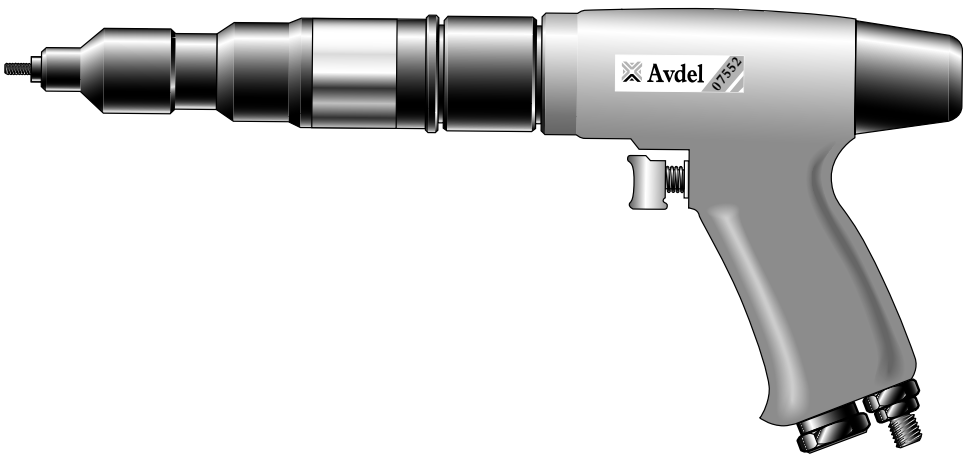
Avdel®

An Acument™ Global Technologies Company

Instruction Manual

Pass onto user to read and keep for reference



Threaded Insert Power Tool

07552

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 07552 TOOL

AIR PRESSURE	Minimum - Maximum	**5 - 8 bar**	70 - 120 lbf/in²
FREE AIR VOLUME REQUIRED	@ 5 bar / 75 lbf/in²	**623 litres/min**	22 ft³/min
MOTOR SPEED	@ 75 lb/in² minimum	**600 RPM**	(clockwise)
CYCLE TIME	Approximately	**4 seconds**	
NOISE LEVEL		**80 dB(A)**	
WEIGHT	Without nose equipment	**1.8 kg**	4 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.

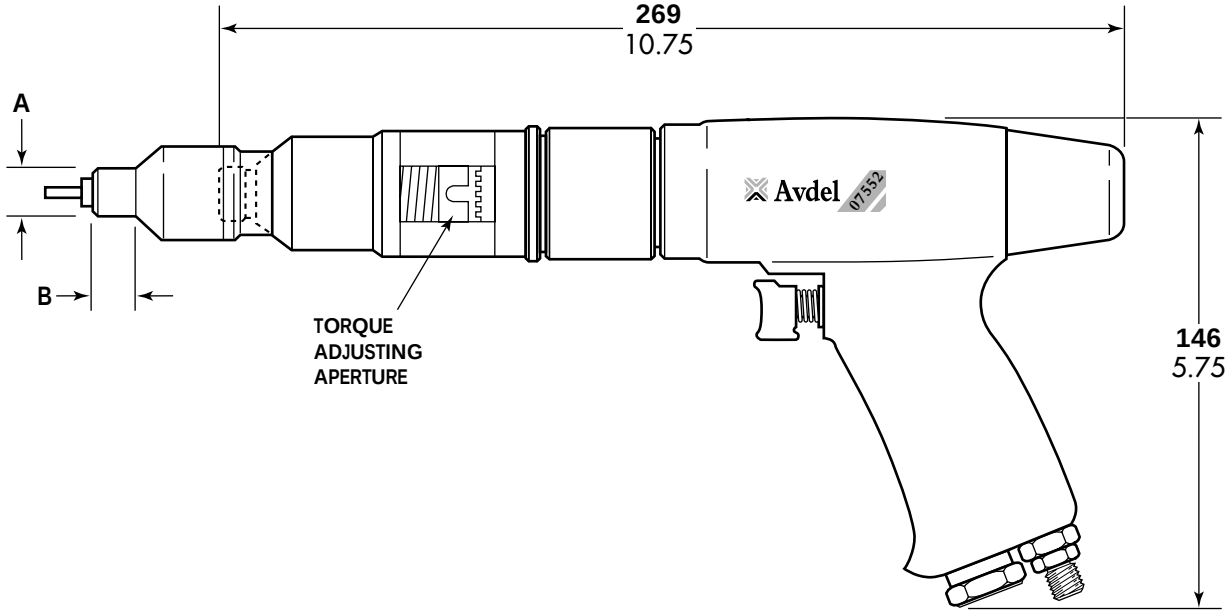
(!) THIS TOOL IS NOT DESIGNED FOR USE IN COMBUSTIBLE OR EXPLOSIVE ATMOSPHERES.

