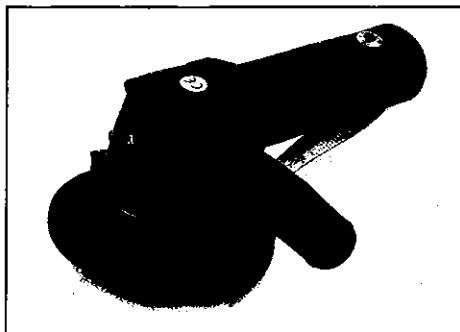




Assembly & Instruction Manual

4" AIR ANGLE GRINDER

Model 1181



Distributed Exclusively By



THANK YOU FOR BUYING CUMMINS INDUSTRIAL TOOLS
Your new Air Angle Grinder has been engineered and manufactured to Cummins tools high standards for dependability, ease of operation, and operator safety. properly cared for, it will give you years of rugged, trouble-free performance

CAUTION: Carefully read through this entire operator's manual before using your new machine

Pay close attention to the Rules for Safe Operation, Warnings, and Cautions. If you use your machine properly and only for what it is intended, you will enjoy years of safe, reliable service.

SAVE THIS MANUAL FOR FUTURE REFERENCE

WARNING
To reduce risk of injury, read and follow instructions, warnings, and cautions. Do not use this tool unless you are properly trained and qualified. Use only accessories approved by Cummins Industrial Tools.

Customer Service Postal Address:
1290 35 Road
Minden, NE 68959
voice: 1-(308) 832-2070
fax: 1-(308) 832-2069
You can purchase additional
tools at www.cumminstools.com

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. **Observe work area conditions.** Do not use machines or power tools in damp or wet locations. Don't expose to rain. Keep work area well lighted.
3. **Keep children away.** Children must never be allowed in the work area. Do not let them handle machines, tools, or extension cords.
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. **Use eye protection.** Always wear ANSI approved impact safety glasses underneath a full face shield during use. Also, wear heavy duty work gloves.
8. **Do not overreach.** Keep proper footing and balance at all times. Do not reach over or across running machines.
9. **Maintain tools with care.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. The handles must be kept clean, dry, and free from oil and grease at all times.
10. **Remove adjusting keys and wrenches.** Check that keys and adjusting wrenches are removed from the tool or machine work surface before starting work.
11. **Stay alert.** Watch what you are doing, use common sense. Do not operate any tool when you are tired.
12. **Check for damaged parts.** Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Any part that is damaged should be replaced.
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 Cummins Industrial Tools.
14. **Do not operate tool if under the influence of alcohol or drugs.** Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate the tool.

Warning: 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.

SPECIFICATIONS

Air Pressure	90 PSI
Air Consumption	6 CFM
Air Inlet	1/4" NPT
Grinding Wheel	24 Grit, 4" x 1/8"

SAVE THIS MANUAL

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

SAFETY WARNING & CAUTIONS

WARNING: When using pneumatic equipment, basic safety precautions should always be followed to reduce the risk of personal injury and hazards due to over pressurization. **READ ALL INSTRUCTIONS BEFORE USING THIS TOOL!**

