GRANDE WEST

SIMCOE 30’ 2018 (P11)

OPERATOR’S MANUAL

vicinity

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CHAPTER 1 GENERAL INFORMATION

INTRODUCTION

OVERVIEW

This manual contains information regarding the operation of the Vicinity bus, manufactured by Grande West Transportation International Ltd. This information applies to original equipment and recommended optional equipment.

All of the information contained in this manual is based on the most up-to-date data available at the time of publishing. Grande West Transportation International Ltd. reserves the right to change the procedures, materials, specifications, dimensions or design of the vehicle shown, described or referred to herein at any time and without prior notice in accordance with the Company's policy of constant product improvement.

It is advisable that customers refer to the electronic copy of the manual for latest updates and revisions of any printed versions of this document. The discrepancy between the time of publishing and most recent changes reflected on the electronic copy of the manual may compromise this document's accuracy.

SERVICE ASSISTANCE

Grande West Transportation International Ltd.

3168 262 St. Aldergrove, BC

Canada V4W 2Z6

For technician support, call 1-855-381-3303 or visit **www.grandewest.com**

UNITS AND CONVERSIONS

Measurements are given using the Metric system. A conversion to the Imperial system is offered in most cases. Below is a table of the most commonly used Metric units, their abbreviations, and their Imperial equivalents.

Metric	Imperial
Kilometre (km)	Mile (mi)
Metre (m)	Foot (ft)
Millimetre (mm)	Inch (in)
Kilogram (kg)	Pound (lb)
Gram (g)	Ounce (oz)
Litre (l)	Gallon (gal)
Newton metre (Nm)	Pound-foot (lb-ft)
Kilopascal (kPa)	Pound per square inch (psi)
Degrees Celsius (°C)	Degrees Fahrenheit (°F)

CONTACT INFORMATION

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HEALTH AND SAFETY

WARNING SYMBOLS

Please take note of the following symbols, which are used throughout this manual to identify potential health hazards or to provide instructions to prevent any personal injuries or damage to the vehicle and its components.

⚠ WARNING

Information in this box contains safety instructions that, if not strictly adhered to, could result in environmental damage, personal injury, or death.

CAUTION: Information with this heading serves as a reminder of an operation that could result in vehicle damage if not followed properly.

Note: This heading contains a tip and/or unique procedure for operating the vehicle.

OPERATING THE VEHICLE

Normal hazards are associated with all forms of powered transport. Before driving the vehicle, operators should familiarize themselves with the vehicle operator's handbook to understand the vehicle controls.

HAZARDOUS MATERIALS

⚠ WARNING

Certain components on the vehicle contain or may produce material that must be handled with caution. The materials listed in this section must not be ingested or come into contact with the eyes, skin, or mouth.

BATTERY ACID

Diluted sulphuric acid can cause skin burns, eye damage, and internal damage if ingested. Vapour from the solution can also irritate the respiratory system and eyes. Take care when topping up or carrying the battery. Since hydrogen gas is given off by the battery, it is highly explosive and a naked flame should never come within close proximity.

COOLANT

Cooling system antifreeze contains ethylene glycol and therefore is highly toxic if ingested. Do not allow coolant to come into contact with the skin or eyes as it can be absorbed through the skin and cause irritation.

OIL AND HYDRAULIC FLUID

Oil contains small amounts of polycyclic aromatic hydrocarbons, which can cause irritation, dermatitis, and acne if it comes into repeated contact with the skin. Toxicity through ingestion of oil or hydraulic fluid is of a low order, however this should be avoided. If it is swallowed or comes into contact with the eyes, seek medical advice immediately.

FRICTION MATERIAL DUST

Friction material dust may contain a high percentage of white asbestos bonded in a resin. Handling and fitting lined brake shoes or clutch plates is not regarded as a health risk. Dust masks should be worn when working around dust produced by worn linings. However, it is necessary to avoid generating airborne dust concentration, therefore an approved vacuum cleaner or damp cloth should be used for dust removal.

INSULATION MATERIAL

Insulation materials include man-made fibres, such as glass, rock, slag, and metal oxides. Contact with these may cause skin irritation. Inhalation of dust from the fibres should be avoided and proper mask and gloves should be worn when working in direct exposure.

DIESEL FUEL

Skin contact with diesel fuel may cause irritation and dermatitis. Inhalation and ingestion are major risks and can cause serious medical problems. If swallowed or contact is made with the eyes, seek medical attention immediately.

DPF EXHAUST SYSTEM

During regeneration, exhaust gas temperatures can reach 800°C (1,500°F), and exhaust system surface temperature could exceed 700°C (1,300°F). These temperatures are hot enough to ignite or melt common materials, and to cause serious burns.

EXHAUST EMISSIONS

Exhaust emissions can be highly toxic if inhaled in sufficient quantity. Avoid exposure to emissions in enclosed spaces and use adequate extraction devices.

ENVIRONMENTAL WARNINGS

Used engine oil, hydraulic fluid, transmission fluid, coolant/antifreeze, batteries, and tires can pose a serious threat to personal health and the environment. These materials must be disposed of in a safe and environmentally responsible manner.

These items must never be disposed of using household refuse bins or by pouring down drains. Observe local regulations and laws pertaining to environmental protection and disposal of hazardous materials.

Contact local authorities for information on safe disposal facilities in your area.

WORKING ON THE VEHICLE

Normal hazards are associated with all forms of powered transport. Before beginning work on the vehicle, make note of all instructions pertaining to safety and hazardous items. Ensure that all personnel are using appropriate safety equipment.

When working on the vehicle and its components, particularly the parts removed from the chassis, the following areas may present hazards in addition to those normally encountered on a motor vehicle:

- Projections – chassis cross members, exhaust tail pipe, etc.
- Moving parts – cooling fan, drive shaft, brake levers, steering linkage, etc.
- Temporary components – driver's seat, etc.
- Noise – engine, exhaust, etc.
- Projectiles – screws under high air pressure, etc.
- Stored energy – tire air pressure, braking system air pressure, parking/emergency spring brake compression, diesel injection pump, etc.

VEHICLE IDENTIFICATION

The exact vehicle specification is identified by the Vehicle Identification Number (VIN) stamped on the manufacturer's identification plate, located at floor level beneath the defroster access panel. Please quote the VIN in any enquiries concerning this vehicle. An example VIN plate is shown below:

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th	17th
WMI Number			Vehicle Descriptor Section								CVMA			Serial Number		

VEHICLE IDENTIFICATION

This manual only applies to 2018 Vicinity buses bearing the following Vehicle Identification Numbers:

2G9B30AA2JA098368	2G9B30AA3JA098377	2G9B30AA7JA098379	2G9B30AA3JA098380

REVISION HISTORY

Date	Revision	Version	Page(s)	Comment	Author
2018/05/04	0	1.0	N/A	Initial release	A. Kedans

CHAPTER 2 TOWING

TOWING

All models of the Vicinity bus should be moved on a tilt-deck trailer only, as depicted in Figure 2.1. This method presents the least likelihood of damage to the bus during loading and towing.

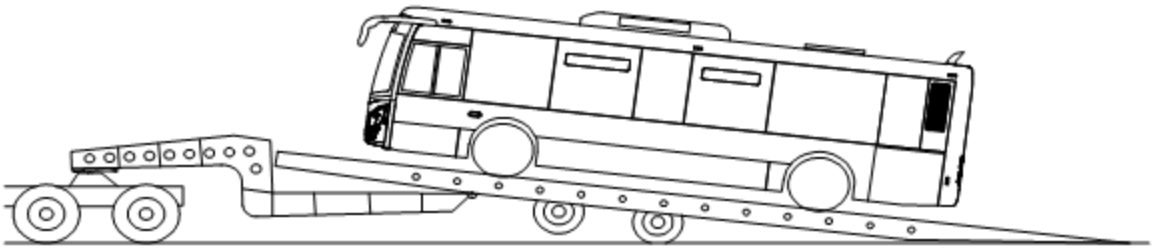


Figure 2.1

TOWING – EMERGENCY ONLY

In the event of an emergency, and a tilt-deck trailer is not available, it is possible to use other towing methods. However, there is an extreme risk of damage to the bus, so the towing company must accept all responsibility for the towed bus.

The following warnings apply to all towing methods:

⚠ WARNING

The driveshaft or both rear axle shafts must be removed when towing with the rear wheels on the ground.

⚠ WARNING

Axle blanking plates must be installed if the rear axles are removed for towing.

⚠ WARNING

When towing with a wheel-lift truck, the road clearances are greatly reduced. The tow-truck operator must use extreme caution to avoid contacting the road with the rear end of the bus.

