



An Acument™ Global Technologies Company

# Instruction Manual



07287

**Hydro-Pneumatic Power Tool**



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## LIMITED WARRANTY

Avdel makes the limited warranty that its products will be free of defects in workmanship and materials which occur under normal operating conditions. This Limited Warranty is contingent upon: (1) the product being installed, maintained and operated in accordance with product literature and instructions, and (2) confirmation by Avdel of such defect, upon inspection and testing. Avdel makes the foregoing limited warranty for a period of twelve (12) months following Avdel's delivery of the product to the direct purchaser from Avdel. In the event of any breach of the foregoing warranty, the sole remedy shall be to return the defective Goods for replacement or refund for the purchase price at Avdel's option. THE FOREGOING EXPRESS LIMITED WARRANTY AND REMEDY ARE EXCLUSIVE AND ARE IN LIEU OF ALL OTHER WARRANTIES AND REMEDIES. ANY IMPLIED WARRANTY AS TO QUALITY, FITNESS FOR PURPOSE, OR MERCHANTABILITY ARE HEREBY SPECIFICALLY DISCLAIMED AND EXCLUDED BY AVDEL.

Avdel UK Limited policy is one of continuous product development and improvement and we reserve the right to change the specification of any product without prior notice.

# Safety Rules

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

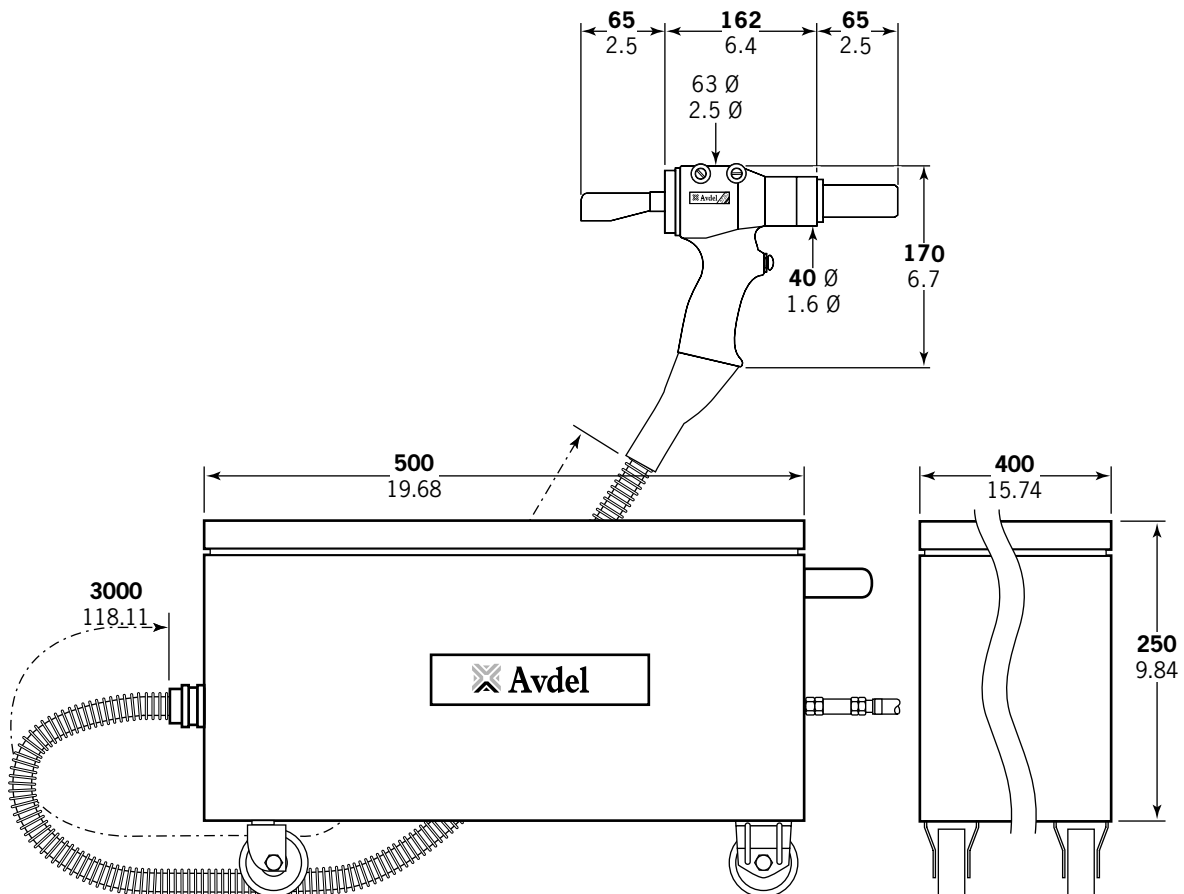
- 1** Do not use outside the design intent.
- 2** Do not use equipment with this tool/machine other than that recommended and supplied by Avdel UK Limited.
- 3** Any modification undertaken by the customer to the tool/machine, nose assemblies, accessories or any equipment supplied by Avdel UK Limited or their representatives, shall be the customer's entire responsibility. Avdel UK Limited will be pleased to advise upon any proposed modification.
- 4** The tool/machine must be maintained in a safe working condition at all times and examined at regular intervals for damage and function by trained competent personnel. Any dismantling procedure shall be undertaken only by personnel trained in Avdel UK Limited procedures. Do not dismantle this tool/machine without prior reference to the maintenance instructions. Please contact Avdel UK Limited with your training requirements.
- 5** The tool/machine shall at all times be operated in accordance with relevant Health and Safety legislation. In the U.K. the "Health and Safety at Work etc. Act 1974" applies. Any question regarding the correct operation of the tool/machine and operator safety should be directed to Avdel UK Limited.
- 6** The precautions to be observed when using this tool/machine must be explained by the customer to all operators.
- 7** Always disconnect the airline from the tool/machine inlet before attempting to adjust, fit or remove a nose assembly.
- 8** Do not operate a tool/machine that is directed towards any person(s) or the operator.
- 9** Always adopt a firm footing or a stable position before operating the tool/machine.
- 10** Ensure that vent holes do not become blocked or covered and that hoses are always in a good condition.
- 11** The operating pressure shall not exceed 7 bar.
- 12** Do not operate the tool if it is not fitted with a complete nose assembly unless specifically instructed otherwise.
- 13** Care shall be taken to ensure that spent stems are not allowed to create a hazard.
- 14** The tool must be fitted with an undamaged pintail deflector before operating.
- 15** When the tool is fitted with a stem deflector, it should be rotated until the aperture is facing way from the operator and other person(s) working in the vicinity.
- 16** When using the tool, the wearing of safety glasses is required both by the operator and others in the vicinity to protect against fastener ejection, should a fastener be placed 'in air'. We recommend wearing gloves if there are sharp edges or corners on the application.
- 17** 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.
- 18** When carrying the tool from place to place keep hands away from the trigger/lever to avoid inadvertent start up.
- 19** Excessive contact with hydraulic fluid oil should be avoided. To minimize the possibility of rashes, care should be taken to wash thoroughly.
- 20** C.O.S.H.H. data for all hydraulic oils and lubricants is available on request from your tool supplier.

# Specifications

## Tool Specification

<b>Air Pressure</b>	Minimum - Maximum	5-7 bar (72.5 - 101.5 psi)
<b>Free Air Volume Required</b>	@ 5.5 bar (80 psi)	3.5 litres
<b>Stroke</b>	Minimum Underload	29mm (1.14in)
	Free Cycling	32mm (1.26in)
<b>Pull Force</b>	@ 5.5 bar (80 psi)	32.4 kN
<b>Cycle time</b>	Approximately	1.7 second
<b>Noise Level</b>		75 dB(A)
<b>Pistol Weight</b>	(without nose equipment)	1.47 kg (3.23 lb)
<b>Total Weight</b>	Pistol and Intensifier (without nose equipment)	40 kg (88 lb)
<b>Vibration</b>	Less than	2.5 m/s <sup>2</sup> (8.2 ft/s <sup>2</sup> )

## Tool Dimensions



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

# Intent of Use

The hydro-pneumatic 07287 tool is designed to place Avdel® lockbolt and breakstem fasteners at high speed making it ideal for batch or flow-line assembly in a wide variety of applications throughout all industries.

The 07287 is of the remote intensifier or split tool concept consisting of; Pistol Grip head, Air Oil Intensifiers and Steel Enclosure (see pages 5, 16, 18, 20 and 21).

Pistol Grip type head fitted with a pintail deflector is the standard tool for which a stem catching option and a side ejection accessory are available (see details page 10). It is also possible to order the base tool only (part number 07287-00200) which will not be fitted with a nose assembly.

