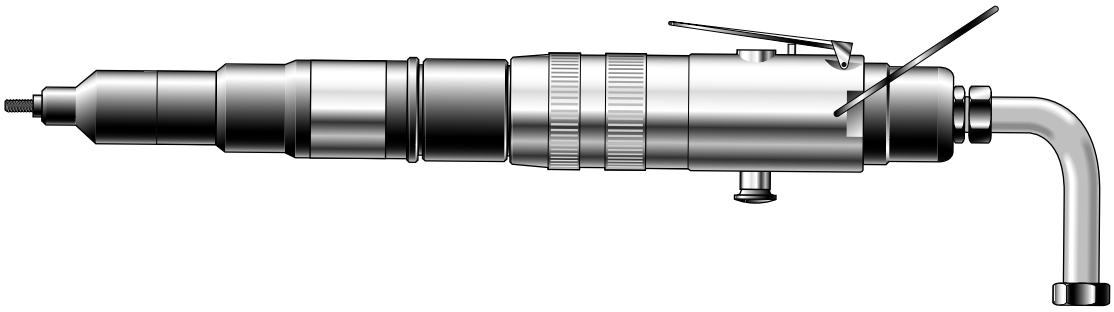
Avdel®

An Acument™ Global Technologies Company

Instruction Manual

Pass onto user to read and keep for reference



Threaded Insert Power Tool

07551

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 07551 TOOL

AIR PRESSURE	Minimum - Maximum	**5 - 8 bar**	70 - 120 lbf/in²
FREE AIR VOLUME REQUIRED	@ 5 bar / 75 lbf/in²	**480 litres/min**	17 ft³/min
MOTOR SPEED	@ 75 lb/in² minimum	**950 RPM**	
CYCLE TIME	Approximately	**4 seconds**	
NOISE LEVEL		**80 dB(A)**	
WEIGHT	Without nose equipment	**1.55 kg**	3.4 lb
VIBRATION	Less than	**2.5 m/s²**	8 ft/s²

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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.

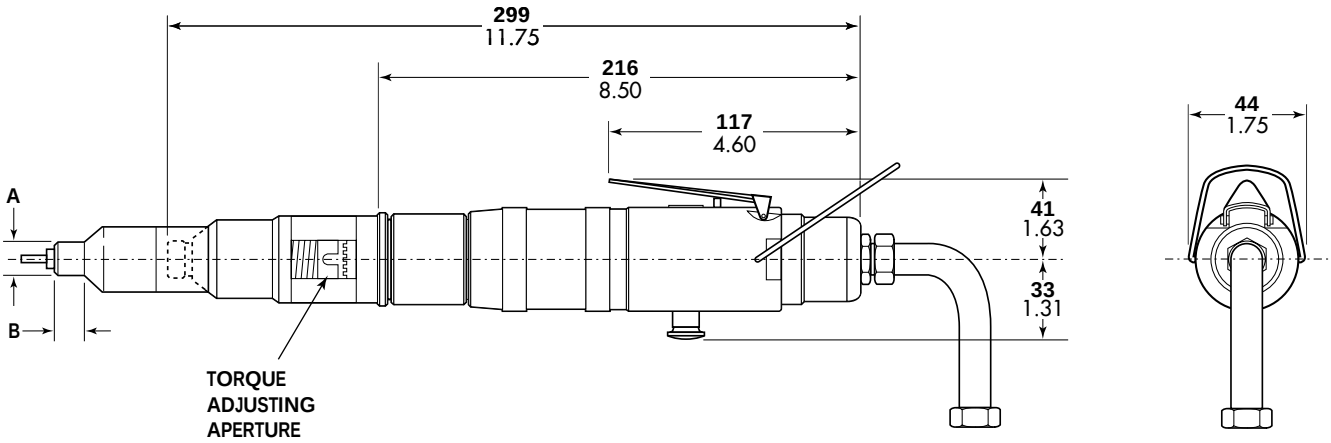
(!) THIS TOOL IS NOT DESIGNED FOR USE IN COMBUSTIBLE OR EXPLOSIVE ATMOSPHERES.

