March 2, 2015

IMPORTANT SAFETY RECALL
This notice applies to your vehicle(s) [«UNIT»]

«CUST_NAME»
ATTENTION: TECH SERVICE DEPT/MAINT
«ADDRESS_1»
«CITY», «STATE» «ZIP»

SUBJECT: SAFETY RECALL: FRONT AXLE BRAKE HOSE ROUTING
Ref.: **NHTSA # 15V-001**
Transport Canada # 2015-009
MCI Service Bulletin 420

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 2013-2015 MCI J model coaches. MCI has discovered that the affected coaches have the potential for the front (steering) axle brake hose to contact and rub against the tire or the upper suspension control arm. If this occurs, the rubbing may wear a hole in the brake hose resulting in loss of air pressure in the front brake chamber, which could result in a crash causing personal injury. Please see the enclosed MCI Service Bulletin 420 for additional information.

The vehicles that are subject to this notice are the following model year 2013-2015 MCI J model coaches (last five VIN digits):

66554	**66748**	**66796 to 66798**	**66823 to 66824**
66826	**66841 to 66842**	**66844**	**66960**
67000 to 67137			

MCI is conducting a recall to repair the above vehicles at no cost to you. MCI estimates that it will take approximately 1 to 2.3 hours to do the necessary repairs, depending on the applicable coach. Please see the enclosed MCI Service Bulletin 420 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 420

Reliability Driven™

Service Bulletin No. 420

MODEL	TYPE	SECTION/GROUP	DATE
J4500 Series	Field Change Program	1-Front Axle	March 2, 2015

SUBJECT

FRONT AXLE BRAKE HOSE ROUTING

CONDITIONS

Ref. MCI NHTSA Recall No.:15V-001

Ref. MCI Transport Canada Recall No.:2015-009

Customer Complaint:

Motor Coach Industries ("MCI") has become aware that the J4500 series coaches listed in the table below may have the potential for the front (steering) axle brake hose to contact and rub against the tire or the upper suspension control arm.

If this occurs, the rubbing may wear a hole in the brake hose resulting in loss of air pressure in the front brake chamber. Loss of air pressure in the front brake chamber may result in reduced performance and increases the risk of a crash or personal injury.

Cause:

The cause of the defect is the orientation and clamping of the front axle brake hose.

Corrective Action:

MCI strongly urges owners of the coaches listed below to have the front axle brake hose routing work performed as soon as possible.

66554	66748	66796 to 66798	66823 to 66824	66826
66841 to 66842	66844	66960	67000 to 67137	

Parts for Coaches Prior to Unit Number 67000

Qty.	New P/N	Description
1	26-04-0044	Kit, Front Brake Hose Routing
		Kit Contents are:
2	03-53-1618	Bracket, Clamp Mount
2	04-20-1726	Hose Assy, Brakes, Front
2	19-10-1956	Fitting, 45 degree
16	19-11-258	Tyrap
a/r	21-7203-2	Sealant, Pipe Fitting
1	20-04-0028	Gauge, Front Brake Line

Parts for Coaches Effective with Unit Number 67000

Qty.	New P/N	Description
1	26-04-0045	Kit, Front Brake Hose Routing
		Kit Contents are:
2	04-20-1726	Hose Assy, Brakes, Front
16	19-11-258	Tyraps
a/r	21-7203-2	Sealant, Pipe Fitting
1	20-04-0028	Gauge, Front Brake Line

Service Procedure:

WARNING

Read this entire procedure before beginning work.

Use Safe Shop Practices At All Times.

WARNING

To avoid personal injury, use caution when loosening the wheel nuts and when lifting the wheel off the hub as wheel and tire assemblies weigh more than 200 lbs.

1. Turn the main battery disconnect switch to the OFF position.
2. Apply the park brake.
3. Chock both sides of the rear tires.
4. Position a jack under the front jack pad, using the locations shown in Figure 1, and partially raise the coach with the tire still contacting the ground.

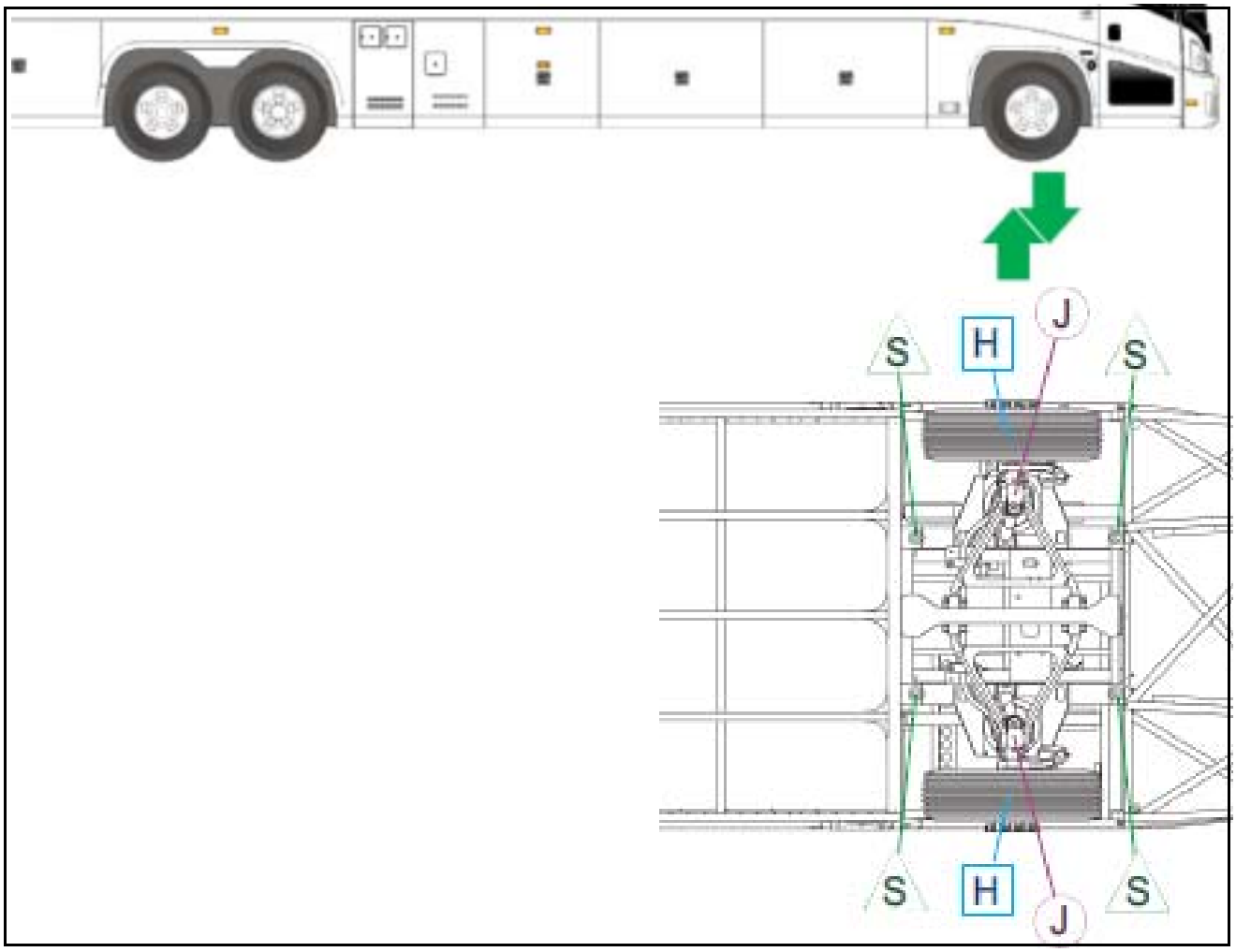

Figure 1.