## Tool Selection

07287 TOOL SELECTION						
FASTENER			NOSE TIP TYPE	ADAPTOR	NOSE ASSY PART N°	COMPLETE TOOL PART N°
NAME & HEAD	Ø	MATERIAL/DETAIL				
MAXLOK®	3/16" (4.8mm)	-	-	07267-00900	07610-02000	07287-00001
	1/4" (6.4 mm)	-	-	07267-00900	07610-02100	07287-00002
HEMLOK®	1/4" (6.4mm)	-	Standard	07267-00800	07612-02000	07287-00004
AVTAINER®	3/8" (10 mm)	-	Standard	07267-00800	07498-00800	07287-00006
MONOBOLT®	3/16" (4.8 mm)	-	Standard	07267-00800	07498-04700	07287-00012
	1/4" (6.4 mm)	-	Standard	07267-00800	07498-04600	07287-00014
	1/4" (6.4 mm)	-	Standard	07267-00800	07498-00500	07287-00016
	3/8" (10 mm)	-	Standard	07267-00800	07220-07200	07287-00018
AVEX®	3/16" (4.8 mm)	Steel	Standard	07267-00800	07490-04900	07287-00030
AVINOX® II	3/16" (4.8 mm)	-	Standard	07267-00800	07498-01300	07287-00036
AVDELOK®	3/16" (4.8 mm)	Straight with Vertical Flats	-	07220-02500	07200-02500	07287-00050
	3/16" (4.8 mm)	Straight with Horizontal Flats	-	07220-02500	07200-02700	07287-00051
	1/4" (6.4 mm)	Straight with Vertical Flats	-	07220-02500	07200-02600	07287-00052
	1/4" (6.4 mm)	Straight with Horizontal Flats	-	07220-02500	07200-02800	07287-00053
	1/4" (6.4 mm)	Straight with Horizontal Flats (Stepped)	-	07220-02500	07200-03300	07287-00054
	1/4" (6.4 mm)	Straight Round	-	07220-02500	07200-03500	07287-00055
	5/16" (8.0 mm)	Straight with Horizontal Flats	-	07220-02500	07220-02700	07287-00056
	5/16" (8.0 mm)	Straight with Horizontal Flats (Stepped)	-	07220-02500	07220-03400	07287-00057
	3/8" (10 mm)	Straight Round	-	07220-02500	07220-02000	07287-00058
	3/8" (10 mm)	Straight Round (Stepped)	-	07220-02500	07220-03500	07287-00059

# Putting into Service

## Air Supply

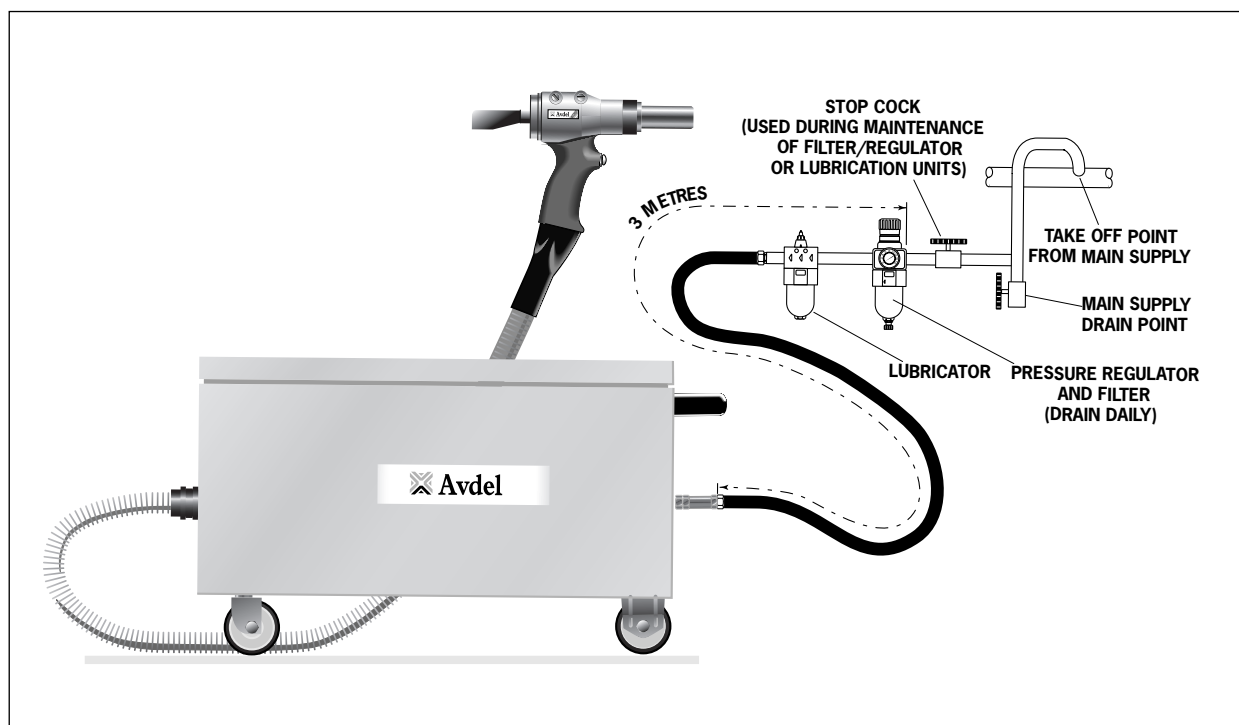
All tools are operated with compressed air. The pressure regulator in the cabinet is set to an optimum pressure of 5.25 bar. Regardless of the air inlet pressure, the pressure gauge in the cabinet will show 5.25 bar maximum. The pressure regulator in the cabinet must not be adjusted under any circumstances. In addition, we recommend the use of external 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.

**IMPORTANT**  
The pressure regulator in the cabinet is set to 5.25 bar.  
The pressure regulator must not be adjusted under any circumstances.

**IMPORTANT**  
The safety valve in the cabinet is set to 5.25 - 5.30 bar.  
The safety valve must not be adjusted under any circumstances.

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 mm or 1/4 inch.

Read servicing daily details page 12.



## Operating Procedure

### OPTION 1

- Ensure that the correct nose equipment is fitted.
- Connect the tool to the air supply.
- Insert the fastener body squarely into the prepared hole of the application.
- Apply the tool to the protruding fastener stem.
- Fully operate the trigger. The tool cycle will ensure the fastener is placed.

### OPTION 2

- Ensure that the correct nose equipment is fitted.
- Connect the tool to the air supply.
- Insert the fastener stem into the nose of the tool.
- Insert the tool with the fastener squarely into the prepared hole of the application.
- Fully operate the trigger. The tool cycle will ensure the fastener is placed.

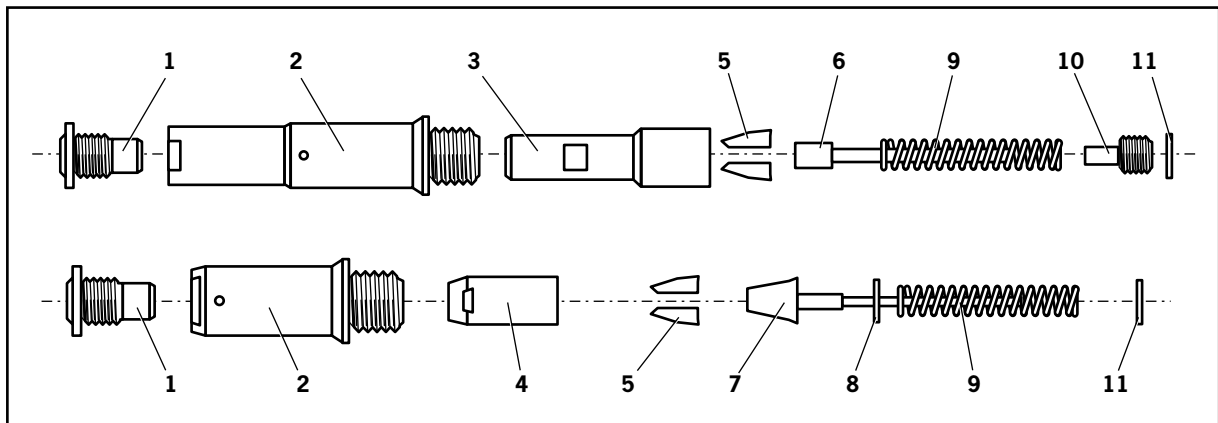
# Nose Assemblies

## Fitting Instructions

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 fastener to be placed, you will be able to order a new complete nose assembly using the selection tables on pages 8 and 9.