NTENT OF USE

The pneumatic 07551 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 07551-00400). For details of nose assemblies see pages 8 and 9.



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

7551 TOOL SELECTION

INSERT NAME & SERIES	Ø	TORQUE SETTING (lbf ins)	UNSET CLUTCH PART Nº	NOSE (see drawing above for A & B) A (mm)	B (mm)	A (in)	B (in)	NOSE ASSY PART Nº	COMPLETE TOOL PART Nº
STANDARD NUTSERTS (9500) (9538)	1/4 BSW	25 - 30	08551-00304	13	15	1/2	19/32	07556-09818	07551-00018
	5/16 BSW	40 - 45	08551-00302	14	14	9/16	9/16	07443-09810	07551-00010
	3/8 BSW	50 - 55	08551-00301	16	10	5/8	13/32	07443-09812	07551-00012
	1/4 BSF	25 - 30	08551-00304	13	15	1/2	19/32	07556-09828	07551-00028
	5/16 BSF	40 - 45	08551-00302	14	14	9/16	9/16	07443-09820	07551-00020
	3/8 BSF	50 - 55	08551-00301	16	10	5/8	13/32	07443-09822	07551-00022
	1/4 UNC	25 - 30	08551-00304	13	15	1/2	19/32	07556-09848	07551-00048
	5/16 UNC	40 - 45	08551-00302	14	14	9/16	9/16	07443-09840	07551-00040
	3/8 UNC	50 - 55	08551-00301	16	10	5/8	13/32	07443-09842	07551-00042
	1/4 UNF	25 - 30	08551-00304	13	15	1/2	19/32	07556-09868	07551-00068
	5/16 UNF	40 - 45	08551-00302	14	14	9/16	9/16	07443-09860	07551-00060
	3/8 UNF	50 - 55	08551-00301	16	10	5/8	13/32	07443-09862	07551-00062
	0 BA	25 - 30	08551-00304	13	15	1/2	19/32	07556-09830	07551-00030
	M6	25 - 30	08551-00304	13	15	1/2	19/32	07556-09886	07551-00086
	M8	40 - 45	08551-00302	14	14	9/16	9/16	07443-09888	07551-00088
	M10	50 - 55	08551-00301	16	12	5/8	15/32	07443-09880	07551-00080
L/F/T.S.N. (9698)	M6	35 - 40	08551-00303	13	15	1/2	19/32	07556-09186	07551-04086
HEXSERT (9688)	M6	30 - 40	08551-00303	16	19	5/8	9/16	07556-09286	07551-06086
	M8	50 - 55	08551-00301	16	15	5/8	19/32	07443-09288	07551-06088
THIN SHEET NUTSERT (9650)	1/4 BSW	35 - 40	08551-00303	13	13 1/2	1/2	17/32	07556-09918	07551-01018
	5/16 BSW	50 - 55	08551-00301	15	22	19/32	7/8	07443-09910	07551-01010
	1/4 BSF	35 - 40	08551-00303	13	13 1/2	1/2	17/32	07556-09928	07551-01028
	5/16 BSF	50 - 55	08551-00301	15	22	19/32	7/8	07443-09920	07551-01020
	1/4 UNC	35 - 40	08551-00303	13	13 1/2	1/2	17/32	07556-09948	07551-01048
	5/16 UNC	50 - 55	08551-00301	15	22	19/32	7/8	07443-09940	07551-01040
	1/4 UNF	35 - 40	08551-00303	13	13 1/2	1/2	17/32	07556-09968	07551-01068
	5/16 UNF	50 - 55	08551-00301	15	22	19/32	7/8	07443-09960	07551-01060
	0 BA	35 - 40	08551-00303	13	11	1/2	7/16	07556-09930	07551-01030
	M6	35 - 40	08551-00303	13	13 1/2	1/2	17/32	07556-09986	07551-01086
	M8	50 - 55	08551-00301	18	19	23/32	3/4	07443-09988	07551-01088

