

Owners Manual

Product Code: 2010T

**MADE FOR THE
TRADE**

TQ TRADEQUIP
the trusted brand in equipment

PORTA POWER KIT



Specifications:

- Safe Working Capacity: 10,000kg
- Kit Contents: 14 Pieces containing Pump, Hose and Fittings
- Ram Length retracted: 322mm
- Ram Length fully extended: 452mm
- Extensions: 110, 265, 365, 520mm
- Adaptor Diameter: 33mm
- Hydraulic Hose Length: 1500mm
- Hydraulic Oil Capacity: 650ml
- Nett Weight: 31kg

About the **TradeQuip** brand

The '**TradeQuip**' brand of workshop equipment, is designed for use in a demanding workshop environment by professional users. With proven and trusted "**Made for the Trade**" reliability, '**TradeQuip**' branded products offer the very best in performance for an affordable price. All backed by a 1year trade guarantee across 1,000+ distributors Australia wide.

TQ TRADEQUIP
the trusted brand in equipment

TQ PRO
Trusted by serious professionals

BORUM
INDUSTRIAL WORKSHOP EQUIPMENT

WARNING

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 TQB Brands Pty Ltd policy of continuous improvement determines the right to make modifications without prior warning.

CONTENT

WARNING2

CONTENT2

ASSEMBLY, OPERATION, PREVENTITIVE MAINTENANCE.....5

PARTS LIST11

WARRANTY14

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



Long loose hair must be contained when operating this equipment



Safety footwear must be worn when operating this equipment



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



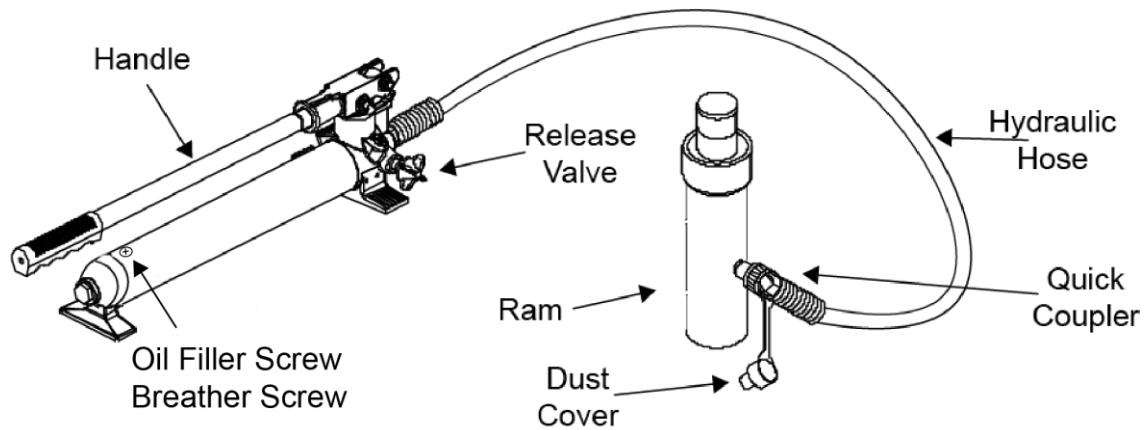
Rings and jewellery must not be worn when operating this equipment

