

Superior quality since  
1984



# Owners Manual

## 100,000KG AIR HYDRAULIC PRESS

# BORUM

INDUSTRIAL WORKSHOP EQUIPMENT

**INDUSTRIAL  
QUALITY**



### Specifications

- Safe Working Capacity: 100,000kg
- Working Range: 113-813mm
- Overall Height: 2048mm
- Overall Width: 1199mm
- Overall Depth: 990mm
- Bed Width: 787mm
- Piston Ram Stroke: 300mm
- Bed Height Settings: 6
- Operating Air Pressure: 110-125psi
- Nett Weight: 652kg
- Crate: 1150x380x2044mm
- Gross Weight: 762kg

### About the Borum brand

Our **“heavy duty commercial”** range of **Borum Industrial** equipment has been manufactured to exacting standards for the past **34 years**. We specify industrial quality components and design to ensure a long and durable working life in **commercial transport, mining, earthmoving and railway** environments. Our **Borum Industrial** range of equipment is focused on achieving superior professional standards, reliability, quality, and are covered by a **12 month trade use warranty**.

# WARNING INFORMATION



## IMPORTANT: READ ALL INSTRUCTIONS BEFORE USE

 **WARNING**

The instructions and warnings contained in this manual should be read and understood before using or operating this equipment. Do not allow anyone to use or operate this equipment until they have read this manual and have developed a thorough understanding of how this equipment works. Failure to observe any of the instructions contained in the manual could result in severe personal injury to the user or bystanders, or cause damage to the equipment and property. Keep this manual in a convenient and safe place for future reference.

The warnings, cautions and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

Whilst every effort has been made to ensure accuracy of information contained in this manual, the Borum policy of continuous improvement determines the right to make modifications without prior warning.

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## STANDARD OPERATING PROCEDURE

**DO NOT** use this machine unless you have been trained and assessed to a competent level in its safe use and operation, and have been given permission to use this



Safety glasses must be worn when operating this equipment



Safety footwear must be worn when operating this equipment



Safety gloves must be worn when operating this equipment



Long loose hair must be contained when operating this equipment



Close fitting/protective clothing must be worn when operating this equipment



Hearing protection must be worn where noise levels are in excess of 85 dB(A) occupational exposure limit

### PRE-OPERATIONAL SAFETY CHECKS

1. The maximum load is 100,000kg. DO NOT exceed this rated capacity. Never apply excessive force to a workpiece and always use the pressure gauge to accurately determine the applied load. Burst hazard exists if hose or connection pressure exceeds rated pressure.
2. Borum Workshop Presses are designed for automotive, truck, implement, fleet, and industrial repair shops where pressing, bending, straightening, forming, holding is required. Each press includes a cylinder, a pump, and lifting bar which provides a safe way to raise and lower the bed frame, and a pressure gauge which provides for monitoring the applied press force.
3. Keep children and unauthorised persons away from the work area.
4. Do not operate this Borum Workshop Press whilst wearing loose clothing. Remove ties, watches, rings and other loose jewellery, and contain long hair in a suitable hair net.
5. Wear approved impact safety goggles, full-face impact safety shield and heavy-duty work gloves when operating this Borum Workshop Press.
6. Keep proper balance and footing, do not overreach and wear non-skid footwear.
7. Inspect this Borum Workshop Press before each use. Do not use if bent, broken, cracked, leaking or otherwise damaged, any suspect parts are noted or it has been subjected to a shock load.
8. Check to ensure that all applicable bolts and nuts are firmly tightened.
9. Keep hands and feet away from the bed area at all times.
10. Do not use this Borum Workshop Press to compress springs or any other item that could disengage and cause a potential hazard. Never stand directly in front of loaded press and never leave loaded press unattended.
11. Do not operate this Borum Workshop Press when you are tired or under the influence of alcohol, drugs or any intoxicating medication.
12. Do not expose this Borum Workshop Press to rain or any other kind of bad weather
13. Do not allow untrained persons to operate this Borum Workshop Press.
14. Do not make any modifications to this Borum Workshop Press.
15. Do not use brake fluid or any other improper fluid and avoid mixing different types of oil when adding hydraulic oil. Only good quality hydraulic jack oil can be used.
16. If this Borum Workshop Press needs repairing and/or there are any parts that need to be replaced, have it repaired by an authorised technicians and only use the replacement parts supplied by the manufacturer.
17. Always ensure the operator has read an onsite risk assessment.
18. Check workspace and walkways to ensure no slip-hazards are present. Provide a 1 metre clearance around this equipment.
19. Faulty equipment must not be used. Immediately report suspect equipment.

