

STRUT SPRING COMPRESSOR

Model 43753

SET UP AND OPERATING INSTRUCTIONS

**This automotive tool is ideal for tire, body, and specialty shops
and garages, dealerships, and service stations!**

Distributed exclusively by Harbor Freight Tools®.

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Visit our website at: <http://www.harborfreight.com>



**Read this material before using this product.
Failure to do so can result in serious injury.
SAVE THIS MANUAL.**

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For technical questions or replacement parts, please call 1-800-444-3353.

Cover revised 08I

Specifications

Capacity	7" Coil Spring Diameter
Maximum Opening	8"
Hardware Tensile	113-128 PSI, Minimum
Lead Screw	11-3/8" L x 5/8" Diameter
Lead Screw Torque	15 ft-lb Minimum
Support Arms	3/8" Steel Flat Stock
Support Arms Length	15-1/4"
Compressor Type	Mac-Pherson Struts Only
Tool Weight	17-1/4 lb.

Save This Manual

You will need the manual for the safety warnings and precautions, assembly instructions, operating and maintenance procedures, parts list and diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep the manual and invoice in a safe and dry place for future reference.

Safety Warnings and Precautions

WARNING: When using tool, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

Read all instructions before using this product!

1. **Avoid working alone.** If an accident happens, an assistant can bring help.
2. **Keep work area clean.** Cluttered areas invite injuries.
3. **Observe work area conditions.** Don't expose to rain. Keep work area well lit.
4. **Keep children away.** Children must never be allowed in the work area. Do not let them handle machines, tools, or extension cords.
5. **Store idle equipment.** When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep out of reach of children.
6. **Dress properly.** Do not wear loose clothing or jewelry as they can be caught in moving parts. Protective, electrically nonconductive clothes and nonskid footwear are recommended when working. Wear restrictive hair covering to contain long hair.
7. **Use eye and ear protection.** Always wear ANSI approved impact safety goggles.
8. **Do not overreach.** Keep proper footing and balance at all times. Do not reach over or across electrical cables or frames.
9. **Use the right tool for the job.** Do not attempt to force a small tool or attachment to do the work of a larger industrial tool. There are certain applications for which this tool was designed. Do not modify this tool and do not use this tool for a purpose for which it was not intended.

10. **Stay alert.** Watch what you are doing, use common sense. Do not operate any tool when you are tired.
11. **Check for damaged parts.** Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment and binding of moving parts; any broken parts or mounting fixtures; and any other condition that may affect proper operation. Any part that is damaged should be properly repaired or replaced by a qualified technician. Do not use the tool if any switch does not turn On and Off properly.
12. **Replacement parts and accessories.** When servicing, use only identical replacement parts. Use of any other parts will void the warranty. Only use accessories intended for use with this tool. Approved accessories are available from Harbor Freight Tools.
13. **Do not operate tool if under the influence of alcohol or drugs.** Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate the tool.
14. **Maintenance.** For your safety, maintenance should be performed regularly by a qualified technician.
15. **Capacity.** Never exceed the recommended capacity (springs up to 7" in diameter). Only use this tool with MacPherson Struts. Never use with high pitched struts.
16. **Use with hand tools.** Never use any air, electric, or impact tools with this tool. Only operate this tool with a 3/4" socket and ratchet, 3/4" combination wrench, or other applicable hand tools. Power, air, or electric tools may compress the spring, leading to injury.
17. **Spring Coils.** If spring coils do not compress evenly, discontinue the operation. Loosen the adjusting screw, reposition the strut spring, and retry.
18. **Adjustment Screw (6).** Before initial use, apply grease adjustment screw. Also, apply grease periodically during use.
19. **Be careful when spring is compressed.** Do not drop or jar spring. Doing so might result in personal injury or damage.
20. **Reaching Torque.** When reaching the maximum torque (15 ft-lb) by tightening the adjustment screw, discontinue, and loosen the screw. Reposition and retry.
21. Always use vehicle support stands.
22. Have qualified service technician inspect this tool annually.
23. The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

Unpacking

When unpacking, check to make sure all of the parts listed on the parts list on page 7 are included. If any parts are missing or broken, please call Harbor Freight Tools at the number on the cover of this manual.

Assembly

The only assembly required is the addition of the **Adjustment Screw (#6)** and **Safety Ring (#20)**.