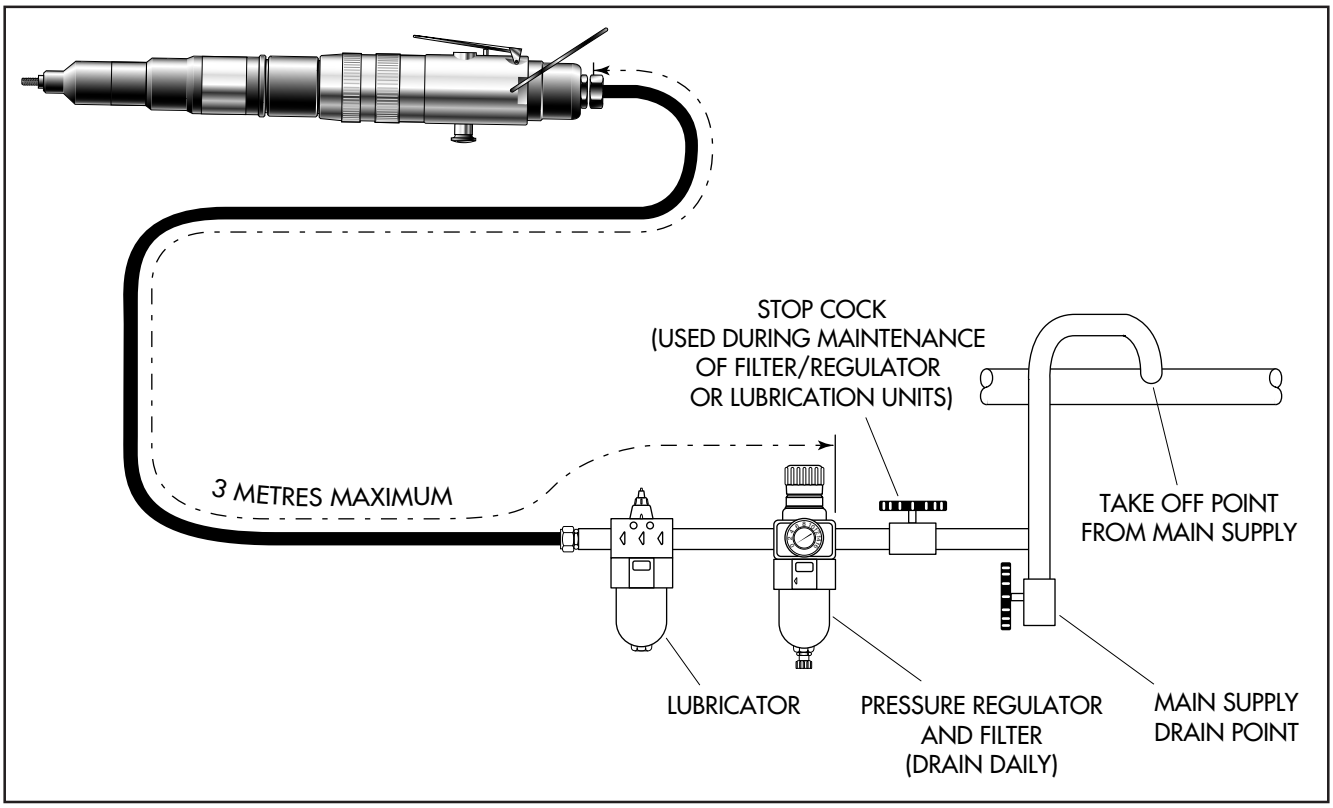
PUTTING INTO SERVICE

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 assembly 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 throttle lever (item 30 page 15) and hold. The drivescrew will screw and collapse the insert.
- To release the tool from the insert, press the reverse valve button (item 43 page 15) whilst still holding the throttle lever down. The drivescrew will reverse out of the insert.

OPTION 2

- Ensure that the correct nose assembly 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 throttle lever (item 30 page 15) and hold. The drivescrew will screw and collapse the insert.
- To release the tool from the insert, press the reverse valve button (item 43 page 15) whilst still holding the throttle lever down. The drivescrew will reverse out of the insert.

