

Safety Defect and Noncompliance Report Guide for Vehicles
PART 573 Defect and Noncompliance Report⁽¹⁾

On January 29, 2010, Heil Environmental decided that a defect which relates to motor vehicle safety exists in the motor vehicles listed below, and is furnishing notification to the National Highway Traffic Safety Administration in accordance with 49 CFR Part 573 Defect and Noncompliance Reports.

Date this report was prepared: [January 29, 2010](#)

Furnish the manufacturer's identification code for this recall (if applicable): [SB227](#)

- **Identify the full corporate name of the fabricating manufacturer of the vehicle being recalled. If the recalled vehicle is imported, provide the name and mailing address of the designated agent as prescribed by 49 U.S.C. ♦30164.**
[The Heil Co. d/b/a Heil Environmental](#)

1. **Identify the corporate official, by name and title, whom the agency should contact with respect to this recall.**

[George Paturalski, Corporate Director of Risk Management](#)

Telephone Number: [866-367-4345 ext.5250](#) **Fax No.:** [423-855-3450](#)

Name and Title of Person who prepared this report.

[George Paturalski, Corporate Director of Risk Management](#)

Signed: 

I. Identify the Vehicle Models Involved in the Recall

2. **Identify the Vehicles Involved in the Recall, for each make and model or applicable vehicle line (provide illustrations or photographs as necessary to describe the vehicle), provide:**

Make(s): [Heil Model Years Involved: 2006 – 2009 Model\(s\): Rapid Rail Body with Rapid Rail Lift](#)

Production Dates: Beginning: [1/31/06](#) **Ending:** [7/31/09](#)

VIN Range*: Beginning: RR8104110 Ending: RR8104614

* Note that VIN range is not applicable, since the chassis are typically delivered to us from the end user via a separate transaction. Therefore, the VIN numbers will not be sequential and will include a variety of chassis manufacturers. The numbers provided above represent Heil Body Serial Numbers, which are assigned to the body by Heil. Further, not all serial numbers that fall within the range are affected – please see attached Product Bulletin #227 which explains the limitation of affected units.

Vehicle Type: Garbage Truck Bodystyle: Automated Side Loader

Descriptive information which characterizes/distinguishes the recalled vehicles from those model vehicles not included in the recall: Those automated side loader Rapid Rail bodies mated with a Rapid Rail lift having a volume capacity rating of 26 yd³, 30 yd³, or 32 yd³ when mounted with a bolt-on rear hinge assembly.

Make(s): Heil Model Years Involved: 2006 – 2009 Model(s): Rapid Rail Body with CP Python Lift

Production Dates: Beginning: 8/2/06 Ending: 7/22/09

VIN Range*: Beginning: RR8321086 Ending: RR8321321

* Note that VIN range is not applicable, since the chassis are typically delivered to us from the end user via a separate transaction. Therefore, the VIN numbers will not be sequential and will include a variety of chassis manufacturers. The numbers provided above represent Heil Body Serial Numbers, which are assigned to the body by Heil. Further, not all serial numbers that fall within the range are affected – please see attached Product Bulletin #227 which explains the limitation of affected units.

Vehicle Type: Garbage Truck Bodystyle: Automated Side Loader

Descriptive information which characterizes/distinguishes the recalled vehicles from those model vehicles not included in the recall: Those automated side loader Rapid Rail bodies mated with a Python lift having a volume capacity rating of 26 yd³, 30 yd³, or 32 yd³ when mounted with a bolt-on rear hinge assembly. (As information, the “CP” of the “CP Python” product is a marketing designation that indicates “Continual Packing” – which relates to attributes of the Rapid Rail body design; the lift itself is the Python lift.)

Make(s): Model Years Involved: Model(s):

Production Dates: Beginning: Ending:

VIN Range: Beginning: _____ Ending: _____

Vehicle Type: Bodystyle:

Descriptive information which characterizes/distinguishes the recalled vehicles from those model vehicles not included in the recall:

Identify the approximate percentage of the production of all the recalled models manufactured by your company between the inclusive dates of manufacture provided above, that the recalled model population represents. For example, if the recall involved Widgets equipped with certain items of equipment from January 1, 1996 through April 1, 1997, then what was the percentage of the recalled Widgets of all Widgets manufactured during that time period.