### OPERATIONAL SAFETY CHECKS

1. Use a qualified person to maintain the press in good condition. Keep it clean for best and safest performance.
2. Only use this Borum Workshop Press on a surface that is stable, level, dry and not slippery, and capable of sustaining the load. Keep the surface clean, tidy and free from unrelated materials and ensure that there is adequate lighting.
3. Ensure that workpiece is centre-loaded and secure.
4. Use a safe working posture (beware of hair catching).



# ASSEMBLY, OPERATION, PREVENTITIVE MAINTENANCE

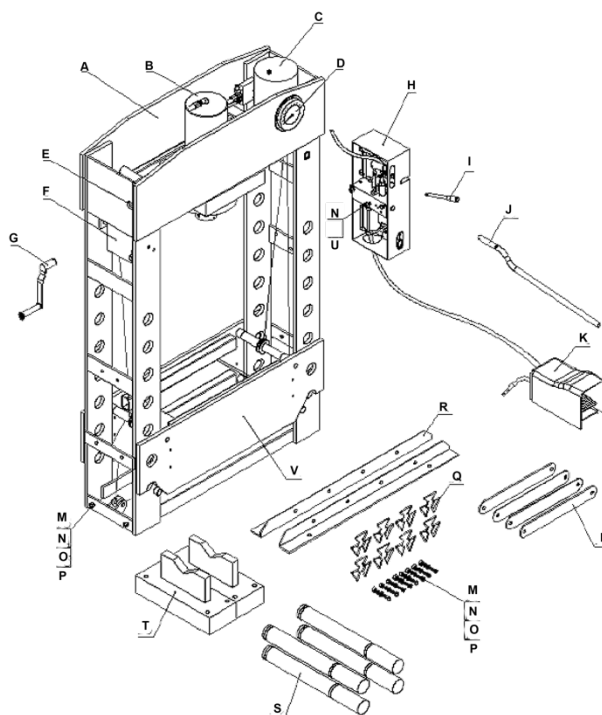
## 1. FEATURES & MODELS

This **"Borum Industrial"** 100,000kg Air Hydraulic Workshop Press is designed for automotive, truck, implement, fleet, and industrial repair shops where pressing, bending, straightening, forming, holding work requires high pressure hydraulics. Polished inner cylinder walls extend the life of the hydraulic seals to minimize abrasion and wear, while the cylinder ram and pistons are also polished and chromed, guided by high performance seals, wear rings and dust seals. Includes a dial gauge for dual metric/tons pressure readings.

**"Borum Industrial"** Air Hydraulic Workshop Presses are available in a variety of capacities and sizes. The press frames are designed for maximum strength, reliability and durability. The strong frames and powerful high-pressure hydraulics will provide years of dependable service in many applications. When components need to be removed or assembled, "Borum Industrial" hydraulic presses deliver the controlled power to safely remove and install bearings, gears, U-joints, bushings, ball joints and pulleys with precision and versatility!

## 2. UNPACKING SHIPPING CASE

1. To avoid any damage to this Press or personal injury, remove the small parts packed in case first.
2. Remove the polybag covering the press components and dispose of plastic bag responsibly.
3. Use a fork lift or crane to lift the press assembly out of the shipping case.
4. Double check parts to ensure they are all there. The parts should include a press body frame, pump, base, support, hardware kits, etc. (Refer to the Parts List below for details)



#	DESCRIPTION	QTY	Note
A	Main Frame	1	
B	Ram Assembly	1	Assembled in
C	Oil Tank	1	Assembled in
D	Pressure Gauge	1	Assembled in
E	Ram Movement	1	Assembled in
F	Winch Assembly	1	Assembled in
G	Winch Handle	1	
H	Pump Assembly	1	
I	Select Valve	1	
J	Pump Handle	1	
K	Air Foot Valve	1	Assembled in

#	DESCRIPTION	Note	QTY
L	Support		4
M	Hex Bolt	8x hardware kit	12
N	Spring Washer	8x hardware kit 4x	15
O	Washer M12	8x hardware kit	12
P	Hex Nut M12	8x hardware kit	12
Q	Retaining Clip	8x hardware kit	8
R	Base		2
S	Bed Pin		4
T	V Block		2
U	Hex Bolt	3x in pump	3
V	Bed Assembly	Assembled in Main	1

### 3. ASSEMBLY

#### 11.1 BASE ASSEMBLY

11.1.1 Disassemble the hex bolt M12\*30(M), washerM12(O), spring washerM12(N), hex nut M12(P) from part A of the press frame body. Then assemble the base to the body frame by the above parts. (refer to Fig 1)

