



McFarlane Aviation Products

Instructions for Continued Airworthiness

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

MC35-944046-7, MCVA35-944046-7, MC35-944048-1, MC35-944048-7, MC35-944054-7,

MC35-944054-9, MC36-380084-3, MC36-380084-5, MC36-380084-7.

FAA PMA Number: PQ3732CE

Notice: Verify that this document is the latest approved revision before use! Current version can be found at:
www.McFarlaneAviation.com/ICA

Approved By:


Quality Assurance Manager


Engineering Manager


Production Manager

Revisions

Revision	Date	Summary
Original	10/21/2019	Original release
A	11/27/2019	Revise Airworthiness Limitations section
B	12/26/2019	Changed clamp part number from MS21919WDG5 to MS21919WCJ5. Updated language in System Description, Service Information, Instructions, Inspection, and Service Time sections; changed Fig. 1.
C	03/17/2022	Add MCVA35-944046-7

List of Effective Pages

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ALL	C / 03/17/2022

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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 - Part Number Listing

McFarlane P/N	Description
MC35-944046-7	CONTROL, Throttle
MCVA35-944046-7	CONTROL, Throttle, Vernier Assist
MC35-944048-1	CONTROL, Propeller
MC35-944048-7	CONTROL, Propeller
MC35-944054-7	CONTROL, Mixture
MC35-944054-9	CONTROL, Mixture
MC36-380084-3	CONTROL, Throttle
MC36-380084-5	CONTROL, Mixture
MC36-380084-7	CONTROL, Propeller

SYSTEM DESCRIPTION

Beechcraft Bonanza aircraft utilize Vernier and quadrant style engine controls. These controls are mounted to the instrument panel between the pilot and co-pilot, routed through the firewall into the engine bay, and ultimately secured to the throttle, mixture, or propeller valve as required. The Beechcraft Bonanza aircraft subject to this ICA utilize two (2) half balls to create the seal around the engine control conduit at the firewall and inserted into the mounting flange and grommet, as shown in **Figure 1**. High temperature clamps are also utilized for the routing of the engine control. The McFarlane series of controls do not have the same outer diameter conduit as the TC'd assemblies. The half balls and clamps attached on the outer diameter of the conduit; therefore, the use of a McFarlane engine control will require replacement with components of the appropriate size in original locations.

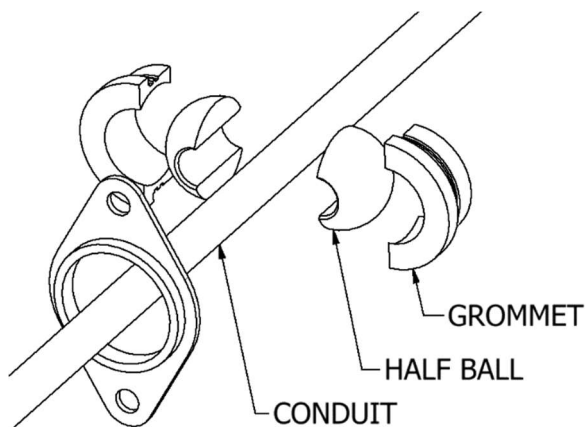


Figure 1- Control Installation through Firewall

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

After removing the Beechcraft engine control, remove the old half ball (P/N 112413-8) from the grommet in the firewall seal and the mounting clamps (P/N: MS21919WDG6 & PP561DS4), as shown in **Figure 1**. When installing the McFarlane engine control, install the McFarlane half ball (P/N: 7391-0.300) into the firewall grommet to ensure a tight seal around the conduit. Use the supplied high temperature clamps (P/N: MS21919WCJ5) when routing the new McFarlane engine control to the appropriate connection point, per the applicable Beechcraft Model Service Manual. The McFarlane provided installation components utilize the same mating hardware (bolts, nuts, washers, etc) for installation.

Refer to the applicable Beechcraft Model Service Manual for installation/maintenance instructions and the applicable Beechcraft Illustrated Parts Catalog for component part numbers.

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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 split grommet (P/N: 112412) from the firewall seal and all bolts, nuts, and washers used to secure the clamps. If not suitable for reuse, replace with appropriate hardware prior to installing the McFarlane engine control.
3. Install the McFarlane engine control per the instructions in the applicable Beechcraft service/maintenance manuals, with the following exceptions.
 - a. Use McFarlane P/N 7391-0.300 Half Ball and Beechcraft P/N 112412 to create the seal at the firewall.
 - b. Use the MS21919WCJ5 Clamps provided with the McFarlane engine control to route the control to the correct location in the engine bay.
4. Finish the installation. Adjust and test for proper function per the 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:

- Beechcraft Bonanza Model 33, 35, & 36 Maintenance Manual, P/N 36-590001-9
- The Latest revision of the following Beechcraft Model Illustrated Parts Catalogs.
 - Bonanza Model 33 Series, P/N 33-59001-3
 - Bonanza Model 36, A36, G36, A36TC, B36TC, P/N 36-590001-1
 - Bonanza E33C Aerobatic, P/N 33-590010-3
 - Bonanza Model F33, G33, F33A, F33C, P/N 33-590010-7
 - Bonanza Model H35 thru V35, P/N 35-590015-9
 - Bonanza Model V35B & V35B-TC, P/N 35-590102-5

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 IN SERVICE TIME

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.