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, part number 08551-00380.

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

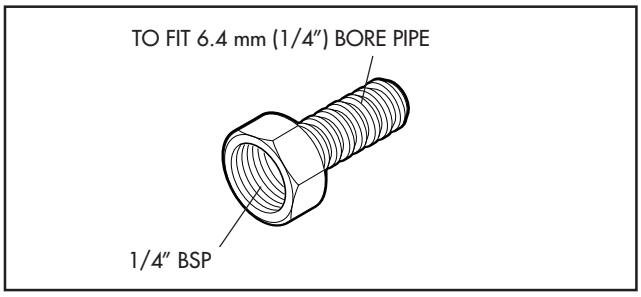
The air supply to the tool must be disconnected when adjusting the torque of the clutch

- Slide round the cover of the clutch housing (item 63 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.

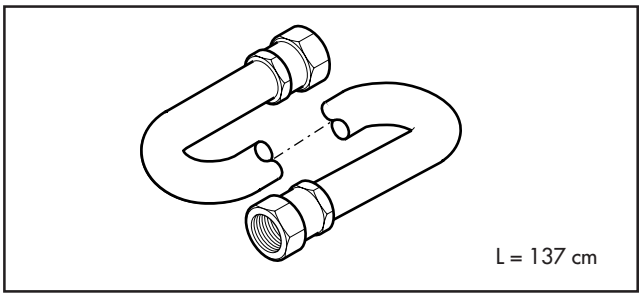
ACCESSORIES

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

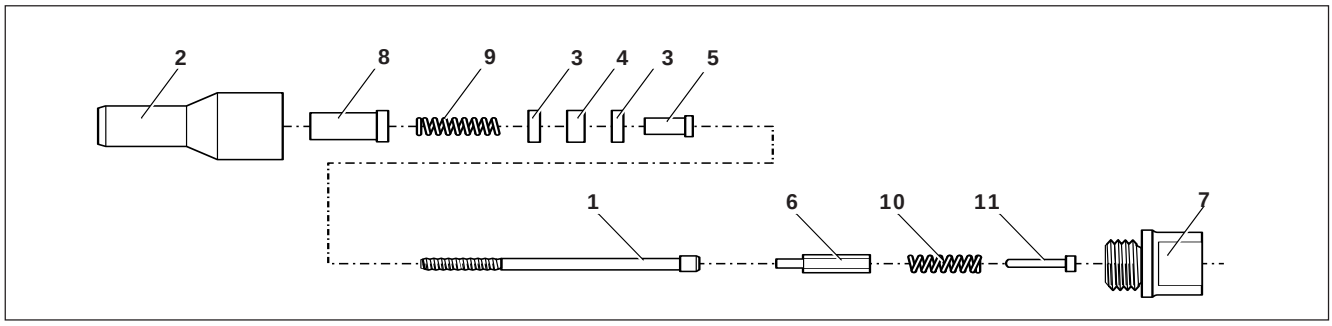
It is essential that the correct nose assembly is fitted prior to operating the tool. By knowing your original complete tool part number or the details of the insert to be placed, you will be able to order a new complete nose assembly using the selection table on page 5.

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 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 07430-08202 and stop 11 part number 07430-08203.