PRE-OPERATIONAL SAFETY CHECKS

- Keep work area clean and well lit. Cluttered or dark work areas invite accidents.
- ALWAYS wear suitable personal protective clothing, gloves and eyewear manufactured to the latest Australian Safety Standards.
- ALWAYS ensure that adequate lighting is available. A minimum intensity of 300 lux should be provided. Ensure that lighting is placed so that you will not be working in your own shadow.
- Use as intended only. Do not use this item to raise or move a vehicle.
- ALWAYS use according to vehicle's service instructions only. It is beyond the scope of this manual to provide body/frame repair guidelines. It is the responsibility of the user to consult a body/frame repair technical manual for full instructions.
- Stay clear of hydraulic ram during operation. Position body as far away as practical when hydraulic ram is under load. Ram can slip suddenly, causing injury.
- This Porta Power Equipment is designed for straightening 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.
- When extension tubes are used, the rated capacity is always reduced by 50% for each tube that is connected.
- Attachments and extension tubes must be aligned and fully engaged so ram force is straight, avoiding an off-centre load condition.
- Keep the Hose Couplers protected when the not in use. Screw Dust Caps onto Hose Couplers when not in use to keep Ram internal mechanisms clean.
- Use the right product for the job. There are certain applications for which the Porta Power Equipment 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.
- ALWAYS regularly check for damage. If any part of this Porta Power Equipment is damaged it should be carefully inspected to make sure that it can perform it's intended function correctly. If in doubt, it should be repaired or replaced. Refer all servicing to a qualified technician.
- When servicing, use only TradeQuip identical replacement parts. Use of any other parts will void the warranty.
- Do not modify this Porta Power Equipment and do not use for a purpose for which it was not intended.

INTENDED USE

For regular professional collision repair and medium duty applications where the convenience of hydraulic power can be utilized for spreading, clamping, pushing and lifting.



NOTE: When using this Porta Power Equipment always open the oil filler screw/breather screw

Pump and Ram Safety Instructions:

- When using this Porta Power Equipment, always open the oil filler screw/breather screw (P7).
- Then close it when not in use to minimise the chance of seeping hydraulic fluid.
- 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.
- Do not allow the piston rod of the ram to extend so far as to exceed the maximum ram stroke.
- When coupler valves are disconnected, always cover with the dust cap to keep the hydraulic system clean.
- Completely retract the ram before removing the filler/breather 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. 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.
- Do not drop heavy objects on to the hose. Do not twist or stretch the hose. Always keep the hose clean to avoid damage to the hose or connectors.
- 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, pressurized 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, PREVENTITIVE MAINTENANCE

1. FEATURES & MODELS

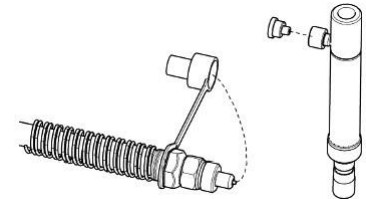
This TradeQuip 10,000kg Hydraulic Porta Power Kit is designed to be used for pushing, spreading, and pressing of vehicle body panels as well as various component parts and assemblies. The variety of attachments include a rubber head, flat base, wedge spreader, spreader toes and various extension tubes with a snap lock design for quick and easy assembly.

The pump has an automatic overload system to help prevent damage to the pump ram and associated equipment. The flex head features a permanently moulded rubber pad, interlocked to prevent separation. The complete kit includes a variety of specially designed auto body, frame repair and construction components for lifting, pushing, bending and spreading.

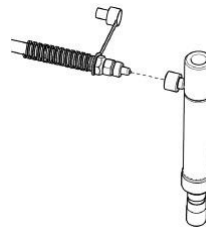
2. ASSEMBLY

Unpacking: after removing the packing material, make sure the product is in perfect condition and that there are no visible damaged parts.

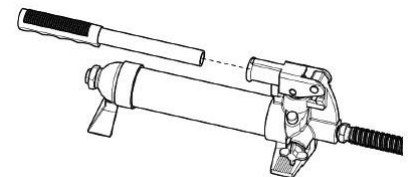
1. Unscrew and save the end plugs located on the ends of the hose and hydraulic ram.



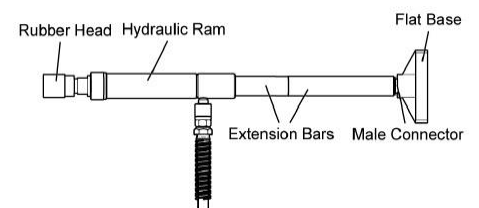
2. Securely screw the hose into the hydraulic ram.



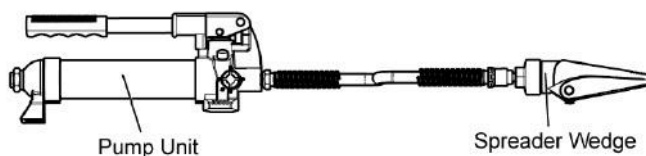
3. Insert the pump handle into the receptacle located at the top of the pump unit.



