



**UNIVERSAL**  
**2011**

**PARTS AND SERVICE MANUAL**

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GENERAL DIMENSIONS	UNIVERSAL
EXTERIOR HEIGHT, STANDARD FLOOR, without escape hatch	111"
EXTERIOR WIDTH, EXCLUDING MIRRORS	96"
EXTERIOR WIDTH, INCLUDING STANDARD MIRRORS	96"
EXTERIOR LENGTH W/BUMPER	21', 22', 24', 26'
GVWR (E350/E450 respectively)	10,700 lbs./11,500 lbs./14,050 lbs.
INTERIOR HEIGHT	78"
INTERIOR WIDTH, FLOOR TO 24" ABOVE	92"
TURNING RADIUS 158" WB	56.7 ft. Dia.
TURNING RADIUS 176" WB	62.5 ft. Dia.
TURNING RADIUS 186" WB	65.8 ft. Dia.
WHEELBASE	138", 158", 176", 186"
* ADD 8" FOR FLAT FLOOR DESIGN	

PAINT CODES	Ford Code	Dupont Code
White	YZ	B9145G Alternate #3

## Unit Identification Numbers

### GLAVAL BUS Production Number and Unit number

You will find these numbers at the bottom of the manufacturer Vehicle Safety Standard Certification label. This sticker is located on the dash to the left of the steering column.

This production number does not coincide with the Vehicle Identification Numbers (VIN) supplied by the chassis manufacturer but is specific to the bus body.



MANUFACTURED BY / FABRIQUE PAR: \_\_\_\_\_ DATE: \_\_\_\_\_

DESIGNATED SEATING CAPACITY /  
NOMBRE DESIGNÉ DE PLACES ASSIÈGES: \_\_\_\_\_

CONVERSION	KG	LB	KG	LB
FRONT	KG	LB	TIRE/PIEDS	ENGLAIS
REAR	KG	LB		
MIDWAY	KG	LB		
REAR	KG	LB		
REAR	KG	LB		

THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.  
THIS VEHICLE CONFORMS TO ALL APPLICABLE STANDARDS PRESCRIBED UNDER THE CANADIAN MOTOR VEHICLE SAFETY REGULATIONS IN EFFECT ON THE DATE OF MANUFACTURE. - CE VÉHICULE EST CONFORME À TOUTES LES NORMES QUI S'Y SONT APPLICABLES EN VERTU DU RÈGLEMENT SUR LA SÉCURITÉ DE VÉHICULES AUTOMOBILES DU CANADA EN VIGUEUR À LA DATE DE SA FABRICATION.

TYPE/TYPE: \_\_\_\_\_ CO-22

**WEIGHT DISTRIBUTION AND PAYLOAD CERTIFICATION**

THIS VEHICLE, AS MANUFACTURED, CONFORMS TO THE WEIGHT DISTRIBUTION AND PAYLOAD REQUIREMENTS IN MID-SIZE BUS MANUFACTURERS ASSOCIATION (MSMA) RECOMMENDED PRACTICE SET.

IT IS THE USER'S RESPONSIBILITY NOT TO LOAD VEHICLE ABOVE NUMBER OF DESIGNATED SEATING POSITIONS AND LOADING ALLOWANCE.

MANUFACTURER: \_\_\_\_\_

VIN/BODY SERIAL # \_\_\_\_\_

NUMBER OF DESIGNATED SEATING POSITIONS: \_\_\_\_\_

NOTE: NUMBER OF DESIGNATED SEATING POSITIONS IS CALCULATED BY USING 150 LB (68 kg) PER DESIGNATED SEATING POSITION (POD) IN (31 kg) FOR WHEELCHAIR POSITION, INCLUDING DRIVER. LOADING ALLOWANCE IS CALCULATED USING 25 LB (11.3 kg) OF CARGO PER DESIGNATED SEATING POSITION IF VEHICLE IS EQUIPPED WITH LUGGAGE COMPARTMENT AND 5 LB (2.3 kg) PER DESIGNATED SEATING POSITION IF VEHICLE IS EQUIPPED WITH AN OVERHEAD SHELF.

### Vehicle Identification Number (VIN)

This number is the identification number for the chassis manufacturer. The VIN number is located on the Vehicle Safety Certification Label and also stamped on a tag located in the upper right hand corner of the dash at the windshield area.



SEATING  
STANDARD FEATURES  
UNIVERSAL

SEATING  
TORQUE SPECS

SEATING		TORQUE SPECIFICATIONS
1	Driver seat to slide tracks	13 ft lbs.
2	Driver slide tracks to pedestal	26-33 ft lbs.
3	Driver pedestal to floor studs	35-45 ft lbs.
4	Passenger seat to baseplate, 4 nuts per seat	13 ft lbs.
5	Passenger seat T-leg to front bolts of baseplate (2 bolts)	15 ft lbs.
6	Passenger seat T-leg to rear bolts of baseplate (2 bolts)	60 ft lbs.
7	Passenger seat T-leg to seat track (3 bolts) 7/16-14 GR8	45-50 ft lbs.
8	Ford front belt anchor to stepwell	26-33 ft. lbs
9	Ford seat belt retractor to B-pillar	26-33 ft. lbs.
10	Ford seat belt D nut to wall plate	26-33 ft. lbs.
11	Ford adjustable latch plate to B-pillar	26-33 ft. lbs.
12	Seat belt to Freedman baseplate	17-21 ft lbs.
13	Baseplate to Perf wall angle (2 bolts) 3/8 - 16 GR8	25-30 ft lbs.

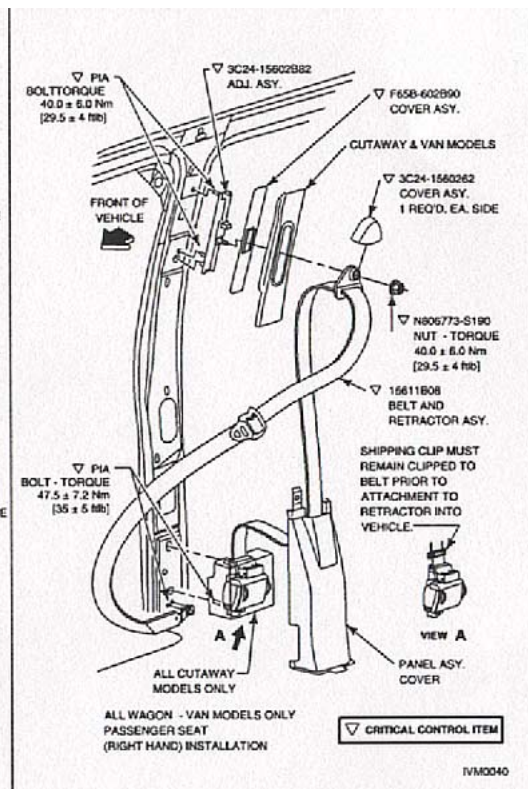
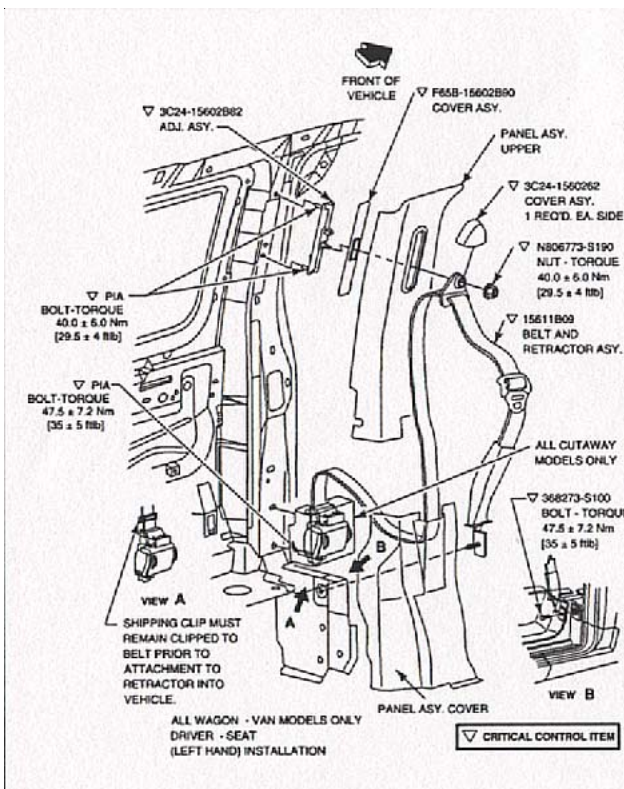
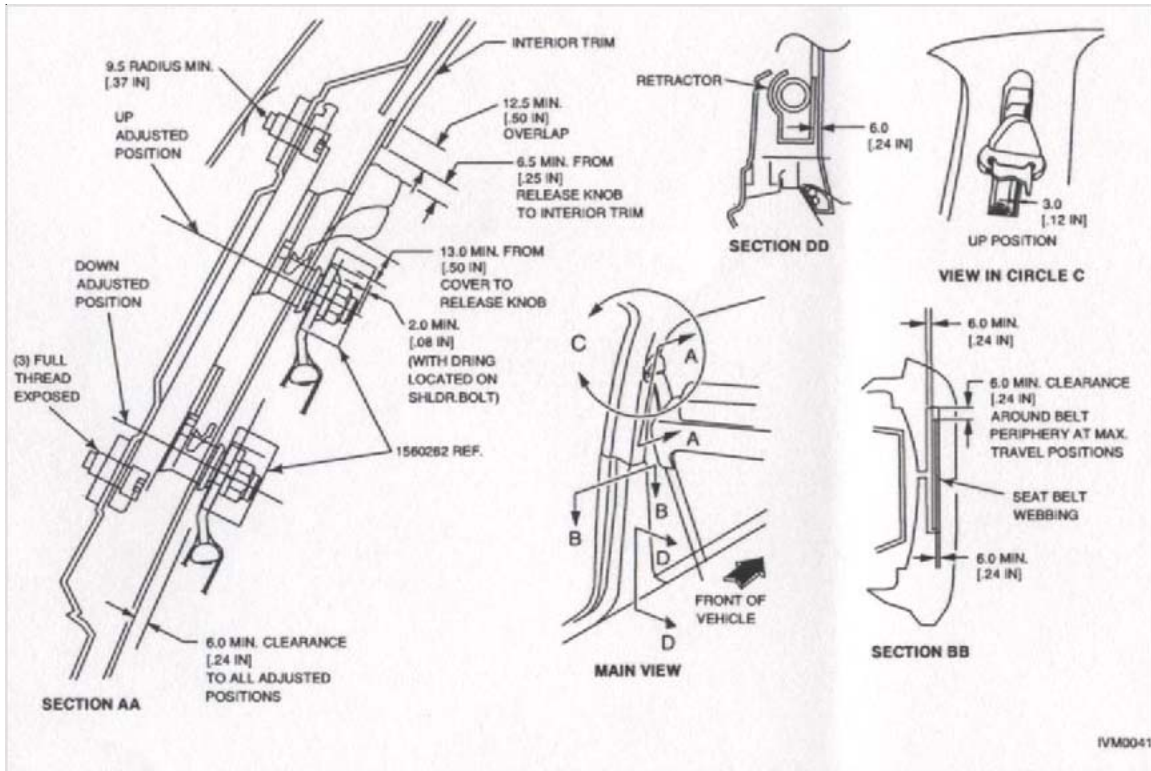
**\*\*\*Refer to these specifications when ever removing and replacing any seating component.**



