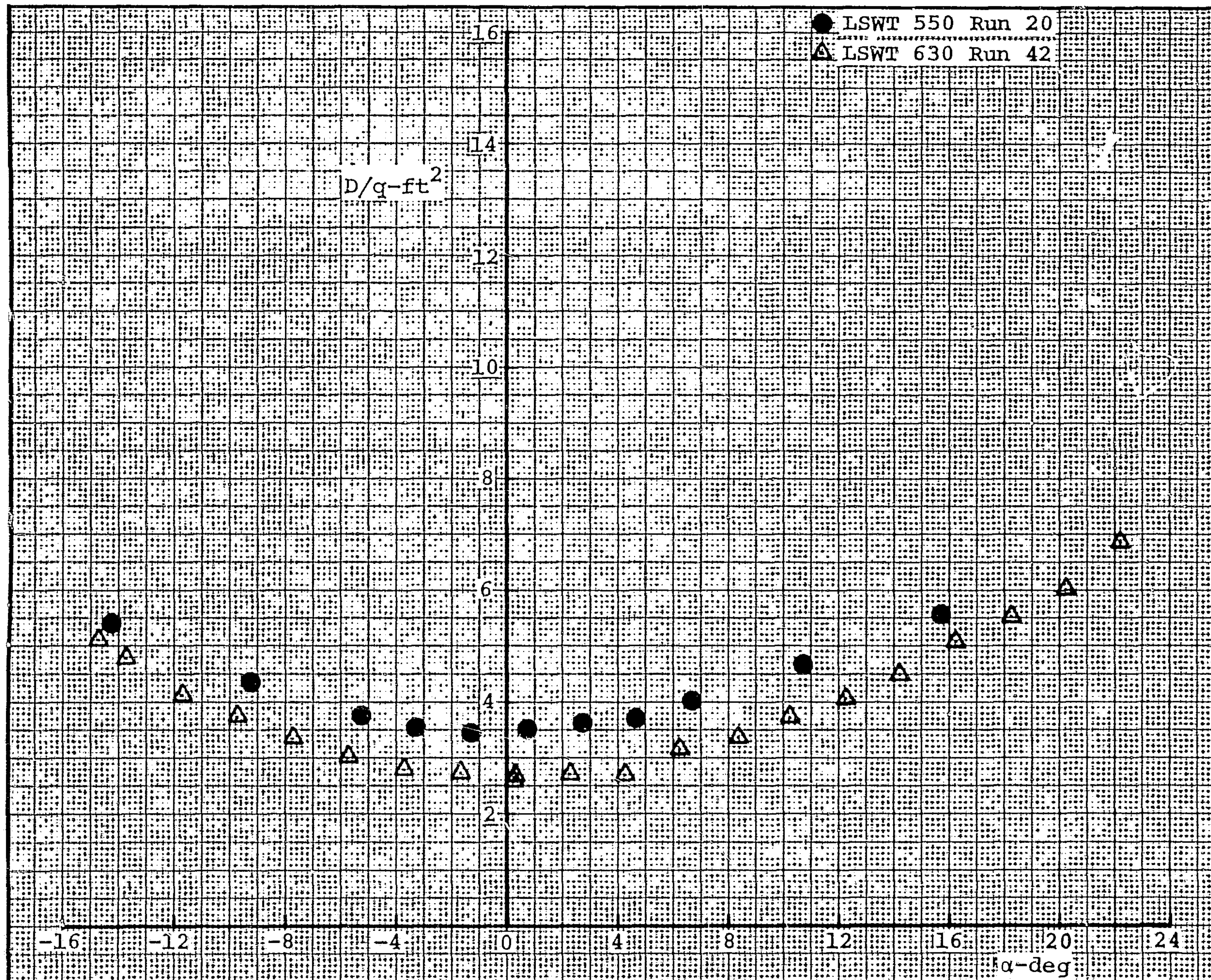


Figure 25. Comparison of Fifth-Scale Pitching Moment Characteristics in Pitch for Basic Fuselage

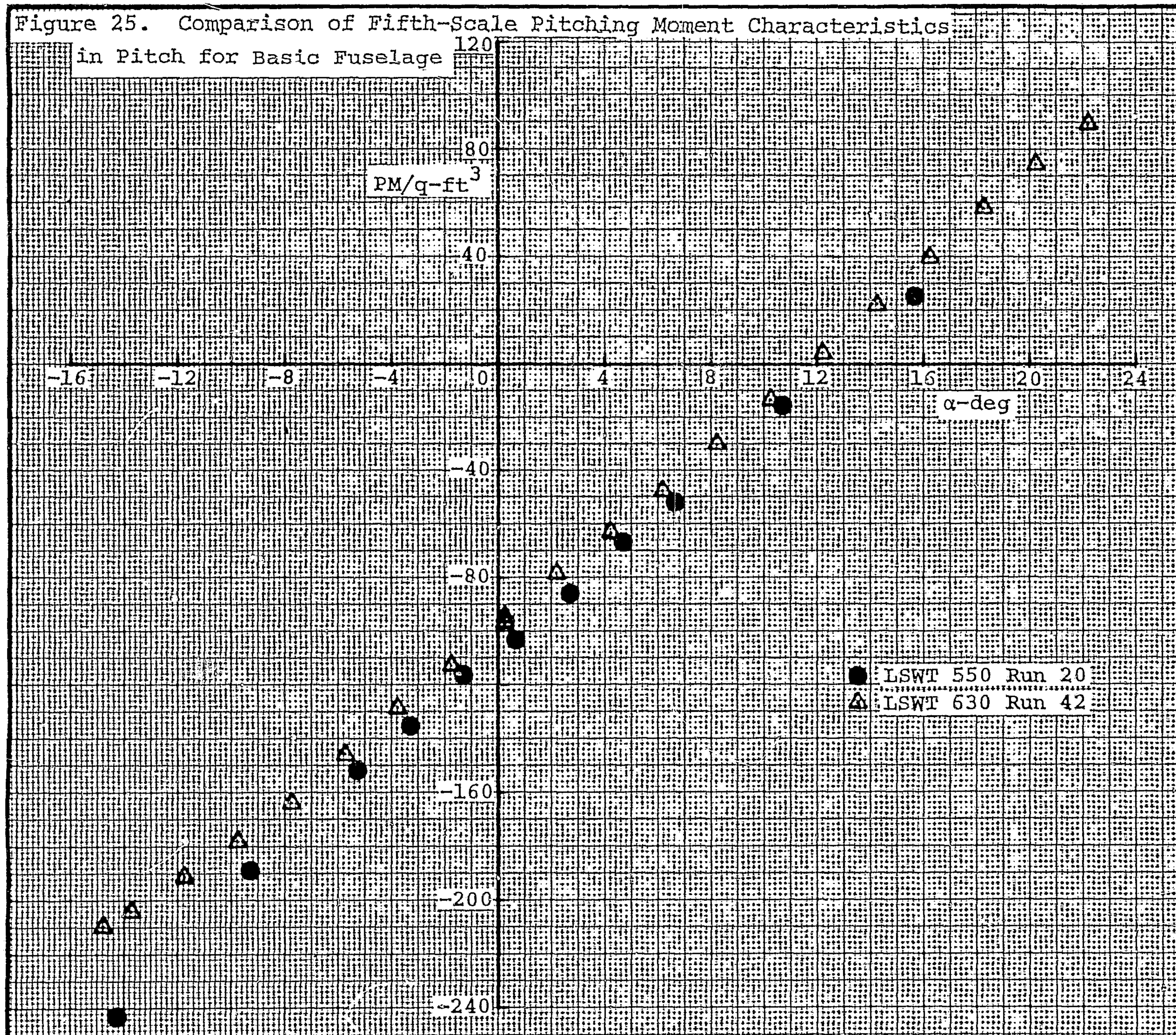


Figure 26. Comparison of Fifth-Scale Lift Characteristics in Pitch for Helicopter

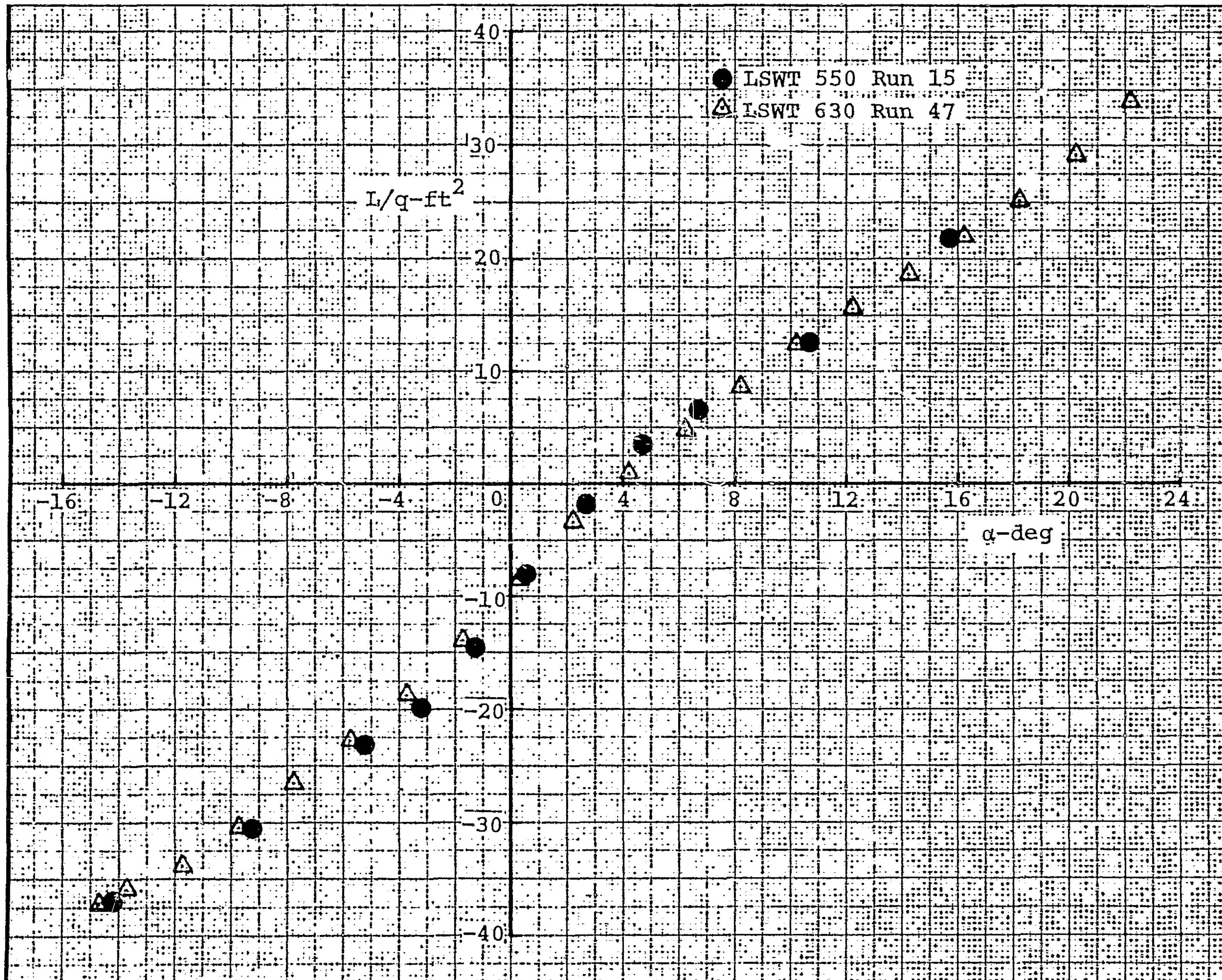
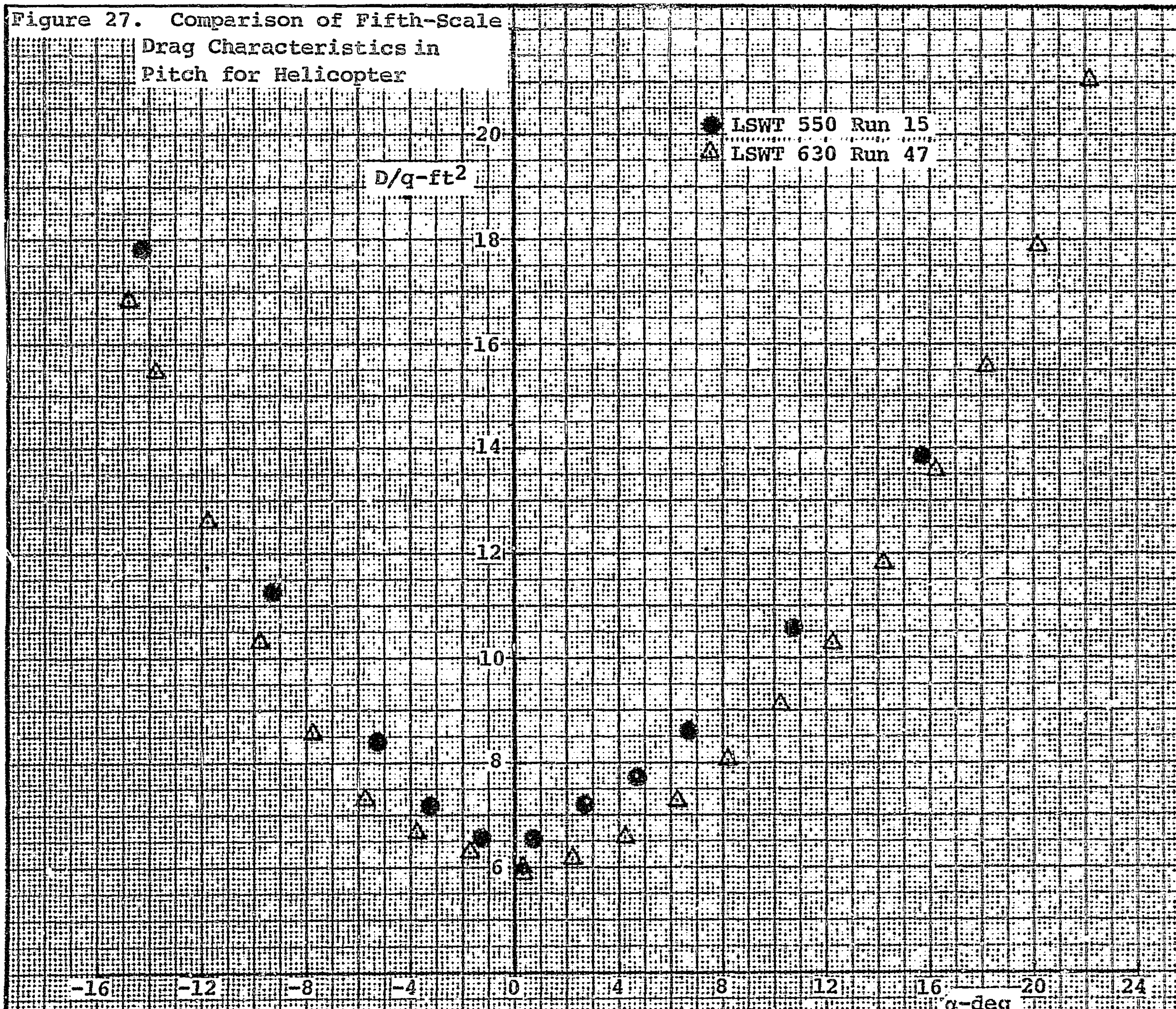


Figure 27. Comparison of Fifth-Scale Drag Characteristics in Pitch for Helicopter



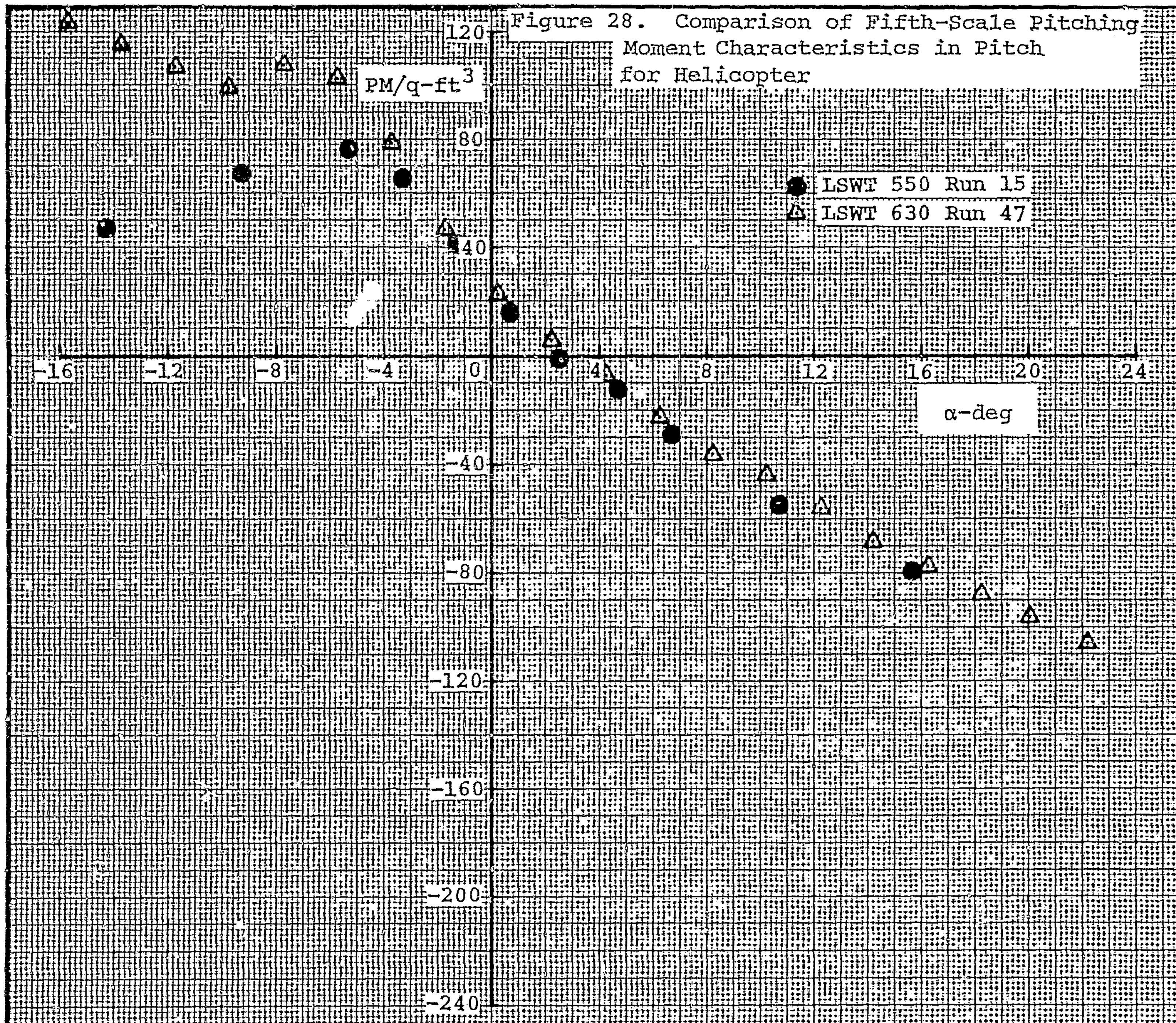


Figure 28. Comparison of Fifth-Scale Pitching Moment Characteristics in Pitch for Helicopter

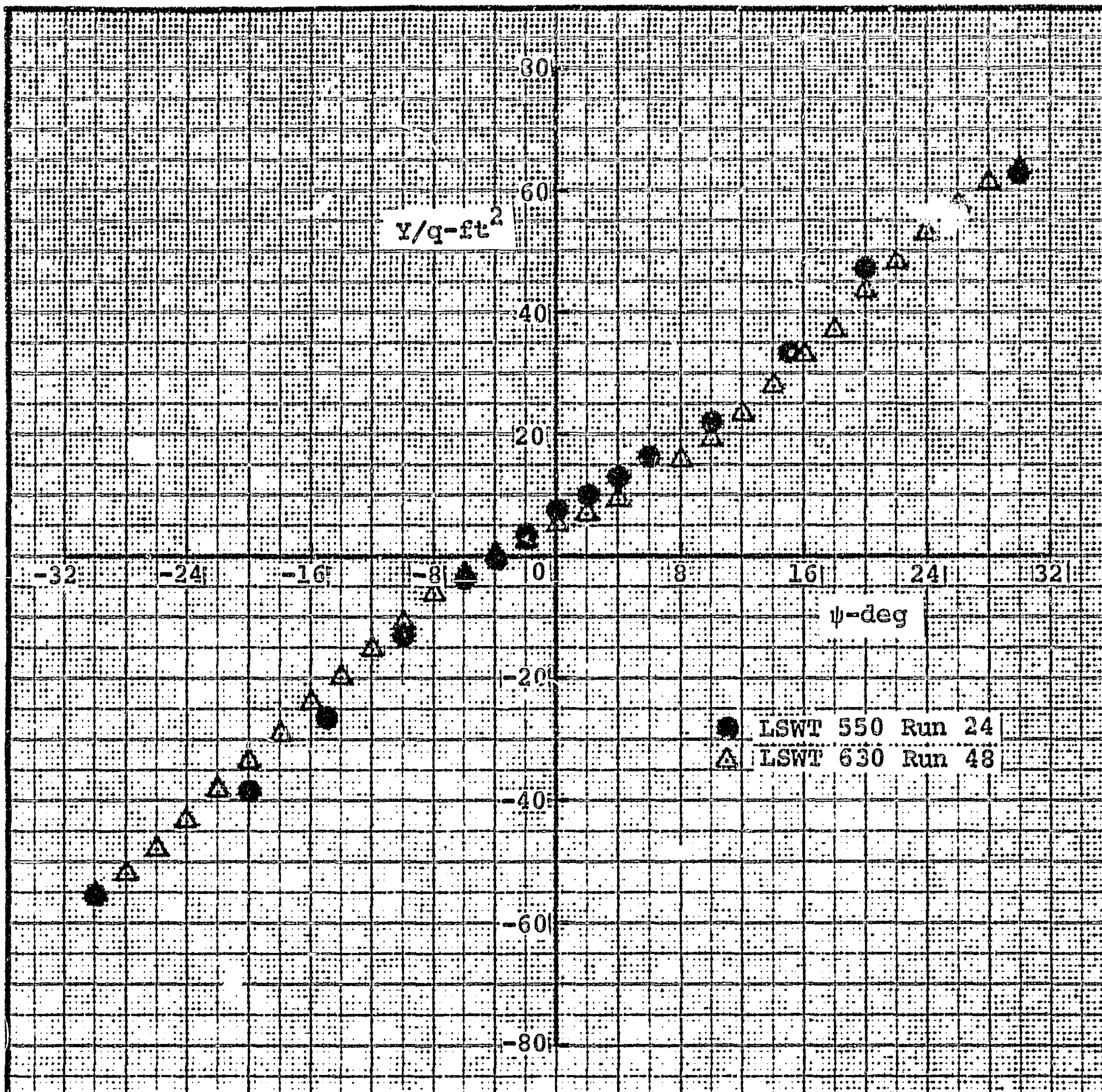


Figure 29. Comparison of Fifth-Scale Side Force Characteristics in Yaw for Helicopter

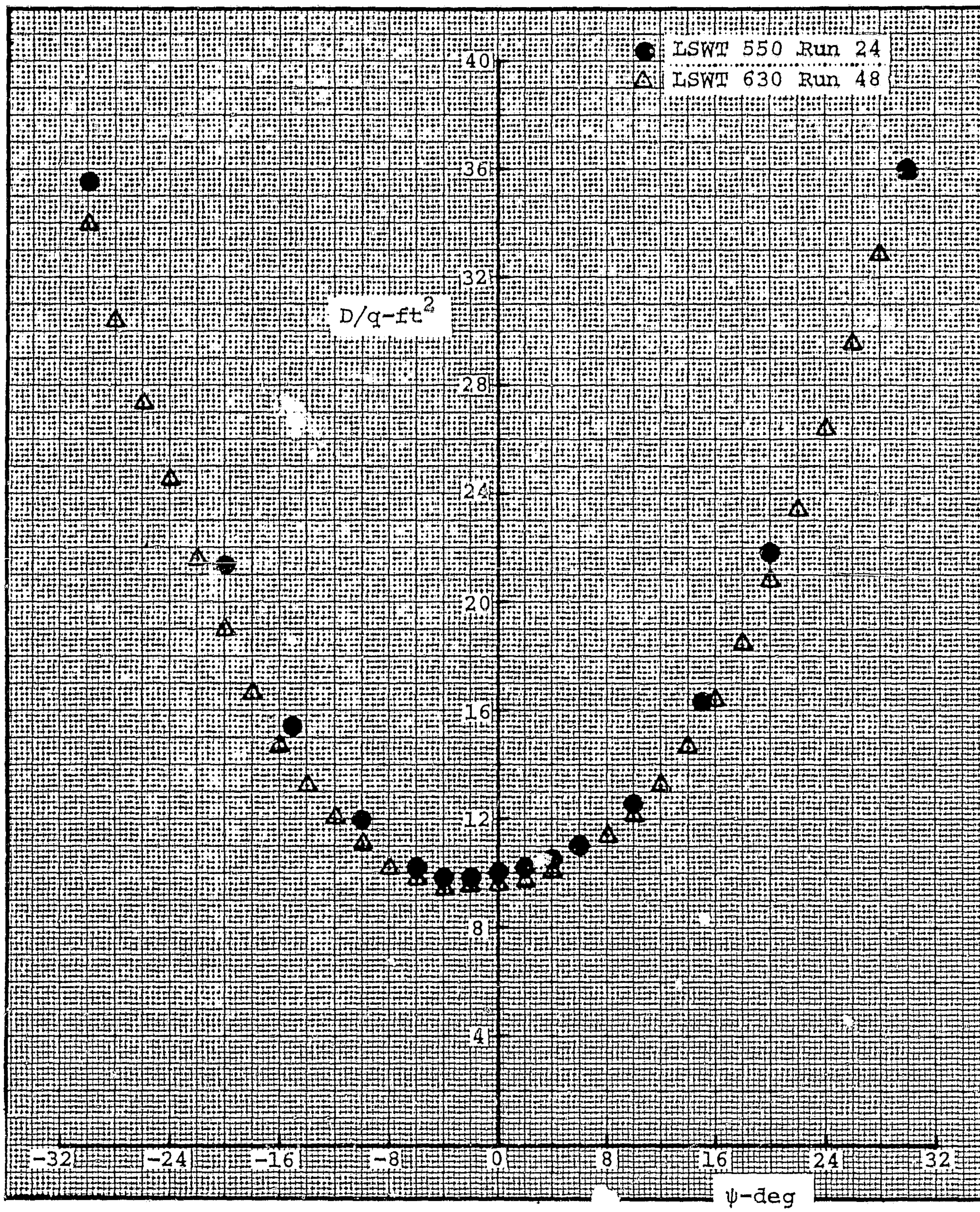


Figure 30. Comparison of Fifth-Scale Drag Characteristics in Yaw for Helicopter

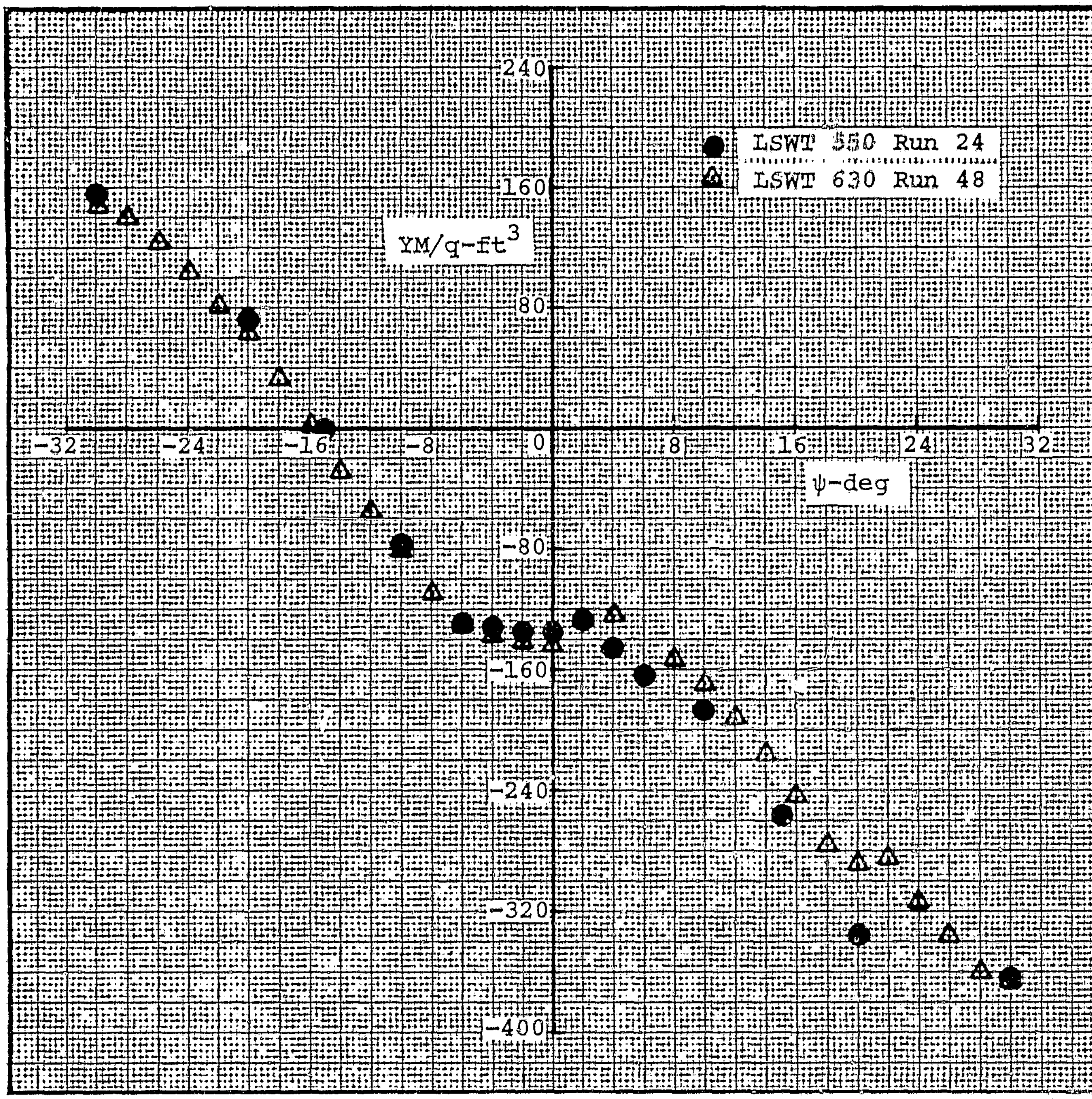


Figure 31. Comparison of Fifth-Scale Yawing Moment Characteristics in Yaw for Helicopter

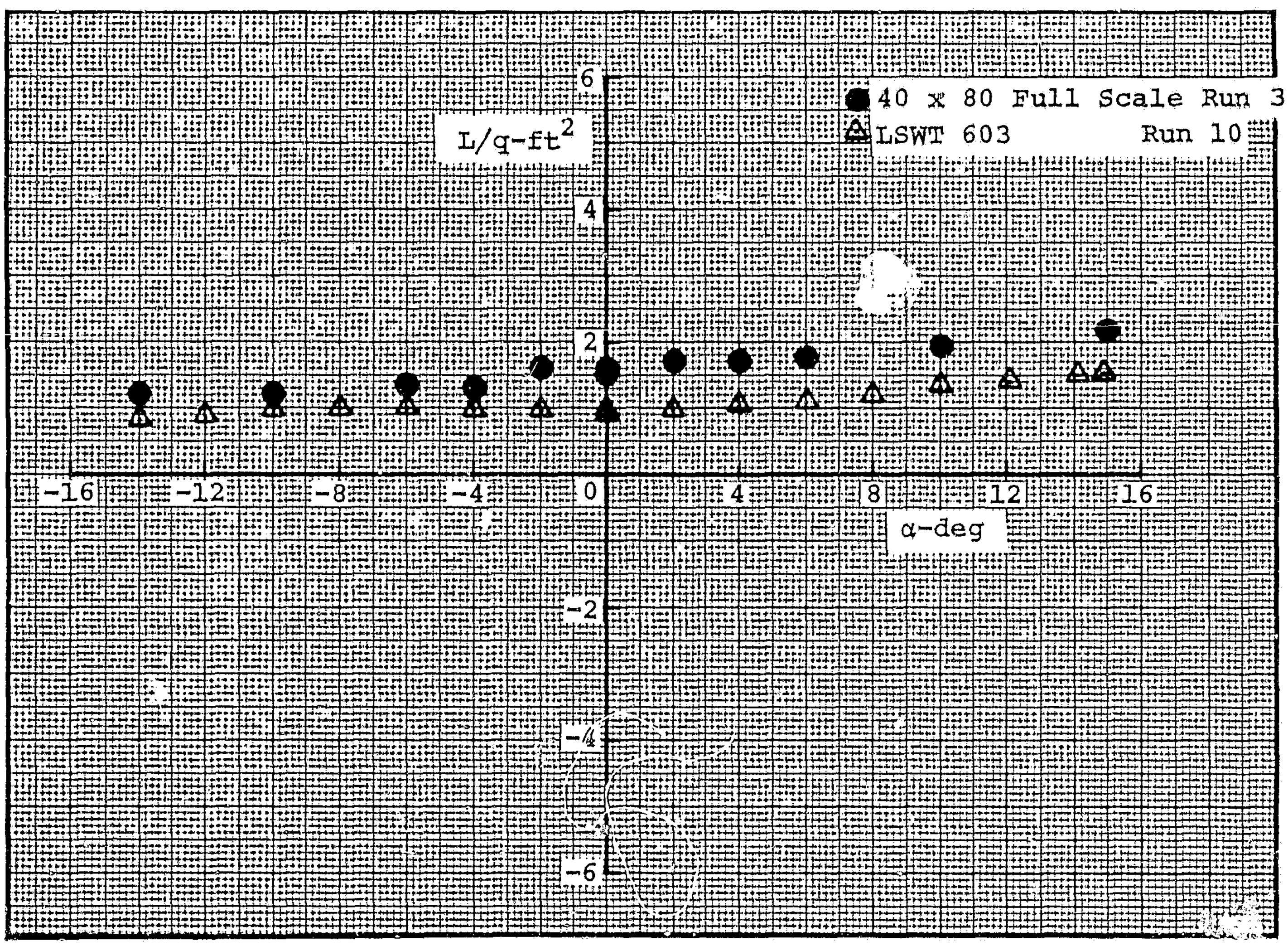


Figure 32. Comparison of Tare Lift Characteristics in Pitch for Three-Point Mount

ORIGINAL PAGE IS
OF POOR QUALITY

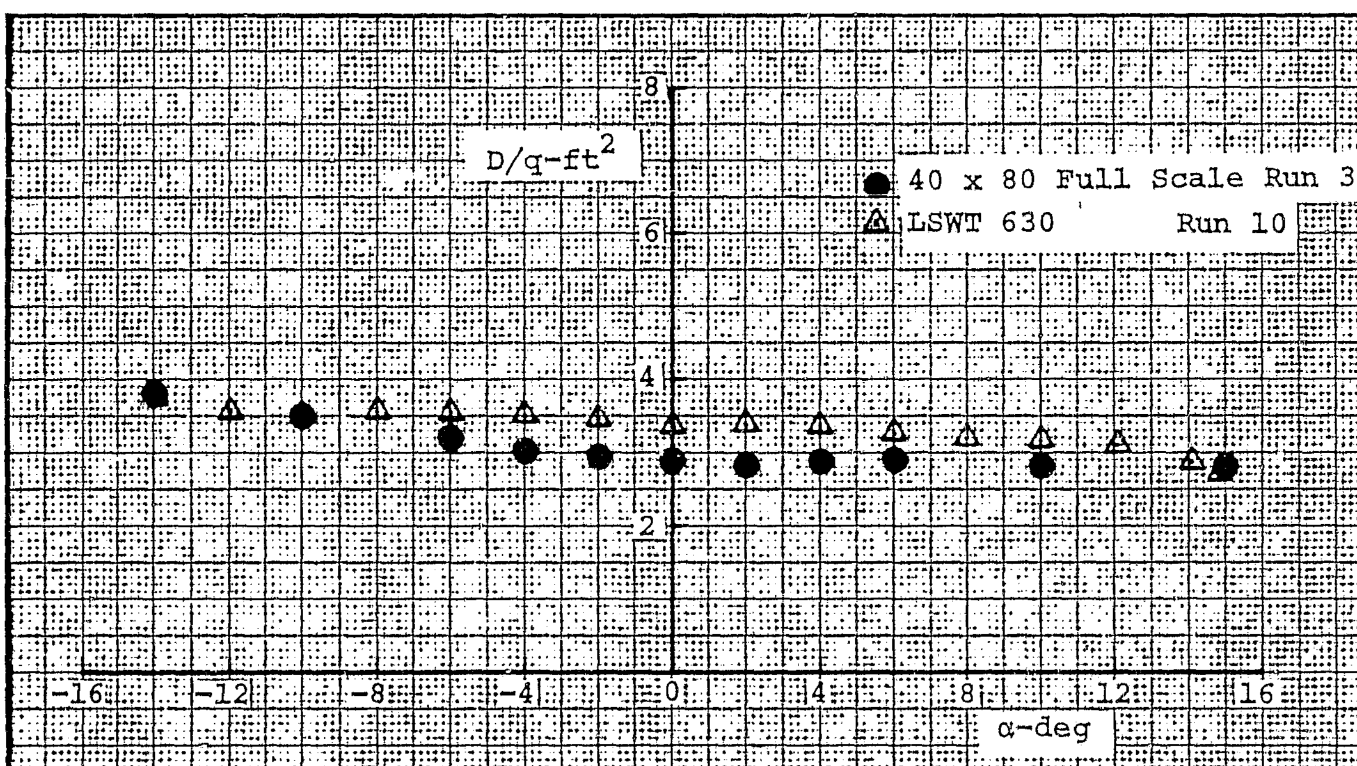


Figure 33. Comparison of Tare Drag Characteristics in Pitch for Three-Point Mount

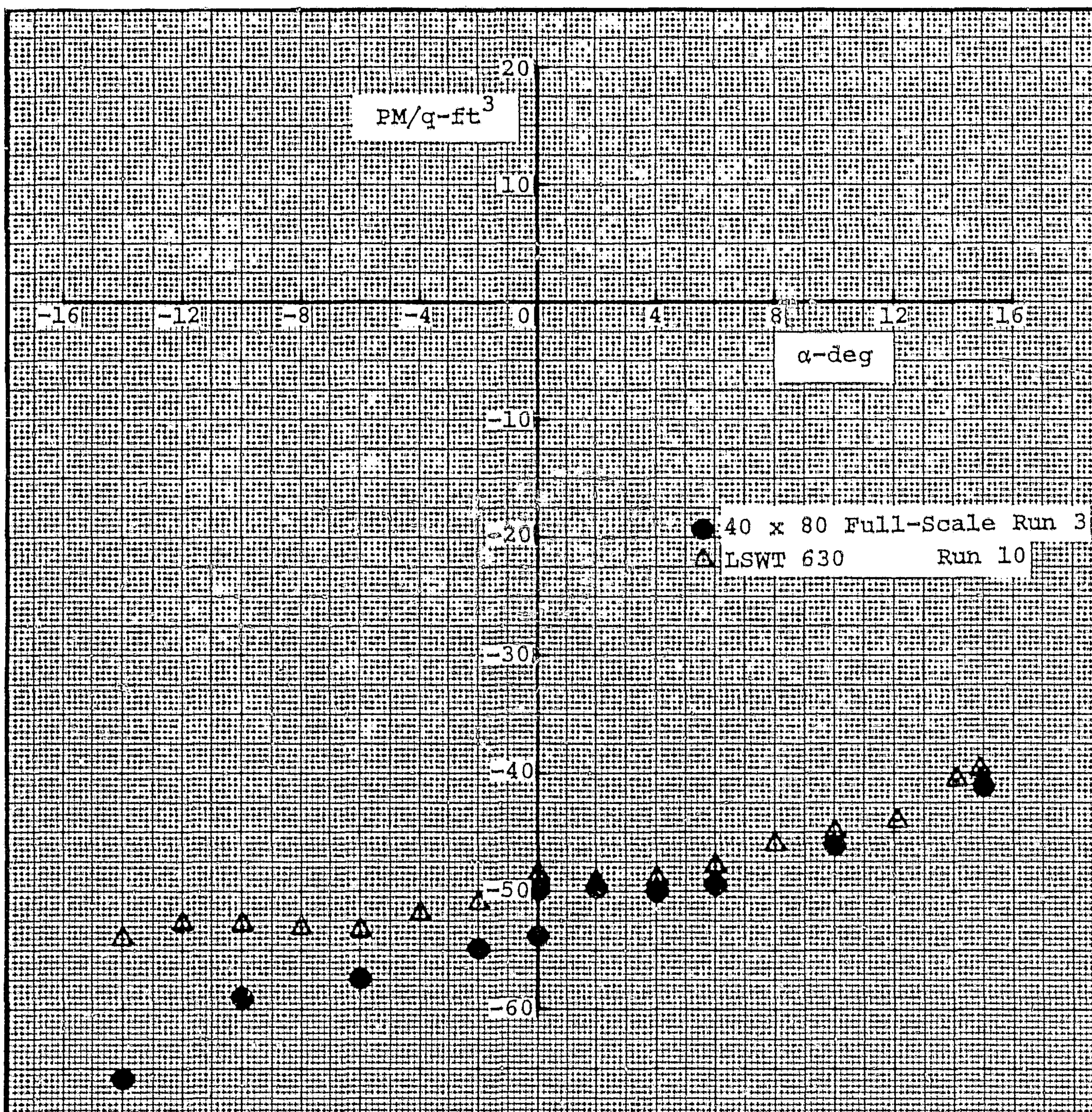


Figure 34. Comparison of Tare Pitching Moment Characteristics in Pitch for Three-Point Mount

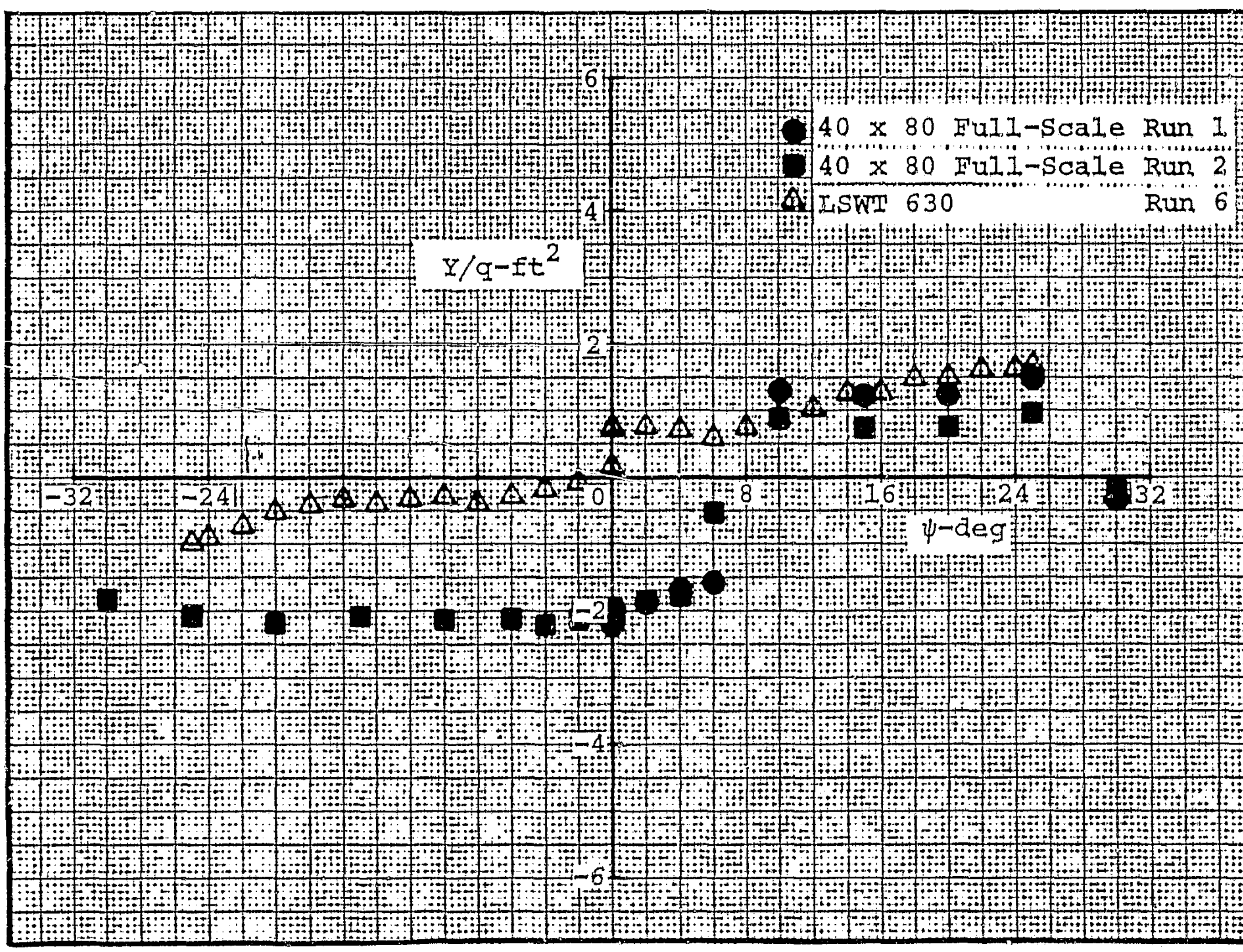


Figure 35. Comparison of Tare Side Force Characteristics in Yaw for Three-Point Mount

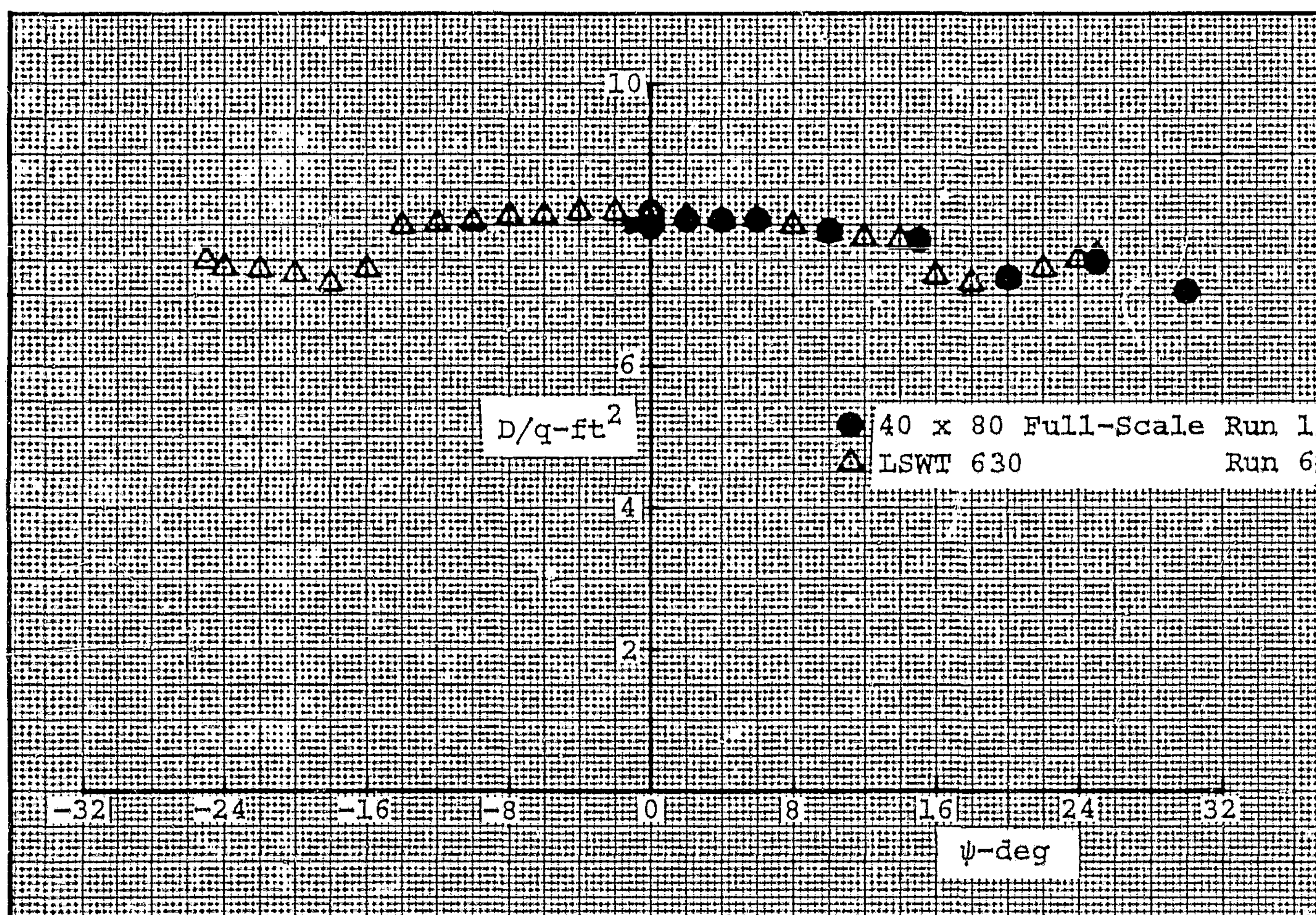


Figure 36. Comparison of Tare Drag Characteristics in Yaw for Three-Point Mount

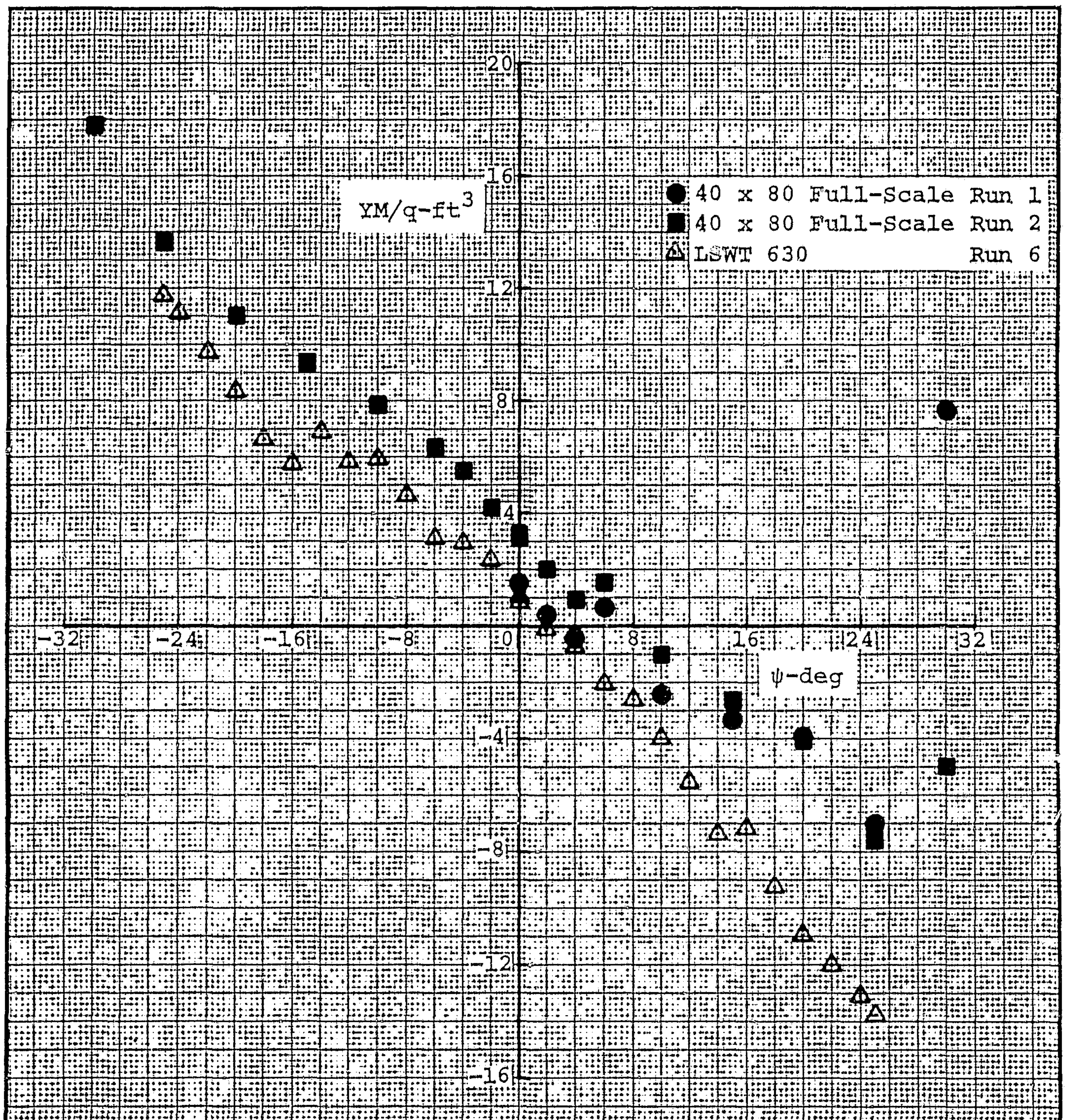


Figure 37. Comparison of Tare Yawing Moment Characteristics in Yaw for Three-Point Mount

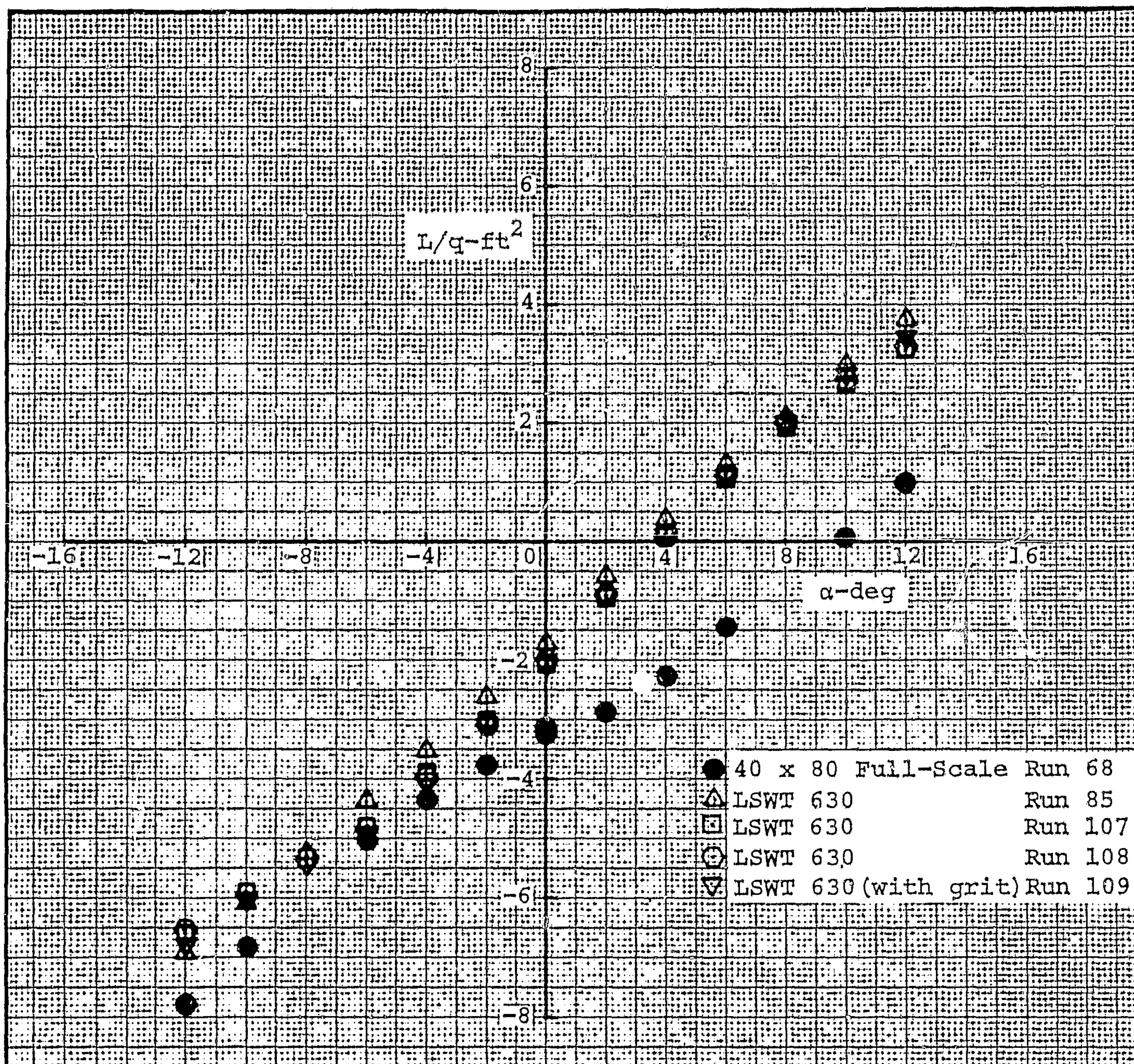


Figure 38. Full/Fifth-Scale Comparison of Lift Characteristics in Pitch for Basic Fuselage

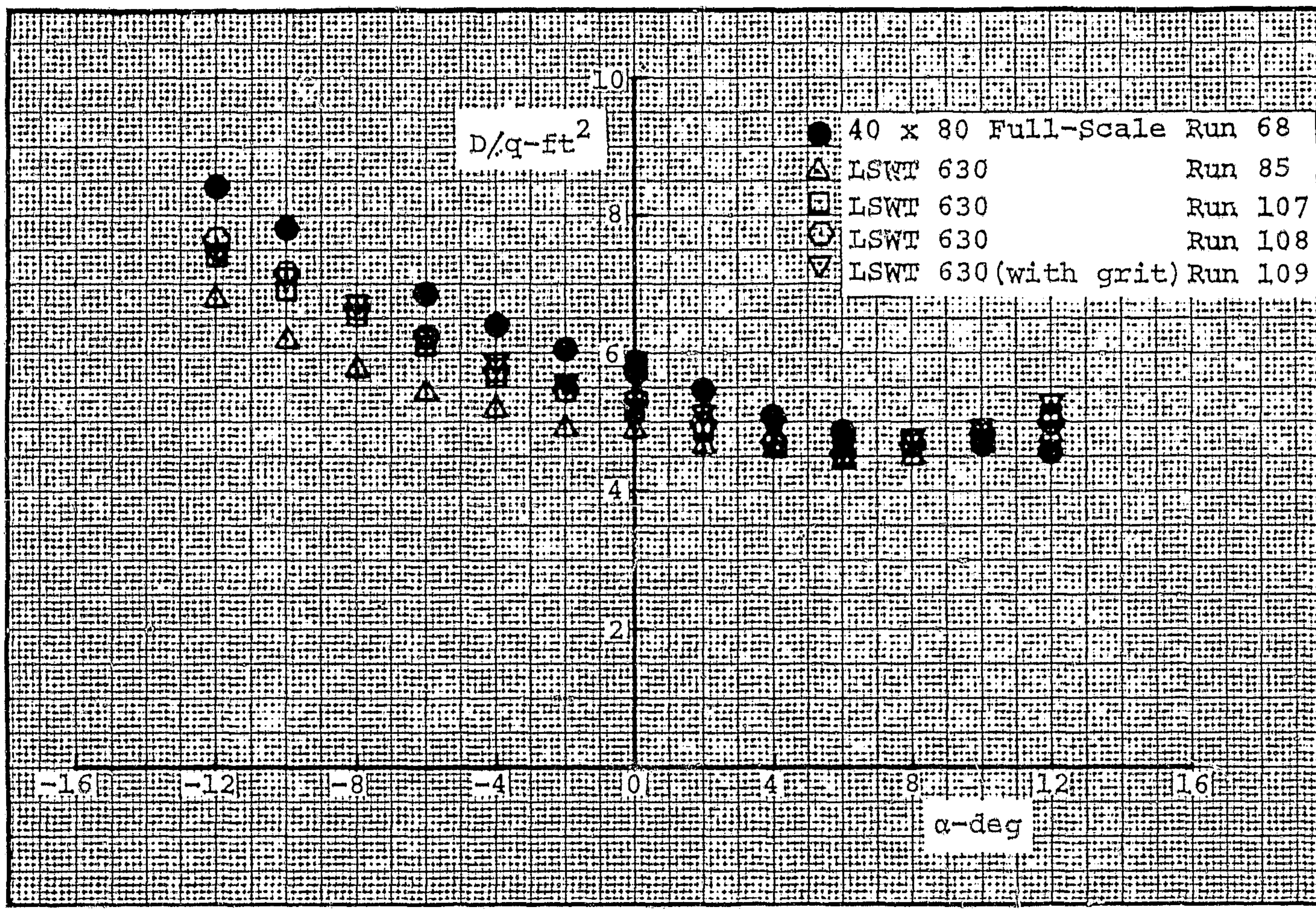


Figure 39. Full/Fifth-Scale Comparison of Drag Characteristics in Pitch for Basic Fuselage

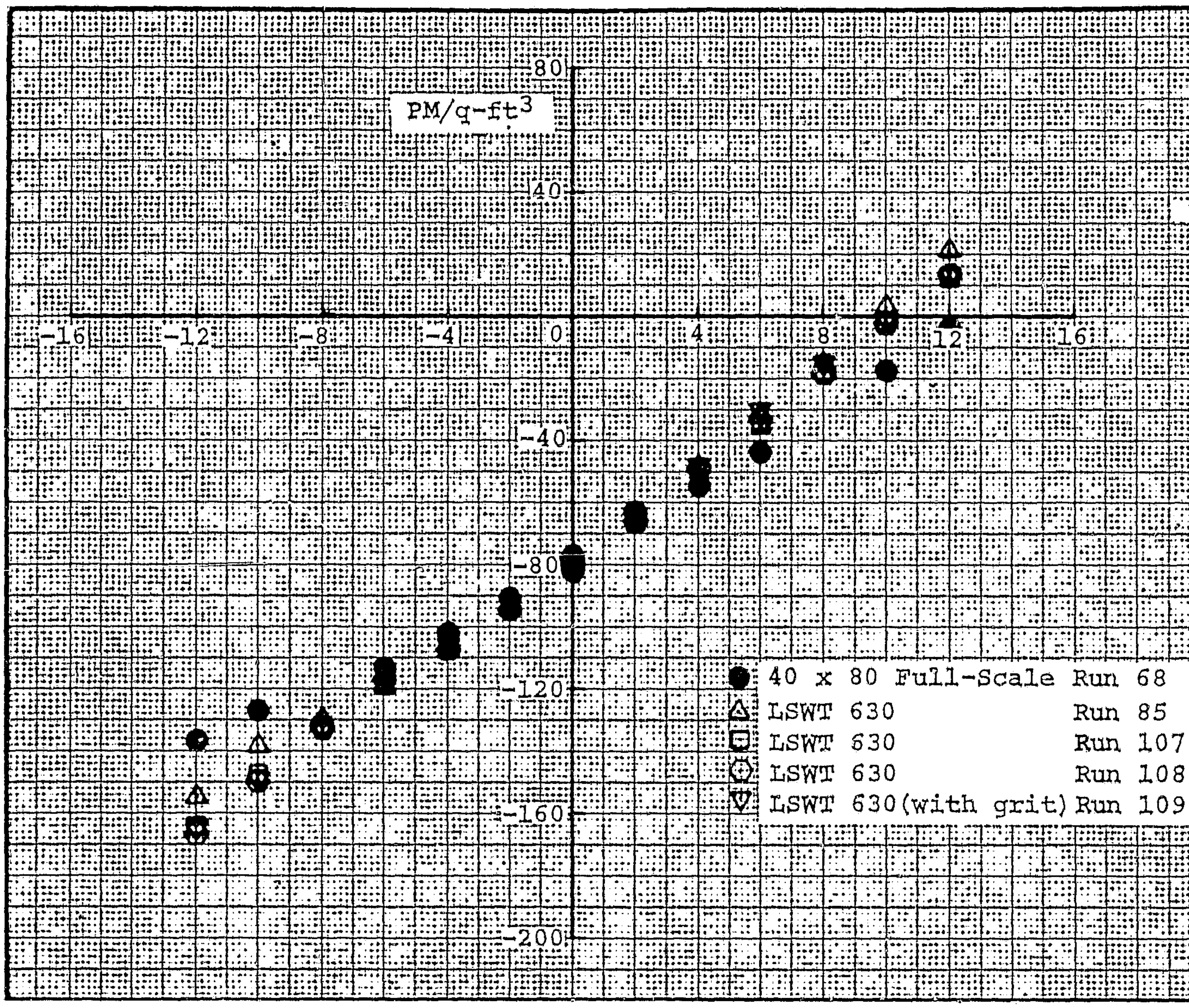


Figure 40. Full/Fifth-Scale Comparison of Pitching Moment Characteristics in Pitch for Basic Fuselage

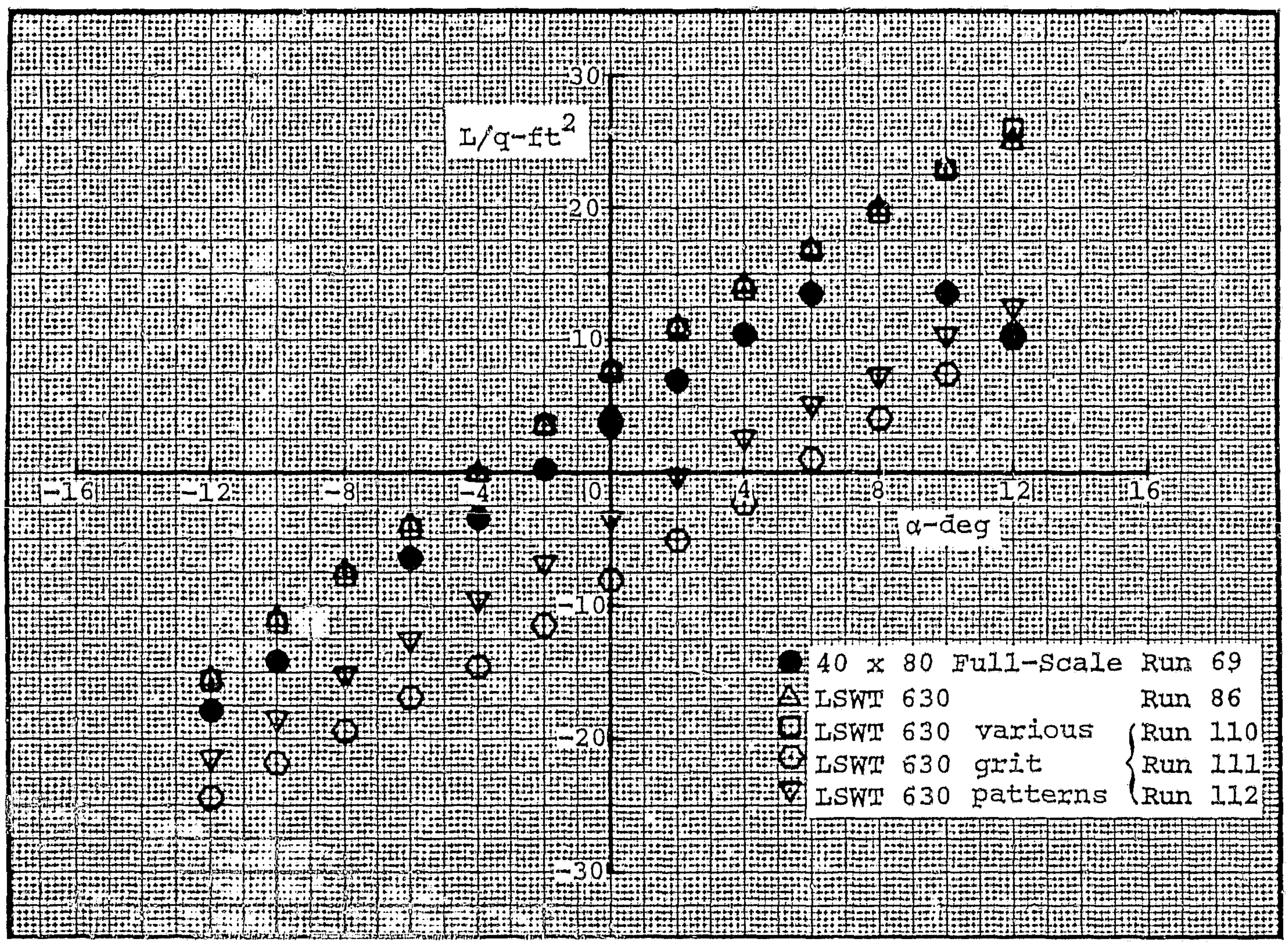


Figure 41. Full/Fifth-Scale Comparison of Lift Characteristics in Pitch for Basic Fuselage with Wings

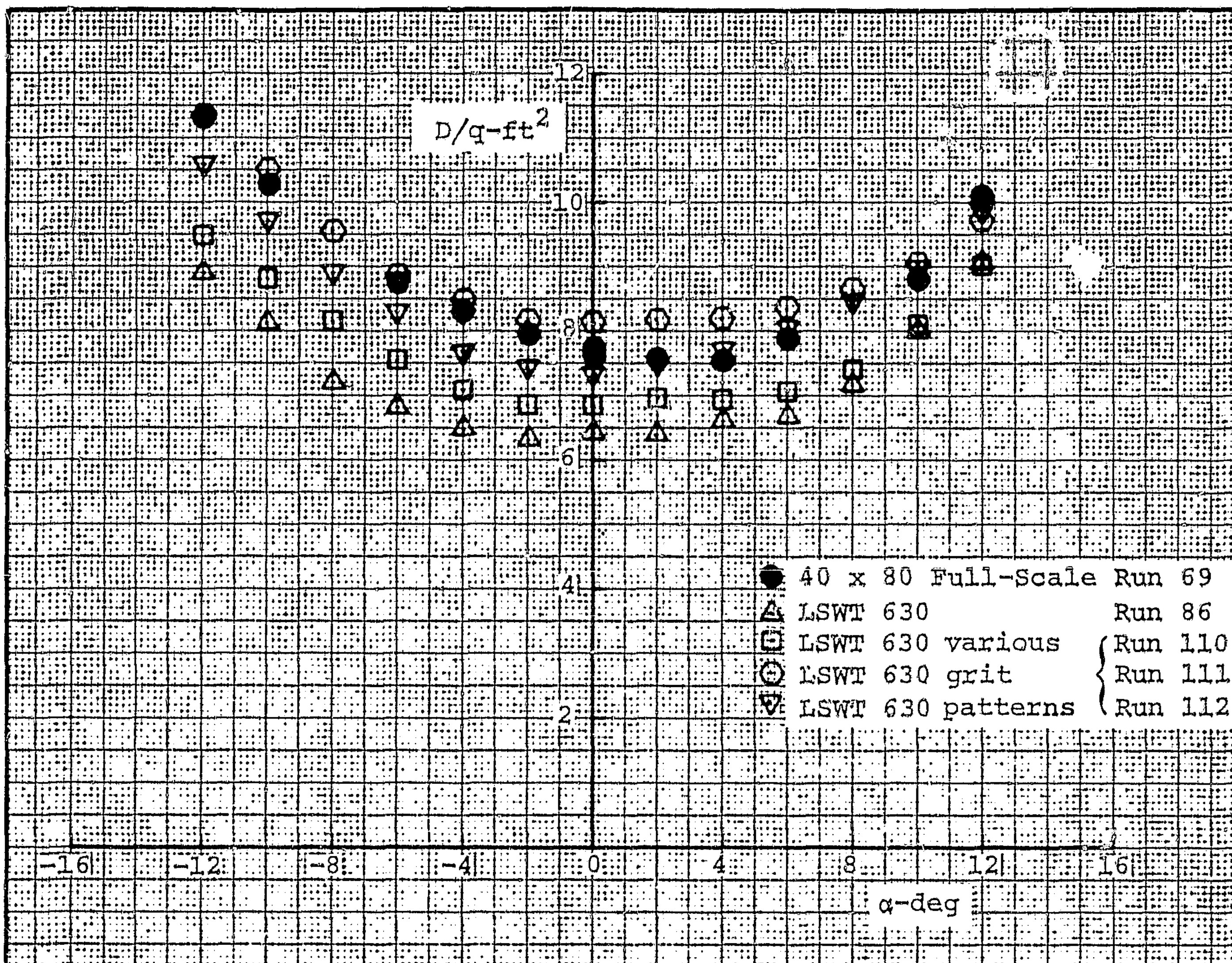


Figure 42. Full/Fifth-Scale Comparison of Drag Characteristics in Pitch for Basic Fuselage with Wings

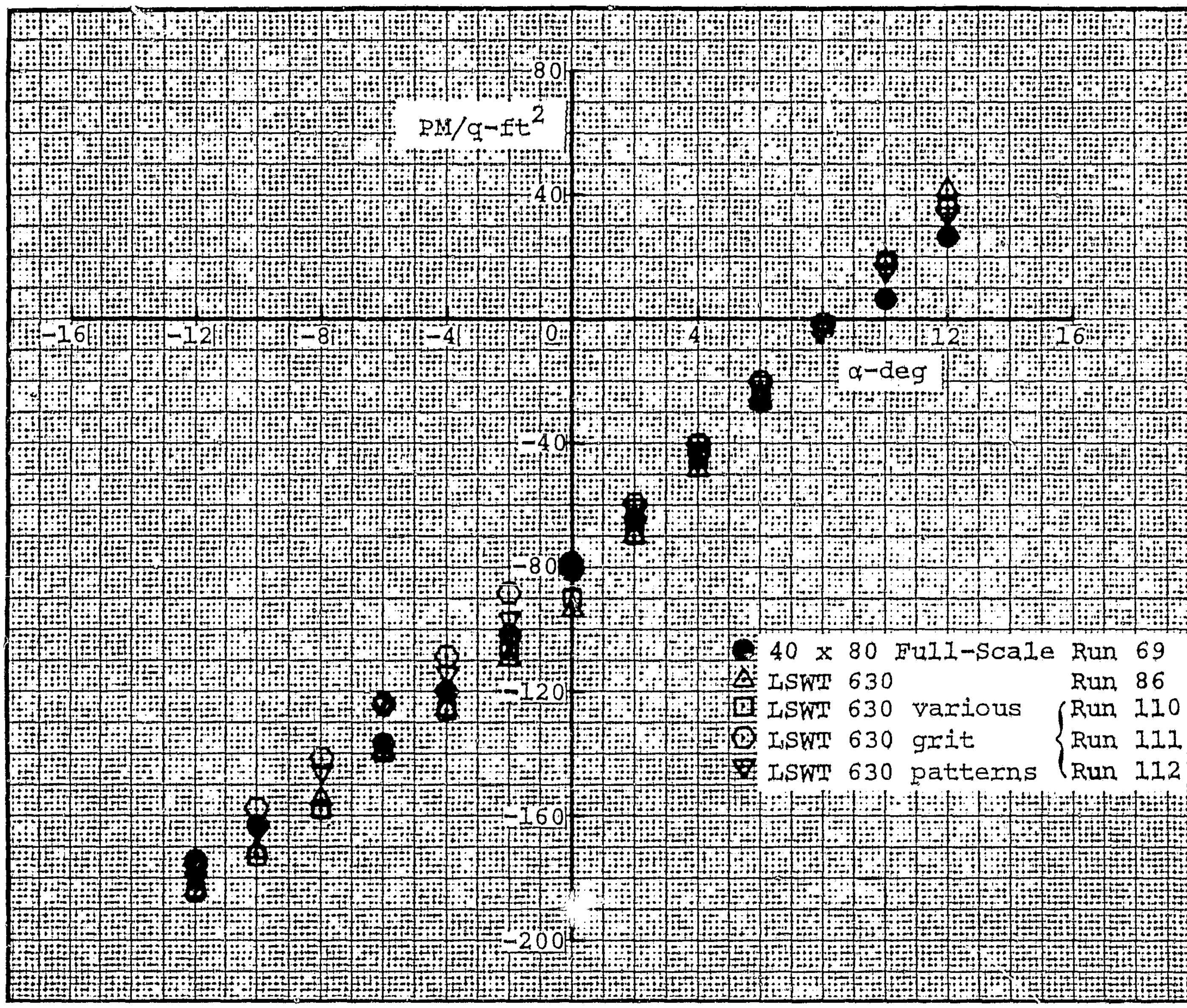


Figure 43. Full/Fifth-Scale Comparison of Pitching Moment Characteristics in Pitch for Basic Fuselage with Wings

C-2

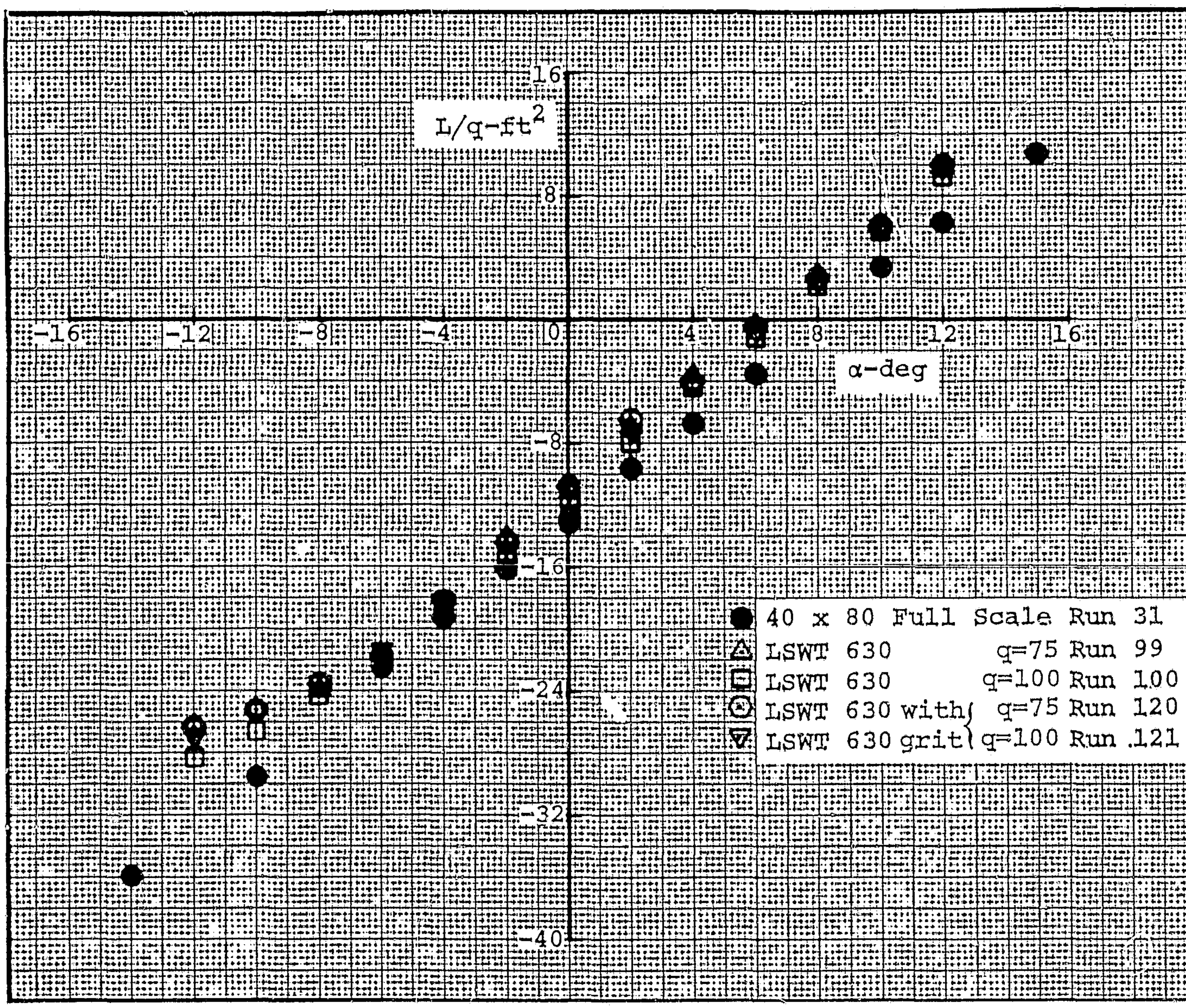


Figure 44. Full/Fifth-Scale Comparison of Lift Characteristics in Pitch for Helicopter without Wings

ORIGINAL PAGE IS
OF POOR QUALITY

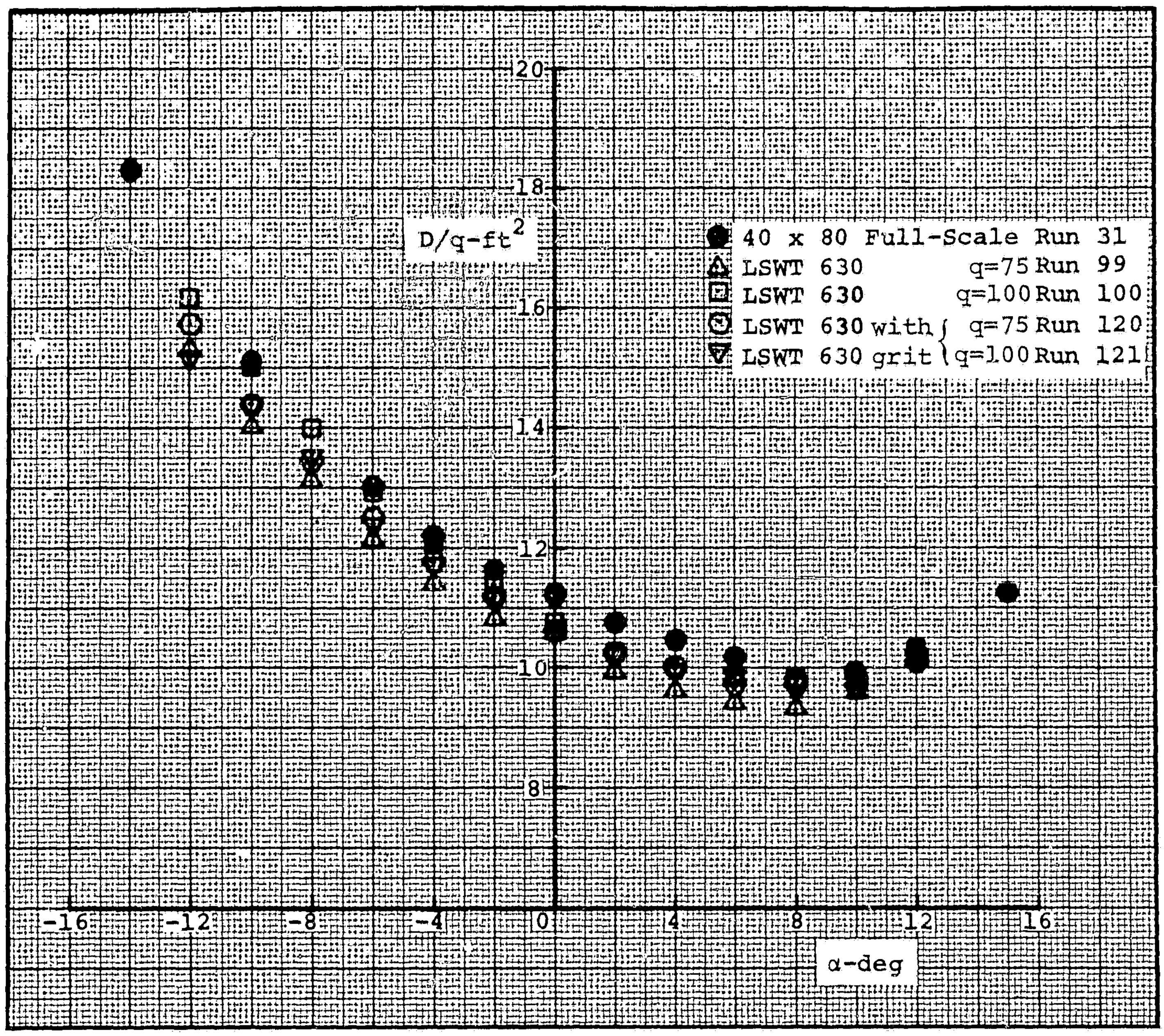


Figure 45. Full/Fifth-Scale Comparison of Drag Characteristics in Pitch for Helicopter without Wings

ORIGINAL PAGE IS
OF POOR QUALITY

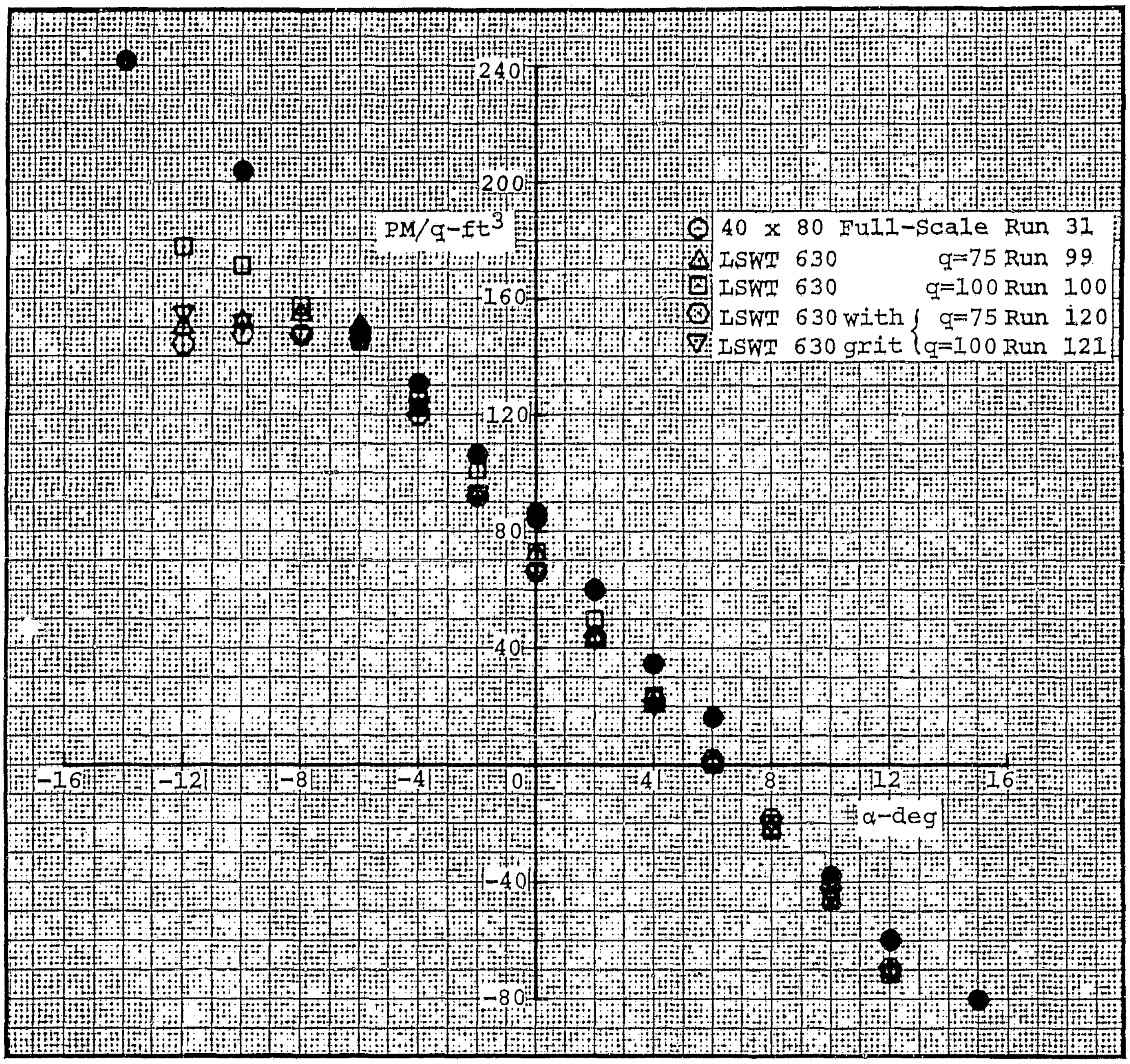


Figure 46. Full/Fifth-Scale Comparison of Pitching Moment Characteristics in Pitch for Helicopter without Wings

ORIGINAL PAGE IS
OF POOR QUALITY

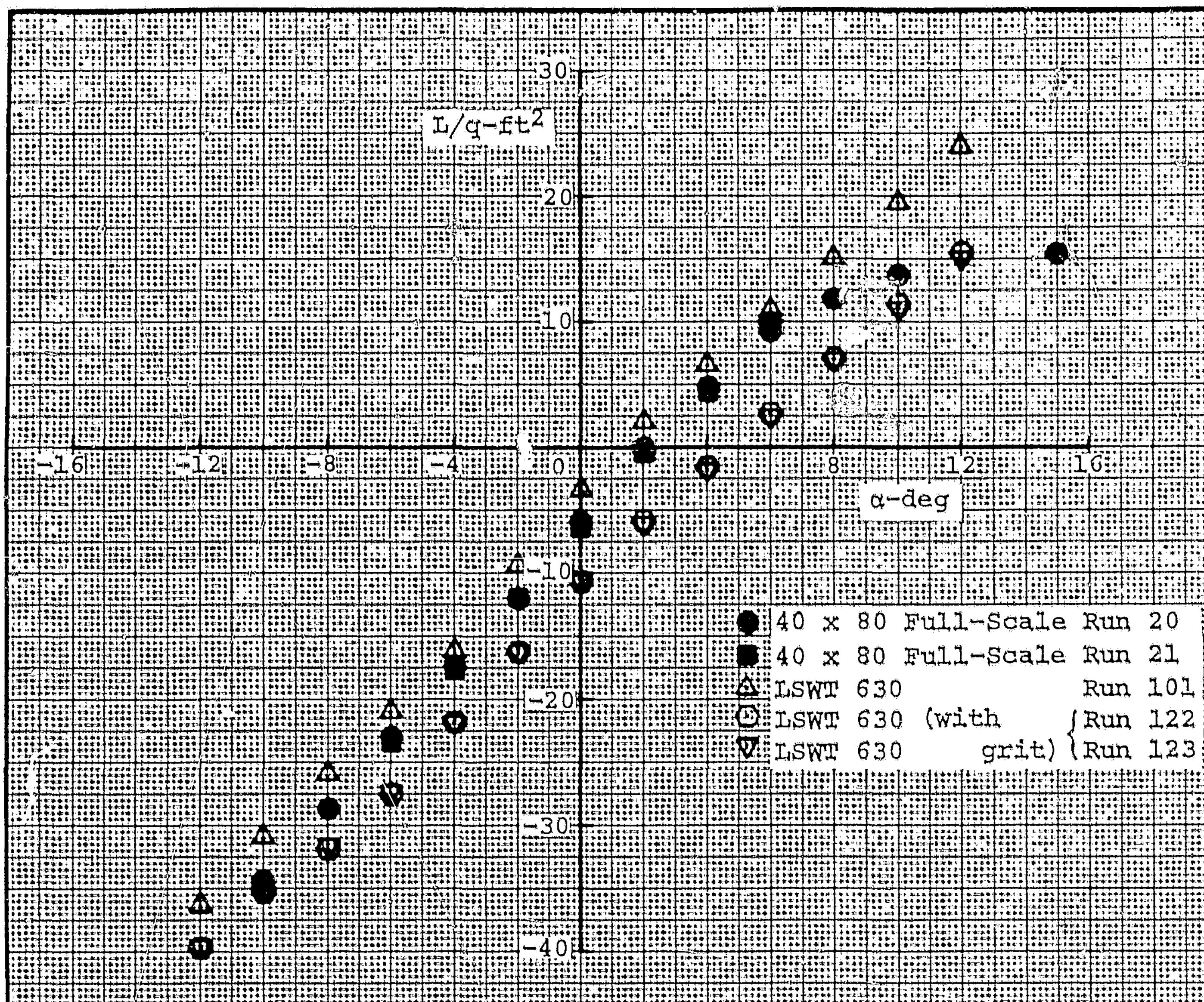


Figure 47. Full/Fifth-Scale Comparison of Lift Characteristics in Pitch for Helicopter