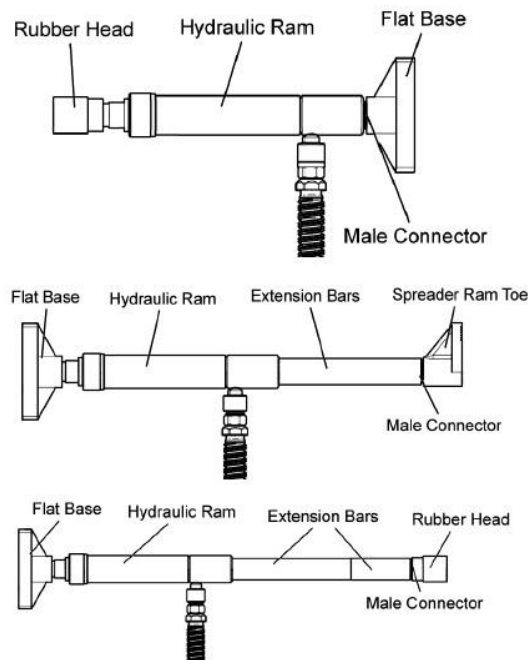
4. To attach the head, the extension bars, the male connector, and the flat base to the hydraulic ram.



5. To attach the spreader wedge to the pump unit.



6. For other attachment combinations.



3. 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.

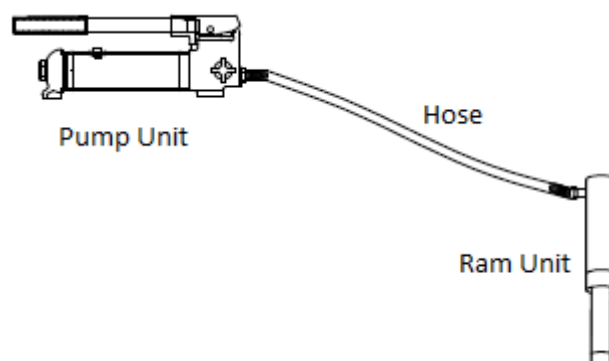
Bleeding Air from the System

Air can accumulate in the hydraulic system during the initial setup or after prolonged use, which can cause the hydraulic ram to respond slowly or operate in an unstable manner or even leak hydraulic fluid.

To remove the air;

1. Position the hydraulic ram so that it is at a lower level than the hydraulic pump unit, with the piston end pointing down (see illustration below).
The objective is to "float the air bubbles up the ram, then up the hose and back into the hydraulic pump."
2. Close the release valve and pump the handle on the hydraulic pump unit rapidly.
3. Without putting load on the hydraulic system this should quickly extend the ram.
4. When fully extended, open the release valve fully to allow the ram piston to retract. *Air bubbles will then be carried back up to the pump reservoir.*
5. Repeat this process 3-4 times.
6. Then with the ram fully retracted, ensure the hydraulic pump unit is positioned horizontally level.
7. Remove the pump oil filler breather screw to release trapped air from the hydraulic pump unit.
8. Check oil level. If necessary top up the hydraulic pump reservoir with good quality hydraulic jack oil until the fluid level is within 13mm of the oil filler breather screw hole.

Important: Repeated changing of hoses may result in loss of hydraulic oil and/or air bubbles entering the hydraulic ram unit. This will adversely affect the ram's performance and can cause hydraulic ram fluid leakage as the seals may not be under sufficient pressure to operate effectively. In this circumstance always "Bleed Air from System" and "Check Hydraulic Oil Level" to restore normal operation.



