



# Service Bulletin No. 277B

<b>MODEL</b> D4500 / D4505 Series Coaches	<b>TYPE</b> Field Change Program	<b>SECTION/GROUP</b> 12--Suspension	<b>DATE</b> Dec 17, 2007
<b>SUBJECT</b> FIXED TAG SUSPENSION MODIFICATION			
<b>CONDITIONS</b> CUSA D4500 / D4505 Series Coaches			

**THIS BULLETIN SUPERCEDES FIELD SERVICE BULLETIN 277 IN IT'S ENTIRETY.**

Ref. NHTSA Recall No.: 06V-480 UPDATED

### **Customer Complaint:**

Customers may experience a possible interference between the drive shaft mounting hardware and the tag axle structure if the vehicle is operated with the tag axle air springs completely collapsed.

### **Cause:**

The interference is due to the location of the transmission output yoke above the fixed (non-steerable) tag axle on D4500 / D4505 coaches equipped with a S60 engine and ZF transmission.

### **Corrective Action:**

MCI strongly encourages customers operating coaches equipped with a S60 engine, ZF transmission and a fixed tag axle to install the parts referenced in this bulletin to limit the suspension travel.

As a result, MCI advises that owners of D4500 / D4505 model coaches between the range of, and including, unit numbers 56555 to 56577 and 57147 to 57166 implement the specified steps in this procedure.

### **Parts**

<b>Qty.</b>	<b>Old P/N</b>	<b>New P/N</b>	<b>Description</b>
1		08-18-1200	Kit, Shim-Engine Mount <i>Kit Contents Are:</i>
2		08-18-1198	Shim
2		08-18-1199	Shim
2		19-01-1648	Capscrew, 7/8-14 UNF x 6
2		8G-18-154	Capscrew, 3/16-16 UNF x 5
2		19-02-0393	Washer, Flat
2		19-3-479	Nut, Lock, 7/8-14 UNF
2		19-3-480	Nut, Lock, Hex, 3/4-16 UNF
1		12-04-1082	Kit, Spacers-Tag Suspension <i>Kit Contents Are:</i>
2	12-04-1079		Plate Assembly
2		12-04-1160	Plate Assembly
2		12-04-1083	Spacer, 1.00 inch
4		19-1-240	Capscrew, 5/16-18 x 2.25
12		19-2-26	Washer, Lock, 5/16
16		19-2-8	Washer, Flat, 5/16
4		19-3-20	Nut, Hex, 5/6-18
2		12-04-1074	Spacer
4		12G-1-5	Bumper, Rubber
4		12G-1-6	Spacer, Bumper Block
2		19-01-1074	Capscrew, 5/16-18 x 1.25

### **Service Procedure:**

#### **General notes**

Read this entire procedure before beginning work.

**Use Safe Shop Practices At All Times.**

1. Turn the main battery disconnect switch to the “ OFF “ position. Chock both sides of the tires.
2. Open the engine compartment doors. Locate the engine remote and position the ENGINE RUN and ENGINE START to the OFF position.
3. Locate the engine cradle mounting hardware shown in Figure 1 ( four locations ).
4. Remove and discard the existing locknuts only from the four locations shown in Figure 1.



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**NOTE**

***DO NOT remove the capscrews at this time as they are required to maintain orientation alignment between the engine and the engine cradle.***

***DO NOT disconnect any engine components.***

5. Position a jack under the engine, in a safe location that can support the load of the engine and transmission without any structural damage.
6. In a safe, controlled manner, jack up the engine enough to allow for spacer installation ( approximately one inch ).



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**NOTE**

***The engine must be supported to avoid component damage.***



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**NOTE**

***Remove and replace ONE fastener at a time.***

7. Remove and discard the existing fastener ( and washer if applicable ). Install appropriate shim ( p/n 08-18-1198 or 08-18-1199 ) and new mounting hardware provided in Parts list. Tighten nut hand tight only.
8. Repeat Step 7. to next fastener.



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**NOTE**

***The exhaust pipe may require removal to access the rear, roadside fastener. If removal is required, re-install exhaust pipe after completion of shim and mounting hardware installation.***

***Ensure that the exhaust pipe temperature has cooled down prior to handling.***

9. Upon completion of installing the four shims and mounting hardware, lower the jack removing all stress from the engine. Remove the jack from under the coach.
10. Torque 19-3-480 to 285–385 lbs.-ft. Torque 19-3-479 to 451–546 lbs.-ft.



