

QUIC-CLAMP® HYDRAULIC HOSE CLAMP

MODEL 500-7

PARTS AND INSTRUCTION MANUAL

UNCRATING YOUR QUIC-CLAMP hydraulic hose clamp:

After uncrating your hose clamp make certain that it has not been damaged during shipment. Inspect it carefully--any damage should be reported immediately to the freight carrier; file a damage claim and retain the damaged shipping carton.

OPERATING INSTRUCTIONS

The QUIC-CLAMP can be used on charged or uncharged lines. When activated, the top movable jaw (plunger) presses the hose against the bottom stationary jaw (base), thus stopping the flow of water.

The motion and speed of the plunger is hydraulically controlled by the release valve and the operator's pumping action on the handle.

Unclamping (raising the plunger) is automatically accomplished by slowly and carefully opening the release valve. This relieves the pressure and the plunger moves to the open position.

To Clamp:

1. Hose line should be free of twists.
2. Press in on latch and lift up on carrying handle.
3. Insert hose between jaws and center it.
4. Close clamping device and be sure latch is fully seated.
5. Close release valve by turning clockwise -- finger pressure tight.
6. Place pump handle in pumping position and pump until desired clamping is attained.
 - a. When used on an uncharged line, the plunger will require approximately 6-8 strokes to fully close down on the hose line.
 - b. Second stage of pump engages at 300 PSI.
 - c. Maximum pump pressure is factory-set at 4500 PSI.
 - d. When pump is used on charged line the second stage will activate when pressure reaches 300 PSI and increased effort will be required to fully close the plunger.
 - e. Relief valve will activate at 4500 PSI and downward motion of plunger will cease. Increased pumping will only activate relief valve.

To Unclamp:

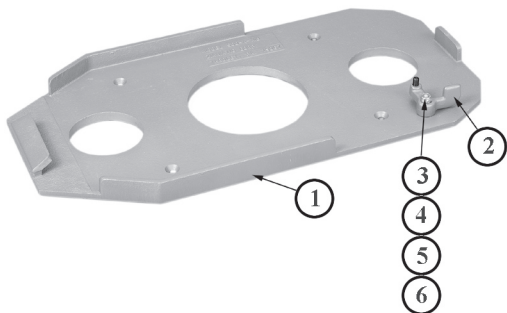
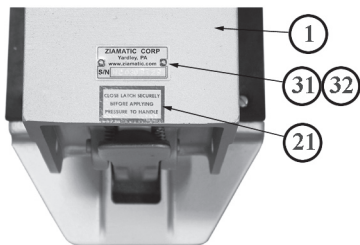
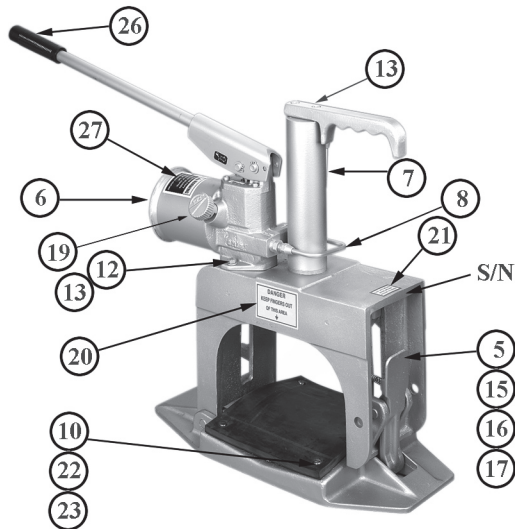
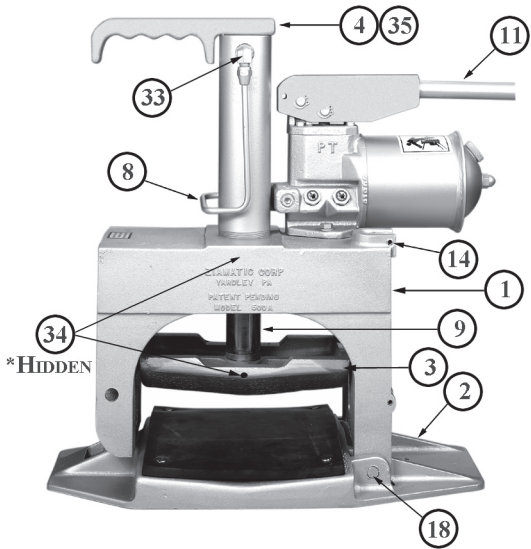
1. Carefully open release valve--turn it very slowly counter-clockwise. CAUTION: If release valve is opened too rapidly, a violent hose reaction could occur which may result in coupling disconnect or water hammer.
2. Once the release valve is opened the movable jaw (plunger) retracts automatically.

