

4 Ton and 10 Ton Portable Repair Kit

#### **OPERATING MANUAL • WARNING INFORMATION • PARTS LIST**



**CSEPR4T** 4 TON



**10 TON** 

	CSEPR4T	CSEPR10T
Maximum Capad	city 4 Ton @ 7,250 psig 1	10 Ton @ 7,250 psig
Ram Minimum H	leight 10.5"	12.7"

**SPECIFICATIONS** 

Stroke .......5.1" 

Shipping Weight.......45.2 Lbs.......71.7 Lbs.

Manufactured to comply with the ASME PASE-2019 Safety Standard

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CSEPR4T/CSEPR10T 1 03/31/20



4 Ton and 10 Ton Portable Repair Kit

#### ARNING INFORMATION



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



**WARNING:** Indicates a hazardous situation which, if not avoided, could result in death or serious injury.



#### IMPORTANT: READ THESE INSTRUCTIONS BEFORE OPERATING

BEFORE USING THIS DEVICE, READ THIS MANUAL COMPLETELY AND THOROUGHLY, UNDERSTAND ITS OPERATING PROCEDURES, SAFETY WARNINGS AND MAINTENANCE REQUIREMENTS.

It is the responsibility of the owner to make sure all personnel read this manual prior to using the device. It is also the responsibility of the device owner to keep this manual intact and in a convenient location for all to see and read. If the manual or product labels are lost or not legible, contact Cornwell for replacements. If the operator is not fluent in English, the product and safety instructions shall be read to and discussed with the operator in the operator's native language by the purchaser/owner or his designee, making sure that the operator comprehends its contents.

#### THE NATURE OF HAZARDOUS SITUATIONS

#### **AWARNING**

The use of portable automotive supporting devices are subject to certain hazards that cannot be prevented by mechanical means, but only by the exercise of intelligence, care, and common sense. It is therefore essential to have owners and personnel involved in the use and operation of the equipment who are careful, competent, trained, and qualified in the safe operation of the equipment and its proper use. Examples of hazards are dropping, tipping or slipping of loads caused primarily by improperly securing loads, overloading, off-centered loads, use on other than hard level surfaces, and using equipment for a purpose for which it was not designed.

#### METHODS TO AVOID HAZARDOUS SITUATIONS

### **AWARNING**



- · Read, study, understand and follow all instructions before operating this device.
- The kit owner is responsible for the kit being used in accordance with OSHA, state, and local safety standards.



- Wear eye protection that meets ANSI Z87.1 and OSHA standards, users and bystanders.
- · Do not use kit beyond its rated capacity.
- . When attachments and adapters are used with the kit, the rated capacity of the kit shall be no greater than the rated capacity of the lowest rated component or combination of components that makes up the kit. Please refer to the Owner's Manual section titled APPLICABLE FORCE FOR COMPONENT SETUPS. Use a pressure gauge that indicates force applied. Wedge Rams are rated at 1-ton capacity. Rubber Heads are rated at 1/2-ton capacity in the 4-ton kit and 1-ton capacity in the 10-ton kit.
- · Do not overextend the rams.
- When using extension tubes, position the shortest tube farthest away from the cylinder.
- Attachments and extension tubes must be aligned and fully engaged so the ram force is straight and avoids off-center conditions.
- · Before operating, tighten all hose, gauge and manifold connections so they are secure and leak free. Do not over tighten or it may cause premature thread failure or split pressure fittings. Tighten all hose quick disconnect fittings by hand only.
- Do not subject the hose to extreme heat or cold, sharp surfaces, abrasion, impact, kinking, twisting, curling, bending or any condition that restricts or affects fluid flow.



- Make sure setup is stable and secure before performing any work.
- Use this kit for the intended purpose of vehicle body/frame repair only.
  - Only components supplied with this kit shall be used with this kit.
  - No alterations or modifications shall be made to any of the kit components.
  - Failure to heed these warnings may result in serious or fatal personal injury and/or property damage.



WARNING: This product can expose you to chemicals including nickel, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

#### CONSEQUENCES OF NOT AVOIDING HAZARDOUS SITUATIONS

## **▲**WARNING

Failure to read this manual completely and thoroughly, understand its OPERATING INSTRUCTIONS, SAFETY WARNINGS, MAINTENANCE INSTRUCTIONS and not comply with them, and neglecting the METHODS TO AVOID HAZARDOUS SITUATIONS could cause accidents resulting in serious or fatal personal injury and/or property damage.



