



McFarlane Aviation Products

Instructions for Continued Airworthiness
McFarlane Aviation, Inc. FAA-PMA Part Number MC0541153 U-BOLT.
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	1/10/2020	Original release
A	6/26/2020	Fixed typo in Installation Instructions

List of Effective Pages

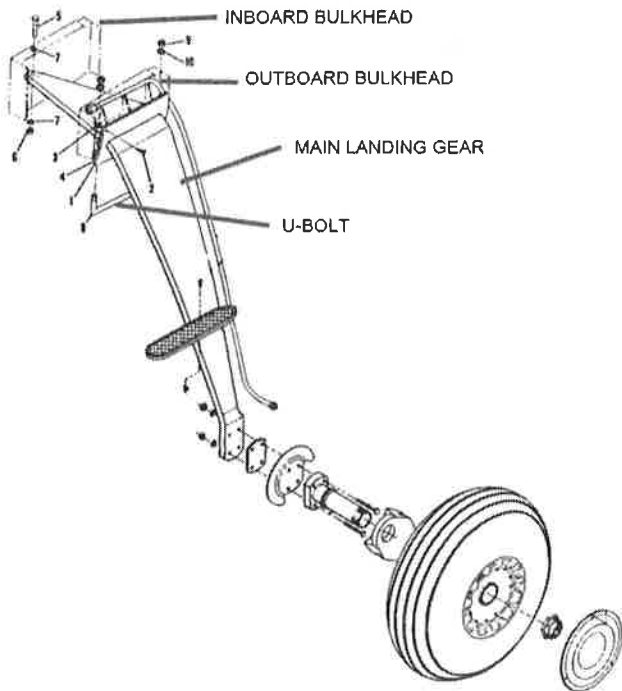
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INTRODUCTION

This document is intended to provide for the continued airworthiness of McFarlane Aviation, Inc. (McFarlane) PMA U-bolt eligible for installation on Textron / Cessna aircraft. The part number is MC0541153 and is comprised of one U-bolt, two MS21045-7S all-metal split-beam lock-nuts, and two NAS1149D0763H aluminum washers. For all items not related to the installation of the McFarlane U-bolt, refer to the basic airplane model service and parts manuals.



Part Number	Qty per side	Description	Notes
0541153	1	U-bolt	Remove
MS20365-720C	2	Nut	Remove
AN960D716	2	Washer	Remove
MC0541153	1	U-bolt	Install
MS21045-7S	2	Nut	Install
NAS1149D0763H	2	Washer	Install

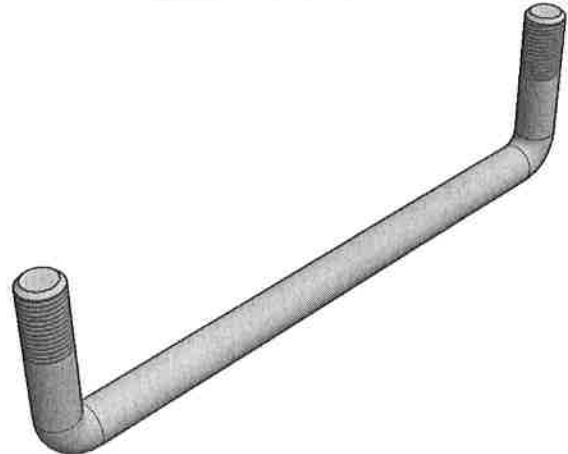


Figure 1: U-bolt; Typical Installation

SYSTEM DESCRIPTION

These U-bolts are used to secure the flat leaf spring style landing gear on various Cessna 172, 175, and 185 aircraft. All eligible aircraft have two U-bolts, one installed on each of the main landing gear. These U-bolts are part of the fastener set used to secure the main landing gear structure to the airframe. This U-bolt is used to secure the main landing gear to the outboard bulkhead, as shown in Figure 1. The McFarlane U-bolt features an improved 7/16"-20 UNJF rolled thread, which is incompatible with the standard UNF thread of the Cessna MS20365-720C nuts. The McFarlane MC0541153 U-bolt is made from higher strength steel than the original Cessna U-bolt.

SPECIAL OPERATING INFORMATION

None.

PART REMOVAL, REPLACEMENT, AND SERVICE INFORMATION

During installation of the improved U-bolt, McFarlane provided nuts and washers must be substituted for the original Cessna nuts and washers.

Install the McFarlane U-bolts by performing the following:

1. Remove and discard the Cessna U-bolt (0541153), as well as associated washers (AN960D716), and nuts (MS20365-720C).
2. Install the McFarlane U-bolt (p/n: MC0541153), washers (NAS1149D0763H), and nuts (MS21045-7S) per the applicable Cessna Service Manual, with the following exceptions:
 - Tighten nuts with dry threads to a torque of 450-500 in-lbs (37.5-41.6 ft-lbs). Note that this must be added to the friction drag torque of the nut to find the final torque value.
 - Ensure that nuts do not bottom out on bottom of U-bolt threads. If nut may bottom out when torqued, steel washer(s) (NAS1149F0763P, included) may be added between the NAS1149D0763H aluminum washers and the MS21045-7S steel lock-nuts. A minimum of one thread must be visible above the nut after tightening.

Warning: Do not use MS20365-720C nuts with the McFarlane MC0541153 U-bolt; this may damage the threads.

3. Finish the installation and check function per the Cessna Service Manual instructions.

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TROUBLESHOOTING

Refer to the applicable Cessna Model Service Manual for troubleshooting instructions and the applicable Cessna 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 Cessna models:
 - Models 172, 172A, 172B, 172C, 172D, 172E, 172F (T-41A), 172G, 172H (T-41A), 172I, 172K, F172D, F172E, F172F, F172G, F172H, FR172E, FR172F, FR172G, P172D, R172E (T-41B,C,D), R172F (T-41D), R172G (T-41C,D), and R172H (T-41D)
 - Models 175, 175A, 175B, and 175C
 - Models 182, 182A, 182B, 182C, and 182D

- The latest revision of the following Cessna Model Illustrated Parts Catalogs:
 - Models 172, 172A, 172B, 172C, 172D, 172E, 172F (T-41A), 172G, 172H (T-41A), 172I, 172K, F172D, F172E, F172F, F172G, F172H, FR172E, FR172F, FR172G, P172D, R172E (T-41B,C,D), R172F (T-41D), R172G (T-41C,D), and R172H (T-41D)
 - Models 175, 175A, 175B, and 175C
 - Models 182, 182A, 182B, 182C, and 182D

INSPECTION

Inspection intervals for the U-bolts are not affected by the use of the McFarlane PMA U-bolts. Refer to the Cessna Service Manuals and Service Letters for inspection instructions.

RECOMMENDED REPLACEMENT PERIODS

McFarlane p/n MC0541153 U-bolts have a recommended service life of 1200 hrs.

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. No additional airworthiness limitations exist.

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.

