Atlas™ Manual 15Ton (15T) and 25Ton (25T) Hydraulic Press

User Manual

2I-15011 Issue 13

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MANUALLY OPERATED HYDRAULIC PRESS, (15 AND 25 TON)

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1. Introduction

Thank you for purchasing a Specac product.

The Specac Atlas™ Manual 15T and 25T Hydraulic Presses have been designed for a wide variety of pressing applications, but they are specifically suited to the preparation of KBr discs using Specac evacuable pellet die assemblies.

The presses can be adapted to provide heated pressing surfaces with Specac Heated Platens and a Temperature Controller (P/N GS15515). These heated pressing surfaces can be used for the preparation of thin films in conjunction with use of the Constant Thickness Film Maker Accessory (P/N GS15640). The High Temperature Film Maker Accessory (P/N GS15800) can also be used with the Specac presses. (The Heated Platens P/N GS15515 are not required for use with the High Temperature Film Maker Accessory P/N GS15800 as this accessory has its own heated pressing surfaces).

The Atlas™ 15T and 25T manual presses work by hand pumping a hydraulic fluid (oil) to raise a piston and compress a sample held in the pressing area. The press consists of a pump block assembly, where the oil is pressurized by the simple pumping action from a handle, and the sample pressing side, where the pressurized oil is forced under the piston assembly. When resistance is offered by a sample, the pressure build up in the system is shown on the 15 or 25 Ton load gauge, located on the pump block assembly.

In addition to the standard versions of the press providing maximum tonnage loads of 15 and 25 tons, there are low tonnage gauge conversion kits available for allowing finer load readings over smaller ranges. These ranges are from 0-1 tons, 0-2 tons and 0-5 tons. The lower tonnage gauges are connected additionally in line with either the standard 15 or 25 ton gauge. With these lower tonnage gauges switched on, the press can only be used up to the maximum tonnage load limit of the lower gauge that has been fitted.

2. Specifications of the Atlas™ Manual Hydraulic Press

CE Marking Compliance

The Atlas™ Manual Hydraulic 15T and 25T Presses do not require and indeed must not be CE Marked. Under the Pressure Directive 97/23/EC regulations, because these presses fall below the stated pressure and volume limits, Specac adopts SEP (Standard Engineering Practice) to ensure the safety in use of these products.

Maximum Height (at pump handle)	610 mm
Maximum Width	310 mm
Maximum Depth	190 mm
Weight	50 Kg
Lower Piston Stroke	25.4 mm
Upper Lead Screw Travel	89 mm
Minimum Daylight (Distance Between Pressing Faces)	38 mm
Maximum Daylight (Distance Between Pressing Faces)	152 mm
Lower Pressing Face Diameter	86 mm
Upper Pressing Face Diameter	32 mm
Maximum Width Of Sampling Area (side to side)	134 mm
Maximum Depth Of Sampling Area (back to front)	141 mm
Oil Capacity	0.284 Liters (0.5 Pint)
Oil Type	CL 37

3. Unpacking and Installation

Beware! *This press is very heavy and care must be taken to transport it properly. This will protect you and the press from accidental damage or injury.*

The press leaves the factory in specially designed packaging. It sits on a wooden pallet and has a thick outer cardboard casing held to the pallet by three tie straps. There are direction arrows on the casing indicating which way up the press is to be handled.

To unpack the press first cut the three straps with a sharp knife and lift up the outer cardboard casing from the pallet.

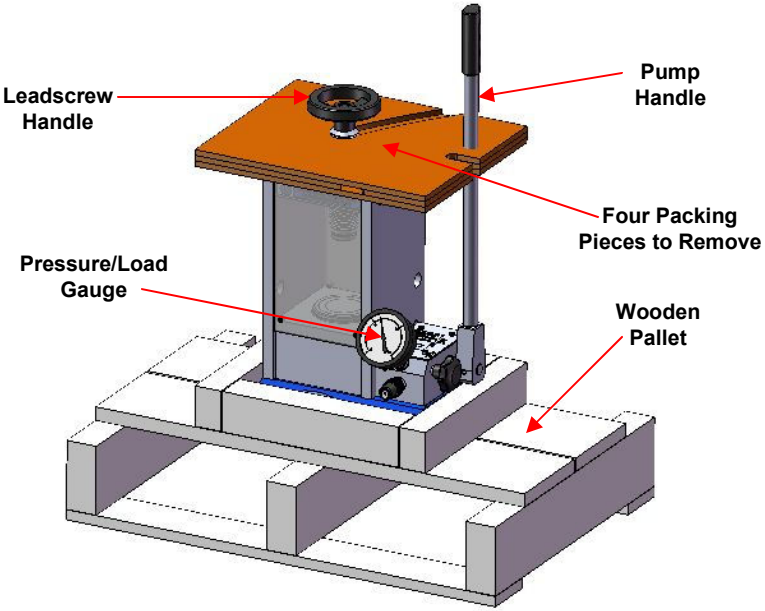


Fig 1. Atlas™ Manual Hydraulic Press Provided as Packaged

The press has internal transport packing around the top, by the lead screw handle. (See Fig 1.) This packing is four pieces of cardboard stacked on top of each other, held tight by the lead screw handle and

supporting the pump handle in an upright position. To remove these four pieces loosen the lead screw handle (turn anticlockwise) and then carefully lift them up and over the lead screw handle.

The press is now ready to be lifted off of the wooden pallet. There are two holes in the upright frame supports on the sample pressing side of the press (used for vacuum tubing when an evacuable pellet die is in the press – see Fig 2.). These two holes can be used to lift up and position the press by passing strong nylon rope through them to provide a sling. If available, a hoist can be used to lift the press via this sling. If a hoist is not available, then a minimum of two people will be required to lift the press. Use heavy-duty gloves and lift the press from underneath by the base casting**. DO NOT ATTEMPT TO LIFT THE PRESS BY THE LEAD SCREW HANDLE OR PUMP HANDLE.**

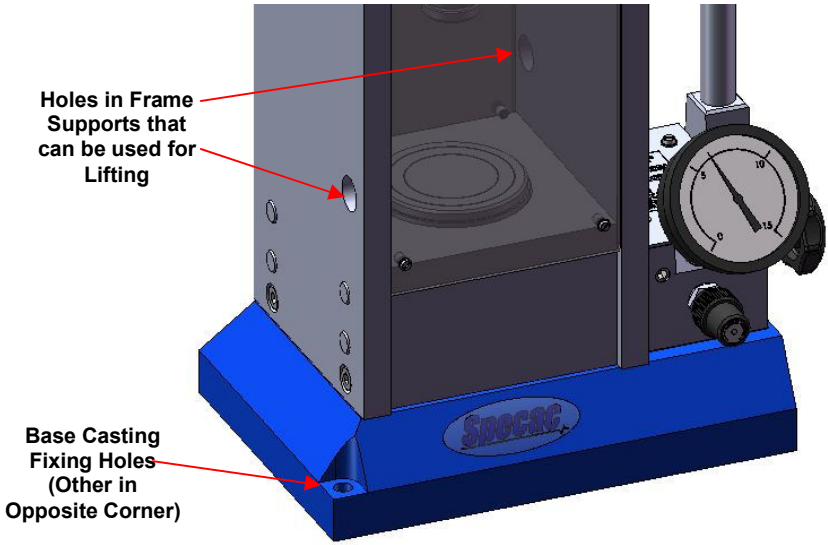


Fig 2. Lifting Holes and Base Casting Fixing Holes

Place the press in its working position. In certain circumstances, it may be necessary to attach the press permanently to a laboratory bench. Two 10 mm diameter holes are provided in the base casting for this

purpose. (See Fig 2.) It is recommended that M8 diameter bolts are used to secure the press and that the bench top is at least 25 mm thick to take the weight of the press.

