



Actuator Component Removal and Replacement Instructions

For Dynon Autopilot Servos

101156-001

Rev B

8/7/2019

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Revision History

REV	DATE	APPROVED	DESCRIPTION OF CHANGE
A	2/7/2014	122355	Initial Release
B	8/7/2019		Added Linear Actuator Applied new template to doc.

Overview

If it is necessary to change the actuator component on a Dynon autopilot servo, these instructions, when followed properly, enable the customer to perform this task in the field. If the customer does not feel comfortable performing these actions, please return the servo to Dynon for repair.

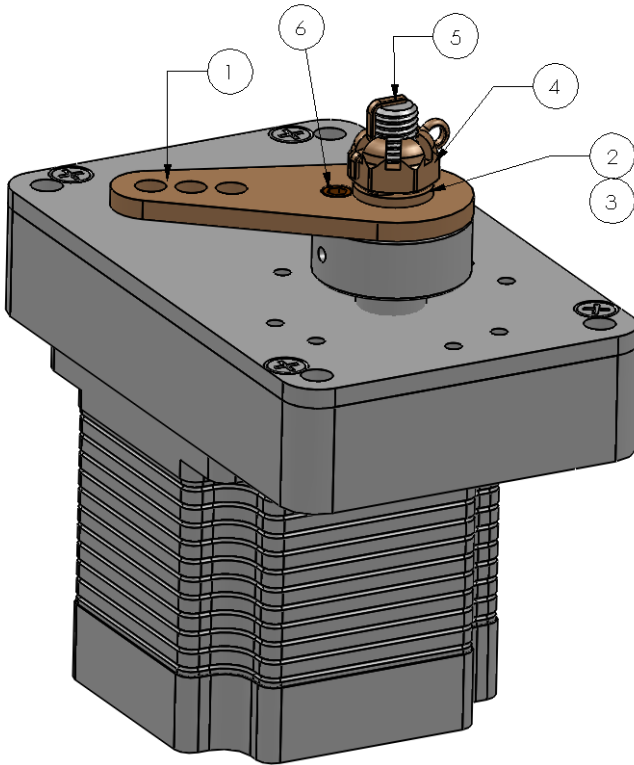


Fig 1

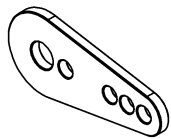
Assembly Components

1. Actuator *(arm shown)
2. Flat washer
3. Wave washer
4. Castle nut
5. Cotter pin

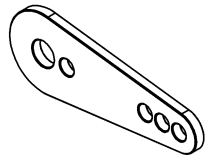
Required Tools

1. Needle nose pliers
2. Torque driver (adjustable to 4.5 in-lb)
3. 1/2 IN. SAE socket

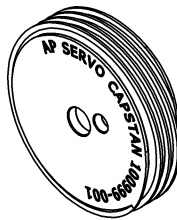
*Servo Actuator Components



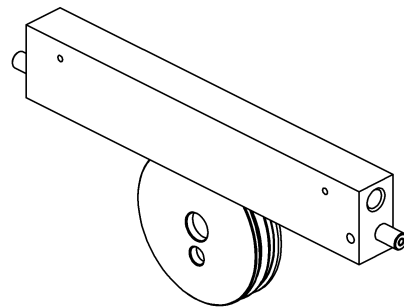
STANDARD ARM



LONG ARM



CAPSTAN



LINEAR ACTUATOR

Removing Arm/Capstan/LA Pulley

Remove the cotter pin from the castellated nut. Note that cotter pins should never be reused; **replace with a new pin**. Unthread the castle nut, remove wave and nylon washers, and finally remove the actuator component. Put all these pieces aside – they will be reused. **DO NOT REMOVE the socket head safety shear screw.**



The autopilot safety shear screw should **NEVER** be removed or adjusted during this procedure. If the shear screw has broken/damaged and needs replacement, there is specific documentation available for this purpose at <http://docs.dynonavionics.com>.

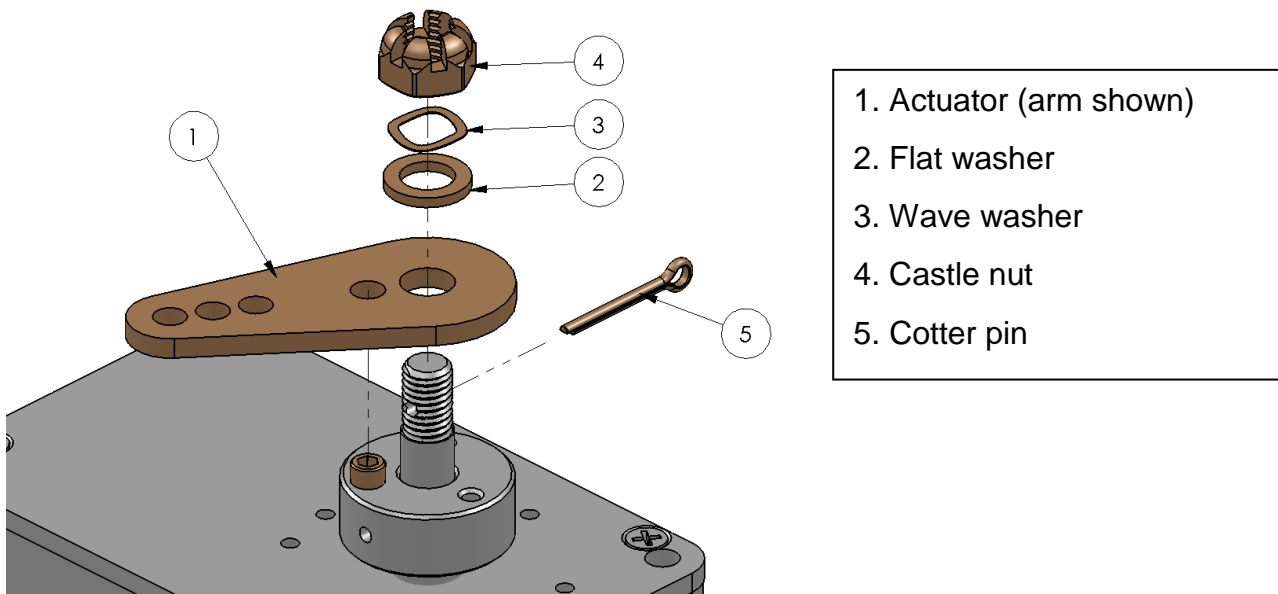


Fig 2

Reassembling the Arm/Capstan Stack

Reverse the disassembly steps to install the remaining hardware. See Figure 2. Assembly order is:

1. Servo Actuating Component
2. Nylon Washer
3. Wave Washer
4. Castle Nut (AN310-5)
5. Cotter Pin (MS24665-210)

Tighten the castle nut finger tight, and then using a torque driver, tighten until a slot in the nut lines up with the hole in the shaft for the cotter pin. **DO NOT EXCEED 4.5 in-lb (72 in-oz) torque on castle nut.** Exceeding this torque specification will affect the yield torque of the safety shear screw, compromising the safety-enhancing intent of its design.

Install a new cotter pin, MS24665-210, following the standard method of trimming and bending the pin legs as shown.

The servo rotation should be smooth. No movement should be observed between the actuating component and the attachment disc as described earlier.