4 Ton and 10 Ton Portable Repair Kit

#### **SETUP**

Please refer to the exploded view drawings on page 6-11 in this manual in order to identify parts:

- 1. Remove the hose from the pump. Remove any pipe dope tape from the pump. Put 2 layers of pipe dope tape around the threads of the adapter, around the threads of the hose, and around the threads of the gauge. Thread the adapter in the pump until tight with the gauge port sticking straight up. Tighten the hose in the end of the adapter. Tighten the gauge in the adapter with the face of the gauge pointing toward the pump handle.
- 2. Install the ram at the end of the hose and secure the quick disconnect fittings together by hand tightening the threaded sleeve on the ram fitting.
- 3. Insert the pump handle in the pump linkage receiver and rotate the handle clockwise until tight. Before operating the pump, turn the reservoir vent screw in a counterclockwise direction until it stops.
- 4. During shipping or handling air may have become trapped in the hydraulic system. If the pump is not providing a full incremental pump stroke or the ram feels spongy, it will be necessary to purge the air out of the hydraulic system:
  - a. Before operating the pump, turn the reservoir vent screw in a counterclockwise direction until it stops.
  - b. Place the pump horizontally on a table. Position the hose and ram over the edge of the table, lower than the pump with the ram piston pointing down.
  - c. Close the pump's release valve and pump the ram to its complete or its furthest extension. Open the pump's release valve to retract the ram all the way. Conduct this procedure several times without a load.
  - d. Repeat steps "b" and "c" until all air is purged from the system.

#### **OPERATION**



This is the safety alert symbol used for the **OPERATING INSTRUCTIONS** section of this manual to alert you to potential personal injury hazards. Obey all instructions to avoid possible injury or death.

- 1. Study the work to be done in order to determine the type ram and other attachments you will be using. Consult the enclosed chart titled "Applicable force for component set ups" in order to determine the maximum allowable force to be used in your specific setup. All rams have female hose disconnects attached to them, and the end of the hose has the male quick disconnect attached to it. Insert the male quick disconnect at the end of the hose all the way in to the ram's female quick disconnect. Slide the female connector's threaded sleeve on to the threads of the male connector and hand tighten. Never use any tools to tighten this connection.
- Consult this Owner's Manual section titled APPLICABLE FORCE FOR COMPONENT SET UPS for typical attachment and extension tube
  setups and pay very close attention to the corresponding load ratings of certain attachment connections. The use of extension tubes,
  ram or plunger toes greatly reduces the hydraulic system's capacity. When using extension tubes, put the shortest tubes on the ends
  of the setup.
- 3. The pump may be operated in the horizontal or vertical position but the pump must point down when used in the vertical position.
- 4. Make sure all hydraulic and attachment connections are fully engaged and tight so ram force is straight in order to avoid off-center load conditions.
- 5. During setup, make sure the hose routing avoids kinks, twists, curls or bends that will impede hydraulic fluid flow. Do not use the hose as a means to carry the kit components. Do not subject the hose to any hazards such as fire, extreme heat or cold, sharp surfaces, or heavy impact. WARNING: Risk of fluid injection injury. NEVER GRASP LEAKING PRESSURIZED HOSE, FITTING OR COMPONENT, OR EXPOSE BODY PARTS TO PRESSURIZED FLUID. SEVERE PERSONAL INJURY MAY RESULT.
- 6. Always use the force gauge to make sure you are within the required force range when operating the system.
- 7. In order to pump the ram it will be necessary to turn the release valve knob in a clockwise direction until tight. Tighten by hand only.
- 8. Pumping the handle up and down transfers the hydraulic fluid from the pump's reservoir, through the hose, in to the cylinder and extends the ram with each incremental pump stroke.
- 9. To release the pressure and return the ram back in to its cylinder, turn the release valve knob in a counterclockwise direction very slowly. Turning the release valve knob slowly will determine the speed in which the ram will retract back into its cylinder.

IMPORTANT: The pump includes an overload valve that will activate at the pump's rated capacity only. If the setup requires a reduced rating, the operator is responsible for using the gauge to determine when to stop pumping since the overload valve is set to a higher rating.

