



16575011
Edition 3
May 2014

Random Orbital Sander

RO2()B - () Series

Maintenance Information



Save These Instructions

 **Ingersoll Rand**[®]

Product Safety Information

WARNING

- Failure to observe the following warnings, and to avoid these potentially hazardous situations, could result in death or serious injury.
- Read and understand this and all other supplied manuals before installing, operating, repairing, maintaining, changing accessories on, or working near this product.
- Always wear eye protection when operating or performing maintenance on this tool. The grade of protection required should be assessed for each use and may include impact-resistant glasses with side shields, goggles, or a full face shield over those glasses.
- Always turn off the air supply, bleed the air pressure and disconnect the air supply hose when not in use, before installing, removing or adjusting any accessory on this tool, or before performing any maintenance on this tool or any accessory.
- Do not use this tool if the actual free speed exceeds the rated rpm. Check the free speed of this tool before mounting any accessories, after all tool repairs, before each job and after every 8 hours of use. Check speed with a calibrated tachometer, without the abrasive product installed.

Note: When reading the instructions, refer to exploded diagrams in Parts Information Manuals when applicable (see under Related Documentation for form numbers).

Disassembly

General Instructions

1. Never apply excessive pressure by a holding device which may cause distortion of a part.
2. Apply pressure evenly to parts, which have a press fit.
3. Apply even pressure to the bearing race that will be press fitted to the mating part.
4. Use correct tools and fixtures when servicing this tool.
5. Don't damage "O" Rings when servicing this tool.
6. Use only genuine **Ingersoll Rand** replacement parts for this tool.
7. When ordering, specify part number, description, tool model number and serial number.

Disassembly of Motor

1. Remove Sanding Pad (34).
2. Remove Lock Ring (27) and pull Motor and Seal (22) from Housing.
3. Remove Retaining Ring (18).
4. Using special brass blocks to fit around outside diameter of Cylinder, clamp around Cylinder and press Shaft of Counterbalance through Bearing (19) and End Plate (20).
5. Remove Blades (24), Rotor (23), and Key (28).
6. Remove End Plate (25) and Bearing (19).

Assembly

Assembly of Motor

1. Grease and assemble "O" Ring (26) to Lock Ring (27).
2. Assemble Lock Ring over Counterbalance (29).
3. Assemble Bearing (19) into End Plate (25), pressing on outer race of Bearing.
4. Assemble End Plate (25) onto Shaft of Counterbalance, pressing on inner race of Bearing.
5. Install Key (28) in key slot.
6. Assemble Rotor (23) to Counterbalance, aligning key-way to Key (28).
7. Assemble Five rotor blades (24) to Rotor Slots.
8. Assemble Cylinder (21) over Rotor, aligning Roll Pin in Cylinder with slot in End Plate.
9. Assemble Bearing (19) into End Plate (20), pressing on outer race of Bearing.
10. Assemble End Plate (20), with Bearing (19), to Counterbalance, pressing on inner race of Bearing.
Note: Align slot in End Plate with Roll Pin in Cylinder.
11. Install Retaining Ring (18) to groove in Counterbalance, with bow in ring positioned as shown in parts illustration page.
12. Assemble Seal (22) to grooves in Cylinder.
13. Assemble Motor to Housing, aligning Seal (22) with air inlet.
14. Tighten Lock Ring (27), securing Motor Assembly.
15. Assemble Sanding Pad (34) and tighten securely.

Vacuum Adapter Removal

1. **25 mm size:** While pressing in on the tabs on the side, pull vacuum adapter out.w
2. **To remove the 28 and 32 mm size:** Remove muffler and pull vacuum adapter out.

Throttle Disassembly

1. Remove Vacuum Adapter (15).
2. Remove Inlet Adapter (13), releasing Spring (12) & Valve (11).
Note: Do not remove seat (10) unless damage is evident.
3. Remove Muffler (14).
4. To remove Valve Stem (6), remove Roll Pin (8) and Lever (7).

Regulator Disassembly

1. Remove Lever (7) by removing Roll Pin (8).
2. Remove Snap Ring (5) from Regulator (3).
3. Remove regulator assembly (3) - includes 2 "O" Rings (4).

Throttle Assembly

1. Coat Valve Stem (6) with **Ingersoll Rand** 29665 spindle oil and assemble into Housing with hole in Valve Stem in line with Housing to accept Valve (11).
2. Assemble Seat (10) into Housing with rounded corners into housing first.
3. Coat Valve (11) with **Ingersoll Rand** 29665 spindle oil and assemble into housing, securing Valve Stem (6).
4. Assemble Spring (12) into Housing.
5. Assemble Inlet Adapter (13) to Housing, securing throttle components.
6. Assemble Lever (7) to Housing, securing with Roll Pin (8).
7. Assemble Vacuum Adapter (15) or Plug (16) to Housing.

Vacuum Adapter installation

1. **25 mm size:** Push into housing until tabs on Vacuum Adapter snap into Housing.
2. **To install 28 and 32 mm size:** Remove muffler. Push adapter into housing and align ring on vacuum adapter with exhaust. Push muffler through ring on vacuum adapter and screw muffler to housing.

Regulator Assembly

1. Assemble Regulator (3) and 2 "O" Rings (4).
2. Insert Regulator assembly (3) into Housing (1).
3. Assemble Snap-Ring (5) into groove on regulator assembly (3).
4. Install Lever (7) by adding Roll Pin (8).

Related Documentation

For additional information refer to:

Product Safety Information Manual 04580387.

Product Information Manual 04578399.

Parts Information Manual 16573933.

Manuals can be downloaded from ingersollrandproducts.com

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