

Safety Defect and Noncompliance Report Guide for Vehicles
PART 573 Defect and Noncompliance Report¹

06V-145
(12 pages)

On April 20, 2006 Keystone RV Company decided 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: April 20, 2006

Furnish the manufacturer's identification code for this recall (if applicable): 06-069

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.

Keystone RV Company

Identify the corporate official, by name and title, whom the agency should contact with respect to this recall.

Garett Carolus, Key Express Division

Telephone Number: 574/537-3925 Fax No.: 574/537-3981

Name and Title of Person who prepared this report:

Garett Carolus, Key Express Division

Signed:

Garett Carolus

¹Each 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.

INVESTIGATION
OFFICE OF DEFECTS

2006 MAY - 2 A 9: 30

RECEIVED

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): Cougar **Model Years Involved:** 2006 **Model(s):** All

Production Dates: Beginning: 4/7/2006 **Ending:** 4/18/2006

VIN Range: Beginning: 4YDT243266K069927 **Ending:** 4YDF291206K070133

Vehicle Type: Recreational Vehicle **Bodystyle:** Travel Trailer & Fifth Wheel

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

All Cougars built in the Oregon plant 901 between the production dates indicated are 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%

II. Identify the Recall Population

3. Furnish the total number of vehicles recalled potentially containing the defect or noncompliance.

<u>Model</u>	<u>Year</u>	<u>Number of Vehicles Potentially Involved</u>
Cougar	2006	85

Total Number Potentially Affected by the Recall: 85

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

Two Cougars coming off the manufacturing line experienced axle failures at the weld joint of the tube and spindle. Upon inspection it was determined that the weld was not in the proper location at the joint. Both failures occurred on axles that were manufactured on 3/31/2006 by Al-Ko Kober Corporation at their Ontario, CA facility. The set-up for the location of the weld is checked at the beginning of each day. Axles manufactured before and after 3/31/2006 do not exhibit any defect. All vehicles manufactured with axles built on that day are included in the population.

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 spindle will separate from the axle tube and the wheel and hub assembly will come off the vehicle.

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

It was determined the weld that joined the axle tube to the spindle was off location. Most of the weld was on the tube with very little on the spindle side. The center of the weld should be ½" nominal from the inside of the brake flange.

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

The spindle will separate from the axle tube and the wheel will come off the vehicle.

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

None.

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

Al-Ko Kober Corporation 21608 Protecta Dr. Elkhart, IN 46516

Identify the name and title of the chief executive officer or knowledgeable representative of the supplier:

Mike Allen, Director of Quality

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.

4/12/2006 – A Cougar experienced an axle failure after it was towed a short distance in the yard from the production line.

4/14/2006 – A second Cougar experienced an axle failure coming off the production line.

One of the failures was shipped to Al-Ko Kober's testing facility in Oklahoma for evaluation. It was determined the weld was not in the correct location at the axle tube/spindle joint.

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.

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 axles manufactured by Al-Ko Kober in Ontario, CA on 3/31/2006 will be replaced.

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

The defective axles have a date code of 209006 on the tag attached to the axle. The axles that are

not included in the recall population will not have that date code.

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 axles that were manufactured by Al-Ko Kober in Ontario, CA on 3/31/2006 were replaced with axles manufactured after that date.

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.

Dealers and retail customers were notified by phone on April 19, 2006 to not move any units to until the axles were replaced. Repair procedures and parts were distributed to dealers by April 27, 2006. Retail notification by mail will occur as soon as we get NHTSA approval.

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.



**Keystone RV
Company**

RECREATIONAL VEHICLE SAFETY RECALL NOTICE

April 26, 2006

RETAIL_NAME
RETAIL_ADDRESS
RETAIL_ADDRESS

VIN: COMPLETE_VIN

RE: Safety Recall: 06V-____
Service Advisory: 06-069

Dear RETAIL_NAME:

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act.

REASON FOR THIS RECALL

Keystone RV Company has decided that a defect which relates to motor vehicle safety exists in certain 2006 Keystone RV Cougars. The fifth-wheels and travel trailers may have a deficient axle weld joint between the axle tube and spindle.

WHAT WE WILL DO

A notice has been sent to your selling dealership regarding this situation. The dealers stand ready to assist you in addressing this condition by replacing the axles.

WHAT YOU SHOULD DO

At your earliest convenience, please make an appointment to have your fifth-wheel or travel trailer serviced by your dealership. The recreational vehicle will need to be at the dealer to perform this service correction approximately one (1) day. Please ask your dealer if you wish to know how much additional time will be needed to schedule and process your fifth-wheel or travel trailer.

