

LOS ANGELES COUNTY

METROPOLITAN TRANSPORTATION AUTHORITY

LIGHT RAIL VEHICLE

P2550

**RUNNING
MAINTENANCE
AND
SERVICE MANUAL**

**SECTION 02
CAR BODY**



SECTION 02

CAR BODY

PART I

THEORY OF OPERATION

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SECTION 02

CAR BODY

02-I-01 INTRODUCTION

This Section of the Running Maintenance and Service Manual is divided into three Parts:

- Part I: Theory of Operation
- Part II: Troubleshooting
- Part III: Maintenance

Each Paragraph is numbered accordingly, to avoid that paragraphs of the same Section, pertaining to a different Part, have the same number.

Part I – Theory of Operation

Part I gives a thorough overlook of the System structure and operation, by means of descriptions, figures, photos, schematics, block diagrams and flow charts, together with references to other documents or Sections when needed.

Part II – Troubleshooting

It gives the Maintenance Technicians a path to troubleshoot the System in every condition by means of the available tools:

- The PTU, equipped with the specific SW program
- The IDU
- The Fault Isolation Table

The Part III – Maintenance consists of:

- Preventive Maintenance
- Corrective Maintenance
- Consumable Materials
- Test Equipment , Tools & Special Tools

02-I-01.a LIST OF ABBREVIATIONS, ACRONYMS AND SYMBOLS

The Abbreviations, Acronyms and Symbols commonly used throughout this manual are given below with their related meaning.

Abbreviation	Meaning
AADS	Automatic Announcement and Display System
ACU	Air Compressor Unit
ADU	Aspect Display Unit
APS.....	Auxiliary Power Supply
ATP	Automatic Train Protection
BCU	Brake Control Unit
C/L	Centerline
CCH	Communication Control Head
DC/DC	Direct Current / Direct Current
EMI	Electromagnetic Interference
FRP.....	Fiber Reinforced Polymer
GPS	Global Positioning System
HCT	Harmonic Current Transducer
HSCB.....	High Speed Circuit Breaker
HV.....	High Voltage
HVAC.....	Heat Ventilation & Air Conditioning
IDU.....	Integrated Diagnostic Unit
LH	Left Hand Side
LRV.....	Light Rail Vehicle
LV	Low Voltage
LVPS.....	Low Voltage Power Supply
MBL	Metro Blue Line
MC	Master Controller
MGDL	Pasadena Gold Line
MGL.....	Metro Gold Line
MTA	Metropolitan Transportation Authority
MV	Medium Voltage
RH.....	Right Hand Side
SUPP.	Support
TBS.....	To Be Supplied
TOR	Top Of Rail
TOR	Top Of Rail
TWC.....	Train-to-Wayside Communication
VHF.....	Very High Frequency

02-I-01.b LIST OF DEFINITIONS

The Definitions commonly used throughout this manual are given below with their related meaning.

Definition	Meaning
'A' body section.....	The section of an articulated vehicle containing the pantograph
'B' body section.....	The section of an articulated vehicle not containing the pantograph
AW0	Empty car operating weight
AW1	Full seated load plus AW0
AW2	Standees at 4 persons per square meter plus AW1
AW3	Standees at 6 persons per square meter plus AW1
AW4	Standees at 8 persons per square meter plus AW1
Front door.....	The door close to the Operator's Cab
Rear door	The door close to the Articulation Section

02-I-01.c LIST OF MEASUREMENT UNITS AND SYMBOLS

The Measurement Units commonly used throughout this manual are given below with their related meaning.

Definition	Meaning
ft.....	Foot
gal.....	Gallon
in.....	Inch
kg.....	Kilogram – approx 2.205 pounds
km.....	Kilometer – approx 0.621 miles
kN	Kilo-Newton – approx 224.809 pounds force
lb.....	Pound
lb-ft.....	Pound force
m.....	Meter – approx 3.28 feet
mm.....	Millimeter – approx 0.0394 inches

02-I-02 THEORY OF OPERATION

02-I-02.01 General Description of the System

The vehicle is made up of two body sections (an "A" and a "B" body section), semi-permanently coupled together by means of an articulation section to make a single operating unit (Refer to Figure 02-I-02.1)

The articulation joints of the two car bodies are hinged together by means of the slewing ring and the connection beam to allow vertical movements over track hollows and humps.

The Articulation section structure is described in detail in paragraph 02-I-02.03.06.

The articulation section is supported by the center, unpowered truck. A three-piece slewing ring with inner and outer races connects the vehicle car sections to the Trailer Truck bolster beam and allows horizontal movements between the car sections on curved tracks.

The vehicle is designed to have 30 years' service life under normal service conditions and preventive maintenance operations, without structural repairs or alterations. Annual mileage is estimated to be as high as 120,000 miles (193,000 km).

The Car Body is made up of (refer to Figure 02-I-02.8) the roof, the side frames, the underframes, the end frames and the articulation section.

All structural parts are made of S500 MC Carbon steel, while the Roof and the external covers of the side frames are made of $\frac{1}{4}$ Hard AISI 301 LN stainless steel.

Reinforced jacking pads are provided to protect the structure when the vehicle is lifted for servicing, de-trucking, re-railing, etc. A special support is used for lifting the vehicle from under the coupler.

The exterior and the underframe of the vehicle and the installed components are designed to minimize damage due to collisions with other vehicles, wayside debris, and the like.

A metal box is mounted around the drum switch to minimize damage caused by debris or minor accidents.

The vehicle is a high-floor car with high level passenger boarding.

Accommodation for four wheelchairs is provided, two for each body section.

A Pantograph, a HVAC unit, a Braking Resistor, a Lightning Arrester, an EMI Detector Unit, an Auxiliary Fuse Box, a High Speed Circuit Breaker and a Junction Box are mounted on the roof of the A body section, while only a HVAC, a Braking Resistor and a Junction Box are mounted on the roof of the B body section, as shown in Figure 02-I-02.1.

Most of the other equipment is mounted on the underframe.

One electric and one electronic locker are installed in each body section, near the articulation section.

Electrical and pneumatic connections between the two car sections pass through the articulation section and other electrical cables pass between the two body sections on brackets mounted on the articulation section (refer to Section 09).

The A and the B body sections have four doorway openings each, two on each side. A pair of bi-parting door panels, that slide into pockets in the sidewalls, are installed at each opening.

Fiberglass insulation is installed in the roof, sidewalls and underfloor throughout the vehicle.

The melamine interior panels on the ceilings and sidewalls are installed with retainer clips and moldings.

Plymetal panels are glued to the upper side of the underframe covered by a high density rubber, cemented to the plymetal floor panels.

A floor trap has been provided in correspondence with the two Motor trucks to have access to the slewing rings, for inspection and de-trucking operations.

Similarly, the floor section in the articulation section is removable for access to the Trailer Truck slewing ring.

Stanchions and handrails are made of brushed stainless steel and wind screens are installed on both sides of each door opening.

Sandboxes and other vehicle equipment items are installed under specially designed seats at some locations.

The area over each door opening is used for the door mechanism and the door electronic control unit (refer to Section 4).

The windshield is made of transparent laminated safety curved glass and is bolted to the steel frame.

The passenger compartment windows are kept in place by light alloy frames mounted on the vehicle structure.

Hinged skirts are mounted on the bottom of the sidebody to partially shield the underfloor equipment.

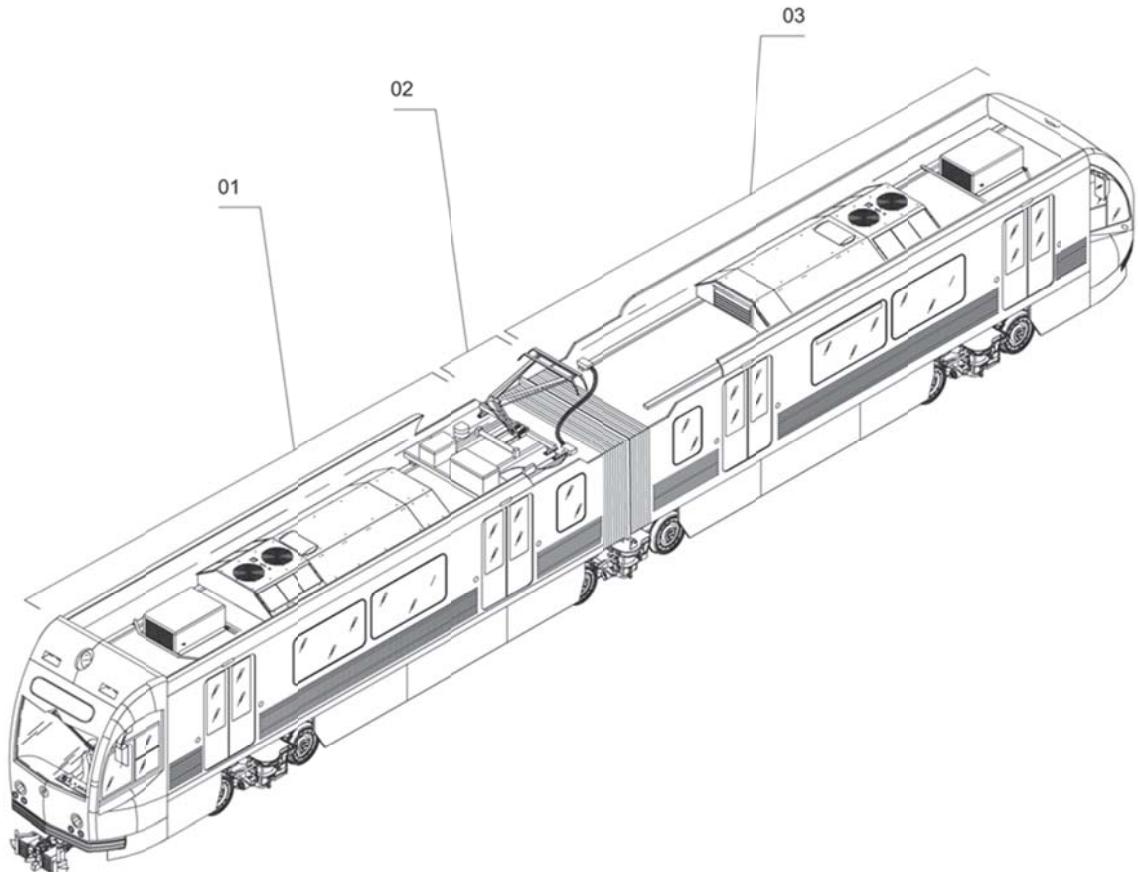
Fairings are mounted along the sides of the roof to shield the equipment and for the appearance of the vehicle

The operator's cab is at the end of each body section and is separated from the passenger compartment by a partition and a lockable door.

Each cab is equipped with operating controls necessary to the operator for the vehicle operation.

A fire extinguisher is placed in each cab.

The P2550 LRV is compatible with the existing MBL, MGL and MGDL vehicles. In particular the anti-climber is vertically aligned with the existing fleet.



1."A" Body Section

2 Articulation Section

3 "B" Body Section

Figure 02-I-02.1 Vehicle Silhouette

02-I-02.01.01 Car Body Dimensions, Track and Wayside Limitations.

Table 02-I-02.1 Car Body Dimensions

Car length over coupler faces:	90 ft (27.43 m)
Width of Car Body at floor level:	104.37 in (2,651 mm)
Floor height from ToR, regulated from AW0 to AW3:	39 in, +0.5 in -0.25 in (990 mm +13 mm, -6.4 mm)
Interior Ceiling height:	80.70 in (2,050 mm)
Seat dimensions:	Refer to paragraph 02-03.03
Minimum aisle width:	24.35 in (618.5 mm)
Nominal coupler height (centerline) above ToR:	20 in (510 mm)
Nominal anti-climber height (centerline) above ToR:	34 in (870 mm)
Coupler face to front door C/L	10'-2" (3.1 m)
Coupler face to rear door C/L	32'-10" (10.0 m)
Door opening width with doors fully opened:	48 in (1,220 mm)
Door height:	75.20 in (1,910 mm)
Maximum equipment height above ToR with new wheels and empty car	150 in (3,810 mm)
Minimum undercar running clearance, level track:	8.25 in (210 mm)

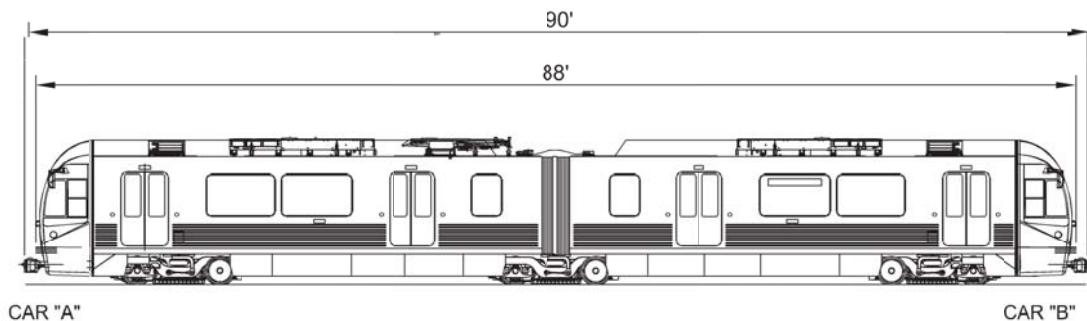


Figure 02-I-02.2 Vehicle Overall Dimensions – Side

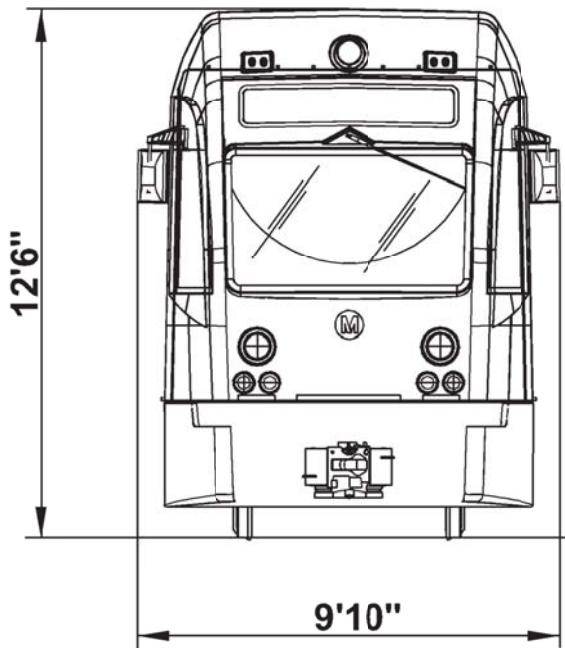


Figure 02-I-02.3 Car Body Overall Dimensions - Front

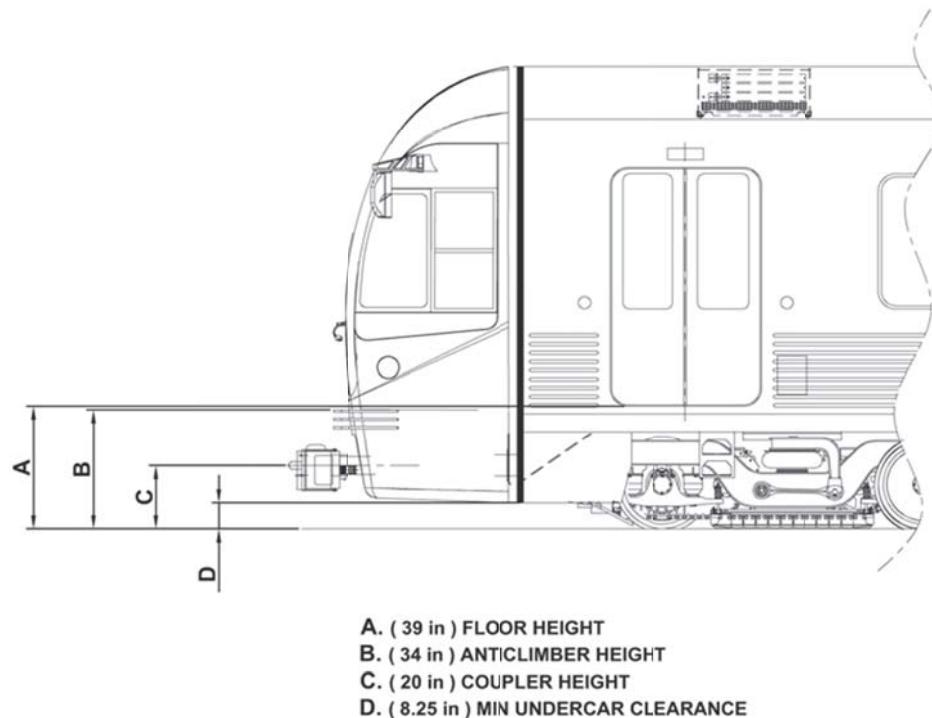


Figure 02-I-02.4 Car Body Overall Dimension - Side

02-I-02.01.02 Jacking Operations

The vehicle is provided with 8 jacking pads, located under the main underframe as shown in Figure 02-I-02.5, two near the front end and the other two near the articulation section of each body section.

Table 02-I-02.2 displays the jacking limits, measured at the center of the vehicle and at the car end, both as maximum misalignment angle and as maximum misalignment height, with respect to the T.O.R.

Dimensional limits during jacking operations are represented in Figure 02-I-02.5.

Table 02-I-02.2 Jacking limits

	Maximum Misalignment Angle With respect to T.O.R.	Maximum Misalignment Height with respect to T.O.R.
Jacking limits at the center of the vehicle	1.25°	39.79 in (1010 mm)
Jacking limits at the end of each car body	2.50°	54.89 in (1394 mm)

A normal car lifting should be performed with eight jacks. If necessary, the fully assembled car can be lifted with six jacks.

During jacking operations trucks must be retained together with the Car Body unless intentionally disconnected as described in Section 12.

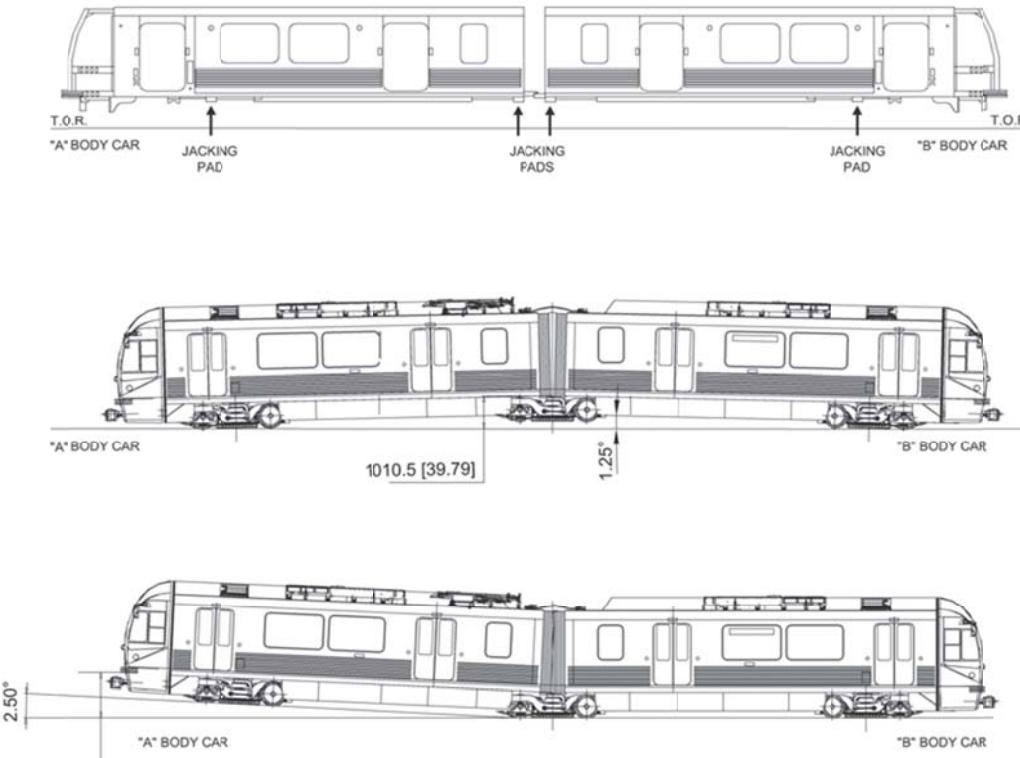


Figure 02-I-02.5 Vehicle Jacking Points and Limits

In an emergency a car section can also be lifted by means of a jack fitted under the coupler.

A special tool, made up of two pieces (refer to Figure 02-I-02.6) is needed to fill the gap between the main underframe and the coupler and to transfer the load directly from the coupler to the underframe without stressing the coupler's bearing bracket and mounting plate (refer to Section 03).

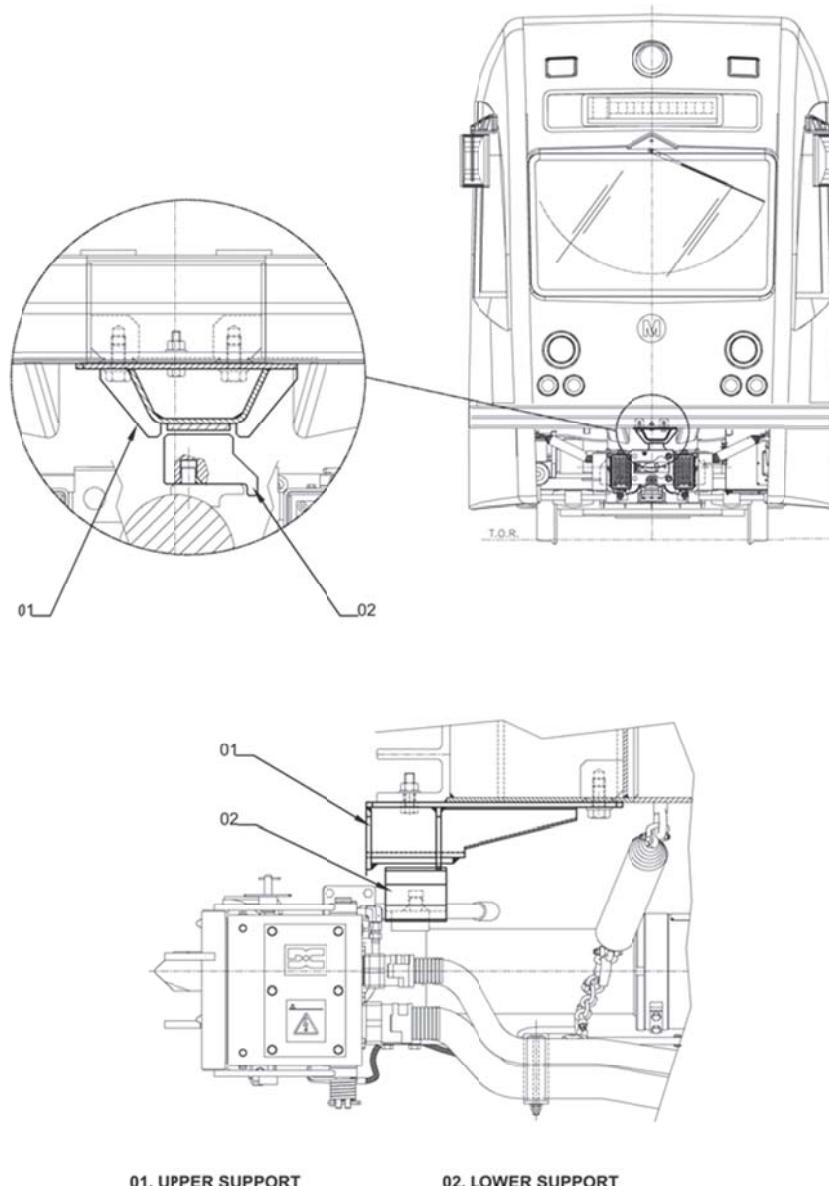


Figure 02-I-02.6 Special Tools to support the Coupler Head

A special Damper must be used to avoid stress on the articulation joint during re-railing operations (refer to Figure 02-1-02.7).

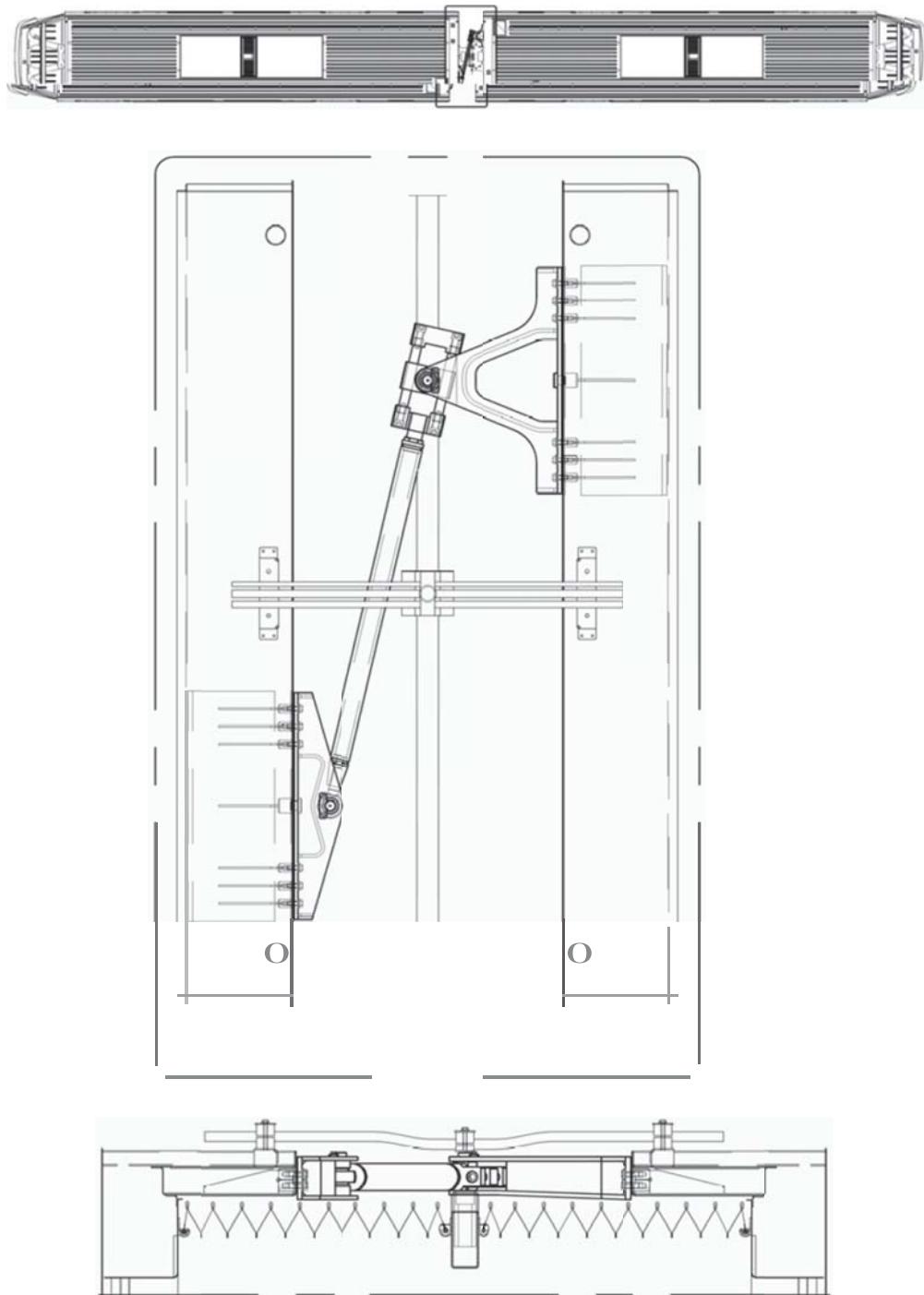


Figure 02-1-02.7 Articulation Section Damper

02-I-02.01.03 Weights and Capacities

Table 02-I-02.3 displays the actual weights and capacities, from AW0 to AW4, both in pounds and kilograms:

Table 02-I-02.3 Weights and Capacities

AW0:	Empty car operating weight	97,781.5 lb	44,357.5 kg
AW1:	Full seated load plus AW0	109,520.1 lb	49,677.5 kg
AW2:	Standees at 4 persons per square meter plus AW1	124,026.5 lb	56,257.5 kg
AW3:	Standees at 6 persons per square meter plus AW1	131,279.7 lb	59,547.5 kg
AW4:	Standees at 8 persons per square meter plus AW1	138,533.0 lb	62,837.5 kg

NOTE: Passenger weight is assumed to be 154 lb (70 kg) per person.

02-I-02.02 Structure

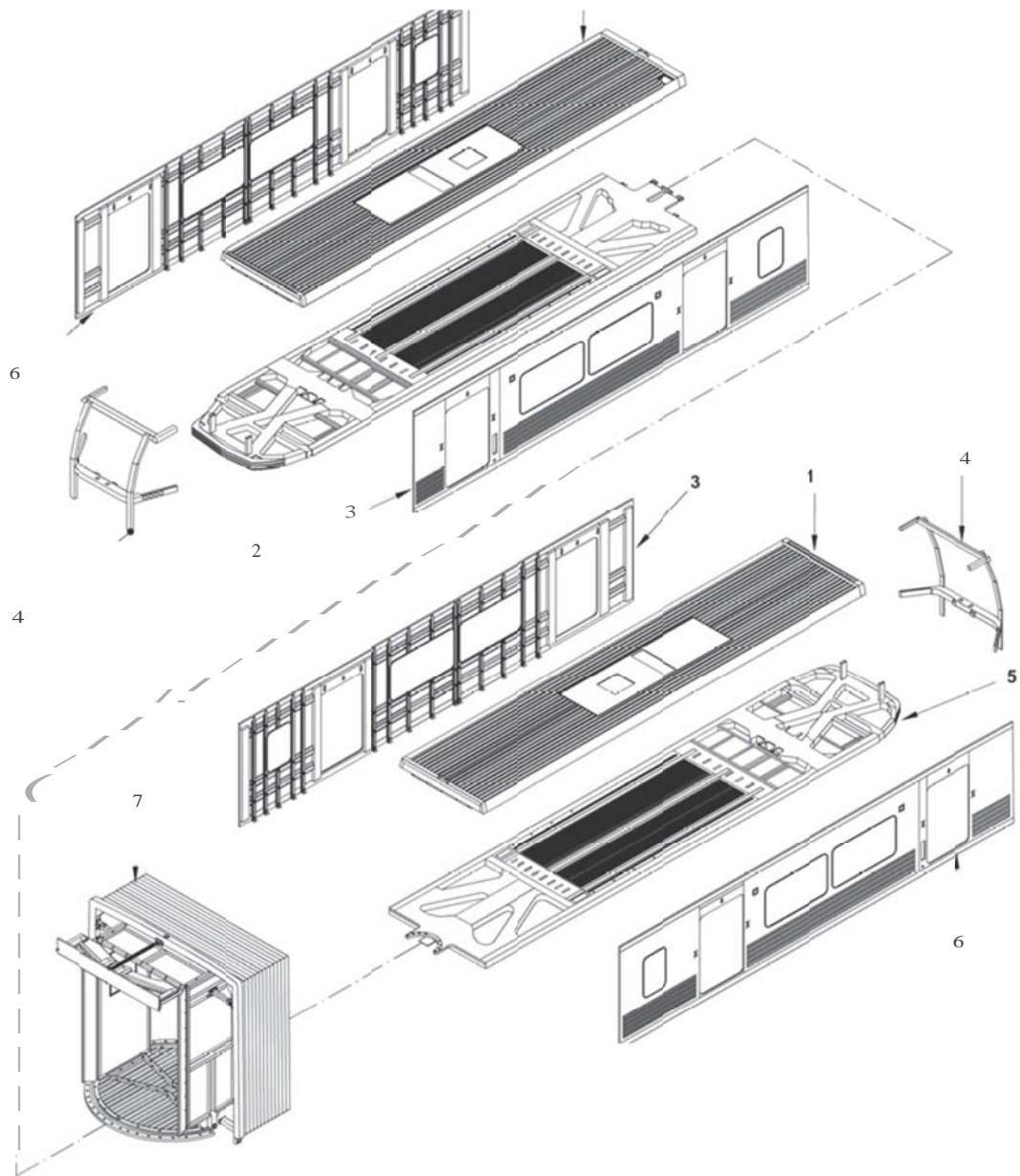
The Car Body structure includes all loaded elements assembled by welding. Bolts rivets and weldings have been used to join the unloaded parts to the primary structure. The structure is made of S500 MC carbon steel.

The Car Body structure is engineered to guarantee the maximum energy-absorbing capability.

In the event of a collision, with mating anticlimbers locked together, deformation of the structure will start from the extreme end and progress towards the bolster, while all the end structural members retain their attachments to one another and to the roof and floor structures.

The following elements can be identified within the Car Body structure as indicated in Figure 02-I-02.8 and will be separately dealt with in the specific related paragraphs:

1. Main Underframe (refer to para 02-I-02.02.01).
2. End Frame (refer to para 02-I-02.02.02).
3. Sidewalls (refer to para 02-I-02.02.03).
4. Roof (refer to para 02-I-02.02.04).
5. Thermo-acoustic Insulation (refer to para 02-I-02.02.05).
6. Articulation Section (refer to para 02-I-02.02.06).



RMMS-02-01-02-01

01_ROOF
 04-END FRAME
 07_ARTICULATION SECTION

02_CAR "A" MAIN UNDERFRAME
 05_CAR "B" MAIN UNDERFRAME

03_LH SIDEWALL
 06_RH SIDEWALL

Figure 02-1-02.8 Car Body Structure Components

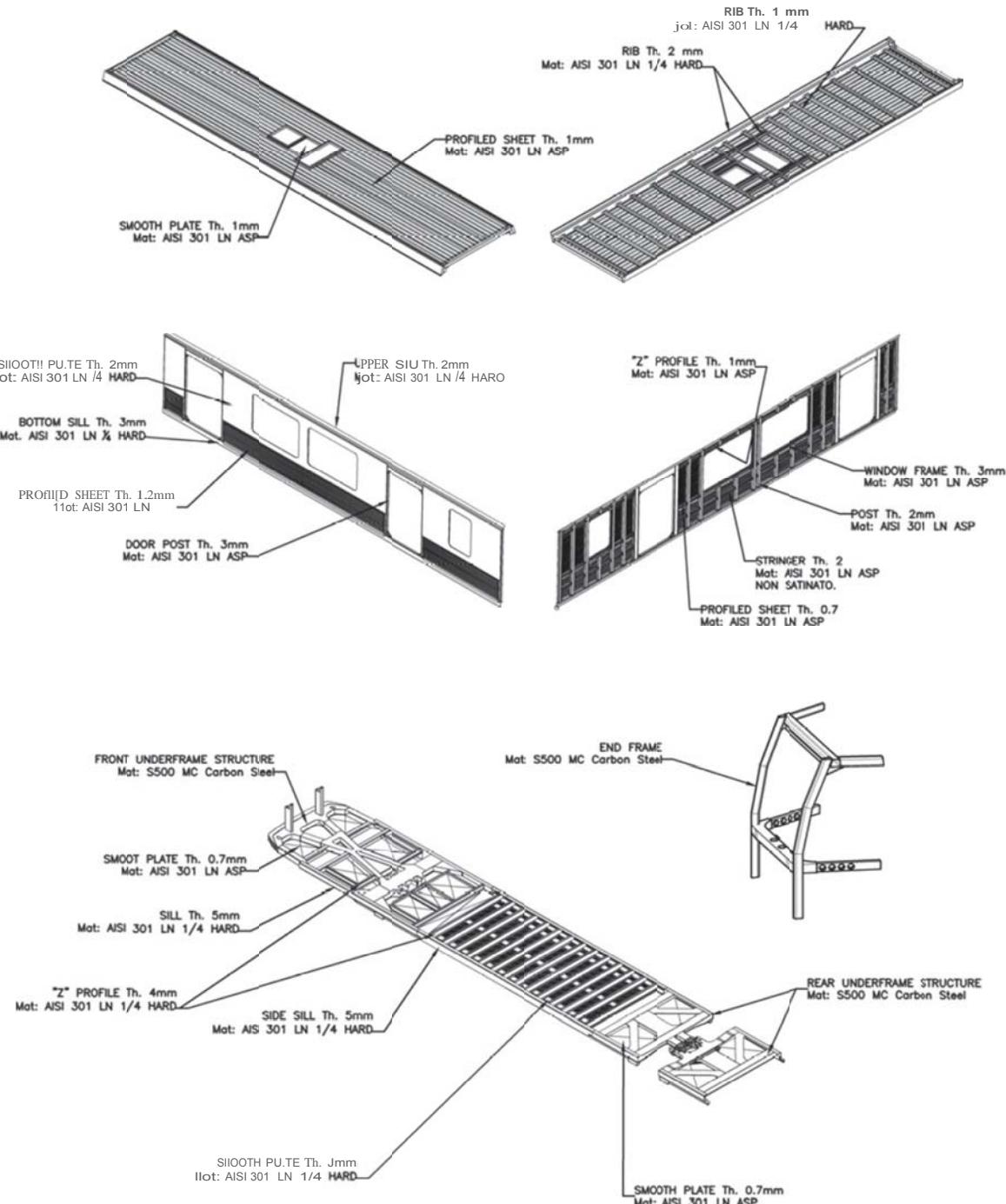


Figure 02-1-02.9 Car Body Structure Materials

02-I-02.02.01 Main Underframe

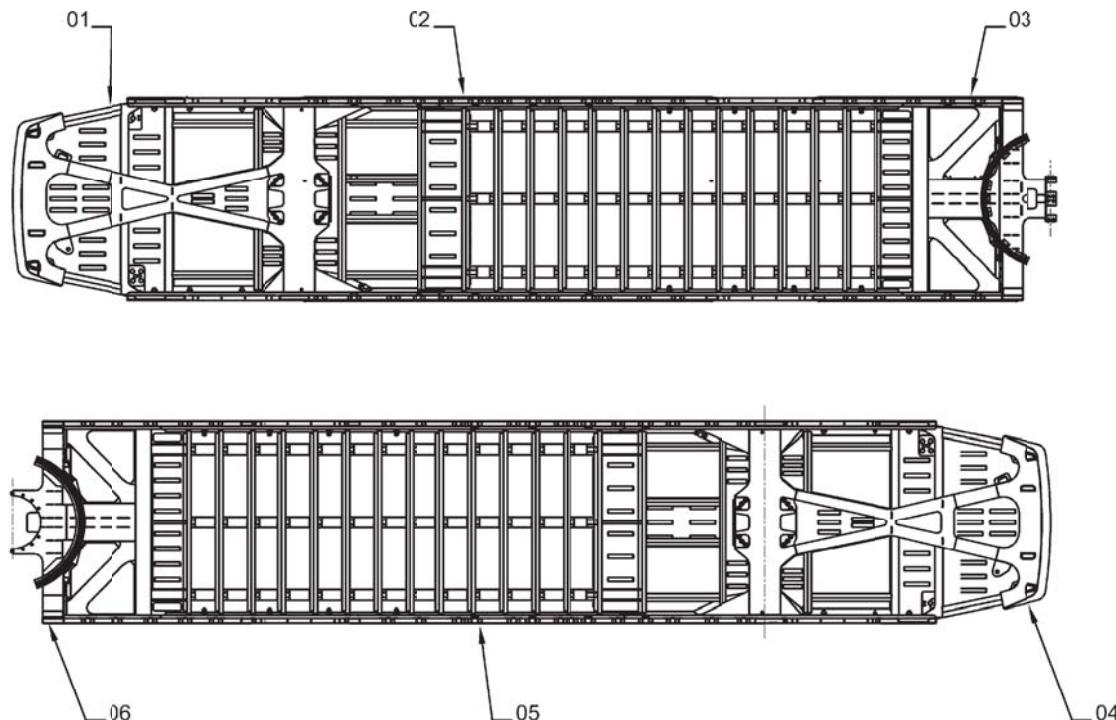
Each ("A or "B") car section structure is provided with a Main Underframe (refer to Figure 02-I-02.10), a structural assembly made up of Front, Central, and Rear Underframe.

The floor is mounted on the upper side of the Main Underframe while most equipment (except for the items on the roof) is mounted on the lower side of it. .

The Front Underframe (refer to Figure 02-I-02.11) is made up of an Anticlimber (2), two Collision Posts (1), an End Sill (3), a Draft Sill (4) and a Body Bolster (5).

The Collision Posts are continuous through the End Sill and are connected to the Vertical Posts (refer to Figure 02-I-02.11). The Collision Posts are designed to resist a longitudinal load of 45,000 lbf (200 kN) without any yielding.

The Anticlimber is designed to be vertically aligned with the existing fleet of LRVs.



- | | | |
|---------------------------------|-------------------------------|---------------------------------|
| 1. FRONT UNDERFRAME (CAR "A") | 3. REAR UNDERFRAME (CAR "A") | 5. CENTRAL UNDERFRAME (CAR "B") |
| 2. CENTRAL UNDERFRAME (CAR "A") | 4. FRONT UNDERFRAME (CAR "B") | 6. REAR UNDERFRAME (CAR "B") |

Figure 02-I-02.10 Main Underframe Structure

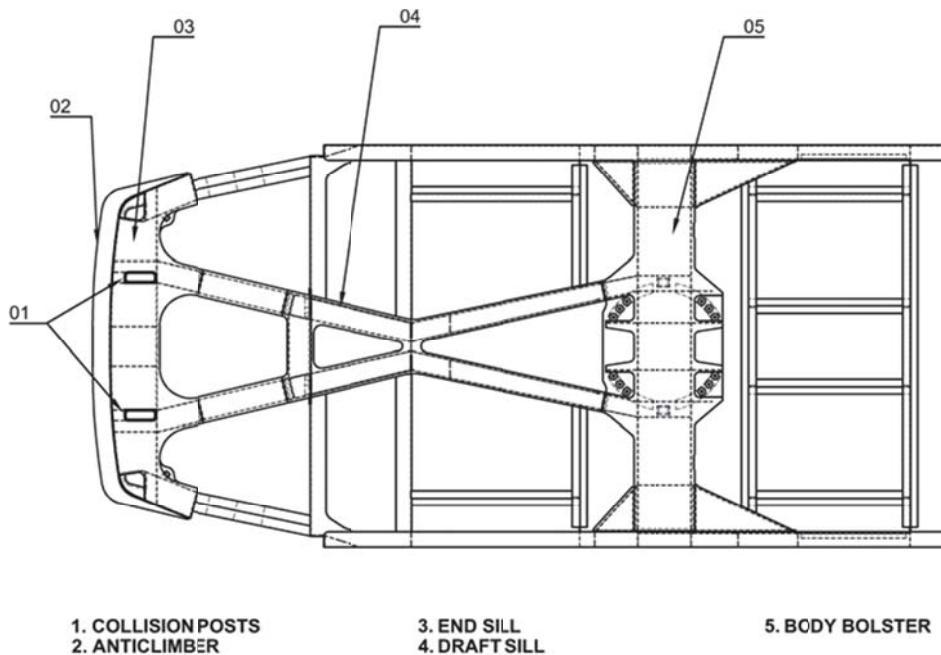


Figure 02-I-02.11 Front Underframe Structure

The Central Underframe (refer to Figure 02-I-02.12) is made up of two Side Sills and three Rail Assemblies.

The main components of the Rear Underframe (refer to Figure 02-I-02.13) are the Rear Beam and the two Articulation Joints.

The Main Underframe components are made of S500 MC carbon steel.

Car "A" and Car "B" are connected one to the other and to the Trailer Truck by means of a 3-race Slewing Ring (refer to Figure 02-I-02.14) by means of the relevant rear Underframe beams and a connection beam.

The relative horizontal rotation between car "A", car "B" and Trailer Truck is granted by the slewing ring.

The outer ring of the slewing ring (3) is connected to the rear beam of the "B" car section (5) by means of 8 bolts (8).

The inner ring (1) of the slewing ring is connected to the rear beam of the "A" car section (6) by means of the connection beam (4), the connection pin (7) and 12 bolts (9).

The slewing ring (2) middle ring is connected to the Trailer Truck bolster beam (10) (refer to Section 12).

The relative vertical pitching between car "A", car "B" and Trailer Truck is granted by the connection pin (7).

The Main Underframe is designed to allow the installation of Couplers, Trucks, Car Body Connection (on Rear Bolster), Connection rails (refer to Figure 02-I-02.12), for mounting components and pipings, External Steps.

Each car section is equipped with four jacking points (refer to Figure 02-I-02.5).

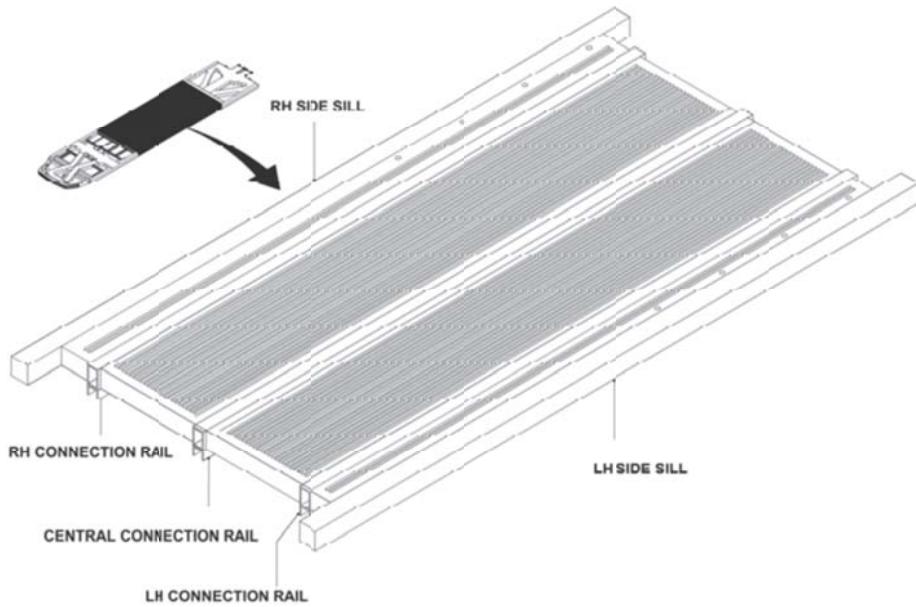


Figure 02-I-02.12 Central Underframe Structure

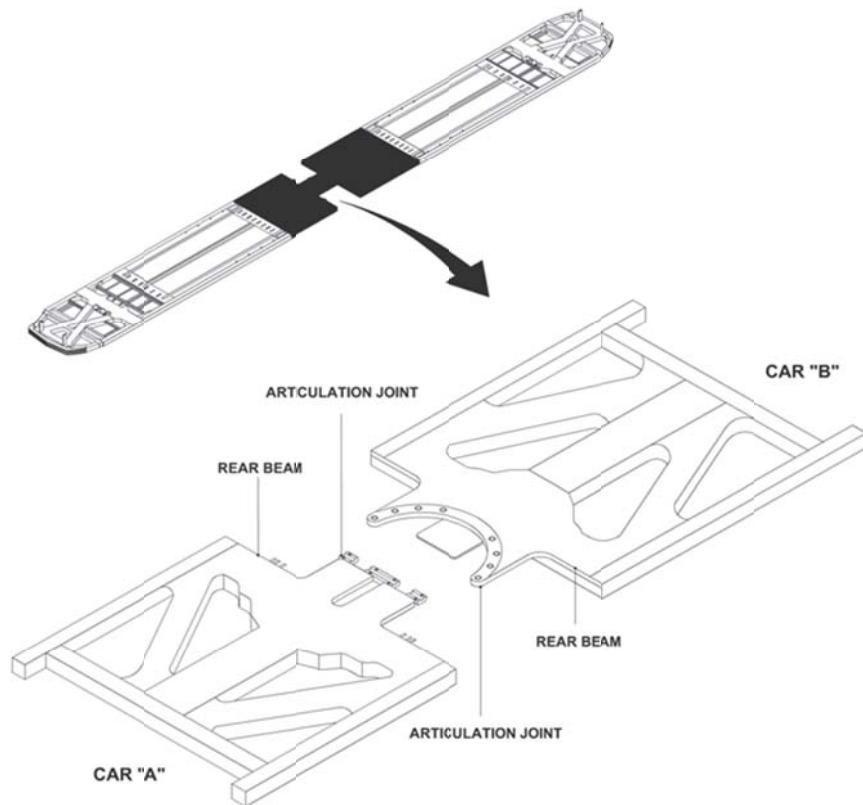


Figure 02-I-02.13 Rear Underframe Structure

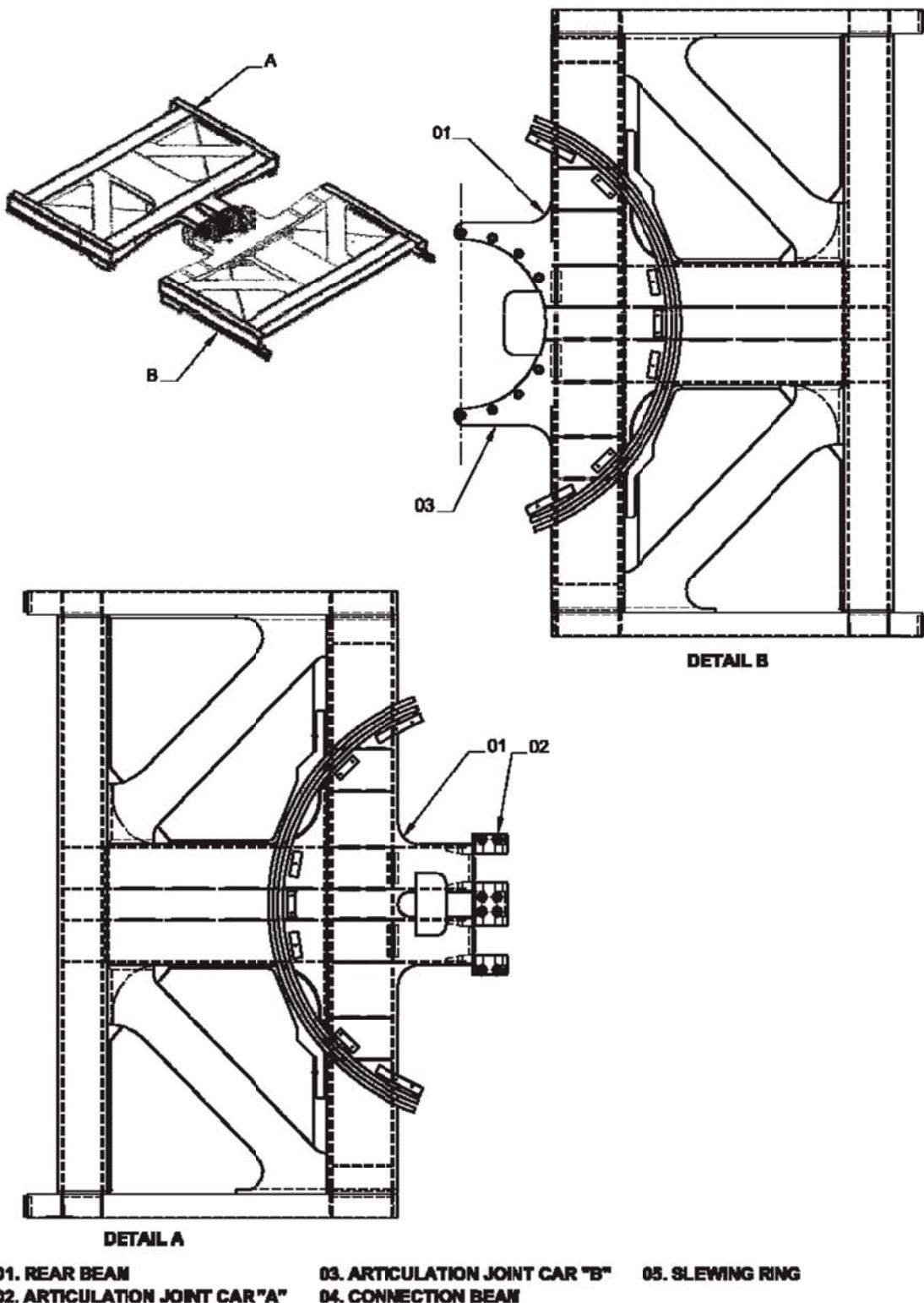
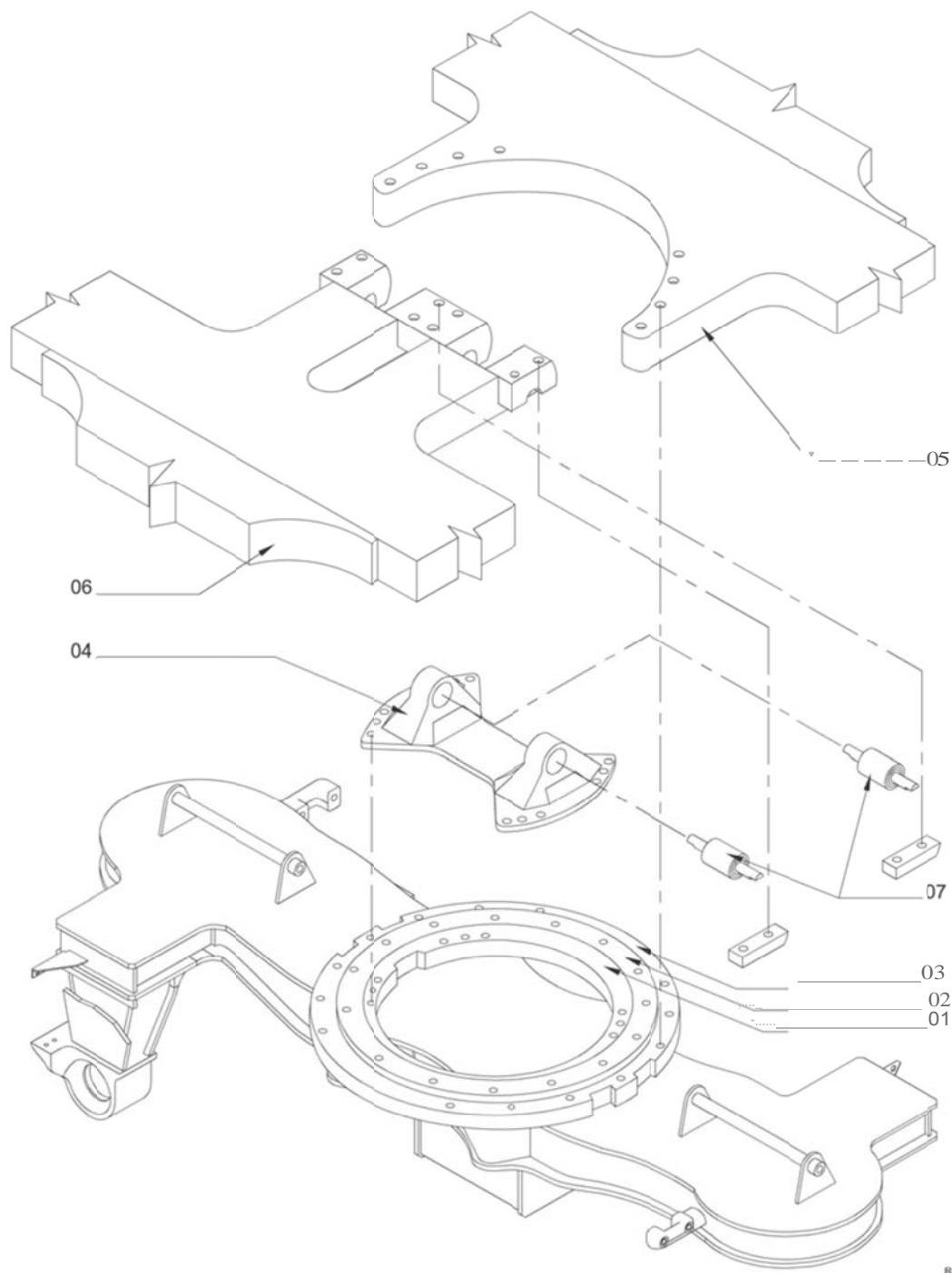


Figure 02-1-02.14 Rear Underframe Structure - Connection Detail



01.SLEWING RING -INNER RING
 04.CONNECTION BEAM
 07.CONNECTION PIN

02. SLEWING RING - MIDDLE RING
 05.MAIN UNDERFRAME CAR "B"

03. SLEWING RING -OUTER RING
 06. MAIN UNDERFRAME CAR "A"

Figure 02-1-02.15 Rear Under frame and Trailer Truck Connection

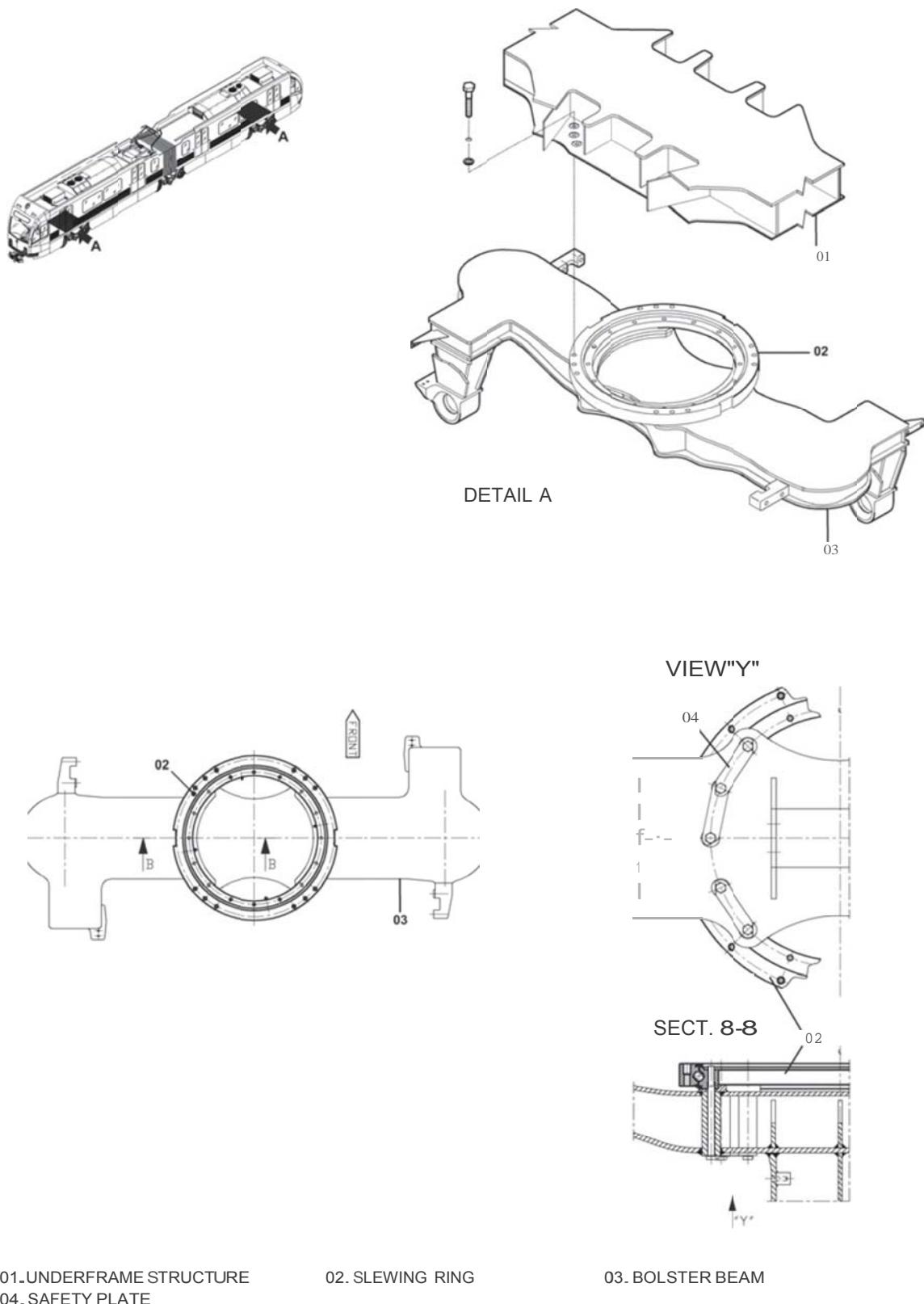
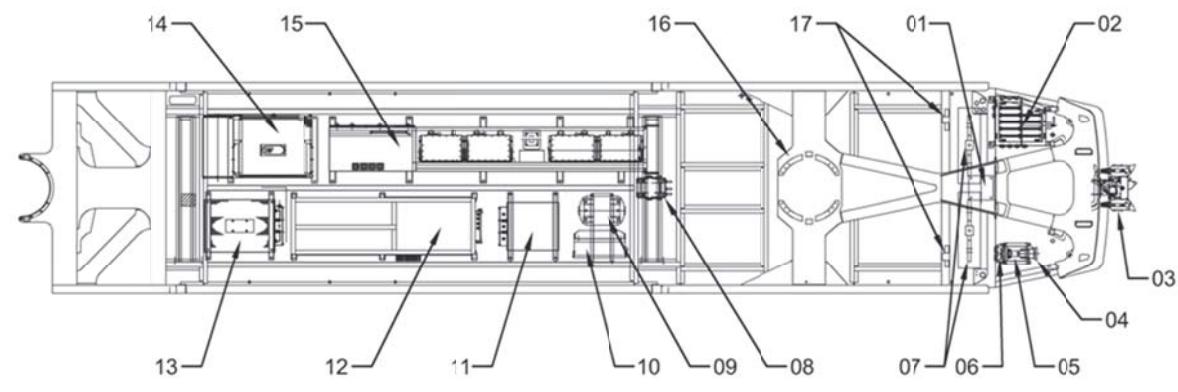
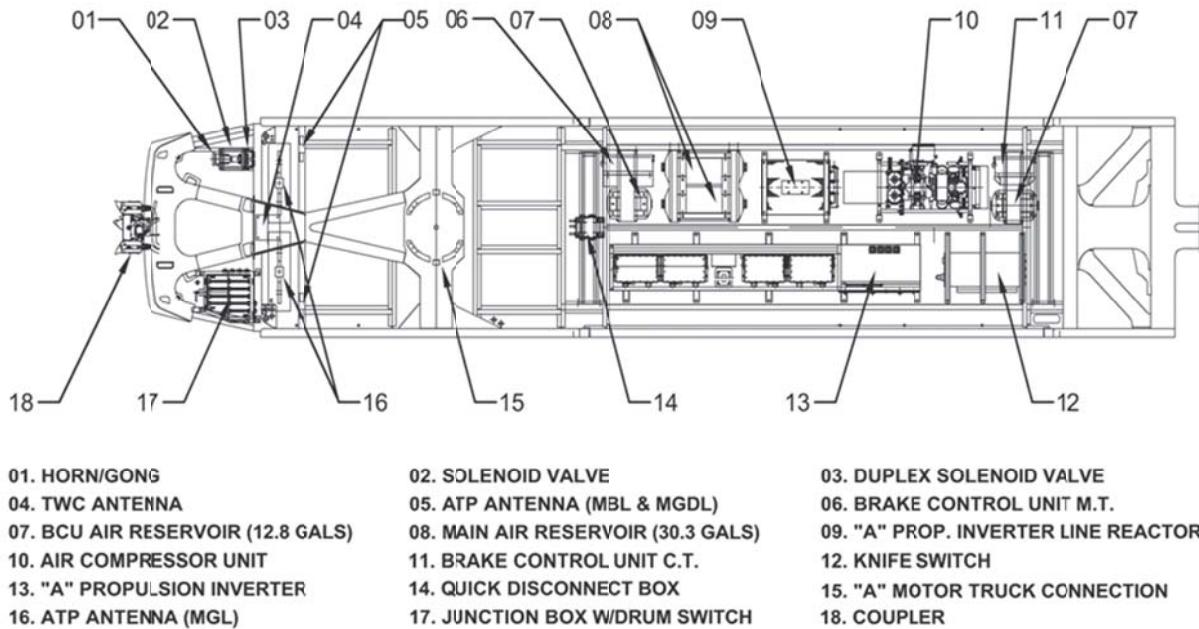


Figure 02-1-02.16 Motor Truck Slewing Ring



02-I-02.02.02 End Frame

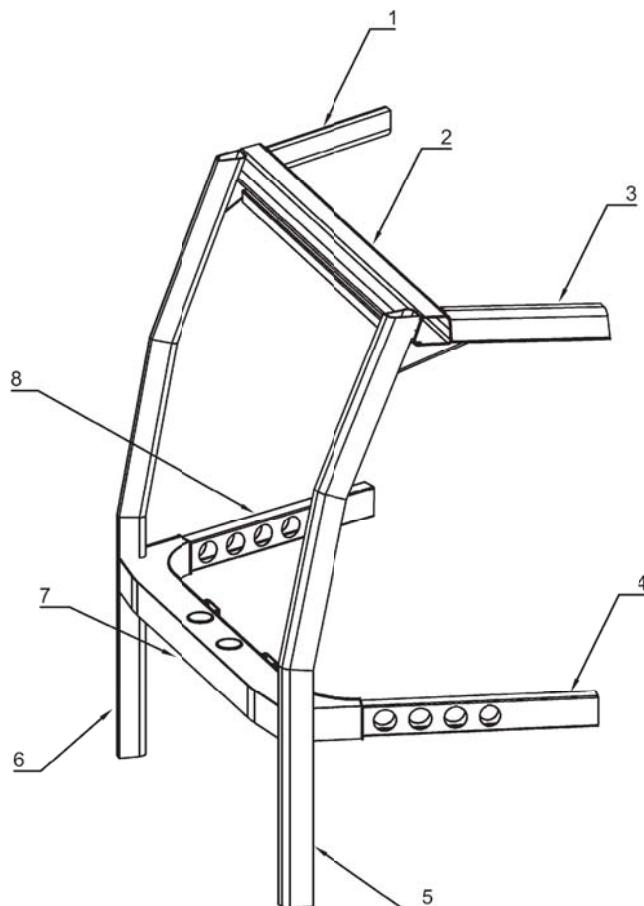
The End Frame (refer to Figure 02-I-02.19) consists of two boxed Vertical Posts, a horizontal Structural Shelf and an Upper Beam.

The Vertical Posts are connected to the lower part to the End Sill through the two collision posts (refer to Figure 02-I-02.11), and to the front part to the Roof (Refer to paragraph 02-I-02.02.04).

The Structural Shelf, connecting the two Vertical Posts and the Collision Posts, absorbs the transversal components of eventual collision forces.

This component is capable of transmitting a longitudinal load of 15,000 lbf (67 kN) applied to the worst point of the front underframe structure.

The End Frame main components are made of S500 MC carbon steel.



1. RH PROFILE
2. UPPER BEAM
3. LH PROFILE

4. LH LOWER PROFILE
5. LH VERTICAL POST
6. RH VERTICAL POST

7. LOWER BEAM
8. LH LOWER PROFILE

Figure 02-I-02.19 End Frame Overview

02-I-02.02.03 Sidewalls

Sidewalls are structural assemblies (mainly made of AISI 301 LN steel) consisting of a series of vertical and horizontal posts interrupted to make room for two doors and three windows (refer to Figure 02-I-02.20) each.

The vertical posts are welded directly to the Main Underframe. Vertical and Horizontal posts form a net frame covered by External Cover Sheets. All the elements forming the sidewalls are welded together.

The low side of door and window vertical posts are welded to the side sills (main underframe), while the high side is welded to the cant rails of the roof (refer to paragraph 02-I-02.02.04).

The window frames and all the longitudinal (horizontal) posts are welded to the vertical posts or doors pillars.

The external cover sheets (made of $\frac{1}{4}$ HARD AISI 301 LN stainless steel) are continuously welded to the underframe side sills, window frames, and to the door posts. All weldings are watertight.

The sidewall components are mainly made of AISI 301 LN ASP or AISI 301 LN $\frac{1}{4}$ Hard steel.

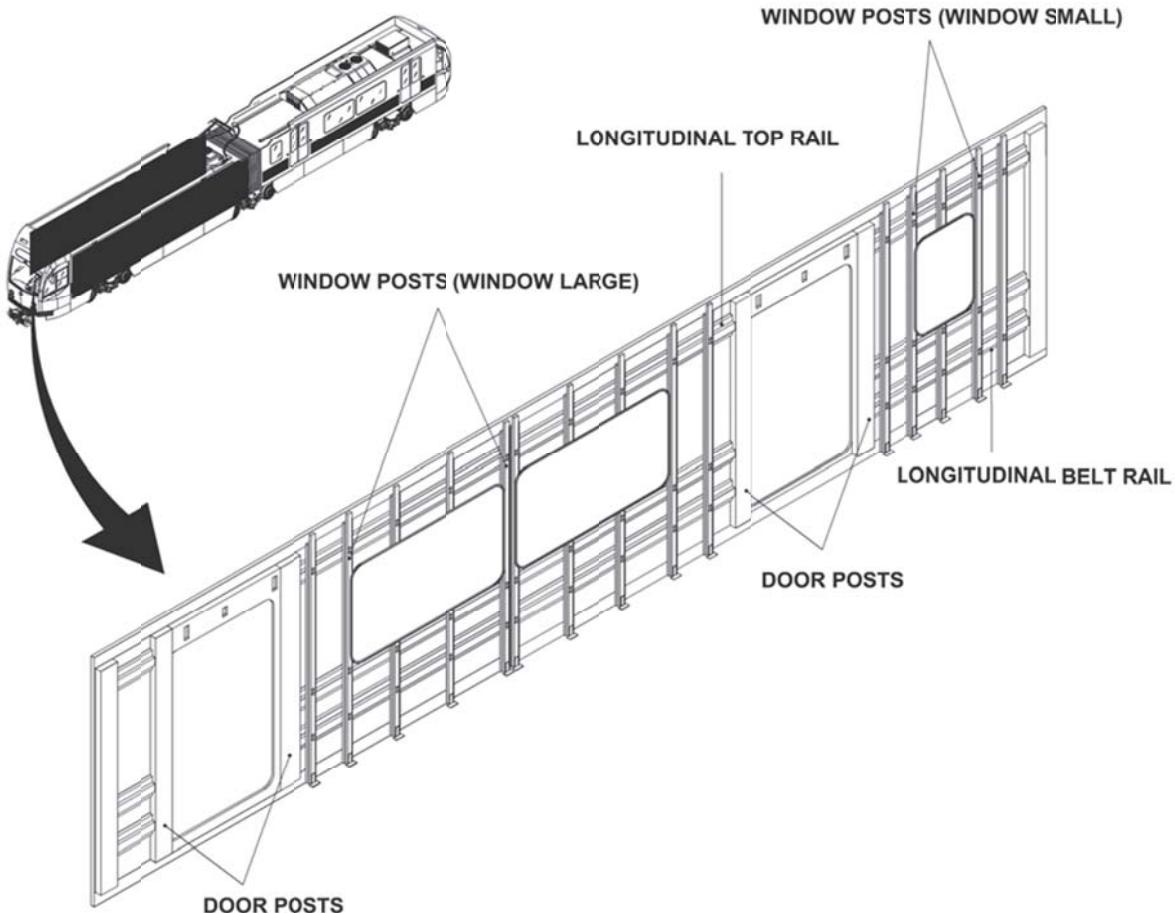


Figure 02-I-02.20 Side Wall Structure

02-I-02.02.04 Roof

The Roof is a structural assembly designed to have the required stress resistance and to support the HVAC and other equipment installed on the roof.

The roof (Refer to Figure 02-I-02.21) consists of 2 Side Sills, Beams and Corrugated Metal (stainless steel) Sheets welded together.

The Side Sills (reinforced cant rails made of 1/4 HARD AISI 301 LN stainless steel) are welded to the Side Walls and have an important role in the body shell structural resistance.

The Beams (made of ¼ HARD AISI 301 LN stainless steel) are spot welded to the side sills.

The Corrugated Metal Sheets (made of AISI 301 LN stainless steel) are spot welded to the carlines and continuously welded to the side sills.

All joints are watertight. The roof components are made of rolled and/or formed sheets. In order to allow maintenance operations, the roof supports 250 lb of concentrated loads everywhere, without permanent deformation.

The roof openings (for the HVAC system air intake and return and for the Junction Boxes) are reinforced by means of a welded frame.

Figure 02-I-02.21 Roof Structure

All equipment mounted on the roof is bolted to mounting rails or directly to the roof Side Sills.

The equipment mounted on the roof is listed below, divided by car section (refer to Figure 02-I-02.22):

Equipment mounted on the roof of the “A” Body Section:

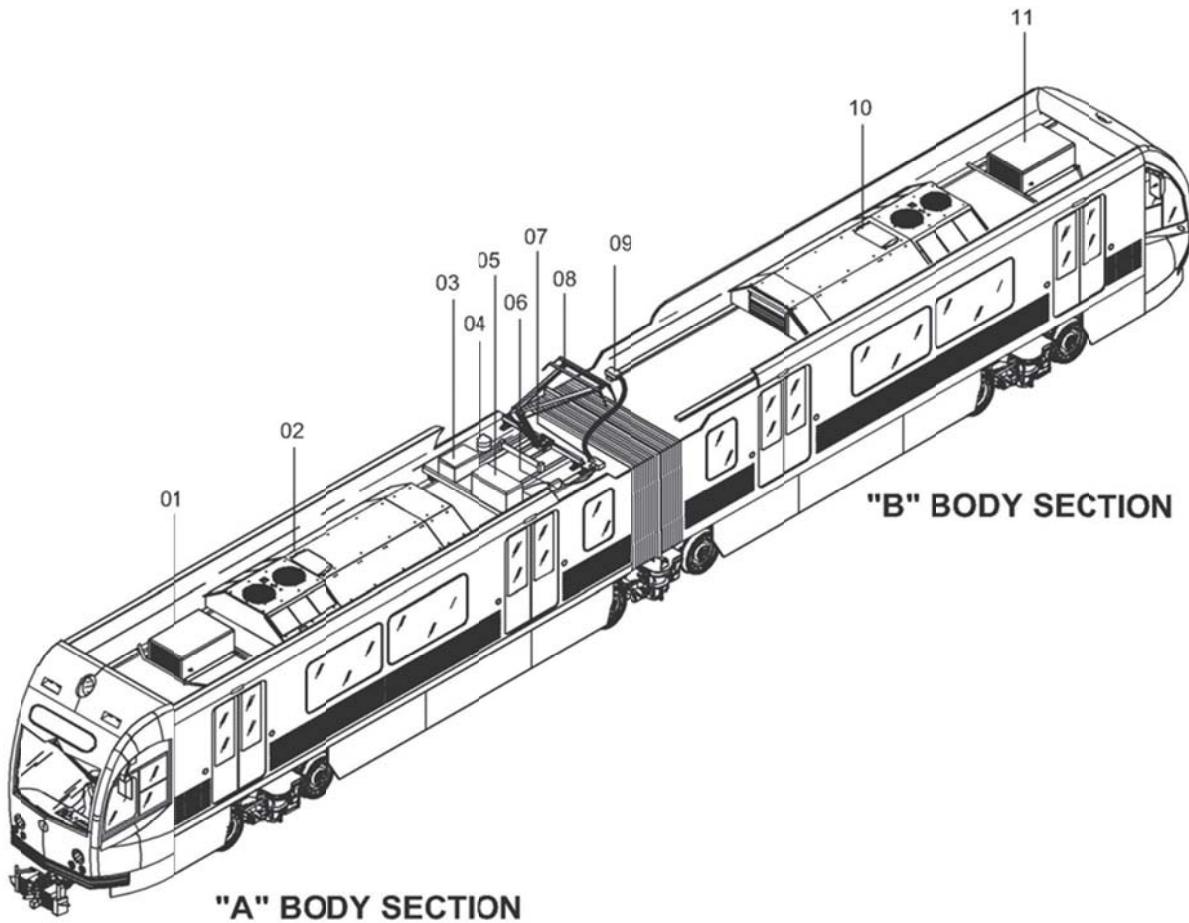
- | | | |
|-----|--------------------|---------------------|
| [1] | Brake Resistor | Refer to Section 07 |
| [2] | HVAC | Refer to Section 05 |
| [3] | HCT | Refer to Section 09 |
| [4] | Lightning arrester | Refer to Section 09 |
| [5] | HSCB | Refer to Section 09 |
| [6] | Fuse box | Refer to Section 09 |
| [7] | Junction Box | Refer to Section 09 |
| [8] | Pantograph | Refer to Section 08 |

Equipment mounted on the roof of the “B” Body Section:

- | | | |
|------|----------------|---------------------|
| [9] | Junction Box | Refer to Section 09 |
| [10] | HVAC | Refer to Section 05 |
| [11] | Brake resistor | Refer to Section 07 |

Roof mounted equipment is bolted to two connection rails (refer to Figure 02-I-02.22) welded to the roof structure (refer to Figure 02-I-02.23, # 4).

The connection rails are provided with holes of suitable shape and in suitable positions for the equipment mounting.



- | | | |
|----------------------------------|----------------------------------|--------------------------------|
| 01. BRAKE RESISTOR (SECTION "A") | 02. HVAC (SECTION "A") | 03. HCT |
| 04. LIGHTNING ARRESTER | 05. HSCB | 06. FUSE BOX |
| 07. JUNCTION BOX (SECTION "A") | 08. PANTOGRAPH | 09. JUNCTION BOX (SECTION "B") |
| 10. HVAC (SECTION "B") | 11. BRAKE RESISTOR (SECTION "B") | |

Figure 02-I-02.22 Vehicle Roof Equipment Layout



Figure 02-I-02.23 Roof Connection Rail

02-I-02.05 Thermo-acoustic Insulation

To thermally and acoustically insulate the vehicle from the outside the underframe is equipped with insulation tanks (refer to Figure 02-I-02.24, Figure 02-I-02.25 and Figure 02-I-02.26).

The thermo-acoustical insulation is provided by mats of insulating material inserted between the structure and the external cover sheet, spot welded to the structure and sealed. The material and the thickness of the mats depend on the structure to which they are applied.

02-I-02.05.01 Underframe.

The thermo-acoustic insulation of the underframe is realized by means of SIX TH 2460 type insulating mats made up of three layers of different density fiberglass (one layer of LB fiberglass 1 ½ in thick and two layers of SIX TH 2020 type fiberglass 1 in thick), covered on both sides with aluminized fiberglass cloth.

Between panels and insulation tanks a 0.19 in. thick gasket is installed.

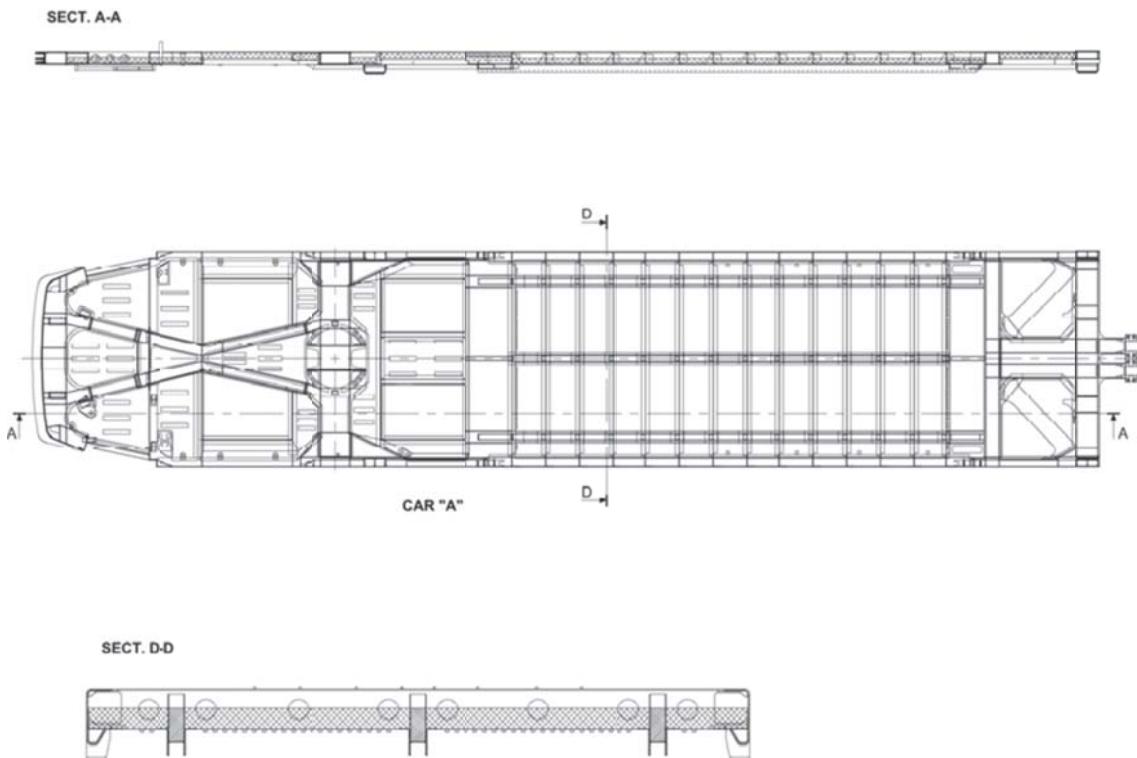


Figure 02-I-02.24 Underframe – Thermo-acoustic Insulation



Figure 02-I-02.25 Underframe Insulating Tanks

02-I-02.05.02 Sidewalls

The thermo-acoustic insulation of the sidewalls is realized with 50 mm thick insulating mats made up of fiberglass and covered with aluminized fiberglass cloth on the internal side.



Figure 02-I-02.26 Sidewall – Thermo-acoustic Insulation (Door Pocket)

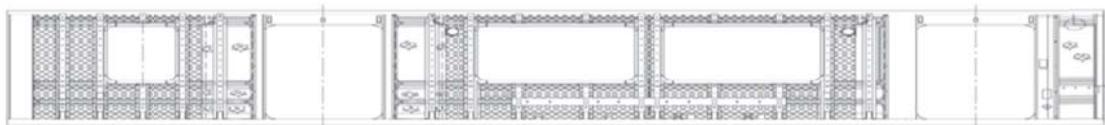


Figure 02-I-02.27 Sidewall- Thermo-acoustic Insulation

02-I-02.02.05.03 Roof and Front Head

The thermo-acoustical insulation of the Roof and the Front Head is realized by means of mats made up of 50 mm thick fiberglass and covered with aluminized fiberglass cloth on the internal side (refer to Figure 02-I-02.28 and Figure 02-I-02.30)

The area above the GPS antenna, over the ceiling of the A cab, is without the thermo-acoustic insulation (refer to Figure 02-I-02.29).



Figure 02-I-02.28 Roof – Thermo-acoustic Insulation

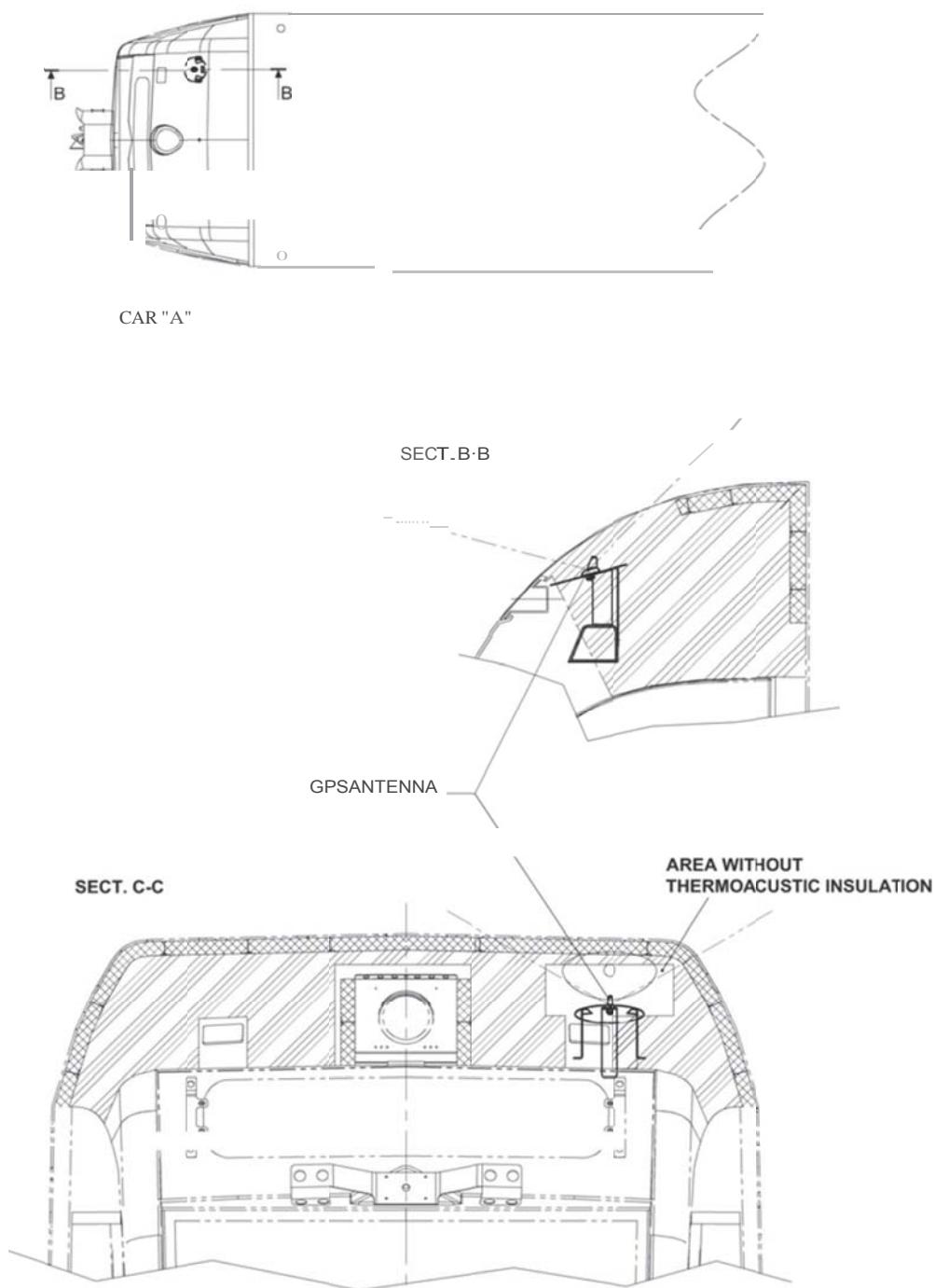


Figure 02-1-02.29 Front Head-Thermo-acoustic Insulation

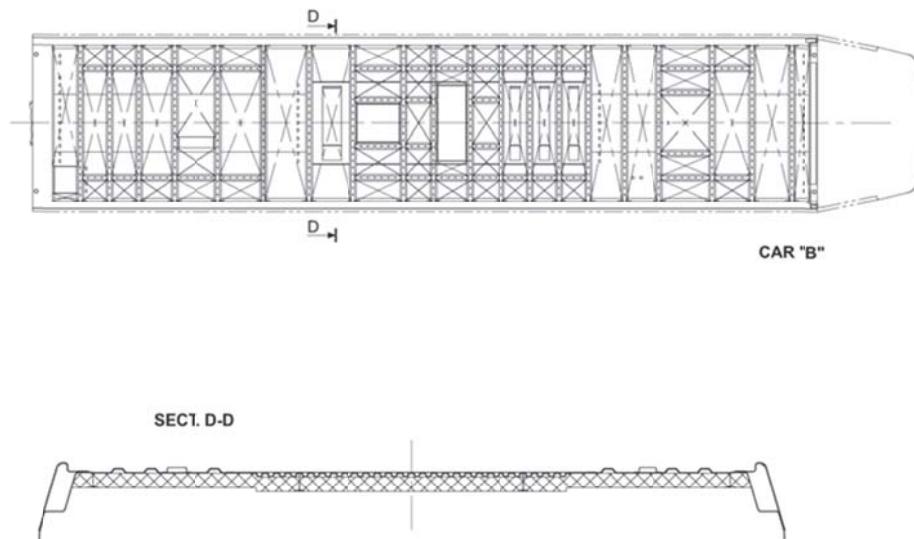


Figure 02-I-02.30 Roof – Thermo-acoustic Insulation

02-I-02.02.06 Articulation Section

The Articulation Section (Refer to Figure 02-I-02.31) is the connecting structure between the “A” and “B” body sections. It has an internal passageway (aisle) to let passengers pass from one body section to the other and permits the relative movements of the two car sections induced by the train travel on curves, hollows and humps.

The Articulation Section structure is made up of an external dome, an internal dome with the Inner Rubber that protects passengers from putting fingers inside the moving articulation, a floor frame covered by the rubber floor and a dome centering structure.

The Articulation section is completed internally by the aisle panels (refer to paragraph 02-I-02.03.06) and externally by the bellow (Refer to paragraph 02-I-02.04.06).

The structure of the Articulation Section is designed to have at least the same structural resistance as the adjacent Car Body sections.

The connection beam provides anti-climbing properties and anti-telescoping protection. The articulation section floor is also designed to have the required stress resistance and to support AW4 passenger loads with no permanent deformation over the vehicle's life.

The Connection Beam (refer to Figure 02-I-02.15) connects the “A” Body section to the inner ring of the Ball Bearing slewing ring.

The outer ring is connected to the “B” body section while the middle ring is connected to the Trailer Truck Bolster Beam.

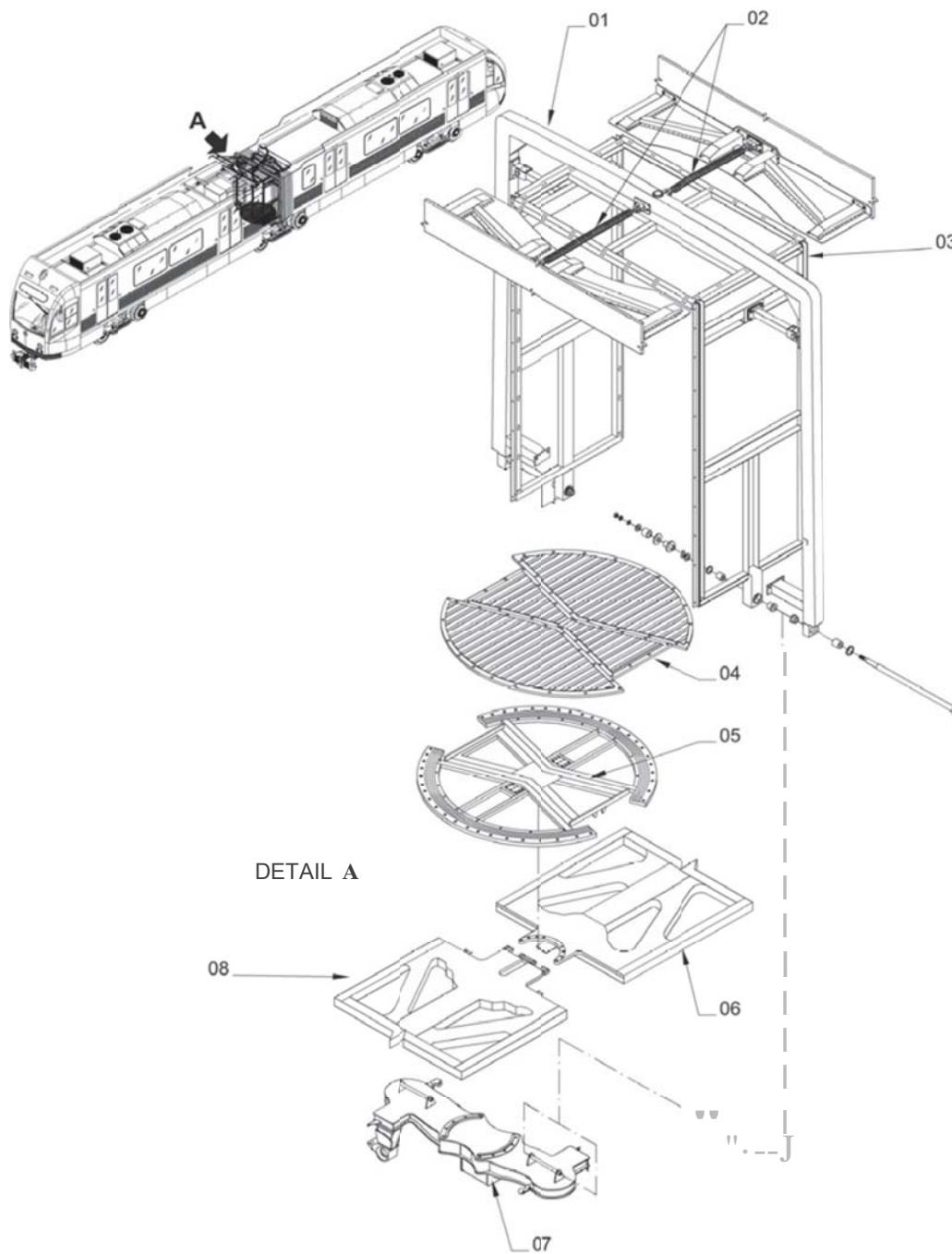


Figure 02-1-02.31 Articulation Section Structure

02-I-02.03 Interior Finishing and Accessories

The vehicle's Interior (refer to Figure 02-I-02.32) has been designed with materials and layout that facilitate cleaning operations and provide passengers with comfort and safety.

Accommodations for the elderly/handicapped are provided; the available space has been optimized to facilitate maneuvering of the wheel chairs.

Four wheel chairs can be accommodated close to the door openings (two per car section) on the vehicle in total.

Any non-metallic Interior component is made of low-flammability, low-smoke emission, high-gloss and graffiti-resistant materials.

The vehicle main Interior components are:

- Floor (refer to para 02-I-02.03.01);
- Liner and Ceiling Panels (refer to para 02-I-02.03.02);
- Stanchions and Handrails (refer to para 02-I-02.03.05);
- Windscreen Panels (at the sides of the doors);
- Passenger Seats (refer to para 02-I-02.03.03);
- Underseat Boxes (refer to para 02-I-02.03.04).

NOTE: For Operator Cab Interiors, refer to paragraph 02-I-02.05.

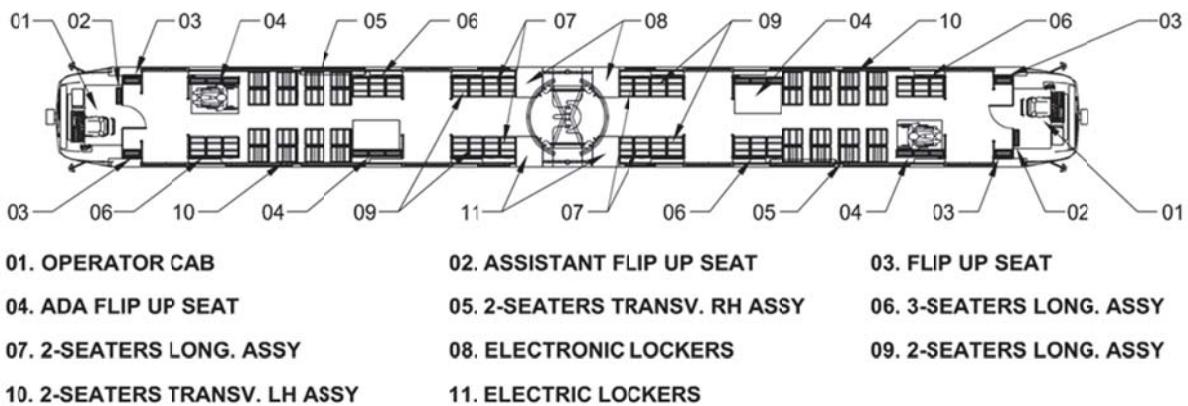


Figure 02-I-02.32 Interior Component Location

02-I-02.03.01 Floor

The vehicle is equipped with a rubber floor that covers the Car Body underframe structure and provides a comfortable and safe walk deck to the passengers.

The floor (refer to Figure 02-I-02.23) consists of slip-resistant rubber sheets glued (by means of HYDROBOND A/401 HENKEL TYPE glue) to ply-metal panels riveted to the main underframe structure.

Polymeric insulating sheets of type XJ456I and XJ458 are installed between the ply-metal panels and the underframe structure stainless.

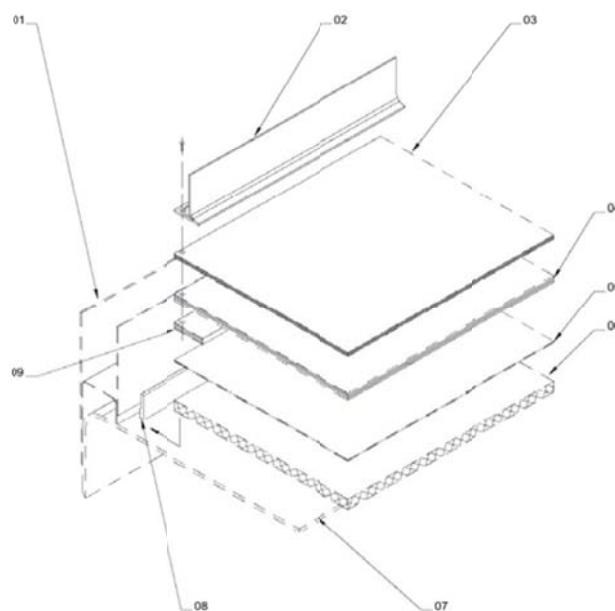
The rubber sheets are 0.20in thick ribbed type (on vehicle aisle, articulation, doorways) and 0.12 in. thick smooth type (under the seats and in the Operator Cabs).

The junction between floor (rubber sheets) and side liners is made up of sealer (FIRE DAM 350-3M type) (refer to Figure 02-I-02.33) and aluminum cove moldings (ANODIZED AL. 8063-T3).

The ply-metal panels consist of stainless steel sheets (0.025 in. thick AISI 304) and structural plywood layers glued together.

The panels (0.5 in. thick) are designed to be removed through the door openings and to support dead loads plus passenger load equivalent to AW4 with no permanent deformation over the vehicle's life.

The floor is provided with floor traps, in correspondence with the Motor trucks, to allow truck maintenance operations (refer to Figure 02-I-02.34).

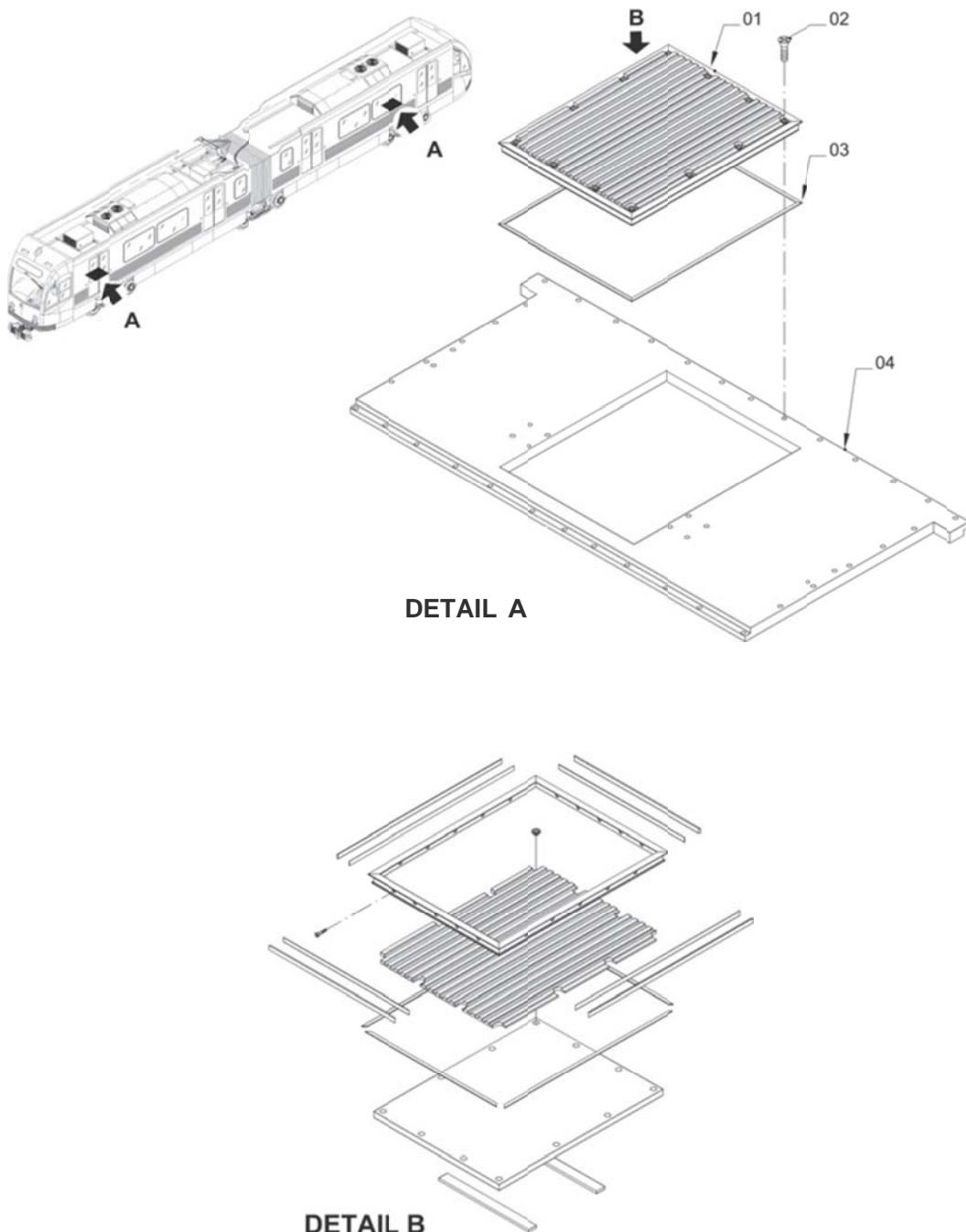


01. SIDE WALL
04. PLY-METAL PANEL
07. UNDERFRAME

02. COVE MOLDING
05. INSULATING SHEET (XJ458)
08. SEALING (FIRE DAM 350-3M)

03. RUBBER SHEET
06. INSULATING SHEET (XJ456I)
09. TAPPING PLATE

Figure 02-I-02.33 Typical Floor – Sidewall Junction



01. FLOOR TRAP PANEL
04. VEHICLE FLOOR

02. SCREW

03. GASKET

Figure 02-1-02.34 Floor Trap

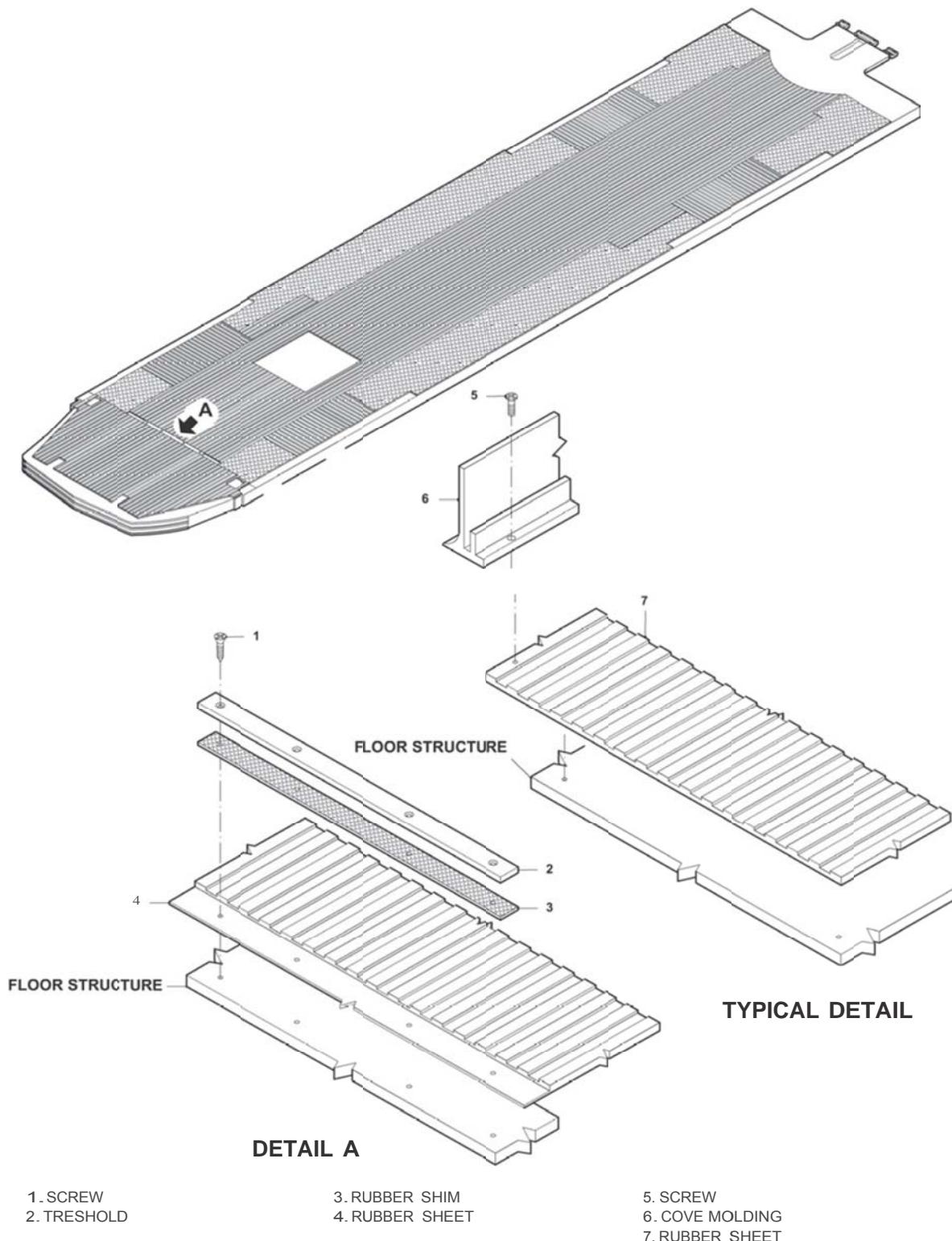


Figure 02-1-02.35 Rubber Sheet

02-I-02.03.02 Liners and Ceiling Panels

The vehicle is equipped with Side Liners, Ceiling Panels and Window masks to hide the structure insulating panels and to provide comfort to the passengers (refer to Figure 02-I-02.36).

An acoustical and thermal insulation is provided between the side liners/ceiling panels and the Car Body structure in order to limit heat and noise transmission.

The acoustical insulation is realized with sound deadener (0.04 in. thick SIR A 198) sprayed directly onto the structure.

The thermal insulation consists of a compound of overlapped fiberglass and light sheets of aluminum (type SIX TH 2460) and fitted inside the hollow spaces of the Car Body structure.

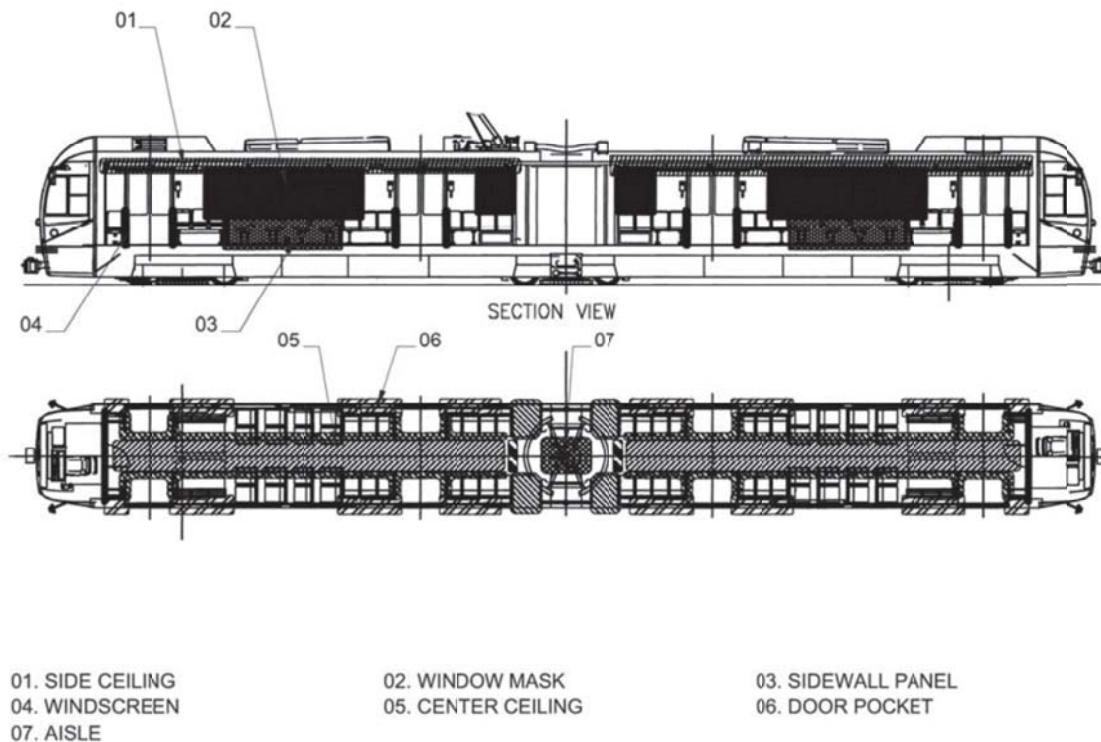


Figure 02-I-02.36 Liners and Ceiling Panels

The characteristics of the Side Liners (Refer to Figure 02-I-02.37) are:

Side-wall Panels made of Melamine HPL (4 per vehicle)

Window Mask made of FRP (12 per vehicle).

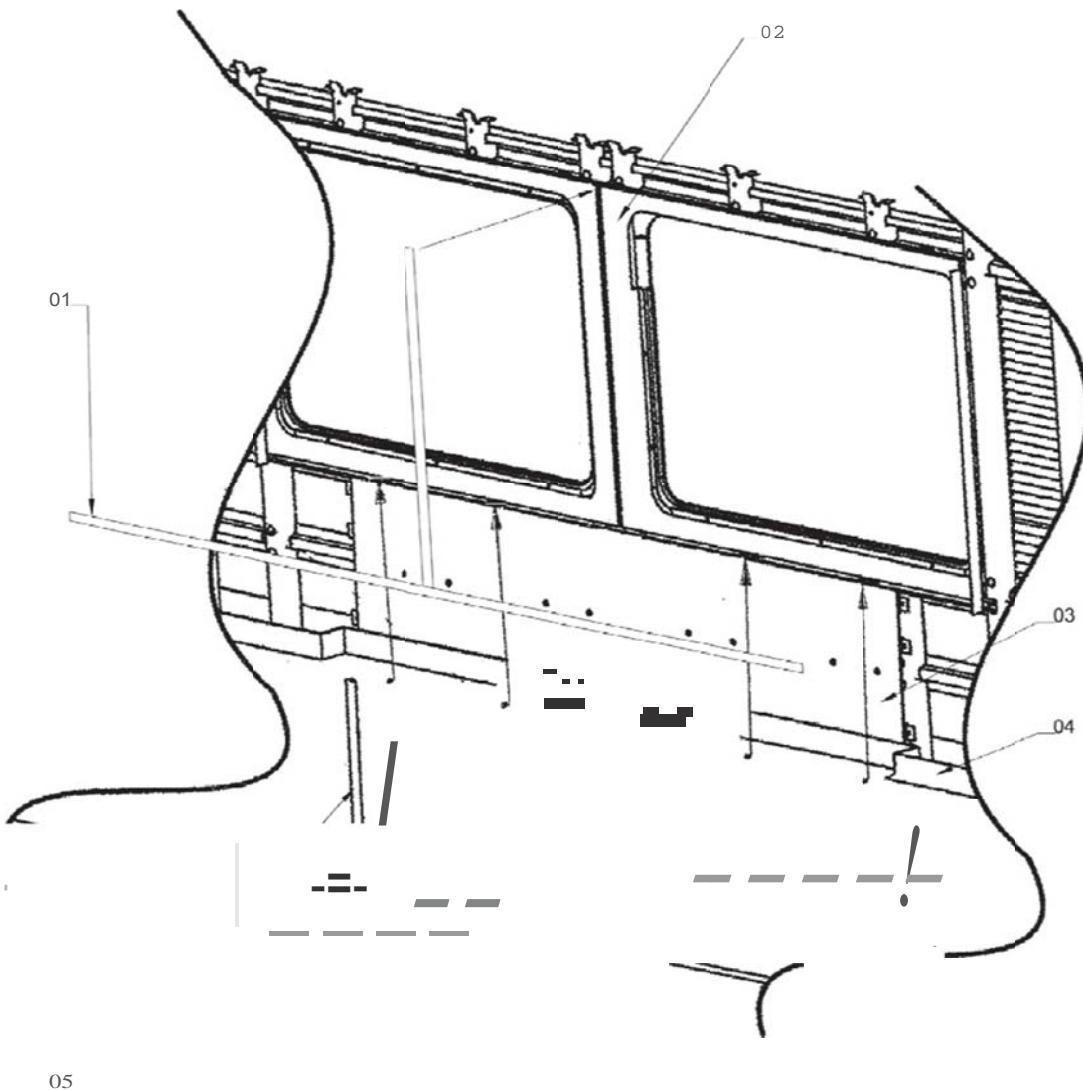
Door Pockets (16 per vehicle) made of Melamine.

The characteristics of the Ceiling Panels (Refer to Figure 02-I-02.39) are:

Center Ceiling, sandwich type (3/8" thick), made of Aluminum H/C, Melamine faced Aluminum and aluminum back face (22 per vehicle).

Side Ceiling, Gelcoated, made of FRP (Fiber Reinforced Polymer) (36 per vehicle).

Cabinets, provided with movable cover panels (with square key latches) and designed to contain electrical/electronic equipment, are installed near the Articulation Section.

02-1-02.03.02.01 *Side-wall Panel*

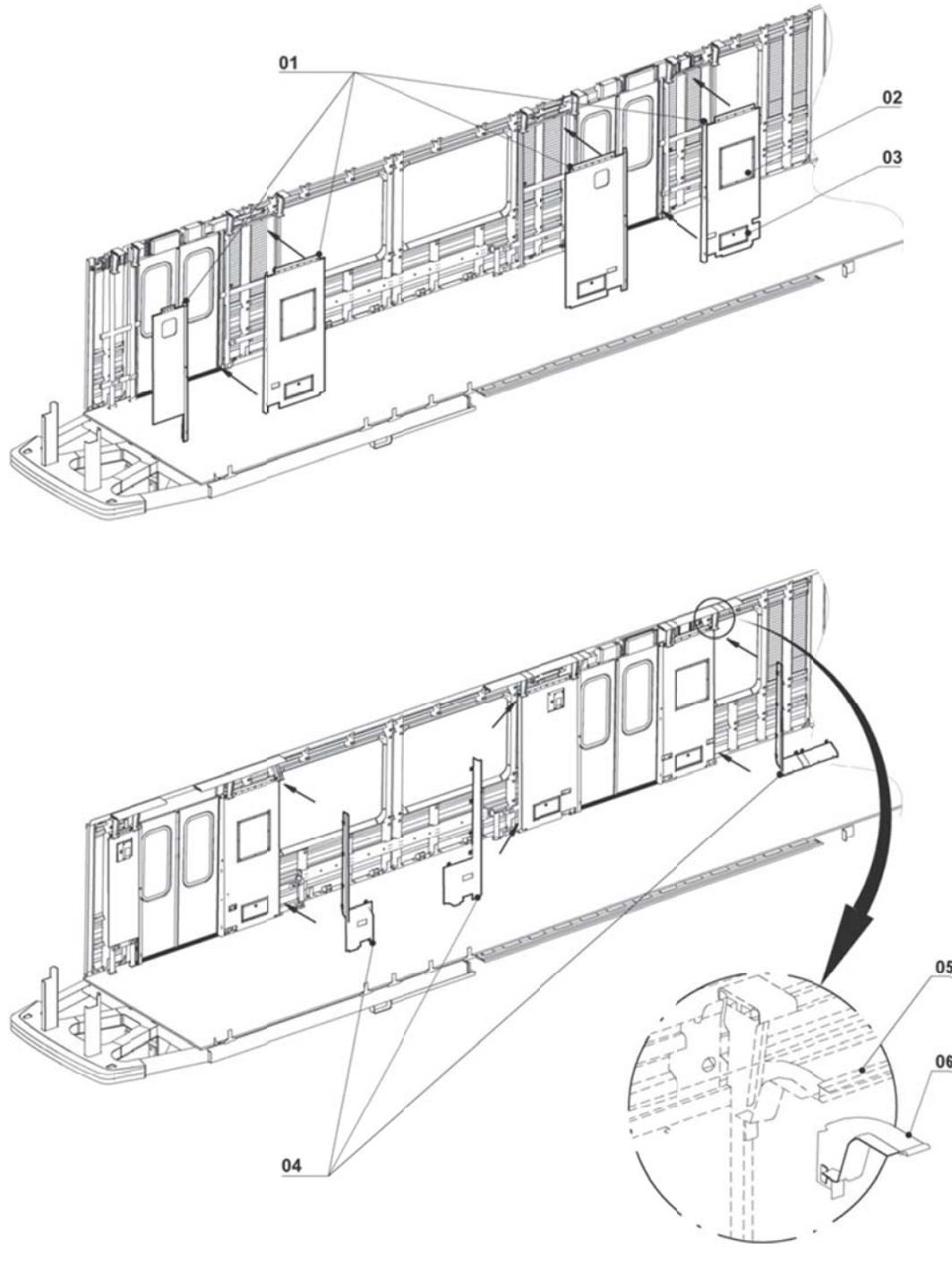
01. WINDOW TRIM
04. COVE MOLDING

02. WINDOW MASK
05. TRIMS

03. SIDEWALL PANEL

Figure 02-1-02.37 Side-Wall Panel

02-I-02.03.02.02 *Door Pocket*



01. DOOR POCKETS
 04. DOG BOX PANELS

02. UPPER ACCESS DOOR
 05. LIGHT RAIL

03. LOWER ACCESS DOOR
 06. DUAL LOCK

Figure 02-I-02.38 Door Pockets

02-1-02.03.02.03

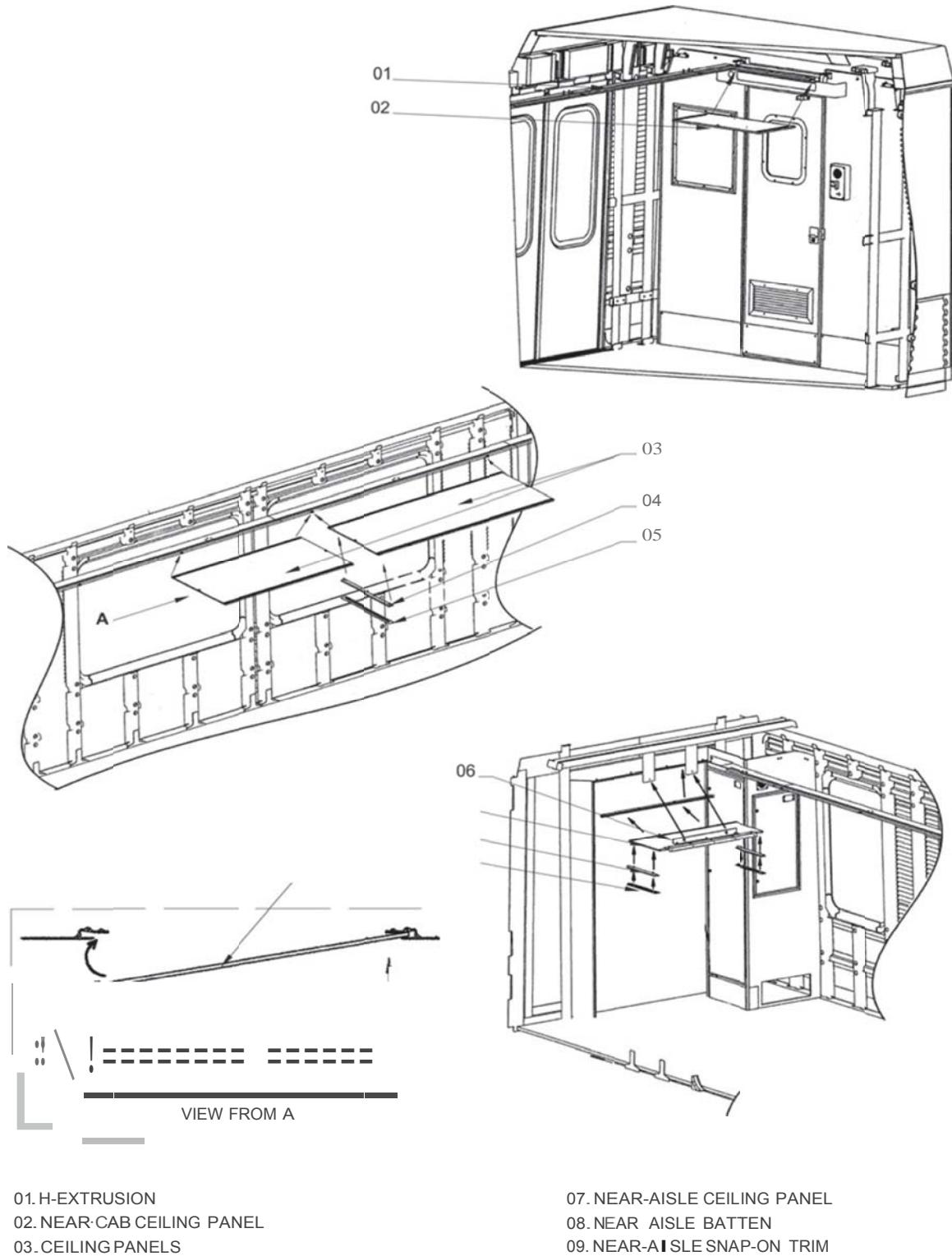
Central Ceiling Panels

Figure 02-1-02.39 Central Ceiling

02-I-02.03.03 Passenger Seats

The vehicle is provided with seven different types of passenger seat assemblies, for a total amount of 76 seats (38 per car section).

The vehicle's seats layout is shown in Figure 02-I-02.40.

The passenger seat assemblies are cantilevered from sidewall in order to facilitate cleaning operations. The transversal seats are provided with handrails/grab rails for passenger safety.

To easily accommodate wheel chairs, each car-body section is provided with two (four per vehicle) longitudinal 3-seaters liftable assemblies installed near doors A1-A2, A5-A6, B5-B6 and B1-B2 (03).

The seat (06) near the cab partition can be lifted by pulling the hook underneath to ease the access to the sand box.

Each seat assembly consists of a metallic frame bolted to the sidewall and pre-formed, fiberglass-reinforced, plastic shells (fitted in the seat frame by means of tamperproof fasteners).

Table 02-I-02.4 Passenger Seat Assemblies

Type	Seats per Assy	Assemblies per vehicle	Total no. of seats	Ref. to Figure 02-I-02.40	Orientation
2-seaters Assembly (on top of equipment boxes)	2	4	8	01	Longitudinal
2-seaters Assembly	2	4	8	02	Longitudinal
3-seaters liftable Assembly	3	4	12	03	Longitudinal
2-seaters Assembly	2	8	16	04	Transversal - LH
3-seaters Assembly	3	4	12	05	Longitudinal
1-seater liftable Assembly	1	4	4	06	Longitudinal
2-seaters Assembly	2	8	16	07	Transversal - RH
Total number of seats on vehicle			76		

NOTE: PASSENGER'S SEATS ARE
SIMMETRICALLY INSTALLED
IN THE "A" AND "B" BODY CARS

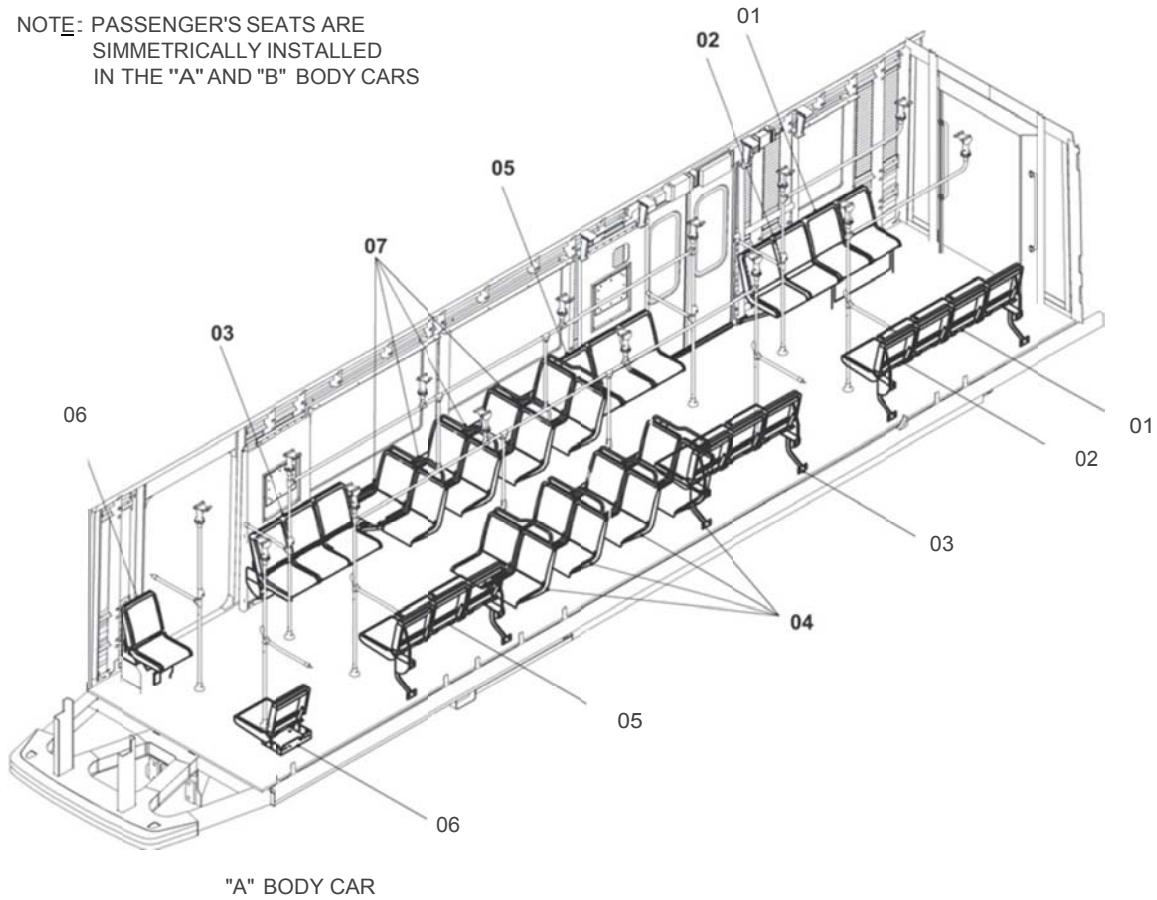
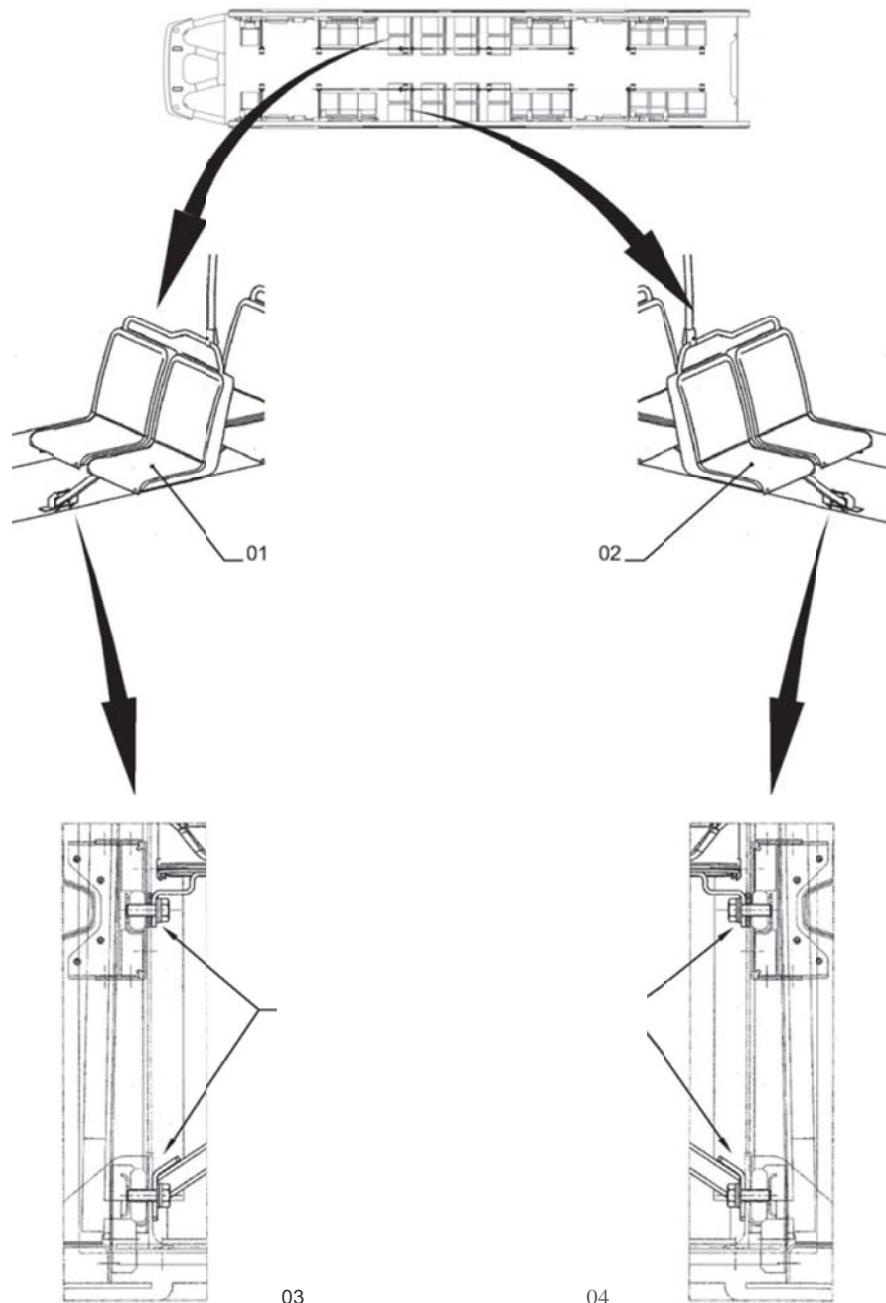


Figure 02-1-02.40 Passenger Seats- Location

02-1-02.03.03.01 2-Seaters Transversal Assembly

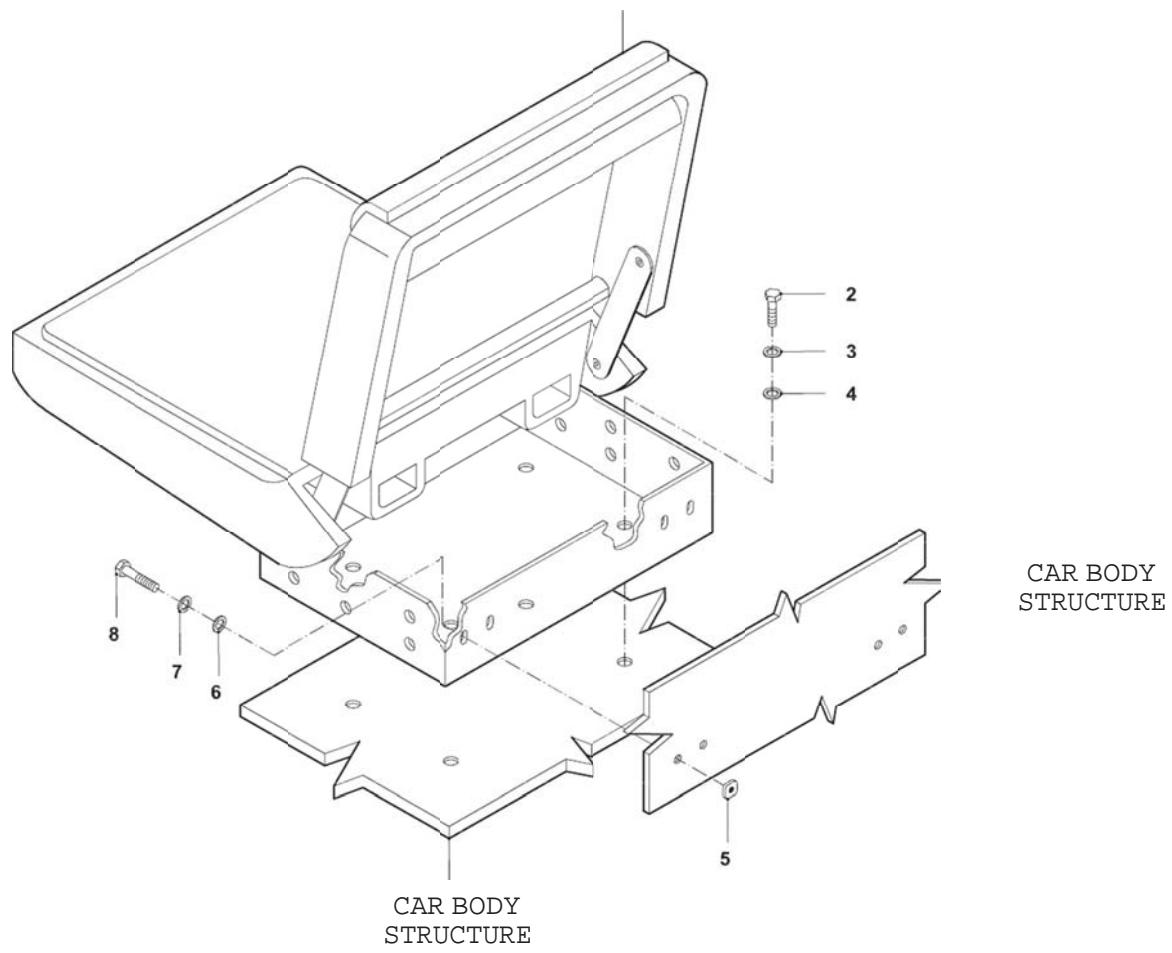

 01.2-SEATERS RH TRANSV.ASSY
 04.LH CONNECTION BOLTS

02.2-SEATERS LH TRANSV.ASSY

03.RH CONNECTION BOLTS

Figure 02-1-02.41 2-Seaters Transversal Assembly

02-I-02.03.03.02

1-Seater Flip-up Longitudinal Assembly

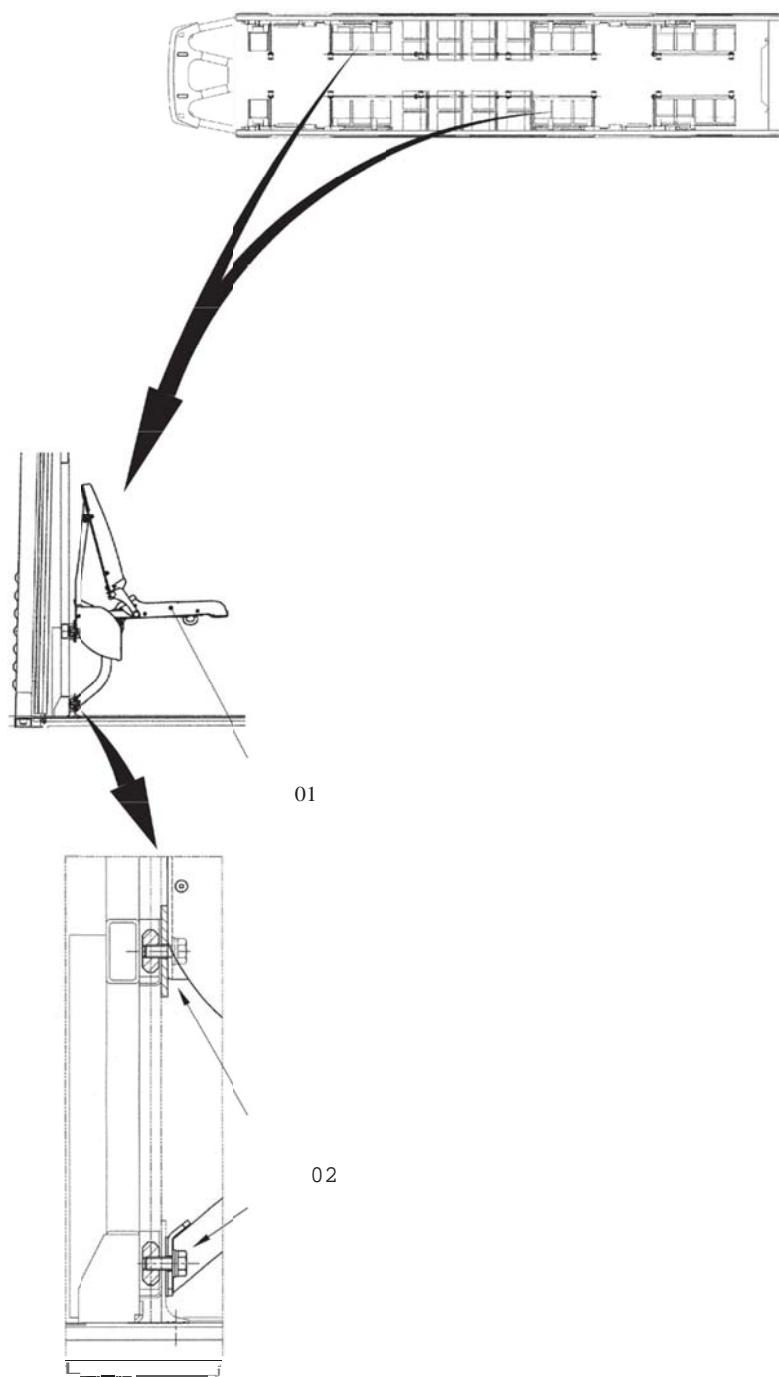
01. 1-SEATER LIFTABLE ASSEMBLY
 04. PLAIN WASHER
 07. SPRING WASHER

02. BOLT
 05. THREADED PLATE
 08. BOLT

03. SPRING WASHER
 06. PLAIN WASHER

Figure 02-1-02.42 1-Seater Liftable Longitudinal Assembly

3-Seaters Liftable Longitudinal Assembly

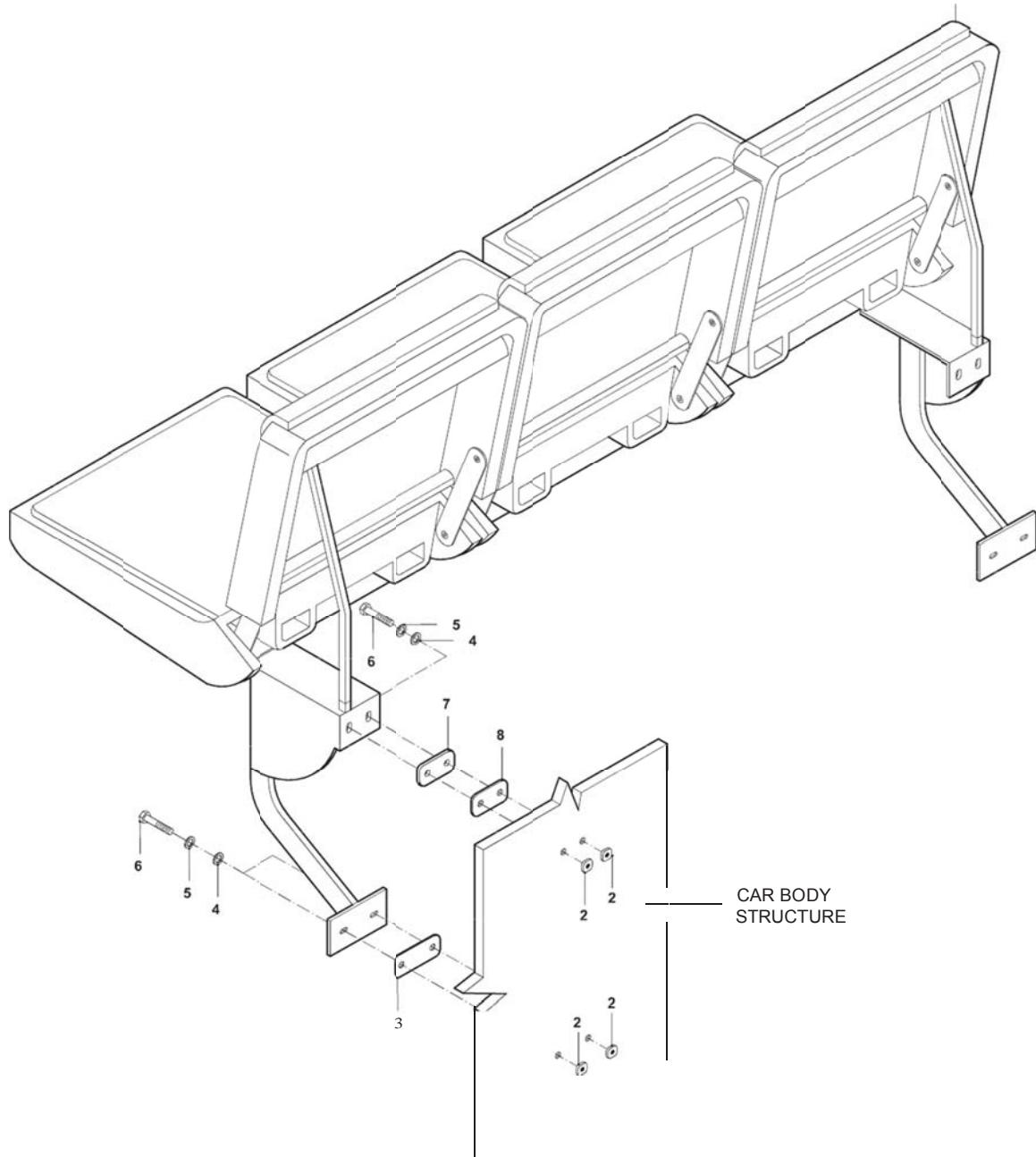


01. 3-SEATERS LIFTABLE ASSEMBLY

02. CONNECTION BOLTS

Figure 02-1-02.43 3-Seatersr Liftable Longitudinal Assembly

02-1-02.03.03.04 3-Seaters Longitudinal Assembly



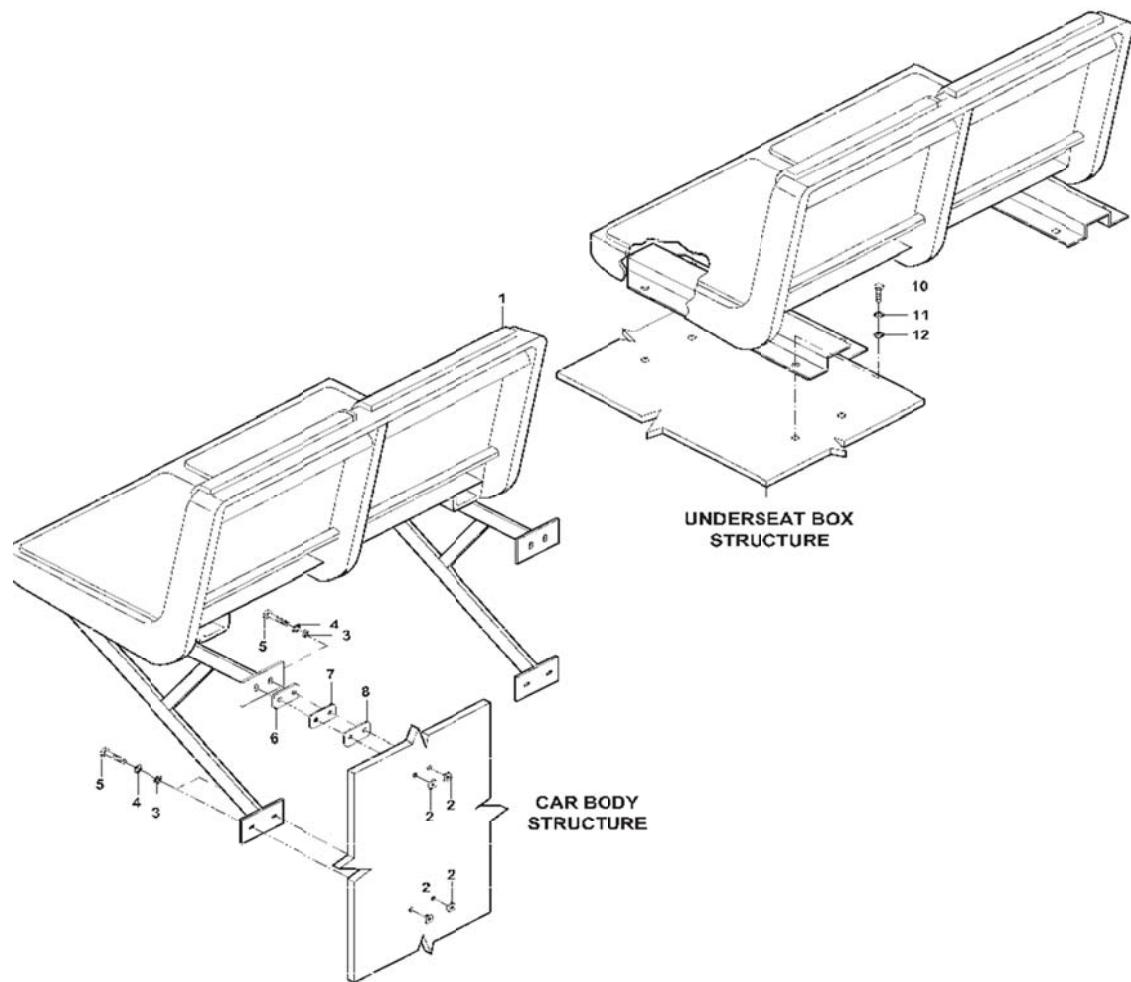
01. 3-SEATERS LONG. ASSEMBLY
 04. PLAIN WASHER
 07. SHIM

02. THREADED PLATES
 05. SPRING WASHER
 08. SHIM

03. SHIM
 06. BOLT

Figure 02-1-02.44 3-Seaters Longitudinal Assembly

02-1-02.03.03.05 2-seaters Longitudinal Assembly



01.2-SEATERS LONG ASSEMBLY
 04.SPRING WASHER
 07. SHIM
 10.BOLT

02.THREADED PLATES
 05.BOLT
 08.SHIM
 11. SPRING WASHER

03. PLAIN WASHER
 06. SHIM
 09.2-SEATERS LONG ASSEMBLY
 12. PLAIN WASHER

Figure 02-1-02.45 2-Seaters Longitudinal Assembly

02-I-02.03.04 Underseat and Equipment Boxes

The vehicle is equipped with four Underseat Boxes (1) made of Aluminum alloy (EN AW-5754) (refer to Figure 02-I-02.46), two per Body Section, mounted under the seats close to the articulation section.

The two boxes on the left side of the vehicle near the articulation section (looking towards the "A" cab) contain, respectively:

- The DC/DC converter for the supply of the Emergency Brake Loop;
- The Headlights power supply.

The Boxes under the seats give access to the High Voltage Line and Train Line connecting the two Car Body Sections.

Covers equipped with four Captive Screws, are installed on the aisle side of each box.

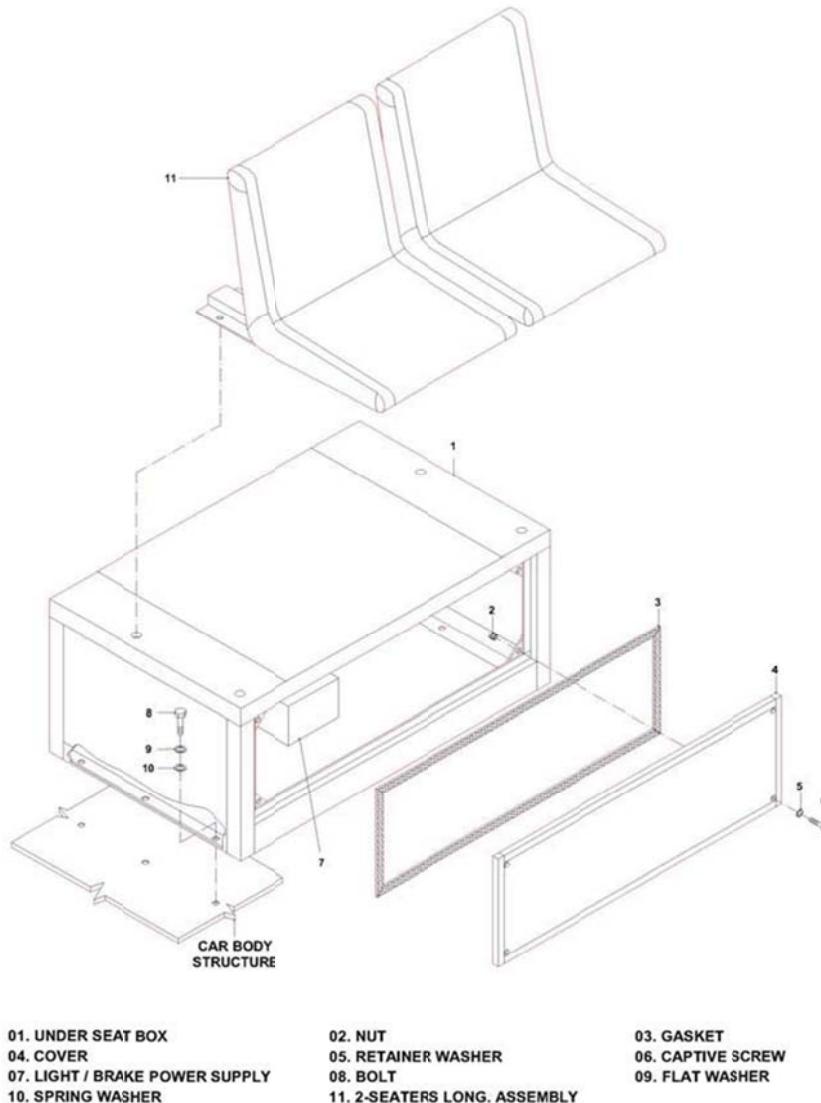


Figure 02-I-02.46 Under Seat Box

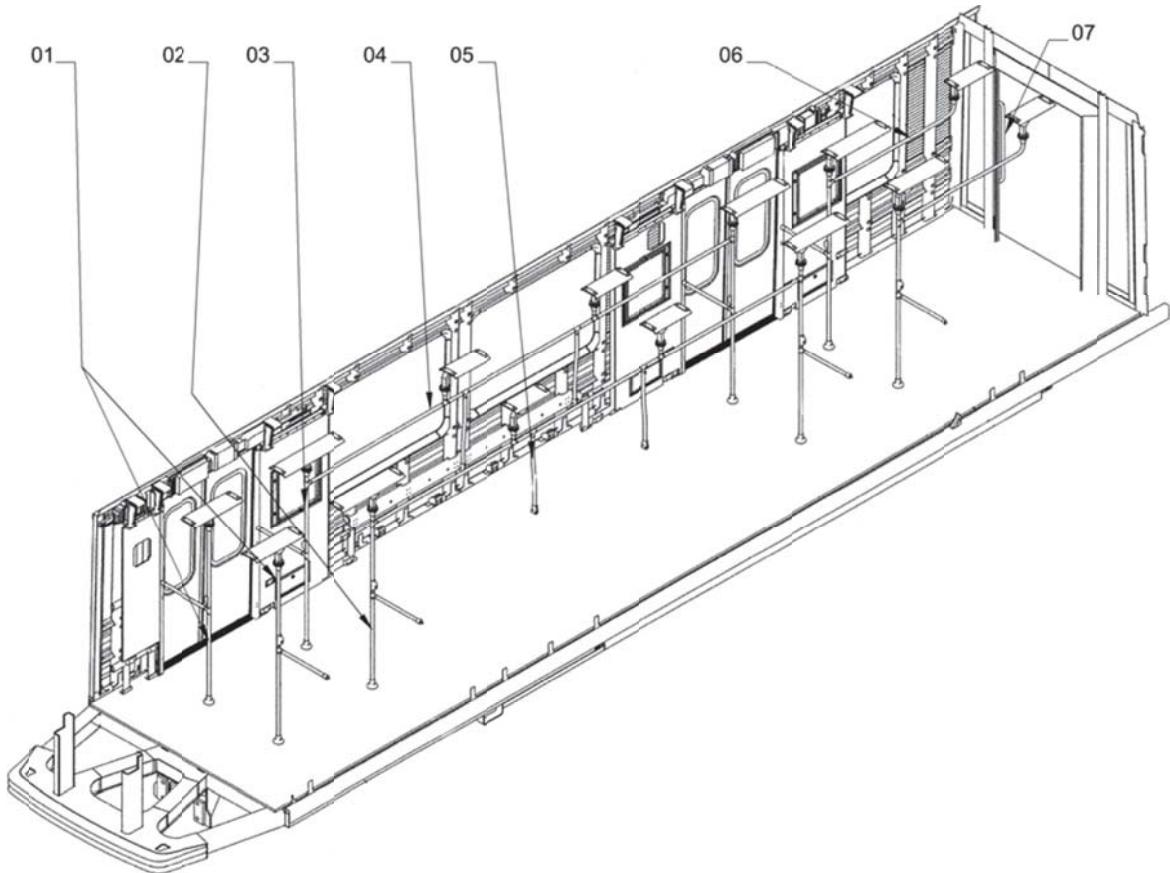
02-1-02.03.05 Stanchions and Handrails

The vehicle is equipped with Handrails and Stanchions (refer to Figure 02-1-02.47) for the safety of standing passengers while the vehicle is moving. Stanchions are connected to each transversal seat and to both sides of each door.

The handrails are connected to the stanchions and are installed on the LH and RH side of the passenger compartment aisle and to each side of the Articulation Section aisle.

Stanchions are bolted to the roof structure with a special rail that allows adjustments during installation, refer to Figure 02-1-02.50.

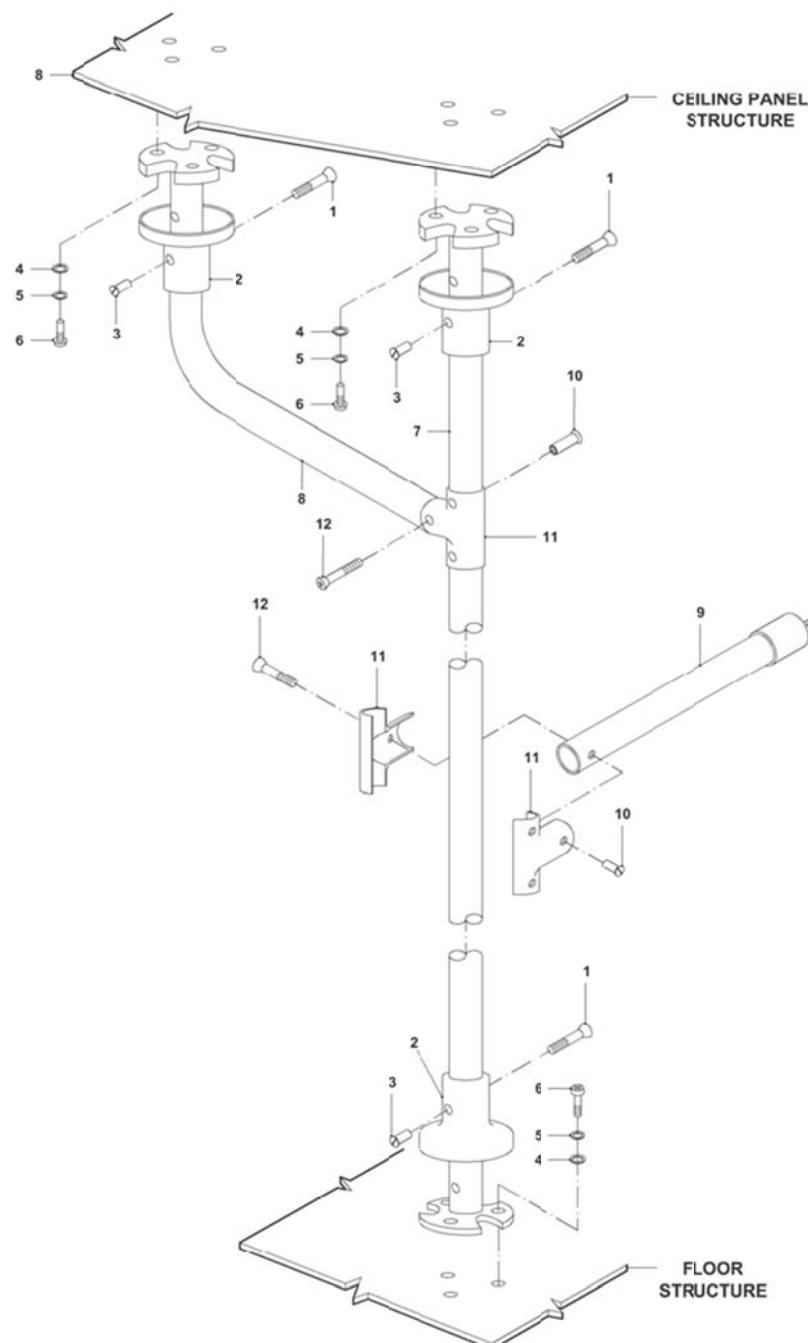
Stanchions and handrails are made of stainless steel.



01. FIRST DOOR STANCHIONS 04. HAND RAIL
 02. STANCHION & HANDRAIL SUPP. 05. SHORT STANCHION
 03. STANCHION & HANDRAIL SUPP.

06. TERMINAL HAND RAIL
 07. AISLE HANDRAIL

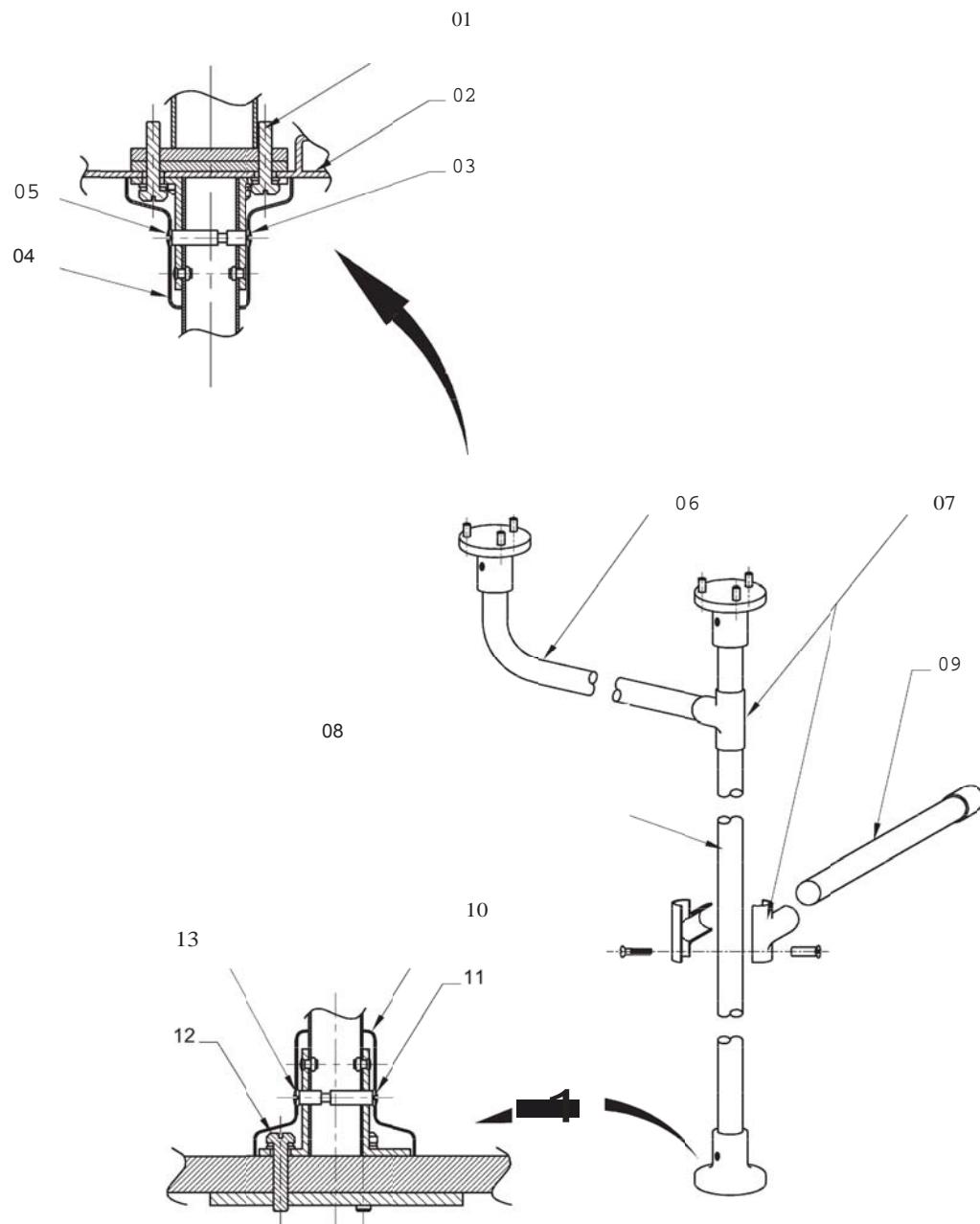
Figure 02-1-02.47 Stanchions & Handrails – Layout



RMISM-02-03-09-01

- | | | |
|----------------------|-------------------|-------------------------|
| 01. SCREW | 05. SPRING WASHER | 09. TRANSVERSE HANDRAIL |
| 02. PROTECTIVE COVER | 06. SCREW | 10. BUSH NUT |
| 03. BUSH NUT | 07. STANCHION | 11. RAIL CLAMP |
| 04. FLAT WASHER | 08. HANDRAIL | 12. SCREW |

Figure 02-1-02.48 Stanchions and Handrails- Detail1



01. SCREW
 04. PROTECTIVE COVER
 07. RAIL CLAMP
 10. PROTECTIVE COVER
 13. BUSH NUT

02. CEILING PANEL
 05. SCREW
 08. STANCHION
 11. SCREW

03. BUSH NUT
 06. HAND RAIL
 09. TRANSVERSE HAND RAIL
 12. SCREW

Figure 02-1-02.49 Stanchions and Handrails – Detail 2



Figure 02-I-02.50 Stanchion Adjusting Connection

02-I-02.03.06 Articulation Section Inner Components

The two car-body sections of the vehicle are connected together by means of the Articulation Section (refer to paragraph 02-I-02.02.06) which provides passengers with a safe passageway from one body section to the other.

The Articulation Section Components are described in the following and in Figure 02-I-02.51:

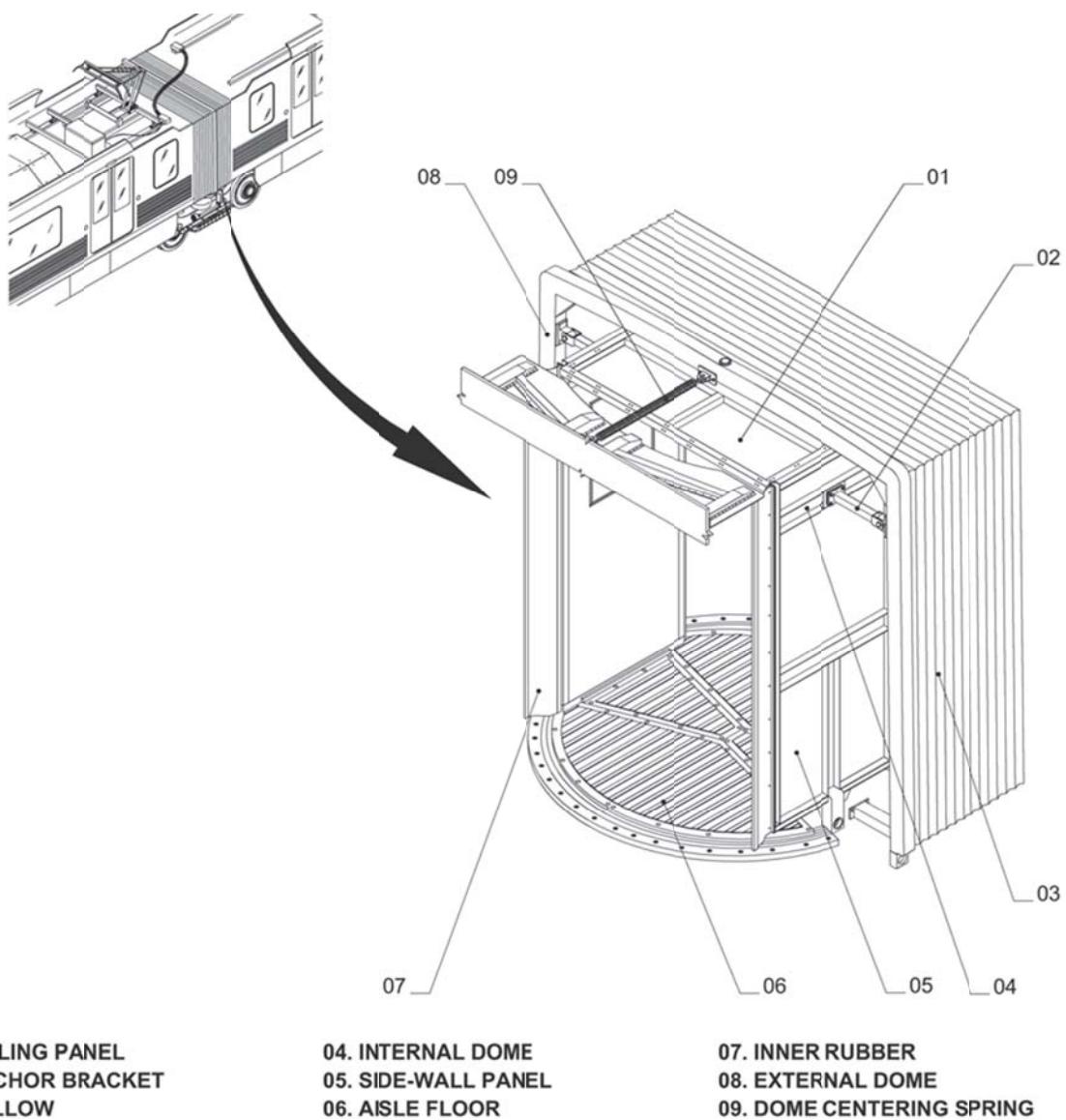


Figure 02-I-02.51 Articulation Section Component Location

02-I-02.03.06.01 Articulation Section Side-wall and Ceiling Panels

Articulation Ceiling panel – 1 per vehicle, sandwich type (3/8" thick - 36.19lbs) made of H/C Aluminum.

Articulation Sidewall panels – 2 per vehicle, one per each side of the aisle; made up of ply-metal (3/8" thick - 14.39lbs).

