

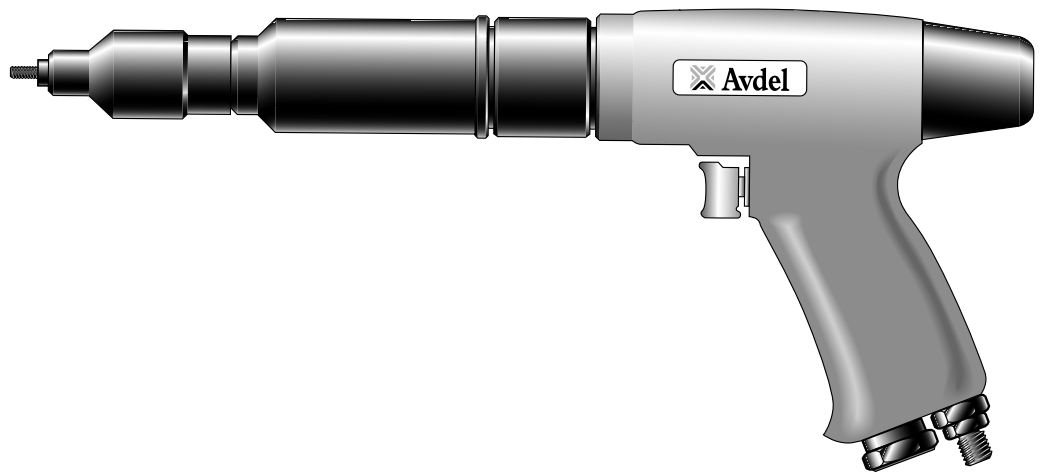


An Acument™ Global Technologies Company



Instruction Manual

Pass onto user to read and keep for reference



Threaded Insert Power Tool

07557

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 07557 TYPE TOOL

AIR PRESSURE	■	Minimum - Maximum	■ 5 - 8 bar	■ 75 - 120 lbf/in ²
FREE AIR VOLUME REQUIRED	■	@ 5 bar / 75 lbf/in ²	■ 510 litres	■ 18 ft ³ /min
MOTOR SPEED	■	@ 75 lb/in ²	■ 550 RPM min.	■ (clockwise)
CYCLE TIME	■	Approximately	■ 3 seconds	■
NOISE LEVEL	■		■ 75 dB(A)	■
WEIGHT	■	Without nose equipment	■ 1.65 kg	■ 3.64 lb
VIBRATION	■	Less than	■ 2.5 m/s ²	■ 8 ft/s ²

SAFETY

General	2
Specific to 07557 Tool	3

INTENT OF USE

General	4
Tool Dimensions / Selection	4-5

PUTTING INTO SERVICE

Air Supply	6
Operating Procedure	6
Clutch Adjustment - Accessories	7

NOSE ASSEMBLIES

Fitting/Servicing/Components	8-9
------------------------------	-----

SERVICING

Regular Servicing	10
Maintenance	11-13
General Assembly & Parts List	14-15

FAULT DIAGNOSIS

Fault Diagnosis Table	16
-----------------------	----

S A F E T Y

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/IN².

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.

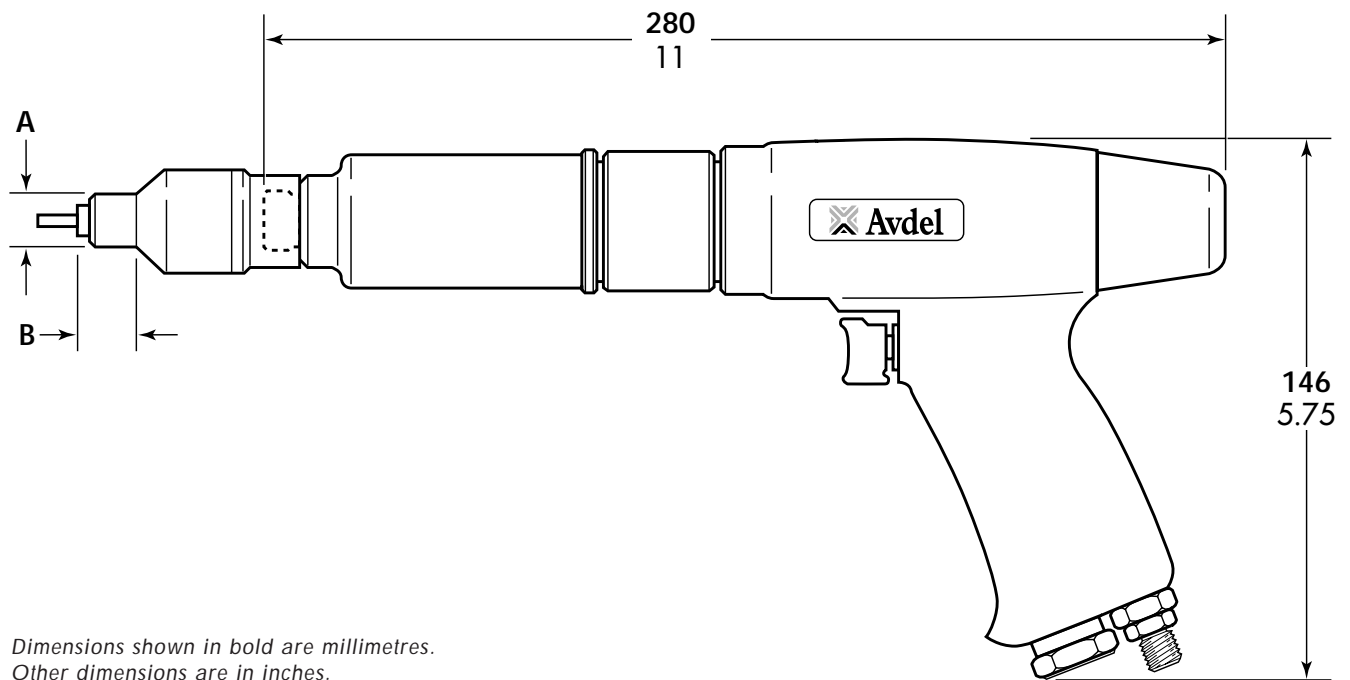
CONTENT OF USE

The pneumatic 07557 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 tables below and opposite to select a complete tool.