1. **KEEP WORK AREA CLEAN.** Cluttered areas invite injuries.
2. **OBSERVE WORK AREA CONDITIONS.** Do not use tools in damp, wet, or poorly lit locations. Don't expose to rain. Keep work area well lit. Do not use electrically powered air compressors in the presence of flammable gases or liquids.
3. **KEEP CHILDREN AWAY.** Children must never be allowed in the work area. Do not let them handle machines, tools, or hoses.
4. **STORE IDLE EQUIPMENT.** When not in use, tools must be locked up in a dry location to inhibit rust. Always lock up tools and keep out of reach of children.
5. **DO NOT FORCE THE TOOL.** It will do the job better and more safely at the rate for which it was intended. Do not use inappropriate attachments in an attempt to exceed the tool's capacities.
6. **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. Do not use a tool for a purpose for which it was not intended.
7. **DRESS PROPERLY.** Do not wear loose clothing or jewelry as they can be caught in moving parts. Non-skid footwear is recommended. Wear restrictive hair covering to contain long hair.
8. **USE EYE AND EAR PROTECTION.** Always wear ANSI approved chemical splash goggles when working with chemicals. Always wear ANSI approved impact safety goggles at other times. Wear a full face shield if you are producing metal filings or wood chips. Wear an ANSI approved dust mask or respirator when working around metal, wood, and chemical dusts and mists.
9. **DO NOT ABUSE THE POWER CORD.** Do not yank compressor's cord to disconnect it from the receptacle. Do not carry tools by the cord.
10. **DO NOT OVERREACH.** Keep proper footing and balance at all times. Do not reach over or across running machines.
11. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect compressor's cord periodically and, if damaged, have them repaired by an authorized technician. Inspect all hoses for leaks prior to use. The handles must be kept clean, dry, and free from oil and grease at all times.

12. REMOVE ADJUSTING KEYS AND WRENCHES. Make it a habit to check that keys and adjusting wrenches are removed from the tool or machine work surface before plugging it in.
13. AVOID UNINTENTIONAL STARTING. Do not carry any tool with your finger on the trigger, whether it is connected to the compressor or not.
14. STAY ALERT. Watch what you are doing; use common sense. Do not operate any tool when you are tired.
15. CHECK DAMAGED PARTS. Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment and binding of moving parts; any broken parts or mounting fixtures; and any other condition that may affect proper operation. Any part that is damaged should be properly repaired or replaced by a qualified technician. Do not use the tool if any switch does not turn on and off properly.
16. 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 Cummins Industrial Tools
17. DO NOT OPERATE TOOL IF UNDER THE INFLUENCE OF ALCOHOL OR DRUGS. Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate the tool.
18. DRAIN COMPRESSOR EVERY DAY. Do not allow moisture to build up inside the compressor. Do not allow compressor to sit pressurized for longer than one hour.
19. MAKE SURE ALL EQUIPMENT IS RATED TO THE APPROPRIATE CAPACITY. Make sure that regulator is set at least 10 PSI lower than the lowest rated piece of equipment you are using.

UNPACKING

When unpacking your Air Angle Grinder, check the items against the list below. If any parts are missing or broken, please call Cummins Industrial Tools at the number on the cover of this manual.

Item#	Description	Qty
N/A	Angle Grinder Assembly	1
47	Handle	1
48	Wrench (A)	1
49	Wrench (B)	1
45	Grinding Wheel	1

ASSEMBLY

Step 1: Thread the HANDLE (#47) into the side of the Angle Grinder as shown in Figure 1. Tighten.

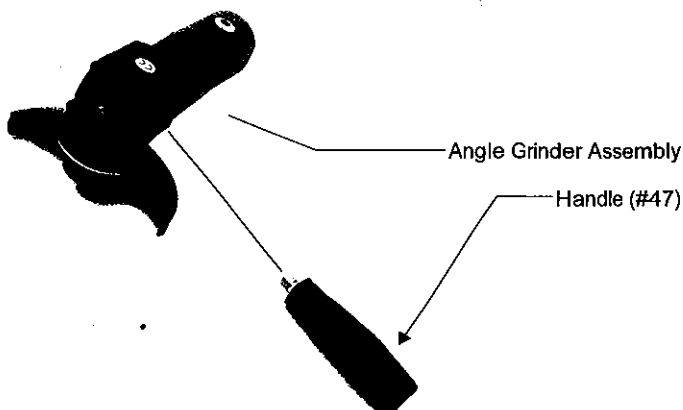


Figure 1 — Handle Assembly

Step 2: Remove the FLANGE NUT (#46) from the ARBOR (#4).

Warning:

There are certain applications for which this tool was designed. Cummins Industrial tools strongly recommends that this tool not be modified and/or used for any application other than which it was designed.

