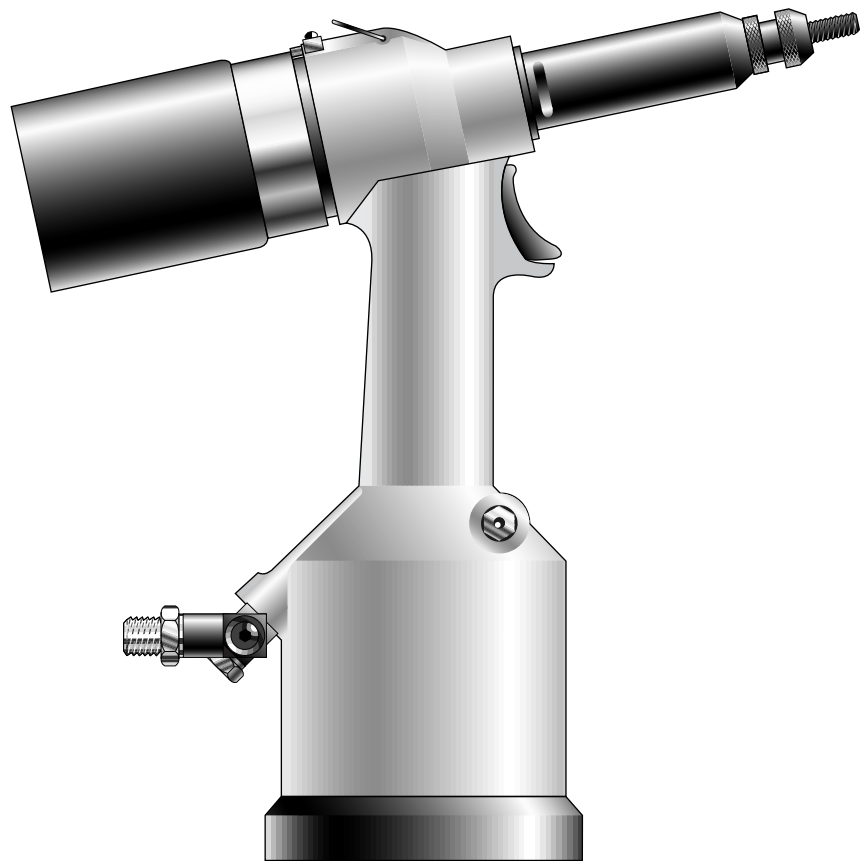


TEXTRON Fastening Systems
Commercial Solutions

Instruction Manual



Threaded Insert Power Tool

74200 model

 Avdel®

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Warranty

Textron Fastening Systems installation tools carry a 12 month warranty against defects caused by faulty materials or workmanship, the warranty period commencing from the date of delivery confirmed by invoice or delivery note.

The warranty applies to the user/purchaser when sold through an authorised outlet, and only when used for the intended purpose. The warranty is invalidated if the installation tool is not serviced, maintained and operated according to the instructions contained in the Instruction and Service Manuals.

In the event of a defect or failure, and at its sole discretion, Textron Fastening Systems undertakes only to repair or replace faulty components.

Safety Rules

This instruction manual must be read with particular attention to the following safety rules, by any person installing, operating, or servicing this tool.

- 1 Do not use outside the design intent.
- 2 Do not use equipment with this tool/machine other than that recommended and supplied by Textron Fastening Systems.
- 3 Any modification undertaken by the customer to the tool/machine, nose assemblies, accessories or any equipment supplied by Textron Fastening Systems or their representatives, shall be the customer's entire responsibility. Textron Fastening Systems will be pleased to advise upon any proposed modification.
- 4 The tool/machine must be maintained in a safe working condition at all times and examined at regular intervals for damage and function by trained competent personnel. Any dismantling procedure shall be undertaken only by personnel trained in Textron Fastening Systems procedures. Do not dismantle this tool/machine without prior reference to the maintenance instructions. Please contact Textron Fastening Systems with your training requirements.
- 5 The tool/machine shall at all times be operated in accordance with relevant Health and Safety legislation. In the U.K. the "Health and Safety at Work etc. Act 1974" applies. Any question regarding the correct operation of the tool/machine and operator safety should be directed to Textron Fastening Systems.
- 6 The precautions to be observed when using this tool/machine must be explained by the customer to all operators.
- 7 Always disconnect the airline from the tool/machine inlet before attempting to adjust, fit or remove a nose assembly.
- 8 Do not operate a tool/machine that is directed towards any person(s) or the operator.
- 9 Always adopt a firm footing or a stable position before operating the tool/machine.
- 10 Ensure that vent holes do not become blocked or covered and that hoses are always in good condition.
- 11 The operating pressure shall not exceed 7 bar (100 lbf/in²).
- 12 Do not operate the tool without full nose equipment, oil plug and oil bleed screw in place.
- 13 When using the tool, the wearing of safety glasses is required both by the operator and others in the vicinity to protect against pin ejection, should a fastener be placed 'in air'. We recommend wearing gloves if there are sharp edges or corners on the application.
- 14 Take care to avoid entanglement of loose clothes, ties, long hair, cleaning rags etc. in the moving parts of the tool which should be kept dry and clean for best possible grip.
- 15 When carrying the tool from place to place keep hands away from the trigger/lever to avoid inadvertent start up.
- 16 Excessive contact with hydraulic oil should be avoided. To minimise the possibility of rashes, care should be taken to wash thoroughly.

Specifications

TOOL SPECIFICATION

| | | |
|---------------------------------|--------------------------------|---|
| Air Pressure | Minimum - Maximum | 5-7 bar (75-100 lbf/in ²) |
| Free Air Volume Required | @ 5 bar/75 lbf/in ² | 8 litres (.28 ft ³) |
| Stroke | Maximum | 7 mm (.276 in) |
| Motor Speed | Spin On | 2000 rpm |
| | Spin Off | 2000 rpm |
| Pull Force | @ 5 bar/75 lbf/in ² | 19.1 kN (4300 lbf) |
| Cycle time | Approximately | 2.5 seconds |
| Noise Level | Less than | 75 dB(A) |
| Weight | Without nose equipment | 2.2 kg (4.85 lb) |
| Vibration | Less than | 2.5 m/s ² (8 ft/s ²) |

