



ATD-7454 and ATD-7455 Hydraulic Shop Press with Bottle Jack Manual



ATD-7454 - 20-Ton Capacity



ATD-7455 - 25-Ton Capacity

Features:

- Ideal for the removal or installation of gears, bearings, universal joints, pulleys, wrist pins and other various press jobs
- Multi-position bed for work height adjustment
- Heavy steel, welded construction
- Hydraulic system is protected from internal damage by a bypass mechanism
- Excellent for bending, bonding or straightening operations



The safety alert symbol is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or property damage.

Read this manual and follow all Safety Rules and Operating Instructions before using this product.

SAFETY and GENERAL INFORMATION

Save these instructions. For your safety, read, understand, and follow the information provided with and on this product before using. The owner and operator of this equipment should have an understanding of this product and safe operating procedures before attempting to use. The owner and operator should be aware that use and repair of this product may require special skills and knowledge. Instructions and safety information should be conveyed in the operator's native language before use of this jack is authorized. If any doubt exists as to the safe and proper use of this jack, remove from service immediately.

Inspect before each use. Do not use if broken, bent, cracked or damaged parts are noted. Any press that appears damaged in any way, or operates abnormally shall be removed from service immediately. If any component of this product has been subjected to a shock load (a load dropped suddenly, unexpectedly upon it), immediately discontinue use until checked by a factory authorized service center. Contact distributor or manufacturer for a list of authorized service centers. It is recommended that an annual inspection be done by qualified personnel. Labels and operator's manuals are available from the manufacturer.

PRODUCT DESCRIPTION

ATD Tools Bench Presses and Shop Presses are designed for automotive, truck, implement, fleet and industrial repair shops where pressing, bending, straightening and forming, is required. Typical applications include installation and removal of alternator and power steering pump bearings, axle bearings, transmission bearings, seals, U-joints and others. It is not intended for use as an assembly table or as fixture stand used to secure a large, final assembly component. **Unlike** presses equipped with a separately mounted pump, the power unit on this press **can not** be equipped with a pressure gauge, therefore monitoring the load must be done by other means, such as a load cell w/ digital indicator. Whatever means is chosen, the load measuring means should be calibrated annually.

SPECIFICATIONS

Model	Capacity	Press Size (L X W X H)	Max. Working Space	Min. Working Space
ATD-7454	20 Ton	28" x 28" x 64-1/2"	34-1/8"	2-1/2"
ATD-7455	25 Ton	28" x 28" x 59"	34-1/4"	2-1/2"