The press is supplied filled with hydraulic oil and is ready to use. The only preparation required before operation is to remove the nylon vent screw (**37**) from the pump plate (**36**) of the pump block assembly.

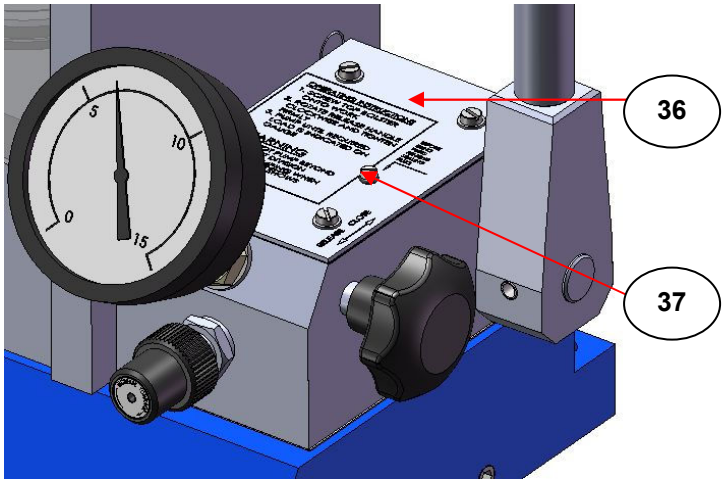


Fig 3. Nylon Vent Screw (Transportation Screw) to Remove

Note: *A light smearing of oil is applied around the main pressing piston area (**4** and **5**) when the press is supplied as new. It is perfectly normal and not a sign that oil is leaking.*

Please keep the press packing materials for future transportation. Replacing a press in its packaging is the reverse of the procedure described previously.

For any inquiries to Specac regarding the press **the serial number must be quoted**. The serial number is a five digit number preceded by a letter of the alphabet e.g. H, and is found engraved on the press at the rear of the pump block assembly. The serial number is also on the Test Certificate found at the rear of this manual.

If you need to contact Specac regarding a service or repair issue relating to an Atlas™ Manual Hydraulic Press, please be as specific as possible regarding the nature of the enquiry. Please quote the serial number for the press, identify how the press is being used and provide as much information as you can.

Where possible, if contacting by email, please provide photographs too as these can help greatly to understand the nature of the enquiry.

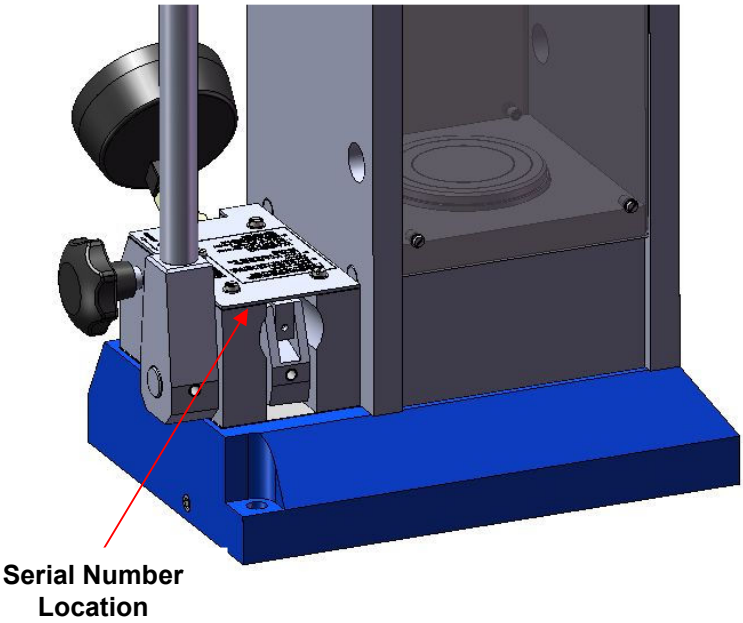


Fig 4. Rear View of 15/25 Ton Atlas™ Manual Hydraulic Press

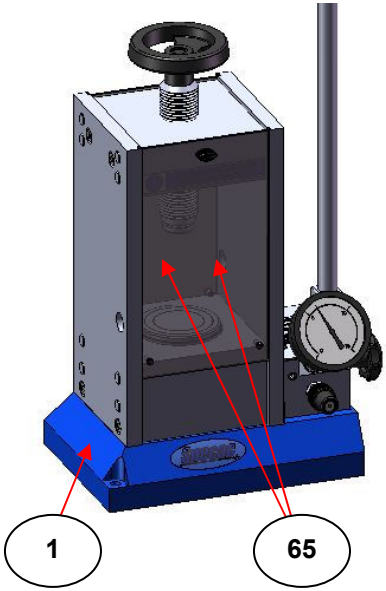
4. Safety Considerations When Operating the Atlas™ Manual Hydraulic Press

Under the Pressure Directive 97/23/EC, because these presses fall below the stated pressure and volume limits, EC Marking compliance is exempt. Therefore Specac adopts SEP (Standard Engineering Practice) to ensure safety in use of these products.

The Atlas™ Manual Hydraulic Press is provided with front and rear safety guards (**65**). These must be kept closed (lowered) at all times when a sample is being pressed. The guards will fall to the lowered, safe position if not purposefully raised or kept open by other means.

Note: *The use of press guards is a requirement for any high tonnage load applications. When using the Specac Film Making Accessories P/N's GS15640 and GS15800, although the tonnage loads to apply are typically 1 to 2 tons, Specac advise that the safety guards are used wherever possible.*

*When using a Film Making Accessory it is a requirement that the pressure relief valve assembly (**66 to 72**) on the Atlas™ Manual Hydraulic Press is adjusted to read a 2 tons maximum load at the load gauge (**31**) for safety and prevention of tonnage overloading to the Film Making Accessory itself.*



If you ever need to move or reposition the press, always lift it from underneath the base casting (**1**). Do not move it by pulling or lifting the pump handle (**32**), load gauge (**31**), or lead screw handle (**20**). It is recommended that a minimum of two people are used to lift or move the press.

5. Operation of the Press

(The text for “bubble part” number identification also refers to the 2D Diagrams Figs 13. to 18.found at the back of this manual).

The press is supplied filled with hydraulic oil and is ready to use. The only preparation required before operation is to remove the nylon vent screw (**37**) from the pump plate (**36**) of the pump block assembly. (Please refer to Fig 3. on page 9.)

