



McFarlane Aviation Products

Instructions for Continued Airworthiness

McFarlane Aviation, Inc. FAA-PMA Beechcraft Engine Controls:

MC50-389010-19, MC50-389010-21, MC50-389010-23, MC50-389010-25, MC50-389010-27, MC50-389010-29,
MC50-389010-33, MC50-389012-15, MC50-389012-19, MC50-389012-21, MC50-389012-23, MC50-389012-25,
MC50-389012-29, MC102-389010-13, MC102-389010-47, & MC102-389010-49.

FAA PMA Number: PQ3732CE

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Approved By:

Quality Assurance Manager

Engineering Manager

Production Manager

Revisions

Revision	Date	Summary
Original	12/1/2019	Original release
A	3/25/2020	Added table

List of Effective Pages

Page	Rev/Date
All	Original / 12/1/19
3	A / 3/25/2020

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INTRODUCTION

This document is intended to provide for the continued airworthiness of McFarlane Aviation, Inc. PMA Engine Controls eligible for installation on Beechcraft aircraft. The applicable controls that are subject to this ICA are shown in Table 1. For all items not related to the installation of the McFarlane Aviation, Inc. Engine Controls, refer to the basic airplane model service and parts manuals.

Table 1- McFarlane FAA-PMA Throttle Controls

Aircraft	Start	End	Control	Remove	Install
56TC	All		(Propeller LH)	50-389010-25 55-4753-4190	MC50-389010-25
58 58A	TH-1	TH-1395* <i>Excludes TH-1389</i>	(Throttle LH)	50-389012-23	MC50-389012-23
			(Throttle RH)	50-389012-29	MC50-389012-29
	TH-1396	TH-2124* <i>Includes TH-1389</i>	(Throttle LH & RH)	102-389010-3 102-389010-47	MC102-389010-47
	TH-1630	TH-2124	(Throttle LH)	102-389010-3 102-389010-47	MC102-389010-47
95-55 95-A55 95-B55 95-B55A	TC-1	TC-2456* <i>Excludes TC-350</i>	(Throttle LH & RH)	50-389012-15 B113-2	MC50-389012-15
95-C55 95-C55A	TE-1	TE-451	(Throttle LH & RH)	50-389012-19	MC50-389012-19
	TC-350		(Throttle LH & RH)	50-389012-15 B113-2	MC50-389012-15
	TE-452	TE-627	(Throttle LH)	50-389012-19	MC50-389012-19
			(Throttle RH)	50-389012-19	MC50-389012-19
	TE-638	TE-767	(Throttle LH)	50-389012-19	MC50-389012-19
			(Throttle RH)	50-389012-19	MC50-389012-19
E55 E55A	TE-768	TE-942* <i>Excludes TE-938</i>	(Throttle LH)	50-389012-19	MC50-389012-19
			(Throttle RH)	50-389012-19	MC50-389012-19
	TE-943	TE-1201	(Throttle RH)	50-389012-19	MC50-389012-19
G58	All		(Throttle LH & RH)	102-389010-3 102-389010-47	MC102-389010-47

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MC50-389010-33, MC50-389012-15, MC50-389012-19, MC50-389012-21, MC50-389012-23, MC50-389012-25,
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Table 2 - McFarlane FAA-PMA Mixture Controls

Aircraft	Start	End	Control	Remove	Install
56TC	All		(Propeller LH)	50-389010-25 55-4753-4190	MC50-389010-25
58 58A	TH-1	TH-1395* <i>Excludes TH-1389</i>	(Propeller LH)	50-389010-33	MC50-389010-33
			(Propeller RH)	50-389010-23	MC50-389010-23
	TH-1396	TH-2124* <i>Includes TH-1389</i>	(Propeller LH)	102-389010-3 102-389010-47	MC102-389010-47
			(Propeller RH)	102-389010-49 102-389010-5	MC102-389010-49
58P	TJ-3	TJ-135	(Propeller RH)	102-389010-3 102-389010-47	MC102-389010-47
	TK-1	TK-90	(Propeller RH)	102-389010-3 102-389010-47	MC102-389010-47
58TC	TK-1	TK-150* <i>Excludes TK-147</i>	(Propeller RH)	102-389010-3 102-389010-47	MC102-389010-47
95-55 95-A55 95-B55 95-B55A	TC-1	TC-2456* <i>Excludes TC-350</i>	(Propeller LH)	50-389010-29 B112-6	MC50-389010-29
			(Propeller RH)	50-389010-27 B112-2	MC50-389010-27
95-C55 95-C55A	TE-1	TE-451	(Propeller LH)	50-389010-23	MC50-389010-23
			(Propeller RH)	50-389010-25 55-4753-4190	MC50-389010-25
	TC-350		(Propeller LH)	50-389010-29 B112-6	MC50-389010-29
			(Propeller RH)	50-389010-27 B112-2	MC50-389010-27
A56TC	All		(Propeller LH)	50-389010-25 55-4753-4190	MC50-389010-25
D55 D55A	All		(Propeller LH)	50-389010-23	MC50-389010-23
			(Propeller RH)	50-389010-25 55-4753-4190	MC50-389010-25
E55 E55A	TE-768	TE-942* <i>Excludes TE-938</i>	(Propeller LH)	50-389010-23	MC50-389010-23
			(Propeller RH)	50-389010-25 55-4753-4190	MC50-389010-25
	TE-943	TE-1201	(Propeller LH)	50-389010-23	MC50-389010-23
G58	All		(Propeller LH)	102-389010-3 102-389010-47	MC102-389010-47
			(Propeller RH)	102-389010-49 102-389010-5	MC102-389010-49

