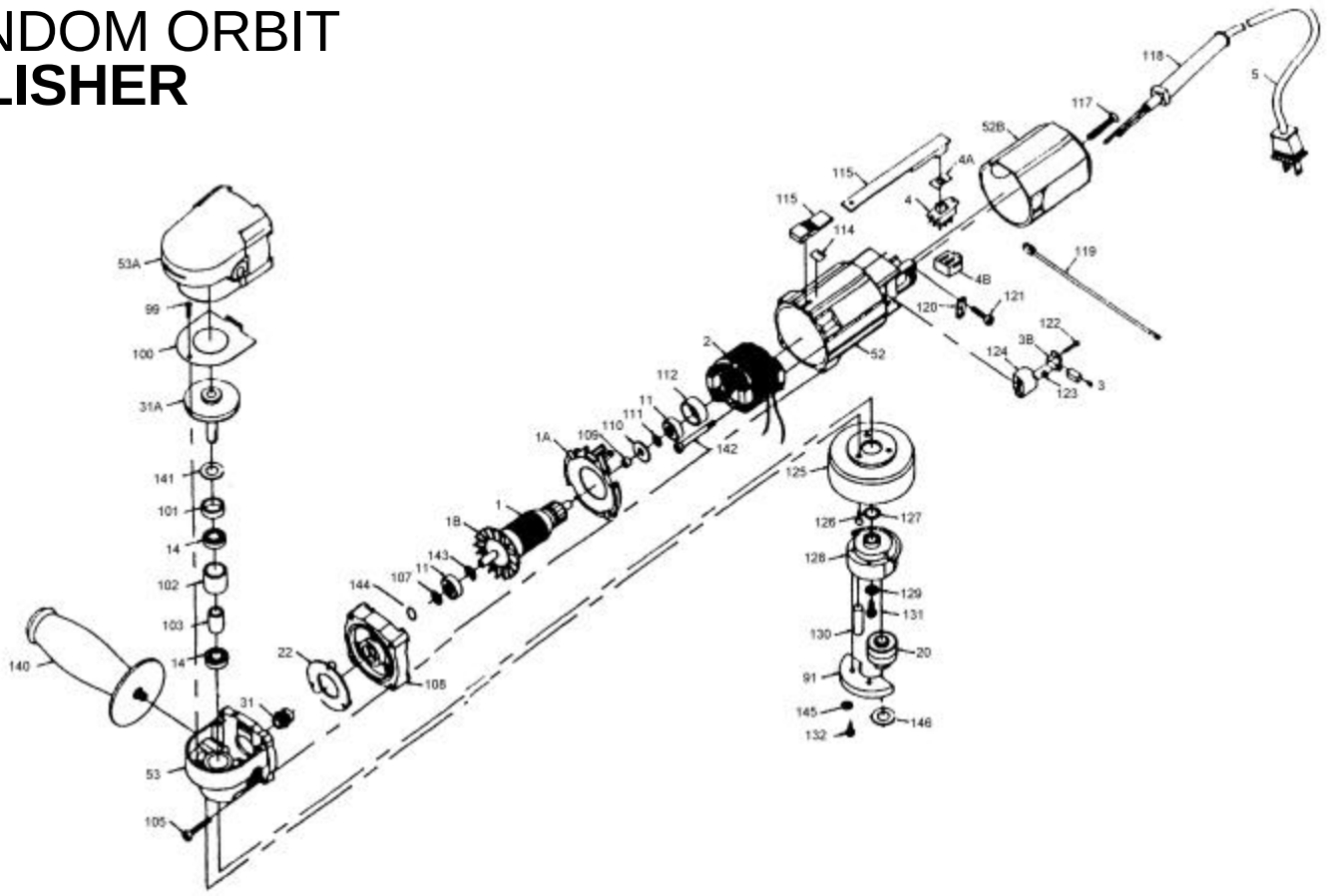
# PORTER-CABLE

**WARNING: Electrical repairs should only be attempted by trained repairmen. Contact the nearest Porter-Cable Service Center or other competent repair center**

