

# J&J Service Instructions

June 20, 2001

Slip Ring Replacement Instructions EBB

## Package Contains:

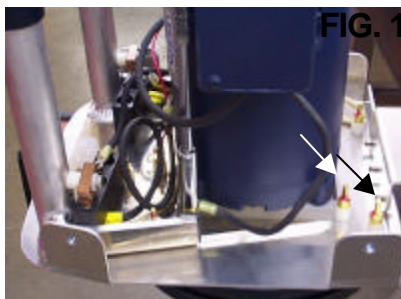
- 1 Slip Ring, Positive
- 1 Slip Ring, Negative
- 8 Brass Screw 10-32 x 2"
- 4 Insulator Bushing 1/8" L.
- 4 Insulator Bushing 3/8" L.
- 8 Insulator Bushing 1/2" L.
- 8 Brass Flat Washer #10
- 16 Brass Nut 10-32
- 4 Bushing, Lower



## Tools Needed:

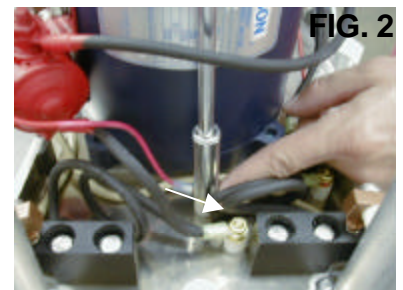
- 3/8 Deep Socket w/ ratchet
- Straight Blade Screw Driver
- 3/4 Socket, 1/2" Drive
- 5/32 Allen Wrench

## Slip Ring Replacement:

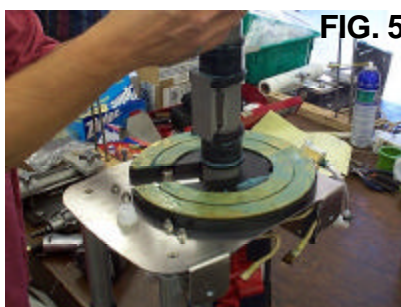
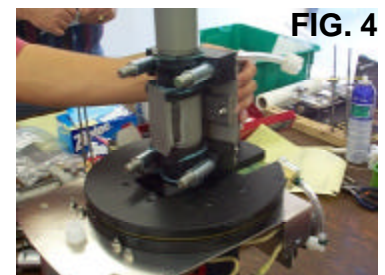


1. Remove motor from boat, and place in vice, gripping square of pivot bracket. Remove cover and rubber shield. Remove all brass nuts from brass screws (fig. 1). Remove all wiring connected to brass screws (fig 2).

**Note:** rear nuts & screws will be more accessible if squirt pump is removed by disconnecting wires, and removing 2 allen head screws with nylocks securing pump to bracket.

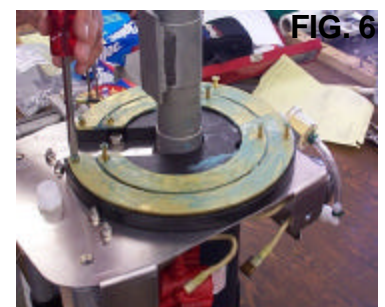


2. Remove pivot assembly by first removing 6 allen head screws, (4) 1/2 -13 nylocks (fig. 3) Remove pivot assembly as seen in (fig 4), do not remove rear bushings from pivot assembly as they ***MUST*** be reinstalled exactly as they were removed.



3. Lift slip ring shield above bushings (fig. 5) using flat head screwdriver remove all brass screws from slip rings (fig. 6)

**Note:** In fig 6 bushing inserts have been removed for viewing purposes. All screws must be completely removed to remove slip rings.



## Slip Ring Replacement (cont.)

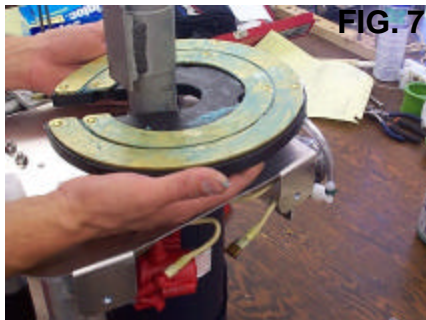


FIG. 7

4. Remove mount with slip rings (fig. 7), remove all insulator bushings from base plate as indicated (fig. 8) and discard.

