



**COACHMEN RECREATIONAL VEHICLE COMPANY, LLC**

June 19, 2006

George H. Person  
Chief, Recall Analysis Division  
National Highway Traffic Safety Administration  
400 Seventh St., S.W.  
Washington, DC 20590

06V-224  
(7 Pages)

Re: Workhorse Custom Chassis, Recall Bulletin No. 20601-C; Steering Intermediate Shaft

Dear Mr. Person:

Pursuant to Part 573 of Title 49 of the Code of Federal Regulations, this correspondence is to serve as our notification to NHTSA of our acknowledgement of a recall being conducted by one of our component suppliers, Workhorse Custom Chassis (Workhorse) concerning a potential safety defect in some of the motorhome chassis they supplied to Coachmen Recreational Vehicles, LLC (Coachmen).

Coachmen received notification from Workhorse that they are conducting the referenced safety recall campaign due to a defect that may exist in certain 2005 and 2006 Workhorse W20/22/24 series chassis. Workhorses' notification stated:

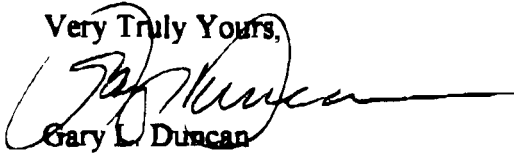
"An incorrect steering intermediate shaft may have been installed on some of the subject chassis during the relevant production period. The incorrect part (W0007621) has a finer pitch spline than the correct part (W0000450). Use of the incorrect part may cause the spline not to match correctly with the corresponding steering gear input shaft. On vehicles equipped with the incorrect part, the spline can strip if the steering wheel is turned with a significant amount of force. The force required to strip the spline (i.e., steering wheel input of 10 to 90 ft-lbs of torque) is more than ordinary users will experience. This failure is likely only to occur when the vehicle is stopped or during tight turning maneuvers at very low speeds. This condition may result in a loss of steering control."

Workhorse has informed Coachmen that we received a total of fifty one (51) chassis affected by this recall campaign. Thirty two (32) of these chassis were used by Coachmen to build some of our 2007 MY Epic, 2006 MY Cruise Master by Georgie Boy, and 2006 MY Landau by Georgie Boy motorhomes built between September 2005 and May 2006. Six (6) of these were sold to customers in Canada. Nineteen (19) of the (51) chassis are still in our inventory and will be remedied prior to final construction.

We understand that Workhorse is administering the recall campaign and will be forwarding all further required correspondence to NHTSA. We have provided Workhorse with the retail owner information on these vehicles so they may be included in their notification and remedy efforts.

Should you have any additional questions or need additional information, please do not hesitate to contact me at (219) 825-8528.

Very Truly Yours,

A handwritten signature in black ink, appearing to read "Gary L. Duncan", with a long horizontal flourish extending to the right.

Gary L. Duncan  
Vice President, Engineering Services

Attachments: Workhorse Service Bulletin 20601-C



## **WORKHORSE CUSTOM CHASSIS SERVICE BULLETIN**

**BULLETIN NO:** 20601-C

May, 2006

**BULLETIN TYPE:** Campaign Safety

**SUBJECT:** Steering Intermediate Shaft

**MODELS:** Certain 2005 and 2006 W20/22/24 Series Motorhome Chassis

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**Workhorse Custom Chassis has determined that a defect which relates to motor vehicle safety may exist in certain W20/22/24 series motorhome chassis.**

**An incorrect steering intermediate shaft may have been installed on some of the subject chassis during the relevant production period. The incorrect part (W0007621) has a finer pitch spline than the correct part (W0000450). Use of the incorrect part may cause the spline not to match correctly with the corresponding steering gear input shaft. On vehicles equipped with the incorrect part, the spline can strip if the steering wheel is turned with a significant amount of force. The force required to strip the spline (i.e., steering wheel input of 10 to 90 ft-lbs of torque) is more than ordinary users will experience. This failure is likely only to occur when the vehicle is stopped or during tight turning maneuvers at very low speeds. This condition may result in a loss of steering control.**

**Workhorse Custom Chassis is conducting a safety recall campaign to inspect the steering shaft and gear connection. If the incorrect shaft was installed, it will be replaced with the correct part.**

### **VEHICLES INVOLVED**

**This recall involves certain Workhorse Model Year 2005 and 2006 W20, W22 and W24 chassis manufactured from April 28, 2005 through March 15, 2006.**

**Approximately 3,881 units are involved. The VIN range for the affected vehicles is as follows (Last 8 digits of the 17 digit VIN starting with 5B4):**

**2005 Models            53404851 to 53412047**

**2006 Models            63411008 to 63417080**

**Dealers can check the WOW system to determine if a specific vehicle is involved. Workhorse believes that only a small number of vehicles in the VIN range may actually contain the defect.**

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## **OWNER NOTIFICATION**

Workhorse Custom Chassis will notify retail owners and body companies regarding this campaign. Attached is the owner letter with owner instructions.

