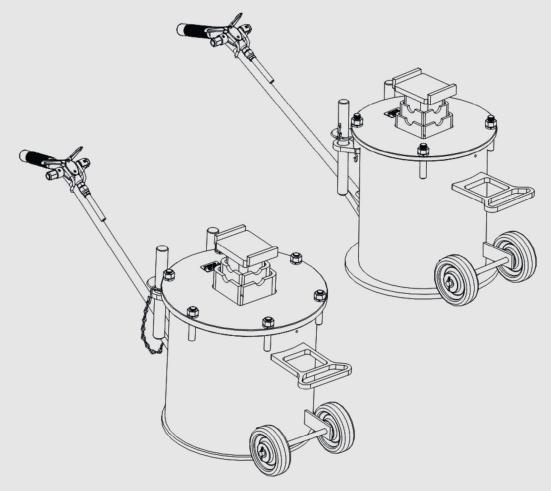


MAHLE CLS-10 & CLS-15





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

- ⚠ 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.

- ⚠ 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. 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 lift point is securely cradled in the center (i.e., between the "saddle ears") of the lift post saddle Never lift a load with it resting on top of a saddle ear of the lift post saddle. Always use the factory-supplied lift post saddle to raise a load and never use blocks or cribbing devices in conjunction with this jack (only adapters and/or attachments supplied by the manufacturer for this particular jack can be used). Never place a hand or any other body part between lift post saddle and vehicle.
- Make sure the load does not exceed the rated capacity of the jack. The maximum capacity of the jack is printed on the capacity tag located on the head plate of the jack.

- <u>Do not exceed the maximum lift height</u>. Never use more than one optional extension adapter with this jack.
- ⚠ After lifting the vehicle, never allow any part of your body to pass under it (and never begin work) until the ram of the jack is properly pinned and the air is exhausted. If the air is not exhausted and the jack is not properly pinned, the jack may rise or drop suddenly when a heavy object is removed from or placed on the vehicle, which could cause dangerous tilting or toppling of the vehicle.
- ⚠ Always use the jack as intended. Never modify or alter the jack. If this jack does not have sufficient capacity to lift a load, use a different jack with adequate capacity. Never attempt to reposition or rotate the jack or move, dolly, or drive the vehicle while it is raised. Never use this jack to lower or support a vehicle if the vehicle was raised using another lifting device or devices. Do not attempt to raise a partially-filled tanker or transport containing an unrestrained load as a sudden load shift could cause a dangerous tilting or toppling of the vehicle. Never throw the jack or allow it to fall from an elevated position, such as from a truck bed.
- ▲ CAUTION Use of this jack around corrosive materials, such as chlorides, will damage inside the cylinder, causing leakage. SUCH USE INVALIDATES WARRANTY.

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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

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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 emplover. makina sure that the comprehends its contents and observes the proper procedures for use of this equipment.

5. Specifications

5.1 CLS-10

Model CLS-10	US units	Metric units
Capacity (at 150 psi)	15,000 lb each	6,804 kg each
Capacity (at 200 psi)	20,000 lb each	9,072 kg each
Maximum Lift Height	37.38 in	94.9 cm
Maximum Lift Height with Optional Extension Adapter	52.38 in	133.0 cm
Minimum Starting Height	17.88 in	45.4 cm
Pin Increment Positions	2.50 in	6.4 cm
Stroke	10 in	25.4 cm
Width	15 in	38.1 cm
Length	22 in	55.9 cm
Weight	139 lb	63 kg

5.2 CLS-15

Model CLS-15	US units	Metric units
Capacity (at 150 psi)	20,000 lb each	9,072 kg each
Capacity (at 200 psi)	30,000 lb each	13,608 kg each
Maximum Lift Height	38.25 in	97.2 cm
Maximum Lift Height with Optional Extension Adapter	53.38 in	135.6 cm
Minimum Starting Height	18.75 in	47.6 cm
Pin Increment Positions	2.50 in	6.4 cm
Stroke	10 in	25.4 cm
Width	16.25 in	41.2 cm
Length	23.75 in	60.3 cm
Weight	194 lb	88 kg

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6. Product Description

6.1 Component identification

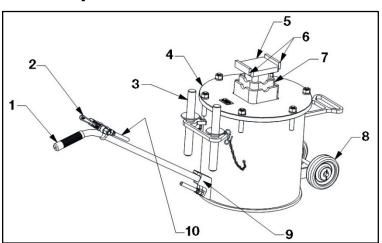


Fig. 1: Top view

- 1 Handle
- 2 Air control valve
- 3 Stand pin
- 4 Head plate
- 5 Lift post saddle
- 6 Saddle ears
- 7 Piston rod
- 8 Wheel
- 9 Handle catch
- 10 Air line

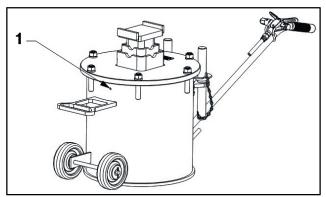


Fig. 2: Drain hole location

1 Drain hole

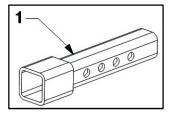


Fig. 3: Extension adapter

1 Extension adapter

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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 Compressed air supply

• The jack requires a supply of compressed air to operate.

