

Bell Helicopter **TEXTRON**

A Subsidiary of Textron, Inc.

April 23, 2003

TO: All Owners/Operators of Bell 212 Helicopters

SUBJECT: REVISION "A" TO TECHNICAL BULLETIN 212-03-189:

**REPLACEMENT OF LANDING LIGHT MECHANICAL RELAY
ASSEMBLY WITH A SOLID-STATE SWITCH MOUNTED ON A
PRINTED WIRING BOARD.**

Revision "A" of this bulletin introduces Grimes Aerospace Company Service Bulletin G5400-97-001 revision 2, dated February 15, 2003.

Original issue of this bulletin incorporated Grimes Aerospace Company Service Bulletin G5400-97-001 revision 1, dated July 15, 2002.

TECHNICAL BULLETIN
Bell Helicopter **TEXTRON**

A Subsidiary of Textron Inc.

No. 212-03-189

Date Jan 6, 2003

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DATE APRIL 23, 2003

REV A

MODEL AFFECTED: 212

SUBJECT: Replacement of Landing light mechanical relay assembly with a solid-state switch mounted on a printed wiring board.

HELICOPTERS AFFECTED: Model 212 helicopters serial number 30680 through 31311.

Serial number 32101 through 32114.

Serial number 35001 through 35080.

[Model 212 helicopters serial number 31080 and subsequent will have the intent of this bulletin accomplished prior to delivery]

[Model 212 helicopters serial number 32115 and subsequent will have the intent of this bulletin accomplished prior to delivery]

[Model 212 helicopters serial number 35081 and subsequent will have the intent of this bulletin accomplished prior to delivery]

COMPLIANCE: At Customer's Option

DESCRIPTION:

Bell Helicopter has become aware of the mechanical relay contact's "welding" themselves closed in the landing light assembly. This situation will cause the landing light to stay in the "on" position even when landing light switch was turned "off". The intent of this bulletin is to provide instructions to replace the mechanical relay with a new solid-state switch mounted on a printed wiring board.

APPROVAL:

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

MANPOWER:

Approximately 1.0 man-hour is required to complete this bulletin. Man-hours are based on hands-on time, and may vary with personnel and facilities available.

MATERIALS:

Refer to attached Grimes Aerospace Company service bulletin

Required Material:

Refer to attached Grimes Aerospace Company service bulletin

Consumable Material:

Refer to attached Grimes Aerospace Company service bulletin

SPECIAL TOOLS:

None required

WEIGHT AND BALANCE:

Not affected

ELECTRICAL LOAD DATA:

Not affected

REFERENCES:

BHT-212-IPC Illustrated Parts Breakdown

BHT-212-MM Maintenance Manual

BHT-212-CR&O Component Repair and Overhaul

Grimes Aerospace Company service bulletin, G5400-97-001 rev 2.

| **A**

PUBLICATIONS AFFECTED:

None affected

ACCOMPLISHMENT INSTRUCTIONS:

Refer to attached Grimes Aerospace Company service bulletin

TECHNICAL BULLETIN

NO. G5400-97-001

GRIMES AEROSPACE COMPANY

DATE 03-15-99

550 State Route 55
Urbana, Ohio 43078

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DATE	2-15-03
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REV.	2
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EQUIPMENT AFFECTED: G5400 Landing Light

SUBJECT: Replacement of mechanical relay assembly with a solid state switch mounted on a printed wiring board.

HELICOPTERS AFFECTED: Bell helicopters equipped with Grimes Aerospace Landing Light, part number G5400-6 with serial number below 32500, Bell Helicopter Textron part number 212-075-139.

COMPLIANCE: This bulletin shall be performed at the customers option or at replacement of mechanical relay.

DESCRIPTION: The intent of this bulletin is to provide instructions to replace the mechanical relay with a new solid state switch mounted on a printed wiring board.

APPROVAL:
The engineering design aspects of this bulletin are FAA/DER approved.

