



MOTOR COACH
INDUSTRIES

July 23, 2010

«Customer_Name»
ATTENTION: TECH SERVICE DEPT/MAINT
«Address»
«Address_2»
«City», «State» «Zip»
«ctry»

SUBJECT: SAFETY RECALL OF DOGA WINDSHIELD WIPER MOTORS

Ref.: **NHTSA # 10V-135**
TRANSPORT CANADA #TC 2010-097
MCI Service Bulletin 344

Attention Owner:

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

Motor Coach Industries, Inc. (“MCI”) has decided that a defect which relates to motor vehicle safety exists in certain MCI E and J series coaches containing a DOGA windshield wiper motor. The DOGA windshield wiper motor may fail to operate properly, including operating intermittently, operating at a single speed only, or completely failing to operate. If this occurs, the driver’s field of view may be reduced, which in turn could result in a crash or otherwise cause personal injury or property damage. Please see the enclosed MCI Service Bulletin 344 for further information.

The vehicles that are subject to this notice are the following model year 1999 – 2001, and 2007 through 2011 E4500, and model year 2001 through 2011 J4500 MCI coaches (last five VIN digits):

60524	60575	61252	61587	61646
61648	62030	63220	63323	63421-63422
63550–63569	63585	63732	63754	64046
64084	64162-64177	64179-64181	64277-64278	64287
64342–64343	64455 - 65655			

MCI is conducting a recall to install a new DOGA motor and electrical harness bypass, and to adjust the wiper arm linkages as necessary, as set forth more specifically in the enclosed MCI Service Bulletin 344. The recall work will be provided at no cost to you.

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

«Unit_Numbers»

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. Submittal 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. Please refer to Service Bulletin 344, and your OWNER LIMITED WARRANTY MANUAL, for more detailed information.

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 the U.S.:

The Administrator

National Highway Traffic Safety Administration

1200 New Jersey Avenue, SE.,

Washington, DC 20590;

or call the toll-free Vehicle Safety Hotline at 1-888-327-4236; (TTY: 1-800-424-9153); or go to <http://www.safercar.gov>.

For Canada:

Road Safety and Motor Vehicle

Regulation Directorate

Transport Canada

Tower C, Place de Ville

330 Sparks Street

Ottawa, Ontario

K1A 0N5

or call the Transport Canada's Information Centre at 1-800-333-0371.

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 Service Bulletin 344



Service Bulletin No. 344

<i>MODEL</i> E / J Series Coaches	<i>TYPE</i> Field Change Program	<i>SECTION/GROUP</i> 3-Body	<i>DATE</i> July 16, 2010
<i>SUBJECT</i> DOGA WINDSHIELD WIPER MOTOR			
<i>CONDITIONS</i>			

Ref. NHTSA Recall No.: 10V-135

Ref. Transport Canada Recall No.: 10-097

Customer Complaint:

MCI has been informed that the potential may exist in which the DOGA windshield wiper motor may fail to operate properly while the wiper system is functioning. If this occurs, the windshield wipers may operate intermittently, operate at a single speed only, or stop operating completely. If the windshield wipers stop functioning, the driver's clear field of view may be reduced.

Cause:

The wiper controller that controls the intermittent mode of the wiper system may switch the wiper motor into its high speed mode when the wiper system is under heavy load, such as when operating in high wind, heavy rain, or dry windshield conditions. This switching occurs as a result of the thermal protection system that is integral to the design of the controller. This switching occurs at a much higher rate of occurrence than anticipated, and as a consequence is causing premature wear and tear to the motor.

In addition, the wiper system linkages that connect the drive motor to the wiper arms may be assembled incorrectly. The force required to move a wiper arm with incorrectly-assembled linkages is higher than anticipated, and causes a higher load input to the motor and premature damage to the motor.

Corrective Action:

MCI strongly encourages customers to install a new DOGA model 259 motor in place of the existing model 258 motor. The 259 motor has a higher load capacity than the current 258 motor, which is intended to provide an additional safety margin to the wiper system. In addition, the installation of a bypass harness on the controller will prevent the controller from switching the motor to high speed.

As a result, MCI advises that owners of E4500 and J4500 model coaches with unit numbers listed in the table below implement the steps in this procedure.

60524	60575	61252	61587	61646
61648	62030	63220	63323	63421 to 63422
63550 to 63569	63585	63732	63754	64046
64084	64162 to 64177	64179 to 64181	64277 to 64278	64287
64342 to 64343	64455 to 65655			

Parts

Qty.	Old P/N	New P/N	Description
1	03-34-1122		Wiper Motor, Doga
1	03-34-1186		Wiper Motor, Doga
1		07-14-5300	Kit, Wiper Controller, Doga <i>Kit Contents Are:</i>
1		03-34-1193	Wiper Motor, Doga
1		07-08-3730	Bracket Assembly, Top, VIP Controller
1		07-08-3732	Bracket Assembly, Bottom, VIP Controller
1		07-12-3562	Harness, Adapter, Wiper Controller
2		7L-5-79	Relay, SPDT, 24V
2		19-1-583	Screw, #10–24 UNC x 1.25–Bottom Bracket Install
4		19-1-605	Screw, #10–24 x 0.50–Top Bracket and Relays Install
4		19-1-696	Screw, Tapping
2		19-2-7	Washer, Flat
5		19-11-258	Tyrap
1		21-7201-10	Trimlock
1		24135	Gauge, Tool
1		03-15-7738	Verification Form, (Must be Returned to MCI, One Per Coach)

Service Procedure:**! WARNING**

Read this entire procedure before beginning work.

Use Safe Shop Practices At All Times.

NOTICE

The windshield wipers must be cycled and in the “parked position” prior to starting this retrofit.

The “parked position” of the windshield blades is 4.0 in. (+/- 0.5 in.) from the edge of the windshield center fencing.

