



CP300 - 30 TON HYDRAULIC PRESS

SHOP PRESS INSTRUCTION MANUAL

PRESS SPECIFICATIONS

Arcan Model No.	A	B	C	D	E	F	G	H
CP300	70-1/2"	6-1/4" to 42-1/4"	28"	9@4-1/2"	6"	7-1/4"	33"	30"

A - Overall Height

B - Throat Height

C - Throat Width

D - Bed Height Adjustments

E - Ram Stroke

F - Distance Between Bed Rails

G - Base Width

H - Base Depth

WARNING 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

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 PRESS, READ THIS MANUAL AND ALL ACCOMPANYING MANUALS COMPLETELY AND THOROUGHLY, UNDERSTAND THEIR OPERATING PROCEDURES, SAFETY WARNINGS AND MAINTENANCE REQUIREMENTS.

It is the responsibility of the press owner to make sure all personnel read all manuals prior to using this press. It is also the responsibility of the press owner to keep this manual intact and in a convenient location for all to see and read. If the manuals or product labels are lost or not legible, contact ARCAN 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

WARNING

The use of automotive service and maintenance products is 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 personnel involved in the use and operation of equipment who are careful, competent, trained, and qualified in the safe operation of the equipment and its proper use when servicing motor vehicles and their components. Examples of hazards are dropping, tipping, flying, or slipping components caused primarily by improperly securing or containing loads, overloading, and off-centered loads; using the equipment on other than hard, level surfaces; and using the equipment for a purpose for which it was not designed.

METHODS TO AVOID HAZARDOUS SITUATIONS

WARNING

- Read, study, understand and follow all instructions before operating this press.
- Always wear safety goggles.
- Parts being pressed may splinter, shatter, or be ejected from the press at a dangerous rate of speed. Because there are a variety of press applications, it is the responsibility of the press owner to provide adequate guards, eye protection and protective clothing to the press operator.
- Visual inspection of the press should be made before use, checking for signs of cracked welds, bent bed pins, loose or missing bolts, leaks, or any other structural damage. Corrections must be made before using the press.
- Do not go near leaks. High pressure hydraulic fluid can puncture skin and cause serious injury, gangrene, or death. If injured, seek emergency medical help as immediate surgery is required to remove the fluid.
- Prior to use make sure the press is securely anchored to a concrete floor.
- Keep hands and fingers out of the press and away from parts that may shift and pinch. Do not stand in front of work area when load is applied.
- Always use an accurate force gauge to measure pressing force.
- Do not exceed the rated capacity of this press or tamper with the pressure/force settings. The rated capacity of the press is subject to the lowest capacity rated accessory used with it. When a lesser rated ram plunger is used with a higher capacity rated press, the press should not be used at a force greater than the rated capacity of the plunger.
- Do not substitute bolts, pins or any part of the press components. Use only genuine factory replacement parts.
- Always center load on ram plunger. Offset loads can damage ram and may cause load to eject at a dangerous rate of speed.
- Remove all loads from movable bolster before attempting to adjust bolster height. Beware of possible falling bolster.
- Press only on loads supported by movable bolster and press plates included. Do not support loads on floor or press frame.
- When using any accessories such as press or arbor plates, be certain they are centered on movable bolster and in full contact with both sides of the bolster.
- Before applying load, be certain all movable bolster supporting pins are fully engaged.
- Always use a bearing shield when pressing bearings.
- Use caution when positioning work to be pressed to ensure the item to be pressed cannot be ejected at a dangerous rate of speed.
- Release hydraulic pressure before loosening any fittings.
- Maintain proper hydraulic fluid levels.
- Do not make any alterations to the press.
- This product may contain one or more chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. *Wash hands thoroughly after handling.*
- Failure to heed and understand these markings may result in serious or fatal personal injury and/or property damage.

