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OFFICE OF DEFECTS
INVESTIGATION

05V-139
(9 pages)

To: Mr. Jon White, Chief
Defects and Recall Information Analysis Division
Associate Administrator for Safety Assurance
National Highway Traffic Safety Administration
400 7th Street, SW
Washington DC 20590

PART 573 Defect and Noncompliance Report

Report Date: April 4, 2005

On January 4, 2005, Vermeer Manufacturing Company determined that there is a defect which relates to motor vehicle safety with respect to certain 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.

1. **Fabricating Manufacturer:**

Vermeer Manufacturing Company
1210 Vermeer Road East
Pella, IA 50219

Telephone: 641-628-3141

Fax: 641-621-7739

Contact Name and Title: Lois Slings, Product Safety and Legal Department,
Operations Manager

Name and Title of Person Who Prepared Report: Robert R. Smith

Who Prepared Report: Vice President and General Counsel

Signed:



Date:

4-5-2005

PART 573 Defect and Noncompliance Report

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I. Identify the Vehicle Models Involved in the Recall

2. **Manufacturer's Identification Code:** IK00-1154

Vehicle Identification:

| | | | | |
|--------------------------|--|------------------------------|----------------|-------------------|
| Make: | Vermeer | Model Years Involved: | 2003 - 2005 | |
| Model(s): | TLR30 | | | |
| Production Dates: | Beginning: | July 2003 | Ending: | January 2005 |
| VIN Range: | Beginning: | 1VRZ111H331000099 | Ending: | 1VRZ111HX51000541 |
| Vehicle Type: | Trailer – Single axle, offered as Heavy Duty or Light Duty: ➤ Heavy Duty (without brakes): GVWR = 2,900 lb ➤ Heavy Duty (with brakes): GVWR = 3,150 lb ➤ Light Duty (without brakes): GVWR = 2,300 lb | | | |

Description which characterizes/distinguishes the recalled vehicles from those model vehicles not included in the recall: The VIN Range includes 443 units. The trailers affected are forty-seven (47) units that received an optional, factory-installed spare tire mount, plus a possible fifteen (15) additional units where the spare tire mount were purchased by dealerships for installation on existing units, for a total of a possible sixty-two (62) units.

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. 13.99%

II. Identify the Recall Population

3. **Total Number of Vehicles Recalled Potentially containing the defect or noncompliance:**

| Model | Year | Number of Vehicles Potentially Involved |
|---|---|--|
| TLR30 | Unknown 2003-2005 (assembly purchased by dealers) | 15 |
| TLR30 | 2003 – factory installed option | 0 |
| TLR30 | 2004 – factory installed option | 36 |
| TLR30 | 2005 – factory installed option | 11 |
| Total Number Potentially Affected by the Recall: | | 62 |

4. **Approximate percentage of Total Number of Vehicles estimated to actually contain the defect or noncompliance:** 100%

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:

From manufacturing records, we determined the specific units which received the optional, factory-installed Spare Tire Mount. In addition, we determined which dealerships ordered the spare tire mount for installation on existing units.

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.**

A spare tire mount, installed by a dealership, failed while the trailer was being towed on a public roadway, resulting in the loss of the wheel and flange. The mount broke just behind the wheel mounting flange in a necked down region of the strut. The fracture surface of the strut was typical for a progressive fatigue failure. A Finite Element Analysis (FEA) was undertaken after notification of the failure.

Attached for reference are:

- A copy of a product brochure for Vermeer Model TLR30 (**Attachment A**); and,
- Drawing Item Number 266040001, Spare Tire Mount Weldment, showing recalled (original) design for spare tire mount (**Attachment B**).

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

Spare tire mount design may allow a progressive fatigue failure in the spare tire mount.

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

Development of a progressive fatigue failure in the spare tire mount can result in separation of the mount and spare tire from the trailer.

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

- (a) Visible cracks can develop at the weld site prior to failure.

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

Not applicable.

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

Not applicable.

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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.**

09/30/04: Warranty Claim #365785 received from dealership in Clearwater, Florida reporting "Spare tire support bracket broke at bend in steel. Broken bracket caused the loss of the spare tire assy. This bracket is too weak to support the tire under driving conditions. Please re-evaluate the design for future problems."

10/06/04: Warranty Claim #365785 processed.

10/06/04-11/19/04: Factory service and warranty departments investigate alleged cause stated in Warranty Claim #365785.

11/17/04: Factory service department determines that dealers have purchased Spare Tire Assemblies for TLR30 as Part Number 266044001 which may also be affected.

11/17/04: Factory corporate test department begins FEA of failed mount.

11/19/04: Factory service department advises factory product safety department of alleged issue.

11/19/04: Factory corporate test department completes FEA of failed mount and initial redesign.

11/19/04-01/04/05: Factory personnel in product safety, engineering, and service departments investigate alleged cause.

01/04/05: Product safety department advised engineering and service departments that a safety alert must be issued.

