06E-010 (12 Pages)

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Safety Defect and Noncompliance Report Guide for Equipment

PART 573 Defect and Noncompliance Report

PART 573 Defect and Noncompliance Report

			[MFR] decided that (a defect
	• / (	-	eral Motor Vehicle Safety
			listed below, and is furnishing on in accordance with 49 CFR
Part 573 <u>Defect and No</u>		arety Administrati	on in accordance with 49 CPN
Date this report was pr	repared: January 23, 20	)06	
Furnish the manufactu	rer's identification code	e for this recall (if	applicable):
owner of the recalled it	tem of equipment. If the	e recalled item of e	rer/brand name/trademark equipment is imported, prescribed by 49 U.S.C.
Fabtech Motorsports , I	David J Winner Enterprise	2S	
I I At Co. Ali.	- FC - 1 - 1 - 1 - 1 - 1 - 1 - 1		
•	omicial, by name and tit	ie, wnom the agen	cy should contact with respect
to this recall.			
Brent Riley, President			
Telephone Number:	909-597-7800	Fax No.:	909-517-2409
-	son who prepared this r		
vanic and ritie or reis	• •	-	
	Brent Riley		
, ,	President	<del></del>	ANTONIO DE LA CONTRACTOR DE LA CONTRACTO
Signed:			
640	I. Identify the Recalled	d Items of Equipm	ent

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) 366-5226 or by FAX at (202) 366-7882.

<sup>&</sup>lt;sup>4</sup> 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.

describe the item of equipment), provide: Generic name of the item: Aftermarket replacement Pitman Arm Make: Fabtech Model: N/A Part Number: Fabtech- FTS71000, FTS71001 Size: 2"x 8" **Function**: A steering component that transfers steering control from the steering box to the center link and ultimately to the wheels of the vehicle. Other information which characterizes/distinguishes the items of equipment to be recalled: In addition to the fore mentioned Pitman Arm the Fabtech Idler Arm must be replaced at the same time in order for the steering centerlink to function properly. All recall notices will identify that both of these parts must be replaced. Fabtech will provide factory replacement Pitman Arm and Idler Arm at the same time to the installers and end consumers. Make: \_\_\_\_\_ Model: \_\_\_\_\_ Part Number: \_\_\_\_\_ Size: \_\_\_\_\_ Function: Other information which characterizes/distinguishes the items of equipment to be recalled: Make: \_\_\_\_\_ Model: \_\_\_\_\_ Part Number: \_\_\_\_\_ Size: \_\_\_\_ Function: Model Years Involved: \_\_\_\_\_\_ Other information which characterizes/distinguishes the items of equipment to be recalled: Make: \_\_\_\_\_ Model: \_\_\_\_\_ Part Number: \_\_\_\_\_ Size: \_\_\_\_\_ Function: \_\_\_\_\_ Other information which characterizes/distinguishes the items of equipment to be recalled:

2. Identify the Items of Equipment Involved in this Recall, for each make and model or applicable item of equipment product line (provide illustrations or photographs as necessary to

	·	
Identify the approximate percentage of the pmanufactured by your company between the that the recalled model population represent equipped with certain items of equipment fr what was the percentage of the recalled Widtime period.  The approximate percentage of defect amount of GM vehicles that would be affected	e inclusive dates of its. For example, it om January 1, 199 gets of all Widget	f manufacture provided above, f the recall involved Widgets 96, through April 1, 1997, then s manufactured during that total production run is 1-2%. The
There is approximately 1360 possible vehicles		· · · · · · · · · · · · · · · · · · ·
have these parts on them.		
II. Identifying	the Recall Popula	tion
3. Furnish the total number of items of equi or noncompliance.	pment recalled po	tentially containing the defect
Model	Year	Number of Items Potentially Involved
Vehicle models affected-		
GM C/K 2500 Pick ups & SUV, Hummer H2	2001-06	1360
		_
Total Number Potentially Affected by the Re	ecall:	1360

4. Furnish the approximate percentage of the total number of items of equipment estimated to actually contain the defect or noncompliance:  $\underline{100\%}$ 

Identify and describe how the recall population was determinedin particular how the
recalled models were selected and the basis for the beginning and final dates of manufacture
of the recalled items of equipment:
Fabtech established that the recall should include all vehicle models that the parts are known to fit
per our catalog application guide including new model years not yet included in the printing of the
catalog. The beginning and final date model range in our catalog are based on General Motor's
delivery of the vehicles that could contain the Pitman Arm and Idler Arm from Fabtech