100%

II. Identify the Recall Population

3. Furnish the total number of vehicles recalled potentially containing the defect or noncompliance.

Number of Vehicles

Model	Year	Potentially Involved
Rapid Rail	2006	47
Rapid Rail	2007	85
Rapid Rail	2008	140
Rapid Rail	2009	107
CP Python	2006	57
CP Python	2007	37
CP Python	2008	27
CP Python	2009	18

Total Number Potentially Affected by the Recall: 518

4. Furnish the approximate percentage of the total number of vehicles estimated to actually contain the defect or noncompliance:

This is uncertain and will be verified by inspection of every vehicle. Regardless of the results of the inspection, 100% of the recalled units are targeted for retrofit installation of the reinforcement kit created by Heil.

Identify and describe how the recall population was determined--in particular how the recalled models were selected and the basis for the beginning and final dates of manufacture of the recalled vehicles:

The recall population was determined through a field inspection of 166 units manufactured on or after the earliest date that Heil shipped the products identified above using a bolt-on rear hinge assembly. The latest date of population sampling was established by the last date of the month when Heil began installing a reinforcing gusset on the rear hinge assembly. The field inspection isolated the potential for cracking to the 26 yd³, 30 yd³, and 32 yd³ size bodies.

III. Describe the Defect or Noncompliance

5. Describe the defect or noncompliance. The description should address the nature and physical location of the defect or noncompliance. Illustrations should be provided as appropriate.

Please see Service Bulletin #227 (attached) which was issued to provide clear instructions to Heil's dealers on how to inspect designated areas for possible cracking – and how to install the Heil Part #126-6051 reinforcement gussets.

Describe the cause(s) of the defect or noncompliance condition.

When customers' chassis are delivered to Heil's factory for installation of a Heil body, there are often variances in those chassis related to the fact that a variety of chassis manufacturers' products may be used – and that even “sister truck” chassis are often delivered with manufacturing variances. As noted in Service Bulletin #227, a key contributing factor is the amount of unreinforced chassis rail that extends beyond the rearward most chassis rail cross member. When the chassis rails do not have a cross member within 30 inches of the end of the chassis, excessive chassis rail flexing can occur and fatigue the body hinge weldment to the point of cracking.

Describe the consequence(s) of the defect or noncompliance condition.

Fatiguing the body hinge weldment to the point of cracking creates a potentially unstable fastening point for the body. When the body is on the route collecting garbage, it is well supported by the entire length of both of the chassis frame rails underneath the body. However, during waste discharge operations at the disposal facility, the body is emptied of its cargo by raising it off of the chassis rails and allowing gravity to discharge the load. It is during this waste discharge operation that the body is no longer supported by the chassis frame rails and could be subject to tip over if the body hinge weldment were to fail.

Identify any warning which can (a) precede or (b) occur.

Visible signs of cracking will occur in the welds between the Z-plate and the left and right side flanges. Inspection procedures and potential failure locations are detailed in *Heil Service*

Bulletin #227 which defines the retrofit kit installation procedures as well.

If the defect or noncompliance is in a component or assembly purchased from a supplier, identify the supplier by corporate name and address.

N/A; this part is manufactured by Heil Environmental

Identify the name and title of the chief executive officer or knowledgeable representative of the supplier:

N/A as to supplier, but George Paturalski is the Corporate Director of Risk Management for Heil Environmental and will be acting as liaison for the company with NHTSA on this recall.

IV. Provide the Chronology in Determining the Defect/Noncompliance

If the recall is for a defect, complete item 6, otherwise item 7.

6. With respect to a defect, furnish a chronological summary (including dates) of all the principle events that were the basis for the determination of the defect. The summary should include, but not be limited to, the number of reports, accidents, injuries, fatalities, and warranty claims.

There were 6 reported failures of the Z-plate over a 3 month period. There were no injuries or fatalities. The very first failure occurred during an unloading procedure at a disposal facility. The body did not detach from the Z-plate attachment point, but the failure caused the body to shift while in the elevated position and the truck rolled over onto its side. Rollover occurrences can sometimes occur at disposal facilities due to unstable ground conditions and/or operators “rocking” the truck to loosen the load within the body cavity. While not common, these occurrences can cause damage to the truck which is not always distinguishable as causal to the rollover itself.