**NEED DRIVER SEAT  
COVER OPT**

DRIVER SEAT		PART NUMBER
1	Driver Seat	OEM
2	Driver Seat Belt	OEM
PASSENGER SEATING		PART NUMBER
	OPTG50401 FREEDMAN FW LOWBACK SGL SEAT	BF080006
	OPTG50403 FREEDMAN FW LOWBACK DBL SEAT	BF080005
	OPTG50405 FREEDMAN FW MI-HI SGL	BF080013
	OPTG50407 FREEDMAN FW MI-HI DBL	BF080000
	OPTG50406 FREEDMAN FW MID SGL RECL SEAT	BF080066
	OPTG50408 FREEDMAN FW MID DBL RECL SEAT	B-35904
	OPTG50413 FREEDMAN FW HI-BACK SGL SEAT	BF080010
	OPTG50415 FREEDMAN FW HI-BACK DBL SEAT	BF080009
	OPTG50414 FREEDMAN FW HI-BACK SGL RECL SEAT	BF080041
	OPTG50416 FREEDMAN FW HI-BACK DBL RECL SEAT	BF080021
	OPTG50000 FREEDMAN SEAT 5-PLACE LOWBACK	BF080007
	OPTG50001 FREEDMAN SEAT 5-PLACE MID HIGH	BF080012
	OPTG50002 FREEDMAN SEAT 5-PLACE HI BACK	BF080011
	OPTG50500 FREEDMAN MID HI (17") SGL FLIP SEAT	BF080028
	OPTG50501 FREEDMAN MI-HI (34") DBL FLIP SEAT	BF080028
	OPTG50503 FREEDMAN SGL FWD FACING FOLDAWAY - WALL MOUNT	BF080085
	OPTG50511 FREEDMAN DBL 34" MID-HI FF FOLDAWAY- FLOOR MOUNT	BF000044
	OPTG50510 FREEDMAN WHEEL WELL MOUNT FF DBL FOLDAWAY	BF080094
	OPTG50500 FREEDMAN MID-HI (17") SGL FLIP	BF080027
	OPTG50501 FREEDMAN MI-HI (34") DOUBLE FLIP	BF080028
FABRIC OPTIONS		PART NUMBER
	OPTG50600 FREEDMAN SEAT FABRIC - LEVEL 1	BF080002
	OPTG50600 FREEDMAN SEAT FABRIC - LEVEL 2	BF080031
	OPTG50600 FREEDMAN SEAT FABRIC - LEVEL 3	BF080039
	OPTG50600 FREEDMAN SEAT FABRIC - LEVEL 4	BF080034
	OPTG50600 FREEDMAN SEAT FABRIC - LEVEL 5	BF080018
	OPTG50600 FREEDMAN SEAT FABRIC - LEVEL 6	BF080025

**\*\*REFER TO TORQUE SPECS ON PAGE 1 of 7 FOR R&R**





*Seat Belt*

**Driver**

- Please refer to the OEM owner’s manual for operation of this belt.

**Passenger**

- 

*Passenger Seating*

**Flip Seat**

-





SEATING

UNIVERSAL

SEATING  
CARE &  
MAINTENANCE

SUGGESTED **DAILY** INSPECTION/MAINTENANCE CHECK LIST

Date \_\_\_\_\_

PART	SUGGESTED MAINTENANCE	NOTES	COMPLETED BY
Driver Seat	Check the mounting bolts to make sure they are intact and tight. Replace any damaged hardware. Secure any loose hardware or mounting brackets to the correct torque specifications as listed on page 1 of 7.		
Seat Belt	Refer to your OEM owner's manual for suggested maintenance on the driver's seat belt.		
Passenger Seat Belts	Check the mounting bolts to make sure they are secured to the proper torque specifications. Check the operation of the seat belts, as well as for damage or fraying. Replace as necessary.		
Seat Covers	Check seating for ripped, torn, frayed or damaged areas. Replace or repair as necessary. Clean by vacuuming. Clean spots with a soap and water solution recommended for fabrics.		
Wheel Chair Securement Systems	Check the mounting bolts, hardware and securement belts. Secure any loose bolts or mounting brackets to proper torque specifications as listed on page 1 of 8, as well as replace any damaged, torn or frayed belts.		

## *Seating Removal/Installation Instructions*

### *Complete Chair*

#### **Removal**

- Remove 4 bolts and nuts attaching chair to base.
- Remove chair from bus.

#### **Reinstallation**

- Align bolts on chair to bolt holes in base.
- Position chair onto base. Replace bolts and nuts.

**\*\* Torque to required specifications as listed on Page 1 of 7.**

**Labor Allowance**

**.8 hr**

### *Back Cover*

#### **Removal**

- Remove arm rest- see next page.
- Remove hog rings from bottom of chair back cover.
- Pull cover off chair back.

#### **Reinstallation**

- Pull cover over chair back.
- Stretch tight and hog ring onto frame from bottom of the chair back.
- Replace arm rest.

**Labor Allowance**

**.5 hr**

### *Bottom Cover*

#### **Removal**

- Remove complete chair from pedestal.
- Remove hog rings from bottom of chair bottom cover.
- Lift cover off.

#### **Reinstallation**

- Position chair bottom cover over chair frame.
- Pull cover tight and hog ring onto chair frame.
- Reinstall chair onto pedestal.

**Labor Allowance**

**.5 hr**

**\*\*REFER TO TORQUE SPECS ON PAGE 1 of 7 FOR R&R**

***Arm Rest***

**Removal**

- Remove bolt from side of arm rest. You may have to pull back the plastic cover on some models to access the bolt. On fabric armrests you will need to unzip the cover and pull it back to access the bolt.

**Reinstallation**

- Position armrest onto chair back.
- Reinstall bolt to secure arm to chair. Be careful not to tighten as to restrict arm movement.

**Labor Allowance** **.2 hr**

***Recline Handle***

**Removal**

- Remove screw from center of recline handle. Handle will pull off.

**Reinstallation**

- Position new handle onto recline rod. Tap the handle to make sure the handle is completely onto the rod to avoid stripping the handle.
- Replace screw.

**Labor Allowance** **.1hr**

***Pedestal***

**Removal**

- Remove chair from pedestal. See previous page for instructions.
- Remove four bolts and nuts from pedestal to floor plate.

**Reinstallation**

- Position chair onto floor plate.
- Reinstall bolts and nuts.
- **Torque to required specification as listed on page 1 of 7.**

**Labor Allowance** **1.0 hr**

**\*\*REFER TO TORQUE SPECS ON PAGE 1 of 7 FOR R&R**



<b>DASH/CONSOLE</b>		<b>PART NUMBER</b>
1	Console mounting bracket, NOT SHOWN	BS020366
2	Cupholder, black drop in	W-09017101
3	Dash, sticker, Diesel "VEHICLE MUST BE IN PARK WITH PARK BRAKE SET FOR FAST I	BX050848
4	Decal, rear heater, dash (Goes over OEM Dash switch)	BI060686
5	Engine Cover CBUS3071	BI060378
6	Fast Idle, Diesel	BA041325
7	Hour Meter	BI060237
8	Light, Green, "LIFT"	BEO10044
9	Light, Red, "DOOR AJAR"	BE010045
10	Pocket, Console	CBUS3078
11	Rear A/C Control (Part of A/C Kit)	OEM
12	Switch ONLY Door Momentary, ON-OFF-ON 18V B-SW 172	BE010672
13	Switch ONLY OFF-LOW -HIGH B-SW 172	BE010671
14	Switch ONLY ON-OFF 18V B-SW 169	BE010670
15	Switch plate, 9 Position	B-GL114
16	Switch, Cover "DOOR"	BI010648
17	Switch, Cover "LIFT"	BI010658
18	Switch, Cover "LIGHTS"	BI010650
19	Switch, Cover "STOP REQUEST"	BI010652
20	Switch, Cover, "DEFROST"	BI010651
21	Switch, Cover, "HEATER"	BI010649

## *Dash Swiches*

### **Air Conditioning**

- Please refer to the OEM owner's manual for operation of these switches.