It is also possible to order the base tool only (part number 07557-00400) which will not be fitted with a nose assembly.

7557 TOOL SELECTION									
INSERT NAME & SERIES	Ø	TORQUE SETTING (lbf ins)	UNSET CLUTCH PART N°	NOSE (see drawing opposite for A & B)				NOSE ASSY PART N°	COMPLETE TOOL PART N°
				A (mm)	B (mm)	A (in)	B (in)		
STEEL THIN SHEET NUTSERT (9650)	3/16 BSW	30 - 35	08556-00380	13	10	1/2	13/32	07556-09916	07557-01016
	1/4 BSW	35 - 40	08557-00380	13	13 1/2	1/2	17/32	07566-09918	07557-01018
	5/16 BSW	50 - 55	08557-00380	14	14	9/16	9/16	07443-09910	07557-01010
	1/4 BSF	35 - 40	08557-00380	13	13 1/2	1/2	17/32	07556-09928	07557-01028
	5/16 BSF	50 - 55	08557-00380	14	14	9/16	9/16	07443-09920	07557-01020
	4 UNC	7 - 9	08556-00390	13	11	1/2	7/16	07556-09954	07557-01054
	6 UNC	16 - 18	08556-00380	13	11	1/2	7/16	07556-09956	07557-01056
	8 UNC	16 - 18	08556-00380	13	12	1/2	15/32	07556-09958	07557-01058
	10 UNC	30 - 35	08556-00380	13	10	1/2	13/32	07556-09950	07557-01050
	4 UNF	7 - 9	08556-00390	13	11	1/2	7/16	07556-09974	07557-01074
	6 UNF	16 - 18	08556-00380	13	11	1/2	7/16	07556-09976	07557-01076
	8 UNF	16 - 18	08556-00380	13	12	1/2	15/32	07556-09978	07557-01078
	10 UNF	30 - 35	08556-00380	13	10	1/2	13/32	07556-09970	07557-01070
	1/4 UNC	35 - 40	08557-00380	13	13 1/2	1/2	17/32	07556-09948	07557-01048
	5/16 UNC	50 - 55	08557-00380	14	14	9/16	9/16	07443-09940	07557-01040
	1/4 UNF	35 - 40	08557-00380	13	13 1/2	1/2	17/32	07556-09968	07557-01068
	5/16 UNF	50 - 55	08557-00380	14	14	9/16	9/16	07443-09960	07557-01060
	6 BA	7 - 9	08556-00390	13	13 1/2	1/2	17/32	07556-09936	07557-01036
	4 BA	16 - 18	08556-00380	13	11	1/2	7/16	07556-09934	07557-01034
	2 BA	30 - 35	08556-00380	13	17	1/2	21/32	07556-09932	07557-01032
	0 BA	35 - 40	08557-00380	13	11	1/2	7/16	07556-09930	07557-01030
	M3	7 - 9	08556-00390	13	11	1/2	7/16	07556-09983	07557-01083
	M4	16 - 18	08556-00380	13	11	1/2	7/16	07556-09984	07557-01084
M5	30 - 35	08556-00380	13	10	1/2	13/32	07556-09985	07557-01085	
M6	35 - 40	08557-00380	13	13 1/2	1/2	17/32	07556-09986	07557-01086	
M8	50 - 55	08557-00380	14	14	9/16	9/16	07443-09988	07557-01088	
SUPERSERT (FB00)	8 UNC	16 - 18	08556-00380	13	10	1/2	13/32	07552-09558	07557-02058
	10 UNC	30 - 35	08556-00380	13	12	1/2	15/32	07552-09550	07557-02050
	8 UNF	16 - 18	08556-00380	13	10	1/2	13/32	07552-09578	07557-02078
	10 UNF	30 - 35	08556-00380	13	12	1/2	15/32	07552-09570	07557-02070
	1/4 UNC	45 - 50	08557-00380	13	15	1/2	19/32	07552-09548	07557-02048
	1/4 UNF	45 - 50	08557-00380	13	15	1/2	19/32	07552-09568	07557-02068
	M3	16 - 18	08556-00380	13	19	1/2	3/4	07552-09583	07557-02083
	M4	16 - 18	08556-00380	13	10	1/2	13/32	07552-09584	07557-02084
LGE FLANGE HEXSERT (9498)	M5	30 - 35	08556-00380	13	11	1/2	7/16	07552-09585	07557-02085
	M6	45 - 50	08557-00380	13	15	1/2	19/32	07552-09586	07557-02086
	M4	16 - 18	08556-00380	13	10	1/2	13/32	07556-09184	07557-04084
	M5	30 - 35	08556-00380	13	10	1/2	13/32	07557-09285	07557-03085
	M6	35 - 40	08557-00380	14	12	9/16	15/32	07556-09186	07557-04086



