



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

ODI RESUME

OFFICE OF DEFECTS INVESTIGATION



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Investigation: PE 10-048
Date Opened: 12/07/2010
Investigator: Tom Bowman
Approver: Frank Borris
Subject: Hitch Receiver Fracture

Date Closed: 12/03/2013
Reviewer: Bruce York-B

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: Winnebago Industries, Inc
Products: 2006 Model Year Winnebago Itasca
Population: 9,300 (Estimated)

Problem Description: Hitch may crack and fracture

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	1	28	29
Crashes/Fires:	0	0	0
Injury Incidents:	0	0	0
Fatality Incidents:	0	0	0

ACTION / SUMMARY INFORMATION

Action: Close this PE.

Summary:

During this investigation, ODI identified 29 reports of cracked and/or fractured hitch receiver assemblies installed on the subject vehicles. The majority (27 of 29) of the reported hitch incidents occurred prior to the initiation of PE10-048 in December, 2010.

This investigation has been characterized by (1) Scant forensic samples available for inspection and review since most of the reported incidents occurred prior to ODI's investigation and pertinent material has been scrapped; (2) Uncertainty regarding the contributory role of issues such as unintended hitch contact with road surfaces, use of hitches with offsets that exceed Winnebago recommendations; and (3) Other usage factors.

Based on reported failures, the indicated failure rate for detected and reported cracking /fracture incidents associated with the estimated population of subject vehicles was found to be 0.10% after the vehicles had been in service for between 6 and 8 years. Reports were higher in calendar year 2007 (9 reports) than in succeeding years 2008-2010 (3-5 reports per year) and 2011 (2 reports) and appear likely to decline further due to diminished use associated with vehicle aging.

ODI is aware of only one consumer complaint (ODI# 10368002) in its files describing a hitch receiver malfunction in Winnebago-Itasca vehicles.

As of September 2013, Winnebago has reported that there have been no additional incidents of cracked or fractured hitch receivers reported since the most recent incident reported in May 2011.

A safety-related defect has not been identified at this time and further use of agency resources does not appear to be warranted. Accordingly, this investigation is closed. The closing of this investigation does not constitute a finding by NHTSA that a safety-related defect does not exist. The agency will take further action if warranted by the circumstances.

For more detailed information, see the attached closing report.



Closing Report – PE10-048

Hitch Receiver Assemblies Installed in Model Year 2006 Winnebago and Itasca Recreational Vehicles: Concern that Hitch Receiver May Fracture in Service Resulting in the Separation of the Towed Vehicle

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Appendices-

- (A) Chronology of Principal Investigation Activities
- (B) Reference Campaigns and Investigations



1) Subject Components –

This report summarizes the Office of Defects Investigation's (ODI's) investigation of the alleged hitch receiver assembly failures on model year (MY) 2006 Winnebago and Itasca recreational vehicles (RV). A fully fractured hitch receiver can result in the towed vehicle separating from the affected towing vehicle in an uncontrolled manner at highway speeds.

Vehicles equipped with hitch receiver assemblies rated at 5,000 lbs. nominal horizontal (pulling) capacity supplied by Valley Towing Products were the primary focus of this investigation.

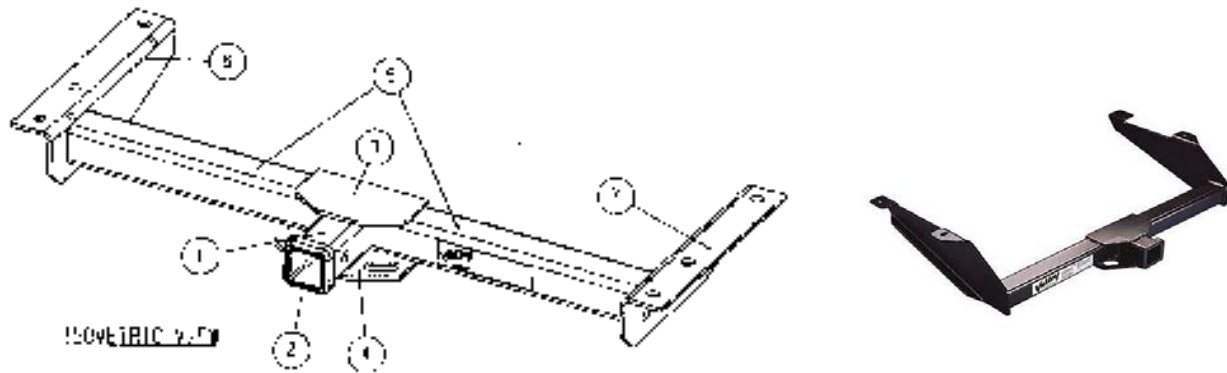
Photograph 1 - A representative vehicle (2006 Itasca Cambria) on a vehicle lift.



