

#8457



**Mark III Colectomatic®  
Refuse Collection Unit  
OPERATOR'S MANUAL**

(For Electric and Mechanical Units)



MR 73481-779

## WARRANTY

The Heil Co. warrants its Solid Waste Collection and Solid Waste Handling Equipment to be free from defects in material and workmanship, under normal use and service, for a period of six (6) months from the date when these products are first placed in operation.

This warranty is expressly limited to the replacement or repair at its factory in Milwaukee, Wisconsin, or such other place as The Heil Co. may designate, of such parts of such product as shall be returned to it with transportation charges prepaid and which shall appear to its satisfaction, upon inspection at such factory or other place designated by it, to have been defective in material or workmanship.

This warranty does not obligate The Heil Co. to bear the cost of labor in replacing defective parts. The Heil Co. makes no warranty in respect to trade accessories, the same being subject to warranties, if any, of their respective manufacturers. No warranty, express or implied, is made or authorized to be made and no obligation is assumed or authorized to be assumed with respect to products of the Heil Co. other than that herein set forth.

The Heil Co. does not assume liability for loss of product, time, or any other consequential damages.

# THE HEIL CO.

MILWAUKEE, WISCONSIN 53201  
CHATTANOOGA, TENNESSEE 37411



## INTRODUCTION

This manual is designed to help ensure safe and efficient operation of the HEIL Mark III Colectomatic Refuse Collection Unit.

The manual will familiarize you with the unit, will give operating procedures and tips and covers the maintenance necessary to keep the unit in safe operating condition.

For truck operation and maintenance instructions, see Truck Owners Manual.

### TO THE OWNER

We at HEIL take pride in the units we manufacture. We hope you will be well satisfied with your purchase. Properly operated and maintained, the Mark III Colectomatic will give years of low-cost, trouble-free service.

### WARRANTY CLAIMS AND INQUIRIES

The HEIL Solid Waste Systems Warranty is included in this manual. Should a warranty failure occur on solid waste equipment purchased from a HEIL Distributor, contact the distributor for warranty repair. All Warranty repairs are to be done by the distributor.

For all parts, claims or inquiries refer to model and serial number of either the tailgate section or the body section. This information is found on the identification plate (Figure 1) on both the tailgate and the body.

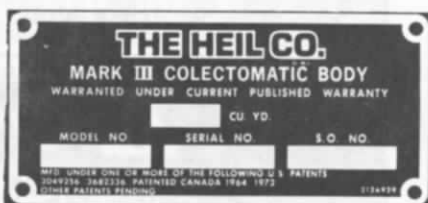


Figure 1. Identification Plate

### DIRECTIONAL REFERENCE

Sides of the Colectomatic are determined by facing in the direction of forward travel. The right side is the "Curbside"; the left side is the "Streetside".



# WARNING

IF INCORRECTLY USED, THIS EQUIPMENT CAN CAUSE SEVERE INJURY. THOSE WHO USE AND MAINTAIN THE EQUIPMENT SHOULD BE TRAINED IN ITS PROPER USE, WARNED OF ITS DANGERS, AND SHOULD READ ENTIRE MANUAL BEFORE ATTEMPTING TO SET UP, OPERATE, ADJUST OR SERVICE THE EQUIPMENT. KEEP THIS MANUAL FOR FUTURE REFERENCE.

## IMPORTANT SAFETY NOTICE

Proper service and repair are important to the safe, reliable operation of the Heil Co.'s products. Service procedures recommended by Heil are described in this service manual and are effective for performing service operations. Some of these service operations may require the use of tools or blocking devices specially designed for the purpose. Special tools should be used when and as recommended. It is important to note that some warnings against the use of specific methods that can damage the product or render it unsafe are stated in the service manual. It is also important to understand these warnings are not exhaustive. Heil could not possibly know, evaluate and advise the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, Heil has not undertaken any such broad evaluations. Accordingly, anyone who uses service procedures or tools which are not recommended by Heil must first satisfy himself thoroughly that neither his safety nor the product safety will be jeopardized by the method he selects.

The information and specifications included in this publication were in effect at the time of approval for printing. The Heil Co., Milwaukee, Wisconsin reserves the right, however, to discontinue or change specifications or design at any time without notice and without incurring any obligation whatsoever.

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## SAFETY MESSAGES



**THIS SAFETY ALERT SYMBOL INDICATES IMPORTANT SAFETY MESSAGES IN THIS MANUAL. WHEN YOU SEE THIS SYMBOL, CAREFULLY READ THE MESSAGE THAT FOLLOWS AND BE ALERT TO THE POSSIBILITY OF PERSONAL INJURY OR DEATH.**



### CAUTION

Clean or replace all safety decals if they can not be read.



### CAUTION

Visually check out the machine for leaks, broken, missing or malfunctioning parts. A part failure during operation can cause injury.



### CAUTION

Wear the proper safety equipment. Obtain additional safety equipment when your safety is in doubt. Hard hat, safety shoes, reflective clothing and gloves may be required.



### WARNING

Never operate this Colectomatic unit unless you are fully aware of all control functions.



## CAUTION

Check that all lights are functioning properly before collecting at night.



## WARNING

Be sure operator's area, steps and grab handles are free of oil, loose objects or ice. Failure to keep these areas clean can cause a serious accident.



## CAUTION

Carry and maintain a fire extinguisher and first aid kit at all times. Know how to use them both.



## WARNING

Be sure all individuals are completely clear of the rear of unit before raising or lowering tailgate and ejecting load. Be ready to stop any function.



## CAUTION

Do not drive or move the unit with the tailgate in any position except fully down and locked.



## WARNING

Be sure all individuals are clear of the point of operation before actuating the controls. Be ready to stop any function.



## WARNING

Do not attempt to connect and unload containers that are not manufactured to fit container arm mechanisms as personal injury or property damage may result.



## CAUTION

Disengage PTO when Colectomatic unit is not in use or when traveling and make sure Cab Packer Switch is "OFF".



## DANGER

Stand clear of rear of unit when packer blade is in motion.



## DANGER

Stand clear when tailgate is opened.



## CAUTION

Keep access doors closed when ejector is in motion.



## CAUTION

Stop engine and remove ignition key before entering body.



## CAUTION

Do not attempt repairs you do not understand. There is no disgrace in asking for help.





## CAUTION

Think out a circuit before making or breaking a connection. A wrong connection can be painful and expensive.



## CAUTION

In all cases, when refuse unit is stored or not-in use, the tailgate must be in the full lowered position, the packer switch "OFF" and the PTO disengaged. Key should be removed from ignition to prevent tampering by unauthorized persons.



## WARNING

Before performing any maintenance or inspection other than operating tests of the unit, disconnect the power source.



## CAUTION

Never attempt to disconnect any hydraulic line unless pressure is relieved in the circuit.



## CAUTION

Before raising tailgate and ejecting refuse from body be sure ejection area is free of personnel.



## WARNING

Do not operate or service this machine until you have read and understand the operation and maintenance manual supplied with this equipment. Manuals can also be obtained from a HEIL Distributor.



## WARNING

Stay clear at all times when container is off ground.



## CAUTION

When any work is to be done on body or tailgate and tailgate is fully or partly raised, it must be blocked securely so it cannot fall.



## CAUTION

Before maintenance is begun, check the job carefully to find all of the hazards present and make sure all necessary safeguards or safety devices are used to protect all persons and equipment involved.



## CAUTION

Truck engine should be stopped, PTO disengaged, and truck keys in the possession of the mechanic before attempting any adjustments, maintenance, or repair.

