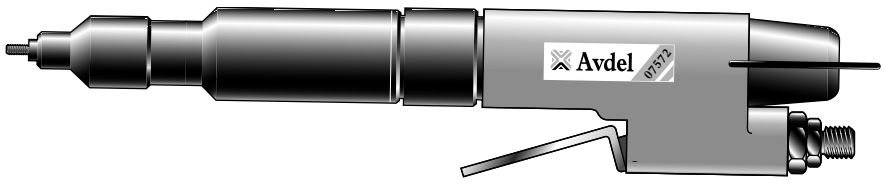
Avdel®

An Acument™ Global Technologies Company

Instruction Manual

Pass on to user to read and keep for reference



Threaded Insert Power Tool

07572

AVDEL policy is one of continuous development. Specifications shown in this document may be subject to changes which may be introduced after publication. For the latest information always consult Avdel.

SPECIFICATIONS FOR 07572 TOOL

AIR PRESSURE	Minimum - Maximum	**5 - 8 bar**	75 - 120 lbf/in²
FREE AIR VOLUME REQUIRED	@ 5 bar / 75 lbf/in²	**288 litres/min**	10 ft³/min
MOTOR SPEED	@ 75 lb/in² minimum	**900 RPM**	(clockwise)
CYCLE TIME	Approximately	**3 seconds**	
NOISE LEVEL		**75 dB(A)**	
WEIGHT	Without nose equipment	**1.15 kg**	2.5 lb
VIBRATION	Less than	**2.5 m/s²**	8 ft/s²

CONTENTS

SAFETY

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

☒ DO NOT USE OUTSIDE THE DESIGN INTENT.

☒ DO NOT USE EQUIPMENT WITH THIS TOOL/MACHINE OTHER THAN THAT RECOMMENDED AND SUPPLIED BY AVDEL.

☒ ANY MODIFICATION UNDERTAKEN BY THE CUSTOMER TO THE TOOL/MACHINE, NOSE ASSEMBLIES, ACCESSORIES OR ANY EQUIPMENT SUPPLIED BY AVDEL OR THEIR REPRESENTATIVES, SHALL BE THE CUSTOMER'S ENTIRE RESPONSIBILITY. AVDEL WILL BE PLEASED TO ADVISE UPON ANY PROPOSED MODIFICATION.

☒ 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 AVDEL PROCEDURES. DO NOT DISMANTLE THIS TOOL/MACHINE WITHOUT PRIOR REFERENCE TO THE MAINTENANCE INSTRUCTIONS. CONTACT AVDEL WITH YOUR TRAINING REQUIREMENTS.

☒ 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 AVDEL.

☒ THE PRECAUTIONS TO BE OBSERVED WHEN USING THIS TOOL/MACHINE MUST BE EXPLAINED BY THE CUSTOMER TO ALL OPERATORS.

☒ ALWAYS DISCONNECT THE AIRLINE FROM THE TOOL/MACHINE INLET BEFORE ATTEMPTING TO ADJUST, FIT OR REMOVE A NOSE ASSEMBLY.

☒ DO NOT OPERATE A TOOL/MACHINE THAT IS DIRECTED TOWARDS ANY PERSON(S).

☒ ENSURE THAT VENT HOLES DO NOT BECOME BLOCKED OR COVERED AND THAT HOSES ARE ALWAYS IN GOOD CONDITION.

In addition to the general safety rules opposite, the following specific safety points must also be observed:

☒ THE OPERATING PRESSURE SHALL NOT EXCEED 8 BAR - 120 LBF/IN^2.

☒ DO NOT OPERATE THE TOOL WITHOUT FULL NOSE EQUIPMENT IN PLACE.

☒ WHEN USING THE TOOL, THE WEARING OF SAFETY GLASSES IS REQUIRED BOTH BY THE OPERATOR AND OTHERS IN THE VICINITY TO PROTECT AGAINST FASTENER PROJECTION, SHOULD A FASTENER BE PLACED 'IN AIR'. WE RECOMMEND WEARING GLOVES IF THERE ARE SHARP EDGES OR CORNERS ON THE APPLICATION.

☒ 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.

☒ WHEN CARRYING THE TOOL FROM PLACE TO PLACE KEEP HANDS AWAY FROM THE TRIGGER/LEVER TO AVOID INADVERTENT START UP.

☒ ALWAYS ADOPT A FIRM FOOTING OR A STABLE POSITION BEFORE OPERATING THE TOOL AND BE AWARE OF A TORQUE REACTION ON THE HANDS WHEN THE TOOL IS OPERATING, PARTICULARLY DURING THE REVERSING SEQUENCE. GRIP THE TOOL FIRMLY TO BE ABLE TO COUNTER THE TORQUE REACTION, BUT NOT TOO TIGHTLY.

☒ KEEP HANDS AWAY FROM THE ROTATING DRIVE SCREW AND THE NOSE END OF THE TOOL. IF A FASTENER BECOMES JAMMED ON THE DRIVE SCREW, SHUT OFF THE AIR SUPPLY AND DRAIN THE SUPPLY LINE TO THE TOOL BEFORE ATTEMPTING TO DISLODGE IT.

☒ THE TOOL IS NOT ELECTRICALLY INSULATED.

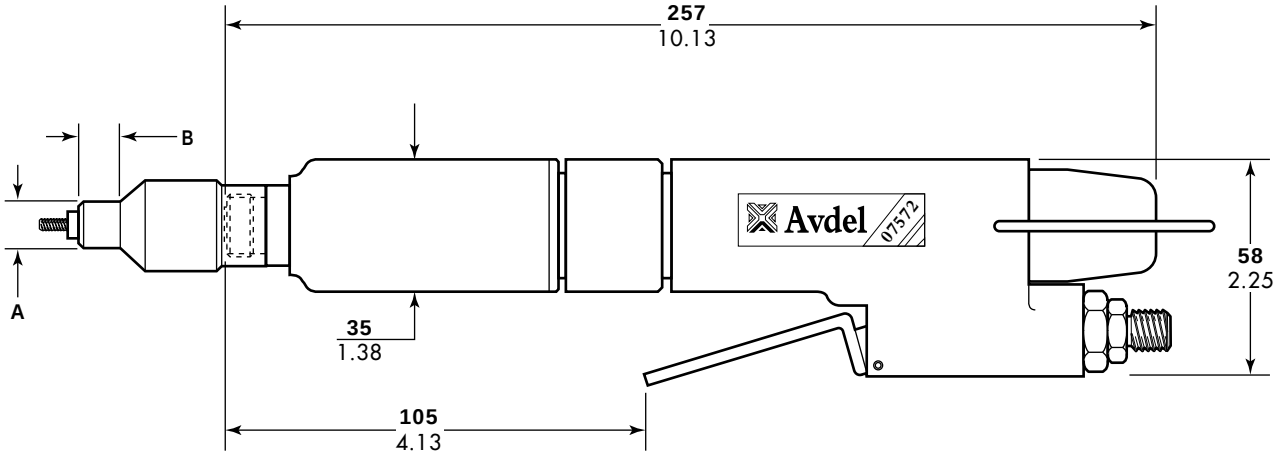
(!) THIS TOOL IS NOT DESIGNED FOR USE IN COMBUSTIBLE OR EXPLOSIVE ATMOSPHERES.