1. Using the “Smart Stick” on the LH side of the steering column, cycle the wipers ensuring that they are in the “parked position.” Using masking tape, mark the “parked position” of the wipers on the windshield.
2. For E/J model coaches prior to 65013, turn the main battery disconnect switch to the OFF position. For E/J model coaches effective with 65013, activate the disconnect feature of the main battery disconnect (MDS) system by pressing (for one second only) the momentary toggle switch on the MDS module to OFF. An audible click can be heard from the main solenoids in the MDS module. Position the rotary switch to the DOWN (OFF) position.
3. Chock both sides of the tires.
4. Open the engine door. Position the ENGINE RUN and ENGINE START switches on the engine compartment remote control box to the OFF position.
5. Locate the center under–dash kickpanel, Figure 1, item #1, housing the steering column. Remove and retain the screws. Place kickpanel aside to be re–installed at a later step in this procedure.
6. Locate the RH under–dash kickpanel, Figure 1, item #2, behind the accelerator and brake pedal. Remove and retain the screws. Maneuver kickpanel past the entrance door air dump valve, Figure 1, item #3 and pull forward to access the flex hose attached to the back of the gasper assembly, Figure 1, item #4. Remove the flex hose from the back of the gasper assembly. Place kickpanel aside to be re–installed at a later step in this procedure.
7. Locate the LH under–dash kickpanel, Figure 1, item #5, to the left of the steering column. Remove and retain the screws. Remove the and retain the park brake knob, Figure 1, item #6. Place kickpanel aside to be re–installed at a later step in this procedure.

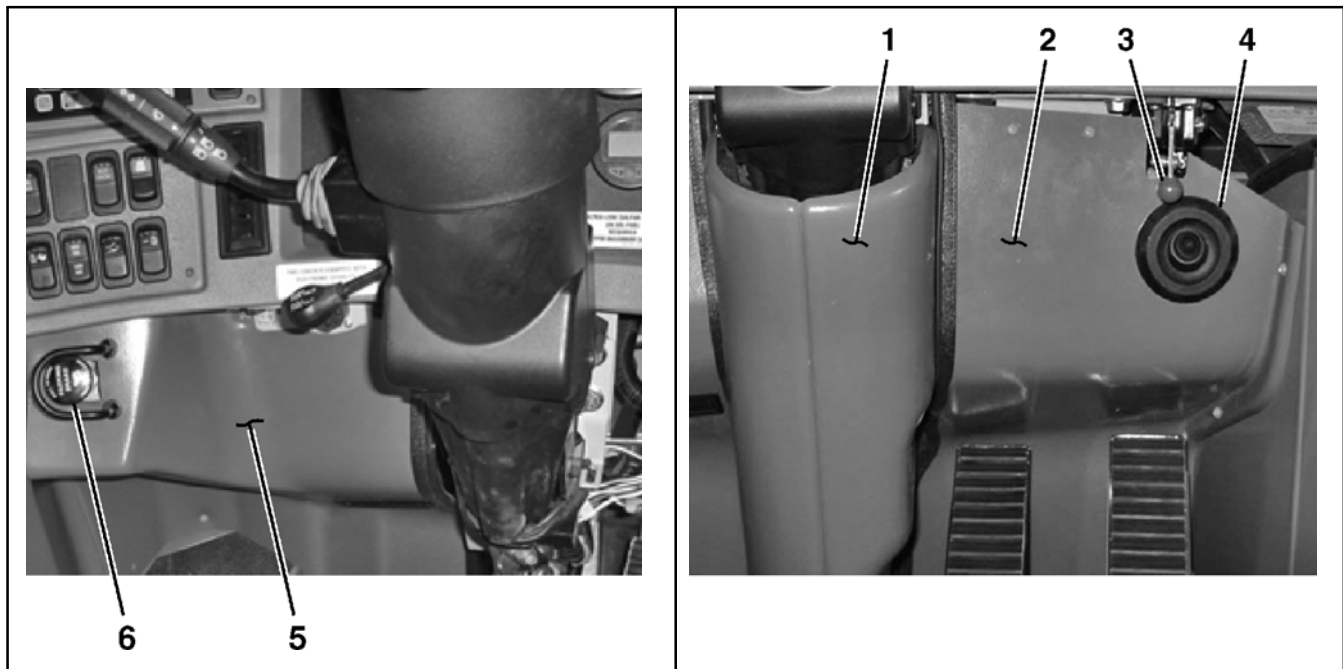


Figure 1. Under-Dash Kickpanel

<u>ITEM</u>	<u>DESCRIPTION</u>
1	Center under-dash kickpanel
2	RH under-dash kickpanel
3	Entrance door air dump valve
4	Gasper assembly
5	LH under-dash kickpanel
6	Park brake switch

8. Remove the fabric return air panel and the return air panel as shown in Figure 2, items 5 and 6. Locate the wiper controller as well as dash harness Plug X145 (J1R) (refer to locations shown in Figure 2, items 1 and 2). Unplug Plug X145 (J1R) from the wiper controller.
9. Connect the male adapter P145B of the wiper controller adapter harness, p/n 07-12-3562, Figure 2, item #3, to Plug X145 (J1R) of the dash harness, Figure 2, item #1. Connect the female adapter P145A of the wiper controller adapter harness, Figure 2, item #3 to the wiper controller, Figure 2, item #2.55
10. Remove the relay bases of the dash harness and retain the hardware. Interlock the relay base located on the jumper harness with the existing relay bases (refer to Figure 2, item #4). Using the screw, p/n 19-1-696 and washer, p/n 19-2-7, install the relay base section of the wiper controller adapter harness, Figure 2, item #3. Install the two relays, p/n 7L-5-79, Figure 2, item #4 into the relay base.
11. Using tyraps, p/n 19-11-258, secure the wiper controller adapter harness to the dash harness as shown in Figure 2, item #7.
12. Using the hardware removed in Step 8, secure the fabric return air panel and the return air panel, Figure 2, items 5 and 6. Proceed to the outside of the coach.