CONSEQUENCES OF NOT AVOIDING HAZARDOUS SITUATIONS

WARNING

Failure to read this manual completely and thoroughly, failure to understand its SAFETY WARNINGS, ASSEMBLY INSTRUCTIONS, OPERATING INSTRUCTIONS, MAINTENANCE INSTRUCTIONS and comply with them, and failure to comply with the METHODS TO AVOID HAZARDOUS SITUATIONS could cause accidents resulting in serious or fatal personal injury and/or property damage.

ASSEMBLY INSTRUCTIONS

Refer to the exploded view drawing to identify the component parts to be assembled.

1) Installing The Ram Cylinder Assembly

- a. Thread the cylinder support ring (R19) on the cylinder (R1) all the way. Use a serviceable thread locking sealer on the cylinder threads before tightening. **IMPORTANT: The cylinder support ring should bottom out on the cylinder threads. Failure to thread it on all the way may cause property damage and/or personal injury.**
- b. This step will require two assemblers. Remove and discard the Allen socket set screws in the four threaded holes of the head plate (see page 7). Apply a serviceable thread locking sealer to the threads of the four each mounting bolts (R20). One assembler must push the ram cylinder up through the press's head plate until the cylinder support ring (R19) is flush against the bottom of the head plate (see page 7). The second assembler should rotate the ram cylinder so the holes in the cylinder support ring align with the threaded holes in the head plate and the "L" fitting (R18) on top of the cylinder is facing the rear of the press and angled towards the pump side of the press. The second assembler must now install the four bolts (R20) to secure the cylinder support ring to the head plate. Tighten the bolts.
- c. Remove the threaded cap from the end of the "L" fitting (R18). Make sure the o-ring (P40) is installed in the groove at the end of the "L" fitting. Thread one end of the hydraulic hose (P43) onto the end of the "L" fitting (R18) and tighten.
- d. Remove the Allen socket plug in the "T" fitting (R24) and any remains of Teflon pipe dope tape in the threaded hole. Teflon pipe dope tape in the hydraulic system could cause pump malfunction.
- e. Install the plastic washer in the shallow counter bore inside the gauge fitting (R22) and hold the fitting upright so the washer will not fall out of its position. Hold the force gauge (R21) in one hand with its threaded fitting pointing down. Thread the gauge fitting (R22) onto the force gauge (R21) slowly and carefully so the plastic washer does not fall out of its position. Hand tighten all the way. Using open end or adjustable wrenches, secure one wrench around the bronze fitting coming out of the force gauge (R21) and tighten the gauge fitting (R22) on the bronze fitting with the other wrench. **IMPORTANT: Do not put any force on the bronze fitting where it connects to the force gauge.**
- f. Put a couple of wraps of Teflon pipe dope tape around the threads of the union fitting (R23) and tighten it in the "T" fitting (R24). Make sure not to lose the o-ring (P40) installed in the union fitting (R23). Hand tighten the threaded sleeve of the union fitting (R23) onto the gauge fitting (R22).
Using open end or adjustable wrenches, secure the gauge fitting (R22) with one wrench and tighten the sleeve of the union fitting (R23) on the gauge fitting with the other wrench. Make sure the force gauge (R21) is positioned so it can be read.
- g. Secure the plunger head (R15) in the ram (R11) with the Allen socket set screw provided.

2) Installing The Hydraulic Pump Assembly

- h. An Allen socket plug is located on the pump's hydraulic block opposite the side of the black release valve knob (P19). Lay the pump on a table with the plug side facing up so very little fluid will escape. Remove any remnant of pipe dope tape that might still be in the hydraulic block threads. Put a couple of wraps of pipe dope tape around the tapered threads of the "L" fitting (P39) and tighten it in the pump's hydraulic block with the fitting facing towards the top of the pump. Be careful not to lose or disrupt the small o-ring (P40) at the end of the "L" fitting (P39).
- i. Install the hydraulic pump assembly on the side of the press with the pump piston facing down towards the floor. Secure the pump to the pump bracket on the press frame with the four bolts (P44) and four washers (P45) provided. Using open end or adjustable wrenches, secure one wrench around the "L" fitting (P39) and the other wrench to tighten the other end of the hydraulic hose (P43) to the "L" fitting.
- j. Locate the round fill/vent screw assembly (P1) at the top of the pump and rotate it in a counterclockwise direction until it stops. Do not remove it.
- k. Remove the bolt and washer at the bottom of the pump handle (P42). Install the pump handle in the pump handle linkage socket (P35) and align the hole in the handle with the hole in the socket. Secure them together with the bolt and washer provided.
- l. Turn the pump's release valve knob (P19) in a clockwise direction until it stops. Now turn it in a counterclockwise direction two full complete revolutions and activate the pump handle ten full incremental pump strokes. Turn the release valve knob (P19) clockwise until it stops and activate the pump until the cylinder ram is fully extended.

