



**Reliability Driven™**

August 7, 2014

**IMPORTANT SAFETY RECALL**

**This notice applies to your vehicle(s) [«UNIT»]**

«CUST\_NAME»

ATTENTION: TECH SERVICE DEPT/MAINT

«ADDRESS\_1»

«CITY», «STATE» «ZIP»

«COUNTRY»

**SUBJECT: SAFETY RECALL: DRIVESHAFT CONTAINMENT**

Ref.: **NHTSA # 14V-335**

**Transport Canada # 2014-238**

**MCI Service Bulletin 414**

Attention Owner:

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

Motor Coach Industries, Inc. (“MCI”) has decided that a defect which relates to motor vehicle safety exists in certain model year 1993 – 1995 MCI 102DL3 and 2006 and 2008 MCI D4505 model coaches. The affected vehicles have a driveshaft with a compressed length of 30 inches or less, a steerable trailing axle equipped with caster change, and no electronic stability control. If the driveshaft becomes detached from the transmission, the driveshaft may escape its containment bracket and strike the trailing axle tie rod and components of the trailing axle locking system, potentially causing the trailing axle steering and caster locking mechanisms to unlock. If this occurs and the driver makes a hard braking application resulting in brake lockup, the driver may experience loss of steering control of the vehicle, increasing the risk of a vehicle crash. Please see the enclosed MCI Service Bulletin 414 for additional information.

The VINs (last five VIN digits) of the recalled vehicles are set forth in the enclosed MCI Service Bulletin 414.

MCI is conducting a recall to repair the above vehicles at no cost to you. MCI estimates that it will take approximately two hours to do the necessary repairs. Please see the enclosed MCI Service Bulletin 414 for additional information.

MCI records indicate that you are the owner or operator of the following vehicle(s) included in this recall: «UNIT»

MCI strongly urges you to have the recall work performed on your vehicle(s) as quickly as possible.

You may contact the MCI Customer Service Line at 1-800-241-2947 if you have any questions about this recall campaign or wish to make arrangements to have your vehicle(s) repaired at an authorized MCI service center. Submission of MCI Warranty Claim Forms may be completed on MCI's website at <http://fleetsupportiw.mcicoach.com/iwarranty/signon> (click on Customer Care System), or a photocopy of the Warranty Claim Form found in the Warranty Manual can be mailed / faxed to the MCI Warranty Department.

After contacting MCI Customer Service, if you are still unable to have the safety defect remedied without charge and within a reasonable time, you may submit a complaint:

**For US customers:**

You may submit a written complaint to the Administrator, National Highway Traffic Safety Administration, 1200 New Jersey Avenue, SE, Washington, DC 20590, or call 888 327-4236 (TTY: 800-424-9153), or go to <http://www.safercar.gov> if remedy difficulties exist.

**For Canadian customers:**

Please contact our customer service at 1-800-241-2947, or for additional information about the recall, you can contact Transport Canada at 1-800-333-0510.

If you are the lessor of the vehicle(s) identified above, Federal law requires that you forward this notice by first class mail to the most recent lessee(s) known to you, within ten days of your receipt of this notice.

If you have sold or otherwise transferred the vehicle(s) identified above, please contact the MCI Customer Service Line at 1-800-241-2947 with all of the information you have regarding the current owner/operator of the vehicle(s).

If you had your vehicle repaired for this condition prior to receipt of this notice and incurred any costs, you may be eligible for reimbursement. Please contact the MCI Customer Service Line at 1-800-241-2947 for further information in that regard.

We regret the inconvenience this may cause you, but urge you to implement the recall procedures with respect to your vehicle(s) as soon as possible for your added safety and satisfaction.

Sincerely,

*Motor Coach Industries*  
Warranty Department

Enclosure: MCI SB 414



Reliability Driven™

# Service Bulletin No. 414

<i>MODEL</i>	<b>D Series</b>	<i>TYPE</i>	<b>Field Change Program</b>	<i>SECTION/GROUP</i>	<b>3-Body</b>	<i>DATE</i>	<b>Aug. 5, 2014</b>
<i>SUBJECT</i>	<b>DRIVESHAFT CONTAINMENT</b>						
<i>CONDITIONS</i>							

Ref. NHTSA Recall No.:14V-335

Ref. Transport Canada Recall No.:2014-238

## **Customer Complaint:**

On certain MCI 102DL3 and D4505 series coaches equipped with a driveshaft with a compressed length of thirty ( 30 ) inches or less, a steerable trailing axle with caster change, and no electronic stability control, in the event of a driveshaft decoupling from the transmission due to a universal joint failure while the coach is in operation, the potential exists for the driveshaft to escape its containment.

