







UT8716-BK 2" Mini Angle Grinder Kit

Universal Item No.	Description	Q'ty	Photo
UT8716-BK	2" Mini Angle Grinder Installed with #60 Grinding Wheel	1	
5A-7283A40-0007	Pin Wrench	1	
654248-11	Spanner Wrench	1	
5A-7283A39-11	#60 Grit 2" Grinding Wheel	3	
5A-7283A39-12	#80 Grit 2" Grinding Wheel	3	
5A-7283A39-13	#120 Grit 2" Grinding Wheel	3	




Universal Tool

Operator Instructions

Includes - Foreseen Use, Work Stations, Putting Into Service, Operating, Dismantling, Assembly and Safety Rules

Important

Read these instructions carefully before installing, operating, servicing or repairing this tool. Keep these instructions in a safe accessible place.

Manufacturer/Supplier Universal Air Tool Company Limited Unit 8 Lane End Industrial Park High Wycombe Bucks HP14 3BY Tel No (01494) 883300 Fax No (01494) 883237	Product Type 2" Mini Angle Disc Grinder	RPM 18,000 Cycles Per Min	
	Model No/Nos UT8716 UT8716-BK	Serial No	

Product Nett Weight 1.40 lbs 0.64 Kg	Recommended Use Of Balancer Or Support No	Recommended Hose Bore Size - Minimum 3/8 Ins 10 M/M	Recommended Max. Hose Length 30 Ft 10 M
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Air Pressure		Noise Level Sound Pressure Level 83.0 dB(A)	
Recommended Working	6.3 bar 90 PSI	Test Method Tested in accordance with Pneurop test code PN8NTC1 and ISO Standard 3744	
Recommended Minimum	n/a bar n/a PSI		
Maximum	7.0 bar 100 PSI		

Personal Safety Equipment	Vibration Level Less than 2.5 Metres / Sec²
Use - Safety Glasses Yes	Test Method Tested in accordance with ISO standards 8662/1 & 8662/4
Use - Safety Gloves Yes	
Use - Safety Boots	
Use - Breathing Masks Yes	
Use - Ear Protectors Yes	

Foreseen Use of Tool

This right angle grinder is designed to be used with reinforced resin bonded depressed centre grinding wheels that have a permitted rotational speed in excess of 18,000 RPM.

The tool is designed to be used for light grinding and dressing of welds, etc. but not for cutting off. The grinder must never be used if a wheel guard (disc cover) item (43) is not fitted.

Work Stations

The tool should only be used as a hand held hand operated tool. It is always recommended that the tool is used when standing on a solid floor. It can be used in other positions but before any such use the operator must be in a secure position having a firm grip and footing and be aware of the safety rules to be obeyed when using the sander.

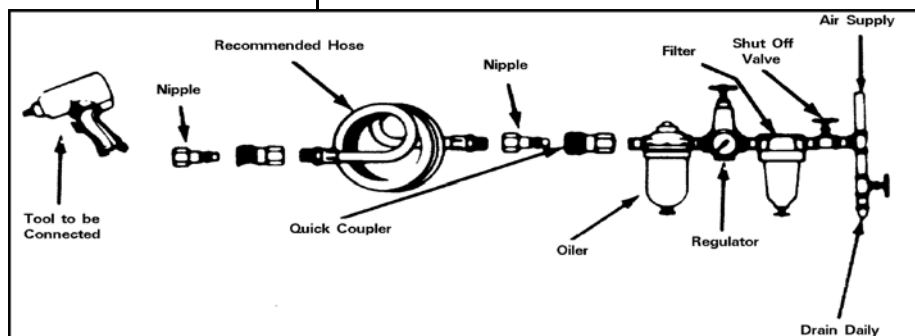
Putting Into Service

Air Supply

Use a clean lubricated air supply that will give a measured air pressure at the tool of 90 p.s.i./6.3 bar when the tool is running with the trigger/lever fully depressed. Use recommended hose size and length. It is recommended that the tool is connected to the air supply as shown in figure 1. Do not connect the tool to the air

line system without incorporating an easy to reach and operate air shut off valve. The air supply should be lubricated. It is strongly recommended that an air filter, regulator, lubricator (FRL) is used as shown in Figure 1 as this will supply clean, lubricated air at the correct pressure to the tool. Details of such equipment can be obtained from your supplier. If such equipment is not used then the tool should be lubricated by shutting off the air supply to the tool, depressurising the line by pressing the trigger on the tool. Disconnect the air line and pour into the intake bushing a teaspoonful (5ml) of a suitable pneumatic motor lubricating oil preferably incorporating a rust inhibitor. Reconnect tool to air supply and run tool slowly for a few seconds to allow air to circulate the oil. If tool is used frequently lubricate on daily basis and if tool starts to slow or lose power.

