



16573321
Edition 3
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Air Grinder

Series 61H

Maintenance Information



Save These Instructions

IR 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).

Lubrication

Each time the Series 61H Grinder is disassembled for maintenance, repair or replacement of parts, lubricate the tool as follows:

1. Apply a coating of **Ingersoll Rand** No. 68 Grease to the inner surface of the Arbor Coupling (39).
2. Fill the oil reservoir in the handle with **Ingersoll Rand** No. 50 Oil. Inject approximately 2.5 cc of oil into the air inlet before attaching the air hose. Remove the Oil Chamber Plug (3) and fill the oil chamber.

3. When installing a new Seal Cup Assembly (28, 38, or 42) or a new Dust Washer (45), impregnate the new seal or washer with **Ingersoll Rand** No. 50 Oil before installation.

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 Tool

1. Clamp the handle of the Grinder horizontally in leather-covered or copper-covered vise jaws.
2. **For Models 61H120H63, 61H120H64 and 61H150H63**, proceed as follows:
 - a. Insert a sprag pin into one of the radial holes in the Inner Wheel Flange (48) and using a wrench, remove the Wheel Flange Nut (52).
 - b. Remove the Outer Wheel Flange (51) and the grinding wheel.
 - c. Using snap ring pliers, remove the Inner Wheel Flange Retainer (50) and slide the Inner Wheel Flange off the Arbor (41) being careful not to lose the Inner Wheel Flange Key (49).

For Models 61H120G4 and 61H150G4, using a wrench on the flats of the Collet Body (54) and the flats on the Collet Nut (56), unscrew the Collet Nut and remove the Collet (55).

For Models 61H120L6 and 61H150L6, unscrew and remove the cone wheel.

NOTICE

The Wheel End Bearing Cap (46) has left-hand threads.

3. **For Models 61H120H63, 61H120H64 and 61H150H63**, using a wrench on the hub of the Wheel Guard, unscrew and remove the Wheel Guard and Bearing Clamp Washer (44).

NOTICE

The Wheel Guard (47) has left-hand threads.

For all other models, using a wrench, unscrew and remove the Wheel End Bearing Cap and Bearing Clamp Washer (44).

4. Grasping the Arbor (41), Collet Body (54) or Cone Wheel Adapter (53), pull the assembled Arbor from the Arbor Housing (33).

5. **For Models 61H120G4 and 61H150G4**, using one wrench on the flats of the Collet Body and another on the flats of the Arbor, unscrew and remove the Collet Body.
For Models 61H120L6 and 61H150L6, using one wrench on the flats of the Cone Wheel Adapter and another on the flats of the Arbor, unscrew and remove the Cone Wheel Adapter.
6. If the Dust Washer (45) must be replaced, use a pointed probe to pick the Washer out of the Wheel End Bearing Cap or Wheel Guard.
7. Slide the Wheel End Bearing (43) off the Arbor and pull the Seal Cup Assembly (42) off the Arbor if it needs replacement.
8. Using a wrench on the flats of the Arbor and another on the flats of the Bearing Nut Assembly (31), unscrew and remove the Bearing Nut Assembly.
9. If the Seal Cup Assembly (38) requires replacement, pull it off the Bearing Nut Assembly.
10. Slide the Rear Arbor Bearing (40) off the Arbor.
11. If the Arbor Coupling (39) remained in the Arbor Housing when the Arbor was removed, strike the castellated end of the Housing against a block of wood to free the Coupling.
12. Using a thin blade screwdriver, spiral the Deflector Retaining Ring (37) out of the annular groove on the Arbor Housing.
13. Slide the Exhaust Deflector (34), Front Deflector Seal (36) and Rear Deflector Seal (35) off the castellated end of the Arbor Housing.

Disassembly of the Motor

1. Using a 5/64" hex wrench, unscrew and remove the two Rear End Plate Retaining Screws (12).
2. Using a wrench on the flats of the Arbor Housing and another on the flats of the Throttle Handle Assembly (1), unscrew and remove the Arbor Housing. Pull the assembled motor out of the Arbor Housing. Remove the two Motor Clamp Washers (30) from the front of the motor or from the inside of the Arbor Housing.
3. Clamp the Bearing Nut Assembly (31) at the front of the motor in leather-covered or copper-covered vise jaws with the Controller Assembly (17) upward.
4. Using the Controller Wrench (57) on the flats of the Controller Assembly, unscrew and remove the Controller Assembly.
5. Lift the Rear Rotor Bearing Washer (20), Rear End Plate Assembly (18) and Cylinder Assembly (21) off the Rotor (23).
6. Remove the Vanes (24) from the Rotor.
7. Remove the Rotor from the vise. Using leather-covered or copper-covered vise jaws, carefully grasp the vane portion of the Rotor in the vise with the Front Rotor Bearing (29) upward.
8. Using a wrench, unscrew and remove the Bearing Nut Assembly from the Rotor.