FRONT TOWING WITH WHEEL LIFT

The Vicinity bus can be towed from the front, as depicted in Figure 2.2. However, the bus must be properly prepared for towing, and particular care must be taken during the tow.

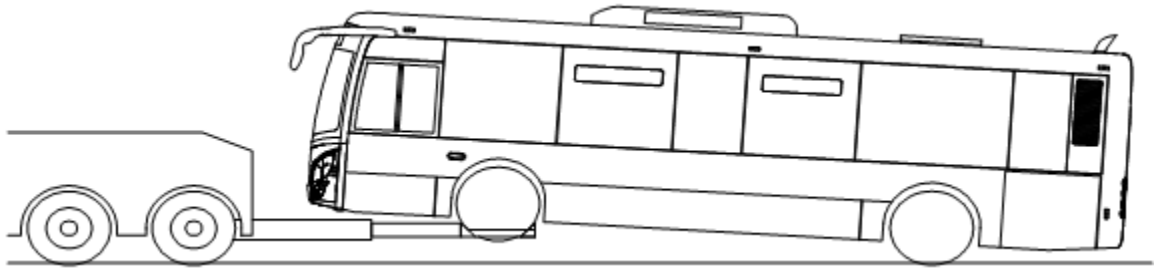


Figure 2.2

Drive Shaft / Axles: Either the drive shaft or both rear axle shafts must be removed for towing. This is necessary regardless of distance or speed to be travelled. Regardless of the make of the transmission, damage to the transmission is likely to occur if the driveshaft or axles are not first removed.

Axle blanking plates must be installed if the rear axles are removed for towing. This will prevent the loss of rear-axle lubricating oil.

Suspension: Prior to towing with a wheel-lift truck the bus suspension should be set to the "Level II" height. Once the bus is at the "Level II" height, the power should be removed from the ECAS ECU. That can be accomplished by turning off the main battery switch. The bus will then remain at the level II height during the tow.

Level II will provide extra road clearance. However, extreme caution should be taken during the tow, as there is still a high likelihood of impact with the road, which even at slow speeds can cause severe damage to the transmission pan, among other components.

Spring Brakes: When towing with a wheel-lift truck the spring brakes will need to be released. Before releasing the spring brakes, make sure the bus cannot roll. Either the wheels should be blocked, or the tow vehicle should be coupled to the bus before the spring brakes are released.

Air can be supplied to the bus through an auxiliary air coupling, located behind the left front bumper panel. Once the bus has an air supply the spring brake valve will release the spring brakes in a normal fashion.

The spring brakes can also be released manually. On each spring brake chamber, the caging bolts must be screwed out. This compresses the spring in the actuator and releases the brakes.

The spring brake caging bolts can be accessed as follows:

- **Single rear wheels:** Through round floor panels located inside the bus over the rear axle.
- **Dual rear wheels:** From underneath the bus.

Doors: Care must be taken to ensure the doors will not open during towing operations. This may occur if there is loss of air during the tow. The doors can be held closed with straps or bungee cords attached to stanchions in the bus.

REAR TOWING WITH WHEEL LIFT

The Vicinity bus can be towed from the rear, as depicted in Figure 2.3. However, the bus must be properly prepared for towing, and particular care must be taken during the tow.

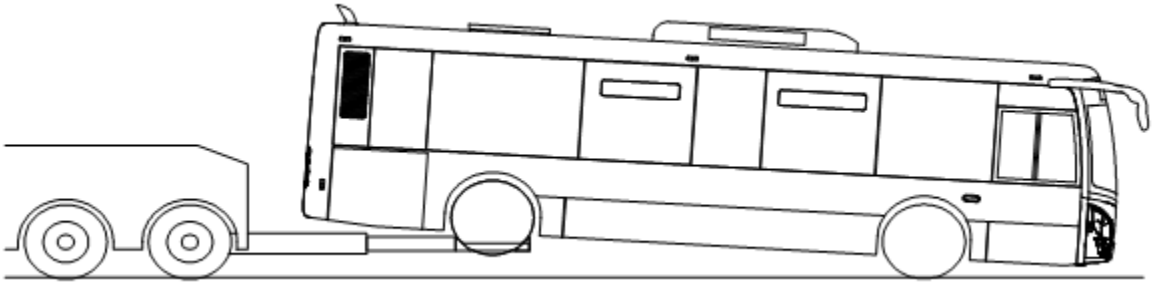


Figure 2.3

Suspension: Prior to towing with a wheel-lift truck the bus suspension should be set to the "Level II" height. Once the bus is at the "level II" height, the power should be removed from the ECAS ECU. That can be accomplished by turning off the main battery switch. The bus will then remain at the level II height during the tow.

Level II will provide extra road clearance. However, extreme caution should be taken during the tow, as there is still a high likelihood of impact with the road, which even at slow speeds can cause severe damage to the transmission pan, among other things.

Doors: Care must be taken to ensure the doors will not open during towing operations. This may occur if there is loss of air during the tow. The doors can be held closed with straps or bungee cords attached to stanchions in the bus.

Steering: When towing from the rear, it is necessary to tie the steering wheel.

TOWBAR TOWING

The Vicinity bus can be towed from the front using a tow bar with both the front and rear wheels on the ground, as depicted in Figure 2.4. Again, the bus must be properly prepared for towing, and particular care must be taken during the tow. A tow bar is available as a special order from Grande West.

Prior to towing, prepare the bus using the procedures described in the section "Towing from the Front with a Wheel Lift", above.

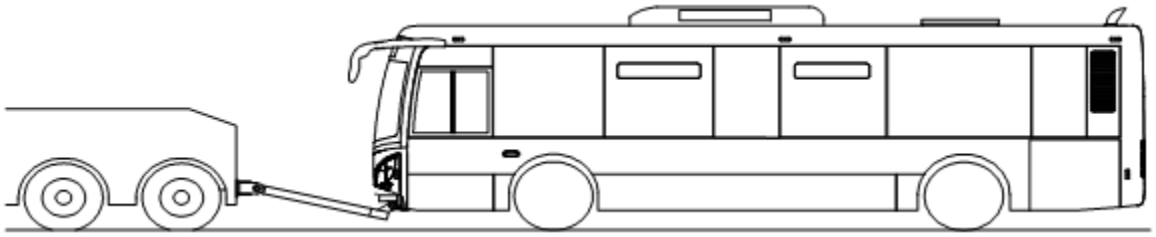


Figure 2.4

Note: When towing with all wheels on the ground, the steering wheel is not locked in place, which allows the front wheels to caster behind the towing vehicle.

If a tow truck with a wheel lift adapter is used for tow bar towing, it will be necessary to construct an adapter to match the wheel lift swivel to the towing eyes on the bus.

CHAPTER 3 SAFETY INSPECTION

PRE-TRIP CHECKS

EXTERIOR

Prior to operating the vehicle, a thorough inspection of the exterior of the bus should be conducted. Walk around the bus, checking for signs of damage and correct operation of the following components:

- Headlights
- CVIP decal and license plate expiry date
- Securement of bike rack
- Left and right turn signals
- Tires, rims, lug nuts, and wheel nut pointers (if applicable)
- Destination signs
- Mirrors
- Windshield wipers
- Windows
- Body panels
- Clearance lights, tail lights, stop lights, and four-way hazard flashers
- Compartment doors are closed and latched

ENGINE COMPARTMENT

The following checks within the rear and side engine compartments are applicable only if relevant to your workplace:

- Transmission fluid level
- Coolant and engine heating loop
- Power steering fluid hoses
- Battery condition
- Drive belts
- Engine oil level
- Fluid leaks under the engine

INTERIOR

Before operating the vehicle, ensure that the following components are working properly:

- Passenger seats, seatbelts, and stanchions
- Mobility aid securement equipment
- Fire extinguisher is within the expiry date
- Accessibility of emergency exits
- Driver's seat and steering wheel are adjusted to the correct height
- Door and wiper controls
- Turn on and test interior lights, defroster unit, auxiliary heater, and air conditioning
- Alignment of mirrors
- Kneeling function and ramp
- Insurance paperwork is up to date

AIR BRAKES

Check the braking system by performing the following tests in order:

- Maximize air pressure
    - Let the compressor build air to maximum pressure. When maximum pressure is achieved, a burst of air released from the air dryer should be heard when the governor disengages the compressor.
- Cooling test
    - Lightly fan brakes to drop pressure by 69 kPa (10 psi). The air gauge should not move, indicating that the compressor remains in the cooling stage.
- Compressor loading test
    - Lightly fan down another 69 kPa (10 psi). The air gauge needle should move, indicating that the

compressor has restarted the loading stage.

