



SERVICE BULLETIN

SB1212

ADDRESSEES	: ABC Customer Care and Parts Source
COACH/BUS MODEL	: C2045, T2100 Series
BULLETIN TYPE	: Service Information
SECTION/CHAPTER	: Section 9 – Electrical system Chapter 14.2 Electric power feed
DATE	: January 18, 2008
SUBJECT	: Vanner 70 M Series battery equalizer
TERMS & CONDITIONS	: No claims will be accepted with reference to this Bulletin.

APPLICATION:

The service information subject of this Bulletin is applicable to Van Hool C2045 and T2100 Series coaches that have been equipped with a Voltmaster 60 Amp, 65-60M model, battery equalizer (part # VH 10674243).

DESCRIPTION:

1. Vanner Inc., manufacturers of the above-mentioned equipment, has informed that production of 65-60M model battery equalizers has been discontinued.
As a result these assemblies will be no longer available as service replacement parts.
2. The old model has been replaced by Vanner's VANN-Guard 60 Amp Power Management System, model 70-60M, (part # VH 10983098), which offers mechanical and electronic enhancements, and improved performance.
3. In production, the new battery equalizer has been installed as from following units:

Model	Engine	VIN
C2045	Cummins	46068 →
	Detroit Diesel	46692 →
	Caterpillar	47200 →

Model	Engine	VIN T2140	VIN T2145
T2100	Cummins	40162 →	44341 →
	Detroit Diesel	40626 →	44666 →
	Caterpillar	N/A	44847 →

4. As the old and new parts are not directly interchangeable, Vanner have developed a field kit and a dedicated work procedure for Van Hool C- and T-coaches in order to allow installation of the new equalizer should an old one fail.
Customers who want to replace the old battery equalizer on their units may purchase the parts and install them as described in the procedure that has been attached to this Bulletin.
For details and part numbers, refer to the Parts and Products Section, overleaf.

PARTS AND PRODUCTS:

Old parts

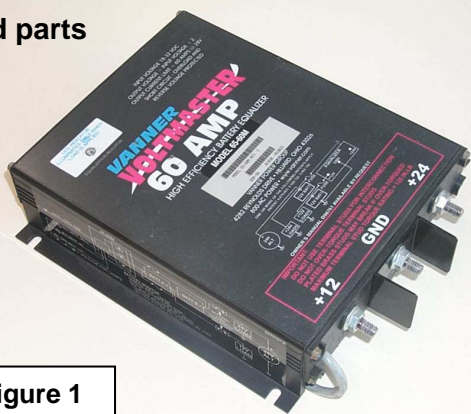


Figure 1

VH reference	Description	Qty.	Refer to
VH 10674243	Battery equalizer, 60 Amp, Vanner model 65-60M	1	Figure 1

New/retrofit parts



Figure 2

VH reference	Description	Qty.	Refer to
VH 10983098	Battery equalizer, 60 Amp, Vanner model 70-60M	1	Figure 2

