



Service Bulletin

Bulletin Number: **SB-21-351-WM**
Release Date: **September 17, 2021**
Distribution: **Waste Management Managers, Heil Dealers, Heil Technical Services, Heil Customer Care**
Subject: **Half/Pack® and Half/Pack® (Featuring Odyssey® Controls): Front Head Manifold Hydraulic Tube Failures and Body Controller Program Update to Smooth Packer Operation**

NOTE: READ THIS BULLETIN IN ITS ENTIRETY BEFORE BEGINNING ANY REPAIR WORK.

Waste Management Half/Pack® and Half/Pack® (featuring Odyssey® Controls) units with a published ship date between **August 1, 2020** and **August 20, 2021**, can potentially have certain hydraulic tube failures due to tubes becoming misaligned or insufficient tube clamping force to prevent tube damage from vibration.

This Service Bulletin describes the required corrective action procedure to install the Front Head Tube Support Clamp. This kit decreases hydraulic tube vibration and reduces the potential for tube movement within the front head manifold. Reinforcing the 3/4" Hydraulic Tube (354-5571) will prevent the tube from loosening or breaking at the front head manifold connection point.

Additionally, this Service Bulletin provides instructions to install Spill Plate (035-3764) on the upper front head enclosure, and hydraulic tube thermal resistant sleeve material has been included at Waste Management's request. These sleeves will be installed on the four (4) front head manifold hydraulic tubes.

Lastly, this Service Bulletin includes additional instructions to reference and perform procedures from TSN-21-002 for affected Waste Management units.

1. PLANNING INFORMATION

A. Products Affected

A full list of affected unit serial numbers can be accessed through the SmartSheet app. Affected Waste Management units will require either SB-20-333-3-WM or SB-21-351-WM procedures to be completed based on their published ship date:

Published Ship Date	Required Bulletin Procedures
October 1, 2018 through July 31, 2020	SB-20-333-3-WM
August 1, 2020 through August 20, 2021	SB-21-351-WM



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B. Compliance

Each Dealer must perform these tasks as outlined in this Service Bulletin for each unit identified above in the Products Affected section no later than **November 30, 2021**. The tasks outlined in this Service Bulletin must be performed by a qualified technician.

Completion of this bulletin will be certified using photographs of each unit and the Task Checklist found on the last page of this document. Waste Management will upload the signed checklist into their Compass maintenance system and Heil dealers will upload both the checklist and pictures into Tavant as they file a warranty claim for each reworked unit. Note to Dealer Warranty Coordinators: please enter as a Campaign Claim for payment; claims filed as Machine Claims will be rejected. If Tavant does not allow filing as a Campaign Claim, verify the unit information with the Affected Population description on page one to ensure that the unit requires completion of this bulletin. Contact the warranty department at warrantysupport@doveresg.com if any assistance is needed.

Photos

Note: It is recommended that photos be taken both before and after the repair to document the original condition of the unit before work was performed but “before” photos do not need to be included with the warranty claim.

To document the final condition of the unit after the repair, pictures are required showing:

1. The Body Serial Number plate located near the front on the street side of the body
2. Front of body showing tubes from exit of the flap area to the clamps that were added
3. In-cab display showing new program number

Photos will be provided to Waste Management and are required for warranty payment.

Warranty Coverage - Mileage

Heil will pay mileage to help defer dealer cost in completing SB-21-351-WM for Waste Management units at the rate of \$1.50 per mile. Miles are calculated using Google Maps from the dealer's nearest location to and from the Waste Management location.

Mileage Calculation Example:

Macqueen Equipment going to WM Madison, WI

Miles to WM: 77 miles x 2 (round trip) = 154 miles

Mileage Paid for Warranty = 154 x \$1.50 = \$231.00

C. Labor Hours

The labor effort required to accomplish the tasks in this Service Bulletin is shown in **Table 1**.

Table 1. Manpower

TASK	LABOR HOURS REQUIRED
Perform the non-programming procedures as detailed in this Service Bulletin	1
Perform the programming procedures from TSN-21-002	1



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D. Tools, Materials and Parts Needed

The tools and parts necessary to perform the rework are outlined in **Table 2** and **Table 3**.

