RECEIVED
By Recall Management Division at 2:42 pm, Feb 08, 2013

Safety Defect and Noncompliance Report Guide for Vehicles

PART 573 Defect and Noncompliance Report[3]

On , *January 31st , 2013 Fontaine Modification determined* **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: *02/06/2013*

Furnish the manufacturer's identification code for this recall (if applicable):

1. **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..**

   Fontaine Modification
   9827 Mt Holly Rd
   Charlotte, NC 28214

   Identify the corporate official, by name and title, whom the agency should contact with respect to this recall. *Kevin Barkley Quality & Warranty Manager*

Telephone Number: **Fax No.: Name and Title of Person who prepared this report**.

704-409-1614 (phone), 704-392-1507 (fax),

Kevin Barkley, Quality & Warranty Manager

Signed:

[3]Each 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.

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): **Model Years Involved**: **Model(s)**: **Production Dates**: **Beginning**: **Ending**: **VIN Range**: **Beginning**: ___*1/1/2011*_____ **Ending**: __*1/9/2013*_____ **Vehicle Type**: **Bodystyle**: *Navistar (International) 4300, 4400, 7300, 7400 & 7500 with Fontaine Modified Dual Steering*

Descriptive information which characterizes/distinguishes the recalled vehicles from those model vehicles not included in the recall: *These Navistar (International) trucks have been modified by adding dual steering components by Fontaine Modification.*

VIN Range: **Beginning**: _____ **Ending**: _____ **Vehicle Type**:
Make(s): _____ **Model Years Involved**: _____**Model(s)**:

Production Dates: **Beginning**: _____ **Ending**: _____

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

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% of Navistar (International) trucks modified by Fontaine Modification, by adding dual steering components, that were converted at Fontaine Modification's Garland, Texas and Springfield, Ohio facilities between 1/1/2011 and until 1/9/2013 are a part of this recall. The total number of affected trucks is 811.

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 *2011, 2012 & 2013*	*811*

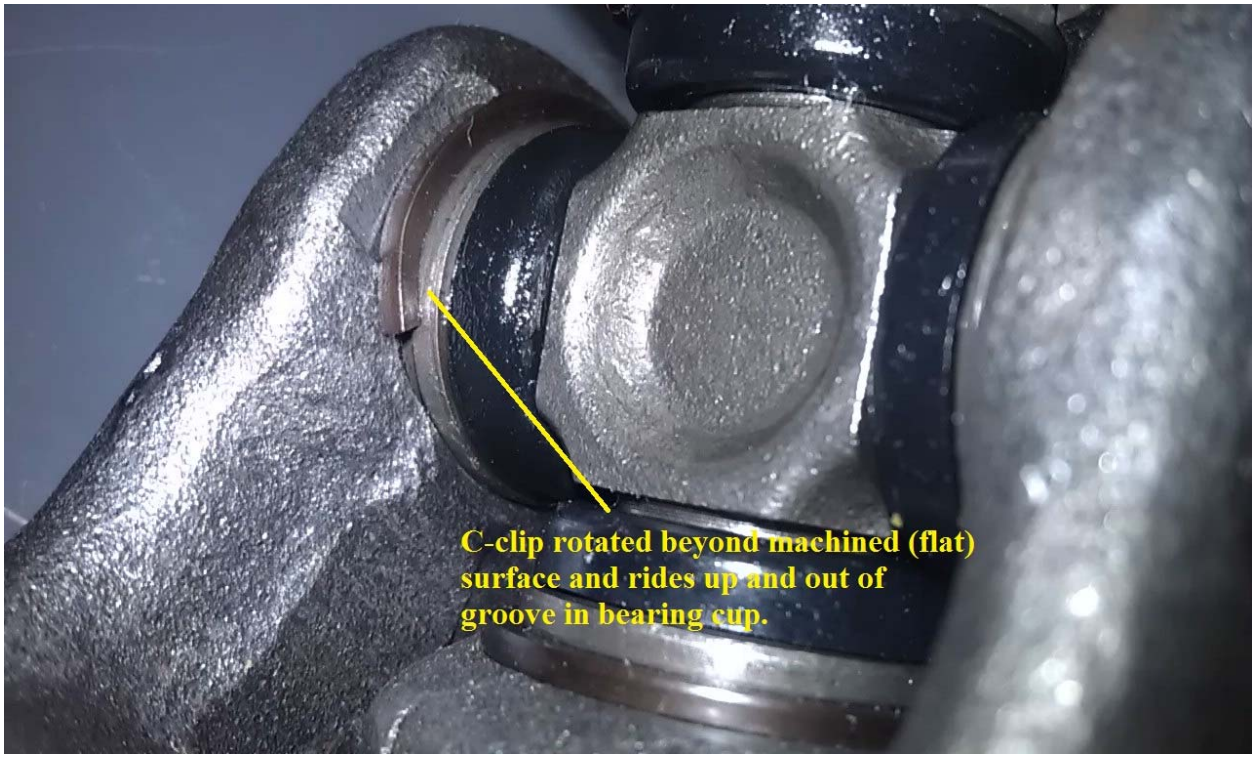
Total Number Potentially Affected by the Recall: 835