NOSE ASSY	1	2	3	4	5	6	7	8	9
07443-09288	07001-00084	07522-08988	07007-00081	07007-00078	07443-03110	07430-01808	07443-08002	07522-08902	07154-03092
07443-09810	07001-00076	07443-06110	07007-00081	07007-00078	07443-03110	07430-01110	07443-08002	-	-
07443-09812	07001-00099	07443-06112	07007-00081	07007-00078	-	07430-01112	07443-08002	-	-
07443-09820	07001-00077	07443-06110	07007-00081	07007-00078	07443-03110	07430-01110	07443-08002	-	-
07443-09822	07001-00098	07443-06112	07007-00081	07007-00078	-	07430-01112	07443-08002	-	-
07443-09840	07001-00078	07443-06110	07007-00081	07007-00078	07443-03110	07430-01110	07443-08002	-	-
07443-09842	07001-00106	07443-06112	07007-00081	07007-00078	-	07430-01112	07443-08002	-	-
07443-09860	07001-00079	07443-06110	07007-00081	07007-00078	07443-03110	07430-01110	07443-08002	-	-
07443-09862	07001-00105	07443-06112	07007-00081	07007-00078	-	07430-01112	07443-08002	-	-
07443-09880	07001-00100	07443-06810	07007-00082	07007-00079	-	07430-01810	07443-08003	-	-
07443-09888	07001-00084	07443-06110	07007-00081	07007-00078	07443-03110	07430-01808	07443-08002	-	-
07443-09910	07001-00076	07443-08805	07007-00081	07007-00078	07443-03110	07430-01110	07443-08002	-	-
07443-09920	07001-00077	07443-08805	07007-00081	07007-00078	07443-03110	07430-01110	07443-08002	-	-
07443-09940	07001-00078	07443-08805	07007-00081	07007-00078	07443-03110	07430-01110	07443-08002	-	-
07443-09960	07001-00079	07443-08805	07007-00081	07007-00078	07443-03110	07430-01110	07443-08002	-	-
07556-09186	07001-00337	07552-06806	07007-00080	07007-00077	-	07522-08802	07443-08001	07552-08806	07150-00403
07556-09286	07001-00337	07522-08986	07007-00080	07007-00077	-	07522-08802	07443-08001	07522-08901	07150-00504
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	-	-
07556-09848	07001-00336	07443-06108	07007-00080	07007-00077	-	07522-08801	07443-08001	-	-
07556-09868	07001-00110	07443-06108	07007-00080	07007-00077	-	07522-08801	07443-08001	-	-
07556-09886	07001-00337	07443-06108	07007-00080	07007-00077	-	07522-08802	07443-08001	-	-
07556-09918	07001-00334	07551-08803	07007-00080	07007-00077	-	07522-08801	07443-08001	-	-
07556-09928	07001-00333	07551-08803	07007-00080	07007-00077	-	07522-08801	07443-08001	-	-
07556-09930	07001-00335	07551-08802	07007-00080	07007-00077	-	07522-08801	07443-08001	-	-
07556-09948	07001-00336	07551-08803	07007-00080	07007-00077	-	07522-08801	07443-08001	-	-
07556-09950	07001-00300	07440-08805	07007-00080	07007-00077	07521-08808	07521-08803	07443-08001	-	-
07556-09968	07001-00110	07551-08803	07007-00080	07007-00077	-	07522-08801	07443-08001	-	-
07556-09986	07001-00337	07551-08802	07007-00080	07007-00077	-	07522-08802	07443-08001	-	-

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.
- Renew the drivescrew in the nose assembly if worn or damaged.

WEEKLY

- Fully dismantle and service the nose assembly (see instructions page 8).
- Lubricate the clutch spring with high pressure grease (eg. Shell Alvania E.P.I.).
- Check the clutch torque setting (see clutch adjustment procedure page 7).
- 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 nesessary to remove the nose assembly. For simple removal instructions see the nose assemblies section (pages 8 and 9).

For total tool servicing we advise that you proceed with dismantling the sub-assemblies in the order shown (pages 11 to 13).

CLUTCH

- Unscrew clutch housing **71** from front of the tool (left hand thread) and pull out bit holder **1** and clutch assembly.
- Slight resistance may be set due to the friction of 'O' ring **61** on the square drive shaft and between the bore of the tool assembly.
- Bit holder **1** may be separated from jaw positive **70** by pressing them apart.
- Cover **63** may be sprung off of clutch housing **71**.
- Remove 'O' ring **61** 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), clutch spring **7** and thrust pad **6**.
- Carefully lever off ring **65** and remove two retaining ring halves **64**.
- Over a suitable container, slide back drive jaw **66** and remove woodruff key **67**, six pins **5** and six balls **4**.
- Slide off bearing **68** and slide back jaw driven **3** to release sixteen balls **69**.
- Generously lubricate the clutch spring with high pressure grease (eg. Shell Alvania EP1)

- Assemble in reverse order of dismantling ensuring that the square drive shaft is fully in. As the drive shaft bottoms and the friction of 'O' ring 61 is overcome, a small click can be heard.