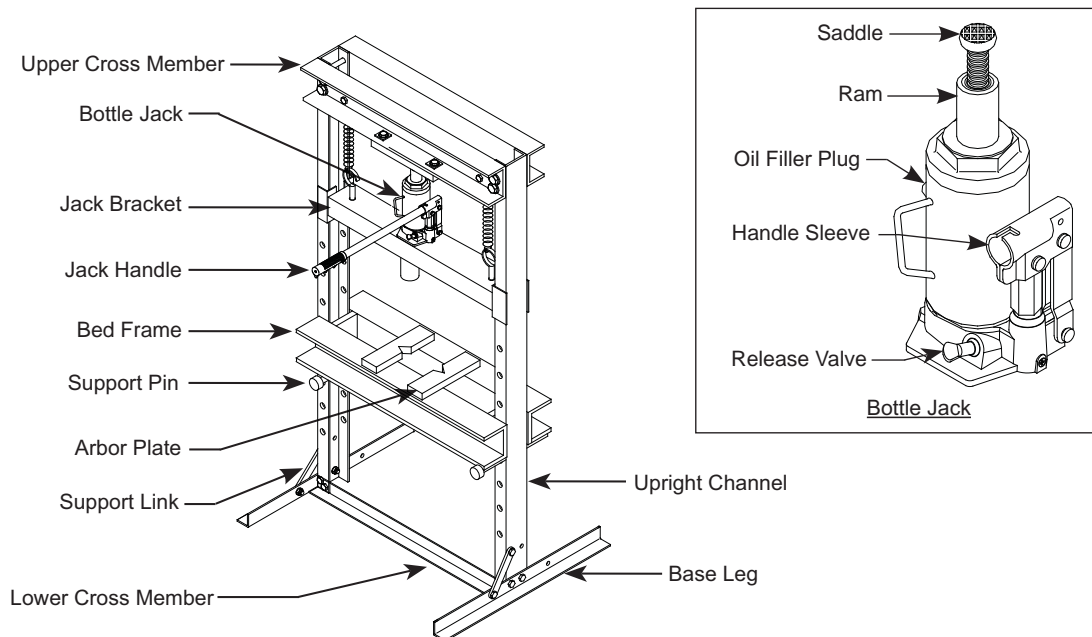


Figure 1 - Shop Press Components (ATD-7454 shown)

PREPARATION

Before Use

1. Verify that the product and application are compatible.
2. Before using this product, read the operator's manual completely and familiarize yourself thoroughly with the product, its components and recognize the hazards associated with its use.
3. To familiarize yourself with basic operation, locate and turn the release valve.
 - a. Clockwise until firm resistance is felt to further turning. This is the '**CLOSED**' release valve position used to **extend** the ram.
 - b. Counterclockwise, but no more than 1 full turn from the closed position. This is the '**OPEN**' release valve position used to **retract** the ram.
4. With ram fully retracted, remove the oil filler plug. Insert the handle into the handle sleeve, then pump 6 to 8 strokes. This will help release any pressurized air, which may be trapped within the reservoir. Ensure the oil level is just below the oil filler hole. Reinstall the oil filler plug.
5. For model ATD-7455: With release valve opened, remove oil filler screw. Ensure the oil level is within 1/4" (6mm) of the opening. Reinstall the oil filler screw.
6. Check that the pump operates smoothly and that the extension screw will thread up/down easily before putting into service. Replace worn or damaged parts and assemblies with ATD Tools authorized replacement parts only.

Bleeding / Venting Trapped Air

With the release valve in the OPEN position (3b above) and with the ram fully lowered, remove the oil filler plug. Insert handle into the handle sleeve; then pump 6 to 8 full strokes. This will help release any pressurized air which may be trapped within the reservoir. Oil level should be even with the bottom of the oil filler hole. Reinstall the oil filler plug.

Assembly

Model ATD-7454: (Refer to Figure 2)

Note: Do not tighten any bolts unless told to do so.

1. Attach base legs (1) to upright channels (2) with bolts, lock washers and nuts (3). Hand tighten only.
2. Attach lower cross member (4) to upright channels (2) with bolts, lock washers and nuts (3).
3. Attach support links (5) to the base (1) and upright channels (2) with bolts, lock washers and nuts (3).
4. Carefully slide bed frame (6) down to lowest possible position between the upright channels (2).
5. Attach the screw hooks (7) to the jack bracket (8) with nuts (9). Leave nut untightened to provide easier spring attachment later.
6. Slide the jack bracket (8) down between upright channels (2) onto the bed frame (6).
7. Attach upper cross members (10) to upright channels (2) with bolts, flat washers, lock washers and nuts (11).
8. Attach head plate (12) to upper cross members (10) with bolts, lock washers and square washers (13).
9. Attach two bolts, lock washers and nuts (14) thru the upper cross member (10). Then attach one end of the springs (15) to the bolts (14) and the other end to the screw hooks (7) on the jack bracket.
10. Carefully place the bottle jack (16) between the head plate (12) and jack bracket (8). Tighten the nuts (9) that hold screw hooks (7) to prevent jack from inadvertently falling out.
11. **Tighten all applicable nuts and bolt assemblies.**
12. Carefully bring the bed frame (6) up and secure it with pins (19).
13. Place the arbor Plates (17) on bed frame (6).
14. The press is now ready to use. Don't forget to insert the handle (18) into handle sleeve of bottle jack

NOTICE: Before *disassembly*, carefully slide bed to its fully lowered position.

