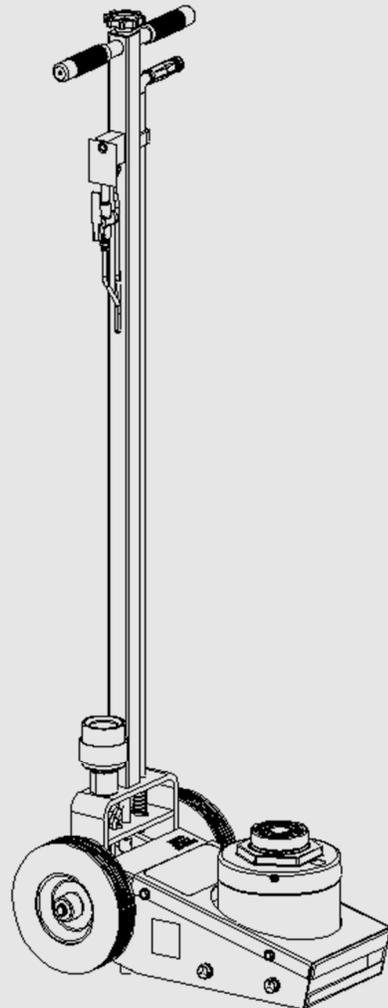


MAHLE CAJ-35

EN

Operation Manual
Truck Service Lift





**EVERY PERSON WHO OPERATES THIS
EQUIPMENT NEEDS TO KNOW AND
UNDERSTAND ALL OF THE INFORMATION IN
THIS MANUAL - FAILURE TO DO SO COULD
RESULT IN SERIOUS INJURY OR DEATH.**

**READ THIS MANUAL CAREFULLY
AND RETAIN FOR YOUR RECORDS**

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1. Safety Regulations

1.1 Warnings

⚠ Failure to follow all of these safety instructions can lead to severe injury or death from a sudden loss of the load. Contact the manufacturer at the numbers or address printed on the back cover of this manual if you have any questions.

⚠ **Before using this jack**, be sure you have read and understood all of the instructions and warnings on the on product labeling and in this owner's manual. See the section entitled "OWNER AND/OR OPERATOR RESPONSIBILITIES" on page 6 of this manual for more information.

⚠ **Inspect the jack before each use**. The jack must be removed from service if damage is detected or if the jack is subjected to an abnormal shock or load. See page 10 of this manual for proper "INSPECTION – BEFORE EACH USE."

⚠ **Inspect the work area before each use**. Make sure the jack and vehicle are located on a hard, level surface capable of supporting the load. Use on other than hard level surfaces can result in jack instability and possible loss of load.

⚠ **Identify appropriate vehicle lift points before using the jack**. Lift only on areas of the vehicle specified by the vehicle manufacturer. The lift point must be strong enough to sustain the lifting force without damage to the vehicle. Make sure the lift point is securely cradled in the jack's factory supplied lift pad. Do not use any kind of cribbing or adapters with this jack. The jack must remain in direct contact with the floor and the lifting pad must be in direct contact with the vehicle.

⚠ **Make sure the load does not exceed the rated capacity of the jack**. The maximum lifting capacity of this jack is 70,000 lbs. / 31,750 kg.

⚠ **Never use more than one jack at the same time to raise a vehicle**. If this jack does not have sufficient capacity to lift a load, use a different jack with adequate capacity.

⚠ **Always lift with either the factory supplied lift pad or extended lift pad in place**. Never lift when one of these two factory furnished lift pads is not properly installed [see graphic on right]. Make sure the lift pad is the only part of the jack in contact with the vehicle — do not attempt to use any other part of the jack as a lifting point. Never place a hand or any other body part between lift pad and vehicle.