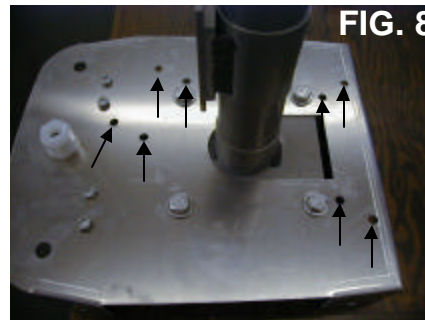


FIG. 8

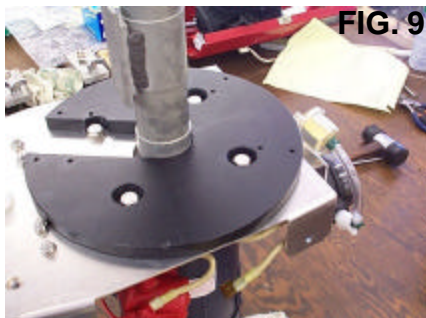


FIG. 9

5. Clean and reinstall slip ring mount (fig. 9). Install new slip rings with hardware provided in kit (fig. 10). Screws press fit through rings and mount, use screwdriver if needed.



FIG. 10

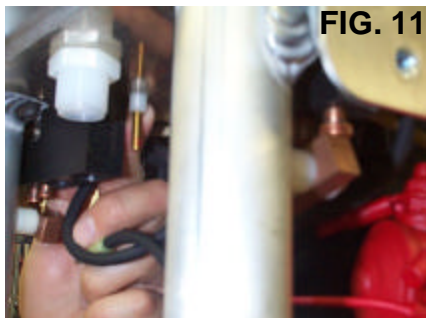


FIG. 11

6. With motor remaining upside down, complete one screw assembly in front of and behind motor. 3/8"L. insulator bushing to be installed into base plate on handlebar side, 1/8"L. insulator bushing to be installed into base plate on squirt pump side. Place over each screw a 1/2" L. insulator bushing, flat washer, 10-32 screw and hand tighten.



FIG. 12

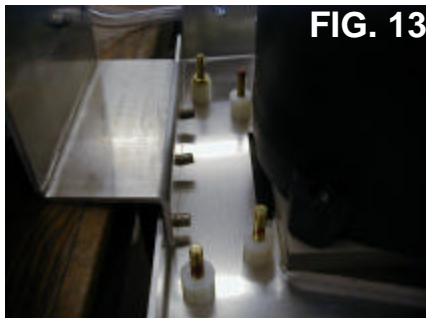


FIG. 13

7. Turn motor right side up, install remaining insulator bushings as stated in step 6. Tighten 3/8" brass nuts to 26 inch pounds.

**Note: To achieve 26 inch pounds, run the nut down hand tight while holding screw head with screwdriver and with a socket tighten nut 2 complete revolutions.**

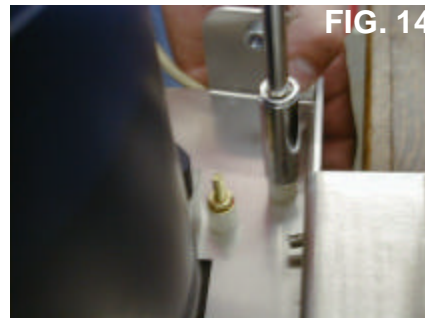
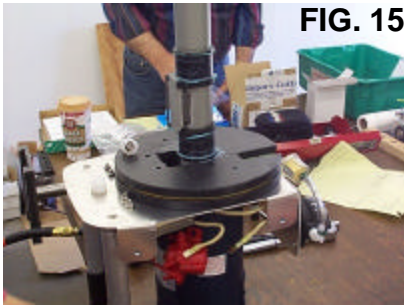


FIG. 14

## Slip Ring Replacement (cont.)



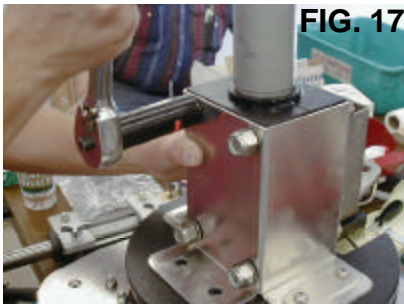
**FIG. 15**

8. Turn motor upside down again, bring slip ring shield back down to slip rings (fig. 15).

**Note:** Some early production motors have been found to require bushing, lowers to be replaced. If you received replacement bushing, lowers they must be installed as seen in fig. 16, with thin side to the prop cage.