- Air leak test
  - With the air gauge registering 689 kPa (100 psi) or more, turn the master power switch to OFF. Apply the brakes fully and hold for one minute. Listen for air leaks and check the air gauges. The amount of air pressure lost should not exceed 21 kPa (3 psi) per minute.
- Low air warning device
  - With the master switch in the RUN or NIGHT RUN position, fan down the brake treadle, ensuring that the low air warning device (visual or audible) activates before 414 kPa (60 psi).
- Compressor build up test
  - Fan down the brake treadle until the air pressure gauges read 345 kPa (50 psi). Restart the engine, applying 1/3 throttle. Air pressure should build from 345 to 621 kPa (50 to 90 psi) in less than three minutes.
- Parking brake test
  - To test the holding power of the parking brake, apply the parking brake and select "Drive" while accelerating gently.
- Service brake test
  - Release the parking brake and select "Drive." Gradually accelerate forward for 3 – 5 m (10 – 15 ft), then firmly apply the brakes.
- Seat alarm test (if installed)
  - With the transmission in DRIVE, apply the brake treadle firmly and lift your body weight off the seat to check the seat alarm. The seat pad alarm is linked to a warning lamp and buzzer, and interlocked with the door brake and throttle.

TROUBLESHOOTING

This section contains common issues and offers solutions on how to fix them. If you are still experiencing difficulties, or do not see your issue listed here, call Technician Support.

ENGINE

Problem	Recommended Solution
Engine light on	Turn the master power switch to OFF. Exit the bus and check for leaks underneath. Check for proper coolant levels in the engine compartment. Restart* and check if the engine or transmission light continues to stay on. If so, remove the bus from service as soon as practical.
Engine not starting	Check if the transmission is in Neutral. Turn the master power switch to OFF. Wait a full minute, then restart.*

*Restart procedure: Turn the master switch to RUN. Wait until all the dash lights have cycled (approx. 10 seconds). Start the bus.

TRANSMISSION

Problem	Recommended Solution
Transmission light on	Turn the master power switch to OFF. Exit the bus and check for leaks underneath. Check for proper coolant levels in the engine compartment. Restart* and check if the engine or transmission light continues to stay on. If so, remove the bus from service as soon as practical.
Bus will not shift into gear	Firmly apply the brakes and ensure that the parking brake is released. Check or adjust accelerator pedal/injection pump. If the transmission oil sump temperature is below -20°C (-4°F), warm up engine for approximately 5 minutes.

*Restart procedure: Turn the master switch to RUN. Wait until all the dash lights have cycled (approx. 10 seconds). Start the bus.

DESTINATION SIGNS

Problem	Recommended Solution
Destination sign does not turn on	Connect power cable or repair damaged connector. Check the power supply voltage. Ensure that all cables and power connectors are connected and undamaged. If the problem persists, a fuse, the Control Console, or the junction board may require replacement.
Control Console does not turn on	Check the Control Console cable connection and repair damaged connector. If this does not fix the problem, the Control Console may need to be rewired, or the fuse may require replacement.
LCD screen is dim or displays incoherent messages	Shut off system and reboot.

COMMON ISSUES

Problem	Recommended Solution
Bus will not move	Ensure that the ramp is stowed and the kneeling switch is at "normal" position. Ensure that the parking brake is released and the transmission is in Drive. Check that the transmission oil level is sufficient.
"Next stop" button will not turn on/off	If the "next stop" button will not turn on, ensure that the cancel button is not activated. If the "next stop" button will not turn off, check if it is stuck in the ON position.
Ramp not deploying/stowing	Ensure that the parking brake is on and the transmission is in Neutral. Turn the master power switch to OFF, wait a full minute, restart.*
Doors not working Wipers not working HVAC system not working Destination sign not working	Turn the master power switch to OFF, wait a full minute, then restart.*

***Restart procedure:** Turn the master switch to RUN. Wait until all the dash lights have cycled (approx. 10 seconds). Start the bus.

CHANGE-OFFS

WHEN TO PROCEED

If you observe the following issues with the bus, complete Trip Inspection Report and continue driving:

- Clearance light/license not working during daylight hours.
- Unmarked body damage.
- Windshield or window(s) damaged or chipped, but vision not obstructed.
- Exterior boarding light not working.
- Washer fluid empty.
    - Proceed only if safe.
- High beams not working during daylight.
- Exterior reflectors missing or damaged.
- Interior (dome) light not working.

WHEN TO CHANGE-OFF

Call *Logistics* immediately and request a new bus if:

- Entrance/exit door(s) not working.
- Destination sign not working.
- Dash lights not working.
- Sun visor not working.
- Windshield or window(s) damage that obstructs vision.
- Flat tire.
- Engine fluid loss.
- Stop engine or warning light is on.
- Kneeling function or ramp not working.
- Parking brake not holding.
    - Use wheel chock.
- Seatbelt issues.
- Square wheel feel during braking.

- Windshield wipers or washer fluid not working.
- Hazardous or unsecure passenger seat.
- Steering wheel play is more than 75 mm (3 in).
- Horn not working.
- Missing/misaligned wheel pointers (if applicable) or elongated pattern around lug nuts.
- Inaudible "Next Stop" bell push.
- Brakes dragging.
- Interior/exterior mirror(s) issues.
- Expired CVIP or insurance decal.
- Bike rack defect.
- Smoke inside bus.
    - Shut ignition off and evacuate passengers.
- Smoke coming from wheel(s).
- Smoke or fire from engine.
    - Shut ignition off and evacuate passengers immediately.
- Both headlights not working during dusk hours.
- Turn signal light(s) not working.
- Both tail lights not working.
- Wipers not working if raining.
- Exterior mirror(s) detached.
- Brake light(s) not working.

WHEN TO CALL FOR REPAIR

Call a service technician or drive to garage for repairs if any of the following occurs:

- Headlight(s)/tail light(s)/brake light(s)/turn signal light(s) not working.
- Windshield wipers worn or washer fluid empty.
- Strange sounds or smells emitting from the bus.
- Fire extinguisher expired or depleted.
- Missing three emergency reflector triangles.
- Wheel chock missing.
- Mobility aid securement fasteners missing.
- Low fluid levels.
- Clearance light/license plate light not working during dusk hours.

WHEN TO REPAIR ON-ROAD

Perform an on-road repair and change off bus when possible if the following issues occur:

- Little or no heat from the HVAC system.
- Destination sign not working.
- Horn not working.
- Hazardous or unsecure passenger seat.
    - Isolate seat until change-off.
- Inaudible "Next Stop" bell push.

CHAPTER 4 VEHICLE OPERATION

BASIC OPERATION

ENTERING THE VEHICLE

To enter the vehicle from the front door:

1. Slide back the front portion of the driver's window, taking care not to damage the door seal when pulling it open.
2. Reach into the opened window and turn the door controller handle to a position that opens the entrance door (#1, 2, or 5).
3. If an emergency situation prevents the door from opening, it can be manually opened by exhausting air from the system. To do this, turn the door manual control valve on the side console to the OFF position. Then, open the door manually by pulling out the door seal halves.

STARTING THE ENGINE

⚠ WARNING

If the parking brake indicator does not illuminate on the dash when the parking brake is applied, do not operate the vehicle.

Before operating the vehicle, perform the following starting procedure:

1. Ensure that the battery disconnect switch is in the ON position and the parking brake is applied. The vehicle should be at a standstill.
2. Press the "Neutral" button on the gear selector.
3. Turn the master switch to either "Run" (if daytime) or "Night Run" (if nighttime).
4. Push the green "Engine Start" button.
5. Allow the engine to idle in order to warm up and build air pressure.

CAUTION: A warning buzzer will sound if the vehicle is not ready for use. Check the display panel.

DRIVING PROCEDURE

⚠ WARNING

Never select "Neutral" during driving operation as the power flow between engine and output will be interrupted, resulting in loss of engine power and retarder braking action.

Regular driving operation of the Vicinity bus is as follows:

1. Fasten seatbelt.
2. Ensure that the transmission is in Neutral.
3. Apply the brake treadle.
4. Release the parking brake.
5. Push "Drive" on the gear selector.
6. Accelerate.

PARKING/EXITING THE VEHICLE

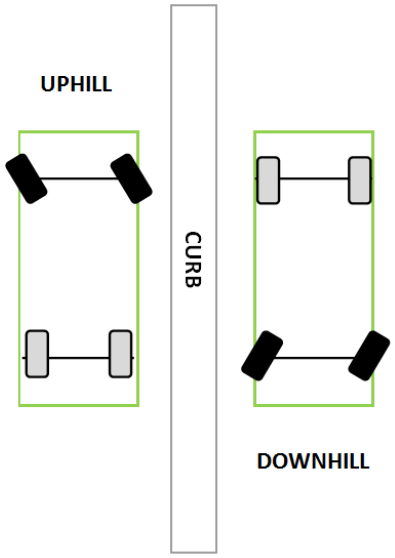
⚠ WARNING

The parking brake must be applied whenever the vehicle is parked.