NTENT OF USE

The pneumatic 07572 type 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.

Use the selection table opposite to select a complete tool which will be fitted with the correct nose assembly for the threaded insert selected. `A' and `B' dimensions will help you assess the accessibility of your application.

It is also possible to order the base tool only (part number 07572-00400). For details of Nose Assemblies see pages 8 and 9.



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

7572 TOOL SELECTION

INSERT NAME & SERIES	Ø	TORQUE SETTING (lbf ins)	UNSET CLUTCH PART Nº	NOSE (see drawing opposite for A & B) A (mm)	B (mm)	A (in)	B (in)	NOSE ASSY PART Nº	COMPLETE TOOL PART Nº
THIN SHEET NUTSERT (9650)	3/16 BSW	30 - 35	08558-00308	13	11	1/2	7/16	07556-09916	07572-01016
	4 UNC	7 - 9	08558-00302	13	11	1/2	7/16	07556-09954	07572-01054
	6 UNC	16 - 18	08558-00305	13	11	1/2	7/16	07556-09956	07572-01056
	8 UNC	16 - 18	08558-00305	13	12	1/2	15/32	07556-09958	07572-01058
	10 UNC	30 - 35	08558-00308	13	11	1/2	7/16	07556-09950	07572-01050
	4 UNF	7 - 9	08558-00302	13	11	1/2	7/16	07556-09974	07572-01074
	6 UNF	16 - 18	08558-00305	13	11	1/2	7/16	07556-09976	07572-01076
	8 UNF	16 - 18	08558-00305	13	12	1/2	15/32	07556-09978	07572-01078
	10 UNF	30 - 35	08558-00308	13	11	1/2	7/16	07556-09970	07572-01070
	6 BA	7 - 9	08558-00302	13	11	1/2	7/16	07556-09936	07572-01036
	4 BA	16 - 18	08558-00305	13	11	1/2	7/16	07556-09934	07572-01034
	2 BA	30 - 35	08558-00308	13	17	1/2	21/32	07556-09932	07572-01032
	M3	7 - 9	08558-00302	13	11	1/2	7/16	07556-09983	07572-01083
	M4	16 - 18	08558-00305	13	11	1/2	7/16	07556-09984	07572-01084
	M5	30 - 35	08558-00308	13	11	1/2	7/16	07556-09985	07572-01085
SUPERSERT (FB00)	8 UNC	16 - 18	08558-00305	13	10	1/2	13/32	07552-09558	07572-02058
	10 UNC	30 - 35	08558-00308	13	12	1/2	15/32	07552-09550	07572-02050
	8 UNF	16 - 18	08558-00305	13	10	1/2	13/32	07552-09578	07572-02078
	10 UNF	30 - 35	08558-00308	13	12	1/2	15/32	07552-09570	07572-02070
	M3	16 - 18	08558-00305	13	19	1/2	3/4	07552-09583	07572-02083
	M4	16 - 18	08558-00305	13	17	1/2	21/32	07552-09584	07572-02084
	M5	30 - 35	08558-00308	13	11	1/2	7/16	07552-09585	07572-02085
LG. FLANGE HEXSERT (9498)	M4	16 - 18	08558-00305	13	15	1/2	19/32	07556-09184	07572-04084
	M5	30 - 35	08558-00308	13	10	1/2	13/32	07557-09285	07572-03085
STANDARD NUTSERTS (9500) (9538)	3/16 BSW	20 - 25	08558-00306	13	12	1/2	15/32	07556-09816	07572-00016
	1/4 BSW	25 - 30	08558-00307	13	15	1/2	19/32	07556-09818	07572-00018
	1/4 BSF	25 - 30	08558-00307	13	15	1/2	19/32	07556-09828	07572-00028
	4 UNC	5 - 7	08558-00301	13	12	1/2	15/32	07556-09854	07572-00054
	6 UNC	9 - 11	08558-00303	13	12	1/2	15/32	07556-09856	07572-00056
	8 UNC	13 - 15	08558-00304	13	10	1/2	13/32	07556-09858	07572-00058
	10 UNC	20 - 25	08558-00306	13	12	1/2	15/32	07556-09850	07572-00050
	6 UNF	9 - 11	08558-00303	13	12	1/2	15/32	07556-09876	07572-00076
	8 UNF	13 - 15	08558-00304	13	10	1/2	13/32	07556-09878	07572-00078
	10 UNF	20 - 25	08558-00306	13	12	1/2	15/32	07556-09870	07572-00070
	1/4 UNC	25 - 30	08558-00307	13	15	1/2	19/32	07556-09848	07572-00048
	1/4 UNF	25 - 30	08558-00307	13	15	1/2	19/32	07556-09868	07572-00068
	6 BA	5 - 7	08558-00301	13	12	1/2	15/32	07556-09836	07572-00036
	4 BA	9 - 11	08558-00303	13	12	1/2	15/32	07556-09834	07572-00034
	2 BA	20 - 25	08558-00306	13	12	1/2	15/32	07556-09832	07572-00032
	0 BA	25 - 30	08558-00307	13	15	1/2	19/32	07556-09830	07572-00030
	M3	5 - 7	08558-00301	13	12	1/2	15/32	07556-09883	07572-00083
	M4	13 - 15	08558-00304	13	10	1/2	13/32	07556-09884	07572-00084
	M5	20 - 25	08558-00306	13	12	1/2	15/32	07556-09885	07572-00085
	M6	25 - 30	08558-00301	13	15	1/2	19/32	07556-09886	07572-00086
L/F THIN SHEET NUTSERT (9698)	M4	16 - 18	08558-00305	13	15	1/2	19/32	07556-09184	07572-04084
	M5	30 - 35	08558-00308	13	10	1/2	13/32	07556-09185	07572-04085
HEXSERT (9688)	M4	16 - 18	08558-00305	13	18	1/2	23/32	07556-09284	07572-06084
	M5	30 - 35	08558-00308	13	12	1/2	15/32	07556-09285	07572-06085
NUTSERT SQ (GK08)	M5	30 - 35	08558-00308	10	13	13/32	1/2	07528-07085	07572-07085

