



SERVICE BULLETIN No.1115

Addressee: MWAA

COACH MODEL	: A508 Washington Airport
BULLETIN TYPE	: Product Improvement
MANUAL & SECTION	: Spare Parts Manual: Section 7855 – Outside lighting, main components
PARTS BOOK REVISION	: Yes
DATE	: April 17th, 2003
SUBJECT	: Rear exterior lights
TERMS & CONDITIONS	: No claims will be accepted with reference to this Bulletin.

APPLICATION:

The specification change subject of this Bulletin has been cut into production as from following units:

Model	Engine	VIN
A508	Cummins	22249 → 22250

DESCRIPTION:

Following the request of the Metropolitan Washington Airport Authorities (MWAA) for enhanced rear exterior lights, the tail, brake and turn signal lamps with light bulbs on the above-mentioned shuttle buses have been replaced by LED light assemblies. The backup lamps retain the classic bulb, but they have been replaced by assemblies with the same shape and brand as the LED lamps. Operators of similar A508 units, who wish to convert their buses to the new specification, may refer to the information further in this Bulletin

Service personnel: please read, initial and circulate.

Service Manager	Parts Manager	Warranty Administrator	Workshop Foreman	Service Technician

PARTS AND PRODUCTS:

Old parts (electrics)

Part No.	Description	Qty.
VH 660733865	Turn signal lamp, amber	2
VH 660733865	Slow down lamp, amber	2
VH 660734465	Tail lamp, red	2
VH 660734525	Back-up lamp, white	2
VH773388501	Stop lamp, red	2
VH 660735205	Drive lamp, green	1

New parts (electrics – refer to Figure 6)

Part No.	Description	Qty.
VH 10758945*	Turn signal lamp, amber, LED	2
VH 10758945*	Slow down lamp, amber, LED	2
VH 10758946*	Stop and tail lamp, red, LED	2
VH 10759946*	Back-up lamp, white	2
VH 10759946*	Drive lamp, white	1
VH 10796405	Green color filter for VH 10759946	1
VH 10714336	Self-tapping screw, 4.8x25mm, zinc plated	27

* For this conversion only, part # include lamps and additional tailor made wiring.

New parts (body)

Part No.	Description	Qty.
VH 10765498	Triple rear lamp housing, fiberglass	3
VH10866555	Adapter for mid-mounted housing	1

- Old and new parts are not directly interchangeable.
- Both old and new parts will be available as service replacements.
- Parts may be purchased from your nearest ABC Customer Care & Parts Source dealership.
- Always use genuine maintenance products and parts. Do not accept imitations.
- Parts disposition: discard according to applicable environmental regulations.

PROCEDURE:

1. General:

- The time required to do the conversion subject of this Bulletin has not been established.
- Lamp housing installation should be executed by an experienced body repair technician.
- Installation of the new LED lamps should be executed by an experienced automotive electrician.
- For more information concerning bus electrics refer to the Electrical Wiring Diagram Booklet that comes with the vehicle.

2. Special tools, equipment or services:

- This job requires the use of a high-speed cutter and a crimping tool.

3. Preparations:

- Park the bus on a level surface, apply the parking brake and shut down the engine.
- Switch off all systems and turn off the battery master switch.
- 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. To remove the OE fitted BOSCH rear light assemblies (see Figure 5):

- 1) Undo the screws securing the lens to the lamp housing. Remove the lens.
- 2) Take note of the lamp wiring. Disconnect the wires attached to the lamp terminals. Cut-off the flat blade connectors.
- 3) Undo the screws securing the lamp housing to the bus rear cap. Remove the housing and label the wires to facilitate the installation of the new lamps.
- 4) Repeat steps one through three for all remaining rear light assemblies.
- 5) Leave the license plate lamp in place.
Do not remove the reflectors.