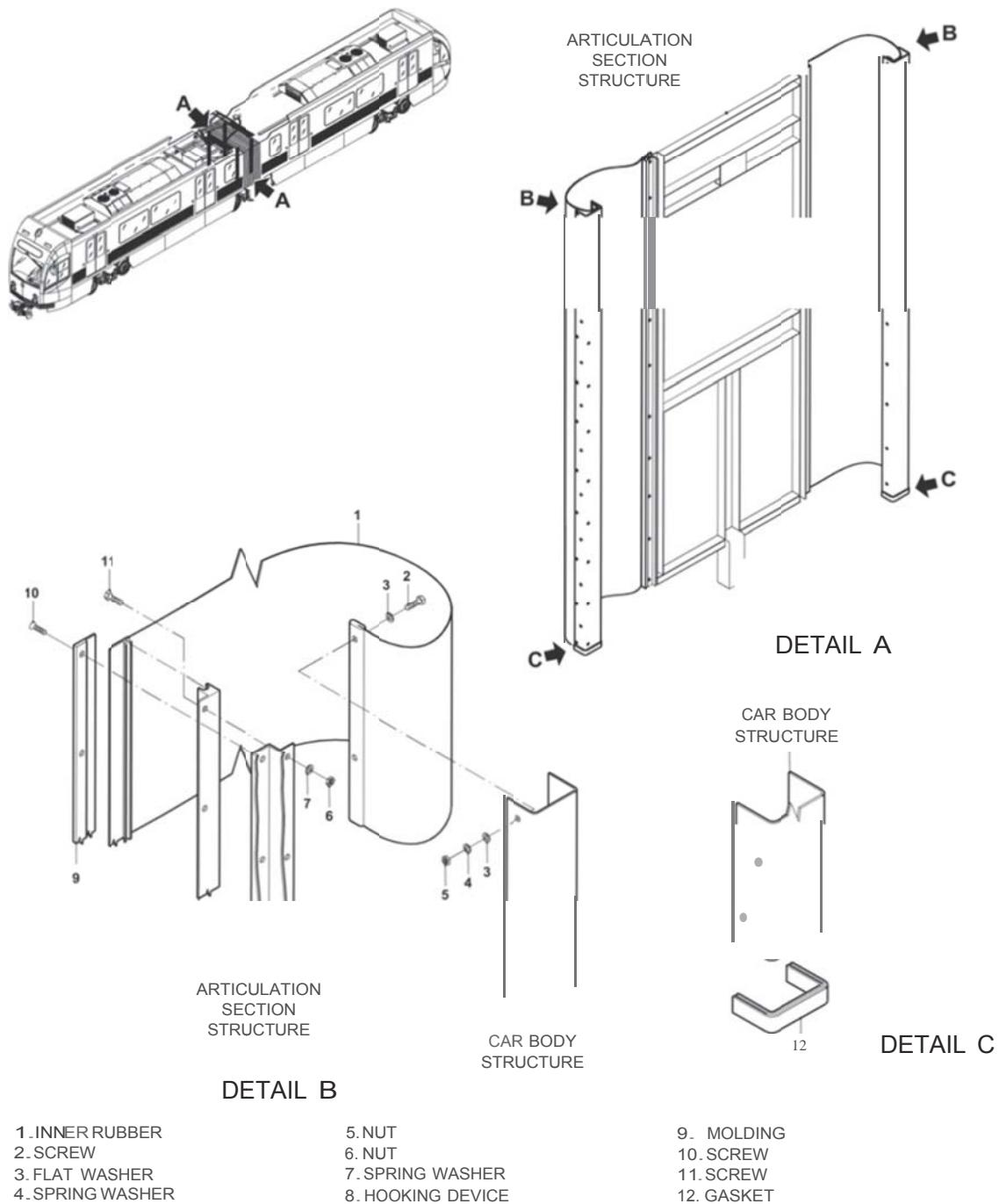


Figure 02-1-02.52 Articulation-Side Panel and Inner Rubber

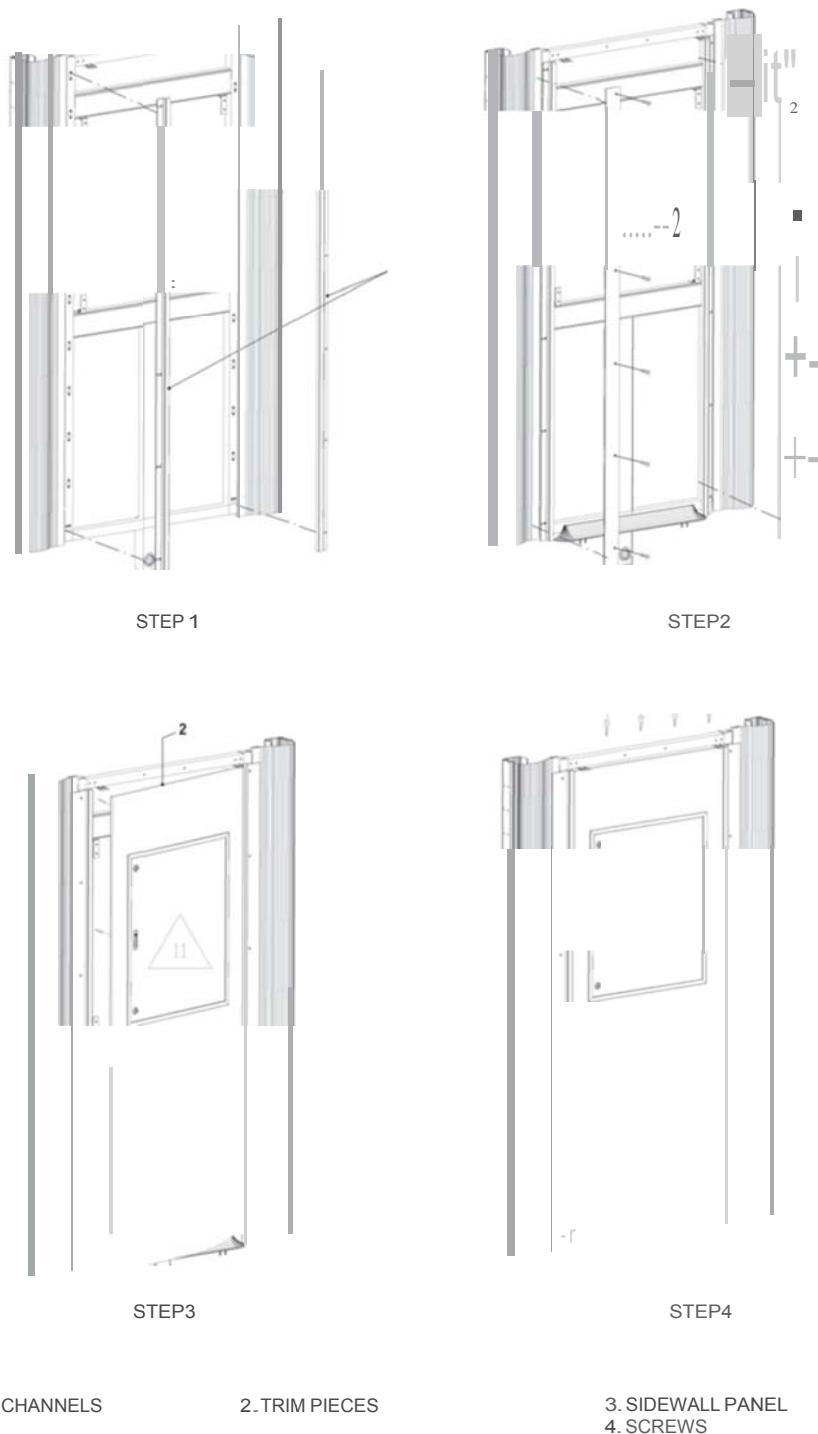
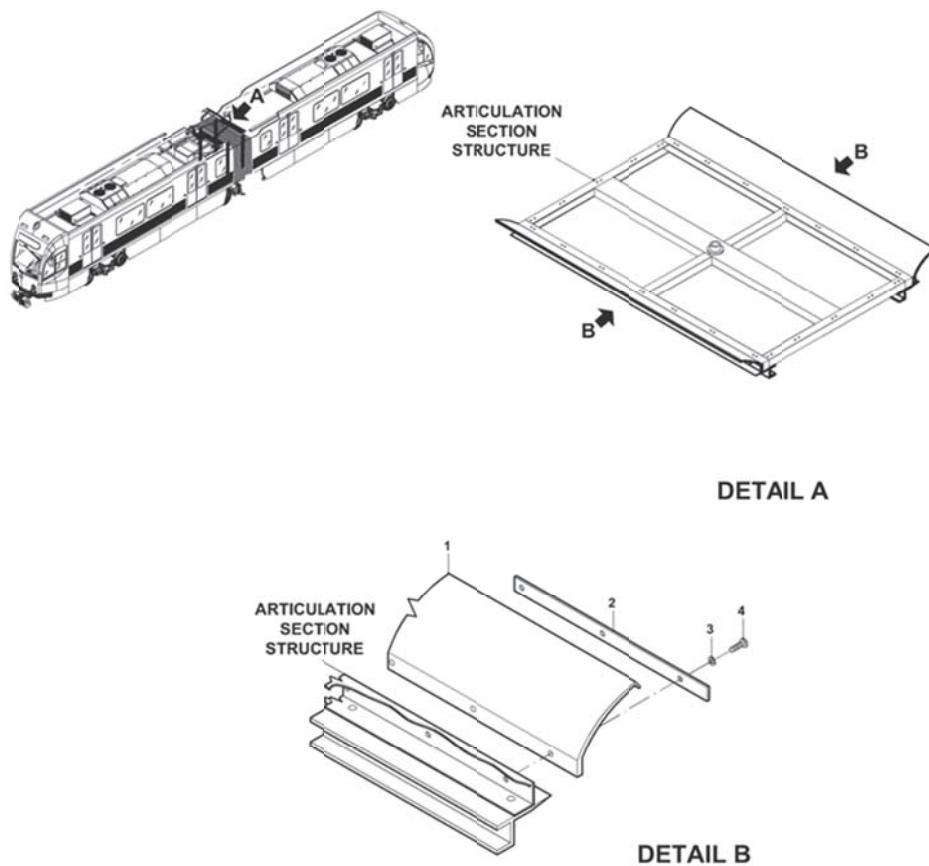


Figure 02-1-02.53 Articulation- Side-Wall Panels -Installation Sequence



RMSAM-02-03-06-01

01. LOCK STRIP GASKET
04. SCREW
07. GASKET

02. PLATE
05. SCREW

03. WASHER
06. WASHER

Figure 02-I-02.54 Articulation - Ceiling Panels

02-I-02.03.06.02 Articulation Section Floor

The Articulation Section Floor (refer to Figure 02-I-02.55) consists of the Floor Lateral parts (5) and the Floor Central parts (6), each one of them provided with slip-resistant rubber sheets glued to ply-metal panels by means of Scotch-grip 743M type glue.

Both the Floor Lateral Parts and the Floor Central Parts consist of two subassemblies connected to the relevant underlying frame subassembly.

A round shaped “C” shoe section (8), made of Teflon, is screwed down to the bottom side of each Floor Lateral Part and slides on Flat Shoes (9) to allow the Articulation Section floor movement. Stainless steel insulation sheets (4) and insulating panels (13) are placed between the ply-metal panels and the lower frame.

The rubber sheets are ribbed type, 0.2" thick.

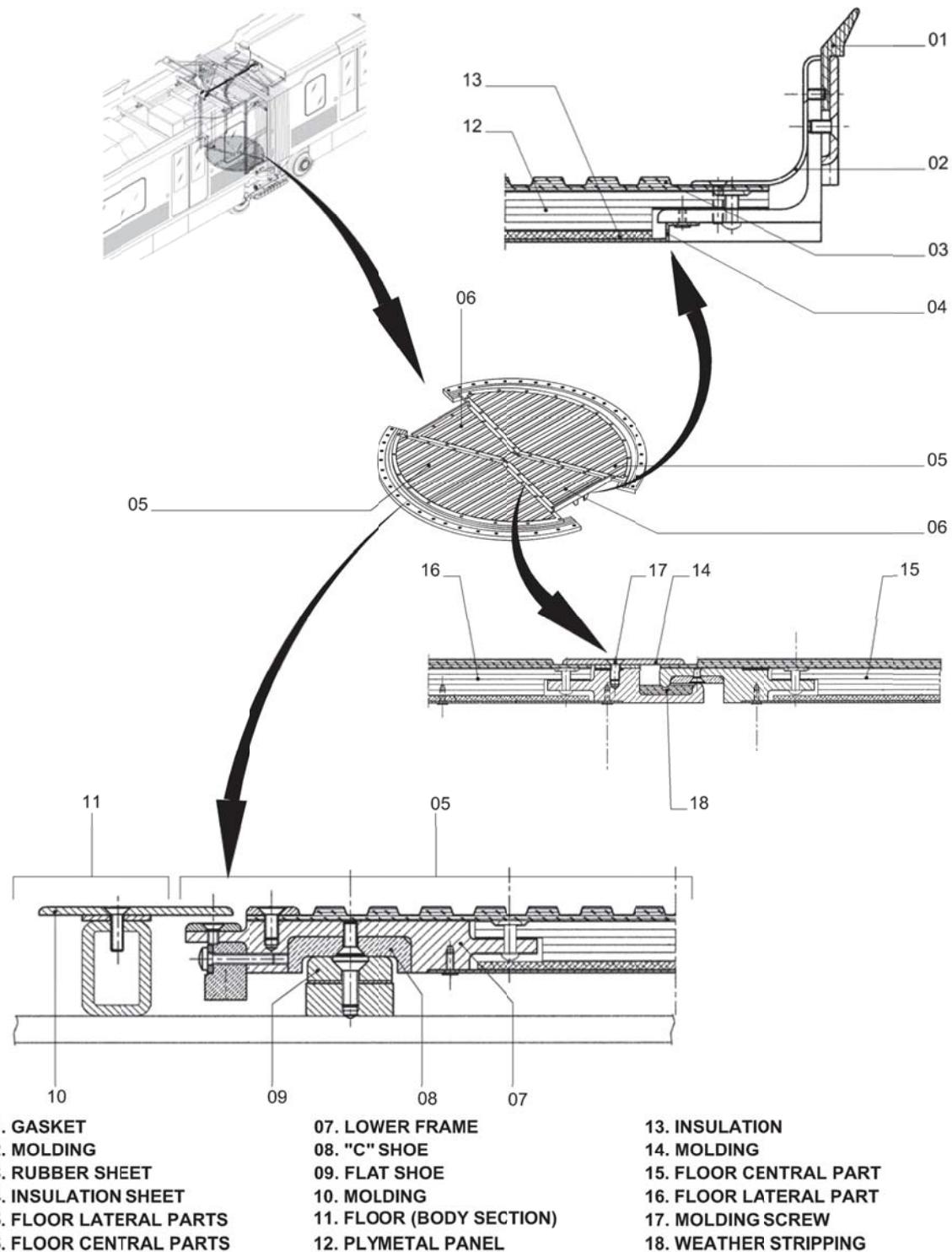
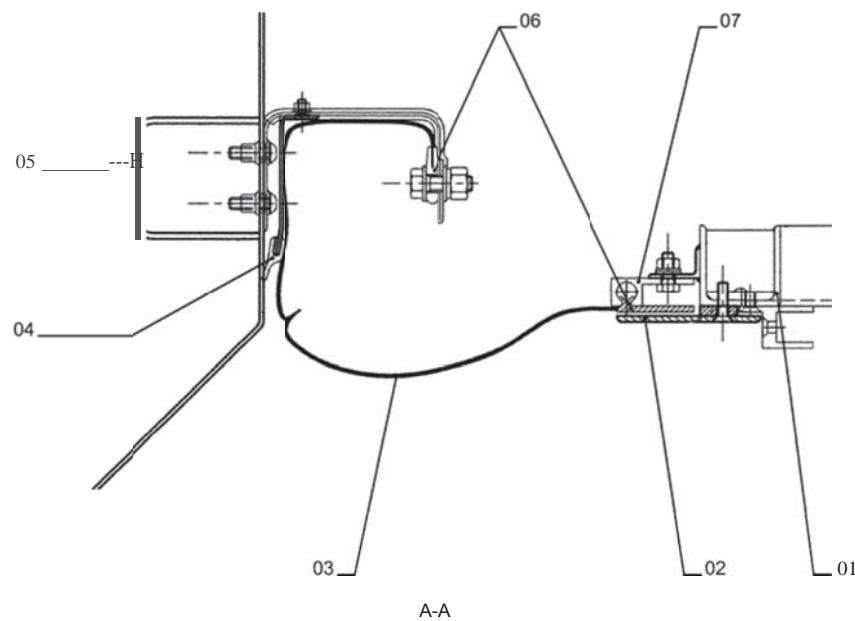
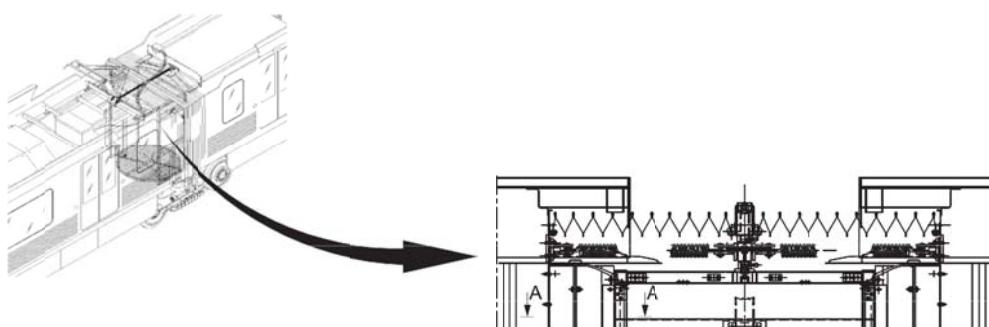


Figure 02-1-02.55 Articulation - Floor Structure

02-1-02.03.06.03 *Inner Rubber*

Four Inner Rubbers (refer to Figure 02-1-02.56 and Figure 02-1-02.57) make up a flexible connection between the aisle lining panels and the car-body structure, thus protecting passengers from getting inside the space between the bellow and the aisle.

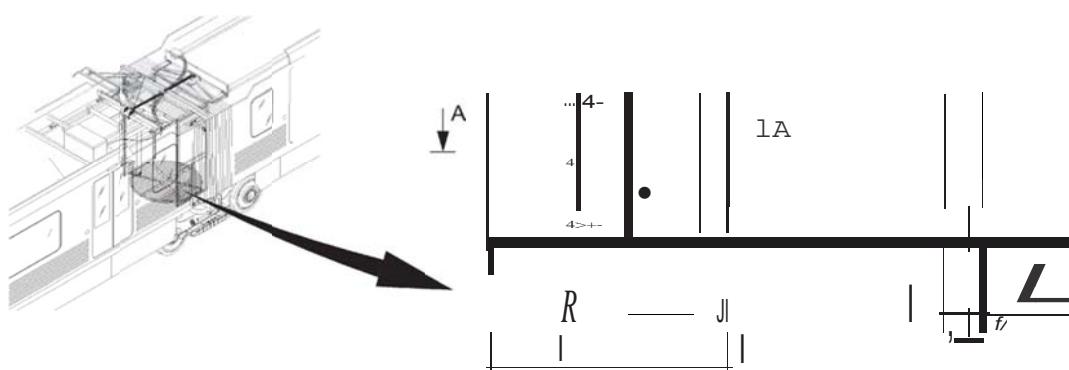


01. INTERNAL DOME
04. PROTECTION
07. HOOKING DEVICE

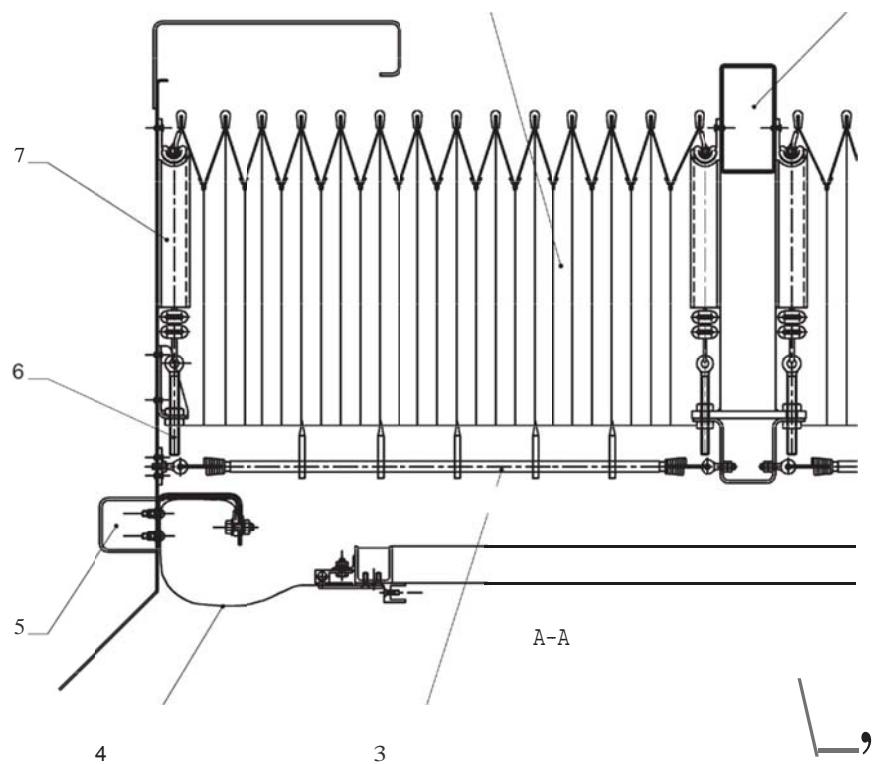
02. MOLDING
05. CAR BODY STRUCTURE

03. INNER RUBBER
06. CONNECTING RUBBER-HEAD

Figure 02-1-02.56 Articulation - Inner Rubber (1)



8



01. EXTERNAL DOME
02. INTERNAL DOME
03. BELLOW RUBBER HOLDER

04. INNER RUBBER
05. CAR BODY STRUCTURE
06. TIE ROD

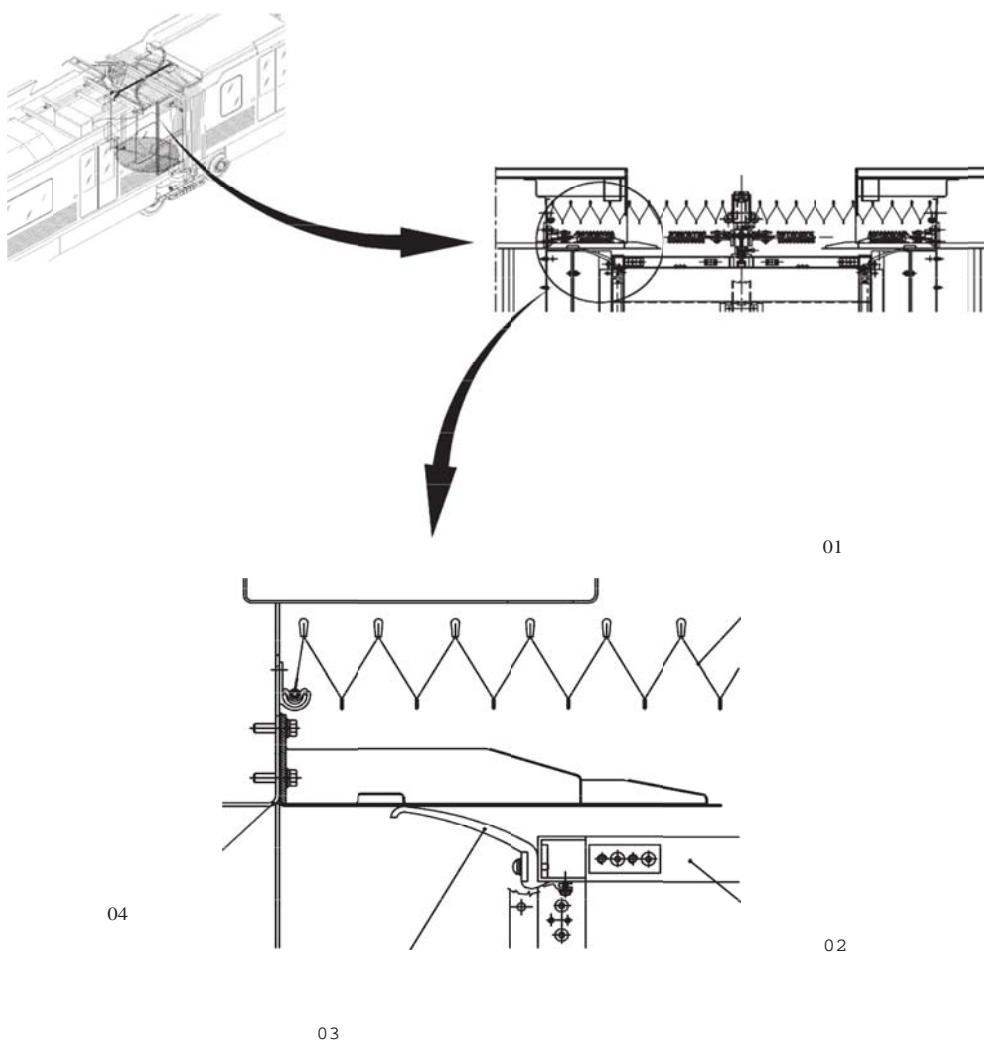
07. RUBBER PROFILE
08. BELLOW

Figure 02-1-02.57 Articulation - Inner Rubber (2)

02-1-02.03.06.04 *Lock-strip Gasket*

The Lock-strip Gasket (refer to Figure 02-1-02.54) is a preformed rubber gasket placed between the Internal dome and the Inner rubber to close the upper side gap.

The lock-strip Gasket is bolted to the dome.



01. BELLOW
04. CAR BODY STRUCTURE

02. INTERNAL DOME FRAME

03. LOCK-STRIP GASKET

Figure 02-1-02.58 Articulation - Lock-strip Gasket

02-I-02.04 Exterior Finishing and Accessories

The vehicle Exterior Finishing and Accessories are listed below:

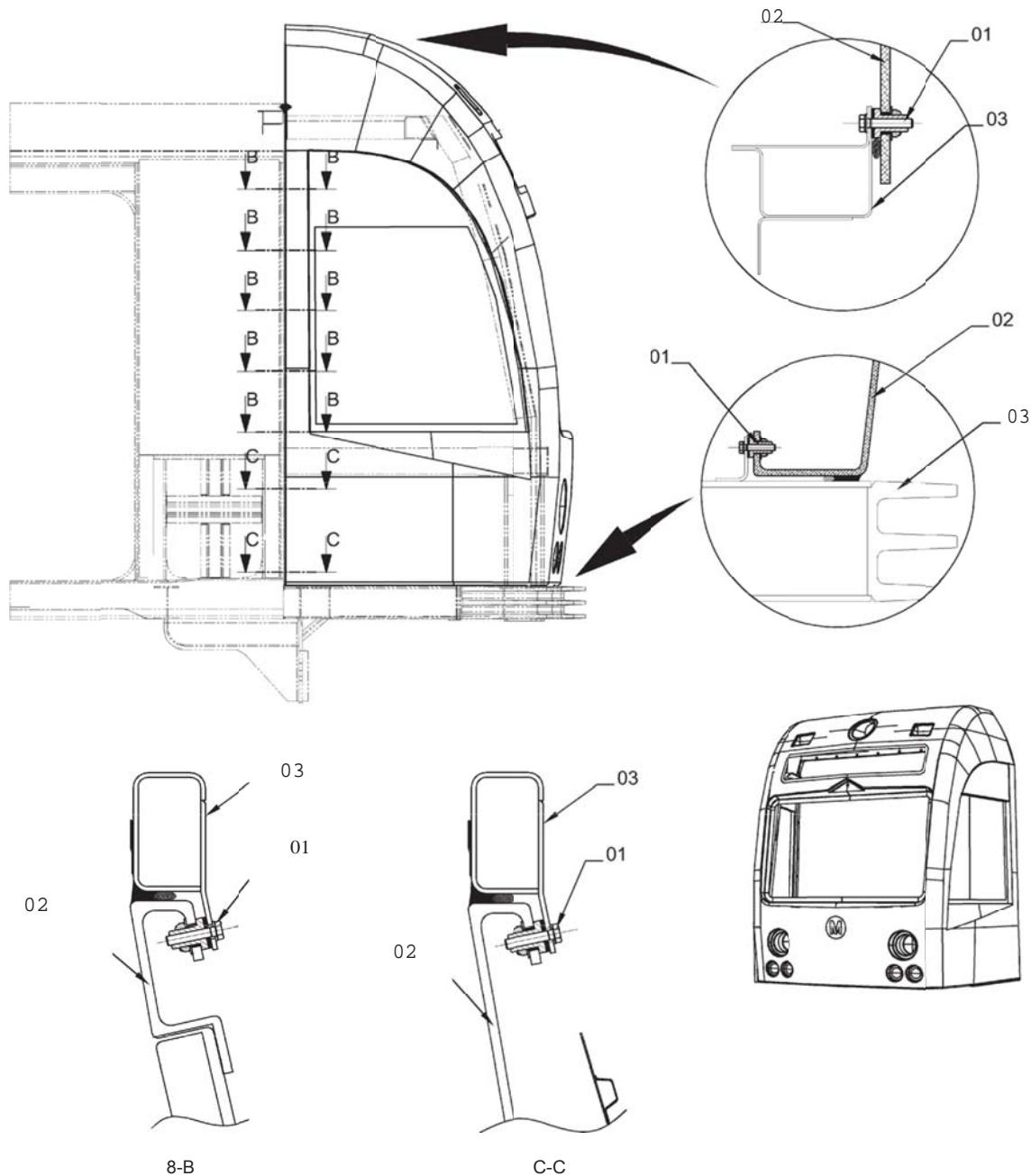
- Exterior Mirror (Refer to paragraph 02-I-02.04.05)
- Front Head Assembly (Refer to paragraph 02-I-02.04.01)
- Skirts and Fairings (Refer to paragraph 02-I-02.04.02)
- External Steps and Handhold (Refer to paragraph 02-I-02.04.03)
- Windows (Refer to paragraph 02-I-02.04.04)
- Outer Bellow (Refer to paragraph 02-I-02.04.06)
- Painting (Refer to paragraph 02-I-02.04.07)

02-I-02.04.01 Front Head Assembly

The Front Head Assembly is a one-piece fiberglass preformed component bolted to the car-body structure as shown in Figure 02-I-02.59.

The following components are fitted to the Front Head assembly by means of special brackets bolted to the fiberglass assembly:

- Roof head light (refer to Section 06)
- Destination sign (refer to Section 15)
- Windshield wiper (refer to Section 18)
- Low/High beam headlights (refer to Section 06)
- Turn lights, stop/tail lights, marker lights (refer to Section 06)

**Figure 02-1-02.59 Front Head Assembly**

02-I-02.04.02 Skirts and Fairings

The vehicle is provided with the following fixed and movable skirts and fairings (Refer to Figure 02-I-02.60):

- Roof Fairings
- Side Skirts
- Front Fixed Skirts

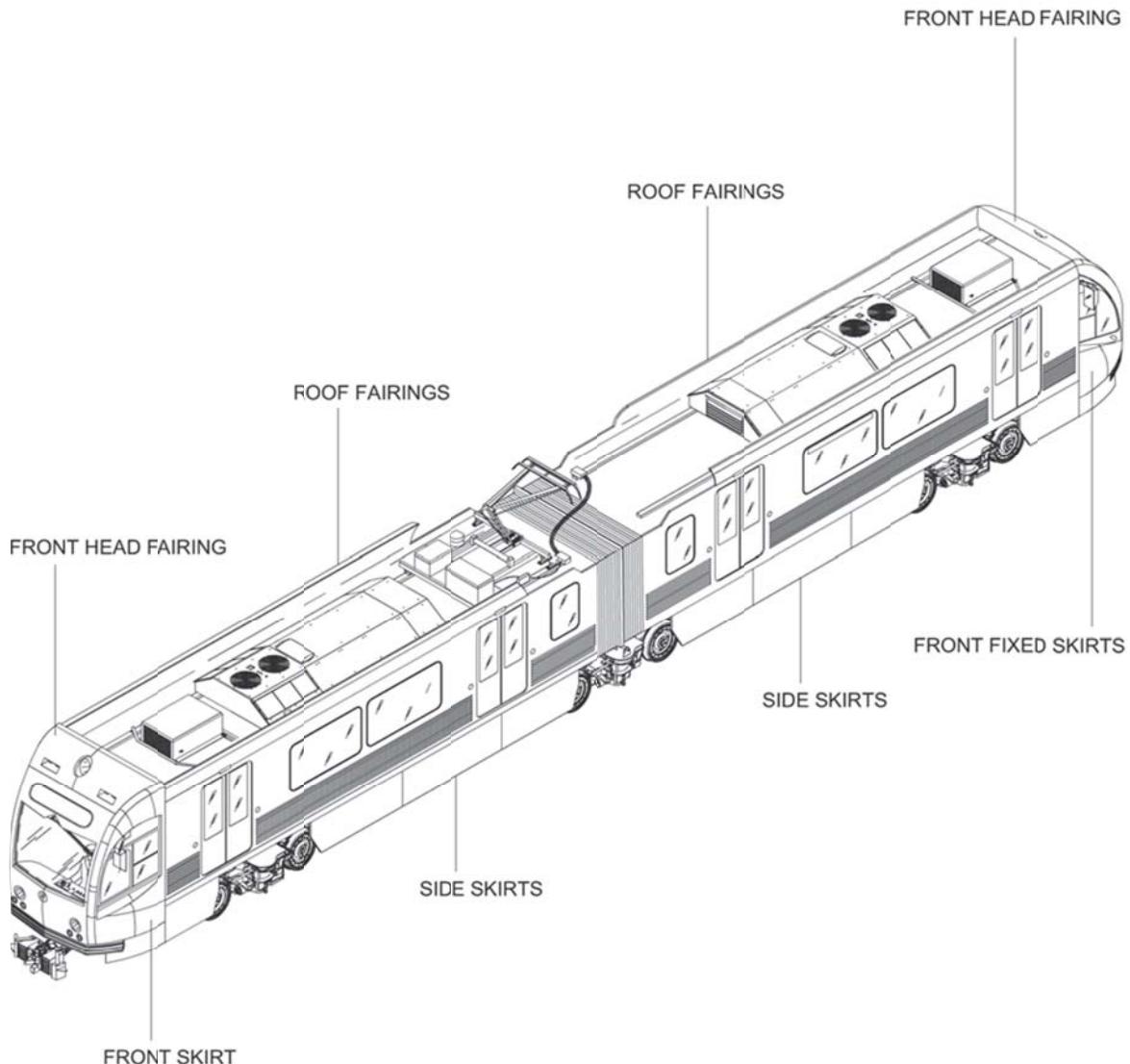


Figure 02-I-02.60 Skirts and Fairings

02-I-02.04.02.01 Roof Fairings

Roof Fairings (Refer to Figure 02-I-02.61) are made of composite material type, fiberglass stiffened isostamic polyester matrix, mounted on steel supports (2, 4).

Figure 02-I-02.61 shows a typical section of the fairings (1, 3) and of the steel supports (2, 4).

The only panel different from the standard roof fairing is the one near the articulation section (on each vehicle side) which is smaller and has smaller supports.

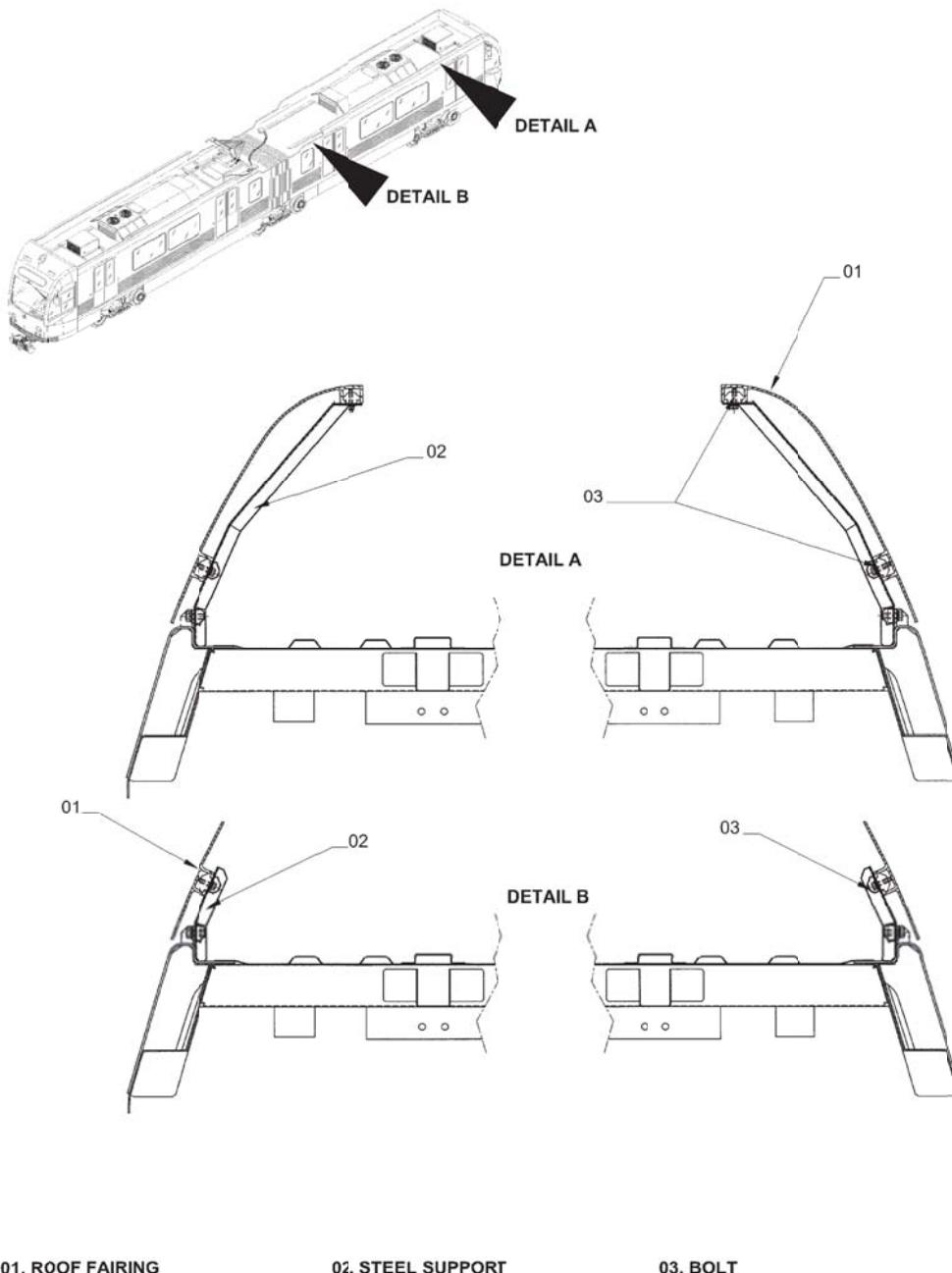
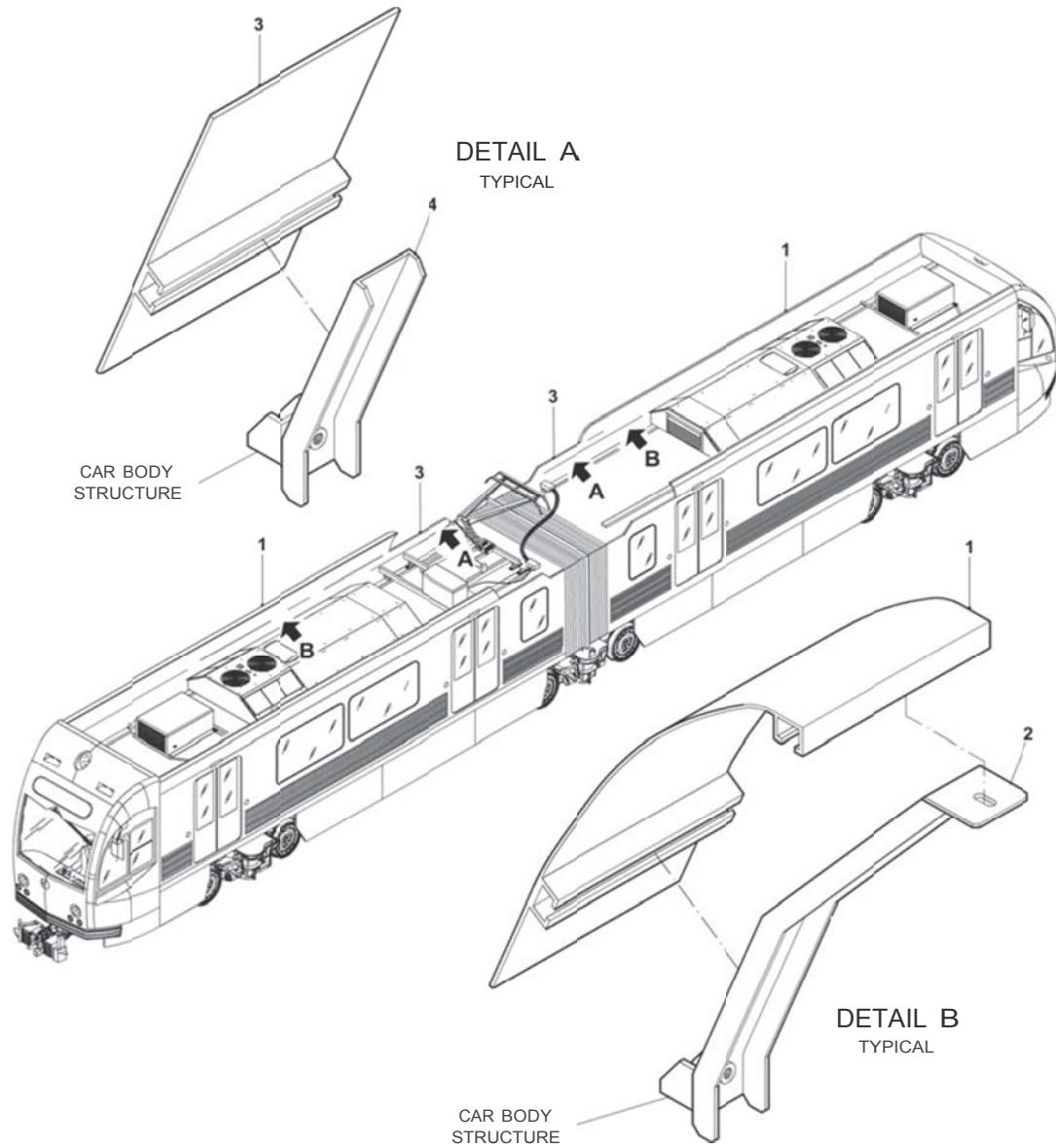


Figure 02-I-02.61 Roof Fairings (1)



01. ROOF FAIRING
 04. STEEL SUPPORT FOR SHORT
 ROOF FAIRING

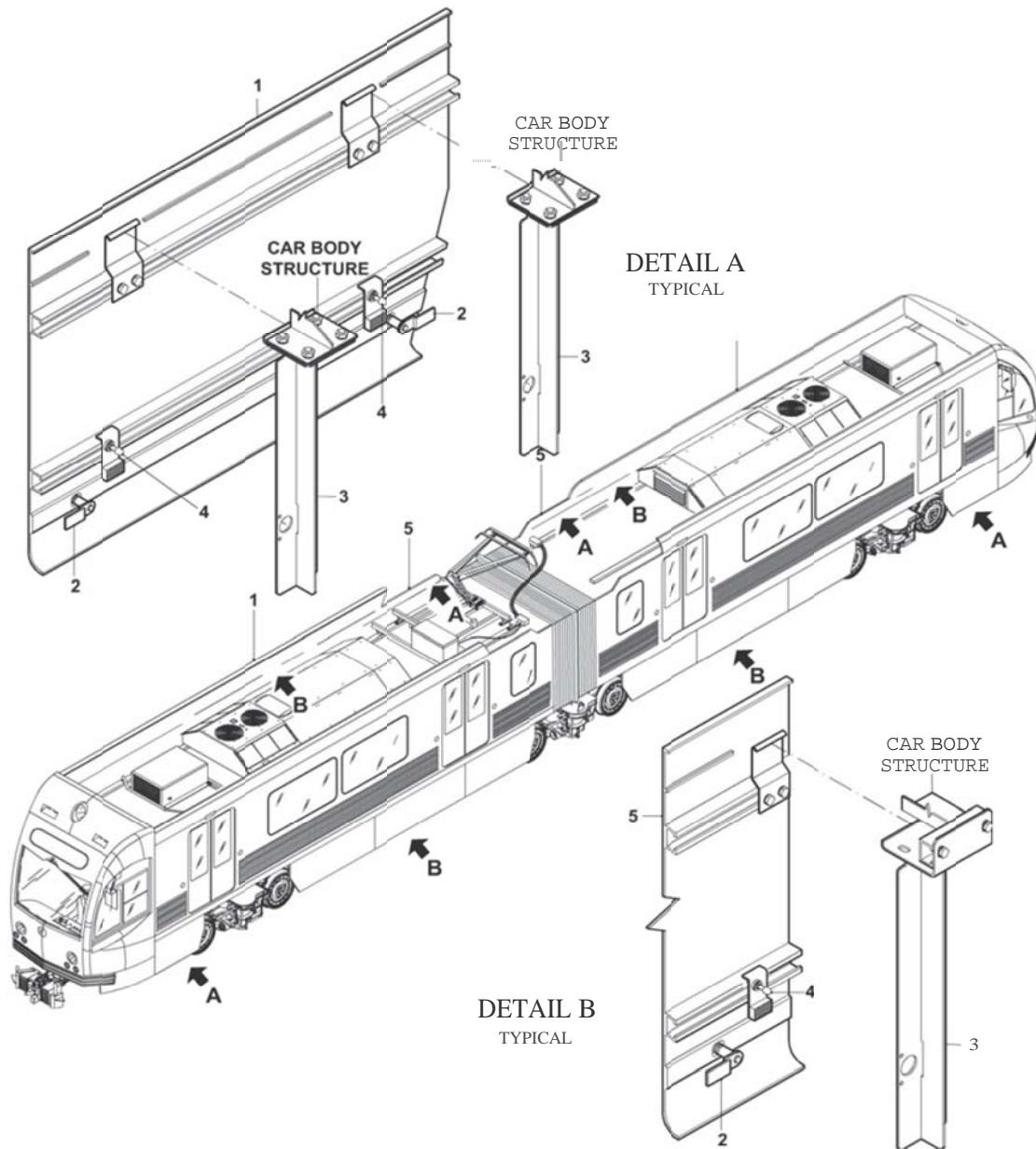
02. STEEL SUPPORT FOR ROOF FAIRING

03. SHORT ROOF FAIRING

02-1-02.04.02.02 Side Skirts

The skirts (12 – 3 per side, per section) installed below the floor level at the sides of the vehicle (Refer to Figure 02-1-02.63) are made of composite material type, fiberglass stiffened isostamic polyester matrix and are used as access covers for equipment installed under the vehicle's floor.

The Skirts (1, 5), hinged to a frame connected to the sidewall, are equipped with square key latches (2) to keep the cover in place and locked.



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Figure 02-1-02.63 Side Skirts (1)

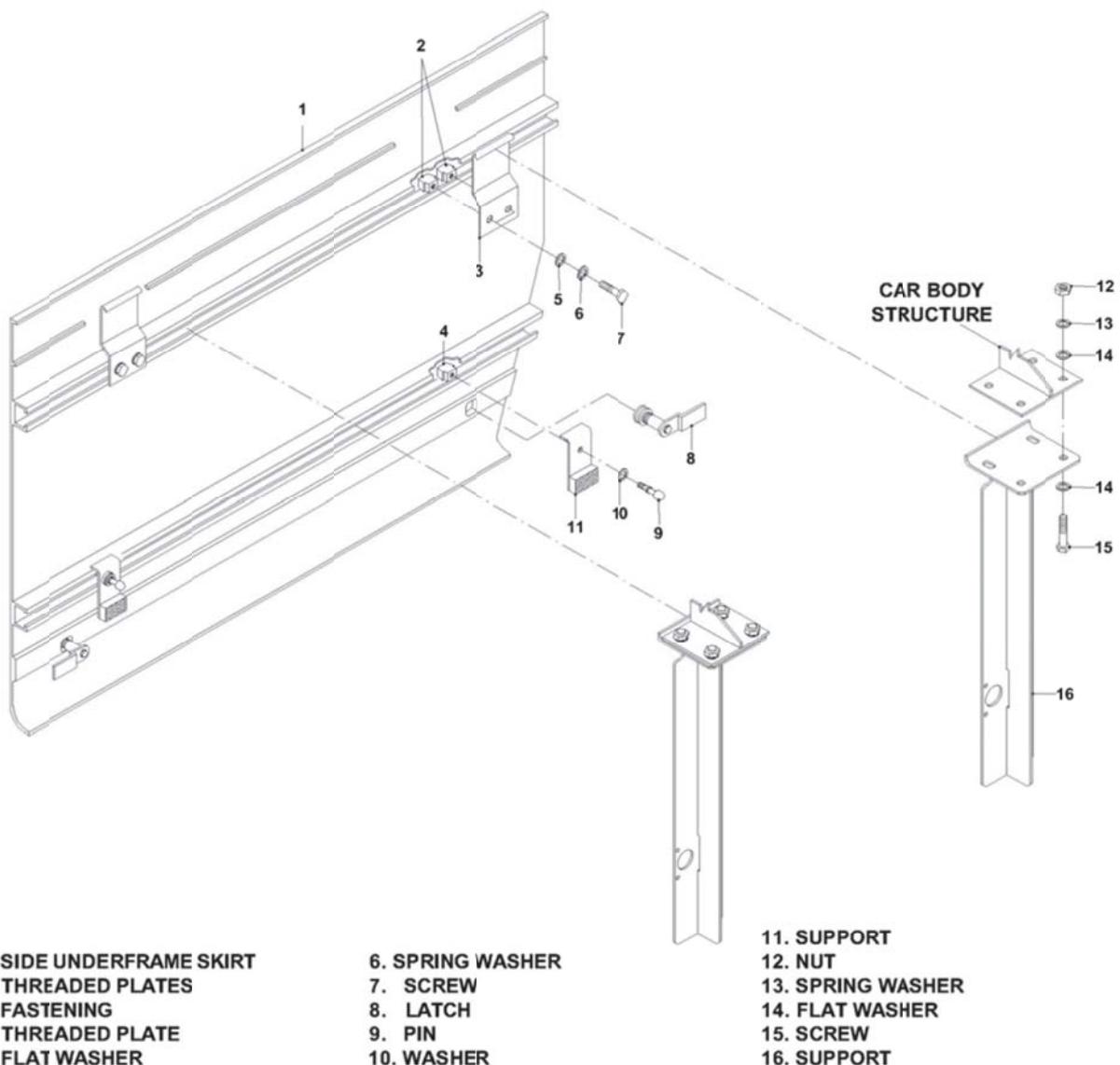


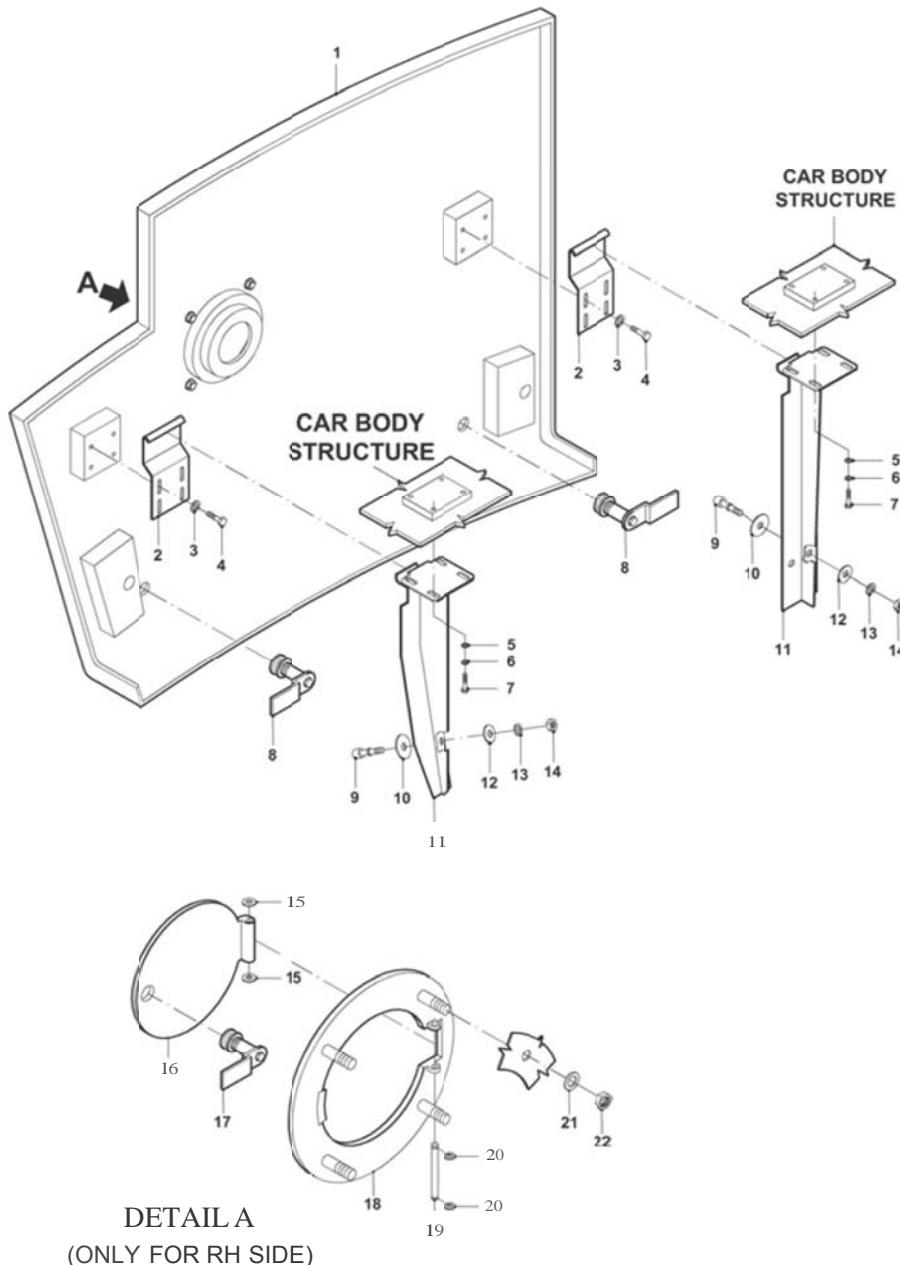
Figure 02-1-02.64 Side Skirts (2)

02-I-02.04.02.03 Fixed Front Skirts

Each Front Underframe assembly (Refer to Figure 02-I-02.66) is made of fiberglass reinforced plastic and is located on the front part of the end frame. It is hinged to the structure, and can be opened for vehicle maintenance operations and closed by means of a latch (3).

The RH side Front Fairing is provided with a small round door for windshield washer water refilling, also provided with a latch.





1. FRONT UNDERFRAME FAIRING
 2. TOP PLATE
 3. WASHER
 4. SCREW
 5. FLAT WASHER
 6. SPRING WASHER
 7. SCREW

8. FASTENER
 9. PIN
 10. WASHER
 11. SUPPORT
 12. WASHER
 13. SPRING WASHER
 14. NUT

15. WASHER
 16. DOOR
 17. FASTENER
 18. FLANGE
 19. PIN
 20. CIRCLIP
 21. WASHER
 22. NUT

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Figure 02-1-02.66 Front Fixed Skirt

02-1-02.04.03 Exterior Steps and Handhold

To make the access to the vehicle from the yard easier to the operators, the front doors have been equipped with exterior steps and a handhold, as shown in Figure 02-1-02.67.

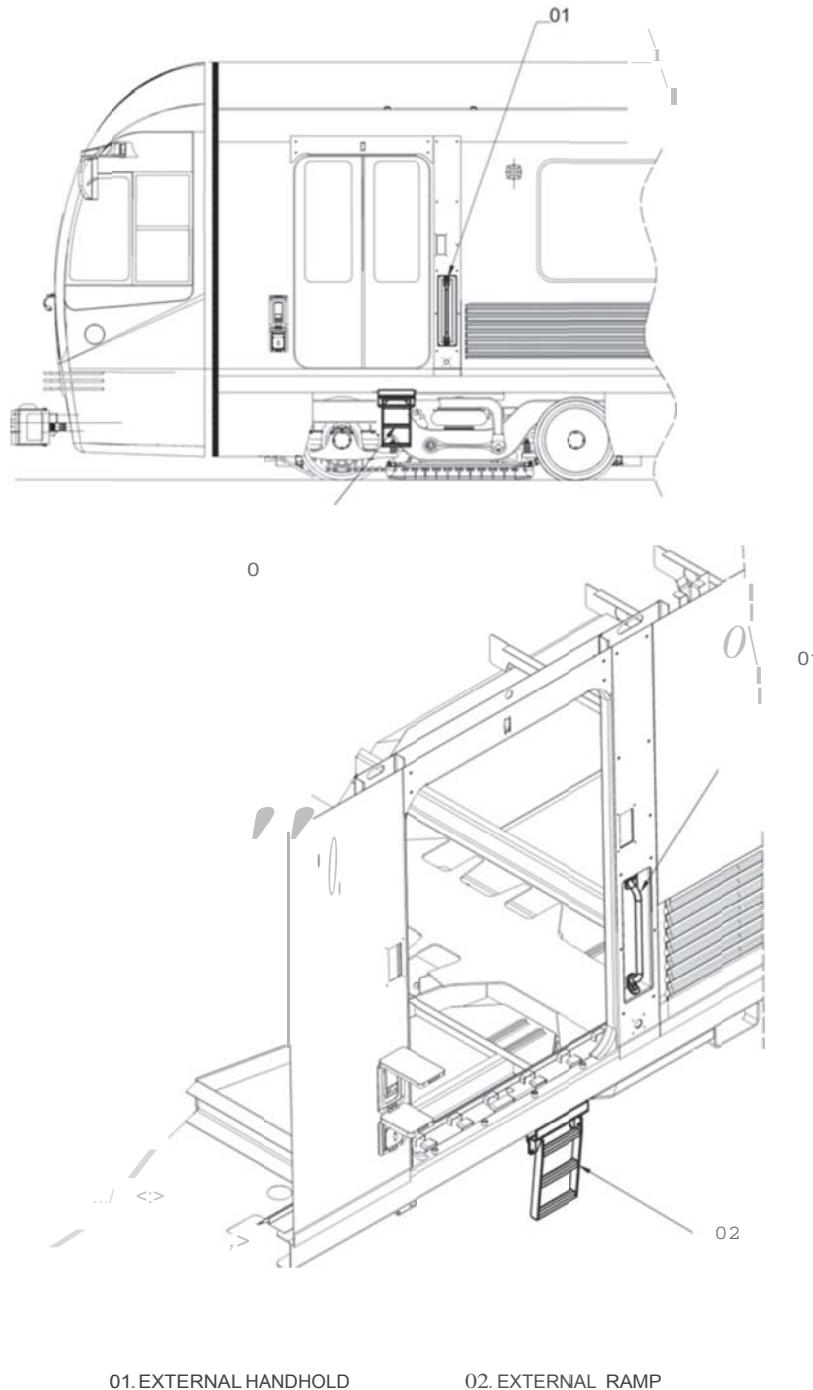


Figure 02-1-02.67 Exterior Steps and Handhold

02-I-02.04.04 Windows

This paragraph will treat all types of windows mounted on the train: the Windshield, the Operator's Cab window, the Passengers' Compartment windows and the Door Windows.

02-I-02.04.04.01 Windshield

The Windshield (Refer to Figure 02-I-02.72), located at both ends of the Vehicle, is made of transparent laminated safety curved glass (9/16 in. thick) and is installed in the Operator's Cab structure from the outside.

The windshield (1) is provided with a steel frame (6) to hold it in place.

The frame is mounted on the vehicle by means of 16 Allen screws and bolts.

The whole windshield weighs 190 lbs (85 kg) and requires a hoisting device to be used for removal/installation operations.

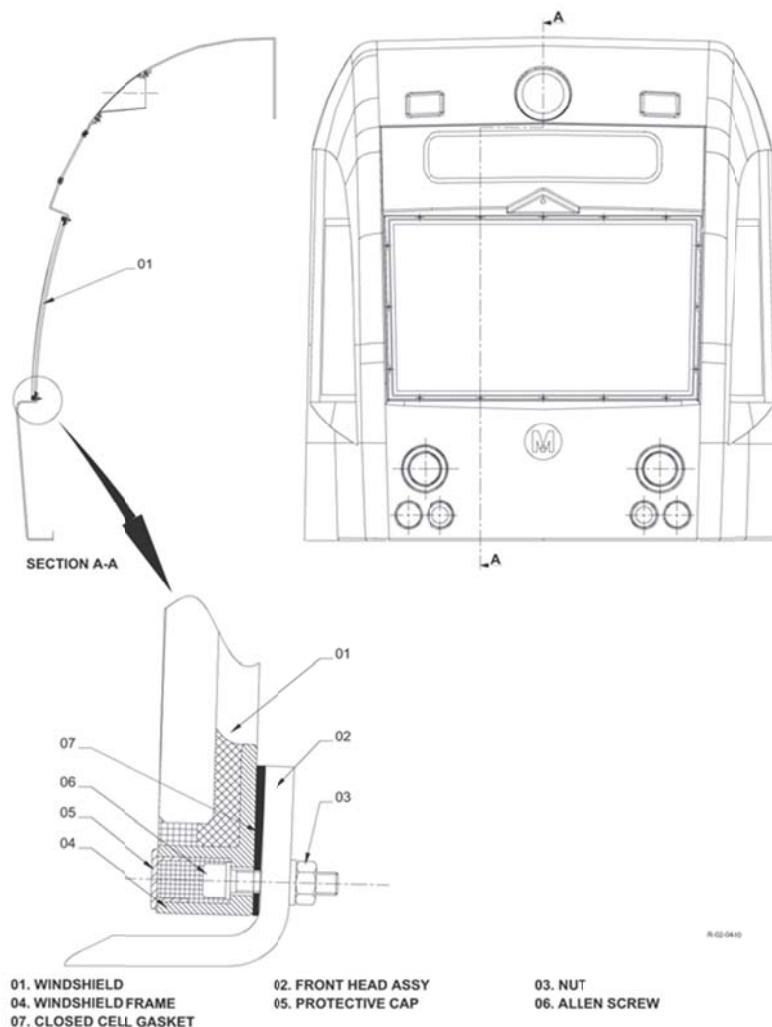


Figure 02-I-02.68 Windshield Mounting

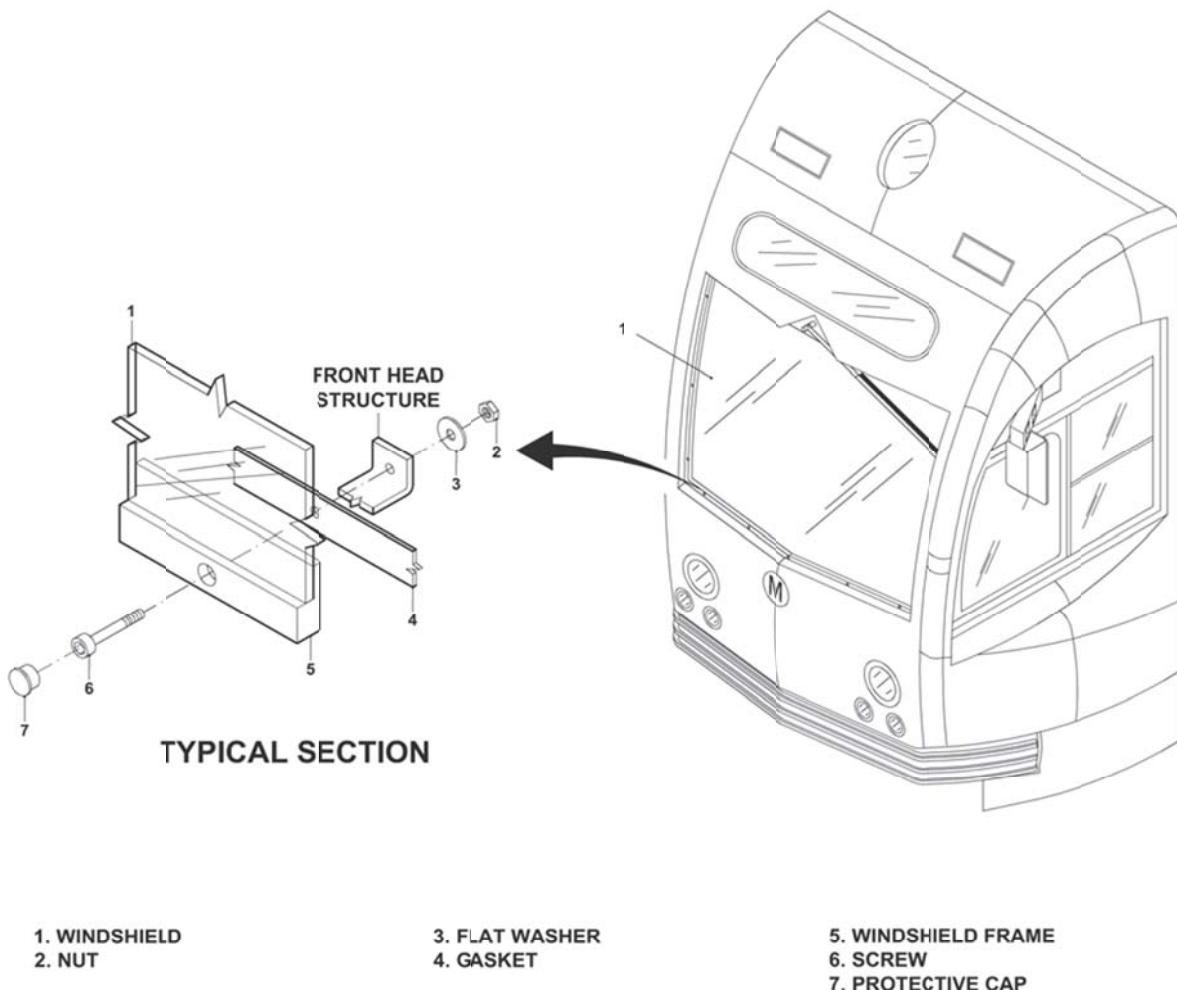


Figure 02-I-02.69 Windshield

02-I-02.04.04.02 Cab Side Window

The operator's cab is provided with two lateral windows (Refer to Figure 02-I-02.72). Each lateral window is made up of two parts: a fixed one (5) and an openable one (4). The window is surrounded by a metal frame necessary to ensure water tightness and to hold the glass window.

The movable part of the openable window is a sliding glass which can be locked by means of two blocking devices: A disengaging handle on the upper part of the frame, and a blocking device which operates on a rackwork.

In this way the glass can be blocked in several intermediate positions.

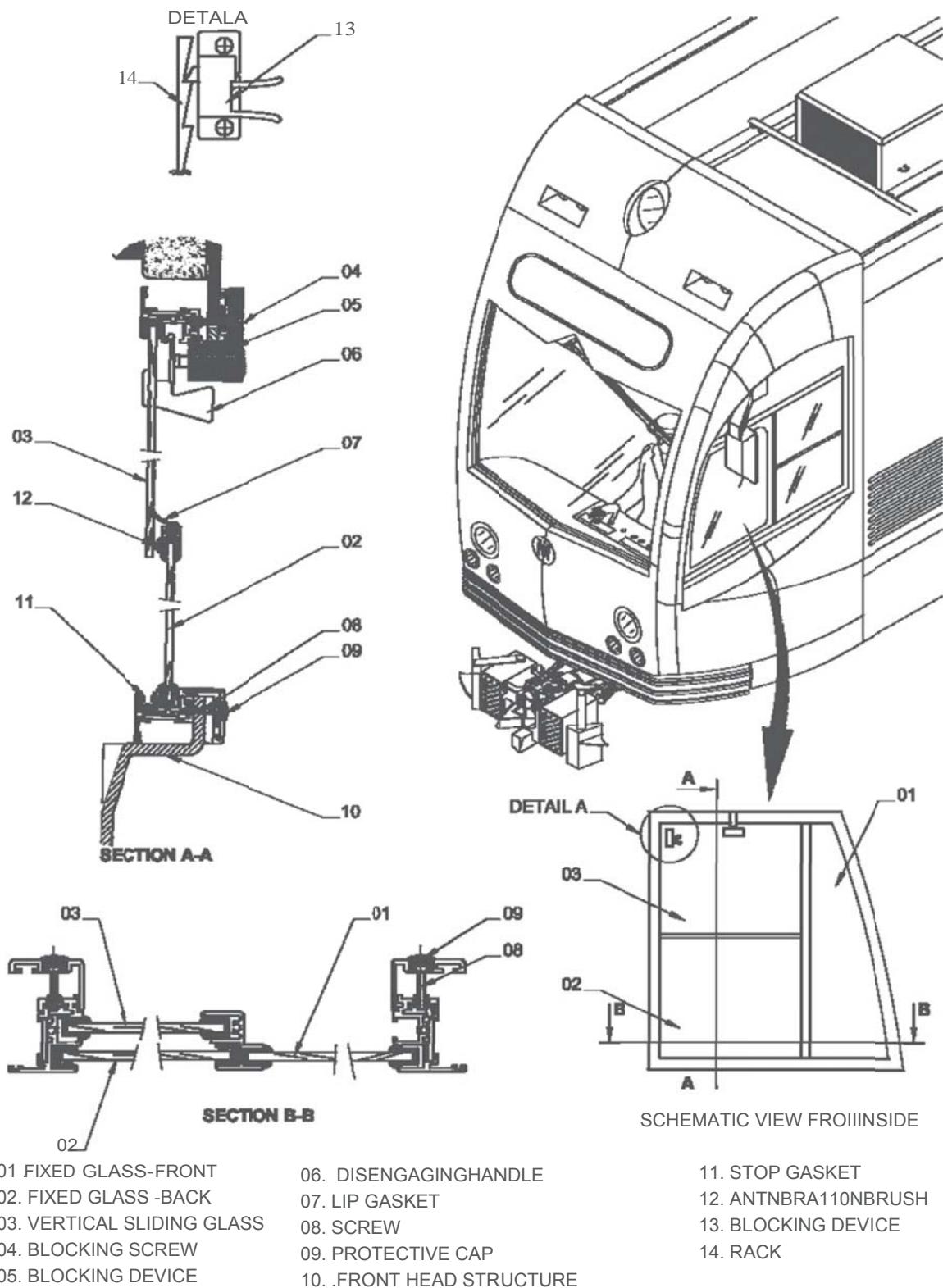


Figure 02-1-02.70 Operator Cab Openable Window

02-I-02.04.04.03 Cab Door Window

The Cab Door Window is also openable from the inside with the same rackwork of the side window.



Figure 02-I-02.71 Cab Door Window

02-I-02.04.04.04 Passenger Compartment Windows

The passenger compartment windows are of two types (refer to Figure 02-I-02.72):

The first is two wide window(s) (a total of eight per vehicle) between each side of a Car Body section.

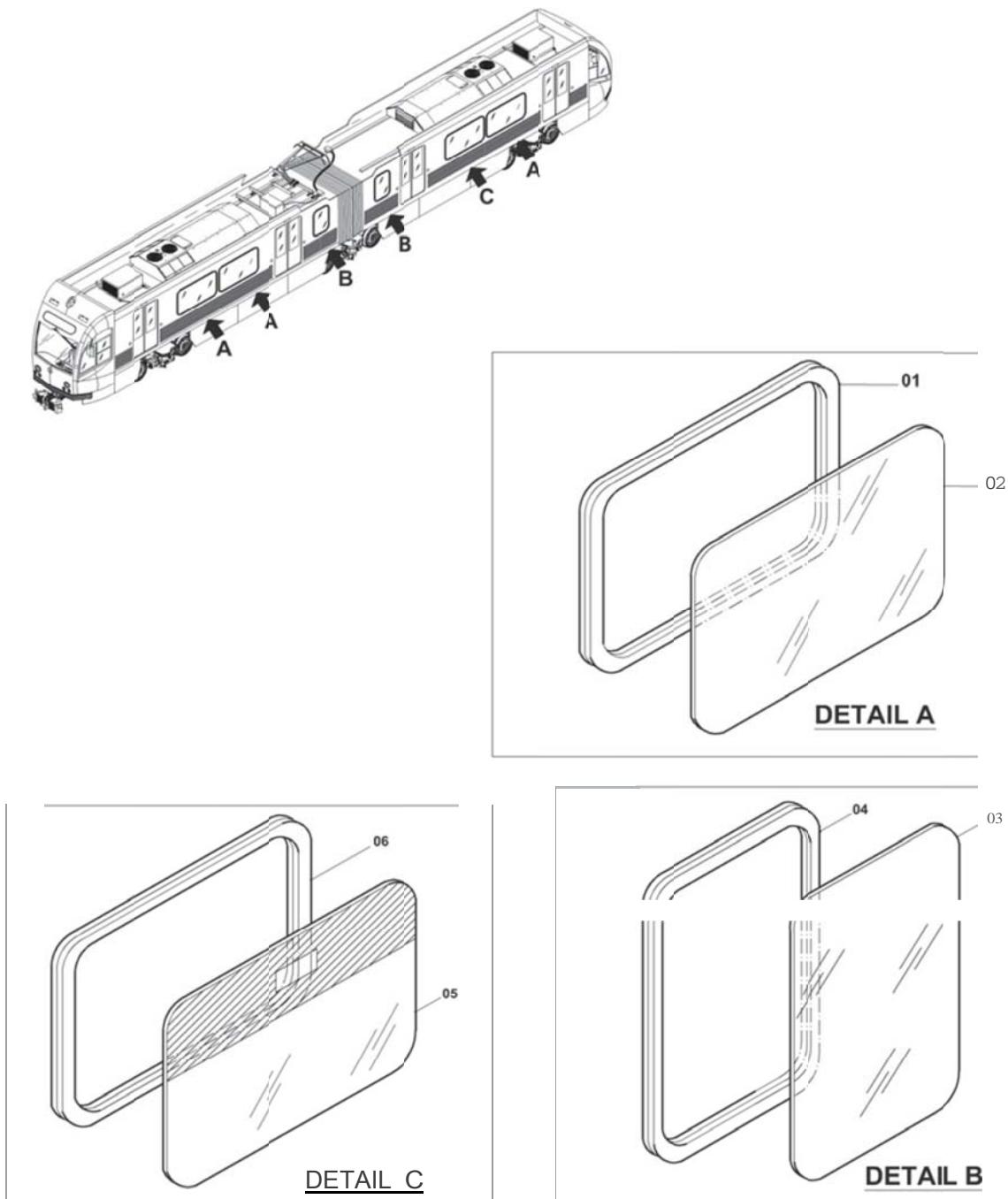
The second one of this type on the right of each side of the vehicle (a total of two per vehicle) has a silk screening cover that protects the destination sign.

One smaller window (a total of four per vehicle) is near the Articulation section.

All windows are made of single density, safety laminated sheet glass supported directly by the car structure with neoprene glazing gasket.

The glazing sections are designed to make a watertight seal without the need for sealing compounds.

All window assemblies are provided with light alloy frames installed on the vehicle's structure. Individual side windows are interchangeable with windows on the same side.



01. WINDOW GASKET
04. WINDOW GASKET

02. PASSENGER SIDE GLASS
05. SIDE GLASS (SILK-SCREENING)

03. SIDE GLASS (ART. SECT. SIDE)
06. WINDOW GASKET

Figure 02-1-02.72 Windows Location

02-1-02.04.05 Exterior Rear-view Mirrors

Each vehicle's end is equipped with two Exterior Rear-View Mirrors (Refer to Figure 02-1-02.73) (one per vehicle side) to assist the operator during vehicle operations.

Both mirrors are attached to the vehicle by means of supports designed to be manually adjusted in order to avoid accidental crash during service or to facilitate vehicle washing.

The inside glass of the RH rear-view mirror is electrically adjustable by means of the Mirror Adjust Switch located on the Operator's Console.

The switch is a four-position switch, spring mounted in the center position. Its activation (up, down, left and right), causes the relevant external rear view mirror movement.

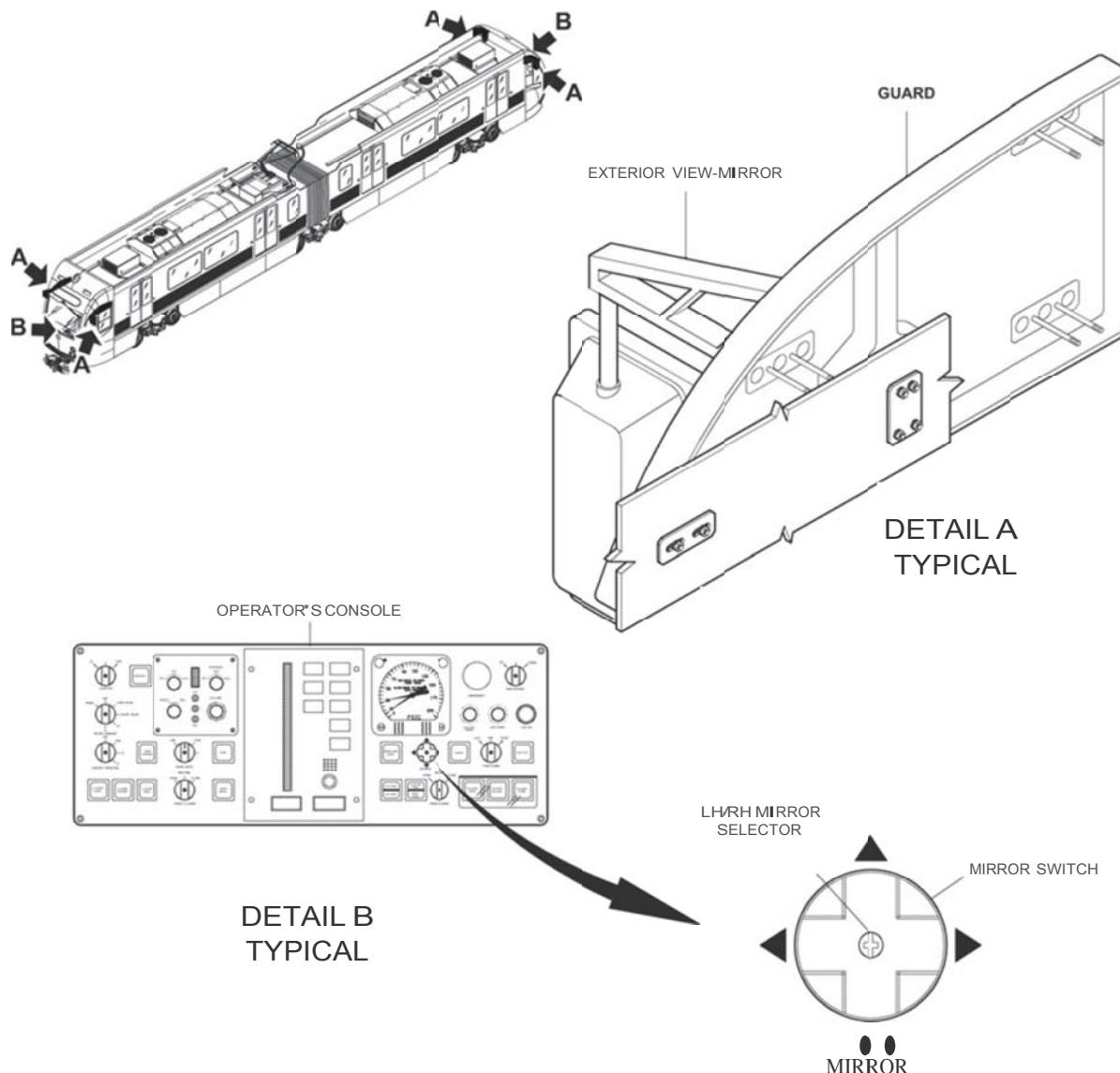


Figure 02-1-02.73 Exterior Rear-view Mirror and Mirror Adjuster Switch

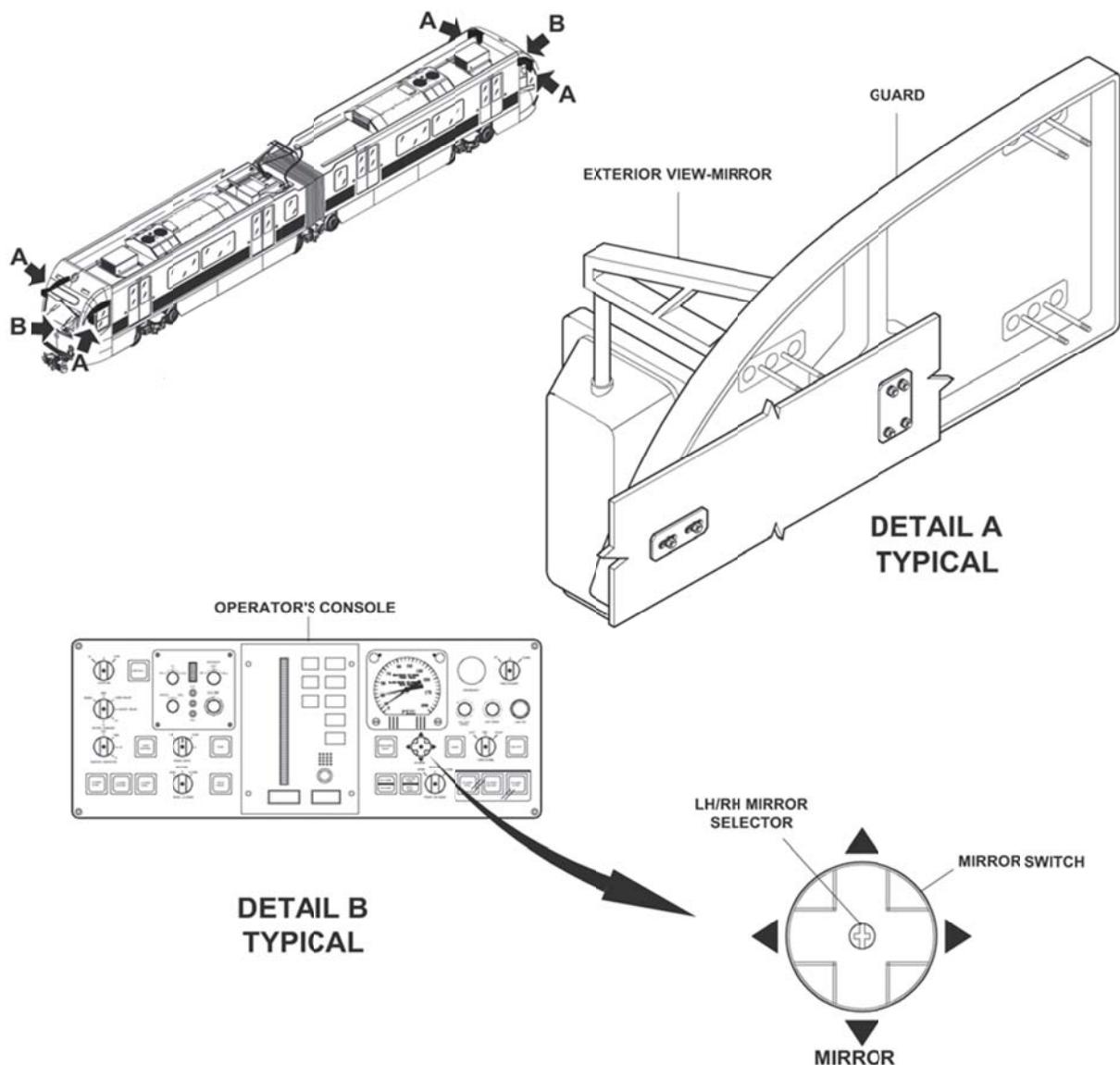


Figure 02-I-02.74 Exterior View Rear Mirror – Electrical connections

02-I-02.04.06 Outer Bellow

A watertight Bellow (Refer to Figure 02-I-02.75) designed in two parts is installed on the Articulation Section.

Each part is connected to the Articulation Section dome on one side and to the Car Body structure on the other and is fully interchangeable with all bellow parts installed on the P2550 LRVs.

The Bellow (1) is connected to the external dome and to the Car Body by means of a U- shaped support frame and a wire.

The rubber profile (2) of the Bellow fits in the “U” shape of the support and it is held in position by pulling the wire which runs through it.

The lower part of the Bellow is held in place also by means of a bellow rubber holder element (3) stretched from the Car Body to the external dome.

Around these rubber holder elements are the rings which hold the bellow in position.

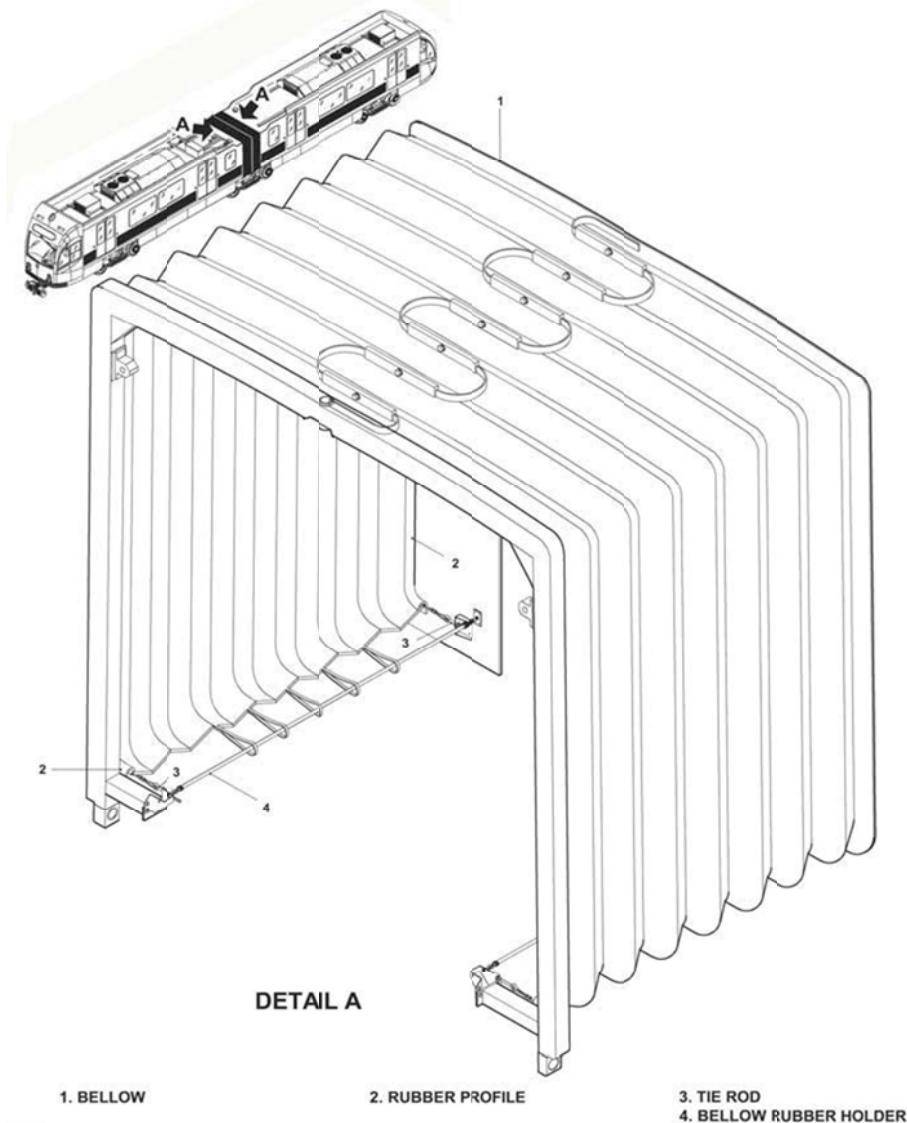


Figure 02-I-02.75 Outer Bellow

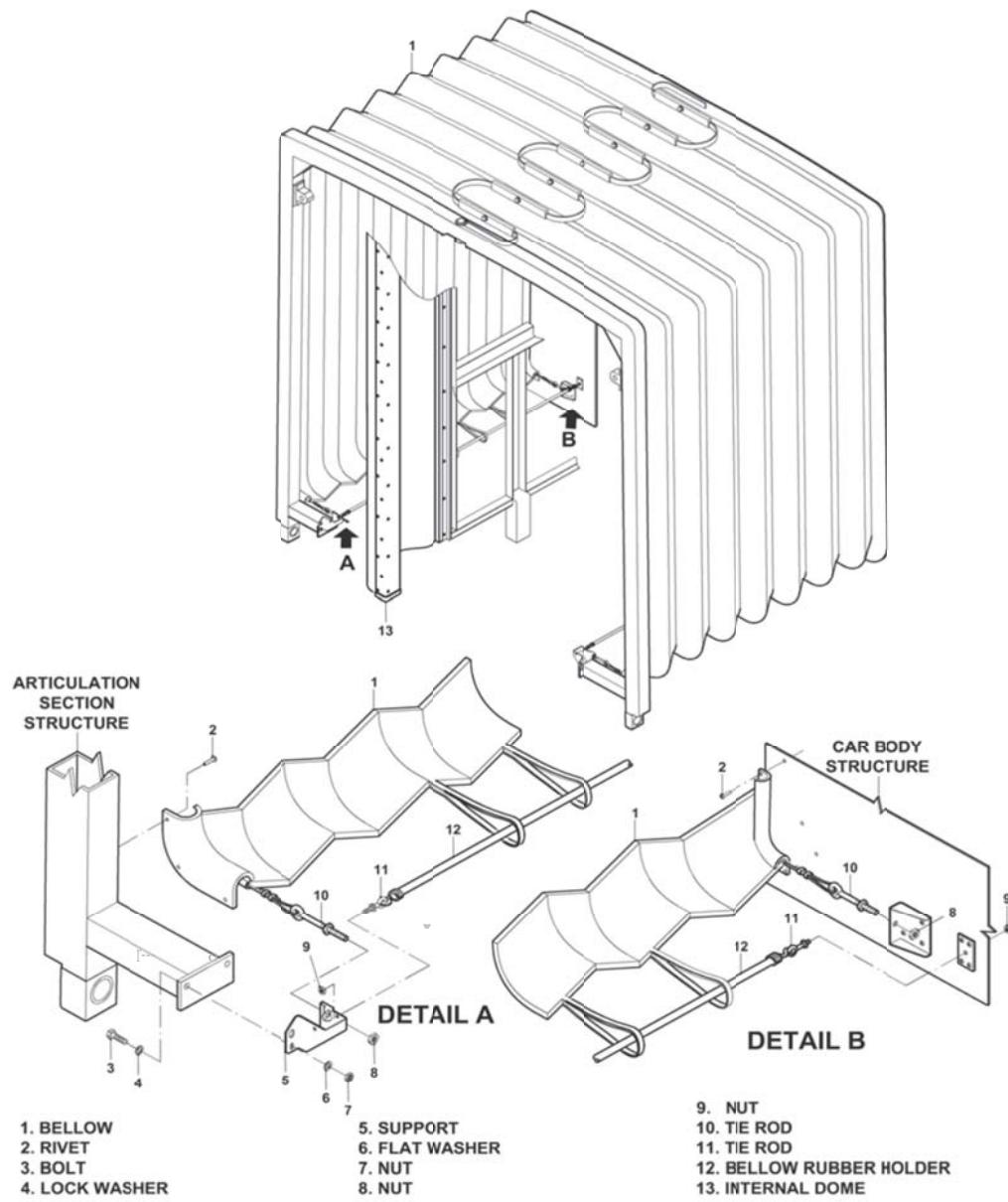


Figure 02-1-02.76 Outer Bellow (2)

02-I-02.04.07 Painting

All undercar structures, except those of stainless steel, have been treated with a polyurethane finish and all exterior finishes have a gloss level of 85 ± 5 .

All exterior finishes have been tested for hardness, adhesion, pull-off strength and paint cure to adhere to the ASTM D standards.

Figure 02-I-02.77 through Figure 02-I-02.79 show the exterior painting scheme of the car-body sheathing, of the underframe structure and of the undercar equipment.

The following equipment/parts have not been painted and must not be painted to avoid any kind of damage:

Undercar

1. Copper tubing
2. Piping and fittings
3. Wearing surfaces
4. Coupler surfaces
5. Flexible conduit and fittings
6. Wire and cable
7. Power resistor
8. Heat transfer surfaces
9. Electrical insulators
10. Elastomeric devices
11. Grounding pads

Truck-related equipment

1. Wheels
2. Axles
3. Elastomeric parts
4. Grease fittings
5. Linkages
6. Threads used for adjustments
7. Electrical equipment
8. Current pick-up devices
9. Wearing surfaces

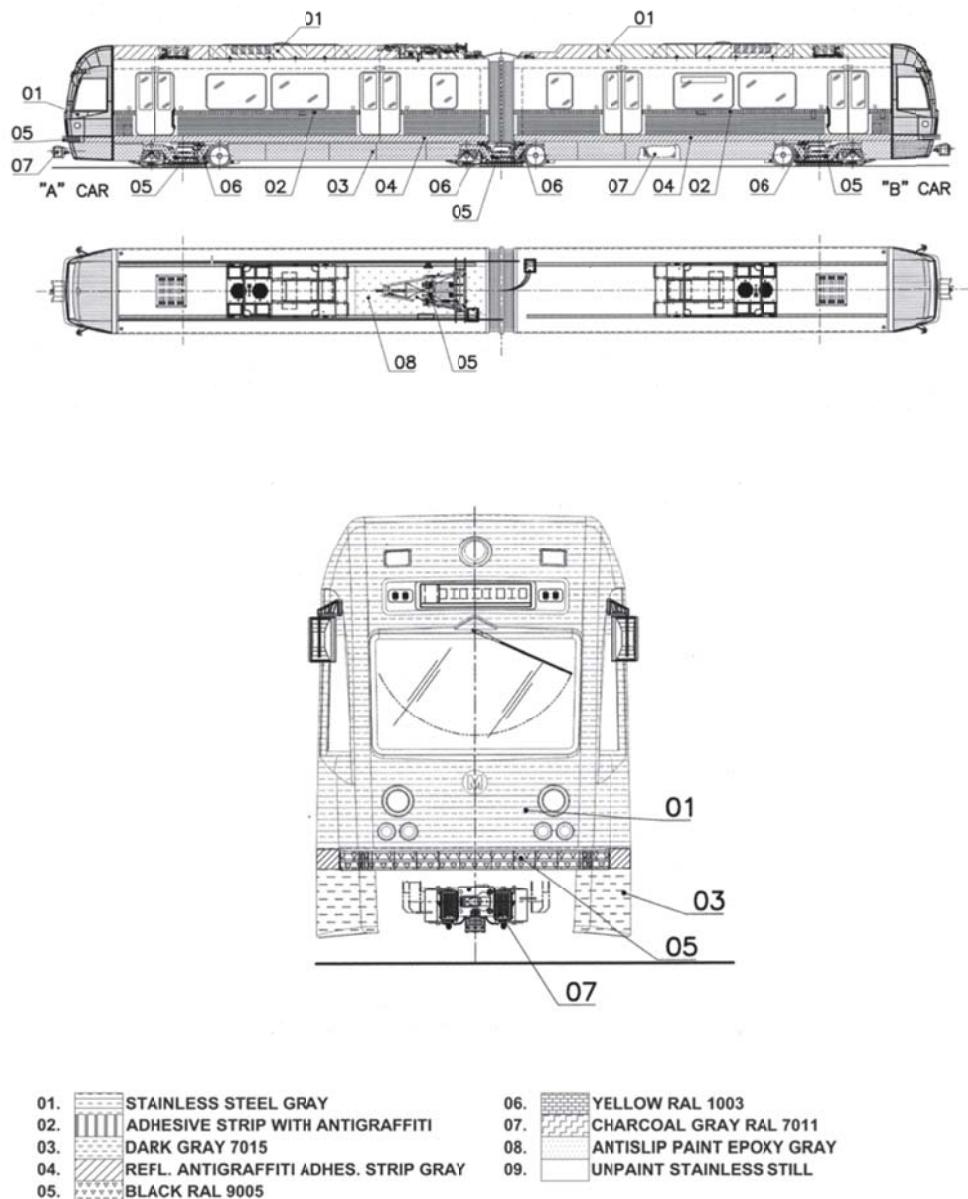
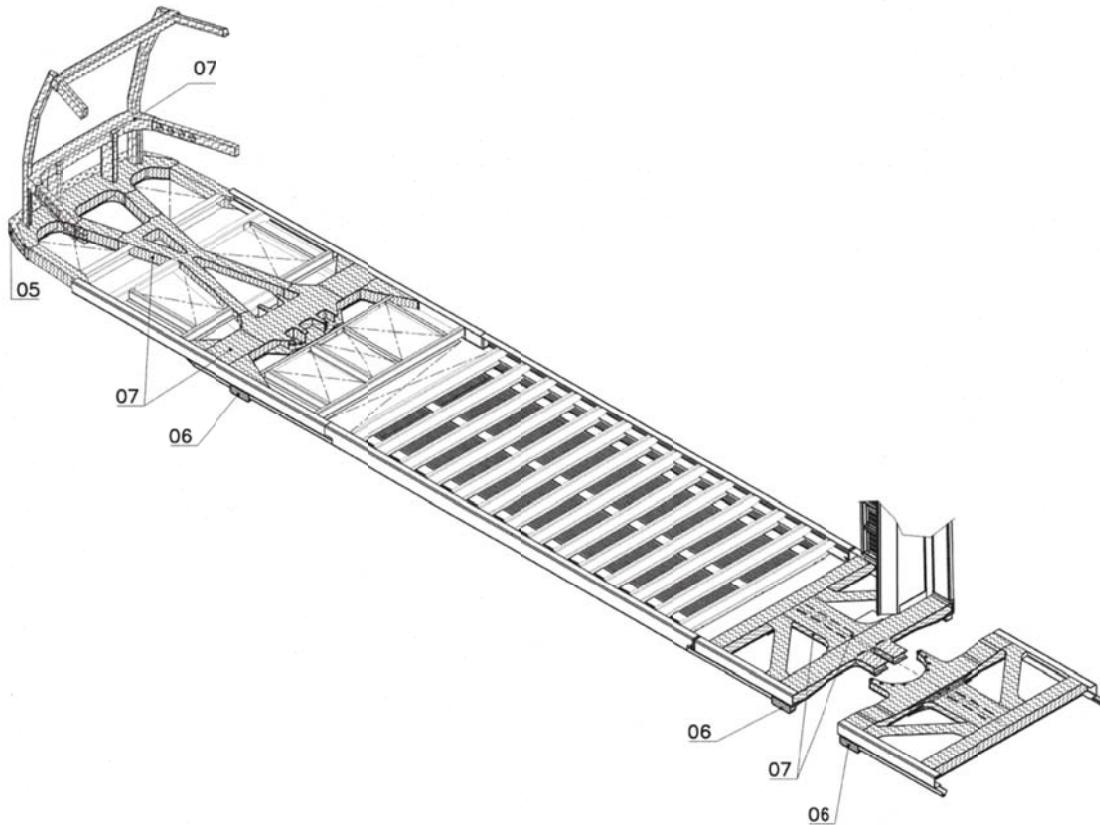


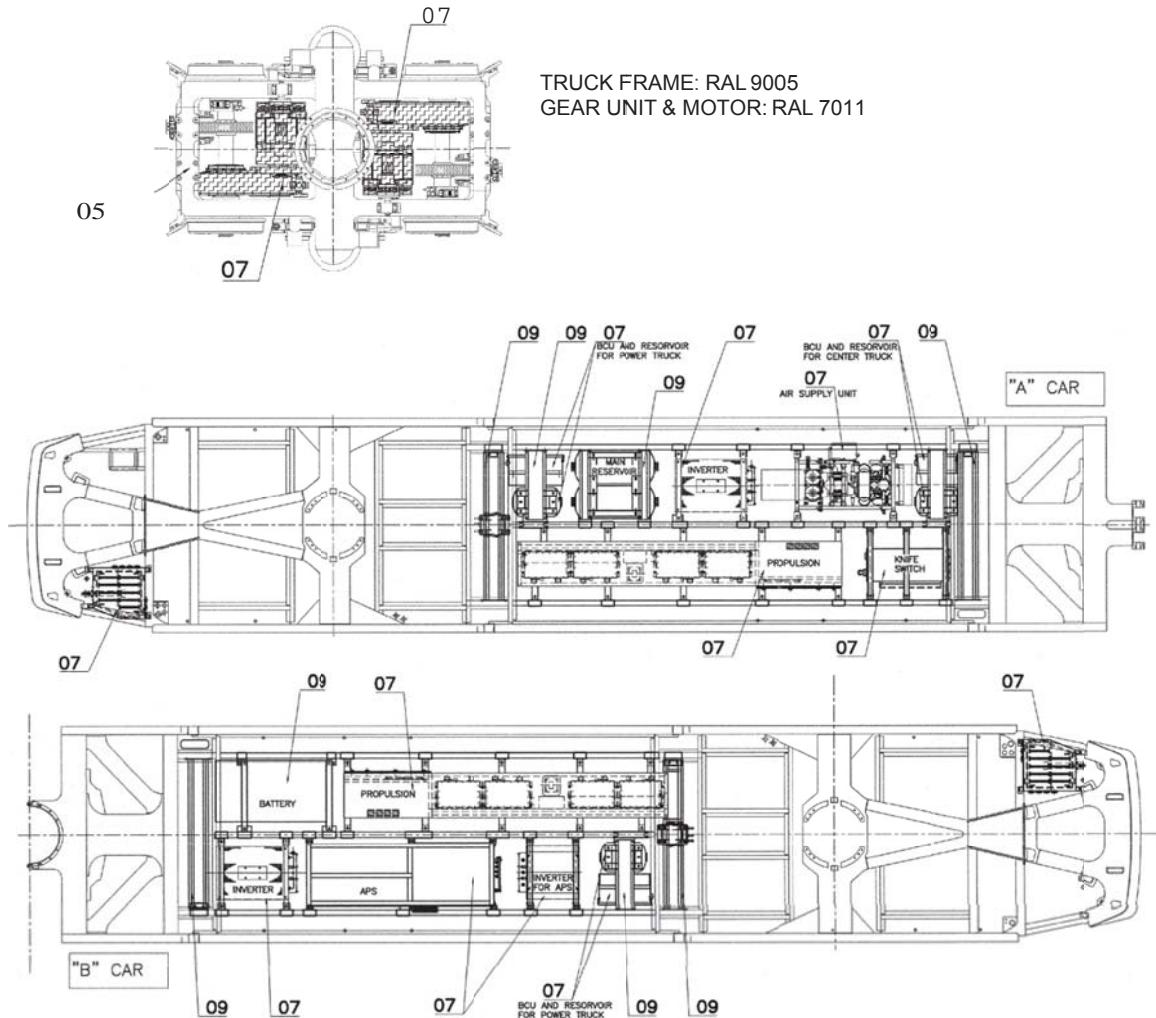
Figure 02-1-02.77 Painting Scheme of the Car-Body Sheathing



01.		STAINLESS STEEL GRAY
02.		ADHESIVE STRIP WITH ANTIGRAFFITI
03.		DARK GRAY RAL 7015
04.		REFL. ANTIGRAFFITI ADHES. STRIP GRAY
05.		BLACK RAL 9005
06.		YELLOW RAL 1003
07.		CHARCOAL GRAY RAL 7011
08.		ANTISLIP PAINT EPOXY GRAY
09.		UNPAINT STAINLESS STILL

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Figure 02-1-02.78 Painting Scheme of the Underframe Structure



- 01. STAINLESS STEEL GRAY
- 02. ADHESIVE STRIP WITH ANTIGRAFFITI
- 03. DARK GRAY 7015
- 04. REFL. ANTIGRAFFITI ADHES. STRIP GRAY
- 05. BLACK RAL 9005

- 06. YELLOW RAL 1003
- 07. CHARCOAL GRAY RAL 7011
- 08. ANTISLIP PAINT EPOXY GRAY
- 09. UNPAINT STAINLESS STILL

Figure 02-1-02.79 Painting Scheme of the Undercar Equipment

02-I-02.05 Operator Cab

The Operator Cab at both ends of the vehicle (Refer to Figure 02-I-02.80) includes all controls necessary to the operation of the vehicle.

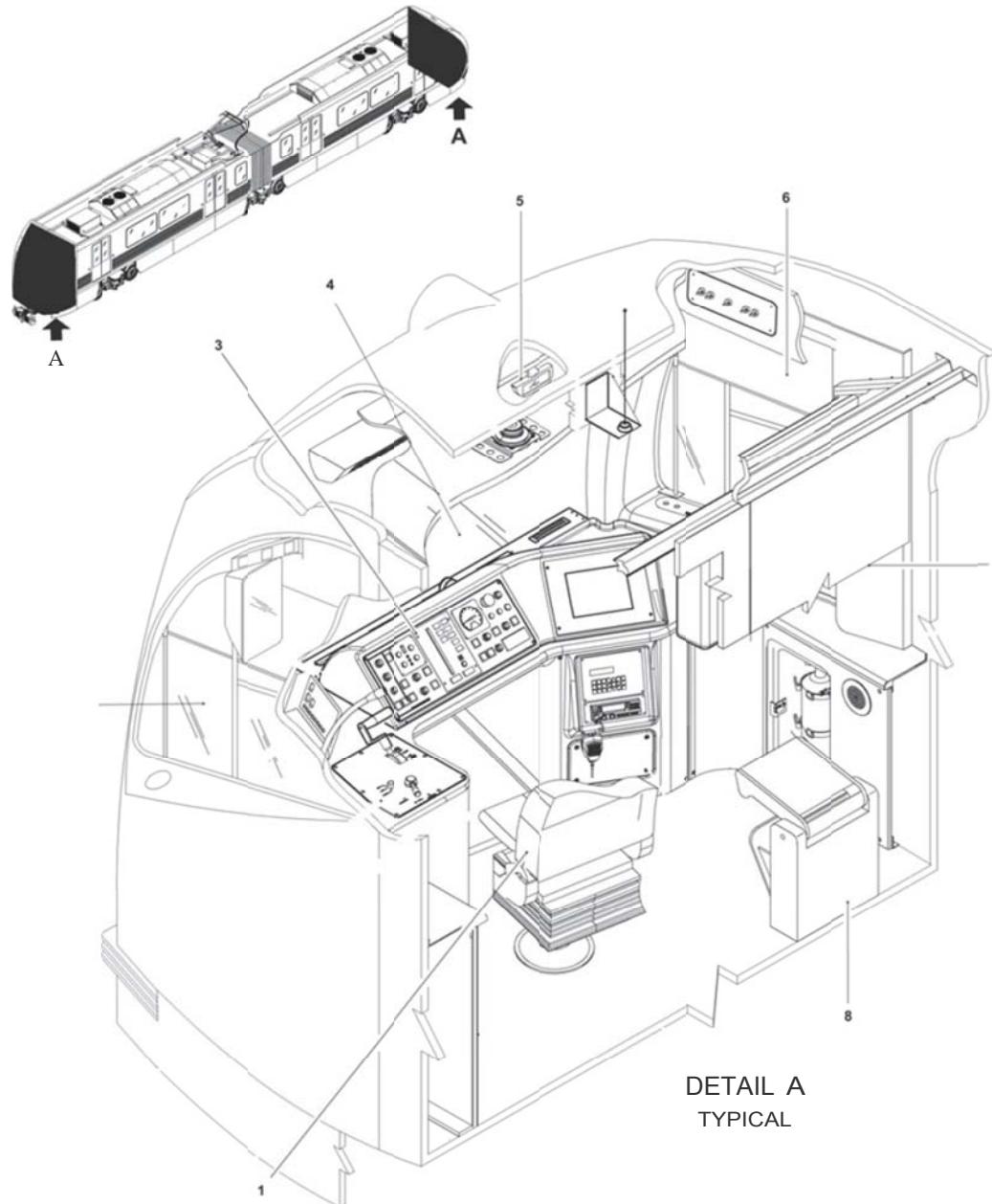
Each Cab is provided with isolation from passengers by means of the cab dividing wall, and a locking-door (Refer to Figure 02-I-02.82).

The Operator Cab is designed to provide the operator with maximum outward visibility and comfortable placement of the vehicle controls.

The Operator Cab includes the Console (3), consisting of an aluminum alloy frame designed to carry out the vehicle system controls installation, Cab Partition (7), Operator's Seat (1), Auxiliary Driver Seat (8), Visors (6), Interior Mirror (5) and Exterior Mirror.

The Operator Cab Assembly also includes the following components:

1. Windshield (Refer to para 02-I-02.04.04).
2. Cab Side Window (Refer to para 02-I-02.04.04).
3. Rear-View Exterior Mirror (Refer to para 02-I-02.04.01).
4. Windshield & Wiper (Refer to Section 17).
5. Operator Console (Refer to Section 10).

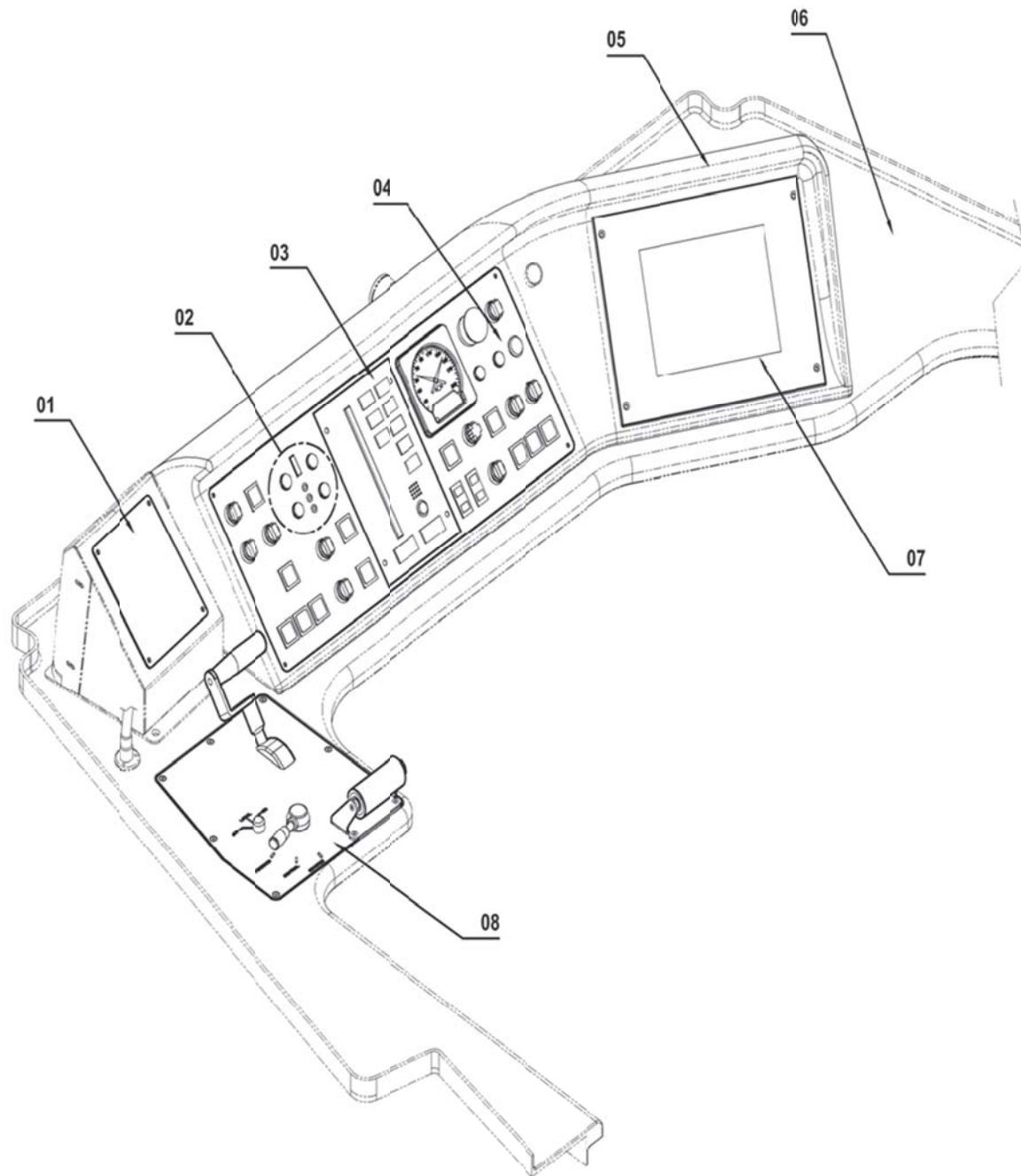


1. OPERATOR'S SEAT
2. CAB LATERAL WINDOW

3. OPERATOR'S CONSOLE
4. WINDSHIELD
5. REAR-VIEW INTERIOR MIRROR

6. VISOR
7. CAB PARTITION
8. AUXILIARY DRIVER SEAT

Figure 02-1-02.80 Operator Cab Assembly



01. TWC CONTROL UNIT

04. OPERATOR CONSOLE

07. IDU

02. CCH

05. DASHBOARD

08. MASTER CONTROLLER CONSOLE

03. ADU

06. DESKTOP

Figure 02-1-02.81 Operator Console

02-I-02.05.01 Cab Partition

Each Cab Partition, arranged as shown in Figure 02-I-02.82, consists of a light alloy frame (joined to the vehicle's structure by means of screws and moldings) on which RH and LH Partition Wall, Cab Partition Door and Cab Partition Header are installed.

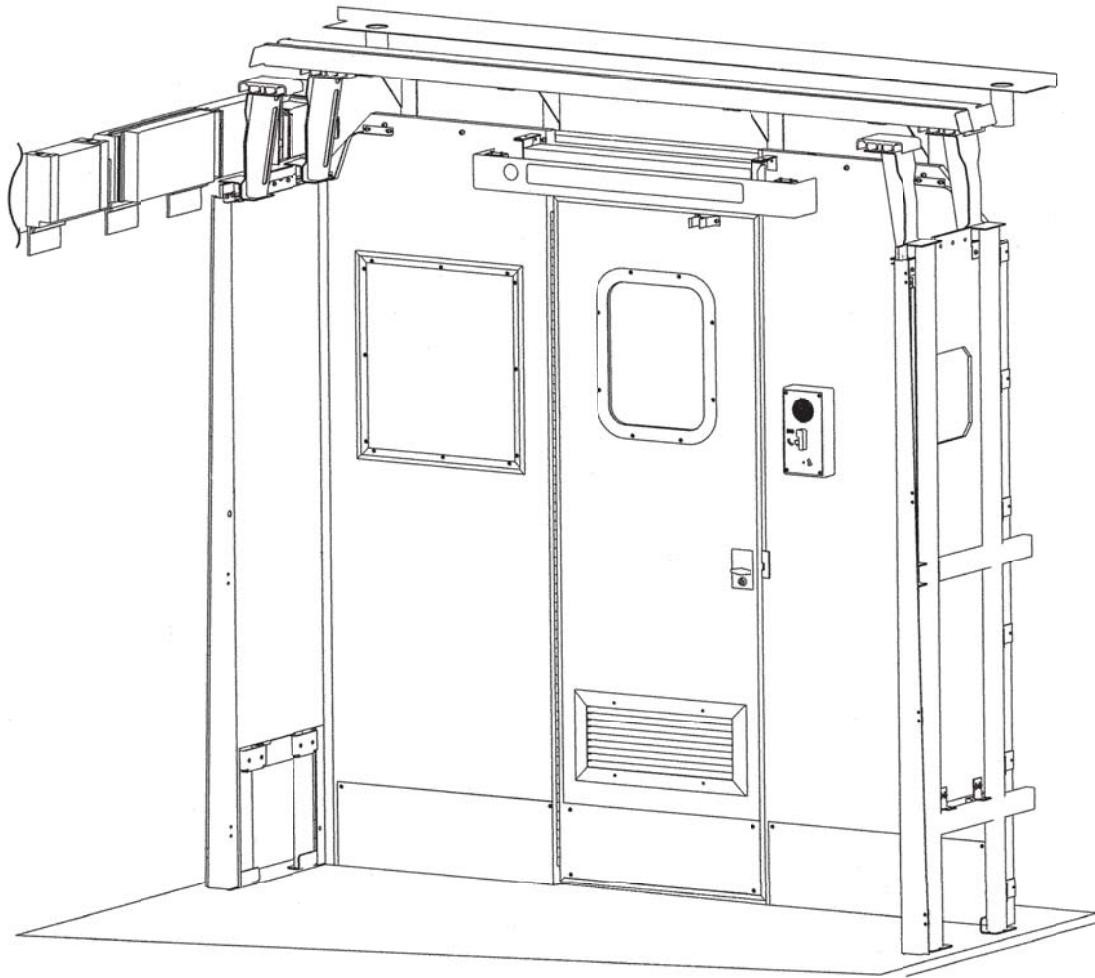
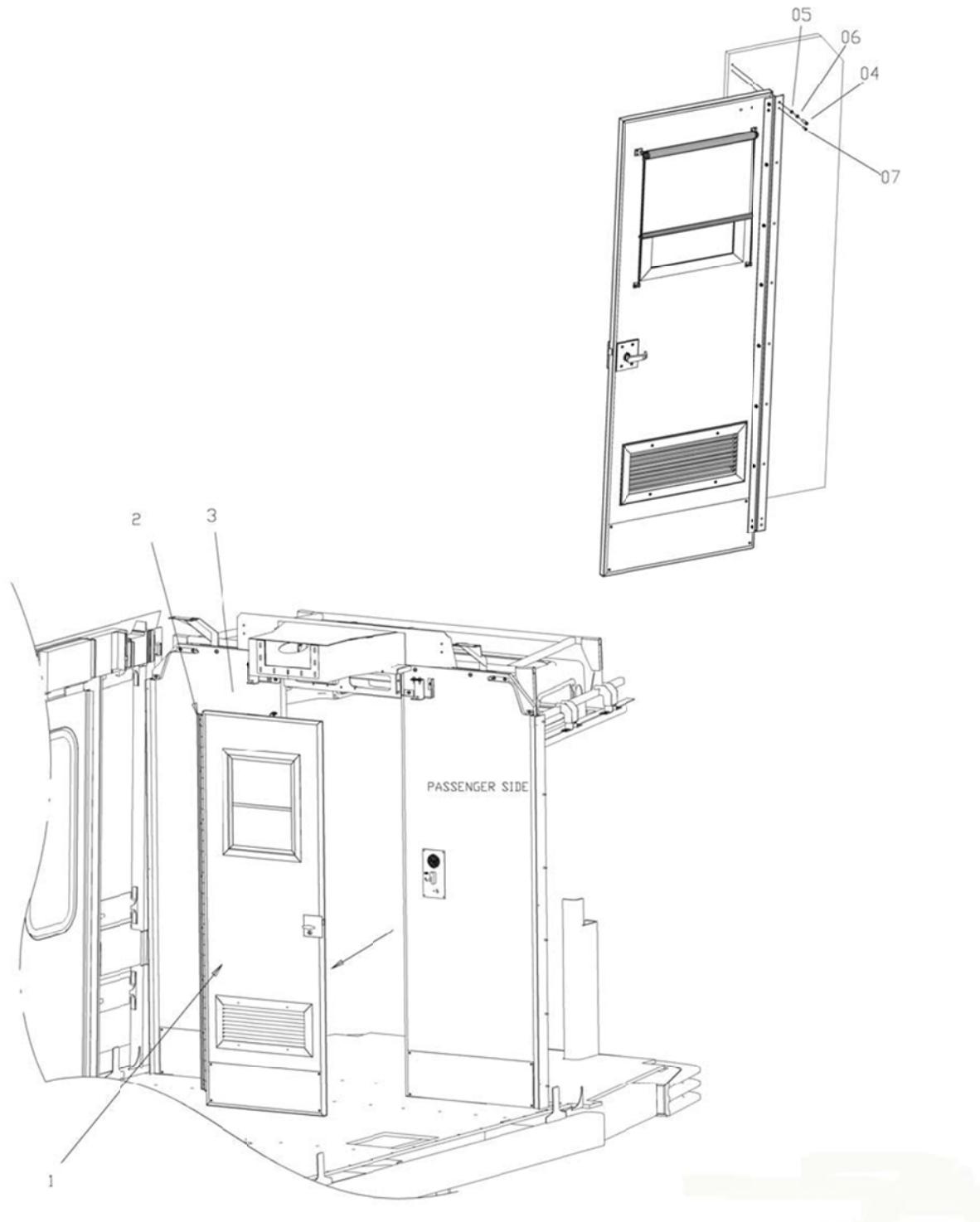


Figure 02-I-02.82 Cab Partition

The Cab Partition Door is provided with a fixed single density laminated safety glass, a door lock and an air grid.

Materials:

Cab Partition Walls:	Ply-metal (1.0" thick)
Cab Partition Door:	Ply-metal (1.0" thick)
Cab Partition Header:	FRP, gelcoated (0.125" thick)
Cab Partition Header Plate:	SST 304 (0.05" thick)



01. DOOR
02. HINGE

03. PARTITION WALL,LH
04. SCREW M6x25

05. FLAT WASHER
06. LOCK WASHER M6
07. SELF TAPPING SCREW M5

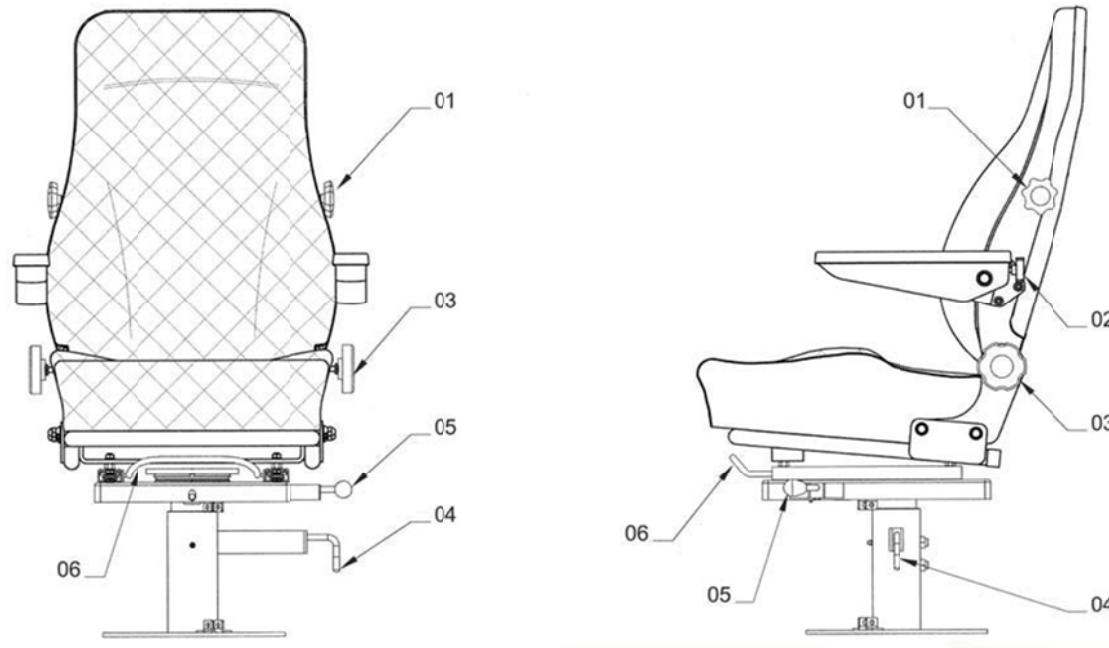
Figure 02-1-02.83 Cab Door

02-I-02.05.02 Operator Seat

The Operator Seat (refer to

Figure 02-I-02.84) consists of a chair mounted on a platform and equipped with a mechanical suspension support with the following features:

- Mechanically adjustable lumbar;
- Adjustable back recline;
- Slide handle;
- Height adjusting rod;
- Adjustable flip up armrests.



01. LUMBAR KNOB
04. SEAT LOCK

02. ADJUSTABLE FLIP-UP ARMREST
05. HEIGHT ADJUSTING ROD

03. SEAT ADJUSTABLE KNOB
06. SLIDE HANDLE

Figure 02-I-02.84 Operator Seat

02-I-02.05.02.01 Auxiliary Driver Seat

The Auxiliary Driver Seat (refer to Figure 02-I-02.85) is a liftable seat, similar to the passenger compartment seats.

The Auxiliary Driver seat is equipped with a basket assembly openable by means of a twine.

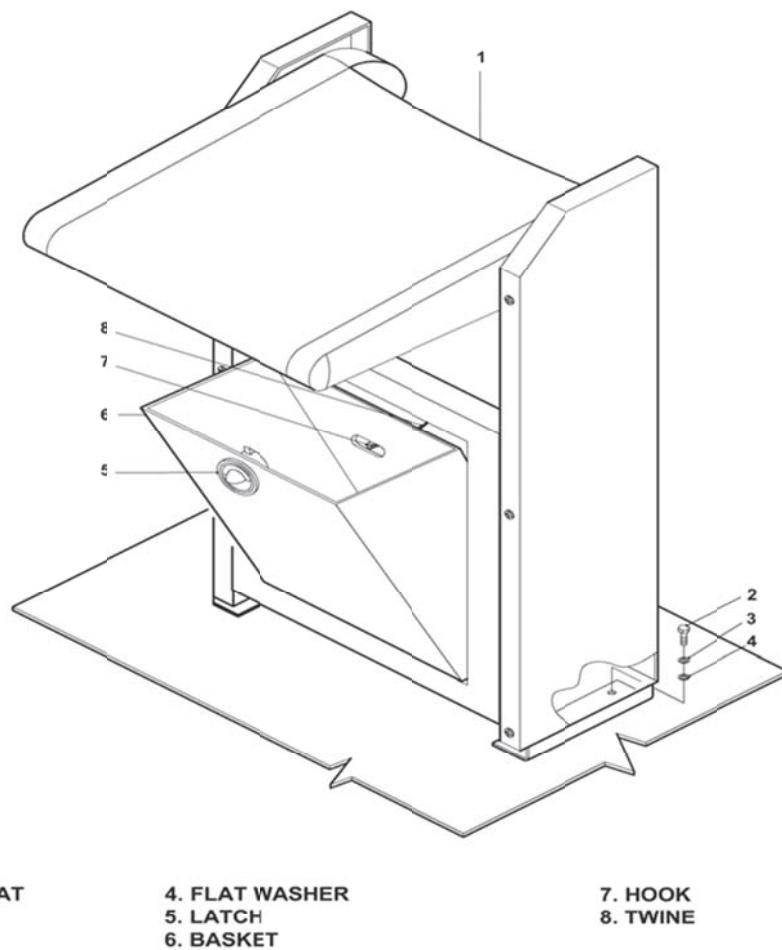


Figure 02-I-02.85 Auxiliary Driver Seat

02-I-02.05.03 Visors

The vehicle is equipped with six Visors (Refer to Figure 02-I-02.87), to provide comfort to the operator during vehicle operations. The visors are adjustable by a block that slide along the sliding rod. Three visors are installed in the operator's cab as follows:

- Two Lateral Visors (cab window side).
- One Front Visor (windshield side).

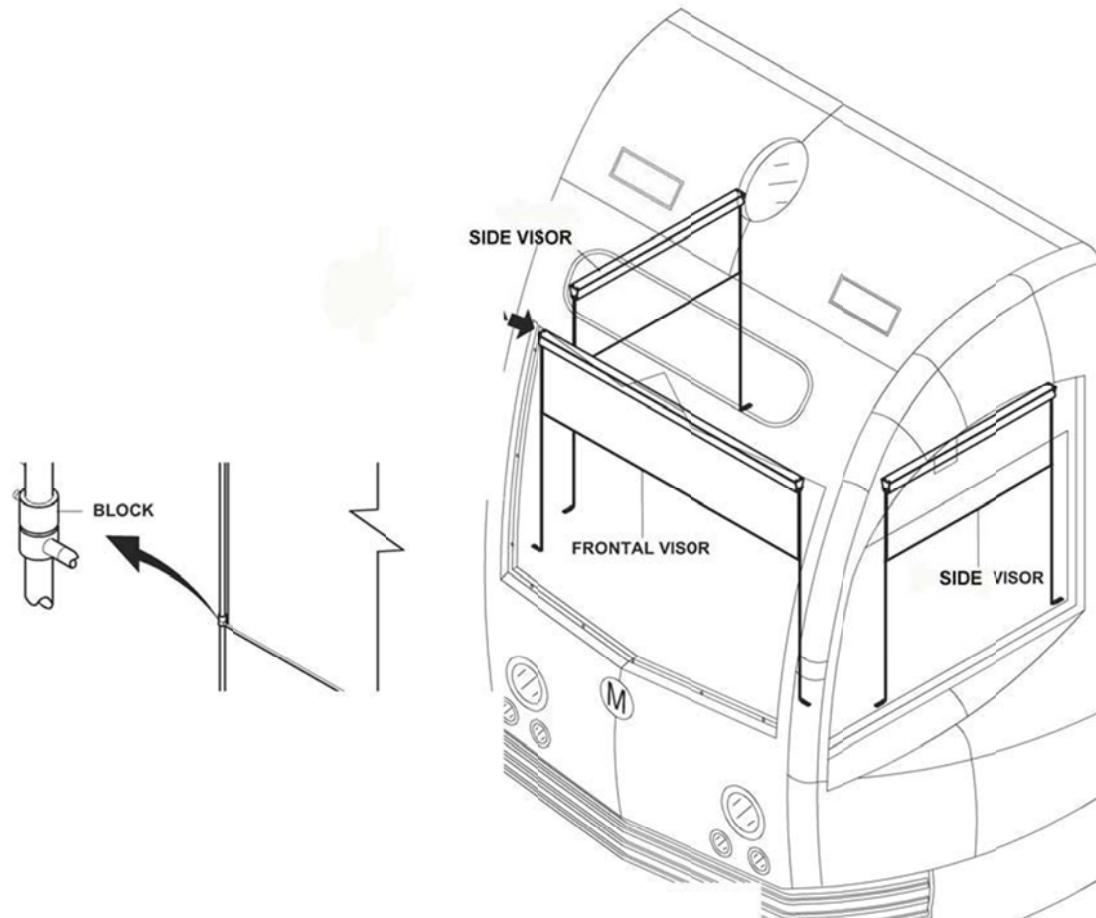
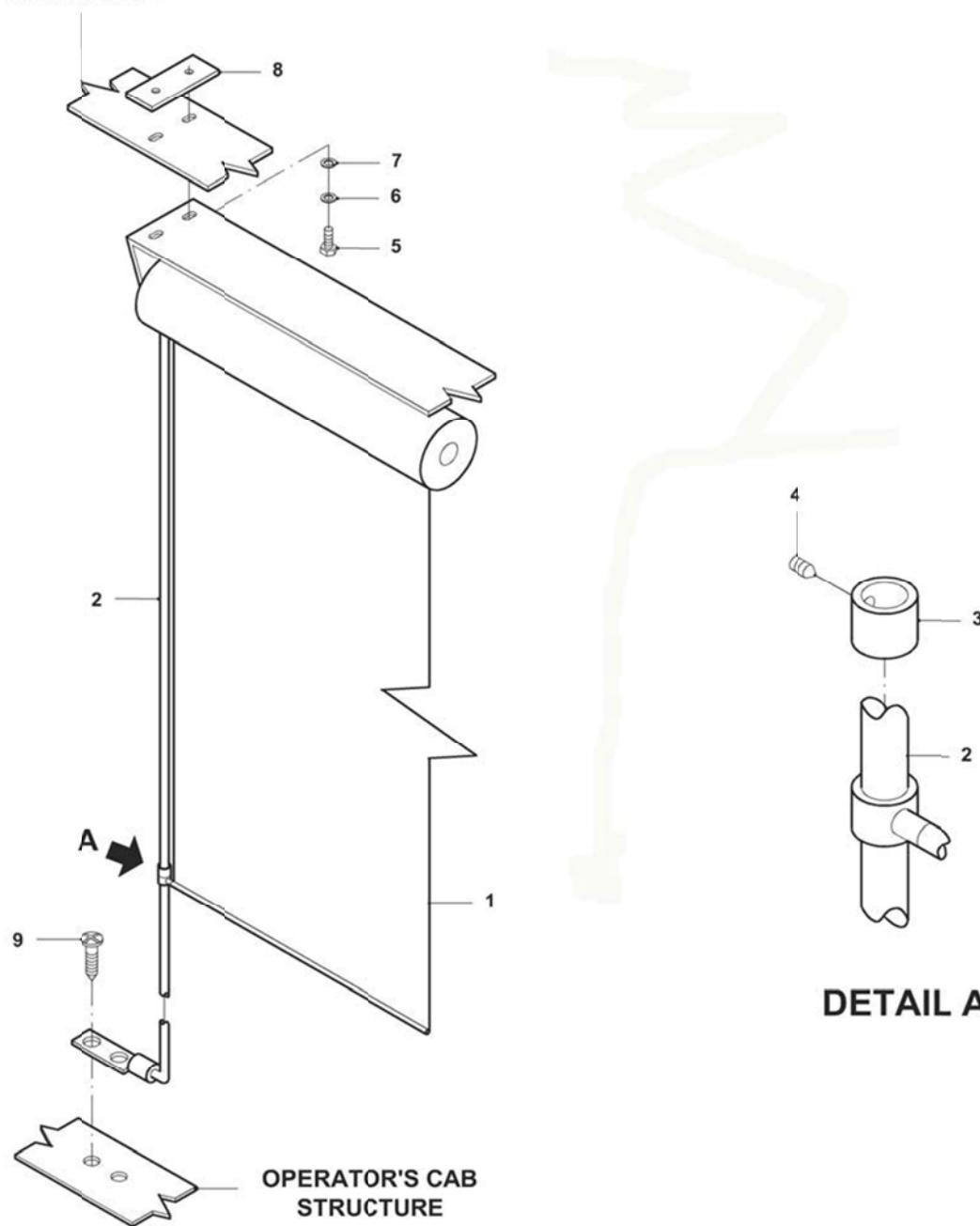


Figure 02-I-02.86 Visors (1)

**OPERATOR'S CAB
STRUCTURE**


1. VISOR
2. SLIDING ROD
3. BLOCK

4. PIN
5. SCREW
6. SPRING WASHER

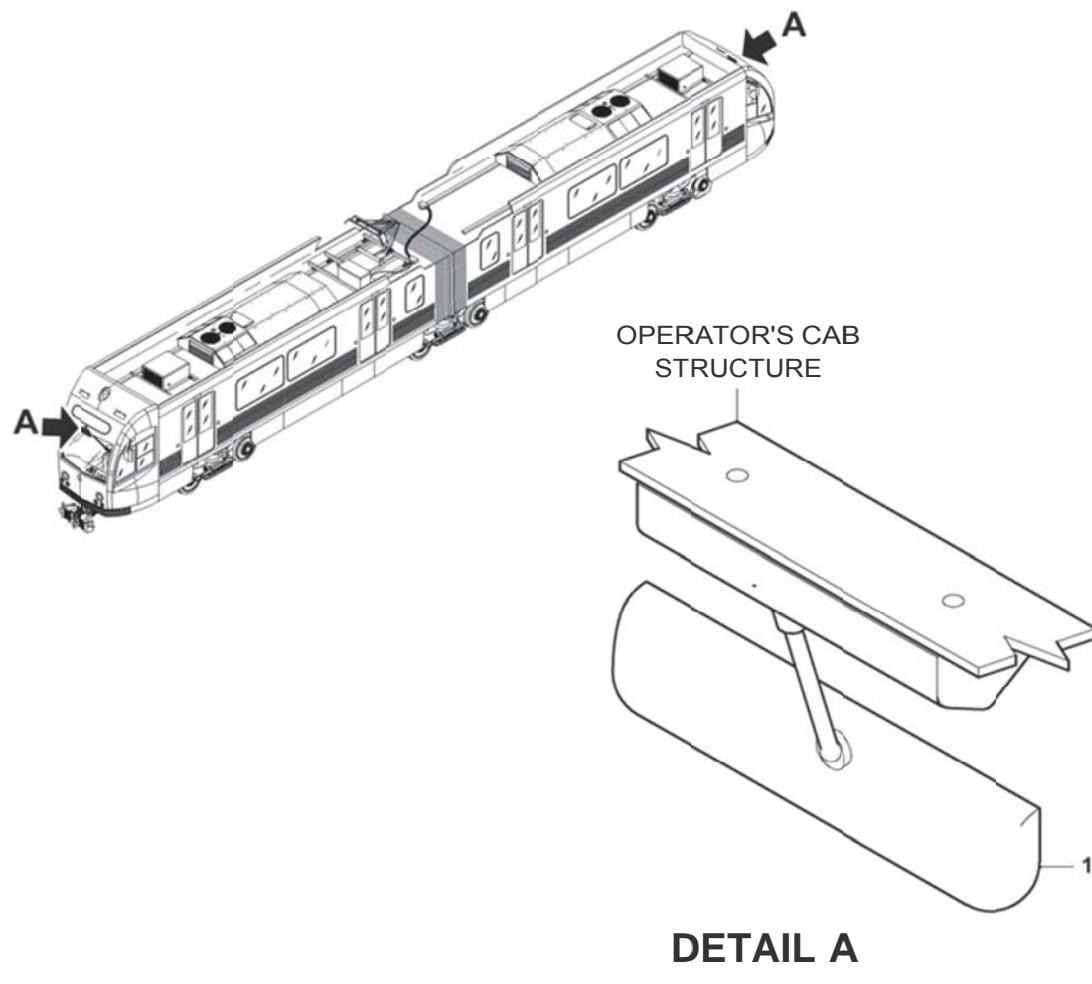
7. FLAT WASHER
8. PLATE
9. SCREW

Figure 02-1-02.87 Visors (2)

02-1-02.05.04 Rear-View Interior Mirror

Each Operator's Cab is equipped with one Rear-View Interior Mirror (Refer to Figure 02-1-02.88), installed on the middle side of the interior cab.

The mirror is a convex type glass with durable silvering and provided with an impact resistant edge trim.



1. REAR-VIEW INTERIOR MIRROR

Figure 02-1-02.88 Interior Mirror

02-I-02.05.05 The Control Console

The Control Console is made up of a desktop mounted on top of the covering structure and bolted to the cab's structure.

The Control Console contains the Dashboard and the Operator Console.

The Dashboard is mounted on the desktop and contains most of the commands and switches used for controlling and operating the vehicle.

The Operator Console, mounted on the dashboard contains:

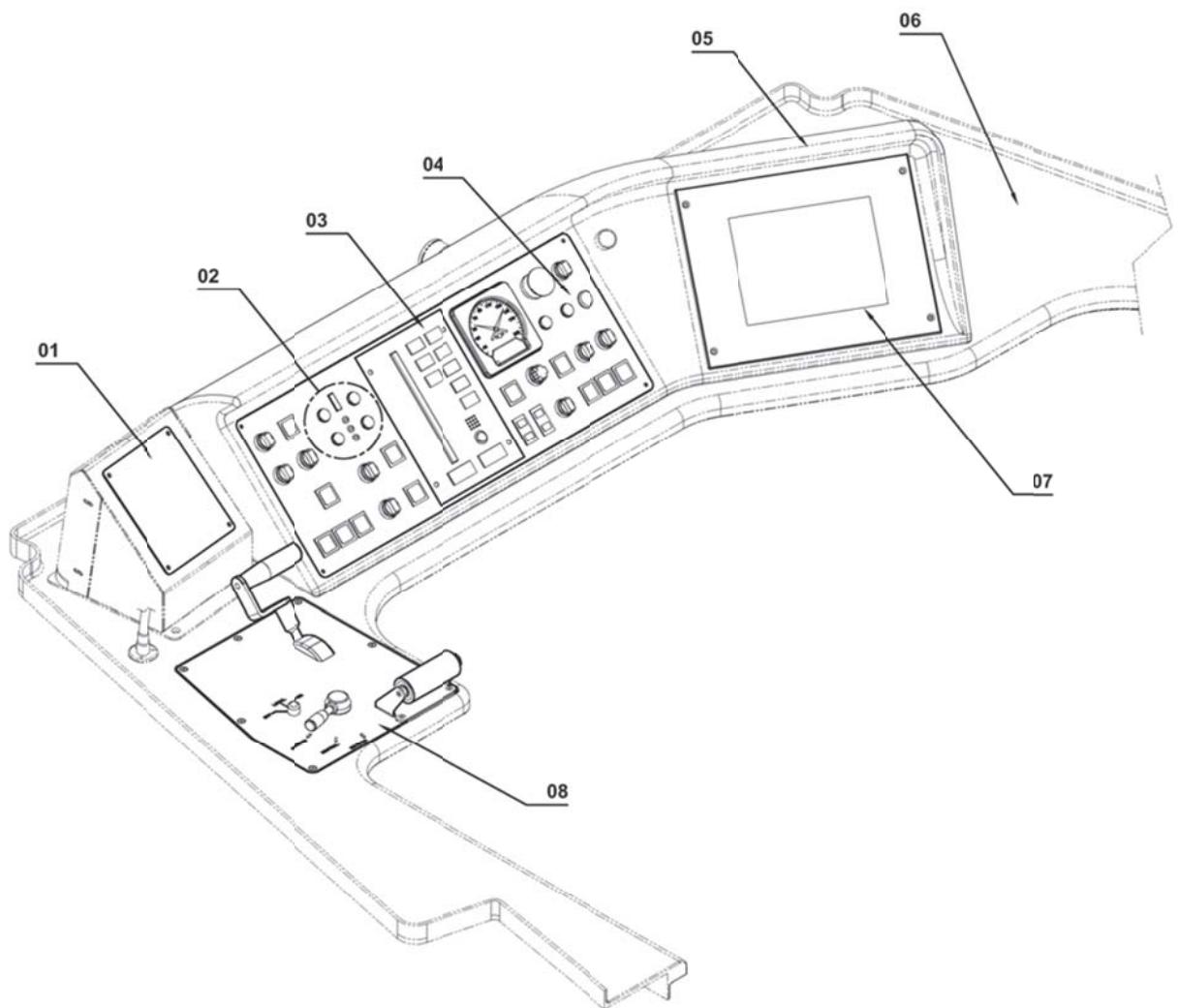
- The Aspect Display Unit (ADU - refer to Section 15)
- The Communication Control Head (CCH - refer to Section 14)

The Console, complete with commands, switches and control lights refer to Section 10); the Integrated Diagnostic Unit (IDU – refer to Section 18) is mounted at the right of the Dashboard, above the Automatic Annunciation Display System and the Radio (refer to Section 14).

On the left of the Operator seat a panel with latches hides the Drum Switch emergency handle (refer to Section 03) and the Park Brake Release handle (refer to Section 13).

The Fire extinguisher is located in a special housing at the right of the Radio System.

The LV (Low Voltage) and MV (Medium Voltage) Circuit Breaker panels are located at the back of the Operator Seat, on the Cab Dividing Wall.

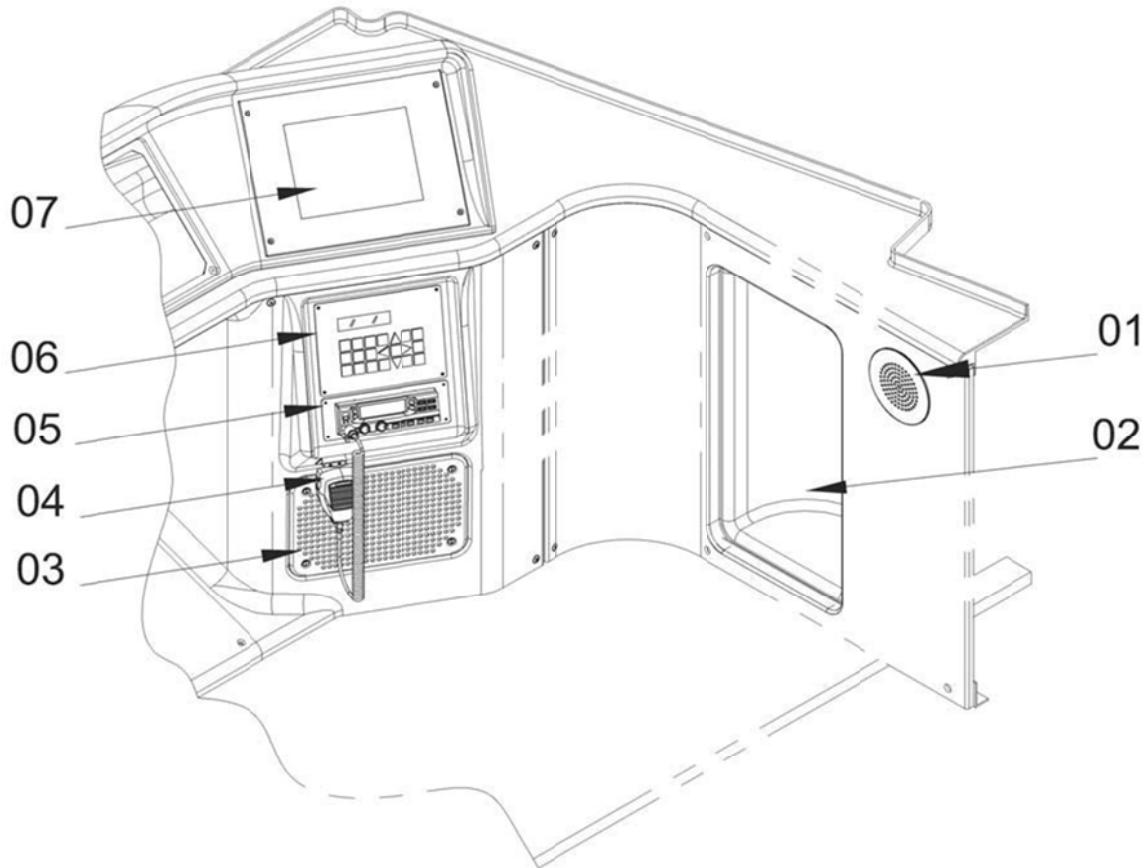


01. TWC CONTROL UNIT
04. OPERATOR CONSOLE
07. IDU

02. CCH
05. DASHBOARD
08. MASTER CONTROLLER CONSOLE

03. ADU
06. DESKTOP

Figure 02-I-02.89 Operator Console and Dashboard



01. INTERNAL COMMUNICATION
LOUDSPEAKER
04. RADIO MICROPHONE
07. IDU

02. FIRE EXTINGUISHER
05. VHF TWO WAY RADIO

03. RADIO LOUDSPEAKER
06. AADS

Figure 02-I-02.90 AADS and Radio

SECTION 02

CAR BODY PART II

TROUBLESHOOTING

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SECTION 02

CAR BODY

02-II-01 INTRODUCTION

This Section of the Running Maintenance and Service Manual is divided into three Parts:

- Part I: Theory of Operation
- Part II: Troubleshooting
- Part III: Maintenance

Each Paragraph is numbered accordingly, to avoid that paragraphs of the same Section, pertaining to a different Part, have the same number.

Part I – Theory of Operation

Part I gives a thorough overlook of the System structure and operation, by means of descriptions, figures, photos, schematics, block diagrams and flow charts, together with references to other documents or Sections when needed.

Part II – Troubleshooting

It gives the Maintenance Technicians a path to troubleshoot the System in every condition by means of the available tools:

- The PTU, equipped with the specific SW program;
- The IDU;
- The Fault Isolation Table.

The Part III – Maintenance consists of:

- Preventive Maintenance
- Corrective Maintenance
- Consumable Materials
- Test Equipment, Tools & Special Tools

02-II-01.a LIST OF ABBREVIATIONS, ACRONYMS AND SYMBOLS

The Abbreviations, Acronyms and Symbols commonly used throughout this manual are given below with their related meaning.

Abbreviation	Meaning2
AADS	Automatic Announcement and Display System
ACU	Air Compressor Unit
ADU	Aspect Display Unit
APS	Auxiliary Power Supply
ATP	Automatic Train Protection
BCU	Brake Control Unit
C/L	Centerline
CCH	Communication Control Head
DC/DC	Direct Current / Direct Current
EMI	Electromagnetic Interference
FRP	Fiber Reinforced Polymer
GPS	Global Positioning System
HCT	Harmonic Current Transducer
HSCB	High Speed Circuit Breaker
HV	High Voltage
HVAC	Heat Ventilation & Air Conditioning
IDU	Integrated Diagnostic Unit
LH	Left Hand Side
LRV	Light Rail Vehicle
LV	Low Voltage
LVPS	Low Voltage Power Supply
MBL	Metro Blue Line
MC	Master Controller
MGL	Metro Gold Line
MTA	Metropolitan Transportation Authority
MV	Medium Voltage
PGL	Pasadena Gold Line
RH	Right Hand Side
SUPP	Support
TBS	To Be Supplied
TOR	Top Of Rail
TOR	Top Of Rail
TWC	Train-to-Wayside Communication
VHF	Very High Frequency

02-II-01.b LIST OF DEFINITIONS

The Definitions commonly used throughout this manual are given below with their related meaning.

Definition	Meaning
'A' body section.....	The section of an articulated vehicle containing the pantograph
'B' body section.....	The section of an articulated vehicle not containing the pantograph
AW0.....	Empty car operating weight
AW1.....	Full seated load plus AW0
AW2.....	Standees at 4 persons per square meter plus AW1
AW3.....	Standees at 6 persons per square meter plus AW1
AW4.....	Standees at 8 persons per square meter plus AW1
Front door.....	The door close to the Operator's Cab
Rear door.....	The door close to the Articulation Section

02-II-01.c LIST OF MEASUREMENT UNITS AND SYMBOLS

The Measurement Units commonly used throughout this manual are given below with their related meaning.

Definition	Meaning
Ft.....	Foot
gal.....	Gallon
In.....	Inch
Kg.....	Kilogram – approx 2.205 pounds
km.....	Kilometer – approx 0.621 miles
kN.....	Kilo-Newton – approx 224.809 pounds force
Lb.....	Pound
lb-ft.....	Pound force
m.....	Meter – approx 3.28 feet
mm.....	Millimeter – approx 0.0394 inches

02-II-02 TROUBLESHOOTING

02-II-02.01 General

Most of the Car Body is designed to have no structural stress during the Vehicle's operating life.

For this reason, in normal service conditions, the repair of structural parts will be necessary only for railroad accidents.

When a structural damage is diagnosed/detected, the repair may not be made until a car-builder engineering evaluation is completed and repair parameters and procedures are established.

02-II-02.02 Fault Isolation / Repair Tables

The Fault Isolation / Repair Table lists the System's Malfunction Symptoms with the relevant Probable Causes and Corrective Actions to be accomplished to fix the Fault.

The Malfunction Symptoms are listed, sequenced in alphabetical order, by SUBSYSTEM /ASSEMBLY and are provided by Unit / Component.

The Corrective Actions are provided with reference to the relevant Maintenance Sheets the Maintainer should refer to in order to have specific detailed Procedures to be followed.

NOTE: The Preventive and Corrective Maintenance Sheets are consistent, respectively, with the Preventive Maintenance Plan and the Corrective Maintenance Analysis (CMA) of the Vehicle.

For this reason, when, in the Fault Isolation / Repair Table, the Maintenance Sheet reference is "Blank", it means that the relevant Corrective Action is not specifically indicated in the above AB Documentation and, consequently, that it is not specifically provided in any Maintenance Sheet.

Table 02-II-02.1 Fault Isolation/Repair

SUBSYSTEM / ASSY		ARTICULATION SECTION		
Unit / Component	Malfunction Symptom	Probable Cause	Corrective Action	Refer to -Sheet
BELLOW	1. Vibrations. Noise	1. Attaching parts loose / damaged.	1. Inspect	R-P-02-08-06-00/I-00
	2. Heavy damage	1. Vandalism / impact	1. Replace	R-C-02-08-06-00/R-00
STRUCTURE	1. Components damaged	1. Heavy stress / impact.	1. Replace.	R-C-02-08-01-00/R-00
	2. Worn attaching part seats.	1. Attaching parts loose.	1. Inspect	R-P-02-08-05-00/I-00
	3. Corrosion.	1. Galvanic effect.	1. Investigate.	
CONNECTION - ARTICULATION JOINT	1. Vibrations.	1. Bolts loose / damaged.	1. Inspect	R-P-02-08-02-00/I-00
	2. Resilient Pin damaged.	1. Heavy stress.	1. Investigate. Replace	R-C 12-02-00-00/R-00
	3. Slewing Ring defective.	1. Heavy stress	1. Investigate. Replace	H-C-12-02-06-00-R-00
CENTERING DOME SYSTEM	1. Dome not perpendicular to the track plane.	1. Heavy stress	1 Replace	R-C-02-08-03-00/R-00
INTERNAL DOME & INNER RUBBERS	1. Dome not perpendicular to the track plane.	1. Centering Dome Spring(S) Device defective.	1. Inspect.	R-P-02-08-03-00/I-00
	2. Vibrations. Noise	1. Attaching parts loose / damaged.	2. Replace	R-C-02-08-03-00/R-00
	3. Inner rubbers damaged.	1. Heavy stress./ Vandalism	1. Inspect	R-P-02-08-05-00/I-00
ARTICULATION FLOOR	1. Covings / Moldings not properly fitted.	1. Attaching part loose /defective	1. inspect	R-P-02-08-04-00/S-0
	2. Rubber Sheet(S) damaged.	1. Heavy stress / vandalism.	1. Replace	R-C-02-08-04-00/R-00

SUBSYSTEM / ASSY		DRIVER CAB INTERIORS		
Unit / Component	Malfunction Symptom	Probable Cause	Corrective Action	Refer to -Sheet -
ROOF ASSEMBLY	1. Vibrations. Noise	1. Attaching parts defective / loose.	1. inspect / fasten.	
	2. Panels damaged.	1. Vandalism / Impact.	1. Replace.	R-C-02-12-01-00/R-00
CENTRAL COVERING ASSEMBLY	1. Vibrations. Noise	1. Attaching parts defective / loose.	1. inspect / fasten.	
	2. Panels damaged.	1. Vandalism / Impact.	1. Replace.	R-C-02-12-02-00/R-00
CONSOLE BASE PLANE	1. Vibrations. Noise	1. Attaching parts defective / loose.	1. Inspect / fasten.	
	2. Panels damaged.	1. Vandalism / Impact.	1. Replace.	R-C-02-12-03-00/R-00
CAB LINING PANELS	1. Vibrations. Noise	1. Attaching parts defective / loose.	1. Inspect / fasten.	
	2. Panels damaged.	1. Vandalism / Impact.	1. Replace.	R-C-02-12-04-00/R-00

(cont'd)

Table 02-II-02.1 Fault Isolation/Repair

SUBSYSTEM / ASSY		DRIVER CAB INTERIORS (cont'd)		
Unit / Component	Malfunction Symptom	Probable Cause	Corrective Action	Refer to -Sheet -
OPERATOR CONSOLE	1. Vibrations. Noise	1. Attaching parts defective / loose.	1. Inspect / fasten.	
	2. Panels damaged	1. Vandalism / Impact.	1. Replace.	R-C-02-12-09-00/R-00
FRONT AIR DIFFUSER ASSEMBLY	1. Vibrations. Noise	1. Attaching parts defective / loose.	1. Inspect / fasten.	
	2. Diffuser damaged.	1. Impact	1. Replace.	R-C-02-12-10-00/R-00
ELECTRICAL CABINET ASSY	1. Vibrations. Noise	1. Attaching parts defective / loose.	1. Inspect / fasten.	
	2. Cabinet damaged	1. Vandalism / Impact.	1. Replace.	R-C-02-12-11-00/R-00
CAB PARTITION WALL ASSY	1. Vibrations. Noise	1. Attaching parts of Panels defective / loose.	1. Inspect / fasten.	
		2. Cab Door Hinges not properly fitted / damaged.	1. Inspect / fasten./ replace Hinges	
	2. Panels damaged	1. Vandalism / Impact.	1. Replace.	R-C-02-12-12-00/R-00
CAB DOOR LOCK	3. Door damaged	1. Vandalism / Impact	1. Replace.	R-C-02-12-12-00/R-00
	1. Vibrations. Noise	1. Attaching parts defective / loose.	1. Inspect / fasten.	
	2. Door Lock do not properly operate.	1. Latch devices dirty	1. Clean / Lubricate	
CAB DOOR WINDOW	3. Door Lock seriously damaged	1. Vandalism / Impact.	1. Replace.	R-C-02-12-15-00/R-00
	1. Window Sliding Section does not operate properly	1. Slide Carriage / Racks mechanism. & Latches dirty	1. Clean / Lubricate	R-P-02-12-08-00/S-00
		2. Slide Carriage / Racks mechanism. & Latches defective.	1. Replace.	R-C-02-12-16-00/R-00
	2. Cab Door Window seriously damage	1. Vandalism / Impact	1. Replace.	R-C-02-12-16-00/R-00

SUBSYSTEM / ASSY		FRONT HEAD		
Unit / Component	Malfunction Symptom	Probable Cause	Corrective Action	Refer to -Sheet --
FRONT HEAD	1 .Front Head scratched or lightly damaged.	1. Vandalism / Impact.	1. Repair/Paint	Sect 02 H-CM Sheets
	2 .Front Head seriously damaged	1. Vandalism / Impact.	1. Replace	R-C-02-03-01-00/R-00

(cont'd)

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Table 02-II-02.1 Fault Isolation/Repair

SUBSYSTEM / ASSY		FRONT HEAD ASSY(cont'd)		
Unit / Component	Malfunction Symptom	Unit / Component	Corrective Action	Refer to -Sheet
RIGHT SKIRT ASSY	1. Skirt does not open or close correctly.	1. Square key latch damaged.	1. Replace the latch	
		2. Latch to be adjusted.	1. Insert / remove shim(s) on each latch to adjust the clearance.	R-C-02-03-02-00/R-00
	2. Skirt scratched or lightly damaged.	1. Vandalism / Impact.	1 .Replace for Repair.	R-C-02-03-02-00/R-00
	3. Skirt seriously damaged.	1. Vandalism / Impact.	1 .Discard & Replace	R-C-02-03-02-00/R-00
LEFT SKIRT ASSY	1. Skirt does not open or close correctly.	1. Square key latch damaged.	1. Replace the latch	
		2. Latch to be adjusted	1. Insert/remove shim(s) on each latch to adjust the clearance.	R-C-02-03-03-00/R-00
	2. Skirt scratched or lightly damaged.	1. Vandalism / Impact.	1 .Replace for Repair.	R-C-02-03-03-00/R-00
	3. Skirt seriously damaged.	1. Vandalism / Impact.	1 .Discard & Replace	R-C-02-03-03-00/R-00

SUBSYSTEM / ASSY		MIRRORS		
Unit / Component	Malfunction Symptom	Probable Cause	Corrective Action	Refer to -Sheet
EXTERIOR REAR-VIEW LEFT & RIGHT MIRROR	1. Exterior Rear-View Mirror does not work.	1. Mirror CB (Circuit Breaker Panel) is open.	1. Close Mirror CB.	
		2. Mirror Motor defective.	1. Replace Mirror Unit.	R-C-02-11-01-00/R-00
		3. Mirror Adjuster Switch (10S05) defective.	1. Replace Switch.	R-C-02-11-03-00/R-00
		4. Mirror CB (10F03) defective.	1. Replace Mirror. CB	R-C-02-11-04-00/R-00
		5. Fault in the Electrical System.	1. Check System electrical continuity.	
	2. Mirror(s) damaged.	1. Impact.	1. Replace.	R-C-02-11-01-00/R-00
	3. Mirror support is stuck.	1. Support connection not lubricated.	1. Lubricate.	
INTERIOR MIRROR	1. Vibrating Mirror.	1. Attaching / Adjusting parts loose / damaged.	1. Check / Fasten / Replace as necessary	
	2. Mirror doesn't hold in position.	1 Adjusting parts loose / damaged.	1. Check / Fasten / Replace as necessary	

(cont'd)

Table 02-II-02.1 Fault Isolation/Repair

SUBSYSTEM / ASSY		OPERATOR'S SEAT		
Unit / Component	Malfunction Symptom	Probable Cause	Corrective Action	Refer to -Sheet
OPERATOR'S SEAT	1. Seat not properly fitted.	1. Attaching parts loose.	1. Fasten.	
	2. The seat does not operate properly.	1. Faulty adjustment devices.	1. Inspect & Lubricate	R-P-02-10-00-00/T-00
	3. Back cushion and / or soft seat damaged.	1. Heavy stress.	1. Replace	R-C-02-10-00-00/R-00
SUBSYSTEM / ASSY		PASSENGERS INTERIORS		
Unit / Component	Malfunction Symptom	Probable Cause	Corrective Action	Refer to -Sheet
FLOOR PLY-METAL PANELS	1. Covings / Moldings not properly fitted.	1. Attaching part loose /defective	1. inspect	
	2. Rubber Sheet(S) damaged.	1. Heavy stress / vandalism.	1. Replace	R-C-02-13-01-00/R-00
LEFT & RIGHT BOX ASSY	1. Vibrations. Noise	1. Attaching parts defective / loose.	1. Inspect / fasten.	
	2. Serious damage	1. Vandalism / Impact	1. Replace	R-C-02-13-02-00/R-00
CENTER CEILING ASSY	1. Vibrations. Noise	1. Attaching parts defective / loose.	1. Inspect / fasten.	
	2. Panels damaged	1. Vandalism / Impact	1. Replace	R-C-02-13-04-00/R-00
	3. Panels paint damaged	1. Vandalism	1. Replace for Repair	R-C-02-13-04-00/R-00
SIDE CEILING ASSY	1. Vibrations. Noise	1. Attaching parts defective / loose.	1. Inspect / fasten.	
	2. Panels damaged	1. Vandalism / Impact	1. Replace	R-C-02-13-05-00/R-00
	3. Panels paint damaged	1. Vandalism	1. Replace for Repair	R-C-02-13-05-00/R-00
HEADER PANEL ASSY	1. Vibrations. Noise	1. Attaching parts defective / loose.	1. Inspect / fasten.	
	2. Panels damaged	1. Vandalism / Impact	1. Replace	R-C-02-13-06-00/R-00
	3. Panels paint damaged	1. Vandalism	1. Replace for Repair	R-C-02-13-06-00/R-00
WAINSCOT ASSY	1. Vibrations. Noise	1. Attaching parts defective / loose.	1. Inspect / fasten.	
	2. Panels damaged	1. Vandalism / Impact	1. Replace	R-C-02-13-07-00/R-00
	3. Panels paint damaged	1. Vandalism	1. Replace for Repair	R-C-02-13-07-00/R-00
AISLE PANELS ASSY	1. Vibrations. Noise	1. Attaching parts defective / loose.	1. Inspect / fasten.	
	2. Panels damaged	1. Vandalism / Impact	1. Replace	R-C-02-13-08-00/R-00
	3. Panels paint damaged	1. Vandalism	1. Replace for Repair	R-C-02-13-08-00/R-00

(cont'd)

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Table 02-II-02.1 Fault Isolation/Repair

SUBSYSTEM / ASSY		PASSENGERS INTERIORS (cont'd)		
Unit / Component	Malfunction Symptom	Unit / Component	Corrective Action	Refer to -Sheet
STANCHIONS & HANDRAILS ASSY	1. Vibrations. Noise	1. Clamps / attaching parts loose.	1. Inspect / fasten.	
	2. Serious damage	1. Vandalism / Impact	1. Replace	R-C-02-13-09-00/R-00
WINDSCREEN PANELS ASSY	1. Vibrations. Noise	1. Attaching parts defective / loose.	1. Inspect / fasten.	
	2. Panels damaged	1. Vandalism / Impact	1. Replace	R-C-02-13-10-00/R-00
	3. Panels paint damaged	1. Vandalism	1. Replace for Repair	R-C-02-13-10-00/R-00
DOOR POCKET ASSY	1. Vibrations. Noise	1. Attaching parts defective / loose.	1. Inspect / fasten.	
	2. Panels damaged	1. Vandalism / Impact	1. Replace	R-C-02-13-11-00/R-00
	3. Panels paint damaged	1. Vandalism	1. Replace for Repair	R-C-02-13-11-00/R-00
WINDOW MASK ASSY	1. Vibrations. Noise	1. Attaching parts defective / loose.	1. Inspect / fasten.	
	2. Panels damaged	1. Vandalism / Impact	1. Replace	R-C-02-13-12-00/R-00
	3. Panels paint damaged	1. Vandalism	1. Replace for Repair	R-C-02-13-12-00/R-00
ELECTRICAL LOCKER ASSY	1. Vibrations. Noise	1. Attaching parts of Panels defective / loose.	1. Inspect / fasten.	
		2. Cab Door Hinges not properly fitted / damaged.	1. Inspect / fasten./ replace Hinges	
	2. Panels damaged.	1. Vandalism / Impact.	1. Replace.	R-C-02-13-13-00/R-00
	3. Door damaged.	1. Vandalism / Impact	1. Replace.	R-C-02-13-13-00/R-00
	4. Door Lock do not properly operate.	1. Latch devices dirty	1. Clean / Lubricate	
	4. Door Lock seriously damaged	1. Vandalism / Impact.	1. Replace.	

SUBSYSTEM / ASSY		PASSENGER SEATS		
Unit / Component	Malfunction Symptom	Probable Cause	Corrective Action	Refer to -Sheet -
2 SEATERS TRANSVERSAL ASSY (LH & RH)	1. Vibrations Noise..	1. Attaching parts loose.	1. Fasten.	
	2. Seat frame damaged.	1. Vandalism.	1. Replace	R-C-02-09-01-00/R-00
	3. Seat shell damaged.	1. Vandalism.	1. Replace	R-C-02-09-01-00/R-00
2 SEATERS LONGITUDINAL ASSY	1. Vibrations Noise..	1. Attaching parts loose.	1. Fasten.	
	2. Seat Frame damaged.	1. Vandalism.	1. Replace	R-C-02-09-04-00/R-00
	3. Seat Shell Damaged.	1. Vandalism.	1. Replace	R-C-02-09-04-00/R-00

(cont'd)

Table 02-II-02.1 Fault Isolation/Repair

SUBSYSTEM / ASSY		PASSENGER SEATS(cont'd)		
Unit / Component	Malfunction Symptom	Probable Cause	Corrective Action	Refer to -Sheet -
3 SEATERS LONGITUDINAL ASSY	1. Vibrations Noise..	1. Attaching parts loose.	1. Fasten.	
	2. Seat Frame damaged.	1. Vandalism.	1. Replace	R-C-02-09-05-00/R-00
	3. Seat Shell damaged.	1. Vandalism.	1. Replace	R-C-02-09-05-00/R-00
2 SEATERS LONGITUDINAL ASSY OVER BOX	1. Vibrations Noise..	1. Attaching parts loose.	1. Fasten.	
	2. Seat Frame damaged.	1. Vandalism.	1. Replace	R-C-02-09-06-00/R-00
	3. Seat Shell damaged.	1. Vandalism.	1. Replace	R-C-02-09-06-00/R-00
	4. Under Seat Box attaching parts loose	1. Vandalism	1. Fasten.	
	5. Under Seat Box damaged	1. Vandalism	1. Replace	R-C-02-13-02-00/R-00
1 SEATER LIFTABLE LONGITUDINAL ASSY	1. Attaching parts loose.	1. Vibrations Noise.	1. Fasten.	
	2. Seat / back frame damaged.	1. Vandalism.	1. Replace	R-C-02-09-02-00/R-00
	3. Pivot point defective / damaged.	1. Vandalism / Heavy stress.	1. Replace	R-C-02-09-02-00/R-00
	4. Rattling Seat.	1. Flip-Up seat assembly not properly fastened.	1. Fasten.	
3-SEATERS FLIP-UP LONGITUDINAL ASSY	1. Attaching parts loose.	1. Vibrations Noise.	1. Fasten.	
	2. Seat / back frame damaged.	1. Vandalism.	1. Replace	R-C-02-09-03-00/R-00
	3. Pivot point defective / damaged.	1. Vandalism / Heavy stress.	1. Replace	R-C-02-09-03-00/R-00
	4. Rattling Seat.	1. Flip-Up seat assembly not properly fastened.	1. Fasten.	