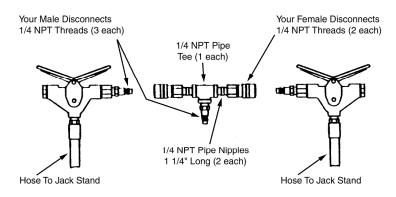
To Operate a Single Jack

If the jack is being used as a single jack, the following steps need to be completed prior to use:

- 1. Connect a quick coupler to the air control valve.
- 2. Attach an air hose with 200 psi maximum to the quick coupler. The unit is now ready for use.
- 3. Actuate the air control valve lever and check that the lift post raises and lowers as expected.

To Operate a Pair of Jacks

Because these jacks are often used in pairs, operating the air control valves on both jacks simultaneously from one airline offers advantages. To utilize a single airline, assemble the air control valve from each jack according to the Figure below or contact the manufacturer to purchase a "Valve Tee Connection" kit (#8855-01009):



Use Pipe Thread Sealer On All Threads

Fig. 4: Valve tee connection

7.2 Preparation before operation

- 1. Make sure the vehicle load does not exceed the rated capacity of the jack (see Specifications for the jack model purchased).
- 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.
- 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. 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. If these conditions cannot be met, move the vehicle and jack to an area where the lift can be performed safely.
- 5. Chock the vehicle's wheels. 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.
- 6. Verify that the vehicle's engine is not running before raising it.

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7.3 Identify a lift point on the vehicle and position the jack

- 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.
- 2. If using only one jack to raise one end of the vehicle, make sure that the jack is balanced side-to- side. With one jack, it is extremely important to ensure the load is level and stable during and after lifting. Loads that are not balanced can result in tipping of the jack which can result in loss of the load, leading to personal injury, death, and/or property damage.
- 3. Position the unit(s) under the vehicle by using the handle and place according to the vehicle manufacturer's recommended lifting points

7.4 Raise the vehicle

- 1. Raise the lift post manually on each jack to engage the manufacturer's recommended lift point. If using two jacks as a pair, keep both lift posts at equal heights. For each jack being used, insert the stand pin in the nearest hole in the lift post so that the stand pin fully engages both sides of the piston rod. This position may not fully engage the lift point on the vehicle until the unit is pressurized to lift the load.
- 2. If the lift post is not fully engaged with the lift point, slowly apply air pressure until the lift post saddle engages the lift points on the vehicle. Before raising the vehicle, ensure that the lift post saddle is positioned such that the lift point is cradled and captured on both sides by the saddle ears on each side of the lift post. Never lift a load with it resting on top of an ear of the lift post saddle.
- 3. Apply air pressure to continue raising the vehicle. If using a pair of jacks, use the air control valves to keep the vehicle level while lifting. Once the proper height has been achieved, insert the other stand pin through the hole in the piston rod (for each jack being used), such that the pins fully engage both sides of the head plate when lowered.

7.5 Support the vehicle.

- 1. Make sure the vehicle is stable. If using two units, make sure the vehicle is level. For each jack being used, check that the stand pin is fully engaged with the notches on both sides of the head plate. Slowly release the air pressure to lower the vehicle so that it is supported by the stand pins (and not the air pressure from the jack). Fully discharge the air pressure from the jack.
- 2. Before beginning work or placing any part of your body under the vehicle, check one last time to ensure the vehicle is stable and level (between a pair of jacks or on a single jack).
- 3. When work is completed, reverse the process described in this section to lower the vehicle.

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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 owner must inspect or appoint a knowledgeable person to inspect the jack for signs of corrosion, damage and/or excessive wear. Contact the manufacturer at the numbers and address printed on the back cover of this manual.

△ 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.

8.1 Inspection - before each use

Visual inspection should be made before each use of the jack, checking for abnormal conditions. Regular inspections should be made weekly for daily use or monthly for intermittent use. Any jack that appears to be damaged in any way, is found to be badly worn, or operates abnormally shall be removed from service until necessary repairs are made:

- ➤ Inspect piston rod, lift post, and lift extension adapter regularly and replace if they are cracked, chipped, or show signs or excessive wear. Holes for the stand pins must not be elongated or deformed.
- ➤ Inspect stand pins for deformities or excessive wear. Stand pins must be able to inset fully into the posts and piston rod in all positions.
- ➤ The piston rod should extend and retract smoothly through its full range.
- Inspect hoses for leaks or kinks. Inspect couplings for damage or air leakage. Replace damaged or defective hoses or couplings.
- ⚠ 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 using the contact information printed on the back cover of this manual. Remember, if you have any doubt about the safe condition of this jack, DON'T USE IT!

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.

The following procedures should be performed periodically to properly maintain the jack:

- Check that all controls operate freely. Wheels should rotate freely.
- ➤ All warning and capacity labels should be readable and complete. Wash external surfaces of jack, labels, and decals with a mild soap solution. Do not allow water to run down the ram or the post and into the cylinder area. If water or any other liquid enters the cylinder, tilt the jack so the liquid can drain out the drain hole (shown in the Component Identification section).
- ➤ Lubricate all rotating and sliding portions of the jack monthly.

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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 located on the capacity tag on the top of the head plate.

Problem	Cause/Solution		
Fails to lift load	 Inadequate air pressure; Increase air pressure but do not exceed 200 psi. Airline leaks; locate and correct leaks. Overloaded; use larger-capacity jack. 		
Fails to hold load	Stand pin not engaged.		

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10. Maintenance Chart

Action	Date	Details	Person responsible
Receiving inspection			

Action	Date	Details	Person responsible

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11. Notes

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