



WHELEN AEROSPACE TECHNOLOGIES

Phone: (860) 526-9504

Fax: (860) 526-2009

Internet: www.flyWAT.com

Sales/Service e-mail: info@flyWAT.com

STC Manual  
Installation Guide/ICA

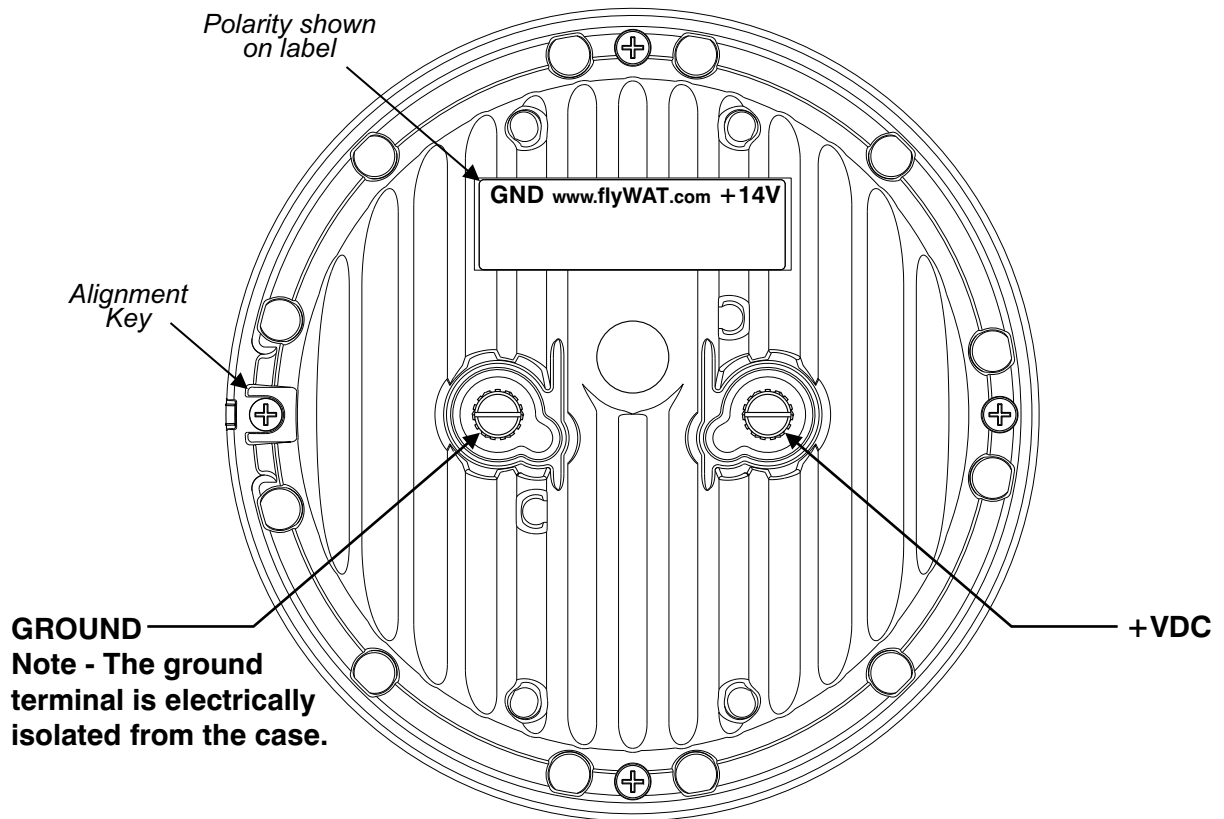
#### MODEL LIST

Model	Part #	Style	Application	Weight*	VDC*	Input Current*
P36P1L	01-0771833-10	PAR36	Landing	0.52 lbs.	14VDC	1.36 Amps
P36P1T	01-0771833-15	PAR36	Taxi	0.52 lbs.	14VDC	1.36 Amps
P36P2L	01-0771833-20	PAR36	Landing	0.52 lbs.	28VDC	0.68 Amps
P36P2T	01-0771833-25	PAR36	Taxi	0.52 lbs.	28VDC	0.68 Amps
P46P1L	01-0790750-10	PAR46	Landing	1.00 lbs.	14VDC	2.60 Amps
P46P2L	01-0790750-20	PAR46	Landing	1.00 lbs.	28VDC	1.25 Amps