All accessories must be rated for at least the RPM speed recommended on the tool's warning label. Wheels and other accessories running over rated speed can fly apart and cause injury.

For safest operation, it is recommended that only these accessories be used with this product:

Abrasive Cut-Off Discs and Wheels

Flap Wheels

Wire Brushes

Wire Wheel Brushes

Always use an approved and proper guard when using the above mentioned accessories. Each accessory must have the correct arbor size and must fit properly on the shoulder bushing. Make sure accessories are tightened down securely.

CAUTION: NEVER INSTALL A CARBIDE TIPPED OR STEEL CIRCULAR SAW BLADE FOR USE ON THIS ANGLE GRINDER. NEVER INSTALL A WOOD CARVING BLADE, CARVING DISC WITH SAW CHAIN CUTTERS, OR A CUTTING CARVING DISC ON THIS ANGLE GRINDER.

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Step 3: Place the GRINDING WHEEL (#45) onto the ARBOR with the Label side of the GRINDING WHEEL against the FLANGE (#43) as shown in Figure 2.

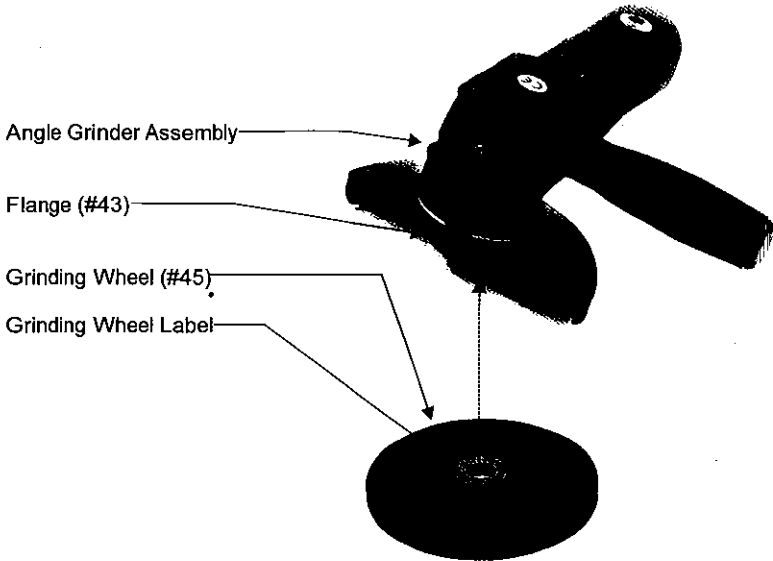


Figure 2 — Attaching the Grinding Wheel

- Step 4: Thread the FLANGE NUT (#46) onto the ARBOR. Tighten by hand.
- Step 5: Place the WRENCH (#48) onto the flats of the ARBOR. You may have to turn the ARBOR slightly to fit the WRENCH on.
- Step 6: Insert the prongs of the WRENCH (#49) into the two holes in the FLANGE NUT as shown in Figure 3.