ORIGINAL PAGE IS
OF POOR QUALITY

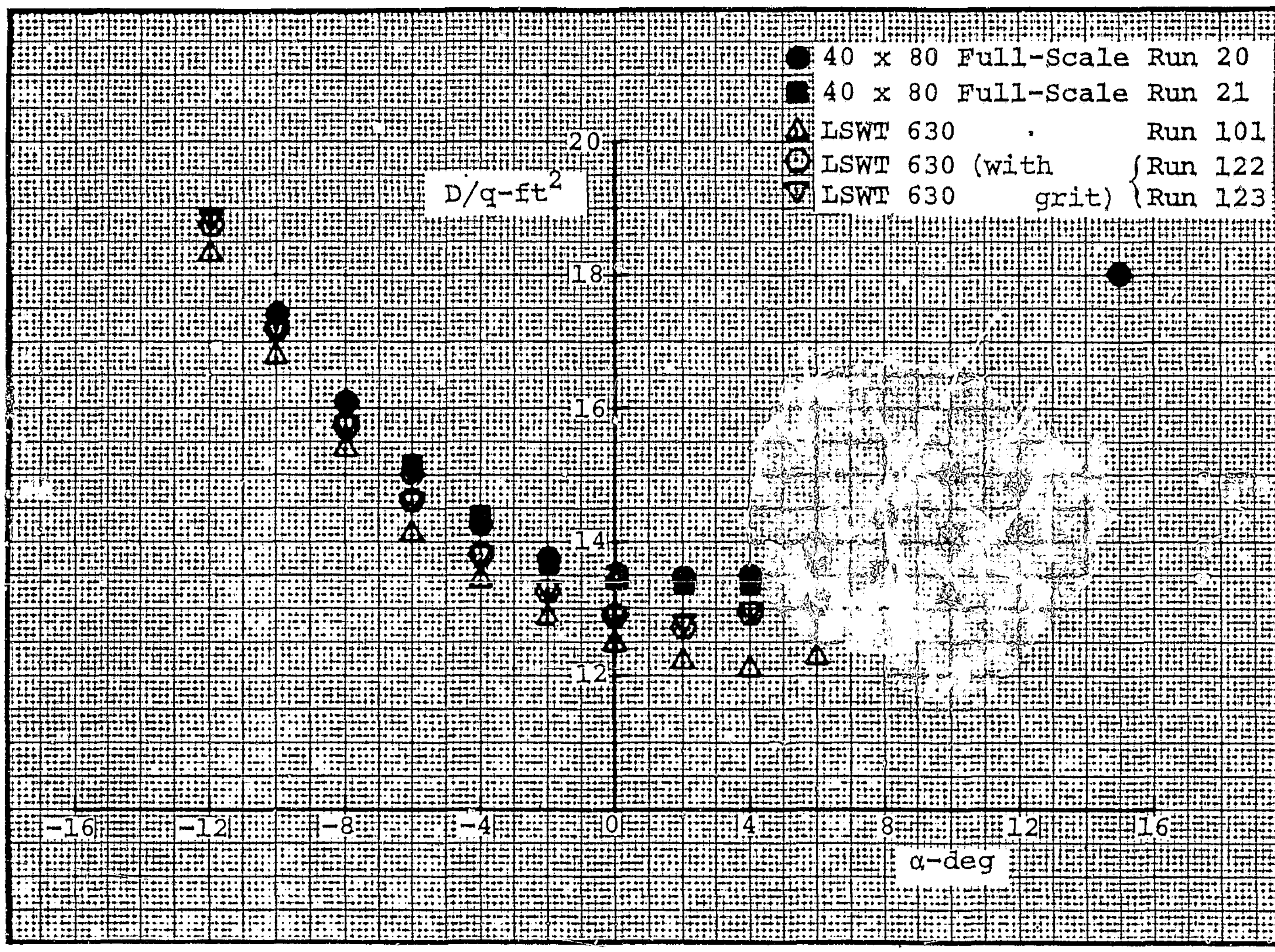


Figure 48. Full/Fifth-Scale Comparison of Drag Characteristics in Pitch for Helicopter

ORIGINAL PAGE IS
OF POOR QUALITY

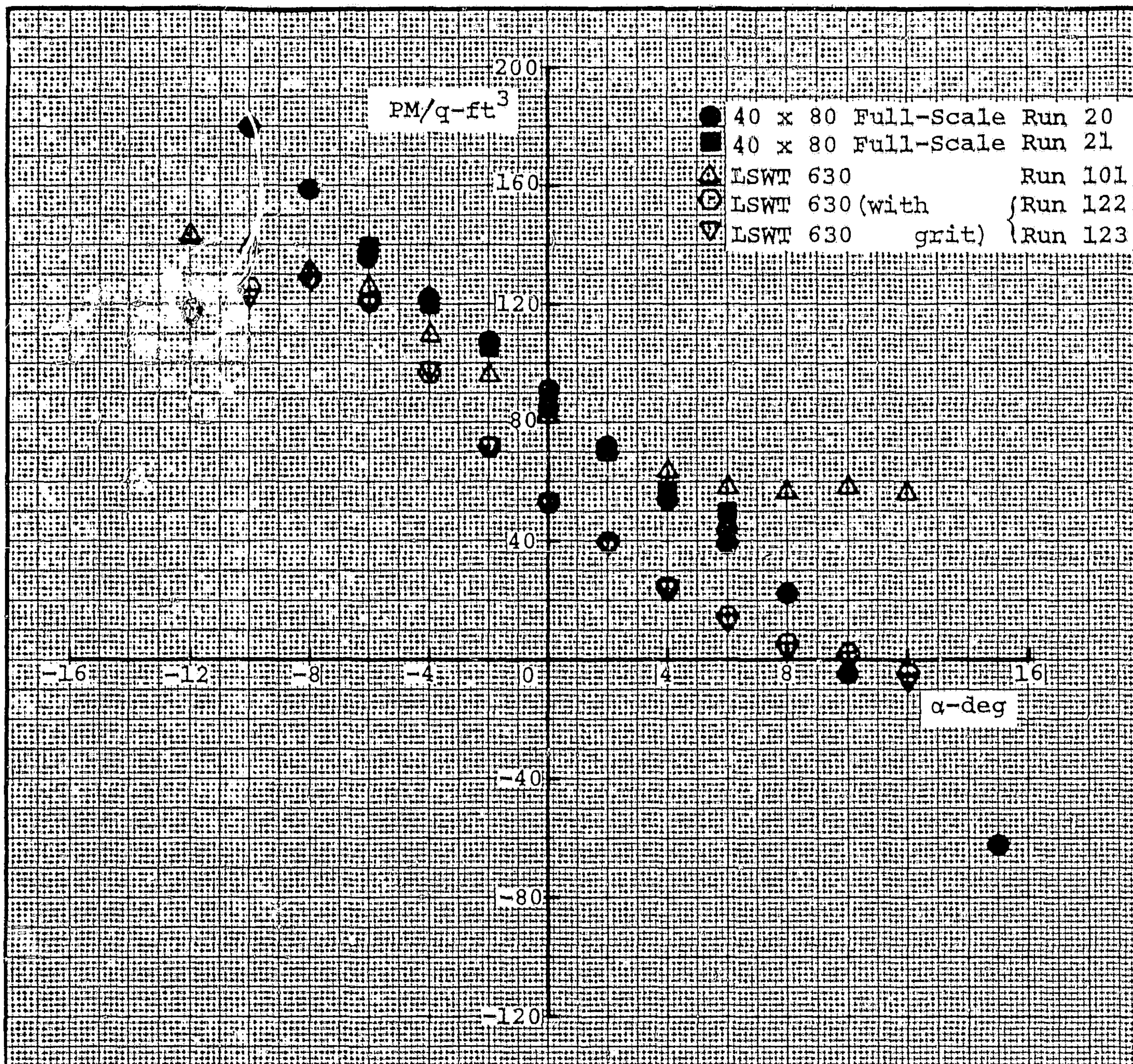


Figure 49. Full/Fifth-Scale Comparison of Pitching Moment Characteristics in Pitch for Helicopter

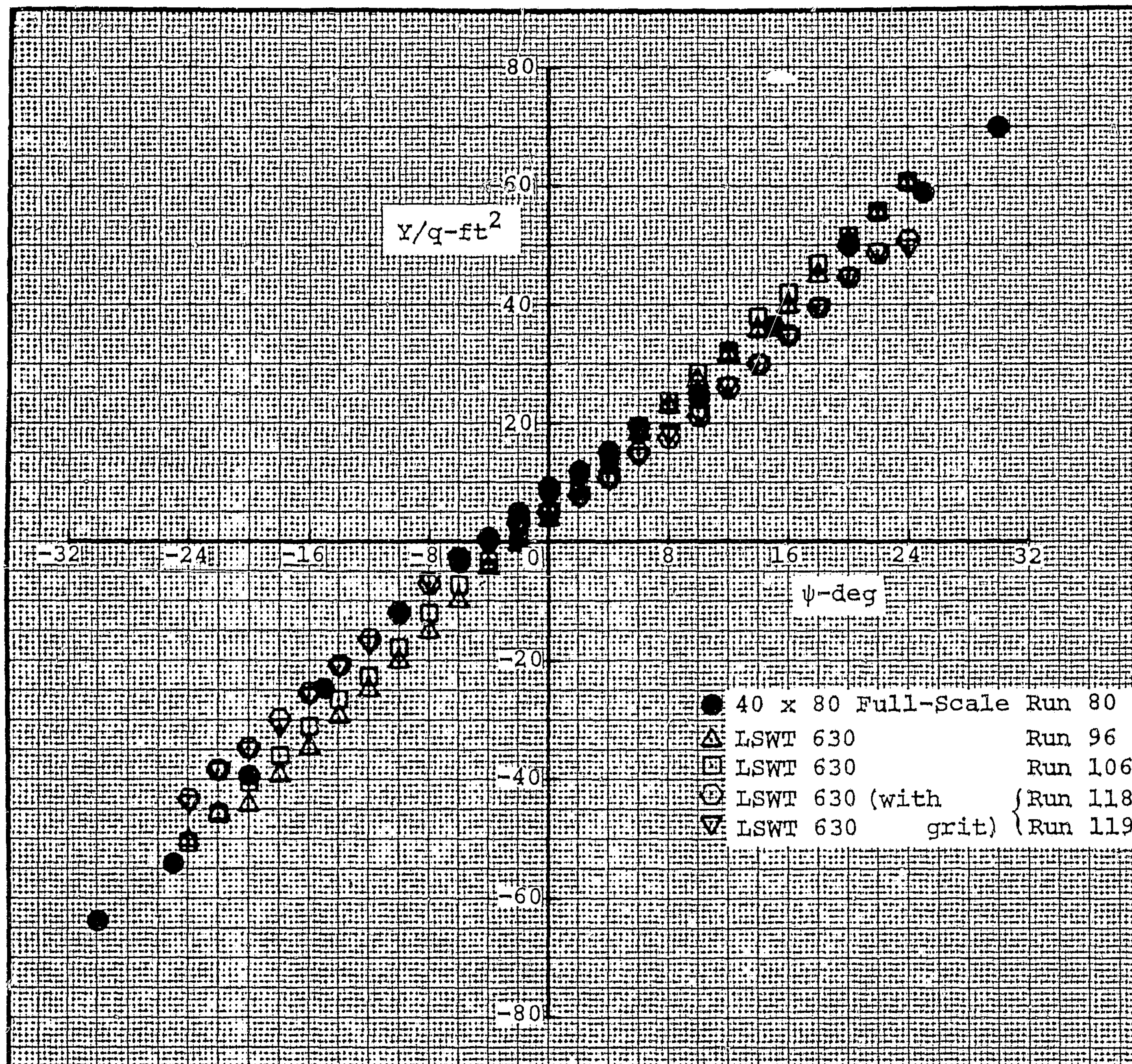


Figure 50. Full/Fifth-Scale Comparison of Side Force Characteristics in Yaw for Helicopter

ORIGINAL PAGE IS
OF POOR QUALITY

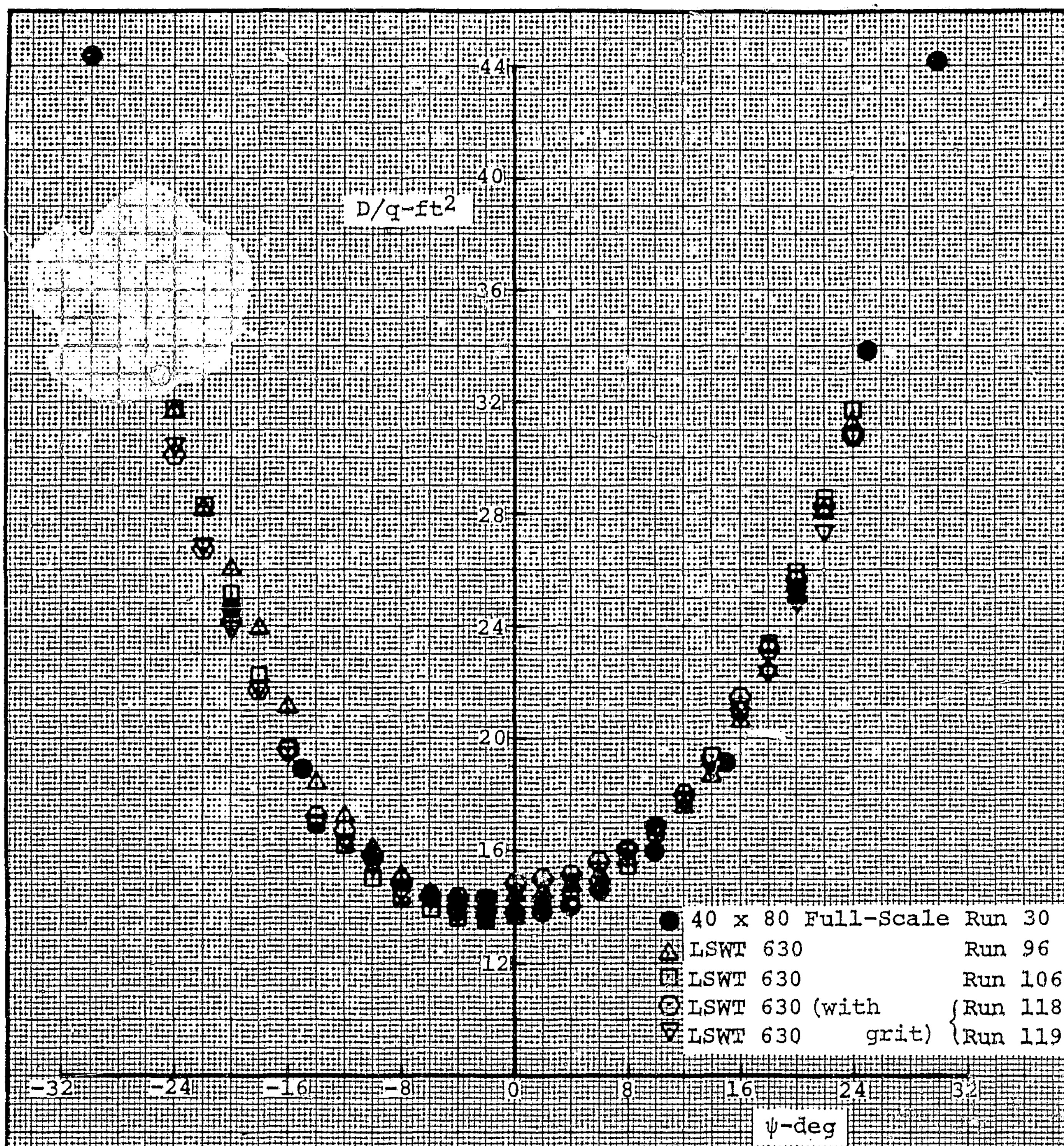


Figure 51. Full/Fifth-Scale Comparison of Drag Characteristics in Yaw for Helicopter

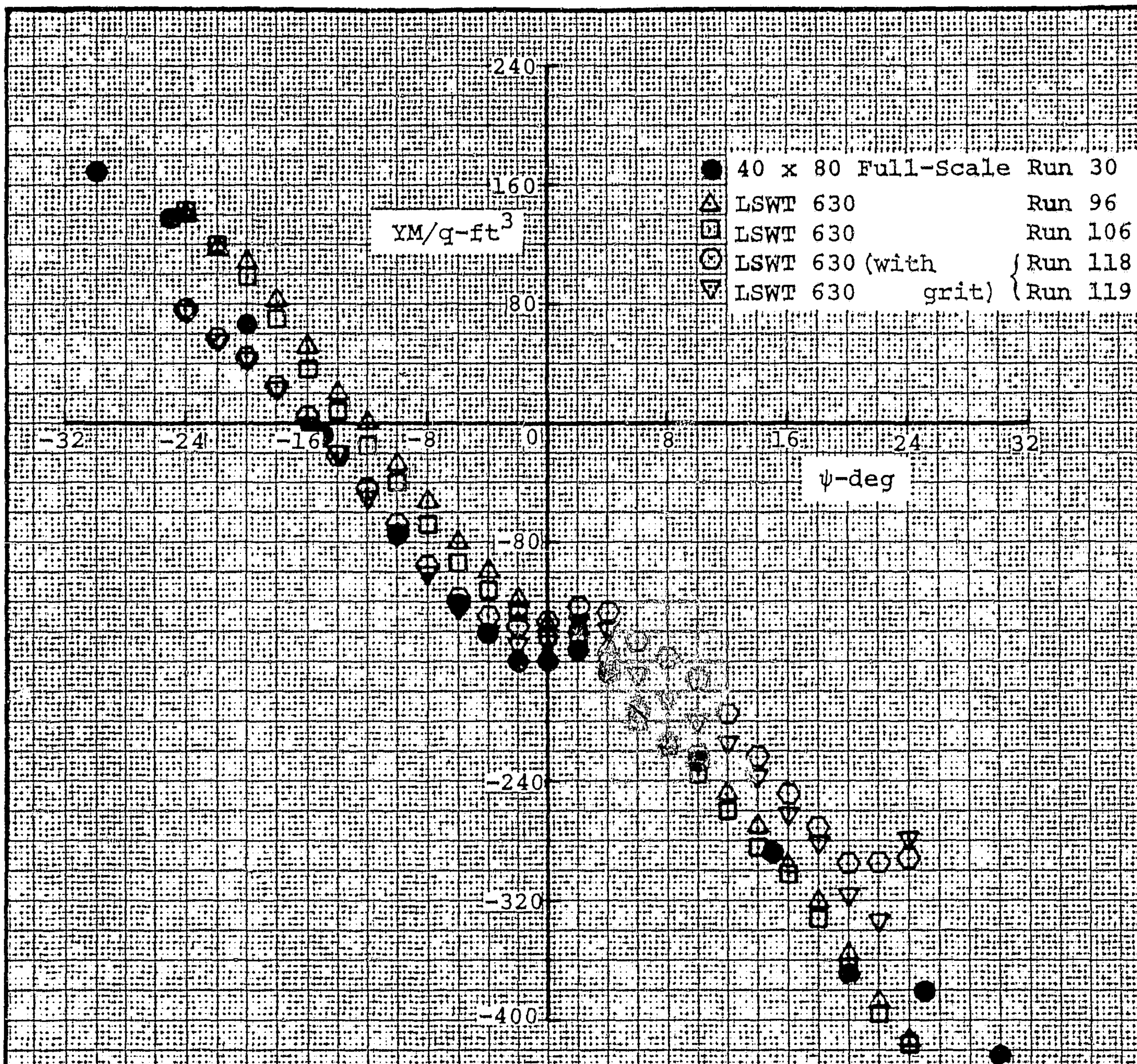


Figure 52. Full/Fifth-Scale Comparison of Yawing Moment Characteristics in Yaw for Helicopter

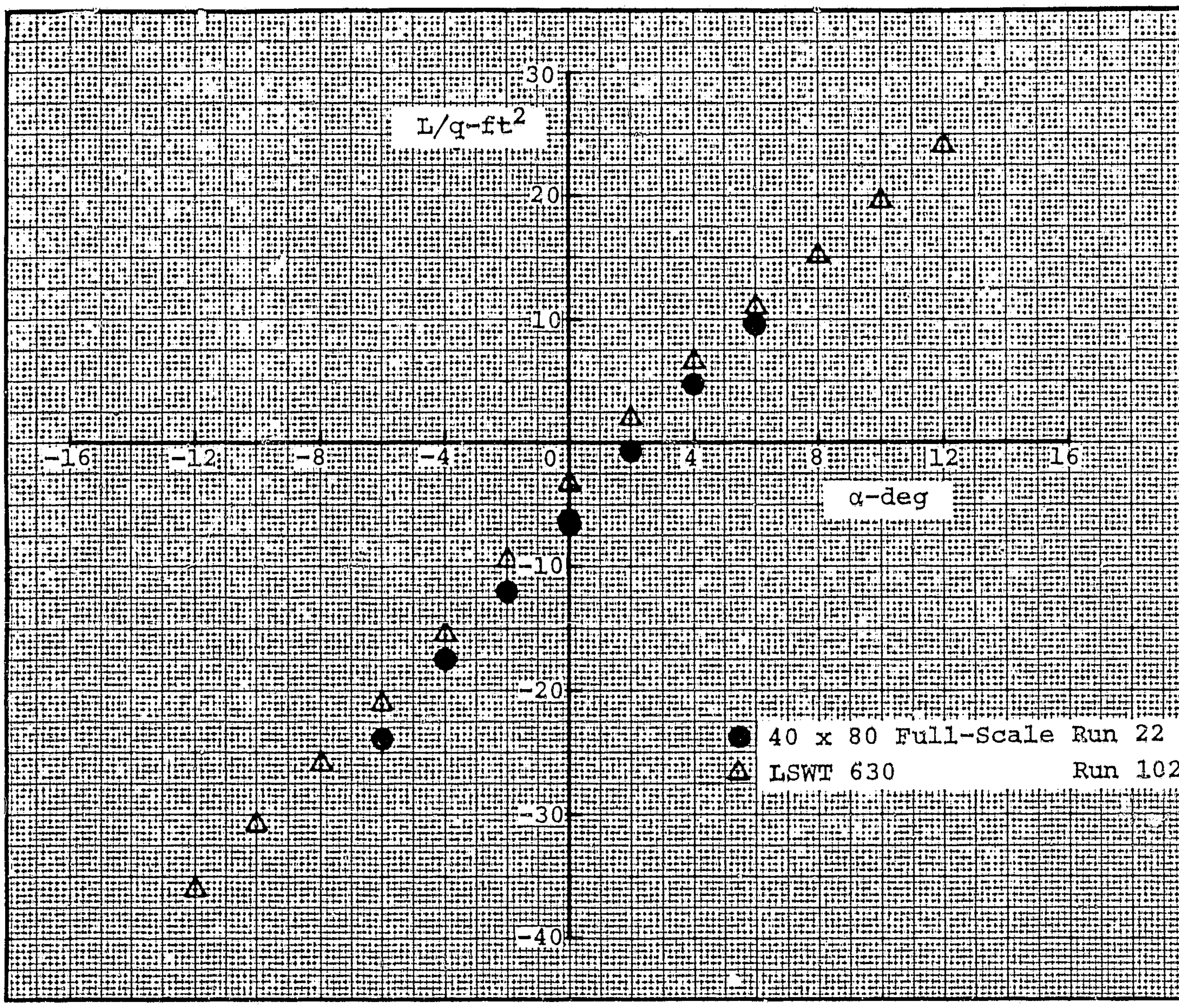


Figure 53. Full/Fifth-Scale Comparison of Lift Characteristics in Pitch for Helicopter without Tail Rotor

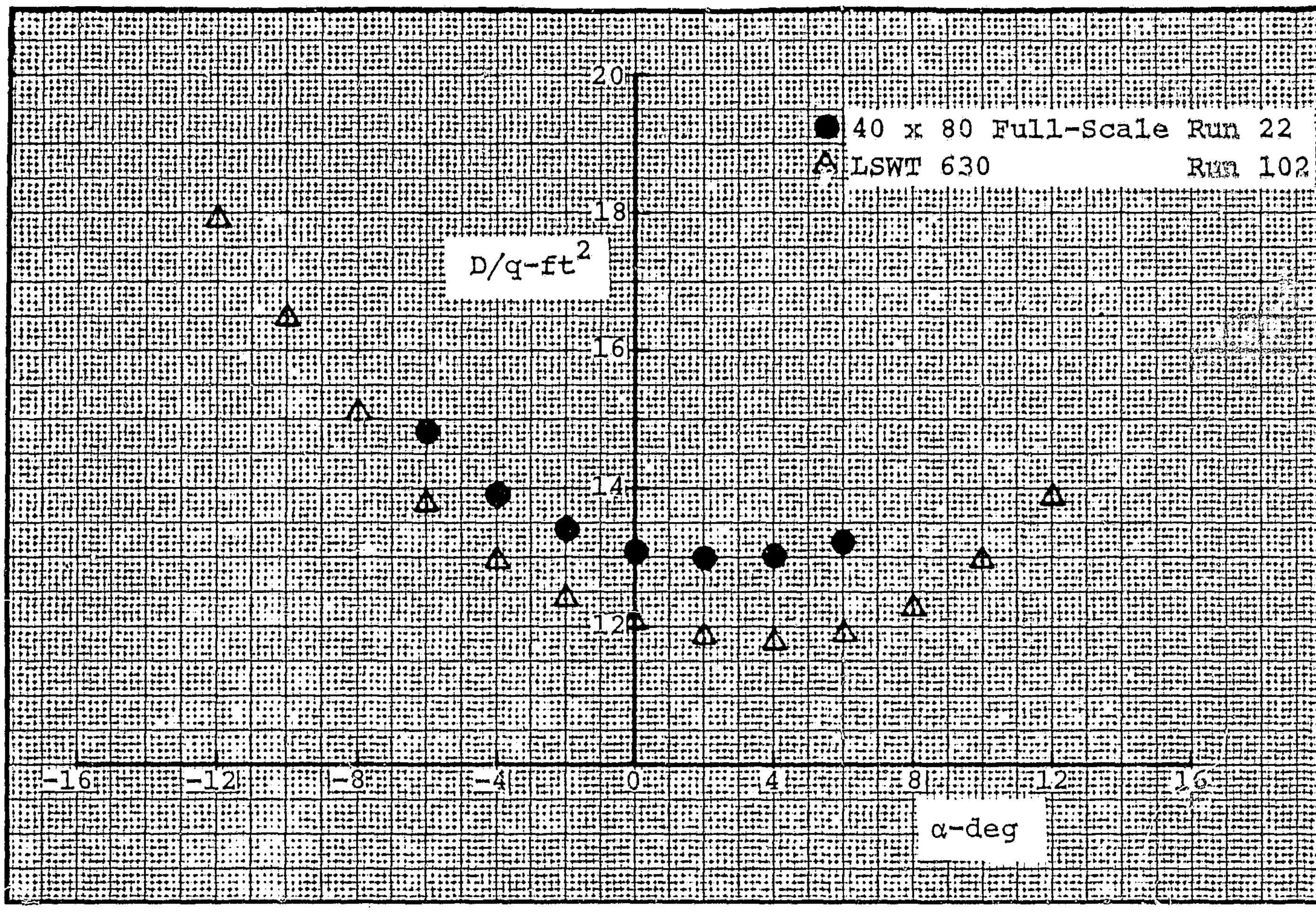


Figure 54. Full/Fifth-Scale Comparison of Drag Characteristics in Pitch for Helicopter without Tail Rotor

ORIGINAL PAGE IS
OF POOR QUALITY

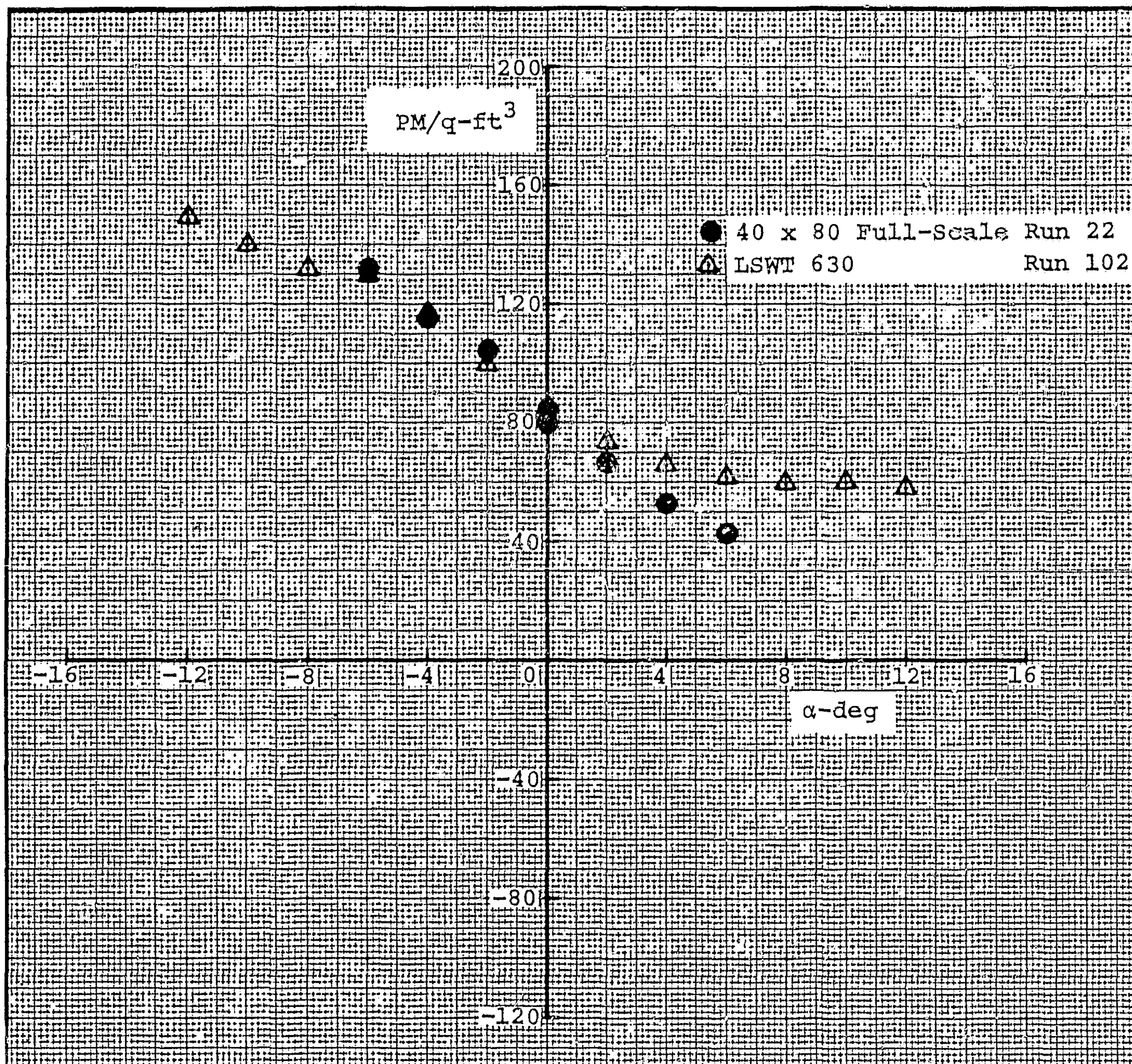


Figure 55. Full/Fifth-Scale Comparison of Pitching Moment Characteristics in Pitch for Helicopter without Tail Rotor

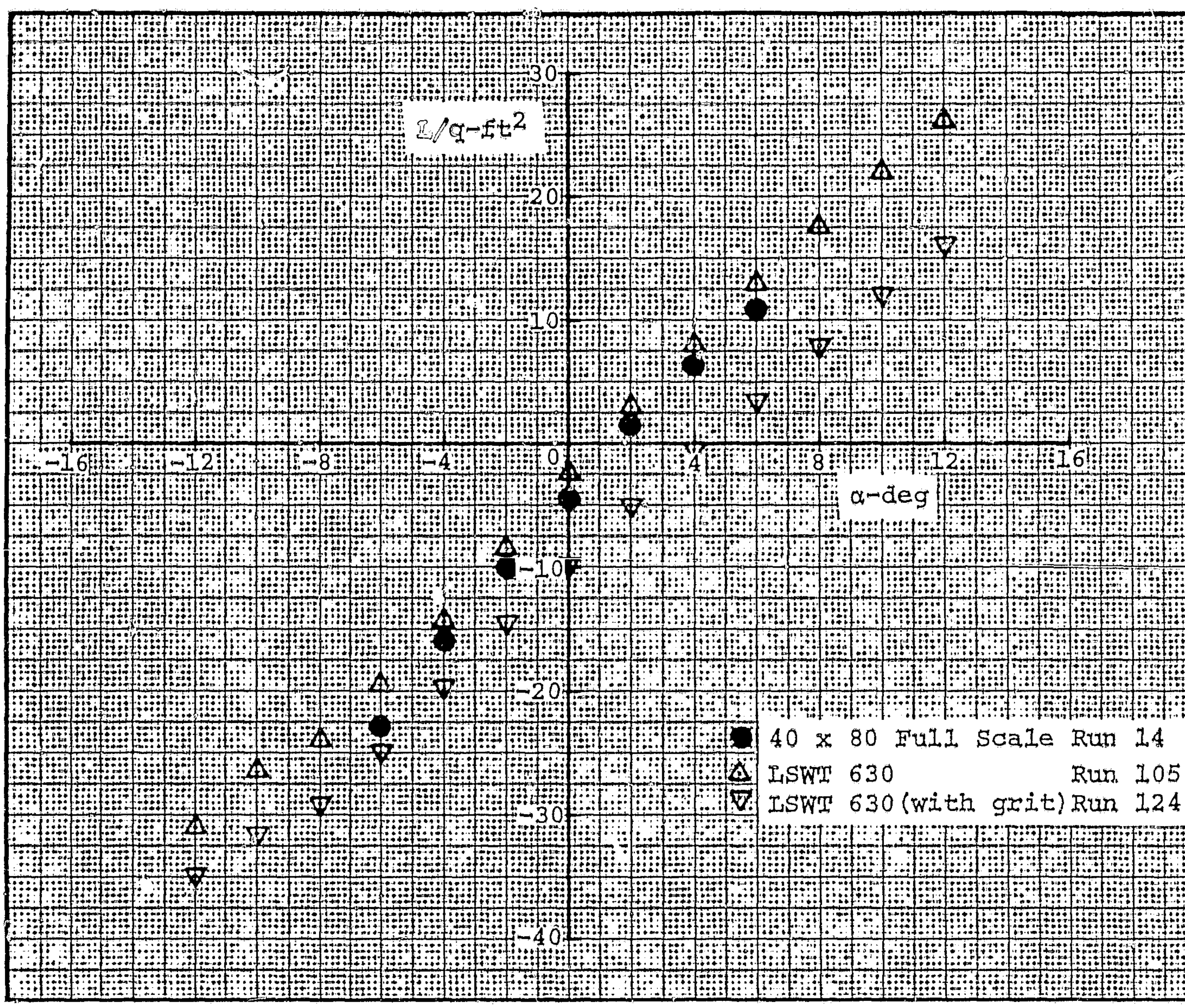


Figure 56. Full/Fifth-Scale Comparison of Lift Characteristics in Pitch for Helicopter with Landing Gear Doors Open

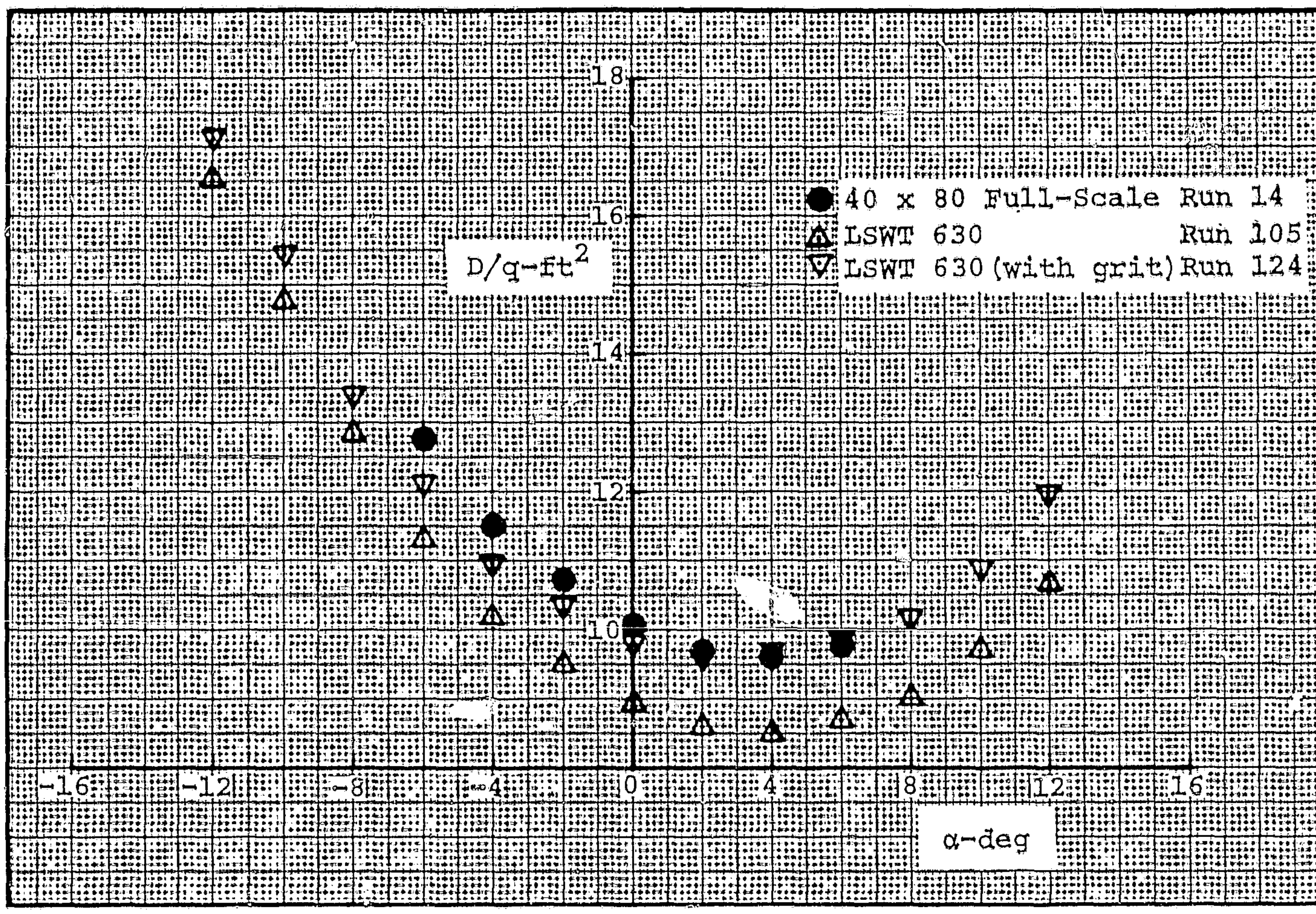


Figure 57. Full/Fifth-Scale Comparison of Drag Characteristics in Pitch for Helicopter with Landing Gear Doors Open

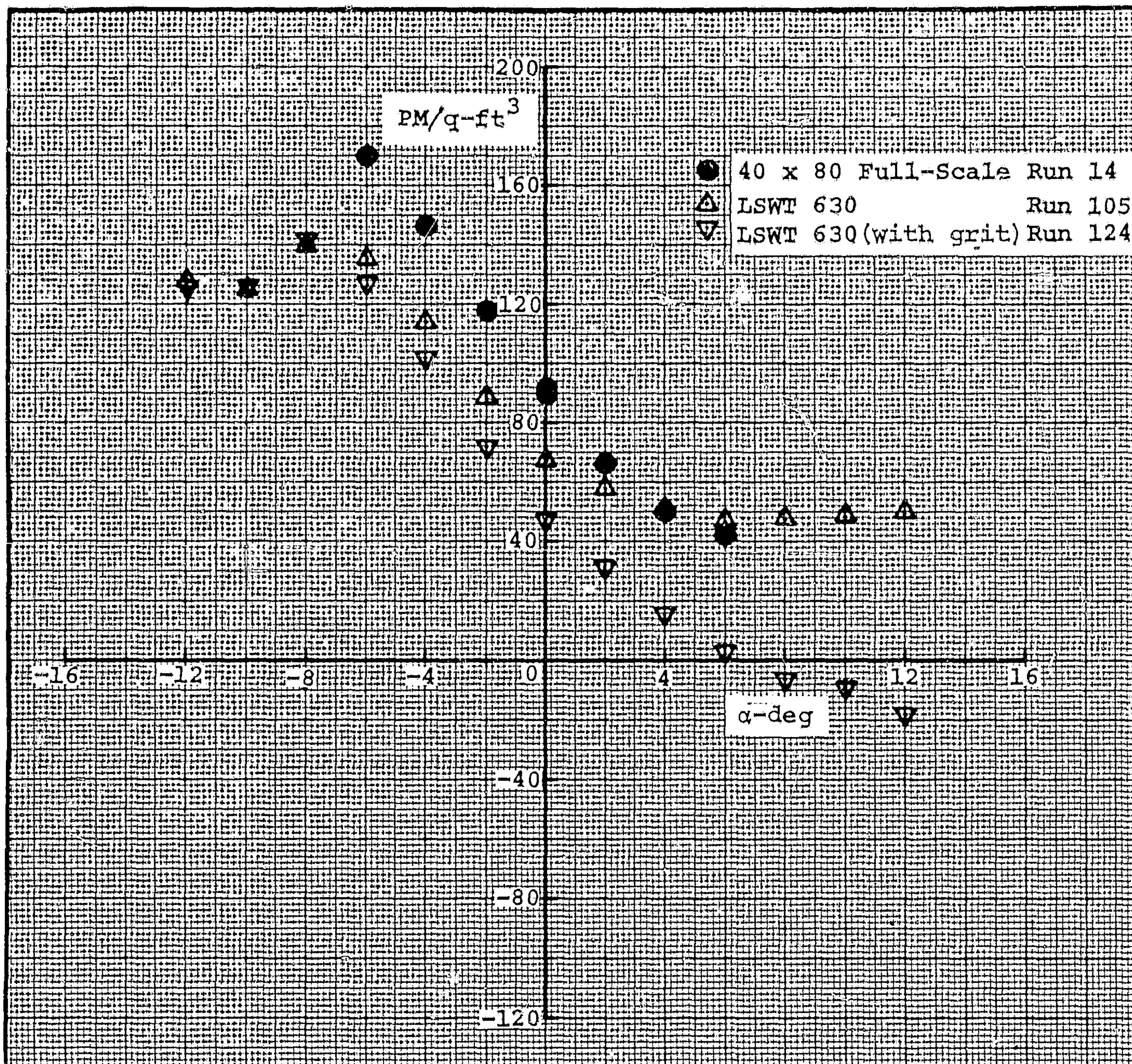


Figure 58. Full/Fifth-Scale Comparison of Pitching Moment Characteristics in Pitch for Helicopter with Landing Gear Doors Open

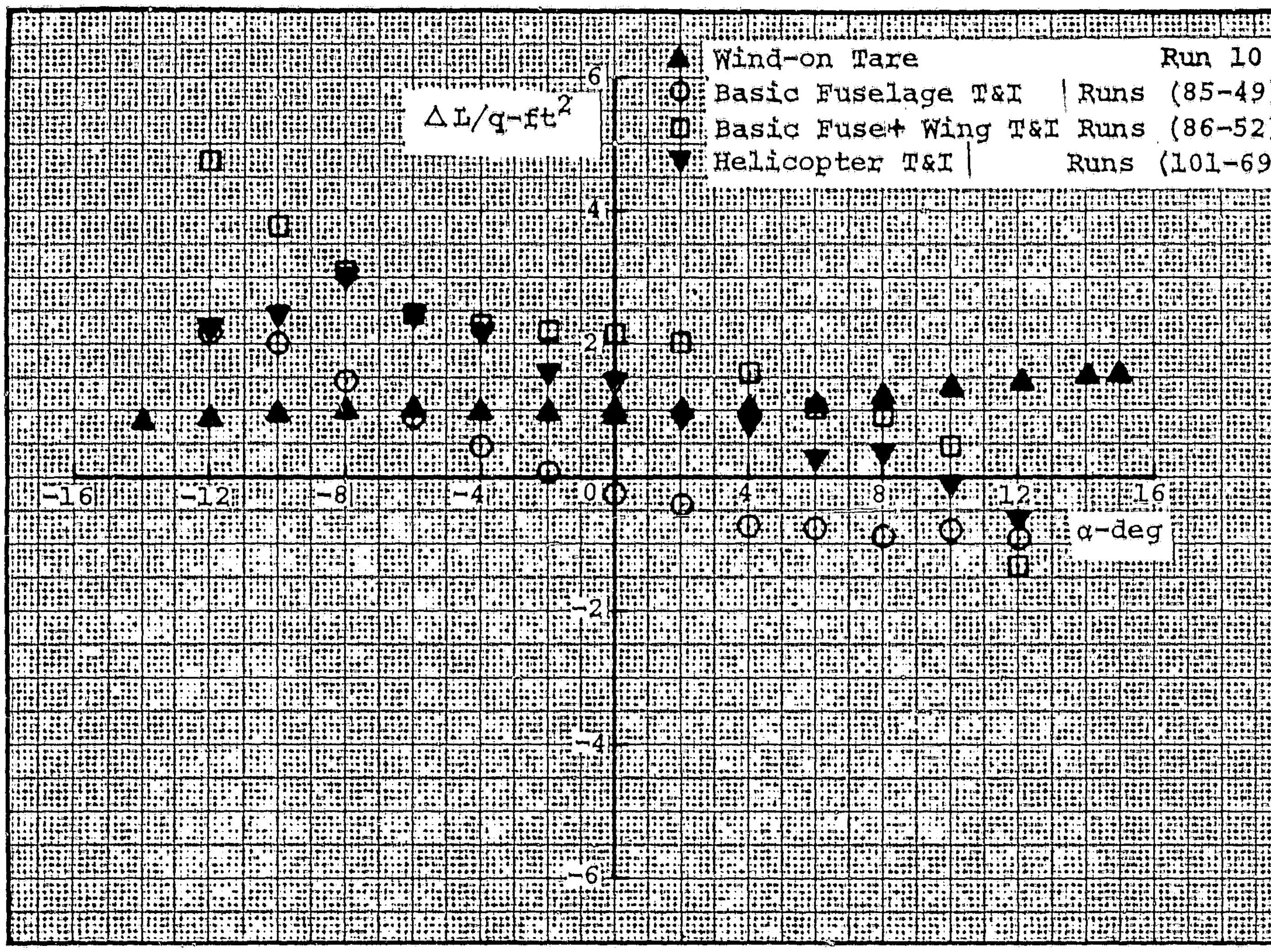


Figure 59. Tare and Interference Corrections to Lift Characteristics in Pitch for Three-Point Mount

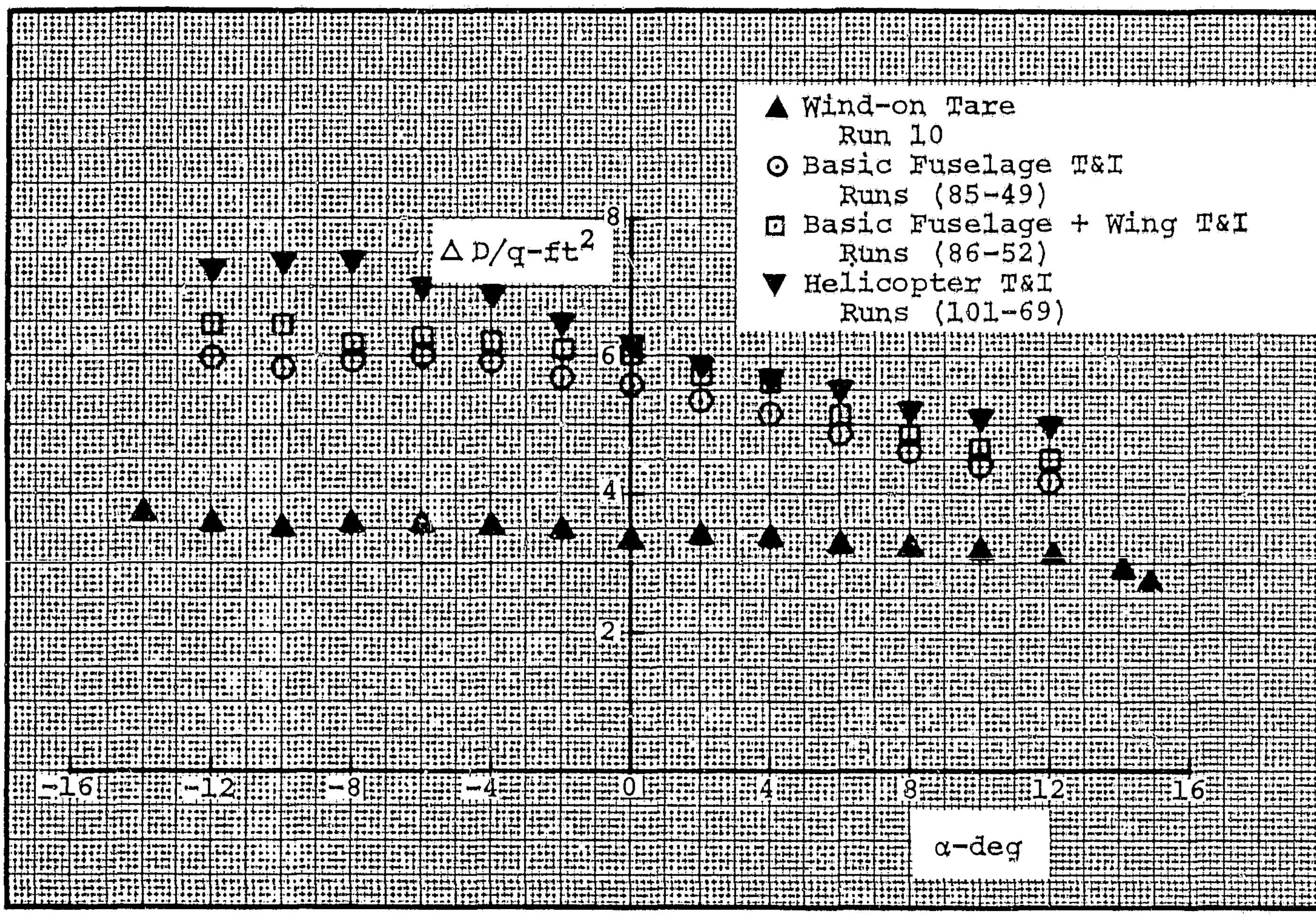


Figure 60. Tare and Interference Corrections to Drag Characteristics in Pitch for Three-Point Mount

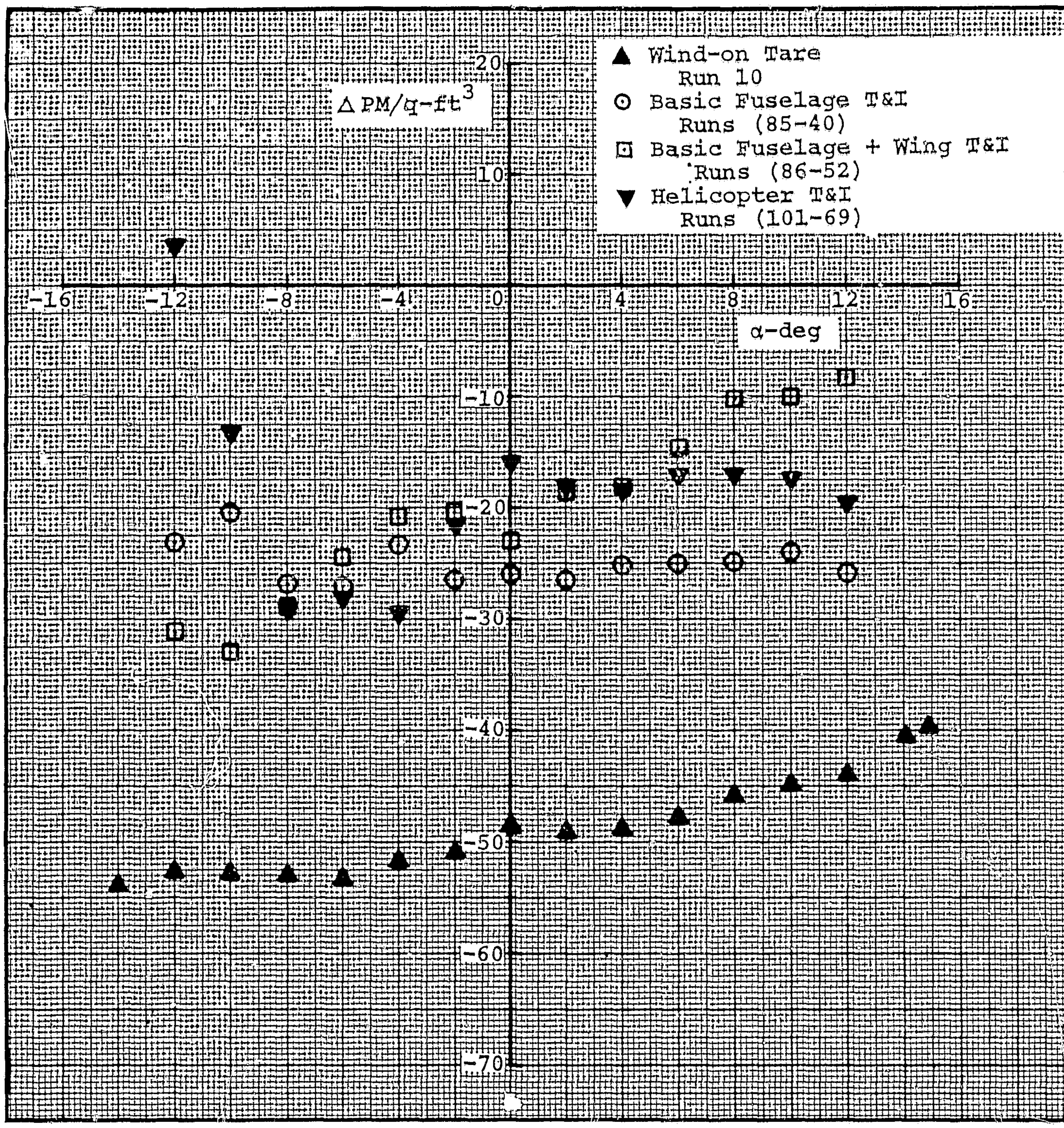


Figure 61. Tare and Interference Corrections to Pitching Moment Characteristics in Pitch for Three-Point Mount

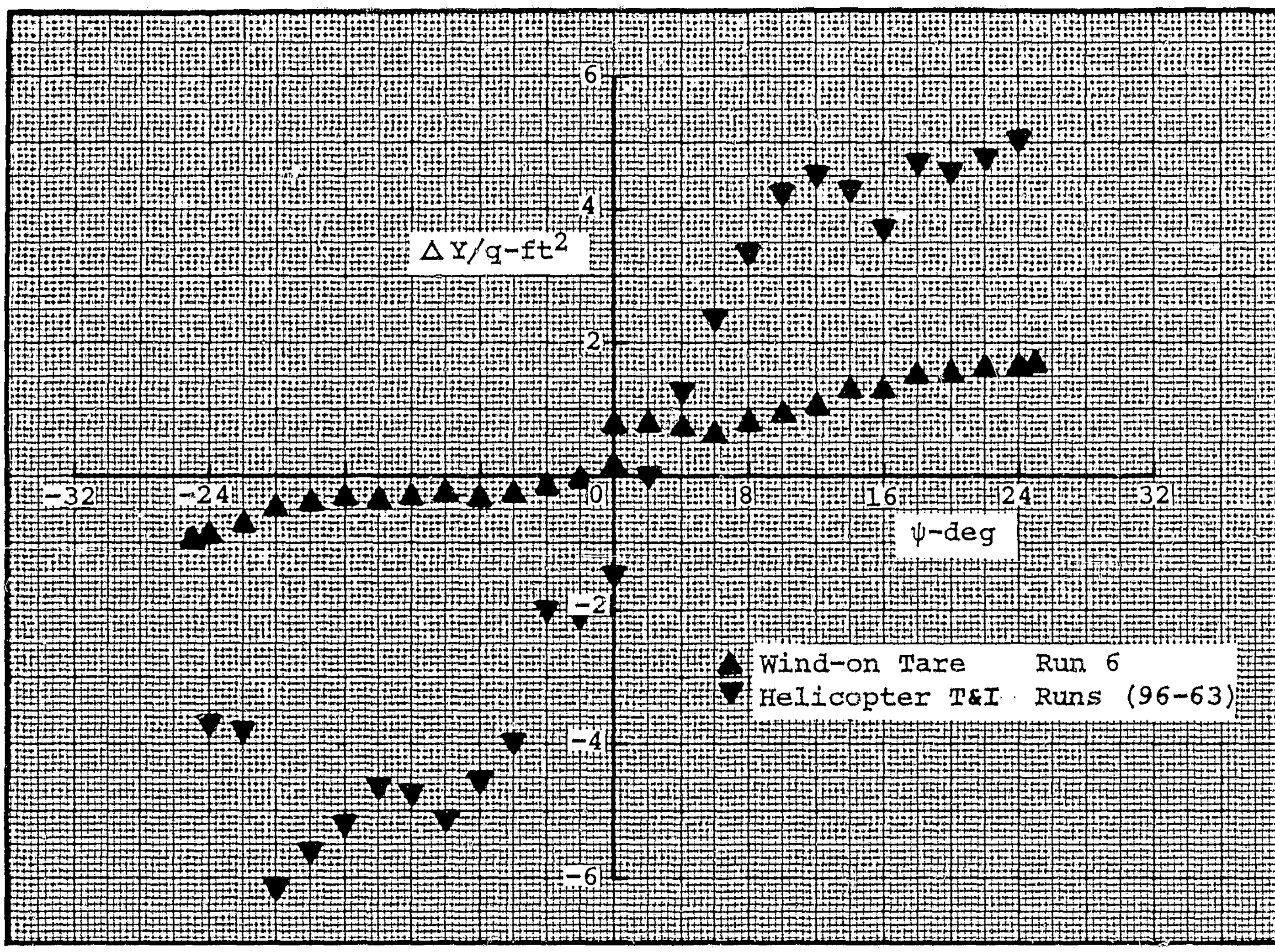


Figure 62. Tare and Interference Corrections to Side Force Characteristics in Yaw for Three-Point Mount

ORIGINAL PAGE IS
OF POOR QUALITY

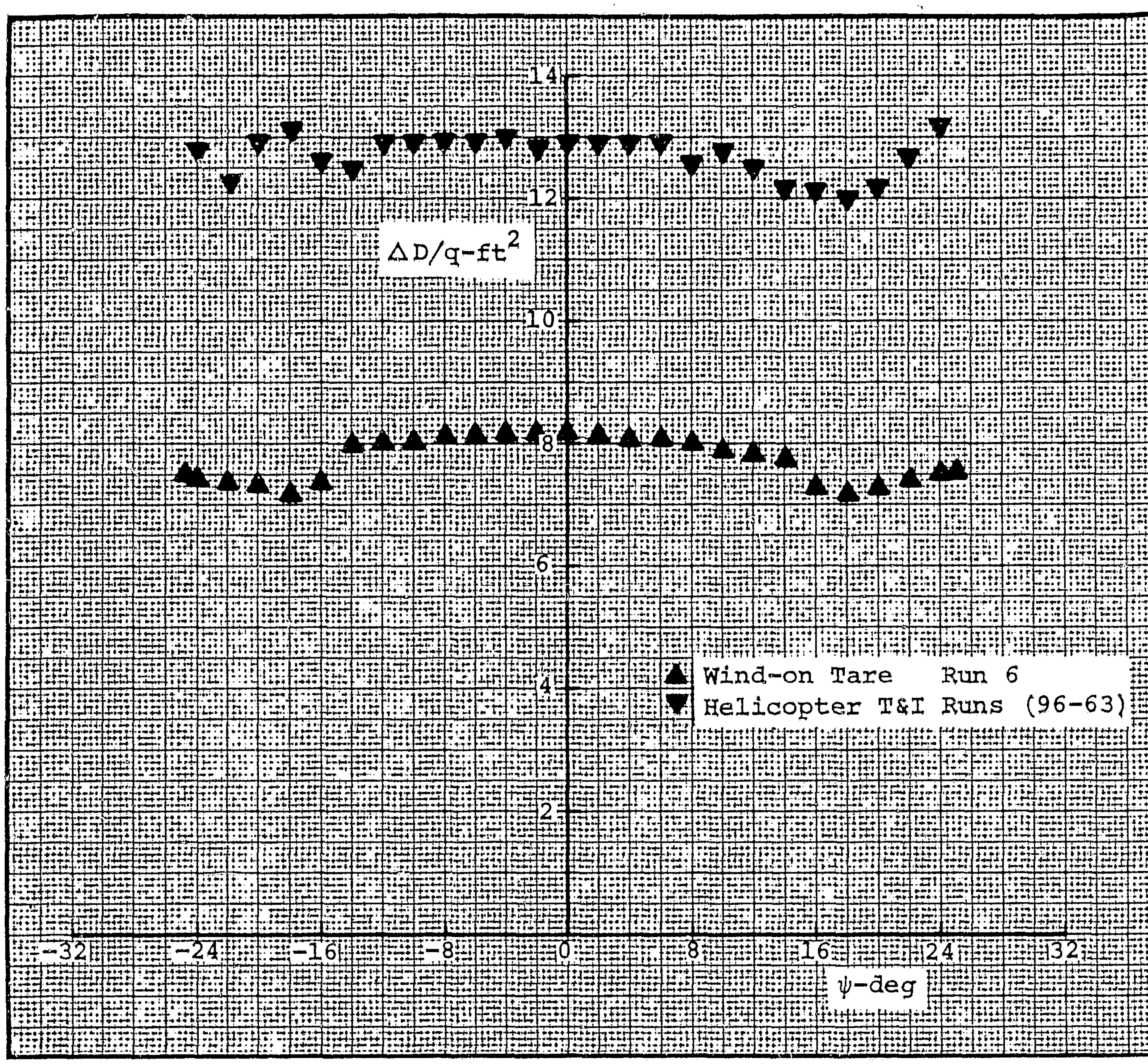


Figure 63. Tare and Interference Corrections to Drag Characteristics in Yaw for Three-Point Mount

ORIGINAL PAGE IS
OF POOR QUALITY

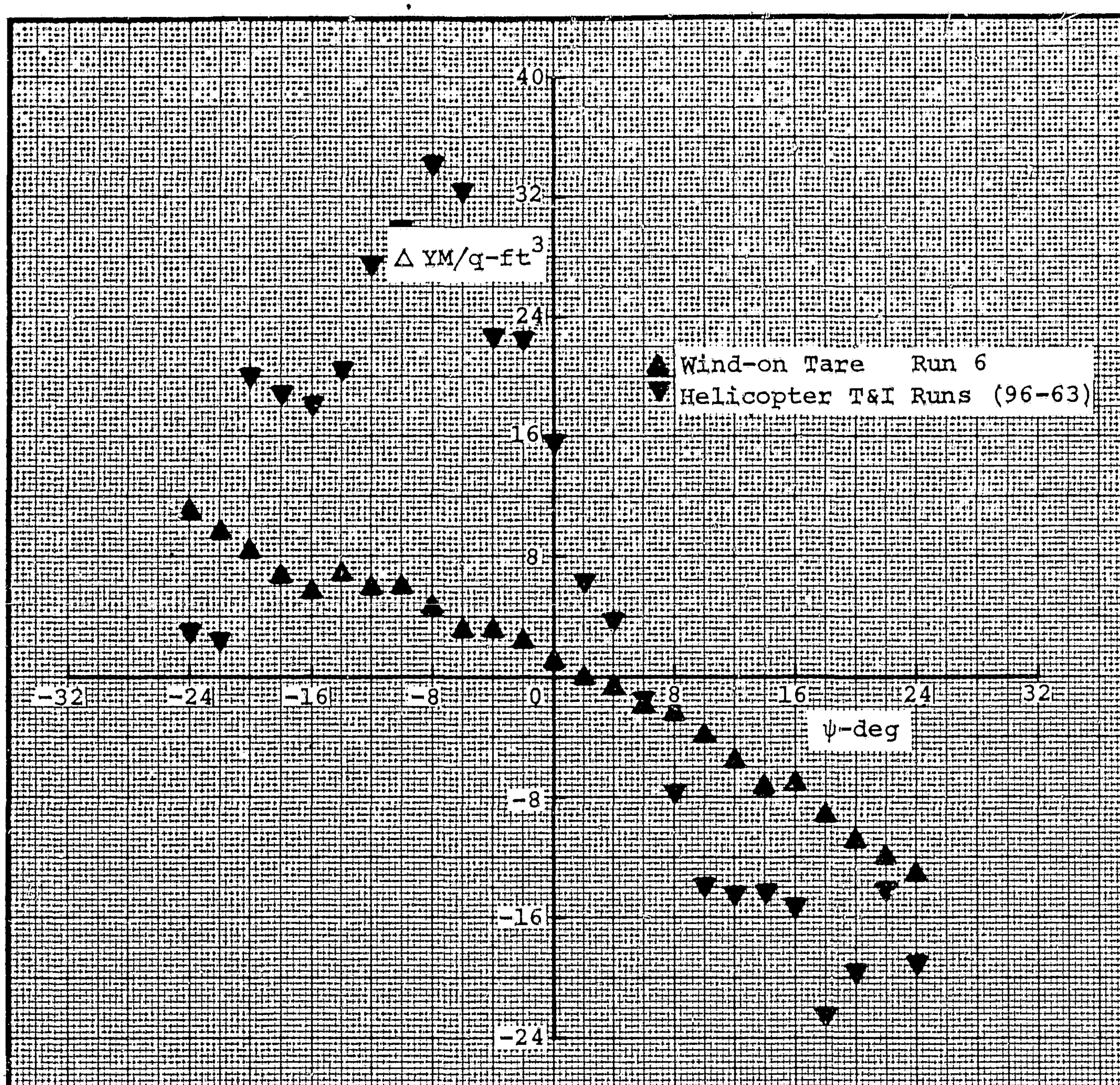
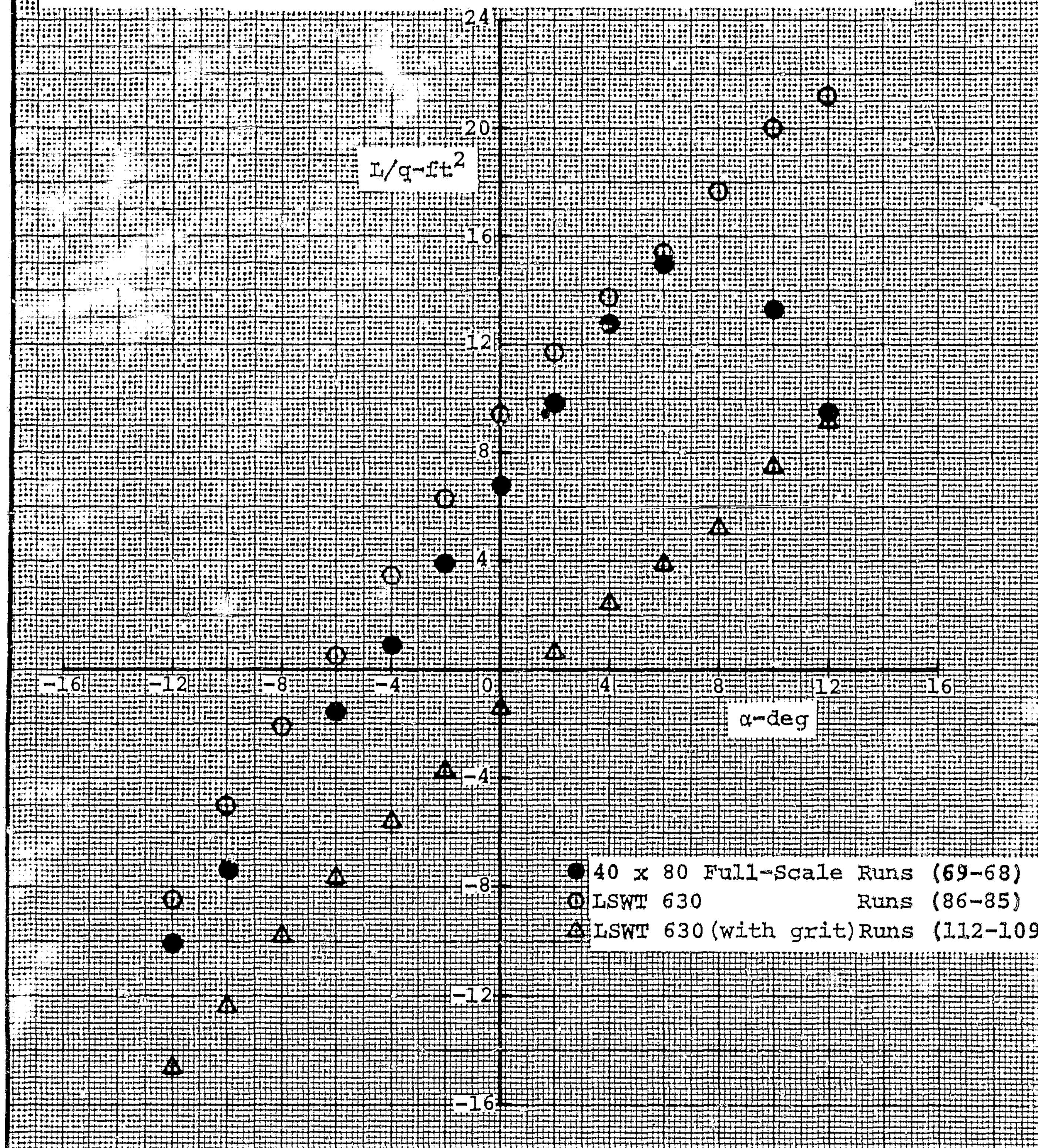


Figure 64. Tare and Interference Corrections to Yawing Moment Characteristics in Yaw for Three-Point Mount

Figure. 65. Full/Fifth-Scale Comparison of Lift Characteristics in Pitch for Wing



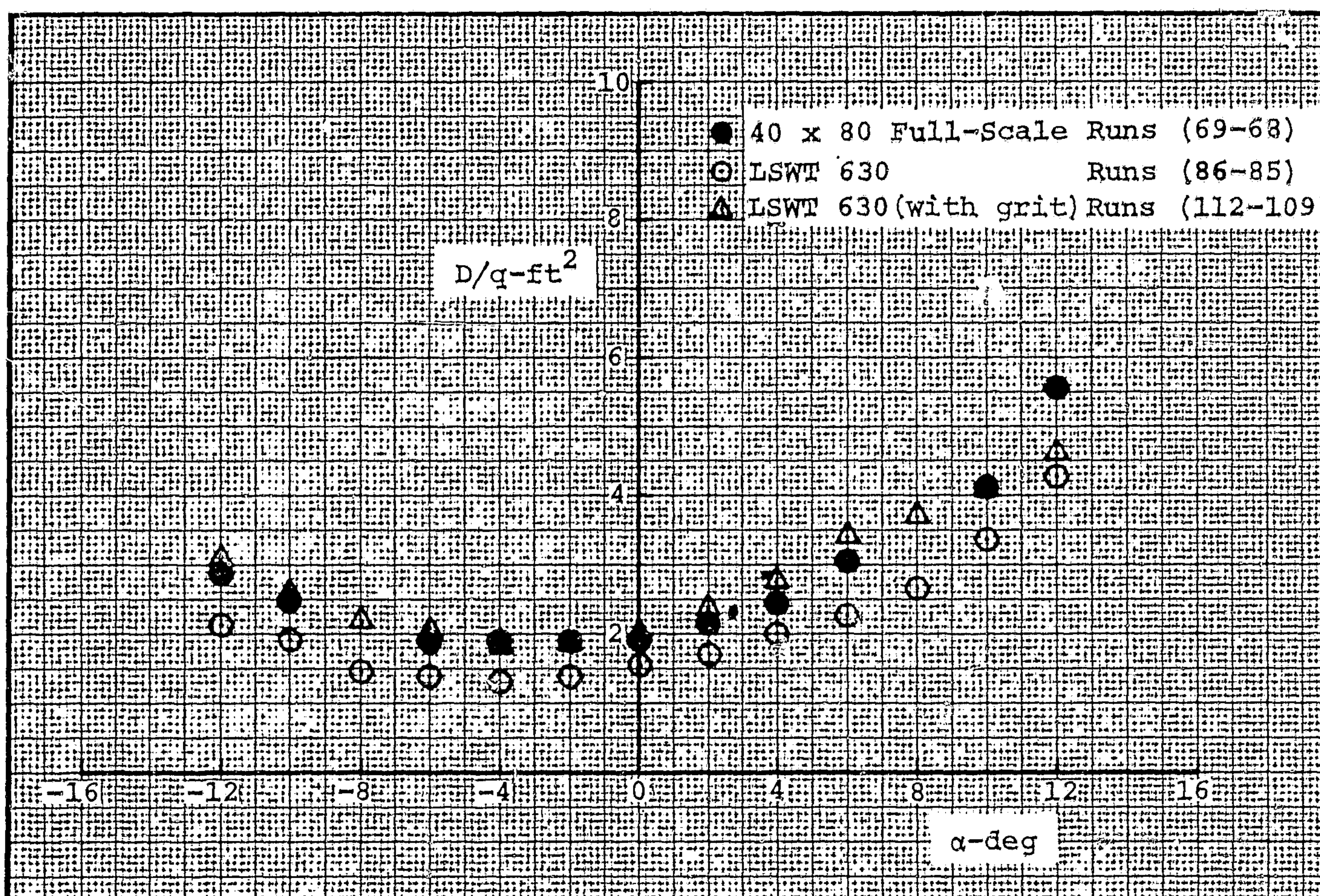
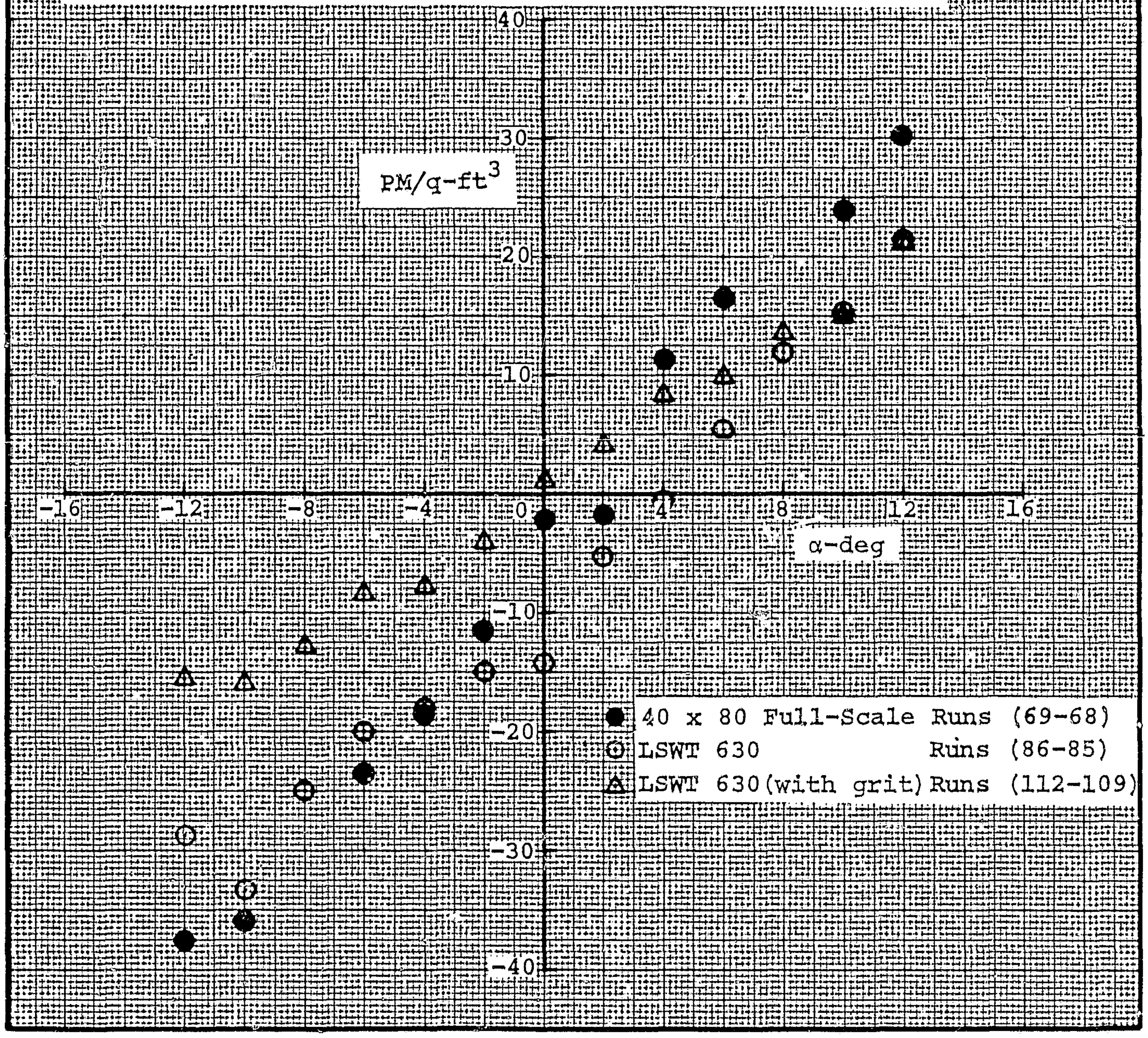


Figure 66. Full/Fifth-Scale Comparison of Drag Characteristics in Pitch for Wing

Figure 67. Full/Fifth-Scale Comparison of Pitching Moment Characteristics in Pitch for Wing



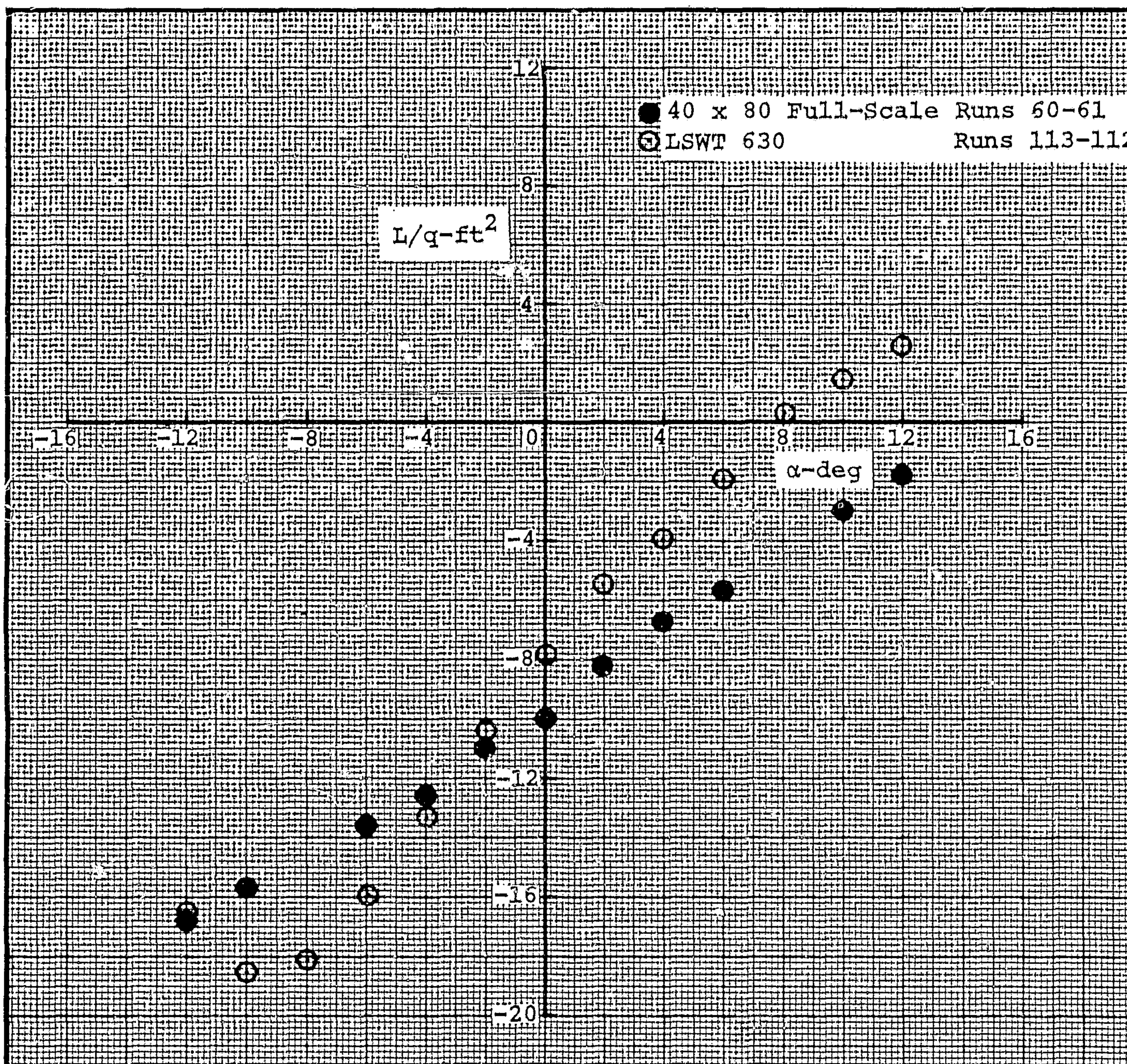


Figure 68. Full/Fifth-Scale Comparison of Lift Characteristics in Pitch for Horizontal Stabilizer

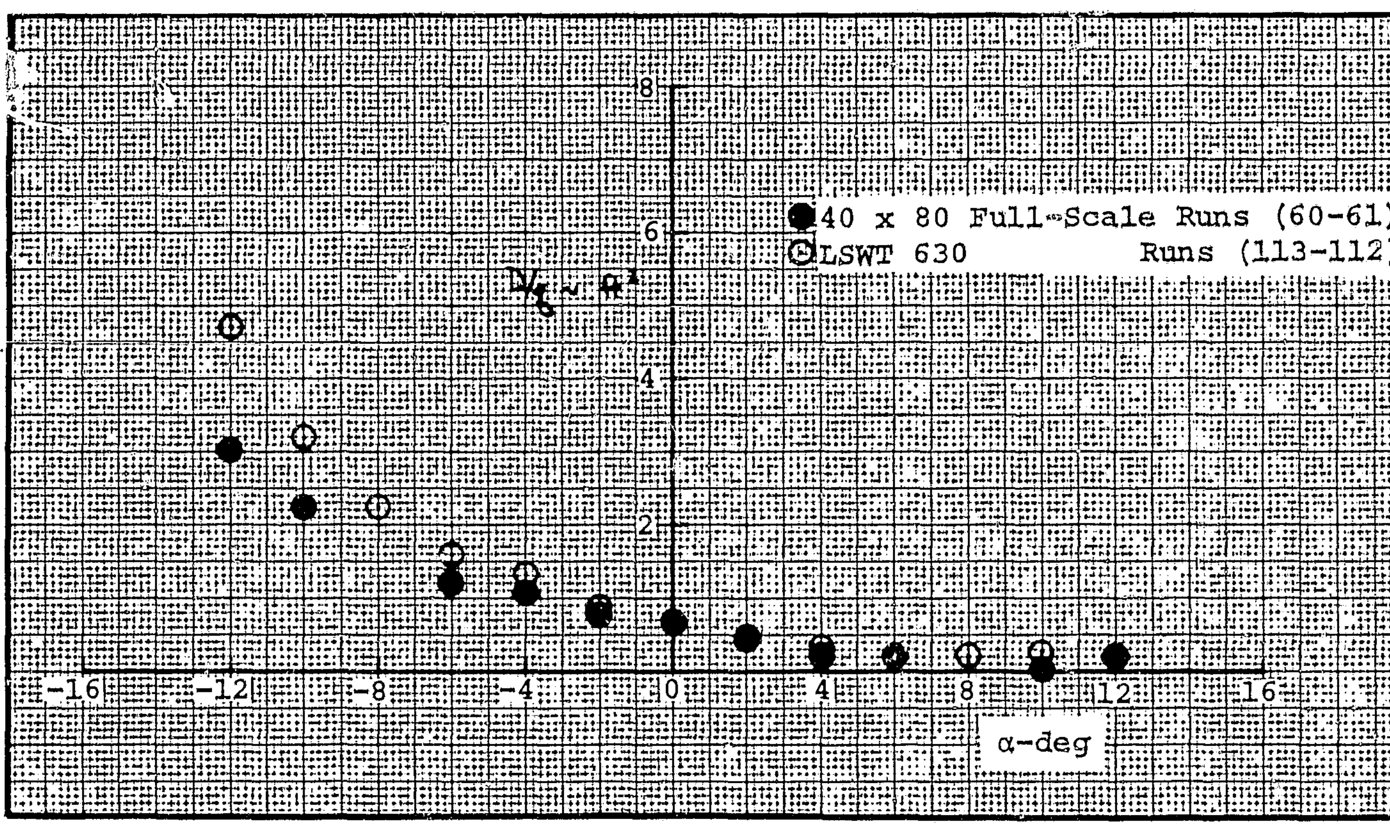


Figure 69. Full/Fifth-Scale Comparison of Drag Characteristics in Pitch for Horizontal Stabilizer

ORIGINAL PAGE IS
OF POOR QUALITY

Figure 70. Full/Fifth-Scale Comparison of Pitching Moment Characteristics in Pitch for Horizontal Stabilizer

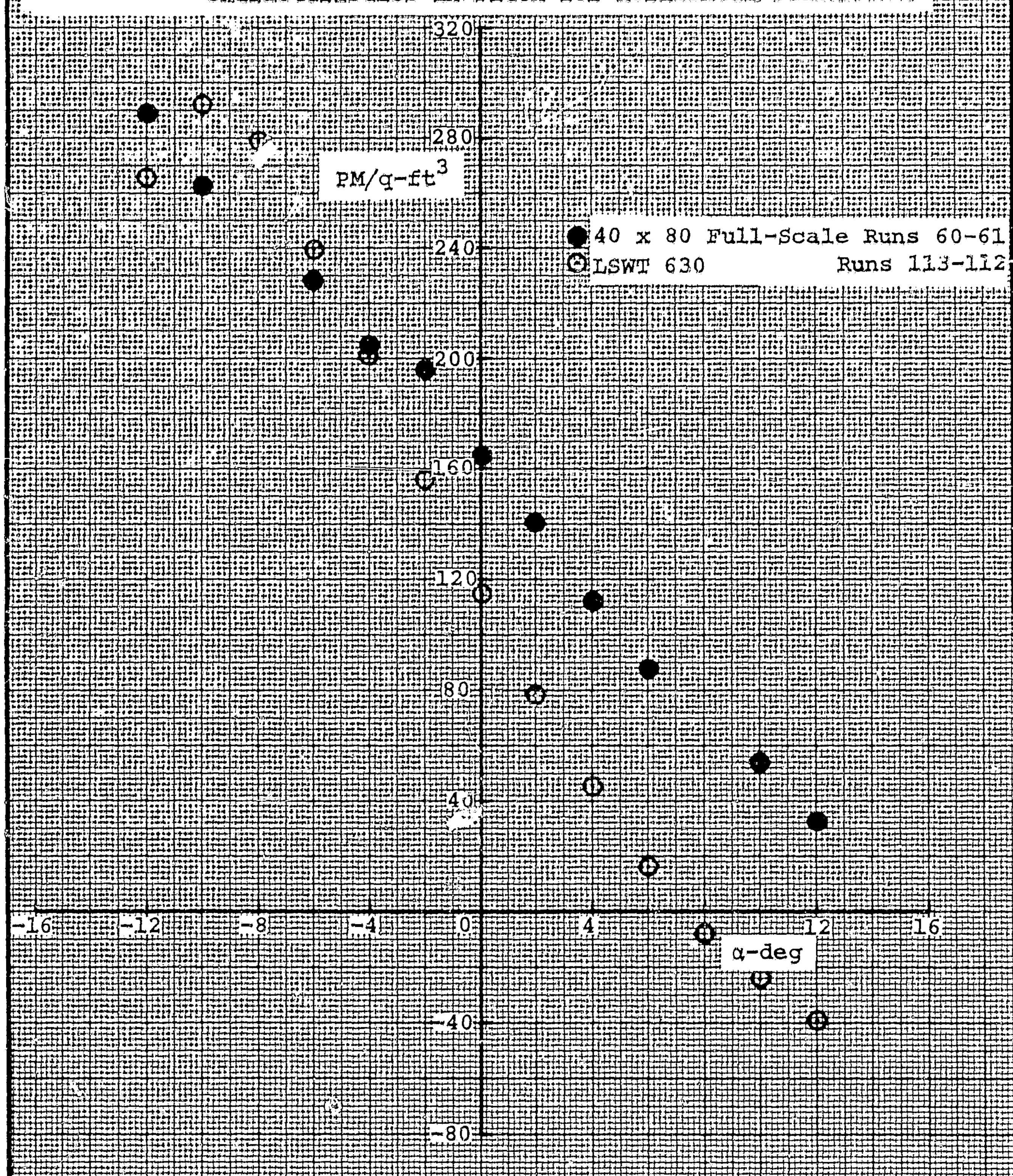


Figure 71. Full/Fifth-Scale Comparison of Lift, Drag, and Pitching Moment Characteristics in Pitch for Slat