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

7557 TOOL SELECTION

INSERT NAME & SERIES	Ø	TORQUE SETTING (lbf ins)	UNSET CLUTCH PART N°	NOSE (see drawing above for A & B)				COMPLETE TOOL PART N°	
				A (mm)	B (mm)	A (in)	B (in)		
STANDARD NUTSERTS (9500) (9538)	3/16 BSW	20 - 25	08556-00380	13	12	1/2	15/32	07556-09816	07557-00016
	1/4 BSW	25 - 30	08556-00380	13	15	1/2	19/32	07566-09818	07557-00018
	5/16 BSW	40 - 45	08557-00380	14	14	9/16	9/16	07443-09810	07557-00010
	3/8 BSW	50 - 55	08557-00380	16	10	5/8	13/32	07443-09812	07557-00012
	1/4 BSF	25 - 30	08556-00380	13	15	1/2	19/32	07556-09828	07557-00028
	5/16 BSF	40 - 45	08557-00380	14	14	9/16	9/16	07443-09820	07557-00020
	3/8 BSF	50 - 55	08557-00380	16	10	5/8	13/32	07443-09822	07557-00022
	4 UNC	5 - 7	08556-00390	13	12	1/2	15/32	07556-09854	07557-00054
	6 UNC	9 - 11	08556-00390	13	12	1/2	15/32	07556-09856	07557-00056
	8 UNC	13 - 15	08556-00390	13	10	1/2	13/32	07556-09858	07557-00058
	10 UNC	20 - 25	08556-00380	13	12	1/2	15/32	07556-09850	07557-00050
	6 UNF	9 - 11	08556-00390	13	12	1/2	15/32	07556-09876	07557-00076
	8 UNF	13 - 15	08556-00390	13	10	1/2	13/32	07556-09878	07557-00078
	10 UNF	20 - 25	08556-00380	13	12	1/2	15/32	07556-09870	07557-00070
	1/4 UNC	25 - 30	08556-00380	13	15	1/2	19/32	07566-09848	07557-00048
	5/16 UNC	40 - 45	08557-00380	14	14	9/16	9/16	07443-09840	07557-00040
	3/8 UNC	50 - 55	08557-00380	16	10	5/8	13/32	07443-09842	07557-00042
	1/4 UNF	25 - 30	08556-00380	13	15	1/2	19/32	07566-09868	07557-00068
	5/16 UNF	40 - 45	08557-00380	14	14	9/16	9/16	07443-09860	07557-00060
	3/8 UNF	50 - 55	08557-00380	16	10	5/8	13/32	07443-09862	07557-00062
	6 BA	5 - 7	08556-00390	13	15	1/2	19/32	07556-09836	07557-00036
	4 BA	9 - 11	08556-00390	13	12	1/2	15/32	07556-09834	07557-00034
	2 BA	20 - 25	08556-00380	13	12	1/2	15/32	07556-09832	07557-00032
	0 BA	25 - 30	08556-00380	13	12	1/2	15/32	07556-09830	07557-00030
	M3	5 - 7	08556-00390	13	12	1/2	15/32	07556-09883	07557-00083
	M4	13 - 15	08556-00390	13	10	1/2	13/32	07556-09884	07557-00084
M5	20 - 25	08556-00380	13	12	1/2	15/32	07556-09885	07557-00085	
M6	25 - 30	08556-00380	13	15	1/2	19/32	07566-09886	07557-00086	
M8	40 - 45	08557-00380	14	14	9/16	9/16	07443-09888	07557-00088	
M10	50 - 55	08557-00380	16	12	5/8	15/32	07443-09880	07557-00080	
LGE FLANGE	M4	16 - 18	08556-00380	13	10	1/2	13/32	07556-09184	07557-04084
THIN SHEET	M5	30 - 35	08556-00380	13	12	1/2	15/32	07556-09185	07557-04085
NUTSERT(9698)	M6	35 - 40	08557-00380	13	15	1/2	19/32	07556-09186	07557-04086
HEXSERT (9498)	M4	16 - 18	08556-00380	13	12	1/2	15/32	07556-09284	07557-06084
	M5	30 - 35	08556-00380	13	12	1/2	15/32	07556-09285	07557-06085
	M6	40 - 45	08557-00380	16	14	5/8	9/16	07566-09286	07557-06086
	M8	50 - 55	08557-00380	16	15	5/8	19/32	07443-09288	07557-06088
NUTSERT SQ (GK08)	M5	30 - 35	08556-00380	10	13	13/32	1/2	07528-07085	07557-07085
	M6	40 - 45	08557-00380	13	15	1/2	19/32	07566-09186	07557-04086