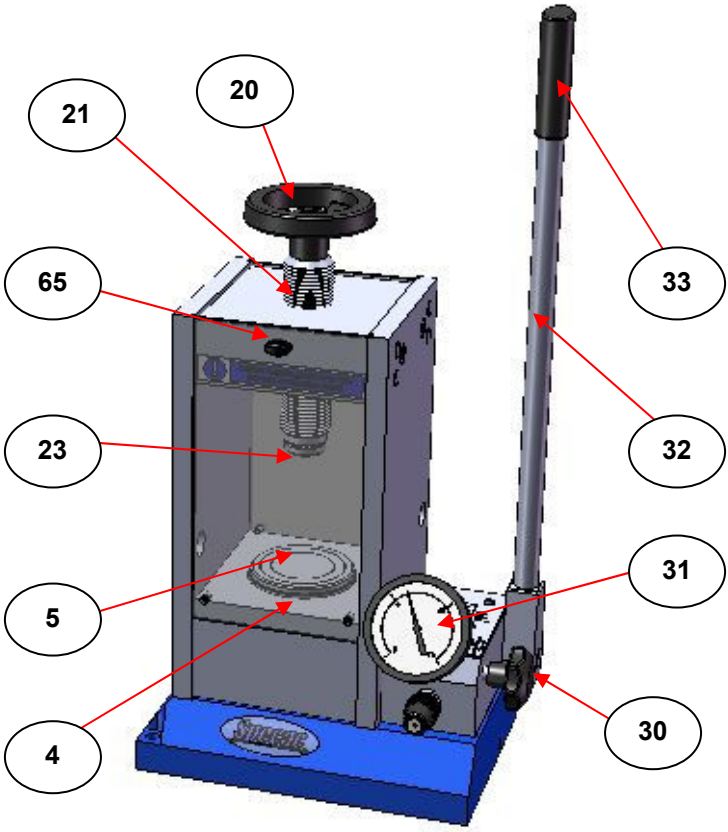


Fig 5. Front View of 15/25 Ton Atlas™ Manual Hydraulic Press

Raise the front safety guard (**65**) and place the work to be pressed on the lower bolster pressing face (**5**) covering the piston (**4**). Ensure that the work is positioned centrally and lower the safety guard. Screw down the top bolster pressing face (**23**) attached to the lead screw (**21**), by turning the lead screw handle (**20**) clockwise.

Important: *Ensure that all the components of the work to be pressed (usually a die set) have been squeezed tightly together before starting to pump a pressure. However, leave a 1mm gap between the top of the die set and the top bolster (**23**) pressing surface to allow for some initial travel of the pressing piston (**4**) on the press.*

Rotate the pressure release handle (**30**) clockwise until it has tightened firmly. This closes the pumping system so that it is ready for you to build up the pressure with the pump handle grip (**33**).

Warning: *Ensure that the safety guard is lowered before pumping.*

Now start to pump the press by pulling and pushing gently, but smoothly, on the pump handle grip (**33**). (The correct leverage and force is applied by holding at the rubber handle.) It will take a few strokes to build up pressure in the oil, but once resistance is offered by the work to the raising of the piston, the load will be indicated on the load gauge (**31**). Keep on pumping until the required load is achieved.

There is a maximum piston (**4**) travel of 25 mm. There is a red ring around the piston (**4**) showing when the limit is reached (See Fig 6.) **DO NOT CONTINUE PUMPING WHEN THIS RED RING SHOWS.** If you do not stop pumping, you will cause damage to the press mechanism.

There is an internal spring stud (**16**) within the piston (**4**) assembly that is designed to break, protecting the press if the allowed piston travel is exceeded. This spring stud (**16**) allows the action of the piston spring (**19**) to pull the piston (**4**) back down when the oil pressure in the system is released. If the stud (**16**) breaks, the spring (**19**) is not compressed when the piston (**4**) is pumped, consequently the piston will not return easily to the start position once the pressure is released.

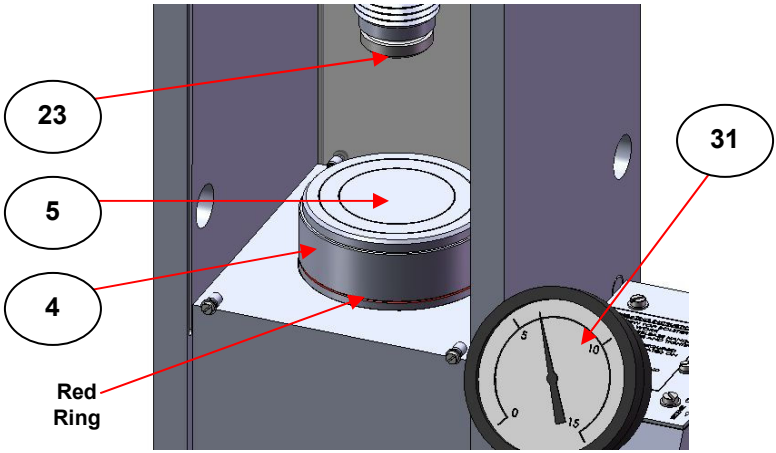


Fig 6. Maximum Limit of Piston (4) Travel (Red Ring Showing)

If the work (e.g. a sample in a die set) is compressing to the extent that the piston (**4**) has travelled to show the red line but the compression load has not been reached, release the pressure by turning the pressure release handle (**30**) anticlockwise (**slowly**) by about one complete rotation. This will allow the piston (**4**) to return to rest. The work will sink down with retraction of the piston (**4**) and a gap will be created between the work and the top bolster pressing face (**23**). Turn the lead screw handle (**20**) clockwise to bring the top bolster pressing face onto the work again, and reapply the load from the piston (**4**) - retighten the release handle (**30**) and pump via pump handle (**33**).

Note: *This procedure should be followed with samples that are highly compacted when compressed within an evacuable pellet die.*

When the required load is indicated on the load gauge (**31**), stop pumping. The pressure and applied tonnage load against the work will be held for as long as required. You may observe a slight decrease in the pressure applied, indicated at the load gauge (**31**), as the work (sample) being pressed may relax over time. You can bring the pressure back up to the required load if desired by pulling gently on the pump handle grip (**33**) again.

Note: *If the applied tonnage load set at the load gauge (**31**) drops by more than one ton over a 15 minute period, this **may indicate** that there is a fault in the system for holding the applied pressure, rather than from any relaxation in the work being pressed. The press system may require bleeding of any trapped air in the oil to function correctly. (See Fault Finding, Causes and Remedy, Section 6, page 20.)*

To release the load on the work turn the pressure release handle (**30**) anticlockwise, **slowly**, by about one complete rotation. (There is no need to turn this handle completely open.) Slow rotation of the release handle (**30**) allows for a gradual and controllable release of the pressurised oil within the system (indicated by a gradual drop of the applied tonnage load at the load gauge (**31**)), to drain back into the oil reservoir and helps to reduce the possibility of any bubbles that might form in the oil from a rapid release of pressure.

Control of a Maximum Applied Load

Beneath the pressure gauge (**31**) there is a pressure relief valve assembly (**66 to 72**) which may be set so that any load between 0-15 tons or 0-25 tons is the maximum load that can be obtained. (See Fig 7.) The relief valve set knob (**69**) can be rotated clockwise to increase the maximum pressure in the system, and hence the applied load, or rotated anticlockwise to decrease the pressure in the system.

Note: *When supplied the pressure relief valve will be set for a 10 ton load on the 15 ton press and a 15 ton load on the 25 ton press.*

To set a specific maximum load, first rotate the relief valve set knob (**69**) anticlockwise until it is held loosely by a couple of screw threads. (Be careful, as if you unscrew the knob completely the relief valve ball bearing (**70**) held behind the knob (**69**) could fall out of position and be lost. (If the ball bearing (**70**) does fall out just simply place it into the knob (**69**) head recess and screw back into position.)