5. To install the new Peterson LED rear light assemblies (see Figure 6):

- 1) The universal triple rear lamp housing #VH 10765498 needs to be trimmed to suit the mid mounted and left/right hand mounted installation respectively.
Refer to Figures 1 and 2 overleaf for housing modifications and remove the material indicated on the drawings by shaded areas.
- 2) To install the triple rear lamp housing in the rear cap, new openings should be provided.
Fabricate a cut-out template by transferring Figure 7 onto a suitable piece of cardboard.
- 3) Referring to the installation dimensions in Figure 6 and using the template, mark on the rear cap the area to be cut-out for each housing assembly.

***NOTE:** To install the mid mounted housing, a special adapter ring is provided to cover the remainder of the old oblong mounting holes.*

- 4) Cut back all redundant fiberglass with a high-speed cutter. Trial fit and dress the opening for the housing to suit.

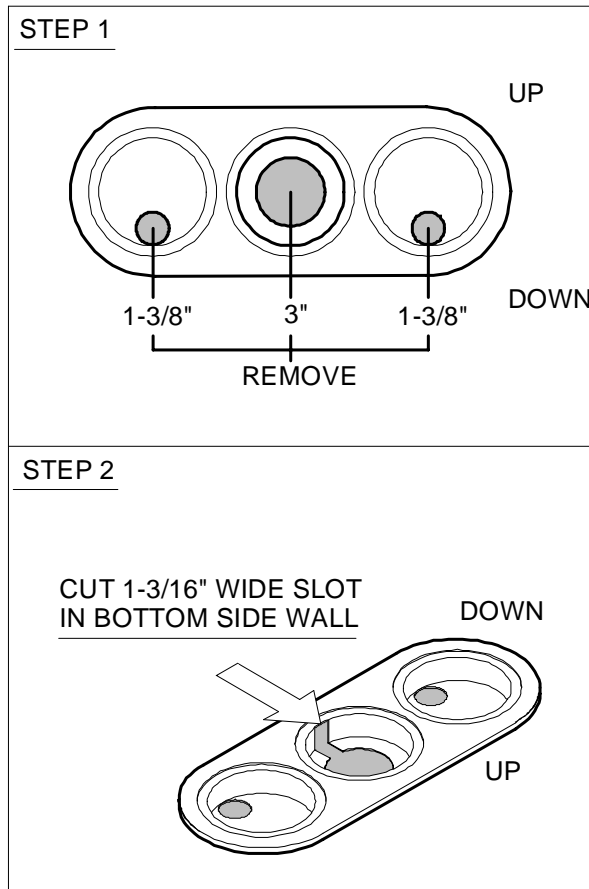


Figure 1: Modifications to be made to the mid mounted rear lamp housing. Remove material indicated by shaded areas.

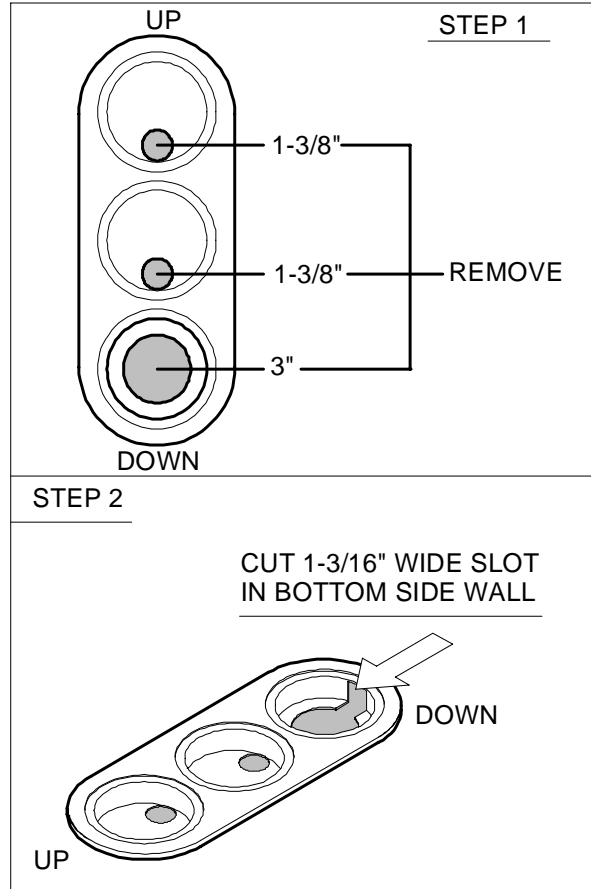


Figure 2: Modifications to be made to the left/right hand mounted rear lamp housings. Remove material indicated by shaded areas.