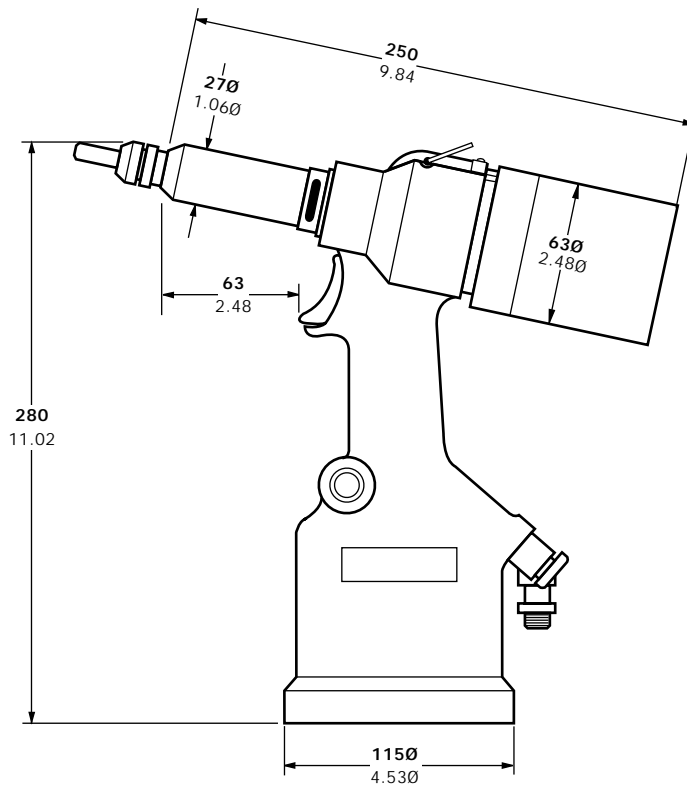
Intent of Use

The hydro-pneumatic 74200 tool is designed to place Avdel® threaded inserts at high speed making it ideal for batch or flow-line assembly in a wide variety of applications throughout all industries.

A complete tool is made up of the base tool (part number 74200-12000) and the appropriate nose assembly for the insert, as described on page 9.

NOSE ASSEMBLIES MUST BE FITTED AS DESCRIBED ON PAGE 8.

TOOL DIMENSIONS



Dimensions shown in **bold** are millimetres. Other dimensions are in inches.

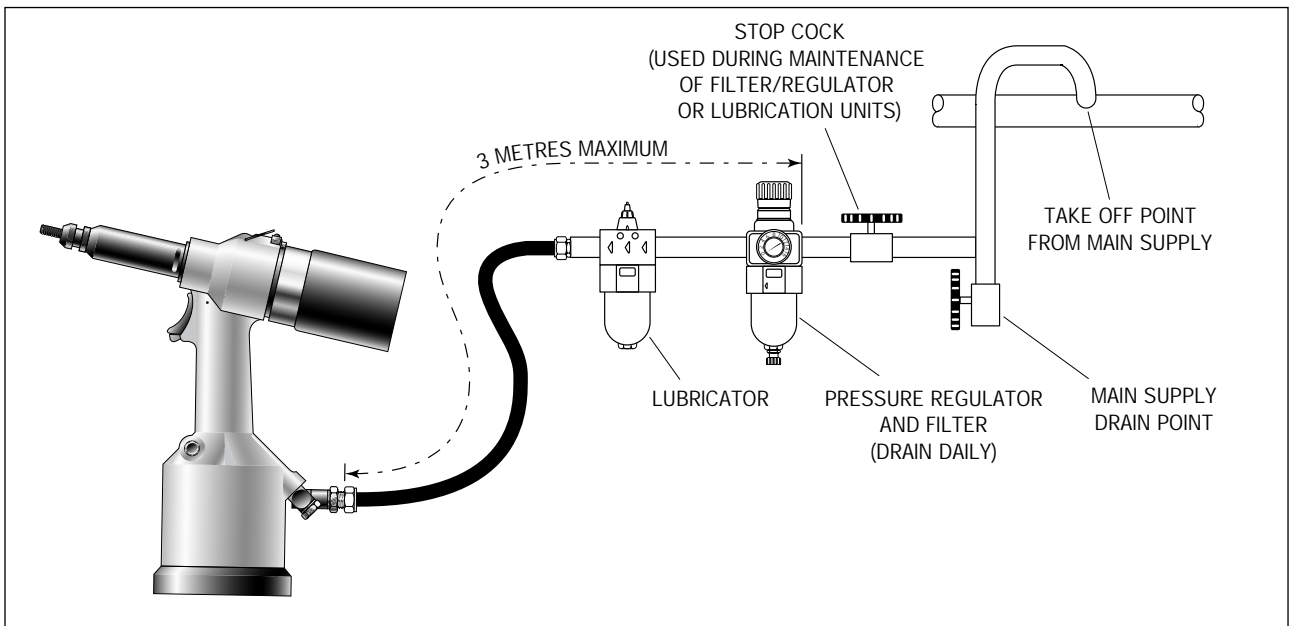
Putting into Service

AIR SUPPLY

All tools are operated with compressed air at an optimum pressure of 5.5 bar. We recommend the use of pressure regulators and automatic oiling/filtering systems on the main air supply. These should be fitted within 3 metres of the tool (see diagram below) to ensure maximum tool life and minimum tool maintenance.

Air supply hoses should have a minimum working effective pressure rating of 150% of the maximum pressure produced in the system or 10 bar, whichever is the highest. Air hoses should be oil resistant, have an abrasion resistant exterior and should be armoured where operating conditions may result in hoses being damaged. All air hoses MUST have a minimum bore diameter of 6.4 millimetres or 1/4 inch.

Read servicing daily details page 10.

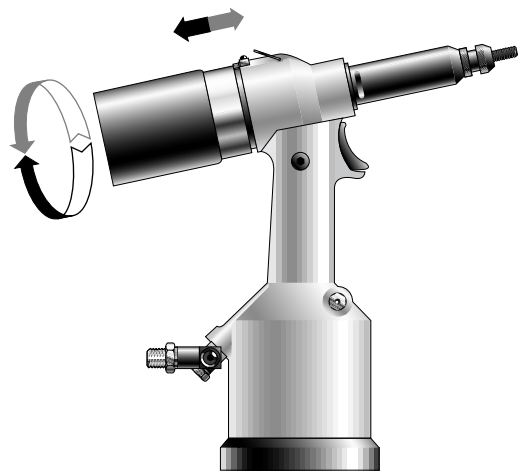


STROKE ADJUSTMENT

This adjustment is necessary to ensure optimum insert deformation. It is suggested, therefore, that a test plate with the same thickness and hole size as workpiece be used.

If deformation is insufficient, the insert will rotate inside the application. If deformation is excessive, thread distortion will occur and possibly drive screw fracture.

The stroke is adjusted by the amount the rear casing **86** is screwed in or out. To shorten stroke, screw in; to lengthen stroke, unscrew the rear casing but never more than 5 turns from the fully "IN" position unless dismantling the tool. Adjust until optimum deformation is obtained. Lock the stroke set finger **88** into the rear casing.



OPERATING PROCEDURE

- Connect tool to air supply.
- Offer up insert, lip first to drive screw. A light pressure will start the motor and automatically thread the insert up against nose and stop.
- Insert fastener into application squarely.
- Fully depress trigger. This will both place insert into the application and reverse it off the drive screw.