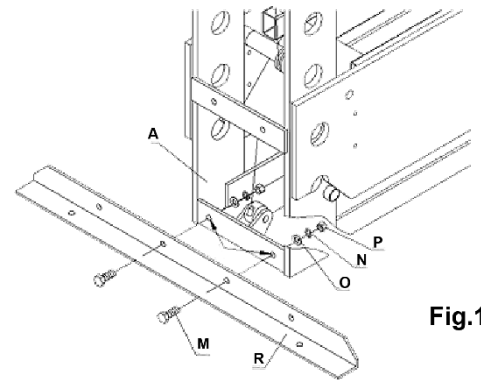


Fig.1

11.1.2 Fix the 4 supports (L) to the body frame (A) by using hex bolt M12X30 (M), washer M12 (O), spring washer M12 (N) and hex nut M12 (P). (refer to Fig.2)

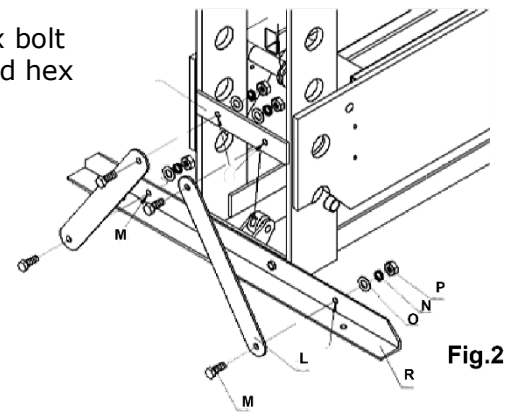


Fig.2

#### 11.2 PUMP ASSEMBLY

11.2.1 Fix the pump assembly. (H) to the body frame by using hex bolt M12 X 25 (U) and spring washer M12 (N). (refer to fig.3)

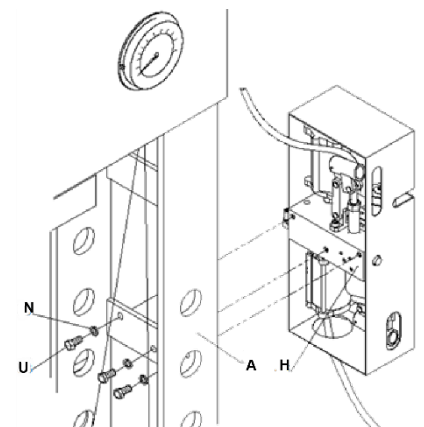


Fig.3

11.2.2 To avoid oil spillage from the oil hose (P17), the factory has fitted a plug in the oil hose for shipping. To remove the plug, trim about 10mm off the end of the oil hose (with the plug). (refer to fig.4)

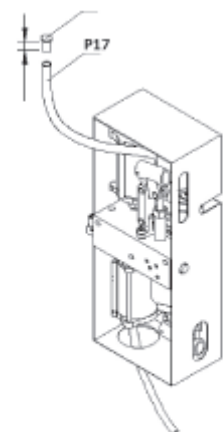


Fig.4

- 11.2.3 Then connect the oil hose (P17) to 1/2" connector (refer to fig.5). Once the oil supply hose is connected, open the oil tank valve to allow the flow of oil and check for leaks.

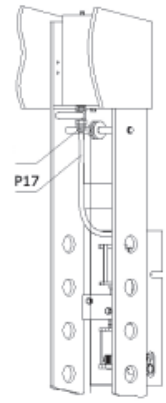


Fig.5

- 11.2.4 Remove the plug from the hose fittings (P18, P19) and oil hose (P20, P21), then connect the oil hose (P20) to fitting (P18) and oil hose (P21) to fitting (P19) and tighten. (refer to Fig.6)

Note: make sure the O-rings are in the grooves of hose fittings (P18 & P19) before assembling the two oil hoses.

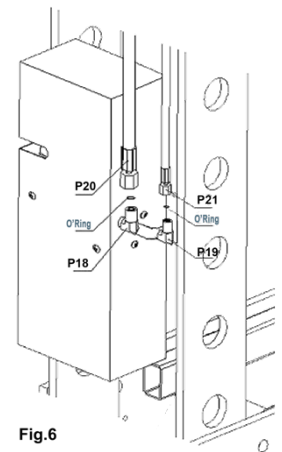


Fig.6

- 11.2.5 Fix the selector lever (I) on the selector valve on the pump (H). (refer to fig. 7)

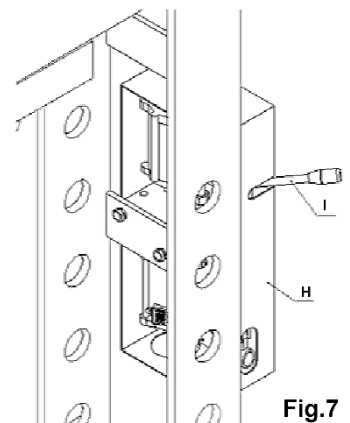


Fig.7

**RAM MOVEMENT**

- 12.1 Insert the ram movement handle (G) to the worm connecting shaft (M1)
- 12.2 Turn the handle clockwise, and the ram moves left (Direction A).
- 12.3 Turn the handle (G) anti-clockwise, and the ram moves right (Direction B)

