

## RigMaster APU 25 Amp. to 60 Amp. Alternator Upgrade

**Important Notice:** If the serial number of the RigMaster Auxiliary Power Unit is below 4492 which includes models RPM 110 and RMP P10-4 you will first need to install the larger engine fan kit part number RP15-001K (mandatory). This kit would be required to increase air flow as additional engine load will be applied by the alternator upgrade.

## Parts List

The following parts are required for the 25 Amp. to 60 Amp. Alternator Upgrade:

|                       |                         |                       |                               | 1                              |
|-----------------------|-------------------------|-----------------------|-------------------------------|--------------------------------|
| Top Bracket           | 60A Alternator          | Bottom Bracket        | Fan Belt                      | Battery Cable                  |
| RP10-001-54           | 185046470               | RP10-001-55           | 10A0815                       | RP7-041                        |
|                       | 0                       | 0                     | -                             | 0                              |
| Alternator Cable      | Lock Washer             | Washer                | Pivot Bolt                    | Washer                         |
| RP13-010              | RP12-061                | RP12-043              | RP12-136                      | RP12-089                       |
|                       | 0                       |                       | 0                             |                                |
| Adj. Bolt<br>RP12-130 | Lock Washer<br>RP12-090 | Cable Nut<br>RP12-139 | Cable Lock Washer<br>RP12-002 | Crankshaft Pulley<br>115398400 |

Note 1: All parts must be ordered separately, they are not supplied as a kit.

## **Disassembly**

You will need to disassemble the following parts in the order listed below:

- 1. Disconnect the RigMaster battery cables from the truck batteries.
- 2. Remove right side panel.
- 3. Loosen alternator adjustment bolt and lower pivot bolt to remove fan belt.
- 4. Disconnect 4 pin regulator harness between regulator and alternator.
- 5. Remove pivot bolt and adjustment bolt hardware. (See Note 2).
- 6. Remove 25 Amp. alternator.
- 7. Remove upper adjustment bracket and lower engine mounting bolts.
- 8. Disconnect 6 pin regulator harness at the regulator; remove connections from the battery posts, and cut yellow alternator wire at the connector. (See Figure 3).
- 9. Remove regulator from back plate. (Optional).

**Note 2:** You will need to reuse the adjustment bracket mounting bolt from the 25 Amp. alternator assembly to mount new top bracket (RP10-001-54) and the engine mounting bolts for the new bottom bracket (RP10-001-55). See Figures below.



Figure 1 – Alternator

Figure 2 – Alternator (side view)



Installation

- 1. Install new top bracket (RP10-001-54) and bottom bracket (RP10-001-55) as shown in Figures 1 and 2 above.
- 2. Remove old Crankshaft pulley that is currently on the engine and install Crankshaft pulley (115398400) with same hardware from pulley being removed. <u>Note the use of a pulley puller</u> <u>may need to be used to remove old crankshaft</u> <u>pulley.</u>
- Install alternator (185046470) to bottom bracket (RP10-001-55) with pivot bolt (RP12-136), lock washer (RP12-061), and washer (RP12-043). (See Figure 4).



Figure 3 – Crankshaft Pulley

- 4. Install adjustment bolt (RP12-130), lock washer (RP12-090), and washer (RP12-089) to top bracket (RP10-001-54). (See Figure 4).
- 5. Connect battery cable (RP7-041), lock washer (RP12-002), and nut (RP12-139) to alternator battery post and battery post on back plate.
- 6. Connect alternator cable (RP13-010) to alternator and join opposite end to yellow wire on main harness using electrical butt connectors. (See Figure 5).

Centre terminal of alternator should receive excite wire from run solenoid (battery 12V from power module).

- 7. Install belt (10A0815) and make belt adjustment. (See Note 3).
- 8. Attach battery cables to truck batteries.
- 9. Run RigMaster unit and check charging voltage. (Should be 13.0v -14.8v).

Note 3: Belt should have no more then 3/16 in. (5mm) deflection when the engine is running.



Figure 4 – Alternator (side view)