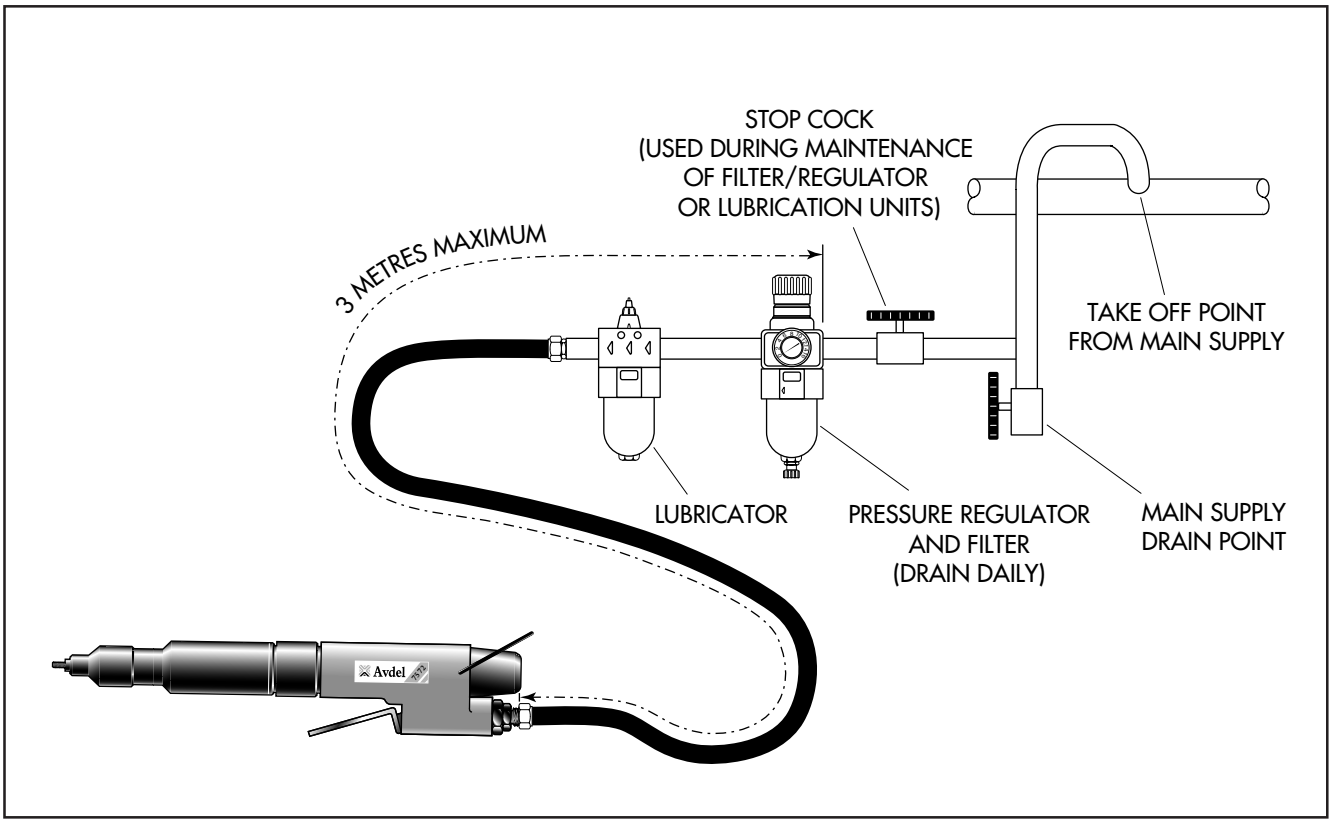
PUTTING INTO SERVICE

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.



OPERATING PROCEDURE

IMPORTANT

When placing Standard Nutserts, lubricate the drive screw of the tool every 25 placings. This is best achieved by wiping the drive screw with a sponge soaked with STP Lubricant part number 07992-00013

OPTION 1

- Ensure that the correct nose equipment is fitted.
- Connect the tool to the air supply.
- Place the insert into the prepared hole of the application.
- Locate the drive screw of the tool into the insert.
- Operate the lever. The drive screw will screw into and collapse the insert, then automatically reverse out.

OPTION 2

- Ensure that the correct nose equipment is fitted.
- Connect the tool to the air supply.
- Screw the insert lip first onto the drive screw of the tool.
- With the insert on the tool, locate it into the prepared hole of the application
- Operate the lever. The drive screw will screw into and collapse the insert, then automatically reverse out.

CLUTCH ADJUSTMENT

If you have ordered a complete tool the clutch will be set for the specified insert.

When purchased as a spare part, the clutch is supplied unset.

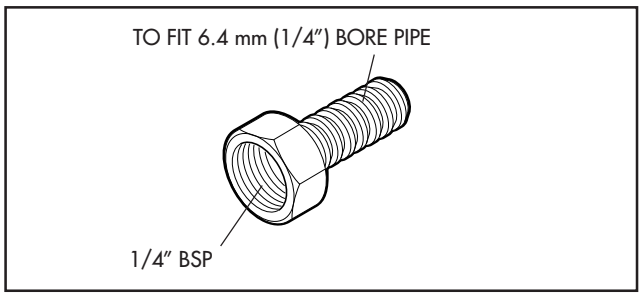
Correct clutch setting is necessary to ensure optimum deformation of the insert. If the deformation is insufficient (clutch torque too low) the insert will rotate in the application. If the deformation is excessive (clutch torque too high) thread distortion will occur and extensive wear on the drivescrew, may lead to fracture.

For details on how to adjust the clutch refer to maintenance instructions referring to the clutch on page 11.