Place a piece of work to be pressed in the usual way, close the pressure release handle (**30**) and start to pump. If the pressure relief

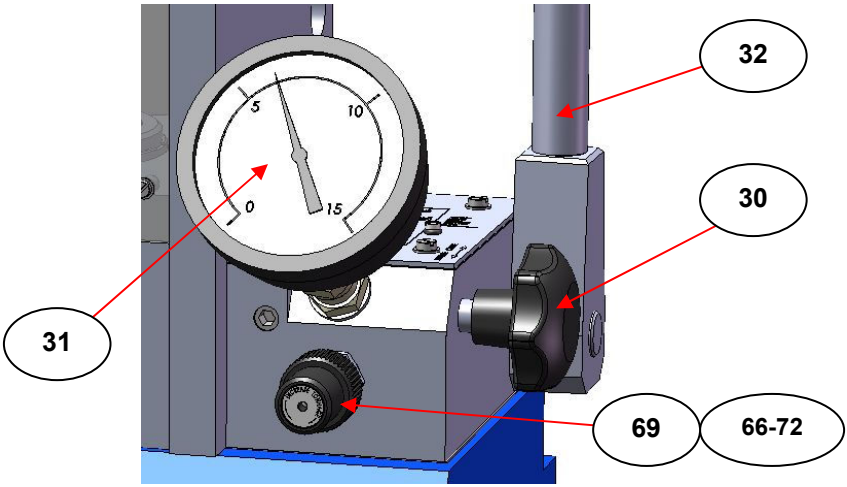


Fig 7. Pressure Relief Valve for Setting a Maximum Load

valve is fully open, there will be no pressure build up in the system (the pressure/load gauge (**31**) indicator will not rise and show a load) and excess pressure being pumped will vent off at the relief valve. Now, start to turn the relief valve set knob (**69**) clockwise, (one complete rotation at a time) and continue pumping. Eventually, pressure will begin to build up in the system and the gauge (**31**) indicator will rise to show a tonnage load. Once the load limit for the setting of the pressure relief valve knob (**69**) has been reached, excess pressure will once again vent off at the relief valve. Continue to turn the relief valve set knob (**69**) clockwise until the required pressure/load is reached.

If you overshoot the pressure and hence load limit you require from over-adjustment clockwise of the knob (**69**) and continuous pumping of the handle (**32**), simply release the pressure from the system by opening the pressure release handle (**30**) and then closing the release handle again. Turn the pressure relief valve knob (**69**) anticlockwise to reduce the load limit and re-pump the press via the handle (**32**).

Repeat the process as necessary to achieve the maximum applied load setting required.

Tip: *This is a useful feature for pressing applications where a maximum load limit is required. For example, 10 Tons maximum for 13 mm evacuable pellet dies P/N GS03000.*

Beware! *With the pressure relief valve set knob (**69**) turned fully clockwise it is possible that the press will reach and go beyond the maximum load rating for the press; that is beyond the 15 and 25 ton gauge divisions. Therefore, the pressure relief valve knob (**69**) **must** only be turned clockwise as far as to obtain the 15 ton or 25 ton gauge division indication when a maximum load is being applied.*

Over pressurization of the pressure gauges will cause damage to the gauge mechanism resulting in the need for replacement.

Lead Screw Assembly

In operation the leadscrew assembly (handle (**20**) and leadscrew (**21**)) is used to adjust for the height of the work to be pressed. Rotating the leadscrew clockwise lowers the leadscrew bolster (**23**) pressing face towards the work and turning the leadscrew anticlockwise raises the bolster (**23**) away from the work.

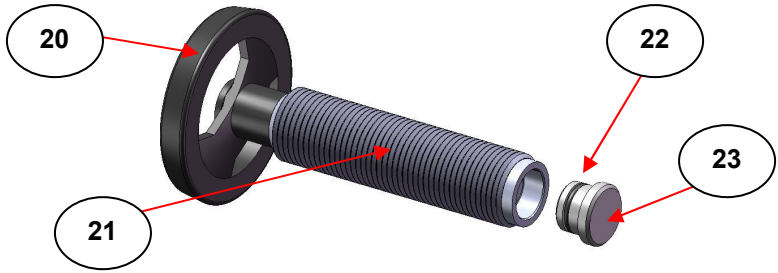


Fig 8. Leadscrew Assembly and Top Bolster Parts of the Press

The bolster (**23**) push fits into the hollow of the leadscrew (**21**) and is retained by an O-ring (**22**). **Any pressing of work must always be carried out using the bolster (23) pressing face** suitably attached into the leadscrew (**21**) assembly via the O-ring (**22**) fixing.

6. Fault Finding, Causes and Remedy

The Atlas™ Manual 15T and 25T Hydraulic Presses should give years of trouble free operation, if used and cared for correctly. If there is a failure of the press operation, it is recommended that you contact your local Specac representative immediately, particularly if your press is still within a warranty period of usage. It will be a requirement to identify your press from its unique serial number found at the rear of the press and provide a brief and clear description of the fault. For technical faults Specac may be contacted via email at techsupport@specac.co.uk.

However, certain faults can be easily identified and repaired without the potential need for return of the press to Specac. The following information is provided to identify faults and carry out the necessary repairs and adjustments should you decide to do so.

Fault: Loss of Pressure in the Pumping System

Cause 1: **Oil Seal or Gasket Has Failed.** This will be evident by excessive oil leaks around the piston, cylinder block, or pump block.

Remedy: It may only be necessary to re-tighten the six cylinder block securing screws (**3**), and/or the four pump block securing screws (**29**). If the oil leak continues, it will be necessary to renew the individual seal(s) and gasket(s), depending on age and usage. (Seals and gaskets that may need replacing are numbered (**8**), (**9**) (2 off), (**11**), (**27**), (**28**), (**38**), (**43**), (**44**), (**48**), (**53**), (**57**) and (**67**). Instructions on how to replace these seals and gaskets are found in the **Atlas™ Manual Hydraulic Press Servicing Guide**.

Cause 2: **Non-Return Valve is Leaking.** (This is a ball bearing (**50**) trapped in position by the load gauge (**31**).) It is likely that the non-return valve ball bearing (**50**) is not seating correctly due to foreign matter adhering to the seat or the ball.

Remedy: By pumping the press without the pressure release handle (**30**) tightened, the foreign matter may be removed from the valve seat by a flow of oil washing through the system. Pump the press about ten times. If this does not work, then you will need to gain access to the non-return valve ball bearing (**50**) for inspection. The procedure to gain access to this ball bearing is found in the **Atlas™ Manual Hydraulic Press Servicing Guide**.

Cause 3: **Release Valve Leaking.** (This is a ball bearing (**58**) trapped behind the pressure release handle (**30**).) It is likely that the ball bearing (**58**) is not seating correctly due to foreign matter adhering to the seat or to the ball.

Remedy: Similar to the non-return valve procedure, pumping the press without the pressure release handle (**30**) tightened may remove the foreign matter from the valve seat by a flow of oil washing through the system. Pump the press about ten times. If this does not work, you will need to gain access to the ball bearing (**58**) for inspection. Unscrew the pressure release handle (**30**) completely. A small dribble of oil may flow from the hole when the release handle assembly (**30**) is removed, but the amount lost is not significant. Check the O-ring (**57**) for signs of wear or cracks etc and replace if necessary. The ball bearing (**58**) can be seen inside the hole resting in the area of the valve seat. To remove the ball bearing the press needs to be tipped over slightly, allowing the ball to roll out. **Be careful when lifting the press as it is heavy**, and also be careful not to lose the ball bearing if it rolls out onto the work bench. Inspect the ball bearing, clean and replace in the hole. Ensure that it rolls back into its valve seat area. Replace the pressure release handle (**30**), tighten and re-pump.

