



# !WARNING

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known 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 and other masonry products, and
- 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 specially designed to filter out microscopic particles.

## !WARNING

- MAXIMUM RPM OF 11,000
- MAX AIR PRESSURE: 90 PSIG, 6.2 BAR
- RATED RPM OF THE ACCESSORY USED **MUST EXCEED THE MAXIMUM TOOL RPM SHOWN**
- USE RECOMMENDED GUARD



ALWAYS READ INSTRUCTIONS BEFORE USING POWER TOOLS



ALWAYS WEAR SAFETY GOGGLES



WEAR HEARING PROTECTION



AVOID PROLONGED EXPOSURE TO VIBRATION

## SPECIFICATIONS

Free Speed . . . . .	11,000 RPM
Spindle Size . . . . .	3/8" - 24
Disc Size . . . . .	4-1/2"
Air Inlet . . . . .	1/4" NPT
Hose Size . . . . .	3/8"
Air Pressure . . . . .	90 psi
Air Consumption . . . . .	4 cfm
Length . . . . .	9"
Sound Level . . . . .	.89 dBA
Weight . . . . .	4.1 lbs.

# CAT412HDG

## 4-1/2" Heavy Duty Grinder

## WARNING - FOLLOW THESE RULES FOR SAFE OPERATION!



This Instruction Manual Contains Important Safety Information.

Read THIS INSTRUCTION MANUAL Carefully and understand ALL INFORMATION Before Operating THIS Tool.

- Always operate, inspect and maintain this tool in accordance with American National Standards Institute Safety Code of Portable Air Tools (ANSI B186.1) and any other applicable safety codes and regulations.
- For safety, top performance and maximum durability of parts, operate this tool at 90 psig/6.2 bar max air pressure with 3/8" diameter air supply hose.



- Always wear impact-resistant eye and face protection when operating or performing maintenance on this tool. Always wear hearing protection when using this tool.



- High sound levels can cause permanent hearing loss. Use hearing protection as recommended by your employer or OSHA regulation.
- Keep the tool in efficient operating condition.
- Operators and maintenance personnel must be physically able to handle the bulk, weight and power of this tool.



- Air under pressure can cause severe injury. Never direct air at yourself or others. Always turn off the air supply, drain hose of air pressure and detach tool from air supply before installing, removing or adjusting any accessory on this tool, or before performing any maintenance on this tool. Failure to do so could result in injury. Whip hoses can cause serious injury. Always check for damaged, frayed or loose hoses and fittings, and replace immediately. Do not use quick detach couplings at tool. See instructions for correct set-up.



- Air powered tools can vibrate in use. Vibration, repetitive motions or uncomfortable positions over extended periods of time may be harmful to your hands and arms. Discontinue use of tool if discomfort, tingling feeling or pain occurs. Seek medical advice before resuming use.



- Place the tool on the work before starting the tool. Do not point or indulge in any horseplay with this tool.
- Slipping, tripping and/or falling while operating air tools can be a major cause of serious injury or death. Be aware of excess hose left on the walking or work surface.
- Keep body working stance balanced and firm. Do not overreach when operating the tool.
- Anticipate and be alert for sudden changes in motion during start up and operation of any power tool.
- Do not carry tool by the hose. Protect the hose from sharp objects and heat.
- Tool shaft may continue to rotate briefly after throttle is released. Avoid direct contact with accessories during and after use. Gloves will reduce the risk of cuts or burns.



- Keep away from rotating end of tool. Do not wear jewelry or loose clothing. Secure long hair. Scalping can occur if hair is not kept away from tool and accessories. Choking can occur if neckwear is not kept away from tool and accessories.
- Correct grinding wheel mounting is necessary to prevent injury from broken wheels. Do not use chipped or cracked grinding wheels. Grinding wheels should be a free fit on the spindle to prevent stress at the hole. Use only wheel collars that come with the grinder for mounting the grinding wheel. Flat washers or other adapters may over stress the wheel. Always use heavy paper blotter discs between the wheel collars and the grinding wheel. Tighten the wheel on the spindle to prevent spin off when the air grinder is turned off.
- Do not lubricate tools with flammable or volatile liquids such as kerosene, diesel or jet fuel.
- Do not force tool beyond its rated capacity.
- Do not remove any labels. Replace any damaged labels.

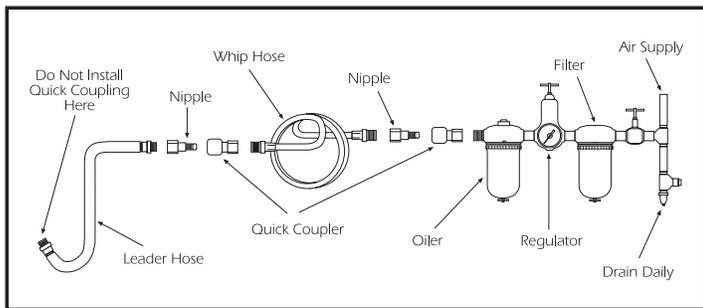


Figure 1

## AIR SUPPLY

Tools of this class operate on a wide range of air pressures. It is recommended that air pressure of these tools measures 90 PSI at the tool while running free. Higher pressure (over 90 psig; 6.2 bar) raises performance beyond the rated capacity of the tool which will shorten tool life because of faster wear and could cause injury.