Complete the following steps when parking and exiting the vehicle:

1. Bring the vehicle to a complete stop using the brake treadle. Use the gear selector to put the transmission into Neutral.

2. When parking downhill, turn the front wheels into the curb; when parking uphill, turn the wheels away from the curb (see diagram).



3. Apply the parking brake and release the brake treadle. The parking brake indicator LED light will illuminate.
4. Open the entrance door using the door controller, position #2.
5. Turn the master switch to the "Engine Off" position.
6. Exit the vehicle through the entrance door and manually close the doors.

ENGINE SHUT DOWN PROCEDURE

To safely shut down the vehicle:

1. Allow the engine to idle for 3 – 5 minutes. This allows sufficient time for engine cooldown.
2. Turn the master switch to ENGINE OFF.
3. When parking the bus for the night, wait for 2 minutes after the engine has shut down and then turn the battery disconnect switch to the OFF position.*

*Step 3 is only necessary if required by company policy.

LOADING/UNLOADING PASSENGERS

The following safety precautions should be observed when loading/unloading passengers from the vehicle:

- Only load/unload passengers from the curb side of the vehicle. Never load/unload passengers from the street side.
- Only load/unload passengers when the vehicle is stationary and on level ground in an open area. Never unload where traffic, trees, telephone poles, or other similar perils may interfere with passenger safety or result in ramp damage.

FILLING FUEL

CAUTION: This vehicle requires the use of an ultra-low sulphur diesel fuel containing no more than 15 ppm of sulphur.

Diesel fuel is held in a 270-litre (71-US gallon) tank located at the front curb side of the vehicle, above the wheel arch. Its access door assembly is complete with a steel hinged spring, allowing it to remain in an open position beyond 120°.

Note: Fill only while whistle is blowing.

TRANSMISSION – ZF ECOLIFE

GEAR SELECTOR

⚠ WARNING

Never leave the driver's seat while the gear selector is in an operating gear.

⚠ WARNING

Never operate the gear selector while stepping on the accelerator at the same time.

CAUTION: Always fully apply the brakes before shifting gears to avoid transmission damage.

The transmission gears can be engaged using a pushbutton with built-in LED.

Depress the brake treadle while pushing the "Drive" or "Reverse" gear selector buttons to switch into gear. Release the parking brake and brake treadle to begin driving.

Note: A flashing LED indicates that there is a fault with the transmission or gear selector.

DIAGNOSTICS

The electronic control unit's function is to control and monitor the EcoLife transmission. It features all standard diagnostic protocols.

The signals for individual gearshifts are supplied by the electronic control unit. Depending on various operating variables of the engine, braking system, etc., the corresponding multidisc clutches or brakes are controlled via the electrohydraulic control unit. The diagnosis system of the electronic control unit monitors the transmission status whenever the vehicle circuit is switched on and in operation mode.

Errors are indicated by illuminated warning lamps (red or yellow) and/or warning messages that appear on the driver's display panel.

If a selected driving range is not accepted by the electronic control unit, the corresponding depressed pushbutton on the speed range selector will flash.

BRAKING

ANTI-LOCK BRAKING SYSTEM

This vehicle's Bendix® Anti-lock Braking System (ABS) uses wheel speed sensors, ABS pressure modulator valves, and an Electronic Control Unit (ECU) to control all four wheels. The EC-60™ controller monitors individual wheel turning motion during braking, checking for excessive wheel slip or lock-up, and automatically adjusts the brake pressure accordingly at the wheel end.

RETARDER

The transmission is equipped with a retarder system that activates when the throttle is released. The retarder provides enough braking force that minimal service brake application is required to slow the bus.

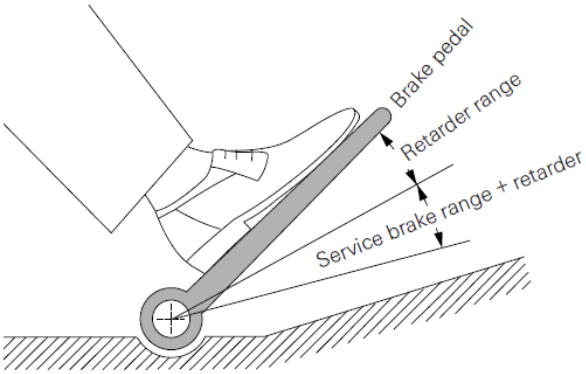
OPERATION

To operate the retarder, actuate the brake pedal. Retarder operation is accepted by the electronic control unit only under the following conditions:

- Accelerator pedal is in idling position.
- A forward gear is engaged.
- The driving speed exceeds approximately 3 km/h.
- The ABS system is not active.

If any one of these conditions is not fulfilled with the retarder engaged, the retarder will be deactivated.

When the maximally permitted oil temperature is approached, either the retarder's performance will be reduced, or the retarder will be disabled by the electronic control unit.



PARKING BRAKE

Parking brake application is made with the red control lever. When the handle is pulled up, it will automatically release to the drive position.

CHAPTER 5 ENTRY RAMP

RICON 621SA 6:1 GENERAL INFORMATION

DESCRIPTION

The standard Vicinity bus comes equipped with a 6:1 multi-slope Ricon ramp, located at the entrance door, to accommodate passengers who require the use of mobility aids or who are unable to easily climb steps. Its maximum weight capacity is 453 kg (1,000 lb). The ramp is connected to the electrical system to enable the interlock function. The ramp interlock circuitry senses the current position of the ramp and relays this information via the 55-pin amp harness connector.

The operator can stow or deploy the ramp using an electrical control found on the right front dash. The ramp can be operated using the deploy/stow buttons on the right front dash, or it can also be operated manually. For further information, refer to the Ricon operator's manual.

Note: The door will not close unless the ramp is stowed.

PRE-TRIP INSPECTION

Perform the following checks on a daily basis before allowing passengers to board the ramp:

- Ramp controller
  - Ensure that the Power ON/OFF switch works correctly.
  - Check if the Power On indicator illuminates when the Power ON/OFF switch is ON.
  - Ensure that the DEPLOY and STOW switches work correctly.
  - Ensure that there are no unusual noises or erratic movements when the ramp is deploying/stowing.
- Ramp and surrounding area
  - Ensure that the vestibule area and trim pockets are free of loose objects and debris.
- Ramp non-slip surface
  - Clean the surface if any slippery or sticky substances that could compromise passenger safety is detected.
  - Ensure that the surface is intact and secure, and free from loose edges that can cause a tripping hazard.

RICON 621SA 6:1 POWER OPERATION

DEPLOYMENT

⚠ WARNING

To prevent injury or vehicle damage, do not attempt to deploy or stow the ramp until determining that nothing is blocking the door or ramp, and that the path is clear of obstacles.

⚠ WARNING

Inspect ramp before operation. Do not operate ramp if lift damage, wear, or any abnormal condition is suspected.

⚠ WARNING

Before operating the ramp, park the vehicle on a level area away from vehicular traffic.

In order to deploy the ramp:

1. Bring bus to a complete stop.
2. With the engine still running, press "Neutral" on the gear selector and apply the parking brake.
3. Kneel the bus using the kneeling rocker switch (see **Level Switch**).
4. Bring the entrance door to the fully open position.
5. Press the "Ramp Enable" switch downwards to the "enable" position.
6. Ensure that passengers are clear of the ramp area, then press the green "ramp deploy" button.

STOWING

⚠ WARNING

To prevent injury or vehicle damage, do not attempt to deploy or stow the ramp until determining that nothing is blocking the door or ramp, and that the path is clear of obstacles.

Ensure that all passengers are clear of the ramp and door before commanding the ramp to stow. Then, to stow the ramp:

1. Press the black "ramp stow" button and hold until the ramp is fully retracted and stowed on board the bus.
2. Fully close the entrance door.
3. Release the parking brake. The bus is now ready for normal operation.

RAMP BUTTONS

Before pushing the green ramp deploy button: the door must be open, the vehicle must be in neutral, the "Ramp Enable" switch must be pushed downwards to the "enable" position, and the parking brake must be engaged. The black stow button raises and folds the ramp inwards to stow position (floor level).

RICON 621SA 6:1 MANUAL OPERATION

DEPLOYMENT

⚠ WARNING

The likelihood of personal injury increases with repeated manual ramp operation. Use the manual operation only when necessary, and then change off the bus as soon as possible.