## NOMENCLATURE



Figure 2. Nomenclature

1. **TAILGATE:** The top hinged gate that contains the hopper and packer blade.
2. **PACKER BLADE:** The packing mechanism that moves the refuse from the hopper into the body.
3. **HOPPER:** Refuse collecting area of tailgate.
4. **CONTROLS:** Electric controls to operate packer blade and hopper. Optional mechanical controls to operate container arm.
5. **BODY:** The refuse-carrying portion of the Colectomatic unit.
6. **LOCATION OF EJECTOR PANEL:** The moveable panel used for ejecting the compacted refuse from the body.
7. **ACCESS DOOR:** The panel located on the side of the body that, when opened, permits access to the inside of the body (Optional on left side of body).
8. **LOCATION OF PTO CONTROLS:** Controls used to engage the PTO to run the hydraulic system of the Colectomatic unit.
9. **LOCATION OF TAILGATE AND EJECTOR PANEL CONTROLS:** Controls located on left side are used to raise the tailgate and eject the refuse from the body with the ejector panel.

# OPERATING INSTRUCTIONS



## WARNING

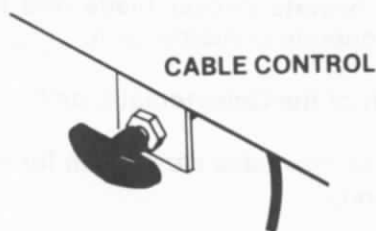
Never operate this Colectomatic unit unless you are fully aware of all control functions.

### CAB CONTROLS IDENTIFICATION

#### 1. PTO CONTROLS



AIR, HYDRAULIC OR VACUUM CONTROL



CABLE CONTROL

#### 2. PACKER SWITCH

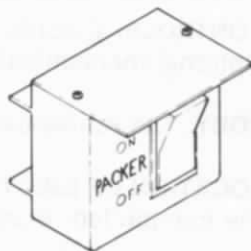


Figure 3. Cab Controls

1. **PTO CONTROLS.** The control for engaging and disengaging the power take-off. Used to activate or deactivate the hydraulic system.
2. **PACKER SWITCH.** (ELECTRIC CONTROLLED UNITS). This switch must be "ON" to provide current for the unit's operation.

## PACKER CONTROLS IDENTIFICATION

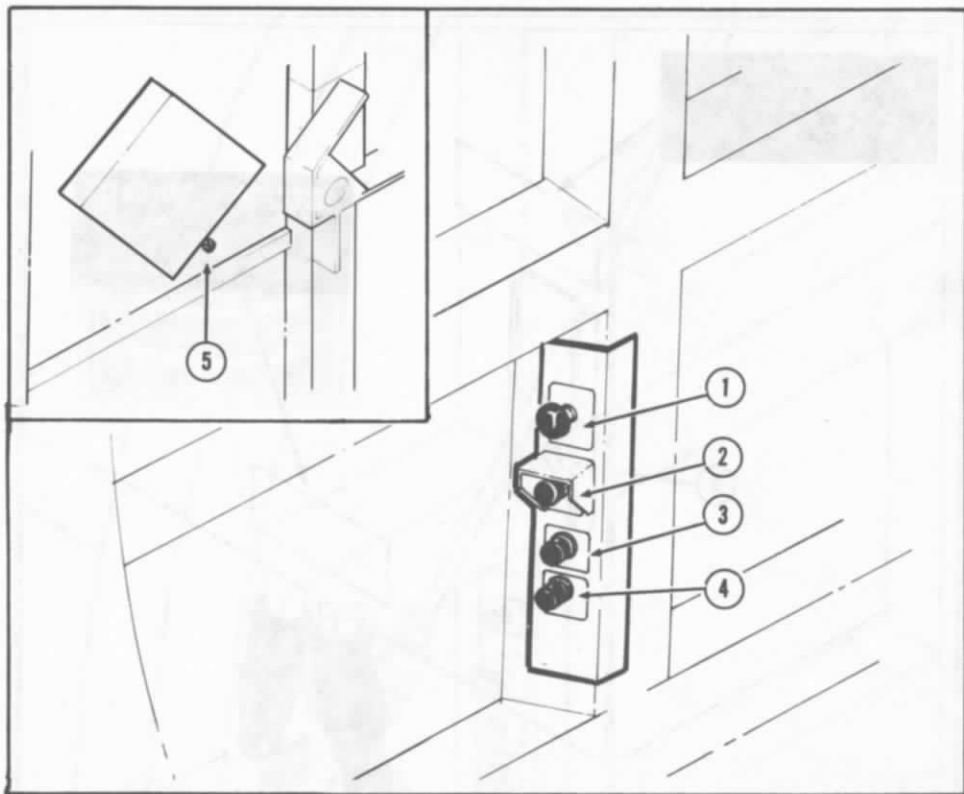


Figure 4. Packer Controls

1. **"STOP" BUTTON.** Push the button to stop the packing mechanism at any position.
2. **"START" BUTTON.** Controls movement of hopper and packer blade. Push to operate the packing mechanism. See page 16 for operating instructions.
3. **"HOPPER LOWER" BUTTON.** Lowers hopper after stop button has been pushed. Push to lower hopper. See page 16 for operating instructions.
4. **"BUZZER" BUTTON.** Used to signal the driver. Push the button to energize a buzzer in the truck cab.
5. **"BULKY OBJECT" SWITCH.** Used when large objects such as davenport, water heaters, etc. are to be loaded into body. See page 16 for operating instructions.

## TAILGATE AND EJECTOR CONTROLS IDENTIFICATION

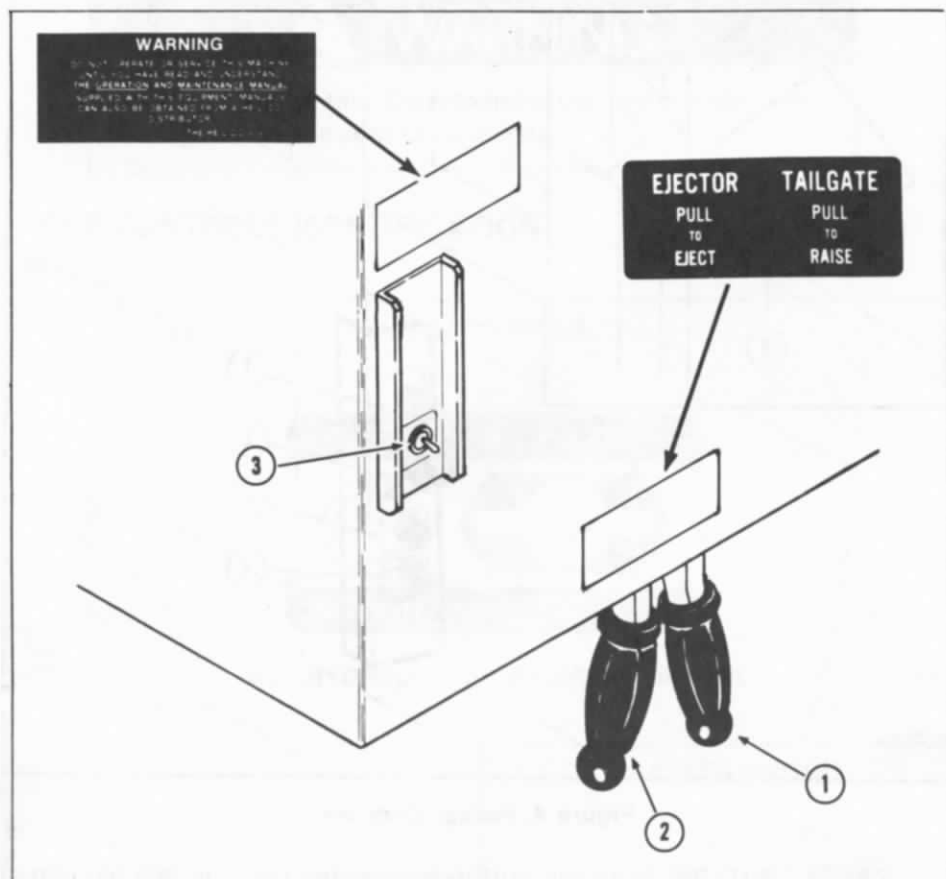


Figure 5. Tailgate and Ejector Controls

1. **TAILGATE CONTROL LEVER.** Controls raising and lowering of tailgate.
2. **EJECTOR CONTROL LEVER.** Controls the movement of the ejector panel.
3. **THROTTLE SWITCH.** Increases engine speed when operating the tailgate or the ejector control.

