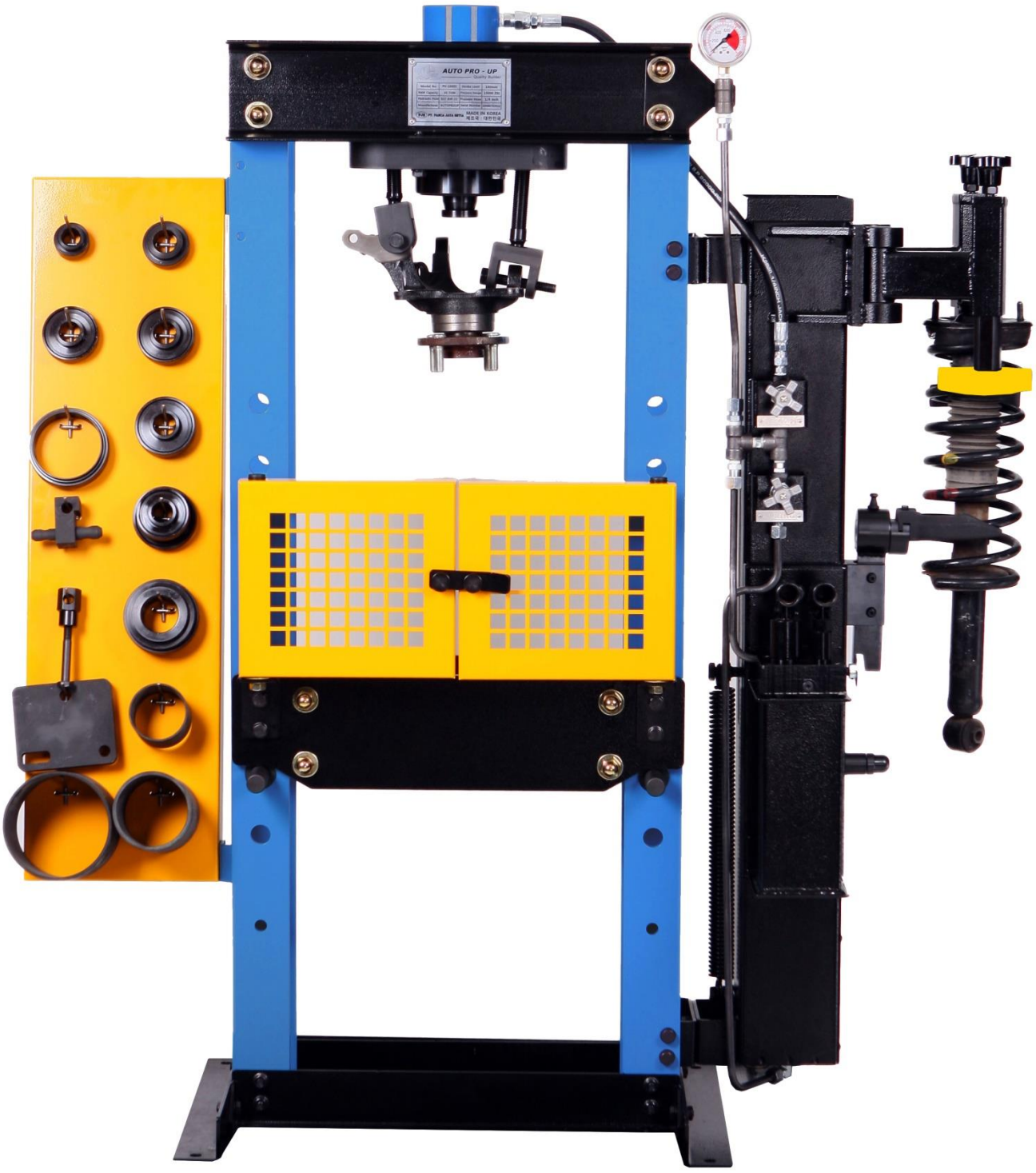
PS-1000S

Hydraulic Workshop Press & Spring Compressor

Operation Manual



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INSPECTION

Visual inspection shall be made before each use of this equipment, checking for abnormal conditions, such as cracked welds, leaks, damaged, loose or missing parts. This equipment shall be removed immediately from service if it is believed to have been subjected to an abnormal or shock load, the equipment shall be inspected by a qualified repair facility. Owners and / or operators should be aware that repair of this equipment may require specialized knowledge and facilities.

- When using the press, basic safety precautions should always be followed.
- Keep work area clean and free from debris.
- Keep children away from work area and shop equipment. Keep hands and feet from loading area.
- Always wear protective eyewear during press operation. If possible position press in an isolated area and shield it to prevent possible injury to others.
- Ensure press is stable and that the components to be pressed shall be well supported and aligned to prevent slippage and breaking. Make sure press bed pins are inserted in the upright frame holes all the way and the pins are fully supporting the press bed channel flanges before pressing.
- Some parts being pressed may have a tendency to pop out of the press or explode under pressure.
- Parts being pressed should be shielded against shattering under pressure.
- The press is designed for pressing purposes only.
- Do not exceed the rated capacity of the press. Never apply excessive force to a work-piece and always use a force gauge to accurately determine the applied load.
- Check press for loose or damaged parts before each operation. Replace damaged parts and tighten all loose bolts before operating.
- Never leave loaded press unattended.
- Ensure the user is familiar with the controls and operational characteristics of this product and aware of the potential hazards associated with its use.
- No alterations shall be made to this product.

IMPORTANT SAFETY INFORMATION

It is mandatory that the operator has a full understanding of all instructions, safety regulations, cautions and warning before starting to operate this high-force tool equipment.

1. Keep hands away from Arbor Plates, Press Apron and Strut/Spring.

2. Do not move workpiece while compressed.

3. Release load before service or maintenance.

4. Bolt to floor before use.

5. Keep area under Arbor Plates clear. If Arbor Plates rest on obstruction (i.e. bolt, debris, etc.), it creates an uneven press, causing excess stress and possible breakage.

6. Avoid off-center loads. Do not operate if workpiece tilts or binds during compression.

7. Do not stand directly in front of the press when loaded. NEVER leave the press unattended when loaded.

8. Do not operate the hydraulic ram beyond rated capacity.

9. Ram service must be performed ONLY by qualified repair personnel. Service or maintenance performed by unqualified personnel could result in a risk of injury.

10. Use this press on a stable, level, dry surface capable of sustain load.

11. Make sure all bolts and nuts are firmly tightened before use.

12. This product is not a toy. Keep it out of reach of children at all times.

⚠ DANGER

Avoid situations where loads are not directly centered on the cylinder plunger. Off-center loads produce considerable strain on cylinders and plungers. In addition, the load may slip or fall.causing dangerous results.

LIMITED WARRANTY

Auto Pro-Up Workshop Press is warranted by the manufacturer against defects in materials and manufacturer workmanship for a period of eighteen (18) months from date of shipment.

Auto Pro-Up Company(APUP) sells its products through authorized retail only to ensure that consumers obtain quality after sale support and service. The warranty NOT VALID if the products have been purchased from an unauthorized, on-line E-tailer (e.g., E-bay® sellers who are not authorized APUP resellers), or if a product's serial number has been altered, removed, or replaced in any way.