INSPECTION

Visual inspection of the shop press should be made before each use of the press, checking for damaged, loose or missing parts. Each press must be inspected by an authorized service center immediately if subjected to an abnormal load or shock. Any press which appears to be damaged in any way, is found to be badly worn, or operates abnormally must be prevented from being used until necessary repairs are made by an authorized service center. It is recommended that an annual inspection of the press be made by an authorized service center and that any defective parts, missing or damaged warning labels be replaced with ARCAN's parts and labels.

RAM CYLINDER ASSEMBLY

Only parts with Item numbers are available for replacement

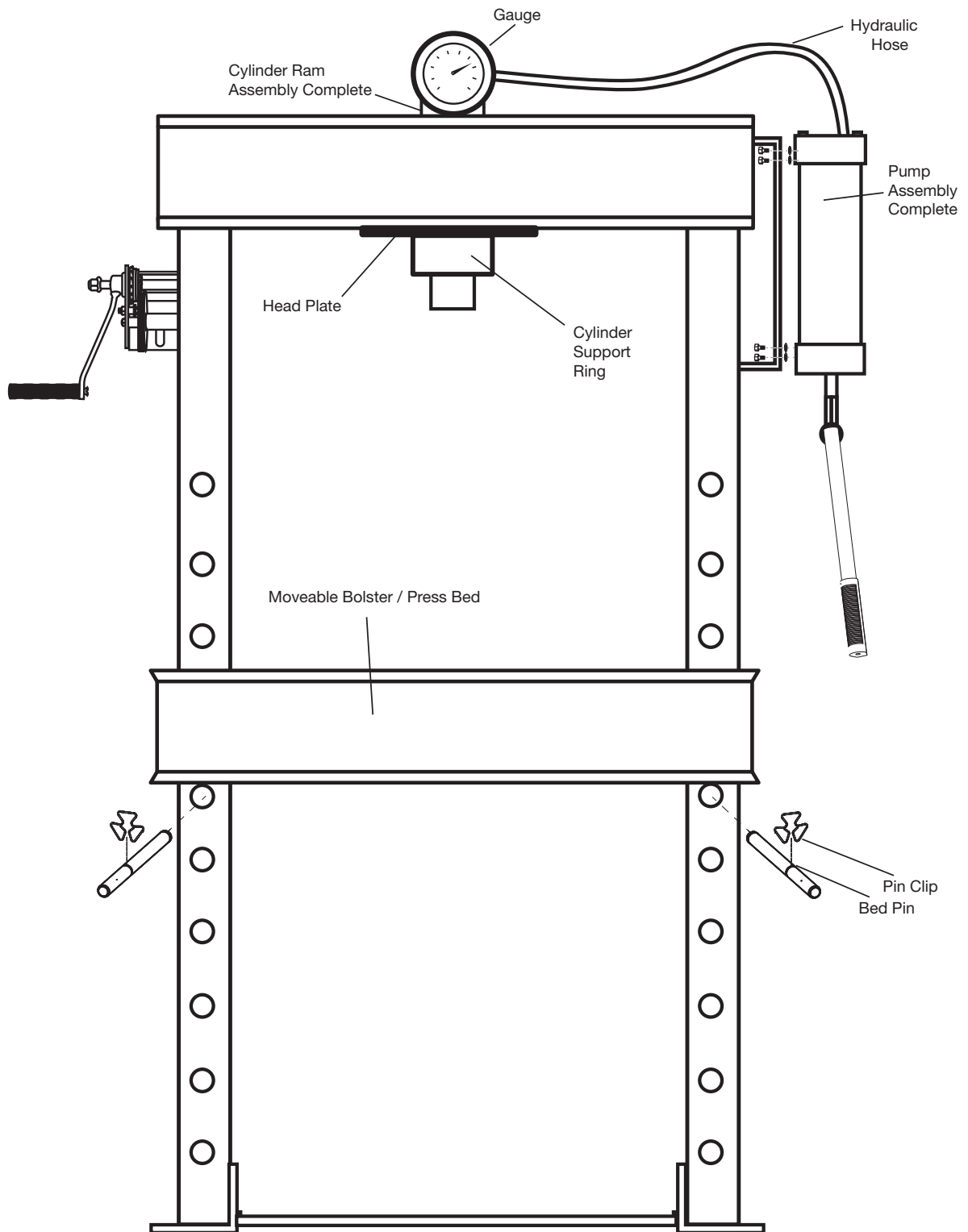
ITEM #	PART #	DESCRIPTION	QTY
R1		Cylinder	1
R2		Ram Retraction Spring	1
R3		Threaded Sleeve For Spring	1
R4		Ram Bearing	1
R5		Bearing Set Screw	1
R6		O-Ring	1
R7		Back Up Ring	1
R8		Cylinder Nut	1
R9		O-Ring	1
R10		Back Up Ring	1
R11		Ram	1
R12		Copper Washer	1
R13		Allen Socket Cap Screw	1
R14		Spacing Collar	1
R15		Plunger Head	1
R16		Expansion Pin	1
R17		1/4 NPT Pipe Plug	2
R18		L Fitting	1
R19		Cylinder Support Ring	1
R20		Mounting Bolt	4
R21		Force Gauge	1
R22		Gauge Fitting	1
R23		Union Fitting	1
R24		T Fitting	1