NTENT OF USE

The pneumatic 07552 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 07552-00400). For details of nose assemblies see pages 8 and 9.



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

7552 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	08556-00380	13	10	1/2	13/32	07556-09916	07552-01016
	4 UNC	7 - 9	08556-00390	13	11	1/2	7/16	07556-09954	07552-01054
	6 BA	7 - 9	08556-00390	13	13 1/2	1/2	17/32	07556-09936	07552-01036
	4 BA	16 - 18	08556-00380	13	11	1/2	7/16	07556-09934	07552-01034
	2 BA	30 - 35	08556-00380	13	17	1/2	21/32	07556-09932	07552-01032
	M3	7 - 9	08556-00390	13	11	1/2	7/16	07556-09983	07552-01083
	M4	16 - 18	08556-00380	13	11	1/2	7/16	07556-09984	07552-01084
	M5	30 - 35	08556-00380	13	10	1/2	13/32	07556-09985	07552-01085
SUPERSERT (FBOO)	8 UNC	16 - 18	08556-00380	13	10	1/2	13/32	07552-09558	07552-02058
	10 UNC	30 - 35	08556-00380	13	12	1/2	15/32	07552-09550	07552-02050
	8 UNF	16 - 18	08556-00380	13	10	1/2	13/32	07552-09578	07552-02078
	10 UNF	30 - 35	08556-00380	13	12	1/2	15/32	07552-09570	07552-02070
	M3	16 - 18	08556-00380	13	19	1/2	3/4	07552-09583	07552-02083
	M4	16 - 18	08556-00380	13	10	1/2	13/32	07552-09584	07552-02084
	M5	30 - 35	08556-00380	13	11	1/2	7/16	07552-09585	07552-02085
LGE FLANGE HEXSERT (9498)	M4	16 - 18	08556-00380	13	10	1/2	13/32	07556-09184	07552-04084
	M5	30 - 35	08556-00380	13	10	1/2	13/32	07557-09285	07552-03085
STANDARD NUTSERTS (9500) (9538)	3/16 BSW	20 - 25	08556-00380	13	12	1/2	15/32	07556-09816	07552-00016
	1/4 BSW	25 - 30	08556-00380	13	15	1/2	19/32	07566-09818	07552-00018
	1/4 BSF	25 - 30	08556-00380	13	15	1/2	19/32	07556-09828	07552-00028
	4 UNC	5 - 7	08556-00390	13	12	1/2	15/32	07556-09854	07552-00054
	6 UNC	9 - 11	08556-00390	13	12	1/2	15/32	07556-09856	07552-00056
	8 UNC	13 - 15	08556-00390	13	10	1/2	13/32	07556-09858	07552-00058
	10 UNC	20 - 25	08556-00380	13	12	1/2	15/32	07556-09850	07552-00050
	6 UNF	9 - 11	08556-00390	13	12	1/2	15/32	07556-09876	07552-00076
	8 UNF	13 - 15	08556-00390	13	10	1/2	13/32	07556-09878	07552-00078
	10 UNF	20 - 25	08556-00380	13	12	1/2	15/32	07556-09870	07552-00070
	1/4 UNC	25 - 30	08556-00380	13	15	1/2	19/32	07566-09848	07552-00048
	1/4 UNF	25 - 30	08556-00380	13	15	1/2	19/32	07566-09868	07552-00068
	6 BA	5 - 7	08556-00390	13	15	1/2	19/32	07556-09836	07552-00036
	4 BA	9 - 11	08556-00390	13	12	1/2	15/32	07556-09834	07552-00034
	2 BA	20 - 25	08556-00380	13	12	1/2	15/32	07556-09832	07552-00032
	0 BA	25 - 30	08556-00380	13	12	1/2	15/32	07556-09830	07552-00030
	M3	5 - 7	08556-00390	13	12	1/2	15/32	07556-09883	07552-00083
	M4	13 - 15	08556-00390	13	10	1/2	13/32	07556-09884	07552-00084
	M5	20 - 25	08556-00380	13	12	1/2	15/32	07556-09885	07552-00085
	M6	25 - 30	08556-00380	13	15	1/2	19/32	07566-09886	07552-00086
LGE FLANGE THIN SHEET NUTSERT (9698)	M4	16 - 18	08556-00380	13	10	1/2	13/32	07556-09184	07552-04084
	M5	30 - 35	08556-00380	13	12	1/2	15/32	07556-09185	07552-04085
HEXSERT (9498)	M4	16 - 18	08556-00380	13	12	1/2	15/32	07556-09284	07552-06084
	M5	30 - 35	08556-00380	13	12	1/2	15/32	07556-09285	07552-06085
NUTSERT SQ (GK08)	M5	30 - 35	08556-00380	10	13	13/32	1/2	07528-07085	07552-07085

