



**Spartan Motors, Inc.**  
1000 Reynolds Road - Charlotte, MI - 48813

**573 DEFECT & NONCOMPLIANCE REPORT**

<b>Description:</b>	IFS Cradle Steering Bell Crank Mounting Brackets Missing Welds		
<b>Internal Code:</b>	10011	<b>Date of Report:</b>	5/12/2010

**Submitted to:** Associate Administrator for Safety Assurance  
National Highway Traffic Safety Administration  
1200 New Jersey Ave. SE  
Washington, DC 20590

Attn: Mrs. Kelly Schuler, Office of Defects Investigation  
Fax: (202) 366-7882  
Email: RMD.ODI@dot.gov

**Manufacturer Identification:** Spartan Motors Chassis, Inc.  
1000 Reynolds Road  
Charlotte, MI 48813

Telephone: (517) 543-6400

**Corporate contacts for recall information:**

Customer Notification / Customer Service:

Wes Redfield  
Campaign/Recall Coordinator  
Customer Service Operations  
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Report prepared by:

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Preparer's Signature: \_\_\_\_\_

## PART 573 Defect and Noncompliance Report

### I. IDENTIFY THE VEHICLE MODELS INVOLVED IN THE RECALL

#### 2. Identify the Vehicles Involved in the Recall:

<b>Make:</b>	Spartan Motors Chassis, Inc.		
<b>Model:</b>	Advantage, Diamond, Gladiator, Metrostar		
<b>Model Years Involved:</b>	2006 through 2009		
<b>Vehicle Type:</b>	Fire Apparatus		
<b>Weight Range:</b>	From GVWR: 42K lbs	To GVWR:	72740 lbs
<b>Weight Class:</b>	From Class: 8	To Class:	8
<b>Beginning VDM:</b>	1/1/2007	<b>Ending VDM:</b>	4/15/2010
<b>% Potentially Involved:</b>	100%		

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

Affected vehicles are equipped with an independent front suspension cradle supplied by Ridewell.

### II. IDENTIFY THE RECALL POPULATION

#### 3. Furnish the total number of vehicles recalled potentially containing the defect or non-compliance

MODEL	MODEL YEAR	No. POTENTIALLY INVOLVED
Advantage	2007	2
Diamond	2006	2
Diamond	2007	8
Diamond	2008	2
Gladiator	2006	2
Gladiator	2007	6
Gladiator	2008	24
Gladiator	2009	9
Metrostar	2008	2
Metrostar	2009	1
<b>TOTAL:</b>		58

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

Approximate Defect Percentage: 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:**

This recall population was determined by researching build records utilizing the part numbers of the defective component. The respective VDM ranges are assigned systematically when the vehicle is complete and shows in the query.

**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.**

Bell crank support brackets installed on the suspension cradle may crack, or separate, from the main structure (cradle assembly).

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

Certain welds that attach the bell crank support brackets may have been omitted during the weldment operation of the suspension cradle.

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

A complete separation of the bell crank support bracket(s) may cause steering impairment which could result in a vehicle crash.

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

A driver may experience difficulting steering preceded by a popping sound from the region of the failure.

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

Generic Component Name:	Independent front suspension cradle
Supplier Part Number:	
Spartan Part Number:	0917-DD1-001 0956-DD1-001 through -003 1005-DD1-001
Supplier Corporate Name:	Ridewell Corporation
Address:	
CEO or Knowledgeable Rep:	Bill Maddocks

**IV. PROVIDE THE CHRONOLOGY IN DETERMINING THE DEFECT/NONCOMPLIANCE**

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

**6. If defect, furnish a chronological summary with dates of all the principle events that were the basis for the determination of the defect. Include number of reports, accidents, injuries, fatalities, and warranty claims.**

3/24/10 Report from Columbus, OH FD that their front suspension cradle was cracked / broken.

3/26/10 Ridewell Director of Engineering met a Spartan representative @ The Columbus FD for inspection of the cradle failure. Missing welds in the region of the failure were identified.

3/29/10 Spartan Motors Chassis, Inc. quarantines units and inventory for inspection by Ridewell.

3/30/10 Ridewell engineering inspects units and inventory quarantined by Spartan and identifies certain critical welds were missing from certain assemblies.

3/31/10 Ridewell engineering and Spartan inspect Columbus fleet for missing critical welds.

4/1/10 Ridewell provides information identifying the potential population of IFS cradels sold to Spartan which may be affected by the missing critical welds. The problem is presented to the Corrective Action Review team at Spartan Motors, Inc.

4/7/10 A Finite Element Analysis is completed by Ridewell which confirms the missing critical welds may result in the failure mode observed in Columbus, OH.

4/28/10 Ridewell determines an error in the assembly process may be the reason for the missing critical welds.

4/29/10 Spartan identifies suspect population of units

5/6/10 The problem is review with Spartan's Corrective Action Review Team and it is determined the problem is related to motor vehicle safety.

**7. If noncompliance, identify and provide the test results or other data in chronological order with dates on which the noncompliance was determined.**

N/A

**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.**

The manufacturer will inspect for missing welds. If cracks are identified, the suspension cradle will be replaced. If no cracks are identified, the required welds will be applied.

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

Those suspension models of this type which have not been included in this recall did receive the required weldments.

**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.**

This product has been discontinued.

**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 this recall.**

See Below

**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 concerning this recall from the time your company determines the defect or noncompliance condition on, not just the initial notification.**

DOCUMENT DESCRIPTION	DATE AND MANNER SUBMITTED
Notification letter to other manufacturers	21-May-10
Draft Notification letter to purchasers	28-May-10
Press release (if applicable)	N/A
Recall Service Bulletin (RSB)	28-May-10
Notification Envelope	Pre Approved

*All documents to be faxed to 202-366-7882, then mailed.*

**The manufacturer's campaign identification number if not identical to the number assigned by NHTSA.**

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