



# SERVICE DIRECTIVE BULLETIN

SERVICE DIRECTIVE BULLETIN NO. T-062

Revision 2

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DATE:            June 5, 2020

1.    SUBJECT:    Drag Strut Assembly Inspection
2.    MODEL:        480 and 480B
3.    EFFECTIVITY:    S/N 5249 and prior
4.    BACKGROUND:

Enstrom has received failure reports of the attachment plate on the forward end of the P/N 4174001-105 Strut Weldment, also known landing gear drag strut (drag strut). Failure of this plate may cause a collapse of the landing gear resulting in significant damage to the aircraft. Aircraft that are exposed to emergency procedure training and/or aggressive operations are most at risk.

Revision 2 adds additional terminating inspection procedures by performing an optional hardness test inspection on the strut attachment plate on the 4174001-105 Strut Weldment.



*Figure 1. Failed drag strut attachment plate*

## 5. COMPLIANCE:

This Service Directive Bulletin (SDB) requires a 25 hour repetitive inspection of the forward end of the drag strut (P/N 4174001-105) for signs of failure. The inspection interval may be extended up to 50 hours at the discretion of the owners/operators if the aircraft is not involved in aggressive operation training (e.g. touchdowns autorotations or tail rotor failures). If the drag strut attachment plate is exhibiting signs of impending failure, such as cracking, material distortion or deformation, it must be replaced before further flight.

Refer to paragraph 6.4 for optional hardness test inspection procedures for 4174001-105 drag struts that are serviceable in accordance with the inspection criteria in paragraph 6.2.

Helicopters equipped with drag strut P/N 4174001-105 may upgrade to drag strut P/N 4174001-107. For helicopters equipped with replacement drag strut P/N 4174001-107, refer to paragraph 13.3.

**NOTE**

**P/N 4174001-107 drag struts are marked “-107” at the location shown in Figure 2 for the SDB T-062 marking.**

## 6. INSPECTION:

**NOTE**

**Perform all maintenance in accordance with the TH-28/480 Series Maintenance Manual (MM).**

6.1 Remove the drag struts.

**NOTE**

**Removal of the drag strut assemblies is the same for both sides.**

6.1.1 Remove the keel access panels.

6.1.2 Hoist the aircraft in accordance with MM paragraph 4-68.

**WARNING**

**Take precaution to ensure aircraft is supported while removing the drag strut.**

6.1.3 Remove the hardware attaching the forward end of the drag strut assembly and forward gear leg (leg fitting) from the gear leg clamp on the forward cross tube (see Figure 8-6 of the MM).

6.1.4 Remove the hardware and bushing from the leg fitting and remove the fitting.

6.1.5 Remove the hardware attaching the drag strut to the aft gear leg and remove the drag strut.

6.2 Inspect the drag strut forward attachment plate.

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- 6.2.1 Visually inspect the plate on the forward end of the drag strut for any deformation or distortion.
  - 6.2.2 Using a 10X magnifying glass and a suitable light source, inspect the attachment plate for cracks around the bolt hole.
  - 6.2.3 Inspect the bolt hole for excessive wear or elongation. If the dimension of the hole is larger than 0.465 inch in any direction, replace the drag strut.
  - 6.2.4 If deformation, distortion, or cracks are present, or if the hole is larger than 0.465 inch in any direction, replace the drag strut before further flight. Refer to paragraph 7 for replacement part number information.
- 6.3 Reinstall the drag struts.

**NOTE**

**Installation of the drag struts is the same for both sides. If paint was removed for the inspection, coat the area with ACF-50 or equivalent.**

- 6.3.1 Attach the drag strut to the aft gear leg. Do not torque the hardware at this time.
  - 6.3.2 Install the leg fitting and bushing onto the gear leg and the drag strut. Do not torque the hardware at this time.
  - 6.3.3 Attach the leg fitting to the gear leg clamp.
  - 6.3.4 Torque all of the hardware to 40-60 in-lb/4.5-6.8 Nm.
  - 6.3.5 Lower the aircraft to the ground.
  - 6.3.6 Install the keel access panels.
- 6.4 Optional hardness test.

