



Disassembly Instructions – 1.2 hp Right Angle Disc Grinder

Right Angle and Motor Disassembly:

1. Shut off the air supply and disconnect the grinder.
2. Remove all mounting accessories: flange, abrasive, and backing disc.
3. Remove the **52169** Handle.
4. Use the **95331** Hex Key (4 mm) to remove the **95897** Screws (5), and the **52094** or **52149** Guard from the housing.
5. Pull the **52117** Spindle along with the associated components out of the housing.
6. Hold the housing in a vise with aluminum or bronze jaws. Secure the housing between the handle mounting boss and the **52164** Exhaust Cover.
7. Roll back the **07136** Grip to expose the wrench flats on the **52090** Adapter. Use an adjustable wrench to remove the adapter from the housing. Turn counterclockwise.
8. Pull the motor assembly out of the housing.
9. Carefully hold the pinion gear stationary in aluminum or bronze jaws. Use an adjustable wrench to remove the governor assembly. Turning clockwise. (LEFT HAND THREADS)
10. Fasten the **96346** Bearing Separator (2") around the portion of the **07118** Cylinder that is closest to the **07114** Rear Bearing Plate.
11. Position the motor assembly with the separator in the **96232** Arbor Press (#2) with the pinion pointing down.
12. Use a 3/16" or 5 mm diameter flat end drive punch as a press tool and the arbor press to push the rotor out of the **01007** Bearing.
13. Use the **96214** Bearing Removal Tool to remove the **01007** Bearing from the **07114** Rear Bearing Plate.
14. Remove the **95939** Retaining Ring from the pinion gear. Position the flat side of the bearing separator toward the gear teeth and secure it to the pinion gear. Place the bearing separator along with the remaining motor components in the arbor press with the pinion gear pointing up. Use a 1/4" or 6 mm diameter flat end drive punch to push the **07106** Rotor out of the pinion gear.
15. Remove the **07119** Front Bearing Plate, **01036** Bearing and the **01277** Shims from the rotor.
16. Use a 1/4" or 6 mm diameter flat end drive punch to remove the **50424** Spindle Cap and the **12152** Bearing from the housing.
17. Hold the **52117** Spindle in aluminum or bronze jaws. Use an adjustable wrench to remove the **52118** Spindle Nut. Turn counterclockwise.
18. Use the bearing separator and the arbor press to remove the **50431** Bearing and the bevel gear.

Right Angle and Motor Disassembly Complete.

Valve Disassembly:

1. Remove the **07147** Plug. Turn counterclockwise.
2. Remove the **07146** Packing, the **07145** Spring, and the **07168** Valve Stem Assembly.
3. Remove the **01017** Pin and the **01089** Safety Throttle Lever.

Valve Disassembly Complete.

Muffler Disassembly:

1. Use the **95266** Hex Key (3 mm) to remove the **50511** Screws (2), **01791** Washers (2), **52180** Clamp and the **52164** Exhaust Cover.
2. Remove the **52167** Felt Silencer and the **52165** Gasket.

Muffler Disassembly Complete.

Important: Clean and inspect all parts before assembling.

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Assembly Instructions – 1.2 hp Right Angle Disc Grinder

Muffler Assembly:

1. Install the **52164** Gasket onto the housing.
2. Install the **52167** Felt Silencer into the **52164** Exhaust Cover and attach these to the housing with the **52180** Clamp, **50511** Screws (2), and the **01791** Washers (2).

Muffler Assembly Complete.

Valve Assembly:

1. Install the **07146** Packing onto the **07147** Plug.
2. Insert the **07145** Spring into the **07168** Valve Stem Assembly and install these into the **07141** Valve Body.
3. Secure the valve components in place with the **07147** Plug. (Torque to 17 N·m/150 in. lbs.)
4. Install the **01089** Safety Throttle Lever and secure it with the **01017** Pin.

Valve Assembly Complete.