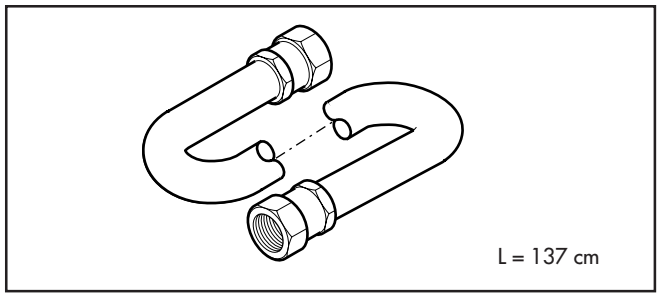
ACCESSORIES

Two different accessories are available to make the connection to your air supply:

Hose Connector
part nº 07005-00276



Hose Assembly
part nº 07008-000324



NOSE ASSEMBLIES

Nose assemblies are specifically designed for each size and type of insert. If you have purchased a complete tool, it will already be fitted with the correct nose assembly for your insert.

It is essential that the correct nose assembly is fitted prior to operating the tool. By knowing your original complete tool part number or the details of the insert to be placed, you will be able to order a new complete nose assembly using the selection table page 5.

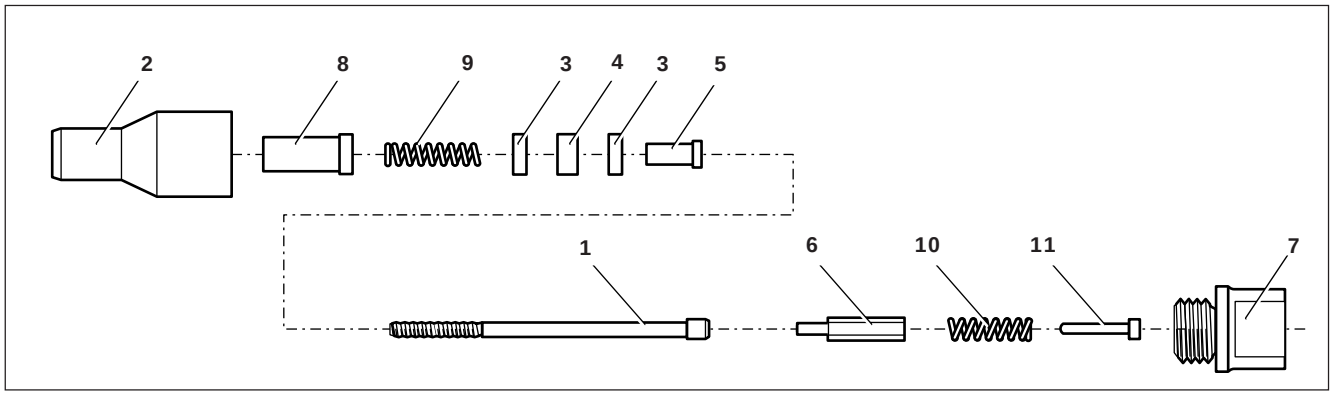
FITTING INSTRUCTIONS

IMPORTANT

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

Before fitting the nose equipment, ensure the clutch on the tool is set to the correct torque for the insert being placed. (Torque values are on page 11.)

- Where applicable, insert sleeve **8** and thrust spring **9** into nose housing **2**.
- Coat thrust washers **3** and thrust bearing **4** with high pressure grease (eg. Shell Alvania E.P.I.) and locate them in the order shown below into the nose housing **2**.
- Where applicable, fit spacer **5** through thrust washers and thrust bearings.
- Insert drive screw **1** through the above assembly.
- Fit drive shaft **6** into the hexagon hole in the drive screw head.
- Insert stop **11** and spring **10** into the front of the base tool.
- Screw adaptor **7** into clutch housing of the base tool (left hand thread).
- Offer up the nose assembly to the adaptor. It will be necessary to rotate the drive screw by hand to line up the hexagon on the drive shaft 6 with the hexagonal hole in the front jaw of the base tool.
- Screw the nose housing **2** onto the adaptor **7** and tighten with a spanner (left hand thread).



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.
- Particularly check wear on drivescrew, thrust washers and thrust bearing.
- Lubricate thrust washers and thrust bearings with high pressure grease (eg Shell Alvania E.P.I.)
- Check springs are not distorted.

- Assemble according to fitting instructions.

NOSE ASSEMBLY COMPONENTS

The table below lists all nose assemblies available. Each nose assembly represents a unique assembly of components which can be ordered individually. Components numbers refer to the text and illustration opposite. We recommend some stock as items will need regular replacement. Read the nose assemblies servicing instructions opposite carefully. All nose assemblies also include spring 10 part number 07430-08282 and stop 11 part number 07430-08203.