The manufacturer will not be responsible for any charges or damages incurred in the removal of the defective parts for repair, or the reinstallation of these parts after repair. Use of any components that are not APUP specified will void the warranty. This warranty shall be considered void if damage to the product(s) was due to improper installation or use, use of non-APUP specified or approved components or replacement parts, connection to an improper power source, and tampering.

PROOF OF PURCHASE

Please keep your dated proof of purchase for warranty and servicing purposes.

REPLACEMENT PARTS

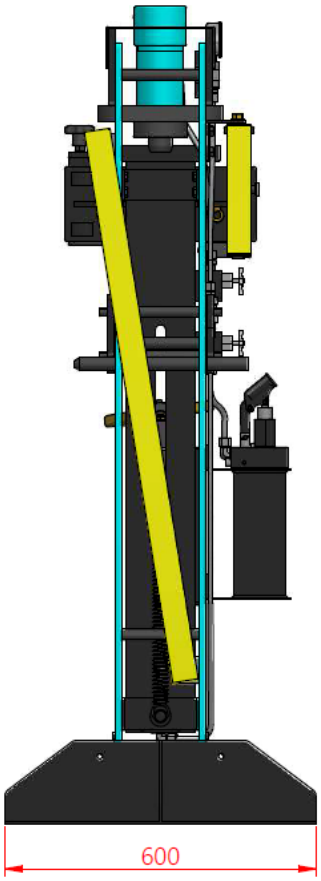
Replacement parts for this product are available by contacting manufacturer or local distributor. If you have difficulty in contacting distributor or local dealers, please write an email at apup@apup.co.kr for assistance.

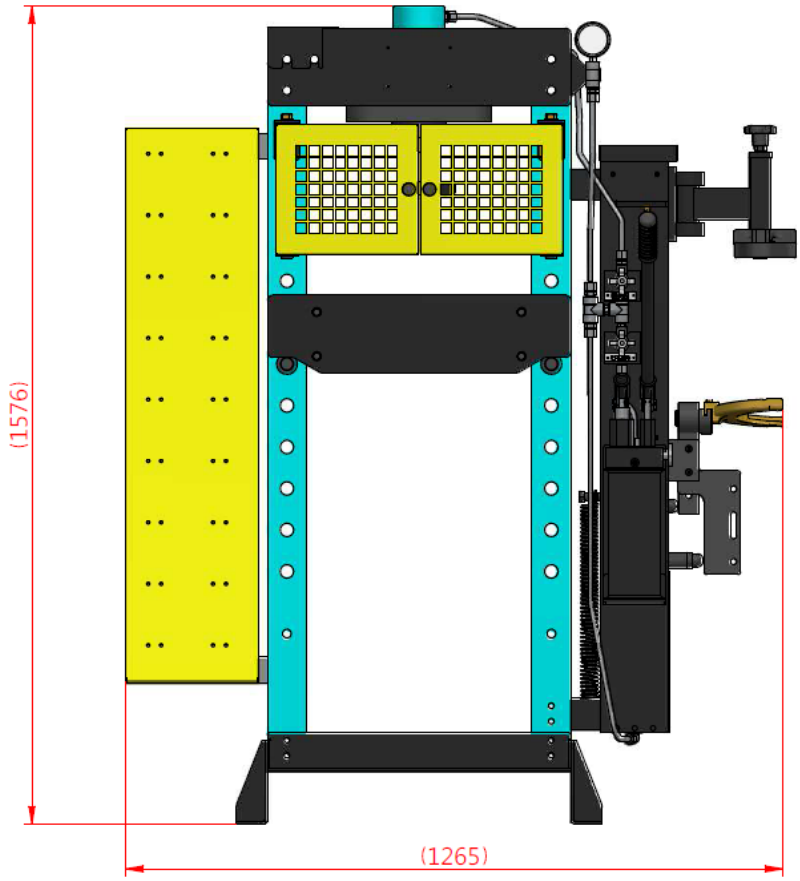
LIMITED WARRANTY

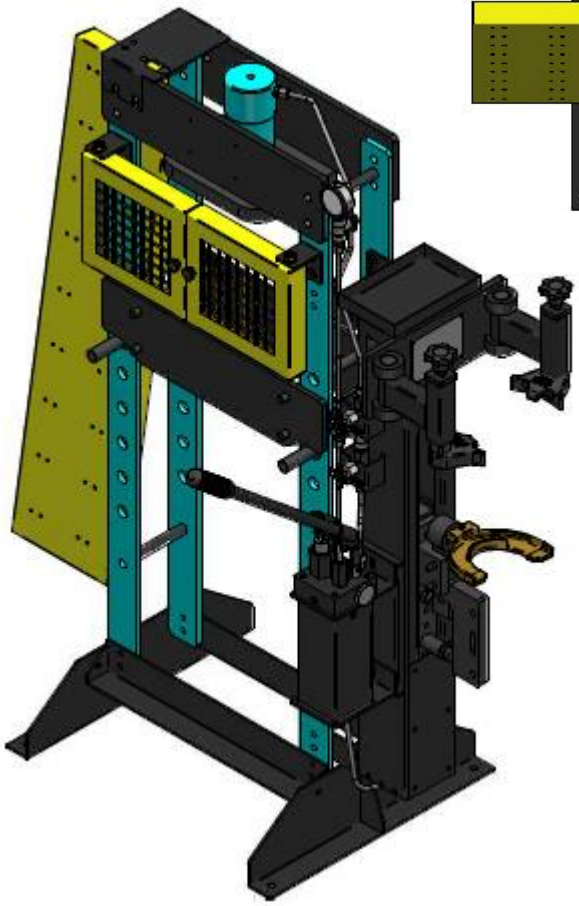
We make every effort to ensure that this product meets high quality and durability standards. We warrants to the original retail consumer a 1-year limited warranty as of the date the product was purchased at retail and that each product is free from defects in materials. Warranty does not apply to defects due directly or indirectly to misuse, abuse, and normal wear and tear, repairs done by an unauthorized service center, alterations and lack of maintenance.

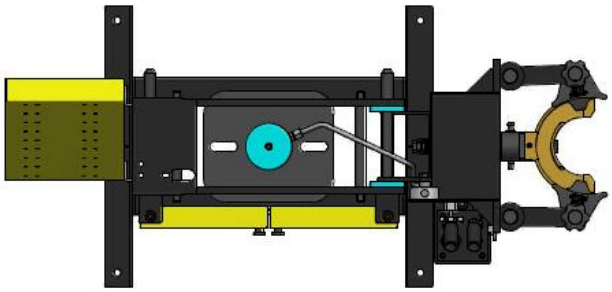
We will replace the product if any part or parts covered under this warranty which examination proves to be defective in workmanship or material during that warranty period (1 year from date of delivery)

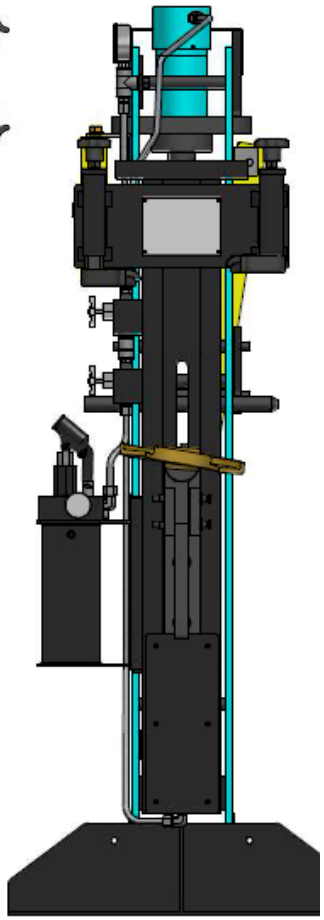
BASIC STRUCTURE











Adjustable Hub Perches

PS-1000S comes with two hub perches that hang a front hub allowing a quick leveling and extraction. Two perches are packed in accessory carton and need to be installed as below picture to be used.