SUBSYSTEM / ASSY		ROOF FAIRINGS		
Unit / Component	Malfunction Symptom	Probable Cause	Corrective Action	Refer to -Sheet
ROOF FAIRINGS	1. Vibrations Noise	1. Attaching parts loose	1. Fasten attaching parts.	R-C-02-04-00-00/R-00
	1. Fairings scratched or lightly damaged.	1. Vandalism / Impact.	1 .Replace for Repair.	R-C-02-04-00-00/R-00
	1. Fairings seriously damaged	1. Vandalism / Impact.	1 .Discard & Replace	R-C-02-04-00-00/R-00

(cont'd)

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Table 02-II-02.1 Fault Isolation/Repair

SUBSYSTEM / ASSY		SKIRTS		
Unit / Component	Malfunction Symptom	Probable Cause	Corrective Action	Refer to -Sheet
SKIRTS	1. Skirt does not open or close correctly.	1. Square key latch damaged. 2. Latch to be adjusted	1. Replace Square key latch 1. Insert / remove shim(s) on each latch to adjust the clearance.	R-C-02-05-00-00/R-00
	2. Skirt scratched or lightly damaged.	1. Vandalism / Impact.	1 .Replace for Repair.	R-C-02-05-00-00/R-00
	3. Skirt seriously damaged.	1. Vandalism / Impact.	1 .Discard & Replace	R-C-02-05-00-00/R-00
SUBSYSTEM / ASSY		WINDOWS		
Unit / Component	Malfunction Symptom	Probable Cause	Corrective Action	Refer to -
WINDSHIELD	1. Water leakage.	1. Gasket faulty or damaged.	1. Replace the gasket.	R-C-02-07-01-00/R-00
		2. Attaching parts loose	1. Fasten attaching parts.	R-C-02-07-01-00/R-00
	2. Glass damaged.	1. Vandalism / Impact.	1. Replace.	R-C-02-07-01-00/R-00
CAB SIDE WINDOW	1. Water leakage.	1. Gasket faulty or damaged.	1. Replace the gasket.	R-C-02-07-02-00/R-00
		2. Attaching parts loose	1. Fasten attaching parts.	R-C-02-07-02-00/R-00
	2. Glass damaged.	1. Vandalism / Impact	1. Replace.	R-C-02-07-02-00/R-00
	3. Shaking / rattling	1. Wearing or aging glass rubber	1. Replace	R-C-02-07-02-00/R-00
	4. Sliding glass blocked	1. Debris in sliding rails	1. Clean sliding rails	R-P-02-12-08-00/S-00
PASSENGER SIDE WINDOW	1. Water leakage.	1. Gasket faulty or damaged.	1. Replace	R-C-02-07-03-00/R-00
	2. Glass damaged.	1. Vandalism / Impact.	1. Replace	R-C-02-07-03-00/R-00
SIDE GLASS (SILK SCREENING)	1. Water leakage.	1. Gasket faulty or damaged.	1. Replace	R-C-02-07-04-00/R-00
	2. Glass damaged.	1. Vandalism / Impact.	1. Replace	R-C-02-07-04-00/R-00
SIDE GLASS (ART. SECT. SIDE)	1. Water leakage.	1. Gasket faulty or damaged.	1. Replace.	R-C-02-07-05-00/R-00
	2. Glass damaged.	1. Vandalism / Impact.	1. Replace.	R-C-02-07-05-00/R-00

SECTION 02

CAR BODY

PART III

MAINTENANCE

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SECTION 02

CAR BODY

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SECTION 02

CAR BODY

02-III-01 INTRODUCTION

The Car Body Part III – Maintenance consists of:

- Preventive Maintenance
- Corrective Maintenance
- Consumable Materials
- Test Equipment, Tools & Special Tools

02-III-01.a List of Abbreviations, Acronyms & Symbols

The Abbreviations, Acronyms and Symbols commonly used throughout this Section are given below with their relevant meaning.

Abbreviation	Meaning
AB	AnsaldoBreda
AC	Alternate Current
ADU	Aspect Display Unit
A/H	Ampere Per Hour
APS	Auxiliary Power Supply
ASSY	Assembly
CCH	Communication Control Head
CCU	Communication Control Unit
DC	Direct Current
DCU	Door Control Unit
ECU	Electronic Control Unit
ELE	Electronic
EMI	Electro Magnetic Interference
H-CML	Heavy Consumable Material List
H-CMS	Heavy Corrective Maintenance Sheet
HV	High Voltage
IDU	Integrated Diagnostic Unit
IPC	Illustrated Parts Catalog
LRV	Light Railway Vehicle
LV	Low Voltage
LVDC	Low Voltage Direct Current
MC	Master Controller
PS	Power Supply
PTU	Portable Test Unit
R-CML	Running Consumable Material List
R-CMS	Running Corrective Maintenance Sheet
RMSM	Running Maintenance & Service Manual
R-PMM	Running Preventive Maintenance Matrix
R-PMR	Running Preventive Maintenance Report
R-PMS	Running Preventive Maintenance Sheet
R-TESTL	Running Test Equipment, Tools & Special Tools List
SCPM	Safety Critical Preventive Maintenance
SYS	System
TBD	To Be Defined
TBS	To Be Supplied
TOC	Table Of Content
TTEM	Tools & Test Equipment Manual
VAC	Voltage Alternate Current
VDC	Voltage Direct Current
W/	With
W/O	Without

02-III-01.b List of Definitions

The Definitions commonly used throughout this Section are given below with their relevant meaning.

Definition	Meaning
'A' body section	The section of an articulated vehicle containing the pantograph
'B' body section	The section of an articulated vehicle not containing the pantograph
AW0	Empty car operating weight
AW1	Full seated load plus AW0
AW2	Standees at 4 persons per square meter plus AW1
AW3	Standees at 6 persons per square meter plus AW1
AW4	Standees at 8 persons per square meter plus AW1
Front door	The door close to the Operator's Cab
Rear door	The door close to the Articulation Section
MC Handle	Master Controller Handle
"A" Cab (or Cab A)	Operator Cab in the A body section
"B" Cab (or Cab B)	Operator Cab in the B body section

02-III-01.c List of Measurement Units

The Measurement Units commonly used throughout this Section are given below with their relevant meaning.

Definition	Meaning
ft	Foot (Length)
gal	Gallon (Volume)
in	Inch (Length)
kg	Kilogram – approx 2.205 pounds (Weight)
km	Kilometer – approx 0.621 miles (Length)
lb	Pound (Weight)
lb-ft	Pound force (Force)
m	Meter – approx 3.28 feet (Length)
mm	Millimeter – approx 0.0394 inches (Length)
mph	Miles per hour (Velocity)
Km/h	Kilometers per hour (Velocity)
s	Seconds (Time)
V	Volt (Tension)
Vdc	Direct Voltage (Tension)
Vac	Alternate Voltage (Tension)
kVA	Kilo-Volt-Ampere (Power)
kW	Kilo-Watt (Power)
W	Watt (Power)
F	Farad (Capacity)
H	Henry (Inductance)
Ω	Ohm (Resistance)
°F	Fahrenheit (Temperature)
°C	Celsius (Temperature)
A	Ampere (Current)
Hz	Herz (Frequency)
rpm	Revolution per Minute (Frequency)
N	Newton (Force)
Nm	Newton-Meter (Torque)
mphs	Mile Per Hour Per Second (Acceleration)

02-III-01.d References

Refer to Section 00 of this RMSM for details relevant to the following Topics :

Topic	Paragraph
MANUAL PURPOSE	00-02
MANUAL ARRANGEMENT	00-03
MANUAL APPLICABILITY	00-04
ACQUISITION OF COPIES, REVISIONS AND CHANGES	00-05
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02-III-02 P2550 ANSALDOBREDA MAINTENANCE PLAN

The AB Preventive Maintenance Plan (PMP) has been designed to permit a 30- year Structural and Service Vehicle Life with the following basic assumptions :

- Yearly mileage: 120,000 Miles
- Motor and Trailer Truck removal: Every 5 years. (600,000 Miles)

The AB Preventive Maintenance Plan (PMP) provides the Preventive Maintenance Tasks to be performed according the following Mileage Intervals:

Running Maintenance		Heavy Maintenance	
Daily			
10,000	Miles		
30,000	Miles	600,000	Miles
60,000	Miles	1,200,000	Miles
120,000	Miles	1,800,000	Miles

In accordance with the Preliminary Version of the AB Preventive Maintenance Plan, the Scheduled Maintenance Tasks for the entire Vehicle Life have been grouped into:

- Running Preventive Maintenance
- Heavy Preventive Maintenance

In accordance with the AB Corrective Maintenance Analysis, the Corrective Maintenance Tasks for the entire Vehicle Life have been grouped into:

- Running Corrective Maintenance
- Heavy Corrective Maintenance

02-III-03 RUNNING -PREVENTIVE MAINTENANCE**02-III-03.01 Running -Preventive Maintenance Matrixes (R-PMM)**

The Car Body Running -Preventive Maintenance Matrix (R-PMM) provides the Preventive Maintenance Plan of the Car Body up to 120,000 Miles. The Car Body (R-PMM) is provided in two different arrangements as follows:

- **R-PMM Component Based**

It lists the Car Body Running - Preventive Maintenance Tasks ordered by Subsystem /Assemblies / Component break down, followed by the PM Task Description and Scheduled Task Interval and linked to the relevant R-PM Sheet Code.

The R-PMM Component Based provides the Maintainer with the following data:

- SUBSYSTEM /ASSEMBLY/UNIT/COMPONENT
- TASK
- SCPM
- INSPECTION INTERVAL
- SHEET CODE

- **R-PMM Mileage Based**

It lists the Car Body Running - Preventive Maintenance Tasks ordered by Scheduled Maintenance Interval and broken down into the related Subsystem /Assemblies/Component followed by the PM Task Description and Person Hours and linked to the relevant R-PM Sheet Code.

The R-PMM Mileage Based provides the Maintainer with the following data:

- INSPECTION INTERVAL
- SYSTEM/SUBSYSTEM /ASSEMBLY/UNIT/COMPONENT
- TASK
- SCPM
- PERSON HOURS
- SHEET CODE

The data listed in this Matrix are the same of those listed in the R-PMM Component Based with the exception of the PERSON HOURS.

02-III-03.01.01 Definitions

The following definitions are applicable to both types of R-PMM

Tasks

- Cleaning:** Methods and processes required (Step-By-Step Instructions) for cleaning specific parts or areas of the Vehicle.
- Inspection:** Preventive Maintenance procedures such as those required to ascertain the serviceability of a Part, Assembly, System or the specific interrelationship of Parts that perform a functional operation.
- Lubrication:** Provides component lubrication Instructions.
- Replacement** Provides the Components / Assemblies and Subassemblies removal & installation in a logical sequential order.
Maintenance procedures identified in this topic include Components that are replaced within a 4 hours window.
- Service:** Operation performed to replenish Sand, Windshield Wiper Washer Fluid, HVAC Coolant, Gear and Compressor Oil, and Vehicle Lubrication.
- Test:** Procedures and Parameters to evaluate the operational efficiency and integrity of a System /Subsystem/Component and the interrelationship of Parts performing functional operations.

02-III-03.01.02 Inspection Intervals

The Running - Preventive Maintenance Intervals for the P2550 LRV Fleet are scheduled as follows:

Daily	10,000 Miles	30,000 Miles	60,000 Miles	120,000 Miles
-------	--------------	--------------	--------------	---------------

The marker “●” in the INSPECTIONS INTERVAL column, indicates the periodicity of the corresponding Task.

02-III-03.01.03 Safety Critical Preventive Maintenance (SCPM) Tasks

The marker “☒” in the SCPM column, indicates that the corresponding Task is a Safety Critical Preventive Maintenance (SCPM) Task, as per the results of the Safety Analyses performed, on Vehicle Subsystems, according to Vehicle Specification.

02-III-03.01.04 Sheet Code

The Sheet Code column, indicates the reference to Running -Preventive Maintenance Sheet where the Procedure to be performed is described and illustrated.

**THE SHEET CODE IS THE EXPLICIT LINK BETWEEN
R-PM MATRIXES, R-PMR /JOB CARDS AND R-PM SHEETS**

Refer to Paragraph 02-III-03.03.01 for Running- Preventive Maintenance Sheet (R-PMS) Form for detailed explanation.

02-III-03.01.05 Person Hours

It indicates the time required to perform the corresponding Task with the basic assumption that the Vehicle is on an Inspection Pit or Stand Up Rail, and the Consumables, Tools and Spare Parts needed to accomplish the Task are available at the Location of the Equipment to be maintained.

Refer to:

- Table 02-III-03.1 for Running - Preventive Maintenance Matrix (R-PMM) (Component Based)
- Table 02-III-03.2 for Running - Preventive Maintenance Matrix (R-PMM) (Mileage Based)

02-III-03.01.06 Running Preventive Maintenance Matrix (Component Based)

Table 02-III-03.1 Running Preventive Maintenance Matrix (Component Based)

SYSTEM 02		CAR BODY							
SUBSYSTEM ASSY/UNIT/COMPONENT	TASK	S C P M	INSPECTION INTERVAL MILES					SHEET CODE	
			Daily	10K	30K	60K	120K		
-ARTICULATION SECTION									
--CONNECTION - ARTICULATION JOINT	INSPECTION	<input checked="" type="checkbox"/>					•	R-P-02-08-02-00/I-00	
--CENTERING DOME SYSTEM	INSPECTION					•		R-P-02-08-03-00/I-00	
--ARTICULATION FLOOR ASSEMBLY	SERVICE						•	R-P-02-08-04-00/S-00	
--INTERNAL DOME & INNER RUBBERS	INSPECTION					•		R-P-02-08-05-00/I-00	
--OUTER BELLOW	INSPECTION					•		R-P-02-08-06-00/I-00	
-DRIVER CAB INTERIORS FINISHING AND ACCESSORIES									
-OPERATOR'S SEAT	TEST					•		R-P-02-10-00-00/T-00	
OPERATOR'S WINDOW & CAB DOOR WINDOW	SERVICE					•		R-P-02-12-08-00/S-00	

02-III-03.01.07 Running Preventive Maintenance Matrix (Mileage Based)
Table 02-III-03.2 Running Preventive Maintenance Matrix (Mileage Based)

SYSTEM 02		CAR BODY		
SUBSYSTEM	TASK	S C P M	PERSON HOURS	SHEET CODE
60,000 MILES				
-ARTICULATION SECTION				
--CENTERING DOME SYSTEM	INSPECTION		0.25	R-P-02-08-03-00/I-00
--INTERNAL DOME & INNER RUBBERS	INSPECTION		0.25	R-P-02-08-05-00/I-00
--OUTER BELLOW	INSPECTION		0.25	R-P-02-08-06-00/I-00
-DRIVER CAB INTERIORS FINISHING AND ACCESSORIES				
--OPERATOR'S SEAT	TEST		0.25	R-P-02-10-00-00/T-00
OPERATOR'S WINDOW & CAB DOOR WINDOW	SERVICE		0.25	R-P-02-12-08-00/S-00
120,000 MILES				
-ARTICULATION SECTION				
--CONNECTION - ARTICULATION JOINT	INSPECTION	<input checked="" type="checkbox"/>	3	R-P-02-08-02-00/I-00
--ARTICULATION FLOOR ASSEMBLY	SERVICE		2	R-P-02-08-04-00/S-00

02-III-03.02 Running -Preventive Maintenance Reports (R-PMR/Job Cards)

This paragraph describes the contents of the Car Body Running -Preventive Maintenance Reports (R-PMR/Job Cards) for the Running - Preventive Maintenance Tasks.

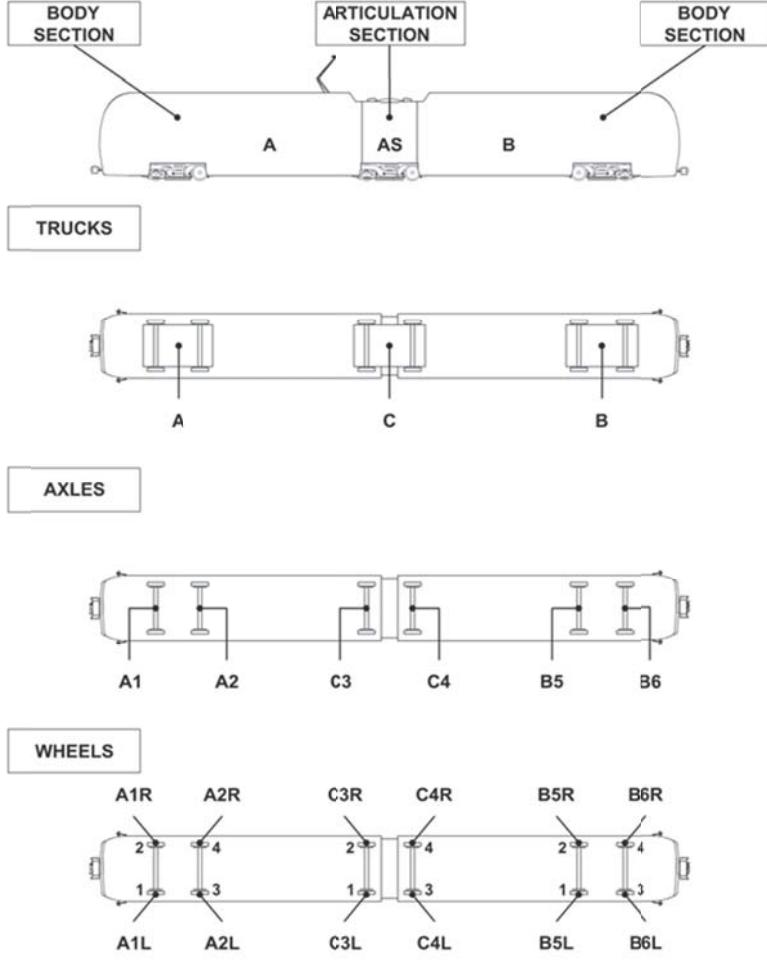
02-III-03.02.01 R-PMR/Job Card Form Content

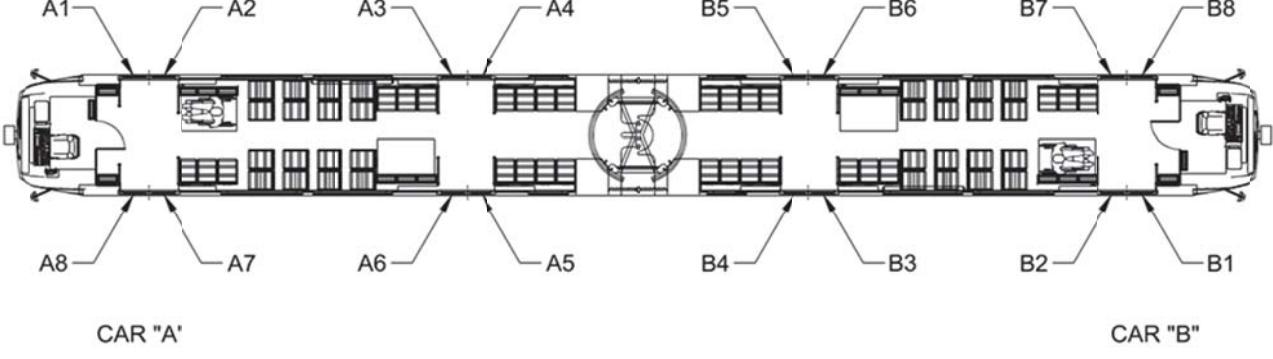
The R-PMR/JOB CARDS are broken down into two main topics:

- Specific Data
- R-PM Data

Refer to Figure 02-III-03.1 for R-PMR/JOB CARD Form example

RUNNING PREVENTIVE MAINTENANCE REPORTS (R-PMR/JOB CARDS) FORM		
SPECIFIC DATA TO BE FILLED IN BY THE MAINTAINER		
ITEM #	TITLE	EXPLANATORY NOTE
1	VEHICLE #	This field indicates the Vehicle Identification Number
2	DATE	This field indicates the Vehicle entering to Maintenance Shop Date
3	RUNNING HOURS	This field indicates the Vehicle Running Hours at the above Date
4	MILES	This field indicates the Vehicle Running Miles at the above Date.
5	EMPLOYEE # & SIGNATURE	This Field indicates the Employee # & Signature of the Maintainer(s) that perform the referred Task(s)
6	STARTING DATE	This field indicates the Starting Date of the referred Task(s).
7	WORK HOURS	This field indicates the Work duration to perform the referred Task(s).
8	COMPLETION DATE	This field indicates the Completion Date of the referred Task(s).
9	DEFECT FOUND/COMMENTS	This field indicates the result of the Task(s) execution and/ or note related to any items of the maintained Equipment requiring Corrective Maintenance
A	P2550 RUNNING PREVENTIVE MAINTENANCE REPORT SYSTEM (Maintenance Interval) JOB CARD	<p>This field provides R-PMR Title. The R-PM Maintenance Intervals are the following: Daily; 10,000 Miles; 30,000 Miles, 60,000 Miles, 120,000 Miles</p>
B	WORK AREA	<p>This column lists the On Vehicle Areas where the Equipment to be maintained is located The Work Areas are provided to optimize the jobs organization of the Preventive Maintenance tasks in order to:</p> <ol style="list-style-type: none"> 1- Respect the Safety Precautions to be followed 2- Complete the preparation and the availability of the Consumables, Tools and Spare Parts, needed to perform the referred Task. 3- Respect the time (PERSON HOURS) established to perform the referred Task (with the basic assumption that the Vehicle is on an Inspection Pit or Stand Up Rail and the Consumables, Tools and Spare Parts are available at the location of the Equipment to be maintained.) <p>The On Vehicle Work Areas are the following: Exterior - Interior - Roof - Truck - Undercar - Vehicle (Vehicle as a whole)</p>

RUNNING PREVENTIVE MAINTENANCE REPORTS (R-PMR/JOB CARDS) FORM (cont'd)		
SPECIFIC DATA TO BE FILLED IN BY THE MAINTAINER		
ITEM #	TITLE	EXPLANATORY NOTE
C	ITEM	<p>This column lists the Subsystem/Assembly, Unit, Component to be maintained</p>
D	TASK	<p>This column lists the R-PM tasks to be performed for each Assembly/Unit/Component (i.e., Cleaning, Inspection, Test)</p> <p>The R-PM Tasks are the following:</p> <ul style="list-style-type: none"> Cleaning - Inspection -Lubrication - Replacement – Service- Test
E	LOCATION	<p>This column lists the On Board Vehicle Location of all Equipment to be maintained according to the following Location identification Codes</p>  <p>BODY SECTION</p> <p>ARTICULATION SECTION</p> <p>BODY SECTION</p> <p>TRUCKS</p> <p>AXLES</p> <p>WHEELS</p>

RUNNING PREVENTIVE MAINTENANCE REPORTS (R-PMR/JOB CARDS) FORM (cont'd)		
SPECIFIC DATA TO BE FILLED IN BY THE MAINTAINER		
ITEM #	TITLE	
E (cont'd)	LOCATION (cont'd)	
EXPLANATORY NOTE		
 <p>CAR "A"</p> <p>CAR "B"</p>		
Door Numbering		
ITEM #	TITLE	EXPLANATORY NOTE
F	PM SHEET CODE	<p>This column lists the reference to Running-Preventive Maintenance Sheet where the Procedure to be performed is described and illustrated.</p> <p>Refer to Running-Preventive Maintenance Sheet (R-PMS) Form for detailed explanation.</p>
G	SHEETOF.....	This field indicates the progressive sheet page number of each R-PMR/JOB CARD

P2550 RUNNING PREVENTIVE MAINTENANCE REPORT PROPULSION 30,000 MILES JOB CARD						M Metro
VEHICLES	DATE	/ /	RUNNING HOURS	MILES		SHEET 1 OF 2
WORK AREA	ROOF	BRAKING RESISTOR	CLEANING	A		R-P-07-03-09-00/C-00
			CLEANING	B		R-P-07-03-08-00/C-00
	TRUCK	GEARBOX	INSPECTION	A A	A1	R-P-07-06-01-001-00
		GEARBOX	INSPECTION	A A	A2	R-P-07-06-01-001-00
	GEARBOX	SERVICE	A A	A1	R-P-07-06-01-003-00	
		SERVICE	A A	A2	R-P-07-06-01-003-00	
	GEARBOX	SERVICE	A A	A1	R-P-07-06-01-009-00	
		SERVICE	A A	A1	R-P-07-06-01-009-00	

P2550 RUNNING PREVENTIVE MAINTENANCE REPORT PROPULSION 30,000 MILES JOB CARD						M Metro
VEHICLES	DATE	/ /	RUNNING HOURS	MILES		SHEET 2 OF 2
DEFECT FOUND / COMMENTS						
1	2	3	4	5	6	7
						8
						9
EMPLOYEE# & SIGNATURE		STARTING DATE	WORK HOURS	COMPLETION DATE		
						FINAL VERSION APPROVAL DATE
						PAGE T-2 Draft Ch. 91

Figure 02-III-03.1 R-PMR/Job Card Form –Example

02-III-03.02.02 R-PMR/Job Card Sequence

The R-PMR/JOB CARDS provided in this Section are grouped according to the following sequence:

Daily 10,000 Miles 30,000 Miles 60,000 Miles 120,000 Miles

02-III-03.02.03 Running –Preventive Maintenance Cycle & R-PMR/Job Card Content

The Running –Preventive Maintenance Cycle and the relevant R-PMR/JOB CARD content are as follows:

MAINTENANCE INTERVAL	PMR /JOB CARD TITLE	PMR /Job Card CONTENT
DAILY	DAILY JOB CARD	<ul style="list-style-type: none"> • List of Assemblies/Components and related Tasks to be performed DAILY
10,000 Miles	10,000 MILES JOB CARD	<ul style="list-style-type: none"> • DAILY Job Card content + List of Assemblies/Components and related Tasks to be performed at 10,000 Miles
30,000 Miles	30,000 MILES JOB CARD	<ul style="list-style-type: none"> • DAILY Job Card content + 10,000 Job Card content + List of Assemblies/Components and related Tasks to be performed at 30,000 Miles
60,000 Miles	60,000 MILES JOB CARD	<ul style="list-style-type: none"> • DAILY Job Card content + 10,000 Job Card content + 30,000 Job Card content + List of Assemblies/Components and related Tasks to be performed at 60,000 Miles
120,000 MILES	120,000 MILES JOB CARD	<ul style="list-style-type: none"> • DAILY Job Card content + 10,000 Job Card content + 30,000 Job Card content + 60,000 Job Card content + List of Assemblies/Components and related Tasks to be performed at 120,000 Miles

02-III-03.02.04 R-PMR/Job Card Data Presentation Sequence

The Subsystems / Assemblies / Units / Components listed in the ITEMS column of each R-PMR/JOB CARD are grouped by Work Area and Vehicle Systems' and sequenced, in alphabetical order, in conjunction with their On Vehicle Locations and Tasks to be performed.

02-III-03.02.05 Running Preventive Maintenance Reports R-PMR/Job Cards

CAR BODY

Running – Preventive Maintenance Reports

R-PMR/JOB CARDS

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CAR BODY RUNNING PREVENTIVE MAINTENANCE REPORT 60,000 MILES JOB CARD								
VEHICLE #		DATE		RUNNING HOURS		MILES		SHEET 1 OF 1

WORK AREA	SYSTEM	ITEM	TASK	LOCATION				PM SHEET CODE
				BODY SECT	TRUCK	AXLE	SIDE	
INTERIOR	CAR BODY	OPERATOR'S SEAT	TEST	A				R-P-02-10-00-00/T-00
		CAB DOOR WINDOW	SERVICE	A				R-P-02-12-08-00/S-00
		ARTICULATION SECTION - CENTERING DOME	INSPECTION	AS				R-P-02-08-03-00/I-00
		ARTICULATION SECTION - INTERNAL DOME & INNER RUBBERS	INSPECTION	AS				R-P-02-08-05-00/I-00
		ARTICULATION SECTION - OUTER BELLOW	INSPECTION	AS				R-P-02-08-06-00/I-00
		OPERATOR'S SEAT	TEST	B				R-P-02-10-00-00/T-00
		OPERATOR'S WINDOW	SERVICE	B				R-P-02-12-08-00/S-00

DEFECT FOUND / COMMENTS

EMPLOYER # & SIGNATURE	STARTING DATE	WORK HOURS	COMPLETION DATE

CAR BODY
RUNNING PREVENTIVE MAINTENANCE REPORT
120,000 MILES JOB CARD

VEHICLE #		DATE		RUNNING HOURS		MILES		SHEET 1 OF 2
-----------	--	------	--	---------------	--	-------	--	--------------

WORK AREA	SYSTEM	ITEM	TASK	LOCATION				PM SHEET CODE
				BODY SECT	TRUCK	AXLE	SIDE	
INTERIOR	CAR BODY	OPERATOR'S SEAT	TEST	A				R-P-02-10-00-00/T-00
		CAB DOOR WINDOW	SERVICE	A				R-P-02-12-08-00/S-00
		ARTICULATION SECTION - CENTERING DOME	INSPECTION	AS				R-P-02-08-03-00/I-00
		ARTICULATION SECTION - FLOOR ASSEMBLY	SERVICE	AS				R-P-02-08-04-00/S-00
		ARTICULATION SECTION - INTERNAL DOME & INNER RUBBERS	INSPECTION	AS				R-P-02-08-05-00/I-00
		ARTICULATION SECTION - OUTER BELLOW	INSPECTION	AS				R-P-02-08-06-00/I-00
		CONNECTION - ARTICULATION JOINT	INSPECTION	AS				R-P-02-08-02-00/I-00
		OPERATOR'S SEAT	TEST	B				R-P-02-10-00-00/T-00
		OPERATOR'S WINDOW	SERVICE	B				R-P-02-12-08-00/S-00

DEFECT FOUND / COMMENTS



CAR BODY - RUNNING PREVENTIVE MAINTENANCE REPORT - 120,000 MILES JOB CARD(cont'd)

02-III-03.03 Running -Preventive Maintenance Sheets (R-PMS)

Each R-PMS provides the following data consistent with Preventive Maintenance Plan (PMP), AB Design Documentation and Vehicle Systems Functional Tree:

- **R-PM Sheet Code.**
- **SYSTEM, SUBSYSTEM /ASSEMBLY, UNIT, Component (Names)**
- **SYSTEM, SUBSYSTEM /ASSEMBLY, UNIT, Component (Location)**
- **Maintenance Interval (Miles).**
- **Maintenance Task**
- **Man Hours**, needed to perform the Task
- **SPARE PARTS**, needed to perform the Task

Each R-PMS provides also:

- **SAFETY PRECAUTIONS**, to be followed to safely accomplish the Task
- **TOOLS**, including Special Tools and Test Equipment, needed to accomplish the Task
- **CONSUMABLES**, required to accomplish the Task and consistent with those used by MTA
- **PROCEDURE**, consisting of **Preliminary Operations** and **Procedural Steps** to be followed while performing Maintenance Tasks
- **Illustrations** and **Pictures** are inserted in the text to facilitate the understanding of the topics and/or to explain step-by-step procedure

02-III-03.03.01 Running- Preventive Maintenance Sheet (R-PMS) Form

The R-PMS Form (refer to Figure 02-III-03.2) consists of several fields containing the following data/ information:

RUNNING -PREVENTIVE MAINTENANCE SHEET (RPMS) Form			
ITEM #	TITLE	CONTENT	EXPLANATORY NOTES
1	Card code	Sheet code	<p>The Sheet Code is an alphanumerical code that identifies each R-PM Sheet.</p> <p>THE SHEET CODE IS THE EXPLICIT LINK BETWEEN R-PM MATRIXES, R-PMR /JOB CARDS AND R-PM SHEETS</p> <p>The Sheet Code consists of letters R-P followed by an 11 digit code number as follows:</p> <p>R-P-nn-mm-zz-ww/Y-kk</p> <p>R = Running P= Preventive</p> <p>nn may vary from 02 to 19, identifying the System/ Manual Section number.</p> <p>mm-zz-ww each one may vary from 00 to 99, according to AB System Functional Tree, allowing the identification of the Assembly/Unit/Component</p> <p>Y Maintenance Task Code. It may be one of the following: C=Cleaning I=Inspection L = Lubrication R=Replacement S=Service T=Test kk It may vary from 00 to 99.</p> <p>It is a progressive number allowing the explicit identification of RPMS when one of the following cases occur:</p> <ul style="list-style-type: none"> 1- same Maintenance Task pertaining to vehicle as a whole or to the same System/Subsystem/Assembly to be performed at same Maintenance Interval in different Vehicle Area (i.e Vehicle as a Whole DAILY Exterior /Interior INSPECTION) 2- same Maintenance Task pertaining to the same Assembly/Unit/Component to be performed at different Maintenance Intervals and for this reason consisting of different Maintenance Procedure
2	System	System name	This field indicates the System to which the Assembly/Unit/Component belongs.
3	Subsystem/ Assembly	Subsystem/ Assembly name	This field indicates the Subsystem/Assembly to which the Unit/Component belongs.
4	Unit	Unit name	This field indicates the Unity to which the Component belongs
5	Component	Component name	This field indicates the Component the Maintenance Task is referring to
6	Maintenance Task	Maintenance Task name	This field indicates the Maintenance Task to be performed.
7	Interval Miles	Number	This field indicates the maintenance Interval Miles. It may be DAILY, 10,000 Miles, 30,000 Miles, 60,000 Miles, 120,000 Miles

RUNNING -PREVENTIVE MAINTENANCE SHEET (RPMS) Form (cont'd)			
ITEM #	TITLE	CONTENT	EXPLANATORY NOTES
8	Man Hours	Number	The Man Hour field indicates the time needed to perform the corresponding Maintenance Task, with the basic assumption that the Vehicle is staged on an Inspection Pit/Jacking tracks with the required Consumables, Tools And Materials Available.
9	Sheet	Pages numbering	This field indicates the progressive R-PMS sheet page number.
10	LOCATION	Illustration	<p>This field indicates the On Board Location of the Equipment to be maintained</p> <p>The following Graphic Symbols are used</p> <p>for: Assembly/Unit/Component</p> <p>for System/Subsystem/Vehicle as a Whole</p> 
11	R	Letter	This field indicates that the Sheet pertains to Running Maintenance
12	P	Letter	This field indicates that the Sheet pertains to Preventive Maintenance
13	nn	Number	<p>This field indicates the System/Manual Section number to which the Sheet pertains.</p> <p>It may vary from 01 to 19</p>
14	rr	Number	This field indicates the Sheet Revision number
15	Page ##	Page ##	This field indicates the RMSM Section Page number
16	-#	Number	This field indicates the RMSM Section Revision number
17	SAFETY PRECAUTIONS	Text	This field presents the General and/or specific Safety Precautions to be followed to accomplish safely the relevant Maintenance Tasks.
18	TOOLS	Text	<p>This field lists the description and the P/N of the Standard tools, Special Tools and Test Equipment needed to accomplish the Maintenance Task.</p> <p>Refer to the TTE Manual for the TE and Special Tools detailed descriptions and tools maintenance.</p>
19	CONSUMABLES	Text	<p>This field lists the Consumables Materials (consistent with those used by MTA with the related P/N.) needed to accomplish the Maintenance Task.</p> <p>Cleaning agents are included</p>
20	SPARE PARTS	Text	This field lists the Description and PN of Spare Parts (consistent with Illustrated Parts Catalog) needed to accomplish the Maintenance Task.
21	PROCEDURE	Text	<p>The Procedure field provides Preliminary Operations and Procedural step by step Instructions to be followed while performing the Maintenance Task.</p> <p>Illustrations and Pictures are inserted in the text to facilitate the understanding of the topics and/or to explain step-by-step procedure.</p>

P2550 PREVENTIVE MAINTENANCE SHEET	
Card Code: R-P-nn-mm-zz-ww/Y-kk	
System:	Sheet: x/z
Subsystem/Assy:	Unit:
Component:	Man Hours
Maintenance Task:	Interval/Miles:
LOCATION:	
 B RH A A EXTERIOR LH B  A B UNDERCARR  A B ROOF  A B INTERIOR	
(11) 	M _{Metro}
(12) 	(15) 
(13)	(14)
(16)	

**Figure 02-111-03.2 R-PMS Form
(Sheet 1 of 2)**

LACMTA P2550 LRV					
Running Maintenance and Servicing Manual - Section 01					
 AnsaldoBreda					
P2550 PREVENTIVE MAINTENANCE SHEET					
Card Code: R-P-nn-mm-zz-ww/Y-kk					
System:	Sheet:				
Subsystem/Assy:	Unit:				
Component:					
Man Hours:					
Maintenance Task:					
Interval/Miles:					
SAFETY PRECAUTIONS:					
(17)					
(18)					
(19)					
(20)					
(21)					
TOOLS:					
CONSUMABLES:					
SPARE PARTS:					
PROCEDURE:					
PRELIMINARY OPERATIONS					
Page 01-2 Draft					
					
<table border="1" style="margin-left: auto; margin-right: 0; border-collapse: collapse;"> <tr> <td style="width: 25px; height: 25px;"></td> </tr> </table>					

**Figure 02-111-03.2 R-PMS Form Front Page
(Sheet 2 of 2)**

02-III-03.03.02 How to Use the R-PM Sheets and R-PMR /Job Cards

To optimize the job organization, proceed as follows:

1. At Scheduled Preventive Maintenance Interval Expiration Date

- a) Use the relevant (Maintenance Interval) R-PMR/JOB CARD where the Subsystems/Assemblies/Units/Components, listed in the ITEMS column, are grouped by Work Area and Vehicle System and sequenced, in alphabetical order, in conjunction with their On Vehicle Location and Task to be performed.
- b) Select the Work Area and the System.
- c) Select the first Equipment listed in the ITEMS column and the Sheet Code listed in conjunction with the Task to be performed and gather the relevant Sheet.
- d) Read carefully the Sheet to fully understand the provided Data/Instructions.
- e) Carefully read:
 - The Safety Precautions to perform the Task safely
 - The Preliminary Operations to set the Vehicle in safety conditions according to MTA Maintenance Shop Regulations
 - The Tools, Consumables and Spare Parts listed in each Sheet which are needed to accomplish the Task, in order to have all of them available next to the location of the Equipment to be maintained before starting the activities
- f) Fill the R-PMR/JOB CARD with the data required by the Maintainer at the start of the Maintenance Activities.

2. Task Execution

- a) Follow carefully the prescribed Safety Precautions and Maintenance Procedural Steps provided in the R-PM Sheet.
- b) Perform the Maintenance Task Procedure on the first Equipment (listed in the ITEMS column of the relevant R-PMR /JOB CARD) at its On Vehicle LOCATION, as indicated in the LOCATION column of the R-PMR /JOB CARD.
- c) After completed the Maintenance Task on the first Equipment, highlight (with a flag) its LOCATION field on the R-PMR / JOB CARD.
- d) Note Equipment Defect Found and / or your Comments on the End Page of the R-PMR / JOB CARD.
- e) Proceed to perform the same Task on the second (same) Equipment listed in the R-PMR / JOB CARD at its On Vehicle LOCATION, (different from the previous one) as indicated in the LOCATION column of the R-PMR /JOB CARD.
- f) Proceed as above to perform the same Task on every Equipment (to which the same Sheet Code refers) listed in the ITEMS column of the relevant (Maintenance Interval) R-PMR /JOB CARD.
- g) During Task execution, note any Areas / Items of the Assembly / Unit/ Component under Preventive Maintenance Process requiring Corrective Maintenance.
- h) Gather as much information about the Equipment as is practical to increase your Equipment knowledge (i.e.; knowledge about the malfunction in terms of correctly operating and incorrectly operating equipment processes).

3 At every Task Completion

- a) Follow carefully the prescribed Safety Precautions before restoring Electrical Power to Vehicle.
- b) Check the correct operation and/or functions of the Subsystem to which the maintained Equipment pertains.
- c) Perform this check on the IDU "A" as follows:

NOTE: Through the IDU you can check if all Systems are exchanging data through the MVB or LonWorks Bus and the Trainlines Status. The IDU Display also shows in real time the Status of all Vehicle Systems.

Reading the IDU Fault List, it is possible to immediately detect a fault.

Using the IDU in Normal Mode, the Fault Indications are generic. Using the IDU in Maintenance Mode the same Fault has a detailed description.

An alternate way for a very detailed System troubleshooting is to directly connect a PTU to the STB and PCA board using the Connectors located in the Electronic Box of the A or B Section.

1. On IDU "A" access to the Maintenance Menu first and then to the "Faults" Screen by selecting, in sequence, the relevant icons.
2. Check, On IDU "A" through the list of the Current Active Faults shown in the "Faults" Screen, for "Fault" Codes related to the Subsystem to which the maintained Equipment pertains.
Refer to Section 18 of RMSM for Fault Signals Details.
3. As per "Fault" Codes check results proceed as follows:

➤ **No Faults are listed in the "Faults" Screen**

- a) Key OFF the Vehicle.
- b) Record Service and Test results on the Defect Report Card for administrative and maintenance planning.
- c) Fill the R-PMR /JOB CARD with the data required to the Maintainer at the completion of the Maintenance Activities and include your comment.

➤ **Fault Codes are listed in the “Faults” Screen**

- a) Investigate/troubleshoot the Equipment previously maintained first and then the System/Subsystem/Assembly/Unit for Fault Probable Causes
- b) Gather as much information about the failure symptoms as is practical.
- c) Refer to Section 18 of RMSM for Fault Signals Details
- d) Try to identify the malfunction in terms of correctly operating and incorrectly operating equipment processes.
- e) Identify which equipment signals or parameters will best help you to localize the failure.
- f) Identify the source of the problem.
- g) Repair or replace the defective component.
- h) Verify that the repair is effective in eliminating all of the failure symptoms.
- i) Evaluate whether the defective component was the root cause of the failure.
- j) Once the Fault Codes are not found in the “Faults” Screen, perform steps from 3-a through 3-c (previous subparagraph **“No Faults are listed in the “Faults” Screen”**)

02-III-03.03.03 Running- Preventive Maintenance Sheet (R-PMS) List

The Car Body Running- Preventive Maintenance Sheets (R-PMS) List is provided in the following pages

The R-PM Sheets are listed by Subsystem / Assembly / Unit / Component and sequenced by Maintenance Interval in conjunction with their Sheet Codes and Tasks (including SCPM flag) to be performed

Table 02-III-03.3 Running Preventive Maintenance Sheets List

SYSTEM 02		CARBODY			
SUBSYSTEM/ ASSY	ASSY /UNIT/ COMPONENT	SCPM	TASK	MAINTEN. INTERVAL (MILES)	SHEET CODE
ARTICULATION SECTION	CENTERING DOME SYSTEM		INSPECTION	60,000	R-P-02-08-03-00/I-00
ARTICULATION SECTION	INTERNAL DOME & INNER RUBBERS		INSPECTION	60,000	R-P-02-08-05-00/I-00
ARTICULATION SECTION	OUTER BELLOW		INSPECTION	60,000	R-P-02-08-06-00/I-00
ARTICULATION SECTION	CONNECTION - ARTICULATION JOINT	✓	INSPECTION	120,000	R-P-02-08-02-00/I-00
ARTICULATION SECTION	ARTICULATION FLOOR ASSEMBLY		SERVICE	120,000	R-P-02-08-04-00/S-00
OPERATOR'S SEAT	OPERATOR'S SEAT		TEST	60,000	R-P-02-10-00-00/T-00
DRIVER CAB INTERIORS FINISHING AND ACCESSORIES	OPERATOR'S WINDOW & CAB DOOR WINDOW		SERVICE	60,000	R-P-02-12-08-00/S-00

02-III-03.03.04

Running- Preventive Maintenance Sheets (R-PMS)

CAR BODY

Running – Preventive Maintenance Sheets

R-PMS

INTENTIONALLY LEFT BLANK

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-08-03-00/I-00

System:

CAR BODY

Sheet:

1/6

Subsystem/Assy:

ARTICULATION SECTION
CENTERING DOME SPRING DEVICE

Component:

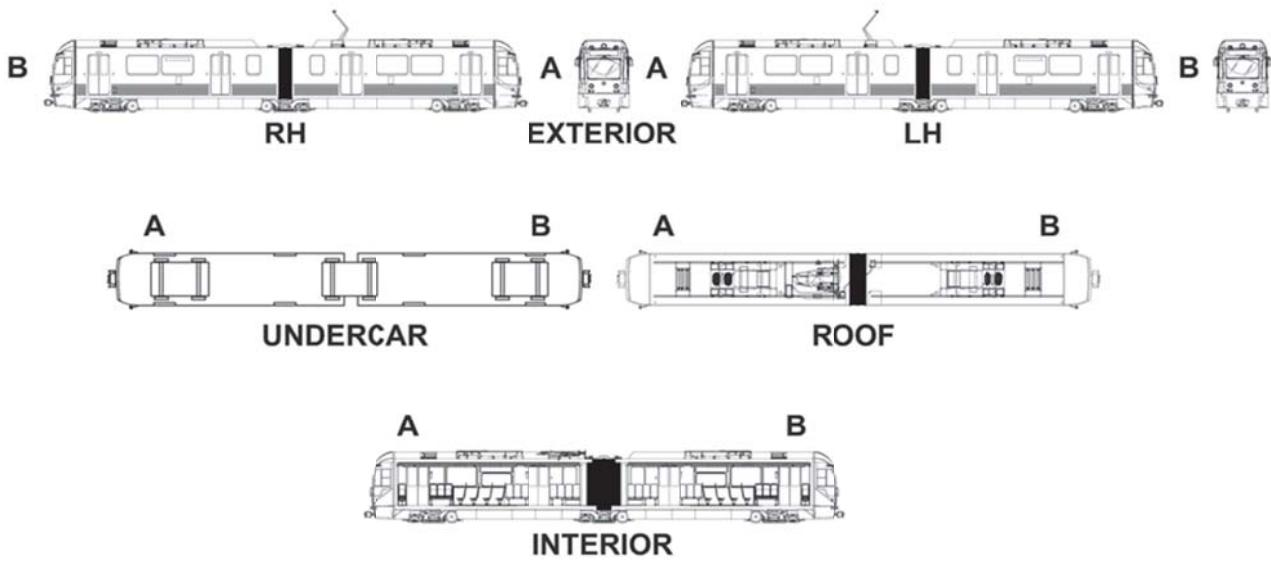
Man Hours:

0.25

Maintenance Task:

INSPECTION

Interval/Miles:

60,000
LOCATION:


P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-08-03-00/I-00

System:

CAR BODY

Sheet:

2/6

Subsystem/Assy:

ARTICULATION SECTION

Unit:

CENTERING DOME SPRING DEVICE

Component:

Man Hours:

0.25

Maintenance Task:

INSPECTION

Interval/Miles:

60,000**SAFETY PRECAUTIONS:**

CAUTION : PAY ATTENTION TO NOT DAMAGE THE AISLE LIGHT FIXTURES DURING THE INSPECTION.

TOOLS:

LACMTA Maintenance Shop Standard Tools Kit.

CONSUMABLES:

Cleaner / degreaser

SPARE PARTS:

N/A

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-08-03-00/I-00

System:

CAR BODY

Sheet:

3/6

Subsystem/Assy:

ARTICULATION SECTION**CENTERING DOME SPRING DEVICE**

Component:

Man Hours:

0.25

Maintenance Task:

INSPECTION

Interval/Miles:

60,000

PROCEDURE:

PRELIMINARY OPERATIONS

Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations:

1. Place the Vehicle in the Maintenance Shop
2. Set the Master Controller Handle to FSB position
3. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON)

INSPECTION

To perform the Task proceed as follows (refer to Figures 1 through 4)

CAUTION: PAY ATTENTION TO NOT DAMAGE THE AISLE LIGHT FIXTURES DURING THE INSPECTION.

NOTE: Keep the (removed) Hardware for later use

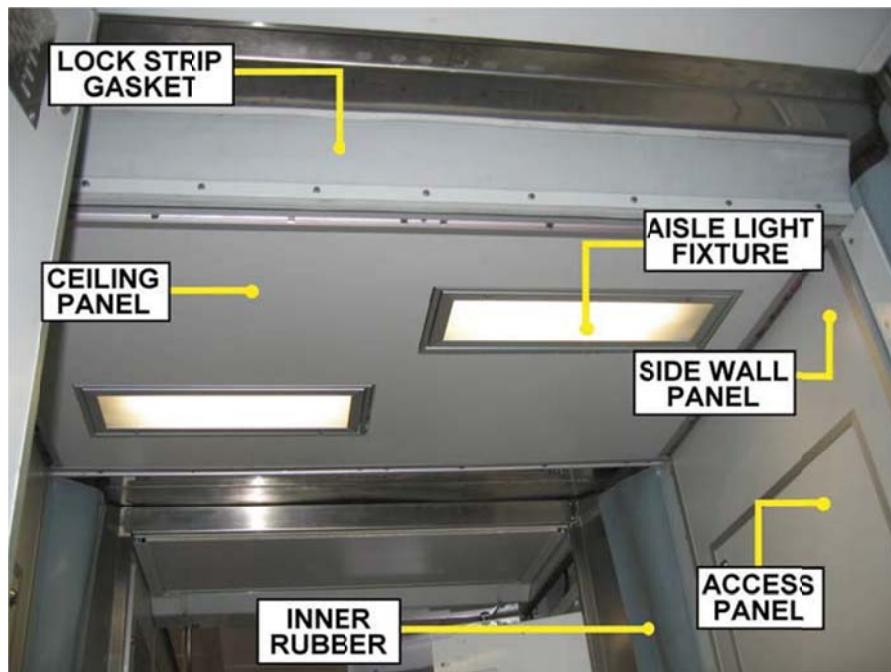


Figure 1 - AISLE INTERIOR COMPONENTS

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-08-03-00/I-00

System:

CAR BODY

Sheet:

4/6

Subsystem/Assy:

ARTICULATION SECTION

Unit:

CENTERING DOME SPRING DEVICE

Component:

Man Hours:

0.25

Maintenance Task:

INSPECTION

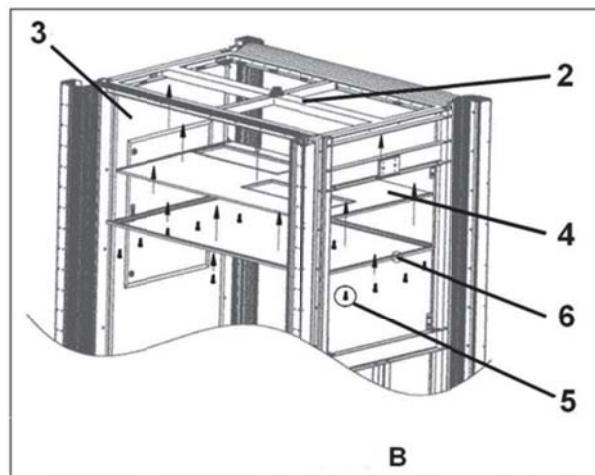
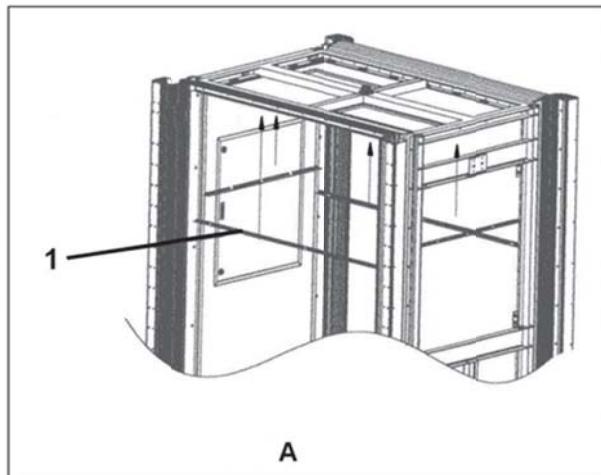
Interval/Miles:

60,000

PROCEDURE (CONT'D):

NOTE: The Centering Dome Spring Device is visible through the Structure Upper Frame Openings, once the Aisle Ceiling Panel has been removed

- 1 Remove the Ceiling Panel as follows: (refer to Fig 1 & 2)
 - a. Pull out the Trim (1-Detail A)
 - b. Remove the Screws (5-Detail B) from Omega Extrusions (6-Detail B)
 - c. Remove the Ceiling Panel (4-Detail B) from Structure.(2-Detail B)



- 1. TRIM
- 2. INTERNAL DOME FRAME
- 3. SIDE-WALL PANEL

- 4. CEILING PANEL
- 5. SCREW
- 6. OMEGA EXTRUSION

Figure 2 - CEILING PANEL REMOVAL/INSTALLATION

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-08-03-00/I-00

System:

CAR BODY

Sheet:

5/6

Subsystem/Assy:

ARTICULATION SECTION**CENTERING DOME SPRING DEVICE**

Component:

Man Hours:

0.25

Maintenance Task:

INSPECTION

Interval/Miles:

60,000

PROCEDURE (CONT'D):

NOTE: Note any Areas / Items requiring Corrective Maintenance.
 The specific Adjustment / Repair Steps are provided in the
 Sheet R C 02-08-03-00 / R-00

- 2 Inspect the Centering Dome Spring Device for damage and for loosen and missing attaching parts.
- 3 Inspect Threaded Pin for deformation

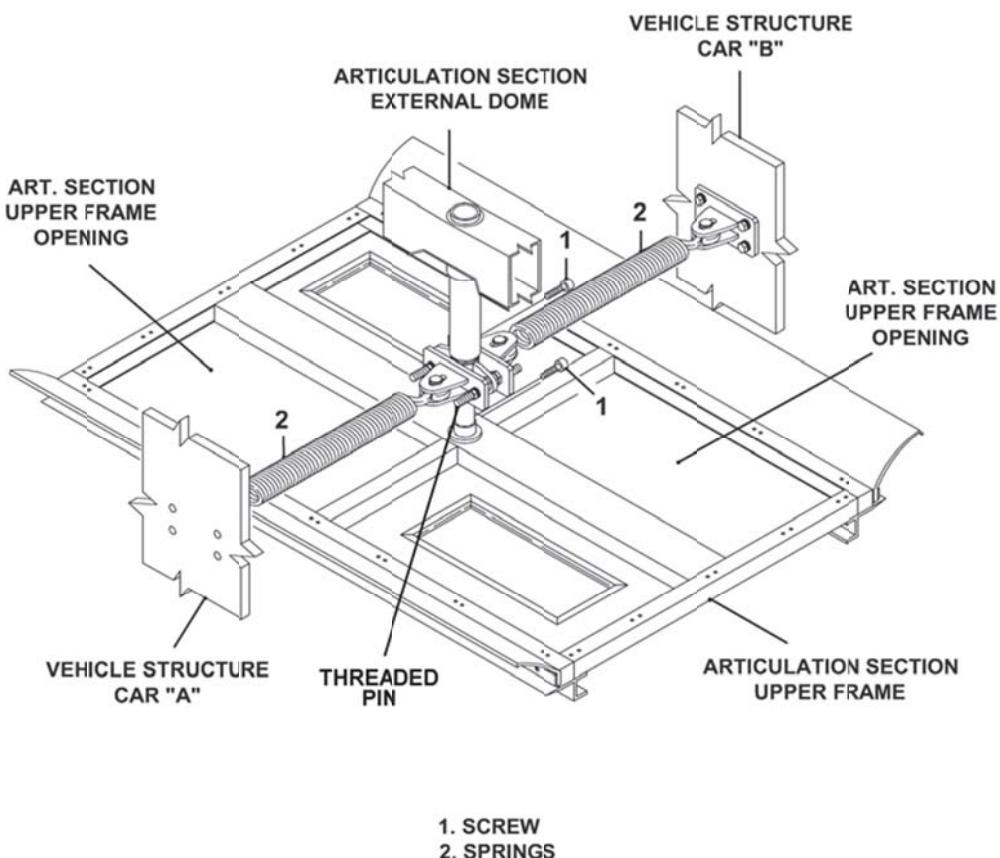


Figure 3 - CENTERING DOME SPRING DEVICE

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-08-03-00/I-00

System:

CAR BODY

Sheet:

6/6

Subsystem/Assy:

ARTICULATION SECTION

Unit:

CENTERING DOME SPRING DEVICE

Component:

Man Hours:

0.25

Maintenance Task:

INSPECTION

Interval/Miles:

60,000

PROCEDURE (CONT'D):

- 4 Inspect each Pin (retaining each Spring) for Cotter Pin damaged / missing
- 5 Check the Blocking Screws (retaining the Central Dome Device Pin to the Articulation Structure Dome) for loosen / missing. As per check result, torque as required

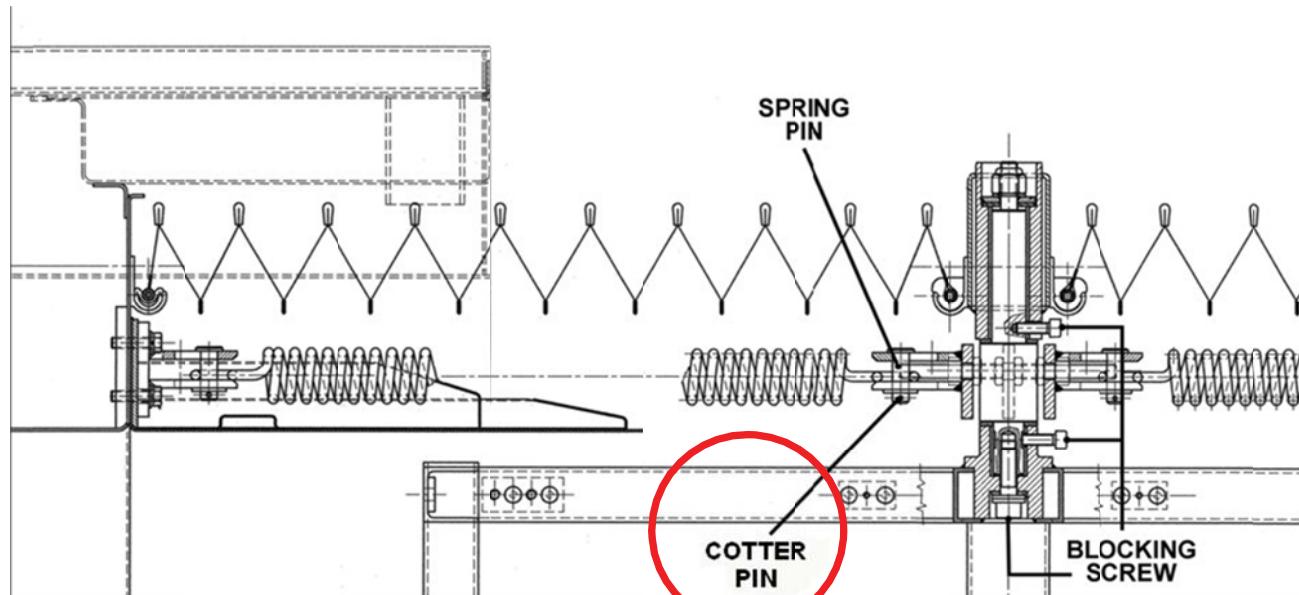


Figure 4 - CENTERING DOME SPRING DEVICE INSPECTION

- 6 Install the Ceiling Panel as follows (refer to previous Fig 2)
 - a) Position in place (to Structure.- 2-Detail B) the Ceiling Panel (4-Detail B)
 - b) Install Omega Extrusions (6-Detail B) and fix them with the Screws (5-Detail B)
 - c) Snap on the Trim (1-Detail A)
- 7 Record Task result on the Defect Report Card for administrative and maintenance planning

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-08-05-00/I-00

System:

CAR BODY

Sheet:

1/6

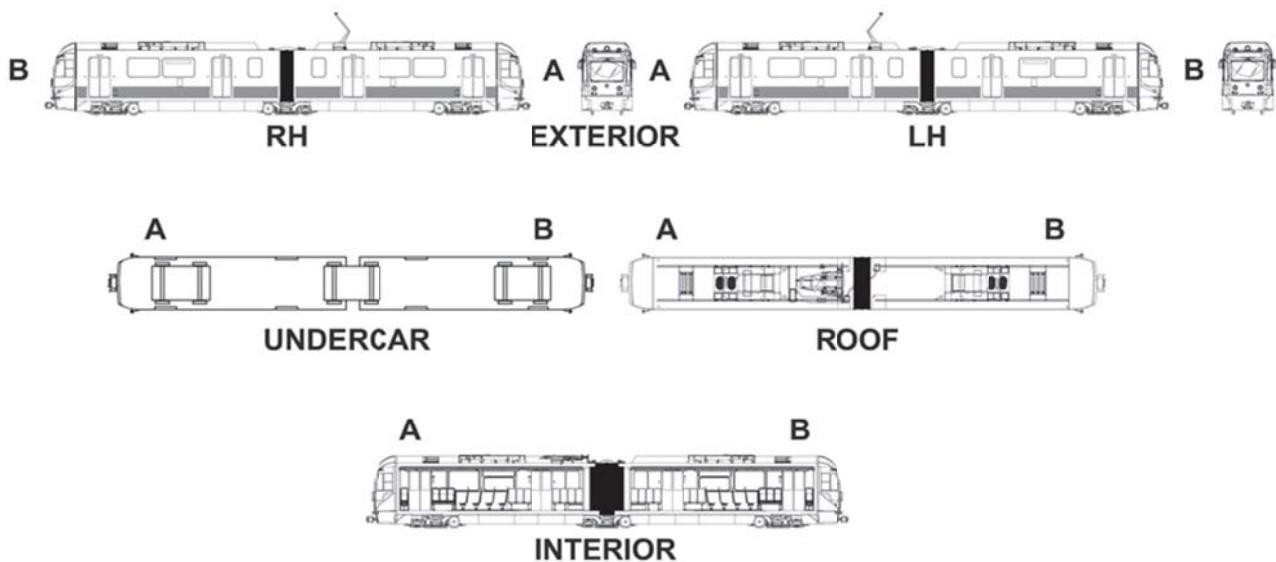
Subsystem/Assy:

ARTICULATION SECTIONUnit:
INTERNAL DOME & INNER RUBBERS

Component:

Man Hours:
0.25

Maintenance Task:

INSPECTIONInterval/Miles:
60,000**LOCATION:**

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-08-05-00/I-00

System:

CAR BODY

Sheet:

2/6

Subsystem/Assy:

ARTICULATION SECTION

Unit:

INTERNAL DOME & INNER RUBBERS

Component:

Man Hours:

0.25

Maintenance Task:

INSPECTION

Interval/Miles:

60,000**SAFETY PRECAUTIONS:**

LACMTA Maintenance Shop Safety Rules & Regulations

TOOLS:

LACMTA Maintenance Shop Standard Tools Kit.

CONSUMABLES:

N/A

SPARE PARTS:

N/A

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-08-05-00/I-00

System:

CAR BODY

Sheet:

3/6

Subsystem/Assy:

ARTICULATION SECTION

Unit:

INTERNAL DOME & INNER RUBBERS

Component:

Man Hours:

0.25

Maintenance Task:

INSPECTION

Interval/Miles:

60,000

PROCEDURE:

PRELIMINARY OPERATIONS

Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations:

1. Place the Vehicle in the Maintenance Shop
2. Set the Master Controller Handle to FSB position
3. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON)

INSPECTION

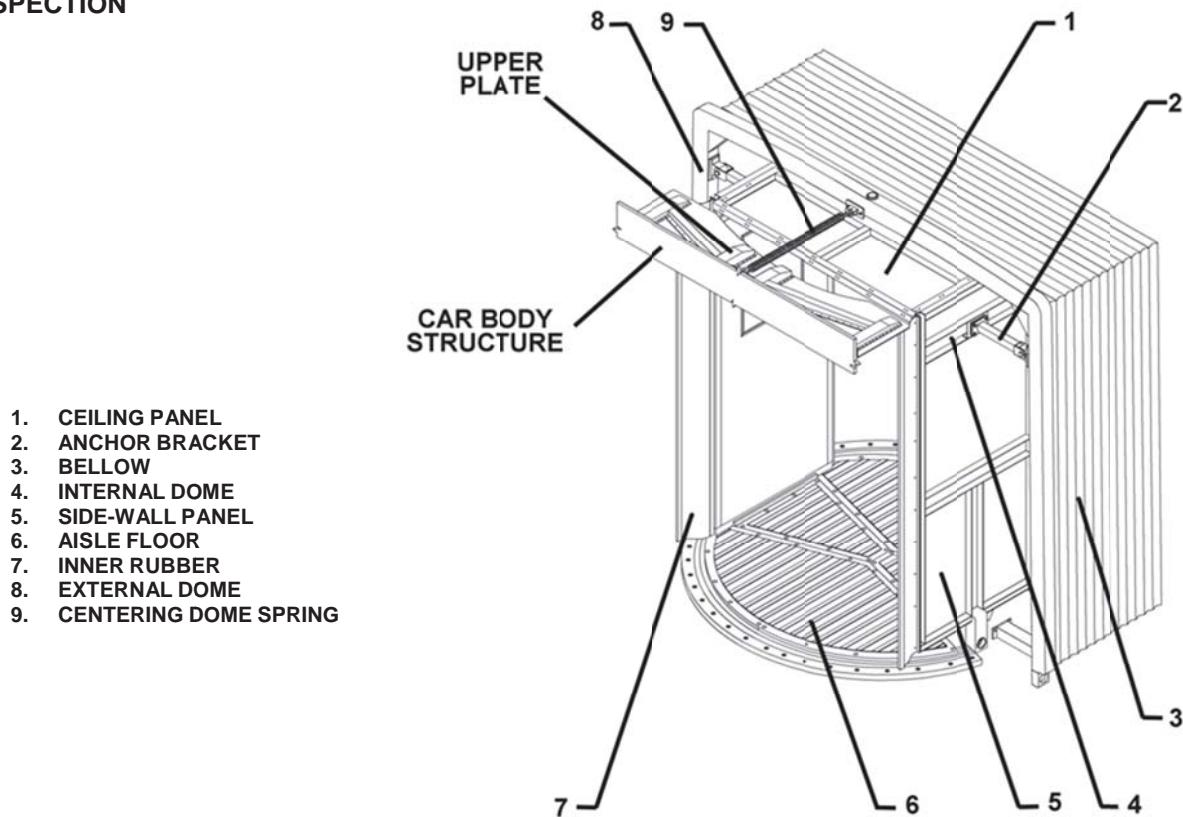


Figure 1 ARTICULATION SECTION -COMPONENTS

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-08-05-00/I-00

System:

CAR BODY

Sheet:

4/6

Subsystem/Assy:

ARTICULATION SECTIONUnit: **INTERNAL DOME & INNER RUBBERS**

Component:

Man Hours:

0.25

Maintenance Task:

INSPECTION

Interval/Miles:

60,000

PROCEDURE (CONT'D):

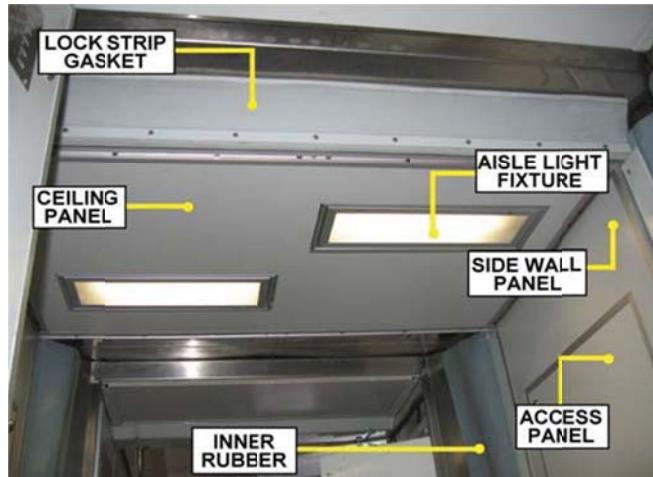
To perform the Task proceed as follows (refer to Figures 1 & 2)

NOTE : Note any areas / items requiring Corrective Maintenance.

The specific Adjustment / Repair Steps are provided in the Sheet R C 02-08-03-00 / R-00

NOTE : Keep the (removed) Hardware for later use

- 1 Check Aisle, Ceiling, Side Wall Panels and Access Panels for damage / signs of vandalism / loose / missing hardware;



- 2 Check Aisle Lock Strip Gaskets for damage / signs of vandalism / loose / missing hardware

- 3 Check the Inner Rubbers for damage / signs of vandalism / loose / missing hardware

- 4 Check the Inner Rubbers Weather Strippings for damage / wear



P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-08-05-00/I-00

System:

Sheet:

CAR BODY**5/6**

Subsystem/Assy:

ARTICULATION SECTION**INTERNAL DOME & INNER RUBBERS**

Component:

Man Hours:

0.25

Maintenance Task:

INSPECTION

Interval/Miles:

60,000**PROCEDURE:**

NOTE : The Internal Dome is visible through the Side Access Panel Openings once they have been removed

- 5 Open both Side Access Panels using the Maintenance Key



- 6 Remove both Access Panels



P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-08-05-00/I-00

System:

CAR BODY

Sheet:

6/6

Subsystem/Assy:

ARTICULATION SECTION

Unit:

INTERNAL DOME & INNER RUBBERS

Component:

Man Hours:

0.25

Maintenance Task:

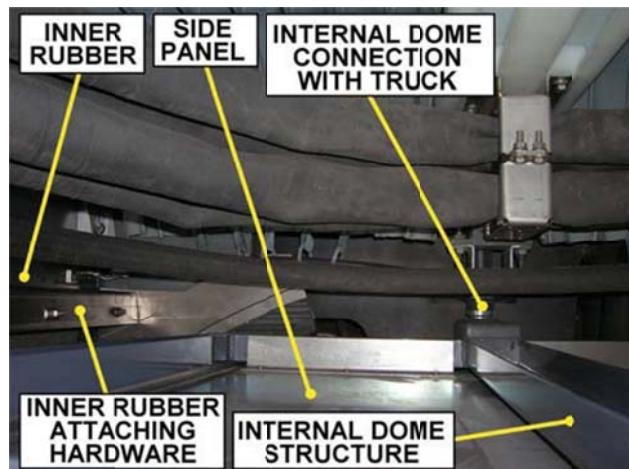
INSPECTION

Interval/Miles:

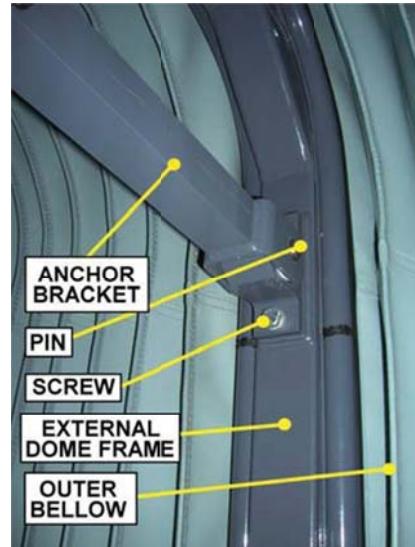
60,000

PROCEDURE (CONT'D):

- 7 Inspect Internal Dome Structure for damage / deformation/ loose / missing hardware;

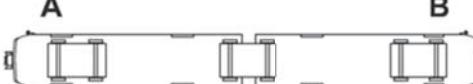
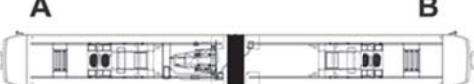


- 8 Inspect Anchor Bracket for damage / deformation / loose / missing hardware



- 9 Inspect Anchor Bracket painting for damage

- 10 Install both the Access Panels and lock them using the maintenance Key
 11 Record Task result on the Defect Report Card for administrative and maintenance planning

P2550 PREVENTIVE MAINTENANCE SHEET	
	Card Code: R-P-02-08-06-00/I-00
System: CAR BODY	Sheet: 1/8
Subsystem/Assy: ARTICULATION SECTION	Unit: OUTER BELOW
Component:	Man Hours: 0.25
Maintenance Task: INSPECTION	Interval/Miles: 60,000
LOCATION:	
 RH	 EXTERIOR
 LH	 B
 UNDERCAR	 ROOF
 INTERIOR	

P2550 PREVENTIVE MAINTENANCE SHEET		
Card Code: R-P-02-08-06-00/I-00		
System: CAR BODY	Sheet: 2/8	
Subsystem/Assy: ARTICULATION SECTION	Unit: OUTER BELLOW	
Component:	Man Hours: 0.25	
Maintenance Task: INSPECTION	Interval/Miles: 60,000	
SAFETY PRECAUTIONS:		
<p>WARNING: DANGER OF PERSONAL INJURY EXISTS DUE TO ELECTRICAL POWER (750 V). ENSURE PANTOGRAPH IS LOWERED, AND CATENARY POWER IS REMOVED AND ISOLATED PER LACMTA SAFETY RULES AND PROCEDURES. IF POSSIBLE, WORK SHOULD BE DONE IN AN AREA WITHOUT OVERHEAD CATENARY. DANGER OF PERSONAL INJURY EXISTS WHEN WORKING ON THE ROOF. FOLLOW SAFETY PROCEDURES FOR ACCESSING ROOF.</p> <p>WARNING: ALWAYS WEAR A SAFETY HARNESS WHEN ACCESSING THE ROOF.</p>		
TOOLS:		
External Scaffold. LACMTA Maintenance Shop Standard Tools Kit.		
CONSUMABLES:		
N/A		
SPARE PARTS:		
N/A		

P2550 PREVENTIVE MAINTENANCE SHEET	
Card Code: R-P-02-08-06-00/I-00	
System: CAR BODY	Sheet: 3/8
Subsystem/Assy: ARTICULATION SECTION	Unit: OUTER BELLOW
Component:	Man Hours: 0.25
Maintenance Task: INSPECTION	Interval/Miles: 60,000
PROCEDURE:	
<p>PRELIMINARY OPERATIONS</p> <ol style="list-style-type: none"> 1. It is assumed that: <ol style="list-style-type: none"> a) The Vehicle is set in accordance with LACMTA Maintenance Shop Safety Regulations and positioned in order to have it available to safely accomplish the Task. b) Wheel Chocks are installed in both running directions. 2. Make sure that: <ol style="list-style-type: none"> a) All Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). b) The Transfer Switch is turned to OFF. c) The Pantograph is in the down position and latched d) The Pantograph Control Motor Switch (5F02 CB LV Locker A Section) is switched off. 3. Lock-out and tag-out the Overhead Catenary, 750Vdc Power, per LACMTA Safety Rules and Procedures 	

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-08-06-00/I-00

System:

CAR BODY

Sheet:

4/8

Subsystem/Assy:

ARTICULATION SECTION

Unit:

OUTER BELLOW

Component:

Man Hours:

0.25

Maintenance Task:

INSPECTION

Interval/Miles:

60,000

PROCEDURE (CONT'D):

INSPECTION

To perform the Task proceed as follows

EXTERIOR INSPECTION (refer to Figures 1 through 3)

1. Position the External Scaffold at both sides of Outer Bellow.
2. Inspect the Outer Bellow for correct installation./ damage



Figure 1 OUTER BELLOW

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-08-06-00/I-00

System:

CAR BODY

Sheet:

5/8

Subsystem/Assy:

ARTICULATION SECTION

Unit:

OUTER BELLOW

Component:

Man Hours:

0.25

Maintenance Task:

INSPECTION

Interval/Miles:

60,000

PROCEDURE (CONT'D):

3. Inspect the Outer Bellow Attaching Parts for damage /deformation / missing/loose hardware
4. Particularly inspect :
 - Rubber Holder (2),
 - Hooks (3, 4),
 - Tie Rod (5)

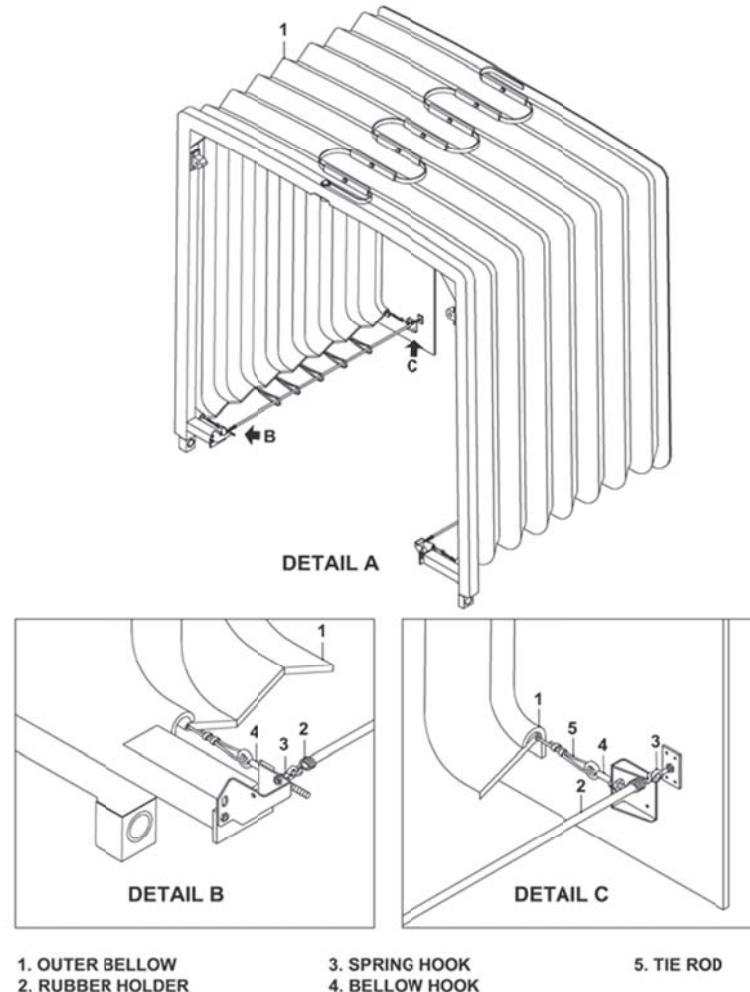


FIG 2 OUTER BELLOW – ATTACHING PARTS

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-08-06-00/I-00

System:

CAR BODY

Sheet:

6/8

Subsystem/Assy:

ARTICULATION SECTION

Unit:

OUTER BELLOW

Component:

Man Hours:

0.25

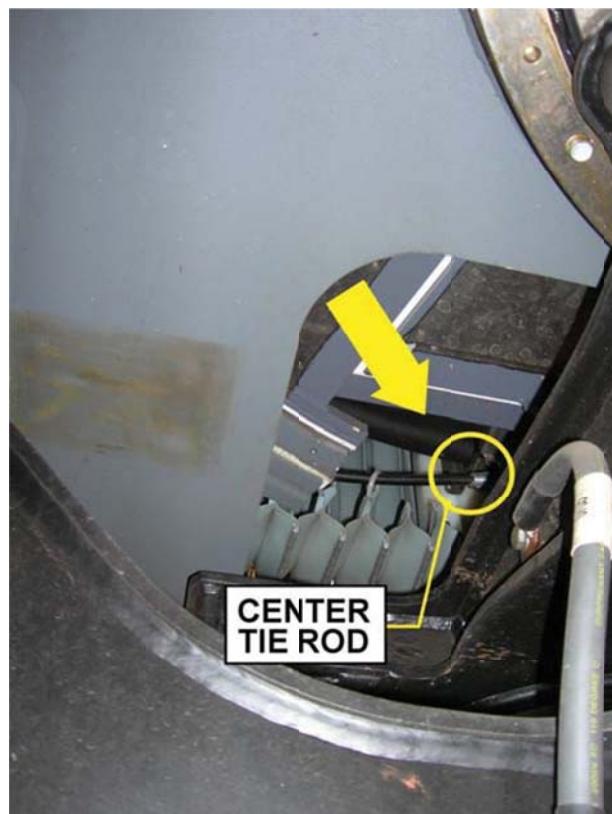
Maintenance Task:

INSPECTION

Interval/Miles:

60,000**PROCEDURE (CONT'D):**

Outer Bellow – Center Tie Rod Outside View



Outer Bellow – Center Tie Rod -View From Pit

Figure 3- OUTER BELLOW – CENTER TIE ROD

P2550 PREVENTIVE MAINTENANCE SHEET	
Card Code: R-P-02-08-06-00/I-00	
System: CAR BODY	Sheet: 7/8
Subsystem/Assy: ARTICULATION SECTION	Unit: OUTER BELLOW
Component:	Man Hours: 0.25
Maintenance Task: INSPECTION	Interval/Miles: 60,000
PROCEDURE (CONT'D):	
INTERIOR INSPECTION NOTE : The Outer Bellow Internal Side is visible through the Side Access Panel Openings once they have been removed	
1 Open both Side Access Panels using the Maintenance Key	
	
2 Remove both Access Panels	
	

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-08-06-00/I-00

System:

CAR BODY

Sheet:

8/8

Subsystem/Assy:

ARTICULATION SECTION

Unit:

OUTER BELLOW

Component:

Man Hours:

0.25

Maintenance Task:

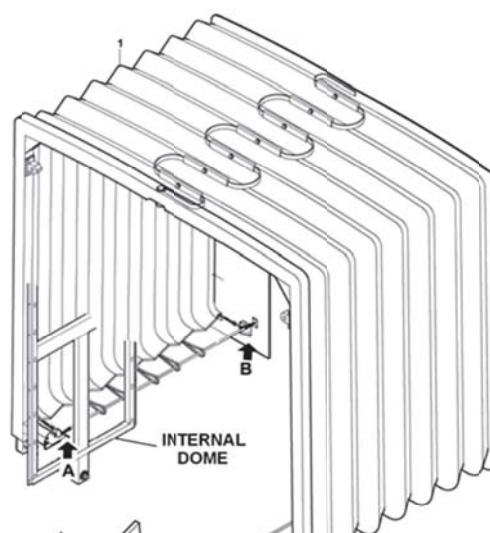
INSPECTION

Interval/Miles:

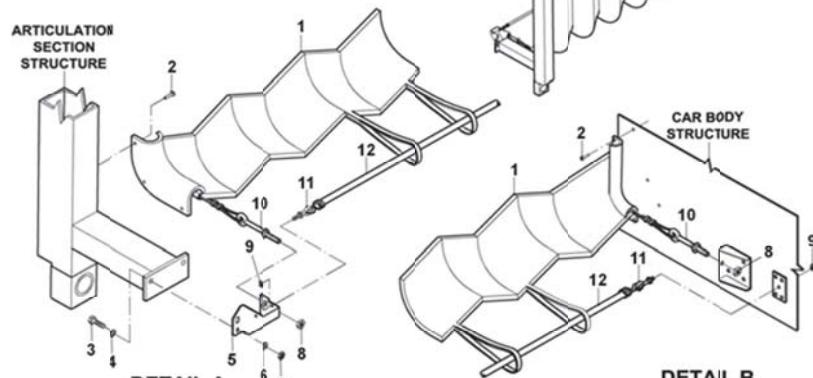
60,000

PROCEDURE (CONT'D):

- 3 Inspect Outer
Bellow for correct
installation.



- 4 Inspect Outer
Bellow for damage



- 5 Inspect Outer
Bellow attaching
parts for damage
/deformation /
missing/loose
hardware

1. BELLOW
2. RIVET
3. BOLT
4. LOCK WASHER
5. SUPPORT
6. FLAT WASHER
7. NUT
8. NUT
9. NUT
10. TIE ROD
11. TIE ROD
12. BELLOW RUBBER HOLDER

- 6 Install both the Access Panels and lock them using the maintenance Key
 7 Restore Power to Catenary
 8 Restore Power to Vehicle
 9 Record Task result on the Defect Report Card for administrative and maintenance planning

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-08-02-00/I-00

System:

CAR BODY

Sheet:

1/6

Subsystem/Assy:

ARTICULATION SECTION

Unit:

CONNECTION – ARTICULATION JOINT

Component:

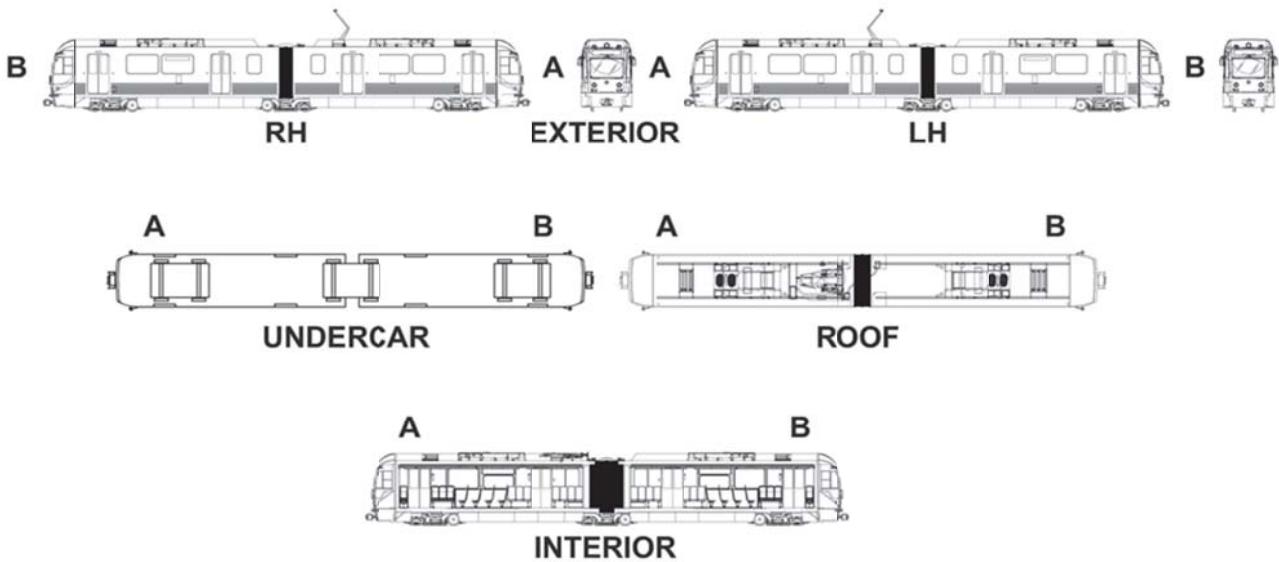
Man Hours:

3

Maintenance Task:

INSPECTION

Interval/Miles:

120,000**LOCATION:**

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-08-02-00/I-00

System:

CAR BODY

Sheet:

2/6

Subsystem/Assy:

ARTICULATION SECTION

Unit:

CONNECTION - ARTICULATION JOINT

Component:

Man Hours:

3

Maintenance Task:

INSPECTION

Interval/Miles:

120,000

SAFETY PRECAUTIONS:

WARNING: BLUE FLAG THE VEHICLE IN ACCORDANCE WITH ALL LACMTA BLUE FLAG POLICIES, RULES, & PROCEDURES IN ORDER TO WARN THAT MAINTENANCE PERSONNEL ARE WORKING ON, UNDER, OR NEAR ROLLING EQUIPMENT.

CAUTION : ALL FOUR (4) INNER RING GREASE NIPPLES AND ALL FOUR (4) OUTER RING GREASE NIPPLES HAVE TO BE SERVICED BECAUSE THE MINOR ROTARY MOVEMENT OF THE INSTALLED BEARING ALLOWS ONLY A LIMITED DISTRIBUTION OF THE GREASE

TOOLS:

LACMTA Maintenance Shop Standard Tools Kit

Grease Gun

CONSUMABLES:

Molikote Longterm 2 Plus Grease

SPARE PARTS:

N/A

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-08-02-00/I-00

System:

Sheet:

CAR BODY**3/6**

Subsystem/Assy:

ARTICULATION SECTION

Unit:

CONNECTION - ARTICULATION JOINT

Component:

Man Hours:

3

Maintenance Task:

INSPECTION

Interval/Miles:

120,000

PROCEDURE:

Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations:

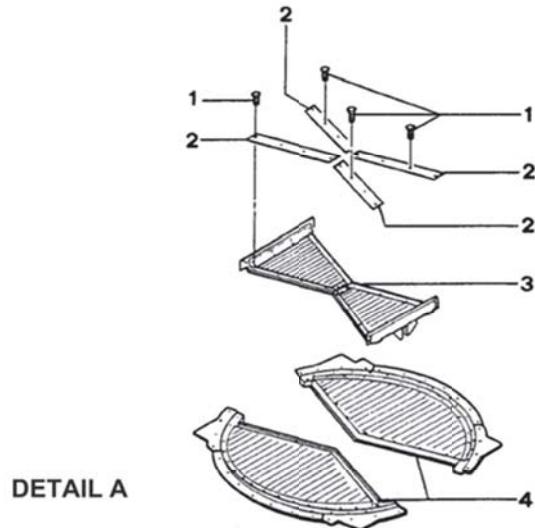
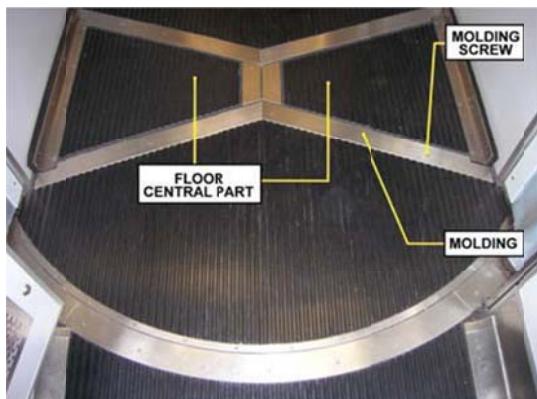
- 1) Place the Vehicle over the Pit (or Stand Up Rail)
- 2) Set the Master Controller Handle to FSB position
- 3) Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake " ON)

INSPECTION (refer to Figures 1 through 3)

To perform the Task proceed as follows :

NOTE : Keep (removed) Parts and Hardware for later use

1. Remove Articulation Section Floor, Central Part, as follows:
 - a) Remove Molding Screws (1) and Molding (2).
 - b) Remove Floor, Central Part (3).



1. Screw
2. Molding

DETAIL A

3. Floor, Central Part
4. Floor, Lateral Parts

Figure 1 – ART SECTION FLOOR – CENTRAL PART - REMOVAL/INSTALLATION

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-08-02-00/I-00

System:

CAR BODY

Sheet:

4/6

Subsystem/Assy:

ARTICULATION SECTION

Unit:

CONNECTION - ARTICULATION JOINT

Component:

Man Hours:

3

Maintenance Task:

INSPECTION

Interval/Miles:

120,000

PROCEDURE (CONT'D):

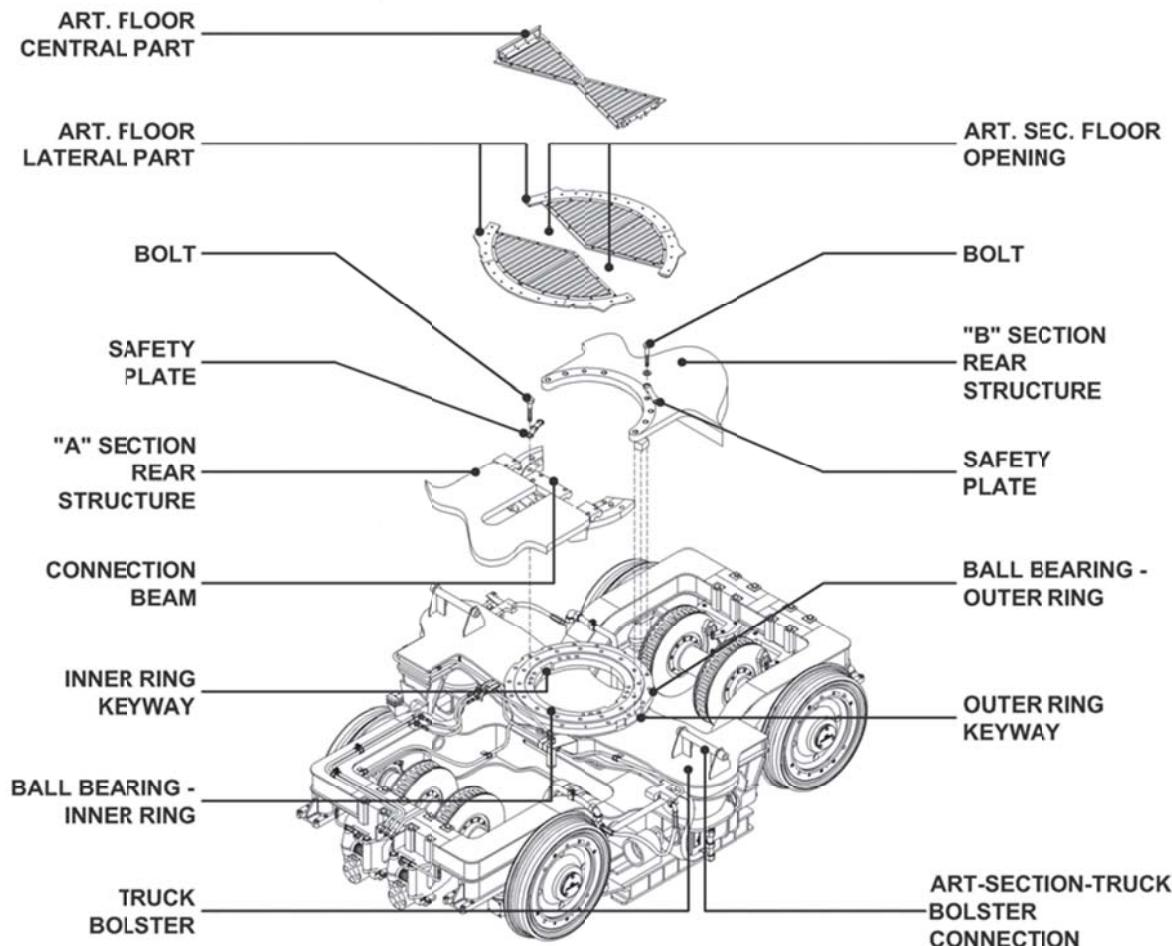


Figure 2 – TRUCK / CARBODIES / ART.SECTION STRUCTURE ACCESS & CONNECTIONS

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-08-02-00/I-00

System:

Sheet:

CAR BODY**5/6**

Subsystem/Assy:

ARTICULATION SECTION

Unit:

CONNECTION - ARTICULATION JOINT

Component:

Man Hours:

3

Maintenance Task:

Interval/Miles:

INSPECTION**120,000**

PROCEDURE (CONT'D):

2. Check for un-bended /damage / missing the (Slewing Ring Bolts) Safety Plates installed on the Outer Center and Inner Rings
3. Check the Marker Lines on each Bolt Head for misalignment
4. Check the Bolts of the Connection Beam for Nominal Torque Value of 72 ft-lb.
5. Check the Resilient Pins of the Connection Beam for visible damage / deformation
6. Lubricate the Slewing Ring as follows :

CAUTION : ALL FOUR (4) INNER RING GREASE NIPPLES AND ALL FOUR (4) OUTER RING GREASE NIPPLES HAVE TO BE SERVICED BECAUSE THE MINOR ROTARY MOVEMENT OF THE INSTALLED BEARING ALLOWS ONLY A LIMITED DISTRIBUTION OF THE GREASE

INNER RING

- a. Connect a Grease Gun provided with suitable Flexible Pipe to one of the four Grease Nipples installed onto the Inner Ring.
- b. Grease the Inner Slewing Ring with Molikote Longterm 2 Plus grease until fresh grease starts leaking out of the gaps of the Ring and Seal
- c. With a clean wiping rag remove excess grease.
- d. Perform previous steps "a" through "c" for each of the others three Grease Nipples

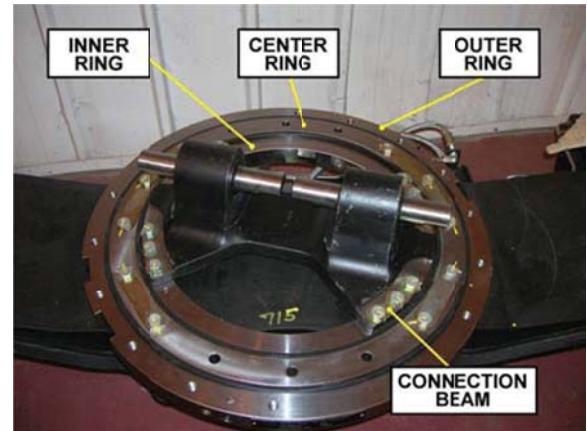
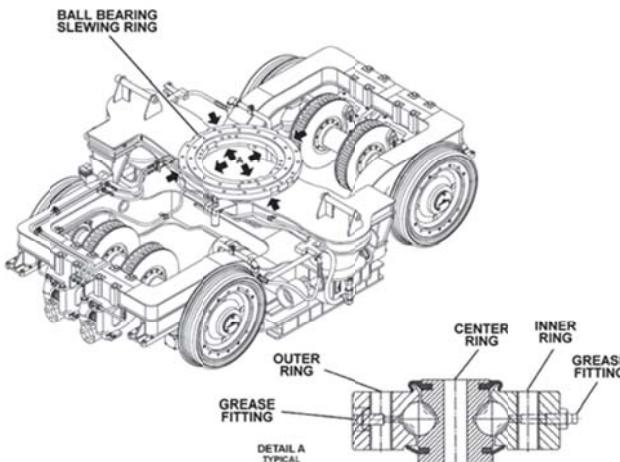


Figure 3 - TRAILER TRUCK -BALL BEARING SLEWING RING LUBRICATION

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-08-02-00/I-00

System:

CAR BODY

Sheet:

6/6

Subsystem/Assy:

ARTICULATION SECTION

Unit:

CONNECTION - ARTICULATION JOINT

Component:

Man Hours:

3

Maintenance Task:

INSPECTION

Interval/Miles:

120,000

PROCEDURE (CONT'D):

OUTER RING

- Connect a Grease Gun provided with suitable Flexible Pipe to one of the four Grease Nipples installed onto the Outer Ring.
- Grease the Outer Slewing Ring with Molikote Longterm 2 Plus grease until fresh grease starts leaking out of the gaps of the Ring and Seal
- Use a clean wiping rag to remove excess of grease.
- Perform previous steps "a" through "c" for each of the others three Grease Nipples

NOTE: Proper lubrication of the Slewing Ring is to reduce friction by lubricating the Seal and to protect against corrosion.

FINAL OPERATIONS

- Install Articulation Section Floor Central Part, as follows:
 - Check the Floor Central Part for damage/deformation. Replace as per check result.
 - Check for correct installation the Gasket on the Floor Central Part.
 - As per check result use recommended product to restore design installation.
 - Clean the Floor Central Part Seat using recommended product.
 - Position the Floor Central Part.
 - Install Moldings.
 - Apply a light coat of LOCTITE 242 on the screw threads and install / torque the Screws
 - Check that there are no level differences between the Vehicle Floor and the Floor Central Part. Adjust as per check result using recommended product
- Record Task results on the Defect Report Card for administrative and maintenance planning

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-08-04-00/ S-00

System:

CAR BODY

Sheet:

1/6

Subsystem/Assy:

ARTICULATION SECTION

Unit:

ARTICULATION FLOOR ASSEMBLY

Component:

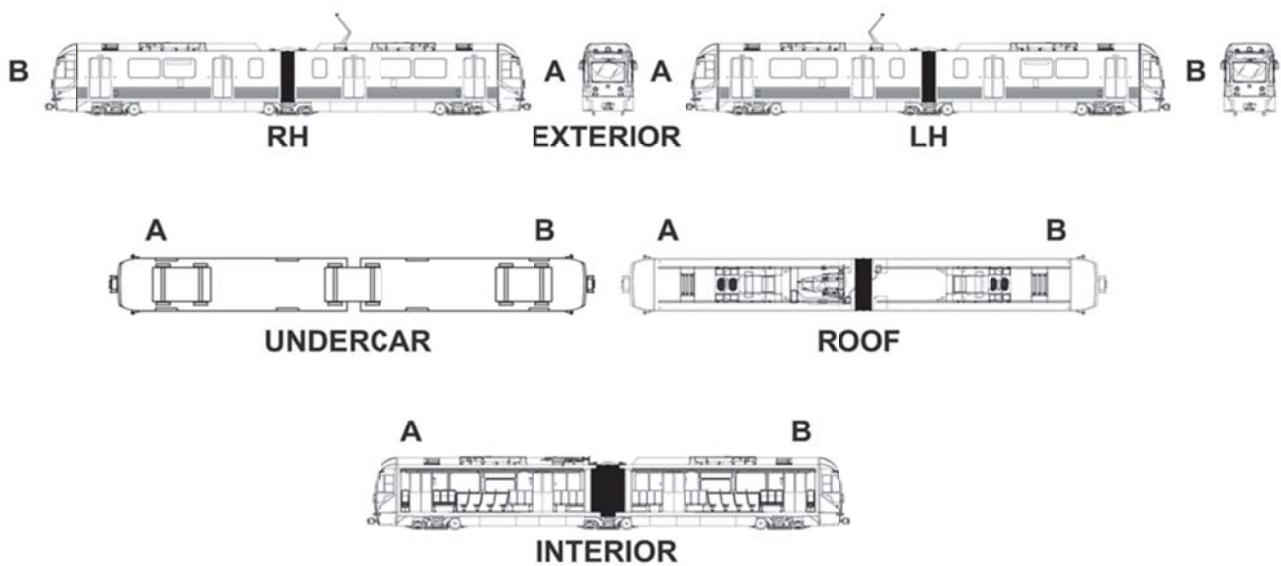
Man Hours:

2

Maintenance Task:

SERVICE

Interval/Miles:

120,000**LOCATION:**

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-08-04-00/ S-00

System:

CAR BODY

Sheet:

2/6

Subsystem/Assy:

ARTICULATION SECTION

Unit:

ARTICULATION FLOOR ASSEMBLY

Component:

Man Hours:

2

Maintenance Task:

SERVICE

Interval/Miles:

120,000**SAFETY PRECAUTIONS:**

LACMTA Maintenance Shop Safety Rules & Regulations

TOOLS:

LACMTA Maintenance Shop Standard Tool Kit

Vacuum Cleaner

CONSUMABLES:

Cleaner/Degreaser, as needed

Loctite 242, as needed

3M Teflon Tape (Threads Sealant), as needed

Double Sided Adhesive Tape (3M 950 Transfer Type), as needed

SPARE PARTS:

N/A

P2550 PREVENTIVE MAINTENANCE SHEET	
Card Code:	
R-P-02-08-04-00/ S-00	
System: CAR BODY	Sheet: 3/6
Subsystem/Assy: ARTICULATION SECTION	Unit: ARTICULATION FLOOR ASSEMBLY
Component:	Man Hours: 2
Maintenance Task: SERVICE	Interval/Miles: 120,000
PROCEDURE:	
<p>PRELIMINARY OPERATIONS Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations:</p> <ol style="list-style-type: none"> 1. Place the Vehicle in the Maintenance Shop 2. Set the Master Controller Handle to FSB position 3. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON) 	
<p>PROCEDURE To perform the Task proceed as follows (Refer to Figures 1 & 2)</p>	
<p>CLEANING</p> <ol style="list-style-type: none"> 1. Clean the Aisle Floor using recommended Cleaner. 2. Rinse with water and dry with cleaning rags. 	
<p>INSPECTION</p> <p>NOTE : Note any areas / items requiring Corrective Maintenance. The specific Adjustment / Repair Steps provided in the Sheet R C 02-08-04-00 / R-00 Keep the (removed) hardware for later use</p> <ol style="list-style-type: none"> 1. Inspect the Aisle Floor Ribbed Coverings for damage / wear 2. Inspect the (Aisle Floor) Central & Lateral Part Floor Moldings for damage, deformation and correct installation. 3. Inspect (Aisle Floor)Central & Lateral Part Floor Moldings for attaching parts that are loose / missing 4. Check that there are no level differences between the Vehicle Floor and the Aisle Floor 5. Remove (Aisle Floor) Central Part as follows (Refer to Fig 1) <ol style="list-style-type: none"> a) Remove Molding Screws (1) and Molding (2). b) Remove Floor, Central Part (3). 6. Check the (Floor Central Part) Weather Stripping (1 & 13, Fig 2) for damage / deformation 	

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-08-04-00/ S-00

System:

CAR BODY

Sheet:

4/6

Subsystem/Assy:

ARTICULATION SECTION

Unit:

ARTICULATION FLOOR ASSEMBLY

Component:

Man Hours:

2

Maintenance Task:

SERVICE

Interval/Miles:

120,000

PROCEDURE (CONT'D):

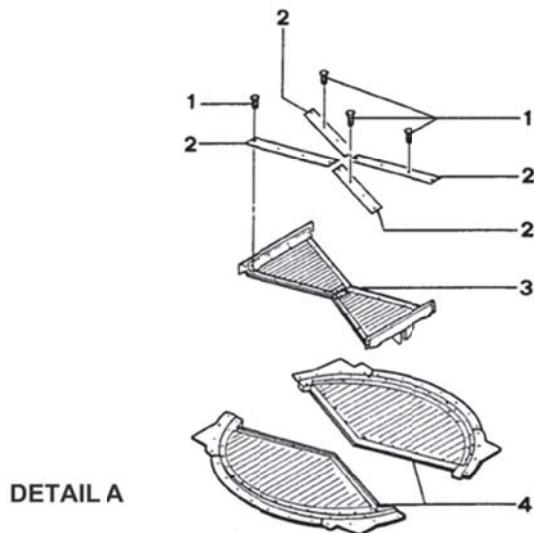
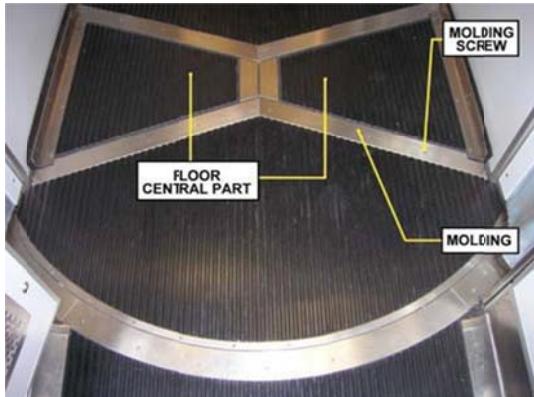


Figure 1 - ART SECTION FLOOR - CENTRAL PART - REMOVAL/INSTALLATION

7. After removing the (Aisle Floor) Central Part, vacuum clean its seat
8. Remove the (Aisle Floor) Lateral Part Floor Molding (9, Fig 2) by loosening and removing the relevant attaching Molding Screws (14, Fig 2).
9. After removing the Weather Stripping (6, Fig 2), vacuum clean its surrounding area
10. Check the Weather Stripping (6, Fig 2) for damage / deformation.
11. Position the Lateral Part Floor Molding (9, Fig 2).
12. Apply a light coat of Loctite 242 on the threads of the Molding Screws (14, Fig 2) and install the Screws on the Molding (9, Fig 2). Torque as required

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-08-04-00/ S-00

System:

CAR BODY

Sheet:

5/6

Subsystem/Assy:

ARTICULATION SECTION

Unit:

ARTICULATION FLOOR ASSEMBLY

Component:

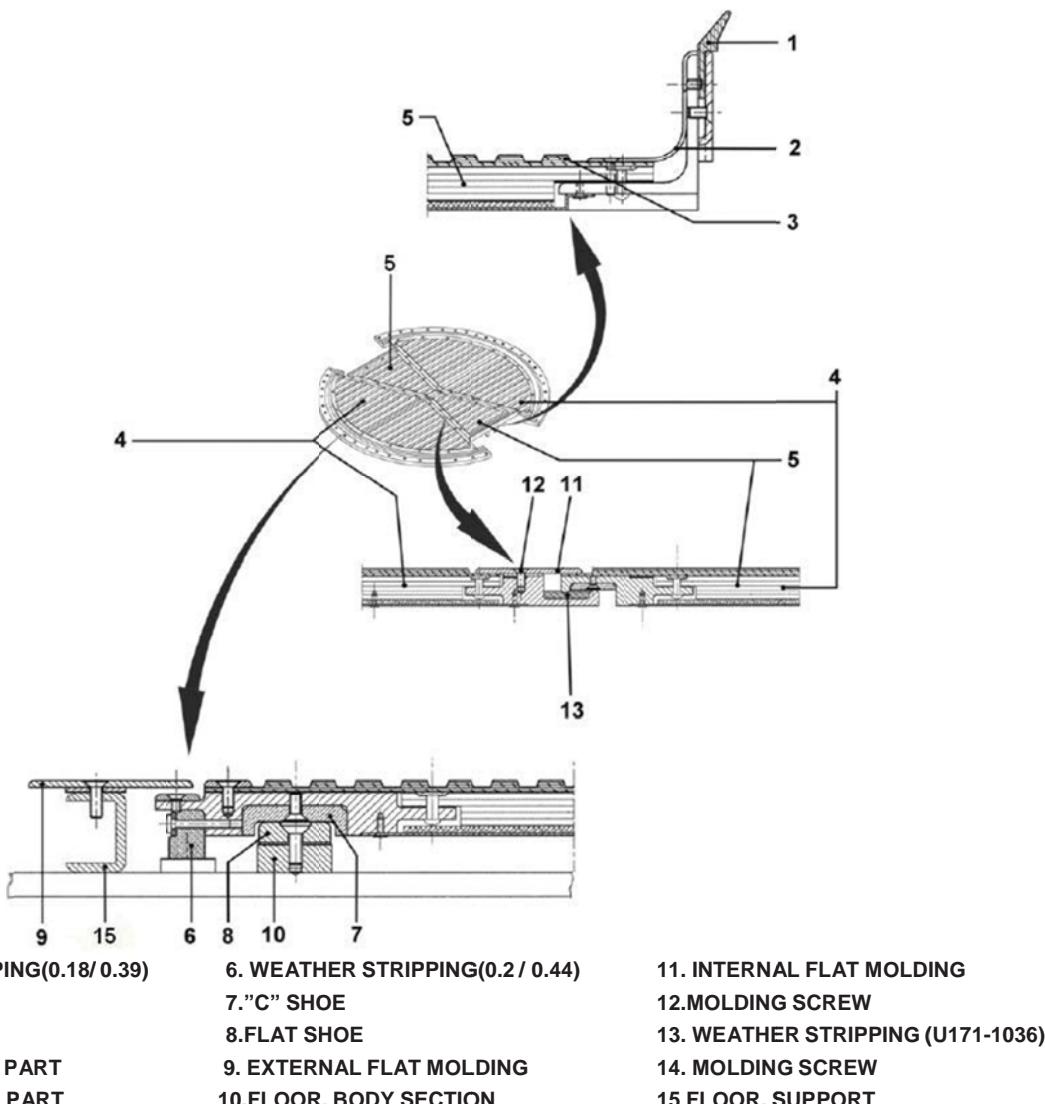
Man Hours:

2

Maintenance Task:

SERVICE

Interval/Miles:

120,000**PROCEDURE (CONT'D):**

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-08-04-00/ S-00

System:

CAR BODY

Sheet:

6/6

Subsystem/Assy:

ARTICULATION SECTION

Unit:

ARTICULATION FLOOR ASSEMBLY

Component:

Man Hours:

2

Maintenance Task:

SERVICE

Interval/Miles:

120,000

PROCEDURE (CONT'D):

13. Install the (Aisle Floor) Floor Central Part as follows:(Refer to Fig 1)
 - a) Check the (Aisle Floor) Floor Central Part for damage/deformation..
 - b) Check for correct installation the Weather Stripping (13, Fig 2). As per check result use recommended product to restore design installation.
 - c) Clean the Floor Central Part Seat using recommended product.
 - d) Position the Floor Central Part.
 - e) Install Moldings.(2)
 - f) Apply a light coat of Loctite 242 on the thread of the Screws (1) and install the Screws on the Molding (2). Torque as required
 - g) Check that there are no level differences between the Vehicle Floor and the Floor Central Part. Adjust as per check result.
14. Clean the Articulation Section Floor according to the Instructions provided in the relevant Step.
15. Record the Task results on the Defect Report Cards for administrative and maintenance planning

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-10-00-00/T-00

System:

CAR BODY

Sheet:

1/6

Subsystem/Assy:

OPERATOR'S SEAT

Unit:

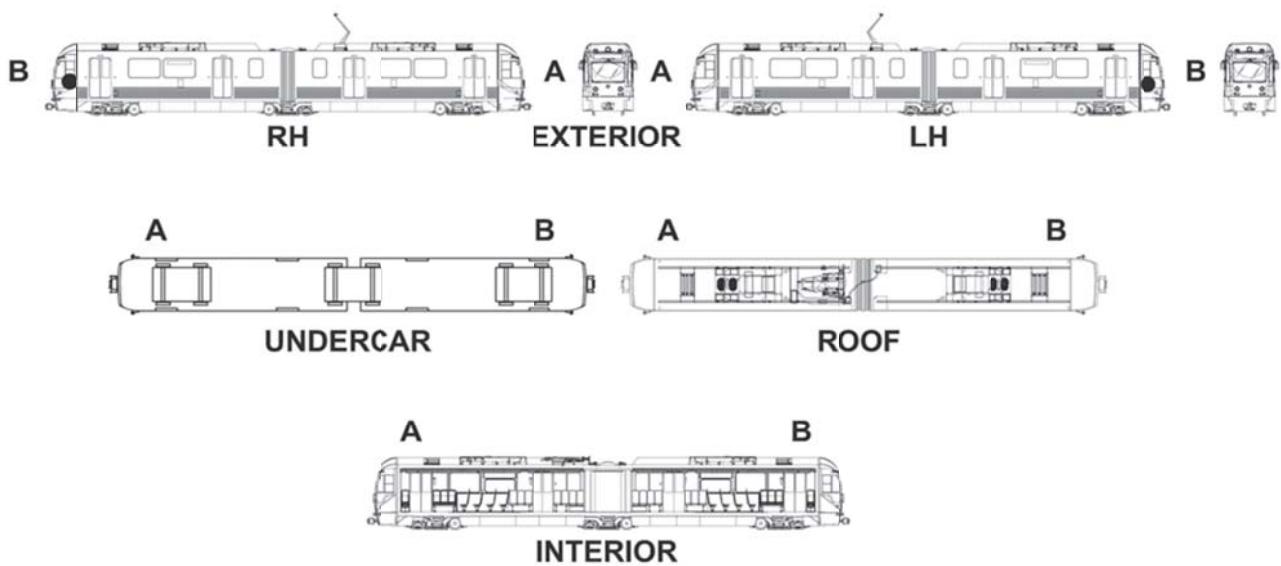
Component:

Man Hours:

0.25

Maintenance Task:

Interval/Miles:

TEST**60,000****LOCATION:**

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-10-00-00/T-00

System:

CAR BODY

Sheet:

2/6

Subsystem/Assy:

OPERATOR'S SEAT

Unit:

Component:

Man Hours:

0.25

Maintenance Task:

TEST

Interval/Miles:

60,000**SAFETY PRECAUTIONS:**

LACMTA Maintenance Shop Safety Rules & Regulations

**WARNING :BLUE FLAG THE VEHICLE IN ACCORDANCE WITH ALL LACMTA BLUE FLAG POLICIES,
RULES, & PROCEDURES IN ORDER TO WARN THAT MAINTENANCE PERSONNEL ARE
WORKING ON, UNDER, OR NEAR ROLLING EQUIPMENT.**

TOOLS:

LACMTA Maintenance Shop Standard Tools Kit.

CONSUMABLES:

OIL: SHELL HD 30

SPARE PARTS:

N/A

P2550 PREVENTIVE MAINTENANCE SHEET					
Card Code: R-P-02-10-00-00/T-00					
System: CAR BODY	Sheet: 3/6				
Subsystem/Assy: OPERATOR'S SEAT	Unit:				
Component:	Man Hours: 0.25				
Maintenance Task: TEST	Interval/Miles: 60,000				
PROCEDURE:					
PRELIMINARY OPERATIONS					
Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations:					
<ol style="list-style-type: none"> 1. Place the Vehicle over the Pit (or Stand Up Rail). 2. Set the Master Controller Handle to FSB position. 3. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). 					
TEST					
To perform the Task proceed as follows (Refer to Figure 1):					
Functional Test <ol style="list-style-type: none"> 1 Lumbar Adjustment <ol style="list-style-type: none"> a) Turn Knob (1) clockwise (CW) to adjust forward (►). b) Turn Knob (1) counter clockwise (CCW) to adjust backward (◄). 2 Flip Up Arm Rest Adjustment <ol style="list-style-type: none"> a) Turn Knob (2) clockwise (CW) to adjust forward (►). b) Turn Knob (2) counter clockwise (CCW) to adjust backward (◄). 3 Back Adjustment (continuous - 35°+45°) <ol style="list-style-type: none"> a) Turn Knob (3) CW or CCW to perform back adjustment. 4 Vertical Adjustment <ol style="list-style-type: none"> b) Pull up the Lever (5) to increase the cushion height from Cab Floor (▲). c) Push down the Lever (5) to decrease the cushion height from Cab Floor (▼). 5 Horizontal Adjustment <ol style="list-style-type: none"> a) Pull up the Lever (6) to unlock the Seat and to slide it forward or backward (←→) to meet the required position. b) Release the Lever (6) after adjustment to lock the Seat in position. 6 Rotation Checking <ol style="list-style-type: none"> a) Check Seat proper rotation by unlocking the Lever (4) 					
Record task result on the Defect report card for administrative and maintenance planning					
Lubrication <ol style="list-style-type: none"> 1. Lubricate the following items (using recommended lubricant): <table style="margin-left: 20px; border: none;"> <tr> <td>a: Slide;</td> <td>b: Swivel Mechanism;</td> <td>c: Armrest Joint;</td> <td>d: Backrest Joint.</td> </tr> </table> 2. Remove excess lubricant by using a clean cloth. 		a: Slide;	b: Swivel Mechanism;	c: Armrest Joint;	d: Backrest Joint.
a: Slide;	b: Swivel Mechanism;	c: Armrest Joint;	d: Backrest Joint.		
Record Task result on the Defect report card for administrative and maintenance planning					

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-10-00-00/T-00

System:

CAR BODY

Sheet:

4/6

Subsystem/Assy:

OPERATOR'S SEAT

Unit:

Component:

Man Hours:

0.25

Maintenance Task:

TEST

Interval/Miles:

60,000

PROCEDURE:

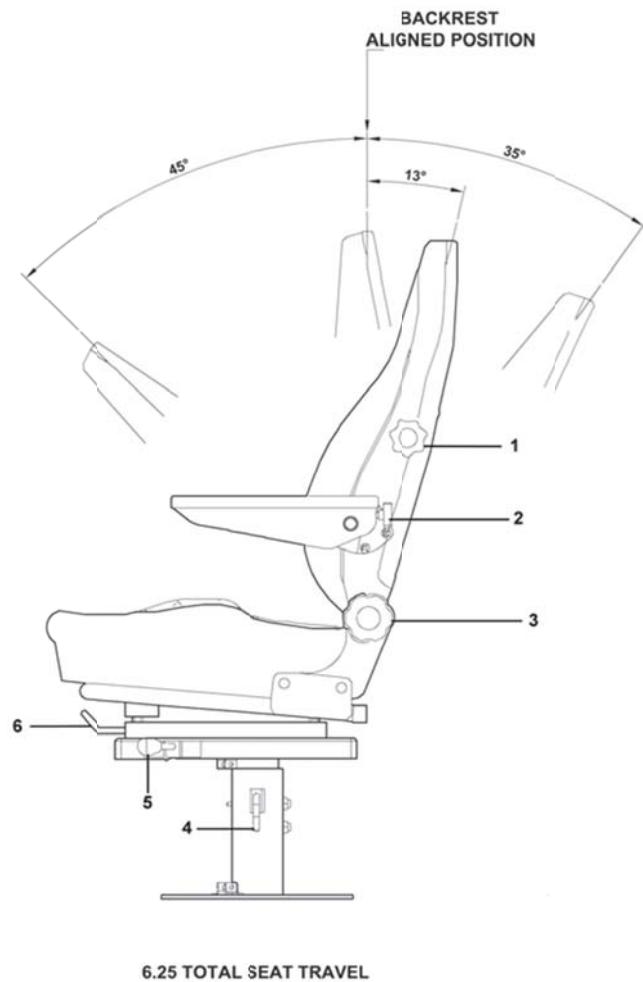


Figure 1 - OPERATOR'S SEAT TEST

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-10-00-00/T-00

System:

CAR BODY

Sheet:

5/6

Subsystem/Assy:

OPERATOR'S SEAT

Unit:

Component:

Man Hours:

0.25

Maintenance Task:

TEST

Interval/Miles:

60,000**PROCEDURE (CONT'D):****Figure 2 - OPERATOR'S SEAT**

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-10-00-00/T-00

System:

CAR BODY

Sheet:

6/6

Subsystem/Assy:

OPERATOR'S SEAT

Unit:

Component:

Man Hours:

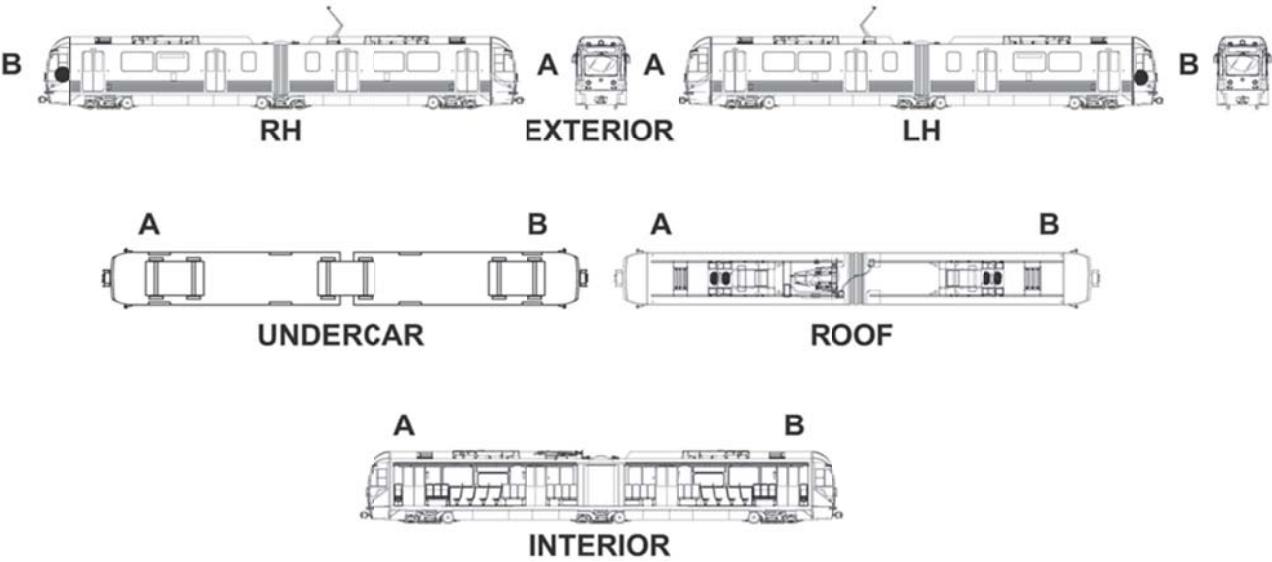
0.25

Maintenance Task:

TEST

Interval/Miles:

60,000**INTENTIONALLY LEFT
BLANK**

P2550 PREVENTIVE MAINTENANCE SHEET	
	Card Code: R-P-02-12-08-00/S-00
System: CAR BODY	Sheet: 1/4
Subsystem/Assy: DRIVER CAB INTERIORS FINISHING AND ACCESSORIES	Unit: OPERATOR'S WINDOW & CAB DOOR WINDOW
Component:	Man Hours: 0.25
Maintenance Task: SERVICE	Interval/Miles: 60,000
LOCATION:	
	

P2550 PREVENTIVE MAINTENANCE SHEET		
Card Code: R-P-02-12-08-00/S-00		
System: CAR BODY	Sheet:	2/4
Subsystem/Assy: DRIVER CAB INTERIORS FINISHING AND ACCESSORIES	Unit: OPERATOR'S WINDOW & CAB DOOR WINDOW	
Component:	Man Hours:	0.25
Maintenance Task: SERVICE	Interval/Miles:	60,000
SAFETY PRECAUTIONS: LACMTA Maintenance Shop Safety Rules & Regulations WARNING :BLUE FLAG THE VEHICLE IN ACCORDANCE WITH ALL LACMTA BLUE FLAG POLICIES, RULES, & PROCEDURES IN ORDER TO WARN THAT MAINTENANCE PERSONNEL ARE WORKING ON, UNDER, OR NEAR ROLLING EQUIPMENT.		
TOOLS: LACMTA Maintenance Shop Standard Tools Kit.		
CONSUMABLES: Cleaning Agent: Safety Kleen Premium Solvent Lubricant : CRC Silicone		
SPARE PARTS: N/A		

P2550 PREVENTIVE MAINTENANCE SHEET	
Card Code:	
R-P-02-12-08-00/S-00	
System:	Sheet:
CAR BODY	3/4
Subsystem/Assy:	Unit:
DRIVER CAB INTERIORS FINISHING AND ACCESSORIES	OPERATOR'S WINDOW & CAB DOOR WINDOW
Component:	Man Hours:
	0.25
Maintenance Task:	Interval/Miles:
SERVICE	60,000
PROCEDURE:	
PRELIMINARY OPERATIONS	
Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations:	
<ol style="list-style-type: none"> 1. Place the Vehicle over the Pit (or Stand Up Rail). 2. Set the Master Controller Handle to FSB position. 3. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). 	
This procedure consists of :	
<ol style="list-style-type: none"> 1 OPERATOR'S WINDOW SERVICE 2 CAB DOOR WINDOW SERVICE 	
CAB WINDOW SERVICE	
To perform the Task proceed as follows: (Refer to Figure 1)	
<ol style="list-style-type: none"> 1. Clean the Window Glasses (1, 2) and Racks (3) using recommended cleaner diluted in water. 2. Remove dirt from Racks (3) using a small brush. 3. Rinse with water and dry with cleaning rags. 4. Lubricate the following items (using recommended lubricant): <ol style="list-style-type: none"> a. Slide Carriage; b. Racks (LH/RH) mechanism. & Latches 5. Remove excess lubricant by using a clean wiping rag or cloth. 6. Record Task result on the Defect Report Card for administrative and maintenance planning 	
CAB DOOR WINDOW SERVICE	
To perform the Task proceed as follows: (Refer to Figure 2)	
<ol style="list-style-type: none"> 1. Clean the Window Glasses (1, 2) and Racks (3) using recommended cleaner diluted in water. 2. Remove dirt from Racks (3) using a small brush. 3. Rinse with water and dry with cleaning rags. 4. Lubricate the following items (using recommended lubricant): <ol style="list-style-type: none"> a. Slide Carriage; b. Racks (LH/RH) mechanism. & Latches 5. Remove excess lubricant by using a clean wiping rag or cloth. 6. Record Task result on the Defect Report Card for administrative and maintenance planning 	

P2550 PREVENTIVE MAINTENANCE SHEET

Card Code:

R-P-02-12-08-00/S-00

System:

CAR BODY

Sheet:

4/4

Subsystem/Assy:

**DRIVER CAB INTERIORS FINISHING
AND ACCESSORIES**

Unit:

**OPERATOR'S WINDOW & CAB
DOOR WINDOW**

Component:

Man Hours:

0.25

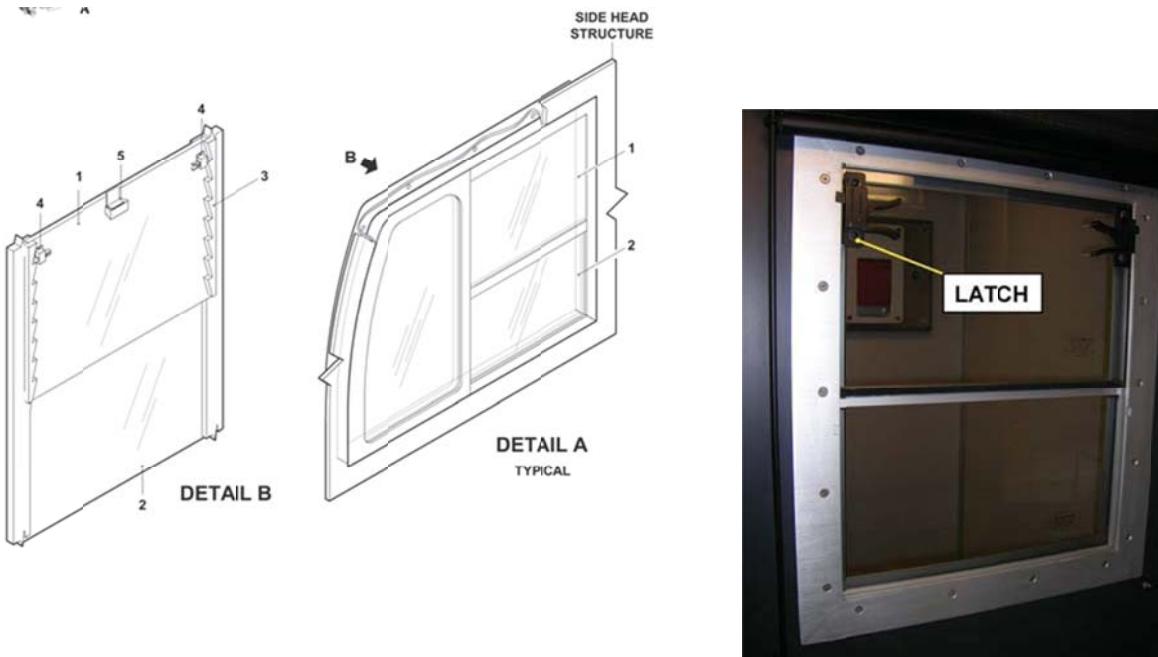
Maintenance Task:

SERVICE

Interval/Miles:

60,000

PROCEDURE (CONT'D):



1. SLIDING GLASS
2. FIXED GLASS

3. RACK
4. RACK MECHANISM
5. HANDLE

Cab –Operator's Window

Cab Door Window

Figure 1 - OPERATOR'S WINDOW & CAB DOOR WINDOW - SERVICE

02-III-04 RUNNING -CORRECTIVE MAINTENANCE**02-III-04.01 Running -Corrective Maintenance Sheets (R-CMS)**

Each R-CMS provides the following data consistent with Corrective Maintenance Analysis (CMA), AB Design Documentation and Vehicle Systems Functional Tree:

- **R-CM Sheet Code**
- **SYSTEM, SUBSYSTEM /ASSEMBLY, UNIT, Component** (Names)
- **SYSTEM, SUBSYSTEM /ASSEMBLY, UNIT, Component** (Location)
- **Maintenance Task,**

The following definitions are applicable to the R-CM Tasks

The following definitions are applicable to the R-CM Tasks

Inspection:	Maintenance procedures such as those required to ascertain the serviceability of a Part, Assembly, System or the specific interrelationship of Parts that perform a functional operation.
Leveling:	Procedure to adjust the distance between the Vehicle Floor to the Top Of Rail and the designated Vehicle Height
Replacement:	Provides the Components / Assemblies and Subassemblies removal & installation in a logical sequential order.
Re-Profiling:	Provides the procedure to maintain the safe and proper "wheel profile."
Repair:	Provides detailed procedures for the repair of a specific Equipment / Component
Service:	Operation performed to replenish Sand, Windshield Wiper Washer Fluid, HVAC Coolant, Gear and Compressor Oil, and Vehicle Lubrication.

- **Man Hours**, needed to perform the Task
- **SPARE PARTS**, needed to perform the Task

Each R-CMS provides also:

- **SAFETY PRECAUTIONS**, to be followed to safely accomplish the Task
- **TOOLS**, including Special Tools and Test Equipment, needed to accomplish the Task
- **CONSUMABLES**, required to accomplish the Task and consistent with those used by MTA
- **PROCEDURE**, consisting of Preliminary Operations and Procedural Steps, to be followed while performing Maintenance Tasks.
- **Illustrations and Pictures** are inserted in the text to facilitate the understanding of the topics and/or to explain step-by-step procedure.

Each R-CM Sheet refers to one Task and consists of several pages where Safety Precautions and Maintenance Instructions to perform safely the Task are provided by Procedural Steps in conjunction with Illustrations and Pictures.

02-III-04.01.01 Running- Corrective Maintenance Sheet (R-CMS) Form

The R-CMS Form (refer to Figure 02-III-04.1) consists of several fields containing the following data/ information:

RUNNING -CORRECTIVE MAINTENANCE SHEET (R-CMS) Form			
ITEM #	TITLE	CONTENT	EXPLANATORY NOTES
1	Card code	Sheet code	<p>The Sheet Code is an alphanumerical code that identifies each R-CM Sheet.</p> <p>THE SHEET CODE IS EXPLICIT</p> <p>The Sheet Code consists of letters R-C followed by an 11 digit code number as follows:</p> <p>R-C-nn-mm-zz-ww/Y-kk</p> <p>R = Running C= Corrective</p> <p>nn may vary from 02 to 19, identifying the System/ Manual Section number.</p> <p>mm-zz-ww each one may vary from 00 to 99, according to AB System Functional Tree, allowing the identification of the Assembly/Unit/Component</p> <p>Y Maintenance Task Code.</p> <p>It may be one of the following:</p> <p>I = Inspection LL =Leveling</p> <p>R = Replacement RP= Re-Proiling</p> <p>RR = Repair S = Service</p> <p>SP = Safety Precautions</p> <p>kk It may vary from 00 to 99.</p> <p>It is a progressive number allowing the explicit identification of R-CMS</p> <p>NOTE :</p> <p>The code R-C-nn-00-00-00-R-kk identifies a Typical Replacement Procedure</p> <p>The Typical Replacement Procedure is provided for the following items :</p> <p>Board, Circuit Breaker, Diode, Indicator Lamp, Main Contactor, Switch & Relays.</p>
2	System	System name	This field indicates the System to which the Assembly/Unit/Component belongs.
3	Subsystem/ Assembly	Subsystem/ Assembly name	This field indicates the Subsystem/Assembly to which the Unit/Component belongs.
4	Unit	Unit name	This field indicates the Unit to which the Component belongs
5	Component	Component name	This field indicates the Component the Maintenance Task is referring to
6	Maintenance Task	Maintenance Task name	This field indicates the Maintenance Task to be performed.
7	Man Hours	Number	The Man Hour field indicates the time needed to perform the corresponding Maintenance Task, with the basic assumption that the Vehicle is staged on an Inspection Pit/Jacking tracks with the required Consumables, Tools and Materials available.

RUNNING -CORRECTIVE MAINTENANCE SHEET (R-CMS) Form (cont'd)			
ITEM #	TITLE	CONTENT	EXPLANATORY NOTES
8	Sheet	Pages numbering	This field indicates the progressive R-CMS sheet page number.
9	LOCATION	Illustration	This field indicates the On Board Location of the Equipment to be maintained The following Graphic Symbols are used for: Assembly/Unit/Component for System/Subsystem/Vehicle as a Whole 
10	R	Letter	This field indicates that the Sheet pertains to Running Maintenance
11	C	Letter	This field indicates that the Sheet pertains to Corrective Maintenance
12	nn	Number	This field indicates the System/Manual Section number to which the Sheet pertains. It may vary from 01 to 19
13	rr	Number	This field indicates the Sheet Revision number
14	Page ##	Page ##	This field indicates the RMSM Section Page number
15	-#	Number	This field indicates the RMSM Section Revision number
16	SAFETY PRECAUTIONS	Text	This field presents the General and/or specific Safety Precautions to be followed to accomplish safely the relevant Maintenance Tasks.
17	TOOLS	Text	This field lists the description and the P/N of the Standard tools, Special Tools and Test Equipment needed to accomplish the Maintenance Task. Refer to the TTE Manual for the TE and Special Tools detailed descriptions and tools maintenance.
18	CONSUMABLES	Text	This field lists the Consumables Materials (consistent with those used by MTA with the related P/N.) needed to accomplish the Maintenance Task. Cleaning agents are included
19	SPARE PARTS	Text	This field lists the Description and PN of Spare Parts (consistent with Illustrated Parts Catalog) needed to accomplish the Maintenance Task.
20	PROCEDURE	Text	The Procedure field provides Preliminary Operations and Procedural step by step Instructions to be followed while performing the Maintenance Task. Illustrations and Pictures are inserted in the text to facilitate the understanding of the topics and/or to explain step-by-step procedure.

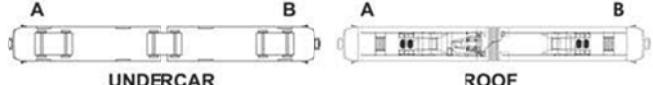
P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-nn-mm-zz-ww/Y-kk	
System:	Sheet:
Subsystem/Assy:	Unit:
Component	Man Hours:
Maintenance Task:	
LOCATION:	
   	
10	R C nn rr
11	M Metro
12	13
14	Page 01-1 Draft
15	

Figure 02-111-04.1 R-CMS Form
(Sheet 1 of 2)

LACMTA P2550 LRV Running Maintenance and Servicing Manual - Section 01		 AnsaldoBreda				
P2550 CORRECTIVE MAINTENANCE SHEET						
Card Code: R-C-nn-mm-zz-ww/Y-kk						
System:	Sheet	x/z				
Subsystem/Assy:	Unit:					
Component:		Man Hours:				
Maintenance Task:						
SAFETY PRECAUTIONS: 						
TOOLS: 						
CONSUMABLES: 						
SPARE PARTS: 						
PROCEDURE: PRELIMINARY OPERATIONS 						
						
Page 01-2 Draft						
<table border="1" style="margin-left: auto; margin-right: 0; border-collapse: collapse;"> <tr> <td style="padding: 2px;">R</td> <td style="padding: 2px;">C</td> <td style="padding: 2px;">nn</td> <td style="padding: 2px;">rr</td> </tr> </table>			R	C	nn	rr
R	C	nn	rr			

**Figure 02-III-04.1 R-CMS Form
(Sheet 2 of 2)**

To optimize the job organization it is suggested to proceed as follows:

1. Before Task Execution

- a) Read accurately the Sheet to fully knowledge the provided Data /Instructions.
- b) Particularly read:
 - The Safety Precautions to perform safely the Task
 - The Preliminary Operations to set the Vehicle in safety conditions according to MTA Maintenance Shop Regulations
 - The Tools, Consumables and Spare Parts listed in each Sheet and needed to accomplish the Task, to have all of them available next the location of the Equipment to be maintained before to start the activities

2. During Task Execution

- a) Follow accurately the prescribed Safety Precautions and Maintenance Procedural Steps.
- b) Note any Areas/Items of the Assembly/Unit/Component under Corrective Maintenance Process requiring further Corrective Maintenance.
- c) Gather as much information about the Equipment as is practical (i. e. knowledge about the malfunction in terms of correctly operating and incorrectly operating equipment processes) to increase your equipment knowledge.

3. At every Task Completion

- a) Follow carefully the prescribed Safety Precautions before restoring the Electrical Power to Vehicle.
- b) Check the correct operation and/or functions of the Subsystem to which the maintained Equipment pertains.
- c) It is suggested to perform this check on the IDU “A “as follows:

NOTE: Through the IDU you can check if all Systems are exchanging data by MVB or LonWorks Bus and the Trainlines Status.

The IDU Display also shows in real time the Status of all Vehicle Systems.

Reading the IDU Fault List, it is possible to immediately detect a fault.

Using the IDU in Normal Mode, the Fault Indications are generic,
Using the IDU in Maintenance Mode, the same Fault has a detailed description.

An alternate way for a very detailed System troubleshooting is to directly connect a PTU to the STB and PCA board using the Connectors located in the Electronic Box of the A or B Section.

1. On IDU "A" access to the Maintenance Menu first and then to the "Faults" Screen by selecting, in sequence, the relevant icons
2. Check, On IDU "A" through the list of the Current Active Faults shown in the "Faults" Screen, for Fault Codes related to the Subsystem to which the maintained Equipment pertains.

Refer to Section 18 of RMSM for Fault Signals Details.

3. As per "Fault" Codes check results proceed as follows:

➤ **No Faults are listed in the "Faults" Screen**

- a) Key OFF the Vehicle.
- b) Record Service and Test results on the Defect Report Card for administrative and maintenance planning.

➤ **Fault Codes are listed in the "Faults" Screen**

- a) Investigate/troubleshoot the Equipment previously maintained first and then the System/Subsystem/Assembly/Unit for Fault Probable Causes.
- b) Gather as much information about the failure symptoms as is practical.
Refer to Section 18 of RMSM for Fault Signals Details.
- c) Try to identify the malfunction in terms of correctly operating and incorrectly operating equipment processes.
- d) Identify which equipment signals or parameters will best help you to localize the failure.
- e) Identify the source of the problem.
- f) Repair or replace the defective component.
- g) Verify that the repair is effective in eliminating all of the failure symptoms.
- h) Evaluate whether the defective component was the root cause of the failure.
- i) Once the Fault Codes are not found in the "Faults" Screen perform steps from 3-a through 3-b (previous subparagraph "**No Faults are listed in the "Faults" Screen**").

02-III-04.01.03 Running- Corrective Maintenance Sheet (R-CMS) List

The Car Body Running- Corrective Maintenance Sheets (R-CMS) List is provided in the following

Table 02-III-04.1

The R-CM Sheets are listed by Subsystem / Assembly / Unit / Component and sequenced by Sheet Codes and Tasks to be performed

Table 02-III-04.1 Running Corrective Maintenance Sheets List

SYSTEM 02		CAR BODY		
SUBSYSTEM / ASSY	UNIT	COMPONENT	TASK	SHEET CODE
FRONT HEAD ASSY		FRONT HEAD	REPLACEMENT	R-C-02-03-01-00/R-00
FRONT HEAD	RIGHT SKIRT ASSY		REPLACEMENT	R-C-02-03-02-00/R-00
FRONT HEAD	LEFT SKIRT ASSY		REPLACEMENT	R-C-02-03-03-00/R-00
ROOF FAIRINGS			REPLACEMENT	R-C-02-04-00-00/R-00
SKIRTS			REPLACEMENT	R-C-02-05-00-00/R-00
WINDOWS	WINDSHIELD		REPLACEMENT	R-C-02-07-01-00/R-00
WINDOWS	CAB SIDE WINDOW		REPLACEMENT	R-C-02-07-02-00/R-00
WINDOWS	PASSENGER SIDE GLASS		REPLACEMENT	R-C-02-07-03-00/R-00
WINDOWS	SIDE GLASS (SILK SCREENING)		REPLACEMENT	R-C-02-07-04-00/R-00
WINDOWS	SIDE GLASS (ART. SECT. SIDE)		REPLACEMENT	R-C-02-07-05-00/R-00
ARTICULATION SECTION			REPLACEMENT	R-C-02-08-00-00/R-00
ARTICULATION SECTION	STRUCTURE ASSEMBLY	BELLOW STRUCTURE	REPLACEMENT	R-C-02-08-01-00/R-00
ARTICULATION SECTION	CONNECTION - ARTICULATION JOINT		REPLACEMENT	R-C-02-08-02-00/R-00
ARTICULATION SECTION	CENTERING DOME SYSTEM		REPLACEMENT	R-C-02-08-03-00/R-00
ARTICULATION SECTION	ARTICULATION FLOOR		REPLACEMENT	R-C-02-08-04-00/R-00
ARTICULATION SECTION	OUTER BELLOW		REPLACEMENT	R-C-02-08-06-00/R-00
PASSENGER SEATS	2 SEATERS TRANSVERSAL ASSY (LH & RH)		REPLACEMENT	R-C-02-09-01-00/R-00
PASSENGER SEATS	1 SEATER LIFTABLE LONGITUDINAL ASSY		REPLACEMENT	R-C-02-09-02-00/R-00
PASSENGER SEATS	3-SEATERS FLIP-UP LONGITUDINAL ASSY		REPLACEMENT	R-C-02-09-03-00/R-00
PASSENGER SEATS	2 SEATERS LONGITUDINAL ASSY		REPLACEMENT	R-C-02-09-04-00/R-00
PASSENGER SEATS	3 SEATERS LONGITUDINAL ASSY		REPLACEMENT	R-C-02-09-05-00/R-00
PASSENGER SEATS	2 SEATERS LONGITUDINAL ASSY OVER BOX		REPLACEMENT	R-C-02-09-06-00/R-00
OPERATOR'S SEAT			REPLACEMENT	R-C-02-10-00-00/R-00
MIRRORS	LEFT & RIGHT MIRROR		REPLACEMENT	R-C-02-11-01-00/R-00
MIRRORS	EXTERIOR MIRROR ADJUSTER SWITCH		REPLACEMENT	R-C-02-11-03-00/R-00
MIRRORS	EXTERIOR MIRROR ADJUSTER CIRCUIT BREAKER		REPLACEMENT	R-C-02-11-04-00/R-00
DRIVER CAB INTERIORS	CAB ROOF ASSEMBLY		REPLACEMENT	R-C-02-12-01-00/R-00
DRIVER CAB INTERIORS	CENTRAL COVERING ASSEMBLY		REPLACEMENT	R-C-02-12-02-00/R-00

Table 02-III-04.1 Running Corrective Maintenance Sheets List (cont'd)

SYSTEM	02	CAR BODY			(cont'd)
SUBSYSTEM / ASSY	UNIT	COMPONENT	TASK	SHEET CODE	
DRIVER CAB INTERIORS	CONSOLE BASE PLANE		REPLACEMENT	R-C-02-12-03-00/R-00	
DRIVER CAB INTERIORS	CAB LINING PANELS		REPLACEMENT	R-C-02-12-04-00/R-00	
DRIVER CAB INTERIORS	OPERATOR CONSOLE		REPLACEMENT	R-C-02-12-09-00/R-00	
DRIVER CAB INTERIORS	FRONT AIR DIFFUSER ASSEMBLY		REPLACEMENT	R-C-02-12-10-00/R-00	
DRIVER CAB INTERIORS	ELECTRICAL CABINET ASSY		REPLACEMENT	R-C-02-12-11-00/R-00	
DRIVER CAB INTERIORS	CAB PARTITION WALL ASSY		REPLACEMENT	R-C-02-12-12-00/R-00	
DRIVER CAB INTERIORS	CAB PARTITION DOOR LOCK		REPLACEMENT	R-C-02-12-15-00/R-00	
DRIVER CAB INTERIORS	CAB PARTITION DOOR WINDOW		REPLACEMENT	R-C-02-12-16-00/R-00	
PASSENGERS INTERIORS	FLOOR PLY-METAL PANELS		REPLACEMENT	R-C-02-13-01-00/R-00	
PASSENGERS INTERIORS	LEFT & RIGHT BOX ASSY		REPLACEMENT	R-C-02-13-02-00/R-00	
PASSENGERS INTERIORS	CENTER CEILING ASSY		REPLACEMENT	R-C-02-13-04-00/R-00	
PASSENGERS INTERIORS	SIDE CEILING ASSY		REPLACEMENT	R-C-02-13-05-00/R-00	
PASSENGERS INTERIORS	HEADER PANEL ASSY		REPLACEMENT	R-C-02-13-06-00/R-00	
PASSENGERS INTERIORS	WAINGCOT ASSY		REPLACEMENT	R-C-02-13-07-00/R-00	
PASSENGERS INTERIORS	AISLE PANELS ASSY		REPLACEMENT	R-C-02-13-08-00/R-00	
PASSENGERS INTERIORS	STANCHIONS & HANDRAILS ASSY		REPLACEMENT	R-C-02-13-09-00/R-00	
PASSENGERS INTERIORS	WINDSCREEN PANELS ASSY		REPLACEMENT	R-C-02-13-10-00/R-00	
PASSENGERS INTERIORS	DOOR POCKET ASSY		REPLACEMENT	R-C-02-13-11-00/R-00	
PASSENGERS INTERIORS	WINDOW MASK ASSY		REPLACEMENT	R-C-02-13-12-00/R-00	
PASSENGERS INTERIORS	ELECTRICAL LOCKER ASSY		REPLACEMENT	R-C-02-13-13-00/R-00	

02-III-04.01.04 Running- Corrective Maintenance Sheets (R-CMS)

CAR BODY

Running – Corrective Maintenance Sheets

R-CMS

INTENTIONALLY LEFT BLANK

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-03-01-00/R-00

System:

CAR BODY

Sheet:

1/6

Subsystem/Assy:

FRONT HEAD ASSY

Unit:

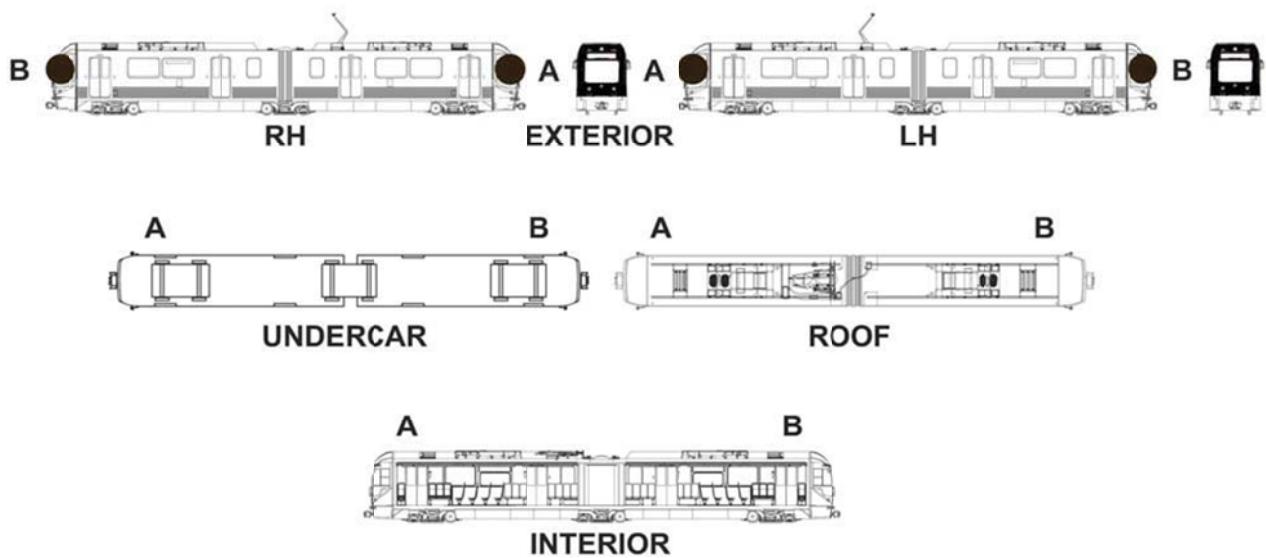
Component:

FRONT HEAD

Man Hours:

5

Maintenance Task:

REPLACEMENT**LOCATION:**

P2550 CORRECTIVE MAINTENANCE SHEET		
Card Code:		
R-C-02-03-01-00/R-00		
System:	Sheet:	
CAR BODY	2/6	
Subsystem/Assy:	Unit:	
FRONT HEAD ASSY		
Component:	Man Hours:	
FRONT HEAD	5	
Maintenance Task:		
REPLACEMENT		
SAFETY PRECAUTIONS:		
LACMTA Maintenance Shop Safety Rules & Regulations		
WARNING: APPLY WHEEL CHOCKS TO PREVENT THE VEHICLE FROM MOVING.		
TOOLS:		
LACMTA Maintenance Shop Standard Tools Kit.		
Overhead Crane (min. capacity 500 Lb).		
CONSUMABLES:		
Sealing Dow Corning 3525 black		
Loctite 270		
SPARE PARTS:		
Front Head Assy.		
Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers		

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-03-01-00/R-00	
System: CAR BODY	Sheet: 3/6
Subsystem/Assy: FRONT HEAD ASSY	Unit:
Component: FRONT HEAD	Man Hours: 5
Maintenance Task: REPLACEMENT	
PROCEDURE:	
a. PRELIMINARY OPERATIONS	
It is assumed that :	
1. The Vehicle is set in safety condition in accordance with LACMTA Maintenance Shop regulations. 2. The Overhead Catenary is isolated and the power removed. 3. All the Equipment /Components installed on the Front Head are removed.	
b. REPLACEMENT	
To perform the Replacement Procedure of the Front Head assembly proceed as follows (Refer to Figure 1):	
Removal	
WARNING: FRONT HEAD WEIGHS 485 LB (220 KG). DURING THE REPLACEMENT PROCEDURE MAKE SURE THAT OVERHEAD CRANE SUPPORTS THE UNIT TO PREVENT UNSAFE CONDITION.	
<ol style="list-style-type: none"> 1. Secure the Front Head (10) to the Overhead Crane (min. capacity 500 Lb).provided with suitable Ropes. 2. Remove Screws (60) and Washers (70, 80). 3. Use the Overhead Crane carefully to remove the Front Head (10) with the Joint Backup Rod (90). 4. Remove Joint Backup Rod (90) and discard it. 5. Disassemble Front Head (10) as follows: <ol style="list-style-type: none"> a) Remove Flanged Bushings (30), Washers (40) and Ring Nuts (50). b) Remove Nuts (14), Washers (12, 13) and Slot Plates (11). 	
Installation	
<ol style="list-style-type: none"> 1. Assemble Front Head (10) as follows: <ol style="list-style-type: none"> c) Install Slot Plates (11), Washers (12, 13) and Nuts (14). Torque Nuts (14) to 6.2 lb-ft. d) Install Flanged Bushings (30), Washers (40) and Ring Nuts (50). e) Torque Ring Nuts (50) to 105 lb-ft.. 	
CAUTION: DURING GASKET INSTALLATION, FOLLOWS STRICTLY GLUE MANUFACTURER INSTRUCTIONS FOR THE SURFACE PREPARATION, ENVIRONMENTAL CONDITIONS AND TIME NECESSARY FOR ADHESIVE SETTING.	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-03-01-00/R-00

System:

CAR BODY

Sheet:

4/6

Subsystem/Assy:

FRONT HEAD ASSY

Unit:

Component:

FRONT HEAD

Man Hours:

5

Maintenance Task:

REPLACEMENT

PROCEDURE:

2. Position Joint Backup Rod (90) and lock it by Sealing Dow Corning 3525.
3. Secure the Front Head to the Overhead Crane (min. capacity 500 Lb).provided with suitable Ropes.

WARNING: FRONT HEAD WEIGHS 485 LB (220 KG).

**DURING THE REPLACEMENT PROCEDURE MAKE SURE THAT
OVERHEAD CRANE SUPPORTS THE UNIT TO PREVENT UNSAFE
CONDITION.**

4. Use the Overhead Crane carefully to install the Front Head (10) in proper position.

NOTE: Apply a light coat of Loctite 270 on the thread of the Screws (60).

5. Install Screws (60) and Washers (70, 80). Torque Screws (60) as required.
6. Record Task results on the Defect Report Card for administrative and maintenance planning.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-03-01-00/R-00

System:

CAR BODY

Sheet:

5/6

Subsystem/Assy:

FRONT HEAD ASSY

Unit:

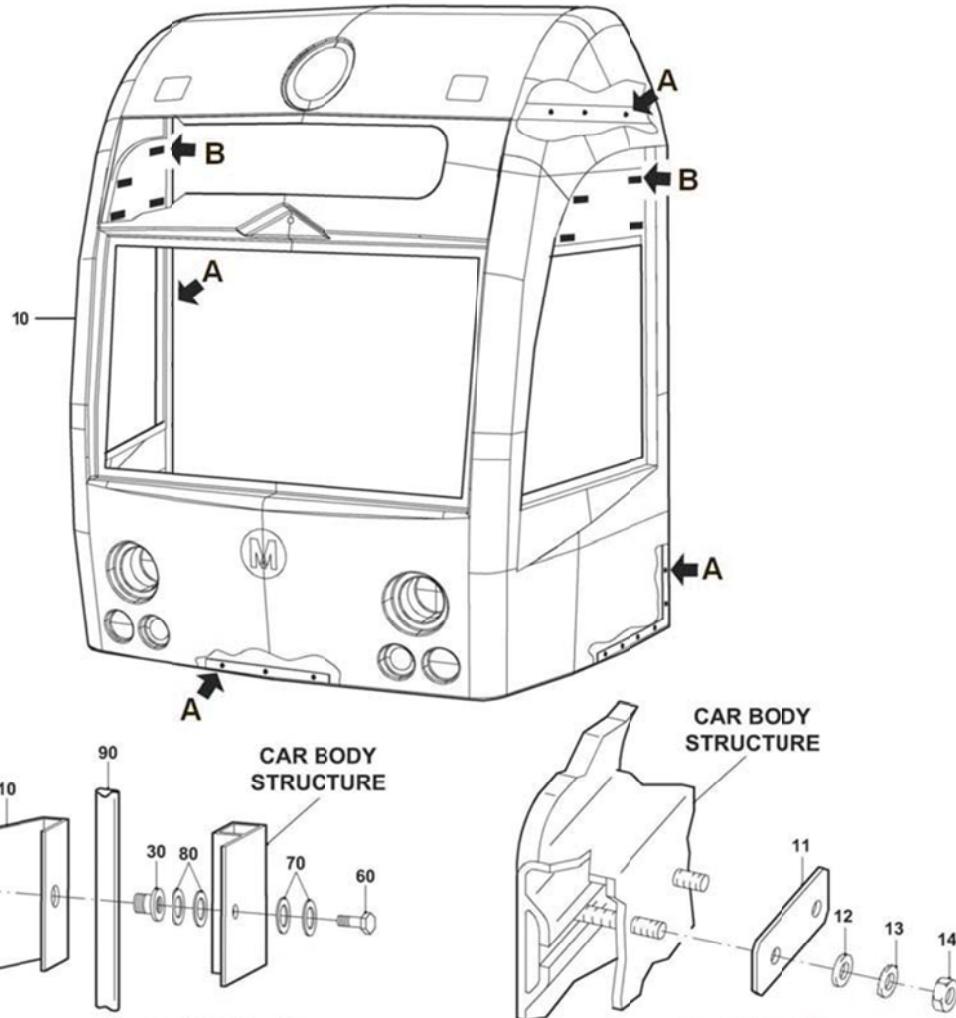
Component:

FRONT HEAD

Man Hours:

5

Maintenance Task:

REPLACEMENT
PROCEDURE:

Figure 1 - FRONT HEAD REPLACEMENT

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-03-01-00/R-00

System:

CAR BODY

Sheet:

6/6

Subsystem/Assy:

FRONT HEAD ASSY

Unit:

Component:

FRONT HEAD

Man Hours:

5

Maintenance Task:

REPLACEMENT**INTENTIONALLY LEFT
BLANK**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-03-02-00/R-00

System:

CAR BODY

Sheet:

1/4

Subsystem/Assy:

FRONT HEAD

Unit:

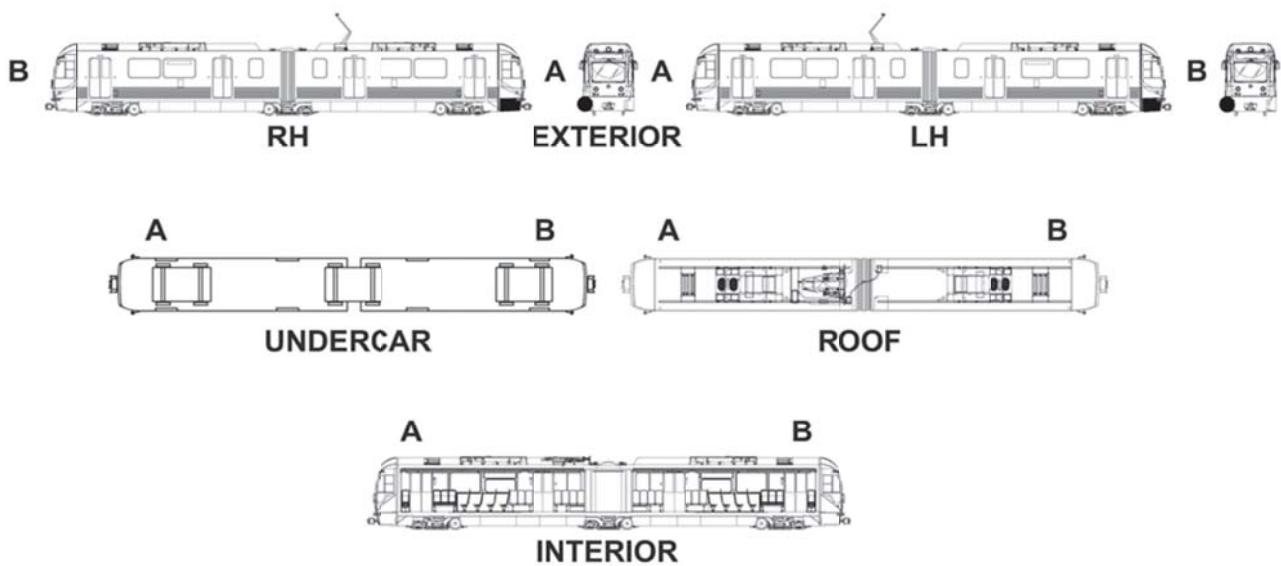
RIGHT SKIRT ASSY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**LOCATION:**

P2550 CORRECTIVE MAINTENANCE SHEET		
Card Code:		
R-C-02-03-02-00/R-00		
System:	Sheet:	
CAR BODY	2/4	
Subsystem/Assy:	Unit:	
FRONT HEAD	RIGHT SKIRT ASSY	
Component:	Man Hours:	
	1	
Maintenance Task:		
REPLACEMENT		
SAFETY PRECAUTIONS:		
LACMTA Maintenance Shop Safety Rules & Regulations		
WARNING: APPLY WHEEL CHOCKS TO PREVENT THE VEHICLE FROM MOVING.		
WARNING: WORKING AREAS MUST BE LIGHTED AND CLEAR FROM DEBRIS.		
TOOLS:		
LACMTA Maintenance Shop Standard Tools Kit.		
CONSUMABLES:		
Tape zinc-o-fix.		
SPARE PARTS:		
Right Skirt Assy		
Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers		

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-03-02-00/R-00	
System: CAR BODY	Sheet: 3/4
Subsystem/Assy: FRONT HEAD	Unit: RIGHT SKIRT ASSY
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
PROCEDURE:	
<p>a. PRELIMINARY OPERATIONS</p> <ol style="list-style-type: none"> 1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations. 2. Place the Vehicle over the Pit. 3. Set the Master Controller Handle to FSB position. 4. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). <p>b. REPLACEMENT</p> <p>To perform Replacement Procedure of Front Head – Right Skirt proceed as follows (Refer to Figure 1):</p> <p>Removal</p> <ol style="list-style-type: none"> 1. Remove Screws (8) and Washers (7, 6). 2. Using the Maintenance Key, unlock the Right Skirt (1) by operating on the relevant Latches (5). 3. Lift the Hinged Right Skirt (1). 4. Disassemble Right Skirt (1) as follows: <ol style="list-style-type: none"> a) Remove Screws (4) and Washers (3), then remove Top Plates (2). b) Remove Latches (5). c) Remove Nuts (11) and Washers (10), then remove Wash Tank Door (9). <p>Installation</p> <ol style="list-style-type: none"> 1. Assemble Right Skirt (1) as follows: <ol style="list-style-type: none"> a) Position Wash Tank Door (9) and lock it by installing Washers (10) and Nuts (11). b) Torque Nuts (11) as required. c) Position Top Plates (2) and lock it by installing Screws (4) and Washers (3). d) Torque Screws (4) as required. e) Install Latches (5). 2. Position Right Skirt (1) and lock it by operating on the Latches (5). <p>NOTE: Apply zinc-o-fix on the attaching parts (6, 7, 8) with adhesive tape on the stainless steel.</p> <ol style="list-style-type: none"> 3. Install Screws (8) and Washers (6, 7). 4. Torque Screws (8) as required. 5. Record Task results on the Defect Report Card for administrative and maintenance planning 	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-03-02-00/R-00

System:

CAR BODY

Sheet:

4/4

Subsystem/Assy:

FRONT HEAD

Unit:

RIGHT SKIRT ASSY

Component:

Man Hours:

1

Maintenance Task:

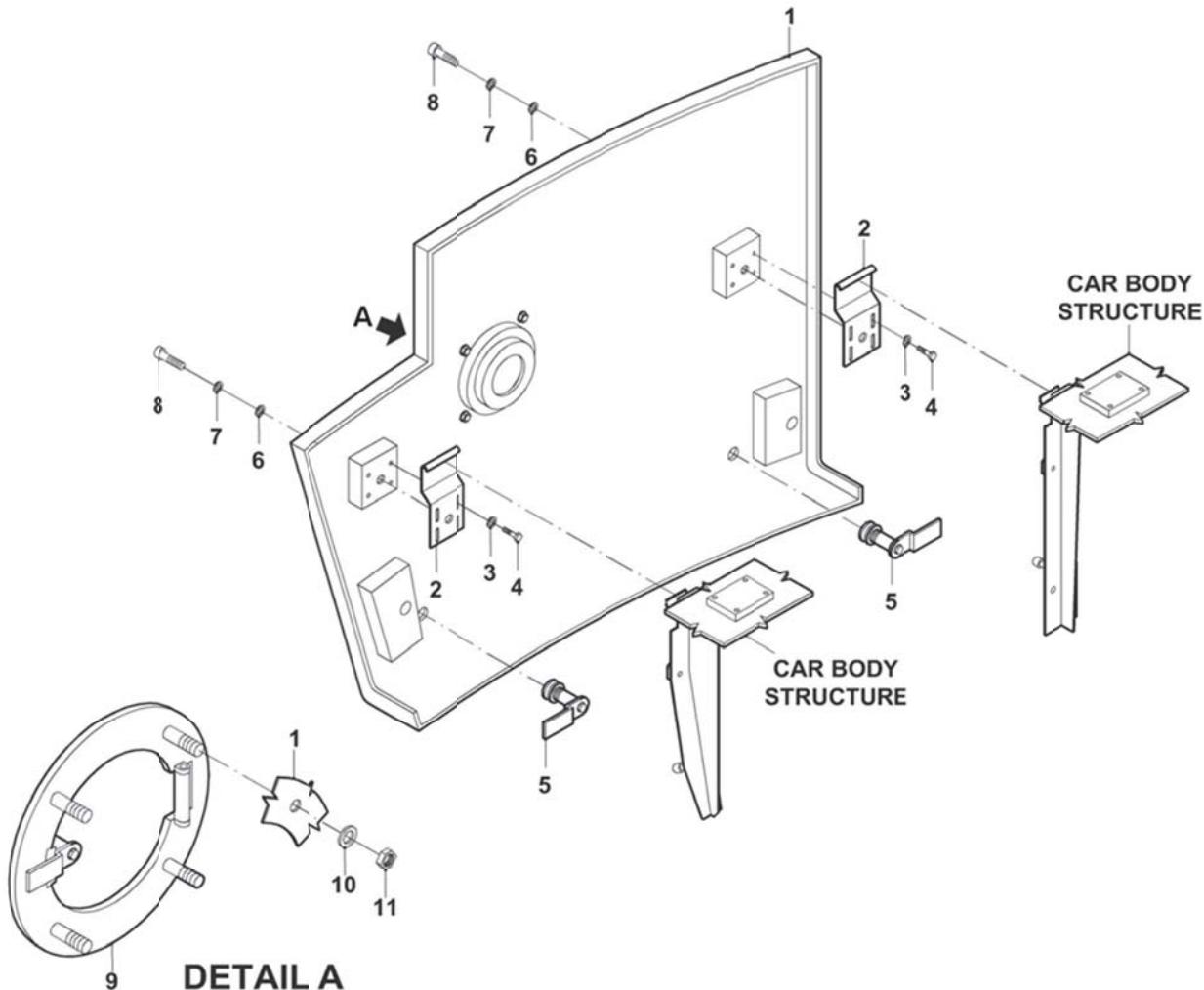
REPLACEMENT**PROCEDURE:**

Figure 1 - FRONT HEAD, RIGHT SKIRT REPLACEMENT

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-03-03-00/R-00

System:

CAR BODY

Sheet:

1/4

Subsystem/Assy:

FRONT HEAD

Unit:

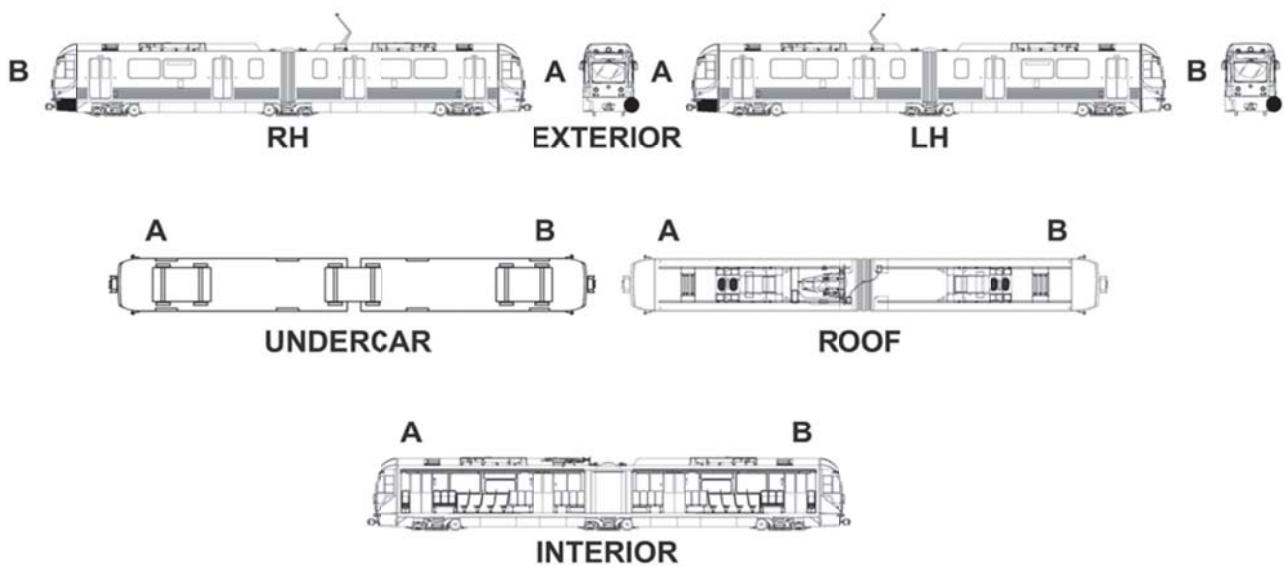
LEFT SKIRT ASSY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**LOCATION:**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-03-03-00/R-00

System:

CAR BODY

Sheet:

2/4

Subsystem/Assy:

FRONT HEAD

Unit:

LEFT SKIRT ASSY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT

SAFETY PRECAUTIONS:

LACMTA Maintenance Shop Safety Rules & Regulations

WARNING: **APPLY WHEEL CHOCKS TO PREVENT THE VEHICLE FROM MOVING.**WARNING: **WORKING AREAS MUST BE LIGHTED AND CLEAR FROM DEBRIS.**

TOOLS:

LACMTA Maintenance Shop Standard Tools Kit.