**7424**

# RANDOM ORBIT **POLISHER**




| Ref. No. | Part No. | Description |
|---|---|---|
| 1 | 872987** | Armature, Incl: Ref. 1B |
| 1A | 698153 | Baffle |
| 1B | 811292** | Armature Fan |
| 2 | 872988 | Field , T1 |
| | 891211 | Field , T2 |
| 3 | 690741 | Brush, T1 |
| | 888386 | Brush & Holder Assy., T2 |
| 3B | 690742 | Brush Holder, T1 |
| 4 | 694006 | Switch |
| 4A | 694924 | Dust Shield |
| 4B | 693971 | VS Switch |
| 5 | 872258 | Cord |
| 11 | 855284 | Bearing |
| 14 | 855219 | Bearing |
| 20 | 872991 | Spindle & Bearing Assy. |
| 22 | 698178 | Grease Plug, T1 |
| 31 | 872990** | Pinion |
| 31A | 872989 | Gear & Shaft Assy. |
| 52 | 888001 | Motor Hsg. , Incl.: Ref 3, 119, 122 |
| 52B | 698738 | Mtr. Hsg. Cap |
| 53 | 891106 | Gear Hsg./Int. Plate , Incl.: Ref. 144 |
| 53A | 699946** | Gear Housing Cover |
| 91 | 874011 | Counterweight |
| 99 | n 882187 | Screw |
| 100 | 699938 | Plate-Gear |
| 101 | 872502 | Spacer |
| 102 | 699925 | Spacer |
| 103 | 699924 | Spacer |
| 105 | 876651 | Screw |
| 107 | 872503 | Spacer |
| 109 | 698394 | Tube-Insulating |
| 110 | 695893 | Washer-Fiber |
| 111 | 849328 | Spacer |
| 112 | 694432 | Bearing Mount |
| 114 | 874502 | Indicator Switch |

| Ref. No. | Part No. | Description |
|---|---|---|
| 115 | 874525 | Switch Button and Slide Pkg., |
| 117 | 694012 | Screw |
| 118 | 810716 | Strain Relief |
| 119 | 699998 | Lead Assy., T1 |
| | 887666 | Lead Assy., T2 |
| 120 | 861434 | Cord Clamp |
| 121 | 882185 | Screw |
| 122 | 854805 | Screw, T1 |
| | 879298 | Screw, T2 |
| 123 | 868775 | Spring |
| 124 | 690740 | Brush Holder Base |
| 125 | 699942 | Vacuum Housing |
| 126 | 845619 | Screw |
| 127 | 851584 | Washer Thrust |
| 128 | 884277 | Eccentric Hsg, Incl: Ref. 132 |
| 129 | 874513** | Eccentric Washer |
| 130 | 695936 | Rubber Plug |
| 131 | 874511** | Hex Screw |
| 132 | 877817 | Screw |
| 140 | 699681 | Aux. Handle |
| 141 | 873140 | Shim (As Required) |
| 142 | 695185 | Screw |
| 143 | 847564** | Snap Ring |
| 144 | 697029** | O-Ring |
| 145 | 859359** | Washer (Balance) |
| 146 | 850218 | Spacer |
| * | 54745 | 6" Polishing Pad |
| * | n 874809** | Lubricant (5 1/2 oz.) |
| * | n 875667** | Lubricant (5 lbs.) |
| * | 48779 | Spindle Wrench |
| * | n 892163 | Carrying Case |
| * | 895251 | Polishing Compound |

* Not Shown
** See Service Notes

PARTS LIST NO. 891657 - 05-17-02



PORTER-CABLE
PROFESSIONAL POWER TOOLS

**WASHER (REF.#145)**

A flat washer may be used under the head of one or both counterweight screws (Ref. #132) to fine tune balance.

**DISASSEMBLY**

CAUTION: Disconnect tool from power source before servicing.

Service to the cord, switch, and brushes may be accomplished by removing the motor housing cap (Ref. #52B). Any service to the motor or gear case areas requires removal of the random orbit system and the gear housing cover, as follows:

1. Hold spindle with spindle wrench, while rotating pad counter-clockwise to remove.

2. Hold flats of eccentric housing (see Fig. 1) with pump pliers, while removing two counterweight screws.

3. Remove counterweight; pull spindle and bearing assembly out.

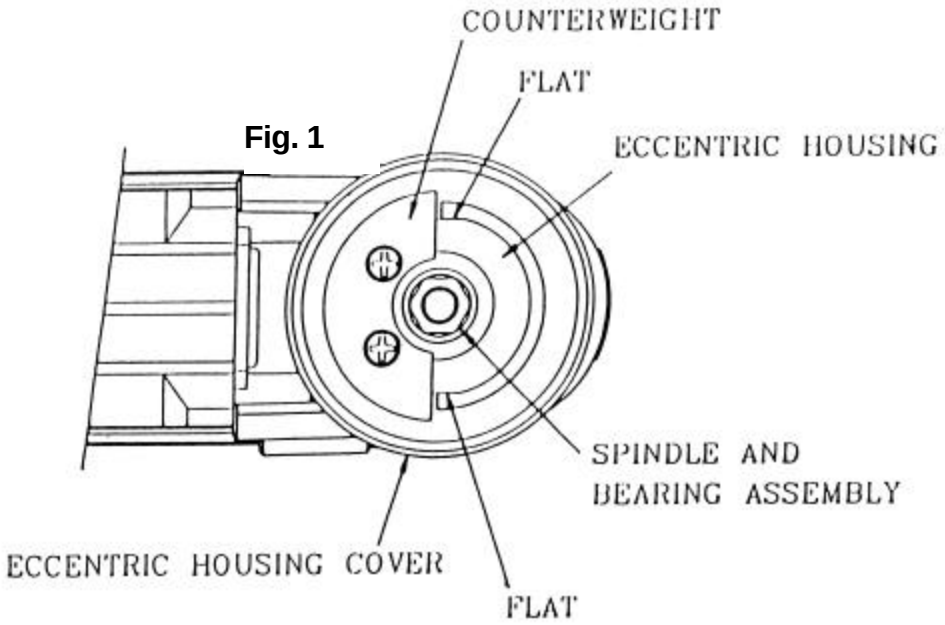
4. Hold flats of eccentric housing with pump pliers, while removing eccentric housing retaining screw and washer.