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Table 3 - McFarlane FAA-PMA Propeller Controls

Aircraft	Start	End	Control	Remove	Install
56TC	All		(Propeller LH)	50-389010-25 55-4753-4190	MC50-389010-25
58 58A	TH-1	TH-1395* <i>Excludes TH-1389</i>	(Propeller LH)	50-389010-33	MC50-389010-33
			(Propeller RH)	50-389010-23	MC50-389010-23
	TH-1396	TH-2124* <i>Includes TH-1389</i>	(Propeller LH)	102-389010-3 102-389010-47	MC102-389010-47
			(Propeller RH)	102-389010-49 102-389010-5	MC102-389010-49
58P	TJ-3	TJ-135	(Propeller RH)	102-389010-3 102-389010-47	MC102-389010-47
	TK-1	TK-90	(Propeller RH)	102-389010-3 102-389010-47	MC102-389010-47
58TC	TK-1	TK-150* <i>Excludes TK-147</i>	(Propeller RH)	102-389010-3 102-389010-47	MC102-389010-47
95-55 95-A55 95-B55 95-B55A	TC-1	TC-2456* <i>Excludes TC-350</i>	(Propeller LH)	50-389010-29 B112-6	MC50-389010-29
			(Propeller RH)	50-389010-27 B112-2	MC50-389010-27
95-C55 95-C55A	TE-1	TE-451	(Propeller LH)	50-389010-23	MC50-389010-23
			(Propeller RH)	50-389010-25 55-4753-4190	MC50-389010-25
	TC-350		(Propeller LH)	50-389010-29 B112-6	MC50-389010-29
			(Propeller RH)	50-389010-27 B112-2	MC50-389010-27
A56TC	All		(Propeller LH)	50-389010-25 55-4753-4190	MC50-389010-25
D55 D55A	All		(Propeller LH)	50-389010-23	MC50-389010-23
			(Propeller RH)	50-389010-25 55-4753-4190	MC50-389010-25
E55 E55A	TE-768	TE-942* <i>Excludes TE-938</i>	(Propeller LH)	50-389010-23	MC50-389010-23
			(Propeller RH)	50-389010-25 55-4753-4190	MC50-389010-25
	TE-943	TE-1201	(Propeller LH)	50-389010-23	MC50-389010-23
G58	All		(Propeller LH)	102-389010-3 102-389010-47	MC102-389010-47
			(Propeller RH)	102-389010-49 102-389010-5	MC102-389010-49

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SYSTEM DESCRIPTION

Beechcraft Baron aircraft utilize quadrant style engine controls. These controls are mounted to the instrument panel between the pilot and co-pilot, routed through the fuselage and wing into the engine bay of each nacelle, and ultimately secured to the throttle, mixture, or propeller valve as required. A typical control installation is shown in Figure 1. Several different types of clamps are used to secure the controls, including different sizes of high temperature clamps. In some places, clamps are used on individual controls, while in other places several controls are clamped together in a single clamp. The McFarlane series of controls do not have the same outer diameter conduit as the TC'd assemblies, so the use of a McFarlane engine control will require the replacement of the clamps fastening the conduit. Beechcraft clamps are used in all other locations.