- 10. Make sure the ram is completely retracted inside its cylinder before disconnecting the hose from the cylinder.
- 11. The air and hydraulic quick disconnect fittings are repeatedly disconnected and exposed to shop or work place floors that are covered with dirt and debris. It is important to use the dust caps provided to prevent contaminants from entering the hydraulic systems.
- 12. Based on continuous engagement and disengagement of the hose from the cylinder, eventually it will become necessary to add hydraulic fluid to the pump's reservoir. Completely retract the ram before adding hydraulic fluid. Do not overfill in order to avoid personal injury and hydraulic malfunction. Use only hydraulic jack oil. Other fluids will cause damage to the hydraulic seals.



4 Ton and 10 Ton Portable Repair Kit

#### PREVENTATIVE MAINTENANCE



This is the safety alert symbol used for the PREVENTATIVE MAINTENANCE section of this manual to alert you to potential personal injury hazards. Obey all instructions to avoid possible injury or death.

- 1. Always store the kit in a well protected area where it will not be exposed to inclement weather, corrosive vapors, abrasive dust, or any other harmful elements. The jack must be cleaned of water, snow, sand, grit, oil, grease or other foreign matter before using.
- Based on continuous engagement and disengagement of the hose from the cylinder, eventually it will become necessary to add hydraulic fluid to the pump's reservoir. Completely retract the ram before adding hydraulic fluid. Do not overfill in order to avoid personal injury and hydraulic malfunction. Use only hydraulic jack oil. Other fluids will cause damage to the hydraulic seals.

Warning: In order to prevent seal damage and kit failure, never use alcohol, hydraulic brake fluid or transmission oil in the pump.

- 3. Every kit owner is responsible for keeping the kit labels clean and readable. Use a mild soap solution to wash external surfaces of the kit components but not any moving hydraulic components.
- Do not attempt to make any hydraulic repairs unless you are a qualified hydraulic repair person that is familiar with this equipment.
   Repairs must be performed by an authorized service center.

#### TROUBLESHOOTING

Important: If repairs are necessary they must be performed in a dirt-free environment by qualified personnel who are familiar with this equipment.

PROBLEM	ACTION
1. Unit will not lift rated load.	Purge air from hydraulic system by following procedure under SETUP.
2. Unit will not sustain rated load or feels "spongy" under rated load.	Purge air from hydraulic system as above.
3. Unit will not lift to full height.	Purge air from hydraulic system as above.
4. Handle tends to raise up while the unit is under rated load.	Pump the handle rapidly several times to push oil past ball valves in power unit.
5. Unit still does not operate.	Contact Cornwell authorized hydraulic service center.

#### **INSPECTION**

Visual inspection should be made before each use of the engine stand, checking for damaged, loose or missing parts. Each engine stand must be inspected by a manufacturer's repair facility immediately, if subjected to an abnormal load or shock. Any stand which appears to be damaged in any way, is found to be badly worn, or operates abnormally MUST BE REMOVED FROM SERVICE until necessary repairs are made by a manufacturer's authorized repair facility. It is recommended that an annual inspection of the stand be made by a manufacturer's authorized repair facility and that any defective parts, decals or warning labels be replaced with manufacturer's specified parts. A list of authorized repair facilities is available from the manufacturer.



4 Ton and 10 Ton Portable Repair Kit

#### WARRANTY COVERAGE

Cornwell Quality Tools Company ("Cornwell") warrants this product against defects in material and workmanship for a period of TWO (2) YEAR from the date of original retail purchase. Subject to the conditions and limitations set forth below, Cornwell will, at its option, either repair or replace any part of the product(s) that proves defective by reason of improper workmanship or materials.

This warranty does not cover any damage to this product that results from accident, abuse, misuse, natural or personal disaster, or any unauthorized disassembly, repair, or modification. Repairs, disassembly and modification are only authorized to be made by Cornwell or a Cornwell Authorized Warranty Center.

#### **WARRANTY SERVICE**

In order to have your tool repaired, return the tool to any Cornwell Authorized Warranty Center, freight prepaid. Please include a copy of your proof of purchase and a brief description of the problem. The tool will be inspected and if any part or parts are found to be defective in material or workmanship, they will be repaired free of charge, and the repaired tool will be returned to you freight prepaid.