## CONTAINER ARM MECHANISM CONTROL

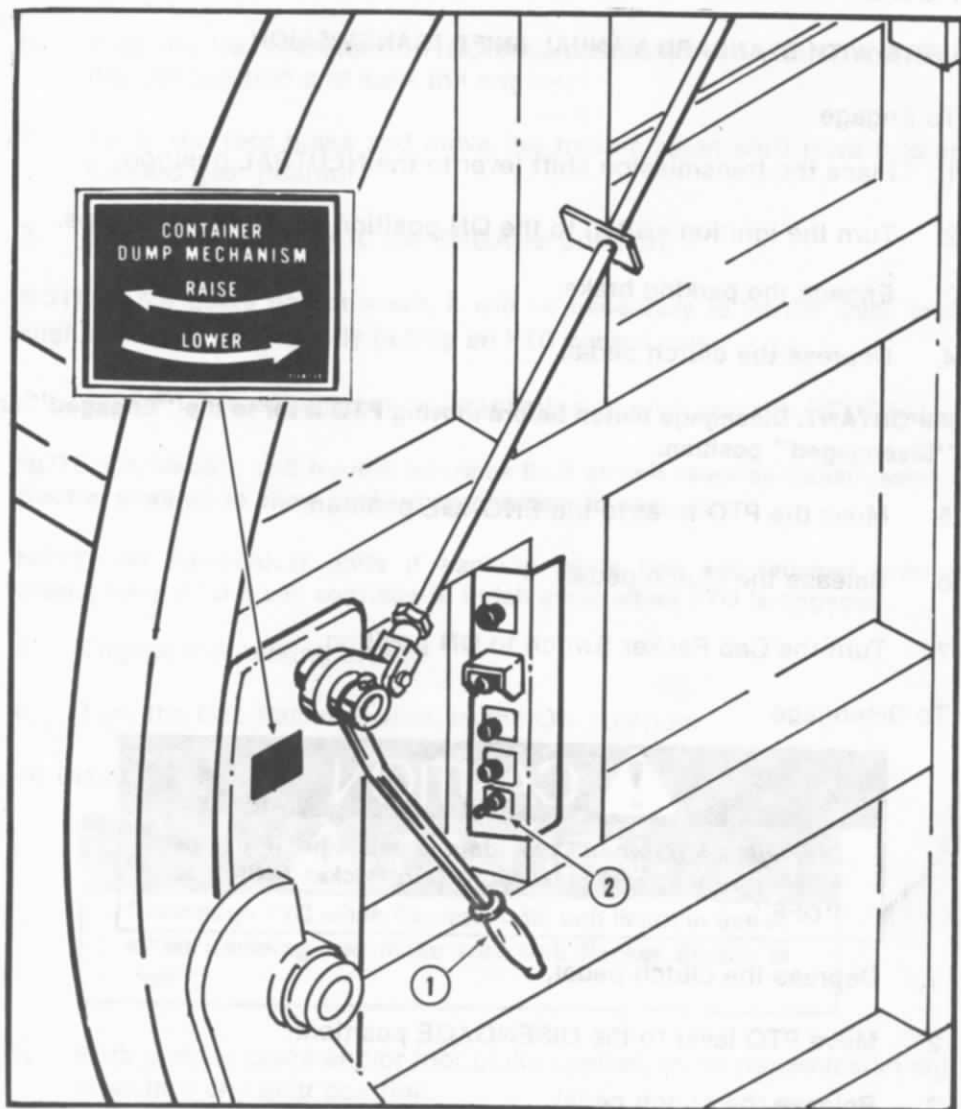


Figure 6. Container Arm Control

1. **CONTROL LEVER.** Controls operation of container arm mechanism. Moving control lever to left raises container. Moving control lever to right lowers container. See page 19 for operating instructions.
2. **THROTTLE SWITCH.** Increases engine speed when operating the container arm mechanism control lever.

## POWER TAKE-OFF OPERATION

### UNITS WITH STANDARD MANUAL SHIFT TRANSMISSION

To Engage

1. Place the transmission shift lever to the NEUTRAL position.
2. Turn the ignition switch to the ON position and start the engine.
3. Engage the parking brake.
4. Depress the clutch pedal.

**IMPORTANT: Disengage clutch before moving PTO lever to the "Engaged" or "Disengaged" position.**

5. Move the PTO lever to the ENGAGE position.
6. Release the clutch pedal.
7. Turn the Cab Packer Switch to ON position.

To Disengage



## CAUTION

**Disengage PTO when Colectomatic unit is not in use or when traveling and make sure Cab Packer Switch is "OFF".**

1. Depress the clutch pedal.
2. Move PTO lever to the DISENGAGE position.
3. Release the clutch pedal.
4. Turn the Cab Packer Switch to the OFF position.
5. Release the parking brake only if the unit is to be moved.
6. If unit is being shut-down, shut off the engine and remove ignition key.



## UNITS WITH AUTOMATIC TRANSMISSION

### To Engage

1. With the transmission in NEUTRAL position, turn ignition switch to the ON position and start the engine.
2. Apply the foot brake and move the transmission shift lever into any forward gear position.
3. Move the PTO lever to the ENGAGE position.

**NOTE:** If the gears do not mesh, it will be necessary to let the truck creep slightly in gear while gently pulling on PTO control lever.

4. After PTO is engaged, move transmission shift lever to NEUTRAL.

**NOTE:** On electric unit Neutral interlock limit switch requires transmission in Neutral position to allow packing mechanism to operate.

**NOTE:** On mechanical units if packing cycle has not finished prior to disengaging PTO it will continue to finish cycle when PTO is engaged.

5. Engage the parking brake.
6. Turn the Cab Packer Switch to the ON position.

### To Disengage



## CAUTION

**Disengage PTO when Colectomatic unit is not in use or when traveling and make sure Cab Packer Switch is "off".**

1. With parking brake and/or foot brake applied, move transmission shift lever into any gear position.
2. Move the PTO to the DISENGAGE position.
3. Move transmission shift lever to the Neutral position.
4. Turn the Cab Packer Switch to the OFF position.
5. Release the parking brake only if the unit is to be removed.
6. If unit is being shut down, shut off the engine and remove ignition key.

## PACKER MECHANISM OPERATION

For normal packing operation position the body ejector panel to the front of the body (next to chassis cab). For ejector control operation, see page 22. This will allow refuse to be deposited in the body by the packer blade. Refuse load will be loosely packed.

For a large, more compact refuse load, position ejector frame at the rear of the body (next to tailgate). When refuse is loaded into tailgate hopper and operation cycle started, the packer blade forces the refuse against the ejector panel.

Compaction continues with each loading cycle, squeezing refuse between packer panel and ejector panel, until a relief valve in the ejector hydraulic circuit allows ejector panel to move forward in body.