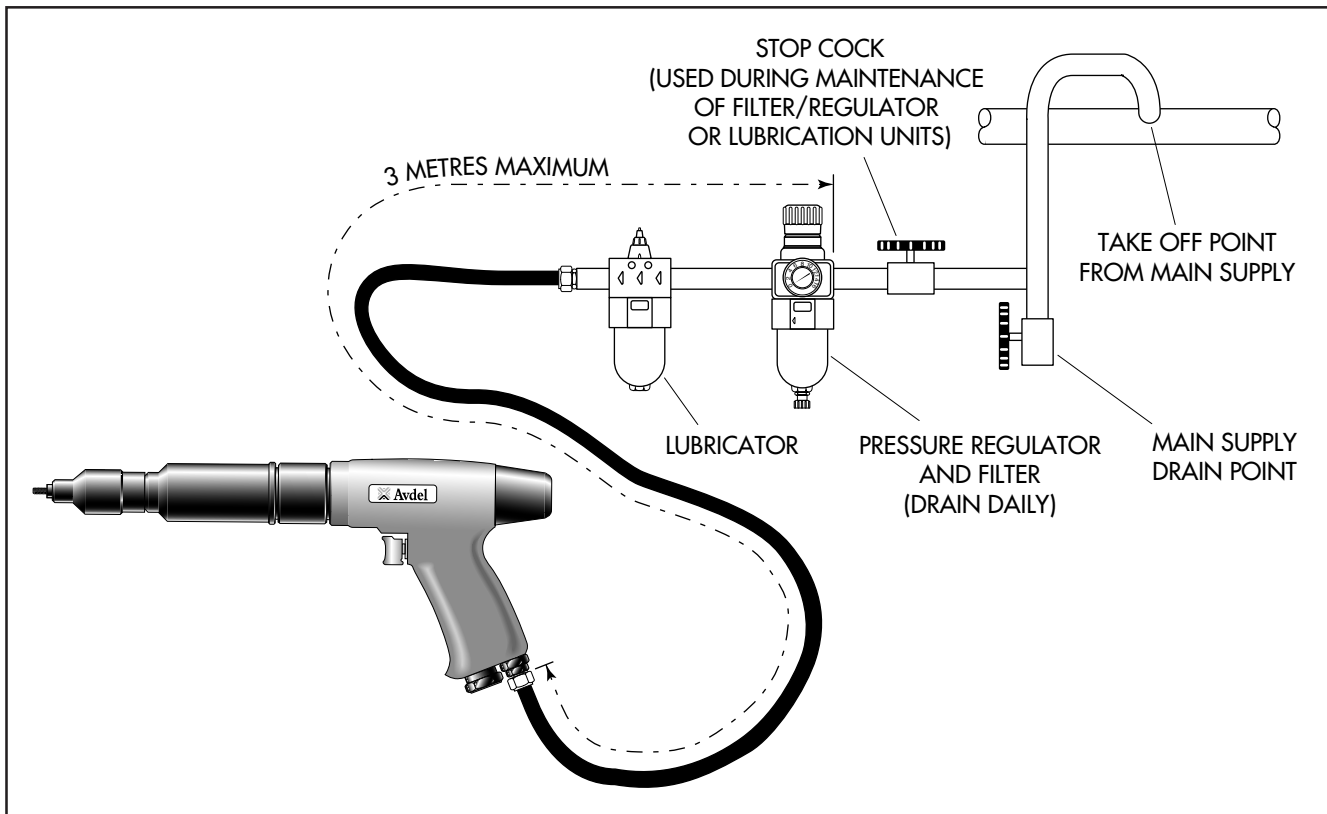
PUTTING INTO SERVICE

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.
- Depress the trigger. The drive screw will screw into and collapse the insert, and 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
- Depress the trigger. The drive screw will screw into and collapse the insert, and then automatically reverse out.

CLUTCH ADJUSTMENT

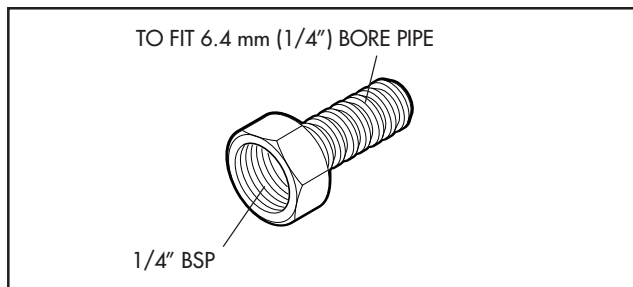
This is necessary to ensure optimum insert deformation. If deformation is insufficient (clutch torque too low) the insert will rotate in the application. If deformation is excessive (clutch torque too high) thread distortion and possibly drive screw fracture will occur. For details on how to adjust the clutch refer to the maintenance instructions referring to the clutch on page 12.

7557 CLUTCH DETAILS																
UNSET CLUTCH PART N°	SPRING PART N°	SPRING COLOUR	N° OF TURNS/lb f ins													
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
08556-00390	08572-00407	OXIDE BLACK	-	-	5	6	7	8	9	10	11	12	13	14	15	16
08556-00380	08556-00412	SILVER	5	7.5	10	12.5	15	17.5	20	22.5	25	28	31	34	-	-
08557-00380	08557-00202	COPPER	-	34	42	51	60	-	-	-	-	-	-	-	-	-

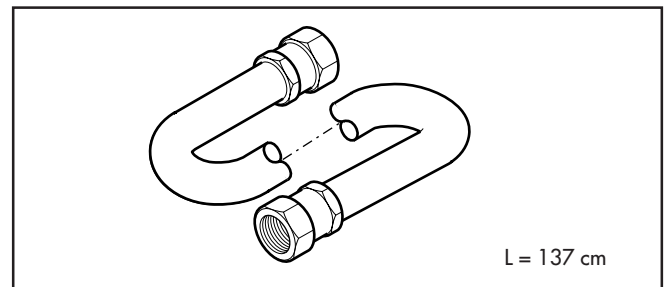
ACCESSORIES

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

Hose Connector
part n° 07005-00276



Hose Assembly
part n° 07008-000324



NOSE ASSEMBLIES

Nose assemblies are specifically designed for each size and type of insert used with the 07557 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 tables pages 4 and 5.

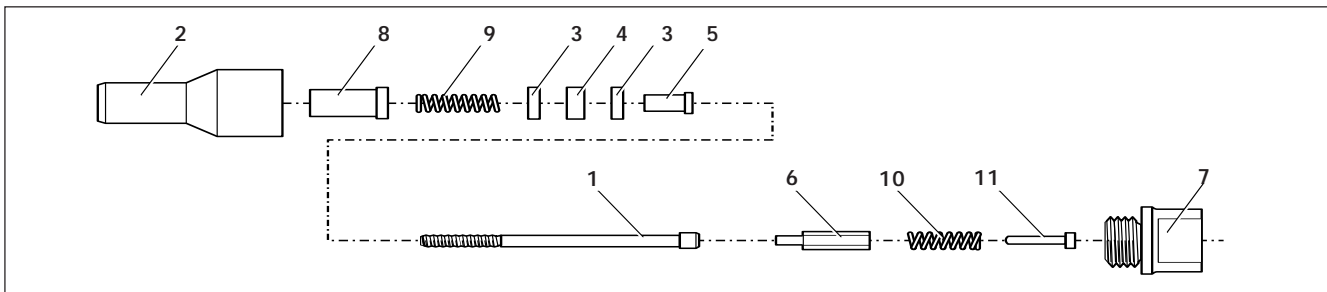
FITTING INSTRUCTIONS

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 quoted on pages 4 & 5.)