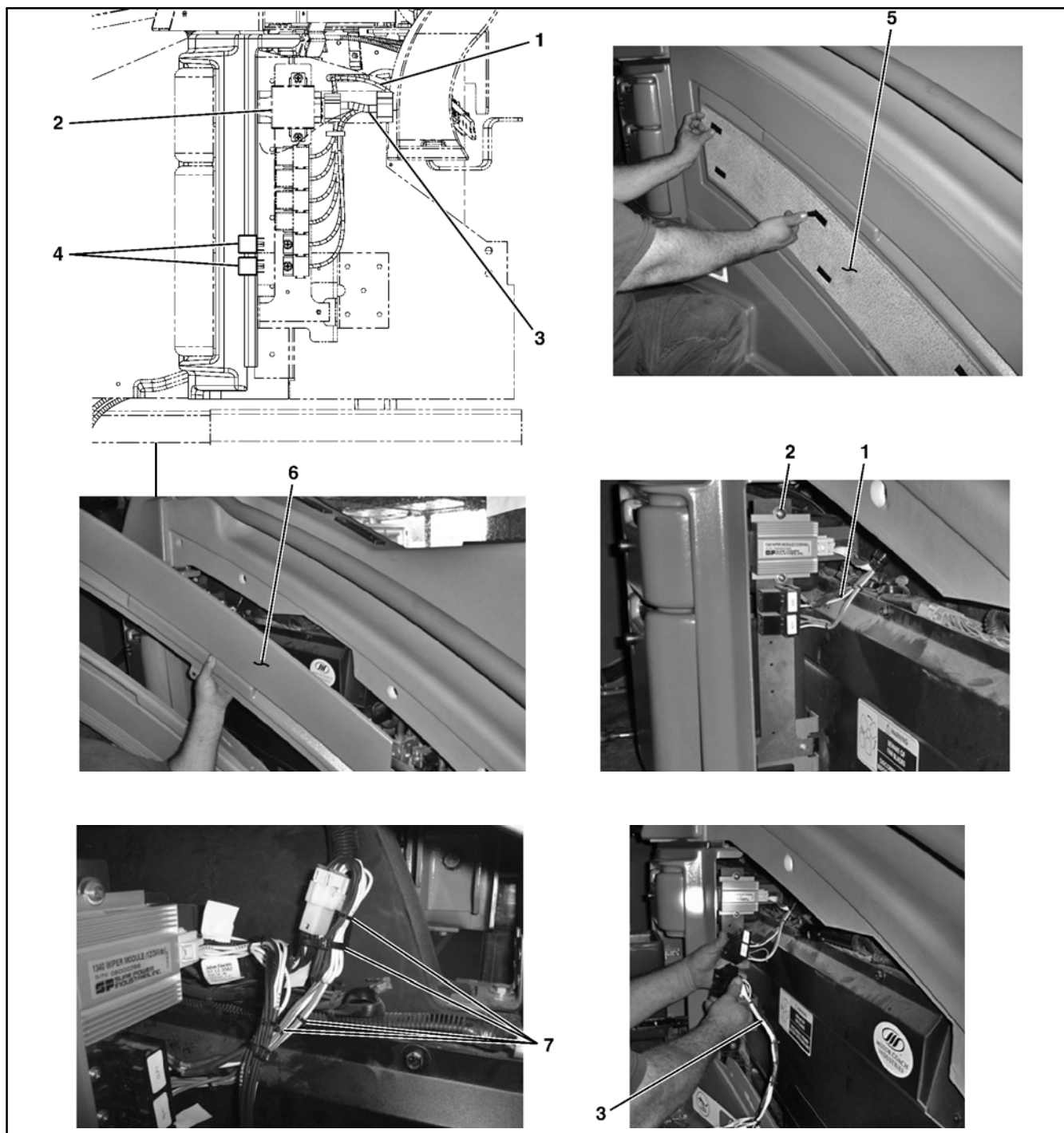


Figure 2. Relay Installation

ITEM	DESCRIPTION
1	Dash harness
2	Wiper controller
3	Wiper controller adapter harness
4	Relay, 24V
5	Fabric return air panel
6	Return air panel
7	Tyrap locations

CAUTION

Use caution when handling wiper arms to prevent damage to the wiper blades.

13. Carefully remove the washer fluid supply lines from the wiper arms.
14. Remove the wiper arms and place aside, to be re-installed at a later step in this procedure.

CAUTION

Use extreme caution when removing and installing the valance to prevent cracking or breakage.

15. Locate the valance directly below the windshields. Carefully remove and retain the lacing from the seal (refer to Figure 3). Remove the washer hose, Figure 4, item #2, from the back of the valance, Figure 4, Item #1. Remove the valance, Figure 4, Item #1, from the coach and place aside, to be re-installed at a later step in this procedure. If equipped, remove the valance insulation and place aside.



Figure 3. Lacing Removal

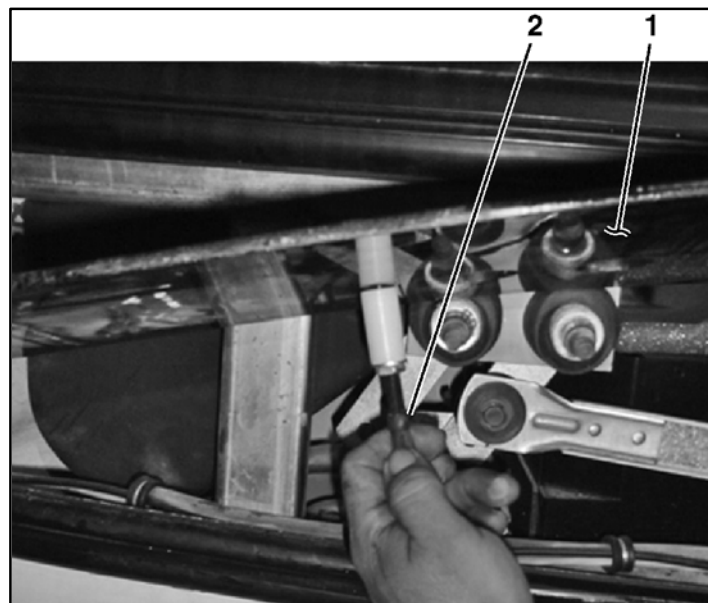


Figure 4. Valance and Washer Hose Removal

16. Locate the Doga windshield wiper motor on the RH (curbside) of the steering column bracket (refer to Figure 5).
17. Carefully disconnect the wiper motor harness (refer to Figure 5).