#### **EXCLUSIONS AND LIMITATIONS**

THIS WARRANTY AND THE REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, REMEDIES AND CONDITIONS, WHETHER ORAL OR WRITTEN, EXPRESS OR IMPLIED. CORNWELL SPECIFICALLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, TO THE EXTENT PERMITTED BY APPLICABLE LAW, ANY WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IF CORNWELL CANNOT LAWFULLY DISCLAIM IMPLIED WARRANTIES UNDER THIS LIMITED WARRANTY, ALL SUCH IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

IN NO EVENT SHALL CORNWELL BE LIABLE TO THE PURCHASER OR TO THE USER OF A CORNWELL PRODUCT FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES BASED UPON BREACH OF WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, TORT, OR ANY OTHER LEGAL THEORY. SUCH DAMAGES INCLUDE, WITHOUT LIMITATION, EXPENSES, LOST REVENUES, LOST SAVINGS, LOST PROFITS, OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING FROM THE PURCHASE, USE OR INABILITY TO USE THE CORNWELL PRODUCT.

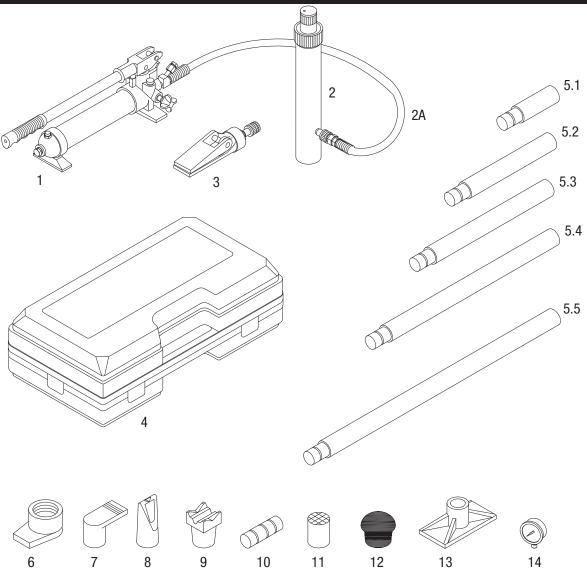
Some states do not allow the exclusion or limitation of incidental or consequential damages or exclusions or limitation on the duration of implied warranties or conditions, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary by state.

Repair kits and replacement parts are available for many Cornwell products, regardless of whether or not the product is still covered by a warranty plan.



4 Ton and 10 Ton Portable Repair Kit

# 4 Ton Portable Repair Kit - Parts



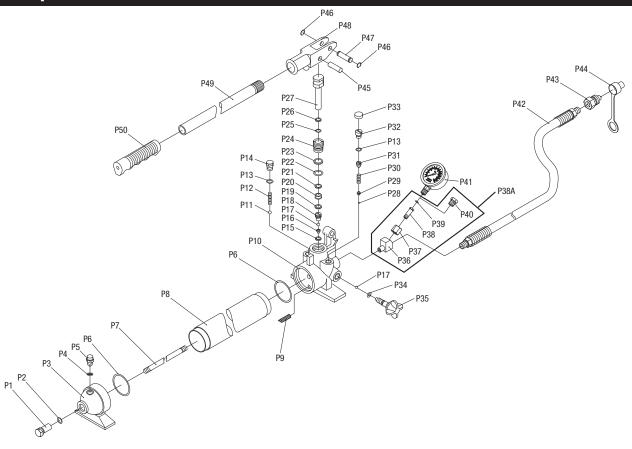
Item	Part		
No.	No.	Description	Qty.
1	RS4TPNG	Pump (incl. hose) - Neon Green	1
2	RS4TRNG	Ram - Neon Green	1
2A	RSHS	Hose	1
3	RSSPRNG	Spreader - Neon Green	1
4	RS4T01	Case	1
5.1	RS4T02.1NG	3.23" Extension - Neon Green	1
5.2	RS4T02.2NG	5.04" Extension - Neon Green	1
5.3	RS4T02.3NG	8.50" Extension - Neon Green	1
5.4	RS4T02.4NG	16.54" Extension - Neon Green	1
5.5	RS4T02 5NG	19 49" Extension - Neon Green	1