- 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 by a new part.
- Particularly check wear on drivescrew, thrust washers and thrust bearing.
- Check springs are not distorted.
- Check the clutch torque setting (see page 4 & 5 for details)
- Lubricate thrust washers and thrust bearings with high pressure grease (eg Shell Avania E.P.I.)
- Lubricate the clutch with high pressure grease.
- 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. Components numbers refer to the illustration above. We recommend some stock as items will need regular replacement. Read the nose assemblies servicing instructions above carefully. All nose assemblies also include spring 10 part number 07430-08282 and stop 11 part number 07430-08203.

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.

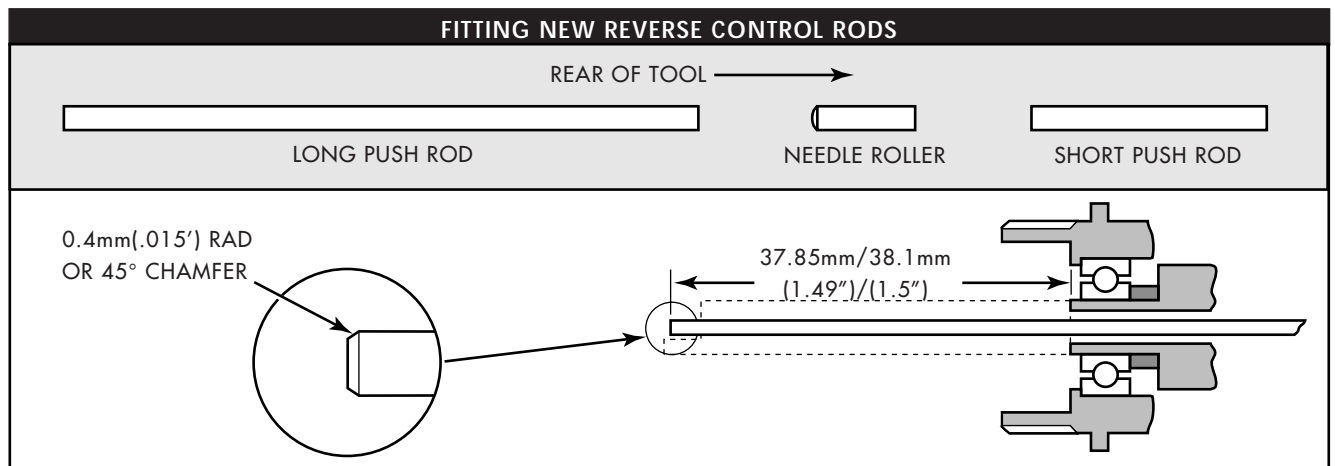
WEEKLY

- Dismantle and clean the nose assembly with special attention to the thrust bearings and thrust washers. Lubricate with high pressure grease (eg. Shell Alvania EPI) before assembling.
- Check for air leaks in the air supply hose and fittings.
- Lubricate the clutch with high pressure grease (eg. Shell Alvania EPI) (see procedure in clutch section page 12)
- Check for wear on thrust bearings and thrust washers. If there is any, renew.

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.



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	
<p>FIRST AID SKIN: As the grease is completely water resistant it is best removed with an approved emulsifying skin cleaner.</p> <p>INGESTION: Make the individual drink 30ml Milk of Magnesia, preferably in a cup of milk.</p> <p>EYES: Irritant but not harmful. Irrigate with water and seek medical attention.</p> <p>ENVIRONMENT Scrape up for burning or disposal on approved site.</p>	<p>FIRE FLASH POINT: Above 220°C. Not classified as flammable. Suitable extinguishing media: CO₂, Halon or water spray if applied by an experienced operator.</p> <p>HANDLING Use barrier cream or oil resistant gloves</p> <p>STORAGE Away from heat and oxidising agent.</p>

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
<p>Safety Instructions appear on pages 2 & 3.</p> <p>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.</p>

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.

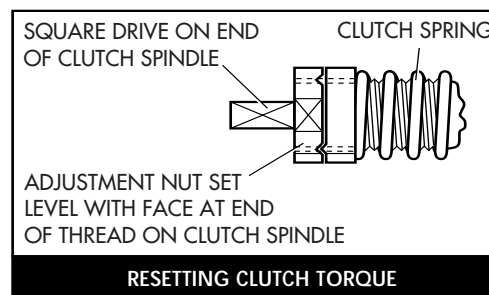
Item numbers in bold refer to the General Assembly drawing and parts list (pages 14 and 15).

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

- Place tool handle and bush assembly 1 in vice fitted with soft jaws.
- Unscrew clutch housing 35 (left hand thread) and remove bush 38 from clutch housing.
- Withdraw clutch assembly, taking care not to bend push rod 30.
- Pull out push rod (long) 30.
- Remove tool from vice and gently tap on front end of assembly to remove needle roller 59 and push rod (short) 64.
- Holding square drive end of clutch spindle 43, unscrew adjustment nut 28.
- Pull off adjustment lock washer 29 and spring 41.
- Depress spring 41 and remove pin 31.
- Remove collar 40 and three balls 39.
- Split retaining ring halves 32.
- Move front jaw 34 relative to clutch spindle 43 until small hole in side of front jaw 34 is aligned with track of balls 37 in clutch spindle 43.
- Ten balls 37 will become visible through small hole in front jaw 34.
- Gently tap front jaw 34, allowing ten balls to fall out of hole in front jaw 34 (as each ball is ejected, turn front jaw 34 on clutch spindle 43 to align next ball with hole).
- Insert small rod through centre of front jaw 34 and tap out clutch spindle 43.
- Remove drive jaw 33, key 36 and spring 41.
- Clean and inspect components, renewing any worn or damaged items, paying special attention to condition of front jaw 34 and drive jaw 33.
- Assemble in reverse order to dismantling.
- Reset clutch torque (dependant on clutch spring fitted : see page 7) in the following manner (see diagram)
- Place square drive on end of clutch spindle 43 in vice, engaging approximately 10mm in vice jaws. This allows for spanner entry.
- Using a spanner, unscrew adjustment nut 28 until it is level with the end of the thread of the clutch spindle. Torque can then be increased / decreased as dictated by the fastener type and size by turning the adjustment nut clockwise/anticlockwise as appropriate.