01/21/05: Redesign for production of spare tire mount completed. Production engineering change notice distributed.

03/16/05: Engineering change notice processed to change bill of materials for production spare tire mount.

03/16/05: Investigation completed relating to units involved.

03/30/05: New part numbers assigned for modified spare tire mount components.

- No traffic accidents or personal injuries have been reported.
- Other than Warranty Claim #365785 referenced above, no additional Claims have been received from 09/30/04 thru 03/17/05 reporting a similar failure.

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.**

Not applicable.

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.**

The remedy, generally known as IK00-1154, will be provided to dealerships for installation on retail customer units. A certified letter will be sent to known retail customers advising them to contact their local independent, authorized dealership to arrange installation of the remedy at no cost for materials or labor. If a retail customer repaired its unit prior to receiving notification of this remedy, the retail customer will be reimbursed for associated materials and labor costs upon submission of appropriate documentation and if determined that the pre-notification repair was substantially similar to the remedy, IK00-1154.

See next paragraph for differences between recall condition and remedy.

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

The modified spare tire mount weldment consists of three pieces of steel:

- one formed steel plate that mounts to the trailer. The plate extends underneath the trailer and connects to a 90° angle iron with 4 bolts, 2 bolts in angle iron and 2 bolts in side of trailer box (PN 269609001)
- flat steel plate on which the spare tire is mounted (PN 269607001); and
- U-shaped formed steel piece, 0.1875 thick, that connects the first two pieces of steel (PN 269608001)
- Drawing Item Number 269606001, Spare Tire Mount Weldment, showing modified design for spare tire mount (**Attachment C**).

The recalled spare tire mount weldment consisted of three pieces of steel:

- one steel plate mounted to the trailer, slightly extended underneath the trailer at middle of mounting plate and connects to with 3 bolts, 1 bolt in trailer floor and 2 bolts in side of trailer box (PN 266042001),
- flat steel plate on which the spare tire is mounted (PN 266041001), and
- U-shaped bent steel piece, 0.1196 thick, that connects the first two pieces of steel (PN 266043001).
- Also refer to Attachment B.

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.

The modified spare tire weldment was implemented into production for units built in and after January 2005.

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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.

1. 04/15/2005: Complete development of field modification Kit, including fabrication of replacement parts and installation instructions.
2. 04/18/2005: Factory will publish Service Bulletin to all Dealers introducing field modification Kit via company internet site.
3. 04/19/2005: Factory will provide owner listing of affected units in their area to Dealers via fax.
4. 05/03/2005: Factory will notify owners of mandatory field modification via certified/registered mail.

VII. Furnish Recall Communications

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.*

ATTACHMENT A

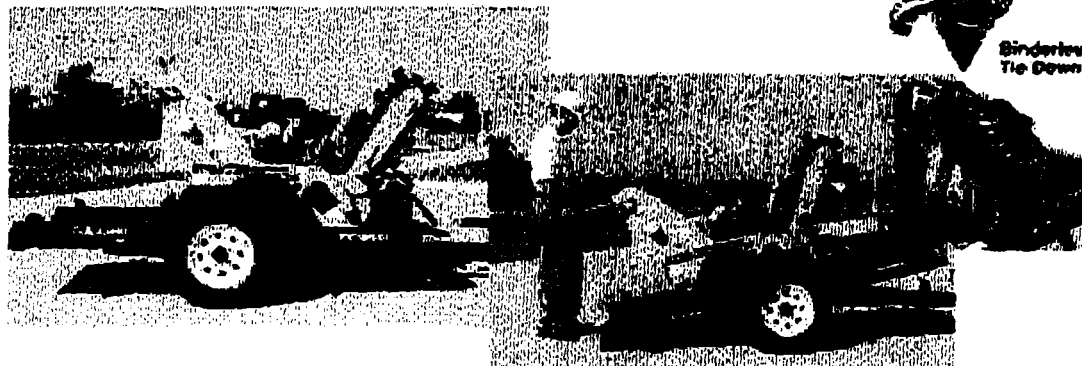
TLR30

Trailer

Vermeer



Binderless Tie Down



Vermeer Introduces The TLR30 Trailer.

The TLR30 trailer from Vermeer is designed to carry walk-behind trenchers and small stump cutters. The new tilt bed design and 12" (30 cm) loading height make for easy loading and unloading without ramps. Composite non-skid lining, sprayed on the steel deck, provides longevity and traction in most weather conditions. The TLR30 is available in three options: light duty, heavy duty, and heavy duty with electric brakes. Binderless tie down is an optional feature of the trailer, available for use with the RT100 and RT200.