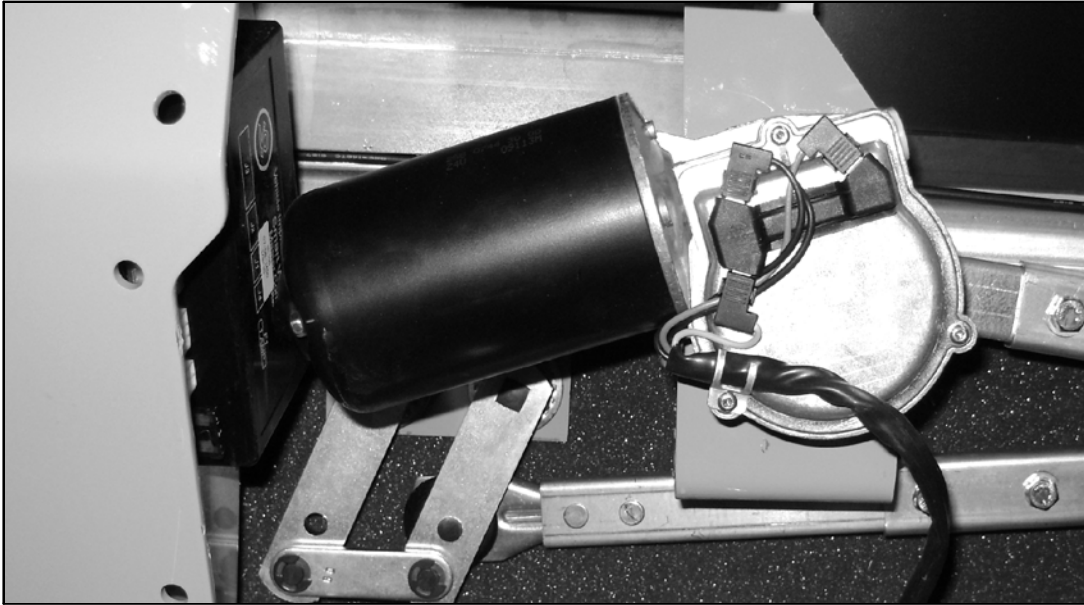


Figure 5. Windshield Wiper Motor

18. Locate the three wiper motor mounting bolts, Figure 6, item #1, securing the wiper motor to the bracket.
19. Loosen the wiper motor crank nut, Figure 6, item #2.
20. Carefully push the linkage off the wiper motor shaft, Figure 6, item #3, ensuring no damage to the splines.
21. Using a 1/2" wrench or socket, remove and retain the three wiper motor mounting bolts, Figure 6, item #1. Remove and discard the wiper motor.

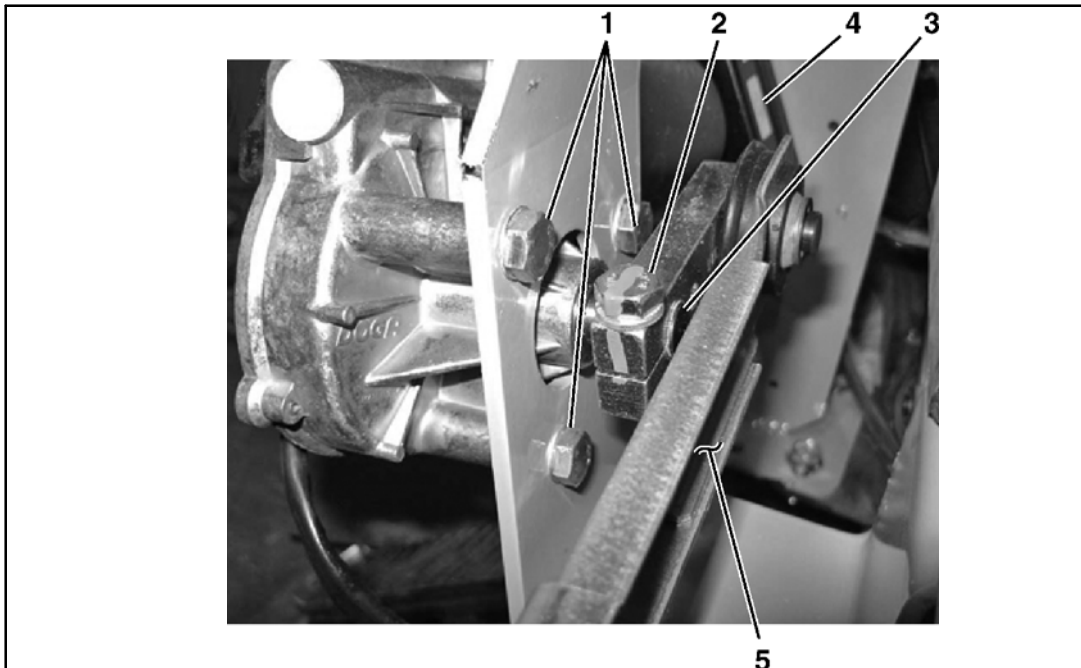


Figure 6. Rear View of Wiper Motor Installation

<u>ITEM</u>	<u>DESCRIPTION</u>
1	Wiper motor mounting bolts, Qty. 3
2	Wiper motor crank nut
3	Wiper motor shaft
4	Motor Linkage
5	Main wiper linkage

22. Locate the VIP controller, Figure 7, item #1, mounted to the RH (curbside) of the steering column bracket beside the wiper motor. Disconnect the harnesses from the VIP controller (refer to Figure 8). Remove and retain the mounting hardware from the VIP controller.