- 5) Roughen the surface along the edge of the newly cut openings with 80 grit wet 'n dry.
- 6) Using bullet type connectors, attach the counter plugs to the bus' wiring with a suitable crimping tool. The chart below shows the application of each wire by wire color code. Ground wire color is brown. For more details, refer to the Electrical Wiring Diagram Booklet that comes with the bus.

Lamp	Color	Location	VH part #	Wire color
Turn signal	Amber	Left hand	10758945	Grey-Yellow
Turn signal	Amber	Right hand	10758945	Blue-Green
Tail lamp	Red	Left hand	10758946	Grey-White
Tail lamp	Red	Right hand	10758946	Grey-Green
Stop lamp	Red	Left hand	10758946	Yellow-Red
Stop lamp	Red	Right hand	10758946	Yellow-Red
Back-up lamp	White	Left hand	10759946	White
Back-up lamp	White	Right hand	10759946	White
Drive lamp	Green	Center	10759946	Orange-Red
Slow down lamp	Amber	Center left	10758945	Orange-Violet
Slow down lamp	Amber	Center right	10758945	Orange-White

NOTE: In this conversion the tail and brake lights are combined in a single lamp.

NOTE: When a Light Emitting Diode (LED) lamp is connected the wrong way around (ground and plus inverted) it will not function.

- 7) Sand, coat with primer, flatten and finish paint the housings and adapter ring VH as appropriate. Allow to dry in a low bake oven.
- 8) Install the lamp housings in the respective rear cap openings using Sikaflex 221 or a similar polyurethane adhesive (see Figure 3). Make sure to correctly guide the lamp wires through the 1-3/8 inch (35 mm) holes. Wipe off spillover with a clean rag and a soapy solution. Allow adhesive to cure.

NOTE: The mid mounted housing should be installed with a special adapter ring which covers the remainder of the old oblong mounting holes.



Figure 3: Right hand rear lamp housing installation

Figure 4: Right hand rear light cluster installation completed



- 9) Trial fit the new lamps and mark the lamp surround mounting holes on the housing.
- 10) Referring to the Electrical Wiring Diagram Booklet that comes with the bus, connect the additional lamp wiring to the appropriate counter plugs. Connect the lamps to their respective wires.
- 11) Install the lamps in the lamp housings referring to Figure 6. Secure with self-tapping screws VH 660280110. Figure 4 shows the right hand rear light cluster installed.

NOTE: The back-up light in the mid mounted lamp housing must be installed with green filter VH 10796405 covering the lens.

Procedure complete.

DISCLAIMER:

The procedures contained herein are not exclusive. Van Hool cannot possibly know, evaluate, or advise the transportation industry of all conceivable ways in which a procedure may be undertaken or of the possible consequences of each such procedure. Other procedures may be as good, or better, depending upon the particular circumstances involved.

Each carrier who uses the procedures herein must first satisfy itself thoroughly that neither the safety of its employees or agents, nor the safety or usefulness of any products, will be jeopardized by any procedure selected.

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.

