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# Component Maintenance Manual with Illustrated Parts List

#### **Retractable Landing Light**

Part Number	CAGE
45-0351-1	72914
S283A321-1	81205
45-0351-2	72914
S283A321-2	81205
45-0351-3	72914
S283A321-3	81205
45-0351-4	72914
S283A321-4	81205
45-0351-5	72914

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ECCN: 9E991.

33-42-07

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Part Number	CAGE
S283A321-5	81205
45-0351-6	72914
S283A321-6	81205

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#### TRANSMITTAL INFORMATION

TO HOLDERS OF RETRACTABLE LANDING LIGHT CMM ATA NO. 33-42-07 ISSUED FOR USE IN SUPPORT OF THE FOLLOWING:

Table TI-1 shows the applicable components.

**Table TI-1. Applicable Components** 

Component PN	Boeing PN	Nomenclature
45-0351-1	S283A321-1	Retractable Landing Light
45-0351-2	S283A321-2	Retractable Landing Light
45-0351-3	S283A321-3	Retractable Landing Light
45-0351-4	S283A321-4	Retractable Landing Light
45-0351-5	S283A321-5	Retractable Landing Light
45-0351-6	S283A321-6	Retractable Landing Light

#### **Revision History**

Table TI-2 shows the revision history of this CMM.

**Table TI-2. Revision History** 

Revision Number	Revision Date
0	1 Mar 1997
1	15 Jun 1999
2	1 Jan 2000
3	15 Mar 2002
4	15 Aug 2004
5	15 Jun 2006
6	15 Aug 2006
7	15 May 2007
8	8 Apr 2010
9	12 Jul 2010
10	8 Sep 2011
11	5 Mar 2013
12	12 Mar 2014
13	14 Dec 2015
14	21 Mar 2017
15	16 Oct 2020
16	14 Jan 2021

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This revision is a full replacement. All changed pages have a new date, as identified in the List of Effective Pages. Revision bars identify the changed data. A revision bar adjacent to the Fig./Item column identifies changes in the Detailed Parts List. See Transmittal information for history of revisions to this CMM.

Remove and discard all pages of the manual and replace them with the attached pages. Write the revision number, revision date, and replacement date on the Record of Revisions page.

Revision bars mark the technical data that changed in this revision; those changes are described in the Table of Highlights. Editorial changes are not marked with a revision bar.

The table of highlights tells users what has changed as a result of the revision. The table consists of three columns.

The Task/Page column identifies the blocks of changed information, such as a task, subtask, graphic, or parts list, and the page on which that block starts. The block of information often includes the MTOSS code. Revision marks, when provided, identify the location of the change within the block.

The Description of Change column tells about the change or changes within each block. The description of change is often preceded by a paragraph or figure reference that applies to the block of information.

The Effectivity column tells the user the part number(s) to which the block of information applies. The default value for this column is "All." "All" means that the block applies to all parts.

#### **Table of Highlights**

Task/Page	Description of Change	Effectivity
TRANSMITTAL INFORMATION	Global Change: Changed the content and format to agree with the Honeywell processes in effect at the time of the release of this revision.	All
TRANSMITTAL INFORMATION	Global Change: The editorial changes and data that were moved or reformatted are not identified with revision bars.	All
Subtask 33-42-07-810-004-A01 (Page 1007)	Paragraph 2.D. Step (34). Changed step reference from "Step (34)" to "Step (33)".	All
Subtask 33-42-07-810-004-A01 (Page 1007)	Paragraph 2.D. Step (35). Changed step reference from "Step (35)" to "Step (34)".	All
Subtask 33-42-07-810-004-A01 (Page 1007)	Paragraph 2.D. Step (36). Changed step reference from "Step (34)" to "Step (33)".	All

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#### **RECORD OF REVISIONS**

For each revision, write the revision number, revision date, date put in the manual, and your initials in the applicable column.

**NOTE:** Refer to the Revision History in the TRANSMITTAL INFORMATION section for revision data.

Revision Number	Revision Date	Date Put In Manual	Ву	Revision Number	Revision Date	Date Put In Manual	Ву

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#### RECORD OF TEMPORARY REVISIONS

Instructions on each page of a temporary revision tell you where to put the pages in your manual. Remove the temporary revision pages only when discard instructions are given. For each temporary revision, put the applicable data in the record columns on this page.

Definition of Status column: A TR may be active, incorporated, or deleted. "Active" is entered by the holder of the manual. "Incorporated" means a TR has been incorporated into the manual and includes the revision number of the manual when the TR was incorporated. "Deleted" means a TR has been replaced by another TR, a TR number will not be issued, or a TR has been deleted.

Temporary Revision Number	Status	Page Number	Issue Date	Date Put In Manual	Ву	Date Removed From Manual	Ву
33-1	INC Rev 14						
33-2	INC Rev 15						
33-3	INC Rev 15						

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#### **SERVICE BULLETIN LIST**

Refer to Table INTRO-5 for other applicable service information documents not listed in the Service Bulletin List.

Service Bulletin/ Revision Number	Title	Modification	Date Put In Manual
45-0351-33-SB01	Repair of Gearbox Assembly		1 Sep 1998
45-0351-33-SB02	Repair of Drain Hole		1 Mar 2001
45-0351-33-SB03	Replacement of Lens Retainer Assembly		1 Oct 2001
45-0351-33-SB04	This SB has been rescinded. See SB 45-0351-33-0007.		1 Aug 2006
Revision 1	No effect		13 Feb 2017
45-0351-33-SB05	This SB has been rescinded. See SB 45-0351-33-0007.		1 Aug 2006
Revision 1	No effect		13 Feb 2017
45-0351-33-0006	Replacement of Motor End Cap	6	1 Feb 2004
45-0351-33-0006,	Replacement of Motor End Cap	6	8 Apr 2010
Revision 1			
45-0351-33-0007	Prevent Moisture in Wiring Harness	7	15 Jun 2006
45-0351-33-0007,	Prevent Moisture in Wiring Harness	7	1 Aug 2006
Revision 1			
45-0351-33-0007,	Prevent Moisture in Wiring Harness	7	15 Sep 2006
Revision 2			
45-0351-33-0007,	Prevent Moisture in Wiring Harness	7	5 Mar 2013
Revision 3			
45-0351-33-0007,	Prevent Moisture in Wiring Harness	7	16 Oct 2020
Revision 4			
45-0351-33-0008	Retractable Landing Light Assembly (Landing Light), PN 45-0351-1 Thru -4; Electrical System, FAA Repair Station License FQSR015K, Hardware Modification (MOD) 8 to Simplify Lens Replacement	8	8 Sep 2011
45-0351-33-0009	Retractable Landing Light Assembly (Landing Light), PN 45-0351-1 Thru -4; Electrical System, FAA Repair Station License FQSR015K, Hardware Modification (MOD) 9 to Upgrade the Input Connector	9	8 Sep 2011

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10050	14 Jan 2021			
10051	14 Jan 2021			
10052	14 Jan 2021			
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10058	14 Jan 2021			
10059	14 Jan 2021			
10060	14 Jan 2021			
10061	14 Jan 2021			
10062	14 Jan 2021			
10063	14 Jan 2021			
10064	14 Jan 2021			
10065	14 Jan 2021			

<sup>\*</sup> Indicates a changed or added page.

EFFECTIVITY-

F Indicates a foldout page.

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#### COMPONENT MAINTENANCE MANUAL 45-0351

#### INTRODUCTION

- 1. <u>How to Use This Manual</u> (TASK 33-42-07-99F-801-A01)
  - **A. General** (Subtask 33-42-07-99F-001-A01)
    - (1) This publication gives maintenance instructions for the equipment shown on the Title page.
    - (2) Standard maintenance procedures that technicians must know are not given in this manual.
    - (3) This publication is written in agreement with the ATA Specification.
    - (4) Refer to the Special Tools, Fixtures, and Equipment and Consumables tables in each section before the start of maintenance or repair procedures.
    - (5) An explanation on how to use the ILLUSTRATED PARTS LIST is given in the Introduction to that section.
    - (6) Honeywell recommends that you do the tests in TESTING AND FAULT ISOLATION before you disassemble the unit. These tests can show the condition of the unit or most possible cause of a malfunction. If a malfunction occurs, repair as necessary.
    - (7) Warnings, cautions, and notes in this manual give the data that follows:
      - A WARNING gives a condition or tells personnel what part of an operation or maintenance procedure, which if not obeyed, can cause injury or death
      - A CAUTION gives a condition or tells personnel what part of an operation or maintenance procedure, which if not obeyed, can cause damage to the equipment
      - A NOTE gives data, not commands. The NOTE helps personnel when they do the related instruction.
    - (8) Warnings and cautions go before the applicable paragraph or step. Notes follow the applicable paragraph or step.
  - B. Observance of Manual Instructions (Subtask 33-42-07-99F-002-A01)
    - (1) Make sure that you carefully obey all safety, quality, operation, and shop procedures for the unit.
    - (2) All personnel who operate equipment and do maintenance specified in this manual must know and obey the safety precautions.
  - **C. Symbols** (Subtask 33-42-07-99F-003-A01)
    - (1) The symbols and special characters are in agreement with IEEE Publication 260 and IEC Publication 27. Special characters in text are spelled out.
    - (2) The signal mnemonics, unit control designators, and test designators are shown in capital letters.
    - (3) The signal names followed by an "\*" show an active low signal.
    - (4) Some figures in this manual incorporate standard geometric characteristic symbols. Refer to Figure INTRO-1 for the geometric characteristic symbols.

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#### CHARACTERISTIC SYMBOLS

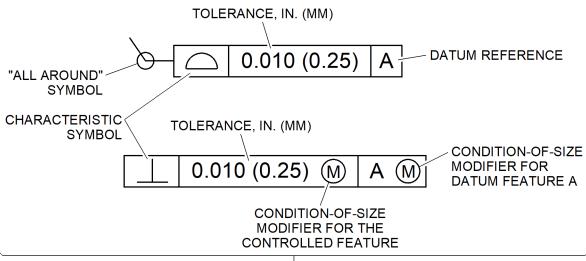
✓ FLATNESS
✓ STRAIGHTNESS
✓ CIRCULARITY
✓ ANGULARITY
✓ CYLINDRICITY
✓ CIRCULAR RUN OUT
✓ PROFILE OF A SURFACE
✓ PROFILE OF A LINE
© CONCENTRICITY
✓ PERPENDICULARITY
✓ PARALLELISM
✓ ANGULARITY
✓ CIRCULAR RUN OUT
✓ POSITION
— SYMMETRY
© CONCENTRICITY

#### **MODIFYING SYMBOLS**

#### **OTHER SYMBOLS**

- M MAXIMUM MATERIAL CONDITION (MMC)
  Ø DIAMETER
- (P) PROJECTED TOLERANCE ZONE

#### **FEATURE CONTROL FRAME**



EXCEPT WHEN THE DATUM(S) OR CONTROLLED FEATURE IS A PLANE SURFACE, A MODIFIER IS REQUIRED PER GENERAL RULE 1 OR MAY BE USED TO ALTER GENERAL RULE 2

ICN-HNYWL-0000233099-001-99

Figure INTRO-1. (Sheet 1 of 2) Geometric Tolerance Symbols

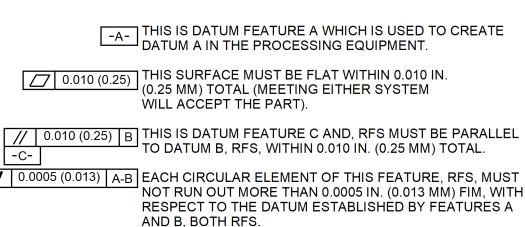
#### COMPONENT MAINTENANCE MANUAL 45-0351

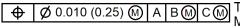
#### **GENERAL RULES**

- POSITION (

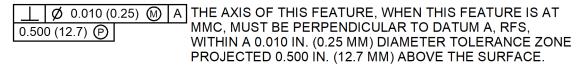
  ) TOLERANCES AND THEIR RELATED DATUMS APPLY AT MMC OR RFS AS SPECIFIED IN THE FEATURE CONTROL FRAME.
- EXCEPT FOR POSITION (♠), ALL TOLERANCES AND THEIR RELATED DATUMS APPLY RFS UNLESS OTHERWISE SPECIFIED.
- 3. ALL GEOMETRIC TOLERANCES ARE SPECIFIED AS TOTAL VALUES (TOTAL DIAMETER, TOTAL THICKNESS, TOTAL WIDTH, OR TOTAL ON RADIUS).
- 4. WHEN TWO DATUM FEATURES ARE REFERENCED IN HYPHENATED FORM, A-B, A SINGLE DATUM IS ESTABLISHED BY THE TWO FEATURES.
- 5. WHEN TWO OR THREE DATUMS ARE REFERENCED IN SUCCEEDING FRAMES, A B C, THE ORDER OF PRECEDENCE IS LEFT TO RIGHT.

#### SAMPLE INTERPRETATIONS





THE AXIS OF THIS FEATURE, WHEN THIS FEATURE IS AT MMC, MUST BE LOCATED WITHIN 0.010 IN. (0.25 MM) DIAMETER OF THE TRUE (BASIC) LOCATION ESTABLISHED IN RELATION TO THE PRIMARY SURFACE DATUM A, SECONDARY DATUM B AT MMC, AND TERTIARY DATUM C AT MMC.



THE ANGULAR ORIENTATION OF THIS FEATURE NEED NOT BE CONTROLLED WITH RESPECT TO ANY OTHER FEATURE.

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#### Figure INTRO-1. (Sheet 2 of 2) Geometric Tolerance Symbols

(5) The symbols in Figure INTRO-2 show ESDS and moisture sensitive devices.

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**ESDS** 

**MOISTURE SENSITIVE** 

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#### Figure INTRO-2. Symbols

- **D. Units of Measure** (Subtask 33-42-07-99F-004-A01)
  - (1) Measurements, weights, temperatures, dimensions, and other values are expressed in the USMS followed by the appropriate SI metric units in parentheses. Some standard tools or parts such as drills, taps, bolts, nuts, etc. do not have an equivalent.
- E. Page Number Block Explanation (Subtask 33-42-07-99F-005-A01)
  - (1) The data in this manual is divided into sections. A standard page number block system is used. Page number blocks are shown in Table INTRO-1.

**Table INTRO-1. Page Number Blocks** 

Section	Page Number Block
Description and Operation	1 thru 999
Testing and Fault Isolation	1001 thru 1999
Schematic and Wiring Diagrams	2001 thru 2999
Disassembly	3001 thru 3999
Cleaning	4001 thru 4999
Inspection/Check	5001 thru 5999
Repair	6001 thru 6999
Assembly	7001 thru 7999
Fits and Clearances	8001 thru 8999
Special Tools, Fixtures, Equipment and Consumables	9001 thru 9999
Illustrated Parts List	10001 thru 10999 <sup>1</sup>
Special Procedures	11001 thru 11999
Removal	12001 thru 12999
Installation	13001 thru 13999
Servicing	14001 thru 14999
Storage (Including Transportation)	15001 thru 15999
Rework (Service Bulletin Accomplishment Procedures)	16001 thru 16999

#### NOTE:

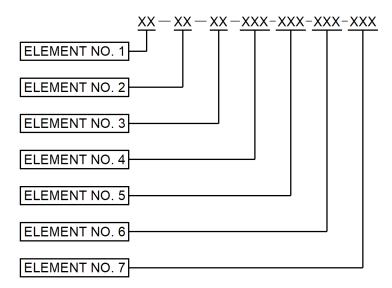
1 The IPL is the last page number block in the document.

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- **F. Illustration** (Subtask 33-42-07-99F-006-A01)
  - (1) Some of the exploded view illustrations shown in the ILLUSTRATED PARTS LIST section are also referenced in the DISASSEMBLY, CLEANING, INSPECTION/CHECK, REPAIR, ASSEMBLY, and/or FITS AND CLEARANCES sections of this manual.
  - (2) Illustrations that support the individual items are shown by the item nomenclature, and in parenthesis, the item number followed by the basic figure number, i.e. washer (90, IPL Figure 1). Item numbers refer to the same IPL figure until a different IPL figure is specified.
  - (3) Illustrations with no specific designation are applicable to all units.
- G. Application of Maintenance Task Oriented Support System (MTOSS) (Subtask 33-42-07-99F-007-A01)
  - (1) In accordance with the ATA Specification 2200, this publication uses a Maintenance Task Numbering System which make the maintenance procedures in this manual compatible with an automated shop environment.
  - (2) The system uses standard and unique number combinations to identify maintenance tasks and subtasks.
  - (3) The MTOSS structure is the logical approach to organizing maintenance tasks and subtasks. The MTOSS numbering system includes the ATA Chapter-Section-Subject number as well as a function code and unique identifiers. The purpose of incorporating the MTOSS numbering system is to provide a means for the automated sorting, retrieval, and management of digitized data.
  - (4) Section and Sub-section Numbering System
    - (a) All procedures in this publication have TASK and SUBTASK numbers at key data retrieval points. The numbers provide the following:
      - Identification of the hardware (part or parts) primary to the TASK
      - Identification of the maintenance function applied to the part or parts
      - A unique identifier for a set of instructions (known as TASK or SUBTASK)
      - Identification of alternate methods and configuration differences that change the procedure applied to the TASK
      - Identification of airline changes to a TASK or SUBTASK.
  - (5) Components of Task and Subtask Number
    - (a) The numbering system is an expansion of the ATA three-element numbering system. The number has seven elements. The first five elements are necessary for each TASK or SUBTASK. The sixth and seventh elements are applied only when necessary. Refer to Figure INTRO-3.
    - (b) Elements 1, 2, and 3 identify the ATA Chapter-Section-Subject number of the pageblock.
    - (c) Element 4 defines the maintenance function being performed. This element is a three position element. The third position is zero filled when further definition is not required. If required, the manufacturer will use the numbers 1 thru 9 or letters A thru Z, excluding the letters I and O. Refer to Table INTRO-2.
    - (d) Element 5 provides a unique identification for each TASK or SUBTASK number which is similarly numbered through the first four elements.

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- TASKS are numbered from 801 thru 999.
- SUBTASKS are numbered from 001 thru 800.
- (e) Element 6 is a three position alphanumeric element used for identification of differences in configurations, methods or techniques, variations of standard practice applications, etc.
- (f) Element 7 provides coding of those tasks or subtasks that have been changed by the customer (e.g., those tasks or subtasks accomplished by an outside repair source).



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# Figure INTRO-3. MTOSS Code Positions Table INTRO-2. MTOSS Function Code Definitions

Code	Function	Definition
000	REMOVAL AND DISASSEMBLY	
010	Removal	Removal of the engine/component from a workstand, transport dolly, test stand, etc., or aircraft.
020	Remove Modular Sections	This is the first echelon of disassembly which consists of sectionalization of the unit/engine into primary modular sections. Modular sections are identified by the third element of the ATA number when removed from the unit/engine.
030	Disassemble Modular Sections	This is the second echelon of disassembly which consists of disassembly of the modular sections into subassemblies after removal from the unit/ engine. Modular section designations appear in the second element of the ATA number for this echelon of disassembly.

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Code	Function	Definition
040	Disassemble Subassemblies	This is the third echelon of engine disassembly which consists of disassembly of subassemblies to the piece part level. The subassemblies are identified by the third element of the ATA number.
050	Remove Accessory/Power Plant Components	This consists of removing individual accessory/ power plant components from either installed or uninstalled engines.
060	Disassemble Accessory	This involves disassembly of accessories/ components into subassemblies.
070	Disassemble Accessory Subassembly	This involves disassembly of accessories/ components subassemblies into piece parts.
080	Remove Test Equipment	This consists of removing equipment and instrumentation after accessory/component test.
090	Disassemble Support Equipment	This consists of disassembly of support equipment required to maintain said support equipment.
100	CLEANING	
110	Chemical	Removal of surface deposits from a part by use of a chemical cleaning agent. After being dissolved, the deposit is washed or rinsed away after a soaking period. Also includes chemical power flushing.
120	Abrasive	Removal of surface deposits from a part by wet or dry particle impingement.
130	Ultrasonic	Removal of surface deposits and entrapped material by use of high frequency sound waves to produce cavitation at the surface of the part. Cleaning is performed in a liquid bath that transmits the sound energy and keeps the removed material in suspension.
140	Mechanical	Removal of surface deposits from a part by use of a brush, felt bob, sandpaper, or other hand or mechanical action.
150	Unassigned	
160	Miscellaneous	Removal of deposits from parts with compressed air, miscellaneous hand cleaning, and various combinations of cleaning procedures.

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Code	Function	Definition
170	Foam/Water Wash	Removal or post emulsified fluorescent penetrant via an agitated water wash, automatic spray rinse, or an aqueous remover aerated to produce a foam.
180	Testing of Solutions	Test used to assist in identifying certain materials by electro-mechanically determining the presence or absence of known constituents.
190	Unassigned	
200	INSPECTION	
210	Check	A thorough visual examination of components, accessories, subsystems, and piece parts to detect structural failure, deterioration or damage: and to determine the need for corrective action. For example: exterior surfaces, electronic circuit cards, gears, control systems, linkages, accessories, components, tubing, wiring and connections, safety wiring, fasteners, clamps, etc., are inspected to verify proper condition and acceptability for continued service.
220	Visual/Dimensional	A comparison of the dimensions and material conditions of parts, subassemblies, and assemblies with the specifications contained in technical manuals and/or blueprints, to detect deviations from established standard and limits and determine the acceptability for continued service, repair, or need to discard the item. A visual/dimensional function code is also required to verify that proper corrective maintenance has been accomplished. Although some of these tasks may not require measurements, a complete spectrum of tasks/sub tasks requires a variety of measuring equipment to determine runout, concentricity, flatness, parallelism, hardness, thickness, clarity, dimensions, etc.
230	Penetrant	Fluorescent penetrant inspection to detect surface cracks.
240	Magnetic	Magnetic particle inspection to detect surface cracks in magnetic materials.

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Code	Function	Definition
250	Eddy Current	Inspection for subsurface cracks, porosity, inclusions, or other nonhomogeneous material structure by use of high frequency electromagnetic wave equipment. Parts are scanned and compared to similar parts or test specimens having known material defects.
260	X-Ray	Inspection for subsurface cracks, porosity, inclusions, or other nonhomogeneous material structure by use of x-ray techniques.
270	Ultrasonic	Inspection for subsurface cracks, porosity, inclusions, or other nonhomogeneous material structure by use of contact pulse echo ultrasonic techniques.
280	Special	Any special inspection to determine the integrity of a part for continued operation In-Service or qualitative analysis.
290	Unassigned	
300	DEDAID	
310	REPAIR  Welding and Brazing	The joining of pieces by welding (fusion, resistance, spot, electron beam, plasma arc), brazing (furnace, torch, induction), or soldering. This category includes hard facing.
320	Machining	The process of obtaining a desired shape or finish by grinding, turning, boring, reaming, broaching, milling, drilling, lapping, honing, sizing, polishing, buffing, cutting, forming, stamping, blanking, etc.
330	Stripping and Plating	Removing or applying a metallic coating on a surface by mechanical, chemical, or electrical means. Plating of chromium, cadmium, tin, etc., to build up the size of a part or provide surface protection. Includes masking or waxing prior to the process.
340	Plasma and Flame Spraying	The application of a protective coating to a part by feeding a powder into an ionized gas stream. Flame spraying uses a fuel oxygen flame to melt and propel metal onto parts to build up the size or provide surface protection.

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Code	Function	Definition
350	Miscellaneous Repairs	Repairing parts by hand (cutting, drilling, polishing, grinding, lapping, riveting, blending, routing, fitting, burring, planishing, sanding, sawing, recambering, drilling, tapping, heating, chilling) and including miscellaneous disassembly and assembly required.
360	Bonding and Molding/Sealing	Joining and curing of parts with an adhesive or fusible material (including silicone, fiberglass, glues).
370	Heat Treating	Controlled heating and cooling of a material to obtain the desired physical property (includes annealing, tempering, quenching, stress relieving, solution heat treat, etc.).
380	Surface Treating	Treating the surface of a part by painting, varnishing, aluminizing, Teflon coating, zinc chromate priming, tumble finishing, shot peening, etc. Baking and masking processes are included.
390	Machine Riveting and Flaring	Joining of parts by riveting and flaring the rivet.
400	INSTALLATION AND ASSEMBLY	
410	Install	Installation of the unit/engine onto a workstand, transport dolly, test stand, or aircraft.
420	Install Modular Sections	The third echelon of assembly consisting of assembly of the modular assemblies into a complete unit/engine assembly. The modular sections are identified by the third element of the ATA number.
430	Assemble Modular Sections	The second echelon of assembly consisting of assembling subassemblies into modular sections. The modular section is identified by the second element of the ATA number.
440	Assemble Subassemblies	The first echelon of assembly consisting of assembling piece parts into subassemblies. The subassemblies are identified by the third element of the ATA number.
450	Install/Close Items Removed/Opened for Access	Installation or closing of access plates, closing of ports, installation of components, tubing or any item which was removed or opened in order to provide access to perform the task.
460	Assemble Accessory	Assemble accessory components.
470	Assemble Accessory Subassembly	Assembly of accessory subassembly components.

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Code	Function	Definition	
480	Install Test Equipment	Install equipment and instrumentation required for accessory component test.	
490	Assemble Support Equipment	Any assembly required to maintain support equipment.	
500	MATERIAL HANDLING		
510	Shipping	The movement of any part, subassembly, assembly, or component from the time it is packaged until it reaches its destination.	
520	Receiving	The receipt activity for any incoming part, subassembly, assembly, or component.	
530	Packing	Installing parts, subassemblies, assemblies, or components into shipping containers.	
540	Unpacking	Removing parts, subassemblies, assemblies, or components from shipping containers.	
550	Storage	Safekeeping of parts, subassemblies, assemblies, or components until required for use.	
560	Marshaling/Positioning	Marshaling is collection of parts, subassemblies, and accessories prior to release for assembly. Positioning is movement from one fixed state to another.	
570	Engine Ferry/Pod Maintenance	Necessary preparations before and after transporting an engine by aircraft ferry method.	
580	Unassigned		
590	Unassigned		
600	SERVICING/PRESERVING/LUBRICATING		
610	Servicing	Action required to sustain a unit or system in proper operating status including priming with applicable fluids prior to use.	
620	Preserving	Preparation of a unit, part, assembly, etc., for safekeeping from decomposition or deterioration. Includes preparation for storage (applying a preservative layer, desiccants, etc.).	
630	Depreserving	Removing preservatives, desiccants, etc., from a unit, part, assembly, etc., prior to installation or operation.	

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Code	Function	Definition
640	Lubricating	Applying oil, grease, dry film, or silicon lubricants on moving parts to reduce friction or cool the item.
650	Unassigned	
660	Unassigned	
670	Unassigned	
680	Unassigned	
690	Unassigned	
700	TESTING/CHECKING	
710	Oil Flow	Measuring the flow of oil through components or compartments under specific conditions.
720	Air Flow	Measuring the flow of air through components or compartments under specific conditions.
730	Fuel Flow	Function checks and flow measurements through the part or system being tested.
740	Water Flow	Function checks and flow measurements through the part or system being tested.
750	Electrical/Return to Service	Functional tests (manual or ATE) of the system or component as well as measurement of electrical or electronic parameters designed to determine whether the item can be returned to service. May include fault isolation procedures for components that require close correlation between test results and fault indications.
760	Engine	Operation of an engine to establish systems function or operation under specific conditions to measure performance.
770	Accessory/Bite	Testing of an accessory to ensure proper operation or function.
780	Pressure Check	Testing to establish the ability of a normally pressurized component or system to operate properly.
790	Leak Check	Determine the ability of a component or system to operate without leaking.
800	MISCELLANEOUS	

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Code	Function	Definition
810	Fault Isolation	Operation of an engine at constant thrust level or identical Engine Pressure Ratio (EPR) to locate the prime suspect deficient system: operating an improperly functioning system or component to locate the cause; or performing a series of checks to isolate a failed part or component.
820	Adjusting/Aligning/Calibrating	Making a physical correction to ensure proper placement or operation of a system or component.
830	Rigging	Hooking-up, arranging, or adjusting a component or accessory linkage for proper operation.
840	Service Bulletin Incorporation	Performing the work specified in the service bulletin. Provides for identification of modification tasks at the task level with subtasks recognizing any functional changes (chemical, visual/dimensional, cleaning, machining, etc.) necessary to incorporate the service bulletin.
850	Part Number Change/Re-identification	Change of part number, application of part number by transfer, engrave repair number, etc.
860	Unassigned	
870	Description and Operation	Electrical and mechanical description of the unit or component. Includes leading particulars, descriptions, limitations, specifications, and theory of operation.
878	Schematic and Wiring Diagrams	Schematic diagrams, wiring diagrams, interconnect diagrams and wire lists.
880	Approved Vendor Processes	Includes processes that may be proprietary and controlled by a particular manufacturer, or by nonproprietary and approved for application by conforming vendors.
890	Airline Maintenance Program (Customer Use)	
900	Unassigned	
910	Special Equipment Maintenance	Identification of tasks to maintain special support equipment.
920	Standard Equipment Maintenance	Identification of tasks to maintain standard support equipment.
930	Tool Fabrication	Includes fabricating any tool for which procedures to use are included in the manual.

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### **Table INTRO-2. MTOSS Function Code Definitions (Cont)**

Code	Function	Definition
940	Special Tools, Equip, and Consumables Listing	Listing of all special tools, standard equipment, special equipment, and consumables required to perform maintenance on the unit or component.
94A	Consumables	
94B	Special Tools/Non Std Tools	
94C	Fixtures/Test Equipment	
94D	Standard Tools	
950	Illustrated Parts List (Detailed Parts List)	Section of IPL/IPC that contains parts description and identification in top-down break down sequence.
960	Illustrated Parts List (Equipment Designation Index)	Section of IPL/IPC that contains equipment designators cross-referenced to detailed parts list.
970	Illustrated Parts List (Numerical Index)	Section of IPL/IPC that contains an alphanumeric listing of all parts in the unit cross-referenced to the detailed parts list.
980	Illustrated Parts List (Alternate Vendor Index)	Optional section of IPL/IPC that contains an alphanumeric listing of all parts in the unit that have more than one vendor source.
990	Illustrations, Tables, Front Matter, Etc.	
99A	Tables	
99B	Illustrations	
99C	Front Matter Pageblock (TASK Level MTOSS) Front Matter Task (Collection of Subtask MTOSS)	
99D	Access	
99E	References	
99F	General/Introduction	

#### H. Standard Practices Manual (Subtask 33-42-07-99F-008-A01)

- (1) Standard cleaning, check, repair, and assembly procedures applicable to multiple models can be found in a standard practices manual. Refer to Paragraph 3.
- I. Electrostatic Discharge (Subtask 33-42-07-99F-009-A01)
  - (1) Touch the items susceptible to electrostatic discharge in accordance with MIL-HDBK-263. Refer to MIL-STD-1686 for definition of the standards and conditions.

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- **2. Customer Support** (TASK 33-42-07-99F-802-A01)
  - A. Honeywell Aerospace Online Technical Publications Website (Subtask 33-42-07-99F-010-A01)
    - (1) Go to the Honeywell Online Technical Publications Website at (https://aerospace.honeywell.com).
      - To download or see publications online
      - To order a publication
      - To tell Honeywell of a possible data error in a publication.
  - B. Honeywell Aerospace Contact Team (Subtask 33-42-07-99F-011-A01)
    - (1) If you do not have access to the Honeywell Technical Publications Website, or if you need to speak to personnel about non-Technical Publication matters, the Honeywell Aerospace Contact Team gives 24/7 customer service to Air Transport & Regional, Business & General Aviation, and Defense & Space customers around the globe.
      - Telephone: 800-601-3099 (Toll Free U.S.A./Canada)
      - Telephone: 602-365-3099 (International).
- **3.** References (TASK 33-42-07-99F-803-A01)
  - A. Honeywell/Vendor Publications (Subtask 33-42-07-99F-012-A01)
    - (1) Honeywell publications related to the content of this manual are shown in the list that follows:
      - ATA No. 20-00-04 (Pub. No. A09-1100-001), Handling, Storage, and Shipping Procedures for Honeywell Avionics Equipment Instruction Manual
      - ATA No. 20-00-03 (Pub. No. A09-1100-004), Standard Repair Procedures for Honeywell Avionics Equipment Instruction Manual.
  - B. Other Publications (Subtask 33-42-07-99F-013-A01)
    - (1) These publications are standard references. Check for latest version of publication.
      - The United States GPO Style Manual (available at http://www.gpo.gov/fdsys/pkg/GPO-STYLEMANUAL-2008/content-detail.html)
      - IEEE Std 260.1, Standard Letter Symbols for Units of Measurement (available from the American National Standards Institute at http://www.ansi.org)
      - ASME Y14.38, Abbreviations for Use on Drawings and Related Documents (available from the American National Standards Institute at http://www.ansi.org)
      - ASME Y14.5, Dimensioning and Tolerancing (available from the American National Standards Institute at http://www.ansi.org)
      - ANSI/IEEE Std 91, Graphic Symbols for Logic Functions (available from the American National Standards Institute at http://www.ansi.org)
      - CAGE codes and manufacturers' addresses are available at https://cage.dla.mil.
      - IEEE 315/ANSI Y32.2, Graphic Symbols for Electrical and Electronics Diagrams (available from the American National Standards Institute at http://www.ansi.org)

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- MIL-HDBK-263, Electrostatic Discharge Control Handbook for Protection of Electrical and Electronic Parts, Assemblies and Equipment (Excluding Electrically Initiated Explosive Devices) (Metric) (available from any military standards database)
- MIL-STD-1686, Electrostatic Discharge Control Program for Protection of Electrical and Electronic Parts, Assemblies and Equipment (Excluding Electrically Initiated Explosive Devices) (Metric) (available from any military standards database).
- **4.** Component Maintenance Levels (TASK 33-42-07-99F-804-A01)
  - A. General (Subtask 33-42-07-99F-014-A01)
    - (1) This CMM contains one or more component maintenance levels for repair. The component maintenance levels of repair are shown below as specified in the ARINC Report 663.
    - (2) Component maintenance level 1 is maintenance operations with an end result of determining LRU serviceability. No maintenance action is performed to repair the LRU.
    - (3) Component maintenance level 1 is limited to return to service testing and configuration confirmation of the LRU, including all software loading as necessary for return to service and the pre-loading of field loadable software.
    - (4) Component maintenance level 2 is maintenance operations with an end result of restoring LRU serviceability. Maintenance procedures are limited to the replacement of subassemblies.
    - (5) Component maintenance level 2 embodies those activities necessary to:
      - Fault isolate to the defective subassembly
      - Replace such subassemblies
      - Return the LRU to service.
    - (6) Component maintenance level 2 includes programming, calibrations, alignments, tuning, etc., necessary to return the LRU to service without the replacement of basic parts.
    - (7) Component maintenance level 3 is maintenance operations with an end result of restoring a LRU or a subassembly to serviceability. Maintenance includes repair of the LRU and or its subassemblies by any and all repair processes, including but not limited to, replacement of defective basic parts such as processor chips, transistors, or chassis mounted parts.
    - (8) Component maintenance level 3 embodies those activities necessary to:
      - Fault isolate to the basic part level
      - Replace/Repair such parts
      - Return the LRU or subassembly to service.
    - (9) Component maintenance level 3 includes all programming, calibrations, alignments, tuning, etc., necessary to return the LRU/SRU to service.
    - (10) If the service location does level 3 repairs, it must have the equipment identified in SPECIAL TOOLS, FIXTURES, EQUIPMENT, AND CONSUMABLES or the equivalent alternative(s).
- 5. Acronyms and Abbreviations (TASK 33-42-07-99F-805-A01)
  - **A. General** (Subtask 33-42-07-99F-015-A01)
    - (1) The abbreviations are used in agreement with ASME Y14.38.

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(2) Acronyms and non-standard abbreviations used in this publication are as follows:

### Table INTRO-3. List of Acronyms and Abbreviations

Term	Full Term
AC	alternating current
Align	alignment
AMP	ampere
ANSI	American National Standards Institute
ARINC	Aeronautical Radio, Incorporated
ASME	American Society of Mechanical Engineers
ATA	Air Transport Association
ATE	automated test equipment
AWG	American Wire Gage
С	Celsius
CAGE	commercial and government entity
CMM	component maintenance manual
DMM	digital multimeter
DPL	detailed parts list
ECCN	export control classification number
EDI	equipment designator index
ESDS	electrostatic discharge sensitive
F	Fahrenheit
GPO	Government Printing Office
Hz	Hertz
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
inHg	inches of mercury
IPC	illustrated parts catalog
IPL	illustrated parts list
kg	kilogram
kPa	kilopascal
LRU	line replaceable unit
mA	milliampere
mm	millimeter
mmHg	millimeters of mercury
MTOSS	maintenance task oriented support system
NHA	next higher assembly

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### Table INTRO-3. List of Acronyms and Abbreviations (Cont)

Term	Full Term
NI	numerical index
Nm	Newton meter
No.	number
PN	part number
PSI	pounds per square inch
Pub.	publication
SB	service bulletin
SI	International System of Units
SIL	service information letter
SPB	spare parts bulletin
SRU	shop replaceable unit
TIL	technical info letter
TR	temporary revision
UNC	unified coarse
USMS	United States Measurement System
VAC	volts alternating current

- **6. Process Verification** (TASK 33-42-07-99F-806-A01)
  - **A. Verification Data** (Subtask 33-42-07-99F-016-A01)
    - (1) Honeywell does a verification of these technical instructions by performance or by simulation of the necessary procedures. Performance shows that the procedures were checked by the use of the manual. Simulation shows that the applicable personnel looked at the procedure in the manual and that the procedure is technically correct. The dates of verification for this manual are given in Table INTRO-4.

#### **Table INTRO-4. Verification Data**

Section	Method	Date
Testing and Fault Isolation	Demonstration	12-13 Feb 1997
Disassembly	Demonstration	12-13 Feb 1997
Assembly	Demonstration	12-13 Feb 1997
Engineering Technical Review	N/A	23 Feb 2017

- 7. <u>Software History</u> (TASK 33-42-07-99F-807-A01)
  - **A. Software Data** (Subtask 33-42-07-99F-017-A01)
    - (1) Not applicable.

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- **8. History of Changes** (TASK 33-42-07-99F-808-A01)
  - A. Modification/Configuration History (Subtask 33-42-07-99F-018-A01)
    - (1) Not applicable.
  - B. Change History for Parts List (Subtask 33-42-07-99F-019-A01)
    - (1) Not applicable.
- 9. Service Information Documents (TASK 33-42-07-99F-809-A01)
  - A. Applicable Service Information Documents (Subtask 33-42-07-99F-020-A01)
    - (1) Refer to Table INTRO-5 for other applicable service information documents not listed in the Service Bulletin List.

**Table INTRO-5. Service Information Documents** 

Document Type	Document Number/ Revision Number	Title	Date Put In Manual
SIL	SIL D200909000039	Announce Addition of 3.7 LBFT (5.0 Joule) Minimum Impact Resistance Requirement and Witness Mark to PN 25-1835-23 Lens Used on Retractable Landing Light, PN 45-0351-1, -2, -3, -4	8 Sep 2011
SIL	SIL-33-444	Define the Loaded and Unloaded Test Conditions for the Retractable Landing Light, PN 45-0351-1, -2, -3, -4	8 Sep 2011
SPB	D200809000087	Spare Parts Bulletin for Correction of Part Numbers	8 Sep 2011
SPB	D201905000027	Spare Parts Bulletin for Retractable Landing Light, PN 45-0351-1 thru -5	16 Oct 2020
SPB	SPB00020	Landing Light	8 Sep 2011
SPB	SPB00119	Retractable Landing Light	8 Sep 2011
SPB	SPB00243	Retractable Landing Light	8 Sep 2011
SPB	SPB00243, Revision	Retractable Landing Light	5 Mar 2013
SPB	SPB00243, Revision 2	Retractable Landing Light	5 Mar 2013
SPB	SPB00219	Retractable Landing Light	19 Jun 2007
SPB	SPB00265	Spare Parts Bulletin for Correction of Part Numbers; Retractable Landing Light, Honeywell PN 45-0351-X, Boeing PN S283A321-X	8 Sep 2011
SPB	SPB00248	Spare Parts Bulletin for Correction of Part Numbers	12 Mar 2014
TIL	TIL 356	Captive Screw Change	15 Jun 1999
TIL	TIL 356A	Captive Screw Change	8 Sep 2011
TIL	TIL 395	Possible Connector Moisture Problem on Retractable Landing Light, P/Ns 45-0351-1, -2, -3, and -4	8 Sep 2011

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### **Table INTRO-5. Service Information Documents (Cont)**

Document Type	Document Number/ Revision Number	Title	Date Put In Manual
TIL	TIL 433	Cancelled	8 Sep 2011
TIL	TIL 442	Use Number 2 Screwdriver on (6 each - Number 6-32) Screws	16 Oct 2020

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### **DESCRIPTION AND OPERATION**

- 1. <u>Description</u> (TASK 33-42-07-870-801-A01)
  - **A. General** (Subtask 33-42-07-870-001-A01)
    - (1) This section contains a description of the retractable landing light.
    - (2) The retractable landing light has a 600-watt lamp, an AC motor, a transformer, and a drivetrain (gearbox assembly) mounted on a baseplate.
    - (3) The entire back of the retractable landing light is completely enclosed with a cover for protection. The connector is mounted outside the cover for easy connection.
    - (4) The retractable landing light is mounted an equal distance from the aircraft centerline on the lower portion of the wing to body fairing. It is designed to illuminate the runway during approach and flair of the aircraft.
    - (5) Refer to Table 1 for the leading particulars.

**Table 1. Leading Particulars** 

Characteristic	Specification
Length	15.48 inches (393.2 mm)
Width	11.70 inches (297.2 mm)
Height	5.28 inches (134.1 mm)
Weight	18.75 pounds (8.5 kg) maximum
Voltage	115 VAC, 400 Hz

(6) Refer to Figure 1 for retractable landing light.

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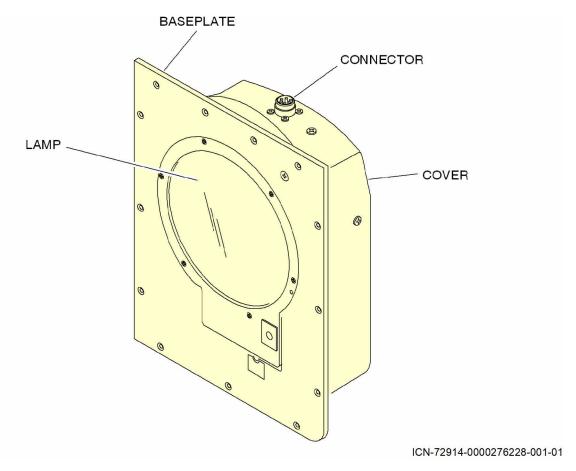


Figure 1. Retractable Landing Light

- **B.** Applicable Publications (Subtask 33-42-07-99C-001-A01)
  - (1) The list that follows identifies Honeywell publications that are related to this section:
    - Not applicable.
- **2. Operation** (TASK 33-42-07-870-802-A01)
  - A. Retractable Landing Light (Subtask 33-42-07-870-002-A01)
    - (1) The retractable landing light operates on 115 VAC and is controlled by a three-position switch in the flight deck. The three positions are EXTEND, ON, and RETRACT.
    - (2) When the switch is placed in the EXTEND position, the retractable landing light extends to a 78° angle, and the lamp does not illuminate.
    - (3) When the switch is placed in the ON position, the retractable landing light fully extends, and the lamp illuminates.
    - (4) When the switch is placed in the RETRACT position, the lamp goes out, and the retractable landing light retracts to the fully stowed position flush with the baseplate.

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#### **TESTING AND FAULT ISOLATION**

- 1. Planning Data (TASK 33-42-07-99C-801-A01)
  - A. Reason for the Job (Subtask 33-42-07-99C-002-A01)
    - (1) Use the test procedures in this section to test and isolate faults.
    - (2) The function of the test procedures is to find if there is a failure in the operation of the LRU.
  - Job Setup Data (Subtask 33-42-07-99C-003-A01) В.
    - (1) You can use equivalent alternatives for the special tools, fixtures, equipment, and consumable materials. The user must find equivalent alternatives.
    - (2) Refer to Table 1001 for the special tools, fixtures, and equipment in this section.
    - (3) CAGE codes and manufacturers' addresses are available at https://cage.dla.mil.

#### Table 1001. Special Tools, Fixtures, and Equipment

Number	Description	Source
05-0491-1	functional tester	CAGE: 06848
05-0494-1	functional tester	CAGE: 06848
	adjustable ac power supply (0 to 120 VAC, 400 Hz, 7 AMP minimum)	commercially available
	stopwatch	commercially available
Fluke 45	digital multimeter (10 Amp, AC range)	commercially available
Fluke Model 8010A	digital multimeter (200 VAC range)	commercially available
IF1610	load fixture (includes counter weights)	CAGE: 06848
IF1611	load fixture (includes counter weights)	CAGE: 06848

WARNING: BEFORE YOU USE A MATERIAL, REFER TO THE MANUFACTURERS' MATERIAL SAFETY DATA SHEETS. SOME MATERIALS CAN BE DANGEROUS.

CAUTION: DO NOT USE MATERIALS THAT ARE NOT EQUIVALENT TO HONEYWELL

> SPECIFIED MATERIALS, MATERIALS THAT ARE NOT EQUIVALENT CAN CAUSE DAMAGE TO THE EQUIPMENT AND CAN MAKE THE WARRANTY NOT

APPLICABLE.

(4) Refer to Table 1002 for the consumable materials in this section.

#### Table 1002. Consumables

Number	Description	Source
A-A-59323	cleaning cloth (low-lint, Type I)	commercially available

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- (5) The list that follows identifies Honeywell publications that are related to this section:
  - Not applicable.
- **2. Procedure** (TASK 33-42-07-810-801-A01)
  - **A. Job Setup** (Subtask 33-42-07-810-001-A01)

WARNING: BEFORE YOU USE A MATERIAL, REFER TO THE MANUFACTURERS' MATERIAL SAFETY DATA SHEETS. SOME MATERIALS CAN BE DANGEROUS.

<u>CAUTION</u>: DO NOT USE MATERIALS THAT ARE NOT EQUIVALENT TO HONEYWELL SPECIFIED MATERIALS. MATERIALS THAT ARE NOT EQUIVALENT CAN CAUSE

DAMAGE TO THE EQUIPMENT AND CAN MAKE THE WARRANTY NOT

APPLICABLE.

CAUTION: USE INDUSTRY APPROVED ELECTROSTATIC DISCHARGE SENSITIVE

PRECAUTIONS. THE RETRACTABLE LANDING LIGHT CONTAINS

ELECTROSTATIC DISCHARGE SENSITIVE ITEMS.

CAUTION: DO NOT DROP OR HIT THE RETRACTABLE LANDING LIGHT DURING THESE

PROCEDURES. THE RETRACTABLE LANDING LIGHT CONTAINS AN ASSEMBLY

THAT CAN BE DAMAGED FROM INCORRECT USE.

<u>CAUTION</u>: DO THESE PROCEDURES IN A CLEAN ENVIRONMENT TO PREVENT DAMAGE

TO MECHANICAL COMPONENTS.

- (1) Obey the precautions.
- (2) The item numbers shown in the DPL are the same as the item numbers on the exploded view illustration(s). To find a part number, find the part on the illustration and note the item number. Find the item number in the parts list and read the correct part number. Item numbers refer to the same figure until a different figure is specified.
- (3) Conduct all tests under the ambient conditions as follow:
  - Temperature of 55 to 91°F (13 to 33°C)
  - Relative humidity of 10 to 90 percent
  - Atmospheric pressure of 24.0 to 30.5 inHg (610 to 775 mmHg).
- (4) Conduct all tests in the order presented, unless otherwise noted. Failure of any test is cause for failure of the retractable landing light. Correct the fault before testing is continued.
- (5) Use the diagrams in SCHEMATIC AND WIRING DIAGRAMS to aid in fault isolation of the retractable landing light.
- **B. Pre-Test Procedures** (Subtask 33-42-07-810-002-A01)
  - (1) Review any shipping tags or forms to determine cause for removal from aircraft.
  - (2) Wipe the retractable landing light with a A-A-59323 cleaning cloth to remove dirt, dust, and foreign material.
  - (3) Visually inspect the retractable landing light for signs of missing, broken, bent, or cracked parts. Damaged parts must be replaced before the retractable landing light is tested.

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- **C. Test Setup** (Subtask 33-42-07-810-003-A01)
  - (1) Test procedures are based on ATP 45-0351, Revision V.
  - (2) Refer to Figure 1001.

**NOTE:** The retractable landing light has both left and right hand configurations. Figure

1001 only shows one unit, but all units shall be subjected to all tests. Test setup connections are the same for both units; the only difference is the location

of the ground stud.

**NOTE:** During testing of the retractable landing light, a no load condition means all

four of the 15.5 pound (7.03 kg) weights are not attached to the load fixture. Repetitive operation of the retractable landing light during testing should be in

the no load condition.

**NOTE:** During testing of the retractable landing light, a loaded condition means all

four of the 15.5 pound (7.03 kg) weights are attached to the load fixture.

- (3) Make sure the adjustable ac power supply is set to 0 volts and is in the OFF position.
- (4) Connect retractable landing light to test setup.
- (5) Set the POWER switch on the 05-0491-1 functional tester or 05-0494-1 functional tester to OFF, the LINE SELECT switch to 112.5 volts, and the MODE switch to RETRACT-OFF position.
- (6) Connect the adjustable ac power supply to the functional tester input and apply 114.5 to 115.5 VAC, 400 Hz. Adjust as needed to maintain voltage throughout test.

WARNING: THE RETRACTABLE LANDING LIGHT MUST BE GROUNDED TO ELIMINATE POSSIBLE ELECTRICAL SHOCK FROM FILTER CIRCUIT.

(7) Make sure load fixture is level (−0.1 to +0.1 degree). Adjust as needed for test.

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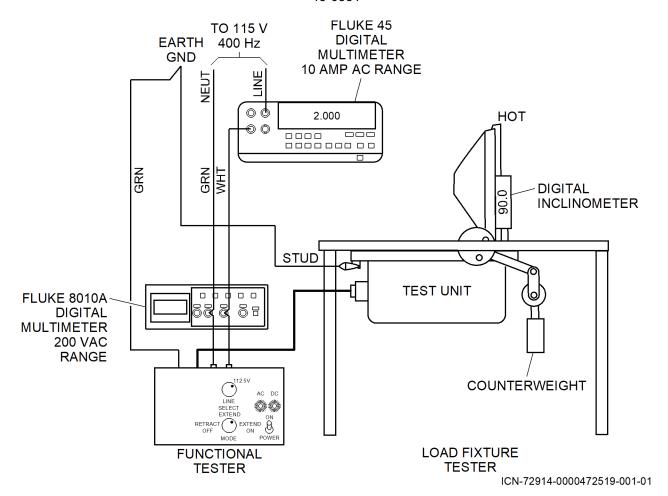


Figure 1001. Test Setup

D. Testing of the Retractable Landing Light (Subtask 33-42-07-810-004-A01)

<u>WARNING:</u> KEEP HANDS CLEAR OF MOVING PARTS THROUGHOUT TEST. FAILURE TO COMPLY CAN RESULT IN SEVERE INJURY TO PERSONNEL.

CAUTION: BE READY TO IMMEDIATELY TURN THE POWER OFF IF THE RETRACTABLE LANDING LIGHT FAILS TO TURN ITSELF OFF AFTER EXTENDING OR RETRACTING OR IF GEARBOX NOISE IS EXCESSIVE. FAILURE TO COMPLY CAN RESULT IN RETRACTABLE LANDING LIGHT DAMAGE.

<u>CAUTION</u>: DO NOT OPERATE THE RETRACTABLE LANDING LIGHT EXCESSIVELY WITH THE LOAD FIXTURE IN THE LOADED CONDITION. REDUCED MOTOR LIFE MAY RESULT.

- (1) Refer to IPL Figure 1 for all the item numbers unless specified differently.
- (2) Turn the POWER switch on the functional tester to the ON position and adjust for 114.5 to 115.5 VAC.
- (3) Turn the POWER switch on the functional tester to the OFF position.
- (4) Adjust the adjustment screw (365) or (355, IPL Figure 1A) fully counterclockwise.

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(5) Under a no-load condition, put the functional tester MODE switch in the EXTEND position.

NOTE: The counterweight on the IF1610 and the IF1611 fixture uses four 15.5 pound (7.03 kg) weights.