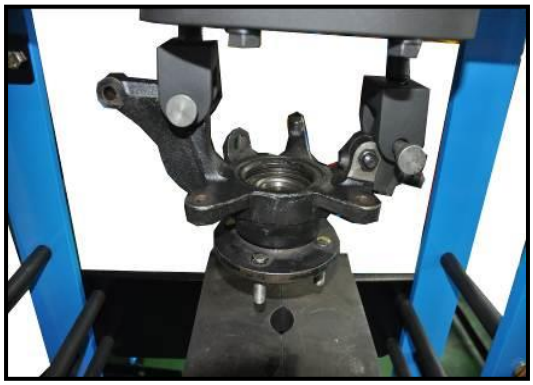
Install two adjustable hub perches to the ram plate and fasten hex nuts to secure perches.

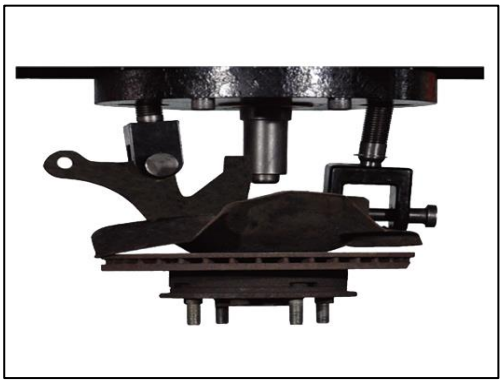
Adjust the length if necessary.

Note: Length of two perches is not always different. They can have same length and it is not defection in manufacturing.

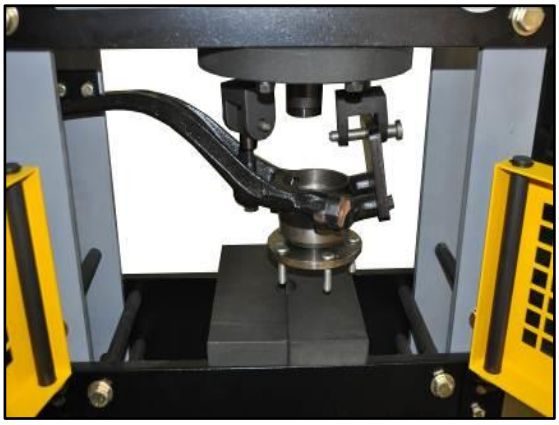
Various kinds of punches are provided with PS-1000S and they are all interlocking tools. Try to combine punches that best fit to your workpiece.

Bearing Removal



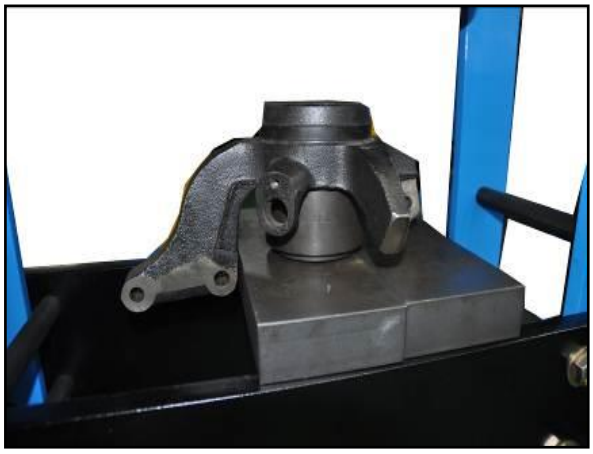


Place the wheel knuckle on the Arbor Plates and connect hub perches to the wheel knuckle assembly using two knuckle pins. Make sure wheel knuckle assembly is leveled as shown on the right picture.



Select the correct-size interlocking bearing punches. Then position the Press Apron as high as possible while positioning the workpiece as close as possible to the ram. Align the workpiece to ensure center-loading. For your safety, make sure to close front safety cage before loading the ram. Apply load by hand pump to remove bearing from the wheel knuckle.

Bearing Installation



Position the Arbor Plates on the Press Apron first. Then place Knuckle support as shown on the picture above. Put the bearing and select the correct interlocking punches. Then

position the Press Apron as high as possible. Align the workpiece to ensure center-loading.

Pump the hand-pump to apply load to install bearing to the wheel knuckle. Once the ram has completely retracted, remove your workpiece from the Arbor Plates and Press Apron.

CAUTION: **DO NOT** apply load to the RAM without proper interlocking punches. It will cause damage to the ram and hydraulic cylinder.

Placing Arbor Plates

Place arbor plates onto the Apron.

Adjust the width as necessary.

As shown on above picture, make sure to fit all four (4) bottom corners of the arbor plates to the Apron so that arbor plates are securely placed.

Bearing Separator

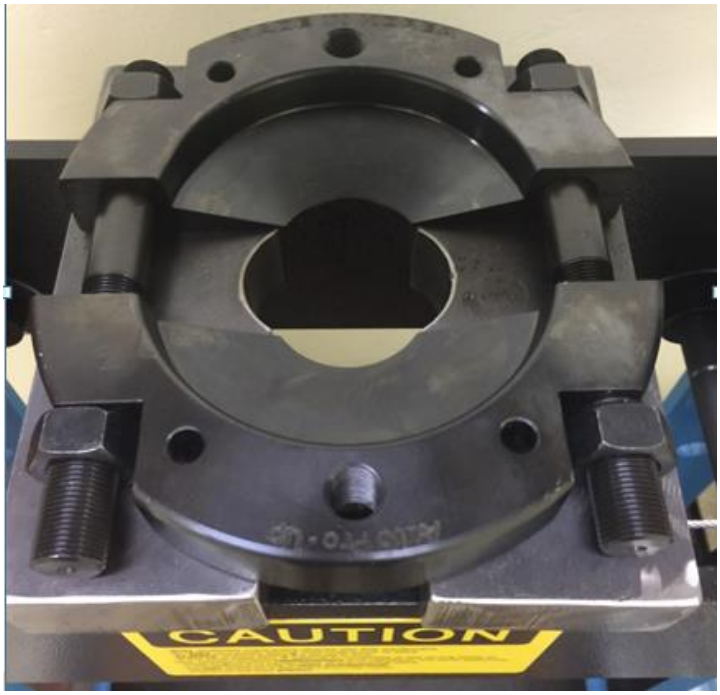
This Product is NOT a toy! Do not allow children to play with or near this item.