- Pull the Front Rotor Bearing (29), Rotor Spacer Assembly (27) and Front End Plate Assembly (25) off the hub of the Rotor. If the Seal Cup Assembly (28) must be replaced, pull the Assembly off the Rotor Spacer.

Disassembly of the Throttle

- Using one wrench on the Throttle Handle Assembly flats and another wrench on the Inlet Bushing (4), unscrew the Inlet Bushing and remove the Air Strainer Screen (5), Throttle Valve Spring (6) and the Throttle Valve (7) from the handle.
- If the Throttle Valve Seat (8) must be removed, insert a hooked rod through the central opening in the Seat and, catching the underside of the Seat, pull the Seat from the handle.

CAUTION

The Throttle Lever Pin must be pressed from the throttle handle in a specific direction. Refer to the Parts Information manual 16573263. Failure to remove the Pin correctly will distort or damage the throttle handle.

NOTICE

The pin hole in one side of the Lever is larger than the other to facilitate removal and installation. Removing the Pin will allow the Lever Lock Spring (16) and Lever Lock (14) to be removed.

- To remove the Throttle Lever Assembly (13), press the Throttle Lever Pin (11) out of the throttle handle.
- Lift off the Throttle Lever Assembly.
- If it is necessary to disassemble Throttle Lever Assembly (13), use a pin punch and hammer to drive the Lever Lock Pin (15) out the side of the Lever as shown in the Parts Information manual 16573263.
- To remove the Throttle Plunger Assembly (9), grasp the Plunger in copper-covered vise jaws and with a twisting action, pull the handle off the Plunger over the Throttle Plunger Stop (10).
- To remove the Throttle Plunger Bushing (2), proceed as follows:
 - Grasp the flats of a 1/4"-20 tap in copper-covered vise jaws with the thread cutting end upward.
 - Thread the Bushing (with the handle) onto the tap.

CAUTION

Do not heat the handle to remove the Bushing. Heat may cause damage to factory installed internal components.

- Using a plastic hammer, sharply rap the handle several times in the bushing area to loosen the retaining compound. Pull the handle with a twisting motion from the Bushing.

Assembly

General Instructions

- Always press on the **inner** ring of a ball-type bearing when installing the bearing on a shaft.
- Always press on the **outer** ring of a ball-type bearing when pressing the bearing into a bearing recess.
- Whenever grasping a tool or part in a vise, always use leather-covered or copper-covered vise jaws. Take extra care with threaded parts and housings.
- Always clean every part and wipe every part with a thin film of oil before installation.
- Apply a film of O-ring lubricant to all O-rings before final assembly.

Assembly of the Throttle

- If the Throttle Plunger Bushing (2) was removed, proceed as follows:
 - Insert the Throttle Plunger Bushing into the Throttle Handle Assembly (1) to a depth approximately one-half the length of the Bushing.
 - Put a few drops of M. I. Herson No. 822 sealant completely around the outside surface of the Bushing.
 - Rotate the Bushing approximately 180° to make certain the sealant makes complete contact around the outside of the Bushing.
 - Push the Bushing into the handle until it bottoms against the shoulder inside the handle.
 - Allow the sealant to cure for eight hours at room temperature.
- Install the Throttle Plunger Stop (10) in the annular groove in the Throttle Plunger (9).

NOTICE

Make certain the Throttle Plunger Stop enters the tool air flow chamber.

- With the Stop lubricated and using a turning motion, insert the assembled Throttle Plunger, Seal end leading, into the Bushing.
- If the Throttle Lever Assembly (13) was disassembled, proceed as follows:
 - Using a No. 43 drill or a piece of metal rod slightly under 0.090" diameter as a slave pin, position the Lever Lock (14) and Lever Lock Spring (16) in the Throttle Lever Assembly (13). Make certain the ends of the Spring are toward the tool inlet and the narrow end of the Lever Lock is toward the handle.
 - Check the functioning of the Lever Lock. If the Lock flattens against the Lever when the top portion of the Lock is pushed forward and returns to vertical when the Lock is released, it is assembled properly.