1. Insert the **Adjustment Screw (6)** with the Hex Nut up, through the hole in the center of the **Plain Axle (13)**.
2. Add (by sliding on) the **Safety Ring (20)** to the **Adjustment Screw (6)** before continuing through the center hole on the **Threaded Axle (10)**.
3. Secure Adjustment Screw (6) with two Nuts (15).

Operation

Warning: MacPherson struts must be removed from the vehicle before attempting repairs. Make sure to put the struts in a MacPherson Strut Vise prior to using the Strut Spring Compressor.

Warning: Only use hand tools with the Strut Spring Compressor. Never use any air, electric, or impact tools with this tool. Only operate this tool with a 3/4" socket and ratchet, 3/4" combination wrench, or other applicable hand tool. Power, air, or electric tools may compress the spring, leading to injury.

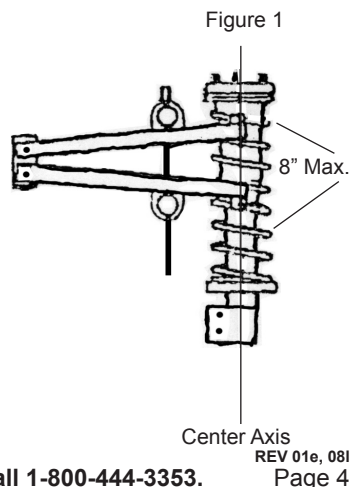
Note: The Strut Spring Compressor should be periodically inspected by a qualified service technician.

Removing a MacPherson Strut from a vehicle.

1. Position the strut into a strut vise.
2. Shut the vise and tighten.

Attaching the Spring Compressor

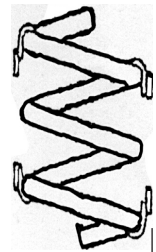
3. Open the Spring Compressor approximately 8 inches. Do not open more than 8" or a long strut may slip off of the tool.
4. Make sure the hex nut on top of the **Adjustment Screw (#6)** is facing up.
5. Before clamping the spring, slip the **Safety Block (#19)** over the **Hook (#5)** and **Hook (#7)** as a safety precaution should the strut break loose.



The **Safety Block (#19)** will keep the claws from springing open and causing injury.

6. Position the top hooks over the strut springs and tighten the **Adjustment Screw (#6)** so that the lower hooks will fit over the spring. See Figure 2.
7. Make sure the same number of coils are between the hooks on each of the spring. Make sure the hooks are securely fastened and sit in line with the center axis of the spring (see Figure1).
8. Turn the **Adjustment Screw (#6)** by using a wrench on the Hex Nut (see assembly diagram on page 8) clockwise to compress the strut spring. Also hold the **Screw Adjustment Nuts (#15)** with another wrench while adjusting.
9. Remove the strut rod nut, mounting plate, and spring seat.
10. Carefully remove the spring with the strut spring compressor still attached.
11. Repair or replace the strut (See service manual).
12. Set the spring over the repaired or new strut and re-install the rod nut, mounting plate, and spring seat.
13. Loosen the strut spring compressor and remove it.
14. Remove the strut from the strut vise.

Figure 2



Low Hook

Note: Remember, if the spring doesn't compress evenly, loosen and reposition.

Note: Only compress the spring enough to remove the drive nut.

Warning! Do not allow contact between spring coils.

Warning! Make sure the arms of the Strut Spring Compressor do not contact each other.

Warning! Do not overtighten.

Replacing a MacPherson Cartridge on a Vehicle

1. Open the Spring Compressor approximately 8 inches. **Position it with the Hex Nut facing down.** As discussed on page 5, before clamping the spring, slip the **Safety Block (#19)** over the **Hook (#5)** and **Hook (#7)** as a safety precaution should the strut break loose. The **Safety Block (#19)** will keep the claws from springing open and causing injury.
2. First, position the top hooks over the strut spring.
3. Use the **Adjustment Screw (#6)** to tighten the unit so the lower hooks fit over the spring.

4. Make sure the same number of coils are between the hooks on each of the spring. Make sure the hooks are securely fastened and sit in line with the center axis of the spring. See Figure1 on Page 5.
5. Turn the **Adjustment Screw (#6)** by using a wrench on the Hex Nut (see assembly diagram on page 8) clockwise to compress the strut spring. Make sure you also hold the **Adjustment Screw Nuts (#15)** with another wrench while adjusting.
6. Repair the cartridge. Release and remove the Strut Spring Compressor.

Note: Only compress the spring enough to remove the drive nut.

Note: Remember, if the spring doesn't compress evenly, loosen and reposition.

Warning! Do not allow contact between spring coils.