MANPOWER:
Approximately 1 man-hour is required to accomplish this bulletin. Man-hours are based on hands-on time and may vary with personnel and facilities available.

SPECIAL TOOLS: None Required.

WEIGHT AND BALANCE: None Required.

ELECTRICAL LOAD DATA: None Required

REFERENCES:
Component Maintenance Manual (CMM) 33-41-40.

PUBLICATIONS AFFECTED:
Component Maintenance Manual (CMM) 33-41-40.

MATERIAL AND AVAILABILITY:

Operators may, through Bell Helicopter Spares, purchase the modification kit, part number 45-0395-1, or return their landing light for modification to the Customer Property Return (CPR) at the address noted below.

Customer Property Return
Plant 8
3000 S. Norwood
Hurst, Texas 76053

ACCOMPLISHMENT INSTRUCTIONS:

CAUTION: ELECTROSTATIC DISCHARGE SENSITIVE (ESDS) PARTS. USE ESDS PROCEDURES AND WORK AREA TO AVOID DAMAGE.

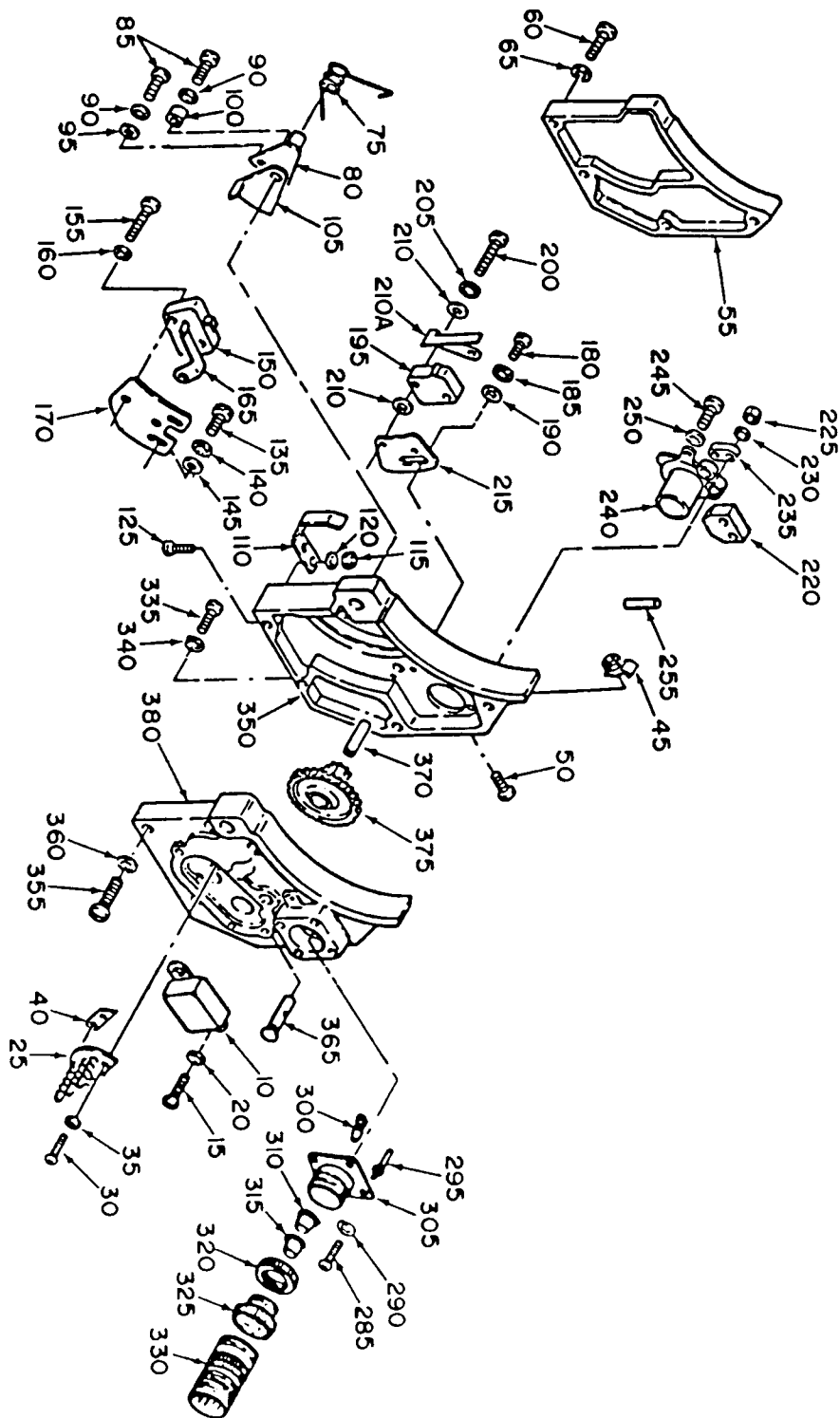
NOTE: Item numbers in parenthesis refer to the index numbers in the attached figures.

