VEHICLE FACTORS GROUP CHAIRMAN'S FACTUAL REPORT

Vehicle Attachment – MCI Vehicle Reports

Palm Springs, California

HWY17MH005

(30 pages)

REPORT #: WAR001 (P) WARRANTY PAGE: 1
08/09/00 MCI FINAL VEHICLE RECORD 3:59 PM

MODEL * 102D3 *

SALES ORDER RELEASE NO. [redacted]

UNIT #: [redacted] ADDENDUMS TO ABOVE ORDER RELEASE NO. DATE #5 96/06/18

OPERATOR	V.I.N. NO.	FLEET NO.
[redacted]	1M8SDMPA5TP[redacted]	

DATE DELIVERED	INSPECTED BY	OPERATOR'S NO.
06/12/96		[redacted]

*** REGULAR ITEMS ***	MAKE	MODEL,TYPE,B/M,BRAND	SERIAL#
ENGINE	DETROIT DDEC	6067GK28 (8L-1-502)	06R0296639
TRANSMISSION	ALLISON	B500R	6610011842
REAR AXLE	ROCKWELL	61143WX-210	NKA96040194
DIFF. CARRIER (STATE RATIO)	ROCKWELL	4.30:1	NKC96027523
FRONT AXLE	ROCKWELL	17101WX-299	NKA96034858
MONITORS	REI	700182	311066/306885
MONITORS	REI	700182	306892/306916
MONITORS	REI	700182	311078/299166
AIR COMPRESSOR	BENDIX	109426	2C2096T
RADIATORS	G&O MANUFACT	6L-1-223	46406 RAD
RADIATORS	YOUNG	6L-1-194	2746068 CAC
RADIATORS		EXIDE	
AIR CONDITIONER COMPRESSOR	CARRIER	6GAA004B1035	1196J02455
CONDENSER COIL	CARRIER	16J-4-1	D9600181
EVAP+HEAT COIL-DRIVER	CARRIER	EM-16	27-000226
CONDENSER FAN MOTOR	RELIANCE	16J-9-1	V77B5943AC-RY
CONDENSER FAN MOTOR	RELIANCE		V77B5943AC-NY
C.H. MOTOR	RELIANCE	16L-8-5	W78P3990AC-RY
ALTERNATOR	DELCO	1117863	96E07
BATTERIES	DELCO	1118447	96D29
STARTER	DELCO	1990418	96D24
PASSENGER SEATS	NATIONAL	4210-A	
DRIVER'S SEAT	NATIONAL	93-B	
SIDE WALL	HOLDS. VIGOR		A416XA
PAINT CHART DRAWING NUMBER	ALL WHITE		
WHEELS	FIRESTONE	27833NC	
MCI KEY CODE	FA0853		
LOCKSMITH CUTTING NO.		32142	
SIDE GLASS (ALL)	S.G.	14-E	
MIS. ITEMS(LIGHTS,BLINDS ETC.)			
SOUND SYSTEM	PANASONIC	700469	17187
AUXILIARY P.A.	REI	700251	323552
AUXILIARY P.A.	REI	700189	50705839
R.A.C. PROCESSER	REI	700227	312704
VCP	REI	700445	14992

*** ADDITIONAL ITEMS ***	MAKE	MODEL,TYPE,B/M,BRAND	SERIAL#
PUBLIC ADDRESS	REI	700246	314340
CLUTCH-FAN	HORTON	6L-6-371	1770343 RH
CLUTCH-FAN	HORTON		1770391 LH
TIRE MANUFACTURER	MICHELIN		XZA PR 16

```
 TIRE SIZE                        !              !12. 0 R 22.5        !
==========================================================================
*** TIRES ***                     !MAKE/TYPE!TIRE SERIAL #  !MILEAGE SERIAL#
==========================================================================
 RIGHT FRONT                      !MICH     !GDZ55299L      !
 LEFT FRONT                       !MICH     !GDZ55392L      !
 R.H. IN DUAL                     !MICH     !GDZ55068L      !
 R.H. OUT DUAL                    !MICH     !GDZ55209L      !
 L.H. IN DUAL                     !MICH     !GDZ55348L      !
  REPORT #: WAR001         (P) WARRANTY                          PAGE: 2
  08/09/00                  MCI FINAL VEHICLE RECORD              4:00 PM
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MODEL  *  102D3     *
                                      SALES ORDER RELEASE NO. [redacted]
 UNIT #: [redacted]            ADDENDUMS TO ABOVE ORDER RELEASE NO. DATE #5  96/06/18
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  [redacted]                      !    1M8SDMPA5TP[redacted]  !
==========================================================================
 DATE DELIVERED                   ! INSPECTED BY            ! OPERATOR'S NO.
          06/12/96                !                         !  [redacted]
==========================================================================
*** TIRES ***                     !MAKE/TYPE!TIRE SERIAL #  !MILEAGE SERIAL#
==========================================================================
 L.H. OUT DUAL                    !MICH     !GDZ55550L      !
 R.H. TRAILING                    !MICH     !GDZ55448L      !
 L.H. TRAILING                    !MICH     !GDZ55275L      !
 SPARE                            !MICH     !GDZ55280L      !
  REPORT #: WAR001         (P) WARRANTY                          PAGE: 3
  08/09/00                  MCI FINAL VEHICLE RECORD              4:00 PM
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MODEL  *  102D3     *
                                      SALES ORDER RELEASE NO. [redacted]
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 DATE DELIVERED                   ! INSPECTED BY            ! OPERATOR'S NO.
          06/12/96                !                         !  [redacted]
==========================================================================
OPTIONS/SPECIALS                    DESCRIPTION
==========================================================================
P1.1.2.1      CHEMICAL TYPE LAV. W/WASH BASIN FACILITY
P1.1.8        AUXILIARY RETENTION TANK
P1.3.5.766    FLOOR COVERING-STEPWELL-RCA TR-766 GREY RIBBED
P1.3.6.766    FLOOR COVERING - ENTRANCE AREA - R.C.A. TR-766 GREY RIBBED
P1.3.7.766    FLOOR COVERING - DRIVER'S AREA - R.C.A. TR-766 GREY SMOOTH
P1.3.8.766    FLOOR COVERING-CENTRE AISLE-R.C.A. TR-766 GREY SMOOTH
P1.3.9.766    FLOOR COVERING - UNDER SEATS - R.C.A. TR-766 GREY SMOOTH
P1.3.21.145   BASIC NON-FOAM BAC FAB ON SDWL-HOLDS.VIGOR A416XA LG SPRAY CAN EFFECT
P1.3.27.145   NON-FOAM BAC FAB ON FULL WIDTH OF CEILING-HOLDS. VIGOR A416XA LG SPRAY
P1.3.30.145   NON-FOAM BAC FAB ON EXTERIOR BTM PNLS OF PARCEL RACK-HOLDS. VGR A416XA
P1.3.35       CARPET ON PASSENGER SIDE OF DR AND PASS MODESTY PANELS #5598 FIRTH COR
P1.4.59       PASSENGER SIDE WINDOW BLINDS
P1.4.71       DRIVER'S ARMREST
P1.4.74       LOCKING DOOR FOR #1 R.H. PARCEL RACK COMPARTMENT
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P1.6.14.2 36 UNIT FIRST AID KIT INCLUDING RUBBER GLOVES & RESPIRATOR
P1.7.25 ALL WHITE PAINT SCHEME
P1.11.2.2 MAINT CARD HLDR INST ON VERTICAL FACE OF DRIVERS PROTECTIVE PANEL
P1.14 BASIC KEYED ALIKE LOCK - ENTRANCE DOOR
P1.14.1 JUNCTION BOX WITH KEY LOCK
P1.14.5 FRT. SIDE SERVICE DOOR WITH KEY LOCK
P1.14.6 FUEL COMPT. FILLER DOOR WITH KEY LOCK
P1.14.8 ENGINE/SERVICE COMPARTMENT DOOR LOCKS
P3.1.20 DRIVER'S MAP LIGHT INSTALLED ON LH SIDE OF DRIVER
P3.3.34 SYSTEM 2000 ENTERTAINMENT SYSTEM W/VCP MOUNTED IN #1 R.H. PARCEL RACK
P3.3.38 SYSTEM 2000 AM/FM RADIO, PA SYSTEM & STEREO MULTIPLEX SYSTEM WITH CASS
P3.3.40 SYSTEM 2000 DRIVERS SPEAKERS WITH 3WAY SWITCH AND AUTO MUTE
P4.1.10 BRAKE DUST SHIELDS - TRAILING AXLE
P4.3.58 DETROIT DDEC SERIES 60 12.7 LITRE 400 HP ENGINE
P4.3.68.1 EXTENDED WARRANTY - ENGINES (DETROIT DIESEL)
P4.6.7.302 FACTORY SUPPLIED MICH. TIRES XZA PR 16 STEEL BELT RADIAL H RATING
P4.7.2.3 HUBODOMETER R.H. DRIVE AXLE IN MILES
P4.7.30.2 EXTENDED TRANSMISSION WARRANTY WITH RETARDER
P4.7.32 ALL. B500R AUTO. TRANSM/RETARDER AND TO INCLUDE TRANS. OIL TEMP. GAUGE
P4.7.33.6 REAR AXLE RATIO 4.30:1
P4.8.1 FUEL _____- ENG. GOV. SPEED_____
P5.6.58 47 PASS W/LAV ARRANGEMENT-NAT MDL 4210-A CENTRE T-PED MNTED SEATS
P6.4.1.3539 HEADREST FACE-HOLDS. VIGOR A416XA LG SPRAY CAN EFFECT
P6.4.3.3542 SIDEBOXING-HOLDS. VIGOR A426XA MOTTLED GREY PLAIN WITH PK/PP/GRN/BLUE
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P6.5.2 EQUAL SEAT SPACING WITH LAVATORY
P6.5.3.26 AISLE END TRIM - CHARCOAL GREY - NATIONAL
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P6.5.28 42 INCH SEAT BACKS - NATIONAL MODELS
P6.5.37 TUFTING ON SEAT BACKS ONLY
P6.5.41.4 UPHOLSTERED SEAT BACKS IN FIRTH "CORD" CARPET
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P6.6.3.2 CARD TABLE STORAGE STRAPS MOUNTED ON CEILING
P6.6.4 CARD TABLE WITH ANTI-SKID SURFACE PADDING/NOSING AND CUP INSERTS

MODEL * 102D3 *

SALES ORDER RELEASE NO. [redacted]

UNIT #: [redacted] ADDENDUMS TO ABOVE ORDER RELEASE NO. DATE #5 96/06/18

OPERATOR	V.I.N. NO.	FLEET NO.
[redacted].	1M8SDMPA5TP[redacted]	

DATE DELIVERED	INSPECTED BY	OPERATOR'S NO.
06/12/96		[redacted]

OPTIONS/SPECIALS	DESCRIPTION
P6.9.1.3539	HEADREST FACE-HOLDS. VIGOR A416XA LG SPRAY CAN EFFECT
P6.9.3.3542	SIDEBOXING-HOLDSWORTH VIGOR A426XA MOTTLED GREY PLAIN WITH PINK,PURPLE
P6.9.4.3539	CUSHION&BAC FACE-HOLDS VIGOR A416XA LG SPRAY CAN EFFECT
P6.10.6.3542	FOLD DOWN R.H. ARMREST ON NATIONAL MODEL DRIVER'S SEAT - HOLDSWORTH
S3.1.242	PROVISIONS FOR DAY-TIME RUNNING LAMPS
S3.4.47	AUTOMATIC FIRE ALARM WITH BUZZER IN LIEU OF BELL.

GENERAL DATA

The data below includes only general information on coach models covered by this manual.

