Old Town SPORTSMAN

3.25” Motor Brush Replacement Kit

SAFETY CONSIDERATIONS

⚠ WARNING

Always have a personal flotation device and paddle with you when taking out a powered/pedal/paddle watercraft. Be especially careful when navigating in moving water, near dams, waterfalls, and/or hazardous water conditions.

⚠ WARNING

You are responsible for the safe and prudent operation of your watercraft. We have designed your Old Town product to be an accurate and reliable tool that will enhance watercraft operation and improve your ability to catch fish. This product does not relieve you from the responsibility for safe operation of your watercraft. You must avoid hazards to navigation and always maintain a permanent watch so you can respond to situations as they develop. You must always be prepared to regain manual control of your watercraft. Learn to operate your Old Town product in an area free from hazards and obstacles.

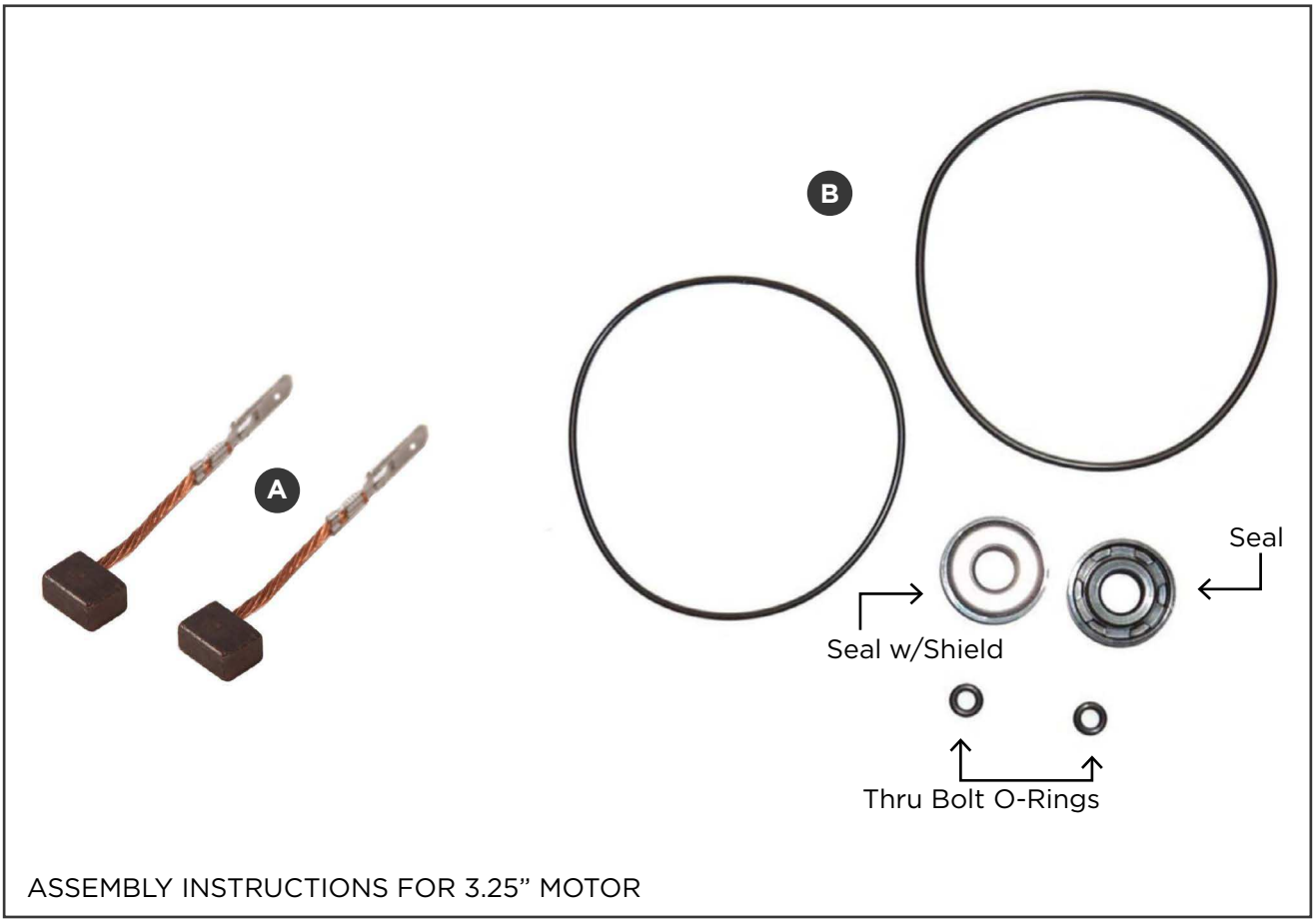
NOTICE: The images in this document may not look the same as your product but your unit will function in a similar way.

CONTENTS

⚠ CAUTION

Before getting started, please read all instructions thoroughly to prevent injury.

ALWAYS WEAR SAFETY GLASSES WHEN HANDLING TOOLS AND EQUIPMENT.



ASSEMBLY INSTRUCTIONS FOR 3.25” MOTOR

PARTS

A.	Brush Assembly	**Part #**	01.1316.0081	**Qty**	2
B.	Seal O-Ring Kit	**Part #**	01.1316.0080	**Qty**	1

TOOLS REQUIRED

- Safety Glasses
- Kill Switch Key
- Section of PVC Pipe or Other Tube
- Mallet
- 1/4” Nut Driver
- Masking Tape
- Utility Knife/Precision Knife
- Brush Spreader Tool or Steel Coat Hanger Bent to Shape
- Small Pointed Tool
- Flat Head Screwdriver

INSTRUCTIONS

1

DISASSEMBLY OF 3.25” MOTOR

Place the drive unit on a stable work surface with the prop facing upwards.