OLD

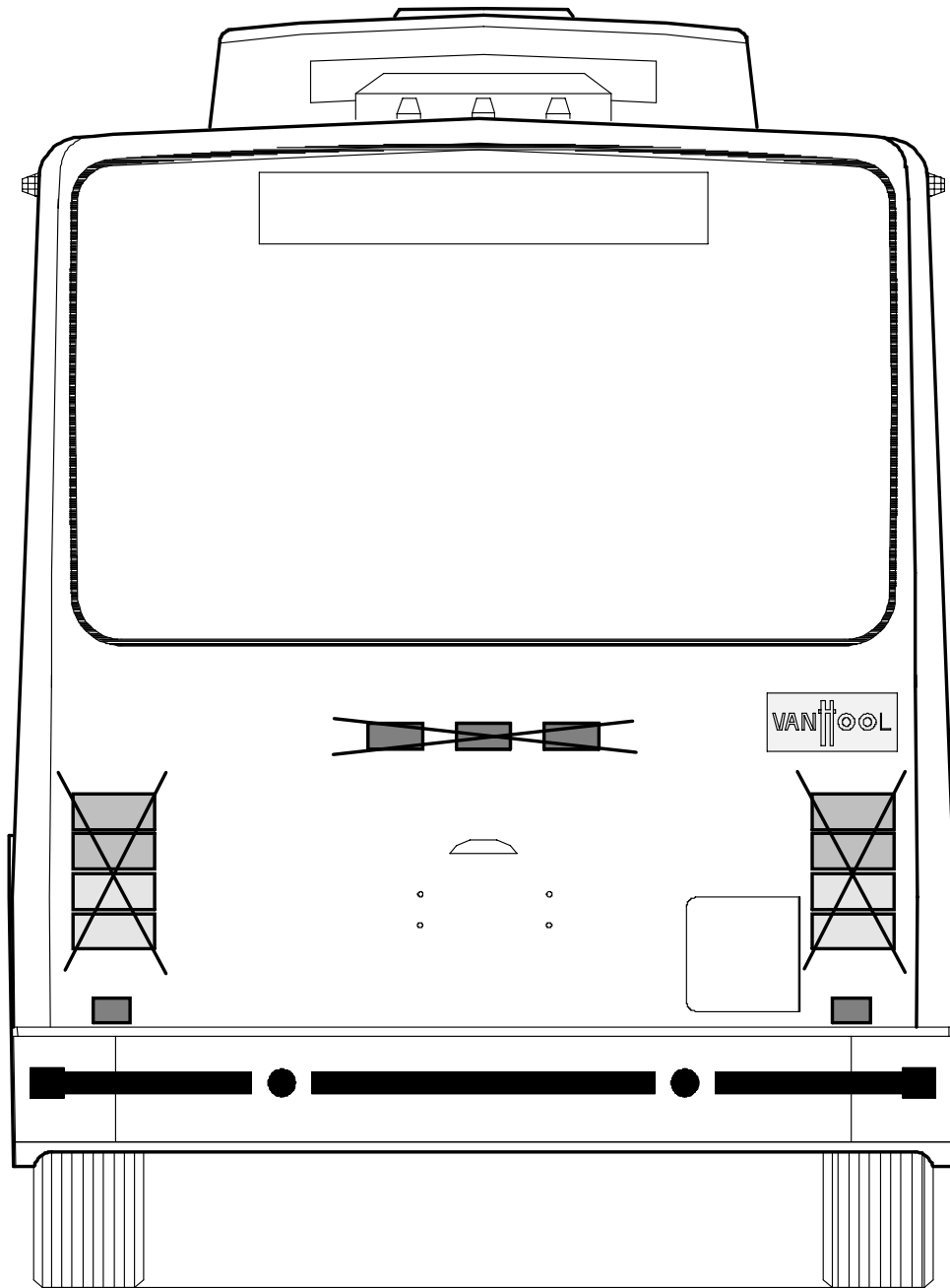