4. Furnish the approximate percentage of the total number of vehicles estimated to actually contain the defect or noncompliance: 50%

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 modification process of converting from a single steer (one steering wheel) to a dual steer (2 steering wheels) on Navistar (International) trucks includes the installation of a cross shaft assembly that contains a u-joint assembly at each end. During a routine inspection prior to release of a completed vehicle, a cross shaft assembly with improperly installed c-clips was detected. C-clips are installed by our supplier (Valco Industries Inc.) to retain the bearing cups for the u-joint assemblies. After the initial assembly with improperly installed c-clips was found, all subsequent cross shaft assemblies installed on trucks and in stock were inspected and additional parts with mis-installed c-clips were found. After internal and external reviews were completed, it was determined that our supplier (Valco Industries Inc.) changed their process for installing the c-clips and or the related components during January of 2011. It was decided to include all trucks modified by Fontaine at both facilities in the recall from the time of the supplier process change until corrective actions were put in place during January, 2013.*

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. *The steering cross shaft assembly installed by Fontaine Modification is the part in question. Fontaine installs 1 cross shaft assembly per truck. It is connected from the Fontaine installed 3-way steering box that is part of the LH steering column over to the Fontaine installed 2-way steering box that is part of the RH steering column. C-clips that retain the bearing cups for the u-joint assemblies that are part of the steering cross shaft assembly were found to not be completely engaged in the groove of the bearing cup(s) which could result in the c-clips coming loose allowing an unsafe condition with the steering cross shaft assembly.*



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

The primary root cause was determined to be improper installation of the c-clips that retain the bearing cups in the cross shaft assembly by Fontaine's supplier, Valco Industries Inc. A secondary root cause appears to be poor machining practices by Valco's casting supplier.

Describe the consequence(s) of the defect or noncompliance condition. *When the c-clip(s) disengage from the bearing cup of the u-joint, the bearing cup can work it's way out of the yoke causing excessively lost motion in the steering cross shaft. The steering from either side may feel un-responsive, or feel "loose" as excess movement occurs in the cross shaft assembly.*

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

Possible warning signs that a c-clip or c-clips have disengaged and a bearing cup or cups is loosening up in the yoke of the steering cross shaft is excess play in the steering system when the truck is driven from either side.

If the defect or noncompliance is in a component or assembly purchased from a supplier, identify the supplier by corporate name and address. *Valco Industries Inc. 625 Burt Street, Springfield, OH 45505*

Identify the name and title of the chief executive officer or knowledgeable representative of the supplier: *Ed Leventhal, President*

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. *Fontaine has received a total of 0 reports of steering cross shaft failures from the field.*

01/09/2013

The initial cross shaft assembly with improperly installed c-clips was detected during inspection of a truck prior to it being released for transport from Fontaine's Springfield, Ohio location. The assembly was replaced.

01/09/2013

Fontaine Modification contacted Valco Industries Inc to alert them to the problem. They checked their stock and reviewed their internal processes.