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**NOTE**

***Procedure Steps 11. to 17. are performed with the coach on a lift. Position jackstands at the front and rear frame support points, according to Figure 1, to ensure that the coach is securely supported before attempting work underneath the coach. Support the tag axle.***

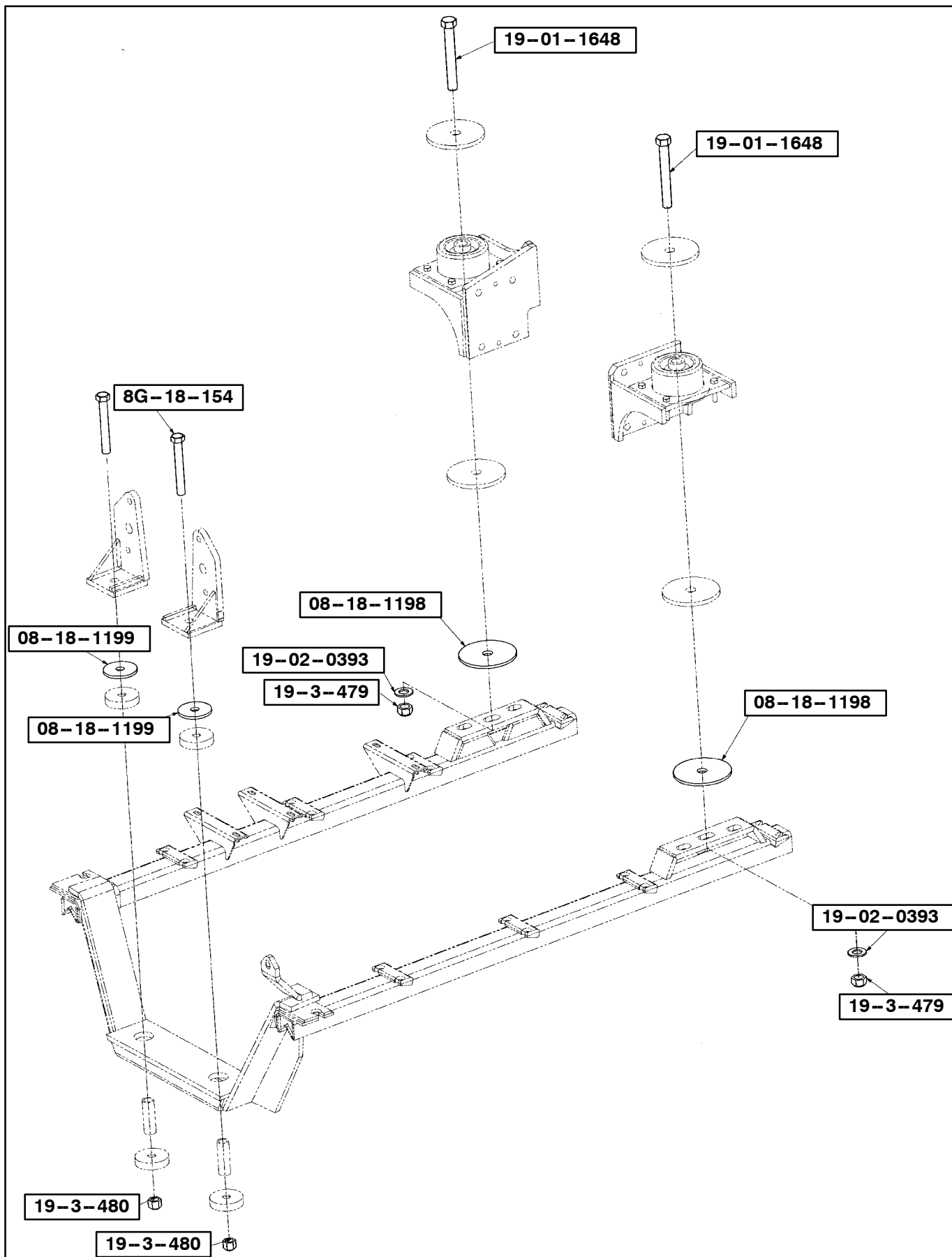


Figure 1.



## NOTE

Steps 11. to 17. will be performed with the coach on a lift.



## NOTE

**PRIOR TO lifting the coach, exhaust all coach air. Locate the tag axle dump valves in the curbside, rear service compartment. Turn the tag axle dump valves to the OFF ( vertical ) position, completely dumping the tag axle air springs.**

**Dump the air from the tag axle suspension and raise coach to desired height. Position jackstands at the front and rear frame support points, according to Figure 2, to ensure that the coach is securely supported before attempting work underneath the coach.**

Support the tag axle.



## REFER TO MANUAL

Refer to *Lifting and Towing*, in the MCI Maintenance Manual, for the basic rules, procedures and safety precautions that must be followed before a coach is to be lifted.