- (6) Turn the POWER switch on the functional tester to the ON position.
  - The retractable landing light must extend with the light off, and stop when fully extended.
  - Canopy subassembly (-335) or (-325, IPL Figure 1A) must extend 76.0° or less, measured from a reference plane formed by the exterior face of the lens (35, 37) or (35, 37, IPL Figure 1A) in the retracted position.
- (7) Turn the POWER switch on the functional tester to the OFF position.
- (8) Set the MODE switch on the functional tester to the RETRACT position.
- (9) Turn the POWER switch on the functional tester to the ON position.
  - The retractable landing light must retract with the light off, and motor assembly (300) or (290, IPL Figure 1A) must turn OFF when the canopy subassembly (-335) or (-325, IPL Figure 1A) is flush with the baseplate assembly (-430, -435) or (-420, -425, IPL Figure 1A).
- (10) Turn the POWER switch on the functional tester to the OFF position.
- (11) Adjust the adjustment screw (365) or (355, IPL Figure 1A) fully clockwise.
- (12) Set MODE switch on the functional tester to the EXTEND position.
- (13) Turn the POWER switch on the functional tester to the ON position.
  - The retractable landing light must extend with the light off, and stop when fully extended
  - Canopy subassembly (-335) or (-325, IPL Figure 1A) must extend 82.0° or greater, measured from a reference plane formed by the exterior face of the lens (35) or (35, IPL Figure 1A) in the retracted position.
- (14) Turn the POWER switch on the functional tester to the OFF position.
- (15) Set the MODE switch on the functional tester to the RETRACT position.
- (16) Turn the POWER switch on the functional tester to the ON position.
  - The retractable landing light must retract with the light off, and motor assembly (300) or (290, IPL Figure 1A) must turn OFF when the canopy subassembly (-335) or (-325, IPL Figure 1A) is flush with the baseplate assembly (-430) or (-420, IPL Figure 1A).
- (17) Turn the POWER switch on the functional tester to the OFF position.
- (18) Adjust the adjustment screw (365) or (355, IPL Figure 1A) counterclockwise to the middle of travel.
- (19) Under a no-load condition, set the MODE switch on the functional tester to the EXTEND-ON position.
- (20) Turn the POWER switch on the functional tester to the ON position.

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- The retractable landing light must extend with the light on low intensity (preheat, low intensity on extend for retractable landing light, PN 45-0351-1 and -2 (Pre 45-0351-33-SB03, -SB04, and -SB05) only), turning on brightly upon full extension (retractable landing light PN 45-0351-3 and -4 and PN 45-0351-1 and -2 (post 45-0351-33-SB03, -SB04, and -SB05) will have full intensity as soon as POWER switch on functional tester is in ON position).
- Canopy subassembly (-335) or (-325, IPL Figure 1A) must extend 78.4 to 79.4°, measured from a reference plane formed by exterior face of lens (35) or (35, IPL Figure 1A) in retracted position.
- (21) Turn the POWER switch on the functional tester to the OFF position.
  - The 115-VAC indicator light and incandescent lamp (50) or (65, IPL Figure 1A) must extinguish.
- (22) Set the MODE switch on the functional tester to the RETRACT position.
- (23) Turn the POWER switch on the functional tester to the ON position.
  - The retractable landing light must retract with the light off.
  - Retract angle must be -1.0 to +1.0°, measured from a reference plane formed by the exterior face of the lens (35) or (35, IPL Figure 1A) in the retracted position.
- (24) Turn the POWER switch on the functional tester to the OFF position.
  - The 115-VAC indicator light must extinguish.
- (25) Under a loaded condition, set the MODE switch on the functional tester to the EXTEND position.
- (26) Turn the POWER switch on the functional tester to the ON position.
  - The retractable landing light must extend with the light off.
- (27) Turn the POWER switch on the functional tester to the OFF position.
  - The 115-VAC indicator light must extinguish.
- (28) Set the MODE switch on the functional tester to the RETRACT position.
- (29) Turn the POWER switch on the functional tester to the ON position.
  - The retractable landing light must retract with the light off, and motor assembly (300) or (290, IPL Figure 1A) must turn OFF when the canopy subassembly (-335) or (-325, IPL Figure 1A) is flush with the baseplate assembly (-430) or (-420, IPL Figure 1A).
- (30) Turn the POWER switch on the functional tester to the OFF position.
  - The 115-VAC indicator light must extinguish.
- (31) Set the MODE switch on the functional tester to the EXTEND-ON position.
- (32) Turn the POWER switch on the functional tester to the ON position.

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- (33) Measure current I<sub>6</sub>.
  - Current in the fully extended position must be 4.4 to 5.4 AMP.
  - The retractable landing light must extend with light on low intensity (preheat, low intensity on extend for retractable landing light, PN 45-0351-1 and -2 [Pre 45-0351-33-SB03, -SB04, and -SB05] only), turning on brightly upon full extension (retractable landing light, PN 45-0351-3 and -4 will have full intensity as soon as POWER switch on functional tester is in ON position).
  - Extension time must be 15 seconds maximum.
- (34) Set the LINE SELECT switch on the functional tester to the 109-volt position (input is still 115 volts) to measure current I<sub>7</sub>.
  - The light intensity must increase.
  - Current must increase by 0.15 AMP minimum with respect to I<sub>6</sub> of Step (33).
- (35) Set the LINE SELECT switch on the functional tester to the 105.5-volt position (input is still 115 volts) to measure current I<sub>8</sub>.
  - The light intensity must increase.
  - Current must increase by 0.15 AMP minimum with respect to I<sub>7</sub> of Step (34).
- (36) Return the LINE SELECT switch on the functional tester to the 112.5-volt position.
  - The light must return to its nominal brightness and current as measured in Step (33).
- (37) Turn the POWER switch on the functional tester to the OFF position.
  - The 115-VAC indicator light and incandescent lamp (50) or (65, IPL Figure 1A) must extinguish.
- (38) Set the MODE switch on the functional tester to the RETRACT-OFF position.
- (39) Turn the POWER switch on the functional tester to the ON position.
  - The incandescent lamp (50) or (65, IPL Figure 1A) must turn off and retract, stopping when fully retracted.
  - The retract time must be 15 seconds maximum.
- (40) Turn the POWER switch on the functional tester to the OFF position.
  - The current reading must be the POWER switch ON reading minus the POWER switch OFF reading. The current difference must not exceed 5.0 mA.
- (41) Turn the adjustable ac power supply power OFF and disconnect the retractable landing light from the test setup.

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### E. Post-Test Procedures (Subtask 33-42-07-810-005-A01)

- (1) If the retractable landing light passed the test(s), prepare it for shipment or storage. Refer to STORAGE (INCLUDING TRANSPORTATION) for details.
- (2) If the retractable landing light did not pass the test(s), replace defective part(s) and repeat test(s). Refer to Paragraph 2.F. for details.

### F. Fault Isolation of the Retractable Landing Light (Subtask 33-42-07-810-006-A01)

- (1) Refer to Table 1003.
- (2) Refer to IPL Figure 1 for all the item numbers unless specified differently.

#### **Table 1003. Fault Isolation**

Fault	Probable Cause	Corrective Action
Canopy subassembly (-335) or (-325, IPL Figure 1A) does not extend or retract (no hum).	Motor assembly (300) or (290, IPL Figure 1A) not connected.	Check the connector, which is part of motor assembly (300) or (290, IPL Figure 1A), to make sure it is connected.
	2. Motor assembly (300) or (290, IPL Figure 1A) overheated.	2. Make sure motor assembly (300) or (290, IPL Figure 1A) to cool.
	3. Motor assembly (300) or (290, IPL Figure 1A) open.	3. Use a DMM to check motor assembly (300) or (290, IPL Figure 1A). If open, replace motor assembly (300) or (290, IPL Figure 1A).
	4. Wiring harness (215) or (215, IPL Figure 1A) open.	4. Use a DMM to check wiring harness (215) or (215, IPL Figure 1A). If open, replace wiring harness (215) or (215, IPL Figure 1A). To repair wiring harness, refer to Figure 2004 or Figure 2005, and REPAIR.
Canopy subassembly (-335) or (-325, IPL Figure 1A) does not extend or retract (faint hum).	Motor assembly (300) or (290, IPL Figure 1A) misaligned.	1. Remove, align, and install motor assembly (300) or (290, IPL Figure 1A).
	2. Gearbox assembly (400) or (390, IPL Figure 1A) jammed.	2. Remove and clean, or replace, gearbox assembly (400) or (390, IPL Figure 1A).

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Fault	Probable Cause		Corrective Action	
Canopy subassembly (-335) or (-325, IPL Figure 1A) retracts but does not extend.	1.	Switch S1 (5 or 5B, IPL Figure 3) open.	1.	Use a DMM to check for open between switch S1 (5 or 5B, IPL Figure 3) Terminals 1 and 2. If open, replace switch S1 (5 or 5B, IPL Figure 3).
	2.	Wiring harness (215) or (215, IPL Figure 1A) open.	2.	Use a DMM to check wiring harness (215) or (215, IPL Figure 1A). If open, replace wiring harness (215) or (215, IPL Figure 1A). To repair wiring harness, refer to Figure 2004 or Figure 2005, and REPAIR.
Canopy subassembly (-335) or (-325, IPL Figure 1A) extends but does not retract.	1.	Switch S2 (20 or 20A, IPL Figure 3) open.	1.	Use a DMM to check for open between switch S2 (20 or 20A, IPL Figure 3) Terminals 1 and 2. If open, replace switch S2 (20 or 20A, IPL Figure 3).
	2.	Wiring harness (215) or (215, IPL Figure 1A) open.	2.	Use a DMM to check wiring harness (215) or (215, IPL Figure 1A). If open, replace wiring harness (215) or (215, IPL Figure 1A). To repair wiring harness, refer to Figure 2004 or Figure 2005, and REPAIR.
Canopy subassembly (-335) or (-325, IPL Figure 1A) retracts but is not flush with baseplate assembly (-430) or (-420, IPL Figure 1A).	1.	Adjustment screw (390) or (380, IPL Figure 1A) needs adjusted.	1.	Turn adjustment screw (390) or (380, IPL Figure 1A) until canopy subassembly (-335) or (-325, IPL Figure 1A) is flush with baseplate assembly (-430) or (-420, IPL Figure 1A).
	2.	Not enough or too many shims (110) or (125, IPL Figure 1A) behind bumper assembly (90) or (105, IPL Figure 1A).	2.	Remove bumper assembly (90) or (105, IPL Figure 1A) and add or remove shims (110) or (125, IPL Figure 1A) as required. Refer to DISASSEMBLY and ASSEMBLY for details.

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Fault	Probable Cause		Corrective Action		
Motor assembly (300) or (290, IPL Figure 1A) slow.	1.	The brake, that is part of the motor assembly (300) or (290, IPL Figure 1A), is stuck on.	1.	Replace defective motor assembly (300) or (290, IPL Figure 1A).	
	2.	Defective motor assembly (300) or (290, IPL Figure 1A) electrical wires.	2.	Replace defective motor assembly (300) or (290, IPL Figure 1A).	
	3.	Motor assembly (300) or (290, IPL Figure 1A) gears bent or damaged.	3.	Replace defective motor assembly (300) or (290, IPL Figure 1A).	
	4.	Defective gearbox assembly (400) or (390, IPL Figure 1A).	4.	Repair or replace defective gearbox assembly (400) or (390, IPL Figure 1A).	
Canopy subassembly (-335) or (-325, IPL Figure 1A) EXTEND mode over travels.	1.	The brake, that is part of the motor assembly (300) or (290, IPL Figure 1A), is stuck off.	1.	Replace defective motor assembly (300) or (290, IPL Figure 1A).	
	2.	The brake, that is part of the motor assembly (300) or (290, IPL Figure 1A), is worn or damaged.	2.	Replace defective motor assembly (300) or (290, IPL Figure 1A).	
	3.	Wiring harness (215) or (215, IPL Figure 1A) open.	3.	Use a DMM to check wiring harness (215) or (215, IPL Figure 1A). If open, replace wiring harness (215) or (215, IPL Figure 1A). To repair wiring harness, refer to Figure 2004 or Figure 2005, and REPAIR.	
Excessive gear noise.	1.	Low amount of grease inside gearbox assembly (400) or (390, IPL Figure 1A).	1.	Add grease inside gearbox assembly (400) or (390, IPL Figure 1A).	
	2.	Defective gearbox assembly (400) or (390, IPL Figure 1A).	2.	Repair or replace gearbox assembly (400) or (390, IPL Figure 1A).	
Incandescent lamp (50) or (65, IPL Figure 1A) does not go to full bright intensity.	Switch S1 (5 or 5B, IPL Figure 3) open.		betw Figu repla	a DMM to check for open veen switch S1 (5 or 5B, IPL re 3) Terminals 3 and 4. If open, ace switch S1 (5 or 5B, IPL re 3).	

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Fault	Probable Cause	Corrective Action
Incandescent lamp (50) or (65, IPL Figure 1A) does not illuminate (faint hum).	1. Incandescent lamp (50) or (69 IPL Figure 1A) open.	5, 1. Use a DMM to check incandescent lamp (50) or (65, IPL Figure 1A) filaments. If open, replace incandescent lamp (50) or lamp (65, IPL Figure 1A).
	2. Wire connections on incandescent lamp (50) or (65 IPL Figure 1A) are loose.	2. Tighten connections on incandescent lamp (50) or (65, IPL Figure 1A).
	3. Transformer (175) or (185, IP Figure 1A) open.	Use a DMM to check if transformer (175) or (185, IPL Figure 1A) is open. If open, replace transformer (175) or (185, IPL Figure 1A).
	4. Wiring harness (215) or (215, IPL Figure 1A) open.	4. Use a DMM to check wiring harness (215) or (215, IPL Figure 1A). If open, replace wiring harness (215) or (215, IPL Figure 1A). To repair wiring harness, refer to Figure 2004 or Figure 2005, and REPAIR.
Incandescent lamp (50) or (65, IPL Figure 1A) does not illuminate (no hum).	1. Incandescent lamp (50) or (69 IPL Figure 1A) open.	5, 1. Use a DMM to check incandescent lamp (50) or (65, IPL Figure 1A) filaments. If open, replace incandescent lamp (50) or (65, IPL Figure 1A).
	2. Wiring harness (215) or (215, IPL Figure 1A) open.	2. Use a DMM to check wiring harness (215) or (215, IPL Figure 1A). If open, replace wiring harness (215) or (215, IPL Figure 1A). To repair wiring harness, refer to Figure 2004 or Figure 2005, and REPAIR.

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Fault	Prob	pable Cause	Cor	rective Action
Incandescent lamp (50) or (65, IPL Figure 1A) does not illuminate at 105.5-, 109-, or 112.5-volt settings.	1.	Transformer (175) or (185, IPL Figure 1A) open.	1.	Use a DMM to check if transformer (175) or (185, IPL Figure 1A) is open. If open, replace transformer (175) or (185, IPL Figure 1A).
	2.	Wiring harness (215) or (215, IPL Figure 1A) open.	2.	Use a DMM to check wiring harness (215) or (215, IPL Figure 1A). If open, replace wiring harness (215) or (215, IPL Figure 1A). To repair wiring harness, refer to Figure 2004 or Figure 2005, and REPAIR.
Incandescent lamp (50) or (65, IPL Figure 1A) flickers.	1.	Incandescent lamp (50), (65, IPL Figure 1A), transformer (175), or (185, IPL Figure 1A) connections loose.	1.	Tighten all connections.
	2.	Switch S1 (5 or 5B, IPL Figure 3) open.	2.	Use a DMM to check for open between switch S1 (5 or 5B, IPL Figure 3) Terminals 3 and 4. If open, replace switch S1 (5 or 5B, IPL Figure 3)
	3.	Defective incandescent lamp (50) or (65, IPL Figure 1A).	3.	Use a DMM to check incandescent lamp (50) or (65, IPL Figure 1A) filaments. If open, replace incandescent lamp (50) or (65, IPL Figure 1A).
	4.	Defective wiring harness (215) or (215, IPL Figure 1A).	4.	Use a DMM to check wiring harness (215) or (215, IPL Figure 1A). If open, replace wiring harness (215) or (215, IPL Figure 1A). To repair wiring harness, refer to Figure 2004 or Figure 2005, and REPAIR.

- **G. Job Close-up** (Subtask 33-42-07-810-007-A01)
  - (1) Remove all tools, equipment, and unwanted materials from the work area.

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### SCHEMATIC AND WIRING DIAGRAMS

- 1. Planning Data (TASK 33-42-07-99C-802-A01)
  - **A.** Reason for the Job (Subtask 33-42-07-99C-004-A01)
    - (1) This section gives schematic and wiring diagrams for the LRU.
    - (2) Use these diagrams as an aid to fault isolate the LRU.
  - **B. Job Setup Data** (Subtask 33-42-07-99C-005-A01)
    - (1) You can use equivalent alternatives for the special tools, fixtures, equipment, and consumable materials. The user must find equivalent alternatives.
    - (2) Refer to Table 2001 for the special tools, fixtures, and equipment in this section.
    - (3) CAGE codes and manufacturers' addresses are available at https://cage.dla.mil.

#### Table 2001. Special Tools, Fixtures, and Equipment

Number	Description	Source
Not applicable	Not applicable	Not applicable

(4) Refer to Table 2002 for the consumable materials in this section.

#### Table 2002. Consumables

Number	Description	Source
Not applicable	Not applicable	Not applicable

- (5) The list that follows identifies Honeywell publications that are related to this section:
  - Not applicable.
- 2. Schematic and Wiring Diagrams (TASK 33-42-07-000-801-A01)
  - **A. Job Setup** (Subtask 33-42-07-000-001-A01)
    - (1) Not applicable.
  - B. Schematic Diagrams (Subtask 33-42-07-000-002-A01)
    - (1) The schematic diagrams for the retractable landing light are given in Figure 2001 thru Figure 2003.
    - (2) Table 2003 shows the schematic diagrams in this section.

### **Table 2003. Schematic Diagrams**

Nomenclature	PN	Figure Number
Retractable Landing Light	PN 45-0351-1, -2 (Pre SB 45-0351-33- SB03)	Figure 2001

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### **Table 2003. Schematic Diagrams (Cont)**

Nomenclature	PN	Figure Number
Retractable Landing Light	PN 45-0351-1, -2, Post SB 45-0351-33- SB03, and PN 45-0351-1, -2, -3, -4, Pre SB45-0351-33-0007, -0009	
Retractable Landing Light	PN 45-0351-1, -2, -3, -4, Post SB45- 0351-33-0007, -0009, and PN 45-0351- 5, -6	Figure 2003

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### Table 2004. Revision Reference Sheet for Figure 2001

Revision Code (Arrow No./Grid Location)	Revision Description	Effectivity
B3	Added R38	Revision E

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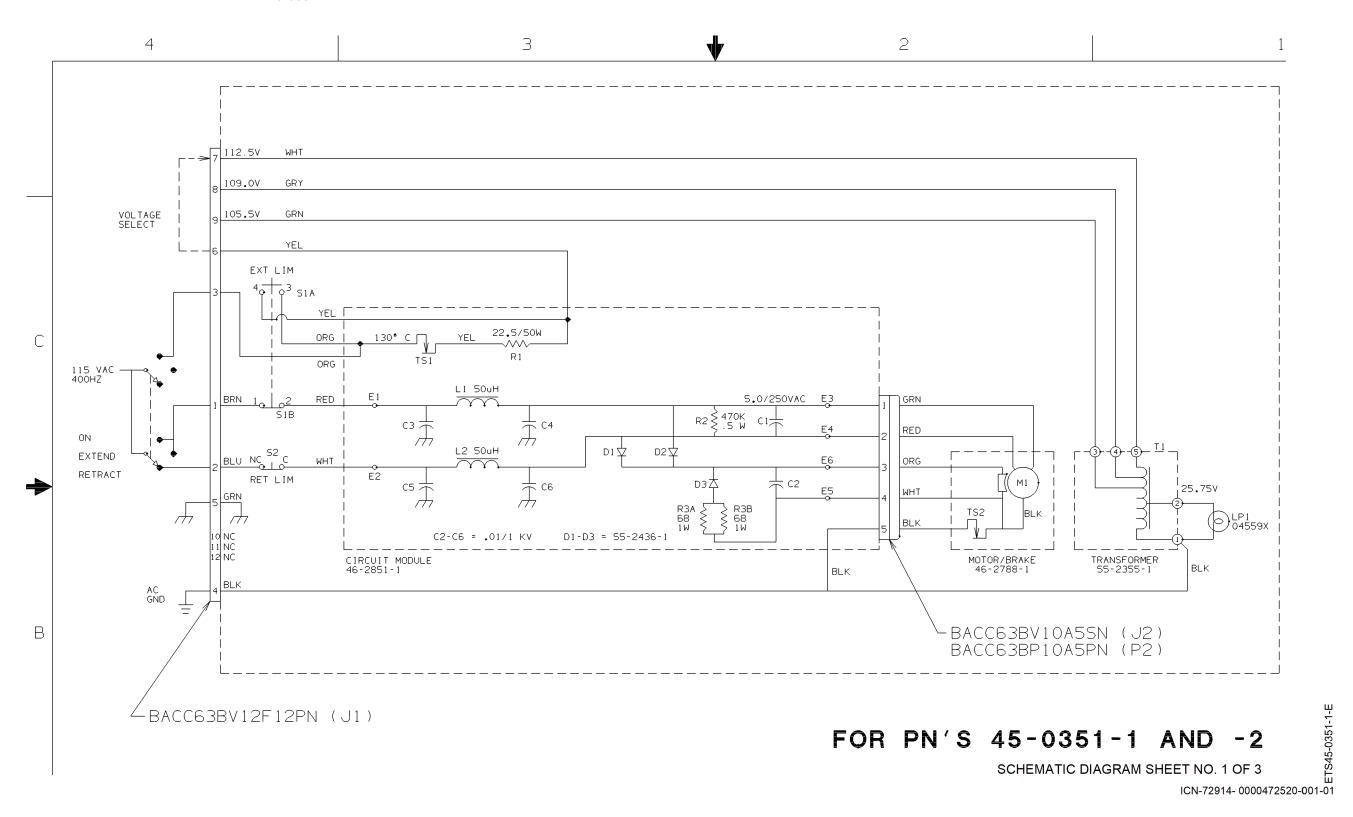


Figure 2001. Retractable Landing Light, PN 45-0351-1, -2, Schematic

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### Table 2005. Revision Reference Sheet for Figure 2002

Revision Code (Arrow No./Grid Location)	Revision Description	Effectivity
B3	Added R38	Revision E

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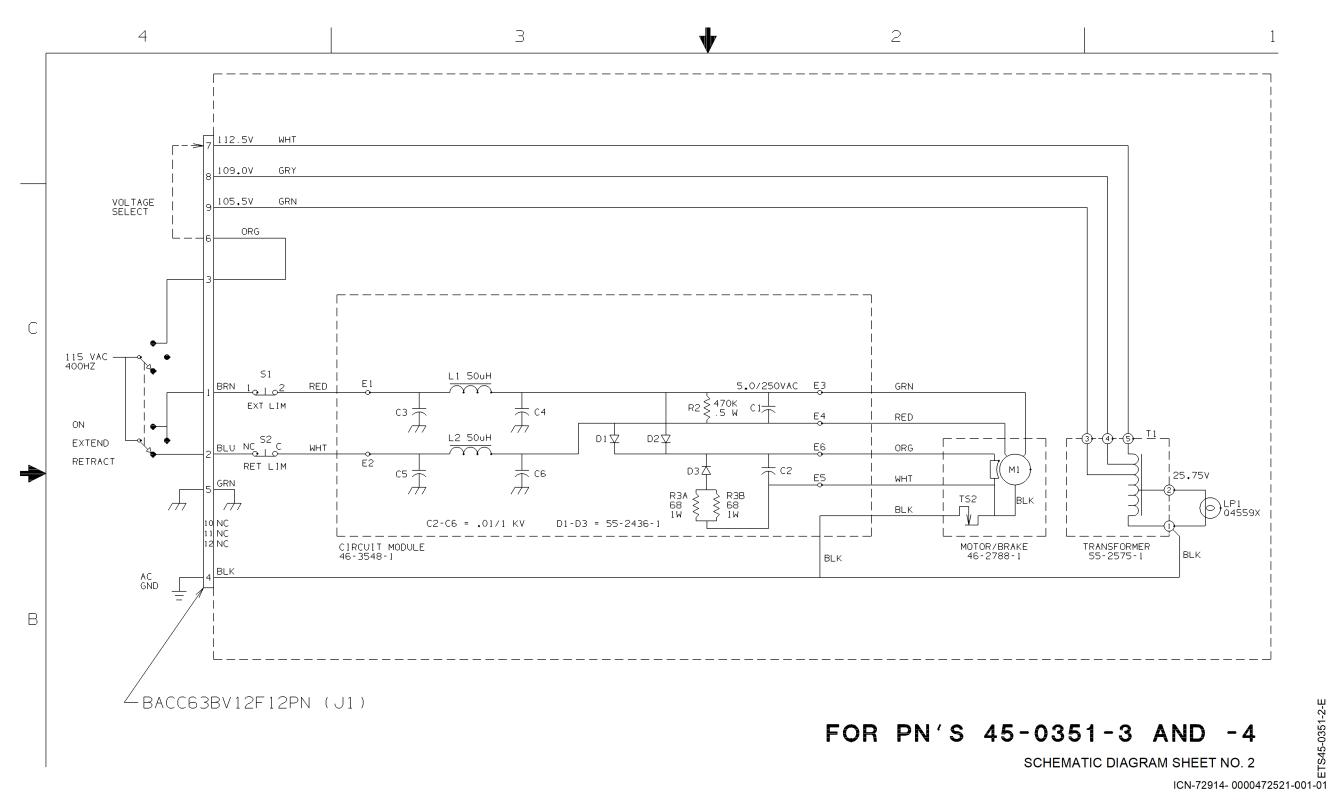


Figure 2002. Retractable Landing Light, PN 45-0351-1, -2, Post SB 45-0351-33-SB04 Schematic

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#### Table 2006. Revision Reference Sheet for Figure 2003

Revision Code (Arrow No./Grid Location)	Revision Description	Effectivity
B3	Added R38	Revision E

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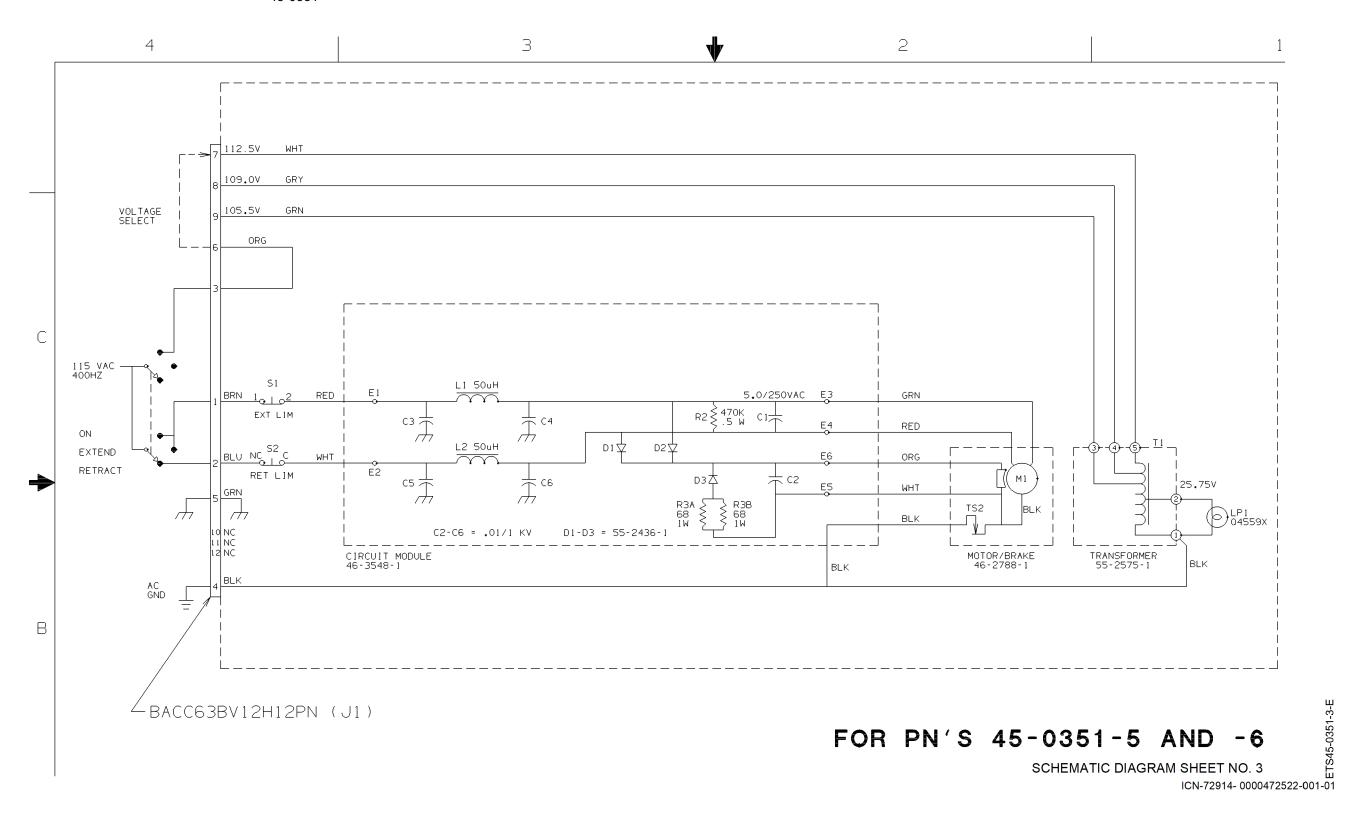


Figure 2003. Retractable Landing Light, PN 45-0351-1, -2, -3, -4, Post SB45-0351-33-0007, -0009, and PN 45-0351-5, -6, Schematic

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- **C. Wiring Diagram** (Subtask 33-42-07-000-003-A01)
  - (1) The wiring diagrams for retractable landing light are given in Figure 2004 and Figure 2005.
  - (2) Table 2007 shows the wiring diagrams in this section.

#### Table 2007. Wiring Diagrams

Nomenclature	PN	Figure Number
Retractable Landing Light	45-0351-1 and -2 (Pre SB45-0351-33- SB03 and 0007)	Figure 2004
Retractable Landing Light	45-0351-1, -2, -3, -4 (post SB 45-0351-33-0007, -0009), -5, and -6, (shown with motor)	

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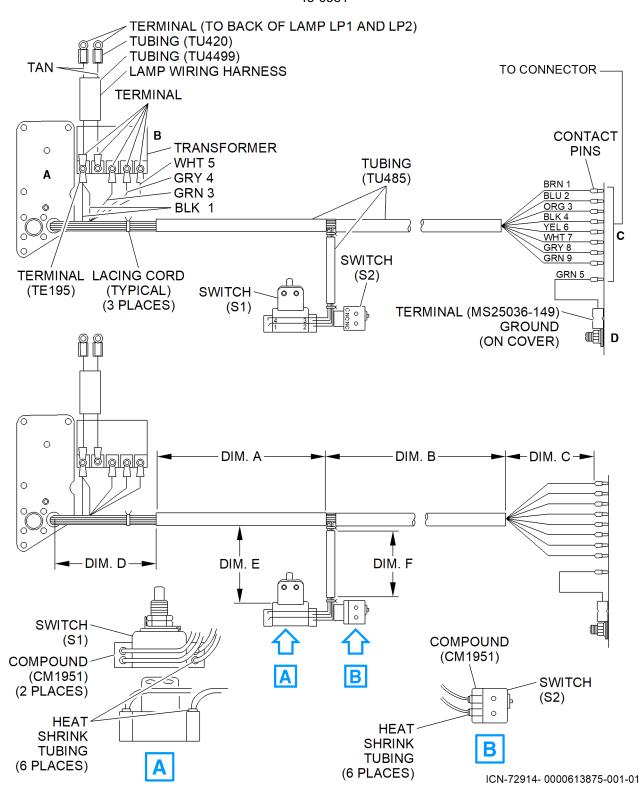
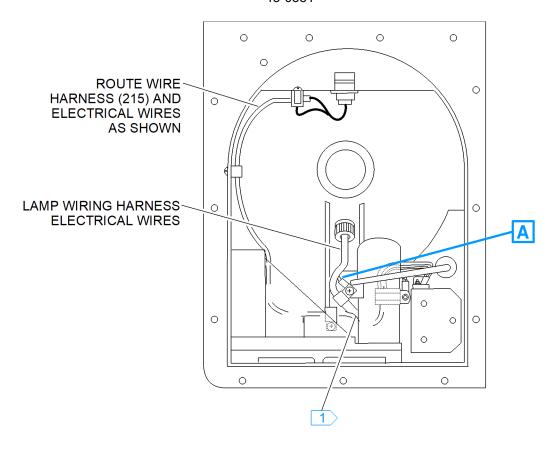
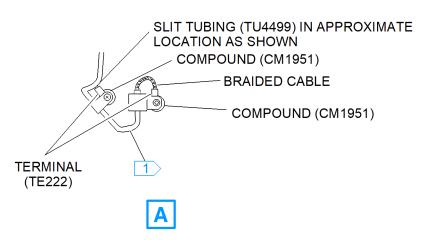


Figure 2004. (Sheet 1 of 2) Wiring Diagram for Retractable Landing Light, PN 45-0351-1 and -2 (Pre SB 45-0351-33-SB03 and 0007)

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#### NOTE:

1 Make sure clear linear lamp harness distance between P clamps is 3.50 inches (88.9 mm) to provide sufficient service loop. ICN-72914- 0000613002-001-01

Figure 2004. (Sheet 2 of 2) Wiring Diagram for Retractable Landing Light, PN 45-0351-1 and -2 (Pre SB 45-0351-33-SB03 and 0007)

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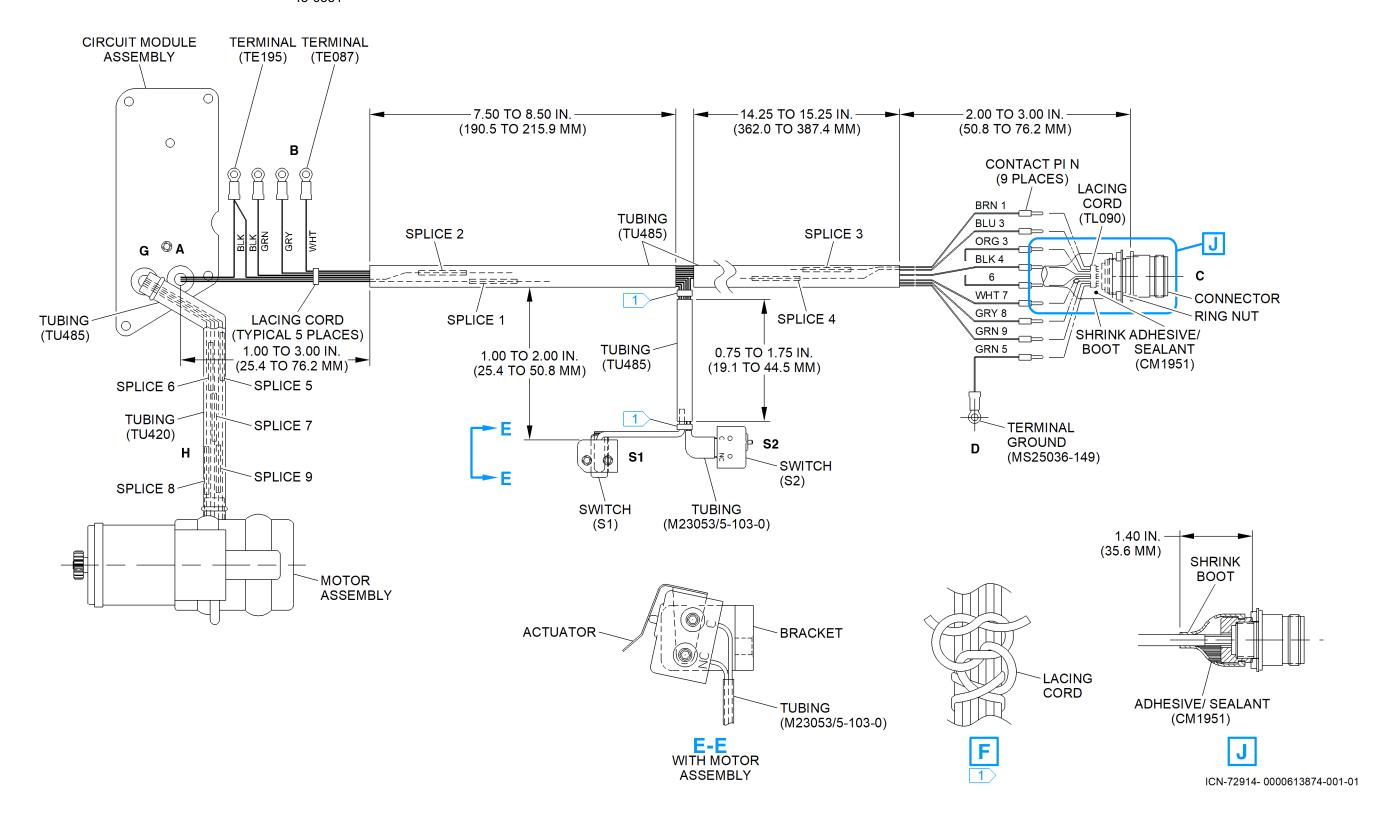


Figure 2005. Wiring Diagram for Retractable Landing Light, PN 45-0351-1, -2, -3, -4 (Post SB 45-0351-33-0007, -0009) and PN 45-0351-5, and -6 (Shown With Motor)

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- **D. Wiring Charts** (Subtask 33-42-07-000-004-A01)
  - (1) The wiring charts for the retractable landing light are given in Table 2009 thru Table 2010.
  - (2) Table 2008 shows the wiring charts in this section.

#### **Table 2008. Wiring Charts**

Nomenclature	PN	Table Number
Retractable Landing Light	45-0351-1 and -2 (Pre SB 45-0351-33- SB03 and 0007)	Table 2009
Retractable Landing Light	45-0351-1, -2, -3, -4 (Post SB 45-0351-33-0007), -5, and -6, shown with motor	

## Table 2009. Wiring Chart for Retractable Landing Light, PN 45-0351-1 and -2 (Pre SB 45-0351-33-SB03, - 0007)

Description	Length	From	То
M227597/7-20-0 black	3.0 inches (76 mm)	А	В
M22759/7-20-0 black	28.0 inches (711 mm)	В	Connector, Contact 4
M227597/7-20-1 brown	21.0 inches (533 mm)	C1	S1, Lead 1
M22759/7-20-2 red	15.0 inches (381 mm)	Α	S1, Lead 2
M22759/7-20-3 orange	15.0 inches (381 mm)	А	S1, Lead 3
M22759/7-20-4 yellow	15.0 inches (381 mm)	А	S1, Lead 4
M227597/7-20-9 white	15.0 inches (381 mm)	А	S2, Lead C
M227597/7-20-6 blue	21.0 inches (533 mm)	C2	S2, Lead NC
M22759/7-20-4 yellow	28.0 inches (711 mm)	А	Connector, Contact 6
M22759/7-20-3 orange	28.0 inches (711 mm)	А	Connector, Contact 3
M22759/7-20-5 green	29.0 inches (737 mm)	В	Connector, Contact 9
M22759/7-20-8 gray	28.0 inches (711 mm)	В	Connector, Contact 8
M227597/7-20-9 white	28.0 inches (711 mm)	В	Connector, Contact 7
M22759/7-20-5 green	5.0 inches (127 mm)	Connector, Contact 5	D

# Table 2010. Wiring Chart for Retractable Landing Light, PN 45-0351-1, -2, -3, -4 (Post SB 45-0351-33-0007, -0009), -5, and -6, With Motor

Description	Length	From	То
M227597/7-20-0 black	3.0 inches (76 mm)	A	В
M22759/7-20-0 black	26.5 inches (673 mm)	В	Connector, Contact 4
M22759/7-20-1 brown	10.5 inches (267 mm)	Connector, Contact 1	Splice 3

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Table 2010. Wiring Chart for Retractable Landing Light, PN 45-0351-1, -2, -3, -4 (Post SB 45-0351-33-0007, -0009), -5, and -6, With Motor (Cont)

Description	Length	From	То
M22759/7-20-2 red	5.0 inches (127 mm)	А	Splice 1
M22759/7-20-9 white	6.0 inches (152 mm)	А	Splice 2
M22759/7-20-6 blue	9.0 inches (229 mm)	Connector, Contact 2	Splice 4
M22759/7-20-5 green	26.5 inches (673 mm)	В	Connector, Contact 9
M22759/7-20-8 gray	26.5 inches (673 mm)	В	Connector, Contact 8
M22759/7-20-9 white	26.5 inches (673 mm)	В	Connector, Contact 7
M22759/7-20-5 green	5.0 inches (127 mm)	Connector, Contact 5	D
M22759/7-20-3 orange	2.0 inches (51 mm)	Connector, Contact 3	Connector, Contact 6
M16878/4 white <sup>1</sup>	10.0 inches (254 mm)	S1, Lead NC	Splice 3
M16878/4 white <sup>1</sup>	7.0 inches (178 mm)	S1, Lead C	Splice 1
M16878/4 white <sup>1</sup>	5.5 inches (140 mm)	S2, Lead C	Splice 2
M16878/4 white <sup>1</sup>	11.0 inches (279 mm)	S2, Lead NC	Splice 4
M22759/7-20-5 green	5.0 inches (127 mm)	G	Splice 5
M22759/7-20-2 red	5.0 inches (127 mm)	G	Splice 6
M22759/7-20-3 orange	4.0 inches (102 mm)	G	Splice 7
M22759/7-20-9 white	3.0 inches (76 mm)	G	Splice 8
M22759/7-20-0 black	3.0 inches (76 mm)	G	Splice 9
M22759/7-20-5 green	3.0 inches (76 mm)	Н	Splice 5
M22759/7-20-2 red	3.0 inches (76 mm)	Н	Splice 6
M22759/7-20-3 orange	4.0 inches (102 mm)	Н	Splice 7
M22759/7-20-9 white	5.0 inches (127 mm)	Н	Splice 8
M22759/7-20-0 black	5.0 inches (127 mm)	Н	Splice 9

#### NOTE:

- 1 Part of switch S1 or switch S2.
  - **E. Job Close-up** (Subtask 33-42-07-000-005-A01)
    - (1) Not applicable.

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#### **DISASSEMBLY**

- 1. Planning Data (TASK 33-42-07-99C-803-A01)
  - **A.** Reason for the Job (Subtask 33-42-07-99C-006-A01)
    - (1) Use these procedures to remove parts from the LRU to do the cleaning, checks, and repair. Do only those procedures of disassembly that are necessary to remove the defective parts.
  - **B. Job Setup Data** (Subtask 33-42-07-99C-007-A01)
    - (1) You can use equivalent alternatives for the special tools, fixtures, equipment, and consumable materials. The user must find equivalent alternatives.
    - (2) Refer to Table 3001 for the special tools, fixtures, and equipment in this section.
    - (3) CAGE codes and manufacturers' addresses are available at https://cage.dla.mil.

#### Table 3001. Special Tools, Fixtures, and Equipment

Number	Description	Source
	bearing puller	commercially available

WARNING: BEFORE YOU USE A MATERIAL, REFER TO THE MANUFACTURERS' MATERIAL SAFETY DATA SHEETS. SOME MATERIALS CAN BE DANGEROUS.

CAUTION: DO NOT USE MATERIALS THAT ARE NOT EQUIVALENT TO HONEYWELL

SPECIFIED MATERIALS. MATERIALS THAT ARE NOT EQUIVALENT CAN CAUSE

DAMAGE TO THE EQUIPMENT AND CAN MAKE THE WARRANTY NOT

APPLICABLE.

(4) Refer to Table 3002 for the consumable materials in this section.

#### Table 3002. Consumables

Number	Description	Source
A-A-59323	cleaning cloth (low-lint, Type I)	commercially available

- (5) The list that follows identifies Honeywell publications that are related to this section:
  - (a) Not applicable.

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- **2. Procedure** (TASK 33-42-07-000-802-A01)
  - **A. Job Setup** (Subtask 33-42-07-000-006-A01)

WARNING: BEFORE YOU USE A MATERIAL, REFER TO THE MANUFACTURERS' MATERIAL SAFETY DATA SHEETS. SOME MATERIALS CAN BE DANGEROUS.

CAUTION: DO NOT USE MATERIALS THAT ARE NOT EQUIVALENT TO HONEYWELL SPECIFIED MATERIALS. MATERIALS THAT ARE NOT EQUIVALENT CAN CAUSE

DAMAGE TO THE EQUIPMENT AND CAN MAKE THE WARRANTY NOT

APPLICABLE.

CAUTION: USE INDUSTRY APPROVED ELECTROSTATIC DISCHARGE SENSITIVE

PRECAUTIONS. THE RETRACTABLE LANDING LIGHT CONTAINS

ELECTROSTATIC DISCHARGE SENSITIVE ITEMS.

CAUTION: DO NOT DROP OR HIT THE RETRACTABLE LANDING LIGHT DURING THESE

PROCEDURES. THE RETRACTABLE LANDING LIGHT CONTAINS AN ASSEMBLY

THAT CAN BE DAMAGED FROM INCORRECT USE.

CAUTION: DO THESE PROCEDURES IN A CLEAN ENVIRONMENT TO PREVENT DAMAGE

TO MECHANICAL COMPONENTS.

- (1) Obey the precautions.
- (2) The item numbers shown in the DPL are the same as the item numbers on the exploded view illustration(s). To find a part number, find the part on the illustration and note the item number. Find the item number in the parts list and read the correct part number. Item numbers refer to the same figure until a different figure is specified.
- (3) Before disassembly, use TESTING AND FAULT ISOLATION to examine the condition of the unit or to find the malfunction. Do this to prevent disassembly that is not necessary.
- (4) Before disassembly, wipe exterior surfaces with a A-A-59323 cleaning cloth to remove dirt, dust, and other foreign materials.
- (5) Do not remove threaded inserts. Refer to INSPECTION/CHECK for details.
- (6) Do not disassemble riveted parts. Refer to REPAIR to determine whether part(s) can be replaced.
- (7) Do not remove electrical wires, unless repair or replacement is required.
- (8) As an aid for assembly, tag the items that are disconnected to show where the connections were made.
- (9) Identify the tie points for the wire assembly to prevent damage to the wire insulation during assembly.
- B. Disassembly of the Retractable Landing Light (Subtask 33-42-07-000-007-A01)
  - (1) For retractable landing light, PN 45-0351-1 and -2 (Pre SB 45-0351-33-SB03 and -SB04), proceed as follows:

**NOTE:** Refer to IPL Figure 1 for all the item numbers unless specified differently.

(a) Loosen six captive screws (15) and move retainer assembly (-10) away from canopy subassembly (-335) to length of lanyard assembly (45).

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- (b) If damaged, remove instruction label (49) from lens retainer (40). Discard instruction label (49).
- (c) If lanyard assembly (45) is damaged, use a small flat-tip screwdriver and turn lanyard assembly (45) clockwise to remove from retainer assembly (-10).
- (d) Remove incandescent lamp (50) from canopy subassembly (-335) far enough to gain access to electrical connections on back.
- (e) Remove two screws and star washers that are part of the incandescent lamp (50).
- (f) Remove the two electrical wires from the back of the incandescent lamp (50). Remove incandescent lamp (50).
- (g) If damaged, remove identification plate (66) and instruction plate (67) from cover (55). Discard identification plate (66) and instruction plate (67).
- (h) Use a sharp knife to carefully remove compound from five screws (60) and bottom edge of cover (55). Remove compound residue from parts.
- (i) Remove five screws (60) and washers (65), then pull cover (55) away from baseplate assembly (-430) to length of wiring harness (215).
- (j) Use a sharp knife to carefully remove compound from two screws (85). Remove compound residue from parts.
- (k) Remove two nuts (75), screws (85), washers (80), harness clamps (70), and ground lug from cover (55). Remove compound residue from parts. If damaged, remove two harness clamps (70) from wiring harness (215) and discard.
- (I) Use a sharp knife to carefully remove compound from four screws (285). Remove compound residue from parts.
- (m) Remove four screws (285), washers (290), ring nut (50, IPL Figure 3), and receptacle connector (45, IPL Figure 3) from cover (55). Leave ring nut (50, IPL Figure 3) on wire harness (215) unless damaged.
- (n) If damaged, remove two nuts (95), screws (100), standoffs (115), four washers (105), canopy bumper (90), and shims (110) from cover (55).
  - **NOTE:** For the ease of assembly, note the number of shims (110) that are removed.
- (o) Remove nut (125), screw (135), washer (130), and harness clamp (120) from gearbox assembly (400). If damaged, remove harness clamp (120) from wiring harness (215) and discard.
- CAUTION: USE CARE WHEN REMOVING COMPOUND NOT TO CUT ELECTRICAL WIRES. FAILURE TO COMPLY CAN RESULT IN ELECTRICAL WIRE DAMAGE.
- (p) Use a sharp knife to carefully remove compound from screw (145) head and harness clamp (140). Remove compound residue from parts. Refer to CLEANING for details.
- (q) Remove screw (145), harness clamp (140), and terminal lug of braided mesh cable from back of canopy subassembly (-335). If damaged, remove harness clamp (140) from the two incandescent lamp (50) electrical wires and discard.

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CAUTION: USE CARE WHEN REMOVING COMPOUND NOT TO CUT ELECTRICAL WIRES. FAILURE TO COMPLY CAN RESULT IN ELECTRICAL WIRE DAMAGE.

- (r) Use a sharp knife to carefully remove compound from allen head screw (155) and harness clamp (150). Remove compound residue from parts. Refer to CLEANING for details.
- (s) Remove allen head screw (155), harness clamp (150), and terminal lug of braided mesh cable from gearbox assembly (400). If damaged, remove harness clamp (150) from wiring harness (215) and discard.
- (t) Remove conduit nut (160) from canopy subassembly (-335), then pull lamp wiring harness (170) out from canopy subassembly (-335). Leave conduit nut (160) on lamp wiring harness (170) unless damaged.
- (u) Disconnect motor assembly (-300) connector from wiring harness (215).
- (v) For retractable landing lights with transformer (175), remove three screws (180), washers (185), and transformer (175) from wiring harness (215).
- (w) For retractable landing lights with transformer (175A), remove two screws (187), screw (189), and transformer (175A) from wiring harness (215).
- CAUTION: USE CARE WHEN REMOVING COMPOUND NOT TO CUT ELECTRICAL WIRES. FAILURE TO COMPLY CAN RESULT IN ELECTRICAL WIRE DAMAGE.
- (x) Use a sharp knife to carefully remove compound from five transformer (175, 175A) stud cavities to gain access to electrical wires. Remove compound residue from parts. Refer to CLEANING for details.
  - **NOTE:** Do Step (y) thru (z) only if parts are damaged. If no parts are damaged, go to Step (aa).
- (y) Remove five nuts (190), lock washers (195A), terminal lugs, and spacer (200) from between two terminal lugs. Remove lamp (50) electrical wires from retractable landing light.
- (z) If damaged, remove three screws (210) and transformer mounting plate (205) from transformer (175, 175A).
- (aa) Remove wiring harness (215) and related parts as follows:
  - Remove two screws (220), washers (225), and part of wiring harness (215) from baseplate assembly (-430).
  - Remove two screws (240), washers (245), and bracket assembly (25, IPL Figure 3) from gearbox assembly (400).
    - **NOTE:** Do Step 3 and 4 only if switch S1 (5, IPL Figure 3) is damaged. If switch S1 is not damaged, go to Step 5.
  - Bend down one side of locking plate (30, IPL Figure 3) away from two jam nuts, that are part of switch S1 (5, IPL Figure 3).

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- 4 Remove jam nut, that is part of switch S1 (5, IPL Figure 3), washer (35, IPL Figure 3), jam nut (part of switch S1) (5, IPL Figure 3), locking plate (30, IPL Figure 3), and switch S1 (5, IPL Figure 3) from bracket assembly (25, IPL Figure 3).
- 5 Remove two screws (230), washers (235), switch S2 (20, IPL Figure 3), and switch actuator (295) from side of gearbox assembly (400).
- 6 Remove entire wiring harness (215) from retractable landing light.
- (ab) Remove motor assembly (300) and related parts as follows:
  - Remove two screws (305), washers (310), and motor assembly (300) from gearbox assembly (400).
  - 2 Remove motor end cap (313) from motor as follows:
    - Starting from the bottom of motor end cap (313), use a small flat-tip screwdriver, and carefully pry motor end cap (313) from motor assembly (300). If necessary, use a sharp knife to slit the cap for ease of removal.

CAUTION: USE CARE WHEN REMOVING ADHESIVE/SEALANT. DO NOT CUT OR PUNCTURE WIRE HARNESS OR TUBING. FAILURE TO COMPLY MAY RESULT IN REPLACEMENT OF ENTIRE WIRE HARNESS AND TUBING.