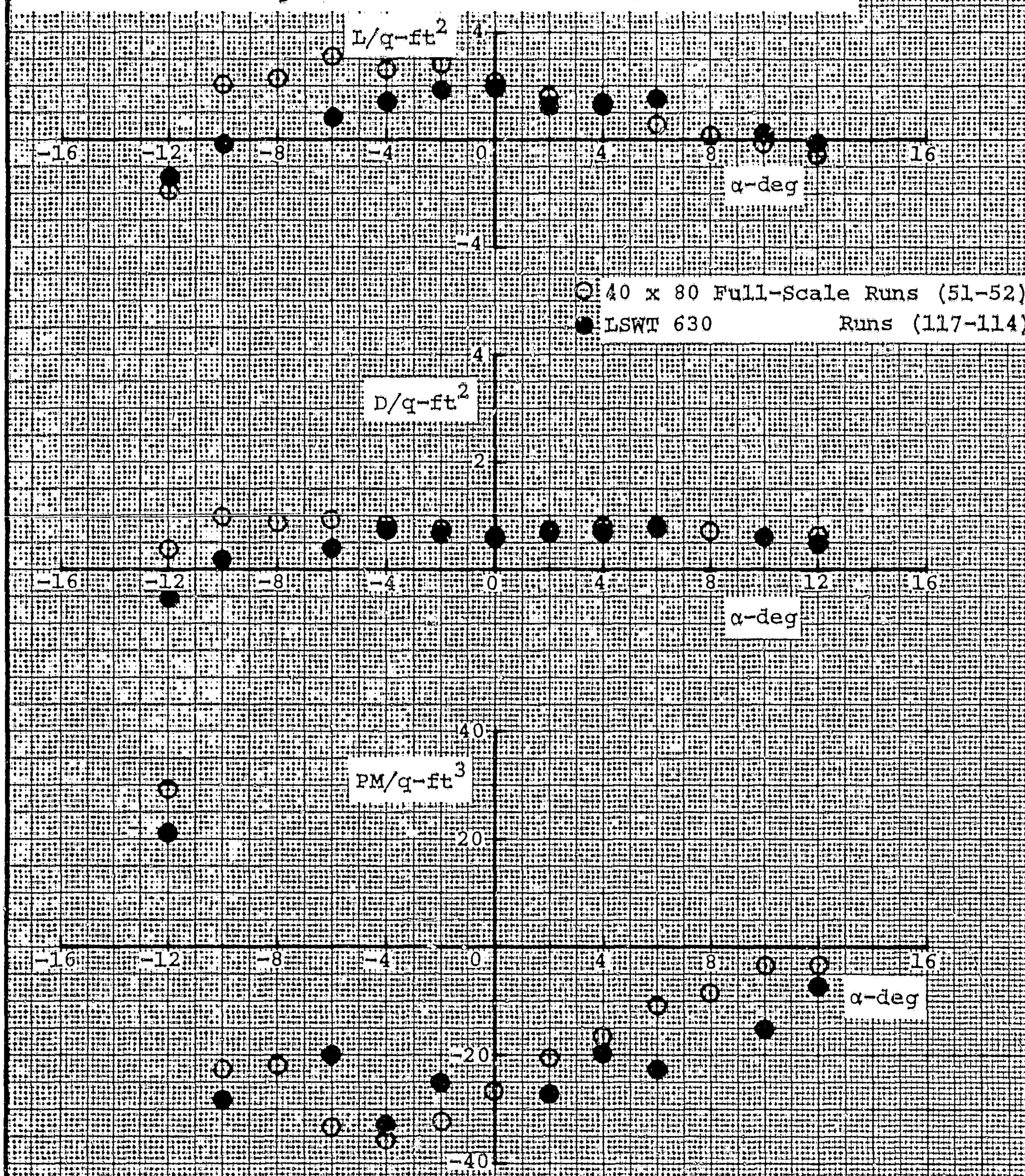
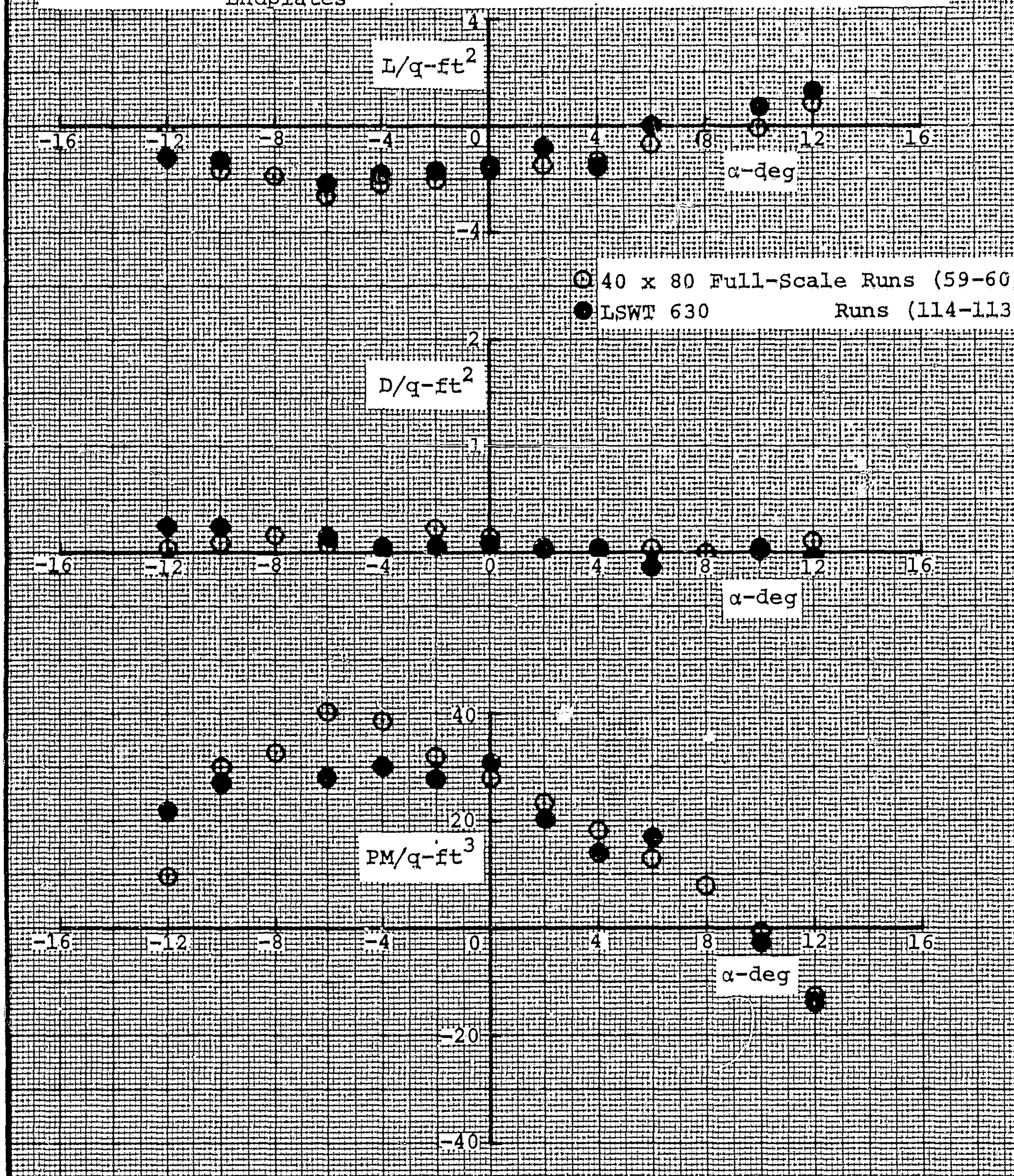


Figure 72. Full/Fifth-Scale Comparison of Lift, Drag, and Pitching Moment Characteristics in Pitch for Endplates



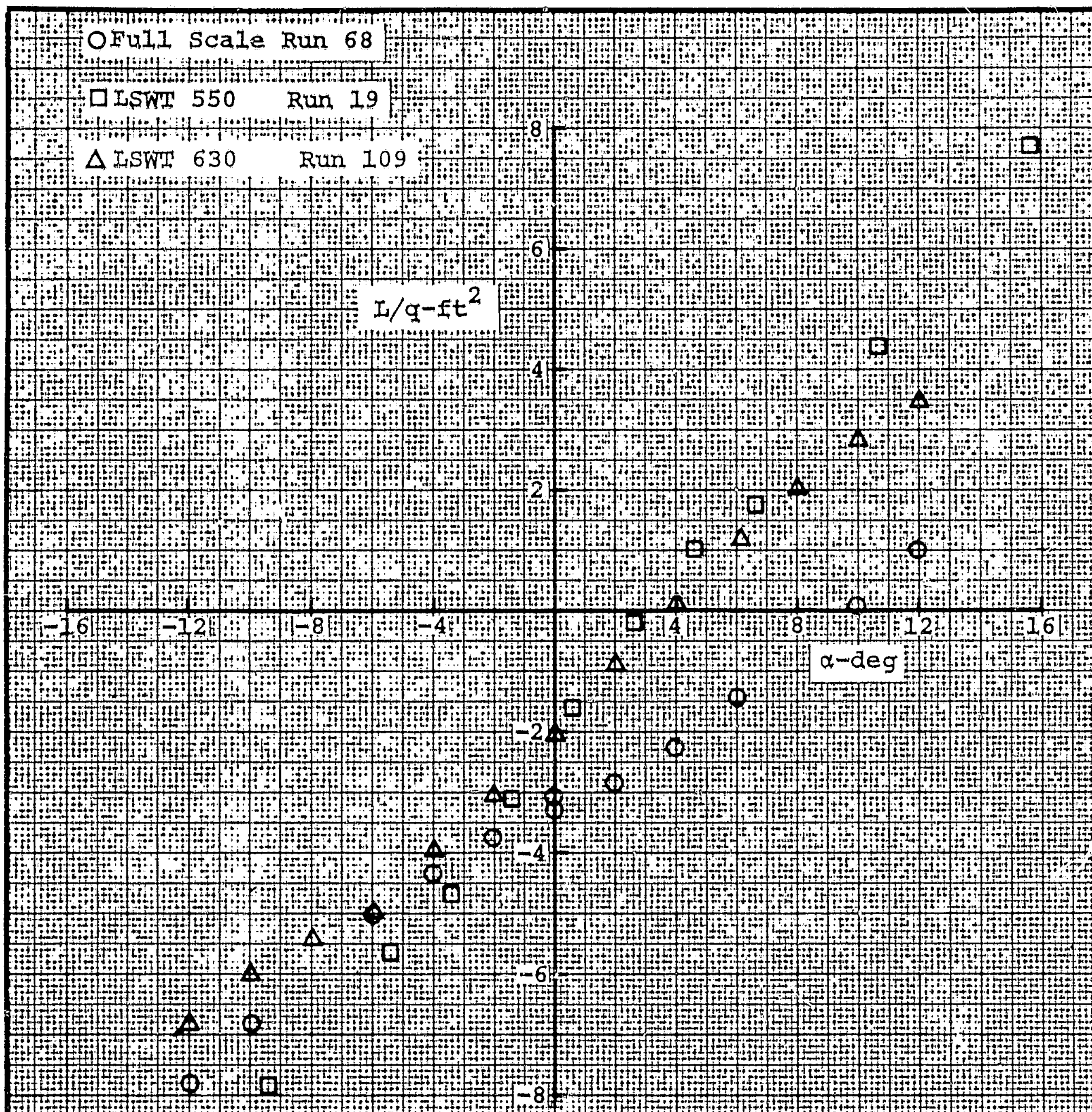


Figure 73. Summary Comparison of Lift Characteristics in Pitch for Basic Fuselage

ORIGINAL PAGE IS
OF POOR QUALITY

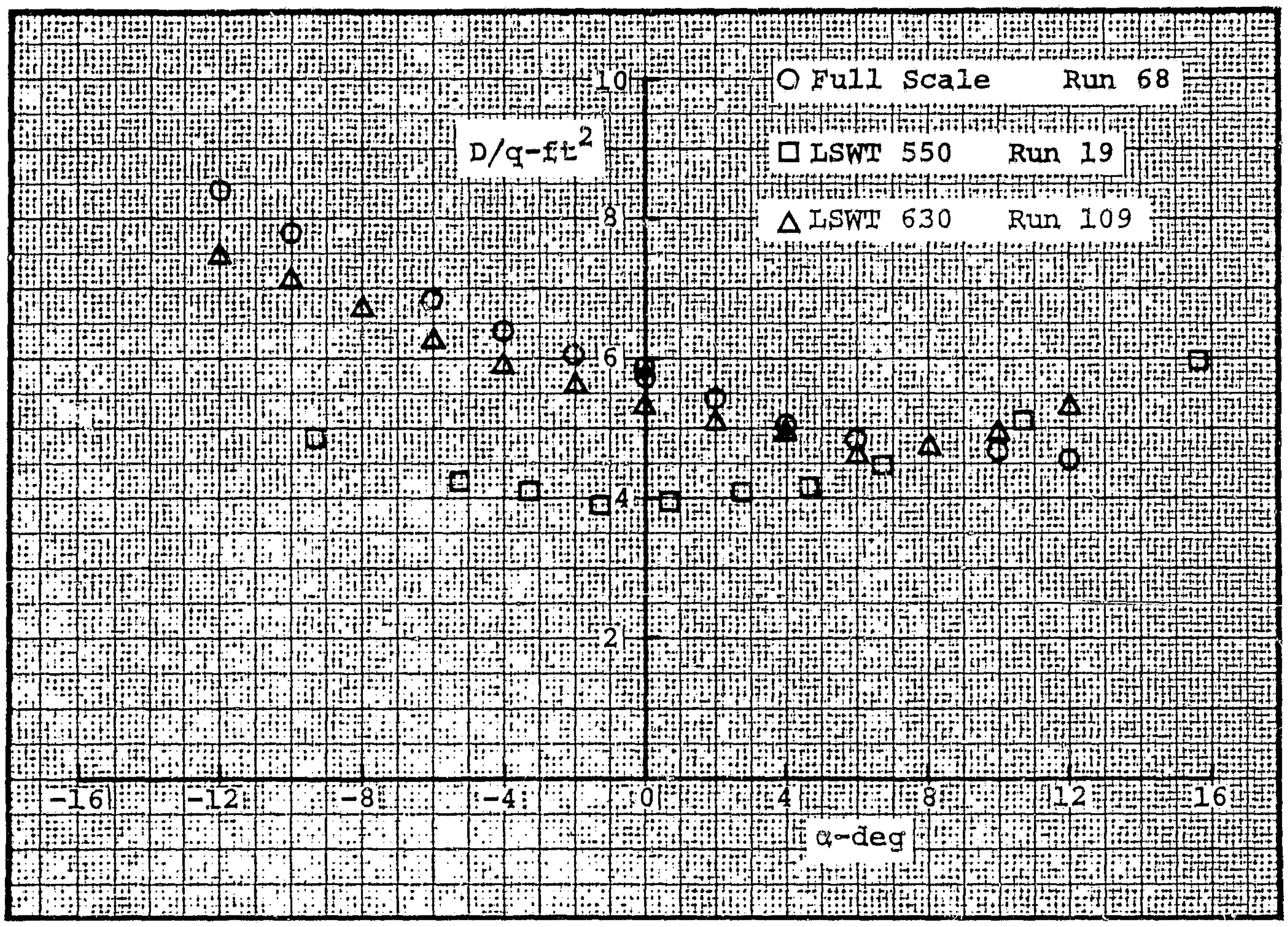


Figure 74. Summary Comparison of Drag Characteristics in Pitch for Basic Fuselage

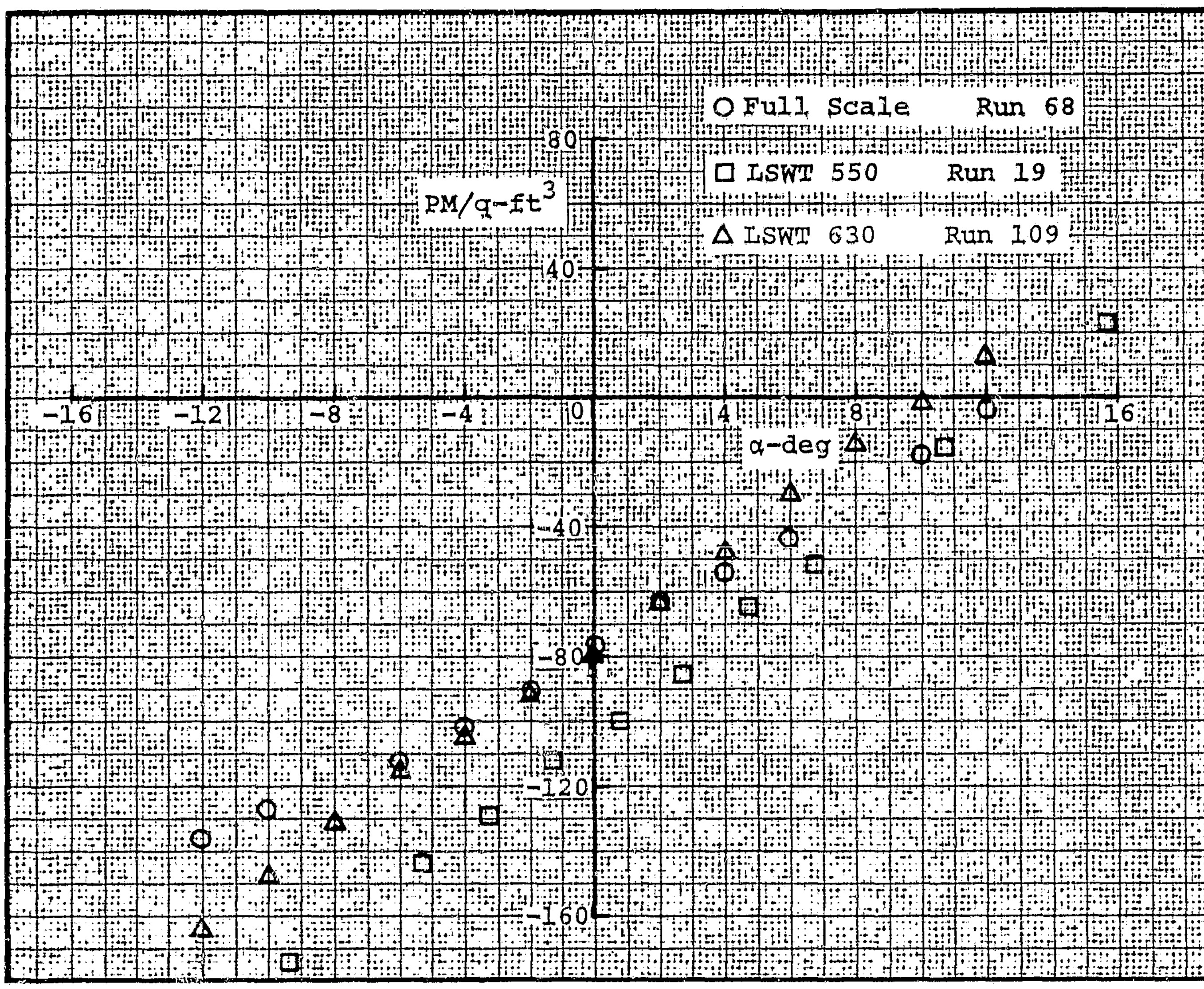


Figure 75. Summary Comparison of Pitching Moment Characteristics in Pitch for Basic Fuselage

ORIGINAL PAGE IS
OF POOR QUALITY

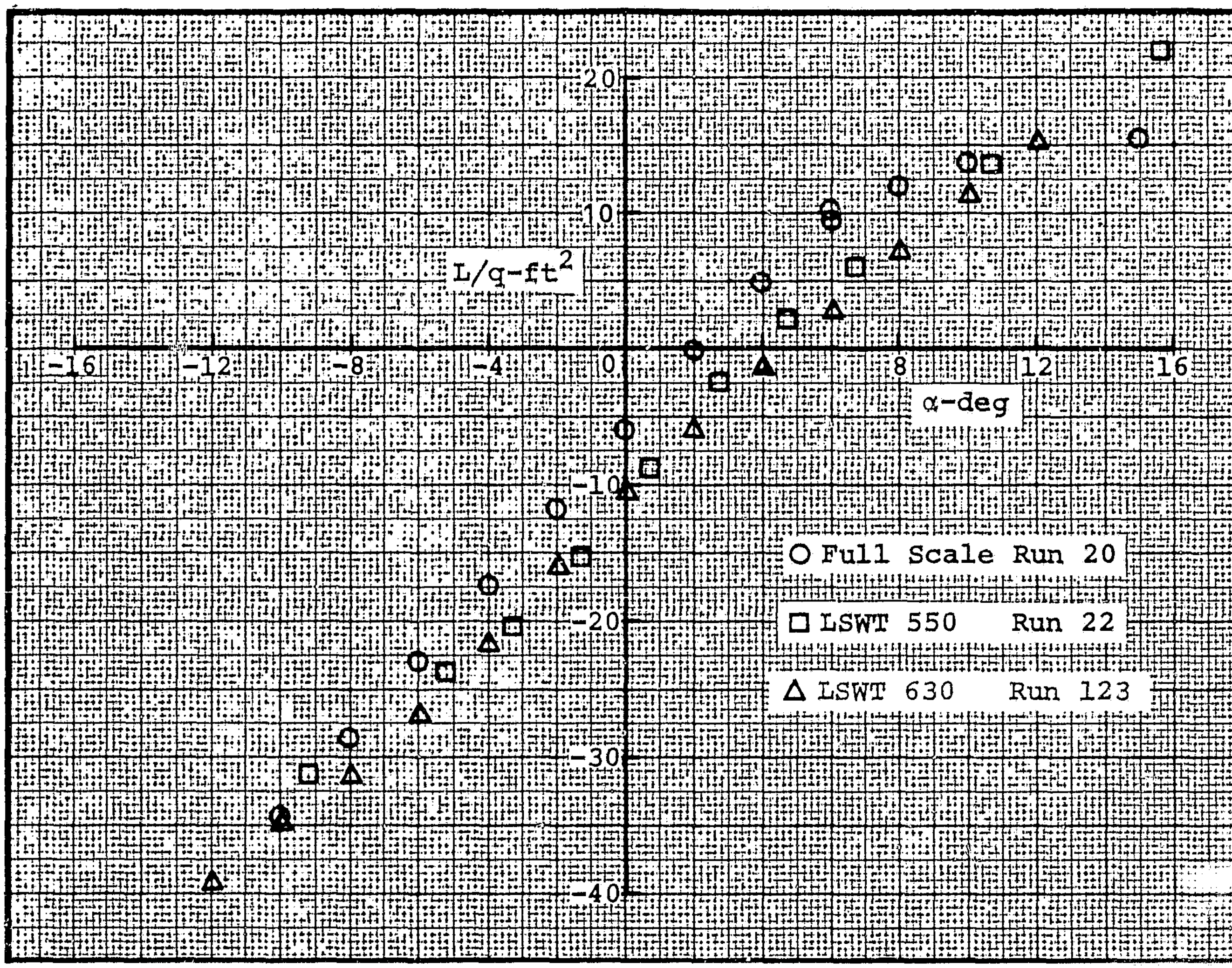


Figure 76. Summary Comparison of Lift Characteristics in Pitch for Helicopter

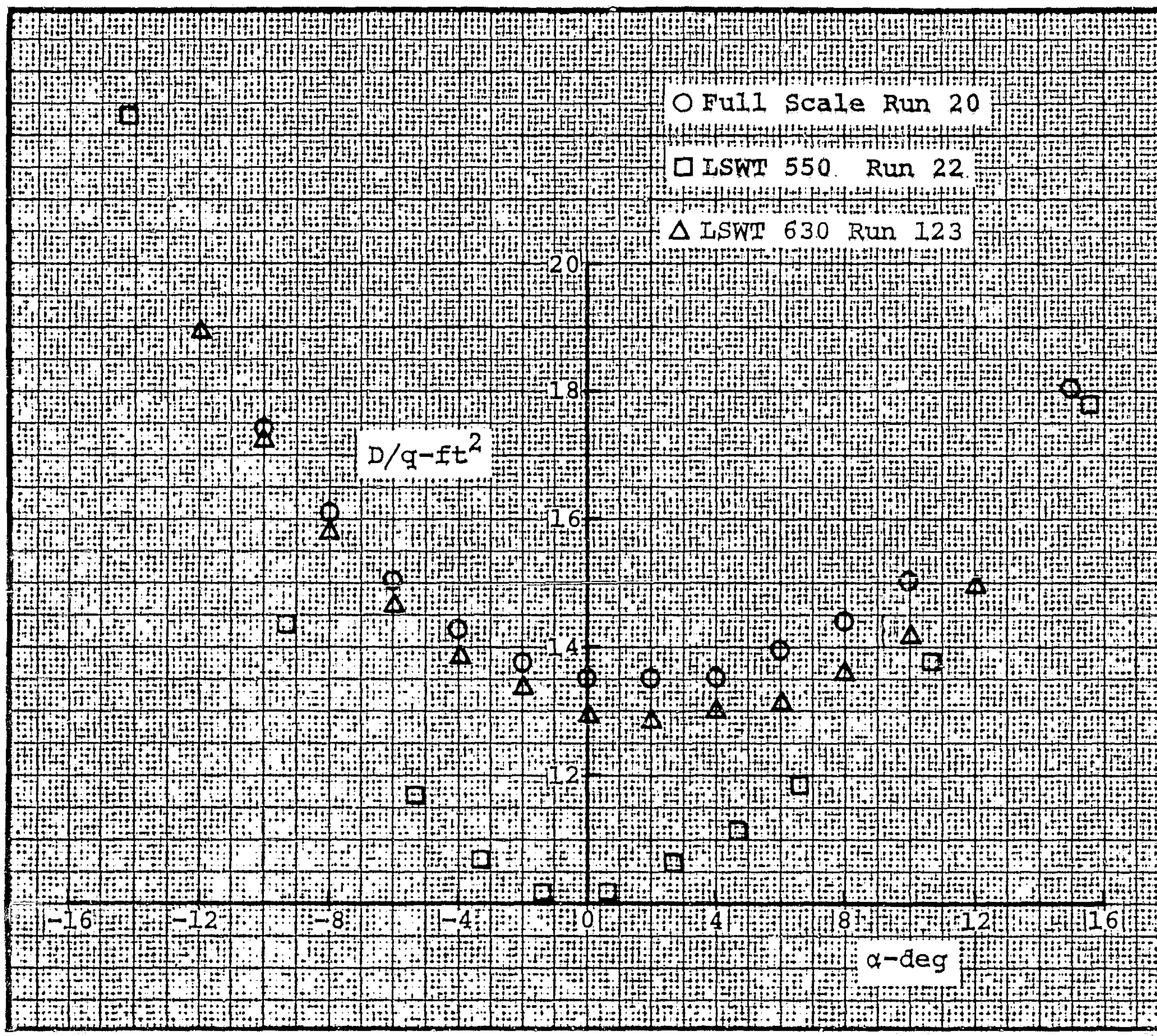


Figure 77. Summary Comparison of Drag Characteristics in Pitch for Helicopter

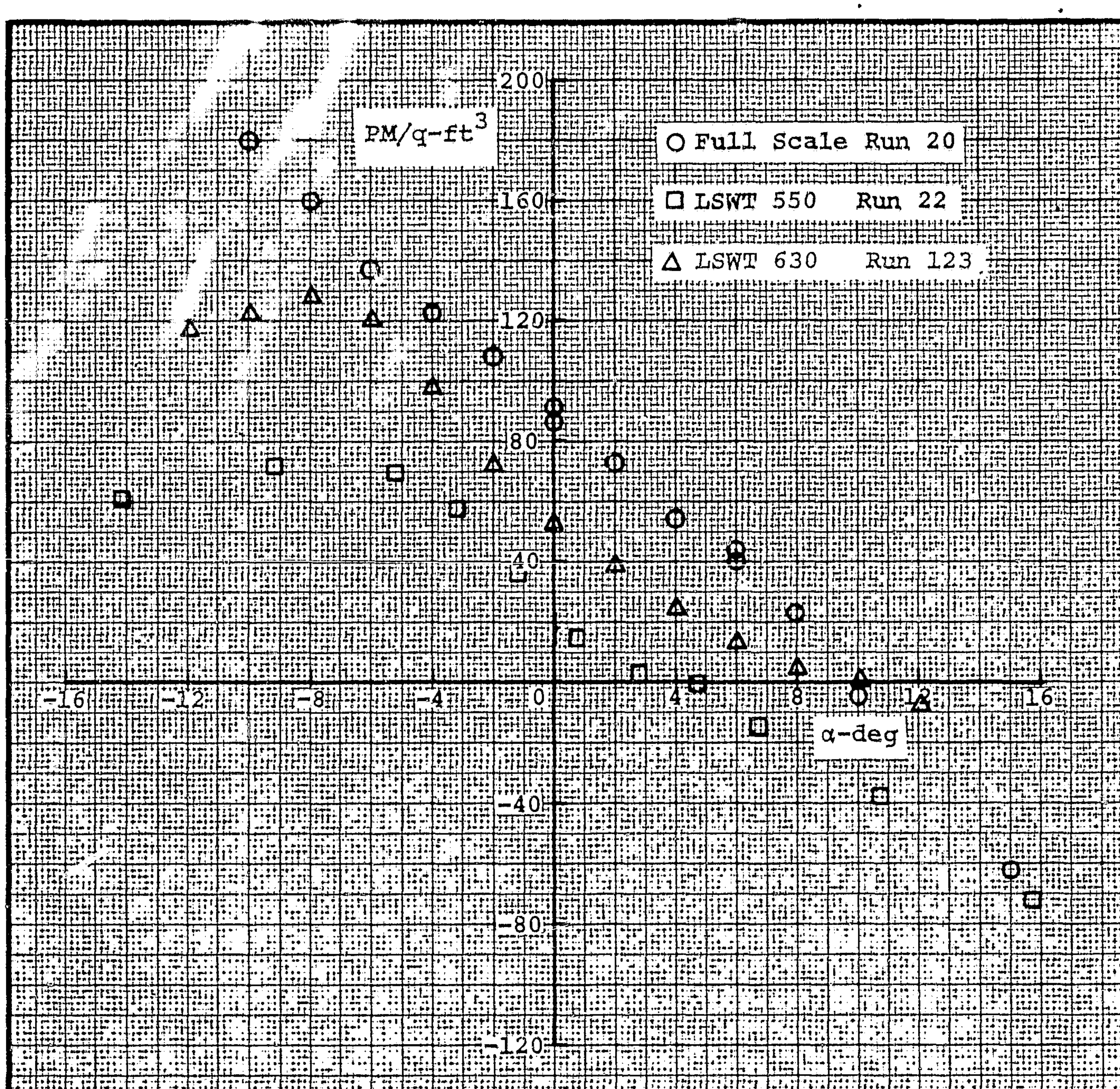


Figure 78. Summary Comparison of Pitching Moment Characteristics in Pitch for Helicopter

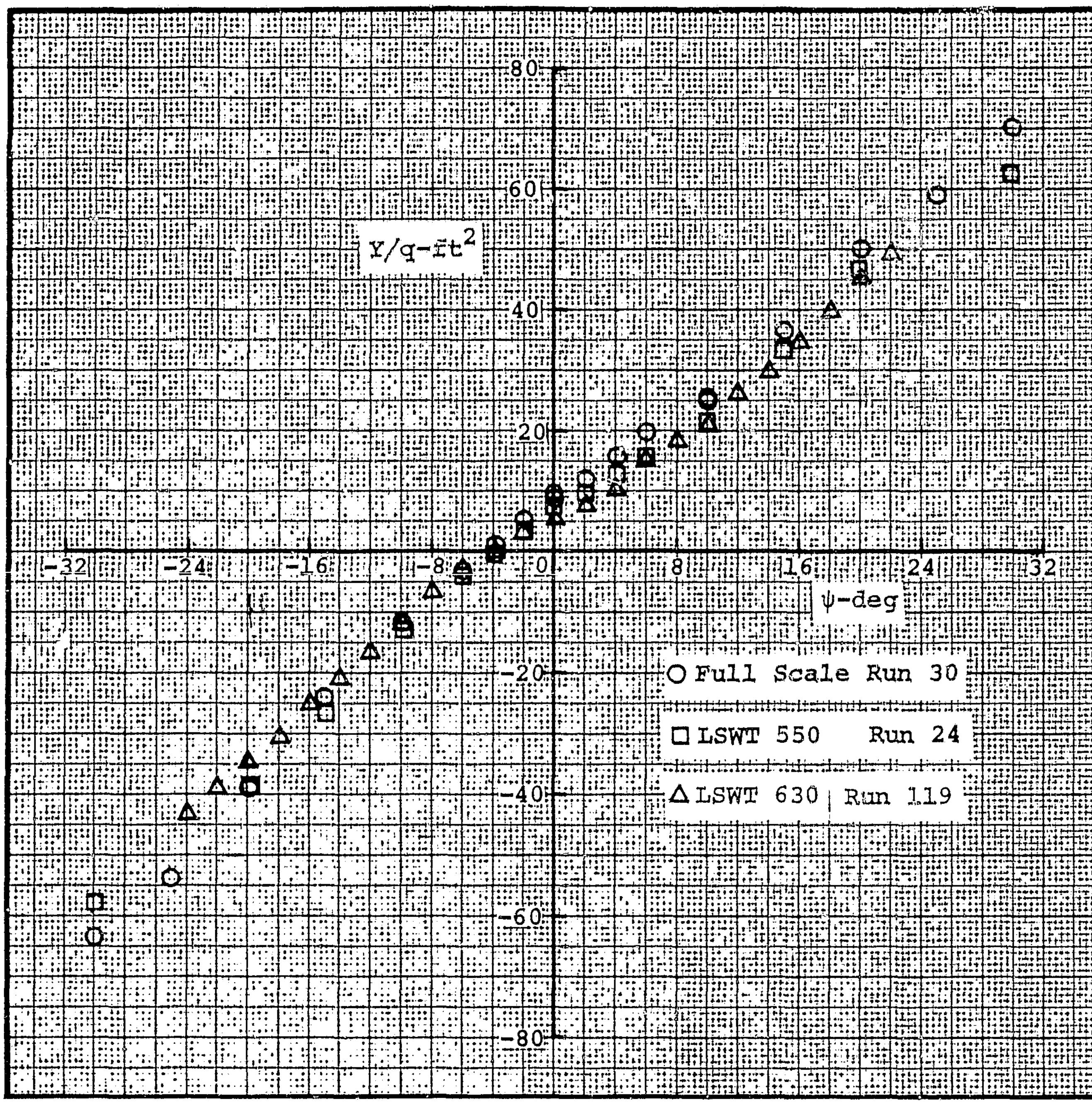


Figure 79. Summary Comparison of Side Force Characteristics in Yaw for Helicopter

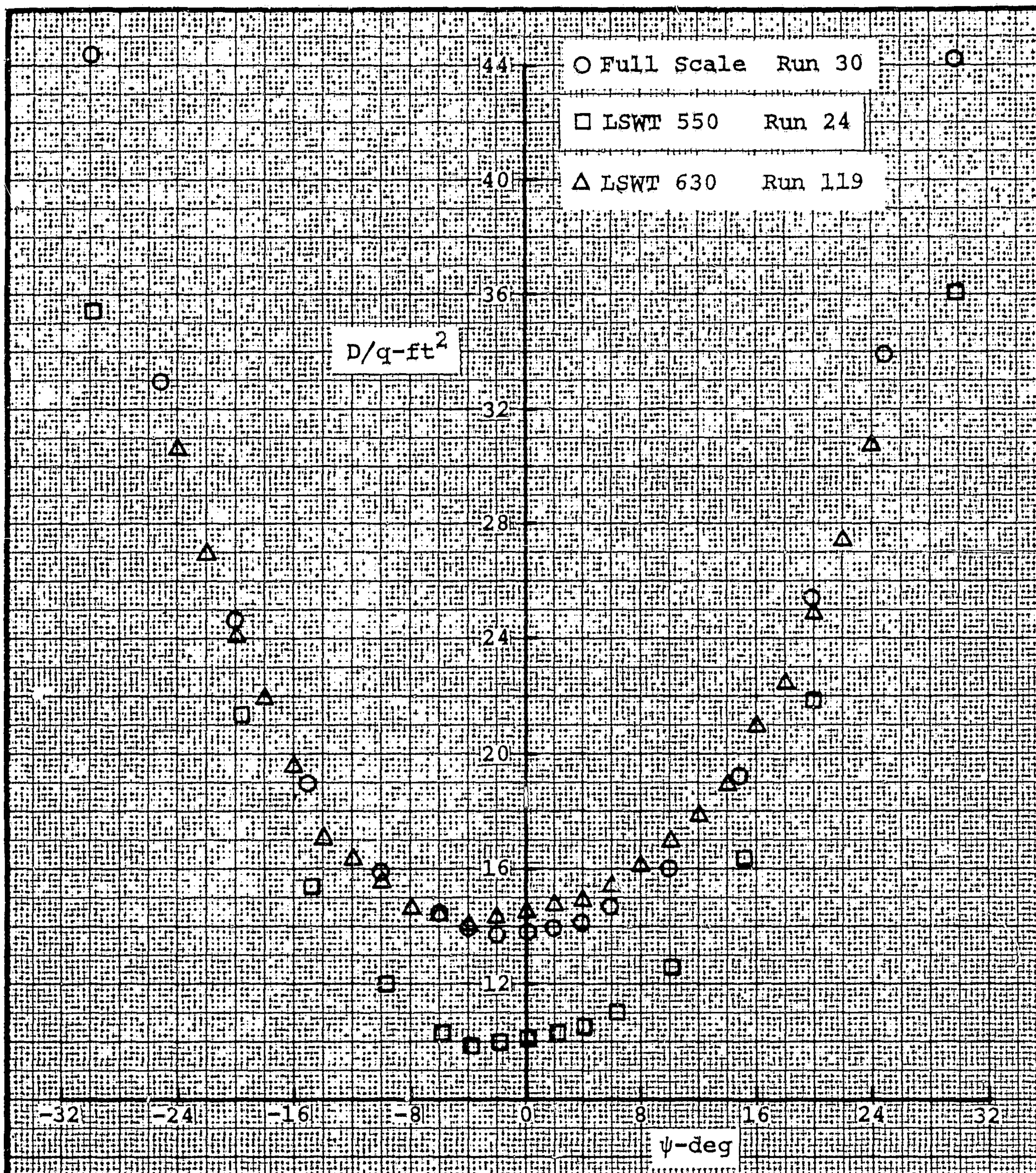


Figure 80. Summary Comparison of Drag Characteristics in Yaw for Helicopter

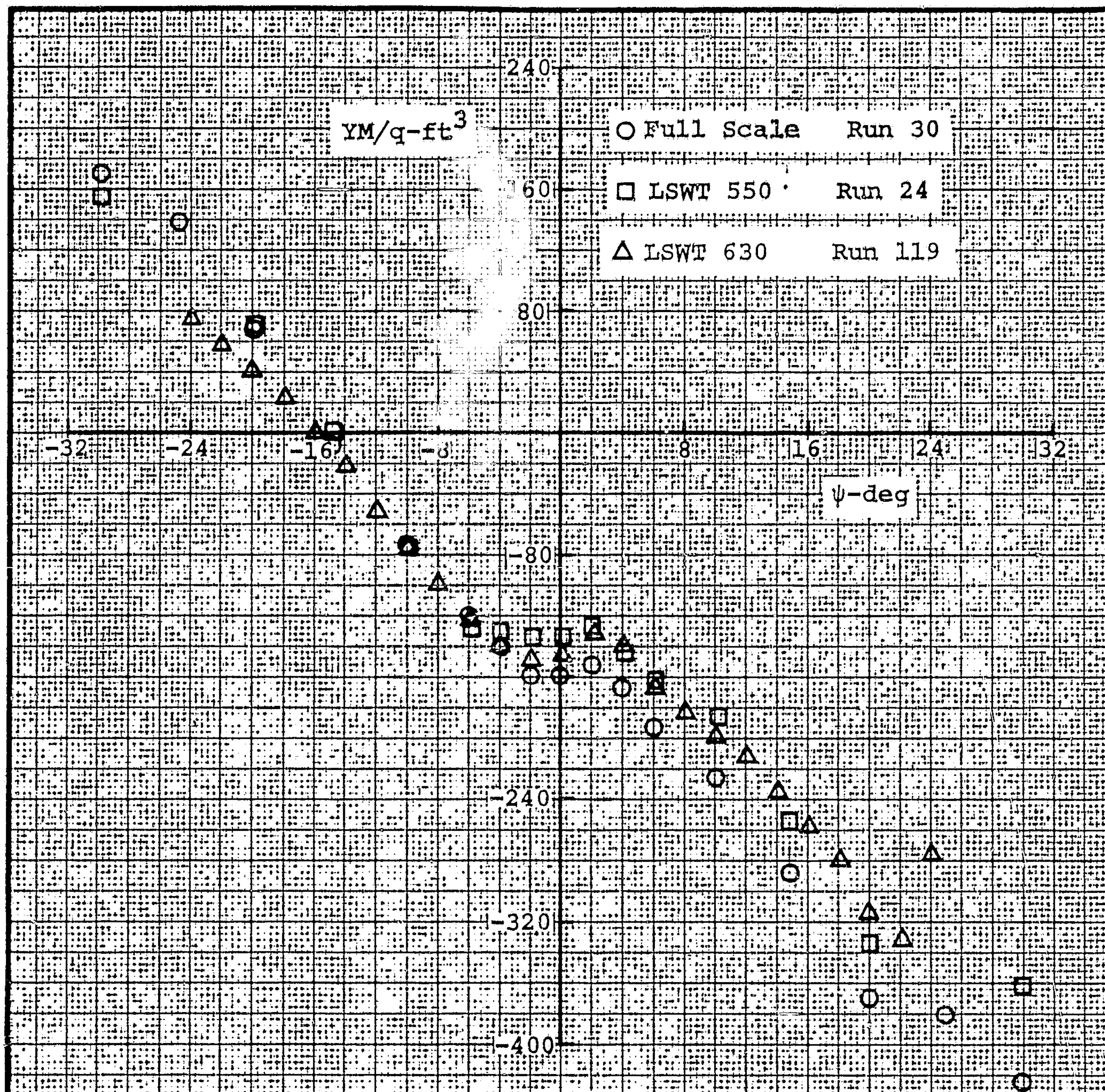


Figure 81. Summary Comparison of Yawing Moment Characteristics in Yaw for Helicopter

TABLE I. COMPARISON OF REYNOLDS NUMBERS FOR FULL-SCALE AND FIFTH SCALE TESTS

		Reynolds Number - Millions									
Run No.		Reynolds No/ft		Wing		Horizontal Stabilizer		Fin		Mounting Strut	
Full Scale	LSWT 630	Full Scale	LSWT 630	Full Scale	LSWT 630	Full Scale	LSWT 630	Full Scale	LSWT 630	Full Scale	LSWT 630
14	124	1.25	.31	6.13	1.52	2.81	.70	2.95	.73	2.25	.56
20	123	1.25	.31	6.13	1.52	2.81	.70	2.95	.73	2.25	.56
31	120	1.28	.31	6.27	1.52	2.88	.70	3.02	.73	2.30	.56
68	109	1.29	.30	6.32	1.47	2.90	.68	3.04	.71	2.32	.54
69	112	1.29	.30	6.32	1.47	2.90	.68	3.04	.71	2.32	.54
30	119	.65	.32	3.19	1.57	1.46	.72	1.53	.76	.38	.19

Notes:

1. Pitch runs were made at q=62.5 psf full-scale and q=75 psf fifth-scale corresponding to velocities of approximately 236 fps and 252 fps respectively.
2. Yaw runs (30 and 119) were made at q=16.2 psf and q=83 psf corresponding to V=118 fps and V=272 fps.
3. Reference lengths used to calculate these Reynolds Numbers:

	Full Scale	Fifth Scale
RN/ft	1.0 ft	.2 ft
Wing chord	4.9 ft	.98 ft
Horizontal Stabilizer chord	2.25 ft	.45 ft
Fin chord	2.36 ft	.472 ft
Mounting strut fairing chord (pitch)	1.8 ft	.36 ft
Mounting Strut diameter (yaw)	.58 ft	.117 ft

TABLE II. RUN SCHEDULE FOR LOW SPEED WIND TUNNEL TEST 630

RUN NO.	CONFIGURATION	α RANGE (DEG)	ψ RANGE (DEG)	TEST q (PSF)	STATIC TARE	T&I RUN	REMARKS
1*	X_3	0	-25/+25	83	1		Model Strut Fouling After Data Pt. 4 8 = 83 psf
2	X_3 $(TS)_1$						No. 36 Grit on Upper Fwd Support & Rear Strut
3	X_3^1		-10/10				Remove grit and modify front of horizontal fairing exposing horiz beam.
4	X_3^2		-6/+6				Increase dia of pitch strut to simulate telescoping NASA system
5	X_3^3						Simulate gusseted joint at base of dummy strut.
6	X_3^4		-25/25				Modify gusseted joint simulation (matches drag of 40x80#)
7				75			Repeat Run #6 @ q = 75 psf
8*		-15/15	0		8		Pitch run with same configuration as Runs #6 & #7 q = 75 psf
9*	X_4	-14/14			9		Add large vert fairing & remove dummy strut (40 x 80 #4)
10	X_5				8		Add dummy strut with fairing (40 x 80 #3)
11*	$BCN_1QO_4P_3Y_1V_2W_1M_1H^+E$	-51/25	0	75	11		MODEL INV. IMAGE OUT Complete A/c smooth
12*	V_1	0	-30/30		12		Add 15" fin cap
13		0	-30/30	83	12		Repeat 12 @ q=83 psf
14		-15/25	0	75	11		Remove fin
15					11		Remove endplates
16*					16		Remove horizontal stabilizer
17	V_2				11		Add fin with 10" cap
18*					18		Remove wing
19	H^+E				18		Add horizontal and endplates
20					18		Remove fin horiz stab & endplates

ORIGINAL PAGE IS OF POOR QUALITY

TABLE II. CONTINUED.

RUN NO.	CONFIGURATION	α RANGE (DEG)	ψ RANGE (DEG)	TEST q (PSF)	STATIC TARE	T&I RUN	REMARKS
21	$BCN_1QO_4P_3Y_1$	-15/25	0	75	18	20	MODEL INV. IMAGE IN Repeat Run #20
22	V_2 H^+E				18	19	Add short fin horiz stab & endplates
23					18	18	Add short fin horiz stab & endplates
24	W_1M_1				11	17	Add wings with retracted gear
25	$BCN_1QO_4P_3Y_1V_2W_1M_1H^+E$				16	16	Remove fin
26	$BCN_1QO_4P_3Y_1V_2W_1M_1H^+E$	-15/25	0	75	11	15	MODEL INV IMAGE IN Add horiz stab
27					11	14	Add endplates
28	V_2				11	11	Add fin with 10" cap
29	V_1	0	-30/30	83	12	13	Add 15" fin cap q = 83 psf
30				75	12	12	Repeat #29 with q = 75 psf
31*	V_2	-15/25	0		32	28	MODEL UPRIGHT Add fin w/10" cap (ALIGN RUN)
32*					32	T+I 11	BEGIN DATA RUNS Repeat #31 w/o image
33*	V_1	0	-30/30		33	12	Add fin with 15" cap
34				83	33	12	Repeat #33 with q = 83 psf
35		-15/25	0	75	32	14	Remove fin
36					32	15	Remove endplates
37*					37	16	Remove horizontal stab
38	V_2				32	17	Add fin with 10" cap
39				75	39	18	Remove wing
40	H^+E				39	19	Add horiz stab and endplates
41					39	20	Remove fin, horizontal stab & endplates
42	$(TS)_2$				39	20	Add transition strips in configuration of LSWT 550 Run #20
43	V_1 V_1				39	18	Add fin with 15" cap & transition strips to match LSWT 550 Run #19
44	G				39	18	Add T/R guard to match configuration of LSWT 550 Run #18
45	H^+				39	19	Add horizontal stab to match LSWT 550 Run #17

TABLE II. CONTINUED.

RUN NO.	CONFIGURATION	α RANGE (DEG)	ψ RANGE (DEG)	TEST q (PSF)	STATIC TARE	T&I RUN	REMARKS
46	$BCN_1QO_4P_3Y_PV_2$ $H^+E(TS)_2G$	-15/25	0	75	39	19	Add endplates with transition strips to match LSWT 550 Run 16
47	W_1M_1				32	11	Add wings with retracted gear with trans strips to match LSWT 550 #15
48	$TF_1R_1^{60}$	0	-30/30		48	12	Add T/R hub, M/R hub & exhaust ejector fairing to match LSWT 550 #24
49	V_2	-15/25	0	75	39	18	Remove wings horiz stab, endplates M/R grit, T/R guard, change to 1 10" fin cap
50	$BCN_1QO_4P_3Y_PV_2W_1M_1H^+E(TS)_2GTF_1R_1^{60}$				39	18	Modify T/R gearbox fairing to production configuration (compares to 40x80 Run #68)
51	$BCN_1QO_4P_3Y_PV_2W_1M_1H^+E$ T F_1	0	-30/30	83	51	13	Yaw run with configuration of #50 @ 8 = 83 psf
52	W_1M_1	-15/25	0	75	32	17	Add wing with retracted gear (compares to 40x80 Run #69)
53	Y_1				32	17	Remove production T/R gearbox fairing
54	H^+				32	15	Remove fin, add horiz stab
55	R_1^{60}				32	15	Add M/R @ 60°
56	E				32	14	Add end plates
57					32	14	Remove M/R
58	V_2				32	11	Add fin with 10" cap
59*	R_1^{60}				59	11	Add M/R @ 60°
60	G				59	11	Add T/R guard antenna
61	V_1				51	11	Add 15" fin cap
62		0	-30/30	83	48	13	Yaw run with configuration of Run #61 @ 9 = 83 psf
63					48	13	Remove exhaust ejector fairing
64				75	48	12	Repeat 63 @ q = 75 psf (compares to 40x80 Run #30)
65		-15/25	0		59	11	Pitch run with configuration of Runs 63 & 64
66	V_2				59	11	Add 10" fin cap
67*					67	19	Remove wings (compares to 40x80 Run #31)
68		-12/+12		100	67	19	Repeat #67 @ q = 100 psf
69	P_4 W_1M_1	-15/25		75	59	11	Add wings and open fuel sump recesses (compares to 40x80 Runs #20 & #21)

ORIGINAL PAGE IS OF POOR QUALITY.

TABLE II. CONTINUED.

RUN NO.	CONFIGURATION	α RANGE (DEG)	ψ RANGE (DEG)	TEST q (PSF)	STATIC TARE	T&I RUN	REMARKS
70	$BCN_1QO_4P_4Y_PV_2W_1M_1H^+E$ G R_1^{60}	-15/25	75	59	59	11	Remove T/R hub (compares to 40x80 Run #22)
71	M_2 T				59	11	Open main gear door, add T/R hub
72	N_2				59	11	Open nose gear door
73*					32	11	Remove M/R hub (compares to 40x80 Run #14)
◊ 74*	N_1 P_3 M_1 X_2	-12/12		75	74	10	SIMULATED AMES 40x80 same SUPPORT SYSTEM config as #32)
◊ 75*					75		Remove fin, same config as #35
◊ 76	$BCN_1QO_4P_3Y_1V_2W_1M_1H^+$ X_2	-12/12	0	75	75	10	Remove endplates. Same config as #36
77*					77		Remove horiz stab. Same config as #37
78	H^+				75		REPEAT OF RUN 76. #36
79	E				75		REPEAT OF RUN 75 #35
80	V_2				74		REPEAT OF RUN 74 #32
81*					81		Remove horiz stab. Same config as #38
82*					82		Remove wing. Same config as #39
83*	H^+E				83		Add horizontal stab & endplates. Same config as #40
84*					84		Remove fin, horiz stab & endplates Same config as #41
85	V_2 T				82		Add fin with 10" cap & T/R hub. Compare with 40x80 #68 LSWT 630 #49
86	W_1M_1				81		Add wings with retracted gear. Compare with 40x80 #69 LSWT 630 #52
87	H^+				75		Remove fin add horiz stab. Compare with #54
88*	R_1^{60}				88		Add M/R hub @ 60°. Compare with #55
89	E				88		Add endplates. Compare with #56
90					75		Remove M/R hub. Compare with #57
91	V_2				74		Add fin with 10" cap. Compare with #58
92*	R_1^{60}				92		Add M/R hub @ 60°. Compare with #59
93	G				92		Add T/R guard antenna. Compare with #66
94	V_1				92		Add 15" fin cap. Compare with #65

TABLE II. CONTINUED.

RUN NO.	CONFIGURATION	α RANGE (DEG)	ψ RANGE (DEG)	TEST q (PSF)	STATIC TARE	T&I RUN	REMARKS
95*	$BCN_1QO_4P_3Y_PV_2W_1M_1H^+E$ GT R_1^{60} X_1	0	-28/28	83	95	6	Yaw run @ q = 83 psf. Compare with 40x80 #30, LSWT 630 #63
96	X_1^*				95		*REMOVE BUBBLE WIRES #63
97	X_2	-12/12	0	75	92	10	Pitch run @ 1 = 75 psf. Compare wi with #65
98	V_2				92		Add 10" fin cap. Compare with #66
99					83		Remove wing. Compare with 40x80 #31 LSWT 630 #67
100	$BCN_1QO_4P_3Y_PV_2W_1M_1H^+E$ GT $R_1^{60}X_2$			100	100	83	Repeat 99 @ q = 100 psf. Compare with 40x80 #31 LSWT 630 #68
101	$BCN_1QO_4P_3Y_PV_2W_1M_1H^+E$ $R_1^{60}TGX_2^*$	-12/12	0	75	92	10	Add wings with retracted gear open sump. Compare 40x80 #20 & 21 LSWT 630 #69.
102					92		Remove T/R hub. Compare to 40x80 #22 LSWT 630 #70
103	M_2 T				92		Add T/R hub @ 60° open main gear door Compare to LSWT 630 #71
104	N_2				92		Open nose gear door. Compare to LSWT 630 #72
105					74		Remove M/R hub 40x80 #14. Compare to LSWT 630 #73
106	N_1 P_3 V_1 M_1 R_1^{60} X_1^*	0	-28/28	83	95	6	Repeat of LSWT 630 #96. Compare to 40x80 #30 LSWT 630 #63
107	V_2 $-X_2^*$	-12/12	0	75	82	10	Repeat of LSWT 630 #85. Compare to 40x80 #68 LSWT 630 #49
108					82		ADD NO. 50 GRIT TO REAR STRUT (TO PIPE & HOSE)
109	$(TS)^*_2$						REMOVED GRIT FROM REAR STRUT. Add grit to fuselage
110	W_1M_1				81		Add wing with gear retracted. Compare to 40x80 #69
111	$(TS)_3$				81		Add 80 grit sandpaper wingwalks. Compare to 40x80 #69
112	$(TS)_4$				81		Add 110 grit sandpaper wingwalks. Compare to 40x80 #69
113	H				74		Add horizontal w/o slat
114	E				74		Add endplates. NO GRIT ON ENDPLATES.
115	E* $(TS)_5$				74		E* = GRIT ON ENDPLATES

TABLE II. CONCLUDED.

RUN NO.	CONFIGURATION	α RANGE (DEG)	ψ RANGE (DEG)	TEST q (PSF)	STATIC TARE	T&I RUN	REMARKS
116	$BCN_1QO_4P_3Y_PV_2W_1M_1H$ $(TS)_6-X_2^*$	-12/12	0	75	74	10	Remove endplates. GRIT ON HORIZ TAIL (lower l.e.)
117	H^+E $(TS)_5$				74		Remove grit from horiz stab. Add slat and endplates.
118	V_1 R_1^{60} GX_1^*	0	-28/28	83	95	6	Add 15" fin cap, M/R @ 60°, T/R guard yaw run @ q=83. Compare to 40x80 #30
119	$(TS)_7$				95		Remove grit from l.e. of fin. Compare to 40x80 #30
120	V_2 X_2^*	-12/12	0	75	83	10	Remove wing, add fin with 10" cap Compare to 40x80 #31
121				100	.83		Repeat 120 @ 1=100 psf. Compare to 40x80 #31
122	P_4 W_1M_1			75	92		Add wing, open fuel sumps. Compare to 40x80 #20 & #21
123	P_2				92		Add pitot tubes, windshield wipers, pilot's sliding glass window. Compare to 40x80 #20 & #21
124	N_2 M_2				74		Open main and nose gear doors. Compare to 40x80 #14

◊ These runs were in error because yaw angle was not zero (actually -.79°)

* Static tare measured on this run

TABLE III. CONFIGURATION NOMENCLATURE COMPARISON

Symbol			Explanation
LSWT 630 Test	Full Scale Test	LSWT 550 Test	
B	B	B	Smooth fuselage and tail boom
CQ 0_4	CQ 0_4	C	Prototype cowling with plugged inlets and ejectors (Q) and no screens (0_4)
E	E	E	Endplates canted 3° nose right
F_1	F_1	F_1	Exhaust ejector fairing
G	G	G	T/R guard antenna
H	H	H	NACA 0015 horizontal stabilizer (with T.E. tab) set at -7° incidence
H^+	H^+	H^+	H plus L.E. slat
M_1	M_1	M_1	Main landing gear retracted with doors closed
M_2	M_2	M_2	Main landing gear retracted with no doors
N_1	N_1	N_1	Nose gear retracted with doors closed
N_2	N_2	N_2	Nose gear retracted with no doors
0_4	0_4	-	All screens closed
P_2	P_2	P_2	Production protuberances: pitot tubes temp probes, windshield wipers, rotating beacons, steps, jack points, misc drain lines
P_3	P_3	-	Fuel sump recesses covered
P_4	P_4	-	Fuel sump recesses open
Q	Q	Q	Fairings to cover engine inlet and plug exhaust ejectors

TABLE III. CONFIGURATION NOMENCLATURE COMPARISON (cont'd)

Symbol			
LSWT 630 Test	Full Scale Test	LSWT 550 Test	Explanation
R_1^{60}	R_1^{60}	R_1^{60}	Main rotor hub, mast, controls set at 60° azimuth (fore and aft is 0°)
T	T	T	Tail rotor hub, mast, controls set at 60° azimuth
$(TS)_1$ through $(TS)_7$			Transition strip configurations used for 603 test. See Pictoral Configuration Nomenclature (Figure 20) for details.
V_1	V_1	V	Vertical fin with stinger and 15" cap (extends to WL 156)
V_2	V_2	-	Vertical fin with stinger and 10" cap (extends to WL 151)
W_1	W_1	W_1	Prototype NACA 0035 wing with standard tip
X_1	X_1	-	40 x 80 mount with no fairings on vertical support strut
X_2	X_2	-	40 x 80 mount with both fairings
X_3	-	-	40 x 80 mount with dummy strut and no fairings
X_3^1 through X_3^4			Modifications to X_3. See Pictoral Configuration Nomenclature (Figure 20) for details.
X_4	-	-	40 x 80 mount with dummy strut and no fairings
X_5	-	-	40 x 80 mount with dummy strut and both vertical fairings
Y_1	Y_1	-	Original prototype T/R gearbox fairing
Y_p	Y_p	Y_1	Preliminary "production" tail rotor gearbox fairing

APPENDICES

APPENDIX A - LSWT 630 Tabulated Data

This appendix contains all tabulated wind axis computer data from the LSWT 630 test. It is included in the interest of completeness and to give the report a "stand-alone" capability. There are four blocks of tabulated data. First is a set of data for all runs with all corrections except wind-on T&I's (pp A-3 to A-126). Next is a set of data for Runs 32 through 73 on the single strut mounting with all T&Is applied (pp A-127 to A-168). The third data set contains Runs 75 through 124 for the model mounted on the three-point system with wind-on support tares removed (pp A-169 to A-218). Finally, a set of data for Runs 74 through 107 is provided from which the "model alone" data of the appropriate configuration in Runs 32 through 73 is subtracted yielding T&I values for the three-point system (pp A-219 to A-252).

While most of the designations used on these forms are self-explanatory, the following nomenclature, in order of occurrence, is provided for clarity.

TEMP	temperature, °F
PO	pressure, lb/in^2
QPSF	dynamic pressure, lb/ft^2
VFPS	velocity, ft/s
RNFT	Reynolds number per foot of length, 1/ft
MACH	Mach number
T01 thru T20	data reduction code identifiers
PNT	data point number
ALPHA	angle of attack (positive nose up), deg
PSI	yaw angle (positive nose right), deg
L/Q	lift/q (positive up), ft^2
D/Q	drag/q (positive aft), ft^2
PM/Q	pitching moment/q (positive nose up), ft^3
Y/Q	side force/q (positive right), ft^2
RM/Q	rolling moment/q (positive right), ft^3
YM/Q	yawing moment/q (positive nose right), ft^3

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 1   11/19/81 0907   RUN 1

TEMP 84.   P0 14.4696

QPSF 83.00   VFPS 272.81   RNFT 1588728.   MACH 0.2386

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
701	0	1	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	1

AMES-TYPE SUPPORTS ONLY   DATA AT C.G.   FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.06	0.01	1.566	7.229	-81.48	0.090	-2.38	-0.61
2	0.06	-2.03	1.566	7.169	-81.04	0.151	-1.70	0.31
3	0.06	-4.00	1.446	7.139	-79.96	-0.241	1.26	1.89
4	0.06	-6.00	1.416	7.199	-79.30	-1.193	9.04	3.38
5	0.06	-8.00	1.325	7.078	-[illegible].81	-1.428	11.59	4.25
6	0.06	-10.01	1.325	7.048	[illegible].58	-1.446	12.62	5.33
7	0.06	-12.00	1.325	7.018	[illegible].79	-1.657	14.68	6.22
8	0.06	-14.02	1.355	6.958	-72.53	-1.867	16.93	7.77
9	0.06	-16.00	1.355	6.566	-66.59	-2.078	19.49	7.35
10	0.06	-18.04	1.386	6.295	-61.65	-2.771	23.61	7.74
11	0.06	-20.02	1.506	6.265	-61.49	-3.072	25.82	9.75
12	0.06	-22.00	1.506	6.355	-62.73	-2.530	25.67	11.07
13	0.06	-24.05	1.446	6.476	-63.48	-2.711	27.98	-138.43
14	0.06	-25.00	1.446	6.506	-64.12	-2.651	27.77	12.48
15	0.06	-0.01	1.717	6.747	-72.72	-4.229	7[illegible].03	-2.09
16	0.06	2.01	1.596	6.687	-72.09	-5.060	94.03	-1.87
17	0.06	3.99	1.476	6.717	-72.40	-5.452	108.87	-1.85
18	0.06	6.04	1.506	6.687	-70.54	-6.295	123.73	-1.64
19	0.06	8.03	1.386	6.657	-69.45	-6.588	139.81	-0.68
20	0.06	10.00	1.536	6.175	-61.43	-5.542	117.58	-2.97
21	0.06	12.02	1.446	6.114	-58.70	-5.422	116.97	-3.22
22	0.06	14.00	1.446	6.084	-58.03	-5.181	117.32	-3.52
23	0.06	16.03	1.446	5.271	-46.98	-5.241	122.63	-0.80
24	0.06	18.00	1.446	5.392	-46.22	-5.482	127.89	-1.47
25	0.06	19.99	1.386	5.422	-48.75	-5.723	133.42	0.24
26	0.06	22.01	1.657	7.711	-78.01	-0.783	[illegible].95	-14.07
27	0.06	24.00	1.355	5.482	-47.54	-5.072	123.57	-0.18
28	0.06	25.03	1.325	5.633	-49.50	-5.271	132.45	1.20
29	0.06	0.01	1.596	7.018	-78.32	-3.193	49.41	-1.63

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 2 11/19/81 0907 RUN 2

TEMP 64. PO 14.5580

QPSF 83.00 VFPS 266.93 RNFT 1671046. MACH 0.2379

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
701	0	1	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	1

AMES-TYPE SUPPORTS ONLY DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.12	0.00	1.536	5.994	-67.36	-0.271	1.72	-0.88
2	0.12	-2.01	1.536	5.934	-66.62	-0.211	1.38	-0.56
3	0.12	-3.99	1.476	5.964	-66.02	-0.151	0.91	-0.25
4	0.12	-6.00	1.416	6.054	-65.84	-0.211	1.24	0.38
5	0.12	-7.98	1.355	6.084	-65.62	-0.151	1.01	0.70
6	0.12	-10.00	1.355	6.114	-65.94	-0.181	2.23	1.63
7	0.12	-11.99	1.386	6.175	-66.09	-0.151	2.11	2.85
8	0.12	-13.98	1.355	6.205	-66.55	-0.181	2.45	4.08
9	0.12	-15.90	1.295	5.994	-62.66	-0.211	2.99	4.76
10	0.12	-18.00	1.265	6.084	-64.17	-0.271	4.23	6.23
11	0.12	-19.95	1.265	6.024	-63.04	-0.181	3.35	6.39
12	0.12	-22.00	1.265	6.145	-63.89	-0.060	2.02	7.46
13	0.12	-23.99	1.235	6.235	-65.40	0.000	2.05	8.23
14	0.12	-25.00	1.205	6.265	-65.97	0.030	1.72	8.54
15	0.12	0.01	1.536	5.783	-64.50	-0.241	0.74	-1.33
16	0.12	1.99	1.536	5.783	-64.76	-0.241	1.04	-1.80
17	0.12	4.00	1.506	5.843	-64.49	-0.301	1.75	-2.72
18	0.12	6.00	1.506	5.873	-64.55	-0.301	1.88	-3.34
19	0.12	8.00	1.416	5.964	-65.23	-0.271	1.50	-4.57
20	0.12	10.00	1.416	5.994	-64.93	-0.241	1.10	-5.20
21	0.12	12.00	1.386	6.024	-64.96	-0.151	0.42	-6.28
22	0.12	13.99	1.355	6.084	-65.11	-0.090	-0.66	-7.21
23	0.12	15.99	1.355	6.145	-65.83	-0.120	-0.51	-8.23
24	0.12	17.99	1.355	5.843	-60.86	-0.241	0.56	-7.38
25	0.12	20.00	1.325	5.843	-60.30	-0.241	0.43	-8.00
26	0.12	22.00	1.295	5.873	-59.74	-0.392	1.51	-8.31
27	0.12	24.02	1.205	5.873	-60.10	-0.422	2.13	-8.78
28	0.12	24.99	1.205	5.934	-60.29	-0.482	2.64	-9.24
29	0.12	0.02	1.596	5.783	-64.57	-0.229	0.71	-1.48

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 3   11/19/81 0907   RUN 3

TEMP 75.   PO 14.5580

QPSF 83.00   VFPS 269.72   RNFT 1627676.   MACH 0.2379

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
701	0	1	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	1

AMES-TYPE SUPPORTS ONLY   DATA AT C.G.   FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.16	0.02	0.512	7.530	=86.48	=0.211	3.23	=0.28
2	0.16	=2.00	0.512	7.530	=86.78	=0.361	5.25	0.54
3	0.16	=4.02	0.452	7.530	=86.23	=0.572	6.19	1.30
4	0.16	=5.99	0.422	7.524	=85.27	=0.594	9.70	2.27
5	0.16	=8.00	0.392	7.410	=82.04	=1.145	11.30	3.05
6	0.16	=9.99	0.422	7.380	=81.93	=1.295	12.30	4.45
7	0.16	0.00	0.512	7.560	=86.85	=0.271	3.53	=0.43
8	0.16	2.00	0.512	7.560	=86.60	=0.241	3.74	=0.91
9	0.16	4.02	0.452	7.620	=88.04	=0.241	3.86	=1.98
10	0.16	5.99	0.452	7.620	=85.78	=0.151	3.82	=2.77
11	0.16	8.03	0.512	7.590	=84.41	0.452	=0.09	=3.45
12	0.16	9.99	0.542	7.440	=82.72	0.542	=2.69	=4.23
13	0.16	=0.01	0.512	7.560	=86.84	=0.271	3.53	=0.13

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 4 11/19/81 0907 RUN 4

TEMP 81. PO 14.5580

QPSF 83.00 VFPS 271.23 RNFT 1604809. MACH 0.2379

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
701	0	1	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	1

AMES-TYPE SUPPORTS ONLY DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.10	0.00	0.452	7.711	-89.31	-0.361	6.88	1.54
2	0.10	-2.00	0.482	7.681	-89.45	-0.301	8.47	1.87
3	0.10	-4.00	0.482	7.651	-89.41	-0.301	8.62	3.01
4	0.10	-6.01	0.422	7.741	-88.93	-0.964	11.76	3.79
5	0.10	0.00	0.452	7.801	-90.10	-0.542	8.62	1.41
6	0.10	2.00	0.452	7.801	-89.71	-0.633	8.95	0.49
7	0.10	4.02	0.452	7.801	-89.06	-0.723	10.22	-1.34
8	0.10	6.01	0.482	7.801	-89.10	-0.633	10.26	-1.71
9	0.10	0.01	0.512	7.801	-89.81	-0.602	8.90	1.27

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 5 11/19/81 0907 RUN 5

TEMP 85. PO. 14.5629

QPSF 83.00 VFPS 272.18 RNFT 1590128. MACH 0.2378

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
701	0	1	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	1

AMES-TYPE SUPPORTS ONLY DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.09	0.00	0.482	8.253	-94.75	0.000	5.20	2.[illegible]
2	0.09	-2.00	0.500	8.313	-95.06	-0.512	7.23	2.79
3	0.09	-4.01	0.482	8.343	-94.45	-0.602	7.74	3.29
4	0.09	-6.00	0.361	8.313	-93.89	-0.693	8.13	4.08
5	0.09	0.00	0.482	8.253	-94.51	-0.331	4.71	1.69
6	0.09	2.01	0.482	8.253	-93.81	-0.361	4.74	0.61
7	0.09	4.00	0.392	8.253	-93.16	-0.331	5.72	-0.48
8	0.09	6.00	0.392	8.253	-93.13	-0.361	5.62	-1.32
9	0.09	0.00	0.482	8.283	-94.18	-0.241	5.27	1.30

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 670

WIND AXES

RUN 6 11/19/81 0907 RUN 6

TEMP 85. PO 14.5629

QPSF 83.00 VFPS 272.18 RNFT 1590128. MACH 0.2378

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
701	0	1	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	1

AMES-TYPE SUPPORTS ONLY DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.09	0.00	0.633	8.133	-92.43	0.120	2.54	0.77
2	0.09	-2.00	0.663	8.163	-94.21	-0.090	3.47	2.30
3	0.09	-3.99	0.633	8.133	-92.78	-0.181	4.38	2.91
4	0.09	-6.01	0.566	8.102	-91.53	-0.301	4.46	3.10
5	0.09	-8.02	0.512	8.102	-91.10	-0.422	5.25	4.59
6	0.09	-10.01	0.482	8.012	-89.59	-0.301	5.37	5.90
7	0.09	-11.99	0.512	7.982	-87.14	-0.361	4.99	5.78
8	0.09	-13.99	0.542	7.952	-86.28	-0.392	5.34	6.87
9	0.09	-16.00	0.633	7.319	-77.07	-0.361	4.24	5.67
10	0.09	-18.00	0.753	7.169	-74.88	-0.422	4.71	6.60
11	0.09	-19.99	0.783	7.289	-75.59	-0.542	6.40	8.30
12	0.09	-21.99	0.813	7.349	-76.37	-0.753	8.63	9.70
13	0.09	-24.01	0.813	7.380	-77.68	-0.904	10.19	11.09
14	0.09	-25.01	0.843	7.470	-78.26	-0.994	10.98	11.72
15	0.09	-0.01	0.542	8.133	-92.57	0.723	-5.07	0.98
16	0.09	2.01	0.542	8.102	-92.41	0.753	-5.82	-0.11
17	0.09	3.98	0.542	8.042	-91.57	0.693	-4.89	-0.73
18	0.09	5.98	0.542	8.072	-91.40	0.572	-3.14	-2.11
19	0.09	7.99	0.602	7.982	-90.05	0.723	-4.91	-2.60
20	0.09	10.01	0.663	7.861	-88.08	0.843	-6.36	-3.99
21	0.09	12.00	0.633	7.801	-86.22	1.024	-8.89	-5.55
22	0.09	14.00	0.602	7.771	-84.98	1.265	-11.72	-7.40
23	0.09	15.99	0.572	7.259	-78.00	1.265	-12.69	-7.26
24	0.09	18.00	0.663	7.139	-74.66	1.476	-16.10	-9.32
25	0.09	19.98	0.663	7.229	-74.92	1.476	-16.96	-10.95
26	0.09	22.01	0.572	7.349	-75.41	1.596	-17.84	-12.04
27	0.09	24.01	0.633	7.500	-76.58	1.627	-18.98	-13.13
28	0.09	24.99	0.633	7.560	-77.13	1.657	-19.88	-13.77
29	0.09	0.00	0.572	8.133	-92.87	0.693	-4.71	0.83

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 7   11/19/81 0907   RUN 7

TEMP 94.   P0 14.5629

QPSF 75.00   VFPS 260.86   RNFT 1480378.   MACH 0.2261

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
701	0	1	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	1

AMES-TYPE SUPPORTS ONLY   DATA AT C.G.   FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.09	0.02	0.000	0.000	0.22	0.000	-0.59	0.00
2	0.09	0.02	0.700	8.167	-93.84	0.433	-1.69	1.29
3	0.09	-2.00	0.700	8.200	-94.64	0.233	0.79	2.01
4	0.09	-4.03	0.733	8.200	-94.20	0.067	2.38	2.72
5	0.09	-6.00	0.633	8.133	-92.34	-0.067	3.03	3.13
6	0.09	-8.01	0.533	8.100	-91.20	-0.300	4.78	4.48
7	0.09	-10.00	0.533	8.133	-90.91	-0.633	7.61	5.21
8	0.09	-12.00	0.567	8.067	-88.86	-0.633	7.86	6.41
9	0.09	-14.01	0.600	8.000	-87.30	-0.593	8.10	6.93
10	0.09	-15.99	0.667	7.400	-78.25	-0.440	6.10	5.89
11	0.09	-18.02	0.767	7.367	-76.66	-0.467	6.40	7.12
12	0.09	-20.00	0.800	7.367	-77.05	-0.593	7.58	8.32
13	0.09	-22.00	0.833	7.467	-78.09	-0.800	9.99	9.87
14	0.09	-24.01	0.833	7.467	-78.36	-1.000	11.95	11.08
15	0.09	-25.00	0.900	7.567	-79.83	-1.100	13.01	11.61
16	0.09	0.00	0.633	8.167	-93.56	0.467	-2.41	1.28
17	0.09	2.01	0.633	8.200	-94.03	0.567	-2.39	-0.12
18	0.09	4.00	0.600	8.167	-94.54	0.567	-1.66	-0.49
19	0.09	6.01	0.667	8.200	-93.76	0.667	-2.74	-1.99
20	0.09	8.01	0.733	8.133	-92.07	0.747	-3.94	-2.53
21	0.09	10.00	0.733	8.000	-89.71	0.500	-2.10	-3.16
22	0.09	12.01	0.633	7.867	-87.54	0.933	-7.08	-5.20
23	0.09	14.01	0.600	7.800	-86.06	1.133	-9.74	-6.98
24	0.09	16.01	0.567	7.767	-84.68	1.333	-12.25	-9.36
25	0.09	18.00	0.733	7.200	-76.30	1.333	-13.34	-9.37
26	0.09	20.01	0.667	7.333	-76.38	1.333	-13.92	-11.06
27	0.09	22.02	0.600	7.433	-77.18	1.367	-14.23	-12.09
28	0.09	24.00	0.600	7.533	-77.16	1.253	-14.00	-12.94
29	0.09	25.00	0.633	7.600	-77.11	0.933	-12.76	-13.42
30	0.09	0.00	0.733	8.167	-93.57	0.333	0.61	1.47

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN : 8 11/19/81 0907 RUN : 8

TEMP 80. PO 14.5629

QPSF 75.00 VFPS 257.54 RNFT 1525353. MACH 0.2261

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
701	0	8	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS ONLY DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.11	-0.01	0.633	8.133	-93.90	0.433	-0.76	1.52
2	-2.00	-0.01	0.767	8.233	-94.82	0.233	1.90	1.93
3	-4.01	-0.01	1.000	8.267	-94.76	0.133	3.55	2.53
4	-6.05	-0.02	1.200	8.500	-98.12	0.000	4.60	2.37
5	-7.98	-0.02	1.500	8.500	-98.36	-0.200	6.67	3.56
6	-9.93	-0.02	1.733	8.433	-98.15	-0.433	9.67	5.52
7	-12.01	-0.02	1.933	8.433	-97.71	0.000	5.96	2.51
8	-14.06	-0.02	2.267	8.400	-98.54	-0.600	10.70	5.06
9	-14.96	-0.02	2.367	8.433	-99.33	-0.700	12.00	7.76
10	0.10	-0.02	0.633	8.167	-94.37	0.467	-0.83	1.62
11	2.00	-0.02	0.533	8.233	-94.37	0.667	-3.43	0.45
12	4.07	-0.02	0.400	8.167	-93.77	0.800	-5.86	1.20
13	5.96	-0.02	0.267	8.133	-94.04	0.773	-5.88	1.47
14	7.92	-0.02	0.267	8.100	-93.46	0.900	-7.67	0.95
15	9.95	-0.02	0.200	8.033	-92.38	0.733	-5.94	1.14
16	12.10	-0.02	0.167	8.067	-92.40	0.933	-10.59	-1.10
17	14.10	-0.02	0.133	7.867	-89.22	0.900	-9.60	-0.46
18	14.91	-0.02	0.133	7.800	-88.87	0.833	-8.95	-0.18
19	0.09	-0.02	0.633	8.167	-93.90	0.467	-0.93	1.45

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 9 11/19/81 0907 RUN 9

TEMP 77. P0. 14.5580

QPSF 75.00 VFPS 256.87 RNFT 1539942. MACH 0.2261

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
701	0	9	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS ONLY DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.10	-0.02	0.767	2.600	-44.00	-0.273	4.75	1.86
2	-1.99	-0.02	0.733	2.667	-44.84	-0.307	5.15	2.38
3	-4.01	-0.02	0.700	2.700	-46.76	-0.440	7.26	2.55
4	-6.06	-0.02	0.700	2.800	-47.93	-0.407	6.34	2.84
5	-8.00	-0.02	0.700	2.833	-47.60	-0.467	7.90	4.23
6	-9.96	-0.02	0.667	2.900	-48.54	-0.612	10.18	5.58
7	-12.02	-0.02	0.567	2.967	-47.80	-0.527	7.80	4.65
8	-14.07	-0.02	0.500	3.067	-48.40	-0.740	11.28	7.71
9	0.09	-0.02	0.733	2.600	-44.60	-0.307	4.49	1.70
10	1.98	-0.02	0.800	2.633	-44.34	-0.273	4.08	1.35
11	4.06	-0.02	0.867	2.600	-44.52	-0.240	3.84	0.98
12	5.99	-0.02	0.967	2.533	-42.52	-0.167	2.38	0.50
13	7.94	-0.02	1.067	2.500	-42.47	-0.140	1.79	0.43
14	9.98	-0.02	1.267	2.400	-39.74	-0.107	1.88	-0.06
15	12.10	-0.02	1.267	2.400	-39.86	0.160	-3.37	-1.99
16	14.10	-0.02	1.267	2.400	-38.71	0.127	-3.06	-1.45
17	14.87	-0.02	1.300	2.333	-37.78	0.060	-1.77	-1.31
18	0.10	-0.02	0.733	2.600	-44.60	-0.307	4.82	2.03

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 10 11/19/81 0907 RUN 10

TEMP 77. PO 14.5580

QPSF 75.00 VFPS 256.87 RNFT 1539942. MACH 0.2261

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
701	0	8	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS ONLY DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.11	-0.02	0.967	3.367	-48.66	-1.600	12.76	1.99
2	-2.00	-0.02	0.967	3.433	-51.04	-1.533	12.76	2.88
3	-4.01	-0.02	0.967	3.500	-51.81	-1.460	13.90	4.50
4	-6.07	-0.02	1.000	3.533	-53.44	-1.220	11.67	3.72
5	-7.95	-0.02	1.000	3.533	-53.21	-1.067	11.47	3.87
6	-9.93	-0.02	0.967	3.500	-52.91	-0.933	12.90	6.29
7	-12.01	-0.02	0.867	3.567	-52.79	-0.633	8.49	3.78
8	-14.03	-0.02	0.833	3.733	-54.07	-0.967	13.00	7.31
9	0.10	-0.02	0.967	3.333	-49.09	-1.633	13.00	2.00
10	1.98	-0.02	0.967	3.367	-49.23	-1.667	12.70	1.13
11	4.05	-0.02	1.033	3.333	-49.03	-1.533	12.29	0.82
12	5.97	-0.02	1.100	3.267	-47.88	-1.600	11.00	-0.28
13	7.94	-0.02	1.200	3.200	-46.07	-1.400	8.28	-1.59
14	9.94	-0.02	1.333	3.133	-45.01	-1.333	8.46	-0.97
15	12.11	-0.02	1.400	3.100	-44.04	-1.000	2.88	-2.75
16	14.09	-0.02	1.500	2.867	-40.65	-1.167	4.62	-2.86
17	14.87	-0.02	1.533	2.700	-39.69	-1.000	4.08	-2.53
18	0.11	-0.02	0.900	3.333	-48.75	-1.633	13.10	2.03

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 11 11/19/81 0907 RUN 11

TEMP 86. PS 14.5187

QPSF 75.00 VFPS 259.36 RNFT 1505745. MACH 0.2264

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	11	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	11	11	0	0	1	0	0	0

T+I RUNS DATA AT UPRIGHT TRUNNION FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.03	0.01	2.200	8.033	-36.90	-5.700	29.58	137.54
2	2.01	0.01	8.167	8.100	-56.84	-6.067	37.84	142.29
3	4.01	0.01	13.233	8.300	-74.83	-6.467	44.41	146.49
4	6.00	0.01	18.467	8.700	-86.76	-6.300	49.73	147.62
5	8.03	0.01	24.300	9.433	-97.40	-6.167	54.71	143.66
6	9.97	0.01	30.233	10.200	-119.15	-6.233	63.28	156.97
7	12.02	0.01	36.133	11.707	-123.35	-6.847	72.29	163.15
8	13.99	0.01	41.833	13.453	-132.78	-6.867	78.97	165.56
9	14.98	0.01	44.620	14.413	-138.46	-6.700	79.41	158.33
10	-0.01	0.01	1.767	8.100	-36.64	-5.767	30.02	138.04
11	-2.02	0.01	-2.900	8.200	-24.32	-5.367	23.89	132.01
13	-6.03	0.01	-11.967	8.567	-8.74	-4.533	7.92	129.49
14	-8.03	0.01	-16.167	9.067	-6.08	-4.867	2.07	130.68
15	-10.00	0.01	-20.600	10.133	-3.15	-5.767	-2.74	132.49
16	-12.03	0.01	-25.600	11.500	5.06	-6.453	-6.32	133.08
17	-13.99	0.01	-29.633	13.013	20.74	-6.753	-13.14	134.12
18	-15.98	0.01	-31.460	14.600	26.33	-7.233	-19.81	133.77
19	-18.02	0.01	-34.787	17.880	61.06	-3.567	-27.62	123.24
20	-20.02	0.01	-36.813	20.120	101.11	-2.433	-29.09	121.16
21	-22.01	0.01	-40.700	22.600	129.95	-2.800	-32.87	126.08
22	-23.99	0.01	-43.680	25.820	157.78	-3.133	-39.60	124.71
23	-25.01	0.01	-46.427	27.487	172.35	-3.700	-43.36	124.33
24	-0.03	0.01	2.300	8.067	-37.87	-5.767	30.75	138.14
24	-0.02	-13.98	-1.325	12.620	22.29	-34.940	131.31	271.26

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 12 11/19/81 0907 RUN 12

TEMP 90. P0 14.5383

QPSF 75.00 VFPS 260.14 RNFT 1492840. MACH 0.2263

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	12	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	11	11	0	0	1	0	0	1

T&I RUNS DATA AT UPRIGHT TRUNNION FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.03	0.00	1.200	8.000	-36.79	-5.967	32.94	147.66
2	0.03	2.02	1.733	8.033	-36.50	-2.167	27.06	135.16
3	0.03	4.00	1.900	8.067	-37.71	1.567	18.95	118.70
4	0.03	6.08	2.000	8.467	-37.07	5.633	8.97	96.84
5	0.03	8.00	1.633	8.600	-29.84	9.667	-1.25	71.78
6	0.03	10.00	0.467	9.400	-15.90	13.200	-9.75	35.01
7	0.03	12.00	-0.300	10.433	-8.47	17.700	-22.54	2.42
8	0.02	14.00	-0.833	12.000	-8.49	22.367	-34.33	-33.48
9	0.02	15.99	-0.933	13.867	-8.58	27.167	-44.53	-65.38
10	0.02	18.00	-0.967	15.900	-8.96	32.567	-58.51	-93.14
11	0.02	19.99	-1.667	18.100	-9.43	37.900	-69.81	-122.64
12	0.02	22.00	-2.167	20.767	-5.36	41.300	-76.37	-145.47
13	0.02	23.98	0.813	25.167	-19.91	46.967	-80.82	-154.07
14	0.02	26.01	1.833	28.820	-23.01	51.213	-85.00	-174.30
15	0.02	28.01	3.293	32.347	-36.32	55.000	-82.98	-187.43
16	0.02	30.00	6.313	36.080	-65.78	58.133	-69.35	-206.12
17	0.02	0.00	1.833	8.100	-37.96	-6.067	34.62	148.90
18	0.02	-2.03	2.200	8.267	-38.28	-10.133	41.75	158.23
19	0.02	-4.00	2.367	8.533	-36.85	-13.467	49.44	172.79
20	0.02	-5.99	2.400	8.933	-30.93	-17.067	58.67	182.62
21	0.02	-7.99	1.600	9.600	-16.43	-21.200	69.71	205.19
22	0.02	-9.99	0.633	10.433	-0.55	-25.200	82.74	226.52
23	0.02	-11.99	-0.553	11.700	15.36	-29.767	96.91	245.91
24	0.02	-13.99	-1.267	12.667	27.52	-35.133	113.61	273.98
25	0.02	-16.00	-2.067	14.467	37.95	-40.133	128.51	303.31
26	0.02	-18.01	-2.733	16.667	42.40	-44.967	141.38	337.60
27	0.02	-19.99	-3.500	19.033	43.87	-49.633	154.26	372.90
28	0.02	-22.02	-3.467	21.633	37.17	-54.367	163.50	409.46
29	0.02	-24.01	-2.833	24.433	26.31	-58.467	168.18	438.33
30	0.02	-26.02	-1.733	28.533	-14.89	-59.133	134.98	380.46
31	0.02	-28.01	-1.413	32.900	-28.05	-65.433	144.05	404.05
32	0.02	-29.99	0.433	36.493	-53.41	-68.000	136.04	415.75
33	0.02	0.00	1.867	8.000	-34.79	-5.867	32.00	148.13

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 13 11/19/81 0907 RUN 13

TEMP 90. PS 14.5383

QPSF 83.00 VFPS 273.66 RNFT 1570441. MACH 0.2380

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	12	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	11	11	0	0	1	0	0	1

T+T RUNS DATA AT UPRIGHT TRUNNION FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.03	0.04	1.777	8.042	-40.90	-5.759	21.48	147.92
2	0.03	2.01	1.747	8.042	-35.93	-1.928	25.73	134.91
3	0.03	4.00	1.898	8.193	-37.58	1.989	16.63	116.87
4	0.03	5.98	2.108	8.494	-36.27	5.729	8.38	96.39
5	0.03	7.98	1.717	8.795	-28.69	10.090	-3.97	70.55
6	0.03	9.99	0.542	9.530	-17.12	13.584	-12.32	35.56
7	0.03	11.99	-0.211	10.452	-9.08	18.108	-24.09	1.58
8	0.03	13.99	-0.512	12.078	-10.32	22.801	-35.83	-33.98
9	0.03	15.99	-0.482	13.976	-10.87	27.771	-46.68	-62.44
10	0.03	17.99	-0.663	15.910	-10.71	33.012	-59.77	-92.80
11	0.02	19.99	-1.506	18.102	-9.85	37.801	-69.93	-121.30
12	0.02	22.02	-2.018	20.699	-4.68	41.506	-77.87	-144.52
13	0.02	23.99	1.211	25.416	-17.49	47.006	-79.82	-152.29
14	0.02	26.01	1.687	28.795	-24.94	51.355	-83.33	-172.58
15	0.02	28.00	3.434	32.506	-36.98	55.090	-82.86	-186.77
16	0.02	30.00	6.307	36.114	-64.69	57.500	-67.46	-201.01
17	-0.02	-0.01	1.687	8.042	-37.52	-5.994	33.32	150.00
18	-0.02	-1.98	1.867	8.205	-37.97	-9.910	41.23	159.19
19	-0.02	-4.03	2.139	8.554	-36.61	-13.373	49.27	169.74
20	-0.02	-5.99	2.259	8.916	-29.88	-17.018	58.58	178.84
21	-0.02	-8.01	1.807	9.488	-18.76	-21.536	71.97	199.95
22	-0.02	-9.99	0.693	10.361	-4.63	-25.482	82.31	219.87
23	-0.02	-12.01	-0.470	11.536	10.96	-29.825	94.78	244.36
24	-0.02	-13.98	-1.325	12.620	26.68	-34.940	111.79	271.26
25	-0.02	-16.01	-2.229	14.367	37.58	-39.819	125.98	302.10
26	-0.02	-18.01	-2.892	16.596	42.63	-44.518	139.33	335.99
27	-0.02	-19.99	-3.795	18.795	44.86	-48.916	150.68	373.32
28	-0.02	-21.98	-3.801	21.446	38.40	-53.765	161.08	408.47
29	-0.02	-24.00	-3.102	24.247	27.53	-57.831	165.33	437.06
31	-0.02	-27.99	-1.416	32.705	-27.08	-64.789	143.32	397.94
32	-0.02	-30.00	0.392	36.301	-51.51	-67.910	135.83	415.11
33	-0.02	0.02	1.958	8.012	-38.12	-5.504	31.49	149.61
33	0.02	0.00	1.867	8.000	-34.79	-5.867	32.00	148.13

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 14   11/19/81 0907   RUN 14

TEMP 91.   PO 14.5187

QPSF 75.00   VFPS 260.55   RNFT 1488385.   MACH 0.2264

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	11	0	0	0	0	0	0	0

T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	11	11	0	0	1	0	0	0

TAI RUNS   DATA AT UPRIGHT TRUNNION   FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.02	0.01	2.233	7.733	-35.11	-1.067	3.88	9.60
2	2.00	0.01	7.800	7.700	-53.34	-0.900	3.73	8.11
3	4.00	0.01	13.400	7.973	-72.46	-1.033	4.90	7.74
4	6.01	0.01	18.333	8.400	-82.72	-0.867	4.65	5.24
5	7.97	0.01	23.867	9.033	-91.91	-0.333	2.02	-0.28
6	10.00	0.01	30.133	9.833	-112.42	-0.233	1.71	2.66
7	11.99	0.01	36.267	11.347	-118.14	-0.733	3.19	6.56
8	14.05	0.01	41.833	13.067	-125.68	-0.567	3.01	6.99
9	15.02	0.01	44.700	14.033	-130.14	-0.400	3.00	6.58
10	-0.02	0.01	2.267	7.693	-34.44	-1.067	3.91	11.10
11	-2.01	0.01	-3.267	7.867	-21.08	-1.067	3.08	12.40
12	-4.03	0.01	-7.800	8.013	-10.95	-0.900	1.56	13.28
13	-6.03	0.01	-12.500	8.300	-5.12	-0.567	-1.90	14.61
14	-8.03	0.01	-16.800	8.867	-2.74	-0.967	-3.78	15.91
15	-10.04	0.01	-21.467	9.867	1.53	-1.600	-3.56	13.60
16	-12.03	0.01	-25.467	11.033	10.01	-1.893	-3.54	8.11
17	-13.99	0.01	-29.933	12.553	25.22	-2.133	-4.06	4.06
18	-16.02	0.01	-32.227	14.433	32.85	-2.467	-5.53	2.02
19	-18.02	0.01	-35.013	17.367	60.64	-0.067	-9.90	-0.13
20	-20.01	0.01	-37.213	19.533	101.97	1.140	-7.10	0.60
21	-22.02	0.01	-41.140	21.900	130.74	1.667	-4.41	0.88
22	-24.05	0.01	-43.753	25.200	158.80	1.633	-5.50	-3.76
23	-25.06	0.01	-47.047	27.033	174.94	1.373	-6.04	-3.21
24	-0.01	0.01	1.767	7.767	-34.28	-1.133	3.75	10.33

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 15 11/19/81 0907 RUN 15

TEMP 91. PO 14.5187

QPSF 75.00 VFPS 260.55 RNFT 1488385. MACH 0.2264

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	11	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	11	11	0	0	1	9	0	0

T+I RUNS DATA AT UPRIGHT TRUNNION FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	0.01	1.167	7.500	=15.36	=0.600	0.04	0.13
2	1.99	0.01	6.580	7.467	=31.23	=0.500	=0.13	=0.86
3	4.02	0.01	11.767	7.767	=45.31	=0.620	0.34	0.06
4	5.98	0.01	17.067	8.167	=55.67	=0.400	0.19	=4.07
5	7.98	0.01	21.867	8.700	=62.98	0.187	=2.11	=4.02
6	10.01	0.01	28.780	9.633	=86.45	0.033	=2.34	=3.66
7	12.02	0.01	35.367	11.000	=104.08	=0.267	=1.33	=1.57
8	14.00	0.01	41.800	12.933	=119.30	0.067	=2.34	=3.70
9	15.00	0.01	44.753	13.987	=123.72	0.200	=4.01	=0.97
10	=0.01	0.01	0.440	7.500	=12.89	=0.433	=0.27	1.77
11	=2.05	0.01	=4.600	7.733	=2.33	=0.300	=0.21	0.69
12	=4.03	0.01	=8.000	7.900	5.21	=0.167	=0.36	=0.31
13	=6.04	0.01	=13.000	8.133	9.30	=0.100	=1.19	0.45
14	=7.99	0.01	=17.533	8.767	11.40	=0.593	=2.30	0.98
15	=10.01	0.01	=21.700	9.667	9.47	=1.100	=3.62	1.64
16	=12.00	0.01	=25.133	10.900	=1.16	=1.720	=3.18	1.57
17	=14.02	0.01	=27.627	12.520	=12.89	=1.833	=3.80	=0.77
18	=15.99	0.01	=29.440	13.833	=14.31	=2.063	=3.90	=5.69
19	=18.04	0.01	=34.133	17.000	36.89	0.433	=7.50	=10.34
20	=20.01	0.01	=36.320	19.440	85.52	2.167	=5.49	=7.96
21	=22.02	0.01	=40.367	21.933	118.55	2.200	=3.71	=6.51
22	=24.00	0.01	=44.240	25.167	153.00	2.067	=3.80	=8.98
23	=25.01	0.01	=47.013	26.767	169.40	1.700	=4.51	=8.12
24	=0.01	0.01	0.467	7.500	=13.29	=0.360	=0.31	0.97