⚠ WARNING

Inspect ramp before operation. Do not operate ramp if lift damage, wear, or any abnormal condition is suspected.

⚠ WARNING

Before operating the ramp, park the vehicle on a level area away from vehicular traffic.

Manual operation of the ramp should only be performed when the power is not working. In order to manually deploy the ramp:

1. Bring the bus to a complete stop.
2. Press "Neutral" on the gear selector and apply the parking brake.
3. Kneel the bus using the kneeling rocker switch (see **Level Switch**).
4. Bring the entrance door to the fully open position.
5. Ensure that the "Ramp Enable" switch is in the upward position (disabled).
6. Ensure that passengers are clear of the ramp area. Stand clear of the ramp and grasp the lifting strap. Pull the ramp straight up using proper lifting procedure (i.e., lifting with legs and keeping a straight back).
7. Lift sufficiently to obtain a grip on the front edge of the ramp. Using both hands, slowly unfold the ramp from its stowed position and lower onto ground.

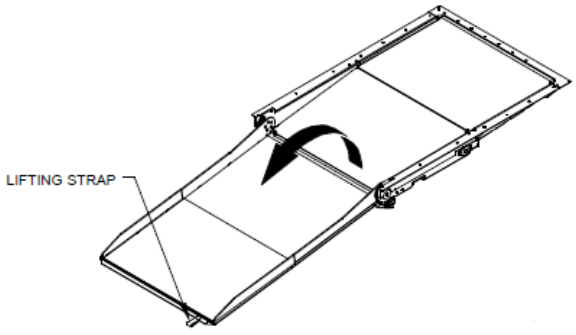
STOWING

CAUTION: Before stowing, ensure that all passengers are clear of the ramp and door. Do not operate the vehicle or close the entrance door until the ramp is fully stowed.

To manually stow the ramp:

1. Grasp the strap and lift the ramp using proper lifting procedure (i.e., lifting with legs and keeping a straight back).
2. Lift sufficiently to obtain a grip on the front edge of the ramp.
3. Lower the ramp back into its stowed position.
4. Fully close the entrance door.
5. Release the parking brake. The bus is now ready for normal operation.

For ramp troubleshooting, refer to **Common Issues**.



CHAPTER 6 SEATING

MOBILITY AID SECUREMENT

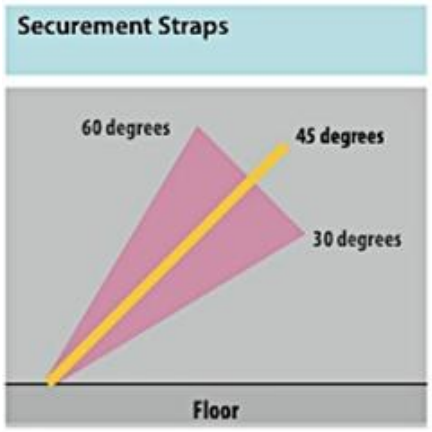
SECUREMENT STRAPS

Similar to the functionality of a seatbelt, Q'Straint straps are designed to secure mobility aids and self-tighten in response to movement in transit.

Note: All mobility aids must be secured during operation.

SECUREMENT STRAP ANGLES

When securing a mobility aid (e.g., wheelchair), the securement straps should form an angle of 45 degrees to the floor for maximum stability. While 45 degrees is the optimal angle, a range between 30 to 60 degrees is considered acceptable. An angle of less than 30 degrees or greater than 60 degrees poses a danger of front-to-back or side-to-side instability.



MOBILITY AID CONDITION

Mobility aids (e.g., wheelchairs, scooters, etc.) in disrepair or those without adequate anchor positions for safe and secure travel are not permitted aboard Vicinity buses. Report such problems to *Control*.

SECURING A MOBILITY AID

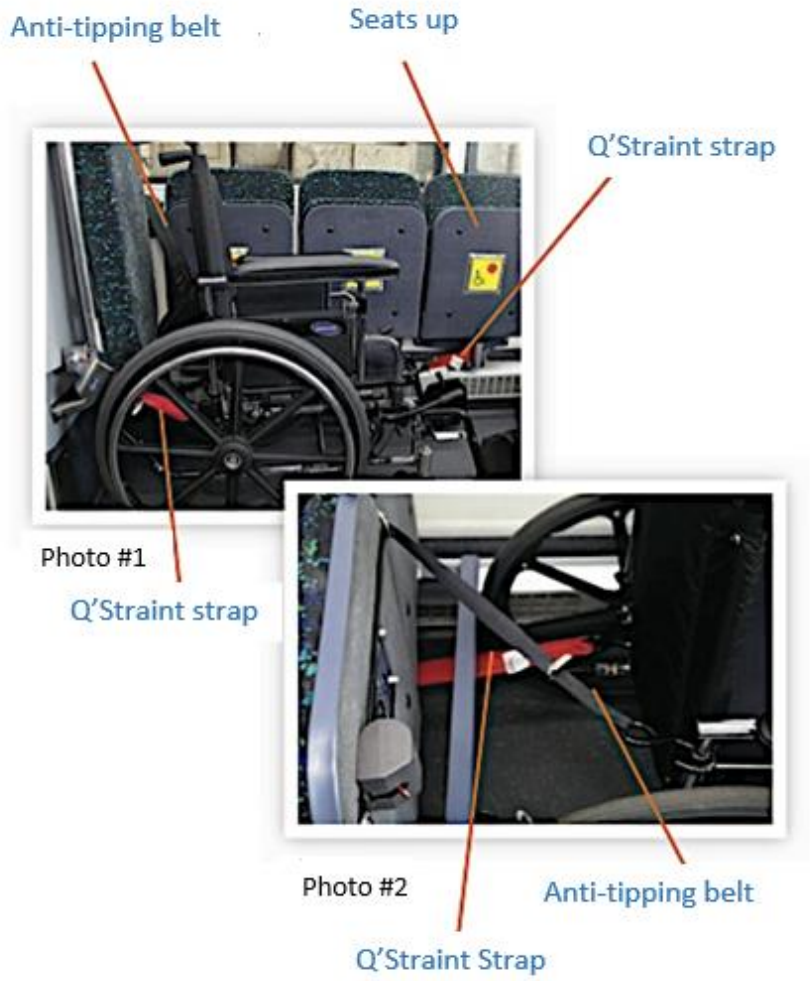
There is a street side rearward-facing mobility aid area immediately behind the street side front wheel well, and another curb side rearward-facing mobility aid seating area immediately behind the curb side front wheel box. In order to secure a mobility aid in one of these locations:

1. Point out the available accessible position (forward- or rear-facing) to the passenger in the mobility aid. Ensure there are no obstacles preventing the passenger from moving into the appropriate position.
2. When the passenger is in position, lock the mobility device's brakes or turn the power to OFF.
3. In the rear-facing mobility aid area (photo #1 below), pull the Q'Straint belt from each retractor and attach the front J-hook to the front of the frame and the rear J-hook to the rear of the frame of the mobility device.
4. In the forward-facing mobility aid area (photo #2), pull the Q'Straint belt from each retractor and attach each of the J-hooks to the rear of the frame. When attaching J-hooks to the mobility device, choose a stable attachment area of the frame.
5. The retractors will tighten automatically and will self-lock in response to the motion of the bus.

ANTI-TIPPING BELT

This belt is used to prevent the mobility device from tipping during turns. In the rear-facing position (photo #1 below), place the anti-tipping belt on the highest point of the mobility device on the aisle side. In the forward facing mobility aid areas (photo #2 below), use the release pin to allow the anti-tipping belt to move freely and place it on the highest point on the mobility device on the aisle side.

Note: Connect the J-hook to the highest point possible on the mobility aid.



ISRI DRIVER'S SEAT

OVERVIEW

The ISRI driver's seat is a fully adjustable air suspension seat with headrest, two armrests, and a 3-point seat belt option. Adjustment can be made fore and aft with a minimum 9" travel.

Note: Adjustments should be made to allow for maximum driving visibility and control.

SEAT ADJUSTMENT

⚠ WARNING

Never adjust the seat while operating the vehicle. Only perform a seat adjustment when the vehicle is stationary.

Note: Seat anchorages and locking parts must be checked periodically. Modifications to the safety belt system are not allowed.