Item numbers in **bold** refer to the General Assembly drawing and parts list (pages 14-15).

Nose Assemblies

It is essential that the correct nose assembly is fitted prior to operating the tool. By knowing the details of the fastener to be placed, you will be able to order a new complete nose assembly using the selection tables on page 9.

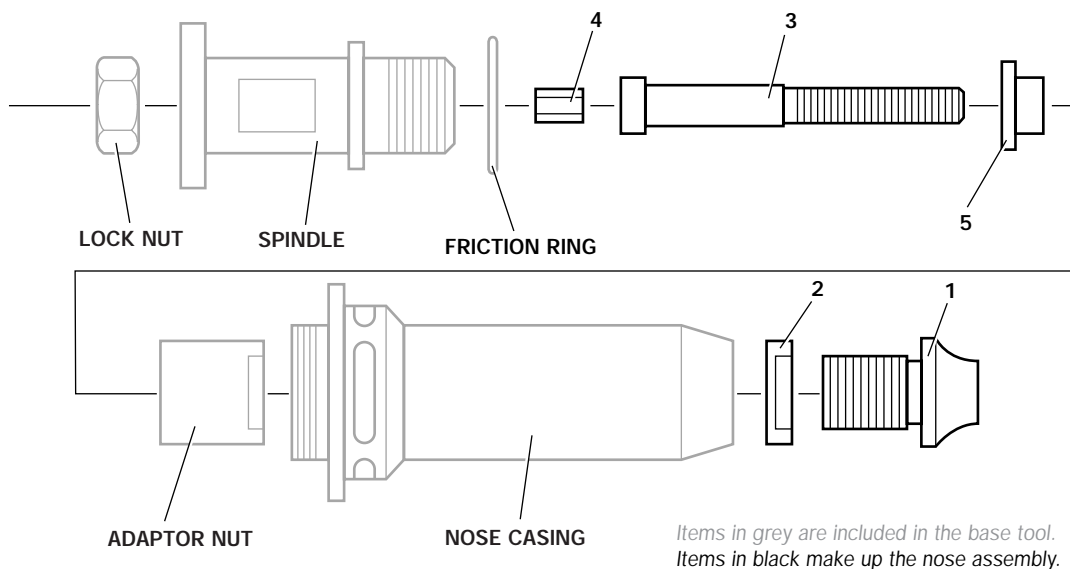
FITTING INSTRUCTIONS

IMPORTANT

The air supply must be disconnected when fitting or removing nose assemblies unless specifically instructed otherwise.

Item numbers in **bold** refer to illustration below:

- If still fitted remove the nose casing and the adaptor nut.
 - Insert drive shaft **4** into spindle.
 - Fit drive screw **3** onto drive shaft **4**.
 - Insert reducing sleeve **5** (if specified) into the adaptor nut.
 - Screw the adaptor nut onto the spindle.
 - Hold the spindle with a spanner* and tighten the adaptor nut clockwise.
 - While holding the adaptor nut with the spanner*, tighten the lock nut anti-clockwise.
 - Screw on the nose casing and nose tip **1** with the nose tip lock nut.
 - The reverse operation is carried out for equipment removal.
-
- With tool still disconnected from air supply, screw one insert onto drive screw manually - making sure the insert is flush with the end of drive screw.
 - Set nose tip in exact position and lock nose tip nut clockwise with a spanner*.
 - Remove the insert from drive screw.



SERVICING INSTRUCTIONS

Nose assemblies should be serviced at weekly intervals.

- Remove the complete nose assembly using the reverse procedure to the 'Fitting Instructions'.
- Any worn or damaged part should be replaced by a new part.
- Particularly check wear on drive screw.
- Assemble according to fitting instructions.

* Refers to items included in the 74200 service kit. For complete list see page 11.

Nose Assemblies

Nose tips vary in shape according to the insert type. Each nose assembly represents a unique assembly of components which can be ordered individually. All nose assemblies also include a nose tip locknut 2 (**part number 07555-00901**). Component numbers refer to the illustration on the opposite page. We recommend some stock as items will need regular replacement. Read the Nose Assemblies servicing instructions opposite carefully.