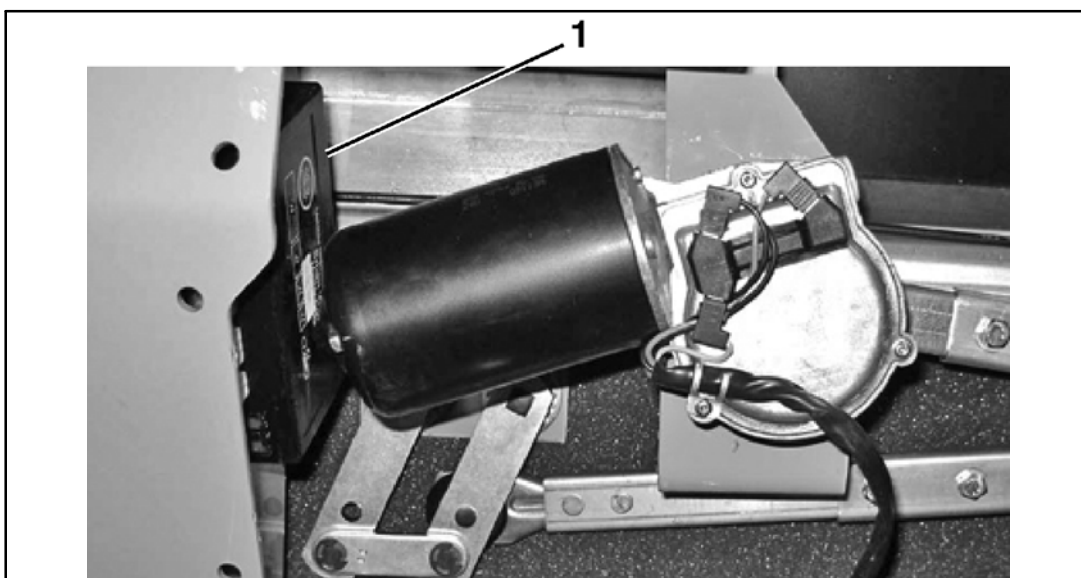


Figure 7. VIP Controller Location

<u>ITEM</u>	<u>DESCRIPTION</u>
1	VIP controller

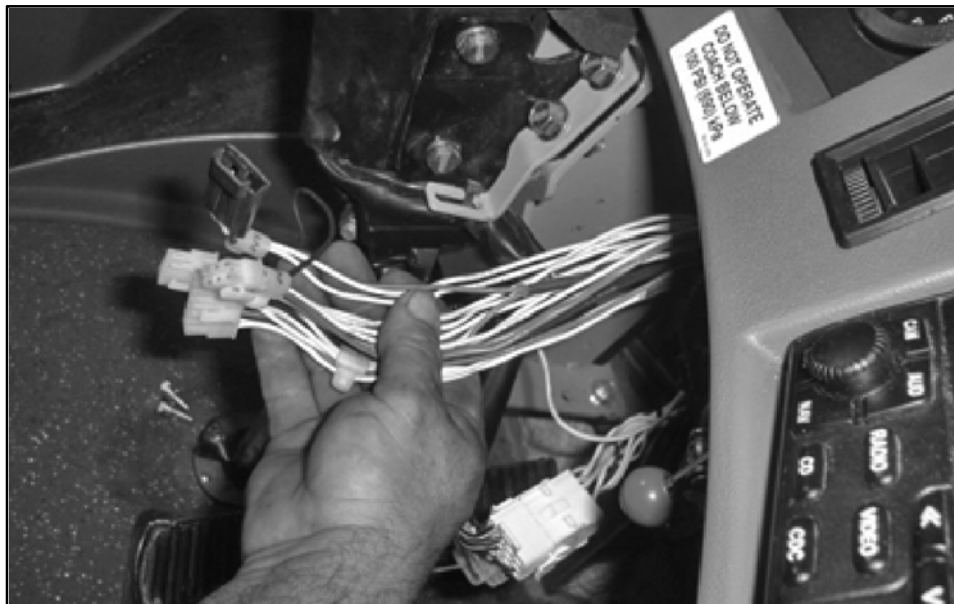


Figure 8. VIP Connector

NOTICE

If your J4500 coach is prior to unit 64918 proceed to Step 24.

If your E4500 coach is prior to unit 65455 proceed to Step 24.

- 23. Disconnect the steer angle sensor (SAS) connector, Figure 12, item #7.
- 24. Route the disconnected harnesses to the LH (roadside) of the steering column bracket by routing to the front of the coach and around the steering column bracket (refer to Figure 9).



Figure 9. Mounted VIP and Harness routed to Opposite Side of Steering Column

25. Locate the pocket gateway on the LH (roadside) of the steering column bracket (refer to Figure 10).
 Remove and discard the two mounting screws. Using screws, p/n 19-1-605, Figure 11, item #3 install the top and bottom brackets 07-08-3730 and 07-08-3732, Figure 11, items 1 and 2, to the VIP.

NOTICE

Visually inspect the steering column bracket above the pocket gateway for two holes. If there are no holes you will need to use the VIP with the bracket assemblies attached as a template for drilling two 0.147 in. top holes prior to performing step 26.

26. Mount the VIP and bracket assembly to the existing pocket gateway mounting holes using 19-1-583 screws for the bottom bracket, mount the top bracket with p/n 19-1-696, screws, refer to Figure 12, items 1, 2 and 5.



