

1/4" COMPOSITE AIR DIE GRINDER



ASSEMBLY AND OPERATING INSTRUCTIONS



Due to continuing improvements, actual product may differ slightly from the product described herein.



3491 Mission Oaks Blvd., Camarillo, CA 93011 Visit our Web site at http://www.harborfreight.com

TO PREVENT SERIOUS INJURY, READ AND UNDERSTAND ALL WARNINGS AND INSTRUCTIONS BEFORE USE.

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For technical questions and replacement parts, please call 1-800-444-3353.

Specifications

| Collet Capacity | 1/4" Diameter |
|----------------------|--|
| Maximum Air Pressure | 90 PSI |
| Air Consumption | 5 SCFM average |
| Air Inlet Diameter | 1/4" - 18 NPT (female inlet) |
| Maximum RPM | 22,000 RPM |
| Activation Method | Paddle Style Activator with Spring- Loaded Safety Lever |
| Overall Dimensions | 1-15/16" D X 6-3/4" L X 2-13/16" H |
| Weight | 1.55 lbs. |

Save This Manual

You will need the manual for the safety warnings and precautions, assembly instructions, operating and maintenance procedures, parts list and diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep the manual and invoice in a safe and dry place for future reference.

Safety Warnings and Precautions

WARNING: When using tool, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

Read all instructions before using this tool!

- 1. Keep work area clean. Cluttered areas invite injuries.
- 2. Do not operate pneumatic tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. Pneumatic tools create sparks which may ignite flammables..
- 3. **Keep children away**. Children must never be allowed in the work area. Do not let them handle machines, tools, extension cords, or air hoses.
- 4. **Store idle equipment**. When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep out of reach of children.
- 5. **Use the right tool for the job**. Do not attempt to force a small tool or attachment to do the work of a larger industrial tool. There are certain applications for which this tool was designed. It will do the job better and more safely at the rate for which it was intended. Do not modify this tool and do not use this tool for a purpose for which it was not intended.
- 6. **Dress properly**. Do not wear loose clothing or jewelry as they can be caught in moving parts. Protective, electrically non-conductive clothes and non-skid footwear are recommended when working. Wear restrictive hair covering to contain long hair.

- 7. Stay alert. Watch what you are doing and use common sense when operating a pneumatic tool. Do not use a pneumatic tool while tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating pneumatic tools may result in serious personal injury.
- 8. Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts.
- 9. Avoid accidental starting. Be sure the Trigger Lever (14) is off before connecting to the air supply. Carrying pneumatic tools with your finger on the Trigger, or connecting pneumatic tools to the air supply with the Trigger on, invites accidents.
- 10. **Remove adjusting keys or wrenches before turning on the tool.** A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.
- 11. **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control and of the toll in unexpected situations.
- 12. Use safety equipment. Always wear ANSI-approved safety glasses underneath a full face shield, and hearing protection.
- 13. **Replacement parts and accessories**. When servicing, use only identical replacement parts. Use of any other parts will void the warranty. Only use accessories intended for use with this tool. Approved accessories are available from Harbor Freight Tools.
- 14. **Do not operate tool if under the influence of alcohol or drugs**. Read warning labels if taking prescription medicine to determine if your judgement or reflexes are impaired while taking drugs. If there is any doubt, do not operate the Wrench.
- 15. **Use proper size and type extension cord**. If an extension cord is required, it must be of the proper size and type to supply the correct current to the compressor without heating up. Otherwise, the extension cord could melt and catch fire, or cause electrical damage to the compressor. Check your air compressor's manual for the appropriate size cord.
- 16. **Maintenance**. For your safety, maintenance should be performed regularly by a qualified technician.
- 17. **Compressed air only**. Use clean, dry regulated, compressed air at 90 PSI. Never use oxygen, carbon dioxide, combustible gases, or any other bottled gas as a power source for this tool.
- 18. When connecting to the air supply: Prior to each use, if an automatic oiler is not used, add two drops of air tool oil (not included) into the Air Inlet (13) fitting of the Die Grinder.
- 19. Always disconnect the Die Grinder from its compressed air supply source, and squeeze the Trigger Lever (14) to release all compressed air in the tool before performing any maintenance or services.
- **Note:** Performance of the compressor (if powered by line voltage) may vary depending on variations in local line voltage. Extension cord usage may also affect tool performance.

