

SERVICE BULLETIN

Beechcraft

TITLE: PROPELLERS - PROPELLER SLIP RING MOUNTING PLATE INSPECTION AND REPAIR

1. Planning Information

A. Effectivity

(1) Airplanes

Airplanes that have accomplished installation of Hartzell STC No. SA5533NM and are equipped with Hartzell P/N PHC-J3YF-2()/FC7663-2R Aluminum Hub 3 Blade Compact Propellers and a Goodrich Electrical Propeller Deicing System:

Beechcraft Model 58 Baron, Serials TH-1889 through TH-2093.

If you are no longer in possession of the airplane, please forward this information to the present owner.

(2) Spares

None.

B. Reason

Raytheon Aircraft Company (RAC) has received a report of surface damage around the mounting holes in the propeller slip ring split mounting plate. Subsequent investigation by RAC has determined that some airplanes did not have the Hartzell P/N A-1381 propeller mounting washers installed between the propeller mounting nuts and the propeller slip ring split mounting plate during factory installation of the propeller.

This Service Bulletin is being issued to announce Hartzell Service Bulletin No. HC-SB-61-272 and Hartzell Service Letter No. HC-SL-61-239.

- Hartzell Service Bulletin No. HC-SB-61-272 checks the torque on the propeller mounting nuts to ensure that the mounting nuts are properly torqued. In addition, the Hartzell Service Bulletin also requires the replacement of propeller hub assembly on any propeller installation that has two or more mounting nuts that do not pass the torque inspection.

The export of these commodities, technology or software are subject to the US Export Administration Regulations. Diversion contrary to U.S. law is prohibited. For guidance on export control requirements, contact the Commerce Department's Bureau of Export Administration at 202-482-4811 or at www.bxa.doc.gov.

Raytheon Aircraft Company (RAC) issues Service Information for the benefit of owners and fixed base operators in the form of two classes of Service Bulletins. The first class, Mandatory Service Bulletins (red border) includes changes, inspections and modifications that could affect safety or crashworthiness. RAC also issues Service Bulletins with no red border which are designated as either recommended or optional in the compliance section within the bulletin. In the case of recommended Service Bulletins, RAC feels the changes, modifications, improvements or inspections will benefit the owner/operator and although highly recommended, Recommended Service Bulletins are not considered mandatory at the time of issuance. In the case of Optional Service Bulletins, compliance with the changes, modifications, improvements or inspections is at the owner/operator's discretion.

Both classes are mailed to:

- RAC Authorized Service Centers.
- Owners of record on the FAA Aircraft Registration Branch List and the RAC International Owner Notification/Registration Service List.
- Those having a publications subscription.

Information on Owner Notification Service or subscription can be obtained through any RAC Authorized Service Center. As Mandatory Service Bulletins and Service Bulletins are issued, temporary notification in the Service Bulletin Master Index should be made until the index is revised. Warranty will be allowed only when specifically defined in the Service Bulletin and in accordance with the RAC Warranty Policy.

Unless otherwise designated, RAC Mandatory Service Bulletins, Service Bulletins and RAC Kits are approved for installation on RAC airplanes in original or RAC modified configurations only. RAC Mandatory Service Bulletins, Service Bulletins and Kits may not be compatible with airplanes modified by STC installations or modifications other than RAC approved kits.



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- Hartzell Service Letter No. HC-SL-61-239 inspects the area around the mounting holes in the propeller slip ring split mounting plate for any scoring, gouging or other damage that could be caused by the propeller mounting nuts when securing the slip ring split mounting plate without the propeller mounting washers being installed. In addition, the Hartzell Service Letter accomplishes any applicable repairs to the propeller slip ring split mounting plate and installs a Hartzell P/N A-1381 propeller mounting washer between each propeller mounting nut and the propeller slip ring split mounting plate.