Table 2. Tools and Materials

Item	Part Number	Application
Personal Protective Equipment	Commercially available	Safety protection as required by employer
Hard-Toed Boots	Commercially available	Safety protection for feet
Wrench Set	Commercially available	To install the field kit
Torque Wrench	Commercially available	To properly tighten hydraulic fittings
LOCTITE® Red Threadlocker	Commercially available	To lock clamp bolts
Sander	Commercially available	To sand paint from metal in preparation of welding
Welder	Commercially available	To weld in place new mounting bracket (if required) and new hose support brackets.
Container	Commercially available	To capture hydraulic fluid

Table 3. Parts from Front Head Tube Support Field Kit (372-9216-WM2)

Part Number	Description	Qty Per Unit	Special Instructions
018-0867-034	Hydraulic Tube Thermal Resistant Sleeve, 34"	2	For 1" front head tubes
018-0867-040	Hydraulic Tube Thermal Resistant Sleeve, 40"	1	For 3/4" front head tube
018-0860-031	Hydraulic Tube Thermal Resistant Sleeve, 31"	1	For 1/4" front head tube
035-3764	Spill Plate	1	Install with Tech Screws (047-2151-011)
311-6871-001	Bracket, Spill Plate Support	1	Supports Spill Plate (035-3764)
047-2151-011	Tek Screw, 1/4-14 x 1" Lg.	4	Hardware for Spill Plate (035-3764)
036-1597-005	Clamp, 3/4" Hydraulic Tube	1	Secures 3/4" hydraulic tube
036-1597-007	Clamp, 1" Hydraulic Tube	1	Secures 1" hydraulic tube
311-6886	Bracket, Front Head Tube Clamp	1	Replaces metal base plate on clamps
FSP070732	HHCS, 1/4-20 x 2-1/4 GR5, Plated	4	Use new hardware with clamps
FSP230700	Locknut, 1/4" Unc GR5, Plated	4	Use new hardware with clamps
FSP510700	Washer, Flat, 1/4" Std, Plated	4	Use new hardware with clamps



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2. PREPARING THE UNIT AND WORK AREA

Prior to performing Lock-Out/Tag-Out, make sure to LOWER the arms and forks FULLY DOWN to the ground or RAISE the arms FULLY UP against the arm stops.

Be certain that all hydraulic pressure has been fully relieved before beginning any hydraulic rework.

To relieve the hydraulic pressure in the system:

- (1) With the engine OFF, turn the ignition switch to the ON position (without starting the engine) and turn the Pump Switch ON. Then:
 - (a) Cycle the controls to the arms, forks, tailgate, etc., in all directions. This relieves the pressure in the cylinders.
 - (b) Turn the ignition switch to OFF.

Make sure that the unit is in **Lock-Out/Tag-Out mode** before performing re-work. Refer to and follow your company's Lock-Out/Tag-Out policies and procedures. At a minimum, refer to and follow the Lock-Out/Tag-Out procedure found in your Heil Service Manual. Always wear appropriate Personal Protective Equipment as required by your employer (but to always include at a minimum, safety glasses and OSHA approved hard-toed boots) when repairing a unit or performing scheduled maintenance on a unit. Clear the work area around the unit of all unnecessary people and equipment.

Reference the Service Shack video on **How to Lock-Out and Tag-Out a Heil Refuse Collection Vehicle**: www.heil.com/heil-service-shack

3. CORRECTIVE ACTIONS

With the unit prepared as described in Section 2 of this Service Bulletin, in **Lock-Out/Tag-Out mode**, carefully follow the steps below.

A. Remove Upper Front Head Enclosure and Detach Front Head Hydraulic Tubes

Referencing **Figure 1**, carefully follow the procedure below.

- (1) Make sure that the work area and affected area on the unit is thoroughly cleaned to prevent hydraulic system contamination.
- (2) Position a container to catch the hydraulic oil that might be released from hydraulic connections when loosened.
- (3) Remove the six (6) bolts and associated hardware from the upper front head enclosure. Set upper front head enclosure and associated hardware aside for reuse later. See **Figure 1**.