Item	Figure 1 Description
J	Jacking Point
S	Safety Stand (Primary locations)
H	Hoisting Points (Reference only)

5. Before the tire is completely off the ground, partially loosen the flanged wheel nuts.

WARNING

To avoid personal injury, use caution when loosening the wheel nuts and when lifting the wheel off the hub as wheel and tire assemblies weigh more than 200 lbs.

6. Operate the jack to raise the front wheel off the ground. Position a jackstand (safety stand) under the front axle bogie support point shown in Figure 1.
7. Remove and retain the wheel nuts. Remove the wheel from the front axle hub and place aside to be re-installed at a later step in this procedure.
8. Enter the coach cabin. Apply and hold a service brake application to drain the air from the system.

NOTICE

Steps 9. to 34. are applicable to the following unit numbers 66554, 66748, 66796 to 66798, 66823 to 66824, 66826, 66841 to 66842, 66844, 66960.

Steps 35. to 54. are applicable to the following unit numbers 67000 to 67137. Welding is not required for unit numbers 67000 to 67137.

9. Prior to any welding on the coach, perform the weld disconnect procedure listed below.

WARNING

The following information must be read before beginning any welding. The prohibitions and requirements must be followed to prevent personal injury and damage to electrical components. Also follow any welding instructions and cautions associated with the specific component being repaired.

Welding may only be performed 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.

Position ground contacts and barriers as close as possible to the weld area to protect components (wiring, brake lines, hydraulic lines, etc.) from heat, contact by weld splatter, and arcing.

PRE-WELDING DISCONNECTION

Introduction

The following steps must be followed before performing any welding activities on the coach:

- Ensure the area is safe for hot work activities.
- Follow the disconnect procedure outlined in later sections to prevent damage to the coach harnesses and electrical components.
- Avoid welding in close proximity to any of the electronic modules or harnesses.
- If welding needs to be performed close to the electronic modules or harnesses, these should be protected by using a fire blanket or heat-resistant material.

In the battery compartment, disconnect the main battery, in the order given:

Figure 2. Battery compartment.

a. Turn the Main Disconnect Switch (MDS) OFF.
b. Turn all circuit breakers to the OFF position.
c. Disconnect all battery and equalizer cables.

NOTICE

The coach has three Power Management Modules (PMMs): PMM1 (located in the front junction box), PMM2 (located on the ceiling in the drag link compartment, below front junction box), and PMM3 (located in the rear junction box). Each PMM has four connectors (as shown below) that all must be disconnected prior to the welding process.

The power connector (Figure 3, Item 1) must be disconnected first before the remaining three connectors can be disconnected.

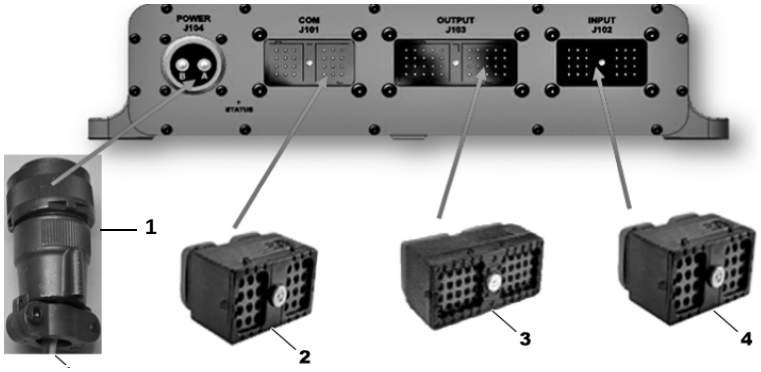

Figure 3. Typical PMM Connector Configuration.

Item	Figure 3 Description
1	Power Connector (J104)
2	COM DRC16–24SA (J101)
3	OUTPUT DRC16–40S (J103)
4	INPUT DRC–16–24SB (J102)

In the front junction box, in the order given:

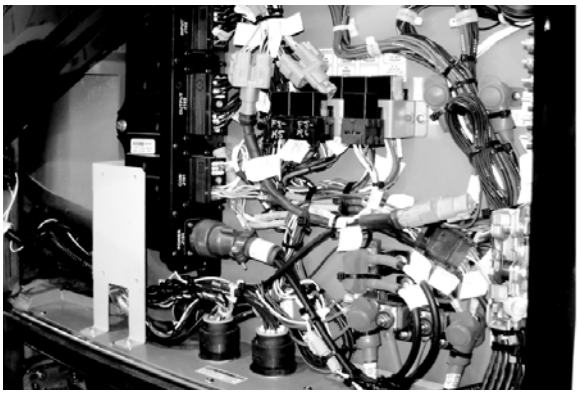

Figure 4. Front junction box.

a. Disconnect all connectors from PMM1.
b. Disconnect all three dash interface connectors.

In the drag link compartment (below the front junction box):

Figure 5. Drag link compartment.

a. Disconnect all connectors from PMM2.

In the rear junction box, mounted to top of #3 baggage bay compartment, in the order given:

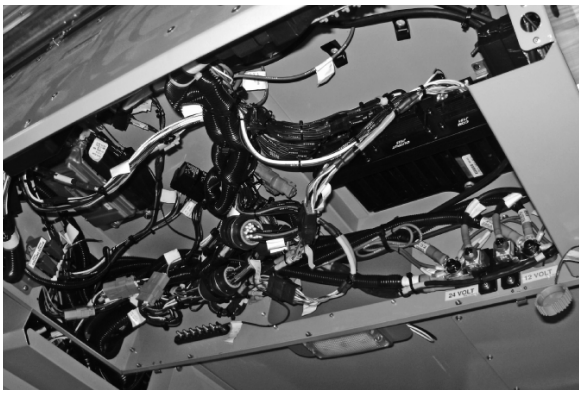

Figure 6. Rear junction box.

a. Disconnect all connectors from PMM3.
b. Disconnect all connectors from the transmission Electronic Control Unit (ECU).
c. Disconnect all connectors from the engine Electronic Control Module (ECM).
d. Disconnect all connectors from the Antilock Brake System (ABS) module.

POST-WELDING CONNECTION

WARNING

To prevent personal injury, exercise extreme caution at power-up.

a. When welding is complete, reconnect all items in the ***exact reverse order*** from disconnection. Reconnection order is critical to safety.

NOTICE

When re-connecting the PMMs, the power connector (Figure 3, Item 1) must be connected last, after the remaining three connectors are connected.

b. Verify all connections are complete and secure.
c. Warn all personnel in the area that the power is going to be switched on.
d. Ensure all personnel are clear of the immediate area.
e. Switch the main battery disconnect ON.
f. Perform a systems check and test drive before returning the coach to regular service.

10. Cut and discard the tyraps securing the ABS sensor to the front brake hose assembly. Disconnect the front brake hose assembly from the front axle brake chamber port. Discard the existing front brake hose assembly. Retain the mounting hardware to be re-installed at a later step in this procedure.
11. Position the new clamp mount bracket, p/n 03-53-1618, on the bogie channel as outlined as Item 1 / Figure 8. Mark a chalk outline around the entire bracket. Remove bracket. Repeat step to opposite side.
12. Using a wire brush, throughly clean the surface area of dirt or grease from the installation area where the brackets will be welded.
13. Weld the clamp mount bracket according to the weld symbol in Figure 7, using the following method,

SHIELDED METAL ARC WELDING (SMAW)

Stainless Steel - Alloy type, 309L / 1/8 inch, 80A-100A

or,

GAS METAL ARC WELDING (GMAW)

Stainless Steel - Alloy type, 309L / 0.035 Dia., 300-350 IPM, 23V-25V.