Safety Instructions:

Always observe the following safety points for safe and efficient use of the hose clamp.

1. Never use on hose lines exceeding 150 PSI.
2. When using on relay supply line make certain the source pumper is discharging at a pressure of 150 PSI or less.
3. Open release valve slowly to prevent violent reaction and/or water hammer.
4. Be certain hose is free of twists and centered in jaws before clamping.
5. Be certain that latch is fully seated before applying pressure.
6. Keep fingers out of area between yoke and plunger as indicated by caution labels affixed to unit.
7. When not in use, pump handle should be placed in storage position.
8. Inspect hose clamp very carefully if inadvertently dropped or abused; check for:
 - a. Cracks or breaks in castings
 - b. Dents or leaks in hydraulic system
 - c. Loose or broken bolts and fastening devices
 - d. Proper operation of jaw movement
9. Never open reservoir or disconnect piping with the system under pressure. Fully open release valve prior to opening reservoir or disconnecting piping.
10. Always wear full protective clothing, including eye protection, when using this device.

MODEL 500-7



ITEM NO.	DESCRIPTION	PART NUMBER	PCS. REQUIRED
1	Yoke Casting	2015-115-105	1
2	Base Casting	2015-115-110	1
3	Plunger Casting	2015-115-115	1
4	Carrying Handle	2015-115-120	1
5	Latch Casting	2015-115-125	1
6	Two-Stage Pump/Reservoir (6A)	2015-115-130	1
7	Hydraulic Ram	2015-115-135	1
8	Tube Assembly & Fittings	2015-115-140	1
9	1" Threaded Stud	2015-115-145	1
10	Neoprene Base Pad	2015-115-150	1
11	Pump Handle	2015-115-155	1
12	5/16-18 x 3/4 Hex. Head Bolt	9010-103112	2
13	5/16 ID Lock Washer	9014-203100	2
14	1/4 x 1-3/4 Spring Pin	9040-102528	2
15	1/4 x 5/8 Spring Pine	9040-002510	2
16	Spring	2015-115-121	2
17	1/2 x 3 Groove Pin	9045-005048	1
18	1/2 x 1-3/4 Groove Pin	9045-005028	2
19	Label "Turn to Close"	2015-115-126	1
20	Label "Danger"	2015-115-131	2
21	Label "Close Latch"	2015-115-136	1
22	1/4-20 x 1-1/4 Pan Head Bolt	9010-212520	4
23	1/4-20 ESNA Lock Nut	9013-172500	4
26	Handle Grip	0000-000-115	1
27	Label "Warning - to avoid"	2015-000-105	1
31	Label, Metal, S/N	0000-000-105	1
32	#4 Drive Screw	9120-101103	2
S/N	"Serial Number" stamped here prior to use of item 31		
33	90-Degree Elbow Adapter	3097-500-124	1
34	1/4-20 x 3/4 Cup Pt Sock Screw	9010-382512	2
35	5/16-18 x 1 Socket Head cap Screw	9010-333116	2

MODEL 500-A-MB

ITEM NO.	DESCRIPTION	PART NUMBER	PCS. REQUIRED
1	Bracket Casting	2015-110-105	1
2	Latch Casting	2015-110-110	1
3	Spring Plunger	2015-110-115	1
4	1/4-20 x 1-1/2" Flat Head Bolt	9010-152524	1
5	1/4-20 Hex Head Nut	9013-172500	1
6	Bushing	2015-110-120	1

Pump Operation:

The low pressure first stage of the pump unloads at 300 PSI and delivers 2.35 cu. in. of oil per stroke of the handle. This provides fast ram approach.

The high pressure second stage takes over when the pressure on the ram becomes more than 300 PSI and will develop pressure to the 4500 PSI maximum that this system is designed for. The second stage delivers .147 cu. in. of oil per full stroke of handle.

NOTE: Always be sure that latch is full seated before applying pressure to the system.

Valve Operation:

The two-way pump is equipped with a two-way valve for use on single-acting rams. To extend a single-acting ram the valve knob should be turned in a clockwise direction. This closes the valve so that oil is pumped to the ram.

To return the ram, the valve knob should be turned in a counter-clockwise direction. This opens the valve and allows oil to flow back to the reservoir.

Reservoir - Sealed:

Reservoir capacity is 32 cu. in. When filled with one pint of hydraulic fluid the oil will occupy 28.875 cu. in. The reservoir is prefilled at the factory.