## *Microphone*

### **Volume Control**

- To increase the speaker volume of the microphone, turn the knob located on the left end of the unit clockwise. To decrease the volume, turn the knob counter-clock-wise.

### **Using the Microphone**

- To activate the microphone, depress the button located on the left side of the Mic and speak into the microphone.

## *Engine Cover Switches*

### **\*Switches will vary depending on options installed.**

- To activate a switch, press the top of the switch.
- To deactivate a switch, press the bottom of the switch.

## *Rear Air Conditioning/Heat*

### **Fan Speed**

- To turn on the fan, turn the knob clock-wise. One click for low, two clicks for med and three clicks for high speed.

### **Temperature Control**

- Turn knob clock-wise to increase temperture coolness.



**INTERIOR**

**UNIVERSAL**

**DASH/CONSOLE  
CARE &  
MAINTENANCE**

**SUGGESTED DAILY INSPECTION/MAINTENANCE CHECK LIST**

**Date** \_\_\_\_\_

PART	SUGGESTED MAINTENANCE	NOTES	COMPLETED BY
Interior Lights	Inspect interior lights, including reading lights, step well lights, entry lights and any emergency lighting. Replace any bulbs that may burnt out or repair or replace as necessary.		
Lift indicator light	Open the lift slightly and check to see if the light is activated. If not contact your local dealer for a repair.		
Heat and or A/C Controls	Turn ON to verify the unit is working properly. Repair as necessary.		



INTERIOR

UNIVERSAL

DASH/CONSOLE  
R & R  
INSTRUCTIONS

## *Dash Component Removal/Installation Instructions*

### *Electric Door Switch*

#### **Removal**

- Remove center console from engine cover.
- Remove and tag wires from old switch.
- Door switch can now pop out from back side.

#### **Reinstallation**

- Replace switch into switch panel.
- Replace wire to correct marked blades.
- Reinstall center console onto engine cover.

**Labor Allowance**

**.5 hr**

### *Heater Switch*

#### **Removal**

- Remove center console from engine cover.
- Remove and tag wires from old switch.
- Door switch can now pop out from back side.

#### **Reinstallation**

- Replace switch into switch panel.
- Replace wire to correct marked blades.
- Reinstall center console onto engine cover.

**Labor Allowance**

**.5 hr**

### *Courtesy Light Switch*

#### **Removal**

- Remove center console from engine cover.
- Remove and tag wires from old switch.
- Door switch can now pop out from back side.

#### **Reinstallation**

- Replace switch into switch panel.
- Replace wire to correct marked blades.
- Reinstall center console onto engine cover.

**Labor Allowance**

**.5 hr**

### *R&R Engine Cover*

**Labor Allowance**

**.7 hr**



<b>FRONT OVERHEAD</b>		<b>PART NUMBER</b>
1	Angle, alum x 1.5	BI060111
2	B-Pillar ABS, Curbside (Mor-View, liner, Cover, Entry Door R/H)	BI060679
3	B-Pillar ABS, Roadside, Overhead, Driv door	B-CBUS3014
4	B-Pillar, ABS, Ford	B-CBUS3013
5	Cover, entry door	BI060459
6	Decal "GLAVAL BUS", 7"x2"	BI060337
7	Decal "Standing forward...."	BI060548
8	Decal, "WATCH YOUR STEP"	BI060549
9	Door, Glove Box	BI060087
10	End Cap BD-16 #2900, J-rail	BI060077
11	Fabric, cargo liner, RONTEx, 72" wide	B-11064312
12	Front vertical, ABS, STD	BI060681
13	Fuse Box Door, 17-1/2" x 16-1/2"	BI060349
14	H-channel	BI060338
15	J-channel, black	B-5620
16	Light, IT4-00C, Round ADA Clear	BE010217
17	Light, Bezel 4"	BI060033
18	Mirror, rear passenger * SEE OPTION #G75014, 6" X16"	BI060076
19	Mirror, 9" round convex, OPTION G75013	BX050420
20	Mirror, 9" round covex, bracket only	BS020713
21	Screw, pan, Quad SDS #2	W-81PQT2EG
22	Sign, "STOP REQUEST", Bezel *SEE OPTION #G75039	CBUS3047
23	Windshield liner, HEADER	BI060680





INTERIOR

UNIVERSAL

FRONT O/H  
OPERATING  
INSTRUCTIONS

## *Overhead Glove Box*

### **Door Operation**

- Open: Turn the knobs counter-clock wise.  
Close: Turn the knobs clock-wise.

**\* While driving, the overhead storage door must remain closed and both knobs securely locked at all times. Personnal injury could occur should objects fall from the storage area and startle the driver.**

## *Rear Passenger View Mirror*

### **Adjusting**

- To adjust the angle of the rear view mirror, loosen nut on each side of the mirror head bracket. Adjust the mirror to the driver's desired angle and re-tighten the nuts on each side.

\*On Convex mirror no nuts to loosen. Just move mirror head to adjust position.



INTERIOR

FRONT O/H  
CARE &  
MAINTENANCE

UNIVERSAL

SUGGESTED DAILY/WEEKLY INSPECTION/MAINTENANCE CHECK LIST

Date \_\_\_\_\_

PART	SUGGESTED MAINTENANCE	NOTES	COMPLETED BY
Windows/ Windshield	Clean interior windows/windshield to ensure a clear view. Check for cracks or damages and repair or replace as needed. To clean use a standard window cleaner or ammonia base product.		
Factory Installed Lights, Signals and Equipment	The information for care and maintenance for the OEM provided components can be found in the chassis' owner's manual, provided to you with your unit. It is recommended that you check all operations of the headlights, turn signals and warning lights DAILY.		
Sun visor	Check and tighten as necessary		
Overhead Console Door	Check the hinges and latches to be sure they are secure. Check for damages, repair or replace as necessary. Vinyl covered trim should be cleaned weekly or as needed with a soap and water solution or vinyl cleaner, following the manufacturer's instructions. Avoid soaking the overhead console, vinyl sidewalls or any other vinyl covered component of the interior with cleaning solutions as damage may result.		



***ABS Manual Door Header Removal Instructions***

- Remove screws from along roof, rear door wing, front vertical and underside of entry way.
- Pull out and down to remove

**Labor Allowance .2 hr**

***Front Vertical Panel Removal Instructions***

**\*NOTE: Glove box door removal is not required**

- Remove ABS door header as described above.
- Remove various screws on all sides.
- May need to disconnect or remove electrical components
- Pull out and down to remove

**Labor Allowance .3 hr**

***Windshield Liner Removal***

- Remove sun visors and retainer clips.
- Remove A-Pillar covers.
- Remove various screws.
- While lowering panel, disconnect light.

**Labor Allowance 1.0 hr**

***B-Pillar Removal***

- Remove ABS door header.
- Remove ABS front vertical
- Remove windshield liner.
- Remove seat belt shoulder strap
- Pull down door seal
- Remove various screws
- Pull out and lean in to remove panel

**Labor Allowance 1.0 hr**

**\*\*PREDRILL ALL ABS PANELS BEFORE INSTALLING TO PREVENT CRACKING.**



<b>FLOORING</b>		<b>PART NUMBER</b>
1	Smooth, grey, 38-1/8"	BF030078
2	Ribbed, grey rubber, 24"	BF030076
3	Fuel fill cover	BI060027
3A	Screw 8X1-1/2 MODTRUSS SDS,Black (14)	B-8112MTPT2BO
3B	Screw painted 8 X 1/4 TRUSS (7)	B-8114MTPA33
4	Wheel Well Assembly With rubberized coating	BA040126-G
<b>ENTRY STEP</b>		<b>PART NUMBER</b>
5	Step Tread 34" x9.38" grey (2)	BF030005
6	Step Tread nosing, white 2" x 34"	BF030067
7	Step Tread nosing, yellow 2"x34"	BF030070
8	Light, step well (2)	BE010008
9	Front side panel 12" deep 34-1/4" wide steps	BS020800
10	Rear side panel 12" deep 34-1/4" wide steps	BS020801
11	Rear entry wing 12" deep 34-1/4" wide steps	BA0412559
12	Front entry wing 12" deep 34-1/4" wide steps	BA0412559
13	Standee line, white 2"x24"	BF030079
14	Standee line, yellow 2" x 24	BF030080



INTERIOR

UNIVERSAL

FLOORING  
CARE &  
MAINTENANCE

SUGGESTED DAILY/WEEKLY INSPECTION/MAINTENANCE CHECK LIST

Date \_\_\_\_\_

PART	SUGGESTED MAINTENANCE	NOTES	COMPLETED BY
Flooring	Check for cuts, tears, lifted or frayed areas. Repair or replace as necessary. Loose flooring could cause a passenger to trip and fall and possibly be injured.		
Rubber Flooring	Clean the flooring with a warm soap and water solution, scrub, rinse and dry. DO NOT allow cleaning solution to stand on the floor for long periods of time. Damage to the floor covering or sub floor could occur.		
Carpeting	Vacuum as necessary. Small spots can be cleaned by using a soap and water solution and a scrub brush. If using a carpet cleaner, test a small area to ensure it will not cause damage to the carpeting.		