14. Repeat Step 13 to opposite side of coach.

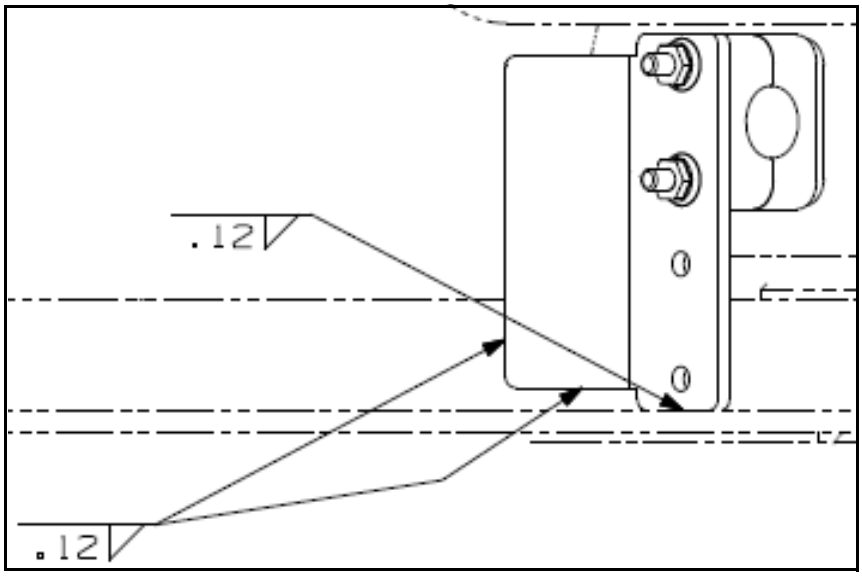

Figure 7. Clamp mount bracket weld symbols.

WARNING

Allow sufficient time for weld to cool off.

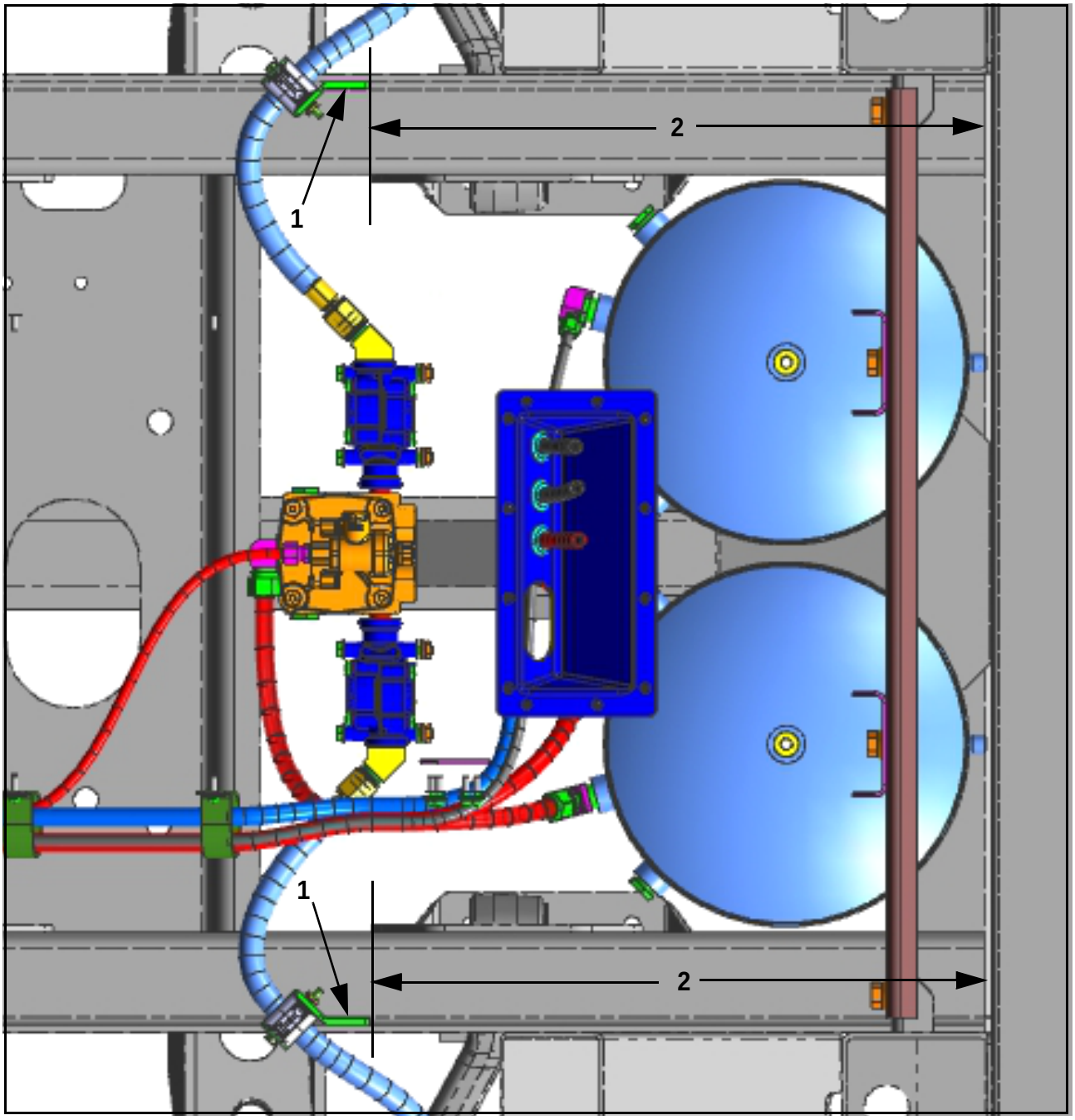

Figure 8. Clamp mount bracket location.

Item	Figure 8 Description
1	clamp mount bracket, p/n 03-53-1618
2	20.75 inch

15. Using a square or straight edge, ensure that the geometry of the first brake hose clamp is parallel to the center of the kingpin (refer to Figures 9 and 11)

NOTICE

If adjustment is required, loosen (do not remove nut from stud) the nylock nut on the airspring assembly and orient to achieve the brake hose clamp parallel to the center of the kingpin (refer to Figure 9). Torque nylock nut to 40-50 ft-lbs.

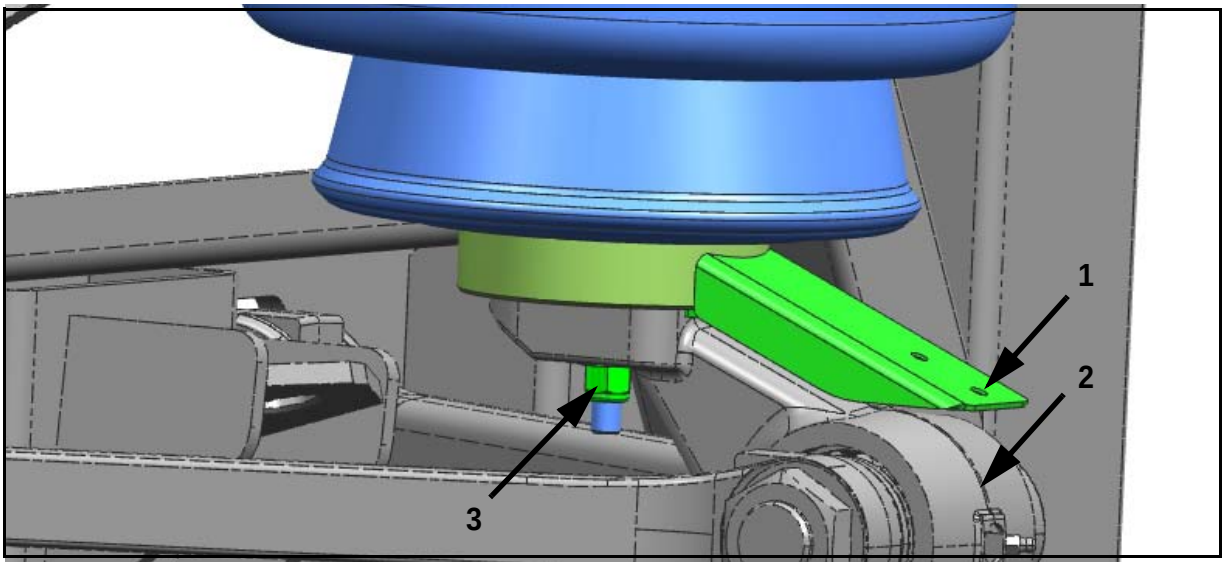

Figure 9.

