

Instruction Sheet 1500 bar HYDRAULIC HAND PUMP



Product information are also available on the NTN-SNR Website at www.ntn-snr.com

1.0 IMPORTANT RECEIVING INSTRUCTIONS

Visually inspect all components for shipping damage. Shipping damage is not covered by warranty. If shipping damage is found, notify carrier at once. The carrier is responsible for all repair and replacement costs resulting from damage in shipment.

2.0 GENERAL HYDRAULIC SAFETY PRECAUTIONS



Read all instructions, warnings and cautions carefully. Follow all safety precautions to avoid personal injury or property damage during system operation. NTN-SNR cannot

be responsible for damage or injury resulting from unsafe product use, lack of maintenance or incorrect product and/or system operation. Contact NTN-SNR when in doubt as to the safety precautions and operations. Failure to comply with the following cautions and warnings could cause equipment damage and personal injury.

A CAUTION is used to indicate correct operating or maintenance procedures and practices to prevent damage to, or destruction of equipment or other property.

A WARNING indicates a potential danger that requires correct procedures or practices to avoid personal injury.

A DANGER is only used when your action or lack of action may cause serious injury or even death.



WARNING: Wear proper personal protective gear when operating hydraulic equipment.



NEVER set the relief valve (pumps equipped with useradjustable relief valve only) to a higher pressure than the maximum rated pressure of the pump. Higher settings may result in equipment damage and/or personal injury.



WARNING: The system operating pressure must not exceed the pressure rating of the lowest rated component in the system. Install pressure gauges in the system to monitor operating pressure. It is your window to what is happening in the system.

CAUTION: Avoid damaging hydraulic hose. Avoid sharp bends and kinks when routing hydraulic hoses. Using a bent or kinked hose will cause severe back-pressure. Sharp bends and kinks will internally damage the hose leading to premature hose failure.

DO NOT drop heavy objects on hose. A sharp impact may cause internal damage to hose wire strands. Applying pressure to a damaged hose may cause it to rupture.

IMPORTANT: Do not lift hydraulic equipment by the hoses or swivel couplers. Use the carrying handle or other means of safe transport.

CAUTION: Keep hydraulic equipment away from flames and heat. Excessive heat will soften packings and seals, resulting in fluid leaks. Heat also weakens hose materials and packings. For optimum performance do not expose equipment to temperatures of 65°C [150°F] or higher. Protect hoses and cylinders from weld spatter.



DANGER: Do not handle pressurized hoses. Escaping oil under pressure can penetrate the skin, causing serious injury. If oil is injected under the skin, see a doctor immediately.



WARNING : Immediately replace worn or damaged parts by genuine NTN-SNR parts.

ATTENTION: Hydraulic equipment must only be serviced by a qualified hydraulic technician. For repair service, contact the Authorized NTN-SNR distributor in your area. To protect your warranty, use only NTN-SNR oil.

TECHNICAL DATA - PUMP 1500b Hydraulic Hand Pump							
Specifications							
Model	Type (speed)	Maximum Pressure Rating psi [bar]		Oil Volume per Stroke in ³ [cm ³]		Usable Oil Capacity in ³ [cm ³]	Weight (Kg)
		Stage 1	Stage 2	Stage 1	Stage 2		
PUMP1500b	Two-speed	200 [13.8]	21755 [1500]	0.687 [11.26]	0.151 [2.47]	155 [2540]	9

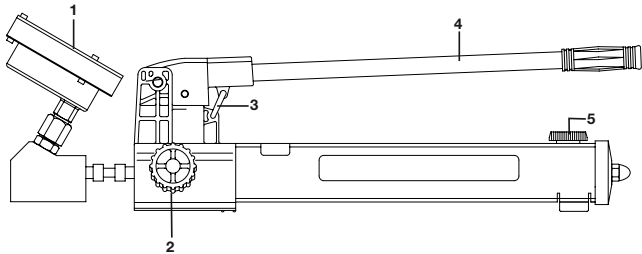
3.0 DESCRIPTION

3.1 Model PUMP 1500b

Figure 1 and the corresponding table show the main components of hand pump model PUMP 1500b. The dual-purpose vent/fill cap acts as a pressure relief valve in case of accidental reservoir pressurization.

Table 1	
Fig. 1	PUMP1500b
1	Pressure gauge
2	Release Valve Knob
3	Handle Lock Pin
4	Handle
5	Vent/Fill Cap

Figure 1



Kit content: - 1 2-stage manual pump - 1 gauge Kit - 1 hose + 1 quick coupling connector (female)	Pump Set 1500b
	1500 bar pump, with 2.5 liter reservoir
	1/4" Female, BSPP cône 120°
	1500 bar gauge
	hose 1500 bar, length 3 m
	G 1/4 (1500 bar)

4.0 OPERATION

1. Release handle lock pin located under beam.
2. The pump may be operated as a vented or a non-vented pump. Turn the reservoir vent/fill cap to the desired position.



WARNING: Do not stand directly over the pump handle. It is possible for the pump handle to “kick back.” Keep your body to the side of the pump and away from the line of force of the handle.

3. Open pump release valve by turning knob counterclockwise one turn. Operate the pump using full strokes six or more times as necessary to purge air from the pump circuit.
4. Open reservoir vent/fill cap and check the oil level. Fill the reservoir (using NTN-SNR oil only) to the indicator mark on the end cap. DO NOT overfill.
5. Close release valve by turning knob clockwise.