NOSE ASSY	1	2	3	4	5	6	7	8	9
07528-07085	07001-00256	07557-08985	07007-00080	07007-00077	07521-08808	07521-08806	07443-08001	-	-
07552-09550	07001-00300	07552-07706	07007-00080	07007-00077	07521-08808	07521-08803	07443-08001	-	-
07552-09558	07001-00318	07552-07701	07007-00080	07007-00077	07521-08809	07521-08804	07443-08001	-	-
07552-09570	07001-00301	07552-07706	07007-00080	07007-00077	07521-08808	07521-08803	07443-08001	-	-
07552-09578	07001-00319	07552-07701	07007-00080	07007-00077	07521-08809	07521-08804	07443-08001	-	-
07552-09583	07001-00325	07552-07709	07007-00080	07007-00077	07520-08803	07520-08802	07443-08001	-	-
07552-09584	07001-00326	07552-07705	07007-00080	07007-00077	07521-08810	07521-08805	07443-08001	-	-
07552-09585	07001-00256	07552-07702	07007-00080	07007-00077	07521-08808	07521-08806	07443-08001	-	-
07552-09586	07001-00337	07552-07703	07007-00080	07007-00077	-	07522-08802	07443-08001	-	-
07552-09984	07001-00326	07552-08811	07007-00080	07007-00077	07521-08810	07521-08805	07443-08001	-	-
07552-09985	07001-00256	07552-08812	07007-00080	07007-00077	07521-08808	07521-08806	07443-08001	-	-
07556-09184	07001-00326	07552-06804	07007-00080	07007-00077	07521-08810	07521-08805	07443-08001	07552-08804	07440-08002
07556-09185	07001-00256	07552-06805	07007-00080	07007-00077	07521-08808	07521-08806	07443-08001	07552-08805	07440-08002
07556-09284	07001-00326	07521-08984	07007-00080	07007-00077	07521-08810	07521-08805	07443-08001	07521-08901	07440-08002
07556-09285	07001-00256	07521-08985	07007-00080	07007-00077	07521-08808	07521-08806	07443-08001	07521-08902	07440-08002
07556-09816	07001-00320	07440-06805	07007-00080	07007-00077	07521-08808	07521-08803	07443-08001	-	-
07556-09818	07001-00334	07443-06108	07007-00080	07007-00077	-	07522-08801	07443-08001	-	-
07556-09828	07001-00333	07443-06108	07007-00080	07007-00077	-	07522-08801	07443-08001	-	-
07556-09830	07001-00335	07443-06108	07007-00080	07007-00077	-	07522-08801	07443-08001	-	-
07556-09832	07001-00321	07440-06805	07007-00080	07007-00077	07521-08808	07521-08803	07443-08001	-	-
07556-09834	07001-00315	07440-06304	07007-00080	07007-00077	07521-08807	07521-08802	07443-08001	-	-
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07556-09883	07001-00325	07440-06306	07007-00080	07007-00077	07520-08803	07520-08802	07443-08001	-	-
07556-09886	07001-00337	07443-06108	07007-00080	07007-00077	-	07522-08802	07443-08001	-	-
07556-09916	07001-00320	07440-08805	07007-00080	07007-00077	07521-08808	07521-08803	07443-08001	-	-
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07557-09285	07001-00256	07557-08901	07007-00080	07007-00077	07521-08808	07521-08806	07443-08001	07557-08902	07440-08002

SERVICING THE TOOL

Regular servicing should be carried out and a comprehensive inspection performed annually or every 200000 cycles, whichever is soonest.

IMPORTANT

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 the air hose to the tool. If there is a filter fitted, drain it.
- Check that the nose assembly is correct.
- Inspect the drivescrew in the nose assembly for wear or damage. If there is any, renew.

WEEKLY

- Fully dismantle and service the nose assembly (see instructions page 8).
- Lubricate the clutch spring with high pressure grease (eg. Shell Alvania EPI).
- Check the clutch torque setting (see clutch adjustment procedure page 11).
- Check for air leaks in the air supply hose and fittings.

For lubricating internal tool parts other than those described previously, use Moly Lithium Grease EP3753 (part number 07992-00020)

MOLY LITHIUM GREASE EP 3753 **SAFETY DATA**	
FIRST AID SKIN: As the grease is completely water resistant it is best removed with an approved emulsifying skin cleaner. INGESTION: Make the individual drink 30ml Milk of Magnesia, preferably in a cup of milk. EYES: Irritant but not harmful. Irrigate with water and seek medical attention. **ENVIRONMENT** Scrape up for burning or disposal on approved site.	**FIRE** FLASH POINT: Above 220°C. Not classified as flammable. Suitable extinguishing media: CO_2, Halon or water spray if applied by an experienced operator. **HANDLING** Use barrier cream or oil resistant gloves **STORAGE** Away from heat and oxidising agent.

MAINTENANCE

Every 200000 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 Moly Lithium grease EP 3753 before assembling.

IMPORTANT

Safety Instructions appear on pages 2 & 3.

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.

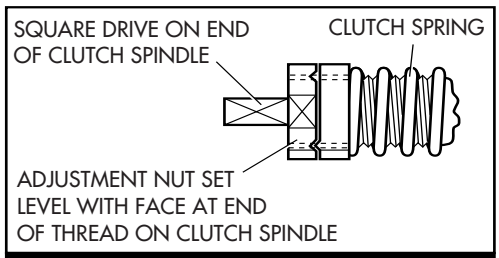
The airline must be disconnected before any servicing or dismantling is attempted, unless specifically instructed not to.
It is recommended that any dismantling operation be carried out in clean conditions.
Item **numbers in bold** refer to the General Assembly drawing and parts list (pages 14 and 15).
Prior to dismantling the tool it is necessary to remove the nose assembly. For simple removal instructions see the nose assemblies section, page 8 and 9.

CLUTCH

- Place housing and bush assembly **51** in vice fitted with soft jaws.
- Unscrew clutch housing **2** (left hand thread) and remove bush **1** from clutch housing **2**.
- Withdraw the clutch assembly, taking care not to bend push rod **9**. Pull out push rod (long) **9**.
- Remove the tool from the vice and gently tap on the front end of assembly to remove needle roller **30** and push rod (short) **33**.
- Holding the square drive end of clutch spindle **60**, unscrew adjustment nut **11**.
- Pull off adjustment lock washer **10** and spring **8**.
- Depress spring **8** and remove pin **61**.
- Remove collar **5** and three balls **4**.
- Remove split retaining ring halves **6**.
- Move front jaw **64** relative to clutch spindle **60** until small hole in side of front jaw **64** is aligned with track of the balls in clutch spindle **60**.
- Ten balls **3** will become visible through small hole in front jaw **64**.
- Gently tap front jaw **64**, allowing the ten balls to fall out of hole in the front jaw, (as each ball is ejected, turn front jaw **64** on clutch spindle **60** to align next ball with hole).
- Insert small rod through centre of front jaw **64** and tap out clutch spindle **60**.
- Remove drive jaw **63**, key **62** and spring **7**.

- Assemble in reverse order to dismantling.

- Reset clutch torque in the following manner, (see diagram opposite):
- Place square drive on end of clutch spindle **60** in vice, engaging approximately 10 mm in vice jaws. This allows access for spanner entry.
- Using the spanner, unscrew adjustment nut **11** until it is level with the end of the thread of the clutch spindle. Torque can then be increased/decreased as dictated by fastener type and size by turning the adjustment nut clockwise anticlockwise as appropriate.



RESETTING CLUTCH TORQUE

Use the data in the table below to know how many turns give a particular torque.