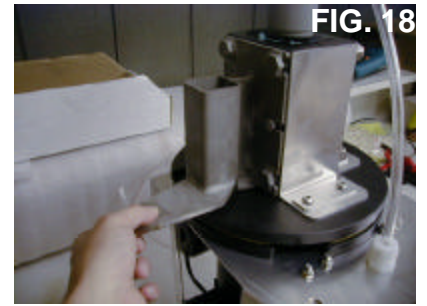


**FIG. 16**

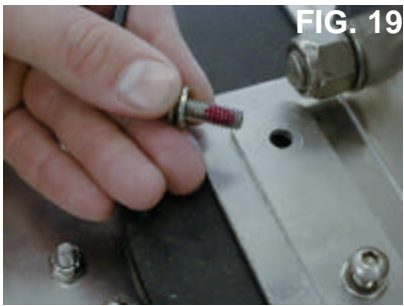


**FIG. 17**

9. Install pivot assembly with cover (fig. 17) tighten down 1/2-13 Nylocks with 1/2" drive socket to 50 ft. lbs. Once tightened check pivot rotation, pivot should rotate with 2 fingers as seen in fig. 18. If pivot is bound back each 1/2-13 Nylock off 1/8 turn, re-check for rotation, repeat as needed, until pivot rotates freely.



**FIG. 18**



**FIG. 19**

10. Loctite should be used on all 6 allen head screws (fig. 19). All 6 allen head screws should be tightened to 8 ft. lbs.