VEHICLE LENGTH: (102DL3) Over Bumpers ..... 45'-6 1/4" (13.87 m)
VEHICLE LENGTH: (102D3) Over Bumpers ..... 40'-6 3/8" (12.35 m)
VEHICLE HEIGHT: (102D3 & 102DL3) Top of Roof Hatch ..... 136.92" (3477.8 mm)
VEHICLE HEIGHT: (102DLS3) Top of Roof Hatch ..... 139.92" (3554 mm)
VEHICLE WIDTH: (102D3 & 102DL3) ..... 102" (2590.8 mm)
TURNING RADIUS: (102DL3)
RH TURN (At Front Bumper) ..... 45'-0" (13.71 m)
LH TURN (At Front Bumper) ..... 46'-6" (14.17 m)
RH TURN (At Tire) ..... 41'-0" (12.50 m)
LH TURN (At Tire) ..... 42'-9" (13.03 m)
TURNING RADIUS: (102D3)
RH TURN (At Front Bumper) ..... 44'-8" (15.37 m)
LH TURN (At Front Bumper) ..... 44'-9" (15.37 m)
RH TURN (At Tire) ..... 40'-9" (15.37 m)
LH TURN (At Tire) ..... 40'-9" (15.37 m)
WHEELBASE: (102DL3) Front Axle to Drive Axle Centers ..... 318" (8077.2 mm)
WHEELBASE: (102D3) Front Axle to Drive Axle Centers ..... 279" (7087 mm)
FRONT AXLE TRACK: ..... 85.6" (2174 mm)
REAR AXLE TRACK: (Center of Dual Wheels) ..... 76.6" (1946 mm)
TRAILING AXLE TRACK: ..... 85.6" (2174 mm)
GROSS VEHICLE WEIGHT: (102D3 & 102DL3) ..... 44,400 lbs. (20,139.8 kg)
APPROXIMATE PAYLOAD CAPACITY: (102DL3) ..... 12,750 lbs. (12358.3 kg)
APPROXIMATE PAYLOAD CAPACITY: (102D3) ..... 11,500 lbs. (12358.3 kg)
FUEL CAPACITY: (Standard Tank) ..... 192 Gal. U.S. (726.7 liters)
COOLING SYSTEM CAPACITY: (With Series 60, Caterpillar or Cummins Installations) ..... 28 Gal. U.S. (106 liters)
STEERING SYSTEM CAPACITY: ..... 7.5 Qts. U.S. (7.1 liters)
TIRE SIZE: (Minimum) ..... "H" Rated

See the capacity schedule in Section 10 for further information on engine, transmission and rear axle lube capacities.

ENGINE DATA

Model	Series 60	Cummins	Caterpillar
Type	4 Cycle	4 Cycle	4 Cycle
No. of Cylinders	6	6	6
Bore (Inches)	5.12	4.92	4.92
Bore (mm)	130	125	125
Stroke (Inches)	6.3	5.78	5.5
Stroke (mm)	160	147	140
Compression Ratio (Turbo)	15:1	16:1	16:1
Total Displacement (Cubic Inches)	775	661	628
Total Displacement (Liters)	12.7	10.8	10.3
No. of Main Bearings	7	7	7

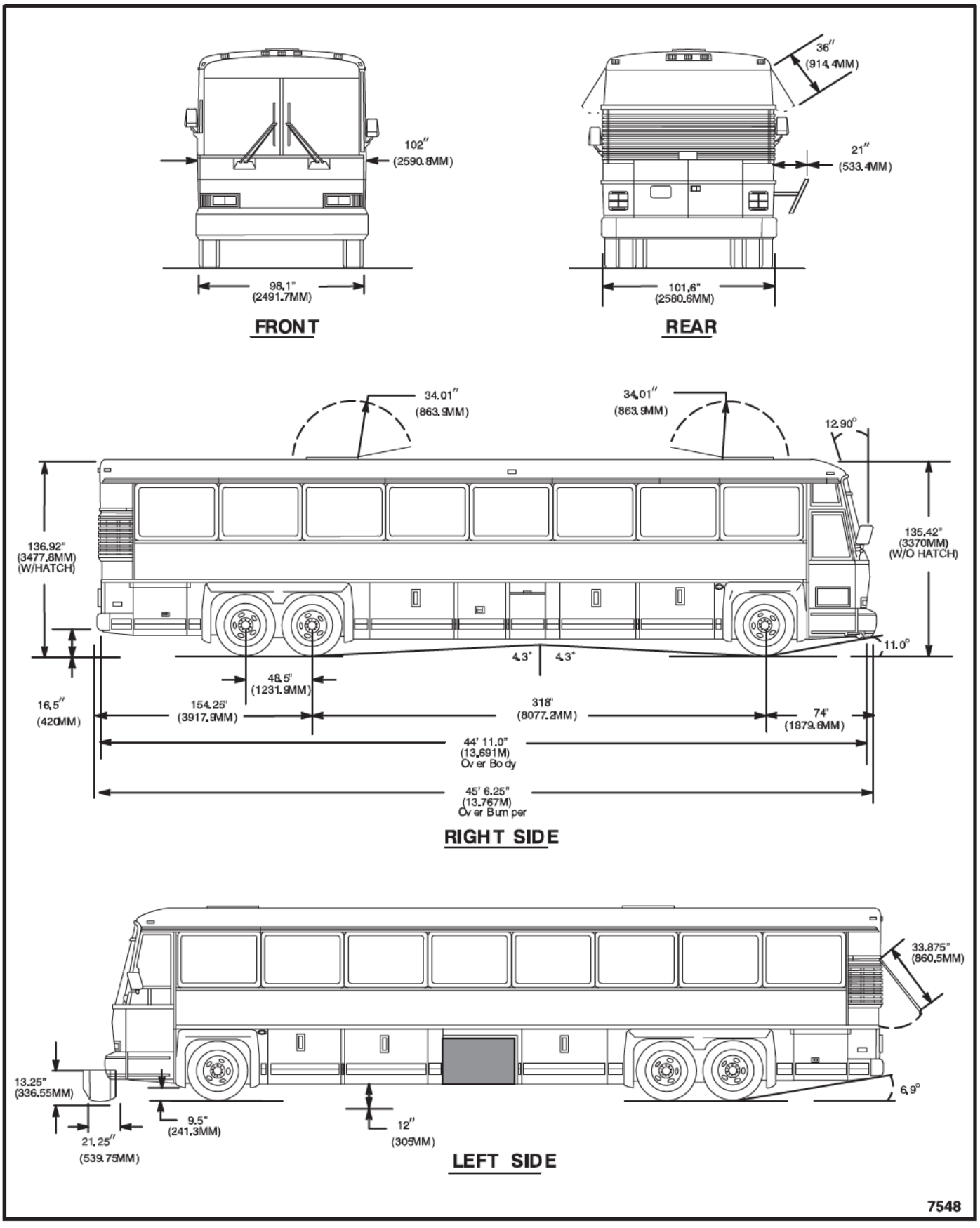

Figure 1 102DL3 Model Body and Door Clearance Diagram

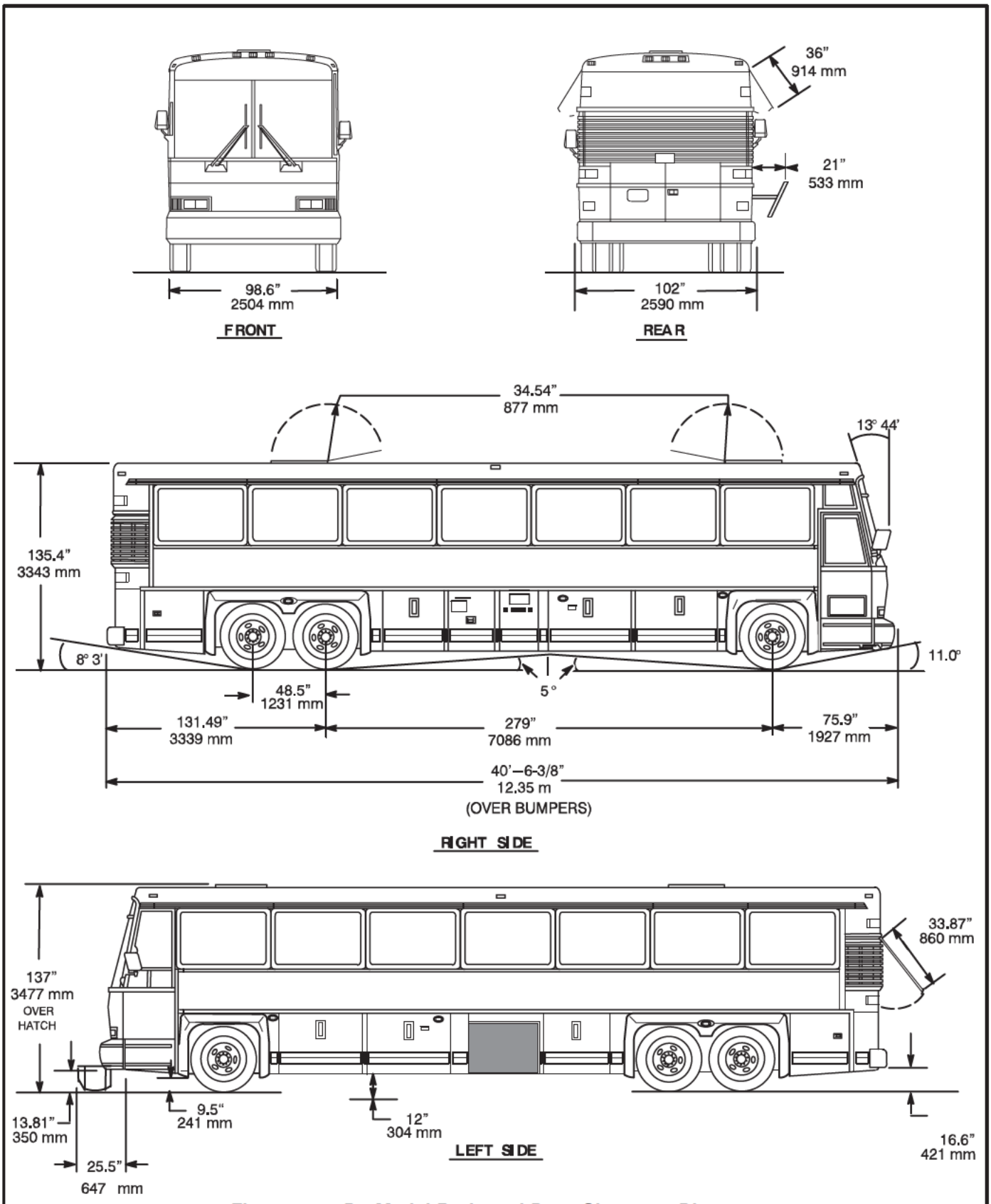

Figure 2 102D3 Model Body and Door Clearance Diagram

C0734

REVISIONS & SERVICE INFORMATION BULLETINS

This manual will on occasion be revised in order to add new information, and to update or correct existing information. Please note the bold vertical line (revision bars) that appear to the left of each text column on sample page below (Figure 1). The revision bars indicate changes made since the last printing. The revision bars can be used to show changes made within a specific sentence or paragraph, and in some instances they may extend throughout whole section, if required. The revision bars should allow the reader to quickly identify areas with new or different information. All information contained in this manual is based on the latest product information available at time of publication. Motor Coach Industries reserves the right to make product changes at any time without notice. Service Bulletins are issued, when required, to supplement or supersede information in this manual. Information in the bulletins should be noted and filed for future use.

⚠ WELDING CAUTION ⚠

Since welding is a procedure which may be carried out either as allowed (explicitly or implicitly) by instructions in this manual or by an independent decision of the coach owner/operator, the following information pertaining to welding should be read before beginning any welding process. The prohibitions and requirements contained therein must be complied with when any coach welding is undertaken. **IMPORTANT:** In order to prevent electronic control component(s) damage during welding, steps 3 thru 5 must be strictly adhered to.

1. Welding must be done only by an experienced and qualified person (Minimum Requirements AWS B1.1). All specific instructions or prohibitions of applicable welding procedures must be followed.
2. Adequate ground contacts and barriers must be positioned as close as possible to the weld area and as required to protect components (wiring, brake lines, hydraulic lines, etc.) from damage due to heat, contact by weld splatter, arcing or other potentially damaging events associated with welding.
3. Turn the main battery disconnect switch to “OFF.”
4. Protect the Vanner battery equalizer as follows:
    a. Disconnect the ground at the equalizer first.
    b. Disconnect the battery leads.
    c. Reconnect the battery leads first and equalizer ground last.