CONSUMABLES:

Tape zinc-o-fix.

SPARE PARTS:

Left Skirt Assy

Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-03-03-00/R-00

System:

CAR BODY

Sheet:

3/4

Subsystem/Assy:

FRONT HEAD

Unit:

LEFT SKIRT ASSY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:****a. PRELIMINARY OPERATIONS**

1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations.
2. Place the Vehicle over the Pit.
3. Set the Master Controller Handle to FSB position.
4. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON).

b. REPLACEMENT

To perform Replacement Procedure of Front Head – Left Skirt proceed as follows (Refer to Figure 1):

Removal

1. Remove Screws (2) and Washers (3, 4).
2. Using the Maintenance Key, unlock the Left Skirt (1) by operating on the relevant Latches (5).
3. Lift the Hinged Left Skirt (1).
4. Disassemble Left Skirt (1) as follows:
 - a) Remove Screws (8) and Washers (7), and then remove Top Plates (6).
 - b) Remove Latches (5).

Installation

1. Assemble Left Skirt (1) as follows:
 - a) Position Top Plates (6) and lock it by installing Screws (8) and Washers (7).
 - b) Torque Screws (8) as required.
 - c) Install Latches (5).
 2. Position Left Skirt (1) and lock it by operating on the Latches (5).
- NOTE:** Apply zinc-o-fix on the attaching parts (2, 3, 4) with adhesive tape on the stainless steel.
3. Install Screws (2) and Washers (3, 4).
 4. Torque Screws (2) as required.
 5. Record Task results on the Defect Report Card for administrative and maintenance planning.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-03-03-00/R-00

System:

CAR BODY

Sheet:

4/4

Subsystem/Assy:

FRONT HEAD

Unit:

LEFT SKIRT ASSY

Component:

Man Hours:

1

Maintenance Task:

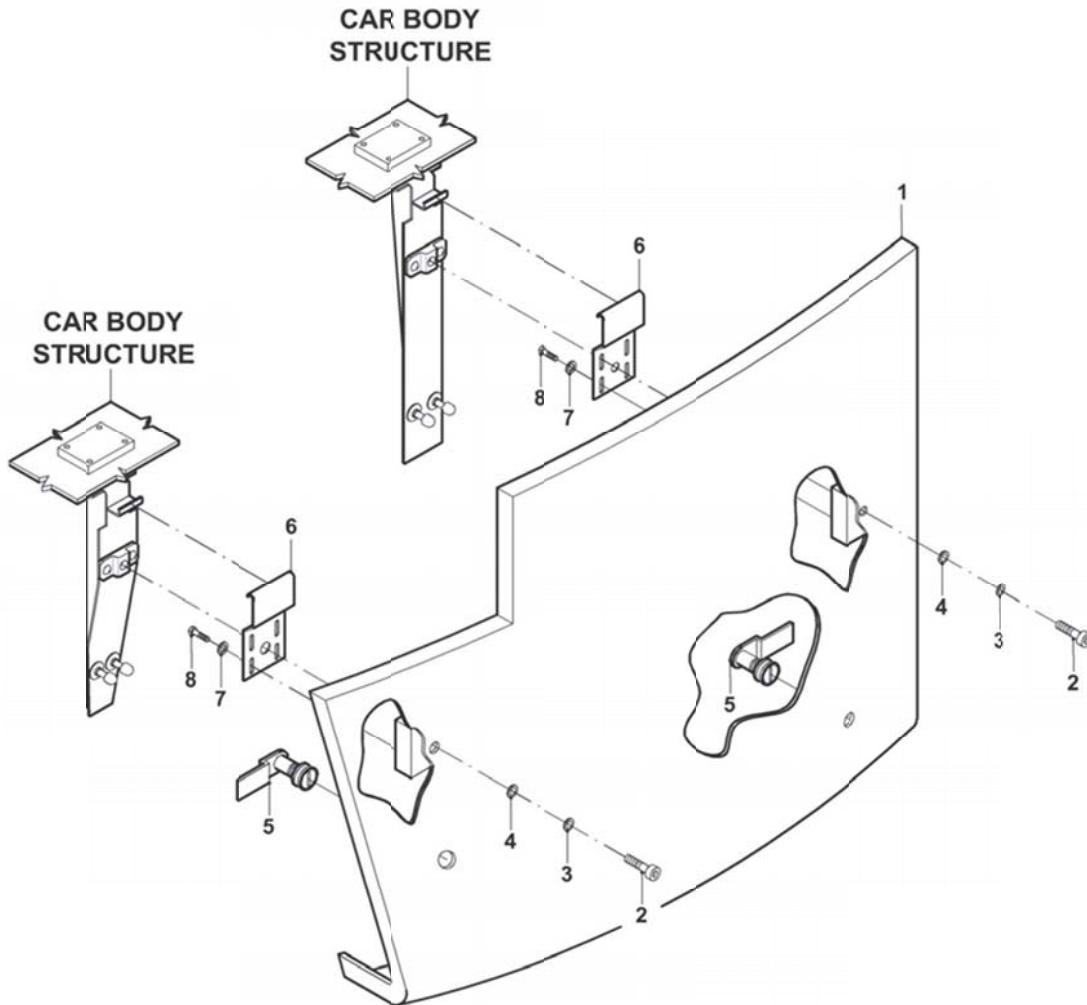
REPLACEMENT**PROCEDURE:**

Figure 1 - FRONT HEAD, LEFT SKIRT REPLACEMENT

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-04-00-00/R-00

System:

CAR BODY

Sheet:

1/4

Subsystem/Assy:

ROOF FAIRINGS

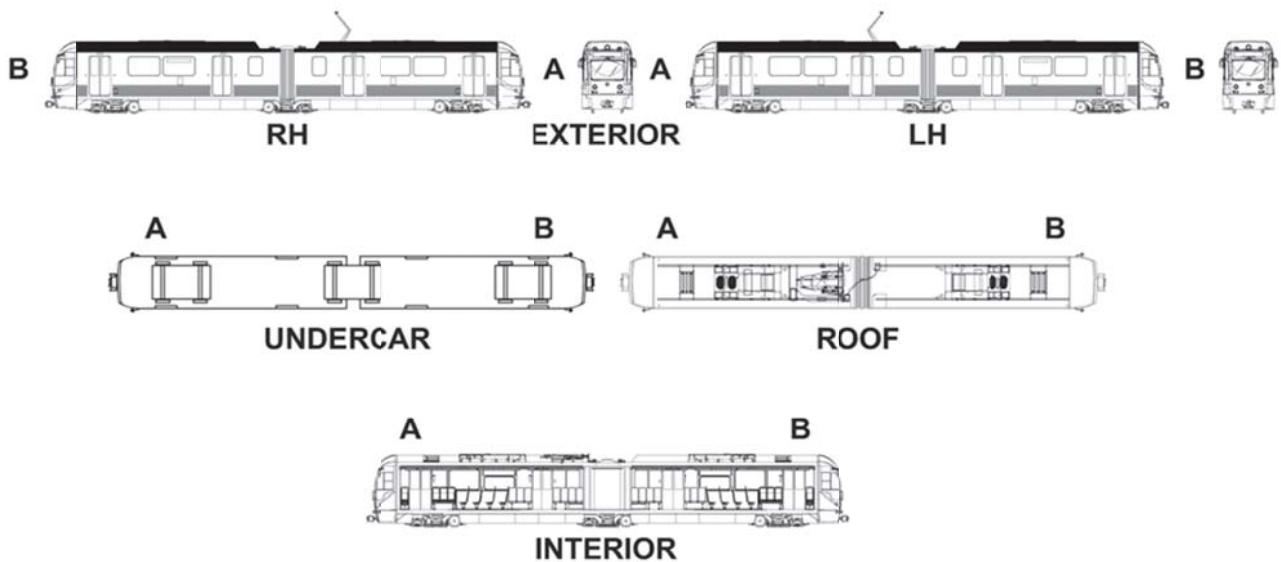
Unit:

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**LOCATION:**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-04-00-00/R-00

System:

CAR BODY

Sheet:

2/4

Subsystem/Assy:

ROOF FAIRINGS

Unit:

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT

SAFETY PRECAUTIONS:

LACMTA Maintenance Shop Safety Rules & Regulations

- WARNING** DANGER OF PERSONAL INJURY EXISTS DUE TO ELECTRICAL POWER (750 V). ENSURE PANTOGRAPH IS LOWERED, AND CATENARY POWER IS REMOVED AND ISOLATED PER LACMTA SAFETY RULES AND PROCEDURES. IF POSSIBLE, WORK SHOULD BE DONE IN AN AREA WITHOUT OVERHEAD CATERARY.
- WARNING** DANGER OF PERSONAL INJURY EXISTS WHEN WORKING ON THE ROOF. FOLLOW SAFETY PROCEDURES FOR ACCESSING ROOF. ALWAYS WEAR A SAFETY HARNESS WHEN ACCESSING THE ROOF.
- WARNING:** APPLY WHEEL CHOCKS TO PREVENT THE VEHICLE FROM MOVING.

TOOLS:

LACMTA Maintenance Shop Standard Tools Kit.

External Scaffold

CONSUMABLES:

N/A

SPARE PARTS:

Roof Fairings

Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code:	
R-C-02-04-00-00/R-00	
System: CAR BODY	Sheet: 3/4
Subsystem/Assy: ROOF FAIRINGS	Unit:
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
PROCEDURE:	
<p>a. PRELIMINARY OPERATIONS</p> <ol style="list-style-type: none"> 1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations. 2. Set the Master Controller Handle to FSB position. 3. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). 4. Lock-out and tag-out the Overhead Catenary, 750Vdc Power, per LACMTA Safety Rules and Procedures. <p>NOTE The tag must indicate the name of the person who removed Power. That person knows why the Power was removed and when it safe to restore it. Only the individual whose name appears on the tag or a person with his approval should remove the tag and restore Power.</p>	
<p>b. REPLACEMENT</p> <p>To perform Replacement Procedure of Roof Fixed Fairings proceed as follows (Refer to Figure 1):</p> <p>Removal</p> <ol style="list-style-type: none"> 1. Position External Scaffold at both sides of "A" and "B" Body Cars. 2. Remove Screws (6) and Washers (7, 8). 3. Remove Connecting Plate (15) by removing Screws (16) and Washers (17, 18). 4. Remove the Fairing (1, 2, 3). 5. Remove Threaded Plates (4, 5) from removed Fairing. 6. If required, remove Supports as follows: <ol style="list-style-type: none"> a) Hold Supports (9, 10, 11). b) Remove Screws (12) and Washers (13, 14). c) Remove involved Supports (9, 10, 11). <p>Installation</p> <ol style="list-style-type: none"> 1. If required, install Supports as follows: <ol style="list-style-type: none"> a) Position involved Supports (9, 10, 11). b) Install Screws (12) and Washers (13, 14). c) Torque Screws (12) as required. 2. Position Threaded Plates (4, 5) in the involved Fairing. 3. Position the Fairing (1, 2, 3) and the Plate (15). 4. Install Screws (16) and Washers (17, 18). 5. Torque Screws (16) as required. 6. Install Screws (6) and Washers (7, 8). 7. Torque Screws (6) as required. 8. Record Task results on the Defect Report Card for administrative and maintenance planning 	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-04-00-00/R-00

System:

CAR BODY

Sheet:

4/4

Subsystem/Assy:

ROOF FAIRINGS

Unit:

Component:

Man Hours:

1

Maintenance Task:

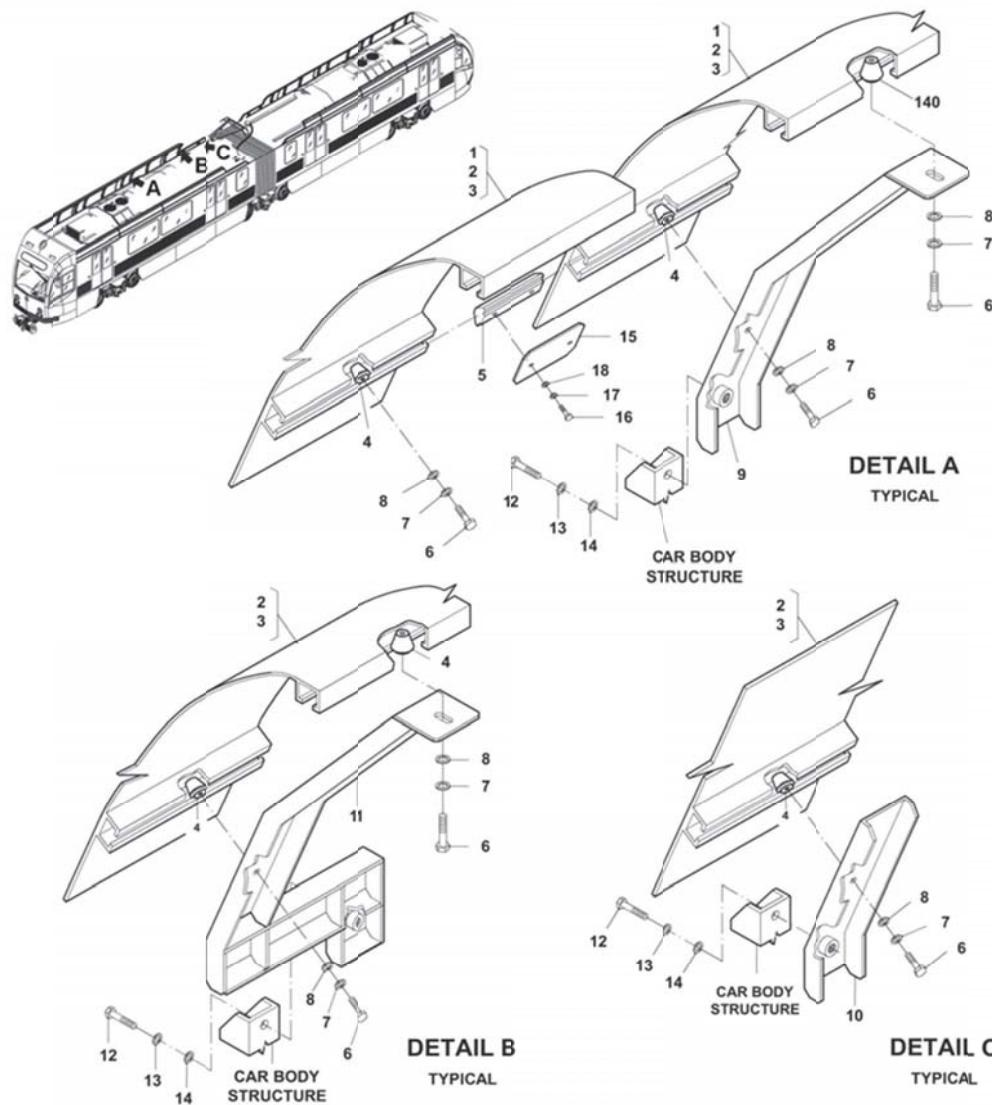
REPLACEMENT**PROCEDURE:**

Figure 1 - ROOF FIXED FAIRINGS REPLACEMENT

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-05-00-00/R-00

System:

CAR BODY

Sheet:

1/14

Subsystem/Assy:

SKIRTS

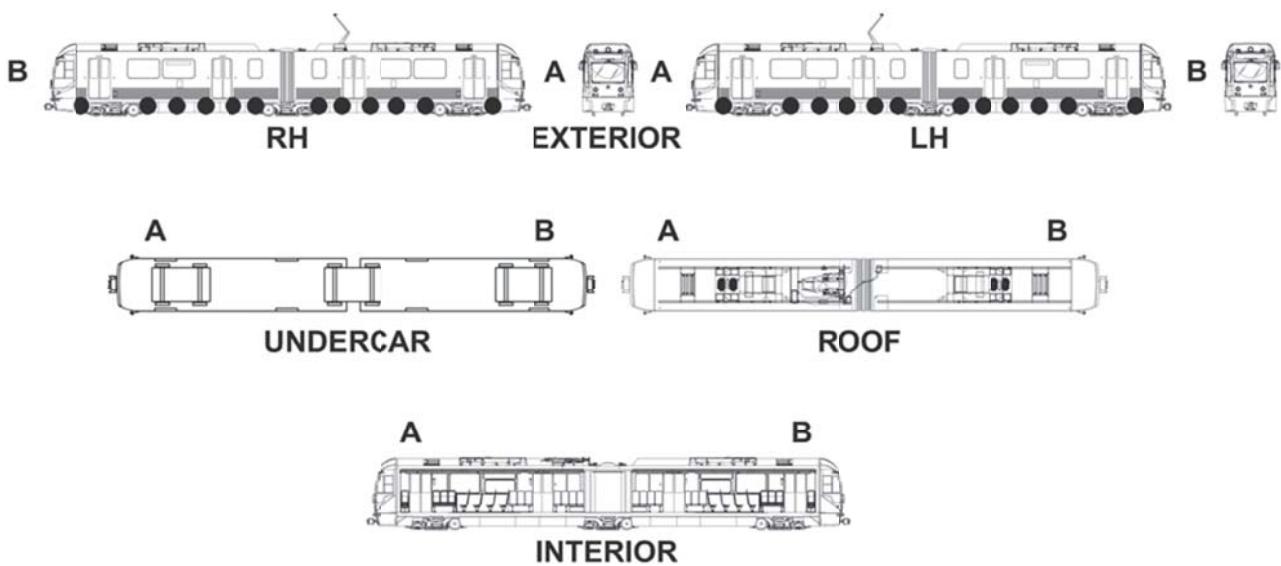
Unit:

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT
LOCATION:


P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-05-00-00/R-00

System:

CAR BODY

Sheet:

2/14

Subsystem/Assy:

SKIRTS

Unit:

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**SAFETY PRECAUTIONS:**

LACMTA Maintenance Shop Safety Rules & Regulations

WARNING: APPLY WHEEL CHOCKS TO PREVENT THE VEHICLE FROM MOVING.**WARNING: WORKING AREAS MUST LIGHTED AND CLEAR FROM DEBRIS.****TOOLS:**

LACMTA Maintenance Shop Standard Tool Kit

CONSUMABLES:

Loctite 243

Cleaner/Degreaser, As Needed

SPARE PARTS:

End Skirt (A8, B8)	P/N AA03PFJ	Qty 2	Side Skirt (A2, B2)	P/N AA03PFP	Qty 2
End Skirt (A1, B1)	P/N AA03PFN	Qty 2	Side Skirt (A4, B4)	P/N AA03PFR	Qty 2
Side Skirt (A7)	P/N AA03PKF	Qty 1	Side Skirt (B7)	P/N AA03PFT	Qty 1
Side Skirt (A3, A6, B3)	P/N AA03PFL	Qty 3	Side Skirt (B6)	P/N AA03PFU	Qty 1
Side Skirt (A5)	P/N AA03PFM	Qty 1	Side Skirt (B5)	P/N AA03PFV	Qty 1
Lock Washer 8 mm	P/N AA00RH8	AR	Lock Washer 6 mm	P/N AA04UEP	AR

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-05-00-00/R-00

System:

Sheet:

CAR BODY**3/14**

Subsystem/Assy:

Unit:

SKIRTS

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT

PROCEDURE:

PRELIMINARY OPERATIONS

1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations:
2. Place the Vehicle over the Pit (or Stand Up Rail).
3. Set the Master Controller Handle to FSB position.
4. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON).
5. Apply Wheel Chocks to prevent the Vehicle from moving.

EXPLANATORY NOTES



Figure 1 – SKIRTS LOCATION & IDENTIFICATION

P2550 CORRECTIVE MAINTENANCE SHEET

R-C-02-05-00-00/R-00

Card Code:

System:
CAR BODY

Sheet:

4/14

Subsystem/Assy:
SKIRTS

Unit:

Component:

Man Hours:
1

Maintenance Task:

REPLACEMENT

PROCEDURE (CONT'D):

The Skirts are identified by their Position on the Vehicle, as follows

ITEM	CAR "A"	CAR "B"
END SKIRTS	A1 - A8	B1 - B8
SIDE SKIRTS	A2 - A3 - A4 - A5 - A6 - A7	B2 - B3 - B4 - B5 - B6 - B7

The arrow ← → indicates the Dismounting Direction of the Skirt.

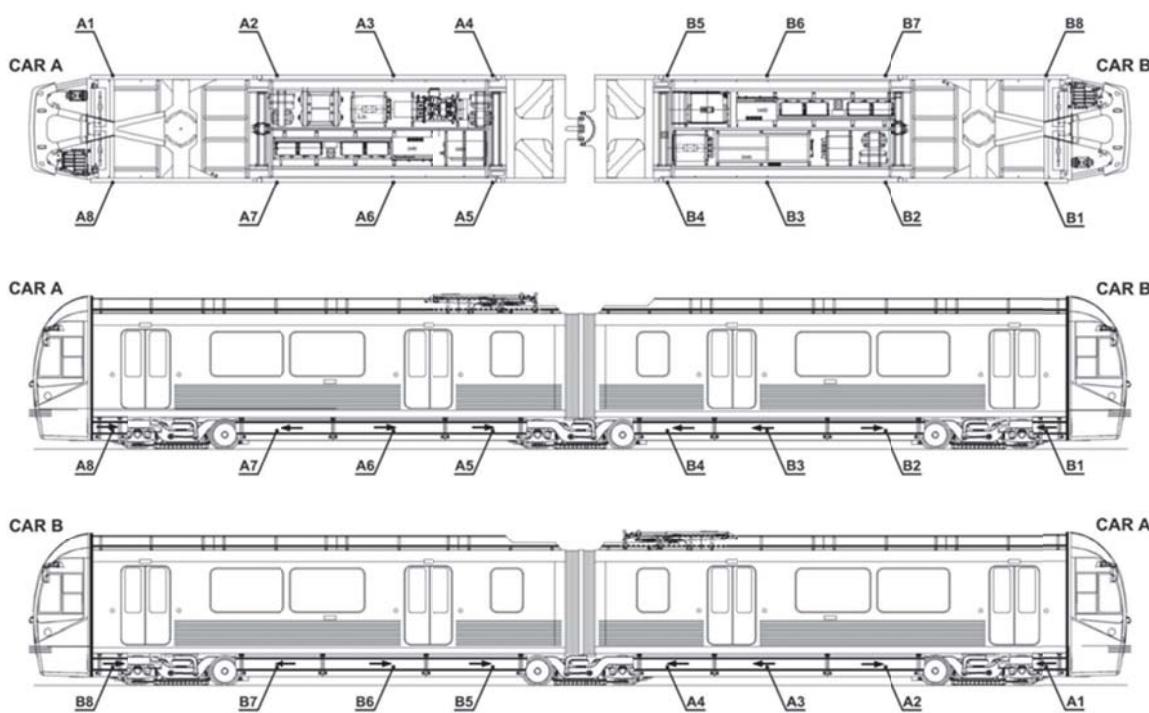


Figure 2 – SKIRTS IDENTIFICATION & LOCATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-05-00-00/R-00

System:

CAR BODY

Sheet:

5/14

Subsystem/Assy:

SKIRTS

Unit:

Component:

Man Hours:

1

Maintenance Task:

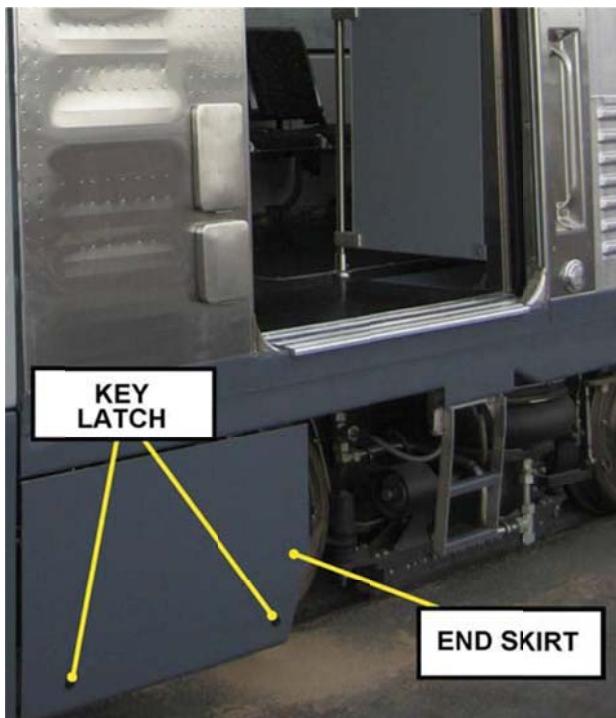
REPLACEMENT

PROCEDURE (CONT'D):

This Sheet provides detailed Instructions for the Replacement and Adjustment of the Skirts and, in addition, Instructions to replace the relevant Skirt Support.

NOTE: It is recommended to keep the attaching hardware for later use and discard the Lock washers once removed.

REMOVAL



End Skirt



End Skirt Supports

Figure 3 – SKIRTS AND SUPPORTS

P2550 CORRECTIVE MAINTENANCE SHEET

R-C-02-05-00-00/R-00

Card Code:

System:
CAR BODY

Sheet:

6/14

Subsystem/Assy:
SKIRTS

Unit:

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT

PROCEDURE (CONT'D):

End Skirts (A1-A8) - (B1-B8) (Refer to Figure 4)

1. Using the Maintenance Key, unlock the Skirt by operating on the relevant Latches.
2. Lift the Hinged Skirt.
3. Remove the Skirt from its supports by sliding it towards the Articulation Section.
4. Remove Bolts, Washers, Lock Washers and Nuts.
5. Remove Hinges and Supports from the Car Body Structure.

Side Skirts (A3-A4-A5-A6) - (B3-B4-B5-B6) (Refer to Figures 5 & 6)

1. Using the Maintenance Key, unlock the Skirt by operating on the relevant Latches.
2. Lift the Hinged Skirt.
3. Remove the Skirt from its supports by sliding it towards the Articulation Section.
4. Remove Bolts, Washers, Lock Washers and Nuts.
5. Remove Hinges.
6. Remove Bolts, Washers and Lock Washers.
7. Remove Supports from the Car Body Structure.

NOTE: Leave the Threaded Plates in place

Side Skirts (A2-A7) - (B2-B7) (Refer to Figures 5 & 6)

1. Using the Maintenance Key, unlock the Skirt by operating on the relevant Latches.
2. Lift the Hinged Skirt.
3. Remove the Skirt from its supports by sliding it towards the Front Head.
4. Remove Bolts, Washers, Lock Washers and Nuts.
5. Remove Hinges.
6. Remove Bolts, Washers and Lock Washers.
7. Remove Supports from the Car Body Structure.

NOTE: Leave the Threaded Plates in place

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-05-00-00/R-00

System:

CAR BODY

Sheet:

7/14

Subsystem/Assy:

SKIRTS

Unit:

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT

PROCEDURE (CONT'D):

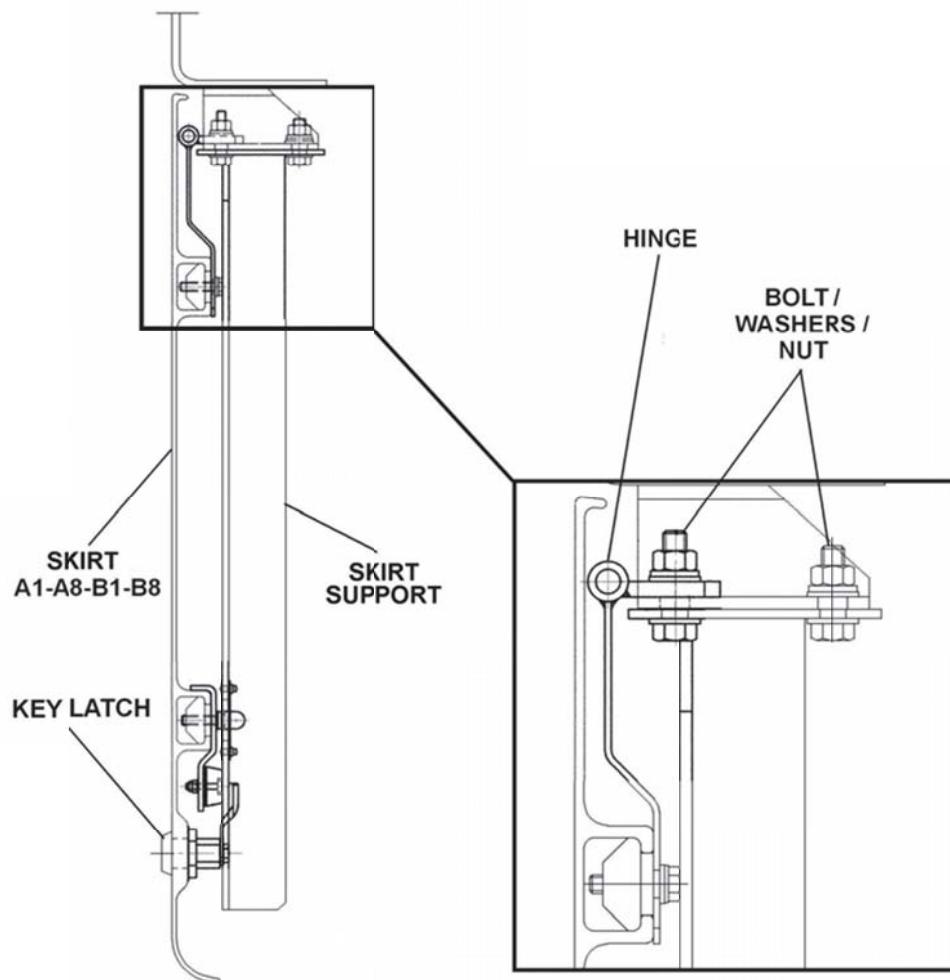


Figure 4 – END SKIRTS REMOVAL / INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

R-C-02-05-00-00/R-00

Card Code:

System:
CAR BODY

Sheet:

8/14

Subsystem/Assy:
SKIRTS

Unit:

Component:

Man Hours:
1

Maintenance Task:

REPLACEMENT

PROCEDURE (CONT'D):

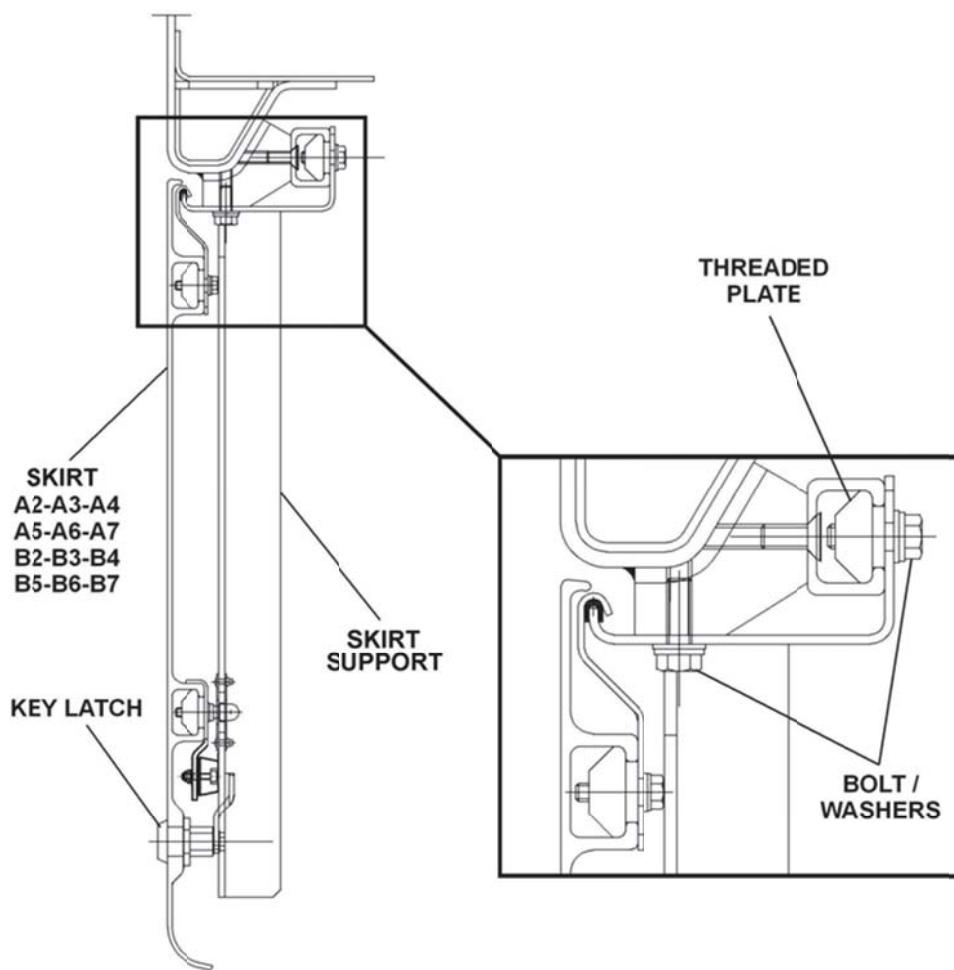


Figure 5 – SIDE SKIRTS REMOVAL / INSTALLATION –(LATERAL SUPPORT)

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-05-00-00/R-00

System:

CAR BODY

Sheet:

9/14

Subsystem/Assy:

SKIRTS

Unit:

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT

PROCEDURE (CONT'D):

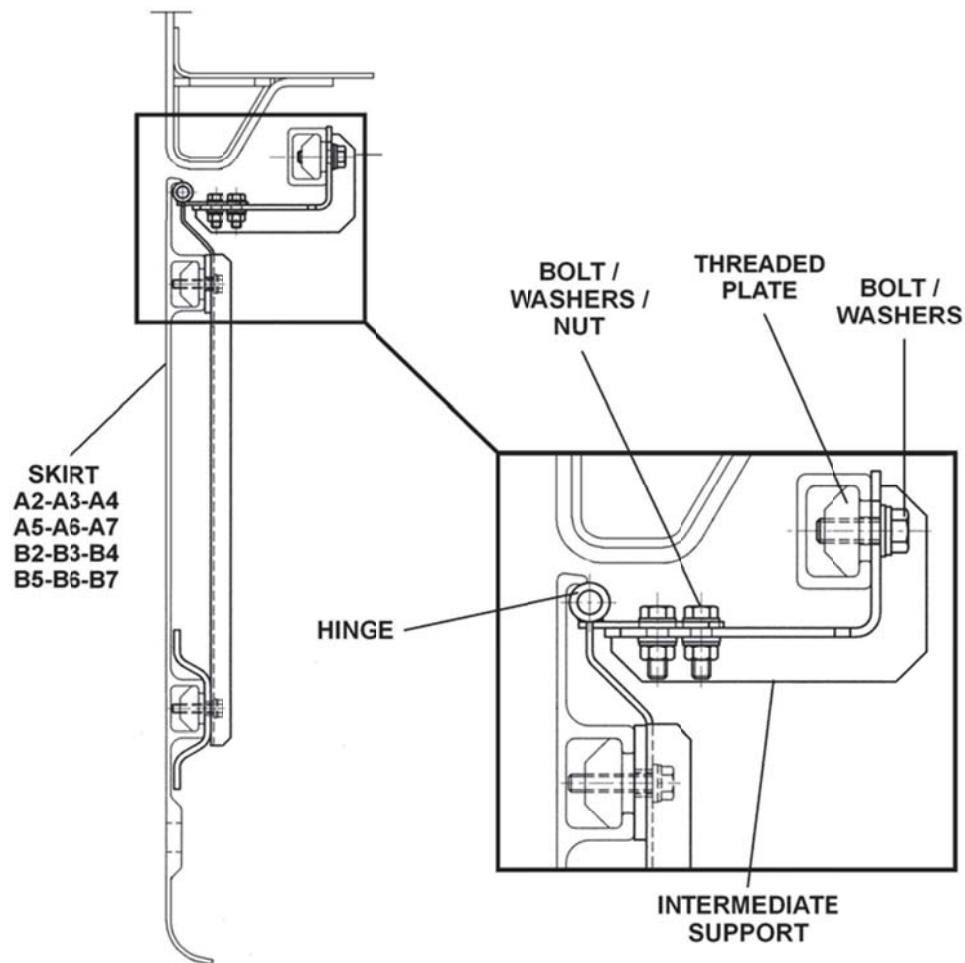


Figure 6 – SIDE SKIRTS REMOVAL / INSTALLATION (CENTRAL SUPPORT)

P2550 CORRECTIVE MAINTENANCE SHEET

R-C-02-05-00-00/R-00

Card Code:

System:
CAR BODY

Sheet:

10/14

Subsystem/Assy:
SKIRTS

Unit:

Component:

Man Hours:
1

Maintenance Task:

REPLACEMENT

PROCEDURE (CONT'D):

INSTALLATION

End Skirts (A1-A8)-(B1-B8) (Refer to Figure 4)

Position Hinges and Supports in the relevant Seats.

1. Apply a light coat of Loctite 242 on the Bolts threads.
2. Install the Bolts, the Washers, "new" Lock Washers and Nuts.
3. Torque the Nuts to **15.2 ft-lb** and mark the Nuts with a continuous line by means of a marker pen.
4. Install the Skirt on the relevant Hinges and make it slide towards the Front Head.
5. Using the maintenance key, lock the skirt by operating on the relevant Latches.
6. Check the Skirt for correct positioning and closing.
7. As per check result perform Skirt Adjustment according to the specific instructions provided at the end of this sheet.
8. Record Task results on the Defect Report Card for administrative and maintenance planning.

Side Skirts (A3-A4-A5-A6)-(B3-B4-B5-B6)(Refer to Figures 5 & 6)

NOTE: The Threaded Plates are already installed on the Vehicle Side Structure

1. Position the Supports in the relevant Seats.
2. Apply a light coat of Loctite 242 on the Bolts threads.
3. Install the Bolts, the Washers, "new" Lock Washers.
4. Torque the Bolts to **15.2 ft-lb** and mark the Bolt Heads with a continuous line by means of a marker pen.
5. Position the Hinges and fast them with relevant Bolts, Washers, Lock Washers and Nuts.
6. Install the Skirt on the relevant Hinges and make it slide towards the Front Head.
7. Using the maintenance key, lock the skirt by operating on the relevant Latches.
8. Check the Skirt for correct positioning and closing.
9. As per check result perform Skirt Adjustment according to the specific instructions provided at the end of this sheet.
10. Record Task results on the Defect Report Card for administrative and maintenance planning.

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code:	R-C-02-05-00-00/R-00
System: CAR BODY	Sheet: 11/14
Subsystem/Assy: SKIRTS	Unit:
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
PROCEDURE (CONT'D):	
Side Skirts A2-A7-B2-B7 <p>NOTE: The Threaded Plates are already installed on the Vehicle Side Structure</p> <ol style="list-style-type: none"> 1. Position the Supports in the relevant Seats. 2. Apply a light coat of Loctite 242 on the Bolts threads. 3. Install the Bolts, the Washers, "new" Lock Washers. 4. Torque the Bolts to 15.2 ft-lb and mark the Bolt Heads with a continuous line by means of a marker pen. 5. Position the Hinges and fast them with relevant Bolts, Washers, Lock Washers and Nuts. 6. Install the Skirt on the relevant Hinges and make it slide towards the Front Head. 7. Using the maintenance key, lock the skirt by operating on the relevant Latches. 8. Check the Skirt for correct positioning and closing. 9. As per check result perform Skirt Adjustment according to the specific instructions provided at the end of this sheet. 10. Record Task results on the Defect Report Card for administrative and maintenance planning. 	
ADJUSTMENT (Refer to Figures 7, 8 & 9)	
Skirts <ol style="list-style-type: none"> 1. Using the Maintenance Key open and remove the Skirt. 2. Loosen the relevant Bolts and align the Skirt to the Vehicle Side by operating on the Slots of the Hinges mounted on the Supports, to eliminate the misalignment. 3. Torque the Bolts once the required alignment is reached. <p>NOTE: To adjust the vertical position, remove the Bolts attaching the Supports to the Vehicle and insert/remove suitable Shim(s).</p> <ol style="list-style-type: none"> 4. Install the skirt according to its relevant installation procedure and check adjustment result. 5. Record Task results on the Defect Report Card for administrative and maintenance planning. 	
Skirt Latches <ol style="list-style-type: none"> 1. Using the Maintenance Key open the Skirt. 2. Insert/remove suitable Shim(S) on each Latch to adjust the clearance. 3. Close the Skirt using the Maintenance Key. 4. Check for correct operation of the Latches. 5. Record Task results on the Defect Report Card for administrative and maintenance planning. 	

P2550 CORRECTIVE MAINTENANCE SHEET

R-C-02-05-00-00/R-00

Card Code:

System:
CAR BODY

Sheet:

12/14

Subsystem/Assy:
SKIRTS

Unit:

Component:

Man Hours:
1

Maintenance Task:
REPLACEMENT

PROCEDURE (CONT'D):

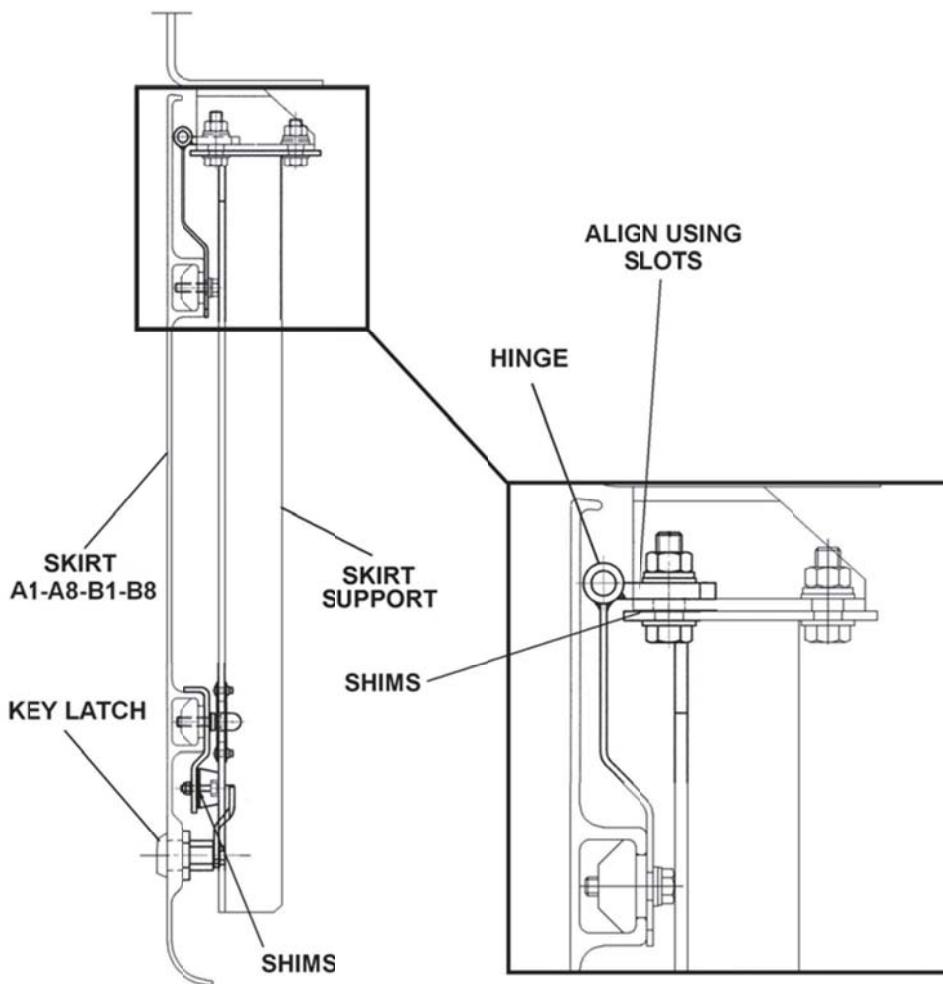


Figure 7 – END SKIRTS ADJUSTMENT

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-05-00-00/R-00

System:

CAR BODY

Sheet:

13/14

Subsystem/Assy:

SKIRTS

Unit:

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT

PROCEDURE (CONT'D):

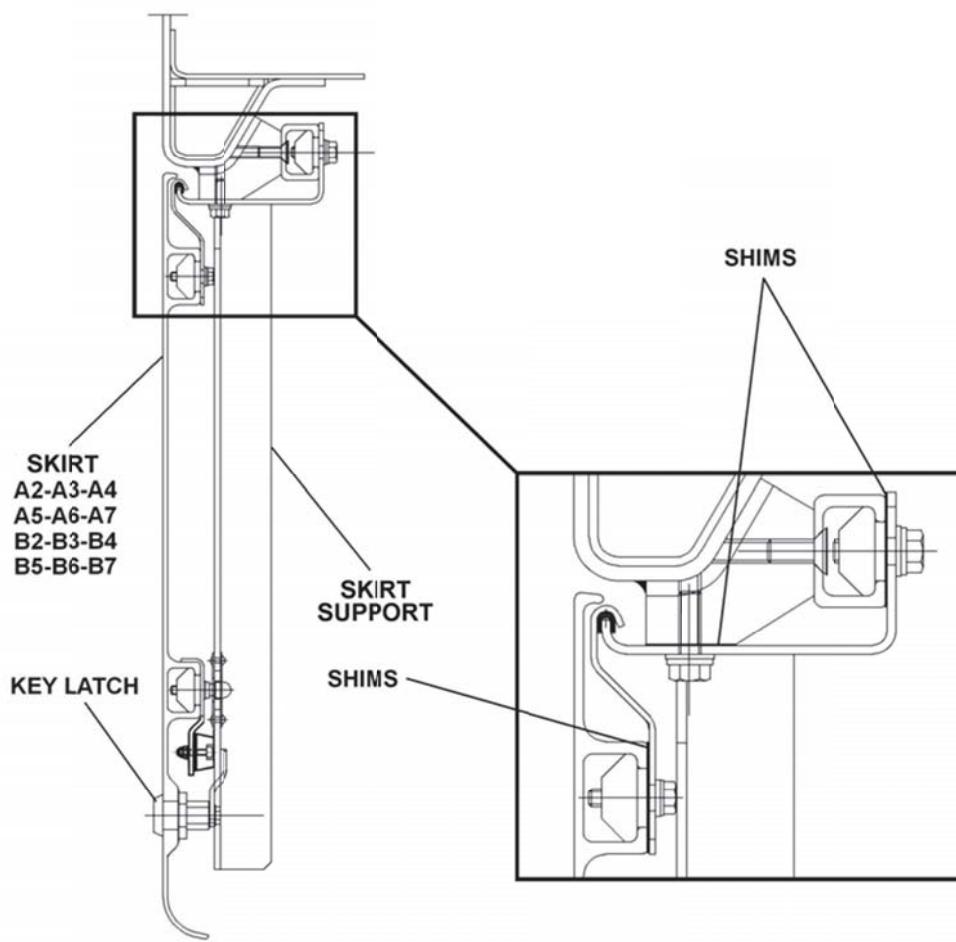


Figure 8 – SIDE SKIRTS ADJUSTMENT-(LATERAL SUPPORT)

P2550 CORRECTIVE MAINTENANCE SHEET

R-C-02-05-00-00/R-00

Card Code:

System:
CAR BODY

Sheet:

14/14

Subsystem/Assy:
SKIRTS

Unit:

Component:

Man Hours:
1

Maintenance Task:
REPLACEMENT

PROCEDURE (CONT'D):

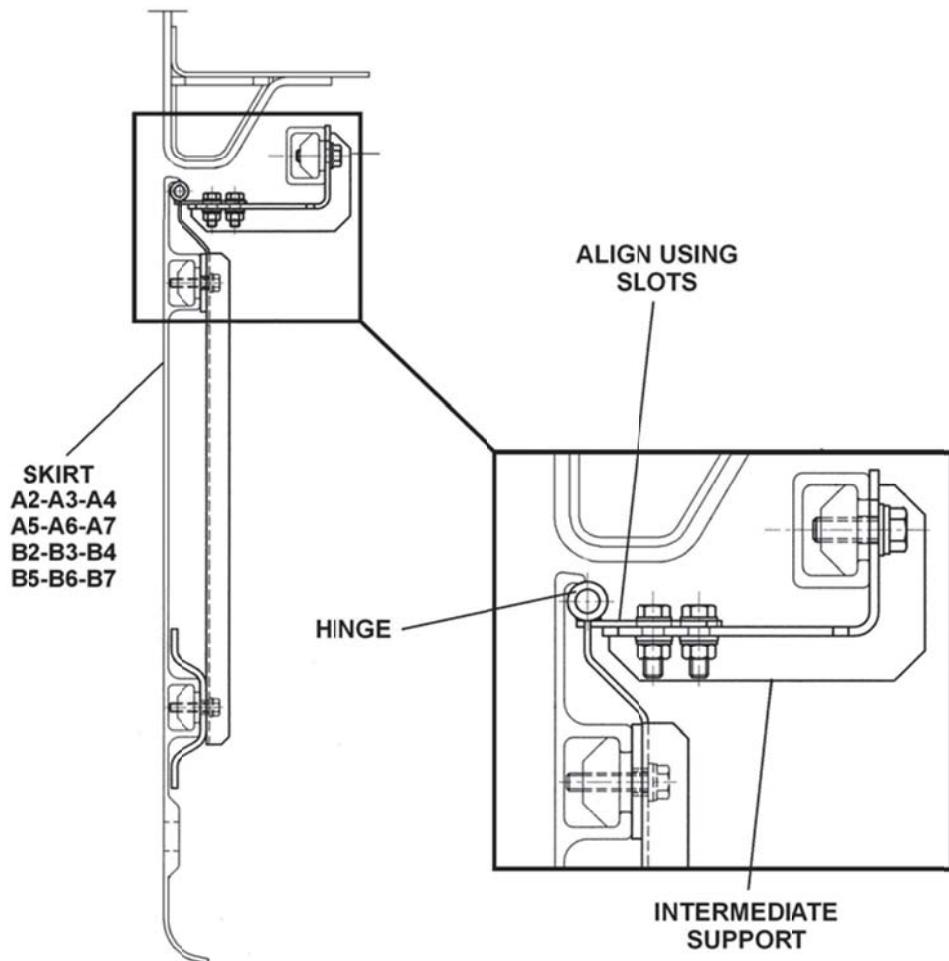


Figure 9 – SIDE SKIRTS ADJUSTMENT-(CENTRAL SUPPORT)

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-07-01-00/R-00

System:

CAR BODY

Sheet:

1/4

Subsystem/Assy:

WINDOWS

Unit:

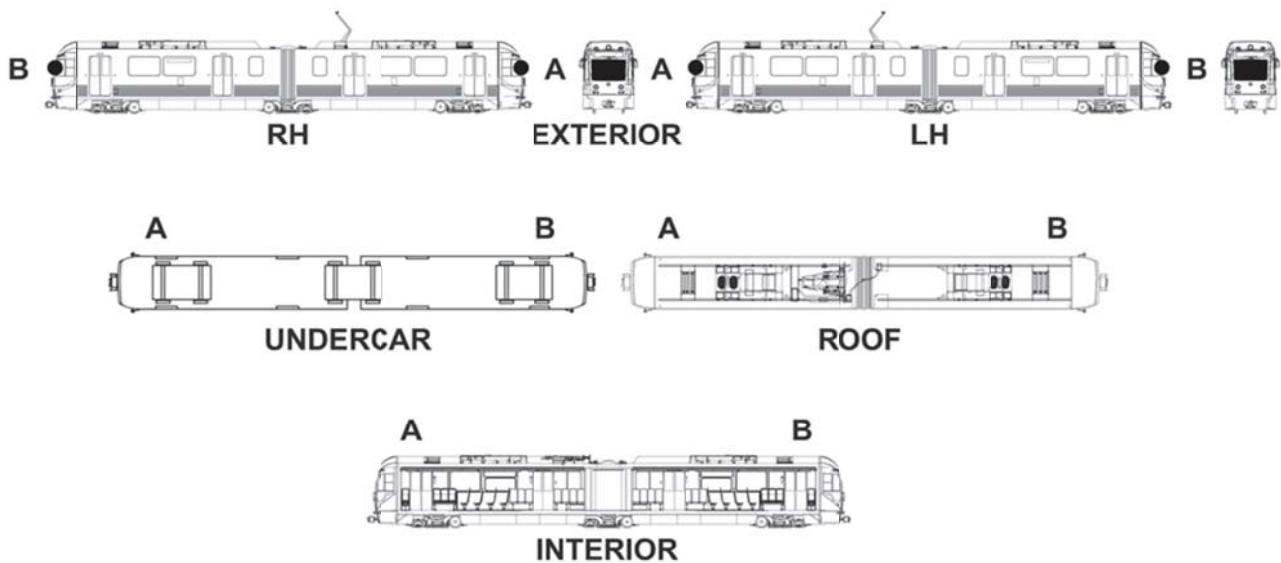
WINDSHIELD

Component:

Man Hours:

8

Maintenance Task:

REPLACEMENT
LOCATION:


P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-07-01-00/R-00

System:

CAR BODY

Sheet:

2/4

Subsystem/Assy:

WINDOWS

Unit:

WINDSHIELD

Component:

Man Hours:

8

Maintenance Task:

REPLACEMENT

SAFETY PRECAUTIONS:

LACMTA Maintenance Shop Safety Rules & Regulations

WARNING: WINDSHIELD WEIGHS 190 LB (85 KG).**DURING THE REPLACEMENT PROCEDURE MAKE SURE THAT THE OVERHEAD CRANE SUPPORTS THE UNIT TO PREVENT UNSAFE CONDITION.**

TOOLS:

LACMTA Maintenance Shop Standard Tools Kit.

External Scaffold.

Overhead Crane (min. capacity 200 Lb).

Suction Pad Equipment.

CONSUMABLES:

Sikaflex 264 Adhesive.

SPARE PARTS:

Windshield

Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers

Gasket, P/N AA03NXK Qty 1

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code:	
R-C-02-07-01-00/R-00	
System: CAR BODY	Sheet: 3/4
Subsystem/Assy: WINDOWS	Unit: WINDSHIELD
Component:	Man Hours: 8
Maintenance Task: REPLACEMENT	
PROCEDURE:	
PRELIMINARY OPERATIONS	
<ol style="list-style-type: none"> 1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations: 2. Set the Master Controller Handle to FSB position. 3. Make sure that all Parking Brakes are applied. (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). 4. Lock-out and tag-out the Overhead Catenary, 750Vdc Power, per LACMTA Safety Rules and Procedures. 	
<p>NOTE The tag must indicate the name of the person who removed Power. That person knows why the Power was removed and when it safe to restore it. Only the individual whose name appears on the tag or a person with his approval should remove the tag and restore Power.</p>	
REPLACEMENT	
To perform Replacement Procedure of Windshield proceed as follows (Refer to Figure 1):	
<p>a. Removal</p> <ol style="list-style-type: none"> 1. Position External Scaffold. 2. Install Suction Pad and secure the Windshield (1) to the Overhead Crane (min. capacity 200 Lb).provided with suitable Ropes. 3. Remove Screws (3, 4, 5). 4. Use the Overhead Crane carefully to remove the Windshield (1) 5. Remove Gasket (2) and discard it. <p>WARNING: WINDSHIELD WEIGHS 190 LB (85 KG).</p>	
<p>b. Installation</p> <ol style="list-style-type: none"> 1. Position External Scaffold. 2. Clean windshield frame using degreasing solvent. 	
<p>CAUTION: DURING GASKET INSTALLATION, FOLLOW STRICTLY GLUE MANUFACTURER INSTRUCTIONS FOR THE SURFACE PREPARATION, ENVIRONMENTAL CONDITIONS AND TIME NECESSARY FOR ADHESIVE SETTING.</p>	
<ol style="list-style-type: none"> 3. Apply adhesive (type Sikaflex 264) on the ply-metal panel surface involved. 4. Position "new" Gasket (2) along windshield frame. 5. Install Suction Pad and secure Windshield to the Overhead Crane provided with suitable Ropes. 6. Use the Overhead Crane carefully to install the Windshield in proper position 7. Install Screws (3, 4, 5). Torque Screws (3, 4, 5) as required. 8. Record Task results on the Defect Report Card for administrative and maintenance planning. 	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-07-01-00/R-00

System:

CAR BODY

Sheet:

4/4

Subsystem/Assy:

WINDOWS

Unit:

WINDSHIELD

Component:

Man Hours:

8

Maintenance Task:

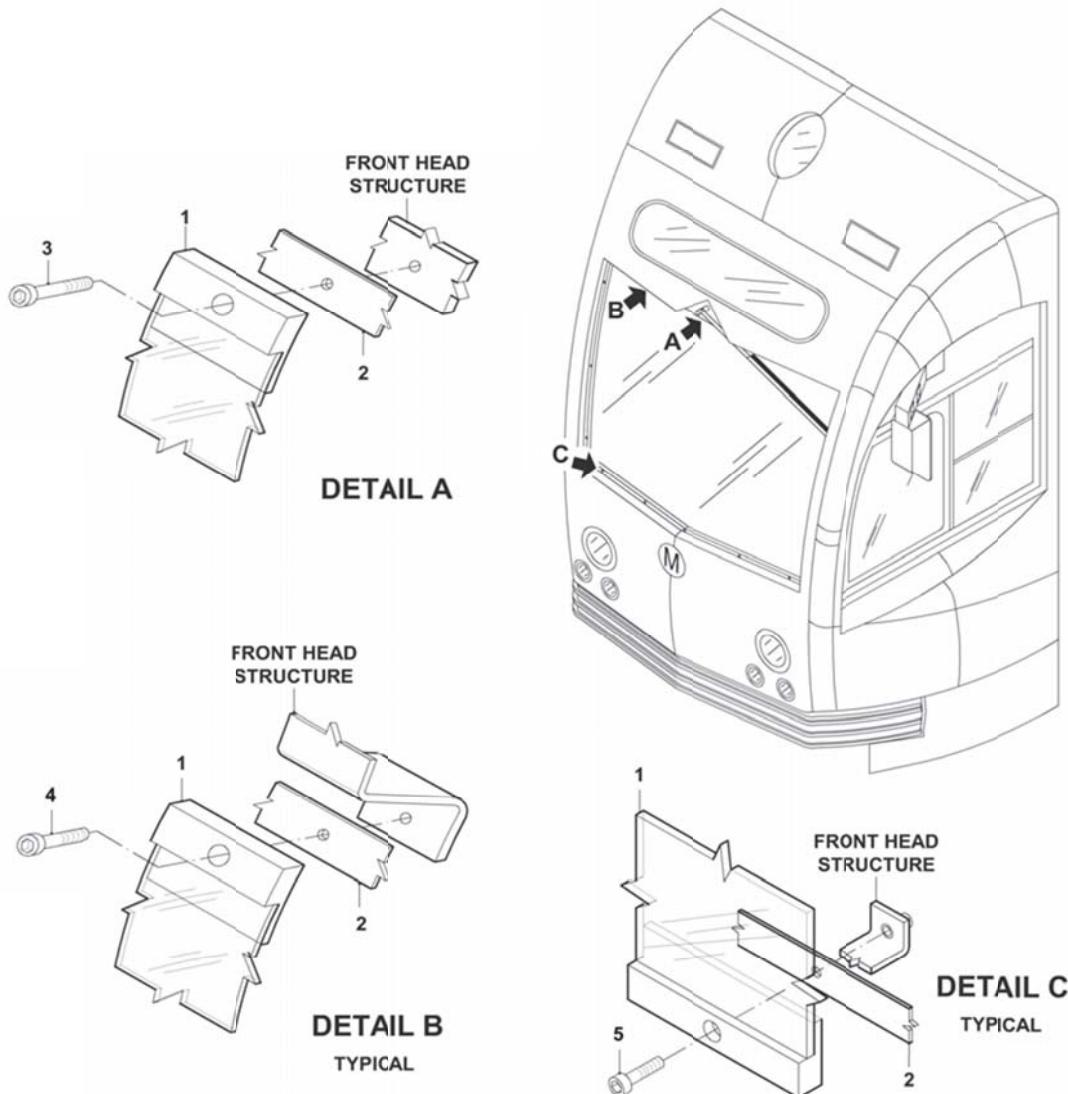
REPLACEMENT**PROCEDURE:**

Figure 1 - WINDSHIELD REPLACEMENT

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-07-02-00/R-00

System:

CAR BODY

Sheet:

1/4

Subsystem/Assy:

WINDOWS

Unit:

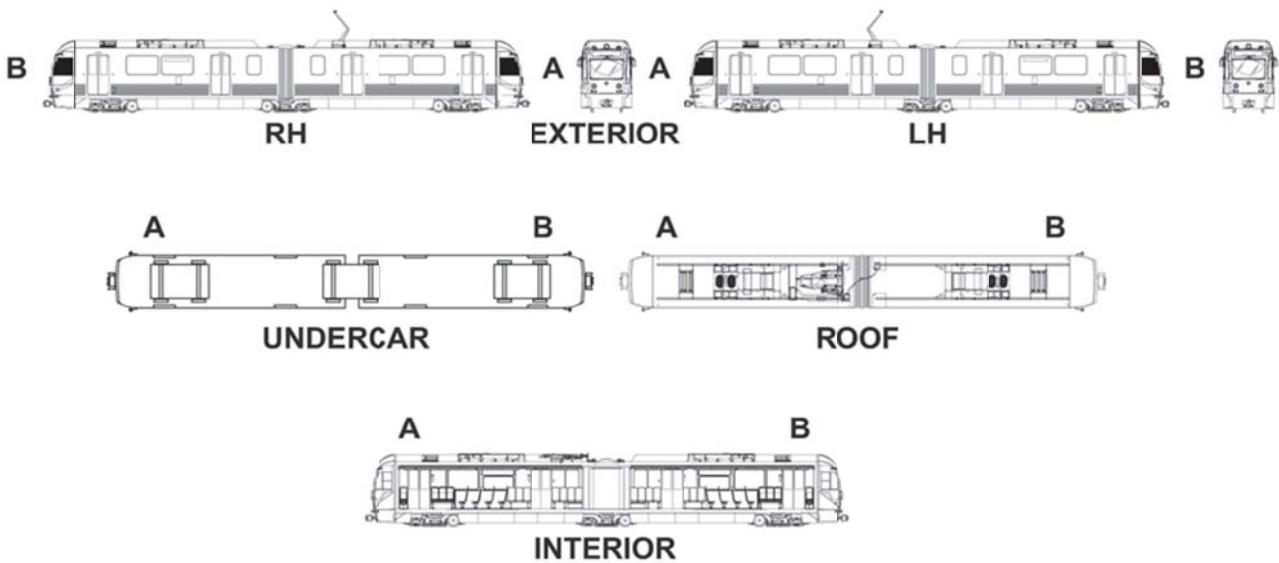
CAB SIDE WINDOW

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**LOCATION:**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-07-02-00/R-00

System:

CAR BODY

Sheet:

2/4

Subsystem/Assy:

WINDOWS

Unit:

CAB SIDE WINDOW

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT

SAFETY PRECAUTIONS:

LACMTA Maintenance Shop Safety Rules & Regulations

WARNING: CAB SIDE WINDOW WEIGHS 44 LB (20 KG).

DURING THE REPLACEMENT PROCEDURE MAKE SURE THAT OVERHEAD CRANE SUPPORTS THE UNIT TO PREVENT UNSAFE CONDITION.

TOOLS:

LACMTA Maintenance Shop Standard Tools Kit.

External Scaffold.

Overhead Crane (min. capacity 50 Lb).

Suction Pad Equipment.

CONSUMABLES:

Sealing, DOW CORNING type 3525.

SPARE PARTS:

Cab Side Window- Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers

Gasket, P/N	AA03N9F	Qty 1.
Gasket, P/N	AA02WG9	Qty 1.

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code:	
R-C-02-07-02-00/R-00	
System:	Sheet:
CAR BODY	3/4
Subsystem/Assy:	Unit:
WINDOWS	CAB SIDE WINDOW
Component:	Man Hours:
	1
Maintenance Task:	
REPLACEMENT	
PROCEDURE:	
<p>PRELIMINARY OPERATIONS</p> <ol style="list-style-type: none"> 1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations: 2. Set the Master Controller Handle to FSB position 3. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON) 	
<p>REPLACEMENT</p> <p>To perform the Replacement Procedure of Cab Side Window proceed as follows (Refer to Figure 1):</p>	
<p>a. Removal</p> <ol style="list-style-type: none"> 1. Position External Scaffold. 2. Install Suction Pad and secure the Cab Side Window to the Overhead Crane (min capacity 50lb) provided with suitable Ropes. 3. Remove Screws (1). 	
<p>WARNING: CAB SIDE WINDOW WEIGHS 44 LB (20 KG). DURING THE REPLACEMENT PROCEDURE MAKE SURE THAT OVERHEAD CRANE SUPPORTS THE UNIT TO PREVENT UNSAFE CONDITION.</p> <ol style="list-style-type: none"> 4. Use the Overhead Crane carefully to remove the Cab Side Window (4). 5. Remove Gaskets (2, 3) and discard them. 	
<p>b. Installation</p> <ol style="list-style-type: none"> 1. Position External Scaffold. 2. Clean Cab Side Window frame using degreasing solvent. 	
<p>CAUTION: DURING GASKET INSTALLATION, FOLLOW STRICTLY GLUE MANUFACTURER INSTRUCTIONS SUCH AS SURFACE PREPARATION, ENVIRONMENTAL CONDITIONS AND TIME NECESSARY FOR ADHESIVE SETTING.</p> <ol style="list-style-type: none"> 3. Apply sealing (type DOW CORNING 3525) on the ply-metal panel surface involved. 4. Position new Gasket (2, 3) along cab side window frame. 5. Install Suction Pad and secure Cab Side Window to the Overhead Crane. 	
<p>WARNING: CAB SIDE WINDOW WEIGHS 44 LB (20 KG). DURING THE REPLACEMENT PROCEDURE MAKE SURE THAT OVERHEAD CRANE SUPPORTS THE UNIT TO PREVENT UNSAFE CONDITION.</p> <ol style="list-style-type: none"> 6. Use the Overhead Crane carefully to install the Cab Side Window (4) in proper position. 7. Install Screws (1). Torque Screws (1) as required. 8. Record Task results on the Defect Report Card for administrative and maintenance planning. 	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-07-02-00/R-00

System:

CAR BODY

Sheet:

4/4

Subsystem/Assy:

WINDOWS

Unit:

CAB SIDE WINDOW

Component:

Man Hours:

1

Maintenance Task:

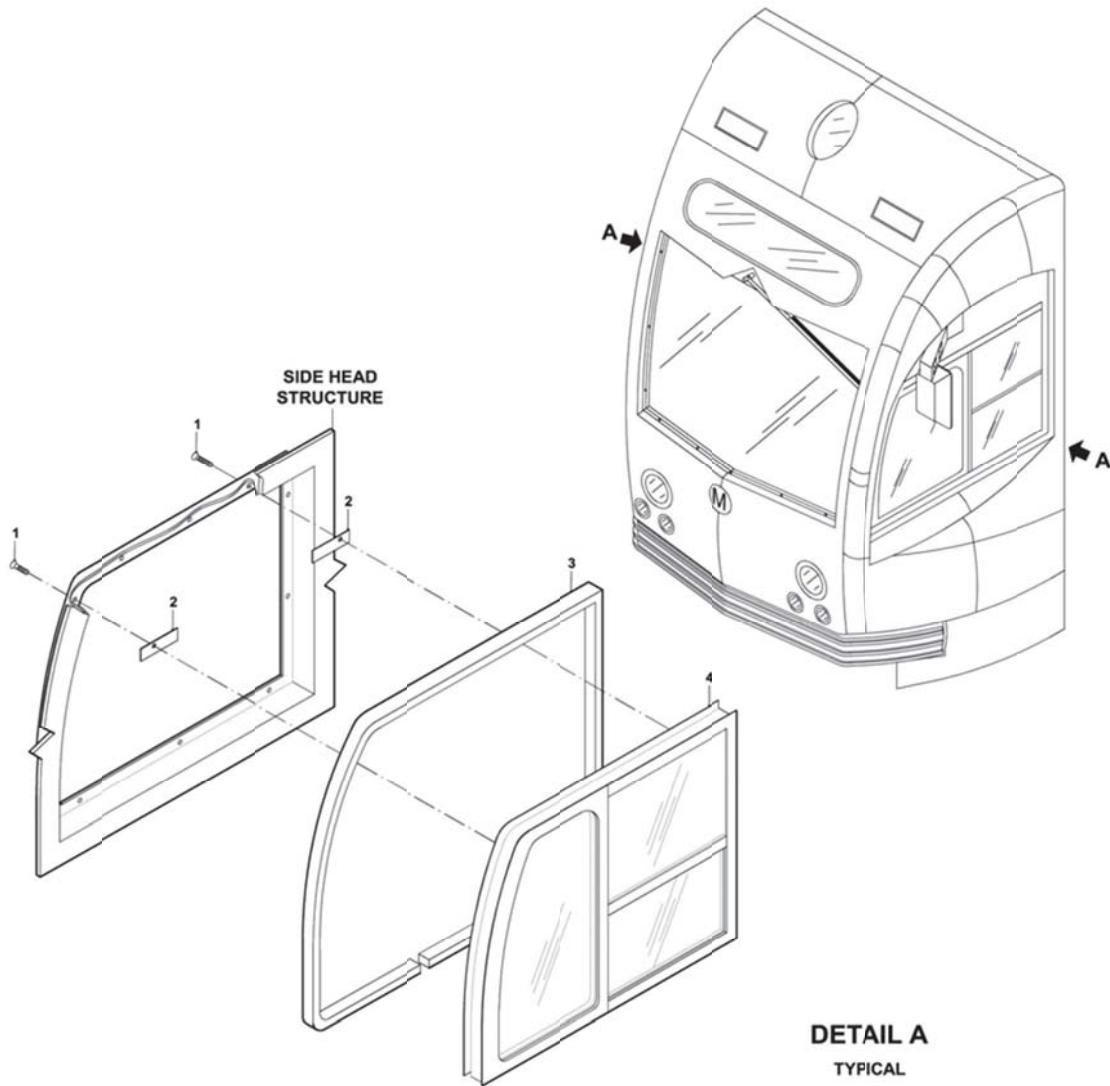
REPLACEMENT**PROCEDURE:**

Figure 1 - CAB SIDE WINDOW REPLACEMENT

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-07-03-00/R-00

System:

CAR BODY

Sheet:

1/8

Subsystem/Assy:

WINDOWS

Unit:

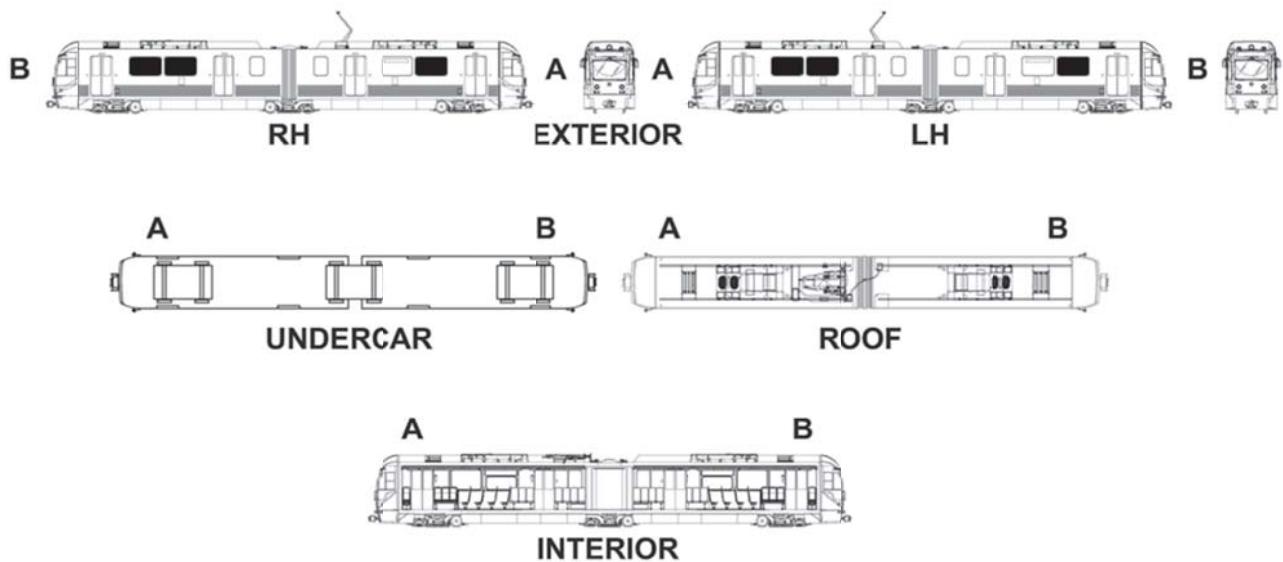
PASSENGER SIDE GLASS

Component:

Man Hours:

4

Maintenance Task:

REPLACEMENT**LOCATION:**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-07-03-00/R-00

System:

CAR BODY

Sheet:

2/8

Subsystem/Assy:

WINDOWS

Unit:

PASSENGER SIDE GLASS

Component:

Man Hours:

4

Maintenance Task:

REPLACEMENT

SAFETY PRECAUTIONS:

LACMTA Maintenance Shop Safety Rules & Regulations

WARNING: DURING MAINTENANCE PROCEDURES, WORK WITH EXTREME CARE TO PREVENT GLASS FROM INJURING PERSONNEL AND/OR BREAKING.

**WARNING: USE A 100 LB CAPACITY (MINIMUM) OVERHEAD CRANE TO PERFORM THE REMOVAL/INSTALLATION OPERATIONS.
PASSENGER SIDE WINDOW ASSEMBLY WEIGHS 86 LB (39 KG)**

TOOLS:

LACMTA Maintenance Shop Standard Tool Kit.

Overhead Crane (100 Lb min capacity).

Window Suction Cup (min. capacity 25 Lb (12 Kg)) Qty 4.

Nylon Tool (commercial)

CONSUMABLES:

SAFETY KLEEN PREMIUM Solvent.

SPARE PARTS:

Passenger Side Window Glass

P/N AA035MC Qty 6,

Passenger Side Window Gasket

P/N AA03CU7 Qty 6,

Zinc-o-Fix Strip (1.57 - 0.003 in.)

P/N AA00D10.

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-07-03-00/R-00	
System: CAR BODY	Sheet: 3/8
Subsystem/Assy: WINDOWS	Unit: PASSENGER SIDE GLASS
Component:	Man Hours: 4
Maintenance Task: REPLACEMENT	
PROCEDURE:	
PRELIMINARY OPERATIONS	
<ol style="list-style-type: none"> 1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations. 2. Place the Vehicle over the Pit. 3. Set the Master Controller Handle to FSB position. 4. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). 5. Apply Wheel Chocks to prevent the Vehicle from moving. 6. Position an External Scaffold to safely perform the Task. 	
REMOVAL (refer to Figure 1):	
The procedure is referred to one Passenger Compartment Window Glass removal	
<p>NOTE: Two workers (1 outside and 1 inside of the Vehicle) are necessary to perform the Task.</p> <p>WARNING: USE A 100 LB CAPACITY OVERHEAD CRANE TO PERFORM REMOVAL/INSTALLATION OPERATIONS. PASSENGER SIDE WINDOW ASSEMBLY WEIGHS 86 LB (39 KG).</p>	
<ol style="list-style-type: none"> 1. Using the Nylon Tool (6), open the Gasket Lock Strip (3), all along the perimeter of the Gasket (2), and remove it. 2. Apply four (4) Glass Suction Cups to the external side of the Glass (1) and connect them to the recommended Overhead Crane in order to support the Glass during removal. 3. Carefully pull the Overhead Crane sling to tension it. 4. Starting from the Glass Upper Corners, push and pull (using the Suction Cups Handles) the Glass, alternatively, from inside and outside of the Vehicle, until the Upper Corners of the Glass pop out of the Gasket (2). 5. Proceed in the same way all along the Glass Surface, pushing from inside and pulling from outside, while supporting the Glass by means of the Suction Cups Handles. 6. As soon as the Glass Upper Corners and Sides are free from the Gasket, lift the Glass by means of the Overhead Crane and remove it from the gasket (2). 7. Once the Glass has been removed, complete the Task as follows: <ul style="list-style-type: none"> • Remove and discard the Gasket (2). • Remove and discard the Zinc-O-Fix Strip installed all around the Window Opening. 	

P2550 CORRECTIVE MAINTENANCE SHEET

R-C-02-07-03-00/R-00

Card Code:

System:
CAR BODY

Sheet:

4/8

Subsystem/Assy:
WINDOWS

Unit:
PASSENGER SIDE GLASS

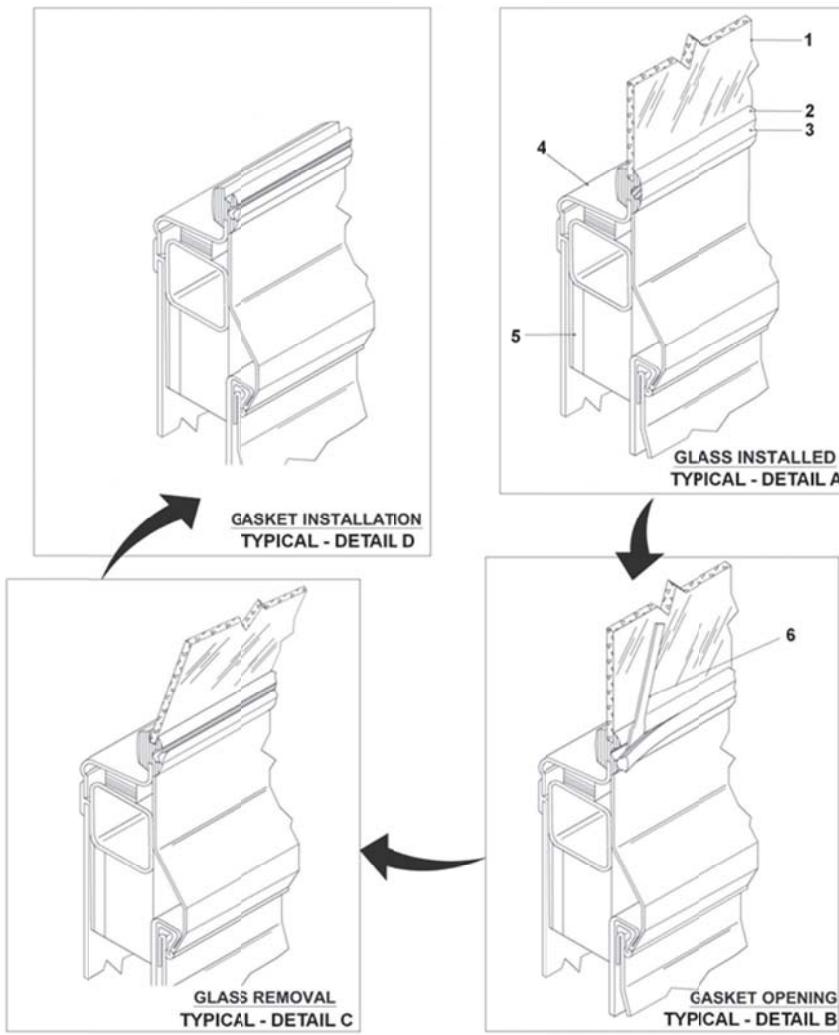
Component:

Man Hours:
4

Maintenance Task:

REPLACEMENT

PROCEDURE (CONT'D):



1. Glass
4. Window Frame

2. Gasket
5. Sidewall

3. Gasket Lock Strip
6. Nylon Tool

Figure 1 - GLASS - REMOVAL / INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-07-03-00/R-00

System:

CAR BODY

Sheet:

5/8

Subsystem/Assy:

WINDOWS

Unit:

PASSENGER SIDE GLASS

Component:

Man Hours:

4

Maintenance Task:

REPLACEMENT

PROCEDURE (CONT'D):

INSTALLATION(refer to Figure 1):

This procedure is referred to one Passenger Compartment Window Glass installation

NOTE:

Two workers (1 outside and 1 inside of the Vehicle) are necessary to perform the Task.

1. Clean the Passenger Window Frame (4) with recommended Solvent.
2. Clean Gasket (2) and its Seat in the Window Frame (4), using recommended cleaner and cleaning rag.
3. Apply the Zinc-O-Fix Strip (refer to Figure 2) all around the Window Opening.

NOTE:

The Zinc-O-Fix Strip (1.57 x 0.003 in. thickness) is fitted with the adhesive side in contact with the Steel's Structure (Window's Opening) so as to allow, through the full contact of the Zinc-Alloy side with the Window's Frame (Light Alloy), a suitable cathode protection preventing the Vehicle's Structure from corrosion (by Galvanic Effect) in the contact area between different metals.

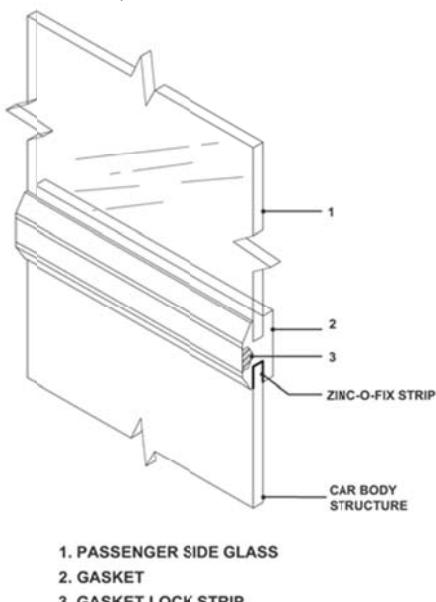


Figure 2 - ZINC-O-FIX STRIP POSITIONING

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-07-03-00/R-00

System:

CAR BODY

Sheet:

6/8

Subsystem/Assy:

WINDOWS

Unit:

PASSENGER SIDE GLASS

Component:

Man Hours:

4

Maintenance Task:

REPLACEMENT

PROCEDURE (CONT'D):

4. Mount the Gasket on the Window Frame with the Self Locking Part of the Gasket lock Strip (3) upraised all along the Gasket perimeter.

NOTE: Install the Gasket starting from the Upper Side of the Window Opening paying attention that the Draining Holes are positioned in the Lower Side of the Window Opening.

5. Push on the Gasket so that it fits perfectly along the whole Window Frame Perimeter.

NOTE: In order to ease the Glass sliding inside the Gasket Channel, it is suggested to apply to the Gasket Channel a suitable lubricating product (i.e. Tires Mounting Paste) by means of a brush.

WARNING: USE A 100 LB CAPACITY OVERHEAD CRANE TO PERFORM PASSENGER SIDE REMOVAL/INSTALLATION OPERATIONS.
THE GLASS ASSEMBLY WEIGHS 86 LB (39 KG).

NOTE: Install the Glass with the MFR (Manufacturer) Name on the bottom side in order to have the MFR Name readable from the inside of the Vehicle.

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code:	R-C-02-07-03-00/R-00
System: CAR BODY	Sheet: 7/8
Subsystem/Assy: WINDOWS	Unit: PASSENGER SIDE GLASS
Component:	Man Hours: 4
Maintenance Task: REPLACEMENT	
PROCEDURE (CONT'D):	
<ol style="list-style-type: none"> 6. Apply four (4) Glass Suction Cups to the Glass external surface and connect them to the recommended Overhead Crane. 7. Lift the Glass by the Overhead Crane. 8. Position the Glass in order to face it with the Window Opening from the outside of the Vehicle. 9. Slightly tilt the Glass in order to insert its Lower Corners inside the Channel of the Gasket (2). 10. Keep the Glass on the Gasket and keep it as close as possible to the vertical position. 11. Move the Glass downwards into the Gasket Channel, paying attention not to damage the Gasket Channel. 12. From the outside of the Vehicle, push and tap the Glass along its perimeter in order to allow it to get inside the Gasket Channel. 13. At the same time, from the inside of the Vehicle, open the Gasket lips, by means of the nylon tool, in order to ease the Glass entering the Gasket Channel. 14. Once the Glass is in place inside the Gasket Channel, check that the Gasket matches the Window Frame (4) and the Glass. 15. Carefully smooth out the Gasket using the Nylon Tool. 16. Check that the Gasket is perfectly fitted both inside and outside of the Vehicle. 17. To complete the Glass installation, push the Self Locking Part of Gasket Lock Strip (3) in its Seat along the entire Gasket perimeter, using the Nylon Tool. 18. Clean gasket and glass with recommended cleaner and cleaning rags. 19. Restore power to the Vehicle. 20. Record Task results on the Defect Report Card for administrative and maintenance planning. 	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-07-03-00/R-00

System:

CAR BODY

Sheet:

8/8

Subsystem/Assy:

WINDOWS

Unit:

PASSENGER SIDE GLASS

Component:

Man Hours:

4

Maintenance Task:

REPLACEMENT**INTENTIONALLY LEFT
BLANK**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-07-04-00/R-00

System:

CAR BODY

Sheet:

1/8

Subsystem/Assy:

WINDOWS

Unit:

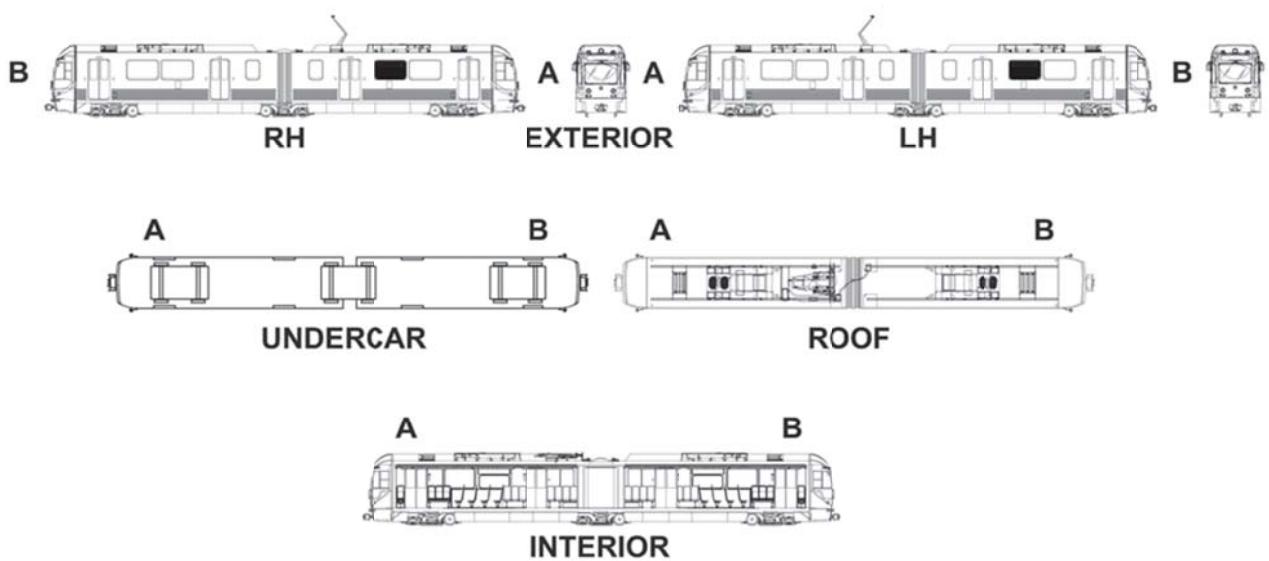
SIDE GLASS (SILK SCREENING)

Component:

Man Hours:

4

Maintenance Task:

REPLACEMENT**LOCATION:**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-07-04-00/R-00

System:

CAR BODY

Sheet:

2/8

Subsystem/Assy:

WINDOWS

Unit:

SIDE GLASS (SILK SCREENING)

Component:

Man Hours:

4

Maintenance Task:

REPLACEMENT**SAFETY PRECAUTIONS:**

LACMTA Maintenance Shop Safety Rules & Regulations

WARNING: DURING MAINTENANCE PROCEDURES, WORK WITH EXTREME CARE TO PREVENT GLASS FROM INJURING PERSONNEL AND/OR BREAKING.

**WARNING: USE A 100 LB CAPACITY (MINIMUM) OVERHEAD CRANE TO PERFORM THE REMOVAL/INSTALLATION OPERATIONS.
PASSENGER SIDE WINDOW ASSEMBLY WEIGHS 86 LB (39 KG)**

TOOLS:

LACMTA Maintenance Shop Standard Tool kit.

Overhead Crane (100 lb min capacity).

Window Suction Cup (min. capacity 25 Lb (12 Kg)) Qty 4.

Nylon Tool (commercial)

CONSUMABLES:

SAFETY KLEEN PREMIUM Solvent.

SPARE PARTS:

Passenger Side Window Glass	P/N	AA03CB7	Qty 2,
Passenger Side Window Gasket	P/N	AA03CU7	Qty 2,
Zinc-o-Fix Strip (1.57 - 0.003 in.)	P/N	AA00D10.	

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-07-04-00/R-00	
System: CAR BODY	Sheet: 3/8
Subsystem/Assy: WINDOWS	Unit: SIDE GLASS (SILK SCREENING)
Component:	Man Hours: 4
Maintenance Task: REPLACEMENT	
PROCEDURE:	
PRELIMINARY OPERATIONS	
<ol style="list-style-type: none"> 1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations. 2. Place the Vehicle over the Pit. 3. Set the Master Controller Handle to FSB position. 4. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). 5. Apply Wheel Chocks to prevent the Vehicle from moving. 6. Position an External Scaffold to safely perform the Task. 	
REMOVAL (refer to Figure 1):	
The procedure is referred to one Passenger Compartment Window Glass removal	
NOTE: Two workers (1 outside and 1 inside of the Vehicle) are necessary to perform the Task.	
WARNING: USE A 100 LB CAPACITY OVERHEAD CRANE TO PERFORM REMOVAL/INSTALLATION OPERATIONS. PASSENGER SIDE WINDOW ASSEMBLY WEIGHS 86 LB (39 KG).	
<ol style="list-style-type: none"> 1. Using the Nylon Tool (6), open the Gasket Lock Strip (3), all along the perimeter of the Gasket (2), and remove it. 2. Apply four (4) Glass Suction Cups to the external side of the Glass (1) and connect them to the recommended Overhead Crane in order to support the Glass during removal. 3. Carefully pull the Overhead Crane sling to tension it. 4. Starting from the Glass Upper Corners, push and pull (using the Suction Cups Handles) the Glass, alternatively, from inside and outside of the Vehicle, until the Upper Corners of the Glass pop out of the Gasket (2). 5. Proceed in the same way all along the Glass Surface, pushing from inside and pulling from outside, while supporting the Glass by means of the Suction Cups Handles. 6. As soon as the Glass Upper Corners and Sides are free from the Gasket, lift the Glass by means of the Overhead Crane and remove it from the gasket (2). 7. Once the Glass has been removed, complete the Task as follows: <ul style="list-style-type: none"> • Remove and discard the Gasket (2). • Remove and discard the Zinc-O-Fix Strip installed all around the Window Opening. 	

P2550 CORRECTIVE MAINTENANCE SHEET

R-C-02-07-04-00/R-00

Card Code:

System:
CAR BODY

Sheet:

4/8

Subsystem/Assy:
WINDOWS

Unit:
SIDE GLASS (SILK SCREENING)

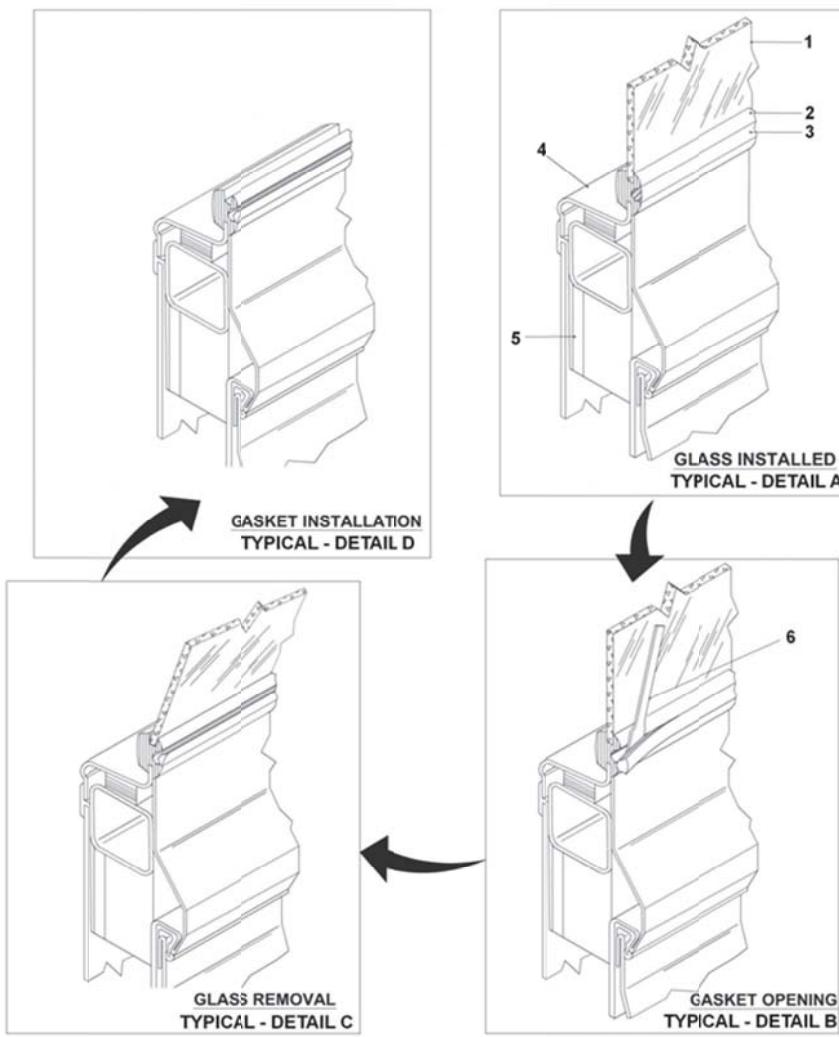
Component:

Man Hours:
4

Maintenance Task:

REPLACEMENT

PROCEDURE (CONT'D):



1. Glass
4. Window Frame

2. Gasket
5. Sidewall

3. Gasket Lock Strip
6. Nylon Tool

Figure 1 - GLASS - REMOVAL / INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-07-04-00/R-00

System:

CAR BODY

Sheet:

5/8

Subsystem/Assy:

WINDOWS

Unit:

SIDE GLASS (SILK SCREENING)

Component:

Man Hours:

4

Maintenance Task:

REPLACEMENT

PROCEDURE (CONT'D):

INSTALLATION(refer to Figure 1):

This procedure is referred to one Passenger Compartment Window Glass installation

NOTE:

Two workers (1 outside and 1 inside of the Vehicle) are necessary to perform the Task.

1. Clean the Passenger Window Frame (4) with recommended Solvent.
2. Clean Gasket (2) and its Seat in the Window Frame (4), using recommended cleaner and cleaning rag.
3. Apply the Zinc-O-Fix Strip (refer to Figure 2) all around the Window Opening.

NOTE:

The Zinc-O-Fix Strip (1.57 x 0.003 in. thickness) is fitted with the adhesive side in contact with the Steel's Structure (Window's Opening) so as to allow, through the full contact of the Zinc-Alloy side with the Window's Frame (Light Alloy), a suitable cathode protection preventing the Vehicle's Structure from corrosion (by Galvanic Effect) in the contact area between different metals.

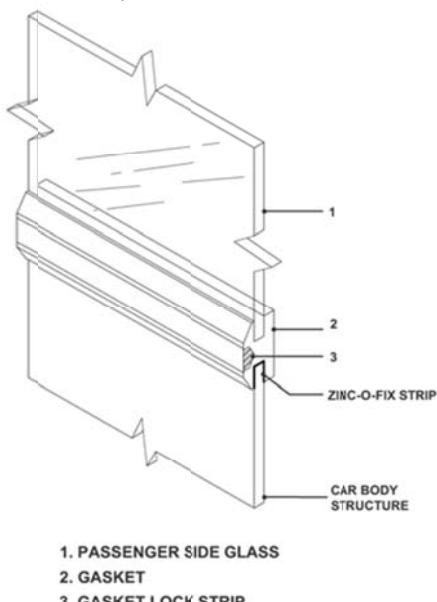


Figure 2 - ZINC-O-FIX STRIP POSITIONING

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-07-04-00/R-00

System:

CAR BODY

Sheet:

6/8

Subsystem/Assy:

WINDOWS

Unit:

SIDE GLASS (SILK SCREENING)

Component:

Man Hours:

4

Maintenance Task:

REPLACEMENT

PROCEDURE (CONT'D):

4. Mount the Gasket on the Window Frame with the Self Locking Part of the Gasket lock Strip (3) upraised all along the Gasket perimeter.

NOTE: Install the Gasket starting from the Upper Side of the Window Opening paying attention that the Draining Holes are positioned in the Lower Side of the Window Opening.

5. Push on the Gasket so that it fits perfectly along the whole Window Frame Perimeter.

NOTE: In order to ease the Glass sliding inside the Gasket Channel, it is suggested to apply to the Gasket Channel a suitable lubricating product (i.e. Tires Mounting Paste) by means of a brush.

WARNING: USE A 100 LB CAPACITY OVERHEAD CRANE TO PERFORM PASSENGER SIDE REMOVAL/INSTALLATION OPERATIONS.
THE GLASS ASSEMBLY WEIGHS 86 LB (39 KG).

NOTE: Install the Glass with the MFR (Manufacturer) Name on the bottom side in order to have the MFR Name readable from the inside of the Vehicle.

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code:	R-C-02-07-04-00/R-00
System: CAR BODY	Sheet: 7/8
Subsystem/Assy: WINDOWS	Unit: SIDE GLASS (SILK SCREENING)
Component:	Man Hours: 4
Maintenance Task: REPLACEMENT	
PROCEDURE (CONT'D):	
<ol style="list-style-type: none"> 6. Apply four (4) Glass Suction Cups to the Glass external surface and connect them to the recommended Overhead Crane. 7. Lift the Glass by the Overhead Crane. 8. Position the Glass in order to face it with the Window Opening from the outside of the Vehicle. 9. Slightly tilt the Glass in order to insert its Lower Corners inside the Channel of the Gasket (2). 10. Keep the Glass on the Gasket and keep it as close as possible to the vertical position. 11. Move the Glass downwards into the Gasket Channel, paying attention not to damage the Gasket Channel. 12. From the outside of the Vehicle, push and tap the Glass along its perimeter in order to allow it to get inside the Gasket Channel. 13. At the same time, from the inside of the Vehicle, open the Gasket lips, by means of the nylon tool, in order to ease the Glass entering the Gasket Channel. 14. Once the Glass is in place inside the Gasket Channel, check that the Gasket matches the Window Frame (4) and the Glass. 15. Carefully smooth out the Gasket using the Nylon Tool. 16. Check that the Gasket is perfectly fitted both inside and outside of the Vehicle. 17. To complete the Glass installation, push the Self Locking Part of Gasket Lock Strip (3) in its Seat along the entire Gasket perimeter, using the Nylon Tool. 18. Clean gasket and glass with recommended cleaner and cleaning rags. 19. Restore power to the Vehicle. 20. Record Task results on the Defect Report Card for administrative and maintenance planning. 	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-07-04-00/R-00

System:

CAR BODY

Sheet:

8/8

Subsystem/Assy:

WINDOWS

Unit:

SIDE GLASS (SILK SCREENING)

Component:

Man Hours:

4

Maintenance Task:

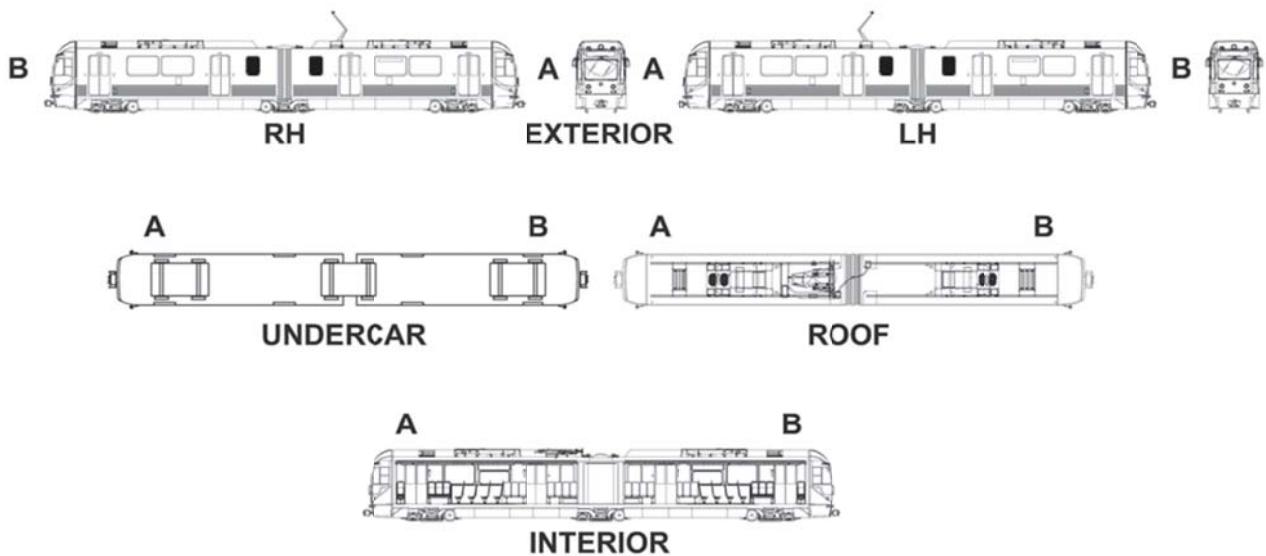
REPLACEMENT**INTENTIONALLY LEFT
BLANK**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-07-05-00/R-00

System:	Sheet:
CAR BODY	1/8
Subsystem/Assy:	Unit:
WINDOWS	SIDE GLASS (ART. SECT. SIDE)
Component:	Man Hours:
	4
Maintenance Task:	
REPLACEMENT	
LOCATION:	



P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-07-05-00/R-00

System:

CAR BODY

Sheet:

2/8

Subsystem/Assy:

WINDOWS

Unit:

SIDE GLASS (ART. SECT. SIDE)

Component:

Man Hours:

4

Maintenance Task:

REPLACEMENT**SAFETY PRECAUTIONS:**

LACMTA Maintenance Shop Safety Rules & Regulations

WARNING: DURING MAINTENANCE PROCEDURES, WORK WITH EXTREME CARE TO PREVENT GLASS FROM INJURING PERSONNEL AND/OR BREAKING.

**WARNING: USE A 50 LB CAPACITY (MINIMUM) OVERHEAD CRANE TO PERFORM THE REMOVAL/INSTALLATION OPERATIONS.
PASSENGER SIDE WINDOW ASSEMBLY WEIGHS 43 LB (19.5 KG)**

TOOLS:

LACMTA Maintenance Shop Standard Tool kit.

Overhead Crane (50 lb min capacity).

Window Suction Cup (min. capacity 25 Lb (12 Kg)) Qty 4.

Nylon Tool (commercial)

CONSUMABLES:

SAFETY KLEEN PREMIUM Solvent.

SPARE PARTS:

Side Glass (Art. Sect. Side)	P/N	AA03CB8	Qty 4
Side Glass (Art. Sect. Side) Gasket	P/N	AA03CU8	Qty 4
Zinc-o-Fix Strip (1.57 - 0.003 in.)	P/N	AA00D10.	

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-07-05-00/R-00	
System: CAR BODY	Sheet: 3/8
Subsystem/Assy: WINDOWS	Unit: SIDE GLASS (ART. SECT. SIDE)
Component:	Man Hours: 4
Maintenance Task: REPLACEMENT	
PROCEDURE:	
PRELIMINARY OPERATIONS	
<ol style="list-style-type: none"> 1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations. 2. Place the Vehicle over the Pit. 3. Set the Master Controller Handle to FSB position. 4. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). 5. Apply Wheel Chocks to prevent the Vehicle from moving. 6. Position an External Scaffold to safely perform the Task. 	
PROCEDURE (CONT'D):	
REMOVAL (refer to Figure 1)	
The procedure is referred to one Passenger Compartment (Art. Sect. Side) Window Glass removal :-	
NOTE: Two workers (1 outside and 1 inside of the Vehicle) are necessary to perform the Task.	
WARNING: USE A 50 LB CAPACITY OVERHEAD CRANE TO PERFORM REMOVAL/INSTALLATION OPERATIONS. PASSENGER SIDE WINDOW ASSEMBLY WEIGHS 43 LB (19.5 KG).	
<ol style="list-style-type: none"> 1. Using the Nylon Tool (6), open the Gasket Lock Strip (3), all along the perimeter of the Gasket (2), and remove it. 2. Apply four (4) Glass Suction Cups to the external side of the Glass (1) and connect them to the recommended Overhead Crane in order to support the Glass during removal. 3. Carefully pull the Overhead Crane sling to tension it. 4. Starting from the Glass Upper Corners, push and pull (using the Suction Cups Handles) the Glass, alternatively, from inside and outside of the Vehicle, until the Upper Corners of the Glass pop out of the Gasket (2). 5. Proceed in the same way all along the Glass Surface, pushing from inside and pulling from outside, while supporting the Glass by means of the Suction Cups Handles. 6. As soon as the Glass Upper Corners and Sides are free from the Gasket, lift the Glass by means of the Overhead Crane and remove it from the gasket (2). 7. Once the Glass has been removed, complete the Task as follows: 8. Remove and discard the Gasket (2). 9. Remove and discard the Zinc-O-Fix Strip installed all around the Window Opening. 	

P2550 CORRECTIVE MAINTENANCE SHEET

R-C-02-07-05-00/R-00

Card Code:

System:
CAR BODY

Sheet:

4/8

Subsystem/Assy:
WINDOWS

Unit:
SIDE GLASS (ART. SECT. SIDE)

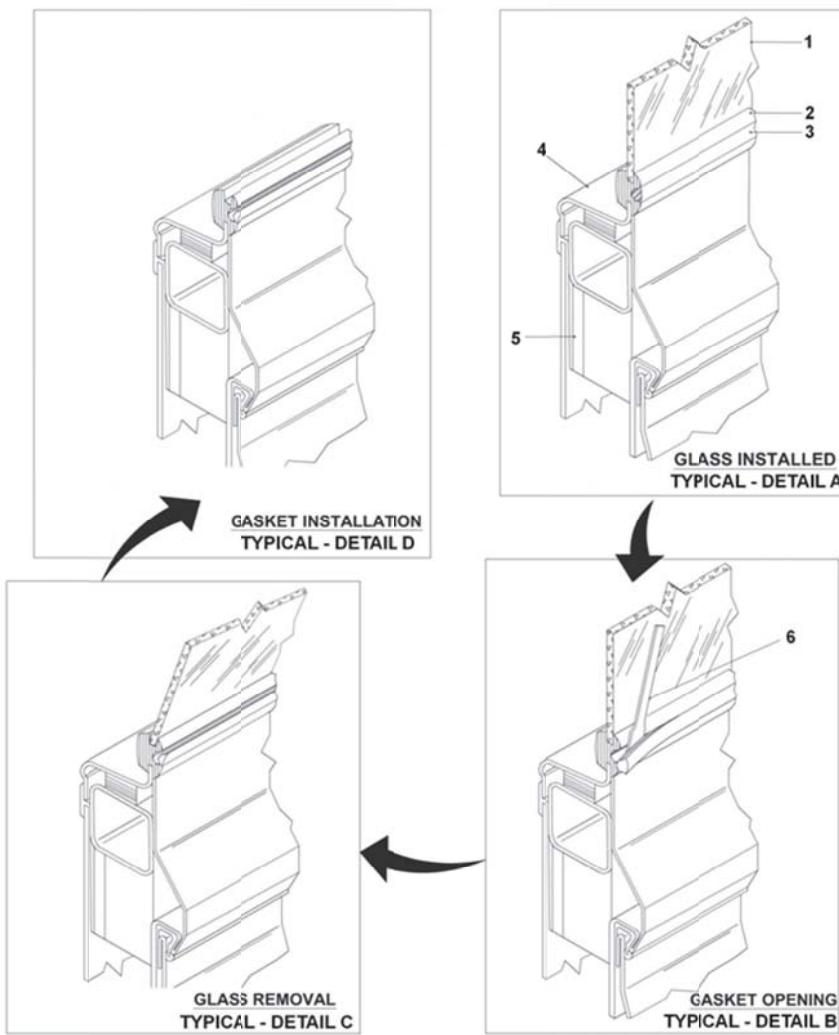
Component:

Man Hours:
4

Maintenance Task:

REPLACEMENT

PROCEDURE (CONT'D):



1. Glass
4. Window Frame

2. Gasket
5. Sidewall

3. Gasket Lock Strip
6. Nylon Tool

Figure 1 - GLASS - REMOVAL / INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-07-05-00/R-00

System:

CAR BODY

Sheet:

5/8

Subsystem/Assy:

WINDOWS

Unit:

SIDE GLASS (ART. SECT. SIDE)

Component:

Man Hours:

4

Maintenance Task:

REPLACEMENT**PROCEDURE (CONT'D):****INSTALLATION**(- refer to Figure 1)

This procedure is referred to one Passenger Compartment (Art. Sec. Side) Window Glass installation:

NOTE: Two workers (1 outside and 1 inside of the Vehicle) are necessary to perform the Task.

1. Clean the Passenger Window Frame (4) with recommended Solvent.
2. Clean Gasket (2) and its Seat in the Window Frame (4), using recommended cleaner and cleaning rag.
3. Apply the Zinc-O-Fix Strip (refer to Figure 2) all around the Window Opening.

NOTE: The Zinc-O-Fix Strip (1.57 x 0.003 in. thickness) is fitted with the adhesive side in contact with the Steel's Structure (Window's Opening) so as to allow, through the full contact of the Zinc-Alloy side with the Window's Frame (Light Alloy), a suitable cathode protection preventing the Vehicle's Structure from corrosion (by Galvanic Effect) in the contact area between different metals.

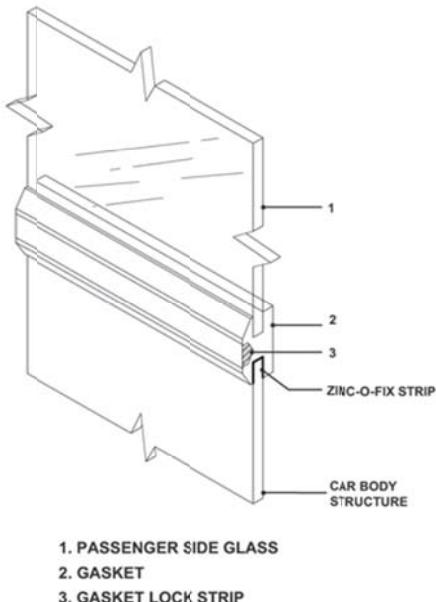


Figure 2 - ZINC-O-FIX STRIP POSITIONING

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-07-05-00/R-00

System:

CAR BODY

Sheet:

6/8

Subsystem/Assy:

WINDOWS

Unit:

SIDE GLASS (ART. SECT. SIDE)

Component:

Man Hours:

4

Maintenance Task:

REPLACEMENT

PROCEDURE (CONT'D):

4. Mount the Gasket on the Window Frame with the Self Locking Part of the Gasket lock Strip (3) upraised all along the Gasket perimeter.

NOTE: Install the Gasket starting from the Upper Side of the Window Opening paying attention that the Draining Holes are positioned in the Lower Side of the Window Opening.

5. Push on the Gasket so that it fits perfectly along the whole Window Frame Perimeter.

NOTE: In order to ease the Glass sliding inside the Gasket Channel, it is suggested to apply to the Gasket Channel a suitable lubricating product (i.e. Tires Mounting Paste) by means of a brush.

WARNING: USE A 50 LB CAPACITY OVERHEAD CRANE TO PERFORM PASSENGER SIDE REMOVAL/INSTALLATION OPERATIONS.
THE GLASS ASSEMBLY WEIGHS 43 LB (19.5 KG).

NOTE: Install the Glass with the MFR (Manufacturer) Name on the bottom side in order to have the MFR Name readable from the inside of the Vehicle.

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code:	R-C-02-07-05-00/R-00
System: CAR BODY	Sheet: 7/8
Subsystem/Assy: WINDOWS	Unit: SIDE GLASS (ART. SECT. SIDE)
Component:	Man Hours: 4
Maintenance Task: REPLACEMENT	
PROCEDURE (CONT'D):	
<ol style="list-style-type: none"> 6. Apply four (4) Glass Suction Cups to the Glass external surface and connect them to the recommended Overhead Crane. 7. Lift the Glass by the Overhead Crane. 8. Position the Glass in order to face it with the Window Opening from the outside of the Vehicle. 9. Slightly tilt the Glass in order to insert its Lower Corners inside the Channel of the Gasket (2). 10. Keep the Glass on the Gasket and keep it as close as possible to the vertical position. 11. Move the Glass downwards into the Gasket Channel, paying attention not to damage the Gasket Channel. 12. From the outside of the Vehicle, push and tap the Glass along its perimeter in order to allow it to get inside the Gasket Channel. 13. At the same time, from the inside of the Vehicle, open the Gasket lips, by means of the nylon tool, in order to ease the Glass entering the Gasket Channel. 14. Once the Glass is in place inside the Gasket Channel, check that the Gasket matches the Window Frame (4) and the Glass. 15. Carefully smooth out the Gasket using the Nylon Tool. 16. Check that the Gasket is perfectly fitted both inside and outside of the Vehicle. 17. To complete the Glass installation, push the Self Locking Part of Gasket Lock Strip (3) in its Seat along the entire Gasket perimeter, using the Nylon Tool. 18. Clean gasket and glass with recommended cleaner and cleaning rags. 19. Restore power to the Vehicle. 20. Record Task results on the Defect Report Card for administrative and maintenance planning. 	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-07-05-00/R-00

System:

CAR BODY

Sheet:

8/8

Subsystem/Assy:

WINDOWS

Unit:

SIDE GLASS (ART. SECT. SIDE)

Component:

Man Hours:

4

Maintenance Task:

REPLACEMENT**INTENTIONALLY
LEFT BLANK**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-00-00/R-00

System:

CAR BODY

Sheet:

1/32

Subsystem/Assy:

ARTICULATION SECTION

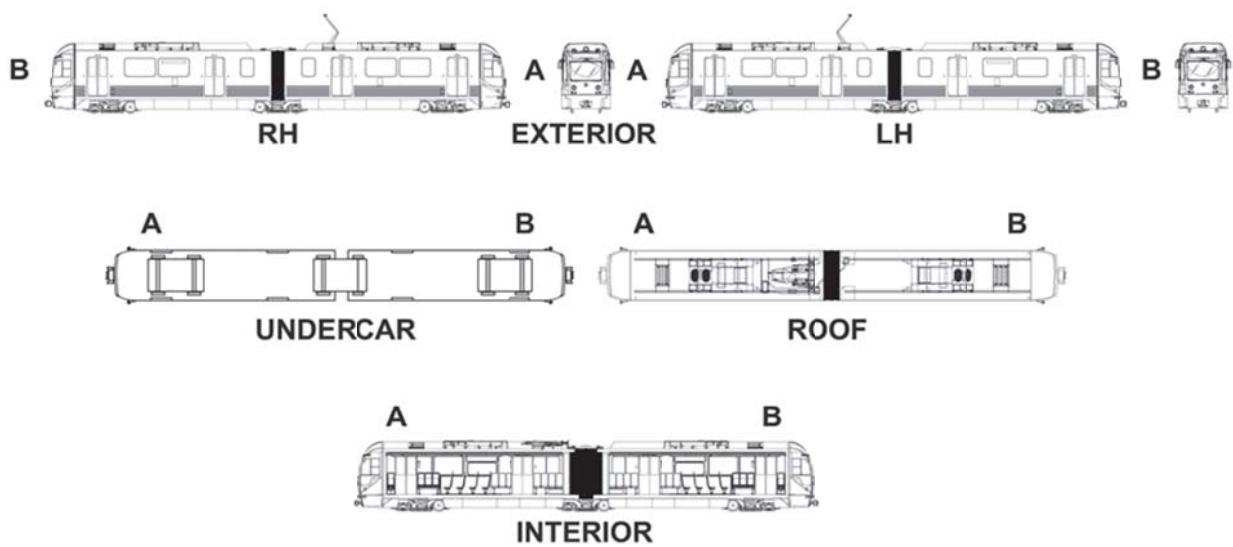
Unit:

Component:

Man Hours:

10

Maintenance Task:

REPLACEMENT
LOCATION:


P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-00-00/R-00

System:

CAR BODY

Sheet:

2/32

Subsystem/Assy:

ARTICULATION SECTION

Unit:

Component:

Man Hours:

10

Maintenance Task:

REPLACEMENT

SAFETY PRECAUTIONS:

WARNING: ELECTRICAL HAZARD (750 VDC).

ENSURE PANTOGRAPH IS LOWERED, AND CATENARY POWER IS REMOVED AND ISOLATED IN ACCORDANCE WITH LACMTA SAFETY RULES AND PROCEDURES. WORK SHOULD BE DONE IN AN AREA AWAYS FROM OVERHEAD CATENARY. FOLLOW SAFETY PROCEDURES FOR ACCESSING THE ROOF.

WARNING: ALWAYS WEAR A SAFETY HARNESS WHEN ACCESSING THE ROOF.

WARNING: ARTICULATION SECTION STRUCTURE). WITH BOTH "A" & "B" OUTER BELLOW SECTIONS INSTALLED ON WEIGHS 335 LB DURING THE REPLACEMENT PROCEDURE MAKE SURE THAT THE OVERHEAD CRANE SUPPORTS THE UNIT.

WARNING: BEFORE REMOVING THE PNEUMATIC SYSTEM MAIN LINE HOSE, MAKE SURE THAT THE PNEUMATIC SYSTEM PRESSURE HAS BEEN RELEASED

WARNING: KEEP FIRMLY THE CENTERING SPRING DEVICE SUPPORT WHILE REMOVING / INSTALLING ITS ATTACHING PARTS, TO AVOID THAT THE STRETCHED SPRING CAUSES INJURY TO PERSONNEL.

CAUTION : CONNECT THE ART SECT STRUCTURE WITH BELLOWS INSTALLED ON TO THE OVERHEAD CRANE (MIN. CAPACITY 350 LB) BY MEANS OF SUITABLE SLING CAREFULLY OPERATE THE OVERHEAD CRANE TO KEEP THE STRUCTURE STILL, IN ORDER TO AVOID THAT ART SECT STRUCTURE MOVES WHILE THE CENTERING DOME SPRING DEVICE IS BEING REMOVED

CAUTION: MAKE SURE THAT THE ARTICULATION SECTION DOME IS SAFELY CONNECTED TO THE OVERHEAD CRANE (MIN. CAPACITY 350 LB) BY MEANS OF A SUITABLE SLING.

CAUTION: THE LENGTH AND THE TENSION FORCE RESULTING FROM THE ADJUSTMENT SHOULD BE THE SAME FOR EACH TENSION ROD.

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-08-00-00/R-00	
System: CAR BODY	Sheet: 3/32
Subsystem/Assy: ARTICULATION SECTION	Unit:
Component:	Man Hours: 10
Maintenance Task: REPLACEMENT	
TOOLS:	
External Scaffold.	
LACMTA Overhaul Standard Tools kit.	
Overhead Crane (min. capacity 350 Lb).	
CONSUMABLES:	
Loctite 242 P/N AA0034E Cleaner / Degreaser	
SPARE PARTS:	
Articulation Section- Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers	
Washer	PN AA03CHP Qty = 2
Lock Washer	PN AA0030F Qty = 2

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-00-00/R-00

System:

CAR BODY

Sheet:

4/32

Subsystem/Assy:

ARTICULATION SECTION

Unit:

Component:

Man Hours:

10

Maintenance Task:

REPLACEMENT**PROCEDURE:****PRELIMINARY OPERATIONS**

1. It is assumed that:
 - a) The Vehicle is set in accordance with LACMTA Maintenance Shop Safety Regulations and positioned in order to have it available to safely accomplish the Task.
 - b) Wheel Chocks are placed to prevent the vehicle from moving in both running directions.
2. Make sure that:
 - a) All Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON).
 - b) The Transfer Switch is turned to OFF.
 - c) The Pantograph is in the down position and latched.
 - d) The Pantograph Control Motor Switch (5F02 CB LV Locker "A" Section) is switched off.
 - e) the Battery Disconnect Circuit Breaker (3F01) is switched off (refer to Fig A).
3. Lock-out and tag-out the Overhead Catenary, 750Vdc Power, per LACMTA Safety Rules and Procedures.
4. Release Pneumatic Pressure from the Pneumatic System Main Line by opening the 1/2-inch Drain Valve of each Main Reservoir. (refer to Fig A)



Battery Disconnect Circuit Breaker (3F01)



Main Reservoirs 1/2 Inch Drain Valves

Figure “A” PRELIMINARY & FINAL OPERATIONS

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-00-00/R-00

System:

CAR BODY

Sheet:

5/32

Subsystem/Assy:

ARTICULATION SECTION

Unit:

Component:

Man Hours:

10

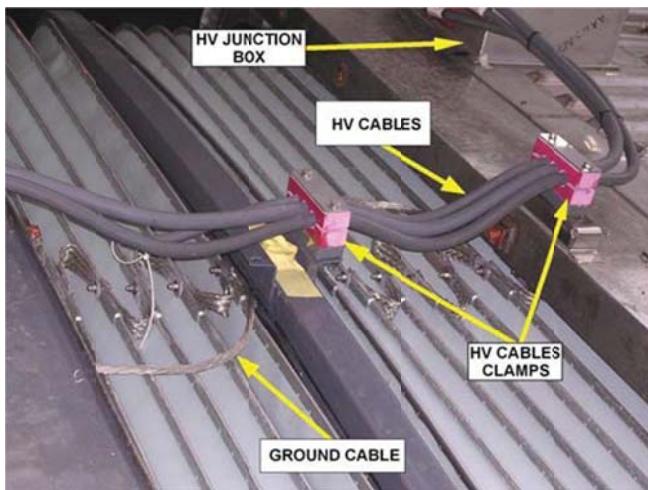
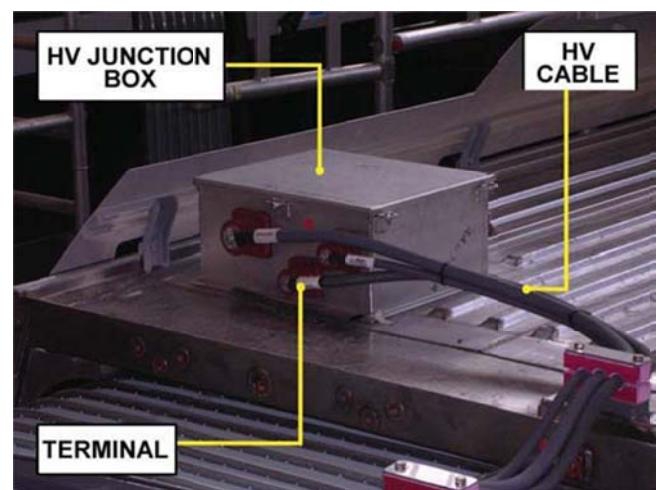
Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

NOTE: Keep the (removed) Hardware and Cables in a known and protected area for later use

5. Remove the HV Cables on top of the Articulation Section as follows: (refer to Fig "B")
 - a) Open each HV Cables clamp by loosening the relevant locking screws.
 - b) Disengage each HV Cable from each Clamp.
 - c) Disconnect each HV Cable Terminal from each HV Junction Box by loosening the relevant Hardware.
 - d) Keep the Hardware in a known and protected area for later use.
 - e) Protect each HV Cable Terminal using suitable Isolating Cap.
 - f) Remove and retain the HV Cables for later use.
6. Remove the Ground Cables as follows: (refer to Fig "B").
 - a) Disconnect the Terminals of the Ground Cables (connecting the Art Sect Dome Structure to both the Car Body Sections structure) by loosening the relevant Hardware.
 - b) Retain the Hardware for later use.
 - c) Protect each Ground Cable Terminal using suitable Isolating Cap.
 - d) Remove and keep the Ground Cables in a known and protected area for later use.


HV & Ground Cables

HV CABLES & Junction Box Terminals
Figure " B "PRELIMINARY & FINAL OPERATIONS

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-00-00/R-00

System:

CAR BODY

Sheet:

6/32

Subsystem/Assy:

ARTICULATION SECTION

Unit:

Component:

Man Hours:

10

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

NOTE: This Sheet provides instructions for Articulation Section removal / installation to be performed as Preliminary / Final Operations of the Car Body sections separation /connection
 The Removal / installation Instructions are provided with the basic assumption that:

- The Articulation Section has to be removed as a complete Assembly
- The Outer Bellows have to be disengaged but not removed from Articulation Section Structure
- The Aisle Interiors Panels will not be disassembled

NOTE: The term "A" Bellow refers to the Bellow installed between the "A" Section Rear End and the Art Sect Center Dome Structure
 The term "B" Bellow refers to the Bellow installed between the "B" Section Rear End and the Art Sect Center Dome Structure

REMOVAL

NOTE: The Articulation Section Removal consists of the Steps listed in the following Table. It is suggested to perform the Steps in sequence as indicated below.

ARTICULATION SECTION STRUCTURE REMOVAL				
STEP	ITEM	TASK	LOCATION	REF TO FIGURE
1	OUTER BELLOWS	DISENGAGEMENT	Outside	1
2	CENTERING DOME SPRING DEVICE	DISENGAGEMENT	Roof	2
3	LV-MV CABLES	DISCONNECTION	Between Car Sections	3-4-5
4	GROUND BRAID	DISCONNECTION	Base of Art Sec	6
5	PIPING	DISCONNECTION	Between Bellow and Side Panels	7
6	TENSION RODS	DISENGAGEMENT	Between Bellow and Side Panels	8
7	AISLE FLOOR - CENTRAL PART	REMOVAL	Aisle	9
8	ART.SECTION	REMOVAL	Roof	10 - 11

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code:	
R-C-02-08-00-00/R-00	
System: CAR BODY	Sheet: 7/32
Subsystem/Assy: ARTICULATION SECTION	Unit:
Component:	Man Hours: 10
Maintenance Task: REPLACEMENT	
PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):	
<p>WARNING: ARTICULATION SECTION STRUCTURE). WITH BOTH "A" & "B" OUTER BELLOWS INSTALLED WEIGHS 335 LB DURING THE REPLACEMENT PROCEDURE MAKE SURE THAT THE OVERHEAD CRANE SUPPORTS THE UNIT.</p>	
<p>STEP 1 Outer Bellows Disengagement (Refer to Figure1):</p> <p>NOTE : Keep the (removed) Hardware and the Hose for later use</p> <ol style="list-style-type: none"> 1 At the center of the Articulation Section <ol style="list-style-type: none"> a Loosen and remove Nuts (9) from each Tie Rod (11) connected to the Art Sect Center Dome and to the "A" Section Rear End on RH / LH side. b Loosen and remove Nuts (9) from each Tie Rod (11) connected to the Art Sect Center Dome and to the "B" Section Rear End on RH / LH side. 2 At the "A" Section Rear End <ol style="list-style-type: none"> a Loosen and remove Nuts (9) from Tie Rod (11) on RH / LH side. 3 At the "B" Section Rear End <ol style="list-style-type: none"> a Loosen and remove Nuts (9) from Tie Rod (11) on RH / LH side. 4 At the "A" Section Rear End <p>Work on the "A" Bellow as follows:</p> <ol style="list-style-type: none"> a) Loosen and remove Nuts (8) from Tie Rod (10) on RH / LH side. b) Disengage the Tie Rod (10) on RH / LH side. c) Disengage the Holder of the Tie Rod (10) from the relevant U-Shaped Retaining Frame. d) Work on the Bellow in order slide it from "A" Section Rear End towards the Art Sect Center Dome Structure. 5 At the "B" Section Rear End <p>Work on the "B" Bellow as follows:</p> <ol style="list-style-type: none"> a) Loosen and remove Nuts (8) from Tie Rod (10) on RH / LH side. b) Disengage the Tie Rod (10) on RH / LH side. c) Disengage the Holder of the Tie Rod (10) from the relevant U-Shaped Retaining Frame. d) Work on the Bellow in order slide it from "B" Section Rear End towards the Art Sect Center Dome Structure. 6 Position, through the gained clearance and underneath the Bellows, a suitable Sling to support the Articulation Section complete. 7 Connect an Overhead Crane (Min. capacity 350 Lb) to the Sling. 8 Carefully raise the Overhead Crane to keep the structure still to avoid that the Articulation Section Structure moves while the Centering Dome Spring Device is being removed. 	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-00-00/R-00

System:

CAR BODY

Sheet:

8/32

Subsystem/Assy:

ARTICULATION SECTION

Unit:

Component:

Man Hours:

10

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

STEP 2 Centering Dome Spring Device Disengagement (Refer to Figure 2):

CAUTION : CONNECT THE ART SECT STRUCTURE WITH BELLOWS INSTALLED ON TO THE OVERHEAD CRANE (MIN. CAPACITY 350 LB) BY MEANS OF SUITABLE SLING CAREFULLY OPERATE THE OVERHEAD CRANE TO KEEP THE STRUCTURE STILL, IN ORDER TO AVOID THAT ART SECT STRUCTURE MOVES WHILE THE CENTERING DOME SPRING DEVICE IS BEING REMOVED

NOTE : Keep the (removed) Parts and Hardware for later use

1 At "A" Section Rear End

Work on the Centering Dome Spring Device Support as follows :

- a) Remove the Screws (2), Lock Washer (3) and Washer (4).
- b) Position the Support (1) with the attached relevant Spring (9) on the Articulation Section Upper Structure and secure it using suitable device.

2 "B" Section Rear End

Work on the Centering Dome Spring Device Support as follows :

- a) Remove the Screws (2), Lock Washer (3) and Washer (4).
- b) Position the Support (1) with the attached relevant Spring (9) on the Articulation Section Upper Structure and secure it using suitable device.

WARNING: KEEP THE CENTERING SPRING DEVICE FIRMLY SUPPORTED WHILE REMOVING ITS ATTACHING PARTS, TO AVOID THAT THE STRETCHED SPRING CAUSES INJURY TO PERSONNEL.

NOTE: Once this Step is completed the Articulation Section Dome Structure is mechanically disconnected from the Car Body Section Rear End Structures.
It remains connected to the Trailer Truck Bolster Beam by means of the relevant Dome Structure Connections and Pins.

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-08-00-00/R-00	
System: CAR BODY	Sheet: 9/32
Subsystem/Assy: ARTICULATION SECTION	Unit:
Component:	Man Hours: 10
Maintenance Task: REPLACEMENT	
PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):	
STEP 3 LV & MV Cables Disconnection (Refer to Figures 3-4-5)	
<p>NOTE: Keep the (removed) Hardware and Cables for later use</p> <p>NOTE: It is suggested to leave in place the Cable Connectors plugged on the "A" Section Rear End –Connector Boxes -</p>	
<p>1 At "B" Section Rear End <u>LV & MV (intercar)Cables</u></p> <p>Work (from outside) on the LV & MV (Intercar)Cables as follows :</p> <ol style="list-style-type: none"> Disengage each Cable from Upper and Lower Clamps of each side by loosening the relevant Clamp Locking Hardware. Disconnect each Connector of each Cable from relevant Connectors Box. Protect the Connector Sockets of the Connector Boxes and each Cable Connector using suitable Isolating Caps. Position each Cable on the "A" Section Rear End next to the Connectors Box, and secure it by means of suitable Clamp. 	
<p><u>Aisle Light Fixtures (Main) Power Supply Cable</u></p> <p>Work (from outside) on the LV Aisle Light Fixtures (Main) Power Supply Cable as follows :</p> <ol style="list-style-type: none"> Disconnect Aisle Light Fixtures (Main) Power Supply Connector from the relevant Socket Installed on the Connectors Box. Protect the Socket and the Aisle Light Fixtures (Main) Power Supply Cable Connector using suitable Isolating Cap. Position the Aisle Light Fixtures (Main) Power Supply Cable with the Connector on the Articulation Section Upper Structure and secure it using suitable device. 	
STEP 4 Ground Braid Disconnection (Refer to Figure 6)	
<p>NOTE : Keep the (removed) Hardware for later use</p> <p>NOTE: It is suggested to leave in place the Ground Braid Terminal connected to the Center Truck</p>	
<p>1 At the center of the Articulation Section</p> <p>Work (from outside) on the Ground Braid as follows</p> <ol style="list-style-type: none"> Disconnect the Ground Braid Terminal by loosening the relevant Hardware, connecting the Ground Braid to the Articulation Structure External Dome. Protect the Ground Braid Terminal using suitable Isolating Cap. Position the Ground Braid on the Trailer Truck Frame and secure it using suitable Clamp. 	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-00-00/R-00

System:

CAR BODY

Sheet:

10/32

Subsystem/Assy:

ARTICULATION SECTION

Unit:

Component:

Man Hours:

10

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

STEP 5 Pneumatic System Main Piping Hose Disconnection (Refer to Figure 7)

NOTE : Keep the (removed) Hardware and the Hose for later use

NOTE: It is suggested to leave in place the Hose Connection connected to the "A" Section Rear End

1 At "B" Section Rear End

Work (from outside) on the Pneumatic System Main Piping Hose as follows:

- a) Disengage the Hose from the Lower Clamp by loosening the relevant Clamp locking hardware.
- b) Disconnect the Hose Nipple from the relevant Pneumatic System Main Line Connection.
- c) Protect the Pneumatic System Main Line Connection (fixed to the "B" Section Rear End) and the (removed) Hose Connection using suitable Protection Caps/Tapes.
- d) Position the Hose on the "A" Section Rear End next to the (fixed) Pneumatic System Main Line Connection, and secure it by means of suitable Clamp.

WARNING : BEFORE REMOVING THE PNEUMATIC SYSTEM MAIN LINE HOSE, MAKE SURE THAT THE PNEUMATIC SYSTEM PRESSURE HAS BEEN RELEASED (REFER TO PRELIMINARY OPERATIONS STEP 4)

STEP 6 Tension Rods Disengagement (Refer to Figure 8)

NOTE: Keep the (removed) Hardware for later use

NOTE: It is suggested to leave in place the Tension Rods Spring Catches engaged with the "A" and "B" Section Rear Ends

Work (from outside) on each Tension Rod as follows:

- a) Move the Guide upwards to reduce the tension of the Tension Rod.
- b) Unlock both the Spring Catches at the end of both the Tension Rods connected with the same Movable Clamp (**Movable Clamps** side only).
- c) Leave in place the other end of the Tension Rod.
- d) Position each Tension Rod on the "A" / "B" Section Rear End to which it is attached and secure it by means of suitable Clamp.

NOTE : Leave both the **Movable Clamps** in place

STEP 7 Articulation Section Floor - Central Part Removal (Refer to Figure 9)

NOTE : Keep the (removed) Parts and Hardware for later use

Work (inside the Aisle) as follows:

1. Remove Molding Screws (1) and Molding (2).
2. Remove Floor, Central Part (3).

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code:	
R-C-02-08-00-00/R-00	
System: CAR BODY	Sheet: 11/32
Subsystem/Assy: ARTICULATION SECTION	Unit:
Component:	Man Hours: 10
Maintenance Task: REPLACEMENT	
PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):	
<p>STEP 8 Articulation Section Structure Removal (Refer to Figures 10 & 11)</p> <p>NOTE : Keep the (removed) Parts and Hardware for later use</p> <p>WARNING: ARTICULATION SECTION STRUCTURE). WITH BOTH "A" & "B" OUTER BELLOW SECTIONS INSTALLED WEIGHS 335 LB DURING THE REPLACEMENT PROCEDURE MAKE SURE THAT THE OVERHEAD CRANE SUPPORTS THE UNIT.</p> <p>CAUTION : MAKE SURE THAT THE ART SECT DOME IS SAFELY CONNECTED TO THE OVERHEAD CRANE (MIN. CAPACITY 350 LB) BY MEANS OF A SUITABLE SLING</p> <ol style="list-style-type: none"> 1. Remove the Screws (5) and Washers (6, 7) while supporting the Upper Plates (3). 2. Remove Upper Plates (3) from "A" / "B" Body Structure. 3. From inside, through the Floor Central Part Openings, unscrew both the Nuts (33) connecting the Articulation Section Dome Structure (RH / LH side) with the Truck Bolster Beam (RH / LH side) and remove the relevant Lock Washers(32), Washers (31). <p>NOTE: The following hardware remains free</p> <ul style="list-style-type: none"> • Bush (30) • Spacer (28) • Disc (29) • Washer (27) <ol style="list-style-type: none"> 4. Discard Washers and Lock Washers. 5. Remove both Pins (22) from outside using a suitable Puller Device. 6. Once the Pins have been removed, remove the Spacers. (25, 26) <p>NOTE : Leave the Split Rings (23) and Flexible Supports (24) in place.</p> <p>NOTE: Once the above Step is completed, the Articulation Section Dome Structure is fully mechanically disconnected from the Car Body and from the Trailer Truck and can be raised.</p> <ol style="list-style-type: none"> 7. To remove the Articulation Section Complete, perform the Separation of the two Car Body Sections according to : Sheet R C-12-02-00-00 / R-00 Step MECHANICAL CONNECTIONS –TRUCK / CARBODY DISCONNECTION 8. Once the Separation of the two Car Body Sections has been completed, remove the Articulation Section as a complete Assembly using the recommended Overhead Crane 	

P2550 CORRECTIVE MAINTENANCE SHEET

R-C-02-08-00-00/R-00

Card Code:

System:
CAR BODY

Sheet:

12/32

Subsystem/Assy:
ARTICULATION SECTION

Unit:

Component:
Maintenance Task:

Man Hours:

10

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

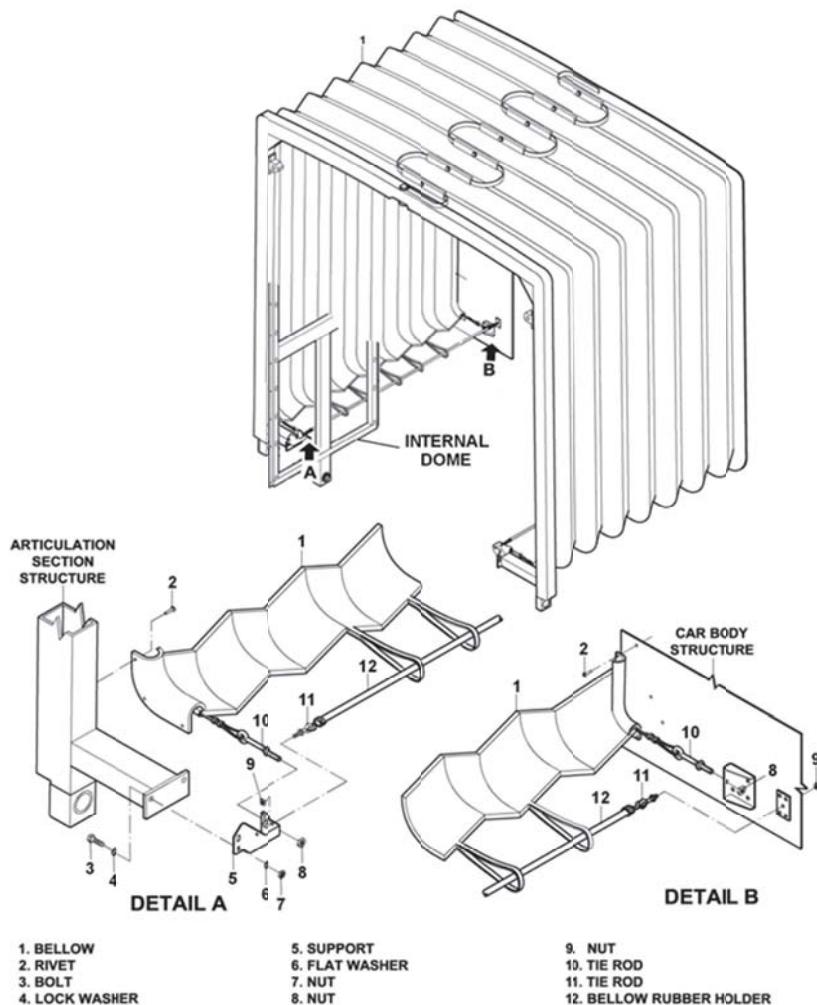


Figure 1 OUTER BELLOW – DISENGAGEMENT /-ENGAGEMENT

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-00-00/R-00

System:

CAR BODY

Sheet:

13/32

Subsystem/Assy:

ARTICULATION SECTION

Unit:

Component:

Man Hours:

10

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

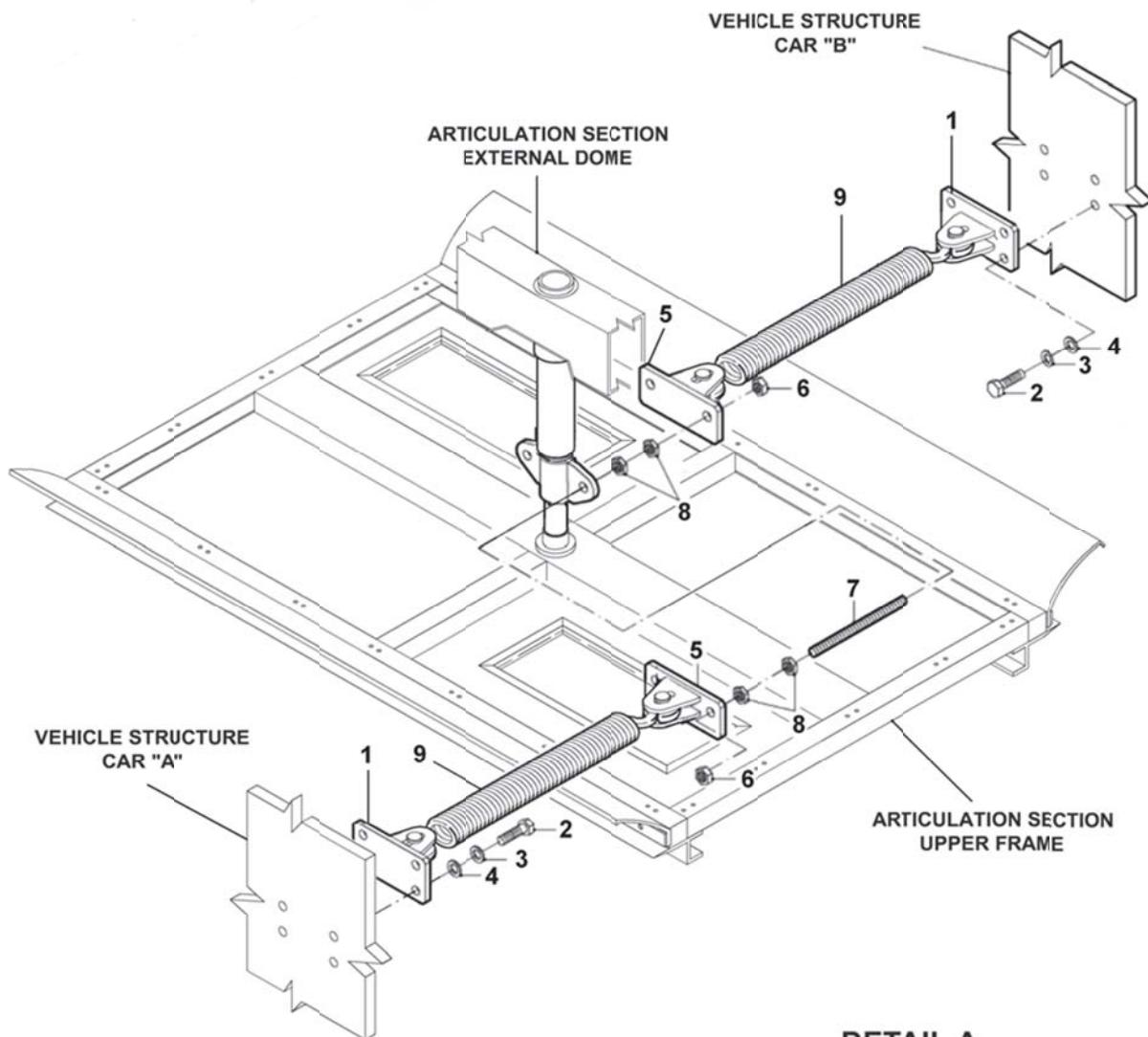


Figure 2 CENTERING DOME SPRING DEVICE DISENGAGEMENT /-ENGAGEMENT

P2550 CORRECTIVE MAINTENANCE SHEET

R-C-02-08-00-00/R-00

Card Code:

System:
CAR BODY

Sheet:

14/32

Subsystem/Assy:
ARTICULATION SECTION

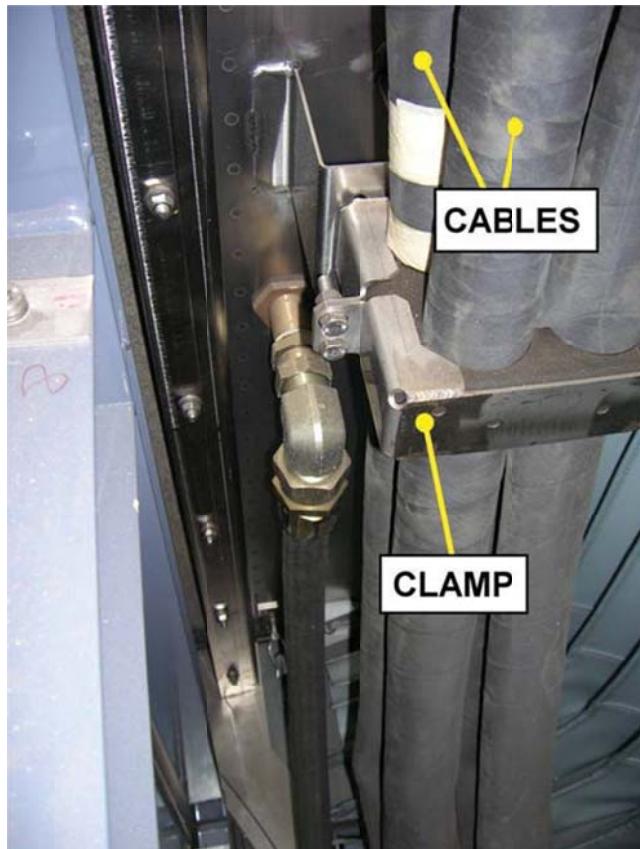
Unit:

Component:
Man Hours:

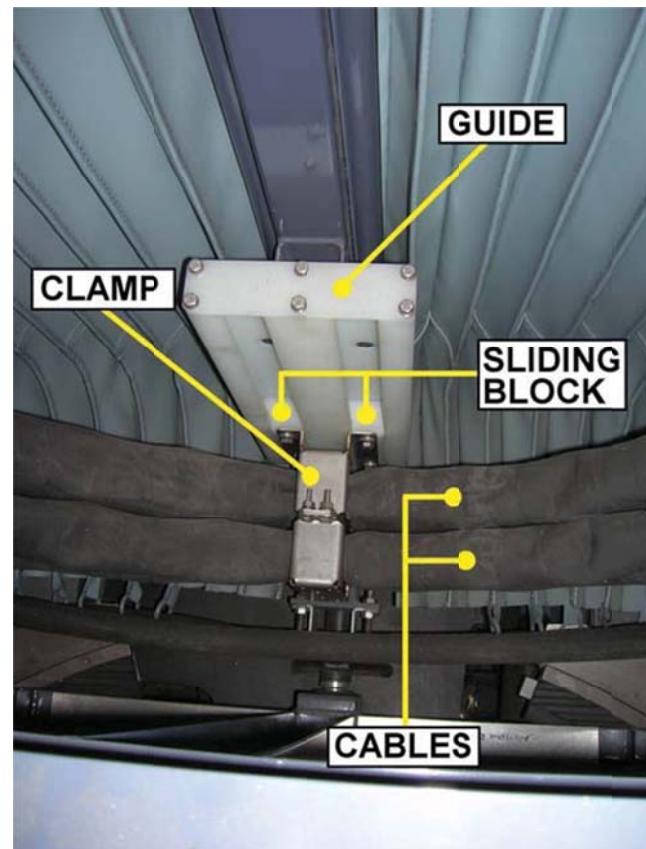
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Maintenance Task:
REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

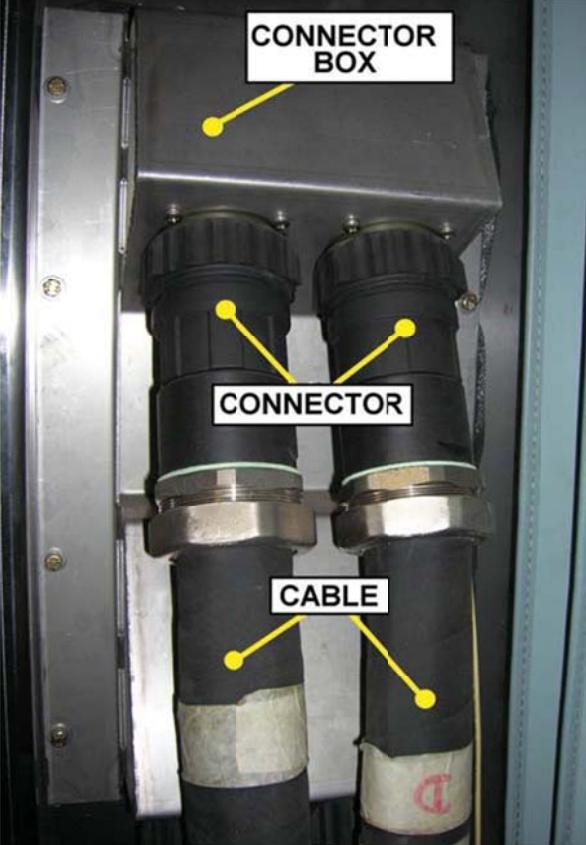
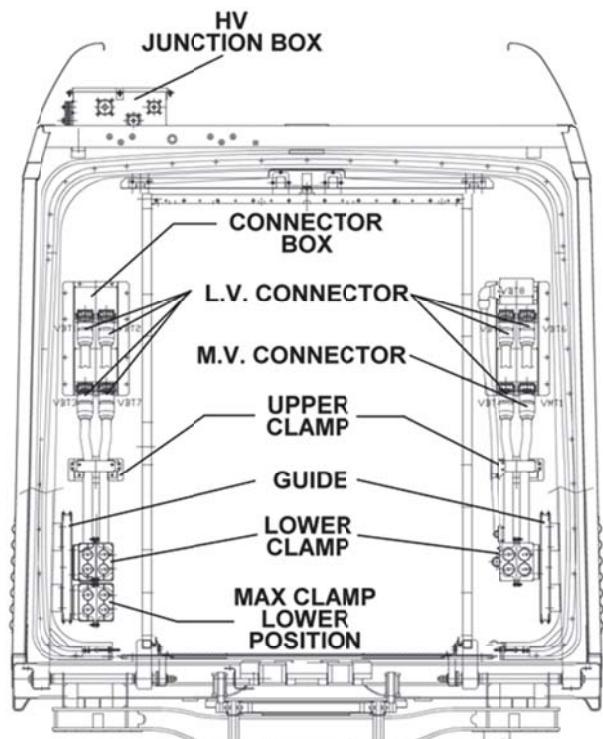


Upper Clamp



Lower Clamp

Figure 3 LV & MV (INTERCAR) CABLES DISCONNECTION/-RECONNECTION

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code:	R-C-02-08-00-00/R-00
System: CAR BODY	Sheet: 15/32
Subsystem/Assy: ARTICULATION SECTION ASSY	Unit:
Component:	Man Hours: 10
Maintenance Task: REPLACEMENT	
PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):	
 Connectors Box & Connectors	 LV & MV Cables & Connector Boxes Locations
Figure 4 LV & MV (INTERCAR) CABLES & CONNECTORS DISCONNECTION/-RECONNECTION	

P2550 CORRECTIVE MAINTENANCE SHEET

R-C-02-08-00-00/R-00

Card Code:

System:
CAR BODY

Sheet:

16/32

Subsystem/Assy:
ARTICULATION SECTION

Unit:

Component:
Man Hours:

10

Maintenance Task:
REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

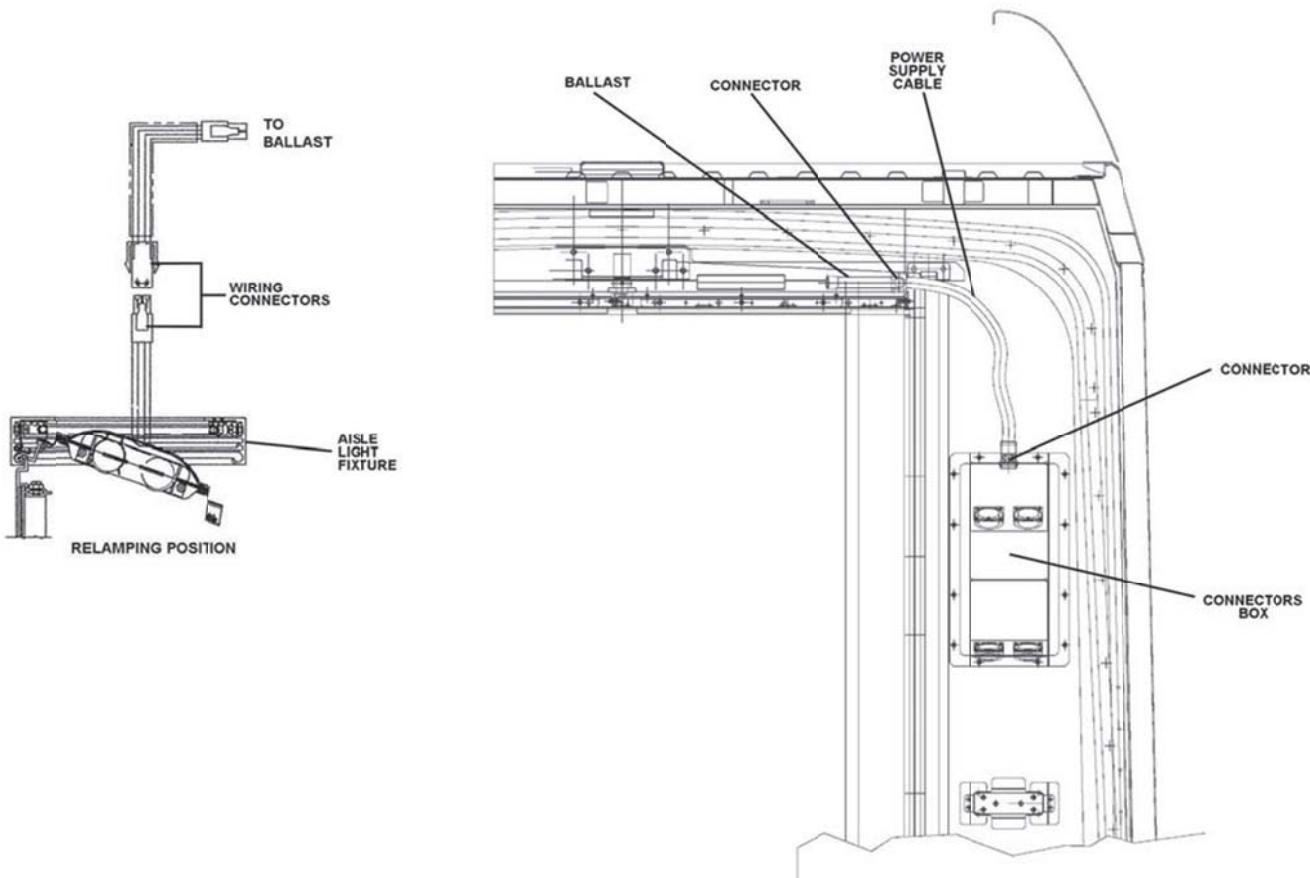


Figure 5 AISLE LIGHT FIXTURES DISCONNECTION /-RECONNECTION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-00-00/R-00

System:

CAR BODY

Sheet:

17/32

Subsystem/Assy:

ARTICULATION SECTION

Unit:

Component:

Man Hours:

10

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

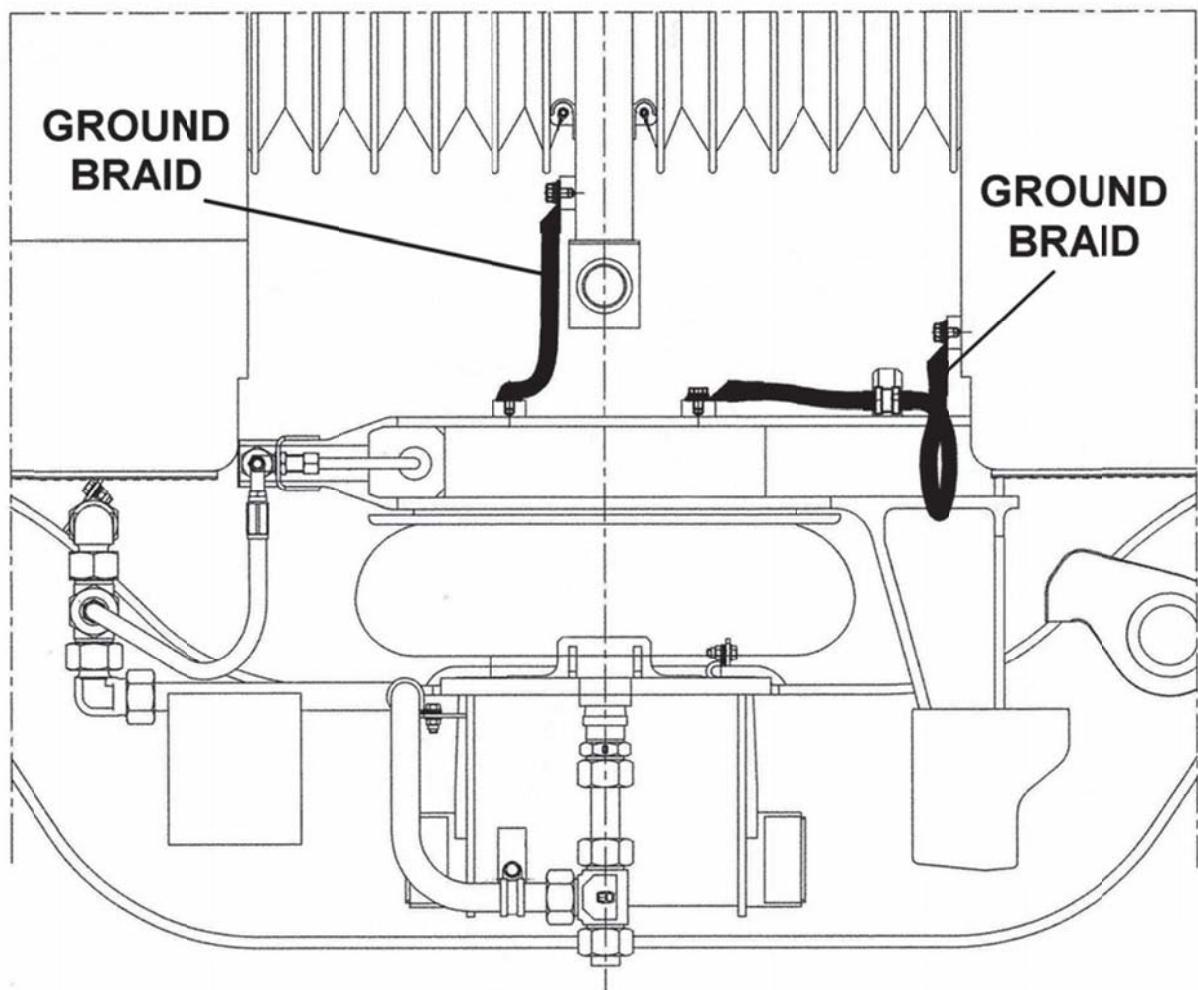


Figure 6 - GROUND BRAID - TRAILER TRUCK –LH- DISCONNECTION /-RECONNECTION

P2550 CORRECTIVE MAINTENANCE SHEET

R-C-02-08-00-00/R-00

Card Code:

System:
CAR BODY

Sheet:

18/32

Subsystem/Assy:
ARTICULATION SECTION

Unit:

Component:
Man Hours:

10

Maintenance Task:
REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

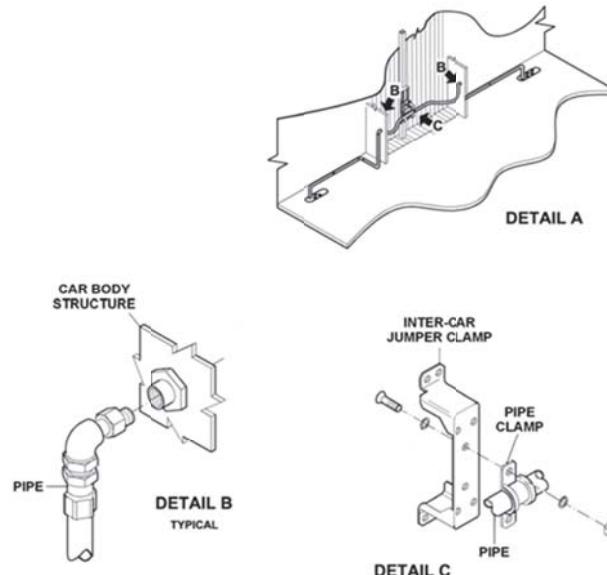
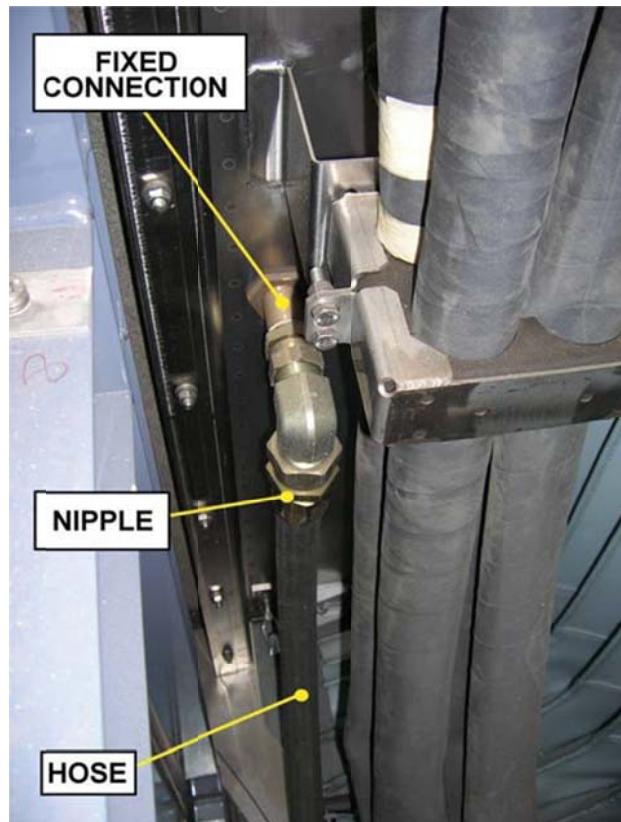


Figure 7 PNEUMATIC SYSTEM MAIN PIPING HOSE DISCONNECTION /-RECONNECTION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-00-00/R-00

System:

CAR BODY

Sheet:

19/32

Subsystem/Assy:

ARTICULATION SECTION

Unit:

Component:

Man Hours:

10

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

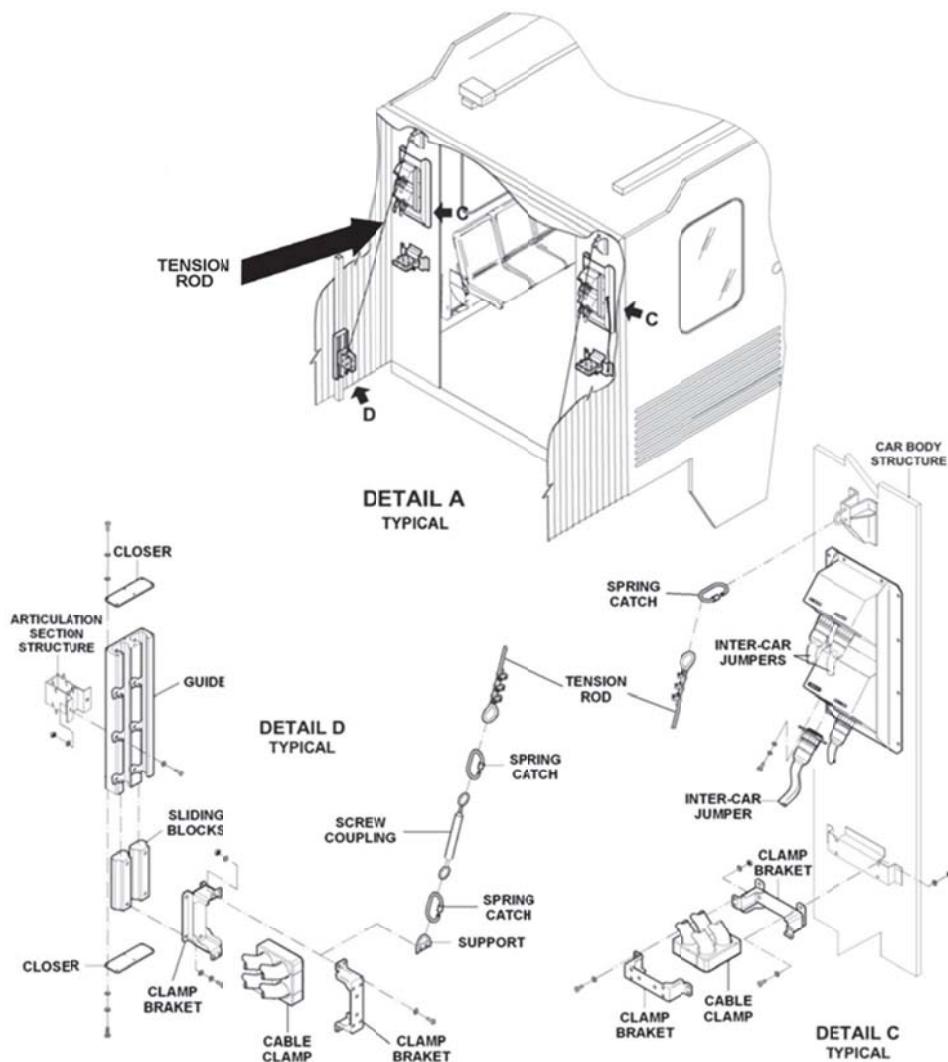


Figure 8 - TENSION RODS _DISENGAGEMENT /-ENGAGEMENT

P2550 CORRECTIVE MAINTENANCE SHEET

R-C-02-08-00-00/R-00

Card Code:

System:
CAR BODY

Sheet:

20/32

Subsystem/Assy:
ARTICULATION SECTION

Unit:

Component:
Maintenance Task:

Man Hours:

10

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

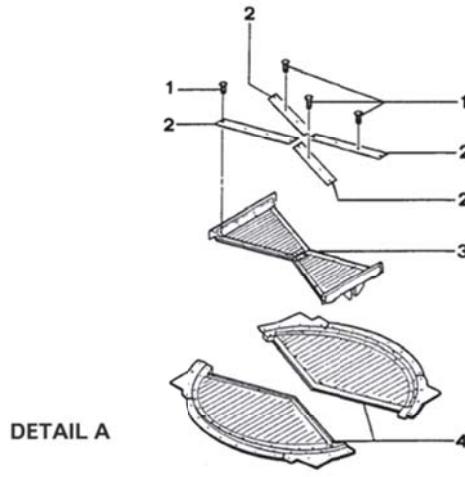
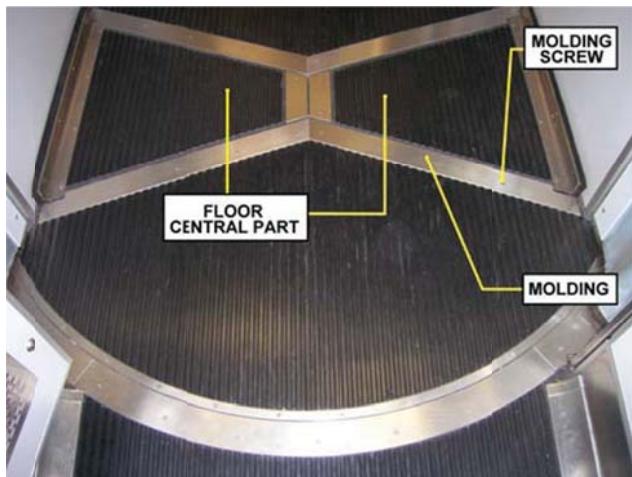


Figure 9– ART SECTION FLOOR –CENTRAL PART- REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-00-00/R-00

System:

CAR BODY

Sheet:

21/32

Subsystem/Assy:

ARTICULATION SECTION

Unit:

Component:

Man Hours:

10

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

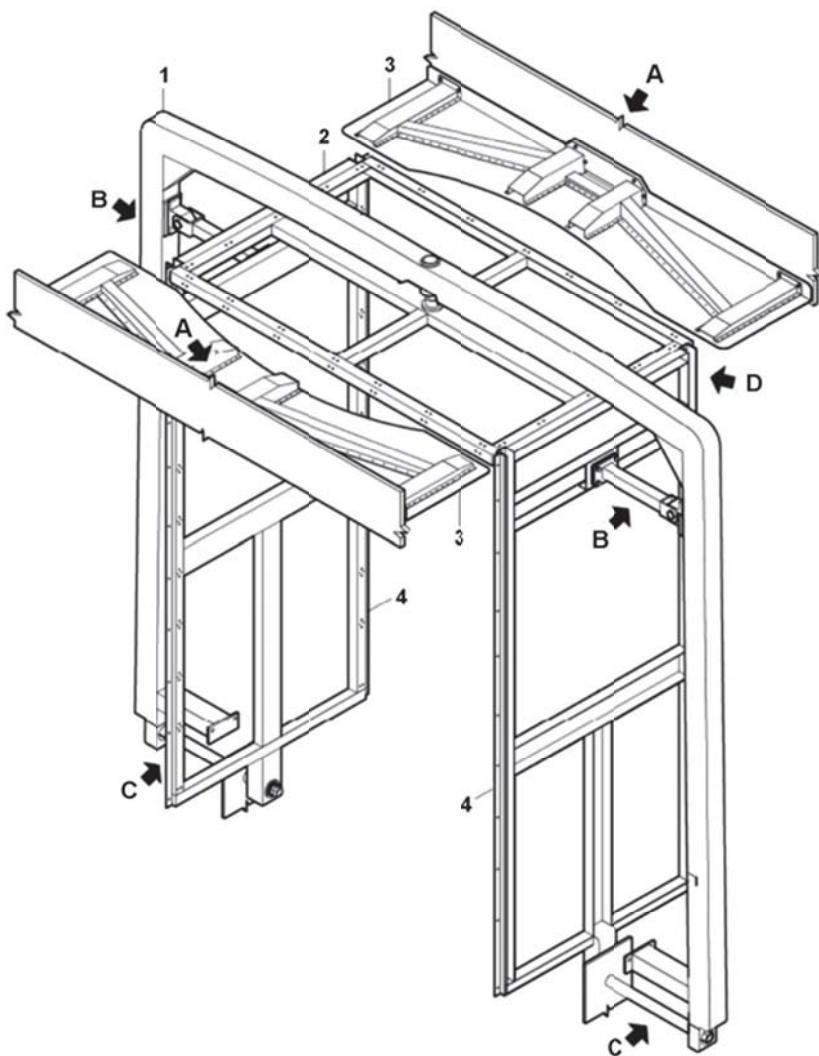


Figure 10 ARTICULATION SECTION STRUCTURE REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

R-C-02-08-00-00/R-00

Card Code:

System:
CAR BODY

Sheet:

22/32

Subsystem/Assy:
ARTICULATION SECTION

Unit:

Component:
Maintenance Task:

Man Hours:

10

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

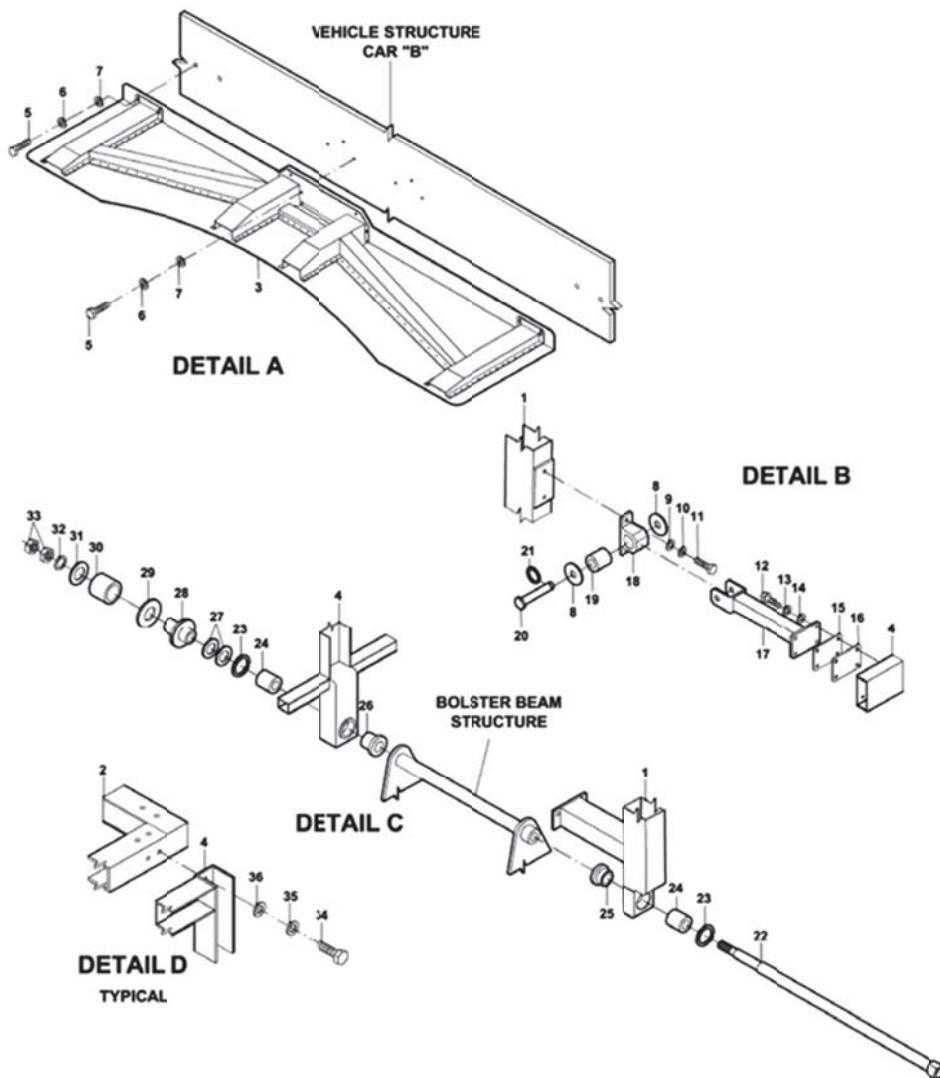


Figure 11 ARTICULATION SECTION STRUCTURE –PINS & PLATES REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET				
Card Code:				
R-C-02-08-00-00/R-00				
System: CAR BODY				Sheet: 23/32
Subsystem/Assy: ARTICULATION SECTION		Unit:		
Component:		Man Hours: 10		
Maintenance Task: REPLACEMENT				
PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):				
<p>INSTALLATION</p> <p>1. It is assumed that:</p> <ul style="list-style-type: none"> a) The Vehicle is set in accordance with LACMTA Maintenance Shop Safety Regulations and positioned in order to have it available to safely accomplish the Task. b) The two Car Body Sections are separated to safely accomplish the Articulation Section installation. c) The "A" & "B" Outer Bellows are installed on the Art. Sect. Assembly to be installed. d) Wheel Chocks are placed to prevent the Vehicle from moving in both running directions. e) The Overhead Catenary is isolated in accordance with the LACMTA Safety Rules and Procedures. f) The Pneumatic Pressure of the Pneumatic System Main Line is released. g) The Articulation Section Structure is suspended over its working position by means of a suitable Overhead Crane. <p>NOTE: The Articulation Section Installation consists of the Tasks listed in the following Table. It is suggested to perform the Steps in the indicated sequence.</p>				
ARTICULATION SECTION INSTALLATION				
STEP	ITEM	TASK	LOCATION	REF TO FIGURE
1	ART.SECTION	INSTALLATION	Roof	10 - 11
2	AISLE FLOOR - CENTRAL PART	INSTALLATION	Aisle	9
3	CENTERING DOME SPRING DEVICE	ENGAGEMENT	Roof	2-12
4	TENSION RODS	ENGAGEMENT	Between Bellow and Side Panels	8
5	PIPING	RECONNECTION	Between Bellow and Side Panels	7
6	GROUND BRAID	RECONNECTION	Base of Art Sec	6-
7	LV-MV CABLES	RECONNECTION	Between Car Sections	3-4-5
8	OUTER BELLOWS	ENGAGEMENT	Outside	1-13

P2550 CORRECTIVE MAINTENANCE SHEET

R-C-02-08-00-00/R-00

Card Code:

System:
CAR BODY

Sheet:

24/32

Subsystem/Assy:
ARTICULATION SECTION

Unit:

Component:
Maintenance Task:

Man Hours:

10

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

STEP 1 Articulation Section Structure Installation (refer to previous Figures 10 & 11)

WARNING: ARTICULATION SECTION STRUCTURE WITH BOTH "A" & "B" OUTER BELOW SECTIONS INSTALLED ON WEIGHS 335 LB DURING THE REPLACEMENT PROCEDURE MAKE SURE THAT THE OVERHEAD CRANE SUPPORTS THE UNIT.

