



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 Extended Die Grinder			RPM 25,000 Cycles Per Min		
					Model No/Nos UT5735			Serial No		
Product Nett Weight 1.65 lbs 0.66 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		
					Noise Level Sound Pressure Level 91.0 dB(A) Sound Power Level 98.0 dB(A) Test Method Tested in accordance with Pneurop test code PN8NTC1 and ISO Standard 3744					
Air Pressure Recommended Working 6.3 bar 90 PSI Recommended Minimum n/a bar n/a PSI Maximum 7.0 bar 100 PSI										
Personal Safety Equipment Use - Safety Glasses Yes Use - Safety Gloves Yes Use - Safety Boots Use - Breathing Masks Yes Use - Ear Protectors Yes					Vibration Level 4.53 Metres / Sec ² Test Method Tested in accordance with ISO standard 8662/1 & 8662/13					

Foreseen Use Of The Tool

This die grinder is primarily designed for use with bonded abrasive mounted point grinding wheels. It may also be used with steel rotary files and carbide burs provided their speed rating matches the speed of the grinder.

This tool should not be fitted with cutting off wheels, saw blades, drill bits, etc. If there is any doubt about the correct use of this product contact your supplier for advice.

Also make sure that the shank size of the attachment to be driven matches with the collet size fitted in the grinder and that the maximum allowed running speed of the attachment exceeds that marked on the grinder.

There are special rules governing the use of bonded abrasive mounted point grinding wheels - for details see section "Operating".

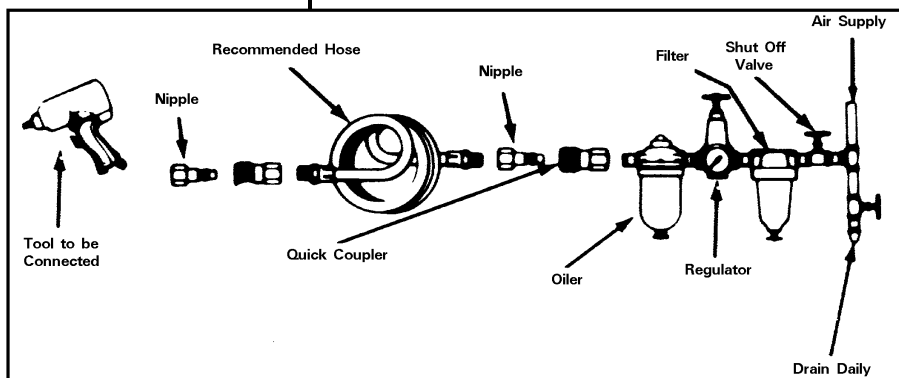
Putting Into Service

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 lever/trigger 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 lever/trigger on the tool. Disconnect the air line and

Work Stations

The tool should only be used as a handheld hand operated tool. It is always recommended that the tool is used when standing on the 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 extra safety precautions that must be observed when using Grinding Machines.



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./7.0 bar.

Operating

Select a suitable mounted point that has a free running speed higher than the maximum running speed marked on the tool. Make sure that the diameter of the shank exactly matches the diameter of the collet mounted in the grinder. There are four standard sizes of collet available for use with this grinder, i.e.

- 1) - 1/4" Dia (0.250ins) (6.35mm)
- 2) - 6mm (0.236ins)
- 3) - 1/8" (0.125ins) (3.175mm)
- 4) - 3mm (0.118ins)

Never try to force a 1/4" diameter shank into a 6mm collet or a 1/8" diameter shank into a 3mm collet. Never try to close a 1/4" diameter collet to secure a 6mm shank or a 1/8" diameter collet to secure a 3mm diameter shank. Always match correctly the shank size to the collet size. If uncertain, have parts measured by a competent person.

Push the shank as far as possible into the collet and tighten the collet nut using the spanners provided on the collet nut and output spindle.

The shank of the mounted point may be pulled forward from the maximum insertion length but always ensure a minimum gripping length of not less than 10mm - See Figure 2.

Be aware that the allowed running speed of the mounted point is lowered because of an increase in the length of the shank between the end of the collet and the body of the mounted point. This distance is shown in Diagram 2 as "LO" and is called the overhang. The information with respect to mounted point size, permissible running speed and reduction in running speed due to an increase in overhang is available from the supplier of the mounted point.

If the increase in overhang for access reasons takes the permissible running speed of the mounted point below the free running speed of the grinder select a smaller diameter mounted point.

The fitting of the mounted point should be done by a trained operator.

When first starting the grinder with a new wheel fitted, the grinder should not be near other persons and be held in a protected area, i.e. under a bench and run for a few seconds. This will protect personnel from possible effects of damage to the mounted point before it was fitted to the grinder i.e. wheel breakage.