The installation of the propeller mounting washer is intended to protect the surface of the propeller slip ring split mounting plate in the area around the mounting holes from any scoring, gouging or other damage that could be caused by the propeller mounting nuts when securing the slip ring split mounting plate without the propeller mounting washers being installed. Consequently, installation of the propeller slip ring split mounting plate without installing the propeller mounting washers may result in surface damage around the mounting holes in the slip ring split mounting plate that may permit the propeller mounting nuts to lose torque during propeller operation. The loss of torque on the propeller mounting nuts could cause fatigue failure of the propeller mounting hardware and ultimately result in separation of the propeller from the affected engine.

C. Description

Part I of this Service Bulletin provides an initial torque inspection which checks the torque on the propeller mounting nuts to ensure that the mounting nuts are properly torqued on each propeller installation (both the left and right engines of the airplane). Refer to Figure 1. Part I of this Service Bulletin also requires the replacement of propeller hub assembly on any propeller installation that has two or more propeller mounting nuts that do not pass the initial torque inspection. Part I of this Service Bulletin must be accomplished in accordance with Hartzell Service Bulletin No. HC-SB-61-272 on each propeller installation (both the left and right engines of the airplane). After ensuring that the propeller mounting nuts are properly torqued and accomplishing the propeller hub assembly replacement (as applicable), the airplane may be returned to service until accomplishment of Part II of this Service Bulletin is required by the time limits specified under COMPLIANCE.

Part II of this Service Bulletin accomplishes Hartzell Service Letter No. HC-SL-61-239 on each propeller installation (both the left and right engines of the airplane) to inspect the area around the mounting hole in the propeller slip ring split mounting plate for any scoring, gouging or other damage (refer to Figures 1 and 2) that may have been caused by the propeller mounting nuts when securing the slip ring split mounting plate without the propeller mounting washers being installed. Part II of this Service Bulletin also accomplishes any applicable repairs to the propeller slip ring split mounting plate and installs a Hartzell P/N A-1381 propeller mounting washer between each propeller mounting nut and the propeller slip ring split mounting plate on both propeller installations. The propeller slip ring split mounting plate is installed on the aft side of the engine mounting flange and should be secured with a Hartzell P/N A-1381 propeller mounting washer installed between each propeller mounting nut and the propeller slip ring split mounting plate. Refer to Figure 1. A propeller slip ring split mounting plate that has surface damage around any of its mounting holes may permit the applicable propeller mounting nut(s) to lose torque and must be repaired. After inspecting the propeller slip ring split mounting plate and accomplishing any applicable repairs, ensure that the propeller slip ring split mounting plate installation has a propeller mounting washer installed between each propeller mounting nut and the propeller slip ring split mounting plate.

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D. Compliance

An Airworthiness Directive will be requested on the matter covered by this Service Bulletin.

Raytheon Aircraft Company considers Part I of this Service Bulletin to be a mandatory inspection/repair and it must be accomplished as soon as possible after receipt of this Service Bulletin, but no later than the next 50 flight hours or 60 days whichever occurs first.

Raytheon Aircraft Company considers Part II of this Service Bulletin to be a mandatory inspection/repair and it must be accomplished as soon as possible after receipt of this Service Bulletin, but no later than the next 100 flight hours, annual inspection or propeller removal whichever occurs first.

E. Approval

The engineering data contained in this Service Bulletin is FAA approved.

F. Manpower

The following information is for planning purposes only:

For estimated man-hours to accomplish Part I of this Service Bulletin refer to Hartzell Service Bulletin No. HC-SB-61-272.

For estimated man-hours to accomplish Part II of this Service Bulletin refer to Hartzell Service Letter No. HC-SL-61-239.

The above is an estimate based on experienced, properly equipped personnel complying with the Hartzell Service Bulletin and the Hartzell Service Letter. Occasionally, after work has started, conditions may be found which could result in additional man-hours.

G. Weight and Balance

None.

H. Electrical Load Data

Not changed.

I. Software Accomplishment Summary

Not applicable.