| INSERT SIZE | COMPLETE TOOL | NOSE ASSEMBLY | 1 | 3 | 4 | 5 |
|---|---------------|---------------|-------------|-------------|-------------|-------------|
| LARGE FLANGE INSERTS (9698,FS58,9408,9418,9498) + STANDARD NUTSERT® (9500) + SQUARESERT® (GK08) + EUROSERT® (GJ08) | | | | | | |
| M3 | 74200-00083 | 07555-09883 | 07555-00903 | 07555-09003 | 07555-01003 | 07555-09103 |
| M4 | 74200-00084 | 07555-09884 | 07555-00904 | 07555-09004 | 07555-01004 | 07555-09104 |
| M5* | 74200-00085 | 07555-09885 | 07555-00905 | 07555-09005 | 07555-01005 | 07555-09105 |
| M5** | 74200-00485 | 07555-09185 | 07555-00915 | 07555-09005 | 07555-01005 | 07555-09105 |
| M6 | 74200-00086 | 07555-09886 | 07555-00906 | 07555-09006 | 07555-01006 | 07555-09106 |
| M8 | 74200-00088 | 07555-09888 | 07555-00908 | 07555-09008 | 07555-01008 | 07555-09108 |
| M10 | 74200-00080 | 07555-09880 | 07555-00910 | 07555-09010 | 07555-01010 | - |
| M12 | 74200-00082 | 74200-09882 † | 07555-00912 | 07555-09012 | 07555-01012 | - |
| 4 UNC | 74200-00054 | 07555-09854 | 07555-00854 | 07555-09054 | 07555-00754 | 07555-09154 |
| 6 UNC | 74200-00056 | 07555-09856 | 07555-00856 | 07555-09056 | 07555-00756 | 07555-09156 |
| 8 UNC | 74200-00058 | 07555-09858 | 07555-00858 | 07555-09058 | 07555-00758 | 07555-09158 |
| 10 UNC | 74200-00050 | 07555-09850 | 07555-00850 | 07555-09050 | 07555-00750 | 07555-09150 |
| 1/4 UNC | 74200-00048 | 07555-09848 | 07555-00848 | 07555-09048 | 07555-00748 | 07555-09148 |
| 5/16 UNC | 74200-00040 | 07555-09840 | 07555-00840 | 07555-09040 | 07555-00740 | 07555-09140 |
| 3/8 UNC | 74200-00042 | 07555-09842 | 07555-00842 | 07555-09042 | 07555-00742 | - |
| 10 UNF | 74200-00070 | 07555-09870 | 07555-00850 | 07555-09070 | 07555-00750 | 07555-09150 |
| 1/4 UNF | 74200-00068 | 07555-09868 | 07555-00848 | 07555-09068 | 07555-00748 | 07555-09148 |
| 5/16 UNF | 74200-00060 | 07555-09860 | 07555-00840 | 07555-09060 | 07555-00740 | 07555-09140 |
| 3/8 UNF | 74200-00062 | 07555-09862 | 07555-00842 | 07555-09062 | 07555-00742 | - |
| 3/16 BSW | 74200-00016 | 07555-09816 | 07555-00850 | 07555-09016 | 07555-00750 | 07555-09150 |
| 1/4 BSW | 74200-00018 | 07555-09818 | 07555-00848 | 07555-09018 | 07555-00748 | 07555-09148 |
| 5/16 BSW | 74200-00010 | 07555-09810 | 07555-00840 | 07555-09019 | 07555-00740 | 07555-09140 |
| THIN SHEET NUTSERT® (9468, FS38, 9650, 9488) | | | | | | |
| M3 | 74200-00183 | 07555-09983 | 07555-00993 | 07555-09003 | 07555-01003 | 07555-09103 |
| M4 | 74200-00184 | 07555-09984 | 07555-00994 | 07555-09004 | 07555-01004 | 07555-09104 |
| M5 | 74200-00185 | 07555-09985 | 07555-00995 | 07555-09005 | 07555-01005 | 07555-09105 |
| M6 | 74200-00186 | 07555-09986 | 07555-00996 | 07555-09006 | 07555-01006 | 07555-09106 |
| M8 | 74200-00188 | 07555-09988 | 07555-00998 | 07555-09008 | 07555-01008 | 07555-09108 |
| M10 | 74200-00180 | 07555-09980 | 07555-00999 | 07555-09010 | 07555-01010 | - |
| M12 | 74200-00182 | 74200-09982 † | 07555-00992 | 07555-09012 | 07555-01012 | - |
| 4 UNC | 74200-00154 | 07555-09954 | 07555-00954 | 07555-09054 | 07555-00754 | 07555-09154 |
| 6 UNC | 74200-00156 | 07555-09956 | 07555-00956 | 07555-09056 | 07555-00756 | 07555-09156 |
| 8 UNC | 74200-00158 | 07555-09958 | 07555-00958 | 07555-09058 | 07555-00758 | 07555-09158 |
| 10 UNC | 74200-00150 | 07555-09950 | 07555-00950 | 07555-09050 | 07555-00750 | 07555-09150 |
| 1/4 UNC | 74200-00148 | 07555-09948 | 07555-00948 | 07555-09048 | 07555-00748 | 07555-09148 |
| 5/16 UNC | 74200-00140 | 07555-09940 | 07555-00940 | 07555-09040 | 07555-00740 | 07555-09140 |
| 10 UNF | 74200-00170 | 07555-09970 | 07555-00950 | 07555-09070 | 07555-00750 | 07555-09150 |
| 1/4 UNF | 74200-00168 | 07555-09968 | 07555-00948 | 07555-09068 | 07555-00748 | 07555-09148 |
| 5/16 UNF | 74200-00160 | 07555-09960 | 07555-00940 | 07555-09060 | 07555-00740 | 07555-09140 |
| 3/16 BSW | 74200-00116 | 07555-09916 | 07555-00950 | 07555-09016 | 07555-00750 | 07555-09150 |
| 1/4 BSW | 74200-00118 | 07555-09918 | 07555-00948 | 07555-09018 | 07555-00748 | 07555-09148 |
| OBA | 74200-00130 | 07555-09930 | 07555-00996 | 07555-09030 | 07555-01006 | 07555-09106 |
| 2BA | 74200-00132 | 07555-09932 | 07555-00950 | 07555-09032 | 07555-00750 | 07555-09150 |
| 4BA | 74200-00134 | 07555-09934 | 07555-00934 | 07555-09034 | 07555-00756 | 07555-09134 |
| SUPERSERT® - OPEN AND CLOSED END (FB) | | | | | | |
| M3 | 74200-00283 | 07555-09583 | 07555-07103 | 07555-09003 | 07555-01003 | 07555-09103 |
| M4 | 74200-00284 | 07555-09584 | 07555-07104 | 07555-09004 | 07555-01004 | 07555-09104 |
| M5 | 74200-00285 | 07555-09585 | 07555-07105 | 07555-09005 | 07555-01005 | 07555-09105 |
| M6 | 74200-00286 | 07555-09586 | 07555-07106 | 07555-09006 | 07555-01006 | 07555-09106 |
| M8 | 74200-00288 | 07555-09588 | 07555-07108 | 07555-09008 | 07555-01008 | 07555-09108 |
| 8 UNC | 74200-00258 | 07555-09558 | 07555-07158 | 07555-09058 | 07555-00758 | 07555-09158 |
| 10 UNC | 74200-00250 | 07555-09550 | 07555-07150 | 07555-09050 | 07555-00750 | 07555-09150 |
| 1/4 UNC | 74200-00248 | 07555-09548 | 07555-07148 | 07555-09048 | 07555-00748 | 07555-09148 |
| 8 UNF | 74200-00278 | 07555-09578 | 07555-07158 | 07555-09078 | 07555-00758 | 07555-09158 |
| 10 UNF | 74200-00270 | 07555-09570 | 07555-07150 | 07555-09070 | 07555-00750 | 07555-09150 |
| 1/4 UNF | 74200-00268 | 07555-09568 | 07555-07148 | 07555-09068 | 07555-00748 | 07555-09148 |
| HEXSERT® (9688) | | | | | | |
| M3 | 74200-00683 | 07555-09283 | 07555-08103 | 07555-09003 | 07555-01003 | 07555-09103 |
| M4 | 74200-00684 | 07555-09284 | 07555-08104 | 07555-09004 | 07555-01004 | 07555-09104 |
| M5 | 74200-00685 | 07555-09285 | 07555-08105 | 07555-09005 | 07555-01005 | 07555-09105 |
| M6 | 74200-00686 | 07555-09286 | 07555-08106 | 07555-09006 | 07555-01006 | 07555-09106 |
| M8 | 74200-00688 | 07555-09288 | 07555-00998 | 07555-09008 | 07555-01008 | 07555-09108 |

* Places all inserts listed in this section except M5 large flange Thin Sheet Nutsert®

** Places M5 large flange Thin Sheet Nutsert® 09698-00516 ONLY

† These nose assemblies include an adaptor nut part number 74200-12119 to replace the one on the tool.

Servicing the Tool

Regular servicing should be carried out and a comprehensive inspection performed annually or every 500,000 cycles, whichever is sooner.