HANDLE ASSEMBLY

- Replace handle and bush assembly 1 in soft jaw vice.
- Using spanner on ring gear 44, remove front remove front gear assembly.
- Using spanner on housing 26, remove inner gear assembly.
- Remove 'O' ring 19 and spacer 18 from handle and bush assembly 1 and pull out motor assembly. (It may be necessary to tap the front end of handle and bush assembly 1 on a wooden block until motor assembly slides out).
- Unscrew silencer retainer assembly 9 and remove perforated washer 10, silencer body 12 and silencer element 11.
- Unscrew nipple 8 from adaptor 7.
- Unscrew adaptor 7 from handle and bush assembly 1 and remove filter 6.
- Tap out pin 15 and carefully pull out trigger assembly, (take care not to damage 'O' rings).
- Support trigger 17 and carefully drive out pin 16 taking care not to damage or bend valve 3.
- Separate trigger 17 from valve 3 and remove 'O' ring 14, three 'O' rings 2 from valve body 13 and 'O' rings 4 & 5 from valve 3.
- Unscrew knob 75 and remove 'O' ring 67 from handle and bush assembly 1.
- Remove screw 73 and washer 74.
- Lightly tap end plate 70 to break Loctite seal between end plate 70 and valve assembly 65.
- Remove end plate 70, taking care not to damage pins 72.
- Remove 'O' ring 71 and spring 69.
- Push valve assembly 65 out of handle and bush assembly 1.

IMPORTANT

Valve assembly 65 is a manufacturer supplied assembly and **MUST NOT** be dismantled.

- Remove 'O' ring 66 from valve assembly 65.
- Remove 'O' ring 68 from valve bush but do not attempt to remove valve bushing from handle and bush assembly 1.
- Assemble in reverse order to dismantling.
- When replacing screw 73 and washer 74 ensure thread sealant is used on screw threads.

FRONT GEAR ASSEMBLY (previously removed from handle assembly).

- Hold ring gear 44 and tap out internal assembly from front end.
- Remove two bearings 25 and spacer 46 from planet gear spindle 45.
- Tap out two shafts 47 and remove two planet gears 48 and bearings 27 from planet gear 48.
- Press out bearing 27 from planet gears 48.

- Assemble in reverse order to dismantling.

REAR GEAR ASSEMBLY

- Pull off spacer 52.
- Hold housing 26 and push out internal assembly from front end.
- Remove two bearings 25 and spacers 20 & 23 from planet gear spindle 24.
- Push out two shafts 50 together with thirty needles 21.
- Take out two planet gears 51 and drive gear 22.
- Using circlip pliers remove circlip 49 from housing 26.

- Assemble in reverse order to dismantling.

MOTOR ASSEMBLY (previously removed from handle assembly).