ORIGINAL PAGE IS
OF POOR QUALITY

~~VOUGHT LOW SPEED WIND TUNNEL TEST 630~~

WIND AXES

~~RUN 16~~ ~~11/19/81 0907~~ ~~RUN 16~~

TEMP 81. PB 14.5187

QPSF 75.00 VFPS 258.17 RNFT 1523449. MACH 0.2264

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	16	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	11	11	0	0	1	0	0	0

~~T+I RUNS DATA AT UPRIGHT TRUNNION FULL SCALE DATA~~

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.01	0.02	-6.633	6.267	111.65	-0.460	0.03	-0.53
2	2.00	0.02	-2.900	6.000	124.81	-0.467	0.03	-2.13
3	4.00	0.02	0.700	5.933	137.32	-0.833	0.56	-1.57
4	6.00	0.02	4.400	6.000	150.23	-0.500	0.53	-2.29
5	8.01	0.02	8.600	6.333	161.27	0.100	-3.51	-5.44
6	10.03	0.02	13.033	6.500	169.31	-0.100	-3.50	-5.83
7	11.99	0.02	18.333	7.067	175.55	-0.500	-1.65	-1.95
8	14.01	0.02	23.300	7.933	183.92	-0.167	-3.17	-2.14
9	15.01	0.02	25.500	8.467	185.86	-0.067	-4.54	-4.56
10	0.02	0.02	-6.667	6.333	111.47	-0.433	0.53	-0.17
11	-2.02	0.02	-10.267	6.667	96.06	-0.400	0.70	0.19
12	-4.05	0.02	-13.467	7.033	78.32	-0.167	0.51	-0.98
13	-6.00	0.02	-16.600	7.440	61.80	0.000	-1.50	-2.17
14	-8.05	0.02	-19.967	8.067	46.09	-0.300	-2.99	0.81
15	-10.02	0.02	-23.280	9.067	29.93	-0.987	-3.79	-0.53
16	-12.00	0.02	-26.667	10.300	16.60	-1.700	-3.31	1.03
17	-14.03	0.02	-28.433	11.787	0.69	-1.933	-5.10	-4.90
18	-15.03	0.02	-29.200	12.560	-7.11	-2.013	-6.51	-7.13
19	-16.00	0.02	-29.700	13.320	-13.15	-2.107	-7.00	-10.66
20	-18.07	0.02	-29.173	16.113	-32.56	1.093	-11.32	-12.08
21	-20.06	0.02	-28.800	17.333	-44.75	1.967	-8.10	-10.61
22	-22.00	0.02	-30.253	19.000	-55.19	1.900	-4.86	-8.51
23	-24.03	0.02	-32.133	20.767	-65.25	1.900	-4.95	-8.42
24	-25.00	0.02	-34.227	22.347	-64.61	1.767	-5.67	-11.84
25	-0.01	0.02	-6.733	6.333	110.65	-0.500	0.20	0.33

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 17 11/19/81 0907 RUN 17

TEMP 81. PO 14.5187

QPSF 75.00 VFPS 258.17 RNFT 1523449. MACH 0.2264

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	11	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	11	11	0	0	1	0	0	0

T&I RUNS DATA AT UPRIGHT TRUNNION FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	0.02	-6.200	6.613	109.50	-5.633	28.08	130.30
2	1.97	0.02	-2.833	6.400	119.66	-6.100	34.44	139.42
3	3.97	0.02	0.967	6.267	134.26	-6.767	42.80	147.33
4	6.02	0.02	4.900	6.400	145.55	-6.467	49.07	148.42
5	8.01	0.02	8.567	6.667	154.84	-6.233	53.01	152.14
6	9.97	0.02	13.400	7.067	162.64	-6.720	62.27	154.38
7	12.03	0.02	18.767	7.467	168.26	-7.167	70.57	161.22
8	14.03	0.02	23.767	8.433	175.92	-6.800	73.56	154.55
9	15.04	0.02	26.000	9.013	179.81	-6.500	73.74	148.35
10	-0.01	0.02	-6.800	6.733	106.03	-5.613	27.28	132.00
11	-2.02	0.02	-9.900	7.047	93.77	-5.100	22.47	124.76
12	-4.01	0.02	-13.100	7.393	76.15	-4.660	16.32	117.25
13	-6.00	0.02	-16.200	7.800	59.81	-4.387	10.11	116.62
14	-8.01	0.02	-19.400	8.500	43.30	-4.767	4.40	118.02
15	-10.01	0.02	-22.933	9.500	26.52	-5.567	0.25	118.63
16	-11.99	0.02	-26.133	10.833	10.43	-6.400	-4.79	122.98
17	-14.00	0.02	-28.967	12.433	-5.45	-6.733	-12.71	124.75
18	-16.00	0.02	-29.500	13.967	-20.66	-6.920	-20.81	122.41
19	-18.01	0.02	-29.780	16.367	-32.36	-3.580	-28.23	113.88
20	-20.00	0.02	-28.367	18.033	-48.13	-2.733	-28.20	118.04
21	-21.98	0.02	-30.667	19.500	-55.64	-2.800	-32.83	122.84
22	-24.01	0.02	-31.847	21.567	-65.40	-3.167	-38.33	123.27
23	-25.01	0.02	-33.767	22.767	-65.45	-3.373	-42.13	122.52
24	-0.02	0.02	-6.700	6.700	106.30	-5.480	27.80	131.67

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 18 11/19/81 0907 RUN 18

TEMP 79. PO 14.5187

QPSF 75.00 VFPS 257.70 RNFT 1530627. MACH 0.2264

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	18	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	11	11	0	0	1	0	0	0

T&I RUNS DATA AT UPRIGHT TRUNNION FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.00	0.02	1.033	5.467	86.49	-5.080	28.67	130.50
2	2.01	0.02	2.000	5.400	100.67	-5.513	34.90	137.99
3	4.03	0.02	2.933	5.600	112.74	-6.147	43.35	145.79
4	6.00	0.02	4.133	5.400	125.43	-6.507	49.91	156.18
6	10.00	0.02	6.767	5.667	145.41	-7.353	71.50	177.18
7	12.00	0.02	8.200	5.933	155.93	-7.613	77.76	179.20
8	14.00	0.02	9.560	6.340	164.46	-7.373	81.68	174.00
9	16.00	0.02	10.900	6.860	173.72	-6.580	82.12	157.95
10	18.02	0.02	12.300	7.533	181.91	-6.827	83.33	149.32
11	0.01	0.02	0.933	5.467	85.73	-5.080	27.77	129.40
12	-2.02	0.02	0.033	5.567	71.55	-4.780	23.11	125.40
13	-4.00	0.02	-0.840	5.667	58.80	-4.667	18.45	125.85
14	-5.99	0.02	-1.733	5.700	41.52	-4.447	11.28	125.60
15	-8.02	0.02	-2.500	5.767	21.53	-4.513	6.92	129.49
16	-10.02	0.02	-3.367	6.167	4.24	-4.927	1.32	135.54
17	-12.03	0.02	-4.133	6.567	-12.50	-5.813	-1.64	144.44
18	-14.04	0.02	-5.000	7.000	-28.58	-5.800	-8.72	149.12
19	-16.00	0.02	-5.733	7.400	-44.64	-5.513	-14.82	148.85
20	-18.02	0.02	-6.033	8.700	-58.86	-2.380	-22.07	127.38
21	-20.02	0.02	-7.033	9.000	-74.25	-2.073	-27.77	124.70
22	-22.01	0.02	-7.900	9.500	-87.69	-2.113	-31.86	124.98
23	-24.00	0.02	-8.667	10.120	-100.80	-2.080	-37.64	122.71
24	-25.04	0.02	-9.100	10.400	-106.56	-2.147	-40.87	124.26
25	-0.04	0.02	0.933	5.500	85.66	-4.987	28.03	129.51
25	-0.01	0.02	-6.733	6.333	110.40	-0.500	0.20	0.33

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 19 11/19/81 0907 RUN 19

TEMP 79. PO 14.5187

QPSF 75.00 VFPS 257.70 RNFT 1530627. MACH 0.2264

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	18	0	0	[illegible]	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	11	11	0	0	1	0	0	0

T+I RUNS DATA AT UPRIGHT TRUNNION FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.03	0.02	8.700	6.867	-44.22	-5.627	30.58	136.97
2	2.00	0.02	11.833	7.200	-67.54	-5.793	38.98	141.37
3	3.97	0.02	14.567	7.547	-85.70	-6.173	44.59	144.23
4	6.02	0.02	18.233	7.867	-109.73	-6.627	55.58	156.39
5	8.02	0.02	20.680	8.300	-121.36	-6.987	63.55	169.42
6	10.01	0.02	24.100	9.113	-144.68	-7.527	75.44	174.26
7	12.03	0.02	25.927	10.367	-149.24	-8.040	83.73	180.40
8	13.99	0.02	28.347	11.380	-158.98	-7.593	91.35	180.64
9	15.00	0.02	29.747	12.133	-165.91	-7.760	92.22	178.34
10	-0.01	0.02	8.567	6.933	-44.05	-5.660	30.01	137.20
11	-2.01	0.02	5.667	6.767	-21.82	-5.327	24.82	134.33
12	-4.03	0.02	2.200	6.600	2.55	-5.160	16.45	132.65
13	-5.99	0.02	-0.580	6.500	23.16	-4.987	11.25	134.23
14	-8.00	0.02	-4.400	6.567	51.95	-5.193	4.62	139.33
15	-10.01	0.02	-7.733	6.833	81.16	-5.420	1.01	145.35
16	-12.01	0.02	-11.600	7.533	115.67	-6.293	-3.16	151.11
17	-13.98	0.02	-14.167	8.400	129.76	-6.193	-10.78	155.61
18	-16.01	0.02	-16.167	9.567	134.69	-5.760	-17.38	152.31
19	-18.02	0.02	-17.807	11.567	144.15	-2.493	-25.77	124.78
20	-20.01	0.02	-19.400	12.693	147.11	-1.960	-28.97	117.20
21	-22.01	0.02	-20.[illegible]00	13.833	142.09	-1.993	-33.52	114.00
22	-23.99	0.02	-21.773	15.207	137.94	-1.960	-39.07	112.39
23	-25.05	0.02	-22.480	15.913	139.87	-1.860	-41.55	109.17
24	0.00	0.02	8.567	6.933	-44.55	-5.460	29.93	136.00

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 20 11/19/81 0907 RUN 20

TEMP 79. PO 14.5187

QPSF 75.00 VFPS 207.70 RNFT 1530627. MACH 0.2264

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	18	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	11	11	0	0	1	0	0	0

T+I RUN DATA AT UPRIGHT TRUNNION FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	S/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.03	0.02	0.833	5.067	88.26	-0.167	1.35	-1.57
2	2.03	0.02	1.867	5.100	102.85	-0.133	1.34	-4.14
3	4.01	0.02	2.800	5.133	116.98	-0.467	1.87	-3.66
4	6.05	0.02	3.933	5.167	130.26	-0.500	2.90	3.57
5	8.04	0.02	4.967	5.367	143.79	-0.433	2.96	5.43
6	9.99	0.02	6.233	5.467	155.11	-0.500	3.52	3.11
7	12.00	0.02	7.533	5.600	165.53	-0.433	1.51	-1.29
8	14.01	0.02	9.133	6.000	176.49	-0.133	-1.83	-3.59
9	15.01	0.02	9.833	6.267	181.60	-0.100	-2.00	-3.71
10	0.01	0.02	0.900	5.100	88.09	-0.167	1.35	-0.40
11	-1.99	0.02	-0.100	5.160	72.48	-0.133	1.24	-1.83
12	-3.96	0.02	-1.133	5.167	61.56	-0.067	1.00	-1.39
13	-6.02	0.02	-2.000	5.147	43.29	0.267	-0.18	-1.75
14	-8.02	0.02	-2.800	5.367	25.96	0.300	-0.35	-2.58
15	-10.01	0.02	-3.633	5.633	8.41	0.000	0.33	-2.00
16	-11.99	0.02	-4.300	6.133	-9.52	-0.533	2.28	-0.04
17	-14.01	0.02	-5.133	6.433	-26.58	-0.500	2.58	1.45
18	-16.01	0.02	-5.900	6.833	-43.21	-0.167	2.67	0.01
19	-18.01	0.02	-6.267	8.033	-57.42	2.833	-2.46	-10.90
20	-20.00	0.02	-7.253	8.333	-72.50	2.733	-2.34	-7.71
21	-22.03	0.02	-8.233	8.833	-87.37	2.333	-2.20	-8.94
22	-24.03	0.02	-8.767	9.567	-100.60	2.600	-3.12	-9.67
23	-25.05	0.02	-9.300	9.800	-106.05	2.593	-3.09	-9.14
24	-0.01	0.02	1.000	5.067	88.09	-0.167	1.51	-3.30

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 21 11/19/81 0907 RUN 21

TEMP 82. PO 14.5580

QPSF 75.00 VFPS 258.06 RNFT 1521935. MACH 0.2261

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	18	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	11	11	0	0	1	0	0	0

T+I RUNS DATA AT UPRIGHT TRUNNION FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.02	0.01	1.200	7.867	81.18	-0.100	0.34	-4.53
2	2.03	0.01	1.933	7.833	94.83	-0.[illegible]33	0.34	-5.94
3	4.04	-0.01	2.900	7.800	107.58	[illegible]	0.30	-4.83
4	5.96	-0.01	3.800	7.867	119.50	0.000	0.90	-3.63
5	8.03	0.00	4.733	8.167	131.80	-0.100	0.34	-6.26
6	9.99	0.00	5.867	8.167	142.48	0.200	0.29	-5.74
7	11.99	0.00	7.067	8.367	152.72	0.287	-1.04	-5.39
8	14.00	0.00	8.033	8.567	162.76	1.253	-2.49	-4.69
9	15.04	0.01	8.800	8.867	167.33	1.307	-5.68	-3.69
10	0.00	0.01	1.200	7.867	81.08	0.113	0.49	-4.50
11	-1.97	0.00	0.333	7.833	68.06	0.127	1.82	-1.94
12	-4.03	0.00	-0.600	7.753	53.63	-0.007	0.67	-1.87
13	-6.04	0.00	-1.300	7.800	37.46	0.400	-0.03	-1.85
14	-8.01	0.00	-1.967	7.833	19.91	0.200	0.16	-2.72
15	-9.92	0.00	-2.733	8.067	5.45	0.167	1.99	-1.22
16	-12.00	0.00	-3.567	8.367	-11.96	-0.300	3.34	0.51
17	-14.01	0.02	-4.233	8.667	-26.71	-0.167	3.40	0.90
18	-16.00	0.02	-5.033	8.933	-42.49	0.000	3.50	-0.33
19	-18.02	0.01	-5.300	10.033	-57.98	2.720	-1.13	-11.94
20	-19.99	0.01	-5.933	10.320	-72.29	2.767	-2.57	-10.80
21	-21.98	0.01	-6.567	10.793	-85.98	2.500	-2.49	-7.24
22	-24.01	0.03	-7.400	11.133	-98.66	2.793	-0.77	-6.37
23	-25.01	0.02	-8.033	11.233	-104.47	2.833	-1.07	-6.98
24	0.00	0.02	1.233	7.767	21.56	-0.167	0.41	-1.27

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 22 11/19/81 0907 RUN 22

TEMP 90. PO 14.5580

QPSF 75.00 VFPS 259.96 RNFT 1493849. MACH 0.2261

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	18	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	11	11	0	0	1	0	0	0

T+I RUNS DATA AT UPRIGHT TRUNNION FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	0.02	9.300	9.767	-56.55	-5.133	28.01	131.33
2	2.01	0.02	12.367	10.100	-81.58	-5.333	36.22	136.66
3	4.00	0.03	15.667	10.600	-105.81	-5.600	43.05	138.60
4	6.02	0.03	18.233	10.800	-124.55	-5.700	50.09	137.20
5	8.00	0.03	20.680	11.520	-137.39	-5.967	58.49	138.55
6	10.00	0.03	23.567	12.267	-159.34	-5.433	64.58	137.31
7	12.01	0.03	25.353	13.467	-164.75	-5.980	71.53	142.47
8	14.02	0.03	27.367	14.513	-174.91	-5.433	76.57	147.34
9	15.03	0.03	29.200	15.367	-192.12	-6.400	82.73	141.20
10	0.00	0.03	8.967	9.867	-54.83	-5.467	28.33	132.37
11	-1.99	0.03	6.233	9.533	-33.72	-5.260	21.64	127.36
12	-4.01	0.03	3.167	9.433	-10.50	-5.100	16.08	125.84
13	-6.01	0.03	0.067	9.233	13.14	-4.960	9.48	127.56
14	-8.01	0.03	-3.133	9.133	39.49	-5.100	5.28	132.74
15	-9.99	0.03	-6.600	9.367	71.47	-5.567	1.55	135.03
16	-12.00	0.03	-10.200	9.833	104.59	-5.733	-2.34	137.40
17	-14.00	0.03	-12.933	10.500	122.05	-5.600	-7.56	138.76
18	-16.01	0.00	-14.800	11.400	125.17	-5.267	-14.98	133.64
19	-18.00	0.02	-16.267	13.567	130.92	-2.033	-22.70	111.62
20	-19.99	0.02	-17.433	14.567	130.60	-2.100	-27.64	112.25
21	-22.01	0.02	-18.567	15.667	128.76	-2.120	-32.13	116.09
22	-24.01	0.02	-19.820	16.733	127.78	-2.100	-37.68	116.06
23	-24.96	0.02	-20.900	17.367	132.96	-2.067	-39.43	114.72
24	-0.01	0.02	9.300	9.833	-56.44	-5.260	29.68	133.33

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 23 11/19/81 0907 RUN 23

TEMP 87. PO 14.5187

QPSF 75.00 VFPS 259.60 RNFT 1502246. MACH 0.2264

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	18	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	11	11	0	0	1	0	0	0

T+I RUNS DATA AT UPRIGHT TRUNNION FULL SCALE DATA

PNT	ALPHA	PS1	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.02	0.00	1.433	8.267	79.92	-5.100	24.71	126.10
2	1.97	0.00	2.167	8.233	91.94	-5.400	30.39	128.13
3	3.98	0.01	3.067	8.400	104.45	-5.613	38.82	130.90
4	6.01	0.01	4.033	8.500	114.99	-5.467	43.91	132.77
5	7.98	0.01	4.867	8.773	126.81	-6.087	51.74	137.75
6	9.99	0.01	6.100	8.800	136.92	-6.107	60.75	140.37
7	12.00	0.01	7.133	8.933	143.80	-6.233	63.88	136.58
8	14.00	0.01	8.400	9.100	153.34	-6.700	73.90	138.53
9	14.99	0.01	9.000	9.400	158.09	-6.467	75.24	136.50
10	0.01	0.01	1.500	8.333	77.55	-5.587	26.67	126.10
11	-2.00	0.01	0.680	8.260	65.58	-5.300	20.45	119.10
12	-3.98	-0.01	-0.267	8.367	52.60	-4.733	15.19	118.46
13	-6.00	0.00	-0.900	8.333	34.74	-4.613	10.12	118.93
14	-7.99	0.00	-1.567	8.433	16.76	-4.733	5.76	118.85
15	-9.98	0.01	-2.300	8.700	0.73	-5.013	2.80	122.86
16	-11.98	0.01	-3.033	9.033	-13.27	-5.033	-1.66	126.07
17	-14.01	0.01	-3.833	9.267	-28.00	-5.080	-6.43	124.70
18	-16.00	0.01	-4.500	9.600	-44.05	-4.800	-10.68	126.50
19	-18.00	0.01	-4.800	10.847	-58.16	-1.667	-20.59	109.19
20	-19.99	0.01	-5.300	11.113	-71.91	-1.587	-24.72	108.04
21	-22.01	0.01	-6.093	11.680	-87.07	-2.227	-30.93	115.13
22	-23.98	0.01	-6.800	12.040	-96.04	-2.300	-34.02	116.21
23	-24.99	0.01	-7.513	12.127	-105.64	-2.233	-37.68	118.49
24	0.02	0.01	1.500	8.467	77.91	-5.100	26.37	125.13

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 24 11/19/81 0907 RUN 24

TEMP 82. PO 14.5187

QPSF 75.00 VFPS 258.41 RNFT 1519881. MACH 0.2264

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	11	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	11	11	0	0	1	0	0	0

T+I RUNS DATA AT UPRIGHT TRUNNION FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	0.01	-6.167	9.633	98.58	-6.260	26.86	131.50
2	1.98	0.01	-2.833	9.400	109.71	-6.460	33.10	135.77
3	4.02	0.01	0.900	9.267	122.22	-7.127	41.82	144.30
4	6.00	0.01	4.567	9.367	132.43	-6.700	47.92	144.41
5	8.01	0.01	8.233	9.793	142.02	-7.193	55.23	140.57
6	10.01	0.01	13.267	10.133	148.89	-7.393	62.84	150.96
7	12.03	0.01	18.000	10.567	155.57	-6.773	67.66	147.40
8	14.00	0.01	22.367	11.467	161.14	-7.093	74.47	141.93
9	15.01	0.01	24.433	12.033	164.10	-7.000	76.08	141.22
10	0.02	0.01	-6.933	9.667	94.91	-6.007	27.94	127.90
11	-2.02	0.01	-10.300	9.947	83.52	-5.493	21.39	119.35
12	-3.98	0.02	-13.033	10.267	66.75	-4.993	15.84	114.29
14	-8.01	0.01	-18.467	11.153	34.86	-5.060	5.21	112.93
15	-10.00	0.01	-21.700	11.967	18.78	-5.640	0.06	113.69
16	-11.98	0.01	-24.013	13.233	4.35	-6.460	-4.78	114.83
17	-13.98	0.01	-26.100	14.367	-11.83	-6.793	-11.07	113.81
18	-16.00	0.01	-27.367	15.567	-26.15	-6.993	-19.31	112.42
19	-17.99	0.01	-25.807	17.873	-41.49	-2.700	-24.21	104.96
20	-19.99	0.01	-27.367	19.260	-52.29	-2.527	-25.06	105.65
21	-22.03	0.01	-27.973	20.713	-62.65	-2.507	-29.42	113.22
22	-24.01	0.02	-29.507	22.340	-70.01	-2.460	-34.71	117.45
23	-25.00	0.00	-31.433	23.433	-71.92	-2.953	-41.55	116.87
24	-0.01	0.00	-6.467	9.633	98.12	-6.013	27.94	128.00
24	0.02	0.01	1.500	8.467	77.90	-5.100	26.37	125.13

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 25 11/19/81 0907 RUN 25

TEMP 82. PO 14.5089

QPSF 75.00 VFPS 258.50 RNFT 1519366. MACH 0.2265

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	16	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	11	11	0	0	1	0	0	0

T+I RUNS DATA AT UPRIGHT TRUNNION FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.01	0.00	-6.533	9.333	99.86	-1.040	-0.59	2.07
2	2.00	0.00	-2.733	9.133	111.96	-1.500	-0.63	1.51
3	4.00	0.00	0.900	9.033	126.57	-1.560	0.93	2.02
4	6.03	0.00	4.600	9.067	135.48	-1.667	0.47	3.02
5	7.98	0.00	7.833	9.467	144.76	-1.700	0.83	-0.72
6	10.02	0.00	12.300	9.700	155.13	-1.133	0.22	-1.56
7	12.02	0.01	17.567	10.133	160.96	-1.193	-1.16	-1.78
8	14.00	0.01	22.033	10.900	167.33	-1.667	1.20	-7.12
9	15.03	0.01	24.067	11.533	170.12	-1.300	-0.59	-7.37
10	0.00	0.01	-6.867	9.367	98.56	-1.467	-0.13	-1.07
11	-2.03	0.01	-10.400	9.733	85.45	-0.993	0.97	-0.87
12	-4.00	0.01	-13.267	10.087	69.91	-0.467	1.83	-1.04
13	-5.91	0.01	-15.667	10.133	55.46	-0.333	-0.08	-1.44
14	-8.02	0.01	-18.533	10.667	38.15	-1.133	-1.20	-0.72
15	-9.91	0.00	-21.933	11.633	22.76	-1.400	-1.37	-0.40
16	-12.02	0.01	-24.787	13.067	3.98	-2.133	-1.20	-1.80
17	-14.03	0.01	-26.460	13.967	-9.28	-2.367	-4.39	-5.97
18	-15.93	0.01	-27.187	15.267	-25.97	-2.467	-6.06	-7.26
19	-18.01	0.01	-26.093	17.500	-43.00	1.353	-6.25	-9.75
20	-20.00	0.01	-26.707	18.667	-51.13	1.700	-4.98	-10.48
21	-22.04	0.01	-28.393	20.207	-63.51	1.900	-3.76	-8.78
22	-24.00	0.01	-29.880	21.867	-72.71	2.007	-2.61	-6.93
23	-25.00	0.01	-31.273	22.833	-73.20	1.800	-3.73	-10.67
24	0.02	0.03	-6.333	9.267	100.42	-1.333	-0.40	-0.77

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 26 11/19/81 0907 RUN 26

TEMP 82. PB. 14.5089

QPSF 75.00 VFPS 258.50 RNFT 1519366. MACH 0.2265

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	11	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	11	11	0	0	1	0	0	0

T+I RUNS DATA AT UPRIGHT TRUNNION FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	0.03	1.733	10.367	-31.31	-1.667	0.19	-0.73
2	1.98	0.03	7.000	10.467	-46.76	-1.693	0.45	-0.00
3	4.03	0.03	12.233	10.767	-62.62	-2.133	3.28	0.97
4	5.99	0.03	17.000	11.133	-72.86	-1.667	1.54	1.86
5	8.01	0.03	22.067	11.800	-84.31	-1.807	1.40	0.75
6	10.01	0.03	28.800	12.933	-106.86	-1.527	1.50	1.59
7	12.00	0.03	35.000	14.367	-122.03	-1.333	0.74	-1.23
8	14.04	0.03	41.000	16.200	-144.52	-2.067	-0.04	-8.39
9	15.01	0.02	43.200	17.127	-155.84	-2.007	0.48	-7.90
10	0.00	0.02	1.233	10.600	-32.32	-1.807	0.13	0.83
11	-2.01	0.02	-3.833	10.533	-19.43	-1.200	1.42	-1.49
12	-3.99	0.02	-8.367	10.833	-10.60	-0.800	0.15	-1.93
13	-6.03	0.02	-12.400	10.833	-6.03	-0.827	-0.95	-1.71
14	-7.97	0.02	-16.233	11.333	-2.26	-1.533	-1.75	-0.32
15	-10.01	0.02	-20.300	12.133	-2.92	-1.760	-1.82	-0.35
16	-11.99	0.02	-23.500	13.333	-7.80	-2.180	-1.06	-1.36
17	-14.04	0.02	-25.367	14.533	-21.04	-2.533	-1.62	-6.47
18	-16.02	0.02	-26.800	15.800	-18.06	-2.733	-1.83	-3.42
19	-18.02	0.02	-29.873	18.040	36.30	-0.667	-3.05	-5.13
20	-20.02	0.03	-3[illegible].607	20.927	79.12	1.807	-3.28	-8.18
21	-22.03	0.03	-37.747	23.033	106.88	2.033	-1.56	-8.34
22	-24.01	0.03	-41.100	25.733	132.96	2.000	-0.95	-10.07
23	-25.02	0.03	-43.933	27.360	146.85	1.467	-3.04	-11.32
24	0.00	0.02	1.480	10.567	-30.82	-1.533	0.28	1.37

ORIGINAL [illegible] OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 27 11/19/81 0907 RUN 27

TEMP 82. PO 14.4990

QPSF 75.00 VFPS 258.59 RNFT 1518851. MACH 0.2266

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	11	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	11	11	0	0	1	0	0	0

T+I RUNS DATA AT UPRIGHT TRUNNION FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.01	0.02	2.667	10.833	-52.14	-1.967	3.18	8.80
2	2.02	0.02	8.553	10.733	-70.67	-2.347	4.97	10.85
3	4.01	0.02	13.600	11.167	-87.22	-2.653	6.85	9.00
4	5.99	0.02	18.833	11.500	-101.21	-2.167	4.90	10.90
5	8.01	0.02	23.733	12.080	-110.41	-2.100	4.61	5.04
6	10.01	0.02	30.600	13.167	-131.66	-1.813	5.38	6.57
7	12.01	0.02	35.533	14.547	-135.92	-1.993	4.73	10.43
8	14.06	0.02	40.980	15.840	-150.75	-2.467	6.51	3.30
9	14.97	0.02	43.500	17.000	-158.57	-2.167	5.02	2.13
10	0.02	0.04	2.367	10.767	-51.10	-2.167	2.66	9.17
11	-2.03	0.05	-2.867	10.800	-37.27	-1.853	3.47	12.18
12	-4.03	0.05	-7.200	10.967	-25.66	-1.507	1.77	12.79
13	-8.01	0.05	-15.667	11.500	-13.86	-1.800	-1.57	12.41
14	-10.02	0.04	-20.033	12.187	-7.55	-2.100	-1.51	11.65
15	-12.01	0.04	-24.400	13.567	4.50	-2.767	-1.58	6.63
16	-14.01	0.04	-27.973	14.800	19.70	-3.127	-2.05	3.89
17	-16.03	0.04	-30.227	16.220	25.82	-3.433	-5.30	4.03
18	-18.02	0.04	-32.360	19.067	62.32	0.340	-6.34	-1.56
19	-19.92	0.04	-35.580	21.000	93.89	0.800	-5.05	0.70
20	-21.99	0.04	-38.713	23.133	118.60	1.167	-5.05	0.81
21	-24.02	0.04	-41.787	26.220	144.20	1.480	-4.63	-1.73
22	-24.98	0.04	-43.760	27.260	147.65	1.233	-5.41	-4.68
23	0.00	0.04	2.833	10.733	-51.83	-2.187	3.06	10.73

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 28 11/30/81 0849 RUN 28

TEMP 82. PB 14.4990

QPSF 75.00 VFPS 258.59 RNFT 1518851. MACH 0.2266

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	11	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	11	11	0	0	1	0	0	0

T+I RUNS DATA AT UPRIGHT TRUNNION FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.02	0.00	2.767	11.053	-53.29	-6.793	29.00	132.30
2	1.95	0.01	8.333	11.133	-72.63	-7.167	36.35	139.43
3	4.00	0.01	13.800	11.467	-91.59	-7.633	44.19	144.08
4	6.00	0.01	19.167	11.840	-104.39	-7.400	49.63	148.58
5	7.99	0.01	23.533	12.667	-115.21	-7.700	57.26	142.92
6	10.01	0.01	30.387	13.567	-138.60	-7.533	64.84	145.22
7	12.00	0.01	35.633	15.067	-141.91	-7.367	71.95	151.82
8	13.91	0.01	41.200	16.693	-159.75	-7.733	77.49	144.07
9	14.98	0.01	44.100	17.753	-168.44	-7.133	77.58	144.00
10	-0.01	0.01	2.567	11.033	-55.85	-6.793	29.06	134.44
11	-1.99	0.02	-2.667	11.167	-40.39	-6.133	22.01	128.75
12	-4.01	0.02	-7.167	11.233	-30.29	-5.667	15.55	125.01
13	-6.03	0.02	-11.033	10.953	-23.00	-5.667	9.26	124.40
14	-8.02	0.02	-15.367	11.500	-18.52	-6.233	3.91	124.26
15	-10.01	0.03	-19.667	12.567	-13.07	-6.767	-1.36	126.87
16	-12.03	0.03	-23.867	13.933	0.12	-7.167	-6.13	123.97
17	-13.99	0.03	-27.807	15.167	15.64	-7.467	-12.73	124.06
18	-16.00	0.03	-29.793	16.400	20.28	-7.613	-18.21	122.72
19	-18.01	0.03	-32.700	19.200	53.06	-4.133	-25.60	111.75
21	-22.00	0.04	-38.300	23.600	117.44	-2.727	-30.97	114.89
22	-23.99	0.04	-40.940	26.487	139.58	-3.167	-36.91	117.73
23	-25.01	0.04	-43.673	27.820	147.27	-3.333	-41.57	119.84
24	0.00	0.04	2.867	11.067	-53.12	-6.467	28.67	132.03
24	24.98	0.01	23.400	15.200	-101.50	3.400	-42.98	-121.96

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 29 11/19/81 0907 RUN 29

TEMP 82. PO 14.4990

QPSF 83.00 VFPS 272.03 RNFT 1597805. MACH 0.2384

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	12	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	11	11	0	0	1	0	0	1

T+I RUNS DATA AT UPRIGHT TRUNNION FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	-0.01	2.982	10.964	-52.85	-6.867	29.86	144.97
2	0.01	2.00	2.952	11.024	-53.26	-2.530	23.20	129.94
3	0.01	4.00	2.741	11.235	-51.35	2.139	13.85	109.64
4	0.01	6.01	2.259	11.566	-46.13	7.108	4.40	87.35
5	0.01	8.02	1.922	11.898	-40.36	11.434	-7.14	58.23
6	0.01	10.04	0.988	12.741	-32.38	15.452	-14.77	25.52
7	0.01	12.01	-0.416	13.825	-22.58	20.572	-29.54	-9.48
8	0.01	14.01	-1.205	15.512	-20.72	26.235	-44.55	-47.28
9	0.01	16.00	-1.054	17.319	-22.71	30.433	-51.63	-75.26
10	0.01	18.00	-0.422	19.096	-26.00	33.867	-59.22	-102.43
11	0.01	20.02	-1.030	21.596	-24.55	40.030	-68.58	-128.78
12	0.01	22.00	-2.380	24.753	-14.77	44.639	-78.43	-155.86
13	0.01	24.00	-3.355	28.036	-11.20	49.699	-89.22	-186.46
14	0.02	26.02	0.181	34.000	-22.66	56.205	-94.96	-193.96
15	0.02	28.01	2.163	38.000	-32.10	60.663	-92.38	-213.39
16	0.02	30.00	3.241	41.813	-48.99	64.759	-84.85	-230.43
17	0.02	-0.01	2.952	11.024	-53.70	-7.349	32.46	147.89
18	0.02	-2.00	2.982	11.193	-52.22	-11.175	38.61	158.97
19	0.02	-4.02	3.072	11.536	-49.09	-14.861	44.69	167.40
20	0.02	-5.99	2.861	12.048	-39.96	-19.247	54.74	181.46
21	0.02	[illegible]	[illegible]	12.620	-28.64	-24.048	70.21	206.82
22	0.02	-10.04	1.476	13.524	-15.38	-28.373	81.62	227.57
23	-0.02	-12.00	0.361	14.608	-1.14	-32.651	94.66	252.13
24	-0.02	-14.02	-0.512	15.946	12.24	-36.898	107.64	287.34
25	-0.03	-16.00	-1.139	17.861	19.46	-41.416	118.79	318.81
26	-0.03	-18.00	-1.416	20.169	21.73	-46.795	131.23	349.26
27	-0.03	-20.00	-2.108	22.651	23.47	-51.687	142.98	384.33
28	-0.03	-21.98	-2.440	25.512	21.99	-56.765	152.63	419.33
29	-0.09	-24.00	-3.024	28.855	20.42	-61.566	164.31	442.66
31	0.02	-28.00	-2.096	38.133	-34.58	-69.470	143.28	410.22
32	0.01	-30.02	-0.271	41.735	-47.38	-72.380	136.71	426.93
33	0.01	0.00	2.651	11.054	-52.68	-6.536	28.77	143.79
33	0.02	0.00	1.867	8.000	-34.79	-5.867	32.00	148.13

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 30 11/19/81 0907 RUN 30

TEMP 82. PO 14.4990

QPSF 75.00 VFPS 258.59 RNFT 1518851. MACH 0.2266

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	12	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	11	11	0	0	1	0	0	1

T+I RUNS DATA AT UPRIGHT TRUNNION FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.02	0.00	2.833	11.100	-51.55	-6.447	30.65	143.17
2	-0.01	1.99	2.867	11.233	-52.60	-2.067	23.34	130.63
3	-0.01	4.00	2.633	11.333	-50.39	2.467	13.62	107.60
4	-0.01	6.04	2.433	11.833	-46.32	7.033	4.98	84.50
5	0.00	8.03	1.967	12.133	-39.43	11.267	-6.02	55.57
6	0.00	9.99	0.933	12.867	-30.79	15.933	-17.54	22.17
7	0.00	12.00	-0.600	14.033	-19.73	21.200	-30.97	-13.67
8	0.00	13.99	-0.900	15.400	-19.74	26.400	-42.61	-48.27
9	0.00	16.02	-0.767	17.213	-21.52	31.200	-52.65	-77.00
10	0.00	18.03	-0.767	19.300	-25.46	35.200	-60.36	-106.87
11	0.01	20.01	-1.433	21.980	-23.70	39.500	-69.26	-136.25
12	0.01	21.99	-2.860	24.933	-15.01	44.633	-78.79	-159.92
13	0.01	24.00	-1.140	30.267	-16.84	51.967	-91.32	-178.91
14	0.01	26.02	0.187	33.947	-23.88	56.353	-94.03	-198.01
15	0.01	27.98	1.813	37.573	-34.55	60.633	-90.93	-216.71
16	0.01	30.00	2.447	41.833	-50.06	64.613	-86.72	-237.54
17	0.01	-0.01	2.967	11.100	-52.68	-7.367	34.03	145.26
18	0.01	-2.00	3.127	11.300	-51.51	-11.553	40.84	155.80
19	0.04	-3.98	3.067	11.667	-47.15	-14.700	47.59	170.38
20	0.04	-5.99	2.767	12.167	-37.73	-18.927	58.24	183.97
21	0.04	-8.00	2.400	12.733	-27.45	-23.667	71.51	207.57
22	0.04	-10.00	1.267	13.600	-13.27	-28.067	82.00	230.20
23	0.04	-12.05	0.000	15.000	4.25	-32.200	94.67	258.16
24	0.04	-14.00	-0.433	16.100	12.48	-36.733	108.98	287.65
25	0.04	-15.99	-0.967	17.933	18.49	-41.633	121.50	318.78
26	0.04	-17.98	-1.267	20.300	21.12	-47.033	133.10	352.80
27	0.04	-20.00	-2.100	22.833	23.83	-52.000	145.85	385.30
28	0.04	-21.99	-2.533	25.833	21.17	-57.033	156.90	422.62
29	0.04	-24.00	-3.200	29.227	21.12	-62.067	167.99	453.71
30	0.04	-25.99	-3.033	33.667	-10.99	-63.733	141.52	405.48
31	0.04	-27.98	-2.067	38.300	-26.63	-69.667	145.57	416.40
32	0.04	-30.01	0.480	41.880	-48.62	-72.300	135.50	418.86
33	0.04	0.00	2.833	11.133	-50.35	-6.433	29.51	143.79

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 31 11/19/81 0907 RUN 31

TEMP 84. PO 14.5334

QPSF 75.00 VFPS 258.76 RNFT 1513553. MACH 0.2263

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	32	0	0	0	0	0	0	0

T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	31	31	0	0	1	0	0	0

UPRIGHT ALIGNMENT RUN DATA AT UPRT. TRUNNION FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.02	0.00	-1.100	11.233	55.39	6.400	32.67	-132.67
2	-2.00	0.00	-7.067	11.233	74.16	6.700	39.88	-136.37
3	-3.98	0.00	-12.600	11.487	91.52	6.867	46.64	-141.27
4	-5.98	0.00	-17.833	11.867	106.76	6.800	50.59	-143.67
5	-8.01	0.00	-23.100	12.533	121.49	6.340	56.06	-142.00
6	-10.00	0.00	-29.467	13.833	141.50	5.880	61.24	-145.20
7	-11.99	0.00	-34.300	15.360	145.77	5.867	66.08	-139.10
8	-13.98	0.00	-39.567	17.000	152.38	5.167	68.78	-133.17
9	-15.00	0.00	-42.100	17.967	157.99	5.233	72.16	-135.40
10	-0.01	0.00	-1.433	11.433	54.79	5.167	30.71	-129.23
11	1.99	0.00	3.467	11.567	41.69	5.000	25.26	-127.87
12	4.00	0.00	8.300	11.833	30.54	4.980	20.69	-125.37
13	6.03	0.00	12.333	12.000	21.50	5.347	15.02	-127.17
14	7.98	0.00	16.767	12.433	17.15	5.573	10.43	-127.07
15	9.99	0.00	20.967	13.200	11.95	5.733	3.69	-129.47
16	12.01	0.00	25.600	14.040	1.11	6.000	-1.19	-129.10
17	13.99	0.00	28.200	15.633	-21.95	7.067	-8.02	-122.07
18	16.00	0.00	30.627	17.267	-28.27	6.513	-14.47	-124.63
19	17.99	0.00	33.027	19.500	-62.31	4.287	-15.07	-121.77
20	20.01	0.00	36.133	21.400	-89.23	2.733	-21.64	-117.73
21	22.02	0.00	39.273	23.900	-108.16	1.860	-26.57	-120.67
22	24.02	0.00	42.140	26.787	-124.44	1.567	-30.67	-111.60
23	25.00	0.00	44.873	28.547	-135.65	2.267	-34.87	-108.43
24	-0.02	0.01	-1.267	11.447	54.63	4.667	29.69	-129.77

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 32 11/19/81 0907 RUN 32

TEMP 94. PB. 14.5187

QPSF 75.00 VFPS 261.26 RNFT 1478131. MACH 0.2364

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	32	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA — DATA AT C.G. — FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.03	0.00	-2.667	8.667	47.78	5.527	21.25	-152.99
2	-2.02	0.00	-9.333	8.900	69.36	5.600	27.86	-153.87
3	-4.00	0.00	-15.367	9.227	92.74	5.747	33.90	-154.94
4	-6.00	0.00	-21.867	10.100	112.75	5.473	40.29	-152.40
5	-8.00	0.00	-26.800	11.167	124.22	5.633	46.78	-151.69
6	-10.00	0.00	-30.633	12.700	105.47	6.733	55.54	-163.72
7	-12.01	0.00	-36.800	14.293	112.48	7.613	66.19	-172.50
8	-14.00	0.00	-42.307	16.100	122.76	6.887	69.09	-160.79
9	-14.99	0.00	-44.967	17.200	128.85	6.933	75.39	-164.03
10	0.00	0.00	-2.500	8.527	46.71	5.673	22.03	-152.33
11	2.03	0.00	2.967	8.567	35.33	5.460	15.88	-150.17
12	3.99	0.00	7.633	8.600	26.80	5.200	10.57	-144.10
13	5.99	0.00	12.067	8.800	20.78	5.200	4.15	-140.34
14	7.99	0.00	16.333	9.233	22.70	5.493	-2.30	-139.20
15	10.05	0.00	21.167	9.867	24.32	5.767	-9.66	-132.68
16	12.04	0.00	25.667	10.833	23.99	5.700	-15.83	-127.35
17	13.99	0.00	28.160	12.560	4.68	6.567	-25.66	-115.86
18	16.01	0.00	31.340	14.093	5.74	7.000	-30.14	-118.64
19	18.00	0.00	35.340	16.300	-19.94	6.053	-33.29	-124.22
20	19.99	0.00	37.660	18.647	-52.65	5.033	-34.62	-127.01
21	21.99	0.00	40.640	21.200	-73.43	5.307	-39.68	-136.18
22	24.03	0.00	44.107	24.320	-90.86	5.833	-47.52	-142.50
23	24.99	0.00	46.800	25.993	-96.85	6.433	-54.10	-146.51
24	0.02	0.00	-2.333	8.600	48.69	5.360	22.21	-151.62

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 33   11/19/81 0907   RUN 33

TEMP 86.   PO 14.5187

QPSF 75.00   VFPS 259.36   RNFT 1505745.   MACH 0.2264

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	33	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	1

SINGLE SUPPORT DATA   DATA AT C.G.   FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	0.01	-2.733	8.567	49.27	6.320	24.23	-161.79
2	0.01	-2.01	-2.767	8.627	52.03	1.567	24.98	-139.43
3	0.01	-4.01	-2.667	8.767	50.53	-2.567	22.80	-112.00
4	0.01	-6.00	-2.300	9.067	46.17	-7.067	22.70	-94.68
5	0.01	-7.99	-1.567	9.700	39.28	-11.527	20.08	-66.43
6	0.01	-9.99	-0.467	10.540	31.22	-16.393	17.15	-36.60
7	0.01	-12.00	0.800	12.033	21.06	-21.900	15.38	-10.75
8	0.01	-13.99	1.900	13.600	15.91	-27.033	14.66	21.20
9	0.01	-15.99	3.100	15.333	9.78	-31.733	14.17	52.13
10	0.01	-17.98	5.000	17.447	-1.58	-36.933	13.27	84.19
11	0.01	-20.03	7.433	20.100	-15.26	-41.933	11.20	124.42
12	0.01	-22.00	[illegible].767	23.200	-34.83	-47.467	7.36	164.46
13	0.01	-23.99	12.700	26.633	-55.11	-52.533	0.10	195.27
14	0.01	-26.01	15.667	30.200	-75.77	-57.300	-0.20	215.46
15	0.01	-28.01	18.240	33.753	-95.21	-61.273	-0.54	224.79
16	0.01	-30.02	19.647	37.100	-100.72	-64.580	3.36	228.53
17	0.01	0.00	-2.400	8.633	48.18	6.993	21.98	-165.48
18	0.01	2.00	-2.700	8.767	48.51	11.067	22.49	-179.37
19	0.01	3.99	-2.667	9.193	42.74	14.580	25.62	-193.10
20	0.01	5.99	-2.420	9.660	34.22	17.600	26.88	-196.28
21	0.01	7.99	-1.633	10.367	21.80	21.427	28.00	-206.16
22	0.01	10.00	-0.500	11.200	8.96	25.767	29.92	-222.68
23	0.01	11.99	0.667	12.467	-2.15	30.200	32.31	-246.64
24	0.01	13.98	1.800	14.333	-10.21	35.267	31.75	-266.94
25	0.01	15.99	3.300	16.153	-22.25	40.767	33.33	-298.61
26	0.01	17.99	5.133	18.200	-38.30	45.600	35.86	-328.58
27	0.01	20.02	7.233	20.800	-52.63	51.333	39.07	-372.95
28	0.01	22.00	9.533	23.567	-72.32	56.907	42.83	-416.14
29	0.01	23.98	11.347	26.833	-87.41	61.900	43.84	-443.67
30	0.01	26.00	13.053	30.333	-99.18	67.100	45.30	-475.03
31	0.01	28.01	13.647	35.420	-68.72	67.200	4.27	-403.60
32	0.01	30.01	14.060	38.913	-67.54	70.600	-5.43	-404.48
33	0.01	0.00	-2.167	8.567	49.42	6.333	24.18	-162.61

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 34 11/19/81 0907 RUN 34

TEMP 86. PO. 14.5187

QPSF 83.00 VFPS 272.85 RNFT 1584019. MACH 0.2382

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	33	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	1

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.02	0.01	-2.651	8.452	48.23	6.199	24.67	-162.35
2	0.02	-1.99	-2.651	8.584	49.41	1.259	25.29	-133.63
3	0.02	-4.00	-2.651	8.765	48.05	-3.289	24.23	-108.53
4	0.02	-6.00	-2.199	9.157	42.74	-7.777	24.04	-90.09
5	0.02	-8.07	-1.440	9.759	36.80	-12.506	21.38	-62.15
6	0.02	-10.00	-0.422	10.572	29.29	-17.265	18.10	-32.56
7	0.02	-12.00	0.873	12.169	18.58	-22.657	15.57	-7.74
8	0.02	-13.99	1.928	13.705	14.55	-27.446	14.70	24.55
9	0.02	-15.99	3.223	15.452	9.21	-32.416	15.06	53.30
10	0.02	-17.99	4.970	17.470	-2.32	-37.325	13.59	85.91
11	0.02	-20.00	7.470	20.120	-13.89	-42.042	12.70	124.22
12	0.02	-22.02	10.000	23.259	-33.85	-47.386	7.65	162.52
13	0.02	-23.99	12.651	26.657	-52.51	-52.566	2.90	194.40
14	0.02	-26.02	15.030	30.114	-71.34	-57.054	2.13	211.57
15	0.02	-28.02	18.042	33.705	-89.64	-61.030	3.22	216.05
16	0.02	-30.00	19.012	37.018	-98.14	-64.446	6.28	222.16
17	0.02	0.00	-3.012	8.614	44.71	6.620	23.22	-163.64
18	0.02	2.02	-3.012	8.765	44.46	10.446	23.62	-177.43
19	0.02	4.00	-2.982	9.247	38.38	13.669	26.47	-190.13
20	0.02	6.00	-2.831	9.669	30.45	17.223	27.75	-194.14
21	0.02	7.99	-2.199	10.241	19.93	20.928	29.26	-203.82
22	0.02	9.98	-1.114	11.175	8.45	25.205	30.82	-219.32
23	0.02	12.00	0.030	12.410	-1.83	29.723	32.59	-242.02
24	0.02	13.99	1.054	14.187	-8.40	34.940	33.11	-261.77
25	0.02	16.03	2.934	16.054	-21.42	40.265	32.96	-295.63
26	0.02	17.99	4.608	18.012	-34.72	45.084	35.07	-324.03
27	0.02	19.99	6.476	20.398	-51.05	50.446	38.09	-367.50
28	0.02	21.98	8.765	23.253	-68.22	56.108	42.00	-410.30
29	0.02	21.98	8.705	23.217	-67.49	56.199	42.13	-409.56
30	0.02	24.00	11.265	26.536	-85.17	61.337	41.82	-441.78
31	0.02	25.99	12.916	30.060	-97.25	66.229	41.71	-470.28
32	0.02	28.00	13.102	35.247	-66.71	66.982	4.63	-408.69
33	0.02	29.99	13.590	38.657	-66.23	70.187	-6.84	-406.66

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 35 11/19/81 0907 RUN 35

TEMP 68. P0 14.6464

QPSF 75.00 VFPS 253.94 RNFT 1578041. MACH 0.2254

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	32	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.00	-0.01	-2.467	8.100	43.02	0.567	0.55	-10.35
2	-2.01	-0.01	-8.867	8.300	62.52	0.733	1.73	-10.32
3	-4.02	-0.01	-15.233	8.767	88.54	1.067	3.20	-13.82
4	-6.02	-0.01	-21.533	9.533	109.12	1.300	3.64	-14.50
5	-8.01	-0.01	-27.433	10.600	123.86	1.373	4.62	-16.08
6	-10.01	-0.01	-31.413	12.100	118.03	1.767	4.03	-18.64
7	-12.01	-0.01	-36.867	13.900	111.73	1.567	6.34	-16.82
8	-14.01	-0.01	-42.533	15.800	122.70	0.900	6.48	-11.50
9	-15.01	-0.01	-45.220	16.947	127.18	0.713	6.45	-11.50
10	-0.01	-0.01	-2.500	8.133	42.95	0.767	0.58	-11.26
11	2.01	-0.01	3.267	8.133	31.12	0.567	-0.12	-13.67
12	4.01	-0.01	7.767	8.233	[illegible]2.42	0.433	-1.03	-13.64
13	5.99	-0.01	12.333	8.367	16.33	0.567	-2.64	-15.22
14	8.00	-0.01	16.733	8.813	17.10	0.733	-3.90	-15.07
15	10.02	-0.01	21.433	9.567	18.16	0.900	-5.05	-14.66
16	12.00	-0.01	26.040	10.133	19.23	0.633	-5.83	-9.29
17	14.03	-0.01	28.767	12.233	1.26	1.433	-9.92	-1.15
18	16.01	-0.01	31.607	13.600	2.54	2.433	-13.52	-3.43
19	18.05	-0.01	34.153	16.060	-28.50	1.347	-10.94	-8.92
20	20.01	-0.01	37.540	18.433	-54.18	0.120	-5.89	-9.55
21	22.02	-0.01	40.447	21.140	-74.93	-0.567	-4.11	-12.52
22	24.00	-0.01	43.767	24.020	-88.78	0.433	-8.10	-10.39
23	25.03	-0.01	47.433	26.233	-96.81	1.253	-12.63	-11.10
24	0.01	-0.01	-2.233	8.133	43.05	0.567	0.02	-11.15

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 36 11/19/81 0907 RUN 36

TEMP 68. PO 14.6464

QPSF 75.00 VFPS 253.94 RNFT 1578041. MACH 0.2254

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	32	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	-0.01	-1.333	7.900	28.05	0.080	-2.71	1.09
2	-2.00	-0.01	-7.933	8.200	45.45	0.353	-2.44	0.04
3	-4.00	-0.01	-14.033	8.600	63.44	0.913	-1.01	-4.94
4	-5.99	-0.01	-19.700	9.267	64.16	1.047	-0.53	-6.26
5	-8.03	-0.01	-24.400	10.700	82.50	1.213	0.09	-7.58
6	-10.00	-0.01	-29.533	12.013	86.26	1.386	0.91	-7.82
7	-12.01	-0.01	-35.500	13.500	94.58	1.080	0.53	-4.80
8	-13.99	-0.01	-41.367	15.527	107.48	0.347	0.23	-1.17
9	-15.00	-0.01	-44.667	16.840	116.87	0.080	0.60	1.87
10	0.01	-0.01	-1.433	7.900	28.10	0.180	-2.43	0.70
11	2.02	-0.01	4.000	7.967	19.25	-0.020	-2.32	2.17
12	4.04	-0.01	8.467	8.000	13.27	-0.253	-1.38	1.83
13	6.00	-0.01	12.900	8.200	9.50	-0.187	-1.65	0.91
14	8.00	-0.01	17.033	8.567	11.79	0.047	-3.18	-0.93
15	10.00	-0.01	21.233	9.400	18.98	0.380	-4.78	-1.79
16	12.00	-0.01	24.800	10.233	37.16	0.367	-5.06	0.18
17	14.00	-0.01	26.033	11.907	42.28	1.247	-6.75	8.77
18	16.01	-0.01	28.993	13.213	45.58	1.987	-8.29	4.86
19	18.03	-0.01	32.893	15.680	-8.64	1.327	-6.47	-0.79
20	19.99	-0.01	36.540	18.273	-40.88	-0.420	-1.34	-1.08
21	22.02	-0.01	39.727	20.813	-63.28	-0.653	0.82	-3.06
22	23.99	-0.01	43.520	23.767	-84.82	0.047	-1.38	-2.05
23	25.02	-0.01	47.100	25.860	-92.88	0.813	-5.33	1.65
24	0.00	-0.01	-1.667	7.867	30.53	0.047	-2.56	1.15

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 37 11/30/81 0849 RUN 37

TEMP 80. PO 14.6464

QPSF 75.00 VFPS 256.81 RNFT 1533731. MACH 0.2254

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	37	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.01	-0.01	7.467	6.667	-107.82	0.107	-1.99	1.19
2	-1.98	-0.01	3.500	6.500	-127.77	0.433	-2.09	-1.31
3	-4.00	-0.01	-0.033	6.467	-145.49	0.900	-2.36	-5.05
4	-6.00	-0.01	-3.933	6.733	-163.27	0.993	-1.89	-4.77
5	-8.00	-0.01	-7.700	7.133	-180.38	1.100	-1.76	-5.80
6	-9.99	-0.01	-12.033	7.767	-194.63	1.233	-1.89	-5.00
7	-12.00	-0.01	-16.900	8.533	-203.21	1.113	-1.73	-4.71
8	-13.99	-0.01	-21.567	9.700	-214.04	0.287	-1.89	-0.51
9	-15.00	-0.01	-23.500	10.433	-218.71	0.100	-1.25	1.62
10	-0.01	-0.01	7.433	6.600	-107.25	0.213	-1.88	0.38
11	2.01	-0.01	10.933	6.867	-86.16	-0.067	-1.13	0.58
12	4.02	-0.01	13.867	7.087	-66.42	-0.267	-0.87	0.98
13	5.99	-0.01	16.700	7.500	-47.61	-0.267	-1.55	1.13
14	8.00	-0.01	19.767	8.000	-28.00	0.000	-2.63	-0.50
15	10.00	-0.01	22.900	8.700	-6.10	0.500	-5.49	-1.74
16	12.00	-0.01	26.200	9.7[illegible]0	15.59	0.633	-6.66	-0.69
17	13.99	-0.01	26.827	11.300	33.50	1.520	-13.27	8.65
18	16.01	-0.01	28.833	12.780	49.54	2.153	-13.88	6.88
19	18.02	-0.01	28.240	14.593	64.93	0.700	-5.72	-0.35
20	20.02	-0.01	29.087	16.447	76.76	-0.700	-2.64	-0.24
21	22.02	-0.01	30.113	17.960	88.89	-0.733	-1.19	-2.44
22	24.00	-0.01	32.253	19.967	100.68	-0.167	-1.41	0.43
23	25.00	-0.01	34.607	21.233	104.95	0.700	-6.32	1.32
24	-0.01	-0.01	7.433	6.667	-107.29	0.100	-1.89	0.28

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 38 11/19/81 0907 RUN 38

TEMP 89. PO 14.6464

QPSF 75.00 VFPS 258.94 RNFT 1501850. MACH 0.2254

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	32	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	0	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.01	-0.01	7.267	7.093	-103.22	5.933	19.32	-147.87
2	-2.01	-0.01	3.400	6.933	-124.34	6.200	25.04	-154.53
3	-3.99	-0.01	-0.133	6.933	-141.01	6.900	31.51	-158.80
4	-5.99	-0.01	-3.933	7.133	-161.17	7.067	37.74	-161.46
5	-8.02	-0.01	-7.667	7.567	-176.59	7.240	45.17	-164.38
6	-9.99	-0.01	-12.100	8.267	-189.01	7.720	53.13	-170.30
7	-11.99	-0.01	-17.100	9.033	-196.65	7.567	59.73	-168.36
8	-14.02	-0.01	-21.620	10.200	-205.97	6.847	65.05	-158.26
9	-15.02	-0.01	-23.500	10.967	-210.68	6.433	67.87	-152.93
10	0.00	-0.01	7.433	7.133	-102.37	5.967	19.37	-148.10
11	2.00	-0.01	10.800	7.433	-82.88	5.367	14.09	-140.26
12	3.99	-0.01	13.433	7.700	-65.14	4.893	9.55	-132.67
13	6.01	-0.01	16.600	8.033	-44.40	4.407	3.32	-128.47
14	8.01	-0.01	19.733	8.433	-24.38	4.667	-3.29	-120.76
15	10.00	-0.01	22.767	9.167	-4.54	5.067	-9.77	-119.29
16	12.01	-0.01	25.833	10.100	16.41	5.200	-16.03	-119.05
17	13.99	-0.01	26.520	11.767	34.72	6.100	-27.43	-111.11
18	15.99	-0.01	28.667	13.167	50.78	6.633	-34.14	-109.18
19	18.00	-0.01	28.907	14.840	64.60	4.633	-31.46	-119.17
20	20.01	-0.01	28.973	16.647	74.35	3.967	-30.78	-122.02
21	22.02	-0.01	30.240	18.407	87.86	4.027	-34.55	-128.93
22	24.01	-0.01	31.827	20.273	96.56	4.867	-44.25	-131.52
23	25.00	-0.01	34.073	21.600	100.20	5.587	-48.95	-133.21
24	-0.02	-0.01	7.200	7.133	-104.27	5.767	19.48	-148.26

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 39 11/19/81 0907 RUN 39

TEMP 94. PO 14.6464

QPSF 75.00 VFPS 260.12 RNFT 1484616. MACH 0.2254

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	39	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.02	0.01	-1.333	5.767	-91.24	5.567	20.10	-147.58
2	-2.02	0.01	-2.300	5.873	-108.37	5.613	26.92	-149.35
3	-4.00	0.01	-3.133	5.893	-123.58	6.133	33.32	-159.36
4	-6.02	0.01	-4.033	6.133	-140.56	6.733	40.66	-164.06
5	-8.01	0.01	-4.900	6.467	-155.18	7.120	47.26	-168.34
6	-9.99	0.01	-6.000	6.933	-166.87	7.267	54.79	-168.96
7	-11.99	0.01	-7.133	7.400	-176.94	6.933	58.87	-161.70
8	-14.00	0.01	-8.233	7.927	-187.35	6.067	61.88	-149.09
9	-15.01	0.01	-8.900	8.200	-192.93	5.933	63.76	-145.06
10	-0.01	0.01	-1.367	5.767	-91.76	5.567	20.26	-145.42
11	2.00	0.01	-0.433	5.833	-76.47	5.267	13.98	-139.52
12	4.01	0.01	0.633	5.733	-60.71	4.713	8.47	-128.56
13	4.01	0.01	0.600	5.767	-60.81	4.667	7.99	-130.49
14	6.02	0.01	1.533	5.800	-46.58	4.100	4.61	-122.95
15	8.00	0.01	2.300	5.807	-29.40	3.867	0.23	-119.92
16	10.01	0.01	3.233	6.000	-10.61	3.933	-5.42	-119.57
17	11.98	0.01	4.267	6.233	5.79	4.067	-9.48	-119.69
18	14.03	0.01	5.300	6.527	20.60	4.200	-15.54	-123.48
19	16.00	0.01	6.367	7.067	35.42	4.233	-19.13	-125.59
20	17.99	0.01	7.333	7.767	51.16	2.567	-22.06	-117.13
21	20.02	0.01	8.000	8.367	66.63	2.567	-26.56	-113.74
22	22.01	0.01	8.967	8.967	82.12	2.733	-31.39	-116.40
23	24.01	0.01	9.867	9.633	95.72	3.133	-36.22	-114.49
24	25.00	0.01	10.233	9.900	102.61	3.113	-38.75	-116.48
25	-0.01	0.01	-1.400	5.767	-92.19	5.427	20.54	-147.45

ORIGINAL PAGE IS
OF POOR QUALITY

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 40 11/19/81 0907 RUN 40

TEMP 94. PO. 14.6464

QPSF 75.00 VFPS 260.12 RNFT 1484616. MACH 0.2254

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	39	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.02	0.01	-10.033	7.267	44.54	5.767	21.32	-151.30
2	-1.98	0.01	-13.767	7.800	72.95	5.640	29.51	-152.02
3	-4.02	0.01	-17.900	8.200	107.52	6.067	38.00	-157.20
4	-6.01	0.01	-21.800	9.033	137.48	6.500	45.05	-163.98
5	-7.98	0.01	-23.700	10.180	144.02	7.200	51.21	-171.23
6	-10.01	0.01	-24.900	11.340	137.03	7.367	59.89	-171.53
7	-12.03	0.01	-27.267	12.667	144.00	7.383	66.22	-168.90
8	-14.01	0.01	-29.367	13.967	152.06	6.967	71.36	-165.22
9	-13.98	0.01	-29.300	13.913	151.20	6.600	67.81	-159.55
10	-15.01	0.01	-30.947	14.727	161.30	6.013	69.36	-150.21
11	-0.02	0.01	-10.300	7.467	42.49	5.867	22.59	-154.78
12	2.02	0.01	-6.667	6.900	18.82	5.567	15.49	-145.51
13	4.00	0.01	-3.033	6.667	-6.41	5.033	7.82	-137.85
14	6.00	0.01	0.333	6.633	-27.72	4.700	2.19	-133.86
15	8.02	0.01	3.500	6.633	-48.65	4.567	-2.69	-135.14
16	9.99	0.01	7.400	6.667	-75.33	4.687	-7.83	-135.13
17	12.01	0.01	11.167	7.133	-101.78	4.733	-12.89	-133.66
18	14.02	0.01	13.833	7.833	-112.94	4.767	-17.82	-135.18
19	16.02	0.01	15.900	8.967	-114.20	4.700	-23.90	-133.54
20	18.00	0.01	18.167	10.567	-118.12	3.173	-25.18	-123.31
21	20.00	0.01	19.567	11.733	-116.37	2.733	-29.84	-120.36
22	21.96	0.01	20.733	12.933	-110.69	2.953	-33.42	-120.28
23	24.01	0.01	22.333	14.320	-110.13	3.100	-37.66	-118.79
24	24.98	0.01	23.400	15.200	-115.63	3.400	-42.82	-117.74
25	-0.01	0.01	-10.167	7.267	43.47	5.687	22.03	-150.68

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 41 11/19/81 0907 RUN 41

TEMP 94. PO 14.6464

QPSF 75.00 VFPS 260.12 RNFT 1484616. MACH 0.2254

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	39	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	0.01	-1.133	5.267	-94.38	-0.267	-1.35	0.76
2	-2.01	0.01	-2.033	5.400	-110.10	-0.573	-0.83	-0.01
3	-4.00	0.01	-3.000	5.600	-127.70	-0.167	-0.66	1.44
4	-6.03	0.01	-3.867	5.800	-143.30	0.433	-0.79	-2.78
5	-7.99	0.01	-4.700	6.100	-156.24	0.547	-0.88	-5.65
6	-9.99	0.01	-5.700	6.433	-170.09	0.573	-0.91	-3.61
7	-12.01	0.01	-6.867	6.933	-181.94	0.367	-1.14	-0.09
8	-14.04	0.01	-8.100	7.433	-192.46	-0.067	-1.62	3.33
9	-15.00	0.01	-8.667	7.767	-198.14	-0.047	-1.43	3.19
10	0.02	0.01	-1.167	5.333	-94.28	-0.300	-1.33	2.62
11	1.99	0.01	-0.267	5.300	-79.94	-0.267	-1.36	0.07
12	4.01	0.01	0.733	5.300	-63.42	-0.400	-1.15	0.98
13	6.02	0.01	1.667	5.367	-48.38	-0.733	-0.59	0.66
14	8.02	0.01	2.500	5.467	-30.47	-0.833	-0.53	0.13
15	10.01	0.01	3.400	5.600	-12.43	-0.767	-0.59	-0.33
16	11.98	0.01	4.400	5.800	4.19	-0.707	-0.75	-1.62
17	13.99	0.01	5.433	6.167	20.30	-0.500	-0.76	-1.83
18	16.02	0.01	6.433	6.667	37.28	-0.393	-0.61	-5.14
19	18.01	0.01	7.300	7.233	52.97	-0.700	-0.44	-1.99
20	20.00	0.01	8.200	7.800	68.55	-2.013	1.04	0.57
21	22.01	0.01	9.067	8.500	83.49	-1.700	1.92	-1.58
22	24.01	0.01	10.000	9.167	99.03	-1.407	1.71	-1.70
23	25.01	0.01	10.400	9.467	105.85	-1.400	1.79	-2.66
24	0.00	0.01	-1.233	5.333	-94.98	-0.360	-1.13	1.59

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 42 11/19/81 0907 RUN 42

TEMP 76. PO 14.6120

QPSF 75.00 VFPS 256.16 RNFT 1546449. MACH 0.2257

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	39	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.01	0.01	-0.867	5.600	-94.52	-0.367	-0.80	2.75
2	-2.00	0.01	-1.800	5.680	-110.23	-0.167	-0.80	0.96
3	-3.98	0.01	-2.733	5.747	-125.40	0.000	-0.83	-1.00
4	-6.00	0.01	-3.633	5.980	-141.44	0.273	-1.01	-1.92
5	-7.99	0.01	-4.567	6.313	-157.95	0.300	-0.71	-0.19
6	-9.99	0.01	-5.567	6.680	-171.27	0.200	-0.98	0.58
7	-12.02	0.01	-6.800	7.013	-183.29	-0.047	-1.13	2.80
8	-14.01	0.01	-7.900	7.613	-194.70	-0.360	-0.72	4.50
9	-15.02	0.01	-8.500	7.880	-200.42	-0.400	-0.69	3.49
10	0.01	0.01	-0.667	5.533	-93.33	-0.353	-0.64	1.46
11	2.00	0.01	0.233	5.580	-76.99	-0.360	-0.65	1.43
12	4.02	0.01	1.267	5.547	-62.82	-0.600	-0.55	2.25
13	6.02	0.01	2.400	5.913	-47.60	-1.067	-0.52	0.63
14	8.02	0.01	3.367	6.047	-31.26	-1.267	-0.40	0.13
15	10.01	0.01	4.333	6.347	-15.08	-1.367	-0.47	-0.38
16	12.01	0.01	5.300	6.580	1.69	-1.567	-0.65	0.34
17	14.02	0.01	6.233	6.947	19.04	-1.847	-0.45	2.60
18	16.01	0.01	7.167	7.413	35.61	-2.500	0.10	5.38
19	18.02	0.01	7.867	7.780	53.30	-2.767	0.44	7.41
20	20.02	0.01	8.567	8.147	69.22	-3.267	3.07	6.95
21	22.00	0.01	9.567	8.880	83.73	-1.067	2.95	-2.50
22	24.00	0.01	10.267	9.347	98.91	-1.067	2.55	-1.90
23	25.01	0.01	10.633	9.680	106.58	-0.967	2.42	-1.66
24	0.00	0.01	-0.600	5.513	-94.69	-0.367	-0.63	1.98

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 43 11/19/81 0907 RUN 43

TEMP 76. PB 14.6120

QPSF 75.00 VFPS 256.16 RNFT 1546449. MACH 0.2257

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	39	0	0	0	0	0	0	0

T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.00	0.01	-1.033	6.200	-92.56	5.127	19.50	-13[illegible].62
2	-2.03	0.01	-1.967	6.233	-109.85	5.133	24.63	-137.40
3	-4.01	0.01	-2.967	6.33[illegible]	-125.64	5.633	30.64	-14[illegible].65
4	-6.00	0.01	-3.833	6.433	-140.42	6.000	35.81	-145.39
5	-8.00	0.01	-4.833	6.800	-15 .81	5.913	40.59	-140.59
6	-10.02	0.01	-5.933	7.233	-167.92	5.433	43.44	-128.55
7	-11.99	0.01	-7.000	7.700	-179.48	4.600	43.93	-111.71
8	-14.00	0.01	-8.233	8.300	-190.77	4.000	44.95	-101.85
9	-14.99	0.01	-8.833	8.533	-195.34	3.920	46.81	-100.93
10	0.00	0.01	-1.000	6.160	-92.67	5.120	21.11	-134.93
11	2.01	0.01	-0.167	6.167	-76.13	4.713	14.76	-127.19
12	4.00	0.01	0.900	6.167	-60.89	4.267	10.31	-121.11
13	6.02	0.01	1.933	6.367	-47.76	3.613	5.32	-118.59
14	8.02	0.01	3.067	6.580	-29.93	3.193	0.15	-120.36
15	10.01	0.01	4.033	6.800	-14.91	3.067	-3.68	-122.03
16	12.04	0.01	5.100	7.133	1.87	2.933	-8.61	-123.39
17	14.00	0.01	5.933	7.567	15.50	2.567	-12.70	-122.70
18	16.00	0.01	6.767	7.833	32.36	2.233	-16.33	-119.01
19	17.99	0.01	7.433	8.367	49.65	1.860	-19.36	-114.30
20	19.99	0.01	8.067	8.833	65.12	1.100	-22.20	-108.19
21	22.00	0.01	8.833	9.367	82.25	0.867	-24.30	-98.44
22	24.04	0.01	9.833	10.033	97.14	3.767	-32.25	-120.77
23	25.00	0.01	10.100	10.267	102.43	3.700	-33.50	-117.77
24	-0.01	0.01	-1.033	6.113	-92.50	5.173	19.41	-134.94

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 40 | 11/19/81 0907 | RUN 44

TEMP 76. | RO 14.5973

QPSF 75.00 | VFPS 256.29 | RNFT 1545668. | MACH 0.2258

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	39	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA				DATA AT C.G.		FULL SCALE DATA		
PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	0.01	-1.100	6.213	-93.73	5.113	18.84	-133.34
2	-2.01	0.01	-1.933	6.300	-111.36	5.333	25.08	-136.12
3	-4.00	0.01	-2.967	6.400	-126.43	5.667	30.28	-142.55
4	-6.02	0.01	-3.933	6.533	-142.87	6.067	35.00	-146.00
5	-8.01	0.01	-4.933	6.820	-156.12	6.000	40.93	-142.26
6	-10.00	0.01	-5.867	7.233	-167.16	5.600	42.62	-127.92
7	-12.01	0.01	-7.133	7.700	-178.24	4.627	43.07	-111.63
8	-13.99	0.01	-8.167	8.267	-189.30	3.967	44.15	-102.37
9	-15.01	0.01	-8.867	8.600	-196.26	4.033	47.06	-101.24
10	-0.01	0.01	-1.000	6.280	-95.15	5.167	20.08	-134.85
11	1.99	0.01	-0.167	6.267	-76.04	4.627	14.14	-125.94
12	4.03	0.01	0.900	6.300	-62.09	4.293	9.10	-117.67
13	6.00	0.01	2.033	6.373	-46.67	3.587	3.49	-117.73
14	7.99	0.01	2.967	6.600	-33.05	3.253	-0.71	-117.51
15	9.99	0.01	4.000	6.867	-17.30	3.080	-4.65	-120.58
16	12.02	0.01	4.967	7.300	-2.11	2.967	-9.28	-124.84
17	14.00	0.01	6.000	7.700	13.24	2.627	-13.58	-122.20
18	16.02	0.01	6.933	8.067	29.71	2.267	-17.57	-116.45
19	18.00	0.01	7.433	8.467	44.40	1.753	-20.85	-112.16
20	20.02	0.01	8.233	9.000	61.85	1.180	-23.43	-106.78
21	22.02	0.01	8.967	9.567	77.38	0.707	-26.97	-100.04
22	23.99	0.01	9.867	10.200	89.98	3.933	-33.07	-120.38
23	25.03	0.01	10.267	10.533	97.11	3.700	-35.86	-118.70
24	0.01	0.01	-1.067	6.267	-93.56	5.033	19.09	-131.80

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 45 11/19/81 0907 RUN 45

TEMP 76. P0 14.5973

QPSF 75.00 VFPS 256.29 RNFT 1545668. MACH 0.2258

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	39	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.02	0.01	-8.533	7.500	22.98	4.947	18.07	-129.29
2	-2.00	0.01	-12.433	8.000	48.96	5.033	25.63	-131.27
3	-3.98	0.01	-15.833	8.567	75.35	5.633	32.04	-139.51
4	-6.03	0.01	-19.700	9.167	103.94	6.080	38.52	-146.35
5	-8.00	0.01	-21.333	10.333	110.38	6.233	45.54	-147.00
6	-10.05	0.01	-23.200	11.520	108.37	6.000	49.70	-143.07
7	-12.01	0.01	-25.833	12.773	120.51	5.433	51.84	-133.11
8	-14.02	0.01	-28.200	14.100	132.05	4.733	53.96	-118.17
9	-14.99	0.01	-29.600	14.833	140.08	4.400	55.78	-114.85
10	0.00	0.01	-8.633	7.567	23.04	4.933	18.84	-127.05
11	2.03	0.01	-5.133	7.267	0.59	4.600	12.65	-124.06
12	4.00	0.01	-2.033	7.067	-16.06	4.267	7.84	-121.51
13	6.02	0.01	1.033	7.167	-31.27	3.733	1.90	-119.22
14	7.99	0.01	4.033	7.167	-45.38	3.333	-2.34	-120.53
15	10.02	0.01	7.233	7.500	-64.80	3.233	-6.03	-123.94
16	12.01	0.01	10.467	7.967	-85.04	3.033	-10.64	-124.66
17	13.99	0.01	13.433	8.733	-98.38	2.713	-15.40	-123.22
18	16.00	0.01	15.633	9.800	-106.04	2.333	-20.32	-120.97
19	18.01	0.01	17.667	10.840	-113.17	2.000	-23.01	-116.75
20	20.03	0.01	19.567	12.233	-117.67	1.300	-24.97	-111.15
21	22.00	0.01	20.933	13.533	-116.03	0.900	-28.14	-104.21
22	24.04	0.01	22.567	14.947	-116.94	3.613	-37.77	-121.24
23	24.99	0.01	23.400	15.593	-118.33	3.600	-39.49	-116.97
24	-0.01	0.01	-8.600	7.433	23.67	4.873	18.21	-128.28

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 530

WIND AXES

RUN 46 11/19/81 0907 RUN 46

TEMP 76. RO 14.5973

QPSF 75.00 VFPS 256.29 RNFT 1545668. MACH 0.2258

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	39	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.01	0.01	-9.700	7.700	39.73	5.273	20.32	-134.79
2	-1.99	0.01	-13.433	8.100	67.45	5.500	26.92	-137.63
3	-4.03	0.01	-17.867	8.767	105.39	5.760	33.22	-146.03
4	-6.00	0.01	-21.500	9.433	133.43	6.300	40.35	-151.71
5	-8.02	0.01	-23.820	10.613	143.01	6.400	46.22	-153.56
6	-9.95	0.01	-24.740	11.820	132.87	6.413	52.75	-150.51
7	-12.00	0.01	-27.080	13.100	139.63	5.767	54.23	-138.09
8	-14.02	0.01	-29.267	14.367	147.78	5.367	58.25	-130.65
9	-15.02	0.01	-30.687	15.040	154.20	5.033	59.52	-125.39
10	-0.01	0.01	-9.767	7.800	40.57	5.233	20.44	-134.54
11	2.01	0.01	-6.233	7.400	16.91	5.167	14.53	-130.40
12	3.98	0.01	-2.633	7.300	-7.78	4.713	7.80	-126.80
13	[illegible]	[illegible]	0.933	7.400	-28.79	4.047	2.14	-129.26
14	[illegible]	0.01	[illegible]	7.500	-50.11	3.853	-2.33	-133.41
15	9.99	[illegible]	7.800	7.733	-75.82	3.767	-6.70	-135.83
16	12.01	0.01	11.733	8.233	-103.56	3.567	-11.88	-134.15
17	13.99	0.01	14.400	9.033	-117.47	3.387	-17.17	-131.97
18	16.00	0.01	16.500	10.067	-121.72	2.033	-21.96	-126.68
19	18.01	0.01	18.667	11.400	-125.19	[illegible]	[illegible]	-120.39
20	20.01	0.01	19.867	12.400	-124.79	1.500	-28.04	-114.52
21	22.00	0.01	21.233	14.067	-115.56	0.267	-31.13	-101.85
22	21.99	0.01	21.100	13.700	-116.77	4.000	-36.01	-127.91
23	23.98	0.01	22.500	15.127	-114.60	3.833	-41.09	-122.94
24	25.00	0.01	23.167	15.727	-116.50	3.853	-41.12	-119.99
25	0.00	0.01	-9.620	7.767	39.40	5.267	20.43	-133.93

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 47 11/19/81 0907 RUN 47

TEMP 76. PO. 14.5973

QPSF 75.00 VFPS 256.29 RNFT 1545668. MACH 0.2[illegible]

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	32	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.02	0.02	-9.000	9.067	33.01	5.093	19.92	-136.93
2	-2.00	0.02	-13.767	9.600	57.34	3.627	25.70	-132.63
3	-3.99	0.02	-18.933	10.033	89.69	3.293	30.94	-125.79
4	-5.98	0.02	-22.933	10.700	113.70	4.827	39.59	-136.04
5	-8.02	0.02	-26.653	12.020	119.05	6.260	45.89	-144.91
6	-10.00	0.02	-29.900	13.833	112.19	5.660	52.09	-138.67
7	-12.00	0.02	-33.667	16.167	121.55	5.527	58.41	-135.38
8	-14.02	0.02	-35.493	19.073	133.24	4.960	60.56	-125.48
9	-14.99	0.02	-36.707	20.433	144.65	5.027	62.16	-122.88
10	0.02	0.02	-8.900	9.187	32.81	5.127	19.18	-136.95
11	2.00	0.02	-3.800	9.267	15.40	5.927	12.47	-137.77
12	3.99	0.02	0.333	9.533	1.20	6.327	4.88	-137.43
13	5.98	0.02	3.933	10.133	-14.63	5.560	-1.17	-132.51
14	8.02	0.02	7.733	10.767	-29.70	4.527	-5.99	-128.68
15	10.00	0.02	11.367	11.700	-38.51	4.467	-10.43	-125.56
16	12.01	0.02	14.367	12.647	-52.46	4.093	-12.96	-123.90
17	14.01	0.02	17.200	14.033	-66.00	3.327	-15.53	-120.46
18	15.99	0.02	20.107	15.547	-75.62	2.993	-19.29	-114.59
19	17.99	0.02	23.300	17.300	-85.30	2.593	-24.07	-111.84
20	20.01	0.02	27.127	19.373	-90.84	2.560	-29.18	-114.34
21	22.02	0.02	31.767	22.200	-97.66	5.360	-40.62	-129.23
22	23.98	0.02	38.373	25.500	-112.28	6.427	-51.49	-136.26
23	24.97	0.02	42.000	27.233	-119.64	6.860	-54.71	-139.51
24	0.02	0.02	-8.867	9.167	33.82	5.060	18.98	-138.69

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 48 11/19/81 1907 RUN 48

TEMP 76. PO 14.5973

QPSF 75.00 VFPS 256.29 RNFT 1545668. MACH 0.2258

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	48	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	1

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.02	0.01	-9.467	12.900	43.32	4.900	17.77	-136.38
2	0.02	-2.02	-9.813	12.867	44.46	2.333	17.24	-133.75
3	0.02	-3.98	-10.133	12.733	48.80	-0.367	17.63	-128.43
4	0.02	-6.01	-10.600	13.167	52.50	-4.100	21.27	-120.49
5	0.02	-8.00	-10.100	13.633	49.29	-7.967	21.18	-100.22
6	0.02	-10.02	-9.233	14.600	42.21	-12.767	19.87	-71.96
7	0.02	-12.00	-8.000	15.600	32.74	-17.533	18.96	-44.0[illegible]
8	0.02	-14.00	-6.833	16.900	24.99	-22.620	17.14	-19.55
9	0.01	-16.01	-4.967	18.500	14.01	-27.333	16.87	11.94
10	0.01	-18.00	-2.333	20.627	2.62	-32.633	14.60	40.89
11	0.01	-20.02	0.100	23.133	-9.05	-37.633	12.41	72.76
12	0.00	-22.00	1.880	26.047	-22.27	-43.100	10.93	91.90
13	0.00	-24.00	4.233	29.247	-31.70	-48.367	10.50	118.31
14	0.00	-26.00	5.727	32.447	-36.28	-53.033	11.32	139.75
15	0.00	-28.01	6.833	36.000	-35.87	-57.453	16.66	159.71
16	0.00	-30.01	6.647	40.000	-25.04	-61.120	27.02	172.33
17	0.00	-0.01	-9.000	12.867	40.88	5.313	15.10	-136.65
18	0.00	2.01	-8.600	13.000	39.93	7.433	12.08	-122.63
19	0.00	4.02	-8.267	13.367	36.97	10.127	9.85	-121.68
20	0.00	8.02	-7.367	14.767	28.10	17.140	13.29	-155.53
21	0.00	10.01	-6.700	15.600	19.86	20.873	15.28	-173.51
22	0.00	12.00	-5.900	16.800	11.46	25.300	16.36	-199.47
23	0.00	14.01	-4.633	18.333	2.34	30.187	16.53	-225.69
24	0.00	16.01	-3.200	20.133	-8.80	35.367	16.33	-255.15
25	0.00	18.00	-1.133	22.400	-20.58	39.967	18.55	-288.68
26	0.00	20.01	0.933	24.933	-31.59	46.300	16.46	-303.24
27	0.00	22.00	2.120	27.707	-38.10	51.000	10.68	-299.09
28	0.00	24.01	4.433	31.033	-48.17	56.267	10.37	-326.64
29	0.00	26.01	5.767	34.600	-50.23	61.007	6.86	-347.02
30	0.00	28.00	6.027	38.293	-44.48	65.300	-0.41	-366.44
31	0.00	30.00	4.300	41.847	-28.96	67.727	-15.26	-366.95
32	0.00	-0.01	-8.933	12.867	41.72	5.033	16.56	-137.40

C-3

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 49 11/19/81 0907 RUN 49

TEMP 55. P0 14.6562

QPSF 75.00 VFPS 250.71 RNFT 1629067. MACH 0.2254

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	39	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	0.01	-1.033	6.000	-95.34	5.753	21.16	-154.90
2	-1.99	0.01	-1.833	6.100	-109.87	5.993	27.46	-158.81
3	-4.00	0.01	-2.700	6.200	-129.98	6.340	32.76	-160.56
4	-6.01	0.01	-3.600	6.400	-144.67	6.787	40.29	-167.75
5	-8.01	0.01	-4.700	6.767	-157.25	7.253	47.50	-172.76
6	-9.60	0.01	-5.800	7.167	-169.41	7.227	53.59	-167.44
7	-12.02	0.01	-6.933	7.667	-178.33	6.853	59.26	-162.63
8	-14.02	0.01	-8.100	8.233	-188.76	6.253	63.24	-151.95
9	-14.98	0.01	-8.667	8.467	-193.10	5.953	64.58	-148.00
10	0.00	0.01	-1.000	5.967	-94.23	5.733	21.00	-153.80
11	2.01	0.01	-0.033	5.940	-79.28	5.387	15.85	-145.90
12	4.00	0.01	1.033	5.900	-65.29	4.927	9.37	-134.79
13	6.01	0.01	1.833	5.900	-49.69	4.393	4.66	-131.98
14	8.00	0.01	2.733	6.100	-33.01	4.087	0.25	-128.30
15	10.01	0.01	3.567	6.267	-16.09	4.100	-3.97	-127.62
16	12.01	0.01	4.533	6.500	0.82	4.153	-8.66	-131.75
17	13.99	0.01	5.633	6.833	15.82	4.287	-13.39	-131.98
18	16.02	0.01	6.800	7.300	29.99	4.187	-17.79	-133.33
19	18.02	0.01	8.000	8.200	45.10	2.593	-21.23	-125.32
20	20.03	0.01	8.833	8.733	60.20	2.693	-24.40	-124.14
21	22.01	0.01	9.733	9.407	75.07	3.013	-30.47	-124.90
22	24.02	0.01	10.467	10.067	87.88	3.087	-32.39	-122.78
23	25.02	0.01	10.900	10.467	95.57	3.053	-35.39	-120.86
24	0.00	0.01	-1.000	6.000	-95.92	5.653	21.05	-154.32

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 50 11/19/81 0907 RUN 50

TEMP 61. PO 14.6759

QPSF 75.00 VFPS 252.00 RNFT 1606504. MACH 0.2252

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	39	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.00	0.01	-1.100	5.933	-98.66	5.900	21.08	-157.50
2	-2.00	0.01	-1.933	6.000	-114.86	6.333	28.66	-164.91
3	-4.01	0.01	-2.900	6.133	-129.74	6.800	35.74	-171.87
4	-6.00	0.01	-3.933	6.433	-143.01	7.527	43.40	-182.18
5	-8.00	0.01	-4.967	6.700	-153.68	7.853	52.25	-185.00
6	-9.99	0.01	-6.100	7.200	-165.43	7.800	57.81	-180.34
7	-12.01	0.01	-7.267	7.633	-175.98	7.280	62.94	-171.95
8	-13.98	0.01	-8.467	8.267	-185.60	6.633	67.46	-159.20
9	-15.01	0.01	-9.000	8.500	-190.12	6.333	68.62	-154.48
10	0.02	0.01	-1.000	5.900	-97.06	5.800	20.97	-157.85
11	2.02	0.01	-0.167	5.867	-83.49	5.600	13.98	-150.80
12	4.01	0.01	0.800	5.867	-68.56	5.133	8.61	-141.88
13	6.03	0.01	1.767	5.867	-52.96	4.533	3.93	-135.08
14	8.01	0.01	2.667	6.000	-36.05	4.207	-0.86	-132.23
15	10.00	0.01	3.500	6.167	-19.11	4.167	-5.50	-130.72
16	12.01	0.01	4.400	6.400	-2.56	4.267	-10.79	-131.83
17	14.00	0.01	5.633	6.700	12.18	4.333	-15.23	-134.63
18	15.99	0.01	6.767	7.267	25.95	4.200	-20.56	-140.08
19	17.98	0.01	7.900	8.100	39.18	2.900	-24.52	-135.47
20	20.04	0.01	8.900	8.733	55.16	3.200	-30.61	-136.93
21	21.99	0.01	9.700	9.447	68.98	3.567	-35.52	-136.74
22	24.03	0.01	10.533	10.207	82.87	3.633	-41.10	-135.67
23	25.00	0.01	10.867	10.467	87.99	3.600	-43.15	-133.80
24	-0.01	0.01	-1.067	5.967	-99.46	5.767	20.42	-158.23

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 51 11/19/81 0907 RUN 51

TEMP 64. PO. 14.6808

QPSF 83.00 VFPS 265.81 RNFT 1678079. MACH 0.2369

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	51	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	1

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	0.00	-0.934	5.873	-96.64	5.783	19.52	-156.08
2	0.01	-2.02	-0.783	5.873	-98.51	2.380	14.32	-144.83
3	0.01	-4.00	-0.602	5.964	-99.93	-0.663	8.83	-135.27
4	0.01	-5.99	-0.301	6.325	-100.72	-3.223	6.81	-143.83
5	0.02	-8.00	0.271	6.928	-107.18	-7.018	0.68	-125.07
6	0.02	-9.99	0.843	7.771	-110.70	-10.964	-5.00	-101.52
7	0.02	-12.00	0.934	9.157	-105.66	-15.181	-9.72	-87.67
8	0.02	-14.01	0.783	10.542	-94.64	-19.126	-11.03	-67.49
9	0.02	-15.99	0.331	12.048	-81.84	-22.717	-10.78	-50.50
10	0.02	-17.99	0.422	13.886	-70.67	-26.566	-10.08	-29.64
11	0.02	-19.99	0.482	15.964	-60.65	-30.663	-7.91	-6.53
12	0.02	-21.99	0.633	18.373	-50.35	-34.910	-4.94	10.36
13	0.02	-23.99	0.873	21.235	-41.54	-39.205	-1.44	29.57
14	0.02	-25.99	1.205	24.361	-34.08	-43.494	2.18	47.99
15	0.02	-28.07	1.717	27.982	-25.92	-47.795	6.07	69.80
16	0.02	-30.03	2.199	31.687	-16.72	-51.898	11.85	86.08
17	0.02	-0.01	-1.024	5.934	-97.68	5.873	18.71	-156.52
18	0.02	2.01	-1.054	6.114	-99.00	8.404	24.90	-159.13
19	0.02	3.99	-0.934	6.446	-101.65	10.886	31.15	-161.07
20	0.02	5.98	-0.873	6.898	-105.72	12.500	35.35	-149.38
21	0.02	7.98	-0.542	7.380	-111.51	15.458	40.87	-152.24
22	0.02	9.99	-0.120	8.253	-118.99	19.247	47.10	-172.08
23	0.03	11.98	0.211	9.217	-121.87	22.892	51.85	-189.92
24	0.03	14.00	0.331	11.054	-116.86	27.319	55.75	-201.38
25	0.03	15.99	-0.030	12.620	-104.94	31.247	55.80	-214.96
26	0.04	18.00	-0.452	14.367	-89.54	35.651	54.43	-232.51
27	-0.01	20.01	-0.753	16.446	-76.32	39.910	54.39	-258.31
28	0.00	21.99	-0.988	18.946	-60.11	44.608	53.90	-289.05
29	0.00	23.98	-1.416	21.506	-42.23	48.554	51.09	-311.62
30	0.00	26.00	-1.235	24.578	-28.46	53.464	41.55	-326.72
31	0.00	28.03	-2.169	28.247	11.98	53.283	-1.75	-233.07
32	0.00	29.99	-1.639	32.000	21.02	57.681	-8.63	-249.85
33	-0.01	0.00	-1.054	5.904	-97.55	5.813	19.87	-157.74

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 52 11/19/81 0907 RUN 52

TEMP 66. PO 14.6808

QPSF 75.00 VFPS 253.16 RNFT 1587495. MACH 0.2252

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	32	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.03	0.02	6.900	7.200	-108.76	6.067	19.88	-157.84
2	-2.02	0.02	3.033	7.133	-128.69	6.333	26.26	-16[illegible].65
3	-4.00	0.02	-0.533	7.200	-147.25	6.647	32.84	-166.45
4	-6.01	0.02	-4.300	7.500	-163.56	6.800	40.65	-169.03
5	-8.02	0.02	-8.267	7.900	-177.17	7.347	48.67	-173.86
6	-10.01	0.02	-12.533	8.467	-188.42	7.900	55.51	-180.73
7	-11.99	0.02	-17.767	9.293	-196.17	7.700	62.97	-177.20
8	-14.01	0.02	-22.467	10.600	-205.49	6.900	68.25	-166.12
9	-14.98	0.02	-24.367	11.233	-208.61	6.567	71.44	-160.38
10	-0.01	0.02	6.867	7.233	-108.59	6.067	19.65	-157.71
11	2.00	0.02	10.067	7.500	-89.32	5.900	14.82	-153.51
12	4.02	0.02	13.233	7.673	-69.45	5.533	8.91	-144.66
13	6.01	0.02	16.067	8.067	-51.69	4.900	2.77	-136.21
14	7.98	0.02	18.900	8.633	-32.28	5.073	-3.06	-133.67
15	10.02	0.02	22.400	9.433	-10.59	5.400	-10.43	-129.50
16	12.01	0.02	25.840	10.367	9.22	5.467	-15.66	-125.02
17	13.99	0.02	28.453	11.833	28.55	5.900	-23.21	-119.99
18	15.99	0.02	29.387	13.167	43.09	6.713	-33.85	-117.03
19	18.01	0.02	26.167	15.580	52.27	4.533	-30.58	-129.57
20	19.99	0.02	27.440	17.187	63.35	4.387	-33.09	-135.13
21	22.00	0.02	29.700	18.920	75.63	4.700	-37.65	-143.50
22	24.02	0.02	32.600	20.993	85.44	5.433	-47.59	-148.94
23	25.01	0.02	34.433	22.133	88.71	6.347	-55.60	-147.73
24	0.00	0.02	6.700	7.233	-109.63	5.887	20.08	-155.42