When body is completely full, entire load is uniformly compacted between packer blade and ejector. Any pocket of loose material is eliminated, enabling larger loads.

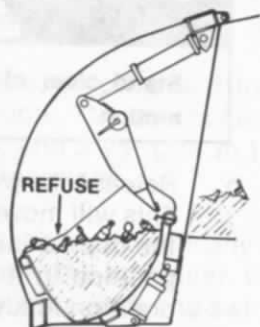
### OPERATION OF NORMAL PACKING CYCLE

1. Place the refuse in the loading hopper.
2. With engine running engage the PTO and turn the Cab Packer Switch to the ON position.
3. Compact the refuse:

**NOTE:** Large objects such as water heaters, davenport, etc. can be more easily loaded by using the optional "Bulky Object" switch. The effect of this switch is to delay the raising motion of the hopper until the packing blade has reached its fully rearmost position. Then the hopper raises and the packing cycle proceeds normally, taking only a few seconds longer than a normal packing cycle. Delaying the hopper motion enables the packer blade to clear large, bulky objects and get behind the object before sweeping it into the body cavity. The normal cycle is available for standard refuse when the switch is returned to the OFF position.

- a. Press START pushbutton. This will raise the hopper to its full up position and simultaneously move the packer blade back and upward. See figure 7.

## STARTING POSITION

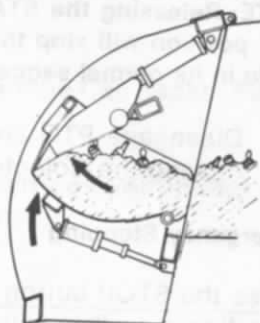


## BLADE OUT/HOPPER UP

1. Press and hold START pushbutton to initiate cycle.



PRESS AND HOLD

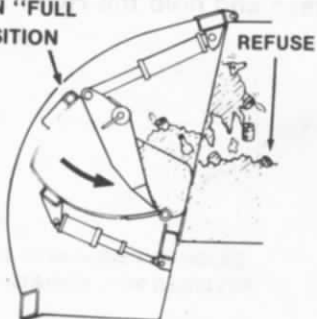


HOPPER IN "FULL UP" POSITION

RELEASE

## PACK REFUSE INTO BODY

2. Release Start pushbutton when hopper is in "full up" position. Packer blade sweeps refuse into body.



## FINISH CYCLE

3. Hopper lowers to starting position for next load.

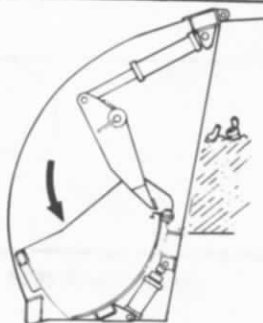


Figure 7. Normal Packing Cycle



## WARNING

**Stand clear of rear of unit when packer blade is in motion.**

- b. Release the pushbutton when the hopper is at its full up position. This will move the packer blade forward to sweep the refuse from the hopper into the body. When packer blade reaches its forward position in the packing cycle, the hopper lowers to the loading position ready for the next load.

**NOTE: Releasing the START pushbutton before the hopper reaches its "full up" position will stop the cycle. Repress the START pushbutton to continue cycle in its normal sequence from stopping point.**

4. Disengage PTO and turn packer switch to the OFF position before moving the Colectomatic unit.

### Emergency Stopping

Press the STOP button in the event the packing cycle has to be stopped. (See figure 4.) This will completely stop the cycle at any point during the packing cycle. If the hopper must be lowered after the cycle is stopped press and hold the HOPPER LOWER pushbutton.

## CONTAINER UNLOADING (Units with Container Arm Mechanism)

The container arm mechanism hydraulically raises, empties and lowers containers independently of the packing operation. The mechanism is capable of handling 1 yd ( $\frac{3}{4}$  m), 2 yd ( $1\frac{1}{2}$  m), and 3 yd ( $2\frac{1}{4}$  m) Heil containers and most containers from other manufacturers.

The mechanism has members that latch, engage, and automatically lock into container handles. The arms then lift and empty the container. When the mechanism is no longer required for usage, the arms pivot and swing to the tailgate sides in a stored position.

### OPERATING INSTRUCTIONS

1. With engine running, engage the PTO and turn the Cab Packer Switch to the On position.
2. With container arm mechanism in its lowered position unfold both pickup arms to rearward position. (See Figure 8.)

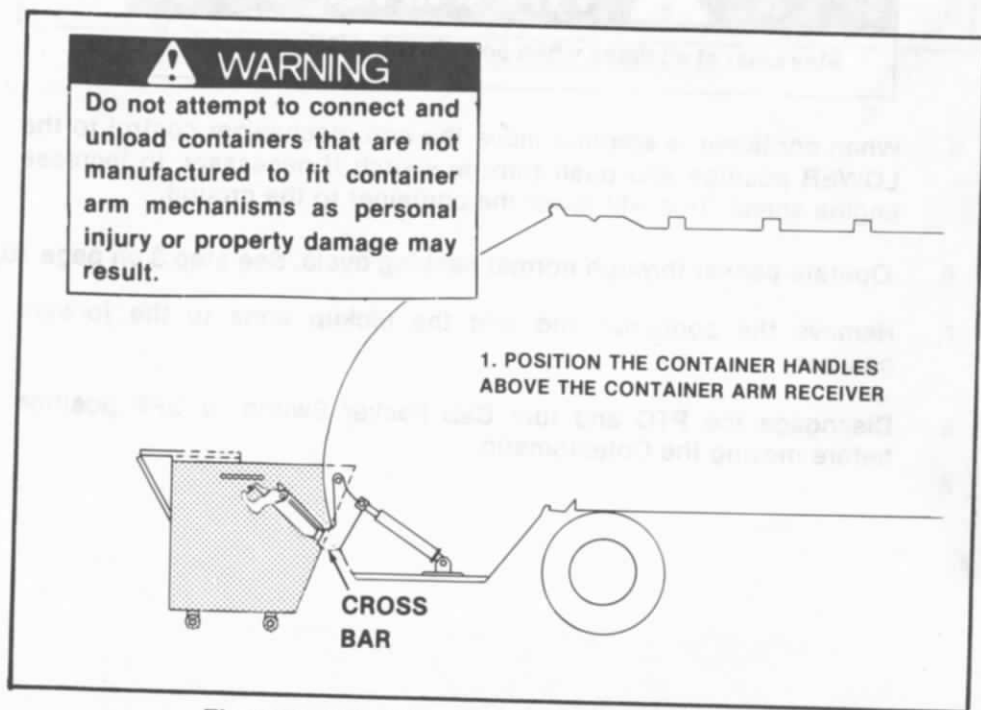


Figure 8. Attaching Container to Arm Mechanism

3. Position the container handles above the container arm receivers.



## WARNING

**Do not attempt to connect and unload containers that are not manufactured to fit container arm mechanisms as personal injury or property damage may result.**