If this occurs, the flailing driveshaft may strike the trailing axle tie rod and components of the trailing axle locking system, potentially causing the trailing axle steering and caster locking mechanisms to unlock. If this occurs and the driver makes a hard braking application resulting in the drive axle brakes locking up, the driver may experience loss of steering control of the vehicle.

## **Cause:**

A flailing driveshaft that decouples from the transmission, escapes its containment, and strikes the trailing axle tie rod and steering and caster locking mechanisms.

## **Corrective Action:**

MCI strongly encourages owners of the coaches listed on Pages 3 and 4 to install the driveshaft containment hoop as soon as possible.



## Parts

Qty.	New P/N	Description
1	03-33-2712	Kit, Drive Shaft Hoop, Secondary <i>Kit contents are:</i>
1	03-33-2711	Hoop Assembly, Drive Shaft
2	03-56-1642	Plate, Tapped, Drive Shaft Protection
8	19-01-1535	Capscrew, 1/2-13 x 1.00, GR 8
1	03-33-2834	Plate
1	19-1-17	Capscrew, 5/16-18 x 1.00
1	19-1-260	Capscrew, 5/16-18 x 3.00
1	19-1-736	Capscrew, 5/16-18 x 3.50
2	19-2-8	Washer, Flat, 5/16
3	19-03-0498	Nut, Lock, 5/16-18
1	19-11-258	Tyrap
a/r		Never Seez, Paste
a/r		Undercoating, Tectyl, 127CG, Grey
4	14-01-1028	Kit, Strap/Bolt ( qty of 2 per kit )



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Service Procedure:



**Read this entire procedure before beginning work.  
Use Safe Shop Practices At All Times.**



**Welding may only be done by an experienced and qualified person. All welding must conform to AWS D1.1 Structural Welding Code-Steel. All applicable instructions and prohibitions must be followed.**

**Prior to any welding on the coach, perform the correct weld disconnect procedure.**



**Refer to the MCI D Series Maintenance Manual, for information regarding the weld disconnect procedure as applicable by VIN.**

The following procedure can be performed using either welding method listed below:

1. SHIELDED METAL ARC WELDING ( SMAW )
  - a. 1/8 rod - 7018, 100A-115A
2. GAS METAL ARC WELDING ( GMAW )
  - a. 0.045 diameter - 70S3, 25V-26V or 300-320 1PM