Size of Hardware Kits			Qty	
3	Bolt	M10x25	12	
	Lock washer	M10	12	
	Nut	M10	12	
9	Nut	M8	2	
	11	Bolt	M16x150	4
		Flat washer	M16	8
		Lock washer	M16	4
13	Nut	M16	4	
	Bolt	M10x25	4	
	Lock washer	M10	4	
14	Square washer	M10	4	
	Bolt	M10x130	2	
	Lock washer	M10	2	
	Nut	M10	2	

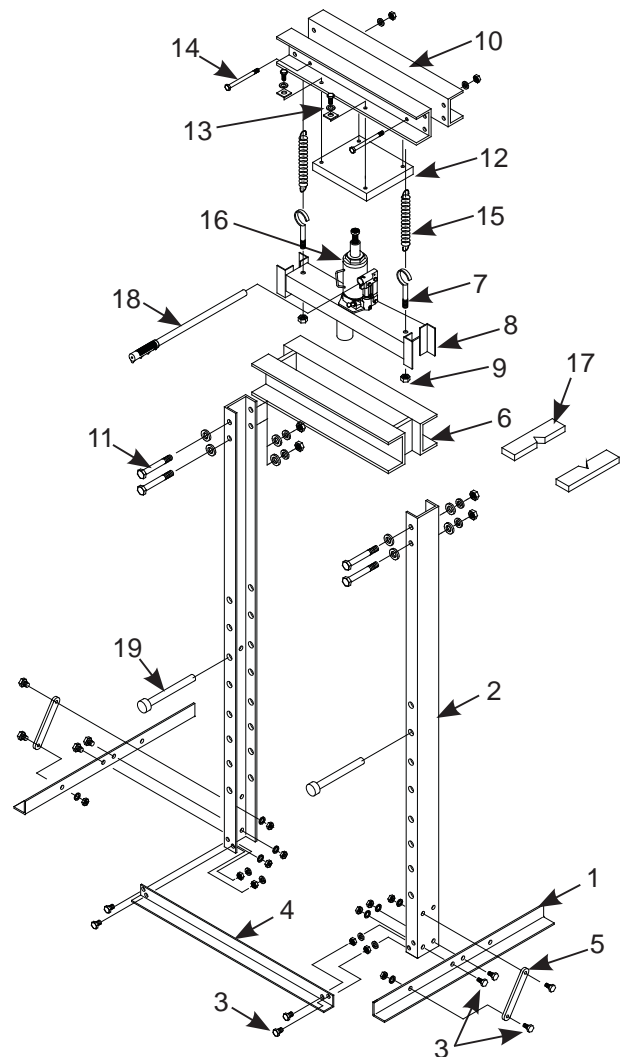


Figure 2 - Assembly Illustration for model ATD-7454

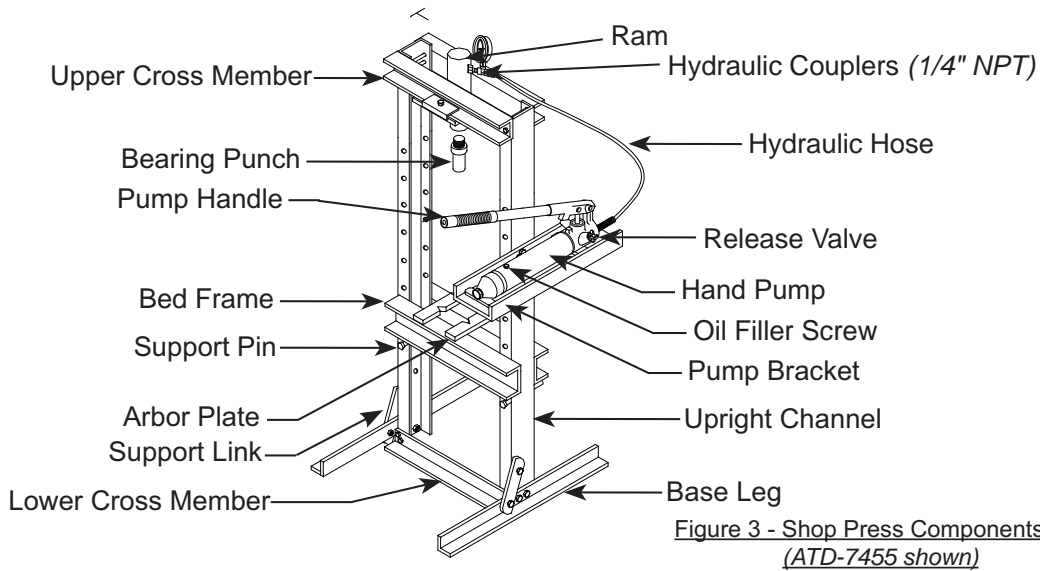


Figure 3 - Shop Press Components
(ATD-7455 shown)

Assembly

Model ATD-7455: (Refer to Figure 4)

Note: Do not tighten any bolts unless told to do so.

1. Attach base legs (1) to upright channels (2) with bolts, lock washers and nuts (3). Hand tighten only.
2. Attach lower cross member (4) to upright channels (2) with bolts, lock washers and nuts (3).
3. Attach support links (5) to the base (1) and upright channels (2) with bolts, lock washers and nuts (3).
4. Carefully slide bed frame (6) down to lowest possible position between the upright channels (2).
5. Slide head plate (7) to into upper cross members (8). Then, secure with bolts (9).
6. Attach the upper cross members assembly (8) to the upright channels (2) with bolts, flat washers, lock washers and nuts (10).
7. Thread the ram (11) to head plate (7) on upper cross members (8).
8. Attached pump support bracket (12) to upright channel (2) with three bolts, lock washers and nuts (3).
9. **Tighten all applicable nuts and bolt assemblies.**
10. Place the hand pump (13) on pump support bracket (12).
11. To hold the pump, attach the fixed brackets (14) and secure with bolts, lock washers and nuts (3).
12. Connect the male coupler end of hydraulic hose (15) to the female coupler of the ram (11) to complete the connections.
13. Carefully bring the bed frame (6) up and secure it with pins (16).
14. Place the arbor plates (17) on bed frame (6).
15. When necessary, replace the saddle of ram (11) with the bearing punch (18).
16. The press is now ready to use.

NOTICE: Before *disassembly*, carefully slide bed to its fully *lowered* position.

Size of Hardware Kits			Qty
3	Bolt	M10x25	19
	Lock washer	M10	19
	Nut	M10	19
9	bolt	10x25	2
10	Bolt	M16x150	4
	Flat washer	M16	8
	Lock washer	M16	4
	Nut	M16	4