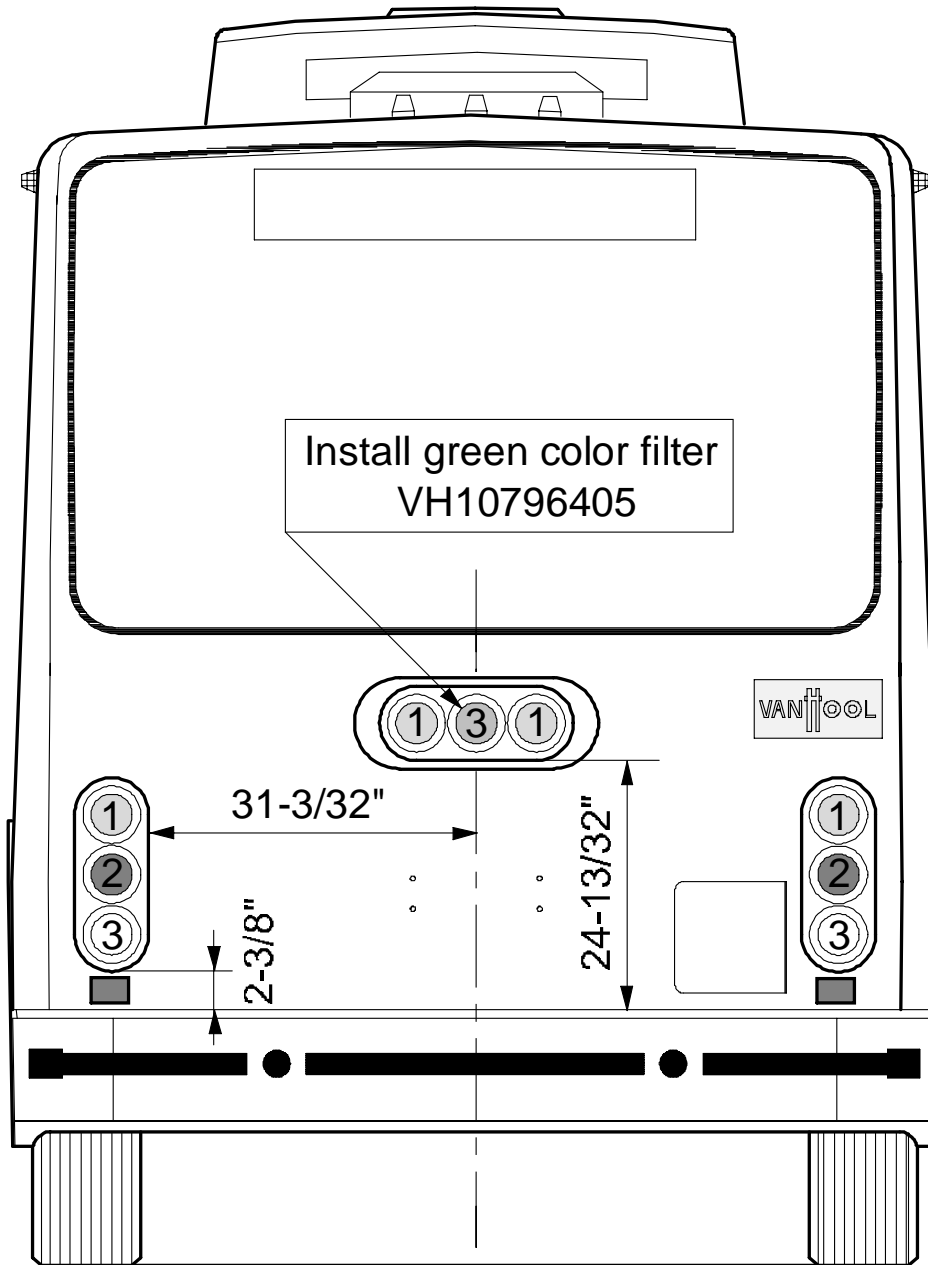