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

- Lightly coat the jaws with Molythium grease.
- Drop Jaws **5** into Jaw Housing **4** or Chuck Collet **3**, depending on whether you have a short or long nose assembly (see table opposite for identification).
- Insert Jaw Spreader **7** into Jaw Housing **4** (locating in the 'V' shape formed by the jaws) or insert front Spring Guide **6** into Chuck Collet **3**.
- Locate Buffer **8** on Jaw Spreader **7**.
- Locate Spring **9** onto Jaw Spreader **7** or onto Front Spring Guide **6**.
- On long nose assemblies, screw Rear Spring Guide **10** into Chuck Collet **3**.
- Fit Locking Ring **11** onto the end plug of the tool.
- Holding tool pointing down, screw on the assembled jaw housing or chuck collet onto the end plug and tighten with spanner.
- Screw Nose Tip **1** into Nose Casing **2**.
- Place Nose Casing **2** over Jaw Housing **4** or Chuck Collet **3** and screw onto tool, tightening with spanner.



## 07287 Nose Assembly Components

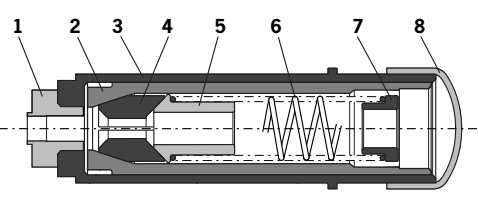
This table lists nose assemblies. Each nose assembly represents a unique assembly of components which can be ordered individually. Component numbers refer to the illustration above. We recommend some stock as items will need regular replacement. Read the Nose Assemblies Servicing Instructions opposite carefully. All nose assemblies also include a locking ring part number 07340-00327.

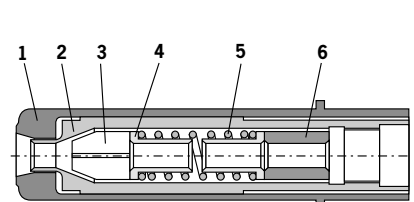
NOSE ASSY	1	2	3	5	6	9	10
07498-00500	07497-03202	07498-00501	07498-00502	07497-03002*	07498-00507	07500-02005	07498-00503

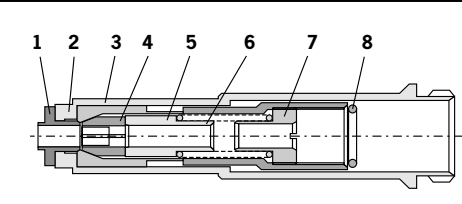
NOSE ASSY	1	2	4	5	7	8	9
07490-04900	07490-04400	07340-00306	07340-00304	07340-07502	07340-07503	07340-01503	07340-01502
07498-01300	07498-01400	07340-00306	07340-00304	07340-07502	07340-07503	07340-01503	07340-01502
07498-04600	07498-03202	07340-00306	07340-00304	07498-04501*	07498-04502	07498-03003	07100-04003
07498-04700	07498-03001	07340-00306	07498-04503	07498-04501*	07498-04900	07498-03003	07100-04003

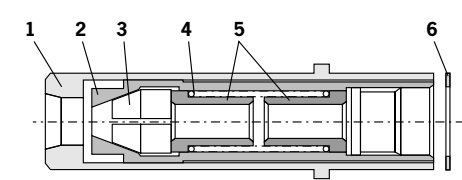
# Nose Assemblies

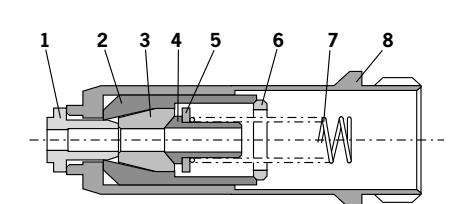
## Selection Tables for Monobolt®, Avdelok®, Avtainer®, Maxlok® and Hemlok®

MONOBOLT® 07220-07200				
	ITEM	DESCRIPTION	PART N°	QTY
	1	NOSE TIP	07220-07101	1
	2	JAW HOUSING	07220-06304	1
	3	NOSE CASING	07220-07202	1
	4	JAWS	73411-05001	1 SET
	5	JAW SPREADER	07220-06302	1
	6	SPRING	07220-06305	1
	7	SPRING GUIDE	07220-06301	1
8	DUST COVER	07220-02108	1	

AVDELOK®							
	DESCRIPTION	ANVIL	CHUCK COLLET	CHUCK JAWS	SPRING GUIDE	SPRING	SPACER
	NOSE ASSY	1	2	3	4	5	6
	07200-02500	07200-02501	07200-02101	07220-02102	07220-02104	07220-02103	-
	07200-02600	07200-02601	07200-02201	07220-02302	07220-02104	07220-02103	-
	07200-02700	07200-02701	07200-02101	07220-02102	07220-02104	07220-02103	-
	07200-02800	07200-02801	07200-02201	07220-02302	07220-02104	07220-02103	-
	07200-03300	07200-03301	07200-03302	07220-02302	07220-02104	07220-02103	-
	07200-03500	07200-03501	07200-02201	07220-02302	07220-02104	07220-02103	-
	07220-02000	07220-02001	07200-02002	07220-02003	07220-02603	07220-02605	-
	07220-02700	07200-02601	07220-02701	07220-02606	07220-02603	07220-02605	-
	07220-03400	07220-03401	07220-03402	07220-02606	07220-02603	07220-02605	07220-02604
	07220-03500	07220-03501	07220-03502	07220-02003	07220-02603	07220-02605	-

AVTAINER® 07498-00800				
	ITEM	DESCRIPTION	PART N°	QTY
	1	NOSE TIP	07498-00802	1
	2	NOSE CASING	07498-00501	1
	3	CHUCK COLLET	07498-00801	1
	4	JAWS	07220-02302	1 SET
	5	SPRING GUIDE	07498-00803	1
	6	SPRING	07500-02005	1
	7	THREADED SPRING GUIDE	07498-00503	1
8	LOCKING RING	07340-00327	1	

MAXLOK® 07610-02000 & 07610-02100					
 <p>Anvils are stamped <sup>3</sup>/<sub>16</sub>M" or <sup>1</sup>/<sub>4</sub>M" to aid identification</p>	ITEM	DESCRIPTION	07610-02000 PART N°	07610-02100 PART N°	QTY
	1	ANVIL	07610-02001	07610-02101	1
	2	CHUCK COLLET	07610-02002	07610-02102	1
	3	CHUCK JAWS	07610-02003	07610-02103	1 SET
	4	SPRING	07220-02103	07220-02103	1
	5	SPRING GUIDE	07220-02104	07220-02104	1
6	FRICITION RING	07610-02004	07610-020041	1	

HEMLOK® 07612-02000				
	ITEM	DESCRIPTION	PART N°	QTY
	1	NOSE TIP	07612-02001	1
	2	JAW HOUSING	07612-02003	1
	3	JAWS	07612-02002	1 SET
	4	JAW SPREADER	07612-04502	1
	5	BUFFER	07498-03003	1
	6	LOCKING RING	07340-00327	1
	7	SPRING	07007-00458	1
8	NOSE CASING	07340-00306	1	

## 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 jaws.
- Ensure Jaw Spreader **7** assembly tube (where fitted) or Front Spring Guide **6** is not distorted.
- Check Spring **9** is not distorted.
- Assemble according to fitting instructions.

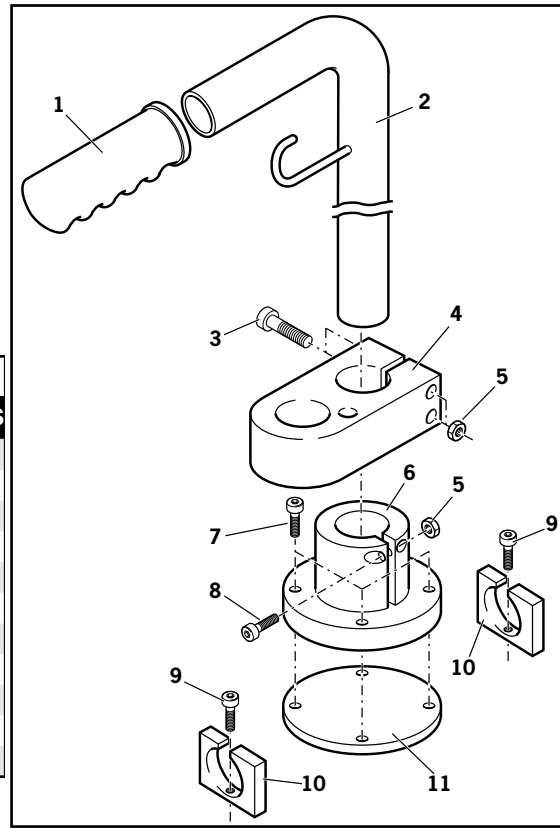
Item numbers in **bold** refer to the Nose Assembly drawing on page 8.

# Accessories

## Handle and Holster Kit

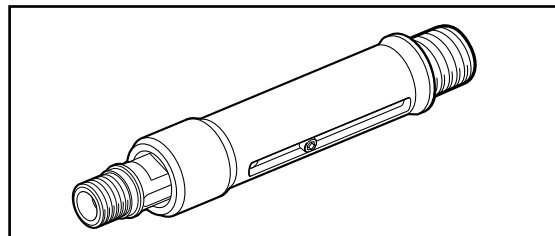
This kit enables an easier handling of the cabinet around the workplace and allows the tool pistol to be stored in a convenient position.