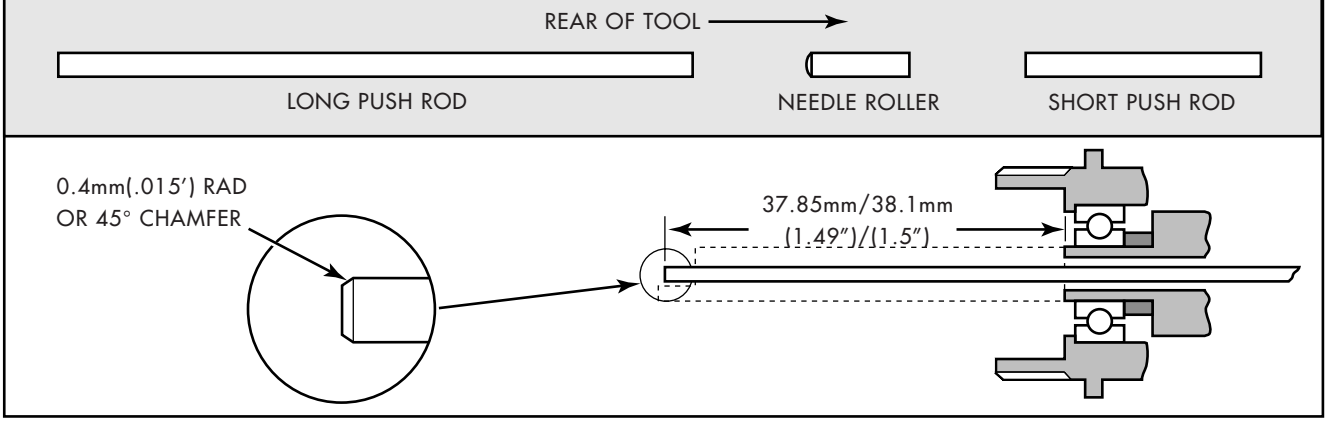
7572 CLUTCH DETAILS

UNSET CLUTCH PART Nº	SPRING PART Nº	SPRING COLOUR	Nº OF TURNS / lb f ins													
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
08558-00390	08556-00412	SILVER	-	-	10	12.5	15	17.5	20	22.5	25	28	31	34	37	-
08558-00380	08572-00407	OXIDE BLACK	-	-	5	6	7	8	9	10	11	12	13	14	15	16

IMPORTANT

It is imperative that the reverse control rods are fitted in the correct sequence (see diagram opposite) to ensure correct tool function. When renewing the long push rod, it is necessary to trim the overall length to give a protrusion of 37.85mm(1.49")/38.1mm(1.5") of the push rod above the front face of the output square drive spindle of the final gearbox. A gauge (part number 07900-00424) is used to achieve this.
This operation should be carried out with the air supply connected to the tool. Do not operate the trigger during this operation. When the rod has been trimmed to the correct length, carefully remove the sharp edge left with either a 0.4mm(.015") radius or 45° chamfer. Take care not to bend or damage the new push rod.

FITTING NEW REVERSE CONTROL RODS



HOUSING AND BUSH ASSEMBLY

- Drive out groverlok pin **55** and remove trigger **56**.
- Unscrew nipple **45** from valve bush **46**. Remove filter **47** and unscrew valve bush **46** from housing and bush assembly **51**.
- Remove spring **48** and push out valve **50** from valve bush **46**.
- Remove 'O' rings **52** and **53** from valve bush **46** and 'O' rings **49** and **54** from valve **50**.
- Unscrew silencer retainer assembly **65**, remove perforated washer **66**, silencer bodies **68** and silencer element **67**.
- Unscrew knob **44** and remove 'O' ring **36**.
- Remove screw **43** and washer **42**.
- Remove end plate **41** by lightly tapping the end plate to break the 'Loctite' seal between the end plate **41** and the reverse valve assembly **34**, taking care not to damage groverlok pins **38**.
- Remove 'O' ring **40** and spring **39**.
- Push reverse valve assembly **34** out of housing and bush assembly **51**.

IMPORTANT

Reverse valve assembly 34 is a manufacturer supplied assembly and MUST NOT be dismantled.

- Remove 'O' ring **35** from reverse valve assembly **34**.
- Remove 'O' ring **37** from reverse valve bushing but do not attempt to remove the valve bushing from the handle and bush assembly.

- Assemble in reverse order of dismantling.
- When replacing screw **43** and washer **42**, ensure thread sealant is used on screw threads.

FRONT GEAR ASSEMBLY (previously removed from housing and bush assembly).

- Hold ring gear **14** and tap out internal assembly from front end, then remove spacer **15** and bearing **19** from rear end of planet gear spindle**12**.
- Tap out two planet gear shafts **16** and remove two planet gears **18** together with needle bearings **17**.
- Press out needle bearings **17** from planet gears **18**. and bearing **13** from ring gear **14**.

- Assemble in reverse order of dismantling.

REAR GEAR ASSEMBLY

- Pull off spacer **21**.
- Hold ring gear **59** and push out internal assembly from the front end.
- Remove two bearings **19** and spacer **57** from planet gear spindle **58**.
- Push out two planet gear shafts **16** and slide out planet gears **18** and needle bearing **17**.
- Press out needle bearings **17** from planet gears **18**.
- Using circlip pliers remove circlip **20** from ring gear **59**.

- Assemble in reverse order of dismantling.

MOTOR ASSEMBLY

- Remove locating pin **26** from front end plate **25**.
- Hold front end plate **25** and tap splined end of rotor **27** with a soft hammer so as not to damage splines.
- Remove front end plate **25** and bearing **24** from rotor **27**.
- Remove cylinder **28** complete with pins **26**.
- Remove five rotor blades **29** from rotor **27**.
- Support rear end plate **31** using a piece of tube with a bore diameter as close as possible to largest diameter of rotor **27**, then tap non-splined end of rotor **27** to remove it from rear end plate **31** and bearing **32**.
- Using a suitable punch, tap out bearing **32** from rear end plate **31** and bearing **24** from front end plate **25**.

- When assembling, make sure that locating pin **26** in front end plate **25** locates in keyway in the front bore of the handle.
- Pay special attention to rear end plate **31** and front end plate **25**, ensuring they are free from burrs and surface marking.
- If necessary, lap faces that abut cylinder **28** on a flat fine grade abrasive paper.

- Press fit bearings **32** & **24** into rear and front end plates **31** & **25.**
- Support bearing **32** in rear end plate **31** on its inner ring and using a soft hammer, tap rotor **27** on its splined end until rotor **27** locates against rear end plate **31**.
- Support the inner face of rear end plate **31** as close as possible to largest diameter of rotor **27** and tap non-splined end of rotor **27** until a clearance of 0.040 mm (0.0015 in) to 0.065 mm (0.0025 in) is obtained between the inner face of rear end plate **31**and rotor **27**.

