

**MODELS AFFECTED:** 407

**SUBJECT:** HYDRAULIC RELIEF VALVE P/N 206-076-036-101, REPLACEMENT OF.

**HELICOPTERS AFFECTED:** 407, Serial Numbers 53000 through 53266.

[Helicopters Serial Numbers 53267 and subsequent will have the intent of this bulletin completed before delivery.]

**COMPLIANCE:** At the next 300 hour inspection after receipt of this bulletin but no later than September 30, 1998.

**DESCRIPTION:** Bell Helicopter has found that the hydraulic relief valve can have a manufacturing defect. This defect can cause an intermittent loss of hydraulic pressure.

The hydraulic relief valve is a sealed unit that you cannot repair. This bulletin gives instructions to replace all valves (P/N 206-076-036-101) with a better valve (P/N 206-076-036-105).

**APPROVAL:** The engineering design aspects of this Service Bulletin are Transport Canada approved.

**MANPOWER:** Approximately 1.0 man-hour is necessary to complete this bulletin. Man-hours are based on hands-on time and can change due to the personnel and facilities available.

**WARRANTY:**

Owners/operators of 407 helicopters who comply with the instructions outlined in this bulletin are eligible for a special 100% warranty credit toward the purchase of the "REQUIRED MATERIAL" section of this bulletin.

To receive this credit:

- Customers must order the replacement parts from an approved BHTI supply source.
- Comply with the instructions outlined in this bulletin no later than September 30, 1998.
- Send a completed Malfunction Report (MR) to BHT Warranty Administration. A copy of the invoice referencing parts used to accomplish this bulletin must be attached to the Malfunction Report.

**- NOTE -**

Customers who comply with the instructions in this bulletin after September 30, 1998, are not eligible for the special warranty credit provisions listed above.

**MATERIAL:**

**Required Material:**

The material that follows is necessary to complete this Bulletin and can be procured through your Bell Helicopter Textron Supply Center.

<u>PART NUMBER</u>	<u>NOMENCLATURE</u>	<u>QUANTITY</u>
206-076-036-105	VALVE	1
MS28778-4	PACKING	3
MS28773-04	RETAINER	1

**WEIGHT AND BALANCE:**

Not affected.

**ELECTRICAL LOAD DATA:**

Not affected.

**REFERENCES:**

BHT-407-MM-4, rev.4- 16 December 1996:

Chapter 29, Hydraulic.

BHT-407-IPB, rev.2- 1 June 1996:

Chapter 29, Hydraulic.

**PUBLICATIONS AFFECTED:**

BHT-407-MM-4, rev.4- 16 December 1996:

Chapter 29, Hydraulic.

**ACCOMPLISHMENT INSTRUCTIONS:**

Remove the hydraulic relief valve as follows:

**- NOTE -**

Close all the ports, tubes, and the hoses with caps and/or plugs (C-428, BHT-ALL-SPM) as you remove them. This prevents contamination of the hydraulic system.


- 1.Remove the transmission fairing (Chapter 53).
- 2.Drain the hydraulic reservoir (Chapter 29).
- 3.Put absorbent material below and around the relief valve (5, Figure 1). This collects the hydraulic fluid released during the removal procedure.

4. Disconnect the tube assemblies (8 and 9) from the tee (1).
5. Disconnect the relief valve (5) from the union (2). Discard the packing (6).
6. Remove the tee (1), packing (4) and the retainer (3) from the relief valve (5). Discard the packing (4) and the retainer (3).

Install the new hydraulic relief valve as follows:

