

**ALERT SERVICE BULLETIN**

REVISION NOTICE

**Bell Helicopter** **TEXTRON**

A Subsidiary of Textron Inc.

DATE 07-09-99

TO: All 407 Helicopter Owners/Operators

SUBJECT: REVISION "A" TO ALERT SERVICE BULLETIN 407-99-27, V<sub>NE</sub>  
RESTORATION TO 130 KIAS, INTRODUCTION OF.

Revision "A" to this Alert Service Bulletin introduces a new Airspeed Limitation decal 407-070-201-121. This decal removes the 5 KIAS cutback above 20°C OAT. In addition the changes that follow are introduced by this bulletin.

- Compliance changed from "300 hrs/no later than 31 July 1999" to "300 hrs/no later than 31 August 1999".
- Helicopters affected changed.
- Added FAA statement: terminating action to FAA AD 99-02-01.
- Added references to Quiet Cruise kit 407-070-201-123.

7851 60046 REV 1198

AN APPROPRIATE ENTRY SHOULD BE MADE IN THE AIRCRAFT LOG BOOK UPON ACCOMPLISHMENT  
IF OWNERSHIP OF AIRCRAFT HAS CHANGED PLEASE FORWARD TO NEW OWNER

**ALERT SERVICE BULLETIN**

**Bell Helicopter** **TEXTRON**

A Subsidiary of Textron Inc.

**NO.** 407-99-27

**DATE** 04-20-99

**PAGE** 1 of 7

**DATE** 06/09/99

**REV** "A"

**MODELS AFFECTED:** 407

**SUBJECT:**  $V_{NE}$  RESTORATION TO 130 KIAS, INTRODUCTION OF.

**HELICOPTERS AFFECTED:** 407, S/N 53000 through 53377.

[Helicopters S/N 53378 and subsequent will have the intent of Revision "A" of this bulletin completed before delivery.]

A.

**COMPLIANCE:** Within the next 300 hours of flight time after you receive this bulletin, but no later than 31 August 1999.

A.

**DESCRIPTION:**

Bell Helicopter has issued Technical Bulletin 407-99-17, dated 15 April 1999 that gives the instructions to fit the new tail rotor installation. This new TR installation yields additional clearance between the tail rotor and the tailboom structure. The modification consists of the installation of a new crosshead, mast nut, flapping stop, pitch horn assemblies, and a pedal stop.

Revision A of this Alert Service Bulletin gives 407 owners and operators the instructions for changing the 407  $V_{NE}$  to 130 KIAS and removes the 5 KIAS cutback above 20°C OAT. The new airspeed limitation placards and the Flight Manual temporary revision needed to complete this revised bulletin are included.

A.

Owners and operators that have completed ASB 407-99-27, dated 04-20-99 must do PART I and PART IV of this revised Bulletin.

**APPROVAL:**

The engineering design aspects of this bulletin are Transport Canada approved. This ASB is mandated by Transport Canada Airworthiness Directive (AD) CF-98-36R6.

A.

7851 55192 REV 1196

- A. Incorporation of the provisions and instructions of Bell Alert Service Bulletin Number 407-99-27, Revision A, dated June 9, 1999, is approved by the Manager, Rotorcraft Standards Office, ASW-110, by letter dated June 30, 1999, as an alternate method of compliance and is considered terminating action to AD 99-06-15 for US registered Bell Model 407 helicopters

**MANPOWER:**

Approximately 1 man-hour is necessary to do this bulletin. Man-hours are based on hands-on time and can change with the personnel and available facilities.

**MATERIAL:**

**Required Material:**

The material that follows is necessary to do this modification and is provided with this bulletin.

	<u>PART NUMBER</u>	<u>NOMENCLATURE</u>	<u>QUANTITY</u>
A.	407-070-201-121	Decal, Airspeed Limitation	2 (NOTE 1, 2)
	407-075-015-121	Decal, Vne Restriction	1
	407-075-015-117	Decal, Vne Restriction	1
	407-075-015-119	Decal, Vne Restriction	1

NOTES: 1. Only one decal is used on the basic aircraft. The second is used on aircraft that are equipped with dual controls. Refer to PART IV of this bulletin.

- A. 2. For Quiet Cruise, you must use decal 407-070-201-123. Order this decal separately.

**Consumable Material:**

The material that follows is necessary to do this modification. However, this material is considered consumable (bench stock) material and may not require ordering depending on the operator's consumable material stock levels. You can get this material through your Bell Helicopter Textron Supply Center.

<u>PART NUMBER</u>	<u>NOMENCLATURE</u>	<u>REF. NO. (NOTE 1)</u>
3950 SCOTCHCAL	EDGE SEALER	C-349
TT-N-95TYII,1Gal	ALIPHATIC NAPHTHA	C-305

- NOTE -

The C REF. NO. above is a cross-reference found in the Standard Practices Manual.

**SPECIAL TOOLS:**

Not required.

**WEIGHT AND BALANCE:**

Not affected.