Retrofit only parts

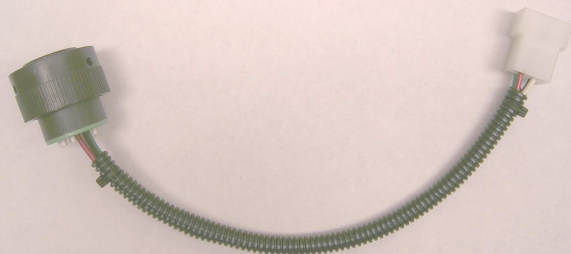


Figure 3

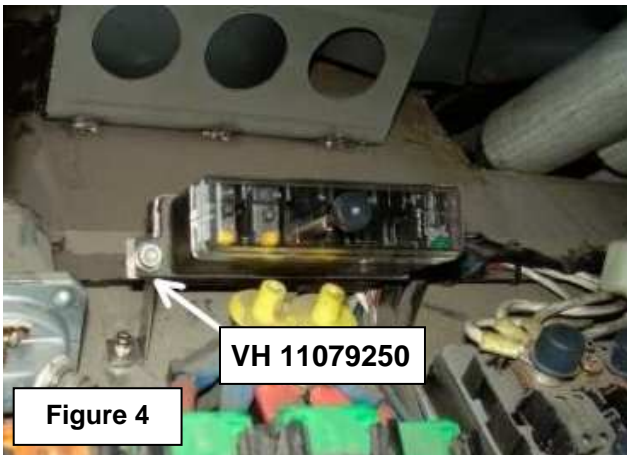


Figure 4

References		Description	Qty.	Refer to
VH 10983098	-	Battery equalizer, 60 A, Vanner model 70-60M	1	Figure 2
VH 11079253	ABC-10477	Wire harness, adapter	1	Figure 3
VH 11079250	ABC-10478	Bracket, circuit breaker module mtg. w/hardware	1	Figure 4
-	ABC-10479	Kit, battery equalizer installation, C-coach, incl. VH 10983098, VH 11079253, VH 11079250	1	N/S
-	ABC-10480	Kit, battery equalizer installation, T-coach, includes VH 10983098, VH 11079253	1	N/S

- Parts may be purchased from your nearest ABC Customer Care & Parts Source service center.
- Waste disposal: discard old parts and products according to applicable environmental regulations.

PROCEDURE:

To replace the battery equalizer

***NOTE:** If you do not have the expertise to perform present procedure, do not hesitate to go to your nearest ABC Customer Care & Parts Source service center.*

1. General:

- This job should be executed by an experienced automotive electrician.
- For more information refer to:

the updated Spare Parts Manual section that has been attached to this Bulletin,
the Vanner installation procedure that has been attached to this Bulletin,
the VANN-Guard 70 Series Owner's Manual,
the Electrical Wiring Diagram Booklet that comes with the coach,
the Maintenance Manual,
the Operator's Guide Book.

2. Special tools, equipment or services:

- No special tools, equipment or services are required.

3. Preparations:

- Park the coach on a level surface with the front wheels straight.
Apply the parking brake and shut down the engine.
- Switch off all systems and turn off the battery master switch.
- When not working in the driver's area, put a "DO NOT OPERATE" tag on the instrument panel.
- Read the entire procedure before beginning to work.

CAUTION: Observe safe shop practices at all times.

4. Installation guidelines:

ATTENTION! On the 70 Series battery equalizer (Figure 5) the terminal studs for the battery cables are located differently compared to those on the 65 Series (Figure 6).