## WARNING

**Stand clear of rear of unit when packer blade is in motion.**

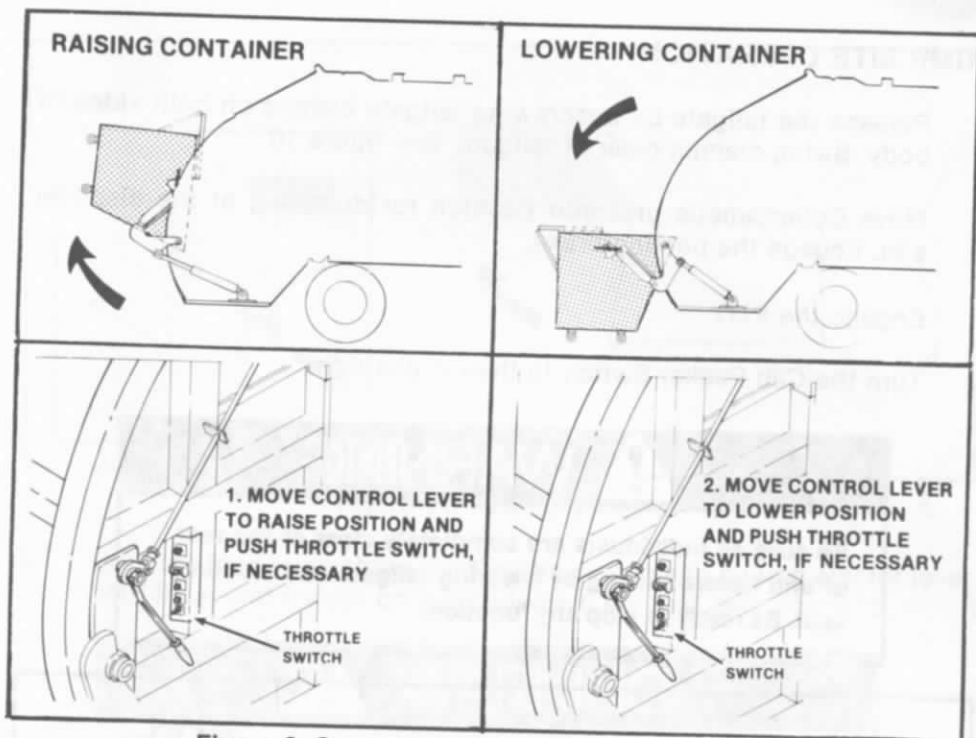
4. Move the arm mechanism control to the RAISE position and push throttle switch to increase engine speed if necessary. This will raise container and dump contents into the hopper. (See Figure 9.)



## WARNING

**Stay clear at all times when container is off the ground.**

5. When container is emptied move the arm mechanism control to the LOWER position and push throttle switch if necessary, to increase engine speed. This will lower the container to the ground.
6. Operate packer through normal packing cycle. See step 3 on page 16.
7. Remove the container and fold the pickup arms to the forward position.
8. Disengage the PTO and turn Cab Packer Switch to OFF position before moving the Colectomatic.



**Figure 9. Sequence of Dumping Container**

3. Position the container handles above the container arm receivers.



## WARNING

**Do not attempt to connect and unload containers that are not manufactured to fit container arm mechanisms as personal injury or property damage may result.**



## WARNING

**Stand clear of rear of unit when packer blade is in motion.**

4. Move the arm mechanism control to the RAISE position and push throttle switch to increase engine speed if necessary. This will raise container and dump contents into the hopper. (See Figure 9.)



## WARNING

**Stay clear at all times when container is off the ground.**

5. When container is emptied move the arm mechanism control to the LOWER position and push throttle switch if necessary, to increase engine speed. This will lower the container to the ground.
6. Operate packer through normal packing cycle. See step 3 on page 16.
7. Remove the container and fold the pickup arms to the forward position.
8. Disengage the PTO and turn Cab Packer Switch to OFF position before moving the Colectomatic.



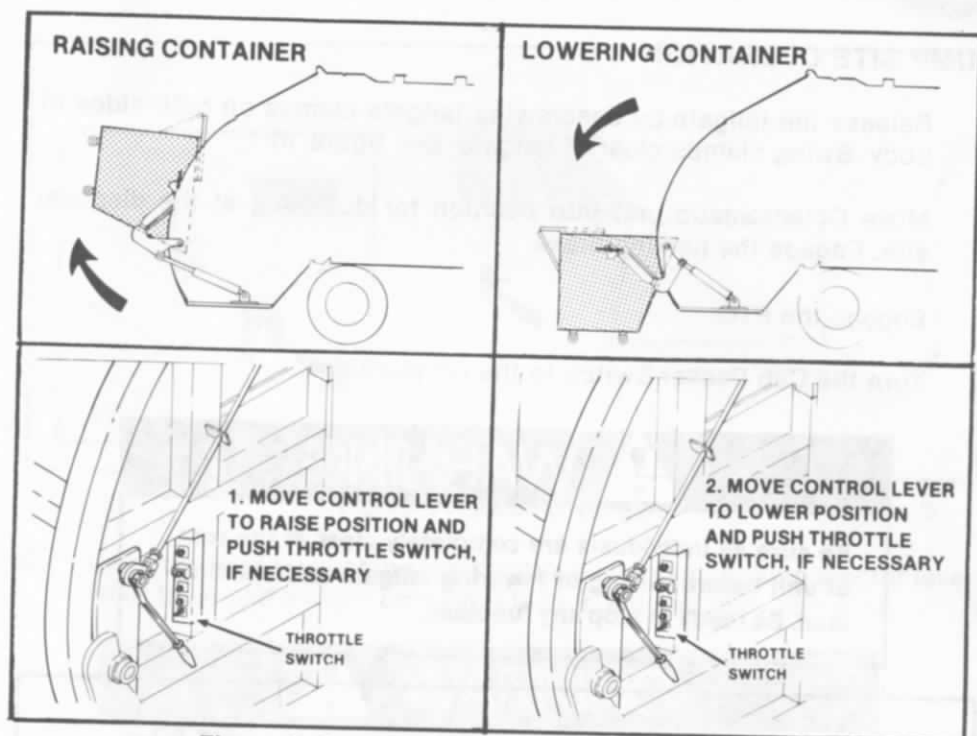


Figure 9. Sequence of Dumping Container

## DUMP SITE OPERATION

1. Release the tailgate by unscrewing tailgate clamps on both sides of body. Swing clamps clear of tailgate. See figure 10.
2. Move Colectomatic unit into position for dumping, at the disposal site. Engage the parking brake.
3. Engage the PTO.
4. Turn the Cab Packer Switch to the On position.

 **WARNING**

**Be sure all individuals are completely clear of the rear of unit before raising or lowering tailgate and ejecting load. Be ready to stop any function.**

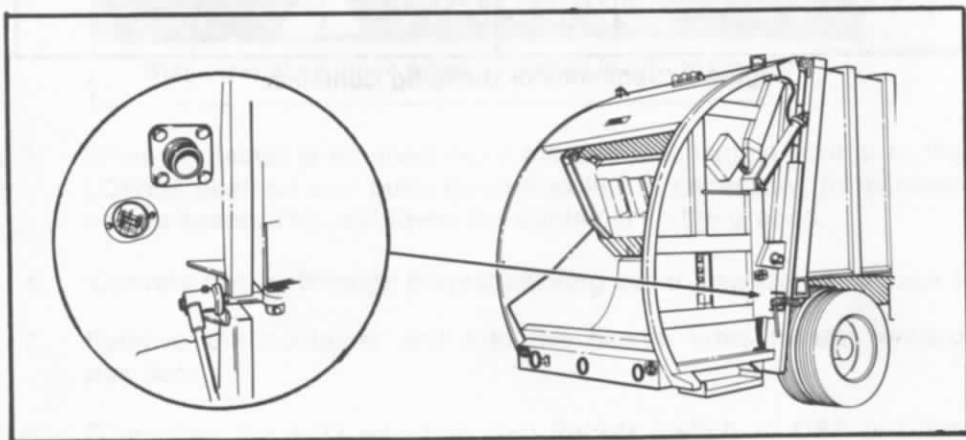
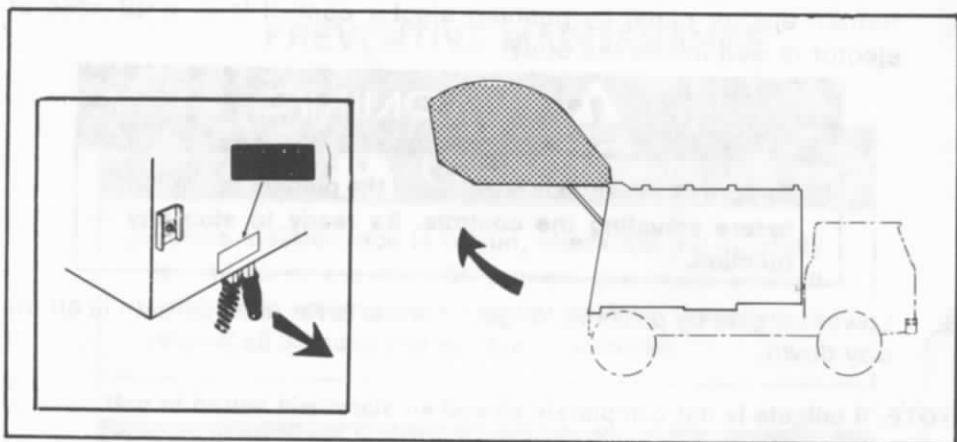