Always use clean, dry air. Dust, corrosive fumes and/or water in the air line will cause damage to the tool. Drain the air tank daily. Clean the air inlet filter screen on at least a weekly schedule. The recommended hookup procedure can be viewed in the above figure.

The air inlet (Figure 2) used for connecting air supply has standard 1/4" NPT. Line pressure should be increased to compensate for unusually long air hoses (over 25 feet). Minimum hose diameter should be 3/8" I.D. and fittings should have the same inside dimensions and be tightly secured.

## LUBRICATION & MAINTENANCE

Lubricate the air motor daily with quality air tool oil. If no air line oiler is used, run 1/2 ounce of air tool oil through the tool by squirting oil into the tool air inlet or into the nearest connection to the air inlet, reconnecting air supply, and then running the tool. Do not use more than 1/2 ounce of oil, as overfilling will reduce the performance of the tool.

## TROUBLESHOOTING

Other factors outside the tool may cause loss of power or erratic action. Reduced compressor output, excessive drain on the air line, moisture or restrictions in air pipes or the use of hose connections of improper size or poor conditions may reduce air supply. If outside conditions are in order, and the tool still performs erratically, disconnect tool from hose and take tool to your nearest Cornwell authorized service center.

## OPERATION



Always use the recommended wheel guard to prevent injury from broken grinding wheel parts. If a guard has withstood a wheel breakage, discontinue its use and replace it with a new guard. It may be damaged. Position the guard between the grinding wheel and the operator. Use barriers to protect others from wheel fragments and grinding sparks.



Always wear impact-resistant eye and face protection when involved in the operation of this tool. Even small projectiles can injure eyes and cause blindness. A grinding wheel that bursts can cause very serious injury. Daily measure the air grinder speed with a tachometer to make sure it's not greater than the RPM marked on the grinding wheel. Never use a grinding wheel marked with a speed lower than the air grinder speed.

Before grinding, test grinding wheel by briefly running the tool at full throttle. Be sure to use a barrier (such as under a heavy work table) to stop any possible broken wheel parts.

### To Assemble Grinding Discs:

1. Use stop spanner (#53) to hold gear shaft (#33).
2. Screw on flange (#38) with shoulder side facing tool. Tighten.
3. Attach grinding disc wheel.
4. Screw on flange nut (#40), shoulder side facing tool. Secure tightly!