Right Angle and Motor Assembly:

1. Select .003" (.08 mm) shim thickness from the **01277** Shim Pack. Install the shims into the **07119** Front Bearing Plate and install the **01036** Bearing.
2. Install the bearing/plate onto the **07106** Rotor. Install the **50435** Key, pinion gear and the **95939** Retaining Ring.
3. Use a .001" (.03 mm) feeler gauge to check the clearance between the front bearing plate and the rotor.
4. The clearance should be .001" (.03 mm) to .0015" (.04 mm). If the clearance needs adjustment, repeat steps 1-4 adding or removing shims as required.
5. Lubricate the **07107** Vanes (5) with the **95842** Dynabrade Air Lube 10W/NR (or equivalent). Install vanes into the rotor.
6. Install the **07118** Cylinder over the **07106** Rotor. Line up the cylinder air inlet with the air inlet in the **52140** Rear Bearing Plate.
7. Place the RASIED OUTSIDE DIAMETER of the **96244** Bearing Press Tool against the outside race of the **01007** Bearing. Use the **96232** Arbor press with the bearing press tool to install the bearing into the **07114** Rear Bearing Plate.
8. Place the RASIED INSIDE DIAMETER of the **96244** Bearing Press Tool against the inside race of the **01007** Bearing. Carefully press the bearing/plate onto the **07106** Rotor until the plate just touches the **07118** Cylinder. This will establish a snug fit between the bearing plates and the cylinder.
9. Carefully secure the pinion in a vise with aluminum or bronze jaws with the end of the rotor pointing up.
10. Apply a small amount of the Loctite #567 (or equivalent) to the threaded stem of the **07113** or **07124** Governor Cage. Install the governor assembly onto the **07106** Rotor. Turn counterclockwise. (LEFT HAND THREAD) (Torque to 9 N·m/80 in. lbs.)
11. Install the motor assembly into the housing.
12. Secure the housing in a vise with aluminum or bronze jaws. Hold the housing between the handle-mounting boss and the **52164** Exhaust Cover.
13. Apply a small amount of the Loctite #567 (or equivalent) to the threads of the **52090** Adapter. Install the adapter and valve body assembly. (Torque to 50 N·m/450 in. lbs.)

Important: Remove the tool from the vise and connect it to the air supply. Test run the tool to make sure that the air motor is functioning properly. Caution: Keep fingers, jewelry and loose clothing away from the pinion gear!

14. Position the bevel gear on the **52117** Spindle and press it into place with the **96232** Arbor Press. Press the **50431** Bearing onto the **52117** Spindle.
15. Install the **52088** Spacer, **50412** Felt Ring, and **52089** Washer onto the spindle.
16. Secure the **52117** Spindle in the vise and install the **52118** Spindle Nut. (Torque to 23 N·m/200 in. lbs.)
17. Position the housing in the vise so that the right angle spindle opening is facing up.
18. Place the **50424** Spindle Cap into the housing with the recessed side facing the **12152** Bearing.

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Disassembly/Assembly Instructions

19. Use the RAISED OUTSIDE DIAMETER of the **96241** Bearing Press Tool to install the **12152** Bearing. Make sure that it fits all the way into the housing bearing pocket.

Important: Follow these steps to adjust the fit of the Spiral Bevel Gear / Pinion Set.

20. Install the spindle assembly into the housing so that the bevel and pinion gear teeth match-up.
21. Install the **52094** or **52149** Guard. Secure it with 3 of the **95897** Screws. Slowly rotate the spindle back and forth to check the amount of backlash or clearance between the bevel and pinion gear teeth. If there is no backlash, remove the spindle assembly, and add the **52120** Shim thickness required to set minimal backlash without the bevel/pinion gear teeth binding or tight. When the correct adjustment is set, install all 5 of the **95897** Screws. (Torque to 7 N·m/60 in. lbs.)
22. Use the **95541** Lubricant Gun to apply 3 plunges of the **95542** Grease through the **01041** Lubricant Fitting.
Notice: Do not overload the gear area of the housing with grease. After every 16 hours of use apply 3 plunges of the **95542** Grease with the **95541** Grease Gun through the **01041** Grease Fitting.

Tool must be tested. Check spindle speed of grinder regularly with 90 PSIG (6.2 Bar) at tool inlet without abrasive product mounted. In accordance with EN 792 the no-load speed may not exceed the rated speed by more than 10%. Important: Apply several drops of the 95842 Dynabrade Air Lube 10W/NR (or equivalent) into the air inlet and run the tool without any accessories or abrasive product mounted. Check the RPM with a tachometer to ensure the correct operating speed. Once the correct RPM is verified, mount only approved accessories that have been inspected and are free of defects. Only use the correct mounting flanges and backing disc. Make sure to properly secure all accessories onto the tool.

Right Angle and Motor Assembly Complete.

Tool Assembly Complete.

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