- While controlling the slave pin, start the Lever Lock Pin (15) into the side of the Lever as shown in the Drawing Parts Information Manual 16573263.
- While maintaining control of the slave pin, and using a hammer, tap the Lever Pin into position.

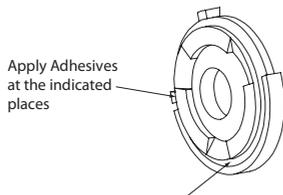
CAUTION

The Throttle Lever Pin must be pressed into the throttle handle in a specific direction. Refer to the Parts Information Manual 16573263. Failure to install the Pin correctly will distort or damage the throttle handle.

- Position the Throttle Lever Assembly (13) on the Throttle Handle Assembly and press the Throttle Lever Pin (11) into position securing the Lever Assembly to the handle.
- If the Throttle Valve Seat (8) was removed, use a flat-faced rod 3/4" (19 mm) in diameter by 4" (100 mm) long to push the Valve Seat into the handle until it seats.
- Rotate the Throttle Plunger Assembly until the hole in the Plunger aligns dead center with the hole in the Throttle Valve Seat.
- Using needle nose pliers to hold the short stem of the Throttle Valve (7), install the Valve inserting the long stem end through the hole in the Throttle Valve Seat and Throttle Plunger.
- Install the Throttle Valve Spring (6), small end first, over the short stem of the Throttle Valve.
- Insert the Air Strainer Screen (5), closed end leading, into the large end of the Valve Spring.
- Install the Inlet Bushing (4) and tighten it between 74 and 100 ft-lb (100 and 135 Nm) torque.

Assembly of the Motor

- Clamp the large body of the Rotor (23) in leather-covered or copper-covered vise jaws with the longer spindle shaft upward.
- Apply a small drop of a suitable thread-locking compound to the bottom of the O-ring groove at each of the four areas shown in Dwg. TPD1083 of the Front End Plate Assembly (25).



Glue points for 61H-A11 End Plate Assembly

(Dwg. TPD1083)

3. Place the Front End Plate Seal (26) on the end plate hub and lightly press the Seal against the adhesive at the four contact points to bond the Seal to the End Plate.
4. Install the End Plate Assembly, Seal end trailing, over the shaft of the Rotor.
5. Using finger pressure, press the Seal Cup Assembly (28), felt end trailing, onto the Rotor Spacer (27) until the felt seal cup is flush with one end of the Spacer. Impregnate the felt with **Ingersoll Rand** No. 50 Oil.
6. Install the Spacer, Seal Cup trailing, over the shaft of the Rotor. Make certain the Spacer enters the central opening of the Front End Plate and the Seal Cup Assembly enters the recess in the End Plate.
7. Install the Front Rotor Bearing, red stained end trailing, over the shaft of the Rotor.
8. If the Bearing Nut Retainers (32) were removed from the Bearing Nut Assembly (31), use snap ring pliers to install the Retainers on the Nuts.
9. Thread the Nut onto the shaft of the Rotor, Retainer end leading, and tighten the Nut between 14 and 19 ft-lb (19 to 26 Nm) torque.
10. Remove the Rotor from the vise and after turning it end for end, clamp the copper-covered vise jaws on the flats of the Bearing Nut with the unassembled rotor shaft upward.
11. Wipe each Vane (24) with a light film of oil and place a Vane in each slot in the Rotor.
12. One end of the Cylinder Assembly (21) has three ports while the other end has one. With the end having three ports toward the Front End Plate, install the Cylinder Assembly over the Rotor. Make certain the Cylinder Dowel Pin (22) at that end enters the small notch in the End Plate.
13. Install the Rear Rotor Bearing Washer (20) into the counterbore of the Rear End Plate Assembly (18).
14. Insert the Controller Assembly (17), bearing end leading, into the rear end plate counterbore against the Bearing Washer. Make certain the Wiper Plate Alignment Pin (19) enters the slot in the brass wiper plate of the Controller Assembly.
15. With the Rear End Plate Assembly leading, thread the Controller Assembly onto the shaft of the Rotor. Using the Controller Wrench (57), tighten the Controller Assembly between 8 and 10 ft-lb (10.5 and 13.5 Nm) torque.