It is recommended that the air pressure at the tool whilst the tool is running is 90 p.s.i./6.3 bar. The tool can run at lower and higher pressures with the maximum permitted working air pressure of 100 p.s.i./7 bar.



Operating

With the grinder correctly connected to the air supply, check the speed of the grinder with an inlet pressure of 100 psi/7.0 bar measured at the tool inlet. Check with a calibrated tachometer. Check that the guard is in position and securely fixed. Check that the grinding wheel is of correct dimensions, is not cracked or chipped and has a permitted speed rating higher than the maximum permissible running speed of the grinder which is 18,000 RPM. Do not over tighten as this could crack the wheel. It should be tight enough to prevent wheel spin off when the air supply is shut off.

When first starting the grinder with a new or changed wheel fitted, the grinder should first be started in a protected area, i.e. such as under a heavy bench well away from other persons and run for, say, one minute. This will provide protection if the wheel should break because some fault was not detected.

Always use eye protection and wear protective gloves if there are sharp edges in the working area. The tool and the grinding process can create a noise level such that ear protectors should be worn.

If the grinding process creates a dust then use a suitable breathing mask.

Check that the material being worked will not cause harmful dust or fumes. If this is so then special breathing apparatus may be required. Seek advice before starting work.

If the grinder vibrates when first fitting the wheel or during use, remove from service immediately and arrange for the fault to be corrected before continuing to use.

Do not apply excessive pressure as this will reduce the cutting efficiency. Apply light loads and allow the wheel to cut.

Handle the grinder with care. If the grinder is dropped, carefully examine the wheel for damage and replace if necessary. Start the machine as if for the first time of fitting a wheel, i.e. under a bench.

Make sure the object to be ground is in a firm fixed position.

Dismantling & Assembly Instructions

Disconnect the tool from the air supply.

Hold the housing (1) in a vice, unscrew lock ring (23) and take off the valve body (3), then push out the 2 spring pins (2 & 38) and remove the lever (4). To remove the adjust valve assembly, use a slotted screwdriver and unscrew the throttle valve plug (11) then take out parts (10,9,6,7,8 and 5) in this sequence. Remove the guard by first taking out 3 screws (25) then pull off the guard (43). To remove the bevel gear (30), first take out lock nut (31) then remove seal (35) bearing (20) then you can remove the bevel gear (30) also the bearing (13). To remove the motor assembly first take out lock nut (21) counter clockwise, then pull out the motor assembly. Take off the pinion gear (22) then tap the rotor to loosen the assembly, take out front end plate (19) and remove the bearing (20). Take out the rotor blades (16) from the rotor (15) and remove the cylinder (18). Take off the rear end plate (14) and bearing (13).

Reassembly

Clean all parts and examine for wear and cracks, etc. and replace as necessary. Look in particular for wear and cuts on O-rings, wear on rotor blades and wear on bearing (13) and (20). Make sure that the faces of end plates (14) and (19) that about cylinder (18) are flat and free from burrs. Lap on a flat fine grade of abrasive paper if necessary. Before placing the motor assembly into the housing (1) make sure the ventilation slot of the motor assembly is aligned with the ventilation slot in the housing (1)