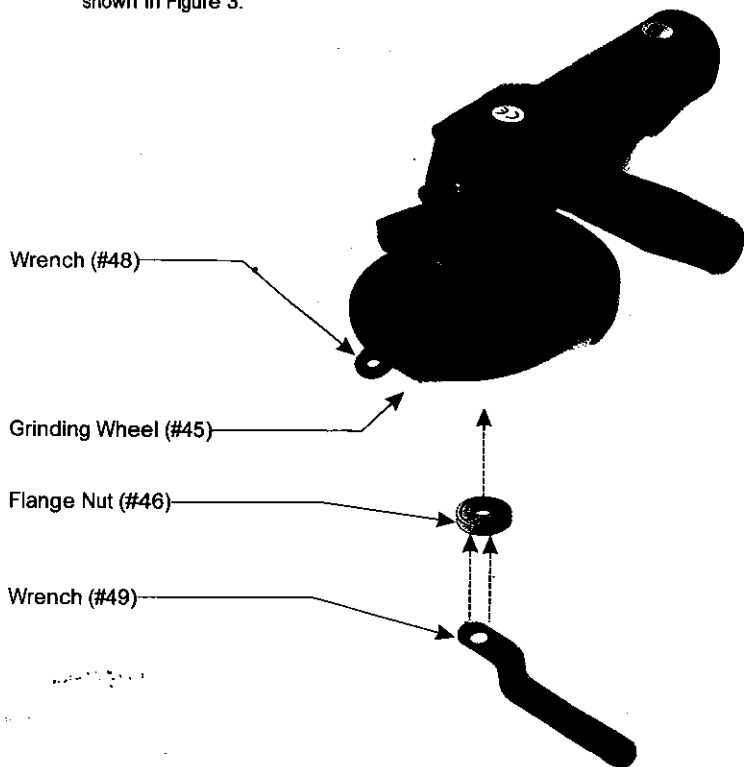


Figure 3 — Securing the Grinding Wheel

Step 7: Hold the flat WRENCH (#48) while tightening the angled WRENCH (#49) to tighten the Flange Nut as shown in Figure 4.

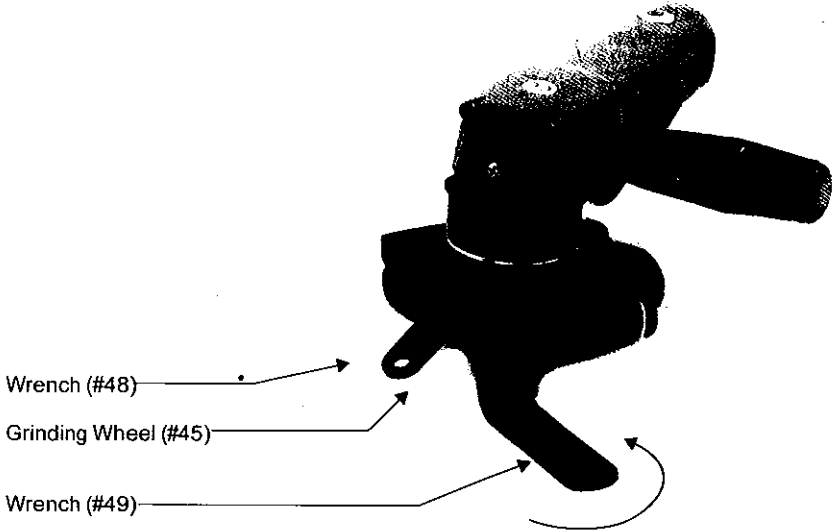


Figure 4 — Tightening the Flange Nut

Step 8: Remove the WRENCHES.

Air Connection

Step 1: You will need a Union fitting (sold separately) before you can connect your Angle Grinder to an air compressor.

Step 2: Attach the Union fitting to the Angle Grinder and tighten.

Step 3: Attach an Air Coupler (sold separately) to the Union fitting if desired. This is a useful accessory as it allows quick-coupling action when using a variety of tools with the same air compressor.

Your Angle Grinder is ready for use.

OPERATION

Setup

Frequent, but not excessive, lubrication is required for best performance. Oil added through the airline connection will lubricate internal parts. An automatic airline oiler is recommended but oil may be added manually before every operation or after about 1 hour of continuous use. Only a few

drops of oil at a time are necessary. Too much oil will collect inside the tool and be blown out during the exhaust cycle. **ONLY USE PNEUMATIC TOOL OIL.** Do not use detergent oil or additives as these lubricants will cause accelerated wear to the seals in the tool.

Dirt and water in the air supply are major causes of pneumatic tool wear. Use a filter/oiler for better performance and longer life. The filter must have adequate flow capacity for the specific application. Consult the manufacturer's instructions for proper maintenance of your filter.