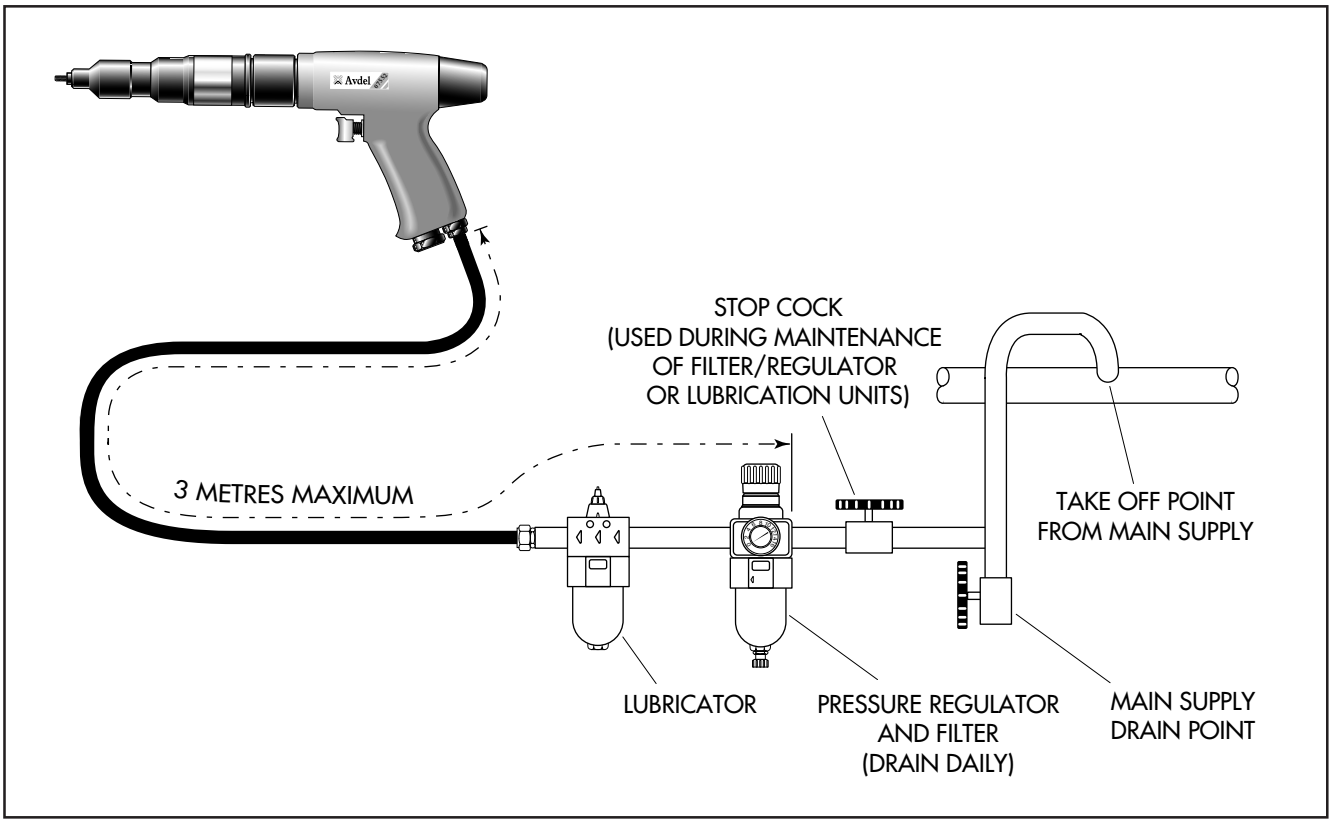
PUTTING INTO SERVICE

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 trigger halfway. The drivescrew will screw into and collapse the insert. Operate the trigger all the way. This will reverse the drivescrew out of the placed insert.

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 trigger halfway. The drivescrew will screw into and collapse the insert. Operate the trigger all the way. This will reverse the drivescrew out of the placed insert.

CLUTCH ADJUSTMENT

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.

IMPORTANT

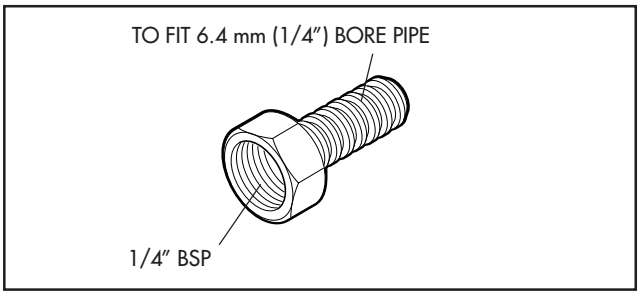
The air supply to the tool must be disconnected when adjusting the torque of the clutch

- Slide round the cover of the clutch housing (item 70 page 15) until you can see the serrations of the adjustment nut of the clutch (item 10 page 15).
- Using clutch adjuster key **74** supplied with the tool, turn the adjustment nut clockwise to decrease the torque or anti-clockwise to increase the torque.
- Turn the key one full turn at a time and test the tool having rotated the clutch housing cover back in place. Repeat as required.
- After dismantling the clutch, we suggest that you set the torque to its minimum by turning the key fully clockwise then adjust by turning the key anti-clockwise two turns at a time until the correct torque is acheived.

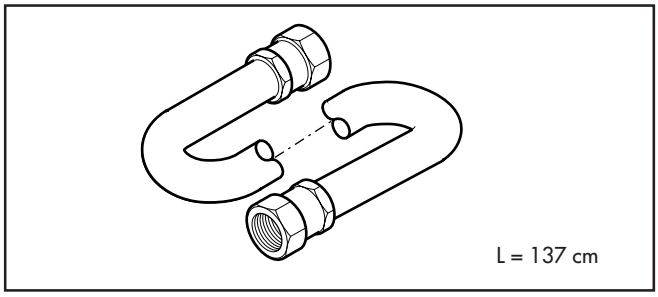
ACCESSORIES

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 used with the 07552 type of tooling. If you have purchased a complete tool, it will already be fitted with the correct nose assembly for your insert.