Figure 10. Tailgate Clamps

5. Raise the tailgate by pushing the throttle switch and pulling tailgate control lever. Hold lever and switch only until tailgate is fully elevated. See figure 11.

 **DANGER**

**Stand clear when tailgate is opened.**



**Figure 11. Raising Tailgate**

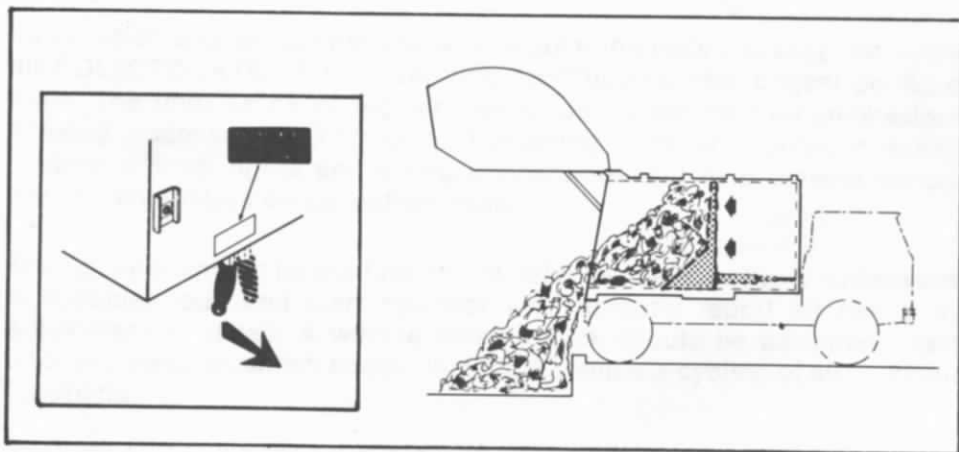
6. Eject the load by pushing the throttle switch and pulling ejector lever. Hold lever and switch only until load is ejected. See figure 12.

**⚠ WARNING**

**Stand clear of gate while unloading.**

**⚠ CAUTION**

**Keep access doors closed when ejector is in motion.**



**Figure 12. Ejecting Load**

7. Retract ejector panel by pushing ejector control lever until nose of ejector is well inside the body.



## WARNING

**Be sure all individuals are clear of the point of operation before actuating the controls. Be ready to stop any function.**

8. Lower tailgate by pushing tailgate control lever until tailgate is all the way down.

**NOTE: If tailgate is not completely closed an alarm will sound in cab.**

9. Swing the tailgate clamp into position on both sides. Lock securely into position.



## CAUTION

**Do not drive or move the unit with the tailgate in any position except fully down and locked.**

10. Disengage the PTO and turn the Cab Packer Switch to OFF position. Release the parking brake.
11. Truck is now ready to move.

## PREVENTIVE MAINTENANCE



### CAUTION

Before maintenance is begun, check the job carefully to find all of the hazards present and make sure all necessary safeguards or safety devices are used to protect all persons and equipment involved.



### CAUTION

Truck engine should be stopped, PTO disengaged, and truck keys in the possession of the mechanic before attempting any adjustments, maintenance, or repair.



### CAUTION

When any work is to be done on body or tailgate and tailgate is fully or partly raised, it must be blocked securely so it cannot fall.

### INTRODUCTION

Lubrication and service performed at regular intervals will keep the MARK III COLECTOMATIC in top operating condition for the longest period of time. The importance of regular inspection cannot be over-emphasized. Making necessary adjustments, tightening nuts and bolts, checking hydraulic lines, lights and wiring connections will help prevent serious trouble and delays on collection route.

The operator should be the first line of defense in Preventive Maintenance. A conscientious and alert operator will promptly report all needs for adjustment or repair. A vehicle safety check should be performed daily prior to operation, which should include a complete cycling of all hydraulic functions.

Perform all truck scheduled preventive maintenance as instructed in the truck owner's manual.

DEPART FROM RECOMMENDED SCHEDULES ONLY WHEN CONDITIONS WARRANT SHORTENING THEM, or when changes in ambient temperature require it. Lubricating schedule is based on eight hour work days. The recommended intervals should be SHORTENED whenever the machine is operated over time, under severe job conditions, such as extreme heat or cold or severe dust conditions.

**NOTE:** Before performing any maintenance work, wash inside of body to reduce unnecessary odors.

## LUBRICATION

Hydraulic Oil Recommendations - Use an oil that contains an antifoamant, rust and oxidation inhibitors and an antiwear additive. This is equivalent to an SAE 10W motor oil, type MS or SD.

**IMPORTANT:** Do not use low viscosity naphtha base motor oil, hydraulic brake fluid or aircraft hydraulic fluid.

ITEM	LUBRICANT/FLUID	CAPACITY
Hydraulic Reservoir	SAE 10W motor oil, type MS or MD	Total 17.5 gal. (66.2 litres)

Oil Can Lubricant Recommendation - Nondetergent SAE 20 engine oil must be used to lubricate all moveable mechanical parts not furnished with grease fittings. Squirt on sufficient oil to give good lubrication but do not bathe parts in oil. Always wipe off the excess.

## DELIVERY INSPECTION

Operator's Controls .....	Check for proper operation
All Accessible Bolts .....	Check for proper torque
Lights and Wiring .....	Check lights for proper operation
Oil Reservoir .....	Check oil level and fill
Hydraulic Fittings and Lines .....	Check for leaks
Truck Inspection .....	See Truck Owner's Manual

## PREVENTIVE MAINTENANCE SCHEDULE

### Daily

Lights and Wiring .....	Check for proper operation
All Bolts .....	Visually check for tightness
Hydraulic Reservoir .....	Check oil level and fill
Operator's Controls .....	Check for binding and proper operation

### Weekly

Truck .....	Look for any Damage
Packing Mechanism and Tailgate .....	Inspect and remove any accumulation of refuse
Ejector Panel, Rollers and Track .....	Inspect and remove any accumulation of refuse that is in front of ejector
Pivot Pins .....	Check locking capscrews for tightness
Body Attaching Bolts .....	Check for proper torque

### Weekly (cont'd.)

- Hydraulic System ..... Inspect circuits for leaks
- Power Take-off ..... Inspect seals for leaks
- Control Valves ..... Inspect seals for leaks
- Hydraulic Cylinders ..... Inspect seals for leaks
- Hydraulic Pump ..... Inspect for leaks
- Control Linkages ..... Check that all cotter pins are in place
- PTO Drive Shaft ..... Check for smooth operation, check setscrews  
for tightness and that keys are in place
- Tailgate ..... Raise and lower, listen for noise or sounds  
that can mean trouble
- Tailgate Gaskets ..... Check for excessive damage or missing gaskets
- Lubrication Points ..... Lubricate