**NOTE**

**The following procedures assume that the drag strut is removed from the aircraft and is serviceable in accordance with the inspection criteria in paragraph 6.2.**

- 6.4.1 Remove the paint from both sides of the attachment plate.
- 6.4.2 Using a Rockwell Hardness Tester or equivalent, check the hardness of the attachment plate in either of the areas shown in Figure 2. Conduct hardness testing per ASTM E18.
- 6.4.3 If the hardness is 80 or higher on the Rockwell B scale, the attachment plate is acceptable. Refer to paragraph 13.2.
  - 6.4.3.1 Stamp or vibro-etch "SDB T-062" in the area shown in Figure 2. If marking only one side, install the strut such that the marking is visible upon installation.

- 6.4.3.2 Repaint the bare and the stamped or vibro-etched areas with MIL-PRF-23377 epoxy primer, or equivalent. At the operator's option, restore the black topcoat. Ensure that the "SDB T-062" is visible after applying the epoxy primer and/or topcoat.

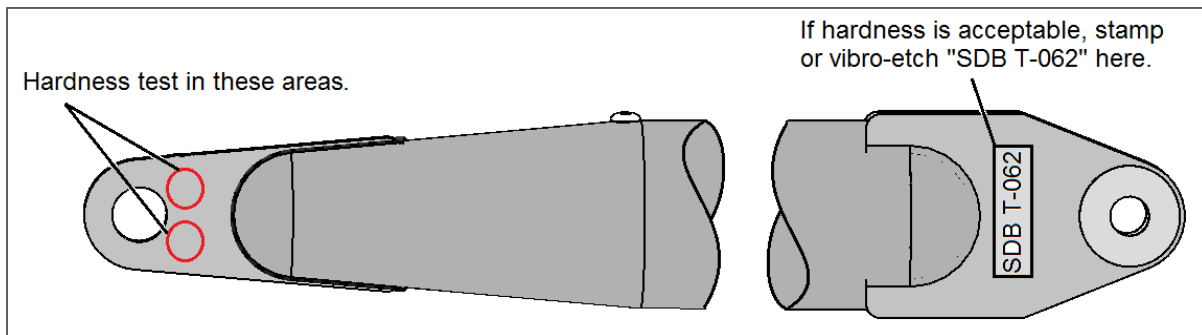


Figure 2. P/N 4174001-105 drag strut hardness test and marking

- 6.4.4 If the hardness is less than 80 on the Rockwell B scale, continue the repetitive inspection procedures at 25 or 50 hour intervals or replace the 4174001-105 Strut Weldment with a 4174001-107 Strut Weldment.

7. PARTS: P/N 4174001-107 Strut Weldment, Quantity 2
8. SPECIAL TOOLS: N/A
9. MAN-HOURS: 1 hour (Inspection)
10. WARRANTY: Per Enstrom Helicopter Warranty Policy
11. WEIGHT CHANGE: None
12. LOG BOOK ENTRY: Enter compliance with this SDB in the aircraft maintenance records.
13. REPETITIVE ACTION:
  - 13.1 Inspect at 25 hour intervals. Inspections at intervals of up to 50 hours are at the discretion of the owners/operators of aircraft that are not involved in aggressive operation training (e.g. touchdowns or autorotations).
  - 13.2 Drag strut P/N 4174001-105 serviceable in accordance with paragraph 6.2 and having a hardness test of Rockwell B scale of 80 or higher terminates the 25 hour and/or 50 interval inspection requirements.
  - 13.3 Replacing drag strut P/N 4174001-105 with drag strut P/N 4174001-107 terminates the 25 hour and/or 50 hour interval inspection requirements.