Engineering Sketch # 1 (below) depicts a representative hitch receiver assembly. The hitch receiver assembly is mounted to the vehicle frame using bolts installed through the holes provided in the right-angled brackets that are welded to each end of the transversely-mounted round-corner-square shaped tube.



Engineering Sketch # 1 – Representative Hitch Receiver (two depictions)

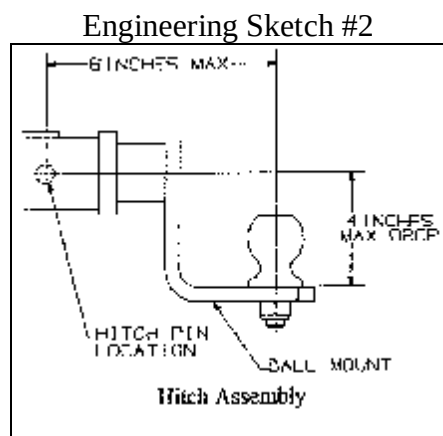


The ball-mount (hitch) is inserted into an exposed round-cornered, square-shaped hole (identified as Number 2 in the left side sketch above and also shown in Photograph 2 below) mounted at the rear of the towing vehicle. The exposed square-shaped hole of the hitch receiver “hosts” a mating hitch assembly. Photograph 2 below depicts this square-shaped hole without a hitch installed.)

Photograph 2- Exposed Portion of Hitch Receiver, Location for Hitch Installation



Engineering Sketch # 2 (shown below) depicts the profile of a representative hitch that may be installed in a hitch receiver assembly and illustrates the maximum allowable offset dimensions of 4 inches vertical and 8 inches horizontal that Winnebago has warned against exceeding for use with the hitch receiver assembly mounted to their vehicles. The hitch is secured with a transversely installed locking pin or equivalent.



The horizontal and/or vertical offsets associated with the installed hitch assembly affect the magnitude of the forces imposed on the hitch receiver affecting the hitch receiver's structural integrity and durability.

In addition to hitch installation geometry, the hitch receiver is also affected by the weight and towing (rolling) resistance of the towed vehicle or cargo towed loads, towing frequency, and towing environments.

Additional variations in the hitch and hitch receiver system durability may exist due to the numerous options available to consumers when matching a hitch to a hitch receiver.

2) Production Volumes –

The production summary in Table 1 summarizes total production volumes for 2005-2007 model year Winnebago-Itasca vehicles. ODI believes these numbers serve as a reasonable approximation for the number of vehicles potentially affected by this investigation.

Table 1 – Total Vehicle Production

Model Year	Winnebago Brand (*) Units Manufactured	Itasca Brand (**) Units Manufactured	Total Production
2005	7,711	3,203	10,914
2006	6,171	3,151	9,322
2007	6,315	3,014	9,329
Total	20,197	9,368	29,565

(*) Itasca brands consist of the Cambria, Ellipse, Horizon, Impulse, Meridian, Navion, Spirit, Suncruiser, Sundancer, Sunova, Sunrise, and Sunstar model vehicles.

(**) Winnebago brands consist of the Access, Adventurer, Aspect, Journey, Minnie, Minnie Winnie, Outlook, Rialta, Sightseer, Tour, Vectra, View, Vista, and Voyage model vehicles.