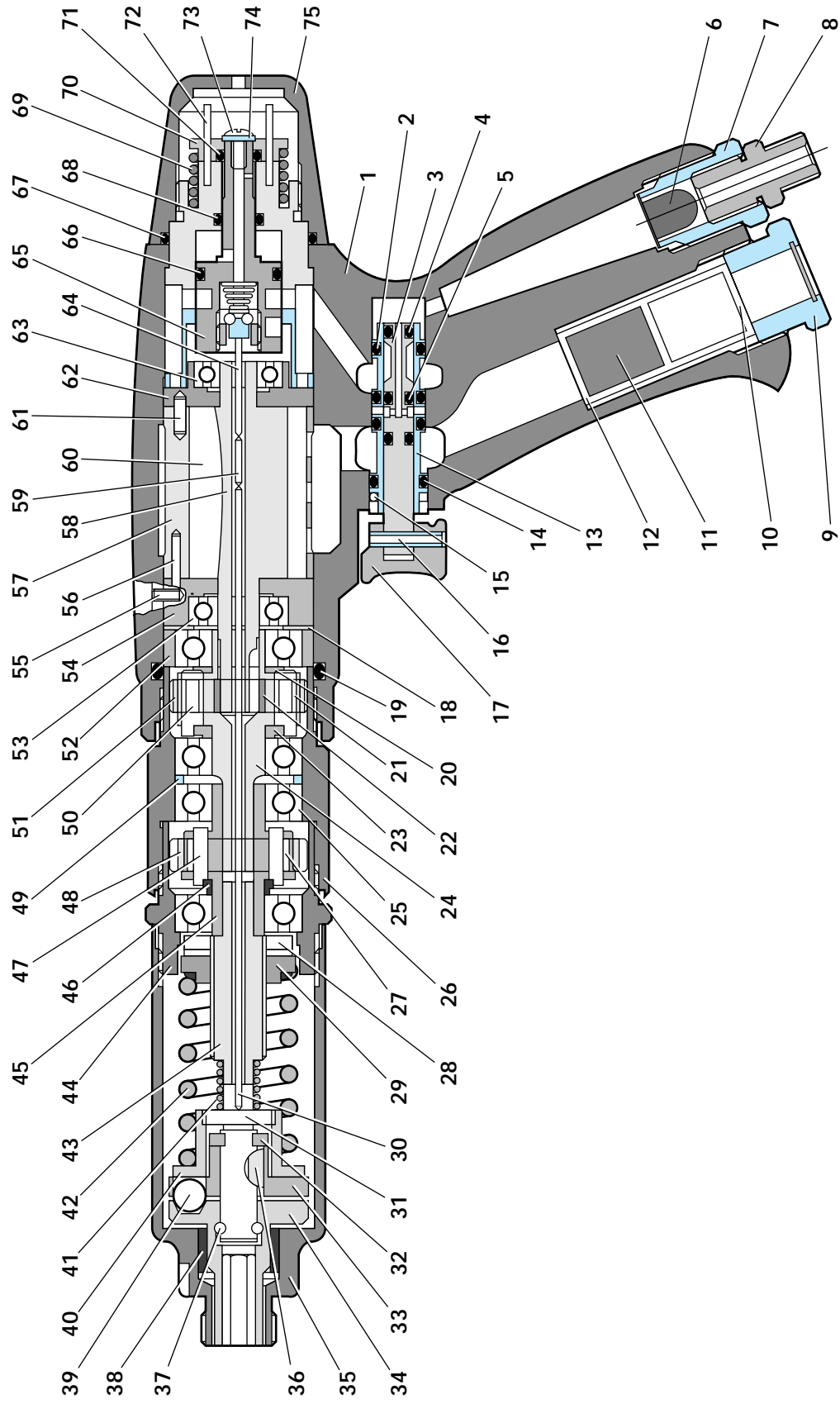
- Remove locating pin 55 from lower end plate 54.
- Hold lower end plate 54 and tap splined end of rotor 58 with a soft hammer so as not to damage splines.
- Remove lower end plate 54 and bearing 53 from rotor 58.
- Remove cylinder 57 complete with pin 56 and pin 61.
- Remove five rotor blades 60 from rotor 58.
- Support rear end plate 62 using a piece of tube with a bore diameter as close as possible to largest diameter of rotor 58, then tap non-splined end of rotor 58 to remove it from rear end plate 62 and bearing 63.
- Using a suitable punch, tap out bearing 53 from lower end plate 54, bearing 63 and rear end plate 62.

- When assembling, make sure that locating pin 55 in lower end plate 54 locates in keyway in front bore of handle.
- Pay special attention to lower end plate 54 and rear end plates 62, ensuring they are free from burrs and surface marking. If necessary, lap faces that abut cylinder 57 on a flat fine grade abrasive paper.

- Press fit bearings 53 & 63 into lower and rear end plates 54 & 62
- Support bearing 63 in rear end plate 62 on its inner ring and using a soft hammer, tap rotor 58 on its splined end until rotor 58 locates against rear end plate 62.
- Support inner face of rear end plate 62 as close as possible to largest diameter of rotor 58.
- Tap non-splined end of rotor 58 until a clearance of 0.0015" (0.040mm) to 0.0025" (0.065mm) is obtained between inner face of rear end plate 62 and rotor 58.
- Check clearance by pulling rotor 58 away from rear end plate 62 and bearing 63.
- Spin rotor 58 ensuring that it rotates freely in rear end plate bearing 63.
- Locate cylinder 57 with locating pin 55 to rear end plate 62 and check ports in rear end plate 62 align with ports in cylinder 57.
- Insert five rotor blades 60 into rotor 58.
- Fit lower end plate 54 to cylinder 57 via locating pin 55.
- Ensure rotor 58 spins freely.
- Refit motor into handle assembly in reverse order to removal (see handle assembly).

IMPORTANT

Check the tool against daily and weekly servicing.



