## (/HOME.PHP)

# **TECHNICAL SERVICE BULLETIN: SV42T SERVO PULLEY**

Original Bulletin: August 2, 2019

PLEASE READ THIS BULLETIN IN ITS ENTIRETY BEFORE CONTACTING DYNON AVIONICS

#### Description

Dynon Avionics has received reports of cracked pulleys in the SV42T linear actuator servo. This can cause poor autopilot performance and presents a risk c interfering with the flight controls.

## Applicability and Affected Equipment

This bulletin affects the pulley on the Dynon linear actuator, which may be found on:

- Some Dynon Avionics SV42T Autopilot Servos (P/N 101008-003 / 101058-003)
- Some SV32 and SV42 servos retrofitted with the Dynon linear actuator



Fig 1: Dynon SV42T servo with linear actuator

#### **Unaffected Equipment**

The following equipment is NOT affected by this service bulletin

- 1. SV32, SV32L, SV32C
- 2. SV42, SV42L, SV42EL, SV42C
- 3. SV52, SV52L, SV52C

Additionally, Dynon Certified installations are unaffected by this service bulletin.

#### Interim Operating Recommendations

Due to the nature of the issue, we recommend complying with this service bulletin before further flight. However, it is up to the owner/operator to determine t airworthiness of the aircraft for flight.

### Solution

Perform the following:

- 1. If you received your SV42T or linear actuator assembly before 12/13/2011, it is unaffected and can remain in service. If you received your servo, or line actuator assembly after this date, inspect it as follows.
- 2. Inspect the pulley for a crack from the center of the pulley through shear screw bore. (Fig 2)

- It may be necessary to engage the autopilot on the ground and apply force to the control surface in order to load the pulley to make the crack vis
- 3. If a crack is found, remove the servo from service and return to Dynon for repair/replacement.
- 4. If no crack is found, inspect the pulley to determine whether it is affected:
  - Unaffected pulleys have a crosshatch weave pattern in their material weave and a plastic-like smooth texture. Inspect the pulley for texture and visually with a magnifier. If a crosshatch weave pattern is present (Fig 3), the pulley may remain in service.
  - Affected pulleys have a unidirectional wood-like "grain", and a finish that appears dull looks similar to wood. If your pulley matches this description remove from service and contact Dynon (../contact.php) for repair/replacement. To remove the servo from service, you may opt to remove the e servo assembly, or if more convenient you may remove the entire linear actuator sub-assembly by following the "Servo Arm / Capstan Removal a Replacement Instructions" on the Dynon Documentation Website (../autopilot-components-documentation.php). Whether you remove the servc linear actuator, ensure that any remaining linkages are secured and do not interfere with flight controls. If you choose to remove only the linear actuator, disable the servo circuit electrically to prevent misleading autopilot behavior. This can be accomplished by disconnecting the wiring to the servo and/or removing its fuse or turning off its circuit breaker.



Fig 2: Affected pulley design with crack

Fig 3: Serviceable pulley design

### Time in Effect

This technical service bulletin is in effect indefinitely or until superseded by a future bulletin.

#### Notice to Special Light Sport Aircraft (S-LSA), Dynon Certified, and other Nonexperimental Customers

You are solely responsible for ensuring that your aircraft is airworthy. In the case of S-LSA aircraft, owners may need special authorization to service the airc such operations are not permitted in the maintenance manual. Please refer to your aircraft maintenance manual or contact your aircraft manufacturer concerthis service bulletin.

This service bulletin does not affect installations of SkyView HDX that are approved under Dynon's STC program.

### Additional Questions?

Contact Dynon Avionics Technical Support via phone (425-402-0433) or email support@dynonavionics.com (mailto:support@dynonavionics.com)

#### IMPORTANT LINKS

SEARCH

#### STAY CONNECTED

News (http://preflight.dynonavionics.com/)

Contact Dynon (/contact.php)

SIGN UP FOR EMAIL ALERTS (http://visitor.r20.constantcontact.com/d.jsp? Ilr=jyyvjyiab&p=oi&m=1108917019401&sit=7jgl 77c6-4099-bf4d-13781778884c) Careers

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