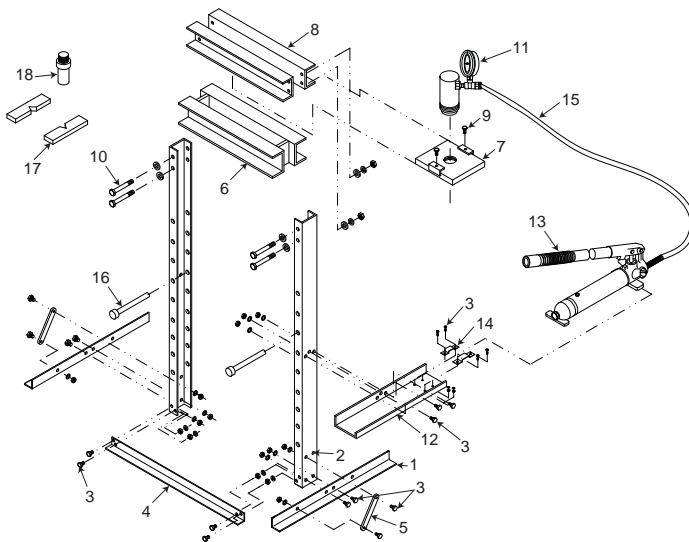


Figure 4 - Assembly Illustration for model ATD-7455

⚠️ WARNING

- **Study, understand, and follow** all printed materials provided with/on this product before use.
- **Always** use an adequately rated, calibrated load cell with digital indicator to monitor pressing force.
- **Do not** exceed rated capacity.
- Use the device only on a hard, level surface.
- Always wear safety goggles when working on or near this equipment.
- Keep hands, feet and all other body parts away from loading area.
- Never leave loaded press unattended.
- Projectile hazard! Ensure workpiece and any attachment is centrally loaded and a **safety shield is installed** around workpiece to help protect against projectiles.
- Do not modify this device beyond installing a shield to protect against projectiles.
- Ensure the user is familiar with the controls and operational characteristics of this product and aware of the potential hazards associated with its use.
- **Failure** to heed these markings may **result in personal injury and/or property damage.**

OPERATION



Projectile Hazard! Wear ANSI approved eye protection. Never stand directly in front of loaded press. Ensure that workpiece is center-loaded and secure. Reduce risk of flying debris by carefully following all operating instructions. Know your press and hazards associated with its use.



Crush Hazard! Keep hands and feet from bed area at all times.

1. Insert the support pins to desired height, then lower the bed. Ensure bed frame is fully rested on the support pins.
2. Place arbor plates on the bed frame as needed.
3. Place workpiece on bed frame, using every precaution necessary to ensure your safety and prevent property damage. Position workpiece in a manner which will not allow it to inadvertently fall from bed.
4. Close release valve by turning it clockwise firmly, insert jack handle into handle sleeve, and pump the handle to extend the ram until ram nears workpiece.
5. Align ram and workpiece to ensure center loading.
6. Apply load to workpiece by pumping handle. **Do not overload workpiece**
7. Monitor the pressure gauge and calculate the applied load using the following formula as basic guideline:

$$\text{Force} = \text{Pressure} \times \text{Area}$$

Effective Area of model ATD-7455 = 5.14 in²

Problem: Determine the applied load in lbs. force on a workpiece being pressed by an ATD-7455 whose pressure gauge is reading 2200 psi.

Solution: 2200 X 5.14 = **11,308 lbs.**

8. Stabilize workpiece in a manner which will not allow it to inadvertently fall from the bed once the load is removed, then turn release valve counterclockwise to retract the ram and remove workpiece. Do not turn the release valve counterclockwise more a 1 full turn.



To reduce the risk of personal injury and/or property damage, ensure that the rated working pressure of each pressurized attachment be **equal to or greater than** the rated working pressure developed by the pump.



Use only handle provided by manufacturer. The handle provided with this product will safely engage the release valve of bottle jack and operate the handle sleeve. If handle is worn, operates abnormally, or will not positively engage the release valve, **STOP**, discontinue use of the jack until a factory replacement handle can be acquired.



Unlike presses equipped with a separately mounted pump, the power unit on this press **can not** be equipped with a pressure gauge, therefore monitoring the load **must** be done by other means, such as a load cell with digital indicator. Whatever means is chosen, the load measuring means should be calibrated annually.



The hydraulic power unit provided with this device is intended to be used as an integral part of this press and not as a stand-alone jacking device separate of the press. **NEVER** use the hydraulic power unit provided with this press for any purpose other than that for which it is intended.

MAINTENANCE

Before each use, inspect press for damage. Do not use if bent, broken, cracked, leaking or otherwise damaged components are noted. Periodically, lightly oil all moving parts, including the pump piston and ram.