07265-09500 PARTS LIST				
ITEM	PART N°	DESCRIPTION	QTY	SPARES
1	07265-09501	RUBBER HANDLE	1	-
2	07265-09502	TUBE WITH HOOK	1	-
3	07265-09504	M5 BOLTS	2	-
4	07265-09503	HOLSTER	1	-
5	07265-09505	M5 NUTS	3	-
6	07265-09508	BASE	1	-
7	07265-09507	M5 BOLT	4	-
8	07265-09506	M5 BOLT	1	-
9	07265-09512	M5 BOLT	2	-
10	07265-09511	CLIPS	2	-
11	07265-09509	PLATE	1	-



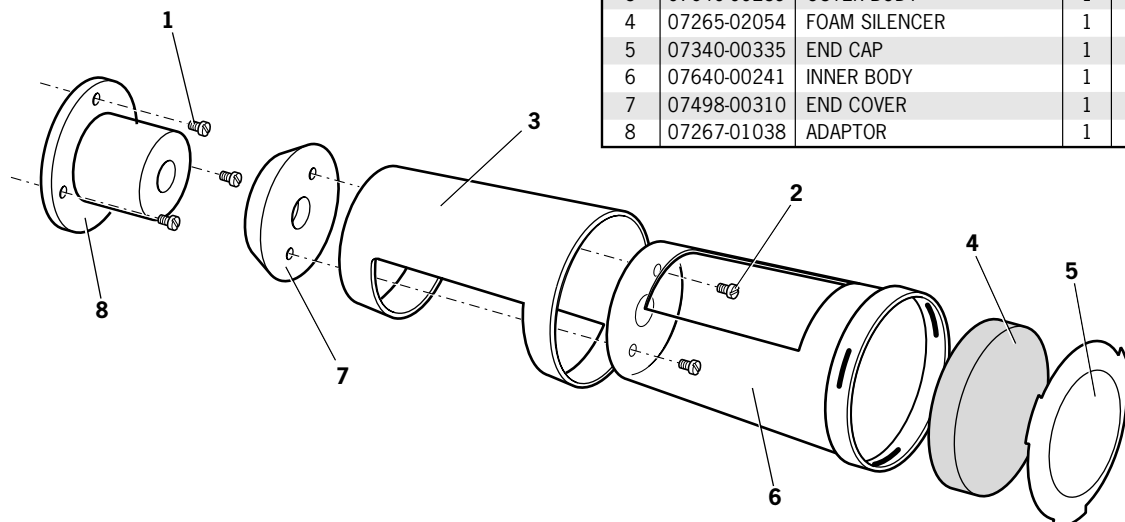
## Side Ejection Adaptor

When fitted between the tool and the nose assembly, this accessory forces fastener stems to eject at the front of the tool. Choose the correct part number according to the stem diameter of the fastener.



## Stem Catcher Unit

Fitted to the rear of the tool, this unit catches the spent stems, preventing them fouling the work area. It should be emptied when half full of spent stems.

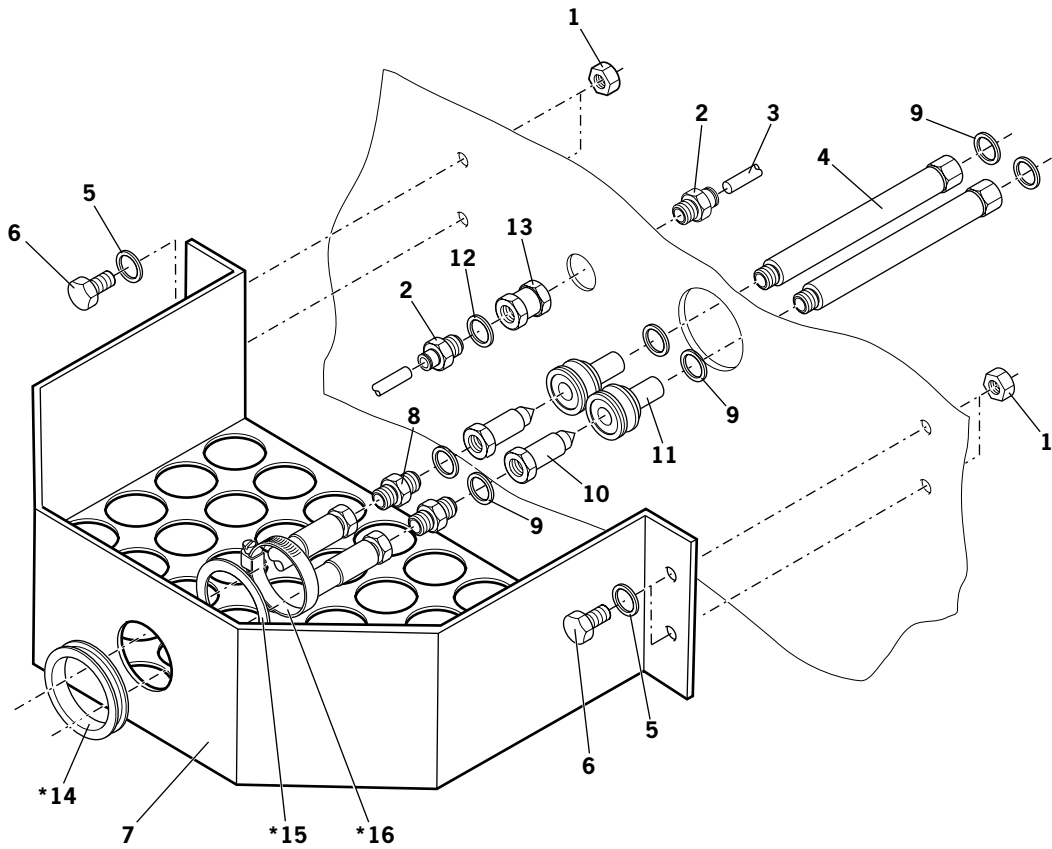


07265-03800 PARTS LIST				
ITEM	PART N°	DESCRIPTION	QTY	SPARES
1	07267-01039	SCREW	3	-
2	07265-02013	SCREW	2	-
3	07640-00239	OUTER BODY	1	-
4	07265-02054	FOAM SILENCER	1	-
5	07340-00335	END CAP	1	-
6	07640-00241	INNER BODY	1	-
7	07498-00310	END COVER	1	-
8	07267-01038	ADAPTOR	1	-

# Accessories

## Quick Connect Kit

This kit enables rapid connection of the handle and hose to the cabinet.



## Parts List of Quick Connect Kit 07267-01250

07267-01250 PARTS LIST				
ITEM	PART N°	DESCRIPTION	QTY	SPARES
1	07265-03206	NUT	4	-
2	07265-03269	CONNECTION	4	-
3	07265-03295	AIR HOSE EXTENSION	1	-
4	07265-09296	OIL HOSE EXTENSION	2	-
5	07265-03204	WASHER	4	-
6	07265-03205	SCREW	4	-
7	07265-03275	TRAY	1	-
8	07267-01022	NIPPLE	2	-
9	07265-02031	WASHER	6	-
10	07265-03278	QUICK FITTING NIPPLE	2	-
11	07267-03277	QUICK FITTING COUPLER	2	-
12	07265-03272	WASHER	1	-
13	07265-03221	CONNECTOR	2	-
* 14	07267-03251	RUBBER RING	1	-
* 15	07267-03252	SPACER WASHER	1	-
* 16	07265-03292	CLAMP	1	-

\* These items are part of the Base Tool and are not part of the Quick Connect Kit

# Servicing the Tool

Regular servicing should be carried out and a comprehensive inspection performed annually or every 500000 cycles, whichever is sooner.

## IMPORTANT

Read Safety Instructions on page 4.

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

## 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, drain it.
- Check that the nose equipment is correct.
- Check oil level in intensifier's reservoir. If necessary top up with the prescribed priming oil.

## Weekly

- Dismantle and clean nose assembly, with special attention to the jaws. Lubricate with Moly Lithium grease EP 3753 before assembling.
- Check for oil leaks and air leaks in the air supply hose and fittings.

## Moly Lithium Grease EP 3753 Safety Data

Grease can be ordered as a single item, the part number is shown in the Service Kit below.

### First Aid

SKIN:

As the grease is completely water resistant it is best removed with an approved emulsifying skin cleaner.

INGESTION:

Ensure the individual drinks 30ml Milk of Magnesia, preferably in a cup of milk.

EYES:

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

### Fire

FLASH POINT: Above 220°C.

Not classified as flammable.

Suitable extinguishing media: CO<sub>2</sub>, Halon or water spray if applied by an experienced operator.

### Environment

Scrape up for burning or disposal on approved site.