5. Pull eccentric housing off and remove spacer (Ref. #127).

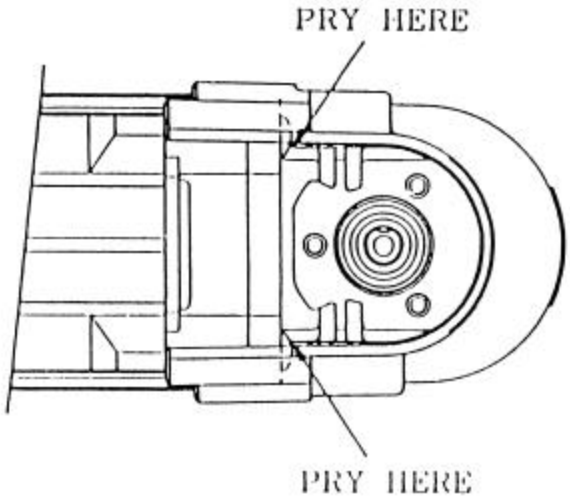
6. Remove three retaining screws and eccentric housing cover (Ref. #125).

7. Insert the blade of a 3/16” wide, “flat” screwdriver at one pry point (see Fig. 2) and pry housing cover (Ref. 53A) outward and forward to release from gear housing. Repeat at the second pry point to release and remove cover.

**Fig. 1**



# SERVICE NOTES




**ARMATURE/PINION/BEARING/INTERMEDIATE PLATE/FAN**

The pinion gear (Ref. #31) is a press-fit to the armature shaft. Disassembly/assembly requires an arbor press and special fixtures (available from Porter-Cable Technical Service) to disassemble:

1. Support intermediate plate/armature assembly on 86759 bearing removal fixture (pinion end up). Press against the end of the armature shaft to drive the armature/pinion assembly out of the intermediate plate.

2. Wrap one shop towel around armature body and another around the fan to protect hands from sharp edges. Grasp body in one hand and fan in the other, twist fan to break bond (to insulating tube). The fan will be damaged and MUST be replaced.

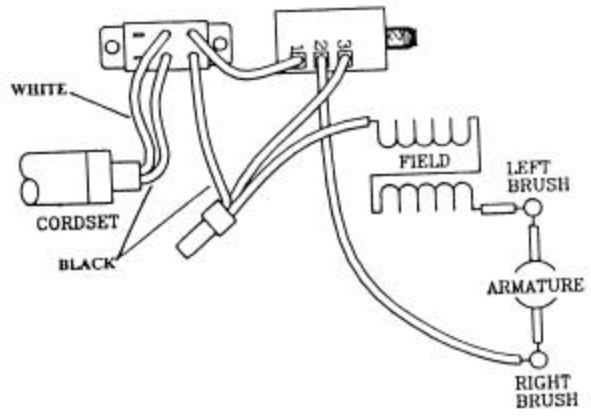
3. Slide fan back toward armature coils. Position armature assembly to the 867759 bearing puller with pulley jaws positioned between the fan and the bearing. Use arbor press to drive armature out of bearing and pinion. The bearing will be damaged and MUST be replaced. Remove snap-ring and fan.

TO REASSEMBLE:

1. Apply super-glue to bore of new fan. Use special fixture (699921) to position fan on armature (length of fixture = distance from fan to end of shaft).

2. Install snap-ring (Ref. 143).

3. Coat intermediate plate bore with Loctite and assemble new bearing.




e special fixture (699921) to support the
ner race of the bearing (and intermediate
ate) while pressing the armature through the
aring until approximately ¼" of shaft
otrudes through bearing.

move from fixture. Place pinion spacer (Ref.
7) and pinion onto armature shaft. Press
til end of pinion is flush with end of shaft.

**G DIAGRAMS**