TITLE
HIGH INTENSITY DISCHARGE (HID) LANDING AND TAXI LIGHT INSTALLATION

EFFECTIVITY

<table>
<thead>
<tr>
<th>Model</th>
<th>Serial Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>172R</td>
<td>17280001 thru 17281233</td>
</tr>
<tr>
<td>172S</td>
<td>172S8001 thru 172S9770</td>
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DESCRIPTION
To install HID landing and taxi lights.

APPROVAL
FAA approval has been obtained on technical data in this publication that affects airplane type design.

REFERENCE
SB05-33-01

CHANGE IN WEIGHT AND BALANCE

<table>
<thead>
<tr>
<th>MODEL</th>
<th>172R, 172S</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEIGHT CHANGE</td>
<td>2.8 pounds</td>
</tr>
<tr>
<td>ARM</td>
<td>35.00 inches</td>
</tr>
<tr>
<td>MOMENT</td>
<td>98.0 inch-pounds</td>
</tr>
<tr>
<td>MOMENT/1000</td>
<td>0.098</td>
</tr>
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</table>
MATERIAL INFORMATION

The following parts cover installation for one airplane.

<table>
<thead>
<tr>
<th>NEW P/N</th>
<th>QUANTITY</th>
<th>DESCRIPTION</th>
<th>OLD P/N</th>
<th>DISPOSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>MK172-33-01</td>
<td>1</td>
<td>Kit, Consisting of the following parts:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CM3558-10-12G1</td>
<td>6</td>
<td>Screw</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MS3367-1-9</td>
<td>30</td>
<td>Tie Strap</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MS35207-273</td>
<td>5</td>
<td>Screw</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MS35207-274</td>
<td>1</td>
<td>Screw</td>
<td></td>
<td></td>
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<tr>
<td>NAS43DD3-101FC</td>
<td>1</td>
<td>Spacer</td>
<td>NAS43DD3-14FC</td>
<td></td>
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<tr>
<td>NAS43DD3-109FC</td>
<td>1</td>
<td>Spacer</td>
<td>NAS43DD3-24FC</td>
<td></td>
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<tr>
<td>NAS43DD3-113FC</td>
<td>1</td>
<td>Spacer</td>
<td>NAS43DD3-36FC</td>
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<td>NAS43DD3-121FC</td>
<td>2</td>
<td>Spacer</td>
<td>NAS43DD3-44FC</td>
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<td>NAS43DD3-144FC</td>
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<td>Spacer</td>
<td>NAS43DD3-48FC</td>
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<tr>
<td>S2906-4-1</td>
<td>8</td>
<td>Rivet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0163-00179</td>
<td>6</td>
<td>Insulator</td>
<td></td>
<td></td>
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<tr>
<td>0570550-6</td>
<td>1</td>
<td>Landing Lights Wire Bundle Assembly - LH Wing</td>
<td>0570550-4 or 0570550-2</td>
<td></td>
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<tr>
<td>0597006-2</td>
<td>2</td>
<td>Plate Assembly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>81007-1</td>
<td>2</td>
<td>Ballast Kit (Ballast and Cable)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>81010-1</td>
<td>1</td>
<td>Light - Landing, HID 35W</td>
<td>4594 or 4596 or 34-0750692-00</td>
<td>Discard</td>
</tr>
<tr>
<td>81011-1</td>
<td>1</td>
<td>Light - Taxi, HID 35W</td>
<td>4626 or 34-0750707-00 or 4587</td>
<td>Discard</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Instructions</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>NAME</th>
<th>MANUFACTURER</th>
<th>USE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alodine 1132</td>
<td>Touch-N-Prep</td>
<td>Cessna Aircraft Company</td>
<td>To apply to bare metal.</td>
</tr>
<tr>
<td>Black Paint</td>
<td></td>
<td>Commercially available</td>
<td>To paint the internal wing leading edge structure.</td>
</tr>
<tr>
<td>K009012</td>
<td>Corrosion Resistant Primer</td>
<td>Cessna Aircraft Company</td>
<td>To apply to bare metal.</td>
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</table>
ACCOMPLISHMENT INSTRUCTIONS

Instructions

1. Prepare the airplane for maintenance.
   A. Make sure that all switches are in the OFF position.
   B. Disconnect electrical power from the airplane. (Refer to the Model 172 Series 1996 and On Maintenance Manual, Chapter 24.)
      (1) Disconnect the airplane battery.
      (2) Disconnect external electrical power.
   C. Attach maintenance warning tags to the battery and external power receptacle that have "DO NOT CONNECT ELECTRICAL POWER - MAINTENANCE IN PROGRESS" written on them.

