NHTSA Id: 13V-531 **12/4/2013**

SUBJECT: Loose steering linkage fasteners.

CONDITION: The central steering system ball joints may not have been properly torqued into the bell crank and idler arms.

APPLIES TO: This bulletin applies to motor home chassis models K2, K3, and MM as well as a MetroStar model emergency response chassis cab equipped with an independent front suspension supplied by Reyco® Granning®. The affected chassis and chassis cabs were manufactured between September 19, 2012 and June 10, 2013.

CORRECTION: Inspect and if loose, tighten per the service bulletin procedure below.

LABOR ALLOCATION:
1.0 hrs. for inspection
2.5 hrs. labor for defect on one side
4.0 hrs. labor for defect on both sides

TOOLS REQUIRED:

1. **For Inspection**
   a. Feeler gauge of 0.001”
   b. Small punch and hammer

2. **If repair required**
   a. Pliers, 30 mm socket, 1/2” torque wrench
   b. Ball joint tools 708116-02 and -05 and Loctite® 242® Threadlocker
   c. 3/4” drive torque wrench

NOTE: Suspension serial number and VIN must be on invoice, completed with information of facility that performed the service. A description of condition found and service performed each side documented. Any parts replaced must be returned to Spartan Motors Chassis, Inc. using the return material authorization process. Parts must be returned to be paid for claim.

GENERAL INSTRUCTIONS:

Please thoroughly review entire work procedure before starting work. If there are questions and/or concerns with steps defined in this procedure, contact Spartan Motors Chassis, Inc. Customer & Product Support Group.

All applicable industry safety standards must be followed when performing work identified in this procedure.

INSPECTION OF BALL JOINTS INSTRUCTIONS:

1. Follow normal maintenance and safety procedures to gain access to the bell crank and idler. Refer to FIG. 2-1.

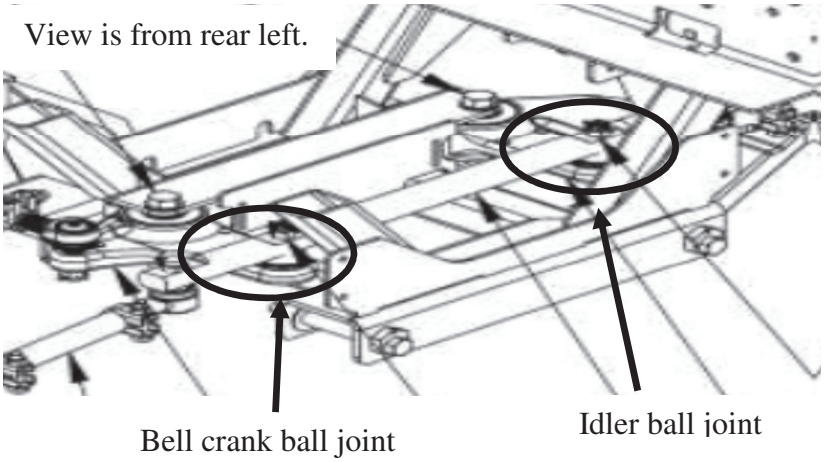

FIG. 2-1

2. Visually inspect the ball joint located in both the bell crank (driver's side) and idler arm (passenger side). The ball joint shall be fully engaged with the notched flange in contact with the surface of the bell crank of the idler arm. If it is not, please proceed to the repair procedure. Refer to FIG. 2-2 and 3-1.

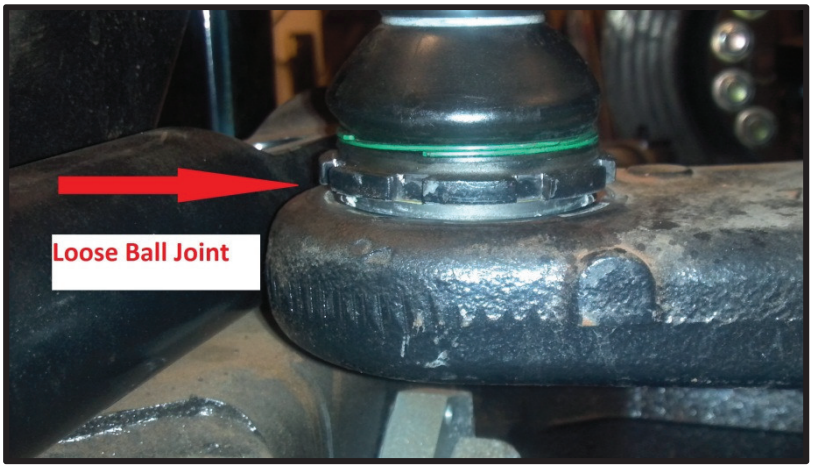

FIG. 2-2

FIG. 3-1

3. If the ball joint appears to be seated, using a .001" feeler gauge to check under the notched flange. If the feeler gauge slides under the flange, please proceed to the step by step instructions.

4. With a punch and hammer use moderate force in an effort to tighten the ball joint in place. If it moves proceed to the step by step instructions. If it is tight this will finish the inspection and vehicle can be returned to service.

STEP-BY-STEP INSTRUCTIONS:

NOTE: Below steps are to be used for ball joints found not seated or loose.

NOTE: Take care to not damage the sealing boot of the ball joint.

1. If a ball joint is found loose contact Randy Summers at 765-838-0361 ext. 1 to acquire loaner tools 708116-02, 708116-05, and Loctite® 242® Threadlocker. Credit card information required for security on tools. Refer to FIG. 4-1.

FIG. 4-1

2. After ball joint tools and Loctite® 242® Threadlocker are acquired disconnect the relay rod from ball joint to be addressed, per instructions from manual D711987, below.
    a. Remove the cotter pin from the ball joint stud. Retain for re-install.
    b. Remove the castle nut from the ball joint stud. Retain for re-install.
    c. Disconnect the ball joint stud from the relay rod tapered hole using a suitable tool.
3. Back the ball joint out of casting only to a point of being 3/4" above seated position, blow off threads, apply Loctite® 242® Threadlocker to the exposed threads of ball joint.
4. Secure the bell crank or idler to resist torque that is to be applied. The bell crank can be secured by clamping the input shaft ahead of steering gear. Idler may require use of clamp or chain.
5. Use tools and tighten ball joint to 350 lbs. ft. with tool 708116-02 at 90 degrees angle to torque wrench. Note: that tool 708116-05 is used with castle nut to hold tool 708116-02 on the ball joints.
6. If torque above is achieved and the ball joints seats in place, re-install the relay rod, tighten castle nut to 155 lbs. ft., and re-install cotter pin and properly bend pins.