Warning! Make sure the arms of the Strut Spring Compressor do not contact each other.

Warning! Do not overtighten.

Maintenance

1. Make sure the **Adjustment Screw (#6)** threads are properly greased.
2. An annual Strut Spring Compressor inspection is recommended. Only qualified service technicians should inspect this tool. If the tool is used extensively, more frequent inspections are recommended.

Parts List

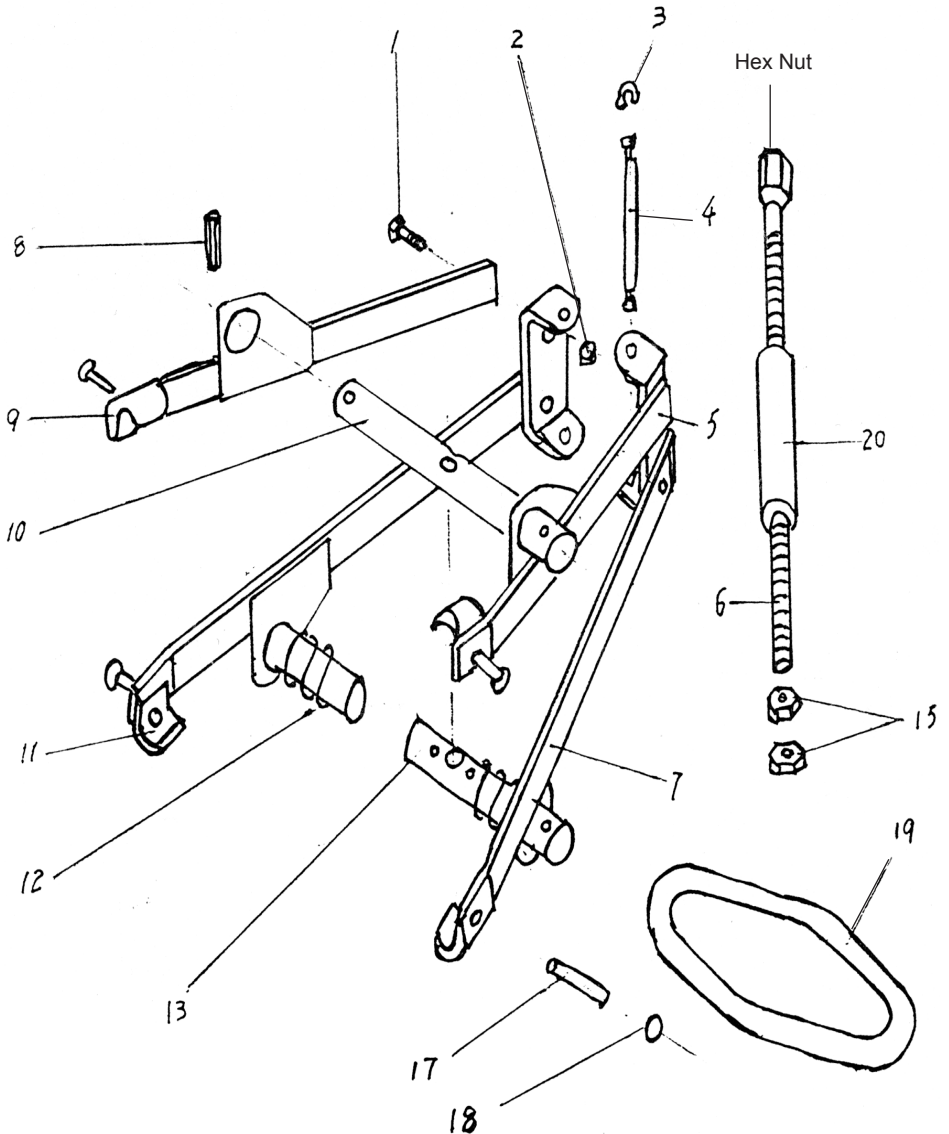
No.	Description	Qty.
1	Bolt	2
2	Nut	2
3	Track Ring	2
4	Small Axle	1
5	Hook	1
6	Adjustment Screw	1
7	Hook	1
8	Axle Pin	6
9	Hook	1
10	Threaded Axle	1
11	Hook	1
12	Spring	2
13	Plain Axle	1
15	Screw Adjusting Nut	2
17	Pin	4
18	Pull Ring	4
19	Safety Block	1
20	Safety Ring	1

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

NOTE: Some parts are listed and shown for illustration purposes only and are not available individually as replacement parts.

Assembly Diagram



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