

R44

Page 1 of 3

SERVICE BULLETIN SB-11

DATE: 11 September 1995

TO: R44 Owners, Operators and Service Centers

SUBJECT: Replacement of Carburetor Air Temperature Gage and Relocation of Probe.

ROTORCRAFT AFFECTED: All R44 Helicopters S/N 0001 thru 0201

TIME OF COMPLIANCE: By 30 November 1995

BACKGROUND: The original R44 carburetor air temperature (CAT) probe is installed upstream of the throttle butterfly. During low power operation, the pressure drop across the butterfly causes an additional temperature drop which can form ice on the downstream side of the butterfly, resulting in power loss or engine stoppage. RHC has certified a CAT probe location downstream of the butterfly to provide more accurate temperature readings, especially at low power settings. The carburetors in all R44s have already been modified with a threaded hole for the new probe. The CAT gage must also be replaced with a new gage, which has a revised yellow arc. On earlier aircraft, the replacement gage must also be relocated for improved visibility

---

COMPLIANCE PROCEDURE:

Order from RHC the following parts:

A058-10	Carb Air Temp Probe	QTY = 1
C604-6	Carb Air Temp Gage	QTY = 1
MT606-1	Pin Removal Tool	QTY = 1
B270-10	Adhesive	QTY = 1
B195-1	Post Light Assy	QTY = 1* See Note below

For R44 helicopters with CAT gage located above the clock, perform Parts A and B.

For R44 helicopters with the CAT gage located below the clock, perform Parts A and C.

**PART A:**

- 1) Remove and retain plug from port in upper flange of carburetor. Open air box cover per R44 MM Section 6.420 to allow viewing into carburetor throat.
- 2) Install A058-10 carb air temperature probe into port in upper flange of carburetor, using a combination of the shim washers and lock washers provided. Select the combination that prevents the threaded portion of the temperature probe from protruding into the carburetor throat, but allows maximum probe penetration into carb throat. At least one lock washer (thick or thin) must be used, installed against the temperature probe. A maximum of 1 shim washer may be used. If necessary for spacing, 2 lock washers may be used, but they must be separated by a shim washer.

\*Note: only required for R44 helicopters with CAT gage presently located below the clock.

(OVER)

- 3) Torque probe to 36-48 in-lb.
- 4) Disconnect plug from A058-5 (on rear side of carb) probe and connect to A058-10 probe. Re-install ty-raps on wire if necessary.
- 5) Remove A058-5 probe. Apply B270-10 adhesive to threads of plug removed in step 1 and install into the exposed port. Torque plug to 36-48 in-lb.
- 6) Close air box cover and install bolts per R44 MM Section 6.430(c).

**PART B: (if CAT gage located above clock)**

- 1) Remove two screws securing instrument console and tilt console back. Cut ty-raps securing CAT gage wires and remove gage.
- 2) One wire in the aircraft wiring harness must be repositioned within the CAT gage harness connector. Using the tool provided, gently remove wire #36 from the #2 position in the connector and insert it firmly into the #3 position.
- 3) Install new C604-6 gage, ty-rap wires and install console screws.
- 4) Verify CAT gage and OAT gage read approximately the same when engine is cold.

**PART C: (if CAT gage presently located below clock)**

- 1) Remove two screws securing instrument console and tilt console back. Cut ty-raps securing wires for CAT gage and clock and remove both instruments.
- 2) One wire in the aircraft wiring harness must be repositioned within the CAT gage harness connector. Using the tool provided, gently remove wire #36 from the #2 position in the connector and insert it firmly into the #3 position.
- 3) Drill new CAT gage post light hole per dimensions in Figure 1. Remove paint around hole on backside of face plate for post light ground. Install B195-1 post light and connect post light wire to instrument cluster light stud.
- 4) Install new C604-6 gage in upper console hole and install clock in lower console hole. Connect and ty-rap wires to wire bundle and install console screws.
- 5) Verify proper function of post light and that CAT gage and OAT gage read approximately the same when engine is cold.