### *Tread Step*

#### **Removal**

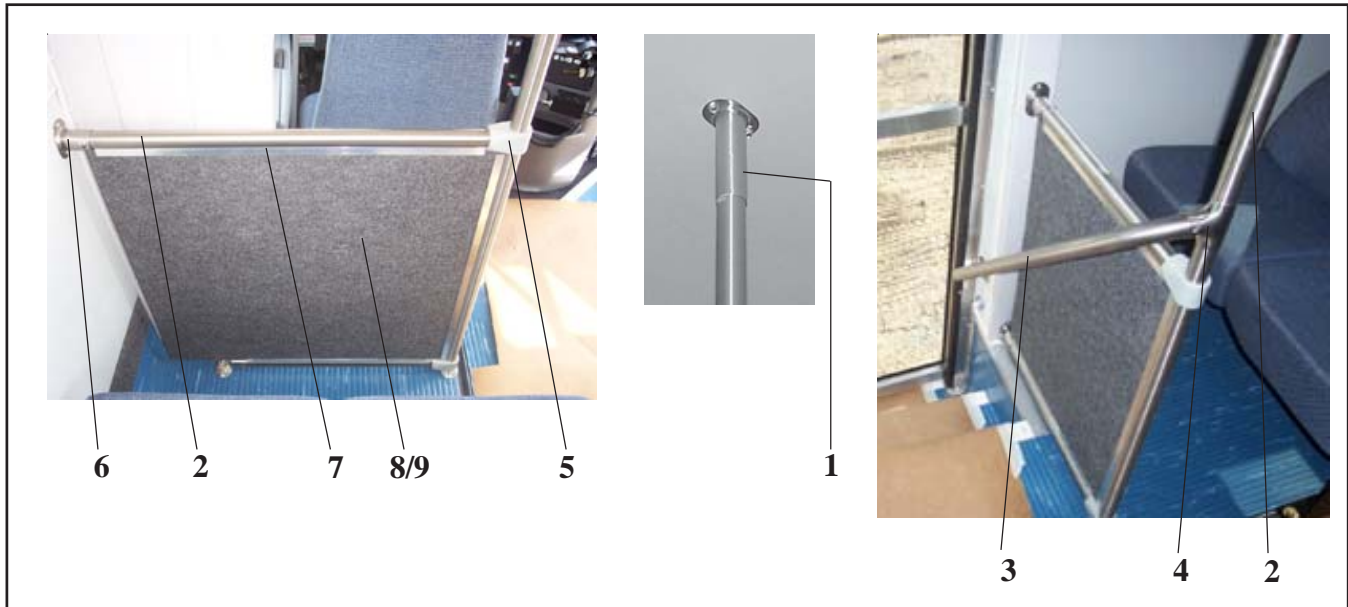
- Using a flat putty knife as a pry tool, slide it under the edge of step tread and lift up.

#### **Reinstallation**

- Clean excess glue from surface.
- Apply adhesive to step.
- Position step tread onto step making sure it is square and even with edge of step. Trim as needed.

**Labor Allowance**

**.5 hr**



<b>STANCHION PANEL</b>		<b>PART NUMBER</b>
1	Stanchion top post	BI060267
2	Tube, Stainless polished	B-M201624000
3	Grab Handle 37-1/2"	B-23-02-002-01
4	Tee, One hole #TL100	BI060379
5	Tee, Cast #PV-2 (2)	BI060389
6	Cup, 90 Degree w/oval flange	BI060183
7	Channel Modesty Panel trim	BI060486
8	Fabric cargo liner, RONTEX 6'	B-11064312
9	Plywood, 3/8"	BF030048
<b>RETAINER HARDWARE - Not Shown</b>		<b>PART NUMBER</b>
10	Shoulder Screw #TL31 (5)	BI060384
11	Screw, 8 x flat, Quad SDDS 2 Zinc (4)	B-81FQT2Z
12	Shoulder nut #TL35 (5)	BI060385
13	Screw, pan Quad 8 x SDS #2 (4)	BH080010
14	Washer, Hex 14x2 SDS Zinc (4)	BH080054
15	Screw, pan, Quad 6 x 1/2 (6)	BH080059
16	Fitting, variable, Crystal #TL800	BI060386



INTERIOR

UNIVERSAL

MODESTY PANEL/  
STANCHION  
CARE &  
MAINTENANCE

SUGGESTED DAILY/WEEKLY INSPECTION/MAINTENANCE CHECK LIST

Date \_\_\_\_\_

PART	SUGGESTED MAINTENANCE	NOTES	COMPLETED BY
Stanchion/ Grab Handles	Check stanchions/grab handles to be sure they are secure. Secure as needed. Check for bent or broken parts or sharp edges that could cause harm to passengers. Repair or replace as needed.		
Modesty Panel	Vacuum the modesty panel to clean. Spot cleaning can be done with a commercial upholstery cleaner . Follow all directions on cleaner. DO NOT allow any cleaner to saturate or soak the modesty panel. DO NOT leave cleaner on for an extended period of time. Damage to the panel could occur.		





INTERIOR

UNIVERSAL

MODESTY PANELS/  
STANCHIONS  
R & R  
INSTRUCTIONS

## *Modesty Panel*

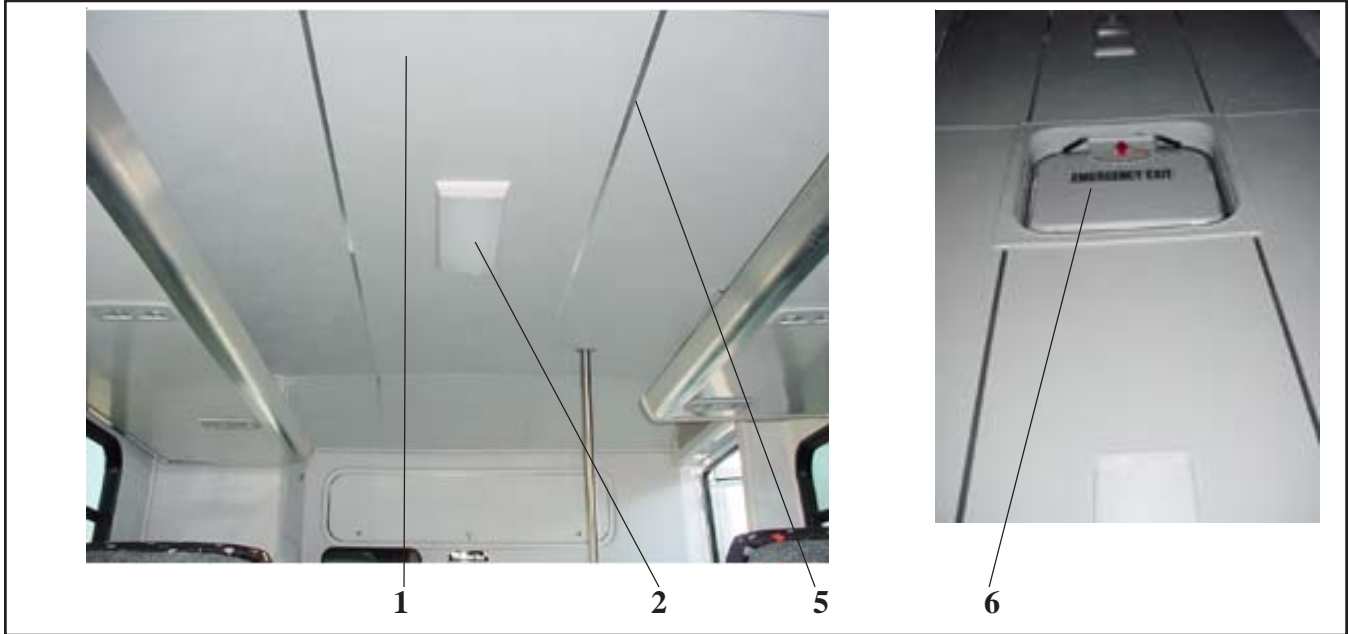
### **Removal**

- Remove top support tube of panel from stantion.
- Pull out panel.

### **Reinstallation**

- Make sure rubber seal is on new panel before installing into the track.
- Reinstall top support tube on stantion.

**Labor Allowance            .5 hr**



<b>CEILING</b>		<b>PART NUMBER</b>
1	Wall panel, rough grey (4)	BI060101
2	Flourescent Light	BE010012
2a	Flourescent Light bulb only	F15T8CW
3	Screw, pan Quad SDS#2 (50) , NOT SHOWN	B-81PQT2EG
4	Screw, 8 x flat Quad SDS (60), NOT SHOWN	B-81FQT2Z
5	Rail "H" alum Bar divider BD 16-1/4"	BI060073
6	Escape Hatch, OPTION G75004	BX050741
7	Escape Hatch, 4-way tilt deluxe, OPTION G75005	BX050740



INTERIOR

UNIVERSAL

CEILING PANEL  
CARE &  
MAINTENANCE

SUGGESTED DAILY/WEEKLY INSPECTION/MAINTENANCE CHECK LIST

Date \_\_\_\_\_

PART	SUGGESTED MAINTENANCE	NOTES	COMPLETED BY
Vinyl Ceiling Panels	Clean with a standard non-abrasive cleaner. Follow manufacturers instructions on the cleaner. DO NOT allow cleaning solution to stay on vinyl for long periods of time. Damage to the ceiling panel will occur.		
Fabric Ceiling Panels	Vacuum regularly. Spot clean as necessary with an upholstery cleaner. Follow all manufacturer's instructions on the cleaner.		