J. References

Raytheon Aircraft Company Beechcraft Baron 55 and 58 Shop Manual, P/N 55-590000-13E23 or subsequent revision, Sections 7, 11 and 13;

Raytheon Aircraft Company Beechcraft Baron B55, E55 and 58 Illustrated Parts Catalog, P/N 58-590000-19F1 or subsequent revision, Chapter 71-10;

Hartzell Propeller Inc. Service Bulletin No. HC-SB-61-272, "PROPELLER - PROPELLER INSTALLATION", Issued: January 17/05 or subsequent revision;

Hartzell Propeller Inc. Service Letter No. HC-SL-61-239, "PROPELLER - SLIP RING SPLIT MOUNTING PLATE INSPECTION AND REPAIR", Issued: January 17/05 or subsequent revision.

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K. Publications Affected

None.

L. Interchangeability of Parts

Not applicable.

M. Warranty Credit

Warranty credit for labor and parts to the extent noted under MANPOWER and MATERIAL will be allowed on all affected airplanes.

Warranty coverage offered in this Service Bulletin will expire 12 months from the last day of the month this Service Bulletin is issued. After that date, the owner/operator assumes the responsibility for compliance cost. Raytheon Aircraft Company reserves the right to void warranty coverage in the area affected by this Service Bulletin until the date the Service Bulletin is accomplished by a Raytheon Aircraft Company Authorized Service Center.

All warranty work must be accomplished by a Raytheon Aircraft Authorized Service Center rated to perform maintenance on the specific model of Beechcraft Airplane.

All warranty reimbursements are handled through Raytheon Aircraft Company Authorized Service Centers. The owner/operator should arrange for an Authorized Service Center to perform the work and the Authorized Service Center must submit the standard Raytheon Aircraft Company warranty claim.

2. Material Information

A. Materials - Price and Availability

Contact a Raytheon Aircraft Authorized Service Center or RAPID for information.

B. Industry Support

Not applicable.

C. Airplanes

NOTE

Prior to accomplishing this Service Bulletin, all the parts required to accomplish both Part I and Part II of this Service Bulletin should be on-hand. In some circumstances, both Part I and Part II of this Service Bulletin will need to be accomplished PRIOR TO FURTHER FLIGHT.

The parts required to accomplish Part I of this Service Bulletin are specified in Hartzell Service Bulletin No. HC-SB-61-272. The parts required to accomplish Part II of this Service Bulletin are specified in Hartzell Service Letter No. HC-SL-61-239. The quantity of parts specified in both the Hartzell Service Bulletin and the Hartzell Service Letter should be doubled (two propeller installations) for each airplane. These parts may be ordered through a Raytheon Aircraft Authorized Service Center, RAPID or Hartzell.

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The following parts required for this Service Bulletin may be ordered through a Raytheon Aircraft Authorized Service Center, RAPID or Hartzell:

Part Number	Description	Quantity Per Airplane
A-1381 * or A1381 **	Washer (Hard, Stainless), Hub Mounting, Propeller	12 (6 Per Side)
A-2044 * or A2044 **	Nut (Self Locking), Hub Mounting, Propeller	As Required, 12 (6 Per Side)
C-3317-228 * or C-3317-228 **	O-Ring, Flange (F-Flange)	2 (1 Per Side)
3E1951 *** or 3E1951 **	Split Mounting Plate, Slip Ring, Propeller Electrical Deicing	As Required, 2 (1 Per Side)

* Part number of Hartzell Propeller Inc., One Propeller Place, Piqua, OH 45356-2634, Website: www.hartzellprop.com, E-mail: techsupport@hartzellprop.com, 937-778-4200 (Hartzell Propeller Inc.), 1-800-942-7767 or 937-778-4379 (Product Support), 1-800-942-7767 or 937-778-4376 (After Hours AOG Support), FAX: 937-778-4391 (Product Support).

** Part number of Raytheon Aircraft Company, P. O. Box 85, Wichita, KS 67201. Obtain from Raytheon Aircraft Parts Inventory and Distribution Company (RAPID), 10511 E. Central, Wichita, KS 67206, Website: parts.raytheonaircraft.com/RACRetail/ssl/login.asp, E-mail: parts@raytheonaircraft.com, 888-RAPID44 (888-727-4344) (Domestic) or 316-676-3100 (International), FAX: 316-676-3222 (Domestic) or 316-676-3327 (International).