Always use eye protection and wear protective gloves if there are sharp edges in the work area. The tool and the grinding process can create a noise level such that the use of ear protectors is advised.

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 masks may be required.

If the grinder vibrates when first fitting a mounted point or during operation, remove from service immediately and correct fault before continuing to use.

Do not apply excessive pressure as this will reduce the cutting efficiency and can bend the shank of the mounted point causing vibration and the possibility of breakage. Apply light loads to allow the wheel to cut.

Handle the grinder with care. If the grinder is dropped, carefully check the mounted point for damage, i.e. cracks, chipping and start for the first time as for fitting a new wheel i.e. under a bench.

Never exceed the maximum air pressure. If there is this possibility always use this grinder with a pressure reducing valve fitted in the supply line. Your supplier will advise of suitable equipment.

This grinder is fitted with a speed regulator and the speed may be reduced by rotating air regulator (41). When making speed checks always rotate the air regulator to the position to give the highest maximum speed.

Dismantling & Assembly Instructions

Disconnect from air supply.

Remove collet nut (25) and collet (24).

Unscrew coupling nut (14) and remove extended front end assembly complete.

To dismantle extended front end assembly, coupling nut (26) may be unscrewed from extension housing (23) [left hand thread].

Pull out motor assembly.

Grip the motor assembly by hand or in a soft jaw vice and tap the rear end of the rotor (15) through the rear end plate (14) and bearing (13). Tap rear end bearing (13) out of rear end plate (14). Remove

D = diameter of mounted point
T = length of mounted point
Lo = overhang
S = diameter of shank
Lg = gripping length

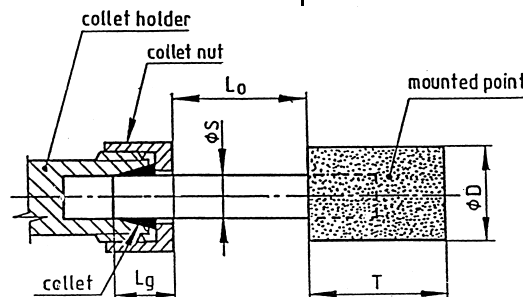


Figure 2. Gripping length of collet and chuck

4 off rotor blades (16) and remove cylinder (18). Pins (17) may be removed from cylinder (18). The rotor (18) can

then be tapped through front end bearing (20), front end plate (19) and spacer (12). Front end bearing (20) can be tapped out of front end plate (19).

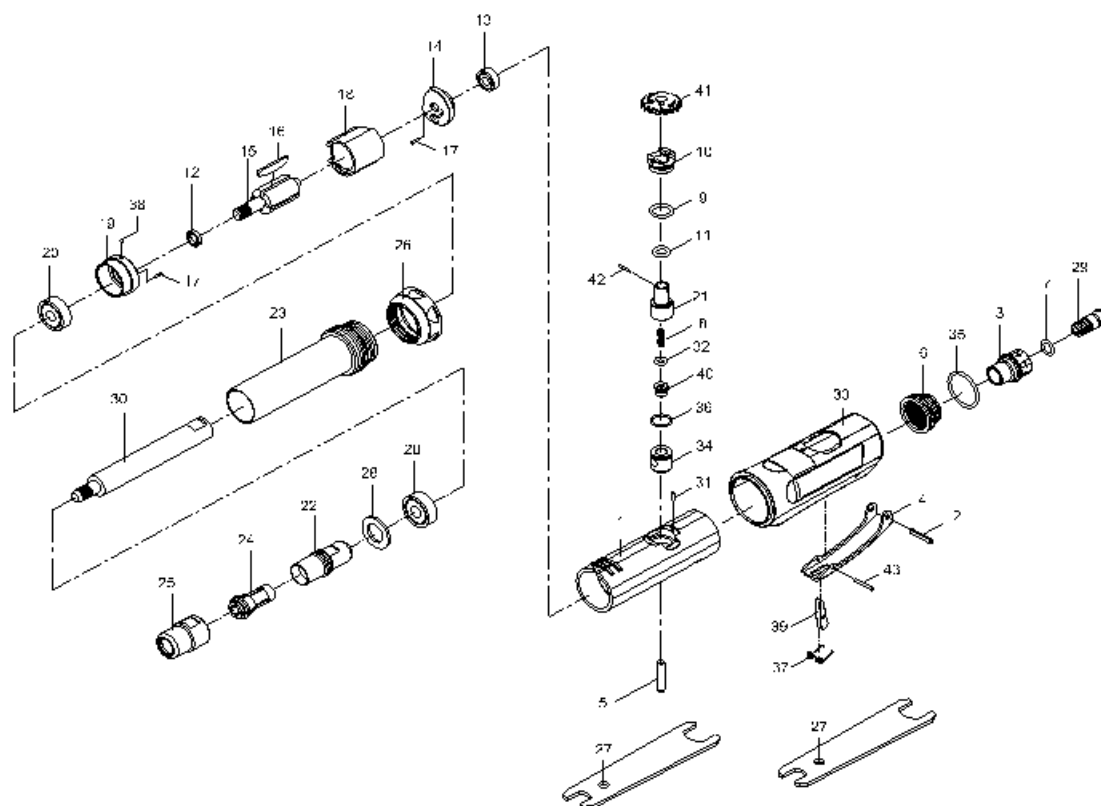
Clean and examine parts for wear and replace only with manufacturer supplied parts. Ensure that the faces of end plates (14) and (19) that abut cylinder (18) are flat and free from burrs. Lap on a flat, very fine grade of abrasive paper if necessary. Check O-Rings for cuts and wear.