01/09/2013 thru 01/31/2013

Fontaine inspected all stock at the Springfield, Ohio location and at the Garland, Texas location. At the Springfield, Ohio location, 3 cross shaft assemblies were installed on trucks in process and all 3 checked out as good. 12 assemblies from stock were checked and 7 were found to be improperly assembled. At the Garland, Texas location, 7 assemblies were installed on trucks in process and all checked out as good. 75 assemblies from stock were checked and 15 were found to be improperly assembled. 48 trucks that had been shipped to dealers local to the Garland, Texas location were checked and all checked out as good.

01/10/2013

Valco Industries supplied their 8D corrective action analysis of their internal processes to Fontaine.

02/05/13

Fontaine completed compiling a VIN and customer list in preparation for the recall.

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.

V. Identify the Remedy: *The remedy for any non-compliant steering cross shaft assemblies found during inspection of trucks in the field is to change out the complete assembly with a known compliant assembly supplied by Valco Industries Inc. per enclosed work instructions.*

FONTAINE MODIFICATION	**Fontaine Modification Work Instructions**	Rev.# 0	Page# 1 of 9
		Department: Quality	WI Number:

Fleet Name: International Cross Shaft C-clip Replacement Process

Creator Name and Title: Javier Galicia	Manager Approval:

Remove gauge cluster cover

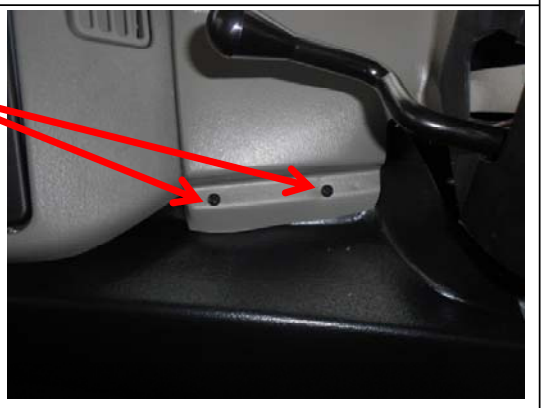
•Remove the 2 fasteners located on the top part of the cluster cover

Remove gauge cluster cover

•Remove the 2 fasteners located on the RH side of the steering column

Remove gauge cluster cover

•Remove the 2 fasteners located on the LH side of the steering column



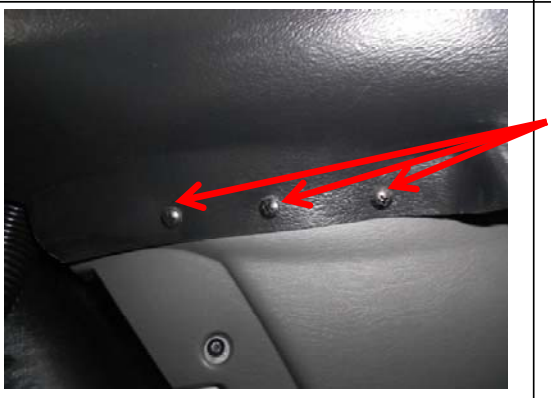
FONTAINE MODIFICATION	**Fontaine Modification Work Instructions**	Rev.# 0	Page# 2 of 9
		Department: Quality	WI Number:

Fleet Name: International Cross Shaft C-clip Replacement Process

Creator Name and Title: Javier Galicia	Manager Approval:

Remove cross shaft cover

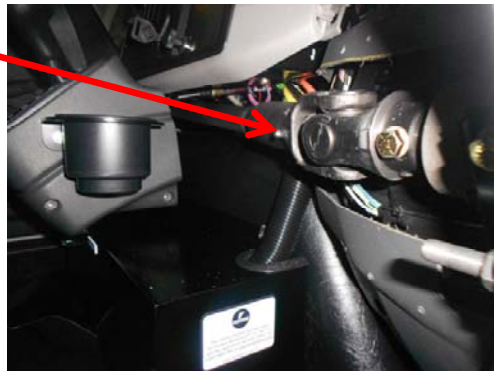
•Remove the 3 fasteners located to the RH of the steering column



Remove cross shaft cover

•Remove the 3 fasteners located to the bottom LH of the steering column

•The RH cross shaft and U-joint are now exposed



FONTAINE MODIFICATION	**Fontaine Modification Work Instructions**	Rev.# 0	Page# 3 of 9
		Department: Quality	WI Number:

