



**AMERICAN FORGE & FOUNDRY**

**MODEL NO.: 816SD**



# **4-Ton Hydraulic Body/Frame Repair Kit — Super Duty *Owner's Manual***



## **WARNING:**

**IMPORTANT: READ THESE INSTRUCTIONS AND ALL WARNINGS PRIOR TO USING THIS EQUIPMENT. UNDERSTAND ALL OPERATING PROCEDURES, SAFETY WARNINGS AND MAINTENANCE REQUIREMENTS. FAILURE TO DO SO COULD CAUSE AN ACCIDENT RESULTING IN SERIOUS OR FATAL INJURY AND/OR PERSONAL PROPERTY DAMAGE.**



## IMPORTANT

FOR YOUR SAFETY, PLEASE READ THESE INSTRUCTIONS CAREFULLY. THE OWNER AND OPERATOR SHALL HAVE AN UNDERSTANDING OF THIS PRODUCT AND SAFE OPERATING PROCEDURES PRIOR TO INITIAL USE. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE TO PROPERTY AND/OR SERIOUS PERSONAL INJURY. PLEASE KEEP THIS INSTRUCTION MANUAL SAFE FOR FUTURE USE.

## SAFETY INFORMATION

### WARNING

- 2.1 **Inspect before each use.** **DO NOT** use if broken, bent, cracked, or otherwise damaged parts are noted. If any component of this product has been subject to a shock load (a load dropped suddenly or unexpectedly), discontinue use until it has been checked by a factory authorized service centre.
- 2.2 The maximum ram capacity is 4 tons. **DO NOT** exceed this rated capacity.
- 2.3 When extension tubes are used, the rated capacity is always reduced by 50% for each tube connected.
- 2.4 The maximum spreader capacity is 0.5 tons. **DO NOT** exceed these rated capacities when using these attachments.
- 2.5 The maximum ram toe and plunger toe capacity is 0.5 tons. **DO NOT** exceed these rated capacities when using these attachments.
- 2.6 **DO NOT** use this equipment as a vehicle lifting device or as a vehicle support.
- 2.7 Keep children and other unauthorized persons away from work area.
- 2.8 Remove loose clothing. Remove ties, watches, rings and other jewelry, and contain long hair.
- 2.9 Always wear ANSI-approved safety goggles when operating the repair kit.
- 2.10 Keep proper balance and footing. Wear nonslip footwear and **DO NOT** overreach.
- 2.11 Only use this equipment on a surface that is stable, level, dry and not slippery. Ensure the surface can sustain the load. Keep the surface clean, tidy, and free from unrelated materials and ensure that there is adequate lighting.
- 2.12 When using this equipment, open the breather valve. Close it when not in use.
- 2.13 **DO NOT** allow the piston rod of ram to extend so far as to exceed the maximum ram stroke.
- 2.14 When coupler valves are disconnected, always use dust cap to keep the hydraulic system clean.
- 2.15 **DO NOT** drop any heavy objects onto the hose and **DO NOT** twist the hose. Always keep the hose clean to avoid damage to the hose and couplers.
- 2.16 Keep the equipment away from heat or fire, as this may cause damage or weaken the seals.
- 2.17 **DO NOT** operate this equipment when you are tired or under the influence of alcohol, drugs, or any intoxicating medication.
- 2.18 **DO NOT** allow any untrained persons to operate the equipment and **DO NOT** make any modifications to it.
- 2.19 **DO NOT** expose the equipment to rain or any other kind of bad weather.
- 2.20 Use a qualified person to maintain the equipment to keep it in good condition. Keep it clean for best and safest performance.
- 2.21 If the equipment needs repairing and/or there are any parts that need to be replaced, have it repaired by authorized technicians and only use the replacement parts supplied by the manufacturer.
- 2.22 **WARNING:** The warnings and cautions discussed in the instruction manual **DO NOT** cover all possible conditions and situation may occur. It must be understood by the operator that common sense and caution are factors which cannot be built in this product, but must be supplied by the operator.