**Approximate Cost:**

Labor:           Parts A and B: 1.0 manhours  
                  Parts A and C: 1.5 manhours

Parts:           \$215 for S/N 0001 thru 0201 if ordered by 31 October 1995  
                  (order must include helicopter serial number)

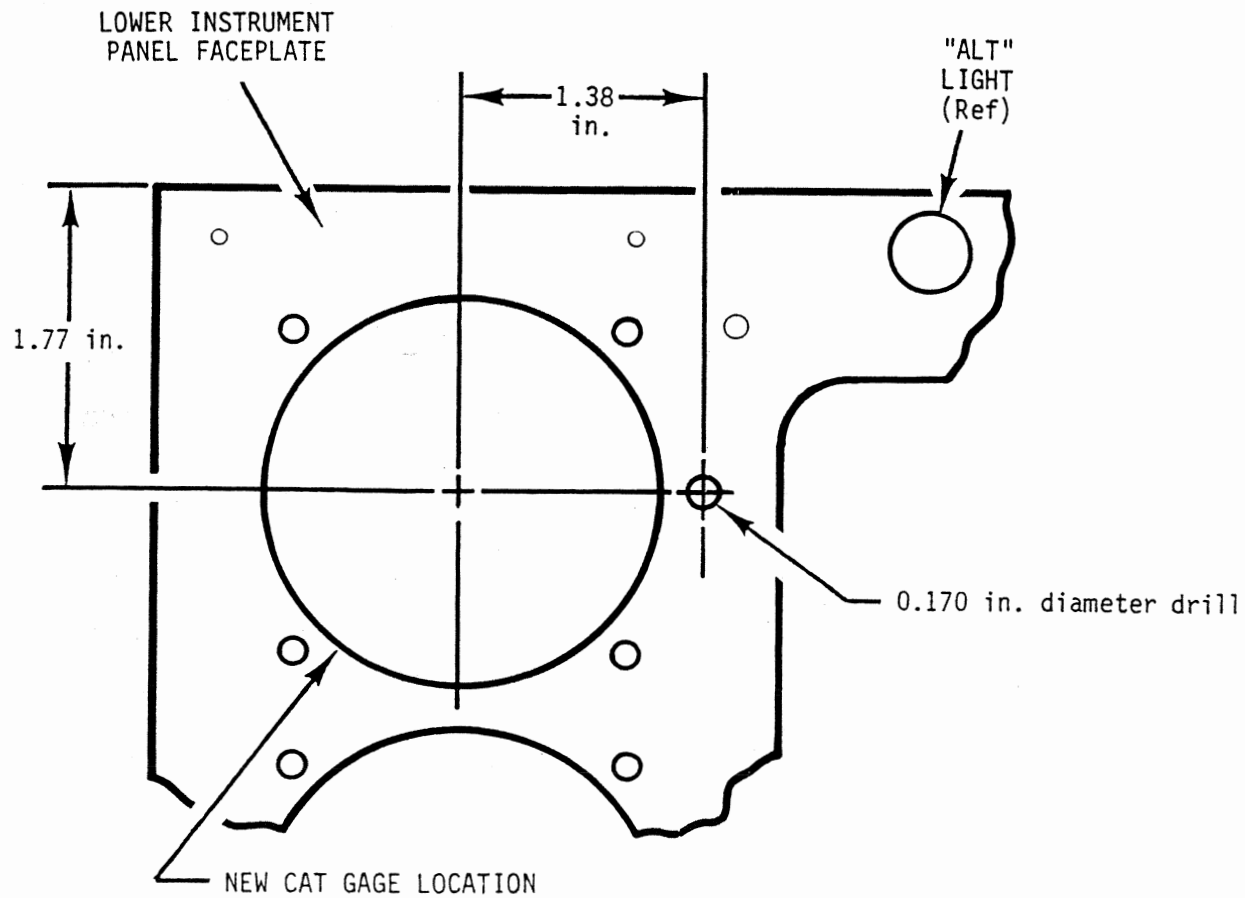


FIGURE 1