Figure 10. Pocket Gateway



Figure 11. Top and Bottom Bracket Assembly for VIP Controller

<u>ITEM</u>	<u>DESCRIPTION</u>
1	Bottom bracket
2	Top Bracket
3	Screws

27. Cut to length and install trimlock, p/n 21-7201-10, on bracket edge as shown in Figure 12, item #4.

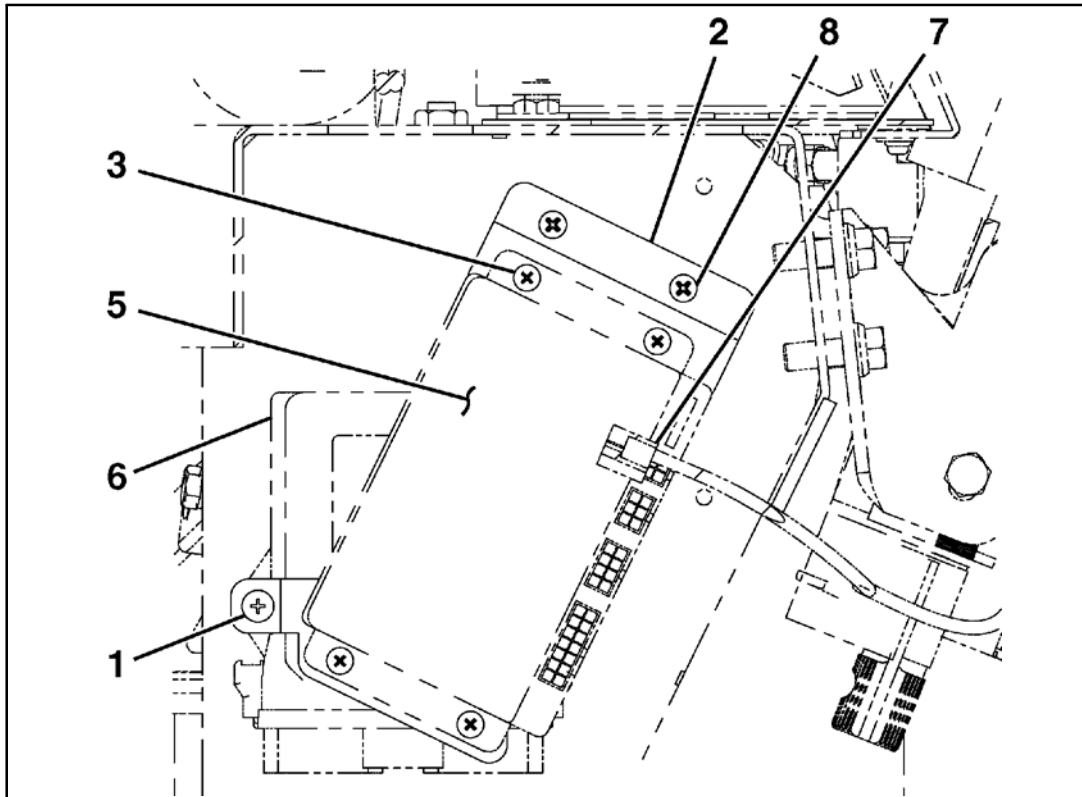


Figure 12. Bracket

<u>ITEM</u>	<u>DESCRIPTION</u>
1	Bottom bracket assembly
2	Top bracket assembly
3	Screw, p/n 19-1-605
4	Trimlock
5	VIP controller (refer to Figure 7)
6	Pocket Gateway (refer to Figure 10)
7	Steer angle sensor harness connector
8	Screw, tapping, p/n 19-1-696

28. Install the new wiper motor, p/n 03-34-1193, using the three wiper motor mounting bolts, Figure 6, item #1, removed in Step 21. Secure the wiper motor to the bracket. Torque the motor mounting bolts to 15 to 18 ft.-lb. Re-connect the wiper motor harness. Re-connect the the harnesses to the VIP controller, and , if applicable, the steer angle sensor (SAS) connector.

29. Cycle the coach power to ON.

30. Cycle the "Smart Stick" rotary position between low speed and OFF to ensure that the motor is in the "Park Position".

31. For E/J model coaches prior to 65013, turn the main battery disconnect switch to the OFF position. For E/J model coaches effective with 65013, activate the disconnect feature of the main battery disconnect (MDS) system by pressing (for one second only) the momentary toggle switch on the MDS module to OFF. An audible click can be heard from the main solenoids in the MDS module. Position the rotary switch to the DOWN (OFF) position.
32. Align the wiper motor linkage, Figure 6, item #4, with the main wiper linkage, Figure 6, item #5, and mount it on the motor shaft. Torque the wiper motor crank nut, Figure 6, item #2, to 16 to 20 ft–lb. Apply torque seal from the face of the capscrew to the face of the wiper motor crank.
33. Positioned in front of the coach, locate the main wiper linkages (refer to Figure 13).
34. Verify that the arm swing angle from the wiper arm pivot is 35 degrees on both sides vertical by utilizing a gauge. With gauge tool 24135 Ensure the angle measured from the frame member is 55 (+/- 1.0) degrees (refer to Figure 13 and gauge tool 24135 template included with this procedure and kit). Repeat on opposite side of coach.

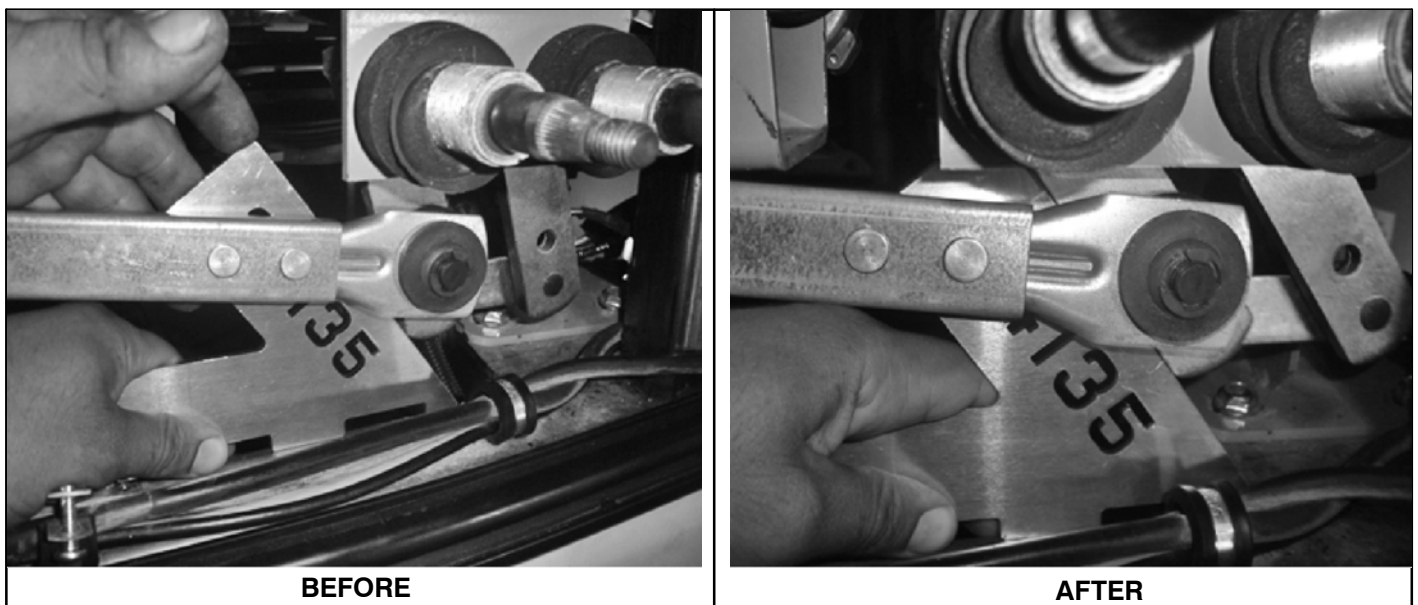


Figure 13. Wiper Arms Before and After Linkage Adjustment

NOTICE

If the angle measured from the frame member is not 55 (+/- 1.0) degrees on both the curbside and roadside wiper arms as shown in Figure 13, proceed to Step 35.