**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](http://www.P65Warnings.ca.gov)



## SPECIFICATIONS

Product #	Ram Capacity (tons)	Pump Capacity (PSI)	Ram Closed Height	Extended Height		Effective Area		Net Weight
				Ram Extended Height	Extension Tubes Length (inch)	Dia. of Inner Ram Cylinder	Effective Area (sq. in)	
816SD	4	8,000	10.5"	15.24"	32.28 / 50.39 / 85.03 / 165.35 / 194.88	1.18"	1.09	40.79 lb.

## OPERATING INSTRUCTIONS

**NOTE:** Inspect before each use for evidence of fluid leaks, damaged hydraulic fittings, bent or broken attachments and missing parts.

- 3.1 Connect the hydraulic ram, hose, and pump unit together, ensure that you have securely fastened the couplers before pumping.
- 3.2 Firmly close the release valve by turning it clockwise.
- 3.3 Adjust the ram into position to ensure the load is centered with the ram.  
**NOTE:** 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.
- 3.4 Pump the handle up and down to supply pressure. This will send fluid from the pump reservoir into the high-pressure hose assembly and into the ram assembly.
- 3.5 Continue pumping until the ram reaches desired position
- 3.6 To release pressure, **SLOWLY** and **CAREFULLY** turn the release valve counterclockwise (**never more than one full turn**) to release the pressure until ram retracts to desired position.

## MAINTENANCE

- 4.1 When not in use, store the equipment in a dry location with the pump piston and the ram fully retracted.
- 4.2 Periodically check the ram and pump piston for signs of rust or corrosion. Clean exposed areas with a clean oiled cloth.  
**WARNING: Never use sandpaper or abrasive material on any surfaces of the unit.**
- 4.3 Applying 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.
- 4.4 With ram fully lowered, set the pump unit in its normal, level position. Remove the oil filler screw to check the hydraulic oil level. If it is not adequate, add high-quality hydraulic jack oil as necessary.  
**WARNING: DO NOT use brake fluid or any other improper fluid and avoid mixing different types of oil when adding hydraulic oil.**
- 4.5 To ensure best performance and longer equipment life, replace the complete hydraulic oil at least once a year. With ram fully lowered, remove the oil filler screw. 350ml of hydraulic oil is required for 4-ton repair kits when changing the oil.  
**NOTE:** Dispose of hydraulic oil in accordance with local regulations.
- 4.6 When equipment efficiency drops, purge away air from hydraulic system: Turn the release valve counterclockwise by 1-1/2 turns, with ram fully retracted and release valve open, pump the handle rapidly for 10–20 times.
- 4.7 It is recommended that an annual inspection be done by qualified technicians.