Item	Figure 9 Description
1	brake hose clamp holes
2	center of kingpin
3	nylock nut

NOTICE

When connecting the front brake hose assembly to the brake chamber, ensure that there are no twists at any point throughout the routing.

16. Apply drops of lubricant to the swivel section on the new front brake hose assembly, p/n 04-20-1726.
17. Orient and connect the new front brake hose assembly to the 90 degree fitting on the front brake chamber as shown in Figure 10.
18. Starting at the front brake chamber, route the front brake hose assembly to the first brake hose bracket (refer to Figure 11). Using the existing mounting hardware, mount (fingertight) the clamp assembly to the brake hose bracket.
19. Orient the front brake line gauge, p/n 20-04-0028, against the front brake chamber clamp as shown in Figure 10. Center the hose routing with the upper opening of the front brake line gauge and tighten the swivel nut to secure in position, ensuring that there is no twist or flex at any point throughout the routing. Torque nut to 56-60 ft-lbs.

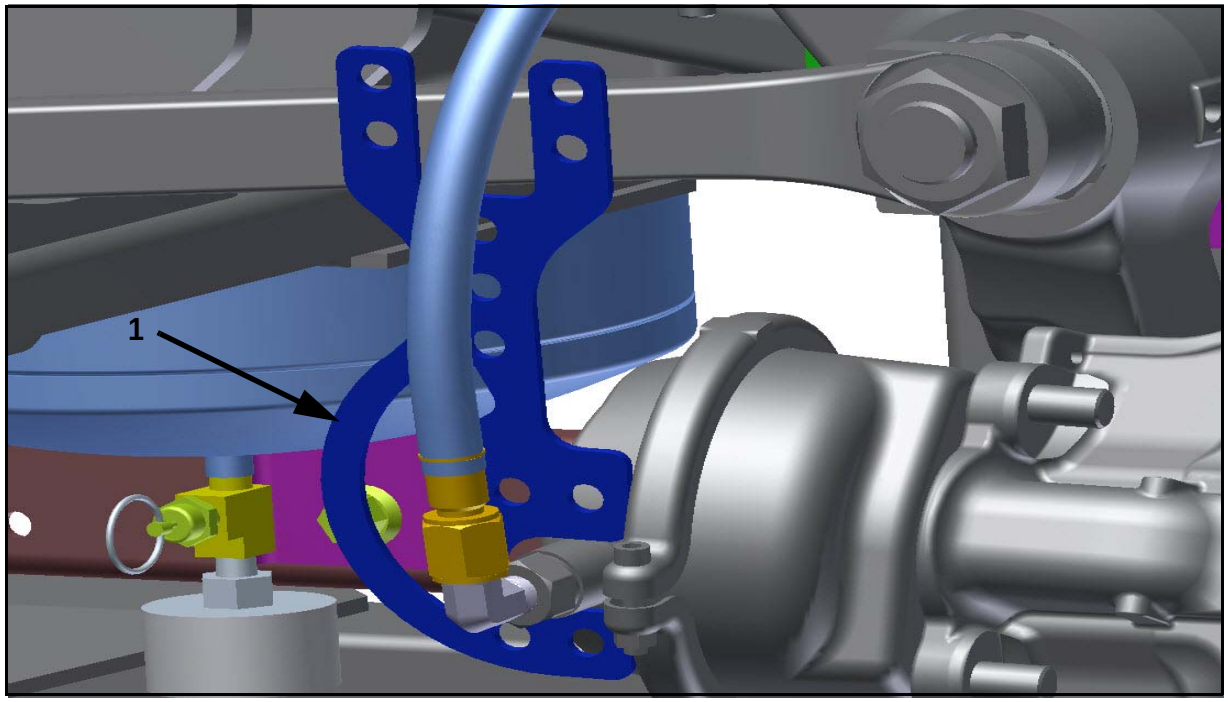

Figure 10. Front brake line gauge location.

Item	Figure 10 Description
1	front brake line gauge

20. Using a measuring tape, ensure that the front brake hose length is the 22.00 inches between the bottom of the swivel fitting to the inside face of the clamp as shown in Figure 11. Tighten clamp to secure in position.

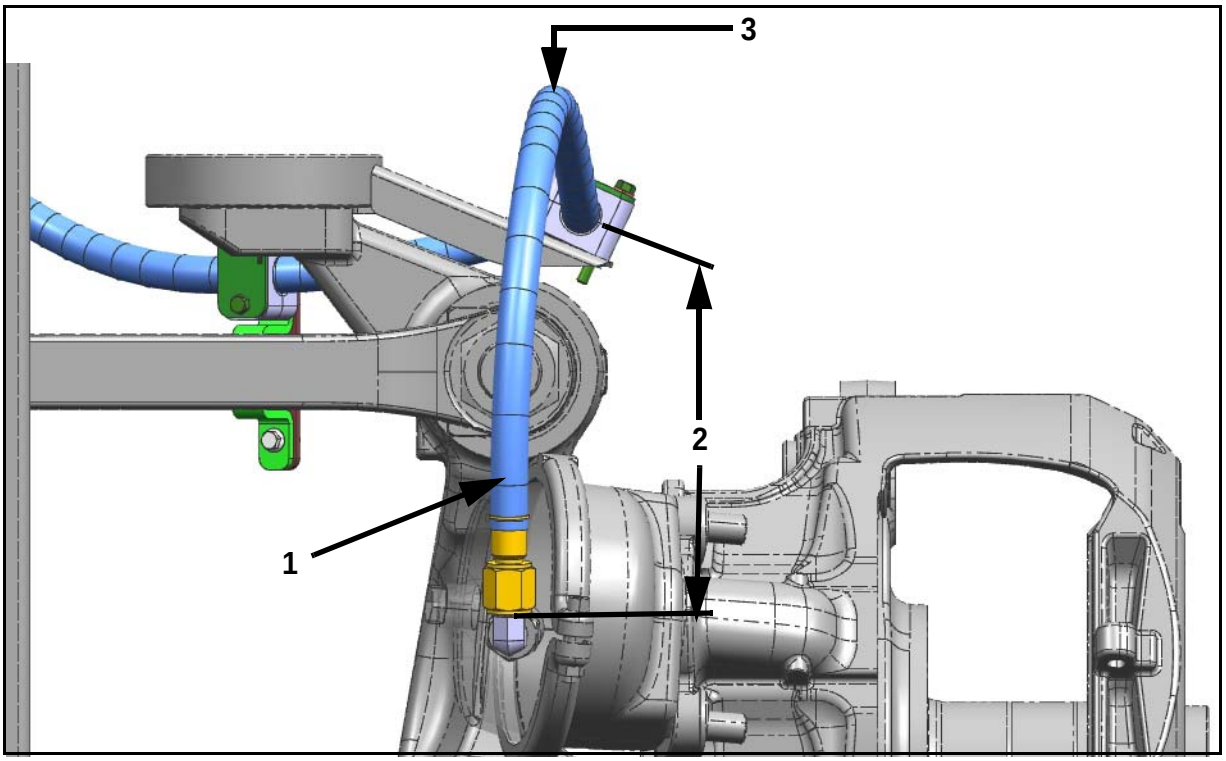

Figure 11.