Item No.	Part No.	Description	Qty.
6	RS4T04ANG	Ram Toe - Neon Green	1
7	RS4T05NG	Plunger Toe - Neon Green	1
8	RS4T06NG	Wedge Head - Neon Green	1
9	RS4T07NG	V-Base - Neon Green	1
10	RS4T08	Male Connector	1
11	RS4T09NG	Serrated Saddle - Neon Green	1
12	RS4T10	Rubber Head	1
13	RS4T03NG	Flat Base - Neon Green	1
14	RSPG	Pressure Gauge	1
	RSCSEPR4TPLK	Product Label Kit (not shown)	1



4 Ton and 10 Ton Portable Repair Kit

## 4 Ton Pump - Parts



Item No.	Part No.	Description	Qty.	Item No.	Part No.	Description	Qty.
P1		Screw	1	P27		Piston	1
P2	*	0-Ring	1	P28	*	Steel Ball	1
P3	RSP12NG	Back Cover - Neon Green	1	P29		Ball Cap	1
P4		Nylon Ring	1	P30	*	Spring	1
P5	RSP09A	Oil Filler Assembly (incl. #4)	1	P31		Screw	1
P6	*	0-Ring	2	P32		Screw	1
P7		Tie Rod	1	P33		Screw Protector	1
P8		Reservoir	1	P34	*	0-Ring	1
P9		Oil Filter	1	P35	RSP15NG	Release Valve - Neon Green	1
P10		Pump	1	P36		Adapter	1
P11	*	Steel Ball	1	P37		Nut	1
P12	*	Spring	1	P38		Gauge Adapter	1
P13	*	O-Ring	2	P38A	RSPGAA	Gauge Adapter Assembly	1
P14		Screw	1			(incl. #P36-P40)	
P15	*	Nylon Ring	1	P39		Ò-Ring	1
P16	*	Valve Base	1	P40		Plunger	1
P17	*	Steel Ball	2	P41	RSPG	Pressure Gauge	1
P18		Valve Cover	1	P42	RSHS	Hydraulic Hose	1
P19	*	Nylon Ring	1	P43	RSP17	Coupler	1
P20	*	Sealing Ring	1	P44	RSP18	Hose Dust Cover	1
P21	*	Washer	1	P45		Pin	1
P22	*	0-Ring	1	P46		Retaining Ring	1
P23	*	Washer	1	P47		Pin	1
P24		Piston Base	1	P48		Handle Socket	1
P25	*	0-Ring	1	P49	RS4TP41NG	Handle (incl. #P50) - Neon Green	1
P26	*	Washer	1	P50		Handle Sleeve	1

Only items identified by part number are available for purchase.
\* Items identified by an asterisk are available in Pump Seal Kit, RSPSKA.

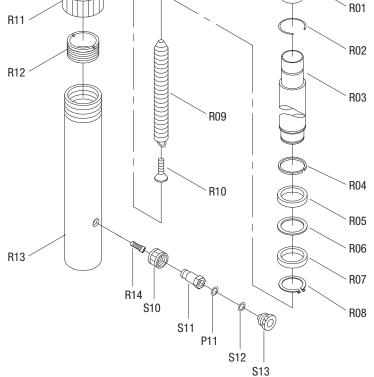


# **CSEPR4T AND CSEPR10T**4 Ton and 10 Ton Portable

Repair Kit

## 4 Ton Ram - Parts

Item No.	Part No.	Description	Qty.
R01	RS4TR01	Cover	1
R02		Circlip	1
R03		Piston Rod	1
R04	*	Circlip	1
R05	*	Bushing	1
R06	*	Nylon Ring	1
R07	*	Sealing Ring	1
R08	*	Circlip	1
R09		Spring	1
R10		Screw	1
R11	RS4TR12	Protection Cap	1
R12		Ring for Ram	1
R13		Cylinder	1
R14		Screw	1
	RSCPRA	Coupler	1
		(incl. #S10, S11, P11, S12, S13)	



# 4 Ton Spreader - Parts

Item No.	Part No.	Description	Qty.
No. S1 S2 S3 S4 S5 S6 S7 S8 S9		Pin Circlip Movable Jaw Spring Fixed Jaw Piston Cup Seal O-Ring End Cap Coupler (incl. #S10, S11, P11, S12, S13)	Otty.  1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Only itom	a identified by no	t number are available for nurchase	S5 S2

Only items identified by part number are available for purchase.
\* Items identified by an asterisk are available in Ram Seal Kit, RS4TRSKA.