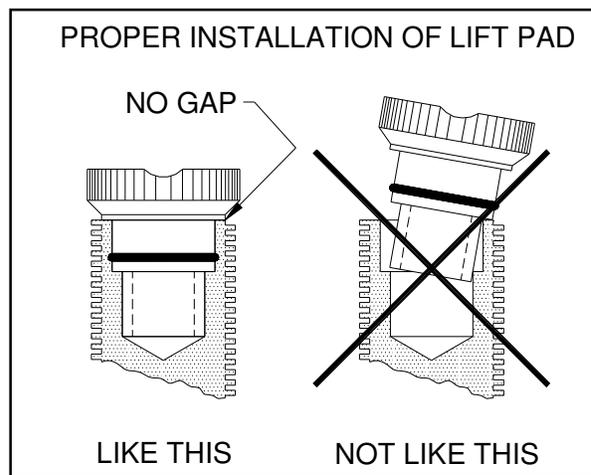


Fig. 1: Proper installation of lift pad

⚠ **Use the jack only as a lift, not as a support stand**.

After lifting the vehicle, never allow any part of your body to pass under it (and never begin work) until it is properly supported by appropriate support stands. Once adequate support stands are in place, remove the jack from underneath the vehicle. See pages 8-9 of this manual for information about raising and lowering a vehicle and refer to the manual that comes with your support stands for information about their proper and safe use.

⚠ **Always use the jack as intended**. Never modify or alter the jack. Use the jack for lifting vehicles only. Use of the jack for any other purpose (than lifting a vehicle), constitutes misuse of the jack.

⚠ **Do not use any type of blocks, cribbing devices, or adapters with this jack**. The jack must remain in direct contact with the floor and the lifting pad must be in direct contact with an appropriate lift point on the vehicle.

⚠ **Never attempt to reposition or rotate the jack or move, dolly, or drive the vehicle** while the vehicle is raised. Never throw the jack or allow the jack to fall from an elevated position, such as from a truck bed.

2. Foreword

2.1 From the manufacturer

Thank you for your purchase. To complement the offering of A/C, fluid and nitrogen service equipment, MAHLE Service Solutions has partnered with Gray Manufacturing to provide the highest quality hydraulic and pneumatic equipment available for the professional service technician. This equipment adheres to high standards promised in the MAHLE guarantee including the assurance of innovation and reliability that comes with the Gray Manufacturing name. Please contact MAHLE Service Solutions' customer service at (800) 468-2321 or tech.mss@us.mahle.com with any comments or questions.

3. Symbols Use

3.1 Signal words

Signal words call attention to a safety message or messages, or a property damage message or messages, and designate a degree or level of hazard seriousness. Signal words used in this manual include:

Keyword	Probability of occurrence	Severity of danger if instructions not observed
DANGER	Immediate impending danger	Death or severe injury.
WARNING	Possible impending danger	Death or severe injury
CAUTION	Possible dangerous situation	Minor injury
NOTICE	Possible damage to property	Possible property damage

4. Responsibilities

4.1 Receiving inspection

Before attempting to operate this equipment, thoroughly read and understand this manual. Completely remove all tape and packaging. Inspect the equipment immediately upon delivery. If shipping damage is evident, inform the delivering carrier immediately and contact the manufacturer using the contact information on the back cover of this manual.

4.2 Owner and/or operator responsibilities

The owner of this equipment must read these instructions and maintain them for future reference and for instructing any other users of the equipment. The owner is responsible for keeping all warning labels and instruction manuals legible and intact. Replacement labels and literature are available from the manufacturer. The owner must never authorize or allow anyone to use this equipment until the operator has read and understood the information in this manual and on the accompanying labeling on the equipment itself.

If this equipment is being used in an occupational setting (or workplace), the employer should ensure that all personnel working with and around the equipment know of the risks associated with its use. Personnel involved in the use and operation of this equipment shall be careful, competent, trained, and qualified in the safe operation of the equipment and its proper use when servicing motor vehicles and their components. Safety information provided with this equipment should be emphasized by the employer and understood by each employee. The employer must make this manual available to all personnel using this equipment and all personnel must read and understand the contents of this manual. If the operator is not fluent in English, the manufacturer's instructions and warnings shall be read to and discussed with the operator in the operator's native language by the employer, making sure that the operator comprehends its contents and observes the proper procedures for use of this equipment.