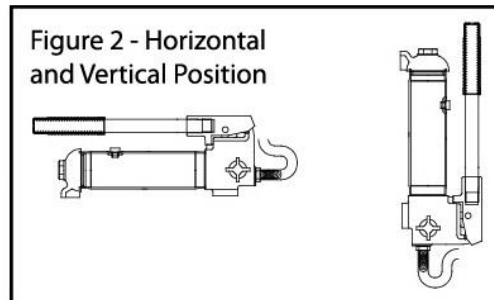
4. OPERATION

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

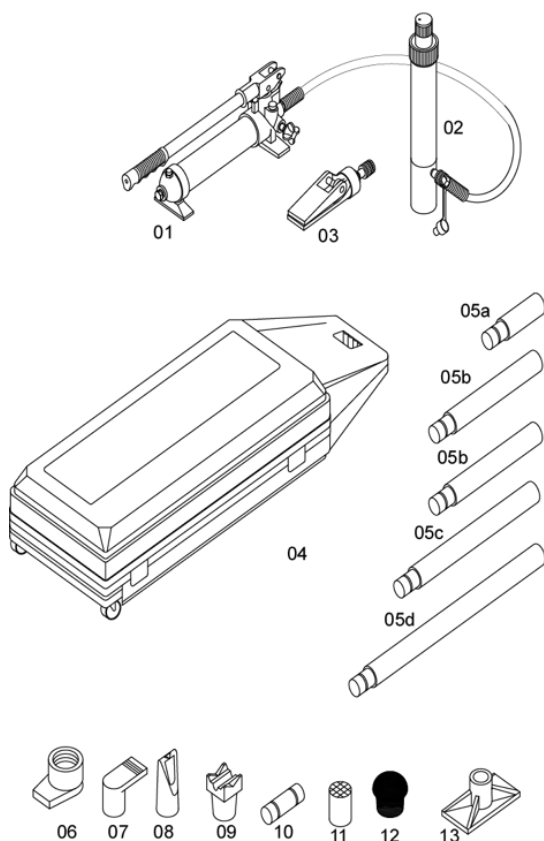
VENTED HYDRAULIC PUMP

This Porta Power kit includes a vented hydraulic pump. The oil filler/breather screw is located in the top rear end of the pump's reservoir. The oil filler/breather screw must be opened by turning it in a counterclockwise direction two full turns before operating the pump.

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



1. Connect the hydraulic ram, hose and pump unit together, ensure that you have securely fastened the couplers before pumping.
2. Open the oil filler/breather screw (P7).
3. Firmly close the release valve (P29) by turning it clockwise.
4. Adjust the ram slowly to make the load coaxial with the ram.
5. The pump can be used in any position from horizontal to vertical. Always keep the hose end of the pump downward when it is not horizontal.
6. Pump the handle (P37) up and down to extend the ram and apply hydraulic pressure.
7. When work is done, SLOWLY and CAREFULLY turn the release valve (P29) counter-clockwise (never more than one turn) to release the pressure until ram retracts to desired position.
8. Close the oil filler breather screw (P7).



USING ATTACHMENTS

Some components in this set do not match the maximum pressure rating of the pump and ram. ALWAYS monitor pressure, load or position using suitable equipment. Pressure may be monitored by adding a manifold and pressure gauge (not included). Using an inline pressure gauge, you can 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 in². When extension tubes in this kit are used, the rated capacity is always reduced by 50% for each tube that is connected. Attachments and extension tubes must always be aligned and fully engaged so ram force is straight, avoiding an off-centre load condition. If bowing or bending of ram or any attachment occurs during use, "STOP", release pressure immediately and reconsider application.