3) Background and Chronology –

On November 29, 2010, ODI received VOQ 10368002 submitted by the original purchaser and then-current owner of a 2006 Winnebago Itasca recreational vehicle who reported that the hitch receiver installed in his vehicle had exhibited cracks and fractures. Since the incurred damage had not progressed to the point of complete fracture / separation of the hitch receiver from the towing vehicle, the hitch receiver, towing system, and towed vehicle had remained attached to the towing vehicle.

Photograph No. 3 – Fractured Attachment Bracket of Hitch Receiver
Described in VOQ 10368002



Photograph No. 4 – Cracked Attachment Bracket of Hitch Receiver
Described in VOQ 10368002



On January 21, 2011, during a phone conversation between the vehicle owner and ODI, the above-referenced complainant stated that his hitch had been equipped with an 8” drop to accommodate the usage parameters of a Blue Ox tow bar. He also said he was aware that the



bottom of the hitch had occasionally scraped the road surface (due to the terrain being negotiated in conjunction with the vertical offset [“drop”] of the hitch), particularly remembering a recurring experience at a service center ramp in the Tampa, FL area.

This hitch receiver was later returned to Winnebago facilities for examination. ODI’s representative photographed the removed hitch receiver during an inspection conducted on June 21, 2011. This visit had been scheduled primarily to review the vehicle associated with newly reported incident #2 (See Table 5) and secondarily to discuss the inspection of the hitch receiver from VOQ 10368002. Photograph 5 (below) illustrates longitudinal scrape marks on the bottom face of the center-mounted hitch receiver plate. These scrape marks are consistent with the owner’s account of occasionally dragging the tail of the vehicle when maneuvering over certain difficult / uneven road contours.

Photograph 5 - Bottom face of the hitch receiver plate that had been installed in the 2006 Winnebago Itasca vehicle described in VOQ 10368002.





4) Prior History –

Following receipt of VOQ 10368002, ODI reviewed the Early Warning Data that Winnebago submitted in the 4th quarter of 2008, at which time ODI noted an increased level of warranty claims occurring in the previous quarter (3rd quarter of 2007) for the component grouping titled “Trlr Hitch” [Trailer Hitch]. At that time (i.e. in early January, 2008), ODI had issued a request for Winnebago to provide further information regarding hitch performance that would explain the observed increase in warranty activity.

On January 22, 2008, Winnebago responded to ODI’s inquiry that the referenced EWR warranty activity was due to “hitches ... used in ways that put exaggerated forces to the mounting.” Winnebago further explained that the specific issues which significantly increase the forces applied to the hitch were:

- a) Ball-mount assemblies with extreme extensions;
- b) “Drops” of up to 8”;
- c) A “surge-style” braking system for the vehicles.

Winnebago further reported that they had made certain changes to the hitch receiver (summarized in Section 6, “Product Changes,” of this report) and updated various Operator / Owner Manuals to describe “the proper and improper usage of the hitch.”

5) ODI Investigation Activities and Findings -

Appendix A lists the principal investigatory actions to date.

Following is a summary of key background and investigation findings.

a) Internal (ODI-VOQ) Data Search –

Other than the above-referenced VOQ 10368002, there are no other VOQ complaints in ODI’s files describing a hitch receiver malfunction in Winnebago-Itasca vehicles.

ODI investigation research has indicated that “early warning” data submitted in 2007 had indicated a potential concern regarding the hitch system integrity.

b) Vehicle Manufacturer, Winnebago, Complaint Records –

At ODI’s request [see Information Request (IR) dated 12/14/2010] Winnebago researched and reported [see Winnebago IR response dated 02/01/2011] that company records indicated 26 previously reported incidents concerning owner complaints regarding hitch performance. The complaint count is summarized in Table 2 below.