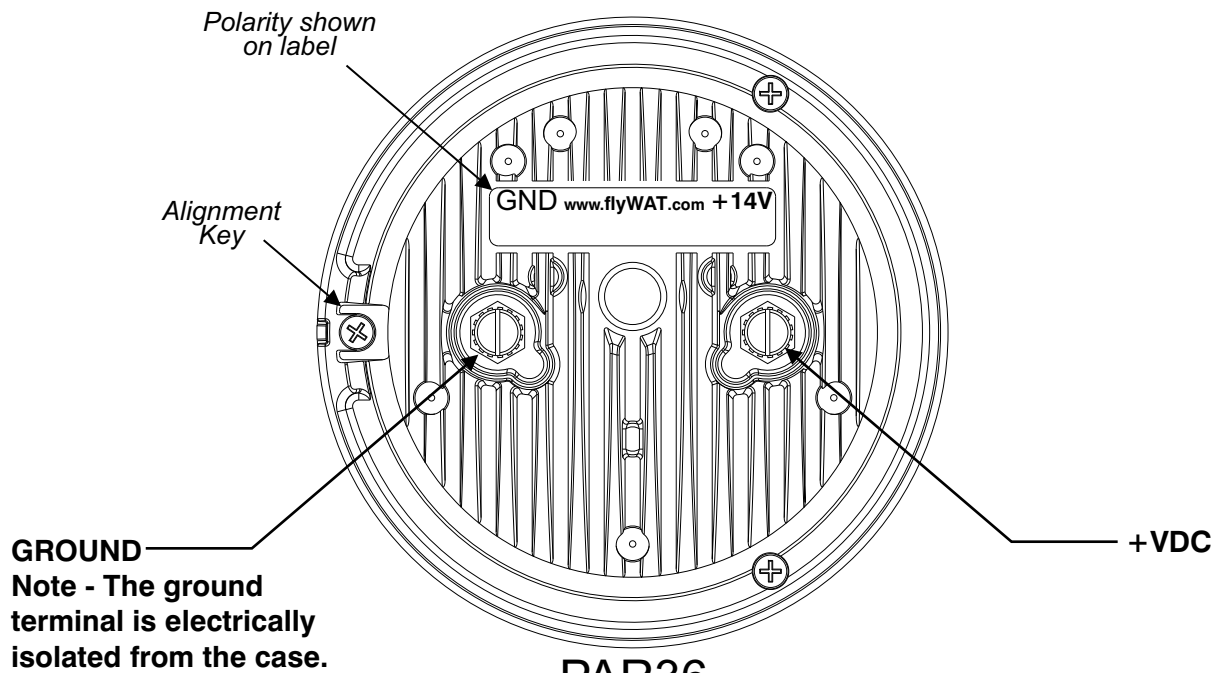
\*NOMINAL

**INSTALLATION PROCEDURES:** The following information provides guidelines for the installation of the WAT LED PAR Lights listed above. Please refer to the OEM manual for your aircraft for specific removal and installation instructions.

- Choose the appropriate replacement light assembly. Note: It is not required to change all PAR lights or Taxi lights to the new LED PAR lights.
- Place the lighting switch in the OFF position.
- Inspect the housing, attachment points and retainer for any signs of abnormal wear or damage.
- Loosen or remove the hardware holding the lamp in place. Take steps to ensure the retainer doesn't fall from the lamp assembly before it is ready to be removed.
- Place retainer screws in a safe place.
- Remove the lamp from the holder.
- Note there are two wires connected to the (existing) lamp. Using a multi-meter, identify the negative wire by measuring continuity to ground. Place a piece of black electrical tape around the wire identified as ground. This is your negative lead.
- Identify the positive wire as the remaining wire lead. The LED light assembly is polarity sensitive, however you will not damage the unit by reversing the polarity.
- While holding the lamp, loosen the screws holding the attached wires. Remove each wire from the lamp.
- Secure the LED Light, note the terminal markings for positive and negative, attach the negative marked wire to the negative side terminal post of the LED Light.
- Attach the positive wire to the positive side terminal post. Remove tape or temporary placard which identified the polarity of the wiring inside the housing.
- If required, install the rubber gasket included with your new LED Light around the LED Light assembly. A light application of a common hand soap on the rubber may aid in its fit into the light housing.
- Place the LED light into the housing ensuring the key (of the assembly) matches the key of the housing. Proper orientation of the lamp is necessary for beam orientation to be left and right of centerline while in operation. For a Taxi light, the 'lines' of the inner optic should be orientated vertically to produce a horizontal light beam.
- Secure the retainer. Care should be taken to tighten the screw only to the point the retainer does not turn with hand pressure. Over-tightening may stress the polycarbonate lens of the LED Light.
- Place the light switch in the ON position and verify proper operation of the WAT LED lamp.
- Determine that the Landing or Taxi light characteristics have not been substantially affected, per 14CFR 23.1383.
- If required, update aircraft records utilizing FAA Field Approval (Form 337) or equivalent.