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 53 11/19/81 0907 RUN 53

TEMP 68. PO 14.6857

QPSF 75.00 VFPS 253.60 RNFT 1580156. MACH 0.2251

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	32	0	[illegible]	[illegible]	[illegible]	0	0	0
T11	T12	T13	T14	[illegible]	[illegible]	[illegible]	[illegible]	T19	T20
0	0	32	32	[illegible]	[illegible]	[illegible]	[illegible]	0	0

SINGLE SUPPORT DATA [illegible] SCALE DATA

PNT	ALPHA	PSI	L/Q	[illegible]	[illegible]	[illegible]	RM/Q	YM/Q
1	0.00	0.02	6.967	7.2[illegible]	[illegible]	6.100	20.30	-156.27
2	-2.00	0.02	3.100	7.147	-1[illegible]	6.100	26.33	-157.80
3	-3.99	0.02	-0.533	7.200	-1[illegible]	6.267	31.58	-158.06
4	-5.99	0.02	-4.133	7.500	-164.82	6.567	37.94	-159.90
5	-8.00	0.02	-8.100	7.833	-178.24	7.073	45.96	-165.24
6	-10.06	0.02	-12.433	8.467	-189.10	7.707	54.97	-172.36
7	-12.01	0.02	-17.533	9.267	-196.94	7.433	61.16	-168.78
8	-14.00	0.02	-22.167	10.367	-206.61	6.920	65.97	-162.24
9	-15.00	0.02	-24.367	11.133	-210.23	6.427	68.81	-154.33
10	0.00	0.02	6.800	7.367	-105.29	6.033	20.17	-155.75
11	2.00	0.02	10.100	7.553	-85.50	5.800	15.03	-151.06
12	4.01	0.02	13.133	7.800	-66.33	5.413	10.37	-141.95
13	6.00	0.02	16.033	8.133	-48.79	4.833	4.30	-133.57
14	8.00	0.02	19.067	8.667	-29.43	4.900	-3.06	-128.85
15	10.00	0.02	22.333	9.367	-7.20	5.267	-9.92	-126.44
16	11.99	0.02	25.867	10.433	13.51	5.447	-15.46	-123.09
17	13.99	0.02	28.240	11.633	31.30	5.880	-22.90	-122.63
18	16.01	0.02	29.367	13.327	49.04	6.553	-33.99	-116.34
19	18.00	0.02	26.367	15.600	56.58	4.300	-28.86	-126.29
20	19.99	0.02	27.867	17.400	70.23	4.200	-30.22	-130.51
21	22.02	0.02	29.807	19.000	82.11	4.400	-34.83	-136.63
22	24.02	0.02	32.493	20.853	92.71	5.187	-44.18	-141.80
23	24.98	0.02	34.027	21.967	95.20	5.900	-50.77	-140.30
24	0.00	0.02	6.833	7.307	-104.58	5.887	20.41	-156.25

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 54 11/19/81 0907 RUN 54

TEMP 68. P0 14.6857

QPSF 75.00 VFPS 253.60 RNFT 1580156. MACH 0.2251

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	32	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.00	0.02	-1.533	8.033	24.29	0.100	-2.39	2.68
2	-1.99	0.02	-7.600	8.300	40.26	0.033	-2.18	2.64
3	-4.01	0.02	-14.067	8.833	60.82	0.307	-1.59	0.07
4	-6.00	0.02	-19.833	9.600	80.22	0.367	-1.77	1.63
5	-7.99	0.02	-24.740	10.953	83.52	0.700	-0.98	-1.92
6	-10.00	0.02	-29.667	12.367	84.18	1.167	1.00	-2.84
7	-12.01	0.02	-36.100	13.833	98.44	0.960	-0.30	0.09
8	-14.01	0.02	-42.133	15.867	113.31	0.420	0.85	3.17
9	-15.00	0.02	-44.600	16.987	119.52	0.133	1.07	4.01
10	0.03	0.02	-1.733	8.133	24.36	0.127	-2.40	3.05
11	2.01	0.02	3.500	8.100	16.19	0.100	-2.25	2.29
12	4.00	0.02	7.800	8.167	9.81	0.033	-2.02	2.51
13	6.03	0.02	12.567	8.333	6.76	-0.033	-2.16	1.79
14	8.01	0.02	16.567	8.833	7.44	0.167	-2.74	0.75
15	10.00	0.02	20.800	9.600	14.56	0.533	-3.85	1.32
16	12.00	0.02	24.500	10.600	32.82	0.800	-4.39	1.78
17	14.02	0.02	26.967	11.867	56.28	1.280	-5.45	3.47
18	16.03	0.02	29.427	13.453	50.00	2.333	-7.46	7.17
19	18.02	0.02	31.293	16.567	-16.23	0.173	-2.70	2.35
20	20.00	0.02	35.453	18.587	-49.37	-0.367	-0.35	-0.43
21	22.01	0.02	39.433	21.533	-72.26	-0.333	1.86	-3.06
22	24.01	0.02	43.787	24.327	-91.93	0.433	-1.52	-3.16
23	25.03	0.02	47.287	26.300	-98.33	1.033	-3.95	0.45
24	0.02	0.02	-1.767	8.067	25.71	-0.067	-2.36	3.69

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 55 11/19/81 0907 RUN 55

TEMP 70. PS 14.6857

QPSF 75.00 VFPS 254.08 RNFT 1572614. MACH 0.2251

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	32	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.02	0.02	-1.967	11.833	33.10	0.433	-1.60	1.93
2	-1.99	0.02	-8.267	12.027	47.22	0.527	-1.64	1.23
3	-4.02	0.02	-14.433	12.460	64.02	0.600	-1.54	0.13
4	-6.02	0.02	-20.273	13.067	79.83	0.533	-1.68	2.15
5	-8.03	0.02	-25.500	14.200	84.92	0.733	0.03	1.00
6	-9.99	0.02	-29.967	15.600	83.17	1.133	1.16	-1.33
7	-12.02	0.02	-36.893	17.193	92.98	0.867	-0.17	0.03
8	-13.99	0.02	-41.380	18.667	96.35	0.407	-0.00	4.63
9	-15.01	0.02	-44.113	19.900	99.47	0.133	0.41	7.24
10	0.00	0.02	-2.100	11.800	32.80	0.433	-2.57	1.57
11	2.02	0.02	3.233	11.833	26.01	0.433	-1.39	0.74
12	4.03	0.02	8.033	11.933	20.79	0.400	-0.82	-0.31
13	5.99	0.02	12.300	12.133	19.20	0.400	-0.71	-0.11
14	8.01	0.02	16.733	12.600	20.99	0.733	-1.48	-1.10
15	9.99	0.02	20.933	13.300	28.55	1.100	-3.23	-1.15
16	12.00	0.02	24.567	14.233	45.53	1.140	-3.25	0.39
17	13.99	0.02	27.513	15.313	70.70	1.233	-3.27	3.16
18	16.03	0.02	29.747	16.707	70.38	1.833	-5.12	7.85
19	18.01	0.02	31.567	19.873	-5.66	0.747	-0.88	0.22
20	19.99	0.02	35.267	21.993	-30.10	0.433	0.57	-1.28
21	22.00	0.02	39.493	24.567	-51.57	0.133	2.65	-5.56
22	24.00	0.02	43.633	27.360	-70.51	0.460	0.62	-5.21
23	25.00	0.02	46.093	28.967	-79.65	[illegible]	-1.67	[illegible]
24	-0.01	0.02	-1.967	11.800	33.03	[illegible]	[illegible]	[illegible]

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 56 11/19/81 0907 RUN 56

TEMP 70. PO 14.6857

QPSF 75.00 VFPS 254.08 RNFT 1572614. MACH 0.2251

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	32	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	0.02	-3.367	11.980	52.13	1.167	-0.48	-8.86
2	-2.01	0.02	-9.567	12.153	68.50	1.173	1.14	-7.58
3	-3.99	0.02	-16.133	12.527	92.09	1.287	1.70	-7.83
4	-6.03	0.02	-22.233	13.267	107.12	1.133	1.59	-5.57
5	-8.00	0.02	-27.633	14.200	118.08	1.220	2.53	-4.83
6	-9.99	0.02	-32.300	15.667	114.65	1.627	2.04	-6.70
7	-11.98	0.02	-37.633	17.207	104.80	1.573	3.94	-7.54
8	-13.98	0.02	-42.687	18.887	108.87	1.000	4.21	-1.50
9	-15.00	0.02	-44.400	19.867	106.80	0.880	4.83	-3.81
10	0.00	0.02	-3.400	11.867	51.67	1.167	-0.31	-9.99
11	2.01	0.02	2.033	12.000	42.47	1.333	-0.35	-11.10
12	4.02	0.02	6.700	12.067	35.10	1.367	-0.31	-13.21
13	6.02	0.02	11.567	12.333	30.92	1.233	-0.69	-13.79
14	7.99	0.02	15.767	12.700	31.59	1.467	-2.39	-12.20
15	10.03	0.02	20.633	13.533	32.18	1.600	-3.69	-10.02
16	12.03	0.02	25.567	14.500	31.56	1.533	-3.92	-6.61
17	14.02	0.02	29.833	15.633	25.63	1.753	-5.38	-4.81
18	16.01	0.02	32.060	17.147	23.80	2.280	-9.39	-3.15
19	18.00	0.02	33.460	20.033	-23.13	1.333	-5.17	-8.40
20	20.03	0.02	36.600	22.413	-48.05	1.167	-3.22	-10.92
21	22.02	0.02	39.720	24.767	-65.13	0.767	-1.23	-11.52
22	24.00	0.02	43.673	27.567	-76.48	1.160	-1.74	-12.56
23	25.00	0.02	46.393	29.433	-84.32	1.900	-6.16	-9.18
24	-0.01	0.02	-3.367	11.967	51.27	1.133	0.04	-9.53

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 57 11/19/81 0907 RUN 57

TEMP 70. PO 14.6759

QPSF 75.00 VFPS 254.16 RNFT 1572087. MACH 0.2252

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	32	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.01	0.02	-2.733	8.233	43.63	0.600	-0.33	-8.04
2	-2.00	0.02	-9.133	8.500	63.93	0.513	0.87	-7.45
3	-4.00	0.02	-15.867	9.100	90.83	0.680	1.41	-7.96
4	-6.01	0.02	-21.433	9.833	110.22	0.687	1.39	-7.34
5	-8.01	0.02	-26.373	11.000	116.11	0.933	1.23	-8.73
6	-9.99	0.02	-31.193	12.547	112.69	1.533	2.58	-11.84
7	-12.01	0.02	-37.313	14.227	119.13	1.367	3.66	-6.64
8	-14.00	0.02	-43.073	16.067	132.92	1.047	4.21	-5.91
9	-15.00	0.02	-45.667	17.200	137.67	0.600	4.41	-3.69
10	-0.01	0.02	-2.867	8.207	43.66	0.633	-0.25	-7.90
11	2.02	0.02	2.333	8.167	33.94	0.707	-0.29	-10.80
12	4.00	0.02	7.100	8.300	24.10	0.700	-0.50	-11.69
13	6.00	0.02	11.833	8.567	18.22	0.633	-2.10	-12.29
14	8.01	0.02	16.200	9.000	19.02	0.833	-3.65	-12.12
15	10.00	0.02	20.700	9.700	19.18	1.100	-4.19	-9.15
16	12.02	0.02	25.700	10.733	18.40	1.113	-5.14	-5.35
17	14.00	0.02	29.807	12.067	11.48	1.667	-7.03	-4.86
18	15.99	0.02	32.393	13.700	7.87	2.593	-11.07	-3.95
19	17.99	0.02	32.800	16.607	-41.02	0.787	-5.22	-7.58
20	20.04	0.02	36.667	19.160	-64.45	0.253	-2.76	-8.55
21	22.02	0.02	39.333	21.593	-83.41	-0.013	-0.76	-12.24
22	23.99	0.02	44.333	24.473	-96.14	0.900	-3.23	-10.11
23	24.99	0.02	47.247	26.313	-103.42	1.333	-6.74	-10.52
24	0.00	0.02	-3.100	8.300	43.95	0.460	-0.09	-7.50

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 58 11/19/81 0907 RUN 58

TEMP 70. PO 14.6660

QPSF 75.00 VFPS 254.25 RNFT 1571561. MACH 0.2253

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	32	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.00	0.00	-3.400	8.767	48.35	6.567	22.87	-161.81
2	-2.00	0.00	-9.800	9.067	67.72	6.213	30.63	-162.01
3	-3.99	0.00	-15.927	9.480	93.64	6.633	36.85	-164.10
4	-6.00	0.00	-22.267	10.333	115.91	6.893	43.95	-167.61
5	-8.01	0.00	-27.033	11.520	117.48	7.433	50.91	-171.75
6	-10.00	0.00	-31.433	12.873	112.39	8.213	61.95	-179.97
7	-11.99	0.00	-37.387	14.567	120.45	8.080	67.92	-176.32
8	-14.00	0.00	-43.400	16.533	132.35	7.467	74.31	-169.00
9	-15.00	0.00	-45.687	17.673	136.93	7.433	78.97	-169.64
10	0.00	0.00	-3.500	8.760	48.74	6.527	23.90	-162.05
11	2.01	0.00	2.267	8.733	36.72	6.353	16.69	-157.92
12	4.01	0.00	7.093	8.767	27.13	6.053	9.84	-153.72
13	6.00	0.00	11.433	9.000	19.82	5.767	3.08	-148.73
14	7.99	0.00	15.753	9.367	21.44	5.767	-3.97	-141.80
15	10.01	0.00	20.400	10.167	22.27	6.100	-10.94	-139.51
16	12.01	0.00	25.133	11.100	21.23	6.000	-16.75	-133.57
17	14.00	0.00	29.280	12.487	13.66	6.287	-23.80	-128.52
18	15.98	0.00	31.427	14.033	10.78	7.167	-31.90	-123.16
19	17.99	0.00	32.407	17.007	-41.29	5.167	-30.45	-131.31
20	20.00	0.00	36.120	19.547	-66.38	4.800	-33.61	-135.40
21	22.01	0.00	39.893	22.100	-84.16	4.500	-38.16	-148.02
22	24.01	0.00	43.780	25.033	-101.83	5.953	-49.34	-150.37
23	25.00	0.00	46.927	26.800	-109.17	6.767	-56.35	-153.18
24	0.00	0.00	-3.667	8.800	47.39	6.333	23.17	-161.01

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 59 11/1[illegible]/81 0907 RUN 59

TEMP 70. PO 14.6660

QPSF 75.00 VFPS 254.25 RNFT 1571561. MACH 0.2253

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	59	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.01	0.00	-3.533	12.567	56.23	6.033	18.63	-139.99
2	-2.01	0.00	-9.600	12.633	71.96	6.147	24.70	-142.45
3	-4.02	0.00	-16.500	13.100	96.67	6.347	31.36	-144.66
4	-6.01	0.00	-22.367	13.833	111.59	6.433	37.86	-148.20
5	-8.03	0.00	-28.233	14.800	121.94	6.787	46.25	-151.39
6	-10.02	0.00	-32.167	16.067	116.27	7.700	53.81	-161.62
7	-12.03	0.00	-37.700	17.607	110.07	7.327	60.67	-154.16
8	-14.02	0.00	-41.733	19.327	105.36	6.953	66.73	-158.76
9	-15.27	0.00	-44.560	20.647	107.88	6.767	70.76	-151.90
10	0.02	0.00	-3.333	12.400	54.73	5.900	18.75	-141.07
11	2.17	0.00	2.300	12.467	45.86	5.767	12.74	-136.63
12	4.03	0.00	6.733	12.500	38.44	5.633	8.21	-135.46
13	6.07	0.00	11.300	12.733	32.99	5.700	2.28	-133.14
14	8.01	0.00	15.500	13.133	33.67	5.913	-3.69	-134.19
15	9.97	0.00	19.967	13.800	34.55	6.267	-10.03	-134.96
16	12.01	0.00	25.133	14.800	34.04	6.247	-15.75	-133.28
17	14.01	0.00	29.473	15.900	27.33	6.433	-22.67	-129.71
18	15.98	0.00	32.027	17.427	26.14	7.333	-31.09	-125.67
19	18.00	0.00	32.660	20.200	-16.39	6.200	-31.41	-130.93
20	19.99	0.00	35.820	22.353	-49.03	5.867	-34.87	-137.10
21	22.01	0.00	38.993	24.693	-66.15	5.833	-40.92	-146.64
22	24.03	0.00	43.853	27.933	-80.69	6.933	-51.39	-159.07
23	25.00	0.00	46.353	29.500	-88.50	7.833	-58.66	-161.45
24	-0.01	0.00	-4.067	12.533	56.97	5.873	19.09	-139.97

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 60 11/19/81 0907 RUN 60

TEMP 70. PO 14.6660

QPSF 75.00 VFPS 254.25 RNFT 1571561. MACH 0.2253

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	59	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

SINGLE SUPRORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.02	0.00	-3.633	12.667	53.38	5.833	18.78	-136.59
2	-2.01	0.00	-9.833	12.800	70.88	6.073	25.21	-139.10
3	-4.01	0.00	-16.267	13.267	93.83	6.233	30.73	-142.60
4	-6.01	0.00	-22.333	13.840	109.09	6.267	37.90	-143.92
5	-8.00	0.00	-27.867	14.833	119.78	6.767	46.63	-150.03
6	-9.97	0.00	-32.040	16.167	115.94	7.507	53.46	-158.31
7	-12.00	0.00	-37.420	17.720	106.05	7.513	60.73	-159.59
8	-14.01	0.00	-42.133	19.360	106.57	6.853	67.01	-151.81
9	-15.00	0.00	-44.500	20.553	105.48	6.700	70.77	-147.26
10	0.00	0.00	-3.900	12.667	53.57	5.867	19.19	-137.64
11	1.99	0.00	1.767	12.667	44.91	5.707	12.92	-132.85
12	4.00	0.00	6.800	12.667	35.98	5.600	7.72	-130.58
13	5.99	0.00	11.033	12.833	30.99	5.600	3.48	-130.72
14	8.00	0.00	15.533	13.280	31.87	5.900	-3.69	-131.67
15	9.99	0.00	19.933	13.900	32.67	6.180	-9.97	-13[illegible].02
16	12.02	0.00	25.300	14.933	31.97	6.100	-15.54	-129.38
17	14.01	0.00	29.493	16.127	25.28	6.367	-22.42	-127.59
18	16.00	0.00	32.173	17.767	23.56	7.087	-29.22	-122.43
19	18.00	0.00	32.267	20.527	-25.39	5.887	-30.18	-126.62
20	20.01	0.00	35.833	22.567	-46.39	5.567	-31.63	-130.88
21	22.01	0.00	40.273	25.300	-72.04	5.733	-38.75	-141.10
22	24.02	0.00	43.820	28.233	-87.97	6.700	-48.69	-151.19
23	25.01	0.00	46.307	29.780	-96.20	7.500	-56.94	-155.41
24	-0.02	0.00	-3.733	12.700	52.94	5.733	18.83	-136.60

ORIGINAL PAGE IS OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 61 11/19/81 0907 RUN 61

TEMP 70. PO 14.6660

QPSF 75.00 VFPS 254.25 RNFT 1571561. MACH 0.2253

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	59	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.01	0.00	-3.600	12.667	53.73	6.267	21.54	-148.76
2	-2.01	0.00	-10.167	12.933	71.14	6.520	29.31	-150.65
3	-4.00	0.00	-16.467	13.200	93.78	6.760	35.60	-154.64
4	-5.99	0.00	-21.967	13.833	108.86	6.867	42.51	-156.24
5	-8.01	0.00	-27.800	14.800	119.39	7.233	50.85	-160.18
6	-10.00	0.00	-32.267	16.200	113.33	8.100	59.36	-169.72
7	-12.00	0.00	-37.347	17.867	105.72	8.000	67.34	-170.64
8	-13.99	0.00	-42.233	19.533	106.09	7.467	73.51	-159.70
9	-15.00	0.00	-44.667	20.600	106.49	7.167	76.81	-158.15
10	0.00	0.00	-3.600	12.667	53.54	6.300	21.62	-147.91
11	2.02	0.00	2.167	12.633	44.47	6.167	15.19	-145.24
12	4.01	0.00	6.900	12.600	35.93	5.967	10.22	-140.43
13	6.01	0.00	11.233	12.833	31.54	6.000	4.32	-140.80
14	8.01	0.00	15.867	13.333	32.10	6.267	-3.32	-140.67
15	10.00	0.00	20.267	13.940	33.42	6.533	-9.38	-141.18
16	12.02	0.00	25.367	15.000	31.63	6.500	-15.28	-137.04
17	14.01	0.00	29.767	16.193	25.75	6.633	-22.87	-133.18
18	16.03	0.00	32.040	17.633	22.63	7.267	-31.00	-128.14
19	17.99	0.00	32.633	20.333	-25.99	6.113	-30.03	-133.62
20	20.02	0.00	36.667	22.907	-52.41	6.067	-34.64	-141.29
21	22.02	0.00	40.213	25.167	-71.34	6.180	-39.57	-150.17
22	24.01	0.00	44.000	28.233	-88.43	6.880	-49.24	-161.71
23	25.01	0.00	46.667	29.933	-95.99	7.960	-58.64	-161.99
24	0.00	0.00	-3.533	12.667	53.12	6.233	21.56	-148.36

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 62 11/19/81 0907 RUN 62

TEMP 74. PB 14.6660

QPSF 83.00 VFPS 268.47 RNFT 1637583. MACH 0.2370

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	48	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	92	32	0	0	1	0	0	1

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	0.02	-3.645	12.620	54.33	6.235	20.89	-147.79
2	0.01	-2.01	-3.675	12.470	56.02	2.139	22.72	-135.55
3	0.01	-4.00	-3.705	12.530	56.91	-2.048	21.95	-120.96
4	0.01	-6.01	-3.193	12.922	49.85	-7.078	23.05	-101.04
5	0.01	-8.03	-2.771	13.434	44.67	-11.747	21.42	-76.03
6	0.01	-10.00	-1.687	14.157	37.65	-16.506	17.06	-47.35
7	0.01	-12.02	-0.181	15.331	26.27	-21.928	12.60	-19.18
8	0.01	-13.99	1.325	16.988	18.74	-26.928	10.78	13.26
9	0.01	-16.00	2.861	18.976	14.41	-31.584	10.80	45.71
10	0.01	-18.00	3.994	21.235	7.32	-36.386	10.52	77.72
11	0.01	-19.99	5.151	23.861	-4.85	-41.064	9.71	105.64
12	0.01	-22.03	7.440	27.048	-21.51	-46.181	7.86	133.40
13	0.01	-23.99	9.608	30.241	-38.49	-50.873	3.10	156.03
14	0.01	-26.00	11.446	33.705	-45.87	-55.416	5.01	179.44
15	0.01	-28.00	13.398	37.018	-55.56	-59.398	7.11	185.63
16	0.01	-30.00	14.066	40.313	-53.61	-63.151	11.12	192.52
17	0.01	0.00	-3.705	12.651	53.67	6.355	20.49	-149.19
18	0.01	2.01	-3.855	12.771	50.85	9.518	17.79	-143.76
19	0.01	4.01	-3.886	13.133	47.23	12.952	19.99	-156.70
20	0.01	5.99	-3.253	13.675	37.23	17.633	27.23	-195.49
21	0.01	8.01	-2.440	14.319	23.88	21.626	30.38	-211.45
22	0.01	10.02	-1.386	15.211	11.82	25.934	33.21	-230.68
23	0.01	12.00	-0.331	16.265	0.21	30.181	34.32	-249.03
24	0.01	14.00	0.994	17.651	-11.85	33.374	35.07	-277.75
25	0.01	16.02	2.681	19.398	-25.24	39.970	34.92	-298.47
26	0.01	18.00	3.765	21.476	-34.02	44.880	36.41	-320.58
27	0.01	20.02	5.120	24.090	-40.99	50.554	39.13	-360.95
28	0.01	22.01	6.837	27.036	-53.81	56.265	43.09	-398.05
29	0.01	24.00	8.705	30.181	-66.05	60.994	43.17	-421.79
30	0.01	26.00	9.211	34.669	-48.51	62.494	11.99	-362.11
31	0.01	28.00	10.343	38.602	-49.72	66.717	7.66	-381.64
32	0.01	30.01	10.518	42.380	-43.68	69.675	-3.15	-382.12
33	0.01	0.00	-3.645	12.590	53.81	5.753	22.63	-147.32

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 63 11/19/81 0907 RUN 63

TEMP 75. PO 14.6709

QPSF 83.00 VFPS 268.68 RNFT 1633979. MACH 0.2370

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	48	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	1

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.00	0.01	-3.494	12.741	55.49	5.916	20.59	-144.45
2	0.00	-2.02	-3.524	12.620	58.13	1.867	22.10	-134.37
3	0.00	-4.02	-3.404	12.620	56.15	-3.163	23.31	-1[illegible]6.68
4	0.01	-5.99	-3.193	12.861	52.26	-6.747	20.97	-103.51
5	0.01	-7.97	-2.681	13.452	45.74	-11.777	19.01	-75.30
6	0.01	-10.01	-1.476	14.367	37.17	-16.837	15.94	-45.27
7	0.01	-12.03	0.120	15.602	25.62	-22.289	11.86	-16.24
8	0.01	-13.99	1.416	17.229	19.97	-27.078	9.74	16.01
9	0.01	-15.99	2.922	19.247	14.96	-31.958	9.75	47.17
10	0.03	-18.00	3.976	21.524	8.99	-36.771	7.61	80.36
11	0.07	-20.04	4.916	24.217	-0.87	-41.560	9.16	109.12
12	-0.01	-22.03	7.108	27.289	-19.24	-46.380	5.67	137.34
13	0.00	-24.02	9.301	30.602	-34.27	-51.795	3.35	161.25
14	0.01	-25.98	11.175	33.916	-45.19	-55.873	3.94	182.72
15	0.01	-28.02	13.193	37.337	-54.34	-59.892	4.51	191.22
16	0.01	-29.99	14.337	40.813	-53.98	-63.361	10.25	199.50
17	0.01	-0.01	-3.723	12.831	54.88	6.295	19.75	-146.16
18	0.01	2.01	-3.765	12.952	52.57	9.639	17.12	-142.38
19	0.01	4.03	-3.494	13.253	45.65	13.145	19.37	-155.05
20	0.01	5.99	-3.133	13.633	37.48	17.500	27.74	-191.91
21	0.01	8.02	-2.289	14.488	24.02	21.705	31.08	-211.60
22	0.01	10.00	-1.054	15.211	10.53	25.602	32.09	-221.87
23	0.01	12.00	0.120	16.343	-1.89	29.970	33.81	-245.42
24	0.01	14.00	1.627	17.831	-13.20	34.795	34.53	-271.15
25	0.01	16.01	3.102	19.518	-26.71	39.898	35.56	-296.11
26	0.02	17.99	4.295	21.355	-34.70	44.548	37.12	-317.38
27	0.02	19.99	5.663	24.126	-41.97	50.331	40.07	-356.91
28	0.02	22.00	7.018	26.988	-52.96	55.873	43.25	-394.76
29	0.02	23.99	8.825	30.030	-67.64	60.723	44.32	-415.28
30	0.02	26.01	9.337	34.639	-46.87	61.958	12.99	-361.08
31	0.02	28.02	10.512	38.524	-49.09	66.434	8.66	-381.52
32	0.02	30.02	10.139	42.265	-42.50	69.785	-2.40	-379.03
33	-0.01	0.00	-3.825	12.771	56.75	5.693	21.60	-144.99

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 64 11/19/81 0907 RUN 64

TEMP 50. PO 14.6955

QPSF 75.00 VFPS 249.16 RNFT 1651425. MACH 0.2251

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	48	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	1

SINGLE SUPPORT DATA				DATA AT C.G.			FULL SCALE DATA	
PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.00	0.01	-4.033	12.767	55.72	6.200	20.82	-146.19
2	0.00	-2.04	-4.067	12.600	57.39	1.967	22.71	-135.13
3	0.00	-4.04	-4.033	12.600	57.10	-2.367	22.45	-118.26
4	0.00	-5.99	-3.600	12.900	51.02	-7.100	22.80	-101.13
5	0.00	-7.98	-3.167	13.400	45.28	-11.600	20.33	-74.63
6	0.00	-9.99	-2.153	14.367	36.38	-16.667	16.26	-47.73
7	0.00	-11.98	-0.767	15.533	25.71	-21.933	12.99	-19.11
8	0.00	-13.99	0.600	17.167	19.51	-27.067	11.68	14.05
9	0.00	-15.99	2.067	19.100	15.98	-31.633	10.36	46.43
10	-0.01	-17.99	3.533	21.353	10.13	-36.700	9.79	79.03
11	-0.02	-20.03	4.367	24.100	-1.03	-41.713	9.01	110.71
12	-0.02	-21.99	6.567	27.267	-17.82	-46.600	6.40	134.40
13	-0.02	-23.99	8.600	30.640	-34.59	-51.440	2.73	161.86
14	-0.02	-26.00	10.767	34.000	-43.96	-56.093	3.83	183.04
15	-0.02	-28.01	13.467	37.700	-56.49	-60.253	4.96	193.68
16	-0.02	-30.01	14.227	41.093	-51.75	-63.853	10.56	203.45
17	-0.02	0.01	-4.167	12.900	56.03	6.567	19.34	-147.64
18	-0.02	2.03	-4.200	12.967	53.72	9.867	17.19	-143.15
19	-0.02	4.00	-3.933	13.267	45.38	13.660	19.17	-160.50
20	-0.02	6.01	-3.233	13.767	36.54	17.933	27.65	-196.56
21	-0.02	8.00	-2.467	14.467	23.45	21.800	31.03	-211.64
22	-0.02	10.00	-1.233	15.280	9.26	25.933	32.83	-226.25
23	-0.02	11.98	0.067	16.400	-2.75	30.267	33.89	-247.63
24	-0.02	13.98	1.460	17.800	-15.37	34.913	35.17	-273.98
25	-0.02	16.01	2.900	19.600	-27.89	40.267	36.58	-302.42
26	-0.02	18.01	4.167	21.667	-36.84	45.100	38.67	-324.65
27	-0.02	20.01	5.400	24.267	-43.02	50.800	41.21	-363.83
28	-0.02	21.99	6.767	27.200	-54.64	56.267	43.81	-400.66
29	-0.02	24.00	9.133	30.300	-68.43	61.100	45.08	-418.31
30	-0.02	26.01	10.633	33.567	-81.30	66.300	47.37	-443.52
31	-0.02	27.99	10.433	38.653	-49.35	67.080	8.37	-379.64
32	-0.02	29.99	10.087	42.107	-41.52	69.900	0.85	-375.54
33	0.01	0.00	-3.467	12.787	55.53	6.087	20.56	-145.92

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 65 11/19/81 0907 RUN 65

TEMP 62. PO 14.6955

QPSF 75.00 VFPS 252.07 RNFT 1603691. MACH 0.2251

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	59	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	0.00	-3.700	12.833	54.68	6.120	21.62	-144.32
2	-2.00	0.00	-10.033	13.033	72.17	6.273	28.63	-146.65
3	-3.98	0.00	-16.367	13.400	95.30	6.520	34.92	-151.67
4	-6.01	0.00	-22.533	14.067	111.02	6.620	43.03	-153.53
5	-8.01	0.00	-27.633	14.833	119.74	6.853	50.61	-157.49
6	-10.01	0.00	-32.067	16.313	114.73	7.600	58.39	-168.76
7	-12.01	0.00	-37.413	17.967	108.74	7.520	66.43	-165.79
8	-14.00	0.00	-41.667	19.467	101.84	7.053	71.76	-157.73
9	-15.01	0.00	-42.033	19.533	110.49	6.787	73.16	-157.41
10	0.00	0.00	-3.767	12.867	54.18	6.053	21.66	-144.23
11	2.02	0.00	1.833	12.733	45.58	5.753	14.56	-141.08
12	4.02	0.00	6.600	12.767	36.59	5.647	9.60	-138.88
13	6.03	0.00	10.967	12.933	30.88	5.727	3.93	-140.38
14	8.01	0.00	15.300	13.367	30.80	6.027	-3.23	-138.65
15	10.01	0.00	19.900	14.033	32.60	6.433	-9.75	-142.20
16	11.99	0.00	25.100	14.967	32.31	6.267	-15.46	-135.89
17	14.01	0.00	29.740	16.367	25.04	6.893	-24.26	-134.51
18	16.01	0.00	31.947	17.687	21.88	7.373	-32.66	-128.93
19	18.01	0.00	33.140	20.353	-23.67	6.300	-32.05	-132.91
20	20.03	0.00	36.207	22.700	-52.81	5.713	-34.73	-138.97
21	21.99	0.00	39.900	25.333	-73.38	5.853	-40.92	-148.64
22	24.01	0.00	43.653	28.400	-90.43	6.853	-52.58	-157.73
23	25.01	0.00	46.660	30.000	-98.49	7.687	-59.95	-161.37
24	0.00	0.00	-3.800	12.833	55.66	6.020	21.68	-145.64

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 66 11/19/81 0907 RUN 66

TEMP 64. PO 14.6955

QPSF 75.00 VFPS 252.55 RNFT 1595961. MACH 0.2251

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	59	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.00	0.00	-3.733	12.867	55.68	5.713	18.85	-135.59
2	-2.00	0.00	-10.300	13.060	73.44	5.880	25.56	-137.77
3	-4.00	0.00	-16.733	13.433	96.44	6.180	31.96	-140.95
4	-6.00	0.00	-22.467	14.133	111.81	6.193	38.65	-142.91
5	-8.00	0.00	-27.800	14.967	119.94	6.513	46.08	-145.03
6	-9.99	0.00	-32.273	16.333	113.56	7.247	53.47	-155.98
7	-12.00	0.00	-37.567	17.967	108.24	7.047	61.81	-154.23
8	-13.99	0.00	-42.027	19.633	103.87	6.680	66.58	-148.67
9	-15.01	0.00	-44.293	20.400	105.92	6.313	70.40	-144.76
10	-0.01	0.00	-3.900	12.900	54.89	5.680	18.76	-135.59
11	1.99	0.00	1.567	12.780	46.27	5.407	12.90	-132.75
12	4.01	0.00	6.567	12.767	36.62	5.347	7.84	-129.41
13	6.00	0.00	11.000	13.033	31.82	5.413	1.56	-131.71
14	8.02	0.00	15.500	13.313	32.27	5.747	-4.63	-130.69
15	10.00	0.00	19.900	14.120	32.87	6.180	-11.20	-134.22
16	12.01	0.00	25.033	15.067	32.38	6.180	-16.46	-131.29
17	13.99	0.00	29.627	16.333	25.22	6.327	-22.98	-127.83
18	16.00	0.00	31.900	17.673	23.10	7.113	-32.42	-124.11
19	17.99	0.00	33.180	20.547	-24.70	6.100	-31.57	-127.34
20	19.98	0.00	35.873	22.713	-53.35	5.680	-34.14	-131.88
21	22.00	0.00	39.920	25.440	-72.02	5.780	-39.42	-141.61
22	23.99	0.00	43.460	28.080	-86.65	6.247	-48.65	-150.39
23	24.99	0.00	46.673	29.980	-95.94	7.280	-57.11	-153.02
24	0.01	0.00	-3.800	12.867	55.72	5.613	18.77	-136.10

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 67 11/19/81 0907 RUN 67

TEMP 65. PO 14.6955

QPSF 75.00 VFPS 252.79 RNFT 1592118. MACH 0.2251

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	67	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.00	0.01	-10.400	11.367	50.78	5.487	18.64	-135.64
2	-2.02	0.01	-14.300	11.767	76.20	5.747	26.57	-138.41
3	-4.03	0.01	-18.133	12.293	105.38	6.020	33.30	-142.08
4	-5.99	0.01	-22.000	13.000	132.55	6.513	41.21	-149.89
5	-8.01	0.01	-24.700	13.767	146.63	6.760	48.64	-153.23
6	-10.02	0.01	-25.307	15.033	133.16	6.927	55.24	-156.15
7	-12.01	0.01	-26.767	16.147	132.49	6.633	60.52	-152.66
8	-14.00	0.01	-28.233	17.367	129.82	6.247	64.58	-147.52
9	-14.99	0.01	-29.073	17.933	131.63	6.067	67.99	-143.58
10	-0.01	0.01	-10.433	11.333	50.28	5.367	18.87	-134.52
11	2.02	0.01	-6.700	11.000	25.38	5.333	12.75	-132.16
12	4.04	0.01	-3.233	10.700	4.38	5.133	7.61	-130.28
13	6.02	0.01	0.000	10.567	-15.97	5.000	1.90	-130.21
14	8.00	0.01	3.600	10.567	-39.74	5.133	-2.94	-133.85
15	10.00	0.01	7.600	10.567	-68.56	5.400	-8.06	-135.27
16	12.00	0.01	11.233	11.100	-94.42	5.367	-12.92	-135.95
17	14.01	0.01	14.233	12.000	-107.14	5.467	-17.97	-135.71
18	16.01	0.01	16.200	12.967	-109.03	5.467	-23.81	-138.22
19	18.02	0.01	18.133	14.167	-109.10	5.580	-28.65	-141.63
20	20.03	0.01	19.567	15.267	-108.32	4.673	-31.88	-134.86
21	21.99	0.01	20.800	16.467	-103.77	4.547	-36.55	-132.40
22	24.02	0.01	22.033	17.767	-101.95	4.340	-41.03	-125.07
23	25.02	0.01	23.167	18.800	-105.74	4.567	-44.51	-126.40
24	0.00	0.01	-10.367	11.400	50.47	5.367	18.87	-134.38

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 68   11/19/81 0907   RUN 68

TEMP 74.   PO 14.6955

QPSF 100.00   VFPS 294.39   RNFT 1799287.   MACH 0.2599

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	67	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA   DATA AT C.G.   FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.01	0.02	-10.500	11.205	51.78	5.250	18.80	-134.38
2	-2.00	0.02	-14.075	11.675	76.29	5.550	26.10	-138.48
3	-4.02	0.02	-18.550	12.175	111.32	5.850	34.31	-143.57
4	-5.99	0.02	-21.975	12.800	133.63	6.260	42.50	-148.45
5	-8.00	0.02	-24.200	13.675	143.19	6.520	49.14	-154.18
6	-9.99	0.02	-25.080	14.875	127.36	6.515	55.66	-153.91
7	-12.01	0.02	-26.395	16.085	130.80	6.200	60.49	-150.50
8	-0.01	0.02	-10.500	11.325	51.51	5.165	19.45	-135.08
9	2.00	0.02	-6.600	10.875	26.19	5.040	12.30	-133.02
10	4.00	0.02	-3.325	10.625	6.07	4.925	7.48	-129.34
11	5.99	0.02	0.125	10.450	-16.11	4.775	2.87	-130.97
12	7.97	0.02	3.425	10.475	-37.13	5.010	-2.76	-133.78
13	10.00	0.02	7.450	10.575	-67.13	5.060	-7.97	-135.54
14	11.99	0.02	11.200	11.000	-91.70	5.375	-13.93	-136.28
15	0.01	0.02	-10.300	11.230	50.83	5.125	18.80	-135.40

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 69 11/19/81 0907 RUN 69

TEMP 75. PO 14.6955

QPSF 75.00 VFPS 255.19 RNFT 1554537. MACH 0.2251

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	59	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA   DATA AT C.G.   FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.01	0.00	-3.700	12.833	56.86	5.380	18.80	-132.34
2	-2.02	0.00	-9.667	13.033	74.34	5.647	26.00	-134.75
3	-4.01	0.00	-16.067	13.367	96.40	5.733	31.17	-138.36
4	-6.00	0.00	-21.867	14.000	110.57	5.747	38.38	-140.75
5	-8.00	0.00	-27.467	14.867	119.25	5.993	44.70	-140.36
6	-10.02	0.00	-31.733	16.247	113.70	6.493	53.01	-152.01
7	-12.01	0.00	-36.833	17.993	101.53	6.333	58.67	-148.73
8	-13.99	0.00	-41.253	19.493	103.94	5.687	65.37	-142.53
9	-16.02	0.00	-45.527	21.700	103.79	5.213	73.77	-140.39
10	-0.02	0.00	-3.633	12.800	56.50	5.373	19.86	-133.95
11	2.02	0.00	2.367	12.767	47.68	5.193	13.22	-131.04
12	4.01	0.00	6.800	12.767	40.09	5.113	8.62	-129.18
13	6.01	0.00	11.467	12.900	34.37	5.200	3.65	-129.74
14	8.02	0.00	15.633	13.300	34.13	5.613	-3.08	-128.75
15	10.01	0.00	20.400	13.933	35.59	5.967	-9.40	-131.58
16	12.02	0.00	25.333	14.833	35.22	5.680	-14.13	-128.85
17	14.01	0.00	27.920	16.660	13.29	6.547	-24.09	-123.06
18	16.00	0.00	30.987	18.133	13.59	7.147	-30.16	-120.15
19	18.01	0.00	33.313	20.467	-21.10	5.980	-30.35	-127.39
20	20.01	0.00	36.480	22.633	-51.56	5.547	-33.76	-132.42
21	22.03	0.00	39.367	25.360	-72.57	6.133	-41.80	-139.09
22	24.02	0.00	43.207	28.213	-89.05	6.700	-49.92	-150.23
23	25.00	0.00	46.467	30.200	-96.57	7.347	-56.10	-155.82
24	0.00	0.00	-3.533	12.867	57.04	5.313	19.90	-133.71

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 70 11/19/81 0907 RUN 70

TEMP 78. PO. 14.6857

QPSF 75.00 VFPS 255.99 RNFT 1543036. MACH 0.2251

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	59	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.00	0.00	-3.667	12.433	59.20	5.300	18.07	-128.66
2	-1.99	0.00	-9.700	12.660	75.96	5.467	23.84	-130.67
3	-4.01	0.00	-16.633	13.120	99.33	5.633	30.84	-134.02
4	-5.98	0.00	-22.000	13.767	112.15	5.733	37.79	-138.02
5	-7.99	0.00	-27.633	14.633	121.14	5.867	44.46	-140.03
6	-10.01	0.00	-31.547	16.067	110.16	6.413	52.97	-150.03
7	-12.01	0.00	-37.100	17.613	106.91	6.180	59.96	-145.63
8	-14.01	0.00	-41.400	19.187	104.65	5.713	64.78	-142.62
9	-15.01	0.00	-43.667	20.200	105.00	5.367	68.66	-138.88
10	0.00	0.00	-3.767	12.467	58.43	5.200	18.13	-129.11
11	1.99	0.00	2.100	12.500	50.03	5.060	12.25	-126.41
12	4.00	0.00	6.467	12.467	42.51	5.000	8.33	-124.99
13	5.99	0.00	11.333	12.633	35.38	5.020	2.06	-124.76
14	8.02	0.00	15.800	13.000	36.49	5.500	-4.20	-125.12
15	10.00	0.00	19.933	13.633	37.38	5.867	-10.54	-128.40
16	12.02	0.00	25.300	14.567	36.23	5.567	-14.23	-125.80
17	14.01	0.00	28.187	16.293	16.64	6.633	-24.91	-118.01
18	15.99	0.00	31.187	17.873	16.47	7.000	-31.57	-117.61
19	18.02	0.00	33.360	20.267	-20.66	5.953	-31.51	-127.10
20	20.01	0.00	36.567	22.313	-47.89	5.567	-34.06	-130.18
21	22.02	0.00	39.373	24.860	-68.77	6.100	-41.74	-136.39
22	23.99	0.00	43.440	27.867	-83.91	6.480	-48.45	-150.07
23	24.98	0.00	46.100	29.533	-92.37	7.133	-53.94	-152.62
24	0.00	0.00	-3.767	12.467	59.26	5.200	18.13	-129.91

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 71 11/19/81 0907 RUN 71

TEMP 81. PO 14.6857

QPSF 75.00 VFPS 256.70 RNFT 1532185. MACH 0.2251

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	59	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.01	0.00	-3.633	13.567	62.06	5.700	17.85	-132.90
2	-2.02	0.00	-9.633	13.933	78.91	5.807	25.90	-133.62
3	-3.99	0.00	-14.900	14.600	101.96	5.487	29.90	-131.80
4	-5.98	0.00	-20.000	15.733	116.72	5.467	35.06	-131.96
5	-8.02	0.00	-24.547	16.967	124.59	5.313	41.54	-129.25
6	-10.01	0.00	-27.640	18.840	109.70	5.173	48.09	-131.74
7	-12.01	0.00	-31.533	20.500	110.28	4.900	52.47	-133.26
8	-14.02	0.00	-35.560	22.253	110.57	4.827	60.66	-132.46
9	-15.01	0.00	-37.500	23.293	112.24	4.867	64.41	-132.28
10	-0.01	0.00	-3.567	13.533	60.65	5.667	18.24	-132.71
11	2.05	0.00	2.167	13.267	51.63	5.667	11.45	-132.05
12	4.01	0.00	7.067	13.300	42.36	5.667	6.19	-131.46
13	6.01	0.00	12.400	13.467	35.92	5.700	1.11	-131.78
14	8.01	0.00	16.967	13.900	35.02	5.833	-3.83	-130.14
15	9.99	0.00	21.900	14.600	37.74	6.133	-10.62	-133.86
16	11.99	0.00	26.733	15.467	38.61	5.720	-13.75	-130.39
17	13.98	0.00	29.140	17.033	19.29	6.467	-22.88	-121.86
18	16.00	0.00	31.887	18.667	17.60	7.187	-31.57	-118.92
19	18.01	0.00	34.600	21.000	-11.64	6.233	-34.04	-127.86
20	20.01	0.00	37.153	23.060	-44.49	5.567	-33.86	-132.85
21	21.99	0.00	39.913	25.647	-69.94	6.073	-40.41	-136.88
22	24.02	0.00	43.240	28.500	-87.18	6.467	-46.28	-147.75
23	25.02	0.00	46.327	30.467	-97.17	6.833	-52.67	-155.91
24	0.00	0.00	-3.967	13.533	61.58	5.667	18.74	-132.21

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 72 11/19/81 0907 RUN 72

TEMP 84. PO 14.6562

QPSF 75.00 VFPS 257.67 RNFT 1519934. MACH 0.2254

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	59	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.00	0.00	-3.700	13.600	61.58	5.707	18.08	-130.96
2	-1.99	0.00	-9.467	14.067	78.98	5.787	24.92	-134.00
3	-3.99	0.00	-14.700	14.733	101.57	5.653	29.46	-132.93
4	-6.03	0.00	-19.967	15.867	116.31	5.253	35.87	-130.37
5	-8.01	0.00	-24.567	17.060	124.85	5.020	41.20	-126.16
6	-9.96	0.00	-27.113	18.880	109.39	4.747	45.77	-127.31
7	-12.01	0.00	-31.540	20.660	107.52	4.353	52.84	-127.01
8	-14.00	0.00	-35.900	22.340	110.86	4.167	59.79	-127.49
9	-15.00	0.00	-37.467	23.233	109.73	4.247	64.02	-130.30
10	0.00	0.00	-3.467	13.520	60.59	5.687	17.69	-131.28
11	2.00	0.00	1.933	13.400	50.35	5.547	11.17	-130.91
12	4.00	0.00	7.133	13.300	41.39	5.460	6.39	-130.69
13	5.99	0.00	12.067	13.433	34.32	5.653	1.59	-129.58
14	8.00	0.00	17.367	13.967	34.51	5.887	-4.91	-127.53
15	10.00	0.00	22.067	14.700	36.42	6.053	-10.96	-131.48
16	11.99	0.00	26.633	15.567	37.59	5.653	-13.66	-130.06
17	14.02	0.00	29.220	17.267	16.43	6.613	-24.43	-118.81
18	15.99	0.00	32.000	18.533	21.11	7.320	-30.85	-118.56
19	18.01	0.00	35.200	20.920	-6.76	6.753	-35.88	-126.53
20	20.02	0.00	37.800	23.200	-42.78	5.587	-34.13	-131.64
21	22.02	0.00	41.200	25.800	-66.06	5.900	-40.35	-141.21
22	24.02	0.00	43.740	28.600	-86.75	6.120	-47.32	-152.44
23	24.99	0.00	45.733	30.300	-98.47	6.720	-54.20	-154.74
24	-0.01	0.00	-3.467	13.600	60.23	5.533	17.81	-131.13

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 73 11/19/81 0907 RUN 73

TEMP 85. PO 14.6562

QPSF 75.00 VFPS 257.91 RNFT 1516390. MACH 0.2254

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	32	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.00	0.00	-3.100	9.833	53.30	6.233	20.93	-153.09
2	-1.99	0.00	-8.933	10.333	72.37	6.133	29.04	-153.19
3	-3.99	0.00	-14.633	11.107	99.55	6.000	34.44	-151.66
4	-6.00	0.00	-19.707	12.313	121.11	5.667	39.76	-148.02
5	-7.99	0.00	-23.220	14.033	120.77	5.567	45.96	-143.61
6	-10.00	0.00	-26.940	15.767	111.65	5.233	52.25	-148.76
7	-11.98	0.00	-31.620	17.513	122.47	5.020	59.12	-149.47
8	-14.00	0.00	-36.700	19.467	136.31	4.760	64.71	-144.62
9	-15.01	0.00	-38.880	20.460	137.49	4.900	70.49	-153.13
10	0.00	0.00	-3.167	9.800	51.91	6.167	21.60	-152.53
11	2.01	0.00	2.633	9.567	39.45	6.033	14.42	-150.61
12	4.00	0.00	7.900	9.600	30.00	5.833	6.78	-147.04
13	6.01	0.00	12.700	9.800	23.05	5.760	0.42	-142.40
14	8.00	0.00	17.733	10.233	23.46	5.747	-5.66	-136.76
15	10.00	0.00	22.500	11.000	26.17	5.733	-10.99	-135.44
16	11.99	0.00	26.500	11.967	23.21	5.733	-16.52	-129.07
17	14.01	0.00	30.567	13.400	13.71	5.793	-22.37	-124.84
18	16.01	0.00	32.567	15.327	9.11	6.173	-31.58	-121.17
19	18.00	0.00	35.200	17.873	-26.16	4.860	-30.09	-127.59
20	20.03	0.00	38.020	20.153	-57.80	4.300	-32.16	-131.89
21	21.99	0.00	41.333	22.667	-83.04	4.367	-38.75	-137.08
22	24.00	0.00	44.533	25.893	-105.23	5.100	-44.94	-143.82
23	24.99	0.00	46.460	27.327	-112.34	5.500	-48.27	-144.38
24	0.00	0.00	-3.167	9.873	53.47	6.100	20.97	-152.51

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 74 11/19/81 1346 RUN 74

TEMP 64. P0 14.6464

QPSF 75.00 VFPS 252.97 RNFT 1593290. MACH 0.2254

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	.74	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.00	-0.76	-2.033	11.300	26.48	6.213	22.70	-158.20
2	-2.05	-0.76	-8.167	11.733	46.10	6.367	26.08	-158.55
3	-4.02	-0.76	-14.700	12.367	70.29	6.147	33.45	-153.59
4	-6.05	-0.76	-20.400	13.333	89.37	5.867	39.50	-145.94
5	-7.92	-0.76	-25.467	14.333	100.50	5.600	47.40	-136.62
6	-10.04	-0.76	-28.453	15.900	75.91	6.167	56.31	-144.96
7	-11.98	-0.76	-33.133	17.600	73.16	6.533	74.15	-153.44
8	-0.00	-0.76	-1.833	11.347	26.75	5.867	23.27	-157.02
9	2.01	-0.76	3.333	11.100	15.36	5.667	15.57	-153.52
10	4.03	-0.76	7.900	11.000	7.69	5.533	7.69	-148.32
11	5.98	-0.76	12.033	11.000	3.90	5.507	1.88	-140.70
12	8.01	-0.76	16.333	11.300	6.55	6.033	-7.30	-136.78
13	9.99	-0.76	20.667	11.767	9.27	6.013	-13.58	-131.41
14	12.00	-0.76	24.093	12.913	-3.48	5.967	-19.33	-121.56
15	0.01	-0.76	-2.033	11.433	25.15	5.780	22.96	-157.59

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 75 11/19/81 1346 RUN 75

TEMP 73. PO 14.6464

QPSF 75.00 VFPS 255.14 RNFT 1559320. MACH 0.2254

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	75	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	-0.77	-1.767	11.000	20.54	0.167	1.65	-13.50
2	-2.03	-0.77	-8.047	11.400	39.25	0.167	0.31	-9.64
3	-3.99	-0.77	-14.300	11.933	62.75	0.133	2.18	-6.27
4	-6.06	-0.77	-20.233	12.967	82.00	-0.100	3.28	-5.39
5	-7.90	-0.77	-24.873	13.980	93.51	-0.347	7.33	-1.32
6	-10.05	-0.77	-27.880	15.753	69.38	-0.167	13.04	-3.93
7	-12.01	-0.77	-33.333	17.487	71.95	0.133	14.61	-3.71
8	-0.00	-0.77	-1.567	10.967	20.56	0.100	1.96	-11.69
9	1.99	-0.77	3.367	10.833	10.03	0.133	0.16	-15.80
10	4.02	-0.77	8.133	10.733	5.87	0.487	-1.71	-21.17
11	5.96	-0.77	12.300	10.733	1.78	0.767	-3.06	-24.14
12	8.00	-0.77	16.567	10.933	4.78	1.500	-7.34	-27.30
13	10.03	-0.77	20.967	11.433	6.72	1.567	-8.65	-25.77
14	12.00	-0.77	[illegible].747	12.433	1.21	1.127	-9.44	-13.61
15	-0.00	-0.77	-1.567	11.000	22.25	0.000	2.34	-11.81

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 76 11/19/81 1346 RUN 76

TEMP 75. PO 14.6464

QPSF 75.00 VFPS 255.62 RNFT 1551937. MACH 0.2254

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	75	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	-0.77	-0.633	10.920	1.07	-0.273	0.75	-2.48
2	-2.03	-0.77	-6.667	11.300	16.10	-0.167	-1.59	-1.11
3	-4.02	-0.77	-12.633	12.033	33.65	-0.200	-1.07	-0.29
4	-6.05	-0.77	-18.367	12.800	51.21	-0.460	1.65	3.87
5	-7.91	-0.77	-22.600	14.033	53.39	-0.520	6.42	6.35
6	-10.04	-0.77	-26.467	15.633	42.47	-0.200	9.06	1.14
7	-11.98	-0.77	-31.933	17.100	50.79	0.100	11.22	-0.94
8	-0.00	-0.77	-0.433	10.900	1.06	-0.333	0.21	-2.44
9	2.01	-0.77	4.433	10.633	-6.78	-0.453	0.52	-4.66
10	4.04	-0.77	9.067	10.567	-8.77	-0.167	-0.25	-8.64
11	5.98	-0.77	13.100	10.600	-10.57	0.047	-0.48	-9.78
12	8.01	-0.77	17.367	10.967	-7.37	0.733	-3.60	-12.12
13	9.99	-0.77	21.233	11.400	0.94	0.967	-6.30	-12.68
14	11.99	-0.77	24.493	12.533	11.77	0.533	-6.70	-8.87
15	0.02	-0.77	-0.533	11.067	-0.56	-0.767	1.81	-2.89

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 77 11/19/81 1346 RUN 77

TEMP 90. PO 14.6071

QPSF 75.00 VFPS 259.52 RNFT 1496366. MACH 0.2257

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	77	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.02	0.02	8.267	9.167	-136.66	-0.587	4.61	2.15
2	-2.03	0.02	4.367	9.200	-158.87	-0.767	3.00	2.11
3	-4.01	0.02	0.733	9.467	-181.33	-0.833	2.92	3.05
4	-6.06	0.02	-2.933	9.833	-200.62	-1.340	4.59	6.69
5	-7.91	0.02	-6.267	10.300	-216.25	-1.967	8.27	13.56
6	-10.04	0.02	-10.133	10.953	-232.83	-2.133	6.79	15.18
7	-12.02	0.02	-15.200	12.067	-541.49	-2.167	9.12	16.61
8	0.01	0.02	8.233	9.167	-139.14	-1.000	4.04	3.12
9	1.99	0.02	11.500	9.200	-116.05	-1.100	5.02	3.61
10	4.07	0.02	14.533	9.333	-93.91	-0.833	1.93	-0.19
11	5.97	0.02	17.267	9.467	-71.73	-0.633	2.25	-0.93
12	8.00	0.02	20.300	9.900	-49.21	0.007	-1.69	-2.15
13	9.98	0.02	23.567	10.507	-26.19	0.500	-4.97	-1.74
14	12.03	0.02	26.273	11.433	-3.63	0.487	-6.27	1.46
15	-0.00	0.02	8.200	9.200	-136.93	-0.967	3.84	2.92

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 78 11/19/81 1346 RUN 78

TEMP 94. PO. 14.6071

QPSF 75.00 VFPS 260.47 RNFT 1482623. MACH 0.2257

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	75	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.00	0.02	-0.600	10.433	1.41	-0.733	3.47	3.63
2	-2.04	0.04	-6.633	10.867	15.06	-0.467	2.72	1.80
3	-4.01	0.04	-12.333	11.487	30.31	-0.453	4.18	1.36
4	-6.05	0.04	-18.333	12.400	49.25	-0.833	3.59	5.76
5	-7.91	0.04	-22.640	13.467	53.94	-1.460	7.93	10.79
6	-10.03	0.04	-26.867	15.133	46.90	-1.987	7.68	14.82
7	-12.01	0.04	-32.200	16.800	60.34	-1.767	9.08	11.59
8	0.02	0.04	-0.300	10.367	1.41	-0.767	3.38	1.83
9	2.00	0.04	4.533	10.167	-4.96	-0.867	3.59	1.72
10	4.03	0.04	9.167	10.167	-8.57	-0.767	1.45	1.37
11	5.98	0.04	13.367	10.133	-8.94	-0.500	1.43	-0.00
12	8.00	0.04	17.633	10.433	-5.75	0.033	-1.36	0.37
13	9.98	0.04	21.600	11.033	1.28	0.500	-4.12	-0.56
14	12.00	0.04	24.453	11.967	13.85	0.413	-3.96	2.48
15	0.01	0.04	-0.633	10.367	-0.25	-0.833	3.52	2.94

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 79 11/19/81 1346 RUN 79

TEMP 94. PO 14.6071

QPSF 75.00 VFPS 260.47 RNFT 1482623. MACH 0.2257

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	75	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.13	0.01	-1.433	10.533	19.30	-0.133	6.45	-9.75
2	-2.03	0.01	-8.067	11.000	38.52	0.040	6.48	-8.32
3	-3.99	0.01	-14.267	11.600	60.75	0.133	6.65	-8.14
4	-6.06	-0.01	-20.267	12.533	80.81	-0.533	7.44	-3.54
5	-7.90	-0.03	-24.967	13.567	91.98	-0.900	9.56	2.79
6	-10.04	-0.03	-28.480	15.300	111.09	-1.533	10.35	4.82
7	-12.01	-0.03	-33.467	16.967	118.09	-1.033	11.84	2.26
8	0.02	-0.03	-1.800	10.600	18.95	-0.333	6.38	-8.13
9	1.99	-0.03	3.400	10.333	12.41	-0.420	5.90	-10.97
10	4.01	-0.03	8.167	10.233	6.60	-0.167	1.69	-12.93
11	5.98	-0.03	12.600	10.333	3.08	0.033	1.24	-13.47
12	8.01	-0.03	17.000	10.633	4.93	0.633	-1.77	-12.78
13	9.99	-0.03	21.433	11.167	6.53	0.800	-3.72	-8.49
14	12.02	-0.03	25.433	12.167	3.78	0.167	-0.71	-4.46
15	0.02	-0.01	-1.633	10.540	18.90	-0.473	5.91	-8.61

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 80 11/19/81 1346 RUN 80

TEMP 90. PO 14.5973

QPSF 75.00 VFPS 259.61 RNFT 1495863. MACH 0.2258

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	74	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTB+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.02	-0.01	-1.700	11.033	22.81	5.133	28.34	-156.99
2	-2.03	-0.01	-8.067	11.433	41.48	5.367	34.24	-158.59
3	-3.99	-0.01	-14.400	12.027	65.40	5.393	41.50	-158.52
4	-6.07	-0.01	-20.400	12.987	85.08	5.140	48.10	-158.51
5	-7.94	-0.01	-25.120	14.033	95.33	4.680	56.65	-155.74
6	-10.04	-0.01	-28.300	15.800	74.55	4.100	64.80	-145.25
7	-12.04	-0.01	-33.200	17.280	77.29	4.827	72.18	-149.30
8	0.01	-0.01	-1.567	11.067	22.54	4.833	28.82	-155.86
9	2.00	-0.01	3.567	10.933	12.76	4.640	21.41	-153.09
10	4.02	-0.01	8.267	10.733	6.76	4.600	12.62	-147.42
11	5.97	-0.01	12.500	10.833	2.75	4.633	6.34	-142.70
12	8.00	-0.01	16.900	11.167	5.97	5.233	-2.80	-141.49
13	10.02	-0.01	21.200	11.633	8.08	5.547	-9.87	-139.91
14	12.03	-0.01	25.027	12.573	4.06	4.667	-12.28	-134.53
15	0.02	-0.01	-1.567	11.000	22.77	4.667	28.51	-155.30

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 81 11/19/81 1346 RUN 81

TEMP 90. PO 14.5973

QPSF 75.00 VFPS 259.61 RNFT 1495863. MACH 0.2258

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	81	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.02	-0.01	7.900	9.600	-130.85	4.700	26.30	-150.83
2	-2.04	-0.01	4.000	9.633	-154.44	5.067	31.38	-154.86
3	-3.99	-0.01	0.433	9.833	-173.00	5.133	38.05	-153.98
4	-6.05	-0.01	-2.967	10.113	-191.86	4.967	43.29	-153.16
5	-7.92	-0.01	-6.300	10.633	-209.71	4.500	52.00	-144.49
6	-10.04	-0.01	-10.300	11.400	-228.07	4.333	59.58	-143.77
7	-11.98	-0.01	-15.100	12.267	-234.96	4.533	68.06	-144.59
8	-0.00	-0.01	7.800	9.567	-134.83	4.653	26.20	-152.89
9	2.00	-0.01	11.000	9.633	-114.00	4.220	20.51	-146.09
10	4.02	-0.01	14.000	9.700	-91.83	4.067	12.72	-139.43
11	5.98	-0.01	16.867	9.933	-69.54	4.033	7.80	-132.95
12	8.01	-0.01	19.967	10.333	-46.21	4.700	-2.38	-129.70
13	9.98	-0.01	23.087	10.933	-23.71	5.120	-9.73	-128.42
14	12.02	-0.01	25.533	11.833	-0.28	4.500	-12.97	-128.47
15	-0.00	-0.01	7.800	9.567	-133.66	4.667	26.17	-151.32

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 82 11/19/81 1346 RUN 82

TEMP 80. PO 14.5973

QPSF 75.00 VFPS 257.24 RNFT 1531157. MACH 0.2258

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	82	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.03	-0.01	-1.067	8.100	-123.38	4.500	27.70	-148.72
2	-2.05	-0.01	-1.800	8.267	-139.96	4.967	33.05	-155.81
3	-4.02	-0.01	-2.500	8.533	-157.79	5.167	41.48	-161.05
4	-6.05	-0.01	-3.200	8.700	-172.52	5.500	50.62	-165.35
5	-7.91	-0.01	-3.967	9.067	-185.59	5.673	62.15	-174.17
6	-10.03	-0.01	-5.000	9.500	-194.56	5.887	73.85	-183.41
7	-12.00	-0.01	-6.033	10.100	-205.56	5.633	81.74	-178.12
8	-0.00	-0.01	-1.000	8.133	-120.93	4.433	27.11	-150.76
9	1.99	-0.01	-0.067	7.967	-106.79	4.133	19.90	-142.93
10	4.02	-0.01	0.833	7.900	-92.20	3.900	12.24	-135.56
11	5.98	-0.01	1.700	7.700	-76.30	3.667	7.02	-134.30
12	8.02	-0.01	2.667	7.700	-57.85	3.833	0.21	-133.27
13	9.98	-0.01	3.600	7.700	-39.36	4.500	-6.79	-136.05
14	11.99	-0.01	4.500	7.833	-21.20	4.667	-13.70	-142.40
15	0.01	-0.01	-0.967	8.200	-122.21	4.533	26.93	-150.83

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 83 11/19/81 1346 RUN 83

TEMP 77. PB 14.5973

QPSF 75.00 VFPS 256.52 RNFT 1542019. MACH 0.2258

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	83	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	-0.01	-9.567	9.553	10.22	4.833	29.18	-153.46
2	-2.03	-0.01	-13.033	10.133	37.63	5.067	35.22	-157.31
3	-4.01	-0.01	-16.900	10.733	70.99	5.313	42.17	-162.28
4	-6.05	-0.01	-20.733	11.480	99.42	5.473	52.38	-164.15
5	-7.92	-0.01	-22.433	12.607	105.87	5.460	63.58	-167.15
6	-10.05	0.01	-23.600	13.800	101.90	5.667	75.23	-173.26
7	-12.01	0.01	-25.733	15.080	109.05	5.833	87.96	-181.27
8	0.01	0.01	-9.433	9.500	10.45	4.700	28.44	-154.61
9	2.00	0.01	-6.000	9.100	-15.77	4.533	20.98	-150.62
10	4.03	0.01	-2.600	8.833	-37.66	4.367	13.25	-144.88
11	5.98	0.01	0.600	8.567	-57.97	4.367	5.73	-145.17
12	8.01	0.01	3.800	8.353	-78.22	4.467	-1.08	-144.12
13	9.99	0.01	7.500	8.333	-100.54	5.007	-8.79	-147.37
14	12.00	0.00	11.167	8.667	-124.33	5.300	-15.99	-152.63
15	-0.00	0.00	-9.567	9.533	11.05	4.700	28.50	-153.76

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 84 11/19/81 1346 RUN 84

TEMP 71. PB 14.5973

QPSF 75.00 VFPS 255.09 RNFT 1564135. MACH 0.2258

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	84	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	0.00	-0.933	7.667	-124.60	-1.233	6.14	-3.68
2	-2.04	0.00	-1.667	7.933	-143.62	-1.000	5.46	-5.08
3	-4.02	0.00	-2.300	8.167	-159.86	-1.027	6.99	-6.61
4	-6.05	0.00	-2.967	8.433	-178.73	-1.220	8.18	-3.52
5	-7.91	0.00	-3.633	8.833	-193.00	-1.567	11.80	0.61
6	-10.05	0.00	-4.573	9.233	-206.55	-2.033	13.41	3.09
7	-12.01	0.00	-5.467	9.800	-217.40	-2.300	14.05	7.02
8	0.02	0.00	-0.833	7.667	-123.58	-1.233	6.54	-3.82
9	2.00	0.00	0.000	7.533	-108.31	-1.300	5.45	-3.02
10	4.02	0.00	0.867	7.400	-92.18	-1.400	3.97	-2.52
11	5.96	0.00	1.767	7.267	-74.96	-1.500	3.29	-1.32
12	8.00	0.00	2.800	7.167	-58.78	-1.400	1.35	-0.54
13	10.02	0.00	3.767	7.200	-42.31	-1.167	0.36	-1.21
14	12.00	0.00	4.733	7.367	-23.39	-0.993	-1.09	-2.71
15	0.01	0.00	-0.867	7.700	-124.92	-1.200	6.40	-4.02

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 85 11/19/81 1346 RUN 85

TEMP 73. P0 14.5973

QPSF 75.00 VFPS 255.57 RNFT 1556704. MACH 0.2258

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	82	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.02	0.00	-0.900	8.467	-123.86	4.647	28.28	-149.76
2	-2.03	0.00	-1.633	8.600	-141.71	5.233	33.13	-160.38
3	-4.01	0.00	-2.333	8.900	-158.01	5.467	42.41	-165.24
4	-6.06	0.00	-3.067	9.167	-176.80	5.733	52.04	-170.15
5	-7.90	0.00	-3.833	9.433	-189.16	5.980	63.36	-178.25
6	-10.04	0.00	-4.833	9.860	-196.66	6.167	74.35	-186.03
7	-11.98	0.00	-5.867	10.507	-207.79	5.633	82.33	-180.74
8	0.01	0.00	-0.933	8.467	-124.35	4.500	28.70	-151.26
9	2.02	0.00	0.033	8.280	-109.05	4.147	20.30	-145.76
10	4.03	0.00	0.900	8.167	-92.94	3.887	13.20	-139.46
11	5.99	0.00	1.800	7.933	-77.08	3.700	7.46	-138.21
12	8.01	0.00	2.667	7.933	-59.17	3.900	0.74	-139.57
13	9.98	0.00	3.667	7.967	-40.87	4.300	-6.96	-144.11
14	12.00	0.00	4.567	8.033	-24.55	4.633	-13.20	-148.00
15	0.01	0.00	-0.833	8.500	-125.37	4.500	27.20	-152.42

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 86 11/19/81 1346 RUN 86

TEMP 75. P0 14.5875

QPSF 75.00 VFPS 256.13 RNFT 1548811. MACH 0.2259

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	81	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.03	0.00	8.533	9.933	-133.79	4.453	26.30	-152.33
2	-2.05	0.00	4.567	10.000	-157.09	4.733	30.92	-154.48
3	-4.01	0.00	1.100	10.200	-176.08	4.800	37.41	-153.19
4	-6.05	0.00	-2.633	10.567	-196.72	4.500	45.15	-150.84
5	-7.92	0.00	-5.833	10.880	-213.92	4.020	52.59	-144.11
6	-10.04	0.00	-9.933	11.793	-230.13	4.033	61.78	-143.70
7	-12.01	0.00	-14.400	12.633	-236.66	4.033	67.47	-144.45
8	0.02	0.00	8.567	9.967	-136.38	4.427	26.25	-150.73
9	2.01	0.00	11.767	10.000	-114.41	4.033	21.04	-145.14
10	4.04	0.00	14.700	10.167	-93.47	3.800	14.28	-139.05
11	5.97	0.00	17.200	10.173	-71.97	3.980	7.54	-135.12
12	8.01	0.00	20.367	10.567	-47.18	4.633	-2.09	-134.08
13	9.98	0.00	23.667	11.300	-25.70	5.113	-10.56	-133.03
14	12.00	0.00	25.760	12.267	-3.05	4.633	-12.60	-133.97
15	-0.00	0.00	8.467	10.033	-138.78	4.400	26.24	-150.49

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 87 11/19/81 1346 RUN 87

TEMP 56. P0 14.5973

QPSF 75.00 VFPS 251.46 RNFT 1621816. MACH 0.2258

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	75	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORT+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.02	-0.02	-0.100	10.733	-1.64	-1.153	5.37	-2.56
2	-2.04	-0.02	-6.233	11.153	12.25	-0.827	4.53	-0.48
3	-3.99	-0.02	-12.067	11.733	29.72	-0.920	4.87	-2.09
4	-6.05	-0.02	-17.900	12.607	47.95	-1.120	7.08	3.13
5	-7.90	-0.02	-22.333	13.800	49.72	-1.853	11.49	7.53
6	-10.05	-0.02	-26.733	15.393	45.35	-2.120	11.20	9.05
7	-12.00	-0.02	-32.353	17.120	53.65	-2.253	14.76	10.83
8	0.01	-0.02	-0.033	10.767	-1.31	-1.087	4.59	-2.83
9	2.01	-0.02	4.900	10.500	-7.78	-1.367	5.69	-1.98
10	4.03	-0.02	9.300	10.400	-10.09	-1.120	4.64	-4.11
11	5.98	-0.02	13.467	10.467	-11.81	-0.767	3.04	-4.94
12	8.01	-0.02	17.900	10.767	-8.27	-0.120	-1.45	-5.71
13	9.98	-0.02	21.900	11.400	-0.37	0.247	-3.87	-3.72
14	12.02	-0.02	25.060	12.233	13.20	0.047	-2.97	-1.26
15	0.01	-0.02	0.000	10.767	-2.32	-1.187	5.64	-0.72

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 88 11/19/81 1346 RUN 88

TEMP 60. PO 14.5973

QPSF 75.00 VFPS 252.43 RNFT 1606090. MACH 0.2258

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	88	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.02	-0.01	-0.600	14.533	5.93	-0.787	5.85	-3.07
2	-2.03	-0.01	-6.600	14.833	18.31	-0.433	3.42	-3.35
3	-4.01	-0.01	-12.300	15.273	31.31	-0.467	3.82	-3.79
4	-6.05	-0.01	-18.200	16.100	47.37	-0.833	5.99	1.24
5	-7.91	-0.02	-22.667	17.213	46.73	-1.613	11.18	9.78
6	-10.04	-0.03	-27.653	18.633	45.94	-2.047	11.87	14.31
7	-12.01	-0.03	-33.033	20.273	46.05	-2.067	10.94	12.80
8	-0.00	-0.03	-0.500	14.533	6.14	-0.707	4.68	-2.41
9	2.01	-0.03	4.467	14.267	1.52	-0.900	5.42	-2.96
10	4.03	-0.03	9.067	14.167	-0.41	-0.633	4.48	-5.70
11	6.00	-0.03	13.100	14.200	-3.79	-0.267	3.86	-5.00
12	8.01	-0.03	17.567	14.600	1.05	0.500	-0.80	-5.74
13	9.99	-0.03	21.733	15.200	9.29	0.833	-3.32	-5.65
14	12.00	-0.03	24.800	16.133	22.63	0.567	-2.87	-2.44
15	0.02	-0.03	-0.633	14.600	5.46	-0.800	4.98	-1.87

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 89 11/19/81 1346 : RUN 89

TEMP 63. PO 14.6071

QPSF 75.00 VFPS 253.07 RNFT 1594997. MACH 0.2257

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	88	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	0

AMES=TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	=0.05	=0.03	=1.933	14.700	26.12	=0.267	7.34	=12.23
2	=2.03	=0.03	=8.000	15.000	40.83	0.100	6.29	=11.99
3	=3.99	=0.03	=14.367	15.533	62.93	=0.133	7.12	=9.89
4	=6.07	=0.03	=20.300	16.333	74.43	=0.600	10.25	=3.43
5	=7.90	=0.03	=25.200	17.327	83.51	=1.160	11.85	3.02
6	=10.03	=0.03	=28.640	18.907	65.24	=1.567	13.81	6.60
7	=12.00	=0.03	=33.333	20.340	59.10	=1.487	14.24	6.96
8	0.01	=0.03	=1.600	14.700	24.77	=0.160	7.01	=12.51
9	2.04	=0.03	3.533	14.487	17.81	=0.133	6.05	=17.01
10	4.01	=0.03	8.100	14.367	14.65	0.133	4.39	=18.34
11	5.99	=0.03	12.500	14.433	11.42	0.633	2.82	=18.80
12	8.01	=0.03	16.967	14.733	13.88	1.233	=1.73	=18.71
13	9.99	=0.03	21.500	15.300	14.90	1.433	=4.46	=14.98
14	12.02	=0.03	25.927	16.240	12.66	0.800	=2.14	=8.70
15	0.01	=0.03	=1.900	14.633	25.25	=0.113	6.78	=12.15

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 90 11/19/81 1346 : RUN 90

TEMP 68. PO. 14.6071

QPSF 75.00 VFPS 254.28 RNFT 1575923. MACH 0.2257

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	75	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	-0.03	-1.400	10.933	17.30	-0.533	7.34	-10.60
2	-2.03	-0.03	-7.633	11.367	34.45	-0.327	6.86	-11.47
3	-4.03	-0.03	-14.000	12.000	58.30	-0.333	7.27	-8.72
4	-6.06	-0.03	-19.933	12.900	77.36	-0.933	10.60	-2.60
5	-7.90	-0.03	-24.680	14.100	83.67	-1.367	11.76	1.61
6	-10.05	-0.03	-28.333	15.627	68.70	-1.787	12.80	5.86
7	-11.98	-0.03	-33.000	17.167	73.20	-1.400	13.92	0.48
8	-0.00	-0.03	-1.467	10.967	15.71	-0.567	7.21	-10.16
9	2.00	-0.03	3.700	10.700	7.56	-0.533	6.14	-14.51
10	4.02	-0.03	8.413	10.633	3.63	-0.433	5.15	-16.34
11	5.99	-0.03	12.600	10.567	0.36	0.033	3.11	-16.60
12	8.01	-0.03	17.133	10.933	2.65	0.567	-1.80	-17.56
13	9.99	-0.03	21.633	11.547	2.24	0.733	-3.79	-13.03
14	12.00	-0.03	25.467	12.400	-1.71	0.533	-4.20	-6.82
15	0.01	-0.03	-1.267	10.967	16.21	-0.600	7.28	-9.46

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 91 11/19/81 1346 RUN 91

TEMP 72. PO 14.6071

QPSF 75.00 VFPS 255.24 RNFT 1560937. MACH 0.2257

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	74	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	-0.03	-1.300	11.360	21.05	5.173	29.16	-159.17
2	-2.04	-0.03	-7.667	11.767	40.47	5.400	34.84	-161.59
3	-4.02	-0.03	-13.900	12.267	64.45	5.513	41.26	-163.33
4	-6.05	-0.03	-20.000	13.333	82.05	5.267	50.18	-163.13
5	-7.90	-0.03	-24.887	14.333	94.45	4.900	59.35	-154.95
6	-10.05	-0.03	-28.200	16.180	71.30	4.567	67.09	-152.69
7	-11.98	-0.03	-33.033	17.500	74.00	4.867	75.45	-154.70
8	0.02	-0.03	-1.433	11.373	20.22	5.000	29.56	-158.54
9	1.99	-0.03	3.800	11.167	12.26	4.867	22.43	-156.00
10	4.02	-0.03	8.400	11.067	4.89	4.587	14.32	-150.20
11	5.98	-0.03	12.500	10.873	0.90	.800	8.34	-145.02
12	8.01	-0.03	17.000	11.400	4.37	5.367	-1.93	-144.19
13	9.99	-0.03	21.167	11.867	5.57	5.920	-10.46	-147.26
14	12.00	-0.03	25.333	12.867	2.46	5.567	-15.63	-140.43
15	0.01	-0.03	-1.467	11.367	20.22	4.947	29.51	-159.11

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 92 11/19/81 1346 RUN 92

TEMP 74. PO 14.6071

QPSF 75.00 VFPS 255.72 RNFT 1553535. MACH 0.2257

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	92	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	-0.01	-1.833	15.020	29.32	4.520	25.32	-139.19
2	-2.06	-0.01	-8.067	15.400	45.32	4.767	30.59	-142.21
3	-3.99	-0.01	-14.333	15.933	66.40	4.967	35.40	-145.51
4	-6.04	-0.01	-20.200	16.700	78.31	4.747	44.58	-144.62
5	-7.94	-0.01	-25.067	17.433	85.71	4.400	54.71	-139.84
6	-10.04	-0.01	-28.447	19.267	64.87	3.973	61.01	-131.98
7	-11.98	-0.01	-33.047	20.507	64.22	4.087	69.02	-134.80
8	0.02	-0.01	-1.533	15.167	28.42	4.467	24.10	-139.84
9	2.00	-0.01	3.300	14.933	20.78	4.213	19.16	-134.83
10	4.00	-0.01	8.133	14.833	16.21	4.333	12.35	-131.65
11	5.99	-0.01	12.500	14.867	14.35	4.747	5.88	-134.20
12	8.01	-0.01	16.680	15.100	15.70	5.447	-2.90	-134.95
13	10.00	-0.01	21.300	15.800	17.41	6.067	-11.76	-140.86
14	12.03	-0.01	25.167	16.567	14.31	5.633	-14.10	-139.89
15	0.01	-0.01	-1.567	15.100	27.78	4.367	24.52	-139.70

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 93 11/19/81 1346 RUN 93

TEMP 81. PO 14.6071

QPSF 75.00 VFPS 257.39 RNFT 1528080. MACH 0.2257

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
7.02	0	.92	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.00	-0.01	-1.567	15.347	27.67	4.340	24.47	-135.48
2	-2.05	-0.01	-7.700	15.633	42.91	4.567	29.31	-136.85
3	-3.99	-0.01	-14.100	16.133	62.51	4.733	35.62	-139.37
4	-6.06	-0.01	-19.933	16.853	77.20	4.560	43.66	-142.50
5	-7.91	-0.01	-24.767	17.767	84.41	4.200	51.77	-137.94
6	-10.03	-0.01	-28.640	19.400	78.58	3.900	60.35	-133.07
7	-12.00	-0.01	-32.953	20.960	60.87	4.033	68.29	-133.36
8	-0.00	-0.01	-1.567	15.400	27.22	4.207	24.33	-135.56
9	1.99	-0.01	3.567	15.153	20.00	4.033	18.71	-131.93
10	4.03	-0.01	8.233	14.947	15.49	4.167	11.81	-132.58
11	5.97	-0.01	12.500	15.067	12.24	4.540	5.71	-130.01
12	8.00	-0.01	16.800	15.333	14.22	5.333	-3.01	-133.02
13	10.00	-0.01	21.367	15.967	15.53	6.000	-11.46	-137.33
14	12.00	-0.01	25.233	16.873	12.47	5.433	-13.73	-133.16
15	0.01	-0.01	-1.733	15.333	25.87	4.193	24.35	-134.55

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 94 11/19/81 1346 RUN 94

TEMP 84. PO 14.6071

QPSF 75.00 VFPS 258.10 RNFT 1517285. MACH 0.2257

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
7.02	0	.92	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.14	-0.01	-1.183	15.333	25.57	4.567	26.05	-146.26
2	-2.04	-0.01	-7.900	15.667	41.35	4.993	31.64	-147.55
3	-4.02	-0.01	-14.267	16.100	62.82	5.000	39.63	-149.61
4	-6.04	-0.01	-20.000	16.933	74.10	4.900	47.76	-149.58
5	-7.90	-0.01	-24.867	17.800	81.51	4.573	57.12	-147.37
6	-10.05	-0.01	-28.333	19.487	62.07	4.220	65.74	-142.41
7	-12.00	-0.01	-32.933	20.833	61.28	4.300	72.96	-141.28
8	0.02	-0.01	-1.600	15.433	25.39	4.567	26.92	-145.72
9	2.02	-0.01	3.680	15.167	19.97	4.373	20.48	-142.22
10	4.02	-0.01	8.267	15.000	14.39	4.433	13.04	-139.15
11	5.99	-0.01	12.467	15.100	12.25	4.807	6.75	-138.23
12	8.01	-0.01	16.900	15.333	14.92	5.667	-1.85	-141.52
13	9.98	-0.01	21.367	16.033	14.95	6.220	-10.57	-144.50
14	12.02	-0.01	25.373	16.900	11.78	5.567	-13.81	-142.91
15	0.02	-0.01	-1.633	15.433	24.93	4.587	26.84	-145.05

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 95 11/19/81 1346 RUN 95

TEMP 86. PO 14.5973

QPSF 83.00 VFPS 272.11 RNFT 1588298. MACH 0.2376

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	95	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	1

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.02	0.00	-0.994	21.325	-3.01	5.259	26.42	-139.67
2	0.02	-1.99	-0.964	21.223	-2.47	1.084	25.80	-128.05
3	0.02	-4.02	-1.145	21.355	-4.27	-3.193	24.16	-112.69
4	0.02	-6.00	-0.512	21.620	-9.47	-7.669	21.82	-94.17
5	0.02	-7.99	0.608	21.898	-18.42	-13.307	19.49	-63.61
6	0.02	-10.02	1.446	22.964	-19.18	-18.766	21.09	-35.54
7	0.02	-12.00	1.807	23.735	-23.34	-22.602	19.36	-13.21
8	0.02	-14.00	2.440	25.211	-17.08	-27.199	21.05	17.06
9	0.02	-15.99	3.464	26.988	-24.80	-31.446	23.94	45.51
10	0.02	-18.02	4.337	29.398	-34.82	-36.789	29.38	77.82
11	0.02	-20.02	5.512	32.319	-47.59	-41.849	33.53	110.70
12	0.02	-21.99	7.639	35.572	-67.92	-46.837	33.09	133.42
13	0.02	-24.01	8.675	37.590	-77.01	-49.843	35.18	277.41
14	0.02	-26.02	10.542	40.964	-88.44	-54.102	38.01	169.76
15	0.02	-28.01	13.175	44.813	-102.81	-58.813	41.87	180.11
16	0.02	0.00	-0.934	21.416	-3.60	5.392	23.82	-139.24
17	0.02	2.01	-1.114	21.572	-4.00	9.157	21.33	-138.49
18	0.02	3.99	-0.813	21.554	-9.82	13.199	23.83	-153.49
19	0.02	6.01	-0.331	22.133	-19.38	18.343	28.35	-198.12
20	0.02	7.99	0.663	22.578	-31.90	22.380	34.08	-213.99
21	0.02	10.01	1.837	23.560	-48.34	27.145	32.19	-229.36
22	0.02	12.00	3.042	24.608	-58.20	31.837	31.89	-253.78
23	0.02	14.01	4.337	26.114	-68.52	37.265	30.06	-282.63
24	0.02	16.00	5.392	27.169	-67.44	41.849	26.26	-309.83
25	0.02	18.01	6.024	29.367	-75.74	46.837	23.36	-337.59
26	0.02	19.99	6.898	31.958	-81.32	51.976	20.94	-370.56
27	0.02	22.00	7.952	34.940	-92.38	57.289	20.56	-403.72
28	0.02	24.02	9.066	38.102	-108.81	62.157	18.74	-428.64
29	0.02	26.01	8.705	42.440	-86.72	62.355	-19.21	-360.28
30	0.02	28.00	9.464	45.934	-88.38	66.608	-26.16	-380.01
31	0.02	0.00	-0.904	21.536	-4.34	4.398	25.86	-139.75

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 96 11/19/81 1346 RUN 96

TEMP 85. PO 14.5678

QPSF 83.00 VFPS 272.14 RNFT 1590396. MACH 0.2378

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	95	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	1

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	0.00	-0.873	22.470	4.95	4.307	26.59	-133.97
2	0.01	-2.01	-0.723	22.199	7.68	-0.452	24.25	-116.35
3	0.01	-4.00	-0.331	22.380	2.03	-5.024	22.82	-99.52
4	0.01	-6.01	0.392	22.530	-6.88	-10.380	20.20	-77.14
5	0.01	-8.00	1.386	23.163	-13.70	-15.705	22.32	-47.62
6	0.01	-10.00	2.072	24.006	-18.13	-20.873	22.00	-23.12
7	0.01	-12.00	2.892	25.181	-24.46	-25.572	22.73	2.56
8	0.01	-14.00	3.584	26.319	-17.94	-30.012	25.74	27.96
9	0.01	-16.01	4.639	28.410	-27.75	-35.066	30.97	56.18
10	0.01	-18.02	5.633	31.066	-37.11	-39.880	33.05	89.36
11	0.01	-20.02	6.867	33.319	-49.00	-44.639	36.13	118.36
12	0.01	-22.01	8.042	35.470	-60.16	-46.566	31.74	127.15
13	0.01	-24.01	4.675	38.964	-78.40	-51.307	31.52	150.27
14	0.01	-26.01	12.440	42.199	-92.95	-55.904	30.92	170.56
15	0.01	-28.00	14.934	45.663	-106.90	-60.000	34.30	181.32
16	0.01	0.01	-0.843	22.440	6.40	4.458	27.54	-134.41
17	0.01	2.00	-1.145	22.560	7.12	8.825	21.28	-138.23
18	0.01	4.02	-0.904	22.819	0.83	13.313	21.72	-152.14
19	0.01	6.00	-0.181	23.193	-9.74	18.530	29.90	-193.21
20	0.01	8.00	0.783	23.614	-21.78	23.373	31.97	-217.00
21	0.01	10.00	2.048	24.548	-38.65	27.952	29.19	-232.33
22	0.01	12.01	3.373	25.331	-51.75	32.380	28.70	-255.10
23	0.01	14.02	4.295	26.416	-62.24	36.639	26.53	-279.42
24	0.01	16.01	5.289	27.922	-71.24	40.904	26.16	-304.08
25	0.01	18.01	6.639	29.518	-70.73	46.325	25.45	-331.92
26	0.01	20.01	7.651	32.289	-76.97	51.717	25.52	-368.35
27	0.01	22.02	8.705	35.392	-90.04	57.223	25.46	-400.68
28	0.01	24.00	10.265	38.620	-102.88	62.030	23.40	-426.22
29	0.01	26.00	10.723	43.127	-84.17	62.633	-9.15	-362.17
30	0.01	28.00	11.205	46.819	-84.88	66.175	-16.72	-377.66
31	0.01	0.01	-0.843	22.440	7.69	3.735	28.04	-134.17

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 97 11/19/81 1346 RUN 97

TEMP 80. PO 14.5629

QPSF 75.00 VFPS 257.54 RNFT 1529353. MACH 0.2261

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	92	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.00	0.01	-1.567	15.367	27.53	5.113	29.22	-143.51
2	-2.05	0.01	-7.867	15.720	43.22	5.527	35.40	-147.45
3	-4.01	0.01	-13.800	16.267	61.61	5.913	42.24	-151.77
4	-6.05	0.01	-19.767	16.900	78.65	6.047	49.23	-156.41
5	-7.92	0.01	-24.733	17.820	85.58	6.080	56.49	-158.64
6	-10.04	0.01	-28.533	19.367	74.18	6.453	65.92	-161.28
7	-12.00	0.01	-32.933	20.987	62.09	6.613	70.52	-158.65
8	0.02	0.01	-1.333	15.400	26.83	5.113	30.22	-142.68
9	2.01	0.01	3.733	15.233	20.55	4.787	22.70	-139.40
10	4.01	0.01	8.367	15.133	13.57	4.713	14.01	-136.34
11	5.99	0.01	12.633	15.087	11.55	4.847	7.90	-133.97
12	8.01	0.01	17.033	15.400	13.81	5.547	-1.61	-139.74
13	10.00	0.01	21.533	15.967	15.95	5.880	-9.21	-142.14
14	11.99	0.01	25.900	16.700	16.60	5.267	-13.61	-143.92
15	0.01	0.01	-1.667	15.400	26.65	5.213	30.04	-143.64

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 98 11/19/81 1346 RUN 98

TEMP 73. PO 14.5531

QPSF 75.00 VFPS 255.95 RNFT 1554345. MACH 0.2262

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	92	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	0.01	-1.367	15.367	28.02	4.807	27.37	-134.26
2	-2.06	0.01	-7.467	15.727	43.44	5.000	32.86	-136.25
3	-4.02	0.01	-13.900	16.267	60.69	5.367	39.39	-142.09
4	-6.06	0.01	-19.900	16.967	77.25	5.533	45.78	-145.79
5	-7.90	0.01	-24.667	17.8[illegible]	84.40	5.767	52.15	-146.31
6	-10.04	0.01	-28.600	19.3[illegible]	70.41	6.067	61.48	-150.53
7	-12.01	0.01	-32.700	20.980	62.86	6.200	66.45	-151.27
8	0.02	0.01	-1.300	15.467	27.25	4.707	27.75	-134.74
9	2.00	0.01	3.667	15.120	19.67	4.333	20.64	-127.99
10	4.01	0.01	8.333	15.013	13.89	4.467	12.37	-128.33
11	5.97	0.01	12.667	15.067	11.51	4.733	5.66	-127.00
12	8.00	0.01	17.100	15.367	14.22	5.273	-3.06	-131.55
13	9.99	0.01	21.633	15.933	17.47	5.787	-10.56	-136.09
14	12.04	0.01	26.267	16.900	16.05	5.133	-15.02	-139.78
15	-0.00	0.01	-1.433	15.367	27.61	4.733	26.70	-135.10