**ELECTRICAL LOAD DATA:**

Not affected.

**REFERENCES:**

BHT-407-MM-2, Rev.7, 01 May 1998.

Chapter 11, Placards and Markings.

BHT 407-FM-1 - TEMPORARY REVISION FOR  $V_{NE}$  INCREASE TO 130 KIAS (ASB 407-99-27) - dated 19 April 1999. A.

TB 407-98-13 - PEDAL STOP, TEMPORARY, AND NEW RIGGING PROCEDURE, INTRODUCTION OF. - dated 12 December 1998.

TB 407-99-17 - NEW TAIL ROTOR INSTALLATION 407-012-100-109, INTRODUCTION OF. - dated 15 April 1999.

**PUBLICATIONS AFFECTED:**

BHT-407-MM-1.

Chapter 5, Inspections.

BHT-407-MM-2.

Chapter 11, Placards and Markings.

BHT-407-FM-1, Rev. 7, 04 September 1998.

A. Section 1, Limitations.

Section 4, Performance.

BHT-407-FMS-3, Original, 01 March 1996.

Section 4, Performance.

BHT-407-FMS-4, Original, 01 March 1996.

Section 4, Performance.

A. BHT-407-FMS-25, Original, 08 May 1998

Section 1, Limitations

#### **ACCOMPLISHMENT INSTRUCTIONS:**

#### **PART I – Modification of the Interconnect Bellcrank Assembly**

1. Complete PART I, Steps 1 through 4 of Technical Bulletin 407-99-17.

- NOTE -

When you do PART I of TB 407-99-17, you get the same results as TB 407-98-13, dated 12 December 1998. Therefore, if you completed TB 407-98-13, it is not necessary to do PART I of TB 407-99-17.

2. Put the Flight Manual temporary revision titled:  $V_{NE}$  INCREASE TO 130 KIAS, reissued 03 June 1999, in the Flight Manual:

A.

a. Keep the three temporary revisions that follow – HOVER PERFORMANCE CORRECTION FOR TEMPORARY TAIL ROTOR PEDAL STOP, dated 10 March 1999, or later approved revision, in the Flight Manual:

1) BHT-407-FM-1.

2) BHT-407-FMS-3, Particle Separator.

3) BHT-407-FMS-4, Snow Deflector.

3. Put the temporary revision - QUIET CRUISE MODE - TEMPORARY REVISION FOR  $V_{NE}$  CHANGE TO 130 KIAS, ASB 407-99-27 REVISION A, dated 03 June 1999, in the Flight Manual.

A.

## **PART II – New Tail Rotor Installation**

1. Complete PART II of Technical Bulletin 407-99-17.

## **PART III – New Directional Controls Rigging Procedure**

1. Complete PART III of Technical Bulletin 407-99-17

## **PART IV – New Instrument Markings and Placards**

### **CAUTION**

DO NOT USE PAINT THINNER OR MEK ON INTERIOR TRIM PANELS.

- NOTE -

Use aliphatic naphtha (C-305) to remove the decal adhesive.

1. Change the decal, Airspeed Limitations (5, Figure 1) as follows:
  - a. Remove the airspeed limitation decal found on the overhead trim panel near the windshield.
  - b. Lift one corner of the decal with a sharp knife and remove it.
  - c. Remove the decal adhesive that stays with aliphatic naphtha (C-305).
  - d. In the location of the removed decal, install the new adhesive-backed decal.
  - e. Apply edge sealer (C-349) to the edges of the decal.

- NOTE -

On the helicopters supplied with the dual control kit, 407-706-702-ALL, one more decal is installed on the co-pilot side of the overhead trim panel. Replace this decal with the new decal. Refer to Step 1.

2. Install temporary markings on the airspeed indicator glass face (4) as shown on Figure 1.

**PART V – Maintenance Action in The Event of a Rapid Full Left Pedal Input at Airspeeds in Excess of 100 KIAS, or an Abrupt, Unexpected Yaw at any Airspeed.**

1. If the helicopter is subjected to a rapid full left pedal input at airspeeds in excess of 100 KIAS, or an abrupt unexpected yaw at any airspeed, maintenance action is necessary before further flight.

- a. Contact Product Support Engineering at one of the numbers that follow:

Bell Helicopter Textron  
Product Support Engineering  
Light Helicopters

Tel: 1-800-243-6407 (Continental USA and Canada)

Tel: 1-800-363-8023 (Continental USA)