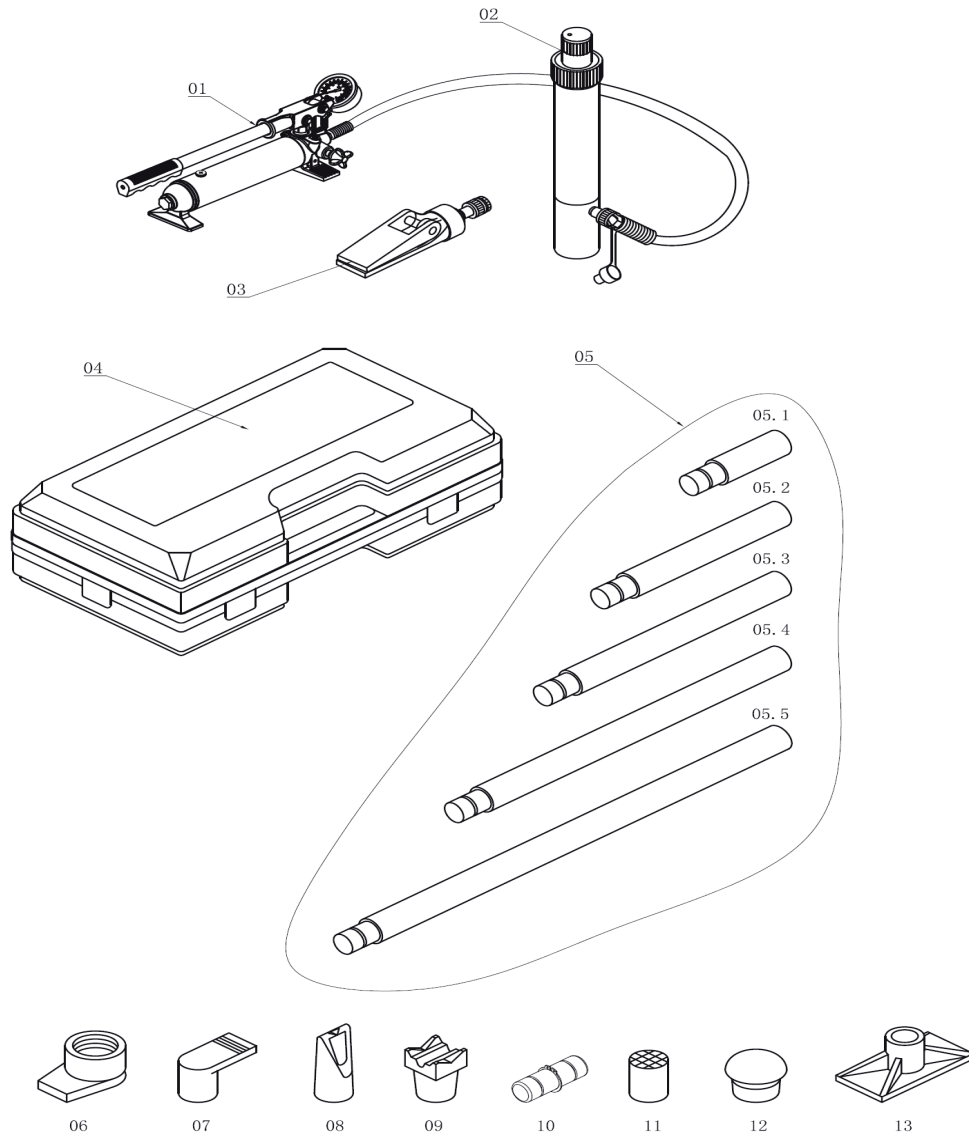
## TROUBLESHOOTING

PROBLEM	CAUSE	REMEDY
Ram will not lift load	1. Release valve not tightly closed 2. Overload condition 3. Air trapped in system	1. Firmly close release valve 2. Remove the overload condition 3. Purge away air from system (see 4.6 for instructions)
Ram will not maintain load	1. Release valve not tightly closed 2. Hydraulic unit malfunction	1. Firmly close release valve 2. Replace ram and/or pump
Ram will not lower after unloading	1. Reservoir overfilled 2. Linkages binding	1. Drain oil to proper level 2. Clean and lubricate moving parts
Ram will not extend to full stroke	1. Oil level low	1. Add hydraulic oil
Poor performance	1. Oil level low 2. Air trapped in system	1. Add hydraulic oil to the system 2. Purge air from system (see 4.6 for instructions)