INTERIOR

UNIVERSAL

CEILING  
R & R  
INSTRUCTIONS

## *Ceiling Component Removal/Installation Instructions*

### *Light Bar*

#### **Removal**

- Remove speakers and courtesy lights.
- Remove J-rail at bottom of light bar.
- Remove screws.
- Light bar will come down in 1 piece. Have a second person to help hold the panel.

#### **Reinstallation**

- Position light bar up to ceiling and sidewall.
- Replace J-rail at the bottom of light bar.
- Replace screws in light bar, making sure panel is smooth and level as you go.
- Replace speakers and courtesy lights.

**Labor Allowance**

**.7 hr**

### *Ceiling Panel*

Some ceiling panels around escape hatches or fluorescent lights may be caulked to roof panel of the bus.

#### **Removal**

- Remove light bar. See above for removal instructions.
- Remove ceiling trim.
- Remove screws around perimeter of ceiling panel. Make sure you have someone holding the panel while the screws are being removed so the panel does not bend or fall.

#### **Reinstallation**

- Position ceiling panel to ceiling.
- Replace screws.
- Replace ceiling trim.
- Reinstall ceiling light bar.

**Labor Allowance**

**1.5 hr**

### *Courtesy Light*

#### **Removal**

- Remove two screws from face of light.
- Disconnect wiring butt connector.

#### **Reinstallation**

- Reconnect wiring.
- Position onto light bar and replace screws.

**Labor Allowance**

**.2 hr**



INTERIOR

CEILING R & R  
INSTRUCTIONS

UNIVERSAL

### *Speaker*

#### **Removal**

- Remove exposed screws.
- Disconnect wires from back of speaker.

#### **Reinstallation**

- Reconnect wiring to speaker.
- Position speaker onto light bar and replace screws.

**Labor Allowance**

**.2 hr**



**ROADSIDE**

6



**CURBSIDE**

1,2

4

<b>WALLS</b>		<b>PART NUMBER</b>
1	Extrusion, CLNG, trim insert	BI060007
2	Extrusion, CLNG, trim retainer	BI060008
3	Light, Courtesy, 4x2x1 ITC #8 (9) NOT SHOWN	BE010011
4	Rail "H" alum Bar divider BD 16-1/4"	BI060073
5	Screw, pan Quad SDS#2 (50) , NOT SHOWN	B-81PQT2EG
6	Wall panel, rough grey (4)	BI060101

**SUGGESTED DAILY INSPECTION/MAINTENANCE CHECK LIST**

DATE: \_\_\_\_\_

PART	SUGGESTED MAINTENANCE	NOTES	COMPLETED BY
Vinyl Wall Panels	Clean with a standard non-abrasive cleaner. Follow manufacturers instructions on the cleaner.		
Fabric Wall Panels	Vacuum. Spot clean as necessary.		

## *Sidewall Component Removal/Installation Instructions*

### *Lower Sidewall Panel*

#### **Removal**

- Remove window(s) at the panel needed to be removed. Refer to “Exterior Windows” for removal instructions.
- Remove screws from sidewall trim strips.

#### **Reinstallation**

- Position sidewall. Replace screws into trim strips.
- Replace windows.

**Labor Allowance**

**1.5 hr**

### *Upper Sidewall Panel*

#### **Removal**

- Remove light bar. Refer to “Ceiling Instructions” for removal instructions.
- Remove window(s) at the panel needed to be removed. Refer to “Exterior Windows” for removal instructions.
- Remove screws from sidewall trim strips.

#### **Reinstallation**

- Reinstall light bar. Refer to “Ceiling Instructions” for installation instructions.
- Position sidewall. Replace screws into trim strips.
- Replace windows.

**Labor Allowance**

**2.0 hr**





FRONT CAP		PART NUMBER
1	Cap, Front, STANDARD FLOOR	B-FBUS370
2	Light, Running AMBER (5)	BE010560



**EXTERIOR**

**UNIVERSAL**

**FRONT CAP  
CARE &  
MAINTENANCE**

**SUGGESTED DAILY/WEEKLY INSPECTION/MAINTENANCE CHECK LIST**

Date \_\_\_\_\_

PART	SUGGESTED MAINTENANCE	NOTES	COMPLETED BY
Exterior body panels & Fiberglass components	Clean road film and dirt from body panels by wetting down with a hose and wiping with a sponge or cloth. Never use harsh abrasives or strong solvents on the bus exterior		
Front & Rear Caps	Inspect cap for scrapes or cuts caused by tree limbs or other overhanging obstructions. Repair as necessary. Wash dirt and grim from front & rear caps using a mild household detergent.		
Seams, Rub Rails and Mouldings	Clean road film and dirt from seams, rub rails & mouldings by wetting down with a hose and wiping with a sponge or cloth. Never use harsh abrasives or strong solvents on the bus exterior. Sealants will yellow without proper cleaning.		
Lights	Inspect all lights. It is recommended that someone outside the bus check the operation of each light as another person inside the vehicle activates each function. Replace any blown bulbs and/or fixtures immediately. Clean lenses with window cleaner or a mild detergent.		
Reflectors	Check to ensure the reflectors are secure. Clean with a standard window cleaner or nonabrasive cleaner to ensure they can be seen.		



EXTERIOR

UNIVERSAL

FRONT CAP  
R & R  
INSTRUCTIONS

## *Front Cap*

### **Removal (Requires two persons)**

- Remove gimp from seam of cap.
- Remove screws and trim below the gimp.
- Remove front ceiling panel.
- Remove stantions
- Remove box of safety triangles
- Remove ABS entry door header
- Remove front ABS trim panel
- Remove (if installed) front glove box or destination sign/light bar
- Remove driver's seat (Not required)
- Remove ABS seat belt trim from behind driver's door.
- Remove driver side ABS pillar post
- Remove front ceiling panel
- Disconnect run lights from cap.
- Score down seam with a putty knife to cut putty seal on cap.
- Clean foam off bottom of cap.
- Remove self tap screws.
- Remove 2 bolts where cap meets wing.
- Cut caulking/sealant between cap and wing.
- Cap is ready to be removed.

### **Reinstallation**

- Replace caulking/sealant to cap.
- Position cap onto bus.
- Replace bolts at the front wing.
- Replace self tapping screws.
- Reconnect running light in cap.
- Reinstall ABS seat belt cover.
- Reinstall front ceiling panel.
- Reinstall stantions.
- Re-caulk exterior and check.

**Labor Allowance 8.0 hr/person**

***Running Light***

**Removal**

- Remove light cover.
- May have to cut caulk seal around light.
- Unplug wires to light.

**Reinstallation**

- Reconnect wiring to light.
- Reposition onto bus.
- Secure lens in place, replace screws.
- Re-caulk to make water tight.

**Labor Allowance**

**.2hr**

***Destination Window***

**Removal**

- Call for tech assistance.

**Reinstallation**

- Call for tech assistance.

**Labor Allowance**

**2.0 hr**



REAR CAP		PART NUMBER
1	Door check hanger	BS020977
2	Drip Rail	BX050095
3	Facia, ABS C/S Vertical, (CBUS3076L)	BX050372
4	Facia, ABS Lower Curbside, (CBUS3077R) STANDARD FLOOR	BX050395
5	Facia, ABS Lower Roadside, (CBUS3077L) STANDARD FLOOR	BX050394
6	Facia, ABS R/S Vertical, (CBUS3076R)	BX050371
7	Facia, ABS Upper, (CBUS3075)	BX050370
8	License Plate holder w/light	BX050580
9	Light, 3rd brake, RED	BE010573
10	Light, BACKUP lamp #40004 WHITE (2)	BE010280
11	Light, RUNNING, RED,	BE010561
12	Light, STOP/TAIL #40 RED (2)	BE010279
13	Light, TURN lamp #400424 YELLOW (2)	BE010281
14	Rear door hinge	BX050547
15	Rear exit door latch, SS	B-3-7901-SS
16	Rear exit door latch,black	BH080347
17	Steel, GLV, Oxford white	BX050416
18	Trim Channel, T-6	BX050004
19	Trim, Insert w/o leg	BX050046
20	Window, Rear Wall	BX050113



**EXTERIOR**

**UNIVERSAL**

**REAR CAP  
CARE &  
MAINTENANCE**

**SUGGESTED DAILY INSPECTION/MAINTENANCE CHECK LIST**

DATE: \_\_\_\_\_

PART	SUGGESTED MAINTENANCE	NOTES	COMPLETED BY
Exterior body panel & Fiberglass components	Clean road film and dirt from body panel by wetting down with a hose and wiping with a sponge or cloth. Never use harsh abrasives or strong solvents on the bus exterior.		
Rear Cap	Inspect cap for scrapes or cuts caused by tree limbs or other overhanging obstructions. Repair as necessary. Wash dirt and grime from rear cap using a mild household detergent.		
Seams, Rub Rails and Mouldings	Inspect for damages, scrapes, cuts or cracking. Repair as necessary		
Lights	Inspect all lights. It is recommended that someone outside the bus check the operation of each light as another person inside the vehicle activates each function. Replace any blown bulbs and/or fixtures immediately. Clean lenses with window cleaner or an ammonia based cleaner.		
Reflectors	Check to ensure that the reflectors are secure. Clean with a standard window cleaner or nonabrasive cleaner to ensure they can be seen.		



EXTERIOR

UNIVERSAL

REAR CAP  
R & R  
INSTRUCTIONS

### ***Tail Light Removal/Installation Instructions***

#### **Removal**

- Remove screws from each side of light.
- Disconnect wiring from light.

#### **Reinstallation**

- Reconnect wiring harness.
- Position light onto bus, replace screws.