### Handling

Use barrier cream or oil resistant gloves

### Storage

Away from heat and oxidising agent.

## Service Kit

SERVICE KIT		
ITEM PART N°	DESCRIPTION	N° OFF
07900-00589	SPREADER	1
07900-00590	PUSHER	1
07900-00591	BULLET	1
07900-00592	GAUGE	1

For all servicing we recommend the use of the Service Kit, part number 07900-06270.

# Servicing the Tool

## Maintenance

---

Every 500000 cycles the tool should be completely dismantled and new components should be used where worn, damaged or recommended. All 'O' rings and seals should be renewed and lubricated with Moly Lithium grease EP 3753 before assembling.

### IMPORTANT

Read Safety Instructions on page 4.

**The employer is responsible for ensuring that tool maintenance instructions are given to the appropriate personnel.**

**The operator should not be involved in maintenance or repair of the tool unless properly trained.**

**The tool shall be examined regularly for damage and malfunction.**

Item numbers in **bold** refer to the General Assembly and Parts List on pages 16 and 17.

- The airline must be disconnected before any servicing or dismantling is attempted unless specifically instructed otherwise.
- It is recommended that any dismantling operation be carried out in clean conditions.
- Prior to dismantling the tool it is necessary to remove the nose assembly. For simple removal instructions see the Nose Assemblies section on pages 8 and 9.
- Remove Bleed Screw **18** and Washer **19** from the tool handle and drain oil from tool.
- For total tool servicing we advise that you proceed with dismantling of sub-assemblies in the order shown overleaf.
- To disconnect Oil Hose **26** and Air Hose **27** from the tool handle, lower Sleeve **22** to gain access to the hoses.
- Disconnect air hose by pushing and releasing the quick release connector. Using two spanners, undo oil hose at Connector **21**, leaving the connector attached to the tool handle. Remove the tool handle.

## Stem Catcher Unit

---

Item numbers in **bold** refer to the Stem Catcher Unit drawing on page 10.

- To remove the stem catcher assembly from the tool, loosen three Screws **1** and slide stem catcher Adaptor **8** together with the stem catcher from off of the Stop Cover **3\*** (\*on pages 16 and 17).
- Remove two Screws **2** and separate the stem catcher assembly from stem catcher adaptor.
- Assemble in reverse order of dismantling.

## Piston Assembly

---

Item numbers in **bold** refer to the General Assembly and Parts List on pages 16 and 17.

- Grip tool Handle **1** in a vice fitted with soft jaws and, using a spanner on the flats of the protrusion on Stop Cover **3**, unscrew stop cover, together with 'O' Ring **12**.
- Remove 'O' Ring **12** from groove on outer diameter of Stop Cover **3** and remove Seal **11** from inner diameter.
- Using circlip pliers, remove Circlip **17** from Piston **2** and withdraw Deflector Support **4** and Spring **5**.
- Push Piston **2** out of rear of tool (some oil will be ejected from tool during this action).
- Using circlip pliers, remove Circlip **16** from tool handle and remove Lip Seal **10**.
- Remove 'O' Ring **14** and Graphite Ring **13** from Piston **2**.
- Assemble in reverse order of dismantling, ensuring that Seals **10**, **11**, **14** and Graphite Ring **13** are assembled the correct way round as shown on page 16.
- Use piston insertion tool\* to install the piston.

\* Item included in the service kit.

# Servicing the Tool

## Trigger Assembly

---

Item numbers in **bold** refer to the General Assembly drawing and Parts List on pages 16-17.

- Using a spanner, undo Locknut **7** and remove Trigger **6**, 'O' Ring **15**, and Spring **8** from Handle **1**.
- Assemble in reverse order of dismantling.

## Cabinet

---

Item numbers in **bold** refer to the General Assembly drawing and Parts List on pages 18-19.

- The cabinet comprises two Intensifiers **4** and **25**, a pilot Valve **23**, a Pressure Regulator and Filter Assembly **45** and an Air Pressure Indicating Assembly **53** together with the air hoses internal to the cabinet.
- Servicing is limited to removal/replacement of complete assemblies and the renewal of seals within the pilot valve.
- To dismantle the cabinet it is necessary to extract the Base Plate **61** and the components installed on it. This is possible after disconnecting all hoses and removing items restricting the withdrawal of the base plate.

## Push and Pull Intensifiers

---

Item numbers in **bold** refer to the General Assembly drawing and Parts List on pages 18-19.

- To remove Intensifiers **4**, **25** and Oil Reservoir **36**, disconnect the oil hose using two spanners, (be prepared for oil spillage from hose/ intensifier), then remove the hoses (quick release connectors) connecting the intensifier to the pilot valve.
- Using a spanner, remove the two nuts and associated washers securing the intensifier to the baseplate.
- Lift intensifier clear of cabinet.
- Replacement is in reverse order of removal.

### I M P O R T A N T

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

# Servicing the Tool

## Pressure Regulator and Filter Assembly

---

- To remove the Pressure Regulator and Filter Assembly **45** from the cabinet, disconnect the two Air Hoses **59** and **63** at the regulator.
- Remove the two screws, spacers, washers and nuts securing the regulator to the cabinet.
- Remove assembly from the cabinet.
- Replacement is in reverse order of removal.

**I M P O R T A N T**

**The pressure regulator in the cabinet is set to 5.25 bar.  
The pressure regulator must not be adjusted under any circumstances.**

**I M P O R T A N T**

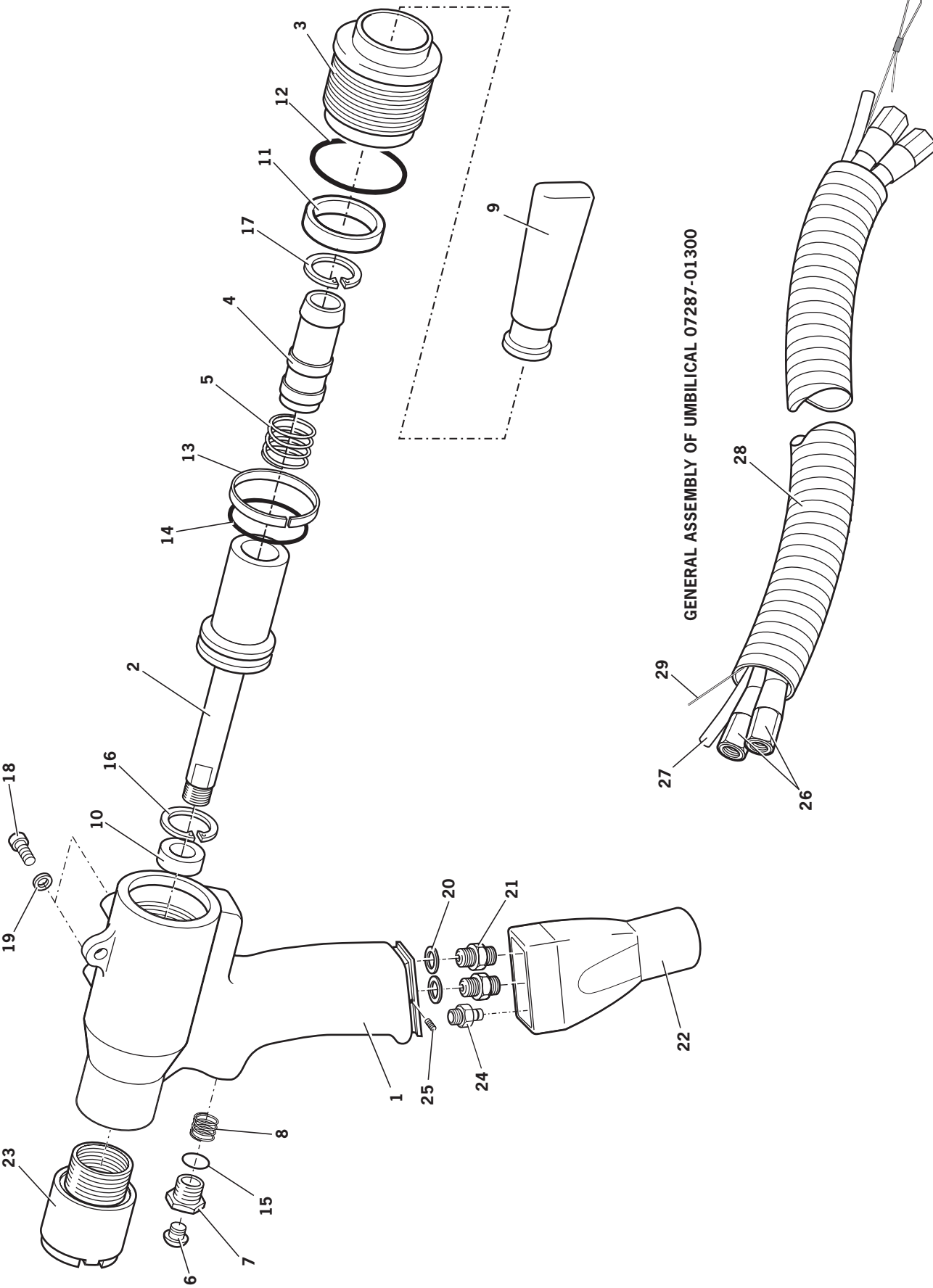
**The safety valve in the cabinet is set to 5.25 - 5.30 bar.  
The safety valve must not be adjusted under any circumstances.**

## Air Pressure Indicator Assembly

---

- To remove the Air Pressure Indicator Assembly **53**, remove the air hose from the rear of the gauge.
- Remove the clamp from the rear of the gauge and withdraw gauge from front of the cabinet.
- Replacement is in reverse order of removal.
- After any dismantling/assembling has occurred, the system **MUST** be primed.