PUMP CYLINDER ASSEMBLY

Only parts with Item numbers are available for replacement

ITEM #	PART #	DESCRIPTION	QTY
P1		Fill/Vent Screw Assembly	1
P2		Welded Pump Assembly	1
P3		Steel Ball	4
P4		Oil outlet Spring	2
P5		Copper Washer	4
P6		Cover Screw	4
P7		Steel Ball	2
P8		Spring Bearing	1
P9		Spring	1
P10		Adjustment Screw	2
P11		O-Ring	2
P12		Cover Screw	2
P13		Overload Caps	2
P14		Steel Ball	1
P15		Spring Bearing	1
P16		Spring	1
P17		Washer	1
P18		Release Valve Bearing	1
P19		Release Knob Assembly	1
P20		Release Valve Stop Plate	1
P21		Lockwasher	1
P22		Pan Head Screw	1
P23		Valve Spring	2
P24		O-Ring	1
P25		Copper Washer	1
P26		Pump Housing	1
P27		U Cup Seal	1
P28		O-Ring	1
P29		Back Up Ring	1
P30		Small Pump Piston	1
P31		Retaining Ring	1
P32		Large Pump Piston	1
P33		Cotter Pin	2
P34		Linkage Pin	3
P35		Handle Linkage Socket	1
P36		Pump Linkage	1
P37		R Pin	1
P38		O-Ring	1
P39		L-Fitting	1
P40		O-Ring	1
P41		Nylon Washer	1
P42		Handle	1
P43		Hydraulic Hose	1
P44		Bolt	4
P45		Flat Washer	4

PRESS



OPERATING INSTRUCTIONS

CHECK YOUR LOCAL, STATE AND FEDERAL REGULATIONS REGARDING THE SAFE USE OF THIS PRESS.