Your Keystone RV dealer is best equipped to obtain parts and provide service to ensure your fifth-wheel or travel trailer is corrected as promptly as possible. If your dealer is unable to assist, please contact Keystone Customer Service by calling 1-866-425-4369. If you take your fifth-wheel or travel trailer to your dealer on the agreed service date, and the Dealer does not remedy the condition within a reasonable amount of time, or without charge to you, please contact Keystone Customer Service by calling 1-866-425-4369. You may also submit a written complaint to: Administrator, National Highway Traffic Safety Administration, 400 Seventh Street SW, Washington, DC 20590. You may call the toll-free Vehicle Safety Hotline at 1-888-327-4236 (TTY: 1-800-424-9153; or go to <http://www.safercar.gov>.)

We regret any inconvenience this action may cause you. As we are sure you will appreciate, the safety of our customers and the quality of our products are of the utmost importance to us.

Thank you for your attention and cooperation in this matter.

Sincerely,

Keystone RV Company

Rick Deisler
Customer Service Manager

cc: National Highway Traffic Safety Administration (NHTSA)

2642 Hackberry Drive – Goshen, IN 46526
Phone: (574) 535-2100 – Fax: (574) 535-2199
www.keystonerv.com

SERVICE ADVISORY # 06-069

Oregon Cougar Axle Replacement

Keystone is conducting a voluntary RECALL notification campaign in accordance with the National Highway Transportation and Safety Act. Keystone has determined that a defect exists in the models listed below. These models may have a deficient axle weld joint between the axle tube and spindle. The following procedure describes how to perform the repairs required and how to inform the customer of their responsibilities as it relates to Lug Nut Torque and Maintenance which is outlined in the Keystone RV and Axle Manufacturer's owner's manuals.

Models Included:

2006 Cougar Fifth Wheels & Travel Trailers Manufactured in Pendleton, Oregon

Serial Number Range:

4YDT243266K069927 - 4YDF291206K070133

Parts Required per Unit:

2 Axles – parts supplied by Al-Ko Kober

Tools Required:

- Impact Wrench - 1/2" drive (removal of wheels only)
- Torque Wrench – 1/2" drive
- Deep Socket 13/16"x 1/2" drive
- Minimum 2" long socket extension, 1/2" drive
- Floor Jack – adequate to trailer weight
- Jack Stands
- Drill
- Paint Remover
- Scouring Pads (very fine light duty)
- Cleaning rags
- Water hose with spray nozzle
- Wheel chocks
- Wire Wheel

INSTRUCTIONS**ONE: PREPARING THE TRAILER**

- Step 1 Locate the trailer on a level, flat, hard surface. Chock the wheels.
- Step 2 Use a floor jack of sufficient capacity to raise one side of the trailer. Place the floor jack under the main frame rail behind the rear spring hanger, leaving enough room to install a jack stand immediately behind the spring hanger. Elevate the frame just enough to take some of the weight off the wheel.
- Step 3 Loosen the lug nuts on the rear wheel about a half turn. DO NOT remove lug nuts at this time.
- Step 4 Continue elevating the frame until the rear tire just clears the shop floor.
- Step 5 Install a jack stand of sufficient capacity directly behind the rear spring hanger.
- Step 6 Relocate floor jack to an area just forward of the front spring hanger, leaving enough room to install a jack stand immediately in front of the spring hanger.
- Step 7 Use a floor jack of sufficient capacity to raise one side of the trailer. Place the floor jack under the main frame rail forward of the rear spring hanger, leaving enough room to install a jack stand immediately forward of the spring hanger. Elevate the frame just enough to take some of the weight off the wheel.
- Step 8 Loosen the lug nuts on the forward wheel about a half turn. DO NOT remove lug nuts at this time.
- Step 9 Raise the frame until the forward tire just clears the shop floor.
- Step 10 Install a jack stand of sufficient capacity just forward of the front spring hanger.
- Step 11 With both tires now slightly off the ground finish removing the lug nuts and the two wheels from the trailer.
- Step 12 Repeat Steps 2 – 11 for the other side of the trailer.

TWO: AXLE REPLACEMENT

- Step 1 Support one of the axle tubes with a hydraulic jack. See Figure 1.
- Step 2 Disconnect the brake wires for the axle from the trailer wiring harness that runs along the inside of the frame on the off door side of the vehicle. Note: Do not disconnect the wires at the back of the brake assembly. See Figure 2.