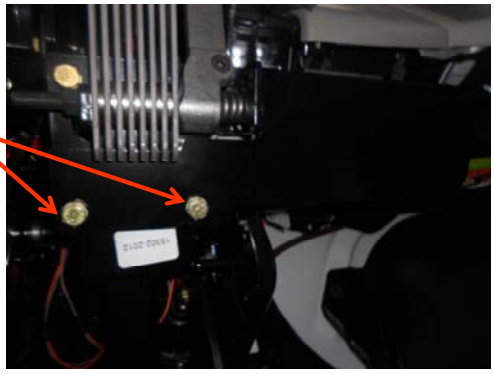
Fleet Name: International Cross Shaft C-clip Replacement Process

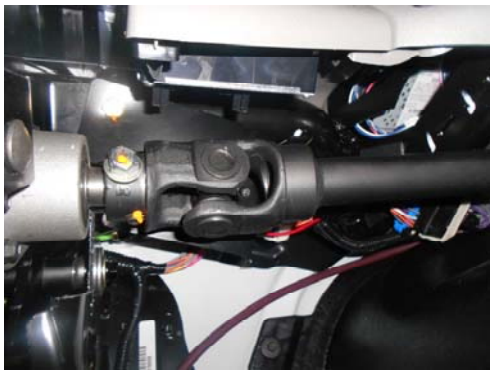
Creator Name and Title:	Manager Approval:
Javier Galicia	

•Remove LH cross shaft cover plate

•Remove LH cross shaft cover plate located on the bottom part of the LH steering column

•To remove you will need a 13mm socket or open wrench.





•The LH cross shaft and U-joint are now exposed

•Remove RH fender well

•Remove the 3 fasteners located under the RH fender well

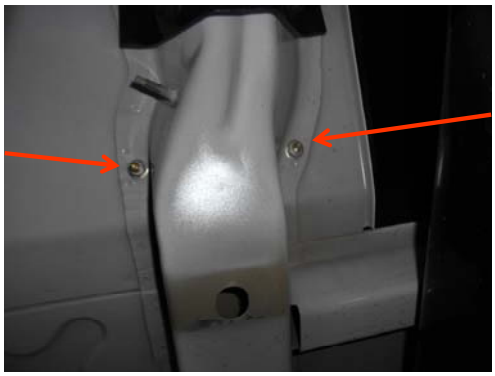
•You will need 13mm open wrench and deep socket

FONTAINE MODIFICATION	**Fontaine Modification Work Instructions**	Rev.# 0	Page# 4 of 9
		Department: Quality	WI Number:

Fleet Name: International Cross Shaft C-clip Replacement Process

Creator Name and Title:	Manager Approval:
Javier Galicia	

•Removing RH steering column
- **•Remove the 2 - 13mm nuts located under the cab**



•Removing RH steering column
- **•This pictures shows both 13mm nuts from a bottom view.**

•Removing RH steering column
- **•Remove the 2 – 13mm bolts on the RH floor board**
- **•This bracket holds the RH steering in place**

FONTAINE MODIFICATION	**Fontaine Modification Work Instructions**	Rev.# 0	Page# 5 of 9
		Department: Quality	WI Number:

Fleet Name: International Cross Shaft C-clip Replacement Process

Creator Name and Title:	Manager Approval:
Javier Galicia	

•Removing RH steering column

•Remove the 2 – 13mm bolts holding steering column bracket to the OEM cross bar

•Removing RH steering column

•Once the steering column is loose, bring the column down and slightly towards the door.
•Just enough to allow the shaft to slide out the slip joint.

BE AWARE OF THE WIRE HARNESS ATTACHED TO THE STEERING COLUMN.