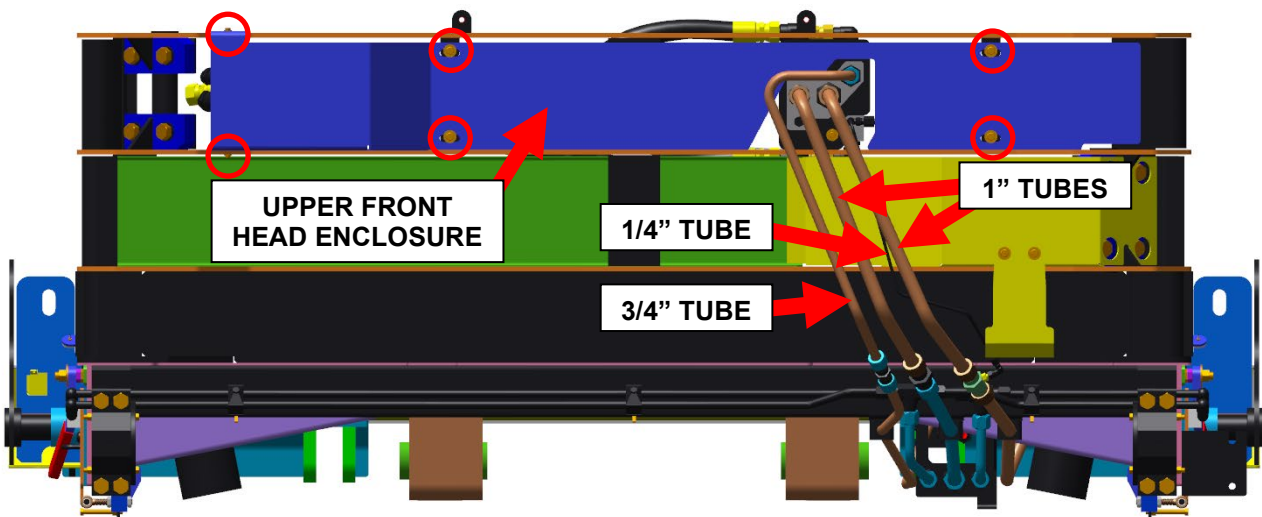


Figure 1. Upper Front Head Enclosure and Connecting Hardware (Red Circles)

- (4) Detach the one (1) 3/4" front head manifold tube and set aside for reuse later. See **Figure 1**.
- (5) Detach the two (2) 1" front head manifold tubes and set aside for reuse later. See **Figure 1**.
- (6) Detach the one (1) 1/4" front head manifold tube and set aside for reuse later. See **Figure 1**.

B. Install Front Head Hydraulic Tubes

Visually inspect the tubes to be reinstalled. The tube flares must not show damage or manufacturing defects, including scratches, scoring or indentations. If indentations are found in tube flares, do not install them, and contact Heil Technical Service at 866.310.4345.