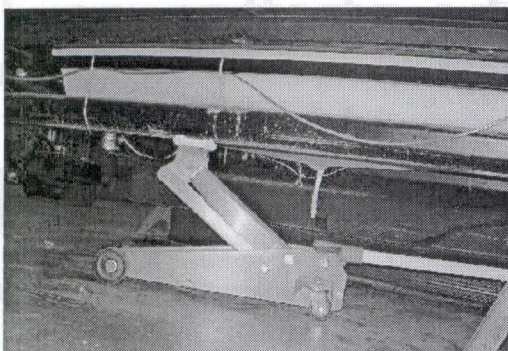


Figure 1

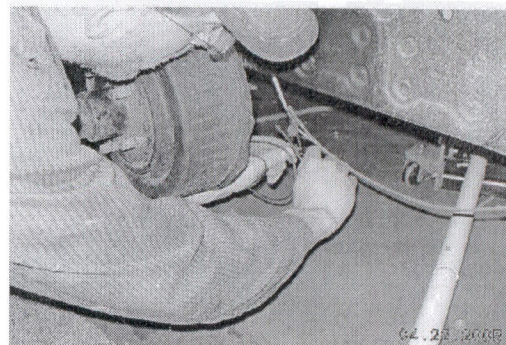


Figure 2

- Step 3 Remove the U-bolts attaching the axle tube to the springs.
- Step 4 Lower the axle and remove from under the vehicle.
- Step 5 Slide the new axle under the trailer positioned so the free end of the brake wires on the axle can be connected to the trailer brake wiring harness on the off door side.
- Step 6 Reattach the axle tube to the springs with the U-bolts removed in Step 3. Begin to tighten the U-bolts evenly in a cross pattern. Finish by applying 45 – 60 ft-lbs of torque to the U-bolts in a cross pattern.
- Step 7 Reattach the brake wiring disconnected in Step 2 from the axle to the trailer wire harness using new wire connectors.
- Step 8 Repeat steps 1 – 7 for the other axle.

THREE: HUB PAINT REMOVAL

- Step 1 For the hub face, apply liquid paint remover or equivalent to the wheel-mating surface of the hub. Use a wire wheel (brush) to clean all black paint from the wheel-mating surface, that is, all areas of the hub face that come in direct contact with the wheel. Avoid damaging the hub face with this process! After the paint is removed, wash off the area with water to remove any remaining residue. Dry the surface completely. See Figures 3 & 4.
- Step 2 Make a final inspection of the wheel and hub mounting surfaces before installing the wheels. If any grease is present use a brake cleaner or degreaser. Rinse any cleaned areas with water to remove residue. Dry the surface completely. See Figure 4.

Warning: When using chemicals (paint remover, brake cleaner/degreaser) be sure to utilize the “Personal Protective Equipment” (PPE) recommended by the manufacturer through the Material Safety Data Sheet (MSDS) and dispose in accordance with all Federal, State and Local Laws.

Warning: When cleaning the hub face with the wire wheel avoid excessive pressure on the studs. Applying too much force here could damage the threads on the studs.

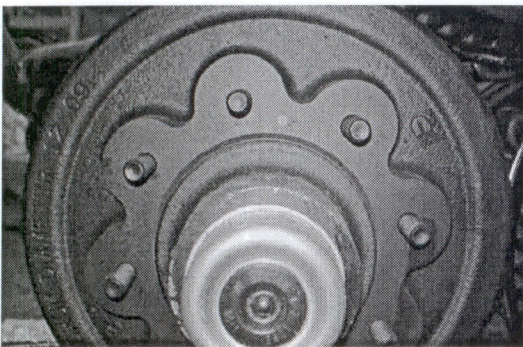


Figure 3
Before Cleaning

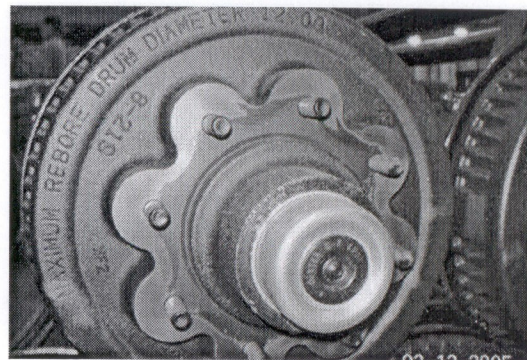


Figure 4
After Cleaning

FOUR: WHEEL ASSEMBLY INSTALLATION

- Step 1 Using a clean rag, wipe down all lug nuts and tapered nut seats on wheel to remove any remaining residues.
- Step 2 Start the lug nuts on each stud by hand.
- Step 3 You must use the star pattern and torque wrench when tightening the lug nuts to the wheel. This sequencing pattern shows how to progressively tighten the lug nuts to best achieve the proper torques and clamp load. See figure 5.

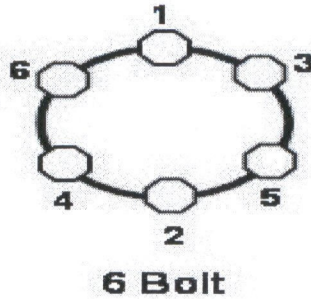


Figure 5

- Step 4 Using the star pattern outlined in Figure 5, tighten the lug nuts until the 1st stage torque (20-25 ft-lbs) outlined in Figure 6 is achieved. Verify the lug nuts are properly positioned in the tapered seats of the wheel.