20. Industrial applications must follow OSHA requirements.

Warning: Some dust created by power sanding, sawing, grinding, drilling and other construction activities contain chemicals known (to the State of California) to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are: lead from lead-based paints, crystalline silica from bricks and cement or other masonry products, arsenic and chromium from chemically treated lumber. Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area and work with approved safety equipment, such as those dust masks that are specifically designed to filter out microscopic particles (*California Health & Safety Code 25249.5, et seq.*)

The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

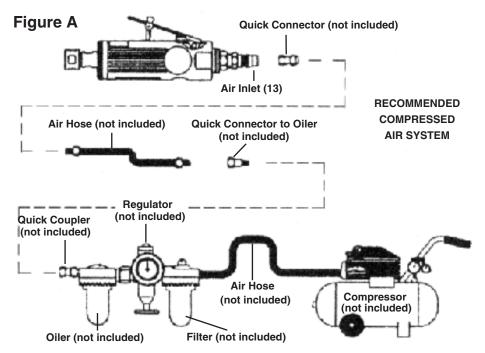
Unpacking

When unpacking, check to make sure the parts listed on page 7 are included. If any parts are missing or broken, please call Harbor Freight Tools at the number on the cover of this manual as soon as possible.

Assembly and Operating Instructions

To Attach a Quick Connector:

1. It is recommended that prior to use, you attach a Quick Connector (not included) into the Die Grinder's Air Inlet (13). To do so, wrap approximately 3" of pipe thread sealer tape (not included) around the male threads of a Quick Connector. Then firmly tighten the Quick Connector into the Air Inlet. (See Figure A.)



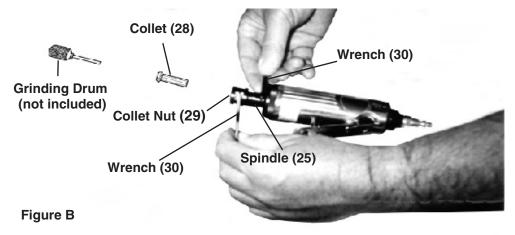
SKU 95029 For technical questions, please call 1-800-444-3353

Assembly and Operation Instructions (continued)

Note: The Composite Air Die Grinder is designed to be used with grinding attachments, backing pads and sanding discs and other small attachments such as the grinding drum shown in Figure B below.

To Operate the Die Grinder:

- 1. WARNING: Prior to performing any assembly and/or adjustment procedures, make sure the air supply hose (not included) is disconnected from the Die Grinder.
- 2. WARNING: Always wear ANSI-approved safety goggles, a full face shield, and hearing protection when operating the Die Grinder.
- 3. Use the two Wrenches (30) to loosen the Collet Nut (29). (See Figure B below.)



- 4. Insert the 1/4" diameter shank of a Grinding Accessory (not included) fully into the Collet (28). Then, firmly re-tighten the Collet Nut (29) to lock both the Collet and Grinding Drum in place. (See Figure B.)
- 5. Connect the air supply hose to the Air Inlet (13). Turn on the air compressor and set its regulator to the recommended 90 PSI for the Die Grinder.
- 6. In order to keep the air supply hose out of the way, hang it over your shoulder.
- 7. **IMPORTANT!** Grip the Die Grinder firmly with **both** hands.
- 8. Trip the Lever Pin (15) with your finger. Then slowly apply hand pressure to the Lever (14) until the desired speed is obtained. (**See Figure C.**) NOTE: The Die Grinder always turns the Grinding Drum clockwise (reference: while holding the tool as you would when operating it).



Figure C

Assembly and Operation Instructions (continued)

- 9. With a firm grip on the Die Grinder, lightly apply the Grinding Drum to the workpiece, slowly and steadily moving the Grinding Drum to the right and left until you have achieved the desired appearance (finish) on the workpiece.
- 10. Once the work is completed, release the hand pressure on the Lever (14). The Lever Pin (15) will automatically return to its locked position to prevent the Lever from accidentally being activated.
- 11. Turn off the air compressor. Trip the Lever Pin (15) with your finger and slowly squeeze the Trigger (14) to release any remaining air pressure from the Die Grinder. Then disconnect the air hose from the tool.
- 12. Remove the Grinding Drum from the Die Grinder. Then store the tool in a clean and dry location out of the reach of children.