Figure 5: Old BOSCH exterior rear light arrangement

Figure 6: New PETERSON exterior rear light arrangement

NEW



- 1: amber VH10758945
- 2: red VH10758946
- 3: white VH10759946

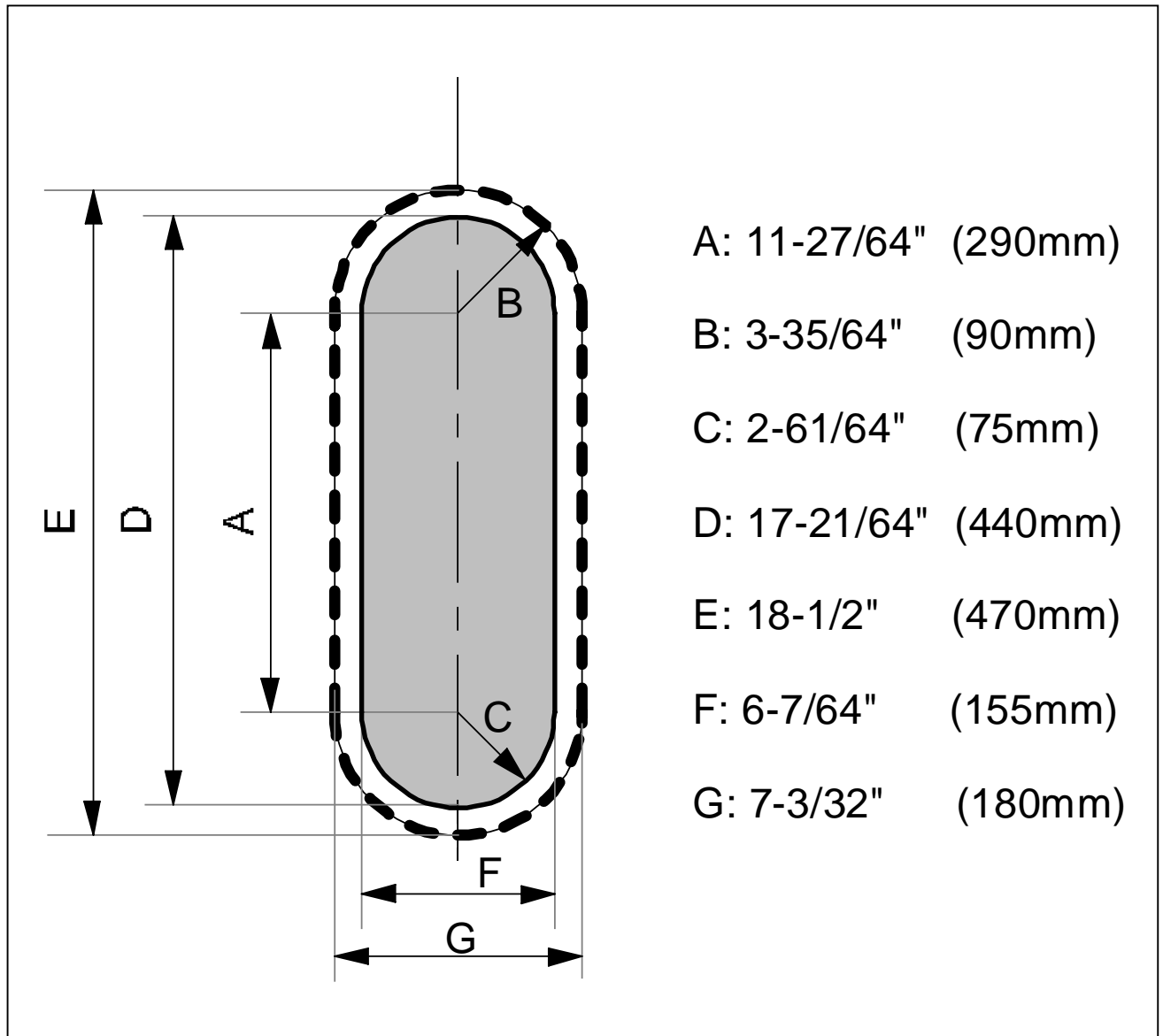


Figure 7: Cut-out template for triple rear lamp housing VH 10765498

- Use bold dotted outside line to locate and adjust template on rear cap referring to the dimensions given in Figure 7
- Remove rear cap material indicated by shaded areas

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