Assembly of the Tool

1. Drop the two Motor Clamp Washers (30), concave side trailing, into the large end of the Arbor Housing (33).
2. Remove the assembled motor from the vise and insert it, Controller Assembly trailing, into the Arbor Housing. Make certain the Bearing Nut Assembly (31) at the front of the motor engages the Arbor Coupling (39).
3. Thread the Throttle Handle Assembly (1) into the assembled Arbor Housing and tighten the joint between 74 and 100 ft-lb (100 and 135 Nm) torque.
4. Install the two Rear End Plate Retaining Screws (12) flush with the handle surface or one thread below flush. If the Screws protrude above the handle surface, the Rear End Plate Assembly (18) is not properly engaged and is out of position.
5. Install the Rear Exhaust Deflector Seal (35) in the internal groove at the large end of the Exhaust Deflector (34).
6. Install the Front Deflector Seal (36) on the hub of the Arbor Housing adjacent to the wrench flats.

7. Slide the Exhaust Deflector onto the Arbor Housing and, using a thin blade screwdriver, spiral the Deflector Retaining Ring (37) into the groove ahead of the Deflector.
8. Using finger pressure, press the Seal Cup Assembly (38), felt end trailing, onto the small end of the Bearing Nut Assembly (31) until the felt seal cup is flush with the end of the Nut. Impregnate the felt with **Ingersoll Rand** No. 50 Oil.
9. Push the Rear Arbor Bearing (40) onto the threaded hub farthest from the wrench flats on the Arbor Assembly (41).
10. Thread the assembled Bearing Nut Assembly/Seal Cup Assembly onto the Arbor with the Seal Cup toward the Bearing. Tighten the Nut between 14 and 19 ft-lb (19 and 26 Nm) torque.
11. Position the Seal Cup Assembly (42), felt end trailing, onto the Arbor near the wrench flats. Use the Wheel End Bearing (43) to push the Seal Cup Assembly onto the Arbor until the Bearing seats. Remove the Bearing and impregnate the felt with **Ingersoll Rand** No. 50 Oil.
12. **For Models 61H120H63, 61H120H64 and 61H150H63**, proceed as follows:
 - a. Apply 1 cc of **Ingersoll Rand** No. 68 Grease to the inside surfaces of the Arbor Coupling (39) and install the Coupling on the Bearing Nut at the motor end of the Arbor.
 - b. Insert the assembled Arbor, Coupling end first, into the Arbor Housing, making certain the Coupling engages the Bearing Nut on the Rotor.
 - c. Install the Wheel End Bearing (43) and Bearing Clamp Washer (44), concave end leading, onto the Arbor.
 - d. If the Dust Washer (45) was removed from the inside of the Wheel Guard (47), install a new Washer and impregnate it with **Ingersoll Rand** No. 50 Oil.

NOTICE

The Wheel Guard has left-hand threads.

- e. While placing the Wheel Guard to the desired position, thread the Guard onto the Arbor Housing and tighten it between 40 and 50 ft-lb (54 and 68 Nm) torque.
- f. Insert the Inner Wheel Flange Key (49) into the slot on the Arbor.
- g. Align the internal slot in the Inner Wheel Flange (48) with the Key and install the Inner Wheel Flange on the Arbor through the Wheel Guard.
- h. Using snap ring pliers, install the Inner Wheel Flange Retainer (50) on the Arbor against the Flange.

NOTICE

To seat the Retainer and bias the motor, make a spacer from tubing that will fit over the Arbor and is approximately the size of the Retainer. After sliding the spacer onto the Arbor, thread the Wheel Flange Nut (52) onto the Arbor until the Retainer is snug against the Inner Wheel Flange. Remove the Nut and spacer.

- i. If the Oil Chamber Plug (3) was removed and the oil drained, fill the oil chamber with **Ingersoll Rand** No. 50 Oil and tighten the Plug between 3.5 and 6 ft-lb (5 and 8 Nm) torque.
- j. Install a grinding wheel, the Outer Wheel Flange (51) and the Wheel Flange Nut (52).
13. **For Models 61H120G4, 61H120L6, 61H150G4 and 61H150L6**, proceed as follows:
 - a. If the Dust Washer (45) was removed from the inside of the Wheel End Bearing Cap (46), install a new Washer and impregnate it with **Ingersoll Rand** No. 50 Oil.
 - b. Install the Wheel End Bearing (43) on the Arbor and position the Bearing Clamp Washer (44) on the Arbor with the concave end against the Bearing.
 - c. Position the Wheel End Bearing Cap over the Arbor against the Washer.