## 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 defective part is commonly known as the Pitman Arm. This steering component is a forged
arm with a splined hole and a pin assembly. One end of the arm is splined and attaches to the
steering box of the vehicle. The other end contains a pin assembly that attaches to the steering
centerlink that connects to the tie rods and finally the spindles that holds the wheels on the vehicle.
The pin assembly located inside the Pitman Arm, can become fatigued after time and break off.
Once broken off there is no other component connecting the steering box to the front wheels of the
vehicle, resulting in total steering loss.
Describe the cause(s) of the defect or noncompliance condition.  The motion caused by the steering box to push the vehicles steering components left to right is
transferred through the Pitman Arm to the centerlink and finally the front wheels of the vehicle.
The pin located in the Pitman Arm is the attachment point for the centerlink and is subjected to
severe side load. This side load is causing a reverse bending fatigue condition at the pin. This
reverse bending fatigue will cause the pin to shear off without warning and the vehicle will lose all
steering control.
Describe the consequence(s) of the defect or noncompliance condition.  Should the pin inside the Pitman Arm fail the vehicle will lose all steering control. This loss of
steering control could cause an accident with potential injury or death.
Identify any warning which can (a) precede or (b) occur.  There are no warning signs of this failure. It could happen without any notice.

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

We manufacturer the part in house that is known to be defec-	tive
Identify the name and title of the chief executive officer of the supplier: $N\!/\!A$	r knowledgeable representative of
IV. Provide the Chronology in Determining the  If the recall is for a defect, complete item 6, otherwise item	
6. With respect to a defect, furnish a chronological summ principle events that were the basis for the determination include, but not be limited to, the number of reports, acciwarranty claims.	of the defect. The summary should
First date of sale	11/18/04

Reported failure from Accessory House, Montclair CA,
of the pin inside the Fabtech Pitman Arm shearing off.
Part failed at approx 5 mph in a parking lot, no injury or
accident reported. Customer was supplied a replacement
Fabtech Pitman arm at no charge.

Reported failure from Folsom Chevrolet, Folsom, CA
of the pin inside the Fabtech Pitman Arm shearing off.
Part failed at approx 5 mph in a parking lot, no injury or
accident reported. Customer was supplied a replacement
Fabtech Pitman arm at no charge.

7/1/05

Fabtech checks design specifications of Pitman Arm and elects to send a pin from a production run to Stork Test Laboratories for Chemical analysis and mechanical properties. Reports indicate that part is within Fabtech's design specification. Based on test results it was determined that the breakage of the pin was caused by an installation error. Fabtech's installation instructions call out for a certain torque specification. If this torque setting is not achieved during the tightening process of the pin, it will move within the tapered seat and eventually break off. No further action required based on chemical analysis, mechanical properties testing and misinstallation theory.

Reported failure from 4WP Azusa, end consumer Mike Parragan of the pin inside the Fabtech Pitman Arm shearing off. Part failed at approx 5 mph in a parking lot, no injury or accident reported. Customer was supplied a replacement Fabtech Pitman arm at no charge.	7/5/05
Reported failure from Les Schwab, Midvale, UT of the pin inside the Fabtech Pitman Arm shearing off. Part failed at approx 5 mph in a parking lot, no injury or accident reported. Customer was supplied a replacement Fabtech Pitman arm at no charge.	7/8/05
Fabtech reviews recent reported breakages and elects to send an OE pin to Stork for a second comparison test. Test results verify that the OE pin material composition is the minimum standard for the Fabtech's pin construction. No further action required based on comparison of chemical analysis, mechanical properties testing and misinstallation theory.	7/13/05
Reported failure from Aggressive Suspensions, Anaheim, CA of the pin inside the Fabtech Pitman Arm shearing off. Part failed at approx 5 mph in a parking lot, no injury or accident reported. Customer was supplied a replacement Fabtech Pitman arm at no charge.	7/22/05
Reported failure from East Coast Offroad, Deland, FL of the pin inside the Fabtech Pitman Arm shearing off. Part failed at approx 5 mph in a parking lot, no injury or accident reported. Customer was supplied a replacement Fabtech Pitman arm at no charge.	8/16/05
Reported failure from Carlos Royval, South El Monte, CA of the pin inside the Fabtech Pitman Arm shearing off. Part failed at approx 5 mph in a parking lot, no injury or accident reported. Customer was supplied a replacement Fabtech Pitman arm at no charge.	8/22/05
Reported failure from Xtreme Truck Center, Helotes, TX of the pin inside the Fabtech Pitman Arm shearing off. Part failed at approx 5 mph in a parking lot, no injury or accident reported. Customer was supplied a replacement Fabtech Pitman arm at no charge.	8/24/05
Fabtech reviews the many potential reasons why the part is failing if the material is within spec and R&D endurance testing has not	9/20/05