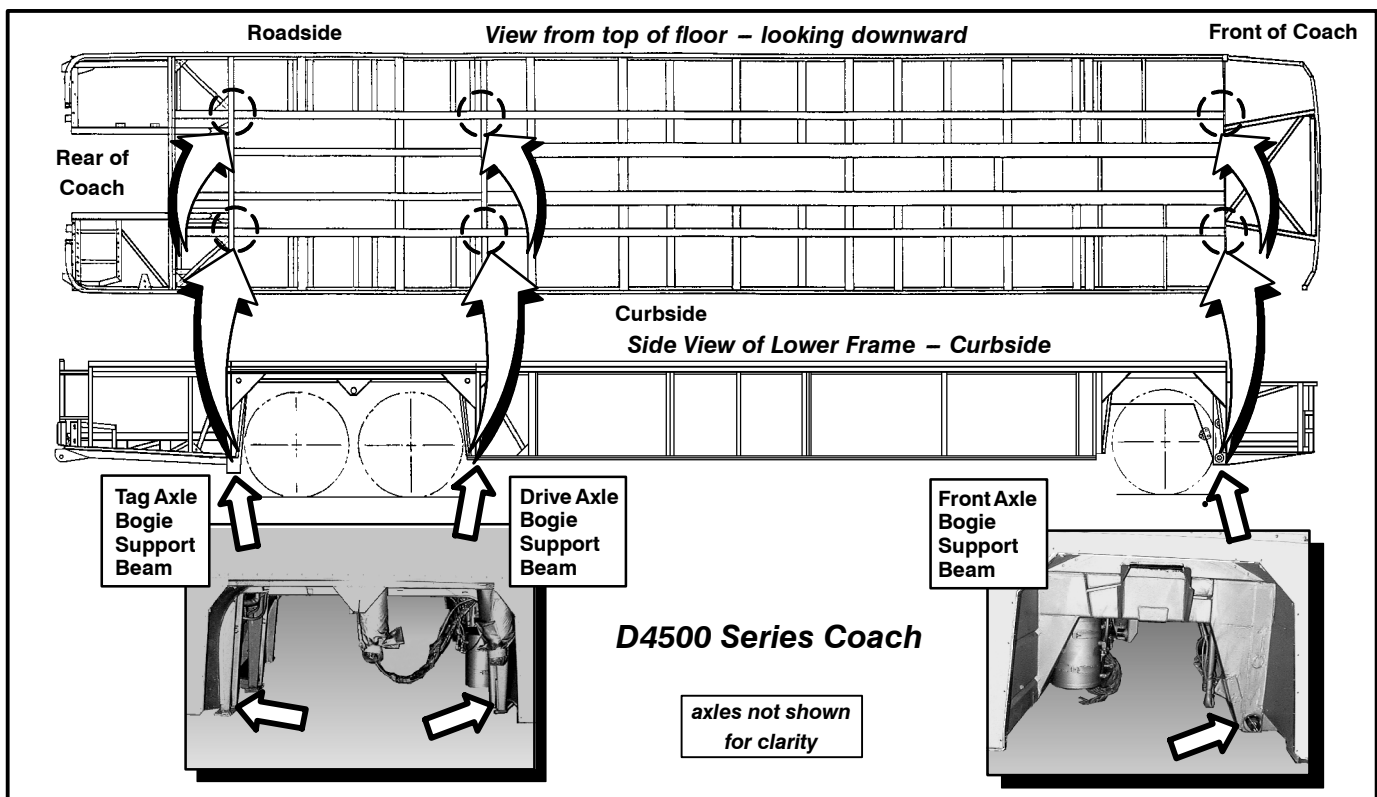


Figure 2. - D4500 Under Frame Jackstand Support Points

11. Locate the four existing rubber bumpers on the tag axle suspension assembly ( Figures 3 and 5 ).

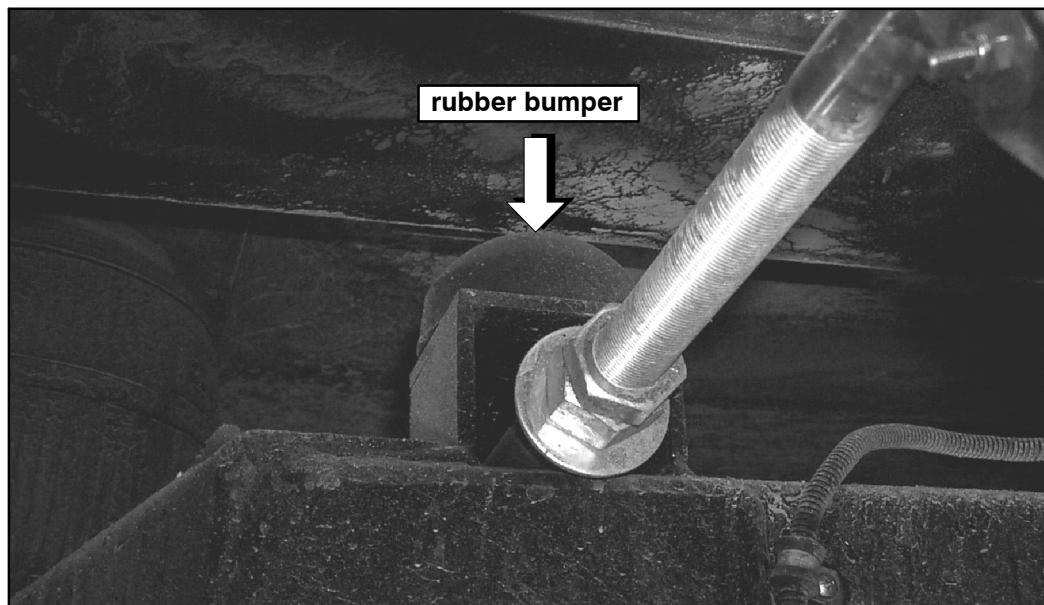


Figure 3. Reference photo.



## NOTE

***Remove and replace ONE bumper assembly at a time.***

12. Remove existing bumper assembly and discard. DO NOT re-use existing bumper.



## NOTE

***If necessary, use a reciprocating saw to cut the threads on the existing bumper assembly, to aid in removal.***

***Assemble with Never-seize.***

13. Disk sand the mounting surface in preparation of good reassembly.  
14. Install the new rubber bumper ( p/n 12G-1-5 ) and bumper block spacer ( p/n 12G-1-6 ) ( Detail B / Figure 5 ).



## NOTE

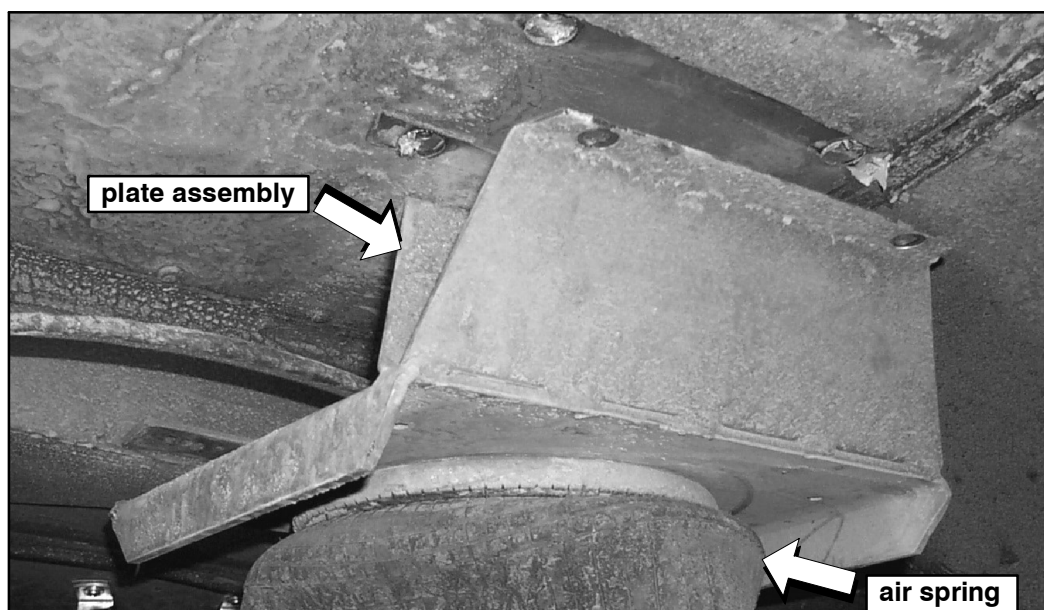
**Always use new fastener hardware when installing / re-installing suspension components on the front, drive and tag suspension systems.**



## CAUTION

**DO NOT attempt repair or removal of the air spring unless the air is completely released from the spring. Use caution when working near an inflated air spring.**

15. Remove and discard the plate assembly and mounting hardware ( Figures 4 and 5 ).



**Figure 4. Reference photo.**

16. Install the new plate assembly ( p/n 12-04-1160 ) and spacer ( p/n 12-04-1083 ) in the locations shown in Figure 5., using the new plate assembly mounting hardware provided in the Parts list. Torque nut ( p/n 19-3-314 ) to 18–22 ft.-lbs.
17. Align and position the spacer ( p/n 12-04-1074 ) in the location shown in Figure 5.
18. After the coach has been lowered to the ground and lifts removed, return the tag axle dump valves to the ON ( horizontal ) position. Close the curbside, rear service department door.

