The HUM-V 2.0
Assist Drive System

- INSTALLATION
- OPERATION
- MAINTENANCE

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Safety :

- Do not operate this equipment until you have read this manual and fully understand the machine's operation.
- Never operate the HUM-V 2.0 with a broken or damaged chain.
- Never operate the HUM-V 2.0 without the chain guards installed.
- Never place your hands, arms or any body parts near the chain engagement with driveshaft sprocket or wheel sprocket while the drive is in motion. The chain and sprockets can cause severe and permanent injuries to body parts.
- Never attempt any maintenance while the motor is rotating.
- Prior to any maintenance, turn the circuit breaker to the off position and remove the positive lead from the battery. This will eliminate the possibility of accidental motor engagement.
- Never touch the positive and negative leads of the battery. This is a 12-volt Direct Current negative ground system.
- Exercise caution when moving your vacuum up and down ramps. This machine weighs in excess of 350 lbs. and can cause injury if moved improperly. Engaging the drive system while descending down a ramp will provide speed control for a safer desent.
- The HUM-V 2.0 engages immediately at a walking speed of 2.5 MPH, the operator should be ready to move with the vacuum as it engages.
- Do Not transport the vacuum without properly securing the vacuum in your vehicle and turning the circuit breaker to the off position.
- Do Not continue to operate a HUM-V 2.0 that has any damaged mechanical or electrical parts.

The HUM-V 2.0 Assist Drive System is Compatible with:

The General Air Duct Cleaning Vacuum/Collector (GEN200)

The Ranger Air Duct Cleaning Vacuum/Collector (GEN401)

The Major Insulation Removal Vacuum (GJR600)

Installation :

If you order your HUM-V 2.0 with new equipment, the factory has completed the installation process. All new equipment builds purchased June 1, 2024 or later have provisions for the installation of a HUM-V 2.0. Aftermarket customer installation kits may become available at a future date.

Parking Brake :

The HUM-V 2.0 System includes a 'PARKING BRAKE' feature that provides 6N force to the drive motor. The parking brake can be engaged with the large lever located on the transaxle motor. The lever is located under the engine mounting base on the battery-side of the vacuum and has 2 positions (UP/DOWN). The lever will click into the position and stay where it is put.

- UP – Parking Brake disengaged / Regular Drive Mode
- DOWN – Parking Brake engaged / DO NOT DRIVE / TURN OFF CIRCUIT BREAKER

The Parking Brake feature is not designed to be a drive brake to slow the machine while it is rolling. Engaging the parking brake while the machine is descending a ramp will cause internal damage to the transaxle gears, making irreparable damage to the transaxle. The Parking Break feature is not an alternative to properly securing your vacuum during transport; all vacuum equipment should be secured in your transport vehicle using the 4-point mounting system with the tie-down points located on the vacuum. The Parking Brake feature should be used ONLY to PARK your vacuum during use on a job-site. Be sure to disengage the Parking Brake prior to engaging the HUM-V 2.0 Assist Drive System.

NOTE: All warranty repairs must go through Meyer Machine Supply & Equipment prior to any service work being done. Work not authorized by Meyer Machine Supply & Equipment will not be covered under warranty.

Maintenance :

Your **HUM-V 2.0 Assist Drive System**, as well as the rest of your equipment, will last for many years if you properly maintain the equipment.

The **HUM-V 2.0** requires the following regular maintenance procedures:

NOTE: ALWAYS FOLLOW THE SAFETY GUIDELINES AS OUTLINED ON PAGE 1 OF THIS MANUAL.

I. Every 100 machine hours, the chain should be greased with an all-purpose lithium based lubricant. Turn the circuit break to the off position, then remove the positive lead from the battery. Using a lint-free rag or swab, apply a thin layer of grease to the interior of both chains, using the drive wheel to rotate as necessary. Take caution to make sure all fingers, clothing and loose articles are not engaged with the chains or sprockets when the wheel is rotated, as this will result in severe and permanent injury to body parts.

II. Every 100 machine hours, all mounting and closure hardware on the HUM-V 2.0 Assist Drive System should be checked for tightness. Use hand tools such as wrenches and drivers to bring all hardware to 'wrench-tight'.

III. Every 100 machine hours, check chain tension so that the chains do not deflect more than 1/2" in the center-most point. To adjust chain tension:
    - Remove the battery and box to make access to the transaxle mounting bolts.
    - Loosen the transaxle mounting bolts on both sides of the transaxle just enough that that the brackets can slide under the machine engine base.
    - Using a 3/8" wrench, turn the 3/8" carriage that bolt runs through the transaxle mounting bracket to either increase or decrease chain tension.
    - Adjust chain tension equally on both sides so that the sprockets and chain engagement stay in-line and parallel.
    - When you have completed the chain tensioning adjustment, make sure all hardware and mounting points are snugged back up and reinstall the battery.

Operation :

Prior to operating your **HUM-V 2.0 Assist Drive System**, there are a few necessary points that must be checked.

- The engine on the equipment is turned off
- The wheel brakes are disengaged
- The drive motor brake is disengaged
- The dust collection system / containment bag is removed

NOTE: Excessive use of the HUM-V 2.0 Assist Drive System may result in draining/weakening the battery that is used to start the engine on the equipment. For repositioning usage that is greater than 500 feet, it is recommended to have a 12-volt portable starting system available.

Once you have checked the items above, you are ready to proceed with operation of the HUM-V 2.0 Assist Drive System.

Begin by turning on the circuit breaker located under the battery box. Start pushing or pulling the equipment in the desired direction of travel. When the swivel caster wheels are parallel with the direction of travel, engage the HUM-V 2.0 toggle switch for the desired direction (Forward or Reverse).