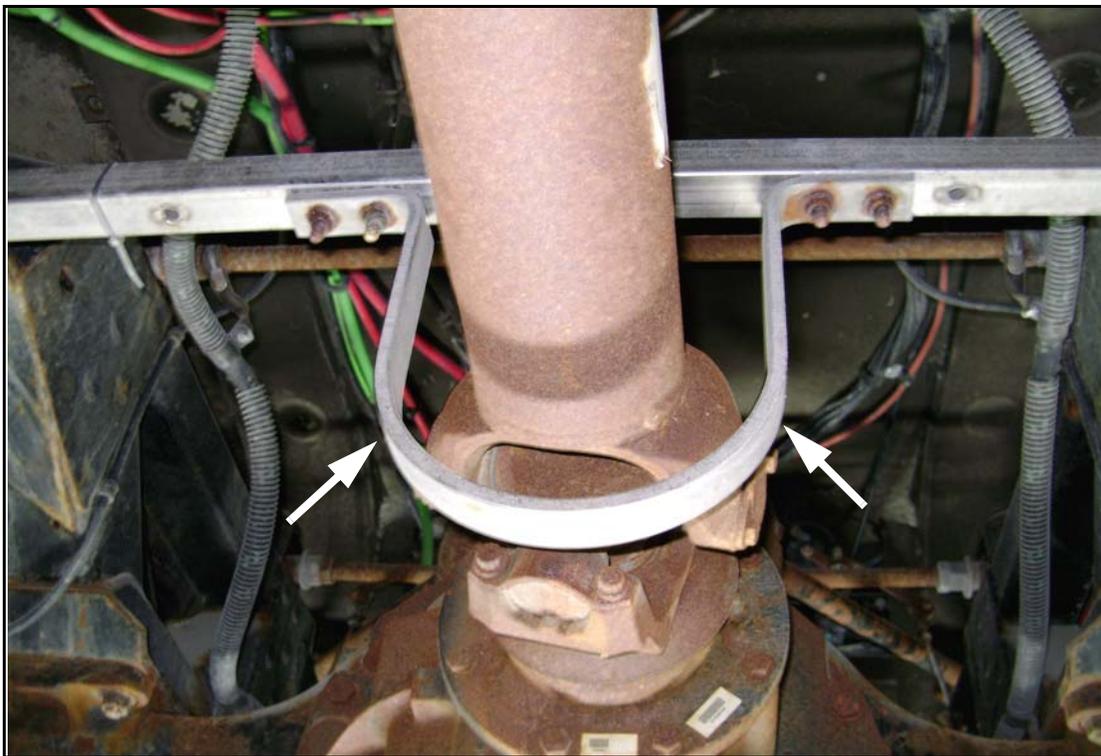
## **REFER TO MANUAL**

*Refer to Section 3 / Exterior Maintenance /Corrosion Prevention, in the MCI D Series Maintenance Manual, for information about corrosion protection on repaired coaches.*

## **REFER TO MANUAL**

*Refer to Section 3 / Body, in the MCI D Series Maintenance Manual, in conjunction with this procedure for jackstand support placement information.*

1. Turn the main battery disconnect switch to the OFF position.
2. Using wheel lifts, lift the coach to the desired work height.
3. Position jack stand supports under the coach frame support points.
4. Locate the driveshaft, installed between the transmission and the drive axle ( refer to Figure 1 ).
5. Remove and retain the mounting hardware on the driveshaft guard ( refer to arrows in Figure 1 ). Remove and retain the driveshaft guard to be re-installed at a later step in this procedure.



**Figure 1.**

## **WARNING**

The driveshaft is heavy and may cause injury if it is not properly supported during the removal process. Secure the weight of the driveshaft prior to removing the straps and bolts.

## **REFER TO MANUAL**

*Refer to Section 14 / Driveshaft, in the MCI D Series Maintenance Manual, in conjunction with this procedure.*

6. Using a marker, label the front and rear orientation of the driveshaft.
7. Secure the weight of the driveshaft. Remove and discard the four ( 4 ) rear yoke driveshaft straps and bolts ( refer to Figure 2 ). Remove and discard the four ( 4 ) front yoke driveshaft straps and bolts ( refer to Figure 2 ). Remove and retain the driveshaft to be re-installed at a later step in this procedure.



**Figure 2.**

8. Locate the bracket, shown as Item 1 in Figures 3 and 4, positioned approximately one ( 1 ) foot away from the crossmember assembly that the driveshaft guard ( Figure 1 ) was mounted to. The vertical face of this bracket will be the reference point utilized to position the tapped plates in Figure 7.



Figure 3.

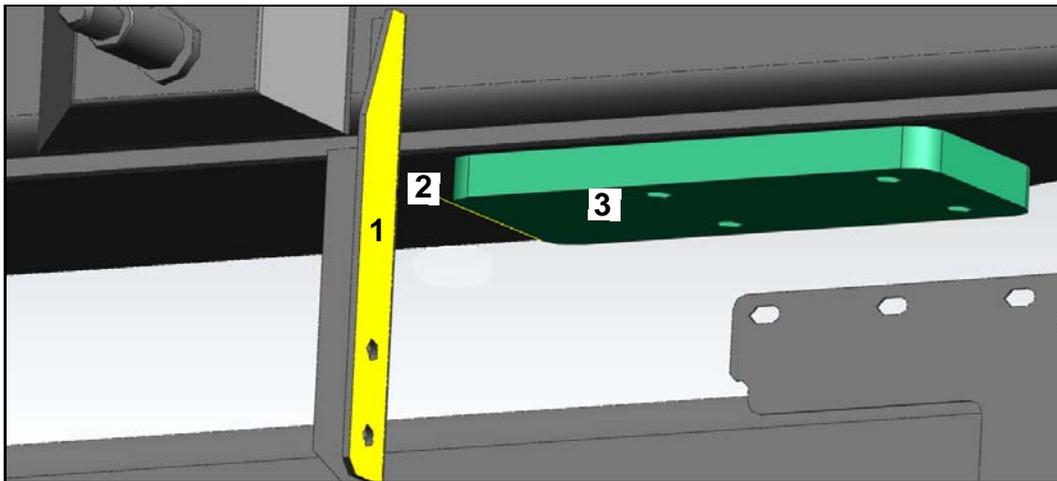


Figure 4.