The other 5 reported failures did not involve a truck rollover. The failures were observed as cracks in the Z-plate area. The sequence of failures and/or reported defects was as follows:

- Hinge Failure – 04/21/09
 - Town of Gila Bend AZ 32 Yd Rapid Rail Body
 - truck rolled onto its side at disposal facility
 - no injuries or fatalities occurred

- Hinge Defect – 06/15/09
 - WM Walnut Creek CA 30 Yd Rapid Rail Body
 - cracks in Z-plate were observed

- Hinge Defect – 06/19/09
 - City of Tucson AZ 26 Yd Rapid Rail Body
 - cracks in Z-plate were observed

- Hinge Defect – 06/19/09
 - City of Glendale CA 30 Yd Rapid Rail Body
 - cracks in Z-plate were observed

- Hinge Defect – 07/14/09
 - City of Tucson AZ 26 Yd Rapid Rail Body
 - cracks in Z-plate were observed
- Hinge Defect – 07/16/09
 - City of Tucson AZ 26 Yd Rapid Rail Body
 - cracks in Z-plate were observed

In July, Heil initiated a field inspection program. One hundred and sixty six (166) units were inspected and cracks were observed in six percent (6%) of the units. The units with defects were consistent in that only the larger body models with volumetric capacities of 26 yd³, 30 yd³, or 32 yd³ had any cracking problems. Additionally, it was found that the defect was only observed in units where the chassis reinforcing crossbar (as installed by the OEM chassis manufacturer) was distant from the end of the chassis rail – and consequently the Z-plate, which is installed at the end of the chassis rail – thereby allowing excessive flexing of the frame rail and concurrent stress on the Z-plate.

Based on field observations, Heil engineers began designing a retrofit kit to reinforce the Z-plate and this effort resulted in *Bolt-On Hinge Kit #372-3984-001*. Service Bulletin 227 was subsequently drafted, and a series of internal technical reviews were conducted on this extensive document to ensure the inspection procedures were robust and well documented – as well as the Kit installation instructions. After internal reviews were completed and synthesized, SB227 was published and distributed to all Heil Dealers along with a list of affected units; all of which are to be inspected and retrofitted with *Bolt-On Hinge Kit #372-3984-001*.

7. With respect to a noncompliance, identify and provide the test results or other data (in chronological order and including dates) on which the noncompliance was determined.

FEA analysis was performed on rear hinge assembly; loading was determined to be 17,710 psi at the toe of the weld of the left and right side plates. These locations match the point of failures/defects observed in the field. The addition of structural gussets reduced the load to 9,960 psi; a reduction of 44% in the imposed stresses. For additional information, see document entitled *Testing performed to validate the proposed field campaign of adding a gusset to the bolt-in hinge*. (Attached)

V. Identify the Remedy

8. Furnish a description of the manufacturer's remedy for the defect or noncompliance. Clearly describe the differences between the recall condition and the remedy.

Rear hinge assemblies being recalled do not have the reinforcing gussets installed between the Z-plate and the left/right side plates. Current production units have these gussets installed at the factory. Reinforcing gussets are to be installed on all identified units in the field between the Z-plate and the left/right side plates – regardless of whether any cracking is observed or not.

Clearly describe the distinguishing characteristics of the remedy component/assembly versus the recalled component/assembly.

This is really “not applicable”, because the recall does not involve a parts swap of a remedy component for a recalled component. The recall involves installing a supplemental structural gusseting Kit to field units instead of removing certain parts and substituting others.

Identify and describe how and when the recall condition was corrected in production. If the production remedy was identical to the recall remedy in the field, so state. If the product was discontinued, so state.

Reinforcing gussets were added to the rear hinge assembly used on all dumping models of the Rapid Rail body and CP Python body for units shipped on or after August 1, 2009.

VI. Identify the Recall Schedule

Furnish a schedule or agenda (with specific dates) for notification to other manufacturers, dealers/retailers, and purchasers. Please, identify any foreseeable problems with implementing the recall.

This recall is already underway. Once the Purchaser Notification Letter is approved by NHTSA, we will send the letters via Registered U.S. Postal Service – return receipt requested. This end-user communication should stimulate units to be returned to local Heil dealers for installation of the retrofit Kit.