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

BACKHEAD ASSEMBLY

- Pull the sides of bail **36** apart to spring it out of its retaining holes.
- Drive out roll pin **31** and remove throttle lever **30**.
- Unscrew nipple **35** from extended nipple **34** and unscrew extended nipple **34** from backhead and reverse bush assembly **45**.
- Remove 'O' ring **33**, exhaust gauze **32** and muffler **37**.
- Prise 'O' ring **38** out of groove in valve bush assembly **45**.
- Unscrew valve cap **41** and remove seal **42**, spring **40** and push out valve stem **29**.
- Using a small sharp edged chisel, carefully lever out small dome headed screw until reverse valve **44** and reverse valve button **43** can be withdrawn.
- Remove spring **26**, spring retaining plate **27** and circlip **28**.
- Do NOT attempt to remove reverse valve bushing.

- Assemble in reverse order to dismantling.

FRONT GEAR ASSEMBLY

- Unscrew front gear assembly from the tool using a spanner on the flats of ring gear **12** and unscrew the inner ring gear using a spanner on the flats of housing **16**.
- Remove spacer **51** and tap front end on a wooden block. The motor assembly will slide out.
- Unscrew motor housing **23** from valve bush assembly **45**.
- Hold ring gear **62** and from the front end tap out the internal assembly.
- Remove two bearings **12** from planet gear spindle **56** and take off spacers **52** and **60**.
- Push out two planet gear shafts **14** complete with thirty needle rollers **58**.
- Remove two planet gears **13** and rotor spline gear **59**.

- Assemble in reverse order to dismantling.

REAR GEAR ASSEMBLY

- Hold housing **16** and tap out the internal assembly from the front end.
- Slide off spacer **20** and remove two bearings **12** and spacers **17** and **52** from planet gear spindle **15**.
- Push out two planet gear shafts **14** complete with thirty needles **53**.
- Remove two planet gears **13** and drive gear **18**.
- Remove circlip **55** from housing **16**.

Assemble in reverse order to dismantling.