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 99 11/19/81 1346 RUN 99

TEMP 73. PO 14.5531

QPSF 75.00 VFPS 255.95 RNFT 1554345. MACH 0.2262

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	83	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.04	0.01	-9.600	13.733	16.29	4.967	26.03	-130.61
2	-2.03	0.01	-13.300	14.233	40.75	5.607	33.73	-136.93
3	-4.01	0.01	-17.100	14.887	69.14	6.100	40.35	-143.86
4	-6.05	0.01	-20.967	15.667	97.89	6.767	47.91	-151.87
5	-7.90	0.01	-22.993	16.587	101.44	7.073	55.13	-160.49
6	-10.03	0.01	-24.267	17.567	98.57	7.433	67.40	-169.82
7	-12.00	0.01	-25.467	18.833	97.24	7.500	73.90	-172.70
8	0.02	0.01	-9.580	13.667	15.85	4.967	26.20	-129.33
9	1.99	0.01	-6.067	13.300	-7.06	4.780	18.55	-129.39
10	4.02	0.01	-2.667	12.933	-29.66	4.633	10.55	-129.42
11	5.96	0.01	0.567	12.667	-47.48	4.667	4.97	-132.63
12	8.01	0.01	4.067	12.500	-68.20	4.800	-2.93	-137.53
13	9.98	0.01	7.400	12.700	-90.94	5.600	-9.22	-136.16
14	11.99	0.01	11.133	13.200	-115.04	5.300	-16.20	-138.60
15	0.01	0.01	-10.367	13.913	22.14	7.200	25.35	-131.16

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 100 11/19/81 1346 RUN 100

TEMP 84. PO 14.5482

QPSF 100.00 VFPS 298.64 RNFT 1748585. MACH 0.2612

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	83	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	0.01	-10.750	14.085	23.78	9.040	22.39	-128.02
2	-2.03	0.01	-14.500	14.825	50.51	10.115	31.36	-136.64
3	-3.99	0.01	-17.850	15.540	73.41	11.270	38.64	-149.96
4	-6.06	0.01	-20.915	16.430	93.10	12.480	45.71	-163.57
5	-7.90	0.01	-23.245	17.460	103.36	13.215	54.84	-180.65
6	-10.05	0.01	-25.780	18.550	118.35	13.765	75.16	-196.32
7	-11.98	0.02	-27.680	19.725	124.91	13.690	73.94	-196.26
8	0.01	0.02	-10.625	14.075	23.24	8.365	23.84	-128.91
9	2.00	0.02	-7.200	13.600	0.76	7.615	17.35	-124.19
10	4.03	0.02	-3.450	13.350	-26.04	7.115	9.05	-124.13
11	5.98	0.02	-0.150	13.120	-48.04	6.950	1.96	-126.42
12	8.01	0.02	3.375	13.025	-68.70	6.900	-5.38	-129.89
13	10.00	0.02	6.975	13.000	-91.45	6.590	-10.97	-130.58
14	12.00	0.02	10.600	13.400	-115.56	6.265	-18.07	-135.25
15	0.01	0.02	-10.875	14.175	24.16	8.715	23.59	-129.98

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 101 11/19/81 1346 RUN 101

TEMP 63. P0 14.5875

QPSF 75.00 VFPS 253.24 RNFT 1593925. MACH 0.2259

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	92	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.00	0.01	-2.473	15.800	32.32	9.300	26.45	-135.30
2	-2.04	0.01	-8.667	16.267	44.93	10.433	33.46	-142.47
3	-3.99	0.01	-14.367	16.900	57.97	11.273	40.81	-151.04
4	-6.05	0.01	-20.133	17.667	72.85	12.433	47.76	-164.84
5	-7.92	0.01	-24.793	18.867	77.60	13.500	56.98	-184.92
6	-10.04	0.01	-30.133	20.300	86.28	13.933	71.47	-194.06
7	-11.98	0.01	-35.393	21.860	90.24	14.967	80.36	-210.26
8	-0.00	0.01	-2.633	15.767	32.04	9.033	26.56	-134.20
9	1.99	0.01	2.940	15.533	21.08	8.013	20.80	-127.61
10	4.03	0.01	7.700	15.400	13.71	7.733	11.72	-121.82
11	5.97	0.01	11.800	15.500	10.09	7.840	4.49	-120.76
12	8.00	0.01	16.367	15.720	10.50	8.053	-3.95	-121.20
13	10.00	0.01	20.740	16.353	13.04	8.200	-11.80	-127.06
14	12.02	0.00	25.300	17.300	12.07	7.233	-15.57	-128.69
15	0.02	0.00	-2.633	15.800	32.70	9.033	26.49	-134.76

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 102 11/19/81 1346 RUN 102

TEMP 67. PO 14.5875

QPSF 75.00 VFPS 254.21 RNFT 1578645. MACH 0.2259

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
7.02	0	.92	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.02	0.00	-2.567	15.400	36.05	8.933	25.10	-130.31
2	-2.05	0.00	-8.633	15.833	48.86	9.967	32.65	-138.32
3	-4.02	0.00	-14.600	16.433	64.60	11.000	39.06	-148.78
4	-6.06	0.00	-20.313	17.320	75.74	12.293	45.56	-162.33
5	-7.90	0.00	-24.740	18.547	77.81	13.200	53.98	-175.58
6	-10.03	0.00	-29.900	19.973	86.66	13.867	68.84	-191.15
7	-12.00	0.00	-35.300	21.473	95.37	15.233	75.47	-208.37
8	0.02	0.00	-2.433	15.467	35.66	8.287	24.97	-129.14
9	1.99	0.00	2.867	15.200	23.64	8.060	18.57	-124.13
10	4.02	0.00	7.600	15.067	16.33	7.733	10.28	-118.44
11	5.97	0.00	11.967	15.100	13.56	7.667	2.19	-116.87
12	8.01	0.00	16.433	15.433	13.81	8.073	-5.98	-120.62
13	9.99	0.00	20.733	16.067	14.93	8.067	-12.47	-120.27
14	11.99	0.00	25.400	16.933	14.68	7.200	-16.04	-123.81
15	0.02	0.00	-2.700	15.433	34.49	8.993	24.51	-131.99

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 103 11/19/81 1346 RUN 103

TEMP 71. PO 14.5875

QPSF 75.00 VFPS 255.17 RNFT 1563608. MACH 0.2259

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	92	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	0.00	-3.000	16.173	35.73	9.367	23.54	-133.99
2	-2.04	0.00	-8.700	17.000	48.45	10.353	31.66	-142.55
3	-4.02	0.00	-14.133	17.767	62.68	11.267	38.86	-150.55
4	-6.07	0.00	-19.427	18.767	77.68	12.167	45.52	-162.94
5	-7.91	0.00	-23.307	20.073	80.55	12.700	53.05	-173.69
6	-10.05	0.00	-27.980	21.833	87.55	12.967	66.85	-186.69
7	-12.00	0.00	-31.773	23.473	88.62	13.407	71.85	-188.78
8	0.01	0.00	-2.733	16.267	36.00	9.300	23.52	-135.01
9	2.02	0.00	2.967	15.887	22.40	8.633	16.61	-129.48
10	4.04	0.00	8.200	15.867	14.73	8.333	8.28	-125.23
11	5.98	0.00	13.100	15.900	13.33	8.307	0.89	-123.24
12	8.00	0.00	18.033	16.367	12.04	8.500	-6.75	-122.39
13	10.00	0.00	22.500	16.833	16.99	8.433	-13.75	-127.87
14	11.99	0.00	27.033	17.867	17.80	7.533	-17.67	-129.33
15	0.02	0.00	-2.967	16.233	34.75	9.200	23.67	-131.91

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 104 11/19/81 1346 RUN 104

TEMP 75. PO 14.5875

QPSF 75.00 VFPS 256.13 RNFT 1548811. MACH 0.2259

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	92	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.02	0.00	-2.067	16.100	25.79	5.513	21.86	-134.30
2	-2.03	0.00	-8.033	16.660	41.78	5.613	27.72	-134.40
3	-4.02	0.00	-13.667	17.227	63.70	5.667	33.36	-135.09
4	-6.07	0.00	-19.000	18.367	76.93	5.467	39.09	-132.14
5	-7.90	0.00	-23.300	19.600	83.44	5.033	43.59	-125.08
6	-10.04	0.00	-26.113	21.513	75.75	4.800	51.17	-119.92
7	-12.01	0.00	-30.233	23.400	72.27	5.000	56.10	-126.23
8	-0.00	0.00	-1.933	16.060	25.76	5.463	21.89	-134.32
9	2.00	0.00	3.200	15.733	16.14	5.433	15.28	-132.60
10	4.03	0.00	8.767	15.687	10.90	5.707	8.08	-131.34
11	5.98	0.00	13.633	15.633	9.90	6.053	-0.75	-132.42
12	8.00	0.00	18.600	16.067	10.20	6.433	-6.25	-132.54
13	9.99	0.00	23.200	16.700	12.77	6.633	-11.65	-134.97
14	12.02	0.00	27.460	17.500	15.20	6.067	-15.67	-134.12
15	0.02	0.00	-2.133	16.047	24.51	5.533	21.75	-134.34

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 105 11/19/81 1346 RUN 105

TEMP 76. PB 14.5875

QPSF 75.00 VFPS 256.37 RNFT 1545149. MACH 0.2259

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	74	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.02	0.00	-1.567	12.233	18.13	5.900	25.70	-152.95
2	-2.05	0.00	-7.667	12.927	37.60	6.007	32.35	-152.69
3	-4.02	0.00	-13.467	13.673	62.34	6.047	37.63	-150.92
4	-6.05	0.00	-18.533	14.867	82.09	5.887	42.06	-147.00
5	-7.90	0.00	-22.867	16.267	86.84	5.733	47.22	-144.38
6	-10.04	0.00	-25.753	18.307	71.59	5.240	56.83	-141.66
7	-12.00	0.00	-30.033	20.080	75.20	5.700	61.38	-143.01
8	0.02	0.00	-1.367	12.200	19.61	5.833	25.67	-152.80
9	2.00	0.00	3.967	11.967	8.65	5.833	18.00	-153.43
10	4.03	0.00	9.100	11.833	1.69	5.827	9.02	-148.58
11	5.97	0.00	14.000	11.933	-1.38	5.967	1.90	-145.47
12	8.00	0.00	18.833	12.200	1.43	6.260	-6.23	-141.37
13	9.99	0.00	23.200	12.833	3.53	6.367	-12.19	-141.60
14	12.00	0.00	27.600	13.733	5.29	5.767	-15.77	-137.23
15	0.02	0.00	-1.400	12.267	18.14	5.833	25.57	-153.17

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 106 11/19/81 1346 RUN 106

TEMP 88. PO. 14.5875

QPSF 83.00 VFPS 272.70 RNFT 1580400. MACH 0.2376

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	95	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	1

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.02	0.00	-0.904	21.837	-7.04	5.030	27.33	-141.93
2	0.02	-2.02	-0.964	21.705	-7.99	0.307	27.59	-124.88
3	0.02	-4.00	-1.024	21.669	-7.73	-3.795	27.13	-109.48
4	0.02	-5.99	-0.633	22.018	-13.71	-7.922	25.21	-91.24
5	0.02	-7.99	0.090	22.440	-19.22	-12.590	22.64	-64.29
6	0.02	-10.01	1.506	23.072	-29.27	-18.223	18.80	-33.91
7	0.02	-11.99	2.259	24.187	-34.27	-23.253	20.21	-9.60
8	0.02	-13.99	2.651	24.880	-25.55	-26.807	20.57	14.98
9	0.02	-15.99	3.633	26.867	-32.36	-31.476	25.35	42.11
10	0.02	-18.01	4.277	29.410	-41.41	-36.512	27.77	75.99
11	0.02	-20.05	5.693	32.434	-51.16	-41.687	30.44	107.37
12	0.02	-21.99	7.892	35.560	-71.62	-46.506	28.48	128.23
13	0.02	-23.98	10.422	39.187	-88.91	-51.759	29.38	152.73
14	0.02	-25.99	12.669	42.892	-100.40	-56.657	31.64	172.10
15	0.02	-27.97	14.464	46.620	-106.14	-59.904	38.56	176.17
16	0.02	0.00	-0.843	21.693	-6.74	6.295	21.49	-140.16
17	0.02	2.03	-0.994	22.018	-7.31	10.169	17.80	-141.08
18	0.02	3.98	-0.452	22.349	-16.96	14.669	20.74	-160.33
19	0.02	6.00	0.060	22.801	-25.44	19.789	29.91	-203.99
20	0.02	8.01	1.295	23.422	-39.41	24.247	32.68	-219.17
21	0.02	9.99	2.620	24.434	-53.08	29.157	30.89	-239.22
22	0.02	11.98	4.066	25.602	-61.87	32.910	30.11	-265.58
23	0.02	13.98	5.301	27.133	-70.73	38.855	25.90	-292.76
24	0.02	16.00	6.386	28.223	-72.58	43.024	24.74	-310.60
25	0.02	18.00	7.139	30.422	-81.20	47.892	26.10	-341.16
26	0.02	20.02	7.892	33.133	-87.37	52.741	27.20	-377.00
27	0.02	21.99	8.602	35.843	-101.35	57.355	27.97	-408.29
28	0.02	23.99	9.970	39.114	-114.58	62.422	24.55	-429.59
29	0.02	26.00	10.482	43.813	-89.29	63.133	-16.09	-358.45
30	0.02	27.99	10.217	47.771	-87.31	66.898	-27.92	-373.37
31	0.02	0.00	-0.693	21.783	-6.04	5.633	24.27	-140.35

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 107 11/19/81 1346 RUN 107

TEMP 88. PO 14.5875

QPSF 75.00 VFPS 259.23 RNFT 1502306. MACH 0.2259

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	82	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	0.00	-1.033	8.660	-123.62	4.233	25.27	-147.52
2	-2.04	0.00	-1.867	9.067	-138.16	3.920	29.22	-142.99
3	-4.02	0.00	-2.567	9.313	-153.79	3.067	31.22	-129.62
4	-6.07	0.00	-3.367	9.813	-172.07	2.380	33.71	-111.64
5	-7.92	0.00	-3.800	10.167	-188.20	2.380	37.40	-103.16
6	-10.04	0.00	-4.500	10.500	-203.72	2.700	44.81	-107.14
7	-11.98	0.00	-5.467	11.067	-216.64	3.300	51.78	-118.18
8	0.03	0.00	-1.000	8.673	-123.12	4.167	24.14	-146.99
9	1.99	0.00	-0.167	8.400	-110.28	4.333	18.37	-147.03
10	4.04	0.00	0.767	8.167	-94.87	4.400	10.65	-143.05
11	5.97	0.00	1.700	7.967	-80.80	4.367	4.26	-137.42
12	8.01	0.00	2.667	8.000	-62.47	4.540	-3.23	-136.66
13	9.98	0.00	3.600	8.100	-45.68	4.800	-8.45	-138.06
14	12.03	0.00	4.500	8.267	-27.77	5.167	-18.20	-141.74
15	-0.00	0.00	-1.100	8.733	-124.53	4.200	24.14	-148.93

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 108 11/19/81 1346 RUN 108

TEMP 88. PO 14.5875

QPSF 75.00 VFPS 259.23 RNFT 1502306. MACH 0.2259

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	82	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	0.01	-1.000	8.833	-124.89	3.847	20.93	-148.37
2	-2.04	0.01	-1.933	9.113	-139.59	3.500	24.05	-140.75
3	-3.99	0.01	-2.633	9.427	-155.18	2.367	26.29	-120.69
4	-6.04	0.01	-3.400	9.933	-170.90	1.540	27.90	-104.65
5	-7.92	0.01	-3.800	10.300	-188.43	1.367	30.76	-96.44
6	-10.05	0.01	-4.533	10.767	-205.37	1.800	37.44	-101.51
7	-11.98	0.01	-5.433	11.333	-219.02	2.633	42.83	-112.95
8	0.03	0.01	-0.967	8.767	-123.82	3.833	21.12	-146.45
9	2.06	0.01	-0.067	8.533	-109.11	3.967	15.59	-147.66
10	4.00	0.01	0.833	8.233	-94.43	4.060	9.06	-141.05
11	5.96	0.01	1.800	8.000	-79.29	4.000	3.26	-137.38
12	8.01	0.01	2.767	8.000	-62.57	4.167	-2.64	-137.89
13	9.99	0.01	3.700	8.067	-45.24	4.347	-7.79	-139.77
14	11.99	0.01	4.533	8.167	-26.78	4.667	-13.97	-144.06
15	0.01	0.01	-1.000	8.727	-124.73	3.867	21.12	-148.01

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 109 11/19/81 1346 RUN 109

TEMP 88. PO 14.5580

QPSF 75.00 VFPS 259.49 RNFT 1500789. MACH 0.2261

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	82	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.02	0.01	-1.067	8.867	-123.16	2.940	21.47	-127.46
2	-2.01	0.01	-1.900	9.220	-138.38	2.360	25.31	-118.86
3	-3.99	0.01	-2.667	9.567	-154.34	1.327	27.44	-101.93
4	-6.08	0.01	-3.467	9.967	-168.93	0.827	28.13	-88.23
5	-7.94	0.01	-3.900	10.367	-188.53	0.667	30.50	-82.11
6	-10.05	0.01	-4.633	10.733	-205.10	1.027	38.19	-84.51
7	-12.00	0.01	-5.600	11.167	-216.33	1.427	40.21	-87.10
8	0.03	0.01	-1.000	8.867	-121.97	2.860	21.71	-127.00
9	2.02	0.01	-0.100	8.700	-107.99	3.027	15.53	-122.67
10	4.03	0.01	0.867	8.500	-92.78	3.247	7.96	-119.53
11	5.97	0.01	1.833	8.100	-75.65	3.427	3.86	-120.66
12	8.00	0.01	2.800	8.133	-58.84	3.827	-2.78	-122.77
13	9.99	0.01	3.800	8.200	-41.56	4.060	-7.16	-130.11
14	12.02	0.01	4.700	8.467	-27.36	4.547	-15.84	-135.08
15	0.03	0.01	-0.967	8.767	-123.42	2.793	23.18	-125.20

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 110 11/19/81 1346 RUN 110

TEMP 90. PO 14.5383

QPSF 75.00 VFPS 260.14 RNFT 1492840. MACH 0.2263

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	81	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.02	0.01	8.400	10.400	-132.90	2.700	21.05	-118.65
2	-2.04	0.01	4.767	10.467	-152.39	2.533	23.94	-110.18
3	-4.01	0.01	0.967	10.767	-174.53	2.000	27.66	-99.32
4	-6.04	0.01	-2.733	11.267	-192.56	1.493	29.26	-92.75
5	-7.90	0.01	-6.133	11.767	-213.68	1.533	33.10	-91.91
6	-10.05	0.01	-10.133	12.433	-229.11	1.833	42.14	-94.99
7	-12.02	0.01	-14.667	13.153	-236.91	2.907	43.17	-98.97
8	0.02	0.01	8.567	10.433	-133.28	2.673	21.11	-119.32
9	1.97	0.01	11.533	10.533	-114.10	2.740	17.74	-121.70
10	4.02	0.01	14.600	10.433	-90.62	3.033	10.41	-118.93
11	5.98	0.01	17.400	10.533	-69.64	1.453	7.80	-120.73
12	7.99	0.01	20.333	10.767	-47.49	4.173	-4.16	-118.63
13	9.98	0.01	23.800	11.333	-24.49	4.633	-10.63	-121.07
14	12.00	0.01	27.200	12.200	-3.64	4.733	-16.77	-121.17
15	-0.02	0.01	8.433	10.407	-133.75	2.700	20.22	-118.15

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 111 11/19/81 1346 RUN 111

TEMP 88. PO 14.5383

QPSF 75.00 VFPS 259.66 RNFT 1499775. MACH 0.2263

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	81	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.02	0.01	-7.280	11.593	-120.25	5.467	17.93	-140.19
2	-2.03	0.01	-10.367	11.800	-134.16	5.487	23.55	-143.03
3	-4.01	0.01	-13.233	12.133	-156.84	4.733	30.69	-137.32
4	-6.06	0.01	-15.400	12.533	-177.05	3.033	34.09	-118.48
5	-7.90	0.01	-17.653	13.140	-196.41	1.567	38.42	-103.08
6	-10.04	0.01	-20.433	14.100	-213.56	0.333	44.52	-90.53
7	-12.01	0.01	-23.233	15.000	-228.54	0.033	45.03	-83.80
8	0.01	0.01	-7.187	11.667	-123.86	5.433	17.16	-140.47
9	2.01	0.01	-4.267	11.733	-103.21	5.433	11.62	-134.32
10	4.02	0.01	-1.573	11.733	-85.54	5.300	4.24	-133.43
11	5.98	0.01	1.567	11.833	-66.32	5.267	-2.48	-129.14
12	8.00	0.01	4.707	12.000	-46.40	5.000	-6.83	-124.37
13	10.02	0.01	8.433	12.327	-24.82	4.867	-12.77	-120.84
14	12.00	0.01	11.493	12.900	-4.71	4.567	-17.11	-122.70
15	0.02	0.01	-7.267	11.667	-12[illegible].68	5.500	17.89	-140.73

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 112 11/19/81 1346 RUN 112

TEMP 88. P0 14.5_83

QPSF 75.00 VFPS 259.66 RNFT 1459775. MACH 0.2263

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	81	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	0.03	-2.487	10.867	-122.16	5.667	17.97	-143.43
2	-2.04	0.03	-5.700	11.067	-142.99	4.967	25.19	-140.27
3	-4.02	0.03	-8.333	11.367	-162.35	3.600	30.85	-125.10
4	-6.06	0.03	-11.233	12.000	-177.31	2.067	33.31	-110.51
5	-7.92	0.03	-13.633	12.520	-201.20	1.353	34.78	-98.49
6	-10.03	0.03	-17.127	13.333	-221.05	1.700	42.21	-101.01
7	-11.98	0.03	-20.300	14.267	-231.93	2.200	44.40	-100.08
8	0.05	0.03	-2.400	10.933	-123.30	5.667	17.86	-143.37
9	2.00	0.03	0.467	11.080	-104.13	5.907	10.31	-138.08
10	4.04	0.03	3.367	11.267	-84.36	6.107	0.60	-133.50
11	5.99	0.03	5.687	11.500	-65.68	5.933	-5.70	-128.98
12	8.00	0.03	7.980	11.833	-45.35	5.387	-9.76	-123.05
13	10.00	0.03	11.240	12.233	-26.76	5.067	-13.98	-117.52
14	12.00	0.03	13.853	13.067	-6.22	5.133	-19.70	-115.97
15	0.02	0.03	-2.633	11.033	-124.21	5.733	18.49	-143.59

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 113 11/19/81 1346 RUN 113

TEMP 66. PO. 14.5187

QPSF 75.00 VFPS 254.57 RNFT 1578708. MACH 0.2264

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	74	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	-0.01	-10.333	11.567	-7.62	5.867	17.94	-145.69
2	-2.05	-0.01	-16.167	11.933	13.87	5.493	23.61	-147.16
3	-3.99	-0.01	-21.633	12.700	38.55	4.067	28.19	-141.76
4	-6.05	0.00	-27.267	13.607	62.43	2.833	31.07	-124.20
5	-7.90	0.04	-31.700	14.733	77.67	1.967	35.02	-114.92
6	-10.04	0.04	-35.700	16.567	71.19	1.533	45.53	-100.76
7	-11.98	0.04	-36.833	18.967	34.26	2.400	48.13	-108.79
8	0.02	0.04	-10.300	11.600	-7.43	5.700	18.63	-145.49
9	2.00	0.04	-5.000	11.567	-25.55	5.607	13.18	-135.81
10	4.02	0.04	-0.600	11.593	-39.41	5.533	4.78	-133.41
11	5.98	0.04	3.727	11.700	-49.29	5.233	-0.74	-127.11
12	8.00	0.04	8.287	12.033	-54.03	4.833	-5.67	-121.67
13	9.99	0.04	12.667	12.500	-51.36	4.833	-10.93	-119.69
14	12.00	0.04	16.400	13.267	-45.41	4.500	-14.85	-118.79
15	0.01	0.04	-10.333	11.533	-7.98	5.620	18.70	-144.36

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 114 11/19/81 1346 RUN 114

TEMP 74. PO 14.5187

QPSF 75.00 VFPS 256.50 RNFT 1548825. MACH 0.2264

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
7.02	0	.74	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.02	-0.01	-11.867	11.700	20.12	6.247	19.12	-153.95
2	-2.03	-0.01	-18.133	12.160	45.79	6.233	24.90	-159.56
3	-4.02	-0.01	-23.833	12.753	77.41	4.787	29.45	-150.25
4	-6.05	-0.01	-29.933	13.673	102.58	3.667	32.70	-140.33
5	-7.90	-0.01	-33.633	14.900	109.84	2.333	39.67	-123.22
6	-10.05	-0.01	-37.400	16.660	101.09	1.833	49.26	-107.58
7	-12.01	-0.01	-37.133	19.020	43.19	3.300	49.14	-122.68
8	0.02	-0.01	-11.867	11.633	19.09	6.427	18.90	-155.71
9	2.00	-0.01	-6.500	11.600	-2.25	6.260	11.28	-146.96
10	4.03	-0.01	-1.900	11.633	-21.39	6.133	4.67	-141.97
11	5.98	-0.01	2.993	11.733	-36.25	5.867	-1.26	-135.15
12	8.01	-0.01	7.787	12.033	-46.25	5.600	-7.32	-133.86
13	9.99	-0.01	12.633	12.533	-52.26	5.433	-11.68	-127.41
14	11.99	-0.01	17.233	13.367	-58.04	5.200	-17.10	-125.04
15	0.02	-0.02	-12.067	11.633	20.45	6.347	19.41	-154.57

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 115 11/20/81 0911 RUN 115

TEMP 74. PO 14.5187

QPSF 75.00 VFPS 256.50 RNFT 1548825. MACH 0.2264

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	74	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	0

AMES=TYPE SUPP[illegible]S+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.02	=0.02	=11.867	11.733	16.88	6.227	17.83	=154.32
2	=2.03	=0.02	=18.067	12.233	43.13	6.193	24.02	=158.57
3	=3.99	=0.02	=23.867	12.900	73.82	4.840	29.00	=150.68
4	=6.07	=0.02	=29.033	13.967	93.09	3.413	33.33	=135.34
5	=7.90	=0.02	=33.353	15.013	104.75	2.213	37.92	=118.96
6	=9.94	=0.02	=37.133	16.767	97.34	1.[illegible]40	48.66	=109.58
7	=11.98	=0.02	=37.967	19.020	53.77	3.200	50.17	=120.01
8	=0.00	=0.02	=11.933	11.800	15.92	6.167	17.96	=152.68
9	2.00	=0.02	=6.533	11.700	=6.30	6.033	10.80	=144.54
10	2.00	=0.02	=6.567	11.767	=5.16	6.133	10.85	=145.37
11	4.04	=0.02	=1.433	11.867	=26.19	5.800	=0.02	=137.89
12	6.00	=0.02	2.900	11.933	=39.94	5.733	=1.61	=133.25
13	8.00	=0.02	7.887	12.167	=49.07	5.433	=8.21	=129.09
14	10.02	=0.02	12.713	12.733	=53.15	5.300	=13.25	=127.14
15	12.00	=0.02	17.560	13.533	=59.01	5.233	=18.52	=125.88
16	=0.00	=0.02	=12.040	11.833	16.23	6.200	17.89	=153.61

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 116 11/20/81 0911 RUN 116

TEMP 74. PO 14.5187

QPSF 75.00 VFPS 256.50 RNFT 1548825. MACH 0.2264

T01	T02	T03	T04	T05	[illegible]	T07	T08	T09	T10
702	0	74	0	[illegible]	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.00	-0.02	-9.800	11.533	-7.64	5.313	18.62	-142.10
2	-2.03	-0.02	-15.367	11.967	12.13	4.867	24.98	-145.20
3	-4.01	-0.02	-20.367	12.833	27.51	3.400	29.40	-133.45
4	-6.05	-0.02	-24.980	14.213	40.52	2.400	32.71	-121.79
5	-7.94	-0.02	-28.800	15.493	41.22	1.100	35.59	-102.92
6	-10.04	-0.02	-32.467	17.220	32.17	1.187	42.28	-94.57
7	-12.00	-0.02	-35.600	19.013	18.23	2.233	47.37	-107.24
8	0.01	-0.02	-9.800	11.600	-8.35	5.353	18.77	-143.73
9	2.00	-0.02	-4.793	11.600	-25.66	5.500	11.57	-136.54
10	4.02	-0.02	-0.600	11.660	-40.55	5.533	4.61	-132.36
11	5.97	-0.02	3.433	11.760	-48.98	5.500	-1.70	-126.78
12	8.00	-0.02	7.833	12.000	-55.05	5.153	-7.14	-121.36
13	10.00	-0.02	12.167	12.427	-53.17	5.000	-11.66	-117.22
14	11.99	-0.02	15.767	13.367	-48.96	4.900	-16.39	-117.94
15	0.01	-0.02	-9.800	11.567	-8.61	5.300	18.48	-143.25

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 117 11/20/81 0911 RUN 117

TEMP 87. PO 14.5187

QPSF 75.00 VFPS 259.60 RNFT 1502246. MACH 0.2264

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	74	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	-0.00	0.00	-9.[illegible]27	12.313	-6.48	5.727	21.07	-148.39
2	-2.04	0.00	-15.333	12.933	13.53	5.200	27.23	-149.61
3	-3.99	-0.01	-21.133	13.593	41.43	3.967	30.90	-141.39
4	-6.05	-0.01	-26.833	14.640	68.99	2.887	34.10	-130.11
5	-7.91	-0.01	-31.367	15.800	87.97	1.933	39.64	-116.40
6	-10.05	-0.01	-35.367	17.647	78.40	2.000	46.30	-108.91
7	-12.01	-0.01	-39.053	19.393	72.70	3.000	51.35	-118.57
8	-0.00	-0.01	-9.647	12.500	-8.97	5.667	21.20	-148.15
9	2.00	-0.01	-4.900	12.367	-22.70	5.500	13.22	-142.45
10	4.02	-0.01	-0.567	12.433	-37.66	6.007	4.78	-137.45
11	5.98	-0.01	3.533	12.467	-47.09	5.793	-1.07	-131.24
12	8.01	-0.01	7.927	12.733	-54.77	5.600	-7.18	-127.46
13	9.99	-0.01	12.500	13.133	-55.69	5.433	-12.95	-123.64
14	12.00	-0.01	16.700	14.033	-61.35	5.400	-18.67	-122.68
15	-0.00	-0.01	-9.533	12.500	-8.25	5.633	20.80	-146.88

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 118 11/20/81 0911 RUN 118

TEMP 92. PO 14.5187

QPSF 83.00 VFPS 274.34 RNFT 1562144. MACH 0.2382

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	95	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	1

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	0.01	-8.886	22.801	-33.60	5.855	23.65	-135.48
2	0.01	-2.00	-9.434	22.394	-28.63	[illegible]	25.00	-134.69
3	0.01	-4.00	-10.181	22.440	-23.40	[illegible]	26.37	-127.71
4	0.01	-6.00	-10.645	22.560	-20.71	-3.277	23.72	-115.00
5	0.01	-8.00	-10.223	22.976	-20.64	-7.645	23.36	-90.51
6	0.01	-10.00	-9.458	23.825	-24.53	-12.560	23.90	-62.93
7	0.01	-12.01	-8.855	24.699	-26.77	-17.139	24.55	-38.89
8	0.01	-14.01	-7.759	25.181	-22.57	-21.440	25.48	-15.36
9	0.01	-16.00	-6.042	26.928	-32.89	-26.084	28.76	10.52
10	0.01	-18.00	-4.470	28.861	-38.98	-30.584	33.04	31.80
11	0.01	-20.00	-3.765	31.386	-47.16	-35.313	37.53	52.39
12	0.01	-22.00	-3.367	34.108	-51.97	-39.428	42.92	66.78
13	0.01	-24.00	-3.771	37.458	-53.50	-44.247	49.79	86.05
14	0.01	-26.00	-2.777	41.319	-57.43	-49.428	64.93	111.45
15	0.01	-28.01	-2.488	45.458	-57.33	-55.211	92.28	133.98
16	0.01	0.00	-8.639	22.952	-33.32	5.512	23.89	-133.06
17	0.01	2.00	-8.054	23.072	-34.54	8.223	19.26	-124.10
18	0.01	4.00	-7.741	23.169	-37.64	11.325	17.55	-127.65
19	0.01	6.00	-6.946	23.699	-40.54	15.633	20.41	-149.18
20	0.01	8.00	-6.837	24.006	-43.65	18.084	21.15	-160.24
21	0.01	10.00	-5.904	24.789	-49.47	21.958	20.62	-176.75
22	0.01	12.00	-4.759	25.771	-57.74	26.867	16.49	-200.08
23	0.01	14.01	-3.843	27.108	-67.93	31.187	15.81	-231.50
24	0.01	16.00	-2.566	28.705	-74.31	35.594	13.44	-256.24
25	0.01	18.00	-1.000	30.271	-74.67	41.114	12.15	-281.58
26	0.01	20.01	0.102	32.855	-82.22	45.934	11.75	-307.16
27	0.01	22.00	-0.548	35.596	-87.62	49.932	5.10	-307.45
28	0.01	24.00	-2.139	38.253	-78.65	52.446	-8.65	-305.09
29	0.01	26.00	-3.458	41.367	-68.71	55.633	-22.34	-315.58
30	0.01	28.00	-4.940	45.000	-56.82	59.428	-42.72	-325.32
31	0.01	0.00	-8.645	22.819	-34.39	5.512	24.40	-133.42

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 119   11/20/81 0911   RUN 119

TEMP 84.   PO 14.5089

QPSF 83.00   VFPS 272.44   RNFT 1590883.   MACH 0.2383

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	95	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	1

AMES-TYPE SUPPORTS+MODEL   DATA AT C.G.   FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	0.00	-8.910	22.681	-33.24	5.594	26.35	-145.68
2	0.01	-2.00	-9.458	22.452	-28.60	3.283	26.24	-145.70
3	0.01	-4.01	-10.090	22.259	-24.71	-0.211	28.25	-136.17
4	0.01	-6.01	-10.307	22.434	-21.78	-3.193	25.43	-121.52
5	0.01	-7.99	-10.042	22.741	-21.88	-7.259	24.35	-98.93
6	0.01	-10.01	-9.699	23.524	-26.26	-12.590	25.32	-69.11
7	0.01	-12.01	-9.096	24.446	-30.14	-17.500	29.09	-43.37
8	0.01	-14.00	-8.494	24.916	-21.01	-21.313	29.46	-21.86
9	0.01	-16.00	-6.446	26.807	-28.63	-26.054	34.25	5.42
10	0.01	-18.01	-4.970	29.006	-40.59	-31.681	44.31	30.61
11	0.01	-20.02	-3.892	31.235	-42.48	-35.361	39.91	52.86
12	0.01	-22.01	-3.964	34.247	-47.08	-39.367	47.36	68.20
13	0.01	-24.01	-3.795	37.861	-49.48	-45.151	65.30	89.46
14	0.01	-26.00	-3.090	41.825	-58.32	-51.295	92.68	113.85
15	0.01	-28.00	-2.699	45.699	-59.33	-55.934	106.95	134.13
16	0.01	0.01	-8.645	22.801	-33.69	6.066	24.61	-144.42
17	0.01	2.00	-8.313	22.861	-36.17	8.301	20.72	-133.50
18	0.01	4.00	-7.952	23.012	-38.72	11.247	19.74	-138.45
19	0.01	6.00	-7.349	23.434	-43.53	15.241	24.35	-171.03
20	0.01	8.00	-6.777	23.976	-47.09	19.108	27.27	-188.02
21	0.01	10.01	-5.813	24.699	-55.31	22.831	27.77	-203.67
22	0.01	12.00	-4.735	25.602	-66.87	27.289	23.12	-219.73
23	0.01	14.00	-3.747	26.687	-79.33	31.446	23.75	-243.96
24	0.01	16.00	-2.380	28.133	-88.20	36.295	21.54	-268.09
25	0.01	18.00	-1.169	29.518	-86.56	41.355	20.39	-290.80
26	0.01	20.01	-0.223	32.078	-92.27	46.566	21.79	-327.17
27	0.01	22.00	-1.018	34.711	-93.60	50.813	19.23	-346.39
28	0.01	24.00	-3.584	38.313	-62.80	51.512	-16.67	-291.13
29	0.01	26.01	-4.361	41.928	-51.07	55.018	-32.72	-309.79
30	0.01	28.00	-5.633	45.735	-38.41	59.488	-54.13	-327.80
31	0.02	0.00	-8.675	22.837	-33.99	5.534	26.18	-145.17

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 120 11/20/81 0911 RUN 120

TEMP 80. PO 14.4892

QPSF 75.00 VFPS 258.20 RNFT 1525480. MACH 0.2267

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	83	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	0.00	-9.900	14.033	17.80	7.033	23.77	-128.73
2	-2.04	0.00	-13.567	14.620	41.92	7.687	30.47	-136.76
3	-3.99	0.00	-17.267	15.260	68.47	8.333	38.66	-146.69
4	-6.05	0.00	-20.767	16.053	93.06	9.033	45.42	-156.90
5	-7.90	0.00	-22.400	16.940	93.67	9.493	52.80	-168.08
6	-10.04	0.00	-24.300	17.967	94.62	9.447	66.18	-177.81
7	-12.00	0.00	-25.500	19.300	91.41	9.467	70.44	-183.27
8	0.01	0.00	-9.733	13.993	17.23	6.867	24.40	-129.85
9	2.00	0.00	-6.500	13.633	-5.43	6.580	16.43	-126.56
10	4.03	0.00	-3.033	13.300	-27.29	6.500	7.80	-125.15
11	5.98	0.00	0.433	12.967	-45.72	6.420	1.29	-124.77
12	8.01	0.00	3.833	12.900	-64.57	6.467	-5.15	-129.84
13	9.99	0.00	7.467	12.800	-88.03	6.567	-11.09	-133.64
14	12.02	0.00	11.333	13.187	-114.09	6.633	-19.54	-137.96
15	-0.00	-0.02	-9.867	13.947	17.00	6.900	24.32	-129.14

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 121 11/20/81 0911 RUN 121

TEMP 84. PO 14.4892

QPSF 100.00 VFPS 299.24 RNFT 1745041. MACH 0.2617

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	83	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	-0.02	-9.875	14.075	17.37	7.110	22.35	-128.23
2	-2.04	-0.02	-13.475	14.600	43.18	7.750	30.25	-137.10
3	-4.02	-0.02	-17.325	15.275	72.01	8.350	37.71	-148.26
4	-6.05	-0.02	-20.450	15.950	94.23	9.075	43.85	-158.48
5	-7.90	-0.02	-22.250	16.970	94.08	9.500	52.52	-266.51
6	-7.90	-0.02	-22.275	17.025	94.15	9.430	52.74	-169.63
7	-9.57	-0.02	-23.825	17.710	98.16	9.430	62.47	-177.63
8	0.02	-0.02	-9.725	14.075	16.18	6.950	22.72	-129.24
9	2.00	-0.02	-6.275	13.605	-5.73	6.510	15.28	-125.36
10	4.02	-0.02	-3.000	13.325	-27.63	6.300	7.28	-125.37
11	8.01	-0.02	3.750	12.950	-65.35	6.385	-6.15	-131.57
12	10.00	-0.02	7.550	12.905	-88.69	6.475	-12.61	-135.40
13	12.00	-0.02	11.325	13.250	-114.32	6.185	-17.90	-140.57
14	-0.00	-0.02	-9.875	14.025	17.43	7.050	23.53	-129.76

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 122 11/20/81 0911 RUN 122

TEMP 80. PO 14.4892

QPSF 75.00 VFPS 258.20 RNFT 1525480. MACH 0.2267

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	92	0	0	0	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.01	-0.01	-9.933	16.180	3.70	7.233	19.34	-140.33
2	-2.03	-0.01	-15.500	16.680	21.12	7.100	27.39	-145.53
3	-3.99	-0.01	-20.967	17.273	45.04	6.347	34.37	-144.09
4	-6.05	-0.01	-26.733	18.133	68.12	5.833	40.41	-143.58
5	-7.92	-0.01	-30.667	19.193	76.16	5.567	44.80	-141.48
6	-10.04	-0.01	-34.600	20.707	72.36	5.167	52.92	-135.81
7	-12.00	-0.01	-38.867	22.327	64.84	5.467	62.99	-139.18
8	0.02	-0.01	-9.700	16.267	3.25	7.187	20.61	-139.77
9	2.00	-0.01	-5.033	16.067	-9.85	7.300	12.23	-134.56
10	4.04	-0.01	-0.613	16.267	-24.83	7.467	2.68	-130.24
11	5.98	-0.01	3.767	16.300	-33.35	7.300	-2.88	-127.57
12	8.01	-0.01	8.267	16.700	-42.28	6.920	-8.10	-124.25
13	9.99	-0.01	12.627	17.133	-43.08	7.100	-14.96	-121.59
14	12.00	-0.01	16.867	17.953	-49.09	6.567	-17.77	-122.06
15	0.02	-0.01	-9.933	16.167	3.56	7.167	21.05	-140.53

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 123 11/20/81 0911 RUN 123

TEMP 80. PO 14.4892

QPSF 75.00 VFPS 258.20 RNFT 1525480. MACH 0.2267

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	92	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.02	-0.01	-9.953	16.300	4.58	7.173	20.81	-141.57
2	-2.03	-0.01	-15.333	16.753	21.43	6.887	28.84	-144.44
3	-4.02	-0.01	-20.833	17.320	46.44	6.187	34.51	-145.63
4	-6.06	-0.01	-26.400	18.200	67.90	5.607	39.98	-141.32
5	-7.91	-0.01	-30.333	19.200	75.81	5.460	45.08	-138.37
6	-10.04	-0.01	-34.200	20.733	69.19	5.107	54.20	-134.84
7	-12.01	-0.01	-38.767	22.413	63.72	5.773	61.77	-141.89
8	0.01	-0.01	-9.633	16.233	4.29	7.007	20.93	-139.66
9	2.00	-0.01	-4.967	16.167	-9.98	7.273	11.95	-134.50
10	4.03	-0.01	-0.633	16.307	-24.43	7.507	2.40	-130.53
11	5.98	-0.01	3.667	16.333	-34.11	7.240	-2.92	-127.64
12	8.01	-0.01	8.267	16.800	-42.31	7.007	-9.07	-125.74
13	9.99	-0.01	12.520	17.280	-44.26	7.140	-15.21	-120.80
14	12.02	-0.01	16.667	18.033	-51.60	6.453	-18.99	-122.47
15	0.01	-0.01	-9.800	16.267	3.20	6.940	21.47	-138.76

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 124 11/20/81 0911 RUN 124

TEMP 80. PO 14.4892

QPSF 75.00 VFPS 258.20 RNFT 1525480. MACH 0.2267

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
702	0	74	0	0	0	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	1	1	0	0	1	0	0	0

AMES-TYPE SUPPORTS+MODEL DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.02	-0.02	-8.800	13.193	-1.29	7.733	23.11	-159.27
2	-2.03	-0.02	-13.767	13.800	21.39	7.040	31.85	-160.03
3	-3.99	-0.02	-18.767	14.433	50.58	5.887	37.40	-155.69
4	-6.05	-0.02	-24.100	15.700	74.43	5.460	41.35	-149.49
5	-7.92	-0.01	-28.167	16.867	88.31	5.800	48.10	-149.86
6	-10.05	-0.01	-30.700	18.993	72.66	5.947	56.95	-146.01
7	-11.98	-0.01	-34.100	20.700	72.69	6.940	62.95	-157.99
8	0.01	-0.01	-8.767	13.133	-1.43	7.700	23.01	-158.65
9	1.99	-0.01	-4.013	12.960	-18.09	7.827	14.27	-150.17
10	4.03	-0.01	0.513	13.067	-33.40	7.900	4.07	-145.56
11	5.99	-0.01	4.500	13.167	-44.56	7.413	-2.95	-140.51
12	8.00	-0.01	9.033	13.367	-51.83	6.833	-9.56	-134.45
13	9.99	-0.01	13.500	13.987	-54.09	6.647	-15.24	-127.41
14	12.00	-0.01	17.533	15.080	-62.22	5.067	-18.51	-128.20
15	0.02	-0.01	-8.733	13.200	-2.81	7.633	23.09	-159.09

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 32 11/20/81 0933 RUN 32

TEMP 94. PO 14.5187

QPSF 75.00 VFPS 261.26 RNFT 1478131. MACH 0.2264

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	32	0	11	31	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS
SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.28	0.00	-2.274	5.368	37.56	4.434	23.84	-156.07
2	-1.77	0.00	-9.043	5.613	58.84	4.454	30.45	-156.21
3	-3.76	0.00	-15.172	5.865	82.05	4.561	36.45	-157.20
4	-5.76	0.00	-21.771	6.672	101.83	4.271	42.77	-155.46
5	-7.76	0.00	-26.814	7.682	112.74	4.453	49.19	-156.71
6	-9.76	0.00	-30.778	9.169	92.84	5.631	57.89	-172.16
7	-11.77	0.00	-37.106	10.724	97.73	6.666	68.54	-186.18
8	-13.76	0.00	-42.816	12.503	104.53	6.191	71.51	-181.85
9	-14.75	0.00	-45.596	13.594	108.24	6.408	77.89	-189.68
10	0.25	0.00	-2.109	5.327	36.49	4.580	24.62	-155.39
11	2.28	0.00	3.468	5.465	25.66	4.422	18.40	-154.40
12	4.24	0.00	8.253	5.605	17.94	4.213	12.94	-149.67
13	6.24	0.00	12.824	5.926	13.06	4.259	6.30	-147.35
14	8.24	0.00	17.244	6.495	16.35	4.591	-0.47	-147.58
15	10.30	0.00	22.255	7.286	19.48	4.500	-8.23	-142.29
16	12.29	0.00	26.941	8.424	20.51	4.869	-14.87	-137.88
17	14.24	0.00	29.631	10.339	2.23	5.779	-25.21	-126.96
18	16.26	0.00	33.025	12.091	3.69	6.277	-30.24	-129.94
19	18.25	0.00	37.240	14.540	-22.63	5.428	-33.97	-135.33
20	20.24	0.00	39.774	17.159	-57.44	4.556	-35.82	-137.51
21	22.24	0.00	42.960	20.019	-82.33	5.047	-41.31	-145.66
22	24.28	0.00	46.618	23.492	-106.59	5.890	-49.41	-150.56
23	25.24	0.00	49.393	25.346	-116.92	6.680	-56.04	-153.78
24	0.27	0.00	-1.942	5.401	38.47	4.267	24.79	-154.69

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 33 11/20/81 0933 RUN 33

TEMP 86. PB 14.5187

QPSF 75.00 VFPS 259.36 RNFT 1505745. MACH 0.2264

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	33	0	12	31	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	1

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA			DATA AT C.G.		FULL SCALE DATA			
PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.26	0.01	-2.017	5.230	44.73	6.021	28.05	-168.44
2	0.26	-2.01	-2.088	5.279	47.53	2.041	27.90	-147.38
3	0.26	-4.01	-2.027	5.395	45.87	-2.102	24.84	-120.92
4	0.26	-6.00	-1.706	5.658	41.21	-6.195	23.88	-104.23
5	0.26	-7.99	-1.027	6.240	33.92	-10.230	20.44	-76.34
6	0.26	-9.99	0.002	7.011	25.42	-14.656	16.74	-46.65
7	0.26	-12.00	1.175	8.415	14.92	-19.710	14.25	-20.80
8	0.26	-13.99	2.152	9.871	9.64	-24.389	12.92	11.23
9	0.26	-15.99	3.189	11.466	3.75	-28.631	11.89	42.18
10	0.26	-17.98	4.877	13.411	-6.85	-33.380	10.56	74.09
11	0.26	-20.03	7.027	15.853	-18.99	-37.927	8.17	113.80
12	0.26	-22.00	9.013	18.708	-36.12	-43.044	4.13	152.85
13	0.26	-23.99	11.508	21.846	-52.75	-47.716	-3.21	181.98
14	0.26	-26.01	13.923	25.057	-68.21	-52.118	-3.46	199.56
15	0.26	-28.01	15.826	28.195	-80.72	-55.775	-3.63	205.18
16	0.26	-30.02	16.418	31.051	-77.16	-58.819	0.56	203.83
17	0.26	0.00	-1.684	5.297	43.65	6.697	25.80	-172.14
18	0.26	2.00	-1.948	5.429	43.74	10.422	27.19	-184.42
19	0.26	3.99	-1.880	5.841	37.55	13.612	31.18	-196.25
20	0.26	5.99	-1.599	6.280	28.46	16.328	33.25	-197.29
21	0.26	7.99	-0.782	6.944	15.36	19.871	35.14	-204.83
22	0.26	10.00	0.376	7.716	1.84	23.944	37.76	-218.91
23	0.26	11.99	1.556	8.902	-9.86	28.129	40.76	-240.45
24	0.26	13.98	2.685	10.665	-18.29	32.959	40.73	-258.47
25	0.26	15.99	4.157	12.351	-30.32	38.229	42.73	-288.13
26	0.26	17.99	5.930	14.233	-45.83	42.836	45.57	-316.57
27	0.26	20.02	7.926	16.627	-58.84	48.338	48.98	-360.05
28	0.26	22.00	10.072	19.149	-76.28	53.678	52.81	-403.22
29	0.26	23.98	11.667	22.121	-87.93	58.423	53.77	-431.83
30	0.26	26.00	13.072	25.263	-94.68	63.347	55.06	-465.66
31	0.26	28.01	13.271	29.927	-57.40	63.141	13.72	-398.36
32	0.26	30.01	13.183	32.925	-47.33	66.196	3.62	-405.28
33	0.26	0.00	-1.451	5.230	44.88	6.037	27.99	-169.27

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 34 11/20/81 0933 RUN 34

TEMP 86. PO 14.5187

QPSF 83.00 VFPS 272.85 RNFT 1584019. MACH 0.2382

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	33	0	13	31	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	1

CORRECTED FOR TARE AND INTERFERENCE EFFECTS
SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.27	0.01	-1.868	5.197	42.47	5.688	29.04	-165.78
2	0.27	-1.99	-1.966	5.347	43.56	1.035	28.63	-138.16
3	0.27	-4.00	-2.071	5.540	41.92	-3.217	26.57	-114.02
4	0.27	-6.00	-1.732	5.937	36.23	-7.401	25.40	-96.41
5	0.27	-8.07	-1.104	6.533	29.82	-11.802	21.80	-69.23
6	0.27	-10.00	-0.207	7.327	21.90	-16.241	17.71	-40.25
7	0.27	-12.00	0.942	8.884	10.91	-21.282	14.42	-16.02
8	0.27	-13.99	1.832	10.355	6.87	-25.699	12.91	15.70
9	0.27	-15.99	2.938	12.003	1.94	-30.267	12.74	43.83
10	0.27	-17.99	4.465	13.881	-8.56	-34.743	10.89	75.69
11	0.27	-20.00	6.707	16.339	-18.29	-38.584	9.78	113.08
12	0.27	-22.02	8.931	19.221	-35.35	-43.805	4.66	150.18
13	0.27	-23.99	11.229	22.296	-49.91	-48.427	0.02	180.53
14	0.27	-26.02	13.180	25.334	-62.92	-52.281	-0.45	195.67
15	0.27	-28.02	15.694	28.410	-73.62	-55.568	1.14	198.38
16	0.27	-30.00	16.086	31.100	-72.43	-58.231	4.88	200.49
17	0.27	0.00	-2.230	5.360	38.96	6.111	27.58	-167.08
18	0.27	2.02	-2.137	5.489	38.63	9.650	29.02	-179.64
19	0.27	4.00	-2.024	5.945	32.28	12.597	32.84	-191.02
20	0.27	6.00	-1.800	6.335	23.95	15.873	35.08	-193.61
21	0.27	7.99	-1.107	6.868	12.91	19.303	37.49	-201.82
22	0.27	9.98	0.021	7.752	0.89	23.307	39.87	-215.84
23	0.27	12.00	1.188	8.921	-9.87	27.548	42.39	-237.09
24	0.27	13.99	2.206	10.612	-16.73	32.494	43.55	-255.52
25	0.27	16.03	4.044	12.364	-29.71	37.545	43.92	-288.24
26	0.27	17.99	5.637	14.176	-42.48	42.104	46.40	-315.83
27	0.27	19.99	7.372	16.369	-57.58	47.206	49.65	-358.86
28	0.27	21.98	9.468	18.981	-72.66	52.618	53.64	-401.74
29	0.27	21.98	9.408	18.945	-71.92	52.709	53.77	-400.99
30	0.27	24.00	11.702	21.953	-86.31	57.604	53.37	-433.94
31	0.27	25.99	13.008	25.094	-93.76	62.270	53.00	-463.95
32	0.27	28.00	12.752	29.803	-56.82	62.812	15.47	-404.87
33	0.27	29.99	12.695	32.639	-48.04	65.825	3.39	-406.40
34	0.27	-0.01	-2.194	5.330	41.64	5.510	29.28	-164.04

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 35 11/20/81 0933 RUN 35

TEMP 68. PO 14.6464

QPSF 75.00 VFPS 253.94 RNFT 1578041. MACH 0.2254

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	32	0	14	31	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TAPE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.25	-0.01	-1.975	4.794	32.51	-0.555	2.31	-10.99
2	-1.76	-0.01	-8.437	4.934	51.91	-0.489	3.67	-9.58
3	-3.78	-0.01	-14.863	5.366	78.03	-0.258	5.21	-11.78
4	-5.78	-0.01	-21.245	6.123	98.67	-0.125	5.62	-11.49
5	-7.77	-0.01	-27.278	7.207	113.10	-0.144	6.47	-12.71
6	-9.77	-0.01	-31.484	8.753	106.21	0.169	5.64	-15.85
7	-11.77	-0.01	-37.298	10.629	97.66	-0.092	7.61	-15.97
8	-13.77	-0.01	-43.510	12.637	104.68	-0.790	7.33	-14.37
9	-14.77	-0.01	-46.556	13.850	106.36	-0.980	7.06	-17.06
10	0.24	-0.01	-2.008	4.827	32.44	-0.356	2.33	-11.89
11	2.26	-0.01	3.843	4.908	21.10	-0.460	1.37	-15.57
12	4.26	-0.01	8.461	5.109	13.36	-0.506	0.11	-16.52
13	6.24	-0.01	13.183	5.361	8.71	-0.295	-1.88	-18.72
14	8.25	-0.01	17.781	5.947	11.37	-0.057	-3.58	-18.79
15	10.27	-0.01	22.712	6.858	14.61	0.175	-5.16	-18.18
16	12.25	-0.01	27.566	7.594	17.85	-0.032	-6.35	-12.24
17	14.28	-0.01	30.545	9.882	1.84	0.828	-10.78	-3.23
18	16.26	-0.01	33.606	11.446	4.31	1.890	-14.60	-4.52
19	18.30	-0.01	36.321	14.122	-26.72	0.875	-12.09	-9.04
20	20.26	-0.01	39.774	16.715	-54.19	-0.266	-6.90	-9.00
21	22.27	-0.01	42.608	19.657	-79.26	-0.843	-4.68	-11.82
22	24.25	-0.01	45.667	22.780	-100.65	0.296	-7.87	-10.36
23	25.28	-0.01	49.105	25.125	-114.16	1.203	-11.81	-11.87
24	0.26	-0.01	-1.741	4.827	32.54	-0.555	1.78	-11.80

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 36 11/20/81 0933 RUN 36

TEMP 68. PO 14.6464

QPSF 75.00 VFPS 253.94 RNFT 1578041. MACH 0.2254

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	32	0	15	31	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.26	-0.01	-0.898	4.706	15.71	-0.988	-1.34	-0.20
2	-1.75	-0.01	-7.567	4.959	33.26	-0.843	-1.16	0.33
3	-3.76	-0.01	-13.717	5.321	51.70	-0.421	0.14	-3.14
4	-5.75	-0.01	-19.444	5.953	52.90	-0.424	0.50	-3.34
5	-7.79	-0.01	-24.251	7.347	71.36	-0.383	1.05	-4.29
6	-9.76	-0.01	-29.574	8.609	74.44	-0.308	1.94	-5.38
7	-11.77	-0.01	-35.871	10.021	80.67	-0.651	1.85	-4.98
8	-13.75	-0.01	-42.253	11.942	89.55	-1.355	2.14	-6.27
9	-14.76	-0.01	-45.909	13.186	95.91	-1.572	2.95	-6.83
10	0.26	-0.01	-0.998	4.706	15.76	-0.888	-1.06	-0.59
11	2.27	-0.01	4.543	4.835	7.33	-0.977	-0.94	-0.51
12	4.29	-0.01	9.171	4.950	2.40	-1.122	-0.09	-1.88
13	6.25	-0.01	13.816	5.252	0.30	-0.991	-0.57	-3.35
14	8.25	-0.01	18.220	5.748	4.84	-0.715	-2.44	-5.24
15	10.25	-0.01	22.738	6.739	14.65	-0.356	-4.49	-5.66
16	12.25	-0.01	26.653	7.758	35.52	-0.353	-5.31	-2.86
17	14.25	-0.01	28.242	9.645	43.01	0.543	-7.59	6.82
18	16.26	-0.01	31.536	11.195	47.80	1.314	-9.72	4.04
19	18.28	-0.01	35.709	13.933	-6.43	0.716	-8.43	-0.73
20	20.24	-0.01	39.517	16.812	-40.88	-0.922	-3.67	-0.73
21	22.27	-0.01	42.708	19.667	-69.41	-0.970	-1.59	-3.36
22	24.24	-0.01	46.291	22.940	-99.55	0.006	-3.46	-4.39
23	25.27	-0.01	49.655	25.206	-114.43	0.964	-7.04	-2.46
24	0.25	-0.01	-1.231	4.672	18.20	-1.022	-1.19	-0.13

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 37 11/20/81 0933 RUN 37

TEMP 80. PB 14.6464

QPSF 75.00 VFPS 256.81 RNFT 1533731. MACH 0.2254

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	37	0	16	31	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.24	=0.01	7.573	3.338	=112.66	=0.710	=0.51	2.38
2	=1.73	=0.01	3.481	3.149	=133.55	=0.492	=0.42	1.06
3	=3.75	=0.01	=0.153	3.115	=152.38	=0.134	=0.64	=1.66
4	=5.75	=0.01	=4.151	3.396	=171.30	=0.137	=0.28	=0.82
5	=7.75	=0.01	=8.044	3.821	=189.46	=0.107	=0.45	=2.04
6	=9.74	=0.01	=12.570	4.479	=204.50	=0.020	=1.07	=2.55
7	=11.76	=0.01	=17.745	5.262	=213.39	=0.143	=1.63	=5.16
8	=13.73	=0.01	=22.883	6.425	=223.79	=0.918	=2.73	=5.85
9	=14.76	=0.01	=25.138	7.144	=227.85	=1.052	=2.66	=7.15
10	0.24	=0.01	7.539	3.272	=112.10	=0.604	=0.40	1.57
11	2.26	=0.01	11.209	3.588	=90.26	=0.775	0.04	0.61
12	4.27	=0.01	14.363	3.886	=70.01	=0.875	=0.12	0.06
13	6.24	=0.01	17.463	4.406	=50.94	=0.787	=1.27	=0.43
14	8.25	=0.01	20.845	5.046	=31.30	=0.442	=2.87	=2.33
15	10.25	=0.01	24.323	5.914	=9.54	0.126	=6.28	=3.46
16	12.25	=0.01	27.975	7.108	11.89	0.317	=7.98	=1.96
17	14.24	=0.01	28.932	8.922	29.52	1.255	=15.07	8.00
18	16.26	=0.01	31.213	10.637	45.31	1.941	=16.07	7.17
19	18.27	=0.01	30.789	12.692	60.62	0.545	=8.20	0.70
20	20.27	=0.01	31.647	14.789	72.62	=0.783	=5.23	1.28
21	22.27	=0.01	32.469	16.536	85.30	=0.721	=3.65	=1.02
22	24.25	=0.01	34.128	18.756	98.10	=0.025	=3.45	0.89
23	25.25	=0.01	36.109	20.120	103.10	0.925	=8.02	0.86
24	0.24	=0.01	7.539	3.338	=112.13	=0.717	=0.40	1.47

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 38 11/20/81 0933 RUN 38

TEMP 88. PO 14.6464

QPSF 75.00 VFPS 258.94 RNFT 1501050. MACH 0.2254

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	32	0	17	31	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.24	-0.01	7.181	3.869	-107.97	5.438	21.18	-151.33
2	-1.76	-0.01	3.234	3.686	-129.65	5.691	26.88	-158.41
3	-3.74	-0.01	-0.337	3.682	-146.90	6.399	33.23	-163.51
4	-5.74	-0.01	-4.166	3.889	-167.64	6.596	39.25	-167.38
5	-7.77	-0.01	-7.962	4.330	-183.65	6.823	46.41	-171.86
6	-9.74	-0.01	-12.539	5.025	-196.60	7.379	54.09	-179.51
7	-11.75	-0.01	-17.829	5.761	-204.66	7.329	60.43	-179.43
8	-13.78	-0.01	-22.868	6.853	-214.20	6.739	65.58	-171.19
9	-14.78	-0.01	-25.112	7.562	-218.90	6.400	68.37	-166.72
10	0.25	-0.01	7.348	3.909	-107.11	5.471	21.23	-151.56
11	2.25	-0.01	10.858	4.258	-87.08	4.904	15.83	-143.72
12	4.24	-0.01	13.709	4.603	-68.78	4.480	11.03	-136.53
13	6.26	-0.01	17.173	5.050	-47.49	4.060	4.40	-133.09
14	8.26	-0.01	20.670	5.595	-26.90	4.401	-2.72	-126.41
15	10.25	-0.01	24.115	6.506	-6.50	4.893	-9.83	-126.11
16	12.26	-0.01	27.617	7.647	15.02	5.130	-16.81	-127.12
17	14.24	-0.01	28.716	9.542	33.86	6.139	-28.97	-120.26
18	16.24	-0.01	31.213	11.189	50.36	6.788	-36.48	-119.14
19	18.25	-0.01	31.680	13.119	64.47	4.906	-34.59	-129.42
20	20.26	-0.01	31.777	15.178	74.25	4.358	-34.62	-131.78
21	22.27	-0.01	32.798	17.176	87.38	4.533	-38.94	-137.15
22	24.26	-0.01	33.781	19.248	95.17	5.481	-48.99	-136.86
23	25.25	-0.01	35.563	20.661	98.10	6.252	-53.76	-136.53
24	0.23	-0.01	7.114	3.909	-109.02	5.271	21.33	-151.73

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 39 11/20/81 0933 RUN 39

TEMP 94. PO 14.6464

QPSF 75.00 VFPS 260.12 RNFT 1484616. MACH 0.2254

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	39	0	18	31	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.27	0.01	-0.888	2.686	-93.26	5.464	23.89	-156.16
2	-1.77	0.01	-2.040	2.706	-110.81	5.755	31.39	-161.20
3	-3.75	0.01	-3.078	2.655	-126.36	6.563	38.36	-175.56
4	-5.77	0.01	-4.210	2.843	-143.69	7.471	46.21	-185.59
5	-7.76	0.01	-5.325	3.156	-158.74	8.123	53.31	-195.54
6	-9.74	0.01	-6.688	3.646	-171.02	8.434	61.42	-201.60
7	-11.74	0.01	-8.097	4.192	-181.96	8.090	66.26	-198.89
8	-13.75	0.01	-9.477	4.872	-193.66	6.548	70.35	-188.94
9	-14.76	0.01	-10.283	5.255	-200.08	6.545	72.94	-185.18
10	0.24	0.01	-0.924	2.685	-93.79	5.467	24.07	-154.04
11	2.25	0.01	0.167	2.841	-78.00	5.009	17.00	-146.30
12	4.26	0.01	1.368	2.830	-61.62	4.394	10.60	-134.95
13	4.26	0.01	1.334	2.863	-61.71	4.347	10.12	-136.88
14	6.27	0.01	2.380	2.980	-46.72	3.821	5.77	-130.29
15	8.25	0.01	3.240	3.062	-28.66	3.720	0.39	-129.30
16	10.26	0.01	4.255	3.324	-8.86	3.994	-6.27	-131.81
17	12.23	0.01	5.363	3.618	8.63	4.372	-11.23	-135.06
18	14.28	0.01	6.476	3.969	24.63	4.759	-18.09	-141.89
19	16.25	0.01	7.631	4.563	40.60	4.981	-22.25	-146.03
20	18.24	0.01	8.708	5.323	57.45	3.382	-25.48	-138.01
21	20.27	0.01	9.521	5.997	73.96	3.246	-29.95	-132.43
22	22.26	0.01	10.679	6.690	90.26	2.986	-34.36	-129.42
23	24.26	0.01	11.832	7.482	104.41	2.562	-38.38	-117.20
24	25.25	0.01	12.352	7.826	111.46	1.964	-40.36	-112.01
25	0.24	0.01	-0.957	2.684	-94.22	5.327	24.35	-156.07

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 43 11/20/81 0933 RUN 40

TEMP 94. PO 14.6464

QPSF 75.00 VFPS 260.12 RNFT 1484616. MACH 0.2254

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	39	0	19	31	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS
SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.23	0.01	-9.376	4.117	37.18	6.002	22.81	-157.66
2	-1.74	0.01	-13.216	4.587	64.56	6.042	31.28	-161.25
3	-3.78	0.01	-17.486	4.933	98.08	6.707	40.11	-170.56
4	-5.77	0.01	-21.555	5.726	127.16	7.836	47.64	-182.24
5	-7.74	0.01	-23.671	6.843	133.17	8.485	54.55	-194.84
6	-9.77	0.01	-25.158	7.983	126.21	9.262	64.47	-200.65
7	-11.79	0.01	-27.891	9.295	134.07	9.496	72.70	-202.88
8	-13.77	0.01	-30.447	10.584	144.12	9.573	80.58	-202.60
9	-13.74	0.01	-30.373	10.531	143.21	9.199	76.98	-196.90
10	-14.77	0.01	-32.299	11.339	154.88	8.857	80.38	-188.55
11	0.23	0.01	-9.643	4.317	35.13	6.102	24.09	-161.15
12	2.27	0.01	-5.914	3.829	12.41	5.694	16.66	-150.18
13	4.25	0.01	-2.195	3.684	-12.08	5.113	8.57	-142.14
14	6.25	0.01	1.259	3.751	-32.91	4.784	2.42	-138.94
15	8.27	0.01	4.519	3.863	-53.64	4.695	-3.09	-141.97
16	10.24	0.01	8.519	4.014	-80.39	4.885	-8.92	-144.28
17	12.26	0.01	12.400	4.608	-107.17	5.014	-14.69	-145.35
18	14.27	0.01	15.194	5.438	-118.84	5.118	-20.27	-148.99
19	16.27	0.01	17.399	6.701	-120.67	5.090	-26.81	-148.38
20	18.25	0.01	19.812	8.427	-125.14	3.542	-28.27	-137.34
21	20.25	0.01	21.366	9.713	-123.79	2.994	-32.66	-130.80
22	22.21	0.01	22.684	11.020	-118.16	2.991	-35.40	-123.54
23	24.26	0.01	24.438	12.501	-117.13	2.744	-37.95	-109.51
24	25.23	0.01	25.573	13.419	-122.15	2.790	-41.96	-100.36
25	0.24	0.01	-9.509	4.117	36.11	5.921	23.52	-157.04

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 41 11/20/81 0933 RUN 41

TEMP 94. P0 14.6464

QPSF 75.00 VFPS 260.12 RNFT 1484616. MACH 0.2254

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	39	0	20	31	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.26	0.01	-0.790	2.342	-96.86	-0.104	-1.09	-1.13
2	-1.76	0.01	-1.804	2.442	-113.38	-0.378	-0.01	-3.58
3	-3.75	0.01	-2.902	2.622	-131.80	0.084	0.64	-3.77
4	-5.78	0.01	-3.926	2.816	-148.28	0.775	0.82	-9.34
5	-7.74	0.01	-4.935	3.125	-162.13	1.019	0.71	-12.88
6	-9.74	0.01	-6.143	3.485	-176.98	1.235	0.17	-10.46
7	-11.76	0.01	-7.553	4.033	-189.96	1.292	-1.23	-4.97
8	-13.79	0.01	-9.066	4.605	-201.75	1.213	-3.79	2.60
9	-14.75	0.01	-9.779	4.982	-208.09	1.396	-4.96	5.36
10	0.27	0.01	-0.822	2.408	-96.74	-0.137	-1.08	0.74
11	2.24	0.01	0.175	2.417	-81.63	-0.120	-1.64	-0.38
12	4.26	0.01	1.262	2.470	-64.32	-0.261	-1.88	1.61
13	6.27	0.01	2.274	2.598	-48.50	-0.598	-1.66	1.89
14	8.27	0.01	3.282	2.766	-29.81	-0.702	-1.76	1.47
15	10.26	0.01	4.154	2.974	-10.99	-0.641	-1.85	0.67
16	12.23	0.01	5.228	3.255	6.39	-0.589	-1.91	-1.28
17	14.24	0.01	6.343	3.711	23.26	-0.392	-1.74	-2.32
18	16.27	0.01	7.434	4.308	40.98	-0.296	-1.38	-6.38
19	18.26	0.01	8.404	4.977	57.34	-0.606	-1.08	-2.95
20	20.25	0.01	9.424	5.654	73.53	-1.514	0.35	[illegible]
21	22.26	0.01	10.432	6.475	88.99	-1.578	0.88	[illegible]
22	24.26	0.01	11.530	7.272	104.92	-1.237	-0.14	2.47
23	25.26	0.01	12.022	7.641	111.89	-1.194	-0.67	4.14
24	0.25	0.01	-0.890	2.408	-97.46	-0.197	-0.87	-0.31

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 42 11/20/81 0933 RUN 42

TEMP 76. PO 14.6120

QPSF 75.00 VFPS 256.16 RNFT 1546449. MACH 0.2257

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	39	0	20	31	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.24	0.01	-0.524	2.675	-97.01	-0.203	-0.53	0.84
2	-1.75	0.01	-1.570	2.723	-113.51	0.029	0.02	-2.60
3	-3.73	0.01	-2.634	2.769	-129.49	0.250	0.47	-6.19
4	-5.75	0.01	-3.690	2.996	-146.41	0.613	0.59	-8.47
5	-7.74	0.01	-4.802	3.338	-163.83	0.772	0.88	-7.42
6	-9.74	0.01	-6.010	3.732	-178.16	0.862	0.11	-6.27
7	-11.77	0.01	-7.487	4.114	-191.32	0.880	-1.24	-2.06
8	-13.76	0.01	-8.862	4.784	-203.97	0.913	-2.86	3.68
9	-14.77	0.01	-9.616	5.096	-210.39	1.087	-4.25	5.73
10	0.26	0.01	-0.323	2.608	-95.80	-0.190	-0.38	-0.43
11	2.25	0.01	0.675	2.698	-78.68	-0.213	-0.93	0.97
12	4.27	0.01	1.796	2.717	-63.72	-0.461	-1.29	2.88
13	6.27	0.01	3.008	3.145	-47.72	-0.932	-1.59	1.86
14	8.27	0.01	4.048	3.346	-30.60	-1.135	-1.64	1.47
15	10.26	0.01	5.087	3.721	-13.64	-1.241	-1.73	0.62
16	12.26	0.01	6.129	4.037	3.90	-1.449	-1.82	0.67
17	14.27	0.01	7.144	4.493	22.02	-1.739	-1.43	2.09
18	16.26	0.01	8.167	5.054	39.31	-2.401	-0.68	4.13
19	18.27	0.01	8.971	5.525	57.68	-2.672	-0.22	5.83
20	20.27	0.01	9.792	6.002	74.21	-3.167	2.36	5.84
21	22.25	0.01	10.931	6.854	89.23	-0.945	1.91	-1.87
22	24.25	0.01	11.795	7.451	104.80	-0.897	0.71	2.25
23	25.26	0.01	12.255	7.854	112.62	-0.761	-0.04	5.14
24	0.25	0.01	-0.257	2.588	-97.17	-0.203	-0.37	0.08

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 43 11/20/81 0933 RUN 43

TEMP 76. PB 14.6120

QPSF 75.00 VFPS 256.16 RNFT 1546449. MACH 0.2257

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	39	0	18	31	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.25	0.01	-0.590	3.118	-94.59	5.026	23.31	-143.23
2	-1.78	0.01	-1.708	3.066	-112.28	5.276	29.11	-149.27
3	-3.76	0.01	-2.913	3.095	-128.41	6.065	35.68	-157.88
4	-5.75	0.01	-4.308	3.143	-143.55	6.735	41.35	-166.87
5	-7.75	0.01	-5.257	3.490	-160.37	6.915	46.63	-167.77
6	-9.77	0.01	-6.626	3.547	-172.08	6.602	50.07	-161.29
7	-11.74	0.01	-7.964	4.492	-184.50	5.757	51.31	-148.93
8	-13.75	0.01	-9.477	5.245	-197.07	4.882	53.42	-141.73
9	-14.74	0.01	-10.213	5.586	-202.47	4.538	55.98	-141.08
10	0.25	0.01	-0.556	3.078	-94.70	5.020	24.91	-143.54
11	2.26	0.01	0.435	3.175	-77.65	4.455	17.78	-133.98
12	4.25	0.01	1.634	3.263	-61.80	3.947	12.44	-127.50
13	6.27	0.01	2.780	3.547	-47.91	3.335	6.47	-125.93
14	8.27	0.01	4.007	3.837	-29.18	3.048	0.29	-129.77
15	10.26	0.01	5.055	4.124	-13.16	3.128	-4.53	-134.27
16	12.29	0.01	6.199	4.520	4.74	3.247	-10.40	-138.86
17	14.25	0.01	7.108	5.008	19.51	3.123	-15.26	-141.08
18	16.25	0.01	8.031	5.330	37.55	2.981	-19.46	-139.47
19	18.24	0.01	8.808	5.923	55.95	2.675	-22.79	-135.18
20	20.24	0.01	9.585	6.462	72.43	1.783	-25.60	-126.95
21	22.25	0.01	10.544	7.089	90.39	1.122	-27.29	-111.51
22	24.29	0.01	11.803	7.884	105.84	3.180	-34.39	-123.28
23	25.25	0.01	12.218	8.192	111.28	2.542	-35.10	-113.31
24	0.24	0.01	-0.591	3.031	-94.53	5.074	23.22	-143.56

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 44 11/20/81 0933 RUN 44

TEMP 76. PO 14.5973

QPSF 75.00 VFPS 256.29 RNFT 1545668. MACH 0.2258

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	39	0	18	31	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.26	0.01	-0.656	3.132	-95.76	5.012	22.64	-141.93
2	-1.76	0.01	-1.673	3.134	-113.79	5.473	29.56	-147.94
3	-3.75	0.01	-2.912	3.162	-129.21	6.097	35.32	-158.76
4	-5.77	0.01	-4.110	3.243	-146.00	6.808	40.55	-167.53
5	-7.76	0.01	-5.359	3.510	-159.68	7.003	46.98	-169.46
6	-9.75	0.01	-6.556	3.946	-171.31	6.768	49.25	-160.61
7	-11.76	0.01	-8.100	4.493	-183.27	5.782	50.47	-148.89
8	-13.74	0.01	-9.409	5.211	-195.60	4.851	52.61	-142.24
9	-14.76	0.01	-10.250	5.655	-203.40	4.645	56.24	-141.39
10	0.24	0.01	-0.557	3.198	-97.18	5.067	23.89	-143.47
11	2.24	0.01	0.433	3.274	-77.58	4.369	17.16	-132.73
12	4.28	0.01	1.635	3.397	-62.99	3.574	11.22	-124.07
13	6.25	0.01	2.879	3.553	-46.82	3.307	4.66	-125.05
14	8.24	0.01	3.906	3.856	-32.31	3.106	-0.55	-126.88
15	10.24	0.01	5.021	4.191	-15.56	3.139	-5.49	-132.79
16	12.27	0.01	6.065	4.686	0.76	3.278	-11.06	-140.28
17	14.25	0.01	7.175	5.141	17.26	3.183	-16.14	-140.58
18	16.27	0.01	8.198	5.564	34.90	3.015	-20.71	-136.92
19	18.25	0.01	8.808	6.024	50.71	2.569	-24.29	-133.03
20	20.27	0.01	9.754	6.630	69.18	1.859	-26.83	-125.48
21	22.27	0.01	10.680	7.290	85.53	0.956	-29.96	-113.04
22	24.24	0.01	11.829	8.047	98.67	3.373	-35.23	-123.21
23	25.28	0.01	12.390	8.462	105.97	2.520	-37.45	-113.99
24	0.26	0.01	-0.622	3.186	-95.58	4.932	22.89	-140.39

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 45 11/20/81 0933 RUN 45

TEMP 76. PO 14.5973

QPSF 75.00 VFPS 256.29 RNFT 1545668. MACH 0.2258

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	39	0	19	31	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.27	0.01	-7.874	4.353	15.63	5.179	19.56	-135.62
2	-1.76	0.01	-11.884	4.787	40.56	5.437	27.40	-140.54
3	-3.74	0.01	-15.416	5.202	65.92	6.168	34.14	-152.79
4	-5.79	0.01	-19.457	5.860	93.61	7.019	41.12	-164.68
5	-7.76	0.01	-21.307	6.998	99.52	7.522	48.89	-170.67
6	-9.81	0.01	-23.464	8.163	97.56	7.703	54.30	-172.32
7	-11.77	0.01	-26.454	9.402	110.56	7.572	58.30	-167.07
8	-13.78	0.01	-29.283	10.718	124.11	7.342	63.20	-155.59
9	-14.75	0.01	-30.947	11.447	133.61	7.239	66.75	-153.18
10	0.25	0.01	-7.975	4.418	15.68	5.167	20.33	-133.40
11	2.28	0.01	-4.380	4.197	-5.81	4.727	13.81	-128.73
12	4.25	0.01	-1.195	4.084	-21.74	4.347	8.59	-125.82
13	6.27	0.01	1.960	4.286	-36.46	3.817	2.12	-124.33
14	8.24	0.01	5.051	4.395	-50.36	3.461	-2.74	-127.35
15	10.27	0.01	8.354	4.849	-69.87	3.433	-7.14	-133.14
16	12.26	0.01	11.700	5.441	-90.43	3.314	-12.45	-136.37
17	14.24	0.01	14.792	6.336	-104.26	3.064	-17.85	-137.03
18	16.25	0.01	17.130	7.533	-112.50	2.723	-23.24	-135.82
19	18.26	0.01	19.312	8.701	-120.19	2.369	-26.11	-130.77
20	20.28	0.01	21.368	10.215	-125.09	1.558	-27.80	-121.52
21	22.25	0.01	22.888	11.622	-123.50	0.931	-30.11	-107.29
22	24.29	0.01	24.673	13.129	-123.93	3.250	-38.02	-111.73
23	25.24	0.01	25.573	13.812	-124.84	2.987	-38.62	-99.50
24	0.24	0.01	-7.942	4.285	16.31	5.108	19.70	-134.65

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 46 11/20/81 0933 RUN 46

TEMP 76. PO . 14.5973

QPSF 75.00 VFPS 256.29 RNFT 1545668. MACH 0.2258

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	39	0	19	31	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.24	0.01	-9.042	4.551	32.37	5.508	21.81	-141.15
2	-1.75	0.01	-12.883	4.887	59.05	5.903	28.70	-146.89
3	-3.79	0.01	-17.453	5.500	95.94	6.401	35.34	-159.42
4	-5.76	0.01	-21.254	6.126	123.11	7.234	52.93	-169.96
5	-7.78	0.01	-23.796	7.276	132.16	7.692	49.58	-177.29
6	-9.71	0.01	-24.988	8.463	122.05	8.096	57.28	-179.49
7	-11.76	0.01	-27.699	9.728	129.68	7.903	60.67	-172.02
8	-13.78	0.01	-30.350	10.984	139.85	7.975	67.48	-168.06
9	-14.78	0.01	-32.042	11.653	147.79	7.880	70.55	-163.74
10	0.24	0.01	-9.109	4.651	33.21	5.468	21.94	-140.90
11	2.26	0.01	-5.481	4.329	10.50	5.294	15.69	-135.08
12	4.23	0.01	-1.796	4.316	-13.46	4.794	8.55	-131.10
13	6.28	0.01	1.760	4.520	-33.98	4.131	2.35	-134.36
14	8.25	0.01	5.118	4.729	-55.10	3.981	-2.73	-140.23
15	10.24	0.01	8.919	5.081	-80.89	3.965	-7.80	-144.97
16	12.26	0.01	12.967	5.708	-108.95	3.847	-13.69	-145.85
17	14.24	0.01	15.758	6.636	-123.35	3.537	-19.61	-145.77
18	16.25	0.01	17.997	7.800	-128.18	3.023	-24.88	-141.53
19	18.26	0.01	20.312	9.261	-132.22	2.569	-28.46	-134.41
20	20.26	0.01	21.667	10.381	-132.21	1.759	-30.87	-124.94
21	22.25	0.01	23.188	12.155	-123.03	0.998	-33.10	-104.93
22	22.24	0.01	23.053	11.788	-124.24	4.033	-37.96	-131.02
23	24.23	0.01	24.602	13.307	-121.61	3.485	-41.40	-113.89
24	25.25	0.01	25.341	13.946	-123.00	3.237	-40.23	-102.43
25	0.25	0.01	-8.962	4.618	32.05	5.501	21.92	-140.28

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 47 11/20/81 0933 RUN 47

TEMP 76. P0 14.5973

QPSF 75.00 VFPS 256.29 RNFT 1545668. MACH 0.2258

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	32	0	11	31	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA			DATA AT C.G.			FULL SCALE DATA		
PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.23	0.02	-8.610	5.863	22.82	3.999	22.50	-139.99
2	-1.76	0.02	-13.476	6.312	46.85	2.481	28.88	-135.00
3	-3.75	0.02	-18.738	6.670	79.03	2.108	33.49	-128.07
4	-5.74	0.02	-22.836	7.272	102.79	3.625	42.07	-139.10
5	-7.78	0.02	-26.669	8.535	107.57	5.081	48.30	-149.96
6	-9.76	0.02	-30.045	10.302	99.56	4.558	54.43	-147.12
7	-11.76	0.02	-33.972	12.599	106.81	4.578	60.76	-149.05
8	-13.78	0.02	-36.004	15.480	114.94	4.268	62.98	-146.64
9	-14.75	0.02	-37.336	16.831	124.00	4.501	64.66	-148.56
10	0.27	0.02	-8.508	5.985	22.62	4.034	21.76	-140.03
11	2.25	0.02	-3.301	6.160	5.75	4.888	14.99	-141.97
12	4.24	0.02	0.953	6.534	-7.61	5.340	7.26	-142.99
13	6.23	0.02	4.690	7.254	-22.31	4.619	0.98	-139.51
14	8.27	0.02	8.647	8.026	-35.97	4.025	-4.17	-137.09
15	10.25	0.02	12.450	9.111	-43.32	3.599	-8.99	-135.16
16	12.26	0.02	15.639	10.229	-55.88	3.261	-11.99	-134.44
17	14.26	0.02	18.673	11.809	-68.36	2.539	-15.10	-131.59
18	16.24	0.02	21.789	13.536	-77.59	2.270	-19.42	-125.92
19	18.24	0.02	25.199	15.533	-87.89	1.967	-24.77	-122.98
20	20.26	0.02	29.242	17.883	-95.58	2.084	-30.41	-124.85
21	22.27	0.02	34.089	21.020	-106.56	5.104	-42.26	-138.69
22	24.23	0.02	40.881	24.660	-127.75	6.474	-53.38	-144.35
23	25.22	0.02	44.591	26.580	-139.55	7.102	-56.64	-146.80
24	0.27	0.02	-8.475	5.965	23.64	3.967	21.56	-141.77

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 48 11/20/81 0933 RUN 48

TEMP 76. PO. 14.5973

QPSF 75.00 VFPS 256.29 RNFT 1545668. MACH 0.2258

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	48	0	12	31	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	1

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.27	0.01	-8.751	9.560	38.84	4.601	21.59	-143.05
2	0.27	-2.02	-9.135	9.515	40.02	2.409	20.16	-141.70
3	0.27	-3.98	-9.493	9.358	44.21	0.092	19.69	-137.32
4	0.27	-6.01	-10.006	9.754	47.60	-3.226	22.45	-130.02
5	0.27	-8.00	-9.561	10.168	43.99	-6.668	21.54	-110.11
6	0.27	-10.02	-8.766	11.065	36.48	-11.023	19.45	-81.98
7	0.27	-12.00	-7.625	11.978	26.67	-15.343	17.84	-54.96
8	0.27	-14.00	-6.582	13.166	18.79	-19.973	15.40	-29.49
9	0.26	-16.01	-4.880	14.627	8.04	-24.226	14.58	2.03
10	0.26	-18.00	-2.459	16.585	-2.58	-29.075	11.89	30.81
11	0.26	-20.02	-0.305	18.884	-12.72	-33.629	9.38	62.18
12	0.25	-22.00	1.127	21.551	-23.50	-38.677	7.69	80.32
13	0.25	-24.00	3.039	24.454	-29.25	-43.548	7.18	105.03
14	0.25	-26.00	3.986	27.301	-28.68	-47.853	8.04	123.89
15	0.25	-28.01	4.420	30.436	-21.30	-51.955	13.54	140.12
16	0.25	-30.01	3.423	33.947	-1.42	-55.360	24.18	147.68
17	0.25	-0.01	-8.284	9.527	36.40	5.018	18.91	-143.33
18	0.25	2.01	-7.848	9.659	35.21	6.787	16.77	-127.70
19	0.25	4.02	-7.479	10.011	31.83	9.154	15.40	-124.85
20	0.25	8.02	-6.515	11.340	21.70	15.580	20.43	-154.20
21	0.25	10.01	-5.824	12.113	12.79	19.050	23.10	-169.76
22	0.25	12.00	-5.011	13.232	3.80	23.228	24.80	-193.31
23	0.25	14.01	-3.748	14.660	-5.68	27.876	25.50	-217.23
24	0.25	16.01	-2.343	16.327	-16.81	32.827	25.72	-244.69
25	0.25	18.00	-0.337	18.429	-28.05	37.202	28.25	-276.70
26	0.25	20.01	1.627	20.758	-37.75	43.306	26.37	-290.37
27	0.25	22.00	2.659	23.285	-41.99	47.771	20.66	-286.22
28	0.25	24.01	4.750	26.313	-48.56	52.786	20.30	-314.86
29	0.25	26.01	5.784	29.524	-45.63	57.252	16.62	-337.70
30	0.25	28.00	5.653	32.798	-33.13	61.242	9.07	-361.18
31	0.25	30.00	3.425	35.856	-8.72	63.325	-6.18	-367.72
32	0.25	-0.01	-8.218	9.527	37.24	4.738	20.37	-144.08

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 49 11/20/81 0933 RUN 49

TEMP 55. PO 14.6562

QPSF 75.00 VFPS 250.71 RNFT 1629067. MACH 0.2254

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	39	0	18	31	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.26	0.01	-0.589	2.919	-97.37	5.652	24.96	-163.49
2	-1.74	0.01	-1.571	2.934	-112.30	6.130	31.93	-170.59
3	-3.76	0.01	-2.645	2.962	-132.76	6.770	37.80	-176.75
4	-5.76	0.01	-3.776	3.110	-147.80	7.523	45.84	-189.25
5	-7.76	0.01	-5.125	3.456	-160.82	8.257	53.55	-199.96
6	-9.35	0.01	-6.435	3.871	-173.43	8.373	60.10	-199.06
7	-11.77	0.01	-7.901	4.461	-183.37	8.008	66.66	-199.87
8	-13.77	0.01	-9.346	5.181	-195.08	7.131	71.72	-191.82
9	-14.73	0.01	-10.045	5.518	-200.22	6.575	73.74	-188.14
10	0.25	0.01	-0.556	2.885	-96.26	5.633	24.81	-162.40
11	2.26	0.01	0.568	2.948	-80.81	5.128	18.87	-152.68
12	4.25	0.01	1.767	2.996	-66.20	4.607	11.51	-141.17
13	6.26	0.01	2.679	3.080	-49.84	4.114	5.82	-139.31
14	8.25	0.01	3.673	3.356	-32.28	3.940	0.31	-137.68
15	10.26	0.01	4.588	3.591	-14.34	4.161	-4.82	-139.85
16	12.26	0.01	5.631	3.885	3.68	4.463	-10.43	-147.17
17	14.24	0.01	6.808	4.274	19.82	4.841	-15.93	-150.33
18	16.27	0.01	8.065	4.797	35.18	4.935	-20.91	-153.79
19	18.27	0.01	9.376	5.758	51.41	3.408	-24.65	-146.18
20	20.28	0.01	10.355	6.364	67.53	3.371	-27.78	-142.81
21	22.26	0.01	11.445	7.130	83.21	3.266	-33.44	-137.92
22	24.27	0.01	12.434	7.916	96.58	2.510	-34.55	-125.42
23	25.27	0.01	13.022	8.394	104.42	1.880	-36.99	-116.23
24	0.25	0.01	-0.556	2.918	-97.94	5.553	24.85	-162.92

ORIGINAL PAGE IS
OF POOR QUALITY

A-145

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 50 11/20/81 0933 RUN 50

TEMP 61. PO 14.6759

QPSF 75.00 VFPS 252.00 RNFT 1606504. MACH 0.2252

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	39	0	18	31	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.25	0.01	-0.656	2.852	-100.69	5.800	24.88	-166.11
2	-1.75	0.01	-1.672	2.834	-117.29	6.472	33.13	-176.71
3	-3.76	0.01	-2.846	2.895	-132.52	7.232	40.78	-188.09
4	-5.75	0.01	-4.108	3.143	-146.14	8.262	48.95	-203.64
5	-7.75	0.01	-5.391	3.390	-157.24	8.855	58.30	-212.16
6	-9.74	0.01	-6.788	3.912	-169.58	8.967	64.44	-212.97
7	-11.76	0.01	-8.233	4.427	-181.01	8.436	70.34	-209.17
8	-13.73	0.01	-9.708	5.210	-191.89	7.519	75.91	-199.03
9	-14.76	0.01	-10.383	5.555	-197.26	6.945	77.80	-194.61
10	0.27	0.01	-0.555	2.819	-99.09	5.698	24.77	-166.43
11	2.27	0.01	0.435	2.875	-85.01	5.341	17.00	-157.57
12	4.26	0.01	1.534	2.963	-69.47	4.814	10.74	-148.26
13	6.28	0.01	2.614	3.047	-53.11	4.255	5.09	-142.42
14	8.26	0.01	3.607	3.256	-35.31	4.061	-0.70	-141.61
15	10.25	0.01	4.521	3.491	-17.37	4.226	-6.33	-142.94
16	12.26	0.01	5.498	3.785	0.29	4.376	-12.56	-147.25
17	14.25	0.01	6.808	4.141	16.18	4.889	-17.78	-153.00
18	16.24	0.01	8.030	4.763	31.13	4.946	-23.67	-160.52
19	18.23	0.01	9.274	5.656	45.47	3.716	-27.94	[illegible]
20	20.29	0.01	10.423	6.365	62.49	3.876	-33.99	[illegible]
21	22.24	0.01	11.410	7.169	77.11	3.825	-38.49	-149.34
22	24.28	0.01	12.502	8.057	91.57	3.052	-43.24	-138.24
23	25.25	0.01	12.985	8.393	96.84	2.440	-44.75	-129.33
24	0.24	0.01	-0.624	2.885	-101.49	5.667	24.23	-166.84

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 51 11/20/81 0933 RUN 51

TEMP 64. P0 14.6808

QPSF 83.00 VFPS 265.81 RNFT 1678079. MACH 0.2369

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	51	0	13	31	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	1