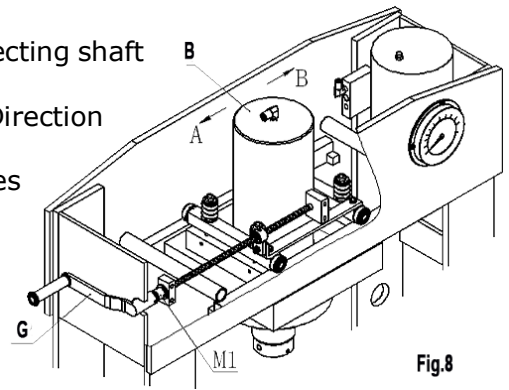


Fig.8

**BED HEIGHT ADJUSTMENT**

- 13.1 Insert the winch handle (G) to the worm shaft (W12)
- 13.2 Turn the handle (G) clockwise, the working bed will lift (direction A)
- 13.3 Turn the handle (G) anti-clockwise, the working bed will lower (direction B)

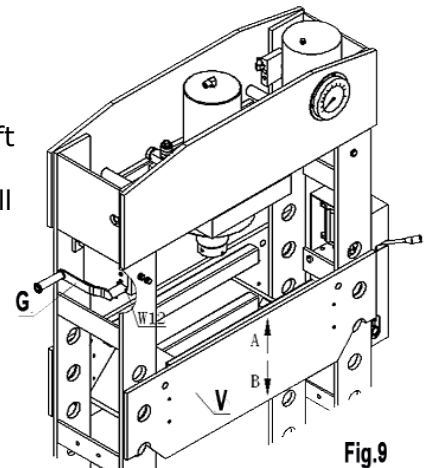
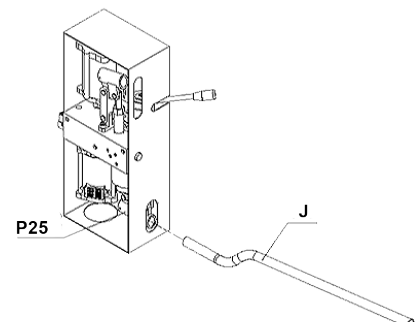
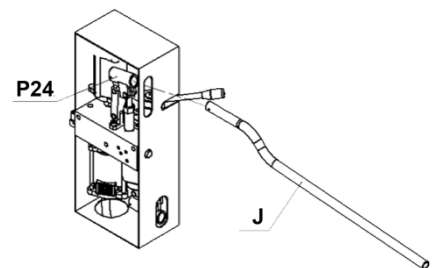


Fig.9

**FITTING PUMP HANDLE**

There are 2 pump handle sockets, one at the top and one at the bottom of the pump, the upper one is for high pressure and low speed; and the lower one is for low pressure and faster speed. The one handle tube(J) is to be moved from one pump socket to the other as required.

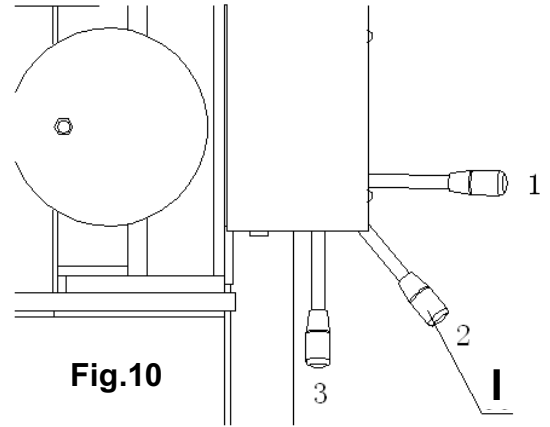
- 14.1 When operating the high pressure pump, insert the pump handle tube (J) into the upper socket (P24)
- 14.2 When operating the low pressure pump, insert the pump handle tube (J) into the lower socket (P25).



**AIR PURGE (Bleed the hydraulic system)**

**15.1 Bleed Air Manually**

15.1.1 Turn the selector valve lever (I) to position 2.



**Fig.10**

15.1.2 Insert the Pump Handle tube (J) to the socket as process 14.2, pump the handle tube (J) no less than twenty cycles.

15.1.3 Turn the selector valve lever(I) to position 3 and check if the ram is working properly; If the ram is working properly, air purge is finished, if not, repeat process 15.1.1~15.1.2

1	When the handle lever (I) is in position 1, the ram piston is retracting.
2	When the lever (I) is in position 2, the ram piston has stopped moving.
3	When the handle lever (I) is in position 3, the ram piston is extending.