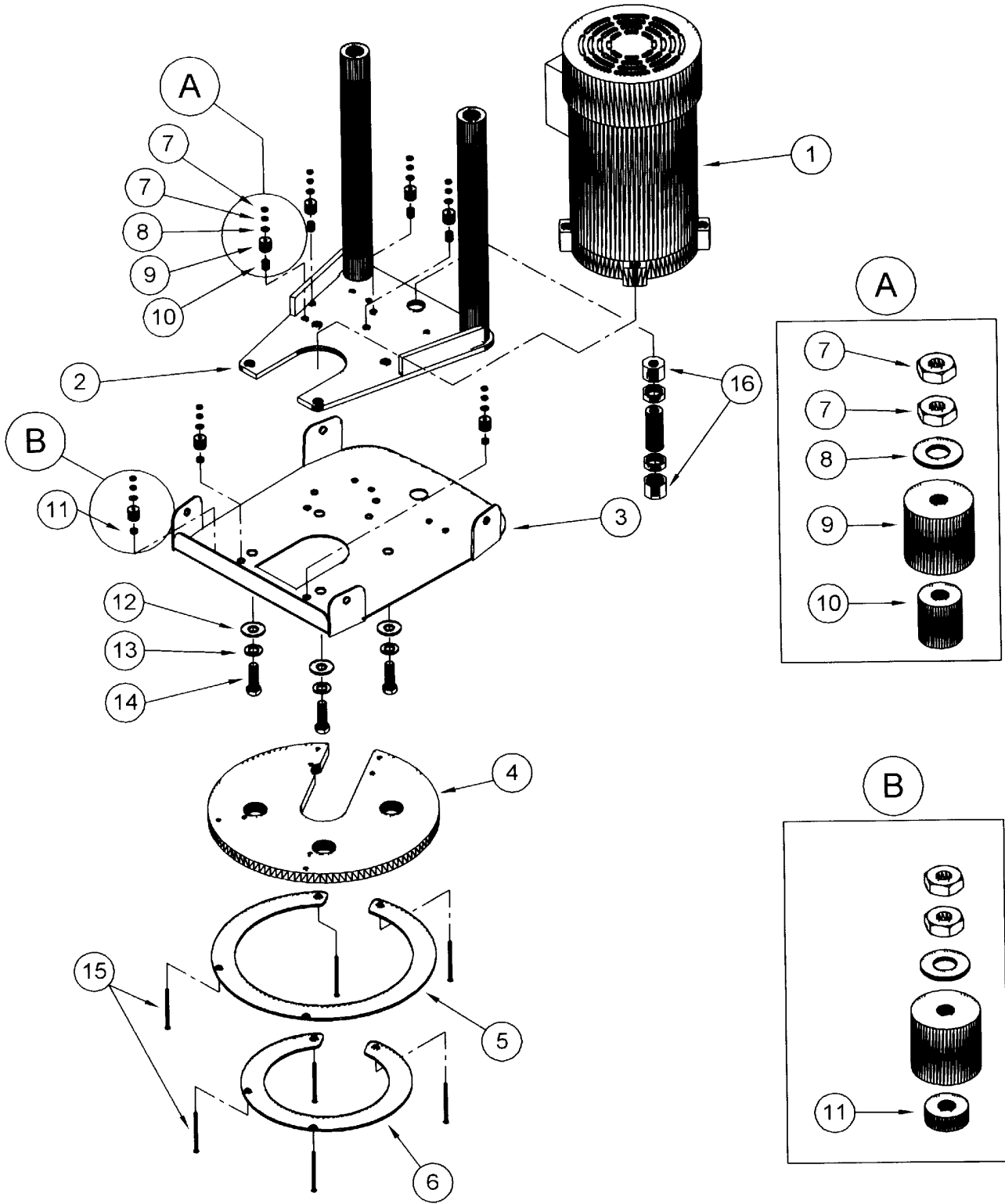
**FIG. 20**



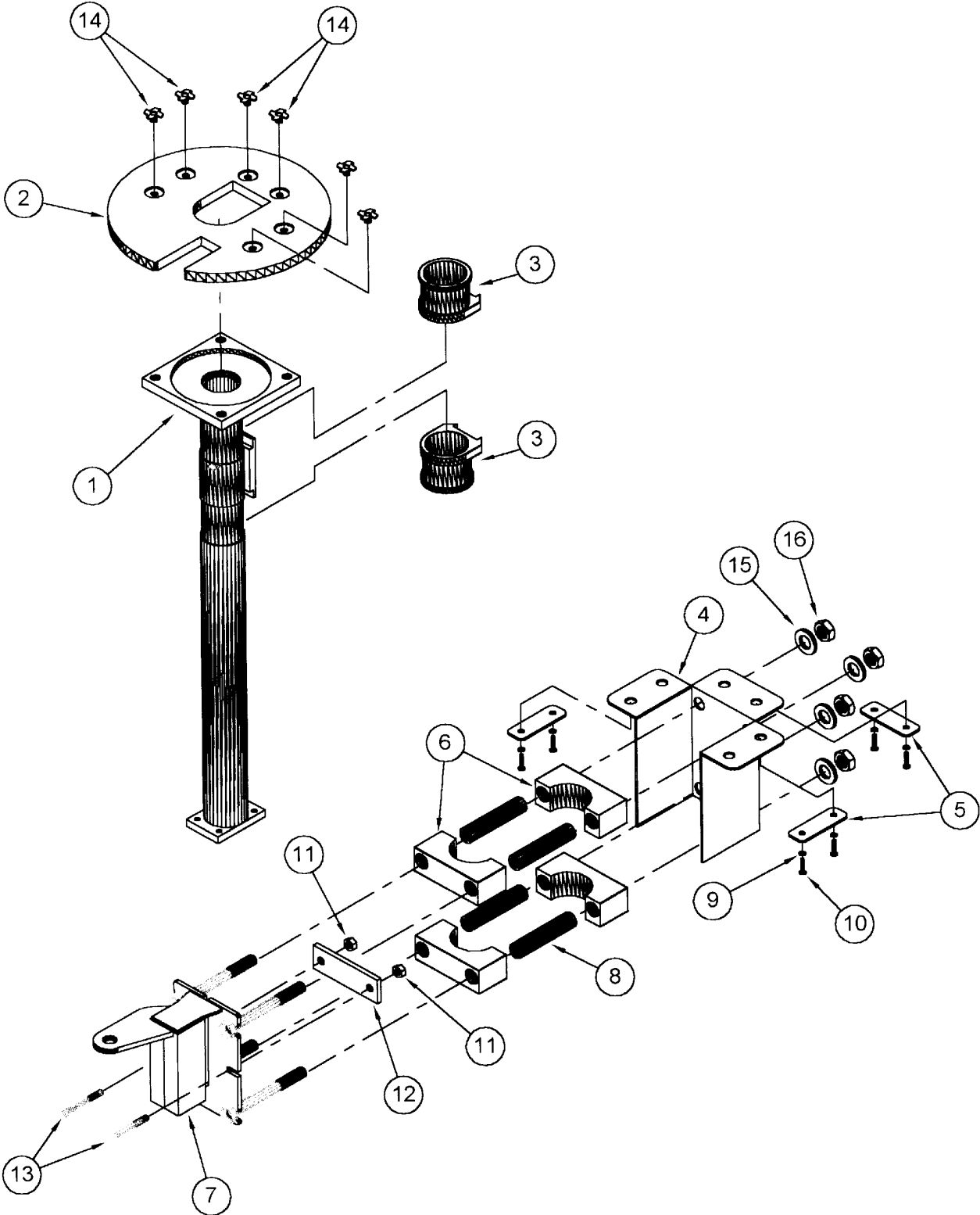
**FIG. 21**

11. Double nut back 4 brass screws (fig. 21), tighten to 13 in. lbs. Reinstall squirt pump if removed. Wire motor as per wiring diagram. For reference a complete motor can be used for an example of wiring layout. Reinstall rubber shield and motor cover.

# Slip Ring Assembly



# Pivot Assembly



# Wiring Diagram