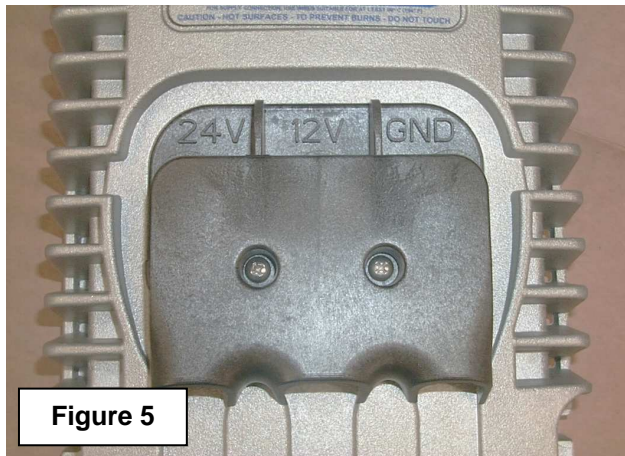


Figure 5

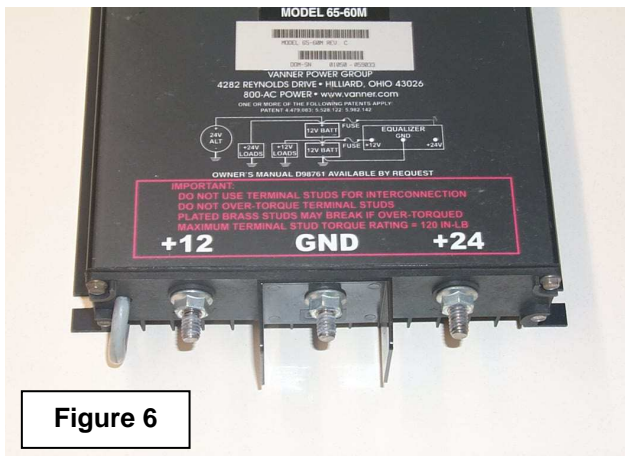


Figure 6

5. To replace battery equalizer VH 10674243:

- 1) Open the battery compartment door.
- 2) Remove the 'Basic Electrics' compartment door.
- 3) Replace the battery equalizer referring to the Vanner Inc. procedure "Installation for 70-60M into Van Hool C Series coach".
Use installation hardware VH 11079253 and VH 11079250 as required.
- 4) Referring to the VANN-Guard 70 Series Owner's Manual, check system performance.
- 5) Close/reinstall all access doors opened/removed.

Procedure complete.

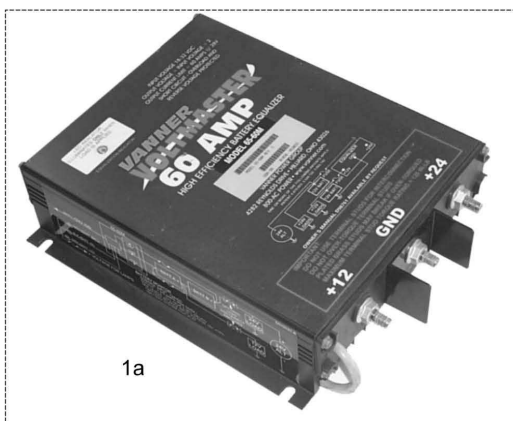
ATTACHMENTS:

Spare Parts Manual section #1402.06-0003 "Battery equalizer/Igualador de acumuladores" (1 page).

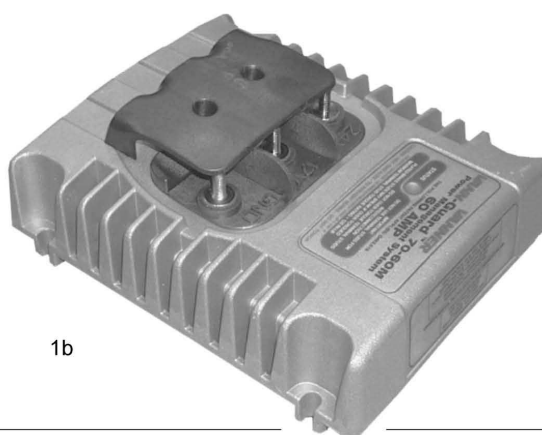
"Vanner Inc. – Installation Manual for 70-60M into Van Hool C Series coach" (12 pages).

SERVICE INFORMATION:

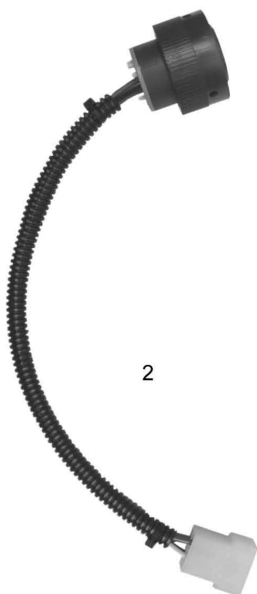
Service Bulletins are issued to supplement or supersede information in the Van Hool manuals. Note Service Bulletin number, date and subject on the register at the end of the relevant chapter(s). File Service Bulletin separately for future reference.