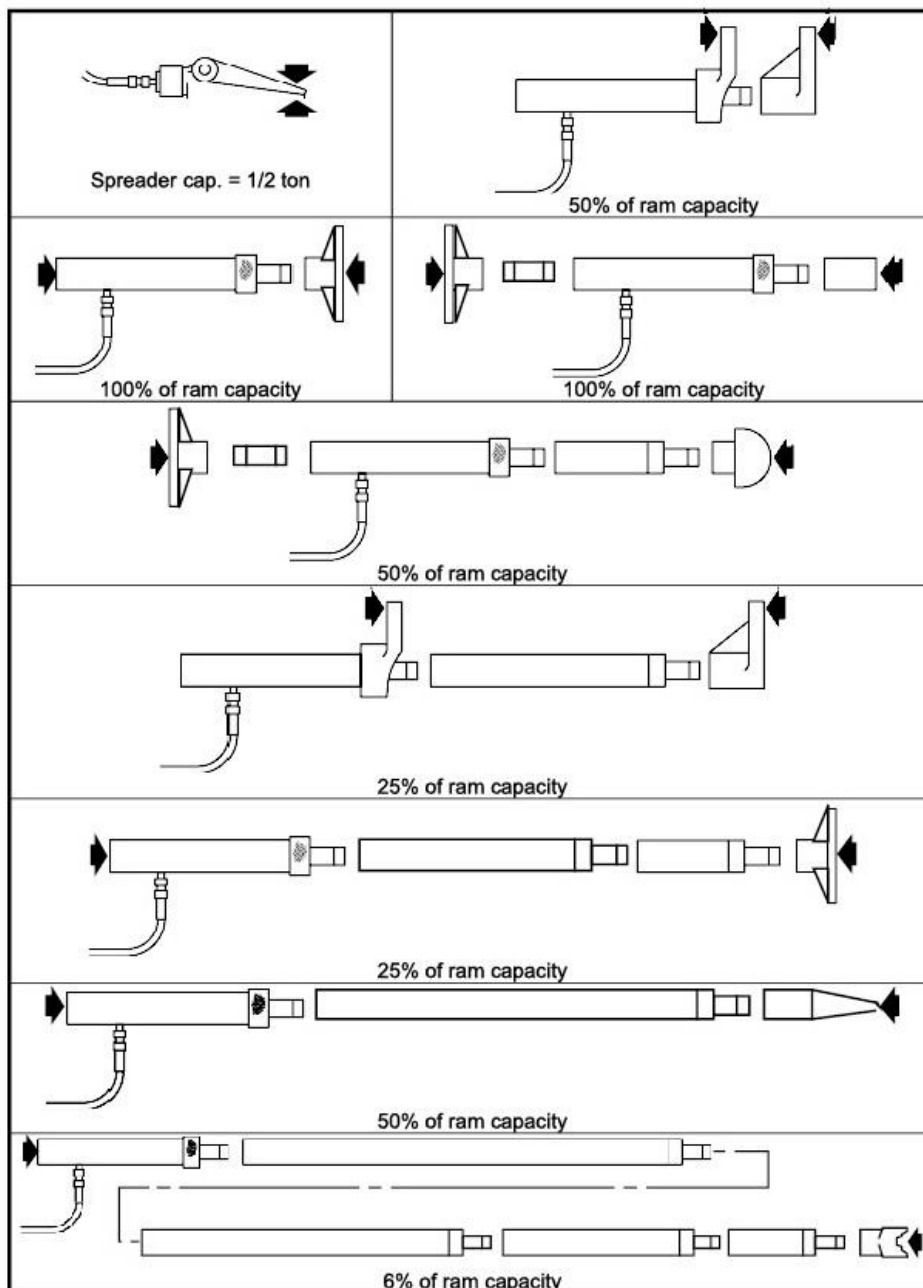
PORTA POWER KIT					
01	Hydraulic Pump	1	06	Ram Toe	1
02	Ram	1	07	Plunger Toe	1
03	Spreader	1	08	Wedge Head	1
04	Blow Mold Case	1	09	90° V Base	1
05a	Extension 110mm	1	10	Male Connector	1
05b	Extension 265mm	2	11	Serrated Saddle	1
05c	Extension 365mm	1	12	Rubber Head	1
05d	Extension 520mm	1	13	Flat Base	1

Ram Attachments

- **Extensions** connect in different combinations to reach desired lengths.
- **Male Connector** connects the female end of the Ram to a Base.
- **Flat Base** is used on the stationary side to spread out the force of the Ram.
- **90° V Base** offsets the force of the Ram when there is not a straight line between the stationary side and the damaged side, or to spread out force on curved surfaces.
- **Serrated Saddle** fits on the pushing end to prevent slipping.
- **Rubber Head** is used for popping dents out of sheet metal such as doors or body panels and to minimise damage to the work surface.
- **Wedge Head** repairs small dents and areas located in angles and tight spaces.
- **Ram Toe and Plunger Toe** are used together to allow spreading in areas that the Ram cannot fit into.