07557-00200 PARTS LIST

ITEM	PART N°	DESCRIPTION	QTY	REC. SPARES	ITEM	PART N°	DESCRIPTION	QTY	REC. SPARES
01	08556-00423	HANDLE AND BUSH ASSEMBLY	1	-	40	08556-00406	COLLAR	1	-
02	08415-00207	'O' RING	3	3	41	08556-00411	SPRING	1	-
03	08556-00417	VALVE	1	1	42	08557-00202	CLUTCH SPRING 35-85lb. (COPPER)	1	-
04	08434-00202	'O' RING	1	1		08572-00407	CLUTCH SPRING 5-16lb. (OXIDE BLACK)	1	-
05	08441-00402	'O' RING	2	4		08556-00412	CLUTCH SPRING 12-35lb. (SILVER)	1	-
06	08415-00201	FILTER	1	2	43	08556-00408	CLUTCH SPINDLE	1	-
07	08415-00202	ADAPTOR	1	-	44	08430-00801	RING GEAR	1	-
08	08433-00221	NIIPPLE	1	-	45	08430-00805	PLANET GEAR SPINDLE	1	-
09	08415-00203	SILENCER RETAINER ASSEMBLY	1	-	46	08430-00807	SPACER	1	-
10	08432-00201	PERFORATED WASHER	1	-	47	08430-00704	SHAFT	2	-
11	08415-00204	SILENCER ELEMENT	1	2	48	08430-00702	PLANET GEAR	2	-
12	08415-00205	SILENCER BODY	1	-	49	08430-00707	CIRCLIP	1	-
13	08520-00212	VALVE BODY	1	1	50	08434-00208	SHAFT	2	-
14	08520-00215	'O' RING	1	2	51	08434-00206	PLANET GEAR	2	-
15	08524-00207	PIN	1	2	52	08430-00706	SPACER	1	-
16	08433-00233	PIN	1	2	53	08430-00601	BEARING	1	-
17	08281-00405	TRIGGER	1	-	54	08430-00602	LOWER END PLATE	1	-
18	08430-00215	SPACER	1	-	55	08435-00202	LOCATING PIN	1	-
19	08522-00205	'O' RING	1	-	56	08433-00233	PIN	1	-
20	08434-00201	SPACER	1	-	57	08435-00214	CYLINDER	1	-
21	08434-00207	NEEDLE	30	-	58	08556-00415	ROTOR	1	-
22	08434-00203	DRIVE GEAR	1	-	59	08556-00418	NEEDLE ROLLER	1	3
23	08434-00205	SPACER	1	-	60	08430-00608	ROTOR BLADE	5	-
24	08556-00414	PLANET GEAR SPINDLE	1	-	61	08435-00203	PIN	1	-
25	08430-00705	BEARING	4	-	62	08433-00214	REAR END PLATE	1	-
26	08430-00708	HOUSING	1	-	63	08430-00606	BEARING	1	-
27	08434-00703	BEARING	2	-	64	08556-00416	PUSH ROD (SHORT)	1	3
28	08430-00229	ADJUSTMENT NUT	1	-	65	08556-00420	VALVE ASSEMBLY	1	-
29	08556-00409	ADJUSTMENT LOCK WASHER	1	-	66	08435-00209	'O' RING	1	-
30	08556-00413	PUSH ROD (LONG)	1	-	67	08435-00204	'O' RING	1	2
31	08556-00407	PIN	1	-	68	08415-00217	'O' RING	1	-
32	08556-00405	RETAINING RING HALF	2	-	69	08556-00425	SPRING	1	-
33	08556-00404	DRIVE JAW	1	-	70	08556-00422	END PLATE	1	-
34	08556-00401	FRONT JAW	1	-	71	08556-00424	'O' RING	1	-
35	08556-00402	CLUTCH HOUSING	1	-	72	08415-00209	PIN	2	-
36	08430-00223	KEY	1	-	73	08415-00221	SCREW	1	-
37	08430-00221	3/32 DIA. BALL	10	-	74	08415-00220	WASHER	1	-
38	08556-00403	BUSH	1	-	75	08415-00421	KNOB	1	-
39	08556-00410	5/16 DIA. BALL	3	-					

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 73	→ 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

Declaration of Conformity

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

declare under our sole responsibility that the product

type 07557

Serial N°

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

EN292 part 1 and part 2

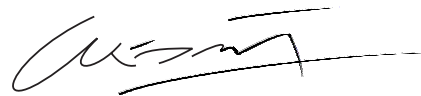
ISO 8662 part 1 and part 7

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



An Acument™ Global Technologies Company

AUSTRALIA

Acument Australia Pty Ltd.

891 Wellington Road
Rowville, Victoria 3178
Tel: +61 3 9765 6400
Fax: +61 3 9765 6445
Email: info@acument.com.au

CANADA

Avdel Canada, a Division of Acument

Canada Limited
87 Disco Road
Rexdale
Ontario M9W 1M3
Tel: +1 416 679 0622
Fax: +1 416 679 0678
Email: infoAvdel-Canada@acument.com

CHINA

Acument China Ltd.

RM 1708, 17/F., Nanyang Plaza,
57 Hung To Rd., Kwun Tong
Hong Kong
Tel: +852 2950 0631
Fax: +852 2950 0022
Email: infochina@acument.com

FRANCE

Avdel France S.A.S.

33 bis, rue des Ardennes
BP4
75921 Paris Cedex 19
Tel: +33 (0) 1 4040 8000
Fax: +33 (0) 1 4208 2450
Email: AvdelFrance@acument.com

GERMANY

Avdel Deutschland GmbH

Klusriede 24
30851 Langenhagen
Tel: +49 (0) 511 7288 0
Fax: +49 (0) 511 7288 133
Email: AvdelDeutschland@acument.com

ITALY

Avdel Italia S.r.l.

Viale Lombardia 51/53
20047 Brugherio (MI)
Tel: +39 039 289911
Fax: +39 039 2873079
Email: vendite@acument.com

JAPAN

Acument Japan Kabushiki Kaisha

Center Minami SKY,
3-1 Chigasaki-Chuo, Tsuzuki-ku,
Yokohama-city, Kanagawa Prefecture
Japan 224-0032
Tel: +81 45 947 1200
Fax: +81 45 947 1205
Email: info@acument.co.jp

SINGAPORE

Acument Asia Pacific (Pte) Ltd.

#05-03/06 Techlink
31 Kaki Bukit Road 3
Singapore, 417818
Tel: +65 6840 7431
Fax: +65 6840 7409
Email: Tlim@acument.com

SOUTH KOREA

Acument Korea Ltd.

212-4, Suyang-Ri,
Silchon-Eup, Kwangju-City,
Kyunggi-Do, Korea, 464-874
Tel: +82 31 798 6340
Fax: +82 31 798 6342
Email: info@acumentkorea.com

SPAIN

Avdel Spain S.A.

C/ Puerto de la Morcuera, 14
Poligono Industrial Prado Overa
Ctra. de Toledo, km 7,8
28919 Leganés (Madrid)
Tel: +34 (0) 91 3416767
Fax: +34 (0) 91 3416740
Email: ventas@acument.com

UNITED KINGDOM

Avdel UK Limited

Pacific House
2 Swiftfields
Watchmead Industrial Estate
Welwyn Garden City
Hertfordshire
AL7 1LY
Tel: +44 (0) 1707 292000
Fax: +44 (0) 1707 292199
Email: enquiries@acument.com

USA

Avdel USA LLC

614 NC Highway 200 South
Stanfield,
North Carolina 28163
Tel: +1 704 888-7100
Fax: +1 704 888-0258
Email: infoAvdel-USA@acument.com

© Avdel UK Limited 2007

Manual No.	Issue	Change Note No.
07900-00653	B	07/325