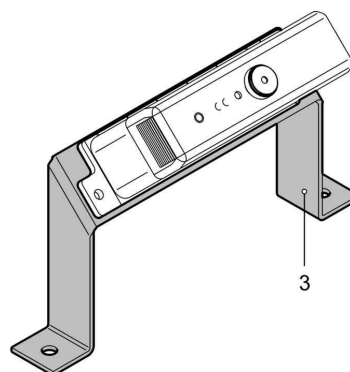
1a



1b





2



3

Valid for units previously equipped with:
Válido por coches antaño proveído de:
65-60M series (1b)

C2045:	1b, 2, 3
T2145:	1b, 2

Pos.	Q.	Ref.N°	Description	Denominación	Spec.
1a 	-	10674243	Battery equalizer No longer available, replaced by	Igualador de acumuladores Ya no disponible, reemplazado a	Vanner 65-60M
1b	1	10983098	Battery equalizer	Igualador de acumuladores	Vanner 70-60M
2	1	11079253	Wiring harness	Haz de cables	
3	1	11079250	Bracket	Soporte	
 Battery equalizer Igualador de acumuladores					2007-10-16 1402.06-0003



Installation Manual for 70-60M into Vanhool C Series coach.

This manual covers the removal of the 65-60M from existing C Series coach and installation of the 70-60M.

Vanner Contact List

If there are questions or problems with the installation please call the phone numbers listed below for technical support.

**Office hours 8am to 5pm Monday through Friday Eastern Time.
Call cell phones outside of business hours.**

Doug Dean	Office: 800-227-6937 ext 3509	Cell: 740-360-8128
Mike O'Sullivan	Office: 800-227-6937 ext 3540	Cell: 614-329-1495

Contents:

New Vanner 70-60M Equalizer, Adapter Harness, Circuit Breaker Bracket

- (1) 70-60M Equalizer
- (1) D014105 Adapter Harness
- (1) D014151 Circuit Breaker relocation kit with mounting hardware.

Tools Required, not included in this kit:

- 4mm Allen wrench for circuit breaker housing
- 10mm socket/driver for Equalizer removal
- 12mm socket/driver for standoff removal
- 13mm socket/driver for Battery cable and Equalizer cable removal
- #2 Phillips screwdriver for Equalizer strain relief
- Diagonal cutters for cable-ties

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The following pages diagram the Vanner 70-60M installation on
Vanhool C Series Coach.

Installer must use greatest care in the routing and termination of all wires. Good electrical practice's should be followed. If there are any questions please call the Vanner representatives listed at the beginning of this document.

The Vanner 65-60M Equalizer is located in the basic electrical area of the battery compartment, Drivers side rear. Upon accessing the battery compartment turn battery disconnect switch off, remove wing nuts from battery cover, remove Negative Cables from the batteries before continuing any work. Remove the Basic Electrical cover to gain access to the Equalizer.

Basic Electrical Cover

Wing nuts for battery cover



Negative terminals removed, cover exposed battery terminals with electrical tape to ensure the cables do not connect and cause a short.



Battery Switch

Equalizer shown in Basic Electrical area.
Equalizer will be removed. The Circuit breaker needs to be oriented differently for installation of 70 Series Equalizer.



