

## MAHLE CCL-300

EN

Operation Manual  
Truck Component Jack





**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

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## 1.1 Warnings

- ⚠ **To avoid serious injury or death**, read this manual carefully before operating this unit. Contact the manufacturer using the contact information on the back cover of this manual if you have any questions. Failure to understand and obey safety instructions may result in unsafe or improper use of this product.
- ⚠ **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 vehicle is appropriately supported before starting repairs. Use the jack only on hard, level surfaces capable of sustaining the load. Do not allow any part of your body under the load while jack is supporting a load.
- ⚠ **Make sure the load does not exceed the rated capacity of the jack**. The maximum lifting capacity of this jack is 300 lbs. / 140 kg.
- ⚠ **Do not use blocks or cribbing devices with this jack**.

- ⚠ **Use the jack only as a lift, not as a workstand**. Never use any other part of the jack as a lifting surface.
- ⚠ **Keep component in the lowest position when rolling jack across floor**.
- ⚠ **Never use any other means to pump this jack than the factory supplied pump handle**.
- ⚠ **Use only the factory supplied adapters**. Do not use any adapters that are not supplied by the manufacturer.
- ⚠ **Always use the jack as intended**. Never modify or alter the jack.
- ⚠ Failure to understand and obey these warnings may result in personal injury and / or property damage.
- ⚠ **WARNING** - The bottle jack on this jack has been modified to ensure a proper descent rate. Do not use any replacement other than from the manufacturer. Failure to heed this warning may result in personal injury and / or property damage.

## 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](mailto: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
<b>DANGER</b>	<b>Immediate</b> impending <b>danger</b>	<b>Death</b> or <b>severe</b> injury.
<b>WARNING</b>	<b>Possible</b> impending <b>danger</b>	<b>Death</b> or <b>severe</b> injury
<b>CAUTION</b>	Possible <b>dangerous situation</b>	<b>Minor</b> injury
<b>NOTICE</b>	Possible <b>damage to property</b>	<b>Possible property damage</b>

## 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.

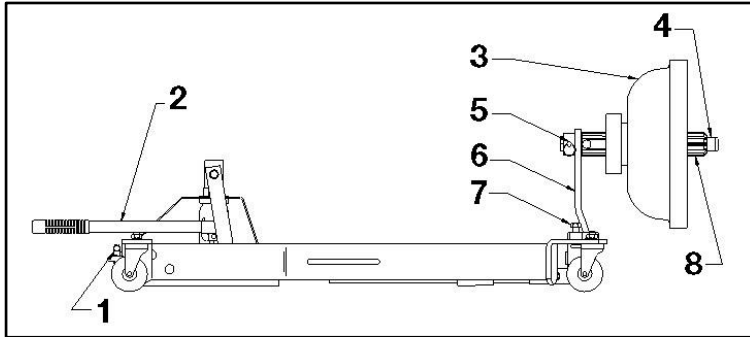
## 5. Specifications

### 5.1 CCL-300

Model CCL-300	US units	Metric units
Capacity	300 lb	140 kg
Start Height	15 in	38.1 cm
Lift Height	39 in	99.1 cm
Width	22 in	55.9 cm
Length	41 in	104.1 cm
Supplied Spline Shaft	2 in	5.1 cm
4 Swivel Casters	3 in	7.6 cm
Head rotation	360°	360°
Weight	134 lb	60.8 kg

## 6. Product Description

### 6.1 Component identification



**Fig. 1: Side view**

- 1 Release knob
- 2 Pump handle
- 3 Clutch
- 4 Adapter shaft
- 5 Quick release pin
- 6 Head plate
- 7 Tilt adjustment screw
- 8 Spline sleeve

## 7. Operation

**△ WARNING** - This section discusses the appropriate and safe methods for using the jack to raise and lower a components from a vehicle. Safe operation is not limited to simply raising and lowering the parts - it also includes adequate preparation before removing them. Failure to follow all of the steps outlined in this section could result in serious injury and/or property damage.