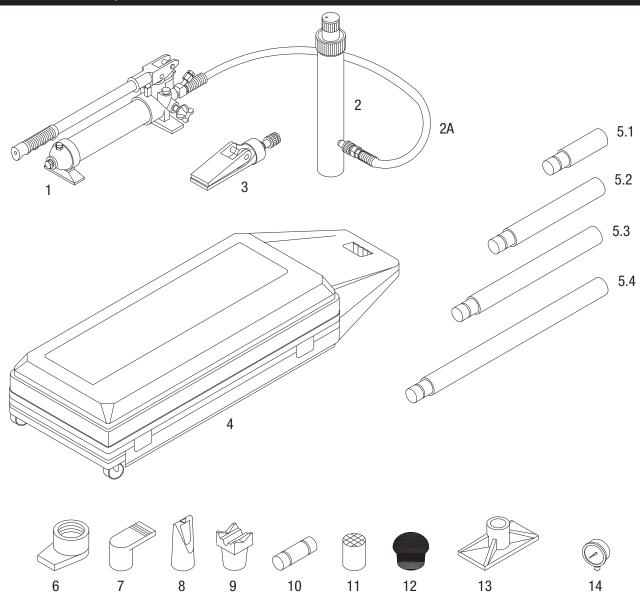
Only items identified by part number are available for purchase.

\* Items identified by an asterisk are available in Spreader Seal Kit, RSSPRSK.



4 Ton and 10 Ton Portable Repair Kit

# **10 Ton Portable Repair Kit - Parts**

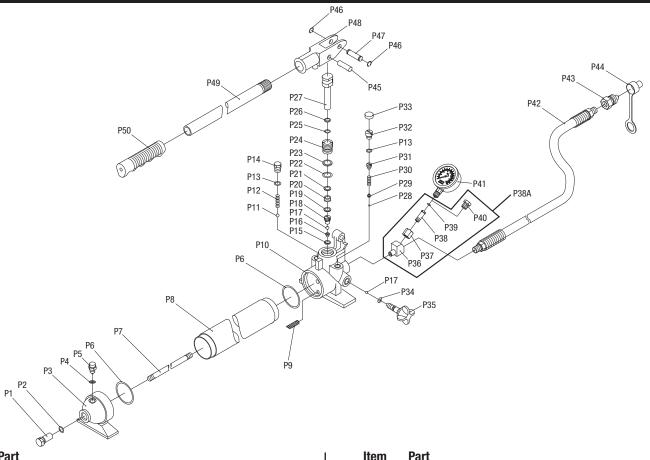


Item No.	Part No.	Description	Qty.	Item No.	Part No.	Description	Qty.
1	RS10TPNG	Pump (incl. hose) - Neon Green	1	6	RS10T04ANG	Ram Toe - Neon Green	1
2	RS10TRNG	Ram - Neon Green	1	7	RS10T05NG	Plunger Toe - Neon Green	1
2A	RSHS	Hose	1	8	RS10T06NG	Wedge Head - Neon Green	1
3	RSSPRNG	Spreader - Neon Green	1	9	RS10T07NG	V-Base - Neon Green	1
4	RS10T01	Case	1	10	RS10T08	Male Connector	1
	RS10T01WH	Wheel with Hardware for Case	2	11	RS10T09NG	Serrated Saddle - Neon Green	1
5.1	RS10T02.1NG	4.33" Extension - Neon Green	1	12	RS10T10	Rubber Head	1
5.2	RS10T02.2NG	10.43" Extension - Neon Green	1	13	RS10T03NG	Flat Base - Neon Green	1
5.3	RS10T02.3NG	14.37" Extension - Neon Green	1	14	RSPG	Pressure Gauge	1
5.4	RS10T02.4NG	20.47" Extension - Neon Green	1		RSCSEPR10TPLK	Product Label Kit (not shown)	1