- <u>b</u> Carefully cut away old adhesive/sealant from around wire harness, that is part of motor assembly (300).
- Remove motor end cap (313) from motor assembly (300). Discard motor end cap (313).
- Use a A-A-59323 cleaning cloth dipped in aqueous cleaner or use a sharp knife carefully to remove all adhesive/sealant residue from motor surface and wire harness. Refer to CLEANING.
- Remove packing O-ring (330) from groove in mounting flange (315) and discard.
- 4 Remove three screws (320) and mounting flange (315) from motor assembly (300).
- 5 Remove packing O-ring (325) from groove in mounting flange (315) and discard.
- (ac) If damaged, remove instruction plate (353) from canopy (350). Discard instruction plate (353).
- (ad) Remove two bolts (340), then slide canopy subassembly (-335) off shaft (160, IPL Figure 2).
- (ae) If damaged, remove nut (360), adjustment screw (365), washer (370), and switch actuator (355) from actuator bracket (375).
- (af) If damaged, remove two screws (380) and actuator bracket (375) from canopy subassembly (-335).

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- (ag) If damaged, remove actuator adjustment nut (385), adjustment screw (390), and washer (395) from canopy subassembly (-335).
- (ah) Remove two bolts (405), allen head screws (410), and gearbox assembly (400) from baseplate assembly (-430).
- (ai) If damaged, remove nut (415), washer (420), and screw (425) from baseplate assembly (-430).
- (aj) If damaged, remove instruction label (465) from baseplate (455). Discard instruction label (465).
- (ak) Refer to Paragraph 2.C. to continue disassembly of the gearbox assembly.
- (2) For retractable landing light, PN 45-0351-1 and -2 (Post SB 45-0351-33-SB03, -SB04 and Pre SB 45-0351-33-0007) and 45-0351-3 and -4 (Pre SB 45-0351-33-0007), proceed as follows:

**NOTE:** Refer to IPL Figure 1Afor all the item numbers unless specified differently.

- (a) Loosen six captive screws (15) or (15, IPL Figure 1A) and move retainer assembly (10A) or (-10, IPL Figure 1A) away from canopy subassembly (-335) or (-325, IPL Figure 1A) to length of lanyard assembly (45) or (45, IPL Figure 1A).
- (b) If damaged, remove instruction label (49) from lens retainer (40). Discard instruction label (49).
- (c) If lanyard assembly (45) or (45, IPL Figure 1A) is damaged, use a small flat-tip screwdriver and turn lanyard assembly (45) or (45, IPL Figure 1A) clockwise to remove from retainer assembly (10A) or (10, IPL Figure 1A).
- (d) Remove incandescent lamp (50) or (65, IPL Figure 1A) from canopy subassembly (-335) or (-325, IPL Figure 1A) far enough to gain access to electrical connections on back.
- (e) Remove two screws and star washers that are part of the incandescent lamp (50) or (65, IPL Figure 1A).
- (f) Remove the two electrical wires from the back of the incandescent lamp (50) or (65, IPL Figure 1A). Remove incandescent lamp (50) or (65, IPL Figure 1A).
- (g) If damaged, remove identification plate (66) or (83, IPL Figure 1A) and instruction plate (67) or (84, IPL Figure 1A) from cover (55) or (70, IPL Figure 1A). Discard identification plate and instruction plate.
- (h) Use a sharp knife to carefully remove compound from five screws (60) or (75, IPL Figure 1A) and bottom edge of cover (55) or (70, IPL Figure 1A). Remove compound residue from parts.
- (i) Remove five screws (60) or (75, IPL Figure 1A) and washers (65) or (80, IPL Figure 1A), then pull cover (55) or (70, IPL Figure 1A) away from baseplate assembly (-430, -435) or (445, -450, IPL Figure 1A) to length of wiring harness (215A) or (215, IPL Figure 1A).
- (j) Use a sharp knife to carefully remove compound from two screws (85) or (100, IPL Figure 1A). Remove compound residue from parts.

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- (k) Remove two nuts (75) or (90, IPL Figure 1A), screws (85) or (100, IPL Figure 1A), washers (80) or (95, IPL Figure 1A), harness clamps (70) or (85, IPL Figure 1A), and ground lug from cover (55) or (70, IPL Figure 1A). Remove compound residue from parts. If damaged, remove two harness clamps (70) or (85, IPL Figure 1A) from wiring harness (215A) or (215, IPL Figure 1A) and discard.
- (I) Use a sharp knife to carefully remove compound from four screws (285) or (275, IPL Figure 1A). Remove compound residue from parts.
- (m) Remove four screws (285) or (275, IPL Figure 1A), washers (290) or (280, IPL Figure 1A), ring nut (50, IPL Figure 3), and receptacle connector (45, IPL Figure 3) from cover (55) or (70, IPL Figure 1A). Leave ring nut (50, IPL Figure 3) on wire harness (215A) or (215, IPL Figure 1A) unless damaged.
- (n) If damaged, remove two nuts (95) or (110, IPL Figure 1A), screws (100) or (115, IPL Figure 1A), standoffs (115) or (130, IPL Figure 1A), four washers (105) or (120, IPL Figure 1A), canopy bumper (90) or (105, IPL Figure 1A), and shims (110) or (125, IPL Figure 1A) from cover (55) or (70, IPL Figure 1A).
  - **NOTE:** For the ease of assembly, note the number of shims (110) or (125, IPL Figure 1A) that are removed.
- (o) Remove nut (125) or (140, IPL Figure 1A), screw (135) or (150, IPL Figure 1A), washer (130) or (145, IPL Figure 1A), and harness clamp (120) or (135, IPL Figure 1A) from gearbox assembly (400) or (390, IPL Figure 1A). If damaged, remove harness clamp (120) or (135, IPL Figure 1A) from wiring harness (215A) or (215, IPL Figure 1A) and discard.
- CAUTION: USE CARE WHEN REMOVING COMPOUND NOT TO CUT ELECTRICAL WIRES. FAILURE TO COMPLY CAN RESULT IN ELECTRICAL WIRE DAMAGE.
- (p) Use a sharp knife to carefully remove compound from screw (145) or (160, IPL Figure 1A) head and harness clamp (140) or (155, IPL Figure 1A). Remove compound residue from parts. Refer to CLEANING for details.
- (q) Remove screw (145) or (160, IPL Figure 1A), harness clamp (140) or (155, IPL Figure 1A), and terminal lug of the braided mesh cable from the back of canopy subassembly (-335) or (-325, IPL Figure 1A). If damaged, remove harness clamp (140) or (155, IPL Figure 1A) from the two incandescent lamp (50) or (65, IPL Figure 1A) electrical wires and discard.
- CAUTION: USE CARE WHEN REMOVING COMPOUND NOT TO CUT ELECTRICAL WIRES. FAILURE TO COMPLY CAN RESULT IN ELECTRICAL WIRE DAMAGE.
- (r) Use a sharp knife to carefully remove compound from allen head screw (155) or (170, IPL Figure 1A) and harness clamp (150) or (165, IPL Figure 1A). Remove compound residue from parts. Refer to CLEANING for details.
- (s) Remove allen head screw (155) or (170, IPL Figure 1A), harness clamp (150) or (165, IPL Figure 1A), and terminal lug of braided mesh cable from gearbox assembly (400) or (390, IPL Figure 1A). If damaged, remove harness clamp (150) or (165, IPL Figure 1A) from wiring harness (215A) or (215, IPL Figure 1A) and discard.

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- (t) Remove conduit nut (160) or (175, IPL Figure 1A) from canopy subassembly (-335) or (-325, IPL Figure 1A), then pull lamp wiring harness (170) or (180, IPL Figure 1A) out from canopy subassembly (-335) or (-325, IPL Figure 1A). Leave conduit nut (160) or (175, IPL Figure 1A) on lamp wiring harness (170) or (180, IPL Figure 1A) unless damaged.
- (u) Disconnect motor assembly (-300A) or (70, IPL Figure 3) connector from wiring harness (215A) or (215, IPL Figure 1A).
- (v) For retractable landing lights with transformer (-175B) or (185, IPL Figure 1A), remove three screws (180) or (190, IPL Figure 1A), washers (187) or (190, IPL Figure 1A), and transformer (175A) or (185, IPL Figure 1A) from wiring harness (215A) or (215, IPL Figure 1A).

CAUTION: USE CARE WHEN REMOVING COMPOUND NOT TO CUT ELECTRICAL WIRES. FAILURE TO COMPLY CAN RESULT IN ELECTRICAL WIRE DAMAGE.

(w) Use a sharp knife to carefully remove compound from five transformer (175A) or (185, IPL Figure 1A) stud cavities to gain access to electrical wires. Remove compound residue from parts. Refer to CLEANING for details.

**NOTE:** Do Step (x) thru (y) only if parts are damaged. If no parts are damaged, go to Step (z).

- (x) Remove five nuts (190) or (200, IPL Figure 1A), lock washers (195A) or (205, IPL Figure 1A), terminal lugs, and spacer (200) or (210, IPL Figure 1A) from between two terminal lugs. Remove lamp (50) or (65, IPL Figure 1A) electrical wires from retractable landing light.
- (y) If damaged, remove three screws (210) and transformer mounting plate (205) from transformer (175B).
- (z) For retractable landing lights with wiring harness (215A), remove wiring harness (215A) and related parts as follows:
  - Remove two screws (220), washers (225), and part of wiring harness (215A) from baseplate assembly (-430, -435).
  - Remove two screws (240), washers (245), and bracket assembly (25, IPL Figure 3) from gearbox assembly (400).

**NOTE:** Do Step 3 and 4 only if switch S1 (5, IPL Figure 3) is damaged. If switch S1 is not damaged, go to Step 5.

- Bend down one side of locking plate (30, IPL Figure 3) away from two jam nuts, that are part of switch S1 (5, IPL Figure 3).
- A Remove jam nut, that is part of switch S1 (5, IPL Figure 3), washer (35, IPL Figure 3), jam nut (part of switch S1) (5, IPL Figure 3), locking plate (30, IPL Figure 3), and switch S1 (5, IPL Figure 3) from bracket assembly (25A, IPL Figure 3).
- 5 Remove two screws (230), washers (235), switch S2 (20, IPL Figure 3), and switch actuator (295) from side of gearbox assembly (400).
- 6 Remove entire wiring harness (215A) from retractable landing light.

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- (aa) Remove motor assembly (-300) and related parts as follows:
  - 1 Remove two screws (305), washers (310), and motor assembly (-300) from gearbox assembly (400).
  - 2 Remove motor end cap (313) from motor as follows:
    - Starting from the bottom of motor end cap (313), use a small flat-tip screwdriver, and carefully pry motor end cap (313) from motor assembly (-300). If necessary, use a sharp knife to slit the cap for ease of removal.

CAUTION: USE CARE WHEN REMOVING ADHESIVE/SEALANT. DO NOT CUT OR PUNCTURE WIRE HARNESS OR TUBING. FAILURE TO COMPLY MAY RESULT IN REPLACEMENT OF ENTIRE WIRE HARNESS AND TUBING.

- <u>b</u> Carefully cut away old adhesive/sealant from around wire harness, that is part of motor assembly (-300).
- Remove motor end cap (313) from motor assembly (-300). Discard motor end cap (313).
- Use a A-A-59323 cleaning cloth dipped in aqueous cleaner or use a sharp knife carefully to remove all adhesive/sealant residue from motor surface and wiring harness. Refer to CLEANING for details.
- Remove packing O-ring (330) from groove in mounting flange (315) and discard.
- 4 Remove three screws (320) and mounting flange (315) from motor assembly (-300).
- 5 Remove packing O-ring (325) from groove in mounting flange (315) and discard.
- (ab) For retractable landing light with wiring harness (215, IPL Figure 1A), remove wiring harness (215, IPL Figure 1A) and related parts as follows:
  - 1 Remove two screws (220, IPL Figure 1A), washers (225, IPL Figure 1A), and part of wiring harness (215, Remove packing O-ring) from baseplate assembly (-420, -425, IPL Figure 1A).
  - Remove two screws (230, IPL Figure 1A), washers (255, IPL Figure 1A), and switch mounting bracket (25A, IPL Figure 3) from gearbox assembly (390, IPL Figure 1A).
  - Remove two screws (10, IPL Figure 3), washers (15, IPL Figure 3), switch S1 (5B, IPL Figure 3), and actuator (40, IPL Figure 3) from switch mounting bracket (25A, IPL Figure 3).
  - 4 Remove two screws (230, IPL Figure 1A), washers (235, IPL Figure 1A), switch S2 (20A, IPL Figure 1A), and switch actuator (285, IPL Figure 1A) from side of gearbox assembly (390, IPL Figure 1A).

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- Remove two screws (227, IPL Figure 1A), washers (288, IPL Figure 1A), and motor assembly (115, IPL Figure 1A) from gearbox assembly (390, IPL Figure 1A).
- 6 Remove motor end cap (75, IPL Figure 3) from motor as follows:
  - Starting from the bottom of motor end cap (75, IPL Figure 3), use a small flat-tip screwdriver, and carefully pry motor end cap (75, IPL Figure 3) from motor assembly (-69, IPL Figure 3). If necessary, use a sharp knife to slit the cap for ease of removal.

CAUTION: USE CARE WHEN REMOVING ADHESIVE/SEALANT. DO NOT CUT OR PUNCTURE WIRE HARNESS OR TUBING. FAILURE TO COMPLY MAY RESULT IN REPLACEMENT OF ENTIRE WIRE HARNESS AND TUBING.

- <u>b</u> Carefully cut away old adhesive/sealant from around wire harness, that is part of motor assembly (-69, IPL Figure 3).
- Remove motor end cap (75, IPL Figure 3) from motor assembly
   (-69, IPL Figure 3). Discard motor end cap (75, IPL Figure 3).
- Use a A-A-59323 cleaning cloth dipped in aqueous cleaner or use a sharp knife carefully to remove all adhesive/sealant residue from motor surface and wiring harness. Refer to CLEANING for details.
- Remove packing O-ring (320, IPL Figure 3) from groove in mounting flange (100, IPL Figure 3) and discard.
- Remove three screws (105, IPL Figure 3) and mounting flange (100, IPL Figure 3) from motor assembly (115, IPL Figure 3).
- 9 Remove packing O-ring (107, IPL Figure 3) from groove in mounting flange (100, IPL Figure 3) and discard.
- 10 Remove entire wiring harness (215, IPL Figure 1A) from retractable landing light.
- (ac) If damaged, remove instruction plate (353) or (343, IPL Figure 1A) from canopy (350) or (340, IPL Figure 1A). Discard instruction plate (353) or (343, IPL Figure 1A).
- (ad) Remove two bolts (340) or (330, IPL Figure 1A), then slide canopy subassembly (-335) or (-325, IPL Figure 1A) off shaft (160, IPL Figure 2).
- (ae) If damaged, remove nut (360) or (350, IPL Figure 1A), adjustment screw (365) or (355, IPL Figure 1A), washer (370) or (360, IPL Figure 1A), and switch actuator (355) or (345, IPL Figure 1A) from actuator bracket (375) or (365, IPL Figure 1A).
- (af) If damaged, remove two screws (380) or (370, IPL Figure 1A) and actuator bracket (375) or (365, IPL Figure 1A) from canopy subassembly (-335) or (-325, IPL Figure 1A).
- (ag) If damaged, remove actuator adjustment nut (385) or (375, IPL Figure 1A), adjustment screw (390) or (380, IPL Figure 1A), and washer (395) or (385, IPL Figure 1A) from canopy subassembly (-335) or (-325, IPL Figure 1A).

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- (ah) Remove two bolts (405) or (395, IPL Figure 1A), allen head screws (410) or (400, IPL Figure 1A), and gearbox assembly (400) or (390, IPL Figure 1A) from baseplate assembly (-430, -435) or (-420, -425, IPL Figure 1A).
- (ai) If damaged, remove nut (415) or (405, IPL Figure 1A), washer (420) or (410, IPL Figure 1A), and screw (425) or (415, IPL Figure 1A) from baseplate assembly (-430, -435) or (-420, -425, IPL Figure 1A).
- (aj) If damaged, remove instruction label (465) or (455, IPL Figure 1A) from baseplate (455, -460) or (445, -450, IPL Figure 1A). Discard instruction label.
- (ak) Refer to Paragraph 2.C. to continue disassembly of the gearbox assembly.
- (3) For retractable landing light, PN 45-0351-1, -2, -3, -4 (Post SB 45-0351-33-0007 and Pre SB 45-0351-33-0008, -0009), proceed as follows:

**NOTE:** Refer to IPL Figure 1A for all the item numbers unless specified differently.

- (a) Loosen six captive screws (15) or (15, IPL Figure 1A) and move retainer assembly (10A) or (10, IPL Figure 1A) away from canopy subassembly (-335) or (-325, IPL Figure 1A) to length of lanyard assembly (45) or (45, IPL Figure 1A).
- (b) If damaged, remove instruction label (49) from lens retainer (40). Discard instruction label (49).
- (c) If lanyard assembly (45) or (45, IPL Figure 1A) is damaged, use a small flat-tip screwdriver and turn lanyard assembly (45) or (45, IPL Figure 1A) clockwise to remove from retainer assembly (10A) or (10, IPL Figure 1A).
- (d) Remove incandescent lamp (50) or (65, IPL Figure 1A) from canopy subassembly (-335) or (-325, IPL Figure 1A) far enough to gain access to electrical connections on back.
- (e) Remove two screws and star washers that are part of the incandescent lamp (50) or (65, IPL Figure 1A).
- (f) Remove the two electrical wires from the back of the incandescent lamp (50) or (65, IPL Figure 1A). Remove incandescent lamp (50) or (65, IPL Figure 1A).
- (g) If damaged, remove identification plate (66) or (83, IPL Figure 1A) and instruction plate (67) or (84, IPL Figure 1A) from cover (55) or (70, IPL Figure 1A). Discard identification plate (66) and instruction plate (67).
- (h) Use a sharp knife to carefully remove compound from five screws (60) or (75, IPL Figure 1A) and bottom edge of cover (55) or (70, IPL Figure 1A). Remove compound residue from parts.
- (i) Remove five screws (60) or (-75A, IPL Figure 1A) and washers (65) or (-80A, IPL Figure 1A), then pull cover (55) or (70, IPL Figure 1A) away from baseplate assembly (-430, -435) or (-445, -450, IPL Figure 1A) to length of wiring harness (215B, 215C) or (215A, 215B, IPL Figure 1A).
- (j) Use a sharp knife to carefully remove compound from two screws (85) or (100, IPL Figure 1A). Remove compound residue from parts.

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- (k) Remove two nuts (75) or (90, IPL Figure 1A), screws (85) or (100, IPL Figure 1A), washers (80) or (95, IPL Figure 1A), harness clamps (-70A) or (-85A, IPL Figure 1A), and ground lug from cover (55) or (70, IPL Figure 1A). Remove compound residue from parts. If damaged, remove two harness clamps (-70A) or (-85A, IPL Figure 1A) from wiring harness (215B, 215C) or (215A, 215B, IPL Figure 1A) and discard.
- (I) Use a sharp knife to carefully remove compound from four screws (285) or (275, IPL Figure 1A). Remove compound residue from parts.
- (m) Remove four screws (285) or (275, IPL Figure 1A), washers (290) or (280, IPL Figure 1A), ring nut (50, IPL Figure 3), and receptacle connector (45, IPL Figure 3) from cover (55) or (70, IPL Figure 1A). Leave ring nut (50, IPL Figure 3) on wire harness (215B, 215C) or (215A, 215B, IPL Figure 1A) unless damaged.
- (n) If damaged, remove two nuts (95) or (110, IPL Figure 1A), screws (-100A) or (-115A, IPL Figure 1A), standoffs (115) or (130, IPL Figure 1A), four washers (105) or (-120A), canopy bumper (-90A) or (105, IPL Figure 1A), and shims (110) or (125, IPL Figure 1A) from cover (55) or (70, IPL Figure 1A).

**NOTE:** For the ease of assembly, note the number of shims (110) or (125, IPL Figure 1A) that are removed.

- (o) Remove nut (125) or (140, IPL Figure 1A), screw (135) or (150, IPL Figure 1A), washer (130) or (145, IPL Figure 1A), and harness clamp (120) or (-135A, IPL Figure 1A) from gearbox assembly (400) or (390, IPL Figure 1A). If damaged, remove harness clamp (-120A) or (-135A, IPL Figure 1A) from wiring harness (215B, 215C) or (215A, 215B, IPL Figure 1A) and discard.
- CAUTION: USE CARE WHEN REMOVING COMPOUND NOT TO CUT ELECTRICAL WIRES. FAILURE TO COMPLY CAN RESULT IN ELECTRICAL WIRE DAMAGE.
- (p) Use a sharp knife to carefully remove compound from screw (145) or (160, IPL Figure 1A) head and harness clamp (-140A) or (-155A, IPL Figure 1A). Remove compound residue from parts. Refer to CLEANING for details.
- (q) Remove screw (145) or (160, IPL Figure 1A), harness clamp (-140A) or (-155A, IPL Figure 1A), and terminal lug of the braided mesh cable from the back of canopy subassembly (-335) or (-325, IPL Figure 1A). If damaged, remove harness clamp (-140A) or (-155A, IPL Figure 1A) from the two incandescent lamp (50) or (65, IPL Figure 1A) electrical wires and discard.
- CAUTION: USE CARE WHEN REMOVING COMPOUND NOT TO CUT ELECTRICAL WIRES. FAILURE TO COMPLY CAN RESULT IN ELECTRICAL WIRE DAMAGE.
- (r) Use a sharp knife to carefully remove compound from allen head screw (155) or (170, IPL Figure 1A) and harness clamp (-150A) or (-165A, IPL Figure 1A). Remove compound residue from parts. Refer to CLEANING for details.
- (s) Remove allen head screw (155) or (170, IPL Figure 1A), harness clamp (-150A) or (-165A, IPL Figure 1A), and terminal lug of braided mesh cable from gearbox assembly (400) or (390, IPL Figure 1A). If damaged, remove harness clamp (-150A) or (-165A, IPL Figure 1A) from wiring harness (215B, 215C) or (215A, 215B, IPL Figure 1A) and discard.

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- (t) Remove conduit nut (160) or (175, IPL Figure 1A) from canopy subassembly (-335) or (-325, IPL Figure 1A), then pull lamp wiring harness (170) or (180, IPL Figure 1A) out from canopy subassembly (-335) or (-325, IPL Figure 1A). Leave conduit nut (160) or (175, IPL Figure 1A) on lamp wiring harness (170) or (180, IPL Figure 1A) unless damaged.
- (u) Disconnect motor assembly (-300A) or (70, IPL Figure 1A) connector from wiring harness (215B, 215C) or (215A, 215B, IPL Figure 1A).
- (v) Remove two screws (187) or (190, IPL Figure 1A), one screw (189) or (190, IPL Figure 1A), and transformer (-175B) or (-185A, IPL Figure 1A) from baseplate assembly (-430, -435) or (-420, -425, IPL Figure 1A).
- CAUTION: USE CARE WHEN REMOVING COMPOUND NOT TO CUT ELECTRICAL WIRES. FAILURE TO COMPLY CAN RESULT IN ELECTRICAL WIRE DAMAGE.
- (w) Use a sharp knife to carefully remove compound from five transformer (-175B) or (-185A, IPL Figure 1A) stud cavities to gain access to electrical wires. Remove compound residue from parts. Refer to CLEANING for details.
  - **NOTE:** Do Step (x) thru (y) only if parts are damaged. If no parts are damaged, go to Step (z).
- (x) Remove five nuts (-190A) or (-200A, IPL Figure 1A), lock washers (195A) or (-205A, IPL Figure 1A), terminal lugs, and spacer (200) or (210, IPL Figure 1A) from between two terminal lugs. Remove lamp (50) or (65, IPL Figure 1A) electrical wires from retractable landing light.
- (y) For retractable landing lights with wiring harness (215B) or (215A, IPL Figure 1A), remove wiring harness (215B) or (215A, IPL Figure 1A) and related parts as follows:
  - Remove two screws (220) or (220, IPL Figure 1A), washers (225) or (225, IPL Figure 1A), and part of wiring harness (215B) or (215A, IPL Figure 1A) from baseplate assembly (-430, -435) or (-420, -425, IPL Figure 1A).
  - Remove two screws (237, IPL Figure 1A), washers (238, IPL Figure 1A), and bracket assembly (25A, IPL Figure 3) from gearbox assembly (400) or (390, IPL Figure 1A).
    - **NOTE:** Do Step 3 and 4 only if switch S1 (5B, IPL Figure 3) is damaged. If switch S1 is not damaged, go to Step 5.
  - Remove two screws (10, IPL Figure 3), washers (15, IPL Figure 3), switch S1 (5B, IPL Figure 3), and switch actuator (-40A, IPL Figure 3) from switch mounting bracket (-25A, IPL Figure 3).
  - 4 Remove entire wiring harness (215B) or (215A, IPL Figure 1A) from retractable landing light.
- (z) Remove motor assembly (-300A) or (70, IPL Figure 3) and related parts as follows:
  - Remove two screws (-305A) or (227, IPL Figure 1A), washers (310) or (288, IPL Figure 1A), and motor assembly (-300A) or (-70, IPL Figure 3) from gearbox assembly (400) or (390, IPL Figure 1A).

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- 2 Remove motor end cap (313) or (75, IPL Figure 1A) from motor as follows:
  - Starting from the bottom of motor end cap (313) or (75, IPL Figure 3), use a small flat-tip screwdriver, and carefully pry motor end cap (313) or (75, IPL Figure 3) from motor assembly (-300A) or (70, IPL Figure 3). If necessary, use a sharp knife to slit the cap for ease of removal.

CAUTION:

USE CARE WHEN REMOVING ADHESIVE/SEALANT. DO NOT CUT OR PUNCTURE WIRE HARNESS OR TUBING. FAILURE TO COMPLY MAY RESULT IN REPLACEMENT OF ENTIRE WIRE HARNESS AND TUBING.

- <u>b</u> Carefully cut away old adhesive/sealant from around wire harness, that is part of motor assembly (-300A) or (70, IPL Figure 3).
- Remove motor end cap (313) or (75, IPL Figure 3) from motor assembly (-300A) or (70, IPL Figure 3). Discard motor end cap.
- Use a A-A-59323 cleaning cloth dipped in aqueous cleaner or use a sharp knife carefully to remove all adhesive/sealant residue from motor surface and wiring harness. Refer to CLEANING for details.
- Remove packing O-ring (330) or (320, IPL Figure 1A) from groove in mounting flange (315) or (100, IPL Figure 3) and discard.
- 4 Remove three screws (320) or (105, IPL Figure 3) and mounting flange (315) or (100, IPL Figure 3) from motor assembly (-300A) or (70, IPL Figure 3).
- 5 Remove packing O-ring (-325A) or (107, IPL Figure 3) from groove in mounting flange (315) or (100, IPL Figure 3) and discard.
- (aa) For retractable landing light with wiring harness (215C) or (215B, IPL Figure 1A), remove wiring harness (215C) or (215B, IPL Figure 1A) and related parts as follows:
  - 1 Remove two screws (220) or (220, IPL Figure 1A), washers (225) or (225, IPL Figure 1A), and part of wiring harness (215B) or (215A, IPL Figure 1A) from baseplate assembly (-430, -435) or (-420, -425, IPL Figure 1A).
  - Remove two screws (237, IPL Figure 1A), washers (238, IPL Figure 1A), and bracket assembly (25A, IPL Figure 1A) from gearbox assembly (400) or (390, IPL Figure 1A).

**NOTE:** Do Step 3 and 4 only if switch S1 (5B, IPL Figure 3) is damaged. If switch S1 is not damaged, go to Step 5.

- Remove two screws (10, IPL Figure 3), washers (15, IPL Figure 3), switch S1 (5B, IPL Figure 3), and switch actuator (-40A, IPL Figure 3) from switch mounting bracket (-25A, IPL Figure 3).
- 4 Remove two screws (230, IPL Figure 1A), washers (235, IPL Figure 1A), switch S2 (-20A, IPL Figure 3), and switch actuator (285, IPL Figure 1A) from side of gearbox assembly (390, IPL Figure 1A).

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- Remove two screws (-305A) or (227, IPL Figure 1A), washers (310) or (288, IPL Figure 1A), and motor assembly (-300A) or (70, IPL Figure 1A) from gearbox assembly (400) or (390, IPL Figure 1A).
- 6 Remove motor end cap (313) or (75, IPL Figure 3) from motor as follows:
  - Starting from the bottom of motor end cap (313) or (75, IPL Figure 3), use a small flat-tip screwdriver, and carefully pry motor end cap (313) or (75, IPL Figure 3) from motor assembly (-300A) or (70, IPL Figure 3). If necessary, use a sharp knife to slit the cap for ease of removal.

CAUTION: USE CARE WHEN REMOVING ADHESIVE/SEALANT. DO NOT CUT OR PUNCTURE WIRE HARNESS OR TUBING. FAILURE TO COMPLY MAY RESULT IN REPLACEMENT OF ENTIRE WIRE HARNESS AND TUBING.

- <u>b</u> Carefully cut away old adhesive/sealant from around wire harness, that is part of motor assembly (-300A) or (70, IPL Figure 3).
- Remove motor end cap (313) or (75, IPL Figure 3) from motor assembly (-300A) or (70, IPL Figure 3). Discard motor end cap (313) or (75, IPL Figure 3).
- Use a A-A-59323 cleaning cloth dipped in aqueous cleaner or use a sharp knife carefully to remove all adhesive/sealant residue from motor surface and wiring harness. Refer to CLEANING for details.
- Remove packing O-ring (330) or (320, IPL Figure 1A) from groove in mounting flange (315) or (100, IPL Figure 1A) and discard.
- 8 Remove three screws (320) or (105, IPL Figure 3) and mounting flange (315) or (100, IPL Figure 3) from motor assembly (-300A) or (-69, IPL Figure 3).
- 9 Remove packing O-ring (-325A) or (107, IPL Figure 3) from groove in mounting flange (315) or (100, IPL Figure 3) and discard.
- 10 Remove entire wiring harness (215A) or (215B, IPL Figure 1A) from retractable landing light.
- (ab) If damaged, remove instruction plate (353) or (343, IPL Figure 1A) from canopy (350) or (340, IPL Figure 1A). Discard instruction plate (353) or (343, IPL Figure 1A).
- (ac) Remove two bolts (-340A) or (-330B, IPL Figure 1A), then slide canopy subassembly (-335) or (-325, IPL Figure 1A) off shaft (160, IPL Figure 2).
- (ad) If damaged, remove nut (360) or (350, IPL Figure 1A), adjustment screw (-365A) or (355, IPL Figure 1A), washer (370) or (360, IPL Figure 1A), and switch actuator (-355B) or (345, IPL Figure 1A) from actuator bracket (-375A) or (365, IPL Figure 1A).
- (ae) If damaged, remove two screws (380) or (370, IPL Figure 1A) and actuator bracket (-375A) or (365, IPL Figure 1A) from canopy subassembly (-335) or (-325, IPL Figure 1A).

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- (af) If damaged, remove actuator adjustment nut (385) or (375, IPL Figure 1A), adjustment screw (390) or (380, IPL Figure 1A), and washer (395) or (385, IPL Figure 1A) from canopy subassembly (-335) or (-325, IPL Figure 1A).
- (ag) Remove two bolts (-405A) or (-395A, IPL Figure 1A), allen head screws (410) or (400, IPL Figure 1A), and gearbox assembly (400) or (390, IPL Figure 1A) from baseplate assembly (-430, -435) or (-420, -425, IPL Figure 1A).
- (ah) If damaged, remove nut (415) or (405, IPL Figure 1A), washer (-420A) or (-410A, IPL Figure 1A), and screw (-425A) or (-415A, IPL Figure 1A) from baseplate assembly (-430, -435) or (-420, -425, IPL Figure 1A).
- (ai) If damaged, remove instruction label (465) or (455, IPL Figure 1A) from baseplate (455, -460) or (445, -450, IPL Figure 1A). Discard instruction label (465) or (455, IPL Figure 1A).
- (aj) Refer to Paragraph 2.C. to continue disassembly of the gearbox assembly.
- (4) For retractable landing light, PN 45-0351-1, -2, -3, -4 (Post SB 45-0351-33-0008 and SB 45-0351-33-0009) and 45-0351-5, -6 proceed as follows:

**NOTE:** Refer to IPL Figure 1 for all the item numbers unless specified differently.

- (a) Loosen six captive screws (15) or (15, IPL Figure 1A) and move retainer assembly (-10B) or (-10A, IPL Figure 1A) away from canopy subassembly (-335) or (-325, IPL Figure 1A) to length of lanyard assembly (45) or (45, IPL Figure 1A).
- (b) If damaged, remove instruction label (49) from lens retainer (40). Discard instruction label (49).
- (c) If lanyard assembly (45) or (45, IPL Figure 1A) is damaged, use a small flat-tip screwdriver and turn lanyard assembly (45) or (45, IPL Figure 1A) clockwise to remove from retainer assembly (10A) or (10, IPL Figure 1A).
- (d) Remove incandescent lamp (50) or (65, IPL Figure 1A) from canopy subassembly (-335) or (-325, IPL Figure 1A) far enough to gain access to electrical connections on back.
- (e) Remove two screws and star washers that are part of the incandescent lamp (50) or (65, IPL Figure 1A).
- (f) Remove the two electrical wires from the back of the incandescent lamp (50) or (65, IPL Figure 1A). Remove incandescent lamp (50) or (65, IPL Figure 1A).
- (g) If damaged, remove identification plate (66) or (83, IPL Figure 1A) and instruction plate (67) or (84, IPL Figure 1A) from cover (55) or (70, IPL Figure 1A). Discard identification plate (66) and instruction plate (67).
- (h) Use a sharp knife to carefully remove compound from five screws (60) or (75, IPL Figure 1A) and bottom edge of cover (55) or (70, IPL Figure 1A). Remove compound residue from parts.
- (i) Remove five screws (60) or (-75A, IPL Figure 1A) and washers (65) or (-80A, IPL Figure 1A), then pull cover (55) or (70, IPL Figure 1A) away from baseplate assembly (-430, -435) or (-445, -450) to length of wiring harness (215D, -215E) or (215C -215D, IPL Figure 1A).

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- (j) Use a sharp knife to carefully remove compound from two screws (85) or (100, IPL Figure 1A). Remove compound residue from parts.
- (k) Remove two nuts (75) or (90, IPL Figure 1A), screws (85) or (100, IPL Figure 1A), washers (80) or (95, IPL Figure 1A), harness clamps (-70A) or (-85A, IPL Figure 1A), and ground lug from cover (55) or (70, IPL Figure 1A). Remove compound residue from parts. If damaged, remove two harness clamps (-70A) or (-85A, IPL Figure 1A) from wiring harness (215D, -215E) or (215C -215D, IPL Figure 1A) and discard.
- (I) Use a sharp knife to carefully remove compound from four screws (285) or (275, IPL Figure 1A). Remove compound residue from parts.
- (m) Remove four screws (285) or (275, IPL Figure 1A), washers (290) or (280, IPL Figure 1A), ring nut (50, IPL Figure 3), and receptacle connector (45, IPL Figure 3) from cover (55) or (70, IPL Figure 1A). Leave ring nut (50, IPL Figure 3) on wire harness (215D, -215E) or (215C -215D, IPL Figure 1A) unless damaged.
- (n) If damaged, remove two nuts (95) or (110, IPL Figure 1A), screws (-100A) or (-115A, IPL Figure 1A), standoffs (115) or (130, IPL Figure 1A), four washers (105) or (-120A), canopy bumper (-90A) or (105, IPL Figure 1A), and shims (110) or (125, IPL Figure 1A) from cover (55) or (70, IPL Figure 1A).
  - **NOTE:** For the ease of assembly, note the number of shims (110) or (125, IPL Figure 1A) that are removed.
- (o) Remove nut (125) or (140, IPL Figure 1A), screw (135) or (150, IPL Figure 1A), washer (130) or (145, IPL Figure 1A), and harness clamp (120) or (-135A, IPL Figure 1A) from gearbox assembly (400) or (390, IPL Figure 1A). If damaged, remove harness clamp (-120A) or (-135A) from wiring harness (215D, -215E) or (215C, -215D, IPL Figure 1A) and discard.
- CAUTION: USE CARE WHEN REMOVING COMPOUND NOT TO CUT ELECTRICAL WIRES. FAILURE TO COMPLY CAN RESULT IN ELECTRICAL WIRE DAMAGE.
- (p) Use a sharp knife to carefully remove compound from screw (145) or (160, IPL Figure 1A) head and harness clamp (-140A) or (-155A, IPL Figure 1A). Remove compound residue from parts. Refer to CLEANING for details.
- (q) Remove screw (145) or (160, IPL Figure 1A), harness clamp (-140A) or (-155A, IPL Figure 1A), and terminal lug of the braided mesh cable from the back of canopy subassembly (-335) or (-325, IPL Figure 1A). If damaged, remove harness clamp (-140A) or (-155A, IPL Figure 1A) from the two incandescent lamp (50) or (65, IPL Figure 1A) electrical wires and discard.
- CAUTION: USE CARE WHEN REMOVING COMPOUND NOT TO CUT ELECTRICAL WIRES. FAILURE TO COMPLY CAN RESULT IN ELECTRICAL WIRE DAMAGE.
- (r) Use a sharp knife to carefully remove compound from allen head screw (155) or (170, IPL Figure 1A) and harness clamp (-150A) or (-165A, IPL Figure 1A). Remove compound residue from parts. Refer to CLEANING for details.

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- (s) Remove allen head screw (155) or (170, IPL Figure 1A), harness clamp (-150A) or (-165A, IPL Figure 1A), and terminal lug of braided mesh cable from gearbox assembly (400) or (390, IPL Figure 1A). If damaged, remove harness clamp (-150A) or (-165A, IPL Figure 1A) from wiring harness (215D, -215E) or (215C, -215D, IPL Figure 1A) and discard.
- (t) Remove conduit nut (160) or (175, IPL Figure 1A) from canopy subassembly (-335) or (-325, IPL Figure 1A), then pull lamp wiring harness (170) or (180, IPL Figure 1A) out from canopy subassembly (-335) or (-325, IPL Figure 1A). Leave conduit nut (160) or (175, IPL Figure 1A) on lamp wiring harness (170) or (180, IPL Figure 1A) unless damaged.
- (u) Disconnect motor assembly (-300A) or (70, IPL Figure 3) connector from wiring harness (215D, -215E) or (215C, -215D, IPL Figure 1A).
- (v) Remove two screws (187) or (190, IPL Figure 1A), one screw (189) or (195, IPL Figure 1A), and transformer (-175B) or (-185A, IPL Figure 1A) from baseplate assembly (-430, -435) or (-420, -425, IPL Figure 1A).

CAUTION: USE CARE WHEN REMOVING COMPOUND NOT TO CUT ELECTRICAL WIRES. FAILURE TO COMPLY CAN RESULT IN ELECTRICAL WIRE DAMAGE.

(w) Use a sharp knife to carefully remove compound from five transformer (-175B) or (-185A, IPL Figure 1A) stud cavities to gain access to electrical wires. Remove compound residue from parts. Refer to CLEANING for details.

**NOTE:** Do Step (x) thru (y) only if parts are damaged. If no parts are damaged, go to Step (z).

- (x) Remove five nuts (-190A) or (-200A, IPL Figure 1A), lock washers (195A) or (-205A, IPL Figure 1A), terminal lugs, and spacer (200) or (210, IPL Figure 1A) from between two terminal lugs. Remove lamp (50) or (65, IPL Figure 1A) electrical wires from retractable landing light.
- (y) For retractable landing lights with wiring harness (215E) or (215D, IPL Figure 1A), remove wiring harness (215E) or (215D, IPL Figure 1A) and related parts as follows:
  - 1 Remove two screws (220) or (220, IPL Figure 1A), washers (225) or (225, IPL Figure 1A), and part of wiring harness (215E) or (215D, IPL Figure 1A) from baseplate assembly (-430, -435) or (-420, -425, IPL Figure 1A).
  - Remove two screws (237, IPL Figure 1A), washers (238, IPL Figure 1A), and bracket assembly (25A, IPL Figure 1A) from gearbox assembly (400) or (390, IPL Figure 1A).

**NOTE:** Do Step 3 and 4 only if switch S1 (5B, IPL Figure 3) is damaged. If switch S1 is not damaged, go to Step 5.

- Remove two screws (10, IPL Figure 3), washers (15, IPL Figure 3), switch S1 (5B, IPL Figure 3), and switch actuator (-40A, IPL Figure 3) from switch mounting bracket (-25A, IPL Figure 3).
- 4 Remove entire wiring harness (215E) or (215D, IPL Figure 1A) from retractable landing light.

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- (z) Remove motor assembly (-300A) or (70, IPL Figure 3) and related parts as follows:
  - Remove two screws (-305A) or (227, IPL Figure 1A), washers (310) or (288, IPL Figure 1A), and motor assembly (-300A) or (70, IPL Figure 3) from gearbox assembly (400) or (390, IPL Figure 1A).
  - 2 Remove motor end cap (313) or (75, IPL Figure 3) from motor as follows:
    - Starting from the bottom of motor end cap (313) or (75, IPL Figure 3), use a small flat-tip screwdriver, and carefully pry motor end cap (313) or (75, IPL Figure 3) from motor assembly (-300A) or (70, IPL Figure 3). If necessary, use a sharp knife to slit the cap for ease of removal.

CAUTION: USE CARE WHEN REMOVING ADHESIVE/SEALANT. DO NOT CUT OR PUNCTURE WIRE HARNESS OR TUBING. FAILURE TO COMPLY MAY RESULT IN REPLACEMENT OF ENTIRE WIRE HARNESS AND TUBING.

- <u>b</u> Carefully cut away old adhesive/sealant from around wire harness, that is part of motor assembly (-300A) or (70, IPL Figure 3).
- Remove motor end cap (313) or (75, IPL Figure 3) from motor assembly (-300A) or (70, IPL Figure 3). Discard motor end cap (313) or (75, IPL Figure 3).
- Use a A-A-59323 cleaning cloth dipped in aqueous cleaner or use a sharp knife carefully to remove all adhesive/sealant residue from motor surface and wiring harness. Refer to CLEANING for details.
- Remove packing O-ring (330) or (320, IPL Figure 1A) from groove in mounting flange (315) or (100, IPL Figure 3) and discard.
- 4 Remove three screws (320) or (105, IPL Figure 3) and mounting flange (315) or (100, IPL Figure 3) from motor assembly (-300A) or (70, IPL Figure 3).
- Remove packing O-ring (-325A) or (107, IPL Figure 3) from groove in mounting flange (315) or (100, IPL Figure 3) and discard.
- (aa) For retractable landing light with wiring harness (215D) or (215C, IPL Figure 1A), remove wiring harness (215D) or (215C, IPL Figure 1A) and related parts as follows:
  - Remove two screws (220) or (220, IPL Figure 1A), washers (225) or (225, IPL Figure 1A), and part of wiring harness (215D) or (215C, IPL Figure 1A) from baseplate assembly (-430, -435) or (-420, -425, IPL Figure 1A).
  - Remove two screws (237, IPL Figure 1A), washers (238, IPL Figure 1A), and bracket assembly (25A, IPL Figure 1A) from gearbox assembly (400) or (390, IPL Figure 1A).

**NOTE:** Do Step 3 and 4 only if switch S1 (5B, IPL Figure 3) is damaged. If switch S1 is not damaged, go to Step 5.

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- Remove two screws (10, IPL Figure 3), washers (15, IPL Figure 3), switch S1 (5B, IPL Figure 3), and switch actuator (-40A, IPL Figure 3) from switch mounting bracket (-25A, IPL Figure 3).
- 4 Remove two screws (230, IPL Figure 1A), washers (235, IPL Figure 1A), switch S2 (-20A, IPL Figure 3), and switch actuator (285, IPL Figure 1A) from side of gearbox assembly (390, IPL Figure 1A).
- 5 Remove two screws (-305A) or (227, IPL Figure 1A), washers (310) or (288, IPL Figure 1A), and motor assembly (-300A) or (70, IPL Figure 3) from gearbox assembly (400) or (390, IPL Figure 1A).
- 6 Remove motor end cap (313) or (75, IPL Figure 1A) from motor as follows:
  - Starting from the bottom of motor end cap (313) or (75, IPL Figure 3), use a small flat-tip screwdriver, and carefully pry motor end cap (313) or (75, IPL Figure 3) from motor assembly (-300A) or (70, IPL Figure 3). If necessary, use a sharp knife to slit the cap for ease of removal.

CAUTION: USE CARE WHEN REMOVING ADHESIVE/SEALANT. DO NOT CUT OR PUNCTURE WIRE HARNESS OR TUBING. FAILURE TO COMPLY MAY RESULT IN REPLACEMENT OF ENTIRE WIRE HARNESS AND TUBING.

- <u>b</u> Carefully cut away old adhesive/sealant from around wire harness, that is part of motor assembly (-300A) or (70, IPL Figure 3).
- Remove motor end cap (313) or (75, IPL Figure 3) from motor assembly (-300A) or (70, IPL Figure 3). Discard motor end cap (313) or (75, IPL Figure 3).
- Use a A-A-59323 cleaning cloth dipped in aqueous cleaner or use a sharp knife carefully to remove all adhesive/sealant residue from motor surface and wiring harness. Refer to CLEANING for details.
- Remove packing O-ring (330) or (320, IPL Figure 1A) from groove in mounting flange (315) or (100, IPL Figure 3) and discard.
- Remove three screws (320) or (105, IPL Figure 3) and mounting flange (315) or (100, IPL Figure 3) from motor assembly (-300A) or (-69, IPL Figure 3).
- 9 Remove packing O-ring (-325A) or (107, IPL Figure 3) from groove in mounting flange (315) or (100, IPL Figure 3) and discard.
- 10 Remove entire wiring harness (215D) or (215C, IPL Figure 1A) from retractable landing light.
- (ab) If damaged, remove instruction plate (353) or (343, IPL Figure 1A) from canopy (350) or (340, IPL Figure 1A). Discard instruction plate (353) or (343, IPL Figure 1A).
- (ac) Remove two bolts (-340A) or (-330B, IPL Figure 1A), then slide canopy subassembly (-335) or (-325, IPL Figure 1A) off shaft (160, IPL Figure 2).

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- (ad) If damaged, remove nut (360) or (350, IPL Figure 1A), adjustment screw (-365A) or (355, IPL Figure 1A), washer (370) or (360, IPL Figure 1A), and switch actuator (-355B) or (345, IPL Figure 1A) from actuator bracket (-375A) or (365, IPL Figure 1A).
- (ae) If damaged, remove two screws (380) or (370, IPL Figure 1A) and actuator bracket (-375A) or (365, IPL Figure 1A) from canopy subassembly (-335) or (-325, IPL Figure 1A).
- (af) If damaged, remove actuator adjustment nut (385) or (375, IPL Figure 1A), adjustment screw (390) or (380, IPL Figure 1A), and washer (395) or (385, IPL Figure 1A) from canopy subassembly (-335) or (-325, IPL Figure 1A).
- (ag) Remove two bolts (-405A) or (-395A, IPL Figure 1A), allen head screws (410) or (400, IPL Figure 1A), and gearbox assembly (400) or (390, IPL Figure 1A) from baseplate assembly (-430, -435) or (-420, -425, IPL Figure 1A).
- (ah) If damaged, remove nut (415) or (405, IPL Figure 1A), washer (-420A) or (-410A, IPL Figure 1A), and screw (-425A) or (-415A, IPL Figure 1A) from baseplate assembly (-430, -435) or (-420, -425, IPL Figure 1A).
- (ai) If damaged, remove instruction label (465) or (455, IPL Figure 1A) from baseplate (455, -460) or (445, -450, IPL Figure 1A). Discard instruction label (465) or (455, IPL Figure 1A).
- (aj) Refer to Paragraph 2.C. to continue disassembly of the gearbox assembly.
- C. Disassembly of the Gearbox Assembly (Subtask 33-42-07-000-008-A01)

**NOTE:** Disassemble gearbox assembly only if gearbox failure has occurred.

- (1) Refer to IPL Figure 2 for all the item numbers unless specified differently.
- (2) Remove the allen head screws (10), the allen head screws (15), the screws (20), and the cover assembly (-5) from the housing assembly (-195).
- (3) Remove the shim set (-35A) from the ball bearing (190).
  - **NOTE:** For ease of assembly, note the number of shims in the shim set (-35A) that are removed.
- (4) Remove the allen head screw (70), the washer (75) and the retaining ring (80) from the idler shaft (65).
- (5) Grasp the primary gear assembly (-40A) and the secondary gear assembly (-50A) and pull out from the housing assembly (-195). During removal, the idler gear (90) may be on the bottom of the secondary gear assembly (-50A). If not, remove the idler gear (90) from the housing assembly (-195).
- (6) Use a bearing puller to remove the two ball bearings (45) from the primary gear (47). Discard the ball bearings (45).
- (7) Use a bearing puller to remove the two ball bearings (55) and the bearing retainer washer (60) from the secondary gear (63). Discard the ball bearings (55).
- (8) Use a hammer and small punch to remove the idler shaft (65) and the ball bearing (85) from the idler gear (90). Discard the ball bearing (85).

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- (9) Remove the allen head screws (100), the washers (105), and the left-hand retainer (95) from the housing assembly (-195).
- (10) Remove the quad ring (110), the bearing (115), and the thrust washer (120) from the left-hand retainer (95). Discard the quad ring (110) and the bearing (115).
- (11) Remove the screws (130) and the right-hand retainer (125) from the housing assembly (-195).
- (12) Remove the packing O-ring (135) from the right-hand retainer (125) and discard.
- (13) Remove the bearing (140) and the thrust washer (145) from the right-hand retainer (125). Discard the bearing (140).
- (14) Slide the thrust bearing (150) and the shim set (-155A) off the shaft (160). Discard the thrust bearing (150).
  - **NOTE:** For ease of assembly, note the number of shims removed from the shim set (-155A).
- (15) Use an arbor press to remove the shaft (160) from the housing assembly (-195).
- (16) Remove the worm gear (165), the sector gear assembly (170), the shim set (-155A), the thrust bearing (180) and the quad ring (185) from the housing assembly (-195). Discard the thrust bearing (180) and the quad ring (185).
  - **NOTE:** For ease of assembly, note the number of shims removed from the shim set (-155A).
- (17) Use a bearing puller to remove the ball bearings (190) from the worm gear (165) and discard.
- **D. Job Close-up** (Subtask 33-42-07-000-009-A01)
  - (1) Remove all tools, equipment, and unwanted materials from the work area.

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#### **CLEANING**

- 1. Planning Data (TASK 33-42-07-99C-804-A01)
  - **A.** Reason for the Job (Subtask 33-42-07-99C-008-A01)
    - (1) Use these procedures to remove dust, dirt, and unwanted oil and grease. Be careful not to cause damage to the parts when you do these procedures.
  - **B. Job Setup Data** (Subtask 33-42-07-99C-009-A01)
    - (1) You can use equivalent alternatives for the special tools, fixtures, equipment, and consumable materials. The user must find equivalent alternatives.
    - (2) Refer to Table 4001 for the special tools, fixtures, and equipment in this section.
    - (3) CAGE codes and manufacturers' addresses are available at https://cage.dla.mil.

#### Table 4001. Special Tools, Fixtures, and Equipment

Number	Description	Source
	soft-bristle brush	commercially available

WARNING: BEFORE YOU USE A MATERIAL, REFER TO THE MANUFACTURERS' MATERIAL SAFETY DATA SHEETS. SOME MATERIALS CAN BE DANGEROUS.

CAUTION: DO NOT USE MATERIALS THAT ARE NOT EQUIVALENT TO HONEYWELL

SPECIFIED MATERIALS. MATERIALS THAT ARE NOT EQUIVALENT CAN CAUSE

DAMAGE TO THE EQUIPMENT AND CAN MAKE THE WARRANTY NOT

APPLICABLE.

(4) Refer to Table 4002 for the consumable materials in this section.

#### Table 4002. Consumables

Number	Description	Source
A-A-59323	cleaning cloth (low-lint, Type I)	commercially available
Armakleen M-HP-2	aqueous cleaner (MIL-C-29602, Type I)	CAGE: 30530
TT-I-735A	isopropyl alcohol	commercially available

- (5) The list that follows identifies Honeywell publications that are related to this section:
  - ATA No. 20-00-03, (Pub. No. A09-1100-004), Standard Repair Procedures for Honeywell Avionics Equipment Instruction Manual.

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- **2. Procedure** (TASK 33-42-07-100-801-A01)
  - **A. Job Setup** (Subtask 33-42-07-100-001-A01)

WARNING: BEFORE YOU USE A MATERIAL, REFER TO THE MANUFACTURERS' MATERIAL SAFETY DATA SHEETS. SOME MATERIALS CAN BE DANGEROUS.