•Removing RH steering column

BE SURE THE COLUMN IS ONLY MOVED ENOUGH TO ALLOW THE SLIP JOINT TO DETATCH FROM THE CROSS SHAFT

FONTAINE MODIFICATION	**Fontaine Modification Work Instructions**	Rev.# 0	Page# 6 of 9
		Department: Quality	WI Number:

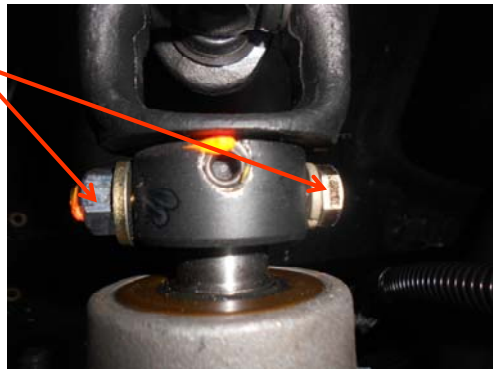
Fleet Name: International Cross Shaft C-clip Replacement Process

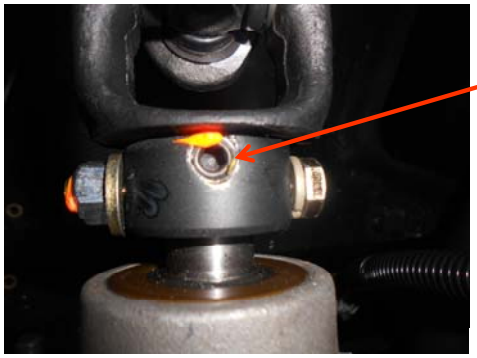
Creator Name and Title:	Manager Approval:
Javier Galicia	

•Removing RH steering column

•Once the cross shaft is detached from the slip joint, Start to removing the cross bolt that fastens the gear box with yoke.

•Bolt and nut head size 9/16”





•Removing RH steering column

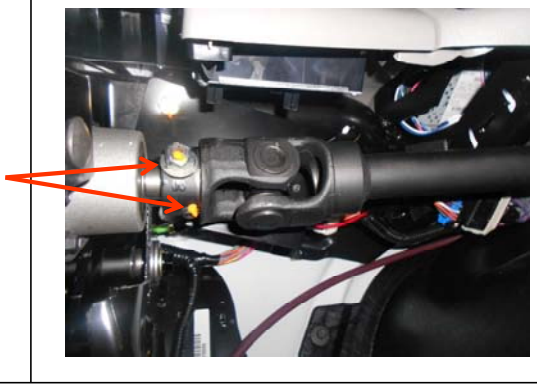
•Remove the 3/16” Allen head set screw

•Once these fastener are removed proceed with the detaching of the yoke and gear box spline

If difficult to remove by hand, use a rubber mallet or a small hammer.

•Removing RH steering column

Follow the same process on the LH side.



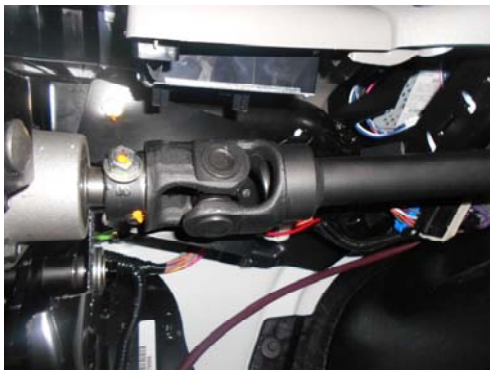
FONTAINE MODIFICATION	**Fontaine Modification Work Instructions**	Rev.# 0	Page# 7 of 9
		Department: Quality	WI Number:

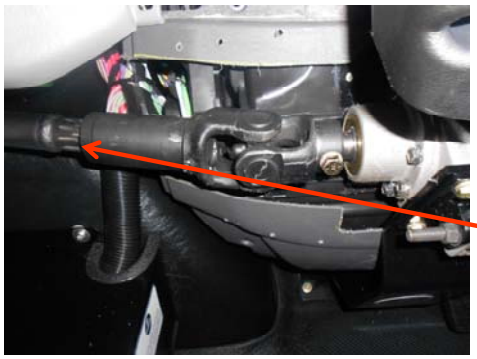
Fleet Name: International Cross Shaft C-clip Replacement Process

Creator Name and Title:	Manager Approval:
Javier Galicia	

•Installing new LH cross shaft assembly

•Assure the woodruff key is in place before the install of the yoke
•Install the LH yoke into the gear box spline first.
•Install the cross bolt and secure with a lock washer at the head of the bolt and a flat washer at the Stover nut
•Install and tighten