Table 2 – Complaint Summary (cracked or fractured hitch receivers) Year of Complaint

Model Year	2005	2006	2007	2008	2009	2010	2011	Total
2005	4	2	3	1	0	0	0	10
2006	--	0	4	1	4	3	2	14
2007	--	--	2	1	0	2	0	5
Total	4	2	9	3	4	5	2	29

Table 2 summarizes the (a) 26 complaints identified by Winnebago in response to ODI Information Request, and (b) 2 complaints received after the 2/1/2011 IR response, and (c) 1 complaint received by ODI.

All complaints listed in Table 2 identify the affected hitch receiver as a 5,000 lbs. capacity hitch receiver manufactured by Valley Towing Products.

Complaints generally describe cracks or deformation --- but not necessarily a complete fracture --- of the hitch receiver.

One complaint, which Winnebago received on August 10, 2009, described the complete separation of the towed vehicle at highway speed due to the complete fracture of the hitch receiver.

c) Past Safety Recalls – Other Manufacturers and Issues –

ODI researched past safety recalls and ODI-conducted investigations that address hitch issues. The results are summarized in Appendix B, “Reference Campaign and Investigations.”

d) Similar Incidents Reported in Peer Vehicles –

ODI is aware of two pertinent reports summarized in Table 3 below of hitch receiver fractures that resulted in the separation of the towed vehicle at highway speed.

Table 3 – Summary of Similar Incidents in Peer Vehicles

Peer Incident	Source	Date	Vehicle Description	Hitch Receiver
# 1	VOQ 10227401	May 12, 2008	1998 Four Winds	Reese Model 38500
# 2	VOQ 10407011	June 15, 2011	2003 Newmar Mountaineer	Cequent



ODI Note: When ODI contacted Four Winds and Newmar shortly after receipt of the complaints, both companies indicated there were no prior similar or related complaints.

General incident details of the peer vehicle incidents can be found at SaferCar.gov using the referenced VOQ numbers. In both instances ODI made contact with the complainants to collect additional information about the alleged fractures.

e) Comparison to Federal Safety Standard Requirements - There are no applicable Federal Safety standards pertinent to hitch receivers.

f) ODI Field Inspection Survey -

ODI participated in a Winnebago- Itasca Owner's rally held in Orlando, Florida between March 10 and March 13, 2011.

Of the several hundred vehicles present, ODI inspected the hitch receiver assemblies installed on 36 vehicles. Rally vehicles were parked in zones grouped by regional chapters. Owners typically had left their vehicle for the day to attend rally events. For these reasons, vehicles were selected for inspection opportunistically for their possible relevance to the hitch receiver issues. One of the inspected vehicles, highlighted in Table 4 below, was within the specific scope of this investigation (i.e. a 2006 Itasca Suncruiser equipped with a 5000 lb. capacity Valley hitch receiver).

Eleven of the inspected vehicles were "near-scope" vehicles --- not in the direct scope of this investigation --- but potentially useful since any issues detected in the various hitch receiver systems might inform and/or influence ODI's insight into the issues and scope of affected vehicles.

Table 4 – In-scope (shaded cells) and "near scope" (unshaded cells) vehicles inspected in Orlando between March 10 and March 13, 2011

Make	Model	Model Year	Number Inspected
Itasca	Suncruiser	2004	3
Itasca	Sunrise	2004	2
Itasca	Sundancer	2004	1
Winnebago	Adventurer	2004	1
Itasca	Suncruiser	2006	1
Itasca	Sunrise	2005	1
Itasca	Cambria	2007	1
Winnebago	Vista	2007	1
Winnebago	Aspect	2007	1



During the survey, ODI did not identify any vehicles exhibiting indications that the integrity of the hitch receiver had been compromised. ODI observed that hitches and hitch receivers are used in a range of loads and towing systems and that the towing systems are used for a myriad of applications such as motorcycle trailer hauling, passenger car hauling, passenger car trailer hauling, van trailer hauling, and racks for bicycles, motorcycles or other cargo.

g) “Newly-Reported” Winnebago-Itasca Incidents (2011) -

Each of the (two) newly reported incidents summarized in Table 5 below were received from Winnebago following the February 1, 2011 Information Request response letter to ODI and provide information pertinent to assessing the risk.