Be certain that the separator jaws are evenly set between bearing halves before attempting to separate.

1. Loosen the Separator Jaw Nuts sufficiently to allow the jaws to catch each bearing housing.

2. Tighten Nuts until the jaws are securely set between the bearing housings.

CAUTION! Overtightening Separator Jaw Nuts may damage bearings and jaws.



PLACE BEARING SEPARATOR SCREW ON THE ARBOR PLATE VERTICALLY

Press Apron (Cradle) Height Adjustment

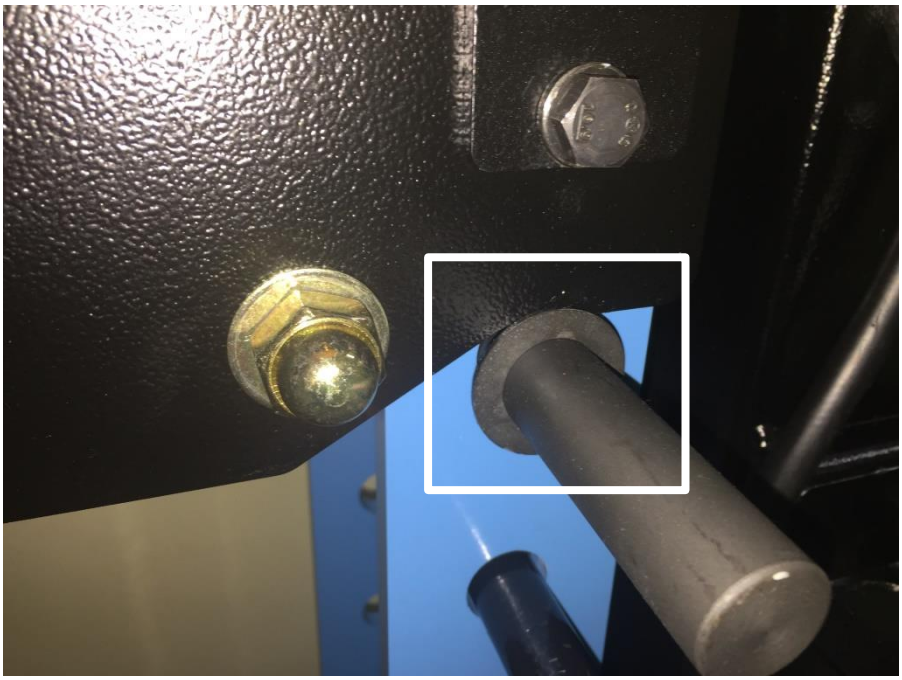
Press Apron (also known as Hub Cradle) can be moved up and down either manually or by using optional hand winch

Optional Hand Winch

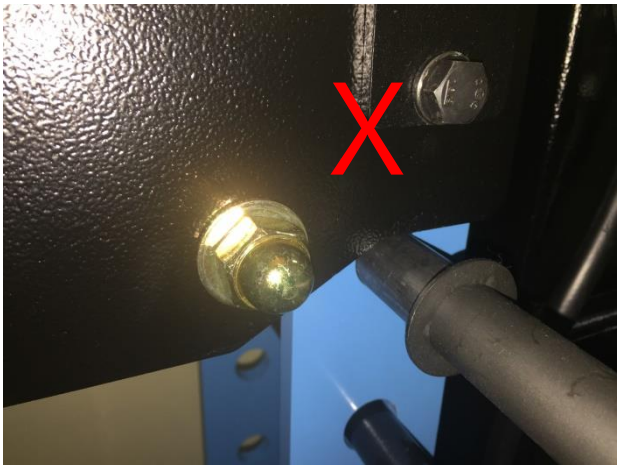
1. Use the Support Pins to adjust the height of the Press Apron.

2. Position the Press Apron as high as possible while positioning the workpiece as close as possible to the piston rod.

3. Place the workpiece on the Arbor Plates so that it is directly under the piston rod.



It is very important to have Press Apron to directly rest on two support pins as shown on above picture.



Switching Valve

To use Press RAM

1. Open the RAM valve by turning it in counterclockwise. One full turn is enough.

2. Close the SPRING valve by turning it in clockwise

To use Spring Compressor

1. Follow above steps opposite

OPEN < Turn in Counterclockwise

Turn in Clockwise > CLOSE

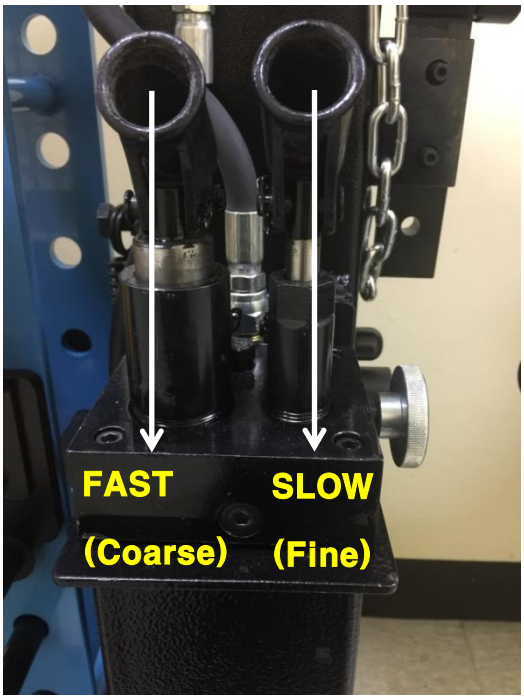
Two-way Hand-Pump

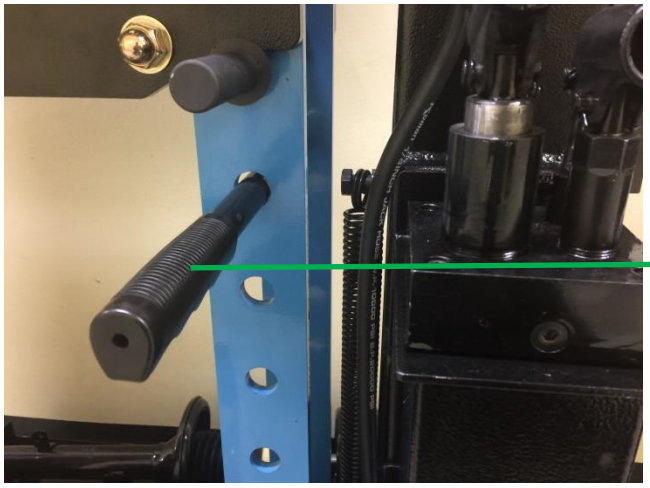
Hand pump can be used in 2 ways.