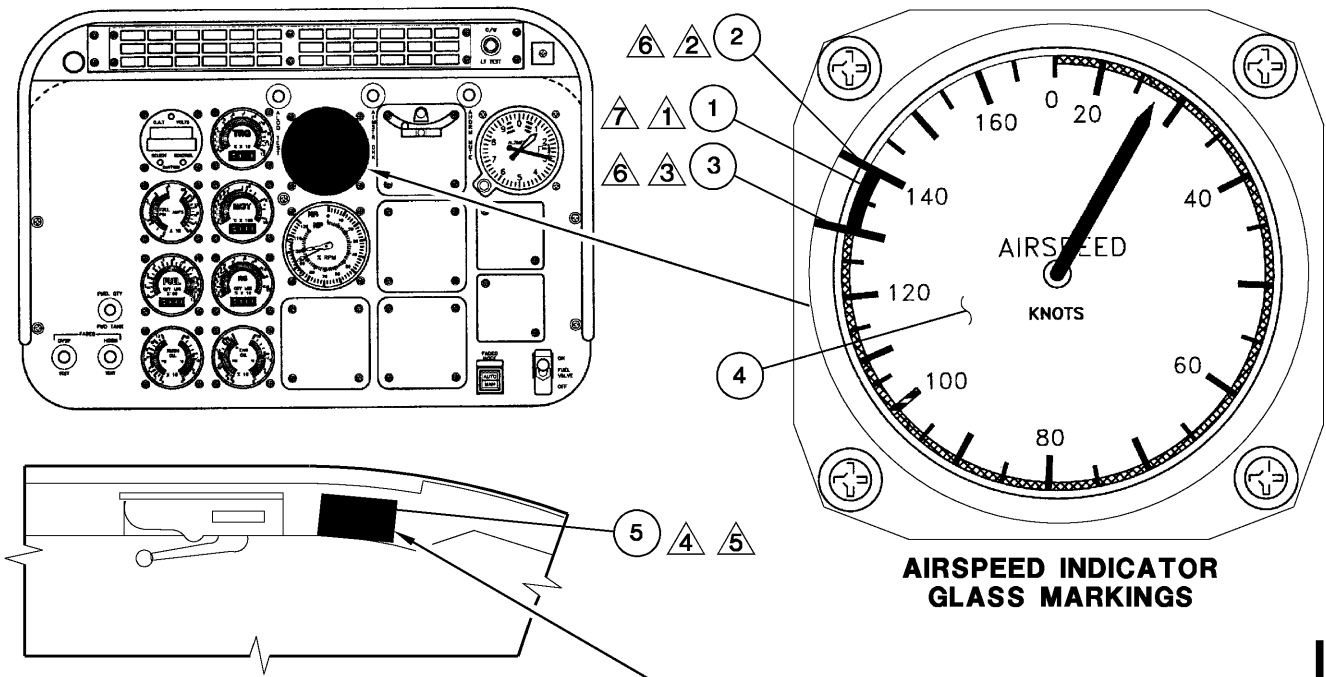
Tel: 1-800-361-9305 (Canada)

Tel: 1-450-437-2862 (all other areas – call collect)

Fax: 1-450-433-0272

Internet: [pselight@bellhelicopter.textron.com](mailto:pselight@bellhelicopter.textron.com)

2. Make an entry in the helicopter Historical Record (HR) to show that this Alert Service Bulletin is completed.
3. Make an entry in the record of the Alert Service Bulletins in the Maintenance Manual.



**AIRSPEED INDICATOR  
GLASS MARKINGS**

**OVERHEAD TRIM PANEL  
VIEW LOOKING INBOARD  
RIGHT SIDE**

**LEGEND**

- 1. Decal 407-075-015-121 (BLACK)
- 2. Decal 407-075-015-119 (WHITE)
- 3. Decal 407-075-015-117 (TRANSLUCENT, LIGHT TOMATO RED)
- 4. Airspeed indicator glass face
- 5. Decal 407-070-201-121

A. |

407 AIRSPEED LIMITATIONS - KNOTS - IAS											
OAT C°	PRESSURE ALTITUDE FT X 1000										
	0	2	4	6	8	10	12	14	16	18	20
52	127	-	-	-	-	-	-	-	-	-	-
40	130	123	116	109	-	-	-	-	-	-	-
20	130	130	123	115	108	101	93	86	79	-	-
0	130	130	130	122	115	107	100	93	85	78	71
-20	130	130	130	130	122	115	107	100	92	85	77
-40	130	130	128	123	118	114	110	105	100	92	85
MAXIMUM AUTOROTATION VNE 100 KIAS											

**NEW AIRSPEED LIMITATION DECAL**

**NOTES**

- 1 Apply decal on the cover glass to cover green arc.
- 2 Apply decal on the cover glass to cover the red V<sub>NE</sub> mark at 140 Knots.
- 3 Apply decal on the cover glass to cover the V<sub>NE</sub> mark at 130 Knots.
- 4 Apply edge sealer (C-349) to edges of the decal.
- 5 If you have the dual controls installed, one more decal is installed on the co-pilot side.
- 6 Decals (2, 3) to exceed glass periphery as shown to prevent rotation of the cover glass.
- 7 Trim decal (1) to fit.
- A. | 8 If you have the quiet cruise mode kit 407-706-016 installed, decal 407-070-201-123 instead of 407-070-201-121 is needed. Refer to BHT-407-FMS-25, Section 1, Limitations.

RAB01201

**Figure 1. New Airspeed Limitation Decal and Airspeed Indicator Glass Markings**