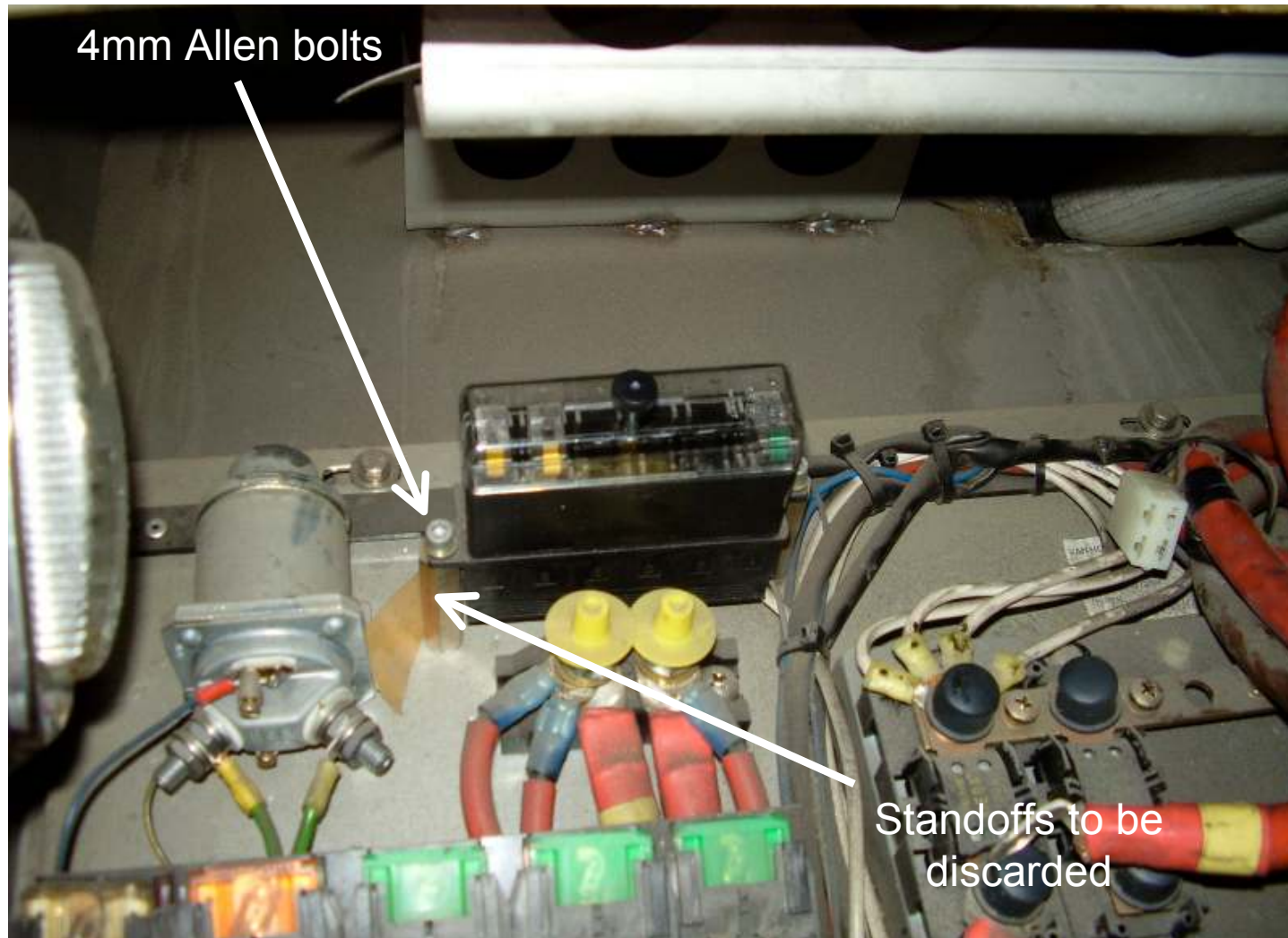
Equalizer

Remove Equalizer mounting bolts, 4 places, new hardware is supplied. Clearly label and remove the 24V, GND, and 12V wires from Equalizer. Cut cable ties to release cables. Disconnect monitor harness.