*** Part number of De-Icing and Specialty Systems (a Division of Goodrich Corporation - formerly BFGoodrich Aerospace), 1555 Corporate Woods Parkway, Uniontown, OH 44685-8799, Website: www.deicingsystems.goodrich.com, E-mail: dssd.support@goodrich.com, 330-374-3040 or 330-374-4013, FAX: 330-374-2290.

Raytheon Aircraft Company expressly reserves the right to supersede, cancel and/or declare obsolete, without prior notice, any parts or publications that may be referenced in this Service Bulletin.

The materials required to accomplish this Service Bulletin are specified in the applicable Hartzell Propeller Manual(s) and/or Hartzell Service Documents and may be ordered through a Raytheon Aircraft Authorized Service Center, RAPID or may be obtained locally.

D. Spares

Not applicable.

E. Reidentified Parts

None.

F. Tooling - Price and Availability

Not applicable.

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3. Accomplishment Instructions

This Service Bulletin shall be accomplished as follows:

NOTE

Should any difficulty be encountered in accomplishing this Service Bulletin, contact Raytheon Aircraft Company at 1-800-429-5372 or 316-676-3140.

A. Airplane

WARNING

Observe all Warnings and Cautions contained in the aircraft manuals referenced in this Service Bulletin.

Whenever any part of this system is dismantled, adjusted, repaired or renewed, detailed investigation must be made on completion to make sure that distortion, tools, rags or any other loose articles or foreign matter that could impede the free movement and safe operation of the system are not present, and that the systems and installations in the work area are clean.

WARNING

Any inspection or maintenance of aluminum hub propellers must be performed by qualified personnel at an appropriately licensed propeller repair facility. Inspection and repair of propeller parts require a high degree of skill. Therefore, personnel with inspection and supervisory responsibility are expected to have an FAA Propeller Repairman's Certificate and a minimum of 18 months practical experience with Hartzell aluminum hub propeller overhaul.

Prior to loosening or removing the propeller mounting hardware, the propeller assembly must be properly supported with a suitable crane hoist and sling. Ensure that the crane hoist and sling have a minimum rating of 800 pounds to support the weight of the propeller assembly when performing maintenance. Failure to do so may cause personal injury and/or damage to the propeller hub.

Prior to performing any inspection or maintenance on the propeller assembly, ensure that the magneto/start switches are OFF, the throttles are in the CLOSED position, and the mixture controls are in the IDLE CUT-OFF position. Always stand in the clear while turning the propellers.

- (1) Remove all electrical power from the airplane and disconnect the batteries in accordance with Section 13 of the Beechcraft Baron 55 and 58 Shop Manual. Display warning notices prohibiting reconnection of airplane electrical power.

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- (2) Gain access to the propeller mounting hardware on both the left and right engines of the airplane by removing the upper engine cowl and the engine cowl upper nose fairing (bug-nose). Refer to Chapter 71-10 of the Beechcraft Baron B55, E55 and 58 Illustrated Parts Catalog.

PART I

WARNING

Part I of this Service Bulletin must be accomplished in accordance with the time limits specified under COMPLIANCE.

- (1) On each propeller installation (both the left and right engines of the airplane), accomplish Hartzell Service Bulletin No. HC-SB-61-272 to: 1) inspect the torque of the propeller mounting nuts and 2) replace the propeller hub assembly as applicable. Refer to Figure 1.
- (2) After accomplishing Hartzell Service Bulletin No. HC-SB-61-272 on each propeller installation (both the left and right engines of the airplane), make a logbook entry noting compliance with Part I of this Service Bulletin.
- (3) The airplane may be returned to service until accomplishment of Part II of this Service Bulletin is required by the time limits specified under COMPLIANCE. If Part II of this Service Bulletin is to be accomplished at a later date, proceed to COMPLETION OF INSPECTION/MODIFICATION. If Part II of this Service Bulletin is to be accomplished at this time, proceed to PART II.

PART II

WARNING

Part II of this Service Bulletin must be accomplished in accordance with the time limits specified under COMPLIANCE.