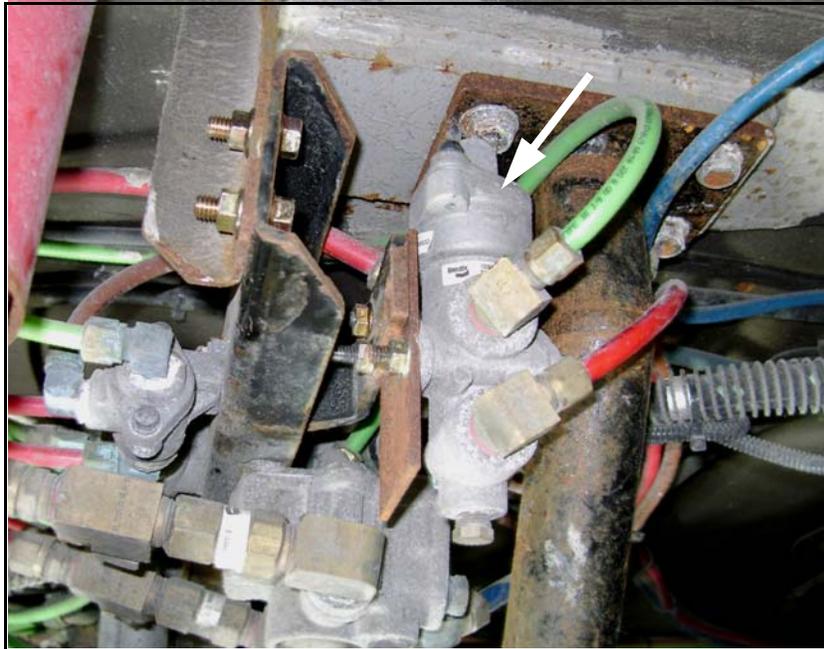
Item	Description
1	Reference bracket
2	0.50 inch dimension between the bracket vertical face and the edge of the tapped plate
3	Tapped plate, p/n 03-56-1642

## NOTICE

*If the coach is equipped with gladhands, perform Steps 9 to 12.*

*If the coach is not equipped with gladhands, proceed to Step 13.*

9. Locate and remove the protection valve ( refer to Figure 5 ).



**Figure 5. Protection valve ( gladhands equipped ).**

10. Align the indicated hole ( Item 3 in Figure 6 ) in plate, p/n 03-33-2834, with the existing hole in the welded bracket. Secure with hardware.
11. Using a 0.343 drill bit and the plate as a template, drill a hole through the welded bracket ( Item 2 in Figure 6 ).
12. Re-install the protection valve using the hardware provided in the Parts list. Re-orient fitting and airlines and secure with a tyrap, p/n 19-11-258.

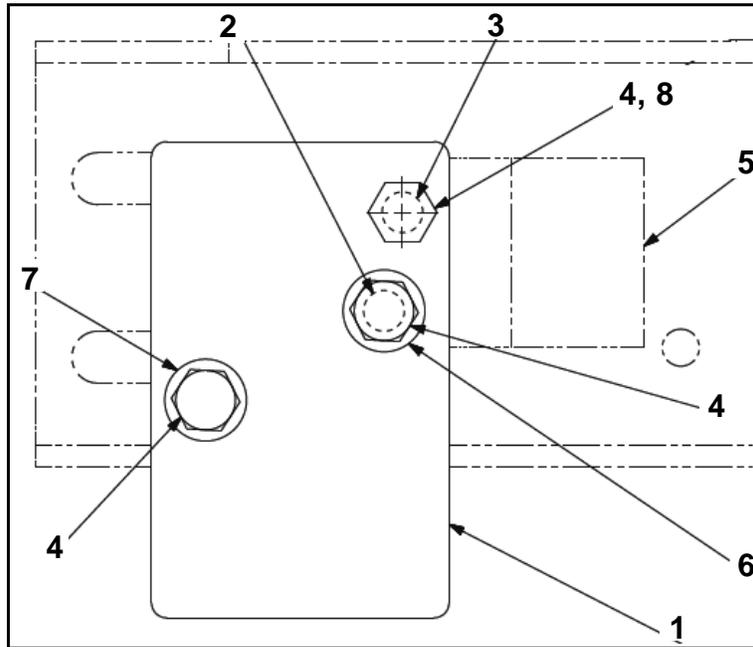


Figure 6.