reviled any failures. For more conclusive answers Fabtech orders further testing from Stork to better understand the cause of the failure. Stork performs failure analysis test that indicate that part was subjected to a reverse bending fatigue ending in a complete shearing of the pin. With this knowledge Fabtech ceases all production of the Pitman Arm. Fabtech proceeds to design a new style pin with different material properties along with a secondary bracket system as a fail safe mechanism to be installed into existing Fabtech Pitman Arms.

Fabtech procures a Pitman Arm pin from a vehicle with 10,000 miles on it and has not failed. This pin is sent to Stork for analysis. Test results indicate small fractures starting to occur from a reverse bending fatigue.

9/29/05

Reported failure by California Truck Works, Stockton CA
Part failed at approx 5 mph in a parking lot, no injury or
accident reported. Without a 100% proven design available from Fabtech
they instruct California Truck Works to remove entire Fabtech
Pitman Arm and associated Idler Arm and replace them with factory
replacement parts.

10/11/05

Fabtech finalizes a new style pin and support bracket design. Fabtech begins in house cycle testing of existing pin to establish a base line of failure for future testing of the new pin and bracket.

11/14/05

Existing pin is ran up to 12,000 cycles and are sent out to Stork for 11/22/05 examination. Test results indicated that the existing pin did not show any type of wear, cracking or bending at 12,000 cycles. Fabtech questions how many cycles would it take to break the OE pin and the existing Fabtech pin since they were unsuccessful at 12,000 cycles. Fabtech contacts Stork and request that they conduct cycle testing and document failure points for each pin. Stork estimates that testing time would be approximately 4-6 weeks. Fabtech sends

Stork parts and they begin the testing process of all three pins.

Reported failure by 4WP Compton, CA end consumer Robert Waduna Part failed at a low speed, no injury or accident reported Fabtech instructs 4WP Compton to remove entire Fabtech Pitman Arm and Idler Arm and replace them with factory replacement parts.

11/23/05

Reported failure by TAG Motorsports San Diego, CA end consumer Chris Albrecht. Part failed at a low speed, no injury or accident reported Fabtech instructs TAG Motorsports to remove entire Fabtech Pitman Arm and Idler Arm and replace them with factory replacement parts

12/12/05

Reported failure by 4WP San Jose customer Brian Part failed at a low speed, no injury or accident reported Fabtech instructs 4WP San Jose to remove entire Fabtech Pitman Arm and Idler Arm and replace them with factory replacement parts	12/14/05
Reported failure by 4WP Santa Ana Part failed at a low speed, no injury or accident reported Fabtech instructs 4WP Santa Ana to remove entire Fabtech Pitman Arm and Idler Arm and replace them with factory replacement parts	12/16/05
Reported failure by Big Johns Part failed at a low speed, no injury or accident reported Fabtech instructs Big Johns to remove entire Fabtech Pitman Arm and Idler Arm and replace them with factory replacement parts	12/22/05
Fabtech reviews the ongoing progress of the Stork testing with more time still required and their concerns of the urgency to address this breakage issue for the safety of the end consumer. Fabtech voluntarily initiates a recall program of all Fabtech Pitman Arms and Idler Arms.	1/4/06
Fabtech creates written procedures and documentation to initialize the recall	1/5-1/9/06
Fabtech contacts NHTSA for notification of this voluntary recall	1/10/06
Fabtech researches database for all customers that have purchased these parts and contacts them by phone, email and fax advising them of the recall and how they will need to contact the end consumer and have each vehicle processed immediately.	1/10/06
Fabtech procures factory replacement Pitman Arm and Idler Arm from Moog. Parts are packaged with processing instructions and are sent to all known dealers that have purchased these parts from Fabtech	1/18/06
Fabtech places notice on their website of this voluntary recall	1/18/06
Fabtech discontinues the Pitman Arm and Idler Arm	1/20/06
Fabtech is contacted by NHTSA for information regarding the recall	1/20/06

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.