NOTE: Release valve is designed to close with hand pressure only. Use of tools to close valve can result in damage to the valve and/or valve seat.

6. The pump may be operated from either the horizontal or vertical position. If operated in the vertical position, the discharge port must be down.
7. The PUMP 1500b is a two-stage pumps. The shift from first to second stage is automatic when the system pressure reaches approximately 200 psi [13.8 bar]. To reduce handle effort at high pressure, take short strokes.

4.1 Relief Valve Adjustment



WARNING: Do not attempt to readjust or disable the internal relief valve. Serious personal injury and/or equipment damage could result.

4.2 Air Removal

Remove trapped air from the circuit as described in the following steps:

1. Move the reservoir vent/fill cap to the “vent” position.
2. Close the pump release valve by turning knob clockwise.

3. Position the pump at a higher elevation than the piston of the hydraulic nut. Be sure that the piston end is BACK.

4. Operate pump to fully extend the piston of the hydraulic nut. Be careful to ensure that the maximum stroke for the nut or tensioner is not exceeded.

5. Open the release valve to retract the hydraulic nut. If necessary, apply some force to assist the retracting process. This will force the trapped air to move up into the pump reservoir.

6. Repeat step 5 as necessary to remove all the trapped air from the circuit.

7. Remove the vent/fill cap. Add additional oil to the reservoir, if necessary.

8. Reinstall the vent/fill cap. Be sure to return the cap to the “vent” position.

5.0 MAINTENANCE

To check pump oil level:

1. Open the release valve to allow oil in the system to return to the reservoir.
2. Remove the reservoir vent/fill cap.
3. Add NTN-SNR hydraulic oil until oil level is up to the indicator mark on the pump end cap. Do not overfill.
4. Reinstall the vent/fill cap. Return the cap to the “vent” position.

- To function, all hand pumps require some air in the reservoir. If the oil level is too high, the pump will not operate properly.

- If the pump is operated under dirty conditions, more frequent oil changes are recommended. Refill with clean NTN-SNR oil.

- Periodically lubricate the beam pin, cross pin, and piston head.

5.1 Keep Oil Lines Clean

When coupler halves are disconnected, always install dust caps or plugs. Use every precaution to guard the pump and oil lines

against entry of dirt and grit. Foreign matter in the system may result in pump or valve failure. Such damage is not covered under warranty.



5.2 Lubricating the Pump

To extend pump life and improve performance, lubricate the beam pin (A), cross pin (B), and piston head (C) regularly, using roller bearing NTN-SNR Lub UNIVERSAL grease. See figure 2

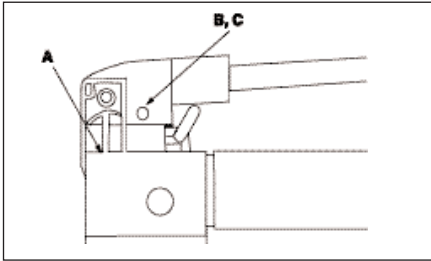


Figure 2

5.3 Changing the Oil

1. Drain all oil and refill with clean recommended oil every 12 months. If pump is used in dirty environments, change the oil more often.
2. Remove vent/fill cap or plug from reservoir.
3. Tilt pump to drain out old oil.
4. Fill reservoir only to level mark shown on pump.
5. Replace the vent/fill cap or plug.
6. Dispose of used oil properly.

5.4 REPLACEMENT PARTS

Designation	Description
TOOL PUMP REPAIR KIT	Repair kit
TOOL Gauge 1500	Pressure Gauge 1500b
TOOL 1500B HYDRALIC - HOSE 3000	High pressure hose 3 m with quick coupling connector
TOOL PUMP COUPLING 1/4	Quick connection coupling G1/4

6.0 TROUBLESHOOTING GUIDE

The following information is intended as an aid in determining if a problem exists. For repair service, contact the Authorized NTN-SNR distributor in your area.

TROUBLESHOOTING		
Problem	Possible Cause	Solution
Hydraulic nut does not advance, advances slowly, or advances in spurts.	<ol style="list-style-type: none"> 1. Oil level in pump reservoir is low. 2. Release valve open. 3. Loose hydraulic coupler. 4. Load is too heavy. 5. Air trapped in system. 	<ol style="list-style-type: none"> 1. Add oil according to the Maintenance instructions on page 3. 2. Close the release valve. 3. Check that all couplers are fully tightened. 4. Do not attempt to lift more than rated tonnage. 5. Remove air according to the instructions on page 3.
Hydraulic nut advances, but does not hold pressure.	<ol style="list-style-type: none"> 1. Leaking connection. 2. Leaking seals. 3. Internal leakage in pump. 	<ol style="list-style-type: none"> 1. Check that all connections are tight and leak free. 2. Locate leak(s) and have equipment serviced by a qualified hydraulic technician. 3. Have pump serviced by a qualified hydraulic technician.
Hydraulic nut does not retract, retracts part way, or retracts more slowly than normal.	<ol style="list-style-type: none"> 1. Release valve closed. 2. Pump reservoir is over-filled. 3. Loose hydraulic coupler. 4. Air trapped in system. 5. Hose I.D. too narrow. 6. Hydraulic nut retraction spring broken. 	<ol style="list-style-type: none"> 1. Open release valve. 2. Drain oil level to full mark. See page 3 instructions for adding oil. 3. Check that all couplers are fully tightened. 4. Remove air according to the instructions on page 3 5. Use larger diameter hydraulic hose. 6. Have hydraulic nut serviced by NTN-SNR Experts & Tools Service.