**- NOTE -**

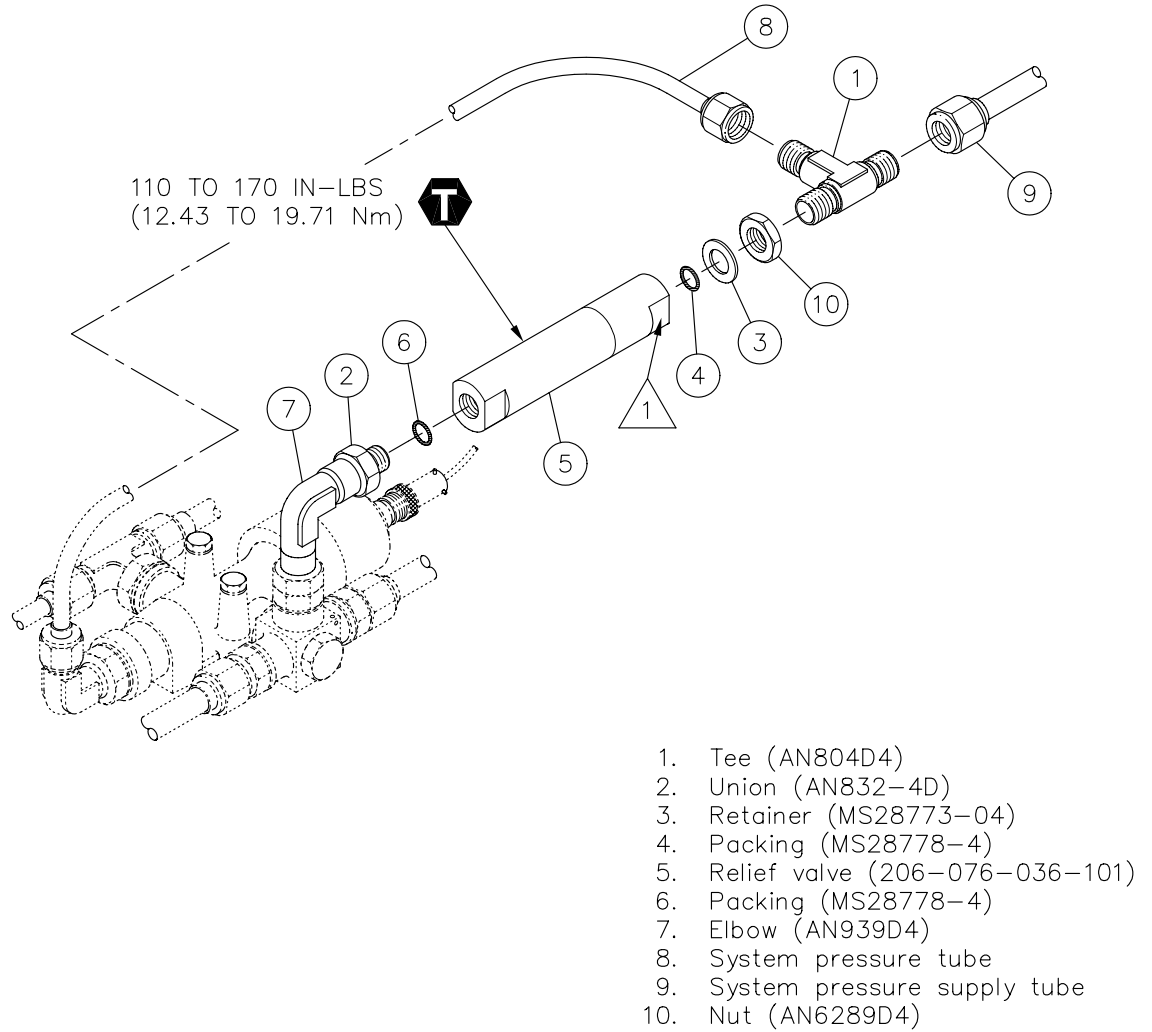
Lubricate all the packings and the retainers with hydraulic fluid (C-002, BHT-ALL-SPM) before you install them. Apply a layer of hydraulic fluid (C-002, BHT-ALL-SPM) to the threads of all the fittings before you install them.

7. Install the packing (6) on the union (2).
8. Install the union (2) in the relief valve (5) , at the end that is marked RET.
9. Install a new retainer (3) and the packing (4) on the tee (1).
10. Install the tee (1) in the relief valve (5).
11. Connect the system pressure tube (8) to the inboard tee fitting (1).
12. Connect the system pressure supply tube (9) to the aft end of the tee fitting (1).
13. Fill the hydraulic system (Chapter 12).
14. Bleed the hydraulic system (Chapter 29).
15. Do a test operation of the relief valve (5) (Chapter 29).
16. Install the transmission fairing (Chapter 53).

17. Make an entry in the helicopter historical record to show that this Alert Service Bulletin is completed.

18. Make an entry in the Record of Alert Service Bulletins in the Maintenance Manual.

19. Return the helicopter to service.



NOTES:

- 1. Make sure that the pressure side of the valve is put in position as shown.
- 2. The pressure (PRESS) and return (RET) ports are shown on the flat section of the valve with permanent ink. The short part of the valve is always the pressure side.

**Figure 1. Hydraulic relief valve – Removal and installation**