Adding/Changing oil to bottle jack

For Bottle Jack model **ATD-7454**:

Important: Use only good grade hydraulic jack oil. Avoid mixing different types of fluid and NEVER use brake fluid, turbine oil, transmission fluid, motor oil or glycerin. Improper fluid can cause premature failure of the jack and the potential for sudden and immediate loss of load. Mobil DTE 13M or equivalent recommended.

For best results, change fluid once a year.

1. Remove jack from press frame.
2. With ram fully lowered and pump piston fully depressed, set jack in its upright, level position. Remove oil filler plug.
3. Drain used fluid into a suitable container

Note: Dispose of hydraulic oil in accordance with local regulations.

4. Fill until oil is level with or just below filler plug hole.

For hand Pump model **ATD-7455**:

1. Depressurize and disconnect hydraulic hose from application.
 2. Remove oil filler screw located on top of the reservoir.
 3. Pour used fluid into a sealable container.
- Note:** Dispose of hydraulic fluid in accordance with local regulations.
4. With pump in its upright, horizontal position, use a small funnel to fill reservoir to within 1/4" (6 mm) of the opening.
 5. Wipe up any spilled fluid and reinstall the vented oil filler screw.

Rust prevention

Check ram and pump piston for signs of rust on a regular basis. Clean as needed with a lint free, oil saturated cloth. **Never** use sandpaper or abrasive material on these surface.

How to remove faulty coupler:

If ram does not retract: Depressurize pump and hose, then remove the ram from application. Disconnect and replace with new coupler.

Important: Do not attempt to grasp ram with pliers or wrench without first wrapping the jaws of such tool with rags or similar padding.

How to bleed air from system:

1. Place pump at a higher elevation than the hose and ram as shown in figure 5
2. Operate pump to fully extend and retract the ram 2 or 3 times. The objective is to force the air bubbles up hill and back to the pump reservoir.
3. To bleed the air from pump reservoir, simply open the oil filler screw. Reinstall after bleeding.

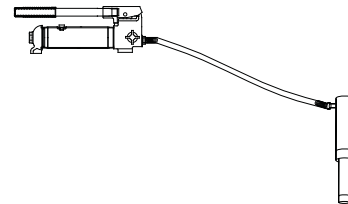


Figure 5 - Illustration to bleed air from system

REPLACEMENT PARTS:

Please refer to the Parts drawing when ordering parts. Not all components of the cylinder are replacement items but are illustrated as a convenient reference of location and position in the assembly sequence. When ordering parts from your distributor, give model number and part number as shown below. Contact your distributor for current pricing.

Replacement Parts illustration for model ATD-7454

Item	Ordering Part#	Description	Qty
1	T126-00003-000	Upper Cross Member	1
2	T060-00001-100	Spring	2
3	T060-00002-100	Screw Hook	2
4	B20Y-10000-000	Bottle Jack	1
5	T126-02000-000	Jack Bracket	1
6	T126-03000-000	Jack Handle	1
7	T126-00001-000	Upright Channel	2
8	T125-01000-000	Support Pin	2
9	T184-00004-000	Support Link	2
10	T184-00005-000	Base Leg	2
11	T125-02000-000	Bead Frame	1
12	T184-00006-000	Lower Cross Member	1
13	T125-00007-000	Arbor Plates (pair)	1
14	T126-01000-000	Head Plate	1
15	F100-80001-000	Gauge	1
16	T060-00007-000	Gauge Adapter	1
17	F250-25002-000	Two-way	1
-	T126-04000-000	Hardware Kit	-