CAUTION: DO NOT USE MATERIALS THAT ARE NOT EQUIVALENT TO HONEYWELL

SPECIFIED MATERIALS. MATERIALS THAT ARE NOT EQUIVALENT CAN CAUSE

DAMAGE TO THE EQUIPMENT AND CAN MAKE THE WARRANTY NOT

APPLICABLE.

CAUTION: USE INDUSTRY APPROVED ELECTROSTATIC DISCHARGE SENSITIVE

PRECAUTIONS. THE RETRACTABLE LANDING LIGHT CONTAINS

ELECTROSTATIC DISCHARGE SENSITIVE ITEMS.

CAUTION: DO NOT DROP OR HIT THE RETRACTABLE LANDING LIGHT DURING THESE

PROCEDURES. THE RETRACTABLE LANDING LIGHT CONTAINS AN ASSEMBLY

THAT CAN BE DAMAGED FROM INCORRECT USE.

CAUTION: DO THESE PROCEDURES IN A CLEAN ENVIRONMENT TO PREVENT DAMAGE

TO MECHANICAL COMPONENTS.

- (1) Obey the precautions.
- (2) Do the procedures in a clean location.
- (3) When you use pressurized air to clean assemblies and parts, do not use more air pressure than is necessary.
- (4) After you clean the assemblies and parts, supply protection from moisture, dust, and other contamination until you do a visual check and assemble the component.
- (5) Refer to ATA No. 20-00-03, (Pub. No. A09-1100-004), Standard Repair Procedures for Honeywell Avionics Equipment Instruction Manual, for more cleaning procedures. Use the standard repair procedures and approved local shop procedures.
- B. Cleaning Procedures (Subtask 33-42-07-100-002-A01)

**NOTE:** Refer to IPL Figure 1 for all the item numbers unless specified differently.

- (1) Clean metal parts in Armakleen M-HP-2 aqueous cleaner. Use a soft-bristle brush to remove ground-in deposits.
- (2) Use a A-A-59323 cleaning cloth dampened with Armakleen M-HP-2 aqueous cleaner to remove old adhesive/sealant residue from parts.
- (3) Use a A-A-59323 cleaning cloth dampened with TT-I-735A isopropyl alcohol to remove old adhesive/sealant residue from lens retainer (40) or (40, IPL Figure 1A).
- (4) Wipe electrical parts with a A-A-59323 cleaning cloth dipped in Armakleen M-HP-2 aqueous cleaner to remove dirt, dust, and foreign material.

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WARNING: AIR PRESSURE MUST BE LIMITED TO 30 POUNDS PER SQUARE INCH (207 KILOPASCALS). FAILURE TO COMPLY CAN RESULT IN INJURY OR DEATH TO PERSONNEL.

- (5) Dry parts with compressed air or wipe with a A-A-59323 cleaning cloth and let air-dry.
- (6) Wipe lens (35), lens (35, IPL Figure 1A), incandescent lamp (50), and lamp (65, IPL Figure 1A) with a dry, A-A-59323 cleaning cloth to remove dirt or dust.
- **C. Job Close-up** (Subtask 33-42-07-100-003-A01)
  - (1) Remove all tools, equipment, and unwanted materials from the work area.

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#### INSPECTION/CHECK

- 1. Planning Data (TASK 33-42-07-99C-805-A01)
  - **A.** Reason for the Job (Subtask 33-42-07-99C-010-A01)
    - (1) Use these procedures to find damage or worn parts and parts that show signs of near failure.
  - **B. Job Setup Data** (Subtask 33-42-07-99C-011-A01)
    - (1) You can use equivalent alternatives for the special tools, fixtures, equipment, and consumable materials. The user must find equivalent alternatives.
    - (2) Refer to Table 5001 for the special tools, fixtures, and equipment in this section.
    - (3) CAGE codes and manufacturers' addresses are available at https://cage.dla.mil.

#### Table 5001. Special Tools, Fixtures, and Equipment

Number	Description	Source
Not applicable	Not applicable	Not applicable

WARNING: BEFORE YOU USE A MATERIAL, REFER TO THE MANUFACTURERS' MATERIAL SAFETY DATA SHEETS. SOME MATERIALS CAN BE DANGEROUS.

CAUTION: DO NOT USE MATERIALS THAT ARE NOT EQUIVALENT TO HONEYWELL

SPECIFIED MATERIALS. MATERIALS THAT ARE NOT EQUIVALENT CAN CAUSE

DAMAGE TO THE EQUIPMENT AND CAN MAKE THE WARRANTY NOT

APPLICABLE.

(4) Refer to Table 5002 for the consumable materials in this section.

#### Table 5002. Consumables

Number	Description	Source
Not applicable	Not applicable	Not applicable

- (5) The list that follows identifies Honeywell publications that are related to this section:
  - (a) Not applicable.

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- **2. Procedure** (TASK 33-42-07-210-801-A01)
  - **A. Job Setup** (Subtask 33-42-07-210-001-A01)

WARNING: BEFORE YOU USE A MATERIAL, REFER TO THE MANUFACTURERS' MATERIAL SAFETY DATA SHEETS. SOME MATERIALS CAN BE DANGEROUS.

CAUTION: DO NOT USE MATERIALS THAT ARE NOT EQUIVALENT TO HONEYWELL

SPECIFIED MATERIALS. MATERIALS THAT ARE NOT EQUIVALENT CAN CAUSE

DAMAGE TO THE EQUIPMENT AND CAN MAKE THE WARRANTY NOT

APPLICABLE.

**CAUTION: USE INDUSTRY APPROVED ELECTROSTATIC DISCHARGE SENSITIVE** 

PRECAUTIONS. THE RETRACTABLE LANDING LIGHT CONTAINS

ELECTROSTATIC DISCHARGE SENSITIVE ITEMS.

<u>CAUTION</u>: DO NOT DROP OR HIT THE RETRACTABLE LANDING LIGHT DURING THESE

PROCEDURES. THE RETRACTABLE LANDING LIGHT CONTAINS AN ASSEMBLY

THAT CAN BE DAMAGED FROM INCORRECT USE.

CAUTION: DO THESE PROCEDURES IN A CLEAN ENVIRONMENT TO PREVENT DAMAGE

TO MECHANICAL COMPONENTS.

- (1) Obey the precautions.
- (2) Replace all damaged or worn parts. This prevents possible failures of the equipment.
- **B. Standard Checks** (Subtask 33-42-07-210-002-A01)
  - (1) Refer to IPL Figure 1 for all the item numbers unless specified differently.
  - (2) Examine parts for nicks, gouges, scratches, or small burrs. If any are deeper than 0.03 inch (0.8 mm), replace part. Refer to REPAIR Paragraph 2.C.
  - (3) Examine parts for corrosion. If deeper than 0.03 inch (0.8 mm) or more than 20 percent of surface is damaged, replace part. Refer to REPAIR Paragraph 2.C.
  - (4) Examine painted parts for scratches, peeling, flaking, or chipping. Repair minor damage. Refer to REPAIR Paragraph 2.D.
  - (5) Visually inspect threaded parts for distortion or stripping. If damaged, replace parts.
  - (6) Examine threaded inserts for stripping and tight fit. If damaged or loose, replace parts.
  - (7) Examine electrical parts for cracks, distortion, bent pins, or signs of burned connections. If damaged, replace parts.
  - (8) Examine wiring harness (215) or (215, IPL Figure 1A) for cracks, breaks, or deterioration of insulation. If damaged, replace parts.
  - (9) Examine transformer (175) or (185, IPL Figure 1A) for cracks and corrosion. Discoloration of potting is acceptable. Replace the transformer if there is any sign of corrosion. Minor cracks can be resealed. Refer to REPAIR for details.
  - (10) Examine lens (35) or (35, IPL Figure 1A) and incandescent lamp (50) or (65, IPL Figure 1A) for cracks or breaks. If damaged, replace parts.
  - (11) Examine canopy subassembly (-335) or (-325, IPL Figure 1A) for dents, cracks, or breaks. If damaged, replace.

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- (12) Examine baseplate assembly (-430) or (-420, IPL Figure 1A) for dents, cracks, or breaks. Repair minor damage.
- (13) Examine all gears inside gearbox assembly (400) or (390, IPL Figure 1A) for worn or chipped teeth. If any gears show signs of wear, replace.
- (14) Examine housing assembly (-195, IPL Figure 2) for dents, cracks, or breaks. If damaged, replace.
- (15) Examine shoulder bolt (405) or (395, IPL Figure 1A) clearances in gearbox assembly (400) or (390, IPL Figure 1A) as follows:

**NOTE:** Refer to Figure 5001.

- (a) Check where shoulder bolts (405) or (395, IPL Figure 1A) pass through gearbox assembly (400) or (390, IPL Figure 1A) for score marks. If score marks are present, refer to REPAIR, Paragraph 2.N. to increase clearance between shoulder bolts (405) or (395, IPL Figure 1A) and gearbox assembly (400) or (390, IPL Figure 1A).
- (b) Check that bolts (-405A) or (-395A, IPL Figure 1A) seat flush to mounting surface of gearbox assembly (400) or (390, IPL Figure 1A). If bolts (-405A) or (-395A, IPL Figure 1A) do not seat flush, refer to REPAIR Paragraph 2.N. to increase clearance between bolts (-405A) or (-395A, IPL Figure 1A) and gearbox assembly (400) or (390, IPL Figure 1A).



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Figure 5001. Gearbox Assembly Mounting Bolt Inspection

- **C. Job Close-up** (Subtask 33-42-07-210-003-A01)
  - (1) Remove all tools, equipment, and unwanted materials from the work area.

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#### **REPAIR**

- 1. Planning Data (TASK 33-42-07-99C-806-A01)
  - **A.** Reason for the Job (Subtask 33-42-07-99C-012-A01)
    - (1) Use these procedures for the LRU to replace defective parts and replace or repair defective subassemblies.
    - (2) Do only those procedures of DISASSEMBLY that are necessary to make repairs. When new parts are necessary, refer to the ILLUSTRATED PARTS LIST for the correct part numbers and quantities.
  - **B. Job Setup Data** (Subtask 33-42-07-99C-013-A01)
    - (1) You can use equivalent alternatives for the special tools, fixtures, equipment, and consumable materials. The user must find equivalent alternatives.
    - (2) Refer to Table 6001 for the special tools, fixtures, and equipment in this section.
    - (3) CAGE codes and manufacturers' addresses are available at https://cage.dla.mil.

#### Table 6001. Special Tools, Fixtures, and Equipment

Number	Description	Source
05-0491-1	functional tester	CAGE: 06848
430 SUPERBONDER	adhesive (AD105)	CAGE: 05972
46447	crimping tool (for use on 322338 terminal)	CAGE: 00779
49935	crimping tool (for use on bomb tail 34130)	CAGE: 00779
59250	crimping tool (for use on 36150, 320631, and 320619 terminals)	CAGE: 00779
876-007	flare punch (Spaenaur)	commercially available
98169	ream fixture	CAGE: 72914
	crimping tool	commercially available
	flat punch	commercially available
	heat gun	commercially available
	oven (optional)	commercially available
	ream (size 43, 0.089 inch. (2.26 mm) diameter)	commercially available
M22520/1-01	crimping tool (used to crimp 55-2417 contact pins)	commercially available
M22520/1-02	turret (used to crimp 55-2417 contact pins)	commercially available

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#### Table 6001. Special Tools, Fixtures, and Equipment (Cont)

Number	Description	Source
M81969/17-03	insertion tool (used to insert 55- 2417-1 contact pins)	commercially available
M81969/19-06	extraction tool (used for extraction of 55-2417-1 contact pins)	commercially available

 $\underline{\textbf{WARNING:}} \ \ \textbf{BEFORE YOU USE A MATERIAL}, \textbf{REFER TO THE MANUFACTURERS' MATERIAL}$ 

SAFETY DATA SHEETS. SOME MATERIALS CAN BE DANGEROUS.

CAUTION: DO NOT USE MATERIALS THAT ARE NOT EQUIVALENT TO HONEYWELL

SPECIFIED MATERIALS. MATERIALS THAT ARE NOT EQUIVALENT CAN CAUSE DAMAGE TO THE EQUIPMENT AND CAN MAKE THE WARRANTY NOT

APPLICABLE.

(4) Refer to Table 6002 for the consumable materials in this section.

#### Table 6002. Consumables

Number	Description	Source
14-78-3-707	paint (PA567, BMS 10-60 Type II)	CAGE: 81205
20300007101	tubing	CAGE: 07497
3140	conformal coating (CM197, clear, transparent)	CAGE: 71984
3145	adhesive (CM1951)	CAGE: 71984
320619	terminal (TE195)	CAGE: 00779
320631	terminal (TE1542)	CAGE: 00779
322337	terminal (TE210)	CAGE: 00779
322338	terminal (TE222)	CAGE: 00779
34130	bombtail (TE324)	CAGE: 00779
36150	terminal (TE087)	CAGE: 00779
430 SUPERBONDER	adhesive (AD105)	CAGE: 05972
46-2904-1	seal, conduit	CAGE: 72914
55-2417-1	contact pin	CAGE: 72914
55-2418-1	wire, electrical	commercially available
88	sealing compound (AD295, MIL-S-22473, grade A, thread-locking anaerobic, single component, red)	CAGE: 05972
	INSULGLASS	CAGE: 12509
A-A-59323	cleaning cloth (low-lint, Type I)	commercially available
ANSI B74.18	aluminum oxide abrasive cloth (600-grit)	commercially available

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#### Table 6002. Consumables (Cont)

Number	Description	Source
BMS 10-79 Type III	primer (PR1055, 515 X 349 base, 910 X 533 green catalyst, urethane compatible, corrosion resistant)	commercially available
CSL-503	gasket material (CM194, high temperature silicone rubber)	CAGE: 38735
EE-4215	potting compound (CM4252)	CAGE: 33564
HD0242	hardener (CM4251)	CAGE: 05972
M23053/5-103-0	heat shrink tubing (AMS-DTL-23053)	commercially available
M23053/5-104-0	heat shrink tubing (AMS-DTL-23053)	commercially available
M81824/1-1	splice (SAE AS81824/1)	commercially available
M81824/1-3	butt splice	commercially available
Molykote 111 compound	high vacuum silicone grease (CM670, light gray translucent)	CAGE: 71984
MS25036-149	terminal (SAE AS25036)	commercially available
MS27488-20	seal plug	commercially available
PR-1204	primer (CM258)	CAGE: 71984
RTV157	adhesive/sealant (AD029, gray)	CAGE: 09214
SN63WRMAP3	electrical solder	commercially available
VARGLAS-H-C-2	tubing (TU420, number 7, non-rigid, white fiberglass (Note 1))	CAGE: 79074
VARGLAS-H-C-2	tubing (TU485, number 2, non-rigid, white fiberglass)	CAGE: 79074
VARGLAS-H-C-2	tubing (TU485, number 5, non-rigid, white fiberglass)	CAGE: 79074
VARGLAS-H-C-2 1214002	tubing (TU485, number 2, non-rigid, white fiberglass)	CAGE: 79074
VARGLAS-H-C-2 1214005	tubing (TU4499, number 5, non- rigid, white fiberglass)	CAGE: 79074
VARGLAS-H-C-2 1214007	tubing (TU420, number 7, non-rigid, white fiberglass (Note 1))	CAGE: 79074
WI106	wire, electrical (WI106)	commercially available
WI940	braided mesh cable (8660)	CAGE: 16428

#### NOTE:

- 1 PN 20300007101, tubing or INSULGLASS is an acceptable alternative to VARGLAS-H-C-2, tubing.
  - (5) The list that follows identifies Honeywell publications that are related to this section:

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- ATA No. 20-00-03, (Pub. No. A09-1100-004), Standard Repair Procedures for Honeywell Avionics Equipment Instruction Manual.
- **2. Procedure** (TASK 33-42-07-300-801-A01)
  - **A. Job Setup** (Subtask 33-42-07-300-001-A01)

<u>WARNING:</u> BEFORE YOU USE A MATERIAL, REFER TO THE MANUFACTURERS' MATERIAL SAFETY DATA SHEETS. SOME MATERIALS CAN BE DANGEROUS.

CAUTION: DO NOT USE MATERIALS THAT ARE NOT EQUIVALENT TO HONEYWELL SPECIFIED MATERIALS. MATERIALS THAT ARE NOT EQUIVALENT CAN CAUSE DAMAGE TO THE EQUIPMENT AND CAN MAKE THE WARRANTY NOT APPLICABLE.

<u>CAUTION</u>: USE INDUSTRY APPROVED ELECTROSTATIC DISCHARGE SENSITIVE PRECAUTIONS. THE RETRACTABLE LANDING LIGHT CONTAINS ELECTROSTATIC DISCHARGE SENSITIVE ITEMS.

<u>CAUTION</u>: DO NOT DROP OR HIT THE RETRACTABLE LANDING LIGHT DURING THESE PROCEDURES. THE RETRACTABLE LANDING LIGHT CONTAINS AN ASSEMBLY THAT CAN BE DAMAGED FROM INCORRECT USE.

<u>CAUTION</u>: DO THESE PROCEDURES IN A CLEAN ENVIRONMENT TO PREVENT DAMAGE TO MECHANICAL COMPONENTS.

- (1) Obey the precautions.
- (2) The item numbers shown in the DPL are the same as the item numbers on the exploded view illustration(s). To find a PN, find the part on the illustration and note the item number. Find the item number in the parts list and read the correct PN. Item numbers refer to the same figure until a different figure is specified.
- (3) Limit repair procedures to correction of minor defects or damage, paint touch-up, and replacement of parts. Refer to INSPECTION/CHECK for details.
- CAUTION: USE A HEAT SINK FOR HEAT-SENSITIVE PARTS; APPLY HEAT FOR A MAXIMUM OF 10 SECONDS AT A TEMPERATURE NOT TO EXCEED 300 DEGREE FAHRENHEIT (149 DEGREE CELCIUS) TO AVOID DAMAGE.
- (4) Apply SN63WRMAP3 electrical solder in accordance with MIL-STD-454. Remove excess with a A-A-59323 cleaning cloth.
- Use same color and type to replace electrical wires. Strip insulation 0.25 inch (6.4 mm). Use SN63WRMAP3 electrical solder to tin end, then attach to another component. Tag electrical wires before removal.
- (6) Install rivets in accordance with MIL-R-47196.
- <u>CAUTION</u>: DO NOT USE CROCUS CLOTH ON ALUMINUM PARTS. CLOTH CONTAINS IRON OXIDE, WHICH CAUSES RAPID OXIDATION OF ALUMINUM.
- (7) Use ANSI B74.18 aluminum oxide abrasive cloth on aluminum parts. Use ANSI B74.18 aluminum oxide abrasive cloth on steel parts.

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- B. References for Repair (Subtask 33-42-07-300-002-A01)
  - (1) These references show where to find repair data that is located in other sections of this manual and in other manuals. The data in other sections of this manual is necessary for repair of the retractable landing light and its primary subassemblies. The data in other manuals gives procedures that are not included in this manual.
  - (2) Refer to SCHEMATIC AND WIRING DIAGRAMS for reference drawings for the retractable landing light and its primary subassemblies. The drawings give data about:
    - Consumable materials
    - Component layout
    - Component termination
    - Schematic diagrams.
  - (3) Refer to SCHEMATIC AND WIRING DIAGRAMS for wire list tables and for harness, cable, and lead assemblies. The tables give data about wire:
    - Terminations
    - Type
    - Size (AWG)
    - Color.
  - (4) Refer to FITS AND CLEARANCES for:
    - Component clearance
    - Maximum component height
    - Maximum lead length
    - Torque limits.
  - (5) Refer to ILLUSTRATED PARTS LIST for:
    - Figure and item numbers
    - Subassembly and component locations
    - Correct part numbers
    - Correct quantities.
  - (6) Refer to ATA No. 20-00-03, (Pub. No. A09-1100-004), Standard Repair Procedures for Honeywell Avionics Equipment Instruction Manual. Standard repair procedures are shop repairs that use the same procedures on many types of assemblies. Use the standard repair procedures and approved local shop procedures.
- C. Standard Repair Procedures (Subtask 33-42-07-300-003-A01)

<u>CAUTION</u>: DO NOT CHANGE SURFACE FINISH OR PART SHAPE OR EXCEED WEAR LIMITS. FAILURE TO COMPLY CAN RESULT IN FAILURE OF THE PART.

(1) Remove minor surface corrosion with correct abrasive cloth.

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- (2) Remove nicks, gouges, scratches, or small burrs as follows:
  - (a) Remove any raised material with a very fine file.
  - (b) Blend damaged area into adjacent surfaces.
  - (c) Polish areas with correct abrasive cloth.
- D. Surface Finish Procedures (Subtask 33-42-07-300-004-A01)
  - (1) These procedures must be used for touch-up of scratches and surface defects.
    - (a) Repair area if required. Refer to Paragraph 2.C. for details.
    - (b) Cover areas not to be treated with masking tape.

WARNING: PRIMER IS FLAMMABLE AND TOXIC TO EYES, SKIN, AND RESPIRATORY TRACT. SKIN AND EYE PROTECTION REQUIRED. AVOID REPEATED OR PROLONGED CONTACT. USE ONLY IN WELL-VENTILATED AREAS. KEEP AWAY FROM OPEN FLAMES OR OTHER SOURCES OF IGNITION.

- (c) Apply BMS 10-79 Type III primer as follows:
  - 1 Mix and thin primer in accordance with manufacturer's instructions.
  - Apply one coat of primer to damaged area. Let air-dry or put in an oven for 1 hour at 200°F (93°C).
  - 3 When dry, check finish is smooth and free of defects.

WARNING: PAINT IS FLAMMABLE AND TOXIC TO EYES, SKIN, AND RESPIRATORY TRACT. SKIN AND EYE PROTECTION REQUIRED. AVOID REPEATED OR PROLONGED CONTACT. USE ONLY IN WELL-VENTILATED AREAS. KEEP AWAY FROM OPEN FLAMES OR OTHER SOURCES OF IGNITION.

- (d) Apply 14-78-3-707 paint as follows:
  - 1 Mix and thin paint in accordance with manufacturer's instructions.
  - Apply one coat of paint to damaged area. Let air-dry or put in an oven for 1 hour at 200°F (93°C).

#### **WARNING: WEAR PROTECTIVE GLOVES WHEN HANDLING HOT PARTS.**

- When dry, apply a second coat of paint. Let air-dry or put in an oven for 1 hour at 200°F (93°C).
- 4 When dry, remove masking tape and check finish is smooth, is free of defects, and blends into other surfaces.
- E. Repair of Retractable Landing Light, PN 45-0351-1 and -2 (Pre SB 45-0531-33-SB03 and -SB04) (Subtask 33-42-07-300-005-A01)
  - (1) Refer to IPL Figure 1 for all the item numbers unless specified differently.
  - (2) Repair damaged retainer assembly (-10) as follows:
    - (a) Remove the screw retainers (20) and the captive screws (-15A) from lens retainer (40).

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(b) Use a small flat-tip screwdriver to turn lanyard assembly (45) clockwise to remove from lens retainer (40).

**NOTE:** For ease of assembly, note locations of gaskets before removal.

- (c) Remove lens gasket (25), lamp gasket (30), and lens (35) from lens retainer (40) and discard.
- (d) Remove previous adhesive residue from lens retainer (40). Refer to CLEANING for details.

# WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

(e) Apply a bead of CSL-503 gasket material in recess of new lens (35) and position on lens retainer (40). Use a A-A-59323 cleaning cloth to remove excess gasket material from lens (35) and/or lens retainer (40).

# WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

(f) Apply a bead of RTV157 adhesive/sealant around outer diameter of new lamp gasket (30) and position on inside of lens retainer (40). Use a A-A-59323 cleaning cloth to remove excess adhesive/sealant from lamp gasket (30) and/or lens retainer (40).

# WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (g) Apply a bead of RTV157 adhesive/sealant on one side of new lens gasket (25) and position on lens retainer (40). Use a A-A-59323 cleaning cloth to remove excess adhesive/sealant from new lens gasket (25) and/or lens retainer (40).
- (h) Insert lanyard assembly (45) into hole in lens retainer (40) and use a small flat-tip screwdriver to thread lanyard assembly (45) counterclockwise into lens retainer (40).
- (i) Insert six captive screws (15) through holes in lens retainer (40) and attach with six screw retainers (20).
- (3) Replace damaged 34130 bombtail on end of lanyard assembly (45) with 49935 crimping tool as required.
- (4) Repair damaged canopy subassembly (-335) as follows:
  - (a) Remove three rubber cushions (345) from canopy (-350A) and discard.

**NOTE:** If canopy (350) is damaged, discard canopy (350) and replace with canopy (-350A).

**NOTE:** Older retractable landing lights may have six rubber cushions (345).

(b) Remove any previous adhesive residue from canopy (350, -350A). Refer to CLEANING for details.

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# WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (c) Apply RTV157 adhesive/sealant on one side of three new rubber cushions (345) and position on canopy (350, -350A). Use a A-A-59323 cleaning cloth to remove excess adhesive/sealant from rubber cushions (345) and/or canopy (350, -350A).
- (5) Repair cracked transformer (175) as follows:
  - WARNING: PRIMER IS FLAMMABLE AND POISONOUS TO THE EYES, SKIN, AND RESPIRATORY TRACT. USE SKIN AND EYE PROTECTION. AVOID REPEATED OR PROLONGED CONTACT. MAKE SURE THAT THE AREA WHERE YOU WILL USE PRIMER HAS GOOD AIRFLOW. KEEP AWAY FROM OPEN FLAMES OR OTHER SOURCES OF IGNITION.
  - (a) Apply PR-1204 primer to exposed area of potting. Use a A-A-59323 cleaning cloth to remove excess primer. Let air-dry for 1 hour.

- (b) Seal exposed surface of potting with 3140 conformal coating. Use a A-A-59323 cleaning cloth to remove excess conformal coating. Let air-dry for 2 hours.
  - **NOTE:** Make sure the retractable landing light is at room temperature for 72 hours before it is installed on the aircraft. This will let the conformal coating to fully cure.
- (6) Replace damaged connector housing (347) as follows:
  - (a) Remove damaged connector housing (347) from canopy (350, -350A). Discard connector housing (347).
  - (b) Put new connector housing (347) on the canopy (350, -350A), then roll and stake connector housing (347) to attach.
- F. Repair of Retractable Landing Light, PN 45-0351-1 and -2 (Post SB 45-0351-33-SB03, -SB04 and Pre SB 45-0351-33-0007) and 45-0351-3 and -4 (Pre SB 45-0351-33-0007) (Subtask 33-42-07-300-006-A01)
  - (1) Refer to IPL Figure 1 for all the item numbers unless specified differently.
  - (2) Repair damaged retainer assembly (10A) or (10, IPL Figure 1A) as follows:
    - (a) Remove six screw retainers (20), or (20, IPL Figure 1A) and captive screws (-15) or (15, IPL Figure 1A) from lens retainer (40) or (40, IPL Figure 1A).
    - (b) Drill out two rivets (48) or (60, IPL Figure 1A) and remove bracket (55) or (55, IPL Figure 1A) from lens retainer (40) or (40, IPL Figure 1A). Discard rivets (60) or (60, IPL Figure 1A).
    - (c) Remove the lamp (50) or (50, IPL Figure 1A) from bracket (47) or (55, IPL Figure 1A) and discard.
    - (d) Remove previous adhesive residue from bracket (47) or (55, IPL Figure 1A). Refer to CLEANING for details.

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- (e) Use a small flat-tip screwdriver to turn lanyard assembly (45) or (45, IPL Figure 1A) clockwise to remove from lens retainer (40) or (40, IPL Figure 1A).
  - **NOTE:** For ease of assembly, note locations of gaskets before removal.
- (f) Remove lens gasket (25) or (25, IPL Figure 1A), lamp gasket (30) or (30, IPL Figure 1A), and clear lens (-35A) or (35, IPL Figure 1A) from lens retainer (40) or (40, IPL Figure 1A) and discard.
- (g) Remove previous adhesive residue from lens retainer (40) or (40, IPL Figure 1A). Refer to CLEANING for details.

# WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

(h) Apply a bead of CSL-503 gasket material in recess of new lens (-35A) or (35, IPL Figure 1A) and position on lens retainer (40) or (40, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess gasket material from lens and/or lens retainer.

# WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

(i) Apply a bead of RTV157 adhesive/sealant around outer diameter of new lamp gasket (-30A) or (30, IPL Figure 1A) and position on inside of lens retainer (40) or (40, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess adhesive/sealant from lamp gasket and/or lens retainer.

# WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (j) Apply a bead of RTV157 adhesive/sealant on one side of new lens gasket (25) or (25, IPL Figure 1A) and position on lens retainer (40) or (40, IPL Figure 1A).
   Use a A-A-59323 cleaning cloth to remove excess adhesive/sealant from new lens gasket and/or lens retainer.
- (k) Insert lanyard assembly (45) or (45, IPL Figure 1A) into hole in lens retainer (40) or (40, IPL Figure 1A) and use a small flat-tip screwdriver to thread lanyard assembly (45) or (45, IPL Figure 1A) counterclockwise into lens retainer (40) or (40, IPL Figure 1A).
- (I) Insert six captive screws (-15A) or (15, IPL Figure 1A) through holes in lens retainer (40) or (40, IPL Figure 1A) and attach with six screw retainers (20) or (20, IPL Figure 1A).

- (m) Apply RTV157 adhesive/sealant to mating surface of new gasket (46) or (50, IPL Figure 1A) and new bracket (47) or (55, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess adhesive/sealant.
- (n) Position bracket (47) or (55, IPL Figure 1A) on lens retainer (40) or (40, IPL Figure 1A) and align holes.
- (o) Insert two new rivets (48) or (60, IPL Figure 1A) into holes and attach in accordance with MIL-R-47196.

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- (3) Replace damaged 34130 bombtail on end of lanyard assembly (45) or (45, IPL Figure 1A) with 49935 crimping tool as required.
- (4) Repair damaged canopy subassembly (-335) or (-325, IPL Figure 1A) as follows:
  - (a) Remove three rubber cushions (345) or (335, IPL Figure 1A) from canopy (340) or (340, IPL Figure 1A) and discard.
    - **NOTE:** Older retractable landing lights may have six rubber cushions (345) or (335, IPL Figure 1A).
  - (b) Remove previous adhesive residue from canopy (350) or (340, IPL Figure 1A). Refer to CLEANING for details.

# WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (c) Apply RTV157 adhesive/sealant on one side of three new rubber cushions (345) or (335, IPL Figure 1A) and position on canopy (350) or (340, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess adhesive/sealant from cushions and/or canopy.
- (5) Repair cracked transformer (175A) or (185, IPL Figure 1A) as follows:
  - WARNING: PRIMER IS FLAMMABLE AND POISONOUS TO THE EYES, SKIN, AND RESPIRATORY TRACT. USE SKIN AND EYE PROTECTION. AVOID REPEATED OR PROLONGED CONTACT. MAKE SURE THAT THE AREA WHERE YOU WILL USE PRIMER HAS GOOD AIRFLOW. KEEP AWAY FROM OPEN FLAMES OR OTHER SOURCES OF IGNITION.
  - (a) Apply PR-1204 primer to exposed area of potting. Use a A-A-59323 cleaning cloth to remove excess primer. Let air-dry for 1 hour.

- (b) Seal exposed surface of potting with 3140 conformal coating. Use a A-A-59323 cleaning cloth to remove excess conformal coating. Let air-dry for 2 hours.
  - NOTE: Make sure the retractable landing light is at room temperature for 72 hours before it is installed on the aircraft. This will let the 3140 conformal coating to fully cure.
- (6) Replace damaged connector housing (347) or (337, IPL Figure 1A) as follows:
  - (a) Remove damaged connector housing (347) or (337, IPL Figure 1A) from canopy (350) or (340, IPL Figure 1A). Discard connector housing.
  - (b) Put the new connector housing (347) or (337, IPL Figure 1A) on canopy (-350A) or (-340A, IPL Figure 1A), then roll and stake connector housing (347) or (337, IPL Figure 1A) to attach.
- G. Repair of Retractable Landing Light, PN 45-0351-1, -2, -3, -4 (Post SB 45-0351-33-0007 and Pre SB 45-0351-33-0008 and -0009) (Subtask 33-42-07-300-007-A01)
  - (1) Refer to IPL Figure 1 for all the item numbers unless specified differently.

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- (2) Repair damaged retainer assembly (10A) or (10, IPL Figure 1A) as follows:
  - (a) Remove six screw retainers (20), or (20, IPL Figure 1A) and captive screws (-15) or (15, IPL Figure 1A) from lens retainer (40) or (40, IPL Figure 1A).
  - (b) Drill out two rivets (48) or (60, IPL Figure 1A) and remove bracket (55) or (55, IPL Figure 1A) from lens retainer (40) or (40, IPL Figure 1A). Discard rivets (60) or (60, IPL Figure 1A).
  - (c) Remove the gasket (46) or (50, IPL Figure 1A) from bracket (47) or (55, IPL Figure 1A) and discard.
  - (d) Remove previous adhesive residue from bracket (47) or (55, IPL Figure 1A). Refer to CLEANING for details.
  - (e) Use a small flat-tip screwdriver to turn lanyard assembly (45) or (45, IPL Figure 1A) clockwise to remove from lens retainer (40) or (40, IPL Figure 1A).
    - **NOTE:** For ease of assembly, note locations of gaskets before removal.
  - (f) Remove lens gasket (25) or (25, IPL Figure 1A), lamp gasket (30) or (30, IPL Figure 1A), and clear lens (-35A) or (35, IPL Figure 1A) from lens retainer (40) or (40, IPL Figure 1A) and discard.
  - (g) Remove previous adhesive residue from lens retainer (40) or (40, IPL Figure 1A). Refer to CLEANING for details.

# WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

(h) Apply a bead of CSL-503 gasket material in recess of new lens (-35A) or (35, IPL Figure 1A) and position on lens retainer (40) or (40, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess gasket material from lens and/or lens retainer.

# WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

(i) Apply a bead of RTV157 adhesive/sealant around outer diameter of new lamp gasket (-30A) or (30, IPL Figure 1A) and position on inside of lens retainer (40) or (40, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess adhesive/sealant from lamp gasket and/or lens retainer.

- (j) Apply a bead of RTV157 adhesive/sealant on one side of new lens gasket (25) or (25, IPL Figure 1A) and position on lens retainer (40) or (40, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess adhesive/sealant from new lens gasket and/or lens retainer.
- (k) Insert lanyard assembly (45) or (45, IPL Figure 1A) into hole in lens retainer (40) or (40, IPL Figure 1A) and use a small flat-tip screwdriver to thread lanyard assembly (45) or (45, IPL Figure 1A) counterclockwise into lens retainer (40) or (40, IPL Figure 1A).

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(I) Insert six captive screws (-15A) or (15, IPL Figure 1A) through holes in lens retainer (40) or (40, IPL Figure 1A) and attach with six screw retainers (20) or (20, IPL Figure 1A).

# WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (m) Apply RTV157 adhesive/sealant to mating surface of new gasket (46) or (50, IPL Figure 1A) and new bracket (47) or (55, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess adhesive/sealant.
- (n) Position bracket (47) or (55, IPL Figure 1A) on lens retainer (40) or (40, IPL Figure 1A) and align holes.
- (o) Insert two new rivets (48) or (60, IPL Figure 1A) into holes and attach in accordance with MIL-R-47196.
- (3) Replace damaged 34130 bombtail on end of lanyard assembly (45) or (45, IPL Figure 1A) with 49935 crimping tool as required.
- (4) Repair damaged canopy subassembly (-335) or (-325, IPL Figure 1A) as follows:
  - (a) Remove three rubber cushions (345) or (335, IPL Figure 1A) from canopy (340) or (340, IPL Figure 1A) and discard.
    - **NOTE:** Older retractable landing lights may have six rubber cushions (345) or (335, IPL Figure 1A).
  - (b) Remove previous adhesive residue from canopy (350) or (340, IPL Figure 1A). Refer to CLEANING for details.

- (c) Apply RTV157 adhesive/sealant on one side of three new rubber cushions (345) or (335, IPL Figure 1A) and position on canopy (350) or (340, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess adhesive/sealant from cushions and/or canopy.
- (5) Repair cracked transformer (-175B) or (-185A, IPL Figure 1A) as follows:
  - WARNING: PRIMER IS FLAMMABLE AND POISONOUS TO THE EYES, SKIN, AND RESPIRATORY TRACT. USE SKIN AND EYE PROTECTION. AVOID REPEATED OR PROLONGED CONTACT. MAKE SURE THAT THE AREA WHERE YOU WILL USE PRIMER HAS GOOD AIRFLOW. KEEP AWAY FROM OPEN FLAMES OR OTHER SOURCES OF IGNITION.
  - (a) Apply PR-1204 primer to exposed area of potting. Use a A-A-59323 cleaning cloth to remove excess primer. Let air-dry for 1 hour.

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# WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

(b) Seal exposed surface of potting with 3140 conformal coating. Use a A-A-59323 cleaning cloth to remove excess conformal coating. Let air-dry for 2 hours.

NOTE: Make sure the retractable landing light is at room temperature for 72 hours before it is installed on the aircraft. This will let the 3140 conformal coating to fully cure.

- (6) Replace damaged connector housing (347) or (337, IPL Figure 1A) as follows:
  - (a) Remove damaged connector housing (347) or (337, IPL Figure 1A) from canopy (350) or (340, IPL Figure 1A). Discard connector housing.
  - (b) Put the new connector housing (347) or (337, IPL Figure 1A) on canopy (-350A) or (-340A, IPL Figure 1A), then roll and stake connector housing (347) or (337, IPL Figure 1A) to attach.
- H. Repair of Retractable Landing Light, 45-0351-1, -2, -3, -4 (Post SB 45-0351-33-0008 and SB 45-0351-33-0009) and 45-0351-5, -6 (Subtask 33-42-07-300-008-A01)
  - (1) Refer to IPL Figure 1 for all the item numbers unless specified differently.
  - (2) Repair damaged retainer assembly (-10B) or (-10A, IPL Figure 1A) as follows:
    - (a) Remove six screw retainers (20), or (20, IPL Figure 1A) and captive screws (-15) or (15, IPL Figure 1A) from lens retainer (40) or (40, IPL Figure 1A).
    - (b) Drill out two rivets (48) or (60, IPL Figure 1A) and remove bracket (47) or (55, IPL Figure 1A) from lens retainer (40) or (40, IPL Figure 1A). Discard rivets (48) or (60, IPL Figure 1A).
    - (c) Remove the gasket (46) or (50, IPL Figure 1A) from bracket (47) or (55, IPL Figure 1A) and discard.
    - (d) Remove previous adhesive residue from bracket (47) or (55, IPL Figure 1A). Refer to CLEANING for details.
    - (e) Use a small flat-tip screwdriver to turn lanyard assembly (45) or (45, IPL Figure 1A) clockwise to remove from lens retainer (40) or (40, IPL Figure 1A).
      - **NOTE:** For ease of assembly, note locations of gaskets before removal.
    - (f) Remove lens gasket (25) or (25, IPL Figure 1A), and lens assembly (37) or (37, IPL Figure 1A) from lens retainer (40) or (40, IPL Figure 1A) and discard.
    - (g) Remove previous adhesive residue from lens retainer (40) or (40, IPL Figure 1A). Refer to CLEANING for details.

# WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

(h) For Pre SB 45-0351-33-0008, apply a bead of CSL-503 gasket material on one side of new lens gasket (25) or (25, IPL Figure 1A), and apply to lens retainer (40) or (40, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess adhesive/sealant from new lens gasket and/or lens retainer.

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- (i) For Post SB 45-0351-33-0008, install lens assembly (37) or (37, IPL Figure 1A), into lens retainer (40) or (40, IPL Figure 1A).
- (j) Insert lanyard assembly (45) or (45, IPL Figure 1A) into hole in lens retainer (40) or (40, IPL Figure 1A) and use a small flat-tip screwdriver to thread lanyard assembly (45) or (45, IPL Figure 1A) counterclockwise into lens retainer (40) or (40, IPL Figure 1A).
- (k) Insert six captive screws (-15A) or (15, IPL Figure 1A) through holes in lens retainer (40) or (40, IPL Figure 1A) and attach with six screw retainers (20) or (20, IPL Figure 1A).

# WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (I) Apply RTV157 adhesive/sealant to mating surface of new gasket (46) or (50, IPL Figure 1A) and new bracket (47) or (55, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess adhesive/sealant.
- (m) Position bracket (47) or (55, IPL Figure 1A) on lens retainer (40) or (40, IPL Figure 1A) and align holes.
- (n) Insert two new rivets (48) or (60, IPL Figure 1A) into holes and attach in accordance with MIL-R-47196.
- (3) Replace damaged 34130 bombtail on end of lanyard assembly (45) or (45, IPL Figure 1A) with 49935 crimping tool as required.
  - (a) If removed, apply the retainer label (49) on the lens retainer (40).
- (4) Repair damaged canopy subassembly (-335) or (-325, IPL Figure 1A) as follows:
  - (a) Remove three rubber cushions (345) or (335, IPL Figure 1A) from canopy (340) or (340, IPL Figure 1A) and discard.
    - **NOTE:** Older retractable landing lights may have six rubber cushions (345) or (335, IPL Figure 1A).
  - (b) Remove previous adhesive residue from canopy (350) or (340, IPL Figure 1A). Refer to CLEANING for details.

# WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

(c) Apply RTV157 adhesive/sealant on one side of three new rubber cushions (345) or (335, IPL Figure 1A) and position on canopy (350) or (340, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess adhesive/sealant from cushions and/or canopy.

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(5) Repair cracked transformer (-175B) or (-185A, IPL Figure 1A) as follows:

WARNING: PRIMER IS FLAMMABLE AND POISONOUS TO THE EYES, SKIN, AND RESPIRATORY TRACT. USE SKIN AND EYE PROTECTION. AVOID REPEATED OR PROLONGED CONTACT. MAKE SURE THAT THE AREA WHERE YOU WILL USE PRIMER HAS GOOD AIRFLOW. KEEP AWAY FROM OPEN FLAMES OR OTHER SOURCES OF IGNITION.

(a) Apply PR-1204 primer to exposed area of potting. Use a A-A-59323 cleaning cloth to remove excess primer. Let air-dry for 1 hour.

# WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

(b) Seal exposed surface of potting with 3140 conformal coating. Use a A-A-59323 cleaning cloth to remove excess conformal coating. Let air-dry for 2 hours.

**NOTE:** Make sure the retractable landing light is at room temperature for 72 hours before it is installed on the aircraft. This will let the 3140 conformal coating to fully cure.

- (6) Replace damaged connector housing (347) or (337, IPL Figure 1A) as follows:
  - (a) Remove damaged connector housing (347) or (337, IPL Figure 1A) from canopy (350) or (340, IPL Figure 1A). Discard connector housing.
  - (b) Put the new connector housing (347) or (337, IPL Figure 1A) on canopy (-350A) or (-340A, IPL Figure 1A), then roll and stake connector housing (347) or (337, IPL Figure 1A) to attach.
- I. Repair of Wiring Harness Assembly and Related Parts for, PN 45-0351-1 and -2 (Pre SB 45-0531-33-SB04) (Subtask 33-42-07-300-009-A01)

**NOTE:** Do Paragraph 2.J. for Post SB 45-0351-33-0007.

**NOTE:** Refer to Table 2009 and Figure 2004.

- (1) Refer to IPL Figure 3 for all the item numbers unless specified differently.
- (2) Replace damaged switch S1 (5) as follows:

CAUTION: USE CARE WHEN REMOVING COMPOUND NOT TO CUT ELECTRICAL WIRES. FAILURE TO COMPLY CAN RESULT IN ELECTRICAL WIRE DAMAGE.

- (a) Use a sharp knife to carefully remove compound from switch S1 (5) to gain access to electrical wires. Remove previous adhesive residue from parts. Refer to CLEANING for details.
- (b) Use a soldering iron to disconnect electrical wires from switch S1 (-5A). Discard switch S1 (-5A).
- (c) Replace damaged heat shrink tubing on ends of electrical wires as required. Use a heat gun to attach.
- (d) Use a soldering iron to connect electrical wires to new switch S1 (-5A).

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# WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (e) Apply 3145 adhesive over solder connections. Use a A-A-59323 cleaning cloth to remove excess adhesive.
- (3) Replace damaged switch S2 (20) as follows:
  - CAUTION: USE CARE WHEN REMOVING ADHESIVE NOT TO CUT ELECTRICAL WIRES. FAILURE TO COMPLY CAN RESULT IN ELECTRICAL WIRE DAMAGE.
  - (a) Use a sharp knife to carefully remove previous adhesive from switch S2 (20) to gain access to electrical wires. Remove adhesive residue from parts. Refer to CLEANING for details.
  - (b) Use a soldering iron to disconnect electrical wires from switch S2 (20). Discard switch S2 (20).
  - (c) Replace damaged heat shrink tubing on ends of electrical wires as required. Use a heat gun to attach.
  - (d) Use a soldering iron to connect electrical wires to new switch S2 (20).

- (e) Apply 3145 adhesive over solder connections. Use a A-A-59323 cleaning cloth to remove excess adhesive.
- (4) Replace damaged 55-2417-1 contact pin in connector (-45A) as follows:
  - (a) Use an M81969/19-06 extraction tool to remove electrical 55-2417-1 contact pin from rear of receptacle connector (-45A).
  - (b) Cut wire at base of 55-2417-1 contact pin. Discard 55-2417-1 contact pin.
  - (c) Strip 0.25 inch (6.4 mm) of insulation from end of electrical wire.
  - (d) Use a M22520/1-01 crimping tool and M22520/1-02 turret to install 55-2417-1 contact pin on electrical wire.
  - (e) Use an M81969/17-03 insertion tool to install 55-2417-1 contact pin in receptacle connector (-45A).
  - (f) Repeat Step (a) thru (e) as required for other 55-2417-1 contact pin.
- (5) Replace damaged 36150 terminal, 322338 terminal, 320631 terminal, 320619 terminal, 322338 terminal, and MS25036-149 terminal as follows:
  - (a) Cut wire at base of terminal. Discard terminal lug.
  - (b) Strip 0.25 inch (6.4) of insulation from end of electrical wire.

- (c) Use a 59250 crimping tool to install terminals 36150, 322338, or 320631 on electrical wire. Use a 46447 crimping tool to install 322338 terminals.
- (d) Repeat Step (a) thru (c) as required for other terminals.
- (6) Replace damaged electrical wires, MS27488-20 seal plug, cable, and tubing as required in positions shown in Figure 2004.
- J. Repair of Wiring Harness Assembly and Related Parts for PN 45-0351-1 and -2 (Post SB 45-0351-33-SB04 and Pre SB 45-0351-33-0007) and 45-0351-3 and -4 (Pre SB 45-0351-33-0007) (Subtask 33-42-07-300-010-A01)
  - **NOTE:** The procedures that follow are applicable to the wiring harness assembly that has the motor installed and the wiring harness assembly without the motor.
  - **NOTE:** Refer to SCHEMATIC AND WIRING DIAGRAMS, Figure 2003, Figure 2005, and Table 2010.
  - (1) Refer to IPL Figure 3 for all the item numbers unless specified differently.
  - (2) Replace damaged switch S1 (5B) as follows:
    - (a) Cut wire at end of splices.
    - (b) Strip 0.025 inch (6.4 mm) of insulation from end of electrical wires.
    - (c) Using crimping tool replace M81824/1-1 splices.
  - (3) Replace damaged switch S2 (20A) as follows:
    - (a) Cut wire at end of splices.
    - (b) Strip 0.025 inch (6.4 mm) of insulation from end of electrical wires.
    - (c) Using crimping tool replace M81824/1-1 splices.
  - (4) Replace damaged 55-2417-1 contact pin in connector (-45A) as follows:
    - (a) Remove shrink boot (43) and sealant from connector (-45A).
    - (b) Use an M81969/19-06 extraction tool to remove 55-2417-1 contact pin from rear of connector (-45A).
    - (c) Cut wire at base of 55-2417-1 contact pin. Discard 55-2417-1 contact pin.
    - (d) Strip 0.25 inch (6.4 mm) of insulation from end of electrical wire.
    - (e) Use a crimping tool to install 55-2417-1 contact pin on electrical wire.
    - (f) Install 55-2417-1 contact pin in connector (-45A).
    - (g) Repeat Step (a) thru (e) for other 55-2417-1 contact pin.
    - (h) With a heat gun, install new shrink boot (43) onto the connector (-45A).
    - (i) After attaching shrink boot (43) onto the connector (-45A), seal the inside of shrink boot (43) with 3145 adhesive through the holes of shrink boot (43).

- (5) Replace damaged 36150 terminal, 322338 terminal, 320631 terminal, 320619 terminal, 322338 terminal, and MS25036-149 terminal as follows:
  - (a) Cut wire at base of terminal. Discard terminal lug.
  - (b) Strip 0.25 inch (6.4 mm) of insulation from end of electrical wire.
  - (c) Use a 59250 crimping tool to install terminals 36150, 322338, and 320631 on electrical wire. Use a 46447 crimping tool to install 322338 terminals on electrical wire.
  - (d) Repeat Step (a) thru (c) for other terminal.
- (6) Replace damaged electrical wires, MS27488-20 seal plug, M81824/1-1 splice, cable, and VARGLAS-H-C-2 tubing, VARGLAS-H-C-2 tubing, and VARGLAS-H-C-2 tubing as required in positions shown in Figure 2005.
- K. Repair of Wiring Harness Assembly and Related Parts for PN 45-0351-1, -2, -3, -4 (Post SB 45-0351-33-0007 and Pre SB 45-0351-33-0008, -0009) (Subtask 33-42-07-300-011-A01)
  - **NOTE:** The procedures that follow are applicable to the wiring harness assembly that has the motor installed and the wiring harness assembly without the motor.
  - **NOTE:** Refer to SCHEMATIC AND WIRING DIAGRAMS, Figure 2003, Figure 2005, and Table 2010.
  - (1) Refer to IPL Figure 3 for all the item numbers unless specified differently.
  - (2) Replace damaged switch S1 (5B) as follows:
    - (a) Use a soldering iron to disconnect electrical wires from switch S1 (5B). Discard switch S1 (5B).
    - (b) Replace M23053/5-103-0 heat shrink tubing on electrical wires as required.
    - (c) Use a soldering iron to connect electrical wires to new switch S1 (5B).
  - (3) Replace damaged switch S2 (20A) as follows:
    - (a) Use a soldering iron to disconnect electrical wires from switch S2 (20A). Discard switch S2 (20A).
    - (b) Replace M23053/5-103-0 heat shrink tubing on electrical wires as required.
    - (c) Use a soldering iron to connect electrical wires to new switch S2 (20A).
  - (4) Replace damaged 55-2417-1 contact pin in connector (-45A) as follows:
    - (a) Remove shrink boot (43) and sealant from connector (-45A).
    - (b) Use an M81969/19-06 extraction tool to remove 55-2417-1 contact pin from rear of connector (-45A).
    - (c) Cut wire at base of 55-2417-1 contact pin. Discard 55-2417-1 contact pin.
    - (d) Strip 0.25 inch (6.4 mm) of insulation from end of electrical wire.
    - (e) Use a crimping tool to install 55-2417-1 contact pin on electrical wire.
    - (f) Install 55-2417-1 contact pin in connector (-45A).

- (g) Repeat Step (a) thru (e) for other 55-2417-1 contact pin.
- (h) With a heat gun, install new shrink boot (43) onto the connector (-45A).
- (i) After attaching shrink boot (43) onto the connector (-45A), seal the inside of shrink boot (43) with 3145 adhesive through the holes of shrink boot (43).
- (5) Replace damaged 36150 terminal, 322338 terminal, 320631 terminal, 320619 terminal, 322338 terminal, and MS25036-149 terminal as follows:
  - (a) Cut wire at base of terminal. Discard terminal lug.
  - (b) Strip 0.25 inch (6.4 mm) of insulation from end of electrical wire.
  - (c) Use a 59250 crimping tool to install 36150, 320631, and 320619 terminals on electrical wire. Use a 46447 crimping tool to install 322338 terminals on electrical wire.
  - (d) Repeat Step (a) thru (c) for other terminal.
- (6) Replace damaged electrical wires, MS27488-20 seal plug, M81824/1-1 splice, cable, and tubing (VARGLAS-H-C-2 tubing, VARGLAS-H-C-2 tubing, and VARGLAS-H-C-2 tubing) as required in positions shown in Figure 2005.
- (7) 45-0351-1, -2, -3, -4 (Post SB 45-0351-33-0008 and SB 45-0351-33-0009) and 45-0351-5, -6
- L. Repair of Wiring Harness Assembly and Related Parts for PN 45-0351-1, -2, -3, -4 (Post SB 45-0351-33-0008 and SB 45-0351-33-0009) and 45-0351-5, -6 (Subtask 33-42-07-300-012-A01)
  - **NOTE:** The procedures that follow are applicable to the wiring harness assembly that has the motor installed and the wiring harness assembly without the motor.
  - **NOTE:** Refer to SCHEMATIC AND WIRING DIAGRAMS, Figure 2003, Figure 2005, and Table 2010.
  - (1) Refer to IPL Figure 3 for all the item numbers unless specified differently.
  - (2) Replace damaged switch S1 (5B) as follows:
    - (a) Use a soldering iron to disconnect electrical wires from switch S1 (5B). Discard switch S1 (5B).
    - (b) Replace M23053/5-103-0 heat shrink tubing on electrical wires as required.
    - (c) Use a soldering iron to connect electrical wires to new switch S1 (5B).
  - (3) Replace damaged switch S2 (20A) as follows:
    - (a) Use a soldering iron to disconnect electrical wires from switch S2 (20A). Discard switch S2 (20A).
    - (b) Replace M23053/5-103-0 heat shrink tubing on electrical wires as required.
    - (c) Use a soldering iron to connect electrical wires to new switch S2 (20A).
  - (4) Replace damaged connector (-45B) as follows:
    - (a) Remove shrink boot (43) and sealant from connector (-45B).