**15.2 Air purge by manual high pressure valve**

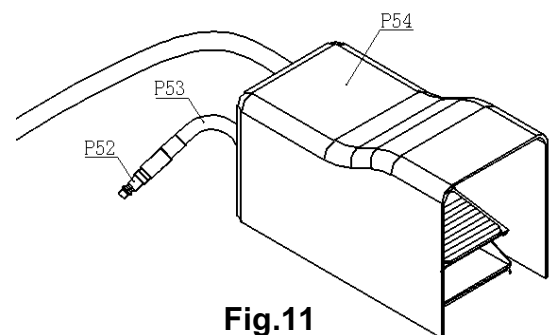
15.2.1 Turn the selector valve lever(I) to position 2

15.2.2 Insert the handle tube (J) to the socket as process 14.1, pump the handle tube (J) no less than twenty cycles.

15.2.3 Turn the selector valve lever(I) to position 3, and check if the ram is working properly; If the ram is working properly, air purge is finished, if not, repeat the process 15.1.1~15.1.2

**15.3 Air purge by air**

15.3.1 Connect the air hose (P52) of the air foot valve (P54) to the workshop compressor supply hose.



**Fig.11**

15.3.2 Turn the selector valve lever(I) to position 2, then depress the air foot valve (P54), keeping the air motor working no less than two minutes (120secs).

15.3.3 Turn the selector valve lever(I) to position 3, then depress the air foot valve (P54), keeping the air motor working and check if the ram is working properly. If the ram is working properly, air purge is finished, if not, repeat the process 15.3.1~15.3.2



## PISTON'S EXTENSION & RETRACTION

### 16.1 Ram extension can be operated either manually or by air.

16.1.1 To operate using compressed air:

16.1.1.1 Connect the air hose (P52) of air foot valve to workshop air compressor supply. (Fig.11)

16.1.1.2 Turn the selector valve lever(I) to position 3. (Fig.10)

16.1.1.3 Depress the air foot valve (P54) to commence operation. Whilst the ram piston is not under load, the air motors will operate in tandem and the ram piston will extend quite quickly. When the piston rod is under load, one air motor may stop working, leaving the other air motor to operate independently. The ram piston rod will then extend more slowly.

16.1.2 To operate manually (without air):

16.1.2.1 Insert the pump handle tube (J) to the low pressure socket as process 14.2, then pump the handle and extend the piston rod for quicker operation of the ram.

16.1.2.2 Insert the pump handle tube (J) to the high pressure socket as process 14.1, then pump the handle and extend the piston rod for slower operation of the ram.

16.1.3 The operator can extend the piston rod either by air according to process 16.1.1 or manually according to process 16.1.2.1 or 16.1.2.2.

**WARNING! : Note when operating using compressed air, NEVER operate manually according to process 16.1.2.1 (Manual Low Pressure) at the same time.**

### 16.2 Ram retraction can be operated manually or by air.

16.2.1 Operating by air

16.2.1.1 Connect the air hose (P52) of air foot valve to workshop air compressor. (Fig.11)

16.2.1.2 Turn the selector valve lever(I) to position 1. (Fig.10)

16.2.1.3 Depress the air foot valve (54), then the air motor (23) and air motor (P35) work together, and the piston rod returns quickly.

16.2.2 Operating manually:

16.2.2.1 Insert the pump handle tube (50) to the low pressure socket as process 14.2, pumping the handle returns the piston rod quickly.

16.2.2.2 Insert the handle tube (50) to the high pressure socket as process 14.1, pumping the handle returns the piston rod slowly

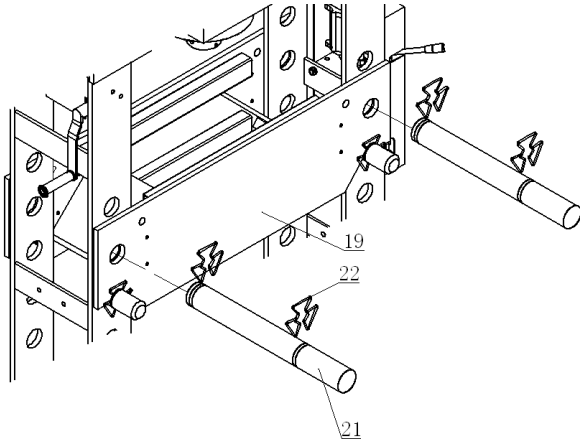
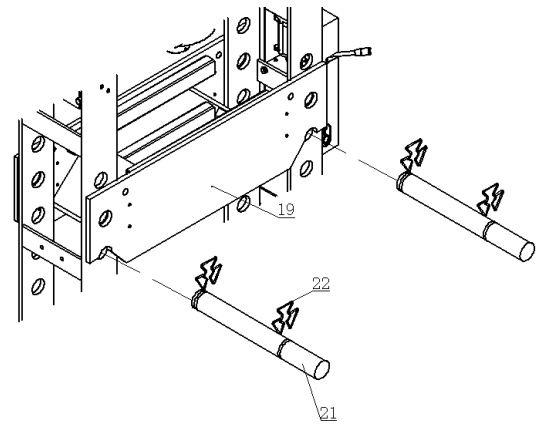
16.2.2.3 The operator can retract the piston rod either by air according to process 16.2.1 or manually according to process 16.2.2.1 or 16.2.2.2.