Table 5 – Summary of Incidents “Newly Reported” in 2011

Incident Number	MY	Model	Report Comments
# 1	2006	Winnebago Adventurer WPG35A	“C/S [customer states] receiver came off along with the stinger and drawbar. Reviewed pics, feel installation was not the issue...”
#2	2006	Cambria	C/S [customer states] hitch and frame had cracks and were bent downward out of position. Customer had cracks welded and has appointment at Winnebago factory on June 20, 2011.”

h) ODI Component Inspection Summary -

The vast majority of the reported hitch incidents occurred prior to the initiation of PE10-048 in December, 2010.

Typically, hitch system components that were replaced prior to December, 2010 had been discarded leaving few opportunities for ODI to inspect damaged components. Inspection opportunities consisted of (a) the hitch removed from the vehicle identified in VOQ 10368002, (b) two incidents reported during the course of this investigation (referred to as Newly-reported incidents No. 1 and 2) and (c) a review of owner-supplied photographs of the failed hitch on the vehicle identified by Winnebago as having had a total hitch separation.

ODI has conducted first-hand examinations of only two cracked and/or fractured hitch receivers as listed below:



- I. the hitch receiver components associated with VOQ 10368002 that had been shipped by the owner to Valley Towing Products and then, at Winnebago request, re-shipped to Winnebago, where they were retained.
- II. the cracked hitch receiver removed from “Newly-reported Incident #2” that had been removed at the Winnebago factory (Winnebago offers vehicle servicing at that facility), where these are now retained.

6) Product Changes –

In January 2008, Winnebago summarized the changes / improvements / upgrades made to hitch product “on or about December 2007” [Response to ODI Information Request No. 11 dated 12/14/2010] as follows:

- a) Increased from seven gauge ^(*) plate steel [ODI Note: Seven gauge plate steel is 3/16” thick.] to ¼” plate steel in our [Winnebago] Class II and Class III hitches;
- b) Each side of the hitch was mounted using a quantity of three hex cap screw (1/2-13-1-1/2) Grade Five fasteners through the hitch into one 17mm hole and two 19mm holes in the extension rail. The extension rail holes have been changed to a quantity of three .531” x .625” slots on each rail;
- c) The mounting hardware previously used one ½” H.D. flat-washer under the screw cap but without a washer on the other side with the prevailing torque nut. That was changed to add a ½” H.D. flat-washer along with the prevailing torque nut to further spread the load.

7) Winnebago Assessment -

On October 5, 2011, representatives from Winnebago and Valley Towing Products met with representatives from ODI and reviewed their assessment of the hitch receiver cracking / fracture issue.

Subsequently, Winnebago summarized their views in a letter dated October 11, 2011 that attributes the alleged failures to owner misuse and argues that the overall alleged failure rate is low. A copy of Winnebago’s letter can be found in the public file on www.safercar.gov.

8) ODI Assessment –

a) Pertinent Facts –

Certain facts that have been developed through this investigation are summarized below:

- I. One hitch receiver had fractured completely and separated from the towing vehicle resulting in a towed vehicle separating from the towing vehicle at



highway speeds. No components were available for inspection at the time of this investigation;

- II. One hitch receiver had reportedly been operated within towing guidelines (3,600 lbs. towed cargo vs. 5,000 lbs. rated capacity) and experienced cracking and deformation. When inspected, this hitch was found to have longitudinal scrape marks on the bottom face of the center-mounted hitch receiver plate.
- III. One towing system (described as newly-reported incident # 1), installed by a Winnebago dealer, experienced cracking and deformation.
- IV. A certain number of hitch receivers are not at risk since they are seldom-to-never used or are at reduced risk because they are used in light applications and, as vehicles age, perhaps diminishing frequency of use.
- V. The product changes in vehicles manufactured after December, 2007 will likely improve the durability and mitigate damage from potential misuse of the hitch receiver for vehicles manufactured after that time.

b) In-Use Detection –

Reports suggest that a compromised hitch receiver system frequently deforms prior to complete separation thereby providing the affected user with a visual indication that the hitch system is deteriorating. Since there has been at least one incident that went undetected before complete separation had occurred, these visual indications may not always be relied on to provide adequate warning for all owners.