The connector on the tool must not hold pressure when the air supply is disconnected. If the wrong fitting is used, the tool can remain charged with air after being disconnected and still be able to drive a fastener. See Figure 5 for the recommended accessories and connection order.

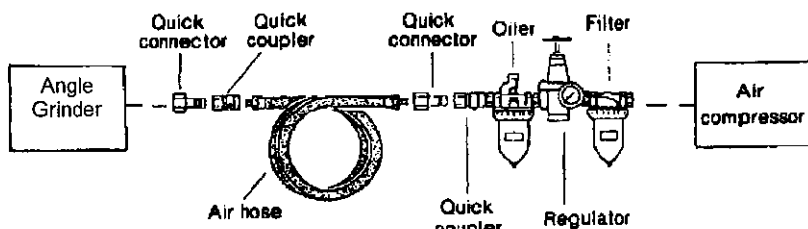


Figure 5 — Airline Oiler Assembly

Use

- Step 1: Set the compressor's pressure regulator to 90 PSI. Do not set the compressor's outlet regulator over 90 PSI.
- Step 2: Connect the Angle Grinder to the air compressor's hose. If leaking is detected, disconnect the air hose and repair before use.
- Step 3: Identify the area you wish to grind. If possible, mark or scribe the area to ensure you grind accurately.
- Step 4: If possible, place the grinding material into a vise or otherwise secure the material so it will not move.
- Step 5: Grip the Angle Grinder with both hands. Make sure you are wearing eye protection and protective gloves before using the Angle Grinder.

Step 6: To operate the Angle Grinder, press the **THROTTLE LEVER LOCK (#61)** forward while depressing the **THROTTLE LEVER (#59)** as shown in-Figure 6.

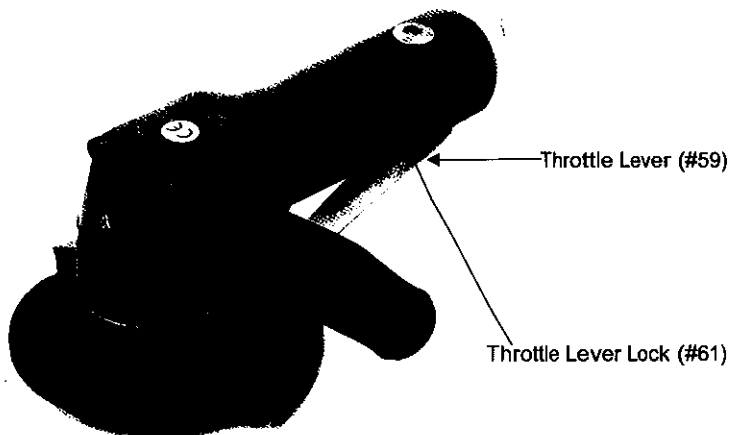


Figure 6 — Operating the Angle Grinder

Step 7: Place the spinning **GRINDING WHEEL (#45)** onto the material to be ground. Let the weight of the Angle Grinder do the work. Do not press the Angle Grinder into the material. If the Angle Grinder stalls, release the **THROTTLE LEVER** immediately.

Step 8: Grind using the outside diameter of the **GRINDING WHEEL** as much as possible. Do not attempt to use the recessed inner diameter of the **GRINDING** wheel as you may damage the **FLANGE NUT (#46)**.

MAINTENANCE

Your Angle Grinder is best operated with an Airline Oiler. If you are using the Angle Grinder without an Airline Oiler, follow the steps below for maintenance.

Step 1: Disconnect the Angle Grinder from the air hose.

Step 2: Apply a few drops of **PNEUMATIC TOOL OIL** through the air line before each use, or every hour if used continuously.

<p>CAUTION Do not use detergent oil or additives as these lubricants will cause accelerated wear to the seals in the tool.</p>

Step 3: Apply a few drops of oil to the THROTTLE LEVER (#59) as shown in Figure 7. Work the THROTTLE LEVER a few times to lubricate.