**PAR46**  
(reference-only)

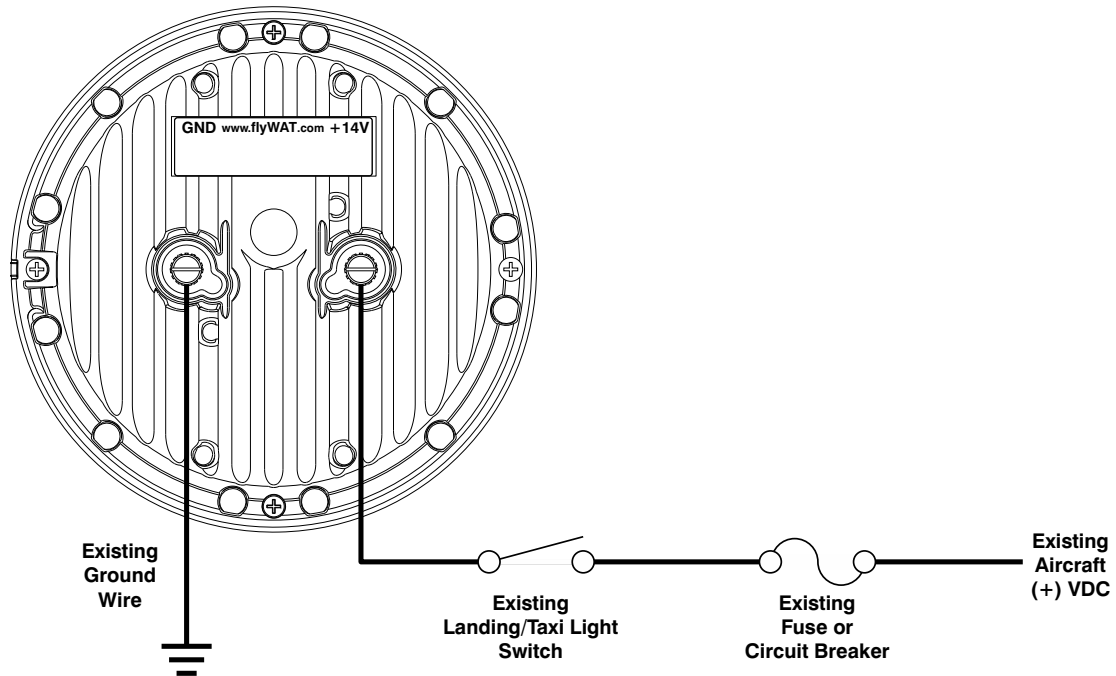


**PAR36**  
(reference-only)

## Periodic Inspections

INTERVAL	DESCRIPTION	ACTIONS	NOTES
Annually (unless the OEM specifies a shorter interval)	<ul style="list-style-type: none"> <li>• Perform function check. Observe that all LEDs are illuminated.  <b>Note: To reduce eye strain during LED inspection, use an optical filter such as dark glasses or a blue covering dome.</b></li> <li>• Inspect lens for abrasion, crazing or cracking.             For additional lens maintenance detail see SAE ARP5637.</li> <li>• Check Mounting, connections and wire integrity.</li> </ul>	<ul style="list-style-type: none"> <li>• Replace if all LEDs are not illuminated.</li> <li>• Replace the lens.</li> <li>• Adjust or replace as required.</li> </ul>	<ul style="list-style-type: none"> <li>• The unit is not repairable.</li> </ul>

## Wiring Diagram



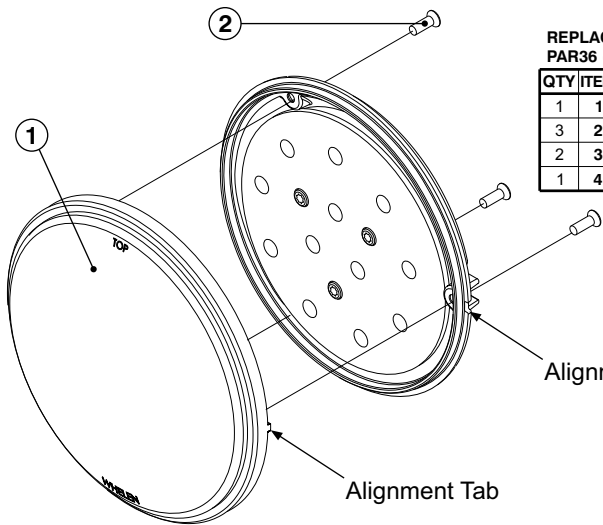
**Troubleshooting Procedure:** The following information is to provide guidelines for troubleshooting the LED Light Models listed on page 1.