1. Carefully Lower the Articulation Section Structure in order to match External and Internal Structure Dome Lower Connections with the relevant Truck Bolster Beam Connections.
2. Clean both Pins (and relevant hardware) connecting the Articulation Section Dome Structure with the Truck Bolster Beam using recommended agent and cleaning rags.
3. Apply a light coat of rust preventative oil to each Pin.
4. Install both Pins (22) with relevant Spacers (25, 26) from outside.

NOTE : The Split Rings (23) and Flexible Supports (24) are already installed on the Articulation Section Dome Structure

5. From inside, on each Pin, install :
 - Washer (27)
 - Spacer (28)
 - Disc (29)
 - Bush (30)
 - The "new" Washer (31)
 - The "new" Lock Washer (32),
 - Nuts (33), which retain the Pin (22) in proper position.

6. Torque the Nuts (33) to **25 ft-lb**

NOTE: Once the above Step has been completed the Articulation Section Structure is mechanically connected to the Trailer Truck.

7. To proceed with the installation, the two Car Body Sections must be re-connected according to Sheet R C-12-02-00-00 / R-00 Step **MECHANICAL CONNECTIONS**
–TRUCK / CARBODY CONNECTION
8. Position the Upper Plates (3) onto the "A" and "B" Body Section Rear End Structure.
9. Install the Screws (5) and Washers (6, 7).
10. Torque the Screws (5) to **15.2 ft-lb**.

P2550 CORRECTIVE MAINTENANCE SHEET			
Card Code:			
R-C-02-08-00-00/R-00			
System: CAR BODY		Sheet: 25/32	
Subsystem/Assy: ARTICULATION SECTION		Unit:	
Component:		Man Hours:	10
Maintenance Task: REPLACEMENT			
PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):			
<p>STEP 2 Floor, Central Parts Installation (refer to previous Figures 9)</p> <ol style="list-style-type: none"> 1. Check the Floor Central Part for damage/deformation. Replace as per check result. 2. Check for correct installation the Gasket on the Floor Central Part. As per check result use recommended product to restore design installation. 3. Clean the Floor Central Part Seat using recommended product. 4. Position the Floor Central Part. 5. Install Moldings. 6. Apply a light coat of LOCTITE 242 on the screw threads and install / torque the Screws 7. Check that there are no level differences between the Vehicle Floor and the Floor Central Part. Adjust as per check result using recommended product. 			
<p>STEP 3 Centering Dome Spring Device Installation (refer to Figures 2 & 12)</p> <p>NOTE : The Threaded Rods (7) with relevant Nuts (8) are already installed</p> <p>WARNING: KEEP THE CENTERING SPRING DEVICE FIRMLY SUPPORTED WHILE INSTALLING ITS ATTACHING PARTS, TO AVOID THAT THE STRETCHED SPRING CAUSES INJURY TO PERSONNEL.</p>			
<p>1 At "A" Section Rear End</p> <p>Work on the Centering Dome Spring Device as follows :</p> <ol style="list-style-type: none"> a) Position the Support (1) with the attached relevant Spring (9). b) Install the Screws (2), Lock Washer (3) and Washer (4). c) Torque the Screws (2) to 15.2 ft -lb. 			
<p>2 "B" Section Rear End</p> <p>Work on the Centering Dome Spring Device as follows :</p> <ol style="list-style-type: none"> a) Position the Support (1) with the attached relevant Spring (9). b) Install the Screws (2), Lock Washer (3) and Washer (4). c) Torque the Screws (2) to 15.2 ft -lb. <p>NOTE: Once completed the above Step the Articulation Section Structure is fully mechanically connected to the Car Body.</p> <ol style="list-style-type: none"> d) Check that the distance between the Art Sect Center Dome and "A" Body Section Rear End is compliant with the Nominal Design Value of 24.21 in. e) The Adjustment can be carried out by means of the Threaded Rods (7) with the relevant Nuts (8). f) Check the Centering Dome Spring Device for proper operation. 			

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-00-00/R-01

System:

CAR BODY

Sheet:

26/32

Subsystem/Assy:

ARTICULATION SECTION

Unit:

Component:

Man Hours:

10

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

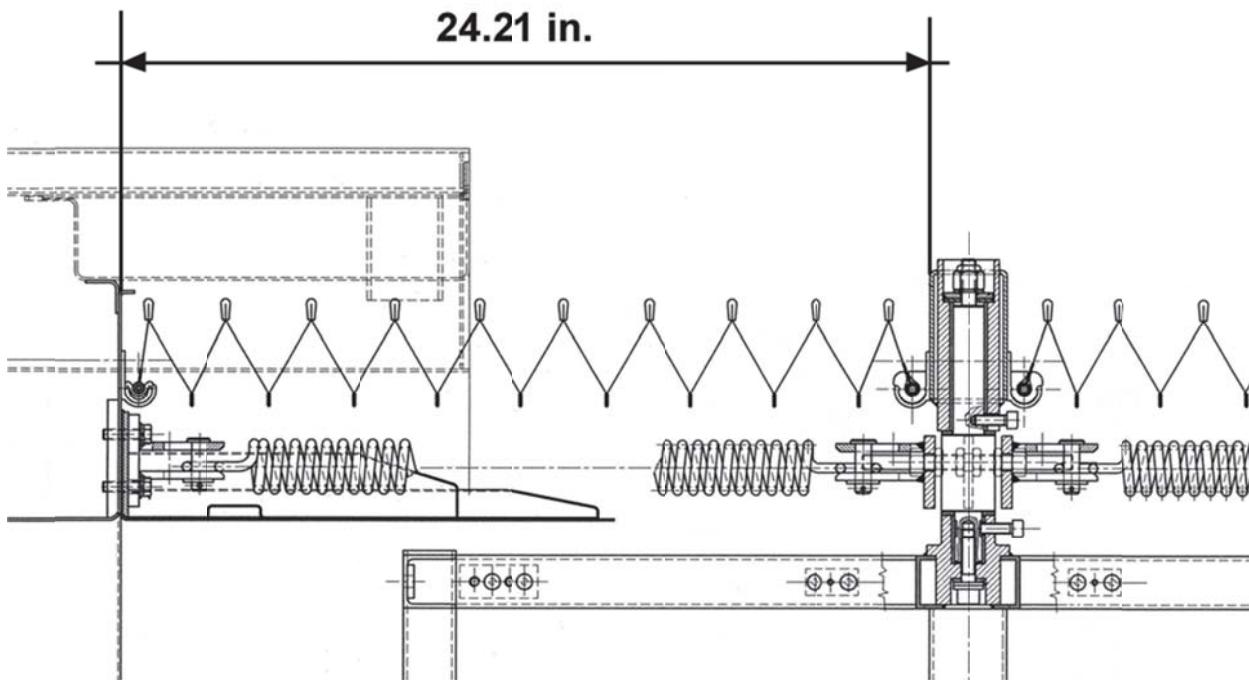


Fig 12 CENTERING DOME SPRING DEVICE NOMINAL DESIGN VALUE

P2550 CORRECTIVE MAINTENANCE SHEET		
Card Code:		
R-C-02-08-00-00/R-00		
System: CAR BODY		Sheet: 27/32
Subsystem/Assy: ARTICULATION SECTION	Unit:	
Component:	Man Hours: 10	
Maintenance Task: REPLACEMENT		
PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):		
<p>STEP 4 Tension Rods Engagement (Refer to previous Figure 8)</p> <p>1 Work on the Tension Rods as follows :</p> <ul style="list-style-type: none"> a) Restore in working position both the Tension Rods installed on the same Vehicle side. b) Move the Movable Guide upwards. c) Reconnect and lock each Spring Catch of the Tension Rod to the (already installed) Movable Clamp. d) Rotate the Screw Coupling clockwise in order to adjust the Tension Rod length. <p>CAUTION: LENGTH AND TENSION FORCE RESULTING FROM THE ADJUSTMENT SHOULD BE THE SAME FOR EACH TENSION ROD</p> <p>STEP 5 Pneumatic System Main Piping Hose Reconnection (Refer to previous Figure 7)</p> <p>1 Work on the Hose as follows :</p> <ul style="list-style-type: none"> a) Restore in working position the Hose. b) Remove the Protecting Cap/Tape (previously installed) from the Pneumatic System Main Line Connection (fixed to the "B" Section Rear End) and from the Hose Connection to be installed on. c) Install the Hose to the relevant Pneumatic System Main Piping Connection. d) Torque the Nipple as required. e) Engage the Hose on the Lower Clamp. f) Check the hose for correct installation. g) Torque the relevant Clamp locking hardware. <p>STEP 6 Ground Braid Reconnection (Refer to previous Figure 6)</p> <p>1 Work on the Ground Braid as follows :</p> <ul style="list-style-type: none"> a) Remove the Isolating Cap (previously installed) from the Ground Braid Terminal. b) Clean the contact surface of the Ground Braid Terminal (on the Terminal and on the Art Sect. Structure) using recommended cleaner and cleaning rags. c) Check the Ground Braid Terminal for damage/deformation (on the Terminal and on the Art Sect. Structure). Replace/adjust as per check result. d) Reconnect the Ground Braid by installing and torqueing the relevant Hardware. 		

P2550 CORRECTIVE MAINTENANCE SHEET

R-C-02-08-00-00/R-00

Card Code:

System:
CAR BODY

Sheet:

28/32

Subsystem/Assy:
ARTICULATION SECTION

Unit:

Component:
Man Hours:

10

Maintenance Task:
REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

STEP 7 LV & MV (Intercar) Cables reconnection (Refer to previous Figures 3,4 & 5)

1 At "B" Section Rear End,(from outside)

LV & MV (Intercar) Cables

Work (from outside) on the LV & MV (Intercar) Cables as follows:

- a) Restore in working position each Cable.
- b) Remove the Isolating Caps (previously installed) from the Connector Sockets of the Connector Boxes and from each Cable Connector.
- c) Connect the Connector of each Cable to the relevant Socket of the Connectors Box.
- d) Engage each Cable on the Upper and Lower Clamps.
- e) Check each Cable for correct installation.
- f) Torque the relevant Clamp locking hardware.

Aisle Light Fixtures Power Supply Cable

Work (from outside) on the Aisle Light Fixtures Power Supply Cable as follows:

- a) Restore in working position the Aisle Light Fixtures Power Supply Cable.
- b) Remove the Isolating Cap (previously installed) from the Connector Socket of the Connector Box and from the Connector of the Aisle Light Fixtures Power Supply Cable.
- c) Position Aisle Light Fixtures Power Supply Cable.
- d) Connect Aisle Light Fixtures Power Supply Connector to the Connectors Box.

P2550 CORRECTIVE MAINTENANCE SHEET		
Card Code:		
R-C-02-08-00-00/R-00		
System: CAR BODY		Sheet: 29/32
Subsystem/Assy: ARTICULATION SECTION	Unit:	
Component:	Man Hours: 10	
Maintenance Task: REPLACEMENT		
PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):		
<p>STEP 8 Outer Bellows Engagement (Refer to Figure1 & 13):</p> <ol style="list-style-type: none"> 1. Lower the Overhead Crane and remove the Sling retaining the Bellows 2. On "A" Bellow <ol style="list-style-type: none"> a) Clean the Bellow U-Shaped Retaining Frame (on "A" Section Rear End) foto. b) Work on the Bellow in order slide it from the Art Sect Center Dome Structure towards the "A" Section Rear End. c) Work in order to engage the Holder of the Tie Rod (10) on the relevant U-shaped Retaining Frame next to the Car Body Section Rear End on both LH & RH sides. At the same time work in order to remove the Sling that passes underneath the Bellow, used to support the Bellow during its lifting by means the Overhead Crane. d) Check for proper installation of the Bellow in the U-shaped Retaining Frame. e) Insert the Tie Rod (10) in the relevant Support, LH / RH side on the A Car Body Section Rear End. f) Install Nuts (8) and torque by hand to half of the Tie Rod length. g) Torque the Nuts (8) as required. h) Insert the Tie Rod (11) in the relevant Support together with the Holder (12), LH / RH side next to the Car Body Section Rear End. i) Install Nuts (9) and torque by hand to half of the Tie Rod length. j) Insert the Tie Rod (11) in the Support together with Holder (12), LH / RH side next to Art Sect Structure Center Dome. k) Install Nuts (9) and torque by hand to half of the Tie Rod length. l) check the bellow for proper installation. m) Torque the Nuts (9) as required. 3. On "B" Bellow <ol style="list-style-type: none"> a) Repeat previous Step 2. 		

P2550 CORRECTIVE MAINTENANCE SHEET**R-C-02-08-00-00/R-00**

Card Code:

System:
CAR BODY

Sheet:

30/32Subsystem/Assy:
ARTICULATION SECTION

Unit:

Component:

Man Hours:

10

Maintenance Task:

REPLACEMENT**PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):****Figure 13 BELOW – U-SHAPED RETAINING FRAME**

P2550 CORRECTIVE MAINTENANCE SHEET		
Card Code:		
R-C-02-08-00-00/R-00		
System: CAR BODY		Sheet: 31/32
Subsystem/Assy: ARTICULATION SECTION	Unit:	
Component:	Man Hours: 10	
Maintenance Task: REPLACEMENT		
PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):		
<p>FINAL OPERATIONS</p> <ol style="list-style-type: none"> 1. Install the HV Cables as follows: (refer to Fig "B"). <ol style="list-style-type: none"> a) Remove Isolating Cap (previously installed) from each HV Cable Terminal. b) Clean the contact surface of each HV Cable Terminal (on the Terminal and on the Junction Box) using recommended cleaner and cleaning rags. c) Reconnect each HV Cable Terminal by installing and tightening the relevant Hardware. d) Engage each HV Cable on each Clamp and torque the relevant Locking Screws. 2. Install the Ground Cables as follows: (refer to Fig "B"). <ol style="list-style-type: none"> a) Remove Isolating Cap (previously installed) from each Ground Cable Terminal. b) Clean the contact surface of each Ground Cable (on the Terminal, on the Art Sect Dome Structure and on the Car body Sections Structure) using recommended cleaner and cleaning rags. c) Reconnect each Ground Cable Terminal by installing and tightening the relevant Hardware. 3. Restore HV and LV Electrical Power to vehicle. 4. Check that the 1/2-inch Drain Valve of each Main Reservoir is closed. 5. Check that Pneumatic Pressure build up. 6. Check the 1/2-inch Drain Valve of each Main Reservoir for air leakage. Adjust as per check result. 7. Perform the Vehicle Leveling according to Sheet R-C-01-01-00-00-LL-00. 8. Record the Task results on the Defect Report Card for administrative and maintenance planning. 		

P2550 CORRECTIVE MAINTENANCE SHEET**R-C-02-08-00-00/R-00**

Card Code:

System:
CAR BODY

Sheet:

32/32Subsystem/Assy:
ARTICULATION SECTION

Unit:

Component:

Man Hours:

10

Maintenance Task:

REPLACEMENT**INTENTIONALLY LEFT
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P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-01-00/R-00

System:

CAR BODY

Sheet:

1/42

Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

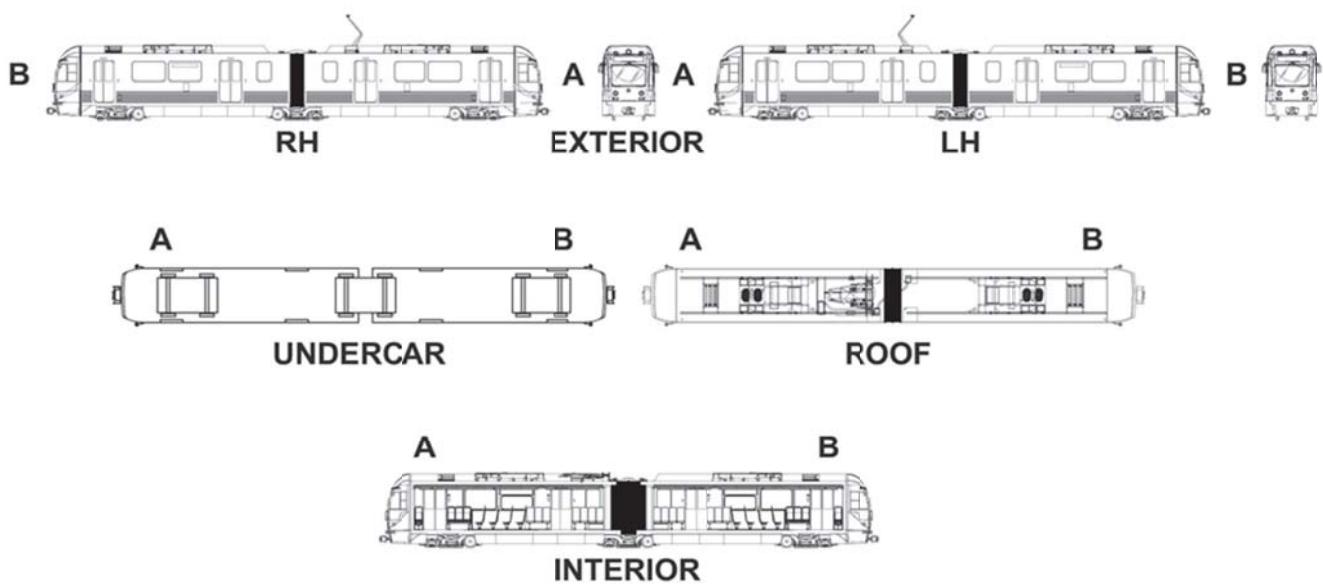
Man Hours:

BELLOW REPLACEMENT
3.5

Man Hours:

STRUCTURE REPLACEMENT
10

Maintenance Task:

REPLACEMENT
LOCATION:


P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-01-00/R-00

System:

CAR BODY

Sheet:

2/42

Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT**3.5**

Man Hours:

STRUCTURE REPLACEMENT**10**

Maintenance Task:

REPLACEMENT

SAFETY PRECAUTIONS:

WARNING: ELECTRICAL HAZARD (750 VDC ON OVERHEAD CATENARY). ENSURE PANTOGRAPH IS LOWERED, AND CATENARY POWER IS REMOVED AND ISOLATED IN ACCORDANCE WITH LACMTA SAFETY RULES AND PROCEDURES. WORK SHOULD BE DONE IN AN AREA AWAYS FROM OVERHEAD CATENARY. FOLLOW SAFETY PROCEDURES FOR ACCESSING THE ROOF.

WARNING: ALWAYS WEAR A SAFETY HARNESS WHEN ACCESSING THE ROOF.

WARNING: ARTICULATION SECTION STRUCTURE WEIGHS 240 LB (109 KG). DURING THE REPLACEMENT PROCEDURE MAKE SURE THAT THE OVERHEAD CRANE SUPPORTS THE UNIT.

WARNING: THE OUTER BELLOW WEIGHS 85 LB (38.5 KG). MAKE SURE TO SECURE IT DURING REPLACEMENT PROCEDURE.

WARNING: BEFORE REMOVING THE PNEUMATIC SYSTEM MAIN LINE HOSE, MAKE SURE THAT THE PNEUMATIC SYSTEM PRESSURE HAS BEEN RELEASED

WARNING: KEEP FIRMLY THE CENTERING SPRING DEVICE SUPPORT WHILE REMOVING ITS ATTACHING PARTS, TO AVOID THAT THE STRETCHED SPRING CAUSES INJURY TO PERSONNEL.

CAUTION: CONNECT THE ARTICULATION SECTION DOME TO THE OVERHEAD CRANE (MIN. CAPACITY 250 LB) BY MEANS OF A SUITABLE SLING. CAREFULLY RAISE THE OVERHEAD CRANE TO KEEP THE STRUCTURE STILL TO AVOID THAT THE ARTICULATION SECTION STRUCTURE MOVES WHILE THE CENTERING DOME SPRING DEVICE IS BEING REMOVED.

CAUTION: MAKE SURE THAT THE ARTICULATION SECTION DOME IS SAFELY CONNECTED TO THE OVERHEAD CRANE (MIN. CAPACITY 250 LB) BY MEANS OF A SUITABLE SLING.

CAUTION: THE LENGTH AND THE TENSION FORCE RESULTING FROM THE ADJUSTMENT SHOULD BE THE SAME FOR EACH TENSION ROD.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

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System:

CAR BODY

Sheet:

3/42

Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT

3.5

Man Hours:

STRUCTURE REPLACEMENT

10

Maintenance Task:

REPLACEMENT

TOOLS:

External Scaffold.

LACMTA Overhaul Standard Tool kit.

Overhead Crane (min. capacity 250 Lb).

CONSUMABLES:

Loctite 242 P/N AA0034E

Cleaner / Degreaser

SPARE PARTS:

Bellow /Structure- Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers

Washer	PN AA03CHP	Qty = 2
Lock Washer	PN AA0030F	Qty = 2

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Card Code:

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System:

CAR BODY

Sheet:

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Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT

Man Hours:

3.5

Man Hours:

STRUCTURE REPLACEMENT**10**

Maintenance Task:

REPLACEMENT**PROCEDURE:****PRELIMINARY OPERATIONS**

1. It is assumed that:
 - a) The Vehicle is set in accordance with LACMTA Maintenance Shop Safety Regulations and positioned in order to have it available to safely accomplish the Task.
 - b) Wheel Chocks are placed to prevent the vehicle from moving in both running directions.
2. Make sure that:
 - a) all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON).
 - b) The Transfer Switch is turned to OFF.
 - c) The Pantograph Control Motor Switch (5F02 CB LV Locker "A" Section) is switched off.
 - d) the Battery Disconnect Circuit Breaker (3F01) is switched off (refer to Fig A).
3. Lock-out and tag-out the Overhead Catenary, 750Vdc Power, per LACMTA Safety Rules and Procedures.
4. Release Pneumatic Pressure from the Pneumatic System Main Line by opening the 1/2-inch Drain Valve of each Main Reservoir (refer to Fig A)(to be performed for Articulation Section structure Replacement only).

**Battery Disconnect Circuit Breaker (3F01)****Main Reservoirs 1/2 Inch Drain Valves****Figure “A” PRELIMINARY & FINAL OPERATIONS**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

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System:

CAR BODY

Sheet:

5/42

Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT

Man Hours:

3.5

Man Hours:

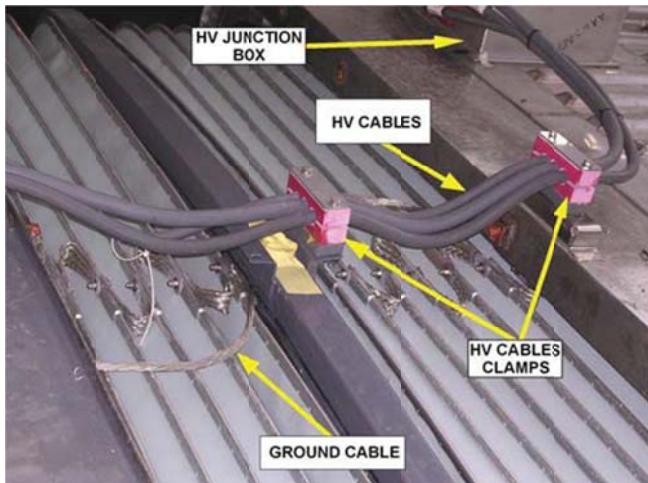
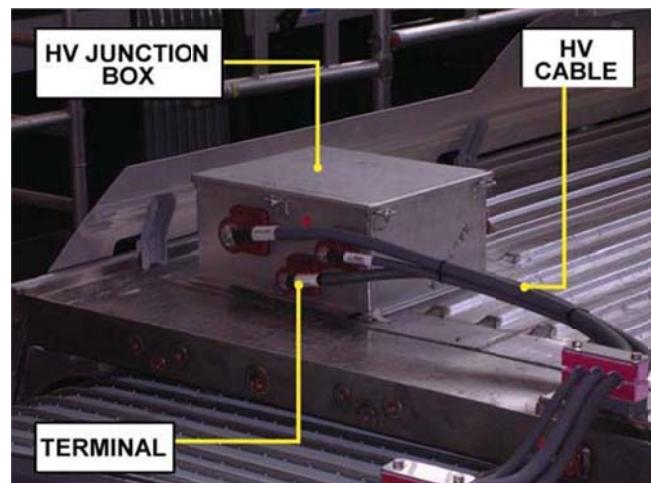
STRUCTURE REPLACEMENT**10**

Maintenance Task:

REPLACEMENT

PROCEDURE (CONT'D):

5. Remove the HV Cables on top of the Articulation Section as follows: (refer to Fig "B")
 - a) Open each HV Cables clamp by loosening the relevant locking screws.
 - b) Disengage each HV Cable from each Clamp.
 - c) Disconnect each HV Cable Terminal from each HV Junction Box by loosening the relevant Hardware.
 - d) Keep the Hardware in a known and protected area for later use.
 - e) Protect each HV Cable Terminal using suitable Isolating Cap.
 - f) Remove and retain the HV Cables for later use.
6. Remove the Ground Cables as follows: (refer to Fig "B").
 - a) Disconnect the Terminals of the Ground Cables (connecting the Art Sect Dome Structure to both the Car Body Sections structure) by loosening the relevant Hardware.
 - b) Retain the Hardware for later use.
 - c) Protect each Ground Cable Terminal using suitable Isolating Cap.
 - d) Remove and keep the Ground Cables in a known and protected area for later use.

**HV & Ground Cables****HV CABLES & Junction Box Terminals****Figure " B "PRELIMINARY & FINAL OPERATIONS**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-01-00/R-00

System:

CAR BODY

Sheet:

6/42

Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT**3.5**

Man Hours:

STRUCTURE REPLACEMENT**10**

Maintenance Task:

REPLACEMENT

PROCEDURE (CONT'D):

- 1. OUTER BELLOW REPLACEMENT**
- 2. ARTICULATION SECTION REPLACEMENT**

NOTE: The Outer Bellow Replacement should be performed as a consequence of a damage not repairable with the Bellow in place.

NOTE: The Articulation Section Replacement must be performed when one of the following operations needs to be carried out:

- Separation of the two Car Body Sections
- Repair, due to Heavy damage to the Structure

1 OUTER BELLOW REPLACEMENT

(refer to Fig 1 & 2)

Removal

WARNING: THE OUTER BELLOW WEIGHS 85 LB (38.5 KG). MAKE SURE TO SECURE IT DURING REPLACEMENT PROCEDURE.

The following Procedure is referred to each Bellow section ("A" and "B" side).

1. Reach the Center Tie Rod (10) located under the Bellow (1), LH side, next to Art Section Structure Center.
2. Loosen and remove Nuts (8) from Tie Rod (10) on LH side.
3. Disengage the Tie Rod (10).
4. Loosen and remove Nuts (9) from Tie Rod (11) on LH side.
5. Remove Holder (12) together with Tie Rod (11).
6. Disengage the Holder of the Tie Rod (10) from the relevant U-shaped Retaining Frame.
7. Repeat step 1. to 6. for RH side.
8. Repeat step 1. to 7. for LH & RH tie rods located next to each Car Body Section Rear End
9. Gain access to the Vehicle Roof.
10. Work on the Bellow in order to gain clearance from Art Sect Center Dome Structure and Car Body Section Rear End.
11. Position, through the gained clearance and underneath the Bellow, a suitable Sling to support the Bellow.
12. Connect an Overhead Crane (Min. capacity 250 Lb (91 Kg)) to the Sling.
13. Carefully operate the Overhead Crane to remove the Bellow (1).

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Card Code:

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System:

CAR BODY

Sheet:

7/42

Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT
3.5

Man Hours:

STRUCTURE REPLACEMENT
10

Maintenance Task:

REPLACEMENT
PROCEDURE OUTER BELLOW REPLACEMENT (CONT'D):


Outer Bellow – Center Tie Rod Outside View



Outer Bellow – Center Tie Rod -View From Pit

Figure 1 - OUTER BELLOW

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-01-00/R-00

System:

CAR BODY

Sheet:

8/42

Subsystem/Assy:

ARTICULATION SECTION**STRUCTURE ASSEMBLY**

Component:

Man Hours:

BELLOW REPLACEMENT**3.5**

Man Hours:

STRUCTURE REPLACEMENT**10**

Maintenance Task:

REPLACEMENT

PROCEDURE OUTER BELLOW REPLACEMENT (CONT'D):

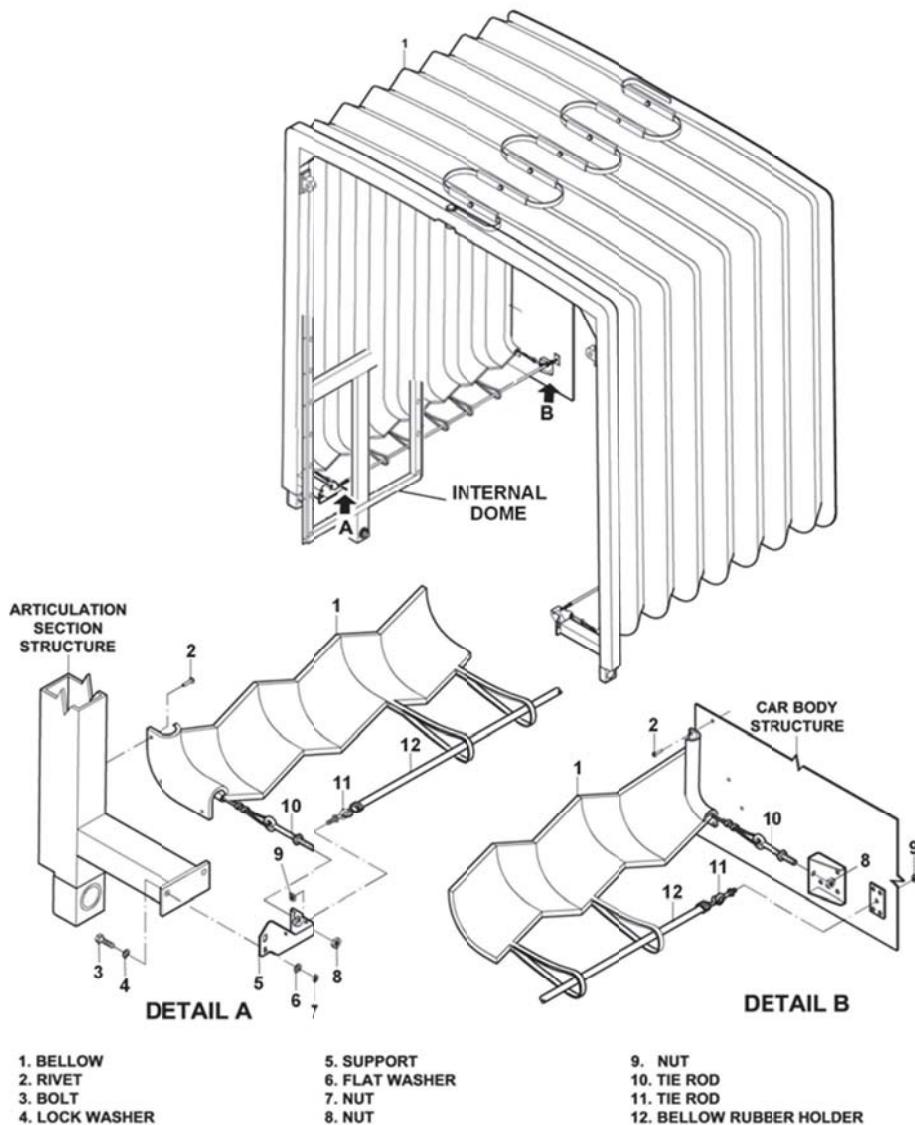


Figure 2 - OUTER BELLOW REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET		
Card Code:		
R-C-02-08-01-00/R-00		
System: CAR BODY	Sheet: 9/42	
Subsystem/Assy: ARTICULATION SECTION	Unit: STRUCTURE ASSEMBLY	Component:
Man Hours: BELLOW REPLACEMENT	Man Hours: 3.5	Man Hours: STRUCTURE REPLACEMENT 10
Maintenance Task: REPLACEMENT		
PROCEDURE OUTER BELLOW REPLACEMENT (CONT'D):		
<p>Installation</p> <ol style="list-style-type: none"> 1. Clean the Bellow U-shaped Retaining Frame (on Car Body Section Rear Ends and on ArtSect. Center Dome). 2. Position the Bellow (1) using suitable Overhead Crane (Min. capacity 200 Lb (91 Kg)). 3. Reach the Vehicle Roof. 4. Work in order to engage the Holder of the Tie Rod (10) on the relevant U-shaped Retaining Frame next to the Car Body Section Rear End on both LH &RH sides. At the same time work in order to remove the Sling that passes underneath the Bellow, used to support the Bellow during its lifting by means the Overhead Crane. 5. Work on the Bellow in order to Engage the Holder of the Tie Rod (10) on the relevant U-shaped Retaining Frame next to the Art Sect Structure Center Dome on both LH &RH sides and, at the same time, completely remove the Sling. 6. Check for proper installation of the Bellow in both the U-shaped Retaining Frames 7. Insert the Tie Rod (10) in the relevant Support, LH side on the Car Body Section Rear End 8. Install Nuts (8) and torque by hand to half of the Tie Rod length 9. Repeat steps 7and 8 for RH side. next to the Car Body Section Rear End 10. Torque the four Nuts (8) as required. 11. Insert the Tie Rod (11) in the relevant Support together with the Holder (12), LH side next to the Car Body Section Rear End 12. Install Nuts (9) and tighten by hand to half of the Tie Rod length. 13. Repeat steps 11 and 12 for RH side next to the Car Body Section Rear End 14. Insert the Tie Rod (10) in the Support, LH side next to the Art Sect Structure Center Dome 15. Install Nuts (8) and tighten by hand to half of the Tie Rod length 16. Repeat steps 14 and 15 for RH side next to the Art Sect Structure Center Dome 17. Torque the four Nuts (8) as required 18. Insert the Tie Rod (11) in the Support together with Holder (12), LH side next to Art Sect Structure Center Dome 19. Install Nuts (9) and tighten by hand to half of the Tie Rod length. 20. Repeat steps 18 and 19 for RH side next to the Art Sect Structure Center Dome. 		

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Card Code:

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System:

CAR BODY

Sheet:

10/42

Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT

Man Hours:

3.5

Man Hours:

STRUCTURE REPLACEMENT**10**

Maintenance Task:

REPLACEMENT

PROCEDURE OUTER BELLOW REPLACEMENT (CONT'D):

Final Operations

1. Install the HV Cables as follows: (refer to Fig "B").
 - a. Remove the Isolating Cap (previously installed) from each HV Cable Terminal.
 - b. Clean the contact surface of each HV Cable Terminal. (on the Terminal and on the Junction Box) using recommended cleaner and cleaning rags.
 - c. Reconnect each HV Cable Terminal by installing and tightening the relevant Hardware
 - d. Engage each HV Cable on each Clamp and tighten the relevant locking screws.
2. Install the Ground Cables as follows: (refer to Fig "B").
 - a) Remove the Isolating Cap (previously installed) from each Ground Cable Terminal.
 - b) Clean the contact surface of each Ground Cable (on the Terminal, on the Art Sect Dome Structure and on the Carbody Sections structure) using recommended cleaner and cleaning rags.
 - c) Reconnect each Ground Cable Terminal by installing and tightening the relevant Hardware.
3. Restore HV and LV Electrical Power to vehicle.
4. Record the Task results on the MTA Defect Report Card for administrative and maintenance planning.

P2550 CORRECTIVE MAINTENANCE SHEET				
Card Code: R-C-02-08-01-00/R-00				
System: CAR BODY		Sheet: 11/42		
Subsystem/Assy: ARTICULATION SECTION	Unit: STRUCTURE ASSEMBLY	Component:		
Man Hours: BELLOW REPLACEMENT	3.5	Man Hours: STRUCTURE REPLACEMENT	10	
Maintenance Task: REPLACEMENT				
PROCEDURE (CONT'D):				
<p>2 ARTICULATION SECTION REPLACEMENT</p> <p>NOTE: This section provides instructions for Articulation Section removal / installation to be performed as Preliminary / Final Operations of the Carbody sections separation /connection</p> <p>Removal</p> <p>NOTE: The Articulation Section cannot be removed as a complete assembly The Articulation Section Removal consists of the steps listed in the following Table. It is suggested to perform the Steps in sequence as indicated below.</p> <p>NOTE: It is assumed that the following activities have been completed: • Preliminary Operations • Outer Bellow Removal</p>				
ARTICULATION SECTION STRUCTURE REMOVAL				
STEP	ITEM	TASK	LOCATION	REF TO FIGURE
1	AISLE INTERIOR STRUCTURE	Removal of the Ceiling Panel	Aisle	1 -2-3
2		Removal of the Lock-Strip Gasket		1-4
3		Removal of the Side Wall Panels		1-5-6
4		Removal of the Inner Rubber		1-7
5	CABLES	Removal of the LV-MV Cables	Between Car Sections	8 -9 -10
6		Removal of the Ground Braids	Base of Art Sec	11-12
7	PIPING	Removal of the Pneumatic System Main Piping Hose	Between bellow and side panels	13
8	CLAMPS	Removal of the Movable Clamps & Tension Rods	Between bellow and side panels	14
9	ART.SECTION STRUCTURE	Removal of the Centering Dome Spring Device	Roof	15
10	AISLE INTERIOR STRUCTURE	Removal of the Articulation Section Floor - Central Part	Aisle	16
11	ART.SECTION STRUCTURE	Articulation Section Structure Removal	Roof	17 - 18

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-01-00/R-00

System:

CAR BODY

Sheet:

12/42

Subsystem/Assy: ARTICULATION SECTION	Unit: STRUCTURE ASSEMBLY	Component:
Man Hours: BELLOW REPLACEMENT	3.5	Man Hours: STRUCTURE REPLACEMENT 10

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

REMOVAL

WARNING: THE ARTICULATION SECTION STRUCTURE WEIGHS 240 LB (109 KG). DURING THE REPLACEMENT PROCEDURE MAKE SURE THAT THE OVERHEAD CRANE SUPPORTS THE UNIT TO PREVENT UNSAFE CONDITIONS.

STEP 1 Ceiling Panel Removal (Refer to Figures 1 through 3):

- NOTE:** Keep the (removed) Hardware and Cables in a known and protected area for later use
1. Open and Remove the Access Panel from the Side-Wall Panel.
 2. Pull out the Trim (1-Detail A).
 3. Remove the Screws (5-Detail B) from Omega Extrusions (6-Detail B).
 4. Remove the Ceiling Panel (4-Detail B) from Structure.(2-Detail B).
 5. Disconnect the Light Fixtures Connector from each Aisle Light Fixtures.
 6. Disconnect the Aisle Light Fixture Connectors from the Ballast and remove the relevant Cables.
 7. Remove the Aisle Light Fixtures.
 8. Disconnect Aisle Light Fixtures (Main) Power Supply Connector from Connectors Box.
 9. Remove Aisle Light Fixtures (Main) Power Supply Cable.
 10. Protect each Terminal of each Cable using suitable Isolating Cap.

STEP 2 Lock-Strip Gasket Removal (Refer to Figures 1 & 4)

NOTE: Retain (removed) Parts and relevant Hardware for later use.

1. Remove screws (4) and washers (3).while supporting Lock-Strip Gasket (1).
2. Remove Lock-Strip Gasket (1) and Plate (2).

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Card Code:

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System:

Sheet:

CAR BODY
13/42

Subsystem/Assy:

Unit:

Component:

ARTICULATION SECTION
STRUCTURE ASSEMBLY

Man Hours:

Man Hours:

BELLOW REPLACEMENT
3.5
STRUCTURE REPLACEMENT
10

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

STEP 3 Side Wall Panels Removal (Refer to Figures 1, 5 & 6).

NOTE: Keep the (removed) Parts and relevant Hardware in a known and protected area for later use.

1. Make each Side Wall Panel (1) slide just to move it out of the Floor Molding (2).
2. Rotate the Side Wall Panel (1) and slide (laterally) it out of Channel (3).
3. Remove the Trim Pieces (5) by removing the Screws (4).
4. Remove Side Wall Channels (3).

STEP 4 Inner Rubber Removal (Refer to Figure 1& 7).

NOTE: Keep the (removed) Parts and relevant Hardware in a known and protected area for later use.

1. Remove the Molding (9) by removing the Screws (10).
2. Pull out the Head of the Inner Rubber (1) from the Hooking Device (8).
3. Remove the Screws (2), Washers (3, 4) and Nuts (5) while supporting the Inner Rubber (1).
4. Remove the Inner Rubber (1).
5. Remove the Hooking Device (8) as follows:
 - a. Remove Screws (11), Washers (7) and Nuts (6).
 - b. Remove the Hooking Device (8).

STEP 5 Removal of the LV & MV Cables (Refer to Figures 8,9 & 10).

NOTE: Keep (removed) Hardware and Cables for later use

1. Disengage each Cable from Upper and Lower Clamps of each side by loosening the relevant Clamp Locking Hardware.
2. Disconnect each Connector of each Cable from relevant Connectors Box.
3. Remove each Cable.
4. Protect each Cable Connector using suitable Isolating Cap.

STEP 6 Removal of the Ground Braids (Refer to Figures 11 & 12).

NOTE : Keep (removed)Hardware and Cables for later use.

1. Disconnect each Ground Braid Terminal by loosening the relevant Hardware, connecting the Ground Braid to the Truck.
2. Protect each Ground Braid Terminal using suitable Isolating Cap.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-01-00/R-00

System:

CAR BODY

Sheet:

14/42

Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT**3.5**

Man Hours:

STRUCTURE REPLACEMENT**10**

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

STEP 7 Pneumatic System Main Piping Hose Removal (Refer to Figure 13).

NOTE : Keep the (removed) Hardware and the Hose for later use.

WARNING : BEFORE REMOVING THE PNEUMATIC SYSTEM MAIN LINE HOSE, MAKE SURE THAT THE PNEUMATIC SYSTEM PRESSURE HAS BEEN RELEASED (REFER TO PRELIMINARY OPERATION STEP 4).

1. Disengage the Hose from the Lower Clamp by loosening the relevant Clamp locking hardware.
2. Disconnect each Hose Nipple from the relevant Pneumatic System Main Line Connection mounted on the Car Body Section Rear Ends.
3. Remove the Hose.
4. Protect each Hose Connection using suitable protection cap/tape.

STEP 8 Movable Clamps & Tension Rods Removal (Refer to Figure 14).

NOTE : Retain (removed) Parts and Hardware for later use.

Tension Rod:

1. Move the Guide upward to reduce the tension of the Tension Rod.
2. Unlock the Spring Catch at both ends of the Tension Rod.
3. Remove the Tension Rod.

Movable Guide:

1. Move the Sliding Blocks upward to access the Guide Retaining Screws.
2. Loosen the Screws attaching the Guide to the Art Sect Structure Center Dome.
3. Remove the Guide.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

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System:

CAR BODY

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Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT
3.5

Man Hours:

STRUCTURE REPLACEMENT
10

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

STEP 9 Centering Dome Spring Device Removal (refer to Figure 15)

NOTE : Keep (removed) Parts and Hardware for later use

CAUTION : CONNECT THE ART SECT STRUCTURE EXTERNAL DOME TO THE OVERHEAD CRANE (MIN. CAPACITY 250 LB) BY MEANS OF SUITABLE SLING CAREFULLY OPERATE THE OVERHEAD CRANE TO KEEP THE STRUCTURE STILL, IN ORDER TO AVOID THAT ART SECT STRUCTURE MOVES WHILE THE CENTERING DOME SPRING DEVICE IS BEING REMOVED.

WARNING: KEEP FIRMLY THE CENTERING SPRING DEVICE SUPPORT WHILE REMOVING ITS ATTACHING PARTS, TO AVOID THAT THE STRETCHED SPRING CAUSES INJURY TO PERSONNEL.

1. Remove the Screws (2) and Washers (3, 4).
2. Remove Nuts (6).

NOTE : Leave the Threaded Rod (7) with relevant Nuts (8) in place.

3. Remove Springs (9) together with Support (1 or 5).

NOTE: Once this Step is completed the Articulation Section Dome Structure is mechanically disconnected from the Car Body Section Rear End Structures. It remains connected to the Trailer Truck Bolster Beam by means of the relevant Dome Structure Connections and Pins.

STEP 10 Articulation Section Floor - Central Part Removal (Refer to Figure 16).

NOTE : Keep (removed) Parts and Hardware for later use.

1. Remove Molding Screws (1) and Molding (2).
2. Remove Floor, Central Part (3).

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-01-00/R-00

System:

CAR BODY

Sheet:

16/42

Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT**3.5**

Man Hours:

STRUCTURE REPLACEMENT**10**

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

STEP 11 Articulation Section Structure Removal (Refer to Figure 17 & 18).

NOTE : Keep the (removed) Parts and Hardware for later use.

WARNING: **ARTICULATION SECTION STRUCTURE WEIGHS 240 LB (109 KG). DURING THE REPLACEMENT PROCEDURE MAKE SURE THAT THE OVERHEAD CRANE SUPPORTS THE UNIT TO PREVENT UNSAFE CONDITIONS.**

CAUTION : MAKE SURE THAT THE ART SECT DOME IS SAFELY CONNECTED TO THE OVERHEAD CRANE (MIN. CAPACITY 250 LB) BY MEANS OF A SUITABLE SLING

1. Remove the Screws (5) and Washers (6, 7) while supporting the Upper Plates (3).
2. Remove Upper Plates (3) from "A" / "B" Body Structure.
3. Unscrew both the Nuts (33) connecting the Articulation Section Dome Structure with the Truck Bolster Beam and remove the relevant Washers, Lock Washers (31, 32) and Spacers. (25, 26).
4. Discard Washers and Lock Washers.
5. Remove both Pins (22) From outside using a suitable Puller Device.

NOTE: The following hardware remains free:

- Bush (30)
- Spacer (28)
- Disc (29)
- Washer (27)

NOTE : Leave the Split Rings (23) and Flexible Supports (24) in place.

NOTE: Once the above Step is completed, the Articulation Section Dome Structure is fully mechanically disconnected from the Carbody and from the Trailer Truck and can be raised.

6. Using the Overhead Crane, remove the Articulation Section Structure.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-01-00/R-00

System:

CAR BODY

Sheet:

17/42

Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT
3.5

Man Hours:

STRUCTURE REPLACEMENT
10

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

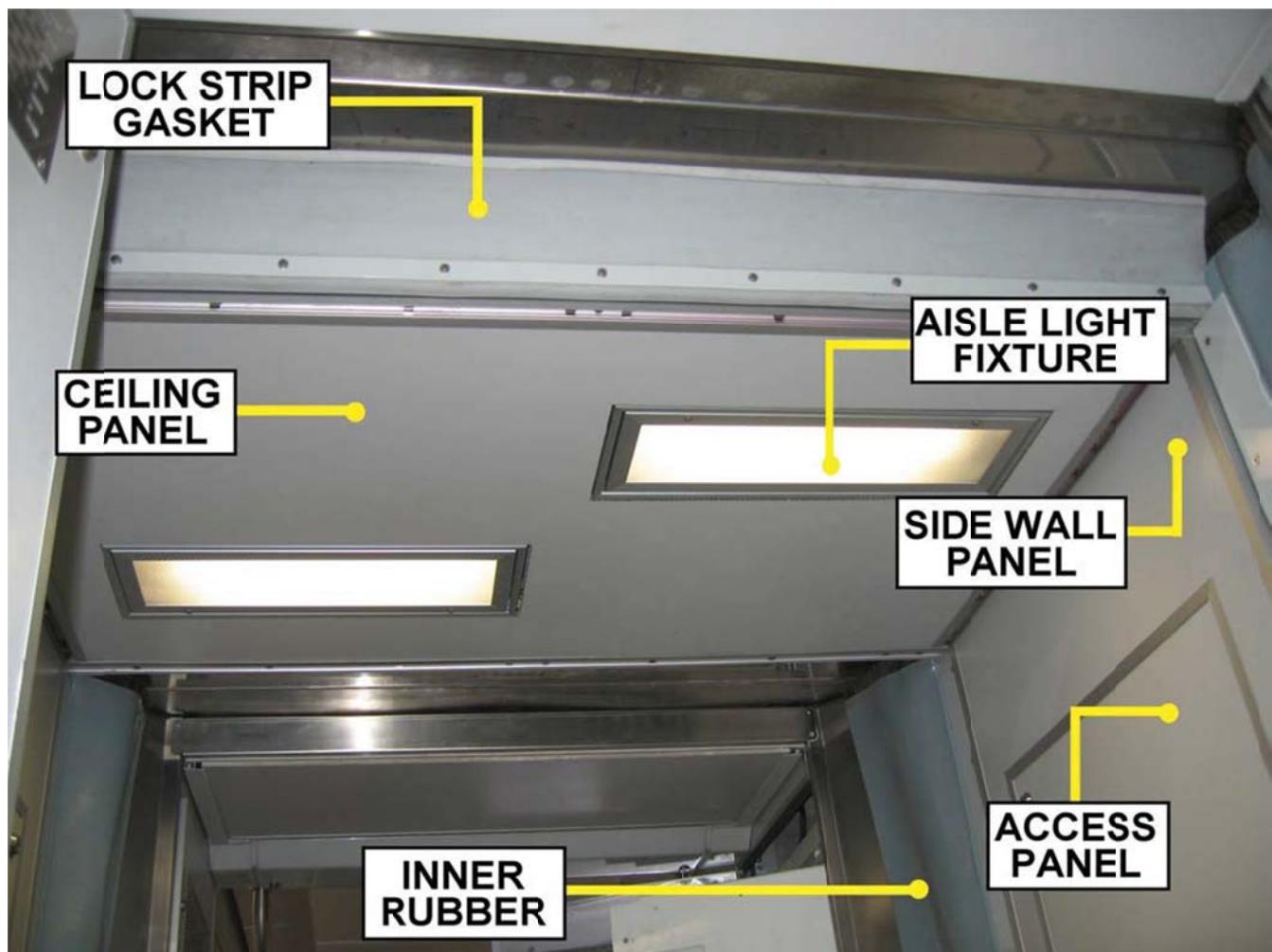


Figure 1 AISLE INTERIOR

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-01-00/R-00

System:

CAR BODY

Sheet:

18/42

Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT**3.5**

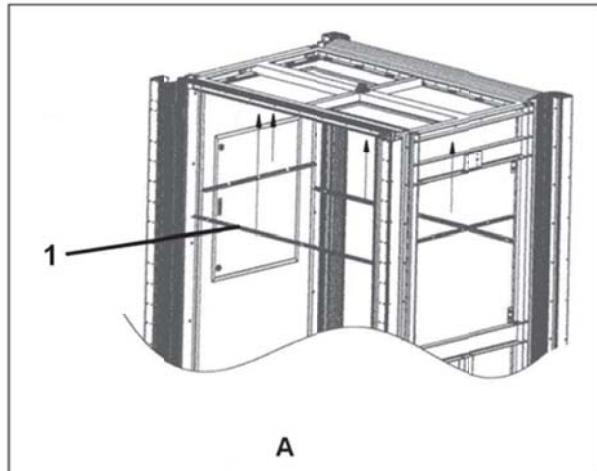
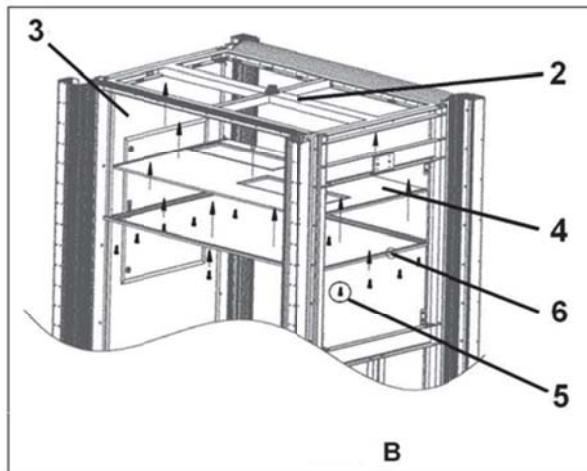
Man Hours:

STRUCTURE REPLACEMENT**10**

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

**A****B**

- 1. TRIM**
- 2. INTERNAL DOME FRAME**
- 3. SIDE-WALL PANEL**

- 4. CEILING PANEL**
- 5. SCREW**
- 6. OMEGA EXTRUSION**

Figure 2 CEILING PANEL REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-01-00/R-00

System:

Sheet:

CAR BODY
19/42

Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT

Man Hours:

3.5
STRUCTURE REPLACEMENT
10

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

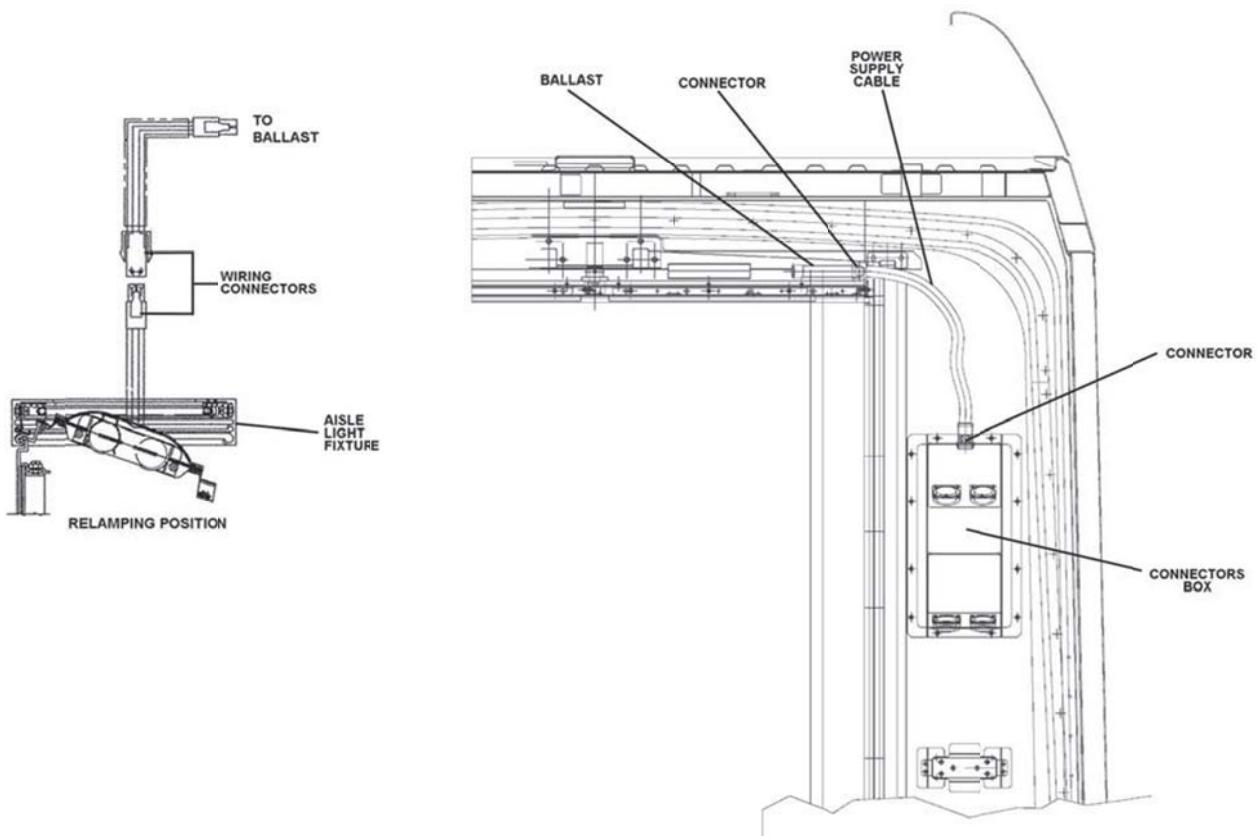


Figure 3 AISLE LIGHT FIXTURES REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-01-00/R-00

System:

CAR BODY

Sheet:

20/42

Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT**3.5**

Man Hours:

STRUCTURE REPLACEMENT**10**

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

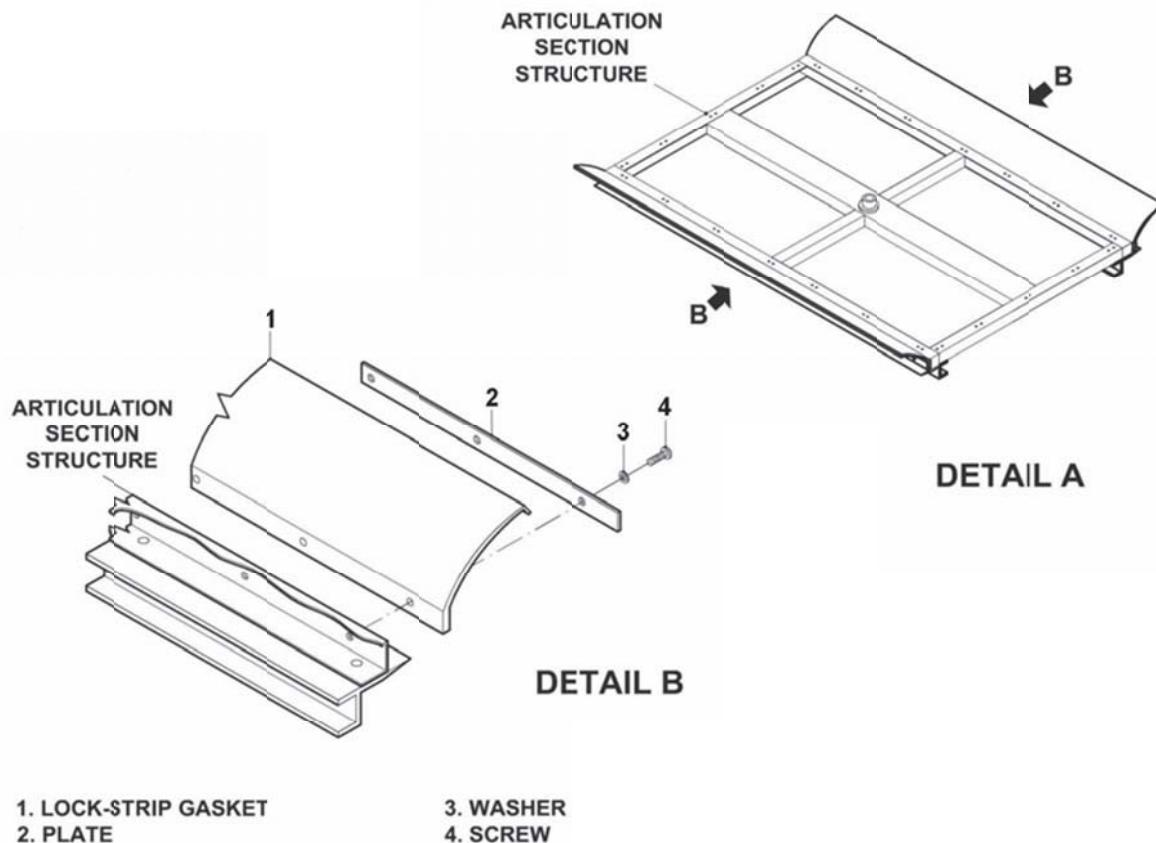


Figure 4 LOCK-STRIP GASKET REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-01-00/R-00

System:

CAR BODY

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21/42

Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT

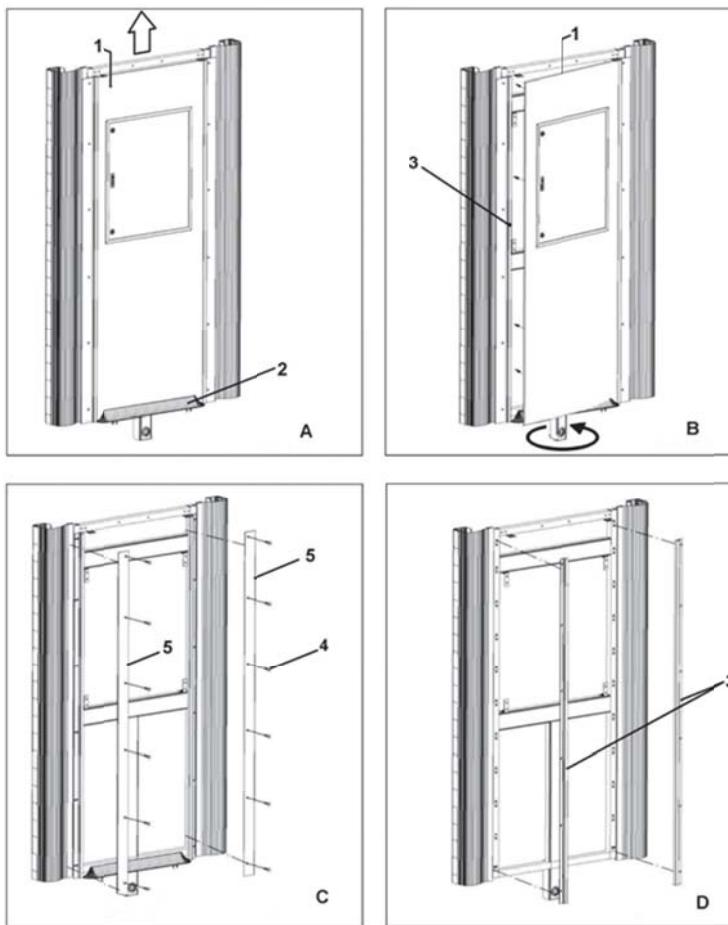
Man Hours:

3.5
STRUCTURE REPLACEMENT
10

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):


 1. SIDEWALL PANEL
 2. FLOOR MOLDING

 3. SIDEWALL CHANNELS
 4. SCREWS

5. TRIM PIECES

Figure 5 SIDE WALL PANELS REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-01-00/R-00

System:

CAR BODY

Sheet:

22/42

Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT**3.5**

Man Hours:

STRUCTURE REPLACEMENT**10**

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

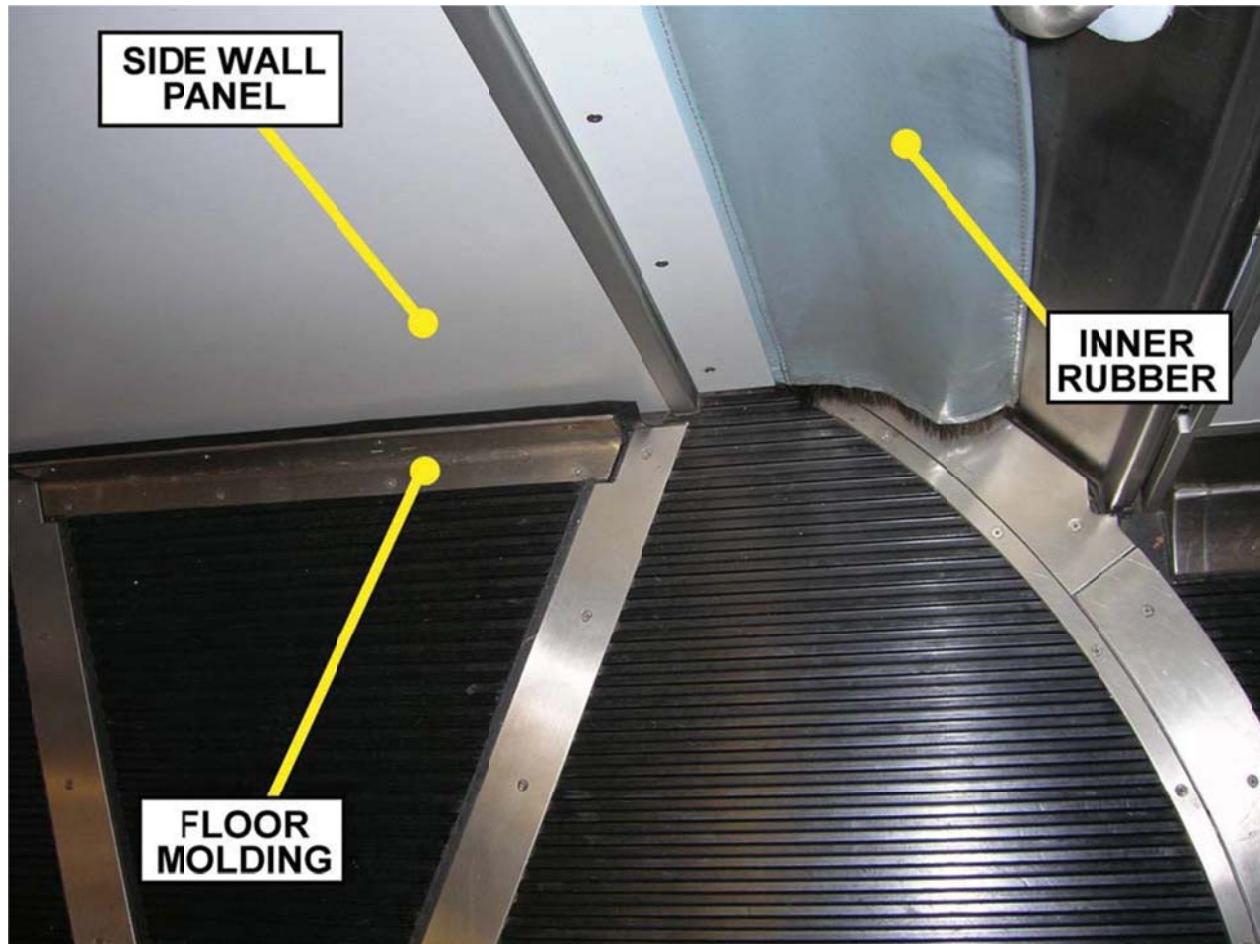


Figure 6 FLOOR MOLDING & SIDE WALL PANEL

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

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System:

CAR BODY

Sheet:

23/42

Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

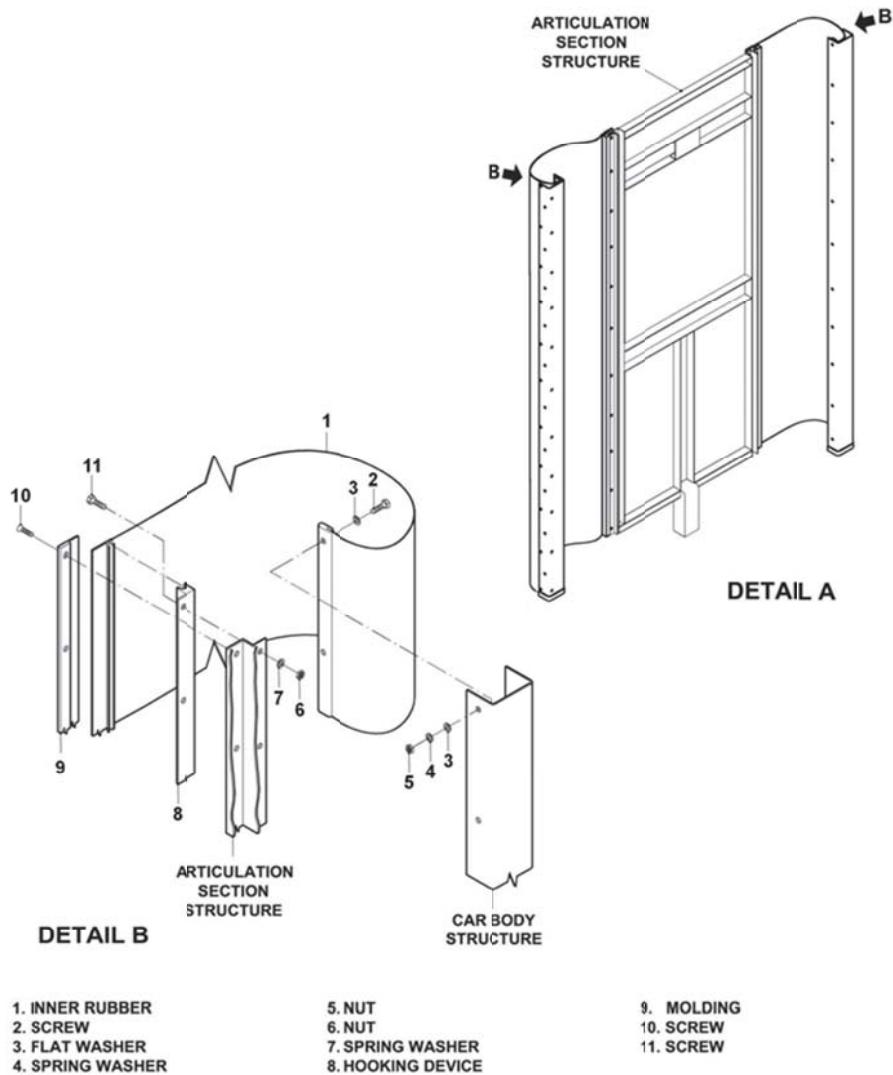
Man Hours:

BELLOW REPLACEMENT

Man Hours:

3.5
STRUCTURE REPLACEMENT
10

Maintenance Task:

REPLACEMENT
PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

Figure 7 INNER RUBBER REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

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Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT

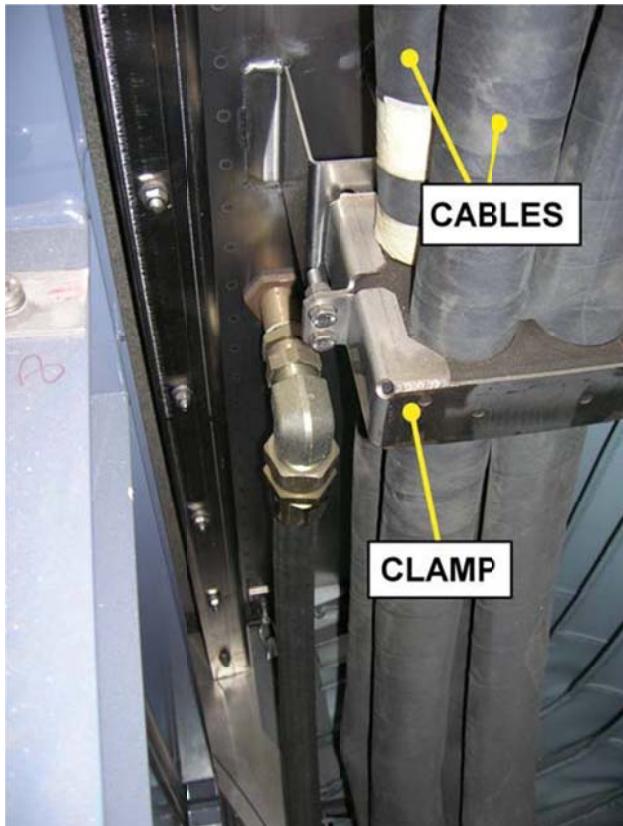
Man Hours:

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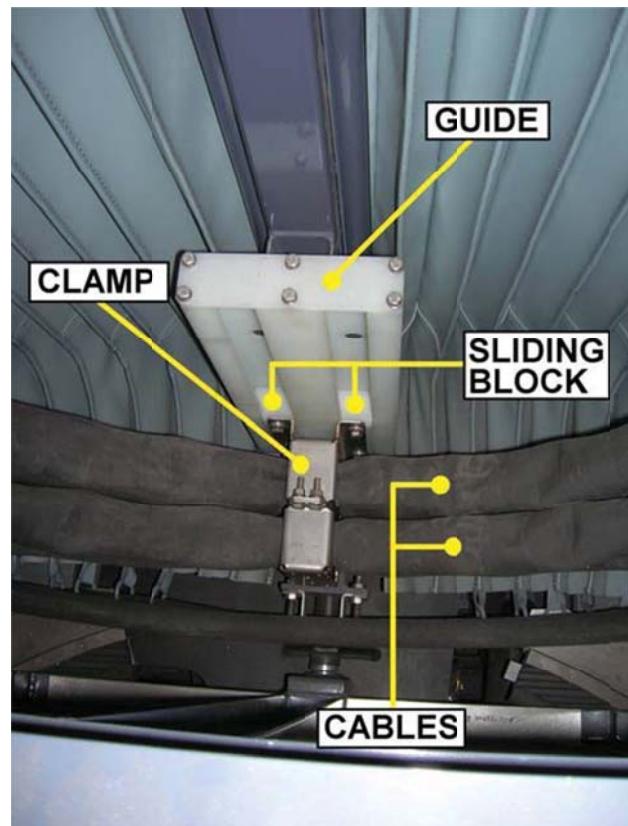
Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):



Upper Clamp



Lower Clamp

Figure 8 LV & MV CABLES REMOVAL / INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-01-00/R-00

System:

CAR BODY

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Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT

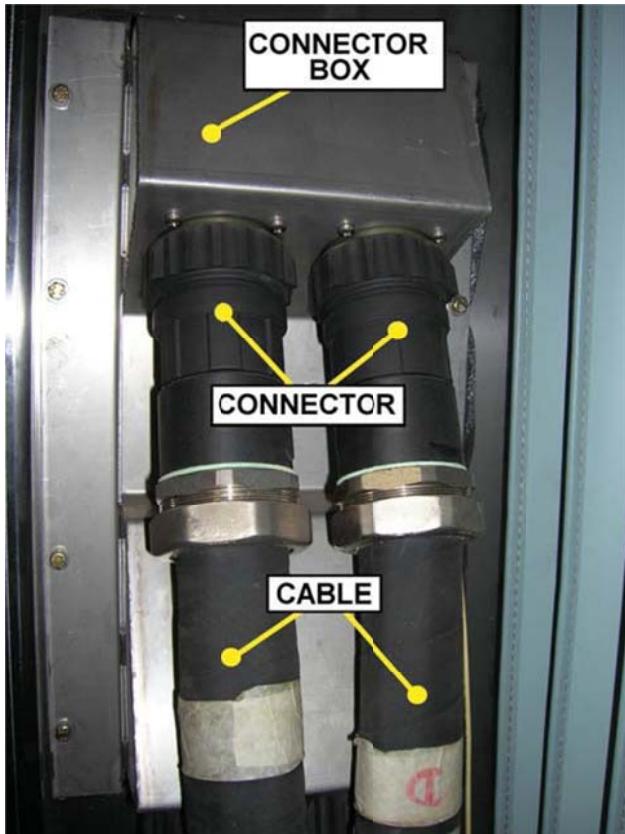
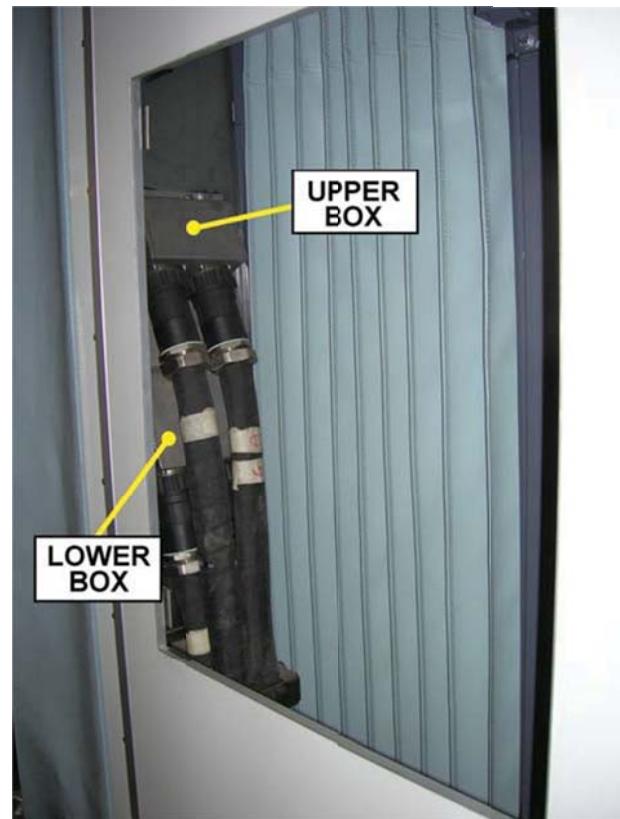
Man Hours:

3.5

Man Hours:

STRUCTURE REPLACEMENT
10

Maintenance Task:

REPLACEMENT
PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

Connectors Box & Connectors

Connectors Box & Connectors
Figure 9 LV & MV CABLES & CONNECTORS REMOVAL / INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-01-00/R-00

System:

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Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

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Man Hours:

STRUCTURE REPLACEMENT**10**

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

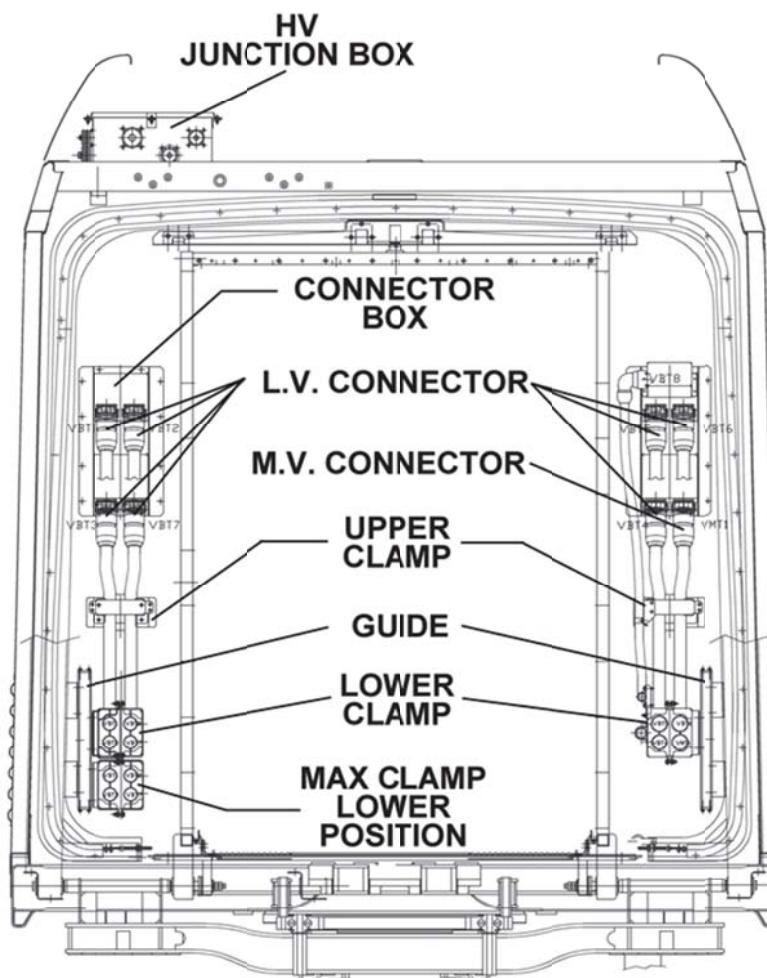


Fig 10 LV & MV CABLES & CONNECTOR BOXES LOCATIONS

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

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Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

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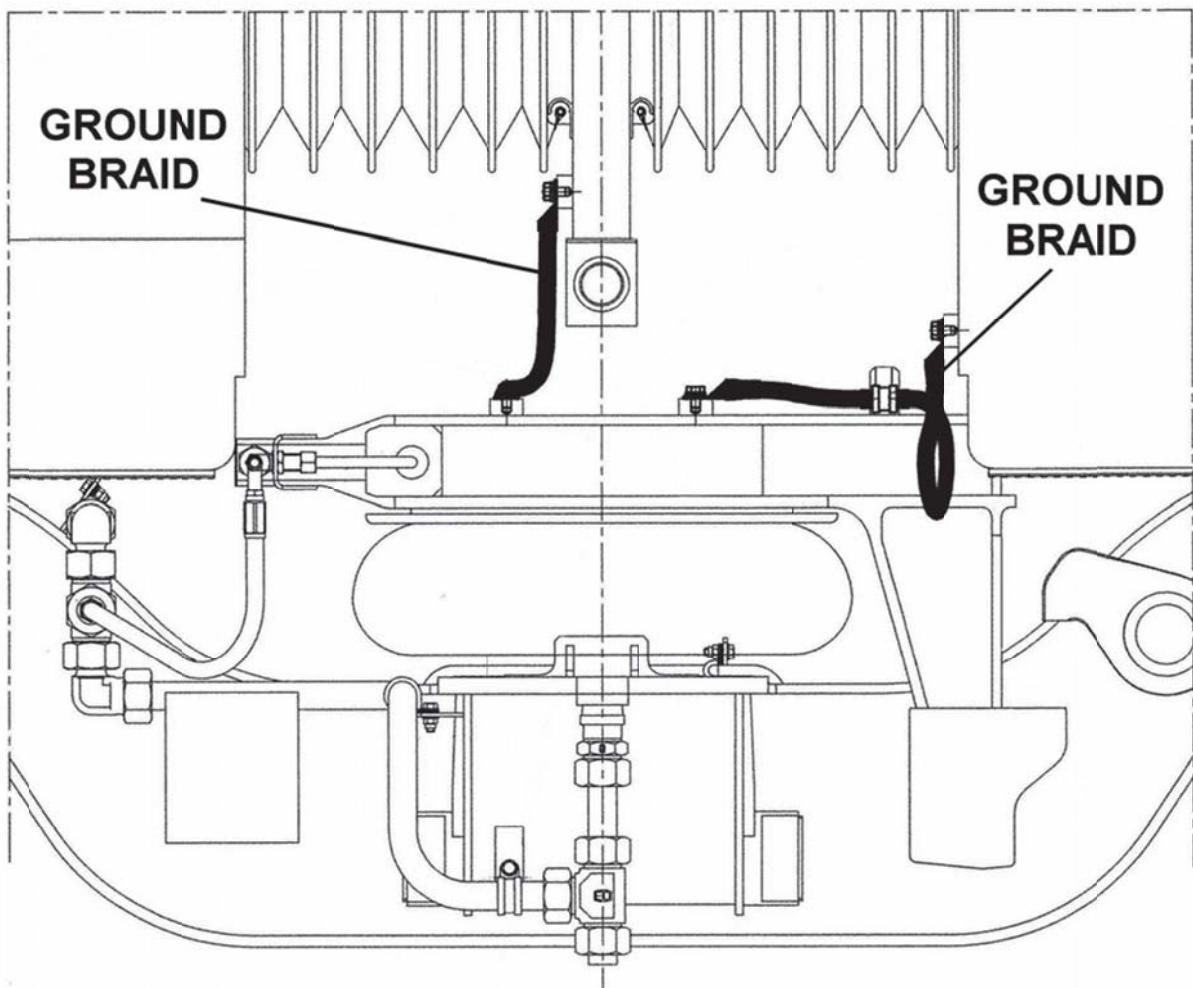
Man Hours:

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STRUCTURE REPLACEMENT

10

Maintenance Task:

REPLACEMENT
PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

Figure 11 - GROUND BRAID - TRAILER TRUCK -LH- REMOVAL / INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-01-00/R-00

System:

CAR BODY

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Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

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Man Hours:

STRUCTURE REPLACEMENT

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Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

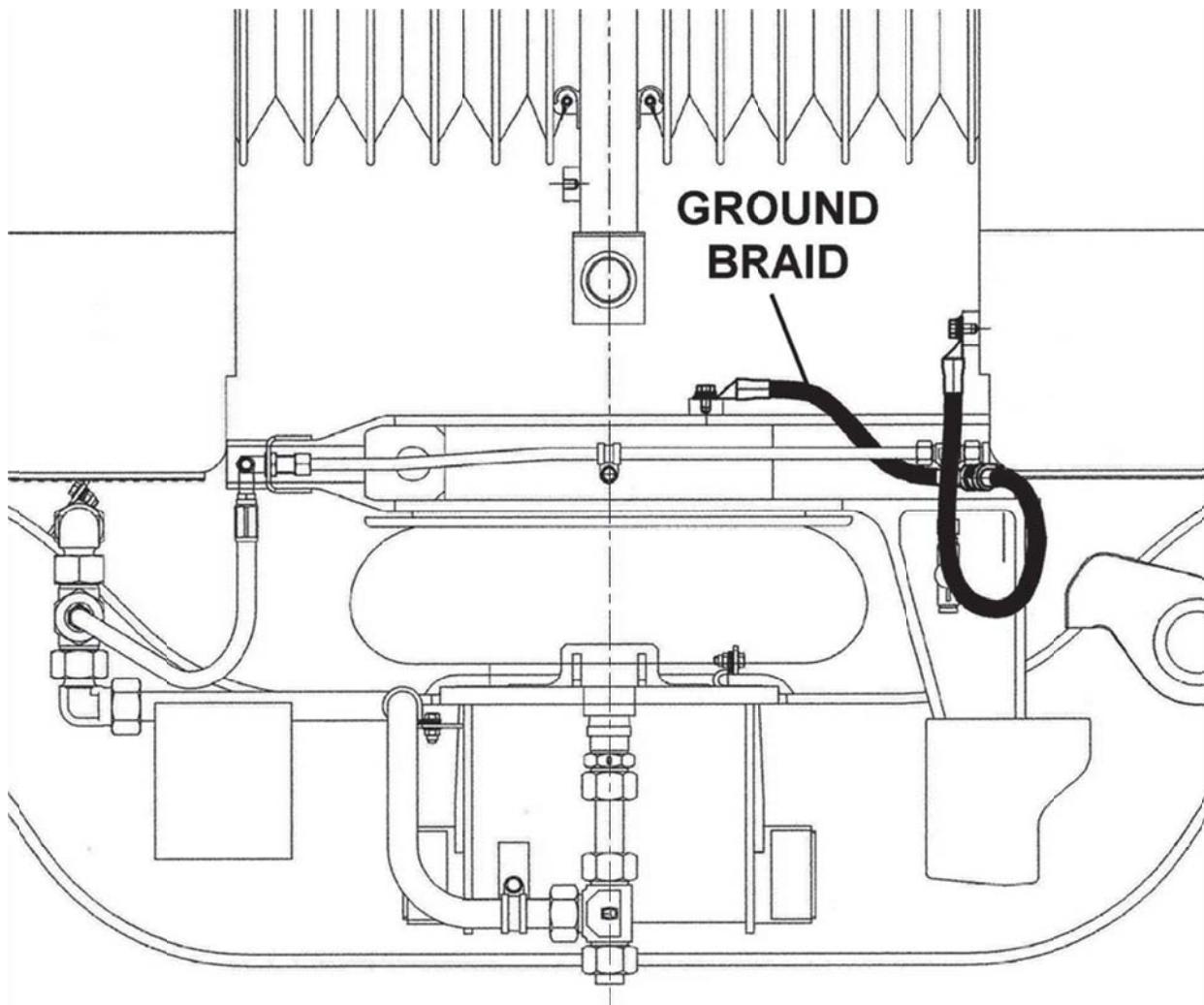


Figure 12 - GROUND BRAID - TRAILER TRUCK -RH- REMOVAL / INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-01-00/R-00

System:

CAR BODY

Sheet:

29/42

Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT

Man Hours:

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Man Hours:

STRUCTURE REPLACEMENT**10**

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

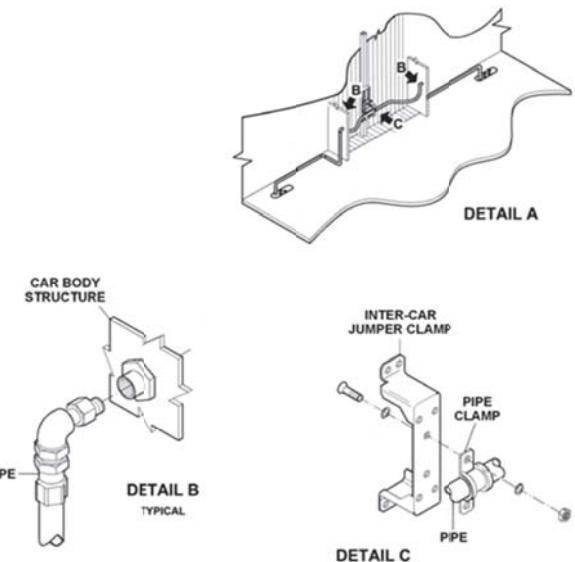
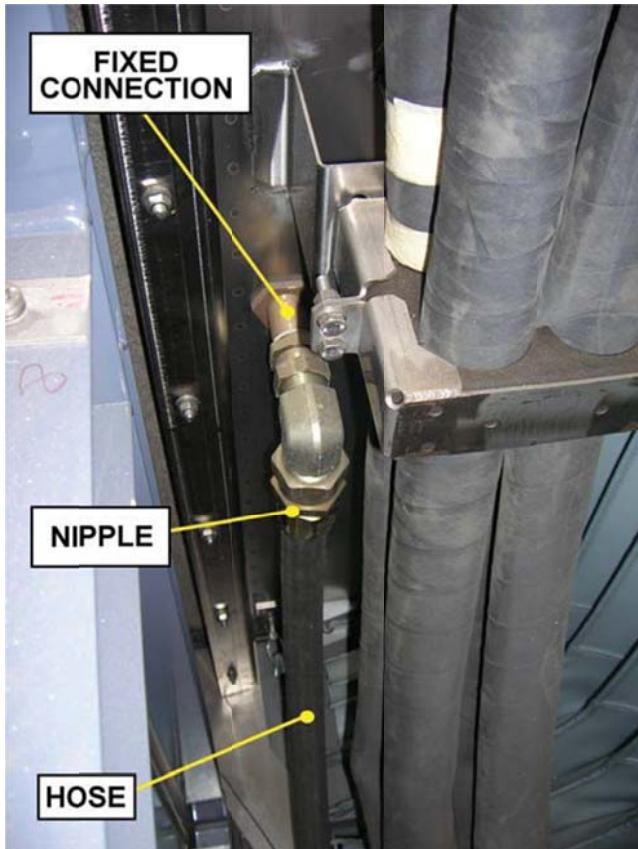


Figure 13 PNEUMATIC SYSTEM MAIN PIPING HOSE CONNECTION REMOVAL / INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-01-00/R-00

System:

CAR BODY

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Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT

Man Hours:

3.5

Man Hours:

STRUCTURE REPLACEMENT**10**

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

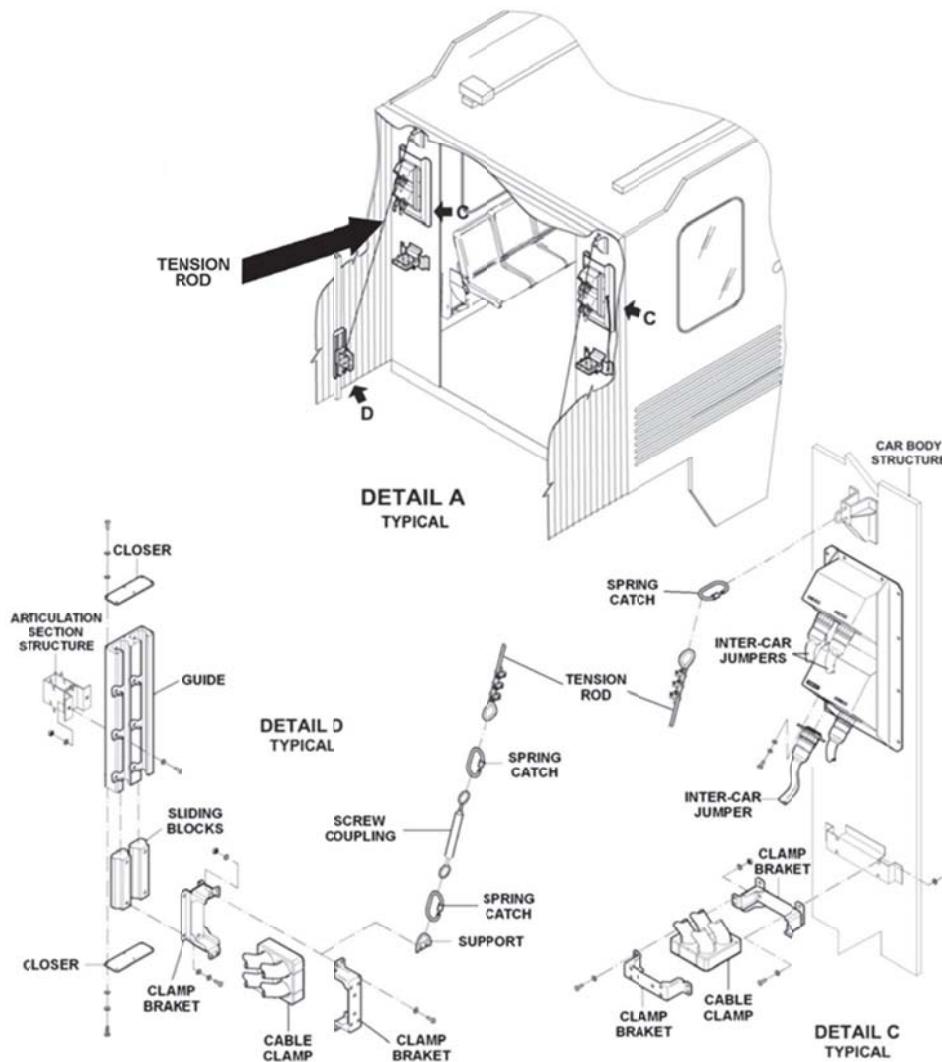


Figure 14 MOVABLE CLAMPS & TENSION RODS REMOVAL / INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-01-00/R-00

System:

CAR BODY

Sheet:

31/42

Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT

Man Hours:

3.5

Man Hours:

STRUCTURE REPLACEMENT**10**

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

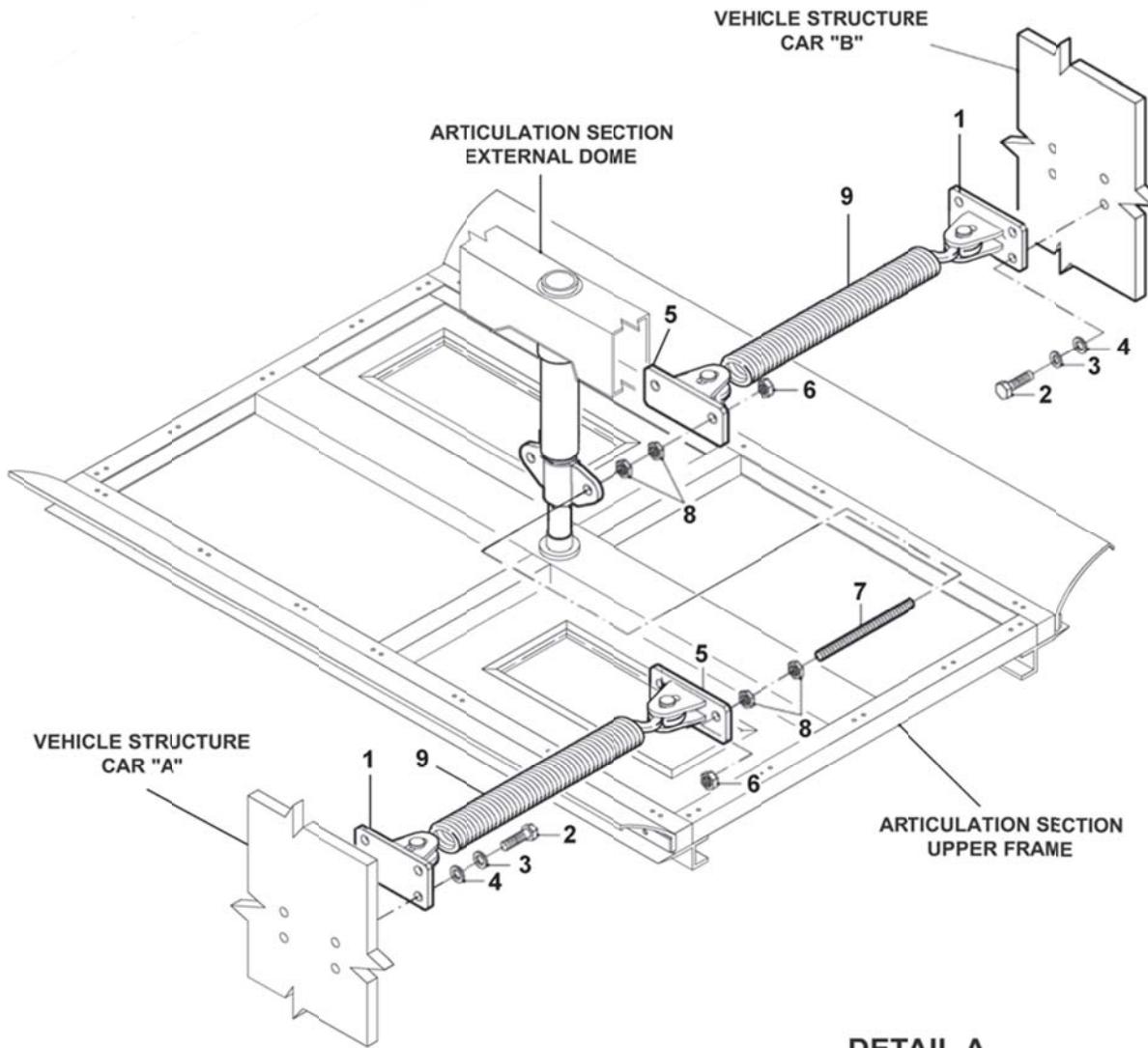


Figure 15 CENTERING DOME SPRING DEVICE REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-01-00/R-00

System:

CAR BODY

Sheet:

32/42

Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT

Man Hours:

3.5**STRUCTURE REPLACEMENT****10**

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

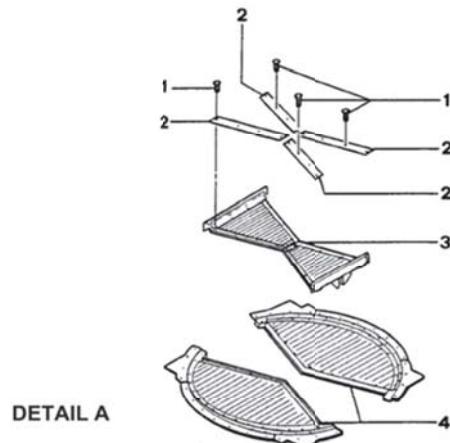
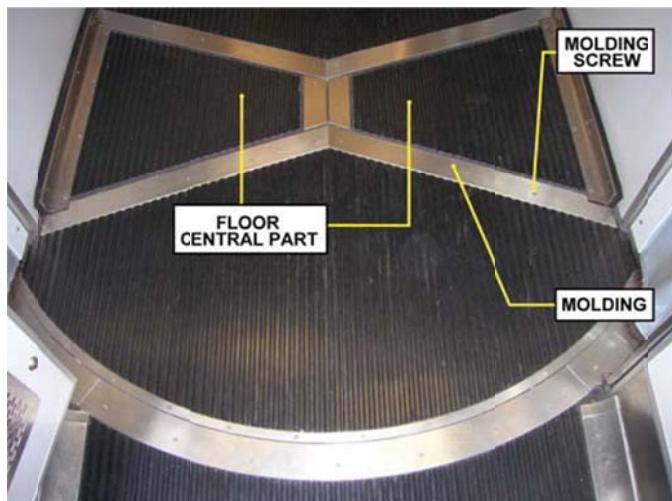


Figure 16 – ART SECTION FLOOR –CENTRAL PART- REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

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Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

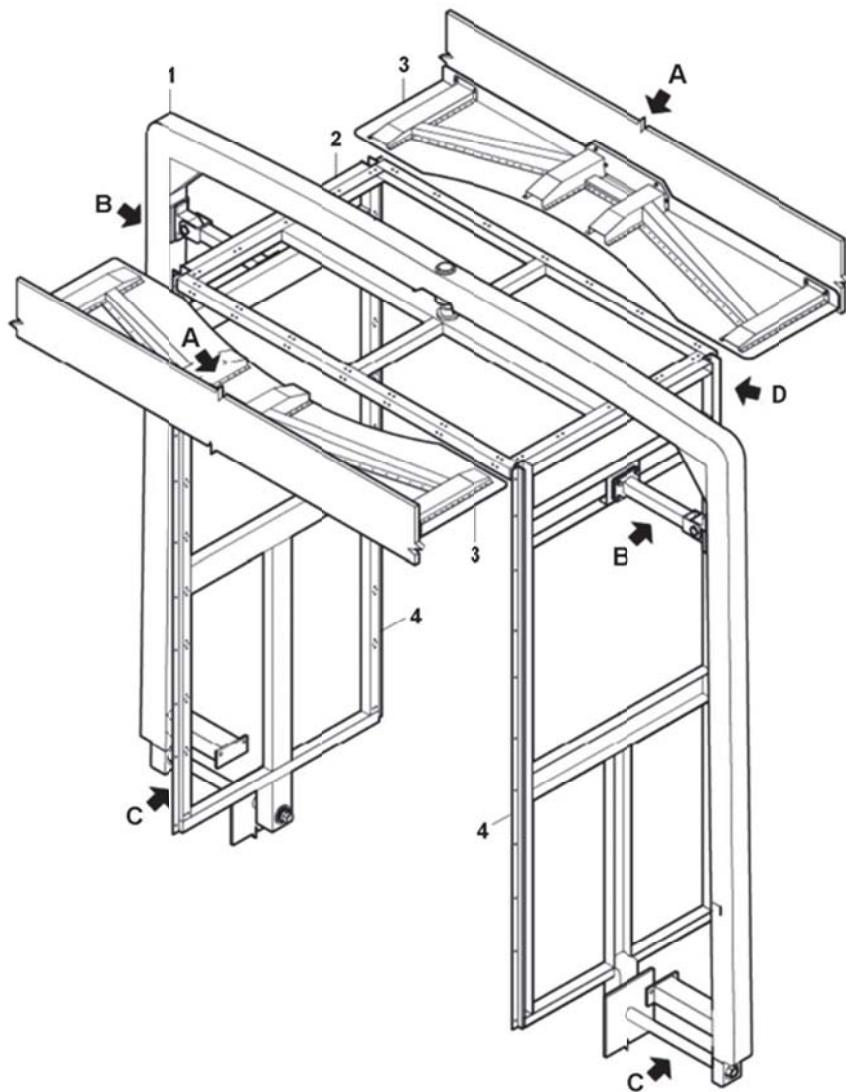
Man Hours:

BELLOW REPLACEMENT
3.5

Man Hours:

STRUCTURE REPLACEMENT
10

Maintenance Task:

REPLACEMENT
PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

Figure 17 ARTICULATION SECTION STRUCTURE REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-01-00/R-00

System:

CAR BODY

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Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT**3.5**

Man Hours:

STRUCTURE REPLACEMENT**10**

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

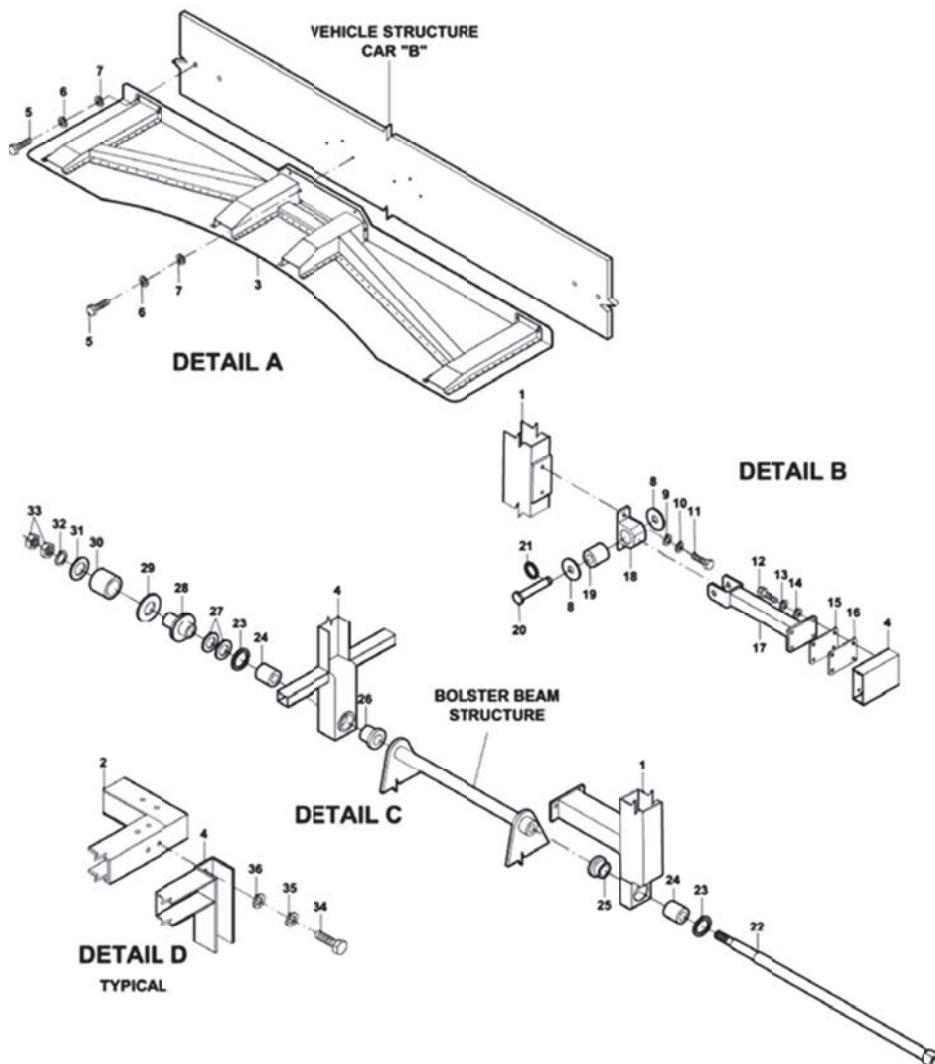


Figure 18 ARTICULATION SECTION STRUCTURE –PINS & PLATES REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-01-00/R-00

System:

CAR BODY

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35/42

Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT

Man Hours:

3.5
STRUCTURE REPLACEMENT
10

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

INSTALLATION

1. It is assumed that:
 - a) The Vehicle is set in accordance with LACMTA Maintenance Shop Safety Regulations and positioned in order to have it available to safely accomplish the Task.
 - b) Wheel Chocks are placed to prevent the vehicle from moving in both running directions.

2. Make sure that:
 - a) All Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON).
 - b) The Transfer Switch is turned to OFF.
 - c) The Pantograph Control Motor Switch (5F02 CB LV Locker "A" Section) is switched off.
 - d) The Battery Disconnect Circuit Breaker (3F01) is switched off (refer to Fig A).
 - e) The Overhead Catenary, 750Vdc Power, is locked-out and tagged-out per LACMTA Safety Rules and Procedures.
 - f) The Pneumatic Pressure of the Pneumatic System Main Line is released
 - g) The Articulation Section Structure is suspended over its working position by means of a suitable Overhead Crane.

NOTE: The Articulation Section cannot be installed as a Complete Assembly.

The Articulation Section Installation consists of the Tasks listed in the following Table.

It is suggested to perform the Steps in the indicated sequence.

ARTICULATION SECTION STRUCTURE INSTALLATION

STEP	ITEM	TASK	LOCATION	REF TO FIGURE
1	ART. SECTION STRUCTURE	Articulation Section Structure Installation	Roof	17 - 18
2	AISLE INTERIOR STRUCTURE	Articulation Section Floor - Central Part Installation	Aisle	16
3	ART. SECTION STRUCTURE	Centering Dome Spring Device Installation	Roof	15-19
4	CLAMPS	Installation of Movable Clamps & Tension Rods	Between bellow and side panels	14
5	PIPING	Pneumatic System Main Line Hose Installation	Between bellow and side panels	13
6	CABLES	Installation of the Ground Braids	Base of Art Sec	11-12
7		Installation of the LV-MV Cables	Between car sections	8 -9 -10
8		Inner Rubber Installation	Aisle	1-7
9	AISLE INTERIOR STRUCTURE	Installation of the Side Wall Panels		1-5-6
10		Lock-Strip Gasket Installation		1-4

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-01-00/R-00

System:

CAR BODY

Sheet:

36/42

Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT

Man Hours:

3.5

Man Hours:

STRUCTURE REPLACEMENT**10**

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

STEP 1 Articulation Section Structure Installation (refer to previous Figures 17 & 18)

**WARNING: ARTICULATION SECTION STRUCTURE WEIGHS 240 LB
(109 KG). DURING THE REPLACEMENT PROCEDURE
MAKE SURE THAT THE OVERHEAD CRANE SUPPORTS
THE UNIT TO PREVENT UNSAFE CONDITIONS.**

1. Carefully Lower the Articulation Section Structure in order to match External and Internal Structure Dome Lower Connections with the relevant Truck Bolster Beam Connections.
2. Clean both Pins (and relevant hardware) connecting the Articulation Section Dome Structure with the Truck Bolster Beam using recommended agent and cleaning rags.
3. Apply a light coat of rust preventative oil to each Pin.
4. Install both Pins (22) from outside.

NOTE : The Split Rings (23) and Flexible Supports (24) are already installed on the Articulation Section Dome Structure.

5. For each Pin, install :
 - Spacers (25,26)
 - Washer (27)
 - Spacer (28)
 - Disc (29)
 - Bush (30)
 - The “new” Washer (31)
 - The “new” Lock Washers (32)
 - Nuts (33), which retain the Pins (22) in proper position
6. Torque the Nuts (33) to **25 ft-lb**.

NOTE: Once the above Step has been completed the Articulation Section Structure is mechanically connected to the Trailer Truck.

7. Position the Upper Plates (3) onto the “A” and “B” Body Section Rear End Structure.
8. Install the Screws (5) and Washers (6, 7).
9. Torque the Screws (5) to **15.2 ft-lb**.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-01-00/R-00

System:

CAR BODY

Sheet:

37/42

Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT

Man Hours:

STRUCTURE REPLACEMENT
10

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

STEP 2 Floor, Central Parts Installation (refer to Figures 16)

1. Check the Floor Central Part for damage/deformation. Replace as per check result.
2. Check for correct installation the Gasket on the Floor Central Part.
As per check result use recommended product to restore design installation.
3. Clean the Floor Central Part Seat using recommended product.
4. Position the Floor Central Part.
5. Install Moldings.
6. Apply a light coat of LOCTITE 242 on the screw threads and install / tighten the Screws
7. Check that there are no level differences between the Vehicle Floor and the Floor Central Part. Adjust as per check result using recommended product

STEP 3 Centering Dome Spring Device Installation (refer to Figure 15 and Fig 19)

NOTE : The Threaded Rods (7) with relevant Nuts (8) are already installed.

1. Position Springs (9) together with Supports (1) (or-5).
2. Install and torque Nuts (6).
3. Install the Screws (2) and washers (3, 4) to each Carbody Section Rear End Structure."
4. Torque the Screws (2) to **15.2 ft -lb**.

NOTE: Once completed the above Step the Articulation Section Structure is fully mechanically connected to the Car Body.
For this reason the Overhead Crane can be disconnected.

5. Remove the Overhead Crane
6. Check that the distance between the Art Sect Center Dome and "A" / "B" Body Section Rear End is compliant with the **Nominal Design Value of 24.21 in.**
7. The Adjustment can be carried out by means of the Threaded Rods (7) with the relevant Nuts (8).
8. Check the Centering Dome Spring Device for proper operation.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-01-00/R-00

System:

CAR BODY

Sheet:

38/42

Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT**3.5**

Man Hours:

STRUCTURE REPLACEMENT**10**

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

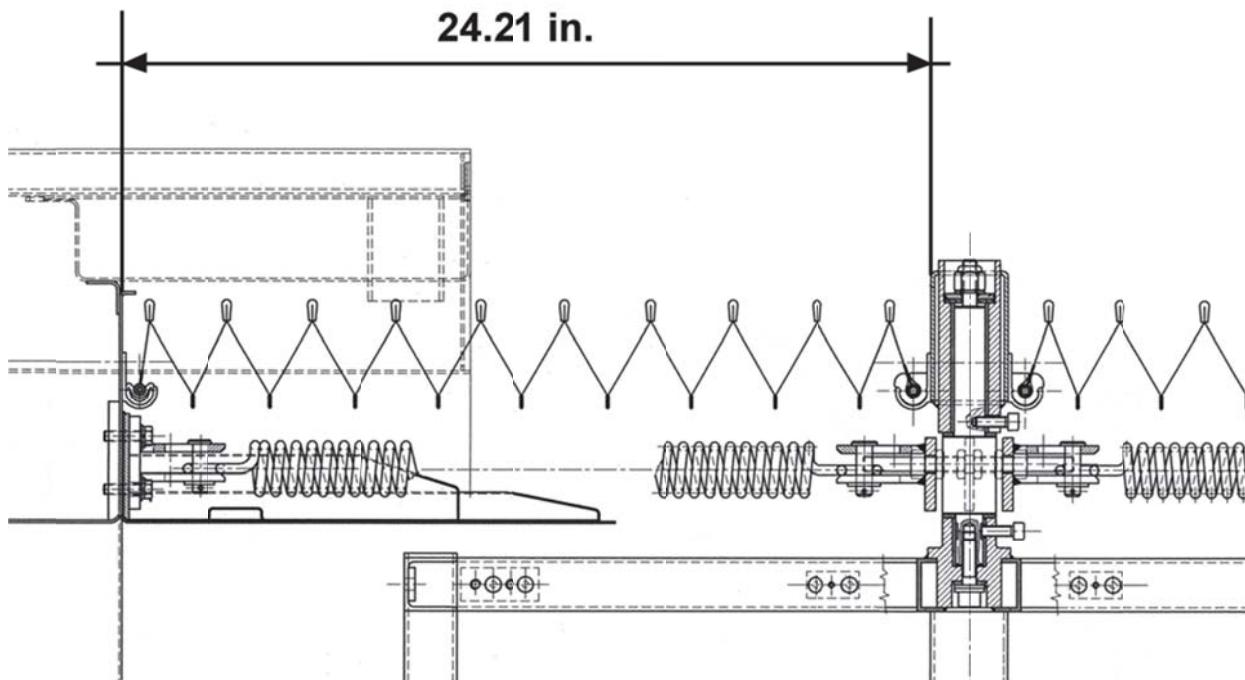


Fig 19 CENTERING DOME SPRING DEVICE NOMINAL DESIGN VALUE

P2550 CORRECTIVE MAINTENANCE SHEET Card Code: R-C-02-08-01-00/R-00			
System: CAR BODY	Sheet: 39/42		
Subsystem/Assy: ARTICULATION SECTION	Unit: STRUCTURE ASSEMBLY	Component:	
Man Hours: BELLOW REPLACEMENT	3.5	Man Hours: STRUCTURE REPLACEMENT	10
Maintenance Task: REPLACEMENT			
PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):			
STEP 4 Movable Clamps & Tension Rods Installation (Refer to Figure 14)			
Movable Guide: 1. Position the Movable Guide. 2. Move the Sliding Blocks upward in order to have access to the holes of the attaching Screws. 3. Install and torque the Screws attaching the Movable Guide to the Art Sect Structure Center Dome.			
Tension Rod: 1. Move the Movable Guide upward. 2. Install and lock both Spring Catches of the Tension Rod. 3. Rotate the Screw Coupling clockwise in order to adjust the Tension Rod length.			
CAUTION: LENGTH AND TENSION FORCE RESULTING FROM THE ADJUSTMENT SHOULD BE THE SAME FOR EACH TENSION ROD			
STEP 5 Pneumatic System Main Piping Hose Installation (Refer to Figure 13).			
1. Remove the Protecting Cap/Tape (previously installed) from each Hose Connection. 2. Install the Hose to both the relevant Pneumatic System Main Piping Connection mounted on the Carbody Section Rear Ends. 3. Torque each Nipple as required. 4. Engage the hose on the Lower Clamp. 5. Check the hose for correct installation.. 6. Torque the relevant Clamp locking hardware.			
STEP 6 Ground Braids Installation (Refer to Figures 11 & 12).			
1. Remove the Isolating Caps (previously installed) from the Ground Braid Terminals. 2. Clean the contact surface of the Ground Braid Terminals (Terminal, Art Sect. Structure and Trailer Truck) using recommended cleaner and cleaning rags. 3. Check the Ground Braid Terminals for damage/deformation (Terminal, Art Sect. Structure and Trailer Truck). Replace/adjust as per check result. 4. Reconnect each Ground Braid by installing and tightening the relevant Hardware.			

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-01-00/R-00

System:

CAR BODY

Sheet:

40/42

Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT

Man Hours:

3.5

Man Hours:

STRUCTURE REPLACEMENT**10**

Maintenance Task:

REPLACEMENT

PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):

STEP 7 LV & MV Cables Installation (Refer to previous Figures 8,9 & 10).

1. Remove the Isolating Cap (previously installed) from each Cable Connector.
2. Connect both Connectors of each Cable to the relevant Sockets of the Connectors Box.
3. Engage the Cable on the Upper and Lower Clamps.
4. Check the Cable for correct installation.
5. Torque the relevant Clamp locking hardware.

STEP 8 Inner Rubber Installation (Refer to previous Figures 1& 7).

1. Install the Hooking Device (8) as follows:
2. Position the Hooking Device (8) in the relevant Seat.
3. Install the Screws (11), Washers (7) and Nut (6).
4. Torque the Nut (6) to **6.2 ft-lb**.
5. Position the Inner Rubber (1) in the relevant Seat.
6. Install the Screws (2), Washers (3, 4) and Nuts (5).
7. Torque the Nut (5) to **15.2 ft-lb**.
8. Engage the Inner Rubber Head (1) in the Hooking Device (8).
9. Position the Molding (9) and lock it by installing and torqueing the Screws (10) to **5.4 ft-lb**.

.lb. STEP 9 Side Wall Panels Installation (Refer to previous Figures 1,5 & 6).

1. Position the Side Wall Channels (3).
2. Position the Trim Pieces (5) over the Side Wall Channels (3).
3. Apply a light coat of LOCTITE 242 on the screw threads and install / torque the Screws (4) to lock the Trim Pieces (5).
4. Install the Side Wall Panel (1) by sliding it laterally into Side Wall Channels (3) and rotate it into place.
5. Move the Side Wall Panel (1) downward, behind the Floor Molding(2).

NOTE : Once this Step has been completed the Side Wall Panels are installed without the relevant Access Panels.

STEP 10 Lock-Strip Gasket Installation (Refer to previous Figures 1 & 4)

1. Position the Lock-Strip Gasket (1) and Plate (2) as shown in the figure 4.
2. Install the Screws (4) and Washers (3).
3. Torque Screws (4) to **5.4 ft-lb**.

P2550 CORRECTIVE MAINTENANCE SHEET			
Card Code:			
R-C-02-08-01-00/R-00			
System: CAR BODY		Sheet: 41/42	
Subsystem/Assy: ARTICULATION SECTION	Unit: STRUCTURE ASSEMBLY	Component:	
Man Hours: BELLOW REPLACEMENT	3.5	Man Hours: STRUCTURE REPLACEMENT	10
Maintenance Task: REPLACEMENT			
PROCEDURE ARTICULATION SECTION REPLACEMENT (CONT'D):			
<p>STEP 11 Ceiling Panel Installation (Refer to Figures 1 through 3):</p> <p>NOTE : Remove the Isolating Caps (previously installed) from each Terminal of each Cable and from each Connector</p> <ul style="list-style-type: none"> d) Install both Aisle Light Fixtures with the relevant Ballast e) Connect each Aisle Light Fixture Connector to the relevant Aisle Light Fixtures f) Connect the Aisle Light Fixture Connector to its Ballast g) Position Aisle Light Fixtures Power Supply Cable h) Connect Aisle Light Fixtures Power Supply Connector to the Connectors Box i) Put the Ceiling Panel (4-Detail B) in place on the Structure (2-Detail B) j) Install Omega Extrusions (6-Detail B) and fix them with the Screws (5-Detail B) k) Snap on the Trim (1-Detail A) l) Install and close (with Maintenance Key) each Access Panel on both Side-Wall Panels <p>NOTE : Once this Step has been completed the Articulation Section Structure Installation is complete.</p>			
<p>Final Operations</p> <ol style="list-style-type: none"> 1. Install the Outer Bellow according to the procedure provided at the beginning of this Sheet (page 02-9). 2. Check that the 1/2-inch Drain Valve of each Main Reservoir is closed. 3. Install the HV Cables as follows: (refer to Fig "B"). <ol style="list-style-type: none"> a) Remove Isolating Cap (previously installed) from each HV Cable Terminal. b) Clean the contact surface of each HV Cable Terminal. (on the Terminal and on the Junction Box) using recommended cleaner and cleaning rags. c) Reconnect each HV Cable Terminal by installing and tightening the relevant Hardware. d) Engage each HV Cable on each Clamp and tighten the relevant Locking Screws. 4. Install the Ground Cables as follows: (refer to Fig "B"). <ol style="list-style-type: none"> a) Remove Isolating Cap (previously installed) from each Ground Cable Terminal. b) Clean the contact surface of each Ground Cable (on the Terminal, on the Art Sect Dome Structure and on the Carbody Sections Structure) using recommended cleaner and cleaning rags. c) Reconnect each Ground Cable Terminal by installing and tightening the relevant Hardware. 5. Restore HV and LV Electrical Power to vehicle. 6. Check that Pneumatic Pressure build up. 7. Check the 1/2-inch Drain Valve of each Main Reservoir for air leakage. Adjust as per check result. <p>Record the Task results on the Defect Report Card for administrative and maintenance planning.</p>			

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-01-00/R-00

System:

CAR BODY

Sheet:

42/42

Subsystem/Assy:

ARTICULATION SECTION

Unit:

STRUCTURE ASSEMBLY

Component:

Man Hours:

BELLOW REPLACEMENT**3.5**

Man Hours:

STRUCTURE REPLACEMENT**10**

Maintenance Task:

REPLACEMENT**INTENTIONALLY LEFT
BLANK**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-02-00/R-00

System:

CAR BODY

Sheet:

1/2

Subsystem/Assy:

ARTICULATION SECTION

Unit:

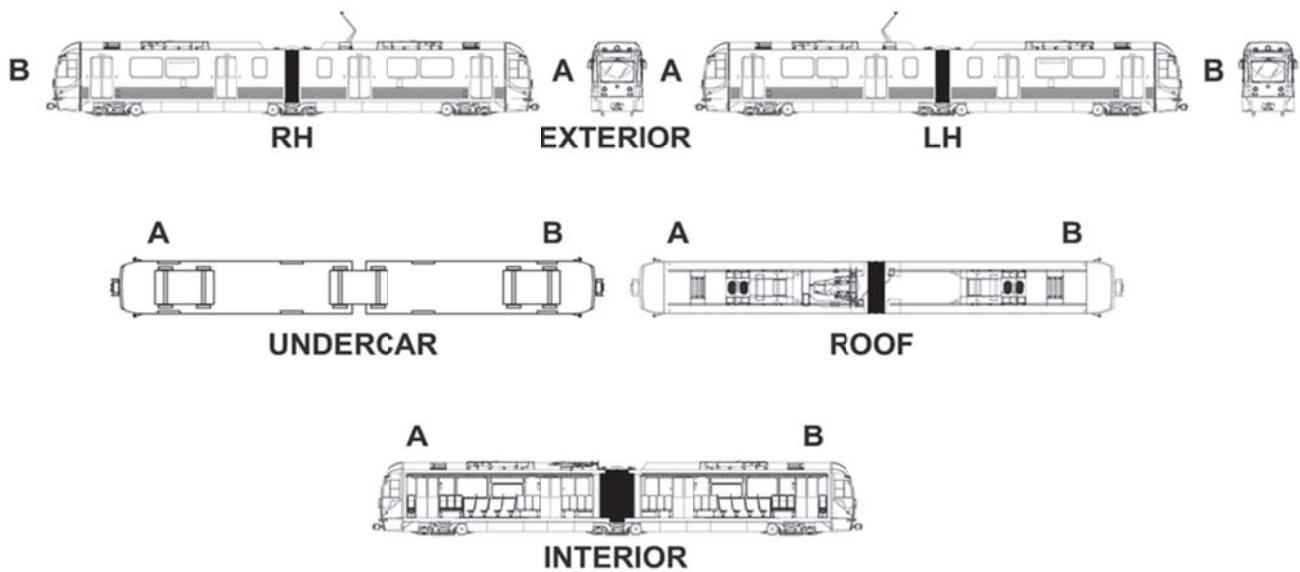
CONNECTION - ARTICULATION JOINT

Component:

Man Hours:

12

Maintenance Task:

REPLACEMENT**LOCATION:**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-02-00/R-00

System:

CAR BODY

Sheet:

2/2

Subsystem/Assy:

ARTICULATION SECTION

Unit:

CONNECTION - ARTICULATION JOINT

Component:

Man Hours:

12

Maintenance Task:

REPLACEMENT

SAFETY PRECAUTIONS:

WARNING: APPLY WHEEL CHOCKS TO PREVENT VEHICLE FROM MOVING.

WARNING: WORKING AREAS MUST BE WELL VENTILATED, LIGHTED, AND CLEAR OF DEBRIS FOR OBVIOUS SAFETY REASONS.

TOOLS:

LACMTA Maintenance Shop Standard Tools Kit.

Grease Gun

CONSUMABLES:

Molikote Longterm 2 Plus Grease

SPARE PARTS:

Connection - Articulation Joint- Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers

PROCEDURE:

The CONNECTION - ARTICULATION JOINT Removal / Installation is included in the Trailer Truck Replacement.

Refer to Sheet R-C 12-02-00-00/R-00

Steps

MECHANICAL CONNECTIONS

Truck-Carbody Disconnection

Truck-Carbody Connection

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-03-00/R-00

System:

CAR BODY

Sheet:

1/6

Subsystem/Assy:

ARTICULATION SECTION

Unit:

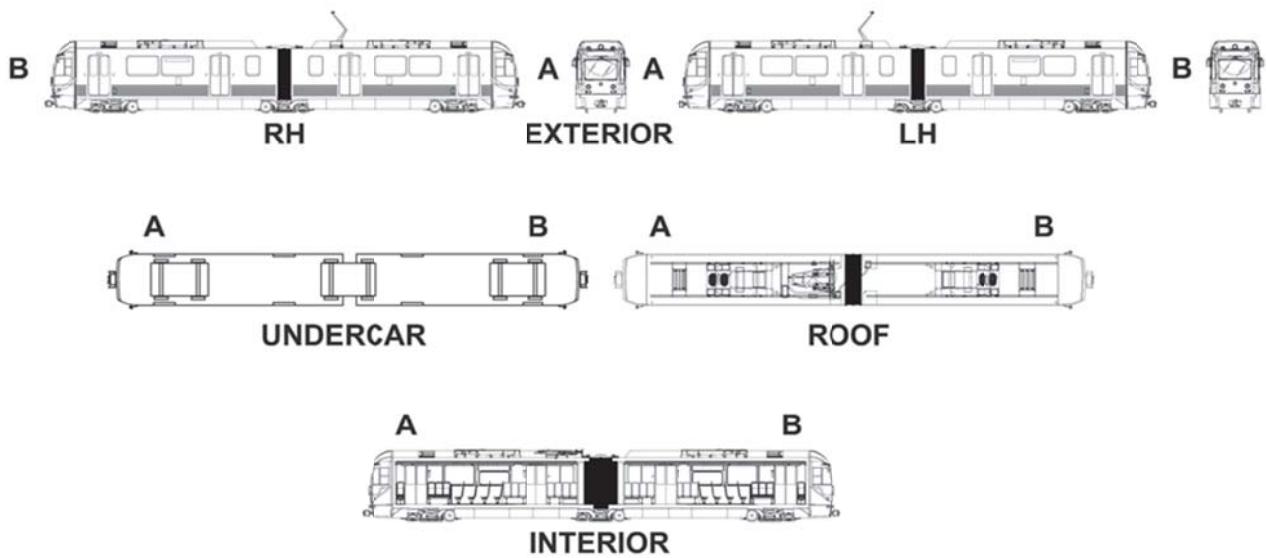
CENTERING DOME SYSTEM

Component:

Man Hours:

0.25

Maintenance Task:

REPLACEMENT
LOCATION:


P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-03-00/R-00

System:

CAR BODY

Sheet:

2/6

Subsystem/Assy:

ARTICULATION SECTION

Unit:

CENTERING DOME SYSTEM

Component:

Man Hours:

0.25

Maintenance Task:

REPLACEMENT

SAFETY PRECAUTIONS:

LACMTA Maintenance Shop Safety Rules & Regulations

WARNING: DANGER OF PERSONAL INJURY EXISTS DUE TO ELECTRICAL POWER. (750 V).

ENSURE PANTOGRAPH IS LOWERED, AND CATENARY POWER IS REMOVED AND ISOLATED PER LACMTA SAFETY RULES AND PROCEDURES.

IF POSSIBLE, WORK SHOULD BE DONE IN AN AREA WITHOUT OVERHEAD CATERNARY.

**DANGER OF PERSONAL INJURY EXISTS WHEN WORKING ON THE ROOF.
FOLLOW SAFETY PROCEDURES AND ALWAYS WEAR A SAFETY HARNESS WHEN
ACCESSING THE ROOF.**

TOOLS:

External Scaffold;

LACMTA Maintenance Shop Standard Tools Kit.

CONSUMABLES:

OIL: JET LUBE 769 LUBRICANT

SPARE PARTS:

Centering Dome System

Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-03-00/R-00

System:

CAR BODY

Sheet:

3/6

Subsystem/Assy:

ARTICULATION SECTION

Unit:

CENTERING DOME SYSTEM

Component:

Man Hours:

0.25

Maintenance Task:

REPLACEMENT

PROCEDURE:

PRELIMINARY OPERATIONS

1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations:
2. Set the Master Controller Handle to FSB position.
3. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON).
4. Lock-out and tag-out the Overhead Catenary, 750Vdc Power, per LACMTA Safety Rules and Procedures.

NOTE The tag must indicate the name of the person who removed Power.

That person knows why the Power was removed and when it safe to restore it.

Only the individual whose name appears on the tag or a person with his approval should remove the tag and restore Power.

REPLACEMENT

1. Removal

To perform Removal Procedure of Centering Dome System proceed as follows (see Figures 1 and 2):

- a. Position External Scaffold.
- b. Disengage the Outer Bellow (Refer to Sheet R-C-02-08-00-00 / R-00 Step 1).

WARNING: KEEP FIRMLY THE SUPPORT (19) WHEN REMOVE ITS ATTACHING PARTS, TO AVOID THAT THE SPRING STRETCH CAUSE INJURY TO MAINTENANCE PERSONNEL.

- c. Remove Screws (20) and Washers (21, 22).
- d. At both "A"/"B" car body sides, remove Cotter Pin (10), Pin (9) and Washer (12).
- e. Remove the two Supports (19) from Springs (18).
- f. At both sides, remove Cotter Pin (10), Pin (9) and Washer (12).
- g. Remove the two Springs (18).

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-03-00/R-00

System:

CAR BODY

Sheet:

4/6

Subsystem/Assy:

ARTICULATION SECTION

Unit:

CENTERING DOME SYSTEM

Component:

Man Hours:

0.25

Maintenance Task:

REPLACEMENT**PROCEDURE:****Removal (Cont'd)**

- h. Remove Nuts (13) and Supports (11) at both sides.
- i. Remove Nuts (14) and Threaded Bar (27) from Pin (15).
- j. Remove Screws (8).
- k. From outside, remove Nut (1), Washer (2), Gasket (3) and Washers (4, 5).
- l. From inside, remove Screw (26) and Washers (23, 24, 25).
- m. Remove Articulation Section Upper Frame (Refer to Sheet R-C-02-08-01-00/R-00 Step 11).
- n. Remove Bush (17) and Washer (16), then remove Bush (6) and Washer (7) and Pin (15) from External Dome.

2. Installation

To perform Installation Procedure of Centering Dome System proceed as follows (see Figure 1).

- a. Position Pin (15), Bush (17) and Washer (16) on the Articulation Section Upper Frame.
- b. Position Bush (6) and Washer (7) on Pin (15).
- c. Install Articulation Section Upper Frame (Refer to Sheet R-C-02-08-01-00/R-00 Step 1).
- d. Install and torque Screws (8).
- e. From inside, install Screw (26) and Washers (23, 24, 25). Torque Screws (26) as required.
- f. From outside, install Nut (1), Washer (2), Gasket (3) and Washers (4, 5). Torque Nut (1) as required.
- g. Install Nuts (14) and Threaded Bar (27) on Pin (15). Torque Nuts (14) as required.
- h. At both sides of Pin, position the two Supports (11), then install Nuts (13). Torque Nuts (13) as required.
- i. Position the two Supports (19) at both "A" / "B" car body sides and fasten them with Screws (20) and Washers (21, 22). Torque Screws (20) as required.
- j. Position Springs (18) on the Supports (11), then install Cotter Pin (10), Pin (9) and Washer (12).

**WARNING: KEEP FIRMLY THE SPRING (18) WHEN STRETCH IT DURING
INSTALLATION PROCEDURE, TO AVOID INJURY TO
MAINTENANCE PERSONNEL.**

- k. Stretch the Springs (18) in order to position it on the Supports (19).
- l. Install Cotter Pin (10), Pin (9) and Washer (12).
- m. Engage the Outer Bellow (Refer to Sheet R-C-02-08-00-00 / R-00 Step 8)
- n. Record Task results on the Defect Report Card for administrative and maintenance planning.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-03-00/R-00

System:

CAR BODY

Sheet:

5/6

Subsystem/Assy:

ARTICULATION SECTION

Unit:

CENTERING DOME SYSTEM

Component:

Man Hours:

0.25

Maintenance Task:

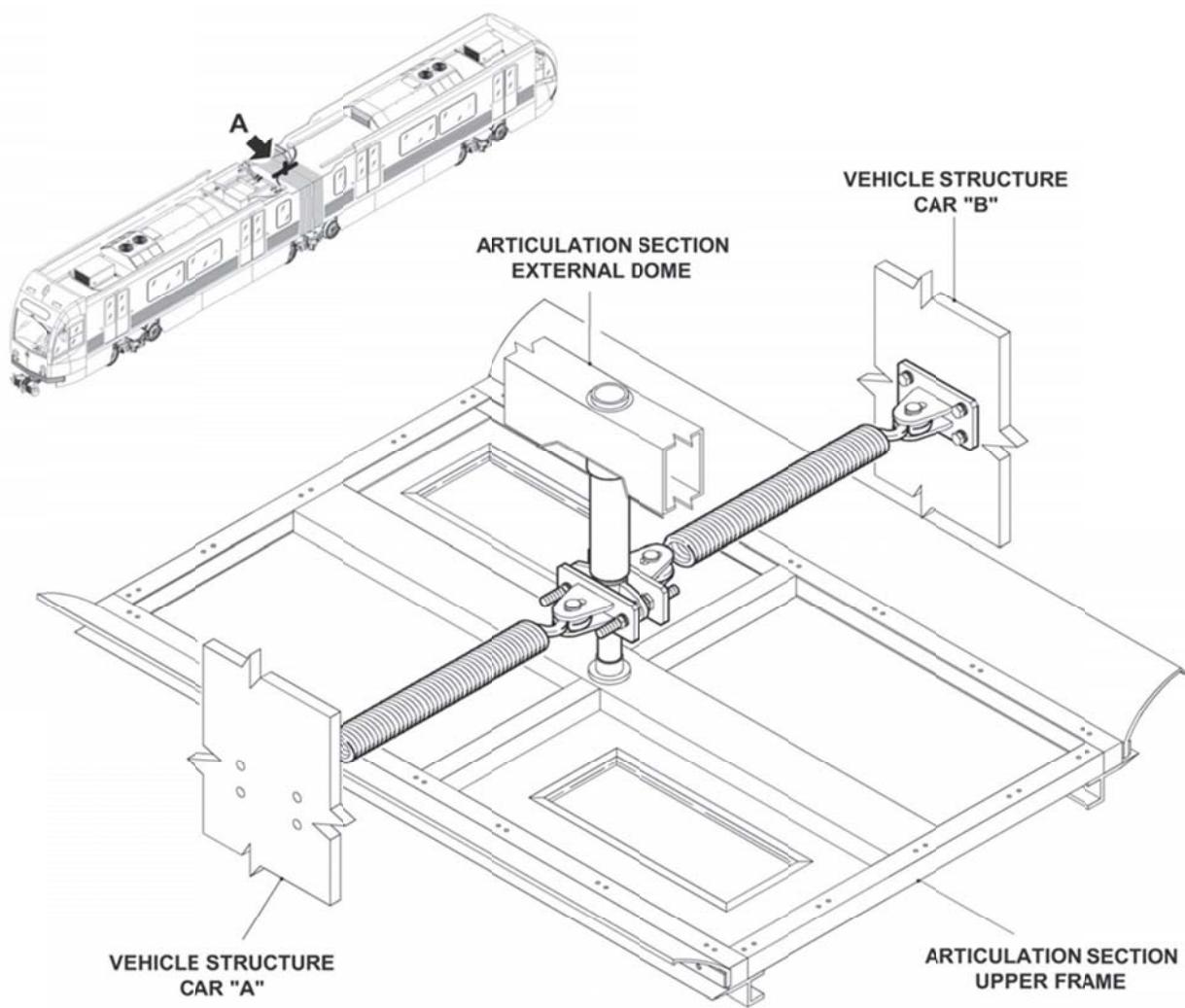
REPLACEMENT
PROCEDURE:


Figure 1 - CENTERING DOME SYSTEM

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-03-00/R-00

System:

CAR BODY

Sheet:

6/6

Subsystem/Assy:

ARTICULATION SECTION

Unit:

CENTERING DOME SYSTEM

Component:

Man Hours:

0.25

Maintenance Task:

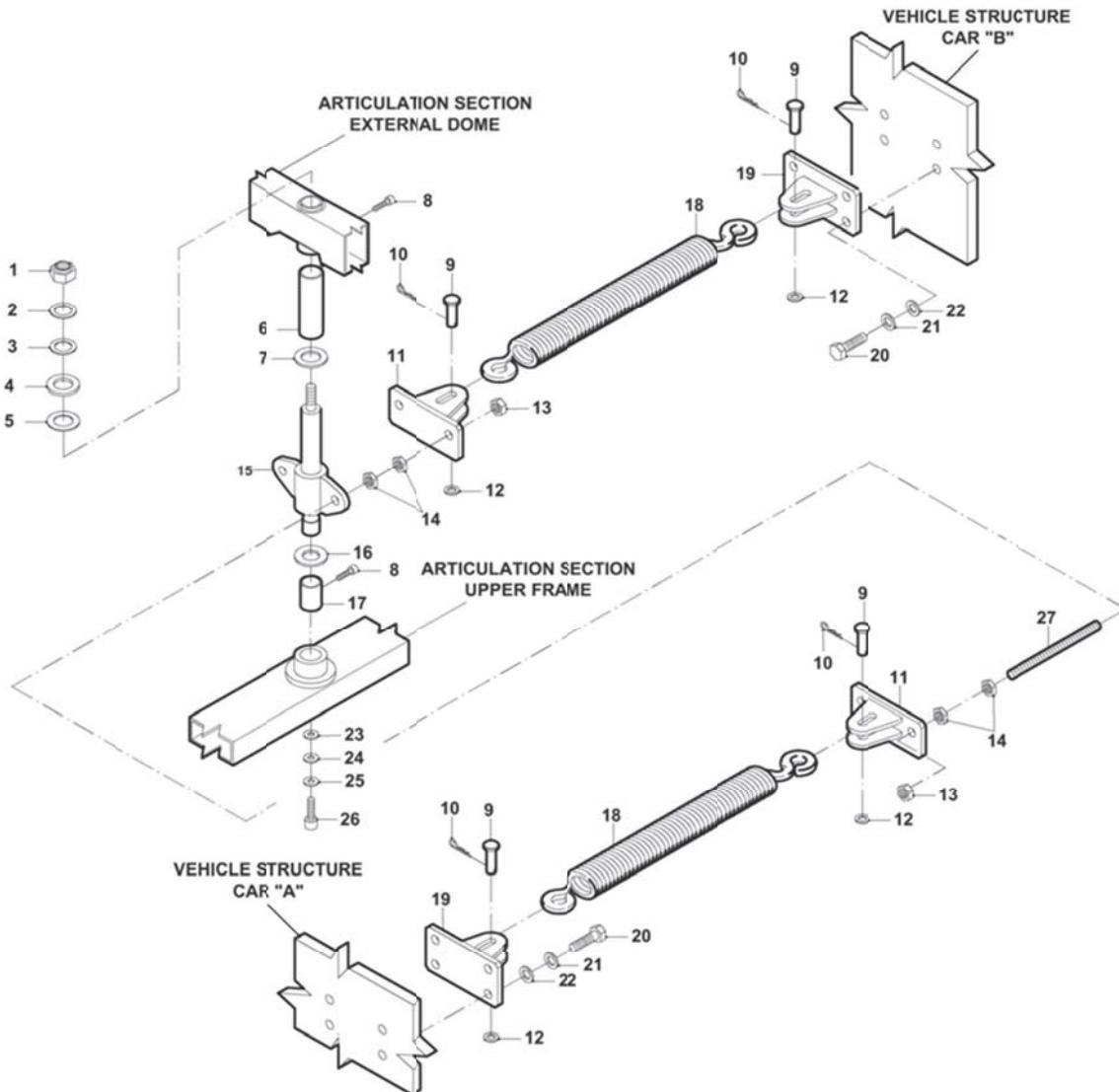
REPLACEMENT**PROCEDURE:**

Figure 2 - CENTERING DOME SYSTEM REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-04-00/R-00

System:

Sheet:

CAR BODY
1/10

Subsystem/Assy:

Unit:

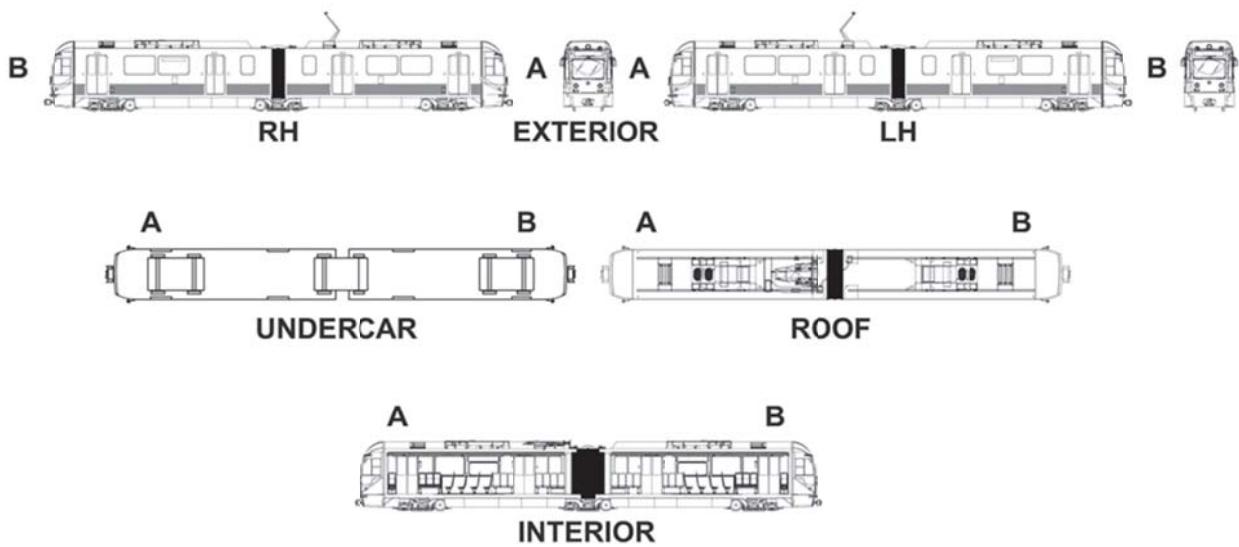
ARTICULATION SECTION
ARTICULATION FLOOR

Component:

Man Hours:

2

Maintenance Task:

REPLACEMENT
LOCATION:


P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-04-00/R-00

System:

CAR BODY

Sheet:

2/10

Subsystem/Assy:

ARTICULATION SECTION

Unit:

ARTICULATION FLOOR

Component:

Man Hours:

2

Maintenance Task:

REPLACEMENT**SAFETY PRECAUTIONS:**

LACMTA Maintenance Shop Safety Rules & Regulations

**WARNING: SOLVENTS AND SOLVENT FUMES CAN BE HARMFUL TO HEALTH.
WHEN USING SOLVENTS, WEAR EYE, SKIN, AND RESPIRATORY PROTECTION AS
REQUIRED.**
**WORK IN WELL VENTILATED AREA. AVOID REPEATED OR PROLONGED CONTACT.
KEEP SOLVENT CONTAINER CLOSED. KEEP SOLVENT AWAY FROM SPARKS,
FLAMES, AND HEAT. FAILURE TO OBSERVE THESE SAFETY PRECAUTIONS CAN
LEAD TO INJURY OR INTOXICATION.**

TOOLS:

LACMTA Maintenance Shop Standard Tools Kit.

CONSUMABLES:

LUBRICANT :	OIL: JET LUBE 769	
CLEANING AGENT:	BLEACH	
SEALER	SAFETY KLEEN PREMIUM SOLVENT (DOW CORNING Q3-3525)	P/N AA003V7
LOCTITE 242		P/N AA0034E
ZINC-O-FIX		P/N AA00D0V
ADHESIVE SCOTCH- SEALANT	GRIP 7434 (3M) (OR EQUIVALENT) BETEFIL 10211 (GREY)	P/N AA03CXD
SOUND DEADENER	AQUAPLAS 163 F	P/N AA03CXW

SPARE PARTS:

Articulation Floor Complete.

Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-08-04-00/R-00	
System: CAR BODY	Sheet: 3/10
Subsystem/Assy: ARTICULATION SECTION	Unit: ARTICULATION FLOOR
Component:	Man Hours: 2
Maintenance Task: REPLACEMENT	
PROCEDURE:	
PRELIMINARY OPERATIONS	
<ol style="list-style-type: none"> 1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations. 2. Place the Vehicle over the Pit. 3. Set the Master Controller Handle to FSB position. 4. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). 	
NOTE:	It is assumed that the Aisle Panels are removed according to Sheet R-C-02-13-08-00 / R-00.
REPLACEMENT	
a. Removal	
To perform Removal Procedure of Articulation Section Floor Assembly proceed as follows:	
<ol style="list-style-type: none"> 1. Remove Articulation Section Floor - Central Part. 2. Remove Articulation Section Floor - Lateral Parts. 	
1. Articulation Section Floor - Central Part Removal (Refer to Figure 1) To Removal Floor, Central Parts, proceed as follows:	
<ol style="list-style-type: none"> a. Remove molding screws (1) and molding (2). b. Remove Central Part (3). 	
2. Articulation Section Floor - Lateral Parts Removal (Refer to Figure 2) To Removal Floor, Lateral Parts, proceed as follows:	
<ol style="list-style-type: none"> a. Remove screws (1) and moldings (2, 3, 4). b. Remove Lateral Parts (5). 	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-04-00/R-00

System:

CAR BODY

Sheet:

4/10

Subsystem/Assy:

ARTICULATION SECTION

Unit:

ARTICULATION FLOOR

Component:

Man Hours:

2

Maintenance Task:

REPLACEMENT

PROCEDURE:

b. Disassembly

The Articulation Section Floor Disassembly consists of the following procedures (Refer to Figure 3):

1. Disassemble the two Central Floor Frames (37) as follows:
 - a. Remove Bent Sheets (46) by removing Screws (45).
 - b. Remove Pin (48), Washers (47).
 - c. Disconnect the two Central Floor Frames (37) and remove Gasket (44).
2. Disassemble each Central Floor Frame (37) as follows:
 - a. Remove Moldings (33) by removing Screws (30).
 - b. Remove Screws (29, 34) and disassemble Molding (31, 33) and Gasket (32).
 - c. Remove Ribbed Covering (35) by scratching it from related panel.
 - d. Remove Protection Sheet (39) and Insulating Panel (40) by removing Screws (41).
 - e. Remove LH/RH Plate (38) by removing Screws (36).
3. Disassemble each Lateral Floor Frame (12) as follows:
 - a. Remove Molding (6) by removing Screws (1).
 - b. Remove Ribbed Covering (9) by scratching it from related panel.
 - c. Remove Gasket (10).
 - d. Remove Protection Sheet (27) and Insulating Panel (26) by removing Screws (28).
 - e. Remove Shoes (19) by removing Screws (24).
 - f. Remove Plate (14, 15) and Shoe (16) by removing Screws (17).
 - g. Remove Molding (13) by removing Screws (11).
 - h. Remove Gasket (21) and Plate (22) by removing Screws (23).
4. Remove Shoes (20) from Car Body structure by removing Screws (25).

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-08-04-00/R-00	
System: CAR BODY	Sheet: 5/10
Subsystem/Assy: ARTICULATION SECTION	Unit: ARTICULATION FLOOR
Component:	Man Hours: 2
Maintenance Task: REPLACEMENT	
PROCEDURE (CONT'D):	
c. Reassembly <p>The Articulation Section Floor Reassembly consists of the following procedures (Refer to Figure 3)</p> <p>NOTE: Apply Loctite 242 to all Threaded Fasteners prior to fastening.</p> <ol style="list-style-type: none"> 1. Assemble each Lateral Floor Frame (12) as follows: <ol style="list-style-type: none"> a. Position Gasket (21) and Plate (22) and lock them by installing Screws (23). Torque Screws (23). b. Clean floor panel using degreasing solvent. <p>CAUTION: DURING MOLDING INSTALLATION, FOLLOWS STRICTLY GLUE MANUFACTURER INSTRUCTIONS FOR THE SURFACE PREPARATION, ENVIRONMENTAL CONDITIONS AND TIME NECESSARY FOR ADHESIVE SETTING.</p> <ol style="list-style-type: none"> c. Apply glue only (type SCOTCH-GRIP 7434 Adhesive) on the ply-metal panel surface involved. d. Position Molding (13) and install Screws (11). Torque Screws (11). e. Position Plate (14, 15) and Shoe (16) and lock them by installing Screws (17). Torque Screws (17). f. Position Shoes (19) and lock them by installing Screws (24). Torque Screws (24). g. Position Protection Sheet (27) and Insulating Panel (26) and lock them by installing Screws (28). Torque Screws (28). h. Clean floor panel using degreasing solvent. <p>CAUTION: DURING RIBBED COVERING INSTALLATION, FOLLOWS STRICTLY GLUE MANUFACTURER INSTRUCTIONS SUCH AS SURFACE PREPARATION, ENVIRONMENTAL CONDITIONS AND TIME NECESSARY FOR ADHESIVE SET.</p> <ol style="list-style-type: none"> i. Apply glue only (type SCOTCH-GRIP 7434 Adhesive) on the ply-metal panel surface involved. j. Install Ribbed Covering (9). k. Check / adjust the installation of rubber sheets. Remove contingent air bubbles or wrinkles using a clean spatula or piece of wood free of indentations. <p>CAUTION: AVOID REMOVING BUBBLES BY PIERCING THE RIBBED COVERING.</p> <ol style="list-style-type: none"> l. Position Molding (6) and lock it by installing Screws (1). Torque Screws (1). 	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-04-00/R-00

System:

CAR BODY

Sheet:

6/10

Subsystem/Assy:

ARTICULATION SECTION

Unit:

ARTICULATION FLOOR

Component:

Man Hours:

2

Maintenance Task:

REPLACEMENT

PROCEDURE (CONT'D):

2. Assemble each Central Floor Frame (37) as follows:

- a. Position LH/RH Plate (38) and lock them by installing Screws (36). Torque Screws (36).
- b. Position Protection Sheet (39) and Insulating Panel (40) and lock them by installing Screws (41). Torque Screws (41).
- c. Clean floor panel using degreasing solvent.

CAUTION: DURING RIBBED COVERING INSTALLATION, FOLLOW STRICTLY GLUE MANUFACTURER INSTRUCTIONS SUCH AS SURFACE PREPARATION, ENVIRONMENTAL CONDITIONS AND TIME NECESSARY FOR ADHESIVE SET.

- d. Apply glue only (type SCOTCH-GRIP 7434 Adhesive) on the ply-metal panel surface involved.
- e. Install Ribbed Covering (35).
- f. Check / adjust the installation of rubber sheets. Remove contingent air bubbles or wrinkles using a clean spatula or piece of wood free of indentations.