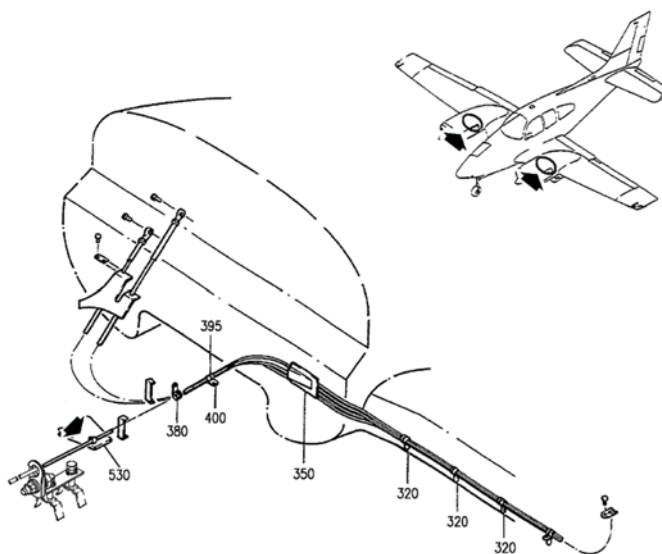


Figure 1 - Typical Control Installation

SPECIAL OPERATING INFORMATION

The control and operation of the engine does not change with the installation of the engine control and the provided installation hardware; see applicable aircraft manufacturer/model Service Manual for the operational control of this system.

PART REMOVAL, REPLACEMENT, AND SERVICE INFORMATION

During removal and installation of the McFarlane control, substitute the McFarlane provided 5/16" high-temperature Adel-style clamps (MS21919WCJ5) for the previously used 1/4" clamps (part numbers MS21919DG4, MS21919WDG4, AS21919WDG04, MS21104D4, AN742-4). Beechcraft clamps are used in all other locations per the Beechcraft Parts Manual.

Table 4 – Push-Pull Control Clamp Replacement Parts

Part Number	Description	Notes
MS21919DG4	CLAMP	Remove
MS21919WDG4	CLAMP	Remove
AS21919WDG04	CLAMP	Remove
MS21104D4	CLAMP	Remove
AN742-4	CLAMP	Remove
MS21919WCJ5	CLAMP	Install

INSTRUCTIONS

The following instructions, specific to the McFarlane parts apply:

1. Remove the Beechcraft engine control, clamps, and firewall seal.
2. If suitable to reuse, clean and reuse the firewall seal, fuselage cover, and all bolts, nuts, and washers used to secure the clamps. If not suitable for reuse, replace with appropriate hardware when installing the McFarlane engine control.
3. Install the McFarlane engine control per the instructions in the applicable Beechcraft service/maintenance manuals. Use the MS21919WCJ5 Clamps provided with the McFarlane engine control to rout the control to the correct location in the engine bay, utilizing the cleaned hardware from Step 2.
4. Use Beechcraft clamps and fixturing components attaching the end of the control to the engine or to the control console.
5. For larger clamps containing more than one control, use Beechcraft clamps.

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6. Discard any extra clamps.
7. Install controls using original firewall seals and fuselage closures, using firewall sealant according to the applicable Beechcraft Service Manual.
8. Finish the installation and connections per the Beechcraft Service Manual instructions.
9. Adjust and perform function check per Beechcraft Service Manual instructions.

TROUBLESHOOTING

Refer to the applicable Beechcraft Model Service Manual for troubleshooting instructions and the applicable Beechcraft Illustrated Parts Catalog for component part numbers. See listing in Data Section below for applicable Service Manuals, Illustrated Parts Catalogs, and troubleshooting information.

PLACARDS

None applicable

DATA

All information to support the continued airworthiness of this replacement part is as defined herein and contained in:

- The latest revision of the Maintenance Manuals for the following Beechcraft models:
 - o Baron Models 56TC, A56TC
 - o Baron Models 58, 58A, 58P, 58TC
 - o Baron Models 95-55, 95-A55, 95-B55, 95-B55A, 95-C55, 95-C55A, D55, D55A, E55, E55A, and G58
- The latest revision of the following Beechcraft Model Illustrated Parts Catalogs.
 - o Baron Models 56TC, A56TC
 - o Baron Models 58, 58A, 58P, 58TC
 - o Baron Models 95-55, 95-A55, 95-B55, 95-B55A, 95-C55, 95-C55A, D55, D55A, E55, E55A, and G58

INSPECTION

Inspection intervals for the Engine Controls are not affected by the use of the McFarlane PMA control. Refer to the Beechcraft Service Manual for inspection instructions.

RECOMMENDED OVERHAUL PERIODS

The maximum recommended "In Service Time" for McFarlane Aviation, Inc. Engine Controls is equal to the maximum time between engine overhauls as recommended by the engine manufacturer.

AIRWORTHINESS LIMITATIONS

The Airworthiness Limitations section is FAA approved and specifies maintenance required under Sec. 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved. There are no new (or additional) airworthiness limitations associated with this equipment and/or installation.

ASSISTANCE & REVISIONS

ICA revisions shall be made available on the McFarlane website, www.mcfarlaneaviation.com/ICA. For questions or assistance regarding these Instructions for Continued Airworthiness (ICA), contact McFarlane Aviation, Inc via email or phone. Email: engineering@mcfarlaneaviation.com Phone: 1-800-544-8594 (within the US) or 1-785-594-2741.