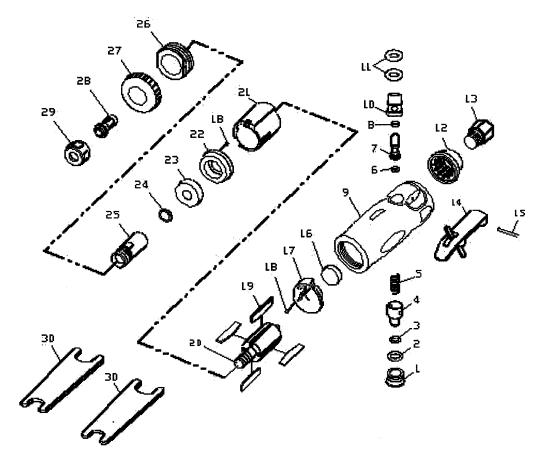
Inspection, Maintenance, and Cleaning

- 1. Warning: Always make sure the Lever (14) is in its "OFF" position and disconnect the Die Grinder from its compressed air supply before performing any inspection, adjustments, maintenance, or cleaning.
- 2. **Before each use,** inspect the general condition of the Die Grinder. Check for loose screws, misalignment or binding of moving parts, cracked or broken parts, damaged air hose, and any other condition that may affect its safe operation. If abnormal noise or vibration occurs, have the problem corrected before further use. **Never use damaged equipment.**
- 3. Daily: With a clean cloth, remove all dirt, oil, and grease from the Die Grinder. If necessary, you may use a mild detergent. Do not use solvents, as damage to the Die Grinder may occur. Do not immerse the Die Grinder in any liquids.

| Part | Description | Q'ty |
|------|---------------|------|
| 1 | Plug Screw | 1 |
| 2 | O-Ring | 1 |
| 3 | O-Ring | 1 |
| 4 | Air Regulator | 1 |
| 5 | Valve Spring | 1 |
| 6 | O-Ring | 1 |
| 7 | Valve Stem | 1 |
| 8 | O-Ring | 1 |
| 9 | Motor Housing | 1 |
| 10 | Valve Bushing | 1 |
| 11 | O-Ring | 2 |
| 12 | Muffler | 1 |
| 13 | Air Inlet | 1 |
| 14 | Trigger Lever | 1 |
| 15 | Lever Pin | 1 |

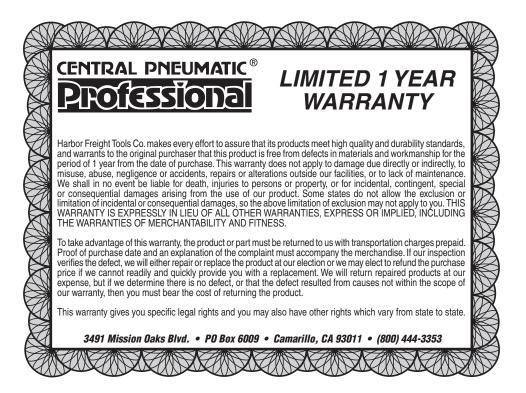
Parts List and Diagram

| Part | Description | Q'ty |
|------|---------------|------|
| 16 | Bearing | 1 |
| 17 | Bearing Plate | 1 |
| 18 | Ball | 2 |
| 19 | Rotor Blade | 4 |
| 20 | Rotor | 1 |
| 21 | Cylinder | 1 |
| 22 | Bearing Plate | 1 |
| 23 | Bearing | 1 |
| 24 | Washer | 1 |
| 25 | Spindle | 1 |
| 26 | Lock Ring | 1 |
| 27 | Housing Cap | 1 |
| 28 | Collet | 1 |
| 29 | Collet Nut | 1 |
| 30 | Wrench | 2 |



NOTE: Some parts are listed and shown for illustration purposes only and are not available individually as replacement parts.

Warranty



PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR DISTRIBU-TOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

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