Item	Figure 11 Description
1	front brake hose assembly, p/n 04-20-1726
2	22.00 inch of hose length from bottom of swivel fitting to inside face of clamp
3	measurement to be taken along the top section of the front brake hose assembly

21. Route the front brake hose assembly to the next (second) brake hose bracket. Using the existing mounting hardware, mount the clamp assembly to the brake hose bracket.
22. Using a measuring tape, ensure that the front brake hose assembly routing length is the 8.00 to 8.25 inches of hose length from face to face of the clamps while maintaining a minimum bend radius of 2.25 inches as shown in Figure 12.
23. Tighten clamps to secure in position.

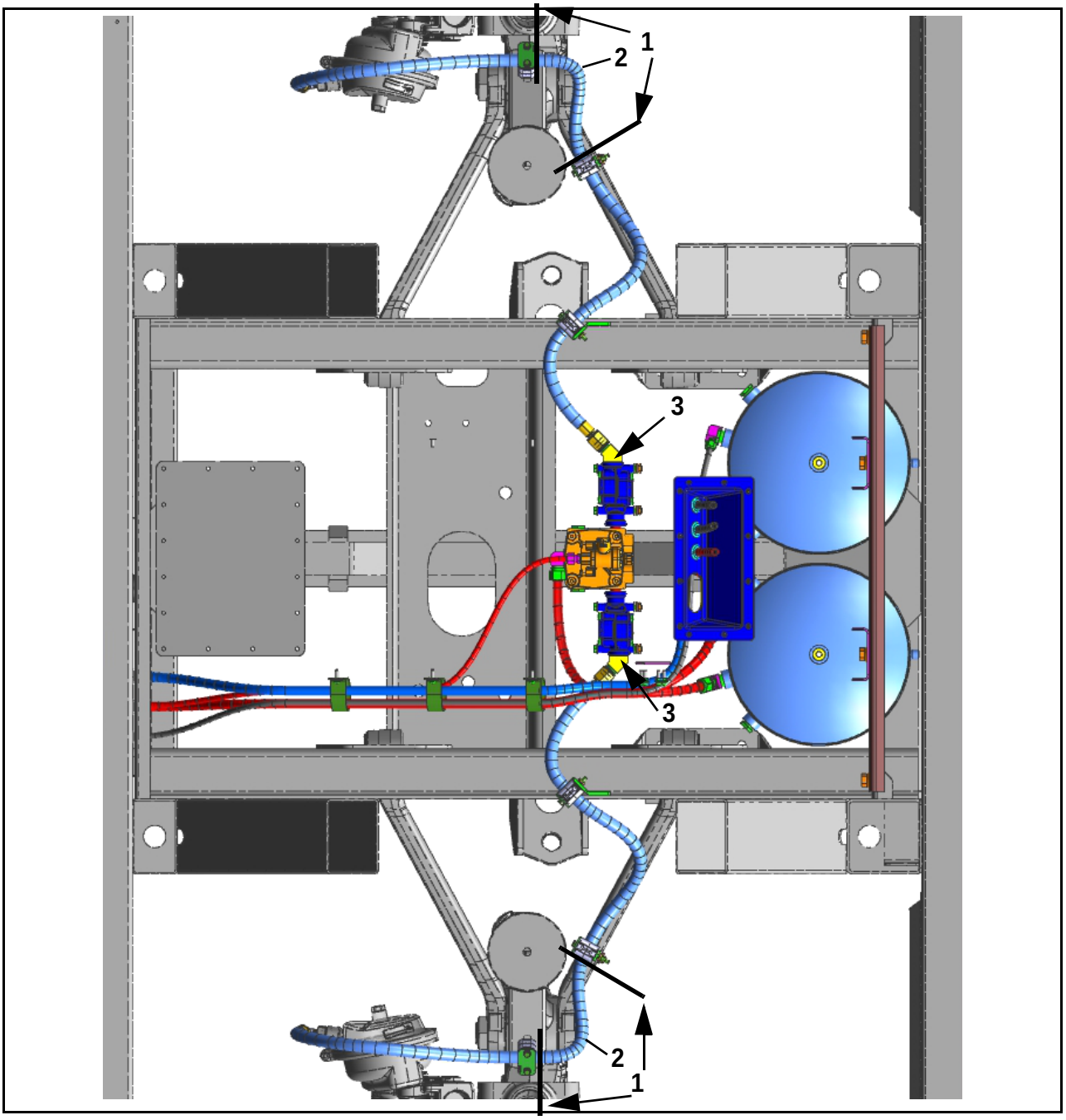

Figure 12.

Item	Figure 12 Description
1	8.00 to 8.25 inches of hose length from face to face of clamps
2	measurement to be taken along the outboard section of the front brake hose assembly
3	45 degree fitting, p/n 19-10-1956

24. Position a square across the face of the suspension arm bolt head (refer to Figure 13). Using a measuring tape, ensure that there is a minimum clearance of 0.06 inch between the edge of the front brake hose assembly and the edge of the square.

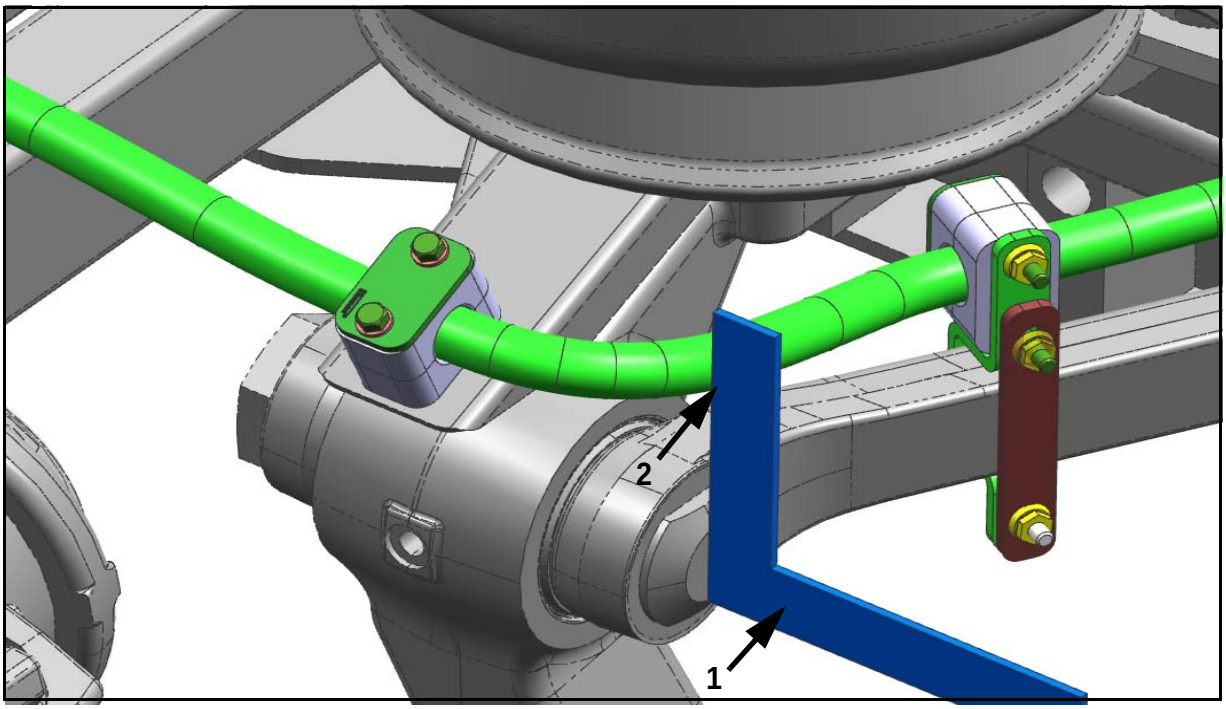

Figure 13.