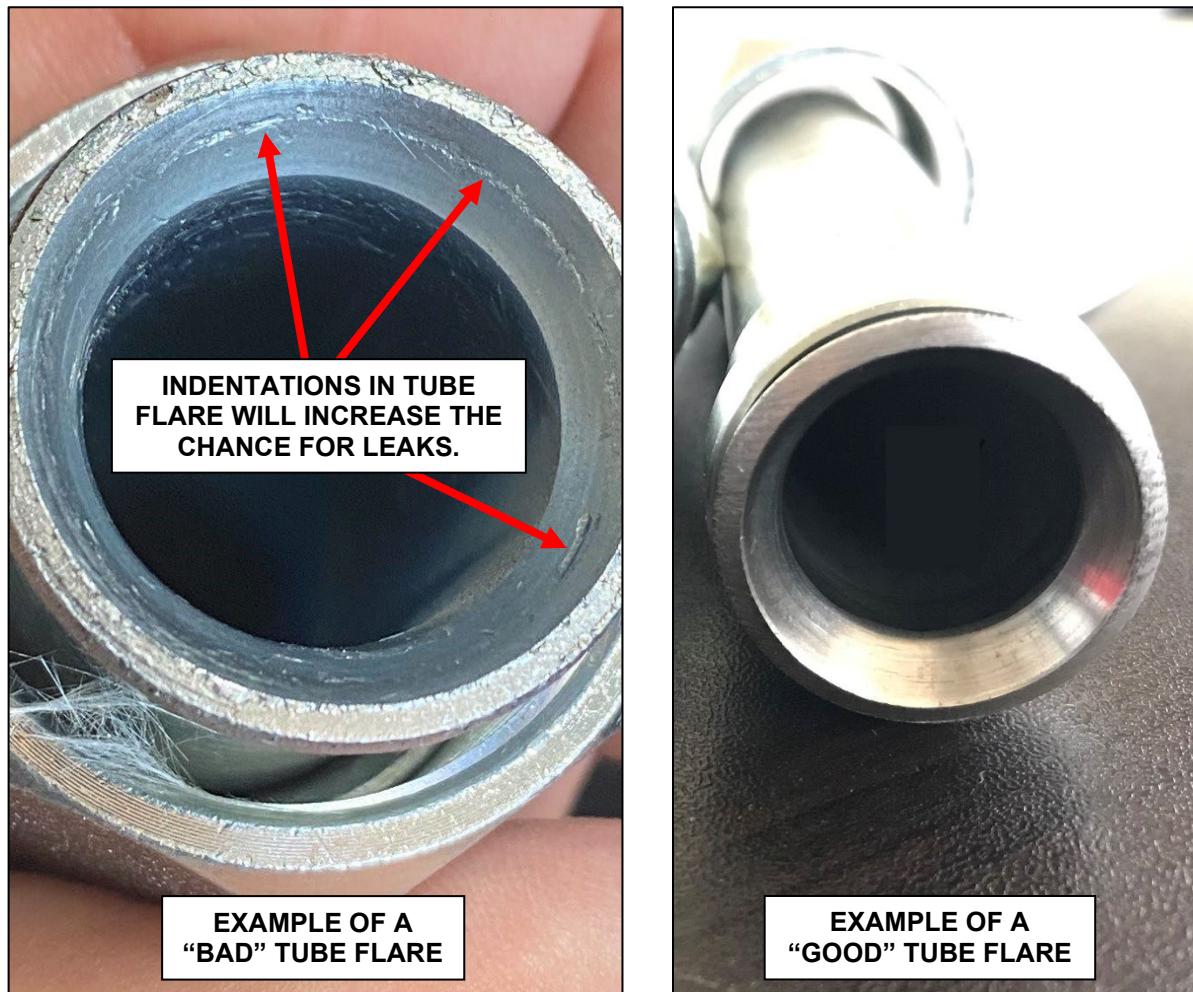


Figure A. Example of "Bad" and "Good" Tube Flares

- (1) Slide the Hydraulic Tube Thermal Resistant Sleeve (018-0867-034) over the two (2) 1" front head manifold tubes. Then reinstall these tubes. Torque fittings to 118 ft-lbs. See **Figure 2**.
- (2) Slide the Hydraulic Tube Thermal Resistant Sleeve (018-0867-040) over the 3/4" tube. Install the 3/4" tube. Torque fittings to 84 ft-lbs.
- (3) Slide the Hydraulic Tube Thermal Resistant Sleeve (018-0860-031) over the 1/4" tube. Install the 1/4" tube. Torque fittings to 12.5 ft-lbs.

- (4) Check ALL existing underbody tube clamp bolts to ensure they are properly tightened, ensuring they will not become loose from vibration over time. Use LOCKTITE® Red Threadlocker as needed. Torque to 8 FT-LBS.