5. Remove the ATEC/WTEC/DDEC power control fuses, and disconnect harnesses from their ECM and ECU units.

⚠ DRILLING CAUTION ⚠

Due to the close proximity of Electrical/Mechanical lines to the aisle floorboard DO NOT drill any holes in the center tunnel area. This area is 15 inches wide and runs immediately under the coach center aisle for the full length of the coach.

Various other WARNINGS, CAUTIONS and NOTES are contained in this manual. They should be read carefully to minimize the risk of personal injury or the possibility that improper service methods may be used which could damage the coach and render it unsafe. It is important to note that these cautions and notices are not all inclusive. We could not evaluate and advise users of all conceivable ways in which service may be done or of the possible hazardous consequences of each way. We have not attempted to do this. Therefore, anyone who uses a service procedure or tool not recommended by the manufacturer should first satisfy himself that neither his safety nor vehicle safety will be jeopardized by the particular method he selects.

Service Bulletin No. 118

MODEL	TYPE	SECTION/GROUP	DATE
MCI 102D Series	Field Change Program	17 – Lavatory	June 15, 1997

SUBJECT LAVATORY EXHAUST RETROFIT KIT/WEBASTO HEATER INSPECTION

CONDITIONS Refer to the Customer Letter Accompanying this Bulletin. This bulletin does not apply to coaches with 8V92 and 6V92 engines.

Ref.: NHTSA No. 97V–053

Section 1: Lavatory Exhaust Retrofit

Description:

Effective with units [redacted] reroute the lavatory exhaust hose to avoid contact with the auxiliary heater ECU, per the following procedure. Contact with the auxiliary heater ECU can cause premature hose wear.

Parts

Qty.	P/N	Description
1	17L–4–84	Lavatory Exhaust Retrofit Kit
1	19–4–144	Clamp
1	19–1–385	Bolt
1	19–3–32	Nut
2	19–2–57	Washer

Service Procedure for 102DL3 Model Coaches

Use Safe Shop Practices At All Times.

Read the entire procedure before beginning work.

Caution: Turn the main battery switch and the remote engine run switch to "off."

1. Loosen the hose clamp and remove the lavatory hose from the air cleaner (Figure 1).
2. Remove the two securing clamps from the auxiliary heater mounting brackets (Figure 1).
3. Inspect the lavatory hose and auxiliary heater harness for damage. Replace these if necessary. The part numbers are 7L–12–1219 for the harness and 17L–4–2 for the hose.

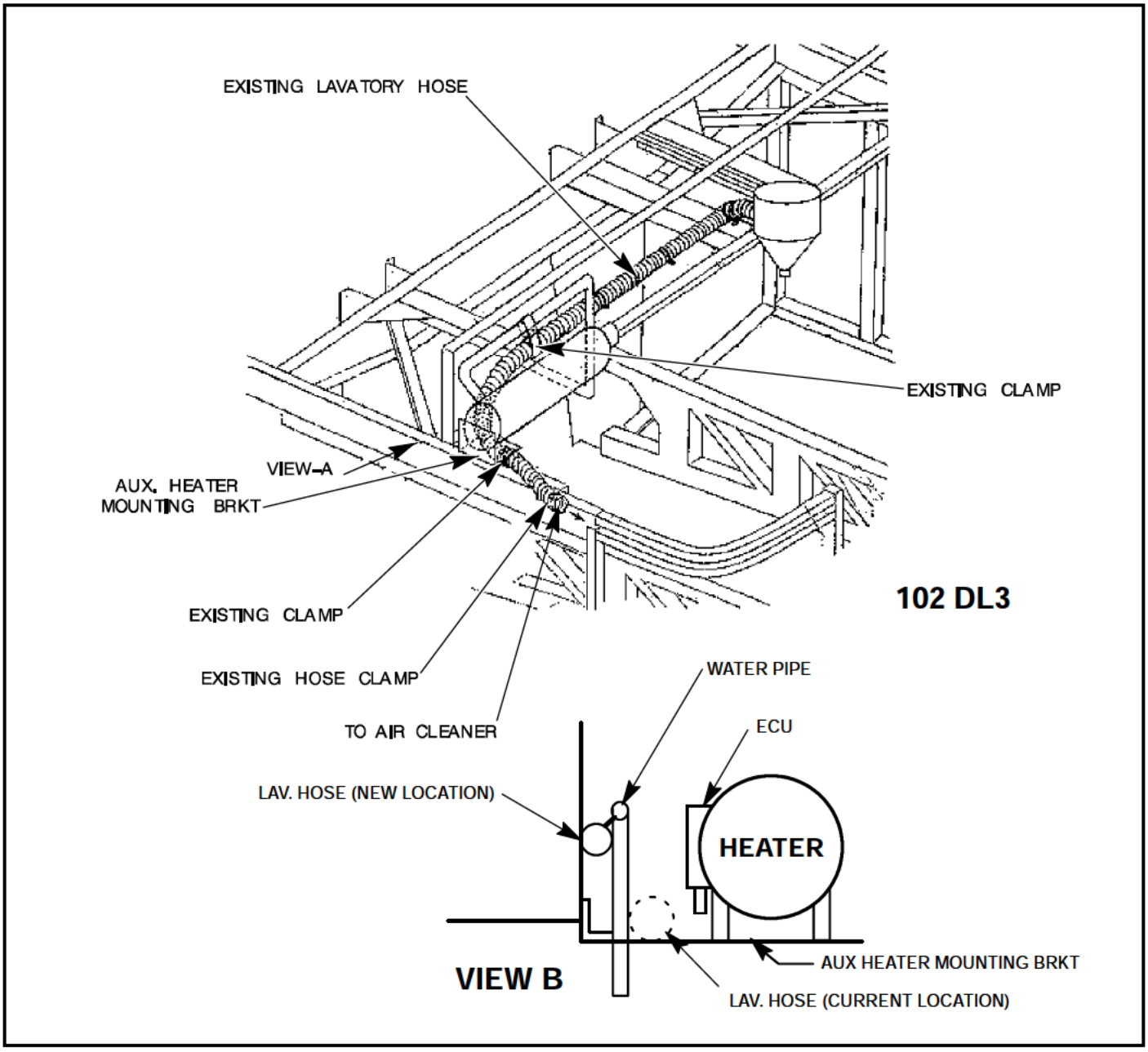

Figure 1: DL3 Routing and Connection Details

4. Route the lavatory hose between the water line and the wall of the rear cross seat, clamping it to the water supply line with the 19–4–144 clamp and the existing clamp, using the hardware supplied (Figure 3).

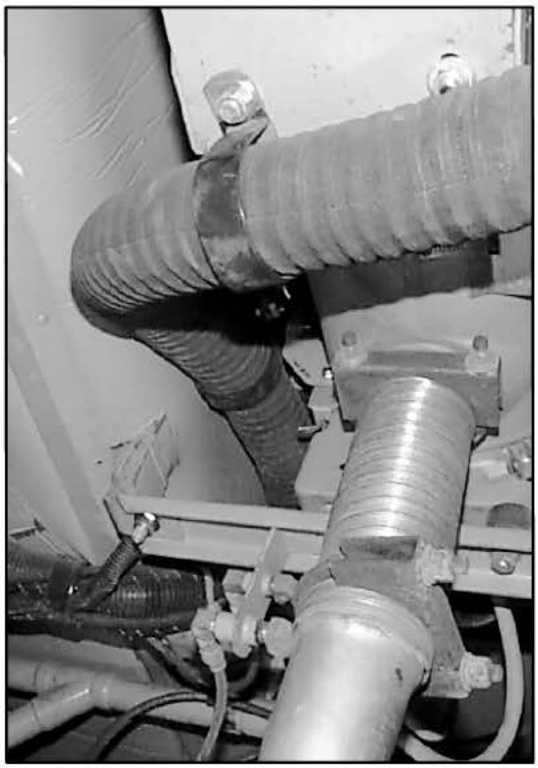

Figure 2: Routing Detail

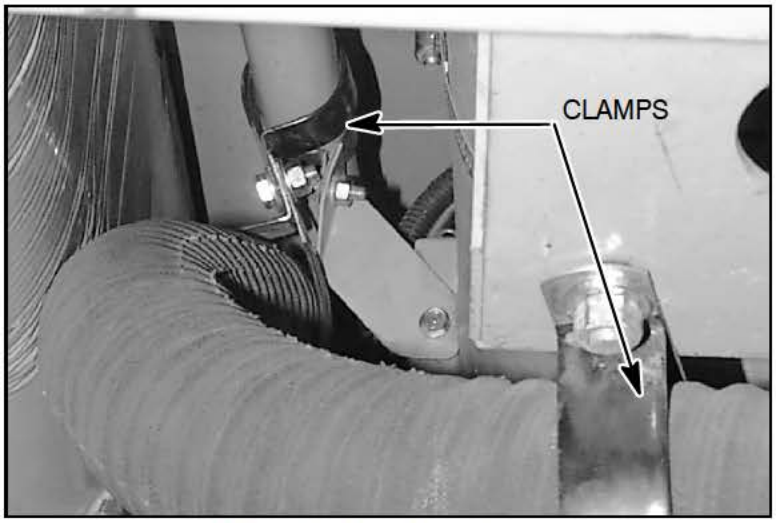

Figure 3: Clamp Location

5. Reclamp the hose to the end of the heater mounting bracket and clamp the hose to the air cleaner (Figure 2).
6. Do a final inspection to check the lavatory hose for clearance from the ECU and auxiliary heater wiring harness.

Service Procedure for 102D3 model coaches

Use Safe Shop Practices At All Times.

Read the entire procedure before beginning work.

Caution: Turn the main battery switch and the remote engine run switch to "off."

1. Loosen the hose clamp and remove the lavatory hose from the air cleaner (Figure 4).
2. Remove the two securing clamps from the auxiliary heater mounting brackets (Figure 4).
3. Inspect the lavatory hose and auxiliary heater harness for damage. Replace these if necessary. The part numbers are 7L–12–1219 for the harness and 17L–4–2 for the hose.
4. Route the lavatory hose over the water supply line and beside the auxiliary heater, clamping it to the the side heater bracket using the existing hose clamp and the hardware provided. Figure 5 shows the present routing, and Figure 6 shows the correct routing. Figure 7 shows the clamping location.