CAUTION

Raytheon Aircraft Company recommends removal of the propeller prior to accomplishing the propeller slip ring split mounting plate inspection procedures in Hartzell Service Letter No. HC-SL-61-239. Prior to installing the propeller, a new Hartzell P/N C-3317-228 flange o-ring must be installed and the old o-ring discarded. Removal and installation of the propeller must be accomplished in accordance with Section 7 of the Beechcraft Baron 55 and 58 Shop Manual and the applicable Hartzell Propeller Manual(s).

The propeller slip ring split mounting plate is installed on the aft side of the engine mounting flange and should be secured with a Hartzell P/N A-1381 propeller mounting washer installed between each propeller mounting nut and the propeller slip ring split mounting plate.

Any propeller slip ring split mounting plate that has surface damage around a mounting hole may permit the applicable propeller mounting nut to lose torque

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and must be repaired. Remove any surface damage using a Bridgeport, or equivalent, (recommended) with a 15/16 inch counterbore piloting tool with a 0.005 inch maximum corner radius. Removal and installation of the propeller slip ring split mounting plate must be accomplished in accordance with Section 11 of the Beechcraft Baron 55 and 58 Shop Manual and the applicable Hartzell Propeller Manual(s).

- (1) On each propeller installation (both the left and right engines of the airplane), accomplish Hartzell Service Letter No. HC-SL-61-239 to: 1) inspect the area around the mounting holes in the propeller slip ring split mounting plate for any scoring, gouging or other damage that could have been caused by the propeller mounting nuts, 2) accomplish any applicable repairs to the propeller slip ring split mounting plate and 3) install a Hartzell P/N A-1381 propeller mounting washer between each propeller mounting nut and the propeller slip ring split mounting plate. Refer to Figures 1 and 2.
- (2) After accomplish Hartzell Service Letter No. HC-SL-61-239 on each propeller installation (both the left and right engines of the airplane), make a logbook entry noting compliance with Part II of this Service Bulletin.
- (3) Proceed to COMPLETION OF INSPECTION/MODIFICATION to return the airplane to service.

COMPLETION OF INSPECTION/MODIFICATION

- (1) On both the left and right engines of the airplane install the engine cowl upper nose fairing (bug-nose) and the upper engine cowl. Refer to Chapter 71-10 of the Beechcraft Baron B55, E55 and 58 Illustrated Parts Catalog.
- (2) Reconnect the airplane batteries, remove warning notices and restore power in accordance with Section 13 of the Beechcraft Baron 55 and 58 Shop Manual.
- (3) Ensure all work areas are clean and clear of tools and miscellaneous items of equipment.
- (4) Return airplane to service.