5. Specifications

5.1 CAJ-35

Model CAJ-35	US units	Metric units
Maximum capacity	70000 lbs	31750 kg
Required air pressure	90-200 psi	6.2-13.8 bar
Minimum start height	9.25 in	23.5 cm
Minimum start height (w/ extended lift pad)	11.875 in	30.2 cm
Lift height (lift screw extended)	19.375 in	49.2 cm
Lift height (lift screw extended) w/ extended lift pad	22 in	55.9 cm
Stroke	5.13 in	13.0 cm
Extension screw adjustment	5 in	12.7 cm
Weight	146 lb	66.2 kg

6. Product Description

6.1 Component identification

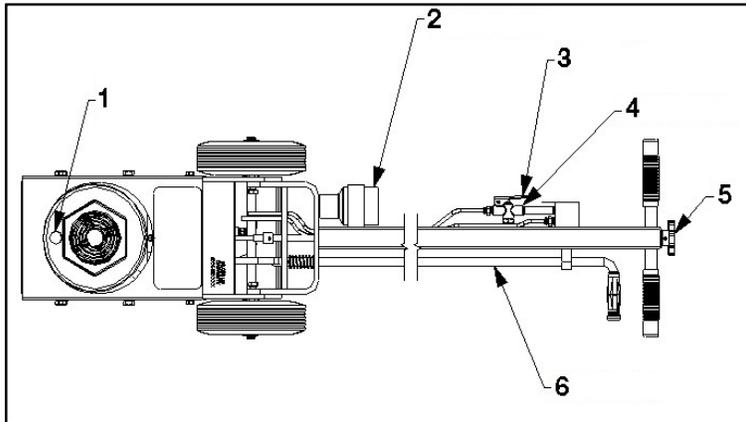


Fig. 2: Top view

- 1 Plastic cover for oil reservoir plug
- 2 Extended lift pad
- 3 Air control lever
- 4 Air control valve
- 5 Release knob
- 6 Handle tilt rod

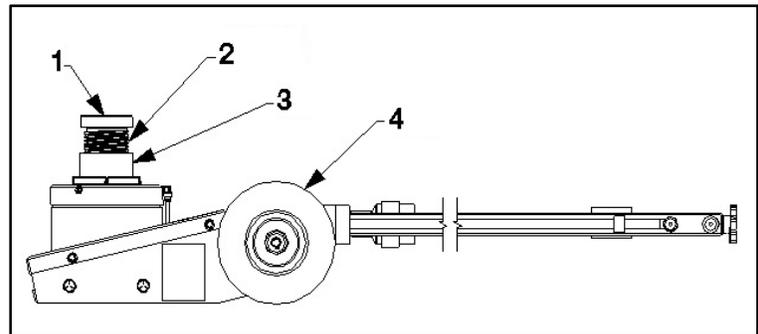


Fig. 3: Top view

- 1 Lift pad
- 2 Extension screw
- 3 Ram
- 4 Wheel

7. Operation

⚠ **WARNING** - This section discusses the appropriate and safe methods for using the jack to raise and lower a vehicle. Safe operation is not limited to simply raising and lowering a vehicle - it also includes adequate preparation before the vehicle is lifted. Failure to follow all of the steps outlined in this section could result in serious injury or death.