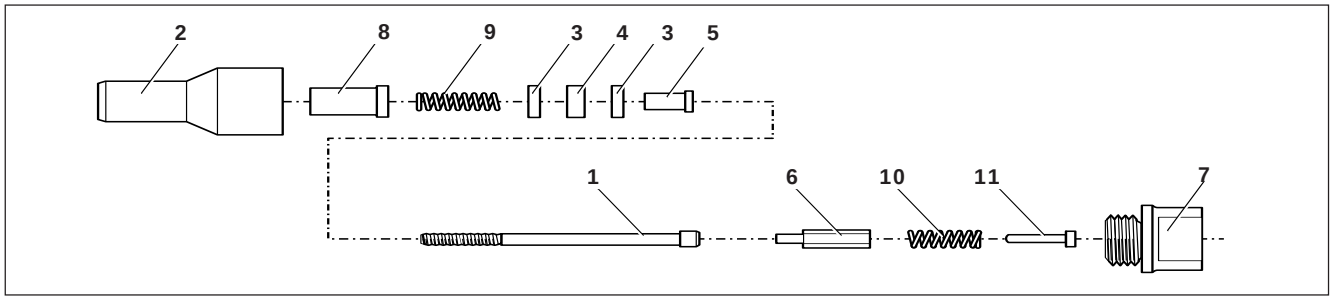
It is essential that the correct nose assembly is fitted prior to operating the tool. By knowing your original complete tool part number or the details of the insert to be placed, you will be able to order a new complete nose assembly using the selection table page 4.

FITTING INSTRUCTIONS

IMPORTANT

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

- 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).
- After fitting a nose assembly and prior to using the tool check the clutch torque setting (see page 7).



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 opposite lists all nose assemblies available. Each nose assembly represents a unique assembly of components which can be ordered individually. Component 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	-	-
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
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07556-09286	07001-00337	07522-08986	07007-00080	07007-00077	-	07522-08802	07443-08001	07522-08901	07150-00504
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	07521-08801	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	-	-
07556-09836	07001-00276	07440-06306	07007-00080	07007-00077	07520-08803	07520-08801	07443-08001	-	-
07556-09848	07001-00336	07443-06108	07007-00080	07007-00077	-	07522-08801	07443-08001	-	-
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07556-09884	07001-00326	07440-06508	07007-00080	07007-00077	07521-08810	07521-08805	07443-08001	-	-
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07556-09985	07001-00256	07440-08805	07007-00080	07007-00077	07521-08808	07521-08806	07443-08001	-	-
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 a filter is 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).
- Check for air leaks in the air supply hose and fittings.
- Lubricate the clutch with high pressure grease (eg. Shell Alvania E.P.I.) (see procedure in clutch section page 12).
- Check for wear on thrust bearings and thrust washers. If there is any, renew.

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.

For total tool servicing we advise that you proceed with dismantling the sub-assemblies in the order shown on pages 12 and 13.

CLUTCH

- Unscrew clutch housing **78** from front of the tool (left hand thread) and pull out bit holder **1** and clutch assembly.
- Bit holder **1** may be separated from jaw positive **77** by pressing them apart.
- Cover **70** may be sprung off of clutch housing **78**.
- Remove 'O' ring **68** from clutch spindle **8** and pull off spacer **11**.
- Remove bush **2** from front end of clutch spindle **8**.
- Insert clutch adjusting key in adjustment plate assembly **9** and rotate in a clockwise direction to unscrew adjustment nut **10** from clutch spindle **8**.
- Slide off adjustment plate assembly **9** (do not remove the three balls from this assembly), spring **7** and thrust pad **6**. Carefully lever off ring **72** and remove two retaining ring halves **71**.
- Over a suitable container, slide back drive jaw **73** and remove key **74**, six pins **5** and six balls **4**.
- Slide off bearing **75** and slide back front jaw **3** to release sixteen balls **76**.

- Assemble in reverse order of dismantling.
- Lubricate sixteen balls **76**, six pins **4** with Molylithium Grease E.P.3753 (part number 07992-00020) before assembling.
- Lubricate clutch spring **7** with Shell Alvania E.P.I. when assembling.

- Always reset the clutch adjustment (see procedure page 7).