# General Assembly of Handle 07287-01000 and Umbilical 07287-01300

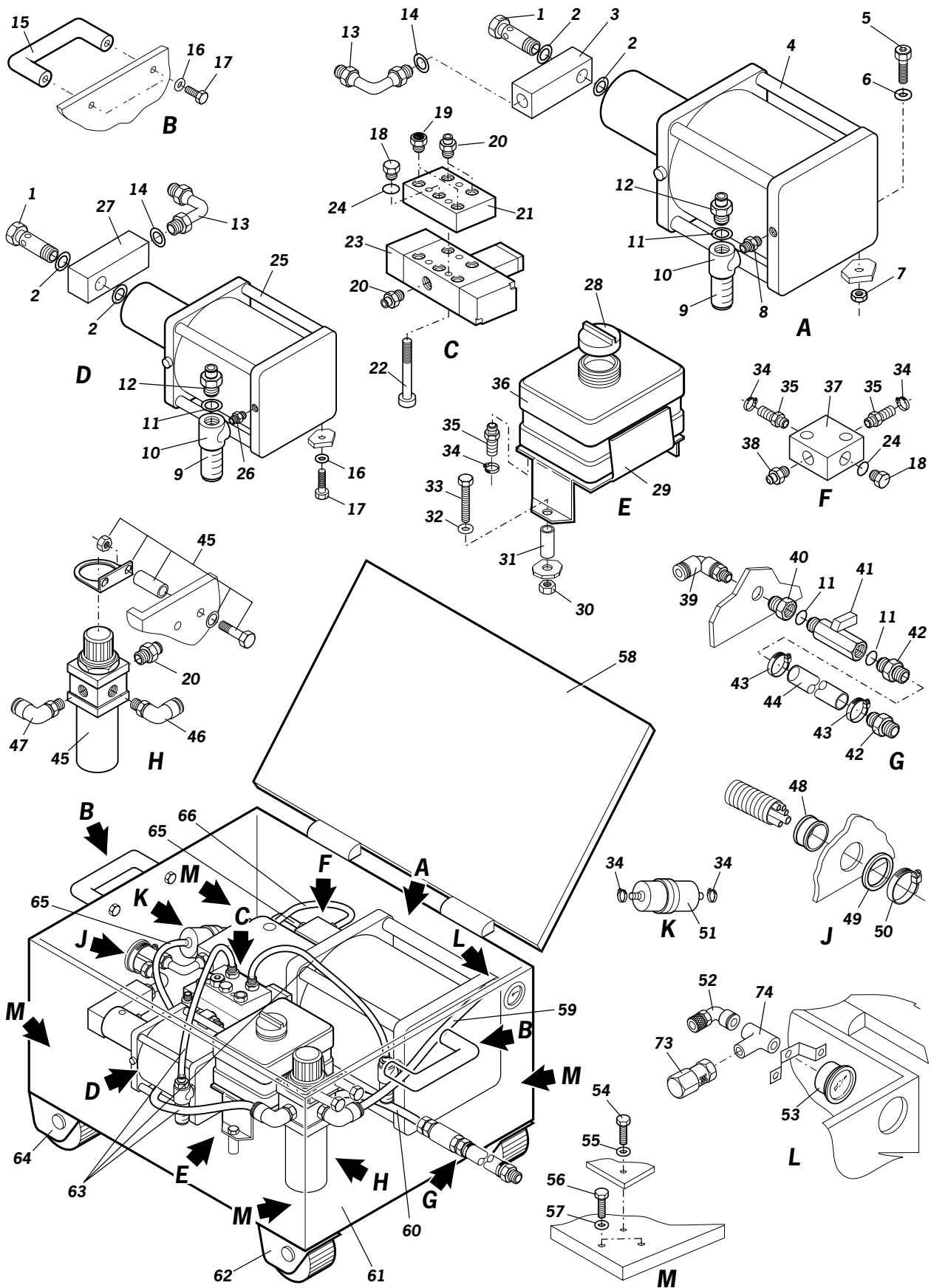


# Parts List for 07287-01000 and 07287-01300

07287-01000 PARTS LIST									
ITEM	PART N°	DESCRIPTION	QTY	SPARES	ITEM	PART N°	DESCRIPTION	QTY	SPARES
1	07287-01001	HANDLE	1	-	14	07267-01014	'O' RING	1	-
2	07287-01002	PISTON	1	-	15	07555-00502	'O' RING	1	-
3	07287-01003	STOP COVER	1	-	16	07267-01016	CIRCLIP	1	-
4	07267-01004	DEFLECTOR SUPPORT	1	-	17	07267-01017	CIRCLIP	1	-
5	07267-01005	SPRING	1	-	18	07265-02010	BLEED SCREW	2	-
6	07265-03023	TRIGGER	1	-	19	07265-02011	WASHER	2	-
7	07265-03022	LOCKNUT	1	-	20	07265-02031	WASHER	2	-
8	07555-09219	SPRING	1	-	21	07267-01022	CONNECTOR	2	-
9	07220-00215	STEM DEFLECTOR	1	-	22	07267-01025	SLEEVE	1	-
10	07267-01010	LIP SEAL	1	-	23	07220-01500	HEAD EXTENSION	1	-
11	07267-01011	SEAL	1	-	24	07287-01004	AIR CONNECTOR	1	-
12	07267-01012	'O' RING	1	-	25	07287-01005	GRUB SCREW	1	-
13	07267-01013	GRAPHITE RING	1	-					

07287-01300 PARTS LIST									
ITEM	PART N°	DESCRIPTION	QTY	SPARES	ITEM	PART N°	DESCRIPTION	QTY	SPARES
26	07267-01301	3m OIL HOSE	2	-	28	07267-01302	3m PROTECTIVE SLEEVE	1	-
27	07265-02021	3m AIR HOSE	1	-	29	07287-01303	LANYARD	1	-

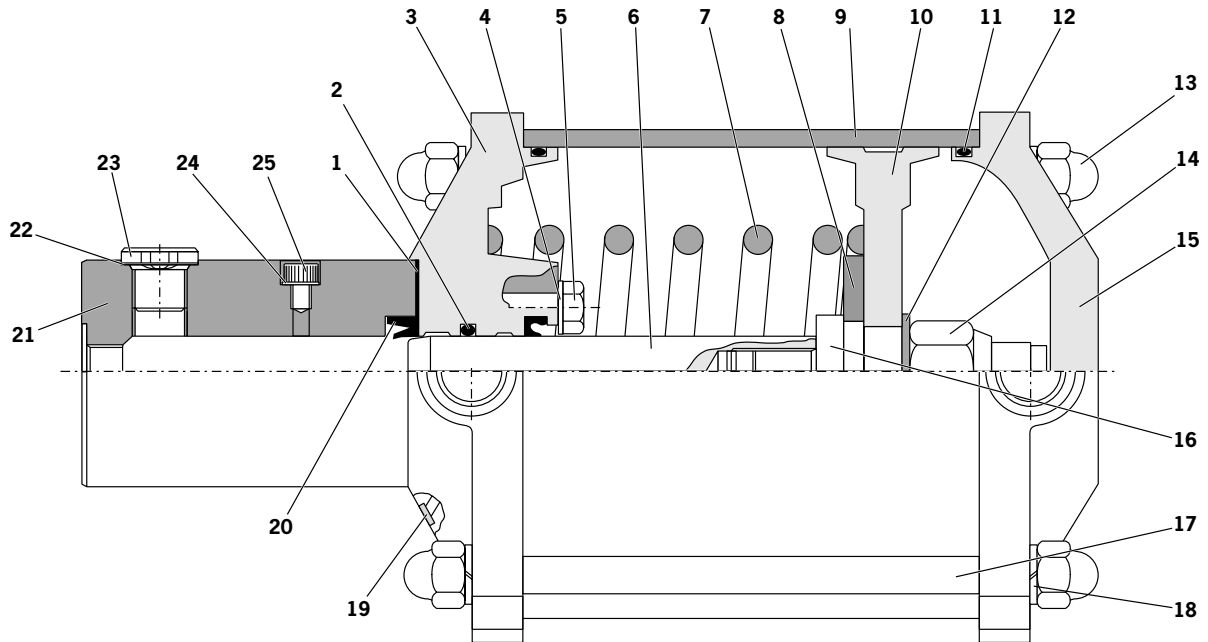
# General Assembly of Cabinet 07287-03200



