



**OWNER'S MANUAL  
PRODUCT CODE: 20TPP**

**20,000kg PORTABLE HYDRAULIC  
BODY REPAIR KIT**



## 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.

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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## SAFETY INSTRUCTIONS



### SAFETY OPERATING INSTRUCTIONS

- Safety related decals must be maintained and replaced if they become hard to read.
- Wear eye protection that meets approved standards
- This equipment is designed for vehicle body / frame applications. Using this equipment in an application for which it is not designed could result in overloading, reduced load capacity, reduced stability and /or system failure.
- Do not overload the hydraulic system; creating pressure beyond the rated capacity of the pump and ram may result in personal injury. Overloading is indicated by bowing extension tubes or slipping attachments.
- Some components in this set do not match the maximum pressure rating of the pump and ram. USE A PRESSURE GAUGE IN THE SYSTEM TO MONITOR HYDRAULIC PRESSURE (NOT INCLUDED). Refer to the instructions in this document for typical applications and load capacity.
- Attachments and extension tubes must be aligned and fully engaged so ram force is straight, avoiding an off centre load condition.
- When servicing, use only Borum identical replacement parts. Use of any other parts will void the warranty.
- Use the right product for the job. There are certain applications for which the Hydraulic body repair kit was designed. Do not modify the hydraulic body repair kit and do not use the hydraulic body repair kit for a purpose for which it was not intended.

#### **Pump and Ram Safety Instructions:**

- Do not exceed the maximum capacity of the pump or tamper with the internal high pressure relief valve. Creating pressure beyond the rated capacity can result in personal injury.
- Completely retract the ram before opening the filler screw on the pump to add hydraulic fluid. An overfill can cause personal injury due to excess reservoir pressure created when rams are retracted.
- Do not set poorly balanced or off-centre loads on a ram.

**Hose Safety Instructions:**

- Before operating the pump, tighten all hose connections using the correct tools. Do not over tighten; connections need only be secure and leak free. Over tightening may cause premature thread failure or high pressure fittings to fail at pressures lower than rated capacity.
- Should a hydraulic hose ever rupture, burst, or need to be disconnected, immediately shut the pump OFF, and open the control valve to release all pressure. Never grasp a leaking, pressurised hose with your hands; the force of escaping hydraulic fluid could cause serious injury.
- Do not subject the hose to any potential hazard such as fire, extreme cold or heat, sharp surfaces, or heavy impact. Do not allow the hose to kink, twist, curl, or bend so tightly that the fluid flow within the hose is blocked or reduced. Do not use the hose to move attached equipment. Periodically inspect the hose for wear, because any of these conditions can damage the hose and result in personal injury.
- Hose material and coupler seals must be compatible with the hydraulic fluid used. Hoses must not come in contact with corrosive materials.



# ASSEMBLY, OPERATION & PREVENTATIVE MAINTENANCE

## 1. FEATURES

The BORUM Professional portable hydraulic repair kit includes a series of attachments that combined with the pump, cylinder and hose, enable configuration of specific tools designed for various operations such as pushing, separating, joining, lifting, compressing, stretching and fixing. The cylinder provides the indicated nominal force, but as some attachments can induce cylinder side loading, the unit can only be used at 50% of its capacity.

## 2. BEFORE USE

Conduct a thorough visual inspection checking for any abnormal conditions, such as cracked welds, and damaged, loose, or missing parts.

The pump may be operated in a horizontal position, or in a vertical position with the head pointing down as shown.

1. Connect the hose between the pump and ram.
2. Determine the appropriate attachment for your application; assemble the attachment to the ram piston

### IMPORTANT

- The use of extension tubes or off-centre attachments greatly reduces the capacity of the hydraulic system. When using extension tubes, put the shortest tubes on the ends of the setup; never put the shortest tubes in the middle of the setup.
- Some components in this set do not match the maximum pressure rating of the pump and ram. FIT A PRESSURE GAUGE IN THE SYSTEM TO MONITOR HYDRAULIC PRESSURE.



### 3. OPERATION

Prior to each use always conduct a visual inspection checking for and any abnormal conditions, such as cracked welds, and damaged, loose, or missing parts.

1. Turn the pump's release valve clockwise to a closed position. **IMPORTANT:** Hand tighten the valve only; applying too much force to the valve may damage the valve system.
2. Work the pump handle up and down to send oil pressure through the hose to the ram, causing the piston to extend to the work piece.
3. The pump is equipped with an overload valve that will bypass oil back into the pump reservoir in an overload situation (when the system meets maximum pressure). In this case, continued pumping will have no effect on the system. If an overload situation commonly occurs, a higher capacity set is needed.
4. To release pressure, slowly turn the release valve counter clockwise. (The release speed is controlled by how fast the valve is opened).

#### Bleeding Air from the System

Air can accumulate in the hydraulic system during the initial setup or after prolonged use, causing the ram to respond slowly or in an unstable manner. To purge the air;

1. Place the ram at a lower level than the pump, with the piston end pointing down.
2. Pump handle to extend and retract the ram several times without putting a load on the system. Air will be released into the pump reservoir.
3. With the ram fully retracted, the pump sitting level, and no pressure in the hydraulic system, remove the pump's filler screw to release air from the hydraulic system. If necessary top up the reservoir with good quality hydraulic jack oil until the fluid level is within 13mm of the pump filler screw hole.