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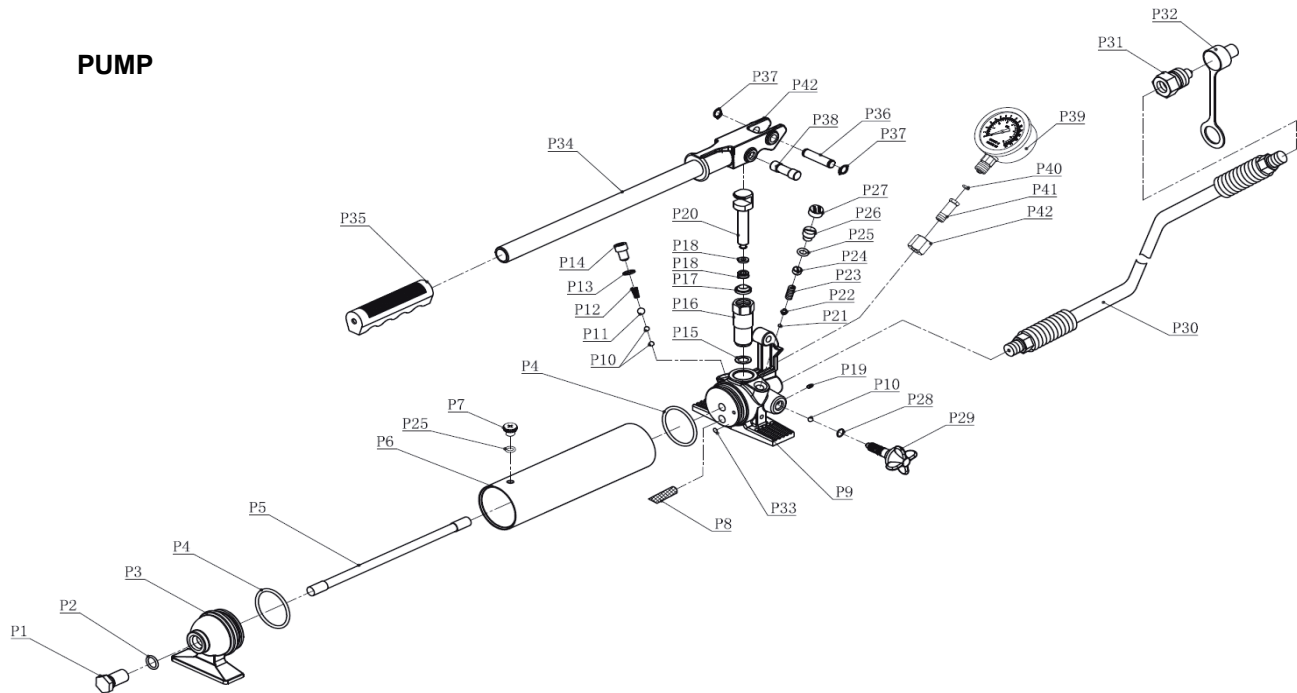
**PARTS LIST: 10-TON SUPER DUTY HYDRAULIC BODY/FRAME REPAIR KIT —  
PARTS BREAKDOWN — Prod. No. 816SD**