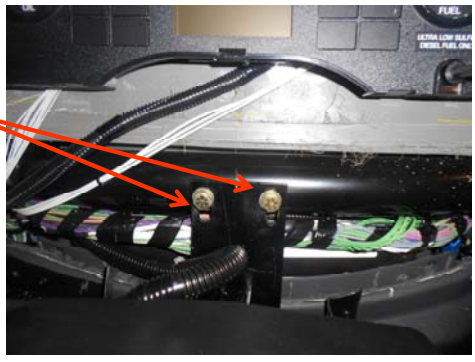




•Installing new RH cross shaft slip joint

•Assure the woodruff key is in place before the install of the yoke
•Install the RH yoke into the gear box spline
•Install the cross bolt and secure with a lock washer at the head of the bolt and a flat washer at the Stover nut
•Install the LH shaft into the RH slip joint

•Installing RH steering column
Hand tighten the 2 bolts holding the top of the steering column



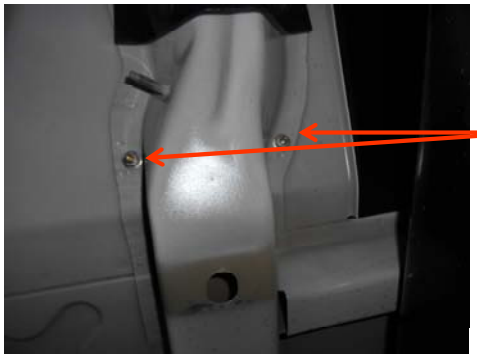
FONTAINE MODIFICATION	**Fontaine Modification Work Instructions**	Rev.# 0	Page# 8 of 9
		Department: Quality	WI Number:

Fleet Name: International Cross Shaft C-clip Replacement Process

Creator Name and Title:	Manager Approval:
Javier Galicia	

•Installing new LH cross shaft assembly

•Put in place the bottom of the steering column and install bolts

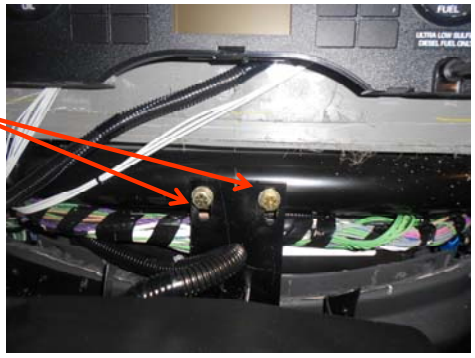


•Installing new RH cross shaft slip joint

•Install stover nut with flat and lock washers to secure the bottom of the steering column

•Installing RH steering column

Tighten the 2 bolts holding the top of the steering column



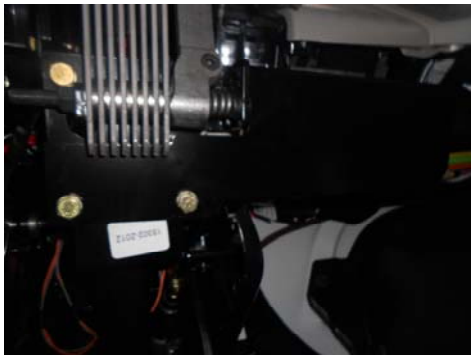
FONTAINE MODIFICATION	**Fontaine Modification Work Instructions**	Rev.# 0	Page# 9 of 9
		Department: Quality	WI Number:

Fleet Name: International Cross Shaft C-clip Replacement Process

Creator Name and Title:	Manager Approval:
Javier Galicia	

•Proceed with the installation of the cross shaft covers. INSTALL IN THE SAME ORDER IT WAS REMOVED

•When installing the LH cross shaft cover plate, make sure the column bracket is installed with the same fasteners



•Installation of cross shaft covers

•Confirm all covers are secure tightly

•Installation of cross shaft covers

•Install and secure cross shaft cover and gauge cluster covers with the same fasteners

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.

Refer to previous pages under sections III and V.

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

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 production remedy is the same as the field remedy.

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.

The largest customer affected (376 of 811 potential trucks) is TYMCO Sweeper. They will be notified as well at their Navistar / International dealer which is Central Texas International and all remaining customers within 2 weeks of the approval from NHTSA of this recall communication.

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.***

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