### 7.1 Removing a clutch

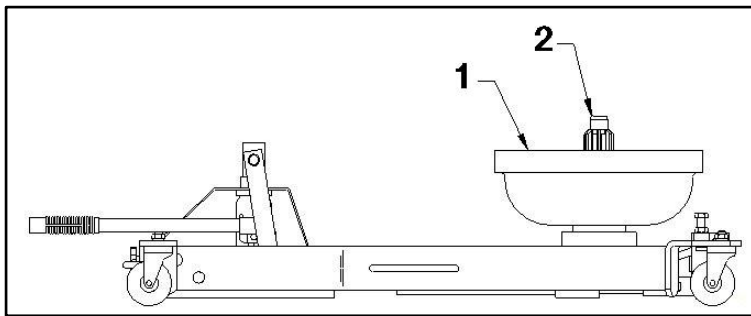
1. Select the correct spline sleeve for the clutch to be removed, place it on the adapter shaft, and install them in the head plate with the quick release pin.
2. Close the release knob fully. Operate the pump handle to raise the lift arm and align the spline sleeve with the clutch.
3. Tilt the head plate with the tilt screw to align it with the clutch bore. Slide the spline sleeve into the clutch.
4. Remove the clutch mounting bolts and back the jack and clutch away from the flywheel. Lower the load slowly.

### 7.2 Transporting the jack

**△** Be sure the adapter shaft is in the vertical position and the jack is fully lowered before transporting, as shown in Fig. 2.

### 7.3 Loading/unloading clutch from the jack

1. To load or unload a clutch from the jack, be sure the adapter shaft is in the vertical position, as shown in Fig. 2.



**Fig. 2: Lowered and vertical position**

- 1 Clutch
- 2 Adapter shaft

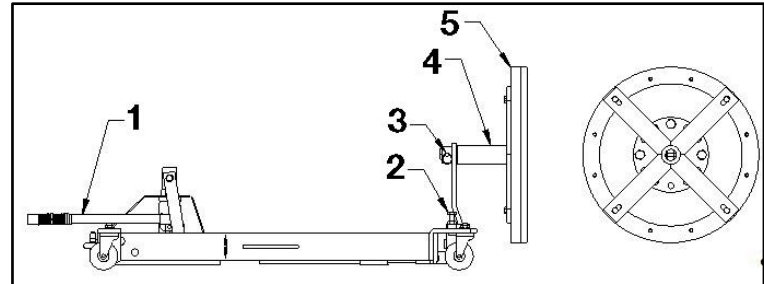
2. Add or remove one piece of the clutch at a time.

### 7.4 Installing a clutch

1. Raise the clutch into position for installation and tilt the clutch using the tile adjustment to align with the flywheel.
2. Put the jack and clutch into position so that the spline shaft engages the pilot bearing in the flywheel. Install and tighten the clutch mounting bolts.

### 7.5 Removing and installing a flywheel using optional flywheel adapter

1. Remove all flywheel to crankshaft retaining bolts except for the top bolt and two at 90° to the top bolt.
2. Install the flywheel adapter as shown in Fig. 3. Close the release knob fully. Operate the pump handle to raise the lift arm and align the flywheel adapter to the flywheel using the tilt adjustment screw.