Item	Figure 13 Description
1	position square across the face of the suspension arm bolt head
2	minimum clearance of 0.06 inch between the edge of the front brake hose assembly and the edge of the square

25. Route the front brake hose assembly to the clamp mount bracket welded to the bogie channel. Remove and retain clamp assembly and the existing mounting hardware from the old mounting location (replaced by the new welded clamp mount bracket). Mount the clamp assembly and front brake hose assembly to the clamp mount bracket. Tighten clamp to secure the front brake hose assembly in position (refer to Figure 8).
26. Using two (2) wrenches, remove and discard the straight fitting from the front brake module. Apply a pair of drops of sealant to the NPT threads of the 45 degree fitting, p/n 19-10-1956. Install the 45 degree fitting, fingertight, in the front brake module as shown in Figure 12. Using two (2) wrenches, tighten the fitting 2.50 turns. Tighten fitting to orientation shown in Figure 12.
27. Orient and connect, using two (2) wrenches, the end of the brake hose assembly to the 45 degree fitting on the front brake module valve. Torque to 56-60 ft-lbs.
28. Using tyraps, secure the ABS sensor to the front brake hose assembly.
29. Using a brush and undercoating, apply a coat on the top surface of the reworked area.
30. Repeat steps to opposite side of coach.

31. Enter the coach cabin. With the air system full, apply and hold a service brake application. Have a second person spray a mixture of soapy water to the threads and swivel nut of the brake hoses bundle. Monitor for thirty (30) seconds for signs of a leak. If a leak is present, tighten and repeat Step.

NOTICE

Ensure that the wheel is squarely mounted against the hub prior to fully tightening the wheel nuts.

WARNING

To avoid personal injury, use caution when lifting the wheel on the hub as wheel and tire assemblies weigh more than 200 lbs.

32. Re-install the front wheels. Using a calibrated torque wrench, torque wheel nuts to 450-500 ft-lbs. using a criss-cross sequence.
33. With the front wheels on the ground, turn the steering wheel all the way to the left. Visually inspect, through the wheel well, to ensure no contact between the brake lines and the front tires or the upper suspension control arm. Turn the steering wheel all the way to the right. Visually inspect, through the wheel well, to ensure no contact between the brake lines and the front tires or the upper suspension control arm.
34. Visually check to ensure that the brake lines do not make contact or kink in any steering or suspension travel position.

Procedure Complete.

PROCEDURE STEPS FOR COACHES 67000 TO 67137

35. Cut and discard the tyraps securing the ABS sensor to the front brake hose assembly.
36. Disconnect the front brake hose assembly from the front axle brake chamber port. Discard the existing front brake hose assembly. Retain the mounting hardware to be re-installed at a later step in this procedure.
37. Using a square or straight edge, ensure that the geometry of the first brake hose clamp is parallel to the center of the kingpin (refer to Figures 14 and 16).

NOTICE

If adjustment is required, loosen (do not remove nut from stud) the nylock nut on the airspring assembly and orient to achieve the brake hose clamp parallel to the center of the kingpin (refer to Figure 14). Torque nylock nut to 40-50 ft-lbs.

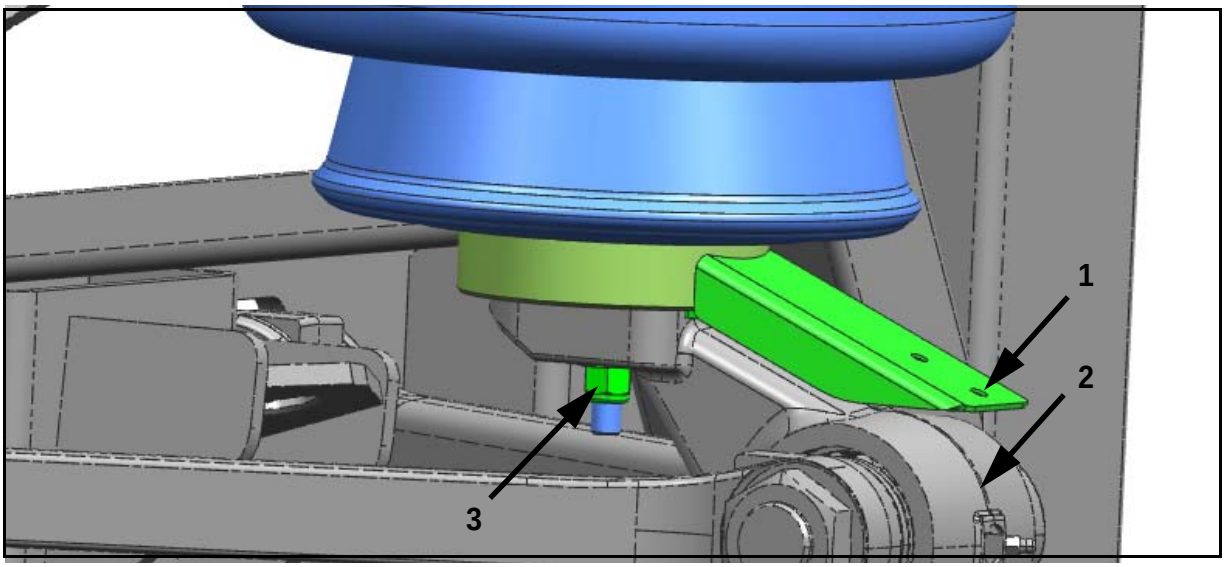

Figure 14.

Item	Figure 14 Description
1	brake hose clamp holes
2	center of kingpin
3	nylock nut

NOTICE

When connecting the front brake hose assembly to the brake chamber, ensure that there are no twists at any point throughout the routing

38. Apply a pair of drops of lubricant to the swivel section on the new front brake hose assembly, p/n 04-20-1726.
39. Orient and connect the new front brake hose assembly to the 90 degree fitting on the front brake chamber as shown in Figure 15.
40. Starting at the front brake chamber, route the front brake hose assembly to the first brake hose bracket (refer to Figure 16). Using the existing mounting hardware, mount (fingertight) the clamp assembly to the brake hose bracket.
41. Orient the front brake line gauge, p/n 20-04-0028, against the front brake chamber clamp as shown in Figure 15. Center the hose routing with the upper opening of the brake line alignment tool and tighten the swivel nut to secure in position, ensuring that there is no twist or flex at any point throughout the routing.