1. **See Figure 1,** Remove five screws (60), lock washers (65) and side cover (55) from the drive housing assembly (350). Keep the side cover and attaching parts.
2. Remove the mechanical relay assembly (240) as follows:
 - (a) Remove two screws (245) and lock washers (250) to loosen relay (240). Discard screws (245) and lock washers (250).
 - (b) Cut relay control wire close to relay (240) and discard relay.
3. Remove two nuts (225), lock washers (230) and contact block assembly (220) from the drive housing assembly (350). Discard the contact block assembly (220) and the attaching parts.
4. Leave the two threaded studs (295) in place.
5. Strip approximately 0.25 inch (6,35 mm) from the end of the relay control wire.
6. Use a soldering iron to tin the end of the relay control wire.

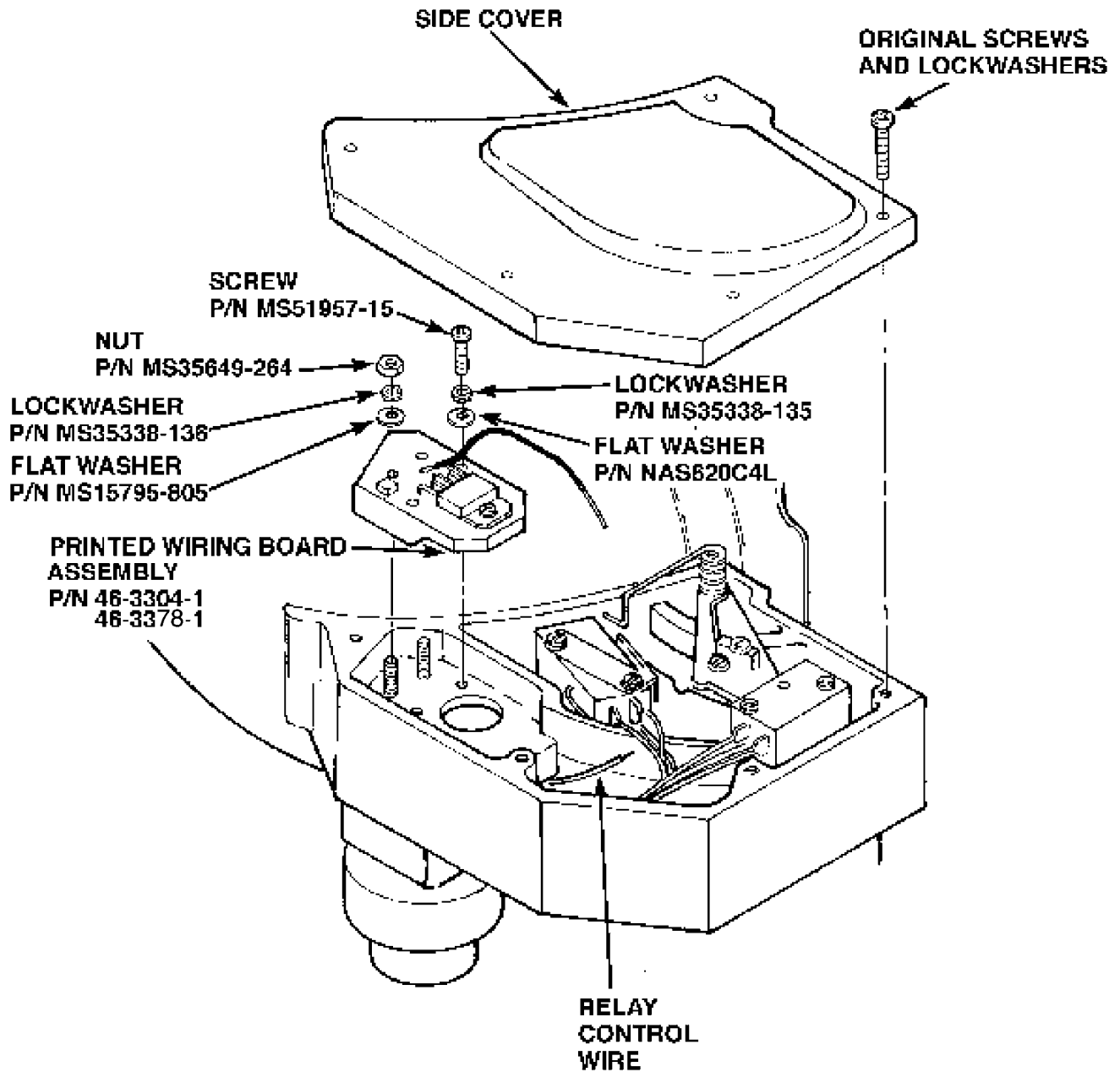
7. Using the splice provided with the kit splice the end of the wire on the new printed wiring board assembly to the relay control wire as shown in Figure 2. Slide the heat shrink tubing also provided over the splice and shrink in place.
8. **See Figure 2**, Position the new printed wiring board assembly over the threaded studs (295), then secure the new circuit card assembly with two new washers, P/N MS15795-805, new lock washers, P/N MS35338-136, new nuts, P/N MS35649-264, new flat washers, P/N NAS620C4L, new lock washers, P/N MS35338-135 and new screws, P/N MS51957-15.