**Important:** Repeated changing of hoses may cause loss of oil and air to enter the hydraulic ram. This will cause the ram to perform poorly; seals will not be under sufficient pressure to operate effectively and additional oil may leak from the ram. In this circumstance see "Bleeding Air from System" and "Adding Oil" to restore normal operation.

When offset attachments are used, the rated capacity of the hydraulic system is reduced 50%. For each extension tube used in the setup, the rated capacity is reduced another 50%. When using two or more extension tubes together, always position the shortest tube farthest away from the ram.

Some components in this set do not match the maximum pressure rating of the pump and ram. By using a load cell and indicator or monitor pressure developed in the ram by using an inline pressure gauge, you can then calculate the applied force using the formula,  $P = \text{pressure in psi}$ , and  $A = \text{effective ram area in in}^2$ . Ram Area is:  $2.411 \text{ in}^2$

If bowing or bending of ram or any attachment occurs during use, "STOP", release pressure immediately and reconsider application. Application may not be compatible with product, a ram kit with a higher capacity may be needed.

#### 4. MAINTENANCE

**Inspection:** Inspect the product for damage, wear, broken or missing parts and that all components function before each use.

- Tighten connections as needed. Use pipe thread sealing compound when servicing connections.
- Only use a good grade hydraulic oil. Do not mix different liquids and **NEVER USE** brake fluid, turbine oil, transmission fluid, motor oil or glycerine. Improper fluid can cause premature failure of the ram and the potential for sudden and immediate loss of load.
- Check the oil level by placing the pump in an upright position.

**Cleaning:** Periodically check the pump piston and ram for signs of rust or corrosion. Clean as needed and wipe with an oily cloth.

**Note:** Never use sandpaper or abrasive material on these surfaces.

**Lubrication:** Application of a coating of light lubricating oil to pivot points and hinges will help to prevent rust and assure that pump assemblies move freely.

##### **Adding Oil:**

1. With ram fully lowered, set pump unit in its normal, level position. Locate and remove oil filler screw.
2. Fill until oil is within 13mm of the oil filler screw hole opening, re-install oil filler screw.

##### **Changing Oil:**

For best performance and increased system life, replace the complete fluid supply at least once per year

1. With ram fully lowered, remove oil filler screw from the pump reservoir as above.
2. Lay the pump on its side and drain the fluid into a suitable container.
3. Set pump in its level upright position.
4. Fill with good quality jack oil to within 13mm of the oil filler screw hole opening. Re-install oil filler screw.

## 5. SERVICE & REPAIR

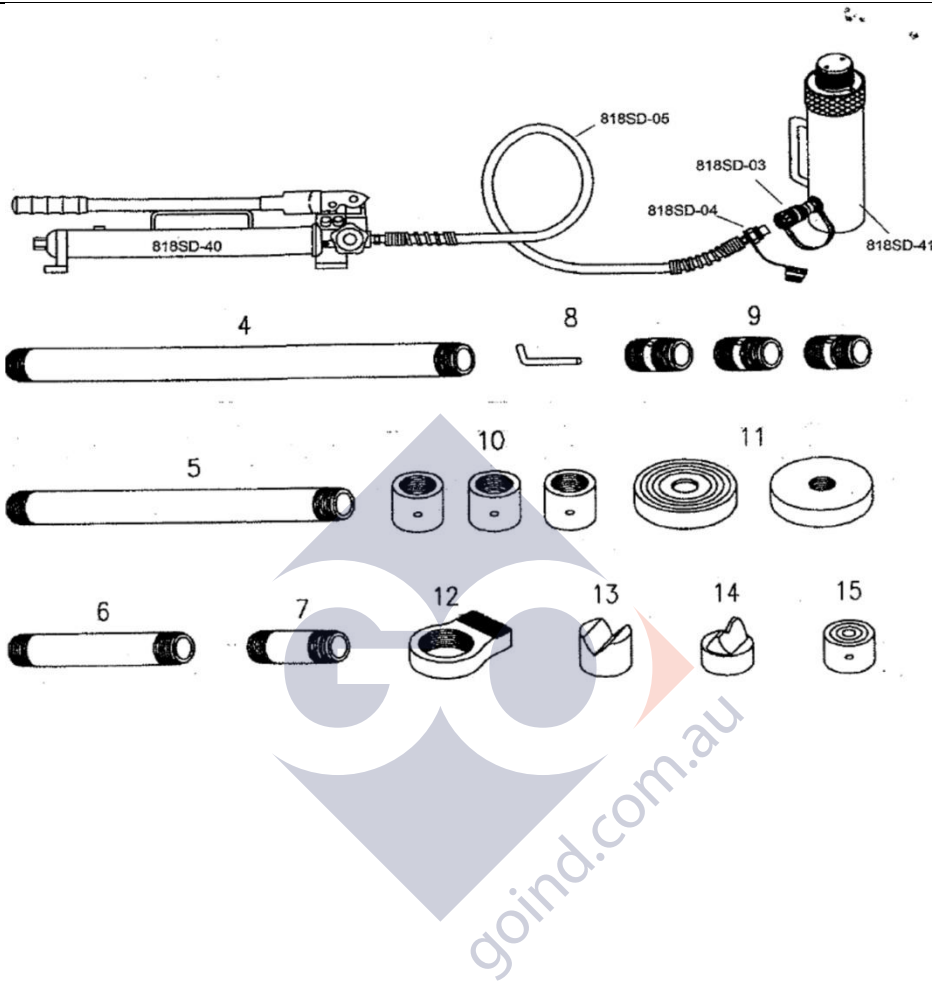
Any hydraulic body repair kit found damaged in any way, or found to be worn or operates abnormally should be removed from service until repaired by an authorised service agent. Owners and / or operators should be aware that repair of this product may require specialised equipment and knowledge. Only authorised parts, labels, decals shall be used on this equipment. Annual inspection of the hydraulic body repair kits 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.