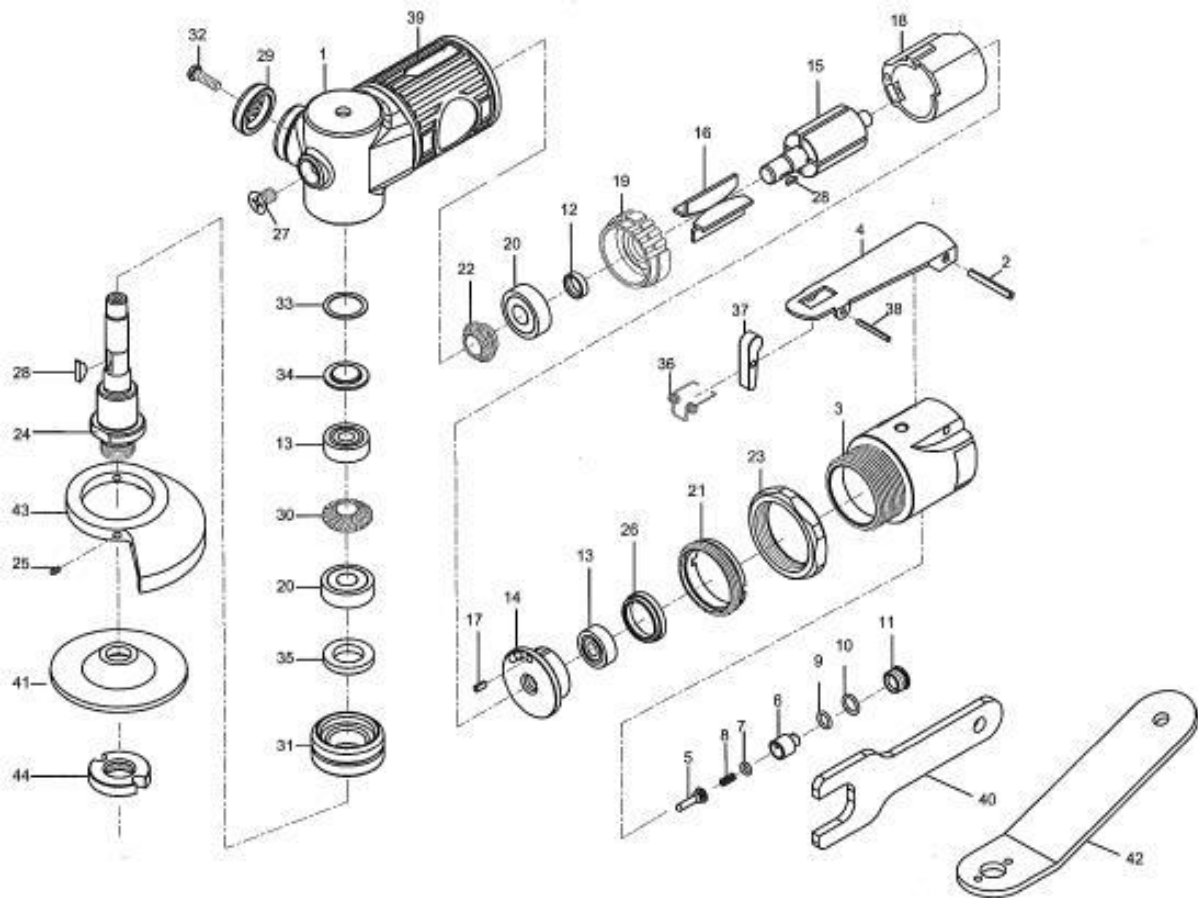
Use only manufacturer or authorized distributor supplied spare parts. Grease the bevel and pinion gears (22 & 30). Lightly coat all parts with suitable pneumatic tool lubrication oil and reassemble in the reverse order.

On completing assembly, ensure that all parts are locked tight and the spindle rotates and the lever throttle. Connect tool to suitable air supply and operate tool slowly for a few seconds and reset for operation required. Refer to section on Operation Instructions.

Safety Rules For A Grinder

1) Read all the instructions before using this tool. All operators must be fully trained in its use and aware of these safety rules.
2) Do not exceed the maximum working air pressure.