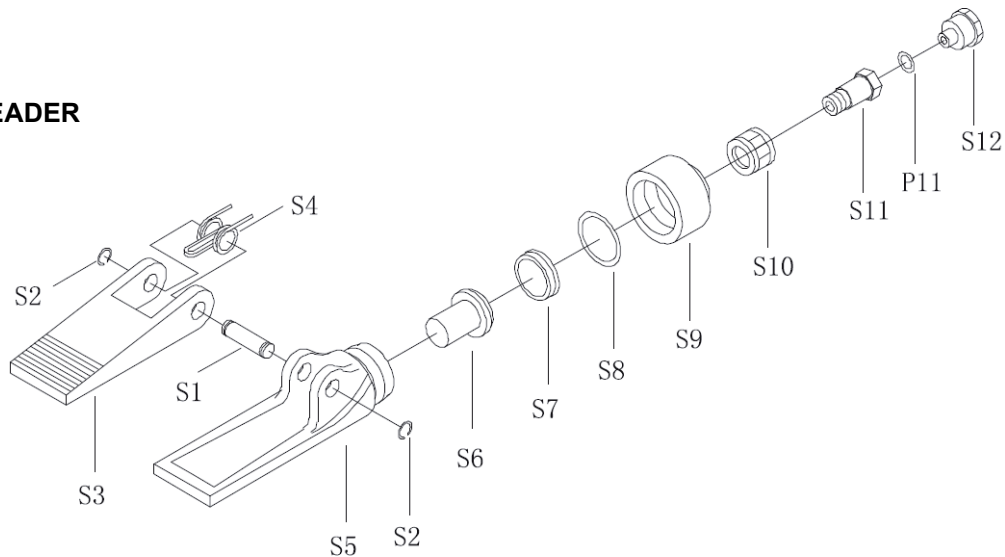


## PARTS LIST: 10-TON SUPER DUTY HYDRAULIC BODY/FRAME REPAIR KIT — PARTS BREAKDOWN — Prod. No. 816SD

### PUMP

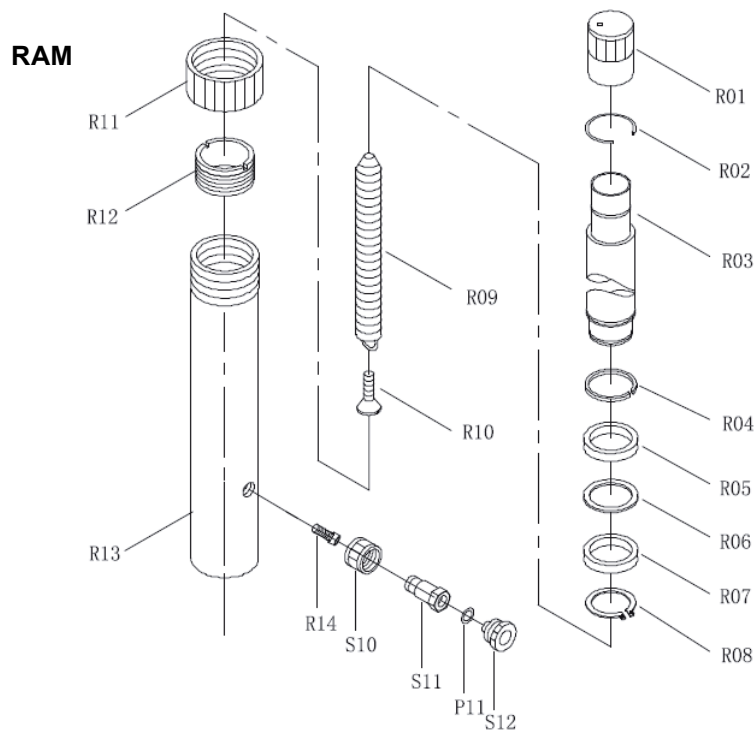


### SPREADER





## PARTS LIST: 10-TON SUPER DUTY HYDRAULIC BODY/FRAME REPAIR KIT — PARTS BREAKDOWN — Prod. No. 816SD



PART NUMBER	KIT DESCRIPTION	REF. NO.	PART NUMBER	KIT DESCRIPTION	REF. NO.	PART NUMBER	KIT DESCRIPTION	REF. NO.
816SD-01	Pump	1	816SD-10	Connect Pin	10	816SD-P29	Release Valve	P29
816SD-02	Ram	2	816SD-11	Round Saddle	11	816SD-P34	Handle	P34
816SD-03	Spreader	3	816SD-12	Rubber Saddle	12			P35
816SD-04	Plastic Blow Case	4	816SD-13	Base	13	816SD-P30	Oil Hose	P30
816SD-5.1	Extension Tube 1	5.1	816SD-R01	Ram Top Cover	R01	816SD-P31	Coupler	P31
816SD-5.2	Extension Tube 2	5.2	816SD-R02	Retainer Ring	R02			P32
816SD-5.3	Extension Tube 3	5.3	816SD-R11	Ram Thread Cover	R11	816SD-P39	Pressure Gauge	P39
816SD-5.4	Extension Tube 4	5.4	816SD-R15	Female Coupler	R15	816SD-RK	Repair Kit	
816SD-5.5	Extension Tube 5	5.5			R14			
816SD-6	Ram Toe	6			R06			
816SD-7	Flat Saddle	7			R16			
816SD-8	Wedge Head	8			R17			
816SD-9	V Base	9						



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## **LIMITED WARRANTY**

**SureWerx USA WARRANTS TO ITS CUSTOMERS THAT THE COMPANY'S SureWerx USA "AFF" BRANDED PRODUCTS ARE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIALS.**

**SureWerx USA** will repair or replace its **SureWerx USA "AFF"** branded products which fail to give satisfactory service due to defective workmanship or materials, based upon the terms and conditions of the following described warranty plans attributed to that specific product. This product carries a ONE-YEAR warranty. During this warranty period, **SureWerx USA** will repair or replace at our option any part or unit which proves to be defective in material or workmanship.

### **OTHER IMPORTANT WARRANTY INFORMATION:**

This warranty does not cover damage to equipment or tools arising from alteration, abuse, misuse, damage and does not cover any repairs or replacement made by anyone other than **SureWerx USA**. The foregoing obligation is **SureWerx USA's** sole liability under this or any implied warranty and under no circumstances shall we be liable for any incidental or consequential damages.

**NOTE:** Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. If you have any questions about warranty service, please contact **SureWerx USA**. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.



[surewerx.com](http://surewerx.com)

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