I M P O R T A N T

**The employer is responsible for ensuring that tool maintenance instructions are given to the appropriate personnel.
The operator should not be involved in maintenance or repair of the tool unless properly trained.**

DAILY

- Daily, before use or when first putting the tool into service, pour a few drops of clean, light lubricating oil into the air inlet of the tool if no lubricator is fitted on air supply. If the tool is in continuous use, the air hose should be disconnected from the main air supply and the tool lubricated every two to three hours.
- Check for air leaks. If damaged, hoses and couplings should be replaced by new items.
- If there is no filter on the pressure regulator, bleed the air line to clear it of accumulated dirt or water before connecting air hose to tool.
- Check that the nose assembly is correct.
- Check the stroke of the tool is adequate to place selected insert. (See stroke adjustment page 7).
- Inspect the drive screw in the nose assembly for wear or damage. If any, renew.

WEEKLY

- Check for oil leaks and air leaks on air supply hose and fittings.

MOLYKOTE 55M SAFETY DATA

Grease can be ordered as a single item, the part number is shown in the service kit page 11.

First Aid

SKIN: Wipe off and wash with soap and water.

INGESTION: No adverse effects are normally expected.
Treat symptomatically.

EYES: Irritant but not harmful. Irrigate with water and seek medical attention.

Environment

Scrape up for incinerating or disposal on approved site.

Fire

FLASH POINT: 101 °C

Not classified as flammable.

Suitable extinguishing media: Carbon dioxide, foam, dry powder or fine water spray.

Handling

Plastic or rubber gloves should be worn.

Storage

Away from heat and oxidising agent.

Servicing the Tool

SERVICE KIT

For all servicing we recommend the use of the service kit (part number 74200-99990) supplied in its own plastic case.

| SERVICE KIT | | |
|--------------|-------------------------|--------|
| ITEM PART N° | DESCRIPTION | N° OFF |
| 07900-00618 | PUSHER | 1 |
| 07900-00619 | GUIDE BUSH | 1 |
| 07900-00478 | Ø 3mm PIN PUNCH | 1 |
| 07900-00624 | Ø 4mm PIN PUNCH | 1 |
| 07900-00157 | INTERNAL CIRCLIP PLIERS | 1 |
| 07900-00161 | EXTERNAL CIRCLIP PLIERS | 1 |
| 07900-00625 | SOFT MALLET | 1 |
| 07900-00623 | 25mm SOCKET | 1 |
| 07900-00006 | SPATULA | 1 |
| 07900-00434 | 32mm SPANNER | 1 |
| 07900-00621 | 28mm SPANNER | 1 |
| 07900-00637 | 17mm SPANNER | 1 |
| 07900-00643 | PUSHER KNOB | 1 |

| SERVICE KIT (Continued) | | |
|-------------------------|----------------------------|--------|
| ITEM PART N° | DESCRIPTION | N° OFF |
| 07900-00393 | 14mm/15mm SPANNER | 1 |
| 07900-00409 | 12mm/13mm SPANNER | 1 |
| 07900-00626 | 11mm SPANNER | 1 |
| 07900-00469 | 2.5mm ALLEN KEY | 1 |
| 07900-00351 | 3mm ALLEN KEY | 1 |
| 07900-00224 | 4mm ALLEN KEY | 1 |
| 07900-00225 | 5mm ALLEN KEY | 1 |
| 07900-00620 | 12mm ALLEN KEY | 1 |
| 07900-00456 | T BAR | 1 |
| 07992-00075 | MOLYKOTE 55M (100 gm TUBE) | 1 |
| 07900-00627 | PLASTIC CASE | 1 |
| 07900-00632 | 17mm/19mm SPANNER | 2 |

Every 500,000 cycles the tool should be completely dismantled and components replaced where worn, damaged or when recommended. All 'O' rings and seals should be replaced with new ones and lubricated with Molykote 55M grease before assembling.

IMPORTANT

Safety Instructions appear on page 4.

The employer is responsible for ensuring that tool maintenance instructions are given to the appropriate personnel.
The operator should not be involved in maintenance or repair of the tool unless properly trained.

The airline must be disconnected before any servicing or dismantling is attempted unless specifically instructed otherwise.

It is recommended that any dismantling operation be carried out in clean conditions.

Before proceeding with dismantling, empty the oil from the tool. Remove oil plug **42**, oil seal washer **43**, bleed screw **48** and bleed screw washer **49** from the handle assembly and drain the oil into a suitable container.

Prior to dismantling the tool it is necessary to remove the nose assembly. For simple removal instructions see the nose assemblies section, pages 8-9.

For total tool servicing we advise that you proceed with dismantling of sub-assemblies in the order shown below.

PNEUMATIC CYLINDER

- Remove rubber base **2**.
- Place tool, base uppermost in vice fitted with soft jaws.
- Using a spanner*, unscrew end plug **3**. Pneumatic piston **9** should move upward under spring **11** pressure (it may be necessary to exert hand pressure to pneumatic piston **9**).
- Remove 'O' ring **4**.
- Withdraw pneumatic piston **9**.
- Remove lip seal **8** and 'O' ring **36**.
- Hold piston rod **10** in soft vice jaws to avoid scratching rod diameter.
- Separate piston rod **10** from pneumatic piston **9** by unscrewing piston rod fastening bolt **5** using a spanner*.
- Inspect air tube **12** for damage or distortion. (Air tube is screwed internally into handle and set in position with Loctite 222) If it is necessary to remove air tube, the base of the air tube will require warming to a temperature of 100o C to soften the Loctite adhesive. The air tube **12** can then be unscrewed from the handle using an Allen key*.
- Check spring **11** is not distorted or damaged.
- Assembly is in reverse order to dismantling.

ROD GUIDE

- With tool in upside down position in vice, unscrew rod guide **15** using a spanner* and T-bar*.
- Withdraw rod guide **15**.
- Unscrew locknut **13** using an Allen key*, remove seal **14** and 'O' ring **98**.
- Remove 'O' ring **16**.
- Assembly is in reverse order to dismantling.

TRIGGER

- With tool held in vice, remove pin **26** using a pin punch*.
- Remove trigger **25**, pin **22**, roller **23** and push wedge **24**.
- Gently push on the head of trigger rod **20** and, remove together with 'O' rings **7** and **21**, guide **19**, lip seal **18** and plug **17**.
- Assembly is in reverse order to dismantling. Ensure lip of lip seal **18** is towards head of tool.

SWIVEL AIR INLET (74200-12700)

- Using an Allen key* remove screw **40** and washer **39**.
- Remove swivelling inlet **38**.
- Unscrew double male connector **41** from swivelling inlet **38** and remove nylon washer **33**.
- Using a spanner*, remove drilled bolt **37**.
- Remove two nylon washers **33** and air inlet block **35**.
- Remove circlip **97** from double male connector **41** using circlip pliers and withdraw sintered filter **96**.
- Assemble in reverse order of dismantling.