CAUTION: AVOID REMOVING BUBBLES BY PIERCING THE RIBBED COVERING.

- g. Position Molding (33) and install Screws (30).
- h. Assemble Molding (31, 33) and Gasket (32) and lock them by Screws (29, 34). Torque Screws (29, 30, 34).

3. Assemble the two Central Floor Frames (37) as follows:

- a. Assemble the two Central Floor Frames (37) and Gasket (44) as shown in the figure.
- b. Install Pin (48) and Washers (47).
- c. Install Bent Sheet (46) and lock it by installing Screws (45). Torque Screws (45).
- d. Clean floor panel using degreasing solvent.

CAUTION: DURING MOLDING INSTALLATION, FOLLOW STRICTLY GLUE MANUFACTURER INSTRUCTIONS FOR SURFACE PREPARATION, ENVIRONMENTAL CONDITIONS AND TIME NECESSARY FOR ADHESIVE SETTING.

- e. Apply glue only (type SCOTCH-GRIP 7434 Adhesive) on the ply-metal panel surface involved.

4. Position Shoes (20) on Car Body structure and lock it by installing Screws (25). Torque Screws (25) and lock them with LOCTITE 242.

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-08-04-00/R-00	
System: CAR BODY	Sheet: 7/10
Subsystem/Assy: ARTICULATION SECTION	Unit: ARTICULATION FLOOR
Component:	Man Hours: 2
Maintenance Task: REPLACEMENT	
PROCEDURE (CONT'D):	
d. Installation	
To perform Installation Procedure of Articulation Section Floor Assembly proceed as follows:	
<ol style="list-style-type: none"> 1. Install Articulation Section Floor - Lateral Parts. 2. Install Articulation Section Floor - Central Part. 	
1. Articulation Section Floor - Lateral Parts Installation (Refer to Figure 2) To Install Floor, Lateral Parts, proceed as follows:	
<ol style="list-style-type: none"> a. Check installation and condition of "C" shoes (6, on floor, lateral parts) and flat shoes (7, on Car Body structure). b. Position the floor, lateral parts (5). c. Install moldings (2, 3, 4). Install screws (1) and lock them with LOCTITE 242. 	
CAUTION: DURING MOLDING INSTALLATION, FOLLOWS STRICTLY GLUE MANUFACTURER INSTRUCTIONS FOR THE SURFACE PREPARATION, ENVIROMENTAL CONDITIONS AND TIME NECESSARY FOR ADHESIVE SETTING.	
<ol style="list-style-type: none"> d. Record Task results on the Defect Report Card for administrative and maintenance planning. 	
2. Articulation Section Floor - Central Part Installation (Refer to Figure 1). To Install Floor, Central Parts, proceed as follows:	
<ol style="list-style-type: none"> a. Clean the floor central part seat. b. Position the floor central part (3). c. Install moldings (2). Install screws (1) and lock them with LOCTITE 242. d. Record Task results on the Defect Report Card for administrative and maintenance planning. 	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-04-00/R-00

System:

CAR BODY

Sheet:

8/10

Subsystem/Assy:

ARTICULATION SECTION

Unit:

ARTICULATION FLOOR

Component:

Man Hours:

2

Maintenance Task:

REPLACEMENT

PROCEDURE (CONT'D):

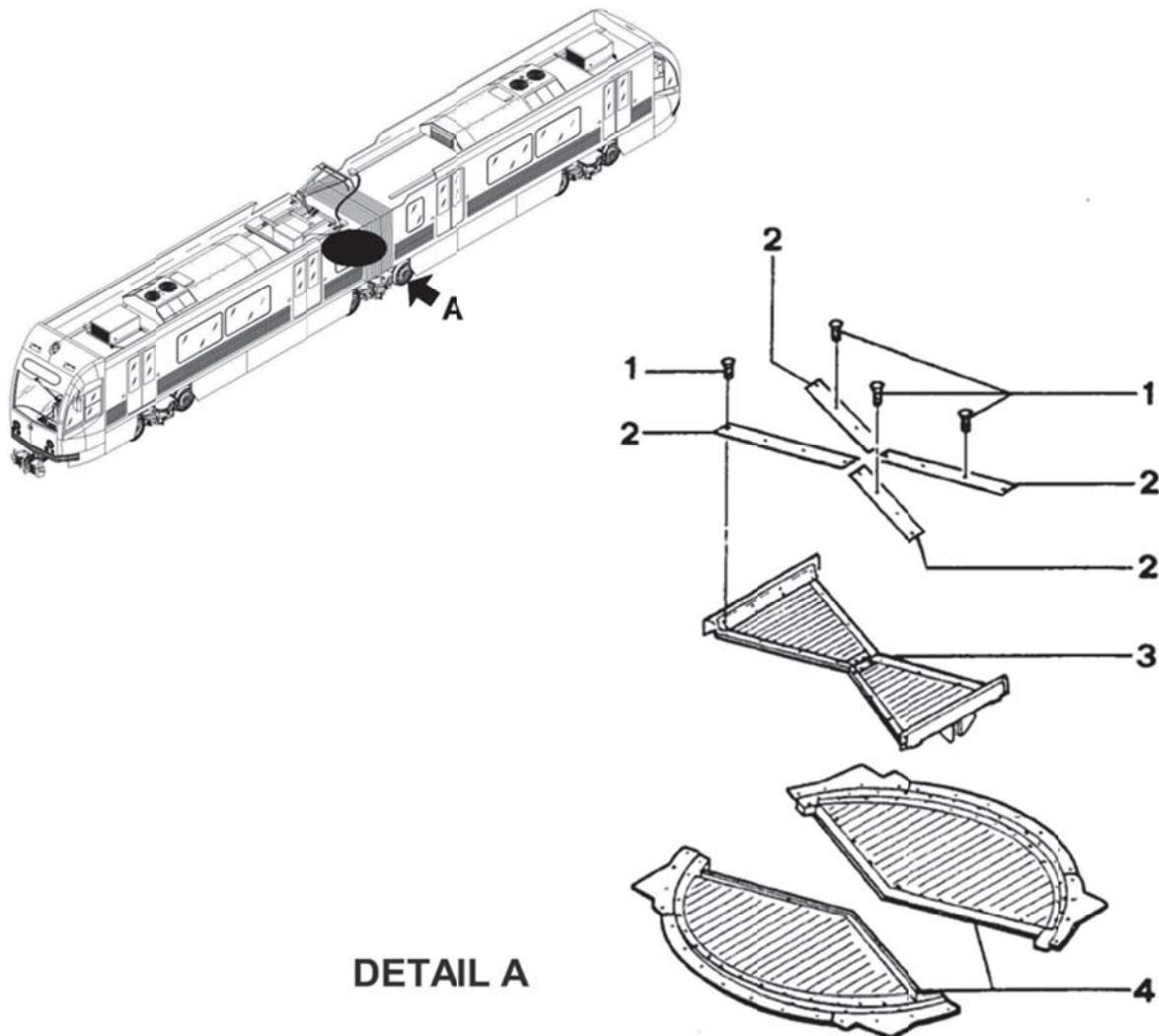


Figure 1

FLOOR CENTRAL PART REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-04-00/R-00

System:

CAR BODY

Sheet:

9/10

Subsystem/Assy:

ARTICULATION SECTION

Unit:

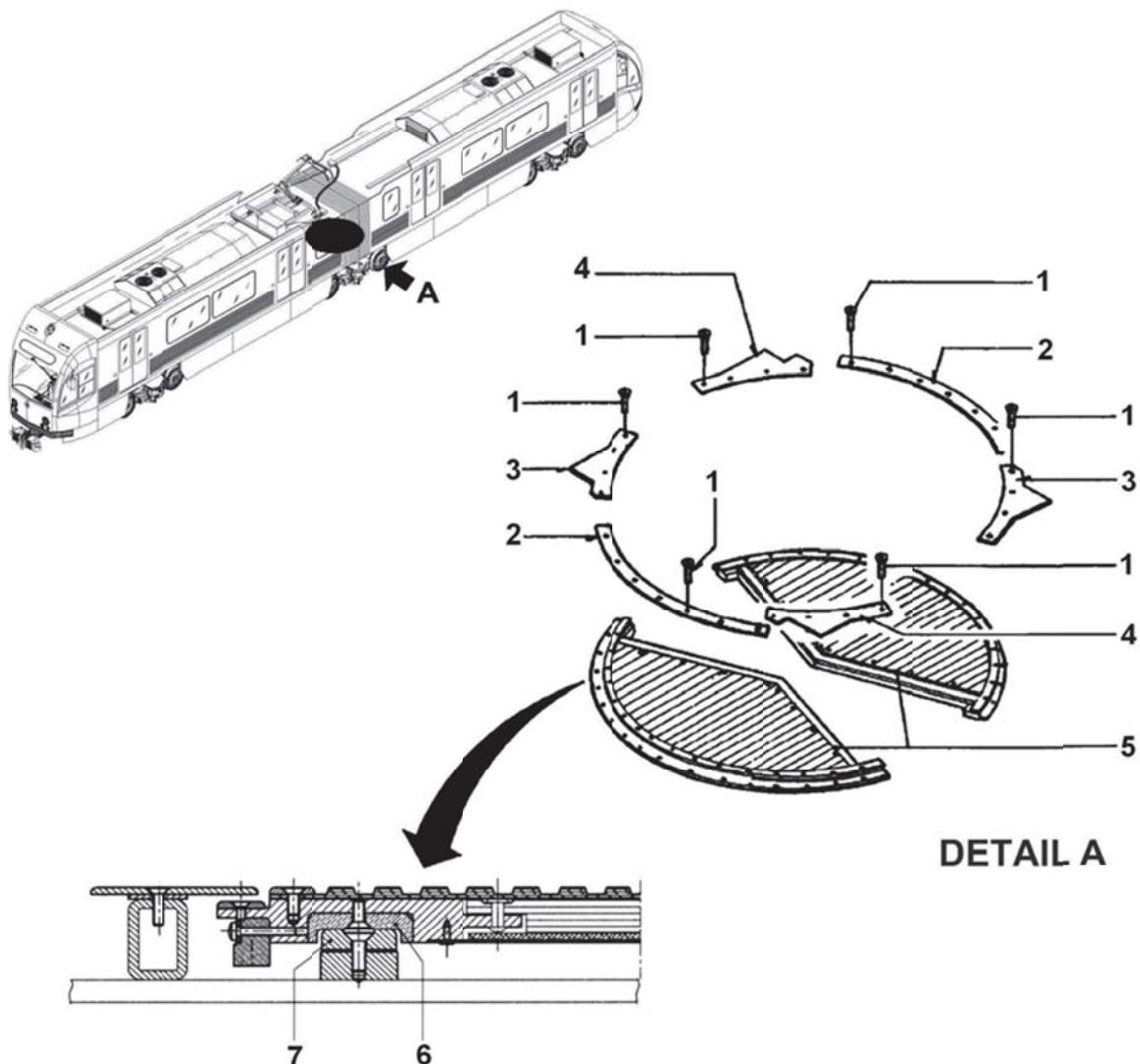
ARTICULATION FLOOR

Component:

Man Hours:

2

Maintenance Task:

REPLACEMENT
PROCEDURE (CONT'D):
**Figure 2****FLOOR LATERAL PART REMOVAL/INSTALLATION**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-04-00/R-00

System:

CAR BODY

Sheet:

10/10

Subsystem/Assy:

ARTICULATION SECTION

Unit:

ARTICULATION FLOOR

Component:

Man Hours:

2

Maintenance Task:

REPLACEMENT

PROCEDURE (CONT'D):

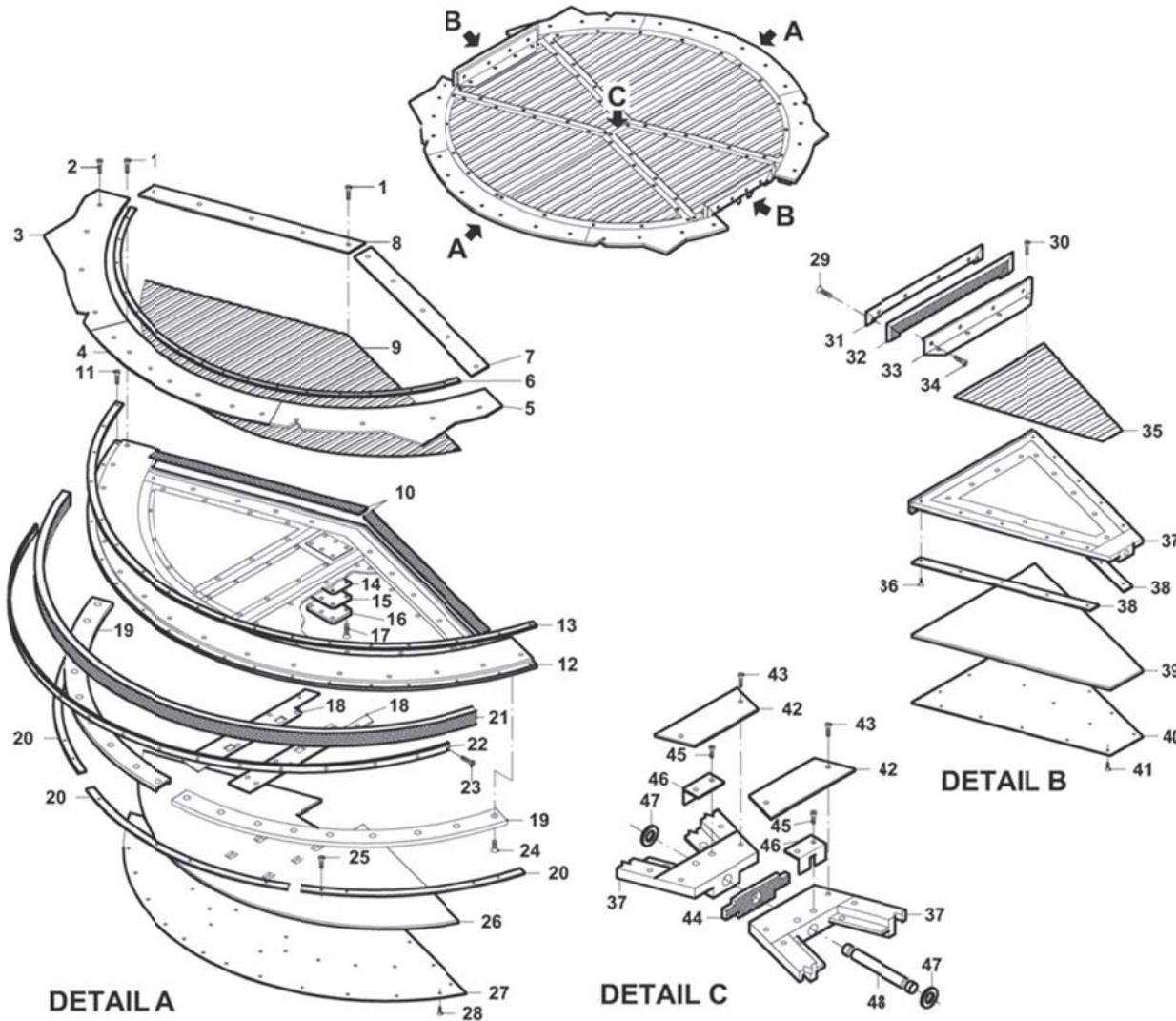


Figure 3 ARTICULATION FLOOR ASSY DISASSEMBLY

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-06-00/R-00

System:

CAR BODY

Sheet:

1/6

Subsystem/Assy:

ARTICULATION SECTION

Unit:

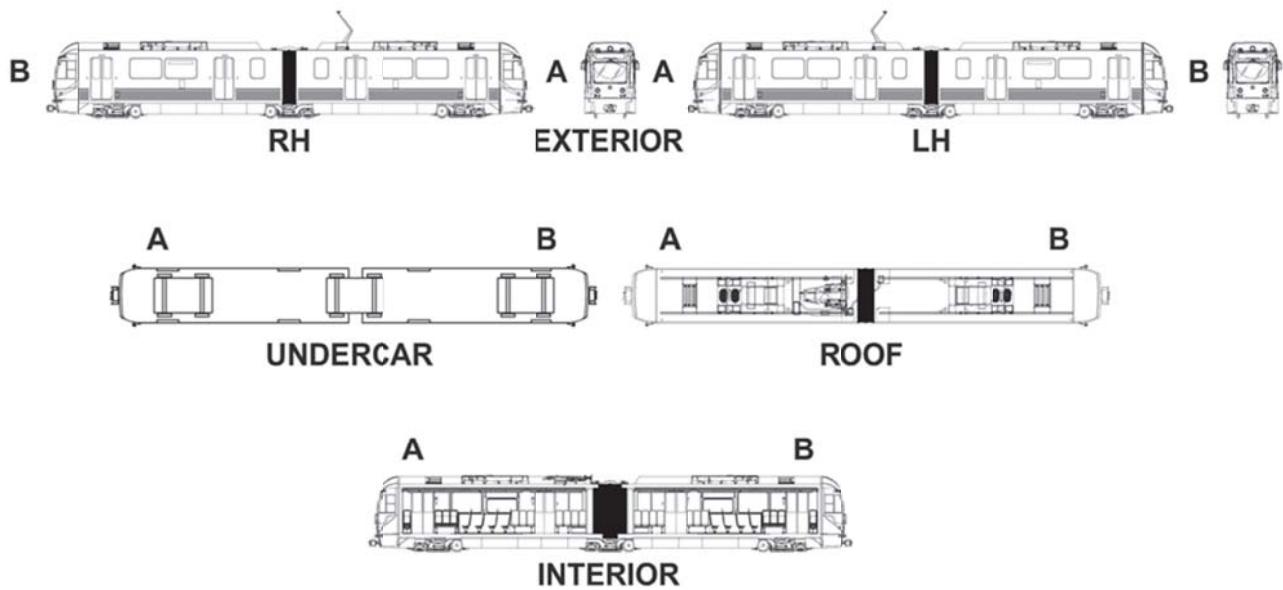
OUTER BELLOW ASSEMBLY

Component:

Man Hours:

2

Maintenance Task:

REPLACEMENT
LOCATION:


P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-06-00/R-00

System:

CAR BODY

Sheet:

2/6

Subsystem/Assy:

ARTICULATION SECTION

Unit:

OUTER BELLOW ASSEMBLY

Component:

Man Hours:

2

Maintenance Task:

REPLACEMENT

SAFETY PRECAUTIONS:

LACMTA Maintenance Shop Safety Rules & Regulations

WARNING: DANGER OF PERSONAL INJURY EXISTS DUE TO ELECTRICAL POWER. (750 V). ENSURE PANTOGRAPH IS LOWERED, AND CATENARY POWER IS REMOVED AND ISOLATED PER LACMTA SAFETY RULES AND PROCEDURES. IF POSSIBLE, WORK SHOULD BE DONE IN AN AREA WITHOUT OVERHEAD CATENARY.

WARNING: ALWAYS WEAR A SAFETY HARNESS WHEN ACCESSING THE ROOF

WARNING: THE OUTER BELLOW WEIGHS 85 LB (38.5 KG). MAKE SURE TO SECURE IT DURING REMOVAL PROCEDURE.

TOOLS:

External Scaffold.

LACMTA Overhaul Standard Tool kit.

Overhead Crane (min. capacity 200 Lb).

CONSUMABLES:

Loctite 242 P/N AA0034E

Cleaner / Degreaser

SPARE PARTS:

Outer Bellow Assembly

Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-08-06-00/R-00	
System: CAR BODY	Sheet: 3/6
Subsystem/Assy: ARTICULATION SECTION	Unit: OUTER BELLOW ASSEMBLY
Component:	Man Hours: 2
Maintenance Task: REPLACEMENT	
PROCEDURE:	
PRELIMINARY OPERATIONS	
<ol style="list-style-type: none"> 1. Set the Vehicle in accordance with LACMTA Maintenance Shop Safety Regulations and position it in order to have it available to safely accomplish the Task. 2. Make sure that: <ol style="list-style-type: none"> a) All Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). b) Wheel Chocks are placed to prevent the vehicle from moving in both running directions. c) The Transfer Switch is turned to OFF. d) The Pantograph Control Motor Switch (5F02 CB LV Locker "A" Section) is switched off. e) The Battery Disconnect Circuit Breaker (3F01) is switched off. 3. Lock-out and tag-out the Overhead Catenary, 750Vdc Power, per LACMTA Safety Rules and Procedures. 	
<p>NOTE The tag must indicate the name of the person who removed Power. That person knows why the Power was removed and when it safe to restore it.</p> <p>Only the individual whose name appears on the tag or a person with his approval should remove the tag and restore Power.</p>	
<ol style="list-style-type: none"> 4. Release Pneumatic Pressure from the Pneumatic System Main Line by opening the 1/2-inch Drain Valve of each Main Reservoir. 	
<p>NOTE: It assumed that the HV Cables and Ground Cables of the Articulation Section are removed according to Sheet R-C-02-08-01-00 / R-00 Steps 5 & 6.</p>	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-06-00/R-00

System:

CAR BODY

Sheet:

4/6

Subsystem/Assy:

ARTICULATION SECTION

Unit:

OUTER BELLOW ASSEMBLY

Component:

Man Hours:

2

Maintenance Task:

REPLACEMENT

PROCEDURE (CONT'D):

REPLACEMENT

To perform Replacement Procedure of Outer Bellow Assembly proceed as follows (Refer to Figure 1):

a. Removal

**WARNING: THE OUTER BELLOW WEIGHS 85 LB (38.5 KG).
MAKE SURE TO SECURE IT DURING REMOVAL PROCEDURE.**

The following Procedure is referred to each Outer Bellow Assembly ("A" and "B" side)

1. Reach the Center Tie Rod (10) located under the Bellow (1), LH side, next to Art Section Structure Center.
2. Loosen and remove Nuts (8) from Tie Rod (10) on LH side.
3. Disengage the Tie Rod (10).
4. Loosen and remove Nuts (9) from Tie Rod (11) on LH side.
5. Remove Holder (12) together with Tie Rod (11).
6. Disengage the Holder of the Tie Rod (10) from the relevant U-shaped Retaining Frame.
7. Repeat step 1. to 6. for RH side.
8. Repeat step 1. to 7. for LH & RH tie rods located next to each Car Body Section Rear End.
9. Gain access to the Vehicle Roof.
10. Work on the Bellow in order to gain clearance from Art Sect Center Dome Structure and Car Body Section Rear End.
11. Position, through the gained clearance and underneath the Bellow, a suitable Sling to support the Bellow.
12. Connect an Overhead Crane (Min. capacity 200 Lb) to the Sling.
13. Carefully operate the Overhead Crane to remove the Bellow (1).

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-06-00/R-00

System:

CAR BODY

Sheet:

5/6

Subsystem/Assy:

ARTICULATION SECTION

Unit:

OUTER BELLOW ASSEMBLY

Component:

Man Hours:

2

Maintenance Task:

REPLACEMENT

PROCEDURE (CONT'D):

b. Installation

1. Clean the Bellow U-shaped Retaining Frame (on Car Body Section Rear Ends and on Art. Sect. Center Dome).
2. Position the Bellow (1) using suitable Overhead Crane (Min. capacity 200 Lb).
3. Reach the Vehicle Roof.
4. Work in order to engage the Holder of the Tie Rod (10) on the relevant U-shaped Retaining Frame next to the Car Body Section Rear End on both LH &RH sides. At the same time work in order to remove the Sling that passes underneath the Bellow, used to support the Bellow during its lifting by means the Overhead Crane.
5. Work on the Bellow in order to Engage the Holder of the Tie Rod (10) on the relevant U-shaped Retaining Frame next to the Art Sect Structure Center Dome on both LH &RH sides. and, at the same time, completely remove the Sling.
6. Check for proper installation of the Bellow in both the U-shaped Retaining Frames.
7. Insert the Tie Rod (10) in the relevant Support, LH side on the Car Body Section Rear End.
8. Install Nuts (8) and tighten by hand to half of the Tie Rod length.
9. Repeat steps 7and 8 for RH side. next to the Car Body Section Rear End.
10. Torque the four Nuts (8) as required.
11. Insert the Tie Rod (11) in the relevant Support together with the Holder (12), LH side next to the Car Body Section Rear End.
12. Install Nuts (9) and tighten by hand to half of the Tie Rod length.
13. Repeat steps 11 and 12 for RH side next to the Car Body Section Rear End.
14. Insert the Tie Rod (10) in the Support, LH side next to the Art Sect Structure Center Dome.
15. Install Nuts (8) and tighten by hand to half of the Tie Rod length.
16. Repeat steps 14 and 15 for RH side next to the Art Sect Structure Center Dome.
17. Torque the four Nuts (8) as required.
18. Insert the Tie Rod (11) in the Support together with Holder (12), LH side next to Art Sect Structure Center Dome.
19. Install Nuts (9) and tighten by hand to half of the Tie Rod length.
20. Repeat steps 18 and 19 for RH side next to the Art Sect Structure Center Dome.
21. Record Task results on the Defect Report Card for administrative and maintenance planning.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-08-06-00/R-00

System:

CAR BODY

Sheet:

6/6

Subsystem/Assy:

ARTICULATION SECTION

Unit:

OUTER BELLOW ASSEMBLY

Component:

Man Hours:

2

Maintenance Task:

REPLACEMENT

PROCEDURE (CONT'D):

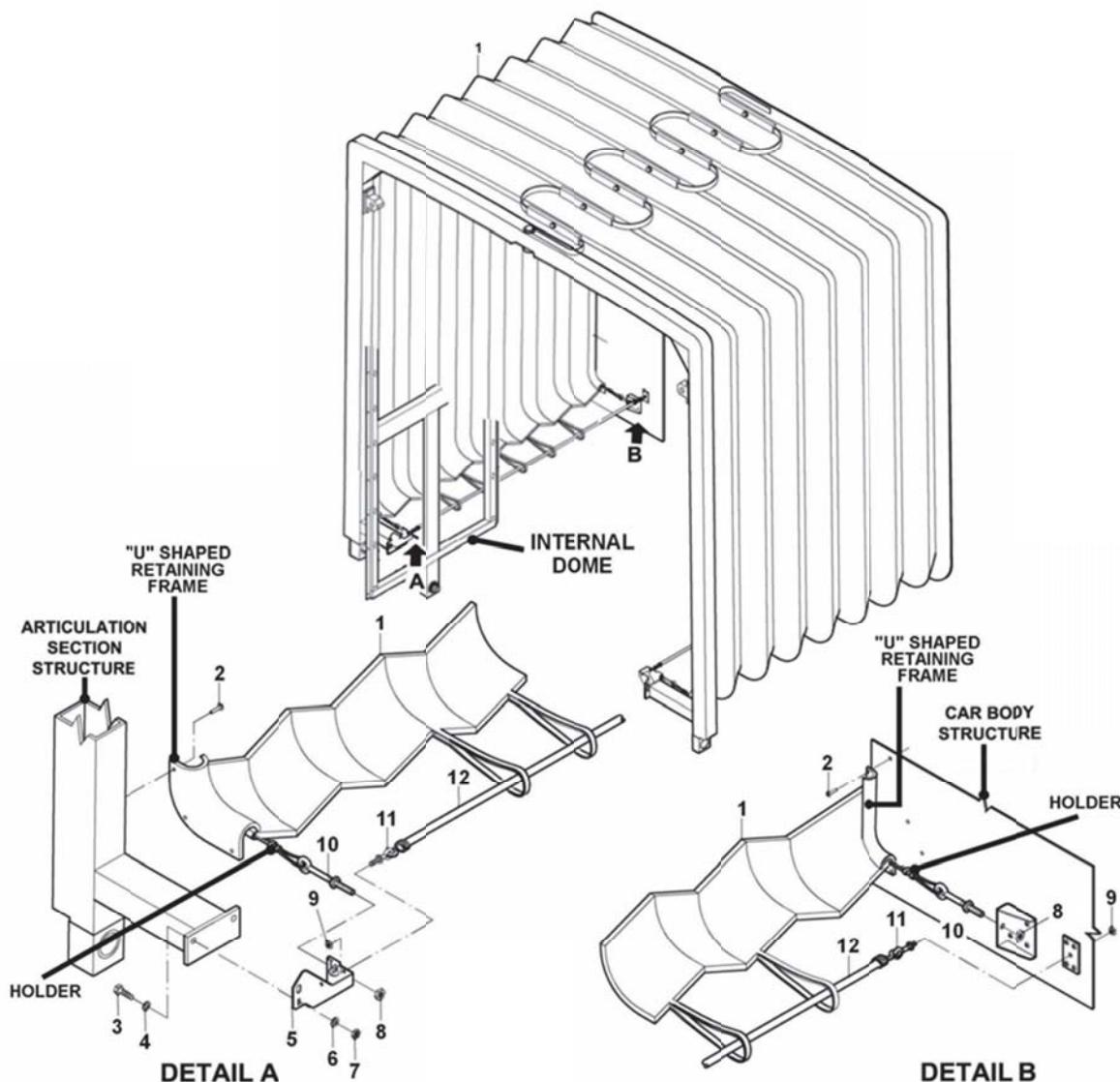


Figure 1 OUTER BELLOW REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-09-01-00/R-00

System:

CAR BODY

Sheet:

1/6

Subsystem/Assy:

PASSENGER SEATS

Unit:

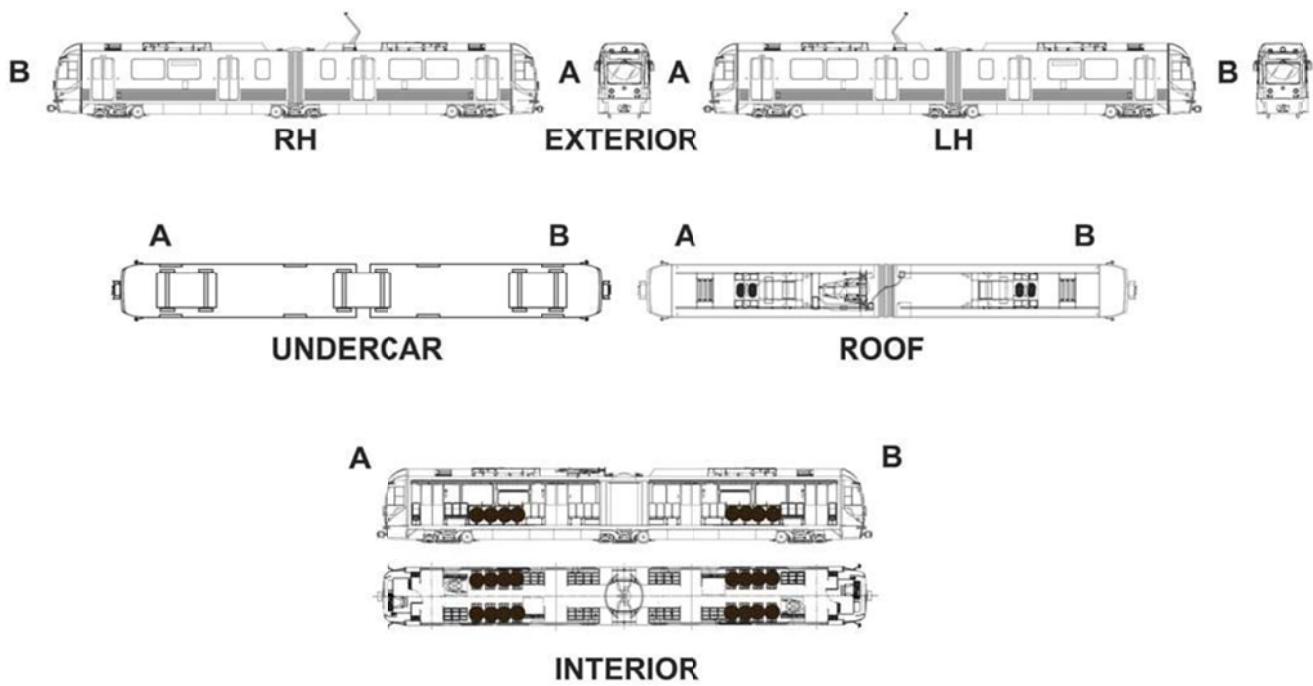
2 SEATERS TRANSVERSAL ASSY (LH & RH)

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT
LOCATION:


P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-09-01-00/R-00

System:

CAR BODY

Sheet:

2/6

Subsystem/Assy:

PASSENGER SEATS

Unit:

2 SEATERS TRANSVERSAL ASSY (LH & RH)

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**SAFETY PRECAUTIONS:**

LACMTA Maintenance Shop Safety Rules & Regulations

WARNING: THE “ 2 SEATERS TRANSVERSAL ” ASSY WEIGHS 71 LB (32 KG).

**DURING THE REPLACEMENT PROCEDURE MAKE SURE TO SUPPORT THE UNIT TO
PREVENT UNSAFE CONDITIONS.**

TOOLS:

LACMTA Maintenance Shop Standard Tools kit.

Overhead Crane (100 lb minimum capacity).

CONSUMABLES:

N/A

SPARE PARTS:

2 Seaters Transversal Assembly, RH P/N AA048FR (1SB009R5) Qty 8

2 Seaters Transversal Assembly, LH P/N AA048FP (1SB009L5) Qty 8

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code:	
R-C-02-09-01-00/R-00	
System:	Sheet:
CAR BODY	3/6
Subsystem/Assy:	Unit:
PASSENGER SEATS	2 SEATERS TRANSVERSAL ASSY (LH & RH)
Component:	Man Hours:
	1
Maintenance Task:	
REPLACEMENT	
PROCEDURE:	
<p>PRELIMINARY OPERATIONS</p> <ol style="list-style-type: none"> 1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations. 2. Place the Vehicle over the Pit. 3. Set the Master Controller Handle to FSB position. 4. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake " ON). 	
<p>EXPLANATORY NOTES</p> <p>This Sheet provides detailed Instructions for the Replacement of each one of the four (4) "2-Seaters Transversal Assembly, RH and LH" installed on the Vehicle (refer to Figure 1, item 4 & 7).</p> <p>NOTE: It is recommended to keep the attaching hardware for later use and discard the Lock Washers once removed.</p>	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-09-01-00/R-00

System:

CAR BODY

Sheet:

4/6

Subsystem/Assy:

PASSENGER SEATS

Unit:

2 SEATERS TRANSVERSAL ASSY (LH & RH)

Component:

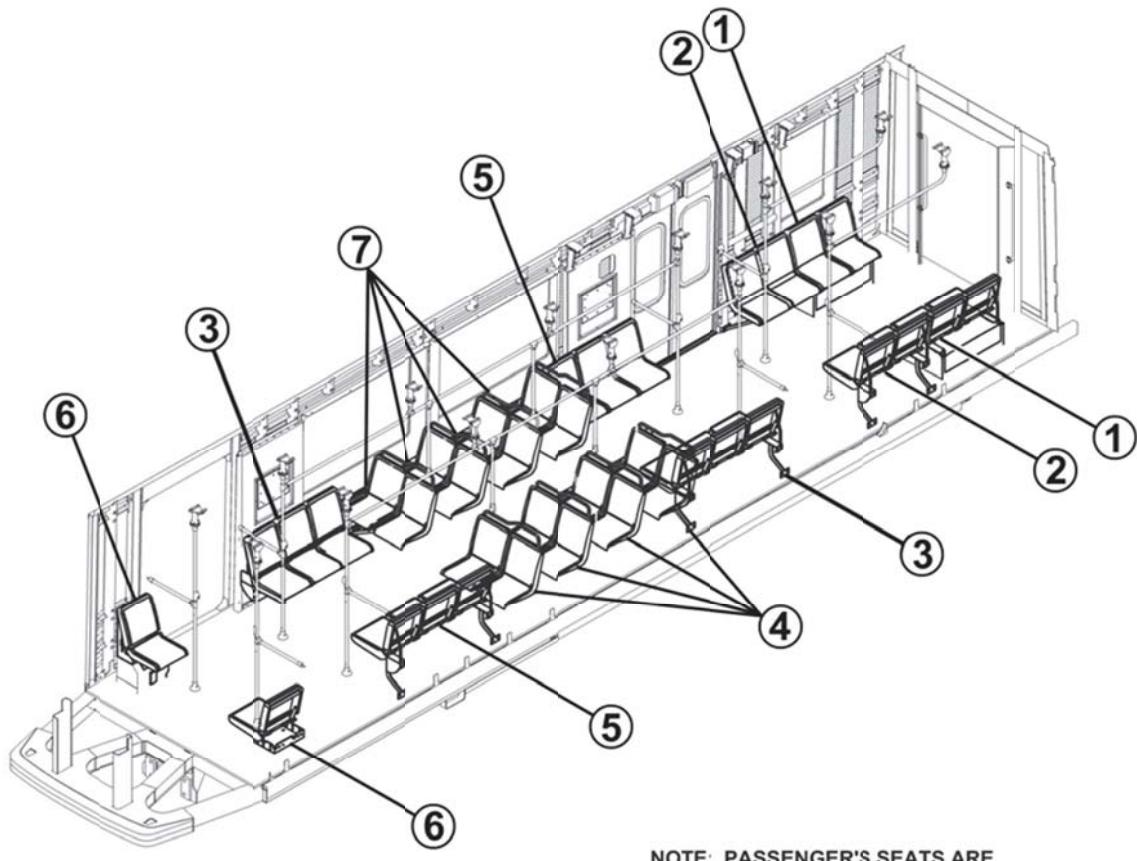
Man Hours:

1

Maintenance Task:

REPLACEMENT

PROCEDURE (CONT'D):



NOTE: PASSENGER'S SEATS ARE SIMMETRICALLY INSTALLED IN THE "A" AND "B" BODY CARS

- | | | |
|------------------------------------|-------------------------|----------------------------------|
| 1. 2-SEATERS LONG. ASSY (OVER BOX) | 2. 2-SEATERS LONG. ASSY | 3. 3-SEATERS LIFTABLE LONG. SEAT |
| 4. 2-SEATERS TRANSV. LH ASSY | 5. 3-SEATERS LONG. ASSY | 6. 1-SEATER LIFTABLE LONG. ASSY |
| 7. 2-SEATERS TRANSV. RH ASSY | | |

Figure 1 PASSENGER SEATS

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-09-01-00/R-00	
System: CAR BODY	Sheet: 5/6
Subsystem/Assy: PASSENGER SEATS	Unit: 2 SEATERS TRANSVERSAL ASSY (LH & RH)
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
PROCEDURE CONT'D):	
<p>WARNING: THE "2 SEATERS TRANSVERSAL" ASSY WEIGHS 71 LB (32 KG).</p> <p>DURING THE REPLACEMENT PROCEDURE MAKE SURE TO SUPPORT THE UNIT TO PREVENT UNSAFE CONDITIONS.</p>	
REMOVAL (Refer to Figure 2):	
<ol style="list-style-type: none"> 1. From the lower side, remove Screws (290) and Washers (310) and disconnect Upper and Lower Covers (230, 240). 2. Remove Screws (170) and Washers (190, 180). 3. Support the Seat (10, 20) and remove Screws (170), Washers (190, 180) and Shims (130). 4. Remove the Seat Assy (10, 20). 5. Discard Lock-Washers (190). 	
INSTALLATION (Refer to Figure 2):	
<ol style="list-style-type: none"> 1. Position the Seat (10, 20) in its related seat. 2. Install Screws (170), "new" Lock-Washers (190), Washers (180) and Shims (130). 3. Torque Screws (170) as required. 4. On the lower side, position Upper and Lower Covers (240, 230) as shown in the figure. 5. Install Screws (290) and Washers (310). 6. Torque Screws (290) as required. 7. Record Task results on the Defect Report Card for administrative and maintenance planning. 	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-09-01-00/R-00

System:

CAR BODY

Sheet:

6/6

Subsystem/Assy:

PASSENGER SEATS

Unit:

2 SEATERS TRANSVERSAL ASSY (LH & RH)

Component:

Man Hours:

1

Maintenance Task:

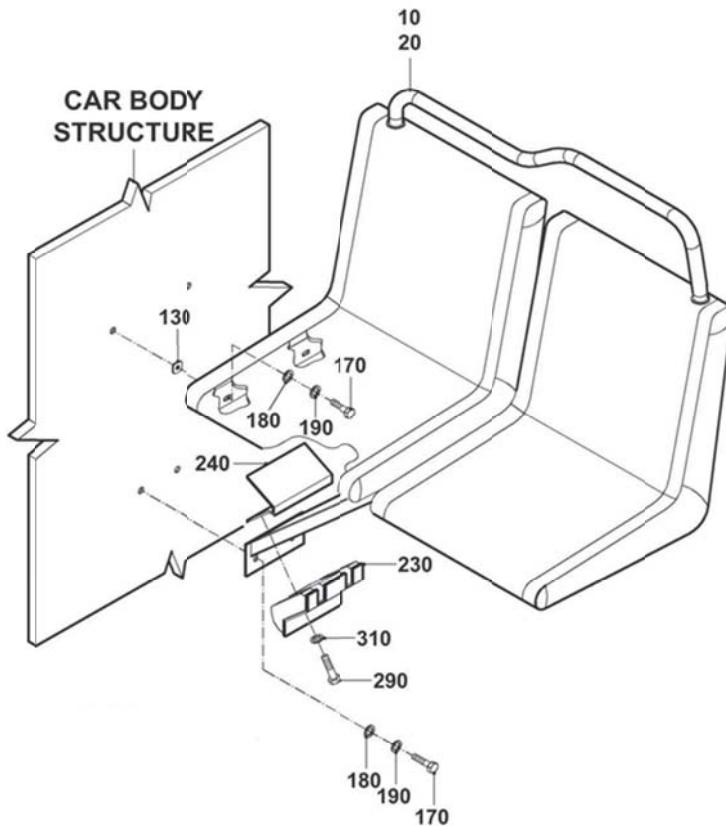
REPLACEMENT**PROCEDURE (CONT'D):**

Figure 2 2 SEATERS TRANSVERSAL ASSEMBLY REPLACEMENT

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-09-02-00/R-00

System:

Sheet:

CAR BODY**1/6**

Subsystem/Assy:

Unit:

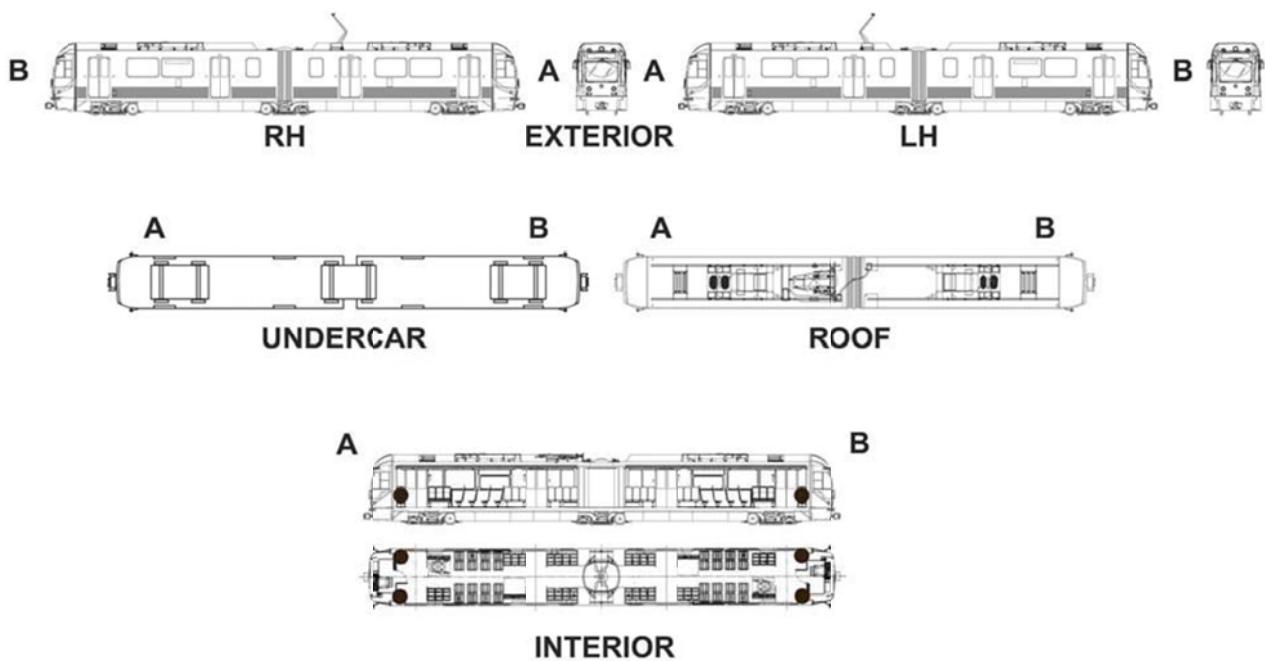
PASSENGER SEATS**1 SEATER LIFTABLE LONGITUDINAL ASSY**

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**LOCATION:**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-09-02-00/R-00

System:

CAR BODY

Sheet:

2/6

Subsystem/Assy:

PASSENGER SEATS

Unit:

1 SEATER LIFTABLE LONGITUDINAL ASSY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**SAFETY PRECAUTIONS:**

LACMTA Maintenance Shop Safety Rules & Regulations

WARNING: THE “1 SEATER LIFTABLE LONGITUDINAL” ASSEMBLY WEIGHS 61 LB (28 KG).

DURING THE REPLACEMENT PROCEDURE MAKE SURE TO SUPPORT THE UNIT TO PREVENT UNSAFE CONDITIONS.

TOOLS:

LACMTA Maintenance Shop Standard Tools kit.

Overhead Crane (100 lb minimum capacity).

CONSUMABLES:

N/A

SPARE PARTS:

1 Seater Longitudinal, Flip-Up Assembly P/N AA048FX (209429) Qty 4

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-09-02-00/R-00

System: **CAR BODY** Sheet: **3/6**

Subsystem/Assy: **PASSENGER SEATS** Unit: **1 SEATER LIFTABLE LONGITUDINAL ASSY**

Component: Man Hours:
1

Maintenance Task:

REPLACEMENT**PROCEDURE:**

PRELIMINARY OPERATIONS

1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations.
2. Place the Vehicle over the Pit.
3. Set the Master Controller Handle to FSB position.
4. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON).

EXPLANATORY NOTES

This Sheet provides detailed Instructions for the Replacement of each one of the four (4) "1 Seater Liftable Longitudinal Assembly" installed on the Vehicle (refer to Figure 1, item 6).

NOTE: It is recommended to keep the attaching hardware for later use and discard the Lock Washers once removed.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-09-02-00/R-00

System:

CAR BODY

Sheet:

4/6

Subsystem/Assy:

PASSENGER SEATS

Unit:

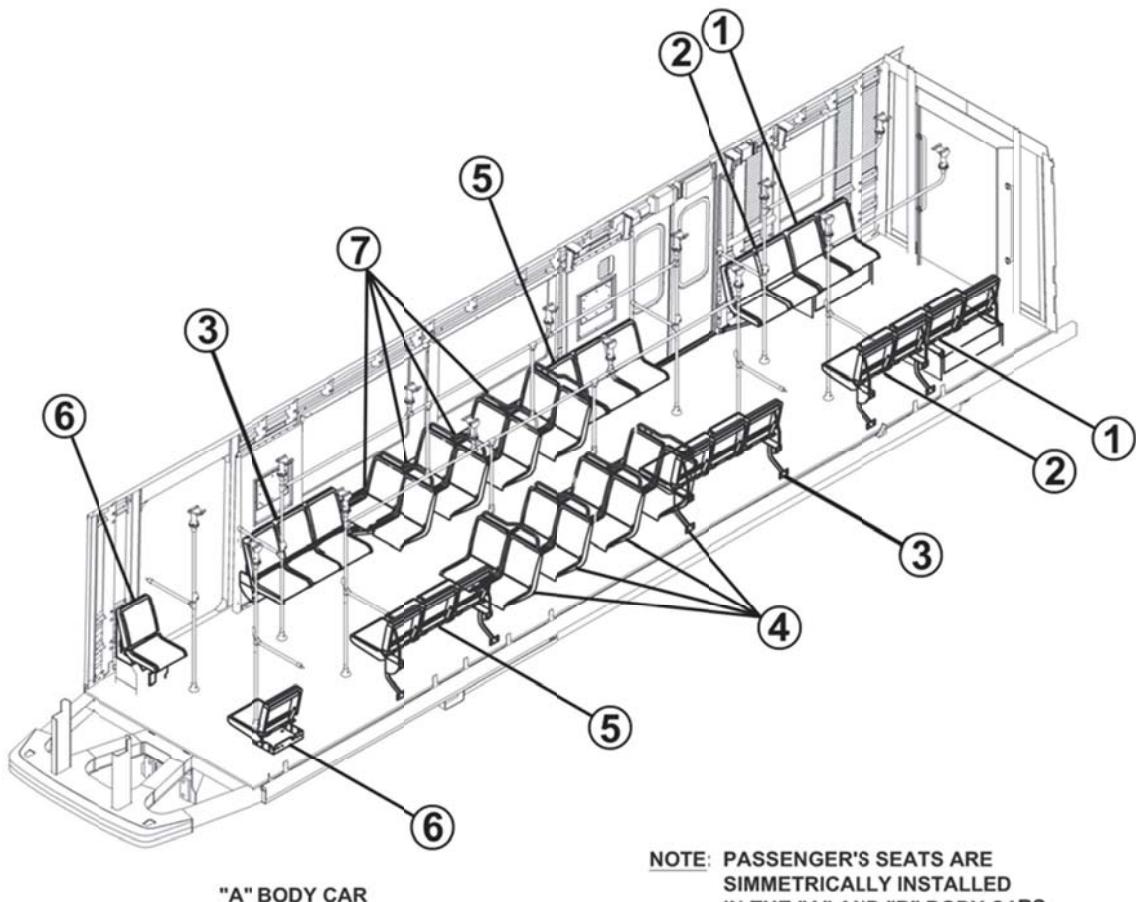
1 SEATER LIFTABLE LONGITUDINAL ASSY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE (CONT'D):**

- | | | |
|------------------------------------|-------------------------|----------------------------------|
| 1. 2-SEATERS LONG. ASSY (OVER BOX) | 2. 2-SEATERS LONG. ASSY | 3. 3-SEATERS LIFTABLE LONG. SEAT |
| 4. 2-SEATERS TRANSV. LH ASSY | 5. 3-SEATERS LONG. ASSY | 6. 1-SEATER LIFTABLE LONG. ASSY |
| 7. 2-SEATERS TRANSV. RH ASSY | | |

Figure 1 PASSENGER SEATS

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code:	
R-C-02-09-02-00/R-00	
System:	Sheet:
CAR BODY	5/6
Subsystem/Assy:	Unit:
PASSENGER SEATS	1 SEATER LIFTABLE LONGITUDINAL ASSY
Component:	Man Hours:
	1
Maintenance Task:	
REPLACEMENT	
PROCEDURE:	
<p>WARNING: THE "1 SEATER LIFTABLE LONGITUDINAL" ASSEMBLY WEIGHS 61 LB (28 KG).</p> <p>DURING THE REPLACEMENT PROCEDURE MAKE SURE TO SUPPORT THE UNIT TO PREVENT UNSAFE CONDITIONS.</p>	
<p>REMOVAL (Refer to Figure 2):</p> <ol style="list-style-type: none"> 1. Remove Screws (150), Washers (190, 180) and Threaded Plate (200). 2. Remove the Seat (30). 3. Discard Lock-Washers (190). 	
<p>INSTALLATION (Refer to Figure 2):</p> <ol style="list-style-type: none"> 1. Position the Seat (30) in the related seat. 2. Install Screws (150), "new" Lock-Washers (190) and Washers (180). 3. Install Screws (150), "new" Lock-Washers (190), Washers (180) and Threaded Plate (200). 4. Torque Screws (150) as required. 5. Record Task results on the Defect Report Card for administrative and maintenance planning. 	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-09-02-00/R-00

System:

CAR BODY

Sheet:

6/6

Subsystem/Assy:

PASSENGER SEATS

Unit:

1 SEATER LIFTABLE LONGITUDINAL ASSY

Component:

Man Hours:

1

Maintenance Task:

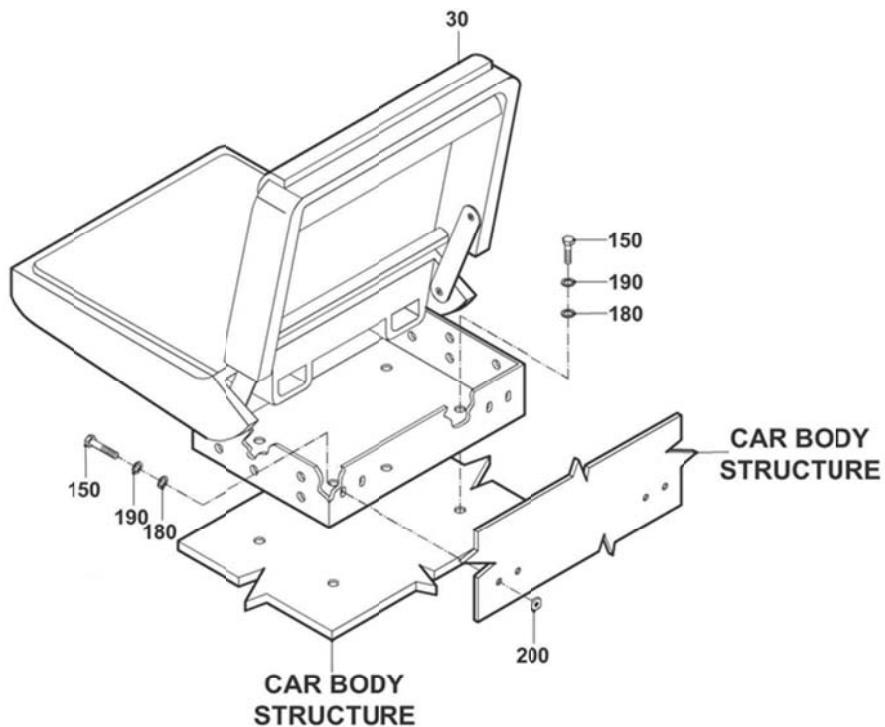
REPLACEMENT**PROCEDURE:**

Figure 2 1 SEATER LIFTABLE LONGITUDINAL ASSEMBLY REPLACEMENT

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-09-03-00/R-00

System:

CAR BODY

Sheet:

1/6

Subsystem/Assy:

PASSENGER SEATS

Unit:

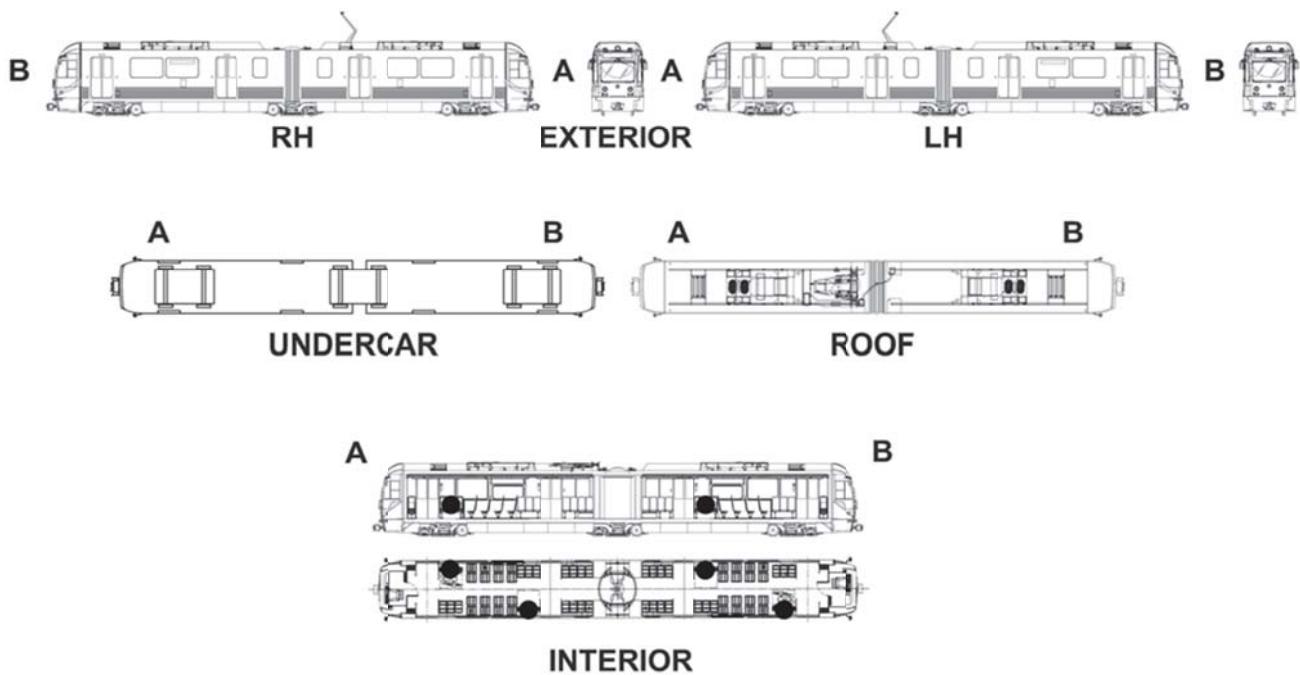
3-SEATERS FLIP-UP LONGITUDINAL ASSY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT
LOCATION:


P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-09-03-00/R-00

System:

CAR BODY

Sheet:

2/6

Subsystem/Assy:

PASSENGER SEATS

Unit:

3-SEATERS FLIP-UP LONGITUDINAL ASSY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**SAFETY PRECAUTIONS:**

LACMTA Maintenance Shop Safety Rules & Regulations

WARNING: THE “ 3-SEATERS FLIP-UP LONGITUDINAL” ASSEMBLY WEIGHS 91 LB (42 KG).**DURING THE REPLACEMENT PROCEDURE PAY ATTENTION TO SUPPORT THE UNIT TO PREVENT UNSAFE CONDITIONS.****TOOLS:**

LACMTA Maintenance Shop Standard Tools kit.

Overhead Crane (100 lb minimum capacity).

CONSUMABLES:

N/A

SPARE PARTS:

3-Seaters Flip-up Longitudinal Assembly P/N AA048FW (1SL002R0) Qty 4

Lock Washer A 12 mm P/N AA00952 Qty 32

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-09-03-00/R-00	
System: CAR BODY	Sheet: 3/6
Subsystem/Assy: PASSENGER SEATS	Unit: 3-SEATERS FLIP-UP LONGITUDINAL ASSY
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
PROCEDURE:	
PRELIMINARY OPERATIONS <ol style="list-style-type: none"> 1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations. 2. Place the Vehicle over the Pit. 3. Set the Master Controller Handle to FSB position. 4. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake " ON). 	
EXPLANATORY NOTES <p>This Sheet provides detailed Instructions for the Replacement of each one of the four (4) "3-Seaters Flip-up Longitudinal Assembly". installed on the Vehicle (refer to Figure 1, item 3).</p> <p>NOTE: It is recommended to keep the attaching hardware for later use and discard the Lock Washers once removed.</p>	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-09-03-00/R-00

System:

CAR BODY

Sheet:

4/6

Subsystem/Assy:

PASSENGER SEATS

Unit:

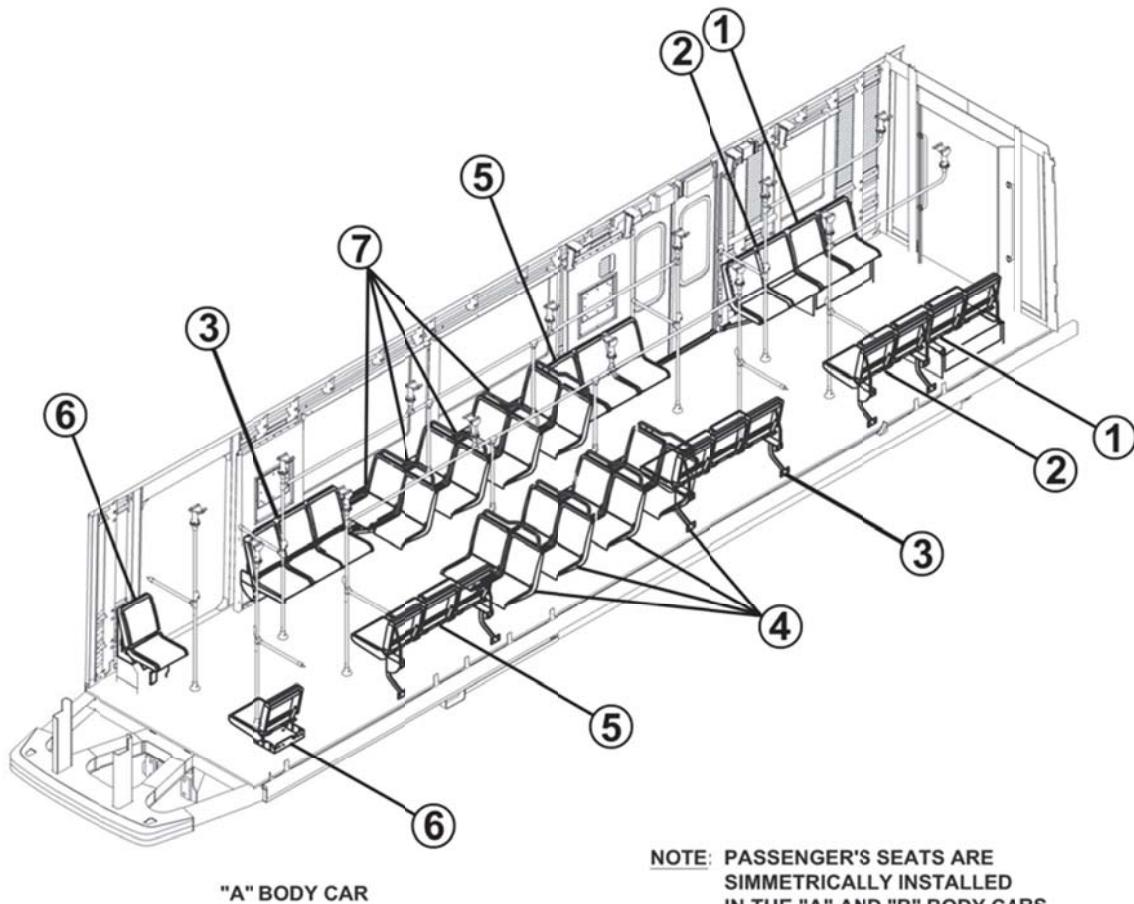
3-SEATERS FLIP-UP LONGITUDINAL ASSY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE (CONT'D):**

- | | | |
|------------------------------------|-------------------------|----------------------------------|
| 1. 2-SEATERS LONG. ASSY (OVER BOX) | 2. 2-SEATERS LONG. ASSY | 3. 3-SEATERS LIFTABLE LONG. SEAT |
| 4. 2-SEATERS TRANSV. LH ASSY | 5. 3-SEATERS LONG. ASSY | 6. 1-SEATER LIFTABLE LONG. ASSY |
| 7. 2-SEATERS TRANSV. RH ASSY | | |

Figure 1 PASSENGER SEATS

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-09-03-00/R-00

System:	Sheet:
CAR BODY	5/6
Subsystem/Assy:	Unit:
PASSENGER SEATS	3-SEATERS FLIP-UP LONGITUDINAL ASSY
Component:	Man Hours:
	1
Maintenance Task:	

REPLACEMENT

PROCEDURE (CONT'D):

WARNING: THE "3-SEATERS FLIP-UP LONGITUDINAL" ASSEMBLY WEIGHS 91 LB (42KG).

DURING THE RPLACEMENT PROCEDURE PAY ATTENTION TO SUPPORT THE UNIT TO PREVENT UNSAFE CONDITIONS.

REMOVAL

(Refer to Figure 2):

1. Support the 3-Seaters Flip-up Longitudinal Assembly (40).
2. Starting from the Lower Side, remove Screws (300) and Washers (310) and disconnect Upper and Lower Covers (255, 265, 270, 280).
3. Remove Screws (160), Washers (180, 190) and Shim (140).
4. From the Upper Side, remove Screws (160), Washers (180, 190) and Shims (90, 100).
5. Remove 3 Seaters Flip-up Longitudinal Assembly (40). Discard Lock-Washers (190).

NOTE: Leave the Threaded Plates (200) in place.

INSTALLATION

(Refer to Figure 2):

NOTE: The Threaded Plates (200) are already installed on the Vehicle Side Structure.

1. Lift the " 3 Seaters Flip-up Longitudinal "Assembly (40) and hold it up in order to match its Supports with the relevant Support Plates on the Car Body Structure.
2. Starting from the Upper Side, position Shims (90, 100) and install Screws (160), "new" Lock-Washers (190) and Washers (180).
3. On the lower side, position Shim (140) and install Screws (160), "new" Lock-Washers (190) and Washers (180). Torque Screws (160) to **52 ft-lb**.
4. Position Upper and Lower Covers (255, 265, 270, 280) as shown in the figure.
5. Install Screws (300) and Washers (310). Torque Screws (300) to **52 ft-lb**.
6. Record Task results on the Defect Report Card for administrative and maintenance planning.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-09-03-00/R-00

System:

CAR BODY

Sheet:

6/6

Subsystem/Assy:

PASSENGER SEATS

Unit:

3-SEATERS FLIP-UP LONGITUDINAL ASSY

Component:

Man Hours:

1

Maintenance Task:

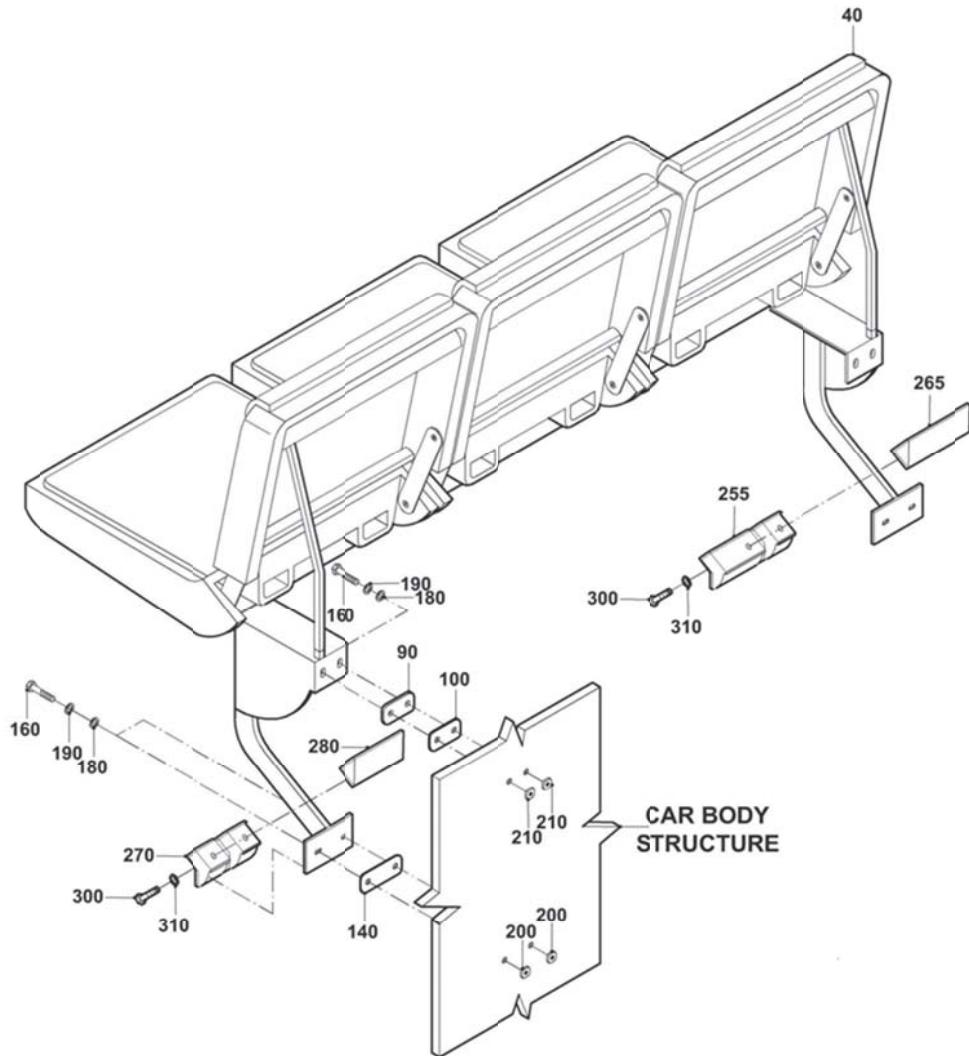
REPLACEMENT**PROCEDURE (CONT'D):**

Figure 2 3 SEATERS FLIP-UP LONGITUDINAL SEAT

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-09-04-00/R-00

System:

CAR BODY

Sheet:

1/6

Subsystem/Assy:

PASSENGER SEATS

Unit:

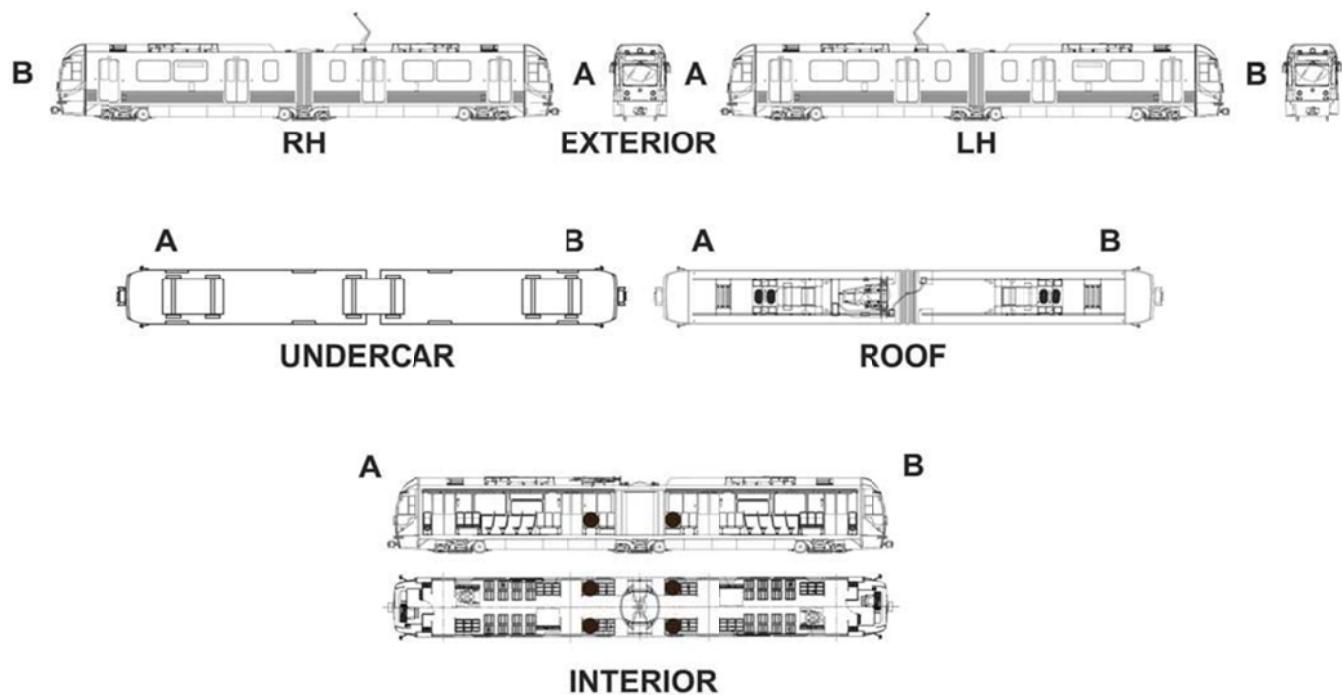
2 SEATERS LONGITUDINAL ASSY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT
LOCATION:


P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-09-04-00/R-00

System:

CAR BODY

Sheet:

2/6

Subsystem/Assy:

PASSENGER SEATS

Unit:

2 SEATERS LONGITUDINAL ASSY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**SAFETY PRECAUTIONS:**

LACMTA Maintenance Shop Safety Rules & Regulations

WARNING: THE “2 SEATERS LONGITUDINAL “ASSEMBLY WEIGHS 63 LB (29 KG).**DURING THE REPLACEMENT PROCEDURE MAKE SURE TO SUPPORT THE UNIT TO PREVENT UNSAFE CONDITIONS.****TOOLS:**

LACMTA Maintenance Shop Standard Tools kit.

Overhead Crane (100 lb minimum capacity).

CONSUMABLES:

N/A

SPARE PARTS:

2 Seaters Longitudinal Assembly P/N: AA048FT (1SD001N5) Qty 4

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-09-04-00/R-00

System: CAR BODY	Sheet: 3/6
----------------------------	----------------------

Subsystem/Assy: PASSENGER SEATS	Unit: 2 SEATERS LONGITUDINAL ASSY
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Component:	Man Hours: 1
------------	------------------------

Maintenance Task:

REPLACEMENT

PROCEDURE:

PRELIMINARY OPERATIONS

1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations.
2. Place the Vehicle over the Pit.
3. Set the Master Controller Handle to FSB position.
4. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON).

EXPLANATORY NOTES

This Sheet provides detailed Instructions for the Replacement of each one of the four (4) "2-Seaters Longitudinal Assembly" installed on the Vehicle (refer to Figure 1, item 2).

NOTE: It is recommended to keep the attaching hardware for later use and discard the Lock Washers once removed.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-09-04-00/R-00

System:

CAR BODY

Sheet:

4/6

Subsystem/Assy:

PASSENGER SEATS

Unit:

2 SEATERS LONGITUDINAL ASSY

Component:

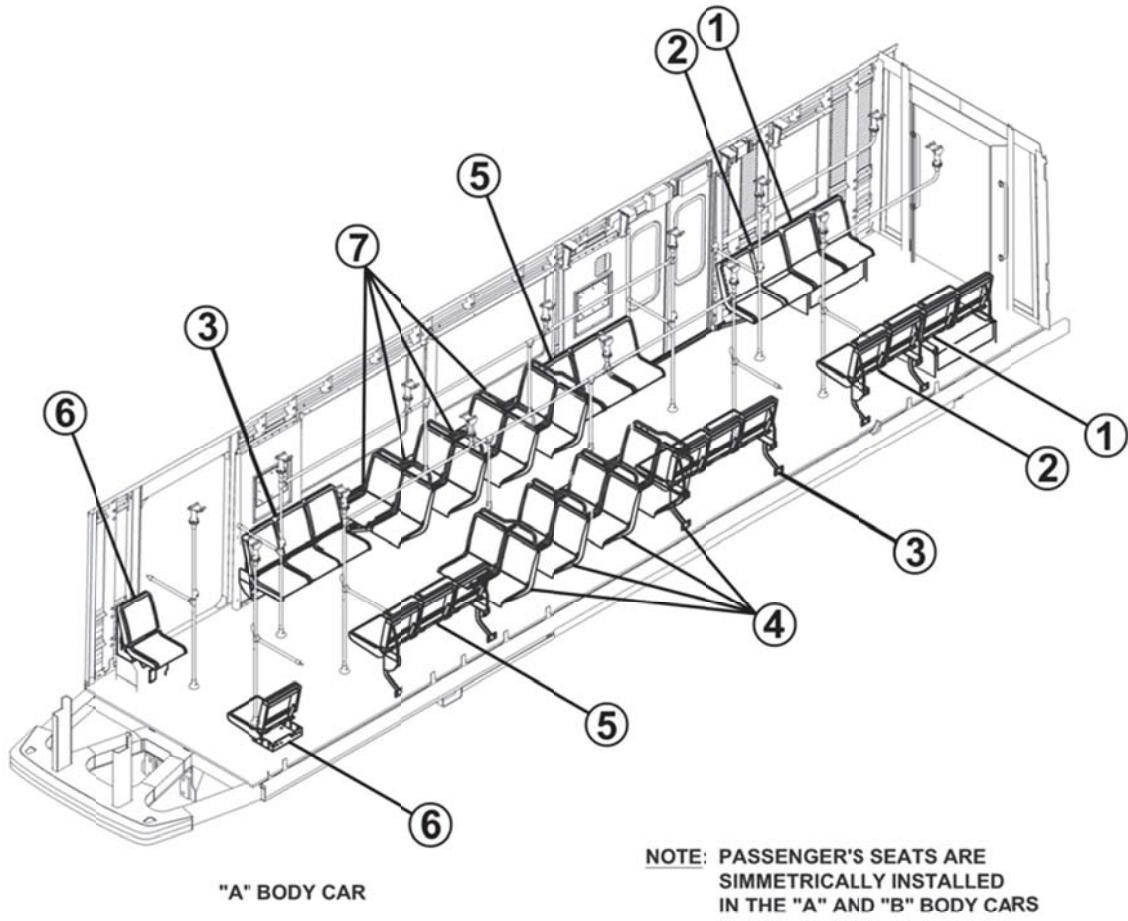
Man Hours:

1

Maintenance Task:

REPLACEMENT

PROCEDURE (CONT'D):



- | | | |
|------------------------------------|-------------------------|----------------------------------|
| 1. 2-SEATERS LONG. ASSY (OVER BOX) | 2. 2-SEATERS LONG. ASSY | 3. 3-SEATERS LIFTABLE LONG. SEAT |
| 4. 2-SEATERS TRANSV. LH ASSY | 5. 3-SEATERS LONG. ASSY | 6. 1-SEATER LIFTABLE LONG. ASSY |
| 7. 2-SEATERS TRANSV. RH ASSY | | |

Figure 2 PASSENGER SEATS

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-09-04-00/R-00	
System: CAR BODY	Sheet: 5/6
Subsystem/Assy: PASSENGER SEATS	Unit: 2 SEATERS LONGITUDINAL ASSY
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
PROCEDURE (CONT'D):	
WARNING: THE "2 SEATERS LONGITUDINAL "ASSEMBLY WEIGHS 63 LB (29 KG) DURING THE REPLACEMENT PROCEDURE MAKE SURE TO SUPPORT THE UNIT TO PREVENT UNSAFE CONDITIONS.	
REMOVAL (Refer to Figure 2):	
<ol style="list-style-type: none"> 1. Support 2 Seaters Longitudinal Assembly (60). 2. Starting from the lower side, remove Screws (290) and Washers (310) and disconnect Upper and Lower Covers (250, 260). 3. Remove Screws (160) and Washers (190, 180). 4. From the upper side, remove Screws (160), Washers (190, 180) and Shims (80, 110,120). 5. Remove 2 Seaters Longitudinal Assembly (60). Discard Lock-Washers (190). <p style="margin-top: 10px;">NOTE: Leave the Threaded Plates (200) in place.</p>	
INSTALLATION (Refer to Figure 2):	
<p>NOTE: The Threaded Plates (200) are already installed on the Vehicle Side Structure.</p> <ol style="list-style-type: none"> 1. Hold the "2 Seaters Longitudinal "Assembly (60) and position it in the related seat. 2. Starting the upper side, position Shims (80, 110, 120) and install Screws (160), "new" Lock-Washers (190) and Washers (180). 3. On the lower side, install Screws (160), "new" Lock-Washers (190) and Washers (180). 4. Torque Screws (160) as required. 5. On the lower side, position Upper and Lower Covers (250, 260) as shown in the figure. 6. Install Screws (290) and Washers (310). 7. Torque Screws (290) as required. 8. Record Task results on the Defect Report Card for administrative and maintenance planning. 	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-09-04-00/R-00

System:

CAR BODY

Sheet:

6/6

Subsystem/Assy:

PASSENGER SEATS

Unit:

2 SEATERS LONGITUDINAL ASSY

Component:

Man Hours:

1

Maintenance Task:

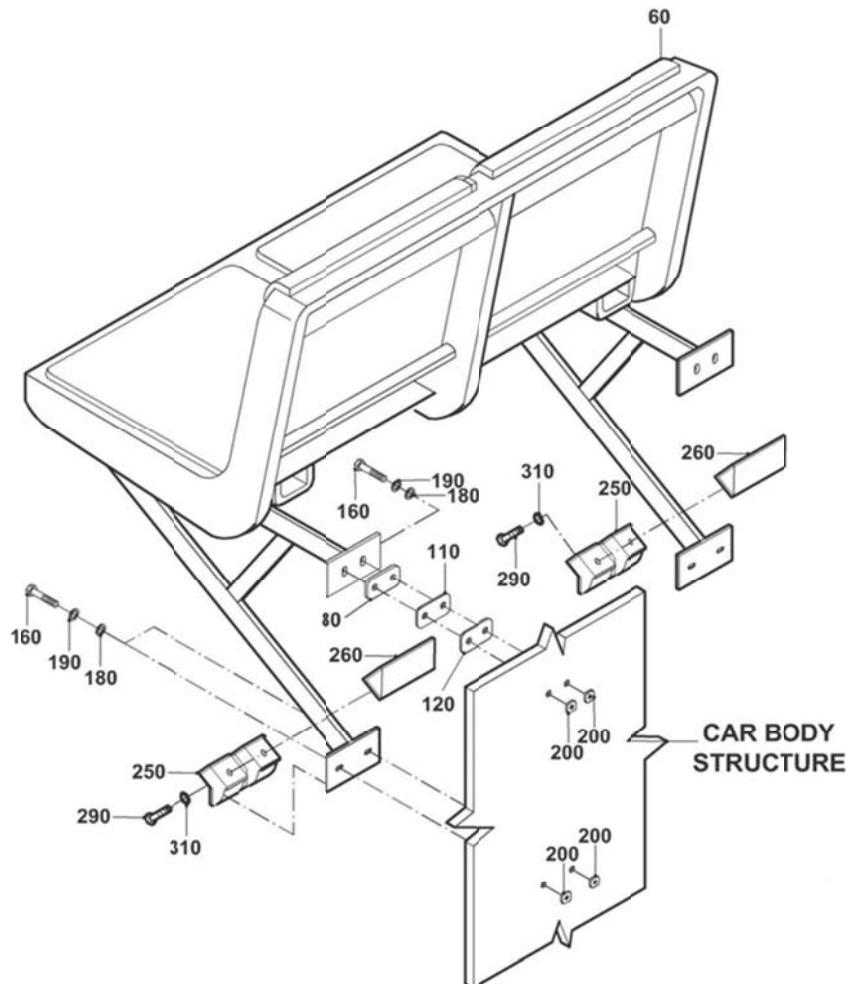
REPLACEMENT**PROCEDURE (CONT'D):**

Figure 3 2 SEATERS LONGITUDINAL ASSEMBLY REPLACEMENT

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-09-05-00/R-00

System:

CAR BODY

Sheet:

1/6

Subsystem/Assy:

PASSENGER SEATS

Unit:

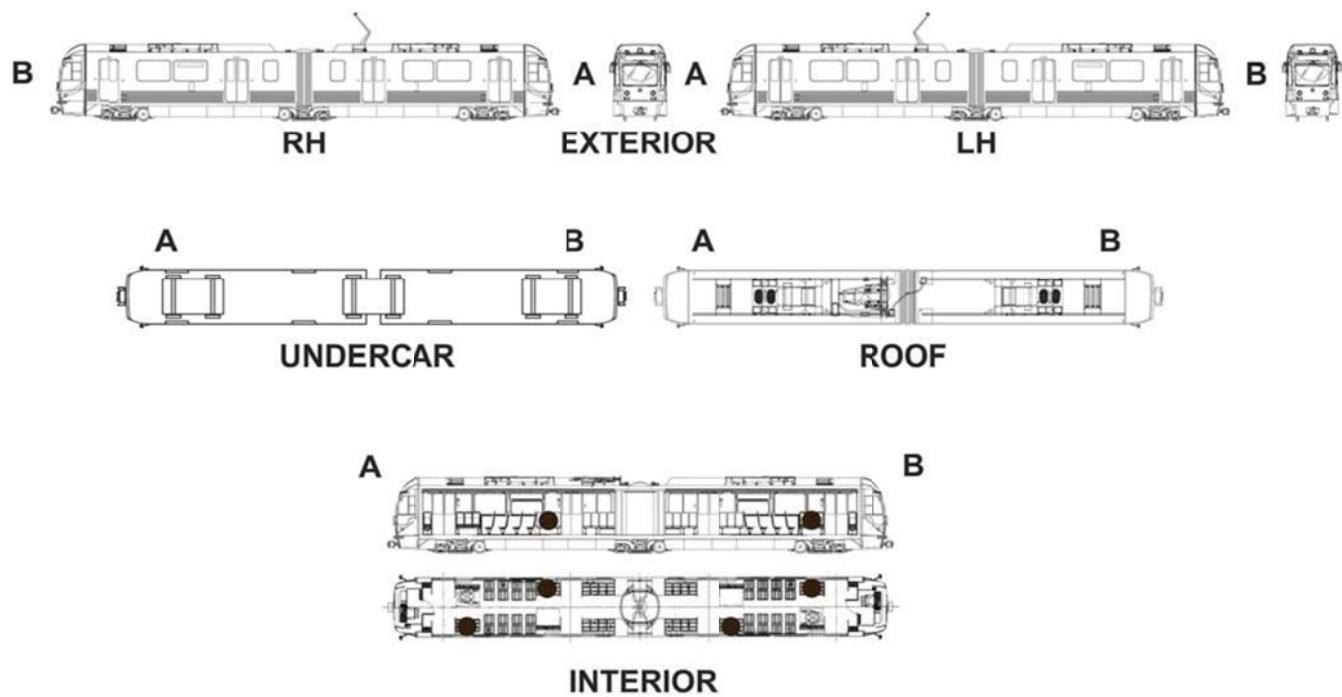
3 SEATERS LONGITUDINAL ASSY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT
LOCATION:


P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-09-05-00/R-00

System:

CAR BODY

Sheet:

2/6

Subsystem/Assy:

PASSENGER SEATS

Unit:

3 SEATERS LONGITUDINAL ASSY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**SAFETY PRECAUTIONS:**

LACMTA Maintenance Shop Safety Rules & Regulations

WARNING: THE “3 SEATERS LONGITUDINAL “ASSEMBLY WEIGHS 87 LB (40 KG).

**DURING THE REPLACEMENT PROCEDURE MAKE SURE TO SUPPORT THE UNIT TO
PREVENT UNSAFE CONDITIONS.**

TOOLS:

LACMTA Maintenance Shop Standard Tools kit.

Overhead Crane (100 lb minimum capacity).

CONSUMABLES:

N/A

SPARE PARTS:

3 Seaters Longitudinal Assembly P/N AA048FV (1SE001N5) Qty 4

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code:	
R-C-02-09-05-00/R-00	
System: CAR BODY	Sheet: 3/6
Subsystem/Assy: PASSENGER SEATS	Unit: 3 SEATERS LONGITUDINAL ASSY
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
PROCEDURE:	
<p>PRELIMINARY OPERATIONS</p> <ol style="list-style-type: none"> 1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations. 2. Place the Vehicle over the Pit. 3. Set the Master Controller Handle to FSB position. 4. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). 	
<p>EXPLANATORY NOTES</p> <p>This Sheet provides detailed Instructions for the Replacement of each one of the four (4) "3-Seaters Longitudinal Assembly". installed on the Vehicle (refer to Figure 1, item 5).</p> <p>NOTE: It is recommended to keep the attaching hardware for later use and discard the Lock Washers once removed.</p>	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-09-05-00/R-00

System:

CAR BODY

Sheet:

4/6

Subsystem/Assy:

PASSENGER SEATS

Unit:

3 SEATERS LONGITUDINAL ASSY

Component:

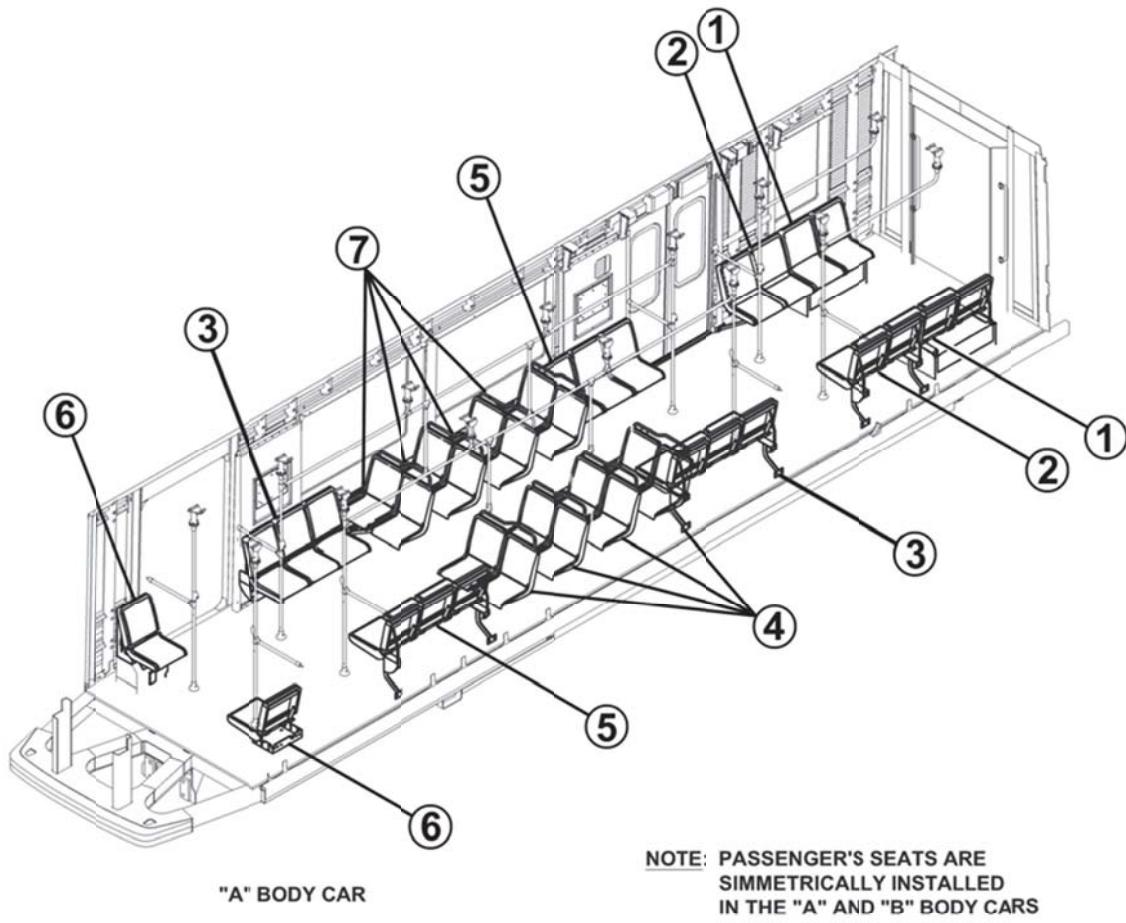
Man Hours:

1

Maintenance Task:

REPLACEMENT

PROCEDURE (CONT'D):



- | | | |
|------------------------------------|-------------------------|----------------------------------|
| 1. 2-SEATERS LONG. ASSY (OVER BOX) | 2. 2-SEATERS LONG. ASSY | 3. 3-SEATERS LIFTABLE LONG. SEAT |
| 4. 2-SEATERS TRANSV. LH ASSY | 5. 3-SEATERS LONG. ASSY | 6. 1-SEATER LIFTABLE LONG. ASSY |
| 7. 2-SEATERS TRANSV. RH ASSY | | |

Figure 1 – PASSENGER SEATS

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-09-05-00/R-00

System:

Sheet:

CAR BODY
5/6

Subsystem/Assy:

Unit:

PASSENGER SEATS
3 SEATERS LONGITUDINAL ASSY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT
PROCEDURE (CONT'D):

WARNING: THE "3 SEATERS LONGITUDINAL "ASSEMBLY WEIGHS 87 LB (40 KG)

DURING THE REPLACEMENT PROCEDURE MAKE SURE TO SUPPORT THE UNIT TO PREVENT UNSAFE CONDITIONS.

REMOVAL

(Refer to Figure 2)

1. Support the 3 Seaters Longitudinal Assembly (50).
2. Starting from the lower side, remove Screws (290) and Washers (310) and disconnect Upper and Lower Covers (250, 260, 275, 285).
3. Remove Screws (160) and Washers (190, 180).
4. From the upper side, remove Screws (160), Washers (190, 180) and Shims (80, 110,120).
5. Remove 3 Seaters Longitudinal Assembly (50). Discard Lock-Washers (190).

NOTE: Leave the Threaded Plates (200) in place.

INSTALLATION

(Refer to Figure 2)

NOTE: The Threaded Plates (200) are already installed on the Vehicle Side Structure.

1. Hold the 3 Seaters Longitudinal Assembly (50) and position it in the related seat.
2. Starting from the upper side, position Shims (80, 110,120) and install Screws (160), "new" Lock-Washers (190) and Washers (180).
3. On the lower side, install Screws (160), "new" Lock-Washers (190) and Washers (180).
4. Torque Screws (160) as required.
5. On the lower side, position Upper and Lower Covers (250, 260, 275, 285) as shown in the figure.
6. Install Screws (290) and Washers (310).
7. Torque Screws (290) as required.
8. Record Task results on the Defect Report Card for administrative and maintenance planning.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-09-05-00/R-00

System:

CAR BODY

Sheet:

6/6

Subsystem/Assy:

PASSENGER SEATS

Unit:

3 SEATERS LONGITUDINAL ASSY

Component:

Man Hours:

1

Maintenance Task:

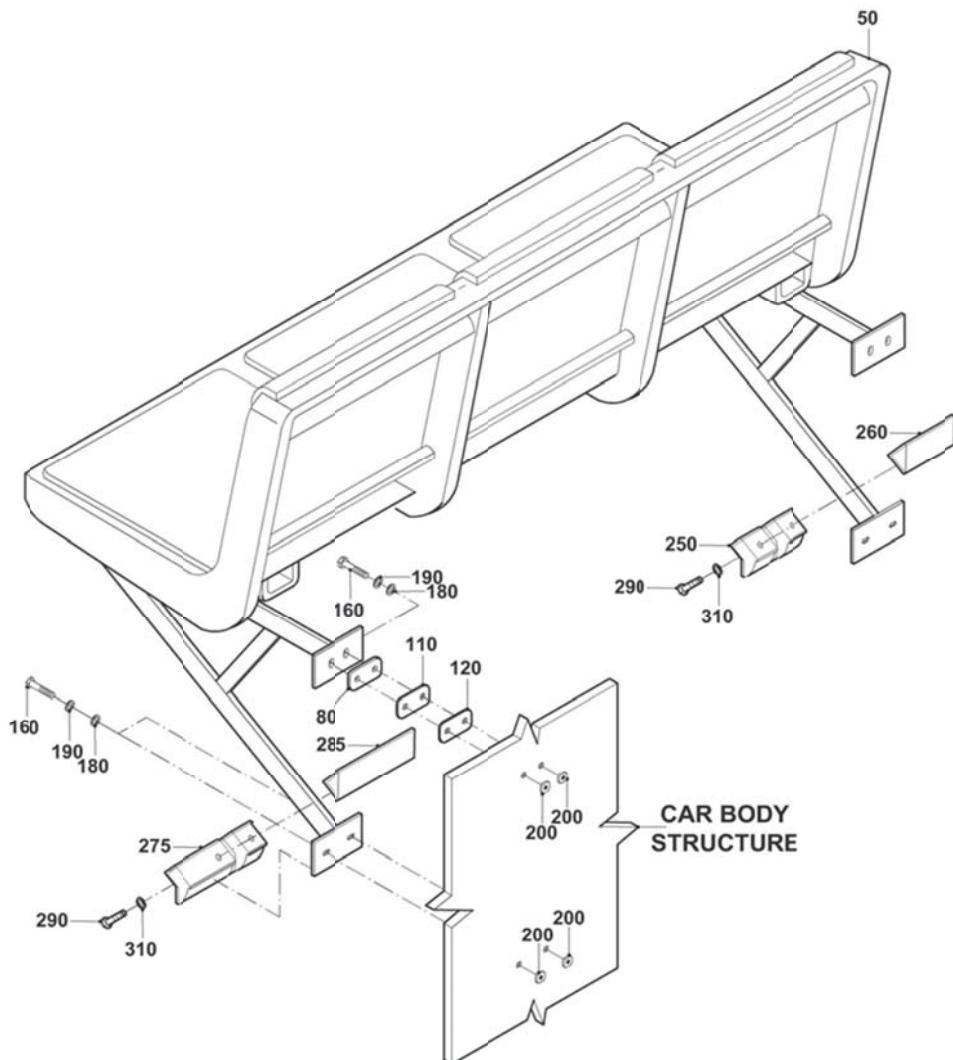
REPLACEMENT**PROCEDURE (CONT'D):**

Figure 2 3 SEATERS LONGITUDINAL ASSEMBLY REPLACEMENT

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-09-06-00/R-00

System:

CAR BODY

Sheet:

1/6

Subsystem/Assy:

PASSENGER SEATS

Unit:

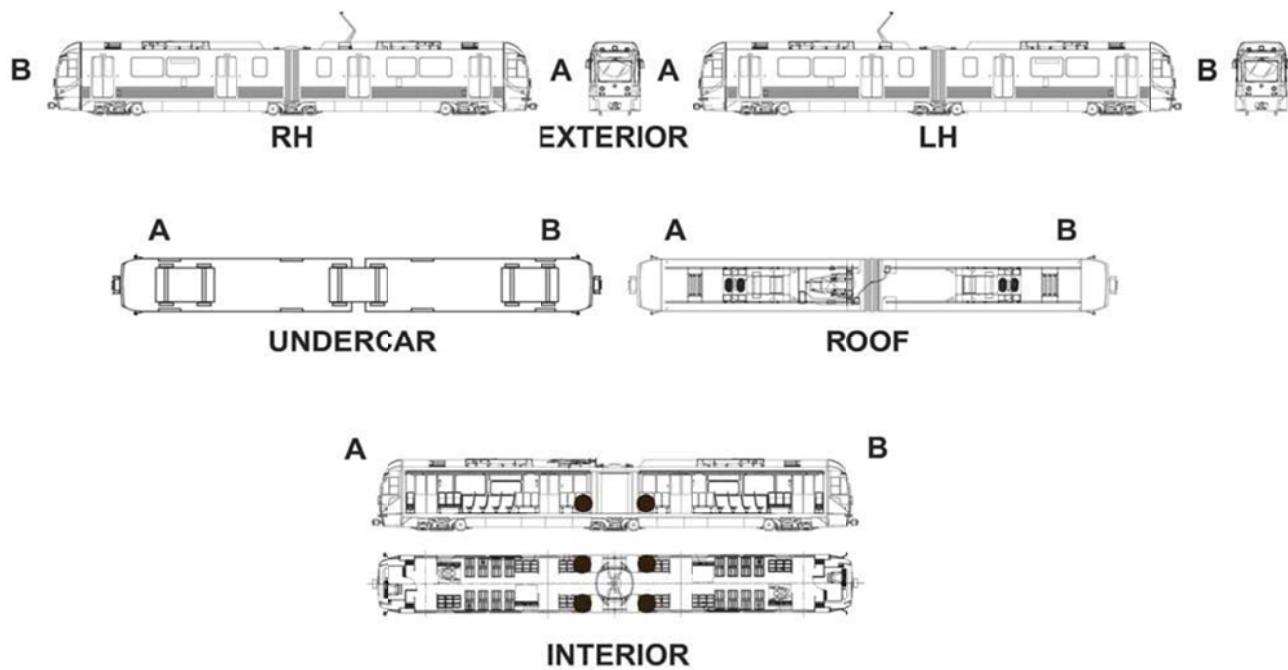
2 SEATERS LONGITUDINAL ASSY OVER BOX

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT
LOCATION:


P2550 CORRECTIVE MAINTENANCE SHEET		
Card Code:		
R-C-02-09-06-00/R-00		
System: CAR BODY	Sheet: 2/6	
Subsystem/Assy: PASSENGER SEATS	Unit: 2 SEATERS LONGITUDINAL ASSY OVER BOX	
Component:	Man Hours: 1	
Maintenance Task: REPLACEMENT		
SAFETY PRECAUTIONS:		
LACMTA Maintenance Shop Safety Rules & Regulations		
WARNING: THE "2 SEATERS LONGITUDINAL "ASSEMBLY OVER BOX WEIGHS 57 LB (26 KG). DURING THE REPLACEMENT PROCEDURE MAKE SURE TO SUPPORT THE UNIT TO PREVENT UNSAFE CONDITIONS.		
TOOLS:		
LACMTA Maintenance Shop Standard Tools kit. Overhead Crane (100 lb minimum capacity).		
CONSUMABLES: N/A		
SPARE PARTS: 2 Seaters Longitudinal Assembly P/N: AA048FU (1SD002N5) Qty 4		

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-09-06-00/R-00	
System: CAR BODY	Sheet: 3/6
Subsystem/Assy: PASSENGER SEATS	Unit: 2 SEATERS LONGITUDINAL ASSY OVER BOX
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
PROCEDURE:	
PRELIMINARY OPERATIONS	
<ol style="list-style-type: none"> 1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations. 2. Place the Vehicle over the Pit. 3. Set the Master Controller Handle to FSB position. 4. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). 	
EXPLANATORY NOTES	
<p>This Sheet provides detailed Instructions for the Replacement of each one of the four (4) "2-Seaters Longitudinal Assembly Over Box," installed on the Vehicle (refer to Figure 1, item 1).</p> <p>NOTE: It is recommended to keep the attaching hardware for later use and discard the Lock Washers once removed.</p>	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-09-06-00/R-00

System:

CAR BODY

Sheet:

4/6

Subsystem/Assy:

PASSENGER SEATS

Unit:

2 SEATERS LONGITUDINAL ASSY OVER BOX

Component:

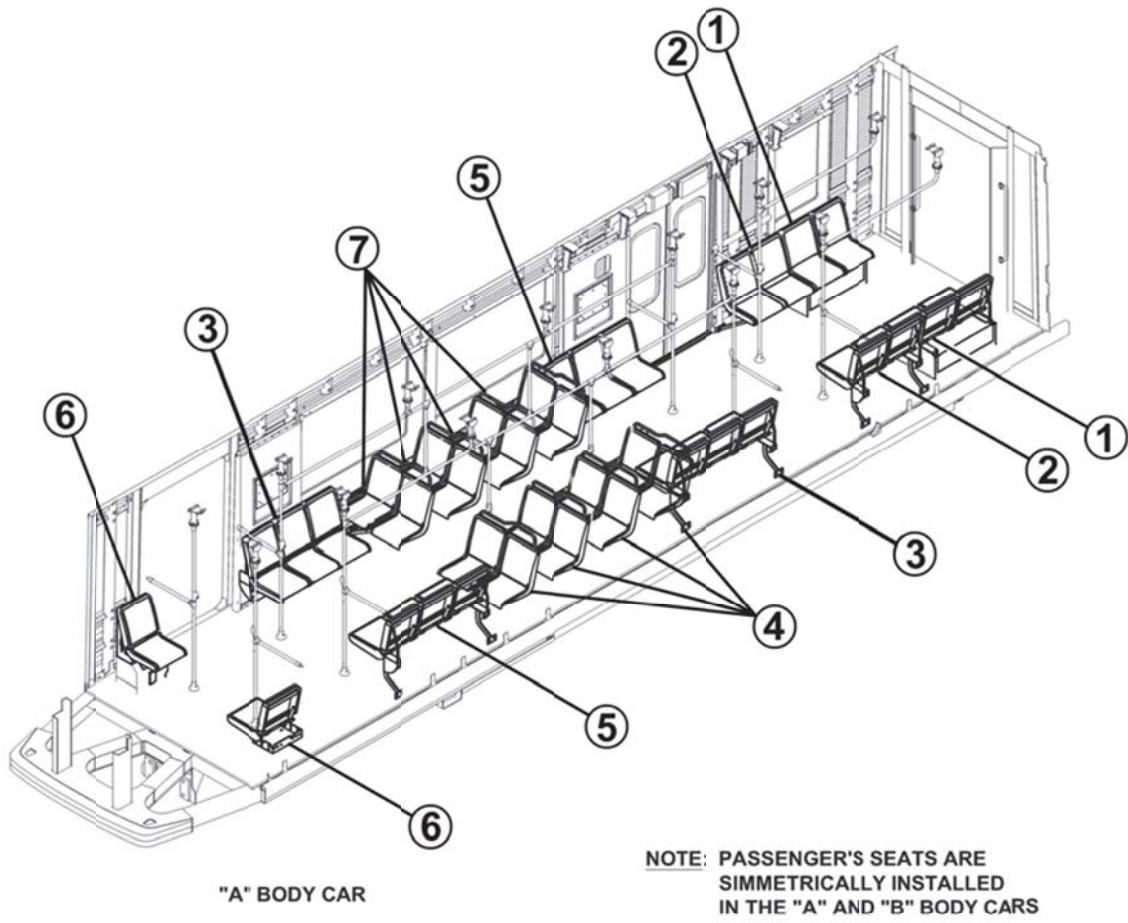
Man Hours:

1

Maintenance Task:

REPLACEMENT

PROCEDURE (CONT'D):



- | | | |
|------------------------------------|-------------------------|----------------------------------|
| 1. 2-SEATERS LONG. ASSY (OVER BOX) | 2. 2-SEATERS LONG. ASSY | 3. 3-SEATERS LIFTABLE LONG. SEAT |
| 4. 2-SEATERS TRANSV. LH ASSY | 5. 3-SEATERS LONG. ASSY | 6. 1-SEATER LIFTABLE LONG. ASSY |
| 7. 2-SEATERS TRANSV. RH ASSY | | |

Figure 1 PASSENGER SEATS

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code:	
R-C-02-09-06-00/R-00	
System: CAR BODY	Sheet: 5/6
Subsystem/Assy: PASSENGER SEATS	Unit: 2 SEATERS LONGITUDINAL ASSY OVER BOX
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
PROCEDURE:	
WARNING: THE "2 SEATERS LONGITUDINAL " ASSY OVER BOX WEIGHS 57 LB (26 KG) DURING THE REPLACEMENT PROCEDURE MAKE SURE TO SUPPORT THE UNIT TO PREVENT UNSAFE CONDITIONS.	
REMOVAL (Refer to Figure 2)	
1. Remove Screws (150) and Washers (190, 180). 2. Remove 2 Seaters Longitudinal Assembly Over Box (70). 3. Discard Lock-Washers (190).	
INSTALLATION (Refer to Figure 2)	
1. Position 2 Seaters Longitudinal Assembly Over Box (70) in the related seat. 2. Install Screws (150), "new" Lock-Washers (190) and Washers (180). 3. Torque Screws (150) as required. 4. Record Task results on the Defect Report Card for administrative and maintenance planning.	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-09-06-00/R-00

System:

CAR BODY

Sheet:

6/6

Subsystem/Assy:

PASSENGER SEATS

Unit:

2 SEATERS LONGITUDINAL ASSY OVER BOX

Component:

Man Hours:

1

Maintenance Task:

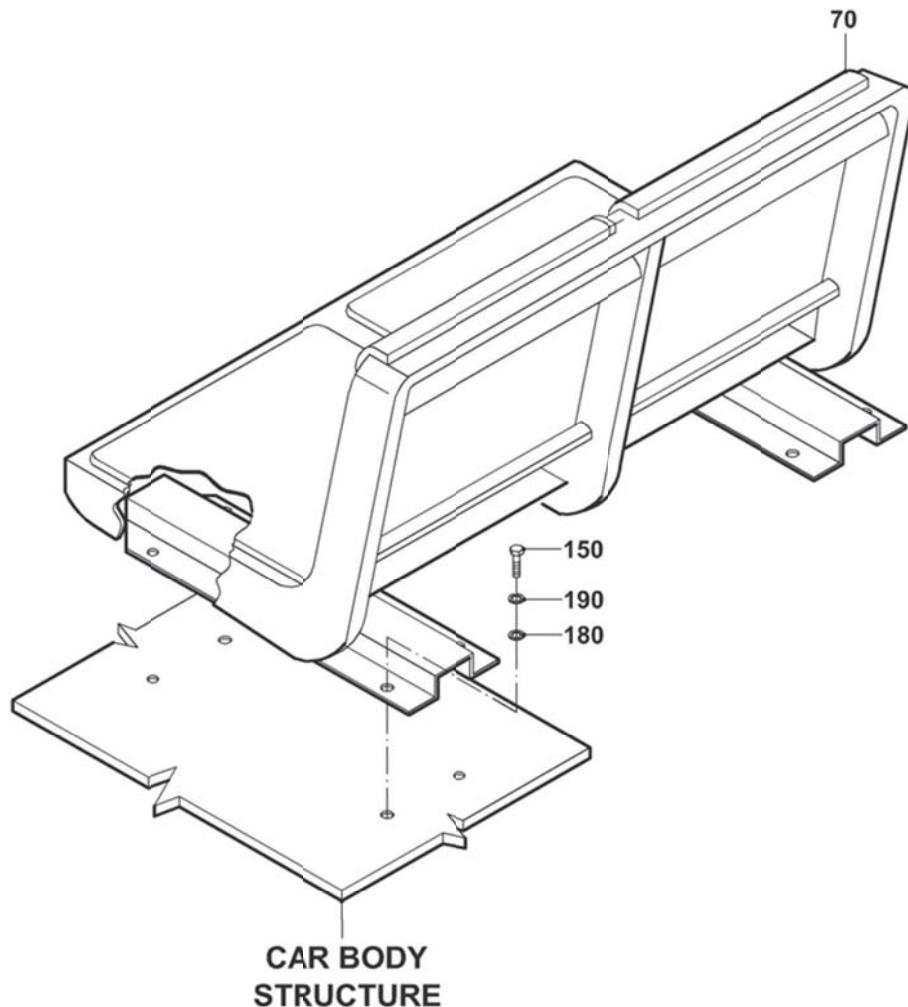
REPLACEMENT**PROCEDURE:**

Figure 2 2 Seaters Longitudinal Assembly Over Box

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-10-00-00/R-00

System:

CAR BODY

Sheet:

1/4

Subsystem/Assy:

OPERATOR'S SEAT

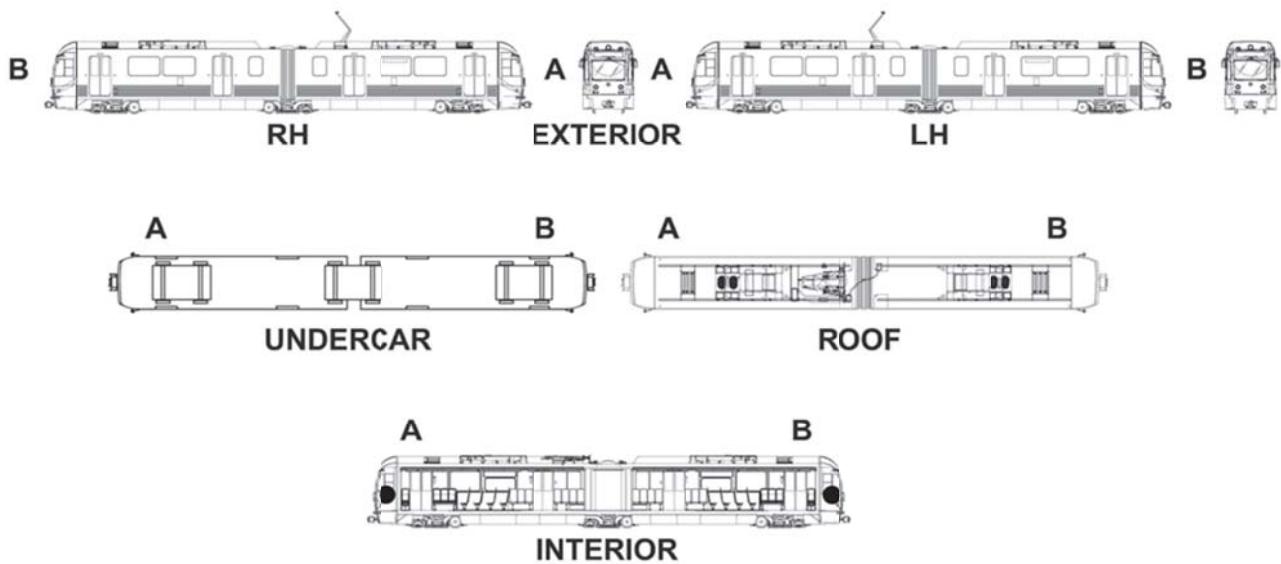
Unit:

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**LOCATION:**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-10-00-00/R-00

System:

CAR BODY

Sheet:

2/4

Subsystem/Assy:

OPERATOR'S SEAT

Unit:

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**SAFETY PRECAUTIONS:**

LACMTA Maintenance Shop Safety Rules & Regulations

WARNING: THE OPERATOR'S SEAT WEIGHS 167.8 LB (76.2 KG).**DURING THE REPLACEMENT PROCEDURE MAKE SURE TO SUPPORT THE UNIT TO PREVENT UNSAFE CONDITIONS.****TOOLS:**

LACMTA Maintenance Shop Standard Tools Kit.

CONSUMABLES:

N/A

SPARE PARTS:

Operator's Seat

Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code:	
R-C-02-10-00-00/R-00	
System: CAR BODY	Sheet: 3/4
Subsystem/Assy: OPERATOR'S SEAT	Unit:
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
PROCEDURE:	
<p>PRELIMINARY OPERATIONS</p> <ol style="list-style-type: none"> 1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations. 2. Place the Vehicle over the Pit. 3. Set the Master Controller Handle to FSB position. 4. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). 	
<p>REPLACEMENT To perform Replacement Procedure of Operator's Seat proceed as follows (Refer to Figure 1):</p> <p>Removal</p> <ol style="list-style-type: none"> 1. Remove Screws (50) and Washers (60, 70). 2. Remove Operator's Seat (40). 3. If necessary: <ol style="list-style-type: none"> a) Remove Screws (20) and Washers (30). b) Remove Operator's Seat Support (10). 4. Discard Lock-Washers (30, 60). <p>WARNING: OPERATOR'S SEAT WEIGHS 167.8 LB (76.2 KG).</p> <p style="text-align: center;">DURING THE REMOVAL / INSTALLATION PROCEDURE MAKE SURE TO SUPPORT THE UNIT TO PREVENT UNSAFE CONDITIONS.</p> <p>Installation</p> <ol style="list-style-type: none"> 1. If necessary: <ol style="list-style-type: none"> a) Position Operator's Seat Support (10) in the related seat. b) Install Screws (20) and "new" Lock-Washers (30). c) Torque Screws (20) as to 30 ft-lb. 2. Position Operator's Seat (40) on the Support (10). 3. Install Screws (50), "new" Lock-Washers (60) and Washers (70). 4. Torque Screws (50) to 30 ft-lb. 5. Record Task results on the Defect Report Card for administrative and maintenance planning. 	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-10-00-00/R-00

System:

CAR BODY

Sheet:

4/4

Subsystem/Assy:

OPERATOR'S SEAT

Unit:

Component:

Man Hours:

1

Maintenance Task:

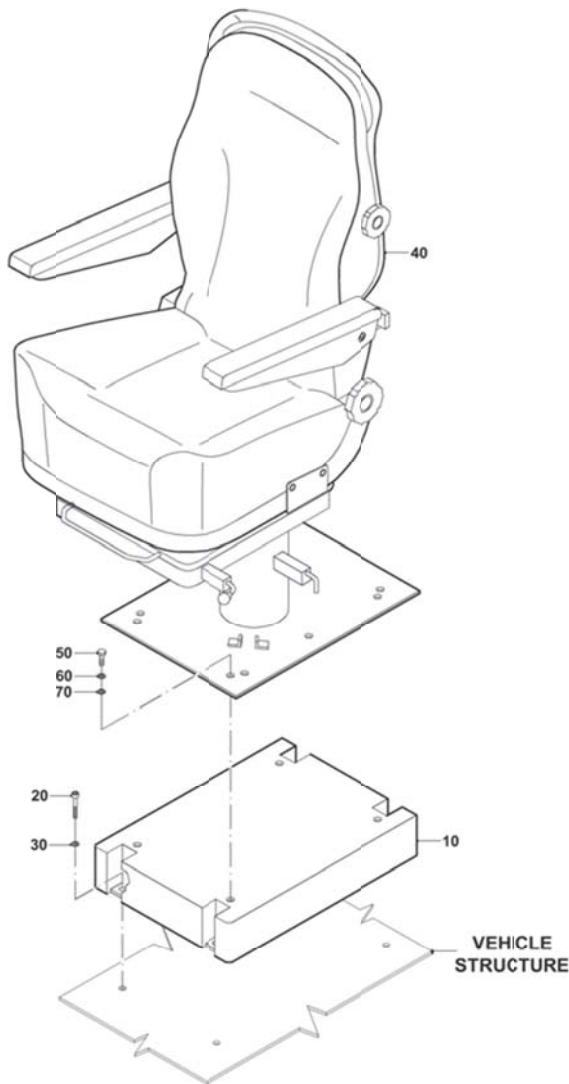
REPLACEMENT**PROCEDURE:**

Figure 1 OPERATOR SEAT REMOVAL / INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-11-01-00/R-00

System:

Sheet:

CAR BODY
1/4

Subsystem/Assy:

Unit:

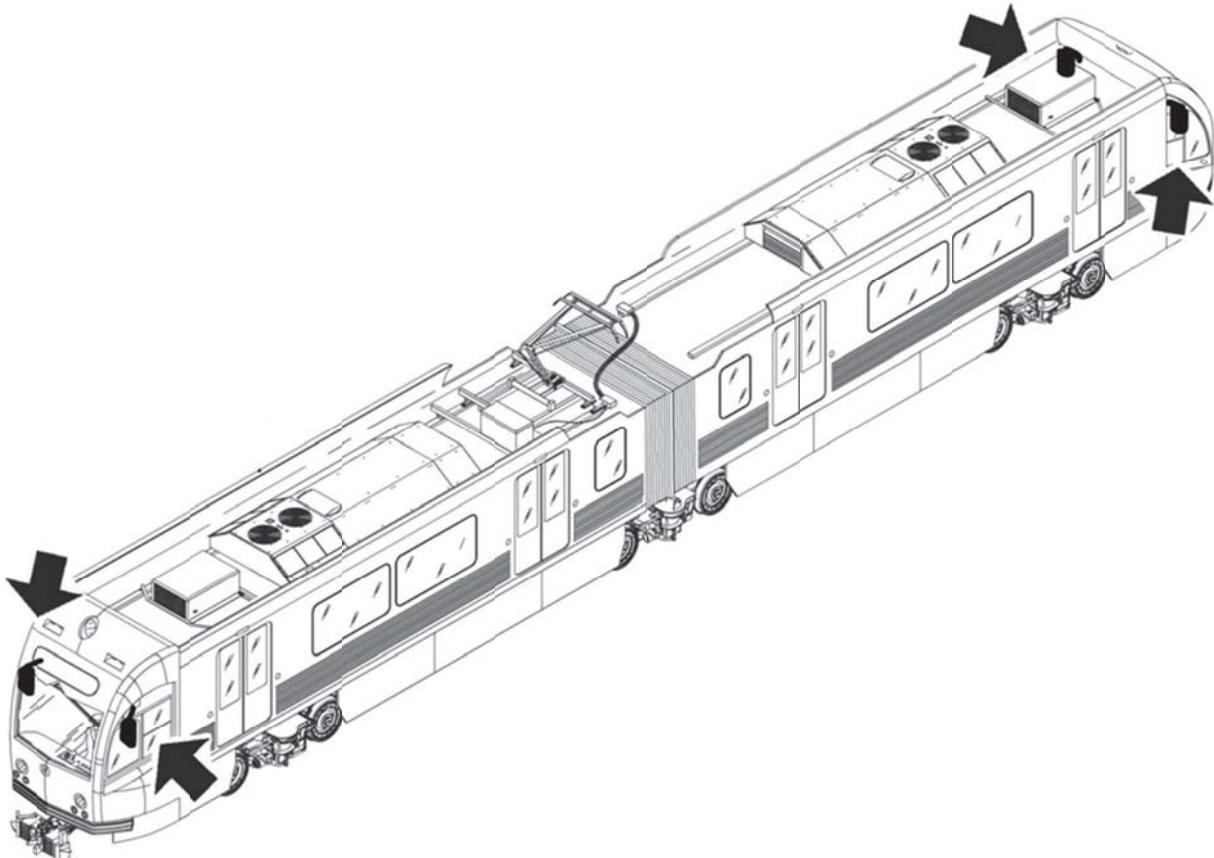
MIRRORS
LEFT & RIGHT MIRROR

Component:

Man Hours:

0.5

Maintenance Task:

REPLACEMENT
LOCATION:

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-11-01-00/R-00

System:

CAR BODY

Sheet:

2/4

Subsystem/Assy:

MIRRORS

Unit:

LEFT & RIGHT MIRROR

Component:

Man Hours:

0.5

Maintenance Task:

REPLACEMENT**SAFETY PRECAUTIONS:**

LACMTA Maintenance Shop Safety Rules & Regulations

CAUTION : SWITCH OFF THE 3F01 CB (BATTERY BOX) BEFORE STARTING TO PERFORM
THE REPLACEMENT**TOOLS:**

LACMTA Maintenance Shop Standard Tools Kit

CONSUMABLES:

N/A

SPARE PARTS:

Left & Right Mirrors

Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code:	
R-C-02-11-01-00/R-00	
System:	Sheet:
CAR BODY	3/4
Subsystem/Assy:	Unit:
MIRRORS	LEFT & RIGHT MIRROR
Component:	Man Hours:
	0.5
Maintenance Task:	
REPLACEMENT	
PROCEDURE:	
<p>PRELIMINARY OPERATIONS</p> <ol style="list-style-type: none"> 1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations. 2. Place the Vehicle over the Pit. 3. Set the Master Controller Handle to FSB position. 4. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). 	
<p>REPLACEMENT</p> <p>To perform Replacement Procedure of Exterior Mirror (LH-RH) proceed as follows (Refer to Figure 1):</p> <ol style="list-style-type: none"> 1. Removal <ol style="list-style-type: none"> a. Gain access to the power supply Exterior Mirror Cable. b. Switch off the Exterior Mirror Adjuster Circuit Breaker 10F03,(located in the A/B LV Lockers) c. Disconnect Power Supply connector. d. Support Exterior Mirror Assembly (LH-RH). e. From inside remove Nuts (60), Washers (40, 50) and plate (20). f. From outside remove Screws (30), Support with rod (10), Electrical Mirror (70) and Bracket Left or Right (80-90). g. Discard Lock-Washers (50). 2. Installation <ol style="list-style-type: none"> a. Position Support with rod (10), Electrical Mirror (70) and Bracket Left or Right (80-90). b. Install Screws (30). c. From inside install plate (20), "new" Lock-Washers (50), Washers (40) and Nuts (60). d. Torque Nuts (60) as required. e. Connect connector Cable of electrical supply. f. Switch on the Exterior Mirror Adjuster Circuit Breaker 10F03,(located in the A/B LV Lockers). g. Record Task results on the Defect Report Card for administrative and maintenance planning. 	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-11-01-00/R-00

System:

CAR BODY

Sheet:

4/4

Subsystem/Assy:

MIRRORS

Unit:

LEFT & RIGHT MIRROR

Component:

Man Hours:

0.5

Maintenance Task:

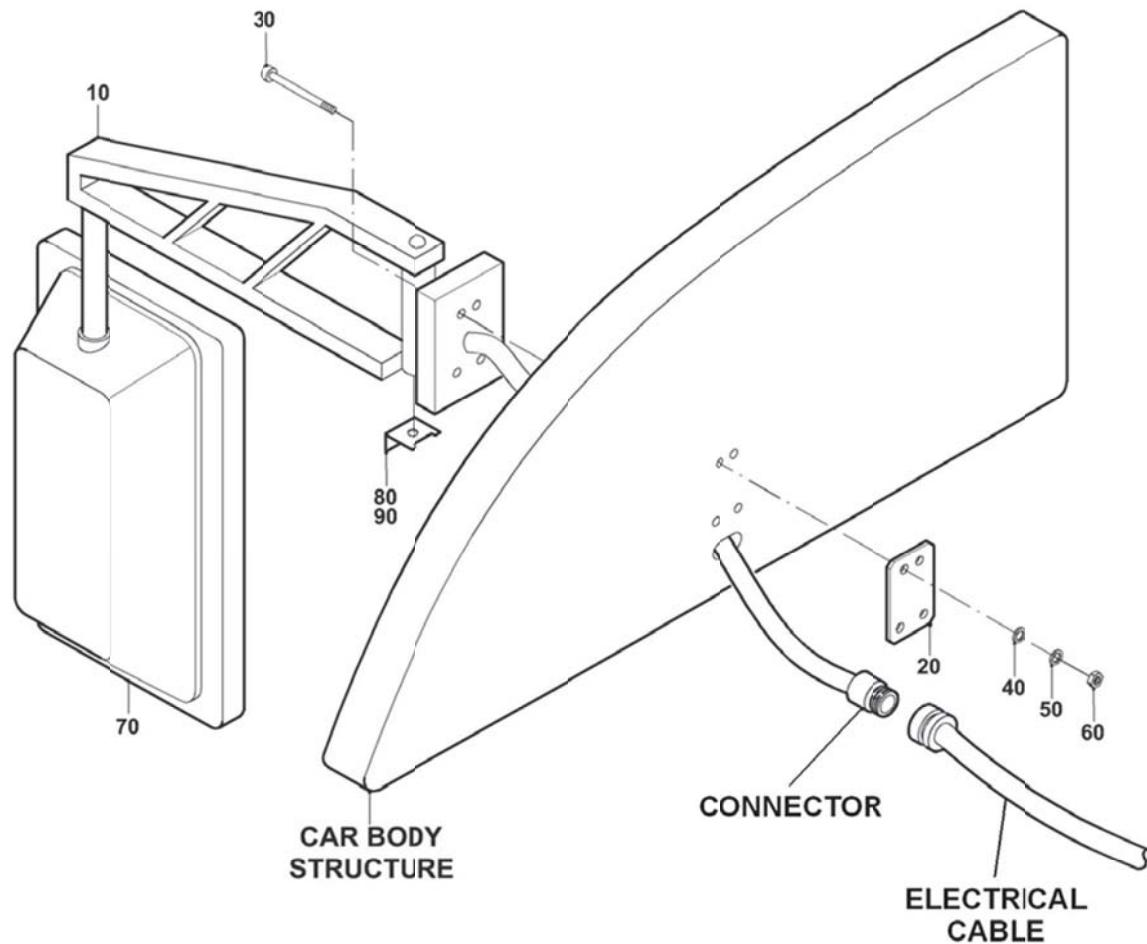
REPLACEMENT**PROCEDURE:**

Figure 1 EXTERIOR MIRROR (LH-RH) REPLACEMENT

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-11-03-00/R-00

System:

CAR BODY

Sheet:

1/4

Subsystem/Assy:

MIRRORS

Unit:

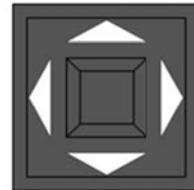
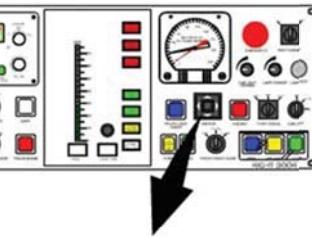
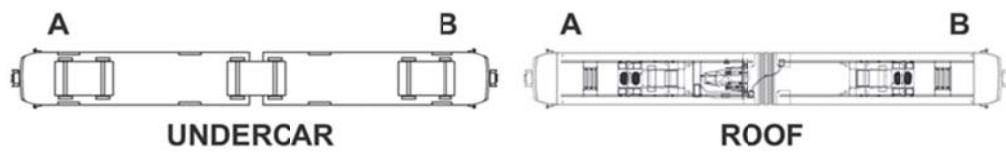
EXTERIOR MIRROR ADJUSTER SWITCH

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**LOCATION:****MIRROR**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-11-03-00/R-00

System:

CAR BODY

Sheet:

2/4

Subsystem/Assy:

MIRRORS

Unit:

EXTERIOR MIRROR ADJUSTER SWITCH

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**SAFETY PRECAUTIONS:**

LACMTA Maintenance Shop Safety Rules & Regulations

CAUTION :SWITCH OFF THE 3F01 CB (BATTERY BOX) BEFORE STARTING TO PERFORM THE REPLACEMENT**TOOLS:**

LACMTA Maintenance Shop Standard Tools Kit

CONSUMABLES:

N/A

SPARE PARTS:

Exterior Mirror Adjuster Switch (10S05)

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-11-03-00/R-00

System:

CAR BODY

Sheet:

3/4

Subsystem/Assy:

MIRRORS

Unit:

EXTERIOR MIRROR ADJUSTER SWITCH

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:****PRELIMINARY OPERATIONS**

1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations.
2. Set the Master Controller Handle to FSB position.
3. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON).

REPLACEMENT

To perform Replacement Procedure of Exterior Mirror Adjuster Switch proceed as follows (Refer to Figs 1-3):

1. Removal.

- a) Gain access to the rear of the Operator Console Panel Assy by unscrew and remove the relevant attaching hardware (Screws and Washers).

NOTE: It is recommended to keep the attaching hardware for later use.

- b) On the rear of the Operator Console Panel, locate the Exterior Mirror Adjuster Switch Body and its electrical connections.
- c) Note the Switch Body Wiring Identification Codes.
- d) Disconnect the Switch Body electrical connections.
- e) Disengage the Switch Assy from its seat.
- f) Remove the Switch Assy by pushing it from the rear toward the front of the Operator Console Panel.

2. Installation.

- a) Install and engage on its seat the Exterior Mirror Adjuster Switch Assy.
- b) Connect the Switch Body electrical connections according to the previously noted wiring identification codes (Refer to Fig 3 for Switch Body Wiring Scheme or to LV Functional Schematic, Sheet 101 for complete Wiring Scheme).
- c) Position the Operator Console Panel Assy.
- d) Install and tighten the Operator Console Panel Assy attaching hardware.
- e) Key on the Vehicle and check that the Exterior Mirror Adjuster Switch works correctly for each Mirror as follows:
 - Select the Mirror to be adjusted by means of the Switch in the center position,
 - Orient the selected Mirror by pressing the four arrows (UP, DOWN, RIGHT, LEFT) of the Switch
 - Check that for any movement of the Switch a corresponding movement occurs for the selected Mirror
- f) Record Task results on the Defect Report Card for administrative and maintenance planning.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-11-03-00/R-00

System:

CAR BODY

Sheet:

4/4

Subsystem/Assy:

MIRRORS

Unit:

EXTERIOR MIRROR ADJUSTER SWITCH

Component:

Man Hours:

1

Maintenance Task:

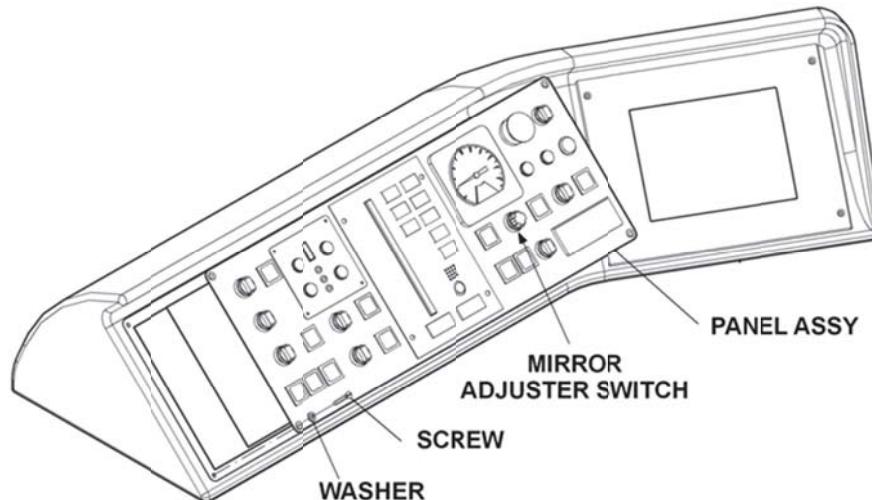
REPLACEMENT**PROCEDURE:**

Fig 1 Mirror Adjuster Switch-Replacement



Fig 2 Mirror Adjuster Switch

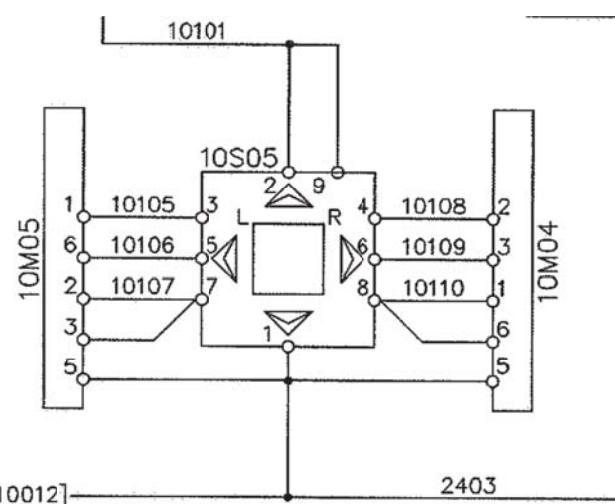


Fig 3 Mirror Adjuster Switch-Wiring Scheme

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-11-04-00/R-00

System:

CAR BODY

Sheet:

1/8

Subsystem/Assy:

MIRRORS

Unit:

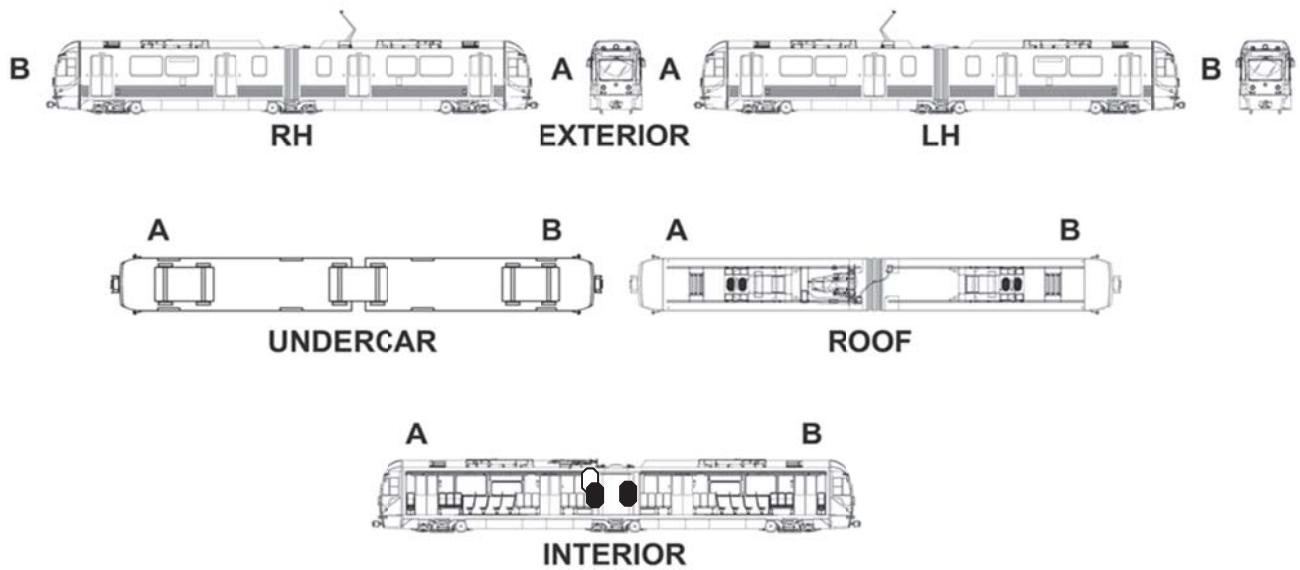
EXTERIOR MIRROR ADJUSTER CIRCUIT BREAKER

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT
LOCATION:


P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-11-04-00/R-00

System:

CAR BODY

Sheet:

2/8

Subsystem/Assy:

MIRRORS

Unit:

EXTERIOR MIRROR ADJUSTER CIRCUIT BREAKER

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**SAFETY PRECAUTIONS:**

LACMTA Maintenance Shop Safety Rules & Regulations

CAUTION :SWITCH OFF THE 3F01 CB (BATTERY BOX) BEFORE STARTING TO PERFORM THE REPLACEMENT**TOOLS:**

LACMTA Maintenance Shop Standard Tools Kit

CONSUMABLES:

N/A

SPARE PARTS:

Exterior Mirror Adjuster Circuit Breaker 10F03 (Type S 280 for DIN bar)

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-11-04-00/R-00

System: CAR BODY	Sheet: 3/8
Subsystem/Assy: MIRRORS	Unit: EXTERIOR MIRROR ADJUSTER CIRCUIT BREAKER
Component:	Man Hours: 1
Maintenance Task:	
REPLACEMENT	
PROCEDURE:	

PRELIMINARY OPERATIONS

Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations:

1. Place the Vehicle in the Maintenance Shop.
2. Set the Master Controller Handle to FSB position.
3. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON).

CAUTION :SWITCH OFF THE 3F01 CB (BATTERY BOX) BEFORE STARTING TO PERFORM THE CB REPLACEMENT

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-11-04-00/R-00

System:

CAR BODY

Sheet:

4/8Subsystem/Assy:
MIRRORS

Unit:

EXTERIOR MIRROR ADJUSTER CIRCUIT BREAKER

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:**

(Refer to Figures 1 through 5)

REMOVAL

To perform the Task proceed as follows:

1. Gain access to the Circuit Breakers Rack installed in the "A" & "B" LV Lockers, by opening the relevant LV Locker Door using Maintenance Key.
2. Locate the Exterior Mirror Adjuster Circuit Breaker 10F03 to be replaced.

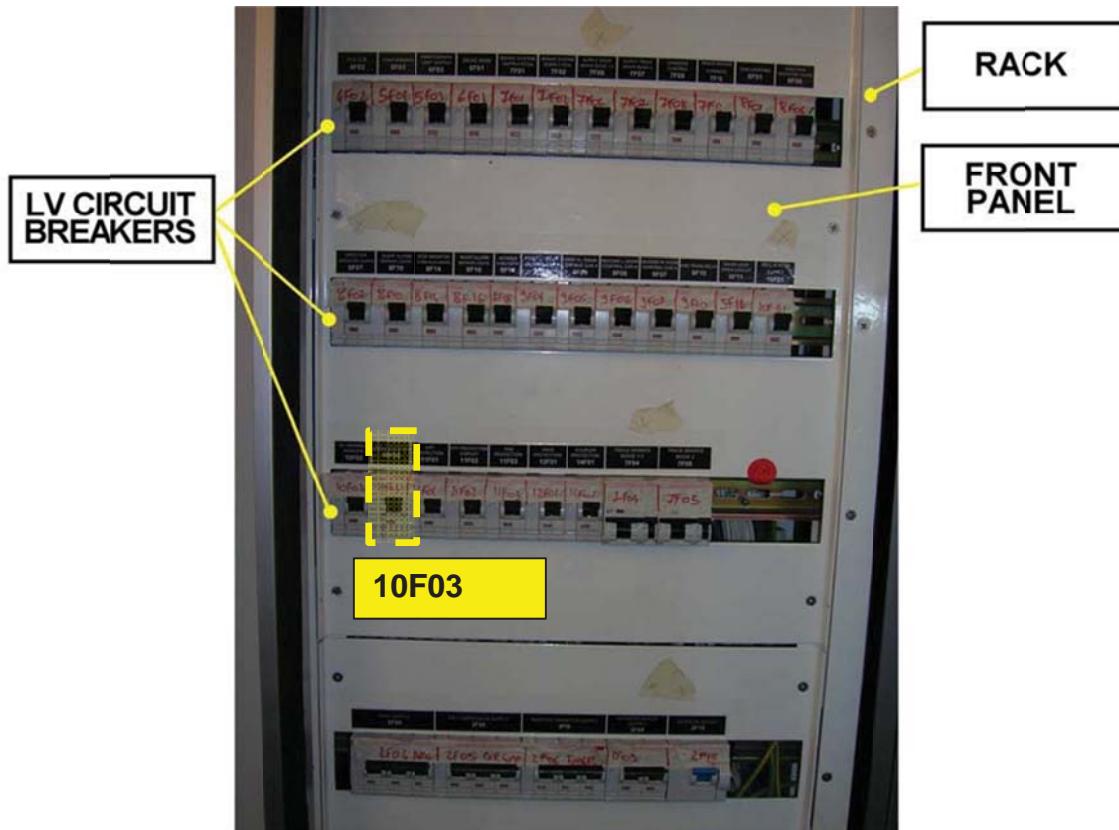


Figure 1

LV LOCKER -CIRCUIT BREAKERS RACK

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-11-04-00/R-00

System:

CAR BODY

Sheet:

5/8

Subsystem/Assy:

MIRRORS

Unit:

EXTERIOR MIRROR ADJUSTER CIRCUIT BREAKER

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:**

- 3 Remove the Circuit Breakers Front Panel by loosening relevant Fixing Screws.
Retain them for later use.

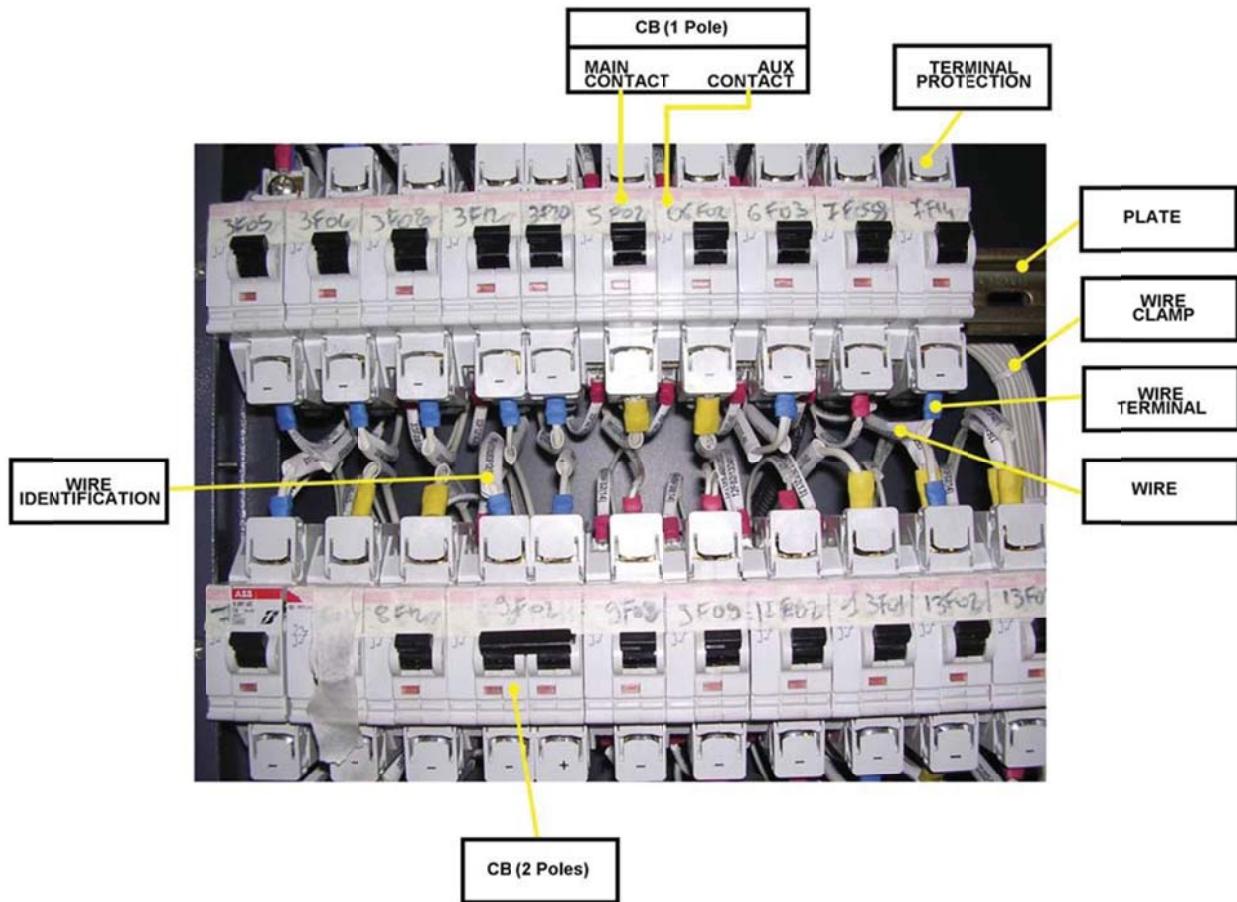


Figure 2 LV LOCKER –CIRCUIT BREAKERS FRONT PANEL REMOVED

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-11-04-00/R-00

System:

CAR BODY

Sheet:

6/8

Subsystem/Assy:

MIRRORS

Unit:

EXTERIOR MIRROR ADJUSTER CIRCUIT BREAKER

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:**

- 4 Locate the Exterior Mirror Adjuster Circuit Breaker 10F03.

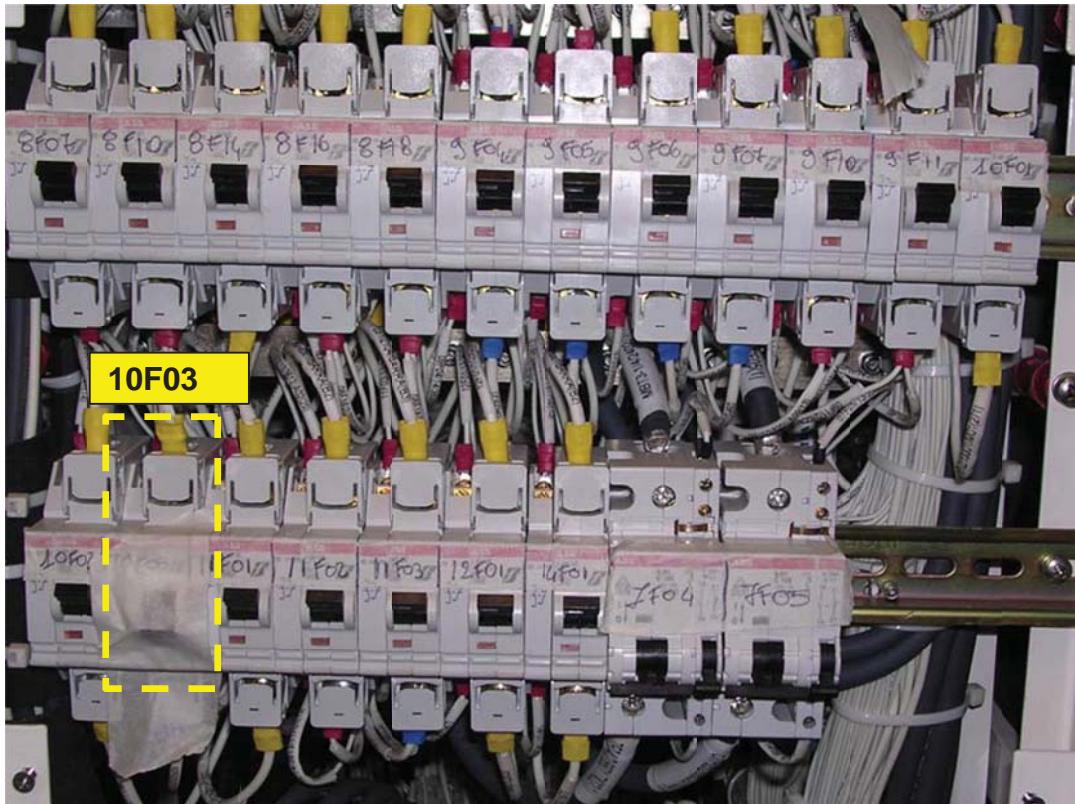


Figure 3 LV LOCKER –MIRROR ADJUSTER CB 10F03 LOCATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-11-04-00/R-00

System:

CAR BODY

Sheet:

7/8

Subsystem/Assy:

MIRRORS

Unit:

EXTERIOR MIRROR ADJUSTER CIRCUIT BREAKER

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT
PROCEDURE:

- 5 Remove the 10F03 Circuit Breaker according to the instructions provided in the following figure 4.

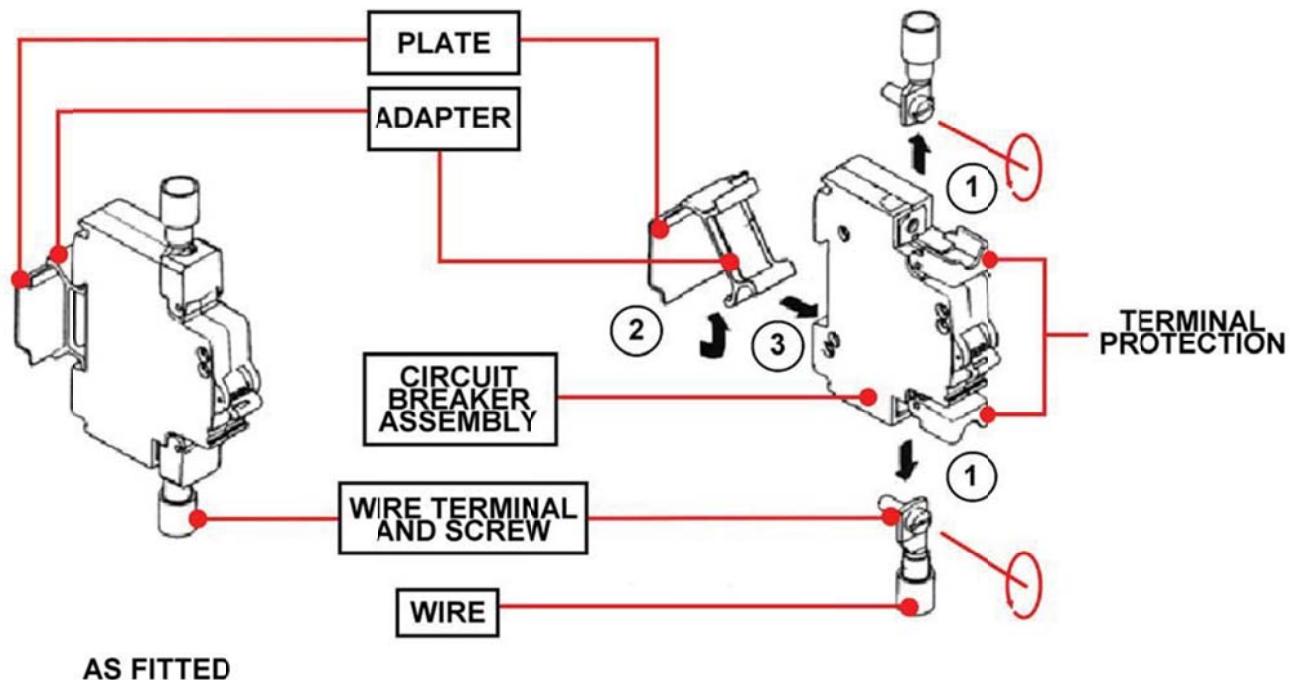


Figure 4 LV LOCKER –MIRROR ADJUSTER 10F03 CIRCUIT BREAKER REMOVAL

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-11-04-00/R-00

System:

CAR BODY

Sheet:

8/8

Subsystem/Assy:

MIRRORSUnit: **EXTERIOR MIRROR ADJUSTER CIRCUIT BREAKER**

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT

PROCEDURE:

INSTALLATION

- 6 Install the 10F03 Circuit Breaker according to the instructions provided in the following figure 5.

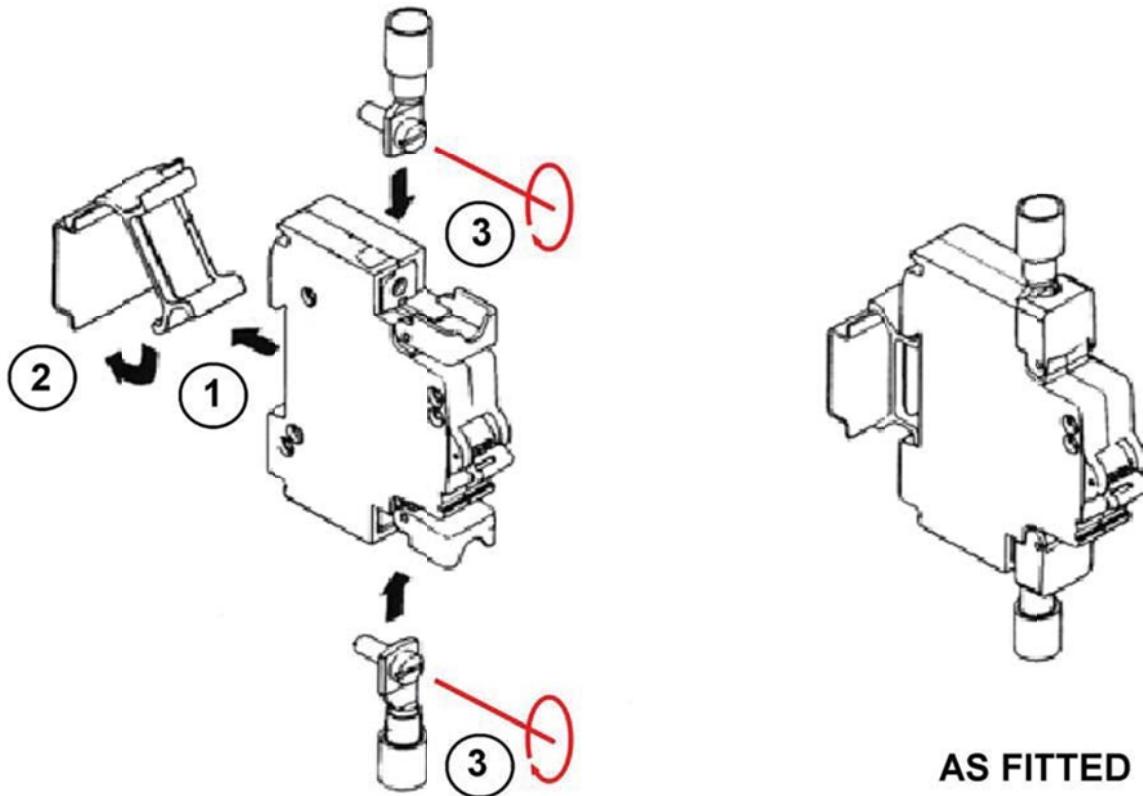


Figure 5 LV LOCKER –MIRROR ADJUSTER 10F03 CIRCUIT BREAKER INSTALLATION

- 7 Install the Circuit Breakers Front Panel and secure it by installing and tightening the relevant Fixing Screws.
 8 Close and secure the LV Locker Door using Maintenance Key.
 9 Record Inspection result on the Defect Report Card for administrative and maintenance planning.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-01-00/R-00

System:

CAR BODY

Sheet:

1/6

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

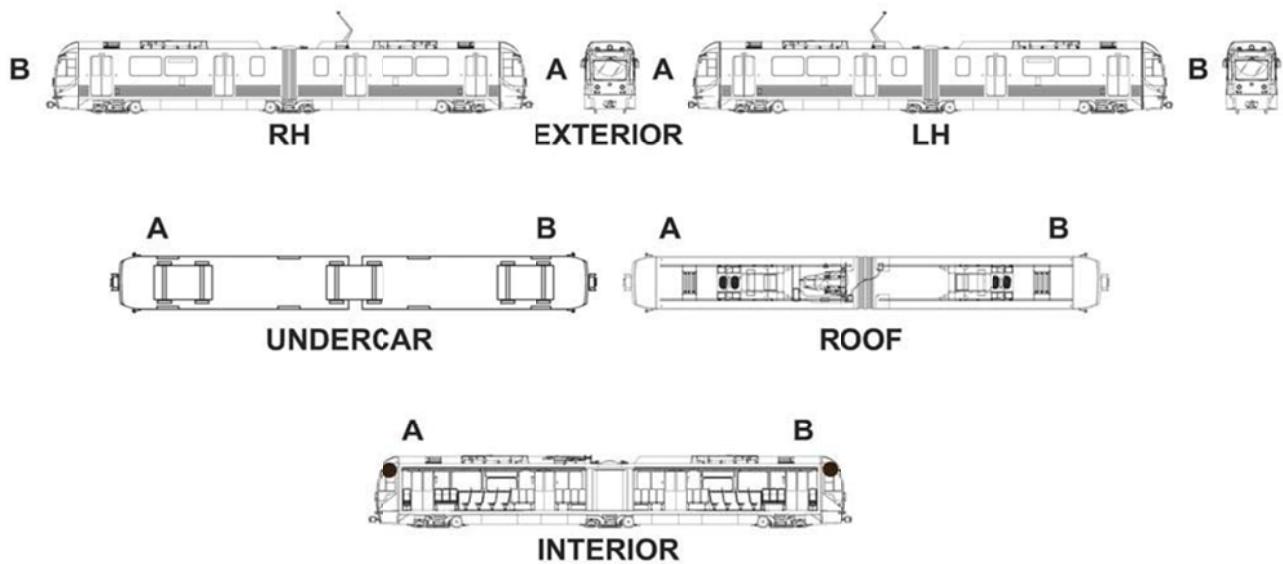
CAB ROOF ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT
LOCATION:


P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-01-00/R-00

System:

CAR BODY

Sheet:

2/6

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

CAB ROOF ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**SAFETY PRECAUTIONS:**

LACMTA Maintenance Shop Safety Rules & Regulations

TOOLS:

LACMTA Maintenance Shop Standard Tools Kit.

CONSUMABLES:

N/A

SPARE PARTS:

Cab Roof Assembly

Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-01-00/R-00

System:

Sheet:

CAR BODY**3/6**

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

CAB ROOF ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:****PRELIMINARY OPERATIONS**

1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations.
2. Set the Master Controller Handle to FSB position.
3. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON).

NOTE: It assumed that the Equipment installed on the Cab Roof is removed.

Refer to the relevant Sheet listed below for the Removal / Installation and Electrical Disconnection / Connection Procedures of each piece of Equipment.

EQUIPMENT	REFER TO SHEET
Loudspeaker	R-C-14-01-04-00/R-00
Halogen Cab Lights	R-C-06-01-03-00/R-00

REPLACEMENT**a. Cab Roof Panels**

To perform the Cab Roof Panels Replacement proceed as follows (Refer to Figure 1):

Removal

- a. Remove Screws (50), Washers (60, 70) and Spacers (40).
- b. Remove the By Pass Electrical Panel (20 on Car A, 30 on Car B).
- c. Remove Screws (150),
- d. Remove the Push-Button Panel (120), the "A" Indicator Panel (130) and the "B" Indicator Panel (140).
- e. Remove Screws (100), Washers (110) and the Lights Support (90).

Installation

- a. Install Lights Support (90) and fasten it with Screws (100) and Washers (110).
- b. Install the Push-Button Panel (120), the "A" Indicator Panel (130) and the "B" Indicator Panel (140) and fasten them with Screws (150).
- c. Install the By Pass Electrical Panel (20 on Car A, 30 on Car B) and fasten it with Screws (50).
- d. Record Task results on the Defect Report Card for administrative and maintenance planning.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-01-00/R-00

System:

CAR BODY

Sheet:

4/6

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

CAB ROOF ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:**

b. Cab Roof Assembly

To perform the Cab Roof Assembly Replacement proceed as follows (Refer to Figure 2):

Removal

- a. Remove Right and Left Port Assemblies (Refer to Sheet R-C-02-12-04-00/R-00).
- b. Remove Screws (40), Washers (50, 60) and Nuts (70).
- c. Remove Cab Roof Assembly (10) and Brackets (20, 30, 32, 34).
- d. Remove the Gasket (72).
- e. Discard Gasket and Lock-Washers (60).

Installation

- a. Install Gasket (72) in the related seat of Cab Roof Assembly.
- b. Install Brackets (20, 30, 32, 34) on Car Body Structure with Screws (40), Washers (50, 60) and Nuts (70). Torque Screws (40) to **15.2 ft-lb**.
- c. Position Cab Roof Assembly (10), and fasten it with Screws (40), Washers (50, 60) and Nuts (70). Torque Screws (40) to **15.2 ft-lb**.
- d. Install Right and Left Port Assemblies (Refer to Sheet R-C-02-12-04-00/R-00).
- e. Record Task results on the Defect Report Card for administrative and maintenance planning.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-01-00/R-00

System:

Sheet:

CAR BODY**5/6**

Subsystem/Assy:

Unit:

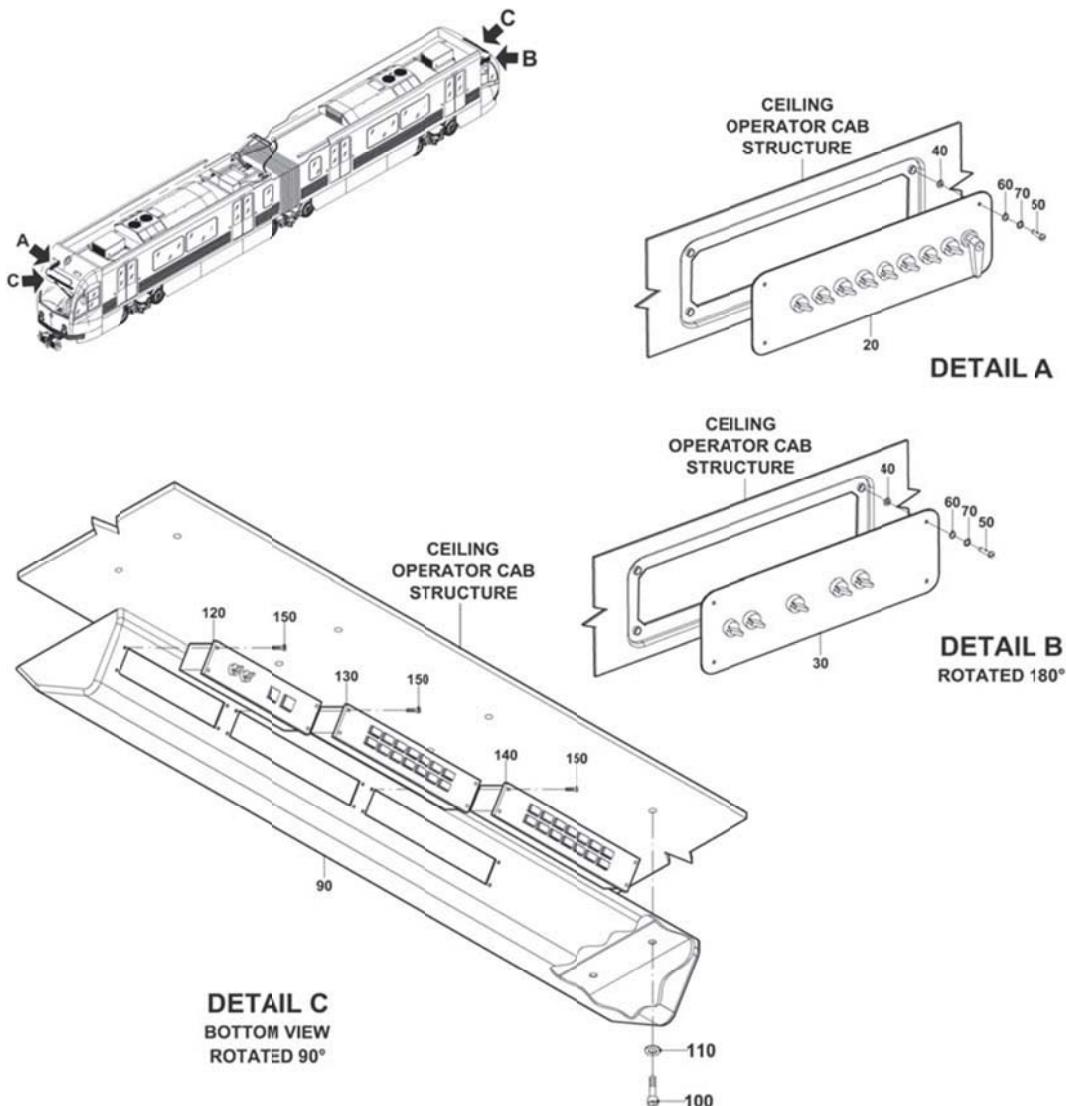
DRIVER CAB INTERIORS**CAB ROOF ASSEMBLY**

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:****Figure 1****CAB ROOF PANELS REMOVAL/INSTALLATION**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-01-00/R-00

System:

CAR BODY

Sheet:

6/6

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

CAB ROOF ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

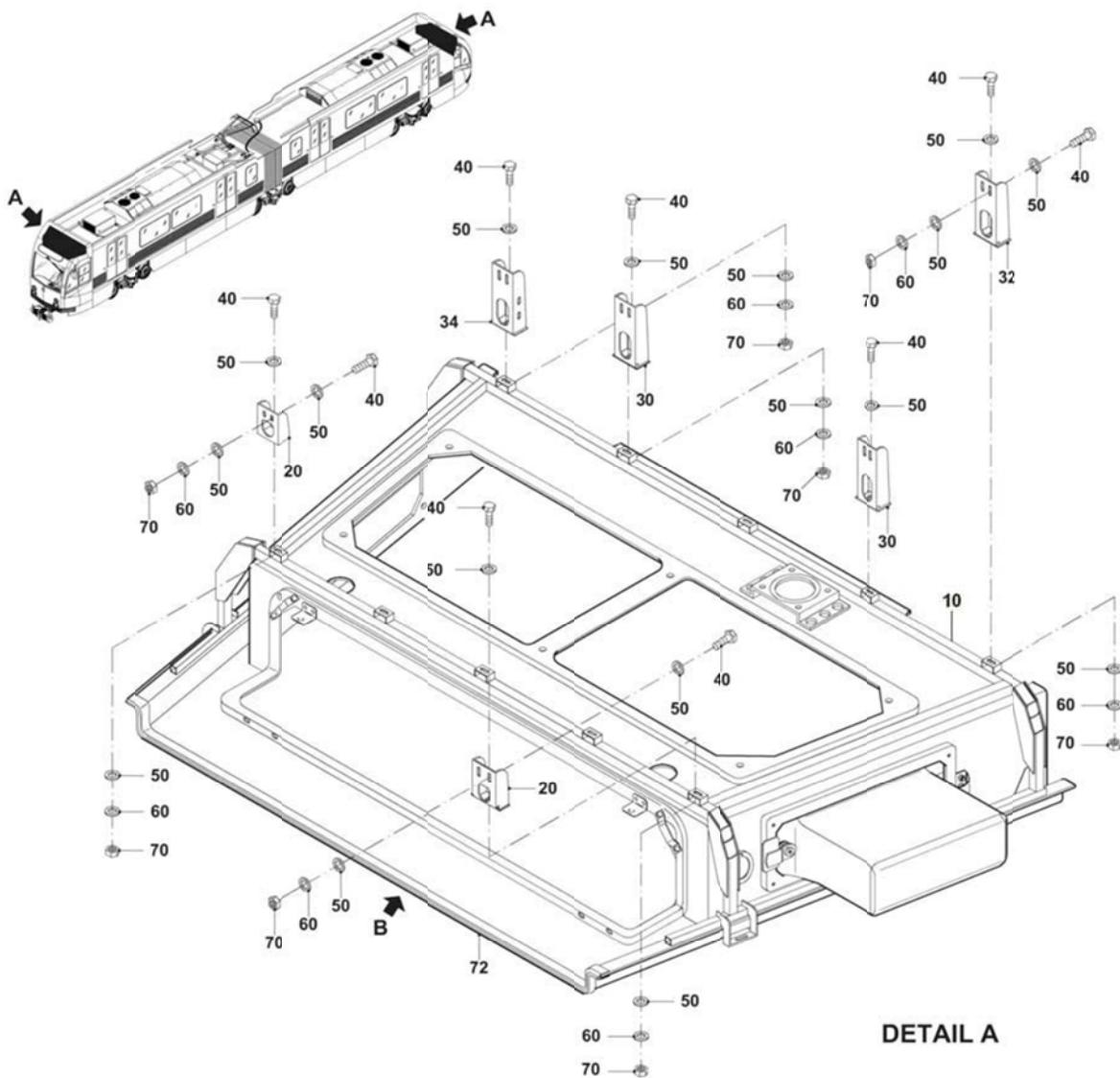
REPLACEMENT**PROCEDURE:**

Figure 2 CAB ROOF ASSEMBLY REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-02-00/R-00

System:

CAR BODY

Sheet:

1/4

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

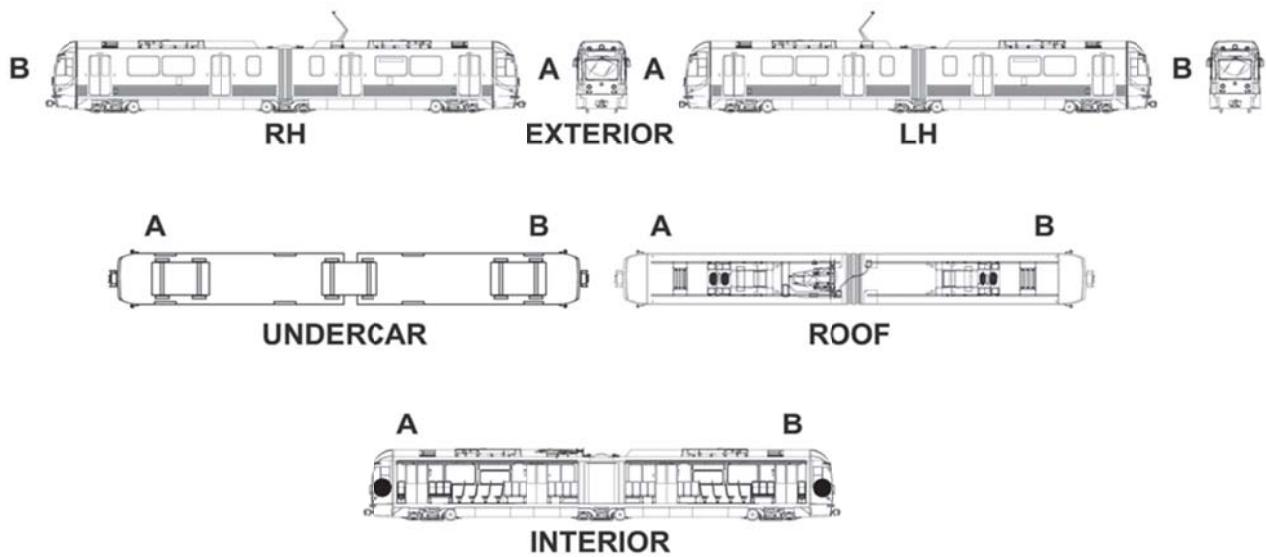
CENTRAL COVERING ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**LOCATION:**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-02-00/R-00

System:

CAR BODY

Sheet:

2/4

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

CENTRAL COVERING ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**SAFETY PRECAUTIONS:**

LACMTA Maintenance Shop Safety Rules & Regulations

TOOLS:

LACMTA Maintenance Shop Standard Tools Kit.