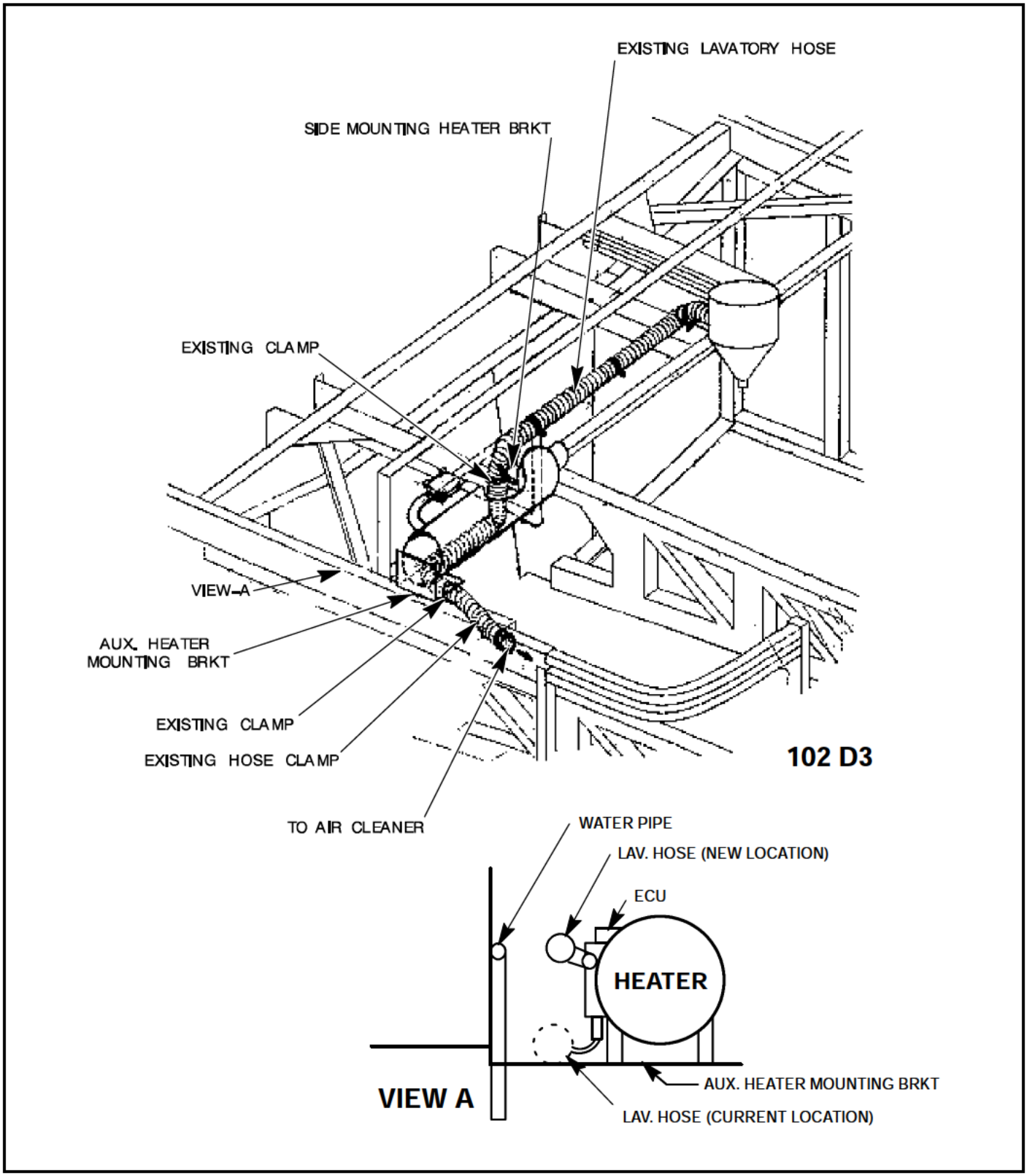

Figure 4: D3 Routing and Connection Details

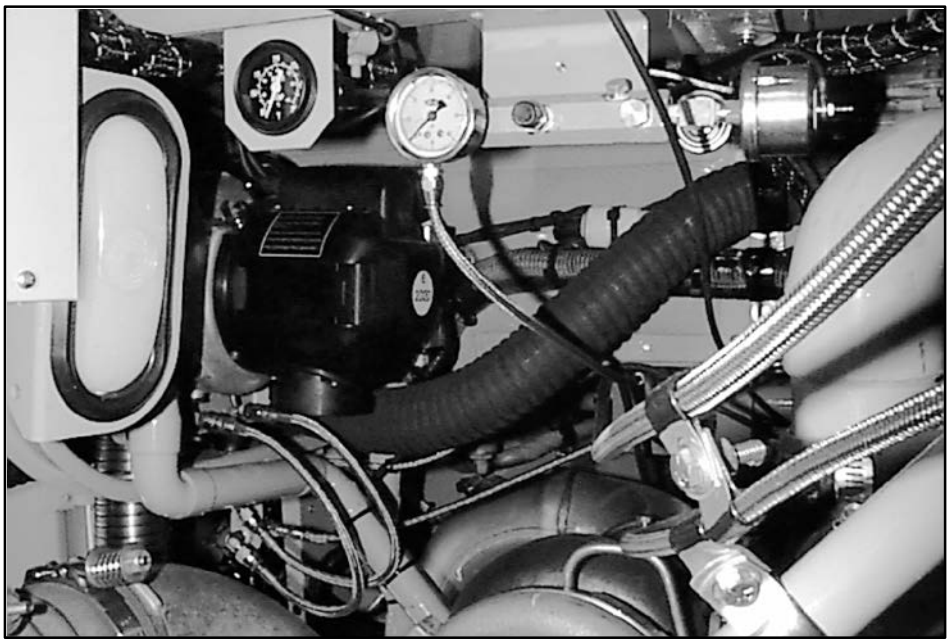

Figure 5: Present Hose Routing

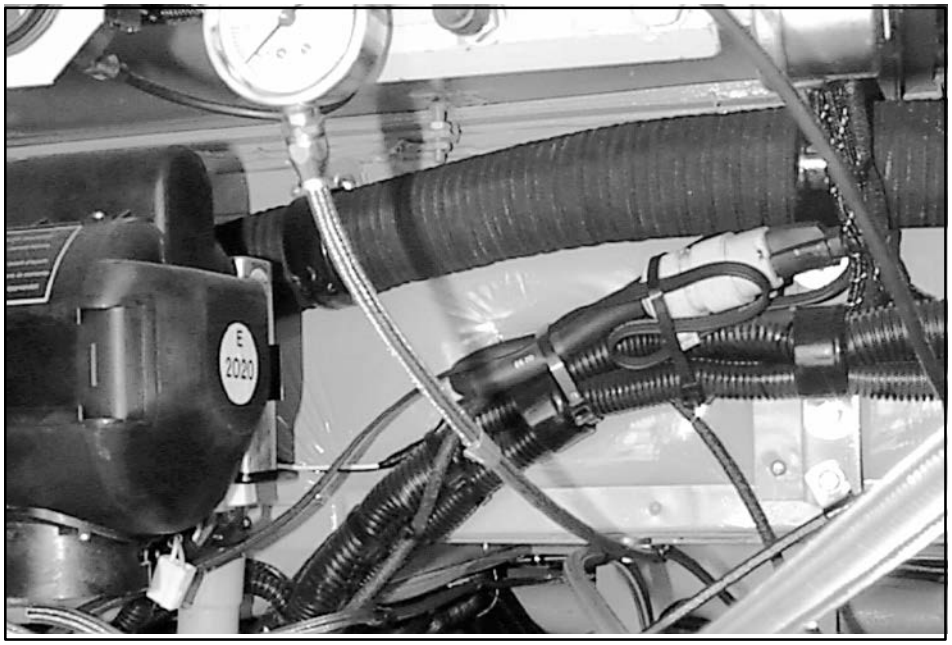

Figure 6: Rerouted Hose

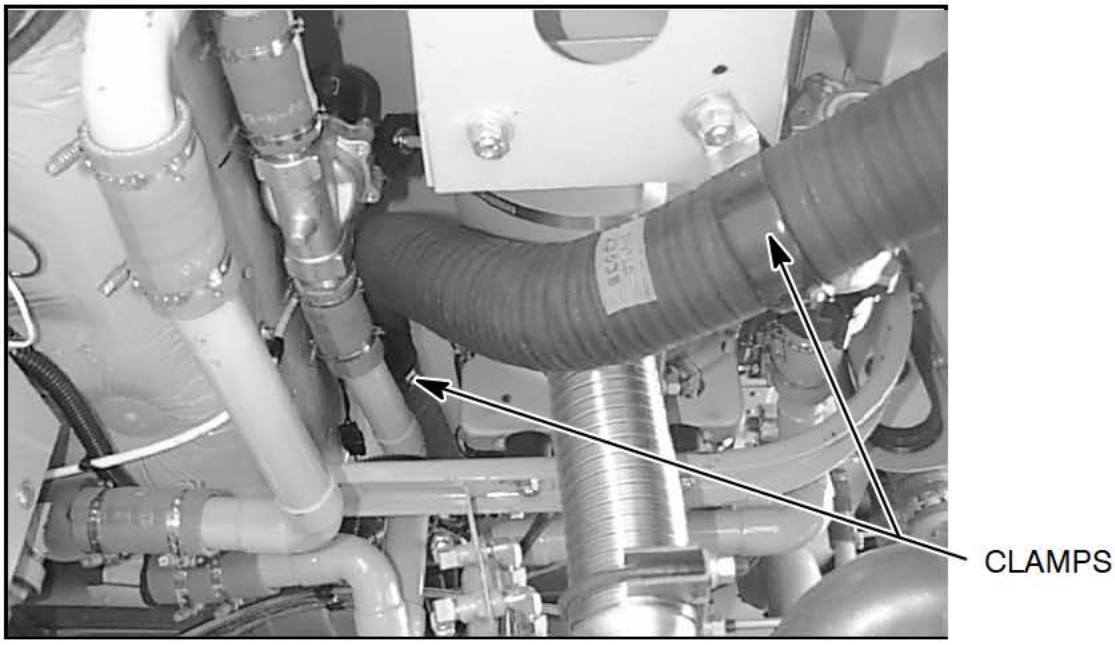

Figure 7: Clamping location (Viewed from side service door)

5. Reclamp the hose to the end of the heater mounting bracket and clamp the hose to the air cleaner.
6. Do a final inspection to check the lavatory hose for clearance from the ECU and auxiliary heater.

Section 2: Webasto Heater Inspection

As part of the retrofit process, inspect the Webasto heater fuel lines and electrical connections:

Fuel line inspection

1. Visually inspect both the supply and return line for leakage, chafing, cracking, or other signs of deterioration. Replace damaged hoses.

   Note: While they are not a part of this campaign, this is a good time to avoid future problems by doing routine maintenance and replacing the hoses if they show signs of wear.

2. Check for tightness of the brass heater fuel lines coming out of the burnerhead. They should be tight and secure. If it is possible to move these fittings (without using excessive force) these fittings must be tightened.
3. To tighten the brass fittings, open the burnerhead and tighten the two 14 mm “banjo” bolts at the side of the burnerhead to 1.23 lb–ft (20 Nm) ±10%.
4. While the burnerhead is open, check the high pressure line from the fuel pump to the nozzle holder for tightness.

Electrical connection inspection

The electrical connections should be free of dirt and corrosion. If the connections appear to be corroded or deteriorated it is imperative that they be cleaned or replaced to maintain reliable system operation.

1. To clean the contacts, simply unplug them and spray them with an electrical contact cleaner.
2. Before reconnecting the electrical connections, apply a thin coating of non–conductive electrical grease to the connections. This will help prevent future corrosion and should be done annually.

Refer to the Webasto workshop manual for detailed maintenance and repair procedures.

Field Change Program Conditions:

The parts required for this change will be supplied without charge. A labour allowance of 1.0 hours will be granted for this procedure on all coach models beyond the normal warranty period. This labour allowance will be paid on receipt of a “Warranty Claim Form” and a “Field Campaign Verification Form” as detailed in your Owner Warranty manual. This program will close six (6) months from the date you receive the parts

Motor Coach apologizes for any inconvenience resulting from this campaign, but urges you to implement this change as soon as possible. **Note:** To eliminate the chance of problems occurring prior to implementing this change, removal of the auxiliary heater fuses in the battery compartment will provide a temporary solution until this bulletin can be completed.

Sincerely,

Motor Coach Industries

U.S. and Canadian Service Departments.

Service Bulletin No. 119

MODEL	TYPE	SECTION/GROUP	DATE
MCI 102D Series	Field Change Program	7B – Alternator	Jan. 8, 1998

SUBJECT ALTERNATOR GROUND RETROFIT KIT

CONDITIONS Refer to the Customer Letter Accompanying this Bulletin. This bulletin does not apply to 102D series coaches with 8V92 or 6V92 engines.

Description:

Effective with units [redacted], a secondary ground cable is added from the alternator to the frame. This ground is recommended by the alternator manufacturer and is added by using the following procedure.

Parts

Qty.	P/N	Description
1	7L–13–3058	Kit, retrofit, alternator ground
2	19–1–23	Cap screw, 3/8–16 x 1" Grade 5
3	19–2–27	Lockwasher, 3/8" Steel
2	19–2–20	Flat washer, 3/8" Brass
1	19–3–122	Nut, 3/8 – 16 UNC, Brass
1	7L–12–2580	Alternator ground cable

Service Procedure

Use Safe Shop Practices At All Times.

Read the entire procedure before beginning work.

Caution: Turn the main battery switch and the remote engine run switch to "off."

1. Prepare the alternator ground surface (the machined surface on the front housing) by scraping off any paint and/or sanding the machined surface to bare metal.
2. Connect the additiional ground cable to the alternator with the capscrew, lockwasher and flat washer provided (Figure 1). Torque to 25–35 lb–ft.