Item	Description
1	Plate
2	Drill a 0.343 inch hole at this location
3	Hole for alignment
4	Lock nut, p/n 19-03-0498
5	Welded bracket reference
6	Capscrew, p/n 19-1-736
7	Capscrew, p/n 19-1-260
8	Capscrew, p/n 19-1-17



13. Position the tapped plate, p/n 03-56-1642, on the bogie structure as outlined in Figures 7 and 8. Mark a chalk outline around the entire plate. Remove plate. Repeat step to opposite side of the coach.
14. Using a wire brush, thoroughly clean the surface area of dirt and grease from the location(s) where the tapped plate(s) will be welded.

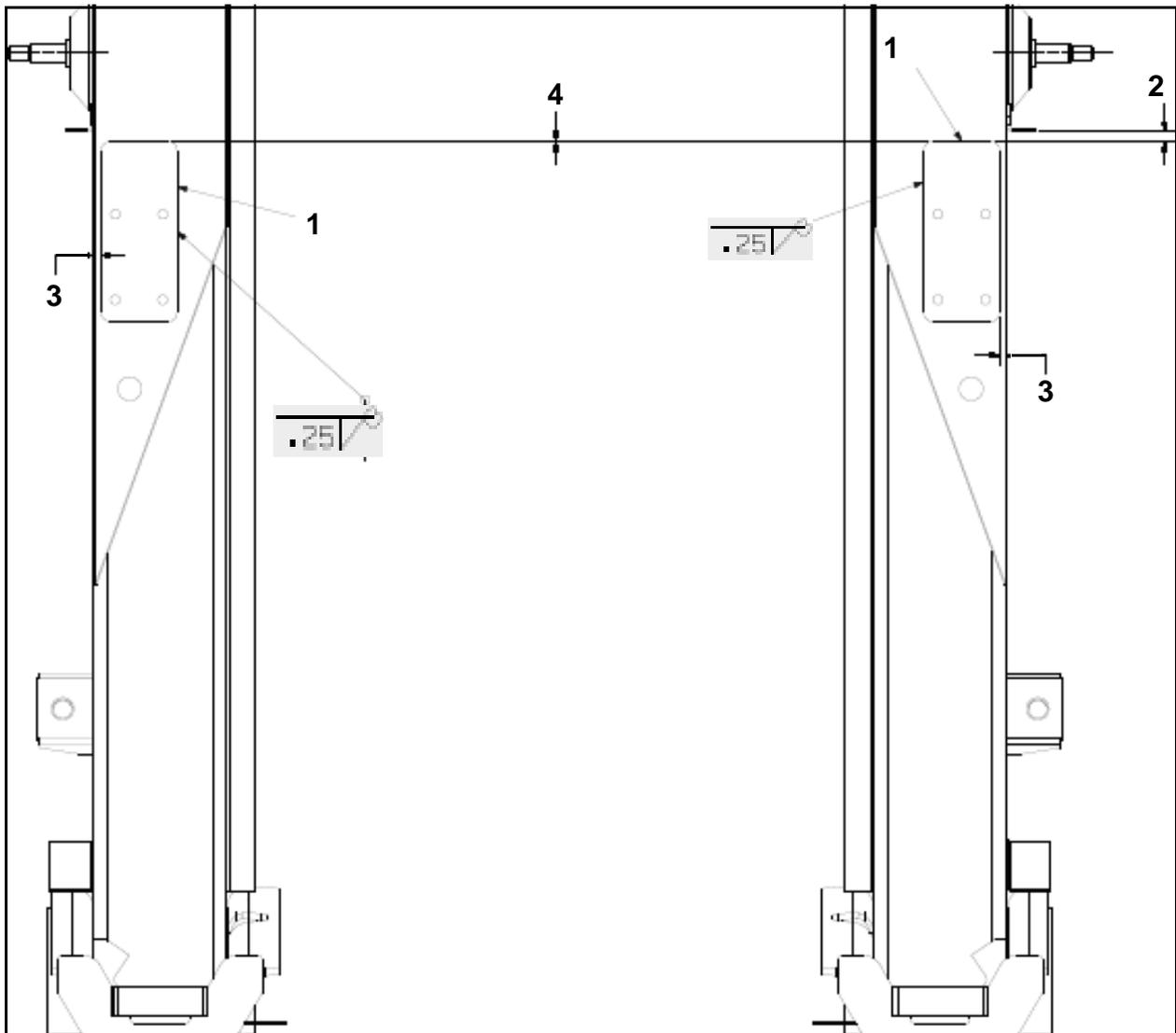