7552 CLUTCH DETAILS

SPRING PART Nº	RANGE	SPRING COLOUR
08430-00230	20-86 lbf/in	RED
08410-00262	10-40 lbf/in	BLACK
08446-00405	5-12 lbf/in	BLUE

HANDLE ASSEMBLY

- Place housing and bush assembly **1** in soft jaw vice.
- Unscrew silencer retainer assembly **50** and remove washer **51**, two silencer bodies **53** and silencer element **52**.
- Unscrew nipple **49** from adaptor **48**.
- Unscrew adaptor **48** from housing **16** and remove filter **47**.
- Unscrew knob **41** and remove 'O' ring **34**.
- Remove screw **39** and washer **40**.
- Lightly tap end plate **37** to break the Loctite seal between end plate **37** and spring **36**.
- Tap out pin **38**. and push out reverse valve **32**.
- Remove 'O' ring **33** from the reverse valve bush and 'O' ring **35** from reverse valve **32**
- Tap out roll pin **35** and very carefully and slowly, so as not to cut the 'O' rings, pull out the trigger assembly.
- Drive out pin **58** from trigger **57** and remove spring **56** and pull out valve **44** from valve body **46**, and 'O' rings **45** from valve **44**.
- Do not remove the reverse valve bushing from the housing.

- Assemble in reverse order to dismantling.
- When replacing screw **39** and washer **40** ensure thread sealant is used on screw threads.

FRONT GEAR ASSEMBLY

- Unscrew front gear assembly from the tool using a spanner on housing **16**.
- Remove 'O' ring **20** and remove spacer **59**. Tap front end on a wooden block and the motor assembly will slide out.
- Hold ring gear **69** and from the front end tap out the internal assembly.
- Remove two bearings **12** and spacer **67** from planet gear spindle **65**.
- Push out two shafts **62** and remove two planet gears **13** and bearings **66**.
- Press out bearings **66** from planet gears **13**.

- Assemble in reverse order to dismantling.

REAR GEAR ASSEMBLY

- Pull off spacer **60**.
- Hold housing **42** and tap out the internal assembly from the front end.
- Remove two bearings **12** and spacers **17** and **60** from planet gear spindle **15**.
- Push out two planet gear shafts **62** complete with thirty needles **61**.
- Remove two planet gears **19** and drive gear **18**.
- Remove circlip 64 from housing **16**.

- Assemble in reverse order to dismantling.