Fault: Failure to achieve pressure in the pumping system

Cause 4: **The oil filter (55) is blocked.**

Remedy: The procedure to gain access to the oil filter (**55**) for cleaning and/or replacement is found in the **Atlas™ Manual Hydraulic Press Servicing Guide**.

Cause 5: Airlock in Pump Assembly.

Remedy: The pump block assembly and possibly the piston side of the press must be bled of air trapped within the oil. The procedure can be split into two distinct operations: Bleeding air from the pump block assembly and bleeding air from the piston assembly.

Bleeding Air from the Pump Block Assembly

To gain access to the oil bleed screw (**40**), the pump plate (**36**) must first be removed. (In Fig 9. the transport screw (**37**) is shown but normally this has been removed for use.)

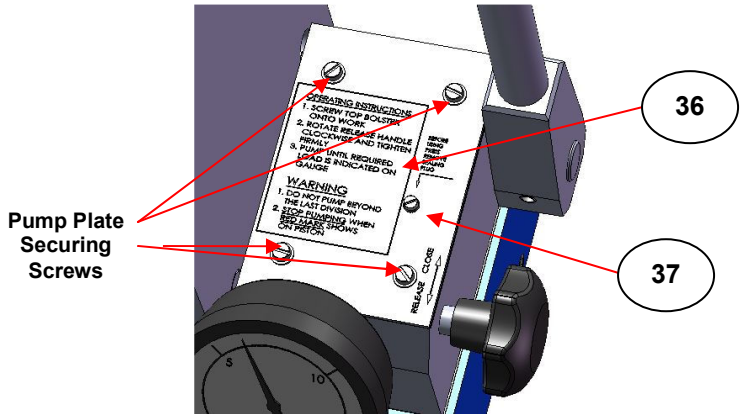


Fig 9. Pump Plate Removal

Loosen and remove the four securing screws and lift the pump plate and the pump block upper gasket (**38**) clear. Be careful not to tear the gasket material. Loosen, but do not remove the oil bleed screw (**40**) by turning anticlockwise. (See Fig 10.)

Take a piece of work (for example, a block of metal) and place it into the pressing area on the lower pressing face, and press it in the usual way (Close pressure release handle (**30**) and pump via the pump handle (**32**)).

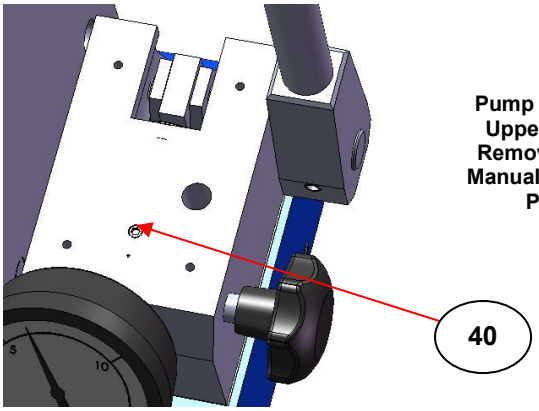


Fig 10. Oil Bleed Screw on Pump Block Assembly

As the pressure tries to build up in the system, any trapped air in the pump block will start to bubble out from the opened oil bleed screw (**40**). Keep on pumping until the oil flows clearly, without bubbling. (See Fig 11.)

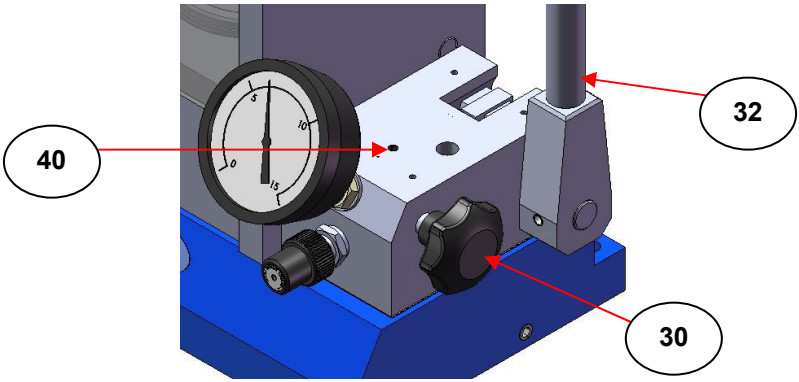


Fig 11. Bleeding Air from the Oil in the Pump Block Assembly

Retighten the bleed screw (**40**) and wipe away any expelled oil. Now release the pressure from the system (open the pressure release handle (**30**)) and remove the work from the press. Carefully replace the pump block upper gasket (**38**) and the pump plate (**36**) and secure with the four fixing screws.

The pump block assembly side of the press has now been primed and purged of air in the oil. The press may now operate but it is advisable to also purge the piston assembly side of the press.

Bleeding Air from the Piston Assembly

The pump block assembly side of the press should have already been purged of air (see pages 20 to 21). If any trapped air remains in the system, it will be in the piston assembly pressing side of the press.

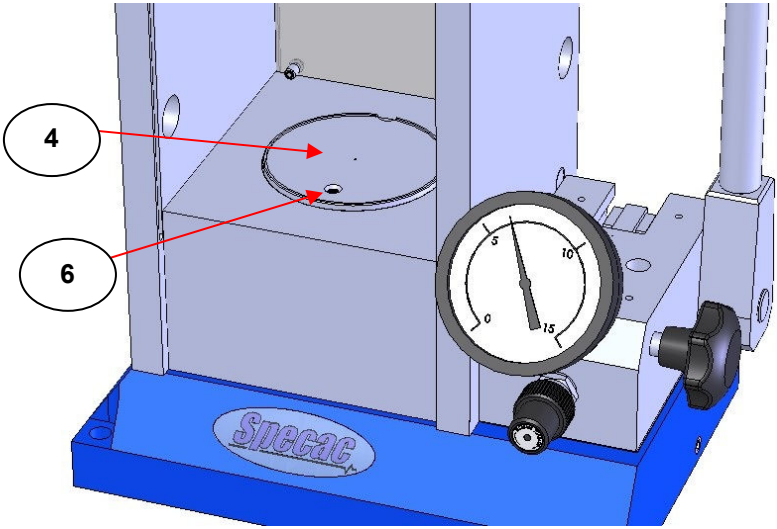


Fig 12. Bleeding Air from Oil in the Piston Assembly

There is a second oil bleed screw (**6**) on the top of the piston (**4**). Remove the lower bolster pressing face (**5**) on the piston, to gain

access to the bleed screw (**6**). (The bolster simply lifts clear of the piston. There may be some suction due to a thin film of oil on the bolster and piston contact faces). Loosen, but do not remove this bleed screw and take a piece of work (e.g. a block of metal) and place it on the piston (**4**), but do not obscure the bleed screw (**6**). Press the work in the usual way. As pressure tries to build up in the system, any trapped air in the piston will start to bubble out from the open oil bleed screw (**6**). Keep on pumping until the oil flows clearly, without bubbling. Retighten the bleed screw (**6**) and wipe away any expelled oil. Now release the pressure from the system (open the pressure release handle (**30**)) and remove the work from the press. Replace the lower pressing face bolster (**5**) onto the piston (**4**).