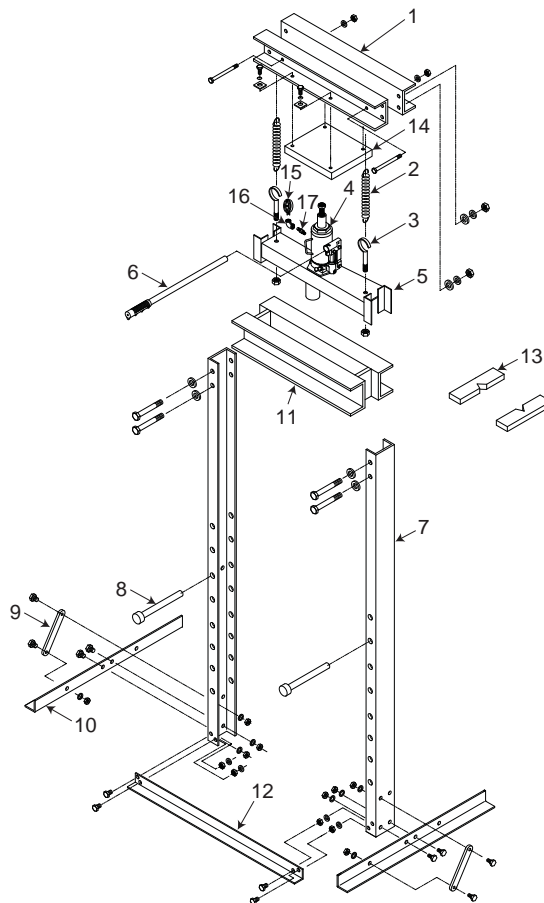


Figure 6 - Replacement Parts Illustration for ATD-7454

Replacement Parts illustration for model ATD-7455

Item	Part #	Description	Qty
1	T125-00001-000	Upper Cross Member	2
2	T125-00003-000	Punch	1
3	T125-00007-000	Arbor Plates (<i>pair</i>)	1
4	T125-02000-000	Bed Frame	1
5	T125-01000-000	Support Pin	2
6	T125-00002-000	Upright Channel	2
7	T184-00006-000	Lower Cross Member	1
8	T184-00004-000	Support Link	2
9	T184-00005-000	Base Leg	2
10	T184-00003-000	Pump Bracket	1
11	F100-90004-K01	Hand Pump	1
12	T125-00008-000	Fixed Bracket	2
13	F040-90107-K02	Oil Filler Screw	1

Item	Part #	Description	Qty
14	T125-03000-000	Head Plate	1
15	F250-30000-000	Ram	1
16	F040-90009-K04	Coupler, Female 1/4" NPT	1
	F040-90009-K05	Coupler, Male 1/4" NPT	1
17	F100-90009-K01	Pump Handle	1
18	F100-80001-000	Gauge	1
19	F250-25001-000	Three-way	1
20	F250-25002-000	Two-way	1
-	55255	Pump & Ram Assembly (#11 & 15)	-
-	T125-04000-000	Hardware Kit	-