CAUTION: ENSURE WIRES DO NOT GET PINCHED WHEN THE SIDE COVER IS INSTALLED. FAILURE TO COMPLY CAN RESULT IN FAILURE OF THE LANDING LIGHT.

9. **See Figure 1**, Position the side cover (55) on the drive housing assembly (350) and secure with original five lock washers (65) and screws (60).
10. Test the landing light in accordance with referenced CMM or applicable aircraft operating procedures.



Landing Light (old configuration)
Figure 1



734305

Landing Light (new configuration)
Figure 2

IDENTIFICATION:

Identification to signify incorporation of this Technical Bulletin shall be indicated with the suffix letter M added after the serial number on the nameplate (Bell preferred method) or by placing a label supplied with the kit to the outside of the unit. If the label is used, place it adjacent to the ID label on the side cover.

MATERIAL INFORMATION:

Parts contained in modification kit, P/N 45-0395-1, are as follows:

<u>New P/N</u>	<u>Quantity</u>	<u>Key Word</u>	<u>Old P/N</u>	<u>Disposition Instructions</u>
MS35649-264	2	Nut	None	Install
MS35338-136	2	Lock Washer	None	Install
MS15795-805	2	Flat Washer	None	Install
MS51957-15	2	Screw	None	Install
MS35338-135	2	Lock Washer	None	Install
NAS6206C4L	2	Flat Washer	None	Install
46-3304-1*	1	PWB	None	Install
46-3378-1*	1	PWB	None	Install
46-3674-1	1	Label	None	Install

* First issue of the modification kit (approximately 475 pieces) will contain 46-3304-1 PWB assemblies. Subsequent issues of the modification kit will contain 46-3378-1 PWB assemblies. Both PWB assemblies are identical in form, fit and function and differ slightly in PWB shape.