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SERVICE BULLETIN

SB074-0111

Subject: Overcenter Link and Hydraulic Actuator, Legacy Retract and IV/IV-P/Propjet

Date: 01-06-2012

Pages: 8

Status: Mandatory Inspections, and Return to Lancair for Remanufacture.

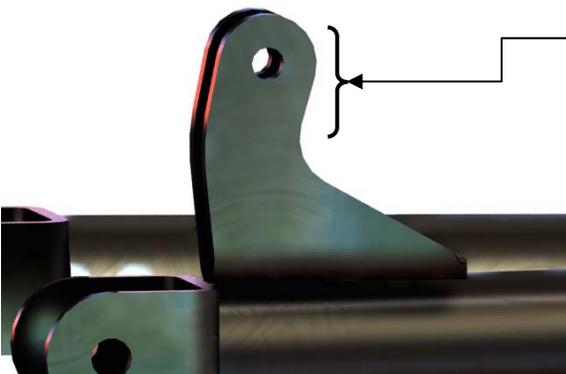
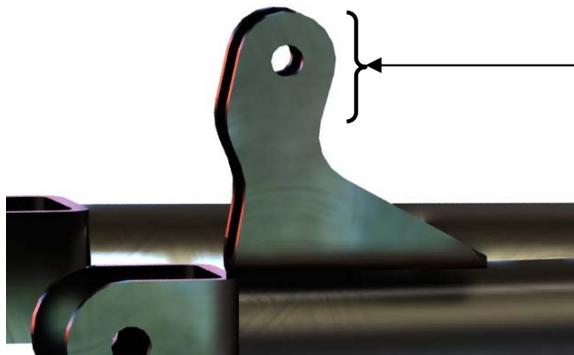
Background:

Cracks have been found to occur in actuator attach tabs of:

- 4718-xxx Overcenter Link Assy, Left Main, Legacy
- 4719-xxx Overcenter Link Assy, Nose Gear, Legacy
- 4720-xxx Overcenter Link Assy, Right Main, Nose IV/IV-P
- 5501-xxx Overcenter Link, Nose Gear Propjet
- GM027-3 Overcenter Link, Nose Gear IV/IV-P

This service bulletin describes how to determine and what to do if you have the affected overcenter link(s). If the tab should break, the landing gear may not retract and the loose actuator end could damage or interfere with the internal structure of the aircraft.

This service bulletin applies to both of the overcenter link tab configurations shown below.

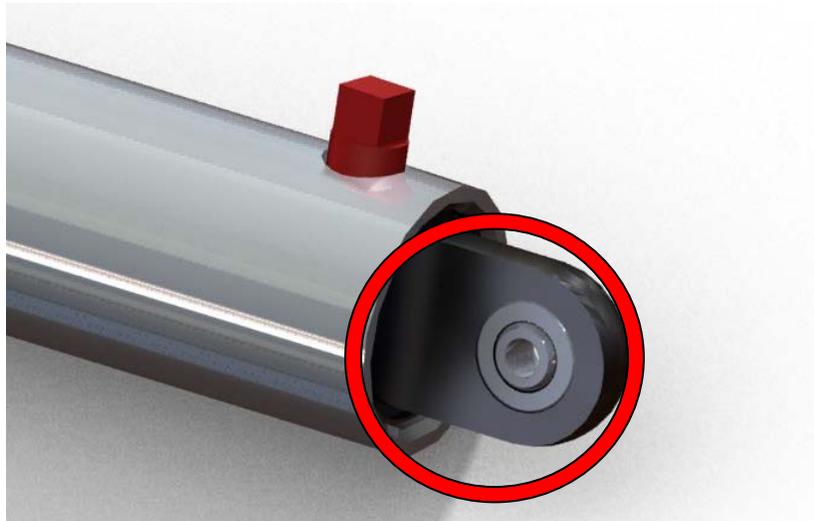


Inspect for upgrade if the thickness of the material in the link tab is less than 0.160”.

Note: Read and thoroughly understand all instructions before proceeding. If you have questions call Lancair.

This service bulletin also addresses the installation of a hydraulic actuator end with a spherical bearing if your current hydraulic actuator end does not have a spherical bearing. Refer to the picture below for an example of a hydraulic actuator end with a spherical bearing.