## NOTICE

***Ensure full surface contact between the tapped plate and the bogie structure.***

15. Tack weld the tapped plate on both sides of the coach. Orient the driveshaft hoop assembly, p/n 03-33-2711, with the holes in the tapped plates to ensure correct installation. Place the driveshaft hoop assembly aside to be re-installed at a later step in this procedure.
16. Weld the plate according to the welding symbol in Figure 7, using the following method,
  1. SHIELDED METAL ARC WELDING ( SMAW )
    - a. 1/8 rod - 7018, 100A-115A
  - or,
  2. GAS METAL ARC WELDING ( GMAW )
    - a. 0.045 diameter - 70S3, 25V-26V or 300-320 1PM
17. Repeat Step 16 to opposite side of coach.

## WARNING

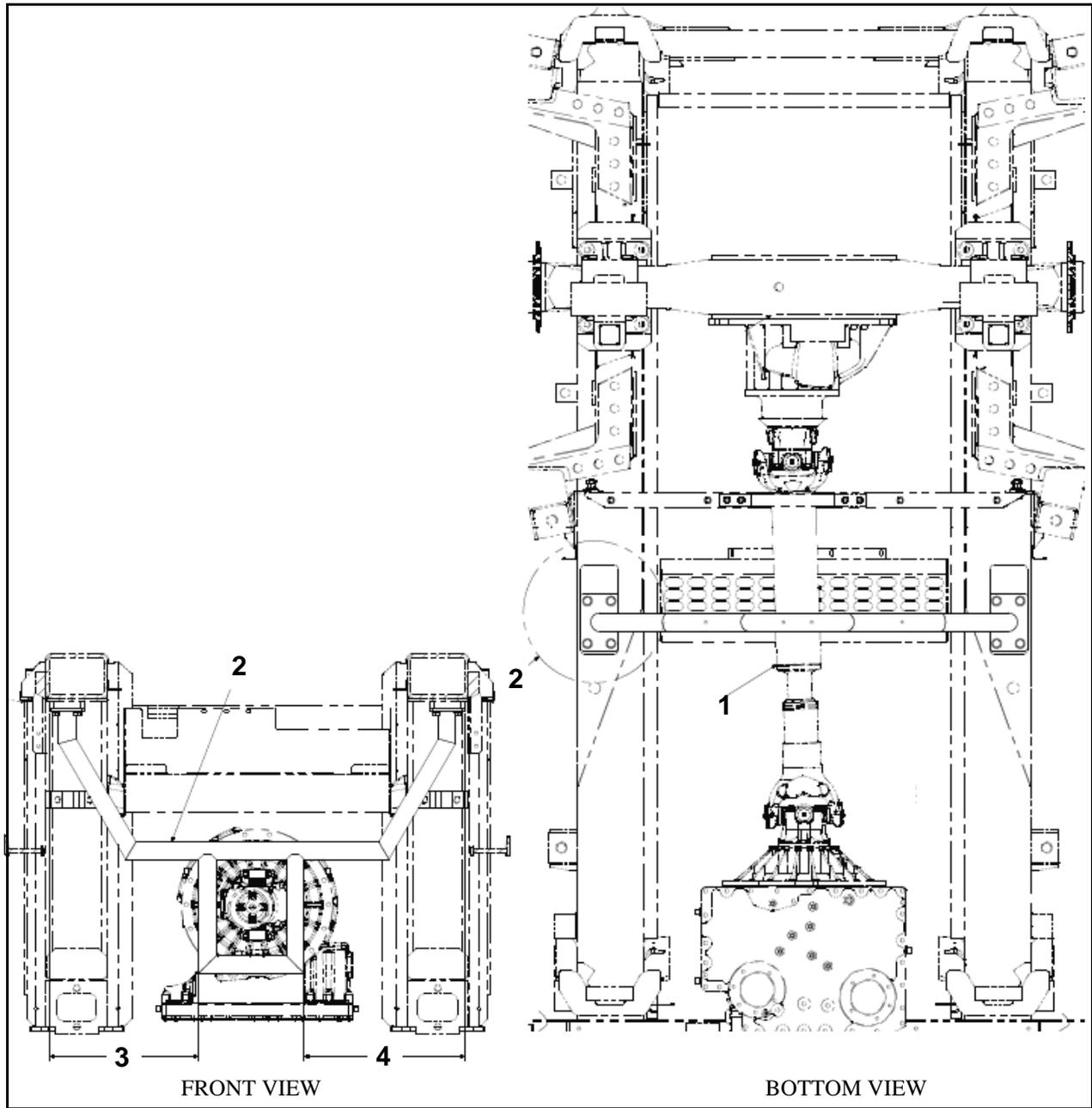
**Allow sufficient time for weld to cool off.**