A. Coarse (Fast-pumping but less powerful)

B. Fine (Slow-pumping but more powerful)

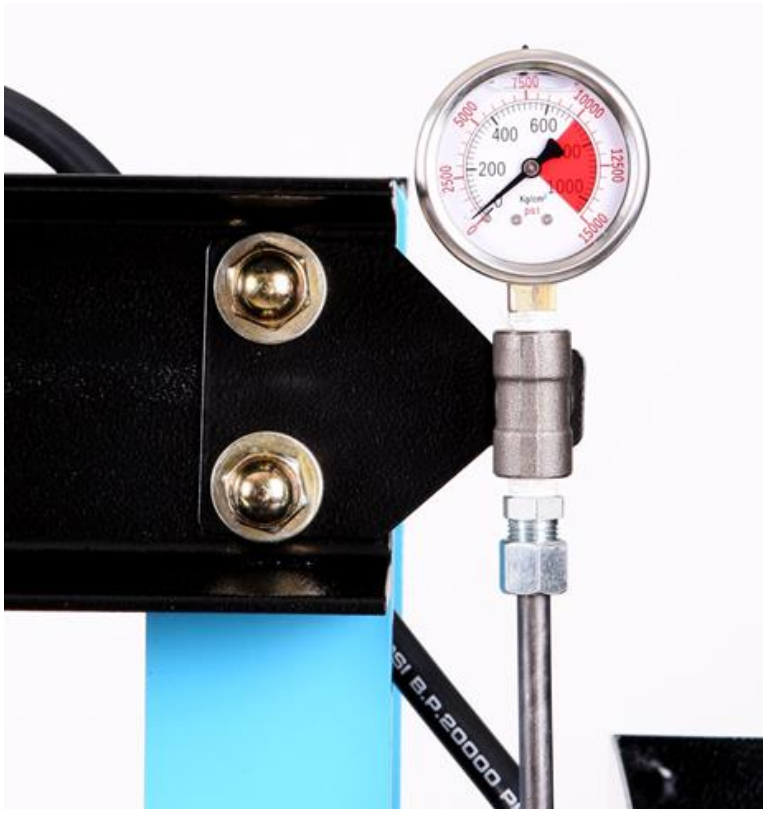
When it is difficult to press down by fast-pumping (coarse), it indicates that it only requires a little more amount of pressure for that work. In this case, switch it to FINE (slow)





Pump Lever can be stored here when it is not in use.

Pressure Gauge



DANGER

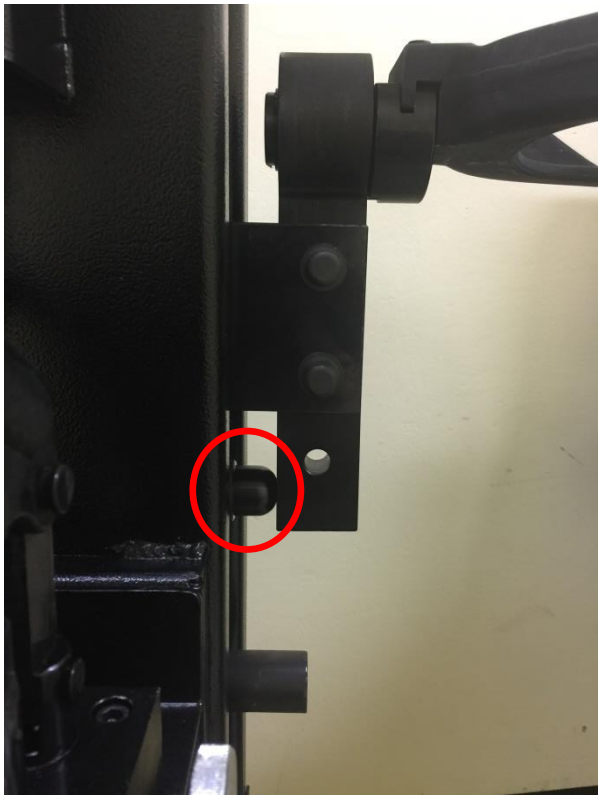
Pressure gauge is engaged for both press ram and spring compressor.

ALWAYS pay close attention to its indicator and NEVER OVERLOAD!

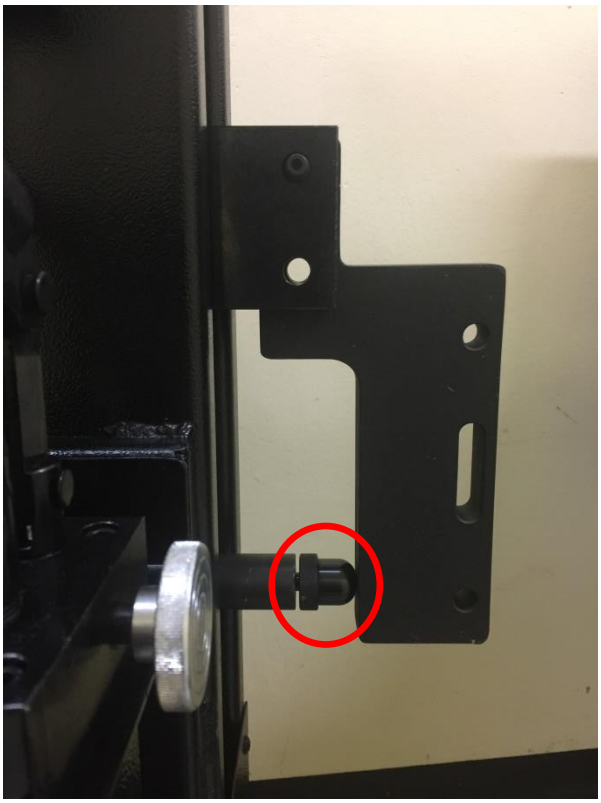
- Some parts being pressed may have a tendency to pop out of the press or explode under pressure.

STRUT SPRING COMPRESSOR

First of all, select correct strut adapter for your work. There are mainly two different kinds of struts. One can be mounted onto horseshoe mount (TYPE A) and the other can be mounted onto a special adapter (TYPE B)