- (b) Use an M81969/19-06 extraction tool to remove all 55-2417-1 contact pins from rear of connector (-45B).
- (c) Remove connector (-45B).
- (d) Install new connector (-45B).
- (e) Install 55-2417-1 contact pins in connector (-45B).
- (f) With a heat gun, install new shrink boot (43) onto the connector (-45B).
- (g) After attaching shrink boot (43) onto the connector (-45B), seal the inside of shrink boot (43) with 3145 adhesive through the holes of shrink boot (43).
- (5) Replace damaged 55-2417-1 contact pin in connector (-45B) as follows:
  - (a) Remove shrink boot (43) and sealant from connector (-45B).
  - (b) Use an M81969/19-06 extraction tool to remove 55-2417-1 contact pin from rear of connector (-45B).
  - (c) Cut wire at base of 55-2417-1 contact pin. Discard 55-2417-1 contact pin.
  - (d) Strip 0.25 inch (6.4 mm) of insulation from end of electrical wire.
  - (e) Use a crimping tool to install 55-2417-1 contact pin on electrical wire.
  - (f) Install 55-2417-1 contact pin in connector (-45B).
  - (g) Repeat Step (a) thru (e) for other 55-2417-1 contact pin.
  - (h) With a heat gun, install new shrink boot (43) onto the connector (-45B).
  - (i) After attaching shrink boot (43) onto the connector (-45B), seal the inside of shrink boot (43) with 3145 adhesive through the holes of shrink boot (43).
- (6) Replace damaged 36150 terminal, 322338 terminal, 320631 terminal, 320619 terminal, 322338 terminal, and MS25036-149 terminal as follows:
  - (a) Cut wire at base of terminal. Discard terminal lug.
  - (b) Strip 0.25 inch (6.4 mm) of insulation from end of electrical wire.
  - (c) Use a 59250 crimping tool to install 36150, 320631, or 320619 terminals on electrical wire. Use a 46447 crimping tool to install 322338 terminals on electical wire.
  - (d) Repeat Step (a) thru (c) for other terminal.
- (7) Replace damaged electrical wires, MS27488-20 seal plug, M81824/1-1 splice, cable, and tubing (VARGLAS-H-C-2 tubing, VARGLAS-H-C-2 tubing, and VARGLAS-H-C-2 tubing) as required in positions shown in Figure 2005.
- M. Repair of Wiring Harness Assembly and Related Parts for PN 46-3145-1 (Subtask 33-42-07-300-017-A01)
  - (1) Refer to IPL Figure 5 for all the item numbers unless specified differently.
  - (2) Replace damaged terminal (60), terminal (70), and terminal (110) as follows:
    - (a) Cut wire (80, 90) at base of terminal. Discard terminal lug.

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- (b) Strip 0.25 inch (6.4 mm) of insulation from end of electrical wire.
- (c) Use a 59250 crimping tool to install terminals (60), (70), or (110) on electrical wire (80, 90).
- (3) Replace damaged electrical wires (80, 90), conduit seal (30), cable (100), butt splice (40), and tubing (10, 20, 50) as required in positions shown in IPL Figure 5.
- N. Repair of Motor Assembly, PN 46-2788 (Subtask 33-42-07-300-013-A01)
  - (1) Assembly:
    - (a) Pinion:
      - 1 Install pinion gear (95, IPL Figure 3) on motor shaft.
      - 2 Make sure pinion gear hole and shaft hole line up.
      - Support motor (115) and shaft to prevent bending of motor shaft. Refer to Figure 6001.
      - 4 Install spring pin (90) in pinion gear hole. Use a flat punch to tap until flush.
      - 5 Use the 876-007 flare punch to flare spring pin on both sides.

**NOTE:** Make sure the shaft is not bent.

- (b) Thermostat:
  - 1 Install thermostat (-85, IPL Figure 3) into 98169 ream fixture. Refer to Figure 6002.
  - Use a ream to ream the right-hand terminal.
  - 3 Sit motor (115) on bench with the pinion gear to the right.
  - 4 Apply a small dot of 430 SUPERBONDER adhesive on the center of the thermostat (-85) on the side opposite the terminals.
  - Install thermostat on motor flush with rubber grommet. Refer to Figure 6003 for thermostat position.
  - 6 Hold thermostat in place until adhesive sets up (approximately 30 seconds).
  - 7 Allow to air dry for 5 minutes.
- (c) Wiring Harness:
  - 1 Cut a piece of M23053/5-104-0 heat shrink tubing to 4 inches. (101.6 mm).
  - Measure 2 inches (50.8 mm) from end of M23053/5-104-0 heat shrink tubing and cut a small notch.
  - <u>3</u> Hold thermostat (-85, IPL Figure 3) in place to make sure thermostat does not get dislodged.
  - 4 Remove clamp holding white and orange motor wire.

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- <u>5</u> Discard clamp and reinstall screw.
- 6 Pull the orange wire to the end of the M23053/5-104-0 heat shrink tubing.
- <u>7</u> Pull the white wire through the notch cut in Step 2.
- <u>8</u> Pull tubing to base of white wire. Refer to Figure 6004.
- 9 Use a heat gun to shrink the tubing.
- Measure white motor wire just past the thermostat. Cut, strip, and tin the wire.
- 11 Measure black motor wire above thermostat. Cut, strip, and tin the wire.
- <u>12</u> Attach white motor wire, additional white wire, and black motor wire to reamed thermostat terminal. Refer to Figure 6005.
- 13 Push black motor wire slack back into motor grommet for stress relief.
- 14 Attach additional black wire on un-reamed thermostat terminal. Refer to Figure 6005.
- 15 Route wires through VARGLAS-H-C-2 tubing.
- Make sure test unit is partially open to check that both retract and extend switches are not engaged. Refer to Figure 6006 for test setup.
- 17 Attach connector with test leads to J2 connector on test unit.
- <u>18</u> Connect the test leads to the corresponding motor wire.

**NOTE:** The motor wires and test leads match corresponding to color.

- 19 Connect J1 to 05-0491-1 functional tester.
- 20 Test motor (115) to make sure motor retracts clockwise and extends counterclockwise.
- 21 Remove sticky backing of pad (80) and install inside cover (-110).

# WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- 22 Clamp cover (-110) to motor (115) and apply 430 SUPERBONDER adhesive. Allow to air dry for 10 minutes.
- 23 Tape off cover. Refer to Figure 6007.

# WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

Mix EE-4215 potting compound and HD0242 hardener.

**NOTE:** Mixture must be 12:1 potting to hardener.

<u>25</u> Fill cover with the potting compound.

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# WARNING: WEAR PROTECTIVE GLOVES WHEN HANDLING HOT PARTS.

<u>26</u> Put motor assembly in oven at 150° F (65.55° C) and allow potting to cure for 1.5 hours.

#### (d) Flange:

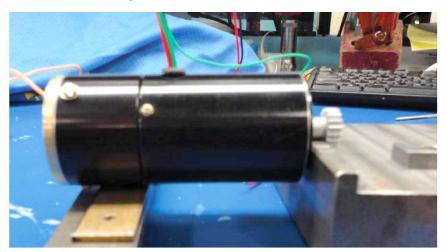
- Apply Molykote 111 compound high vacuum silicone grease to O-ring (107, IPL Figure 3).
- 2 Insert O-ring into flange (100).
- <u>3</u> Install bearing into flange.
- 4 Line up flange. Refer to Figure 6008.
- 5 Apply 88 sealing compound to threads on three flat head screws (105).
- 6 Install end cap (75) on motor.
- Apply PR-1204 primer at joint. Allow to air cure for 1-2 hrs.

# WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

8 Apply 3145 adhesive all around cap.

#### **WARNING: WEAR PROTECTIVE GLOVES WHEN HANDLING HOT PARTS.**

- 9 Put motor assembly in oven at 150°F (65.55°C) and allow potting to cure for 5 hours.
- (e) Installation and Test
  - <u>1</u> Refer to ASSEMBLY to install motor in the retractable landing light.
  - Refer to TESTING AND FAULT ISOLATION to test the retractable landing light.



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Figure 6001. Motor and Shaft Support

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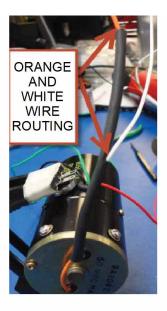
Figure 6002. Thermostat in Ream Fixture



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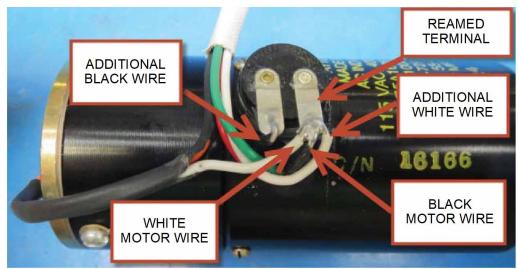
Figure 6003. Thermostat Position on Motor

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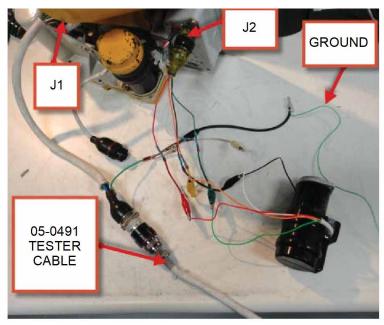
Figure 6004. Wire Routing



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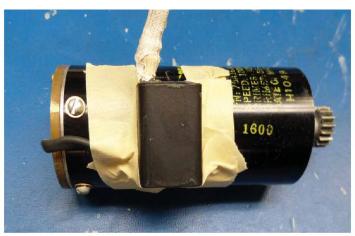
Figure 6005. Wire Solder Points

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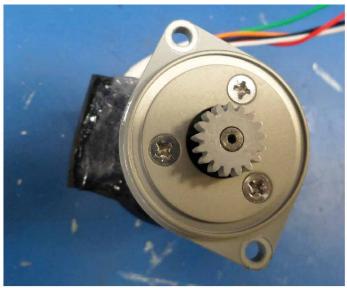
Figure 6006. Test Setup



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Figure 6007. Tape Location

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ICN-72914- 0000568264-001-01

Figure 6008. Flange Location

- O. Replacement of Threaded Inserts (Subtask 33-42-07-300-014-A01)
  - (1) Refer to Table 6003 for the threaded inserts in the retractable landing light. Remove and replace inserts using standard shop tools in accordance with standard shop practices and the procedures to follow.

Table 6003. Threaded Inserts

Figure	Item	Insert	Size
IPL Figure 1	351	NAS1130-06L10	6-32 X 0.138-inch (3.51- mm) long
IPL Figure 1	352	NAS1130-08L10	8-32 X 0.164-inch (4.17- mm) long
IPL Figure 1	354	NAS1130-4FL15	1/4-28 X 0.375-inch (9.53-mm) long
IPL Figure 1	440	MS21209C0820P	8-32
IPL Figure 1	-445A	MS21209C0615P	6-32
IPL Figure 1	450	MS21209C1-15P	10-24
IPL Figure 1A	341	NAS1130-06L10	6-32 X 0.138-inch (3.51 mm) long
IPL Figure 1A	342	NAS1130-08L10	8-32 UNC X 0.164-inch (4.17-mm) long
IPL Figure 1A	344	NAS1130-4FL15	1/4-28 UNC X 0.375-inch (9.53-mm) long
IPL Figure 1A	430	MS21209C0820P	8-32 UNC
IPL Figure 1A	-435A	MS21209C0615P	6-32 UNC

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#### Table 6003. Threaded Inserts (Cont)

Figure	Item	Insert	Size
IPL Figure 1A	440	MS21209C1-15P	10-24
IPL Figure 2	-25A	MS21209C0815P	8-32 X 0.246-inch (6.25- mm long
IPL Figure 2	200	MS21209C0215P	2-56 X 0.129-inch (3.28- mm) long
IPL Figure 2	-205A	MS21209C0410P	4-40 X 0.169-inch (4.29- mm) long
IPL Figure 2	210	MS21209C0615P	6-32 X 0.207-inch (5.26- mm) long
IPL Figure 2	215	MS21209C0815P	8-32 X 0.246-inch (6.25- mm) long
IPL Figure 2	220	MS21209F1-15P	10-32 X 0.285-inch (7.24- mm) long
IPL Figure 2	225	MS21209C0820P	8-32 X 0.328 (8.33-mm) long

(2) Replace a damaged insert as follows:

**NOTE:** These procedures are standard for all threaded inserts.

- (a) Thread the appropriate screw extractor into the damaged insert and remove the insert. Discard the insert.
- (b) Clean the threads where the new insert (440) is to be installed to remove dirt and dust. Refer to CLEANING for details.

<u>CAUTION</u>: OVERSIZED THREADED INSERTS CANNOT BE USED. IF THREADS ARE DAMAGED, ITEM MUST BE REPLACED.

- (c) Install the insert in accordance with MS33537.
- P. Post-Repair Procedures (Subtask 33-42-07-300-015-A01)
  - (1) Clean parts. Refer to CLEANING for details.
  - (2) Wrap parts in a A-A-59323 cleaning cloth to avoid contamination, until ready for assembly.
- **Q. Job Close-up** (Subtask 33-42-07-300-016-A01)
  - (1) Remove all tools, equipment, and unwanted materials from the work area.

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#### **ASSEMBLY**

- 1. Planning Data (TASK 33-42-07-99C-807-A01)
  - **A.** Reason for the Job (Subtask 33-42-07-99C-014-A01)
    - (1) Use these procedures to assemble the LRU. Do only those procedures that are applicable to the disassembly done.
  - **B. Job Setup Data** (Subtask 33-42-07-99C-015-A01)
    - (1) You can use equivalent alternatives for the special tools, fixtures, equipment, and consumable materials. The user must find equivalent alternatives.
    - (2) Refer to Table 7001 for the special tools, fixtures, and equipment in this section.
    - (3) CAGE codes and manufacturers' addresses are available at https://cage.dla.mil.

Table 7001. Special Tools, Fixtures, and Equipment

Number	Description	Source
	arbor press	commercially available
	strap wrench	commercially available
	torque driver (0 to 10 inch-pounds (0 to 1.1 Nm), 0 to 50 inch-pounds (0 to 5.6 Nm), 0 to 100 inch-pounds (0 to 11.3 Nm), 0 to 200 inch-pounds (0 to 22.6 Nm))	commercially available

WARNING: BEFORE YOU USE A MATERIAL, REFER TO THE MANUFACTURERS' MATERIAL SAFETY DATA SHEETS. SOME MATERIALS CAN BE DANGEROUS.

CAUTION: DO NOT USE MATERIALS THAT ARE NOT EQUIVALENT TO HONEYWELL

SPECIFIED MATERIALS. MATERIALS THAT ARE NOT EQUIVALENT CAN CAUSE

DAMAGE TO THE EQUIPMENT AND CAN MAKE THE WARRANTY NOT

APPLICABLE.

(4) Refer to Table 7002 for the consumable materials in this section.

#### Table 7002. Consumables

Number	Description	Source
3145	adhesive (CM1951)	CAGE: 71984
515	gasket eliminator and sealant (AD329, anaerobic, purple, room temperature curing, single component)	CAGE: 05972
520T	lacing cord (TL090, white nylex #16)	CAGE: 07112
601	retaining compound (AD335, general purpose anaerobic single component, green)	CAGE: 05972

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#### Table 7002. Consumables (Cont)

Number	Description	Source
620	retaining compound (AD3355, general purpose single component anaerobic, green)	CAGE: 05972
823E508	jointing compound JC5A (CM760)	CAGE: 85570
88	sealing compound (AD295, MIL-S-22473, grade A, thread-locking anaerobic, single component, red)	CAGE: 05972
A-A-59323	cleaning cloth (low-lint, Type I)	commercially available
M81824/1-1	splice (SAE AS81824/1)	commercially available
MIL-G-21164	grease (CM6561, shell aeroshell grease 33MS, molybdemum disulfide)	commercially available
Molykote 111 compound	high vacuum silicone grease (CM670, light gray translucent)	CAGE: 71984
MS20995C32	safety wire	commercially available
PR-1204	primer (CM258)	CAGE: 71984
RTV157	adhesive/sealant (AD029, gray)	CAGE: 09214
VARGLAS-H-C-2	tubing (TU485, number 2, non-rigid, white fiberglass)	CAGE: 79074
WI940	braided mesh cable (8660)	CAGE: 16428

- (5) The list that follows identifies Honeywell publications that are related to this section:
  - Not applicable.

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- **2. Procedure** (TASK 33-42-07-400-801-A01)
  - **A. Job Setup** (Subtask 33-42-07-400-001-A01)

WARNING: BEFORE YOU USE A MATERIAL, REFER TO THE MANUFACTURERS' MATERIAL SAFETY DATA SHEETS. SOME MATERIALS CAN BE DANGEROUS.

CAUTION: DO NOT USE MATERIALS THAT ARE NOT EQUIVALENT TO HONEYWELL

SPECIFIED MATERIALS. MATERIALS THAT ARE NOT EQUIVALENT CAN CAUSE

DAMAGE TO THE EQUIPMENT AND CAN MAKE THE WARRANTY NOT

APPLICABLE.

CAUTION: USE INDUSTRY APPROVED ELECTROSTATIC DISCHARGE SENSITIVE

PRECAUTIONS. THE RETRACTABLE LANDING LIGHT CONTAINS

ELECTROSTATIC DISCHARGE SENSITIVE ITEMS.

CAUTION: DO NOT DROP OR HIT THE RETRACTABLE LANDING LIGHT DURING THESE

PROCEDURES. THE RETRACTABLE LANDING LIGHT CONTAINS AN ASSEMBLY

THAT CAN BE DAMAGED FROM INCORRECT USE.

CAUTION: DO THESE PROCEDURES IN A CLEAN ENVIRONMENT TO PREVENT DAMAGE

TO MECHANICAL COMPONENTS.

- (1) Obey the precautions.
- (2) The item numbers shown in the DPL are the same as the item numbers on the exploded view illustration(s). To find a part number, find the part on the illustration and note the item number. Find the item number in the parts list and read the correct part number. Item numbers refer to the same figure until a different figure is specified.
- (3) Refer to the data written during disassembly for the location of the tie points and where to connect the components and wires.
- (4) Examine the parts for damage. Refer to INSPECTION/CHECK for details.
- (5) Repair the parts before assembly. Refer to REPAIR for details.
- B. Assembly of Gearbox Assembly (Subtask 33-42-07-400-002-A01)
  - (1) Refer to IPL Figure 2 for all the item numbers unless specified differently.
  - (2) Coat the ball bearings (190) with MIL-G-21164 grease, then use an arbor press to install the bearings (190) on the worm gear (165).
  - (3) Do the shimming procedure and partial assembly of the gearbox assembly (400, IPL Figure 1) or (390, IPL Figure 1A) as follows:
    - (a) Measure and note dimensions A, B, and C shown in Figure 7001.
    - (b) Calculate shim set (-35A) thickness (s) in Figure 7001 as follows:

A + B - C = S

- (c) This value must be within -0.000/+0.002 inch (-0.00/+0.05 mm) and used when the cover (30) is installed later.
- (d) Coat the quad ring (185) with Molykote 111 compound high vacuum silicone grease, then install the quad ring (185) and the thrust bearing (180) into the housing assembly (-195).

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- (e) Coat the new thrust bearing (150) and the bearing (140) with MIL-G-21164 grease, then install the thrust washer (145), the bearing (140), and the thrust bearing (150) into the right-hand retainer (125).
- (f) Measure and note dimensions A, B, and C shown in Figure 7002.
- (g) Calculate the shim set (-155A) thickness (S) as follows:

$$S = (A - B - C) \div 2$$

- The value must be within +0.000/-0.002 inch (-0.00/+0.05 mm).
- (h) Start the shaft (160) into the housing assembly (-195), then slide the shim set (-155A) into the housing assembly (-195) over the shaft (160) in the area shown in Figure 7002.
- (i) Slide the sector gear assembly (170) into the housing assembly (-195) with the teeth facing out and align with the shim set (-155A) and the thrust bearing (180). Slide the shaft (160) through the sector gear assembly (170) to hold it in place. If required, tap the shaft (160) with a nonmetallic hammer to insert the shaft (160) through the sector gear assembly (170).

CAUTION: MAKE SURE ALL HOLES AND PARTS LINE UP PROPERLY WHEN THE SHAFT IS INSTALLED. THE HOUSING ASSEMBLY MAY CRACK IF THE PARTS ARE NOT LINED UP. FAILURE TO COMPLY CAN RESULT IN HOUSING ASSEMBLY DAMAGE.

(j) If required, carefully use an arbor press to install the shaft (160) the rest of the way through the sector gear assembly (170).

- (k) Apply 601 retaining compound from the bottom of the shaft (160) up approximately 0.5 inch (13 mm).
- (I) Slide the worm gear (165) into the housing assembly (-195) and mesh the teeth with the sector gear assembly (170). Make sure the worm gear (165) is all the way down into the housing assembly (-195) so the ball bearing (190) on the worm gear (165) bottoms into the housing cavity.
- (m) Manually rotate the worm gear (165) to make sure the sector gear assembly (170) moves and the teeth are properly meshed.
- (n) Slide the shim set (-155A) over the end of the shaft (160).
- (o) Coat the right-hand retainer (125) with Molykote 111 compound high vacuum silicone grease, then position the right-hand retainer (125) on the housing assembly (-195) and carefully tap with a nonmetallic hammer to seat into the housing assembly (-195). Make sure the holes are lined up.
- (p) Temporarily install the screws (130) and tighten to secure the right-hand retainer (125).
- (q) Use the shim set (-155A) to adjust S1 and S2 in Figure 7002 as required to the centralize the pattern and provide a +0.000/-0.002 inch (+0.00/-0.05 mm) axial play on the worm gear (165) axis.

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(r) After shimming procedures are complete, remove the screws (130) and the right-hand retainer (125) from the housing assembly (-195).

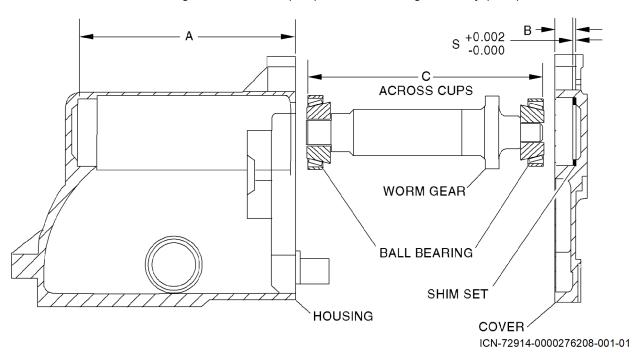


Figure 7001. Shimming Procedure

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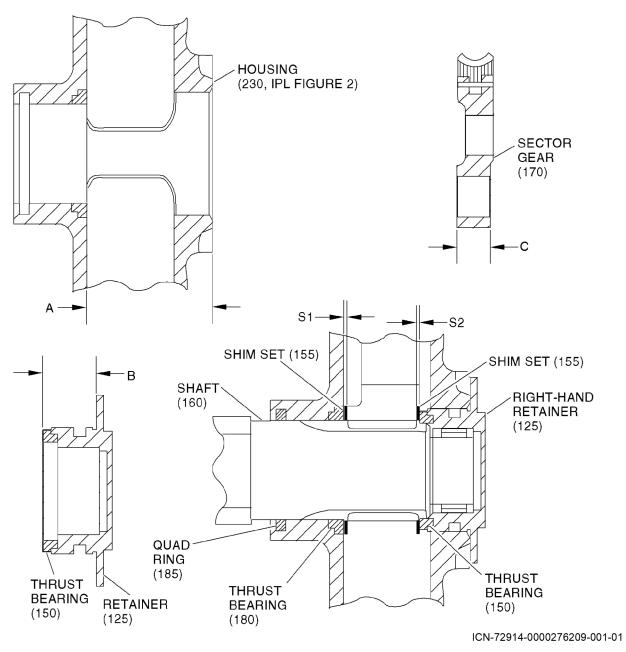


Figure 7002. Shimming Procedure

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(4) Install the new packing O-ring (135) in the groove on the right-hand retainer (125).

<u>CAUTION</u>: MAKE SURE THE PACKING O-RING STAYS IN THE GROOVE AS THE RIGHT-HAND RETAINER IS INSTALLED. THE PACKING O-RING CAN COME OUT OF THE GROOVE AND TEAR IF CARE IS NOT USED. FAILURE TO COMPLY CAN RESULT IN PACKING O-RING DAMAGE.

(5) Coat the right-hand retainer (125) with Molykote 111 compound high vacuum silicone grease, then position the right-hand retainer (125) on the housing assembly (-195) and carefully tap with a nonmetallic hammer to seat into the housing assembly (-195). Make sure the holes are lined up.

- (6) Apply 823E508 jointing compound JC5A to the threads of the screws (130) and thread into the holes. Tighten the screws (130) to a torque of 8.0 to 9.0 inch-pounds (0.9 to 1.0 Nm). Use a A-A-59323 cleaning cloth to remove the excess jointing compound.
- (7) Fill the worm cavity and the sector gear area with approximately 2.54 ounces (75.0 milliliters) of MIL-G-21164 grease.
- (8) Coat the quad ring (110) with Molykote 111 compound high vacuum silicone grease, coat the bearing (115) with MIL-G-21164 grease, then install the thrust washer (120), the bearing (115), and the quad ring (110) into the left-hand retainer (95).
- (9) Coat the left-hand retainer (95) with Molykote 111 compound high vacuum silicone grease, then position the left-hand retainer (95) on the housing assembly (-195) and carefully tap with a nonmetallic hammer to seat into the housing assembly (-195). Make sure the holes are aligned.
- (10) Apply Molykote 111 compound high vacuum silicone grease to the threads of the allen head screws (100), then install the washers (105) on the screws (100) and thread into the holes. Tighten the screws (100) equally to a torque of 39 to 45 inch-pounds (4.4 to 5.1 Nm). Use a A-A-59323 cleaning cloth to remove excess silicone grease.
- (11) Manually rotate the worm gear (165) to make sure the sector gear (170) and the shaft (160) rotate freely without sticking or binding.
- (12) Coat the ball bearing (85) with MIL-G-21164 grease, then use an arbor press to install the ball bearing (85) into the idler gear (90).
- (13) Insert the idler shaft (65) into the idler gear (90) and attach with the retaining ring (80).
- (14) Coat the ball bearings (55) with MIL-G-21164 grease, then position the bearing retainer washer (60) on the secondary gear (63).
- (15) Use an arbor press to install the ball bearings (55) on the secondary gear (63). Coat the secondary gear (63) teeth with MIL-G-21164 grease.
- (16) Coat the idler gear (90) teeth with MIL-G-21164 grease, then position the idler gear (90) on the secondary gear assembly (-50A) and mesh teeth.
- (17) Hold the idler gear (90) on the secondary gear assembly (-50A). At the same time, set both gears into the cavities of the housing assembly (-195), then mesh teeth of the secondary gear assembly (-50A) with the worm gear (165).

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- (18) Manually rotate the secondary gear assembly (-50A) to make sure the gears and the associated parts move freely with no sticking or binding.
- (19) Coat the new ball bearings (45) with MIL-G-21164 grease, then use an arbor press to install the ball bearings (45) on the primary gear (47). Coat the primary gear (47) teeth with MIL-G-21164 grease.
- (20) Lift up on the secondary gear assembly (-50A) enough that the ball bearing (45) on the primary gear (47) clears the teeth on the secondary gear assembly (-50A).
- (21) Install the primary gear assembly (-40A) so the ball bearing (45) fits into the cavity in the housing assembly (-195), then mesh the teeth of the primary gear assembly (-40A) with the secondary gear assembly (-50A).
- (22) Manually rotate the primary gear assembly (-40A) to make sure all the gears and associated parts move freely with no sticking or binding.

#### WARNING: SEALANT IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH SEALANT WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (23) Apply 515 gasket eliminator and sealant to the threads of the allen head screw (70), then install the washer (75) on the allen head screw (70) and thread though hole and into the idler shaft (65). Tighten the allen head screw (70) to a torque of 39 to 45 inch-pounds (4.4 to 5.1 Nm). Attach the allen head screw (70) with MS20995C32 safety wire in accordance with MS33540. Use a A-A-59323 cleaning cloth to remove excess gasket eliminator and sealant.
- Use the correct number of shim sets (-35A) obtained during disassembly and position the shim set (-35A) on top of the ball bearing (190).

### <u>WARNING:</u> COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (25) Apply 823E508 jointing compound JC5A to the threads of the screws (20), the allen head screws (10) and the allen head screws (15). Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (26) Before the cover assembly (-5) is installed, fill the gear case to 75 percent full with MIL-G-21164 grease. Observe all internal moving parts to make sure all the gears, the gear teeth, bearings, etc., are well lubricated with MIL-G-21164 grease.

### <u>WARNING:</u> SEALANT IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH SEALANT WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (27) Apply 515 gasket eliminator and sealant around the mating surface of the cover assembly (-5) and the housing assembly (-195).
- (28) Position the cover assembly (-5) on the housing assembly (-195) and tap with a nonmetallic hammer to seat. Use a A-A-59323 cleaning cloth to remove excess gasket eliminator and sealant.
- (29) Attach cover assembly (-5) to housing assembly (-195) with two screws (20), five allen head screws (10), and two allen head screws (15). Tighten screws (20) to a torque of 25 to 29 inch-pounds (2.8to 3.3 Nm). Tighten two allen head screws (15) to a torque of 43 to 51 inch-pounds (4.9 to 5.8 Nm). Tighten five allen head screws (10) to a torque of 14 to 17 inch-pounds (1.6 to 1.9 Nm).

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- C. Assembly of Retractable Landing Light (Subtask 33-42-07-400-003-A01)
  - (1) Refer to IPL Figure 1 for all the item numbers unless specified differently.
  - (2) For retractable landing light, PN 45-0351-1 and -2, (Pre service bulletin 45-0351-33-SB03, 45-0351-33-SB04), proceed as follows:
    - (a) If removed, install the screw (-425A), the washer (-420A), and the nut (415) on the baseplate assembly (-430, -435).
    - (b) If removed, apply the instruction label (465) on the baseplate (455).
    - (c) Position the gearbox assembly (400) on the baseplate assembly (-430, -435) and align the holes

### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

(d) Coat the threads of the allen head screws (410) and the bolts (-405A) with 823E508 jointing compound JC5A and thread into the holes. Tighten the allen head screws (410) to a torque of 67 to 79 inch-pounds (7.5 to 8.9 Nm). Tighten the bolts (-405A) to a torque of 38 to 50 inch-pounds (4.3 to 5.7 Nm). Use a A-A-59323 cleaning cloth to remove excess jointing compound.

#### WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (e) If removed, apply 620 retaining compound to the actuator adjustment nut (385).
- (f) If removed, install the washer (395) and the adjustment screw (390) on the canopy subassembly (-335), and attach with the actuator adjustment nut (385). Tighten the actuator adjustment nut (385) until adjustment screw (390) threads are flush with other side of actuator adjustment nut (385). Use a A-A-59323 cleaning cloth to remove excess retaining compound.

#### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (g) If removed, apply 823E508 jointing compound JC5A to the threads of the screws (380).
- (h) If removed, position the actuator bracket (-375A) on the canopy subassembly (-335) and attach with the screws (380). Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (i) If removed, position the switch actuator (-355A) on the actuator bracket (-375A), and attach with the washer (370), the adjustment screw (-365A), and the nut (360).

- (j) Coat three sides of shaft (160, IPL Figure 2) with 823E508 jointing compound JC5A where canopy subassembly (-335) attaches. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (k) Slide canopy subassembly (-335) on shaft (160, IPL Figure 2) and align holes.

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### WARNING: SEALANT IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH SEALANT WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (I) Apply 515 gasket eliminator and sealant to threads of the bolts (-340B), thread into holes, and tighten to a torque of 142 to 158 inch-pounds (16 to 17.8 Nm). Use a A-A-59323 cleaning cloth to remove excess gasket eliminator and sealant.
- (m) Install motor assembly (-300) and related parts as follows:
  - 1 Install motor end cap (313) on motor as follows:

## WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- <u>a</u> Apply a bead of 3145 adhesive, about 0.5 inch (13 mm) wide, around the periphery of the motor.
- <u>b</u> Slide motor end cap (313) into place over motor, seating it down fully over the thermostat (-314F) to the motor wiring.

## WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

Apply a bead of 3145 adhesive around the mating surface of the motor end cap (313) where it meets the thermostat, motor wire harness, and motor assembly (-300) surface. Make sure entire area is sealed. Use a A-A-59323 cleaning cloth to wipe off excess adhesive.

# CAUTION: MAKE SURE PACKING O-RING STAYS IN GROOVE AS MOTOR IS INSTALLED. PACKING O-RING CAN COME OUT OF GROOVE AND TEAR IF CARE IS NOT USED. FAILURE TO COMPLY CAN RESULT IN PACKING O-RING DAMAGE.

- Install new packing O-ring (-325A) in groove on mounting flange (315).
- <u>3</u> Position mounting flange (315) on motor assembly (-300) and align holes.

## WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

4 Apply 88 sealing compound to threads of three screws (320), thread into holes, and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess sealing compound.

# CAUTION: MAKE SURE PACKING O-RING STAYS IN GROOVE AS MOTOR IS INSTALLED. PACKING O-RING CAN COME OUT OF GROOVE AND TEAR IF CARE IS NOT USED. FAILURE TO COMPLY CAN RESULT IN PACKING O-RING DAMAGE.

- 5 Install new packing O-ring (330) in groove on mounting flange (315).
- 6 Position motor assembly (-300) on gearbox assembly (400) and align holes.

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## WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- Apply 823E508 jointing compound JC5A to threads of two screws (-305A), then install washers (310) on screws (-305A), thread into holes, and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (n) Install wiring harness (215) and related parts as follows:
  - <u>1</u> Position and route wiring harness (215) in the same general areas it was before removal. Refer to Figure 2004.
  - Position switch actuator (295) and switch S2 (20, IPL Figure 3) on side of gearbox assembly (400) and align holes.

## WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- Apply 823E508 jointing compound JC5A to threads of two screws (-230A), then install washers (235) on screws (-230A), thread into holes, and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- If removed, put switch S1 (5, IPL Figure 3) and locking plate (30, IPL Figure 3) on bracket assembly (25, IPL Figure 3). Attach with washer (35, IPL Figure 3) and two jam nuts, that is part of switch S1 (5, IPL Figure 3).
- Align both jam nuts, that are part of switch S1 (5, IPL Figure 3), so that flat side is lined up with locking plate (30, IPL Figure 3).
- 6 Bend locking plate (30, IPL Figure 3) up against jam nuts, that are part of switch S1 (5, IPL Figure 3), to keep them from turning.
- Position bracket assembly (25, IPL Figure 3) on gearbox assembly (400) and attach with two washers (245) and screws (-240A).

## WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- Apply 823E508 jointing compound JC5A to threads of two screws (220), then install washers (225) on screws (220), thread into holes, and tighten to attach part of wiring harness (215) to baseplate assembly (-430). Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (o) If removed, position mounting plate (205) on transformer (175) and align holes.

### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

(p) Apply 823E508 jointing compound JC5A on threads of three screws (210), thread into holes, and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.

#### COMPONENT MAINTENANCE MANUAL 45-0351

- (q) Position and route incandescent lamp (-50B) electrical wires in the same general areas they were before removal. Refer to Figure 2004.
- (r) Position terminal lugs of incandescent lamp (-50B) electrical wires and wiring harness (215) on transformer (175) studs. Refer to REPAIR for correct electrical connections.
- (s) Insert one spacer (200) between black wire and tan wire terminal lugs, then attach other terminal lugs with five lock washers (195A) and nuts (-190A).
- WARNING: PRIMER IS FLAMMABLE AND POISONOUS TO THE EYES, SKIN, AND RESPIRATORY TRACT. USE SKIN AND EYE PROTECTION. AVOID REPEATED OR PROLONGED CONTACT. MAKE SURE THAT THE AREA WHERE YOU WILL USE PRIMER HAS GOOD AIRFLOW. KEEP AWAY FROM OPEN FLAMES OR OTHER SOURCES OF IGNITION.

### <u>WARNING:</u> ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (t) Apply PR-1204 primer, then 3145 adhesive, over electrical connections on transformer (175). Use a A-A-59323 cleaning cloth to remove excess primer.
- (u) Position transformer (175) on wiring harness (215) and align holes.

### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (v) Apply 823E508 jointing compound JC5A to threads of three screws (180), then install washers (185) on screws (180), thread into holes, and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (w) Connect motor assembly (-300) connector to wiring harness (215).
- (x) Make sure motor assembly (-300) connector is tight as follows:
  - Use a strap wrench to turn coupling ring clockwise. If coupling ring will not turn, motor assembly (-300) connector is tightened sufficiently.
  - If coupling ring turns, continue to tighten clockwise until coupling ring does not turn.
- (y) Insert lamp wiring harness (170) electrical wires through hole in canopy subassembly (-335) and attach with conduit nut (160).
- (z) If removed, clip harness clamp (-150A) over wiring harness (215), then position terminal lug of the WI940 braided mesh cable and harness clamp (-150A) on gearbox assembly (400) and align holes.

### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

(aa) Apply 823E508 jointing compound JC5A to threads of allen head screw (155), thread into hole, and tighten to a torque of 67 to 79 inch-pounds (7.5 to 8.9 Nm). Use a A-A-59323 cleaning cloth to remove excess jointing compound.

COMPONENT MAINTENANCE MANUAL 45-0351

WARNING: PRIMER IS FLAMMABLE AND POISONOUS TO THE EYES, SKIN, AND

RESPIRATORY TRACT. USE SKIN AND EYE PROTECTION. AVOID REPEATED OR PROLONGED CONTACT. MAKE SURE THAT THE AREA WHERE YOU WILL USE PRIMER HAS GOOD AIRFLOW. KEEP AWAY

FROM OPEN FLAMES OR OTHER SOURCES OF IGNITION.

WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (ab) Apply PR-1204 primer then 3145 adhesive over head of allen screw (155), harness clamp (-150A), and terminal lug of WI940 braided mesh cable. Refer to Figure 2004. Use a A-A-59323 cleaning cloth to remove excess primer/adhesive.
- (ac) If removed, clip harness clamp (-140A) over lamp wiring harness (170) electrical wires, then position terminal lug of WI940 braided mesh cable and harness clamp (-140A) on back of canopy subassembly (-335) and align holes.
- WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.
- (ad) Apply 823E508 jointing compound JC5A to threads of screw (145), thread into hole, and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- WARNING: PRIMER IS FLAMMABLE AND POISONOUS TO THE EYES, SKIN, AND RESPIRATORY TRACT. USE SKIN AND EYE PROTECTION. AVOID REPEATED OR PROLONGED CONTACT. MAKE SURE THAT THE AREA WHERE YOU WILL USE PRIMER HAS GOOD AIRFLOW. KEEP AWAY FROM OPEN FLAMES OR OTHER SOURCES OF IGNITION.
- WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.
- (ae) Apply PR-1204 primer then 3145 adhesive over head of screw (145), harness clamp (-140A), and terminal lug of WI940 braided mesh cable. Refer to Figure 2005. Use a A-A-59323 cleaning cloth to remove excess primer.
- (af) If removed, clip harness clamp (-120A) over wiring harness (215), then position harness clamp (-120A) on gearbox assembly (400) and align holes.
- WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.
- (ag) Apply 823E508 jointing compound JC5A to threads of screw (135), then install washer (130) on screw (135), insert through hole, and attach with nut (125). Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (ah) If removed, position shim (110) and canopy bumper (-90A) on cover (55) and align holes.
- WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.
- (ai) Apply 823E508 jointing compound JC5A to threads of two screws (-100A), then install four washers (105) and two standoffs (115), insert through holes, and attach with nuts (95). Use a A-A-59323 cleaning cloth to remove excess jointing compound.

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(aj) Insert receptacle connector (-45A, IPL Figure 3) through hole in cover (55), then slide ring nut (50, IPL Figure 3) along wiring harness (215) to back of receptacle connector (45, IPL Figure 3) and align holes.

### <u>WARNING:</u> COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (ak) Apply 823E508 jointing compound JC5A to threads of four screws (285), then install washers (290) on screws (285), insert through holes and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (al) If removed, clip two harness clamps (-70A) over wiring harness (215), then position ground lug from receptacle connector (45, IPL Figure 3) and two harness clamps (-70A) on cover (55) and align holes.

#### <u>WARNING:</u> COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (am) Apply 823E508 jointing compound JC5A to threads of the screws (85), then insert through holes and attach with washers (80) and nuts (75). Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (an) If removed, install new identification plate (66) on cover (55).
- (ao) Position cover (55) on baseplate assembly (-430, -435) and align holes.

- (ap) Apply 823E508 jointing compound JC5A to threads of five screws (60), then install washers (65) on screws (60), insert through holes, and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (aq) Position the two electrical wires on back of incandescent lamp (-50B) and attach with two star washers and screws, that are part of lamp (-50B). Refer to REPAIR for correct electrical connections.
- (ar) Position incandescent lamp (-50B) in canopy subassembly (-335) as follows:
  - <u>1</u> Filament of incandescent lamp (-50B) is horizontal when retractable landing light is installed in aircraft with retractable landing light extended.
  - Notches in lamp gasket (30) align with raised glass lugs in back of incandescent lamp (-50B).
  - Raised glass lugs on back of incandescent lamp (-50B) mate with recesses in canopy (-350A) so that the entire rim of incandescent lamp (-50B) is seated in canopy (-350A).
- (as) If removed, insert lanyard assembly (45) into hole in lens retainer (40) and use a small flat-tip screwdriver to thread lanyard assembly (45) counterclockwise into lens retainer (40).
- (at) If removed, apply the retainer label (49) on the lens retainer (40).
- (au) Position retainer assembly (-10) on canopy subassembly (-335) and tighten six captive screws (-15A) to attach.

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- (3) For retractable landing light, PN 45-0351-1, -2, (post SB 45-0351-33-SB03, -SB04 and Pre SB 45-0351-33-0007) and PN 45-0351-3, -4 (Pre SB 45-0351-33-0007), proceed as follows:
  - (a) Refer to IPL Figure 1 for all the item numbers unless specified differently.
  - (b) Position gearbox assembly (400) or (390, IPL Figure 1A) on baseplate assembly (-430, -435) or (-420 -425, IPL Figure 1A) and align holes.

#### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (c) Coat threads of two allen head screws (410) or (400, IPL Figure 1A) and the bolts (-405A) or (-395A, IPL Figure 1A) with 823E508 jointing compound JC5A and thread into holes. Tighten allen head screws (410) or (400, IPL Figure 1A) to a torque of 67 to 79 inch-pounds (7.5 to 8.9 Nm). Tighten the bolts (-405A) or (-395A, IPL Figure 1A) to a torque of 38 to 50 inch-pounds (4.3 to 5.7 Nm). Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (d) If removed, install washer (395) or (385, IPL Figure 1A), adjustment screw (390) or (380, IPL Figure 1A), and actuator adjustment nut (385) or (375, IPL Figure 1A) on canopy subassembly (-335) or (-325, IPL Figure 1A).

#### WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (e) Apply 620 retaining compound to actuator adjustment nut (385) or (375, IPL Figure 1A), then tighten actuator adjustment nut (385) or (375, IPL Figure 1A) until adjustment screw (390) or (380, IPL Figure 1A) threads are flush with other side of actuator adjustment nut (385) or (375, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess retaining compound.
- (f) If removed, position actuator bracket (-375A) or (365, IPL Figure 1A) on canopy subassembly (-335 or -325, IPL Figure 1A) and align holes.
- (g) Apply 823E508 jointing compound JC5A to threads of two screws (380) or (370, IPL Figure 1A), thread into holes and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (h) If removed, position switch actuator (-355A) or (345, IPL Figure 1A) on actuator bracket (-375A) or (365, IPL Figure 1A) and attach with washer (370) or (360, IPL Figure 1A), adjustment screw (-365A) or (355, IPL Figure 1A), and nut (360) or (350, IPL Figure 1A).

- (i) Coat three sides of shaft (160, IPL Figure 2) with 823E508 jointing compound JC5A where canopy subassembly (-335) or (-325, IPL Figure 1A) attaches. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (j) Slide canopy subassembly (-335) or (-325, IPL Figure 1A) on shaft (160, IPL Figure 2) and align holes.

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### WARNING: SEALANT IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH SEALANT WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (k) Apply 515 gasket eliminator and sealant to threads of two bolts (-340A) or (-330B, IPL Figure 1A), thread into holes and tighten to a torque of 142 to 158 inch-pounds (16.0 to 17.8 Nm). Use a A-A-59323 cleaning cloth to remove excess gasket eliminator and sealant.
- (I) Install motor assembly (-300) or (115, IPL Figure 3) and related parts as follows:
  - 1 Install motor end cap (313) or (75, IPL Figure 3) on motor as follows:

## WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- <u>a</u> Apply a bead of 3145 adhesive, about 0.5 inch (13 mm) wide, around the periphery of the motor.
- <u>b</u> Slide motor end cap (313) or (75, IPL Figure 3) into place over motor, seating it down fully over the thermostat to the motor wire harness.

## WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

Apply a bead of 3145 adhesive around the mating surface of the motor end cap (313) or (75, IPL Figure 3) where it meets the thermostat, motor wire harness, and motor assembly (-300) or (115, IPL Figure 3) surface. Make sure entire area is sealed. Use a A-A-59323 cleaning cloth to wipe off excess adhesive.

# WARNING: MAKE SURE O-RING STAYS IN GROOVE AS MOTOR IS INSTALLED. O-RING CAN COME OUT OF GROOVE AND TEAR IF CARE IS NOT USED. FAILURE TO COMPLY CAN RESULT IN O-RING DAMAGE.

- Install new packing O-ring (-325A) or (-107A, IPL Figure 3) in groove on mounting flange (315) or (100, IPL Figure 3).
- Position mounting flange (315) or (100, IPL Figure 3) on motor assembly (-300) or (115, IPL Figure 3) and align holes.
- 4 Apply 88 sealing compound to threads of three screws (320) or (105, IPL Figure 3), thread into holes and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess sealing compound.

CAUTION: MAKE SURE PACKING O-RING STAYS IN GROOVE AS MOTOR IS INSTALLED. PACKING O-RING CAN COME OUT OF GROOVE AND TEAR IF CARE IS NOT USED. FAILURE TO COMPLY CAN RESULT IN PACKING O-RING DAMAGE.

5 Install new packing O-ring (330) or (320, IPL Figure 1A) in groove on mounting flange (315) or (100, IPL Figure 3).

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6 Position motor assembly (-300) or (-69, IPL Figure 3) on gearbox assembly (400) or (390, IPL Figure 1A) and align holes.

## WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- Apply 823E508 jointing compound JC5A to threads of two screws (320) or (105, IPL Figure 3), thread into holes and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (m) Install wiring harness (-215A) or (215, IPL Figure 1A) and related parts as follows:
  - <u>1</u> Position and route wiring harness (215A) or (215, IPL Figure 1A) in the same general areas it was before removal. Refer to Figure 7007.
  - Position switch actuator (295) or (285, IPL Figure 1A) and switch S2 (-20A, IPL Figure 3) on side of gearbox assembly (400) or (390, IPL Figure 1A) and align holes.

## WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- Apply 823E508 jointing compound JC5A to threads of two screws (-230A) or (230, IPL Figure 1A), then install washers (235) or (235, IPL Figure 1A) on screws (-230A) or (230, IPL Figure 1A), thread into holes, and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- Position switch mounting bracket (25A, IPL Figure 3) on gearbox assembly (400) or (390, IPL Figure 1A) and attach with two washers (245) or (238, IPL Figure 1A) and screws (240) or (237, IPL Figure 1A).
- Position switch actuator (40, IPL Figure 3) and switch S1 (5B, IPL Figure 3) on gearbox assembly (400) or (390, IPL Figure 1A) and attach with two washers (15, IPL Figure 3) and screws (10, IPL Figure 3).

- Apply 823E508 jointing compound JC5A to threads of two screws (220) or (220, IPL Figure 1A), then install washers (225) or (225, IPL Figure 1A) on screws (220) or (220, IPL Figure 1A), thread into holes, and tighten to attach part of wiring harness (-215A) or (215, IPL Figure 1A) to baseplate assembly (-430, -435) or (-420, -425A, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (n) Position and route lamp (-50B) or (-65A, IPL Figure 1A) electrical wires in the same general areas they were before removal. Refer to Figure 7007.
- (o) Position terminal lugs of lamp (-50B) or (-65A, IPL Figure 1A) electrical wires and wiring harness (215A) or (215, IPL Figure 1A) on transformer (175, 175A) or (185, IPL Figure 1A) studs. Refer to SCHEMATIC AND WIRING DIAGRAMS for correct electrical connections.

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(p) Insert one spacer (200) or (210, IPL Figure 1A) between black wire and tan wire terminal lugs, then attach other terminal lugs with five lock washers (-195A) or (205A, IPL Figure 1A) and nuts (-190A) or (200A, IPL Figure 1A).

#### WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (q) Apply 3145 adhesive over electrical connections on transformer (175, 175A) or (185, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess adhesive.
- (r) Position transformer (175, 175A) or (185, IPL Figure 1A) on wiring harness (215A) or (215, IPL Figure 1A) and align holes.

#### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (s) Apply 823E508 jointing compound JC5A to threads of the screws (180) or (190, IPL Figure 1A), then thread into holes and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (t) Connect motor assembly (-300) or (-69, IPL Figure 3) connector to wiring harness (215A) or (215, IPL Figure 1A).
- (u) Make sure motor assembly (-300) or (-69, IPL Figure 3) connector is tight as follows:
  - Use a strap wrench to turn coupling ring clockwise. If coupling ring will not turn, motor assembly (-300) or (-69, IPL Figure 3) connector is tightened sufficiently.
  - If coupling ring turns, continue to tighten clockwise until coupling ring does not turn.
- (v) Insert lamp wiring harness (170) or (180, IPL Figure 1A) electrical wires through hole in canopy subassembly (-335) or (-325, IPL Figure 1A) and attach with conduit nut (160) or (175, IPL Figure 1A).
- (w) If removed, clip harness clamp (-150A) or (-165A, IPL Figure 1A) over lamp wiring harness (170) or (180, IPL Figure 1A), then position terminal of WI940 braided mesh cable and harness clamp (-150A) or (-165A, IPL Figure 1A) on gearbox assembly (400) or (390, IPL Figure 1A) and align holes.

### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

(x) Apply 823E508 jointing compound JC5A to threads of allen head screw (155) or (170, IPL Figure 1A), thread into hole, and tighten to a torque of 67 to 79 inch-pounds (7.5 to 8.9 Nm). Use a A-A-59323 cleaning cloth to remove excess jointing compound.

### WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

(y) Apply 3145 adhesive over head of allen head screw (155) or (170, IPL Figure 1A), harness clamp (-150A) or (-165A, IPL Figure 1A), and terminal of WI940 braided mesh cable. Refer to Figure 2004. Use a A-A-59323 cleaning cloth to remove excess adhesive.

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(z) If removed, clip harness clamp (140) or (155, IPL Figure 1A) over lamp wiring harness (170) or (180, IPL Figure 1A) electrical wires, then position terminal lug of WI940 braided mesh cable and harness clamp (140) or (155, IPL Figure 1A) on back of canopy subassembly (-335) or (-325, IPL Figure 1A) and align holes.

#### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (aa) Apply 823E508 jointing compound JC5A to threads of screw (145) or (160, IPL Figure 1A), thread into hole, and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (ab) If removed, clip harness clamp (120) or (135, IPL Figure 1A) over wiring harness (215A) or (215, IPL Figure 1A), then position harness clamp (120) or (135, IPL Figure 1A) on gearbox assembly (400) or (390, IPL Figure 1A) and align holes.

#### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (ac) Apply 823E508 jointing compound JC5A to threads of screw (135) or (150, IPL Figure 1A), then install washer (130) or (145, IPL Figure 1A) on screw (135) or (150, IPL Figure 1A), insert through hole, and attach with nut (125) or (140, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (ad) If removed, position shims (110) or (125, IPL Figure 1A), two standoffs (115) or (130, IPL Figure 1A), and bumper assembly (-90A) or (105, IPL Figure 1A) on cover (55) or (70, IPL Figure 1A) and align holes.

### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (ae) Apply 823E508 jointing compound JC5A to threads of two screws (-100A) or (-115A, IPL Figure 1A), then install washers (105) or (-120A, IPL Figure 1A) on screws (-100A) or (-115A, IPL Figure 1A), insert through holes, and attach with nuts (95) or (110, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (af) Insert connector (-45A, IPL Figure 3) through hole in cover (55) or (70, IPL Figure 1A), then slide ring nut (50, IPL Figure 3) along wiring harness (215A) or (215, IPL Figure 1A) to back of connector (-45A, IPL Figure 3) and align holes.

- (ag) Apply 823E508 jointing compound JC5A to threads of four screws (285) or (275, IPL Figure 1A), then install washers (290) or (280, IPL Figure 1A) on screws (285) or (275, IPL Figure 1A), insert through holes, and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (ah) If removed, clip two harness clamps (-70A) or (-85A, IPL Figure 1A) over wiring harness (215A) or (215, IPL Figure 1A), then position ground lug from connector (-45A, IPL Figure 3) and two harness clamps (-70A) or (85, IPL Figure 1A) on cover (55) or (70, IPL Figure 1A) and align holes.

### COMPONENT MAINTENANCE MANUAL 45-0351

### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (ai) Apply 823E508 jointing compound JC5A to threads of two screws (85) or (100, IPL Figure 1A), then insert through holes and attach with washers (80) or (95, IPL Figure 1A) and nuts (75) or (90, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (aj) If removed, install new identification label (3, 4, 4C, or 4D) and new instruction label (13) on cover (70).
- (ak) Position cover (55) or (70, IPL Figure 1A) on baseplate assembly (-430, -435) or (-420, -425, IPL Figure 1A) and align holes.

## WARNING: ADHESIVE SEALANT IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

(al) Apply RTV157 adhesive/sealant to seal around entire periphery where cover (55) or (70, IPL Figure 1A) meets baseplate assembly (-430, -435) or (-420, -425, IPL Figure 1A).

- (am) Apply 823E508 jointing compound JC5A to threads of five screws (60) or (-75A, IPL Figure 1A), then install washers (65) or (-80A, IPL Figure 1A) on screws (60) or (-75A, IPL Figure 1A), insert through holes, and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (an) Position the two electrical wires on back of incandescent lamp (-50B) or (-65A, IPL Figure 1A) and attach with two star washers and screws, that are part of the incandescent lamp (-50B) or (-65A, IPL Figure 1A). Refer to SCHEMATIC AND WIRING DIAGRAMS for correct electrical connections.
- (ao) Position incandescent lamp (-50B) or (-65A, IPL Figure 1A) in canopy subassembly (-335) or (-325, IPL Figure 1A) as follows:
  - 1 Put lamp in lamp retainer so that the unused lamp seal lug, (nub below two lamp terminals) mates with gasket (46) or (50, IPL Figure 1A) on lamp retainer bracket (47) or (55, IPL Figure 1A).
  - Align raised glass lug near rim of lamp with cutout in lamp retainer bracket (47) or (55, IPL Figure 1A).
- (ap) If removed, insert lanyard assembly (45) or (45, IPL Figure 1A) into hole in lens retainer (40) or (40, IPL Figure 1A) and use a small flat-tip screwdriver to thread lanyard assembly (45) or (45, IPL Figure 1A) counterclockwise into lens retainer (40) or (40, IPL Figure 1A).
- (aq) Position retainer assembly (10A) or (10, IPL Figure 1A) on canopy subassembly (-335) or (-325, IPL Figure 1A) and tighten six captive screws (-15A) or (15, IPL Figure 1A) to attach.

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- (4) For retractable landing light, PN 45-0351-1, -2, -3, -4 (post SB 45-0351-33-0007 and Pre SB 45-0351-33-0008, -0009), proceed as follows:
  - (a) Refer to IPL Figure 1 for all the item numbers unless specified differently.
  - (b) Prepare the motor assembly leads as follows:
    - On the motor assembly (-70, IPL Figure 3), put new VARGLAS-H-C-2 tubing over five wire leads and hold in position against motor cap with a mechanical clamp. Refer to Figure 7004.
    - Strip 0.25 inch (6.4 mm) of insulation from end of five motor assembly wire leads.

**NOTE:** The distance from housing of motor assembly to grommet on circuit card assembly on wiring harness assembly must be 9.0 to 10.0 inches (228 to 254 mm).

- Connect five wires from motor assembly to same color wires as circuit card assembly and install five wire M81824/1-1 splices at locations in a staggered manner approximately as shown in Figure 7004.
- 4 Remove temporary clamp and extend new VARGLAS-H-C-2 tubing over length of motor assembly wire leads. Use 520T lacing cord to tie wire leads into bundles at locations shown in Figure 7004.
- (c) Position gearbox assembly (400) or (390, IPL Figure 1A) on baseplate assembly (-430, -435) or (-420 -425, IPL Figure 1A) and align holes.

#### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (d) Coat threads of two allen head screws (410) or (400, IPL Figure 1A) and the bolts (-405A) or (-395A, IPL Figure 1A) with 823E508 jointing compound JC5A and thread into holes. Tighten allen head screws (410) or (400, IPL Figure 1A) to a torque of 67 to 79 inch-pounds (7.5 to 8.9 Nm). Tighten the bolts (-405A) or (-395A, IPL Figure 1A) to a torque of 38 to 50 inch-pounds (4.3 to 5.7 Nm). Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (e) If removed, install washer (395) or (385, IPL Figure 1A), adjustment screw (390) or (380, IPL Figure 1A), and actuator adjustment nut (385) or (375, IPL Figure 1A) on canopy subassembly (-335) or (-325, IPL Figure 1A).

#### WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (f) Apply 620 retaining compound to actuator adjustment nut (385) or (375, IPL Figure 1A), then tighten actuator adjustment nut (385) or (375, IPL Figure 1A) until adjustment screw (390) or (380, IPL Figure 1A) threads are flush with other side of actuator adjustment nut (385) or (375, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess retaining compound.
- (g) If removed, position actuator bracket (-375A) or (365, IPL Figure 1A) on canopy subassembly (-335 or -325, IPL Figure 1A) and align holes.

#### COMPONENT MAINTENANCE MANUAL 45-0351

- (h) Apply 823E508 jointing compound JC5A to threads of two screws (380) or (370, IPL Figure 1A), thread into holes and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (i) If removed, position switch actuator (-355B) or (345, IPL Figure 1A) on actuator bracket (-375A) or (365, IPL Figure 1A) and attach with washer (370) or (360, IPL Figure 1A), adjustment screw (-365A) or (355, IPL Figure 1A), and nut (360) or (350, IPL Figure 1A).

#### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (j) Coat three sides of shaft (160, IPL Figure 2) with 823E508 jointing compound JC5A where canopy subassembly (-335) or (-325, IPL Figure 1A) attaches. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (k) Slide canopy subassembly (-335) or (-325, IPL Figure 1A) on shaft (160, IPL Figure 2) and align holes.

#### WARNING: SEALANT IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH SEALANT WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (I) Apply 515 gasket eliminator and sealant to threads of two bolts (-340A) or (-330B, IPL Figure 1A), thread into holes and tighten to a torque of 142 to 158 inch-pounds (16.0 to 17.8 Nm). Use a A-A-59323 cleaning cloth to remove excess gasket eliminator and sealant.
- (m) Install motor assembly (-300A) or (115, IPL Figure 3) and related parts as follows:
  - 1 Install motor end cap (313) or (75, IPL Figure 3) on motor as follows:

## WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- <u>a</u> Apply a bead of 3145 adhesive, about 0.5 inch (13 mm) wide, around the periphery of the motor.
- Slide motor end cap (313) or (75, IPL Figure 3) into place over motor, seating it down fully over the thermostat to the motor wire harness.

## WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

Apply a bead of 3145 adhesive around the mating surface of the motor end cap (313) or (75, IPL Figure 3) where it meets the thermostat, motor wire harness, and motor assembly (-300A) or (115, IPL Figure 3) surface. Make sure entire area is sealed. Use a A-A-59323 cleaning cloth to wipe off excess adhesive.

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WARNING: MAKE SURE O-RING STAYS IN GROOVE AS MOTOR IS INSTALLED. O-RING CAN COME OUT OF GROOVE AND TEAR IF CARE IS NOT USED. FAILURE TO COMPLY CAN RESULT IN O-RING DAMAGE.

- Install new packing O-ring (-325A) or (-107A, IPL Figure 3) in groove on mounting flange (315) or (100, IPL Figure 3).
- <u>3</u> Position mounting flange (315) or (100, IPL Figure 3) on motor assembly (-300A) or (115, IPL Figure 3) and align holes.
- 4 Apply 88 sealing compound to threads of three screws (320) or (105, IPL Figure 3), thread into holes and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess sealing compound.

CAUTION: MAKE SURE PACKING O-RING STAYS IN GROOVE AS MOTOR IS INSTALLED. PACKING O-RING CAN COME OUT OF GROOVE AND TEAR IF CARE IS NOT USED. FAILURE TO COMPLY CAN RESULT IN PACKING O-RING DAMAGE.

- 5 Install new packing O-ring (330) or (320, IPL Figure 1A) in groove on mounting flange (315) or (100, IPL Figure 3).
- 6 Position motor assembly (-300A) or (-69, IPL Figure 3) on gearbox assembly (400) or (390, IPL Figure 1A) and align holes.

## WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- Apply 823E508 jointing compound JC5A to threads of two screws (320) or (105, IPL Figure 3), thread into holes and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (n) Install wiring harness (-215B) or (215A, IPL Figure 1A) and related parts as follows:
  - <u>1</u> Position and route wiring harness (215B) or (215A, IPL Figure 1A) in the same general areas it was before removal. Refer to Figure 7007.
  - Position switch actuator (295) or (285, IPL Figure 1A) and switch S2 (-20A, IPL Figure 3) on side of gearbox assembly (400) or (390, IPL Figure 1A) and align holes.

- Apply 823E508 jointing compound JC5A to threads of two screws (-230A) or (230, IPL Figure 1A), then install washers (235) or (235, IPL Figure 1A) on screws (-230A) or (230, IPL Figure 1A), thread into holes, and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- Position switch mounting bracket (25A, IPL Figure 3) on gearbox assembly (400) or (390, IPL Figure 1A) and attach with two washers (245) or (238, IPL Figure 1A) and screws (-240A) or (237, IPL Figure 1A).

### COMPONENT MAINTENANCE MANUAL 45-0351

Position switch actuator (40, IPL Figure 3) and switch S1 (5B, IPL Figure 3) on gearbox assembly (400) or (390, IPL Figure 1A) and attach with two washers (15, IPL Figure 3) and screws (10, IPL Figure 3).

## WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- Apply 823E508 jointing compound JC5A to threads of two screws (220) or (220, IPL Figure 1A), then install gasket (247) or (239, IPL Figure 1A), washers (225) or (225, IPL Figure 1A) on screws (220) or (220, IPL Figure 1A), thread into holes, and tighten to attach part of wiring harness (-215B) or (215A, IPL Figure 1A) to baseplate assembly (-430, -435) or (-420, -425A, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (o) Position and route lamp (-50B) or (-65A, IPL Figure 1A) electrical wires in the same general areas they were before removal. Refer to Figure 7007.
- (p) Position terminal lugs of lamp (-50B) or (-65A, IPL Figure 1A) electrical wires and wiring harness (215B) or (215A, IPL Figure 1A) on transformer (-175B) or (-185A, IPL Figure 1A) studs. Refer to SCHEMATIC AND WIRING DIAGRAMS for correct electrical connections.
- (q) Insert one spacer (200) or (210, IPL Figure 1A) between black wire and tan wire terminal lugs, then attach other terminal lugs with five lock washers (-195A) or (205A, IPL Figure 1A) and nuts (-190A) or (200A, IPL Figure 1A).

#### <u>WARNING:</u> ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (r) Apply 3145 adhesive over electrical connections on transformer (-175B) or (-185A, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess adhesive.
- (s) Position transformer (-175B) or (-185A, IPL Figure 1A) on wiring harness (215B) or (215A, IPL Figure 1A) and align holes.

- (t) Apply 823E508 jointing compound JC5A to threads of the screws (180) or (190, IPL Figure 1A), then thread into holes and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (u) Connect motor assembly (-300A) or (-69, IPL Figure 3) connector to wiring harness (215B) or (215A, IPL Figure 1A).
- (v) Make sure motor assembly (-300A) or (-69, IPL Figure 3) connector is tight as follows:
  - Use a strap wrench to turn coupling ring clockwise. If coupling ring will not turn, motor assembly (-300A) or (-69, IPL Figure 3) connector is tightened sufficiently.
  - If coupling ring turns, continue to tighten clockwise until coupling ring does not turn.

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- (w) Insert lamp wiring harness (170) or (180, IPL Figure 1A) electrical wires through hole in canopy subassembly (-335) or (-325, IPL Figure 1A) and attach with conduit nut (160) or (175, IPL Figure 1A).
- (x) If removed, clip harness clamp (-150A) or (-165A, IPL Figure 1A) over lamp wiring harness (170) or (180, IPL Figure 1A), then position terminal of WI940 braided mesh cable and harness clamp (-150A) or (-165A, IPL Figure 1A) on gearbox assembly (400) or (390, IPL Figure 1A) and align holes.

#### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

(y) Apply 823E508 jointing compound JC5A to threads of allen head screw (155) or (170, IPL Figure 1A), thread into hole, and tighten to a torque of 67 to 79 inch-pounds (7.5 to 8.9 Nm). Use a A-A-59323 cleaning cloth to remove excess jointing compound.

#### WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (z) Apply 3145 adhesive over head of allen head screw (155) or (170, IPL Figure 1A), harness clamp (-150A) or (-165A, IPL Figure 1A), and terminal of WI940 braided mesh cable. Refer to Figure 2004. Use a A-A-59323 cleaning cloth to remove excess adhesive.
- (aa) If removed, clip harness clamp (140) or (155, IPL Figure 1A) over lamp wiring harness (170) or (180, IPL Figure 1A) electrical wires, then position terminal lug of WI940 braided mesh cable and harness clamp (140) or (155, IPL Figure 1A) on back of canopy subassembly (-335) or (-325, IPL Figure 1A) and align holes.

#### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (ab) Apply 823E508 jointing compound JC5A to threads of screw (145) or (160, IPL Figure 1A), thread into hole, and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (ac) If removed, clip harness clamp (120) or (135, IPL Figure 1A) over wiring harness (215B) or (215A, IPL Figure 1A), then position harness clamp (120) or (135, IPL Figure 1A) on gearbox assembly (400) or (390, IPL Figure 1A) and align holes.

- (ad) Apply 823E508 jointing compound JC5A to threads of screw (135) or (150, IPL Figure 1A), then install washer (130) or (145, IPL Figure 1A) on screw (135) or (150, IPL Figure 1A), insert through hole, and attach with nut (125) or (140, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (ae) If removed, position shims (110) or (125, IPL Figure 1A), two standoffs (115) or (130, IPL Figure 1A), and bumper assembly (-90A) or (105, IPL Figure 1A) on cover (55) or (70, IPL Figure 1A) and align holes.

### COMPONENT MAINTENANCE MANUAL 45-0351

### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (af) Apply 823E508 jointing compound JC5A to threads of two screws (-100A) or (-115A, IPL Figure 1A), then install washers (105) or (-120A, IPL Figure 1A) on screws (-100A) or (-115A, IPL Figure 1A), insert through holes, and attach with nuts (95) or (110, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (ag) Insert connector (-45A, IPL Figure 3) through hole in cover (55) or (70, IPL Figure 1A), then slide ring nut (50, IPL Figure 3) along wiring harness (215B) or (215A, IPL Figure 1A) to back of connector (-45A, IPL Figure 3) and align holes.

#### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (ah) Apply 823E508 jointing compound JC5A to threads of four screws (285) or (275, IPL Figure 1A), then install washers (290) or (280, IPL Figure 1A) on screws (285) or (275, IPL Figure 1A), insert through holes, and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (ai) If removed, clip two harness clamps (-70A) or (-85A, IPL Figure 1A) over wiring harness (215B) or (215A, IPL Figure 1A), then position ground lug from connector (-45A, IPL Figure 3) and two harness clamps (-70A) or (85, IPL Figure 1A) on cover (55) or (70, IPL Figure 1A) and align holes.

### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (aj) Apply 823E508 jointing compound JC5A to threads of two screws (85) or (100, IPL Figure 1A), then insert through holes and attach with washers (80) or (95, IPL Figure 1A) and nuts (75) or (90, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (ak) If removed, install new identification label (3, 4, 4C, or 4D) and new instruction label (13) on cover (70).
- (al) Position cover (55) or (70, IPL Figure 1A) on baseplate assembly (-430, -435) or (-420, -425, IPL Figure 1A) and align holes.

## WARNING: ADHESIVE SEALANT IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

(am) Apply RTV157 adhesive/sealant to seal around entire periphery where cover (55) or (70, IPL Figure 1A) meets baseplate assembly (-430, -435) or (-420, -425, IPL Figure 1A).

### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

(an) Apply 823E508 jointing compound JC5A to threads of five screws (60) or (-75A, IPL Figure 1A), then install washers (65) or (-80A, IPL Figure 1A) on screws (60) or (-75A, IPL Figure 1A), insert through holes, and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.

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- (ao) Position the two electrical wires on back of incandescent lamp (-50B) or (-65A, IPL Figure 1A) and attach with two star washers and screws, that are part of the incandescent lamp (-50B) or (-65A, IPL Figure 1A). Refer to SCHEMATIC AND WIRING DIAGRAMS for correct electrical connections.
- (ap) Position incandescent lamp (-50B) or (-65A, IPL Figure 1A) in canopy subassembly (-335) or (-325, IPL Figure 1A) as follows:
  - 1 Put lamp in lamp retainer so that the unused lamp seal lug, (nub below two lamp terminals) mates with gasket (46) or (50, IPL Figure 1A) on lamp retainer bracket (47) or (55, IPL Figure 1A).
  - Align raised glass lug near rim of lamp with cutout in lamp retainer bracket (47) or (55, IPL Figure 1A).
- (aq) If removed, insert lanyard assembly (45) or (45, IPL Figure 1A) into hole in lens retainer (40) or (40, IPL Figure 1A) and use a small flat-tip screwdriver to thread lanyard assembly (45) or (45, IPL Figure 1A) counterclockwise into lens retainer (40) or (40, IPL Figure 1A).
- (ar) Position retainer assembly (-10B) or (10A, IPL Figure 1A) on canopy subassembly (-335) or (-325, IPL Figure 1A) and tighten six captive screws (-15A) or (15, IPL Figure 1A) to attach.
- (5) For retractable landing light, PN 45-0351-1, -2, -3, -4 (post SB 45-0351-33-0008, -0009), and PN 45-0351-5, -6 proceed as follows:
  - (a) Refer to IPL Figure 1 for all the item numbers unless specified differently.
  - (b) Prepare the motor assembly leads as follows:
    - On the motor assembly (-70, IPL Figure 3), put new VARGLAS-H-C-2 tubing over five wire leads and hold in position against motor cap with a mechanical clamp. Refer to Figure 7004.
    - Strip 0.25 inch (6.4 mm) of insulation from end of five motor assembly wire leads.
      - **NOTE:** The distance from housing of motor assembly to grommet on circuit card assembly on wiring harness assembly must be 8.50 to 9.50 inches (215.9 to 241.3 mm).
    - Connect five wires from motor assembly to same color wires as circuit card assembly and install five wire M81824/1-1 splices at locations in a staggered manner approximately as shown in Figure 7004.
    - 4 Remove temporary clamp and extend new VARGLAS-H-C-2 tubing over length of motor assembly wire leads. Use 520T lacing cord to tie wire leads into bundles at locations shown in Figure 7004.
  - (c) Position gearbox assembly (400) or (390, IPL Figure 1A) on baseplate assembly (-430, -435) or (-420 -425, IPL Figure 1A) and align holes.

#### COMPONENT MAINTENANCE MANUAL 45-0351

### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (d) Coat threads of two allen head screws (410) or (400, IPL Figure 1A) and the bolts (-405A) or (-395A, IPL Figure 1A) with 823E508 jointing compound JC5A and thread into holes. Tighten allen head screws (410) or (400, IPL Figure 1A) to a torque of 67 to 79 inch-pounds (7.5 to 8.9 Nm). Tighten the bolts (-405A) or (-395A, IPL Figure 1A) to a torque of 38 to 50 inch-pounds (4.3 to 5.7 Nm). Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (e) If removed, install washer (395) or (385, IPL Figure 1A), adjustment screw (390) or (380, IPL Figure 1A), and actuator adjustment nut (385) or (375, IPL Figure 1A) on canopy subassembly (-335) or (-325, IPL Figure 1A).

### WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (f) Apply 620 retaining compound to actuator adjustment nut (385) or (375, IPL Figure 1A), then tighten actuator adjustment nut (385) or (375, IPL Figure 1A) until adjustment screw (390) or (380, IPL Figure 1A) threads are flush with other side of actuator adjustment nut (385) or (375, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess retaining compound.
- (g) If removed, position actuator bracket (-375A) or (365, IPL Figure 1A) on canopy subassembly (-335 or -325, IPL Figure 1A) and align holes.
- (h) Apply 823E508 jointing compound JC5A to threads of two screws (380) or (370, IPL Figure 1A), thread into holes and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (i) If removed, position switch actuator (-355B) or (345, IPL Figure 1A) on actuator bracket (-375A) or (365, IPL Figure 1A) and attach with washer (370) or (360, IPL Figure 1A), adjustment screw (-365A) or (355, IPL Figure 1A), and nut (360) or (350, IPL Figure 1A).

#### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (j) Coat three sides of shaft (160, IPL Figure 2) with 823E508 jointing compound JC5A where canopy subassembly (-335) or (-325, IPL Figure 1A) attaches. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (k) Slide canopy subassembly (-335) or (-325, IPL Figure 1A) on shaft (160, IPL Figure 2) and align holes.

#### WARNING: SEALANT IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH SEALANT WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

(I) Apply 515 gasket eliminator and sealant to threads of two bolts (-340A) or (-330B, IPL Figure 1A), thread into holes and tighten to a torque of 142 to 158 inch-pounds (16.0 to 17.8 Nm). Use a A-A-59323 cleaning cloth to remove excess gasket eliminator and sealant.

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- (m) Install motor assembly (-300A) or (115, IPL Figure 3) and related parts as follows:
  - 1 Install motor end cap (313) or (75, IPL Figure 3) on motor as follows:

WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- <u>a</u> Apply a bead of 3145 adhesive, about 0.5 inch (13 mm) wide, around the periphery of the motor.
- Slide motor end cap (313) or (75, IPL Figure 3) into place over motor, seating it down fully over the thermostat to the motor wire harness.

WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

Apply a bead of 3145 adhesive around the mating surface of the motor end cap (313) or (75, IPL Figure 3) where it meets the thermostat, motor wire harness, and motor assembly (-300A) or (115, IPL Figure 3) surface. Make sure entire area is sealed. Use a A-A-59323 cleaning cloth to wipe off excess adhesive.

WARNING: MAKE SURE O-RING STAYS IN GROOVE AS MOTOR IS INSTALLED. O-RING CAN COME OUT OF GROOVE AND TEAR IF CARE IS NOT USED. FAILURE TO COMPLY CAN RESULT IN O-RING DAMAGE.

- Install new packing O-ring (-325A) or (-107A, IPL Figure 3) in groove on mounting flange (315) or (100, IPL Figure 3).
- Position mounting flange (315) or (100, IPL Figure 3) on motor assembly (-300A) or (115, IPL Figure 3) and align holes.
- 4 Apply 88 sealing compound to threads of three screws (320) or (105, IPL Figure 3), thread into holes and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess sealing compound.

CAUTION: MAKE SURE PACKING O-RING STAYS IN GROOVE AS MOTOR IS INSTALLED. PACKING O-RING CAN COME OUT OF GROOVE AND TEAR IF CARE IS NOT USED. FAILURE TO COMPLY CAN RESULT IN PACKING O-RING DAMAGE.

- Install new packing O-ring (330) or (320, IPL Figure 1A) in groove on mounting flange (315) or (100, IPL Figure 3).
- 6 Position motor assembly (-300A) or (-69, IPL Figure 3) on gearbox assembly (400) or (390, IPL Figure 1A) and align holes.

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## WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- Apply 823E508 jointing compound JC5A to threads of two screws (320) or (105, IPL Figure 3), thread into holes and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (n) Install wiring harness (-215D, -215E) or (215C, 215D, IPL Figure 1A) and related parts as follows:
  - Position and route wiring harness (-215D, -215E) or (215C, 215D, IPL Figure 1A) in the same general areas it was before removal. Refer to Figure 7007.
  - Position switch actuator (295) or (285, IPL Figure 1A) and switch S2 (-20A, IPL Figure 3) on side of gearbox assembly (400) or (390, IPL Figure 1A) and align holes.

## WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- Apply 823E508 jointing compound JC5A to threads of two screws (-230A) or (230, IPL Figure 1A), then install washers (235) or (235, IPL Figure 1A) on screws (-230A) or (230, IPL Figure 1A), thread into holes, and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- Position switch mounting bracket (25A, IPL Figure 3) on gearbox assembly (400) or (390, IPL Figure 1A) and attach with two washers (245) or (238, IPL Figure 1A) and screws (-240A) or (237, IPL Figure 1A).
- Position switch actuator (40, IPL Figure 3) and switch S1 (5B, IPL Figure 3) on gearbox assembly (400) or (390, IPL Figure 1A) and attach with two washers (15, IPL Figure 3) and screws (10, IPL Figure 3).

- Apply 823E508 jointing compound JC5A to threads of two screws (220) or (220, IPL Figure 1A), then install gasket (247) or (239, IPL Figure 1A), washers (225) or (225, IPL Figure 1A) on screws (220) or (220, IPL Figure 1A), thread into holes, and tighten to attach part of wiring harness (-215D, -215E) or (215C, 215D, IPL Figure 1A) to baseplate assembly (-430, -435) or (-420, -425A, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (o) Position and route lamp (-50B) or (-65A, IPL Figure 1A) electrical wires in the same general areas they were before removal. Refer to Figure 7007.
- (p) Position terminal lugs of lamp (-50B) or (-65A, IPL Figure 1A) electrical wires and wiring harness (-215D, -215E) or (215C, 215D, IPL Figure 1A) on transformer (-175B) or (-185A, IPL Figure 1A) studs. Refer to SCHEMATIC AND WIRING DIAGRAMS for correct electrical connections.

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(q) Insert one spacer (200) or (210, IPL Figure 1A) between black wire and tan wire terminal lugs, then attach other terminal lugs with five lock washers (-195A) or (205A, IPL Figure 1A) and nuts (-190A) or (200A, IPL Figure 1A).

### WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (r) Apply 3145 adhesive over electrical connections on transformer (-175B) or (-185A, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess adhesive.
- (s) Position transformer (-175B) or (-185A, IPL Figure 1A) on wiring harness (-215D, -215E) or (215C, 215D, IPL Figure 1A) and align holes.

#### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (t) Apply 823E508 jointing compound JC5A to threads of the screws (180) or (190, IPL Figure 1A), then thread into holes and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (u) Connect motor assembly (-300A) or (-69, IPL Figure 3) connector to wiring harness (-215D, -215E) or (215C, 215D, IPL Figure 1A).
- (v) Make sure motor assembly (-300A) or (-69, IPL Figure 3) connector is tight as follows:
  - Use a strap wrench to turn coupling ring clockwise. If coupling ring will not turn, motor assembly (-300A) or (-69, IPL Figure 3) connector is tightened sufficiently.
  - If coupling ring turns, continue to tighten clockwise until coupling ring does not turn.
- (w) Insert lamp wiring harness (170) or (180, IPL Figure 1A) electrical wires through hole in canopy subassembly (-335) or (-325, IPL Figure 1A) and attach with conduit nut (160) or (175, IPL Figure 1A).
- (x) If removed, clip harness clamp (-150A) or (-165A, IPL Figure 1A) over lamp wiring harness (170) or (180, IPL Figure 1A), then position terminal of WI940 braided mesh cable and harness clamp (-150A) or (-165A, IPL Figure 1A) on gearbox assembly (400) or (390, IPL Figure 1A) and align holes.

### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

(y) Apply 823E508 jointing compound JC5A to threads of allen head screw (155) or (170, IPL Figure 1A), thread into hole, and tighten to a torque of 67 to 79 inch-pounds (7.5 to 8.9 Nm). Use a A-A-59323 cleaning cloth to remove excess jointing compound.

### WARNING: ADHESIVE IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH ADHESIVE WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

(z) Apply 3145 adhesive over head of allen head screw (155) or (170, IPL Figure 1A), harness clamp (-150A) or (-165A, IPL Figure 1A), and terminal of WI940 braided mesh cable. Refer to Figure 2004. Use a A-A-59323 cleaning cloth to remove excess adhesive.

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(aa) If removed, clip harness clamp (140) or (155, IPL Figure 1A) over lamp wiring harness (170) or (180, IPL Figure 1A) electrical wires, then position terminal lug of WI940 braided mesh cable and harness clamp (140) or (155, IPL Figure 1A) on back of canopy subassembly (-335) or (-325, IPL Figure 1A) and align holes.

#### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (ab) Apply 823E508 jointing compound JC5A to threads of screw (145) or (160, IPL Figure 1A), thread into hole, and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (ac) If removed, clip harness clamp (120) or (135, IPL Figure 1A) over wiring harness (-215D, -215E) or (215C, 215D, IPL Figure 1A), then position harness clamp (120) or (135, IPL Figure 1A) on gearbox assembly (400) or (390, IPL Figure 1A) and align holes.

#### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (ad) Apply 823E508 jointing compound JC5A to threads of screw (135) or (150, IPL Figure 1A), then install washer (130) or (145, IPL Figure 1A) on screw (135) or (150, IPL Figure 1A), insert through hole, and attach with nut (125) or (140, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (ae) If removed, position shims (110) or (125, IPL Figure 1A), two standoffs (115) or (130, IPL Figure 1A), and bumper assembly (-90A) or (105, IPL Figure 1A) on cover (55) or (70, IPL Figure 1A) and align holes.

#### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

- (af) Apply 823E508 jointing compound JC5A to threads of two screws (-100A) or (-115A, IPL Figure 1A), then install washers (105) or (-120A, IPL Figure 1A) on screws (-100A) or (-115A, IPL Figure 1A), insert through holes, and attach with nuts (95) or (110, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (ag) Insert connector (-45A, IPL Figure 3) through hole in cover (55) or (70, IPL Figure 1A), then slide ring nut (50, IPL Figure 3) along wiring harness (-215D, -215E) or (215C, 215D, IPL Figure 1A) to back of connector (-45A, IPL Figure 3) and align holes.

- (ah) Apply 823E508 jointing compound JC5A to threads of four screws (285) or (275, IPL Figure 1A), then install washers (290) or (280, IPL Figure 1A) on screws (285) or (275, IPL Figure 1A), insert through holes, and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (ai) If removed, clip two harness clamps (-70A) or (-85A, IPL Figure 1A) over wiring harness (-215D, -215E) or (215C, 215D, IPL Figure 1A), then position ground lug from connector (-45A, IPL Figure 3) and two harness clamps (-70A) or (85, IPL Figure 1A) on cover (55) or (70, IPL Figure 1A) and align holes.

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### WARNING: COMPOUND IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

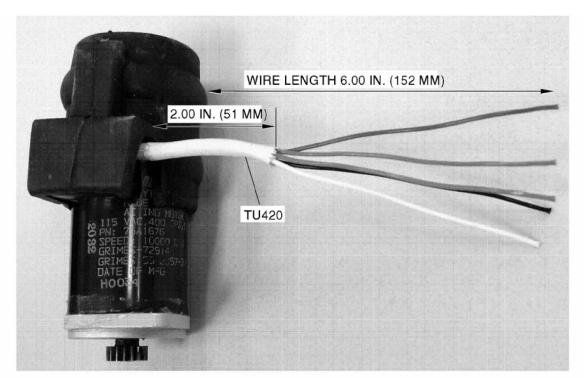
- (aj) Apply 823E508 jointing compound JC5A to threads of two screws (85) or (100, IPL Figure 1A), then insert through holes and attach with washers (80) or (95, IPL Figure 1A) and nuts (75) or (90, IPL Figure 1A). Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (ak) If removed, install new identification label (3) or (3, 4, 4C, or 4D, IPL Figure 1A) and new instruction label (13) or (13, IPL Figure 1A) on cover (55) or (70, IPL Figure 1A).
- (al) Position cover (55) or (70, IPL Figure 1A) on baseplate assembly (-430, -435) or (-420, -425, IPL Figure 1A) and align holes.

## WARNING: ADHESIVE SEALANT IS VERY FLAMMABLE. DO NOT BREATHE THE VAPORS OR TOUCH COMPOUND WITH BARE SKIN. OBEY FIRE PRECAUTIONS.

(am) Apply RTV157 adhesive/sealant to seal around entire periphery where cover (55) or (70, IPL Figure 1A) meets baseplate assembly (-430, -435) or (-420, -425, IPL Figure 1A).

- (an) Apply 823E508 jointing compound JC5A to threads of five screws (60) or (-75A, IPL Figure 1A), then install washers (65) or (-80A, IPL Figure 1A) on screws (60) or (-75A, IPL Figure 1A), insert through holes, and tighten to attach. Use a A-A-59323 cleaning cloth to remove excess jointing compound.
- (ao) Position the two electrical wires on back of incandescent lamp (-50B) or (-65A, IPL Figure 1A) and attach with two star washers and screws, that are part of the incandescent lamp (-50B) or (-65A, IPL Figure 1A). Refer to SCHEMATIC AND WIRING DIAGRAMS for correct electrical connections.
- (ap) Position incandescent lamp (-50B) or (-65A, IPL Figure 1A) in canopy subassembly (-335) or (-325, IPL Figure 1A) as follows:
  - 1 Put lamp in lamp retainer so that the unused lamp seal lug, (nub below two lamp terminals) mates with gasket (46) or (50, IPL Figure 1A) on lamp retainer bracket (47) or (55, IPL Figure 1A).
  - Align raised glass lug near rim of lamp with cutout in lamp retainer bracket (47) or (55, IPL Figure 1A).
- (aq) If removed, insert lanyard assembly (45) or (45, IPL Figure 1A) into hole in lens retainer (40) or (40, IPL Figure 1A) and use a small flat-tip screwdriver to thread lanyard assembly (45) or (45, IPL Figure 1A) counterclockwise into lens retainer (40) or (40, IPL Figure 1A).
- (ar) Position retainer assembly (-10B) or (10A, IPL Figure 1A) on canopy subassembly (-335) or (-325, IPL Figure 1A) and tighten six captive screws (-15A) or (15, IPL Figure 1A) to attach.
- (6) Test the retractable landing light. Refer to TESTING AND FAULT ISOLATION for details.

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ICN-72914-0000276210-001-01

Figure 7003. Motor Assembly Wire Leads Rework

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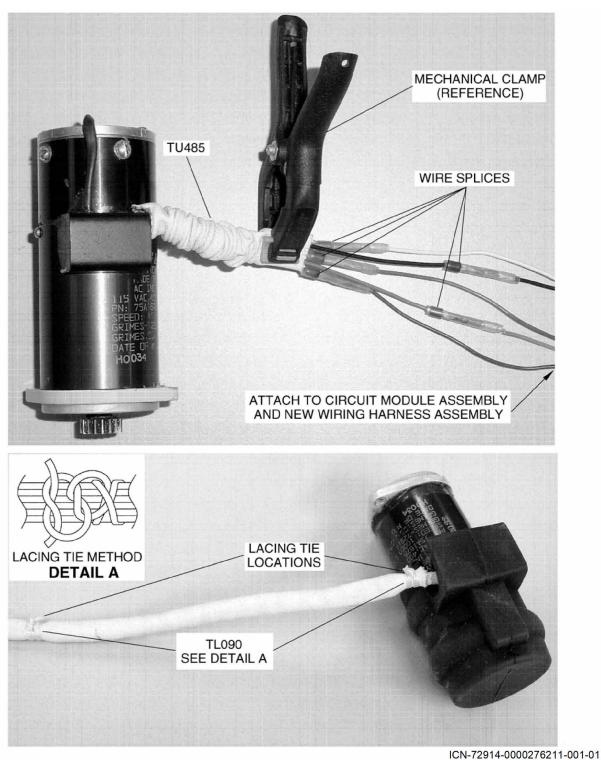


Figure 7004. Wire Splice and Lacing Locations

### COMPONENT MAINTENANCE MANUAL 45-0351

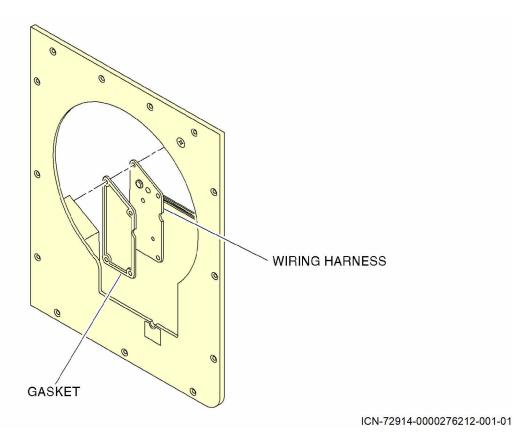
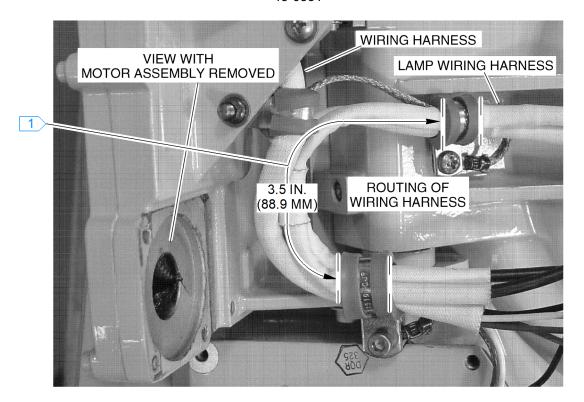


Figure 7005. Rework Locations

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#### **NOTE:**

Make sure that there is a 3.5 inches (88.9 mm) service loop distance between the P clamps in the lamp wire harness.

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Figure 7006. Wire Harness Routing

#### COMPONENT MAINTENANCE MANUAL 45-0351

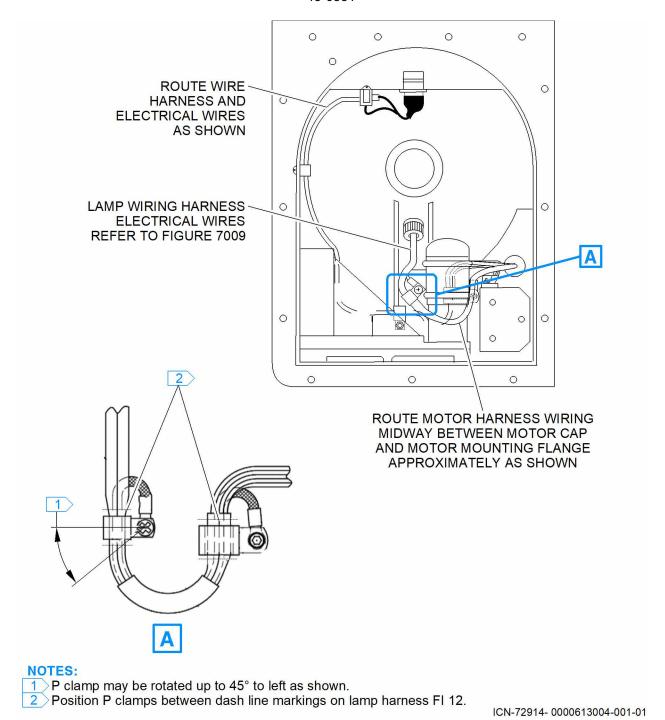


Figure 7007. Wire Harness Routing

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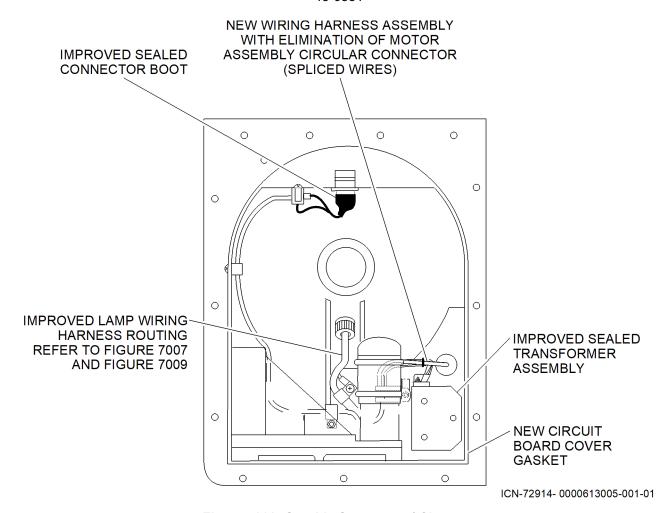
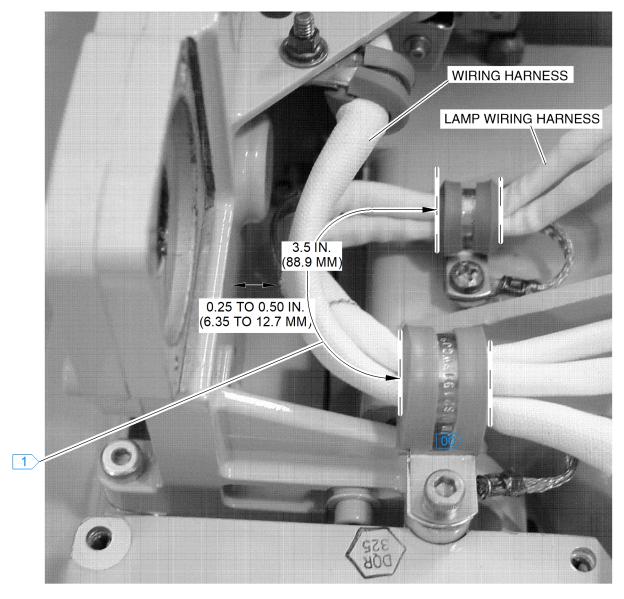


Figure 7008. Graphic Summary of Changes

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#### NOTE:

Make sure that there is a 3.5 inches (88.9 mm) service loop distance between the P clamps in the lamp wire harness. The canopy is shown in the retracted position.

| ICN-72914- 0000613006-001-01

#### Figure 7009. Wire Harness to Housing Clearance

- **D. Job Close-up** (Subtask 33-42-07-400-004-A01)
  - (1) Remove all tools, equipment, and unwanted materials from the work area.

### COMPONENT MAINTENANCE MANUAL 45-0351

### FITS AND CLEARANCES

- 1. Planning Data (TASK 33-42-07-99C-808-A01)
  - **A.** Reason for the Job (Subtask 33-42-07-99C-016-A01)
    - (1) This section gives the fits and clearances used when the LRU was made.
    - (2) This section gives the torque data required for repair and assembly of the LRU.
  - **B. Job Setup Data** (Subtask 33-42-07-99C-017-A01)
    - (1) The list that follows identifies Honeywell publications that are related to this section:
      - ATA No. 20-00-03, (Pub. No. A09-1100-004), Standard Repair Procedures for Honeywell Avionics Equipment Instruction Manual.
- **2.** Fits and Clearances (TASK 33-42-07-220-801-A01)
  - A. Fits and Clearances of the Retractable Landing Light (Subtask 33-42-07-220-001-A01)
    - (1) Refer to Table 8001 when you do the procedures in REPAIR and ASSEMBLY.

### **Table 8001. Fits and Clearances**

Figure - Item	Condition to Measure	Limits
IPL Figure 2 - Shim set (155)	Axial play on worm gear (165) axis.	+0.000/-0.0020 inch (+0.00/-0.051 mm) maximum.

- B. Specified Torque Values (Subtask 33-42-07-220-002-A01)
  - (1) Tighten nuts, bolts, screws, and tube fittings to standard torque values unless specified differently in this manual. Refer to ATA No. 20-00-03, (Pub. No. A09-1100-004), Standard Repair Procedures for Honeywell Avionics Equipment Instruction Manual, for standard torque values.
  - (2) Table 8002 gives information necessary to tighten fasteners to specified torque. Values shown do not include frictional torque caused by self-locking devices or rundown resistance. Frictional torque values must be added to the specified torque.

### Table 8002. Specified Torque

Figure Number	Item Number	Nomenclature	Torque inch-pounds (Nm)
IPL Figure 2	130	Countersunk head screw	8.0 to 9.0 (0.9 to 1.0)
IPL Figure 2	100	Allen head screw	39 to 45 (4.4 to 5.1)
IPL Figure 2	70	Allen head screw	39 to 45 (4.4 to 5.1)
IPL Figure 2	20	Shoulder screw	25 to 29 (2.8 to 3.3)
IPL Figure 2	15	Allen head screw	43 to 51 (4.9 to 5.8)
IPL Figure 2	10	Allen head screw	14 to 17 (1.6 to 1.9)
IPL Figure 1A	400	Allen head screw	67 to 79 (7.6 to 8.9)
IPL Figure 1A	-395A	Shoulder screw 38 to 50 (4.3 to 5.7)	

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### Table 8002. Specified Torque (Cont)

Figure Number	Item Number	Nomenclature	Torque inch-pounds (Nm)
IPL Figure 1A	330	Hex head bolt	142 to 158 (16.0 to 17.8)
IPL Figure 1A	170	Allen head screw	67 to 79 (7.6 to 8.9)
IPL Figure 1	410	Allen head screw	67 to 79 (7.6 to 8.9)
IPL Figure 1	405	Shoulder bolt	38 to 50 (4.3 to 5.7)
IPL Figure 1	340	Hex head bolt	142 to 158 (16.0 to 17.9)
IPL Figure 1	155	Allen head screw	67 to 79 (7.6 to 8.9)

- **C. Job Close-up** (Subtask 33-42-07-220-003-A01)
  - (1) Not applicable.

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### SPECIAL TOOLS, FIXTURES, EQUIPMENT, AND CONSUMABLES

- 1. Planning Data (TASK 33-42-07-99C-809-A01)
  - **A. Reason for the Job** (Subtask 33-42-07-99C-018-A01)
    - (1) This section gives the special tools, fixtures, equipment, and consumable materials that are necessary for LRU maintenance.
  - **B. Job Setup Data** (Subtask 33-42-07-940-001-A01)
    - (1) You can use equivalent alternatives for the special tools, fixtures, equipment, and consumable materials. The user must find equivalent alternatives.
    - (2) Refer to Table 9001 for the special tools, fixtures, and equipment in this section.
    - (3) CAGE codes and manufacturers' addresses are available at https://cage.dla.mil.

Table 9001. Special Tools, Fixtures, and Equipment

Number	Description	Source	
05-0491-1	functional tester	CAGE: 06848	
05-0494-1	functional tester	CAGE: 06848	
430 SUPERBONDER	adhesive (AD105)	CAGE: 05972	
46447	crimping tool (for use on 322338 terminal)	CAGE: 00779	
49935	crimping tool (for use on bomb tail 34130)	CAGE: 00779	
59250	crimping tool (for use on 36150, 320631, and 320619 terminals)	CAGE: 00779	
876-007	flare punch (Spaenaur)	commercially available	
98169	ream fixture	CAGE: 72914	
	bearing puller commercially availa		
	adjustable ac power supply (0 to 120 VAC, 400 Hz, 7 AMP minimum)	commercially available	
	arbor press	commercially available	
	crimping tool	commercially available	
	flat punch	commercially available	
	heat gun	commercially available	
	oven (optional)	commercially available	
	ream (size 43, 0.089 inch. (2.26 mm) diameter)	commercially available	
	soft-bristle brush commercially available		
	stopwatch	commercially available	
	strap wrench	commercially available	

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### Table 9001. Special Tools, Fixtures, and Equipment (Cont)

Number	Description	Source	
	torque driver (0 to 10 inch-pounds (0 to 1.1 Nm), 0 to 50 inch-pounds (0 to 5.6 Nm), 0 to 100 inch-pounds (0 to 11.3 Nm), 0 to 200 inch-pounds (0 to 22.6 Nm))	ch-pounds ach-pounds	
Fluke 45	digital multimeter (10 Amp, AC range)	commercially available	
Fluke Model 8010A	digital multimeter (200 VAC range)	commercially available	
IF1610	load fixture (includes counter weights)	CAGE: 06848	
IF1611	load fixture (includes counter weights)	CAGE: 06848	
M22520/1-01	crimping tool (used to crimp 55-2417 contact pins)	commercially available	
M22520/1-02	turret (used to crimp 55-2417 contact pins)	commercially available	
M81969/17-03	insertion tool (used to insert 55- 2417-1 contact pins)	commercially available	
M81969/19-06	extraction tool (used for extraction of 55-2417-1 contact pins)	commercially available	

WARNING: BEFORE YOU USE A MATERIAL, REFER TO THE MANUFACTURERS' MATERIAL SAFETY DATA SHEETS. SOME MATERIALS CAN BE DANGEROUS.

<u>CAUTION</u>: DO NOT USE MATERIALS THAT ARE NOT EQUIVALENT TO HONEYWELL SPECIFIED MATERIALS. MATERIALS THAT ARE NOT EQUIVALENT CAN CAUSE

DAMAGE TO THE EQUIPMENT AND CAN MAKE THE WARRANTY NOT

APPLICABLE.

(4) Refer to Table 9002 for the consumable materials in this section.

### **Table 9002. Consumable Materials**

Number	Description	Source
14-78-3-707	paint (PA567, BMS 10-60 Type II)	CAGE: 81205
20300007101	tubing	CAGE: 07497
3140	conformal coating (CM197, clear, transparent)	CAGE: 71984
3145	adhesive (CM1951)	CAGE: 71984
320619	terminal (TE195)	CAGE: 00779
320631	terminal (TE1542)	CAGE: 00779
322337	terminal (TE210)	CAGE: 00779

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### Table 9002. Consumable Materials (Cont)

Number	Description	Source	
322338	terminal (TE222)	CAGE: 00779	
34130	bombtail (TE324)	CAGE: 00779	
36150	terminal (TE087)	CAGE: 00779	
430 SUPERBONDER	adhesive (AD105)	CAGE: 05972	
46-2904-1	seal, conduit	CAGE: 72914	
515	gasket eliminator and sealant (AD329, anaerobic, purple, room temperature curing, single component)	CAGE: 05972	
520T	lacing cord (TL090, white nylex #16)	CAGE: 07112	
55-2417-1	contact pin	CAGE: 72914	
55-2418-1	wire, electrical	commercially available	
601	retaining compound (AD335, general purpose anaerobic single component, green)	CAGE: 05972	
620	retaining compound (AD3355, general purpose single component anaerobic, green)	nent CAGE: 05972	
823E508	jointing compound JC5A (CM760)	CAGE: 85570	
88	sealing compound (AD295, MIL-S-22473, grade A, thread-locking anaerobic, single component, red)	CAGE: 05972	
	INSULGLASS	CAGE: 12509	
	static shield bag	commercially available	
A-A-59135	dunnage (sheet material)	commercially available	
A-A-59136	cushioning (foam planks)	commercially available	
A-A-59323	cleaning cloth (low-lint, Type I)	commercially available	
ANSI B74.18	aluminum oxide abrasive cloth (600-grit)	commercially available	
Armakleen M-HP-2	aqueous cleaner (MIL-C-29602, Type I)	CAGE: 30530	
ASTM-D1974	tape	commercially available	
ASTM-D5118	shipping box	commercially available	
BMS 10-79 Type III	primer (PR1055, 515 X 349 base, 910 X 533 green catalyst, urethane compatible, corrosion resistant)		
CSL-503	gasket material (CM194, high temperature silicone rubber)	CAGE: 38735	

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### Table 9002. Consumable Materials (Cont)

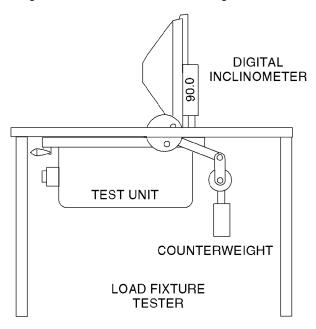
Number	Description	Source	
EE-4215	potting compound (CM4252)	CAGE: 33564	
HD0242	hardener (CM4251)	CAGE: 05972	
M23053/5-103-0	heat shrink tubing (AMS-DTL-23053)	commercially available	
M23053/5-104-0	heat shrink tubing (AMS-DTL-23053)	commercially available	
M81824/1-1	splice (SAE AS81824/1)	commercially available	
M81824/1-3	butt splice	commercially available	
MIL-B-121	wrapping material (Grade A)	commercially available	
MIL-D-3464	desiccant	commercially available	
MIL-G-21164	grease (CM6561, shell aeroshell grease 33MS, molybdemum disulfide)	commercially available	
Molykote 111 compound	high vacuum silicone grease (CM670, light gray translucent)	CAGE: 71984	
MS20995C32	safety wire	commercially available	
MS25036-149	terminal (SAE AS25036)	commercially available	
MS27488-20	seal plug	commercially available	
PR-1204	primer (CM258)	CAGE: 71984	
RTV157	adhesive/sealant (AD029, gray)	CAGE: 09214	
SN63WRMAP3	electrical solder	commercially available	
TT-I-735A	isopropyl alcohol	commercially available	
VARGLAS-H-C-2	tubing (TU420, number 7, non-rigid, white fiberglass (Note 1))	CAGE: 79074	
VARGLAS-H-C-2	tubing (TU485, number 2, non-rigid, white fiberglass)	CAGE: 79074	
VARGLAS-H-C-2	tubing (TU485, number 5, non-rigid, white fiberglass)	CAGE: 79074	
VARGLAS-H-C-2 1214002	tubing (TU485, number 2, non-rigid, white fiberglass)	CAGE: 79074	
VARGLAS-H-C-2 1214005	tubing (TU4499, number 5, non- rigid, white fiberglass)	CAGE: 79074	
VARGLAS-H-C-2 1214007	tubing (TU420, number 7, non-rigid, white fiberglass (Note 1))	CAGE: 79074	
WI106	wire, electrical (WI106)	commercially available	
WI940	braided mesh cable (8660)	CAGE: 16428	

### NOTE:

1 PN 20300007101, tubing or INSULGLASS is an acceptable alternative to VARGLAS-H-C-2, tubing.

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- (5) The list that follows identifies Honeywell publications that are related to this section:
  - Not applicable.
- (6) Refer to Figure 9001 for the load fixture diagram.