**Note:** A circuit feature of the Parmetheus Plus is multiple parallel paths of LEDs and fixed current sources. For this reason, a group of 3 or 6 LEDs may not be illuminated, while the remainder of the LEDs may be operating at full intensity. This creates a situation where the light may be producing adequate light to perform its intended function, but it should still be replaced.

In the case of no light output:

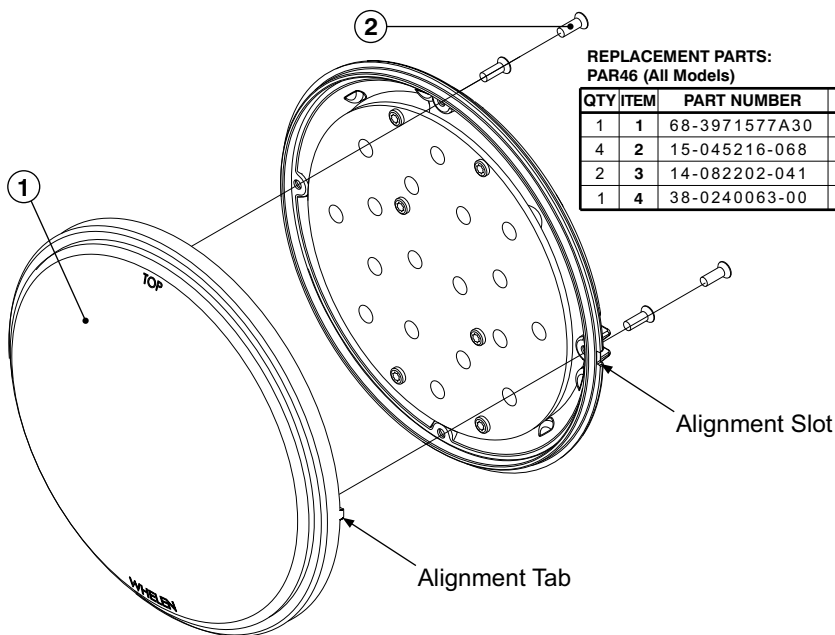
1. For a new installation, check the polarity of the wire connections. Check that the appropriate part has been selected for the aircraft.
2. Check for the correct voltage at the light (+14V / 28V) terminal. Check for ground at the (GND) terminal.
3. Check the connections at the (+14V / 28V) and (GND) terminals.
4. Perform a bench check and replace if a failure is confirmed.

Refer to the aircraft manual for additional information.



**REPLACEMENT PARTS:  
PAR36 (All Models)**

QTY	ITEM	PART NUMBER	DESCRIPTION
1	1	68-3971486A30	LENS, CLEAR NON OPTIC PAR-36
3	2	15-045216-068	SCREW, 4 X 3/8 PFH PLASTI-LOC SS W/NYSEAL
2	3	14-082202-041	SCREW, 8-32 X 1/4 PH SLOT, BRASS, TERMINAL (NOT SHOWN)
1	4	38-0240197-00	GASKET, PAR36, BLK (NOT SHOWN)



**REPLACEMENT PARTS:  
PAR46 (All Models)**

QTY	ITEM	PART NUMBER	DESCRIPTION
1	1	68-3971577A30	LENS, CLEAR NON OPTIC PAR-46 LED
4	2	15-045216-068	SCREW, 4 X 3/8 PFH PLASTI-LOC SS W/NYSEAL
2	3	14-082202-041	SCREW, 8-32 X 1/4 PH SLOT, BRASS, TERMINAL (NOT SHOWN)
1	4	38-0240063-00	GASKET, PAR46, BLK (NOT SHOWN)

**Lens Replacement Procedure:**

**Note:** The procedure outlined herein is common to the PAR36 and PAR46 models.

1. Remove the PAR36/PAR46 light assembly from its installed location
2. Remove the phillips-head screws (Item 2) used to secure the lens to the light assembly. Note that there are 4 screws used for this in the PAR46 and 3 in the PAR36.
3. Separate and remove the existing lens from the light assembly.
4. Install the replacement lens (Item 1) onto the light assembly, making sure that the lens' alignment tab engages the assembly's alignment slot.
5. Secure the replacement lens to the light assembly using the existing hardware. Care should be taken not to over-tighten these screws. Over-tightening may stress the lens.