Note: The Ram Toe and Plunger Toe must **only** be used together to prevent an off-centre load.

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.



5. INSPECTION

- Prior to each use conduct a visual inspection checking for abnormal conditions, such as cracked welds, leaks, and damaged, loose, or missing parts.
- This Porta Power Kit shall always be maintained in accordance with the maintenance instructions. No alterations or modifications shall be made.
- Inspections shall be performed in accordance with this owner's manual.
- The Porta Power Kit must be inspected immediately if it is believed to have been subjected to abnormal load or shock.
- Owners and /or operators should be aware that repair of this product may require specialised equipment and knowledge (refer to maintenance section).

6. MAINTENANCE

- When not in use, store the equipment in a dry location with the pump piston (P18/20) and the ram fully retracted.
- Periodically check the ram and pump piston for signs of rust or corrosion. Clean exposed areas with a clean oiled cloth.



Never use sandpaper or abrasive material on these surfaces.

- A coating of light lubricating oil to pivot points, axles and hinges will help to prevent rust and assure that pump assemblies move freely. Periodically lubricate the pivot points, axles and hinges with a light lubricating oil as needed.
- With ram fully lowered, set pump unit in its normal, level position. Remove the oil filler breather screw (p07) to check the hydraulic oil level. If it is not adequate, add high quality hydraulic jack oil as necessary.



DO NOT use brake fluid or any other improper fluid and avoid mixing different types of oil when adding hydraulic oil.

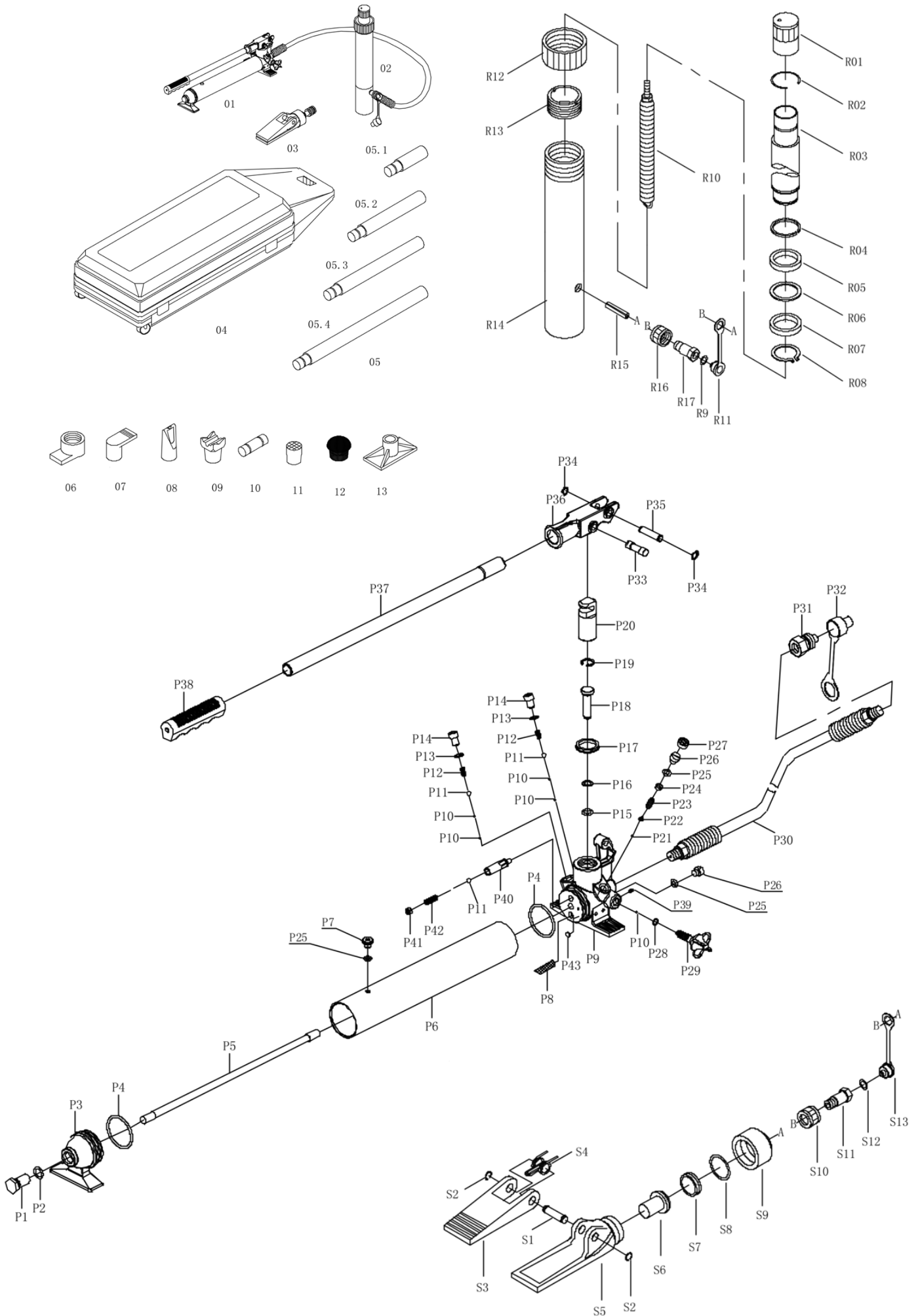
- To ensure best performance and longer equipment life, replace the complete (650ml) hydraulic oil at least once a year.
- With ram fully lowered, remove the oil filler breather screw (P07).
- Dispose of used hydraulic oil in accordance with local regulations.
- When equipment efficiency drops, bleed air from hydraulic system :Turn the release valve counter-clockwise by 1-1/2 turns, with ram fully retracted and release valve open, pump the handle rapidly for 10-20 times.
- It is recommended that an annual inspection be done by qualified technicians.
- Tighten connections as needed. Use pipe thread sealing compound when servicing connections.
- Only use a high quality hydraulic jack 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. This will also void warranty.
- Check the oil level by placing the pump in an upright position.