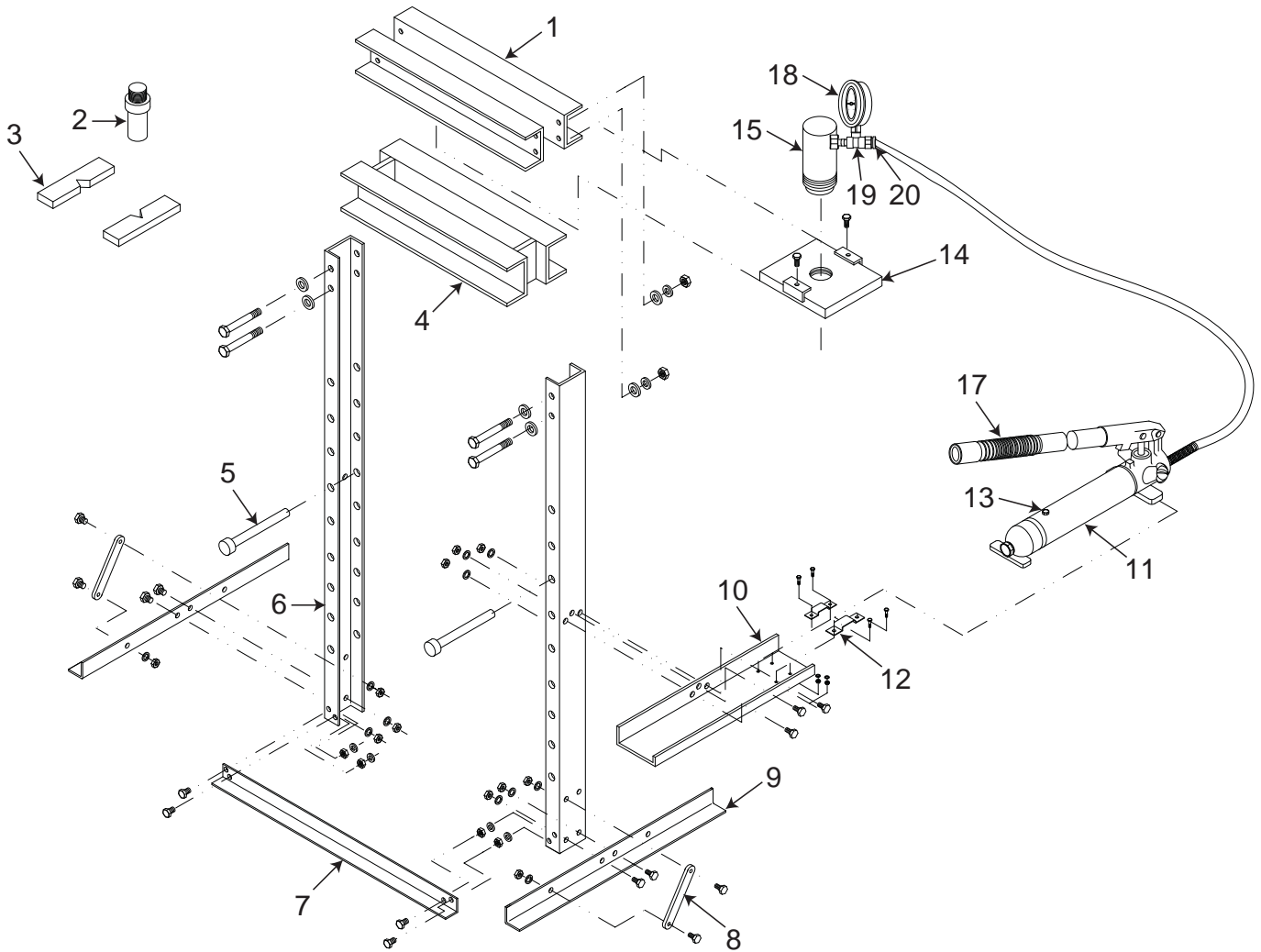


Figure 7 - Parts Illustration for ATD-7455

TROUBLESHOOTING

Symptom	Possible Causes	Corrective Action
Ram will not press load	<ul style="list-style-type: none"> • Release valve not tightly closed • Overload condition • Faulty/ Loose couplers • Oil lever in pump is low 	<ul style="list-style-type: none"> • Ensure release valve tightly closed • Remedy overload condition • Replace/ tighten couplers • Fill and bleed system
Ram bleeds off after press operation	<ul style="list-style-type: none"> • Release valve not tightly closed • Oil lever in pump is low • Ram or Bottle Jack malfunction 	<ul style="list-style-type: none"> • Ensure release valve tightly closed • Fill and bleed system • Contact ATD Tools Tech.
Ram will not retract after unloading	<ul style="list-style-type: none"> • Reservoir overfilled • Linkage binding 	<ul style="list-style-type: none"> • Drain fluid to proper level • Clean and lubricate moving parts
Poor lift performance	<ul style="list-style-type: none"> • Fluid level low • Air trapped in system 	<ul style="list-style-type: none"> • Ensure proper fluid level • With ram fully retracted, remove oil filler plug/screw to let pressurized air escape, then reinstall oil filler plug/screw
Ram will not extend to full extension	<ul style="list-style-type: none"> • Fluid level low 	<ul style="list-style-type: none"> • Ensure proper fluid level