Using the kill switch key, remove the prop nut, washer, prop, and drive pin.

2

Visually inspect the area behind the prop hub for any evidence of fishing line or debris wrapped around the prop shaft or damage to the prop shaft seals.

3

As an aide to reassembly, place a small piece of masking tape over the parting line of the center section and front end bell.

Use a utility/precision knife to carefully cut the tape along the seam. This will help align the parts during reassembly and ensure the motor functions spins in the correct direction.

4

Use the 1/4” nut driver to remove the two 1/4” thru bolts. Remove the motor end housing by pulling it up and off the motor shaft.

INSTRUCTIONS

5

Use the short piece of PVC pipe or tubing to hold the armature in place and remove the center section of the housing.

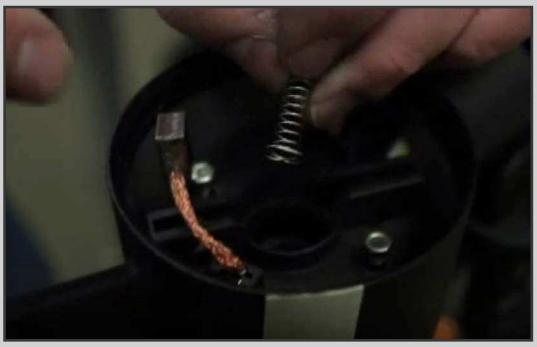
6

Before removing the armature, the current brushes need to be held out of the way with a suitable tool, i.e. brush spreader, bent steel coat hanger. This will prevent them from dropping and getting stuck.

Remove and inspect the armature commutator for any discolored areas or evidence of arcing or sparking.

7

Remove the tool used to hold the brushes and slide the brushes out of their pockets. Remove the two brush springs and set aside.



8

Using the 1/4” nut driver, remove the two brush plate mounting screws and remove the brush holder.

Take note the positions of the red and black motor leads and disconnect.

INSTRUCTIONS

9

Use a small, pointed tool to depress the barb of the motor brush and pull to remove from the brush holder.

10

REPLACING THE MOTOR BRUSH

Insert barbed end first and replace both motor brushes.

11

REASSEMBLY OF 3.25” MOTOR UNIT

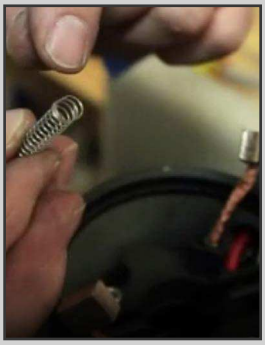
Reconnect the red and black motor leads. Ensure they are in the correct position and insert the brush plate assembly back into the unit.

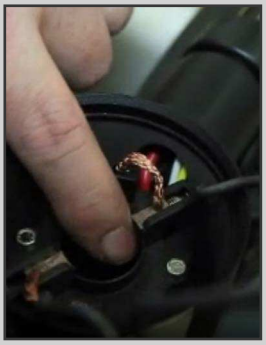
Reinstall the two 1/4” brush plate mounting screws.

12

Reinstall the brush springs back into the brush pocket. Make sure to install with the larger, oval end in first.

Insert the tool used in **Step 6** into the brush pocket to compress the springs and reinstall the brushes into the brush pockets.



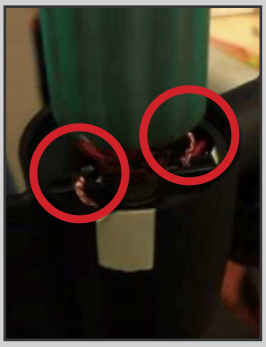


INSTRUCTIONS

13

Reinstall the armature and remove the brush spreader tool.

Check that the armature is free to spin, the brush shunt leads (braided copper wires) are not touching anything, and that brushes are free to move.



14

CENTER SECTION O-RING REPLACEMENT

Remove and replace the center section o-ring with the larger o-ring. Remove and replace the plane end housing o-ring with the smaller o-ring.

15

Take note of the orientation of the seals in the end housing and then remove them with a flat head screw driver. Insert the seal with the cup/shield facing outwards. Then insert seal w/shield next and push until flush.

NOTICE: Applying a small amount of grease to each o-ring/seal will help prevent damage during installation.

16

Using the same tube used in **Step 5**, place over the armature and lower the center section over the armature and tube. Line up the pieces of masking tape to ensure proper alignment.

Check that the thrust washer are still on the armature shaft.

INSTRUCTIONS

17

Reinstall the plane end housing over the armature shaft.

Orient the plane end housing so that the holes for the thru bolts are in the 3 and 9 position relative to the skeg and motor shaft.

18

THRU BOLT O-RING REPLACEMENT

Remove and replace the thru bolt o-rings with the new ones. Install thru bolts in the plane end housing. Ensure you do not cross thread them.

NOTICE: Applying a small amount of grease to each o-ring/seal will help prevent damage during installation.

19

Reinstall the drive pin, making sure the pin is not bent or damaged. Reinstall the prop, prop washer, and prop nut. Tighten back into position.

Be sure to check that the drive runs properly before taking it out on the water. The prop should spin in the counterclockwise direction shown.