## **DEALER CAMPAIGN RESPONSIBILITY**

1. WCC dealers must perform this campaign on identified customer vehicles at their request at no charge, regardless of time or vehicle mileage.
2. All dealer stock must be held and inspected/repaired before delivery to retail customers. Please note that it is a violation of Federal law for a dealer to deliver a new vehicle covered by this notice under a sale or lease until the defect is remedied. Also, any vehicle lessor receiving this recall notice must forward a copy of the notice to the lessee within ten (10) days

## **SERVICE PROCEDURE**

The service procedure for this recall requires inspection of the steering intermediate shaft to determine if the correct part was installed (as shown in the attached Inspection Procedure). If an incorrect shaft is identified, it should be replaced with the correct part (Part Number W0000450). Torque pinch bolt to 36-40 ft-lbs.

## **RECALL CAMPAIGN COMPLETION LABEL**

Complete the Recall Campaign Completion Label (Part Number W8001493) and attach it to the air cleaner housing in a visible area. These labels are available from the WCC Parts Department.

## **WARRANTY INFORMATION**

Claim Type-----Complete campaign 20601-C  
Labor Operation Code-----T2002-----0.5 hours --- Inspect for correct steering shaft.  
Labor Operation Code-----T2003-----0.5 hours ---Replace incorrect shaft.  
Above times include 0.2 hours administrative time.

## **PARTS INFORMATION**

The correct steering shaft is part number W0000450. It is expected that very few, if any, steering shafts will require replacement.

All replaced steering intermediate shafts are to be sent to:

Attn: Product Support Manager  
850 Stephenson Hwy Suite 510  
Troy, Michigan 48064

## Inspection Procedure

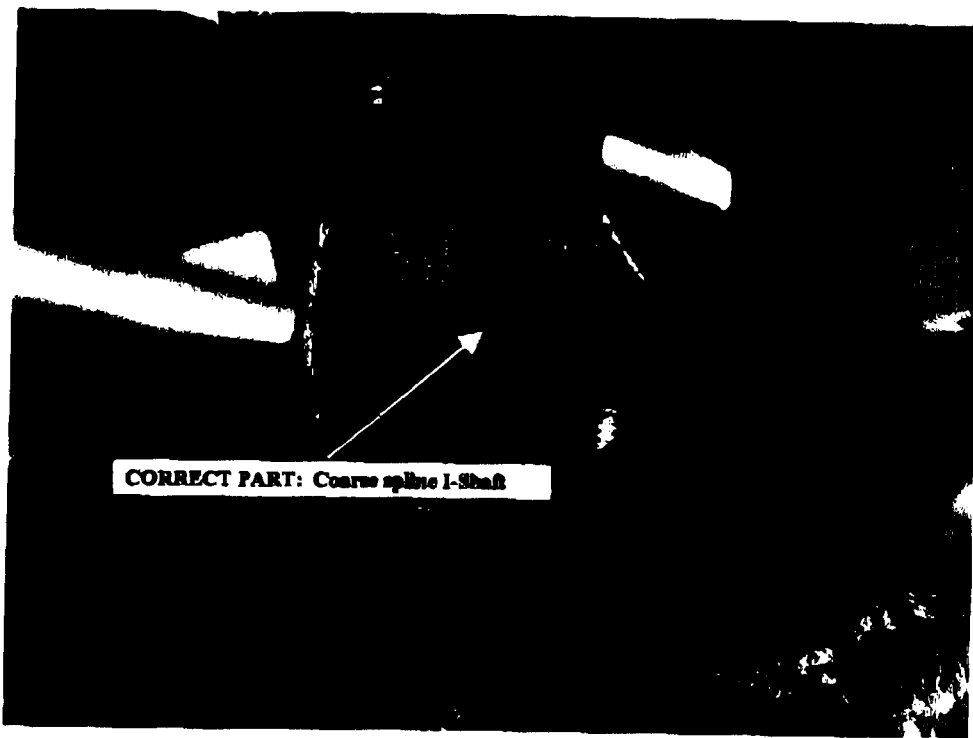
The below procedure should be used to determine if the correct steering intermediate shaft has been installed on the vehicle.