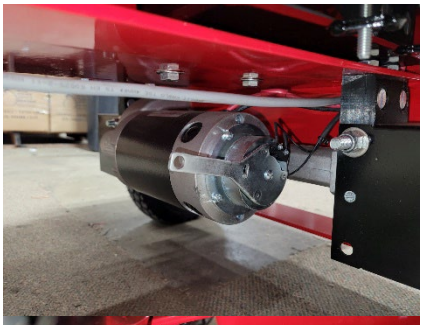
The HUM-V 2.0 Assist Drive System is designed to move your equipment approximately 2.5 MPH in the direction of travel. This pace is achieved quickly through rapid acceleration, but immediately provides for a comfortable walking pace. With the assistance of an operator, the HUM-V 2.0 Assist Drive System will reduce the load making it easier to move the equipment up inclines of up to 15 degrees.

The HUM-V 2.0 Assist Drive System uses a dual-shaft transaxle to provide power as a 2-WHEEL DRIVE system. The transaxle does provide a significant amount of mechanical advantage for the normal driving operation allowing it to ascend ramps. When an operator tries to push the machine without the assist of the drive motor, the operator must overcome the resistance of the mechanical DIS-advantage.

In the case of a damaged chain, mis-aligned axle, or electronic failure of the motor, the HUM-V 2.0 system can be made neutral by removing one of the chains. Each chain is closed with a #35-Master Link. Using a small flat screw driver, remove the retainer clip, then push the link out of the adjacent rollers, and remove the chain from the sprockets.

Any time the HUM-V 2.0 Assist Drive System is not being used, the circuit breaker should be in the OFF position. The circuit breaker is located on a small box under the battery of your vacuum.

The HUM-V 2.0 Assist Drive System and the equipment it is installed on are heavy duty industrial items. Proper care and usage of these items are required for consistent, reliable, and continued usage. Ground clearance of your equipment is reduced with the HUM-V 2.0 Assist Drive System, and extra care should be taken to ensure that components installed on the undercarriage of your equipment are not damaged. The drive wheel axles are aligned in 2-dimensions to ensure proper chain engagement. Excessive force on the drive wheel axle can cause bending and misalignment. Sudden drops of more than 2” vertical should be avoided to maintain proper chain/sprocket alignment.



Parking Brake Lever

The Parking Brake Lever is accessible from the battery-side under carriage of the engine mounting base.

UP Position:

Parking Brake Disengaged / Regular Drive Mode

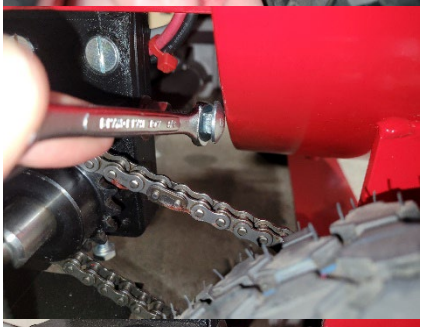
Down Position:

Parking Brake Engaged / DO NOT DRIVE / TURN OFF CIRCUIT BREAKER

Chain Lubrication

Using a lint free rag or swab, apply a small amount to the interior portion of both chains.

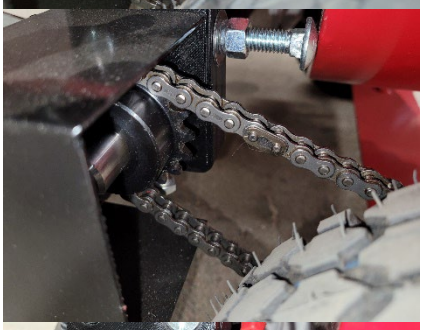
Rotate the wheel/s to access the remainder of the chain.



Chain Tensioning

After removal of the battery box and loosening the transaxle mounting bolts, use a 3/8” wrench on the carriage bolt to increase or decrease chain tension.

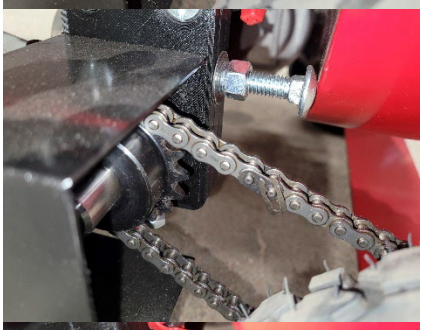
Be sure to adjust both chain tensions equally to maintain a straight and parallel arrangement of the sprockets.



Master Link Identification

Rotate the wheel to find the Master Chain Link. This is a removable link that connects the two ends to make a chain-loop.

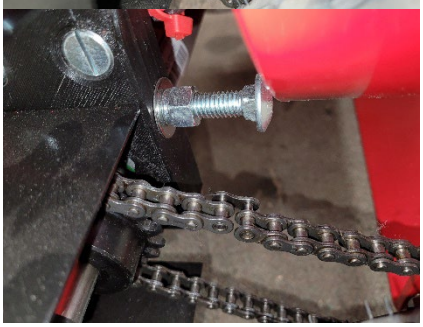
The Master Chain Link can be identified by the removable spring retainer clip.



Master Link Removal

Using a very small straight blade (SLOT) screwdriver, gently pry the removeable spring retainer clip so it can be removed. Once the removable spring retainer clip is removed, slide the Master Chain Link Cap off the stems.

Excessive force can cause this part to ‘fling-off’’ out of your sight. Be gentle and keep an eye on the parts.



Master Link Dis-Assembly

Push the stems of the Master Chain Link through the rollers of the adjacent links to remove the Master Chain Link.

The chain is now disconnected and can be removed from the sprockets.

The transaxle will not spin with less resistance.