*Procedure complete.*

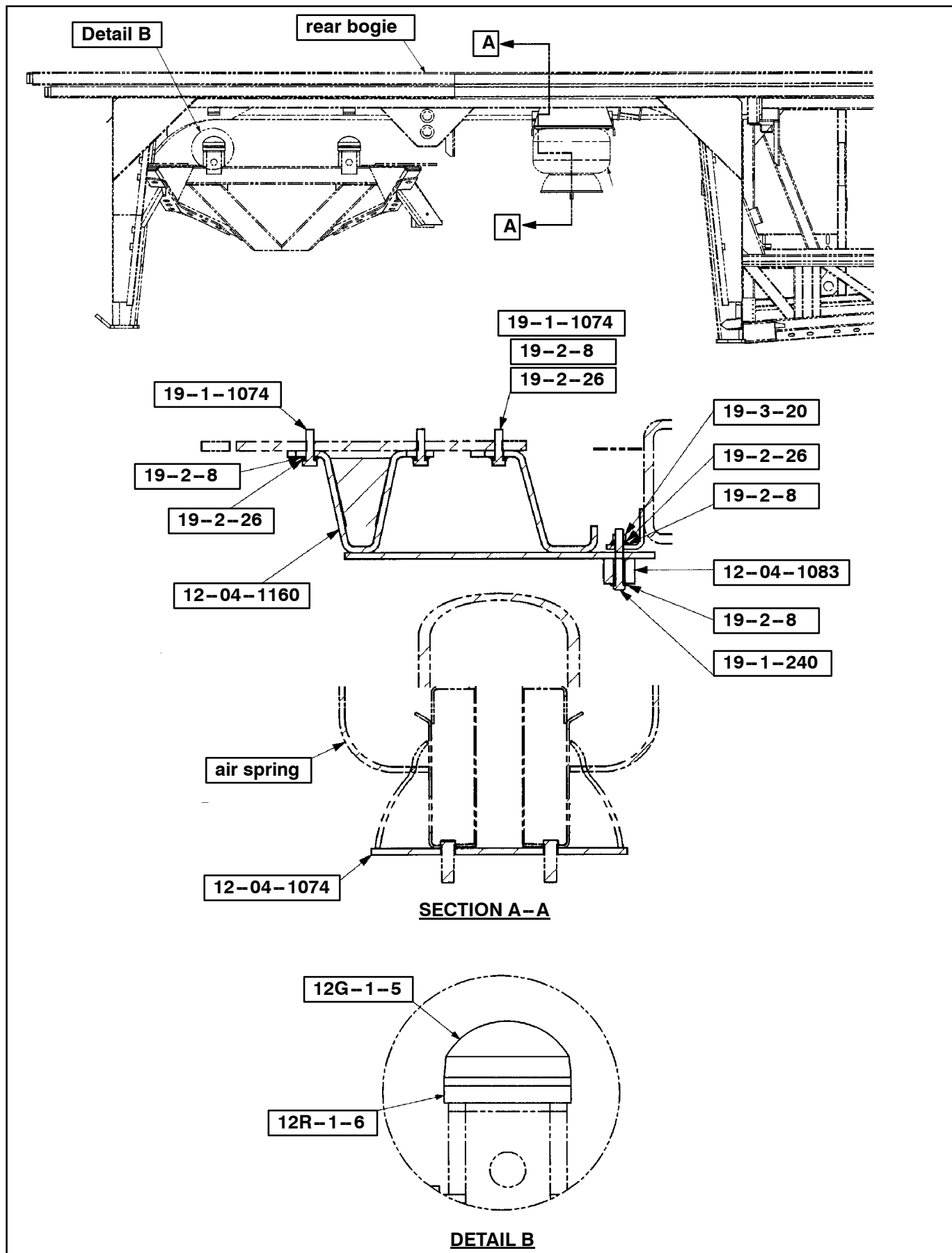


Figure 5.

Mail or fax the completed warranty claim form to MCI's warranty department, or photocopy and mail it 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 5.5 hours will be granted, for the procedure of installing the specified part(s) in this bulletin on D4500 / D4505 model coaches.

This labor allowance will be credited to your MCI Fleet Support Parts Account on receipt of a "Warranty Claim Form" as detailed in your Owner Warranty manual.

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*  
U.S. and Canadian Service Departments.