Heil also intends to send a supplemental notification to its dealers reinforcing that Heil wants SB227 completed with all units in the field to be retrofitted. They will be asked to help us contact the owners of the affected Product to solicit their participation in this safety recall campaign.

One foreseeable problem is that many of our end-user customers routinely conduct daily pre-trip inspections of their refuse collection vehicles before they are deployed on-route to collect garbage. Some owners may simply continue to inspect the Z-plate area on a daily basis in lieu of “downing a truck” and removing a revenue producing asset from service in the field if they don’t observe any cracking.

VII. Furnish Recall Communications

9. Furnish a final copy of all notices, bulletins, and other communications that relate directly to the defect or noncompliance and which are sent to more than one manufacturer, distributor, or purchaser. This includes all communications (including both original and

follow-up) concerning this recall from the time your company determines the defect or noncompliance condition on, not just the initial notification. *A DRAFT copy of the notification documents should be submitted to this office by Fax (202-366-7882) for review prior to mailing.*

Documents provided as attachments hereto:

- *Testing performed to validate the proposed field campaign of adding a gusset to the bolt-in hinge.*
- *Heil Service Bulletin 227*
- *Heil DRAFT Purchaser notification documents*
- *Heil DRAFT Distributor notification document*

Note that these documents are to be submitted separately from those provided in accordance with Part 573.8 requirements.

1. ¹Each manufacturer must furnish a report, to the Associate Administrator for Safety Assurance, for each defect or noncompliance condition which relates to motor vehicle safety.

This guide was developed from 49 CFR Part 573, "Defect and Noncompliance Reports" and also outlines information currently requested. Any questions, please consult the complete Part 573 or contact Mr. Jon White at (202) 366-5227 or by FAX at (202) 366-7882.

The Privacy Act of 1974 - Public Law 93-579, As Amended: *This information is requested pursuant to the authority vested in the National Highway Traffic Safety Act and subsequent amendments. You are under no obligation to respond to this questionnaire. Your response maybe used to assist the NHTSA in determining whether a manufacturer should take appropriate action to correct a safety defect. If the NHTSA proceeds with administration enforcement or litigation against a manufacturer, your response, or statistical summary thereof, may be used in support of the agency's action.*

Clearly describe the distinguishing characteristics of the remedy component/assembly versus the recalled component/assembly.

This is really “not applicable”, because the recall does not involve a parts swap of a remedy component for a recalled component. The recall involves installing a supplemental structural gusseting Kit to field units instead of removing certain parts and substituting others.

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Reinforcing gussets were added to the rear hinge assembly used on all dumping models of the Rapid Rail body and CP Python body for units shipped on or after August 1, 2009.

VI. Identify the Recall Schedule

Furnish a schedule or agenda (with specific dates) for notification to other manufacturers, dealers/retailers, and purchasers. Please, identify any foreseeable problems with implementing the recall.

This recall is already underway; 57 units (slightly more than 10% of the affected units) have been retrofitted.

Once the Purchaser Notification Letter is approved by NHTSA, we will send the letters via Registered U.S. Postal Service – return receipt requested. This end-user communication should stimulate units to be returned to local Heil dealers for installation of the retrofit Kit.

Heil also intends to send a supplemental notification to its dealers reinforcing that Heil wants SB227 completed with all units in the field to be retrofitted. They will be asked to help us contact the owners of the affected Product to solicit their participation in this safety recall campaign.

One foreseeable problem is that many of our end-user customers routinely conduct daily pre-trip inspections of their refuse collection vehicles before they are deployed on-route to collect garbage. Some owners may simply continue to inspect the Z-plate area in lieu of “downing a truck” and removing a productive fleet asset from service in the field if they don’t observe any cracking.

VII. Furnish Recall Communications

9. Furnish a final copy of all notices, bulletins, and other communications that relate directly to the defect or noncompliance and which are sent to more than one manufacturer, distributor, or purchaser. This includes all communications (including both original and

follow-up) concerning this recall from the time your company determines the defect or noncompliance condition on, not just the initial notification. A *DRAFT* copy of the notification documents should be submitted to this office by Fax (202-366-7882) for review prior to mailing.

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