2. Remove and discard the incandescent landing and taxi lights and hardware that attaches them. Keep the lens. (Refer to the Model 172 Series 1996 and On Maintenance Manual, Chapter 33, Landing/Taxi Lights - Maintenance Practices.)

3. Install HID taxi and landing lights.
   A. Paint all internal leading edge structure black between WS 100.00 and WS 118.00.
   B. Install the inboard ballast kit.
      (1) (Refer to Figure 1, View B-B and C-C.) Temporarily install the 0597006-2 Plate Assembly against the 0523030 Rib and mark the locations of the nutplates.
      (2) Use the nutplate location marks made in the step above and remove the material in the 0523030 Rib to give clearance for the nutplates when you install the 0597006-2 Plate Assembly.
      (3) Apply Alodine 1132 and corrosion resistant primer to the bare metal edges.
      (4) (Refer to Figure 1, View B-B and C-C.) Make marks for hole locations as shown.
      (5) Drill four Number 40 (0.098-inch diameter) pilot holes in the 0597006-2 Plate Assembly as shown.
      (6) (Refer to Figure 1, View B-B.) Put the 0597006-2 Plate Assembly against the 0523030 Rib and match drill the four Number 40 (0.098-inch diameter) holes drilled in the step above from the 0597006-2 Plate Assembly into the 0523030 Rib.
      (7) Drill the holes to Number 30 (0.128-inch diameter) through the 0597006-2 Plate Assembly and the 0523030 Rib. Deburr the holes.
      (8) Install the 0597006-2 Plate Assembly with four S2906-4-1 Rivets.
      (9) (Refer to Figure 1, View C-C.) Install one 81007-1 Ballast Kit with three each CM3558-10-12G1 Screws and 0163-00179 Insulators with the insulators between the ballast and the 0597006-2 Plate Assembly.
      (10) Check for isolation of greater than 100 Kohms with an ohm meter between the 81007-1 Ballast Kit and the wing rib.

   NOTE: It is important that the 81007-1 Ballast Kit be electrically isolated from the structure of the airplane for correct magnetometer or flux detector operation.

   C. Install the outboard ballast kit.
      (1) (Refer to Figure 1, View D-D and View E-E.) Temporarily install the 0597006-2 Plate Assembly against the 0523030 Rib and mark the locations of the nutplates.
      (2) Use the nutplate location marks made in the step above and remove the material in the 0523030 Rib to give clearance for the nutplates when you install the 0597006-2 Plate Assembly.
      (3) Remove material from lightening hole flange so the 0597006-2 Plate Assembly will fit flush on rib.
(4) Apply Alodine 1132 and corrosion resistant primer to the bare metal edges.

(5) (Refer to Figure 1, View D-D and E-E.) Make marks for hole locations as shown.

(6) Drill four Number 40 (0.098-inch diameter) pilot holes in the 0597006-2 Plate Assembly.

(7) (Refer to Figure 1, View D-D.) Put the 0597006-2 Plate Assembly against the 0523030 Rib and match drill the four Number 40 (0.098-inch diameter) holes drilled in the step above from the 0597006-2 Plate Assembly into the 0523030 Rib.

(8) Drill the holes to Number 30 (0.128-inch diameter) through the 0597006-2 Plate Assembly and the 0523030 Rib. Deburr the holes.

(9) Install the 0597006-2 Plate Assembly with four S2906-4-1 Rivets.

(10) (Refer to Figure 1, View E-E.) Install one 81007-1 Ballast Kit with three each CM3558-10-12G1 Screws and 0163-00179 Insulators with the insulators between the ballast and the 0597006-2 Plate Assembly.

(11) Check for isolation of greater than 100 Kohms with an ohm meter between the 81007-1 Ballast Kit and the wing rib.

NOTE: It is important that the 81007-1 Ballast Kit be electrically isolated from the structure of the airplane for correct magnetometer or flux detector operation.

D. (Refer to Figure 2.) Do a modification to the electrical wiring with one 0570550-6 Landing Lights Wire Bundle Assembly - LH Wing.