Note: For Caterpillar engines, the upper mounting bracket must be removed:

a. Clean the contact surfaces between the bracket and the alternator to bare metal

b. Using one of the existing 3/8" bolts, connect the ground cable to the bracket, ensuring the contact surfaces are cleaned to bare metal

c. Reinstall the bracket and remaining mounting hardware.

d. Torque 3/8" bolts to 25–35 lb–ft and 1/2" bolts to 65–75 lb–ft.

3. For engines without an oil reserve tank:
   a. Route the cable over the alternator to the bracket mounting the air regulator. Use any one of the three existing holes.
   b. Scrape the paint off the bracket and sand it to bare metal. Use the capscrew, lockwasher, flat washer, and nut provided to secure the cable. (See Figure 1, Section B–B).
   c. Torque to 25–35 lb–ft.
   d. Go to Step 5. of this procedure.

4. For engines with an oil reserve tank:
   a. Route the cable over the alternator and under the reserve tank to the air regulator bracket per view A of Figure 1.
   b. Remove one set of the hardware that mounts the oil reserve tank bracket to the air regulator bracket.
   c. Scrape off paint and sand the surface to bare metal, (both sides) to ensure contact with the hardware and ground cable.
   d. Use the capscrew, lockwasher and flatwasher provided to secure the cable (Figure 1, Section B-B). Due to the confined nature of this area, it may be necessary to install the capscrew from the front side of the bracket, and to place the nut on the back side.
   e. Torque to 25–35 lb–ft.
   f. Connect the ground cable to the bracket with the hardware previously removed from the bracket.
   g. Go to Step 5. of this procedure.
5. Inspect the existing ground cable connection to the frame stud and engine block (Figure 1). If the connection is loose or corroded, remove the connection, sand all contact surfaces to a clean shiny appearance, and reassemble the connection.
6. Torque the 1/2 – 13 nut on the frame ground stud to 50 lb–ft.
7. Torque the engine ground bolt to 50 lb–ft.

Field Change Program Conditions:

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

A labour allowance of 0.5 hours will be granted for this procedure on all coach models beyond the normal warranty period.

This labour allowance will be paid on receipt of a “Warranty Claim Form” and a “Field Campaign Verification Form” as detailed in your Owner Warranty manual.

This program will close six (6) months from the date you receive the parts.

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.

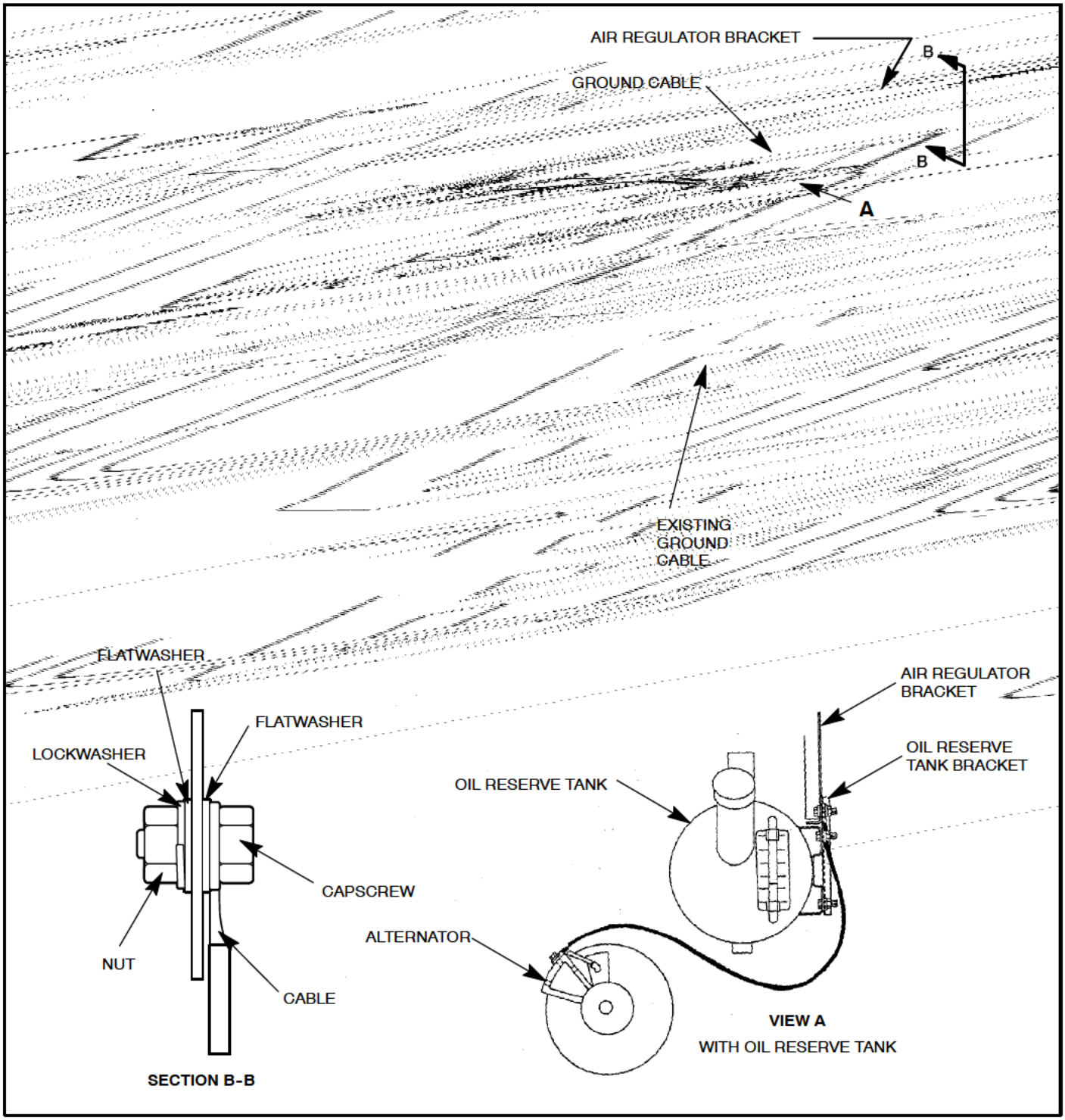

Figure 1 Alternator Ground

Service Bulletin No. 115A

MODEL	TYPE	SECTION/GROUP	DATE
MCI 102D3/DL3 Series	Field Change Program	4 - Brakes & Air System	May 20, 1998

SUBJECT PARKING BRAKE SYSTEM

CONDITIONS Refer to the Customer Letter Accompanying this Bulletin

Description:

This bulletin is a revision of Field Service Bulletin 115. Part 4L-28-9, a decal, has been eliminated.

Effective with unit 48127*, MCI redesigned the braking system on 102D3 and 102DL3 coaches by removing the interlock between the parking brake and service brakes.
On some 102D3 coaches, removal of the parking brake interlock results in noise from the tag axle brake regulator valve. DOT braking performance standards are not impaired by removing the tag axle brake regulator valves from 102D3 coaches. As a result, the tag axle regulator valve was removed from 102D3 production coaches effective with unit 48107*.

Effective with unit 48127 on 102D3 and 102DL3, replace all 4L-28-9 decals with 3L-15-2486 Decals. MCI has cut in the 3L–15–2486 decals effective unit 50815 on 102D3 and 102DL3 coaches.

MCI is initiating a Field Change Program to:
a) remove the parking brake interlock.
b) eliminate tag axle brake regulator valve noise by removing the valve from 102D3 units built prior to unit 48107*.
c) provide the driver with proper instruction on the release of the parking brake.
*Refer to the last page of this bulletin for a list of units, which although built prior to the production removal of the interlock and/or regulator valve, were reworked before delivery. Those units are not included in this field change program.

Use the following parts and service procedure to accomplish removal of the interlock system, tag axle brake regulator valve, and parking brake decal replacement.

Parts

Qty.	Old P/N	New P/N	Description
1		4L-1-84	Kit - Parking Brake Interlock Removal
		Kit Contents are:	
3	19-10-1336		Elbow - Male (3/8T x 1/4MP)
1	19-10-1402		Tee - Male Branch (1/4MP x 3/8T)
1	4C-20-209		Elbow - Drop
2	19-1-12		Capscrew
2	19-2-69		Flatwasher
2	19-2-25		Lockwasher
2	19-3-19		Nut - Hex
6	19-11-258		Tyrap
3	19-11-259		Tyrap
1	4L-28-9		Decal
1		3L-15-2486	Decal: **Replaces 4L-28-9**
1	4L-4-183		Kit - Tag Axle Brake Regulator Valve Removal
		Kit Contents are:	
2	19-10-1632		Elbow - 45° Male
1	4L-20-470		Tubing - 1/2" Green Nylon Airline (54" Length)
2	19-10-1833		Sleeve
2	19-10-1834		Nut
2	19-10-1835		Insert - Stainless Steel

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Service Procedures:

Use Safe Shop Practices At All Times.

Read the procedure(s) completely before beginning work.

Procedure A - Removal of Parking Brake Interlock System

1. Turn the main battery switch to "OFF," apply the parking brake, and chock the coach wheels.

   Note: The part of the park brake air system that is to be modified is on the delivery side of the push/pull valve. This part of the system is vented when the parking brake is applied. Therefore it is not necessary to vent the park brake air reservoir.

2. Open the front bumper and remove the spare tire from the tire compartment.
3. **a)** On coaches having an **E-10 brake valve**, disconnect the air lines to the 19-10-1402 male branch tees on the primary stop/park switch assembly and the secondary stop/fast idle switch assembly (see Figure 1). Replace the tees with 19-10-1336 male elbows (see Figure 3). Reconnect the red and green airlines running between the switches and the E-10 brake valve (see Figure 3).
   b) On coaches having an **E-15 or E15R** brake valve, disconnect the air lines to the 19-10-1400 street tee on the primary stop/park switch assembly and from the 19-10-1402 male branch tee on the secondary stop/fast idle switch assembly (see Figure 2). Replace the tees with 19-10-1336 male elbows (see Figure 4). Connect the red and green airlines running between the switches and the E-15/E-15R brake valve to the newly installed 19-10-1336 elbows (see Figure 4).
4. Disconnect the 3/8" brown airline from the delivery port of the SV-1 synchro valve in the interlock assembly. Leave that line connected to the primary stop/park brake switch assembly.
5. Disconnect the 3/8" brown airline from the supply port of the SV-1 synchro valve in the interlock assembly. Leave that line connected to the push/pull parking brake valve assembly beside the driver.