# Parts List of Cabinet 07287-03200

07287-03200 CABINET PARTS LIST									
ITEM	PART N°	DESCRIPTION	QTY	SPARES	ITEM	PART N°	DESCRIPTION	QTY	SPARES
1	07267-03224	SCREW	2	-	38	07267-03209	CONNECTOR	1	-
2	07265-03259	WASHER	4	-	39	07267-03262	ELBOW CONNECTOR	2	-
3	07267-03227	DISTRIBUTOR	1	-	40	07267-03263	BUSH	1	-
4	07005-10112	INTENSIFIER	1	-	41	07267-03264	AIR TUBE	1	-
5	07265-02267	BOLT	2	-	42	07265-03253	CONNECTOR	2	-
6	07625-02268	WASHER	2	-	43	07265-02076	CLAMP	2	-
7	07265-02269	NUT	2	-	44	07265-03219	AIR HOSE (2500mm)	1	-
8	07265-03260	CONNECTOR	1	-	45	07265-03220	PRESSURE REG & FILTER ASSY	1	-
9	07265-03263	SILENCER	2	-	46	07265-03256	ELBOW CONNECTOR	1	-
10	07265-03225	QUICK EXHAUST	2	-	47	07265-03257	ELBOW CONNECTOR	1	-
11	07265-03261	WASHER	5	-	48	07267-03251	RING	1	-
12	07267-03204	HOSE CONNECTOR	2	-	49	07267-03252	WASHER	1	-
13	07267-03226	ELBOW CONNECTOR	2	-	50	07265-03292	CLAMP	1	-
14	07265-02031	WASHER	2	-	51	07267-03212	OIL FILTER	1	-
15	07265-03202	HANDLE	2	-	52	07265-03255	ELBOW CONNECTOR	1	-
16	07265-02284	WASHER	6	-	53	07265-03254	AIR PRESSURE INDICATOR ASSY	1	-
17	07265-02283	SCREW	4	-	54	07265-03231	SCREW	4	-
18	07267-03208	PLUG	2	-	55	07265-03232	WASHER	4	-
19	07265-03270	SILENCER	2	-	56	07265-03205	SCREW	8	-
20	07265-03271	STRAIGHT CONNECTOR	4	-	57	07265-03204	WASHER	8	-
21	07265-03222	SUB BASE	2	-	58	07265-03201	BOX (inc. KEY)	1	-
22	07265-03266	SCREW	3	-	59	07265-03216	6mm AIR HOSE (270mm)	1	-
23	07005-01524	VALVE	1	-	60	07265-03215	10mm AIR HOSE (100mm)	1	-
24	07265-03268	WASHER	2	-	61	07265-03230	BASE PLATE	1	-
25	07005-10113	INTENSIFIER	1	-	62	07265-03203	WHEEL	2	-
26	07267-03221	CONNECTOR	1	-	63	07267-03268	10mm AIR HOSE (450mm)	3	-
27	07267-03222	DISTRIBUTOR	1	-	64	07265-03207	WHEEL	2	-
28	07267-03213	OIL RESERVOIR PLUG	1	-	65	07267-03265	OIL HOSE (400mm)	2	-
29	07267-03215	OIL RESERVOIR BASE	1	-	66	07267-03266	OIL HOSE (200mm)	1	-
30	07267-03219	NUT	2	-	67	07267-03267	OIL HOSE	1	NOT SHOWN
31	07267-03217	SPACER	2	-	68	07267-03271	10mm AIR HOSE	1	NOT SHOWN
32	07267-03218	WASHER	2	-	69	07267-03272	6mm AIR HOSE	1	NOT SHOWN
33	07267-03216	BOLT	2	-	70	07265-03272	WASHER	5	NOT SHOWN
34	07267-03211	CLAMP	6	-	71	07265-03273	WASHER	8	NOT SHOWN
35	07267-03210	HOSE CONNECTOR	4	-	72	07265-03206	NUT	8	NOT SHOW
36	07267-03214	OIL RESERVOIR	1	-	73	07287-03280	SAFETY VALVE	1	-
37	07267-03207	OIL DISTRIBUTOR	1	-	74	07287-03281	'T' CONNECTOR	1	-

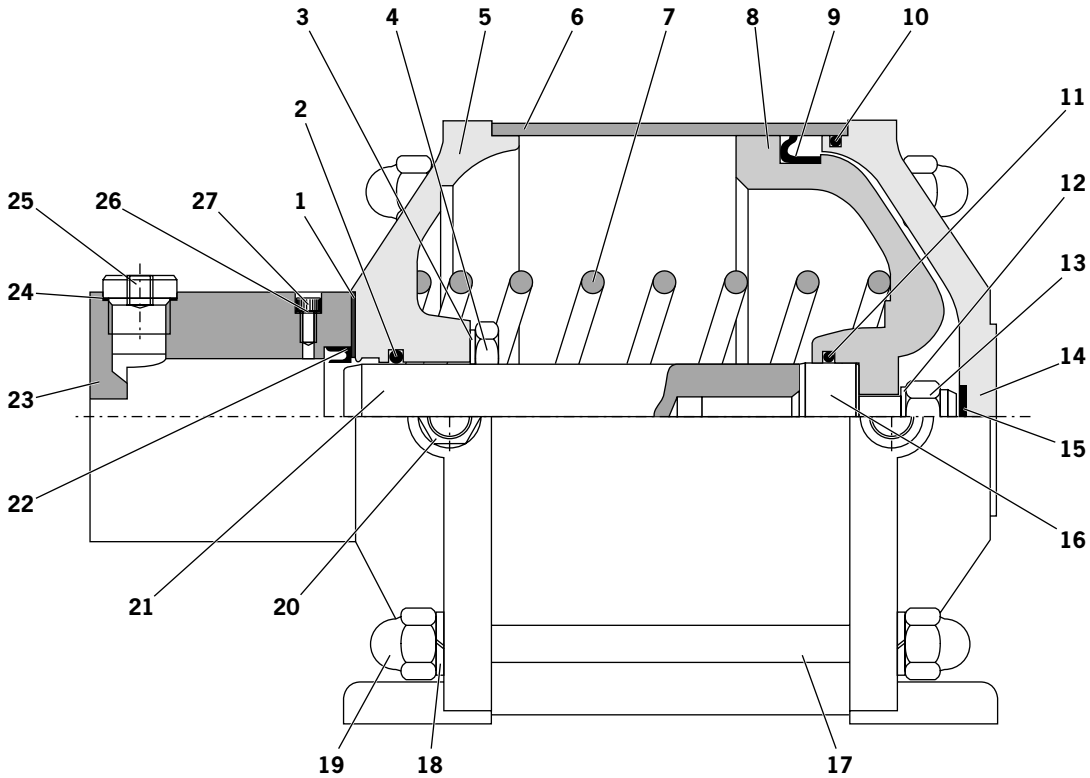
# General Assembly of Push Intensifier 07005-10113



## Parts List of Push Intensifier 07005-10113

07005-10113 PUSH INTENSIFIER PARTS LIST									
ITEM	PART N°	DESCRIPTION	QTY	SPARES	ITEM	PART N°	DESCRIPTION	QTY	SPARES
1	07267-08119	SEAL	4	-	14	07267-08015	LOCKNUT	1	-
2	07267-08104	SEAL	1	-	15	07267-08116	REAR FLANGE	1	-
3	07267-08107	FRONT FLANGE	1	-	16	07267-08130	ROD EXTENSION	1	-
4	07267-08125	WASHER	4	-	17	07287-08114	TENSION ROD	4	-
5	07267-08106	SCREW	4	-	18	07267-08126	SPRING WASHER	8	-
6	07287-08109	ROD	1	-	19	07267-08122	FILTER	1	-
7	07267-08134	SPRING	1	-	20	07267-08103	SEAL	1	-
8	07267-08133	SPRING GUIDE	1	-	21	07287-08102	STEEL HEAD	1	-
9	07287-08117	PNEUMATIC CYLINDER	1	-	22	07267-08128	WASHER	1	-
10	07267-08110	PISTON	1	-	23	07267-08101	PLUG	1	-
11	07267-08031	WASHER	1	-	24	07267-08123	WASHER	1	-
12	07267-08112	SEAL	1	-	25	07267-08121	BLEED SCREW	1	-
13	07267-08113	BLIND NUT	8	-	26	07267-08135	FILTER	1	NOT SHOWN