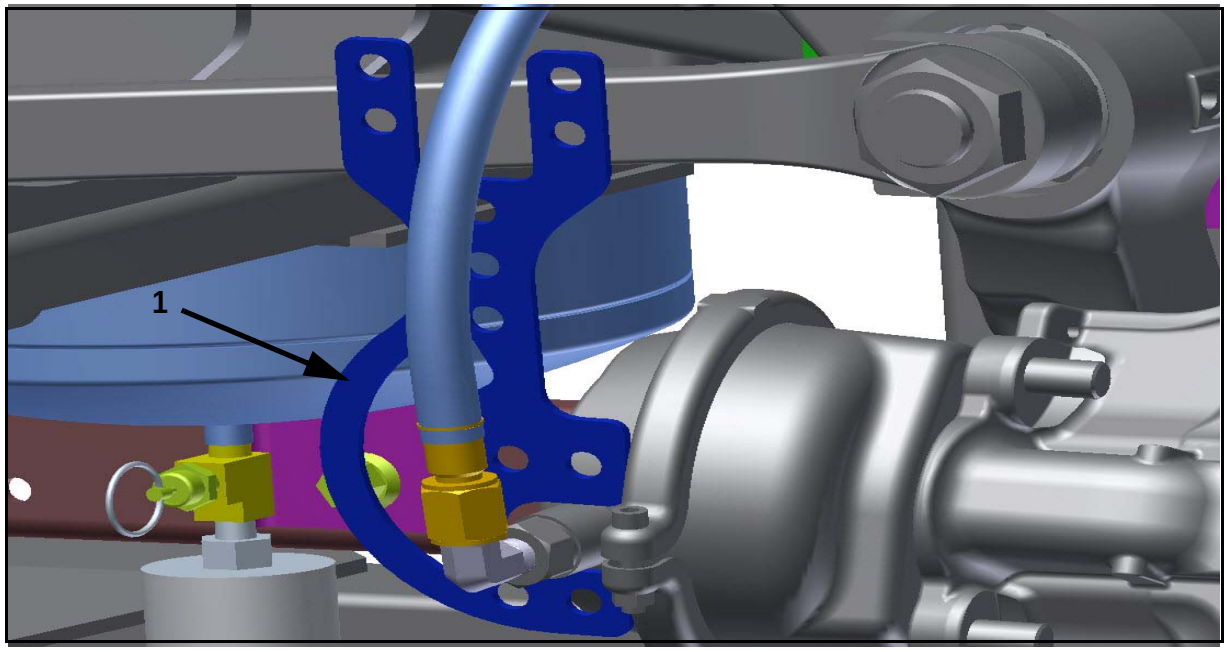

Figure 15.

Item	Figure 15 Description
1	front brake line gauge

42. Using a measuring tape, ensure that the front brake hose length is the 22.00 inches between the bottom of the swivel fitting to the inside face of the clamp as shown in Figure 16. Tighten clamp to secure in position.

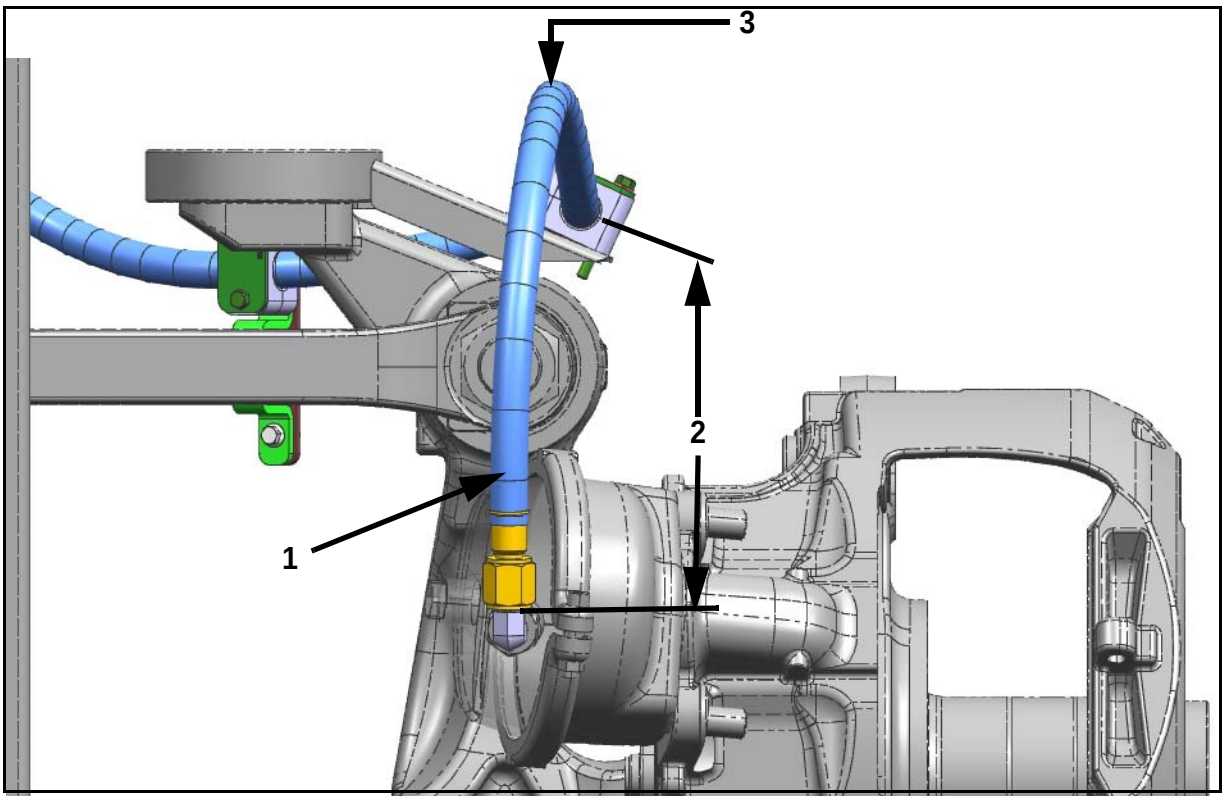

Figure 16.

Item	Figure 16 Description
1	front brake hose assembly, p/n 04-20-1726
2	22.00 inch of hose length from bottom of fitting to inside face of clamp
3	measurement to be taken along the top section of the front brake hose assembly

43. Route the front brake hose assembly to the next (second) brake hose bracket. Using the existing mounting hardware, mount the clamp assembly to the brake hose bracket.
44. Using a measuring tape, ensure that the front brake hose assembly routing length is the 8.00 to 8.25 inches of hose length from face to face of the clamps while maintaining a minimum bend radius of 2.25 inches as shown in Figure 17.
45. Tighten clamps to secure in position.