### After First Month

- Hydraulic Filter ..... Replace

### Every Four Months

- Hydraulic Filter ..... Replace

### Yearly or Every 1000 Hours

- Hydraulic System ..... Drain, flush, refill and change filter
- Hydraulic Reservoir Breather ..... Replace



# LUBRICATION AND SERVICE CHART

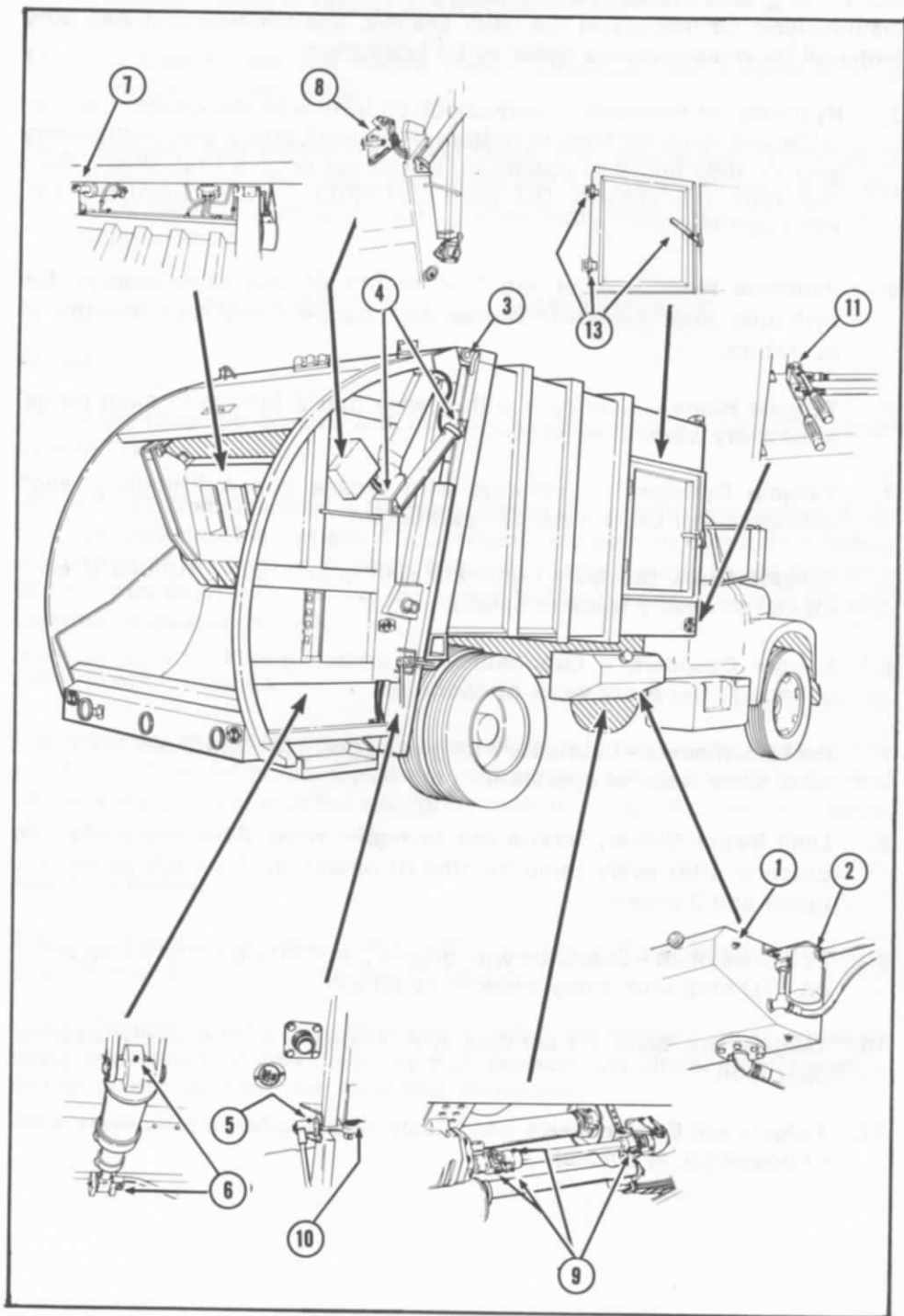


Figure 13. Lubrication and Service Points

**NOTE: For grease fittings, use the same grease as recommended by the truck manufacturer for lubricating the truck chassis. Use nondetergent SAE 20W motor oil for areas requiring motor oil for lubrication.**

1. **Hydraulic Oil Reservoir** – Daily check oil level with the ejector cylinder retracted. Keep oil level to bottom of oil level check plug. After every year or 1000 hours of operation, whichever occurs first, drain, flush and refill the system. **DO NOT OVERFILL THE HYDRAULIC OIL RESERVOIR.**
2. **Hydraulic Filter** – After the first month of operation change the hydraulic filter element. Thereafter, change every four months of operation.
3. **Tailgate Hinge** – Lubricate with grease gun 2 fittings (1 each hinge) after every week of operation.
4. **Tailgate Cylinders** – Lubricate with grease gun 4 fittings (2 each cylinder) after every week of operation.
5. **Tailgate Screw Clamps** – Lubricate with grease gun 2 fittings (1 each clamp) after every week of operation.
6. **Hopper Cylinders** – Lubricate with grease gun 4 fittings (2 each cylinder) after every week of operation.
7. **Packer Cylinders** – Lubricate with grease gun 4 fittings (2 each cylinder) after every week of operation.
8. **Limit Switch Striker, Screws and Springs** – Wipe clean and apply new graphite after every three months of operation. 5 switch stations (3 upper and 2 lower)
9. **PTO Drive Shaft** – Lubricate with grease gun 4 fittings (3 on pump end, 1 on PTO end) after every week of operation.
10. **Tailgate Eye Bolts** – Lubricate with engine oil after every week of operation.
11. **Tailgate and Ejector Levers** – Lubricate with engine oil after every week of operation. (4 places)

12. **Container Arm Mechanism Lever and Linkage** - Lubricate with engine oil after every week of operation. (Not Illustrated)
13. **Side Door Hinges and Handle Pivot** - Lubricate with engine oil in 3 places after every week.
14. **Container Arm Mechanism** - Lubricate with grease gun 6 fittings (2 each cylinder and 1 each pivot arm) and lubricate with engine oil the latch pivot and lift arm bearing after every week of operation. (Not Illustrated.)

## HYDRAULIC SYSTEM MAINTENANCE

### Oil Level

Check the reservoir oil level and fill daily or after every 8 hours, whichever occurs first.

**IMPORTANT:** Contamination is the worst enemy of any hydraulic system. Keep dirt from entering the system. Clean around any system component before disconnecting or removing it. When filling the reservoir, filter the oil through a 200 mesh (or finer) screen. Never use a cloth to filter the oil because oil will pick up lint as it passes through.