The piston pressing side of the press has now been primed and purged of air.

Fault: Piston Does Not Return When Pressure is Released

Cause 1: **Foreign matter has become lodged between the piston (4) and the cylinder block (2).**

Remedy: It will be necessary to remove the piston and clean or replace any damaged parts. The procedure to do this is found in the **Atlas™ Manual Hydraulic Press Servicing Guide**.

Cause 2: **The piston has been pumped beyond the warning red ring causing damage to the return mechanism.**

Remedy: It will be necessary to remove the piston and clean or replace any damaged parts. The procedure to do this is found in the **Atlas™ Manual Hydraulic Press Servicing Guide**.

7. Legend (Bubble Number Part Identification)

Item	Description
1	Base casting
2	Cylinder block
3	Cylinder block screw * (6 off)
4	Piston
5	Piston lower bolster
6	Piston bleed screw *
7	Bleed ball 3/16” dia.
8	Piston wiper O-ring
9	Piston O-ring (2 off)
10	Upright screw * (4 off)
11	Cylinder block O-ring
12	Spring housing *
13	Copper sealing washer (3 off)
14	Piston spring housing screw * (3 off)
15	Piston spring spacer
16	Piston spring stud *
17	Piston spring locking nut *
18	Piston spring nut and washer
19	Piston spring
20	Lead screw handle
21	Lead screw
22	Lead screw top bolster O-ring
23	Lead screw top bolster
24	Oilway plug seal ball 9/32” dia.
25	Oilway plug screw *
26	Pump block *
27	Pump block lower gasket
28	Pump block O-ring
29	Pump block screw * (4 off)
30	Pressure release handle *
31	Load gauge
32	Pump handle
33	Pump handle grip
34	Upright screw * (8 off)
35	Upright dowel (16 off)
36	Pump plate
37	Pump vent screw (not needed)
38	Pump block upper gasket
39	Gauge connector
40	Pump bleed screw *
41	Bleed ball 3/16” dia.
42	Pump piston
43	Pump piston seal
44	Pump piston O-ring
45	Pump piston sealing housing
46	Pump piston gasket (not needed)
47	Pump piston screws * (4 off)
48	Pressure gauge seal
49	Non-return valve spring
50	Non-return valve ball 9/32” dia.
51	Inlet ball stop
52	Non-return valve ball 9/32” dia.

Item	Description
53	Oil intake seal
54	Oil intake pipe
55	Oil intake filter
56	Oil intake circlip
57	Release handle O-ring
58	Release ball 9/32” dia.
59	Crank pin circlip
60	Crank
61	Crank shaft
62	Crank shaft bearing (2 off)
63	Crank fixing spiral pin (2 off)
64	Crank pin
65	Safety guard
66	Relief valve body
67	Relief valve O-ring
68	Relief valve plunger
69	Relief valve set knob
70	Relief valve ball 3/8” dia.
71	Relief valve spring
72	Relief valve ball 1/16” dia (24 off)
73	Relief valve seating

Spare Parts

The above list of parts can be ordered as spares from Specac.

Note: *When ordering spares, you must include a full description of the item (from the parts list) and where marked with an asterisk * also provide the serial number of your press.*

Parts (**20**) and (**21**) (lead screw handle and lead screw) are supplied as a complete assembly.

The O-ring seals and gaskets from parts (**8**), (**9**), (**11**), (**13**), (**22**), (**27**), (**28**), (**38**), (**43**), (**44**), (**48**), (**53**), (**57**) and (**67**) have been collected together for the Atlas™ Manual Hydraulic Press Seals and Gaskets Kit as P/N GS15100.