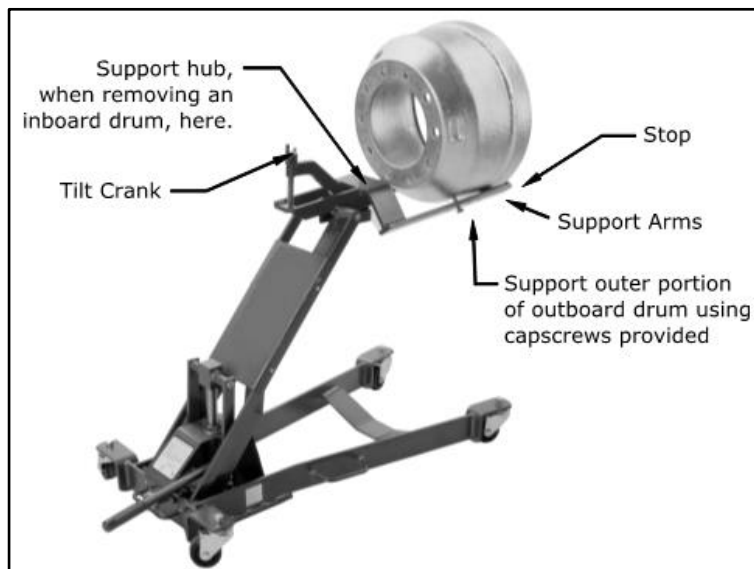
**Fig. 3: Flywheel adapter**

3. Center the flywheel adapter in the flywheel and bolt the adapter to the flywheel. Leave room to access the remaining three flywheel to crankshaft flange mounting bolts retaining the flywheel to the crankshaft flange. Make sure the release knob is closed on the jack, and then remove the last three flywheel to crankshaft mounting bolts.
4. Back the jack and flywheel away from the engine and slowly lower the flywheel.
5. Then while supporting the flywheel, remove the flywheel from the adapter.



## 7.6 Removing and installing a brake drum using optional brake drum adapter

1. Read, understand, and follow all operating instructions before operating this jack.
2. Install the Brake Drum Adapter to the jack as shown (Fig. 4).



**Fig. 4: Brake drum adapter**

3. Remove necessary hardware from vehicle to free drum from wheel assembly.
4. Using the tilt crank, adjust the support arms until they are parallel with the outer bore of the drum.
5. Position the Brake Drum Adapter so that the stops engage on the front of the outer most portion of the drum.
6. Outboard Drums: Adjust capscrews so that they contact the rear of the drum. Inboard Drum / Hub: Raise jack until both front and rear of drum / hub are supported.
7. Slide drum off of axle by supporting the drum and rolling the jack and Brake Drum Adapter away from vehicle.

## 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 (as described above), 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:

- Visually inspect the jack for signs of cracking, chipping, or excessive wear, including all welds.
- Visually inspect all four casters for cracking, chipping or excessive wear.
- Visually inspect the lift arm for any permanent deformation such as bending or twisting. The lift arm should raise and lower smoothly. If the lift arm doesn't raise to full height, refer to the Adding Hydraulic Fluid section of this manual.
- Visually inspect the power unit for oil leaks.
- Any abnormal condition or sign of damage that suggests the jack will not work properly.

⚠ If any irregularities or problems are detected during an inspection or during operation, the unit must be removed from service immediately and repaired. Contact the manufacturer using the contact information on the back cover of this manual.

### 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 Section 8.3 “ADDING HYDRAULIC FLUID”.
- 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

1. Remove the jack from service.
2. Lower the lift arm completely.
3. Remove the rubber plug in the reservoir of the power unit and add oil until it runs back out. The jack should be kept in an upright position while adding oil. Replace the rubber plug. Do not add oil to the reservoir if the jack's lift arm is not fully retracted.

⚠ **CAUTION** - Do not use brake or transmission fluid. Use of the wrong fluid can deteriorate the seals and corrosion problems will occur.

- ❗ If the lift arm still doesn't rise to proper height contact the manufacturer using the contact information printed on the back cover of this manual.

## 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 the left front caster bracket.

Problem	Cause/Solution
Fails to lift load	<ul style="list-style-type: none"><li>• Low oil level, see the section "ADDING HYDRAULIC FLUID"</li><li>• Release open, turn control knob clockwise until tight.</li></ul>
Fails to hold load	<ul style="list-style-type: none"><li>• Release open, turn control knob clockwise until tight.</li></ul>
Oil leaks	<ul style="list-style-type: none"><li>• Reservoir fill plug loose; tighten fill plug.</li><li>• Reservoir is overfilled. Oil will leak from the oil plug if the reservoir is overfilled. (Lower lift arm completely. Remove power unit reservoir fill plug. Allow excess oil to run out. Install fill plug in reservoir.)</li></ul>

## 10. Optional adapters

**⚠ WARNING** – The flywheel adapter is rated at 250 lbs. Do not overload when using this adapter. Failure to heed this warning may result in personal and/or property damage.