1. **Control switch:** Activates the seat. To exit the seat, push the control switch down.
2. **Horizontal slide adjustment:** Pull the central lever to move seat forward/backward. Release lever to lock the seat in position.
3. **Slope adjustment:** Pull the handle and adjust slope by loading/unloading the front seat cushion area.
4. **Seat cushion adjustment:** Pull the lever to move the seat cushion forward/backward. Release lever to lock the seat cushion in position.
5. **Damper adjustment:** Adapts the suspension characteristics of the seat to the driver's preference and road condition. Adjust the lever up for minimum damper force and down for maximum damper force.
6. **Height adjustment:** Pull or push the handle to adjust the seat to desired height.
7. **Lumbar support:** Push the button to vent and bleed the air chamber to conform to body shape.
8. **Backrest adjustment:** Pull handle and adjust angle by applying weight against the backrest.
9. **Armrests:** Inclination can be adjusted by rotating the front knob.

SEAT BELT

An integrated 3-point seat belt is fitted to the driver's seat. The seat belt recoil is located to the left of the driver.

CHAPTER 7 EMERGENCY OPERATION

EMERGENCY SWITCHES

EMERGENCY TOGGLE SWITCH

In a critical emergency situation, or when circumstances prevent you from using the radio to call a Code 9, use the "Destination Sign: Call 911" switch. This switch is located in the lower side console of the driver's station.

To activate it, flip up the red switch guard and pull the toggle switch toward yourself. The rear destination sign will display "CALL 911," alerting passersby to call emergency services. The interior destination sign will continue to display the destination as normal.

INTERLOCK OVERRIDE TOGGLE

The interlock override toggle switch should only be used in emergency situations, since it prevents the interlock from activating when the passenger door is opened.

EMERGENCY EXIT ALARM SWITCH

A micro switch is fitted to the window frame to warn the driver if an attempt to open the window is made while the vehicle is in motion.

DOOR EMERGENCY SWITCH

The door emergency switch is located on the ceiling panel above both doors. Push the red button to open the sealed cover (if installed), then rotate the switch to release the air pressure in the door. The door can then be pushed open manually.

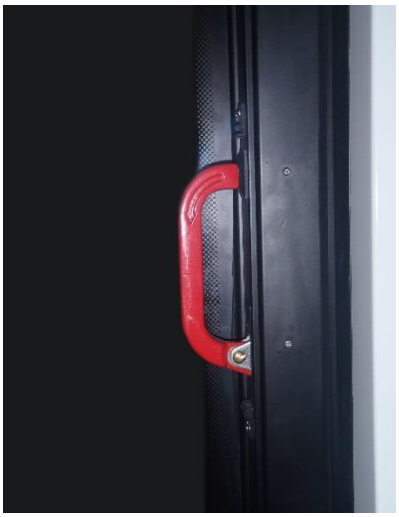
EMERGENCY EXITS

OVERVIEW

Vicinity is equipped with three emergency exit windows and a roof escape hatch. The rear exit door also provides an escape route.

PASSENGER EXIT WINDOWS

Two emergency exit windows are located on either side of the bus, near the middle of the passenger area. To open one of these exit windows, pull the red handle down and push the bottom of the window outward. To close, pull the window in toward the bus and ensure that it is safely latched shut.



DRIVER'S WINDOW

The driver's window functions as an emergency exit. It can be opened by pinching the release mechanism and sliding the window forward.

ROOF EMERGENCY EXIT

An emergency escape hatch is fitted into the rear roof structure to facilitate evacuation in the event that the vehicle falls on its side. To open, push the roof hatch up to the open position and rotate the red handle either right or left to unlock. Then, push the hatch up and clear of the bus.

Note: The emergency roof exit is not to be used as a vent.

FIRE SUPPRESSION

AUTOMATIC FIRE SUPPRESSION SYSTEM

An automatic fire suppression system is mounted in the upper engine compartment and activates automatically during a fire hazard event.

In the event that the fire suppression system is automatically activated, the red and yellow indicator inside the switch will illuminate, and the alarm will sound. These will only turn off once the vehicle power is switched off.

FIRE EXTINGUISHERS

⚠ WARNING

Expired or depleted fire extinguishers cannot be used and must be replaced.

This vehicle may be equipped with dry chemical fire extinguishers. Common locations include behind the driver's seat, as well as on the top of the front street side wheel housing.

Note: Loud noises and a large cloud of extinguishing dust can be expected when discharging an extinguishing agent.

OPERATION

⚠ WARNING

Evacuate and ventilate the extinguished area to eliminate all smoke and fumes, as these byproducts can pose a health threat.

⚠ WARNING

If the fire cannot be approached any closer than the distance indicated on the label, it may be too advanced to fight with a fire extinguisher. In this case, evacuate the area immediately.

⚠ WARNING

Extinguisher discharge should be applied to the burned surface even after the flames have been extinguished to allow sufficient time for cooling and to prevent re-ignition.

To discharge a fire extinguisher:

1. Hold unit upright and remove pull pin.
2. Start back from the fire as indicated on label.
3. If the fire can be approached safely, direct the chemical flow at the base of the flames with a slow, side-to-side sweeping motion.

For more information, refer to the Strike First instruction manual included with this vehicle.

CHAPTER 8 DRIVER'S CONTROLS

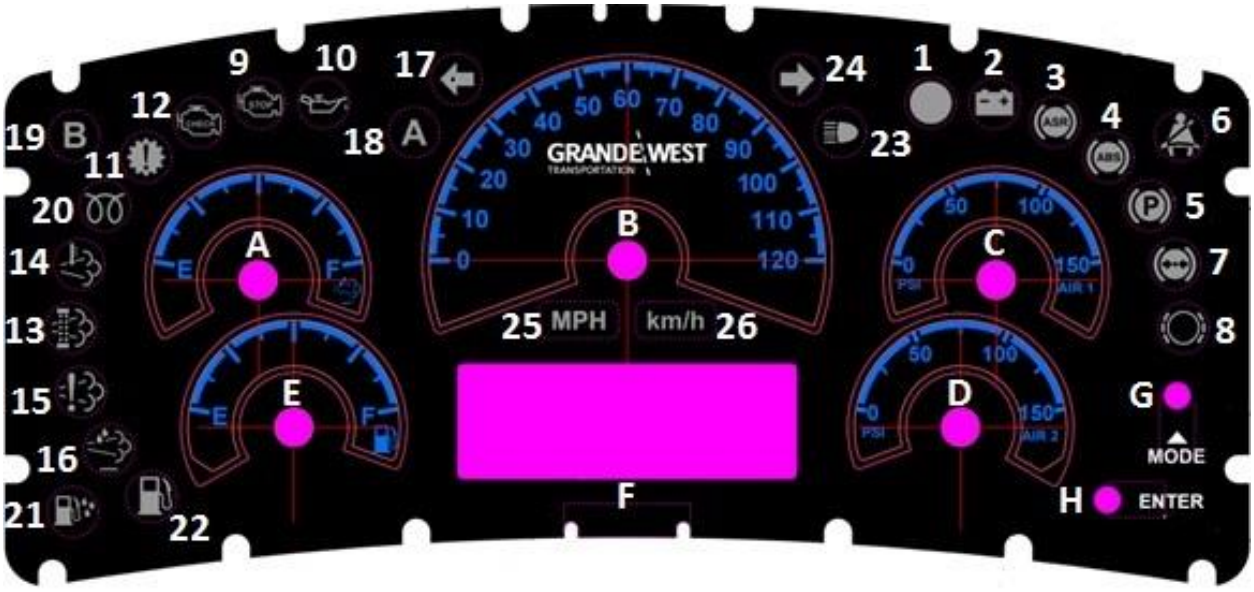
DISPLAY PANEL

DISPLAY PANEL STANDARD SYMBOLS

The display panel standard (DPS) is a software-programmable display panel capable of multiplexing. It controls indicator LEDs, gauges, and a graphic LCD screen.

Note: The DPS backlight will appear white when Day Run lights are activated and blue when bus is in Night Run mode.

For more information on the DPS, refer to the Parker Vansco manual.