1 Liter of CL37 oil is provided as P/N GS15101.

2D Diagrams of Atlas™ Manual Hydraulic Press

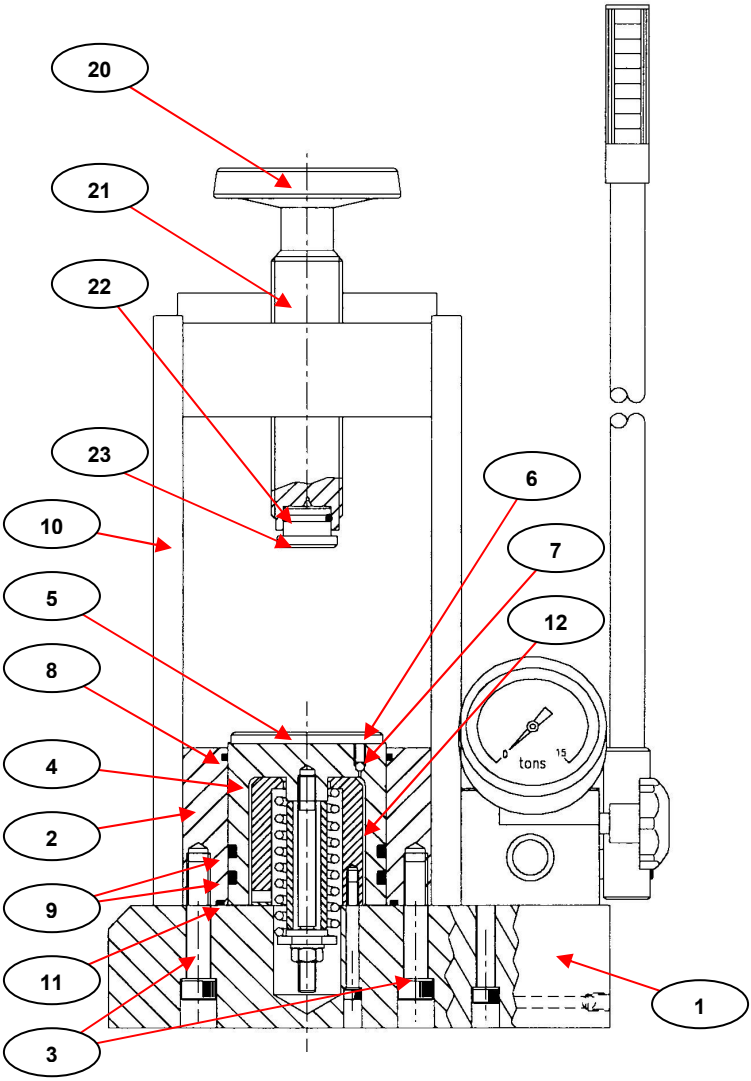


Fig 13. Front Cutaway View of Manual Hydraulic Press

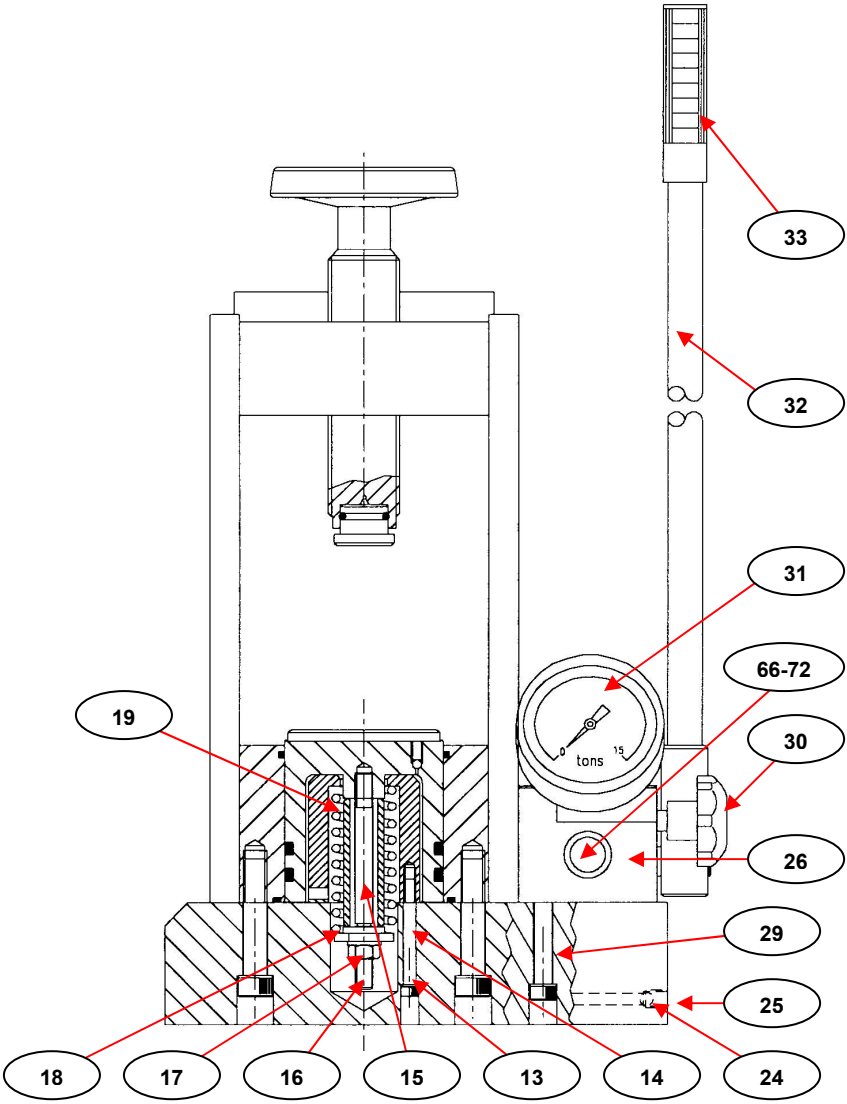


Fig 14. Front Cutaway View of Manual Hydraulic Press

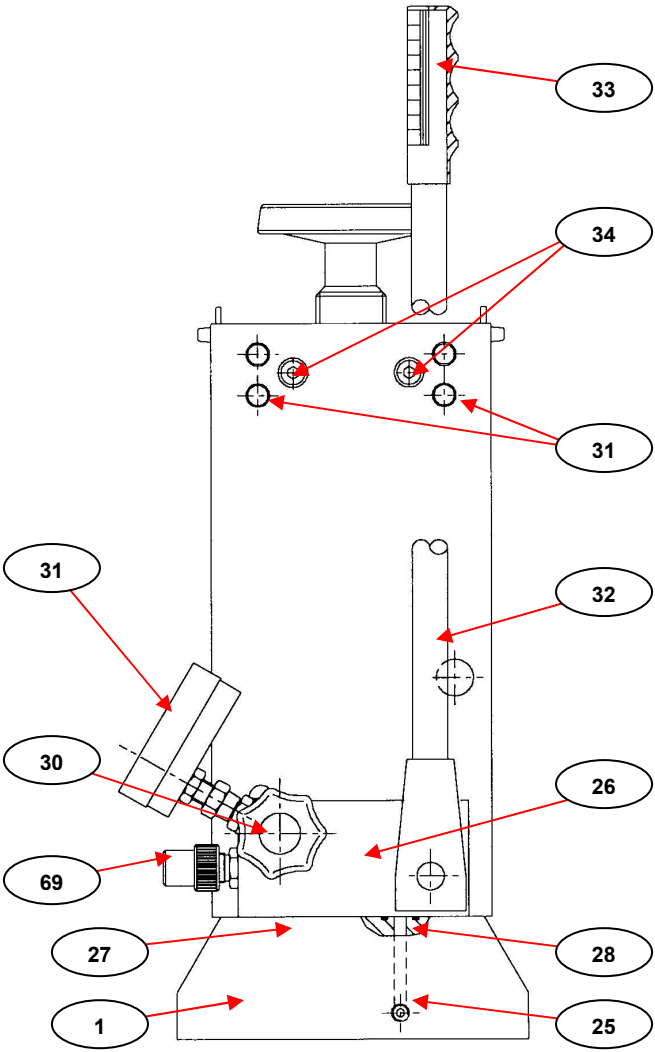


Fig 15. Side View of Manual Hydraulic Press

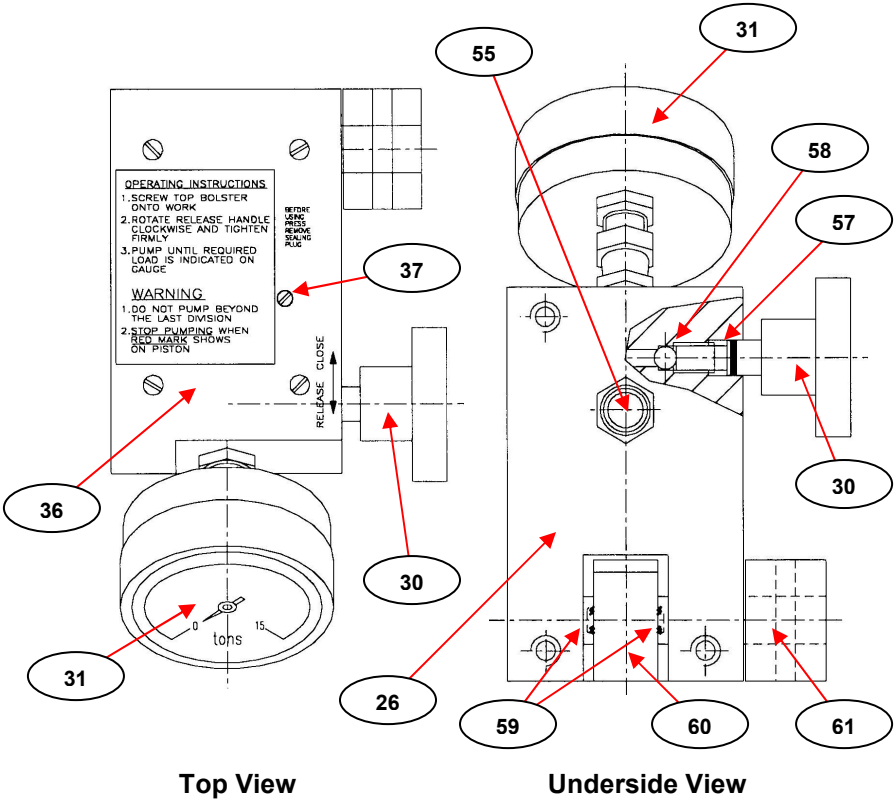


Fig 16. Top and Underside View of Pump Block Assembly

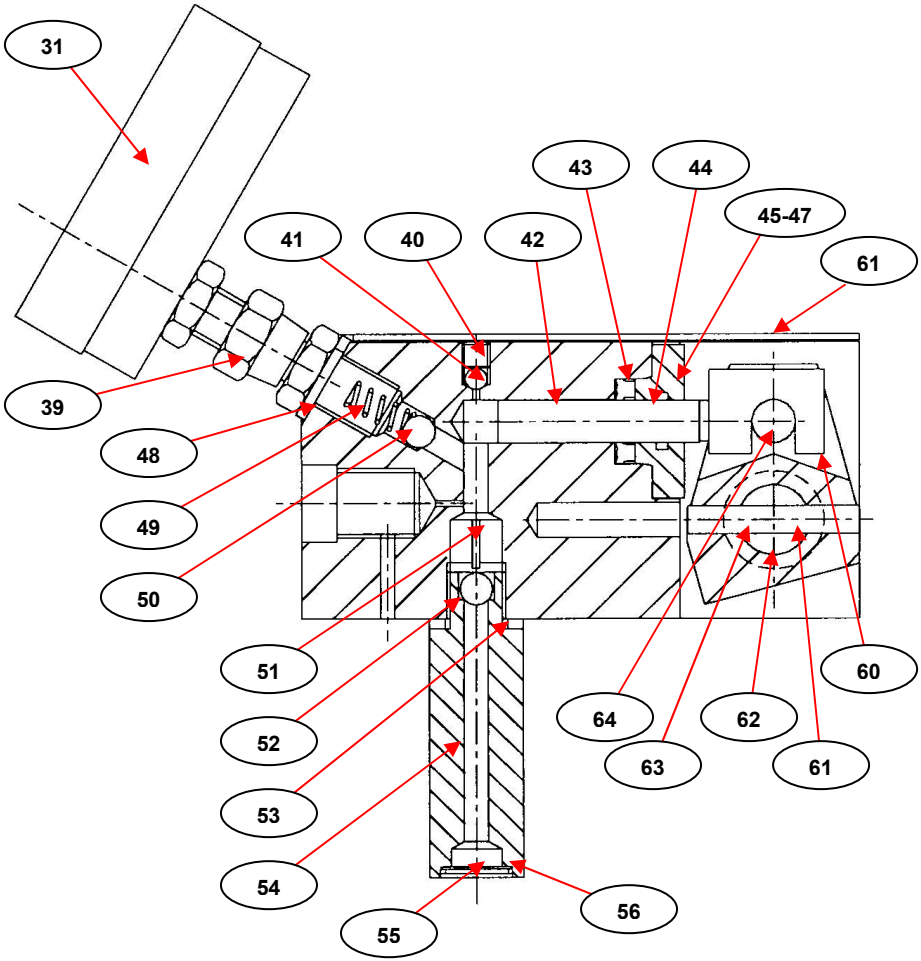


Fig 17. Side Cutaway View of Manual Hydraulic Press

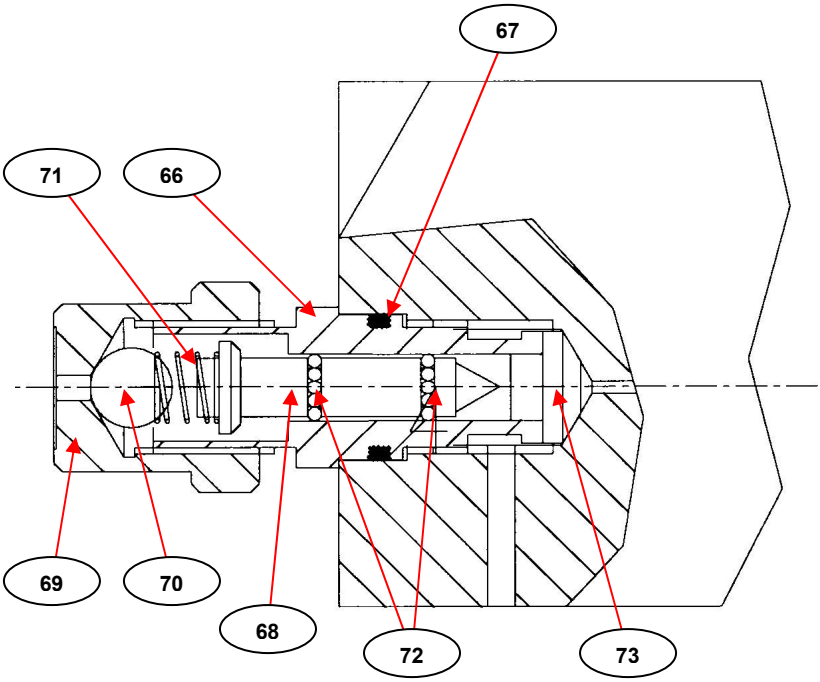


Fig 18. Side Cutaway View of Pressure Relief Valve Assembly

Test Certificate - Atlas™ Manual Hydraulic Press

Product Number: GS15011 GS25011

Serial No:_____ Order No:_____

Item	Check/Test	Checked
1	Visual inspection of Guard	
2	Visual inspection of gauge nuts	
3	Visual inspection of bolts	
4	Condition of paint	
5	Correct function of gauge	
6	Check for oil leaks	
7	Check piston release	
8	Press able to reach 15 tons / 25 tons	
9	Drop back @ 15 tons /25 tons = less than 1 ton in 15 minutes	
10	Pressure release valve - set to 10 tons -15011 - set to 15 tons -25011	

Tested By:_____

Approval By:_____ Date:_____

Original to file

Drg No.: 3MZ13066
3MZ13067

Completed TAG Label on Press

Notes