### BODY REPAIR KIT PARTS LIST

Part #	Description	QTY	Part #	Description	QTY
1	10,000psi Hydraulic Pump	1	9	Male Connector	3
2	Hydraulic Hose	1	10	Threaded Coupling	3
3	20,000kg Hydraulic Ram Unit	1	11	Plunger Base	2
4	700mm Extension Tube	1	12	Toe Lift	1
5	500mm Extension Tube	1	13	Vee Head	1
6	250mm Extension Tube	1	14	Wedge Head	1
7	125mm Extension Tube	1	15	Serrated Saddle	1
8	Lock Pin	1	16	Blow Mould Case	1





# TROUBLESHOOTING

Problem	Cause	Solution
Pump loses pressure	<ol style="list-style-type: none"> <li>1. System components leaking fluid</li> <li>2. Pump release valve not fully closed</li> </ol>	<ol style="list-style-type: none"> <li>1. Repair or replace as necessary</li> </ol>
Pump not delivering fluid	<ol style="list-style-type: none"> <li>1. Low fluid level in reservoir</li> <li>2. Seats are worn</li> </ol>	<ol style="list-style-type: none"> <li>1. Check fluid level</li> <li>2. Repair seats or replace pump body</li> </ol>
Pump handle has a spongy feel	<ol style="list-style-type: none"> <li>1. Air trapped in system</li> <li>2. too much fluid in reservoir</li> </ol>	<ol style="list-style-type: none"> <li>1. Refer to bleeding air from the system</li> <li>2. Check fluid level</li> </ol>
Ram piston will not extend	<ol style="list-style-type: none"> <li>1. Loose couplers</li> <li>2. Pump release valve not fully closed</li> <li>3. Low fluid level in pump reservoir</li> <li>4. Ram seals leaking</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten couplers</li>   <li>2. Fill and bleed the system</li> <li>3. Replace worn seals. Look for excessive contamination or wear</li> </ol>
Ram piston extends only partially	<ol style="list-style-type: none"> <li>1. Low fluid level in pump reservoir</li> <li>2. Load is above capacity of system</li> </ol>	<ol style="list-style-type: none"> <li>1. Fill and bleed the system</li> <li>2. Use correct equipment</li> </ol>
Ram piston extends slower than normal	<ol style="list-style-type: none"> <li>1. Loose couplers</li> <li>2. Pump release valve not fully closed</li> <li>3. Restricted hydraulic line or fitting</li> <li>4. Pump not working correctly</li> <li>5. Ram seals leaking</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten couplers</li>   <li>2. Clean and replace if damaged</li> <li>3. Repair or replace as necessary</li> <li>4. Replace worn seals. Look for excessive contamination or wear.</li> </ol>
Ram does not hold pressure	<ol style="list-style-type: none"> <li>1. Leaky connection</li>   <li>2. Ram seals leaking</li>   <li>3. Pump or valve not working correctly</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean, reseal with thread sealant, and tighten connection</li> <li>2. Replace worn seals. Look for excessive contamination or wear Replace contaminated fluid</li> <li>3. Repair or replace as necessary</li> </ol>

Problem	Cause	Solution
Ram leaks hydraulic fluid	<ol style="list-style-type: none"> <li>1. Worn or damaged seals</li> <li>2. Loose connection</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace worn seals. Look for excessive contamination or wear. Replace contaminated fluid.</li> <li>2. Clean, reseal with thread sealant, and tighten connection.</li> </ol>
Ram will not retract or retracts slower than normal	<ol style="list-style-type: none"> <li>1. Pump release valve closed</li> <li>2. Loose couplers</li> <li>3. Blocked hydraulic lines</li> <li>4. Weak or broken retraction springs</li> <li>5. Ram damaged internally</li> <li>6. Pump reservoir too full</li> </ol>	<ol style="list-style-type: none"> <li>1. Open pump release valve</li> <li>2. Tighten couplers</li> <li>3. Clean and flush lines</li> <li>4. Send to service centre</li> <li>5. Send to service centre</li> <li>6. Drain fluid to correct level</li> </ol>



## WARRANTY

Borum 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 the machine 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 12 month 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.