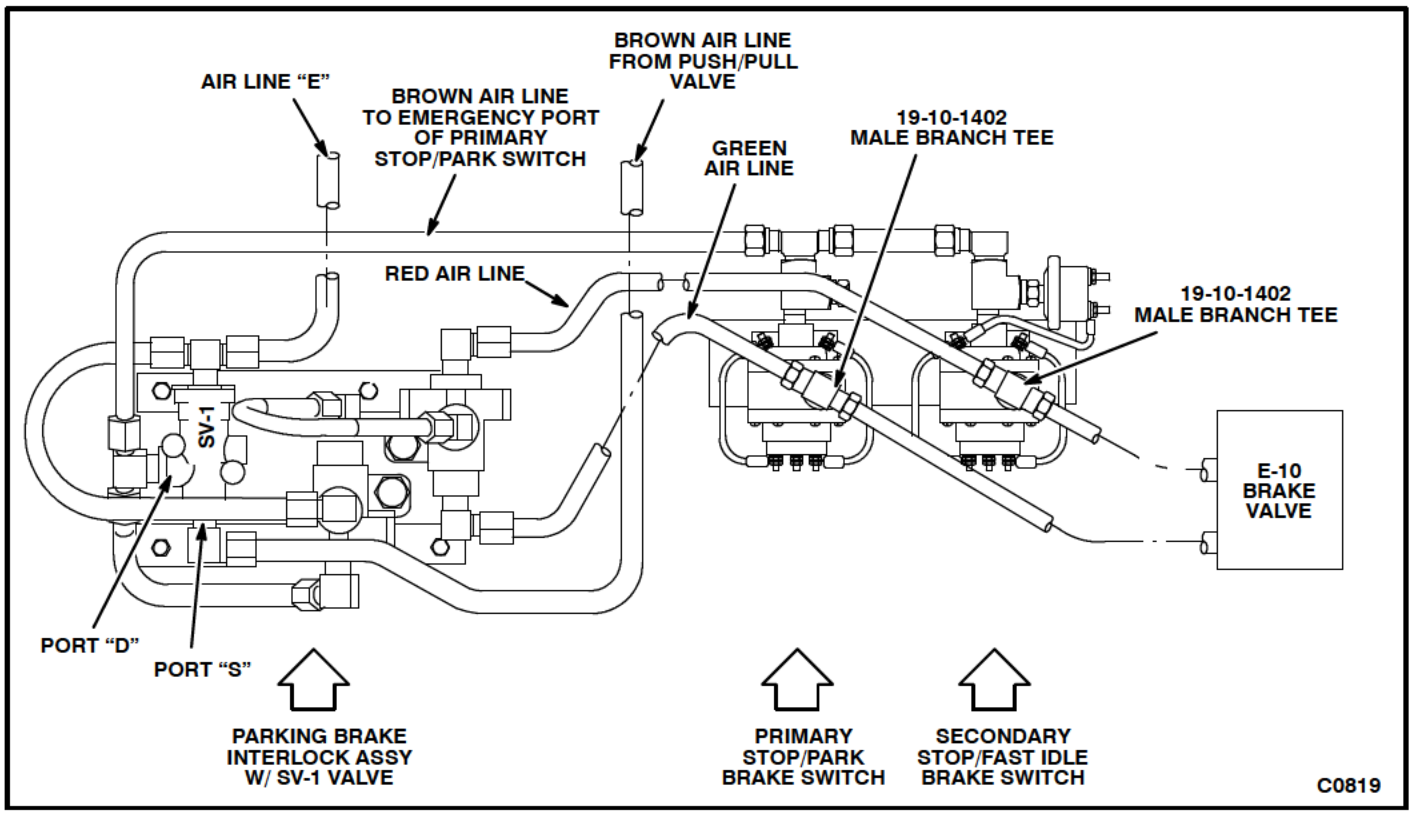

Figure 1. Brake System With E-10 Brake Valve and Parking Brake Interlock.

6. Disconnect the 3/8"brown-colored airline "E" from the tee at the top of the SV-1 valve. Leave that line connected to the emergency control drop elbow.
7. Unbolt the parking brake interlock assembly from the panel at the rear of the tire compartment. Discard the interlock assembly.

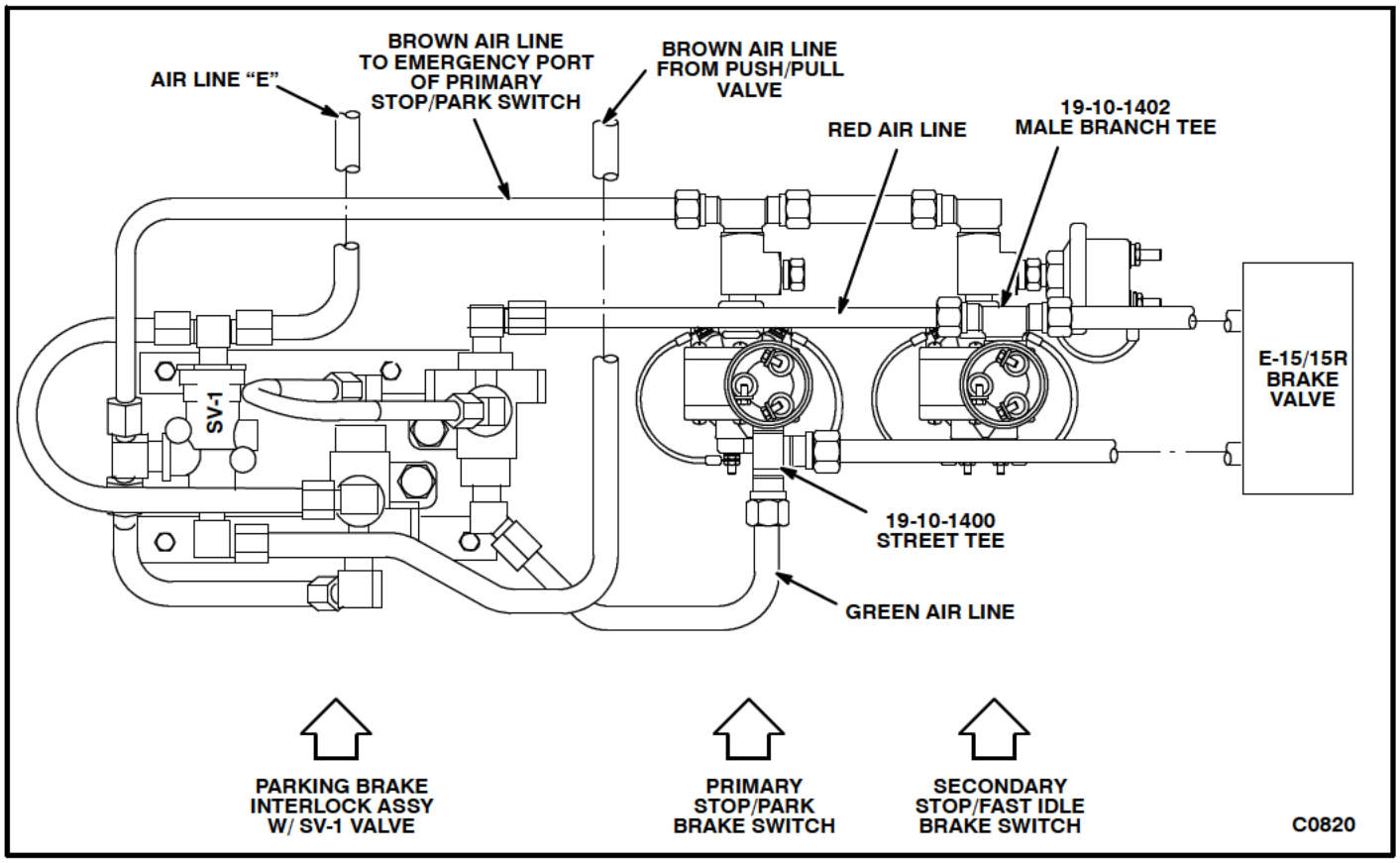

Figure 2. Brake System With E-15/ E-15R Brake Valve and Parking Brake Interlock.

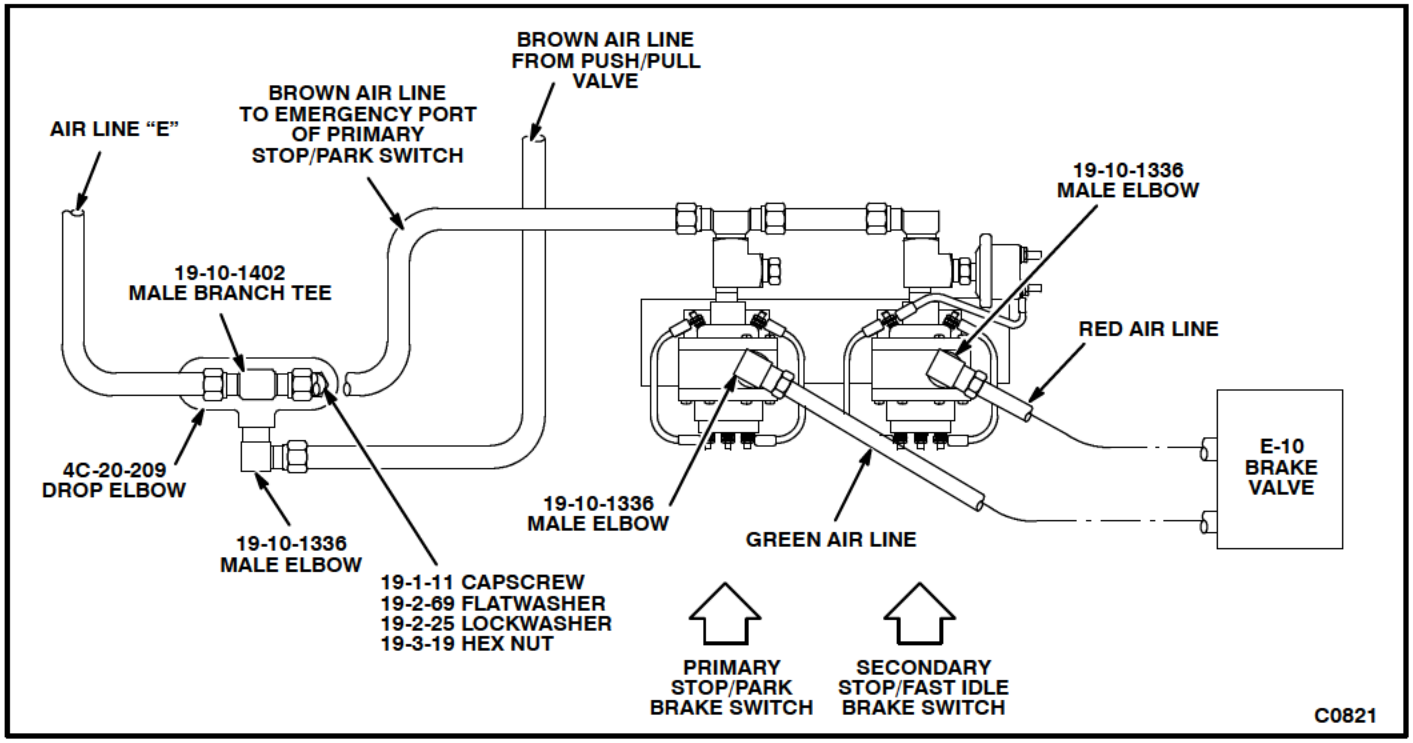

Figure 3. Brake System With E-10 Brake Valve and Without Parking Brake Interlock.

8. Install a 19-10-1336 male elbow in the end port of the 4C-20-209 drop elbow. Orient the 19-10-1336 elbow so that its open end is pointing to the right. Install a 19-10-1402 male branch tee in the top port of the elbow, orienting it so that the long dimension of the tee is parallel with the mounting flange of the drop elbow.
9. Install the 4C-20-209 drop elbow with the added fittings in the same approximate location that was occupied by the interlock assembly, making sure it is located such that all of the brown airlines can be easily connected to it. Install the drop elbow with its end port and the 19-10-1336 elbow downward. Use the capscrews, nuts and washers from the kit to install the drop elbow as shown in Figures 3 & 4.