**Figure 7. Plate installation.**

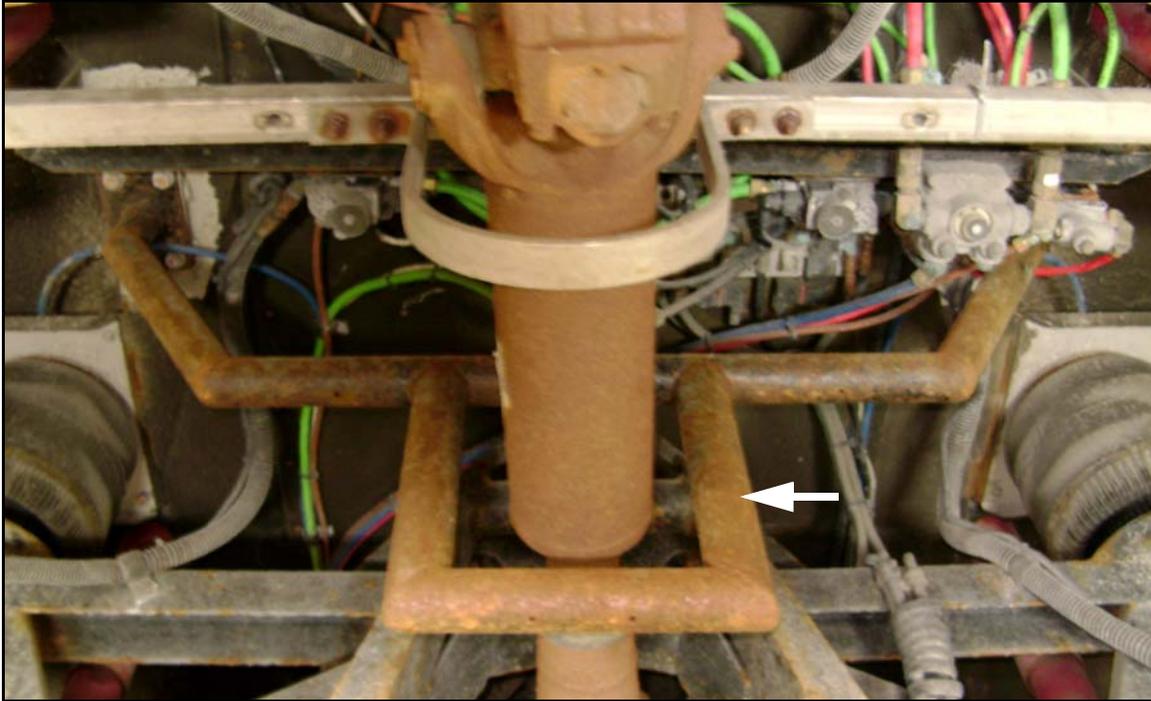
Item	Description
1	Plate, tapped
2	0.50 inch
3	0.38 inch
4	0.00 inch

18. Orient the driveshaft hoop assembly, p/n 03-33-2711, as shown per the views and dimensions provided in Figure 8.
19. Apply Never Seez to the threads of the capscrews, p/n 19-01-1535. Using the capscrews, secure the hoop assembly to the tapped plates welded in Step 16. Torque capscrews to 75-80 ft-lbs.



**Figure 8. Hoop assembly installation.**

Item	Description
1	Driveshaft
2	Hoop Assembly, Driveshaft
3	16.93 inch
4	18.30 inch