- 1) Prior to use, the press feet or rails shall be firmly anchored to a concrete floor to prevent jumping and tipping of the press while it is being used.
- 2) Evaluate the work to be accomplished in order to make the full use of the cylinder's ram stroke. Consideration to press accessories used in conjunction with the component to be worked on should determine the work height of the movable bolster.
- 3) Make sure the movable bolster is free of any accessories, work pieces and tools before raising or lowering the movable bolster. The movable bolster can be raised by turning the winch crank in a clockwise direction and lowered by turning the crank in a counterclockwise direction. Once the movable bolster is at its desired work height, install the bed pins in the press frame holes closest to the underside of the movable bolster. Make sure the bed pins are fully engaged in the parallel flanges of the press's upright columns. Lower the movable bolster on top of the bed pins until there is a slight slack in the winch cable.
- 4) Make sure the cylinder's ram is completely retracted at this time by turning the release valve knob in a counterclockwise direction. Assemble the work setup on the movable bolster so that it is secure, stable and the cylinder's ram is properly aligned with the part to be pressed so it makes for a straight vertical operation.
- 5) Install proper guarding that provides adequate protection against any flying parts and use the bearing shield if it applies to the application.
- 6) Make sure that goggles and all protective clothing are worn at this time and clear the press work area of bystanders before using.
- 7) Turn the release valve knob in a clockwise direction until it stops and slowly activate the pump handle until the ram meets the load. Continue to slowly pump the handle to make sure the setup is still stable and the ram is pushing straight and vertical. Discontinue pumping if the setup or vertical ram travel looks compromised. Release the ram and make any required setup changes before pumping again. Make sure that you read the force gauge intermittently so the force does not exceed the lowest rated capacity of a press accessory, plunger or adapter being used.
- 8) After the work has been completed, retract the ram all the way, remove everything off the top of the movable bolster and raise the bolster off the top of the bed pins. The bed pins can now be removed and movable bolster moved to another height. Always support the movable bolster with bed pins. Never leave the press unattended without the bed pins supporting the bolster.

PREVENTIVE MAINTENANCE

Any press found to be inoperable or not operating according to its original design as a result of worn parts due to lack of lubrication or adjustment, air/hydraulic system (if applicable) contaminated with water, rust and/or foreign materials from the air supply or other outside source is not eligible for warranty consideration.

- The press must be anchored to a concrete floor and placed in a well protected area where it will not be exposed to inclement weather, corrosive vapors, abrasive dust, or any other harmful elements.
- Check for hydraulic leaks and tighten, repair or replace components before using.
- Use a general purpose grease to lubricate the pump linkage.
- It should not be necessary to refill or top off the pump's hydraulic fluid reservoir unless there is an external leak. An external leak requires immediate repair by a qualified hydraulic repair mechanic who is familiar with the press.
- In order to prevent hydraulic seal damage, never use alcohol, hydraulic brake fluid or transmission oil in the hydraulic pump. Use a light viscosity hydraulic jack or turbine oil, Chevron Hydraulic Oil ISO 32 or its equivalent Unocal Unax AW 150.
- Do not attempt to make any hydraulic repairs unless you are a qualified hydraulic repair person that is familiar with this press. Repair by an authorized service center is recommended.

TROUBLE SHOOTING

PROBLEM	ACTION
1. Ram will not extend 2. Ram will not hold load 3. Pumping feels spongy under load 4. Ram will not extend all the way	Make sure the round vent knob at the top of the reservoir is open all the way. Follow step "I" under ASSEMBLY INSTRUCTIONS.
5. Ram will not retract all the way	Make sure the round vent knob at the top of the reservoir is open. If this does not correct the problem consult ARCAN.
6. Press still does not operate properly	Consult ARCAN.

LIMITED WARRANTY

POWERSTATION, LLC WARRANTS TO ITS CUSTOMERS THAT THE COMPANY'S POWERSTATION, LLC BRANDED PRODUCTS ARE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIALS.

PowerStation, LLC will repair or replace its PowerStation, LLC 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, PowerStation, LLC 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 PowerStation, LLC. The foregoing obligation is PowerStation, LLCs' 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 PowerStation, LLC. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

1-800-879-7316

Monday - Friday 9am to 5pm EST

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