MOTOR ASSEMBLY

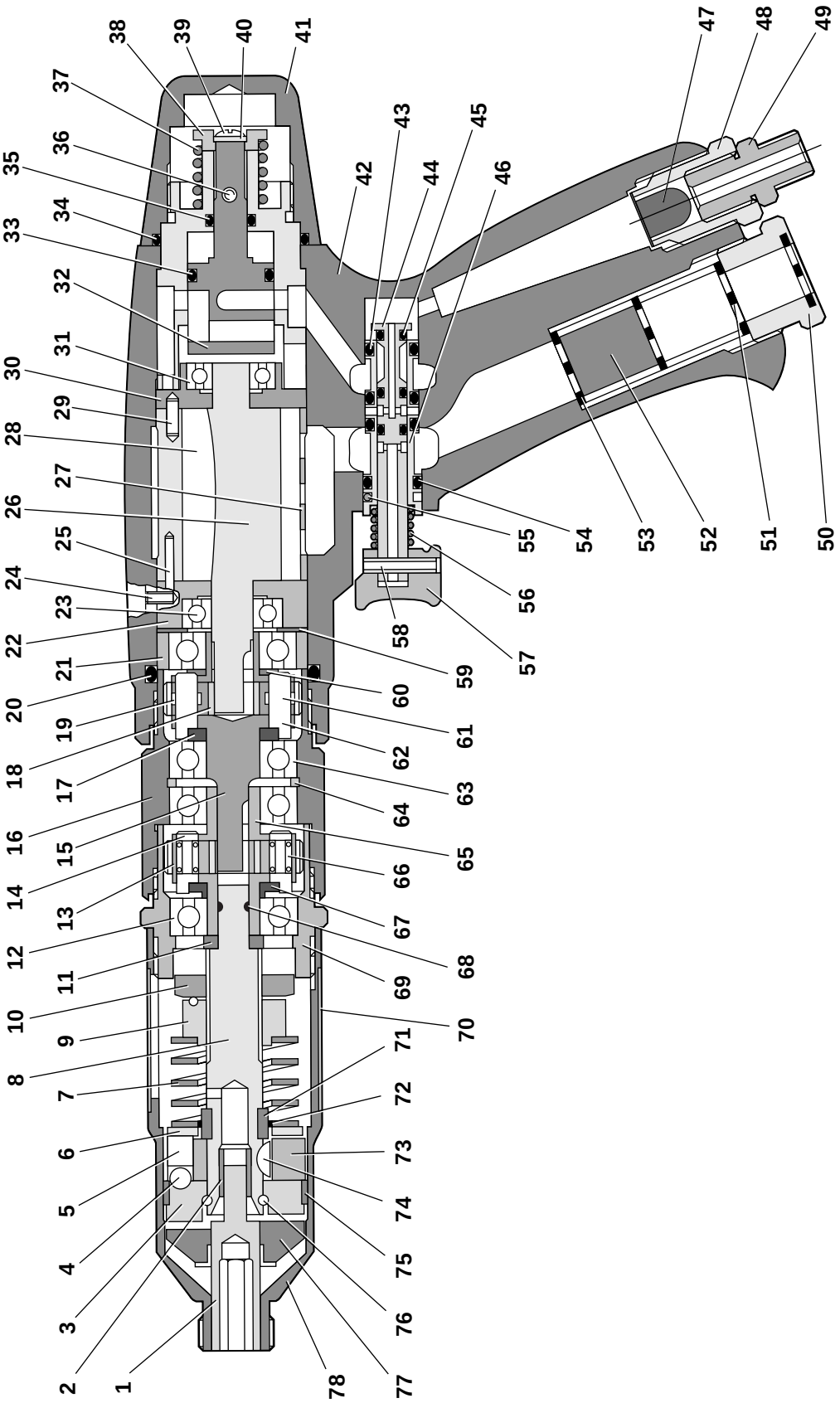
- Remove locating pin **24** from front end plate **22**.
- Hold front end plate **22** by hand and tap the splined end of rotor **26** with a soft hammer so as not to damage the splines and remove front end plate **22** and bearing **23** from rotor **26**.
- Remove cylinder **27** complete with locating roll pin **25** and pin **29**.
- Remove rotor blades **28** from rotor **26**.
- Support rear end plate **30** in a tube with a bore diameter as close as possible to the largest diameter of the rotor and tap the non-splined end of rotor **26** to remove it from the rear end plate and bearing assembly.
- With a suitable punch tap out bearing **23** from front end plate **22** and bearing **31** from rear end plate **30**.

- When assembling, ensure locating pin **24** in front end plate **22** locates in the keyway in the front bore of housing and bush assembly **42**.
- Ensure that front end plate **22** and rear end plate **30** that abut cylinder **27** are clean and free from burrs and surface marking. If necessary, lap faces that abut cylinder **27** on a flat fine grade of abrasive paper. Press bearings into front and rear end plates **22** & **30**. Support the bearings in rear end plate **30** on its inner ring and tap rotor **26** on its splined end with a soft hammer onto the bearing until the rotor locates against rear end plate **30**.
- Support the inner face of rear end plate **30** as close as possible to the largest diameter of rotor **26** and tap the non-splined end of rotor **26** until a clearance of 0.040 mm (0.0015 in)/0.065 mm (0.0025 in) is obtained between the inner face of the rear end plate **30** and rotor **26**. This clearance is to be checked when pulling rotor **26** away from the rear end plate **30** and bearing assembly.
- Spin rotor **26** to ensure that it will rotate freely in the rear end plate bearing.
- Locate cylinder **27** by locating pin **24** to rear end plate **30**, checking that the ports in the end plate match with those in cylinder **27**.
- Insert rotor blades **28** into rotor **26** and locate correctly front end plate **22** to cylinder **27** using the locating pin.
- Ensure that rotor **26** will spin freely in the assembly. This is best checked by placing the motor assembly in a vee block and squeezing the front and rear end plate against the cylinder.

- Complete assembly in reverse order to dismantling.