Figure 2. Front Head Tubes with Thermal Resistant Sleeves Installed (1/4" Tube Sleeve Not Yet Installed)

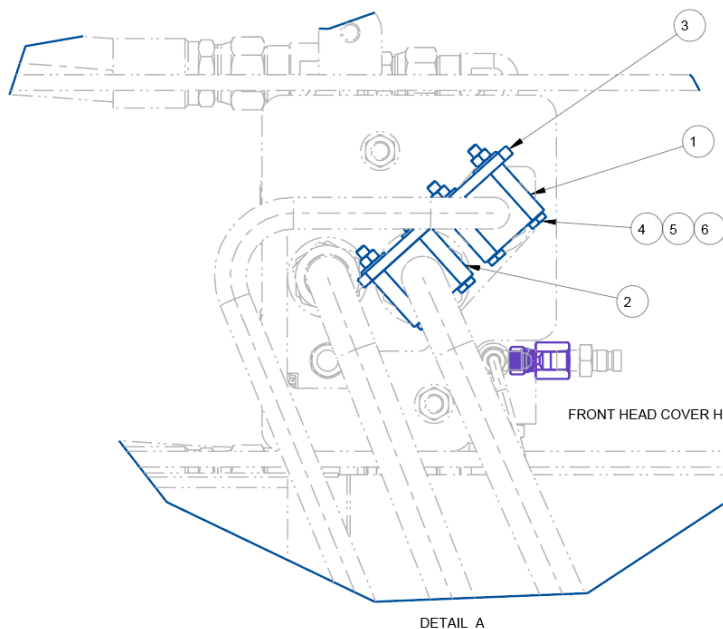
C. Install Front Head Tube Support Clamp (311-6886)

Reference **Table 3** and **Figure 4** for parts for this procedure.

- (1) Enter the body through the hopper side door.
- (2) Install the Front Head Tube Support Clamp (311-6886) as shown in **Figure 4**.
 - (a) When installing Clamps (036-1597-005 and 036-1597-007), remove the metal base plate. Front Head Tube Clamp Bracket (311-6886) is used in its place. Replace existing hardware in clamp assembly with hardware show in **Figure 4**.
 - (b) Install the 3/4" and 1" tube clamps over the thermal resistant sleeves. The sleeve must cover the tube nut at the manifold. For the unclamped 1" tube at the manifold, zip tie the sleeve at the manifold tube nut.
- (3) Exit the body through the hopper side door.



Figure 3. Front Head Tube Support Clamp Installation Location (Thermal Resistant Sleeves not Shown)



REF	PART No.	DESCRIPTION	QTY
1	036-1597-005	CLAMP, 3/4" HYD. TUBE	1
2	036-1597-007	CLAMP, 1" HYD. TUBE	1
3	311-6886	BRACKET, FRONT HEAD TUBE CLAMP	1
4	FSP070732	HHCS, 1/4-20 X 2-1/4 GR 5, PLATED	4
5	FSP230700	LOCKNUT, 1/4" UNC GR5, PLATED	4
6	FSP510700	WASHER, FLAT, 1/4" STD , PLATED	4

Figure 4. Front Head Tube Support Clamp Detailed View (Thermal Resistant Sleeves not Shown)

D. Test for Hydraulic Fluid Leaks, Reinstall Upper Front Head Enclosure, and Install Spill Plate

- (1) Take the unit out of Lock-Out/Tag-Out Mode.
- (2) Operate all unit functions. Then put the unit back into Lock-Out/Tag-Out Mode and visually inspect for leaks. If there are leaks, loosen and re-torque the hydraulic fittings that are leaking and then repeat the process to check again for leaks. Continue this procedure until there are no leaks, then check hydraulic oil level and add oil if needed. Contact Technical Services if leaks continue. **DO NOT REUSE THE HYDRAULIC OIL DRAINED FROM THE SYSTEM DURING DISASSEMBLY.** Dispose of used hydraulic fluid in a responsible, approved manner.
- (3) Reinstall the upper front head encloser using the six (6) bolts and associated hardware that was removed in Step 3.A.(3). See **Figure 1**.
- (4) Install the Spill Plate (035-3764) and Spill Plate Support Bracket (311-6871-001) to front head cover plate using four (4) self-drilling Tek Screws (047-2151-011). The Spill Plate Support Bracket runs along the bottom of the Spill Plate. See **Figure 5**.