Figure 2

## WARRANTY

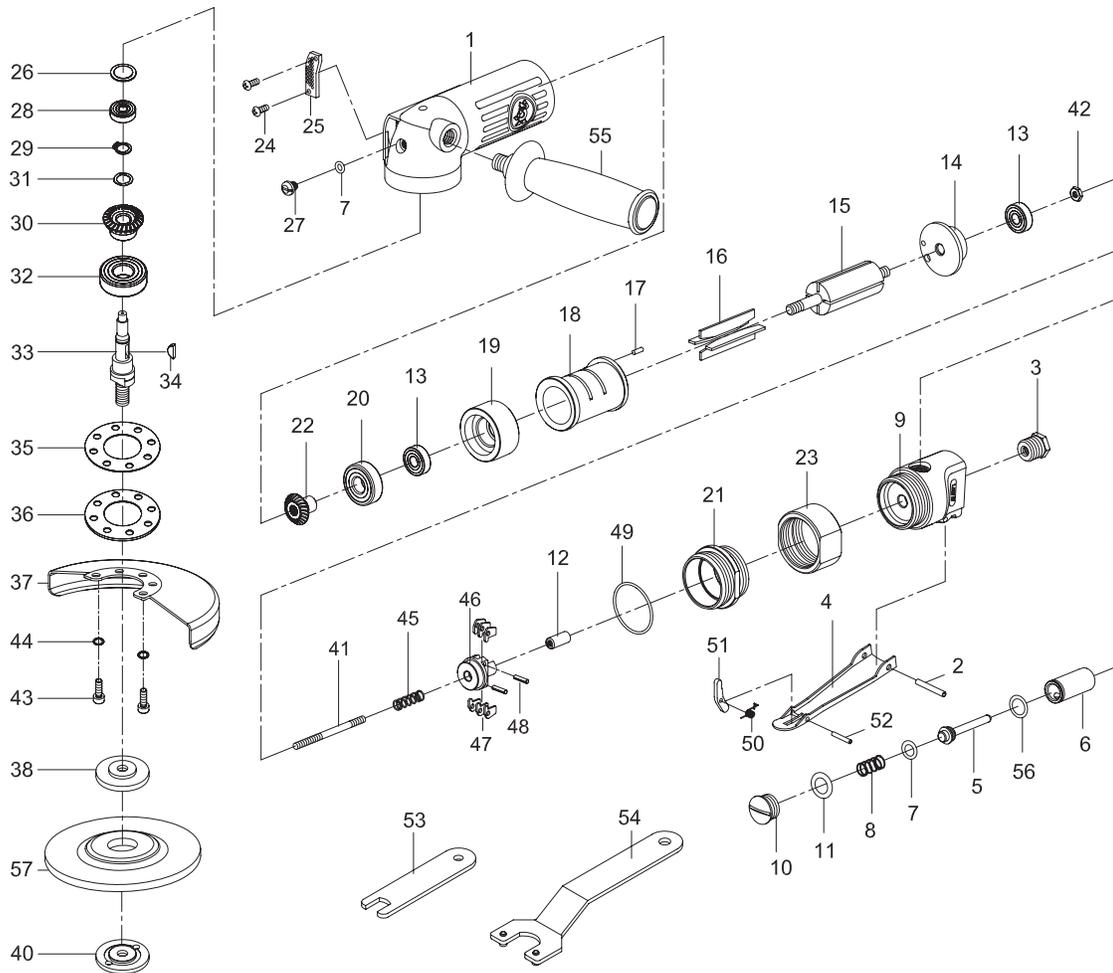
Cornwell warrants its air tools for a period of 1 year to the consumer. We will repair any air tool covered under this warranty which proves to be defective in material or workmanship during the warranty period. In order to have your tool repaired, return the tool to any Cornwell Authorized Warranty Center, freight prepaid. Please include a copy of your proof of purchase and a brief description of the problem. The tool will be inspected and if any part or parts are found to be defective in material or workmanship, they will be repaired free of charge and the repaired tool will be returned to you freight prepaid.

This warranty gives you specific rights. You may also have other rights which vary from state to state.

The foregoing obligation is Cornwell's sole liability under this or any implied warranty and under no circumstances shall Cornwell be liable for any incidental or consequential damages.

Note: Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

# PARTS BREAKDOWN - CAT412HDG



Ref. #	Item #	DESCRIPTION	QTY.	Ref. #	Item #	DESCRIPTION	QTY.
1	RS21101	Motor Housing	1	30	RS21110	Bevel Gear	1
2	RS21158	Spring Pin	1	31	RS21143	Wave Washer	1
3	RS21157	Air Inlet	1	32	RS21109	Ball Bearing	1
4	RS21160	Throttle Lever Assy.	1	33	RS21111	Spindle	1
5	RS41205	Valve Stem	1	34	RS21112	Key	1
6	RS41206	Bushing	1	35	RS21108	Gasket	1
7	RS41207	O-Ring	2	36	RS21107	Retainer	1
8	RS21154	Valve Spring	1	37	RS41237	Disc Cover	1
9	RS21156	Throttle Valve Housing	1	38	RS41238	Flange	1
10	RS41210	Throttle Lever Plug	1	40	RS41240	Flange Nut	1
11	RS43006	O-Ring	1	41	RS41241	Adjust Screw	1
12	RS21146	Plunger	1	42	RS41242	Adjust Nut	1
13	RS30524	Ball Bearing	2	43	RS41243	Screw	4
14	RS21126	Rear End Plate	1	44	RS187144	Spring Washer	4
15	RS21124	Rotor	1	45	RS21128	Spring	1
16	RS21125	Rotor Blade	4	46	RS21144	Governor Assy. (Incl. #12, 41, 42, 45, 46, 47(6), 48(2))	1
17	RS21122	Spring Pin	1	47	RS21145	Pendulum	6
18	RS41218	Cylinder	1	48	RS21147	Spring Pin	2
19	RS21120	Front End Plate	1	49	RS21139	O-Ring	1
20	RS21118	Ball Bearing	1	50		Torsion Spring (Incl. w/ #4)	1
21	RS41221	Lock Nut	1	51		Throttle Lever Lock (Incl. w/ #4)	1
22	RS41222	Bevel Gear	1	52	RS78741	Spring Pin	1
23	RS21151	Coupling Nut	1	53	RS21141	Spanner	1
24	RS43007	Screw	2	54	RS41254	Pin Wrench	1
25	RS41225	Deflector	1	55	RS41255	Handle	1
26	RS41226	Spacer	1	56	RS188036	O-Ring	1
27	RS21102	Screw	1	57	RS41257	Grinding Wheel (4-1/2")	1
28	RS21114	Ball Bearing	1				
29	RS21113	Retaining Ring	1				