NOTICE

While tightening the Cone Wheel Adapter (53) or Collet Body (54), maintain the alignment of the Bearing, Washer and Cap to facilitate Arbor insertion into the Housing.

- d. Thread the Cone Wheel Adapter or Collet Body onto the Arbor and tighten it between 14 and 19 ft-lb (19 and 26 Nm) torque.
- e. Apply 1 cc of **Ingersoll Rand** No. 68 Grease to the inside surfaces of the Arbor Coupling (39) and install the Coupling on the Bearing Nut at the motor end of the Arbor.
- f. Insert the assembled Arbor, Coupling end first, into the Arbor Housing making certain the Coupling engages the Bearing Nut on the Rotor.

NOTICE

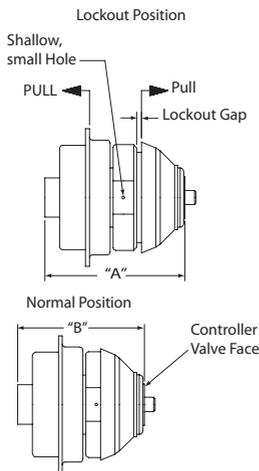
The Wheel End Bearing Cap has left-hand threads.

- g. Thread the Wheel End Bearing Cap into the Arbor Housing and tighten it between 40 and 50 ft-lb (54 and 68 Nm) torque.
- h. If the Oil Chamber Plug (3) was removed and the oil drained, fill the oil chamber with **Ingersoll Rand** No. 50 Oil and tighten the Plug between 3.5 and 6 ft-lb (5 and 8 Nm) torque.
- i. **For Models 61H120G4 and 61H150G4**, install the Collet (55), Collet Nut (56) and a burr.
- j. **For Models 61H120L6 and 61H150L6**, install a cone wheel.

Inspecting and Resetting the Controller

Over a period of time, wear on the valve face of the Controller Assembly (17) or on the nozzle face in the Throttle Handle Assembly (1) could cause the Controller to lock the Grinder in an inoperable condition. The cause of the locked condition must be corrected before the Grinder can be operated. To correct the condition, proceed as follows:

1. Using a 5/64" hex wrench, unscrew and remove the two Rear End Plate Retaining Screws (12).
2. Using a wrench on the flats of the Arbor Housing (33) and another on the flats of the Throttle Handle Assembly (1), unscrew and remove the Arbor Housing. Pull the assembled motor out of the Arbor Housing. Remove the two Motor Clamp Washers (30) from the front of the motor or from the inside of the Arbor Housing.
3. Clamp the Bearing Nut Assembly (31) at the front of the motor in a vise with the Controller Assembly upward.
4. Using the Controller Wrench (57) on the flats of the Controller Assembly, unscrew and remove the Controller Assembly.
5. Pull the Rear End Plate Assembly (18) and Rear Rotor Bearing Washer (20) off the Controller.
6. The Controller is in the locked position if the lockout gap shown in Dwg. TPD1085 exists and the "A" dimension measures 2.00" (50.8 mm).

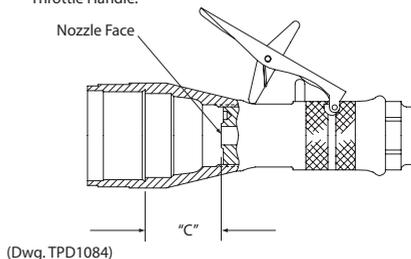


(Dwg. TPD1085)

To reset the Controller, proceed as follows:

- a. One of the flats on the metal ring has a shallow, small hole in the center of the flat. Position that flat upward and grasp the brass wiper plate and the nose cone section of the Controller with your hands.

- b. While pulling the wiper plate away from the nose cone section, lightly rap the entire Assembly on a workbench surface. Repeat this process until the nose cone section goes flush against the ring when the wiper plate and nose cone are released.
7. After resetting the Controller, and using verniers or a micrometer, measure the length of the Controller from the end of the shaft to the end of the nose cone. If the "B" dimension in Dwg. TPD1085 measures less than 1.896" (48.16 mm), replace the Controller Assembly.
8. To determine if the nozzle face in the Throttle Handle is worn, a measurement must be taken from the nozzle face to the shoulder where the brass wiper plate seats. (Refer to Dwg. TPD1084). If the "C" dimension is greater than 1.365" (34.67 mm), replace the Throttle Handle.