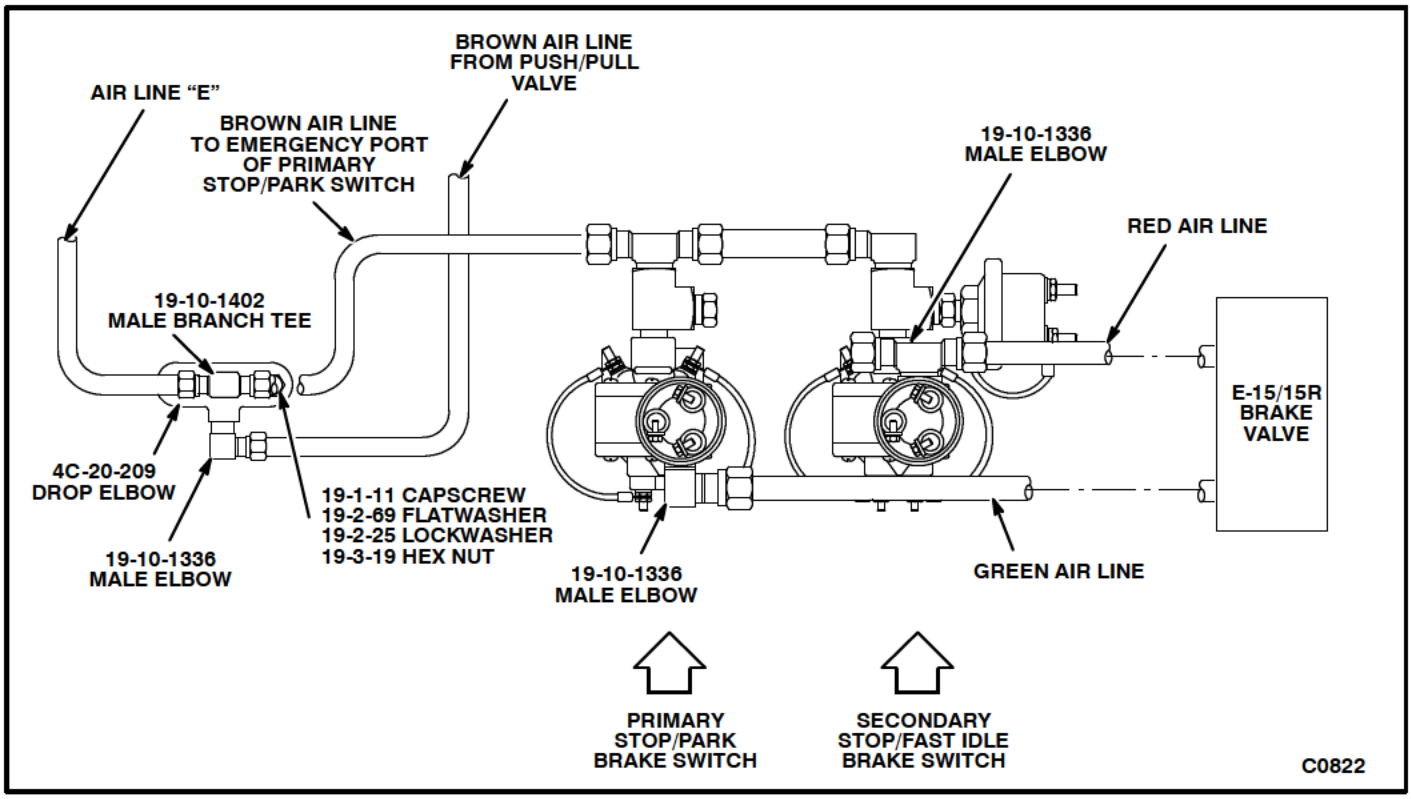

Figure 4. Brake System With E-15/E-15R Brake Valve and Without Parking Brake Interlock.

10. Connect the brown airline running to the emergency port of the primary stop/park brake switch to the right hand port of the 19-10-1402 tee in the drop elbow and the brown airline "E" running to the emergency control drop elbow, to the left hand port.
11. Connect the brown airline from the push/pull parking brake valve to the 19-10-1336 elbow in the end port of the drop elbow.
12. Place tyraps on the airlines as required to secure them in a neat and safe manner.
13. Remove the existing decal on the top of the flip-up cover over the parking brake handle and apply the 3L-15-2486 decal in the same location. A heat gun works well for removing the old decal.
14. Turn the main battery switch to "ON," start the coach and build up air pressure to 100 psi, as shown on the dash-mounted air gauges. Release the park brake and check that the red park brake telltale and amber stop light telltale lights turn off .Check the new connections for leaks. Re-apply the parking brake and check that the two telltale lights illuminate. Remove the wheel chocks.

Note: Improper operation of the telltale lights could indicate improper routing and connection of the airlines.

Note: Before correcting leaks, stop the engine, turn the main battery switch to "OFF" and apply the parking brake.

Procedure complete.

Procedure B – Removal of Tag Axle Brake Regulator Valves - 102D3 ONLY

1. Turn the main battery switch to "OFF," apply the parking brake and chock the coach wheels.
2. Remove and discard the 1/2" green nylon airlines connecting the the R-14 valve to the 28 psi tag axle brake regulator valves. See Figure 5.
3. Remove both regulator valve assemblies complete with all fittings from the wheel well bulkhead connectors. Do not remove the bulkhead connector. See Figure 5.

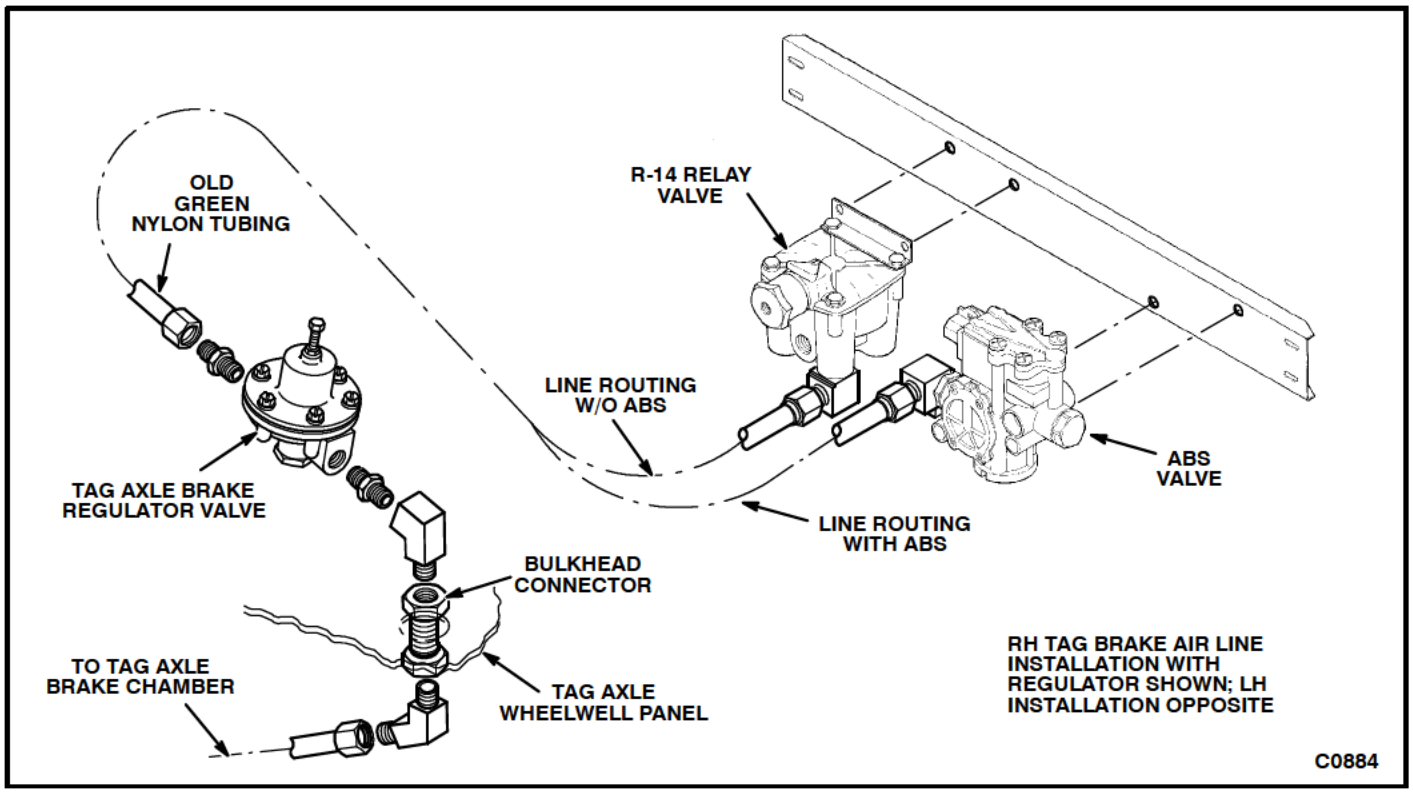

Figure 5. Old Tag Axle Brake Line Installation With Regulator Valve.

4. Install a19-10-1632 male 45° elbow into each of the bulkhead connectors, and using the nuts and ferrules supplied with the elbow, connect a 24" or 27"* length of new 1/2" green nylon airline from the kit to each elbow. See Figure 6.
   *Use 24" lengths of tubing with an anti-lock brake system, 27" lengths if there is not an anti-lock brake system.
5. Using the 19-10-1833 sleeves, 19-10-1835 inserts, and 19-10-1834 nuts from the kit, connect the other ends of the new airlines to the ABS valve on coaches with anti-lock brakes or to the R-14 valve on coaches without anti-lock brakes. See Figure 6.
6. Turn the main battery switch to "ON," start the coach, and build up air pressure to 100 psi as shown on the dash-mounted air gauges. Release the park brake and check that the red park brake telltale and amber stop light telltale lights turn off .Check the new connections for leaks. (A service btake aplication has to be made to check air brakes.)

Procedure c – Replacing the parking brake decal

1. Remove the existing decal on top of the flip-up cover over the parking brake handle. A heat gun works well for removing the old decal.
2. Apply the 3L-15-2486 decal in the same location as the old decal.

Procedure complete.

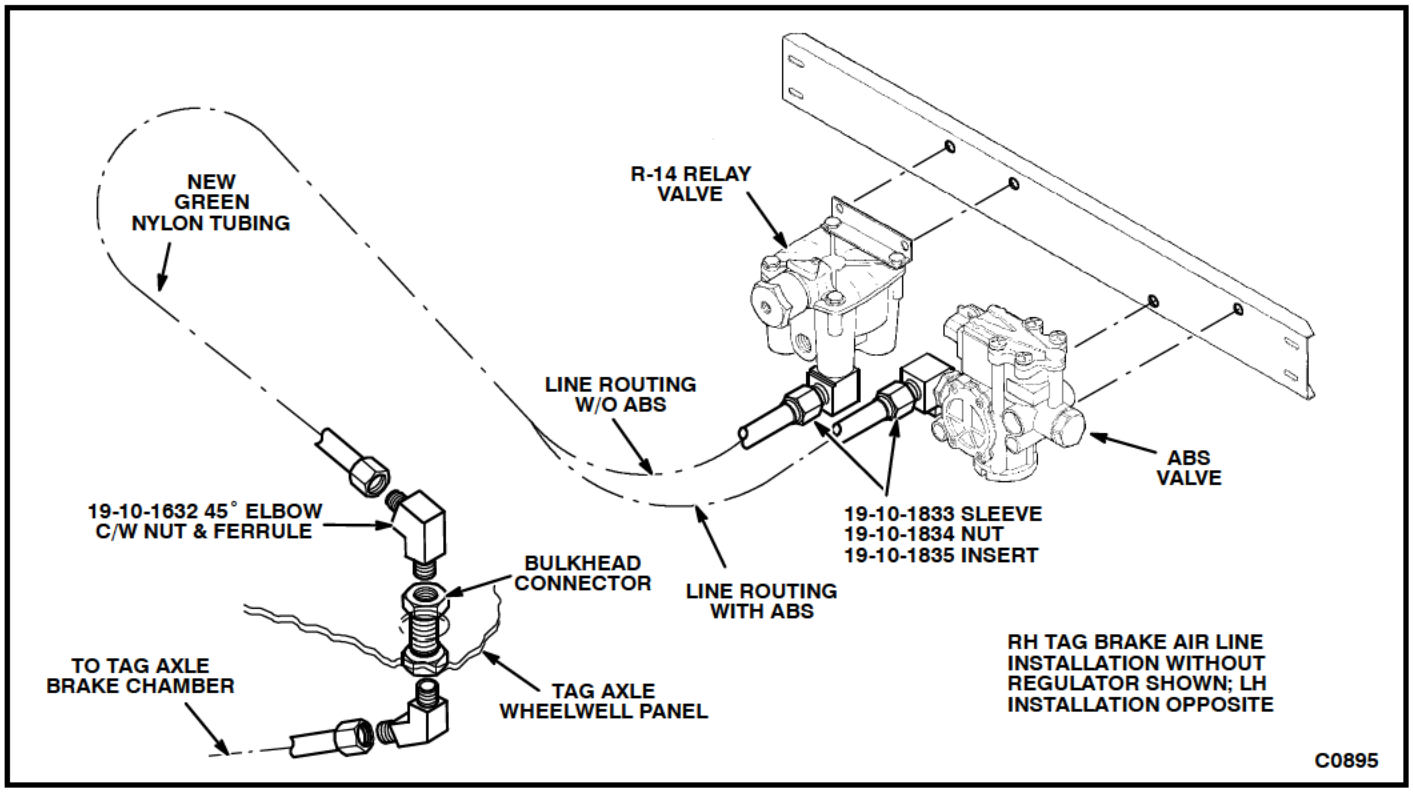

Figure 6. New Tag Axle Brake Airline Installation Without Regulator Valve.