**Labor Allowance**

**.3 hr**

### ***Reflectors Installation Instructions***

#### **Reinstallation**

- Clean surface thoroughly with rubbing alcohol.
- Remove protective paper from reflector and press into position.

**Labor Allowance**

**.2 hr**

### ***3rd Brake Light Removal/Installation Instructions***

#### **Removal**

- Remove screws from each side of light.
- Cut caulk from around light.
- Disconnect wiring from light.

#### **Reinstallation**

- Reconnect wiring harness.
- Position light onto bus, replace screws.
- Re-caulk to seal.

**Labor Allowance**

**.3 hr**

### ***Marker Light Removal/Installation Instructions***

#### **Removal**

- Remove screws from each side of light.
- Disconnect wiring from light.

#### **Reinstallation**

- Reconnect wiring harness.
- Position light onto bus, replace screws.

**Labor Allowance**

**.3 hr**



<b>REAR BUMPER</b>		<b>PART NUMBER</b>
1	Bumper 9x97 4 hole	BX050510
1A	Bracket (2)	BX050511
1B	Bolt, carriage 1/2x1/2 (4) NOT SHOWN	B-12C112CB5Z
1C	Nut, Hex 1/2-13 Zinc (10) NOT SHOWN	W-050NFZ
1D	Washer, 1/2 USS (16) NOT SHOWN	W-050WUHYZ
1E	1/2-13x2 HHCS 8 yellow ZInc (6) NOT SHOWN	W-5032CH8YZ
1F	Lockwasher, 1/2 Split ZINC (4) NOT SHOWN	B-050WLZ
2	Reflector, RED, stick on	BX050010
3	Bumper step, OPTION G40209	BX050588
4	Bumper step filler	BX050597



***Bumper Removal/Installation Instructions***

**Removal**

- Remove 4, 1/2 x 1-1/2” carriage bolts, washer and nuts from bumper to bumper bracket. Bumper will be free from the bus.

**Reinstallation**

- Position bumper onto bus. Install bolts and nuts.
- Check that the bumper is square and level to the bus.
- Securely tighten all bolts and nuts.

**Labor Allowance** **.5 hr**

***Bumper Bracket Removal/Installation Instructions***

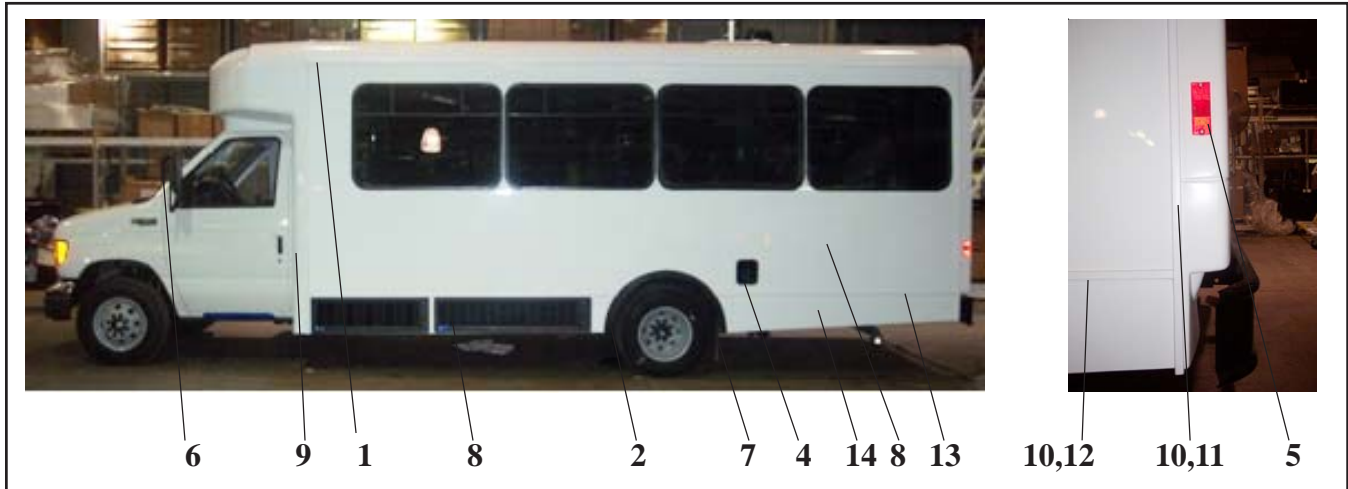
**Removal**

- Remove bumper as instructed above.
- Remove 6, 1/2” x 2” HHCS yellow zinc bolts from bracket.

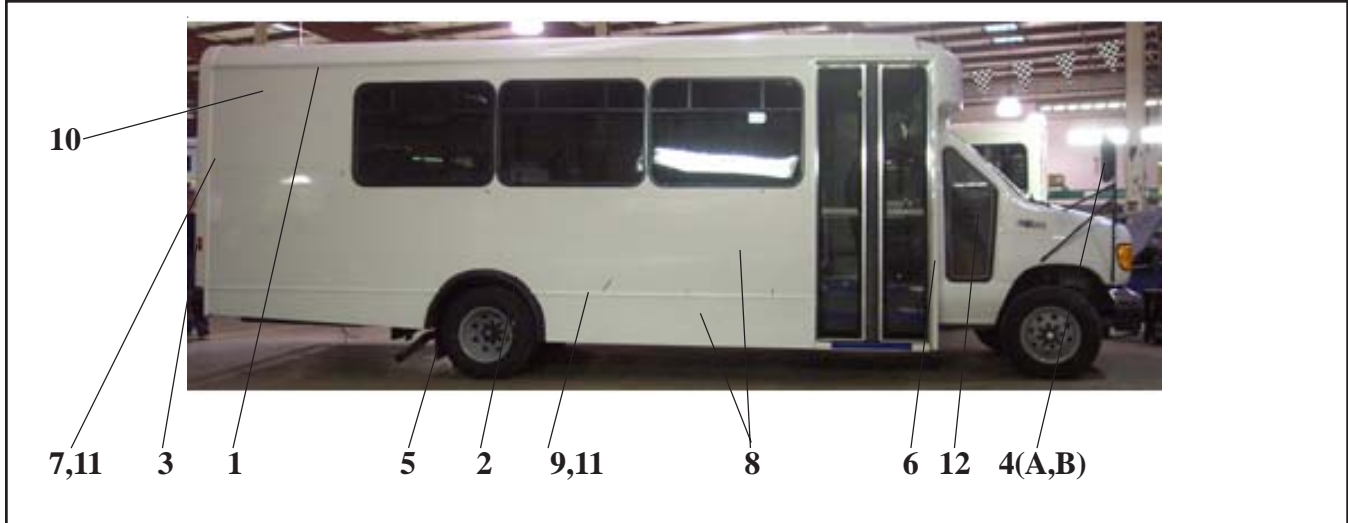
**Reinstallation**

- Position bracket onto bus.
- Replace bolts.
- Tighten securely.

**Labor Allowance** **1.0 hr**



ROADSIDE		PART NUMBER
1	Drip Rail	B-K060PW16
2	Fender Well trim, black rubber	BX050077
3	Fuel Fill Cover, Locking, NOT SHOWN	BX050245
4	Fuel Fill decal "UNLEADED FUEL ONLY"	BX050121
4a	Fuel Fill decal "DIESEL ONLY"	BX050180
5	Light, Marker, Side, RED #18	BE010532
6	Mirror, See SIDE MIRRORS	BX050541
7	Mud Flap, rear, black poly, 18x24x3/16	BX050050
7A	Mud Flap, brace	BS020894
8	Steel, Galv, Oxford White, 40"	BX050416
9	Transition, B pillar	B-FBUS371
10	Trim Channel T-6, 12' pc	BX050004
11	Trim Insert with Leg	BX050002
12	Trim end cap	BX050464
13	Skirt Trim Insert without Leg, horizontal applications	BX050046
14	Steel, GLV, Oxford White 10"	BX050416



ROADSIDE		PART NUMBER
1	Drip Rail	B-K060PW 16
2	Fender Well trim, black rubber	BX050077
3	Light, Marker, Side, RED #18	BE010532
4	Mirror, See SIDE MIRRORS	BX050528
4A	Mirror Mounting Bracket #B-21.731.2	BX050517
4B	Mirror Head only	BX050518
5	Mud Flap, rear, black poly, 18x24x3/16	BX050050
5A	Mud Flap Bracket	BX050502
6	Transition, B pillar, More-View	B-FBUS372
7	Trim Insert with Leg	BX050002
8	Steel, GLV, Oxford White 40"	BX050416
9	Skirt Trim Insert without Leg	BX050046
10	Steel, GLV, Oxford White 10"	BS020638
11	Trim Channel T-6, 12' pc	BX050004
12	Window, Mor-View non tint	B-1999-0913



**EXTERIOR**

**EXTERIOR SIDE  
CARE &  
MAINTENANCE**

**UNIVERSAL**

**SUGGESTED DAILY INSPECTION/MAINTENANCE CHECK LIST**

DATE: \_\_\_\_\_

PART	SUGGESTED MAINTENANCE	NOTES	COMPLETED BY
Exterior body panel & Fiberglass components	Clean road film and dirt from body panel by wetting down with a hose and wiping with a sponge or cloth. Never use harsh abrasives or strong solvents on the bus exterior.		
Roof Area	Inspect roof for scrapes or cuts caused by tree limbs or other overhanging obstructions. Repair as necessary. Wash dirt and grime from roof using a mild household detergent.		
Seams, Rub Rails and Mouldings	Inspect for damages, scrapes, cuts or cracking. Repair as necessary.		
Lights Emergency, directional, hazard, clearance, marker, etc.	Inspect each light to confirm they are working properly. It is recommended to have a person on the exterior checking the lights as a second person inside the vehicle activates the lighting. Replace any blown or damaged bulbs/fixtures immediately.		
Underbody	Clean off any road debris, dirt and salt from the underbody. These circumstances can accelerate the corrosion of the components under the vehicle such as the frame, suspension, exhaust parts, etc.		
Reflectors	Inspect to ensure the reflectors are in place.		
Mirrors	Inspect to ensure the mirror heads and support arms are secure and the bolts and mounting brackets are not damaged or loose. Check power operations where applicable. Secure or replace items as necessary. Clean with a standard glass cleaner.		
Skirting	Inspect for scratches, cracks or damage. Repair or replace as necessary. On the steel skirting, check that the skirt has not been hit and is not interfering with the tires or restricting any other function under the bus.		