4 Ton and 10 Ton Portable Repair Kit

## **10 Ton Pump - Parts**



Item	Part			Item	Part		
No.	No.	Description	Qty.	No.	No.	Description	Qty.
P1		Screw	1	P27		Piston	1
P2	*	0-Ring	1	P28	*	Steel Ball	1
P3	RSP12NG	Back Cover - Neon Green	1	P29		Ball Cap	1
P4		Nylon Ring	1	P30	*	Spring	1
P5	RSP09A	Oil Filler Assembly (incl. #P4)	1	P31		Screw	1
P6	*	0-Ring	2	P32		Screw	1
P7		Tie Rod	1	P33		Screw Protector	1
P8		Reservoir	1	P34	*	O-Ring	1
P9		Oil Filter	1	P35	RSP15NG	Release Valve - Neon Green	1
P10		Pump	1	P36		Adapter	1
P11	*	Steel Ball	1	P37		Nut	1
P12	*	Spring	1	P38		Gauge Adapter	1
P13	*	0-Ring	2	P38A	RSPGAA	Gauge Adapter Assembly	1
P14		Screw	1			(incl. #P36-P40)	
P15	*	Nylon Ring	1	P39		0-Ring	1
P16	*	Valve Base	1	P40		Plunger	1
P17	*	Steel Ball	2	P41	RSPG	Pressure Gauge	1
P18		Valve Cover	1	P42	RSHS	Hydraulic Hose	1
P19	*	Nylon Ring	1	P43	RSP17	Coupler	1
P20	*	Sealing Ring	1	P44	RSP18	Hose Dust Cover	1
P21	*	Washer	1	P45		Pin	1
P22	*	0-Ring	1	P46		Retaining Ring	1
P23	*	Washer	1	P47		Pin	1
P24		Piston Base	1	P48		Handle Socket	1
P25	*	0-Ring	1	P49	RS10TP41NG	Handle (incl. #50) - Neon Green	1
P26	*	Washer	1	P50		Handle Sleeve	1

Only items identified by part number are available for purchase. \* Items identified by an asterisk are available in Pump Seal Kit, RSPSKA.

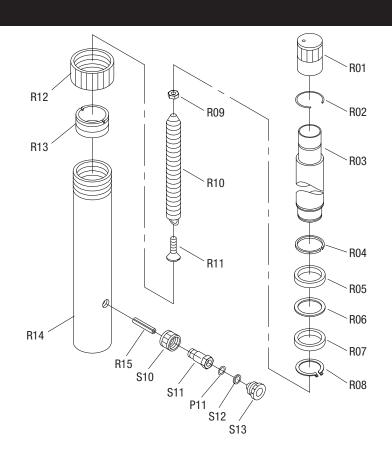


4 Ton and 10 Ton Portable Repair Kit

## 10 Ton Ram - Parts

Item No.	Part No.	Description	Qty.
R01	RS10TR01	Cover	1
R02		Circlip	1
R03		Piston Rod	1
R04	*	Circlip	1
R05	*	Bushing	1
R06	*	Nylon Ring	1
R07	*	Sealing Ring	1
R08	*	Circlip	1
R09		Nut	1
R10		Spring	1
R11		Screw	1
R12	RS10TR12	Protection Cap	1
R13		Ring for Ram	1
R14		Cylinder	1
R15		Screw	1
	RSCPRA	Coupler	
		(incl. #S10, S11, P11, S12, S13)	1

Only items identified by part number are available for purchase.
\* Items identified by an asterisk are available in Ram Seal Kit, RS10TRSKA.



# **10 Ton Spreader - Parts**

Item No.	Part No.	Description	Qty.					
S1		Pin	1					
S2		Circlip	2					
S3		Movable Jaw	1					
S4		Spring	1					
S5		Fixed Jaw	1					
S5 S6		Piston	1				0	
S7	*	Cup Seal	1					
S8 S9	*	0-Ring	1			,		S13
S9		End Cap	1					010
	RSCPRA	Coupler					S12	
		(incl. #S10, S11, P11, S12, S13)	1		$\wedge$		P11	
				64			S11	
						S10		
			S2 /			0.0		
					S9			
			S1 S1		\$8 \$7			
					31			
				S6				
			S3					
Only iter	ne identified by a	nart numher are available for nurchase		S5 S2				

Only items identified by part number are available for purchase.

<sup>\*</sup> Items identified by an asterisk are available in Spreader Seal Kit, RSSPRSK.