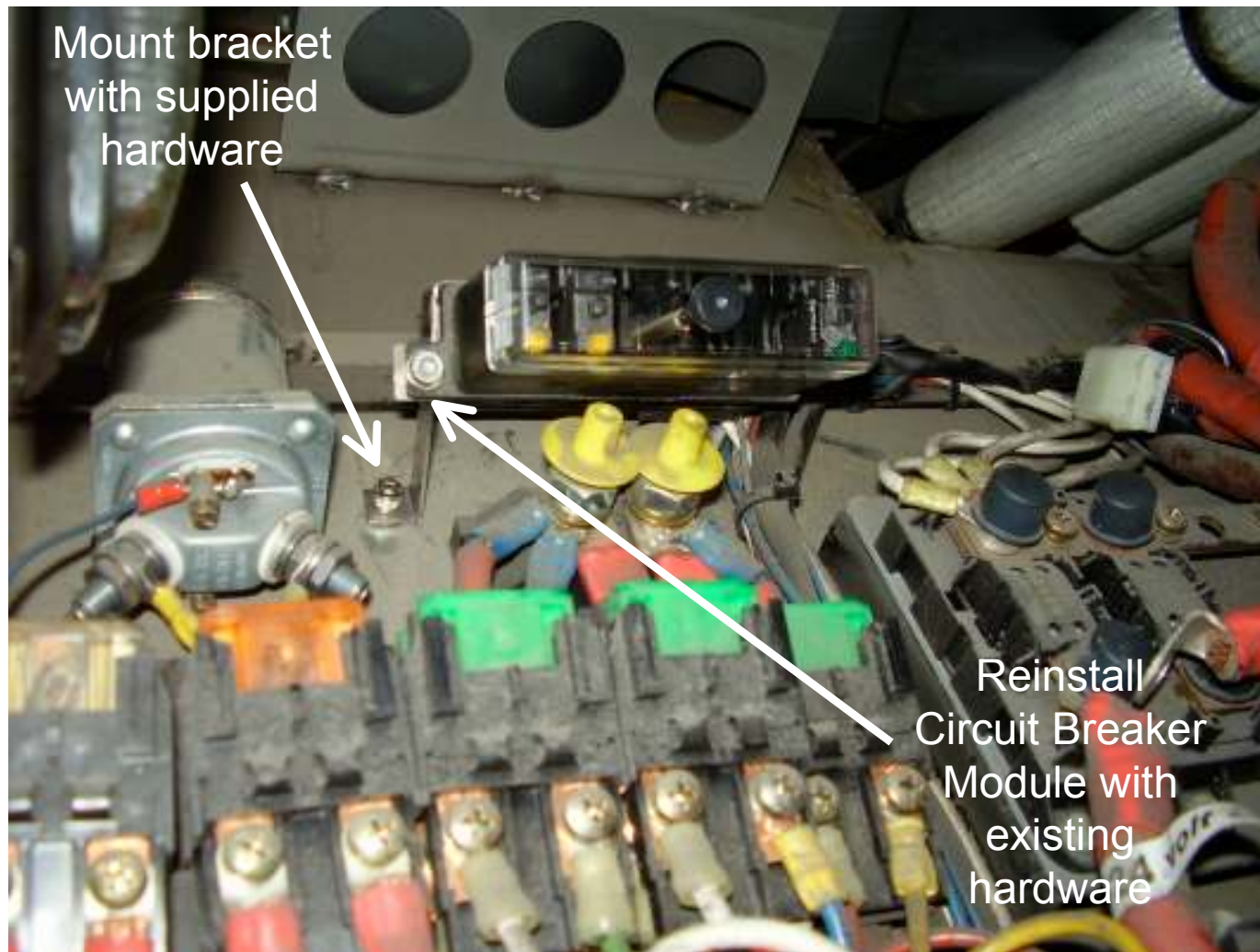


Circuit Breaker Module

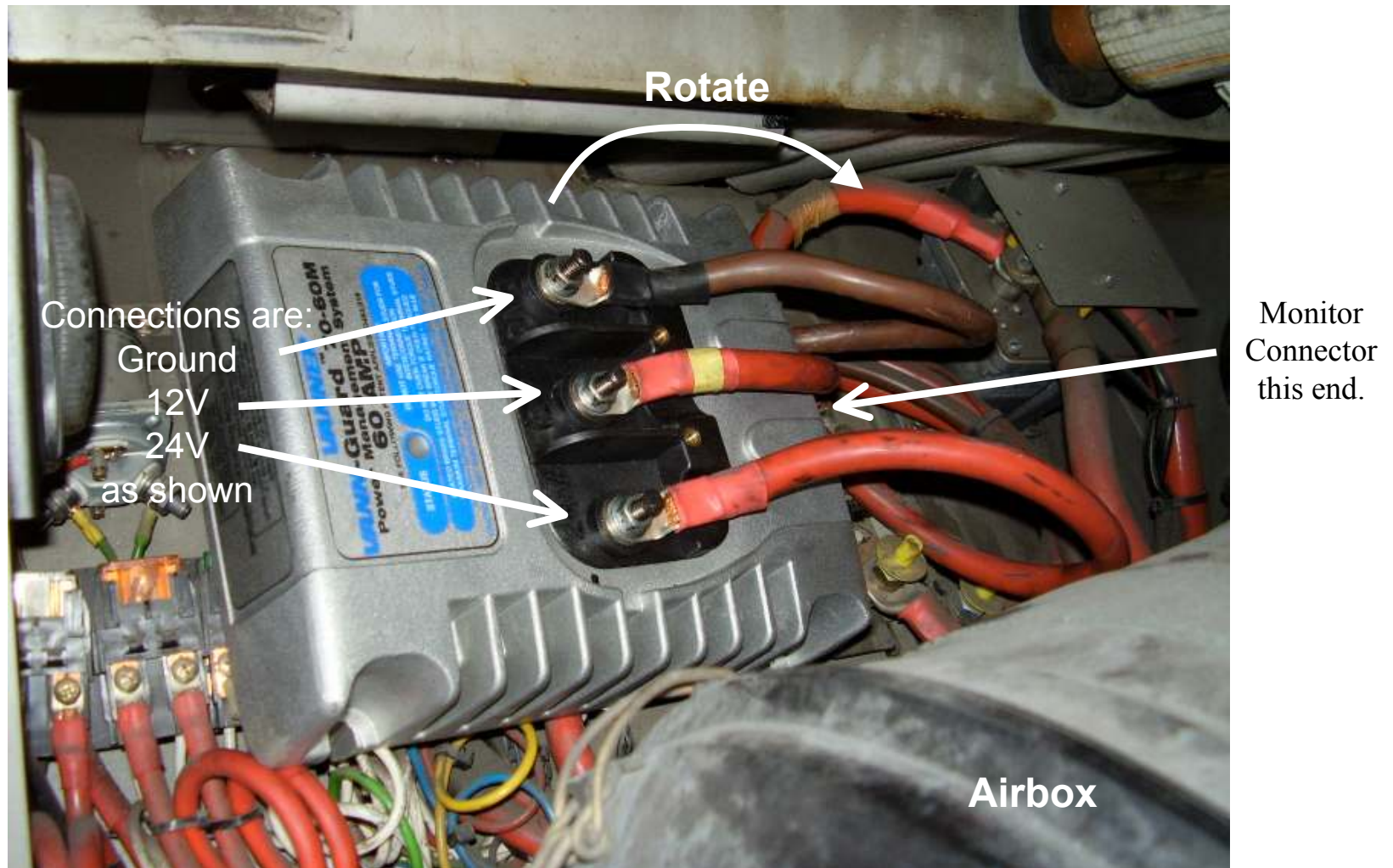
With Equalizer removed, remove the two Allen bolts that retain the Circuit Breaker Module. These bolts will be reused. Rotate the Module rearward and remove the two standoffs that were supporting it.