7. STORAGE

This Hydraulic Porta Power Kit should always be stored in a dry location with the hydraulic pump piston and ram fully retracted on a level surface. Coupler valves should always be screwed in when not in use to keep equipment clean. Always keep couplers and valves debris, dirt and dust free.

8. SERVICE & REPAIR

Any Hydraulic Porta Power 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 and decals shall be used on this equipment. Annual inspection of the Porta Power Kit 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 LIST

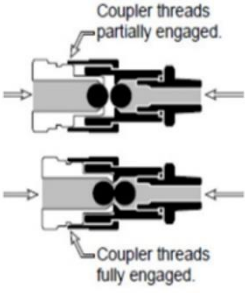
No:	Description	Qty
PORTA POWER KIT		
1	Hydraulic pump	1
2	Ram	1
3	Spreader	1
3	Blow mold case	1
5	Extension tube set	1
6	Spreader ram toe	1
7	Spreader plunger toe	1
8	Wedge head	1
9	90° V base	1
10	Male connector	1
11	Serrated saddle	1
12	Rubber head	1
13	Flat base	1
SPREADER		
S1	Pin	1
S2	Retaining ring	2
S3	Spreader mouth	1
S4	Spring	1
S5	Fixed mouth	1
S6	Small piston	1
S7	Piston ring	1
S8	O ring	1
S9	Top cap	1
S10	Nut	1
S11	Ram connector	1
S12	O ring	1
S13	Dust cap	1
RAM		
R01	Protection cap	1
R02	Circlip	1

No:	Description	Qty
RAM CONT		
R03	Piston rod	1
R04	Spacing ring	1
R05	Washer	1
R06	PTFE washer	1
R07	U-ring	1
R08	Retaining ring	1
R09	O-ring	1
R10	Spring	1
R11	Dust cap	1
R12	Protection bushing	1
R13	Spacing ring	1
R14	Ram assembly	1
R15	Pin	1
R16	Nut	1
R17	Fitting	1
PUMP		
P1	Screw	1
P2	O-ring	1
P3	Pump foot	1
P4	O-ring	2
P5	Tie rod	1
P6	Reservoir	1
P7	Oil Filler Breather Screw	1
P8	Oil filter	1
P9	Pump Assembly	1
P10	Steel ball	5
P11	Steel ball	3
P12	Spring	2
P13	Washer	2
P14	Screw	2