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.26	0.00	-0.151	2.620	-102.42	5.273	23.89	-159.52
2	0.26	-2.02	-0.100	2.638	-104.39	2.160	17.65	-149.36
3	0.26	-4.00	-0.023	2.740	-106.08	-0.590	11.17	-140.74
4	0.26	-5.99	0.167	3.106	-107.25	-2.848	8.20	-150.11
5	0.27	-8.00	0.618	3.703	-114.16	-6.326	1.16	-132.06
6	0.27	-9.99	1.059	4.527	-118.11	-9.942	-5.35	-109.13
7	0.27	-12.00	1.002	5.872	-113.34	-13.806	-10.83	-95.87
8	0.27	-14.01	0.686	7.191	-102.32	-17.376	-12.79	-76.26
9	0.27	-15.99	0.046	8.598	-89.11	-20.569	-13.05	-59.88
10	0.27	-17.99	-0.083	10.294	-76.91	-23.984	-12.74	-39.75
11	0.27	-19.99	-0.280	12.180	-65.05	-27.607	-10.80	-17.54
12	0.27	-21.99	-0.432	14.335	-51.87	-31.337	-7.90	-1.83
13	0.27	-23.99	-0.548	16.865	-38.89	-35.066	-4.29	15.85
14	0.27	-25.99	-0.638	19.581	-25.70	-38.731	-0.39	32.28
15	0.27	-28.07	-0.644	22.665	-9.61	-42.315	4.00	51.41
16	0.27	-30.03	-0.737	25.750	9.23	-45.671	10.44	64.50
17	0.27	-0.01	-0.242	2.680	-103.46	5.365	23.07	-159.96
18	0.27	2.01	-0.180	2.839	-104.86	7.610	30.28	-161.36
19	0.27	3.99	0.024	3.145	-107.77	9.815	37.51	-161.99
20	0.27	5.98	0.157	3.565	-112.24	11.153	42.65	-148.91
21	0.27	7.98	0.550	4.008	-118.55	13.835	49.07	-150.30
22	0.27	9.99	1.015	4.831	-126.58	17.348	56.13	-168.65
23	0.28	11.98	1.368	5.729	-129.93	20.720	61.61	-185.08
24	0.28	14.00	1.483	7.479	-125.20	24.873	66.16	-195.20
25	0.28	15.99	1.081	8.931	-113.24	28.532	66.71	-207.68
26	0.29	18.00	0.577	10.528	-97.58	32.669	65.73	-224.40
27	0.24	20.01	0.141	12.412	-82.82	36.667	65.93	-243.78
28	0.25	21.99	-0.286	14.668	-64.50	41.117	65.52	-280.61
29	0.25	23.98	-0.976	16.920	-43.36	44.823	62.63	-303.91
30	0.25	26.00	-1.145	19.602	-24.88	49.504	52.83	-320.54
31	0.28	28.03	-2.527	22.788	22.04	49.110	9.08	-229.44
32	0.28	29.99	-2.534	25.974	39.28	53.323	1.61	-249.73
33	0.26	0.00	-0.272	2.650	-103.33	5.303	24.23	-161.18

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 52 11/20/81 0933 RUN 52

TEMP 66. P0 14.6808

QPSF 75.00 VFPS 253.16 RNFT 1587495. MACH 0.2252

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	32	0	17	31	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.28	0.02	6.816	3.976	-113.49	5.571	21.74	-161.29
2	-1.77	0.02	2.867	3.886	-134.00	5.825	28.10	-166.54
3	-3.75	0.02	-0.738	3.948	-153.14	6.146	34.55	-171.17
4	-5.76	0.02	-4.533	4.255	-170.04	6.329	42.15	-174.97
5	-7.77	0.02	-8.562	4.663	-184.24	6.930	49.90	-181.34
6	-9.77	0.02	-12.974	5.224	-196.01	7.560	56.46	-189.96
7	-11.75	0.02	-18.496	6.020	-204.18	7.462	63.67	-188.28
8	-13.77	0.02	-23.711	7.253	-213.71	6.792	68.78	-179.05
9	-14.74	0.02	-25.962	7.830	-216.83	6.530	71.95	-174.13
10	0.24	0.02	6.781	4.009	-113.34	5.571	21.50	-161.17
11	2.25	0.02	10.[illegible]25	4.324	-93.50	5.437	16.55	-156.96
12	4.27	0.02	13.513	4.578	-73.08	5.121	10.39	-148.52
13	6.26	0.02	16.640	5.083	-54.77	4.554	3.85	-140.83
14	8.23	0.02	19.831	5.792	-34.81	4.806	-2.48	-139.30
15	10.27	0.02	23.752	6.774	-12.53	5.227	-10.49	-136.34
16	12.26	0.02	27.624	7.914	7.83	5.396	-16.44	-133.08
17	14.24	0.02	30.650	9.609	27.68	5.939	-24.75	-129.15
18	16.24	0.02	31.933	11.190	42.66	6.868	-36.19	-126.99
19	18.26	0.02	28.941	13.859	52.16	4.807	-33.71	-139.82
20	20.24	0.02	30.245	15.715	63.26	4.777	-36.91	-144.90
21	22.25	0.02	32.262	17.687	75.16	5.205	-42.04	-151.73
22	24.27	0.02	34.550	19.969	84.05	6.048	-52.33	-154.27
23	25.26	0.02	35.918	21.195	86.60	7.012	-60.41	-151.03
24	0.25	0.02	6.615	4.009	-114.37	5.391	21.93	-158.88

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 53 11/20/81 0933 RUN 53

TEMP 68. PO 14.6857

QPSF 75.00 VFPS 253.60 RNFT 1580156. MACH 0.2251

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	32	0	17	31	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.25	0.02	6.881	4.056	-109.39	5.604	22.15	-159.73
2	-1.75	0.02	2.934	3.899	-130.44	5.591	28.17	-161.68
3	-3.74	0.02	-0.737	3.948	-153.96	5.766	33.29	-162.77
4	-5.74	0.02	-4.366	4.255	-171.30	6.096	39.45	-165.83
5	-7.75	0.02	-8.394	4.596	-185.30	6.656	47.20	-172.71
6	-9.82	0.02	-12.879	5.224	-196.71	7.369	55.92	-181.63
7	-11.77	0.02	-18.267	5.993	-204.95	7.196	61.86	-179.88
8	-13.76	0.02	-23.408	7.020	-214.84	6.811	66.50	-175.16
9	-14.76	0.02	-25.970	7.729	-218.45	6.392	69.32	-168.10
10	0.25	0.02	6.715	4.142	-110.03	5.538	22.02	-159.21
11	2.25	0.02	10.158	4.378	-89.69	5.337	16.77	-154.52
12	4.26	0.02	13.411	4.704	-69.96	5.001	11.85	-145.81
13	6.25	0.02	16.605	5.149	-51.87	4.487	5.38	-138.19
14	8.25	0.02	20.002	5.827	-31.95	4.634	-2.49	-134.49
15	10.25	0.02	23.681	6.706	-9.15	5.093	-9.98	-133.27
16	12.24	0.02	27.646	7.978	12.11	5.375	-16.23	-131.14
17	14.24	0.02	30.436	9.409	30.43	5.919	-24.45	-131.79
18	16.26	0.02	31.916	11.352	48.62	6.709	-36.33	-126.30
19	18.25	0.02	29.140	13.878	56.47	4.573	-31.99	-136.54
20	20.24	0.02	30.671	15.929	70.14	4.590	-34.05	-140.28
21	22.27	0.02	32.065	17.769	81.65	4.906	-39.22	-144.85
22	24.27	0.02	34.443	19.829	91.32	5.802	-48.92	-147.12
23	25.23	0.02	35.527	21.026	93.12	6.564	-55.58	-143.67
24	0.25	0.02	6.748	4.082	-109.33	5.391	22.27	-159.71

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 54 11/20/81 0933 RUN 54

TEMP 68. PO 14.6857

QPSF 75.00 VFPS 253.60 RNFT 1580156. MACH 0.2251

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	32	0	15	31	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS
SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.25	0.02	-1.098	4.839	11.96	-0.969	-1.01	1.40
2	-1.74	0.02	-7.233	5.059	28.06	-1.162	-0.90	2.91
3	-3.77	0.02	-13.751	5.554	49.09	-1.028	-0.44	1.86
4	-5.76	0.02	-19.578	6.286	68.96	-1.105	-0.75	4.55
5	-7.75	0.02	-24.588	7.601	72.39	-0.894	-0.02	1.36
6	-9.76	0.02	-29.707	8.963	72.35	-0.521	2.04	-0.40
7	-11.77	0.02	-36.471	10.354	84.54	-0.771	1.02	-0.09
8	-13.77	0.02	-43.026	12.281	95.33	-1.281	2.77	-1.99
9	-14.76	0.02	-45.842	13.332	98.56	-1.519	3.42	-4.70
10	0.28	0.02	-1.297	4.940	12.03	-0.940	-1.03	1.74
11	2.26	0.02	4.043	4.967	4.26	-0.858	-0.86	-0.38
12	4.25	0.02	8.500	5.114	-1.08	-0.836	-0.72	-1.18
13	6.28	0.02	13.486	5.387	-2.41	-0.837	-1.08	-2.47
14	8.26	0.02	17.755	6.015	0.51	-0.595	-2.00	-3.56
15	10.25	0.02	22.305	6.939	10.23	-0.202	-3.56	-2.55
16	12.25	0.02	26.353	8.125	31.18	0.080	-4.64	-1.26
17	14.27	0.02	29.179	9.608	57.02	0.577	-6.30	1.53
18	16.28	0.02	31.973	11.438	52.23	1.661	-8.90	6.36
19	18.27	0.02	34.108	14.817	-13.99	-0.438	-4.67	2.40
20	20.25	0.02	38.430	17.526	-49.37	-0.868	-2.67	-0.08
21	22.26	0.02	42.415	20.385	-77.65	-0.651	-0.55	-3.36
22	24.26	0.02	46.554	23.504	-106.78	0.396	-3.59	-5.53
23	25.28	0.02	49.839	25.648	-119.94	1.186	-5.65	-3.67
24	0.27	0.02	-1.331	4.873	13.38	-1.134	-0.99	2.39

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 55 11/20/81 0933 RUN 55

TEMP 70. PO 14.6857

QPSF 75.00 VFPS 254.08 RNFT 1572614. MACH 0.2251

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	32	0	15	31	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.27	0.02	-1.531	8.639	20.79	-0.634	-0.23	0.64
2	-1.74	0.02	-7.900	8.785	35.04	-0.669	-0.36	1.51
3	-3.78	0.02	-14.118	9.180	52.30	-0.736	-0.39	1.93
4	-5.78	0.02	-20.018	9.752	68.59	-0.939	-0.66	5.07
5	-7.79	0.02	-25.351	10.847	73.80	-0.863	0.99	4.28
6	-9.75	0.02	-30.006	12.196	71.37	-0.554	2.19	1.11
7	-11.78	0.02	-37.266	13.713	79.07	-0.864	1.16	-0.17
8	-13.75	0.02	-42.266	15.082	78.42	-1.295	1.91	-0.46
9	-14.77	0.02	-45.359	16.245	78.49	-1.518	2.76	-1.50
10	0.25	0.02	-1.665	8.605	20.49	-0.635	-1.20	0.29
11	2.27	0.02	3.777	8.701	14.11	-0.524	-0.00	-1.94
12	4.28	0.02	8.737	8.882	9.94	-0.469	0.47	-4.01
13	6.24	0.02	13.215	9.184	10.01	-0.405	0.38	-4.36
14	8.26	0.02	17.922	9.782	14.08	-0.028	-0.74	-5.40
15	10.24	0.02	22.436	10.638	24.23	0.364	-2.93	-5.02
16	12.25	0.02	26.420	11.758	43.92	0.420	-3.50	-2.64
17	14.24	0.02	29.721	13.051	71.43	0.530	-4.11	1.20
18	16.28	0.02	32.293	14.691	72.63	1.161	-6.56	7.03
19	18.26	0.02	34.380	18.123	-3.40	0.136	-2.85	0.27
20	20.24	0.02	38.243	20.531	-30.05	-0.069	-1.75	-0.92
21	22.25	0.02	42.476	23.417	-56.89	-0.186	0.24	-5.85
22	24.25	0.02	46.402	26.535	-85.28	0.421	-1.46	-7.56
23	25.25	0.02	48.653	28.309	-101.01	1.480	-3.39	-6.51
24	0.24	0.02	-1.532	8.605	20.72	-0.643	-0.23	0.92

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 56 11/20/81 0933 RUN 56

TEMP 70. PO 14.6857

QPSF 75.00 VFPS 254.08 RNFT 1572614. MACH 0.2251

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	32	0	14	32	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.26	0.02	-2.874	8.673	41.65	0.045	1.28	-9.80
2	-1.76	0.02	-9.137	8.787	57.91	-0.049	3.08	-6.04
3	-3.75	0.02	-15.762	9.126	81.60	-0.036	3.71	-5.81
4	-5.79	0.02	-21.945	9.856	96.69	-0.292	3.58	-2.56
5	-7.76	0.02	-27.478	10.806	107.34	-0.297	4.38	-1.46
6	-9.75	0.02	-32.368	12.319	102.86	0.029	3.66	-3.91
7	-11.74	0.02	-38.058	13.934	90.79	-0.084	5.23	-6.65
8	-13.74	0.02	-43.653	15.722	90.93	-0.690	5.07	-4.30
9	-14.76	0.02	-45.732	16.770	86.02	-0.813	5.45	-9.33
10	0.25	0.02	-2.908	8.560	41.19	0.045	1.45	-10.63
11	2.26	0.02	2.610	8.774	32.47	0.306	1.14	-12.98
12	4.27	0.02	7.395	8.942	26.08	0.427	0.84	-16.09
13	6.27	0.02	12.419	9.330	23.35	0.373	0.06	-17.30
14	8.24	0.02	16.813	9.833	25.88	0.676	-2.06	-15.91
15	10.28	0.02	21.914	10.825	28.67	0.875	-3.80	-13.53
16	12.28	0.02	27.096	11.963	30.24	0.869	-4.44	-9.55
17	14.27	0.02	31.610	13.282	26.21	1.148	-6.24	-6.89
18	16.26	0.02	34.059	14.993	25.59	1.736	-10.47	-4.24
19	18.25	0.02	35.624	18.089	-21.30	0.860	-6.33	-8.54
20	20.28	0.02	38.834	20.697	-48.05	0.781	-4.21	-10.36
21	22.27	0.02	41.881	23.284	-69.43	0.490	-1.78	-10.80
22	24.25	0.02	45.573	26.327	-88.31	1.022	-1.49	-12.53
23	25.25	0.02	48.072	28.321	-101.45	1.847	-5.35	-9.92
24	0.24	0.02	-2.875	8.659	40.79	0.011	1.80	-10.16

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 57 11/20/81 0933 RUN 57

TEMP 70. PO 14.6759

QPSF 75.00 VFPS 254.16 RNFT 1572087. MACH 0.2252

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	32	0	14	[illegible]	[illegible]	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	[illegible]	[illegible]	[illegible]	[illegible]	0	0

CORRECTED FOR T[illegible] AND IN[illegible] EFFECTS
SINGLE SUPPORT DATA DATA AT [illegible] SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	[illegible]	RM/Q	YM/Q
1	0.24	0.02	-2.242	4.928	[illegible]	[illegible]	1.43	-8.68
2	-1.75	0.02	-8.703	5.135	[illegible]	[illegible]	2.80	-6.72
3	-3.76	0.02	-15.496	5.699	[illegible]	-0.643	3.42	-5.94
4	-5.77	0.02	-21.144	6.423	99.76	-0.737	3.37	-4.34
5	-7.77	0.02	-26.218	7.607	105.35	-0.584	3.08	-5.37
6	-9.75	0.02	-31.261	9.199	100.89	-0.064	4.19	-9.05
7	-11.77	0.02	-37.744	10.956	105.07	-0.292	4.94	-5.80
8	-13.76	0.02	-44.047	12.903	114.92	-0.644	5.07	-8.76
9	-14.76	0.02	-46.999	14.103	116.88	-1.093	5.03	-9.21
10	0.24	0.02	-2.375	4.900	33.15	-0.489	1.51	-8.54
11	2.27	0.02	2.910	4.941	23.93	-0.320	1.19	-12.70
12	4.25	0.02	7.793	5.175	15.04	-0.240	0.65	-14.56
13	6.25	0.02	12.684	5.562	10.61	-0.228	-1.35	-15.79
14	8.26	0.02	17.248	6.134	13.30	0.044	-3.33	-15.84
15	10.25	0.02	21.977	6.989	15.61	0.375	-4.31	-12.67
16	12.27	0.02	27.228	8.196	17.04	0.449	-5.67	-8.29
17	14.25	0.02	31.581	9.713	12.02	1.060	-7.89	-6.95
18	16.24	0.02	34.391	11.544	9.63	2.049	-12.15	-5.04
19	18.24	0.02	34.964	14.661	-39.21	0.313	-6.38	-7.73
20	20.29	0.02	38.901	17.444	-64.49	-0.132	-3.77	-7.99
21	22.27	0.02	41.995	20.110	-87.74	-0.290	-1.32	-11.54
22	24.24	0.02	46.235	23.233	-107.95	0.761	-3.00	-10.07
23	25.24	0.02	48.928	25.200	-120.53	1.279	-5.94	-11.25
24	0.25	0.02	-2.608	4.993	33.45	-0.662	1.67	-8.14

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 58 11/20/81 0933 : RUN 58

TEMP 70. PO 14.6660

QPSF 75.00 VFPS 254.25 RNFT 1571561. MACH 0.2253

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	32	0	11	31	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA				DATA AT C.G.		FULL SCALE DATA		
PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.25	0.00	-3.009	5.567	38.13	5.473	25.46	-164.86
2	-1.75	0.00	-9.509	5.780	57.21	5.068	33.22	-164.35
3	-3.75	0.00	-15.731	6.118	82.95	5.448	39.40	-166.35
4	-5.76	0.00	-22.171	6.905	104.98	5.691	46.44	-170.67
5	-7.77	0.00	-27.048	8.035	106.01	6.254	53.32	-176.77
6	-9.76	0.00	-31.578	9.341	99.76	7.111	64.31	-188.39
7	-11.75	0.00	-37.691	10.997	105.73	7.131	69.37	-189.94
8	-13.76	0.00	-43.909	12.936	114.12	6.771	76.74	-190.05
9	-14.76	0.00	-46.317	14.067	116.29	6.910	81.47	-195.34
10	0.25	0.00	-3.109	5.560	38.52	5.433	26.49	-165.11
11	2.26	0.00	2.767	5.630	27.04	5.315	19.21	-162.12
12	4.26	0.00	7.715	5.772	18.29	5.067	12.22	-159.29
13	6.25	0.00	12.191	6.126	12.10	4.826	5.23	-155.74
14	8.24	0.00	16.664	6.628	15.09	4.864	-2.13	-150.19
15	10.26	0.00	21.484	7.583	17.40	5.233	-9.50	-149.10
16	12.26	0.00	26.405	8.688	17.74	5.168	-15.78	-144.09
17	14.25	0.00	30.752	10.267	11.21	5.499	-23.35	-139.62
18	16.23	0.00	33.108	12.027	8.73	6.443	-32.00	-134.46
19	18.24	0.00	34.305	15.244	-43.95	4.541	-31.13	-142.43
20	20.25	0.00	38.235	18.059	-71.17	4.323	-34.82	-145.90
21	22.26	0.00	42.215	20.922	-93.09	4.643	-39.79	-157.50
22	24.26	0.00	46.290	24.201	-117.47	6.006	-51.23	-158.44
23	25.25	0.00	49.520	26.155	-129.27	7.015	-58.28	-160.44
24	0.25	0.00	-3.276	5.600	37.18	5.240	25.76	-164.06

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 59 11/20/81 0933 RUN 59

TEMP 70. PO 14.6660

QPSF 75.00 VFPS 254.25 RNFT 1571561. MACH 0.2253

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	59	0	11	31	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.24	0.00	-3.143	9.366	46.03	4.939	21.22	-143.04
2	-1.76	0.00	-9.309	9.347	61.46	5.001	27.29	-144.79
3	-3.78	0.00	-16.306	9.737	86.00	5.161	33.91	-146.92
4	-5.77	0.00	-22.271	10.404	100.68	5.231	40.34	-151.26
5	-7.79	0.00	-28.249	11.314	110.48	5.607	48.66	-156.44
6	-9.78	0.00	-32.313	12.534	103.65	6.599	56.17	-170.09
7	-11.79	0.00	-38.008	14.036	95.31	6.381	63.02	-167.31
8	-13.78	0.00	-42.244	15.730	87.09	6.261	69.16	-179.91
9	-15.03	0.00	-45.226	17.039	86.49	6.295	73.30	-178.97
10	0.27	0.00	-2.942	9.201	44.53	4.807	21.33	-144.14
11	2.42	0.00	2.809	9.372	36.25	4.733	15.25	-140.94
12	4.28	0.00	7.356	9.506	29.63	4.647	10.58	-141.06
13	6.32	0.00	12.063	9.864	25.35	4.760	4.42	-140.20
14	8.26	0.00	16.413	10.396	27.36	5.011	-1.85	-142.58
15	10.22	0.00	21.047	11.213	29.68	5.399	-8.58	-144.53
16	12.26	0.00	26.405	12.388	30.58	5.415	-14.77	-143.79
17	14.26	0.00	30.947	13.681	24.91	5.646	-22.21	-140.81
18	16.23	0.00	33.708	15.421	24.12	6.609	-31.19	-136.97
19	18.25	0.00	34.560	18.439	-19.03	5.575	-32.08	-142.03
20	20.24	0.00	37.934	20.864	-53.78	5.389	-36.07	-147.59
21	22.26	0.00	41.315	23.515	-75.06	5.576	-42.55	[illegible]
22	24.28	0.00	46.365	27.105	-96.38	6.990	-53.28	[illegible]
23	25.25	0.00	48.947	28.854	-108.58	[illegible]	-60.59	[illegible]
24	0.24	0.00	-3.676	9.333	46.77	4.779	[illegible]	-143.03

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 60 11/20/81 0933 RUN 60

TEMP 70. PO 14.6660

QPSF 75.00 VFPS 254.25 RNFT 1571561. MACH 0.2253

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	59	0	11	31	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.23	0.00	-3.244	9.466	43.17	4.739	21.36	-139.64
2	-1.76	0.00	-9.543	9.513	60.38	4.928	27.80	-141.43
3	-3.77	0.00	-16.072	9.904	83.16	5.048	33.28	-144.86
4	-5.77	0.00	-22.238	10.411	98.18	5.065	40.38	-146.98
5	-7.76	0.00	-27.881	11.348	108.33	5.587	49.04	-155.04
6	-9.73	0.00	-32.182	12.635	103.36	6.403	55.81	-166.68
7	-11.76	0.00	-37.725	14.150	91.32	6.565	63.08	-173.25
8	-13.77	0.00	-42.643	15.763	88.32	6.160	69.44	-172.92
9	-14.76	0.00	-45.130	16.947	84.84	6.176	73.27	-172.96
10	0.25	0.00	-3.509	9.466	43.37	4.773	21.78	-140.70
11	2.24	0.00	2.265	9.563	35.24	4.668	15.43	-137.04
12	4.25	0.00	7.421	9.671	27.16	4.613	10.09	-136.15
13	6.24	0.00	11.790	9.959	23.29	4.659	5.63	-137.73
14	8.25	0.00	16.445	10.542	25.55	4.998	-1.85	-140.06
15	10.24	0.00	21.016	11.314	27.81	5.312	-8.52	-141.60
16	12.27	0.00	26.573	12.522	28.51	5.268	-14.57	-139.90
17	14.26	0.00	30.967	13.908	22.86	5.579	-21.97	-138.69
18	16.25	0.00	33.857	15.763	21.53	6.363	-29.32	-133.73
19	18.25	0.00	34.166	18.765	-28.03	5.261	-30.85	-137.73
20	20.26	0.00	37.949	21.081	-51.17	5.091	-32.83	-141.37
21	22.26	0.00	42.595	24.122	-80.95	5.476	-40.38	-150.56
22	24.27	0.00	46.331	27.403	-103.62	6.755	-50.58	-159.25
23	25.26	0.00	48.901	29.136	-116.32	7.751	-58.87	-162.66
24	0.23	0.00	-3.344	9.499	42.74	4.639	21.42	-139.65

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 61 11/20/81 0933 RUN 61

TEMP 70. P0 14.6660

QPSF 75.00 VFPS 254.25 RNFT 1571561. MACH 0.2253

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	59	0	11	31	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.24	0.00	-3.210	9.466	43.53	5.173	24.13	-151.81
2	-1.76	0.00	-9.876	9.647	60.65	5.374	31.91	-152.99
3	-3.76	0.00	-16.272	9.838	83.12	5.574	38.15	-156.90
4	-5.75	0.00	-21.870	10.405	97.95	5.665	44.99	-159.28
5	-7.77	0.00	-27.815	11.314	107.93	6.054	53.25	-165.20
6	-9.76	0.00	-32.411	12.668	100.72	6.598	61.72	-178.14
7	-11.76	0.00	-37.652	14.297	91.00	7.052	69.69	-184.29
8	-13.75	0.00	-42.741	15.937	87.89	6.770	75.94	-180.71
9	-14.76	0.00	-45.297	16.994	85.85	6.643	79.31	-183.84
10	0.25	0.00	-3.209	9.467	43.34	5.206	24.21	-150.97
11	2.27	0.00	2.667	9.531	34.81	5.129	17.70	-149.45
12	4.26	0.00	7.521	9.605	27.11	4.980	12.59	-146.01
13	6.26	0.00	11.992	9.960	23.86	5.059	6.46	-147.82
14	8.26	0.00	16.779	10.596	25.78	5.365	-1.48	-149.06
15	10.25	0.00	21.350	11.355	28.57	5.666	-7.93	-150.76
16	12.27	0.00	26.640	12.589	28.17	5.668	-14.30	-147.56
17	14.26	0.00	31.240	13.975	23.33	5.846	-22.42	-144.28
18	16.28	0.00	33.727	15.633	20.61	6.545	-31.11	-139.44
19	18.24	0.00	34.532	18.571	-28.63	5.487	-30.70	-144.73
20	20.27	0.00	38.783	21.423	-57.20	5.592	-35.84	-151.77
21	22.27	0.00	42.536	23.991	-80.28	5.524	-41.19	-159.63
22	24.26	0.00	46.510	27.401	-104.05	6.933	-51.12	-169.77
23	25.26	0.00	49.261	29.290	-116.12	8.211	-60.56	-169.23
24	0.25	0.00	-3.143	9.467	42.92	5.140	24.15	-151.41

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 62 11/20/81 0933 : RUN 62

TEMP 74. PO 14.6660

QPSF 83.00 VFPS 268.47 RNFT 1637583. MACH 0.2370

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	48	0	13	31	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	1

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.26	0.02	-2.861	9.365	48.60	5.722	25.26	-151.21
2	0.26	-2.01	-2.991	9.232	50.19	1.918	26.05	-140.08
3	0.26	-4.00	-3.126	9.305	50.81	-1.976	24.29	-126.45
4	0.26	-6.01	-2.726	9.701	43.36	-6.700	24.41	-107.36
5	0.26	-8.03	-2.426	10.208	37.73	-11.050	21.85	-83.08
6	0.26	-10.00	-1.472	10.911	30.29	-15.482	16.66	-55.04
7	0.26	-12.02	-0.114	12.046	18.62	-20.550	11.44	-27.46
8	0.26	-13.99	1.230	13.638	11.08	-25.181	8.93	4.41
9	0.26	-16.00	2.575	15.527	7.17	-29.434	8.49	36.23
10	0.26	-18.00	3.488	17.645	1.10	-33.801	7.82	67.50
11	0.26	-19.99	4.389	20.080	-9.24	-37.999	6.79	94.51
12	0.26	-22.03	6.369	23.008	-22.96	-42.598	4.87	121.04
13	0.26	-23.99	8.187	25.879	-35.85	-46.734	0.22	142.16
14	0.26	-26.00	9.600	28.927	-37.48	-50.649	2.42	163.56
15	0.26	-28.00	11.055	31.727	-39.58	-53.943	5.01	167.19
16	0.26	-30.00	11.140	34.393	-27.85	-56.936	9.70	170.84
17	0.26	0.00	-2.922	9.396	47.94	5.846	24.85	-152.62
18	0.26	2.01	-2.981	9.494	45.03	8.724	23.18	-145.98
19	0.26	4.01	-2.927	9.830	41.15	11.878	26.37	-157.58
20	0.26	5.99	-2.222	10.341	30.75	16.284	34.56	-194.96
21	0.26	8.01	-1.347	10.946	16.88	19.999	38.62	-209.42
22	0.26	10.02	-0.249	11.787	4.27	24.030	42.28	-227.15
23	0.26	12.00	0.826	12.776	-7.81	28.006	44.12	-244.09
24	0.26	14.00	2.146	14.075	-20.16	30.927	45.50	-271.50
25	0.26	16.02	3.791	15.707	-33.51	37.251	45.87	-291.08
26	0.26	18.00	4.793	17.638	-41.75	41.898	47.74	-312.36
27	0.26	20.02	6.014	20.058	-47.48	47.311	50.70	-352.30
28	0.26	22.01	7.537	22.759	-58.18	52.771	54.73	-389.48
29	0.26	24.00	9.142	25.596	-67.16	57.261	54.73	-413.94
30	0.26	26.00	9.301	29.698	-44.94	58.534	23.27	-355.81
31	0.26	28.00	9.993	33.157	-39.80	62.547	18.51	-377.80
32	0.26	30.01	9.616	36.354	-25.36	65.316	7.08	-381.88
33	0.26	0.00	-2.862	9.335	48.08	5.243	26.99	-150.76

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 63 11/20.81 0933 RUN 63

TEMP 75. P0 14.6709

QPSF 83.00 VFPS 268.68 RNFT 1633979. MACH 0.2370

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	48	0	13	31	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	1

CORRECTED FOR TARE AND INTERFERENCE EFFECTS
SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.25	0.01	-2.711	9.486	49.76	5.404	24.96	-147.89
2	0.25	-2.02	-2.841	9.383	52.29	1.648	25.44	-138.90
3	0.25	-4.02	-2.826	9.395	50.05	-3.087	25.64	-122.18
4	0.26	-5.99	-2.725	9.641	45.77	-6.372	22.34	-109.82
5	0.26	-7.97	-2.332	10.226	38.81	-11.090	19.47	-82.33
6	0.26	-10.01	-1.262	11.122	29.81	-15.812	15.54	-52.96
7	0.26	-12.03	0.187	12.317	17.97	-20.909	10.70	-24.53
8	0.26	-13.99	1.320	13.879	12.31	-25.332	7.95	7.15
9	0.26	-15.99	2.637	15.798	7.71	-29.810	7.44	37.69
10	0.28	-18.00	3.470	17.934	2.77	-34.186	4.91	70.14
11	0.32	-20.04	4.147	20.430	-5.20	-38.492	6.23	97.96
12	0.24	-22.03	6.037	23.248	-20.68	-42.797	2.68	124.98
13	0.25	-24.02	7.874	26.235	-31.56	-47.647	0.47	147.34
14	0.26	-25.98	9.334	29.143	-36.86	-51.114	1.35	166.85
15	0.26	-28.02	10.845	32.040	-38.27	-54.430	2.42	172.75
16	0.26	-29.99	11.414	34.897	-28.28	-57.151	8.83	177.83
17	0.26	-0.01	-2.941	9.577	49.15	5.787	24.11	-149.60
18	0.26	2.01	-2.891	9.675	46.75	8.846	22.51	-144.60
19	0.26	4.03	-2.535	9.950	39.57	12.068	25.76	-155.92
20	0.26	5.99	-2.101	10.299	31.00	16.152	35.07	-191.38
21	0.26	8.02	-1.196	11.114	17.01	20.076	39.33	-209.57
22	0.26	10.00	0.082	11.788	2.98	23.702	41.16	-218.36
23	0.26	12.00	1.278	12.855	-9.91	27.795	43.62	-240.48
24	0.26	14.00	2.778	14.256	-21.52	32.349	44.97	-264.88
25	0.26	16.01	4.213	15.82[illegible]	-34.99	37.180	46.52	-288.71
26	0.27	17.99	5.324	17.519	-42.44	41.568	48.45	-309.17
27	0.27	19.99	6.558	20.098	-48.48	47.092	51.63	-348.26
28	0.27	22.00	7.719	22.713	-57.34	52.381	54.90	-386.19
29	0.27	23.99	9.264	25.447	-68.78	56.991	55.88	-407.43
30	0.27	26.01	9.426	29.666	-43.28	57.996	24.28	-354.80
31	0.27	28.02	10.157	33.074	-39.10	62.262	19.50	-377.71
32	0.27	30.02	9.234	36.236	-24.13	65.429	7.83	-378.81
33	0.24	0.00	-3.343	9.516	51.02	5.183	25.97	-148.43

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 64 11/20/81 0933 RUN 64

TEMP 50. PB 14.6955

QPSF 75.00 VFPS 249.16 RNFT 1651425. MACH 0.2251

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	48	0	12	31	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	1

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.25	0.01	-3.317	9.429	51.21	5.901	24.64	-152.85
2	0.25	-2.04	-3.388	9.251	52.92	2.047	25.62	-143.10
3	0.25	-4.04	-3.395	9.227	52.47	-1.896	24.47	-127.18
4	0.25	-5.99	-3.005	9.491	46.09	-6.230	23.98	-110.69
5	0.25	-7.98	-2.627	9.939	39.95	-10.306	20.69	-84.55
6	0.25	-9.99	-1.685	10.837	30.62	-14.930	15.84	-57.79
7	0.25	-11.98	-0.391	11.915	19.60	-19.748	11.87	-29.17
8	0.25	-13.99	0.852	13.437	13.27	-24.422	9.93	4.07
9	0.25	-15.99	2.156	15.232	9.97	-28.531	8.08	36.47
10	0.24	-17.99	3.409	17.316	4.90	-33.144	7.08	68.91
11	0.23	-20.03	3.960	19.851	-4.72	-37.707	5.97	100.08
12	0.23	-21.99	5.815	22.775	-19.08	-42.179	3.17	122.78
13	0.23	-23.99	7.408	25.851	-32.18	-46.623	-0.59	148.55
14	0.23	-26.00	9.026	28.857	-36.39	-50.913	0.55	167.14
15	0.23	-28.01	11.053	32.139	-41.95	-54.755	1.86	174.06
16	0.23	-30.01	11.003	35.044	-28.17	-58.093	7.74	178.[illegible]
17	0.23	0.01	-3.451	9.563	51.52	6.268	23.17	-154.30
18	0.23	2.03	-3.448	9.628	48.97	9.217	21.90	-148.18
19	0.23	4.00	-3.146	9.914	40.21	12.690	24.73	-163.65
20	0.23	6.01	-2.412	10.386	30.80	16.658	34.03	-197.54
21	0.23	8.00	-1.615	11.043	17.03	20.243	38.17	-210.29
22	0.23	10.00	-0.357	11.796	2.17	24.111	40.67	-222.46
23	0.23	11.98	0.956	12.836	-10.43	28.197	42.34	-241.44
24	0.23	13.98	2.345	14.131	-23.43	32.606	44.15	-265.51
25	0.23	16.01	3.757	15.796	-35.95	37.727	45.99	-291.92
26	0.23	18.01	4.963	17.697	-44.33	42.334	48.38	-312.62
27	0.23	20.01	6.094	20.093	-49.21	47.806	51.12	-350.92
28	0.23	21.99	7.306	22.782	-58.57	53.039	53.80	-387.74
29	0.23	24.00	9.451	25.583	-68.87	57.620	55.02	-406.48
30	0.23	26.01	10.651	28.493	-76.73	62.545	57.14	-434.15
31	0.23	27.99	10.062	33.163	-38.06	63.024	17.84	-374.33
32	0.23	29.99	9.215	36.122	-21.37	65.500	9.93	-376.25
33	0.26	0.00	-2.751	9.450	51.02	5.790	24.38	-152.59

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 65   11/20/81 0933   RUN 65

TEMP 62.   PO 14.6955

QPSF 75.00   VFPS 252.07   RNFT 1603691.   MACH 0.2251

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	59	0	11	31	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA   DATA AT C.G.   FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.26	0.00	-3.309	9.634	44.49	5.027	24.21	-147.38
2	-1.75	0.00	-9.742	9.747	61.68	5.128	31.22	-148.98
3	-3.74	0.00	-16.171	10.038	84.64	5.335	37.47	-153.93
4	-5.77	0.00	-22.438	10.638	100.12	5.418	45.52	-156.59
5	-7.77	0.00	-27.648	11.348	108.28	5.674	53.02	-162.52
6	-9.77	0.00	-32.212	12.781	102.12	6.498	60.74	-177.21
7	-11.77	0.00	-37.720	14.397	94.01	6.573	68.78	-179.48
8	-13.76	0.00	-42.176	15.870	83.61	6.358	74.18	-178.79
9	-14.77	0.00	-42.665	15.928	89.81	6.265	75.67	-183.16
10	0.25	0.00	-3.376	9.666	43.98	4.960	24.24	-147.29
11	2.27	0.00	2.334	9.631	35.92	4.715	17.08	-145.30
12	4.27	0.00	7.222	9.772	27.78	4.661	11.97	-144.47
13	6.28	0.00	11.727	10.061	23.22	4.786	6.08	-147.41
14	8.26	0.00	16.213	10.629	24.49	5.125	-1.39	-147.05
15	10.26	0.00	20.984	11.449	27.76	5.566	-8.30	-151.79
16	12.24	0.00	26.370	12.553	28.83	5.434	-14.48	-146.39
17	14.26	0.00	31.213	14.148	22.62	6.106	-23.81	-145.61
18	16.26	0.00	33.631	15.684	19.86	6.650	-32.76	-140.23
19	18.26	0.00	35.041	18.594	-26.32	5.675	-32.72	-144.01
20	20.28	0.00	38.325	21.217	-57.62	5.239	-35.93	-149.45
21	22.24	0.00	42.220	24.152	-82.24	5.593	-42.54	-158.11
22	24.26	0.00	46.163	27.568	-106.04	6.906	-54.46	-165.79
23	25.26	0.00	49.254	29.357	-118.62	7.937	-61.87	-168.61
24	0.25	0.00	-3.409	9.633	45.46	4.926	24.26	-148.69

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 66 11/20/81 0933 RUN 66

TEMP 64. P0 14.6955

QPSF 75.00 VFPS 252.55 RNFT 1595961. MACH 0.2251

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	59	0	11	31	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA — DATA AT C.G. — FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.25	0.00	-3.343	9.666	45.48	4.620	21.47	-138.65
2	-1.75	0.00	-10.009	9.774	62.95	4.734	28.15	-140.11
3	-3.76	0.00	-16.538	10.071	85.78	4.994	34.51	-143.21
4	-5.76	0.00	-22.371	10.705	100.90	4.991	41.13	-145.97
5	-7.76	0.00	-27.814	11.481	108.49	5.333	48.48	-150.05
6	-9.75	0.00	-32.417	12.801	100.96	6.144	55.83	-164.39
7	-11.76	0.00	-37.872	14.397	93.51	6.098	64.16	-167.89
8	-13.75	0.00	-42.534	16.037	85.66	5.983	69.00	-169.69
9	-14.77	0.00	-44.925	16.794	85.25	5.792	72.90	-170.52
10	0.24	0.00	-3.510	9.699	44.69	4.586	21.35	-138.65
11	2.24	0.00	2.065	9.676	36.61	4.368	15.42	-136.94
12	4.26	0.00	7.188	9.772	27.81	4.360	10.21	-134.99
13	6.25	0.00	11.758	10.159	24.13	4.472	3.71	-138.73
14	8.27	0.00	16.414	10.577	25.96	4.845	-2.79	-139.09
15	10.25	0.00	20.983	11.535	28.03	5.312	-9.76	-143.81
16	12.26	0.00	26.305	12.655	28.92	5.348	-15.49	-141.80
17	14.24	0.00	31.098	14.113	22.79	5.539	-22.52	-138.92
18	16.25	0.00	33.583	15.670	21.08	6.390	-32.52	-135.41
19	18.24	0.00	35.079	18.784	-27.33	5.474	-32.24	-138.46
20	20.23	0.00	37.986	21.223	-68.09	5.201	-35.33	-142.38
21	22.25	0.00	42.241	24.261	-80.91	5.521	-41.05	-151.08
22	24.24	0.00	45.968	27.244	-102.18	6.296	-50.53	-158.48
23	25.24	0.00	49.266	29.333	-115.97	7.526	-59.04	-160.28
24	0.26	0.00	-3.409	9.667	45.52	4.520	21.35	-139.17

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 67 11/20/81 0933 RUN 67

TEMP 65. PO 14.6955

QPSF 75.00 VFPS 252.79 RNFT 1592118. MACH 0.2251

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	67	0	19	31	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.25	0.01	-9.742	8.218	43.45	5.721	20.13	-141.99
2	-1.78	0.01	-13.752	8.552	67.81	6.152	28.35	-147.71
3	-3.79	0.01	-17.720	9.026	95.95	6.661	35.41	-15[illegible].46
4	-5.75	0.01	-21.753	9.693	122.25	7.446	43.79	-168.10
5	-7.77	0.01	-24.675	10.429	135.80	8.050	52.00	-176.93
6	-9.78	0.01	-25.566	11.676	122.37	8.624	59.82	-185.31
7	-11.77	0.01	-27.387	12.775	122.56	8.772	66.98	-186.61
8	-13.76	0.01	-29.311	13.985	121.86	8.850	73.78	-184.90
9	-14.75	0.01	-30.420	14.547	125.17	8.906	78.97	-181.90
10	0.24	0.01	-9.776	8.184	42.95	5.601	20.36	-140.87
11	2.27	0.01	-5.947	7.929	18.99	5.460	13.91	-136.84
12	4.29	0.01	-2.393	7.719	-1.26	5.213	8.36	-134.58
13	6.27	0.01	0.926	7.685	-21.14	5.084	-2.13	-135.30
14	8.25	0.01	4.618	7.795	-44.71	5.261	-3.33	-140.66
15	10.25	0.01	8.720	7.915	-73.61	5.599	-9.14	-144.43
16	12.25	0.01	12.466	8.574	-99.78	5.646	-14.72	-147.62
17	14.26	0.01	15.593	9.604	-113.00	5.818	-20.41	-149.51
18	16.26	0.01	17.698	10.701	-115.48	5.856	-26.72	-153.05
19	18.27	0.01	19.780	12.028	-116.11	5.948	-31.73	-155.61
20	20.28	0.01	21.368	13.249	-115.71	4.931	-34.68	-145.21
21	22.24	0.01	22.753	14.555	-111.21	4.579	-38.50	-135.50
22	24.27	0.01	24.139	15.948	-108.91	3.982	-41.29	-115.71
23	25.27	0.01	25.342	17.020	-112.21	3.945	-43.59	-108.65
24	0.25	0.01	-9.708	8.251	43.14	5.601	20.36	-140.73

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 68 11/20/81 0933 RUN 68

TEMP 74. PO 14.6955

QPSF 100.00 VFPS 294.39 RNFT 1799287. MACH 0.2599

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	67	0	19	31	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS
SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.24	0.02	-9.842	8.055	44.44	5.485	20.30	-140.74
2	-1.76	0.02	-13.525	8.461	67.90	5.954	27.88	-147.75
3	-3.78	0.02	-18.136	8.908	101.89	6.490	36.43	-156.93
4	-5.75	0.02	-21.728	9.493	123.34	7.192	45.09	-166.66
5	-7.76	0.02	-24.173	10.338	132.36	7.809	52.49	-177.86
6	-9.75	0.02	-25.335	11.518	116.58	8.206	60.22	-182.99
7	-11.77	0.02	-27.016	12.713	120.86	8.338	66.94	-184.45
8	0.24	0.02	-9.842	8.175	44.18	5.400	20.94	-141.44
9	2.25	0.02	-5.848	7.803	19.80	5.168	13.47	-137.71
10	4.25	0.02	-2.486	7.642	0.42	5.005	8.23	-133.63
11	6.24	0.02	1.050	7.567	-21.28	4.859	3.10	-136.05
12	8.22	0.02	4.441	7.702	-42.09	5.137	-3.15	-140.56
13	10.25	0.02	8.570	7.923	-72.17	5.259	-9.05	-144.70
14	12.24	0.02	12.432	8.473	-97.06	5.654	-15.72	-147.95
15	0.26	0.02	-9.641	8.081	43.51	5.358	20.29	-141.73

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 69 11/20/81 0933 RUN 69

TEMP 75. P0 14.6955

QPSF 75.00 VFPS 255.19 RNFT 1554537. MACH 0.2251

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	59	0	11	31	0	0	0	0
T11	**T12**	**T13**	**T14**	**T15**	**T16**	**T17**	**T18**	**T19**	**T20**
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.24	0.00	-3.310	9.633	46.66	4.286	21.38	-135.40
2	-1.77	0.00	-9.376	9.746	63.84	4.501	28.59	-137.09
3	-3.77	0.00	-15.872	10.004	85.73	4.548	33.72	-140.62
4	-5.76	0.00	-21.771	10.572	99.66	4.545	40.86	-143.81
5	-7.76	0.00	-27.481	11.381	107.80	4.813	47.11	-145.38
6	-9.78	0.00	-31.879	12.714	101.07	5.392	55.36	-160.49
7	-11.77	0.00	-37.140	14.424	86.79	5.386	61.02	-162.43
8	-13.75	0.00	-41.761	15.897	85.74	4.590	67.79	-163.56
9	-15.78	0.00	-46.297	18.088	80.13	4.901	76.39	-171.57
10	0.23	0.00	-3.244	9.599	46.30	4.279	22.45	-137.00
11	2.27	0.00	2.867	9.664	38.02	4.155	15.73	-135.25
12	4.26	0.00	7.421	9.772	31.27	4.127	10.98	-134.76
13	6.26	0.00	12.225	10.027	26.69	4.259	5.79	-136.76
14	8.27	0.00	16.547	10.564	27.83	4.712	-1.24	-137.16
15	10.26	0.00	21.484	11.349	30.75	5.099	-7.96	-141.17
16	12.27	0.00	26.606	12.422	31.76	4.848	-13.16	-139.37
17	14.26	0.00	29.393	14.440	10.88	5.759	-23.64	-134.16
18	16.25	0.00	32.670	16.129	11.57	6.423	-30.26	-131.46
19	18.26	0.00	35.214	18.707	-23.75	5.355	-31.03	-138.49
20	20.26	0.00	38.596	21.148	-56.34	5.071	-34.96	-142.91
21	22.28	0.00	41.690	24.185	-81.53	5.878	-43.43	-148.55
22	24.27	0.00	45.718	27.383	-104.69	6.755	-51.81	-158.29
23	25.25	0.00	49.060	29.555	-116.64	7.595	-58.03	-163.07
24	0.25	0.00	-3.143	9.667	46.84	4.220	22.48	-136.78

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 70 11/20/81 0933 RUN 70

TEMP 78. PO 14.6857

QPSF 75.00 VFPS 255.99 RNFT 1543036. MACH 0.2251

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	59	0	11	31	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS
SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.25	0.00	-3.276	9.233	49.00	4.206	20.66	-131.72
2	-1.74	0.00	-9.408	9.374	65.46	4.321	26.43	-133.02
3	-3.77	0.00	-16.439	9.757	88.66	4.448	33.38	-136.29
4	-5.74	0.00	-21.903	10.339	101.24	4.531	40.27	-141.07
5	-7.75	0.00	-27.647	11.148	109.69	4.686	46.86	-145.04
6	-9.77	0.00	-31.692	12.535	97.54	5.312	55.32	-158.49
7	-11.77	0.00	-37.406	14.044	92.17	5.233	62.30	-159.33
8	-13.77	0.00	-41.910	15.590	86.40	5.020	67.20	-163.74
9	-14.77	0.00	-44.298	16.594	84.32	4.845	71.16	-164.65
10	0.25	0.00	-3.376	9.266	48.23	4.106	20.71	-132.17
11	2.24	0.00	2.599	9.396	40.37	4.021	14.76	-130.61
12	4.25	0.00	7.087	9.471	33.69	4.013	10.70	-130.57
13	6.24	0.00	12.090	9.759	28.19	4.079	4.20	-131.77
14	8.27	0.00	16.714	10.264	30.18	4.598	-2.37	-133.52
15	10.25	0.00	21.017	11.048	32.53	4.999	-9.09	-137.99
16	12.27	0.00	26.573	12.156	32.78	4.735	-13.26	-136.32
17	14.26	0.00	29.660	14.074	14.23	5.846	-24.45	-129.11
18	16.24	0.00	32.869	15.868	14.45	6.276	-31.67	-128.91
19	18.27	0.00	35.262	18.508	-23.32	5.329	-32.19	-138.20
20	20.26	0.00	38.682	20.828	-52.68	5.091	-35.26	-140.67
21	22.27	0.00	41.696	23.684	-77.70	5.844	-43.36	-145.85
22	24.24	0.00	45.948	27.031	-99.44	6.529	-50.34	-158.15
23	25.23	0.00	48.692	28.884	-112.35	7.378	-55.87	-159.89
24	0.25	0.00	-3.376	9.266	49.06	4.106	20.71	-132.97

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 71 11/20/81 0933 RUN 71

TEMP 81. PO 14.6857

QPSF 75.00 VFPS 256.70 RNFT 1532185. MACH 0.2251

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	59	0	11	31	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.24	0.00	-3.243	10.366	51.86	4.606	20.44	-135.96
2	-1.77	0.00	-9.343	10.646	68.42	4.661	28.49	-135.95
3	-3.75	0.00	-14.704	11.239	91.29	4.301	32.44	-134.06
4	-5.74	0.00	-19.903	12.306	105.81	4.265	37.54	-135.02
5	-7.78	0.00	-24.562	13.482	113.12	4.134	43.94	-134.31
6	-9.77	0.00	-27.785	15.310	97.07	4.072	50.44	-140.21
7	-11.77	0.00	-31.840	16.933	95.52	3.953	54.81	-146.97
8	-13.78	0.00	-36.071	18.660	92.27	4.134	63.08	-153.62
9	-14.77	0.00	-38.132	19.691	91.55	4.345	66.91	-158.05
10	0.24	0.00	-3.176	10.333	50.46	4.573	20.82	-135.76
11	2.30	0.00	2.669	10.166	41.99	4.629	13.96	-136.28
12	4.26	0.00	7.688	10.305	33.54	4.680	8.56	-137.03
13	6.26	0.00	13.159	10.594	28.24	4.759	3.25	-138.80
14	8.26	0.00	17.879	11.164	28.70	4.931	-1.99	-138.63
15	10.24	0.00	22.982	12.015	32.87	5.266	-9.17	-143.44
16	12.24	0.00	28.003	13.054	35.13	4.888	-12.77	-140.90
17	14.23	0.00	30.610	14.811	16.87	5.678	-22.42	-132.96
18	16.25	0.00	33.570	16.663	15.58	6.463	-31.67	-130.22
19	18.26	0.00	36.501	19.241	-14.30	5.609	-34.71	-138.97
20	20.26	0.00	39.269	21.575	-49.27	5.091	-35.06	-143.34
21	22.24	0.00	42.233	24.466	-78.80	5.813	-42.03	-146.36
22	24.27	0.00	45.751	27.669	-102.83	6.522	-48.17	-155.82
23	25.27	0.00	48.922	29.825	-117.34	7.086	-54.60	-163.15
24	0.25	0.00	-3.576	10.333	51.39	4.573	21.32	-135.27

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 72 11/20/81 0933 RUN 72

TEMP 84. P0 14.6562

QPSF 75.00 VFPS 257.67 RNFT 1519934. MACH 0.2254

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	59	0	11	31	0	0	0	0

T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.25	0.00	-3.309	10.400	51.39	4.613	20.67	-134.02
2	-1.74	0.00	-9.175	10.781	68.49	4.641	27.51	-136.34
3	-3.75	0.00	-14.504	11.372	90.90	4.468	32.01	-135.19
4	-5.79	0.00	-19.872	12.438	105.39	4.051	38.34	-133.46
5	-7.77	0.00	-24.582	13.576	113.38	3.840	43.61	-131.20
6	-9.72	0.00	-27.255	15.351	96.80	3.642	48.12	-135.68
7	-11.77	0.00	-31.846	17.093	92.76	3.406	55.18	-140.73
8	-13.76	0.00	-36.409	18.746	92.61	3.471	62.21	-148.58
9	-14.76	0.00	-38.097	19.631	89.06	3.723	66.52	-156.02
10	0.25	0.00	-3.076	10.320	50.40	4.593	20.28	-134.34
11	2.25	0.00	2.433	10.297	40.70	4.508	13.68	-135.11
12	4.25	0.00	7.754	10.305	32.57	4.473	8.76	-136.27
13	6.24	0.00	12.824	10.559	26.63	4.712	3.74	-136.59
14	8.25	0.00	18.279	11.230	28.19	4.985	-3.08	-135.91
15	10.25	0.00	23.150	12.116	31.57	5.186	-9.52	-141.07
16	12.24	0.00	27.903	13.154	34.11	4.821	-12.68	-140.57
17	14.27	0.00	30.694	15.049	14.02	5.826	-23.98	-129.91
18	16.24	0.00	33.682	16.529	19.09	6.596	-30.95	-129.86
19	18.26	0.00	37.101	19.161	-9.42	6.129	-36.56	-137.63
20	20.27	0.00	39.917	21.716	-47.58	5.112	-35.33	-142.13
21	22.27	0.00	43.523	24.624	-75.00	5.644	-41.98	-150.67
22	24.27	0.00	46.251	27.770	-102.40	6.175	-49.21	-160.50
23	25.24	0.00	48.326	29.652	-118.49	6.966	-56.13	-162.01
24	0.24	0.00	-3.076	10.399	50.04	4.439	20.39	-134.19

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

WIND AXES

RUN 73 11/20/81 0933 RUN 73

TEMP 85. PB 14.6562

QPSF 75.00 VFPS 257.91 RNFT 1516390. MACH 0.2254

T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
0	0	32	0	11	31	0	0	0	0
T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
0	0	32	32	0	0	1	0	0	0

CORRECTED FOR TARE AND INTERFERENCE EFFECTS

SINGLE SUPPORT DATA DATA AT C.G. FULL SCALE DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	Y/Q	RM/Q	YM/Q
1	0.25	0.00	-2.709	6.633	43.09	5.140	23.51	-156.15
2	-1.74	0.00	-8.642	7.048	61.86	4.988	31.64	-155.53
3	-3.75	0.00	-14.438	7.745	88.87	4.815	36.99	-153.91
4	-5.76	0.00	-19.611	8.886	110.18	4.465	42.24	-151.09
5	-7.75	0.00	-23.234	10.550	109.30	4.386	48.37	-148.62
6	-9.76	0.00	-27.085	12.237	99.01	4.131	[illegible]	-157.21
7	-11.74	0.00	-31.924	13.947	107.75	4.070	61.46	-163.09
8	-13.76	0.00	-37.209	15.873	118.06	4.065	67.13	-165.70
9	-14.77	0.00	-39.512	16.857	116.79	4.378	72.99	-178.90
10	0.25	0.00	-2.776	6.600	41.70	5.073	24.18	-155.59
11	2.26	0.00	3.133	6.464	29.77	4.996	16.94	-154.81
12	4.25	0.00	8.521	6.605	21.15	4.847	9.15	-152.61
13	6.26	0.00	13.459	6.927	15.34	4.819	2.56	-149.42
14	8.25	0.00	18.645	7.497	17.11	4.845	-3.82	-145.15
15	10.25	0.00	23.583	8.416	21.29	4.866	-9.55	-145.02
16	12.24	0.00	27.770	9.554	19.71	4.901	-15.54	-139.58
17	14.26	0.00	32.040	11.182	11.26	5.006	-21.92	-135.95
18	16.26	0.00	34.251	13.325	7.06	5.450	-31.69	-132.48
19	18.25	0.00	37.100	16.113	-28.83	4.235	-30.77	-138.71
20	20.28	0.00	40.138	18.671	-62.65	3.826	-33.38	-142.38
21	22.24	0.00	43.653	21.486	-91.93	4.107	-40.39	-146.57
22	24.25	0.00	47.042	25.060	-120.83	5.151	-46.84	-151.90
23	25.24	0.00	49.053	26.679	-132.39	5.746	-50.21	-151.65
24	0.25	0.00	-2.776	6.673	43.26	5.006	23.55	-155.57

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 75

(RUN 75-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	-0.75	-34.182	13.914	124.73	0.767	6.09	-7.51
2	-10.00	-0.75	-28.773	12.209	122.85	0.753	0.15	-10.09
3	-8.00	-0.75	-26.010	10.529	145.61	0.725	-3.91	-5.37
4	-6.00	-0.75	-21.066	9.406	134.84	1.135	-8.51	-9.16
5	-4.00	-0.75	-15.282	8.436	114.61	1.693	-11.71	-10.76
6	-2.00	-0.75	-8.918	7.960	90.02	1.699	-12.43	-12.56
7	0.00	-0.75	-2.523	7.628	69.72	1.729	-11.04	-13.75
8	2.00	-0.75	2.424	7.466	59.23	1.802	-12.54	-16.96
9	4.00	-0.75	7.056	7.400	54.94	2.117	-14.00	-21.94
10	6.00	-0.75	11.291	7.472	49.70	2.379	-14.12	-23.91
11	8.00	-0.75	15.359	7.735	50.82	2.897	-15.63	-25.73
12	10.00	-0.75	19.573	8.294	51.67	2.890	-16.93	-24.76
13	12.00	-0.75	23.343	9.330	45.31	2.144	-12.60	-10.97

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 76

(RUN 76-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	-0.75	-32.846	13.546	103.66	0.737	2.72	-4.75
2	-10.00	-0.75	-27.359	12.102	95.57	0.718	-3.75	-4.98
3	-8.00	-0.75	-23.757	10.566	106.15	0.557	-4.97	2.20
4	-6.00	-0.75	-19.234	9.250	104.19	0.775	-10.17	0.03
5	-4.00	-0.75	-13.548	8.527	85.30	1.261	-14.97	-4.79
6	-2.00	-0.75	-7.542	7.861	66.92	1.364	-14.33	-4.02
7	0.00	-0.75	-1.390	7.561	50.23	1.295	-12.77	-4.49
8	2.00	-0.75	3.436	7.269	42.49	1.214	-12.17	-5.78
9	4.00	-0.75	7.939	7.234	40.30	1.461	-12.54	-9.38
10	6.00	-0.75	12.044	7.338	37.32	1.651	-11.47	-9.51
11	8.00	-0.75	16.136	7.766	38.65	2.127	-11.87	-10.53
12	10.00	-0.75	19.910	8.272	45.96	2.289	-14.60	-11.64
13	12.00	-0.75	23.109	9.436	55.90	1.548	-9.86	-6.19

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 77

(RUN 77-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.04	-16.021	8.490	-485.89	-1.532	0.59	12.80
2	-10.00	0.04	-11.025	7.439	-179.62	-1.206	-5.94	8.94
3	-8.00	0.04	-7.424	6.794	-163.72	-0.910	-3.30	9.70
4	-6.00	0.04	-3.829	6.291	-146.69	-0.097	-7.21	2.84
5	-4.00	0.04	-0.222	5.966	-129.45	0.627	-10.98	-1.44
6	-2.00	0.04	3.456	5.767	-107.50	0.764	-9.75	-0.76
7	0.00	0.04	7.240	5.862	-87.70	0.662	-9.15	0.88
8	2.00	0.04	10.548	5.834	-66.71	0.568	-7.69	2.47
9	4.00	0.04	13.406	5.995	-45.57	0.792	-10.28	-0.89
10	6.00	0.04	16.214	6.208	-23.51	0.974	-8.78	-0.65
11	8.00	0.04	19.094	6.702	-3.18	1.404	-9.98	-0.58
12	10.00	0.04	22.256	7.383	18.99	1.824	-13.28	-0.68
13	12.00	0.04	24.842	8.320	40.17	1.503	-9.41	4.08

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 78

(RUN 78-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.06	-33.049	13.228	113.08	-1.133	0.56	7.81
2	-10.00	0.06	-27.774	11.609	99.89	-1.056	-5.08	8.55
3	-8.00	0.06	-23.813	10.003	106.86	-0.418	-3.58	7.03
4	-6.00	0.06	-19.195	8.847	102.20	0.404	-8.15	1.91
5	-4.00	0.06	-13.283	7.985	82.08	1.007	-9.72	-3.13
6	-2.00	0.06	-7.478	7.424	65.82	1.061	-10.03	-1.05
7	0.00	0.04	-1.556	7.095	50.58	0.895	-9.52	1.58
8	2.00	0.06	3.563	6.800	44.27	0.800	-9.11	0.59
9	4.00	0.06	8.065	6.833	40.52	0.866	-10.82	0.56
10	6.00	0.06	12.311	6.871	38.95	1.103	-9.56	0.31
11	8.00	0.06	16.426	7.235	40.29	1.431	-9.64	1.94
12	10.00	0.06	20.291	7.910	46.38	1.823	-12.42	0.49
13	12.00	0.06	23.051	8.863	57.91	1.430	-7.11	5.14

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 79

(RUN 79-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	-0.01	-34.317	13.395	170.85	-0.400	3.32	-1.53
2	-10.00	-0.01	-29.379	11.766	163.64	-0.598	-2.42	-1.43
3	-8.00	-0.01	-26.127	10.114	146.07	0.134	-1.90	-1.05
4	-6.00	0.01	-21.097	8.575	133.63	0.714	-4.34	-7.41
5	-4.00	0.03	-15.249	8.103	112.61	1.592	-7.24	-12.62
6	-2.00	0.03	-8.942	7.561	89.27	1.568	-6.29	-11.21
7	0.00	-0.01	-2.824	7.265	68.32	1.299	-6.61	-10.17
8	2.00	-0.01	2.457	6.966	61.60	1.248	-6.82	-12.11
9	4.00	-0.01	7.117	6.900	55.66	1.466	-10.60	-13.75
10	6.00	-0.01	11.545	7.071	50.95	1.637	-9.75	-13.16
11	8.00	-0.01	15.768	7.433	50.96	2.027	-10.04	-11.22
12	10.00	-0.01	20.112	8.038	51.50	2.122	-12.01	-7.45
13	12.00	-0.01	24.007	9.058	47.89	1.188	-3.89	-1.82

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 80

(RUN 8 - RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA   FULL SCALE DATA   SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.01	-33.967	13.684	130.03	5.447	63.51	-153.01
2	-10.00	0.01	-29.204	12.265	127.84	5.035	51.89	-151.66
3	-8.00	0.01	-26.216	10.555	147.90	5.726	48.39	-159.35
4	-6.00	0.01	-21.198	9.422	137.81	6.377	36.13	-162.26
5	-4.00	0.01	-15.382	8.529	117.26	6.853	27.62	-163.01
6	-2.00	0.01	-8.938	7.995	92.25	6.892	21.40	-161.43
7	-0.00	0.01	-2.566	7.730	71.79	6.464	15.85	-157.92
8	2.00	0.01	2.596	7.567	61.99	6.307	8.72	-154.22
9	4.00	0.01	7.190	7.401	55.84	6.234	0.40	-148.29
10	6.00	0.01	11.470	7.573	50.65	6.240	-4.76	-1[illegible]2.38
11	8.00	0.01	15.693	7.968	52.00	6.631	-11.08	-139.92
12	10.00	0.01	19.832	8.497	53.04	6.868	-18.12	-138.90
13	12.00	0.01	23.580	9.459	48.20	5.695	-15.41	-131.94

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 81

(RUN 81-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.01	-16.007	8.708	-182.22	5.170	59.61	-148.39
2	-10.00	0.01	-11.189	7.884	-174.82	5.260	46.68	-150.00
3	-8.00	0.01	-7.442	7.128	-157.16	5.558	40.77	-148.39
4	-6.00	0.01	-3.888	6.575	-138.06	6.199	31.41	-156.93
5	-4.00	0.01	-0.542	6.334	-121.24	6.593	24.16	-158.47
6	-2.00	0.01	3.110	6.199	-103.00	6.592	18.51	-157.70
7	0.00	0.01	6.840	6.229	-85.60	6.281	13.20	-154.91
8	2.00	0.01	10.031	6.267	-64.79	5.887	7.82	-147.22
9	4.00	0.01	12.540	6.365	-43.01	5.702	0.49	-140.32
10	6.00	0.01	15.798	6.672	-21.44	5.637	-3.27	-132.61
11	8.00	0.01	18.743	7.133	-0.32	6.094	-10.61	-128.15
12	10.00	0.01	21.774	7.809	21.49	6.438	-18.07	-127.40
13	12.00	0.01	24.118	8.725	43.64	5.521	-16.10	-125.81

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 82

(RUN 82-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.01	-6.903	6.535	-152.80	6.267	73.24	-181.90
2	-10.00	0.01	-5.950	5.992	-141.54	6.808	60.94	-189.50
3	-8.00	0.01	-5.008	5.552	-132.75	6.746	51.13	-178.48
4	-6.00	0.01	-4.183	5.164	-118.80	6.721	38.66	-169.00
5	-4.00	0.01	-3.460	5.031	-105.82	6.628	27.51	-165.49
6	-2.00	0.01	-2.748	4.829	-88.48	6.488	20.19	-158.51
7	0.00	0.01	-2.020	4.760	-73.97	6.124	14.61	-150.69
8	2.00	0.01	-1.029	4.600	-57.49	5.799	7.16	-144.02
9	4.00	0.01	-0.207	4.567	-43.31	5.536	0.01	-136.45
10	6.00	0.01	0.609	4.434	-28.25	5.265	-4.01	-133.98
11	8.00	0.01	1.451	4.502	-12.03	5.229	-8.00	-131.72
12	10.00	0.01	2.273	4.569	5.79	5.627	-15.16	-135.09
13	12.00	0.01	3.107	4.732	22.96	5.684	-16.88	-139.76

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 83

(RUN 83-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.03	-26.593	11.509	161.81	6.468	79.40	-185.04
2	-10.00	0.03	-24.536	10.269	154.90	6.586	62.20	-179.33
3	-8.00	0.01	-23.474	9.117	158.94	6.531	52.50	-171.29
4	-6.00	0.01	-21.645	7.931	152.15	6.698	40.40	-167.85
5	-4.00	0.01	-17.855	7.232	122.70	6.773	28.26	-166.76
6	-2.00	0.01	-13.949	6.691	88.28	6.594	22.35	-160.14
7	0.00	0.02	-10.526	6.194	60.18	6.328	15.50	-155.79
8	2.00	0.03	-6.969	5.734	33.47	6.200	8.29	-151.75
9	4.00	0.03	-3.683	5.503	11.70	6.003	1.06	-145.79
10	6.00	0.03	-0.468	5.299	-10.34	5.965	-5.30	-144.86
11	8.00	0.03	2.576	5.157	-32.05	5.864	-9.33	-142.55
12	10.00	0.03	6.178	5.202	-55.64	6.332	-17.12	-146.37
13	12.00	0.02	9.763	5.564	-80.20	6.316	-19.14	-149.95

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 84

(RUN 84-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.02	-6.331	6.232	-164.57	-1.664	5.53	3.21
2	-10.00	0.02	-5.515	5.722	-153.33	-1.098	0.61	-3.18
3	-8.00	0.02	-4.671	5.317	-140.34	-0.522	0.37	-3.22
4	-6.00	0.02	-3.950	4.895	-124.92	0.013	-3.61	-7.34
5	-4.00	0.02	-3.261	4.665	-107.91	0.434	-6.92	-11.09
6	-2.00	0.02	-2.619	4.495	-92.20	0.529	-7.29	-7.94
7	0.00	0.02	-1.903	4.329	-75.49	0.396	-6.85	-5.73
8	2.00	0.02	-0.968	4.167	-59.09	0.366	-7.25	-4.15
9	4.00	0.02	-0.173	4.067	-43.30	0.235	-8.32	-3.35
10	6.00	0.02	0.688	3.999	-26.76	0.099	-7.71	-1.00
11	8.00	0.02	1.595	3.969	-12.76	-0.002	-6.94	1.03
12	10.00	0.02	2.424	4.067	2.54	0.155	-7.93	-0.18
13	12.00	0.02	3.335	4.265	20.66	0.023	-4.25	-0.04

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 85

(RUN 85-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA   FULL SCALE DATA   SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.02	-6.742	6.946	-155.09	6.264	73.89	-184.49
2	-10.00	0.02	-5.778	6.350	-143.62	7.087	61.39	-192.10
3	-8.00	0.02	-4.879	5.920	-136.30	7.052	52.37	-182.53
4	-6.00	0.02	-4.045	5.627	-122.88	6.954	40.02	-173.76
5	-4.00	0.02	-3.298	5.399	-106.15	6.926	28.49	-169.72
6	-2.00	0.02	-2.590	5.165	-90.41	6.756	20.29	-163.13
7	-0.00	0.02	-1.902	5.129	-75.23	6.131	15.73	-153.33
8	2.00	0.02	-0.945	4.916	-60.01	5.817	7.71	-146.96
9	4.00	0.02	-0.145	4.834	-44.16	5.525	1.01	-140.38
10	6.00	0.02	0.703	4.668	-29.14	5.298	-3.54	-137.92
11	8.00	0.02	1.457	4.735	-13.25	5.297	-7.51	-137.99
12	10.00	0.02	2.340	4.835	4.26	5.627	-15.32	-143.13
13	12.00	0.02	3.168	4.932	19.51	5.649	-16.35	-145.33

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 86

(RUN 86-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.02	-15.252	9.064	-183.84	4.668	58.94	-148.24
2	-10.00	0.02	-10.821	8.274	-176.92	4.957	48.85	-149.92
3	-8.00	0.02	-6.979	7.380	-161.29	5.084	41.42	-148.03
4	-6.00	0.02	-3.547	7.026	-142.87	5.735	33.22	-154.64
5	-4.00	0.02	0.144	6.700	-124.21	6.260	23.50	-157.69
6	-2.00	0.02	3.700	6.567	-105.57	6.258	18.04	-157.26
7	0.00	0.02	7.507	6.695	-89.54	6.028	13.25	-152.52
8	2.00	0.02	10.779	6.634	-65.34	5.702	8.38	-146.30
9	4.00	0.02	13.607	6.829	-44.87	5.439	2.12	-140.00
10	6.00	0.02	16.150	6.914	-23.72	5.587	-3.58	-134.80
11	8.00	0.02	19.143	7.366	-1.30	6.027	-10.31	-132.51
12	10.00	0.02	22.351	8.176	19.49	6.433	-18.88	-132.01
13	12.00	0.02	24.359	9.163	40.99	5.651	-15.76	-131.30

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 87

(RUN 87-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.00	-33.234	13.558	106.46	-1.619	6.26	7.04
2	-10.00	0.00	-27.593	11.854	98.36	-1.190	-1.56	2.79
3	-8.00	0.00	-23.534	10.340	102.73	-0.802	-0.02	3.67
4	-6.00	0.00	-18.767	9.055	100.92	0.113	-4.73	-0.73
5	-4.00	0.00	-13.049	8.236	81.57	0.540	-9.02	-6.57
6	-2.00	0.00	-7.075	7.712	63.02	0.701	-8.24	-3.41
7	0.00	0.00	-1.022	7.430	47.92	0.543	-8.39	-4.87
8	2.00	0.00	3.902	7.135	41.49	0.302	-7.01	-3.12
9	4.00	0.00	8.201	7.067	38.97	0.510	-7.64	-4.90
10	6.00	0.00	12.412	7.204	36.08	0.837	-7.97	-4.64
11	8.00	0.00	16.668	7.567	37.75	1.274	-9.71	-4.13
12	10.00	0.00	20.594	8.275	44.73	1.569	-12.16	-2.67
13	12.00	0.00	25.640	9.125	57.19	1.065	-6.13	1.39

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 88

(RUN 88-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA   FULL SCALE DATA   SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	-0.01	-33.882	16.701	98.84	-1.432	2.43	9.01
2	-10.00	-0.01	-28.525	15.105	98.86	-1.115	-0.90	8.01
3	-8.00	-0.00	-23.870	13.739	99.91	-0.568	-0.29	6.03
4	-6.00	0.01	-19.064	12.549	100.38	0.404	-5.82	-2.62
5	-4.00	0.01	-13.250	11.772	83.08	0.994	-10.08	-8.28
6	-2.00	0.01	-7.477	11.395	69.17	1.096	-9.32	-6.22
7	0.00	-0.01	-1.456	11.195	55.31	0.921	-8.31	-4.45
8	2.00	-0.01	3.468	10.902	50.78	0.768	-7.27	-4.09
9	4.00	-0.01	7.965	10.834	48.65	0.997	-7.81	-6.48
10	6.00	-0.01	11.996	10.934	44.06	1.330	-7.09	-4.70
11	8.00	-0.01	16.334	11.399	47.06	1.893	-9.06	-4.17
12	10.00	-0.01	20.409	12.071	54.32	2.156	-11.62	-4.62
13	12.00	-0.01	23.397	13.030	66.70	1.584	-6.03	0.22

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 89

(RUN 89-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	-0.01	-34.212	16.777	111.88	-0.852	5.73	3.17
2	-10.00	-0.01	-29.558	15.384	118.38	-0.637	1.03	0.34
3	-8.00	-0.01	-26.358	13.867	135.87	-0.115	0.44	-0.75
4	-6.00	-0.01	-21.101	12.774	127.43	0.644	-1.61	-7.39
5	-4.00	-0.01	-15.349	12.036	114.77	1.326	-6.77	-14.36
6	-2.00	-0.01	-8.875	11.562	91.65	1.628	-6.46	-14.87
7	0.00	-0.01	-2.769	11.357	75.10	1.365	-5.68	-14.39
8	2.00	-0.01	2.473	11.124	67.18	1.531	-6.62	-18.06
9	4.00	-0.01	7.050	11.033	63.69	1.766	-7.91	-19.15
10	6.00	-0.01	11.421	11.165	59.28	2.233	-8.16	-18.50
11	8.00	-0.01	15.734	11.533	59.90	2.627	-9.99	-17.14
12	10.00	-0.01	20.181	12.171	59.88	2.755	-12.76	-13.94
13	12.00	-0.01	24.497	13.131	56.77	1.821	-5.31	-6.09

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 90

(RUN 90-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	-0.01	-33.906	13.613	126.03	-0.762	5.41	-3.36
2	-10.00	-0.01	-29.211	12.089	121.96	-0.853	0.02	-0.45
3	-8.00	-0.01	-25.846	10.637	136.20	-0.322	0.31	-2.13
4	-6.00	-0.01	-20.763	9.342	130.20	0.312	-1.25	-6.52
5	-4.00	-0.01	-14.875	8.491	109.77	1.127	-6.63	-13.25
6	-2.00	-0.01	-8.509	7.927	85.22	1.203	-5.90	-14.34
7	0.00	-0.01	-2.422	7.628	64.88	1.062	-6.78	-12.21
8	2.00	-0.01	2.730	7.334	56.79	1.133	-6.55	-15.63
9	4.00	-0.01	7.337	7.300	52.70	1.200	-7.14	-17.15
10	6.00	-0.01	11.521	7.303	48.22	1.633	-7.88	-16.30
11	8.00	-0.01	15.900	7.733	48.67	1.961	-10.06	-15.98
12	10.00	-0.01	20.312	8.417	47.20	2.057	-12.09	-11.98
13	12.00	-0.01	24.063	9.297	42.39	1.550	-7.36	-4.16

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 91

RUN 91-RUN 101/ 1.00

[illegible]/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	-0.01	-33.941	13.945	126.82	5.504	67.01	-158.51
2	-10.00	-0.01	-29.085	12.634	124.75	5.498	54.15	-158.96
3	-8.00	-0.01	-26.037	10.885	146.60	5.948	48.20	-158.77
4	-6.00	-0.01	-20.859	9.777	135.03	6.501	38.23	-166.89
5	-4.00	-0.01	-14.812	8.763	116.04	6.973	27.31	-167.81
6	-2.00	-0.01	-8.505	8.325	91.12	6.929	21.96	-164.42
7	0.00	-0.01	-2.289	8.023	70.30	6.803	16.19	-161.22
8	2.00	-0.01	2.856	7.800	61.45	6.532	9.69	-157.09
9	4.00	-0.01	7.325	7.734	53.99	6.223	2.09	-151.07
10	6.00	-0.01	11.446	7.613	48.79	6.403	-2.73	-144.71
11	8.00	-0.01	15.767	8.199	50.39	6.761	-10.15	-142.63
12	10.00	-0.01	19.847	8.738	50.54	7.243	-18.78	-146.21
13	12.00	-0.01	23.929	9.763	46.55	6.584	-18.78	-137.78

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 92

(RUN 92-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.01	-33.952	16.951	117.00	4.722	60.57	-138.62
2	-10.00	0.01	-29.347	15.730	118.16	4.905	48.13	-138.35
3	-8.00	0.01	-26.169	13.957	138.28	5.450	43.40	-143.53
4	-6.00	0.01	-21.098	13.155	131.48	5.979	32.66	-148.39
5	-4.00	0.01	-15.316	12.436	118.24	6.426	21.53	-159.00
6	-2.00	0.01	-8.840	11.955	95.87	6.292	17.66	-145.00
7	0.00	0.01	-2.822	11.683	78.56	6.149	12.35	-141.24
8	2.00	0.01	2.330	11.567	70.01	5.880	6.47	-135.96
9	4.00	0.01	7.110	11.499	65.23	5.568	0.04	-132.47
10	6.00	0.01	11.419	11.602	62.20	6.347	-5.13	-133.90
11	8.00	0.01	15.449	11.901	61.73	6.840	-11.13	-133.38
12	10.00	0.01	19.955	12.666	62.39	7.389	-20.04	-139.82
13	12.00	0.01	23.719	13.455	58.44	6.655	-17.23	-137.24

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 93

(RUN 93-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.01	-33.831	17.397	113.62	4.668	59.79	-137.16
2	-10.00	0.01	-29.552	15.876	131.56	4.828	47.48	-139.35
3	-8.00	0.01	-25.925	14.301	137.37	5.251	40.62	-141.67
4	-6.00	0.01	-20.768	13.301	130.17	5.794	31.68	-146.16
5	-4.00	0.01	-15.082	12.636	114.36	6.193	21.75	-143.87
6	-2.00	0.01	-8.509	12.193	93.56	6.094	16.42	-139.69
7	0.00	0.01	-2.522	12.008	76.84	5.968	11.47	-137.51
8	2.00	0.01	2.623	11.786	69.20	5.700	5.98	-133.06
9	4.00	0.01	7.131	11.616	64.59	5.799	-0.39	-133.39
10	6.00	0.01	11.468	11.805	60.12	6.150	-5.39	-129.76
11	8.00	0.01	15.593	12.135	60.25	6.731	-11.29	-131.45
12	10.00	0.01	20.022	12.833	60.50	7.323	-19.75	-136.30
13	12.00	0.01	23.829	13.770	56.57	6.451	-16.89	-130.50

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 94

(RUN 94-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.01	-33.812	17.270	114.07	4.935	64.47	-145.07
2	-10.00	0.01	-29.215	15.945	115.43	5.152	52.77	-148.74
3	-8.00	0.01	-26.024	14.345	133.83	5.621	46.01	-151.07
4	-6.00	0.01	-20.899	13.387	127.28	6.130	35.86	-153.33
5	-4.00	0.01	-15.177	12.596	114.44	6.460	25.67	-154.08
6	-2.00	0.01	-8.740	12.229	92.08	6.518	18.78	-150.40
7	0.00	0.01	-2.624	12.097	74.72	6.199	13.98	-147.78
8	2.00	0.01	2.651	11.802	69.27	6.042	7.86	-143.40
9	4.00	0.01	7.191	11.668	63.47	6.067	0.81	-140.00
10	6.00	0.01	11.387	11.836	60.12	6.408	-4.25	-137.94
11	8.00	0.01	15.668	12.134	60.95	7.059	-10.08	-139.92
12	10.00	0.01	20.068	12.909	59.90	7.538	-18.90	-143.46
13	12.00	0.01	23.947	13.792	55.90	6.588	-16.95	-140.25

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 95

(RUN 95-RUN 6)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-0.07	-24.00	7.856	30.201	0.71	-48.926	24.99	265.61
2	-0.07	-22.00	6.830	28.233	8.42	-46.098	24.46	124.43
3	-0.07	-20.00	4.717	25.001	28.13	-41.256	27.08	102.06
4	-0.07	-18.00	3.576	22.205	40.16	-36.315	24.61	70.91
5	-0.07	-16.00	2.836	19.681	52.22	-31.111	19.72	40.00
6	-0.07	-14.00	1.897	17.262	69.15	-26.807	15.71	10.20
7	-0.07	-12.00	1.295	15.753	63.80	-22.241	14.37	-19.00
8	-0.07	-10.00	0.955	14.941	70.42	-18.409	15.71	-41.71
9	-0.07	-8.00	0.100	13.800	72.68	-12.914	14.26	-68.05
10	-0.07	-6.00	-1.079	13.518	82.07	-7.368	17.36	-97.27
11	-0.07	-4.00	-1.775	13.222	88.53	-2.969	19.79	-115.75
12	-0.07	-2.00	-1.627	13.061	91.73	1.154	22.32	-130.28
13	-0.07	0.00	-1.536	13.193	89.56	4.536	31.49	-140.64
14	-0.07	2.00	-1.656	13.468	88.42	8.384	26.68	-138.39
15	-0.07	4.00	-1.353	13.515	81.70	12.533	28.73	-152.96
16	-0.07	6.00	-0.876	14.058	72.05	17.744	31.48	-195.78
17	-0.07	8.00	0.066	14.602	58.06	21.680	38.99	-211.46
18	-0.07	10.00	1.169	15.693	39.83	26.278	38.55	-225.29
19	-0.07	12.00	2.410	16.807	28.02	30.813	40.78	-248.23
20	-0.07	14.00	3.728	18.336	16.51	35.973	41.78	-275.08
21	-0.07	16.00	4.819	19.910	10.54	40.583	38.96	-302.56
22	-0.07	18.00	5.358	22.218	-1.04	45.337	39.47	-328.13
23	-0.07	20.00	6.241	24.743	-6.45	50.525	37.90	-359.77
24	-0.07	22.00	7.379	27.591	-16.98	55.693	38.39	-391.69
25	-0.07	24.00	8.423	30.572	-32.07	60.482	37.73	-415.27

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 96

(RUN 96-RUN 6)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-0.08	-24.00	3.878	31.567	-0.64	-50.381	21.34	139.07
2	-0.08	-22.00	7.223	28.110	16.27	-45.803	23.13	117.40
3	-0.08	-20.00	6.072	26.007	26.71	-44.048	29.69	109.77
4	-0.08	-18.00	4.870	23.871	37.87	-39.410	28.32	82.43
5	-0.08	-16.00	4.001	21.080	49.37	-34.680	26.70	50.37
6	-0.08	-14.00	3.042	18.371	68.29	-29.621	20.41	21.10
7	-0.08	-12.00	2.379	17.199	62.68	-25.211	17.74	-3.23
8	-0.08	-10.00	1.590	15.994	71.47	-20.572	16.63	-29.02
9	-0.08	-8.00	0.873	15.060	77.41	-15.284	17.08	-52.20
10	-0.08	-6.00	-0.179	14.427	84.70	-10.052	15.75	-80.35
11	-0.08	-4.00	-0.964	14.247	94.80	-4.843	18.44	-102.43
12	-0.08	-2.00	-1.386	14.037	101.87	-0.338	20.79	-118.74
13	-0.08	0.00	-1.416	14.337	97.52	3.584	31.67	-134.94
14	-0.08	2.00	-1.687	14.458	99.53	8.072	26.60	-138.13
15	-0.08	4.00	-1.448	14.774	92.46	12.577	26.58	-161.25
16	-0.08	6.00	-0.723	15.121	81.64	17.956	33.06	-191.10
17	-0.08	8.00	0.180	15.633	68.26	[illegible]	36.89	-214.39
18	-0.08	10.00	1.386	16.656	49.44	27.[illegible]09	35.54	-228.34
19	-0.08	12.00	2.734	17.526	34.54	31.333	37.59	-249.44
20	-0.08	14.00	3.684	18.634	22.84	35.331	38.27	-271.78
21	-0.08	16.00	4.711	20.656	6.78	39.616	38.86	-296.69
22	-0.08	18.00	5.569	22.372	3.93	44.822	41.55	-322.46
23	-0.08	20.00	6.984	25.045	-2.02	50.213	42.49	-357.21
24	-0.08	22.00	8.122	28.012	-14.51	55.572	43.30	-388.33
25	-0.08	24.00	9.633	31.121	-26.31	60.4[illegible]4	42.38	-413.10

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 97

(RUN 97-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/W	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.03	-33.811	17.424	114.86	7.248	62.02	-162.44
2	-10.00	0.03	-29.426	15.836	127.30	7.370	52.98	-167.45
3	-8.00	0.03	-25.868	14.343	138.38	7.157	45.33	-162.66
4	-6.00	0.03	-20.629	13.353	131.65	7.272	37.31	-160.05
5	-4.00	0.03	-14.749	12.765	113.36	7.372	28.32	-156.25
6	-2.00	0.03	-8.671	12.277	93.86	7.045	22.48	-150.23
7	0.00	0.03	-2.522	12.028	76.70	6.741	16.22	-145.54
8	2.00	0.03	2.733	11.868	69.82	6.455	10.05	-140.65
9	4.00	0.03	7.317	11.800	62.62	6.348	1.74	-137.17
10	6.00	0.03	11.554	11.823	59.41	6.447	-3.11	-133.70
11	8.00	0.03	15.801	12.200	59.84	6.940	-9.84	-138.13
12	10.00	0.03	20.189	12.833	60.92	7.203	-17.49	-141.11
13	12.00	0.03	24.519	13.601	60.70	6.281	-16.78	-141.26

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 98

(RUN 98-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.03	-33.553	17.408	115.68	6.834	57.92	-155.06
2	-10.00	0.03	-29.491	15.816	123.57	6.985	48.56	-156.67
3	-8.00	0.03	-25.847	14.339	136.96	6.844	41.08	-150.44
4	-6.00	0.03	-20.729	13.415	130.16	6.757	33.85	-149.43
5	-4.00	0.03	-14.810	12.762	112.35	6.824	25.44	-146.53
6	-2.00	0.03	-8.245	12.282	93.99	6.525	19.90	-139.10
7	0.00	0.03	-2.389	12.028	76.78	6.361	13.70	-137.12
8	2.00	0.03	2.696	11.754	68.90	6.000	7.95	-129.12
9	4.00	0.03	7.284	11.680	62.95	6.100	0.10	-129.15
10	6.00	0.03	11.637	11.806	59.40	6.339	-5.44	-126.78
11	8.00	0.03	15.893	12.168	60.25	6.671	-11.34	-129.97
12	10.00	0.03	20.315	12.804	62.44	7.108	-18.88	-135.08
13	12.00	0.03	24.785	13.781	60.16	6.162	-18.09	-137.04

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 99

(RUN 99-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA   FULL SCALE DATA   SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.03	-26.337	15.270	150.03	8.135	65.40	-176.50
2	-10.00	0.03	-25.213	14.052	151.51	8.352	54.48	-175.91
3	-8.00	0.03	-24.051	13.099	154.51	8.153	44.20	-164.85
4	-6.00	0.03	-21.877	12.117	150.61	7.980	35.99	-155.44
5	-4.00	0.03	-18.055	11.385	120.86	7.559	26.43	-148.33
6	-2.00	0.03	-14.224	10.795	91.53	7.163	20.84	-139.73
7	-0.00	0.03	-11.344	10.576	71.39	8.823	12.39	-133.22
8	2.00	0.03	-7.017	9.932	42.05	6.446	5.81	-130.52
9	4.00	0.03	-3.731	9.603	19.59	6.269	-1.68	-130.24
10	6.00	0.03	-0.459	9.397	-0.07	6.266	-6.16	-132.43
11	8.00	0.03	2.841	9.303	-22.03	6.197	-11.16	-135.92
12	10.00	0.03	6.099	9.572	-46.18	6.921	-17.59	-135.16
13	12.00	0.03	9.750	10.100	-71.04	6.315	-19.38	-135.95

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 100

(RUN 100-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.04	-28.563	16.168	177.75	14.324	65.41	-200.05
2	-10.00	0.03	-26.684	15.022	170.90	14.676	61.93	-202.16
3	-8.00	0.03	-24.360	13.977	157.26	14.304	44.27	-185.30
4	-6.00	0.03	-21.828	12.873	145.93	13.675	33.76	-166.94
5	-4.00	0.03	-18.825	12.043	125.28	12.734	24.76	-154.49
6	-2.00	0.03	-15.412	11.381	101.17	11.632	18.47	-139.39
7	-0.00	0.03	-11.730	10.749	73.06	10.672	9.44	-130.09
8	2.00	0.04	-8.169	10.234	50.00	9.282	4.66	-125.32
9	4.00	0.04	-4.538	10.020	23.40	8.757	-3.12	-124.96
10	6.00	0.04	-1.214	9.853	-0.41	8.546	-9.07	-126.15
11	8.00	0.04	2.149	9.828	-22.53	8.298	-13.62	-128.30
12	10.00	0.04	5.632	9.868	-46.42	7.915	-19.26	-129.56
13	12.00	0.04	9.196	10.298	-71.43	7.282	-21.21	-132.57

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 101

(RUN 101-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.03	-36.304	18.307	143.07	15.610	71.92	-214.19
2	-10.00	0.03	-30.998	16.771	139.02	14.849	58.45	-200.10
3	-8.00	0.03	-25.983	15.385	131.12	14.579	46.00	-189.18
4	-6.00	0.03	-21.001	14.117	125.90	13.636	35.85	-168.28
5	-4.00	0.03	-15.349	13.402	109.82	12.737	26.93	-155.57
6	-2.00	0.03	-9.508	12.824	95.71	11.944	20.55	-145.20
7	0.00	0.03	-3.428	12.461	81.48	10.926	13.45	-137.33
8	2.00	0.03	1.997	12.166	70.27	9.678	8.06	-128.71
9	4.00	0.03	6.597	12.068	62.85	9.372	-0.45	-122.73
10	6.00	0.03	10.773	12.238	57.94	9.440	-6.61	-120.46
11	8.00	0.03	15.169	12.522	56.54	9.451	-12.23	-119.63
12	10.00	0.03	19.396	13.220	58.01	9.524	-20.09	-126.03
13	12.00	0.02	23.869	14.191	56.17	8.257	-18.70	-126.02

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

.DELTA DATA

ID.NO. 102

(RUN 102-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.02	-36.180	17.911	148.18	15.871	66.97	-212.20
2	-10.00	0.02	-30.796	16.452	139.45	14.782	55.89	-197.17
3	-8.00	0.02	-25.978	15.080	131.43	14.294	43.16	-180.23
4	-6.00	0.02	-21.150	13.763	128.80	13.485	33.62	-165.69
5	-4.00	0.02	-15.514	12.928	116.27	12.451	25.10	-153.18
6	-2.00	0.02	-9.446	12.389	99.58	11.474	19.69	-141.00
7	0.00	0.02	-3.588	12.066	85.35	10.571	12.18	-132.43
8	2.00	0.02	1.923	11.833	72.83	9.725	5.83	-125.23
9	4.00	0.02	6.523	11.734	65.43	9.371	-1.94	-119.32
10	6.00	0.02	10.937	11.840	61.41	9.270	-8.91	-116.63
11	8.00	0.02	15.201	12.233	59.84	9.469	-14.22	-119.02
12	10.00	0.02	19.415	12.937	59.91	9.387	-20.79	-119.26
13	12.00	0.02	24.020	13.835	58.77	8.213	-19.22	-121.16

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 103

(RUN 103-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.02	-32.650	19.911	141.41	14.043	63.35	-192.58
2	-10.00	0.02	-28.833	18.289	140.29	13.884	53.76	-192.60
3	-8.00	0.02	-24.496	16.612	134.04	13.774	42.11	-178.15
4	-6.00	0.02	-20.247	15.201	130.55	13.365	33.54	-166.27
5	-4.00	0.02	-15.052	14.260	114.37	12.719	24.90	-154.98
6	-2.00	0.02	-9.552	13.550	99.24	11.867	18.73	-145.26
7	0.00	0.02	-3.987	12.838	84.96	10.999	10.58	-136.06
8	2.00	0.02	1.928	12.524	71.79	10.309	4.00	-130.66
9	4.00	0.02	7.059	12.533	63.92	9.974	-3.85	-126.14
10	6.00	0.02	12.051	12.639	61.17	9.906	-10.15	-122.93
11	8.00	0.02	16.826	13.168	58.08	9.898	-15.03	-120.82
12	10.00	0.02	21.156	13.700	61.96	9.757	-22.04	-126.84
13	12.00	0.02	25.653	14.769	6[illegible].90	8.546	-20.85	-126.67