EXTERIOR

TRIM & ACCESSORIES  
R & R  
INSTRUCTIONS

UNIVERSAL

### *Passenger Side Wing Removal/Installation Instructions*

#### **Removal**

- Remove gimp around wing.
- Remove screws at angle portion of window.
- Remove 1 bolt at each side of bottom of wing.
- Remove two bolts at top where it connects to cap.

#### **Reinstallation**

- Replace gimp around wing.
- Position wing onto bus body side.
- Reinstall bolts to wing and body of bus.
- Reinstall bolts at top of wing to cap.
- Replace screws at top angle of wing.

**Labor Allowance**

**.7 hr**

### *Skirting Removal/Installation Instructions*

#### **Removal**

- Remove condensor screens (Road side only).
- Remove side marker lights (Road side only).
- Remove battery door, when necessary (Road side only).
- Remove gimp and trim around skirting.
- Remove wheel well molding.
- Score seam with a putty knife to cut double sided tape loose.
- Skirting can now be pulled off.

#### **Reinstallation**

- Reinstall double sided tape to the skirting.
- Position skirt onto bus body.
- Reinstall gimp and trim.
- Reinstall wheel well molding.

**Labor Allowance**

**2-3 hr**

***Wheel Well Removal/Installation Instructions***

**Removal**

- Remove 6 self tapping screws from perimeter of wheel well.
- Remove wheel well molding.

**Reinstallation**

- Position wheel well molding onto bus and replace screws.

**Labor Allowance** **.5 hr**

***Fuel Fill Removal/Installation Instructions***

**Removal**

- Remove 6 self tapping screws.
- Remove 3 screws holding bezel to neck.

**Reinstallation**

- Position bezel and fuel fill neck to bus.
- Replace screws.

**Labor Allowance** **.3 hr**



**EXTERIOR**  
**STANDARD FEATURES**  
**UNIVERSAL**

**SIDE**  
**MIRRORS**

**NO PHOTOS AT TIME OF PRINTING**

<b>SIDE MIRRORS, MANUAL</b>		<b>PART NUMBER</b>
1	DRIVER SIDE	CALL FOR PN
2	PASSENGER ( CURBSIDE), FENDER MOUNT	CALL FOR PN
*PLEASE CALL FOR PART NUMBERS. VARIOUS OPTIONS AVAILABLE		

***Curb Side Mirror***

**Removal**

- Remove 6 - 1/4" RIV nuts from mirror on the fender.

**Reinstallation**

- Reposition mirror over existing holes.
- Replace 6 RIV nuts.

**Labor Allowance** **.3hr**

***Street Side Mirror***

**Removal**

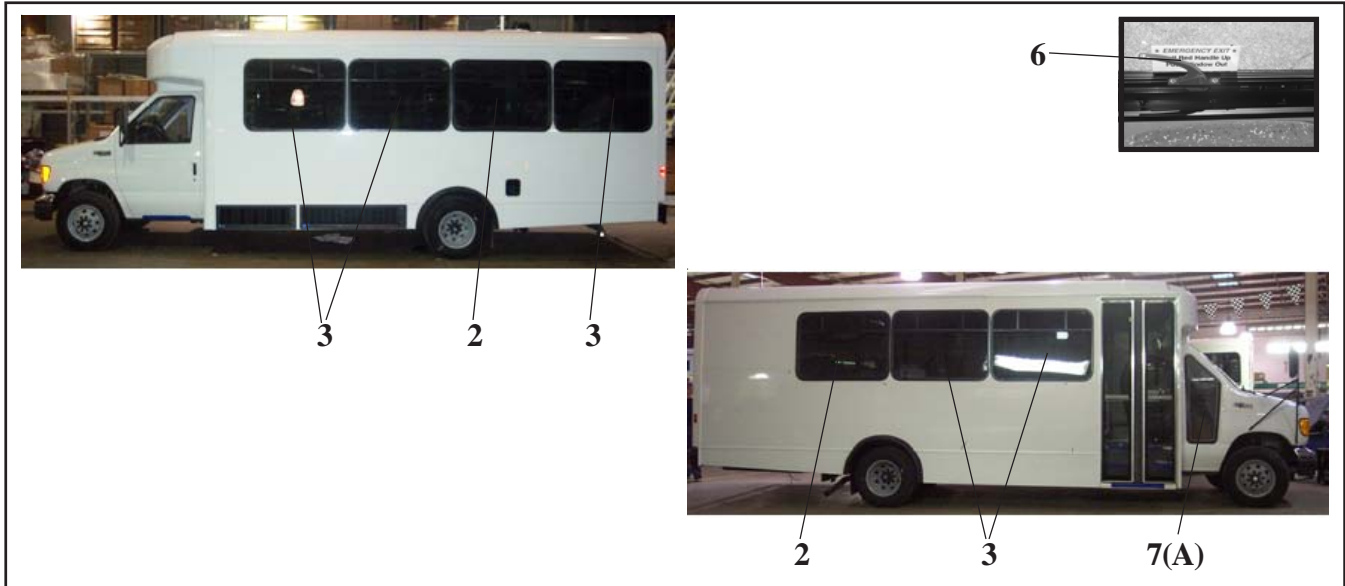
- Remove black triangular shaped access panel from driver door panel by popping it off door.
- Remove 3-716" nut screws from inside door.

**Reinstallation**

- Reposition mirror over existing holes.
- Replace 3- 716" nuts.
- Replace access panel .

**Labor Allowance** **.3hr**





<b>WINDOWS-KINRO</b>		22.5" W x 32.5 H	46.5W x 32.5 H
1	Double T-Slide (2) NOT SHOWN, 20% Light Transmission	BX050540	NA
2	Double T-Slide Egress (2) 20% Light Transmission	NA	BX050539
3	Double T-Slide (4) 20% Light Transmission	NA	BX050538
4	Window Seal NOT SHOWN "D"	BX050373	BX050373
5	Window screw pan quad 8x 3/4 Blk Oxide NOT SHOWN	BH080051	BH080051
6	Egress Handle	B-RM08401-03	B-RM08401-03

<b>MISCELLANEOUS WINDOWS</b>		<b>PART NUMBER</b>
7	Mor-View Window, non-tint	B-1999-0913
7A	Mor-View Window Mounting Bracket	BS020346
8	Window Decal "PULL HANDLE & PUSH" (On Egress Windows)	BI060097
9	Window, Rear Wall	BX050113

***Complete Window Removal/Installation Instructions***

**Removal**

- Remove luggage racks, if applicable.
- While one person removes the screws (8 x 3/4” black oxide pan quad) from the interior trim ring/garnish, a second person is required to hold the window from the outside to prevent window from falling out.
- When all screws have been removed from interior trim ring, window will be loose. The person on the outside can now lift window out of opening.

**Reinstallation**

- Prep window by cleaning outer ring of the inside of the window with rubbing alcohol.
- Apply clean seal around outer ring of inside window.
- Position a new trim ring on interior of window opening. While holding trim ring, have a second person on the outside place window into opening. Pushing window into trim ring. Making sure window is flush on all sides.
- Reinstall all screws starting at each corner to pull the window into place, then working down the sides to the bottom.

**Labor Allowance .8hr**

***Slider Vent Window Removal/Installation Instructions***

**Removal**

- Slide window open.
- Using needle nose pliers, remove slide track. Slide window over to where track has been removed and tilt out of frame.

**Reinstallation**

- Tilt slider window and place in window frame. Slide to “open” position.
- Replace slide track by pressing into window frame.
- Slide window closed.