Fabtech checks design specifications of Pitman Arm and elects to send a pin from a production run to Stork Test Laboratories for Chemical analysis and mechanical properties. Reports indicate that part is within Fabtech's design specification. Based on test results it was determined that the breakage of the pin was caused by an installation error. Fabtech's installation instructions call out for a certain torque specification. If this torque setting is not achieved during the tightening process of the pin, it will move within the tapered seat and eventually break off. No further action required based on chemical analysis, mechanical properties testing and misinstallation theory.

7/1/05

Fabtech reviews recent reported breakages and elects to send an OE pin to Stork for a second comparison test. Test results verify that the OE pin material composition is the minimum standard for the Fabtech's pin construction. No further action required based on comparison of chemical analysis, mechanical properties testing and misinstallation theory.

7/13/05

Fabtech reviews the many potential reasons why the part is failing if the material is within spec and R&D endurance testing has not reviled any failures. For more conclusive answers Fabtech orders further testing from Stork to better understand the cause of the failure. Stork performs failure analysis test that indicate that part was subjected to a reverse bending fatigue ending in a complete shearing of the pin. With this knowledge Fabtech ceases all production of the Pitman Arm. Fabtech proceeds to design a new style pin with different material properties along with a secondary bracket system as a fail safe mechanism to be installed into existing Fabtech Pitman Arms.

9/20/05

Fabtech procures a Pitman Arm pin from a vehicle with 10,000 miles on it and has not failed. This pin is sent to Stork for analysis. Test results indicate small fractures starting to occur from a reverse bending fatigue.

9/29/05

Existing pin is ran up to 12,000 cycles by Fabtech and are sent out to Stork for examination. Test results indicated that the existing pin did not show any type of wear, cracking or bending at 12,000 cycles. Fabtech questions how many cycles would it take to break the OE pin and the existing Fabtech pin since they were unsuccessful at 12,000 cycles. Fabtech contacts Stork and request that they conduct cycle testing and document failure points for each pin. Stork estimates that testing time would be approximately 4-6 weeks. Fabtech sends Stork parts and they begin the testing process of all three pins.

11/22/05

Fabtech reviews the ongoing progress of the Stork testing with more time still required and their concerns of the urgency to address this breakage issue for the safety of the end consumer. Fabtech voluntarily initiates a recall program of all Fabtech Pitman Arms and Idler Arms.

## 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.

Remedy- Once a vehicle has been identified that it has one of our Pitman Arm and Idler Arm present we are instructing the following. End consumer is to take vehicle to a Fabtech Authorized Installer for a retro fit process immediately. The Authorized Installer will remove the original Fabtech parts and replace them with Fabtech supplied factory replacement parts. The original parts are to be returned to Fabtech for inspection and identification. Once Fabtech has processed these returned parts they will issue two checks. One to the Authorized Installer for the labor portion of the retro fit and one check to the end consumer, refunding them their initial purchase including labor. Fabtech will log all retro fit processes and contact each end consumer directly to make sure that their vehicle has been retro fitted properly. Fabtech has created extensive written procedures on how to inspect and process an end consumers vehicle. Fabtech can provide these documents upon request by NHTSA.

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

The recared component is built in house by Patiech and has a hylon bushing assembly that the
Pitman Arm pin pivots on. The remedy Pitman Arm will come from Moog with a design that is
more similar to an OE factory Pitman Arm using rubber rather than plastic.

The recalled component is built in house by Fahtach and has a nylon bushing assembly that the

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.

All production of the Fabtech Pitman Arm was stopped on 10/17/	05. The part should be considered
discontinued as of 1/20/06.	

## 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.

Fabtech contacts NHTSA for notification of this voluntary recall	1/10/06
Fabtech researches database for all customers that have purchased these parts and contacts them by phone, email and fax advising them of the recall and how they will need to contact the end consumer and have each vehicle processed immediately.	1/10/06
Fabtech places notice on their website of this voluntary recall	1/18/06

## 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: These documents are to be submitted separately from those provided in accordance with Part 573.8 requirements.