**WARNING! : Note when operating using compressed air, NEVER operate manually according to process 16.2.2.1 (Manual Low Pressure) at the same time.**

16.3 To cease movement of the ram piston, stop pumping the pump handle tube (J) or release the air foot valve (P54), the piston rod will stop immediately. Then turn the selector valve lever(I) to position 2. (Fig.10)

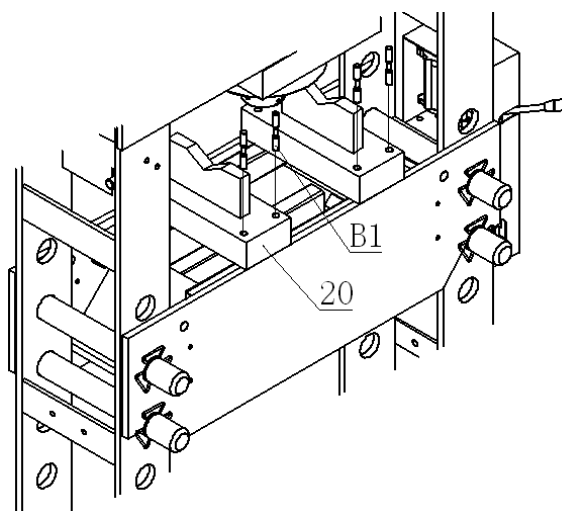
**PRESS SETUP**

- 17.1 Position ram piston according to Section 12 'Ram Movement', so that it is centred to workpiece.
- 17.2 Adjust the bed (19) according to Section 13 'Bed Height Adjustment' to the appropriate working height (as close to the retracted ram piston as possible), then insert the pins (21) to the holes of body frame and lock the circlips (22).(Fig.12 & Fig.13)

**Fig 12****Fig 13**

- 17.3 According to the working conditions, operator can decide which side of the bed 'v' block is up, and adjust the space of the bed 'v' blocks.

**Note: to prevent the bed 'v' blocks from slipping off of the press bed, press down on the four limiting pins of the block. (fig 14)**

**Fig 14**

- 17.4 Put the workpiece on the bed 'v' blocks (20).

## 4. BEFORE USE

- Prior to each use conduct a visual inspection checking for abnormal conditions, such as cracked welds, leaks, and damaged, loose, or missing parts.
- Before the first use, ensure the base is secured to the floor using anchor bolts.
- Ensure the standing surface of the workshop press site is firm and horizontal, and that sufficient lighting is provided for safe operating procedures
- Clean the workshop press down thoroughly
- Before first use, pour a teaspoon of good quality air tool lubricant into the air supply inlet of the lift control valve, connect to air supply and operate for 3 seconds to evenly distribute lubricant.
- Ensure the hydraulic system has been bled according to Section 15 'Air Purge' (Bleeding air from the hydraulic system).

## 5. OPERATION

- 18.1 Turn the selector valve lever(I) to position 3, then depress the air foot valve (P54), both air motors will operate simultaneously, and the piston rod will extend quickly. When the serrated saddle gets close to the work piece, change to manual operation.
- 18.2 According to handle tube usage 14.2, insert the handle tube into the (upper) high pressure socket (P24) and pump the handle tube, the piston rod extends slowly. Make sure that work piece and piston rod are aligned properly.
- 18.3 After adjusting the position of work piece, operator can continue to press by air, or manually.

### 18.3.1 Operating by air:

Depress the air foot valve (P54), and both air motors will work simultaneously, when the ram piston head touches the work piece, the piston rod will begin to assert pressure, and the 1st air motor will stop working, only the 2nd air motor will continue to work independently, under this condition, the ram piston will continue to extend slowly and assert pressure on the work piece and the bed 'v' block. Once job is completed, release the air foot valve (P54).

### 18.3.2 Operating manually:

According to pump handle tube usage 14.2, insert pump handle tube into (upper) high pressure socket (P24), and pump the handle tube (J) until job is completed, then stop pumping.

### 18.3.3 Operating both by air and manual:

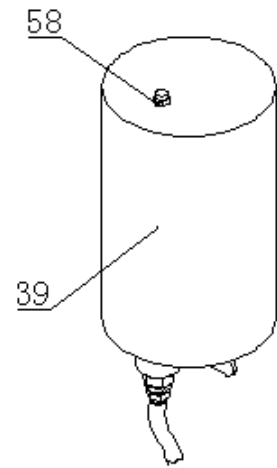
Operator can press the work piece both by manual as process 18.3.2 and by air as process 18.3.1 at the same time.