(1) Remove the left wing access panels 510AB, 510 BB, and 510CB and the left wing to fuselage close-out panels as necessary, to get access to the landing/taxi light wiring. (Refer to the Model 172 Series 1996 and On Maintenance Manual, Access/Inspection Plates - Description and Operation.)

(2) Remove the left forward door post interior trim and the left side overhead trim to get access to the landing/taxi light wiring connector and ground stud. (Refer to the Model 172 Series 1996 and On Maintenance Manual, Interior Upholstery - Maintenance Practices.)

(3) (Refer to Figure 2.) Remove the existing wiring for the landing/taxi light along the leading edge of the left wing.

(4) Route the new wires.

(a) Route new wires in the existing leading edge bundle. Use MS3367-1-9 Tie Straps as necessary.

(b) Cut the wires to length as necessary and terminate them with the pins and terminal included with the cable assembly.

(c) Route the ground wire GL010-APL011(14) with the LH fuel sender wires. Terminate the taxi light ground terminal at ground stud GL010, which is located above the fuel sender wires, behind the wing-to-fuselage close-out access panel on the wing side.

(d) Connect the wires at the PL010, PL002, and PL011 connectors.

(5) Install the left forward door post interior trim and the left side overhead trim. (Refer to the Model 172 Series 1996 and On Maintenance Manual, Interior Upholstery - Maintenance Practices.)

(6) Install any access plates that were removed. (Refer to the Model 172 Series 1996 and On Maintenance Manual, Access/Inspection Plates - Description and Operation.)

E. (Refer to Figure 1, View F-F.) Install the 81010-1 Light - Landing, HID 35W and the 81011-1 Light - Taxi, HID 35W with new screws and spacers as shown.

NOTE: The spacer configuration is important for light dimming characteristics. (Refer to the Model 172 Series 1996 and On Maintenance Manual, Chapter 33 Landing/Taxi Lights - Maintenance Practices.)

4. Remove the maintenance warning tags and connect the airplane battery.
5. Do an operational check of the landing and taxi lights.
   A. Put the BAT MASTER switch in the on position.
   B. Put the LIGHTS LAND/OFF switch to LAND position.
   C. Put the LIGHTS TAXI/OFF switches to TAXI.
   D. Check operation of landing and taxi lights.
   E. Put the switches in the OFF positions.

6. Reinstall lens assembly to leading edge of wing. (Refer to the Maintenance Manual, Chapter 33, Landing/Taxi Lights - Maintenance Practices.)

7. Make an entry in the airplane logbook stating this modification kit has been installed.
Figure 1. HID Light Installation (Sheet 1)

VIEW A-A
VIEW LOOKING DOWN AT TOP OF LH WING
(SOME STRUCTURE OMITTED FOR CLARITY)

Figure 1. HID Light Installation (Sheet 1)
**VIEW B-B**

VIEW LOOKING INBOARD AT WS 100.00
(BALLAST OMITTED FOR CLARITY)

**NOTE:**
ALL DIMENSIONS SHOWN ARE IN INCHES.

**VIEW C-C**

VIEW LOOKING INBOARD AT WS 100.00

Figure 1. HID Light Installation (Sheet 2)
Figure 1. HID Light Installation (Sheet 3)

**VIEW D-D**
VIEW LOOKING OUTBOARD AT WS 118.00
(BALLAST OMITTED FOR CLARITY)

- 0523031 RIB (REFERENCE)
- 0.38 (TYPICAL)
- 0.20 (TYPICAL)
- 1.25
- REMOVE LIGHTENING HOLE FLANGE
- 0.38 (TYPICAL)
- 0.50 (TYPICAL)
- 0597006-2 PLATE ASSEMBLY (1 REQUIRED)
- CM3558-10-12G1 SCREW
- 0163-00179 INSULATOR (3 EACH REQUIRED BETWEEN BALLAST AND SUPPORT ASSEMBLY)
- NUMBER 30 (0.128 INCH DIAMETER) HOLE
- S2906-4-1 RIVET (4 EACH REQUIRED)

**VIEW E-E**
VIEW LOOKING OUTBOARD AT WS 118.00

- 0523031 RIB (REFERENCE)
- TO TAXI LIGHT CIRCUIT BREAKER AND GROUND
- 81007-1 BALLAST KIT (1 REQUIRED)
Figure 1. HID Light Installation (Sheet 4)
Figure 2. Cable Assembly Installation (Sheet 1)