To check the oil level:

1. Make sure the release valve is in the open position to relieve all pressure on the system and return the oil to the reservoir. Ram will be in fully retracted position.
2. Have the reservoir and filler cap face up.
3. Remove the filler cap.
4. Oil should be up to the bottom thread of the filler cap opening in the reservoir.

The reservoir has a relief valve in the filler cap that is set at 15 to 25 PSI. When the ram retracts, oil will vent to the atmosphere if more oil is contained in the system than the reservoir can handle.

NOTE: Always wear full protective clothing, including eye protection, when working with the hose clamp.

NOTE: the pump depends upon the hydraulic oil for lubrication of all moving parts and the use of improper fluids will result in serious damage to the unit.

Troubleshooting:

NOTE: Do not attempt to repair pump or ram if either one is not functioning properly. Return the complete unit to the factory or your nearest hydraulic service technician for repair.

The only problem that can be field-corrected is low oil level. To correct, simply refill fluid capacity to required level (see Reservoir-Sealed). Low oil level will be indicated by ram not extending at normal rate or failure of the pump to reach full pressure.

APPLIES TO HYDRAULIC RAM Single Acting -- Spring Return

Hydraulic Connections:

The QUIC-CLAMP hydraulic hose clamp has been inspected prior to shipment. All hydraulic connections should be free of dents or creases. If any loose connections or oil leaks are noted, call the factory before operating the clamp.

NOTE: Do not attempt to repair pump or ram if either unit is not functioning properly. Return the complete unit to the factory or your nearest hydraulic service technician for repair.

Hydraulic lines and fittings can act as restrictors when the cylinder or ram retracts slowing the hydraulic oil in its return to the pump. The restricting, or slowing, of the oil causes back pressure which will slow the cylinder or ram return. Return speed (retraction of plunger) will also vary because of ram condition and the oil's temperature and viscosity.

Inspection:

Make frequent visual inspections for the following problems:

1. Cracked or damaged cylinder housing.
2. Excessive wear, bending, or other damage to plunger, piston rod or cylinder housing.
3. Cylinder becoming loose where threaded into yoke casting.
4. Plunger becoming loose where threaded into end of piston rod.
5. Leaking hydraulic fluid.
6. Loose bolts.

Any problems should be noted, the unit properly tagged, and not used until all repairs are completed.

NOTE: Always wear full protective clothing, including eye protection, when working with the hose clamp.

Important:

1. Keep the piston rod clean at all times.
2. Always center the hose line under the plunger and ram.
3. When the cylinder is not in use keep the plunger fully retracted.

NOTE: Clamp may not completely shut off flow of water. A clearance of approximately 3/16" is allowed between the plunger and base to prevent damage to fire hose. If complete water stoppage is desired a thin piece of neoprene rubber may be placed on the base casting. Caution must be exercised to prevent hose damage.

SPECIFICATIONS:

Weight: 53 lbs. -- shipping weight is 60 lbs.

Dimensions: 18-1/2" L x 9" W x 20" H --
(shipping container) 20-1/2" x 10-1/2" x 22"

Pump: Hydraulic, two stage hand pump -- 10,000
PSI capacity
300 PSI second stage
4500 PSI maximum -- factory-set and not to be changed in field

Hydraulic ram: Single acting, spring return -- 10 ton capacity

Limitations: Maximum working pressure of hose lines not to exceed 150 PSI
Maximum hose diameter -- 5"

Hydraulic fluid: AMS/OIL Superior Wisconsin Type AHO synthetic hydraulic fluid or equivalent
all-weather, anti-foaming, anti-wear synthetic fluid
Pour point -- 55° F
Stable pour point -- 40° F
Viscosity -- 215 SSU @ 100°

APPLIES TO TWO-STAGE HYDRAULIC HAND PUMP Two-Stage -- Two-Way Valve

Hydraulic Oil Specification:

Use only an approved, high-grade hydraulic oil (215 SSU @ 100° F), such as OTC 16355.

High Pressure Relief Valve Adjustment:

The high pressure relief valve is preset at the factory to 4500 maximum PSI and is not to be set higher since clamp is designed to withstand maximum 4500 PSI.

NOTE: Any adjustment of the high pressure relief valve must be performed by a qualified hydraulic technician. An OTC authorized hydraulic service center may be able to repair the hydraulic pump or ram. Take this form with you to the dealer.

Low Pressure Unloading Valve Adjustment:

The 300 PSI unloading valve is preset at the factory and cannot be adjusted.

Lubrication:

Apply lubrication periodically to all pivot and friction points. Use a good grade of No. 10 motor oil. Do not use dry lubricants.



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