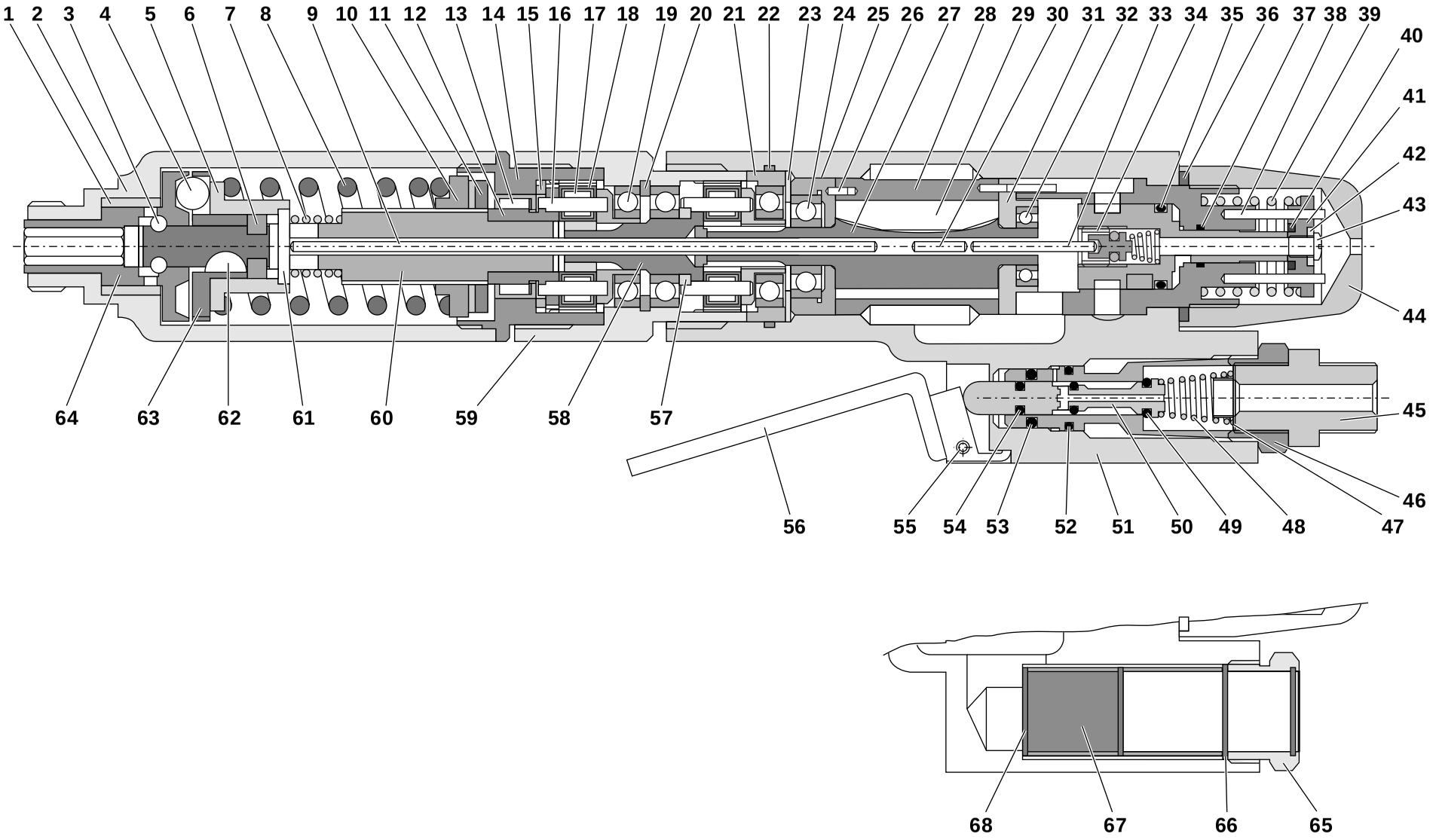
- Check clearance by pulling rotor **27** away from rear end plate **31** and bearing **32**.
- Spin the rotor, ensuring that it rotates freely in rear end plate bearing **32**.
- Locate cylinder **28** with locating pin **26** to rear end plate **31** and check ports in rear end plate **31** align with ports in cylinder **28**.
- Insert rotor blades **29** into rotor **27**.
- Fit front end plate **25** to cylinder **28** via its locating pin.
- Ensure rotor **27** spins freely.

- Assemble in reverse order of dismantling.

IMPORTANT

Check the tool against daily and weekly servicing.