* Refers to items included in the 74200 service kit. For complete list see page 11.
Item numbers in **bold** refer to the General Assembly drawing and parts list (pages 14-15).

Maintenance

DIFFERENTIAL VALVE

- Using special flat spanner* unscrew valve locking plug **27**, withdraw and remove spring **104** and 'O' ring **29**.
- Remove silencer **34** using a spanner* and remove nylon washer **33**.
- Push valve piston **28** out from its housing together with 'O' rings **30**, **31** & **32**.
- Check spring **104** for distortion and renew if required.
- Assemble in reverse order of dismantling.

HEAD ASSEMBLY

- Remove nose equipment prior to commencing dismantling.
- Using spanners* remove spindle **44** and locknut **45**.
- Remove return spring locknut **46** using a spanner*.
- Remove return spring **47**, washer **99** and locking ring **90**.
- Check return spring **47** for distortion and renew if required.
- Assemble in reverse order of dismantling.

REAR CASING

- Using an Allen key* remove screw **40** from stroke set finger **88** and lift off bridge washer **95**.
- Disengage stroke set finger **88** by pushing it back against spring **89**.
- Unscrew rear casing **86**.
- Remove rear casing rubber band **87** if necessary.
- Extract circlip **84** using circlip pliers* and remove sintered silencer **85**.
- Complete assembly in reverse order of dismantling. Locate pawl **102** in head before screwing on rear casing **86**.

DISTRIBUTOR

- Using an Allen key* remove two screws **40**.
- Withdraw distributor **83** together with air motor end plug **81** and 'O' rings **82** & **31** taking care not to drop ball **79** and push rod **78**.
- Using an Allen key* remove four countersunk socket head screws **58** and withdraw stroke stop **57**.
- Pull out two air supply tubes **59** and four 'O' rings **60**.
- Assemble in reverse order of dismantling.

HYDRAULIC PISTON & AIR MOTOR ASSEMBLY (74200-12610)

- Wrap adhesive tape around hydraulic piston **54** thread and move assembly backwards slowly and firmly. Using circlip pliers* remove circlip **52** and front seal **51**.
- Remove 'O' rings **76** and **77**.
- Using two spanners* separate the hydraulic piston **54** from air motor casing **75**. Shim adjustment ring **55**, movement pivot **56** and 'O' ring **101** will come out with hydraulic piston **54**.
- Remove air motor assembly out of air motor casing **75**, remove circlip **61** using circlip pliers*, then tap air motor casing **75** on bench to free components.
- Parts **62** to **74** can be pulled out as an assembly, taking care not to drop pin **74**.
- Remove bearing **62**, planet gear spindle **63**, three planets **64**, planet gear **65** and spacer **66**.
- Using a soft mallet tap splined head of rotor **70**.
- Bearing **67** and front end plate **68** will come out with stator **69** and five rotor blades **71**. (rotor **70** remains in hand).
- Place rear end plate **72** in vice with soft jaws.
- Using a pin punch* tap centre of rotor **70** to remove bearing **73**. (turn rotor **70** upside down and bearing **73** will come out).
- When assembling air motor, rear side of rotor **70** must just touch rear end plate **72** without any axial gap, (any existing gap will disappear when bearing **73** is fully located).
- When inserting air motor into air motor casing **75** carefully align parts so that pin **74** locates in centre hole between spin on/off ports of air motor casing **75** and rear end plate **72**.
- When assembling hydraulic piston **54** onto air motor assembly, tighten parts by hand and blow air into one of the outer ports of air motor casing **75**, checking to see air motor rotates freely.
- When assembling front seal **51** ensure larger diameter faces rear of tool.
- Complete assembly in reverse order to dismantling.

IMPORTANT

Check the tool against daily and weekly servicing.
Priming is ALWAYS necessary after the tool has been dismantled and prior to operating

* Refers to items included in the 74200 service kit. For complete list see page 11.
Item numbers in **bold** refer to the General Assembly drawing and parts list (pages 14-15).