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Figure 9001. Load Fixture

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## **SPECIAL PROCEDURES**

1. Not Applicable

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## **REMOVAL**

1. Not Applicable

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## **INSTALLATION**

1. Not Applicable

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## **SERVICING**

1. Not Applicable

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### STORAGE (INCLUDING TRANSPORTATION)

- 1. Planning Data (TASK 33-42-07-99C-810-A01)
  - **A.** Reason for the Job (Subtask 33-42-07-99C-019-A01)
    - (1) Use these procedures to prepare the LRU for storage or transportation. The function of these procedures is to make sure that the LRU has protection from dust, moisture, and other contamination.
  - **B. Job Setup Data** (Subtask 33-42-07-99C-020-A01)
    - (1) You can use equivalent alternatives for the special tools, fixtures, equipment, and consumable materials. The user must find equivalent alternatives.
    - (2) Refer to Table 15001 for the special tools, fixtures, and equipment in this section.
    - (3) CAGE codes and manufacturers' addresses are available at https://cage.dla.mil.

### Table 15001. Special Tools, Fixtures, and Equipment

Number	Description	Source
Not applicable	Not applicable	Not applicable

WARNING: BEFORE YOU USE A MATERIAL, REFER TO THE MANUFACTURERS' MATERIAL SAFETY DATA SHEETS. SOME MATERIALS CAN BE DANGEROUS.

CAUTION: DO NOT USE MATERIALS THAT ARE NOT EQUIVALENT TO HONEYWELL

SPECIFIED MATERIALS. MATERIALS THAT ARE NOT EQUIVALENT CAN CAUSE

DAMAGE TO THE EQUIPMENT AND CAN MAKE THE WARRANTY NOT

APPLICABLE.

(4) Refer to Table 15002 for the consumable materials in this section.

### Table 15002. Consumables

Number	Description	Source
	static shield bag	commercially available
A-A-59135	dunnage (sheet material)	commercially available
A-A-59136	cushioning (foam planks)	commercially available
A-A-59323	cleaning cloth (low-lint, Type I)	commercially available
ASTM-D1974	tape	commercially available
ASTM-D5118	shipping box	commercially available
MIL-B-121	wrapping material (Grade A)	commercially available
MIL-D-3464	desiccant	commercially available

(5) The list that follows identifies Honeywell publications that are related to this section:

### COMPONENT MAINTENANCE MANUAL 45-0351

- ATA No. 20-00-04 (Pub. No. A09-1100-001), Handling, Storage, and Shipping Procedures for Honeywell Avionics Equipment Instruction Manual
- ATA No. 20-00-03 (Pub. No. A09-1100-004), Standard Repair Procedures for Honeywell Avionics Equipment Instruction Manual.
- **2. Procedure** (TASK 33-42-07-550-801-A01)
  - **A. Job Setup** (Subtask 33-42-07-550-001-A01)

WARNING: BEFORE YOU USE A MATERIAL, REFER TO THE MANUFACTURERS' MATERIAL SAFETY DATA SHEETS. SOME MATERIALS CAN BE DANGEROUS.

CAUTION: DO NOT USE MATERIALS THAT ARE NOT EQUIVALENT TO HONEYWELL SPECIFIED MATERIALS. MATERIALS THAT ARE NOT EQUIVALENT CAN CAUSE DAMAGE TO THE EQUIPMENT AND CAN MAKE THE WARRANTY NOT APPLICABLE.

<u>CAUTION</u>: USE INDUSTRY APPROVED ELECTROSTATIC DISCHARGE SENSITIVE PRECAUTIONS. THE RETRACTABLE LANDING LIGHT CONTAINS ELECTROSTATIC DISCHARGE SENSITIVE ITEMS.

<u>CAUTION</u>: DO NOT DROP OR HIT THE RETRACTABLE LANDING LIGHT DURING THESE PROCEDURES. THE RETRACTABLE LANDING LIGHT CONTAINS AN ASSEMBLY THAT CAN BE DAMAGED FROM INCORRECT USE.

<u>CAUTION</u>: DO THESE PROCEDURES IN A CLEAN ENVIRONMENT TO PREVENT DAMAGE TO MECHANICAL COMPONENTS.

- (1) Obey the precautions.
- (2) Refer to ATA No. 20-00-04 (Pub. No. A09-1100-001), Handling, Storage, and Shipping Procedures for Honeywell Avionics Equipment Instruction Manual, for full instructions about storage and transportation of the retractable landing light.
- **B. Preservation** (Subtask 33-42-07-550-002-A01)
  - CAUTION: USE INDUSTRY APPROVED ELECTROSTATIC DISCHARGE SENSITIVE PRECAUTIONS. THE RETRACTABLE LANDING LIGHT CONTAINS ELECTROSTATIC DISCHARGE SENSITIVE ITEMS.
  - (1) Clean the retractable landing light with a A-A-59323 cleaning cloth to remove dirt, dust, and unwanted material.
  - (2) Do the preservation procedure for the retractable landing light. Refer to MIL-STD-2073-1C, Method 41.
  - (3) Put the retractable landing light in MIL-B-121 wrapping material, then in a static shield bag.
- **C. Packing** (Subtask 33-42-07-550-003-A01)
  - (1) Put A-A-59136 cushioning material, A-A-59135 dunnage, MIL-D-3464 desiccant, and the retractable landing light in an ASTM-D5118 shipping box, then seal with ASTM-D1974 tape.

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- **D. Storage** (Subtask 33-42-07-550-004-A01)
  - (1) Identify the ASTM-D5118 shipping box. Refer to MIL-STD-129. Also, include the overhaul date and location.
  - (2) If the retractable landing light must be in storage for a long time, keep it in a location with a temperature range of -20 to +131°F (-30 to +55°C).
- **E. Transportation** (Subtask 33-42-07-550-005-A01)
  - (1) When equipment is sent to Honeywell for warranty repair, use the approved ATA container, or equivalent.
- F. Job Close-up (Subtask 33-42-07-550-006-A01)
  - (1) Remove all tools, equipment, and unwanted materials from the work area.

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## REWORK (SERVICE BULLETIN ACCOMPLISHMENT PROCEDURES)

1. Not Applicable

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### **ILLUSTRATED PARTS LIST**

- **1. Description** (TASK 33-42-07-99C-811-A01)
  - **A. General** (Subtask 33-42-07-99C-021-A01)
    - (1) This section gives the parts that are used to make the LRU. It also supplies the necessary data to get replacement parts for REPAIR and TESTING AND FAULT ISOLATION.
    - (2) The DPL part of the ILLUSTRATED PARTS LIST gives a breakdown, in disassembly sequence, of assemblies and detail parts of the unit.
    - (3) The illustrations show where you can find each part and are an important aid in DISASSEMBLY and ASSEMBLY.
    - (4) The item numbers shown in the DPL are the same as the item numbers on the exploded view illustration(s). To find a part number, find the part on the illustration and record the item number. Go to the DPL to find the item number and related part number.
  - **B. Job Setup Data** (Subtask 33-42-07-99C-022-A01)
    - (1) The list that follows identifies references that are related to this section:
      - CAGE codes and manufacturers' addresses are available at https://cage.dla.mil.
- **2. Contents of the IPL** (TASK 33-42-07-99C-812-A01)
  - **A. Vendor Code List** (Subtask 33-42-07-99C-023-A01)
    - (1) The vendor code list shows the vendor CAGE code, name, and address in numerical sequence for all vendors shown in the IPL. Refer to the Vendor Code List.
    - (2) The vendor CAGE code is given in the nomenclature column of the DPL to identify the vendor.
  - B. Equipment Designator Index (Subtask 33-42-07-99C-024-A01)
    - (1) The EDI is an alphanumeric list of the equipment designators given to the subassemblies and electrical/electronic parts. The designators are an aid to identify parts in SCHEMATIC AND WIRING DIAGRAMS. Refer to the Equipment Designation Index List.
    - (2) Each entry in the EDI identifies the figure and item numbers where the part is found in the DPL. The EDI can also identify a geographical location of the equipment designator found on the graphic illustration. If the Equipment Designator Index table lists U17 as located in the 4E area, go to the illustration and find 4 on the left grid and E on the top grid and follow it to where it intersects. You should find the component within that grid location on the illustration. A hyphen between two designators shows a continuous sequence of designators (example: A1-A5 is the same as A1 thru A5).

**NOTE:** If the component is not shown on the illustration, it may be hidden under a raised component. Thus, it will not be viewable on the illustration.

- **C.** Numerical Index (Subtask 33-42-07-99C-025-A01)
  - (1) The NI is an alphanumeric list of all the part numbers shown in the part number column of the DPL.
  - (2) Also included in the index are the Honeywell part numbers that are equivalent to the manufacturer part number. Optional manufacturer part numbers are not included in the index.

### COMPONENT MAINTENANCE MANUAL 45-0351

- (3) The figure item column gives all of the locations of a part. If a part number is in more than one figure item location, the part number is shown only one time in the part number column.
- (4) The total required column shows the total number of parts that are used at each figure item location.
- (5) The airline stock number column has space for customers to use.
- **D. Detailed Parts List** (Subtask 33-42-07-99C-026-A01)

**NOTE:** Refer to Figure 10001.

- (1) An item number is given to each part in the DPL and on the related illustration. The item numbers show the general disassembly sequence.
- (2) To find a part number in the DPL.
  - (a) If the part number is known, refer to the NI to find the figure and item numbers in the DPL.
  - (b) If the part number is not known, turn to the illustration; locate the part, and record the item number. The part number is shown opposite the item number in the DPL.
  - (c) If the equipment designator is known, refer to the EDI to find the figure and item numbers in the DPL.
- (3) Revision codes for added, changed, or deleted data.
  - (a) Revision bars (I) in the left margin adjacent to an entry shows changed or added data to the part in the DPL.
- (4) Figure item column.
  - (a) A part not shown on the illustration is identified in the DPL as non-illustrated by a dash (-) before the item number.
  - (b) When two or more items that are visually alike are listed in sequence, only the first item is illustrated. The illustration, however, is applicable to both items.
  - (c) When the detailed parts of an assembly or installation are illustrated, they can be identified by a bracket. The bracket identifies the next higher assembly or installation. If brackets are not used, the detail parts are illustrated, but the next higher assembly or installation is not.
  - (d) The parts that make up a select-from range group (i.e. calibration resistor assortments) have a non-illustrated item number or a different figure.
- (5) Part number column.
  - (a) A part number that is prefixed usually indicates a type of part or method of procurement. Examples of these prefixes are AN, MS, and NAS. These standard part numbers may be suffixed by numbers only or numbers and letters. Suffix numbers usually indicate configuration or design difference. Suffix letters usually indicate material, color, or finish differences.
  - (b) All procurable components manufactured by Honeywell have a part number. The part number is stamped, etched, or cast on the part at time of manufacture when size, space, or shape is available. More manufacturing symbol(s), letter(s), or number(s) can be shown with the part number to identify a manufacturing process, a design change, or for a proprietary repair. Do not use this data to order a part. Use only the item part number and nomenclature as shown in the DPL.

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- (c) The letter "S" prefix of a part number designates a Honeywell standard part number. These standard part numbers have suffix letters and numbers.
- (d) Honeywell commercial standard numbers are used in the parts lists to identify off-the-shelf items procured from another manufacturer. A commercial standard number can be a 10 or 11 digit number.
- (e) Nonprocurable part numbers are usually easy to identify and are primarily used for information purposes. The part numbers NONPROCXXX, ORDERNHA, GAREFXXX, TUCREFXXX, AIREFXXX, and TORREFXXX are not procurable and should not be ordered.
  - The part number NONPROCXXX is primarily used to sub-divide components into a logical, easy to use, subgroup. The subgroup is not procurable, but is used to identify a group of procurable components.
  - The part number ORDERNHA (Order Next Higher Assembly) is primarily used to identify nonprocurable details of an assembly.
  - The part number GAREFXXX, TUCREFXXX, AIREFXXX, and TORREFXXX is used when a procurable part number exceeds 15 digits. When the part number GAREFXXX, TUCREFXXX, AIREFXXX, and TORREFXXX appears in the PART NUMBER column, refer to the nomenclature for the actual part number of the item desired.
- (6) Airline stock number column.
  - (a) The airline stock number column has space for customers to use.
- (7) Nomenclature column.
  - (a) The indenture code shows the relationship of each item to its NHA.
    - <u>1</u> Each item goes in the nomenclature column one indenture (one dot) to the right of the assembly to which it belongs.
    - The items at the same indenture are all components of a single assembly or subassembly. Refer to Figure 10002 for an example of the indenture code system.
  - (b) Wherever possible, abbreviations will agree with the ASME Y14.38 specification. The non-standard abbreviations that spell words are not used.
  - (c) The vendor code data are as follows:
    - The vendors with a code number have the letter V before the number. This code identifies where to get that item.
    - No vendor code is shown in the nomenclature column of the DPL if the item is a U.S. standard part or Honeywell is the vendor.
    - 3 The vendors with no code number (NCN) are identified by (VNCN\_).
    - 4 The vendors with no code number are shown in the nomenclature column of the DPL with the vendor's full name and address.
  - (d) A Honeywell specification drawing number will be shown if applicable.
  - (e) Refer to this list of possible explanation terms. These terms may be abbreviated.
    - 1 OPTIONAL shows that the part is an optional alternative to other parts in the same item number variant group.

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- 2 ALTERNATE shows that the part is an alternative to other parts in the same item number variant group.
- 3 SUPERSEDED BY shows that the part is replaced by the part number or item number shown and is not interchangeable.
- 4 SUPERSEDES shows that the part replaces the part number or item number shown and is not interchangeable.
- 5 REPLACED BY shows that the part is replaced by the part number or item number shown and is interchangeable. Part can be used until the supply is gone.
- 6 REPLACES shows that the part replaces the part number or item number shown and is interchangeable.
- 7 PRE SERVICE BULLETIN XXXX shows that the part is used if service bulletin XXXX was not done.
- <u>8</u> POST SERVICE BULLETIN XXXX shows that the part is used if service bulletin XXXX was done.
- 9 PRE SPARE PARTS BULLETIN XXXX shows that the part is used if spare parts bulletin XXXX was not done.
- 10 POST SPARE PARTS BULLETIN XXXX shows that the part is used if spare parts bulletin XXXX was done.
- 11 NONREPAIRABLE shows that the part cannot be repaired.
- NONPROCURABLE shows that the part or assembled parts cannot be purchased and no part number exists for the assembly. The components of the assembled parts can be ordered unless differently specified.
- ORDER NEXT HIGHER ASSEMBLY shows that the part number is part of a matched set and cannot be ordered independently. The next higher assembly can be ordered.
- 14 REFERENCE (GAREF, TUCREF, AIREF, TORREF etc.) shows the procurable part number that exceeds 15 digits in the NOMENCLATURE column as ORDER PN NNNN.
- 15 ORDER PART NUMBER shows a nonstandard or reference part number.
- PART ADDED shows the part is added with no comparable component involved in the change. Interchangeability of other parts is not affected by the additions, unless specified.
- <u>17</u> DELETED shows the part is not available for use.
- 18 SEE FIGURE FOR DETAILS shows the part number details in a different figure.
- 19 SEE FIGURE FOR NEXT HIGHER ASSEMBLY refers the part number to the next higher assembly.
- <u>20</u> USE WITH (ITEM or PART NUMBER) shows a part is used with a different part.
- 21 COMPONENT OF (ITEM or PART NUMBER) shows that the part is a component of a different part.

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- 22 MAY BE SUBSTITUTED shows that the part in the NOMENCLATURE column with its vendor code is an equivalent alternative for the part in the PART NUMBER column.
- 23 REFER TO ATA or PUBLICATION NUMBER identifies the assemblies that have their own Component Maintenance Manuals. These entries are also shown in the INTRODUCTION of this manual under References.
- 24 Control Source Drawing (CSD) shows the Honeywell part number for the part in the PART NUMBER column and is fully interchangeable.
- Honeywell Control Source Drawing (HCSD) shows the Honeywell part number for the part in the PART NUMBER column and is fully interchangeable.
- <u>26</u> HAZARDOUS MATERIAL identifies parts that can have dangerous effects.
- <u>27</u> ESDS identifies parts that are electrostatic sensitive.
- 28 MOISTURE SENSITIVE identifies parts that are moisture sensitive.
- (f) If applicable, refer to REPAIR for description of wire, sleeving, and lacing given in this DPL.
- (8) The effectivity code column.
  - (a) The effectivity code identifies the different configurations of the top assembly in each IPL figure.
  - (b) If this column is empty, the part is used in all configurations of the top assembly for that IPL figure.
  - (c) If this column has a letter code in it, the part is only used in the configuration of the top assembly that has the same letter code.
  - (d) If this column has more than one letter code, the part is used in each top assembly with the same letter codes.
  - (e) If a comma separates the column entry (A, C), the other codes do not apply. For example, a component coded "A, C" is applicable for Codes A and C only and not applicable for Code B.
  - (f) If a dash separates the column entry (A-C), the other codes do apply. For example, a component coded "A-C" is applicable for Codes A, B, and C.
- (9) The units per assembly column.
  - (a) The units per assembly column show the quantity of parts necessary in the assembly of one next higher assembly. The letters AR in this column show "as required" items and refer to bulk items or adjustable quantity items, such as shims or spacers. The letters RF are used to show an item that is shown in another area with a quantity.

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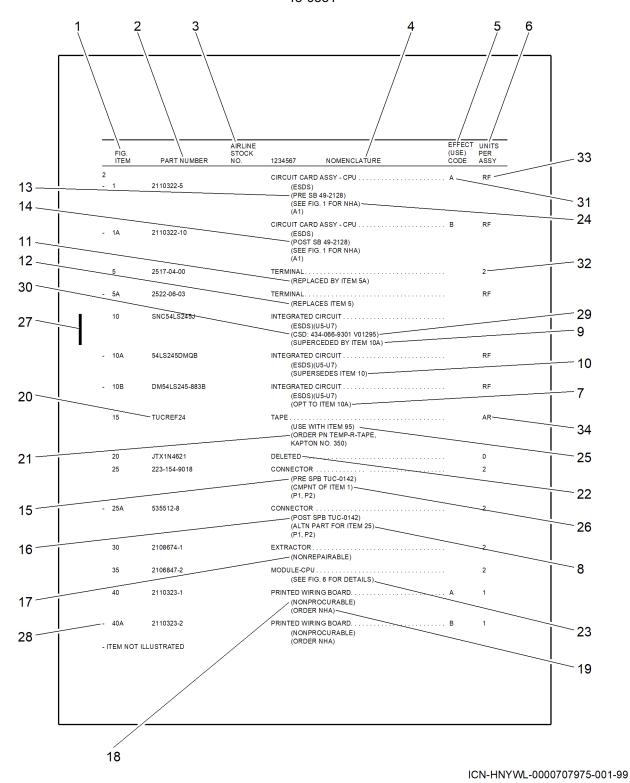


Figure 10001. DPL Example

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### Key to Figure 10001

1.	FIGURE/ITEM column	18.	NONPROCURABLE example
2.	PART NUMBER column	19.	ORDER NEXT HIGHER ASSEMBLY example
3.	AIRLINE STOCK NUMBER column	20.	REFERENCE example
4.	NOMENCLATURE column	21.	ORDER PART NUMBER example
5.	EFFECTIVITY (USE) CODE column	22.	DELETED example
6.	UNITS PER ASSEMBLY column	23.	SEE FIGURE FOR DETAILS example
7.	OPTIONAL example	24.	SEE FIGURE FOR NEXT HIGHER ASSEMBLY example
8.	ALTERNATE example	25.	USE WITH (ITEM or PART NUMBER) example
9.	SUPERSEDED BY example	26.	COMPONENT OF (ITEM or PART NUMBER) example
10.	SUPERSEDES example	27.	Changed or added data indicator example
11.	REPLACED BY example	28.	Non-illustrated indicator example
12.	REPLACES example	29.	Vendor code example
13.	PRE SERVICE BULLETIN example	30.	Control Specification or Drawing Number for the related part in the Part Number column example
14.	POST SERVICE BULLETIN example	31.	Effectivity (A) example
15.	PRE SPARE PARTS BULLETIN example	32.	Quantity example
16.	POST SPARE PARTS BULLETIN example	33.	RF indicates item referenced elsewhere
17.	NONREPAIRABLE example	34.	As required example

#### 1234567

Assembly or installation descriptive title

- Detail parts
- Assembly
- Attaching parts for assembly
- • Detail parts for assembly
- • Subassembly
- • Attaching parts for subassembly
- • Detail parts for subassembly
- • Sub-subassembly
- • Attaching parts for sub-subassembly
- • • Detail parts for sub-subassembly

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### Figure 10002. Nomenclature Indentures

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### 3. <u>Vendor Code List</u>

NOTE:

The vendor codes and part numbers that are shown in the DPL must not be construed as an authorization of the vendor, pursuant to the FAA regulations, to ship directly to the user. Neither must it be construed as a certification by Honeywell that parts shipped by vendors directly to users will conform to the type design or that such parts are airworthy or safe for installation.

Code	Vendor	
V00779	TYCO ELECTRONICS CORP., 2800 FULLING MILL RD BLDG 38 MIDDLETOWN, PA 17057-3142	
V07322	MINNESOTA RUBBER CO., 1100 XENIUM LN N STE 1 MINNEAPOLIS, MN 55441-4440	
V08805	GENERAL ELECTRIC CO., DBA GE 1975 NOBLE RD NELA PK CLEVELAND, OH 44112-1719	
V21335	TIMKEN CO., THE DIV TIMKEN AEROSPACE 336 MECHANIC ST LEBANON, NH 03766-2614	
V56878	SPS TECHNOLOGIES LLC DBA AEROSPACE DIV AEROSPACE PRODUCTS 301 HIGHLAND AVE JENKINTOWN, PA 19046-2630	
V5X895	AEROFLITE COMPONENTS INC., 261 GEMINI AVE BREA, CA 92821-3704	
V60038	TIMKEN CORP., THE DIV TIMKEN CO 4500 MOUNT PLEASANT ST NW NORTH CANTON, OH 44720-5450	
V72914	HONEYWELL INTL AEROSPACE-URBANA 550 STATE ROUTE 55 URBANA OH, 43078 USA	
V80205	NATIONAL AEROSPACE STANDARDS COMMITTEE AEROSPACE INDUSTRIES	
V80756	SPIROLOX INC., 555 OAKWOOD RD LAKE ZURICH, IL 60047-1558	
V81205	THE BOEING CO., DBA BOEING DIV DEFENSE SPACE & SECURITY 7755 E MARGINAL WAY S SEATTLE, WA 98108-4002	
V81343	SOCIETY OF AUTOMOTIVE ENGINEERS INC., 400 COMMONWEALTH DR WARRENDALE, PA 15096	
V81349	MILITARY SPECIFICATIONS PROMULGATED BY MILITARY DEPARTMENTS/AGENCIES UNDER AUTHORITY OF DEFENSE STANDARDIZATION MANUAL 4120 3-M	
V88044	AERONAUTICAL STANDARDS GROUP DEPT OF NAVY AND AIR FORCE	
V91929	HONEYWELL INTL INC DBA HONEYWELL 315 E STEPHENSON ST FREEPORT, IL 61032-4316	
V96906	MILITARY STANDARDS PROMULGATED BY MILITARY DEPARTMENTS UNDER AUTHORITY OF DEFENSE STANDARDIZATION MANUAL 4120 3-M	

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### 4. <u>Detailed Parts List</u>

## **Equipment Designator Index**

EQUIPMENT	FIG.	GEOGRAPHIC	EQUIPMENT	FIG.	GEOGRAPHIC
DESIGNATOR	ITEM	LOCATION	DESIGNATOR	ITEM	LOCATION
S1 S1 S1 S2 S2 S2 S2	3 -5A 3 5B 3 -5C 3 20 3 20A 3 -20B				

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## **Numerical Index**

PART NUMBER	AIRLINE STOCK NO.	FIG. ITEM	TTL REQ.
A1111-3		1 160	1
A2037A2126 A4401		1A 175 2 190 1 -347A	1 2 1
A4401-1		1A -337A 1 347	1
AN4-16A		1A 337 1 340 -340B 1A 330 -330B	1 2 2 2 2
AN4-17A		1 -340A 1A -330A	2 2 2
AS21919WCJ05		1A -330A 1 -120A -140A -70A 1A -135A -155A -85A	1 1 2 1 1
AS21919WCJ09		1 -150A	1
B85		1A -165A 2 115 140	1 1 1
BACC63BV12F12PN		1 -270 3 45	0 1
BACC63BV12H12PN BE274		3 -45B 2 -115A -140A	1 1 1 1
BE600 CK63AY103ME CN07861 LPQ4559X LW158	SEE BACC63BV12H12PN SEE Q4559X	2 -190A 4 -65	0
M81824-1-1		3 35 3 -55 -60	1 4 9
M81824/1-1 M818241-3 M83723-16S12A MK45-0351-0007	SEE M81824-1-1	5 40 3 43 1 -900 1A -900	2 1 1 1
MS16535-112		1 48 -520 1A 60	2 2 2
MS171433		1 314J 3 90	1
MS20426A3-4 MS20470A3-5		4 -35 4 -15	0

EFFECTIVITY—

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## **Numerical Index**

PART NUMBER	AIRLINE STOCK NO.	FIG. ITEM	TTL REQ.
MS21042L04		1 360	1
		1A 350	1
MS21042L06		1 190	5
		95	2
MS21042L08		1A 110 1 125	2 1
W321042L00		-585	0
		75	2
		1A 140	1
		90	2
MS21209C0215P		2 200	2
MS21209C0410P		2 -205A	4
MS21209C0415P		2 205	4
MS21209C0615P		1 -445A	5
		1A -435A 2 210	5 5
MS21209C0815P		2 215	2
14162 1200 00 101		-25A	2
MS21209C0820P		1 440	4
		1A 430	4
		2 225	2
		25	2
MS21209C1-15P		1 450	5
MS21209C615P		1A 440 1 445	5 5
WI32 1209C0 13P		1A 435	5 5
MS21209F1-15P		2 220	2
MS21919WCJ5		1 120	_ 1
		140	1
		70	2
		1A 135	1
		155	1
MS21919WCJ9		85 1 150	2 1
W321919WC39		1A 165	1
MS24693C26		1 320	3
		1A -310	0
		3 105	3
MS24693S25		1 210	3
MS27039-0806		1 145	1
MC27020 0000		1A 160	1
MS27039-0808		1 135 180	1 3
		220	2
		240	2
		-580	0
		85	2
		1A 100	2

EFFECTIVITY—

# COMPONENT MAINTENANCE MANUAL 45-0351

## **Numerical Index**

PART NUMBER	AIRLINE STOCK NO.	FIG. ITEM	TTL REQ.
		150	1
		220	2
MS35206-208		1 230	2
MS35206-227		1 380	2
		1A 370	2
MS35206-228		1 60	5
		-605	0
		1A 75	5
MS35206-230		1 100	2
M005000 004		1A 115	2
MS35206-231		1 -100A	2
MS35206-242		1A -115A 1 -240A	2 2
W333200-242		-570	0
		1A 237	2
MS35206-247		1 189	1
W000200 247		-645	0
		-935	1
		1A 195	1
		-935	1
MS35206-248		1 187	2
		-650	0
		-940	2
		1A 190	2
		-940	2
MS35338-136		1A -205A	5
MS35338-41		1 195A	5
		-550	0
MC25400 444V		1A 205	5
MS35489-144X		4 -20 -25	0 0
MS35650-3255T		1 415	1
W033030-32331		1A 405	1
MS51957-15		1 285	4
mee reer re		-595	0
		1A 275	4
MS51957-28		1A -75A	5
NAS1130-06L10		1 351	8
		1A 341	8
NAS1130-08L10		1 352	2
		1A 342	2
NAS1130-4FL15		1 354	2
NA 044 40 CN 020 D		1A 344	2
NAS1149CN632R		1A -120A	4
NAS1149D0432J		-80A 1 -420A	5 1
NA91143D043ZJ		1 -420A 1A -410A	1
NAS1149D0463J		1 420	1
14/1011110001000		1 720	'

# COMPONENT MAINTENANCE MANUAL 45-0351

## **Numerical Index**

PART NUMBER	AIRLINE STOCK NO.	FIG. ITEM	TTL REQ.
		1A 410	1
NAS1149E0332P		2 105 75	2
NAS1149EN232P		1 235	1 2
14/10/14/02/1		1A 228	0
		235	2
		238	2
		-255	0
		3 15	2
NAS1149EN632P		1 105	4
		-600 65	0 5
		65 1A 120	5 4
		80	5
NAS1149EN832P		1 130	1
		185	3
		225	2
		245	2
		310	2
		-575	0
		80	2
		1A 145 225	1 2
		-228A	2
		-238A	2
		-300	0
		95	2
NAS1219-4-12		1 -425A	1
		1A -415A	1
NAS1249-4-12		1 425	1
NA O4054NO OB		1A 415	1
NAS1351N3-8P NAS1351N3H10P		2 100 2 70	2
NAS1351N3H10P NAS1352N02-8P		2 70 1 -230A	1 2
NAO 13321102-01		1A 227	2
		230	2
		-250	0
		3 10	2
NAS1352N06-12P		2 10	5
NAS1352N08-10P		1 305	2
		390	1
NAS1352N08-12P		1A 380 1 -305A	1 2
INAO IOOZINOO-IZF		1 -305A 1A -227A	2
		-295	0
		2 15	2
NAS1352N3-12P		1 155	1
		410	2

EFFECTIVITY—

# COMPONENT MAINTENANCE MANUAL 45-0351

## **Numerical Index**

PART NUMBER		AIRLINE STOCK NO.	FIG. ITEM	TTL REQ.
			-545	0
			1A 170	1
			400	2
NAS1611-020			2 135	1
NAS1611-028			1 325	1
			330	1
			1A -315 320	0 1
			3 107	1
NAS1611-028A			1 -325A	1
14A01011-020A			1A -315A	0
			3 -107A	1
NAS600-4P			2 130	4
NAS620-4			1 290	4
			-590	0
			1A 280	4
NAS620-5			1 370	1
			1A 360	1
NAS620-6			1 -195	6
NAS620-8			1 395	1
NACC74 C			1A 385	1
NAS671-6			1 -190A -555	5 0
			-555 1A 200	5
NAS671C6			1A -200A	5
Q4115-559N			2 110	1
Q4117-559N			2 185	1
Q4559X			1 50	1
			-50B	1
			1A -65A	1
RLR20C4703GR			4 -55	0
RR2402			2 -80A	1
RRN93	055 40505 4000		2 80	1
SC4728	SEE 12705-4C6C		1 1051	0
SC4728			1 -405A 1A 395	2 0
SW515	SEE 1SE2		IA 393	U
SW515	OLL IOLZ		1A -240	0
000010			3 20A	1
			5B	1
TE1542			5 70	2
TE210			5 60	2
TE222			5 110	2
TE324	SEE 34130			
TE324			1 -485	0
TI 000			-530	0
TL090			1 -565	0
TU420			5 50	AR

EFFECTIVITY—

## COMPONENT MAINTENANCE MANUAL 45-0351

#### **Numerical Index**

PART NUMBER	AIRLINE STOCK NO.	FIG. ITEM	TTL REQ.
TU4499		5 20	AR
TU485		5 10	AR
WI106		5 90	AR
WI940		5 100	AR
0R190		2 -110A	1
0R192		2 -185A	1
1SE2		3 -20B	1
		-5C	1
11232-3		1A -260	0
		3 40	1
11308		1 110	AR
		1A 125	AR
12705-4C6C		1 405	2
		1A -395A	2
25-1789-2300		1 35	1
25-1835-23		1 -35A	1
		-495	1
		1A 35	1
34130		1 -485A	1
		-530A	1
		1A -64	1
4029		4 -30	0
45-0351-1		1 -1	RF
45-0351-2		1 -1A	RF
45-0351-3		1A -1	RF
45-0351-4		1A -1A	RF
45-0351-5		1A -1B	RF
45-0351-6		1A -1C	RF
45-0351L1		1 3	1
		-930	1
		1A 3	1
45.0405.4		-930 4 470	1
45-0405-1 45-0405-3		1 -470	1
		1 -490	1
45-0412-1 45-0421-1		1 -535 1 -630	0 0
46-2763-1		1 25	1
40-2703-1		1 25 1A 25	1
46-2766-1		1 45	1
40-2700-1		-500	1
		1A 45	1
46-2768-1		1 10	1
46-2770-1		1 55	1
		1A 70	1
46-2771-1		1 -5	1
46-2771-2		1 -5A	1
46-2774-1		1 -335	1
		1A -325	1

## COMPONENT MAINTENANCE MANUAL 45-0351

#### **Numerical Index**

PART NUMBER	AIRLINE STOCK NO.	FIG. ITEM	TTL REQ.
46-2776-1		1 350	1
		1A 340	1
46-2778-5		4 -5	0
46-2778-9		4 -5A	0
46-2780-1		1 66	1
46-2781-1		1 67	0
		1A 84	0
46-2782-1		1 353	0
		1A 343	0
46-2787-1		1 -327	1
10.0700.4		3 -110	1
46-2788-1		1 -300	1
		1A -290	0
46 2700 2		3 -69 1 -300A	1
46-2788-3		1 -300A 1A -290A	1 0
		3 -70	1
46-2789-1		1 315	1
40-2709-1		1A -305	0
		3 100	1
46-2790-1		1 -260	0
10 2700 1		3 25	1
46-2819-1		1 314M	1
		3 95	1
46-2826-1		1 465	0
		1A 4	1
		4C	1
		455	0
46-2826-3		1 49	1
		1A -4D	1
		63	1
46-2834-1		1 375	1
46-2835-1		1 365	1
46-2836-1		1 355	1
46-2849-1		4 -80	0
46-2850-3		4 -45	0
46-2850-5		4 -45A	0
46-2852-1		1 205	1
46-2855-1		2 -155A -175A	1 0
46-2856-1		2 -35A	1
46-2857-1		2 -33A 2 60	1
46-2858-1		2 65	1
46-2859-1		2 125	1
46-2862-1		2 170	1
46-2863-1		2 -40	1
		47	1
		• •	

## COMPONENT MAINTENANCE MANUAL 45-0351

#### **Numerical Index**

PART NUMBER	AIRLINE STOCK NO.	FIG. ITEM	TTL REQ.
		63	1
		-63B	1
46-2865-1		2 90	1
46-2866-1		2 165	1
46-2867-1		2 85	1
46-2873-1		2 45	2
		55	2
46-2874-1		2 120	1
46-2875-1		2 95	1
46-2876-1		2 160	1
46-2881-1		2 -195	1
46-2881-3		2 230	1
46-2883-1		2 -5	1
46-2883-3		2 30	1
46-2885-1		1 400	1
		1A 390	1
		2 -1	RF
46-2904-1		1 -165	0
		5 30	1
46-2905-1		1 345	3
		1A 335	3
46-2906-1		1 215	1
		3 -1	RF
46-2909-1		1 -430	1
40.000.0		1A -420	1
46-2909-2		1 -435	1
40.0000.0		1A -425	1
46-2909-3		1 455	1
40,0000 4		1A 445	1
46-2909-4		1 -460	1
40.0040.4		1A -450	1
46-2919-1		2 150	1
40,0000 4		180	1
46-2920-1		2 155	1
46 2024 4		-175 1 205	0
46-2921-1		1 -265 3 30	0
46 2024 1			1
46-2924-1 46-2925-1		2 35 4 -40	1 0
46-2926-1 46-2926-1		4 -40 2 145	1
46-2954-1		2 145	2
46-2956-1		1 40	1
TU-2000-1		1A 40	1
46-2966-1		1 314C	1
-0 <b>2</b> 000-1		3 80	1
46-2985-1		1 90	1
46-3009-1		1 30	1

## COMPONENT MAINTENANCE MANUAL 45-0351

#### **Numerical Index**

PART NUMBER	AIRLINE STOCK NO.	FIG. ITEM	TTL REQ.
		1A 375	1
46-3011-1		1 295	1
46-3137-1		1A 285 1 -15A	1 6
40-3137-1		1A 15	6
46-3145-1		1 170	1
		-905	1
		1A 180	1
		-905	1
40.0450.4		5 -1	RF
46-3152-1		2 -40A	1
46-3153-1		2 -50A -63A	1 1
46-3189-1		1 115	2
40-3109-1		1A 130	2
46-3191-1		1 -90A	1
		1A 105	1
46-3277-1		4 -10	0
46-3379-1		1 47	1
		-505	1
40.0404.4		1A 55	1
46-3421-1		1 10A	1
		-475 1A 10	1 1
46-3469-1		1A -245	0
40-0400-1		3 25A	1
46-3536-1		1 -480	1
		-525	1
46-3536-3		1 -625	0
46-3536-7		1 -314	1
		1A -304	0
10.0510.4		3 -77	1
46-3542-1		1 -355A	1 1
46-3544-1		1 -375A -615	0
		-945	1
		1A 365	1
		-945	1
46-3546-1		1 215A	1
		-540	0
		1A 215	1
46 2546 2		3 -1A	RF 1
46-3546-3		1 215C 1A 215B	1 1
		3 -1C	RF
46-3546-5		1 215B	1
		-910	1
		1A 215A	1

## COMPONENT MAINTENANCE MANUAL 45-0351

#### **Numerical Index**

PART NUMBER	AIRLINE STOCK NO.	FIG. ITEM	TTL REQ.
		-910	1
		3 -1B	RF
46-3546-7		1 215D	1
		1A 215C	1
		3 -1D	RF
46-3546-9		1 -215E	1
		1A -215D	1
		3 -1E	RF
46-3547-1		1A -5	1
46-3547-2		1A -5A	1
46-3547-3		1A -5B	1
46-3547-4		1A -5C	1
46-3548-1		3 65	1
		4 -1	0
46-3548-3		3 -65A	1
		4 -1A	0
46-3549-1		1 -355B	1
		-610	0
		-925	1
		1A 345	1
		-925	1
46-3569-1		1 -365A	1
		-620	0
		-950	1
		1A 355	1
		-950	1
46-3655-1		1A 83	0
46-3677-1		1 313	1
		1A -303	0
10.0710.1		3 75	1
46-3716-1		1 -640	0
46-3864-1		3 -40A	1
46-4071-1		1 247	1
		-915	1
		1A 239 -915	1
46-4121-1		1 -350A	1 1
40-4121-1		1A -340A	1
55-1156-3		1 -280	0
33-1130-3		1A -270	0
		3 50	1
55-2352-1		4 -70	0
55-2353-1		1 -314F	1
00 2000-1		3 -85	1
55-2354-1		3 -03 4 -75	0
55-2355-1		1 175	1
55-2356-1		1 -250	0
00 2000 1		3 5	1

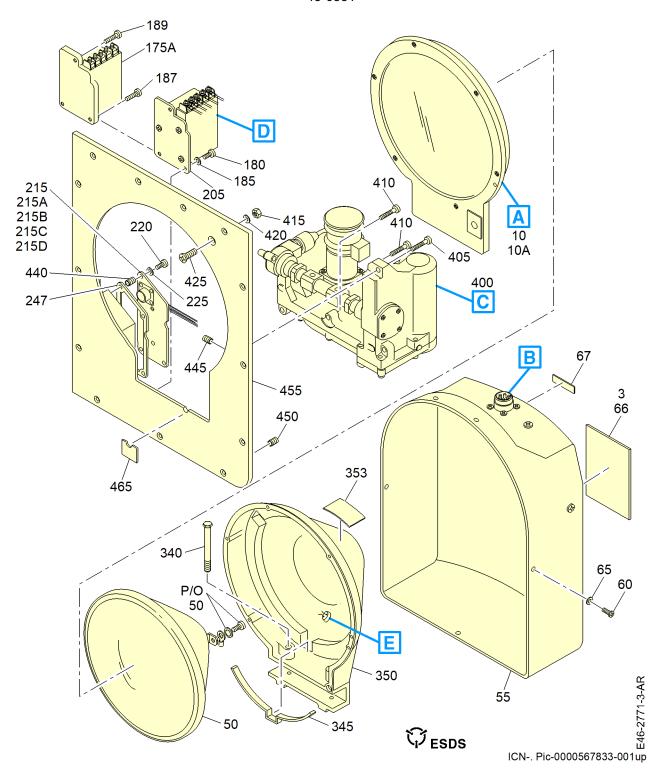
# COMPONENT MAINTENANCE MANUAL 45-0351

#### **Numerical Index**

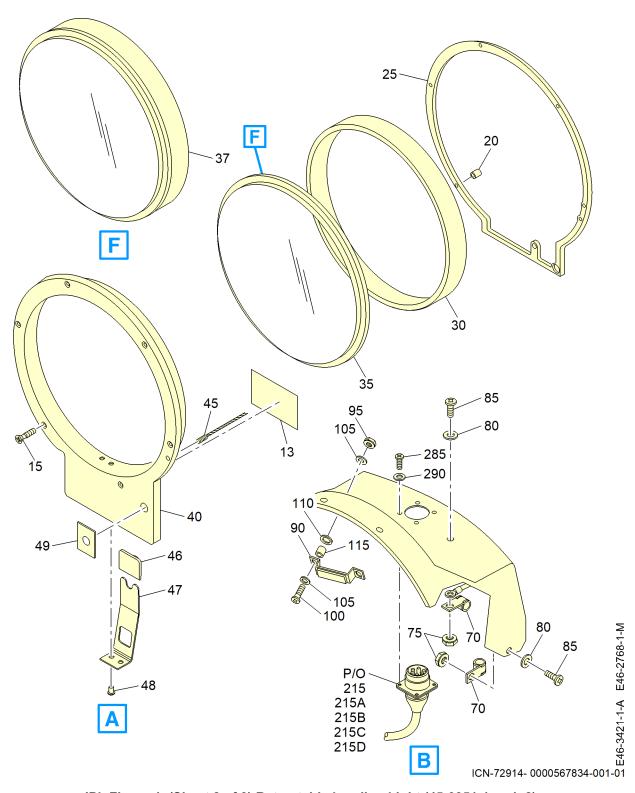
PART NUMBER	AIRLINE STOCK NO.	FIC ITE		TTL REQ.
55-2356-3			-250A	0
30 2000 0			-5A	1
55-2357-1			328	1
			115	1
55-2359-1			-255	0
		3	20	1
55-2418-1		5	80	AR
55-2419-1		1	-270A	0
		1A	-265	0
		3	-45A	1
55-2436-1		4	-50	0
55-2445-1		4	-60	0
55-2500-1		1	-50A	1
		1A	65	1
55-2504-1		1	46	1
			-510	1
		1A	50	1
55-2505-1		1	-30A	1
			-515	1
		1A	30	1
55-2575-1		1	175A	1
			-635	0
		1A	185	1
55-2575-3		1	-175B	1
			-920	1
		1A	-185A	1
			-920	1
60-3307-5		1	200	1
			-560	0
		1A	210	1
60-4443-7		1	20	6
		1A	20	6
60-4489-1		1	15	6
72464198-1		1	-10B	1
		1A	-10A	1
72464198L1			13	1
		1A		1
72464199-1			37	1
		1A		1
72552950-001			-50C	1
		1A	-65B	1

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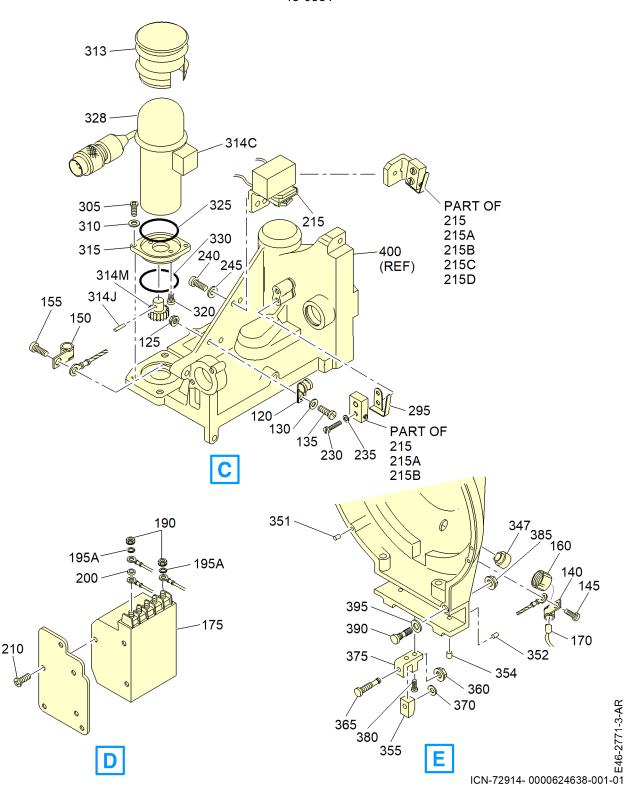
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IPL Figure 1. (Sheet 1 of 3) Retractable Landing Light (45-0351-1 and -2)



IPL Figure 1. (Sheet 2 of 3) Retractable Landing Light (45-0351-1 and -2)



IPL Figure 1. (Sheet 3 of 3) Retractable Landing Light (45-0351-1 and -2)

# COMPONENT MAINTENANCE MANUAL 45-0351

	FIG.	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
_							
1 -	1	45-0351-1			ABLE LANDING, LH	Α	RF
-	1A	45-0351-2		LIGHT	ABLE LANDING, RH	В	RF
	3	45-0351L1		IDENTIFIC	CATION 45-0351-33-0007)		1
-	5	46-2771-1		RETRACT (ESDS)	ABLE LANDING L ARRANGEMENT)	Α	1
-	5A	46-2771-2		RETRACT (ESDS)	ABLE LANDING L ARRANGEMENT)	В	1
	10	46-2768-1			SSEMBLY 15-0351-33-SB03)		1
	10A	46-3421-1		(PRE SB 4	SSEMBLY 15-0351-33-0008) 45-0351-33-SB03)		1
-	10B	72464198-1			SSEMBLY45-0351-33-0008)		1
	13	72464198L1		INSTRUC <sup>*</sup>	TION 45-0351-33-0008)		1
	15	60-4489-1		CAPTIVE	EDED BY ITEM: 15A)		6
-	15A	46-3137-1		CAPTIVE	EDES ITEM: 15)		6
	20	60-4443-7		RETAINER SCREW			6

- ITEM NOT ILLUSTRATED

ALL

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## COMPONENT MAINTENANCE MANUAL 45-0351

	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
1							
	25	46-2763-1		GASKET LENS			1
	30	46-3009-1		LAMP	45-0351-33-SB03)		1
-	30A	55-2505-1		LAMP (PRE SE	45-0351-33-0008) B 45-0351-33-SB03)		1
	35	25-1789-2300		CLEAR	45-0351-33-SB03)		1
-	35A	25-1835-23		CLEAR (PRE SE	45-0351-33-0008) B 45-0351-33-SB03)		1
	37	72464199-1		CLEAR	EMBLY B 45-0351-33-0008)		1
	40	46-2956-1		RETAINER			1
	45	46-2766-1		LANYARD	ASSEMBLY		1
	46	55-2504-1			B 45-0351-33-SB03)		1
	47	46-3379-1		(POST S	B 45-0351-33-SB03)		1
	48	MS16535-112		RIVET (V81349 (POST S	HING PARTS) 		2
	49	46-2826-3		LABEL	ICATION		1
	50	Q4559X		INCAND (V08805	ESCENT ) CED BY ITEM: 50A)		1

- ITEM NOT ILLUSTRATED

EFFECTIVITY—

# COMPONENT MAINTENANCE MANUAL 45-0351

	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
1	504	FF 0500 4					
-	50A	55-2500-1		INCAND (28 V, 60 (REPLA (PRE SF	PESCENT 00 W) CES ITEM: 50) PB 00265) CED BY ITEM: 50B)		1
-	50B	Q4559X		INCAND (28 V, 60 (V08805 (CSD: LI (REPLA (POST 5			1
-	50C	72552950-001		LED (28 V, 17 (V08805			1
	55	46-2770-1			HING PARTS)		1
	60	MS35206-228		-	AD		5
	65	NAS1149EN632P		WASHER (V80205			5
	66	46-2780-1		IDENTIF	FICATION 3 45-0351-33-0007)		1
	67	46-2781-1		DELETED			0
	70	MS21919WCJ5		HARNES (V81349			2
-	70A	AS21919WCJ05		(V81343	SPB 00243)		2

- ITEM NOT ILLUSTRATED

ALL ALL

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## COMPONENT MAINTENANCE MANUAL 45-0351

_	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
1							
	75	MS21042L08		· ·	HING PARTS) 5)		2
	80	NAS1149EN832P		WASHER (V8020	5)		2
	85	MS27039-0808		SCREW PAN HE (V96900			2
					*		
	90	46-2985-1			ASSEMBLY RSEDED BY ITEM: 90A)		1
-	90A	46-3191-1			ASSEMBLYRSEDES ITEM: 90)		1
	95	MS21042L06		•	HING PARTS) 		2
	100	MS35206-230		PAN HE (V9690	<del></del>		2
-	100A	MS35206-231		(V9690			2
	105	NAS1149EN632P		WASHER (V8020	5)		4
	110	11308		SHIM			AR
	115	46-3189-1			F		2
	120	MS21919WCJ5		CLAMP HARNE (V8134			1
-	120A	AS21919WCJ05		(V8134	3) SPB 00243)		1

- ITEM NOT ILLUSTRATED

ALL

EFFECTIVITY

# COMPONENT MAINTENANCE MANUAL 45-0351

	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
1							
	125	MS21042L08		•	NG PARTS)		1
	130	NAS1149EN832P		WASHER (V80205)			1
	135	MS27039-0808		,	D		1
	140	MS21919WCJ5					1
-	140A	AS21919WCJ05		(V81343)	PB 00243)		1
	145	MS27039-0806		SCREW (V96906)	NG PARTS)*		1
	150	MS21919WCJ9			S		1
-	150A	AS21919WCJ09		CLAMP LOOP (V81343)	PB 00219)		1
	155	NAS1352N3-12P		SCREW ALLEN H (V80205)	<del></del>		1
	160	A1111-3			* 		1
-	165	46-2904-1		DELETED			0