A hitch receiver that is in a compromised condition is more likely to be visually detected if owners are directed to the importance of inspecting and guidelines for doing so.

The events that precede and potentially damage the hitch system may be perceived by the operator. These events should prompt the operator to conduct a subsequent inspection of the hitch system for the purpose of assessing whether any damage had been incurred.

Visual inspection of the hitch receiver condition is possible though access may be challenging in certain vehicles due to the presence of obstructing mud flaps, splash guards, or the like.

Certain drivers may be unwilling or uninterested in conducting a rigorous inspection.

To conduct an effective visual inspection, owners have to be informed where to look, how frequently to inspect, what characteristics or symptoms to look for, and what action to take if a suspicious condition is detected.



c) Complaint Activity –

Reported vehicle hitch integrity issues were relatively high in year 2007 (9 reports, see Table 2), lower in years 2008-2010 (3-5 reports per year), and diminishing in year 2011 (2 reports). It is reasonable to expect that these types of incidents may remain at the currently low level and possibly decline due to diminished use associated with vehicle aging.

Based on reported failures, the indicated failure rate for detected and reported cracking and/fracture incidents associated with the entire population of subject vehicles was found to be 0.10% after the vehicles had been in service for between 6 and 8 years. The failure rate statistics are shown in Table 6.

Table 6 – Complaint Rate Summary (allegations of cracked or fractured hitch receivers)

Model Year	2005	2006	2007	Total
Production	10,914	9,322	9,329	29,565
Reports of Cracked and/or Fractured Hitch Receivers	10	14	5	29
Nominal Rate	0.09%	0.15%	0.05%	0.10%

Information available to ODI at this time indicates that the loss of hitch receiver integrity on the subject vehicles represents a (1) high-risk, but (2) low frequency, and (3) frequently detectable event.

As of September 2013, Winnebago has reported that there have been no additional incidents of cracked or fractured hitch receivers reported since the most recent incident (#2) reported in May 2011.

9) ODI Actions–

The facts to date indicate:

- a) Reported hitch incidents may be associated with one or more high-load events, some of which may have been severe enough to be detected by the operator. A damaged hitch is likely to exhibit visual indications (deformation and displacement) of the deteriorating integrity of the receiver;
- b) Since 27 of the 29 reported incidents of hitch cracking, deforming, and/or fracturing occurred prior to the initiation of this investigation, scant forensic evidence has been available for inspection and review. ODI has examined the scant available evidence



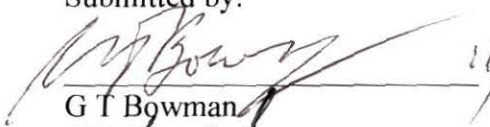
which consisted of two “newly-reported” incidents. Each of these samples has indicated that the hitch system has experienced ground contact. Since new and surviving evidence is scarce, it is not clear how often or severely this form of load may (or may not) have been encountered in the earlier reported incidents. ODI asserts that some degree of hitch-to-ground contact is part of the expected use environment. However, due to the scant surviving evidence, ODI cannot confidently refute Winnebago’s claim that owner abuse has been a contributing factor in the earlier reported incidents.

- c) Owners may have received Winnebago-supplied information (owner’s manual and newsletter) regarding parameters for safe hitch and hitch receiver operation ;
- d) The frequency of new complaints has diminished over time.

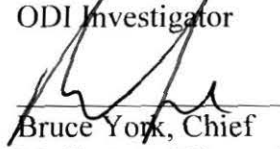
ODI will continue to monitor this issue and will take action if warranted.

This investigation is closed.