Parts List for 74200-12000

74200-12000 PARTS LIST

| ITEM | PART N° | DESCRIPTION | QTY | REC. SPARES | ITEM | PART N° | DESCRIPTION | QTY | REC. SPARES | ITEM | PART N° | DESCRIPTION | QTY | REC. SPARES |
|------|-------------|-----------------------------|-----|-------------|------|-------------|-----------------------------|-----|-------------|------|-------------|----------------------------|-----|-------------|
| 01 | 74200-12001 | HEAD & HANDLE | 1 | - | 40 | 07001-00420 | M4 BUTTON SOCKET HD SCREW | 4 | 4 | 79 | 74200-12079 | BALL (RUBBER) | 1 | 1 |
| 02 | 74200-12002 | RUBBER BASE | 1 | 1 | 41 | 74200-12041 | 1/4" DOUBLE MALE CONNECTOR | 1 | - | 80 | 07007-01503 | BOOKMARK LABEL | 1 | N/I |
| 03 | 74200-12003 | END PLUG (SCREWED) | 1 | - | 42 | 07005-01274 | OIL PLUG | 1 | 1 | 81 | 74200-12081 | AIR MOTOR END PLUG | 1 | - |
| 04 | 74200-12004 | 'O' RING | 1 | 1 | 43 | 74200-12043 | OIL SEAL WASHER | 1 | 1 | 82 | 74200-12082 | 'O' RING | 2 | 2 |
| 05 | 74200-12005 | PISTON ROD FASTENING BOLT | 1 | - | 44 | 74200-12044 | SPINDLE | 1 | 1 | 83 | 74200-12083 | DISTRIBUTOR | 1 | - |
| 06 | 07002-00109 | M4 SHAKEPROOF WASHER | 2 | - | 45 | 07555-00803 | LOCK NUT | 1 | 1 | 84 | 74200-12084 | CIRCLIP | 1 | 1 |
| 07 | 07003-00027 | 'O' RING | 2 | 2 | 46 | 74200-12046 | RETURN SPRING LOCKNUT | 1 | 1 | 85 | 74200-12085 | SINTERED SILENCER | 1 | 1 |
| 08 | 74200-12008 | LIP SEAL (PNEUMATIC PISTON) | 1 | 1 | 47 | 74200-12047 | RETURN SPRING | 1 | 1 | 86 | 74200-12086 | REAR CASING | 1 | - |
| 09 | 74200-12009 | PNEUMATIC PISTON | 1 | - | 48 | 07001-00329 | M5 BLEED SCREW | 1 | 1 | 87 | 74200-12087 | REAR CASING RUBBER BAND | 1 | 1 |
| 10 | 74200-12010 | PISTON ROD (INTENSIFIER) | 1 | - | 49 | 07003-00033 | OIL SEAL BLEED WASHER | 1 | 1 | 88 | 74200-12088 | STROKE SET FINGER | 1 | 1 |
| 11 | 07555-00205 | SPRING | 1 | 1 | 50 | 07265-03021 | SUSPENSION RING | 1 | 1 | 89 | 74200-12089 | SPRING | 1 | 1 |
| 12 | 74200-12012 | AIR SUPPLY TUBE | 1 | 1 | 51 | 07265-02004 | FRONT SEAL | 1 | 1 | 90 | 07003-00028 | LOCKING RING | 2 | 2 |
| 13 | 74200-12013 | LOCK NUT | 1 | - | 52 | 07004-00033 | CIRCLIP | 1 | 1 | 91 | 74200-12091 | NOSE CASING | 1 | - |
| 14 | 74200-12014 | SEAL | 1 | 1 | 53 | 74200-12053 | SEAL | 1 | 1 | 92 | 74200-12092 | ADAPTOR NUT (UP TO M10) | 1 | 1 |
| 15 | 74200-12015 | ROD GUIDE | 1 | - | 54 | 74200-12054 | HYDRAULIC PISTON | 1 | - | 93 | 74200-12093 | COLOURED LABEL | 1 | N/I |
| 16 | 07003-00100 | 'O' RING | 1 | 1 | 55 | 74200-12055 | SHIM ADJUSTMENT RING | 1 | 1 | 94 | 07900-00354 | TIE ON SAFETY LABEL | 1 | N/I |
| 17 | 74200-12017 | PLUG | 1 | - | 56 | 74200-12056 | MOVEMENT PIVOT | 1 | 1 | 95 | 74200-12095 | BRIDGE WASHER | 1 | 1 |
| 18 | 74200-12018 | LIP SEAL | 1 | 1 | 57 | 74200-12057 | STROKE STOP | 1 | - | 96 | 74200-12096 | SINTERED FILTERED | 1 | 1 |
| 19 | 74200-12019 | GUIDE | 1 | - | 58 | 07001-00427 | M5 CSK SOCKET HEAD SCREW | 4 | 4 | 97 | 74200-12097 | CIRCLIP | 1 | 1 |
| 20 | 74200-12020 | TRIGGER ROD | 1 | - | 59 | 74200-12059 | PNEU. MOTOR AIR SUPPLY TUBE | 2 | 2 | 98 | 07003-00134 | 'O' RING | 1 | 1 |
| 21 | 07003-00315 | 'O' RING | 1 | 1 | 60 | 74200-12060 | 'O' RING | 4 | 4 | 99 | 74200-12099 | WASHER | 1 | 1 |
| 22 | 74200-12022 | PIN | 1 | 1 | 61 | 74200-12061 | CIRCLIP | 1 | 1 | 100 | 07007-01526 | 'CE' LABEL (AVDEL ITALY) | 1 | N/I |
| 23 | 74200-12023 | ROLLER | 1 | 1 | 62 | 74200-12062 | BEARING | 1 | - | 101 | 74200-12121 | 'O' RING | 1 | 1 |
| 24 | 74200-12024 | PUSH WEDGE | 1 | - | 63 | 74200-12063 | PLANET GEAR SPINDLE | 1 | - | 102 | 74200-12122 | PAWL (RUBBER) | 1 | 1 |
| 25 | 74200-12025 | TRIGGER | 1 | 1 | 64 | 07555-09208 | PLANET | 3 | - | 103 | 74200-12103 | PLUG | 1 | 1 |
| 26 | 74200-12026 | PIN | 1 | 1 | 65 | 74200-12065 | PLANET GEAR | 1 | - | 104 | 74200-12104 | SPRING | 1 | N/I |
| 27 | 74200-12027 | VALVE LOCKING PLUG | 1 | - | 66 | 74200-12066 | SPACER | 1 | - | 105 | 07900-00614 | TOOL MANUAL | 2 | N/I |
| 28 | 74200-12028 | VALVE PISTON | 1 | - | 67 | 07555-09206 | BEARING | 1 | - | 106 | 07900-00632 | 17/19 MM THIN SPANNER | 1 | N/I |
| 29 | 07003-00086 | 'O' RING | 1 | 1 | 68 | 07555-09210 | FRONT END PLATE | 1 | - | 107 | 07900-00409 | 12/13 MM SPANNER | 1 | N/I |
| 30 | 07003-00040 | 'O' RING | 1 | 1 | 69 | 07555-09211 | STATOR | 1 | - | 108 | 07900-00224 | 4 MM ALLEN KEY | 1 | N/I |
| 31 | 07003-00026 | 'O' RING | 2 | 2 | 70 | 74200-12070 | ROTOR | 1 | - | 109 | 07900-00225 | 5 MM ALLEN KEY | 1 | N/I |
| 32 | 07003-00046 | 'O' RING | 1 | 1 | 71 | 07555-09213 | ROTOR BLADE | 5 | 5 | 110 | 07900-00624 | 4 MM Ø PIN PUNCH | 1 | N/I |
| 33 | 74200-12033 | 1/8" NYLON WASHER | 4 | 4 | 72 | 07555-09214 | REAR END PLATE | 1 | - | 111 | 07900-00637 | SPECIAL 17 MM FLAT SPANNER | 1 | N/I |
| 34 | 74200-12034 | 1/8" SILENCER | 1 | 1 | 73 | 07555-09215 | BEARING | 1 | - | 112 | 07900-00469 | 2.5 MM ALLEN KEY | | |
| 35 | 74200-12035 | AIR INLET BLOCK | 1 | - | 74 | 07555-09216 | PIN | 1 | 1 | 113 | 74200-12300 | DEFLECTOR ASSEMBLY | 1 | N/I |
| 36 | 07003-00029 | 'O' RING | 4 | 4 | 75 | 74200-12075 | AIR MOTOR CASING | 1 | - | 114 | 74200-12700 | INLET ASSEMBLY | 1 | |
| 37 | 74200-12037 | DRILLED BOLT | 1 | - | 76 | 07003-00305 | 'O' RING | 1 | 1 | 115 | 07340-00401 | SPRING | 1 | |
| 38 | 74200-12038 | SWIVELLING INLET | 1 | - | 77 | 07003-00306 | 'O' RING | 5 | 5 | | | | | |
| 39 | 74200-12039 | WASHER | 1 | 1 | 78 | 74200-12078 | PUSH ROD 80 mm LONG | 1 | 1 | | | | | |

Priming

Priming is ALWAYS necessary after the tool has been dismantled and prior to operating. It may also be necessary to restore the full stroke after considerable use, when the stroke may be reduced and fasteners are not fully placed by one operation of the trigger.

OIL DETAILS

The recommended oil for priming is Hyspin VG32 available in 0.5l (part number 07992-00002) or one gallon containers (part number 07992-00006). Please see safety data below.