Figure 5. Spill Plate (035-3764) Installation Location

E. Body Controller Program Update to Smooth Packer Operation

Reference **TSN-21-002** to update programming on the body controller. This controller program update smooths the packer movement when changing direction or stopping (extend to retract or retract to extend). The smoother action reduces stress on the packer assembly and associated hydraulic components for longer life.

Reference the task checklist on the next page, ensuring that all steps have been completed.

To obtain reimbursement from Heil for re-work as a result of implementing this Service Bulletin, submit one completed Request For Credit (RFC) for each unit re-worked. Heil Dealers and Service Centers must file claims electronically using Heil's online warranty system. Labor will be reimbursed up to two (2) hours per re-worked affected unit listed in this Service Bulletin. All re-work must be completed by **January 31, 2020**. Completion of this bulletin will be certified using photographs of each unit and the Task Checklist found on the last page of this document. Waste Management will upload the signed checklist into their Compass maintenance system and Heil dealers will upload both the checklist and pictures into Tavant on a warranty claim for each unit. Note to Dealer Warranty Coordinators: please enter as a Campaign Claim for payment; claims filed as Machine Claims will be rejected. If Tavant does not allow filing as a Campaign Claim, verify the unit information with the Affected Population description on page one to ensure that the unit requires completion of this bulletin. Contact the warranty department at warrantysupport@doveresg.com if any assistance is needed.



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TASK CHECKLIST FOR SB-21-351-WM:

Completion of this bulletin will be certified using photographs of each unit and the Task Checklist found on this page. Waste Management will upload the signed checklist into their Compass maintenance system and Heil dealers will upload both the checklist and pictures into Tavant on a warranty claim for each unit. Note to Dealer Warranty Coordinators: please enter as a Campaign Claim for payment; claims filed as Machine Claims will be rejected. If Tavant does not allow filing as a Campaign Claim, verify the unit information with the Affected Population description on page one to ensure that the unit requires completion of this bulletin. Contact the warranty department at warrantysupport@doveresg.com if any assistance is needed.

- ☐ Remove and visually inspect the four (4) front head hydraulic tube to ensure that the tube flares show no damage or manufacturing defects, including scratches, scoring or indentations. See **Page 6** and **Figure A**.
- ☐ Installed hydraulic tube thermal resistant sleeves over four (4) front head tubes, with no exposed hydraulic tubing visible at front head. See **Page 6** and **Figures 1-2**.
- ☐ Checked all existing underbody tube clamp bolts to ensure they are properly tightened, using LOCKTITE Red Threadlocker as needed, torqued to 8 ft-lbs. See **Page 7**.
- ☐ Installed Front Head Tube Support Clamp. See **Page 7-8**, **Table 3**, and **Figures 3-4**.
- ☐ Unit tested for hydraulic fluid leaks. See **Page 9**.
- ☐ Reinstalled upper front head enclosure. Installed Spill Plate (035-3764) and Spill Plate Support Bracket (311-6871-001) to front head cover plate. See **Page 9** and **Figure 5**.
- ☐ Updated body controller program update to smooth packer operation, referencing TSN-21-002. See **Page 9**.
- ☐ Photos taken to document completed rework. See **Page 2**.
- ☐ Waste Management/Dealer sign-off that the above tasks have been completed.

Body Serial Number: _____ Heil Dealership: _____

Dealer Technician Printed: _____ Phone Number: _____

Dealer Technician Signed: _____ Date: _____

Waste Management Printed: _____ Phone Number: _____

Waste Management Signed: _____ Date: _____

If you have any questions regarding the information detailed in this Bulletin, please contact Heil Technical Service at 866.310.4345.

*Heil Environmental Service Bulletin procedures are intended for use by professional technicians, NOT a "do-it-yourselfer." They are written to inform experienced technicians of conditions that may occur on some units, or to provide information that could assist in the proper servicing of a unit. Properly trained technicians have **access to and are familiar with the applicable Heil Operation Manual and Heil Parts and Service Manuals** and have the equipment, tools, safety training, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the Bulletin instructions apply to your unit, or that your unit will have that condition. See your Heil Dealer to determine whether your unit may benefit from the information in this Service Bulletin.*

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