- 3) Use personal safety equipment.
- 4) Use only compressed air at the recommended conditions.
- 5) If the tool appears to malfunction remove from use immediately and arrange for service and repair.
- 6) If the tool is used with a balancer or other support device ensure that it is fixed securely.
- 7) Always keep hands away from the working attachment fitted to the tool.
- 8) The tool is not electrically insulated. Never use the tool if there is any chance of it coming into contact with live electricity.
- 9) Always when using the tool adopt a firm footing and/or position and grip the tool firmly to be able to counteract any forces or reaction forces that may be generated whilst using the tool.
- 10) Use only correct spare parts. Do not improvise or make temporary repairs.
 - 11) Do not lock, tape, wire, etc. the on/off valve in the run position. The trigger/lever etc. must always be free to return to the 'off' position when it is released.
 - 12) Always shut off the air supply to the tool, and depress the trigger/lever etc. to exhaust air from the feed hose before fitting, adjusting or removing the working attachment.
 - 13) Check hose and fittings regularly for wear. Replace if necessary. Do not carry the tool by its hose and ensure the hand is remote from the on/off control when carrying the tool with the air supply connected.
 - 14) Take care against entanglement of moving parts of the tool with clothing, ties, hair, cleaning rags, etc. This will cause the body to be drawn towards the tool and can be very dangerous.
 - 15) It is expected that users will adopt safe working practices and observe all relevant legal requirements when installing, using or maintaining the tool.
 - 16) Do not install the tool unless an easily accessible and easily operable on/off valve is incorporated in the air supply.
 - 17) Take care that the tool exhaust air does not cause a problem or blows on another person.
 - 18) Never lay a tool down unless the working attachment has stopped moving.
 - 19) A grinding wheel should only be fitted by a competent person trained to do so. The wheel must be of the correct size and speed rating.
 - 20) Check the speed of the grinder at least once per week, if it is in regular use, with an accurate tachometer.
 - 21) The tool must only be used with the grinding wheels as set out in section "Foreseen Use of the Tool" and shown on parts list. Never fit any other device.
 - 22) Carry out the instructions as set out in "Putting into Service".
 - 23) Many countries have local or national rules re the use and fitting of grinding wheels. Make sure such rules are observed.
 - 24) Use a barrier to prevent sparks causing a hazard to the operator, any other person or anything within the vicinity of the sparks.
 - 25) If a wheel guard becomes damaged or has withstood a wheel breakage, the guard must be changed.
 - 26) Do not use chipped or cracked grinding wheels.
 - 27) Always wear impact resistant eye protection.
 - 28) Use only the disc plate, Item (44) provided with the grinder for locating and clamping the wheel. Never use substitutes. Use the paper blotter fixed to the wheel as this ensures even tightness when the wheel is secured.
 - 29) Tighten the wheel plates sufficiently to prevent wheel spin off when the grinder is turned off. Do not tighten excessively as this may crack the wheel.
 - 30) The noise from the tool or the process noise of the grinding operation may be such that hearing protection should be worn.
 - 31) Avoid inhaling dust from the grinding process. Wearing of a breathing mask is recommended. Grinder certain materials may mean that special breathing precautions are necessary. Seek advice before using the tool.
 - 32) Always ensure that the workpiece is firmly supported so that it cannot move during the grinding process.
 - 33) If the grinder is dropped do not use unless the wheel is first checked for damage by a competent person.
 - 34) When not in use the grinder should be stored in a safe place where it will not be damaged. If a tool has not been used for a period of time check the tool as for the first time of using.
 - 35) Be aware that if the grinding process causes high vibration, special precautions should be taken.
 - 36) The operator should be aware that the grinding wheel will continue



Ref No	Part No	Description
1	54201-11	Housing
2	30102-11	Spring Pin
3	5J-542003-0004	Valve Body
4	51704-18	Lever
5	5J-542005-11	Valve Stem
6	5J-542006-11	Adjust Valve
7	70107-11	O-Ring
8	5J-542010-11	Spring
9	40134-12	O-Ring
10	60307-11	O-Ring
11	5J-542010-11	Throttle Valve Plug
12	61012-11	Spacer
13	054213-11	Ball Bearing (2)
14	54214-11	Rear End Plate
15	5J-542015-11	Rotor
16	54216-11	Rotor Blade (4)
17	70117-13	Spring Pin
18	654218-11	Cylinder
19	654219-11	Front End Plate
20	030120-11	Ball Bearing (2)
21	54221-11	Lock Nut
22	5J-542022-11	Pinion Gear

Ref No	Part No	Description
23	54223-11	Lock Ring
24	654224-0003	Spindle
25	654225-11	Screw (3)
26	54226-11	Cap
27	54227-11	Screw
28	654232-11	Key (2)
29	5J-542011-0002	Exhaust Cover
30	5J-542030-11	Bevel Gear
31	654231-11	Lock Nut
32	5J-542013-11	Screw
33	54233-11	Packing
34	54234-11	Bearing Cover
35	54235-11	Seal
36	51541-11	Spring
37	51540-18	Lever Bar
38	51542-11	Spring Pin
39	54241-0013	Rubber Grip
40	654248-11	Spanner
41	5A-7283A39-11	Cutting Wheel
42	5A-7283A40-0007	Pin Wrench
43	654245-11	Disc Cover
44	5A-7283A36-0003	Nut

Declaration of Conformity
Universal Air Tool Company Limited
Unit 8, Lane End Industrial Park, High Wycombe, Bucks, HP14 3BY, England

declare under our sole responsibility that the product

Models UT8716 & UT8716-BK 2" Mini Angle Disc Grinder, Serial Number

to which this declaration relates is in conformity with the following standard(s) or other normative document(s)

EN792 (Draft), EN292 Parts 1 & 2, ISO 8662 Parts 1 & 4, Pneurop PN8NTC 1

following the provisions of **89/392/EEC as amended by 91/368/EEC & 93/44/EEC Directives**

Lane End

D.H.Moppett (Man. Director)



Place and date of issue

Name and signature or equivalent marking of authorised person

to rotate after the power supply has been shut off. This could cause a hazard.

37) Always store grinding wheels in accordance with the manufacturer's instructions.

38) Check frequently that the spindle thread has not become damaged or worn.

39) Always ensure that the grinding wheel has a higher permissible running speed to the speed of the grinder.

Notes

Accessories

Distributor

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