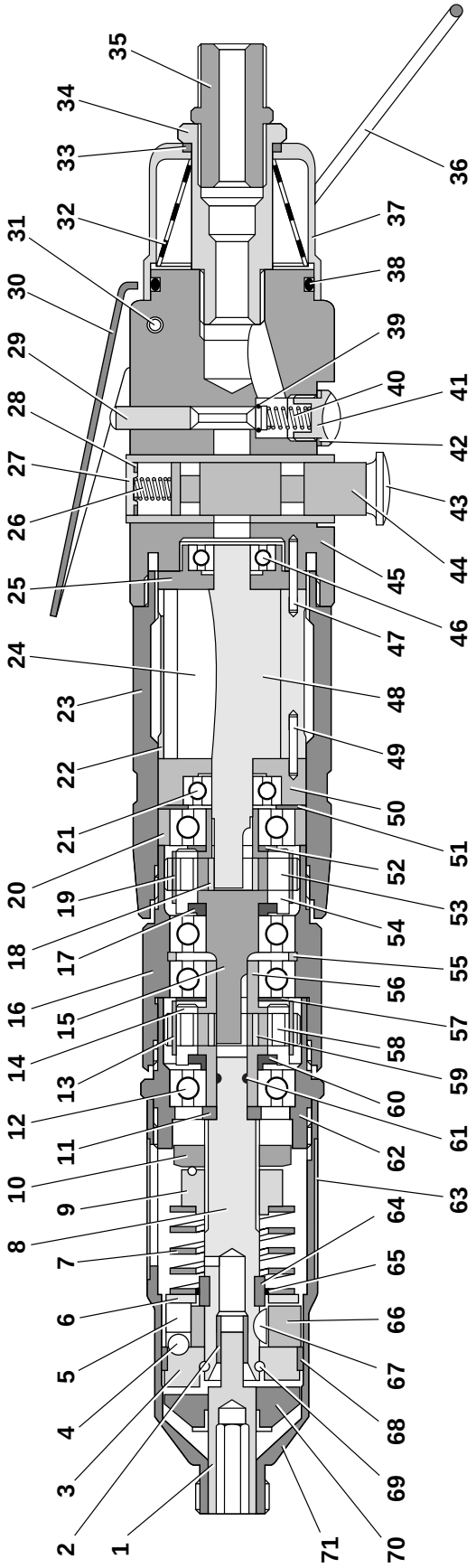
MOTOR ASSEMBLY

- Hold lower end plate **50** and tap the splined end of rotor **48** with a soft hammer so as not to damage the splines and remove rotor cylinder **22** complete with locating pin **47** and pin **49**.
- Remove five rotor blades **24** from rotor **48**.
- Support rear end plate **25** 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 the rotor **48** to remove it from the rear end plate and bearing assembly.
- With a punch tap out bearing **46** from rear end plate **25** and bearing **21** from lower end plate **50**.

- Assemble in reverse order to dismantling, ensuring the following:
- Locating pin **47** correctly locates the motor assembly to the backhead assembly before screwing on motor housing **23**.
- Lower end plate **50** and rear end plate **25** that abut the rotor cylinder **22** are clean and free from burrs and surface marking. If
- necessary, lap faces that abut the rotor cylinder on a flat fine grade of abrasive paper. Press bearings into front and end plates **50** & **25**. Support the bearings in the rear end plate **25** on its inner ring and tap the rotor on its splined end with a soft hammer onto the bearing until the rotor locates against the rear end plate.
- Support the inner face of rear end plate as close as possible to the largest diameter of the rotor **48** and tap the non-splined end of the rotor until a clearance of 0.0015" (0.040 mm)/0.0025"(0.065 mm) is obtained between the inner face of the rear end plate and the rotor. This clearance is to be checked when pulling the rotor away from the rear end plate and bearing assembly.
- Spin rotor **48** to ensure that it will rotate freely in the rear end plate bearing.
- Locate the rotor cylinder **22** by the locating pin **47** to the rear end plate, checking that the ports in the end plate match with those in the rotor cylinder.
- Insert the five rotor blades **24** into the rotor **48** and locate correctly the lower end plate **50** to the rotor cylinder **22** using pin **49**.
- Ensure that the rotor **48** 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.

IMPORTANT

Check the tool against daily and weekly servicing.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07551-00400 PARTS LIST