1. Optional 'Circle'
2. Alternator Charge Indicator
3. ASR Active
4. ABS Active
5. Parking Brake Active
6. Seatbelt Warning
7. Low Air Warning
8. Not used
9. Stop Engine
10. Engine Oil Pressure
11. Check Transmission
12. Check Engine
13. Exhaust Aftertreatment
14. High Exhaust Temperature
15. Unused
16. Low DEF Warning
17. Left Turn Signal
18. Optional 'A'
19. Optional 'B'
20. Wait to Start
21. Water in Fuel Warning
22. Low Fuel Pressure Warning
23. High Beam
24. Right Turn Signal
25. MPH
26. km/h

A. DEF Level
B. Speedometer
C. Primary Air
D. Secondary Air
E. Fuel Level
F. LCD Display
G. Information Mode
H. Information Enter

LCD DISPLAY ICONS

LCD Display

Coolant Level Low

Transmission High Temperature

Transmission in Neutral

Transmission in Reverse

Transmission in Gear (1-6)

Rear or Side Engine Door Open

Traction Control Warning

Entrance/Exit Door Open

Next Stop Request Active

Wheelchair Next Stop Request Active

Wheelchair Ramp Deployed

ECAS Level-II Active

ECAS Bus Kneeled

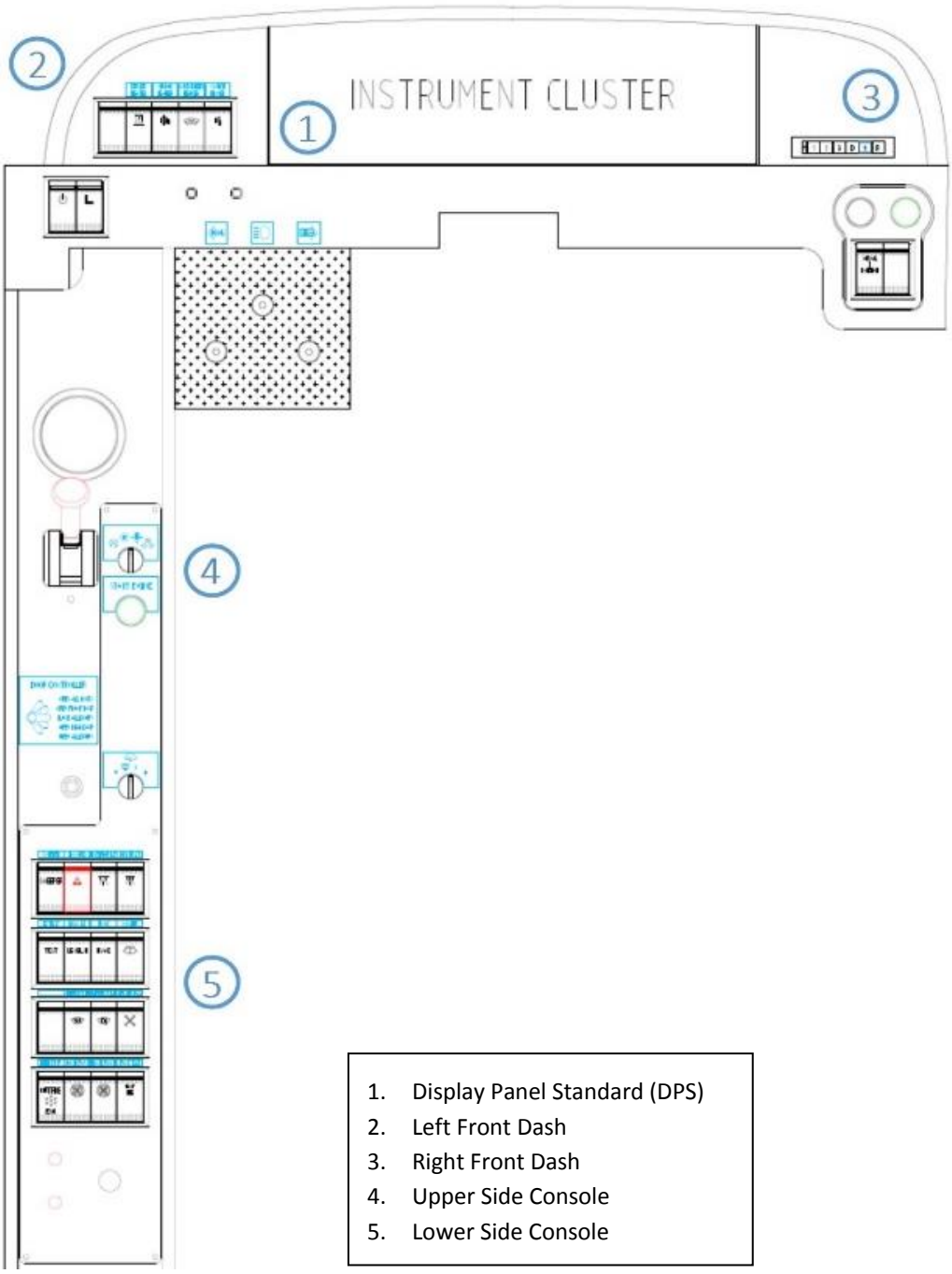
ECAS Warning

ECAS Fault
(Typically low voltage)

DRIVER'S STATION

GENERAL LAYOUT

Note: Switches shown in the diagram below may vary



1. Display Panel Standard (DPS)
2. Left Front Dash
3. Right Front Dash
4. Upper Side Console
5. Lower Side Console

LEFT FRONT DASH

The left front dash of the driver's station is comprised of a malfunction indicator lamp (1), as well as the following cluster of switches (in order from left to right).

DRIVER'S HEATER SWITCH

The driver's floor heater is controlled by a standard rocker switch that activates the floor heater fans on the floor directly to the left of the driver's seat.

MIRROR DE-ICER SWITCH

Heats and defrosts the Lucerix electrically powered exterior side view mirrors.

WINDSHIELD DE-ICER SWITCH

Activates the heating element across the span of the windshield where the wipers are located to de-ice the windshield in the wipers' path of motion.

DIMMER SWITCH

The dimmer switch is a variable scroll wheel switch that can be turned to adjust the brightness of the instrument switch lighting for the driver's station. Scrolling the wheel all the way downwards will turn off all instrument switch lighting.

RIGHT FRONT DASH

The right front dash of the driver's station is comprised of three main groups of switches.

TRANSMISSION GEAR SELECTOR

Transmission gears can be changed using a push button with built-in LED. A flashing LED indicates that there is a problem with the transmission or gear selector.

RAMP CONTROLS

Before pushing the green ramp deploy button, the following conditions must be met:

- the front door must be open,
- the vehicle must be in neutral,
- the "Ramp Enable" switch must be pushed downwards to the "enable" position, and
- the parking brake must be engaged.

The black button stows the ramp.

LEVEL SWITCH

The level switch is a rocker switch with a kneeling function that commands the vehicle to kneel the suspension to the lowest height. The normal level switch returns the vehicle suspension level to normal height.

UPPER SIDE CONSOLE

The upper side console of the driver's station contains the following switches and mechanical components.

PARKING BRAKE LEVER

The parking brake lever activates or de-activates the parking/emergency brake.

MASTER SWITCH

The master switch is a rotary switch that controls the running state of the vehicle.

1. "Off" shuts down the engine. The fare box will remain functional for 3 minutes.
2. "Day Run" is used for normal driving conditions when daylight is sufficient. When the engine is ready to start during daylight hours, switch to "Day Run," then press the green "Engine Start" button.
3. "Night Run" is used for normal driving conditions when daylight is insufficient. It turns on the headlights and clearance lights. Always operate the bus after dusk with the switch in this position.
4. "Night Park" is used for prolonged stops during nighttime, without the engine running. This mode retains functionality of interior lights, and forces clearance and brake lights to stay on for visibility. Park at layover with the switch in this position.

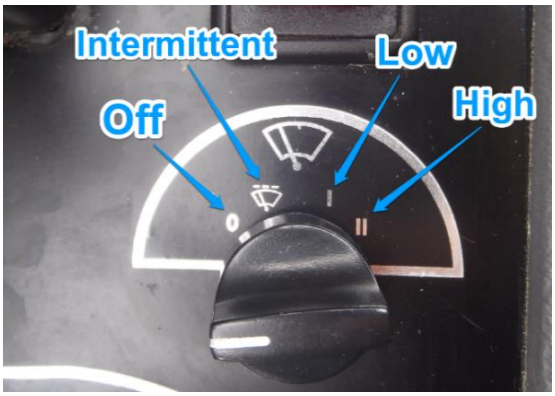
START ENGINE BUTTON

The green "start engine" button turns on the engine. After pressing, allow the engine to idle in order to warm up and build air pressure.

DOOR HANDLE

Door opening and closing is controlled by a 5-position lever. For instructions on opening and closing, refer to **Door Operation**.

WINDSHIELD WIPER CONTROL SWITCH



The windshield wiper switch has four positions: off, intermittent, low, and high. Rotate switch to intermittent to engage the windshield wipers once every 7 seconds.

LOWER SIDE CONSOLE

The lower side console of the driver's station includes the following switches.

HAZARD LIGHTS SWITCH

The hazard lights switch activates the 4-way flashers. If the vehicle is powered down, this switch can still wake up key components necessary to carry out a hazard light function, provided that the battery disconnect switch in the engine bay compartment is not disconnected.

DRIVER'S LIGHT SWITCH

The driver's light switch activates the reading light directly above the driver's seat.