The following units were built prior to unit 48127 when the Parking Brake Interlock was removed from production coaches. However these units had the Interlock removed before being delivered, and therefore are not affected by this Field Change Program.

47952-47953	48012	48074	48081	48093	48097-48123
47959-47960	48072	48076-48077	48083	48096	

The following units were built prior to Unit 48107 when the Tag Axle Brake Regulator Valves were removed from Production Coaches. However these units had the regulator valves removed before being delivered and therefore are not affected by this Field Change Program.

47952-47953	47959-47960	48012	48076-48077	48083	48101

Service Bulletin No. 120

MODEL	TYPE	SECTION/GROUP	DATE
MCI 102 D series Coaches	Field Change Program	13B	Jan. 8, 1998

SUBJECT B500/R ECU ISOLATION

CONDITIONS Refer to the Customer Letter Accompanying this Bulletin

Description:

Install the following retrofit kit to electrically isolate the B500/R and HD4060/R ECU.

Parts

Qty.	Old P/N	New P/N	Description
1		7L-13-3301	B500/R Retrofit kit
1		19-1-11	Capscrew, 1/4 - 20 UNC x 3/4
2.0		21-7404-26	Heat shrink
1		7C-12-344	Diode assembly
3		19-02-0334	Nylon insulator
3		19-02-0335	Nylon Flat washer
1		7L-13-3324	Decal

Effectivity: Affects MCI 102D series coaches built prior to coach number 50128 (Last 5 digits of Vehicle Identification Number) September 1997.

Service Procedure:

Use Safe Shop Practices At All Times.

Read the entire procedure before beginning work.

1. Set the parking brake, turn on the ignition, and check for diagnostic codes.
2. If a Code 34 exists in the memory, clear the code and start the engine, then shut it off.
3. Check for Code 34 again. If a Code 34 appears, an Allison distributor must recalibrate the ECU.
4. Set the park brake and turn off the battery at the disconnect switch, located in the battery compartment (behind baggage bay #2 on the right-hand side of the coach).

Part 1: Diode Assembly

5. Install the diode assembly to the neutral start relay located in the rear junction box, which is accessible through the left-hand side engine service door (Figures 1, 2 and 3).

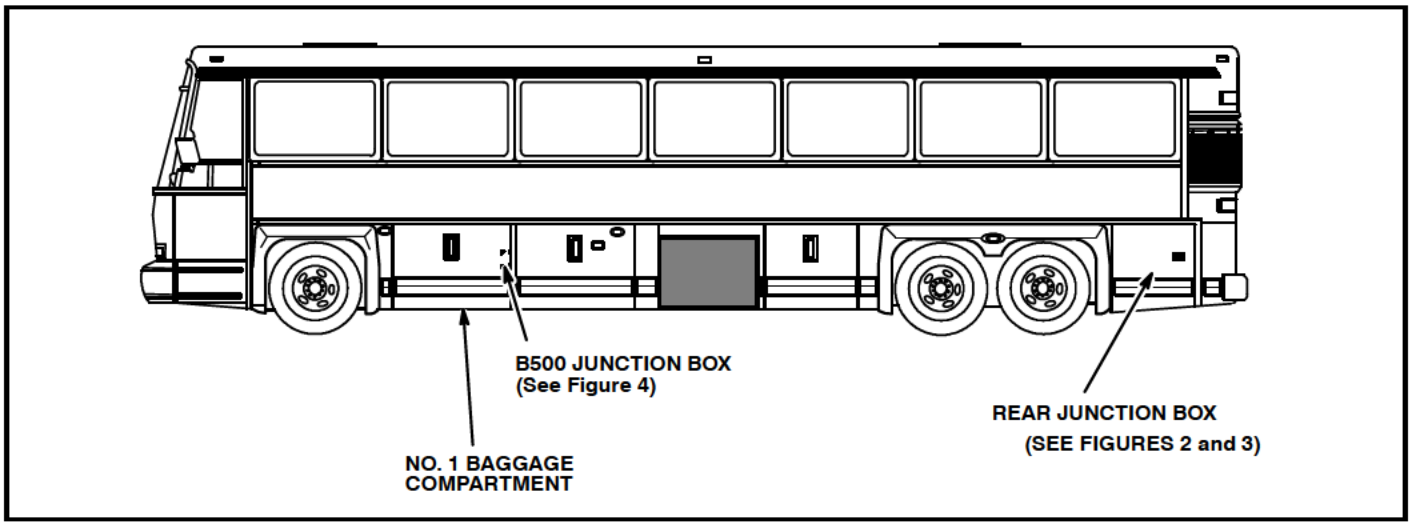

Figure 1 Location of Rear J-box and B500 Junction Boxes

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Note: Connect the red-coloured terminal to Terminal 7 on the relay, per Figure 3. Installing the diode backwards will destroy the diode.

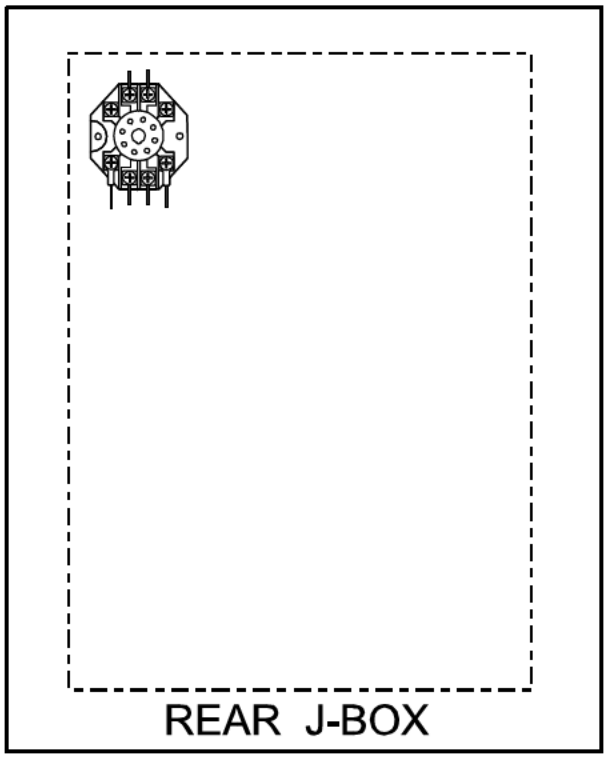

Figure 2: Neutral Start Relay location

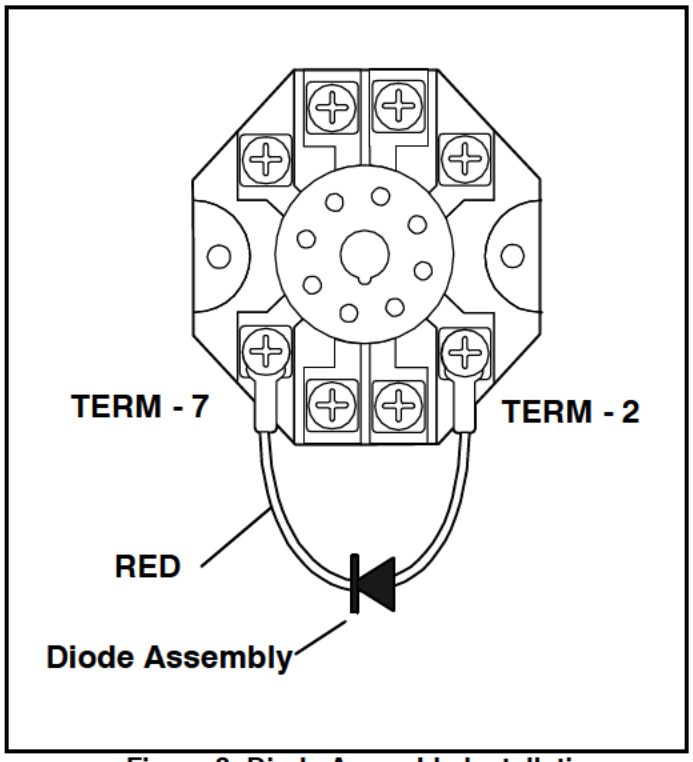

Figure 3: Diode Assembly Installation

Part 2: ECU isolation

6. Disconnect the connectors from the ECU and unbolt the ECU from the mounting plate. The ECU is located in the B500 junction box, which is located on the rear wall of the #1 LH baggage bay (Figure 1).

7. If a Code 34 recurred in Step 3, this is the appropriate time have the ECU recalibrated.

8. Reinstall the ECU, using the existing capscrews and the nylon insulators and washers supplied as shown in Figure 4. Torque the capscrews to 3 to 5 ft-lbs torque.

Note: Do not over-tighten the bolts. This will extrude the nylon insulators and washers, and compromise the electrical isolation.

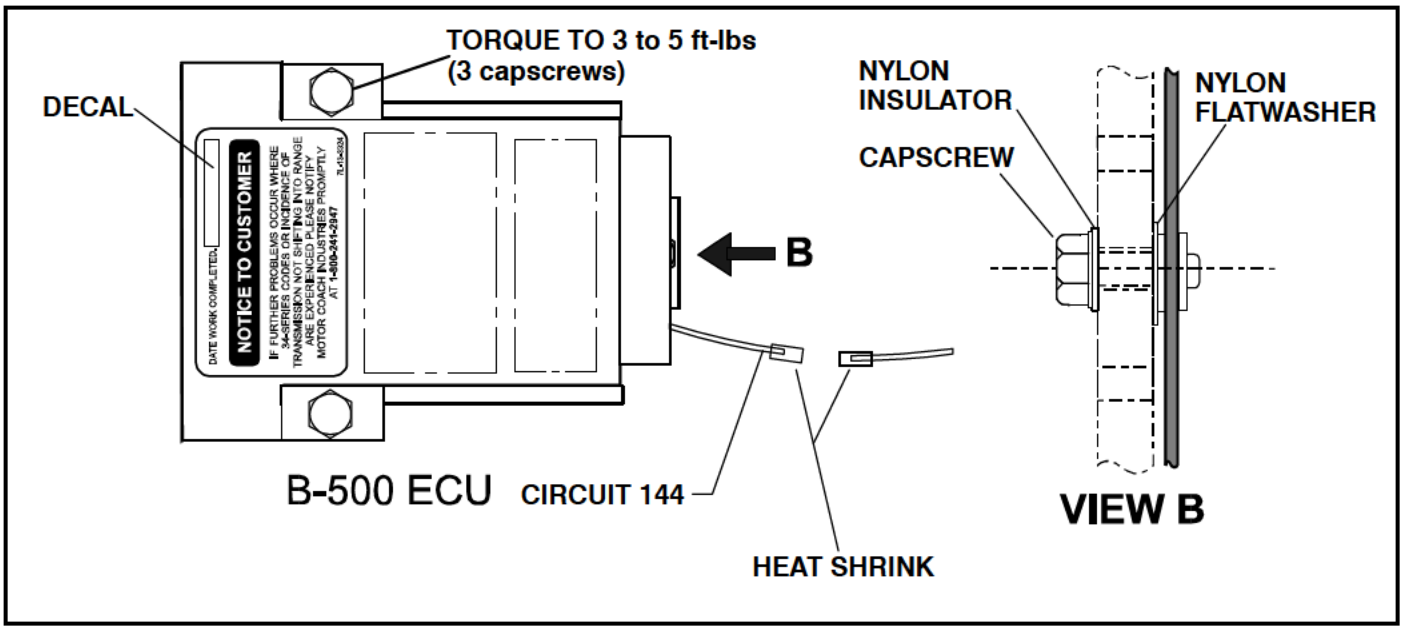

Figure 4: ECU Isolation Details

Note: It may be necessary to use the capscrew supplied (part number 19-1-11) to fasten the ECU at the front hole.

9. Cut Ground Wire 144 approx. 2 inches (5 cm) from the ECU connector and heat shrink both ends per Figure 4.
10. Check the ECU case with an ohmmeter to ensure discontinuity from the coach frame.
11. Affix the decal to the ECU as shown in Figure 4.
12. Enter the date on the decal in the box provided to show when the work was done.

Procedure complete.

Note: If 34 series diagnostic codes persist after completing this repair, check the kit installation. If Code 34 still occurs, replace the ECU.