ITEM	PART Nº	DESCRIPTION	QTY	SPARES	ITEM	PART Nº	DESCRIPTION	QTY	SPARES
01	08430-00218	BIT HOLDER	1	-	38	08433-00219	'O' RING	1	3
02	08446-00406	BUSH	1	1	39	08414-00209	'O' RING	1	3
03	08430-00235	JAW DRIVEN	1	-	40	08430-00202	SPRING	1	1
04	08446-00410	BALL	6	6	41	08433-00226	VALVE CAP	1	-
05	08446-00411	PIN	6	6	42	08433-00227	SEAL	1	1
06	08446-00412	THRUST PAD	1	-	43	08433-00229	REVERSE VALVE BUTTON	1	-
07	08430-00230	SPRING	1	1	44	08433-00228	REVERSE VALVE	1	-
08	08446-00408	CLUTCH SPINDLE	1	-	45	08433-00232	VALVE BUSH ASSEMBLY	1	-
09	08446-00403	ADJUSTMENT PLATE ASSEMBLY	1	-	46	08430-00606	BEARING	1	-
10	08446-00402	ADJUSTMENT NUT	1	1	47	08433-00231	LOCATING PIN	1	-
11	08446-00401	SPACER	1	-	48	08430-00605	ROTOR	1	-
12	08430-00705	BEARING	4	-	49	08433-00233	PIN	1	-
13	08434-00206	PLANET GEAR	2	-	50	08430-00602	FRONT END PLATE	1	-
14	08434-00208	PLANET GEAR SHAFT	2	-	51	08430-00215	SPACER	1	-
15	08434-00209	PLANET GEAR SPINDLE	1	-	52	08434-00201	SPACER	1	-
16	08430-00708	HOUSING	1	-	53	08434-00207	NEEDLE ROLLERS	30	30
17	08434-00205	SPACER	1	-	54	08434-00208	PLANET GEAR SHAFT	2	-
18	08434-00203	ROTOR SPLINE GEAR	1	-	55	08430-00707	CIRCLIP	1	2
19	08434-00206	PLANET GEAR	2	-	56	08443-00401	PLANET GEAR SPINDLE	1	-
20	08430-00706	SPACER	1	-	57	08434-00201	SPACER	1	-
21	08430-00601	BEARING	1	-	58	08434-00207	NEEDLE ROLLERS	30	30
22	08435-00214	ROTOR CYLINDER	1	-	59	08434-00203	ROTOR SPLINE GEAR	1	-
23	08433-00212	MOTOR HOUSING	1	-	60	08443-00402	SPACER	1	-
24	08430-00608	ROTOR BLADE	5	5	61	08414-00209	'O' RING	1	3
25	08433-00214	REAR END PLATE	1	-	62	08434-00211	RING GEAR	1	-
26	08444-00401	SPRING	1	1	63	08446-00404	COVER	1	-
27	08433-00215	SPRING RETAINING PLATE	1	-	64	08410-00256	RETAINING RING HALF	2	-
28	08433-00216	CIRCLIP	1	2	65	08410-00263	RING	1	-
29	08433-00217	VALVE STEM	1	-	66	08446-00407	DRIVE JAW	1	-
30	08433-00218	THROTTLE LEVER	1	-	67	08430-00223	KEY	1	-
31	08430-00207	ROLL PIN	1	2	68	08430-00236	BEARING	1	1
32	08433-00224	EXHAUST GAUZE	1	2	69	08430-00221	BALL	16	16
33	08433-00223	'O' RING	1	3	70	08430-00217	JAW-POSITIVE	1	-
34	08433-00222	NIPPLE	1	-	71	08446-00409	CLUTCH HOUSING	1	-
35	08433-00221	NIPPLE	1	-	72	08414-00202	DRIVE SCREW	1	NOT SHOWN
36	08433-00220	BAIL	1	-	73	08435-00203	PIN	1	NOT SHOWN
37	08433-00225	MUFFLER	1	2	74	08446-00414	CHUCK KEY	1	NOT SHOWN

FAULT DIAGNOSIS TABLE

SYMPTOM	POSSIBLE CAUSE	REMEDY
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 (see servicing the tool page 10)
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 (see clutch adjustment page 7)
	→ Insufficient air pressure/volume	→ Adjust air pressure/volume
	→ Insert out of grip	→ Select correct insert for application
	→ 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 Insert
	→ Drive screw thread worn	→ Replace drive screw
	→ Incorrect combination of insert and drive screw	→ Check part numbers and replace
Standard Nutserts centres falling out	→ Dirty Nutserts	→ Clean Nutserts
	→ Insufficient torque on setting on tool	→ Adjust (see clutch adjustment page 7)
	→ Application thickness below minimum recommended grip	→ Change to correct Insert
	→ Oversize hole in application	→ Correct hole size in application
Worn drive screws	→ Incorrect torque setting on tool	→ Adjust (see clutch adjustment page 7)
	→ Drive screw not lubricated	→ Only occurs when placing Standard Nutserts - see operating procedure page 6)
	→ 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 07551

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 _____

A. Seewraj
Product Engineering Manager - Automation Tools

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Manual No.	Issue	Change Note No.
07900-00657	B	07/325

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