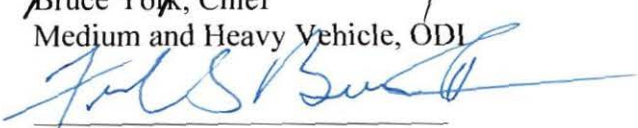
Submitted by:


G T Bowman
ODI Investigator

11/22/13


Bruce York, Chief
Medium and Heavy Vehicle, ODI

11/22/13


Frank Borris
ODI Office Director



PE10-048

Appendix A – Chronology of Principal Investigation Activities

Date	Event
January, 2008	ODI sends EWR Inquiry to Winnebago re warranty claim activity for “hitches”
March, 2008	Winnebago publishes “Service Tips” regarding Hitch Accessories
November 28, 2010	ODI receives VOQ 10368002
December 7, 2010	ODI initiates PE10-048
December 14, 2010	ODI issues Information Request Letter to Winnebago
December 27, 2010	ODI issues Information Request Letter to Valley Towing Products
February 2, 2011	ODI receives Winnebago Information
February 9, 2011	ODI receives information from Valley Towing Products (*)
March 10-13, 2011	ODI conducts inspection of hitch receivers and hitch assemblies installed in Winnebago-Itasca vehicles attending Florida State Winnebago Owners Rally (Orlando, Fl)
May 25, 2011	ODI requests Winnebago to provide prompt notification of all newly-reported incidents received between February 1, 2011, and October 30, 2011
June 15, 2011	Winnebago advises ODI of two reports received in the period between February 1, 2011, and May 25, 2011
June 21, 2011	ODI inspects the hitch receiver installed in a 2006 Cambria that had been reported as a newly-reported incident (See ODI Section 4, “ODI Investigation Activities...” below for photographic depictions of the damaged hitch receiver.)
October 5, 2011	Winnebago, Valley Hitch, and ODI Review Meeting

(*) On February 11, 2011, ODI noted that Valley had omitted certain data; Valley rectified the deficiency on the same day the issue was identified. PE10-048



Appendix B - Reference Campaigns and Investigations -- Hitches and Hitch Receivers

The following tables summarize pertinent safety campaigns and ODI investigations regarding hitch malfunctions and/or defects:

Table I1 - Table of Investigations that Concluded in Safety Campaigns

Table I2 - Table of Investigations that Concluded in Closure (without an associated Safety Campaign)

Table I3 - Comparison of Complaint and Crash Data Summarized in EA07-013 to Data Summarized in Current Investigation, PE10-048

Table I4 - Summary of “Uninfluenced” Recreational Vehicle, Hitch-related Campaigns



Table I1 - Summary of ODI Investigations conducted since January 1, 2005 (excluding AQ, EQ and IE). Key word search criteria “hitch.”

Camp. # Inv #	Vehicles	Issue (as described in submitted 573 documentation)	(1) Complaints/ (2) Separations (3) Crashes
11V-289 (CV) (PE11-012)	2,281 units 2011-2012 MY Daimler Trucks N.A.	“Customer reported that they had dropped several trailers...”	(1) “several”/ (2) “several”/ (3) none
11V-209 (CV) (PE10-042)	808 units 2009-2011 MY Mack	Fifth wheel bolt to frame may loosen due to interference	(1 & 2) 2 field reports & 11 wty claims/ (3) none
07V-530 (CV) (PE07-047)	38,000 units 2006 – 2008 MY Daimler Trucks N.A.	Over-tightened pivot bolt may prevent latch jaw from closing & latching securely	(1) 8 (2) 8 (each complaint reported a separation) (3) none
07V-496 (CV) (PE07-046)	6,600 units 2007-2008 MY Volvo	Over-tightened pivot bolt may prevent latch jaw from closing & latching securely	(1) one (2) none (3) none
07V-010 (RV) (PE06-047)	2,086 units 2001-2003 Monaco	Flange is cracking; customers exceeding weight rating; hitch not at proper angles; not using towed brake systems; hitch extensions. Remedy: add angle iron to reinforce	(1) “several” (2) none (3) none
03V-440 (RV) (PE03-041)	6 units 2001-2003 MY NuWa Industries	“extended hitch pin box” (optional) inferred	(1) 1 (2) none (3) none

(“CV”) denotes commercial vehicles implying:

- (1) subject to FMCSA roadside inspections;
- (2) commercial-grade cargo (typically heavy cargo loads);



- (3) professional drivers;
- (4) air braked systems that apply trailer brakes in the event of a trailer separation;
- (5) “dropped” commercial (CV) trailers most frequently occur in the loading yard (at low speed / off public roadways).