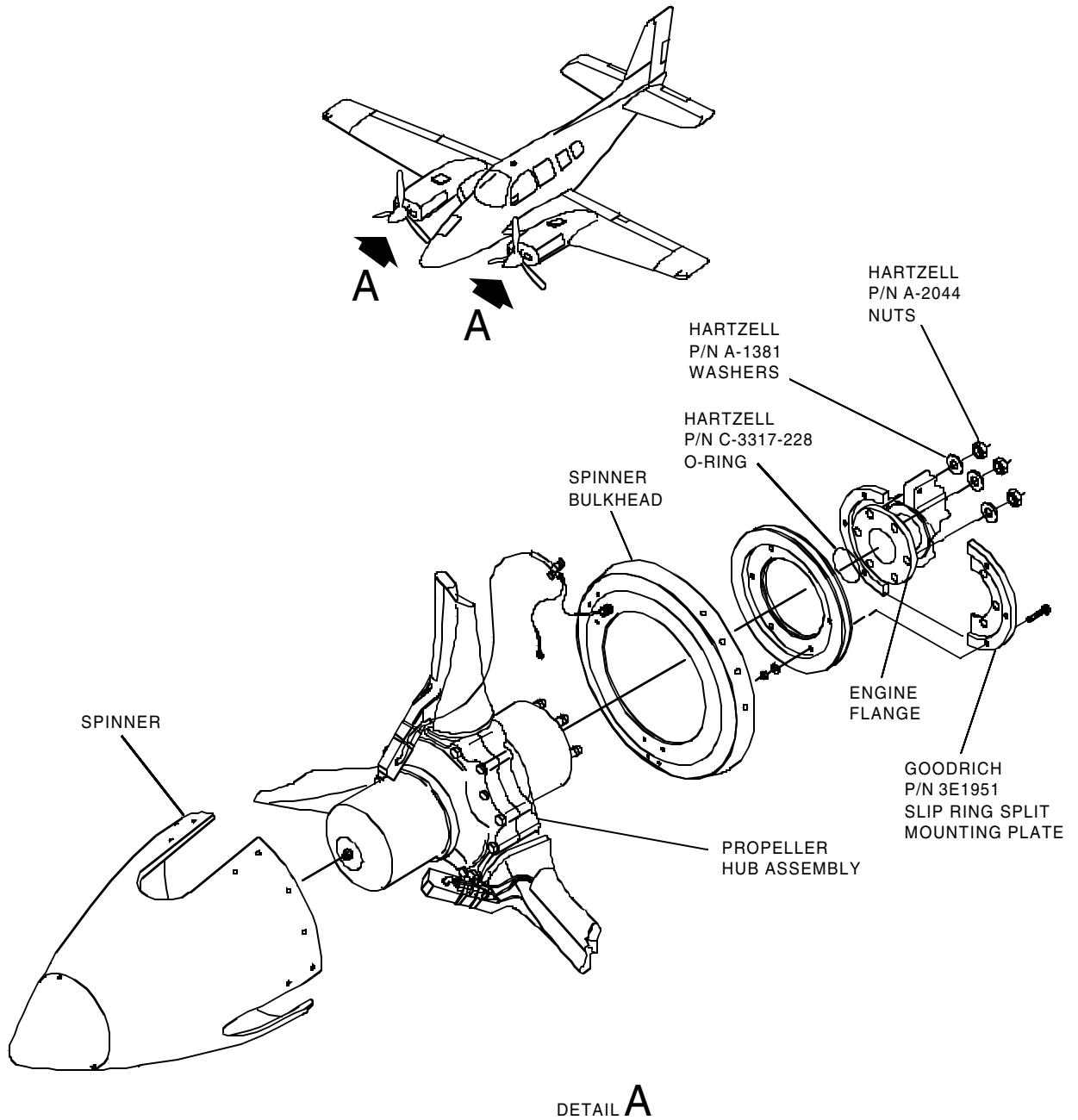
B. Spares

Not applicable.

C. Record of Compliance

Upon completion of this Service Bulletin, make an appropriate maintenance record entry.

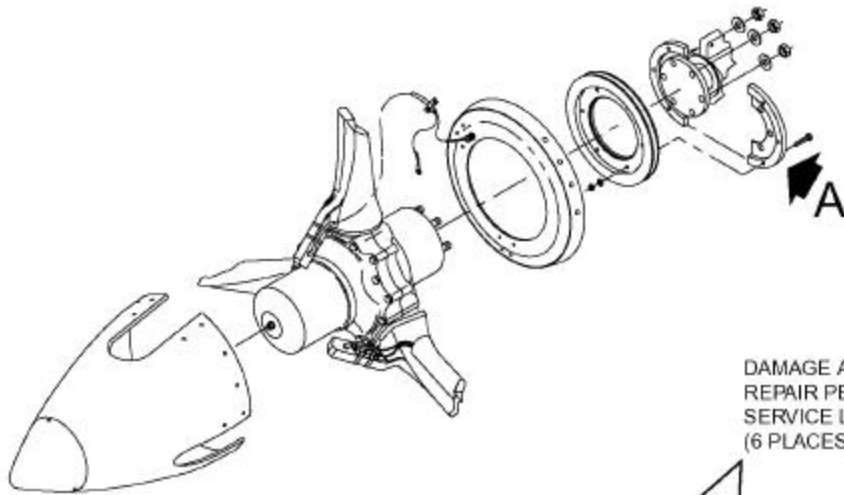
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**Installation of Hartzell 3 Blade Propeller with Goodrich Electrical Propeller Deicing
Figure 1**