CONSUMABLES:

N/A

SPARE PARTS:

Central Covering Assembly

Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers

P2550 CORRECTIVE MAINTENANCE SHEET									
Card Code:									
R-C-02-12-02-00/R-00									
System: CAR BODY	Sheet: 3/4								
Subsystem/Assy: DRIVER CAB INTERIORS	Unit: CENTRAL COVERING ASSEMBLY								
Component:	Man Hours: 1								
Maintenance Task: REPLACEMENT									
PROCEDURE:									
<p>PRELIMINARY OPERATIONS</p> <ol style="list-style-type: none"> 1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations. 2. Set the Master Controller Handle to FSB position. 3. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). <p>NOTE: It assumed that the Equipment installed on the Central Covering are removed. Refer to the relevant Sheet listed below for the Removal / Installation and Electrical Disconnection / Connection Procedures of each piece of Equipment.</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">EQUIPMENT</th> <th style="width: 50%;">REFER TO SHEET</th> </tr> </thead> <tbody> <tr> <td>Radio</td> <td>R-C-14-03-01-01/R-00</td> </tr> <tr> <td>Loudspeaker</td> <td>R-C-14-03-01-02/R-00</td> </tr> <tr> <td>CCH Panel</td> <td>R-C-14-01-02-00/R-00</td> </tr> </tbody> </table>		EQUIPMENT	REFER TO SHEET	Radio	R-C-14-03-01-01/R-00	Loudspeaker	R-C-14-03-01-02/R-00	CCH Panel	R-C-14-01-02-00/R-00
EQUIPMENT	REFER TO SHEET								
Radio	R-C-14-03-01-01/R-00								
Loudspeaker	R-C-14-03-01-02/R-00								
CCH Panel	R-C-14-01-02-00/R-00								
<p>REPLACEMENT</p> <p>To perform Replacement Procedure of Central Covering Assembly proceed as follows (Refer to Figure 1):</p> <p>Removal</p> <ol style="list-style-type: none"> 1. Remove Screws (60) and Shims (30). 2. Remove Screws (50), Washers (70, 80) and Shims (40). 3. Remove Central Covering Assembly (10). 4. Remove the Gasket (20). 5. Discard Gasket and Lock-Washers (80). <p>Installation</p> <ol style="list-style-type: none"> 1. Install Gasket (20) in the related seat of Central Covering Assembly. 2. Position Cab Roof Assembly (10). 3. Install Screws (50), Washers (70, 80) and Shims (40). Torque Screws (50) to 6.2 ft-lb. 4. Install Screws (60) and Shims (30). Torque Screws (60) to 6.2 ft-lb. 5. Record Task results on the Defect Report Card for administrative and maintenance planning. 									

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-02-00/R-00

System:

CAR BODY

Sheet:

4/4

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

CENTRAL COVERING ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

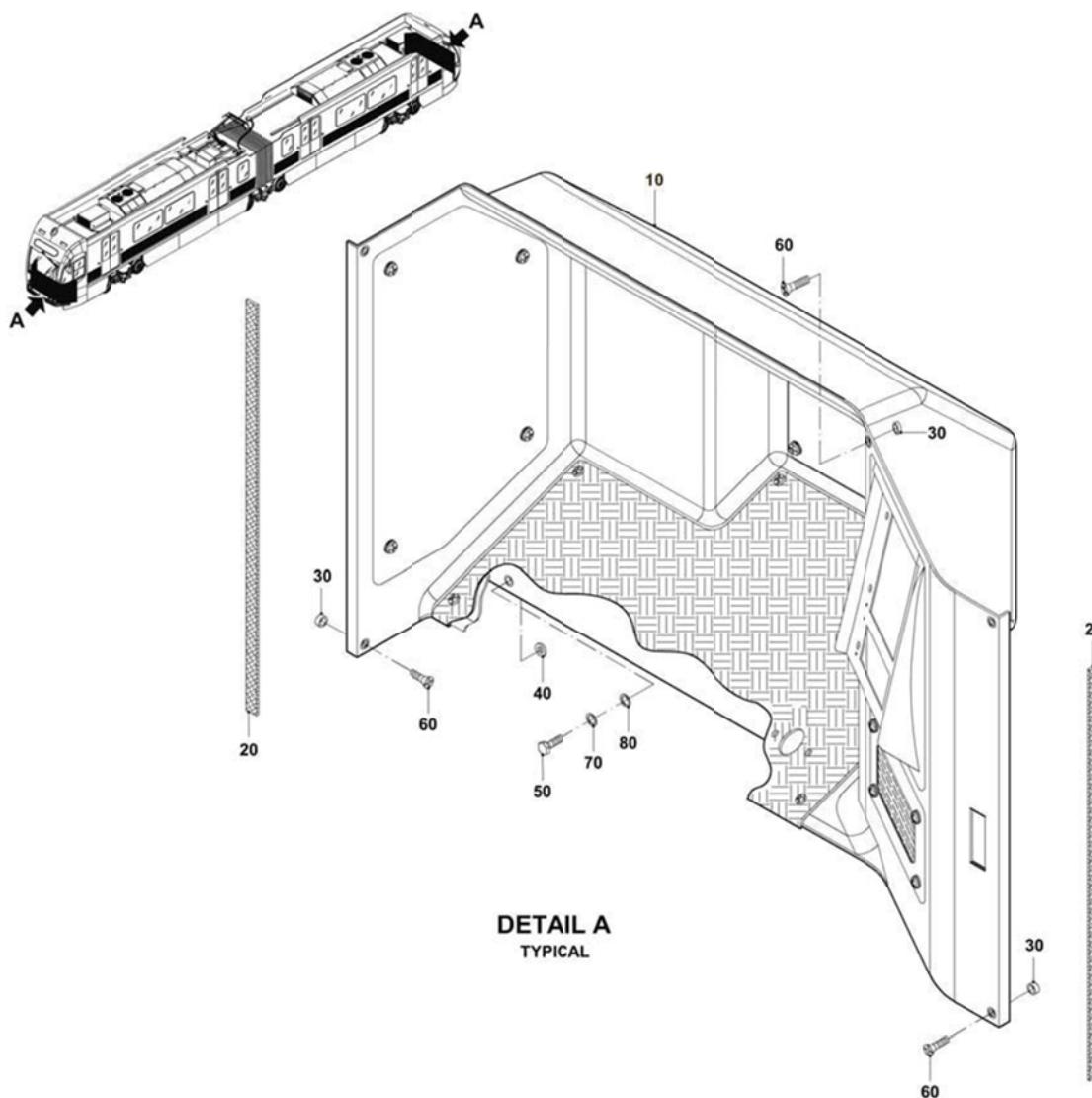
REPLACEMENT**PROCEDURE:**

Figure 1

CENTRAL COVERING ASSEMBLY REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-03-00/R-00

System:

CAR BODY

Sheet:

1/6

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

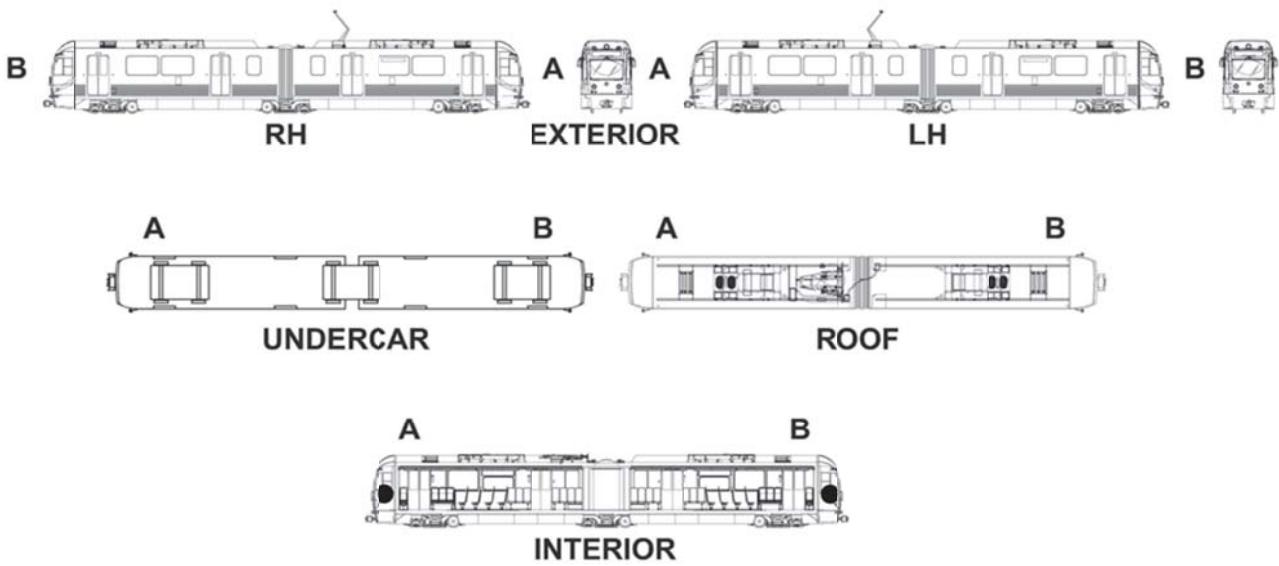
CONSOLE BASE PLANE

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT
LOCATION:


P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-03-00/R-00

System:

CAR BODY

Sheet:

2/6

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

CONSOLE BASE PLANE

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**SAFETY PRECAUTIONS:**

LACMTA Maintenance Shop Safety Rules & Regulations

TOOLS:

LACMTA Maintenance Shop Standard Tools Kit.

CONSUMABLES:

Sealing Dow Corning CQ 3-3525

SPARE PARTS:

Console Base Plane

Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-03-00/R-00

System:

CAR BODY

Sheet:

3/6

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

CONSOLE BASE PLANE

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT

PROCEDURE:

PRELIMINARY OPERATIONS

1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations.
2. Set the Master Controller Handle to FSB position.
3. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON).

NOTE: It assumed that the Equipment installed on the Console Base Plane is removed.
 Refer to the relevant Sheet listed below for the Removal / Installation and Electrical Disconnection / Connection Procedures of each piece of Equipment.

EQUIPMENT	REFER TO SHEET
Master Controller	R-C-07-08-01-00/R-00
Desk Microphone	R-C-14-01-03-00/R-00
AADS Console Operator	R-C-14-02-01-00/R-00
Operator Console	R-C-02-12-09-00/R-00
Cab Lining Panels	R-C-02-12-04-00/R-00

REPLACEMENT

a. Console Base Plane Assembly

To perform the Console Base Plane Assembly Replacement proceed as follows (Refer to Figure 1):

Removal

1. On front side remove Screws (80), Washers (90, 100), Shims (50, 60) and Nuts (110).
2. On rear side remove Screws (80), Washers (90, 100) and Shims (20, 30, 40).
3. Remove the Console Base Plane Assembly (10).
4. Leave in position the Threaded Bushings (70).
5. Remove Gasket (65) and Seal Rubber (290).
6. Remove Cage Nuts (120) from Console Base Plane Assembly (10).

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-03-00/R-00

System:

CAR BODY

Sheet:

4/6

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

CONSOLE BASE PLANE

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT

PROCEDURE:

Installation

1. Install Cage Nuts (120) on Console Base Plane Assembly (10).
2. Install Gasket (65) and Seal Rubber (290) with Sealing Dow Corning CQ 3-3525.
3. Check condition of Threaded Bushings (70). Replace if necessary.
4. Position Console Base Plane Assembly (10) and fasten it, on rear side, with Screws (80), Washers (90, 100) and Shims (20, 30, 40). Torque Screws (80) as required.
5. On front side install Screws (80), Washers (90, 100), Shims (50, 60) and Nuts (110). Torque Nuts (110) as required.
6. Record Task results on the Defect Report Card for administrative and maintenance planning.

b. Console Frames.

To perform the Console Frames Replacement proceed as follows (Refer to Figure 2):

Removal

1. Remove Screws (170), Washers (180, 190),
2. Remove Console Frames (130, 140, 150).
3. Leave in position Threaded Bushings (160).
4. Remove Screws (260), Washers (270, 280),
5. Remove Console Frames (230, 240).
6. Leave in position Threaded Bushings (250).
7. Remove Cage Nuts (200) from Console Frame (130).
8. Remove Cage Nuts (210) from Console Frame (140).
9. Remove Cage Nuts (220) from Console Frame (150).

Installation

1. Install Cage Nuts (200) on Console Frame (130).
2. Install Cage Nuts (210) on Console Frame (140).
3. Install Cage Nuts (220) on Console Frame (150).
4. Check condition of Threaded Bushings (160 and 250). Replace if necessary.
5. Install Console Frames (230, 240) and fasten them with Screws (260) and Washers (270, 280). Torque Screws (260) as required.
6. Install Console Frames (130, 140, 150) and fasten them with Screws (170) and Washers (180, 190). Torque Screws (170) as required.
7. Record Task results on the Defect Report Card for administrative and maintenance planning.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-03-00/R-00

System:

Sheet:

CAR BODY

5/6

Subsystem/Assy:

Unit:

DRIVER CAB INTERIORS

CONSOLE BASE PLANE

Component:

Man Hours:

1

1

Maintenance Task

Maintenance Task: **REPLACEMENT**

PROCEDURE

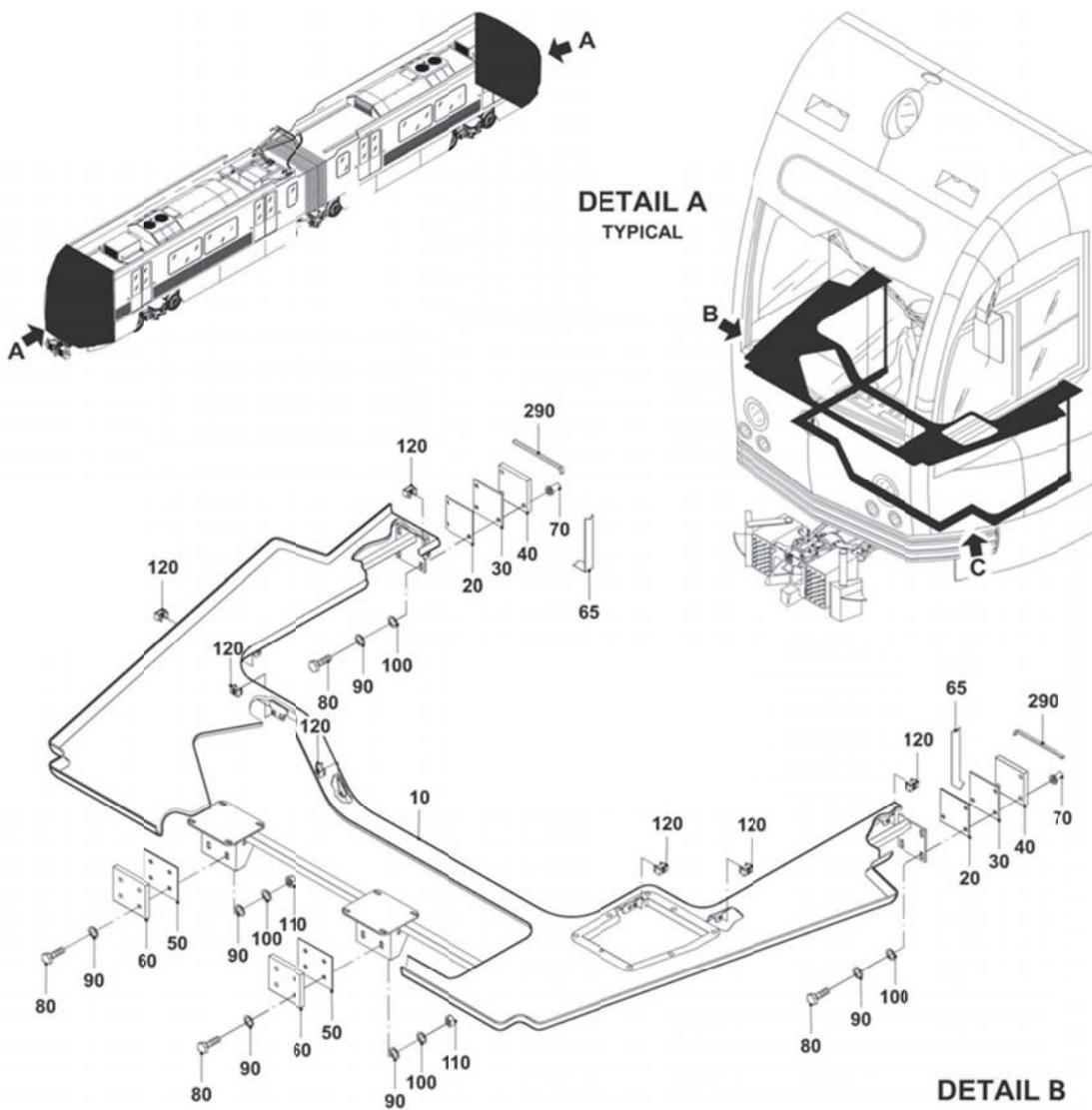


Figure 1 CONSOLE BASE PLANE ASSEMBLY REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-03-00/R-00

System:

CAR BODY

Sheet:

6/6

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

CONSOLE BASE PLANE

Component:

Man Hours:

1

Maintenance Task:

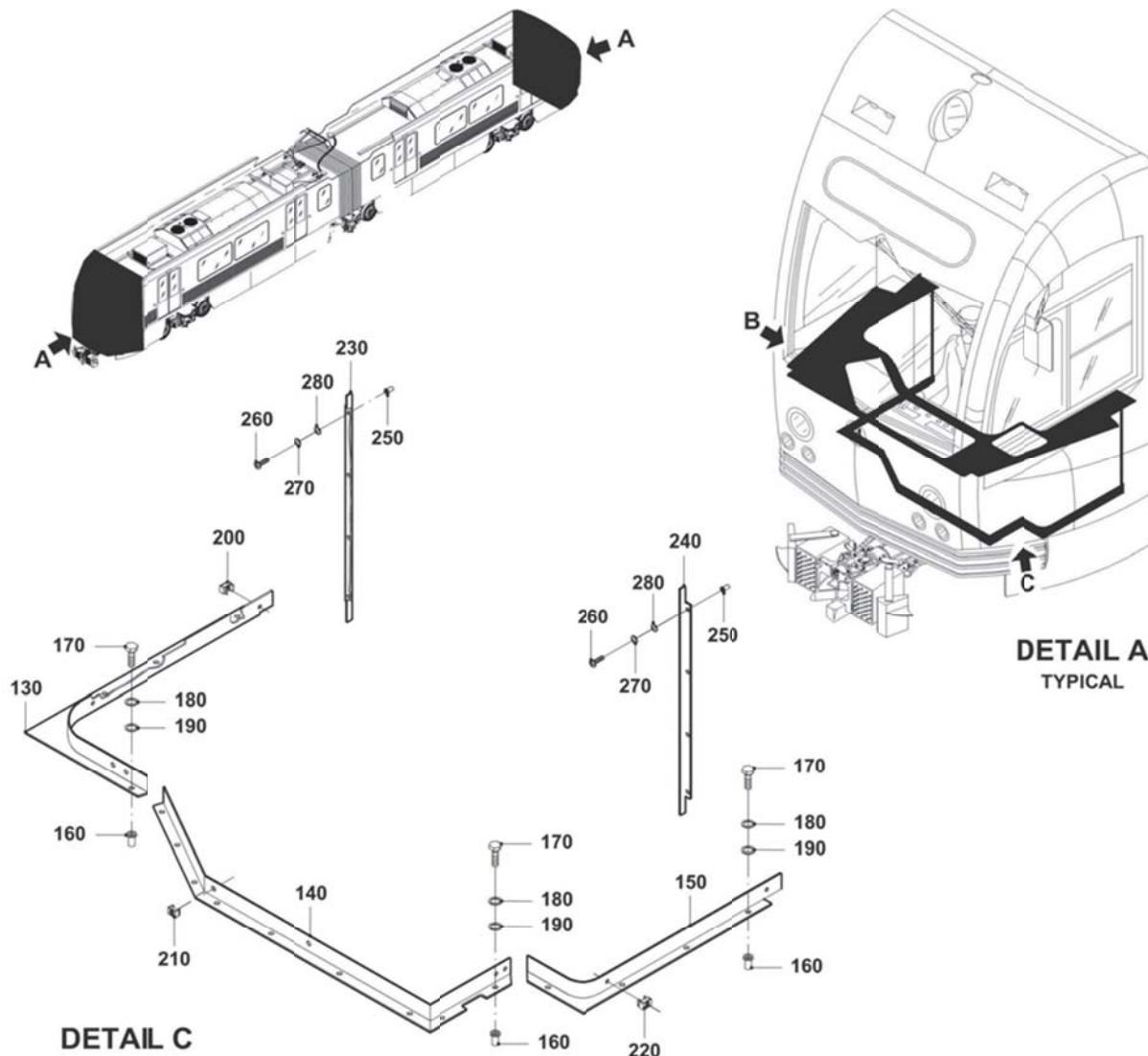
REPLACEMENT**PROCEDURE:**

Figure 2 CONSOLE FRAMES REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-04-00/R-00

System:

CAR BODY

Sheet:

1/8

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

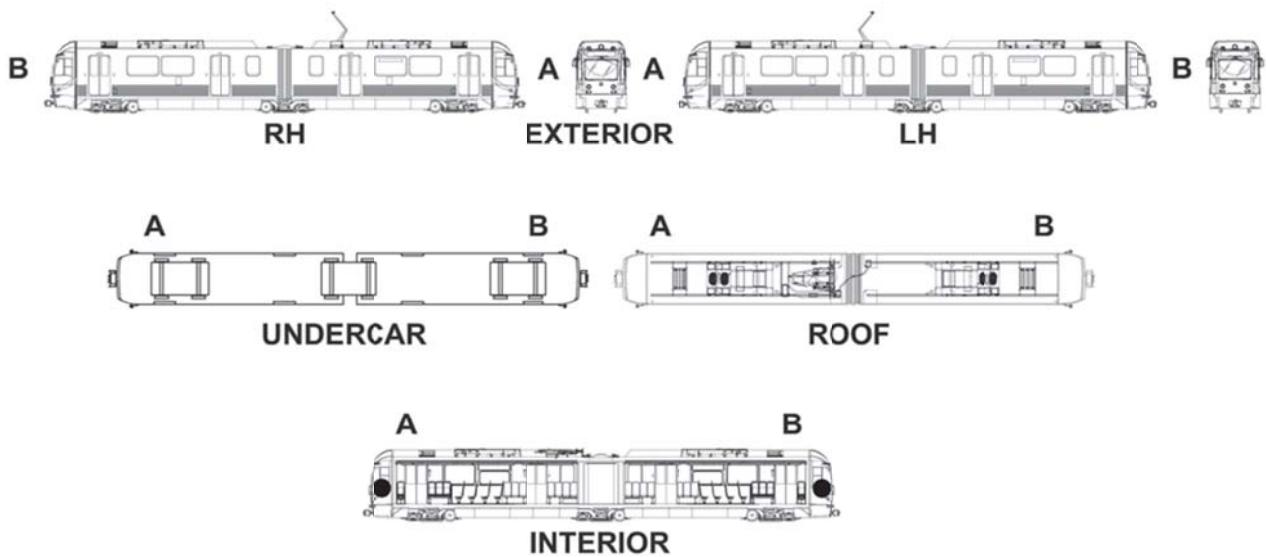
CAB LINING PANELS

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**LOCATION:**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-04-00/R-00

System:

CAR BODY

Sheet:

2/8

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

CAB LINING PANELS

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**SAFETY PRECAUTIONS:**

LACMTA Maintenance Shop Safety Rules & Regulations

TOOLS:

LACMTA Maintenance Shop Standard Tools Kit.

CONSUMABLES:

Sealing Dow Corning CQ 3-3525

Adhesive Loctite 243

SPARE PARTS:

Cab Lining Panels

Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-04-00/R-00

System:

CAR BODY

Sheet:

3/8

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

CAB LINING PANELS

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT

PROCEDURE:

PRELIMINARY OPERATIONS

1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations.
2. Set the Master Controller Handle to FSB position.
3. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON).

REPLACEMENT

a. Left Port Assembly

To perform the Left Port Assembly Replacement proceed as follows (Refer to Figure 1):

Removal

1. Remove Cab Side Sliding Windows (Refer to Sheet R-C-02-07-02-00/R-00).
2. Remove Screws (80), Bushings (70), Shims (30) and Nuts (120).
3. Remove Screws (90), Washers (100, 110) and Shims (50, 60).
4. Remove Screws (260), Washers (270, 280),
5. Remove Sheet (250) and Left Vent Canal (210) with Air Diffusers (240).
6. Remove Left Port Assembly (150), then remove Seal Rubber (40).

Installation

1. Apply a light coat of Sealing Dow Corning CQ 3-3525 on the Seal Rubber (40).
2. Position the Seal Rubber (40) in its seat.
3. Install the Left Port Assembly (150).
4. Install Left Vent Canal (210) with Air Diffusers (240), Sheet (250) and fasten with Screws (260) and Washers (270, 280). Torque Screws (260) as required.
5. Install Screws (90), Washers (100, 110) and Shims (50, 60). Torque Screws (90) to **15.2 ft-lb**.
6. Install Screws (80), Bushings (70), Shims (30) and Nuts (120). Torque Screws (80) as required.
7. Install Cab Side Sliding Windows (Refer to Sheet R-C-02-07-02-00/R-00).
8. Record Task results on the Defect Report Card for administrative and maintenance planning.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-04-00/R-00

System:

CAR BODY

Sheet:

4/8

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

CAB LINING PANELS

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:****b. Right Port Assembly**

To perform Replacement Procedure of Right Port Assembly proceed as follows (Refer to Figure 2):

Removal

1. Remove Cab Side Sliding Windows (Refer to Sheet R-C-02-07-02-00/R-00).
2. Remove Screws (80), Bushings (70), Shims (30) and Nuts (120).
3. Remove Screws (90), Washers (100, 110) and Shims (50, 60).
4. Remove Screws (260), Washers (270, 280),
5. Remove Sheet (250) and Right Vent Canal (220) with Air Diffusers (240).
6. Remove Right Port Assembly (200), and then remove Seal Rubber (40).

Installation

1. Apply a light coat of Sealing Dow Corning CQ 3-3525 on the Seal Rubber (40).
2. Install the Right Port Assembly (200).
3. Install Right Vent Canal (220) with Air Diffusers (240), Sheet (250) and fasten with Screws (260) and Washers (270, 280). Torque Screws (260) as required.
4. Install Screws (90), Washers (100, 110) and Shims (50, 60). Torque Screws (90) to **15.2 ft-lb**.
5. Install Screws (80), Bushings (70), Shims (30) and Nuts (120). Torque Screws (80) as required.
6. Install Cab Side Sliding Windows (Refer to Sheet R-C-02-07-02-00/R-00).
7. Record Task results on the Defect Report Card for administrative and maintenance planning.

c. Left Lower Covering Assembly.

To perform Left Lower Covering Assembly Replacement proceed as follows (Refer to Figure 3):

Removal

1. Remove Screws (330) and Shims (320).
2. Remove Left Lower Covering Assembly (310).

Installation

1. Install the Left Lower Covering Assembly (310).
2. Install Screws (330) and Shims (320). Torque Screws (330) to **6.2 ft-lb**.
3. Record Task results on the Defect Report Card for administrative and maintenance planning.

d. Right Lower Covering Assembly

To perform Right Lower Covering Assembly Replacement proceed as follows (Refer to Figure 3):

Removal

1. Remove Screws (370) and Shims (360).
2. Remove Right Lower Covering Assembly (380).

Installation

1. Install the Right Lower Covering Assembly (380).
2. Install Screws (370) and Shims (360). Torque Screws (370) to **6.2 ft-lb**.
3. Record Task results on the Defect Report Card for administrative and maintenance planning.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-04-00/R-00

System:

CAR BODY

Sheet:

5/8

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

CAB LINING PANELS

Component:

Man Hours:

1

Maintenance Task:

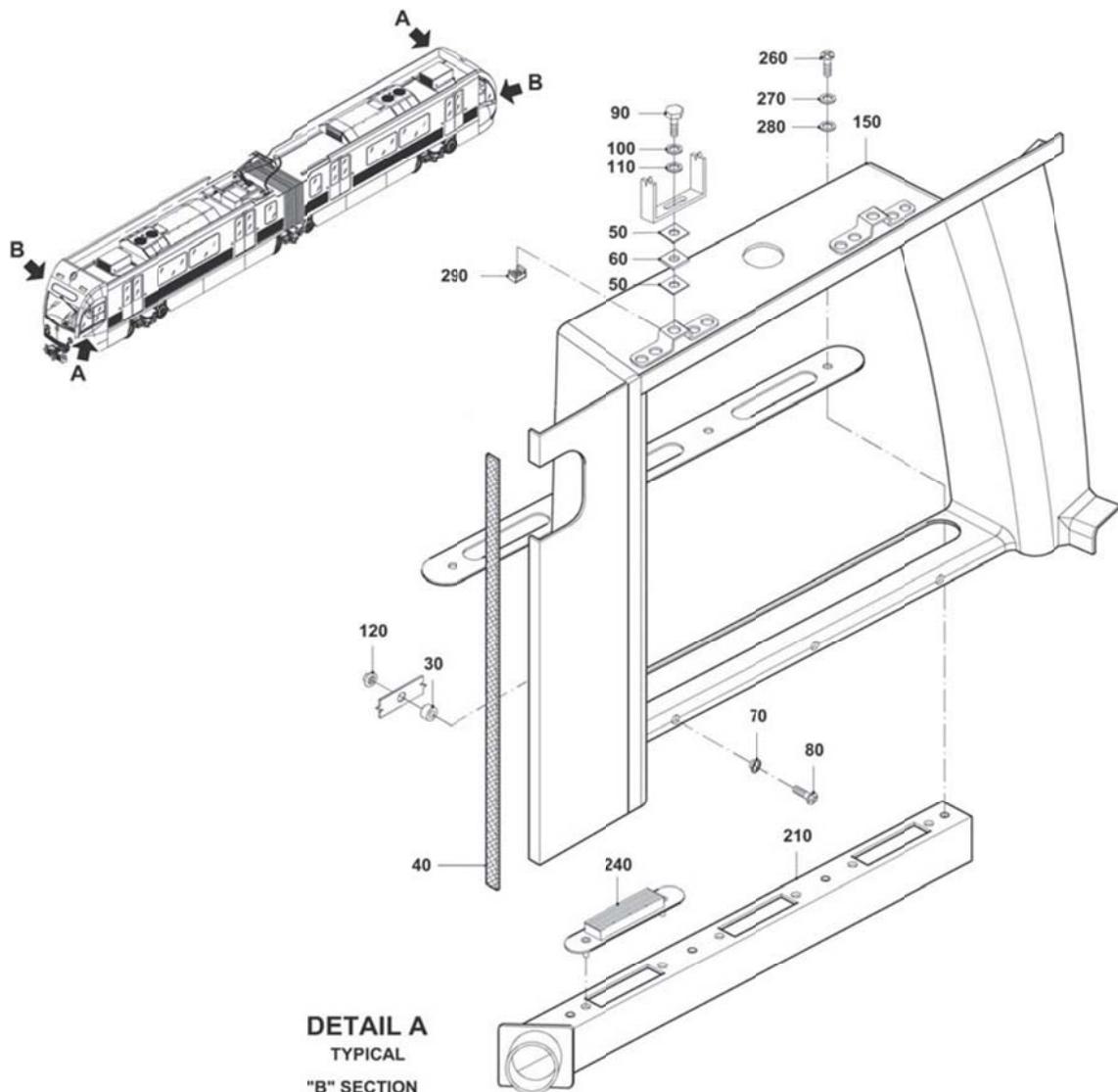
REPLACEMENT**PROCEDURE:**

Figure 1 LEFT PORT ASSEMBLY REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-04-00/R-00

System:

CAR BODY

Sheet:

6/8

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

CAB LINING PANELS

Component:

Man Hours:

1

Maintenance Task:

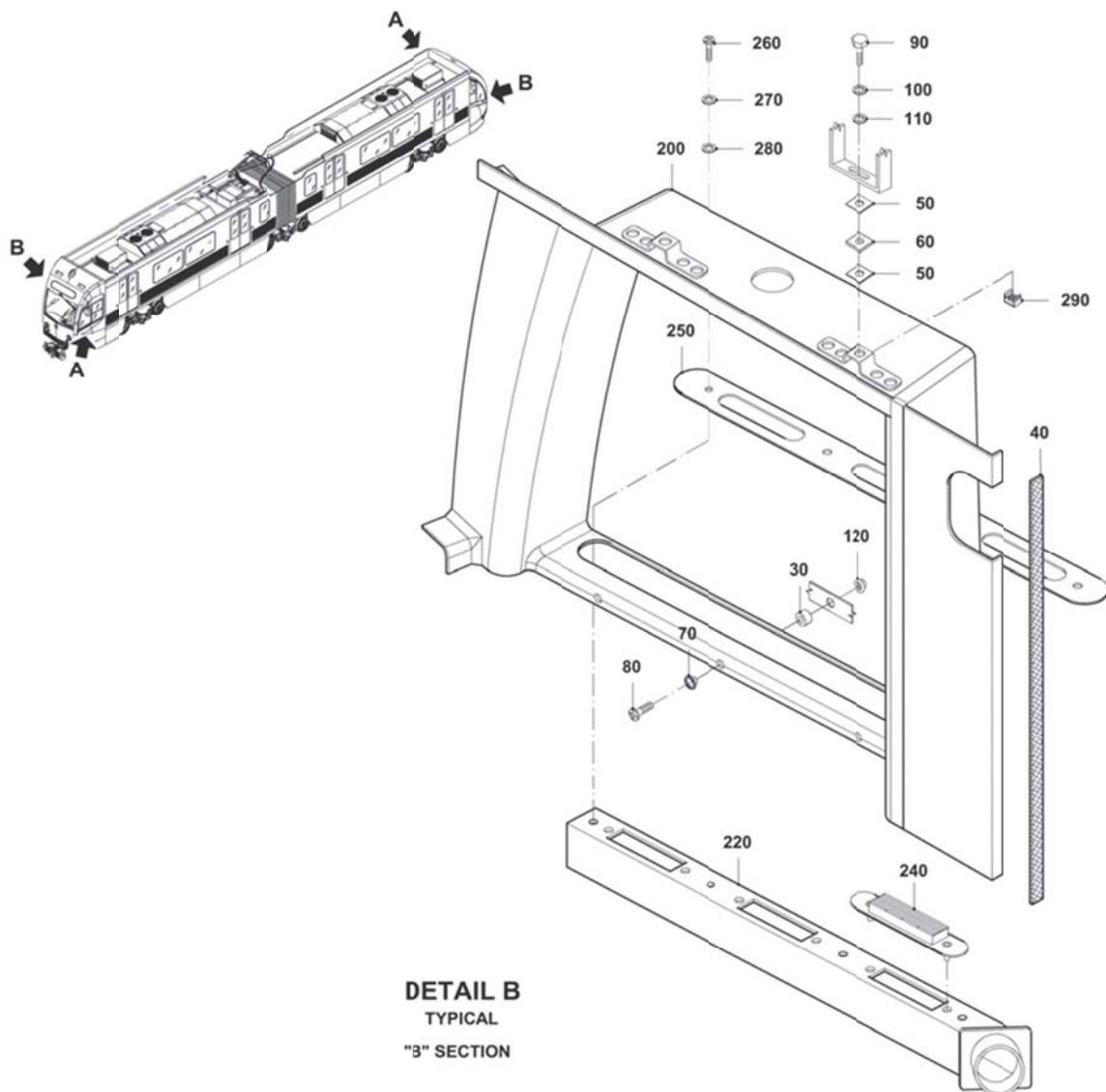
REPLACEMENT**PROCEDURE:**

Figure 2 RIGHT PORT ASSEMBLY REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-04-00/R-00

System:

CAR BODY

Sheet:

7/8

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

CAB LINING PANELS

Component:

Man Hours:

1

Maintenance Task:

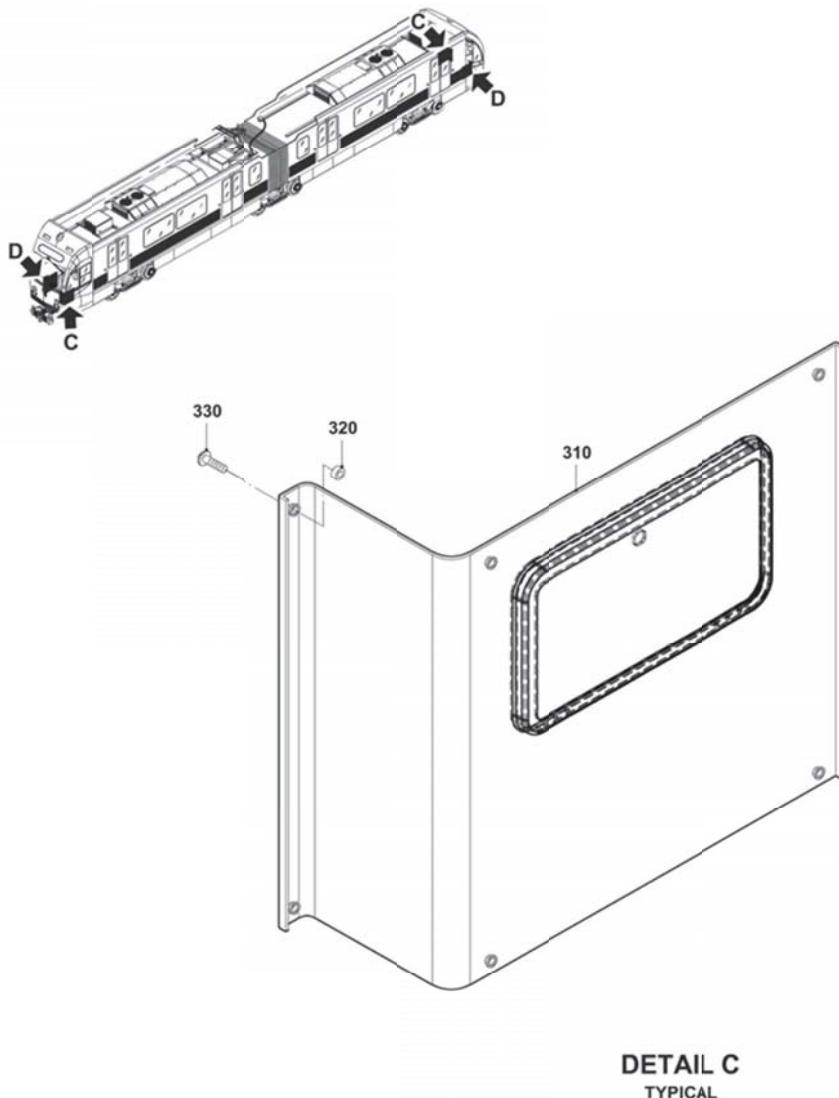
REPLACEMENT
PROCEDURE:


Figure 3 LEFT LOWER COVERING REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-04-00/R-00

System:

CAR BODY

Sheet:

8/8

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

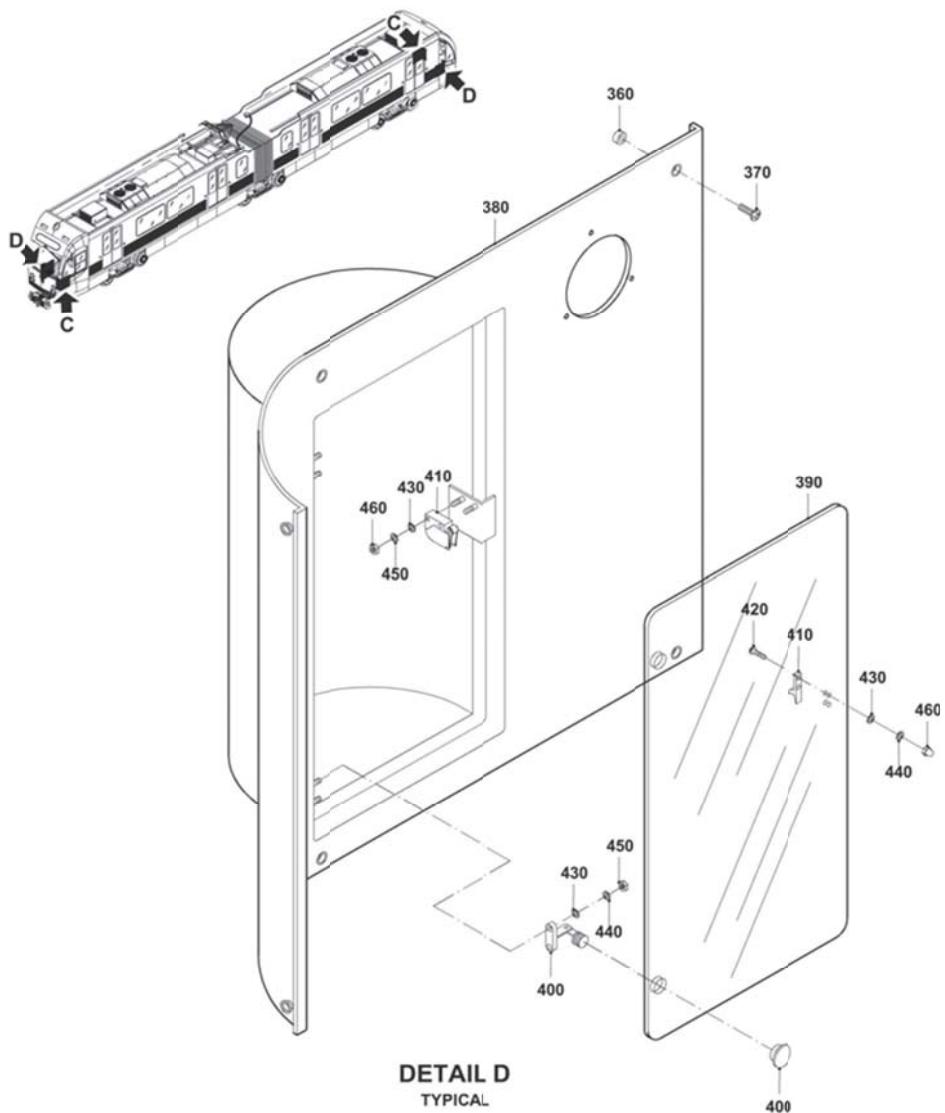
CAB LINING PANELS

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-09-00/R-00

System:

CAR BODY

Sheet:

1/6

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

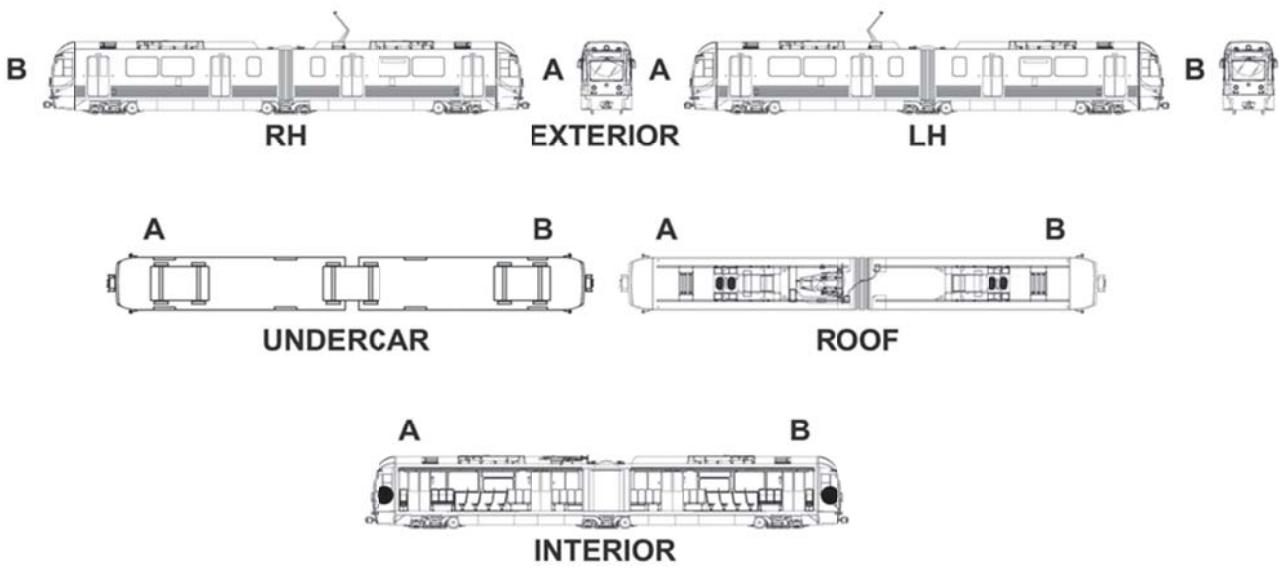
OPERATOR CONSOLE

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT
LOCATION:


P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-12-09-00/R-00	
System: CAR BODY	Sheet: 2/6
Subsystem/Assy: DRIVER CAB INTERIORS	Unit: OPERATOR CONSOLE
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
SAFETY PRECAUTIONS: LACMTA Maintenance Shop Safety Rules & Regulations	
TOOLS: LACMTA Maintenance Shop Standard Tools Kit.	
CONSUMABLES: N/A	
SPARE PARTS: Operator Console Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers	

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code:	
R-C-02-12-09-00/R-00	
System: CAR BODY	Sheet: 3/6
Subsystem/Assy: DRIVER CAB INTERIORS	Unit: OPERATOR CONSOLE
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
PROCEDURE:	
<p>PRELIMINARY OPERATIONS</p> <ol style="list-style-type: none"> 1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations. 2. Set the Master Controller Handle to FSB position. 3. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). 4. Remove Electrical Power from Vehicle by lowering the Pantograph. 5. Turn the Transfer Switch to OFF. 6. Set the Pantograph Control Motor Switch (5F02 CB LV Locker "A" Section) to OFF. 7. Lock-out and tag-out the Pantograph Control Motor Switch per LACMTA Safety Rules and Procedures. <p>NOTE: It assumed that Electrical Connections to Operator Console are disconnected. According to each Switch / Pushbutton / Item Label, refer to the relevant Sheet provided in Sections 03 through 19 for the relevant Electrical Disconnection / Connection Procedures.</p>	
<p>REPLACEMENT</p> <p>a. Operator Console Assembly.</p> <p>To perform the Operator Console Assembly Replacement proceed as follows (Refer to Figure 1):</p> <p>Removal</p> <ol style="list-style-type: none"> 1. Remove Screws (20), Washers (30), and then remove Operator Console Assembly (10). 2. Remove Screws (50), and then remove IDU Monitor (40). <p>Installation</p> <ol style="list-style-type: none"> 1. Install IDU Monitor (40) and fasten it with Screws (50). Torque Screws (50) as required. 2. Install Operator Console Assembly (10) and fasten it with Screws (20) and Washers (30). Torque Screws (20) as required. 3. Record Task results on the Defect Report Card for administrative and maintenance planning. <p>b. Operator Console Structure Assembly.</p> <p>To perform the Operator Console Structure Assembly Replacement proceed as follows (Refer to Figure 2):</p> <p>Removal</p> <ol style="list-style-type: none"> 1. Remove Screws (20), Washers (30) and Nuts (40). 2. Remove Screws (25), Washers (33, 37) and Nuts (45). 3. Remove Operator Console Structure Assembly (10). 4. Remove Threaded Bush (50), Bush Nut (60) and Threaded Spacer (70) from Operator Console Structure Assembly (10). 	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-09-00/R-00

System:

CAR BODY

Sheet:

4/6

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

OPERATOR CONSOLE

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT

PROCEDURE:

Installation

1. Install Threaded Bush (50), Bush Nut (60) and Threaded Spacer (70) on Operator Console Structure Assembly (10).
2. Install Operator Console Structure Assembly (10) in proper position.
3. Install Screws (20), Washers (30) and Nuts (40). Torque Nuts (40) as required.
4. Install Screws (25), Washers (33, 37) and Nuts (45). Torque Nuts (45) as required.
5. Record Task results on the Defect Report Card for administrative and maintenance planning.

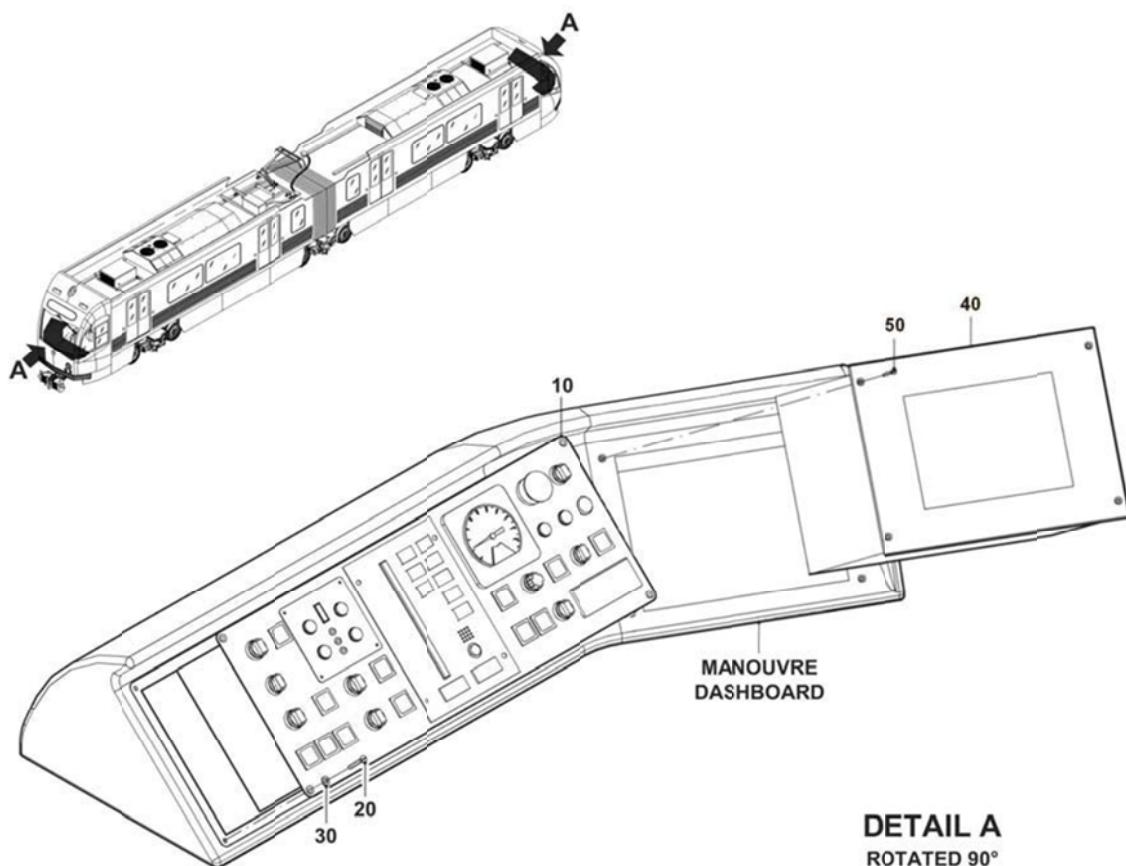


Figure 1 OPERATOR CONSOLE ASSEMBLY REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-09-00/R-00

System:

CAR BODY

Sheet:

5/6

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

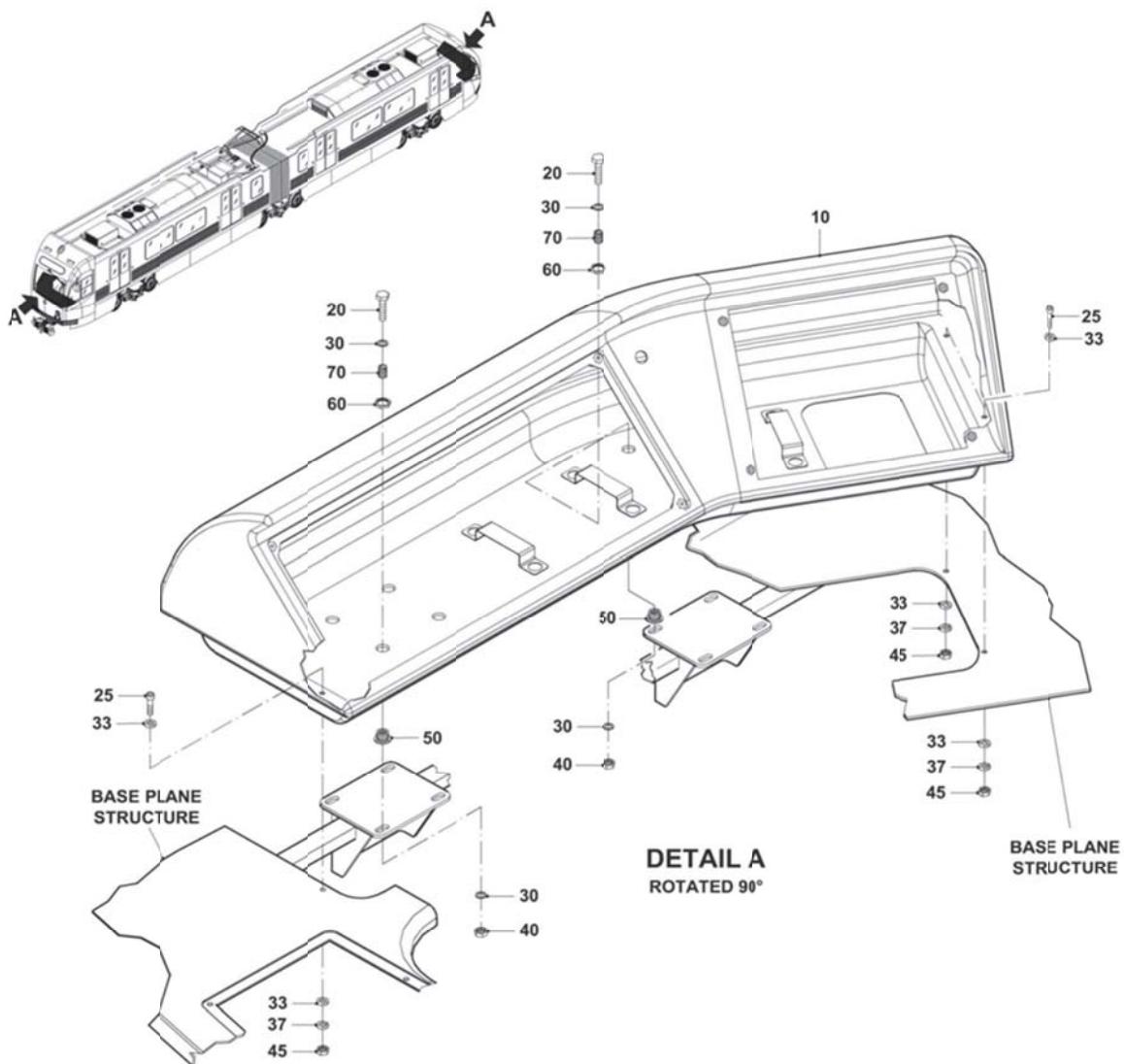
OPERATOR CONSOLE

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:**
Figure 2 OPERATOR CONSOLE ASSEMBLY REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-09-00/R-00

System:

CAR BODY

Sheet:

6/6

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

OPERATOR CONSOLE

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**INTENTIONALLY LEFT
BLANK**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-10-00/R-00

System:

CAR BODY

Sheet:

1/4

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

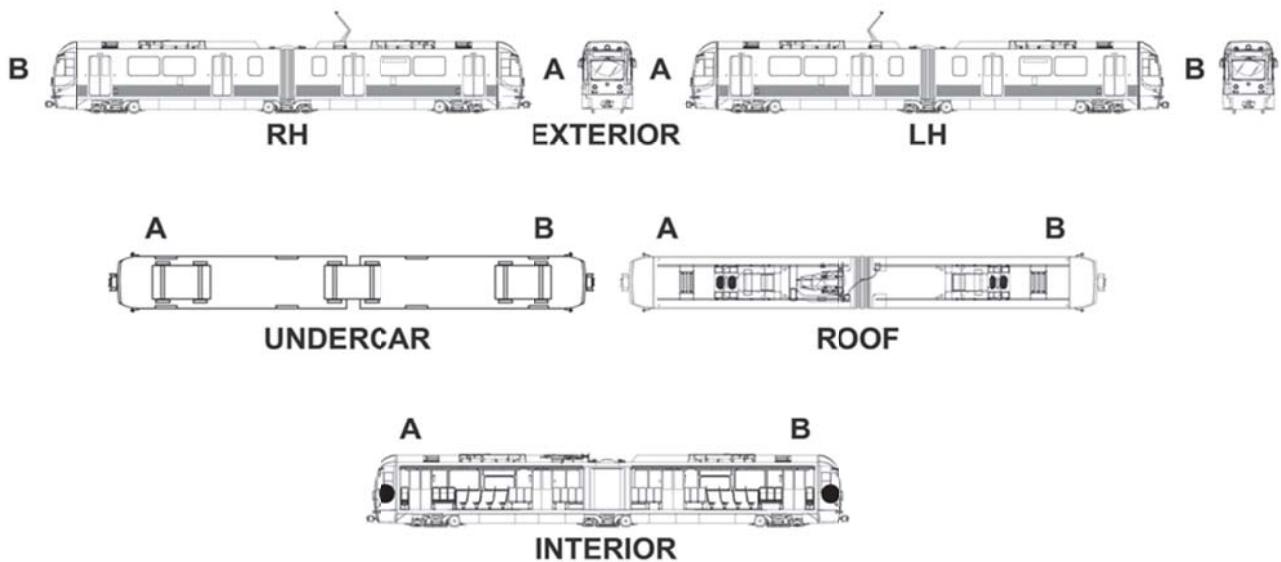
FRONT AIR DIFFUSER ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**LOCATION:**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-10-00/R-00

System:

CAR BODY

Sheet:

2/4

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

FRONT AIR DIFFUSER ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**SAFETY PRECAUTIONS:**

LACMTA Maintenance Shop Safety Rules & Regulations

TOOLS:

LACMTA Maintenance Shop Standard Tools Kit.

CONSUMABLES:

N/A

SPARE PARTS:

Front Air Diffuser Assembly

Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code:	
R-C-02-12-10-00/R-00	
System: CAR BODY	Sheet: 3/4
Subsystem/Assy: DRIVER CAB INTERIORS	Unit: FRONT AIR DIFFUSER ASSEMBLY
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
PROCEDURE:	
<p>PRELIMINARY OPERATIONS</p> <ol style="list-style-type: none"> 1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations. 2. Set the Master Controller Handle to FSB position. 3. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). <p>NOTE: It assumed that the Console Base Plane is removed. (Refer to Sheet R-C -02-12-03-00/R-00)</p>	
<p>REPLACEMENT</p> <p>To perform the Front Air Diffuser Assembly Replacement proceed as follows (Refer to Figure 1):</p> <p>Removal</p> <ol style="list-style-type: none"> 1. Remove Screws (40), Washers (50, 60), Shims (20) and Rubber Nuts (70). 2. Remove Screws (30), Washers (50, 60) and Rubber Nuts (70). 3. Remove the Front Air Diffuser Assembly. 4. Remove Screws (110), Washers (120, 130), 5. Remove Plate (80) and Diffuser (90) from Front Air Diffuser (10). <p>Installation</p> <ol style="list-style-type: none"> 1. Install Diffuser (90), Plate (80), Screws (110) and Washers (120, 130) on Front Air Diffuser (10). 2. Install Front Air Diffuser Assembly and fasten it with Screws (30), Washers (50, 60) and Rubber Nuts (70). 3. Install Screws (40), Washers (50, 60), Shims (20) and Rubber Nuts (70). 4. Record Task results on the Defect Report Card for administrative and maintenance planning. 	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-10-00/R-00

System:

CAR BODY

Sheet:

4/4

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

FRONT AIR DIFFUSER ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

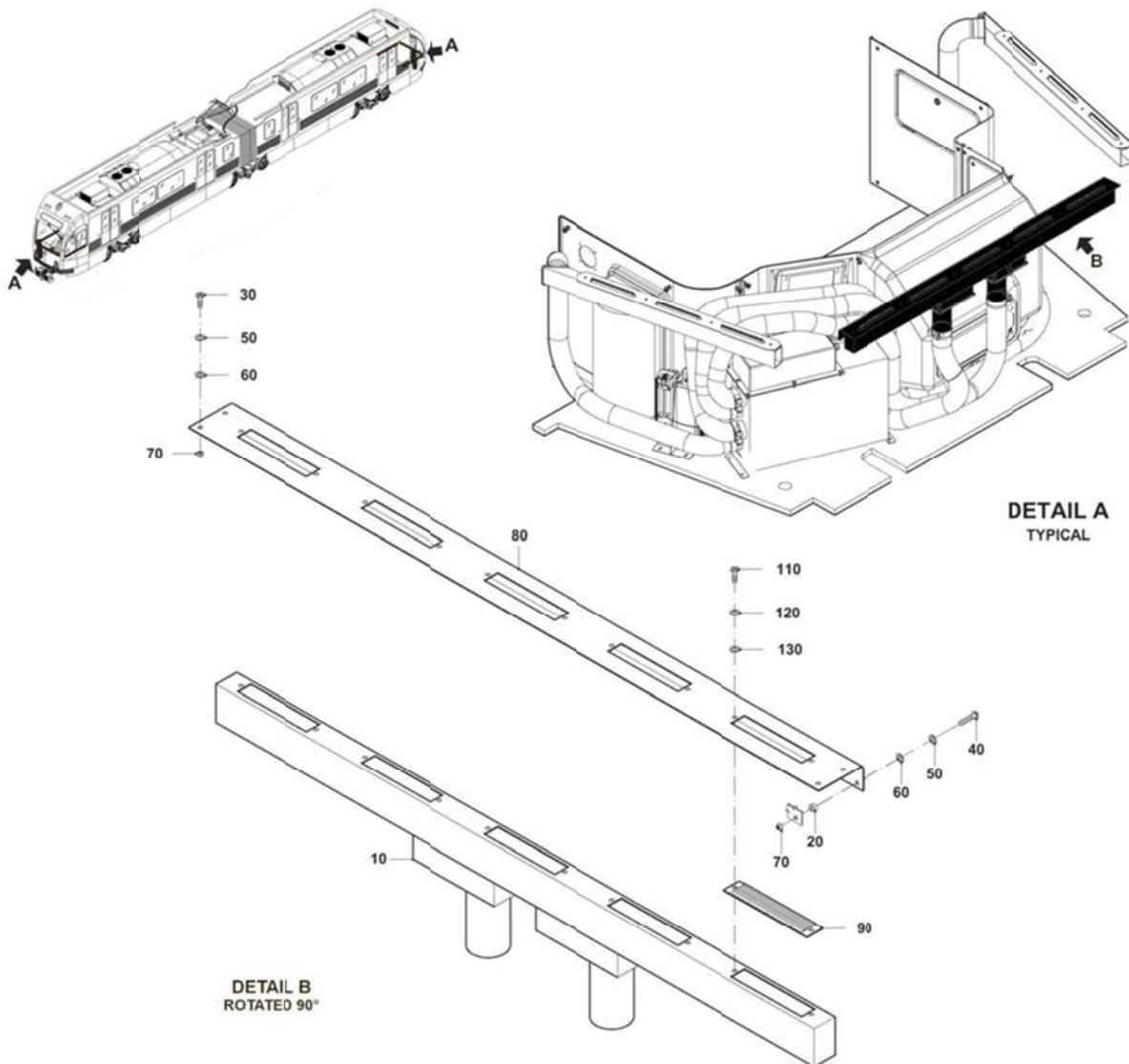
REPLACEMENT**PROCEDURE:**

Figure 1 FRONT AIR DIFFUSER ASSEMBLY REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-11-00/R-00

System:

CAR BODY

Sheet:

1/6

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

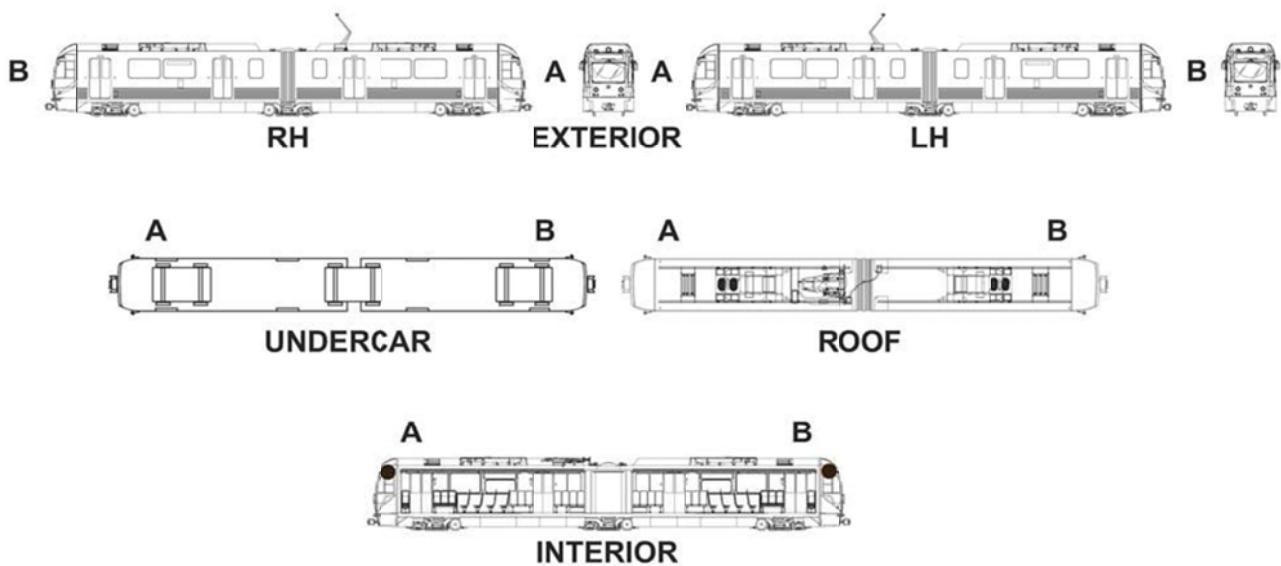
ELECTRICAL CABINET ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT
LOCATION:


P2550 CORRECTIVE MAINTENANCE SHEET		
Card Code:		
R-C-02-12-11-00/R-00		
System:	Sheet:	
CAR BODY	2/6	
Subsystem/Assy:	Unit:	
DRIVER CAB INTERIORS	ELECTRICAL CABINET ASSEMBLY	
Component:	Man Hours:	
	1	
Maintenance Task:		
REPLACEMENT		
SAFETY PRECAUTIONS:		
LACMTA Maintenance Shop Safety Rules & Regulations		
CAUTION :SWITCH OFF THE 3F01 CB (BATTERY BOX) BEFORE STARTING TO PERFORM THE REPLACEMENT		
TOOLS:		
LACMTA Maintenance Shop Standard Tools Kit.		
CONSUMABLES:		
N/A		
SPARE PARTS:		
Electrical Cabinet Assembly		
Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers		

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-11-00/R-00

System:

CAR BODY

Sheet:

3/6

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

ELECTRICAL CABINET ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT

PROCEDURE:

PRELIMINARY OPERATIONS

1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations:
2. Set the Master Controller Handle to FSB position.
3. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON).
4. Remove Electrical Power from Vehicle by lowering the Pantograph.
5. Turn the Transfer Switch to OFF.
6. Set the Pantograph Control Motor Switch (5F02 CB LV Locker "A" Section) to OFF
7. Lock-out and tag-out the Pantograph Control Motor Switch per LACMTA Safety Rules and Procedure.

NOTE: The tag must indicate the name of the person who removed Power.

That person knows why the Power was removed and when it safe to restore it. Only the individual whose name appears on the tag or a person with his approval should remove the tag and restore Power.

NOTE: It assumed that the Electrical Connections to Electrical Cabinet are disconnected. According to each Circuit Breaker Label, refer to the relevant Sheet provided in Sections 03 through 19 for the relevant Electrical Disconnection / Connection Procedures.

REPLACEMENT

a. Cab Control Panels

To perform the Cab Control Panels Replacement proceed as follows (Refer to Figure 1):

Removal

1. Remove Screws (240).
2. Remove the Circuit Breaker Panel (210 on Car A), (220 on Car B).
3. Remove Screws (240).
4. Remove the MV Circuit Board Panel (230).

Installation

1. Install the MV Circuit Board Panel (230) and fasten it with Screws (240).
2. Install the Circuit Breaker Panel (210 on Car A), (220 on Car B) and fasten it with Screws (240).
3. Record Task results on the Defect Report Card for administrative and maintenance planning.

b. Electrical Cabinet Furnishing Assembly

To perform the Electrical Cabinet Furnishing Assembly Replacement proceed as follows (Refer to Figure 2):

Removal

1. Remove Screws (30) and Washers (40, 50).
2. Remove the Electrical Cabinet Furnishing Assembly (10).
3. Leave in position Threaded Bushings (20).

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-11-00/R-00

System:

CAR BODY

Sheet:

4/6

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

ELECTRICAL CABINET ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT

PROCEDURE:

Installation

1. Check condition of Threaded Bushings (20). Replace if necessary.
2. Position Electrical Cabinet Furnishing Assembly (10) and fasten it with Screws (30) and Washers (40, 50).
3. Torque Screws (30) as required.
4. Record Task results on the Defect Report Card for administrative and maintenance planning.

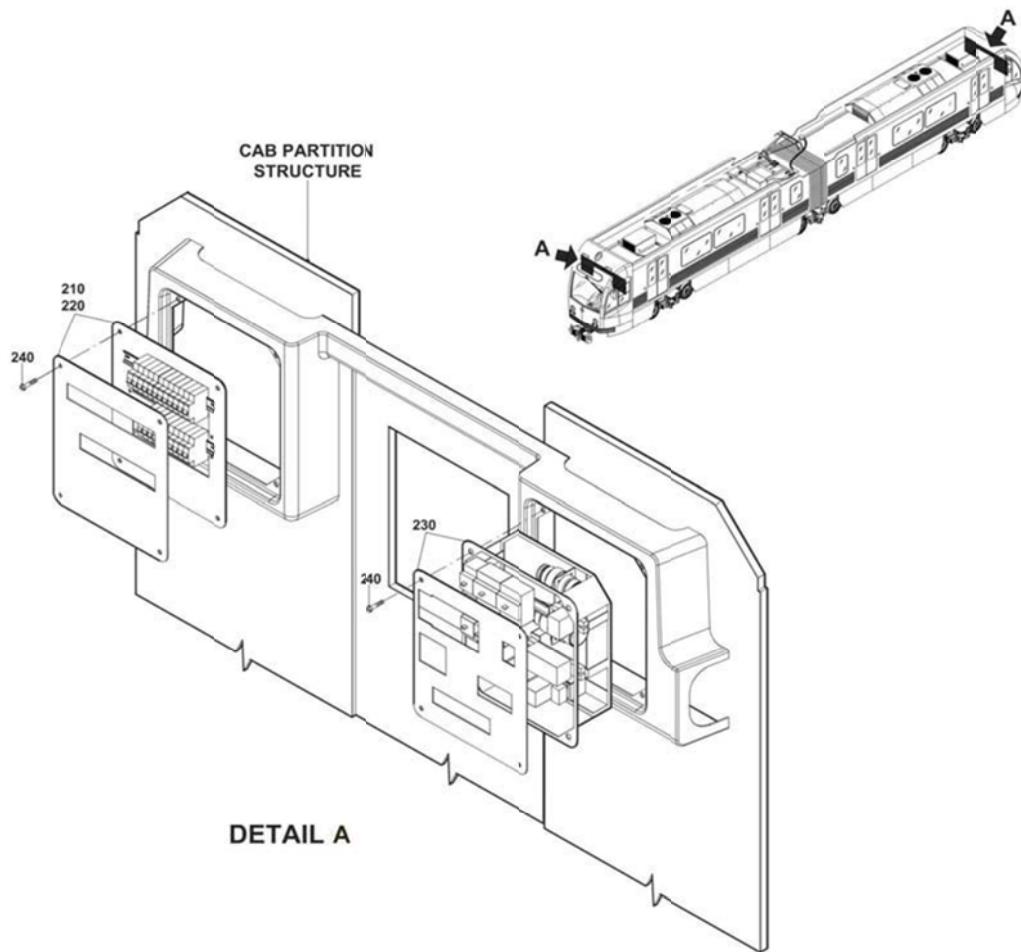


Figure 1 -CAB CONTROL PANELS REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-11-00/R-00

System:

Sheet:

CAR BODY
5/6

Subsystem/Assy:

Unit:

DRIVER CAB INTERIORS
ELECTRICAL CABINET ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

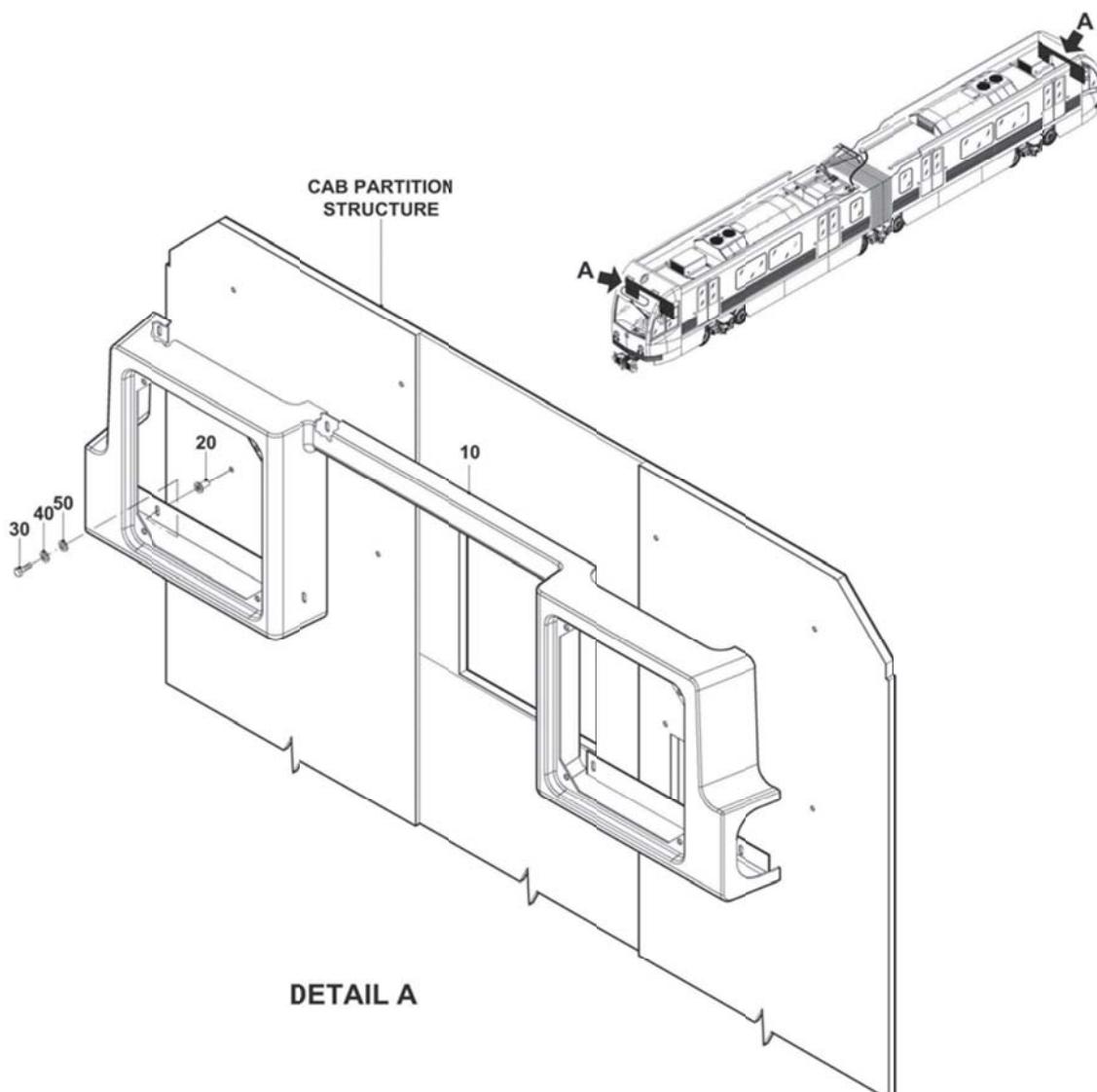
REPLACEMENT
PROCEDURE:


Figure 2 ELECTRICAL CABINET FURNISHING ASSEMBLY REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-11-00/R-00

System:

CAR BODY

Sheet:

6/6

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

ELECTRICAL CABINET ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**INTENTIONALLY LEFT
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P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-12-00/R-00

System:

Sheet:

CAR BODY**1/10**

Subsystem/Assy:

Unit:

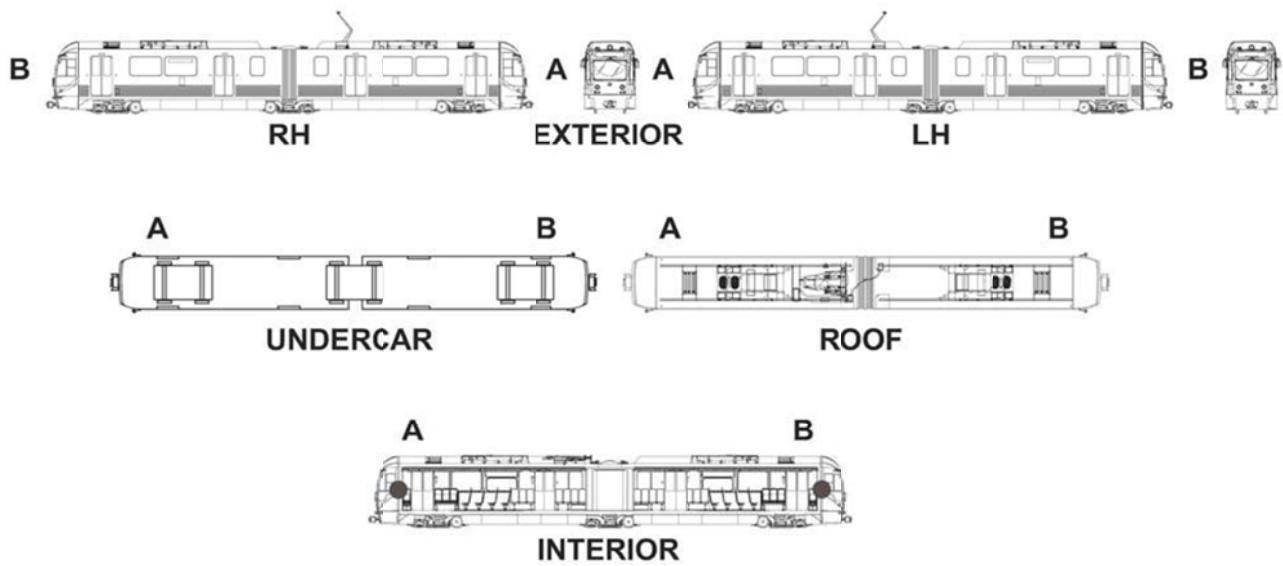
DRIVER CAB INTERIORS**CAB PARTITION WALL ASSEMBLY**

Component:

Man Hours:

3

Maintenance Task:

REPLACEMENT**LOCATION:**

P2550 CORRECTIVE MAINTENANCE SHEET		
Card Code:		
R-C-02-12-12-00/R-00		
System:	Sheet:	
CAR BODY	2/10	
Subsystem/Assy:	Unit:	
DRIVER CAB INTERIORS	CAB PARTITION WALL ASSEMBLY	
Component:	Man Hours:	
	3	
Maintenance Task:		
REPLACEMENT		
SAFETY PRECAUTIONS:		
LACMTA Maintenance Shop Safety Rules & Regulations		
CAUTION :SWITCH OFF THE 3F01 CB (BATTERY BOX) BEFORE STARTING TO PERFORM THE REPLACEMENT		
TOOLS:		
LACMTA Maintenance Shop Standard Tools Kit.		
CONSUMABLES:		
N/A		
SPARE PARTS:		
Cab Partition Wall Assembly		
Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers		

P2550 CORRECTIVE MAINTENANCE SHEET									
Card Code:									
R-C-02-12-12-00/R-00									
System: CAR BODY	Sheet: 3/10								
Subsystem/Assy: DRIVER CAB INTERIORS	Unit: CAB PARTITION WALL ASSEMBLY								
Component:	Man Hours: 3								
Maintenance Task: REPLACEMENT									
PROCEDURE:									
<p>PRELIMINARY OPERATIONS</p> <ol style="list-style-type: none"> 1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations: 2. Set the Master Controller Handle to FSB position. 3. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). <p>NOTE: It is assumed that the Equipment installed on the Cab Partition Wall is removed. Refer to the relevant Sheet listed below for the Removal / Installation and Electrical. Disconnection / Connection Procedures of each piece of Equipment.</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">EQUIPMENT</th> <th style="width: 50%;">REFER TO SHEET</th> </tr> </thead> <tbody> <tr> <td>Passenger Intercom</td> <td>R-C-14-01-05-00/R-00</td> </tr> <tr> <td>Announcement Sign</td> <td>R-C-14-02-04-00/R-00</td> </tr> <tr> <td>Video Camera</td> <td>R-C-14-01-08-00/R-00</td> </tr> </tbody> </table>		EQUIPMENT	REFER TO SHEET	Passenger Intercom	R-C-14-01-05-00/R-00	Announcement Sign	R-C-14-02-04-00/R-00	Video Camera	R-C-14-01-08-00/R-00
EQUIPMENT	REFER TO SHEET								
Passenger Intercom	R-C-14-01-05-00/R-00								
Announcement Sign	R-C-14-02-04-00/R-00								
Video Camera	R-C-14-01-08-00/R-00								
<p>REPLACEMENT</p> <p>a. Removal</p> <p>Cab Partition Wall Assembly To perform the Cab Partition Wall Assembly Removal proceed as follows (Refer to Figure 1):</p> <ol style="list-style-type: none"> 1. Remove Cab Partition Header (4). 2. Remove Cab Partition Door (3). 3. Remove Cab Partition Wall, RH (2). 4. Remove Cab Partition Wall, LH (1). <p>Cab Partition Header To perform the Cab Partition Header Removal proceed as follows (Refer to Figure 2):</p> <ol style="list-style-type: none"> 1. Remove Screws M6, Washers and Nuts from Header Bracket. 2. Remove Screws M6, Washers and Nuts from Threaded Inserts on the Wall Bracket Assembly. 3. Remove Cab Partition Header (4). <p>Cab Partition Door Stay Track To perform the Cab Partition Door Stay Track Removal proceed as follows (Refer to Figure 3):</p> <ol style="list-style-type: none"> 1. Remove two Screws M5 fastening the Door Stay Track to the Electrical Cabinet Furnishing. 2. Leave the Door Stay Track installed on Cab Partition Door (3). 									

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-12-00/R-00

System:

CAR BODY

Sheet:

4/10

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

CAB PARTITION WALL ASSEMBLY

Component:

Man Hours:

3

Maintenance Task:

REPLACEMENT**PROCEDURE:****Cab Partition Door**

To perform the Cab Partition Door Removal proceed as follows (Refer to Figure 4):

1. Remove eight Screws M6, Lock Washers, Flat Washers and two Screws M5 fastening the Door Hinge to the Cab Partition Wall, LH (1).
2. Leave the Door Hinge installed on Cab Partition Door (3).

Cab Partition Walls

To perform the Cab Partition Wall RH & LH Removal proceed as follows (Refer to Figure 5):

1. On bottom remove four Screws M6 from L-Angle.
2. On top remove two Screws M6, Lock Washers, Flat Washers and Threaded Inserts.
3. Slide Cab Partition Wall (1 & 2) out of Closeout Extrusion and remove them.

b. Installation**Cab Partition Wall Assembly**

To perform Cab Partition Wall Assembly Installation proceed as follows (Refer to Figure 1):

1. Install Cab Partition Wall, LH (1).
2. Install Cab Partition Wall, RH (2).
3. Install Cab Partition Door (3).
4. Install Cab Partition Header (4).
5. Record Task results on the Defect Report Card for administrative and maintenance planning

Cab Partition Walls

To perform Cab Partition Wall RH & LH Installation proceed as follows (Refer to Figure 5):

1. Slide Cab Partition Wall (1 & 2) into Closeout Extrusion.
2. On top, install two Screws M6, Lock Washers, Flat Washers and Threaded Inserts.
3. On bottom, install four Screws M6 and fasten Cab Partition Wall (1 & 2) to L-Angle.
4. Record Task results on the Defect Report Card for administrative and maintenance planning

Cab Partition Door

To perform Cab Partition Door Installation proceed as follows (Refer to Figure 4):

1. Position the Cab Partition Door (3) with Door Hinge already installed.
2. Install eight Screws M6, Lock Washers, Flat Washers and two Screws M5, and fasten the Door Hinge to the Cab Partition Wall, LH (1).
3. Record Task results on the Defect Report Card for administrative and maintenance planning.

Cab Partition Door Stay Track

To perform Cab Partition Door Stay Track Installation proceed as follows (Refer to Figure 3):

1. The Door Stay Track is already installed on Cab Partition Door (3).
2. Install two Screws M5, and fasten the Door Stay Track to the Electrical Cabinet Furnishing.
3. Record Task results on the Defect Report Card for administrative and maintenance planning.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-12-00/R-00

System:

Sheet:

CAR BODY**5/10**

Subsystem/Assy:

Unit:

DRIVER CAB INTERIORS**CAB PARTITION WALL ASSEMBLY**

Component:

Man Hours:

3

Maintenance Task:

REPLACEMENT**PROCEDURE:****Cab Partition Header**

To perform Cab Partition Header Installation proceed as follows (Refer to Figure 2):

1. Position Cab Partition Header (4) and install Screws M6, Washers and Nuts on Header Bracket.
2. Install Screws M6, Washers and Nuts on Threaded Inserts on the Wall Bracket Assembly.
3. Record Task results on the Defect Report Card for administrative and maintenance planning.

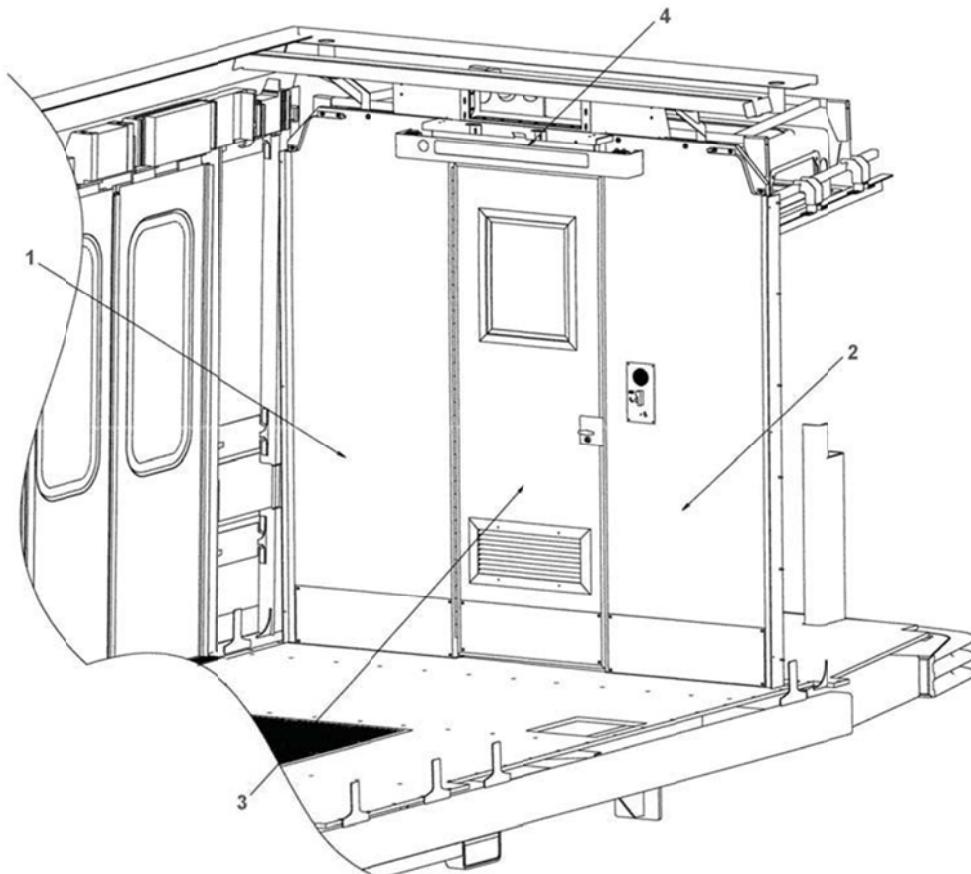


Figure 1 CAB PARTITION WALL ASSEMBLY COMPONENTS

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-12-00/R-00

System:

CAR BODY

Sheet:

6/10

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

CAB PARTITION WALL ASSEMBLY

Component:

Man Hours:

3

Maintenance Task:

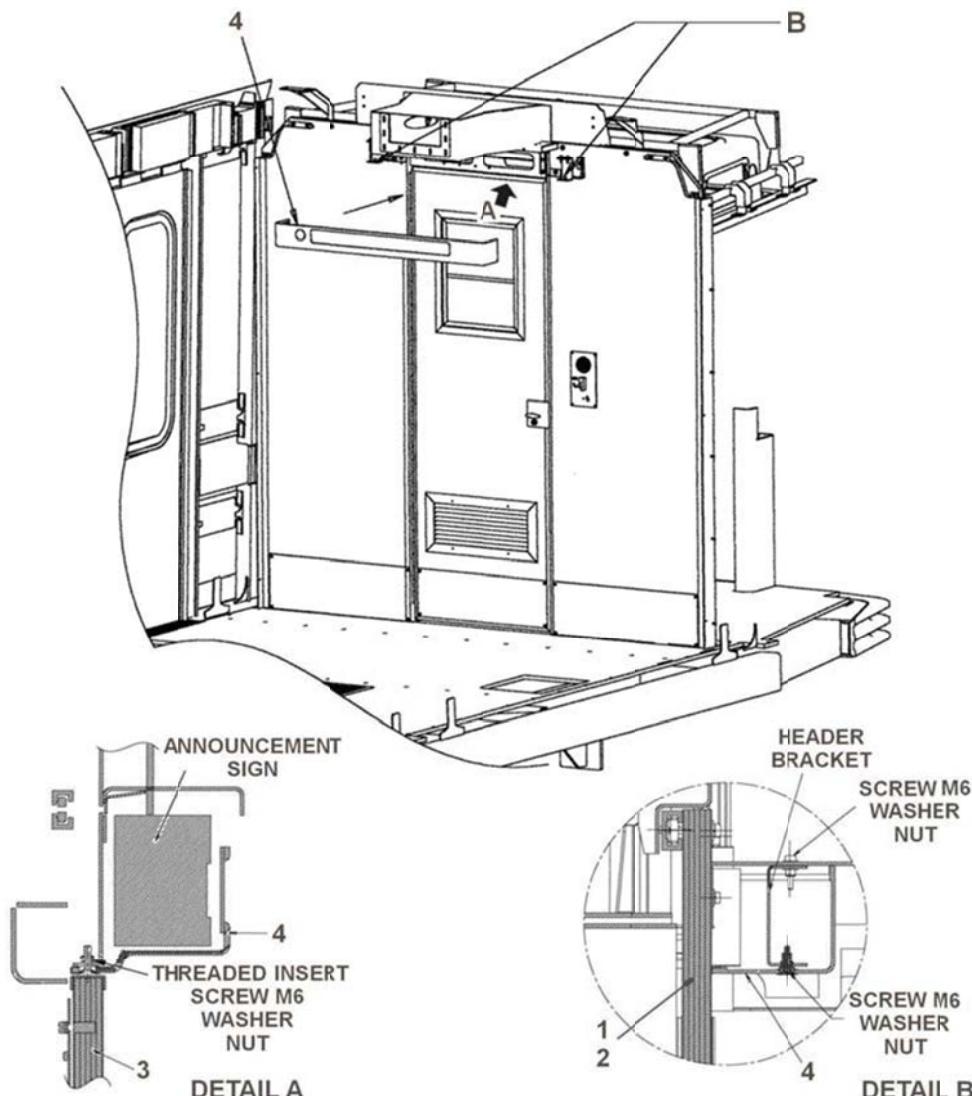
REPLACEMENT**PROCEDURE:**

Figure 2 CAB PARTITION HEADER REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-12-00/R-00

System:

Sheet:

CAR BODY
7/10

Subsystem/Assy:

Unit:

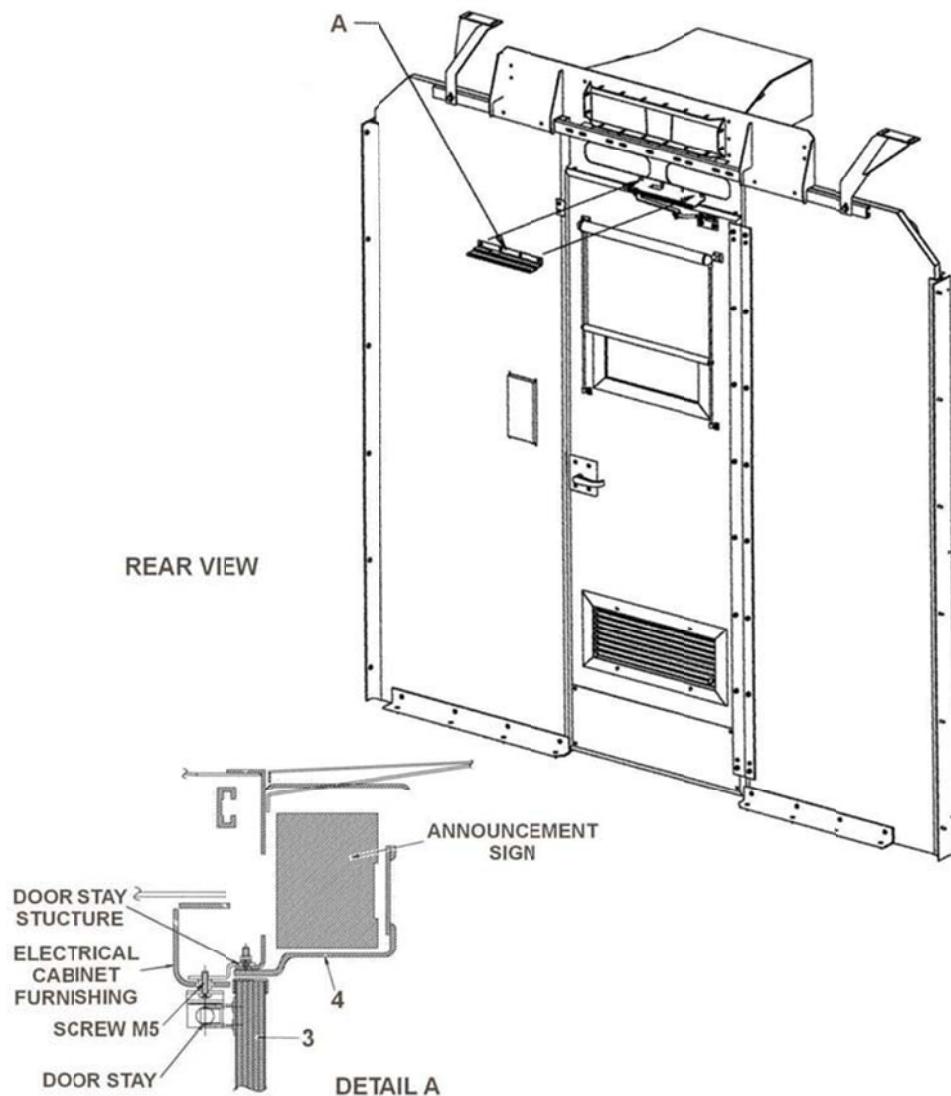
DRIVER CAB INTERIORS
CAB PARTITION WALL ASSEMBLY

Component:

Man Hours:

3

Maintenance Task:

REPLACEMENT
PROCEDURE:

Figure 3 CAB PARTITION DOOR STAY TRACK REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-12-00/R-00

Sheet:

8/10

System:

CAR BODY

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

CAB PARTITION WALL ASSEMBLY

Component:

Man Hours:

3

Maintenance Task:

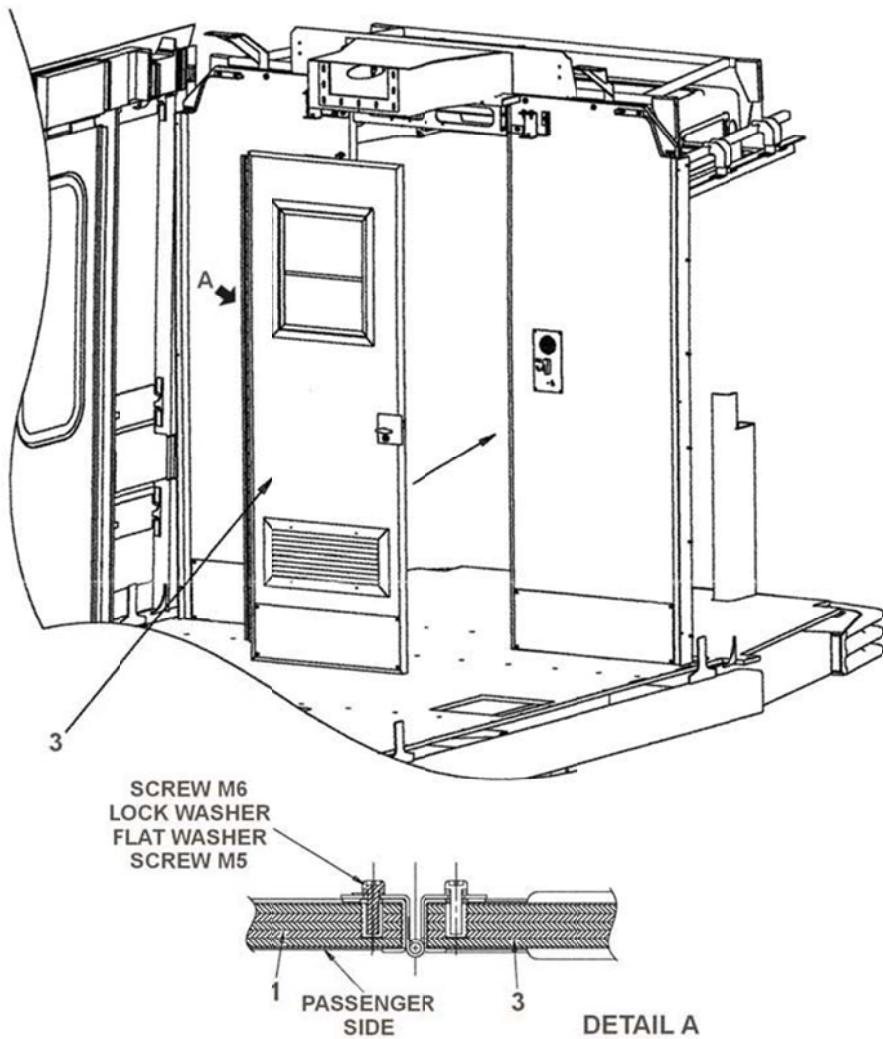
REPLACEMENT**PROCEDURE:**

Figure 4 CAB PARTITION DOOR REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-12-00/R-00

System:

Sheet:

CAR BODY**9/10**

Subsystem/Assy:

Unit:

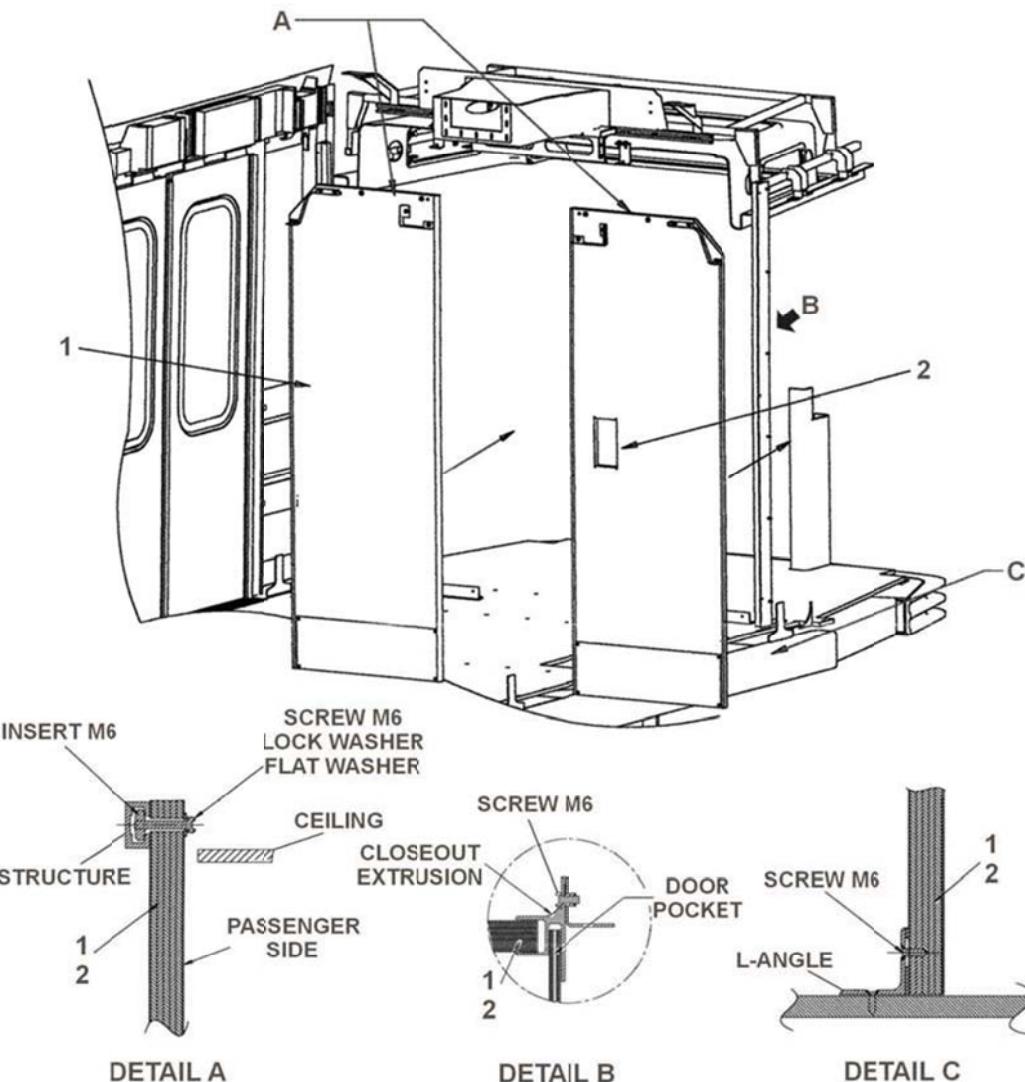
DRIVER CAB INTERIORS**CAB PARTITION WALL ASSEMBLY**

Component:

Man Hours:

3

Maintenance Task:

REPLACEMENT**PROCEDURE:****Figure 5****CAB PARTITION WALLS REMOVAL/INSTALLATION**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-12-00/R-00

System:

CAR BODY

Sheet:

10/10

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

CAB PARTITION WALL ASSEMBLY

Component:

Man Hours:

3

Maintenance Task:

REPLACEMENT**INTENTIONALLY LEFT
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P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-15-00/R-00

System:

Sheet:

CAR BODY

1/4

Subsystem/Assy:

Unit:

DRIVER CAB INTERIORS

CAB PARTITION DOOR LOCK

Component:

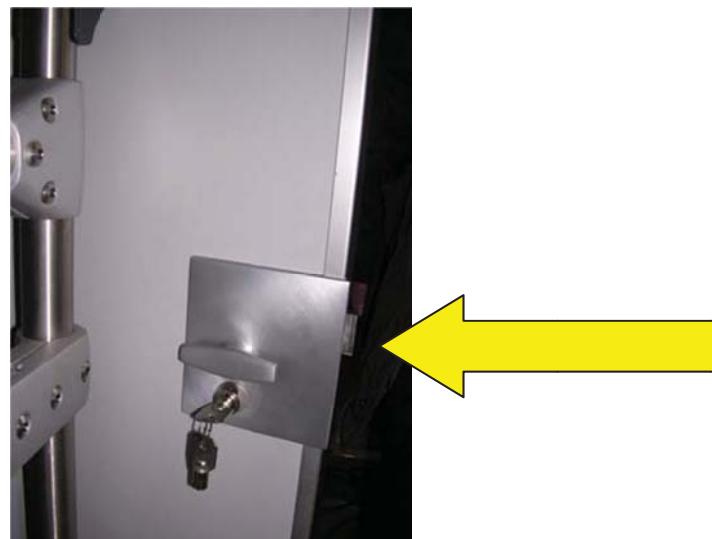
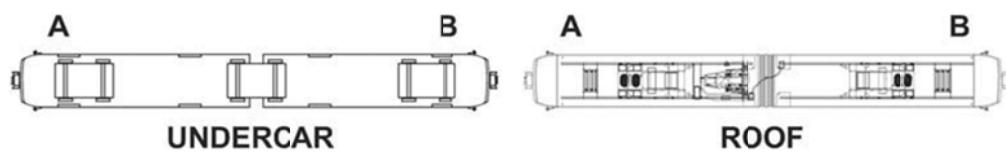
Man Hours:

1

Maintenance Task:

REPLACEMENT

LOCATION:



P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-12-15-00/R-00	
System: CAR BODY	Sheet: 2/4
Subsystem/Assy: DRIVER CAB INTERIORS	Unit: CAB PARTITION DOOR LOCK
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
SAFETY PRECAUTIONS: LACMTA Maintenance Shop Safety Rules & Regulations	
TOOLS: LACMTA Maintenance Shop Standard Tools Kit.	
CONSUMABLES: N/A	
SPARE PARTS: Cab Partition Door Lock Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers	

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-12-15-00/R-00	
System: CAR BODY	Sheet: 3/4
Subsystem/Assy: DRIVER CAB INTERIORS	Unit: CAB PARTITION DOOR LOCK
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
PROCEDURE:	
TBS	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-15-00/R-00

System:

CAR BODY

Sheet:

4/4

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

CAB PARTITION DOOR LOCK

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**INTENTIONALLY LEFT
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P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-16-00/R-00

System:

CAR BODY

Sheet:

1/4

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

CAB PARTITION DOOR WINDOW

Component:

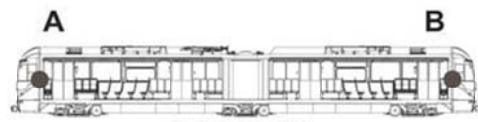
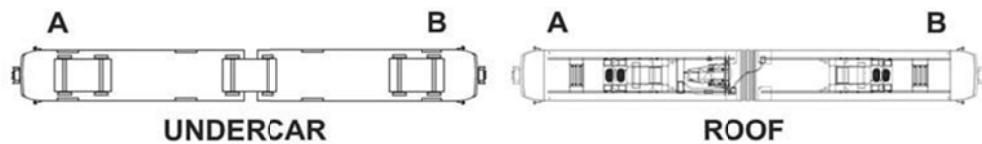
Man Hours:

1

Maintenance Task:

REPLACEMENT

LOCATION:



P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-12-16-00/R-00	
System: CAR BODY	Sheet: 2/4
Subsystem/Assy: DRIVER CAB INTERIORS	Unit: CAB PARTITION DOOR WINDOW
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
SAFETY PRECAUTIONS:	
LACMTA Maintenance Shop Safety Rules & Regulations	
TOOLS:	
LACMTA Maintenance Shop Standard Tools Kit.	
CONSUMABLES:	
N/A	
SPARE PARTS:	
Cab Partition Door Window Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers	

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-12-16-00/R-00	
System: CAR BODY	Sheet: 3/4
Subsystem/Assy: DRIVER CAB INTERIORS	Unit: CAB PARTITION DOOR WINDOW
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
PROCEDURE:	
TBS	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-12-16-00/R-00

System:

CAR BODY

Sheet:

4/4

Subsystem/Assy:

DRIVER CAB INTERIORS

Unit:

CAB PARTITION DOOR WINDOW

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**INTENTIONALLY LEFT
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P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-01-00/R-00

System:

CAR BODY

Sheet:

1/10

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

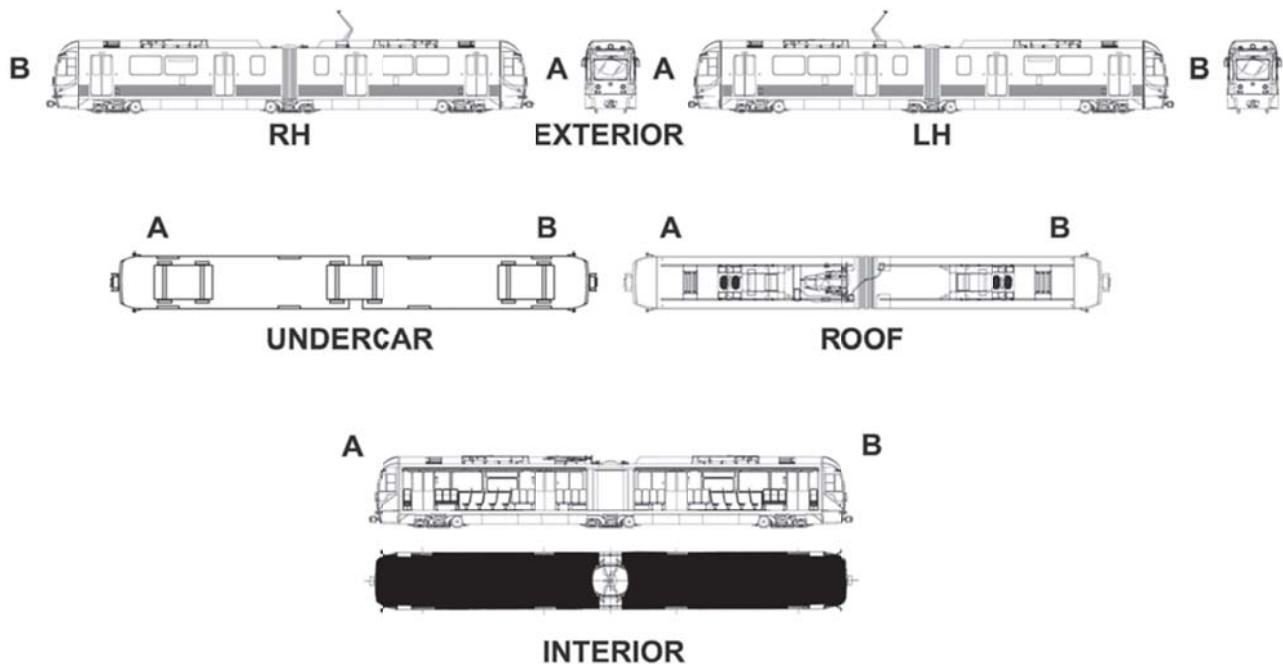
FLOOR PLY-METAL PANELS

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**LOCATION:**

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-13-01-00/R-00	
System: CAR BODY	Sheet: 2/10
Subsystem/Assy: PASSENGERS INTERIORS	Unit: FLOOR PLY-METAL PANELS
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
SAFETY PRECAUTIONS:	
LACMTA Maintenance Shop Safety Rules & Regulations	
TOOLS:	
LACMTA Maintenance Shop Standard Tools Kit.	
CONSUMABLES:	
Acetone	
Glue	HENKEL HYDROBOND A/401 TYPE
Sealant	RUBBER MONDOSIL Black.
Adhesive Tape	3M TRANSFER 950 Type
SPARE PARTS:	
Floor Ply-Metal Panels-	
Plain Rubber Sheet	MONDORUBBER
Ribbed Rubber Sheet	MONDORUBBER.
Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-01-00/R-00

System:

CAR BODY

Sheet:

3/10

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

FLOOR PLY-METAL PANELS

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT

PROCEDURE:

PRELIMINARY OPERATIONS

1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations:
2. Set the Master Controller Handle to FSB position.
3. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON).
4. Remove Electrical Power from Vehicle by lowering the Pantograph.
5. Turn the Transfer Switch to OFF.
6. Set the Pantograph Control Motor Switch (5F02 CB LV Locker "A" Section) to OFF
7. Lock-out and tag-out the Pantograph Control Motor Switch, per LACMTA Safety Rules and Procedures.

NOTE: The tag must indicate the name of the person who removed Power.

That person knows why the Power was removed and when it is safe to restore it.

Only the individual whose name appears on the tag or a person with his approval should remove the tag and restore Power.

NOTE: It is assumed that the Equipment installed on the Floor is removed.

Refer to the relevant Sheet listed below for the Removal / Installation and Electrical Disconnection / Connection Procedures of each piece of Equipment.

EQUIPMENT

Seats Assembly

REFER TO SHEET

 R-C-02-09-01-00/R-00
 through
 R-C-02-09-06-00/R-00

 Headlights Power Supply
 6A02 Safety Loop DC \ DC Converter

 R-C-06-02-12-00/R-00
 R-C-10-04-01-00/R-00

REPLACEMENT

To perform the Floor Ply-metal Panels Replacement proceed as follows:

Removal

1. Floor Trap

To Remove each Floor Trap, proceed as follows (Refer to Figure 1):

- a) Remove Screws (1).
- b) Remove Floor Trap (2).

NOTE: Do not remove the Gasket (3) glued to Floor Trap well.

2. Cab Threshold

To Remove the Cab Threshold, proceed as follows (Refer to Figure 2):

- a) Remove Screws.
- b) Remove Cab Threshold and Rubber Shim.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-01-00/R-00

System:

CAR BODY

Sheet:

4/10

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

FLOOR PLY-METAL PANELS

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:****3. Floor (typical procedure)**

To Remove the Floor, proceed as follows (Refer to Figures 2, 3 and 4):

- Select the floor area to be removed.
- Remove the Cove Molding Supports (by removing the related Screws) related to the selected area.
- Lift by hand a corner of the Rubber Sheet to be removed.
- Putting the Rubber Sheet under stress, strip/scrape little by little the glue layer between the Rubber Sheet and the Ply-metal Panel.
- Remove the Rubber Sheet(s).
- Remove rivets using suitable tools.
- Remove the Ply-metal Panels.

Installation**1. Floor (typical procedure).**

To Install the Floor, proceed as follows (Refer to Figures 2, 3 and 4):

- Clean the vehicle structure and related attaching part areas.
- Install the Ply-metal Panels with rivets.
- Clean and degrease with acetone the Ply-metal Panel surface(s).
- Prepare and clean the side to be glued of the Rubber Sheets to be installed.
- Apply the glue (HENKEL HYDROBOND A/401 TYPE) on the Ply-metal surface only.
- Install the Rubber Sheets (Plain Rubber - MONDORUBBER and Ribbed Rubber - MONDORUBBER).
- Cold vulcanize the joints between Plain Floor and Ribbed Floor.
- Seal joints and areas not covered by the Rubber Flooring with Sealant RUBBER MONDOSIL Black.
- Check/adjust the installation of the Rubber Sheets.
- Install the Cove Molding Supports and lock them with related Screws.
- Record Task results on the Defect Report Card for administrative and maintenance planning.

2. Cab Threshold

To Install Cab Threshold, proceed as follows (Refer to Figure 2):

- Install Cab Threshold and Rubber Shim.
- Install and tighten Screws.
- Record Task results on the Defect Report Card for administrative and maintenance planning.

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-13-01-00/R-00	
System: CAR BODY	Sheet: 5/10
Subsystem/Assy: PASSENGERS INTERIORS	Unit: FLOOR PLY-METAL PANELS
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
PROCEDURE:	
<p>3. Floor Trap To Install each Floor Trap, proceed as follows (refer to Figure 1): NOTE: In order to prevent/reduce noise level in the vehicle, perform the following procedure with extreme care.</p> <ul style="list-style-type: none"> a) Check that the Gasket (3) in the Floor Trap well is correctly installed. As necessary, use double sided adhesive tape (3M TRANSFER 950 Type). b) Clean Floor Trap area in contact with the Gasket, using cleaning rags. Mild detergent (pH 5.5) diluted in water should be used if necessary. c) Install Floor Trap (2) as shown. d) Install and tighten the Screws (1). e) Verify that there are no level differences between the Vehicle Floor and the Floor Trap. If necessary adjust using suitable shims. f) Record Task results on the Defect Report Card for administrative and maintenance planning 	
REPAIR	
<p>1. Rubber Sheet To Repair Rubber Sheet on local/limited areas, proceed as follows:</p> <ul style="list-style-type: none"> a) Clean the involved area. b) Mark the repair area. c) Cut the Rubber Sheet, following accurately the marking lines. d) Putting under stress an edge of the rubber sheet to be removed, strip/scrape, the glue layer between the Rubber Sheets and the Ply-metal Panel. e) Remove the Rubber Sheet. f) Clean and degrease the Ply-metal surface with acetone. g) Prepare and clean the part of the Rubber Sheet to be installed (side to glue). h) Apply glue (HENKEL HYDROBOND A/401 TYPE) on the Ply-metal surface only. i) Install the new Rubber Sheet. j) Cold vulcanize the joints between Rubber Sheet now installed and the other parts of Rubber Flooring. k) Seal joints and areas not covered by the Rubber Flooring with Sealant RUBBER MONDOSIL Black. l) Check/adjust the Rubber Sheet installation. m) Record Task results on the Defect Report Card for administrative and maintenance planning. 	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-01-00/R-00

System:

CAR BODY

Sheet:

6/10

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

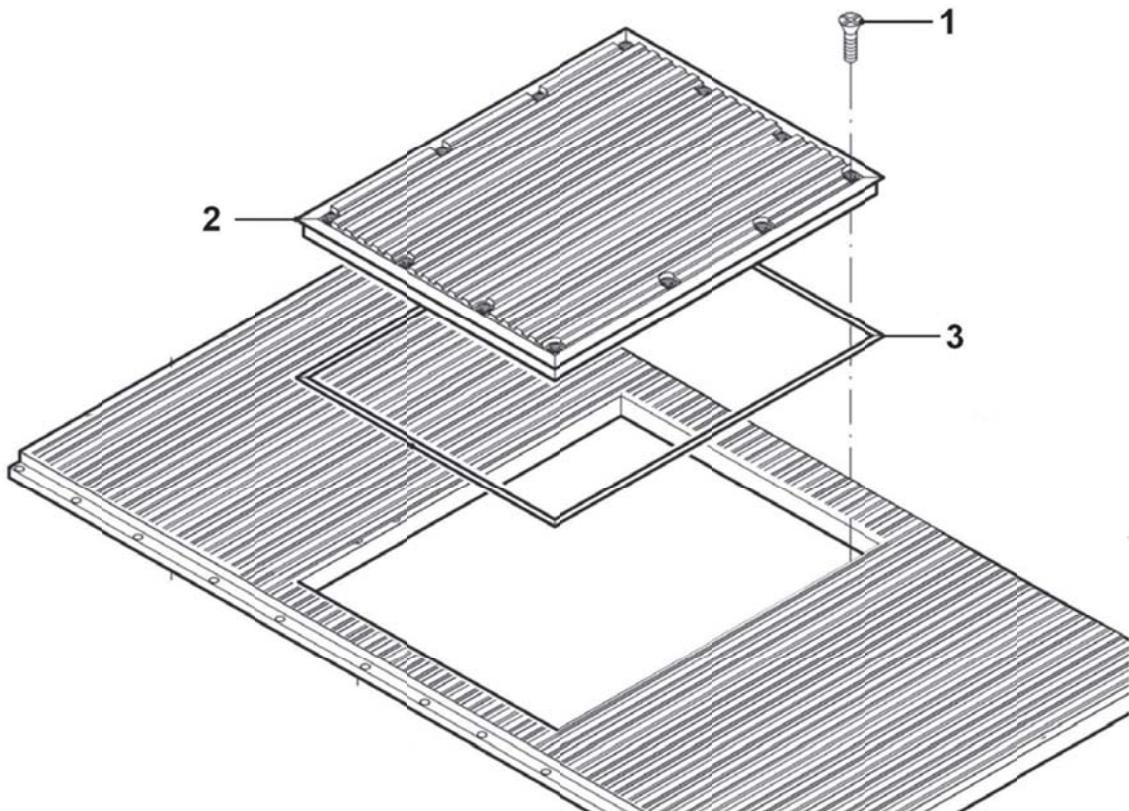
FLOOR PLY-METAL PANELS

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:****Figure 1 FLOOR TRAP REMOVAL/INSTALLATION**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-01-00/R-00

System:

Sheet:

CAR BODY**7/10**

Subsystem/Assy:

Unit:

PASSENGERS INTERIORS**FLOOR PLY-METAL PANELS**

Component:

Man Hours:

1

Maintenance Task:

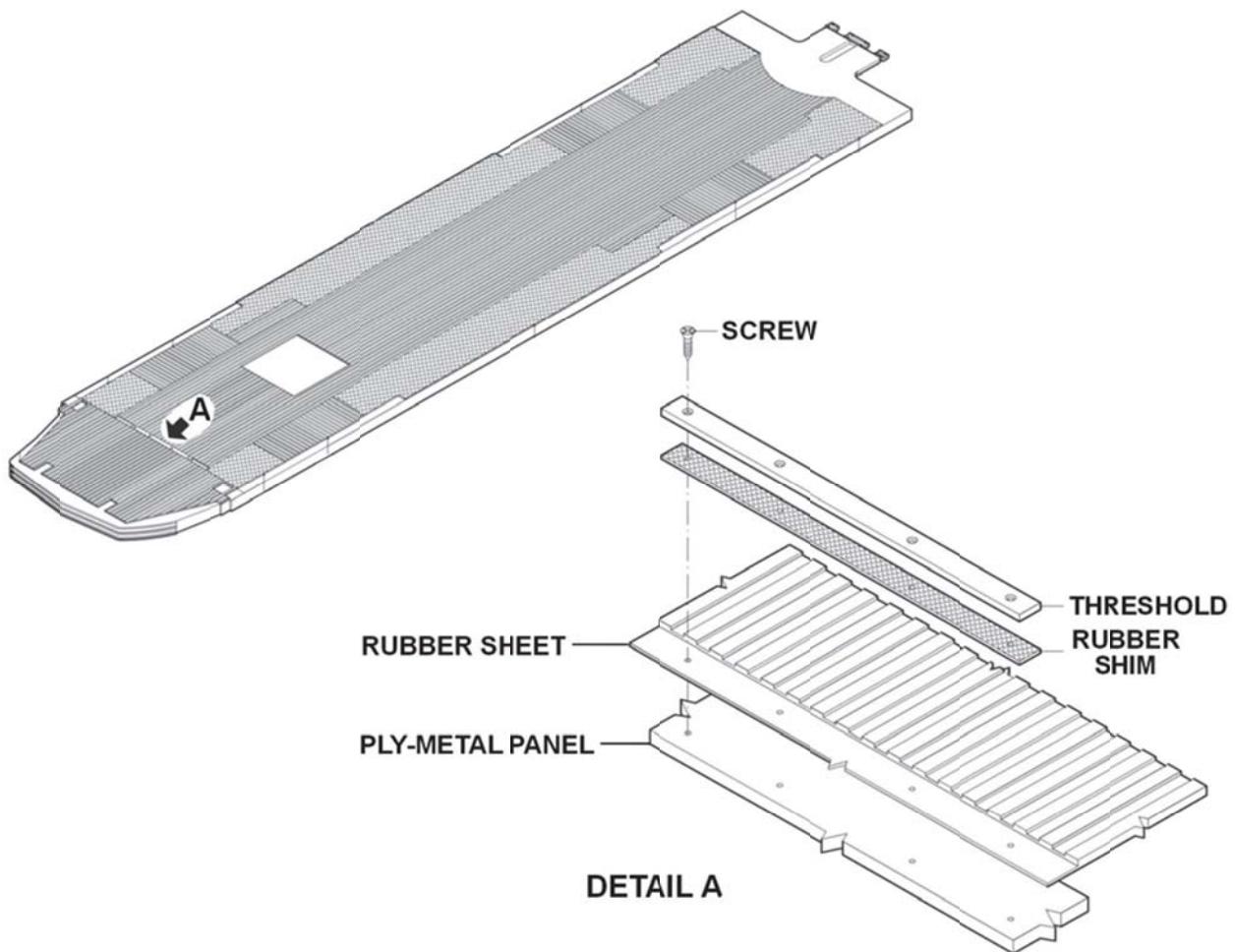
REPLACEMENT**PROCEDURE:**

Figure 2 FLOOR CAB THRESHOLD REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-01-00/R-00

System:

CAR BODY

Sheet:

8/10

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

FLOOR PLY-METAL PANELS

Component:

Man Hours:

1

Maintenance Task:

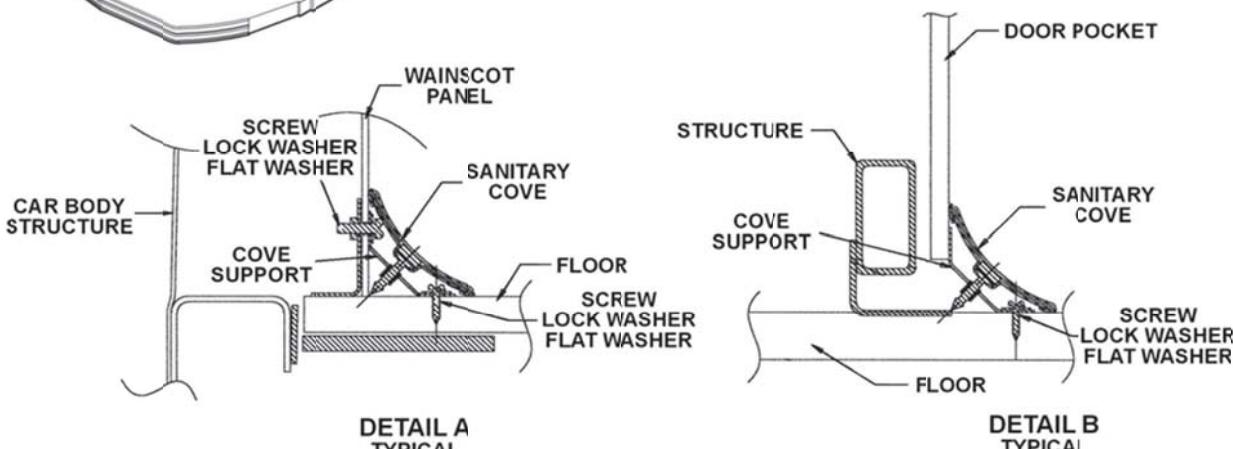
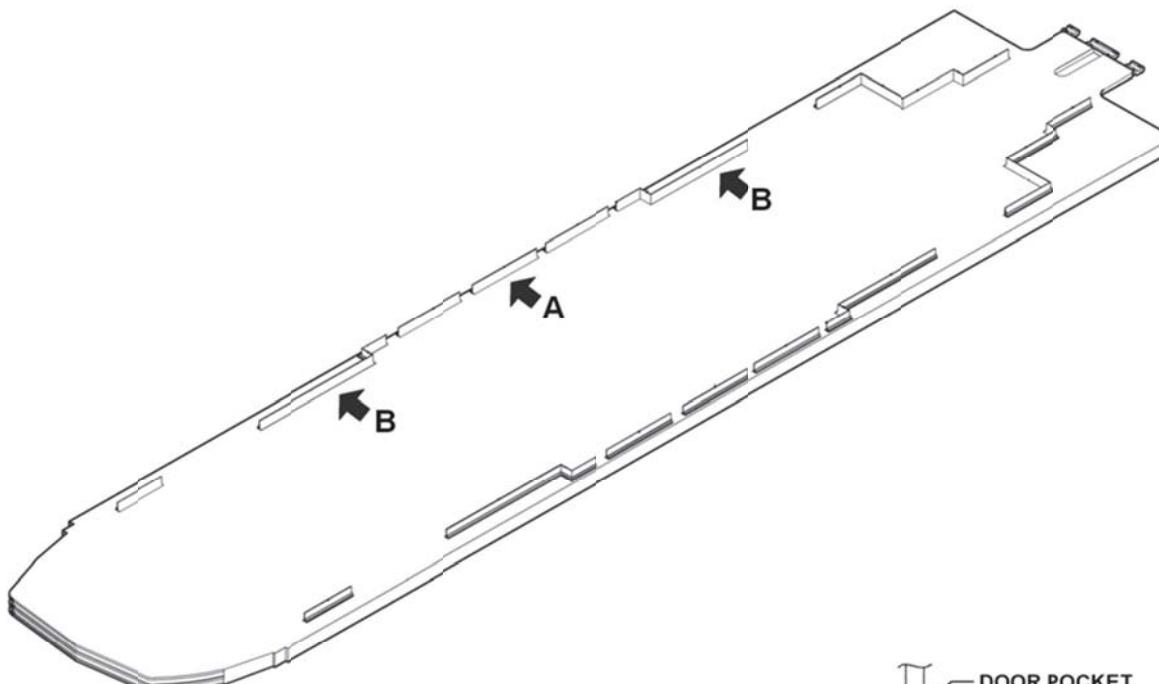
REPLACEMENT**PROCEDURE:**

Figure 3 FLOOR COVE MOLDINGS REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-01-00/R-00

System:

Sheet:

CAR BODY**9/10**

Subsystem/Assy:

Unit:

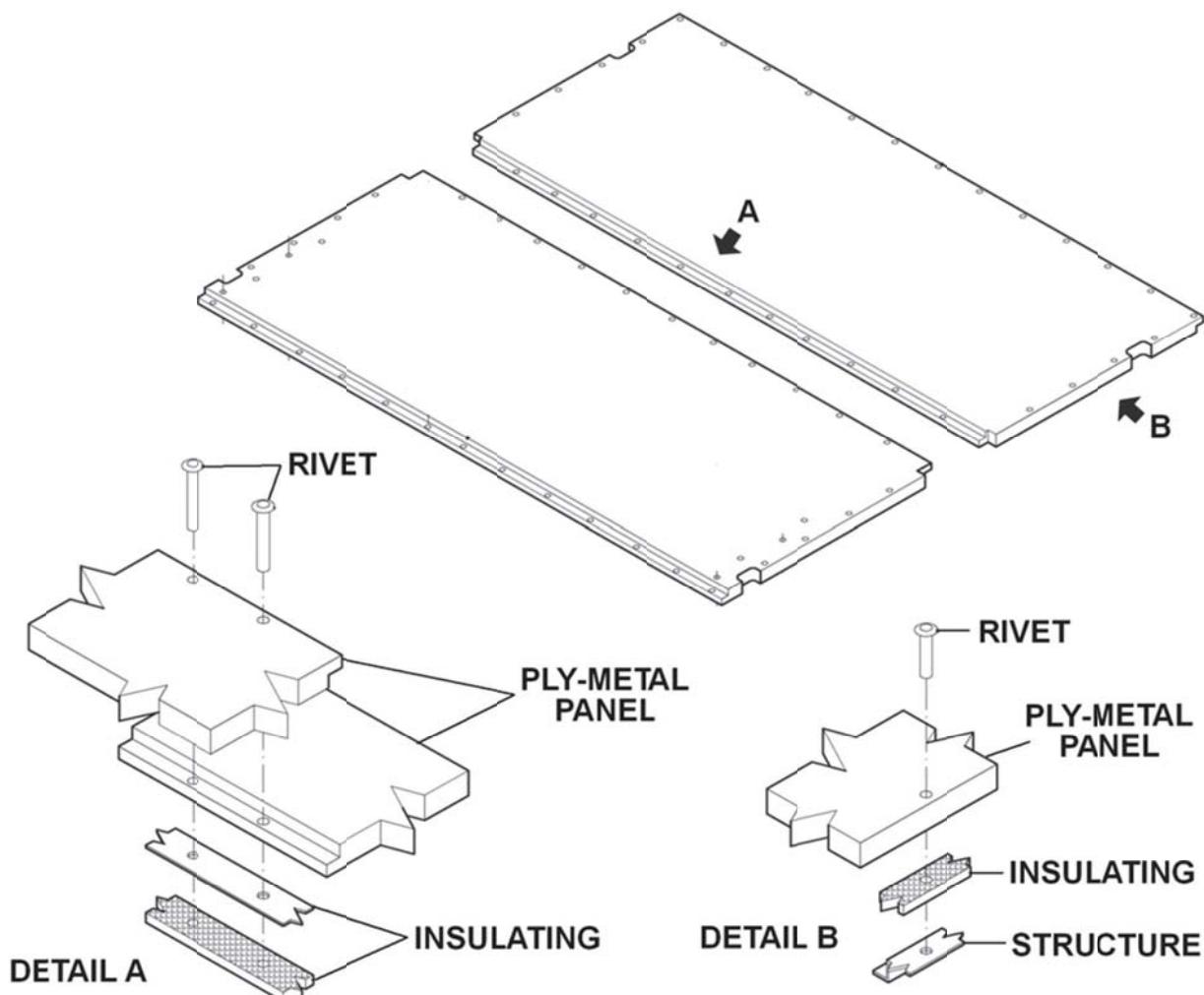
PASSENGERS INTERIORS**FLOOR PLY-METAL PANELS**

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:**
Figure 4 FLOOR PLY-METAL PANELS (TYPICAL) REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-01-00/R-00

System:

CAR BODY

Sheet:

10/10

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

FLOOR PLY-METAL PANELS

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**INTENTIONALLY LEFT
BLANK**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-02-00/R-00

System:

CAR BODY

Sheet:

1/4

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

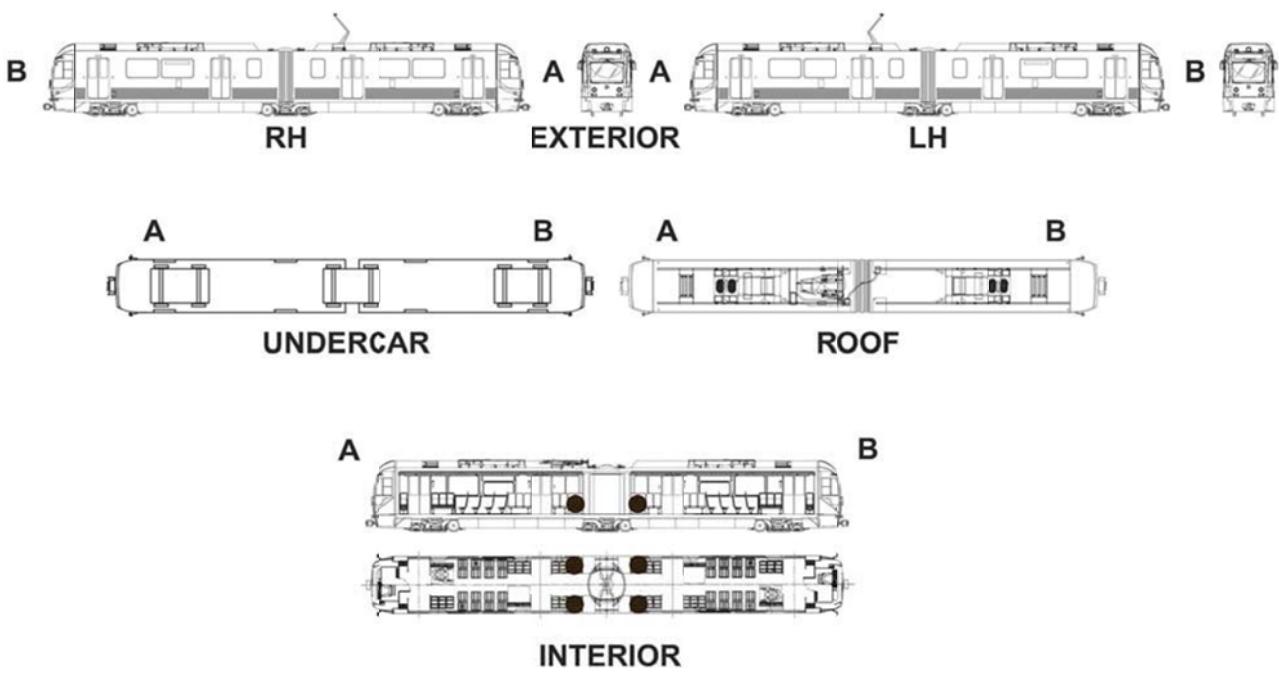
LEFT & RIGHT BOX ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT
LOCATION:


P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-13-02-00/R-00	
System: CAR BODY	Sheet: 2/4
Subsystem/Assy: PASSENGERS INTERIORS	Unit: LEFT & RIGHT BOX ASSEMBLY
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
SAFETY PRECAUTIONS: LACMTA Maintenance Shop Safety Rules & Regulations	
TOOLS: LACMTA Maintenance Shop Standard Tools Kit.	
CONSUMABLES: N/A	
SPARE PARTS: Left & Right Box Assembly Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers	

P2550 CORRECTIVE MAINTENANCE SHEET									
Card Code:									
R-C-02-13-02-00/R-00									
System: CAR BODY	Sheet: 3/4								
Subsystem/Assy: PASSENGERS INTERIORS	Unit: LEFT & RIGHT BOX ASSEMBLY								
Component:	Man Hours: 1								
Maintenance Task: REPLACEMENT									
PROCEDURE:									
<p>PRELIMINARY OPERATIONS</p> <ol style="list-style-type: none"> 1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations. 2. Set the Master Controller Handle to FSB position. 3. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). 4. Remove Electrical Power from Vehicle by lowering the Pantograph. 5. Turn the Transfer Switch to OFF. 6. Set the Pantograph Control Motor Switch (5F02 CB LV Locker "A" Section) to OFF 7. Lock-out and tag-out the Pantograph Control Motor Switch per LACMTA Safety Rules and Procedures. <p>NOTE The tag must indicate the name of the person who removed Power. That person knows why the Power was removed and when it safe to restore it. Only the individual whose name appears on the tag or a person with his approval should remove the tag and restore Power.</p> <p>NOTE: It assumed that the Equipment installed over / in the Box are removed. Refer to the relevant Sheet listed below for the Removal / Installation and Electrical Disconnection / Connection Procedures of each piece of Equipment.</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">EQUIPMENT</th> <th style="width: 50%;">REFER TO SHEET</th> </tr> </thead> <tbody> <tr> <td>2 Seaters Longitudinal Assembly Over Box</td> <td>R-C-02-09-06-00/R-00</td> </tr> <tr> <td>Headlights Power Supply</td> <td>R-C-06-02-12-00/R-00</td> </tr> <tr> <td>6A02 Safety Loop DC \ DC Converter</td> <td>R-C-10-04-01-00/R-00</td> </tr> </tbody> </table> <p>REPLACEMENT To perform the Left & Right Box Assembly Replacement proceed as follows (Refer to Figure 1):</p> <p>Removal</p> <ol style="list-style-type: none"> 1. Remove Screws (30), Washers (40, 50), then remove the Left & Right Box Assembly (60, 70). <p>Installation</p> <ol style="list-style-type: none"> 1. Position Left & Right Box Assembly (60,70). 2. Install Screws (30) and Washers (40, 50). 3. Record Task results on the Defect Report Card for administrative and maintenance planning. 		EQUIPMENT	REFER TO SHEET	2 Seaters Longitudinal Assembly Over Box	R-C-02-09-06-00/R-00	Headlights Power Supply	R-C-06-02-12-00/R-00	6A02 Safety Loop DC \ DC Converter	R-C-10-04-01-00/R-00
EQUIPMENT	REFER TO SHEET								
2 Seaters Longitudinal Assembly Over Box	R-C-02-09-06-00/R-00								
Headlights Power Supply	R-C-06-02-12-00/R-00								
6A02 Safety Loop DC \ DC Converter	R-C-10-04-01-00/R-00								

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-02-00/R-00

System:

CAR BODY

Sheet:

4/4

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

LEFT & RIGHT BOX ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

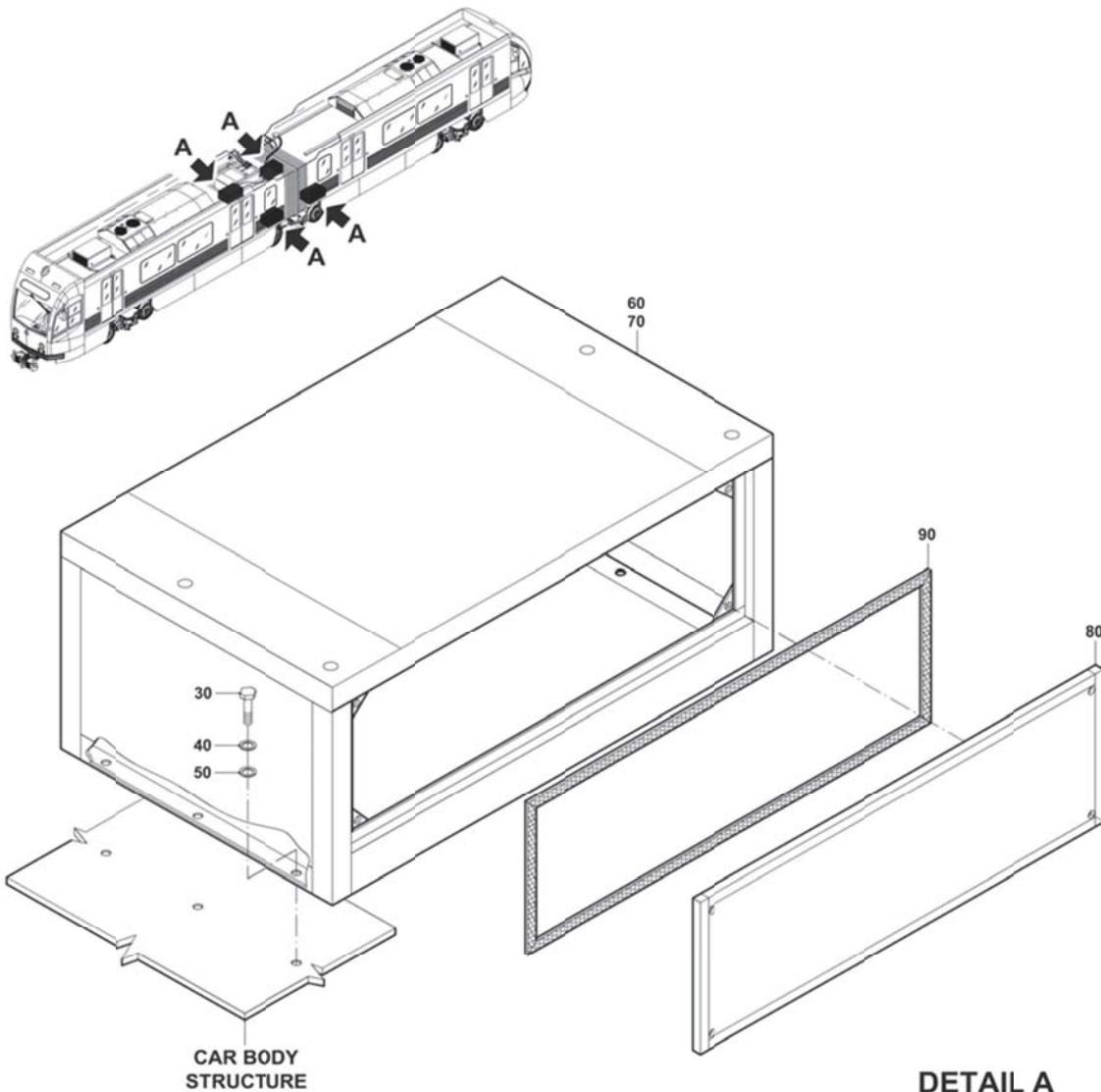
REPLACEMENT**PROCEDURE:**

Figure 1 LEFT & RIGHT BOX ASSEMBLY REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-04-00/R-00

System:

CAR BODY

Sheet:

1/10

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

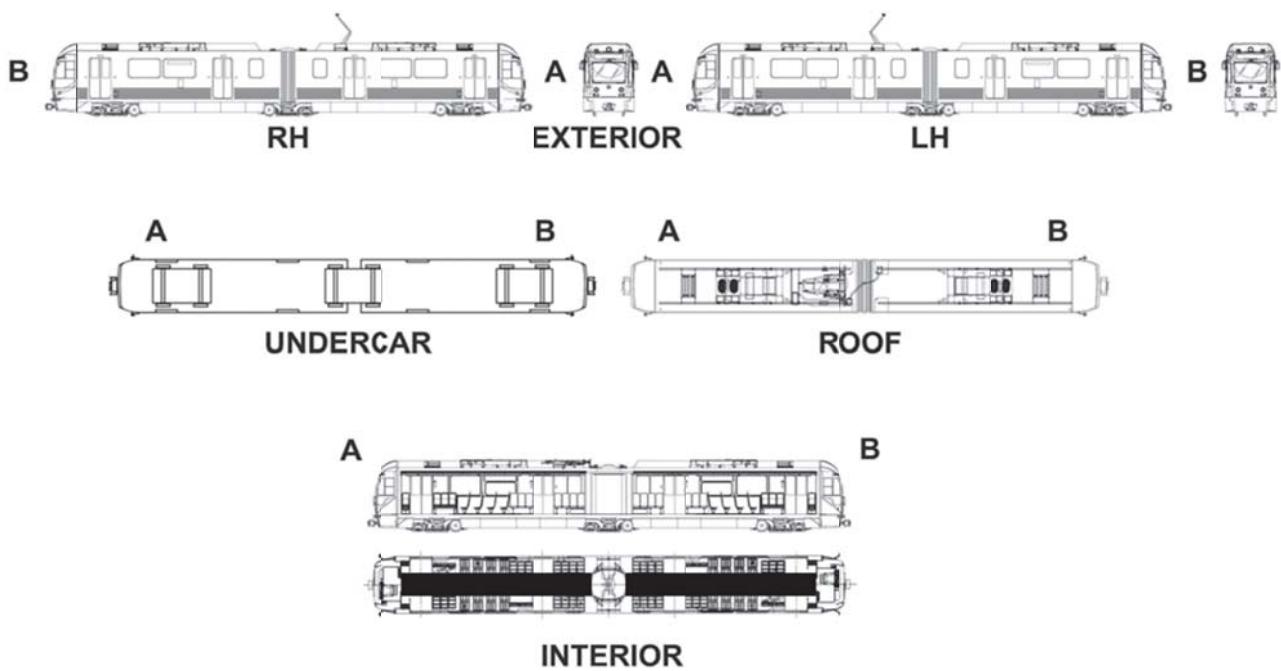
CENTER CEILING ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**LOCATION:**

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-13-04-00/R-00	
System: CAR BODY	Sheet: 2/10
Subsystem/Assy: PASSENGERS INTERIORS	Unit: CENTER CEILING ASSEMBLY
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
SAFETY PRECAUTIONS: LACMTA Maintenance Shop Safety Rules & Regulations	
TOOLS: LACMTA Maintenance Shop Standard Tools Kit.	
CONSUMABLES: Loctite 242	
SPARE PARTS: Center Ceiling Assembly Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers	

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code:	
R-C-02-13-04-00/R-00	
System: CAR BODY	Sheet: 3/10
Subsystem/Assy: PASSENGERS INTERIORS	Unit: CENTER CEILING ASSEMBLY
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
PROCEDURE:	
<p>PRELIMINARY OPERATIONS</p> <ol style="list-style-type: none"> 1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations. 2. Place the Vehicle over the Pit. 3. Set the Master Controller Handle to FSB position. 4. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). <p>REPLACEMENT</p> <p>To perform the Center Ceiling Assembly Replacement proceed as follows (Refer to Figures 1 through 5):</p> <p>Removal</p> <ol style="list-style-type: none"> 1. At Articulation Section Side remove the Header Panel (Refer to Sheet R-C-02-13-06-00/R-00). 2. Slide out Lateral Bulb Tee Trims from related Omega Trims and remove them (Refer to Figure 2, Detail A). 3. Remove Screws, Lock Washers and Flat Washers from Nuts installed on Locker Panel Secondary Structure, then remove Lateral Omega Trims (Refer to Figure 2, Detail A). 4. Remove Wing Screws (attaching the L-Bracket of the Low Ceiling Panel (11) to the Low Ceiling C-Channel)(Refer to Figure 2, Detail B and C). 5. Slide Low Ceiling Panel (11) out of Low Ceiling C-Channel Closeout. (Refer to Figure 2, Detail B and D). 6. Remove Ceiling Panels (1, 2, 3, 4, 5, 7, 8, 9, 10) as follows: <ul style="list-style-type: none"> • Removal sequence: Ceiling Panel (10), Ceiling Panel (9), Ceiling Panel (8), Grille Ceiling Panel (7), Ceiling Panel (5), Ceiling Panel (4), Ceiling Panel (3), Ceiling Panel (2) and Front Ceiling Panel (1) (Refer to Figure 1) • Slide out Transversal Bulb Tee Trims from related Omega Trims and remove them (Refer to Figure 3, Detail E). • Remove Screws from Cage Nuts installed to Ceiling Panels (Refer to Figure 3, Detail E), then remove Screws, Lock Washers, Flat Washers, Nuts and Omega Trims from Center Ceiling Extrusion (Refer to Figure 3, Detail F and G) • Move Ceiling Panel into one Center Ceiling Extrusion, rotate it down and slide it out the outer Center • Ceiling Extrusion (Refer to Figure 4, View on Arrow H - Typical). <p>NOTE: Before the Grille Ceiling Panel (7) removing, remove fourteen Screws and Return Air Grille (6) (Refer to Figure 4, Detail I and J).</p> <ul style="list-style-type: none"> • Slide Front Ceiling Panel (1) out of F-Extrusion installed on Cab Partition Wall (Refer to Figure 5, Detail K) 	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-04-00/R-00

System:

CAR BODY

Sheet:

4/10

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

CENTER CEILING ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:**

Installation

NOTE: Apply Loctite 242 to all Threaded Fasteners before fastening.

1. Install Ceiling Panels (1, 2, 3, 4, 5, 7, 8, 9, 10) as follows:

- Installation sequence: Front Ceiling Panel (1), Ceiling Panel (2), Ceiling Panel (3), Ceiling Panel (4), Ceiling Panel (5), Grille Ceiling Panel (7), Ceiling Panel (8), Ceiling Panel (9) and Ceiling Panel (10) (Refer to Figure 1)
- Insert Front Ceiling Panel (1) into F-Extrusion installed on Cab Partition Wall (Refer to Figure 5, Detail K)
- Slide Ceiling Panel into one Center Ceiling Extrusion, rotate it up and center it between Center
- Ceiling Extrusions (Refer to Figure 4, View on Arrow H - Typical).
- Install Omega Trims and fasten them with Screws, Lock Washers, Flat Washers and Nuts on Center Ceiling Extrusion (Refer to Figure 3, Detail F and G), then install Screws on Cage Nuts installed to Ceiling Panels (Refer to Figure 3, Detail E)
- Slide Transversal Bulb Tee Trims on related Omega Trims (Refer to Figure 3, Detail E)

NOTE: After installation of Grille Ceiling Panel (7), install Return Air Grille (6) and fasten it with fourteen Screws and (Refer to Figure 4, Detail I and J).

2. Slide Low Ceiling Panel (11) into Low Ceiling C-Channel Closeout (Refer to Figure 2, Detail B and D).
3. Fasten L-Bracket of Low Ceiling Panel (11) to Low Ceiling C-Channel with Wing Screws (Refer to Figure 2, Detail B and C).
4. Install Lateral Omega Trims and fasten them with Screws, Lock Washers and Flat Washers to Nuts installed on Locker Panel Secondary Structure (Refer to Figure 2, Detail A).
5. Slide Bulb Tee Trims on related Omega Trims (Refer to Figure 2, Detail A).
6. Install the Header Panel at Articulation Section Side (Refer to Sheet R-C-02-13-06-00/R-00).
7. Record Task results on the Defect Report Card for administrative and maintenance planning.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-04-00/R-00

System:

CAR BODY

Sheet:

5/10

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

CENTER CEILING ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

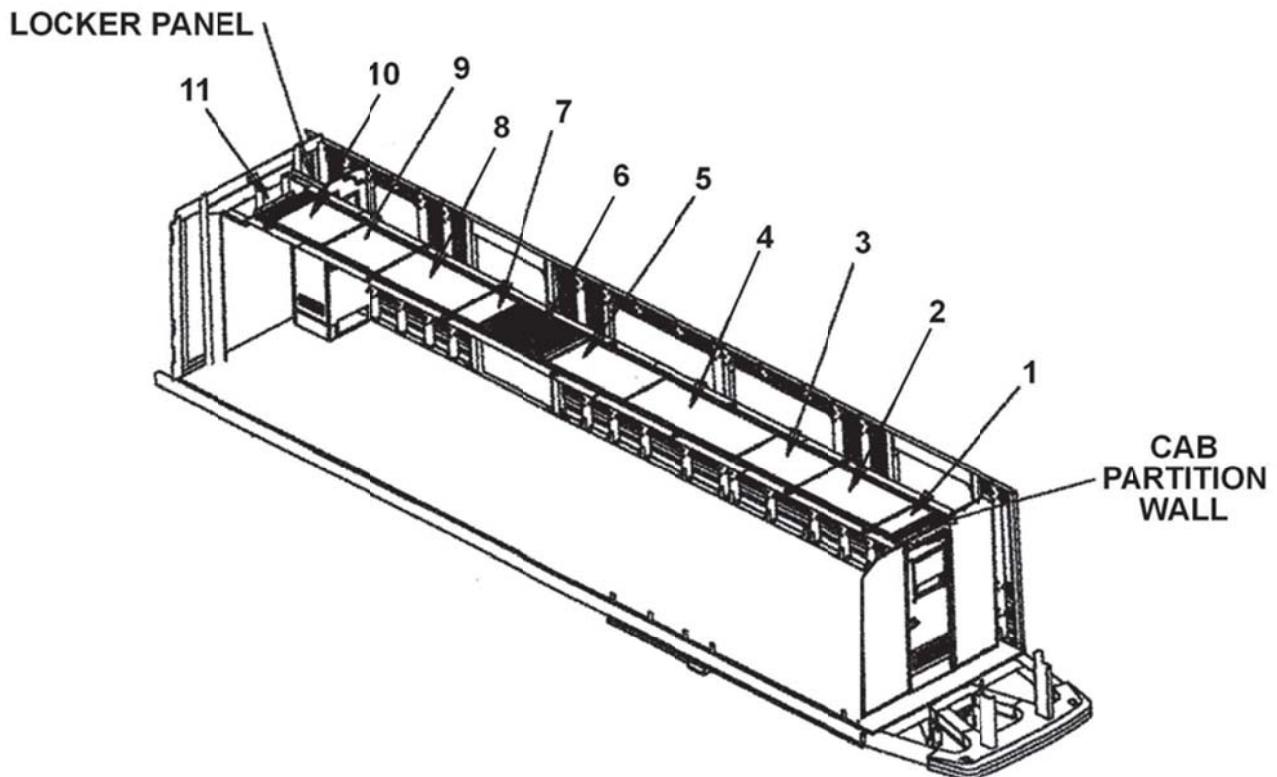
REPLACEMENT
PROCEDURE:


Figure 1 CENTER CEILING ASSEMBLY COMPONENTS

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-04-00/R-00

System:

CAR BODY

Sheet:

6/10

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

CENTER CEILING ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

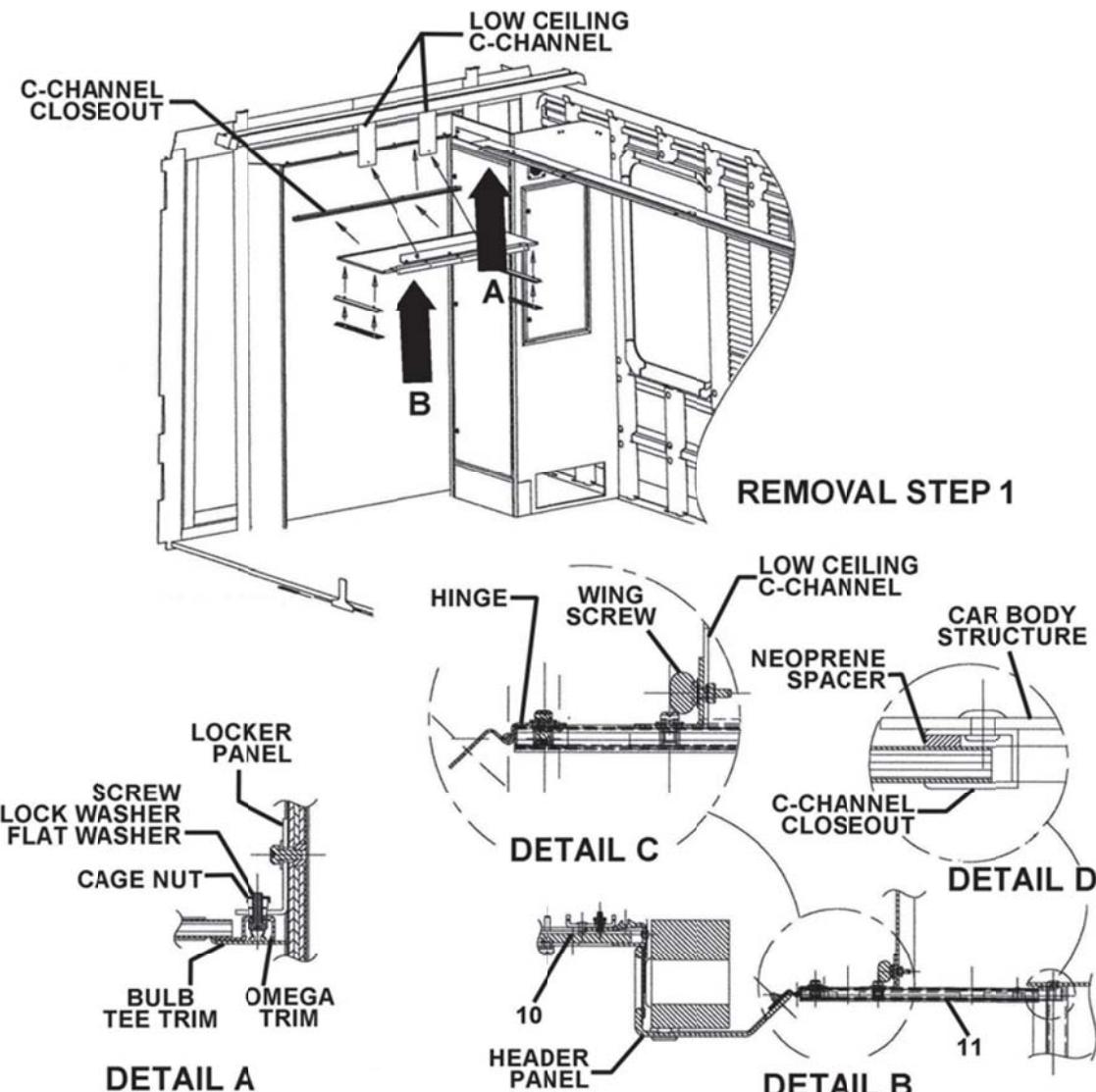
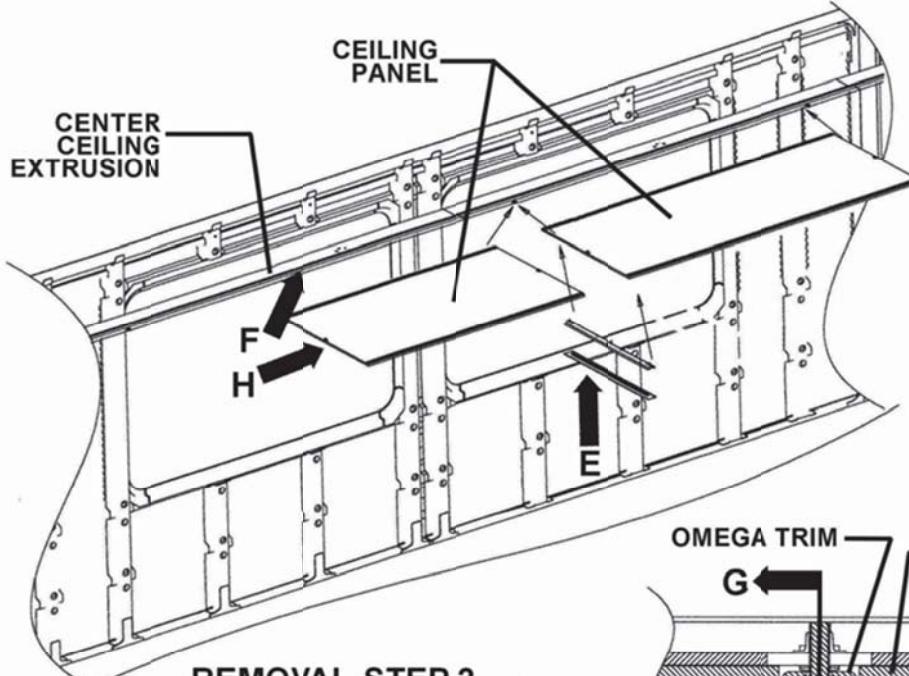
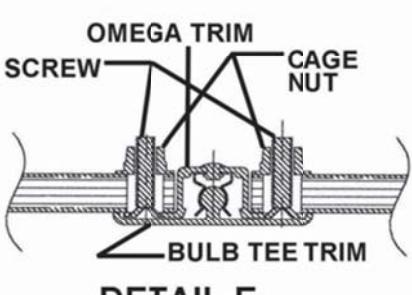
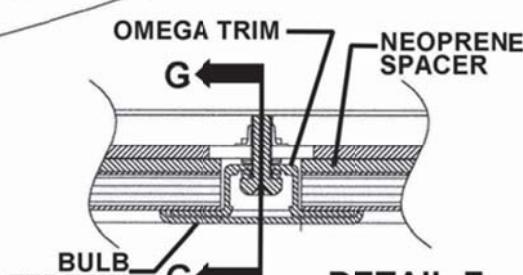
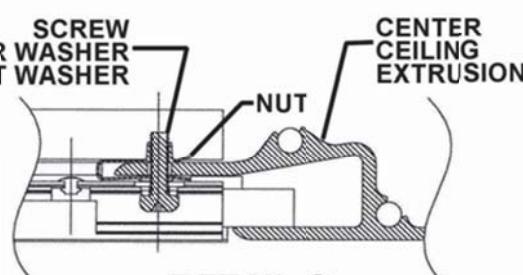
REPLACEMENT**PROCEDURE:**

Figure 2 CENTER CEILING ASSEMBLY REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-13-04-00/R-00	
System: CAR BODY	Sheet: 7/10
Subsystem/Assy: PASSENGERS INTERIORS	Unit: CENTER CEILING ASSEMBLY
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT PROCEDURE:	
 <p>REMOVAL STEP 2</p>	
 <p>DETAIL E</p>	 <p>DETAIL F</p>
 <p>DETAIL G</p>	
Figure 3 CENTER CEILING ASSEMBLY REMOVAL/INSTALLATION	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-04-00/R-00

System:

CAR BODY

Sheet:

8/10

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

CENTER CEILING ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

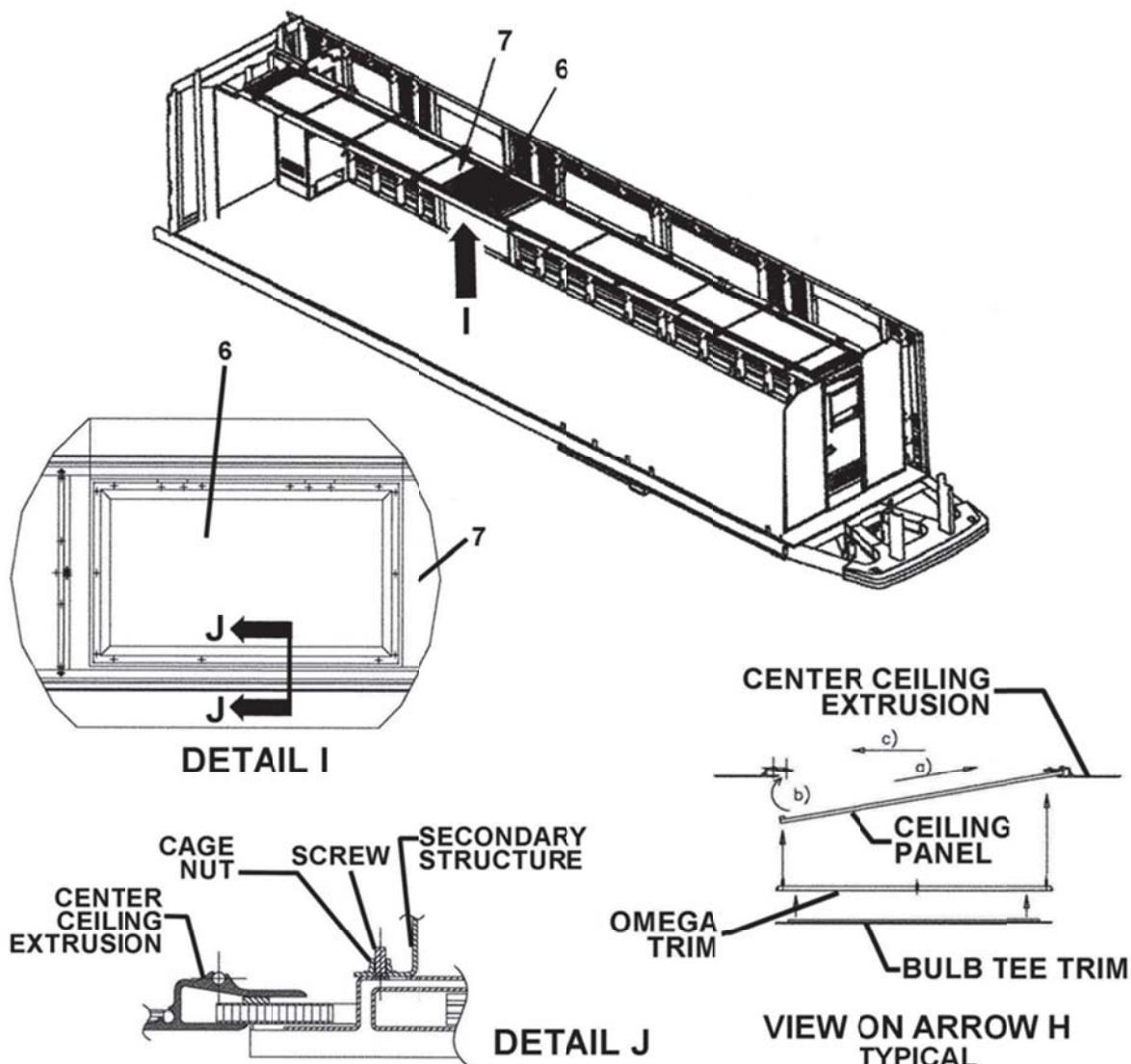
REPLACEMENT**PROCEDURE:**

Figure 4

CENTER CEILING ASSEMBLY REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-04-00/R-00

System:

CAR BODY

Sheet:

9/10

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

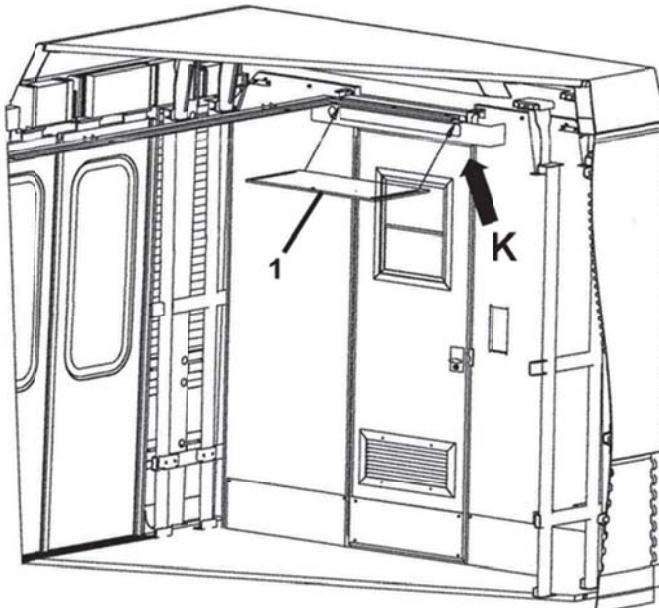
CENTER CEILING ASSEMBLY

Component:

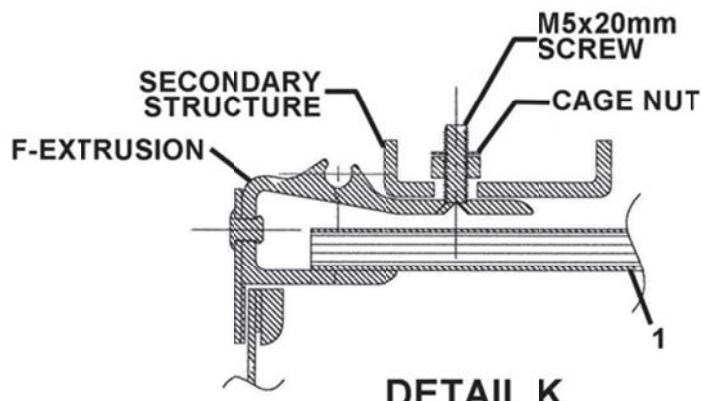
Man Hours:

1

Maintenance Task:

REPLACEMENT
PROCEDURE:


REMOVAL STEP 3



DETAIL K

Figure 5 CENTER CEILING ASSEMBLY REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-04-00/R-00

System:

CAR BODY

Sheet:

10/10

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

CENTER CEILING ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**INTENTIONALLY LEFT
BLANK**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-05-00/R-00

System:

CAR BODY

Sheet:

1/4

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

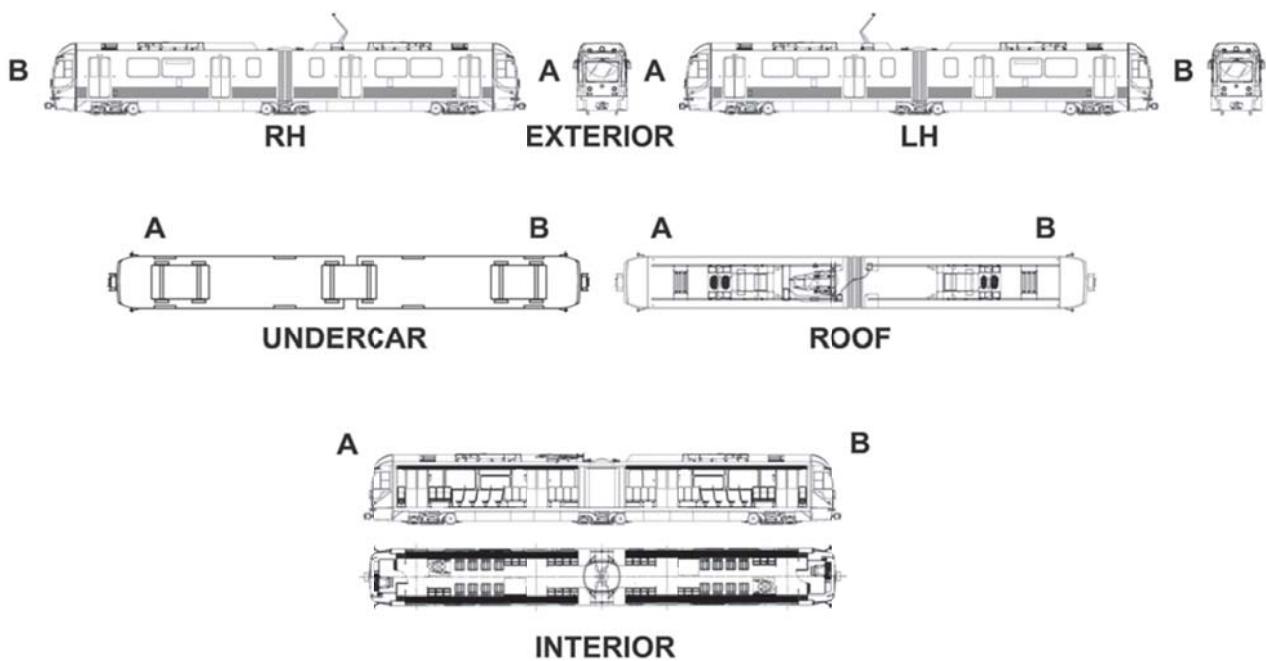
SIDE CEILING ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT
LOCATION:


P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-13-05-00/R-00	
System: CAR BODY	Sheet: 2/4
Subsystem/Assy: PASSENGERS INTERIORS	Unit: SIDE CEILING ASSEMBLY
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
SAFETY PRECAUTIONS:	
LACMTA Maintenance Shop Safety Rules & Regulations	
TOOLS:	
LACMTA Maintenance Shop Standard Tools Kit.	
CONSUMABLES:	
Loctite 242	
SPARE PARTS:	
Side Ceiling Assembly Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-05-00/R-00

System:

CAR BODY

Sheet:

3/4

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

SIDE CEILING ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT

PROCEDURE:

PRELIMINARY OPERATIONS

1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations:
2. Set the Master Controller Handle to FSB position.
3. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON).