# General Assembly of Pull Intensifier 07005-10112



## Parts List of Pull Intensifier 07005-10112

07005-10112 PULL INTENSIFIER PARTS LIST									
ITEM	PART N°	DESCRIPTION	QTY	SPARES	ITEM	PART N°	DESCRIPTION	QTY	SPARES
1	07267-08019	SEAL	4	-	15	07267-08035	SHOCK ABSORBER	1	-
2	07287-08004	SEAL	1	-	16	07267-08032	ROD EXTENSION	1	-
3	07267-08022	WASHER	4	-	17	07287-08014	TENSION ROD	4	-
4	07267-08006	SCREW	4	-	18	07267-08026	SPRING WASHER	8	-
5	07287-08007	FRONT FLANGE	1	-	19	07267-08013	BLIND NUT	8	-
6	07287-08017	PNEUMATIC CYLINDER	1	-	20	07267-08033	FILTER	1	-
7	07287-08008	SPRING	1	-	21	07287-08009	ROD	1	-
8	07267-08010	PISTON	1	-	22	07287-08003	SEAL	1	-
9	07267-08011	PISTON SEAL	1	-	23	07287-08002	STEEL HEAD	1	-
10	07267-08012	SEAL	1	-	24	07267-08030	WASHER	1	-
11	07267-08020	SEAL	1	-	25	07267-08029	PLUG	1	-
12	07267-08031	WASHER	1	-	26	07267-08034	WASHER	1	-
13	07267-08015	LOCKNUT	1	-	27	07267-08021	BLEED SCREW	1	-
14	07267-08016	REAR FLANGE	1	-					

# Priming

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

## Oil Details

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

## Hyspin® VG 32 Oil Safety Data

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### First Aid

#### SKIN:

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

#### INGESTION:

Seek medical attention immediately. DO NOT induce vomiting.

#### EYES:

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

### Fire

Flash point 232°C. Not classified as flammable.

Suitable extinguishing media: CO<sub>2</sub>, dry powder, foam or water fog. DO NOT use water jets.

### Environment

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

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

### Handling

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

### Storage

No special precautions.

# Priming

## Priming Procedure

---

### I M P O R T A N T

**CONNECT AIR SUPPLY (this causes the piston to bottom, allowing more priming oil into the tool).**

**DO NOT OPERATE THE TRIGGER WHILE THE BLEED SCREW IS REMOVED.**

**All operations should be carried out on a clean bench, with clean hands, in a clean area.**

**Care MUST be taken, at all times, to ensure that no foreign matter enters the tool, or serious damage may result.**

Item numbers in **bold** refer to the General Assembly of Handle and Parts List on pages 16-17.

- Prior to starting the priming procedure, obtain a suitable container to collect excess oil.
- Disconnect the air supply and undo the intensifier oil reservoir cap.
- Top up the reservoir in the cabinet with VG32 Hyspin® priming oil to a level of 20 mm (0.8") below top of the reservoir.
- Remove Bleed Screw **18** and associated Washer **19** from front of tool.
- Connect the tool to the air supply.
- **CARE SHALL BE TAKEN TO ENSURE THAT THE BLEED HOLES ARE NOT DIRECTED TOWARDS THE OPERATOR OR OTHER PERSONNEL.**
- Place tool handle over the container with bleed hole orientated towards the container and operate the trigger.
- When oil is ejected from the bleed hole, release the trigger.
- Operate trigger again, replace Bleed Screw **18** and Washer **19** at front of tool BEFORE releasing trigger again.
- Disconnect tool from air supply.
- Remove Bleed Screw **18** and Washer **19** from rear of tool.
- Connect tool to air supply.
- Cycle the trigger until oil is ejected from the bleed hole. Release the trigger and replace the Bleed Screw **18** and Washer **19** at the rear of the tool.
- Repeat the trigger operating/releasing sequence, allowing a few seconds between cycles to allow priming oil to circulate.
- Continue until oil flowing from both bleed holes is free of air bubbles, (ensure that the reservoir is not starved of oil, otherwise air will be drawn into the system introducing air bubbles in the oil stream).
- When air free oil is flowing from both bleed holes, operate the trigger and tighten the front bleed screw with an Allen key. Release the trigger and tighten the rear bleed screw with an Allen key.
- If necessary, top up the oil reservoir.

# Priming

## Alternative Priming Procedure

---

### I M P O R T A N T

**CONNECT AIR SUPPLY (this causes the piston to bottom, allowing more priming oil into the tool).  
All operations should be carried out on a clean bench, with clean hands, in a clean area.  
Care MUST be taken, at all times, to ensure that no foreign matter enters the tool, or serious damage may result.**

Item numbers in **bold** refer to the General Assembly of Handle and Parts List on pages 16 and 17, item number **28\*** refers to the General Assembly of Cabinet and Parts List on pages 18 and 19.

- Prior to starting the priming procedure, obtain a suitable container to collect excess oil.
- Disconnect the air supply and undo the intensifier Oil Reservoir Plug **28\***.
- Top up the reservoir in the cabinet with VG32 Hyspin® priming oil to a level of 20 mm (0.8") below top of the reservoir.

If the oil hoses are changed, prime them before connecting, as follows:

- Disconnect the air supply.
- Place the oil tank in a higher position than the tool.
- In that position, unscrew the Bleed Screws **18** and Washers **19** until the oil flows under gravity.
- Once the oil starts to flow from one of the bleed holes, close it by tightening the screw. Wait until the oil flows from the other bleed hole, then close this as well.

In other cases, prime as below:

- **CARE SHALL BE TAKEN TO ENSURE THAT THE BLEED HOLES ARE NOT DIRECTED TOWARDS THE OPERATOR OR OTHER PERSONNEL.**
- Connect the tool to the air supply.
- Keeping the trigger pressed, slightly loosen the Bleed Screw **18** (the closest to the front of the tool) until oil begins to flow.
- Keep the trigger pressed until there is no air in the oil, then tighten the Bleed Screw **18**.
- Release the trigger.
- Repeat the last three steps, with intervals of several seconds, to ensure that clean oil circulates and all air is removed.

The hydraulic circuit for the pull side is now free of air. The following removes air from the hydraulic circuit on the return side.

- Keep the tool connected to the air.
- Without pressing the trigger (the return hydraulic circuit already has pressure), slightly loosen the Bleed Screw **18** from the rear of the tool until oil begins to flow.
- When there is no air in the oil, tighten the Bleed Screw **18**.
- Operate trigger.
- Repeat the last three steps, with intervals of several seconds, to ensure that clean oil circulates and all air is removed.

Ensure that the oil reservoir is not starved of oil, otherwise air will be drawn in to the system.

- If necessary, refill the oil reservoir up to the level as indicated before.

To verify that the tool is correctly primed, measure the stroke. The piston stroke should be approximately 32mm and the piston should always return fully.

# Fault Diagnosis

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<b>Symptom</b>	<b>Possible Cause</b>	<b>Remedy</b>	<b>Page Ref</b>
Several pulls required to set rivet	Low air pressure	Increase air pressure	7
	Lack of lubrication	Lubricate tool at air inlet point	12
	Worn or broken jaws	Fit new jaws	8
	Oil level in tool low or air in oil	Prime tool	22-24
Tool will not grip stem of fastener	Worn or dirty jaws	Clean or fit new jaws	8
	Jaw housing loose	Tighten against nylon locking ring	8
	Weak or broken spring in nose assembly	Fit new spring	8
	Incorrect component in nose assembly	Identify and replace	8
Tool fails to break Lockbolt	Insufficient air pressure	Adjust air pressure/air leaks	7
	Incorrect length of bolt	Change to correct length of bolt	
	Tool requires priming	Reprime tool	22-24
	Tool exhaust silencer dirty	Clean silencer	
	Control valve dirty	Remove/clean valve	
Tool fails to swage collar	Insufficient air pressure	Adjust air pressure/air leaks	7
	Worn anvils	Replace	
	Tool requires priming	Reprime tool	22-24
	Swaging anvil cracked	Replace	
	Incorrect length of bolt	Change to correct length of bolt	

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

# Notes

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# Declaration of Conformity

We, Avdel UK Limited, Watchmead Industrial Estate, Welwyn Garden City, Herts, AL7 1LY declare under our sole responsibility that the product:

**Model 07287**

Serial No.

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

EN ISO 12100 - parts 1 & 2

BS EN ISO 8662 - part 6

BS EN ISO 3744

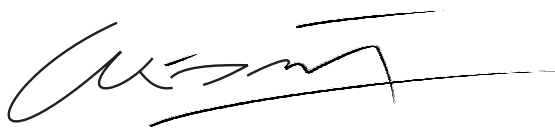
ISO EN 792 part 13 - 2000

BS EN ISO 11202

BS EN 982

BS EN 983

following the provisions of the Machine Directive 98/37/EC



A. Seewraj - Product Engineering Manager - Automation Tools

Date of issue



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



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