- ITEM NOT ILLUSTRATED

EFFECTIVITY—

## COMPONENT MAINTENANCE MANUAL 45-0351

	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
1							
	170	46-3145-1		LAMP W	RING FIG 5 FOR DETAILS)		1
	175	55-2355-1		(PRE SB (PRE SB	MER 45-0351-33-SB05) 45-0351-33-0007) SEDED BY ITEM: 175A)		1
	175A	55-2575-1		(PRE SB (POST S	MER 45-0351-33-0007) B 45-0351-33-SB05) SEDED BY ITEM: 175B)		1
-	175B	55-2575-3		(POST S (SUPERS	MER B 45-0351-33-0007) SEDES ITEM: 175A)		1
	180	MS27039-0808		PAN HEA (V96906) (PRE SB			3
	185	NAS1149EN832P		(V80205)	45-0351-33-SB05)		3
	187	MS35206-248		PAN HEA (V96906) (PRE SB			2
	189	MS35206-247		PAN HEA (V96906) (PRE SB (PRE SB			1
	190	MS21042L06		NUT STOP (V96906)			5

- ITEM NOT ILLUSTRATED

EFFECTIVITY—

ALL

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# COMPONENT MAINTENANCE MANUAL 45-0351

	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
1							
-	190A	NAS671-6		HEX (V8020	5) RSEDES ITEM: 190)		5
-	195	NAS620-6		(V8020	5) RSEDED BY ITEM: 195A)		6
	195A	MS35338-41		LOCK (V9690	6) RSEDES ITEM: 195)		5
	200	60-3307-5		SPACER			1
	205	46-2852-1		TRANS	SFORMER MOUNTING B 45-0351-33-SB05)		1
	210	MS24693S25		SCREW FLAT H (V9690	6) B 45-0351-33-SB05)		3
	215	46-2906-1		WIRING (ESDS) (PRE S (SUPE)			1
	215A	46-3546-1		WIRING (ESDS) (PRE S (POST (SUPE) (SUPE) (SUPE)			1

- ITEM NOT ILLUSTRATED

## COMPONENT MAINTENANCE MANUAL 45-0351

	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
1	215B	46-3546-5		WIRIN ASSEM (ESDS (REPL (SUPE (ALTN (PRE S			1
	215C	46-3546-3		WIRIN (ESDS (REPL (SUPE (ALTN (POST	S		1
	215D	46-3546-7		WIRIN (ESDS (REPL (ALTN (POST	S		1
-	215E	46-3546-9		WIRIN ASSEM (ESDS (REPL (ALTN (POST			1
	220	MS27039-0808		•			2
	225	NAS1149EN832P		WASHER (V8020	 95)		2

- ITEM NOT ILLUSTRATED

ALL

EFFECTIVITY

# COMPONENT MAINTENANCE MANUAL 45-0351

	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
1							
	230	MS35206-208		MACHIN (V96906)			2
-	230A	NAS1352N02-8P		PAN HEA (V80205)			2
	235	NAS1149EN232P		WASHER (V80205)	)		2
	240	MS27039-0808		PAN HEA (V96906)			2
-	240A	MS35206-242		(V96906)	) B 45-0351-33-0007)		2
	245	NAS1149EN832P		(V80205)			2
	247	46-4071-1		GASKET	* В 45-0351-33-0007)		1
-	250	55-2356-1		DELETED			0
-	250A	55-2356-3		DELETED			0
-	255	55-2359-1		DELETED			0
-	260	46-2790-1		DELETED			0
-	265	46-2921-1		DELETED			0
-	270	BACC63BV12F12PN		DELETED			0
-	270A	55-2419-1		DELETED			0
-	275	LW158		DELETED			0
-	280	55-1156-3		DELETED			0
	285	MS51957-15		SCREW PAN HEA (V96906)			4

- ITEM NOT ILLUSTRATED

EFFECTIVITY—

## COMPONENT MAINTENANCE MANUAL 45-0351

	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
1							
	290	NAS620-4		WASHER FLAT (V80205)			4
	295	46-3011-1		ACTUATOR. SWITCH			1
-	300	46-2788-1		(REPLAC	SEMBLY ED BY ITEM: 300A) 45-0351-33-0007)		1
-	300A	46-2788-3		(REPLAC	SEMBLY ES ITEM: 300) B 45-0351-33-0007)		1
	305	NAS1352N08-10P		SCREW PAN HEA (V80205)			2
-	305A	NAS1352N08-12P		ALLEN H (V80205)			2
	310	NAS1149EN832P		(V80205)	*		2
	313	46-3677-1		END CAP MOTOR	3 45-0351-33-0006)		1
-	314	46-3536-7			3 45-0351-33-0006)		1
	314C	46-2966-1		PAD			1
-	314F	55-2353-1		THERMOS	ГАТ		1
	314J	MS171433		PIN SPRING (V96906)			1
	314M	46-2819-1		GEAR			1
	315	46-2789-1		FLANGE MOUNTII	 NG		1

- ITEM NOT ILLUSTRATED

EFFECTIVITY—

# COMPONENT MAINTENANCE MANUAL 45-0351

	FIG.	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
_	I I LIVI	NOMBER	NO.	1234307	NOMENCLATORE	CODE	A001
1							
	320	MS24693C26		SCREW (V9690	•		3
	325	NAS1611-028		O-RING PACKIN (V8020			1
-	325A	NAS1611-028A		PACKIN (V8020)			1
-	327	46-2787-1		COVER			1
	328	55-2357-1		MOTOR			1
	330	NAS1611-028		O-RING PACKIN (V8020			1
-	335	46-2774-1		CANOPY	SUBASSEMBLY		1
	340	AN4-16A		BOLT HEX HE (V8804			2
-	340A	AN4-17A		BOLT HEX HE (V8804 (SUPER	EAD		2
-	340B	AN4-16A		HEX HE (V8804 (SUPER			2
	345	46-2905-1			l		3

- ITEM NOT ILLUSTRATED

## COMPONENT MAINTENANCE MANUAL 45-0351

	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
_ 1							
•	347	A4401-1		LAMP HO	PN A-4401-1)		1
-	347A	A4401		LAMP HO (ORDER	DR DUSING PN A-4401) PB 00248)		1
	350	46-2776-1		MACHIN (NONPR	OCURABLE) SEDED BY ITEM: 350A)		1
-	350A	46-4121-1		MACHIN (NONPR	OCURABLE) SEDES ITEM: 350)		1
	351	NAS1130-06L10		SCREW	0.138 IN LG)		8
	352	NAS1130-08L10		SCREW	0.164 IN LG)		2
	353	46-2782-1		DELETED			0
	354	NAS1130-4FL15			X 0.375 IN LG)		2
	355	46-2836-1		SWITCH	SEDED BY ITEM: 355A)		1
-	355A	46-3542-1		SWITCH (PRE SB	45-0351-33-0007) SEDES ITEM: 355)		1

- ITEM NOT ILLUSTRATED

# COMPONENT MAINTENANCE MANUAL 45-0351

_	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
1	355B	46-3549-1		ACTUA	TOR SB 45-0351-33-0007)		1
	360	MS21042L04		(ATTAC	HING PARTS) OCKING,HEXAGON 10)		1
	365	46-2835-1		SCREW ADJUS	, 		1
-	365A	46-3569-1		SCREW			1
	370	NAS620-5		FLAT (V8020	,		1
	375	46-2834-1		BRACKET	* TOR RSEDED BY ITEM: 375A)		1
-	375A	46-3544-1		ACTUA	TOR RSEDES ITEM: 375)		1
	380	MS35206-227		SCREW MACHII (V96900	HING PARTS)  NE 6) *		2
	385	46-3010-1		NUT	TOR ADJUSTMENT		1
	390	NAS1352N08-10P		SCREW PAN HE (V80205			1
	395	NAS620-8		WASHER (V8020	5)		1

- ITEM NOT ILLUSTRATED

ALL

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# COMPONENT MAINTENANCE MANUAL 45-0351

	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
1							
	400	46-2885-1		(ESDS) (SEE IF	( ASSEMBLY ) PL FIG 2 FOR DETAILS) CHING PARTS)		1
	405	12705-4C6C		BOLT SHOUL (V5687 (ORDE	DER		2
-	405A	SC4728		(OPT T	TO ITEM 405) B 45-0351-33-SB01)		2
	410	NAS1352N3-12P		ALLEN (V8020			2
	415	MS35650-3255T		NUT (V8134	9)		1
	420	NAS1149D0463J		(V8020	5) RSEDED BY ITEM: 420A)		1
-	420A	NAS1149D0432J		(V8020	5) RSEDES ITEM: 420)		1
	425	NAS1249-4-12		COUN <sup>-</sup> (V8020 (SUPE	TERSUNK HEAD 5) RSEDED BY ITEM: 425A) PB 00020)		1
-	425A	NAS1219-4-12		COUN <sup>-</sup> (V8020 (SUPE	TERSUNK HEAD 5) RSEDES ITEM: 425) SPB 00020)		1
-	430	46-2909-1		BASEPLA	TE ASSEMBLY	Α	1
-	435	46-2909-2		BASEPLA <sup>-</sup> RH	TE ASSEMBLY	В	1

- ITEM NOT ILLUSTRATED

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# COMPONENT MAINTENANCE MANUAL 45-0351

	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
1							
•	440	MS21209C0820P		INSERT SCREW (V81349)	ΓHREAD		4
	445	MS21209C615P		SCREW (V96906)	THREAD EDED BY ITEM: 445A)		5
-	445A	MS21209C0615P		INSERT SCREW (0.138-32 (V96906)			5
	450	MS21209C1-15P		INSERT SCREW (V96906)	 ΓHREAD		5
	455	46-2909-3		MACHINE	CURABLE)	Α	1
-	460	46-2909-4		MACHINE	OCURABLE)	В	1
	465	46-2826-1		DELETED			0
-	470	45-0405-1		MODIFIC (USE THI	S MODIFICATION KIT TO M THE SB 45-0351-33-SB03		1
-	475	46-3421-1		RETAINER	ASSEMBLY		1
-	480	46-3536-1		LABEL			1
-	485	TE324		DELETED			0
-	485A	34130		GUIDE (V00779)	324 V72914)		1

- ITEM NOT ILLUSTRATED

EFFECTIVITY—

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## COMPONENT MAINTENANCE MANUAL 45-0351

	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
1							
-	490	45-0405-3		MODIFIC (USE TH	HIS MODIFICATION KIT TO RM THE SB 45-0351-33-SB03		1
-	495	25-1835-23		LENS CLEAR			1
-	500	46-2766-1		LANYARD	ASSEMBLY		1
-	505	46-3379-1		BRACKET.			1
-	510	55-2504-1		GASKET			1
-	515	55-2505-1		GASKET LAMP			1
-	520	MS16535-112		RIVET (V81349	)		2
-	525	46-3536-1		LABEL			1
-	530	TE324		DELETED			0
-	530A	34130		GUIDE (V00779	) E324 V72914)		1
-	535	45-0412-1		.DELETED			0
-	540	46-3546-1		DELETED			0
-	545	NAS1352N3-12P		DELETED			0
-	550	MS35338-41		DELETED			0
-	555	NAS671-6		DELETED			0
-	560	60-3307-5		DELETED			0
-	565	TL090		DELETED			0
-	570	MS35206-242		DELETED			0
-	575	NAS1149EN832P		DELETED			0
-	580	MS27039-0808		DELETED			0
-	585	MS21042L08		DELETED			0
-	590	NAS620-4		DELETED			0

- ITEM NOT ILLUSTRATED

EFFECTIVITY—

# COMPONENT MAINTENANCE MANUAL 45-0351

	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
1							
-	595	MS51957-15		DELETED			0
-	600	NAS1149EN632P		DELETED			0
-	605	MS35206-228		DELETED			0
-	610	46-3549-1		DELETED			0
-	615	46-3544-1		DELETED			0
-	620	46-3569-1		DELETED			0
-	625	46-3536-3		DELETED			0
-	630	45-0421-1		.DELETED.			0
-	635	55-2575-1		DELETED			0
-	640	46-3716-1		DELETED			0
-	645	MS35206-247		DELETED			0
-	650	MS35206-248		DELETED			0
-	900	MK45-0351-0007		MODIF (USE T	ICATION HIS MODIFICATION KIT TO ORM THE SB 45-0351-33-0007 ADE.)		1
-	905	46-3145-1			S WIRING		1
-	910	46-3546-5		WIRING ASSEM (ESDS)			1
-	915	46-4071-1		GASKET			1
-	920	55-2575-3		TRANSFO	RMER		1
-	925	46-3549-1		SWITCH ACTUA	.TOR		1
-	930	45-0351L1			FICATION		1
-	935	MS35206-247		SCREW PAN HI (V9690	<del></del>		1

- ITEM NOT ILLUSTRATED

EFFECTIVITY—

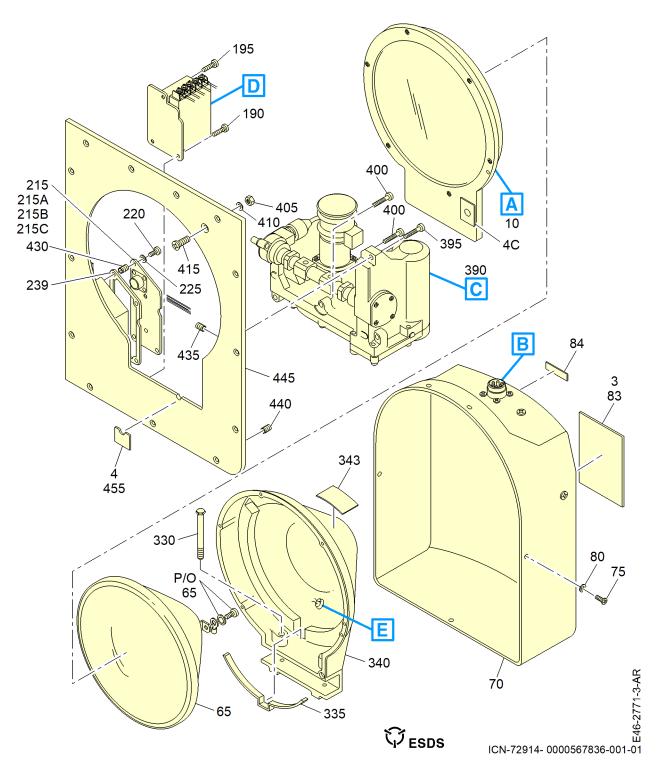
## COMPONENT MAINTENANCE MANUAL 45-0351

	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
1							
-	940	MS35206-248		SCREW PAN HEAI (V96906)	 D		2
-	945	46-3544-1		BRACKET ACTUATO			1
-	950	46-3569-1		SCREW ADJUSTM			1

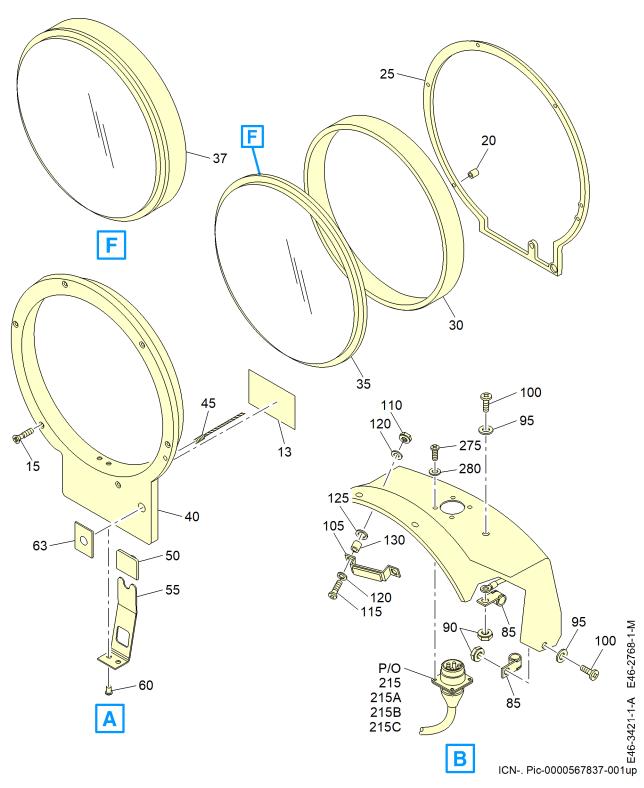
- ITEM NOT ILLUSTRATED

COMPONENT MAINTENANCE MANUAL 45-0351

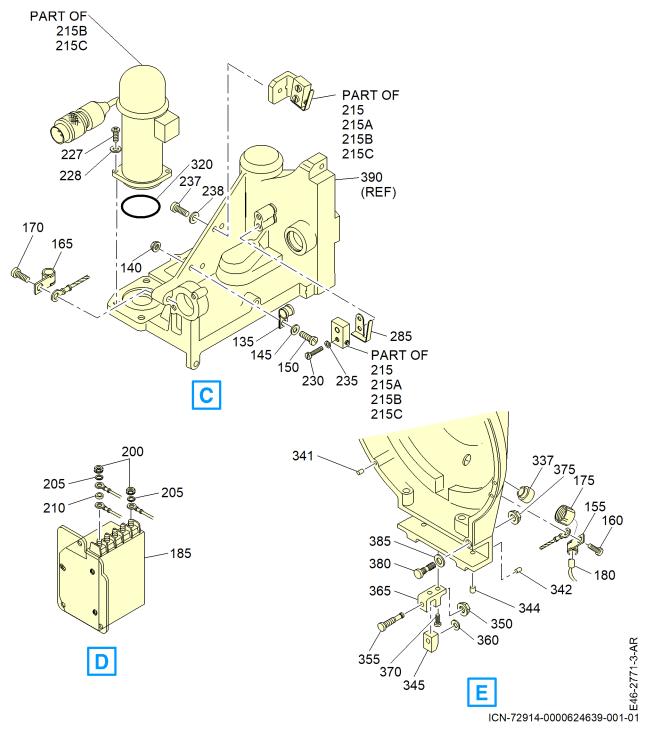
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IPL Figure 1A. (Sheet 1 of 3) Retractable Landing Light (45-0351-3 thru -6)



IPL Figure 1A. (Sheet 2 of 3) Retractable Landing Light (45-0351-3 thru -6)



IPL Figure 1A. (Sheet 3 of 3) Retractable Landing Light (45-0351-3 thru -6)

# COMPONENT MAINTENANCE MANUAL 45-0351

_	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
1/	Δ						
-	1	45-0351-3		LIGHTRETRACTABLE LANDING, LH (ESDS) (SCD S283A321-3)		Α	RF
-	1A	45-0351-4		RETRACT (ESDS) (SCD S28	В	RF	
-	1B	45-0351-5		LIGHTRETRACTABLE LANDING, LH (ESDS) (SCD S283A321-5)			RF
-	1C	45-0351-6			ГABLE LANDING, RH 13A321-6)	D	RF
	3	45-0351L1		IDENTIFIC	CATION 3 45-0351-33-0007)		1
	4	46-2826-1		INSTRUC	CURABLE)		1
	4C	46-2826-1		INSTRUC (NONPRO	OCURABLE) ED BY ITEM: 4D)		1
-	4D	46-2826-3		INSTRUC (NONPRO	OCURABLE) ES ITEM: 4C)		1
-	5	46-3547-1		LIGHTRETRACTABLE LANDING (ESDS) (GENERAL ARRANGEMENT)		Α	1

- ITEM NOT ILLUSTRATED

EFFECTIVITY

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## COMPONENT MAINTENANCE MANUAL 45-0351

FIG.	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
1A						
- 5A	46-3547-2		RETRA (ESDS)	CTABLE LANDING  RAL ARRANGEMENT)	В	1
- 5B	46-3547-3		LIGHTRETRA	CTABLE LANDING	С	1
- 5C	46-3547-4		RETRA (ESDS)	CTABLE LANDING RAL ARRANGEMENT)	D	1
10	46-3421-1			R ASSEMBLY B 45-0351-33-0008)	A,B	1
- 10A	72464198-1			ASSEMBLYSB 45-0351-33-0008)		1
13	72464198L1		INSTRU	JCTION SB 45-0351-33-0008)		1
15	46-3137-1		SCREW CAPTI\			6
20	60-4443-7		RETAINE SCREV	R <i>V</i>		6
25	46-2763-1		GASKET LENS			1
30	55-2505-1		LAMP (PRE S	B 45-0351-33-0008) ON ITEM: 10)	A,B	1
35	25-1835-23		CLEAR (PRE S	B 45-0351-33-0008) ON ITEM: 10)	A,B	1
37	72464199-1		CLEAR	SEMBLYSB 45-0351-33-0008)		1
40	46-2956-1		RETAINE LENS	R		1

- ITEM NOT ILLUSTRATED

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# COMPONENT MAINTENANCE MANUAL 45-0351

FIG.	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
1A						
45	46-2766-1		LANYARI	O ASSEMBLY		1
50	55-2504-1		GASKET.			1
55	46-3379-1		BRACKE	Т		1
60	MS16535-112			•		2
63	46-2826-3			* FICATION		1
- 64	34130		GUIDE (V0077			1
65	55-2500-1		INCAN (28 V, ( (PRE S	DESCENT 600 W) 6PB 00265) ACED BY ITEM 65A)	A,B	1
- 65A	Q4559X		INCAN (28 V, 6 (V0880 (CSD: 1 (POST (PRE S	•		1
- 65B	72552950-001		LAMP INCAN (28 V, 6 (V0880	DESCENT 600 W)	A-C	1
70	46-2770-1		COVER			1
75	MS35206-228		SCREW PAN H (V9690		A,B	5

- ITEM NOT ILLUSTRATED

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EFFECTIVITY

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# COMPONENT MAINTENANCE MANUAL 45-0351

	FIG. TEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
1A							
- 7	75A	MS51957-28		PAN HEA (V96906)	D EDES ITEM: 75)		5
8	30	NAS1149EN632P		(V80205)	EDED BY ITEM: 80A)	A,B	5
- 8	30A	NAS1149CN632R		FLAT (V80205) (SUPERS	EDES ITEM: 80)		5
8	33	46-3655-1					0
8	34	46-2781-1		DELETED			0
8	35	MS21919WCJ5		CLAMP HARNES (V81349) (PRE SPE			2
- 8	35A	AS21919WCJ05		(V81343) (POST SF	,		2
9	90	MS21042L08		•	NG PARTS)		2
9	95	NAS1149EN832P		WASHER (V80205)			2
1	100	MS27039-0808		PAN HEA (V96906)	D		2
1	105	46-3191-1		BUMPER AS	SEMBLY		1
1	110	MS21042L06		,	NG PARTS)		2

- ITEM NOT ILLUSTRATED

# COMPONENT MAINTENANCE MANUAL 45-0351

_	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
1/	4						
	115	MS35206-230		PAN HEA (V96906)	D EDED BY ITEM: 115A)	A,B	2
-	115A	MS35206-231		(V96906)	EDES ITEM: 115)		2
	120	NAS1149EN632P		(V80205)	EDED BY ITEM: 120A)	A,B	4
-	120A	NAS1149CN632R		FLAT (V80205)	EDES ITEM: 120)		4
	125	11308		SHIM			AR
	130	46-3189-1		STANDOFF.			2
	135	MS21919WCJ5					1
-	135A	AS21919WCJ05		CLAMP (V81343) (POST SF	PB 00243)		1
	140	MS21042L08		•	NG PARTS)		1
	145	NAS1149EN832P		WASHER (V80205)			1
	150	MS27039-0808		PAN HEA (V96906)	D		1
	155	MS21919WCJ5			3		1

- ITEM NOT ILLUSTRATED

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### COMPONENT MAINTENANCE MANUAL 45-0351

	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
_							
1 <i>i</i>	A 155A	AS21919WCJ05		(V8134	3) SPB 00243)		1
	160	MS27039-0806		•	,		1
	165	MS21919WCJ9		HARNE (V9690			1
-	165A	AS21919WCJ09		CLAMP LOOP (V8134	······································		1
	170	NAS1352N3-12P		(ATTAC SCREW ALLEN (V8020	CHING PARTS) HEAD 5)		1
	175	A1111-3			*  JIT		1
	180	46-3145-1			3 WIRING		1
	185	55-2575-1		(PRE S	RMER B 45-0351-33-0007) SB 45-0351-33-SB05) RSEDED BY ITEM: 185A)	A,B	1
-	185A	55-2575-3		(POST	RMER SB 45-0351-33-0007) RSEDES ITEM: 185)		1
	190	MS35206-248		PAN H (V9690 (POST			2

- ITEM NOT ILLUSTRATED

# COMPONENT MAINTENANCE MANUAL 45-0351

FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
1A						
195	MS35206-247		PAN H (V9690 (POST	6) SB 45-0351-33-0007) SB 45-0351-33-SB05)		1
200	NAS671-6		HEX (V8020	* 5) RSEDED BY ITEM: 200A)	A,B	5
- 200A	NAS671C6		PLAIN, (0.138- (V8020	,		5
205	MS35338-41		LOCK (V9690	6) RSEDED BY ITEM: 205A)	A,B	5
- 205A	MS35338-136		LOCK (V9690	6) RSEDES ITEM: 205)		5
210	60-3307-5		SPACER			1
215	46-3546-1		WIRING (ESDS) (PRE S) (SUPE) (SUPE)		A,B	1
215A	46-3546-5		WIRING ASSEN (ESDS (REPLA (SUPE (ALTN (PRE S (POST		A,B	1

- ITEM NOT ILLUSTRATED

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### COMPONENT MAINTENANCE MANUAL 45-0351

WIRING, WITH MOTOR ASSEMBLY (ESDS) (REPLACED BY ITEM: 215C) (SUPERSEDES ITEM: 215) (ALTN PART TO ITEM 215A) (POST SB 45-0351-33-0007) (SEE IPL FIG 3 FOR DETAILS)  215C 46-3546-7 HARNESS	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
WIRING, WITH MOTOR ASSEMBLY (ESDS) (REPLACED BY ITEM: 215C) (SUPERSEDES ITEM: 215) (ALTN PART TO ITEM 215A) (POST SB 45-0351-33-0007) (SEE IPL FIG 3 FOR DETAILS)  215C 46-3546-7 HARNESS	1A						
WIRING, WITH MOTOR ASSEMBLY (ESDS) (REPLACES ITEM: 215B) (ALTN PART TO ITEM 215D) (POST SB 45-0351-33-0009) (SEE IPL FIG 3 FOR DETAILS)  - 215D 46-3546-9 HARNESS	215B	46-3546-3		WIRIN (ESDS (REPL (SUPE (ALTN (POST	G, WITH MOTOR ASSEMBLY ) ACED BY ITEM: 215C) RSEDES ITEM: 215) PART TO ITEM 215A) SB 45-0351-33-0007)	A,B	1
WIRING, WITHOUT MOTOR ASSEMBLY (ESDS) (REPLACES ITEM: 215A) (ALTN PART TO ITEM 215C) (POST SB 45-0351-33-0009) (SEE IPL FIG 3 FOR DETAILS) (ATTACHING PARTS)  220 MS27039-0808SCREW	215C	46-3546-7		WIRIN (ESDS (REPL (ALTN (POST	G, WITH MOTOR ASSEMBLY ) ACES ITEM: 215B) PART TO ITEM 215D) SB 45-0351-33-0009)		1
220 MS27039-0808SCREW	- 215D	46-3546-9		WIRINASSEN (ESDS) (REPLA (ALTN) (POST) (SEE II	G, WITHOUT MOTOR  MBLY ) ACES ITEM: 215A) PART TO ITEM 215C) SB 45-0351-33-0009) PL FIG 3 FOR DETAILS)		1
(V80205)  227 NAS1352N02-8PSCREW	220	MS27039-0808		SCREW PAN H	EAD		2
PAN HEAD (V80205) (REPLACED BY ITEM: 227A)  - 227A NAS1352N08-12P SCREW	225	NAS1149EN832P	•				2
ALLEN HEAD (V80205) (REPLACES ITEM: 227)	227	NAS1352N02-8P		PAN H (V8020	EAD 95)		2
	- 227A	NAS1352N08-12F	0	ALLEN (V8020	HEAD (5)		2
228 NAS1149EN232PDELETED	228	NAS1149EN232P	•	DELETED			0
- 228A NAS1149EN832PWASHER	- 228A	NAS1149EN832P	•				2

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### COMPONENT MAINTENANCE MANUAL 45-0351

FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
1A						
230	NAS1352N02-8P		SCREW PAN HEA (V80205)	D		2
235	NAS1149EN232P		WASHER (V80205)			2
237	MS35206-242		SCREW (V96906)			2
238	NAS1149EN232P		(V80205)	B D200809000087)		2
- 238A	NAS1149EN832P		(V80205) (POST SF	PB D200809000087)		2
239	46-4071-1		GASKET	3 45-0351-33-0007)		1
- 240	SW515		DELETED			0
- 245	46-3469-1		DELETED			0
- 250	NAS1352N02-8P		DELETED			0
- 255	NAS1149EN232P		DELETED			0
- 260	11232-3		DELETED			0
- 265	55-2419-1		DELETED			0
- 270	55-1156-3		DELETED			0
275	MS51957-15		SCREW PAN HEA (V96906)	D		4
280	NAS620-4		WASHER FLAT (V80205)			4
285	46-3011-1		ACTUATOR SWITCH			1
- 290	46-2788-1		.DELETED			0
- 290A	46-2788-3		.DELETED			0
- 295	NAS1352N08-12P		DELETED			0
- ITEM NO	OT ILLUSTRATED					

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# COMPONENT MAINTENANCE MANUAL 45-0351

	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
1/	4						
-	300	NAS1149EN832P		DELETED.			0
-	303	46-3677-1		DELETED.			0
-	304	46-3536-7		DELETED.			0
-	305	46-2789-1		DELETED.			0
-	310	MS24693C26		DELETED.			0
-	315	NAS1611-028		DELETED.			0
-	315A	NAS1611-028A		DELETED.			0
	320	NAS1611-028		O-RING PACKIN (V8020			1
-	325	46-2774-1		CANOPY	SUBASSEMBLY		1
	330	AN4-16A		BOLT HEX HE (V88044		A,B	2
-	330A	AN4-17A		HEX HE (V88044 (SUPEF		A,B	2
-	330B	AN4-16A		HEX HE (V88044 (SUPER			2
	335	46-2905-1					3
	337	A4401-1		LAMP H (ORDEI	FOR IOUSING R PN A-4401-1) PB 00248)		1
-	337A	A4401		LAMP H (ORDEI	FOR IOUSING R PN A-4401) SPB 00248)		1

- ITEM NOT ILLUSTRATED

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# COMPONENT MAINTENANCE MANUAL 45-0351

FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
1A						
340	46-2776-1		MACHI (NONP (SUPE	NED ROCURABLE) RSEDED BY ITEM: 340A) R NHA)	A,B	1
- 340A	46-4121-1		MACHI (NONP (SUPE	NED ROCURABLE) RSEDES ITEM: 340) R NHA)		1
341	NAS1130-06L10		SCREV	V THREAD X 0.138 IN LG) 5)		8
342	NAS1130-08L10		SCREV	V THREAD X 0.164 IN LG) 5)		2
343	46-2782-1		DELETE	D		0
344	NAS1130-4FL15			8 X 0.375 IN LG) 5)		2
345	46-3549-1		SWITCH ACTUA	TOR		1
350	MS21042L04		NUT	,		1
355	46-3569-1			TMENT		1
360	NAS620-5		WASHER. FLAT (V8020	5)		1
365	46-3544-1		BRACKET	-		1

- ITEM NOT ILLUSTRATED

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### COMPONENT MAINTENANCE MANUAL 45-0351

FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
1A						
370	MS35206-227			6)		2
375	46-3010-1			*  .TOR ADJUSTMENT		1
380	NAS1352N08-10P		SCREW PAN H (V8020			1
385	NAS620-8		WASHER. (V8020	5)		1
390	46-2885-1		(ESDS	ASSEMBLY ) PL FIG 2 FOR DETAILS)		1
395	SC4728		•	CHING PARTS)		0
- 395A	12705-4C6C		(V5687 (CSD: 3	8) SC4728 V72914) R PN 12705-4C-6C)		2
400	NAS1352N3-12P		SCREW ALLEN (V8020			2
405	MS35650-3255T		NUT(V8134			1
410	NAS1149D0463J		(V8020	5) RSEDED BY ITEM: 410A)	A,B	1
- 410A	NAS1149D0432J		(V8020	5) RSEDES ITEM: 410)		1
415	NAS1249-4-12		COUN <sup>-</sup> (V8020 (SUPE	TERSUNK HEAD 5) RSEDED BY ITEM: 415A) PB 00020)	A,B	1

- ITEM NOT ILLUSTRATED

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# COMPONENT MAINTENANCE MANUAL 45-0351

	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
1/	4						
-	415A	NAS1219-4-12		COUNTER (V80205)	RSUNK HEAD EDES ITEM: 415) PB 00020)		1
-	420	46-2909-1		BASEPLATE LH	ASSEMBLY	A,C	1
-	425	46-2909-2		BASEPLATE RH	ASSEMBLY	B,D	1
	430	MS21209C0820P		INSERT SCREW T (V81349)	HREAD		4
	435	MS21209C615P		SCREW T (V96906)	HREAD EDED BY ITEM: 435A)	A,B	5
-	435A	MS21209C0615P		SCREW T (0.138-32 (V96906)	HREAD X 0.207 LG) EDES ITEM: 435)		5
	440	MS21209C1-15P		INSERT SCREW T (V96906)	HREAD		5
	445	46-2909-3		MACHINE	CURABLE)	A,C	1
-	450	46-2909-4		MACHINE	CURABLE)	B,D	1
	455	46-2826-1		DELETED			0
-	900	MK45-0351-0007		MODIFICA (USE THIS	S MODIFICATION KIT TO II THE SB 45-0351-33-0007		1

- ITEM NOT ILLUSTRATED

EFFECTIVITY—

# COMPONENT MAINTENANCE MANUAL 45-0351

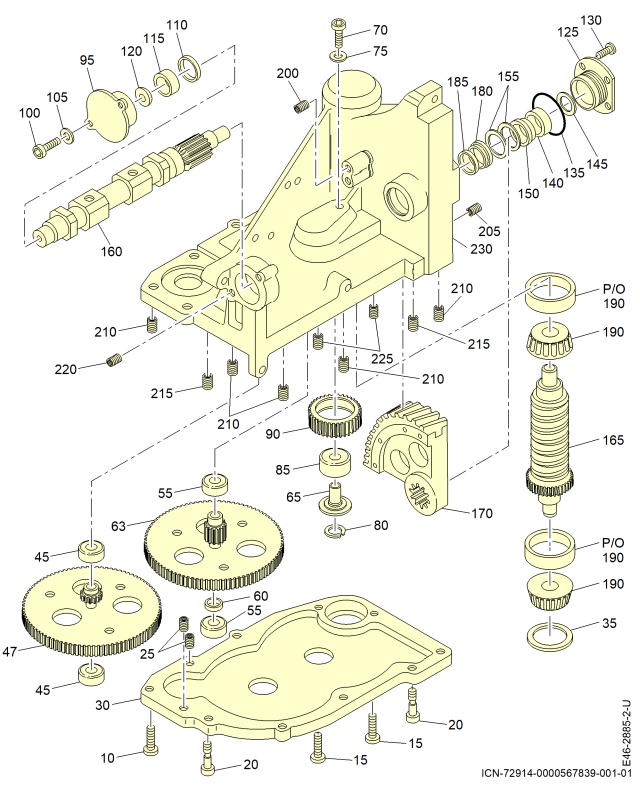
FIG.	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
1A						
- 905	46-3145-1			S WIRING		1
- 910	46-3546-5		WIRING ASSEN (ESDS			1
- 915	46-4071-1		GASKET			1
- 920	55-2575-3		TRANSFO	RMER		1
- 925	46-3549-1		SWITCH ACTUA	ATOR		1
- 930	45-0351L1			IFICATION		1
- 935	MS35206-247		SCREW PAN H (V9690			1
- 940	MS35206-248		SCREW PAN H (V9690			2
- 945	46-3544-1		BRACKET	Г ATOR		1
- 950	46-3569-1			TMENT		1

- ITEM NOT ILLUSTRATED

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### COMPONENT MAINTENANCE MANUAL 45-0351



IPL Figure 2. Gearbox Assembly

# COMPONENT MAINTENANCE MANUAL 45-0351

	FIG.	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
2							
-	1	46-2885-1		(ESDS) (SEE IPL	SSEMBLY FIG 1 FOR NHA) FIG 1A FOR NHA)		RF
-	5	46-2883-1			SEMBLY		1
	10	NAS1352N06-12P		•			5
	15	NAS1352N08-12P		.SCREW ALLEN H (V80205)			2
	20	46-2954-1		SHOULD			2
	25	MS21209C0820P		INSERT SCREW (V81349)			2
-	25A	MS21209C0815P		HELICAL (V96906)			2
	30	46-2883-3		MACHIN (NONPR	ED OCURABLE) NHA)		1
	35	46-2924-1		SET (WC (0.062 IN	DRM) CH THICK) SEDED BY ITEM: 35A)		1
-	35A	46-2856-1		SET (WC	 DRM) SEDES ITEM: 35)		1
-	40	46-2863-1		PRIMAR'	Y SEDED BY ITEM: 40A)		1

- ITEM NOT ILLUSTRATED

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# COMPONENT MAINTENANCE MANUAL 45-0351

	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
2							
-	40A	46-3152-1		PRIMAR'	MBLY Y SEDES ITEM: 40)		1
	45	46-2873-1		BEARING BALL			2
	47	46-2863-1		GEAR PRIMAR	Υ		1
-	50	46-2864-1		SECONE	DARY SEDED BY ITEM: 50A)		1
-	50A	46-3153-1		.GEAR ASSE	MBLY		1
	55	46-2873-1		BEARING BALL			2
	60	46-2857-1			G RETAINER		1
	63	46-2864-1		GEARSECOND	 DARY		1
-	63A	46-3153-1		SECONE (SUPERS	DARY SEDES ITEM: 63) SEDED BY ITEM: 63B)		1
-	63B	46-2864-1		SECONE	 DARY SEDES ITEM: 63A)		1
	65	46-2858-1		.SHAFTIDLER			1
	70	NAS1351N3H10P		•			1
	75	NAS1149E0332P		.WASHER (V80205)			1
	80	RRN93		RETAINI (V80756)			1

- ITEM NOT ILLUSTRATED

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	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
2	80A	RR2402		RETAIN (V80756 (OPT TO	) DITEM 80)		1
	85	46-2867-1			*		1
	90	46-2865-1		.GEAR			1
	95	46-2875-1		RETAINER.			1
	100	NAS1351N3-8P		•			2
	105	NAS1149E0332P		(V80205	•		2
	110	Q4115-559N			* )		1
-	110A	0R190		QUAD (OPT TO	D ITEM 110) R PN OR190)		1
	115	B85		(V21335	) R PN B-85)		1
-	115A	BE274			) ITEM 115)		1
	120	46-2874-1		.WASHER	г		1
	125	46-2859-1		RETAINER.			1
	130	NAS600-4P		SCREW (V80205	HING PARTS) ) *		4

- ITEM NOT ILLUSTRATED

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### COMPONENT MAINTENANCE MANUAL 45-0351

_	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
2							
_	135	NAS1611-020		O-RING PACKING (V80205)			1
	140	B85		.BEARING (V21335) (ORDER F	PN B-85)		1
-	140A	BE274		.BEARING (OPT TO I	TEM 140)		1
	145	46-2926-1		.WASHER			1
	150	46-2919-1		.BEARING			1
	155	46-2920-1		SET (0.048 INC	CH THICK) EDED BY ITEM: 155A)		1
-	155A	46-2855-1		SET	EDES ITEM: 155)		1
	160	46-2876-1		.SHAFTMACHINE	D		1
	165	46-2866-1		.GEAR WORM			1
	170	46-2862-1		.GEAR ASSEM SECTOR	1BLY		1
-	175	46-2920-1		.DELETED			0
-	175A	46-2855-1		.DELETED			0
	180	46-2919-1		.BEARING			1
	185	Q4117-559N		RING QUAD (V07322)			1
-	185A	0R192		QUAD (OPT TO I	TEM 185) PN OR192)		1

- ITEM NOT ILLUSTRATED

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# COMPONENT MAINTENANCE MANUAL 45-0351

	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
2							
	190	A2037A2126		BALL (V60038)	PN A2037/A2126)		2
-	190A	BE600		BEARING BALL (OPT TO I	TEM 190)		2
-	195	46-2881-1		.HOUSING AS	SEMBLY		1
	200	MS21209C0215P		INSERT SCREW T (V81349)	::::::::::::::::::::::::::::::::::::::		2
	205	MS21209C0415P		SCREW T (0.112-40 (V96906)			4
-	205A	MS21209C0410P		SCREW T (V96906)	::::::::::::::::::::::::::::::::::::::		4
	210	MS21209C0615P		SCREW T	HREAD X 0.207 LG)		5
	215	MS21209C0815P		INSERT HELICAL (V96906)			2
	220	MS21209F1-15P		INSERT SCREW T (V96906)	HREAD		2
	225	MS21209C0820P		INSERT SCREW T (V81349)	HREAD		2
	230	46-2881-3		MACHINE	CURABLE)		1

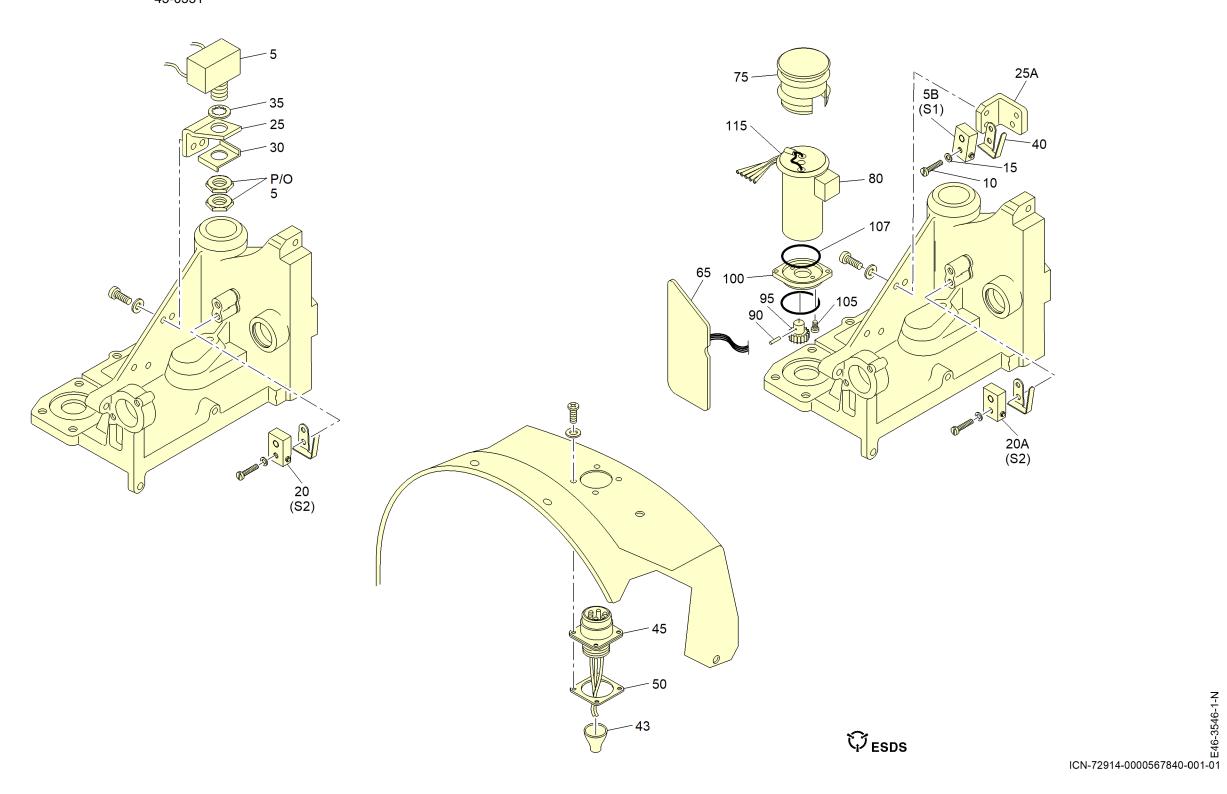
- ITEM NOT ILLUSTRATED

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IPL Figure 3. Wiring Harness

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# COMPONENT MAINTENANCE MANUAL 45-0351

	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
3	1	46-2906-1		WIRING (ESDS) (PRE SB 4 (SUPERS	45-0351-33-SB04) EDED BY ITEM: 1A) FIG 1 FOR NHA)	Α	RF
-	1A	46-3546-1		WIRING (ESDS) (PRE SB 4 (POST SB (SUPERS) (SUPERS) (SEE IPL I	45-0351-33-0007) 5 45-0351-33-SB04) EDED BY ITEM: 1B) EDED BY ITEM: 1C) FIG 1 FOR NHA) FIG 1A FOR NHA)	В	RF
-	1B	46-3546-5		WIRING, NASSEMBL (ESDS) (REPLACI (SUPERS (ALTN PA (THE DIFF 46-3546-1 CIRCUIT I LISTED) A LACING C (PRE SB 4 (POST SB (SEE IPL I	ED BY ITEM: 1E) EDES ITEM: 1A) RT TO ITEM 1C) FERENCES BETWEEN AND 46-3546-5 ARE THE MODULE ASSEMBLY (NOT	C	RF
-	1C	46-3546-3		WIRING, N (ESDS) (REPLACI (SUPERS) (ALTN PA (POST SB) (SEE IPL I	WITH MOTOR ASSEMBLY ED BY ITEM: 1D) EDES ITEM: 1A) RT TO ITEM 1B) 445-0351-33-0007) FIG 1 FOR NHA) FIG 1A FOR NHA)	D	RF

- ITEM NOT ILLUSTRATED

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# COMPONENT MAINTENANCE MANUAL 45-0351

	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
3	40	40.0540.7		LIADNEGO		_	
-	1D	46-3546-7		WIRING (ESDS) (REPL/ (ALTN) (POST) (SEE IF	G, WITH MOTOR ASSEMBLY ) ACES ITEM: 1C) PART TO ITEM 1E) SB 45-0351-33-0009) PL FIG 1 FOR NHA) PL FIG 1A FOR NHA)	E	RF
-	1E	46-3546-9		WIRING ASSEN (ESDS (REPL/ (ALTN (POST (SEE IF		F	RF
	5	55-2356-1		(PRE S	 SB 45-0351-33-SB04) RSEDED BY ITEM: 5A)	Α	1
-	5A	55-2356-3		(PRE S		Α	1
	5B	SW515			SB 45-0351-33-SB04)	B,C,D, E,F	1
-	5C	1SE2		(V9192 (OPT T (CSD: S (POST S1	O ITEM 5B) SW515 V72914) SB 45-0351-33-SB04)	B,C,D, E,F	1
	10	NAS1352N02-8P		SCREW PAN H (V8020		B,C,D, E,F	2

- ITEM NOT ILLUSTRATED

# COMPONENT MAINTENANCE MANUAL 45-0351

_	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
3							
	15	NAS1149EN232P		(V80205)	45-0351-33-SB04)	B,C,D, E,F	2
	20	55-2359-1		.SWITCH	5-0351-33-SB04)	Α	1
	20A	SW515			45-0351-33-SB04)	B,C,D, E,F	1
-	20B	1SE2		(V91929) (OPT TO I (CSD: SW	TEM 20A) 515 V72914) 45-0351-33-SB04)	B,C,D, E,F	1
	25	46-2790-1			SEMBLY5-0351-33-SB04)	Α	1
	25A	46-3469-1		SWITCH N	 1OUNTING 45-0351-33-SB04)	B,C,D, E,F	1
	30	46-2921-1		LOCKING	5-0351-33-SB04)	Α	1
	35	LW158		LOCK	5-0351-33-SB04)	Α	1
	40	11232-3		(POST SB	45-0351-33-SB04) EDED BY ITEM: 40A)	В,С	1
-	40A	46-3864-1		SWITCH (POST SB	45-0351-33-SB04) EDES ITEM: 40)	B,C,D, E,F	1
	43	M83723-16S12A		SHRINK (V81349)	N M83723/16S12A)		1

- ITEM NOT ILLUSTRATED

EFFECTIVITY—

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### COMPONENT MAINTENANCE MANUAL 45-0351

	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
3							
	45	BACC63BV12F12PN		(V5X895	PR) ) SEDED BY ITEM: 45A)	A,B,C,D	1
-	45A	55-2419-1		(PRE SB	PR 45-0351-33-0009) SEDES ITEM: 45)	A,B,C,D	1
-	45B	BACC63BV12H12PN		(V81205 (CSD: CI	PR ) N07861 V72914) B 45-0351-33-0009)		1
	50	55-1156-3		.RING NUT			1
-	55	M81824-1-1		(V81349 (CSD: M		B,C,F	4
-	60	M81824-1-1		(V81349 (CSD: M	 ) 81824/1-1 V81349) PN M81824/1-1)	D,E	9
	65	46-3548-1		CIRCUIT	OCURABLE)	В	1
-	65A	46-3548-3		CIRCUIT	OCURABLE)	C,D,E,F	1
-	69	46-2788-1		(REPLAC	SEMBLY CED BY ITEM: 70) 45-0351-33-0007)	D,E	1
-	70	46-2788-3		(REPLAC	SEMBLY CES ITEM: 69) B 45-0351-33-0007)	D,E	1
	75	46-3677-1		MOTOR	B 45-0351-33-0006)	D,E	1

- ITEM NOT ILLUSTRATED

ALL

EFFECTIVITY

33-42-07

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	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
3							
-	77	46-3536-7			B 45-0351-33-0006)	D,E	1
	80	46-2966-1		PAD		D,E	1
-	85	55-2353-1		THERMOST	AT	D,E	1
	90	MS171433		PIN SPRING (V96906)		D,E	1
	95	46-2819-1		GEARPINION		D,E	1
	100	46-2789-1		FLANGE MOUNTII	 NG	D,E	1
	105	MS24693C26		SCREW(V96906)		D,E	3
	107	NAS1611-028		O-RING PACKING (V80205)		D,E	1
-	107A	NAS1611-028A		PACKINO (V80205)		D,E	1
-	110	46-2787-1		COVER		D,E	1
	115	55-2357-1		MOTOR		D,E	1

- ITEM NOT ILLUSTRATED

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Illustration deleted.

ICN-HNYWL-0000182424-001-99

IPL Figure 4. Deleted

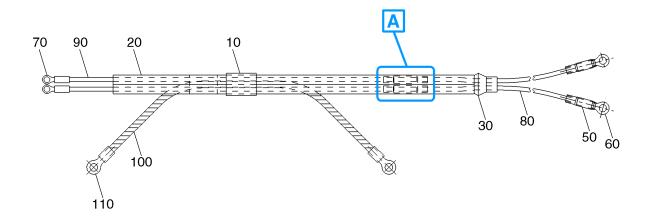
EFFECTIVITY ALL

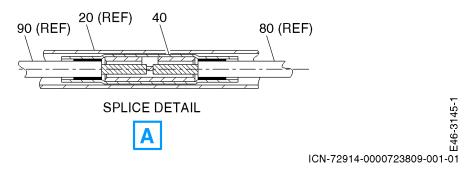
# COMPONENT MAINTENANCE MANUAL 45-0351

	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
4							
_	1	46-3548-1		DELETED			0
-	1A	46-3548-3		DELETED			0
-	5	46-2778-5		.DELETED			0
-	5A	46-2778-9		.DELETED			0
-	10	46-3277-1		.DELETED			0
-	15	MS20470A3-5		.DELETED			0
-	20	MS35489-144X		.DELETED			0
-	25	MS35489-144X		.DELETED			0
-	30	4029		.DELETED			0
-	35	MS20426A3-4		.DELETED			0
-	40	46-2925-1		.DELETED			0
-	45	46-2850-3		.DELETED			0
-	45A	46-2850-5		.DELETED			0
-	50	55-2436-1		DELETED			0
-	55	RLR20C4703GR		DELETED			0
-	60	55-2445-1		DELETED			0
-	65	CK63AY103ME		DELETED			0
-	70	55-2352-1		DELETED			0
-	75	55-2354-1		DELETED			0
-	80	46-2849-1		DELETED			0

- ITEM NOT ILLUSTRATED

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**IPL Figure 5. Wiring Harness** 

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	FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	1234567	NOMENCLATURE	EFFECT (USE) CODE	UNITS PER ASSY
_ 5							
-	1	46-3145-1		WIRIN	G PL FIG 1 FOR NHA)		RF
	10	TU485		.TUBING 0.75 IN	ICH		AR
	20	TU4499		.TUBING 9.00 IN	ICH		AR
	30	46-2904-1		.SEAL	UIT		1
	40	M818241-3		BUTT	ER PN M81824/1-3)		2
	50	TU420		.TUBING 0.75 IN	ICH		AR
	60	TE210		.TERMINAI NO. 8	STUD		2
	70	TE1542		.TERMINAI	STUD		2
	80	55-2418-1		.WIRE 8.00 IN	ICH		AR
	90	WI106		.WIRE 8.75 IN	ICH		AR
	100	WI940		.CABLE 8.50 IN	ICH		AR
	110	TE222		.TERMINAI			2

- ITEM NOT ILLUSTRATED

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