

ALERT SERVICE BULLETIN



NO. 412-10-138

DATE Jan 11, 2010

PAGE 1 of 5

DATE
REV

MODEL AFFECTED: 412 & 412EP

SUBJECT: GEARBOX COWL DOOR HINGES, CRIMPING OF.

HELICOPTERS AFFECTED: Model 412 and 412EP helicopters serial number 33001 through 33213, 34001 through 34036 and 36001 through 36524.

[Model 412 helicopters serial numbers 33214 and subsequent, 34037 and subsequent, 36525 and subsequent will have the intent of this bulletin accomplished prior to delivery.]

COMPLIANCE: Six months from release date of this bulletin.

DESCRIPTION:

Bell Helicopter has recently investigated an incident where a gearbox cowl door (212-061-812) departed an aircraft in flight. The loss of the door was attributed to the absence of crimping at the ends of the hinge. Some helicopters have dual hinges and aluminum doors while others have single hinges and composite doors. This ASB provides instructions to crimp both configurations of hinges.

APPROVAL:

The engineering design aspects of this bulletin are FAA/ODA approved.

MANPOWER:

Approximately 1 to 2 man-hours are required to complete this bulletin. Man-hours are based on hands-on time, and may vary with personnel and facilities available.

WARRANTY:

There is no warranty provided for this bulletin.

MATERIAL:

Consumable Material:

The following material is required to accomplish this bulletin; however this material is considered consumable (bench stock) material and may not require ordering depending on the operator's consumable material stock levels. This material may be obtained through your Bell Helicopter Textron Supply Center.

Part Number	<u>Nomenclature</u>	<u>Quantity</u>
MS20470AD3 (length to suit)	Rivet	A/R
MS20470AD4 (length to suit)	Rivet	A/R

SPECIAL TOOLS:

None required

WEIGHT AND BALANCE:

Not affected

ELECTRICAL LOAD DATA:

Not affected

REFERENCES:

BHT-412-IPB Illustrated Parts Breakdown

PUBLICATIONS AFFECTED:

BHT-412-MM Maintenance Manual

ACCOMPLISHMENT INSTRUCTIONS:

1. Make helicopter ready for maintenance.
2. Inspect hinge assy on both sides of the aircraft for crimping of the end loop(s). Correct crimping of the hinge is confirmed by the presence of two opposed flats on the loop at each end to prevent the pin(s) from sliding out. See Figure 1.
3. If a single hinge requires crimping, proceed as follows:
 - a. Support door and using a suitable pick or awl, remove pin from hinge.
 - b. Measure the length of the pin and if required, cut it shorter than the hinge by approximately 0.030 inch (0.75 mm).
 - c. Re-install the pin, approximately centered in the hinge.
 - d. Using suitable pliers, crimp the loops at both ends of the hinge pin, just enough to restrain its movement. See Figure 1. Check the hinge for freedom of movement.
4. If a double-hinge requires crimping, proceed as follows:
 - a. Remove door frame from aircraft by removing attaching screws. Retain hardware for re-installation.
 - b. Remove rivets attaching the hinge to the door and to the frame.
 - c. Using suitable pliers (or small hammer and anvil), crimp the loops at both ends of the hinge pins, just enough to restrain their movement. See Figure 1. Check the hinge for freedom of movement.
 - d. Re-install hinge on door and on frame using MS20470AD3 rivets on door and MS20470AD4 on frame.
 - e. Re-install door frame using retained hardware.
5. Touch-up finish paint as required.
6. Make helicopter ready for flight.

7. Make an entry in the helicopter historical records indicating compliance with this Alert Service Bulletin.

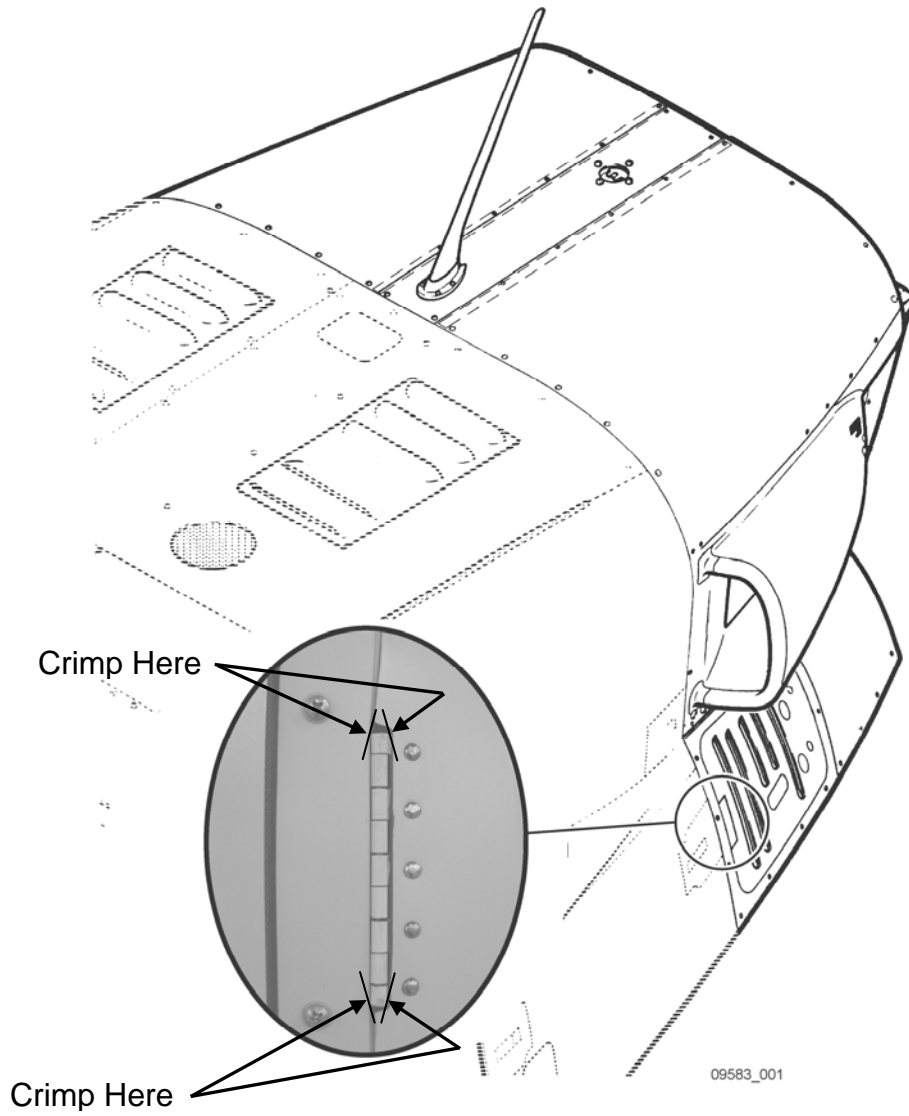


Figure 1
Hinge Crimping