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 10

(RUN 104-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.02	-31.087	19.827	125.07	5.634	47.57	-130.00
2	-10.00	0.02	-27.025	17.976	128.79	5.728	38.28	-126.23
3	-8.00	0.02	-24.429	16.155	136.29	6.086	32.44	-128.77
4	-6.00	0.02	-19.819	14.796	129.87	6.702	27.15	-135.98
5	-4.00	0.02	-14.584	13.722	115.32	7.127	19.42	-139.58
6	-2.00	0.02	-8.910	13.218	92.59	7.144	14.86	-137.28
7	0.00	0.02	-2.889	12.721	74.92	7.082	8.89	-136.36
8	2.00	0.02	2.230	12.367	65.37	7.100	2.59	-133.73
9	4.00	0.02	7.651	12.353	60.01	7.337	-4.12	-132.18
10	6.00	0.02	12.585	12.372	57.76	7.654	-11.77	-132.12
11	8.00	0.02	17.392	12.868	56.24	7.831	-14.53	-130.97
12	10.00	0.02	21.880	13.570	57.76	7.955	-19.97	-133.94
13	12.00	0.02	26.031	14.392	59.27	7.087	-18.80	-131.46

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 105

(RUN 108-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.02	-30.911	16.518	128.00	6.336	52.88	-146.81
2	-10.00	0.02	-26.664	14.767	124.77	6.173	43.89	-147.93
3	-8.00	0.02	-23.999	12.828	139.35	6.774	36.17	-148.18
4	-6.00	0.02	-19.416	11.307	135.02	7.119	30.20	-150.83
5	-4.00	0.02	-14.382	10.167	113.93	7.507	23.69	-155.43
6	-2.00	0.02	-8.478	9.476	88.15	7.537	19.41	-155.58
7	0.00	0.02	-2.588	8.901	67.49	7.529	12.77	-154.99
8	2.00	0.02	2.956	8.600	57.88	7.500	5.31	-154.56
9	4.00	0.02	7.991	8.501	50.83	7.461	-3.14	-149.47
10	6.00	0.02	12.977	8.672	46.51	7.568	-9.20	-145.10
11	8.00	0.02	17.626	9.002	47.47	7.658	-14.51	-139.80
12	10.00	0.02	21.881	9.704	48.52	7.688	-20.51	-140.56
13	12.00	0.02	26.195	10.630	49.38	6.784	-18.92	-134.58

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 106

(RUN 106-RUN 6)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-0.07	-24.00	9.631	31.844	-11.35	-50.905	19.22	141.83
2	-0.07	-22.00	7.091	28.229	4.67	-45.779	19.85	118.65
3	-0.07	-20.00	4.875	25.070	24.67	-41.017	23.96	98.30
4	-0.07	-18.00	3.521	22.228	33.52	-36.065	23.05	69.22
5	-0.07	-16.00	3.003	19.561	44.66	-31.139	21.12	36.61
6	-0.07	-14.00	2.113	16.941	60.64	-26.439	15.26	8.26
7	-0.07	-12.00	1.749	16.208	52.91	-22.909	15.22	-15.26
8	-0.07	-10.00	1.017	15.057	60.37	-17.893	13.45	-39.96
9	-0.07	-8.00	-0.415	14.340	71.84	-12.198	17.38	-68.72
10	-0.07	-6.00	-1.196	13.918	77.80	-7.644	20.73	-94.21
11	-0.07	-4.00	-1.656	13.536	85.05	-3.614	22.74	-112.39
12	-0.07	-2.00	-1.626	13.543	86.23	0.444	24.12	-127.35
13	-0.07	0.00	-1.446	13.705	85.53	4.307	32.41	-142.91
14	-0.07	2.00	-1.535	13.913	85.10	9.340	23.26	-140.99
15	-0.07	4.00	-0.989	14.311	74.53	14.028	25.70	-160.01
16	-0.07	6.00	-0.483	14.730	65.95	19.215	33.07	-201.88
17	-0.07	8.00	0.686	15.437	50.70	23.501	37.58	-216.49
18	-0.07	10.00	1.965	16.578	34.96	28.333	37.24	-235.37
19	-0.07	12.00	3.446	17.817	24.26	31.948	38.96	-260.31
20	-0.07	14.00	4.710	19.372	14.23	37.632	37.61	-285.53
21	-0.07	16.00	5.813	20.964	5.40	41.758	37.45	-303.33
22	-0.07	18.00	6.476	23.283	-6.54	46.416	42.20	-331.83
23	-0.07	20.00	7.222	25.876	-12.39	51.216	44.15	-365.68
24	-0.07	22.00	8.037	28.511	-26.01	55.785	45.79	-396.36
25	-0.07	24.00	9.340	31.639	-37.88	60.799	43.32	-416.12

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 107

(RUN 107-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.02	-6.342	7.505	-163.96	3.940	43.32	-122.06
2	-10.00	0.02	-5.451	6.992	-150.53	3.618	31.91	-113.28
3	-8.00	0.02	-4.824	6.646	-135.54	3.455	26.17	-107.23
4	-6.00	0.02	-4.338	6.264	-118.07	3.632	21.87	-116.00
5	-4.00	0.02	-3.527	5.811	-101.85	4.534	17.31	-134.23
6	-2.00	0.02	-2.813	5.626	-86.84	5.459	16.38	-145.99
7	0.00	0.02	-2.065	5.394	-75.32	5.829	11.[illegible]4	-150.97
8	2.00	0.02	-1.129	5.032	-60.98	6.000	5.64	-148.14
9	4.00	0.02	-0.284	4.837	-46.16	6.033	-1.50	43.95
10	6.00	0.02	0.614	4.702	-32.65	5.966	-6.82	-[illegible]37.11
11	8.00	0.02	1.456	4.802	-16.55	5.937	-11.47	-135.10
12	10.00	0.02	2.273	4.969	-0.53	6.127	-16.84	-137.07
13	12.00	0.02	3.092	5.163	16.09	6.178	-21.23	-139.03

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 108

(RUN 108-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.03	-6.308	7.772	-166.35	3.275	34.36	-116.84
2	-10.00	0.03	-5.479	7.253	-152.06	2.714	24.52	-107.61
3	-8.00	0.03	-4.825	6.784	-135.83	2.446	19.50	-100.55
4	-6.00	0.03	-4.386	6.392	-117.25	2.783	16.12	-108.67
5	-4.00	0.03	-3.602	5.928	-103.41	3.825	12.40	-125.14
6	-2.00	0.03	-2.881	5.674	-88.25	5.040	11.22	-143.78
7	0.00	0.03	-1.970	5.496	-75.76	5.474	7.95	-150.39
8	2.00	0.03	-1.060	5.175	-60.34	5.630	3.05	-148.80
9	4.00	0.03	-0.197	4.899	-45.37	5.694	-3.25	-141.87
10	6.00	0.03	0.719	4.734	-31.08	5.600	-7.83	-137.08
11	8.00	0.03	1.587	4.802	-16.64	5.564	-10.89	-136.31
12	10.00	0.03	2.368	4.935	-0.20	5.672	-16.11	-138.76
13	12.00	0.03	3.140	5.065	17.38	5.684	-17.15	-141.41

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 109

(RUN 109-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.03	-6.470	7.601	-163.57	2.062	31.70	-90.90
2	-10.00	0.03	-5.579	7.222	-151.80	1.942	25.25	-90.67
3	-8.00	0.03	-4.921	6.845	-135.82	1.741	19.23	-86.11
4	-6.00	0.03	-4.435	6.419	-114.98	2.075	16.35	-92.51
5	-4.00	0.03	-3.635	6.068	-102.57	2.786	13.55	-106.38
6	-2.00	0.03	-2.864	5.785	-87.29	3.395	12.53	-121.78
7	0.00	0.03	-2.041	5.532	-74.11	4.563	8.52	-129.42
8	2.00	0.03	-1.079	5.336	-58.95	4.692	2.91	-123.85
9	4.00	0.03	-0.180	5.169	-43.98	4.877	-4.23	-120.40
10	6.00	0.03	0.747	4.835	-27.52	5.030	-7.21	-120.39
11	8.00	0.03	1.595	4.935	-12.81	5.224	-11.06	-121.19
12	10.00	0.03	2.468	5.069	3.47	5.386	-15.49	-129.10
13	12.00	0.03	3.297	5.363	16.62	5.559	-18.93	-132.37

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 110

(RUN 110-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA   FULL SCALE DATA   SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.03	-15.492	9.580	-184.05	3.532	34.64	-102.73
2	-10.00	0.03	-11.003	8.916	-175.84	2.750	29.17	-101.13
3	-8.00	0.03	-7.316	8.265	-161.18	2.611	22.01	-95.98
4	-6.00	0.03	-3.668	7.726	-138.87	2.731	17.48	-96.61
5	-4.00	0.03	0.011	7.266	-122.66	3.462	13.76	-103.85
6	-2.00	0.03	3.874	7.032	-100.95	4.070	11.12	-113.24
7	0.00	0.03	7.458	7.063	-83.57	4.329	8.04	-120.62
8	2.00	0.03	10.616	7.165	-64.49	4.411	4.93	-122.78
9	4.00	0.03	13.539	7.100	-41.81	4.665	-1.83	-119.78
10	6.00	0.03	16.330	7.270	-21.55	3.079	-3.29	-120.40
11	8.00	0.03	19.147	7.572	-1.33	5.574	-12.48	-117.07
12	10.00	0.03	22.496	8.209	20.69	5.958	-18.99	-120.05
13	12.00	0.03	25.797	9.097	40.41	5.750	-19.91	-118.51

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 111

(RUN 111-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.03	-24.091	11.431	-175.70	0.669	36.51	-87.62
2	-10.00	0.03	-21.346	10.580	-160.34	1.280	31.65	-96.98
3	-8.00	0.03	-18.780	9.652	-143.99	2.573	27.21	-106.43
4	-6.00	0.03	-16.338	8.990	-123.09	4.310	22.24	-122.76
5	-4.00	0.03	-14.191	8.633	-104.96	6.196	16.77	-141.83
6	-2.00	0.03	-11.287	8.365	-82.96	7.019	10.69	-145.87
7	-0.00	0.03	-8.165	8.329	-74.71	7.062	4.20	-142.52
8	2.00	0.03	-5.252	8.366	-54.12	7.100	-1.04	-135.48
9	4.00	0.03	-2.631	8.399	-36.68	6.935	-7.99	-134.26
10	6.00	0.03	0.499	8.569	-18.25	6.861	-13.48	-128.79
11	8.00	0.03	3.500	8.802	-0.37	6.398	-15.12	-122.80
12	10.00	0.03	7.070	9.192	19.99	6.192	-21.03	-119.85
13	12.00	0.03	10.091	9.797	39.34	5.584	-20.26	-120.03

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 112

(RUN 112-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.05	-21.193	10.708	-179.22	2.839	35.90	-103.87
2	-10.00	0.05	-18.044	9.820	-167.88	2.619	29.35	-107.19
3	-8.00	0.05	-14.758	9.017	-148.70	2.429	23.55	-102.51
4	-6.00	0.05	-12.160	8.450	-123.50	3.333	21.48	-114.67
5	-4.00	0.05	-9.277	7.864	-110.38	4.874	16.91	-129.73
6	-2.00	0.05	-6.602	7.629	-91.52	6.514	12.28	-143.22
7	0.00	0.05	-3.465	7.529	-73.05	7.293	5.00	-145.46
8	2.00	0.05	-0.502	7.713	-54.91	7.573	-2.38	-139.21
9	4.00	0.05	2.275	7.929	-35.74	7.737	-11.50	-134.42
10	6.00	0.05	4.597	8.236	-17.73	7.527	-16.68	-128.64
11	8.00	0.05	6.774	8.635	0.67	6.785	-18.04	-121.48
12	10.00	0.05	9.898	9.100	18.19	6.391	-22.27	-116.51
13	12.00	0.05	12.452	9.963	37.83	6.150	-22.84	-113.31

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

.DELTA DATA

ID.NO. 113

(RUN 113-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA   FULL SCALE DATA   SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.06	-37.710	15.420	86.74	3.042	39.63	-112.65
2	-10.00	0.06	-36.590	13.031	124.21	2.465	32.58	-107.24
3	-8.00	0.06	-3[illegible].883	11.285	130.58	3.010	24.00	-118.20
4	-6.00	0.02	-28.138	10.054	115.27	4.090	19.25	-128.35
5	-4.00	0.01	-22.615	9.203	90.43	5.524	14.30	-146.21
6	-2.00	0.01	-16.984	8.491	64.36	7.036	10.70	-150.00
7	0.00	0.01	-11.320	8.230	41.64	7.494	4.97	-147.74
8	2.00	0.06	-5.970	8.200	23.69	7.273	0.49	-136.94
9	4.00	0.06	-1.674	8.259	9.75	7.168	-7.44	-134.26
10	6.00	0.06	2.674	8.438	-1.49	6.826	-11.76	-126.75
11	8.00	0.06	7.079	8.835	-7.99	6.232	-13.96	-120.11
12	10.00	0.06	11.345	9.370	-6.36	6.156	-19.24	-118.66
13	12.00	0.06	14.996	10.164	-1.33	5.517	-18.00	-116.12

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 114

(RUN 114-RUN 10)/ 1.00

11/20/81 1438

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.01	-38.001	15.446	96.18	3.930	40.62	-126.42
2	-10.00	0.01	-38.275	13.116	154.20	2.769	36.27	-114.16
3	-8.00	0.01	-34.805	11.448	162.65	3.374	28.61	-126.44
4	-6.00	0.01	-30.792	10.120	155.39	4.921	20.87	-144.31
5	-4.00	0.01	-24.750	9.248	128.94	6.260	15.51	-154.83
6	-2.00	0.01	-19.009	8.720	96.46	7.767	12.05	-162.36
7	0.00	0.01	-12.890	8.366	69.53	7.875	6.19	-156.05
8	2.00	0.01	-7.470	8.234	46.99	7.926	-1.41	-148.09
9	4.00	0.01	-3.001	8.299	27.94	7.769	-7.53	-142.87
10	6.00	0.01	1.943	8.471	11.49	7.461	-12.28	-134.83
11	8.00	0.01	6.552	8.833	-0.14	7.000	-15.57	-132.30
12	10.00	0.01	11.315	9.404	-7.30	6.756	-20.01	-126.38
13	12.00	0.01	15.854	10.268	-13.98	6.216	-20.28	-122.36

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 115

(RUN 115-RUN 10)/ 1.00

11/23/81 0818

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.00	-38.840	15.471	106.22	3.845	41.66	-123.89
2	-10.00	0.00	-38.122	13.334	148.90	2.903	35.95	-116.11
3	-8.00	0.00	-34.535	11.565	157.60	3.264	26.94	-122.43
4	-6.00	0.00	-29.860	10.399	145.82	4.690	21.43	-139.60
5	-4.00	0.00	-24.847	9.403	125.68	6.297	15.12	-155.13
6	-2.00	0.00	-18.943	8.794	93.77	7.726	11.16	-161.36
7	0.00	0.00	-12.889	8.462	65.06	7.795	4.96	-154.70
8	2.00	0.00	-7.537	8.400	44.08	7.800	-1.84	-146.50
9	4.00	0.00	-2.571	8.530	23.28	7.441	-12.10	-138.86
10	6.00	0.00	1.796	8.668	7.92	7.330	-12.57	-132.95
11	8.00	0.00	6.679	8.969	-3.02	6.832	-16.49	-127.52
12	10.00	0.00	11.341	9.597	-8.14	6.625	-21.51	-126.13
13	12.00	-0.00	16.154	10.430	-14.90	6.250	-21.66	-123.22

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 116

(RUN 116-RUN 10)/ 1.00

11/23/81 0818

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.00	-36.475	15.451	70.99	2.871	38.87	-111.07
2	-10.00	0.00	-33.362	13.686	85.24	2.109	29.40	-100.94
3	-8.00	0.00	-29.911	12.013	94.15	2.166	24.29	-106.59
4	-6.00	0.00	-25.874	10.650	93.61	3.651	20.88	-125.80
5	-4.00	0.00	-21.318	9.331	79.27	4.865	15.49	-137.98
6	-2.00	0.00	-16.251	8.527	62.88	6.406	12.12	-148.03
7	0.00	0.00	-10.756	8.195	41.50	6.942	5.62	-144.13
8	2.00	0.00	-5.764	8.234	23.58	7.166	-1.12	-137.67
9	4.00	0.00	-1.672	8.325	8.62	7.167	-7.62	-133.22
10	6.00	0.00	2.403	8.498	-1.23	7.091	-12.74	-126.39
11	8.00	0.00	6.626	8.802	-9.01	6.552	-15.42	-119.79
12	10.00	0.00	10.823	9.293	-8.19	6.324	-19.95	-116.20
13	12.00	0.00	14.383	10.268	-4.86	5.916	-19.57	-115.28

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 117

(RUN 117-RUN 10)/ 1.00

11/23/81 0818

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.01	-39.908	15.821	125.51	3.631	42.82	-122.33
2	-10.00	0.01	-36.235	14.101	131.53	2.922	33.39	-115.30
3	-8.00	0.01	-32.529	12.343	140.79	3.000	28.41	-120.03
4	-6.00	0.01	-27.703	11.084	121.75	4.140	22.28	-134.11
5	-4.00	0.01	-22.115	10.096	93.31	5.424	17.01	-145.85
6	-2.00	0.02	-16.188	9.487	64.17	6.744	14.34	-152.46
7	0.00	0.02	-10.783	8.975	42.67	7.356	8.07	-150.42
8	2.00	0.01	-5.870	9.000	26.54	7.566	0.53	-143.58
9	4.00	0.01	-1.640	9.099	11.51	7.640	-7.45	-138.32
10	6.00	0.01	2.478	9.204	0.68	7.388	-12.10	-130.90
11	8.00	0.01	6.695	9.534	-8.68	6.9[illegible]	-15.43	-125.91
12	10.00	0.01	11.180	10.004	-10.73	6.757	-21.28	-122.62
13	12.00	0.01	15.295	10.930	-17.25	6.417	-21.82	-120.02

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 118

(RUN 118-RUN 6)/ 1.00

11/23/81 0818

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-0.08	-24.00	-4.584	30.078	24.17	-43.344	39.60	74.97
2	-0.08	-22.00	-4.181	26.759	24.41	-38.674	34.29	57.04
3	-0.08	-20.00	-4.548	24.096	28.43	-34.770	31.12	44.04
4	-0.08	-18.00	-5.223	21.693	35.90	-30.163	28.32	25.20
5	-0.08	-16.00	-6.675	19.608	44.18	-25.723	24.52	4.85
6	-0.08	-14.00	-8.307	17.230	63.64	-21.027	20.15	-22.33
7	-0.08	-12.00	-9.371	16.713	60.38	-16.754	19.55	-44.80
8	-0.08	-10.00	-9.940	15.813	65.07	-12.258	18.53	-68.83
9	-0.08	-8.00	-10.735	14.874	70.47	-7.224	18.12	-95.08
10	-0.08	-6.00	-11.211	14.458	70.82	-2.976	19.26	-118.10
11	-0.08	-4.00	-10.813	14.307	69.38	0.037	21.99	-130.62
12	-0.08	-2.00	-10.096	14.331	65.58	2.982	21.53	-136.99
13	-0.08	0.00	-9.181	14.819	59.25	4.789	28.96	-134.03
14	-0.08	2.00	-8.596	14.970	57.87	7.470	24.58	-123.99
15	-0.08	4.00	-8.283	15.126	53.94	10.634	22.42	-126.90
16	-0.08	6.00	-7.489	15.627	50.85	15.059	23.57	-147.07
17	-0.08	8.00	-7.440	16.025	46.39	17.361	26.06	-157.63
18	-0.08	10.00	-6.566	16.927	38.62	21.115	26.97	-172.77
19	-0.08	12.00	-5.392	17.970	28.48	25.843	25.38	-194.53
20	-0.08	14.00	-4.450	19.331	17.10	29.900	27.54	-223.94
21	-0.08	16.00	-3.139	21.446	3.67	34.728	26.15	-248.97
22	-0.08	18.00	-1.663	23.133	-0.01	39.639	28.25	-272.26
23	-0.08	20.00	-0.565	25.612	-7.26	44.433	28.71	-296.08
24	-0.08	22.00	-1.121	28.248	-12.22	48.386	22.94	-295.42
25	-0.08	24.00	-2.771	30.754	-2.08	50.819	10.32	-291.97

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 119

(RUN 119-RUN 6)/ 1.00

11/23/81 0818

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-0.08	-24.00	-4.609	30.464	28.20	-44.219	55.03	78.27
2	-0.08	-22.00	-4.777	26.882	29.33	-38.594	38.69	58.41
3	-0.08	-20.00	-4.686	23.923	33.13	-34.782	33.54	44.33
4	-0.08	-18.00	-5.730	21.826	34.36	-31.231	39.55	23.88
5	-0.08	-16.00	-7.078	19.488	48.43	-25.693	30.01	-0.25
6	-0.08	-14.00	-9.037	16.967	65.22	-20.922	24.13	-28.72
7	-0.08	-12.00	-9.612	16.459	57.02	-17.114	24.08	-49.29
8	-0.08	-10.00	-10.183	15.508	63.36	-12.262	19.94	-75.15
9	-0.08	-8.00	-10.553	14.642	69.21	-6.865	19.11	-103.36
10	-0.08	-6.00	-10.873	14.330	69.74	-2.877	20.98	-124.69
11	-0.08	-4.00	-10.719	14.128	68.05	-0.012	23.86	-139.13
12	-0.08	-2.00	-10.120	14.289	65.61	3.373	22.77	-148.00
13	-0.08	0.00	-9.452	14.548	59.32	5.271	31.43	-146.65
14	-0.08	2.00	-8.855	14.759	56.25	7.548	26.04	-133.40
15	-0.08	4.00	-8.494	14.970	52.85	10.555	24.61	-137.70
16	-0.08	6.00	-7.892	15.362	47.85	14.667	27.51	-168.92
17	-0.08	8.00	-7.380	15.995	42.96	18.385	32.19	-185.41
18	-0.08	10.00	-6.480	16.833	32.82	21.970	34.12	-199.60
19	-0.08	12.00	-5.367	17.801	19.35	26.265	32.00	-214.19
20	-0.08	14.00	-4.349	18.916	5.65	30.181	35.47	-236.56
21	-0.08	16.00	-2.952	20.874	-10.22	35.029	34.24	-260.82
22	-0.08	18.00	-1.831	22.380	-11.90	39.880	36.49	-281.47
23	-0.08	20.00	-0.883	24.835	-17.31	45.063	38.75	-316.04
24	-0.08	22.00	-1.591	27.362	-18.19	49.217	37.07	-334.36
25	-0.08	24.00	-4.217	30.814	13.77	49.886	2.31	-278.01

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 120

(RUN 120-RUN 10)/ 1.00

11/23/81 0818

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.02	-26.370	15.737	144.20	10.101	61.94	-187.08
2	-10.00	0.02	-25.229	14.446	147.50	10.371	53.17	-183.84
3	-8.00	0.02	-23.487	13.455	146.92	10.555	41.91	-172.45
4	-6.00	0.02	-21.686	12.503	145.89	10.246	33.52	-160.41
5	-4.00	0.02	-18.243	11.762	120.35	9.796	24.78	-151.21
6	-2.00	0.02	-14.458	11.173	92.46	9.204	17.58	-139.49
7	0.00	0.00	-10.826	10.608	66.14	8.528	11.32	-131.17
8	2.00	0.02	-7.469	10.267	43.81	8.247	3.74	-127.69
9	4.00	0.02	-4.118	9.971	22.07	8.138	-4.37	-125.99
10	6.00	0.02	-0.632	9.700	1.93	8.017	-9.74	-124.52
11	8.00	0.02	2.608	9.702	-18.41	7.864	-13.39	-128.24
12	10.00	0.02	6.145	9.669	-43.14	7.891	-19.42	-132.63
13	12.00	0.02	9.908	10.082	-69.80	7.649	-22.63	-135.27

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 121

(RUN 121-RUN 10)/ 1.00

11/23/81 0818

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.00	-26.943	15.138	[illegible]	10.065	68.07	-193.04
2	-10.00	0.00	-25.184	14.383	[illegible]	10.354	52.19	-185.89
3	-8.00	0.00	-23.365	13.533	147.59	10.494	41.81	-174.03
4	-6.00	0.00	-21.377	12.402	147.11	10.287	31.95	-161.99
5	-4.00	0.00	-18.258	11.769	123.56	9.805	23.75	-152.65
6	-2.00	0.00	-14.369	11.155	93.71	9.269	17.35	-139.84
7	0.00	0.00	-10.834	10.686	66.57	8.677	10.52	-131.80
8	2.00	0.00	-7.244	10.239	43.51	8.177	2.59	-126.49
9	4.00	0.00	-4.063	9.994	21.61	7.936	-4.95	-126.19
10	6.00	0.00	-0.754	9.873	1.51	7.939	-10.34	-128.14
11	8.00	0.00	2.524	9.753	-19.19	7.783	-14.40	-129.98
12	10.00	0.00	6.207	9.773	-43.67	7.799	-20.90	-134.36
13	12.00	0.00	9.921	10.148	-70.18	7.202	-21.05	-137.90

ORIGINAL PAGE IS
OF POOR QUALITY

A-216

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 192

(RUN 122-RUN 10)/ 1.00

11/23/81 0818

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.01	-39.744	18.764	117.61	6.102	54.50	-142.98
2	-10.00	0.01	-35.490	17.176	125.34	6.098	40.01	-142.13
3	-8.00	0.01	-31.806	15.715	129.23	6.616	33.59	-145.21
4	-6.00	0.01	-27.601	14.582	120.98	7.074	28.52	-147.34
5	-4.00	0.01	-21.969	13.776	96.91	7.806	20.49	-148.58
6	-2.00	0.01	-16.[illegible]	13.239	71.91	8.635	14.50	-148.34
7	-0.00	0.01	-10.[illegible]	2.844	52.95	8.861	6.39	-142.39
8	2.00	0.01	-6.[illegible]	12.700	39.38	8.966	-0.46	-135.69
9	4.00	0.01	-1.738	12.928	24.51	9.097	-9.42	-131.16
10	6.00	0.01	2.713	13.039	14.41	8.893	-13.90	-127.23
11	8.00	0.01	7.034	13.500	3.82	8.320	-16.35	-122.70
12	10.00	0.01	11.307	14.004	1.88	8.422	-23.28	-120.57
13	12.00	0.01	15.462	14.850	-4.99	7.584	-20.92	-119.39

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 12.

(RUN 123-RUN 1C)/ 1.00

11/23/81 0818

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/W	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.01	-39.618	18.841	116.53	6.406	53.23	-145.66
2	-10.00	0.01	-35.092	17.203	122.22	6.03[illegible]	41.27	-141.12
3	-8.00	0.01	-31.491	15.730	128.75	6.50[illegible]	33.96	-142.15
4	-6.00	0.01	-27.241	14.643	120.68	6.85[illegible]	28.07	-145.19
5	-4.00	0.01	-21.752	13.815	98.04	7.653	20.56	-150.11
6	-2.00	0.01	-16.217	13.312	72.23	8.4[illegible]2	15.96	-147.25
7	-0.00	0.01	-10.620	12.897	53.53	8.63[illegible]	[illegible].97	-141.72
8	2.00	0.01	-5.937	12.800	39.26	8.9[illegible]	-0.74	-135.63
9	4.00	0.01	-1.731	12.970	24.82	9.137	-9.76	-131.41
10	6.00	0.01	2.614	13.073	13.66	[illegible]	-13.95	-127.32
11	8.00	0.01	7.033	13.599	3.78	8.[illegible]	-17.32	-124.18
12	10.00	0.01	11.200	14.150	0.69	8.461	-23.53	-119.79
13	12.00	0.01	15.239	14.926	-7.46	7.475	-22.12	-119.79

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 124

(RUN 124-RUN 10)/ 1.00

11/23/81 0818

WIND AXES DATA FULL SCALE DATA SUPPORT TARES REMOVED

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.01	-34.995	17.148	125.48	7.583	54.49	-161.89
2	-10.00	0.01	-31.603	15.441	125.94	6.867	43.98	-152.32
3	-8.00	0.01	-29.256	13.410	140.96	6.869	36.92	-153.66
4	-6.00	0.00	-24.378	12.139	127.27	6.658	29.51	-153.38
5	-4.00	0.00	-19.748	10.937	102.45	7.346	23.52	-160.16
6	-2.00	0.00	-14.660	10.357	72.10	8.583	18.95	-162.89
7	-0.00	0.01	-9.751	9.797	47.83	9.326	10.06	-160.70
8	2.00	0.01	-4.958	9.594	31.06	9.493	1.52	-151.28
9	4.00	0.01	-0.686	9.731	15.86	9.533	-8.08	-146.45
10	6.00	0.01	3.421	9.902	-3.25	9.007	-13.94	-140.18
11	8.00	0.01	7.826	10.169	-5.78	8.232	-17.84	-132.88
12	10.00	0.01	12.179	10.858	-9.14	7.966	-23.55	-126.39
13	12.00	0.01	16.129	11.976	-18.12	6.086	-21.66	-125.53

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 74

(RUN 74-RUN 32)/ 1.00

11/23/81 1303

WIND AXES DATA CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	-0.76	4.600	6.683	-25.39	-0.074	5.41	32.16
2	-10.00	-0.76	3.144	6.515	-17.06	0.400	-3.04	29.05
3	-8.00	-0.76	1.723	6.527	-10.70	1.024	-2.52	21.67
4	-6.00	-0.76	2.116	6.516	-14.23	1.580	-4.19	9.50
5	-4.00	-0.76	1.336	6.398	-14.39	1.623	-3.83	3.36
6	-2.00	-0.76	1.732	6.080	-15.89	1.897	-5.14	-2.21
7	0.00	-0.76	0.932	5.938	-12.76	1.648	-2.65	-2.69
8	2.00	-0.76	1.592	5.655	-11.70	1.226	-3.63	0.98
9	4.00	-0.76	0.157	5.414	-11.07	1.297	-5.79	1.84
10	6.00	-0.76	-0.201	5.116	-9.71	1.259	-5.30	6.97
11	8.00	-0.76	-0.412	4.871	-9.42	1.479	-7.58	10.75
12	10.00	-0.76	-0.848	4.599	-9.80	1.158	-6.50	11.68
13	12.00	-0.76	-2.173	4.652	-23.82	1.094	-5.42	16.94

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 75

(RUN 75-RUN 35)/ 1.00

11/23/81 1303

WIND AXES DATA, CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	-0.76	4.703	6.619	-26.53	0.305	7.03	12.07
2	-10.00	-0.76	4.351	6.740	-35.27	-0.309	7.04	11.99
3	-8.00	-0.76	2.758	6.674	-19.89	-0.231	1.22	11.64
4	-6.00	-0.76	1.856	6.693	-18.83	0.033	-2.47	6.21
5	-4.00	-0.76	1.264	6.485	-17.55	0.375	-3.07	5.48
6	-2.00	-0.76	1.238	6.409	-15.99	0.627	-3.51	0.17
7	0.00	-0.76	1.211	6.127	-14.20	0.471	-0.54	-0.09
8	2.00	-0.76	0.292	5.935	-12.53	0.582	-1.34	-0.73
9	4.00	-0.76	0.222	5.651	-8.45	0.984	-1.97	-4.72
10	6.00	-0.76	-0.223	5.407	-7.42	1.103	-1.52	-5.76
11	8.00	-0.76	-0.649	5.058	-6.26	1.586	-3.97	-8.52
12	10.00	-0.76	-1.147	4.690	-7.49	1.421	-3.68	-7.53
13	12.00	-0.76	-2.215	4.930	-16.22	1.133	-3.24	-0.64

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 76

(RUN 76-RUN 36)/ 1.00

11/23/81 1303

WIND AXES DATA CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	-0.76	4.640	6.866	-30.85	0.836	9.35	4.18
2	-10.00	-0.76	3.940	6.824	-32.52	0.143	7.08	6.57
3	-8.00	-0.76	2.070	6.615	-18.75	-0.132	5.38	10.54
4	-6.00	-0.76	1.807	6.656	-4.39	-0.035	1.02	7.23
5	-4.00	-0.76	1.840	6.628	-18.36	0.222	-1.26	2.86
6	-2.00	-0.76	1.747	6.291	-19.65	0.622	-0.56	-1.03
7	0.00	-0.76	1.588	6.192	-19.01	0.666	1.40	-2.37
8	2.00	-0.76	0.622	5.822	-15.50	0.531	1.49	-4.19
9	4.00	-0.76	0.458	5.635	-11.84	0.928	-0.03	-6.88
10	6.00	-0.76	-0.083	5.390	-11.10	1.062	-0.00	-6.65
11	8.00	-0.76	-0.333	5.278	-11.66	1.478	-1.37	-7.10
12	10.00	-0.76	-0.931	4.789	-12.45	1.365	-2.06	-7.06
13	12.00	-0.76	-1.660	4.906	-21.10	0.885	-1.49	-5.65

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 77

(RUN 77-RUN 37)/ 1.00

11/23/81 1303

WIND AXES DATA CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.03	3.222	6.652	-324.01	-1.928	10.86	21.84
2	-10.00	0.03	3.164	6.363	-26.89	-2.095	7.96	18.03
3	-8.00	0.03	2.178	6.425	-25.61	-1.877	8.73	15.73
4	-6.00	0.03	1.800	6.374	-26.54	-1.193	4.84	7.55
5	-4.00	0.03	1.390	6.317	-26.55	-0.699	3.52	4.61
6	-2.00	0.03	1.422	6.056	-22.51	-0.325	3.46	1.43
7	0.00	0.03	1.157	5.943	-22.20	-0.377	4.24	1.42
8	2.00	0.03	0.774	5.653	-22.89	-0.345	5.02	2.86
9	4.00	0.03	0.496	5.483	-21.89	0.020	2.12	-0.20
10	6.00	0.03	0.229	5.130	-18.11	0.175	3.31	-0.59
11	8.00	0.03	-0.129	4.933	-15.49	0.491	0.99	-0.05
12	10.00	0.03	-0.298	4.709	-13.74	0.445	0.87	1.61
13	12.00	0.03	-1.281	4.462	-13.13	0.194	1.51	3.56

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 78

(RUN 78-RUN 36)/ 1.00

11/23/81 1303

WIND AXES DATA; CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.05	4.437	6.548	-21.42	-1.034	7.19	16.74
2	-10.00	0.05	3.524	6.331	-28.20	-1.631	5.75	20.10
3	-8.00	0.05	2.014	6.051	-18.05	-1.107	6.77	15.36
4	-6.00	0.05	1.846	6.252	-6.38	-0.406	3.04	9.11
5	-4.00	0.05	2.105	6.086	-21.58	-0.032	3.99	4.52
6	-2.00	0.05	1.810	5.855	-20.74	0.319	3.74	1.94
7	0.00	0.03	1.422	5.725	-18.66	0.266	4.65	3.70
8	2.00	0.05	0.750	5.354	-13.72	0.117	4.55	2.18
9	4.00	0.05	0.584	5.233	-11.62	0.333	1.69	3.06
10	6.00	0.05	0.184	4.923	-9.47	0.513	1.91	3.16
11	8.00	0.05	-0.043	4.747	-10.02	0.782	0.85	5.37
12	10.00	0.05	-0.549	4.426	-12.03	0.899	0.12	5.08
13	12.00	0.05	-1.717	4.334	-19.09	0.767	1.25	5.68

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 79

((RUN 79-RUN 35)/ 1.00

11/23/81 1303

WIND AXES DATA CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	-0.02	4.568	6.099	19.59	-0.862	4.26	18.05
2	-10.00	-0.02	3.745	6.297	5.52	-1.660	4.46	20.65
3	-8.00	-0.02	2.640	6.259	-19.43	-0.821	3.23	15.96
4	-6.00	0.00	1.825	6.262	-20.04	-0.388	1.70	7.96
5	-4.00	0.02	1.297	6.151	-19.55	0.374	1.40	3.62
6	-2.00	0.02	1.214	6.009	-16.74	0.496	2.63	1.52
7	0.00	-0.02	0.910	5.764	-15.60	0.041	3.89	3.49
8	2.00	-0.02	0.325	5.435	-10.16	0.028	4.39	4.12
9	4.00	-0.02	0.282	5.151	-7.73	0.333	1.43	3.47
10	6.00	-0.02	0.031	5.005	-6.17	0.360	2.85	5.00
11	8.00	-0.02	[illegible]	4.757	-6.12	0.716	1.62	5.99
12	10.00	-0.02	-0.608	4.434	-7.66	0.653	1.25	9.79
13	12.00	-0.02	-1.551	4.658	-13.64	0.177	5.46	8.51

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 80

(RUN 80-RUN 32)/ 1.00

11/23/81 1303

WIND AXES DATA. CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	-0.01	4.672	6.319	-21.29	-1.799	3.14	36.46
2	-10.00	-0.01	3.301	6.411	-18.49	-1.645	5.47	28.41
3	-8.00	-0.01	2.079	6.225	-15.63	0.066	6.65	3.17
4	-6.00	-0.01	2.186	6.160	-18.73	0.855	4.33	-2.90
5	-4.00	-0.01	1.563	6.066	-19.02	0.867	4.30	-1.53
6	-2.00	-0.01	1.769	5.786	-20.28	0.893	3.03	-2.23
7	-0.00	-0.01	1.364	5.706	-16.60	0.271	3.51	-0.38
8	2.00	-0.01	0.856	5.487	-14.37	0.196	2.17	1.44
9	4.00	-0.01	0.548	5.148	-12.06	0.362	-0.90	2.77
10	6.00	-0.01	0.291	4.951	-10.83	0.390	-0.89	4.95
11	8.00	-0.01	0.179	4.739	-9.99	0.681	-3.14	6.07
12	10.00	-0.01	-0.360	4.458	-10.96	0.689	-2.71	3.13
13	12.00	-0.01	-1.283	4.302	-16.25	-0.195	1.65	3.91

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 81

(RUN 81-RUN 38)/ 1.00

11/23/81 1303

WIND AXES DATA CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.00	3.321	6.376	-29.16	-2.720	7.05	33.80
2	-10.00	0.00	2.988	6.267	-30.10	-3.036	4.54	35.71
3	-8.00	0.00	2.042	6.252	-25.23	-2.393	4.38	28.27
4	-6.00	0.00	1.785	6.163	-21.77	-1.654	3.02	14.76
5	-4.00	0.00	1.253	6.126	-23.49	-1.291	4.06	10.02
6	-2.00	0.00	1.270	5.947	-22.33	-0.718	3.64	4.20
7	0.00	0.00	1.136	5.683	-23.40	-0.666	4.22	-0.38
8	2.00	0.00	0.599	5.418	-24.25	-0.728	4.01	-1.39
9	4.00	0.00	0.604	5.138	-21.08	-0.463	1.19	-2.11
10	6.00	0.00	0.169	4.945	-19.08	-0.074	2.44	0.61
11	8.00	0.00	-0.271	4.806	-16.79	0.339	-0.52	-2.45
12	10.00	0.00	-0.574	4.550	-14.44	0.283	-0.82	-2.27
13	12.00	0.00	-1.650	4.327	-12.69	-0.595	2.96	-1.48

ORIGINAL PAGE IS
OF POOR QUALITY

A-227

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 82

(RUN 82-RUN 39)/ 1.00

11/23/81 1303

WIND AXES DATA; CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	-0.02	2.237	5.823	-22.14	-2.312	14.98	19.52
2	-10.00	-0.02	1.882	5.779	-22.02	-2.506	11.66	17.97
3	-8.00	-0.02	1.479	5.870	-25.76	-2.478	8.35	21.71
4	-6.00	-0.02	1.183	5.818	-26.77	-2.053	3.40	21.47
5	-4.00	-0.02	0.722	5.853	-29.16	-1.509	2.08	15.78
6	-2.00	-0.02	0.378	5.562	-26.94	-0.892	0.76	7.21
7	0.00	-0.02	0.031	5.411	-26.98	-0.883	2.42	5.03
8	2.00	-0.02	-0.091	5.145	-26.73	-0.916	1.95	4.60
9	4.00	-0.02	-0.361	5.040	-28.55	-0.530	1.31	2.45
10	6.00	-0.02	-0.531	4.735	-27.39	-0.223	0.61	-3.13
11	8.00	-0.02	-0.477	4.648	-27.15	0.099	-0.77	-3.86
12	10.00	-0.02	-0.517	4.411	-27.30	0.344	-1.44	-4.62
13	12.00	-0.02	-0.732	4.250	-27.75	0.339	-3.06	-7.74

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 83

(RUN 83-RUN 40)/ 1.00

11/23/81 1303

WIND AXES DATA - CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.00	2.441	5.642	-26.13	-3.672	14.37	21.61
2	-10.00	-0.00	1.902	5.637	-25.13	-3.450	9.54	27.79
3	-8.00	-0.02	1.389	5.658	-26.54	-3.092	8.16	28.23
4	-6.00	-0.02	1.160	5.604	-29.11	-2.443	3.69	19.63
5	-4.00	-0.02	1.056	5.709	-30.46	-1.521	1.19	9.61
6	-2.00	-0.02	0.788	5.493	-31.67	-1.067	2.69	5.20
7	0.00	-0.01	0.494	5.184	-27.52	-1.396	3.57	7.41
8	2.00	-0.00	0.397	5.208	-31.13	-1.213	3.36	0.98
9	4.00	0.00	0.006	5.136	-28.29	-0.816	3.79	-1.83
10	6.00	0.00	-0.195	4.822	-27.85	-0.457	2.48	-5.83
11	8.00	0.00	-0.308	4.507	-27.19	-0.241	1.33	-2.55
12	10.00	-0.00	-0.524	4.339	-23.45	0.146	-0.60	-3.39
13	12.00	-0.01	-0.745	4.134	-20.54	0.302	-2.03	-7.41

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 84

(RUN 84-RUN 41)/ 1.00

11/23/81 1303

WIND AXES DATA - CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	-0.01	2.265	5.698	-26.04	-3.582	15.58	11.10
2	-10.00	-0.01	1.771	5.669	-27.61	-3.265	13.37	12.80
3	-8.00	-0.01	1.418	5.678	-29.52	-2.632	11.23	13.28
4	-6.00	-0.01	1.086	5.577	-28.49	-2.017	7.34	6.14
5	-4.00	-0.01	0.732	5.519	-25.92	-1.195	6.31	-2.15
6	-2.00	-0.01	0.283	5.464	-27.68	-0.682	5.41	-1.45
7	0.00	-0.01	0.066	5.255	-25.26	-1.014	6.91	-2.97
8	2.00	-0.01	-0.049	5.117	-24.80	-1.171	6.99	-2.65
9	4.00	-0.01	-0.266	4.938	-25.81	-1.156	5.83	-3.88
10	6.00	-0.01	-0.351	4.684	-24.02	-0.944	4.94	-3.15
11	8.00	-0.01	-0.261	4.423	-26.50	-0.712	3.10	-2.06
12	10.00	-0.01	-0.269	4.253	-29.02	-0.520	2.21	-1.98
13	12.00	-0.01	-0.373	4.144	-27.82	-0.399	0.81	-1.65

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID NO. 85

(RUN 85-RUN 49)/ 1.00

11/23/81 1303

WIND AXES DATA - CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	-0.01	2.189	5.970	-23.20	-2.281	15.17	18.26
[illegible]	-10.00	-0.01	2.012	5.824	-20.44	-2.112	12.30	13.39
3	-8.00	-0.01	1.440	5.935	-26.82	-2.285	9.35	21.22
4	-6.00	-0.01	0.889	6.008	-26.93	-1.884	5.02	20.50
5	-4.00	-0.01	0.452	5.919	-23.36	-1.396	3.60	13.06
6	-2.00	-0.01	0.085	5.660	-26.55	-0.989	0.38	11.13
7	-0.00	-0.01	-0.254	5.576	-26.17	-1.192	3.02	12.13
8	2.00	-0.01	-0.403	5.342	-26.45	-1.042	0.77	8.09
9	4.00	-0.01	-0.732	5.178	-25.18	-0.781	0.89	3.04
10	6.00	-0.01	-0.758	4.864	-25.06	-0.476	0.88	-1.32
11	8.00	-0.01	-0.889	4.612	-24.83	-0.063	-0.21	-1.68
12	10.00	-0.01	-0.796	4.406	-24.09	0.170	-2.86	-4.58
13	12.00	-0.01	-0.932	4.186	-25.94	0.208	-3.48	-1.77

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 86

(RUN 86-RUN 52)/ 1.00

11/23/81 1303

WIND AXES DATA CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	-0.02	4.768	6.455	-31.26	-3.344	3.14	42.67
2	-10.00	-0.02	3.772	6.458	-32.85	-3.516	4.29	46.05
3	-8.00	-0.02	3.082	6.186	-28.93	-2.981	2.27	38.21
4	-6.00	-0.02	2.458	6.255	-24.54	-1.893	1.91	24.82
5	-4.00	-0.02	2.313	6.213	-20.81	-1.368	1.91	18.44
6	-2.00	-0.02	2.213	6.108	-20.42	-1.137	1.97	12.69
7	0.00	-0.02	2.155	6.039	-22.95	-1.202	3.96	11.33
8	2.00	-0.02	2.033	5.715	-18.62	-1.418	3.92	12.31
9	4.00	-0.02	1.576	5.619	-18.12	-1.358	3.22	10.46
10	6.00	-0.02	1.017	5.163	-14.43	-0.637	2.68	6.72
11	8.00	-0.02	0.386	4.854	-10.21	-0.148	-0.28	5.39
12	10.00	-0.02	0.[illegible]51	4.664	-10.02	-0.063	-1.14	3.69
13	12.00	-0.02	-1.363	4.499	-8.27	-0.740	3.06	-0.46

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 87

(RUN 87-RUN 54)/ 1.00

11/23/81 1303

WIND AXES DATA : CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	-0.04	4.864	6.546	-32.12	-1.424	13.55	11.15
2	-10.00	-0.04	3.895	6.225	-28.37	-1.563	9.29	9.38
3	-8.00	-0.04	2.699	6.100	-22.86	-1.018	11.24	6.46
4	-6.00	-0.04	2.424	6.139	-21.84	-0.037	7.69	-1.14
5	-4.00	-0.04	2.366	6.095	-21.67	0.117	5.35	-4.25
6	-2.00	-0.04	1.949	6.024	-18.75	0.314	5.37	-3.31
7	0.00	-0.04	1.802	5.902	-15.22	-0.093	5.59	-4.41
8	2.00	-0.04	1.483	5.551	-12.98	-0.493	6.57	-1.83
9	4.00	-0.04	1.287	5.306	-9.64	-0.285	5.40	-3.00
10	6.00	-0.04	0.710	5.121	-9.54	0.077	4.02	-2.65
11	8.00	-0.04	0.674	4.832	-8.41	0.502	0.46	-2.29
12	10.00	-0.04	0.193	4.584	-9.26	0.496	-0.50	-1.02
13	12.00	-0.04	-0.812	4.250	-15.47	0.003	1.53	0.14

ORIGINAL PAGE IS
OF POOR QUALITY

A-233

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 88

(RUN 88-RUN 55)/ 1.00

11/23/81 1303

WIND AXES DATA - CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	-0.05	4.814	6.400	-32.95	-1.154	9.70	13.00
2	-10.00	-0.05	3.349	6.222	-26.37	-1.446	9.79	13.27
3	-8.00	-0.04	2.987	6.278	-26.84	-0.802	10.08	6.02
4	-6.00	-0.03	2.547	6.207	-22.17	0.106	6.41	-3.86
5	-4.00	-0.03	2.498	6.027	-22.86	0.292	.24	-6.07
6	-2.00	-0.03	2.172	5.994	-19.08	0.240	3.80	-4.89
7	0.00	-0.05	1.802	5.906	-16.30	-0.061	4.92	-3.40
8	2.00	-0.05	1.356	5.580	-13.43	-0.359	5.45	-1.40
9	4.00	-0.05	0.945	5.311	-10.89	-0.161	4.09	-1.93
10	6.00	-0.05	0.426	5.052	-13.80	0.146	3.48	-0.68
11	8.00	-0.05	0.218	4.892	-12.54	0.571	-0.18	-0.47
12	10.00	-0.05	-0.147	4.669	-13.66	0.515	-0.65	-0.58
13	12.00	-0.05	-1.132	4.512	-18.87	0.154	0.56	0.50

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 89

(RUN 89-RUN 56)/ 1.00

11/23/81 1303

WIND AXES DATA; CORRECTED AXES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	-0.05	5.446	6.175	-31.72	-1.323	9.04	13.31
2	-10.00	-0.05	4.495	6.362	-35.85	-1.576	9.93	10.81
3	-8.00	-0.05	2.716	6.408	-24.13	-0.922	7.64	4.95
4	-6.00	-0.05	2.443	6.347	-23.79	-0.292	6.48	-1.20
5	-4.00	-0.05	2.151	6.319	-20.52	-0.067	3.43	-4.47
6	-2.00	-0.05	2.016	6.168	-20.11	0.142	3.15	-5.28
7	0.00	-0.05	1.812	6.020	-16.89	-0.268	5.35	-2.58
8	2.00	-0.05	1.527	5.731	-15.57	-0.405	4.85	-4.31
9	4.00	-0.05	1.324	5.447	-12.27	-0.279	3.51	-2.65
10	6.00	-0.05	0.776	5.157	-12.28	0.256	2.63	-1.67
11	8.00	-0.05	0.687	4.960	-11.72	0.590	0.10	-2.64
12	10.00	-0.05	0.299	4.614	-13.40	0.583	-0.89	-1.11
13	12.00	-0.05	-0.483	4.428	-17.35	-0.065	2.20	1.35

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 90

(RUN 90-RUN 57)/ 1.00

11/23/81 1303

WIND AXES DATA: CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	-0.05	5.440	5.997	-32.98	-1.064	8.97	6.68
2	-10.00	-0.05	3.825	6.172	-32.36	-1.684	8.49	14.40
3	-8.00	-0.05	1.965	6.375	-21.84	-0.863	8.60	7.60
4	-6.00	-0.05	1.973	6.313	-23.60	-0.197	7.17	1.69
5	-4.00	-0.05	2.274	6.304	-24.73	0.322	3.85	-3.01
6	-2.00	-0.05	1.994	6.157	-22.46	0.370	3.99	-4.83
7	0.00	-0.05	1.670	6.039	-19.84	-0.052	5.55	-1.85
8	2.00	-0.05	1.481	5.764	-17.58	-0.191	4.91	-2.36
9	4.00	-0.05	1.185	5.488	-12.48	-0.184	4.44	-2.00
10	6.00	-0.05	0.545	5.055	-10.75	0.265	4.18	-0.96
11	8.00	-0.05	0.443	4.879	-10.33	0.554	1.30	-1.72
12	10.00	-0.05	0.262	4.668	-13.10	0.399	0.40	0.06
13	12.00	-0.05	-1.068	4.364	-18.55	0.095	1.28	2.05

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 91

(RUN 91-RUN 58)/ 1.00

11/23/81 1303

WIND AXES DATA : CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	-0.03	5.397	6.271	-32.76	-2.216	5.23	35.23
2	-10.00	-0.03	4.201	6.593	-28.64	-2.539	1.99	35.84
3	-8.00	-0.03	2.541	6.230	-11.89	-1.469	5.10	23.29
4	-6.00	-0.03	2.302	6.267	-23.46	-0.487	2.71	8.27
5	-4.00	-0.03	2.701	6.045	-21.51	0.034	-0.91	3.68
6	-2.00	-0.03	2.737	5.936	-20.30	0.281	0.74	3.06
7	0.00	-0.03	2.720	5.739	-18.52	-0.044	2.50	4.92
8	2.00	-0.03	1.828	5.540	-16.11	-0.440	2.34	6.40
9	4.00	-0.03	1.278	5.314	-14.45	-0.510	1.28	9.41
10	6.00	-0.03	0.914	4.797	-11.94	-0.050	2.13	11.17
11	8.00	-0.03	0.842	4.829	-10.39	0.503	-0.61	6.65
12	10.00	-0.03	0.315	4.410	-11.55	0.733	-1.92	2.00
13	12.00	-0.03	-0.442	4.320	-15.24	0.391	-0.66	4.30

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 92

(RUN 92-RUN 59)/ 1.00

11/23/81 1303

WIND AXES DATA - CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	-0.01	5.374	6.300	-30.22	-2.281	5.41	34.36
2	-10.00	-0.01	4.560	6.532	-37.47	-2.594	3.96	37.72
3	-8.00	-0.01	3.515	6.045	-24.67	-1.327	5.44	18.30
4	-6.00	-0.01	2.864	6.177	-23.72	-0.524	3.12	7.22
5	-4.00	-0.01	2.630	6.123	-21.22	-0.203	0.79	1.90
6	-2.00	-0.01	2.254	5.996	-19.51	-0.261	2.36	2.92
7	0.00	-0.01	2.486	5.687	-19.12	-0.285	3.00	4.03
8	2.00	-0.01	1.727	5.569	-17.48	-0.528	2.68	6.51
9	4.00	-0.01	1.463	5.347	-14.41	-0.326	1.07	9.39
10	6.00	-0.01	1.191	5.060	-11.66	0.007	0.45	6.13
11	8.00	-0.01	0.820	4.773	-11.40	0.464	-1.83	7.32
12	10.00	-0.01	0.761	4.677	-12.01	0.710	-3.91	3.47
13	12.00	-0.01	-0.608	4.318	-16.11	0.226	-0.09	3.99

ORIGINAL PAGE IS OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 93

(RUN 93-RUN 66)/ 1.00

11/23/81 1303

WIND AXES DATA: CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	-0.01	5.475	6.368	-31.74	-2.051	3.56	34.74
2	-10.00	-0.01	4.514	6.377	-21.37	-2.234	3.36	31.70
3	-8.00	-0.01	3.451	6.191	-23.40	-1.245	2.74	14.06
4	-6.00	-0.01	3.264	6.034	-25.04	-0.468	1.41	4.05
5	-4.00	-0.01	3.135	5.987	-25.08	-0.261	0.32	4.16
6	-2.00	-0.01	3.267	5.816	-23.23	-0.205	0.26	3.68
7	0.00	-0.01	2.724	5.638	-19.20	-0.264	2.31	3.35
8	2.00	-0.01	2.184	5.474	-17.59	-0.360	2.55	5.21
9	4.00	-0.01	1.627	5.190	-13.37	-0.197	1.04	2.67
10	6.00	-0.01	1.381	4.960	-12.31	0.094	1.05	8.20
11	8.00	-0.01	1.002	4.812	-11.51	0.537	-1.07	6.03
12	10.00	-0.01	0.948	4.551	-12.25	0.745	-2.56	5.89
13	12.00	-0.01	-0.393	4.361	-16.32	0.091	1.02	8.89

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 94

(RUN 94-RUN 65)/ 1.00

11/23/81 1303

WIND AXES DATA - CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	-0.01	5.294	6.268	-31.52	-2.247	3.57	38.12
2	-10.00	-0.01	4.601	6.478	-38.65	-2.279	3.86	34.94
3	-8.00	-0.01	3.185	6.362	-26.94	-1.213	3.60	17.09
4	-6.00	-0.01	3.147	6.198	-27.17	-0.546	1.23	7.70
5	-4.00	-0.01	2.776	5.987	-24.02	-0.346	1.04	4.69
6	-2.00	-0.01	2.764	5.879	-23.49	-0.169	-0.45	2.08
7	0.00	-0.01	2.531	5.780	-21.92	-0.381	1.85	2.99
8	2.00	-0.01	2.042	5.538	-17.13	-0.367	2.53	3.47
9	4.00	-0.01	1.653	5.248	-14.42	-0.235	0.46	5.40
10	6.00	-0.01	1.385	5.080	-11.58	0.042	-0.18	8.76
11	8.00	-0.01	1.244	4.777	-9.41	0.581	-1.37	5.60
12	10.00	-0.01	1.036	4.698	-12.42	0.705	-3.19	6.65
13	12.00	-0.01	-0.375	4.474	-16.90	0.121	-0.06	4.13

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 95

(RUN 95-RUN 63)/ 1.00

11/23/81 1303

WIND AXES DATA : CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-0.24	-28.00	2.331	12.782	-64.48	-4.393	39.45	7.37
2	-0.24	-26.00	1.175	11.759	-51.45	-2.914	36.63	3.92
3	-0.23	-24.00	0.814	11.375	-45.61	-2.230	34.68	129.58
4	-0.22	-22.00	1.635	12.376	-47.51	-4.121	30.37	9.56
5	-0.30	-20.00	1.367	11.909	-42.42	-3.391	27.29	12.96
6	-0.26	-18.00	0.859	11.440	-37.49	-2.550	24.41	7.37
7	-0.24	-16.00	0.827	11.191	-32.54	-1.641	16.54	7.82
8	-0.24	-14.00	1.113	11.322	-29.37	-1.845	13.10	9.75
9	-0.24	-12.00	1.642	11.436	-41.48	-1.769	8.58	11.75
10	-0.24	-10.00	2.704	11.836	-49.03	-2.923	5.52	17.29
11	-0.24	-8.00	2.929	11.664	-57.11	-2.175	0.09	18.43
12	-0.24	-6.00	2.211	11.977	-55.20	-1.273	-0.51	15.52
13	-0.23	-4.00	1.683	11.959	-54.32	-0.111	-1.46	9.51
14	-0.23	-2.00	1.877	11.838	-54.74	-0.626	0.37	11.03
15	-0.24	0.00	1.947	11.748	-52.15	-0.543	2.32	9.90
16	-0.24	2.00	1.777	11.896	-50.76	0.308	-1.15	6.13
17	-0.24	4.00	1.729	11.611	-49.55	1.204	-1.86	2.04
18	-0.24	6.00	1.763	11.827	-50.26	2.147	-6.77	-6.42
19	-0.24	8.00	1.874	11.477	-49.13	2.365	-5.21	-4.68
20	-0.24	10.00	1.750	11.768	-51.24	3.419	-8.96	-10.92
21	-0.24	12.00	1.764	11.754	-48.29	4.042	-11.73	-13.30
22	-0.24	14.00	1.553	11.851	-46.95	4.890	-14.90	-17.61
23	-0.24	16.00	1.186	11.348	-32.52	4.693	-20.25	-21.24
24	-0.25	18.00	0.691	11.825	-33.23	5.217	-25.09	-28.09
25	-0.25	20.00	0.339	11.862	-32.84	4.884	-30.71	-22.28
26	-0.25	22.00	0.233	12.227	-35.05	4.908	-34.34	-17.53
27	-0.25	24.00	-0.209	12.603	-40.00	5.113	-36.96	-21.22
28	-0.25	26.00	-0.718	12.773	-43.43	4.363	-43.46	-5.57
29	-0.25	28.00	-0.686	12.894	-49.24	4.389	-45.71	-2.52

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 96

(RUN 96-RUN 63)/ 1.00

11/23/81 1303

WIND AXES DATA CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-0.25	-28.00	4.103	13.651	-68.64	-5.603	31.90	8.63
2	-0.25	-26.00	3.052	13.012	-56.00	-4.735	29.56	3.55
3	-0.24	-24.00	-3.144	12.741	-46.86	-3.685	31.03	3.04
4	-0.23	-22.00	2.027	12.253	-39.66	-3.825	29.03	2.53
5	-0.31	-20.00	2.722	12.916	-43.84	-6.183	29.89	20.66
6	-0.27	-18.00	2.153	13.106	-39.79	-5.646	28.12	18.89
7	-0.25	-16.00	1.993	12.590	-35.39	-5.210	23.52	18.19
8	-0.25	-14.00	2.258	12.431	-30.22	-4.658	17.79	20.66
9	-0.25	-12.00	2.726	12.882	-42.60	-4.739	11.96	27.51
10	-0.25	-10.00	3.339	12.889	-47.98	-5.085	6.44	29.98
11	-0.25	-8.00	3.702	12.923	-52.38	-4.546	2.90	34.28
12	-0.25	-6.00	3.111	12.885	-52.57	-3.957	-2.12	32.43
13	-0.24	-4.00	2.494	12.984	-48.05	-1.984	-2.81	22.83
14	-0.24	-2.00	2.118	12.815	-44.60	-2.118	-1.16	12.57
15	-0.25	0.00	2.067	12.893	-44.19	-1.495	2.49	15.61
16	-0.25	2.00	1.746	12.886	-39.65	-0.004	-1.23	6.39
17	-0.25	4.00	1.634	12.871	-38.79	1.248	-4.00	3.75
18	-0.25	6.00	1.916	12.890	-40.67	2.359	-5.19	-1.73
19	-0.25	8.00	1.988	12.508	-38.93	3.336	-7.32	-7.61
20	-0.25	10.00	1.966	12.760	-41.64	4.250	-11.97	-13.96
21	-0.25	12.00	2.089	12.473	-41.78	4.562	-14.92	-14.50
22	-0.25	14.00	2.508	12.148	-40.62	4.248	-18.42	-14.30
23	-0.25	16.00	1.078	12.093	-36.28	3.726	-20.35	-15.37
24	-0.26	18.00	1.302	11.978	-28.26	4.703	-23.01	-22.42
25	-0.26	20.00	1.081	12.164	-28.41	4.572	-26.12	-19.72
26	-0.26	22.00	0.975	12.648	-32.58	4.787	-29.43	-14.17
27	-0.26	24.00	1.001	13.152	-34.23	5.034	-32.32	-19.05
28	-0.26	26.00	1.298	13.482	-40.76	4.641	-33.59	-7.11
29	-0.26	28.00	1.055	13.779	-45.74	3.985	-36.27	-0.18

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 97

(RUN 97-RUN 65)/ 1.00

11/23/81 1303

WIND AXES DATA: CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.01	5.295	6.422	-30.73	0.066	1.13	20.75
2	-10.00	0.01	4.390	6.369	-26.78	-0.061	4.07	16.24
3	-8.00	0.01	3.311	6.360	-22.38	0.324	2.91	5.50
4	-6.00	0.01	3.416	6.165	-22.81	0.596	2.68	0.99
5	-4.00	0.01	3.206	6.149	-25.10	0.567	3.70	2.52
6	-2.00	0.01	2.834	5.928	-21.70	0.363	3.25	2.25
7	0.00	0.01	2.632	5.719	-19.94	0.161	4.09	5.23
8	2.00	0.01	2.124	5.603	-16.59	0.046	4.71	6.32
9	4.00	0.01	1.780	5.380	-15.27	0.046	1.39	8.23
10	6.00	0.01	1.551	5.067	-12.28	0.081	0.96	13.00
11	8.00	[illegible]	1.378	4.843	-10.52	0.462	-1.13	7.39
12	10.00	0.01	1.157	4.622	-11.40	0.371	-1.78	9.04
13	12.00	0.01	0.197	4.283	-12.10	-0.186	0.10	3.12

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 98

(RUN 98-RUN 66)/ 1.00

11/23/81 1303

WIND AXES DATA: CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.01	5.753	6.378	-29.67	0.115	1.68	16.84
2	-10.00	0.01	4.575	6.316	-29.36	-0.077	4.45	13.37
3	-8.00	0.01	3.829	6.229	-23.81	0.348	3.20	5.30
4	-6.00	0.01	3.304	6.148	-25.05	0.496	3.58	0.73
5	-4.00	0.01	3.408	6.114	-27.08	0.369	4.01	1.51
6	-2.00	0.01	3.530	5.905	-22.80	0.225	3.73	4.27
7	0.00	0.01	2.858	5.658	-19.26	0.129	4.53	3.74
8	2.00	0.01	2.258	5.442	-17.89	-0.060	4.52	9.15
9	4.00	-0.01	1.779	5.254	-15.01	0.105	1.53	6.91
10	6.00	-0.01	1.550	4.961	-13.03	0.284	1.01	11.19
11	8.00	0.01	1.301	4.845	-11.51	0.478	-1.12	7.50
12	10.00	0.01	1.241	4.522	-10.31	0.531	-1.69	7.11
13	12.00	0.01	0.563	4.372	-12.73	-0.198	-0.18	2.35

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID NO. 99

(RUN 99-RUN 67)/ 1.00

11/23/81 1303

WIND AXES DATA: CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.00	2.143	5.920	-25.24	-1.281	6.14	13.70
2	-10.00	0.00	1.521	5.755	-23.78	-1.212	6.61	15.76
3	-8.00	0.00	1.726	6.058	-32.93	-1.027	2.79	16.98
4	-6.00	-0.00	1.242	5.863	-26.73	-0.770	2.92	17.52
5	-4.00	0.00	1.072	5.785	-29.77	-0.649	4.00	13.01
6	-2.00	0.00	0.938	5.623	-30.48	-0.579	4.46	11.73
7	-0.00	0.00	-0.136	5.687	-23.65	1.529	4.08	10.50
8	2.00	-0.00	0.399	5.336	-29.30	-0.700	3.75	7.98
9	4.00	0.00	0.198	5.188	-31.05	-0.613	1.49	5.48
10	6.00	0.00	0.163	4.973	-29.46	-0.432	1.84	2.47
11	8.00	0.00	-0.113	4.720	-26.31	-0.440	-0.23	2.50
12	10.00	0.00	-0.778	4.805	-21.12	0.040	-0.86	7.78
13	12.00	0.00	-0.855	4.709	-18.59	-0.342	-2.20	8.61

ORIGINAL PAGE IS
OF POOR QUALITY

A-245

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 100

(RUN 100-RUN 68)/ 1.00

11/23/81 1303

WIND AXES DATA CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.00	-0.486	6.883	3.60	5.336	6.21	-11.64
2	-10.00	-0.01	-0.175	6.857	0.90	5.530	13.62	-12.77
3	-8.00	-0.01	0.955	7.028	-26.37	5.383	2.34	-2.88
4	-6.00	-0.01	1.208	6.805	-31.93	5.176	-0.51	4.89
5	-4.00	-0.01	0.686	6.568	-30.86	4.703	1.25	8.04
6	-2.00	-0.01	-0.361	6.299	-21.90	4.081	2.32	12.35
7	-0.00	-0.01	-0.486	5.984	-23.34	3.504	1.23	13.52
8	2.00	-0.00	-0.866	5.766	-22.04	2.409	3.05	13.88
9	4.00	-0.00	-0.607	5.692	-28.44	2.097	0.31	10.00
10	6.00	0.00	-0.742	5.543	-29.56	2.074	-1.82	9.30
11	8.00	-0.00	-0.717	5.339	-28.76	1.794	-2.87	10.20
12	10.00	-0.00	-1.099	5.104	-22.90	1.347	-2.62	13.61
13	12.00	0.00	-1.378	4.991	-21.43	0.658	-3.13	12.32

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 101

(RUN 101-RUN 69)/ 1.00

11/23/81 1303

WIND AXES DATA CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.01	2.244	7.277	3.61	9.636	18.62	-47.84
2	-10.00	0.01	2.434	7.368	-13.35	8.534	15.21	-33.18
3	-8.00	0.01	3.026	7.376	-29.07	8.632	9.40	-38.05
4	-6.00	0.01	2.464	6.979	-28.14	7.830	5.98	-20.53
5	-4.00	0.01	2.185	6.831	-29.36	6.729	6.26	-10.08
6	-2.00	0.01	1.570	6.482	-21.65	5.904	4.15	-4.83
7	0.00	0.01	1.475	6.184	-15.99	4.993	3.30	1.72
8	2.00	0.01	0.895	5.877	-18.06	3.840	4.15	7.90
9	4.00	0.01	0.796	5.644	-18.33	3.607	0.26	12.92
10	6.00	0.01	0.268	5.510	-17.19	3.601	-2.11	15.74
11	8.00	0.01	0.393	5.228	-17.17	3.402	-3.64	15.91
12	10.00	0.01	-0.111	5.105	-17.34	3.151	-4.70	13.60
13	12.00	0.00	-0.654	5.014	-19.54	2.359	-3.08	10.93

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 102

(RUN 102-RUN 70)/ 1.00

11/23/81 1303

WIND AXES DATA: CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.00	2.616	7.254	3.89	10.029	12.61	-48.57
2	-10.00	0.00	2.524	7.244	-10.37	8.555	12.51	-32.36
3	-8.00	0.00	3.175	7.291	-29.95	8.468	6.74	-29.57
4	-6.00	0.00	2.506	6.850	-26.93	7.705	4.24	-20.35
5	-4.00	0.00	2.542	6.602	-25.70	6.533	4.80	-11.83
6	-2.00	0.00	1.818	6.400	-19.86	5.603	5.15	-4.68
7	0.00	0.00	1.500	6.124	-14.20	4.810	3.75	1.89
8	2.00	0.00	1.002	5.819	-17.70	4.027	3.06	6.69
9	4.00	0.00	1.020	5.606	-15.11	3.722	-0.84	12.08
10	6.00	0.00	0.546	5.381	-15.29	3.602	-2.93	14.69
11	8.00	0.00	0.303	5.234	-16.11	3.541	-4.43	12.70
12	10.00	0.00	0.274	5.120	-17.30	3.115	-4.24	17.14
13	12.00	0.00	-0.415	4.929	-18.06	2.427	-3.35	12.71

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 103

(RUN 103-RUN 71)/ 1.00

11/23/81 1303

WIND AXES DATA - CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.00	0.547	6.344	-6.52	9.434	16.09	-41.05
2	-10.00	0.00	0.389	6.293	-9.50	8.902	15.57	-45.38
3	-8.00	0.00	1.427	6.457	-30.49	8.584	8.94	-39.25
4	-6.00	0.00	1.258	6.274	-29.59	7.888	6.93	-27.60
5	-4.00	0.00	1.284	6.385	-30.59	6.962	5.70	-16.30
6	-2.00	0.00	1.371	6.269	-22.84	5.714	2.55	-6.64
7	0.00	0.00	0.939	5.777	-18.03	4.758	2.19	1.94
8	2.00	0.00	1.078	5.695	-20.85	4.016	1.80	6.70
9	4.00	0.00	1.061	5.580	-19.76	3.666	-0.81	11.62
10	6.00	0.00	0.699	5.348	-15.60	3.560	-3.13	15.35
11	8.00	0.00	0.760	5.276	-16.60	3.591	-5.43	16.18
12	10.00	0.00	0.124	4.920	-15.39	3.208	-5.43	14.99
13	12.00	0.00	-0.352	4.941	-17.05	2.597	-5.35	11.87

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 104

(RUN 104-RUN 72)/ 1.00

11/23/81 1303

WIND AXES DATA - CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.00	2.160	6.107	[illegible]	[illegible]	0.08	15.44
2	-10.00	0.00	1.828	5.886	[illegible]	[illegible]	1.94	16.36
3	-8.00	0.00	1.472	5.839	[illegible]	[illegible]	-0.21	6.90
4	-6.00	0.00	1.561	5.767	[illegible]	[illegible]	-0.01	0.93
5	-4.00	0.00	1.557	5.717	[illegible]	[illegible]	[illegible]	[illegible]
6	-2.00	0.00	1.912	5.795	[illegible]	[illegible]	[illegible]	[illegible]
7	0.00	0.00	1.881	5.614	[illegible]	[illegible]	[illegible]	[illegible]
8	2.00	0.00	1.440	5.424	[illegible]	[illegible]	0.78	2.40
9	4.00	0.00	1.586	5.384	[illegible]	[illegible]	-1.18	4.77
10	6.00	0.00	1.469	5.109	[illegible]	[illegible]	-6.15	4.13
11	8.00	0.00	0.992	4.920	[illegible]	[illegible]	-4.01	3.45
12	10.00	0.00	0.672	4.697	-18.37	[illegible]	-2.95	5.46
13	12.00	0.00	0.097	4.465	-18.62	1.206	-3.33	6.51

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 105

(RUN 105-RUN 73)/ 1.00

11/23/81 1303

WIND AXES DATA CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	0.00	2.567	5.887	-33.88	1.632	-0.80	20.41
2	-10.00	0.00	1.979	5.822	-28.21	1.125	1.21	16.22
3	-8.00	0.00	0.780	5.597	-21.86	1.356	-1.49	5.45
4	-6.00	0.00	1.438	5.749	-28.44	1.435	-1.03	3.70
5	-4.00	0.00	1.678	5.777	-29.45	1.276	-0.07	2.62
6	-2.00	0.00	1.870	5.772	-28.21	1.038	-0.14	2.63
7	0.00	0.00	1.879	5.584	-25.89	0.838	0.65	2.64
8	2.00	0.00	1.585	5.485	-22.64	0.828	0.14	1.48
9	4.00	0.00	1.171	5.248	-20.42	0.962	-0.96	4.23
10	6.00	0.00	1.284	5.052	-17.42	1.149	-1.64	4.42
11	8.00	0.00	0.832	4.774	-15.46	1.418	-3.19	4.32
12	10.00	0.00	0.248	4.535	-17.23	1.501	-3.37	3.46
13	12.00	0.00	0.326	4.315	-14.61	0.871	-0.95	2.99

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 106

(RUN 106-RUN 63)/ 1.00

11/23/81 1303

WIND AXES DATA. CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

PNT	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-0.24	-28.00	3.661	14.665	-67.97	-5.556	36.26	3.54
2	-0.24	-26.00	3.329	13.739	-63.55	-5.527	30.32	5.21
3	-0.23	-24.00	2.583	13.019	-57.58	-4.209	28.91	5.81
4	-0.22	-22.00	1.895	12.373	-51.26	-3.801	25.75	3.78
5	-0.30	-20.00	1.525	11.979	-46.88	-2.152	24.17	9.19
6	-0.26	-18.00	0.804	11.463	-44.14	-2.301	22.85	5.68
7	-0.24	-16.00	0.995	11.071	-40.10	-1.670	17.94	4.43
8	-0.24	-14.00	1.329	11.001	-37.87	-1.476	12.65	7.81
9	-0.24	-12.00	2.096	11.891	-52.37	-2.437	9.43	15.48
10	-0.24	-10.00	2.766	11.952	-59.07	-2.406	3.25	19.04
11	-0.24	-8.00	2.414	12.204	-57.95	-1.459	3.20	17.76
12	-0.24	-6.00	2.094	12.376	-59.47	-1.549	2.87	18.58
13	-0.23	-4.00	1.802	12.274	-57.80	-0.755	1.49	12.87
14	-0.23	-2.00	1.879	12.321	-60.24	-1.335	2.16	13.96
15	-0.24	0.00	2.037	12.260	-56.18	-0.772	3.23	7.64
16	-0.24	2.00	1.898	12.341	-54.08	1.263	-4.57	3.53
17	-0.24	4.00	2.093	12.408	-56.73	2.699	-4.89	-5.01
18	-0.24	6.00	2.157	12.499	-56.37	3.618	-5.18	-12.52
19	-0.24	8.00	2.494	12.312	-56.49	4.187	-6.62	-9.70
20	-0.24	10.00	2.546	12.652	-56.11	5.474	-10.27	-20.99
21	-0.24	12.00	2.801	12.763	-52.05	5.174	-13.55	-25.37
22	-0.24	14.00	2.534	12.887	-49.23	6.548	-19.08	-28.05
23	-0.24	16.00	2.180	12.402	-37.66	5.868	-21.77	-22.01
24	-0.25	18.00	1.808	12.890	-38.73	6.296	-22.36	-31.79
25	-0.25	20.00	1.320	12.995	-38.78	5.575	-24.46	-28.19
26	-0.25	22.00	0.890	13.147	-44.08	5.000	-26.94	-22.20
27	-0.25	24.00	0.708	13.670	-45.81	5.430	-31.38	-22.07
28	-0.25	26.00	1.057	14.168	-45.89	5.141	-40.53	-3.39
29	-0.25	28.00	0.066	14.751	-48.16	4.697	-47.53	4.04

ORIGINAL PAGE IS
OF POOR QUALITY

VOUGHT LOW SPEED WIND TUNNEL TEST 630

DELTA DATA

ID.NO. 107

(RUN 107-RUN 45)/ 1.00

11/23/81 1303

[illegible] ES DATA : CORRECTED AMES DATA-CORRECTED SINGLE SUPPORT DATA

[illegible]	ALPHA	PSI	L/Q	D/Q	PM/Q	SF/Q	RM/Q	YM/Q
1	-12.00	-0.01	2.590	6.529	-32.06	-4.604	-15.39	80.70
2	-10.00	-0.01	2.340	6.466	-27.35	-5.581	-17.17	92.21
3	-8.00	-0.01	1.495	6.661	-26.07	-5.882	-16.85	96.52
4	-6.00	-0.01	0.598	6.646	-22.12	-5.207	-13.13	78.26
5	-4.00	-0.01	0.223	6.331	-19.06	-3.788	-7.58	48.65
6	-2.00	-0.01	-0.144	6.122	-22.98	-2.286	-3.56	28.26
7	0.00	-0.01	-0.416	5.841	-26.26	-1.494	-1.56	14.49
8	2.00	-0.01	-0.586	5.459	-27.42	-0.859	-1.30	6.90
9	4.00	-0.01	-0.871	5.181	-27.18	-0.273	-1.61	-0.53
10	6.00	-0.01	-0.847	4.898	-28.57	0.192	-2.40	-2.14
11	8.00	-0.01	-0.889	4.678	-28.13	0.577	-4.17	1.21
12	10.00	-0.01	-0.863	4.541	-28.88	0.671	-4.37	1.48
13	12.00	-0.01	-1.009	4.417	-29.37	0.738	-8.37	4.53

APPENDIX B - Run Schedules

This appendix presents the run schedules from Low Speed Wind Tunnel Test 550 conducted in November 1977 and the 40- by 80-foot Wind Tunnel Test also conducted in November 1977.

Table B-I. Run Schedule for Low Speed Wind Tunnel Test 550

RUN NO.	PT. NO.	MODEL CONDITIONS: CONFIGURATION	α RANGE (DEG)	ψ RANGE (DEG)	φ (DEG)	TUFTS	TUFT PICS	CONF PICS		TUNNEL CONDITIONS: TEST q (PSF)	q_{SET} (IN H_2O)		TEMP (°F)	BARO PRESS (IN-HG)	STATIC TARE	T&I	ALIGN	REMARKS	ENGR	DATE 1977
*26		$B\ C\ W_1\ M_1\ N_1\ R_1^{60}H^+\ TEVG\ F_1S_1(TS)_1$	-15/15	0	0	ON		X		75	11.94		64	29.26	26	8/439	8/439	Sail on; includes partial lip fairing	RHO	11/2
*27		Z						X					65	29.27	27			Add fuselage afterbody		
*28								X							28			Wing off		
NOTE 1 29		$W_2\ M_1$						X							27			Thin wing		
NOTE 1 30		S_2						X					66	29.27	27			Aft controls fairing		
31													60	29.43	27			Thin wing; repeat of 29		11/3
*32		W_{2F}						X					64	29.48	32			Wing trailing edge fairing		
33		W_{3F}	-6/6					X					66		32			Fillets at wheel pod		
*34		J_2	-15/15					X					70		34			Float kit		
35		J_2^+						X							34			Faired float kit		
36		W_{3F}^0						X					71	29.49	34			Change wing incidence from +5° to 0°		
37		W_{1F}						X							34			Thick wing T.E. fairings		
38		W_1 A						X							23			Stroub's strakes		
39		W_{1F}						X							23			Thick wing; T.E. fairing		
*40		W_{3F}						X					66	29.70	40			Thin wing with T.E. fairing		11/4
41		W_3				OFF		X					71		40			T.E. fairing off (Gear pod-to-wing fairing still on)		
42		F_2						X					81	29.72	40			Fair over exhaust ducts		
43		Y_1						X					80		40			Alternate T/R gearbox fairing		
44		H	-15/25					X					84		40			Remove slat on tail		
45		X_2	-15/15					X					85	29.71	40	N/A	N/A	Faired model strut		
*46								X					86	29.68	46	8/439	8/439			

* INDICATES STATIC TARE TAKEN

NOTE 1 - Left wing angle incorrect on Runs 29 and 30

Table B-I. (Continued)

RUN NO	PT. NO.	CONFIGURATION	α RANGE (DEG)	ψ RANGE (DEG)	φ (DEG)	TUFTS	TUFT PICS	CONF PICS		TEST q (PSF)	q_{SET} (IN H_2O)		TEMP (°F)	BARO PRESS (IN Hg)	STATIC TARE	r&I	ALIGN	REMARKS	ENGR	DATE 1977
*1		B C W_1 M_2 N_2 R_{1s}^{0} H^+ T E V G Q P_1 P_2	-15/15	0	0	OFF		X		75	11.94		93	29.314	1	8/439	8/439		RHO	10/31
2		TS_1						X						29.29	1			No.60 grit add to nose, canopy, wing, vert fin, H.T., endplates & cowl. Grit on'til further notice.		
3			0							5.0 to 75.0	.79 to 11.94		90		N/A			0-35psf in 5" incr; 35-75 in 10" incr.		
4		R_{1s}^{30}	0/-10					X		75	11.94				1					
5		R_1^{60}	-6/6					X						29.28	1			Stub blades off		
6		R_1^{90}						X					91		1					
7		R_1^{0}											93	29.27	1					
8			-15/15					X							1			Main rotor off		
9		R_{1s}^{90}	-6/6					X					86	29.25	1			Stub blades on		11/1
10		R_{1s}^{60}													1					
11			-15/15										81	29.26	1			Flt. test protrusions removed		
12								X					79	29.26	1			Prod. protrusions removed		
*13								X							13			Main rotor off		
14								X					81	29.30	13			Tail rotor off		
15		M_1 N_1						X					79	29.26	13			Land. gear doors on		
16								X							13			Wings off		
17								X					82		13			Endplates off		
*18								X					84	29.27	18			Horiz. tails off		
19								X							18			T/R guard antenna off		
*20								X							20			Vert. fin off		
21		W_1 M_1 R_{1s}^{60} H^+ T E V G		0				X	FLOW PICS				62	29.30	1			Flow visualization		11-2
*22		R_1^{60}	-15/27			ON		X					68		22			Stub blades off		
*23		F_1	-15/15					X					65	29.30	23			Exhaust fairing		
*24			0	-30/30									69		24	11/439		Stability run		
25		L	-6/6	0				X					66	29.28	23	8/439		Fair over cowl lip		

* INDICATES STATIC TARE TAKEN

Table B-II. Run Sch[illegible]ule for Full-Scale M222 Test in 40- by 80-Foot Wind Tunnel.

Static Tare	Data Run	q	Configuration	α	ψ	Remarks
1		0	Helicopter Support Structure with Dummy 7" Diameter Strut, Neither Vertical Fairing Installed	0	-30°/30°	Static Tare Run To Verify No Interferences
	1	16.6	Wind On Tare Run	0	0/+30°	Tare Run To Get Drag of Support Structure in Yaw
	2	30	Wind On Tare Run	0	-30°/30°	
2		0	Large Vertical Fairing and Dummy Strut Fairing Installed, Tare Run	-15/+15	0	
	3	65	Wind On Tare Run	-15/+15	0	
3		0	Dummy Strut and its Fairing Removed	-15/+15	0	Larger Vertical Fairing Still On
	4	65	Wind On Tare Run	-15/+15	0	
4		0	B C $R_{15}^{?}$ E V_2 H^+ G M_2 N_2 P_1 P_2 T W_1 K_3 J_1 J_3 I_1 D O_1 X_2 P_3 Y_1 Q	-15/+15		Static Tare For Initial Configuration
		Up to 30		0	0	Wind On, This Run Aborted Due To Shake of Yaw Boom and Airframe
5	5	65		-14/+15	0	Baseline: Main Rotor Assy Removed, Foul Between Support + Fairing Occurs Except -5°, Wind On
5	6		K_2 P_4	-14/+15	0	Skid Gear Underbelly Fairings Off, Fuel Sumps Are Exposed
5	7			-6/+6	0	Nose Float Bags Off
	8			-6/+6	0	Yaw Boom Removed (Only Center Support Cable), Main Rotor Slip Ring Not Evaluated
5	9		K_1	-10/+6	0	Skid Gear Cross Tube Fairings Off, Cross Tube Fairings Have Chord Length of 8"
5	10		J_4 I_2	-6/+6	0	Fwd Faired Nose Float Bags and Align Float Switches F/A
5	11			-6/+6	0	Skid Landing Gear Off
5	12			-6/+6	0	Rescue Hoist Fairing Off
5	13		J_5	-6/+6	0	Add Wedge-Shaped Afterbodies to the Wing Float Tips
5	14			-6/+6	0	Entire Float Kit Off
4	15	+40	R_1^{90}	-6/+8	0	Add Main Rotor Assy, w/o Stub Blades, Set To 90° Azimuth
4	16		$R_1^{67.5}$	-6/+6	0	Azimuth Changed To 67.5°, Should Have Been 60°
4	17		R_1^{30}	-6/+6	0	" " " 30°
4	18		R_1^{0}	-6/+6	0	" " " 0°
4	19		R_1^{R} M_3 N_3	-6/+6	0	Rotor Turning @ 90%, Gear Down with Doors Retracted
4	20		M_1 N_1	-10/+15	0	Raise Gear and Retract Doors
4	21		R_1^{60}	-6/+6	0	Set Rotor To 60° Azimuth, To Compare with Rotor Turning
4	22			-6/+6	0	Tail Rotor Assembly Removed, Original T/R Gearbox Fairing Re-installed
6	23		B Z	-10/+10	0	206-Type Fuselage Afterbody, Also Covers Fuel Sump Recesses
7	24			-6/+6	0	Fuel Sump Recesses Covered By A Plate, Afterbody Removed
7	25		W_{1F}	-10/+10	0	Trailing Edge Fairings on the Standard Wing
7	26		W_{1A}	-10/+6	0	Add Smaller "Square" Wing Tip in Place of The Standard Wing Tip, T.E. Fairings Still On
7	27		M_2	-10/+6	0	Remove Main Gear Doors
7	28		N_2	-10/+6	0	Remove Nose Gear Doors
7	29		M_1 N_1 W_1	-10/+6	0	Remove Misc. Protrusions, Square Wing Tips, T.E. Fairings; Install Gear Doors + Original Wing Tips
8	30	16.6	V_1 T O_4 X_1	0	-30/+20	Yaw Run, Close All Fire Screens, Install Tail Rotor Assy, Add Fin Extension, Both [illegible] Fairings On
9	31	65	V_2 X_2	-14/+15	0	10" Fin Extension, Standard Wings Off, Support Strut Fairings On
10	32		M_1 W_3	-14/+12	0	Thin Wings with Wheel Pod Fillet, Simulated Main Landing Gear Door Retracted
10	33		Z	-12/+12	0	Add Fuselage Afterbody
	34		W_{3F}	-12/+12	0	Add Trailing Edge Fairings To The Wing
11	35		O_2	-6/+6	0	Cooling Screen Covers Removed in Engine and Exhaust Ejector Cowls
11	36		O_2 O_3	-6/+6	0	Controls Cowl Screen Cover Removed, Resulting in All Available Cooling Screens Open
11	37		R_1^{R}	-12/+12	0	Standard Rotor Hub Turning at 90% N_R (100% = 338 RPM)
11	38		L	-12/+12	0	Install Fairing To Cover The Lip on The Transmission Cowl, Rotor Turning
11	39			-12/+12	0	Remove Cowl Lip Fairing, Open Up Inlet & Exhaust Ejectors, Last Run of Day
11	40			-12/+12	0	Repeat Run 39, First Run of Day

Table B-II (continued)

STATIC TIRE	DATA RUN	q	CONFIGURATION	α	ψ		REMARKS
11	41	25	B C R_1^R E V_2 H^+ G M_1 N_1 T W_{1F} Z O_2 O_3 X_2 P_1 F_1 Y_1	-12/+10	0		INSTALL FLIGHT TEST EXHAUST EJECTOR FAIRINGS, FAILURE OF LEFT WING T.E. FAIRING
11	42		W_{1F}	-6/+6	0		REMOVE EXHAUST EJECTOR FAIRINGS, REMOVE BROKEN LEFT WING TRAILING EDGE FAIRING
11	43		W_3	-6/+6	0		RIGHT WING TRAILING EDGE FAIRING OFF
11	44		F_2	-12/+12	0		INSTALL EXHAUST EJECTOR FAIRINGS
11	45		S_1	-12/+12	0		FULL SAIL INSTALLED
11	46		S_2	-12/+12	0	[illegible]	AFT ROTATING CONTROLS FAIRING ON
11	47		R_1^{60}	-12/+12	0	"	FIX MAIN ROTOR AT 60° AZIMUTH. REMOVE AFT ROTATING CONTROLS FAIRING
11	48		Y_C	-12/+12	0		ALTERNATE TAIL-ROTOR GEARBOX FAIRING, SO-CALLED "COFFMAN" FAIRING
11	49		Y_H	-12/+12	0		" " " " " " "HESTER" "
11	50		Y_P	-6/+6	0		" " " " " " "PRODUCTION" "
11	51		W_2	-12/+12	0		LARGE FILLET AT WHEEL POD REMOVED FROM THIN WING
11	52		H	-12/+12	0		HORIZONTAL TAIL SLAT REMOVED
11	53			-6/+6	0		TAIL ROTOR GUARD REMOVED, ALSO GUARD ATTACH SOCKETS AT FIN + TAILBOOM REMOVED
11	54		R_4^{34}	-12/+12	0		FAIRED MAIN ROTOR ASSY., NO STUB BLADES, AZIMUTH POSITION QUESTIONABLE
11	55		R_4^{90}	-6/+6	0		AZIMUTH RESET TO 90°
11	56		R_4^{60}	-6/+6	0		" " " 60° (QUESTIONABLE)
11	57		R_4^{0}	-6/+6	0		" " " 0° GRIPS ALIGNED F/A
11	58		$R_4^{67.5}$ J_4	-12/+12	0		" " " 67.5° (SHOULD HAVE BEEN 60°), FAIRED FLOAT NOSE BAGS INSTALLED
11	59		I_2	-12/+12	0		INSTALL FLOAT INFLATION SWITCHES. ALIGNED F/A, SWITCH SHIELDS NOT INSTALLED
11	60			-12/+12	0		HORIZONTAL STABILIZER ENDPLATES REMOVED
	61			-12/+12	0		" " REMOVED
11	62		J_2	-12/+12	0		FLOAT EXTENSIONS MOUNTED ONTO THE THIN WINGS
11	63		R_4^{60}	-6/+6	0		RESET MAIN ROTOR AZIMUTH POSITION TO 60°
11	64		R_4^{30}	-6/+6	0		RECHECK " " " " OF 30°
11	65		R_4^{60} J_2^*	-6/+6	0		UNABLE TO SUCCESSFULLY TURN FAIRED MAIN ROTOR ASSY, CLOTH BAGS REMOVED FROM FLOAT TIPS
11	66			-6/+6	0		FLOAT NOSE BAGS AND SWITCHES REMOVED
11	67			-12/+4	0		FUSELAGE AFTERBODY REMOVED
12	68		O_4 Q	-12/+12	0	(BASIC BODY CON[illegible]	REMOVE MAIN ROTOR ASSY, WINGS, FLOAT TIP, CLOSE ALL COOLING SCREENS, ADD INLET + EXHAUST PLUGS
13	69		M_1 W_1	-12/+12	0		STANDARD WING BACK ON, MAIN GEAR DOORS ON, GEAR RETRACTED
13	70		A	-6/+6	0		VORTEX GENERATORS INSTALLED ON SIDE OF FUSELAGE
13	71		W_{1F}	-12/+12	0		WING TRAILING EDGE FAIRINGS INSTALLED, VORTEX GENERATORS OFF
13	72	[illegible]	R_1^R	-12/+12	0		RE-INSTALL MAIN ROTOR ASSY, TURNING @ 90% N_R, OPEN INLET + EXHAUST PLUGS
13	73		S_3	-6/+6	0		MODIFIED FULL SAIL
13	74		O_5	-6/+6	0		AFT TWO OF FORWARD FOUR COOLING SCREENS UNCOVERED
13	75		S_4	-6/+6	0		REMOVE SAIL, INSTALL MODIFIED AFT CONTROLS FAIRING
13	76	20	R_4^R	-6/+6	0		FAIRED MAIN ROTOR ASSY, TURNING AT 30% N_R

TEST COMPLETED