Notes

Worldwide Distribution

France
Eurolabo - Paris.
Tel.01 42 08 01 28
Fax 01 42 08 13 65
email: contact@eurolabo.fr

Germany
L.O.T. - Oriel GmbH & Co,
KG - Darmstadt
Tel: 06151 88060
Fax: 06151 880689
email:info@LOT-Oriel.de
Website: www.LOT-Oriel.com/de

Japan
Systems Engineering Inc. -Tokyo
Tel: 03 3946 4993
Fax: 03 3946 4983
email:systems-eng@systems-eng.co.jp
Website: www.systems-eng.co.jp

Spain
Teknokroma S.Coop C. Ltda
Barcelona
Tel: 93 674 8800
Fax: 93 675 2405
email: comercial@teknokroma.es

Switzerland
Portmann InstrumentsAG
Biel-Benken
Tel: 061 726 6555
Fax: 061 726 6550
email: info@portmann-instruments.ch
Website:www.portmann-instruments.ch

USA
Specac Inc.
301 Berkeley Drive
Swedesboro
NJ 08085, USA
Tel: 856 241 1924
Fax: 856 241 1925
Toll free: 1-800 447 2558

United Kingdom
Specac Ltd. - London
River House, 97 Cray Avenue,
Orpington
Kent BR5 4HE
Tel: +44 (0) 1689 873134
Fax: +44 (0) 1689 878527
Registered No. 1008689 England

Brilliant Spectroscopy™

www.specac.com

SPECAC INC.
301 Berkeley Drive
Swedesboro
NJ 08085, USA
Tel: 856 241 1924
Fax: 856 241 1925
Toll free: 1-800 447 2558

SPECAC LTD.
River House, 97 Cray Avenue,
Orpington
Kent BR5 4HE
Tel: +44 (0) 1689 873134
Fax: +44 (0) 1689 878527
Registered No. 1008689 England

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