(“RV”) denotes recreational vehicle.



Table I2 - Table of Investigations that Concluded in Closure (without an associated Safety Campaign)

Investigation No.	Vehicles	Issue	(1) Complaints/ (2) Separations (3) Crashes
PE10-014	2,281 units 2011-2012 MY Daimler Trucks N.A.	Initiated based on a single fatality crash involving a horse trailer at the urging of the complainant. The PE was closed because the hitch connection integrity was not suspected, nor found, to be causal or contributing.	(1) one (2) none (3) none (one alleged but disproved)
EA08-019 PE08-028	1,000 (est.) units	Tow bar lengths can impose leverage excess articulation forces; vehicles have been operated at full to excess cramp maneuvers; pins exhibit surface conditions that increase the risk of crack initiation	(1) 19 (2) 19 (3) one
EA07-013 PE07-025	215,000 units 2002 MY Gen'l Mtrs	Closing report states, "failures rare"; associated with low-speed driving; improper trailer hitch attachment	(1) 41complaints; 89 warranty claims (2) unknown (3) one



Table I3 Comparison of Complaint and Crash Data Summarized in EA07-013 to Data Summarized in Current Investigation, PE10-048

	EA07-013 GM MY 2002 vehicles	EA07-013 GM “non-subject” vehicles	PE10-048 Winnebago MY 2005-2007 vehicles
Investigation Status	closed	reference (*)	closed
Complaint rate	0.06% (at 5 yrs) 130 (combined) complaints & warranty claims for 215,052 vehicles	0.01% (at 5 yrs) 877 (combined) complaints & warranty claims for 6,409,600 vehicles	0.10% (at 6 yrs) 29 (combined) complaints & warranty claims for 29,565 vehicles
Separation Count	1	ODI closing report states, “9 high speed hitch separations”	1
Crash Count	2	10	0



Table I4 - Summary of “Uninfluenced” Recreational Vehicle, Hitch-related Campaigns

There are an additional 71 “uninfluenced,” (not investigated by ODI) “hitch-related” campaigns conducted during this analysis period (January 1, 2005 to date). These address a range of products (e.g. commercial, RV, passenger utility, boat, aftermarket, etc.) and a range of issues (attachment breakage, electrical, etc.).

Table I4 summarizes those voluntarily-conducted campaigns which pertain to the hitch structural integrity in recreational vehicles since these appear to be the most pertinent for comparison to PE10-048.

Camp. #	Vehicles	Issue (as described in submitted 573 documentation)	(1) Complaints/ (2) Separations (3) Crashes
09V-069 Tiffin (RV) (**)	1,408	Radii too sharp on the hitch end plate; hitch could break	(1) none (2) none (3) none
07V-005 Jayco (RV)	1,271	The distance from the rear cap to the hitch receiver encourages the use of longer ball mounts (install higher grade fasteners)	(1) unknown (2) none (3) none
06E-033 Cequent (RV hitch supplier)	385 (2000-2003 MY Gulfstream)	Cross tube can separate from the frame bracket	(1) “sporadic reports” (2) unknown (3) none
05V-556 Jayco	1,878	Reinforcing plates missing from the installation of the hitch receiver....hitch may become partially detached	(1) unknown (2) none (3) none
05V-465 Four Winds	359	Spacer plate does not fit flush... can cause hitch to fail	(1) unknown (2) unknown (3) unknown



05V-443 Weekend Warrior	891	There is no supporting gusset; tongue is bending up.	(1) 28 (2) unknown (3) unknown
05V-092 Coachmen	251	Bracket may fracture (due to wrong grade of steel) allowing hitch assembly to become disengaged	(1) none (2) none (3) none

(**) This supplier issue is also addressed by 09V-004 (Entegra Coach); 08V-596 (Newmar Coach).



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TABLES-

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