### A. Visual Inspection of Steering Intermediate Shaft Spline

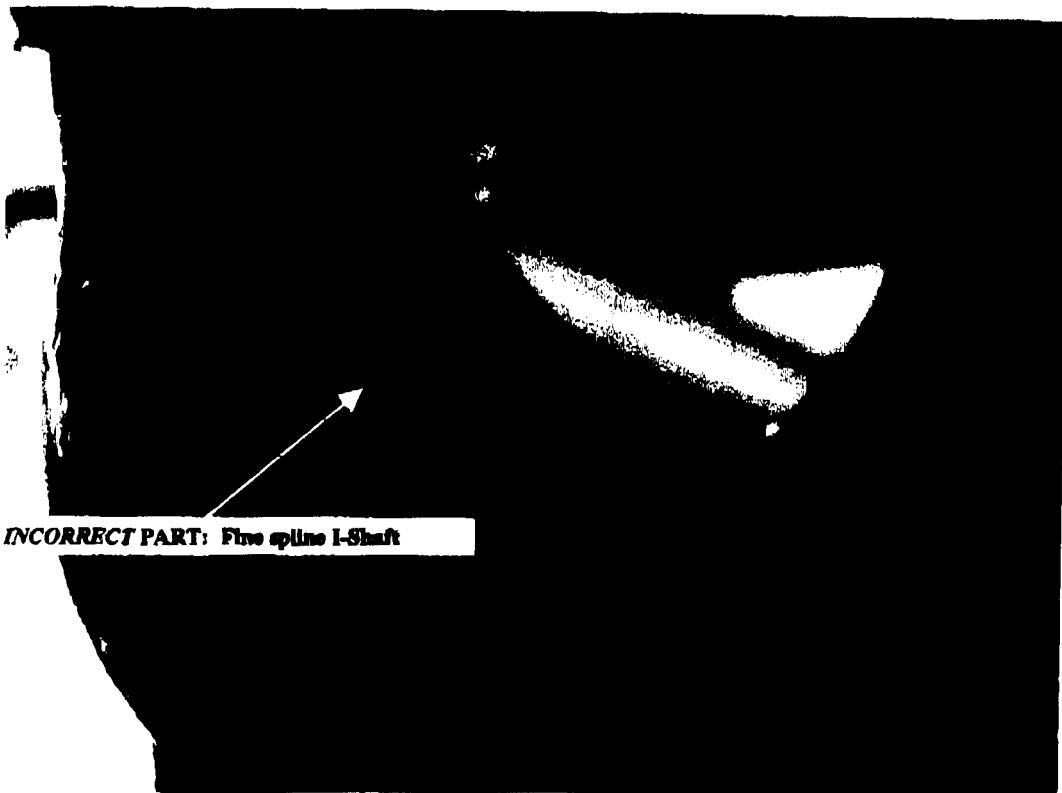
You will need a flashlight when inspecting a completed unit (with a body attached). A flashlight may not be necessary when inspecting an incomplete chassis (without a body).

Inspect the intermediate shaft where it is connected to the input shaft at the top of the steering gear. The spline on the intermediate shaft is visible above the tip of the steering gear input shaft, as indicated in the photograph below:





The coarse spline I-shaft is shown above. This is correct for W20/22/24 models.



The fine spline I-shaft is shown above. This is *incorrect* for W20/22/24 models.

## **B. Steering Wheel Torque Procedure**

**After performing the visual inspection described above, the following supplemental procedure should be used as a precaution:**

- 1. Place the vehicle in "Park" and apply the parking brake.**
- 2. With the engine shut down and the key in the "On" position, turn the steering wheel completely to the left (counterclockwise) with the maximum force that you can apply. Repeat this process by turning the steering wheel completely to the right (clockwise), again using the maximum force that you can apply. (Please note that it takes over 120 ft-lbs of torque to turn the wheels in a static condition without power steering.)**
- 3. If the incorrect shaft was installed, the steering shaft will become loose at the gear box (in the range of 10 to 90 foot pounds of torque).**