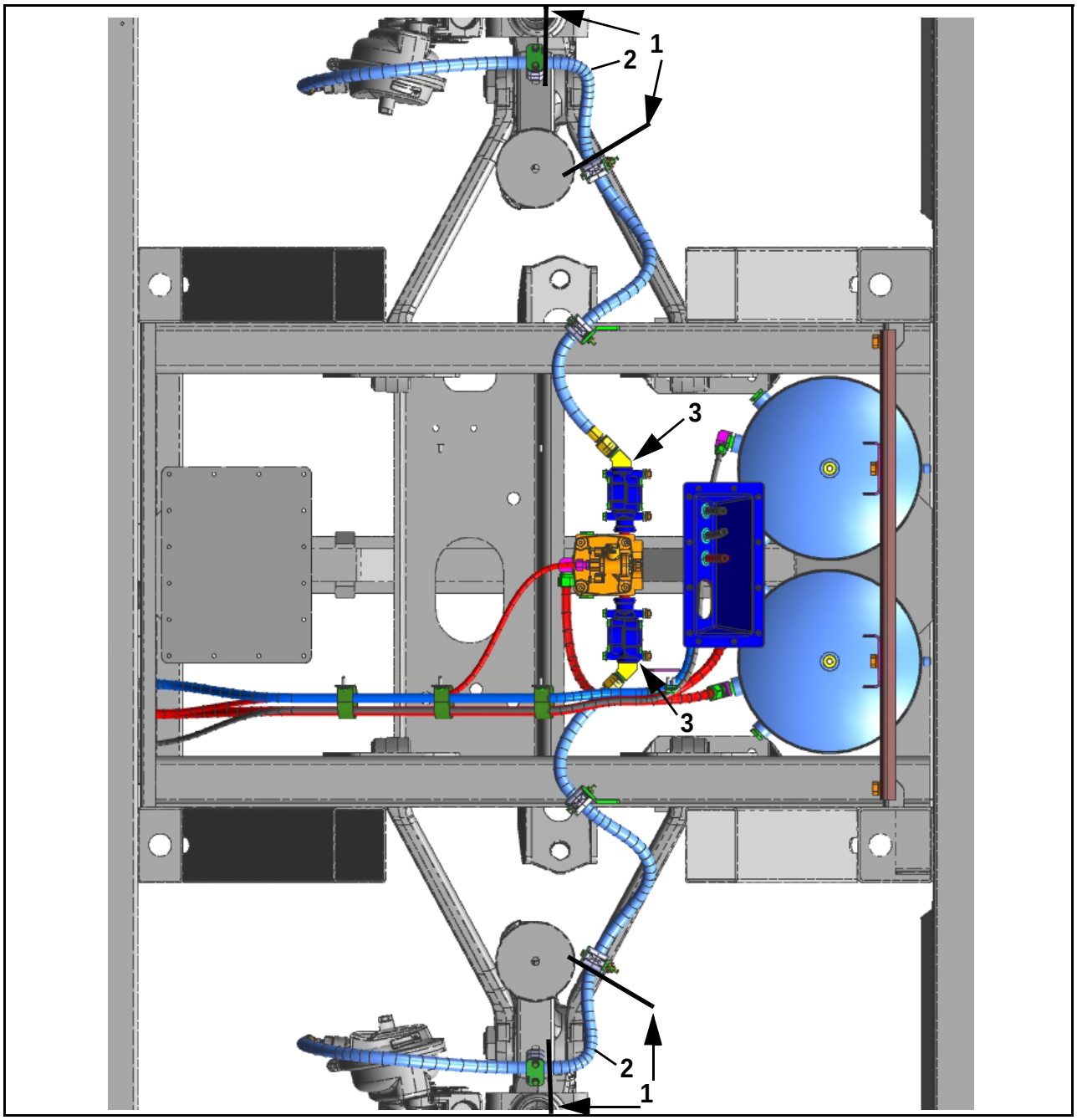

Figure 17.

Item	Figure 17 Description
1	8.00 to 8.25 inches of hose length from face to face of clamps
2	measurement to be taken along the outboard section of the front brake hose assembly
3	45 degree fitting on the front brake module valve

46. Position a square across the face of the suspension arm bolt head (refer to Figure 18). Using a measuring tape, ensure that there is a minimum clearance of 0.06 inch between the edge of the front brake hose assembly and the edge of the square.

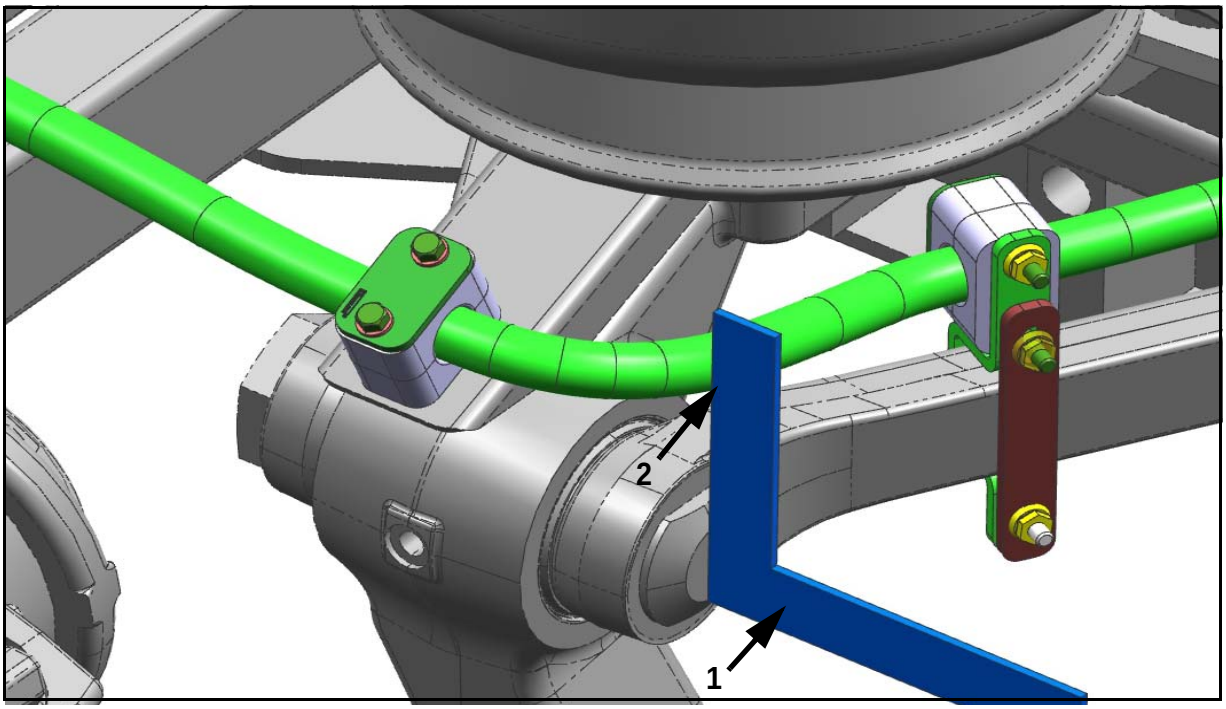

Figure 18.

Item	Figure 18 Description
1	position square across the face of the suspension arm bolt head
2	minimum clearance of 0.06 inch between the edge of the front brake hose assembly and the edge of the square

47. Route the front brake hose assembly to the next brake hose bracket. Tighten clamp to secure the front brake hose assembly in position (refer to Figure 17).
48. Orient and connect, using two (2) wrenches, the end of the brake hose assembly to the 45 degree fitting on the front brake module valve(refer to Figure 17). Torque to 56-60 ft-lbs.
49. Using tyraps, secure the ABS sensor to the front brake hose assembly.
50. Repeat steps to opposite side of coach.

51. Enter the coach cabin. With the air system full, apply and hold a service brake application. Have a second person spray a mixture of soapy water to the threads and swivel nut of the brake hoses bundle. Monitor for thirty (30) seconds for signs of a leak. If a leak is present, tighten and repeat Step.

NOTICE

Ensure that the wheel is squarely mounted against the hub prior to fully tightening the wheel nuts.

WARNING

To avoid personal injury, use caution when lifting the wheel on the hub as wheel and tire assemblies weigh more than 200 lbs.

52. Re-install the front wheels. Using a calibrated torque wrench, torque wheel nuts to 450-500 ft-lbs. using a criss-cross sequence.
53. With the front wheels on the ground, turn the steering wheel all the way to the left. Visually inspect, through the wheel well, to ensure no contact between the brake lines and the front tires or the upper suspension control arm. Turn the steering wheel all the way to the right. Visually inspect, through the wheel well, to ensure no contact between the brake lines and the front tires or the upper suspension control arm.
54. Visually check to ensure that the brake lines do not make contact or kink in any steering or suspension travel position.

Procedure Complete.

Mail or fax the completed limited warranty claim form and verification form to MCI's warranty department, or photo-copy 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 2.3 hours will be granted against claim 420.1, for performing Steps 1 to 34 in this bulletin on J4500 coaches.

A labor allowance of 1.0 hours will be granted against claim 420.2, for performing Steps 1 to 8 and 35 to 54 in this bulletin on J4500 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:

_____

(PLEASE PRINT

FCP INFORMATION – ONE FORM PER UNIT

FCP#: _____ **Coach Model _____** **Model Year _____**

COACH SERIAL #: (At least the last 5 digits)	**DATE COMPLETED ___ / ___ /___**
MILEAGE:	

IMPORTANT: TO RECEIVE CREDIT FOR ANY ALLOWABLE LABOR CHARGES, THIS VERIFICATION FORM MUST BE RETURNED TO MCI UPON COMPLETION OF THE FCP.

SUBMITTED BY: (Please Print)

_____ **DATE ___ / ___ /___**

TITLE: (Please Print) _____

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