Reassembly

Lightly coat parts with oil, pack bearings with a lithium or molybdenum based general purpose grease and reassemble in the reverse order.

Note:- when reassembling the motor assembly, ensure that pins (17) in cylinder (18) are correctly located in the holes in front end plate (19) and rear end plate (14). Also ensure that pin (17) located in the outside diameter of front end plate (19) locates in the slot in motor housing (33).

Check the collet assembly, the function of the safety lever and that the free speed is correct before returning to service. Ensure that the air regulator is in the maximum open position before making a speed check.



Ref No	Part No	Description
1	522201	Motor Housing
2	40337	Lever Pin
3	522203-21	Air Inlet
4	522204	Throttle Lever
5	522205	Valve Shaft
6	52206	Deflector
7	OR000705105-1	O-Ring
8	522208	Spring
9	73107	O-Ring
10	522210	Valve Screw
11	72834	O-Ring
12	52212	Rotor Spacer
13	O52213	Ball Bearing
14	52214	Rear End Plate
15	52215	Rotor
16	52216	Vane (4)
17	30117	Spring Pin (2)
18	52218	Cylinder
19	52219	Front End Plate
20	O30120	Ball Bearing (2)
21	522221	Controller
22	53222	Spindle

Ref No	Part No	Description
23	532223E	Ext. housing
24	51224	Collet
25	532226E	Collet Nut
26	532226E	Front Cap
27	52227	Spanner (2)
28	53226E	Washer
29	522241-21	Fixed Shaft
30	53230E	Tension Shaft
31	70117	Spring Pin
32	30107	O-Ring
33	522252-15	Grip
34	522236	Bushing
35	52235	O-Ring
36	52236	O-Ring
37	522212	Spring
38	52245	Steel Ball
39	522239	Safety Bar
40	522240	Throttle Valve
41	522238	Knob
42	522217	Spring Pin
43	522220	Spring Pin

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

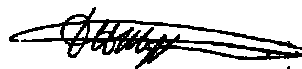
Model UT5735 Extended Die Grinder, Serial Number
to which this declaration relates is in conformity with the following standard(s) or other normative document(s)
EN792 (Draft), EN292 Parts 1 & 2, ISO 8662 Parts 1 & 13, Pneurop PN8NTC1
following the provisions of **89/392/EEC as amended by 91/368/EEC & 93/44/EEC Directives**

Lane End

Place and date of issue

D.H. Moppett (Man Director)

Name and signature or equivalent marking of authorised person



Safety Rules When Using A Die 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) Always select suitable abrasive to use with this tool - see Operating Instructions.
- 3) Always shut off the air supply to the grinder and depress the lever to exhaust air from the feed hose before fitting, adjusting or removing the mounted point.
- 4) Always adopt a firm footing and/or position before using the grinder.
- 5) Use only correct spare parts.
- 6) Check hose and fittings regularly for wear. Do not carry the tool by its hose.
- 7) Do not remove and never tie down the safety lever.
- 8) Never exceed the maximum air pressure and check the free running speed frequently. Have air regulator fully open when making speed checks.
- 9) Use safety equipment as recommended.
- 10) Take care against entanglement of moving parts of the tool with clothing, ties, hair, cleaning rags, etc.
- 11) Use only compressed air at the recommended pressure.
- 12) Do not attempt to fit any other attachment than those recommended - see "Foreseen Use of Tool".
- 13) If the tool appears to malfunction, remove from use immediately, and arrange for service and repair.

Accessories

Notes

Distributor