Wheel Torque Requirements			
Wheel Size	1st Stage	2nd Stage	3rd Stage
15"	20-25 ft-lbs	50-60 ft-lbs	110-120 ft-lbs
16"	20-25 ft-lbs	50-60 ft-lbs	110-120 ft-lbs

Figure 6

- Step 5 Using the star pattern outlined in Figure 5, tighten the lug nuts until the 2nd stage torque (50-60 ft-lbs) outlined in Figure 6 is achieved.
- Step 6 Lower the trailer to the ground.
- Step 7 Using the star pattern outlined in Figure 5, tighten the lug nuts until the 3rd and final stage (110-120 ft-lbs) is achieved. See Figure 6.
- Step 8 Use a dial or digital torque wrench to verify that the proper amount of torque has been applied.

FIVE: DELIVERING THE TRAILER TO THE CUSTOMER

- Step 1** Make a copy of the Customer Acknowledgment sheet on the next page. While reviewing the document with the customer, use a torque wrench to demonstrate the processes outlined in Figure 5 and Figure 6 on their unit. The proper break-in procedures must be followed.
- Step 2** Once the responsibilities are understood, the customer needs to sign and date this acknowledgement.
- Step 3** A representative of the dealership should then sign and date the document.

NOTE: ***THIS PROPERLY COMPLETED ACKNOWLEDGEMENT MUST BE RETURNED WITH YOUR WARRANTY CLAIM TO KEYSTONE RV COMPANY TO BE ELIGIBLE FOR REIMBURSEMENT FOR PERFORMING THIS RECALL!***

SIX: WARRANTY REIMBURSEMENT

Submit the claim on Key Express or on a Keystone Warranty claim form with **Service Advisory # 06-069** and **Flat Rate Code # 7106942B** noted in the customer complaint section of the form. The amount of time authorized for this repair is 3.0 hours.

SEVEN: PART RETURN

Al-Ko Kober will issue a call tag for the axles that were replaced. Once the axles are ready to be returned, contact us at one of the numbers below and we will make arrangements to have the axles picked up.

If you have any questions please contact us through normal channels at:

Team Cougar (Indiana)

866-273-1454

Team Oregon

541-276-6075

CUSTOMER ACKNOWLEDGMENT

Dear Keystone Owner:

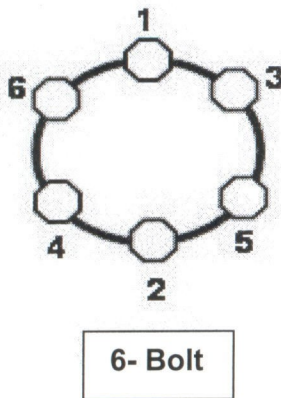
By signing this document you are acknowledging that a Recall /Service Advisory has been performed on your recreational vehicle (RV). The repair involved removing the wheels, cleaning any paint and/or contamination from the hub or wheel and reinstalling the wheels on your RV to the proper torque.

Because your wheels have been removed and reinstalled, it is critical that you follow the torque tightening procedures outlined below and your Owner's Manual's to help assure your safety as well as other motorists. **A FAILURE TO ADHERE TO THE PROPER TORQUE PROCEDURES CAN LEAD TO LOOSENING OF THE LUG NUTS AND THE POSSIBLE SEPARATION OF A WHEEL FROM YOUR TRAILER!**

A torque wrench is necessary to insure the tightening procedures are done correctly. If you do not own a torque wrench, one can be obtained from a local hardware or automotive parts store. It will need to apply at least 150 ft/lbs of torque.

Torque Requirements

Anytime a wheel is subsequently removed for servicing, the torque intervals must be repeated from the beginning. Tighten using the 6- bolt star pattern shown below (left). Use the torque intervals and range in the table below (right).



Torque Intervals and Range		
1st Stop	10 miles	110 - 120 ft/lbs
2nd Stop	25 miles	110 - 120 ft/lbs
3rd Stop	50 miles	110 - 120 ft/lbs
Thereafter	Before each trip	110 - 120 ft/lbs

Please make certain that your servicing dealer has reviewed the torque tightening procedures with you in detail as well as provide a physical review of the process should you feel the need. If you feel uncomfortable or apprehensive in any way performing this maintenance service yourself, your dealer or local tire store can provide this service for a nominal fee.

Customer: I acknowledge that the above-described service has been performed and that I have read and understand the torque requirements and procedures as outlined above.

Name _____ Serial Number (last 6) _____

Signature _____ Date _____

Dealer: I have explained the torque requirements and procedures for properly maintaining the wheels on this trailer.

Name _____ Date _____

NOTE: **THIS DOCUMENT MUST BE RETURNED WITH YOUR WARRANTY CLAIM TO BE ELIGIBLE FOR REIMBURSEMENT.**