7.1 Raising a vehicle

1. Make sure the vehicle load does not exceed the rated capacity of the jack (70,000 lbs. / 31,750 kg.)
2. Inspect the jack for signs of wear or damage (see “Inspection Instructions” in Section 8). The jack should be immediately removed from service if you detect any abnormal conditions or signs of damage that suggest the jack will not work properly or safely — When in doubt, don’t use the jack!
 - ⚠ If you see any signs of wear or damage, or if there is any indication that the jack is not performing normally, immediately take it out of service and contact customer service at the address and number shown on the back cover of this manual. NEVER use a jack that appears damaged in any way.
3. Transport the jack to the work area by wheeling it. You can push or pull the jack. Wheel the jack across smooth surfaces only.
 - ⚠ Jolting caused by the wheels catching on uneven surfaces can cause physical strain and personal injury.
4. Select appropriate vehicle support stands and bring them to the immediate work area. Follow the instructions supplied with the vehicle stands. Use appropriate vehicle stands to support the load immediately after lifting. NEVER use the jack to support a load while working on a vehicle. Failure to follow all of these instructions can result in jack instability and loss of a load.
5. Examine the work area. Use the jack only on hard, level surfaces capable of safely supporting the load. The jack must ALWAYS remain in direct contact with the floor. NEVER attempt to lift from a polished or greasy floor. Clear the surrounding area of personnel, tools, equipment, or any other objects that would interfere with the use of the jack. Make sure appropriate support stands and chocks are available for use in the immediate area. If these conditions cannot be met, move the vehicle and jack to an area where the lift can be performed safely.
6. Identify a lift point on the vehicle that is capable of supporting the load. Lift only on areas of the vehicle specified by the vehicle manufacturer. The lift point must be strong enough to sustain the lifting force without damage to the vehicle. Position the jack so that as the vehicle is lifted, the load will be balanced on the vehicle tires that remain on the ground. Chock the vehicle’s wheels that will remain on the ground. When raising a vehicle from one end, always chock the wheels that will remain on the ground. Make sure at least two wheels of the vehicle remain in contact with the floor at all times — NEVER use the jack to raise all four wheels of the vehicle from the floor.
7. Verify that the vehicle’s engine is not running before raising it.
8. Position the lift pad for contact with the vehicle’s lift point. Check to make sure the lift pad contacts and cradles the lift point squarely and securely so as to prevent loss of load.
9. Connect a quick coupler to the air control valve. Close the release valve by rotating the release knob clockwise. Attach air supply of 110 psi minimum to 200 psi maximum. The unit is now ready for use. Actuation of the air control lever will now raise the lift pad. Rotating the release knob counterclockwise will lower the lift pad (always rotate this knob slowly and only rotate the knob as far as necessary to lower the vehicle gently).
10. Raise the load to the desired height. Upon actuating the air control valve, the jack lift pad will rise quickly until contact is made with the load. Then the jack will continue to lift the load (at a slower rate) until the air control valve is released or the jack has reached the limit of its stroke.
11. Position appropriate support stands under the vehicle manufacturer’s recommended lift areas to provide stable support for the raised vehicle. Make sure all personnel are clear of the area.
12. Lower the vehicle onto the support stands by slowly and carefully turning the release control knob counterclockwise. When lowering the jack, it is important to keep the rate of lowering under control and to assure the recommended vehicle lift points will properly rest on the stand pad. Refer to the instructions and warnings accompanying the support stands for additional information about their safe use.
13. When the support stands are supporting the entire load, the jack can be removed from the area before work on the vehicle begins.

7.2 Lowering a vehicle

⚠ To avoid serious injury or death, NEVER drive the vehicle off the jack or attempt to move a vehicle that it is elevated by the jack.

❗ Use this jack to lower the vehicle only if you used it to lift the vehicle. Using this jack to lower a vehicle that was raised with another device (or multiple devices) could overload this jack to the point of catastrophic failure.

1. Make sure the vehicle load does not exceed the rated capacity of the jack (70,000 lbs. / 31,750 kg.)
 2. Inspect the jack for signs of wear or damage (see “Inspection Instructions” in Section 8). The jack should be immediately removed from service if you detect any abnormal conditions or signs of damage that suggest the jack will not work properly or safely – When in doubt, don’t use the jack!
 3. Transport the jack to the work area by wheeling it. You can push or pull the jack. Wheel the jack across smooth surfaces only.
 4. Close the release knob by rotating clockwise and actuate the control valve to raise the vehicle off the vehicle support stands.
 5. Follow steps 6-10 in Section 7.1 to raise vehicle off the support stands.
 6. Carefully remove the vehicle support stands from beneath the vehicle and place them away from the work area.
 7. Slowly turn the release knob counterclockwise to lower the vehicle to the floor gently. The ram will fully retract by leaving the air supply connected and the release valve open. The ram will fully retract even under no-load conditions.
 8. Lower the jack completely and move the jack and chocks away from the work area.
- ❗ **Air Powered Ram Retraction:** The ram will retract by leaving the air supply connected and the release valve open. The ram will fully retract even under no load conditions.