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DAMAGE AREA
REPAIR PER HARTEZLL
SERVICE LETTER HC-SL-61-239
(6 PLACES)



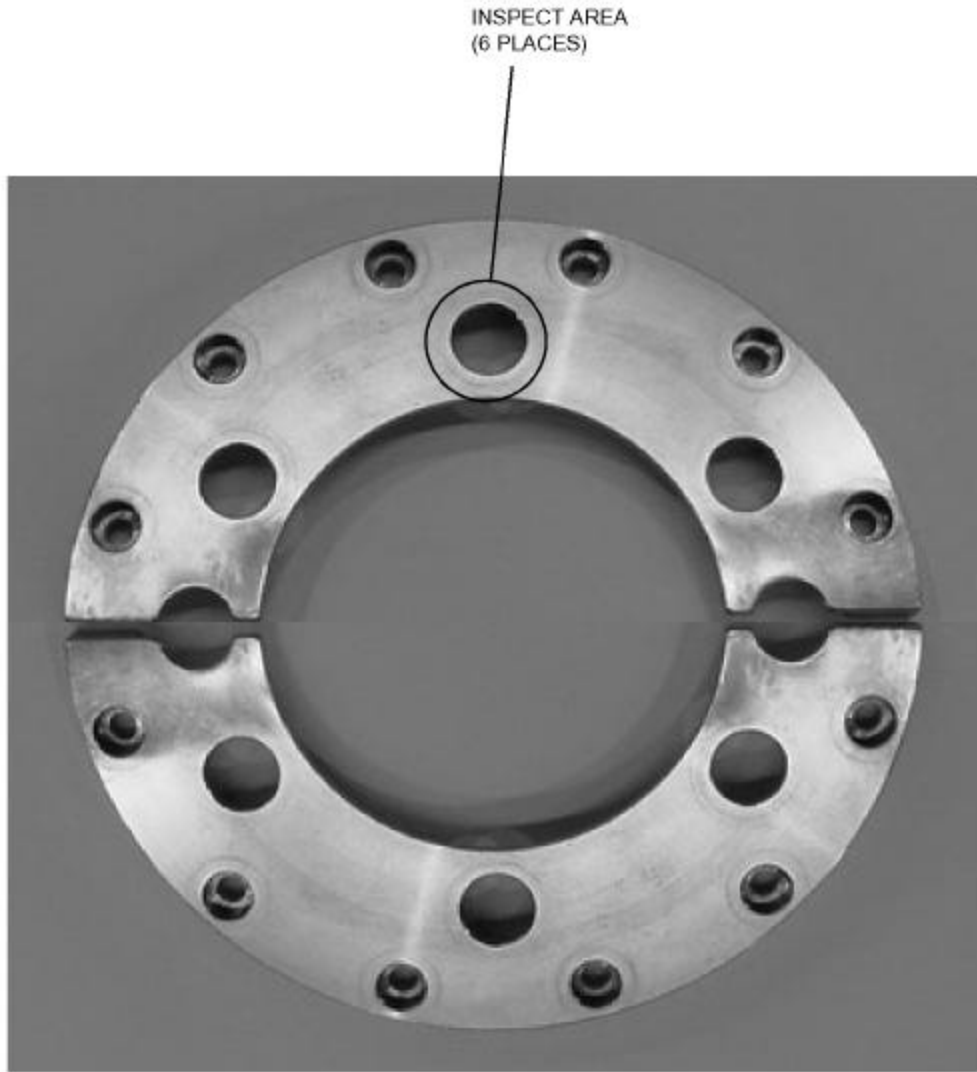
DAMAGED MOUNTING PLATE

DETAIL **A**

8370902 AI

Goodrich Electrical Propeller Deicing Slip Ring Split Mounting Plate
Figure 2 (Sheet 1 of 2)

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UNDAMAGED MOUNTING PLATE

DETAIL **A**

B570603.AI

Goodrich Electrical Propeller Deicing Slip Ring Split Mounting Plate
Figure 2 (Sheet 2 of 2)