### 18.4 Release the pressure:

- 18.5 Turn the selector valve lever(I) to position 2, the pressure on the ram piston will be released automatically.
- 18.6 Ram piston will retract, according to process 16.2
- 18.7 Remove the work piece.
- 18.8 When complete, disconnect the air hose from the compressor and clean the machine.

## 6. Maintenance

- Use a clean and dry cloth to clean the press surface, and grease the connecting part and moving part periodically.
- When the press is not in use, fully retract the ram piston and store in dry place.
- If the workshop press operating efficiency is reduced, bleed the air in the hydraulic system according to Step 15.
- Regularly check that the oil tank level is sufficient by pumping the pump handle tube to check if the ram piston can extend fully (300mm). If the oil level is low, add good quality hydraulic oil to the oil tank as follows: remove the screw (58) on the oil tank, add good quality hydraulic oil then retighten the screw (58). After adding oil, perform air bleed according to process 15.



## 7. INSPECTION

- Prior to each use conduct a visual inspection checking for abnormal conditions, such as cracked welds, metal fatigue, leaks, and damaged, loose, or missing parts.
- Owners and /or operators should be aware that repair of this product may require specialised equipment and knowledge.

## 8. STORAGE

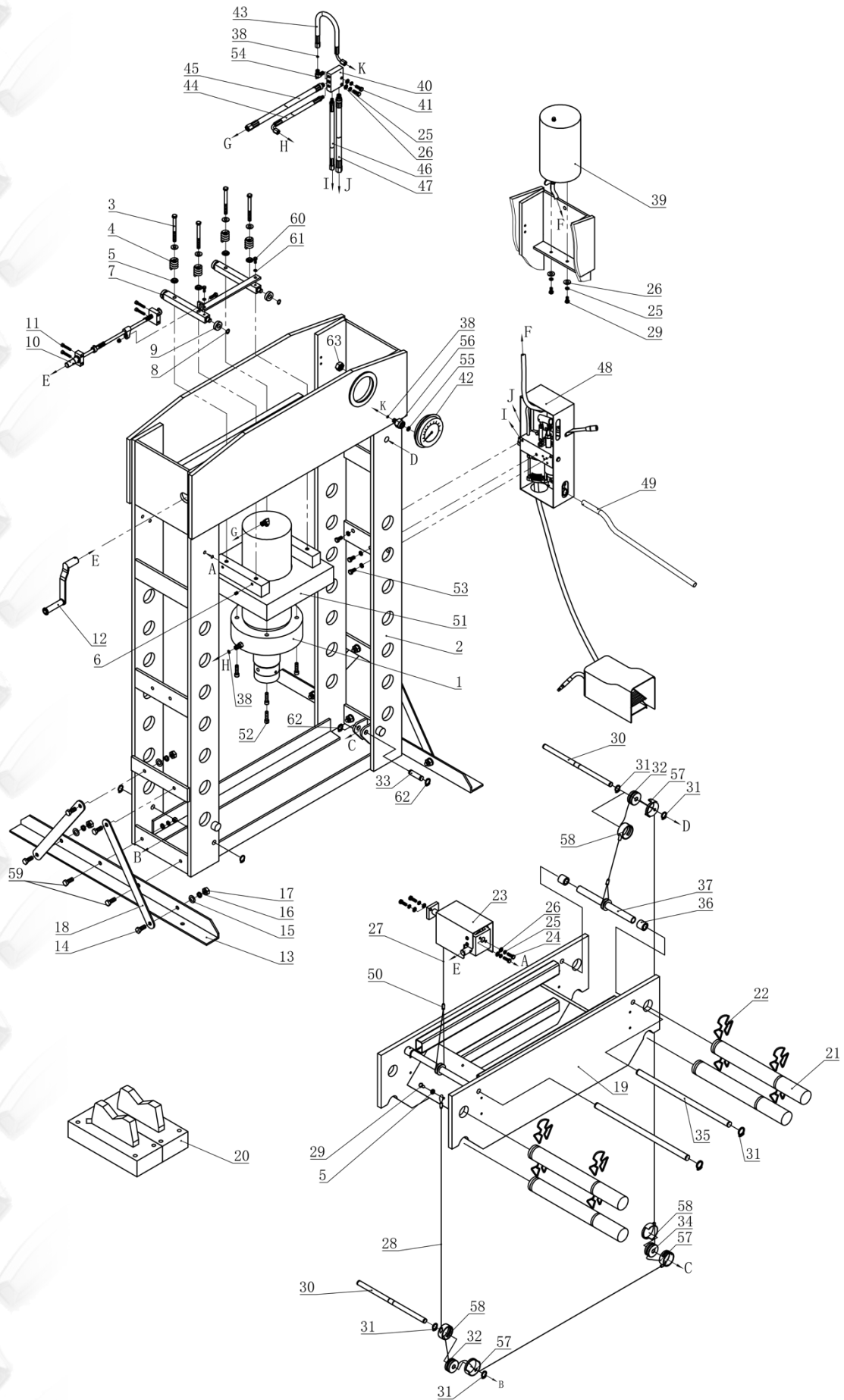
This Borum Workshop Press should always be stored in a dry location on a level surface with the piston ram fully retracted and the compressed air supply disconnected.