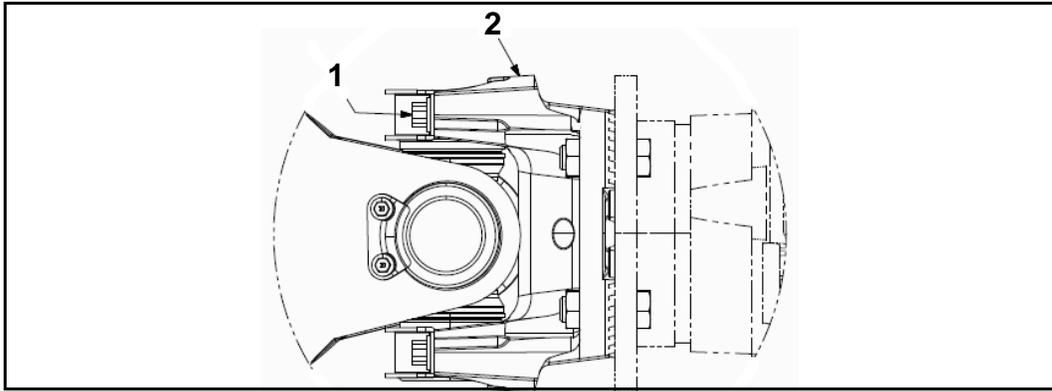


**Figure 9. Driveshaft hoop assembly installation.**

## **WARNING**

**The driveshaft is heavy and may cause injury if it is not properly supported during the reinstallation process. Secure the weight of the driveshaft until it has been fully installed.**

20. Orient the driveshaft per the labeling earlier in this procedure. Insert the driveshaft through the lower opening of the hoop assembly as shown in Figure 9. Using two ( 2 ) strap / bolt kits, p/n 14-01-1028, attach the driveshaft to the yoke flange on the transmission ( refer to Figure 10 ). Torque to 115-125 ft-lbs.
21. Using two ( 2 ) strap / bolt kits, p/n 14-01-1028, attach the opposite end of the driveshaft to the yoke flange on the drive axle ( refer to Figure 10 ). Torque to 115-125 ft-lbs.



**Figure 10. Yoke flange connection.**

Item	Description
1	Strap / bolt kit
2	Yoke flange

22. Grease the u-joints and shaft.

23. Using the existing mounting hardware, re-install the driveshaft guard ( refer to arrows in Figure 1 ). Torque hex nut to 15-25 ft-lbs. Tighten jam nut to secure.

24. Using a brush and tectyl, apply a coat on the top surface of the reworked area.

*Procedure Complete.*



Mail or fax the completed limited warranty claim form and verification form to MCI's warranty department, or photocopy and mail to:

MCI Fleet Support  
Attn: Warranty Department  
7001 Universal Coach Drive  
Louisville, KY 40258  
Fax Number 1-800-360-8886

to receive credit for the hours used to complete this task. Contact the MCI Fleet Support Technical Center at 1-800-241-2947 for any further information.

***Field Change Program Conditions:***

The parts required for this change will be supplied without charge.

A labor allowance of 2.0 hours will be granted for the procedure of installing the specified part(s) in this bulletin on applicable D Series coaches.

This labor allowance will be credited to your MCI Fleet Support Parts Account on receipt of the attached "MCI Field Change Program Verification Form" and a "Warranty Claim Form" as detailed in your Owner Warranty manual to MCI's Warranty department. A "MCI Field Change Program Verification Form" needs to be submitted for each VIN affected. Photocopy the attached "MCI Field Change Program Verification Form" as required for the number of affected coaches in your fleet.

Motor Coach apologizes for any inconvenience resulting from this campaign, but urges you to implement this change as soon as possible.

Sincerely,

Motor Coach Industries



Reliability Driven™

## MCI FIELD CHANGE PROGRAM (FCP) VERIFICATION

CONTACT INFORMATION	
CUSTOMER NAME: _____ <small>(PLEASE PRINT)</small>	
FCP INFORMATION – ONE FORM PER UNIT	
FCP#: _____	Coach Model _____ Model Year _____
COACH SERIAL #: <small>(At least the last 5 digits)</small>	DATE COMPLETED __ / __ / __
MILEAGE:	
<b>IMPORTANT: TO RECEIVE CREDIT FOR ANY ALLOWABLE LABOR CHARGES, THIS VERIFICATION FORM MUST BE RETURNED TO MCI UPON COMPLETION OF THE FCP.</b>	
SUBMITTED BY: <small>(Please Print)</small> _____ DATE __ / __ / __	
TITLE: <small>(Please Print)</small> _____	
SIGNATURE: _____	
COMMENTS:	

FAX TO: 800-360-8886

**MAILING ADDRESS:**

**MOTOR COACH INDUSTRIES  
ATTN: WARRANTY DEPT.  
7001 UNIVERSAL COACH DRIVE  
LOUISVILLE, KY 40258**

MCI part # 03-15-7738C