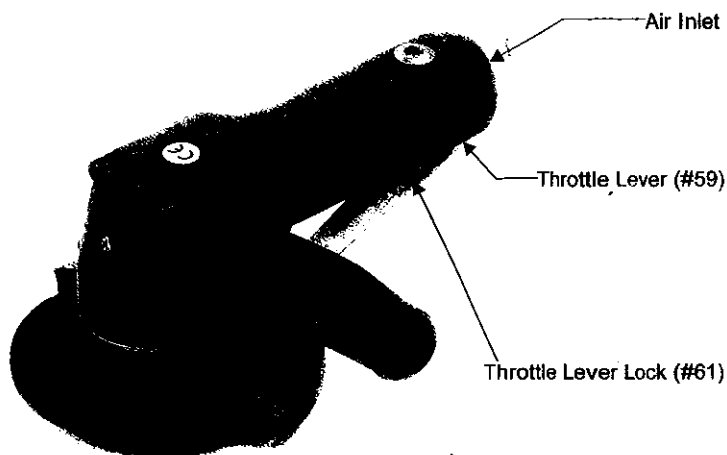
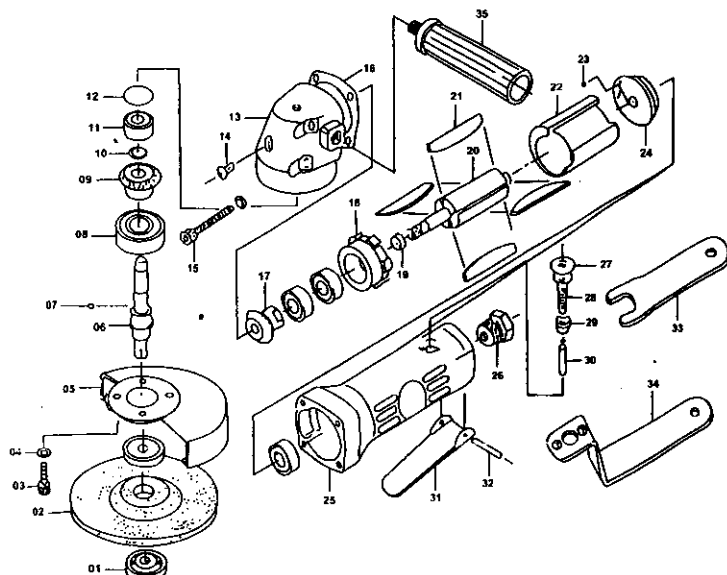


Figure 7 — Lubrication Points

Periodically check the condition of the GRINDING WHEEL (#45). If more than 1/2" of the GRINDING WHEEL is gone, or if the circular lines in the top of the GRINDING WHEEL are no longer visible, you must replace the GRINDING WHEEL with an approved replacement Wheel from Cummins Industrial tools

4" AIR ANGLE GRINDER



PARTS NO.	DESCRIPTION	QTY
01	DISC NUT	2
02	DISC WHEEL	1
03	SCREW	4
04	SPRING WASHER	8
05	DISC COVER	1
06	GEAR SHAFT	1
07	KEY	1
08	BALL BEARING	1
09	BEVEL GEAR	1
10	RETAINING RING	1
11	BALL BEARING	4
12	SPACER	1
13	ANGLE HOUSING	1
14	SCREW	1
15	SCREW	4
16	PACKING	1
17	RINION GEAR	1
18	FRONT PLATE	1

PARTS NO.	DESCRIPTION	QTY
19	BEARING SPACER	1
20	ROTOR	1
21	ROTOR BLADE	4
22	CYLINDER	1
23	STEEL BALL	1
24	BEAR PLATE	1
25	HOUSING	1
26	AIR INLET	1
27	SCREW	1
28	SPRING	1
29	VALVE STEM BUSHING	1
30	VALVE STEM	1
31	LEVER	1
32	SPRING PIN	1
33	STOP SPANNER	1
34	DISC SPANNER	1
35	HANDLE	1