8. Maintenance and Inspection

⚠ **WARNING** - The jack must be inspected according to the requirements of this section. Failure to properly inspect the jack could lead to severe injury or death. The jack must be removed from service and inspected immediately if it is subjected to an abnormal load or a shock load. If any irregularities or problems are detected during an inspection, the jack must be removed from service immediately and repaired. Contact the manufacturer at the numbers and address printed on the back cover of this manual.

8.1 Inspection – before each use

The jack owner (or a knowledgeable person appointed by the owner) must give the jack a more thorough inspection weekly (if it is used on a daily basis) or monthly (if used less frequently). In addition to a visual inspection, the inspector should also operate and move the jack to assist in identifying any problems that might exist. The jack must be removed from service and repaired if the jack appears damaged, if it is badly worn, or if it operates abnormally.

Visual inspection of the jack must be made before each use of the jack. The jack should be immediately removed from service if any of the following conditions are detected or observed:

- Inspect lift pad regularly and replace if it is cracked, chipped or shows signs of excessive wear.
- The ram should extend and retract smoothly through its full range. Inspect the ram for scratches and dents, which prevent normal operation.
- Inspect for oil leaks. Operate jack for signs of oil blowing from the exhaust ports
- The jack's controls or wheels do not operate smoothly or freely. Move the jack forward and backward on its wheels to ensure that the wheels rotate smoothly and freely.
- Any abnormal condition or sign of damage that suggests the jack will not work properly.

8.2 Maintenance instructions

⚠ **WARNING** - All inspection and maintenance procedures must be performed after the jack has been removed from service. Failure to do this may result in personal injury and/or property damage.

- Check oil level in the oil reservoir. Refer to the "ADDING HYDAULIC FLUID" section
- All warning and capacity labels should be readable and complete. Wash external surfaces of jack, labels, and decals with a mild soap solution.
- Lubricate all rotating and sliding portions of the jack monthly.

8.3 Adding hydraulic fluid

⚠ **WARNING** - The oil reservoir in this equipment is sealed and pressurized when in use. When checking the fluid level, do not have the jack connected to the air supply. Failure to heed this warning may result in personal injury and/or property damage.

1. Remove the jack from service.
 2. The ram must be in the fully-lowered position and the jack must be on a level surface.
 3. Disconnect the airline.
 4. Carefully remove the plastic cover from the oil reservoir plug located on the top surface of the jack body.
 5. Clean around the surface of the oil fill plug to prevent contamination of the hydraulic oil system.
 6. Remove the oil fill plug using a 3/16 Hex wrench.
 7. Visually check the hydraulic oil level. **RAM MUST BE FULLY RETRACTED.** The oil should be within 1/4 inch of the bottom of the oil fill hole. If the fluid level is low, add a high-grade hydraulic fluid equivalent to Shell Tellus T22 oil.
- ⚠ **CAUTION** - Do not use brake or transmission fluid. Use of the wrong fluid can deteriorate the seals and corrosion problems will occur.
8. Reinstall and secure the oil reservoir plug, replace the plastic cover, and connect to air supply and test for normal operation.

9. Troubleshooting

This section is a list of potential problems and solutions. If the solution listed fails to correct the problem, call the manufacturer at the numbers and address printed on the back cover of this manual. Please have the model number, and serial number of your jack available. The serial number is permanently stamped on a metal tag attached to the top of the frame.

Problem	Cause/Solution
Fails to lift load	<ul style="list-style-type: none"> • Low oil level; see the “Adding Hydraulic Fluid” section. • Inadequate air pressure; ensure 110 psi minimum. • Release open; turn release knob clockwise until tight. • Airline leaks; locate and correct leaks. • Overloaded; use larger-capacity jack.
Air motor will not run	<ul style="list-style-type: none"> • Airline leaks; locate and correct leaks. • Inadequate air pressure; ensure 90 psi minimum. • Air piston sticking or stuck, add oil to air inlet to lubricate piston.
Oil leaks	<ul style="list-style-type: none"> • Oil reservoir plug loose; tighten oil reservoir plug.

11. Notes

MAHLE

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