If the angle measured from the frame member is 55 (+/- 1.0) degrees on both the curbside and roadside wiper arms as shown in Figure 13, proceed to Step 36.

35. Locate the wiper arm linkage sliding channel. Loosen the bolts on the sliding channel and adjust the linkage to achieve the 55 degree angle. Tighten bolts. Using the gauge, ensure the linkage is 55 degrees. Torque bolts to 16–18 ft–lb.

NOTICE

Do not stretch the lacing.

To prevent water intrusion, ensure there are no gaps in the lacing.

36. Lubricate the channel in which the lacing, removed in Step 15, sits. Re–install the valance. Using a lacing tool, insert the lacing in the seal (fencing) groove (refer to Figures 3 and 4).

CAUTION

Use caution when handling wiper arms to prevent damage to the wiper blades.

37. Re-install the wiper arms.
38. Re-connect the washer fluid supply lines to the wiper arms.
39. Position the ENGINE RUN and ENGINE START switches on the engine compartment remote control box to the ON position. Close the engine door.
40. Test the wiper system by operating the wiper system in low, intermittent, and high speed modes for several cycles of the wiper. Ensure the wiper stops in the "parked position" when the "Smart Stick" rotary position is at OFF. Adjust as necessary.
41. Before installing the RH under-dash kickpanel cut 1/2" from the straight part of the gasper assembly (refer to Figure 14).

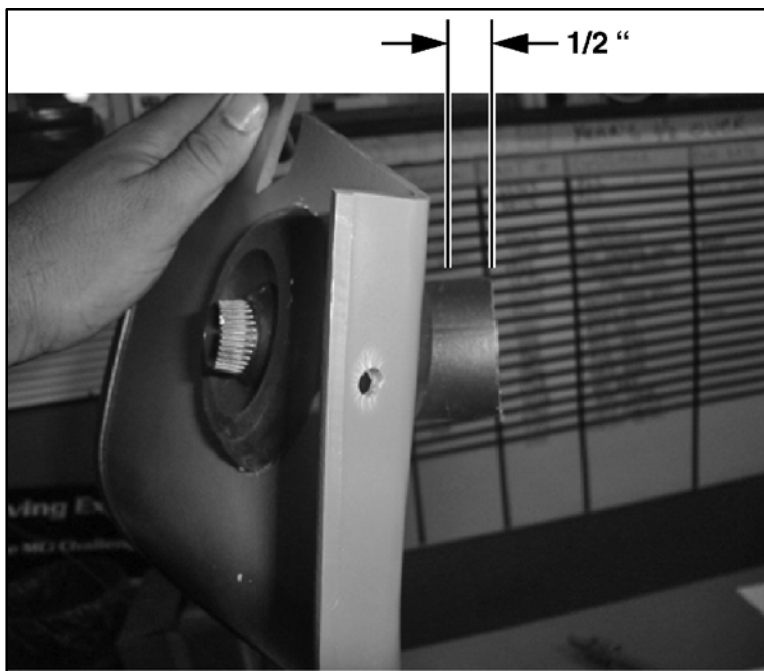


Figure 14. RH Under-Dash Kickpanel

42. Orientate the RH under-dash kickpanel, Figure 1, item #2, behind the accelerator and brake pedal. Attach the flex hose to the back of the gasper assembly, Figure 1, item #4. Apply tape to secure flex hose to the back of the gasper assembly. Using the screws removed in Step 6, secure the RH under-dash kickpanel.
43. Using the screws removed in Step 5, secure the center under-dash kickpanel, Figure 1, item #1.
44. Using the screws removed in Step 7, secure the brake valve and the LH under-dash kickpanel, Figure 1, item #5.

Procedure complete.