REPLACEMENT

To perform the Side Ceiling Assembly Replacement proceed as follows (Refer to Figure 1):

Removal

1. Recommended removal sequence:
Side Ceiling Panel (2), Side Ceiling Panel (1), Side Ceiling Panel (8), Side Ceiling Panel (9), Side Ceiling Panel (7), Side Ceiling Panel (6), Side Ceiling Panel (5), Side Ceiling Panel (3) and Side Ceiling Panel (4).
2. Open the Side Ceiling Panel by turning the Key Latches.
3. Rotate down the Side Ceiling Panel.
4. Remove the Side Ceiling Panel disengaging the Hook from the Light Rail.

Installation

NOTE: Apply Loctite 242 to all Threaded Fasteners before fastening.

1. Recommended installation sequence: Side Ceiling Panel (4), Side Ceiling Panel (3), Side Ceiling Panel (5), Side Ceiling Panel (6), Side Ceiling Panel (7), Side Ceiling Panel (9), Side Ceiling Panel (8), Side Ceiling Panel (1) and Side Ceiling Panel (2).
2. Attach the Hook of the Side Ceiling Panel to the Light Rail.
3. Rotate the Side Ceiling Panel into proper position.

NOTE: Loosen Nuts on Hook Extrusion and Adjust Side Ceiling Panel position to achieve constant spacing with outboard Walls.

Torque Nuts When Proper spacing has been achieved.

Adjust Latch Cam position to achieve a tight closure against Structure.

4. Lock the Side Ceiling Panel turning the Key Latches.
5. Record Task results on the Defect Report Card for administrative and maintenance planning.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-05-00/R-00

System:

CAR BODY

Sheet:

4/4

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

SIDE CEILING ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

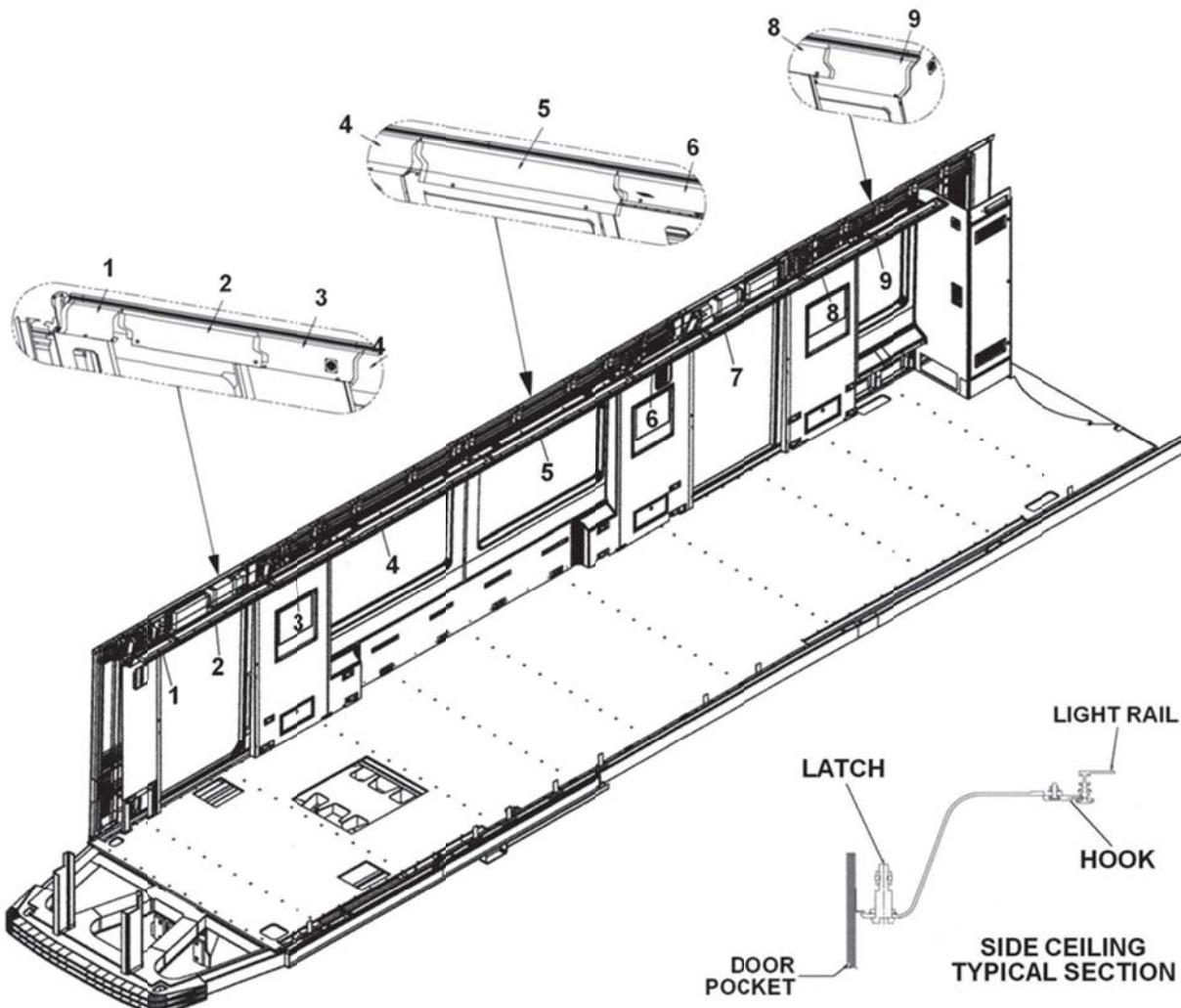
REPLACEMENT**PROCEDURE:**

Figure 1 SIDE CEILING ASSEMBLY COMPONENTS

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-06-00/R-00

System:

CAR BODY

Sheet:

1/4

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

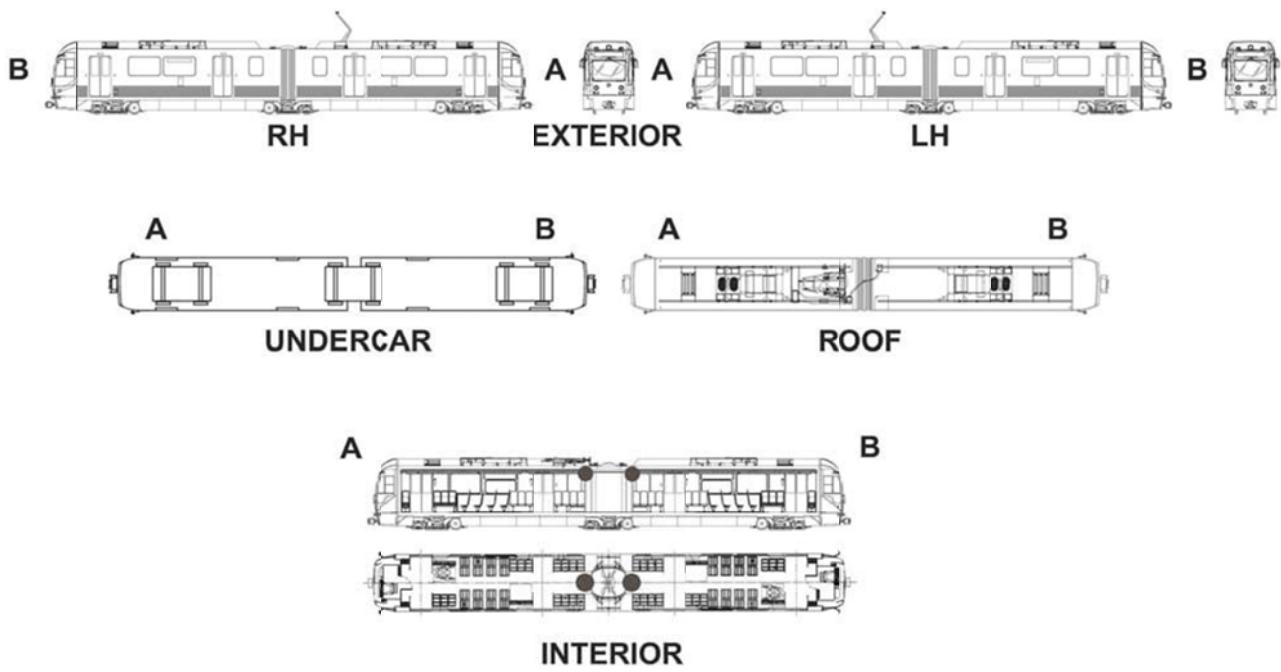
HEADER PANEL ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**LOCATION:**

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-13-06-00/R-00	
System: CAR BODY	Sheet: 2/4
Subsystem/Assy: PASSENGERS INTERIORS	Unit: HEADER PANEL ASSEMBLY
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
SAFETY PRECAUTIONS:	
<p>LACMTA Maintenance Shop Safety Rules & Regulations</p> <p>CAUTION :SWITCH OFF THE 3F01 CB (BATTERY BOX) BEFORE STARTING TO PERFORM THE REPLACEMENT</p>	
TOOLS:	
LACMTA Maintenance Shop Standard Tools Kit.	
CONSUMABLES:	
Loctite 242	
SPARE PARTS:	
Header Panel Assembly Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers	

P2550 CORRECTIVE MAINTENANCE SHEET							
Card Code:							
R-C-02-13-06-00/R-00							
System: CAR BODY	Sheet: 3/4						
Subsystem/Assy: PASSENGERS INTERIORS	Unit: HEADER PANEL ASSEMBLY						
Component:	Man Hours: 1						
Maintenance Task: REPLACEMENT							
PROCEDURE:							
<p>PRELIMINARY OPERATIONS</p> <ol style="list-style-type: none"> 1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations. 2. Set the Master Controller Handle to FSB position. 3. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). <p>CAUTION :SWITCH OFF THE 3F01 CB (BATTERY BOX) BEFORE STARTING TO PERFORM THE REPLACEMENT</p> <p>NOTE: It assumed that the Equipment installed on the Header Panel are removed. Refer to the relevant Sheet listed below for the Removal / Installation and Electrical Disconnection / Connection Procedures of each piece of Equipment.</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">EQUIPMENT</th> <th style="width: 50%;">REFER TO SHEET</th> </tr> </thead> <tbody> <tr> <td>Announcement Sign Assembly</td> <td>R-C-14-02-04-00/R-00</td> </tr> <tr> <td>Video Camera</td> <td>R-C-14-01-08-00/R-00</td> </tr> </tbody> </table> <p>REPLACEMENT</p> <p>To perform the Header Panel Assembly Replacement proceed as follows (Refer to Figure 1):</p> <p>Removal</p> <ol style="list-style-type: none"> 1. Rotate Latch 1/4 turn, and open Header Panel (1) (Refer to Figure 1, Detail B). 2. Remove Lock Nuts and Flat Washers (attaching the Header Panel (1) to the Hinge). 3. Remove the Header Panel (Refer to Figure 1, Detail A). 4. Remove Screws, Lock Washers, Flat Washers and L-Brackets from Lockers, 5. Remove the Header Closeouts RH and LH (2 and 3) (Refer to Figure 1, Detail B). <p>Installation</p> <p>NOTE: Apply Loctite 242 to all Threaded Fasteners before fastening.</p> <ol style="list-style-type: none"> 1. Position the Header Closeouts RH and LH (2 and 3) and L-Brackets and fasten them to Lockers with Screws, Lock Washers and Flat Washers (Refer to Figure 1, Detail B). 2. Install Lock Nuts and Flat Washers and fasten the Header Panel (1) to the Hinge attached to the Low Ceiling Panel (Refer to Figure 1, Detail A). 3. Rotate Header Panel to proper position and Latch 1/4 turn fasteners against L-Bracket (Refer to Figure 1, Detail B). 4. Record Task results on the Defect Report Card for administrative and maintenance planning. 		EQUIPMENT	REFER TO SHEET	Announcement Sign Assembly	R-C-14-02-04-00/R-00	Video Camera	R-C-14-01-08-00/R-00
EQUIPMENT	REFER TO SHEET						
Announcement Sign Assembly	R-C-14-02-04-00/R-00						
Video Camera	R-C-14-01-08-00/R-00						

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-06-00/R-00

System:

CAR BODY

Sheet:

4/4

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

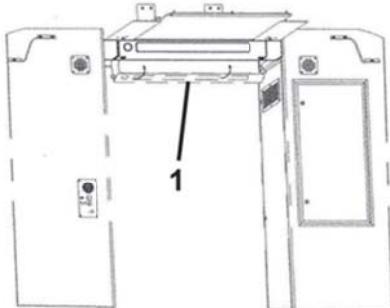
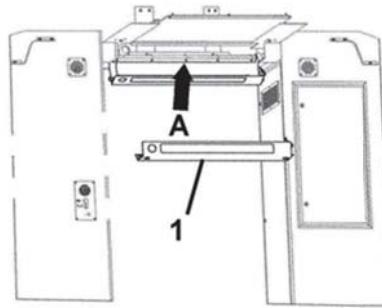
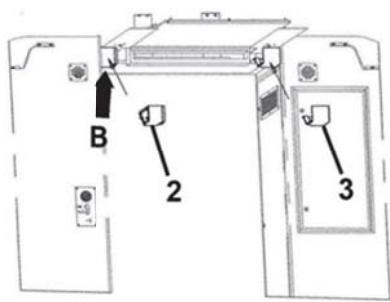
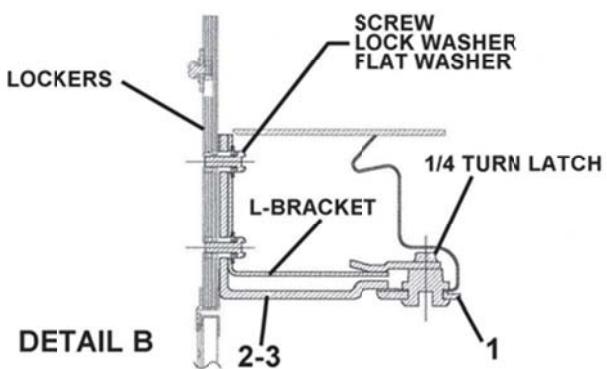
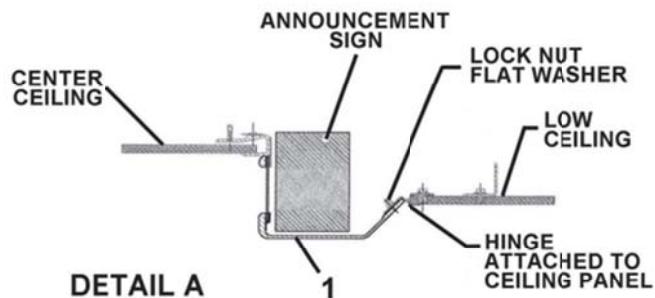
HEADER PANEL ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:****REMOVAL STEP #1****REMOVAL STEP #2****REMOVAL STEP #3****Figure 1****HEADER PANEL ASSEMBLY REMOVAL/INSTALLATION**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-07-00/R-00

System:

CAR BODY

Sheet:

1/6

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

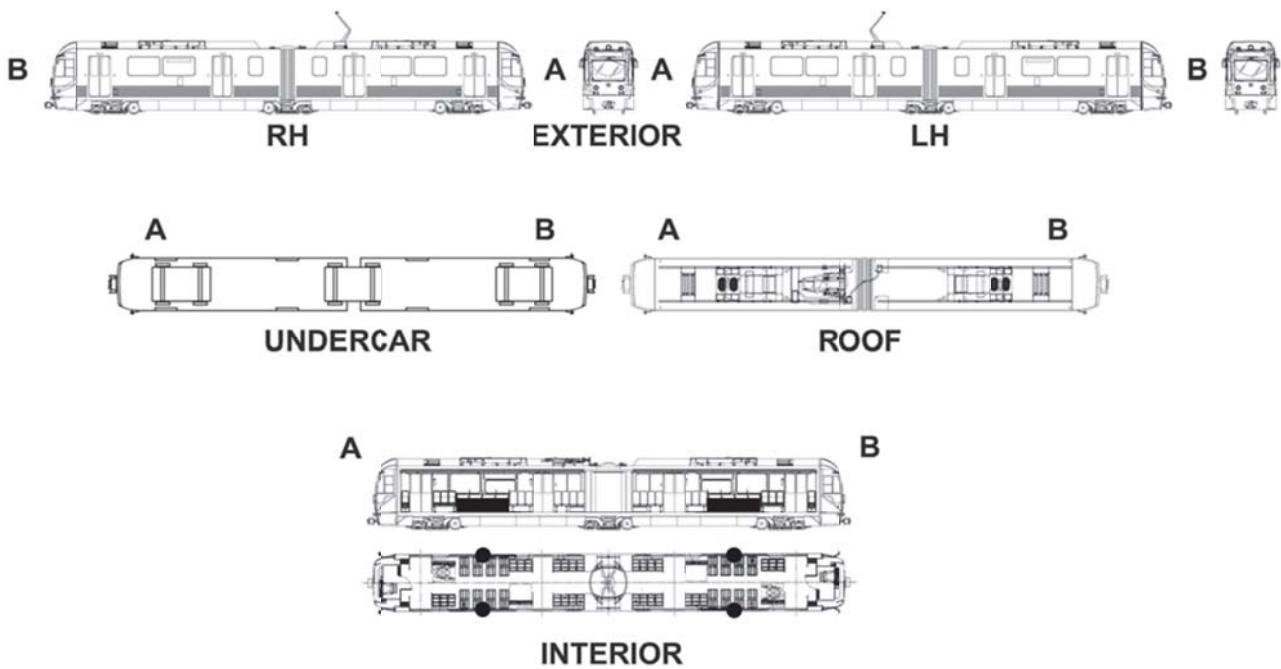
WAINGCOT ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**LOCATION:**

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-13-07-00/R-00	
System: CAR BODY	Sheet: 2/6
Subsystem/Assy: PASSENGERS INTERIORS	Unit: WAINSCOT ASSEMBLY
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
SAFETY PRECAUTIONS: LACMTA Maintenance Shop Safety Rules & Regulations	
TOOLS: LACMTA Maintenance Shop Standard Tools Kit.	
CONSUMABLES: Loctite 242	
SPARE PARTS: Wainscot Assembly Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers	

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-13-07-00/R-00	
System: CAR BODY	Sheet: 3/6
Subsystem/Assy: PASSENGERS INTERIORS	Unit: WAINGCOT ASSEMBLY
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
PROCEDURE:	
PRELIMINARY OPERATIONS <ol style="list-style-type: none"> 1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations: 2. Set the Master Controller Handle to FSB position. 3. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). 	
NOTE: It assumed that the Equipment installed on the Wainscot are removed. Refer to the relevant Sheet listed below for the Removal / Installation Procedures of each piece of Equipment.	
EQUIPMENT 3 Seaters Flip-up Longitudinal Assembly 2 Seaters Transversal Assembly 3 Seaters Longitudinal Assembly	REFER TO SHEET R-C-02-09-03-00/R-00 R-C-02-09-01-00/R-00 R-C-02-09-05-00/R-00

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-07-00/R-00

System:

CAR BODY

Sheet:

4/6

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

WAINGCOT ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:**

REPLACEMENT

To perform the Wainscot Assembly Replacement proceed as follows: (Refer to Figures 1 and 2):

Removal

1. Slide out Bulb Tee Trims from Omega Trims and remove them (Refer to Figure 1, Detail A).
2. Remove Screws and Omega Trims from Wainscot Secondary Structure (Refer to Figure 1, Detail B and C).
3. On top, remove Screws from Nuts installed on Wainscot Rail Slide (Refer to Figure 2, Detail D). Leave Nut in position.
4. On bottom remove Screws, Lock Washers and Flat Washers from Wainscot L-Angle,
5. Remove Wainscot Panels RH and LH (1 and 2) (Refer to Figure 2, Detail E).

Installation

NOTE: Apply Loctite 242 to all Threaded Fasteners prior to fastening.

NOTE: It is assumed that the. The Nuts are already installed on Wainscot Rail Slide

1. Position Wainscot Panels RH and LH (1 and 2) and fasten them with Screws and Nuts (Refer to Figure 2, Detail D).
2. On bottom install Screws, Lock Washers and Flat Washers to fasten Wainscot Panels RH and LH (1 and 2) to Wainscot L-Angle (Refer to Figure 2, Detail E).
3. Install Omega Trims and fasten them to Wainscot Secondary Structure with Screws (Refer to Figure 1, Detail B and C).
4. Slide Bulb Tee Trims to Omega Trims (Refer to Figure 1, Detail A).
5. Record Task results on the Defect Report Card for administrative and maintenance planning.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-07-00/R-00

System:

CAR BODY

Sheet:

5/6

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

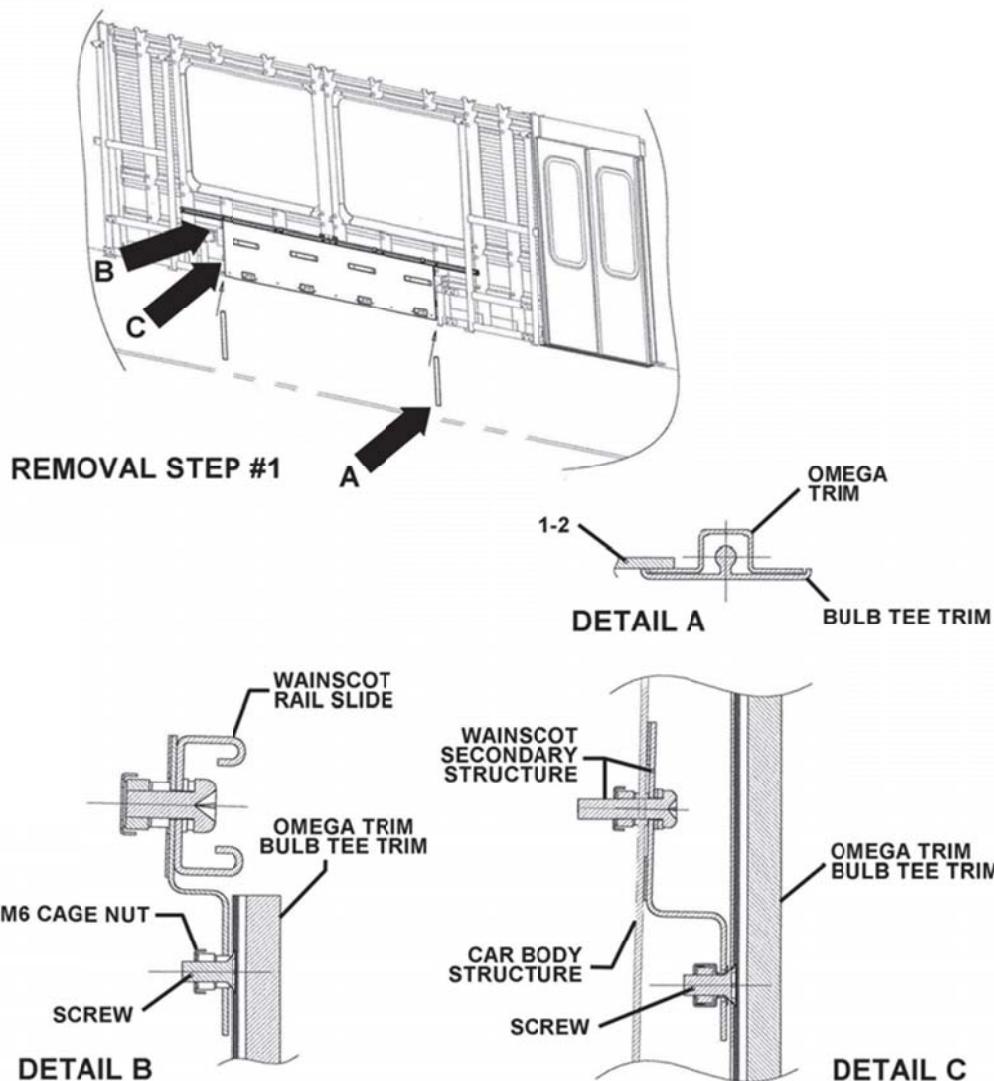
WAINGSCOT ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:****Figure 1****WAINGSCOT ASSEMBLY REMOVAL/INSTALLATION**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-07-00/R-00

System:

CAR BODY

Sheet:

6/6

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

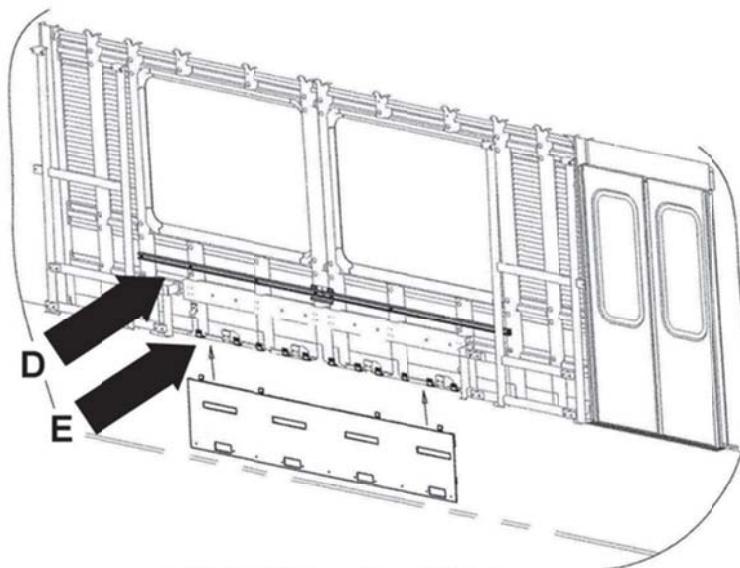
WAINGCOT ASSEMBLY

Component:

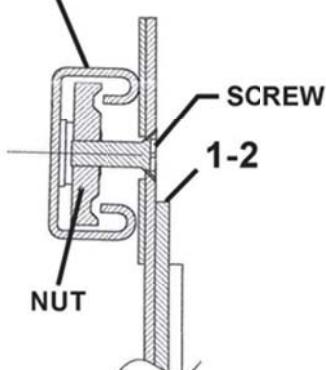
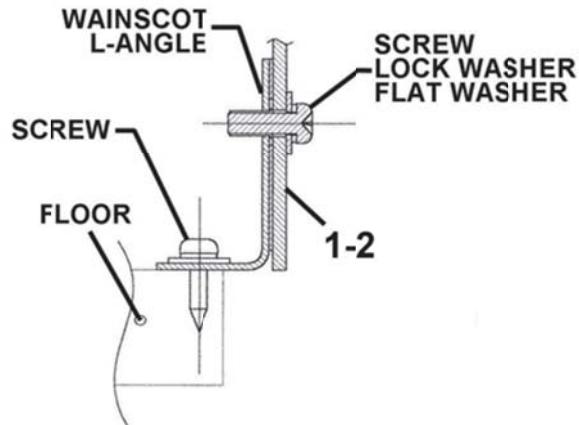
Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:****REMOVAL STEP #2**

WAINGCOT RAIL SLIDE

**DETAIL D****DETAIL E****Figure 2 WAINGCOT ASSEMBLY REMOVAL/INSTALLATION**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-08-00/R-00

System:

CAR BODY

Sheet:

1/10

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

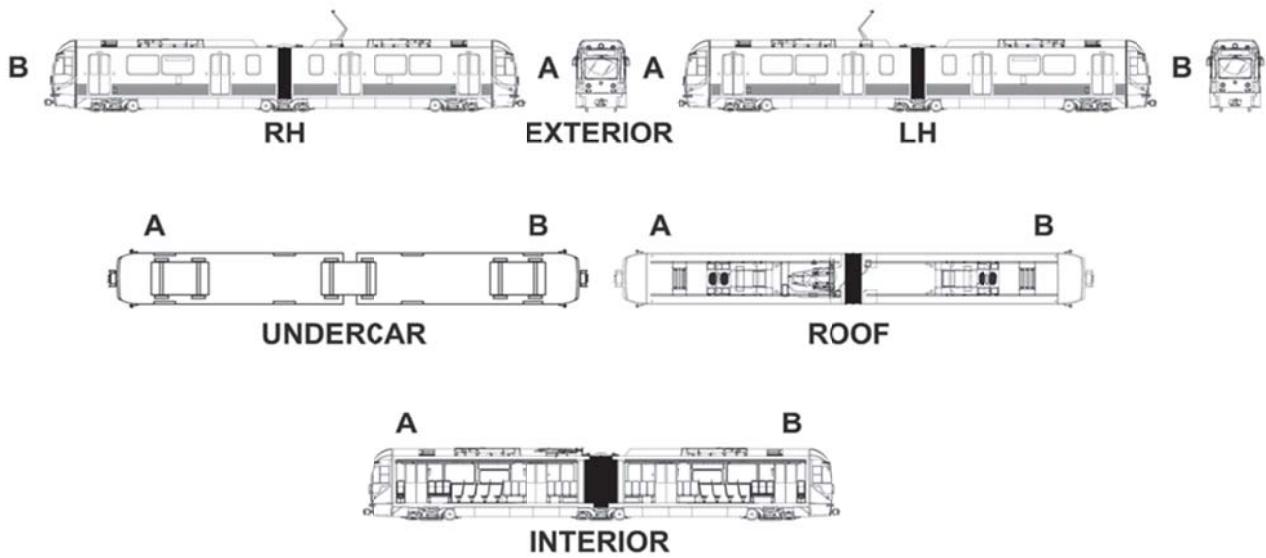
AISLE PANELS ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT
LOCATION:


P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-13-08-00/R-00	
System: CAR BODY	Sheet: 2/10
Subsystem/Assy: PASSENGERS INTERIORS	Unit: AISLE PANELS ASSEMBLY
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
SAFETY PRECAUTIONS: LACMTA Maintenance Shop Safety Rules & Regulations	
CAUTION : SWITCH OFF THE 3F01 CB (BATTERY BOX) BEFORE STARTING TO PERFORM THE REPLACEMENT	
TOOLS: LACMTA Maintenance Shop Standard Tools Kit.	
CONSUMABLES: Loctite 242	
SPARE PARTS: Aisle Panels Assembly Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers	

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-13-08-00/R-00	
System: CAR BODY	Sheet: 3/10
Subsystem/Assy: PASSENGERS INTERIORS	Unit: AISLE PANELS ASSEMBLY
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
PROCEDURE: PRELIMINARY OPERATIONS <ol style="list-style-type: none"> Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations. Set the Master Controller Handle to FSB position. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). Remove Electrical Power from Vehicle by lowering the Pantograph. Turn the Transfer Switch to OFF. Set the Pantograph Control Motor Switch (5F02 CB LV Locker "A" Section) to OFF. Lock-out and tag-out the Pantograph Control Motor Switch per LACMTA Safety Rules and Procedures. <p>NOTE The tag must indicate the name of the person who removed Power. That person knows why the Power was removed and when it safe to restore it. Only the individual whose name appears on the tag or a person with his approval should remove the tag and restore Power.</p> <p>NOTE: It assumed that the Aisle Light Fixtures are removed. (Refer to Sheet R-C 02-08-01-00 / R-00 STEP 1)</p>	
REPLACEMENT <ol style="list-style-type: none"> Removal To perform Aisle Panels Assembly Removal proceed as follows (Refer to Figure 1): <ol style="list-style-type: none"> Remove Ceiling Panel. Remove Lock Strip Gasket. Remove Side Wall Panels (with Access Panel installed). Remove Inner Rubber. <ol style="list-style-type: none"> Ceiling Panel Removal (Refer to Figure 2) <ol style="list-style-type: none"> Pull out the Bulb Tee Trim with Gasket from related Omega Trims and remove them (Refer to Figure 2, Detail A and C). Remove Screws, Lock Washers, Washers and Omega Trims, then remove Ceiling Panel from Dome Structure (Refer to Figure 2, Detail B and C). Lock-Strip Gasket Removal (Refer to Figure 3). <ol style="list-style-type: none"> Remove screws (4) and washers (3).while supporting Lock-Strip Gasket (1). Remove Lock-Strip Gasket (1) and Plate (2). Side Wall Panels Removal (Refer to Figures 4 and 5) <ol style="list-style-type: none"> On backside of Panel remove Screws, Lock Washers and Flat Washers removing the Side Wall Panel from Articulation Section Structure (Refer to Figure 4, Detail D and E). Slide up Side Wall Panel just to move it out of Floor Molding. Rotate the Side Wall Panel and slide (laterally) it out of Extrusion Channel. Remove Screws and Trim Pieces, and then remove the Extrusion Channels (Refer to Figure 5, Detail G). 	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-08-00/R-00

System:

CAR BODY

Sheet:

4/10

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

AISLE PANELS ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:**

- 4. Inner Rubber Removal** (Refer to Figure 6).
 - a. Remove Screws (10) and the Molding (9).
 - b. Pull out the Head of the Inner Rubber (1) from the Hooking Device (8).
 - c. Remove the Screws (2), Washers (3, 4) and Nuts (5) while supporting the Inner Rubber (1).
 - d. Remove the Inner Rubber (1).
 - e. Remove Screws (11), Washers (7) and Nuts (6), then remove the Hooking Device (8).

b. Installation.

To perform Installation Procedure of Aisle Panels Assembly proceed as follows (Refer to Figure 1):

1. Install Inner Rubber.
2. Install Side Wall Panels (with Access Panel installed).
3. Install Lock Strip Gasket.
4. Install Ceiling Panel.

NOTE: Apply Loctite 242 to all Threaded Fasteners prior to fastening.

- 1. Inner Rubber Installation** (Refer to Figure 6).
 - a. Position the Hooking Device (8) in the seat.
 - c. Install the Screws (11), Washers (7) and Nut (6). Torque the Nut (6) to **6.2 ft-lb**.
 - e. Position the Inner Rubber (1) in the Seat.
 - f. Install the Screws (2), Washers (3, 4) and Nuts (5). Torque the Nut (5) to **15.2 ft-lb**.
 - h. Engage the Inner Rubber Head (1) in the Hooking Device (8).
 - i. Position the Molding (9) and lock it by installing and torqueing the Screws (10) to **5.4 ft-lb**.
- 2. Side Wall Panels Installation** (Refer to previous Figures 4 and 5)
 - a. Position the Extrusion Channels and the Trim Pieces and install / tighten the Screws to lock the Trim Pieces (Refer to Figure 5, Detail G).
 - b. Install the Side Wall Panel by sliding it laterally into Extrusion Channels and rotate it into place.
 - c. Slide down the Side Wall Panel behind the Floor Molding (Refer to Figure 4, Detail F).
 - d. On backside of Panel install Screws, Lock Washers and Flat Washers fastening the Side Wall Panel to Articulation Section Structure (Refer to Figure 4, Detail D and E).
- 3. Lock-Strip Gasket Installation** (Refer to previous Figure 3)
 - a. Position the Lock-Strip Gasket (1) and Plate (2) as shown in the figure 4.
 - b. Install the Screws (4) and Washers (3). Torque Screws (4) to **5.4 ft-lb**.
- 4. Ceiling Panel Installation** (Refer to previous Figure 2)
 - a. Position the Ceiling Panel, then install Omega Trims and fix them with Screws, Lock Washers and Washers (Refer to Figure 2, Detail B and C).
 - b. Snap on the Bulb Tee Trim with Gasket from related Omega Trims (Refer to Figure 2, Detail A and C).

Record Task results on the Defect Report Card for administrative and maintenance planning

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-08-00/R-00

System:

CAR BODY

Sheet:

5/10

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

AISLE PANELS ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

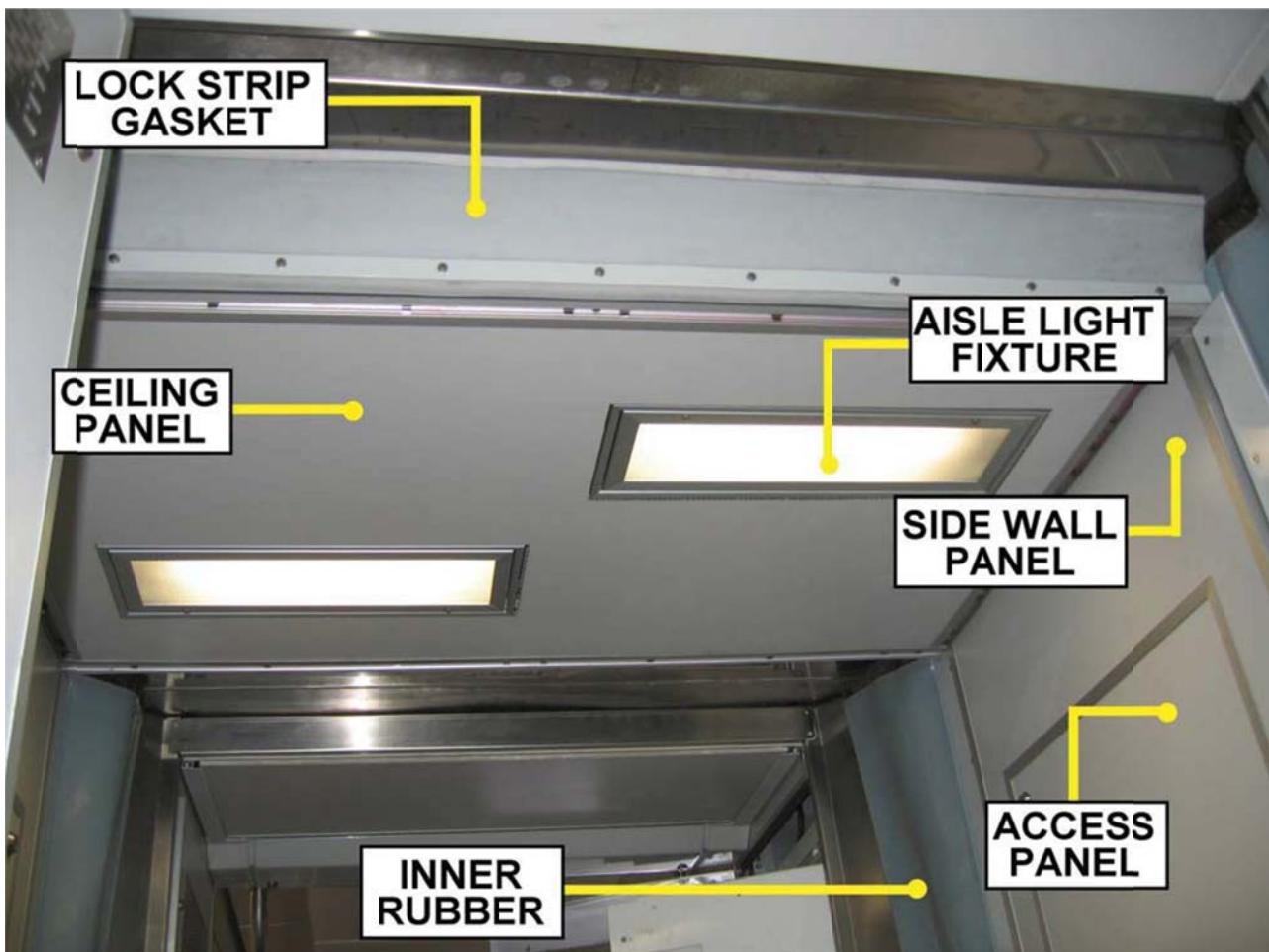
REPLACEMENT
PROCEDURE:


Figure 1 AISLE PANELS ASSEMBLY COMPONENTS

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-08-00/R-00

System:

CAR BODY

Sheet:

6/10

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

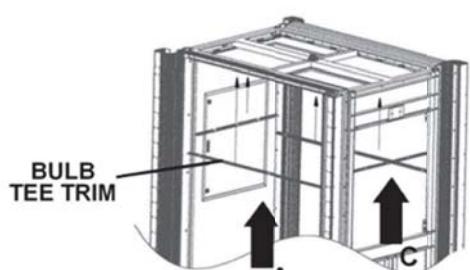
AISLE PANELS ASSEMBLY

Component:

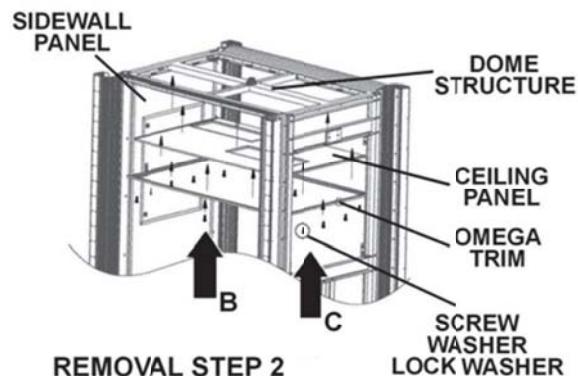
Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:**

REMOVAL STEP 1



REMOVAL STEP 2

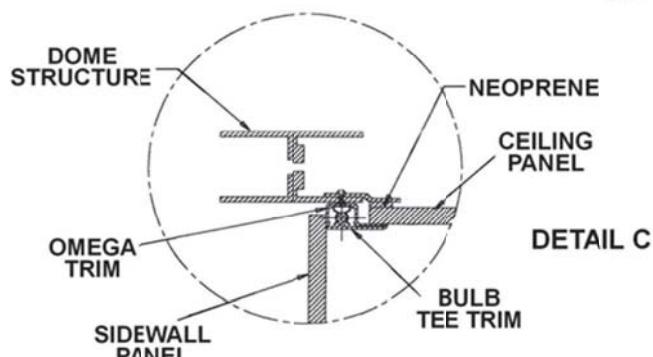
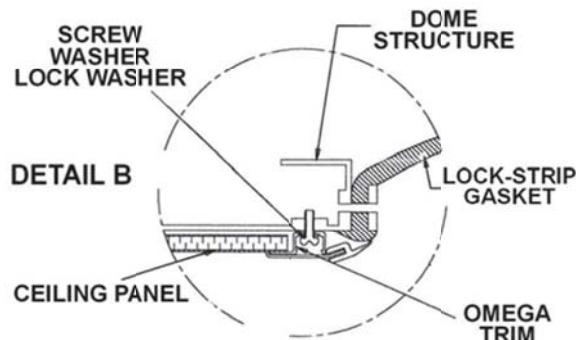
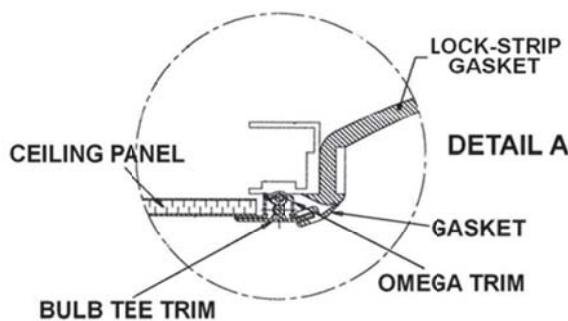


Figure 2

CEILING PANEL REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-08-00/R-00

System:

CAR BODY

Sheet:

7/10

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

AISLE PANELS ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

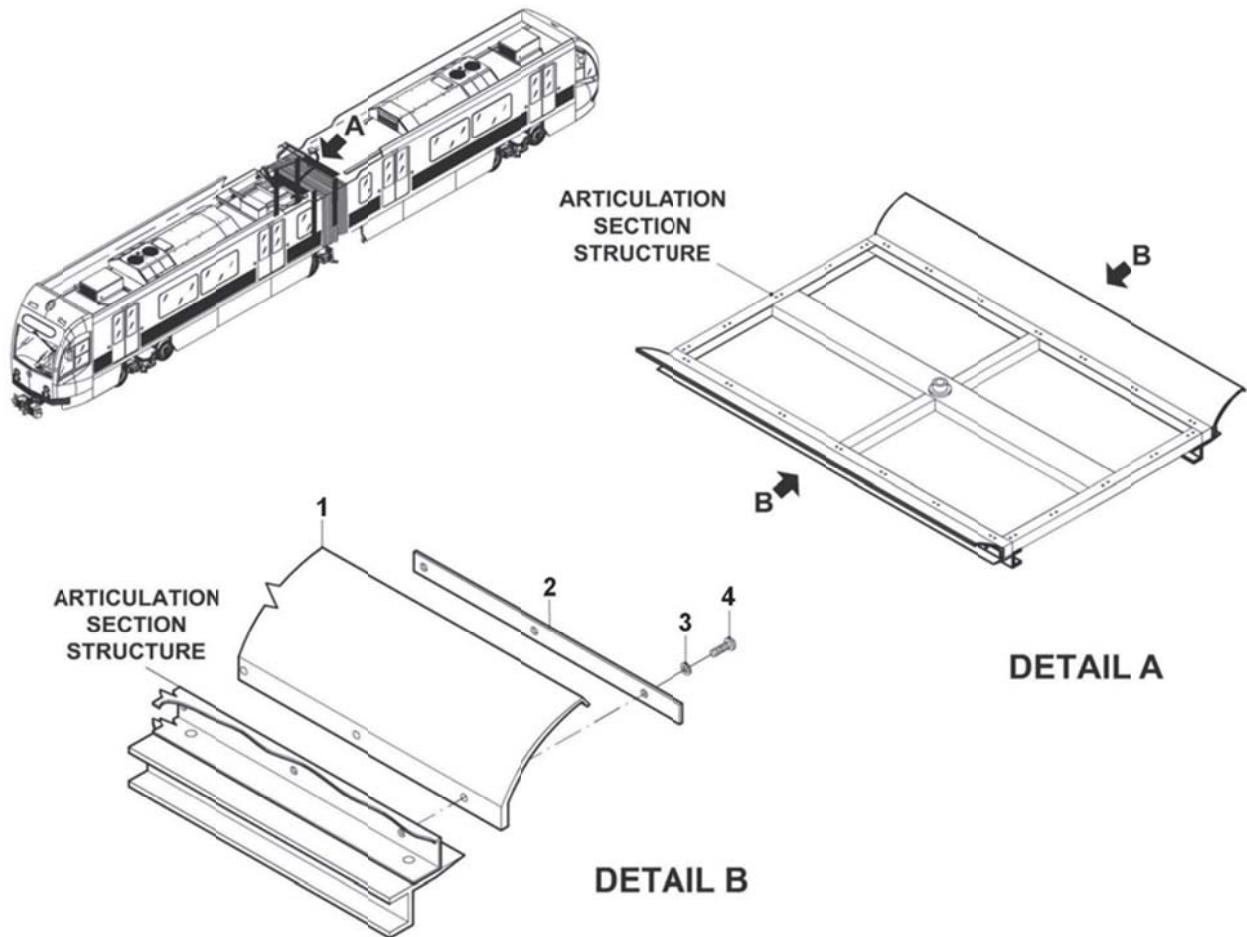
REPLACEMENT**PROCEDURE:**

Figure 3 LOCK-STRIP GASKET REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-08-00/R-00

System:

CAR BODY

Sheet:

8/10

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

AISLE PANELS ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

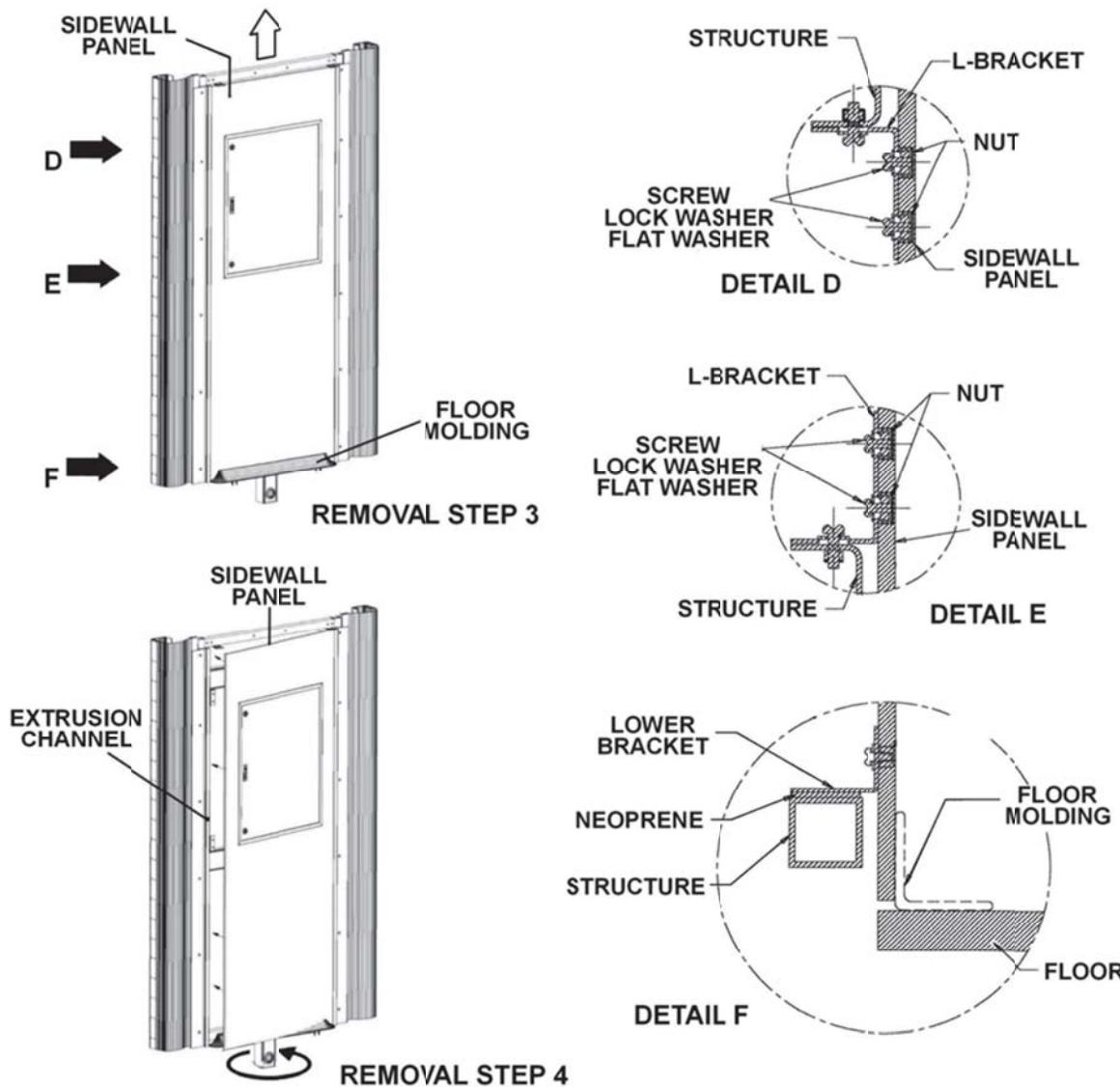
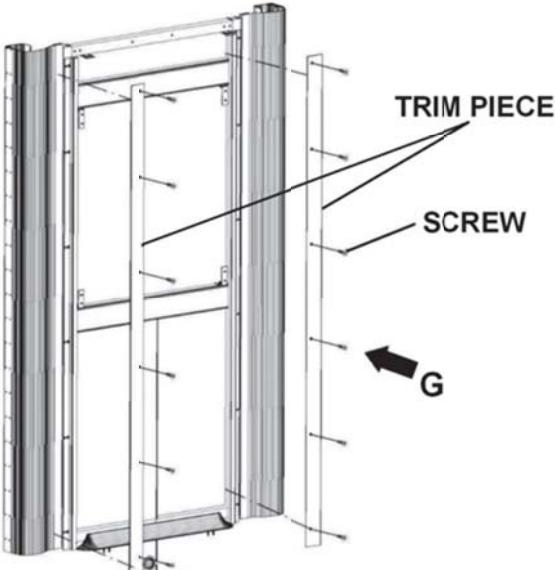
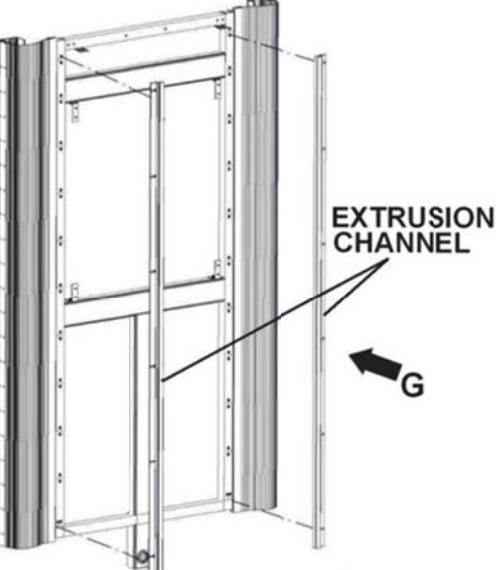
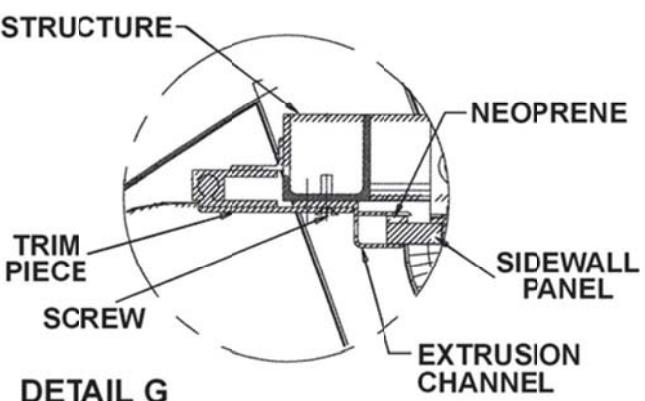
REPLACEMENT**PROCEDURE:**

Figure 4

SIDE WALL PANELS ASSEMBLY REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-13-08-00/R-00	
System: CAR BODY	Sheet: 9/10
Subsystem/Assy: PASSENGERS INTERIORS	Unit: AISLE PANELS ASSEMBLY
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT PROCEDURE:	
 <p>REMOVAL STEP 5</p>	 <p>REMOVAL STEP 6</p>
 <p>DETAIL G</p>	
Figure 5 SIDE WALL PANELS ASSEMBLY REMOVAL/INSTALLATION	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-08-00/R-00

System:

CAR BODY

Sheet:

10/10

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

AISLE PANELS ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

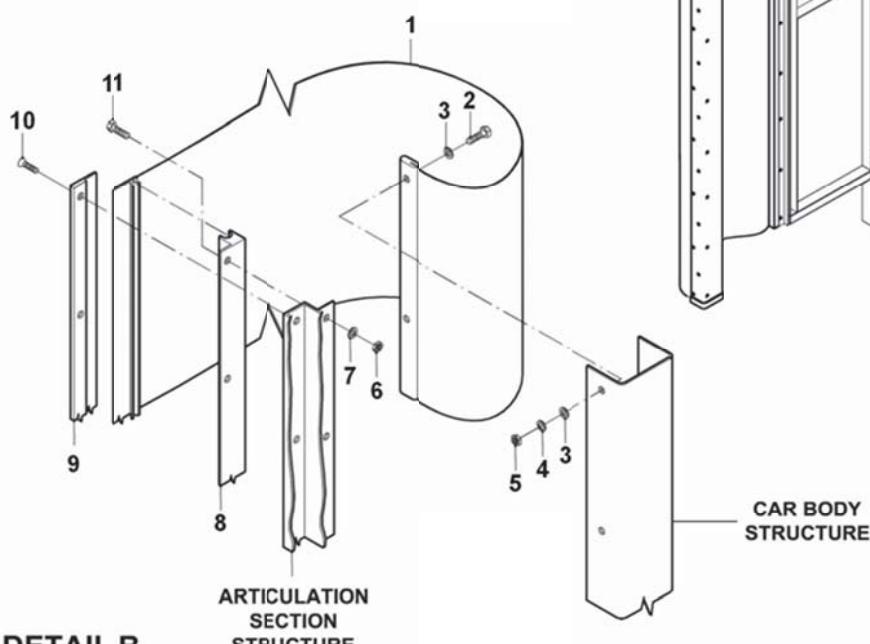
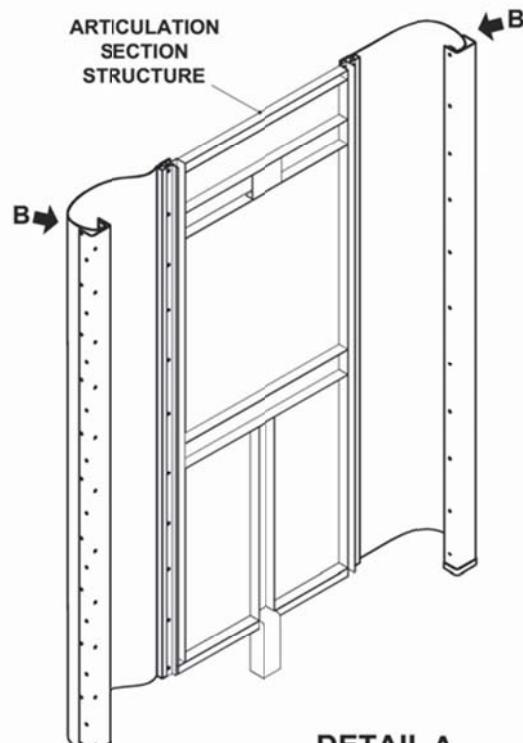
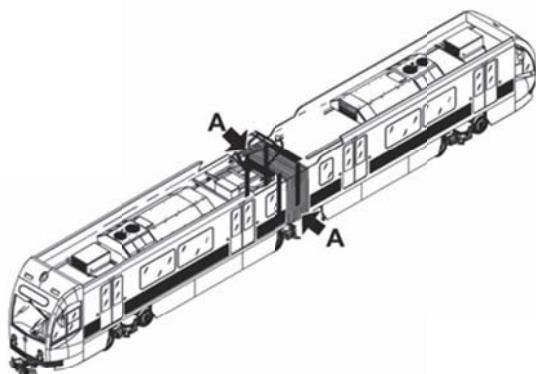
REPLACEMENT**PROCEDURE:**

Figure 6 INNER RUBBER REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-09-00/R-00

System:

CAR BODY

Sheet:

1/8

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

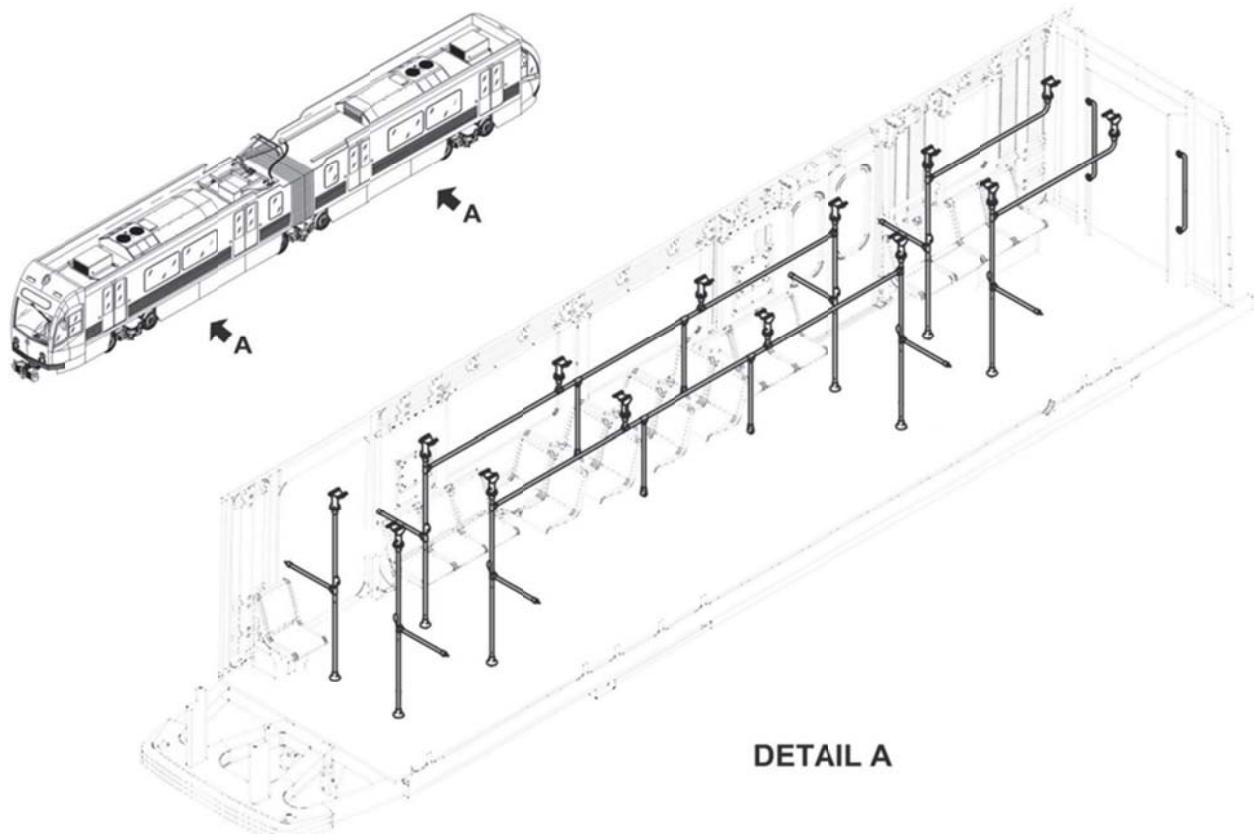
STANCHIONS & HANDRAILS ASSY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**LOCATION:**

P2550 CORRECTIVE MAINTENANCE SHEET		
Card Code: R-C-02-13-09-00/R-00		
System: CAR BODY	Sheet:	2/8
Subsystem/Assy: PASSENGERS INTERIORS	Unit: STANCHIONS & HANDRAILS ASSY	
Component:	Man Hours:	1
Maintenance Task: REPLACEMENT		
SAFETY PRECAUTIONS: LACMTA Maintenance Shop Safety Rules & Regulations		
TOOLS: LACMTA Maintenance Shop Standard Tools Kit.		
CONSUMABLES: Loctite 242		
SPARE PARTS: Stanchions & Handrails Assy Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers		

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code:	
R-C-02-13-09-00/R-00	
System: CAR BODY	Sheet: 3/8
Subsystem/Assy: PASSENGERS INTERIORS	Unit: STANCHIONS & HANDRAILS ASSY
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
PROCEDURE:	
<p>PRELIMINARY OPERATIONS</p> <ol style="list-style-type: none"> 1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations. 2. Place the Vehicle over the Pit. 3. Set the Master Controller Handle to FSB position. 4. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). <p>NOTE: It assumed that the "Passenger Door Open" Push Button Switches installed on the Stanchions are removed. Refer to the Sheet R-C-04-07-00-00/R-00 for the Removal / Installation and Electrical Disconnection / Connection Procedures</p>	
<p>REPLACEMENT</p> <p>To perform Stanchion & Handrails Assembly Replacement proceed as follows (Refer to Figures 1 - 4):</p> <p>Removal</p> <ol style="list-style-type: none"> 1. Remove Screws, Lock Washers, Flat Washers and Self-locking Nut, then remove Handrail Bar (7) (Refer to Figure 2, Detail A). 2. Remove the Special Screw and slide the Cover Plate (8), leave in position the Mounting Base (9) and Rivets (Refer to Figure 2, Detail B). 3. Remove Screws, Lock Washers and Flat Washers from Upper Stanchion Attachment. 4. Remove Screws, Sleeves, Fitting (10) and Stanchion (6) from Stanchion (1) (Refer to Figure 2, Detail C). 5. Remove Screws, Sleeves and Fitting (10) from Stanchion (3) (Refer to Figure 3, Detail D). 6. Remove Screws, Sleeves, Fitting (11) and Stanchion (5) from Seat (Refer to Figure 3, Detail E). 7. Remove Screws, Sleeves, Fitting (10) and Stanchion (3) from Stanchion (1) (Refer to Figure 2, Detail C) and from Stanchion (4) (Refer to Figure 3, Detail F). 8. Remove the Special Screw and slide the Cover Plate (8), leave in position the Mounting Base (9) and Rivets (Refer to Figure 3, Detail F). 9. Remove Screws, Lock Washers and Flat Washers from Upper Stanchion Attachment. 10. Remove Screws, Sleeves, Fitting (10) and Stanchion (2) from Stanchion (1) (Refer to Figure 4, Detail H). 11. Remove Screws, Lock Washers, Flat Washers and Cup Fitting (12) from Door Pocket Structure (Refer to Figure 4, Detail G). 12. Remove the Special Screw and slide the Cover Plate (8), leave in position the Mounting Base (9) and Rivets (Refer to Figure 2, Detail B and Figure 4, Detail I). 13. Remove Screws, Lock Washers and Flat Washers from Upper Stanchion Attachment. 14. Remove Screws, Lock Washers and Flat Washers from Floor, the remove Stanchion (1). 	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-09-00/R-00

System:

CAR BODY

Sheet:

4/8

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

STANCHIONS & HANDRAILS ASSY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:**

Installation

NOTE: Apply Loctite 242 to all Threaded Fasteners before fastening.

1. Install Stanchion (1) and fasten it to Floor and to Upper Stanchion Attachment with Screws, Lock Washers and Flat Washers (Refer to Figure 2, Detail B and Figure 4, Detail I).

NOTE: Mounting Base (9) and Rivets are already installed on Stanchion.

2. Install the Cover Plate (8) and the Special Screw.
3. Install Cup Fitting (12) and fasten it with Screws, Lock Washers and Flat Washers to Door Pocket Structure (Refer to Figure 4, Detail G).
4. Position Stanchion (2), then fasten it to Stanchion (1) with Fitting (10), Screws and Sleeves (Refer to Figure 4, Detail H).
5. Install Stanchion (4) and fasten it to Upper Stanchion Attachment with Screws, Lock Washers and Flat Washers (Refer to Figure 3, Detail F).

NOTE: Mounting Base (9) and Rivets are already installed on Stanchion.

6. Install the Cover Plate (8) and the Special Screw.
7. Position Stanchion (3) and fasten it to Stanchion (1) (Refer to Figure 2, Detail C) and to Stanchion (4) (Refer to Figure 3, Detail F) with Fitting (10), Screws and Sleeves.
8. Position Stanchion (5) and fasten it to Stanchion (3) with Fitting (10), Screws and Sleeves (Refer to Figure 3, Detail D) and to Seat with Fitting (11), Screws and Sleeves (Refer to Figure 3, Detail E).
9. Position Stanchion (6) and fasten it to Stanchion (1) with Fitting (10), Screws and Sleeves (Refer to Figure 2, Detail C).
10. Fasten Stanchion (6) to Upper Stanchion Attachment with Screws, Lock Washers and Flat Washers (Refer to Figure 2, Detail B). Mounting Base (9) and Rivets are already installed on Stanchion.
11. Install the Cover Plate (8) and the Special Screw.
12. Record Task results on the Defect Report Card for administrative and maintenance planning.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-09-00/R-00

System:

Sheet:

CAR BODY
5/8

Subsystem/Assy:

Unit:

PASSENGERS INTERIORS
STANCHIONS & HANDRAILS ASSY

Component:

Man Hours:

1

Maintenance Task:

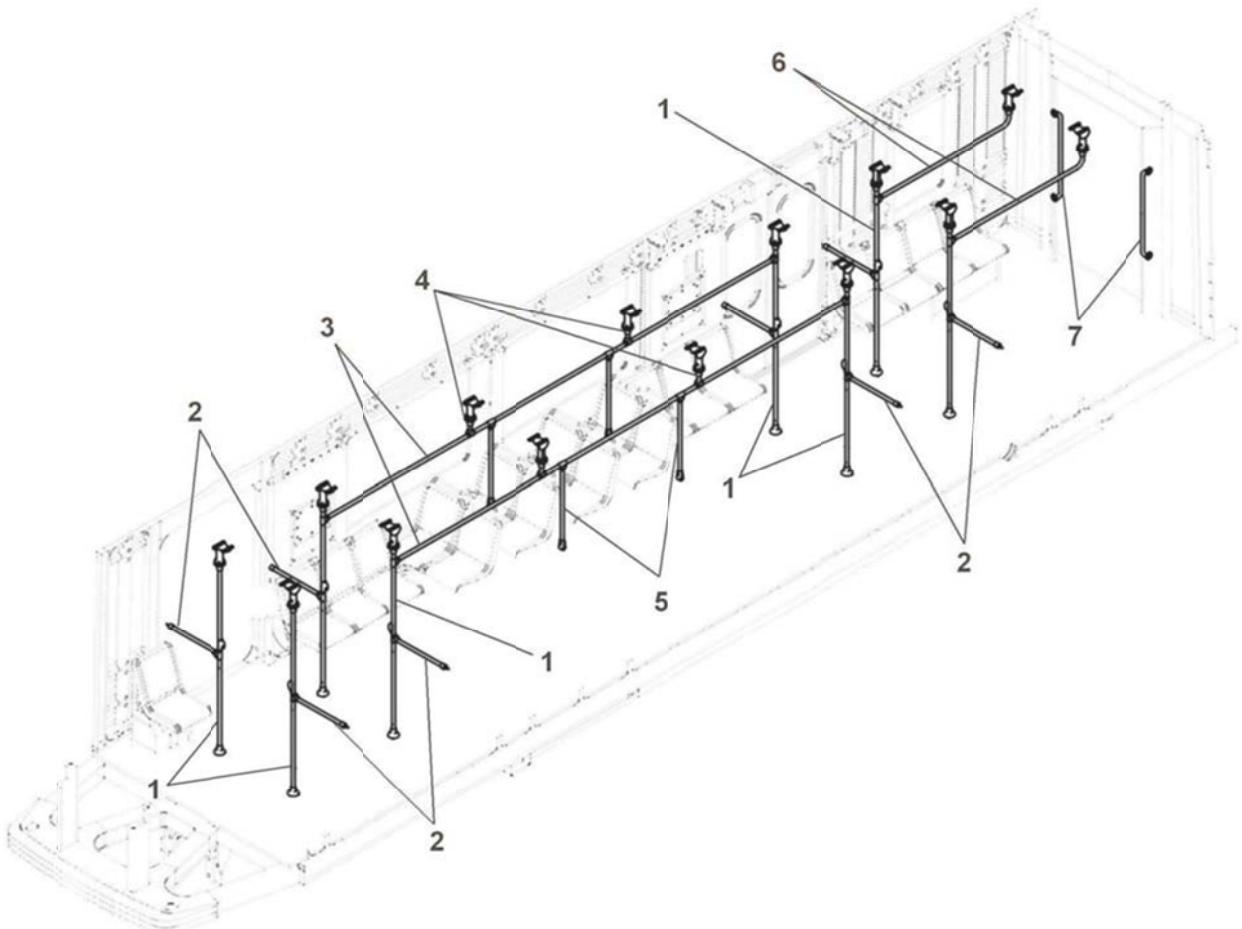
REPLACEMENT
PROCEDURE:


Figure 1 STANCHION & HANDRAILS ASSEMBLY COMPONENTS

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-09-00/R-00

System:

CAR BODY

Sheet:

6/8

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

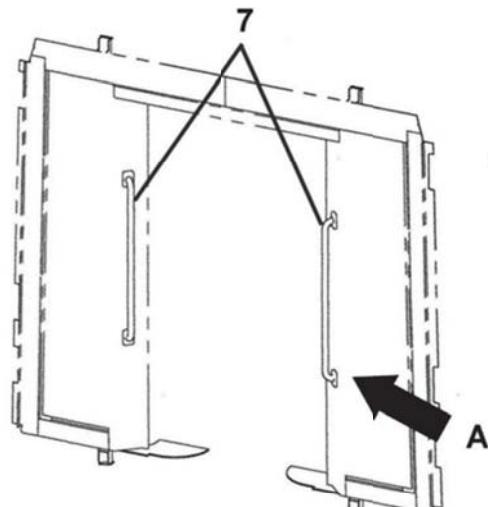
STANCHIONS & HANDRAILS ASSY

Component:

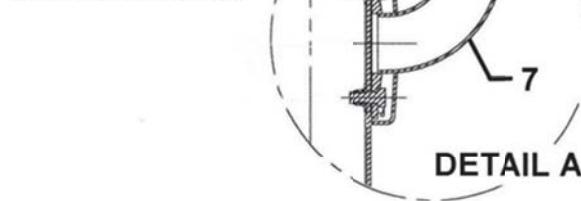
Man Hours:

1

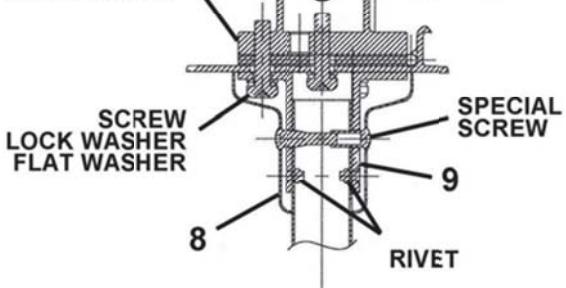
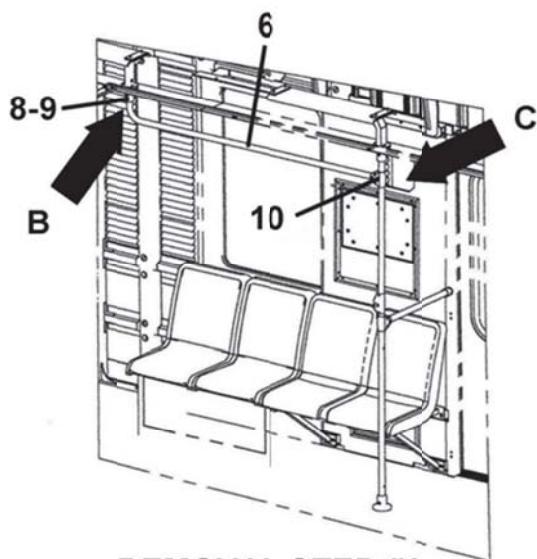
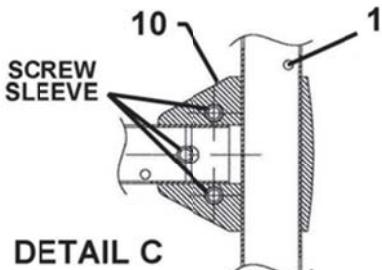
Maintenance Task:

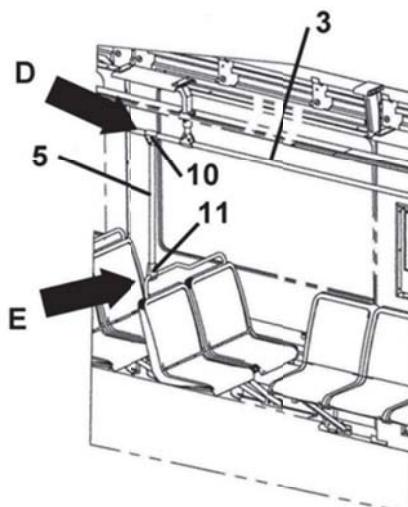
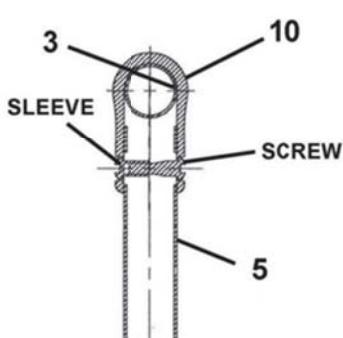
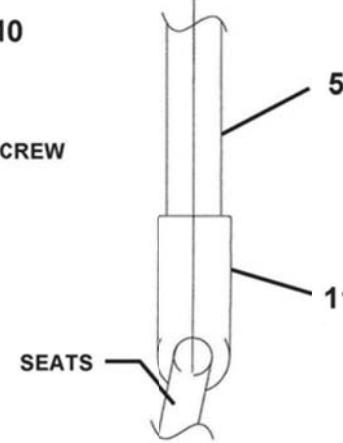
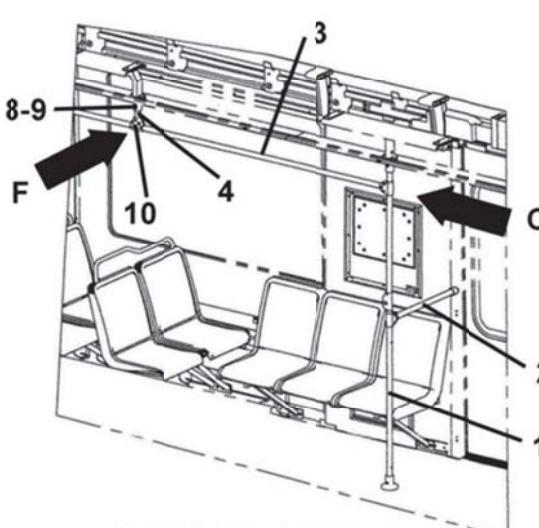
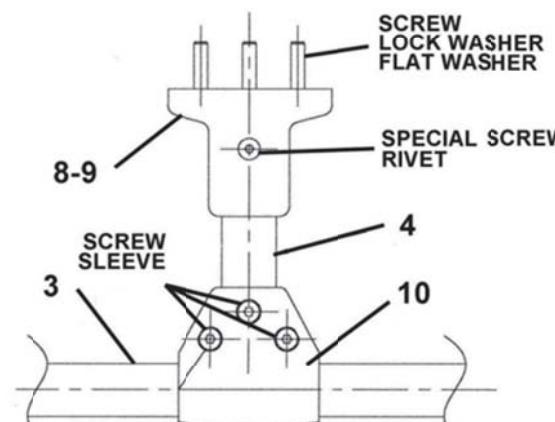
REPLACEMENT**PROCEDURE:****REMOVAL STEP #1**

SCREW
LOCK WASHER
FLAT WASHER
SELF LOCKING NUT

**DETAIL A**

UPPER STANCHION ATTACHMENT

**DETAIL B****REMOVAL STEP #2****DETAIL C****Figure 2 STANCHION & HANDRAILS ASSEMBLY REMOVAL/INSTALLATION**

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-13-09-00/R-00	
System: CAR BODY	Sheet: 7/8
Subsystem/Assy: PASSENGERS INTERIORS	Unit: STANCHIONS & HANDRAILS ASSY
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
PROCEDURE:	
 <p>REMOVAL STEP #3</p>	
 <p>DETAIL D</p>	
 <p>DETAIL E</p>	
 <p>REMOVAL STEP #4</p>	
 <p>DETAIL F</p>	
Figure 3 STANCHION & HANDRAILS ASSEMBLY REMOVAL/INSTALLATION	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-09-00/R-00

System:

CAR BODY

Sheet:

8/8

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

STANCHIONS & HANDRAILS ASSY

Component:

Man Hours:

1

Maintenance Task:

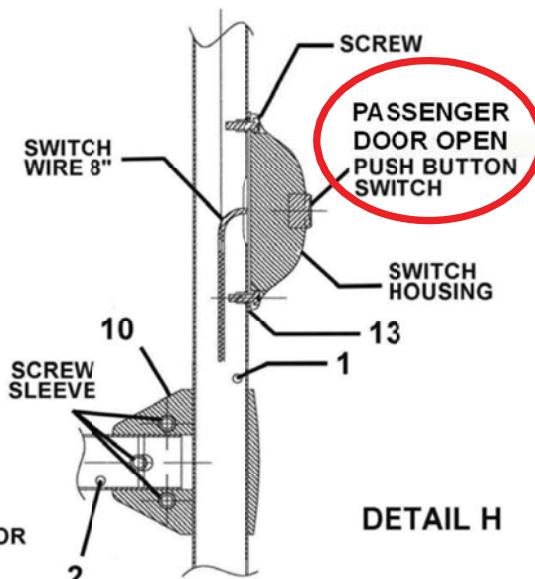
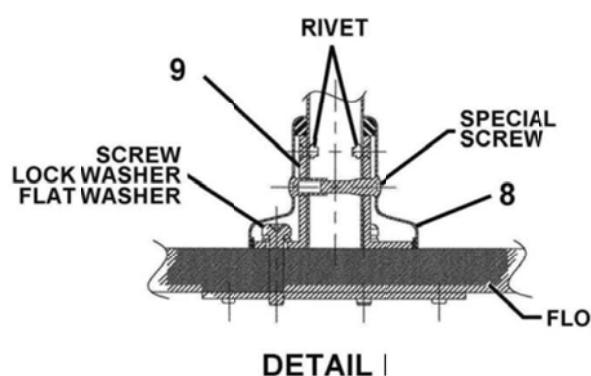
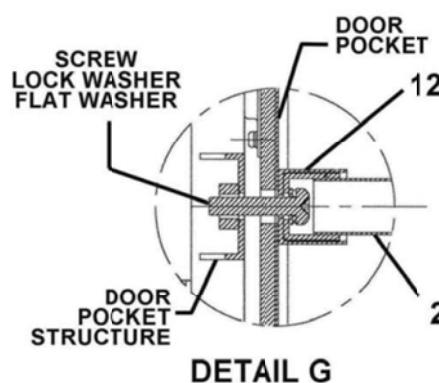
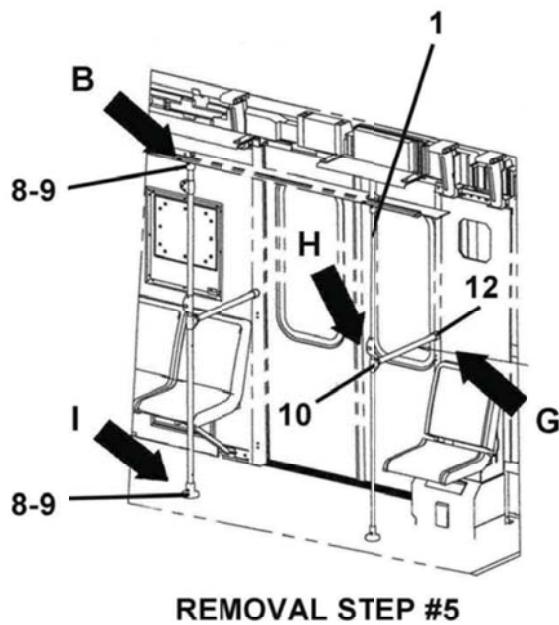
REPLACEMENT**PROCEDURE:**

Figure 4 STANCHION & HANDRAILS ASSEMBLY REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-10-00/R-00

System:

CAR BODY

Sheet:

1/4

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

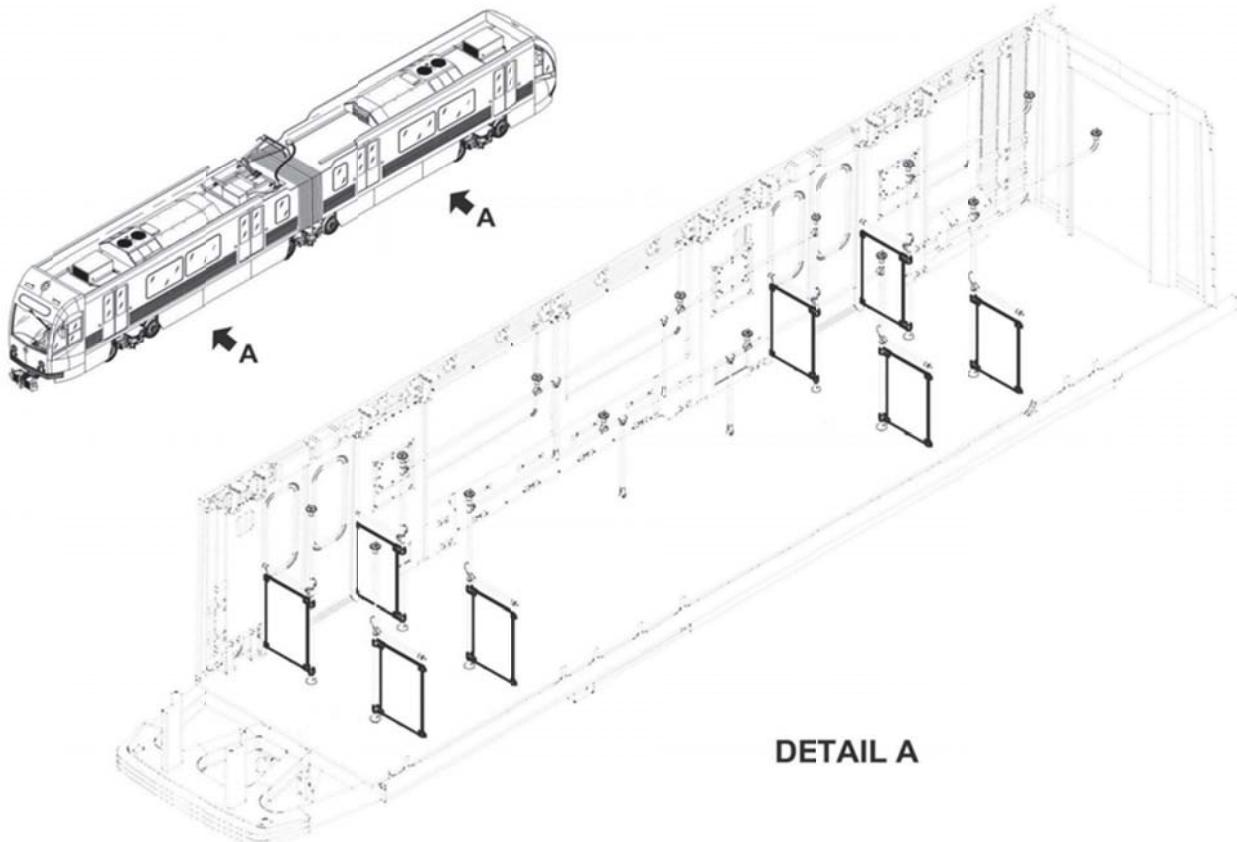
WINDSCREEN PANELS ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**LOCATION:**

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-13-10-00/R-00	
System: CAR BODY	Sheet: 2/4
Subsystem/Assy: PASSENGERS INTERIORS	Unit: WINDSCREEN PANELS ASSEMBLY
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
SAFETY PRECAUTIONS: LACMTA Maintenance Shop Safety Rules & Regulations	
TOOLS: LACMTA Maintenance Shop Standard Tools Kit.	
CONSUMABLES: Loctite 242	
SPARE PARTS: Windscreen Panels Assembly Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers	

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code:	
R-C-02-13-10-00/R-00	
System: CAR BODY	Sheet: 3/4
Subsystem/Assy: PASSENGERS INTERIORS	Unit: WINDSCREEN PANELS ASSEMBLY
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
PROCEDURE:	
<p>PRELIMINARY OPERATIONS</p> <ol style="list-style-type: none"> 1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations. 2. Place the Vehicle over the Pit. 3. Set the Master Controller Handle to FSB position. 4. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). 	
<p>REPLACEMENT To perform Windscreen Panels Assembly Replacement proceed as follows (Refer to Figure 1):</p> <p>Removal</p> <ol style="list-style-type: none"> 1. Remove Screws and Sleeves at Stanchion Mounted Brackets (3) and at Door Pocket Mounted Brackets (2). 2. Remove Windscreen Panel Assembly (1) from Brackets. <p>Installation</p> <p>NOTE: Apply Loctite 242 to all Threaded Fasteners prior to fastening.</p> <ol style="list-style-type: none"> 1. Slide Windscreen Panel Assembly (1) into Door Pocket Mounted Brackets (2). 2. Install Stanchion Mounted Brackets (3). 3. Fasten Windscreen Panel Assembly to Stanchion Mounted Brackets and to Door Pocket Mounted Brackets with Screws and Sleeves. 4. Record Task results on the Defect Report Card for administrative and maintenance planning. 	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-10-00/R-00

System:

CAR BODY

Sheet:

4/4

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

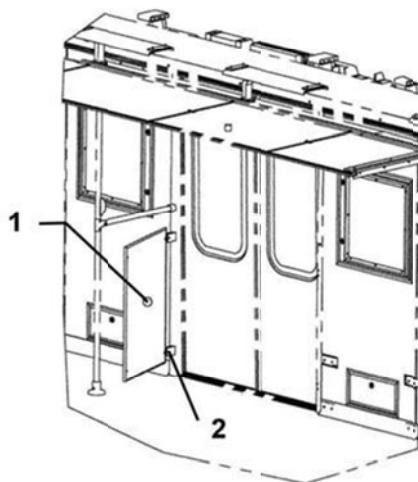
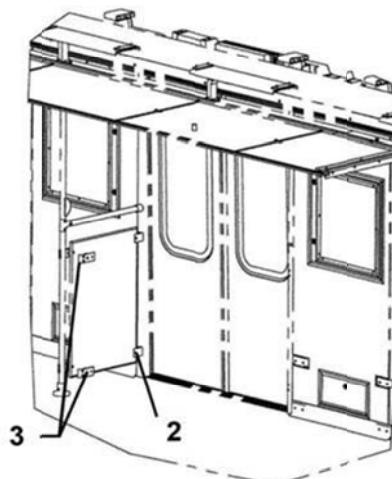
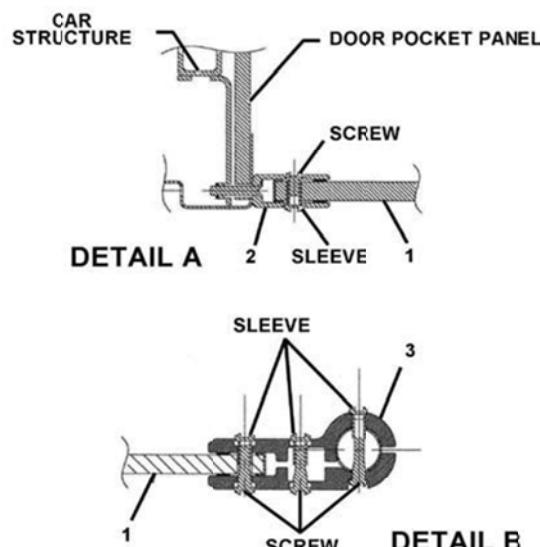
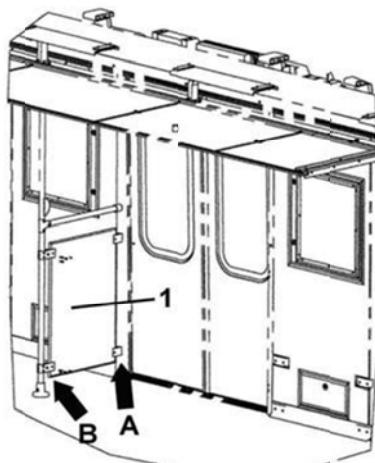
WINDSCREEN PANELS ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:****Figure 1****WINDSCREEN PANELS ASSEMBLY REMOVAL/INSTALLATION**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-11-00/R-00

System:

CAR BODY

Sheet:

1/8

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

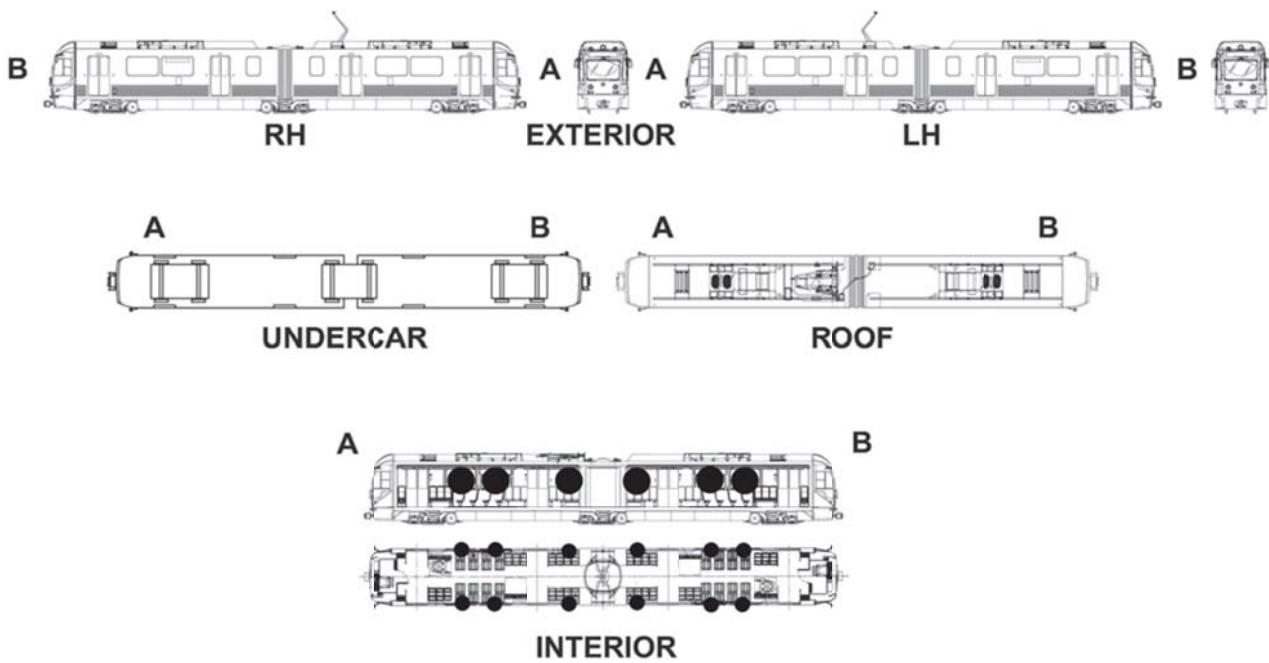
DOOR POCKET ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**LOCATION:**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-11-00/R-00

System:

CAR BODY

Sheet:

2/8

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

DOOR POCKET ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**SAFETY PRECAUTIONS:**

LACMTA Maintenance Shop Safety Rules & Regulations

TOOLS:

LACMTA Maintenance Shop Standard Tools Kit.

CONSUMABLES:

Loctite 242

SPARE PARTS:

Door Pocket Assembly

Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-11-00/R-00

System:

CAR BODY

Sheet:

3/8

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

DOOR POCKET ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:****PRELIMINARY OPERATIONS**

1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations.
2. Place the Vehicle over the Pit.
3. Set the Master Controller Handle to FSB position.
4. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON).

NOTE: It assumed that the following Equipment is removed.

The Removal / Installation Procedures are provided for each Equipment listed below, in the relevant Sheets

EQUIPMENT	REFER TO SHEET
Cove Moldings	R-C-02-13-01-00/R-00
Window Masks	R-C-02-13-12-00/R-00
Wainscot Panels	R-C-02-13-07-00/R-00
Stanchion & Handrails	R-C-02-13-09-00/R-00
Seats Assembly through	R-C-02-09-01-00/R-00
	R-C-02-09-06-00/R-00

REPLACEMENT

To perform the Door Pocket Assembly Replacement proceed as follows (Refer to Figures 1 to 4):

Removal

1. Remove Brush Seals (Refer to Sheet R-C-04-05-04-00 -00/R-00) and Emergency Door Operator (Refer to Sheet R-C-04-04-00-00-00/R-00).
2. Remove Dog Box Door Pockets (5, 6, 7, 8, 13, 14) and Extensions (15, 16) as follows:
 - Remove Screws, Lock Washers and Flat Washers fastening Dog Box Door Pockets (13, 14) and Extensions (15, 16) to Seating Box (Refer to Figure 2, Detail A).
 - Remove Screws from Nuts into Secondary Structure (Refer to Figure 2, Detail B) Leave Nuts in position.
 - Slide out Dog Box Door Pockets (5, 6, 7, 8, 13, 14) and remove them (Refer to Figure 2, Detail C).
 - Separate Dog Box Door Pockets (13, 14) from related Extension (15, 16) using a rubber mallet.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-11-00/R-00

System:

CAR BODY

Sheet:

4/8

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

DOOR POCKET ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:**

3. Remove Short Door Pockets (1, 2) and Door Pockets (3, 4, 9, 10, 11, 12) as follows:
 - Open Access Doors on Door Pockets (3, 4, 9, 10, 11, 12) and remove Screws
 - Flat Washers and Lock Washers from Secondary Structure (Refer to Figure 3, Details D, E)
 - On top remove Screws, Flat Washers and Lock Washers from Secondary Structure
 - (Refer to Figure 3, Detail F)
 - Slide out Short Door Pockets (1, 2) and Door Pockets (3, 4, 9, 10, 11, 12) and remove them (Refer to Figure 3, Detail G)

Installation

NOTE: Apply Loctite 242 to all Threaded Fasteners before fastening.

1. Install Short Door Pockets (1, 2) and Door Pockets (3, 4, 9, 10, 11, 12) as follows:
 - Slide Short Door Pockets (1, 2) and Door Pockets (3, 4, 9, 10, 11, 12) into place to catch jam attachments (Refer to Figure 3, Detail G)
 - On top install Screws, Flat Washers and Lock Washers to Secondary Structure (Refer to Figure 3, Detail F). Leave Screws loose
 - Align Door Pockets
 - Open Access Doors on Door Pockets (3, 4, 9, 10, 11, 12) and install Screws
 - Flat Washers and Lock Washers to Secondary Structure (Refer to Figure 3, Details D, E). Torque all Screws
2. Install Dog Box Door Pockets (5, 6, 7, 8, 13, 14) and Extensions (15, 16) as follows:
 - Engage Dual Lock of Dog Box Door Pockets (13, 14) and related Extension (15, 16) using a rubber mallet
 - Slide Dog Box Door Pockets (5, 6, 7, 8, 13, 14) into place to catch jam attachments (Refer to Figure 2, Detail C). Align Door Pockets

NOTE: Nuts are already installed on Secondary Structure

- Fasten Dog Box Door Pockets (5, 6, 7, 8, 13, 14) and Extensions (15, 16) with Screws (Refer to Figure 2, Detail B)
 - Install Screws, Lock Washers and Flat Washers fastening Dog Box Door Pockets (13, 14) and Extensions (15, 16) to Seating Box (Refer to Figure 2, Detail A)
3. Install Brush Seals (Refer to Sheet R-C-04-05-04-00 -00/R-00) and Emergency Door Operator (Refer to Sheet R-C-04-04-00-00-00/R-00).
 4. Record Task results on the Defect Report Card for administrative and maintenance planning.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-11-00/R-00

System:

CAR BODY

Sheet:

5/8

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

DOOR POCKET ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

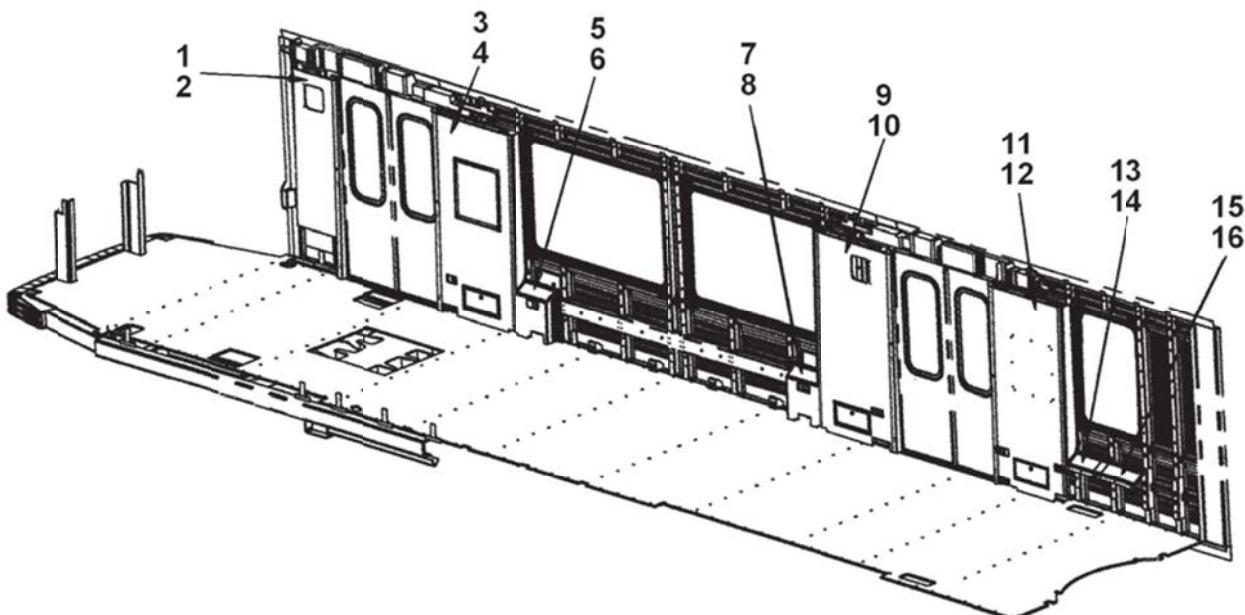
REPLACEMENT
PROCEDURE:


Figure 1 DOOR POCKET ASSEMBLY COMPONENTS

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-11-00/R-00

System:

CAR BODY

Sheet:

6/8

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

DOOR POCKET ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

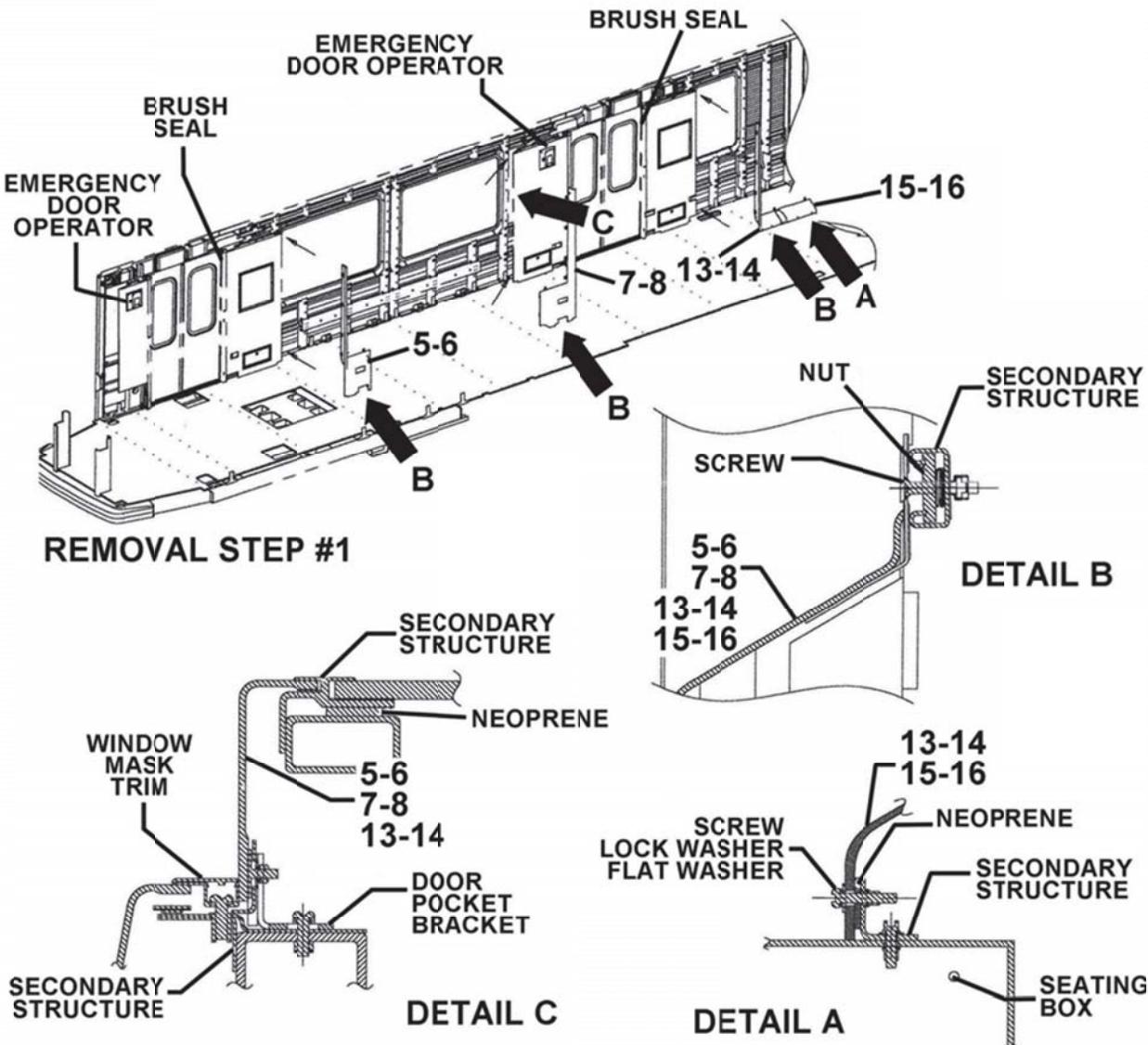
REPLACEMENT**PROCEDURE:**

Figure 2 DOOR POCKET ASSEMBLY REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-11-00/R-00

System:

Sheet:

CAR BODY**7/8**

Subsystem/Assy:

Unit:

PASSENGERS INTERIORS**DOOR POCKET ASSEMBLY**

Component:

Man Hours:

1

Maintenance Task:

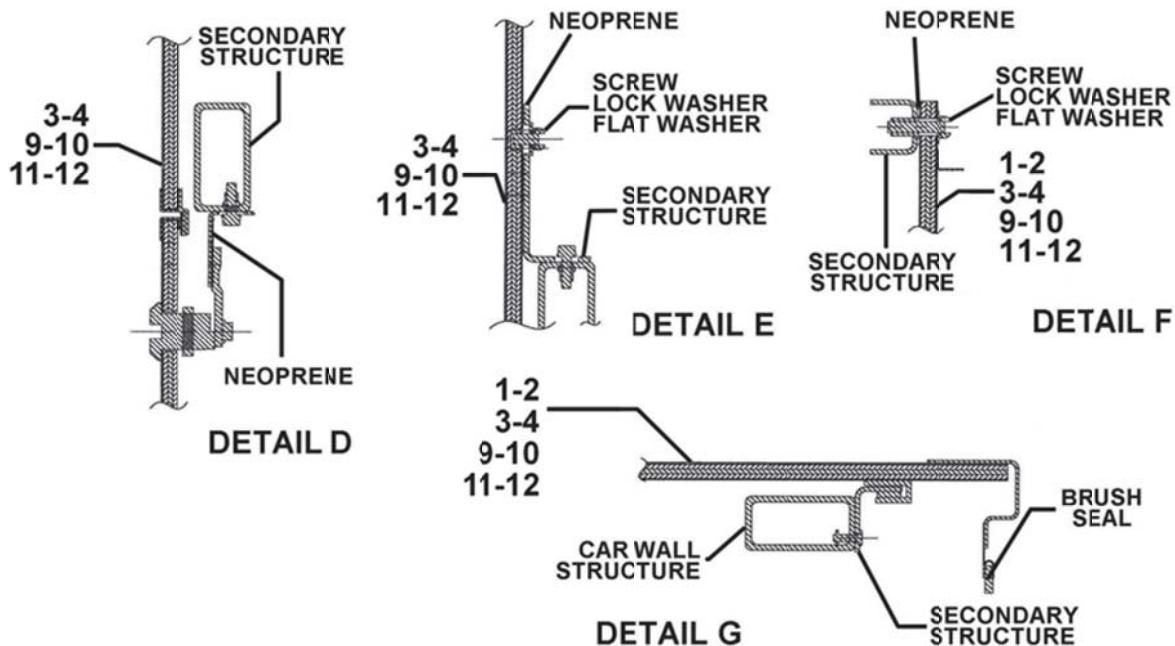
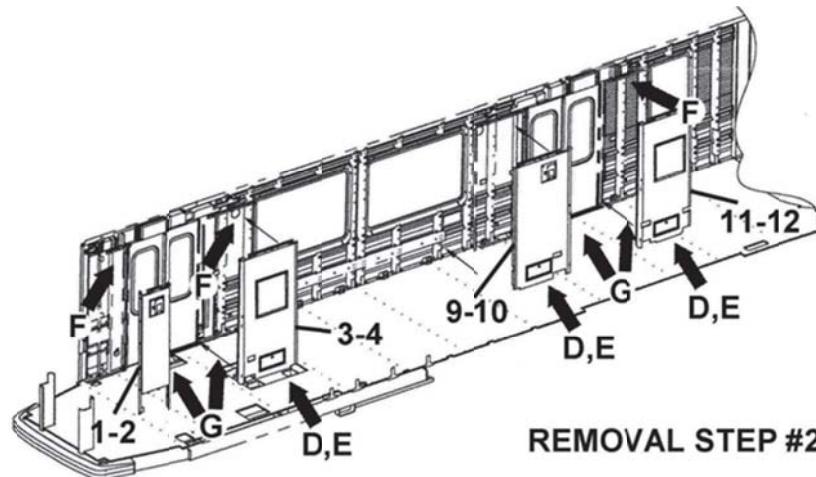
REPLACEMENT**PROCEDURE:**

Figure 3 DOOR POCKET ASSEMBLY REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-11-00/R-00

System:

CAR BODY

Sheet:

8/8

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

DOOR POCKET ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**INTENTIONALLY LEFT
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P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-12-00/R-00

System:

CAR BODY

Sheet:

1/10

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

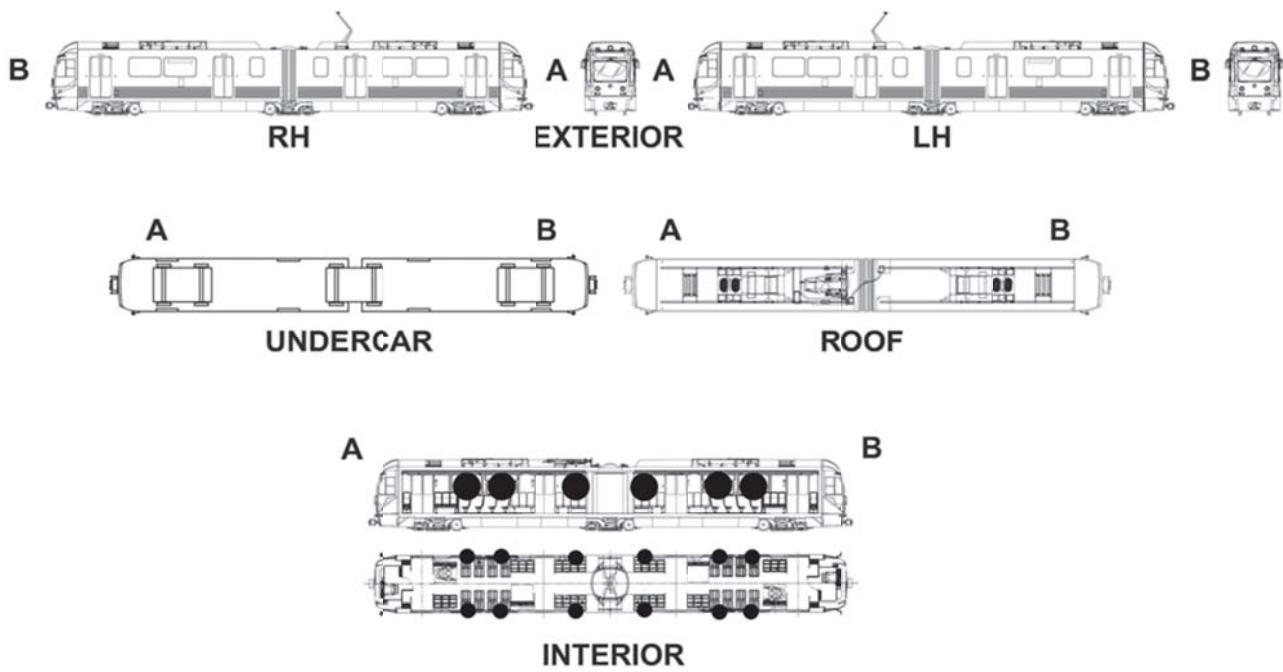
WINDOW MASK ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT
LOCATION:


P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code: R-C-02-13-12-00/R-00	
System: CAR BODY	Sheet: 2/10
Subsystem/Assy: PASSENGERS INTERIORS	Unit: WINDOW MASK ASSEMBLY
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
SAFETY PRECAUTIONS: LACMTA Maintenance Shop Safety Rules & Regulations	
CAUTION : SWITCH OFF THE 3F01 CB (BATTERY BOX) BEFORE STARTING TO PERFORM THE REPLACEMENT	
TOOLS: LACMTA Maintenance Shop Standard Tools Kit.	
CONSUMABLES: Loctite 242	
SPARE PARTS: Window Mask Assembly Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers	

P2550 CORRECTIVE MAINTENANCE SHEET													
Card Code:													
R-C-02-13-12-00/R-00													
System: CAR BODY	Sheet: 3/10												
Subsystem/Assy: PASSENGERS INTERIORS	Unit: WINDOW MASK ASSEMBLY												
Component:	Man Hours: 1												
Maintenance Task: REPLACEMENT													
PROCEDURE:													
PRELIMINARY OPERATIONS <ol style="list-style-type: none"> 1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations. 2. Place the Vehicle over the Pit. 3. Set the Master Controller Handle to FSB position. 4. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). <p>NOTE: It assumed that the following Equipment is removed. The Removal / Installation and Electrical Disconnection /Connection Procedures are provided for each Equipment listed below, in the relevant Sheets.</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">EQUIPMENT</th> <th style="width: 50%;">REFER TO SHEET</th> </tr> </thead> <tbody> <tr> <td>Stanchion & Handrails</td> <td>R-C-02-13-09-00/R-00</td> </tr> <tr> <td>2 Seaters Transversal Assembly</td> <td>R-C-02-09-01-00/R-00</td> </tr> <tr> <td>3 Seaters Flip-up Longitudinal Assembly</td> <td>R-C-02-09-03-00/R-00</td> </tr> <tr> <td>3 Seaters Longitudinal Assembly</td> <td>R-C-02-09-05-00/R-00</td> </tr> <tr> <td>Side Destination Sign</td> <td>R-C-14-02-02-01/R-00</td> </tr> </tbody> </table>		EQUIPMENT	REFER TO SHEET	Stanchion & Handrails	R-C-02-13-09-00/R-00	2 Seaters Transversal Assembly	R-C-02-09-01-00/R-00	3 Seaters Flip-up Longitudinal Assembly	R-C-02-09-03-00/R-00	3 Seaters Longitudinal Assembly	R-C-02-09-05-00/R-00	Side Destination Sign	R-C-14-02-02-01/R-00
EQUIPMENT	REFER TO SHEET												
Stanchion & Handrails	R-C-02-13-09-00/R-00												
2 Seaters Transversal Assembly	R-C-02-09-01-00/R-00												
3 Seaters Flip-up Longitudinal Assembly	R-C-02-09-03-00/R-00												
3 Seaters Longitudinal Assembly	R-C-02-09-05-00/R-00												
Side Destination Sign	R-C-14-02-02-01/R-00												
REPLACEMENT <p>To perform the Window Mask Assembly Replacement proceed as follows (Refer to Figures 1 to 5):</p> <p>Removal</p> <ol style="list-style-type: none"> 1. Remove Side Destination Sign Cover (7) as follows: <ul style="list-style-type: none"> • Open the Side Destination Sign Cover (7) and rotate it. • Remove Screws from U-Bracket, then remove Side Destination Sign Cover (7) (Refer to Figure 2, Detail B). • Remove Screws and U-Bracket from Secondary Structure (Refer to Figure 2, Detail C). 													

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-12-00/R-00

System:

CAR BODY

Sheet:

4/10

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

WINDOW MASK ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:****Removal (cont'd)**

2. Remove Large Window Masks (1, 2, 3, 4) and Small Window Masks (5, 6) as follows:

- On top remove Screws, Flat Washers and Nuts fastening Vertical Bulb Tee Trims to Window Mask Secondary Structure (Refer to Figure 3, Detail D)
- Slide out Vertical Bulb Tee Trims from related Omega Trims and remove them (Refer to Figure 3, Detail E, F and G)
- Remove Screws, Lock Washers and Vertical Omega Trims from Window Mask Secondary Structure (Refer to Figure 3, Detail E, F and G)
- Slide out Horizontal Bulb Tee Trims from related Omega Trims and remove them (Refer to Figure 5, Detail H and I)
- Remove Screws from Nuts into Window Mask Secondary Structure, then remove Horizontal Omega Trims (Refer to Figure 5, Detail H and I). Leave Nuts in position
- Remove Wainscot Panels (Refer to Maintenance Sheet R-C-02-13-07-00/R-00)
- On top, remove Screws, Flat Washers, Lock Washers and Nuts from Window Mask Secondary Structure (Refer to Figure 5, Detail J), then remove Large Window Masks (1, 2, 3, 4) and Small Window Masks (5, 6)

Installation

NOTE: Apply Loctite 242 to all Threaded Fasteners before fastening.

1. Install Large Window Masks (1, 2, 3, 4) and Small Window Masks (5, 6) as follows:

- Position Large Window Masks (1, 2, 3, 4) and Small Window Masks (5, 6) and fasten them on top with Screws, Flat Washers, Lock Washers and Nuts on Window Mask Secondary Structure (Refer to Figure 5, Detail J)
- Install Wainscot Panels (Refer to Sheet R-C-02-13-07-00/R-00)
- On bottom the Nuts are already installed on Window Mask Secondary Structure. Install Horizontal Omega Trims and fasten Large Window Masks (1, 2, 3, 4) and Small Window Masks (5, 6) with Screws (Refer to Figure 5, Detail H and I)
- Slide Horizontal Bulb Tee Trims on related Omega Trims (Refer to Figure 5, Detail H and I).
- Install Vertical Omega Trims and fasten them with Screws and Lock Washers on Window Mask Secondary Structure (Refer to Figure 3, Detail D, E and F)
- Slide Vertical Bulb Tee Trims on related Omega Trims (Refer to Figure 3, Detail D, E and F).
- On top fasten Vertical Bulb Tee Trims to Window Mask Secondary Structure with Screws, Flat Washers and Nuts (Refer to Figure 3, Detail D)

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-12-00/R-00

System:

CAR BODY

Sheet:

5/10

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

WINDOW MASK ASSEMBLY

Component:

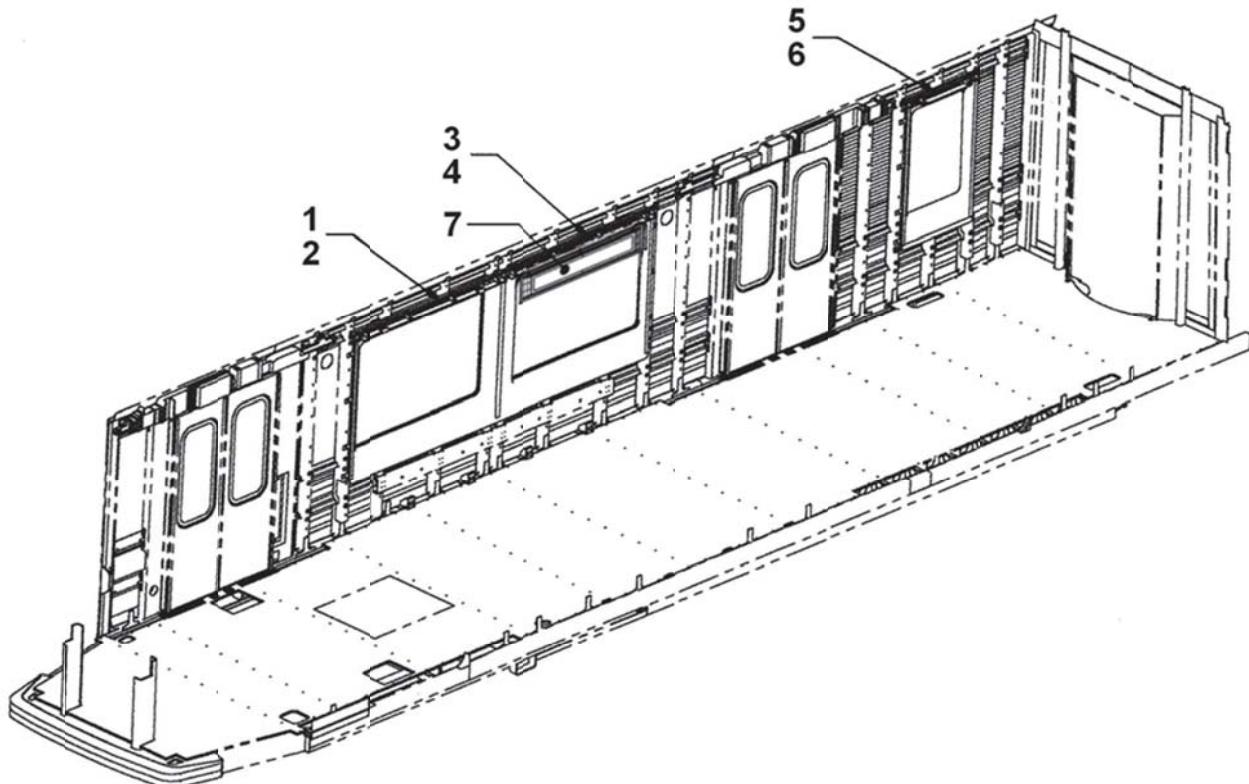
Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:**

2. Install Side Destination Sign Cover (7) as follows:
 - Install U-Bracket and Screws on Secondary Structure (Refer to Figure 2, Detail C).
 - Install Side Destination Sign Cover (7) and fasten it on U-Bracket with Screws (Refer to Figure 2, Detail B)
 - Rotate the Side Destination Sign Cover (7) into position and engage latches
3. Record Task results on the Defect Report Card for administrative and maintenance planning.

**Figure 1****WINDOW MASK ASSEMBLY COMPONENTS**

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-12-00/R-00

System:

CAR BODY

Sheet:

6/10

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

WINDOW MASK ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

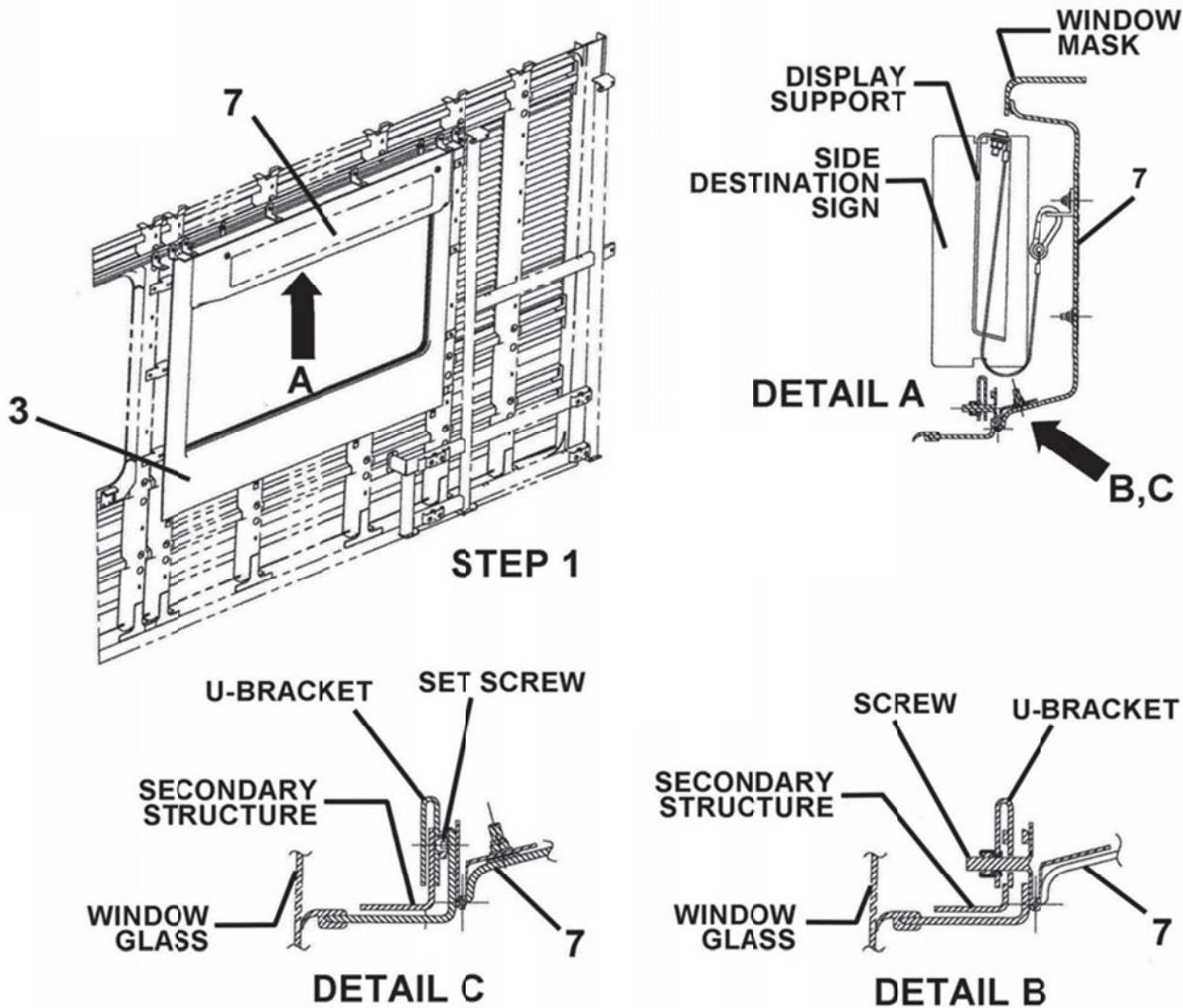
REPLACEMENT**PROCEDURE:**

Figure 2

WINDOW MASK ASSEMBLY REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-12-00/R-00

System:

CAR BODY

Sheet:

7/10

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

WINDOW MASK ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

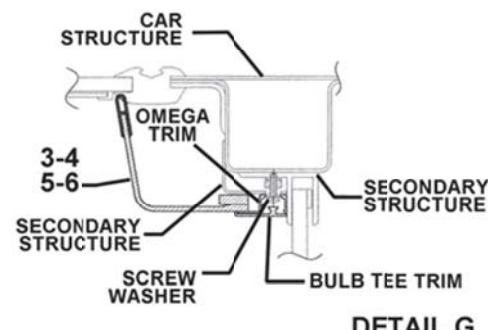
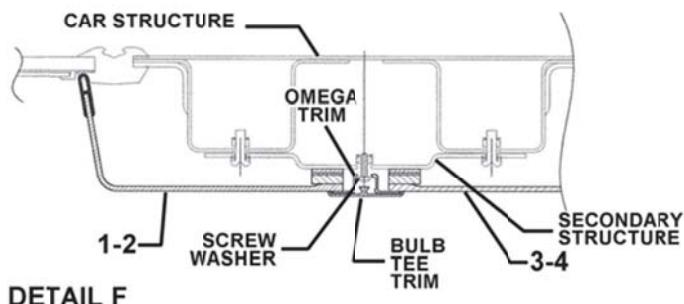
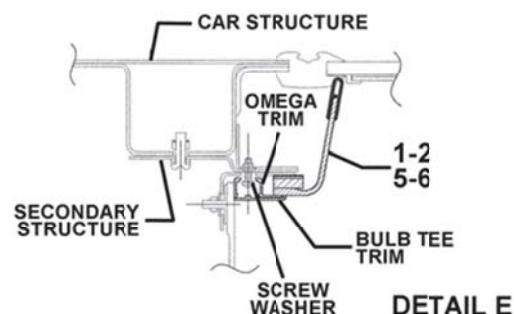
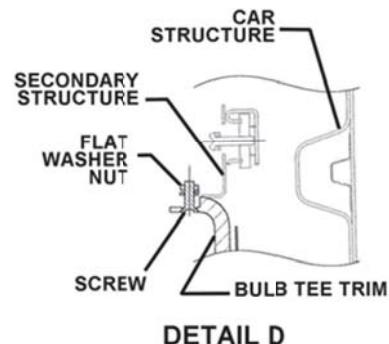
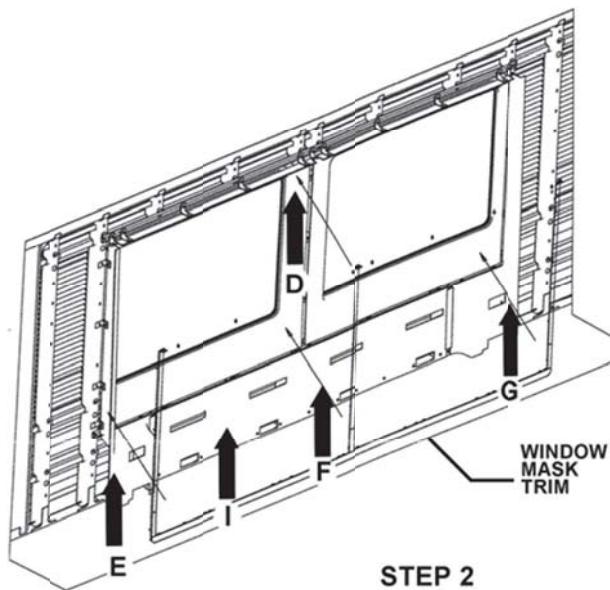
REPLACEMENT**PROCEDURE:**

Figure 3 WINDOW MASK ASSEMBLY REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-12-00/R-00

System:

CAR BODY

Sheet:

8/10

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

WINDOW MASK ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

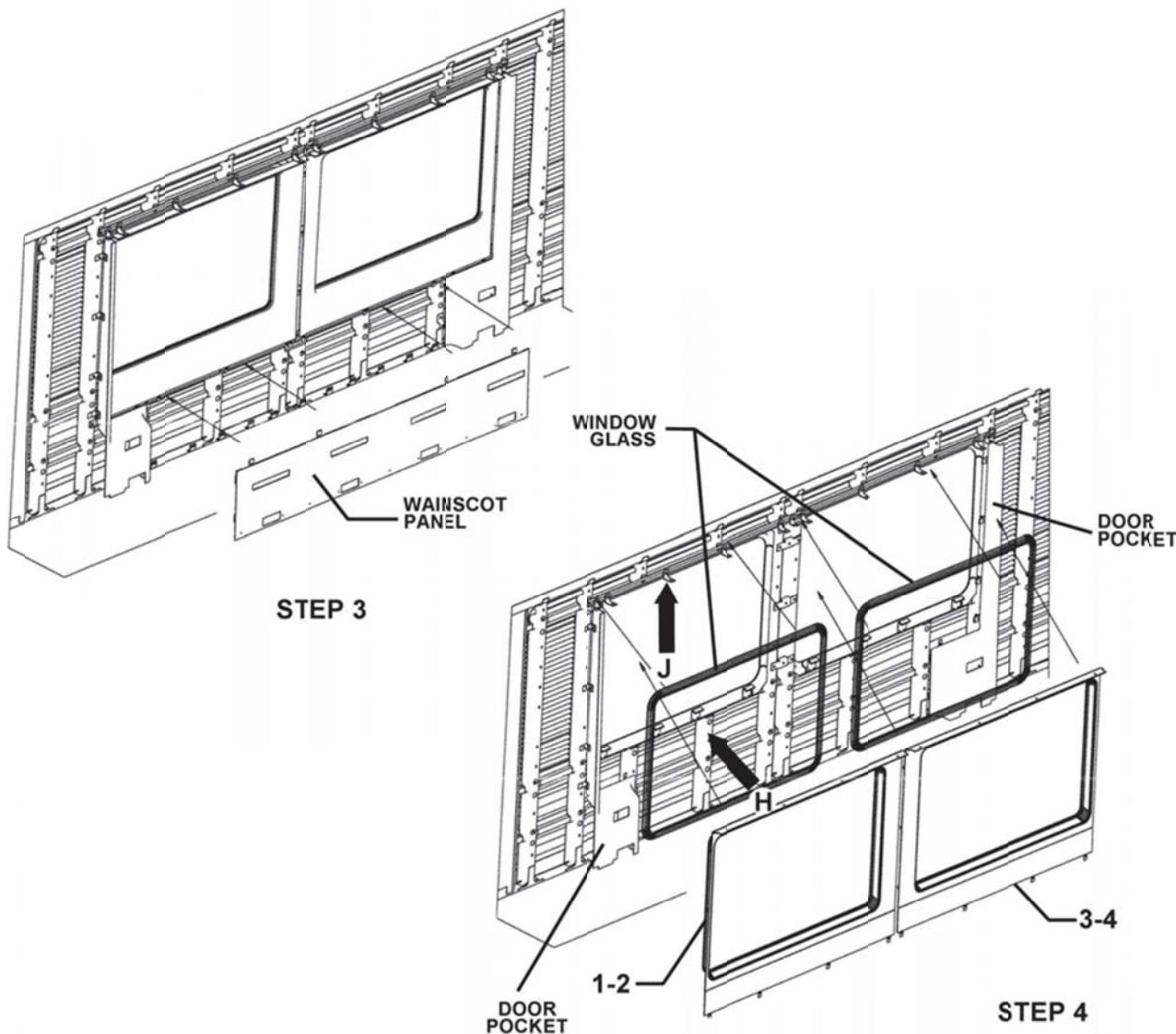
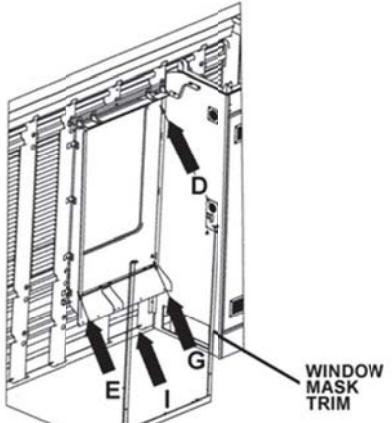
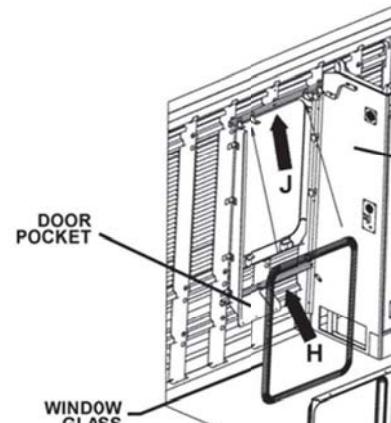
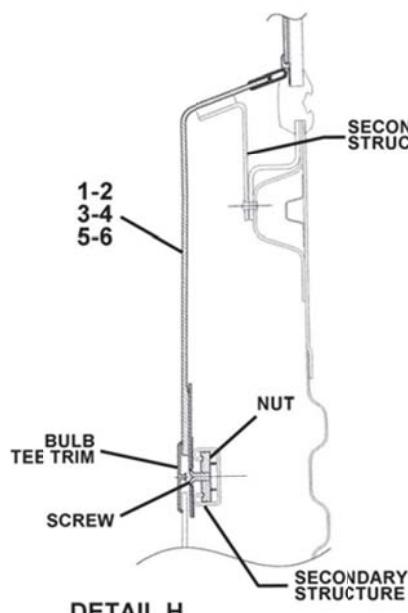
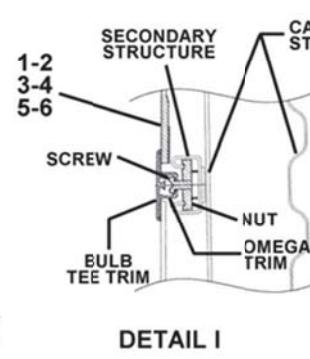
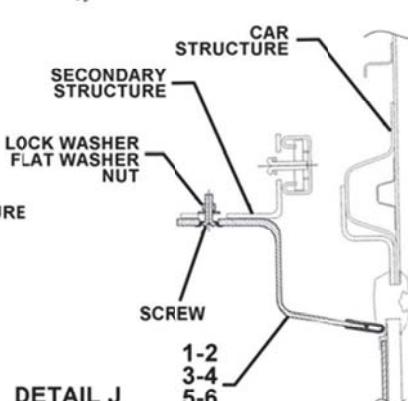
REPLACEMENT**PROCEDURE:**

Figure 4 **WINDOW MASK ASSEMBLY REMOVAL/INSTALLATION**

P2550 CORRECTIVE MAINTENANCE SHEET		
Card Code: R-C-02-13-12-00/R-00		
System: CAR BODY	Sheet: 9/10	
Subsystem/Assy: PASSENGERS INTERIORS	Unit: WINDOW MASK ASSEMBLY	
Component:	Man Hours: 1	
Maintenance Task: REPLACEMENT PROCEDURE:		
 STEP 5	 STEP 6	
 DETAIL H	 DETAIL I	 DETAIL J
Figure 5 WINDOW MASK ASSEMBLY REMOVAL/INSTALLATION		

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-12-00/R-00

System:

CAR BODY

Sheet:

10/10

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

WINDOW MASK ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**INTENTIONALLY LEFT
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P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-13-00/R-00

System:

CAR BODY

Sheet:

1/6

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

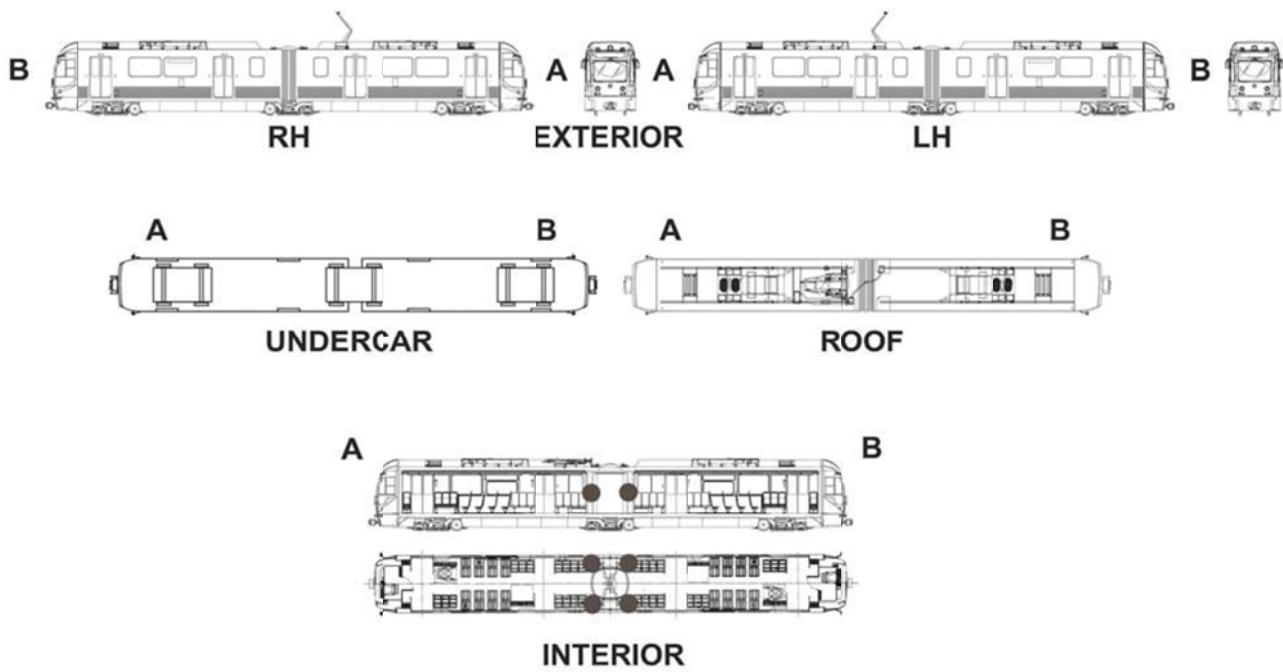
ELECTRICAL LOCKER ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT
LOCATION:

P2550 CORRECTIVE MAINTENANCE SHEET		
Card Code:		
R-C-02-13-13-00/R-00		
System:	Sheet:	
CAR BODY	2/6	
Subsystem/Assy:	Unit:	
PASSENGERS INTERIORS	ELECTRICAL LOCKER ASSEMBLY	
Component:	Man Hours:	
	1	
Maintenance Task:		
REPLACEMENT		
SAFETY PRECAUTIONS:		
LACMTA Maintenance Shop Safety Rules & Regulations		
CAUTION :SWITCH OFF THE 3F01 CB (BATTERY BOX) BEFORE STARTING TO PERFORM THE REPLACEMENT		
TOOLS:		
LACMTA Maintenance Shop Standard Tools Kit.		
CONSUMABLES:		
Loctite 242		
SPARE PARTS:		
Electrical Locker Assembly		
Refer to IPC Sect 02 for detailed Parts List and relevant Part Numbers		

P2550 CORRECTIVE MAINTENANCE SHEET	
Card Code:	
R-C-02-13-13-00/R-00	
System: CAR BODY	Sheet: 3/6
Subsystem/Assy: PASSENGERS INTERIORS	Unit: ELECTRICAL LOCKER ASSEMBLY
Component:	Man Hours: 1
Maintenance Task: REPLACEMENT	
PROCEDURE:	
<p>PRELIMINARY OPERATIONS</p> <ol style="list-style-type: none"> 1. Set the Vehicle in safety conditions in accordance with LACMTA Maintenance Shop Regulations. 2. Set the Master Controller Handle to FSB position. 3. Make sure that all Parking Brakes are applied (by checking on the IDU "Parking Brake A and B Not Released" and on Indicator Panel "A" "Park / Friction Brake" ON). 4. Remove Electrical Power from Vehicle by lowering the Pantograph. 5. Turn the Transfer Switch to OFF. 6. Set the Pantograph Control Motor Switch (5F02 CB LV Locker "A" Section) to OFF. 7. Lock-out and tag-out the Pantograph Control Motor Switch per LACMTA Safety Rules and Procedures. 	
<p>NOTE The tag must indicate the name of the person who removed Power. That person knows why the Power was removed and when it safe to restore it. Only the individual whose name appears on the tag or a person with his approval should remove the tag and restore Power.</p>	
<p>NOTE: It assumed that all the Equipment installed in the Locker are removed According to each Item Label, refer to the relevant Sheet provided in Sections 03 through 19 for the relevant Electrical Disconnection / Connection and Removal / Installation Procedures.</p>	
<p>REPLACEMENT</p> <p>To perform Electrical Locker Assembly Replacement proceed as follows (Refer to Figure 1):</p>	
<p>Removal</p> <ol style="list-style-type: none"> 1. Remove Nuts and Flat Washers, then remove Neoprene Washers and Upper Locker Panels (1, 2) from Locker Structure (Refer to Figure 1, Details A, B and C). 2. Open Locker Doors (3). 3. Remove ten Screws M5, Lock Washers, Flat Washers and two Screw # 10, then remove Locker Doors (3) from Front Locker Panel (Refer to Figure 1, Details D, E and F). 4. Remove Nuts and Flat Washers, then remove Neoprene Washers and Lower Locker Panels (4, 5) from Locker Structure (Refer to Figure 2, Details G, H and I). 5. Remove Nuts and Flat Washers, then remove Neoprene Washers and Front Locker Panels (6, 7 on A Car and 8, 9 on B Car) from Locker Structure (Refer to Figure 2, Details J and K). 	

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-13-00/R-00

System:

CAR BODY

Sheet:

4/6

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

ELECTRICAL LOCKER ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:**

Installation

NOTE: Apply Loctite 242 to all Threaded Fasteners before fastening.

1. Position Front Locker Panels (6, 7 on A Car and 8, 9 on B Car) and fasten them to Locker Structure with Nuts, Flat Washers and Neoprene Washers (Refer to Figure 2, Details J and K).
2. Position Lower Locker Panels (4, 5) and fasten them to Locker Structure with Nuts, Flat Washers and Neoprene Washers (Refer to Figure 2, Details G, H and I).
3. Position Locker Doors (3) and fasten to Front Locker Panel with ten Screws M5, Lock Washers, Flat Washers. Adjust vertical position of Doors to achieve a 0.12 spacing, then lock them with two Screw # 10 (Refer to Figure 1, Details D, E and F). Close Locker Doors (3).
4. Position Upper Locker Panels (1, 2) and fasten them to Locker Structure with Nuts, Flat Washers and Neoprene Washers (Refer to Figure 1, Details A, B and C).
5. Record Task results on the Defect Report Card for administrative and maintenance planning.

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-13-00/R-00

System:

CAR BODY

Sheet:

5/6

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

ELECTRICAL LOCKER ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

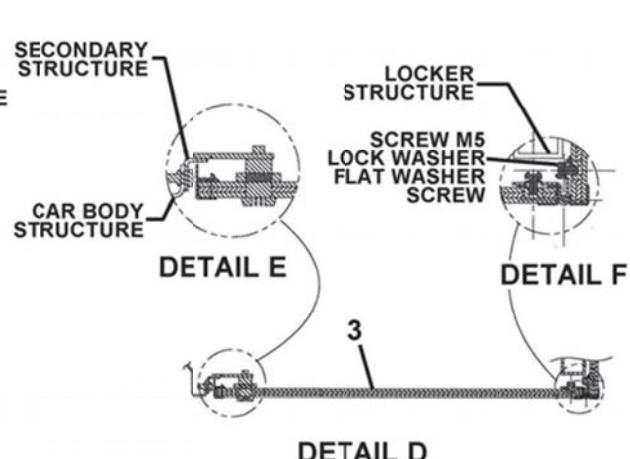
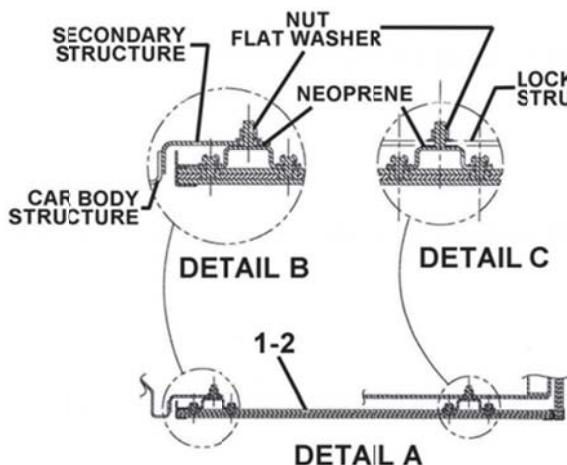
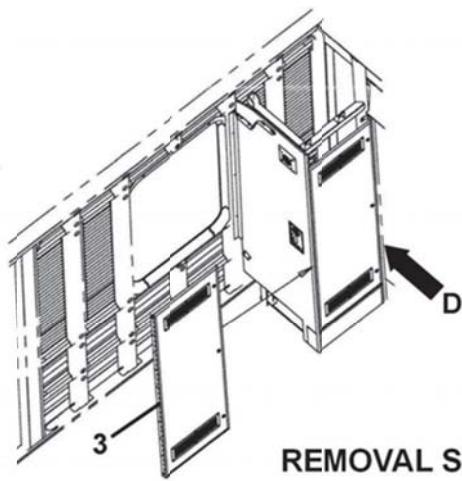
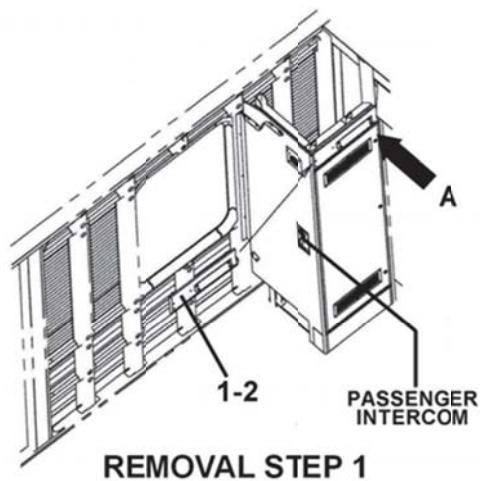
REPLACEMENT**PROCEDURE:**

Figure 1 ELECTRICAL LOCKER ASSEMBLY REMOVAL/INSTALLATION

P2550 CORRECTIVE MAINTENANCE SHEET

Card Code:

R-C-02-13-13-00/R-00

System:

CAR BODY

Sheet:

6/6

Subsystem/Assy:

PASSENGERS INTERIORS

Unit:

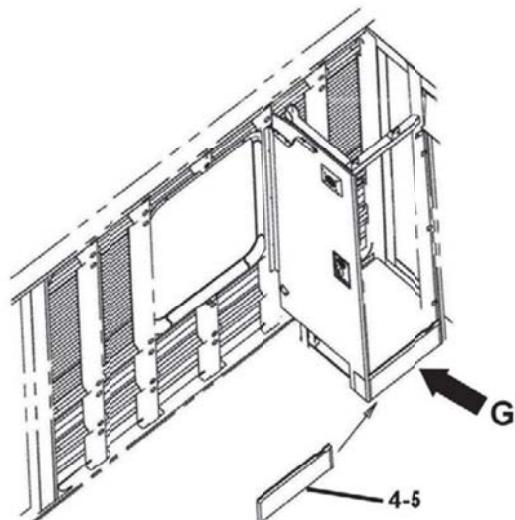
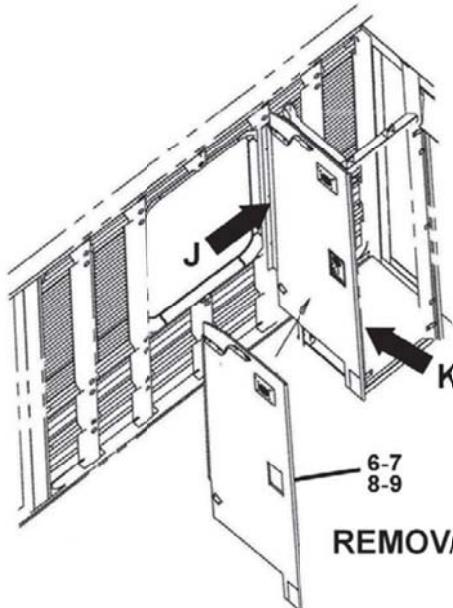
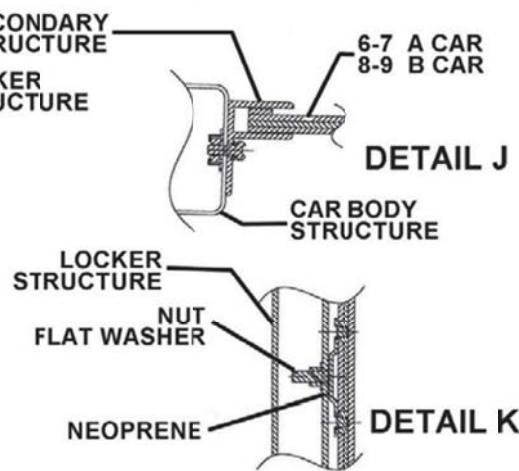
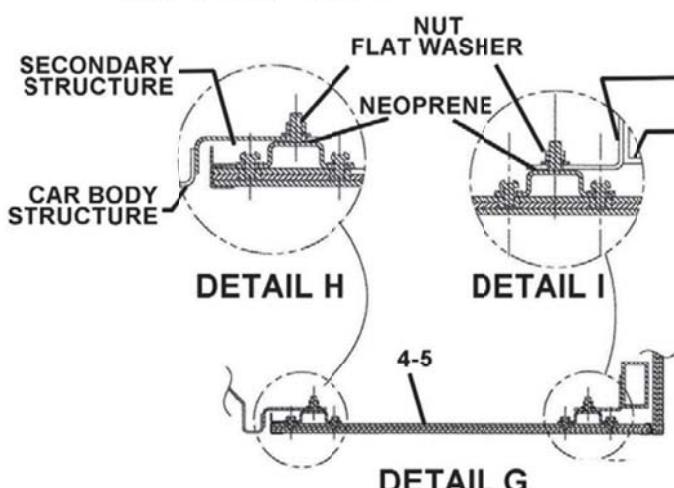
ELECTRICAL LOCKER ASSEMBLY

Component:

Man Hours:

1

Maintenance Task:

REPLACEMENT**PROCEDURE:****REMOVAL STEP 3****REMOVAL STEP 4****Figure 2****ELECTRICAL LOCKER ASSEMBLY REMOVAL/INSTALLATION**

02-III-05 CONSUMABLE MATERIALS LIST (R-CML)

The Consumable Materials needed to accomplish the Car Body Running Maintenance are listed, sequenced in alphabetical order, by SUBSYSTEM /ASSY -UNIT / COMPONENT in the following Table 02-III-05.1

Table 02-III-05.1 Running Maintenance Consumable Materials List (R-CML)

SYSTEM 02	CAR BODY		
SUBSYSTEM /ASSY - UNIT / COMPONENT	AGENT	PN	MTA PN
ARTICULATION FLOOR ASSEMBLY	Cleaner / Degreaser	(commercial)	
	Safety Kleen Premium Solvent		
	3M Teflon Tape		
	Double Sided Adhesive Tape (Transfer Type)	3M 950	
	Jet Lube 769 Lubricant		
	Loctite 242	AA0034E	
	Sealer (Dow Corning Q 3-3525)	AA003V7	
	ZINC-O-FIX	AA00D0V	
	Adhesive Scotch-Grip 7434 (3M) (or Equivalent)		
	Sealant Betefil 10211 (Grey)	AA03CXD	
ARTICULATION SECTION	Sound Deadener Aquaplas 163 F	AA03CXW	
	Loctite 242	AA0034E	
CAB DOOR WINDOW	Cleaner / Degreaser	(commercial)	
	Safety Kleen Premium Solvent		
CAR BODY STRUCTURE	CRC Silicone Lubricant		
	LACMTA approved Cleaning Products		
CENTERING DOME SPRING DEVICE	Jet Lube 769 Lubricant		
	Cleaner / Degreaser	(commercial)	
CONNECTION - ARTICULATION JOINT	Molikote Longterm 2 Plus Grease		
DRIVER CAB INTERIORS	Sealer (Dow Corning Q 3-3525)	AA003V7	
	Adhesive Loctite 243		
FRONT HEAD ASSEMBLY	Sealer (Dow Corning Q 3-3525)	AA003V7	
	Loctite 270		

Table 02-III-05.1 Running Maintenance Consumable Materials List (R-CML)
 (cont'd)

SYSTEM 02	CAR BODY	(cont'd)	
SUBSYSTEM /ASSY - UNIT / COMPONENT	AGENT	PN	MTA PN
FRONT HEAD SKIRT	Tape zinc-o-fix.		
OUTER BELLOW	Loctite 242	AA0034E	
	Cleaner / Degreaser	(commercial)	
OPERATOR'S WINDOW	Safety Kleen Premium Solvent		
	CRC Silicone Lubricant		
	Sealer (Dow Corning Q 3-3525)	AA003V7	
OPERATOR SEAT	Oil: Shell HD 30		
PASSENGERS INTERIORS	Loctite 242	AA0034E	
SKIRTS	Cleaner / Degreaser	(commercial)	
	Adhesive Loctite 243		
WINDOWS GLASS	Safety Kleen Premium Solvent		
WINDSHIELD	Sikaflex 264 Adhesive.		

02-III-06 TEST EQUIPMENT & SPECIAL TOOLS LIST (R-TESTL)

The Tools and Test Equipment needed to accomplish the Car Body Running Maintenance are listed, sequenced in alphabetical order, by SUBSYSTEM /ASSY -UNIT / COMPONENT, in the following Table 02-III-06.1.

Refer to “Tools and Test Equipment Manual” for Special Tools / Test Equipment Description and Maintenance.

Table 02-III-06.1 Running -Test Equipment & Special Tools List (R-TESTL)

SYSTEM 02		CARBODY		
SUBSYSTEM /ASSY - UNIT / COMPONENT	LACMTA STANDARD TOOLS KIT	LACMTA WORKSHOP DEVICES	SPECIAL TOOL / TEST EQUIPMENT	PN
VEHICLE	X		Upper Support	AA04Y1K,
			Lower Support	AA04Y1P
ARTICULATION FLOOR ASSEMBLY	X			
ARTICULATION SECTION	X	External Scaffold.		
		Overhead Crane (350 Lb min. capacity)		
			Articulation Section Damper	AA05767
CAR BODY STRUCTURE	X			
CENTERING DOME SPRING DEVICE	X	External Scaffold.		
CONNECTION - ARTICULATION JOINT	X			
DRIVER CAB INTERIORS	X			
FRONT HEAD ASSEMBLY	X	Overhead Crane (min. capacity 500 Lb)		
FRONT HEAD -LEFT & RIGHT SKIRT	X			
INTERNAL DOME & INNER RUBBERS	X			
MIRRORS (LH & RH)	X			
OUTER BELLOW	X	External Scaffold.		
		Overhead Crane (200 Lb min. capacity)		
OPERATOR'S SEAT	X			
OPERATOR'S WINDOW	X	External Scaffold.		
		Overhead Crane (min. capacity 50 Lb)		
		Suction Pad Equipment.		
PASSENGERS INTERIORS	X			

Table 02-III-06.1 Running -Test Equipment & Special Tools List (R-TESTL)
(cont'd)

SYSTEM	02	CARBODY			(cont'd)
SUBSYSTEM/ASSY - UNIT / COMPONENT	LACMTA STANDARD TOOLS KIT	LACMTA WORKSHOP DEVICES	SPECIAL TOOL / TEST EQUIPMENT	PN	
PASSENGER SEATS	X	Overhead Crane (100 lb min capacity)			
ROOF FIXED FAIRINGS	X	External Scaffold.			
SKIRTS	X				
WINDOWS GLASS	X	Overhead Crane (100 lb min capacity).			
		Window Suction Cup (min. capacity 25 Lb)			
		Nylon Tool (commercial)			
WINDSHIELD	X	External Scaffold.			
		Overhead Crane (min. capacity 200 Lb)			
		Suction Pad Equipment.			

LOS ANGELES COUNTY

METROPOLITAN TRANSPORTATION AUTHORITY

LIGHT RAIL VEHICLE

P2550



**RUNNING MAINTENANCE
AND
SERVICE MANUAL**

VOLUME M-01 B

**SECT 00 INTRODUCTION
SECT 03 COUPLER**



**SECT 04 DOORS
FINAL DRAFT 09/09/30**