No:	Description	Qty
PUMP CONT		
P15	O-ring	1
P16	PTFE Washer	1
P17	U-ring	1
P18	Small piston	1
P19	Retaining ring	1
P20	Big piston	1
P21	Steel ball	1
P22	Ball cup	1
P23	Spring	1
P24	Screw	1
P25	O-ring	3
P26	Screw	2
P27	Plastic cap	1
P28	O-ring	1
P29	Release valve	1
P30	Plastic cap	1
P31	Hose fitting	1
P32	Dust proof cover	1
P33	Pin	1
P34	Retaining ring	2
P35	Pin	1
P36	Handle socket	1
P37	Handle	1
P38	Handle sleeve	1
P39	Screw	1
P40	Valve base	1
P41	Screw	1
P42	Spring	1
P43	Alnico	1

TROUBLESHOOTING

PROBLEM	SYMPTOM	CAUSE	CONCLUSION	SOLUTION
Ram will not lift	Pump has resistance but no lift	Release valve not tightly closed	Bypass through release valve	Ensure Release tightly closed
	Pump has no resistance, lift ram will not raise	Air in Hydraulic system	Air cavitation in pump and or lift ram	Bleed system
	Pump has no resistance, lift ram will not raise	Overload actuated	Relief valve needs reset	Contact Qualified Technician for repairs
	Pump has no resistance, lift ram will not raise	Load weight exceeds Lift Capacity Overload actuated	Higher capacity porta power set required Relief valve needs reset	Select Higher Capacity Ram Contact Qualified Technician for repairs
Ram will not load	Load cannot be sustained, lift ram drops under load	Release valve not tightly closed	Bypass through release valve	Contact Qualified Technician for repairs
	Load cannot be sustained, lift ram drops under load	Damaged Main Seal	Replace main ram seals	Contact Qualified Technician for repairs
	Load cannot be sustained, lift ram drops under load Pump handle rises	Main check valve obstructed	Replace Main check valve ball and reseal valve seat	Contact Qualified Technician for repairs
Ram will not lower after unloading	Ram rises after retracting	Reservoir overfilled	Pump failure due to cavitation caused by excess reservoir level	Bleed system
	Release valve pin siezed	Linkages binding	Dry release valve pin	Lubricate release valve 32gr Hydraulic oil
Poor lift performance *larger capacity ram used	Pump has no resistance, lift ram will not raise to full stroke	Fluid level low	Drain fluid to correct level	Fill fluid to correct level the Bleed system
	Pump has no resistance, lift ram will not raise to full stroke	Air trapped in system	Lift ram raised for extended period causing air ingress to hydraulic system	With ram fully retracted, remove oil filler plug to let pressurised air escape reinstall oil filler plug , Bleed system
	*Pump has no resistance, lift ram will not raise to full stroke	*Ram raises to partial extension only	*Ram oil capacity larger than reservoir capacity	*Select higher capacity mated pump and ram set

PROBLEM	SYMPTOM	CAUSE	CONCLUSION	SOLUTION
Will not lift to full extension	Lift ram has limited stroke, pump loses resistance	Fluid level low	Lift ram raised for extended period causing air ingress to hydraulic system	Fill fluid to correct level the Bleed system
Ram will not retract, hose and ram under pressure	Ram will not retract when release is opened	Coupler not tightened to fully engaged position	Coupler loose causing one way flow only	Tighten coupling using 2 adjustable wrenches till couplers are fully engaged to reopen two way flow 

WARRANTY

TradeQuip 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.

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.



All images and illustrations shown are for reference purposes only. All information, specifications and illustrations in this manual are based on the latest information available at the time of publication and are subject to change without notice. The information in this manual is periodically revised to ensure the latest information is included. Download the latest version of this manual and other related technical documentation from www.tqbbrands.com.au.