GENERAL ASSEMBLY OF BASE TOOL 07572-00400



07572-00400 PARTS LIST

ITEM	PART Nº	DESCRIPTION	QTY	REC. SPARES	ITEM	PART Nº	DESCRIPTION	QTY	REC. SPARES
1	08556-00403	BUSH	1	-	39	08558-00411	SPRING	1	-
2	08558-00401	CLUTCH HOUSING	1	-	40	08556-00424	'O' RING	1	1
3	08430-00221	3/32" DIA. BALL	10	-	41	08558-00412	END PLATE	1	-
4	08558-00402	1/4 DIA. BALL	3	-	42	08415-00220	WASHER	1	-
5	08558-00403	COLLAR	1	-	43	08415-00221	SCREW	1	-
6	08556-00405	RETAINING RING HALF	2	-	44	08558-00413	KNOB	1	-
7	08556-00411	SPRING	1	1	45	08433-00221	NIPPLE	1	-
8	08556-00412	SILVER SPRING	1	-	46	08572-00404	VALVE BUSH	1	-
8	08572-00407	OXIDE BLACK SPRING	1	-	47	08550-00423	FILTER	1	-
9	08558-00404	PUSH ROD	1	1	48	08572-00406	SPRING	1	1
10	08556-00409	ADJUSTMENT LOCK WASHER	1	-	49	08434-00202	'O' RING	1	1
11	08430-00229	ADJUSTMENT NUT	1	-	50	08572-00403	VALVE	1	-
12	08410-00204	PLANET GEAR SPINDLE	1	-	51	08572-00401	HOUSING AND BUSH ASSEMBLY	1	-
13	08410-00252	BEARING	1	-	52	08520-00215	'O' RING	1	1
14	08410-00203	RING GEAR	1	-	53	08415-00207	'O' RING	1	1
15	08410-00251	SPACER	1	-	54	08441-00402	'O' RING	2	2
16	08410-00205	PLANET GEAR SHAFT	4	-	55	08433-00233	PIN	1	-
17	08410-00206	NEEDLE BEARING	4	-	56	08572-00402	TRIGGER	1	-
18	08410-00250	PLANET GEAR	4	-	57	08414-00210	SPACER	1	-
19	08410-00245	BEARING	3	-	58	08558-00416	PLANET GEAR SPINDLE	1	-
20	08410-00208	CIRCLIP	1	1	59	08414-00204	RING GEAR	1	-
21	08410-00209	SPACER	1	-	60	08556-00408	CLUTCH SPINDLE	1	-
22	08572-00410	'O' RING	1	1	61	08556-00407	PIN	1	-
23	08410-00244	SPACER	1	-	62	08430-00223	KEY	1	-
24	08412-00241	BEARING	1	-	63	08558-00417	DRIVE JAW	1	-
25	08412-00234	FRONT END PLATE	1	-	64	08558-00418	FRONT JAW	1	-
26	08415-00212	PIN	2	-	65	08415-00203	SILENCER RETAINER ASSEMBLY	1	-
27	08558-00406	ROTOR	1	-	66	08432-00201	PERFORATED WASHER	1	-
28	08415-00236	CYLINDER	1	-	67	08415-00204	SILENCER ELEMENT	1	1
29	08410-00242	ROTOR BLADE	5	5	68	08415-00205	SILENCER BODY	2	-
30	08556-00418	NEEDLE ROLLER	1	-	69	08551-00402	PROTECTIVE CAP	1	NOT SHOWN
31	08524-00204	REAR END PLATE	1	-	70	08557-00201	PROTECTIVE CAP	1	NOT SHOWN
32	08424-00205	BEARING	1	-	71	08435-00202	LOCATION PIN	1	NOT SHOWN
33	08556-00416	PUSH ROD	1	-	72	08415-00234	NAME PLATE	1	NOT SHOWN
34	08558-00419	REVERSE VALVE ASEMBLY	1	-	73	08572-00408	SCREW	2	NOT SHOWN
35	08415-00215	'O' RING	1	1	74	08572-00409	SCREW	1	NOT SHOWN
36	08412-00226	'O' RING	1	1	75	08430-00209	HANGING BAIL	1	NOT SHOWN
37	08415-00217	'O' RING	1	1	76	07900-00354	TIE ON SAFETY LABEL	1	NOT SHOWN
38	08415-00209	PIN	2	-					

FAULT DIAGNOSIS TABLE

SYMPTOM	POSSIBLE CAUSE	REMEDY
Tool reverses before Insert is Placed	→ Worn thrust bearing or thrust washers	→ Replace
	→ Dirty insert threads	→ Change batch of inserts
	→ Worn drive screw	→ Replace
	→ Lack of lubrication on drive screw (Standard Nutserts only)	→ Lubricate drive screw properly (see page 6)
	→ Thrust spring not fitted	→ Fit thrust spring
	→ Clutch torque setting too low	→ Adjust to correct setting
	→ Insufficient pressure/volume of air	→ Check air supply/fittings
Tool runs slowly	→ Insufficient air pressure	→ Adjust air pressure at base of handle. 5 - 8 bar maximum.
	→ Incorrect bore of hose	→ Ensure bore of hose is 6.4mm minimum
	→ Insufficient air volume	→ Ensure there is no restriction in the air supply or connections
	→ Tool not properly lubricated internally	→ Lubricate as per instructions
Tool fails to start	→ Tool not properly lubricated	→ Lubricate then depress trigger several times
	→ Restricted air pressure/volume	→ Ensure there is no restriction in the air supply
Tool runs permanently in reverse mode	→ Push rod too long	→ Replace with one of correct length
	→ Insufficient air supply	→ Adjust air pressure/volume
Tool runs permanently in forward mode	→ Push rods/needle roller missing	→ Replace where necessary
	→ Air leak around screw **43**	→ Seal with thread sealant
	→ Push rod too short	→ Replace
Inserts not pulling up	→ Torque setting too low	→ Adjust to correct setting
	→ Insufficient air pressure/volume	→ Adjust air pressure/volume
	→ Inserts out of grip	→ Select correct insert
	→ Lack of lubrication on insert	→ Change batch of inserts
	→ Lack of lubrication on drive screw (Standard Nutserts only)	→ Lubricate drive screw correctly (see page 6)
	→ Insert thread restricted	→ Change Inserts
	→ Drive screw thread worn	→ Replace drive screw
	→ Incorrect insert/drive screw	→ Replace with correct insert/drive screw
Standard Nutserts centres falling out	→ Dirty Nutserts	→ Clean Nutserts
	→ Clutch torque setting too low	→ Adjust to correct setting
	→ Application thickness below minimum recommended grip	→ Change to correct Insert
	→ Oversize hole in application	→ Correct hole size in application
Worn drive screws	→ Clutch torque setting too high	→ Adjust to correct setting
	→ Drive screw not lubricated	→ Lubricate drive screw regularly when using Standard Nutserts
	→ Inserts not lubricated	→ Change batch of inserts
	→ Tool not held correctly	→ Ensure tool is held square to application
	→ Incorrect insert/drive screw threads	→ Replace with correct insert/drive screw
	→ Restricted insert threads	→ Change batch of inserts

Engineered Fastening and Assembly Systems

CE

Declaration of Conformity

We, *Avdel UK Limited, Mundells, Welwyn Garden City, Herts, AL7 1EZ*

declare under our sole responsibility that the product

type 07572

Serial N° _____

to which this declaration relates is in conformity with the following standards or other formative documents

EN292 part 1 and part 2
ISO 8662 part 1 and part 7
ISO 3744 and PNEUROP test code PN8TC1
ISO PREN792 part 6

following the provisions of the Machine Directive 98/37/EC
This box contains a power tool which is in conformity with Machines Directive 98/37/EC. The 'Declaration of Conformity' is contained within.

Welwyn Garden City - date of issue _____

A. Seewraj
Product Engineering Manager - Automation Tools

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