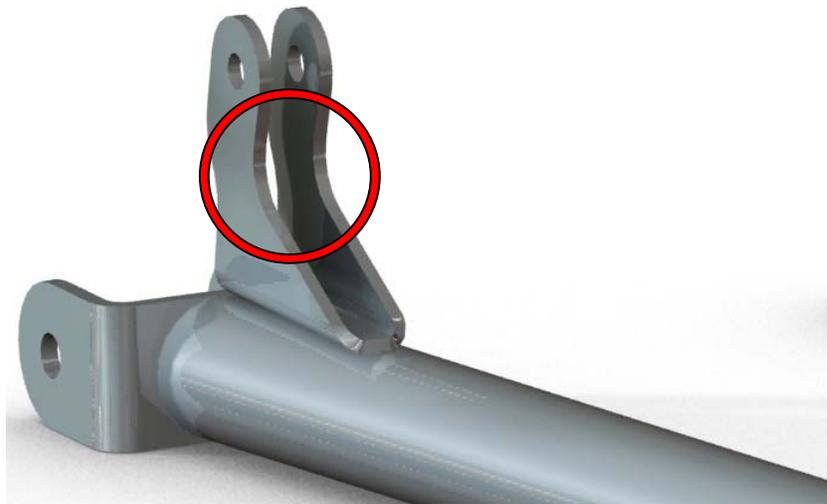
Note: If your overcenter link does not need repair or replacement but your hydraulic actuator needs an end with a spherical bearing you will have to order adapter bushings due to the change in bolt hole size from that for an AN4 bolt to that for an AN3 bolt.

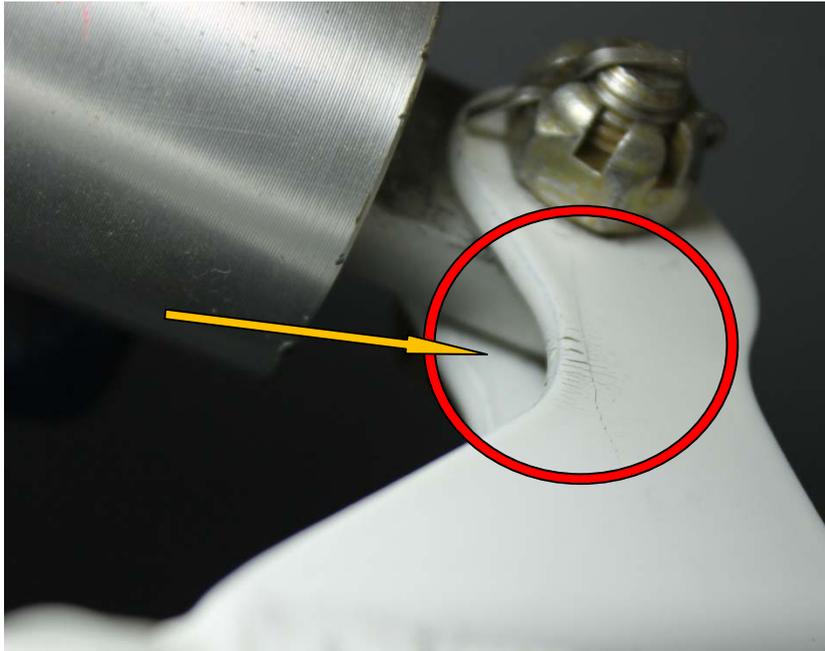


OVERCENTER LINKS

Inspection

Before the next flight and at every preflight inspection of your Legacy Retract or IV/IV-P/Propjet, visually inspect the nose and main landing gear overcenter link actuator attach tabs in the area shown below. Look for cracks in the finish coating as shown in the two photographs that follow.





Action

If cracks are found, immediately remove the overcenter links. Use removal procedures from the Legacy Retract or IV/IV-P/Propjet Assembly Manuals, respectively, which can be found at www.lancair.com. If there are no cracks, at your convenience remove the overcenter links but inspect the overcenter links at every preflight until removal. There are two options for replacement.

When you remove your overcenter links inspect the hydraulic actuator end. If the end does not have a spherical bearing we suggest replacing it using one of three optional methods. Without the spherical bearing, excessive side loads could cause the actuator to internally bypass hydraulic fluid.

Please schedule with Lancair due to part availability and pricing.

Replacement Options

Option 1: Return/Exchange

Remove your overcenter links. Call Lancair for an RMA and return the overcenter links for upgrade. The overcenter links will be stripped, bracket welded, inspected, and powder coated white (unless otherwise requested). Custom powder coating colors may incur additional charge.