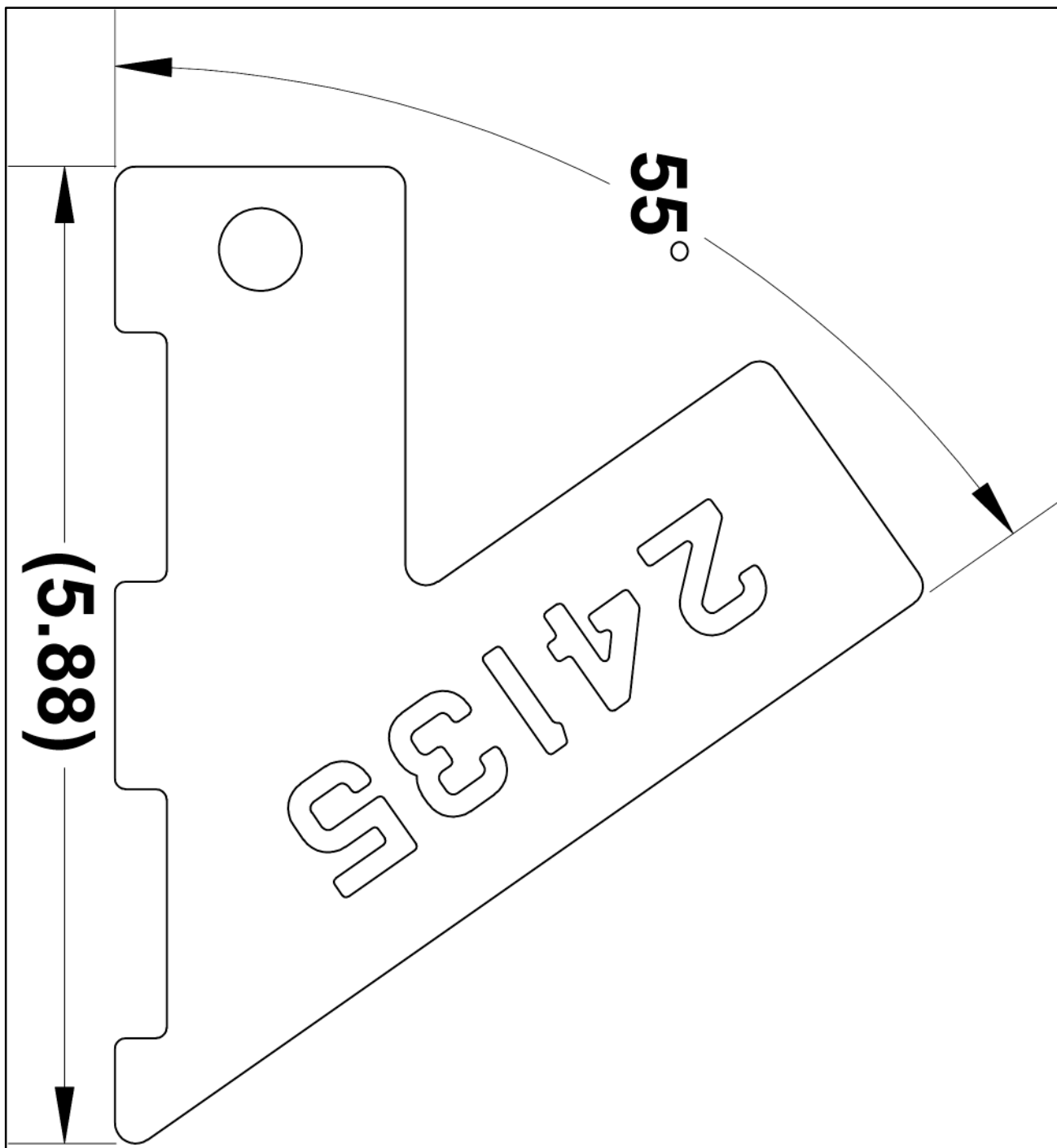


Figure 15. Gauge Tool 24135 Template

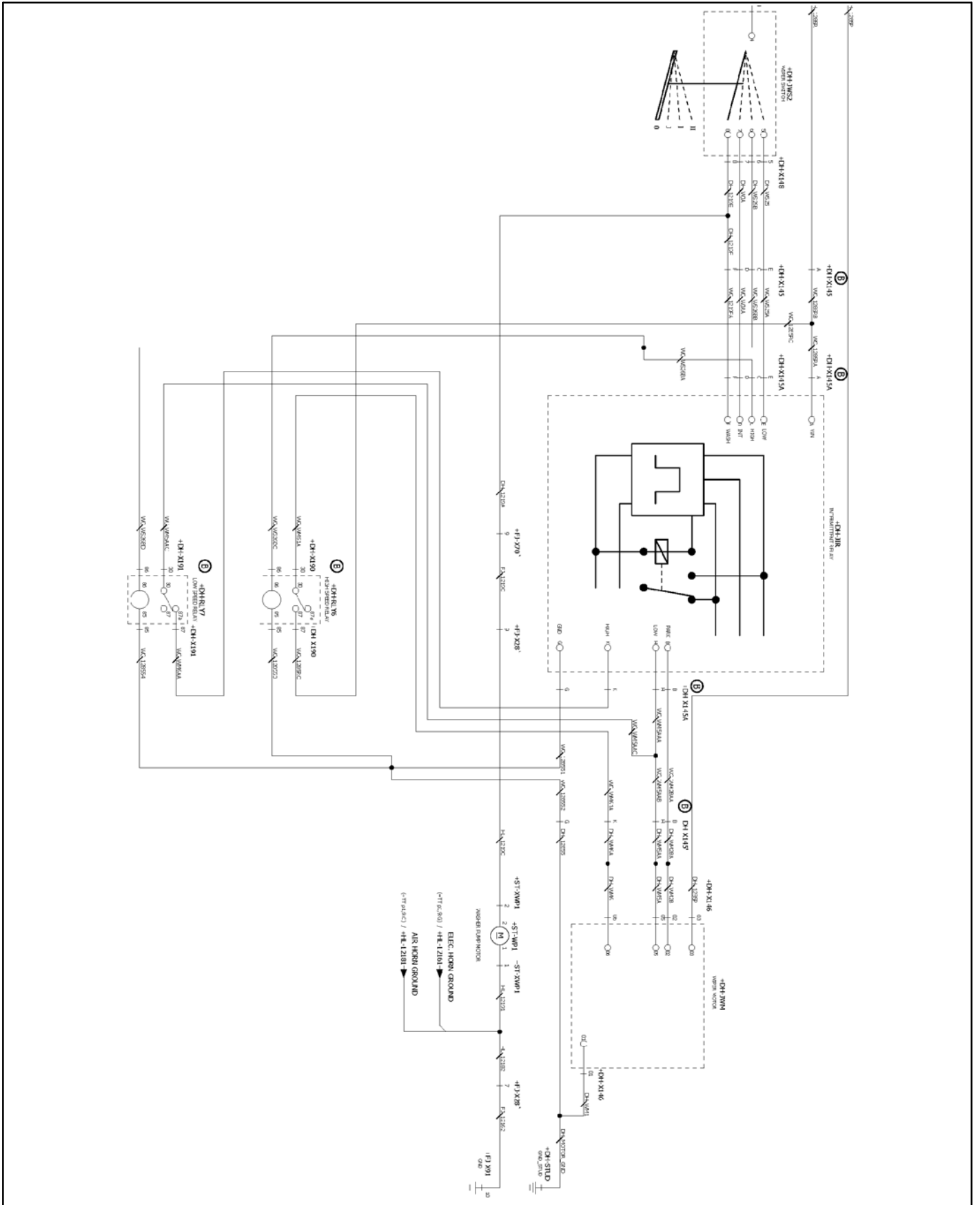


Figure 16. Post-retrofit schematic.

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.

Record the new wiper motor serial number and batch number and submit with paperwork to be returned to MCI.

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 E4500 and J4500 model 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
U.S. and Canadian Service Departments.



MOTOR COACH
INDUSTRIES

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:	
<u>IMPORTANT:</u> 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: 1-502-318-8183

MAILING ADDRESS:

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

MCI PART #03-15-7738