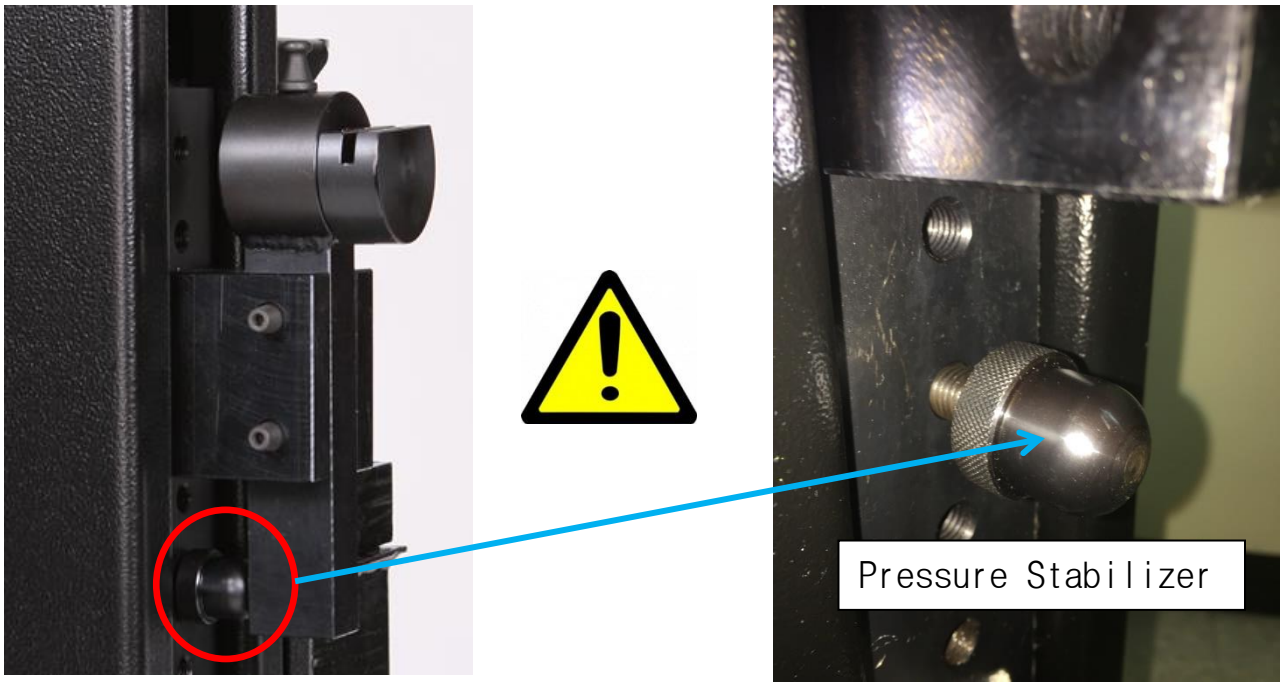
Strut Adapter **TYPE A**



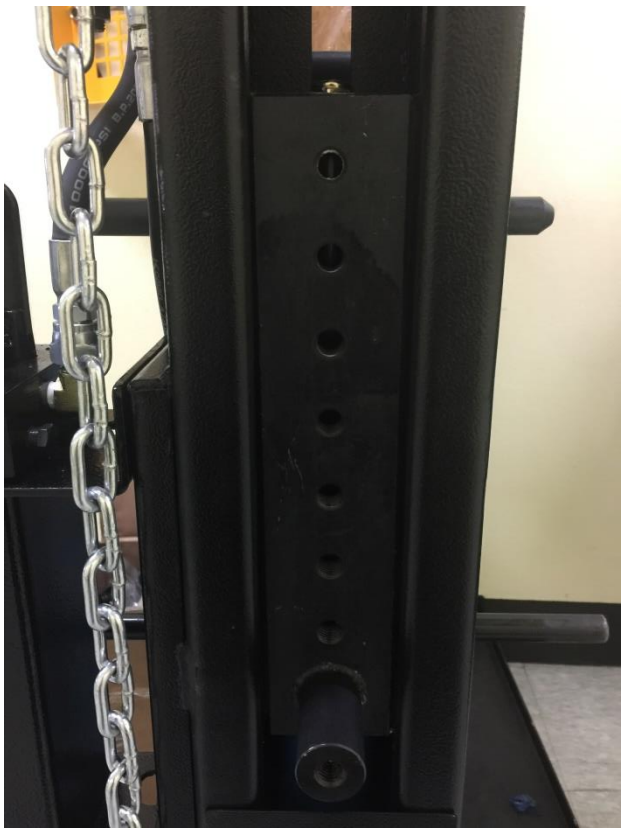
Strut Adapter **TYPE B**

Pressure Stabilizer

Whenever using any strut adapter, pressure stabilizer MUST be used for maximum pressure resistance and optimum performance. It requires high-pressure to press down springs and without pressure stabilizer, strut adapters can be tilted due to high pressure.

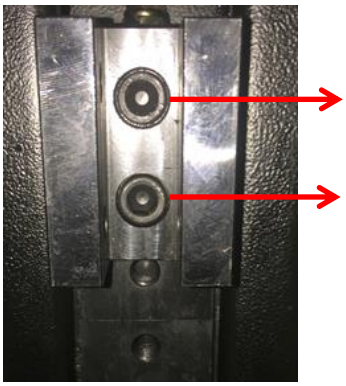


Adjust height of the workpiece

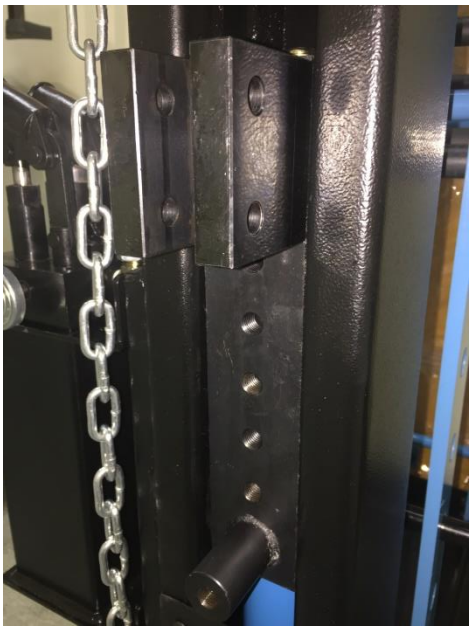


There are total seven (7) screw holes for height adjustment. Select the most appropriate height of your work before mounting the strut.

Use 10mm Hex socket wrench to fasten/loosen the workpiece. Make sure it is firmly fastened before any work.



Use 10mm socket wrench



TOP

MIDDLE

BOTTOM

⚠WARNING

It is very important to set the most appropriate height before pressing down springs. If workpiece is installed too low, you will have to apply more-than-necessary pressure to set spring arms to the spring. This will result in unexpected accident due to too much downward pressure.

Before pressing down springs

Position Spring Arms as near the top of the strut assembly as possible and ensure that the strut assembly is set up vertically, and the spring is clasped centrally and evenly.

Pay particular attention when selecting the horseshoe Mount. Spring MUST fully nest on the Shoe. If Shoe is too large or too small, the strut can be slipped or tilted due to a heavy downward-travel pressure.

