



47146642
Edition 2
July 2011

Air Die Grinders

Models 335SG4A and 325SG4A

Maintenance Information



Save These Instructions

 **Ingersoll Rand**

 **WARNING**

Always wear eye protection when operating or performing maintenance on this tool.

Always turn off the air supply and disconnect the air supply hose before installing, removing or adjusting any accessory on this tool or before performing any maintenance on this tool.

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

Lubrication

Whenever one of these Grinder is disassembled for overhaul or replacement of parts, lubricate the tool as follows:

1. Always wipe the Vanes with a light film of oil before inserting them into the vanes slots.

2. Inject 0.5 to 1.0 cc of **Ingersoll Rand** No. 10 oil into the air inlet Assembly after assembly.
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Disassembly

General Instructions

1. Do not disassemble the tool any further than necessary to replace or repair damaged parts.
2. Whenever grasping a tool or part in a vise, always use leather-covered or copper-covered vise jaws to protect the surface of the part and help prevent distortion. This is particularly true of threaded members and housings.
3. Do not remove any part which is a press fit in or on a subassembly unless the removal of that part is necessary for repairs or replacement.
4. Do not disassemble the Tool unless you have a complete set of new gaskets and O-rings for replacement.

Disassembly of the Motor

1. Grasp the Cylinder in a soft sided vise and use a punch to tap the Rotor out of the Rear Bearing.
2. Remove the Rear Endplate, Rear Bearing and Spring Washer.
3. Remove the Vanes out of Rotor.
4. Grasp the Rotor in a soft sided vise and remove the Collet body or Coupling Nut or Pinion.
5. Press Rotor out of the front Bearing by support front Endplate. Remove Spacer.

Disassembly of the Throttle

1. Unscrew and remove the Valve Plug.
 2. Remove the Spring and the Throttle Valve.
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Tool special instructions

Steps common to all models

1. Remove the Clamp Nut using wrench.
 2. Pull the Motor subassembly out of the Motor Housing.
 3. Disassemble the Motor.
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Assembly

General Instructions

1. Always press on the **inner** ring of a ball-type bearing when installing the bearing on a shaft.
2. Whenever grasping a tool or part in a vise, always use soft sided vise jaws. Take extra care not to damage threads or distort housings.
3. Always clean every part and wipe internal part with a thin film of oil before installation.
4. Check every bearing for roughness. Don't use rough bearings.

Final Assembly

1. Install motor into the Motor Housing. Make sure the Cylinder Dowel Pin is aligned with the round hole in the Motor Housing.
2. Place the O-ring in Clamp nut insert, apply Loctite 243 approximately 2 to 3 pitches on Clamp Nut Insert thread. Assemble Clamp nut insert into clamp nut with 15 N.m torque.
3. **For Straight Model**, apply Loctite 243 approximately 2 to 3 pitches on the Clamp Nut Thread, thread it into Housing Assembly, tighten it to 20 N.m torque.
4. Install the Collet and Collet Nut.

Assembly of the Motor Housing

1. Add O-ring onto Throttle Pin, Insert Throttle Pin with Spring into Valve hole of Housing assembly.
 2. Add the O-ring onto Valve Plug, screw the Valve Plug into Housing Thread, tighten it to 5 N.m torque.
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Troubleshooting Guide

Trouble	Probable Cause	Solution
Low power or low free speed	Insufficient air pressure	Check air line pressure at the inlet of the tool. It must be 90 psig (6.2 bar/620KPa).
	Clogged Muffler elements	Disassemble the tool's Clamp Nut, if the Muffler can't be cleaned, replace it.
	Plugged Inlet Screen	Clean the Inlet Screen with a clean, suitable cleaning solution or replace the Screen.
	Worn or broken vanes	Install a complete set of new Vanes.
	Worn or broken Motor Housing	Replace the Motor Housing.
	Internal air leakage in the Motor Housing indicated by high air consumption/low speed or air leaking out the front and rear exhaust simultaneously.	Replace the Motor Housing.
	Bent stem on Throttle Valve	Remove the Throttle Valve.
Excessive run out	Loose Collet Nut	Tighten the Collet Nut.
	Worn or damaged Collet, Collet Nut or Nosepiece	Replace the damaged component and retest.
Scoring of end plate	Worn front end plate Spacer or front end plate	Install a new front end plate Spacer and front end plate.
	Worn front Rotor Bearing	Install a new front Rotor Bearing.
Leaky Throttle Valve	Dirt accumulation on Throttle Valve or Throttle Valve Seat.	Disassemble, inspect and clean parts.
	Worn Throttle Valve or Throttle Valve Seat	Replace the Throttle Valve and/or Throttle Valve Seat.
	Excessive dirt build-up beneath the Throttle Lever.	Clean out the slot area.
	Bent Throttle Valve Plunger	Replace the plunger.
Front Rotor Bearing runs hot	Front end plate Spacer rubbing the bore of the front end plate	Replace the front end plate and front end plate Spacer combination.
Slow tool idle	Bent or leaky Throttle Valve	Replace the Throttle Valve.
Rough operation/vibration	Improper lubrication or dirt buildup	Disassemble the tool and clean in a suitable cleaning solution. Assemble the tool and inject 3 cc of the recommend oil in the inlet and run the Grinder long enough to coat the internal parts with the oil.
	Worn or broken rear Bearing or front Rotor Bearing	Replace the worn or broken Bearing. Examine the front end plate. Front end plate Spacer, and rear Rotor Bearing, and replace any damaged parts. If the rear end plate is damaged, replace the Rotor.

Related Documentation

For additional information refer to:
 Product Safety Information Manual 47146659.
 Product Information Manual 47146626.
 Parts Information Manual 47146634.

Manuals can be downloaded from www.ingersollrandproducts.com.

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