HYSPIN VG 32 OIL SAFETY DATA

First Aid

SKIN:

Wash thoroughly with soap and water as soon as possible. Casual contact requires no immediate attention. Short term contact requires no immediate attention.

INGESTION:

Seek medical attention immediately. DO NOT induce vomiting.

EYES:

Irrigate immediately with water for several minutes. Although NOT a primary irritant, minor irritation may occur following contact.

Fire

Flash point 232°C. Not classified as flammable.

Suitable extinguishing media: CO₂, dry powder, foam or water fog. DO NOT use water jets.

Environment

WASTE DISPOSAL: Through authorised contractor to a licensed site. May be incinerated. Used product may be sent for reclamation.

SPILLAGE: Prevent entry into drains, sewers and water courses. Soak up with absorbent material.

Handling

Wear eye protection, impervious gloves (e.g. of PVC) and a plastic apron. Use in well ventilated area.

Storage

No special precautions.

PRIMING PROCEDURE

IMPORTANT

All operations should be carried out on a clean bench, with clean hands in a clean area.
Ensure that the oil is perfectly clean and free from air bubbles.
Care **MUST** be taken at all times, to ensure that no foreign matter enters the tool, or serious damage may result.
The tool must remain on its side throughout the priming sequence

- Place tool on its side, oil plug **42** side up.
- Pull back stroke set finger **88** and unscrew rear casing **86** by a maximum of 5 turns from the fully 'IN' position.
- With an Allen key, unscrew oil plug **42** and remove with oil seal washer **43**.
- Fill tool with priming oil rocking gently to expel air.
- Replace oil seal washer **43** and oil plug **42** and tighten.
- You must now bleed the tool. This operation is to ensure air bubbles are eliminated from the oil circuit.
- Ensuring oil bleed screw **48** is fully tightened unscrew by ONE TURN only, using an Allen key. Connect the tool to the air supply and depress the trigger.
- Wait until oil appears all around oil bleed screw **48** then re-tighten. Wipe excess oil away.
- Release the trigger.
- Using an Allen Key open oil plug **42**.
- Top-up with priming oil to reset level. Replace oil seal washer **43** and oil plug **42** and fully tighten.
- It is necessary to fit the appropriate nose equipment and adjust the tool stroke prior to operating the tool.

Item numbers in **bold** refer to general assembly drawings and parts list (pages 14-15).

Fault Diagnosis

| SYMPTOM | POSSIBLE CAUSE | REMEDY | PAGE REF |
|---------------------------------------|---|--|----------|
| Pneumatic motor runs slowly | Air leak from motor | Check for worn seals. Replace | 13 |
| | Low air pressure | Increase | 7 |
| | Air way blockage | Clear restriction in air supply | |
| | Worn drive screw | Replace | 8 |
| | Vanes jamming | Lubricate tool through air inlet | |
| Insert does not deform properly | Stroke incorrectly set | Adjust | 7 |
| | Air pressure outside the tolerance | Adjust | 7 |
| | Low oil level | Prime tool | 16 |
| | Insert out of grip | Check grip range of Insert | |
| Drivescrew turns independent of motor | Worn or damaged drive shaft | Replace | |
| | Worn or damaged drive screw | Replace | 8 |
| | Adaptor nut loose | Tighten | 8 |
| | Locking ring 90 missing | Fit new locking ring | 13 |
| Insert will not place onto drivescrew | Incorrect Insert thread size | Change to correct insert | |
| | Incorrect drive screw fitted | Change to correct drive screw | |
| | Worn or damaged drive screw | Replace | |
| | Nose equipment incorrectly assembled | Disconnect air supply, re-fit nose equipment carefully | 8-9 |
| Tool is jammed on placed insert | Excessive stroke/ Defective insert/ Worn or defective drive screw | DO NOT DEPRESS TRIGGER. Unlock stroke locking device and bring rear casing forward to zero stroke position. Depress trigger. Tool should spin off. Reset stroke. If not, disconnect air to tool. Insert a 4 mm Ø pin through nose casing slots into spindle 44 . Turn until drive screw leaves. Insert. Use new insert AND drive screw. | |
| | Stroke of tool excessive | Re-set stroke | |
| | Side load on drive screw | Hold tool square to application when placing Insert | |

continued overleaf

Item numbers in **bold** refer to general assembly drawings and parts list (pages 14-15).

Other symptoms or failures should be reported to your local TFS authorised distributor or repair centre.

Fault Diagnosis

| SYMPTOM | POSSIBLE CAUSE | REMEDY | PAGE REF |
|--|--|---|----------|
| Tool does not spin on | Screw adaptor nut loose | Tighten | |
| | No air supply | Connect | 7 |
| | Insufficient gap between locknut 45 and spindle 44 | Adjust to 1.5 mm gap to 2mm gap | 13 |
| | Push rod 78 too short | Replace | 13 |
| | Air motor jammed | Lubricate tool at air inlet. If insufficient dismantle and clean air motor thoroughly | |
| Trigger inoperative | Static friction | Depress trigger a few times | |
| | Low air pressure | Increase air pressure | |
| | Valve piston remains stuck | Depress trigger several times. Lubricate tool through air inlet. If unsuccessful, dismantle, clean and lubricate trigger elements | |
| Drivescrew does not return and/or keeps spinning off | Lip seal 18 is defective | Replace | 12 |
| Tool does not spin off | Adaptor nut 92 loose | Tighten | |
| | No air supply | Connect | |
| | Rear casing unscrewed by more than 5 turns | Set tool stroke | |
| | 'O' ring 82 leaking air | Replace | 13 |
| | Distributor stuck | Lubricate | |
| | Air motor jammed | Lubricate tool at air inlet. If insufficient dismantle and clean air motor thoroughly | |

Item numbers in **bold** refer to general assembly drawings and parts list (pages 14-15).

Other symptoms or failures should be reported to your local TFS authorised distributor or repair centre.

Declaration of Conformity

We, Textron Fastening Systems Limited, Mundells, Welwyn Garden City, Herts, AL7 1EZ
declare under our sole responsibility that the product:

Model Type 74200

Serial No. 

to which this declaration relates is in conformity with the following standards:

EN292 part 1 and part 2

ISO 8662 part 1

ISO 3744

ISO PREN792 part 14

EN 60742/0695

EN 50081-1

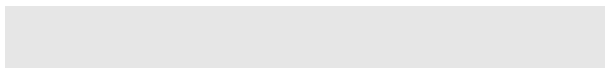
EN 55014

following the provisions of the Machine Directive 89/392/EC
(as amended by Directive 91/368/EC, 93/44/EC) and 93/68/EC



M. Delle Fave - Quality Manager

Welwyn Garden City - date of issue



This box contains a power tool which is in
conformity with Machines Directive
89/392/EC. The 'Declaration of Conformity'
is contained within.

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