**Labor Allowance .5 hr**

**NOTE: On slider windows, dirt and debris can collect in the slider track, which will not allow the window to seal completely allowing water to enter into the interior of the vehicle. Please make sure these tracks are cleaned regularly.**

## *Egress Window Handle Removal/Installation Instructions*

### **Removal**

- Drill 2 rivets heads out & remove old handle and rivet base

### **Reinstallation**

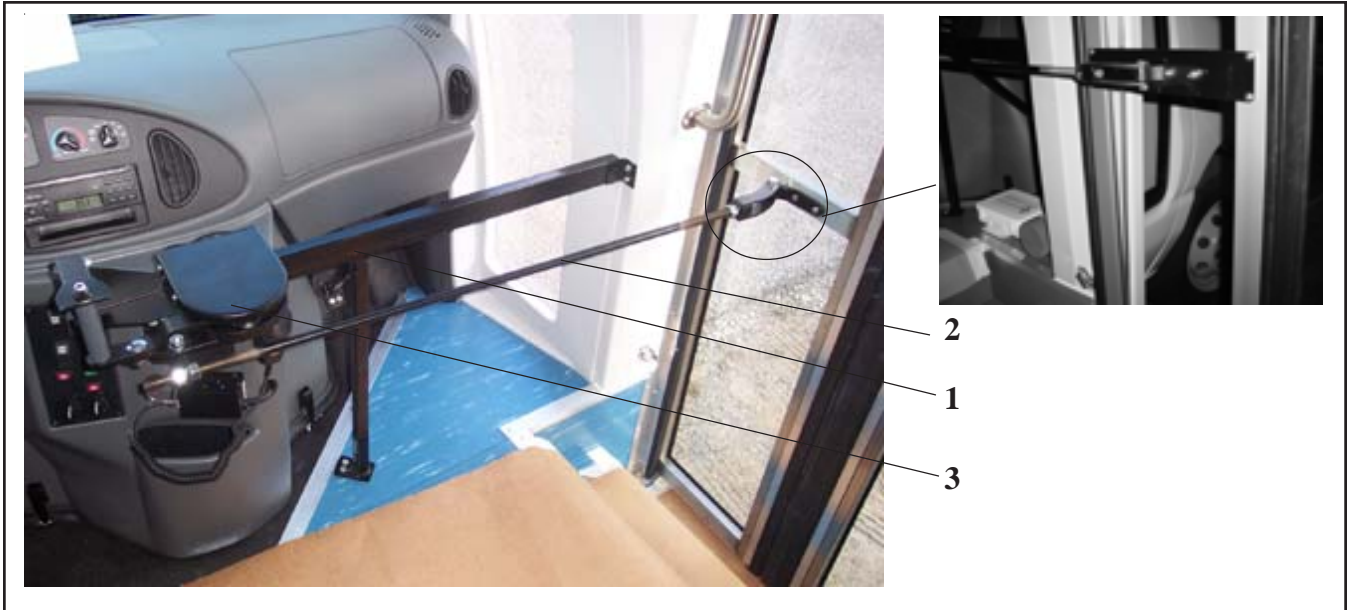
- Install new handle with EITHER: 2 rivets or 4 washers (on each side of handle) and nuts & bolts supplied in kit.

**Labor Allowance**

**.3 hr**



<b>Door Components</b>		<b>PART NUMBER</b>
1	Universal/Titan Front Door 14-3/4 x 83	BX050701
2	Universal/Titan Rear Door 14-3/4 x 83	BX050701
3	Door Seal	BX050047
4	Door Brace, manual	BS020948



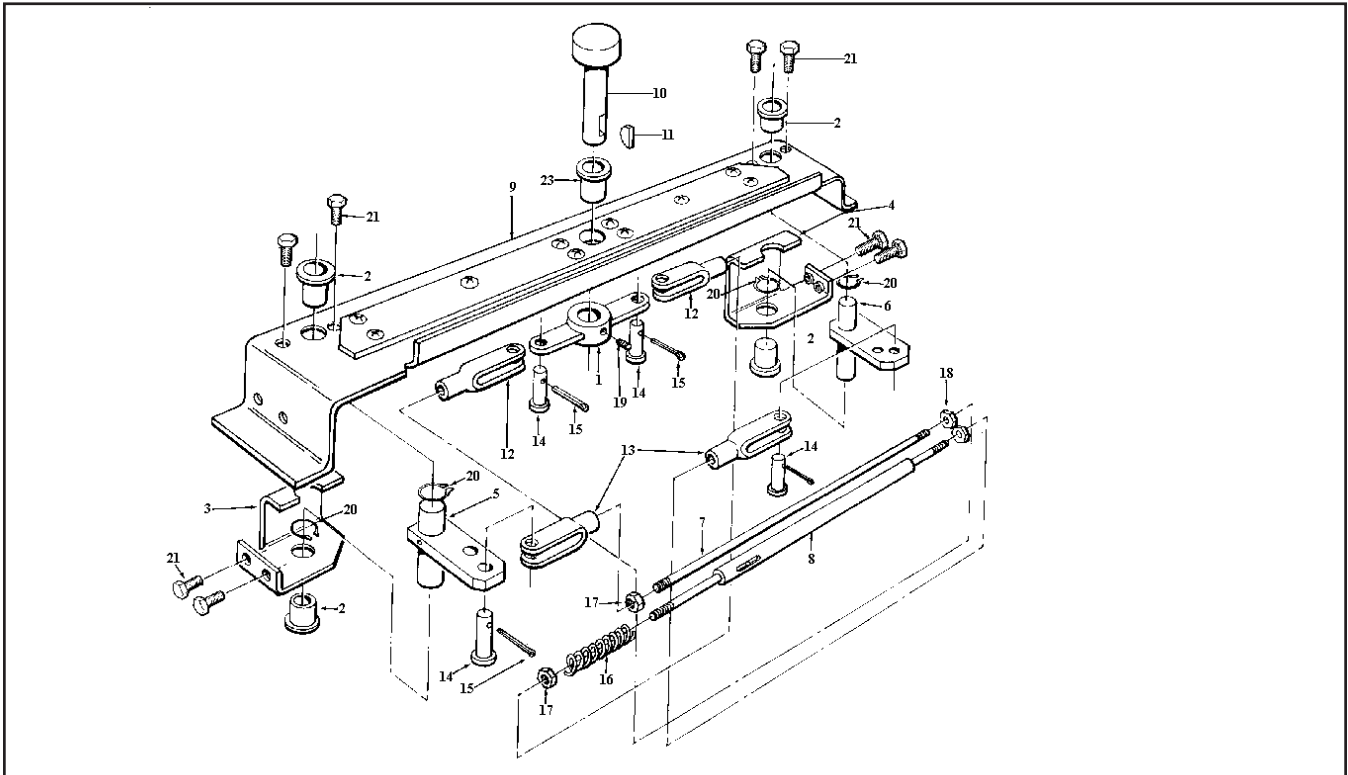
MISCELLANEOUS WINDOWS		PART NUMBER
1	Bracket, Assy, Manual Door Control	BS020948
2	Rod, Door Closer 42"	BI060413
3	Control, Manual Door	BI060049
4	Yoke, Door Plate Assy	BI060433



3                      1                      2



Door Components		PART NUMBER
1	Entry Door Overhead	BI060544
2	Wing Entry Door Rear	CBUS3069
3	Header, Manual Control NOT SHOWN (See next page for breakdown)	BX050530



ENTRY DOOR, MANUAL CONTROL BREAKDOWN		PART #
1	PIVOT ARM	B-150105
2	BUSHING	B-150108
3	PIVOT BRACKET R/H	B-150109A
4	PIVOT BRACKET L/H	B-150109B
5	PIVOT LINK R/H	B-150110A
6	PIVOT LINK L/H	B-150110B
7	TIE ROD RIGHT DOOR	B-150125
8	SPRING ROD LEFT DOOR	B-150117
9	FRAME	B-350100
10	DRIVE SHAFT	B-250102
11	KEY, WOODRUFF #806	B-806
12	CLEVIS L/H	B-350000-12
13	CLEVIS R/H	B-350000-13
14	CLEVIS PIN	B-350000-14
15	COTTER PIN 3/32 x 1	B-350000-15
16	SPRING	B-350000-16
17	JAM NUT L/H 3/8-24	B-350000-17
18	JAM NUT R/H 3/8-24	B-350000-18
19	SET SCREW 1/4-20 x 3/8	B-350000-19
20	SNAP RING	B-350000-20
21	HDCSS SERRATED HEAD 1/4-20 x 1/2 HEX	B-350000-21
22	BUSHING	B-350000-23



### *Door Component Removal/Installation Instructions*

#### *Seal Brush*

##### **Removal**

- Open door, slide brush along track outward to remove.

##### **Reinstallation**

- Slide replacement brush all the way into the track.

**Labor Allowance .2hr**

#### *Seal Brush Track*

##### **Removal**

- Remove seal brush.
- Remove track by drilling out the three pop rivets.

##### **Reinstallation**

- Position new track in place.
- Replace new track onto door frame with 1/4" Pop rivets.
- Replace seal brush.

**Labor Allowance .3hr**

#### *Door Center Brace*

##### **Removal**

- Remove 1/4" bolts

##### **Reinstallation**

- Position new brace and install new bolts.

**Labor Allowance .3hr**

#### *Relay*

##### **Removal**

- Remove entry door header panel.
- Unplug wires from relay(2).
- If changing out both, be careful not to exchange parts.

##### **Reinstallation**

- Reconnect wires to new relay(s).
- Reinstall door header

\*Symptoms of bad relay(s): Stepwell light will not stay on with out holding button.



***Complete Door***

**Removal**

- While a person is holding the door, remove two allen head 9/16” nuts from the pivot base the bottom inside corner of the door.
- Remove the pivot base.
- Tilt the door outward slightly while pulling down on the door. You may need to “twist” door from side to side to release the door. There is a 6” hex shaped rod at the top of the door going into the door header.

**Reinstallation**

- Insert hex rod into hole in door header.
- Push door upward until it is all the way to the top of the header.
- Reinstall the pivot base.

**Labor Allowance** **.5 hr**

***Bulb Seal -Small***

Small goes along each side of door frame

**Removal**

- Lift edge of seal and pull seal from track.

**Reinstallation**

- Insert one end of seal into track and press into track. Continue until all of seal is pressed into track.

**Labor Allowance** **.3hr**

***Bulb Seal - Large***

Wide goes along top of door frame and is screwed into place.

**Removal**

- Remove screws from seal.
- Lift edge of seal and pull seal from track.

**Reinstallation**

- Insert one end of seal into track and press into track. Continue until all of seal is pressed into track.
- Replace screws.

**Labor Allowance** **.3hr**

***Entry Door Motor***

**Labor Allowance** **2.0hr**