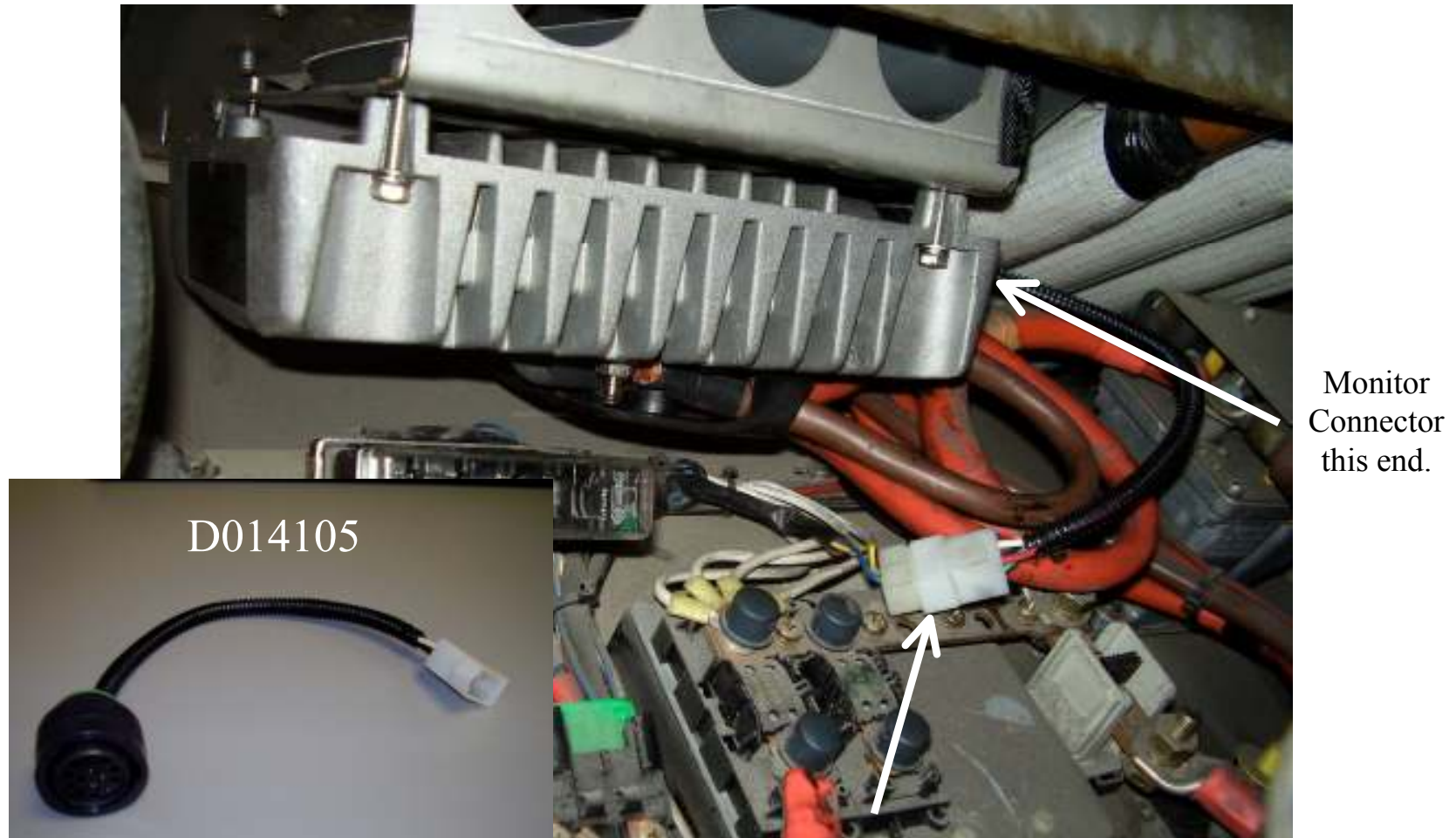
Install bracket with supplied hardware, reinstall Circuit Breaker Module into bracket.
Install longer mounting bolts in rear location for Equalizer.
Leave loose, only thread enough to retain the bolt. (bolts not visible in this photo)



Remove cable strain relief from 70-60M. Install cables onto Equalizer, Note: cable order is different than 65 Series. Reinstall strain relief. The 70 Series is rotated 90° from how the 65 Series was installed. Rotate unit towards airbox and install. The monitor connector (14 PIN Deutsch) is on the “inside” of the bus.



The longer mounting bolts are shown in this photo. Install 70-60M into rear mounting bolts then install front mounting bolts. Tighten all to 70 lb-in.



Attach supplied D014105 Adapter Harness to 70-60M. Connect Adapter Harness to the bus harness. Cable tie all wires and reconnect battery connections, install battery cover and wing nuts. Turn on battery switch. Installation is now complete.

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D914151-B 9-6-07