IMPORTANT

Check the tool against daily and weekly servicing.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07552-00200 PARTS LIST

ITEM	PART Nº	DESCRIPTION	QTY	SPARES	ITEM	PART Nº	DESCRIPTION	QTY	SPARES
01	08430-00218	BIT HOLDER	1	-	40	08415-00220	WASHER	1	-
02	08446-00406	BUSH	1	2	41	08435-00208	KNOB	1	-
03	08430-00235	JAW DRIVEN	1	-	42	08446-00413	HOUSING BUSH ASSEMBLY	1	-
04	08446-00410	BALL	6	12	43	08415-00207	'O' RING	3	3
05	08446-00411	PIN	6	6	44	08524-00206	VALVE	1	-
06	08446-00412	THRUST PAD	1	-	45	08434-00202	'O' RING	3	6
07	08430-00230	CLUTCH SPRING (RED)	1	1	46	08520-00212	VALVE BODY	1	-
	08410-00262	CLUTCH SPRING (BLACK)	1	1	47	08415-00201	FILTER	1	2
	08446-00405	CLUTCH SPRING (BLUE)	1	1	48	08415-00202	ADAPTOR	1	1
08	08446-00408	CLUTCH SPINDLE	1	-	49	08433-00221	NIPPLE	1	1
09	08446-00403	ADJUSTMENT PLATE ASSEMBLY	1	-	50	08415-00203	SILENCER RETAINER ASSEMBLY	1	1
10	08446-00402	ADJUSTMENT NUT	1	-	51	08432-00201	WASHER	1	2
11	08446-00401	SPACER	1	1	52	08415-00204	SILENCER ELEMENT	1	2
12	08430-00705	BEARING	2	-	53	08415-00205	SILENCER BODY	2	-
13	08430-00702	PLANET GEAR	2	-	54	08520-00215	'O' RING	1	2
14	08430-00704	SHAFT	2	-	55	08524-00207	ROLL PIN	1	2
15	08434-00209	PLANET GEAR SPINDLE	1	-	56	08520-00216	SPRING	1	2
16	08430-00708	HOUSING	1	-	57	08520-00217	TRIGGER	1	-
17	08434-00205	SPACER	1	-	58	08433-00233	PIN	1	2
18	08434-00203	DRIVE GEAR	1	-	59	08430-00215	SPACER	1	-
19	08434-00206	PLANET GEAR	2	-	60	08434-00201	SPACER	1	-
20	08522-00205	'O' RING	1	2	61	08434-00207	NEEDLES	30	30
21	08430-00706	SPACER	1	-	62	08434-00208	SHAFT	2	-
22	08430-00602	LOWER END PLATE	1	-	63	08430-00705	BEARING	2	-
23	08430-00601	BEARING	1	-	64	08430-00707	CIRCLIP	1	1
24	08435-00202	LOCATING PIN	1	-	65	08430-00805	PLANET GEAR SPINDLE	1	-
25	08433-00233	ROLL PIN	1	1	66	08430-00703	BEARING	2	-
26	08430-00605	ROTOR	1	-	67	08430-00807	SPACER	1	-
27	08435-00214	CYLINDER	1	-	68	08414-00209	'O' RING	1	2
28	08430-00608	ROTOR BLADE	5	5	69	08430-00801	RING GEAR	1	-
29	08435-00203	PIN	1	-	70	08446-00404	COVER	1	-
30	08433-00214	REAR END PLATE	1	-	71	08410-00256	RETAINING RING HALF	2	-
31	08430-00606	BEARING	1	-	72	08410-00263	RING	1	-
32	08435-00206	REVERSE VALVE	1	-	73	08446-00407	DRIVE JAW	1	-
33	08435-00209	'O' RING	1	2	74	08430-00223	KEY	1	-
34	08435-00204	'O' RING	1	2	75	08430-00236	BEARING	1	-
35	08415-00217	'O' RING	1	2	76	08430-00221	BALL	16	16
36	08415-00219	PIN	1	2	77	08430-00217	JAW POSITIVE	1	-
37	08415-00218	SPRING	1	-	78	08446-00409	CLUTCH HOUSING	1	-
38	08415-00222	END PLATE	1	-	79	08446-00414	CHUCK KEY	1	NOT SHOWN
39	08415-00221	SCREW	1	-					

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
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 07552

Serial Nº _____

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 _____

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