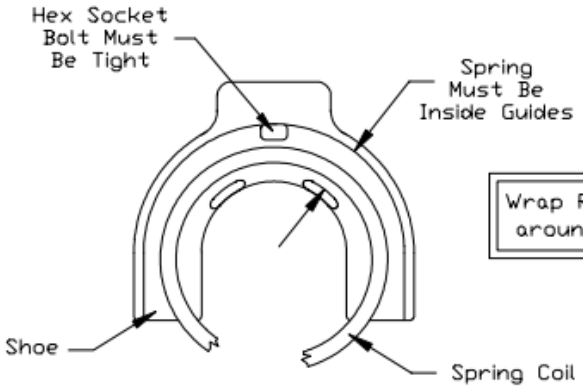
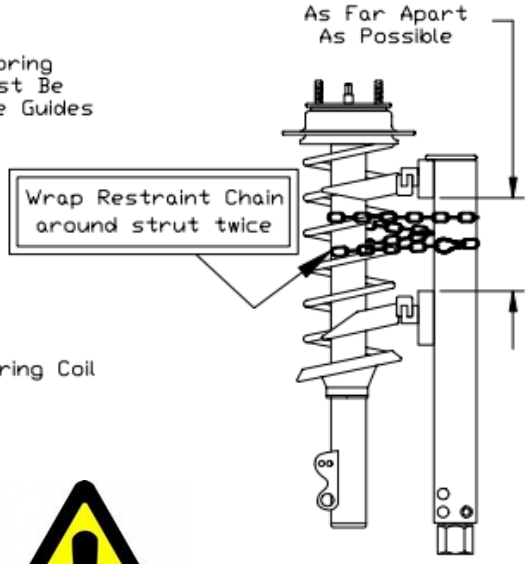
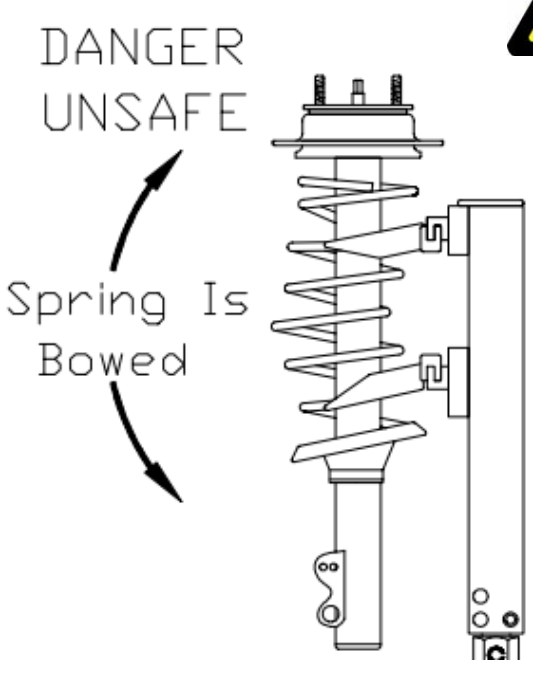
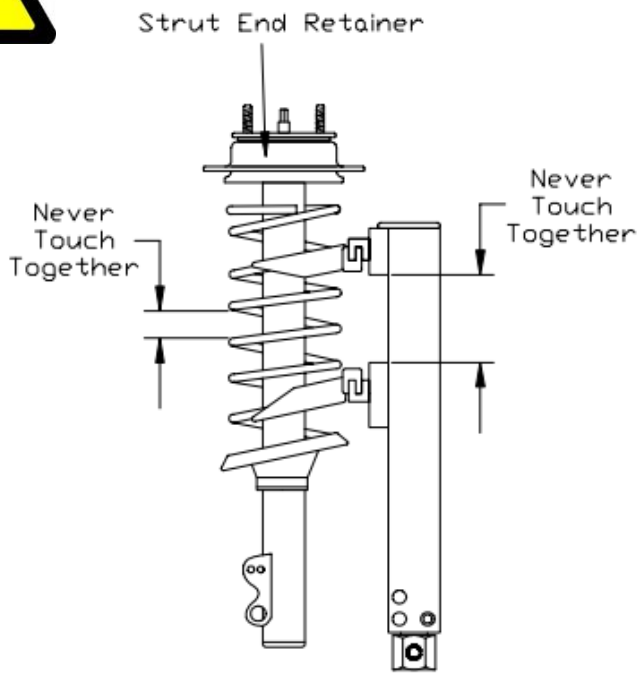


Figure 1

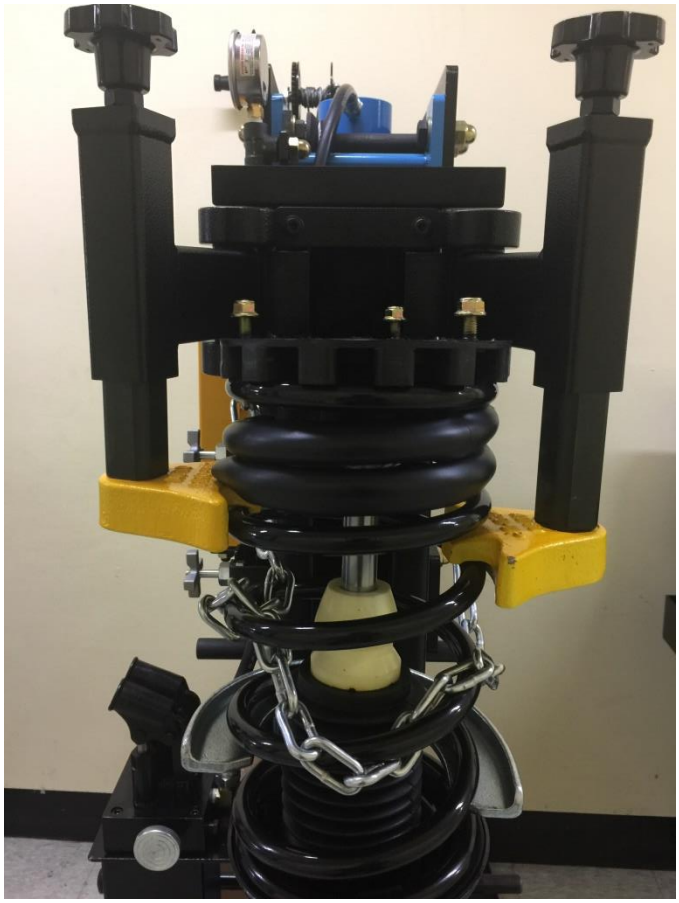


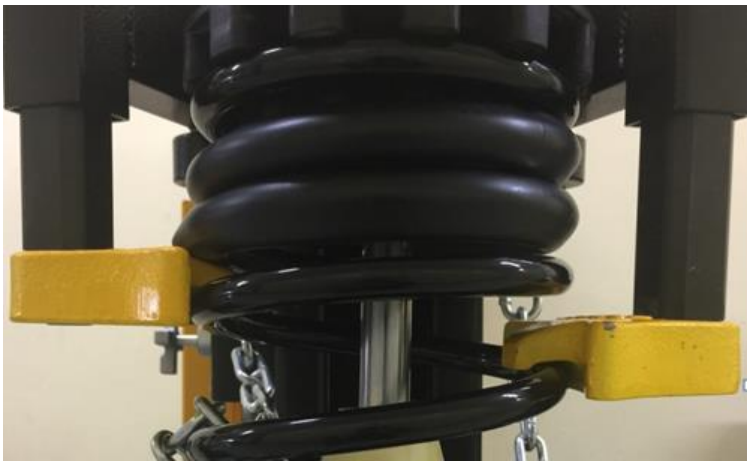


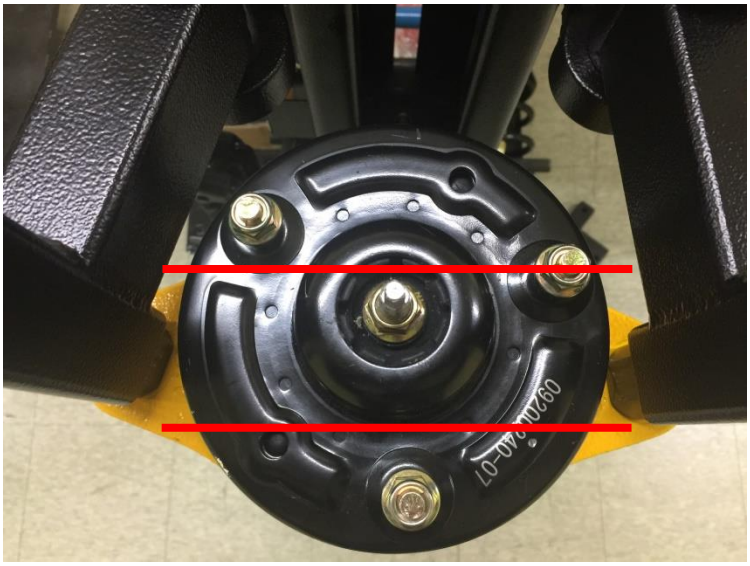


With the strut assembly properly positioned, compress spring until the bottom coil of spring is free of the lower spring seat. COMPRESS SPRING ONLY FAR ENOUGH TO RELIEVE PRESSURE ON THE STRUT END RETAINER!