### Flywheel adapter

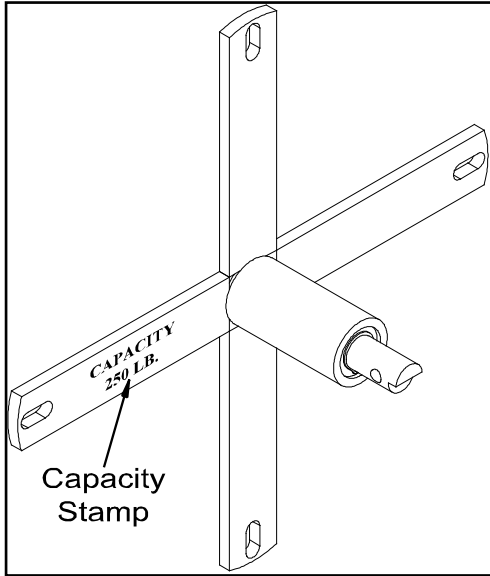


Fig. 5: Flywheel adapter - rear view

### 12" height extension

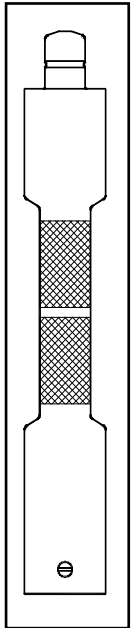


Fig. 6: 12" height extension

### Brake drum adapter

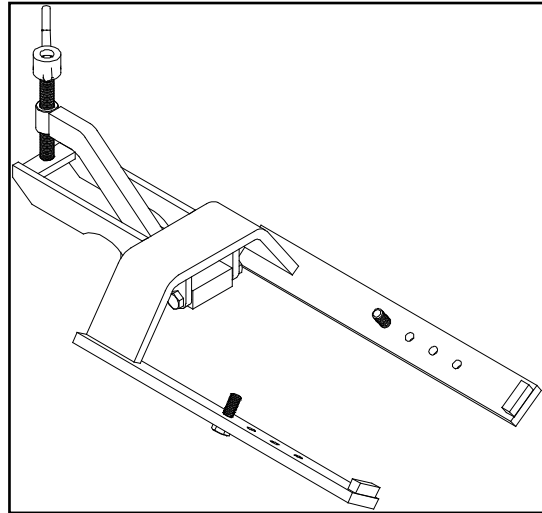


Fig. 7: Brake drum adapter

### 1.75" diameter spline adapter kit

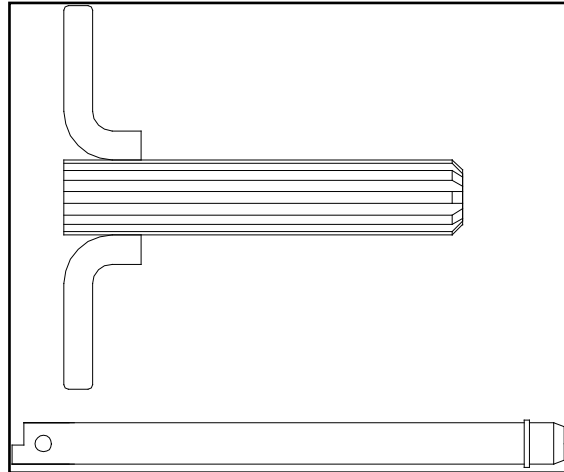


Fig. 8: 1.75" diameter spline adapter





## 12. Notes

# MAHLE

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