NOTICE

There are a number of ways to obtain the "C" dimension in Dwg. TPD1084. One method is to make a steel plug having a 1.594" (40.5 mm) diameter, a 1/2" (13 mm) hole through the center and both ends surface-ground parallel to a 1.25" (31.75 mm) length. Insert the plug into the Throttle Handle and using a depth micrometer, measure through the plug to the nozzle face. Subtract the length of the plug from the measured length to determine the "C" dimension.

9. Install the Rear Rotor Bearing Washer into the counterbore of the Rear End Plate Assembly.
10. Insert the Controller Assembly, bearing end leading, into the rear end plate counterbore against the Bearing Washer. Make certain the Wiper Plate Alignment Pin (19) enters the slot in the brass wiper plate of the Controller Assembly.
11. With the Rear End Plate Assembly leading, thread the Controller Assembly onto the shaft of the Rotor (23). Make certain the Cylinder Dowel Pin (22) enters the notch in the End Plate.
12. Using the Controller Wrench, tighten the Controller Assembly between 8 and 10 ft-lb (10.5 and 13.5 Nm) torque.
13. Drop the two Motor Clamp Washers, concave side trailing, into the large end of the Arbor Housing.
14. Remove the assembled motor from the vise and insert it, Controller Assembly trailing, into the Arbor Housing. Make certain the Bearing Nut Assembly at the front of the motor engages the Arbor Coupling (39).

15. Thread the Throttle Handle Assembly into the assembled Arbor Housing and tighten the joint between 74 and 100 ft-lb (100 and 135 Nm) torque.
16. Install the two Rear End Plate Retaining Screws flush with the handle surface or one thread below flush. If the Screws protrude above the handle surface, the Rear End Plate Assembly is not properly engaged and is out of position.

17. After assembling the tool, test the Grinder. If the Controller length "B" and nozzle face length "C" were within tolerance and the Controller locks the Grinder in an inoperable condition when tested, replace the Controller Assembly.

Troubleshooting Guide

Trouble	Probable Cause	Solution
Low power or low free speed	Insufficient air pressure at the inlet	Check the air pressure at the inlet. It must be 90 psig (6.2 bar/620 kPa).
	Plugged Screen	Clean the Inlet Bushing Screen in a clean, suitable, cleaning solution. If it cannot be cleaned, replace it. WARNING Never operate a Grinder without an Inlet Screen. Ingestion of dirt into the Grinder can, in some cases, cause an unsafe condition.
	Worn or broken Vanes	Replace a complete set of new Vanes.
	Worn or broken Cylinder	Replace the Cylinder if it appears cracked or if the bore is wavy or scored.
	Improper lubrication or dirt build-up in the motor	Lubricate the Grinder as instructed in LUBRICATION . If lubrication does not result in satisfactory operation, disassemble the motor, clean and inspect all parts.
Rough operation	Worn or broken Rear Rotor Bearing Assembly or Front Rotor Bearing	Examine each bearing. Replace the Rear Rotor Seal Assembly if worn or damaged or replace the Front Rotor Bearing.
	Bent Arbor	Mount the Arbor on centers. Check bearing diameter runout with an indicator. Replace the Arbor if runout exceeds 0.002" (0.051 mm) Total Indicator Reading.
Scoring	Improper assembly	Make certain that all motor parts are properly aligned prior to installing the Handle Assembly into the Arbor Housing.
Air leaks	Worn Valve Seat or Valve Seat Washer	Replace worn parts.
	Worn Throttle Valve Seals	Replace both Seals.
	Oil Chamber Plug worn or not tight	Tighten the Plug. If the problem persists, replace the Plug.
High free speed	Worn Rear End Plate Assembly and/or Controller Seal	Replace the Rear End Plate Assembly if the large inside diameter of the Rear End Plate is worn to 1.156" (38.506 mm) or larger and/or the outside diameter of the Controller Seal is worn to 1.511" (38.379 mm) or smaller.
Grinder will not run	Coupling Nut too tight	Loosen Coupling Nut and retighten to 47.5 to 52.5 ft-lb (64.5 to 71.5 Nm) torque. WARNING Do not exceed 52.5 ft-lb (71.5 Nm) torque.

Related Documentation

For additional information refer to:
 Product Safety Information Manual 04584959, 04580288.
 Product Information Manual 16573214, 16576100, 16576118, 16576126.
 Parts Information Manual 16573263.

Manuals can be downloaded from ingersollrandproducts.com.

Notes:

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