▪ Strut Mount Configurations

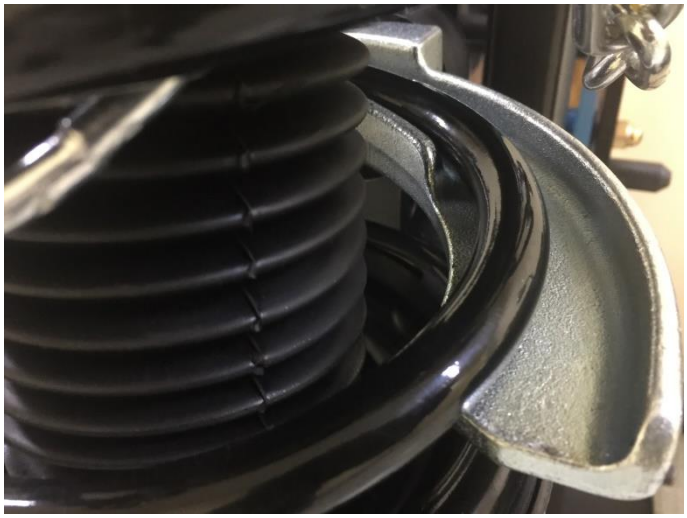






⚠ DANGER

Be sure to set spring arms center-aligned as shown on above pictures. It is very important to set up correctly to distribute load/pressure as even as possible. Otherwise, strut can be tilted during operation and it can be VERY dangerous.

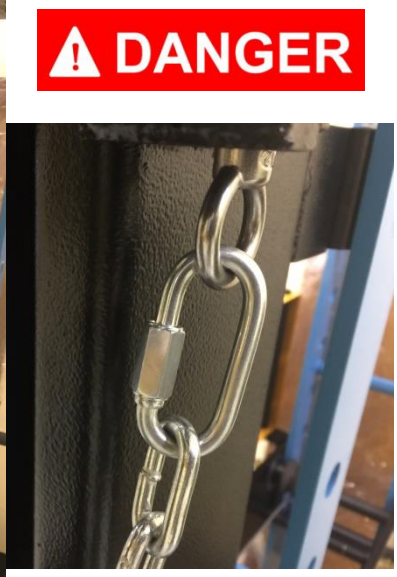


Spring MUST be inside Guide and must be fully nested on horseshoe

With PS-1000S, there are total two (2) different size of horseshoes are provided as standard. Large horseshoe is sold separately.

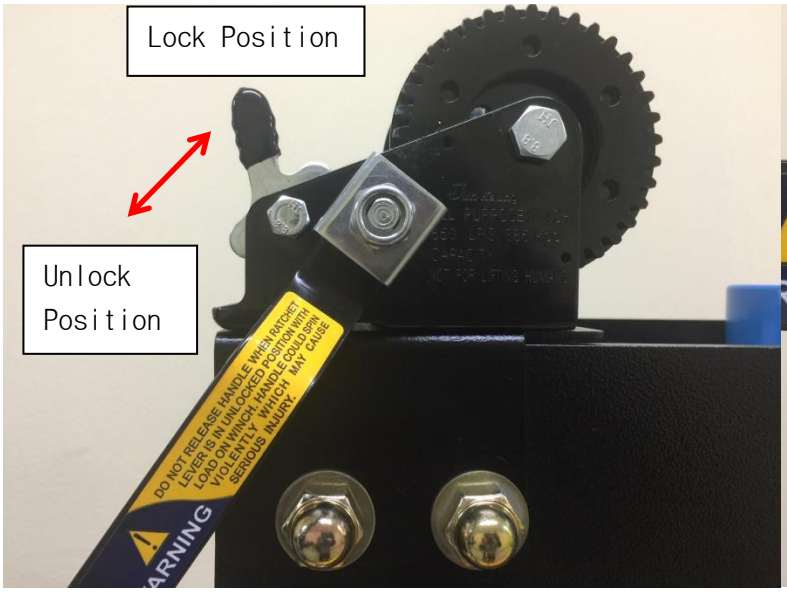
Safety Chain

In order to prevent any unexpected accident or injury, ALWAYS wrap safety chain around the spring and adjust the chain ends as necessary. A compressed spring is very dangerous.



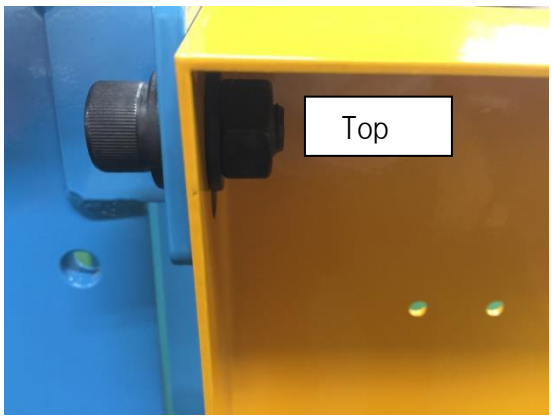
Hand Winch (optional)

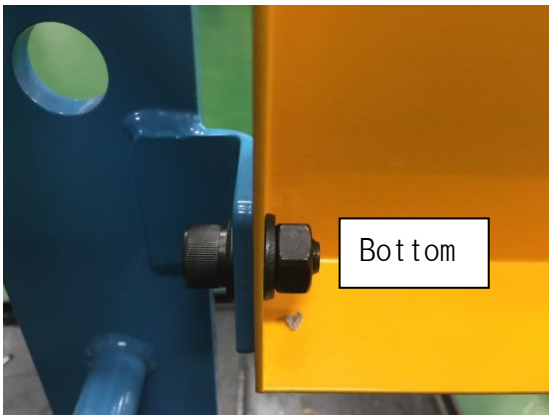
Hand winch can be installed to the PS-1000S at request and additional charge. Hand winch is used to lift up or lower the Press Apron (cradle) to desired work position easily. When using the hand winch, DO NOT release handle when ratchet lever is in unlocked position with load on winch. Handle will spin very violently which may cause serious injury during operation.



PS-1000S STANDARD TOOLS

- Accessory Rack Assembly





AUTO PRO-UP COMPANY

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