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Phone: (641) 626-3141
Fax: (641) 627-2200

Call toll-free 1-800-VERMEER
www.vermeer.com

General

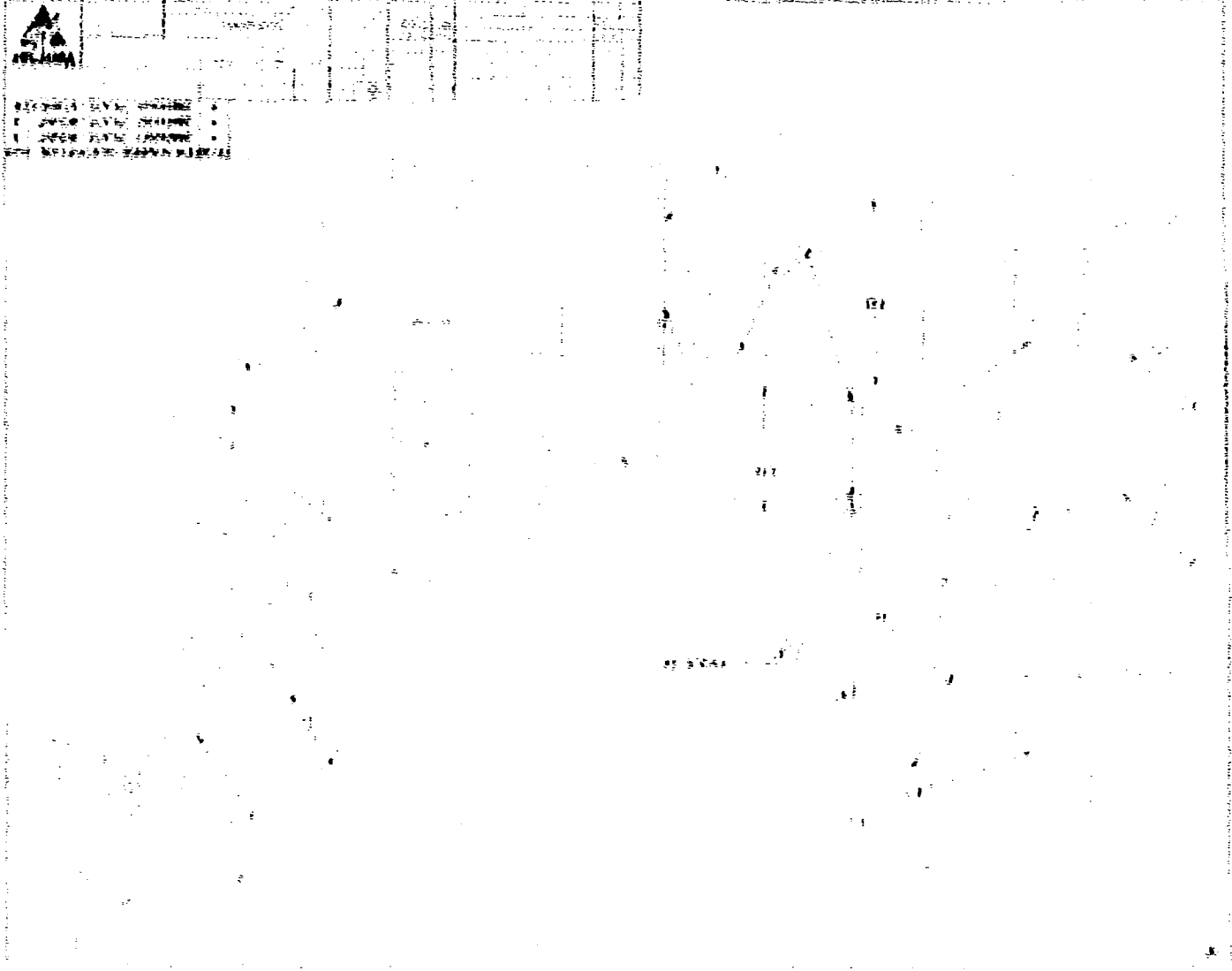
- Overall length: 141" (358 cm)
- Width: 71.5" (182 cm)
- Tongue height: 19.5" (50 cm)
- Floor bed width: 50" (127 cm)
- Floor bed height: 12" (30 cm)
- Floor bed length: 56" (141 cm)
- Rear width between fenders: 52" (132 cm)
- Max. gross vehicle weight rating: LD 2200 lb (1000 kg)
HD 2900 lb (1310 kg)
HD w/brakes 3180 lb (1440 kg)
- Max. gross axle weight rating: LD 2100 lb (950 kg)
HD 2850 lb (1290 kg)
- Empty weight: 500 lb (226 kg)
- Empty tongue weight: 50 lb (23 kg)
- Brakes: Optional with HD model
- Tires: LD P185-60R13
HD S72-13R0013
- Number of axles: 1
- Tail light w/plate holder: Yes
- Fenders: Yes
- Frame: 13" x 4.5" custom square S-bolt white
- Safety chain size: Dual zinc-plated airtrucks
- Tongue jack: 1000 lb w/rd on foot
- Tie down kits (optional): Chains, hooks, binder or wheel chocks; Binderless tie down
- hitch type: 2" ball

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ATTACHMENT B



ATTACHMENT C