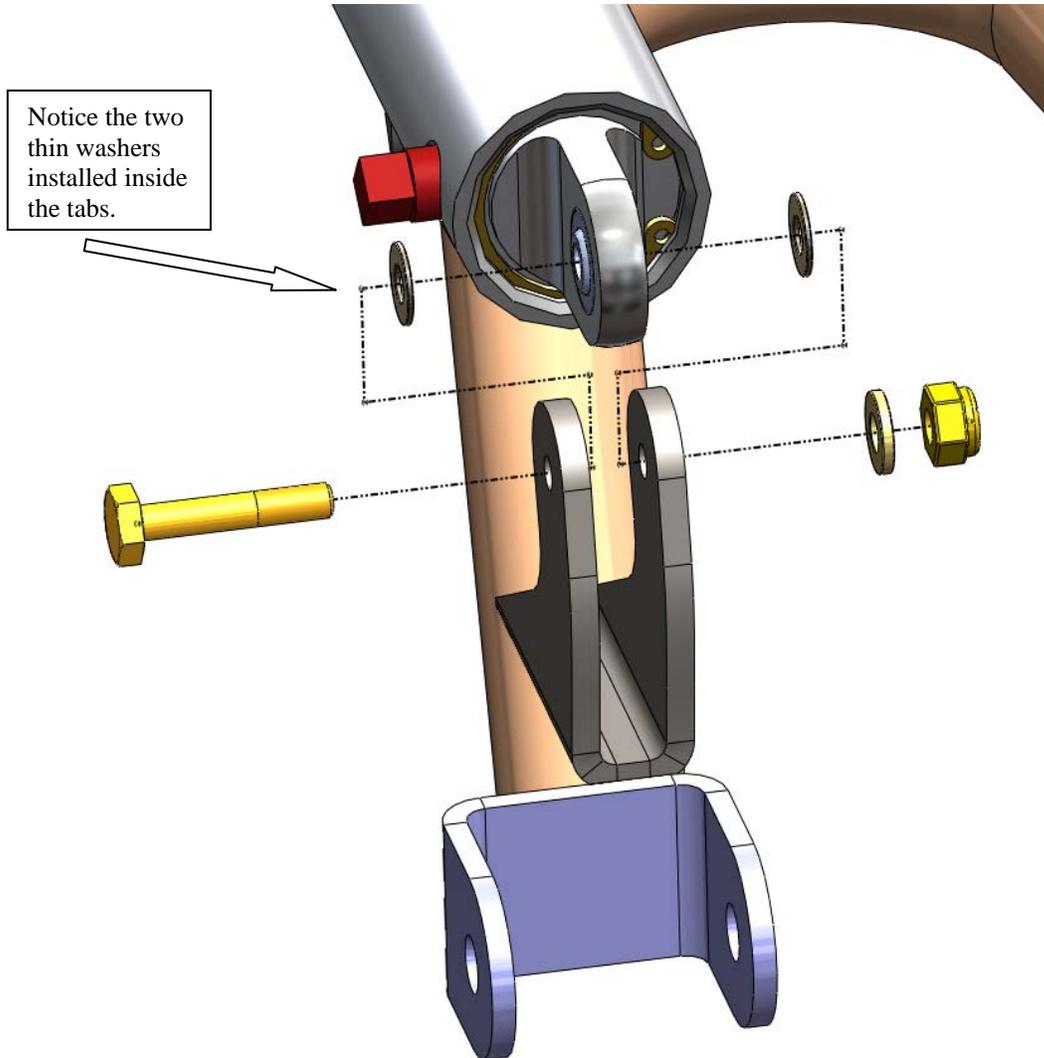
Option 2: Purchase New Overcenter Links

New Part numbers are listed in the following table.

1	4718-1010	O/C Link, Left Main, L2K
1	4719-1010	O/C Link, Nose, L2K
1	4720-1010	O/C Link, Right Main, L2K or Nose IV/IV-P
1	5501-1010	O/C Link, Nose, Propjet

Reinstallation

Refer to the Legacy Retract or IV/IV-P/Propjet Assembly Manual (available from www.lancair.com), respectively, for reinstallation procedures. Attach the actuator to the overcenter link as shown below and torque the nut to 25 in-lbs. Perform a retract test on the ground to check for binding and parts interference.



HYDRAULIC ACTUATOR END REMOVAL AND REPLACEMENT

If your hydraulic actuator does not have a spherical bearing installed in the end, Lancair is offering three options.

Note: If your overcenter link does not need repair or replacement but your hydraulic actuator needs an end with a spherical bearing you will have to order adapter bushings due to the change in bolt hole size from that for an AN4 bolt to that for an AN3 bolt.

Option 1:

Purchase parts for the hydraulic actuator ends and replace them yourself. Refer to replacement procedures below.

Option 2:

Call Lancair for RMA, return the hydraulic actuator, and Lancair will replace it for the cost of parts, labor, and shipping.

Option 3:

Purchase a new hydraulic actuator. No credit for old hydraulic actuators.

Hydraulic Actuator End Replacement Procedures

Remove the actuator from the aircraft.



Remove the 90 degree fitting.



Push in the end.



Remove the snap ring.



Pull the actuator end out of the cylinder.



Install an AS568A-212 O-ring onto the new actuator end P/N 9-33106-01 or -02.



Grease the O-ring using Mil-H-5606 hydraulic fluid, Lubriplate No. 105, or similar.



Slide the actuator end into the cylinder without cutting or nicking the O-ring.



Push the actuator end far enough into the cylinder that the snap ring can be installed.



Pull the actuator end out line up the hole in the cylinder with the hole in the actuator end.



Coat the 90 degree fitting threads with thread compound (Loctite™ 565) then reinstall the fitting to approximately the angle shown.