## 9. SERVICE & REPAIR

Any Borum Industrial Workshop Press found damaged in any way, or found to be worn or operates abnormally should be removed from service until repaired by an authorised service agent. Owners and / or operators should be aware that repair of this product may require specialised equipment and knowledge. Only authorised parts, labels, decals shall be used on this equipment. Annual inspection of the drill press is recommended and can be made by an authorised repair facility to ensure that your equipment is in optimum condition and that the equipment has the correct decals and safety labels specified by the manufacturer.



# PARTS DIAGRAM



## PARTS LIST

NO.	DESCRIPTION	Q'TY	NO.	DESCRIPTION	Q'TY	NO.	DESCRIPTION	Q'TY
1	Ram Assembly	1	22	Circlip	8	43	Oil Hose 1	1
2	Frame	1	23	Moving Device	1	44	Oil Hose	1
3	Bolt	4	24	Bolt	4	45	Oil Hose 3	1
4	Spring	4	25	Lock Washer	8	46	Oil Hose 1	1
5	Cover	9	26	Flat Washer	8	47	Oil Hose 2	1
6	Screw	4	27	Cable	1	48	Pump Assembly	1
7	Square Tube	2	28	Cable	1	49	Handle Tube	1
8	Circlip	4	29	Bolt	3	50	Cable Sleeve	3
9	Roller	4	30	Roller Pin	2	51	Plate	1
10	Ram Moving Device	1	31	Circlip	12	52	Screw	4
11	Screw	4	32	Roller	2	53	Bolt	3
12	Handle	1	33	Roller Pin	1	54	Fitting	1
13	Base	2	34	Big Roller	1	55	Nylon Ring	1
14	Bolt	8	35	Lifting Bar	2	56	Gauge Fitting	1
15	Flat Washer	12	36	Tube	4	57	Cover 1	3
16	Lock Washer	15	37	Bushing	2	58	Cover 2	3
17	Nut	12	38	O Ring	3	59	Bolt	4
18	Support Bar	4	39	Oil Tank	1	60	Bolt	2
19	Working Bed	1	40	Adapter	1	61	Lock Washer	2
20	Steel Block	2	41	Bolt	2	62	Circlip	2
21	Pin	4	42	Pressure Gauge	1	63	Nut	1

## TROUBLESHOOTING

RAM WILL NOT PRESS LOAD	RAM BLEEDS OFF AFTER PRESS OPERATION	RAM WILL NOT RETRACT AFTER UNLOADING	POOR LIFT PERFORMANCE	RAM WILL NOT EXTEND TO FULL EXTENSION	CAUSES AND SOLUTIONS
<b>x</b>	<b>x</b>		<b>x</b>		Release valve not tightly closed Ensure release valve tightly closed
<b>x</b>					Overload condition Remedy overload condition
<b>x</b>	<b>x</b>		<b>x</b>		Power unit malfunctioning Replace the power unit
		<b>x</b>	<b>x</b>		Reservoir overfilled Remove pump, then drain fluid to proper level
		<b>x</b>			Linkage binding Clean and lubricate moving parts
<b>x</b>				<b>x</b>	Fluid level low Ensure proper fluid level
<b>x</b>			<b>x</b>	<b>x</b>	Air trapped in system Purge air from system

## WARRANTY

BORUM Industrial products have been carefully tested and inspected before shipment and are guaranteed to be free from defective materials and workmanship for a period of 12 months from the date of purchase except where tools are hired out when the guarantee period is ninety days from the date of purchase.

Should this piece of equipment develop any fault, please return the complete tool to your nearest authorised warranty repair agent or contact TQB Brands Pty Ltd Warranty team – [warranty@tqbbrands.com.au](mailto:warranty@tqbbrands.com.au).

If upon inspection it is found that the fault occurring is due to defective materials or workmanship, repairs will be carried out free of charge. This guarantee does not apply to normal wear and tear, nor does it cover any damage caused by misuse, careless or unsafe handling, alterations, accident, or repairs attempted or made by any personnel other than the authorised TQB Brands Pty Ltd repair agent.

This guarantee applies in lieu of any other guarantee expressed or implied and variations of its terms are not authorised.

Your TQB Brands Pty Ltd guarantee is not effective unless you can produce upon request a dated receipt or invoice to verify your proof of purchase within the 12month period.

### Consumer Guarantee

Our goods come with a guarantee that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.



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