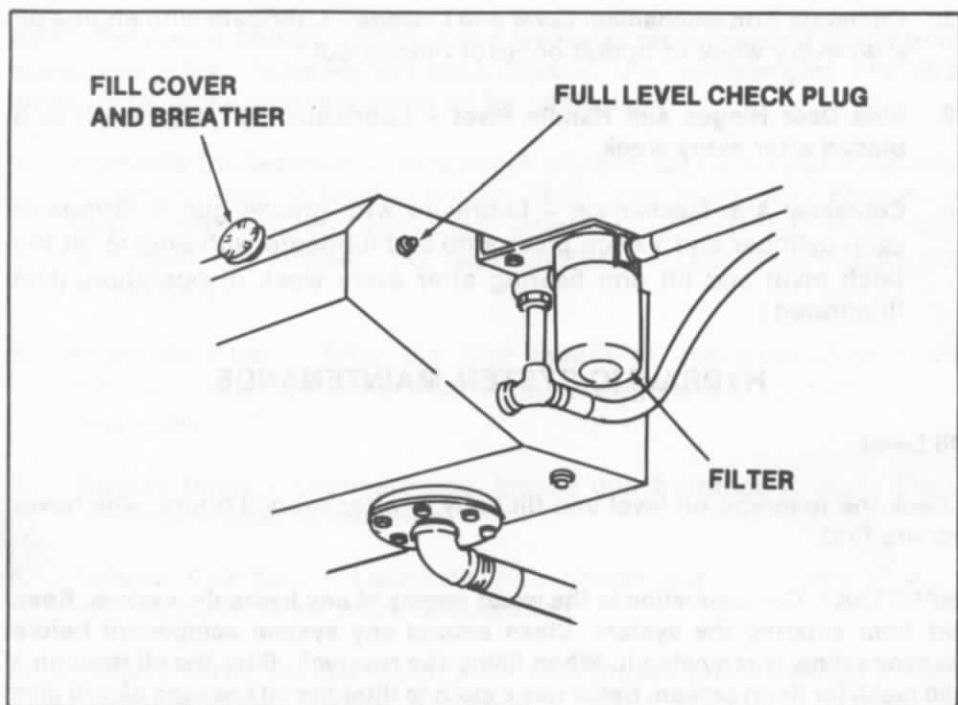
### Level Check Procedure

The reservoir should be filled to bottom of the oil level check plug with the ejector cylinder retracted. Cycle the packer mechanism 5 to 10 times and recheck the oil level with the ejector cylinder retracted. Add recommended oil as required. (See figure 14.)

### Servicing Hydraulic Filter

The filter must be replaced one month after the unit has been placed into operation and every four months thereafter.

**NOTE:** Change the filter more often under certain conditions such as extremely dusty atmosphere or area. Use only HEIL replacement filters. Filter canisters can be purchased from your local HEIL distributor.



**Figure 14. Reservoir and Filter**

#### **Changing the Filter Canister**

1. Using a wide strap wrench remove the filter canister.
2. Remove used gasket from filter base groove.
3. Take new gasket from inside filter and install in base groove.
4. Apply clean oil to the gasket.
5. Turn filter on by hand until tight to seal gasket in groove.
6. Loosen filter then retighten by hand until filter contacts the base gasket.
7. Use a wide strap wrench on the bottom of the element and tighten an additional  $\frac{1}{2}$  (minimum) to  $\frac{3}{4}$  (maximum) turn.
8. Check for leaks with pump operating.

## Changing Hydraulic Oil

The hydraulic oil should be changed once a year or after every 1000 hours, whichever occurs first. At the same time replace the filter.

### Draining and Cleaning Procedures

It must be remembered that almost all hydraulic system malfunctions can be traced to dirt in the fluid. When working with the hydraulic system, the hands, tools, working area and parts must be kept as clean as possible. Drain the Hydraulic System fluid as follows:

1. Disengage the PTO, shut off the engine and remove ignition key.
2. Remove the breather cap and then the drain plug from bottom of the reservoir. (See figure 15.)

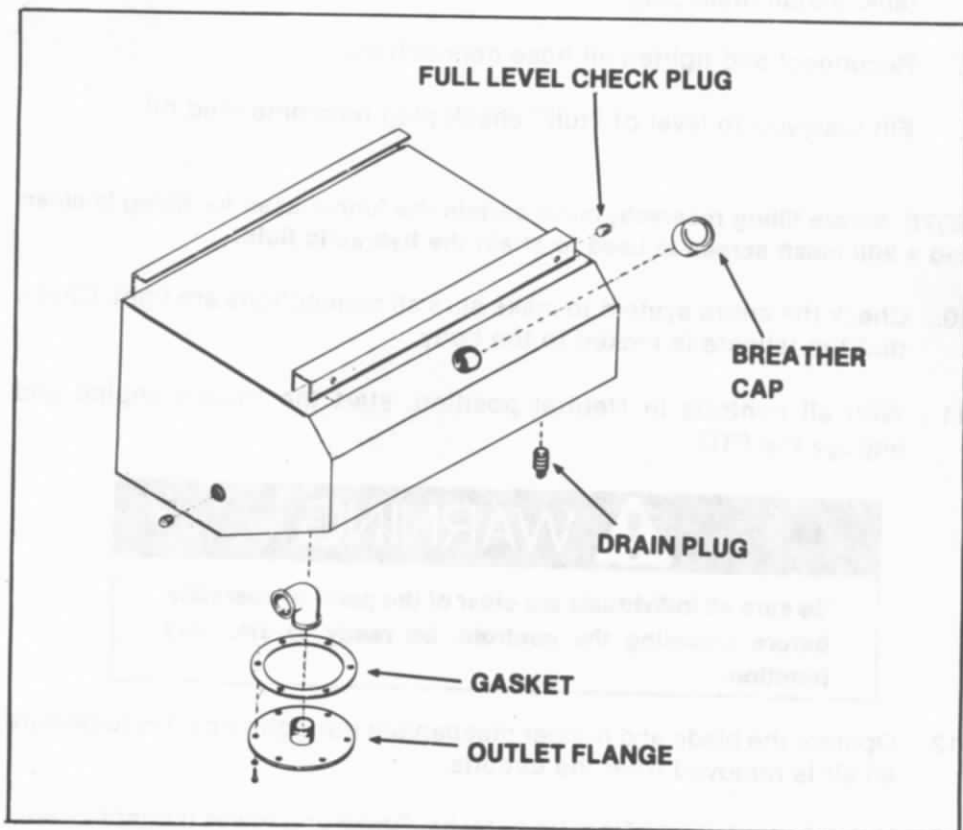


Figure 15. Oil Reservoir

3. While fluid is draining from the reservoir, clean the breather element in a nonflammable cleaner and thoroughly dry. Change the breather if it can no longer be cleaned.
4. The easiest and most effective way to drain the entire hydraulic system is to disconnect all hoses at their adapters and allow oil to drain into a suitable container.
5. Remove and replace the hydraulic filter as described under "Changing the Filter Canister," page 32.
6. Remove the bottom outlet flange to gain access to the inside of the reservoir. Remove sediment from bottom of the reservoir.
7. Install the bottom outlet flange. Use a new gasket between flange and tank. Install drain plug.
8. Reconnect and tighten all hose connections.
9. Fill reservoir to level of "full" check plug recommended oil.

**NOTE: Before filling reservoir, make certain the funnel used for filling is clean and a 200 mesh screen is used to strain the hydraulic fluid.**

10. Check the entire system to make sure all connections are tight. Check that the tailgate is locked to the body.
11. With all controls in Neutral position, start the truck's engine and engage the PTO.



## WARNING

**Be sure all individuals are clear of the point of operation before actuating the controls. Be ready to stop any function.**

12. Operate the blade and hopper mechanism through 10 cycles to be sure all air is removed from the circuits.
13. Unlatch the tailgate from body locks. Raise and lower tailgate several times.

14. Operate ejector - full out - full retract with tailgate raised.
15. With the ejector panel in the forward position (toward cab), and tailgate down and locked, check oil level in the reservoir. Add recommended oil, if necessary, until oil flows out of oil level check plug. Install plug.



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