INTERIOR LIGHTS SWITCH

The interior lights switch activates either half of the passenger overhead lights (2nd position) or all of the overhead lights (3rd position).

LIGHT TEST SWITCH

The light and buzzer test switch activates all exterior lights and the reverse buzzer.

ECAS LEVEL II SWITCH

CAUTION: Remaining in Level II for prolonged periods of time while mobile is not recommended due to potential risks involving damage to suspension components.

The ECAS Level II switch prompts the vehicle to achieve the highest possible ride height. It is used for special driving circumstances, such as dynamic terrain.

Note: Level II height can only be achieved at speeds under 20 km/h (12 mph).

HVAC CONTROL SWITCH

The HVAC system will turn on a few moments after activating the HVAC control switch.

WINDSHIELD WASHER SWITCH

The windshield washer rocker switch activates the windshield washers, as well as the wipers in low speed for a short duration of time.

DASH FAN SWITCH

The dash fan switch activates the fan on the driver's dash panel.

DEFROSTER SWITCHES

The fan speed of the windshield defroster system can be controlled using rocker switches, found on the driver's upper side console. The defroster system has two speeds: high and low-medium.

Note: Defrost I-II must be turned off in order to activate high speed.

DRIVER'S FAN

Cold air can be directed onto the driver by turning on the HVAC switch and adjusting the driver's overhead fans above the driver's station.

A three-position rocker switch controls the pressure of air blown. The positions are Off, Low, and High.

ENGINE FAST IDLE SWITCH

The engine fast idle switch increases the engine's idling RPM to 1100. Fast idle can be cancelled by pressing the switch again, or by any brake or throttle application.

INTERLOCK OVERRIDE TOGGLE

The interlock override toggle switch prevents the interlock from activating when the passenger door is opened. It should only be used in emergency situations.

SOS EMERGENCY TOGGLE SWITCH

The SOS emergency toggle switch should only be used in emergency situations, as it displays "SOS," "Emergency," and "Call 911" messages on the destination sign.

CHAPTER 9 DOOR SYSTEM

OVERVIEW

This vehicle comes equipped with electrically powered Vapor doors.

Refer to the Vapor OEM manual for door controller operations, wiring, and troubleshooting.

EMERGENCY EXIT VALVES

Both the entrance and exit door have a three-position emergency exit valve that enables manual opening of the door by exhausting air from the door system. Its design prevents a direct connection between the air supply port and the exhaust port at any position of the valve operating handle.

Push the red button to release the cover, then turn the switch.

AIR RELEASE VALVE

This red twist valve is located to the left of the driver. Turn the lever counter clockwise to dump the air, allowing the front door to open/close freely. Turn clockwise to close the exhaust valve.

DOOR OPERATION

Note: Before opening the entrance/exit doors, bring the bus to a complete stop and apply the parking brake.

Opening and closing is controlled by a standard 5-position door controller on the driver's left side console.

Starting from the top and turning clockwise, the positions are:

1. Entrance and exit doors open;
2. Entrance door open, exit door closed;
3. Entrance and exit doors closed;
4. Exit door open, entrance door closed;
5. Entrance and exit doors open.

CHAPTER 10 GLASS/BODY

WINDSHIELD

OVERVIEW

The Vicinity bus is equipped with a one piece windshield that spans the width of the bus. The windshield is 1473 mm x 2667 mm (58 in x 105 in).

DEFROSTING/DEFOGGING

The windshield is equipped with a defrosting and defogging system. The defrosting and defogging system is equipped with blower outlets mounted horizontally just below the windshield, and vertically on each side of the windshield.

WIPER SYSTEM

DESCRIPTION

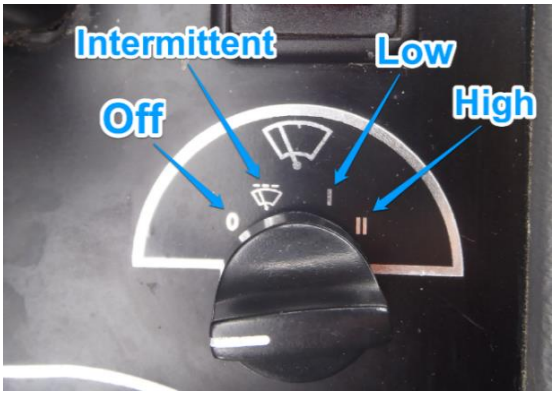
The windshield is equipped with an electrically controlled, two-speed, dual-blade wiper system.

PREVENTATIVE MAINTENANCE

Regardless of weather conditions, the windshield wiper and washer system should be operated at least once per day. This promotes sufficient lubrication and prevents rapid wear of components.

WIPER SWITCH

The windshield wipers are controlled by a rotary switch on the side console of the driver's station. The switch has four positions: off, intermittent, low, and high. Rotate switch to intermittent to engage the windshield wipers once every 7 seconds.



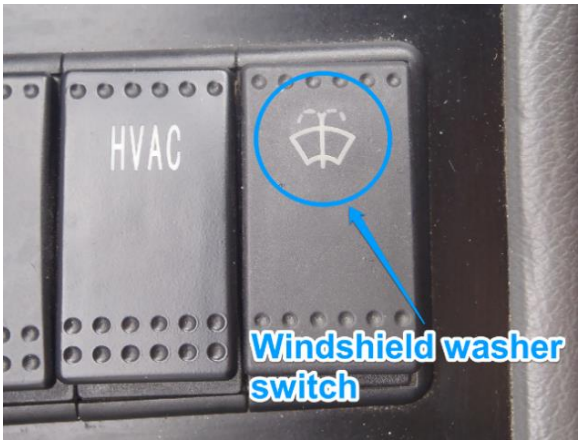
WASHER SYSTEM

DESCRIPTION

The windshield washer switch is located on the lower side console of the driver's station. When activated, a washer pump directs washer fluid from the reservoir via filler hoses. Washer nozzles mounted on the wiper arms then spray the windshield with the washer fluid and the wipers operate at low speed for a short duration of time.

WASHER SWITCH

The windshield washer rocker switch activates the windshield washers, as well as the wipers at low speed for a short duration of time.



WASHER FLUID

Washer fluid helps windshield wipers remove rain, dirt, or other buildup that can interfere with visibility. If washer fluid does not release when the washer control is activated, the reservoir may require more fluid, or the hoses and nozzles may need to be cleaned. In more severe cases, the washer pump may require replacement.

WASHER FLUID RESERVOIR

The windshield washer reservoir is installed in the front of the bus and can be accessed through the interior front panel. It is capable of holding 8.7 litres (2.3 US gallons) of washer fluid.

FILLING

A washer fluid filling port is located in the front exterior of the bus in a locked access panel under the windshield. The washer fluid reservoir should be checked regularly and refilled when necessary.

ACCESS DOORS

DEF TANK

The DEF tank is located in front of the curb side rear wheel. It contains a multifunction head unit that monitors the temperature and level of DEF in the tank.

CHAPTER 11 ELECTRICAL

BATTERIES

BATTERY DISCONNECT SWITCH

⚠ WARNING

The battery disconnect switch only disconnects the **positive** side of the battery.

The main power for the vehicle is controlled by the battery disconnect switch, which is located at the bottom of the engine compartment.

Battery disconnect switch – Power ON position

Prior to starting the bus, open the engine compartment door and turn the switch ON by turning it clockwise. When shutting down the bus at the end of a shift, turn the master run switch on the driver's side console to the "Off" position and wait 100 seconds before disconnecting the battery switch, or else an engine fault code will result.

Note: The disconnect switch should only be used for safety lockout, or when parking the vehicle for several days.

SAFETY PRECAUTIONS

⚠ WARNING

Working with batteries has the potential for danger. Use extreme caution when handling.

- Do not smoke near batteries.
- Do not expose batteries to naked flames.
- Always switch off electrical current before making or breaking electrical connections, especially during charging.
- Avoid short circuits.
- Highly explosive hydrogen gas is given off by the batteries. It is critical that no source of ignition come close to the batteries.

BATTERY BOX

Two 12V Optima absorbent glass mat (AGM) batteries are located in the curb side of the engine compartment. Each positive and negative bolt head is protected by a heat shield.

The batteries are contained within a steel battery box with a heat-deflecting aluminum shield overtop.

BATTERY BOOSTER PLUG

The bus can be jump started using a booster plug located on the right side post next to the battery box.

SIGNAL/SOUND SYSTEM

SIGNAL BELLS

All sound functions are controlled through the multiplex system, which uses a speaker to broadcast the appropriate sounds.

Passengers can operate signal bells by use of bell pushes located on both sides of the bus. They are engaged by a "push once" circuit fitted to prevent continuous ringing.

There are two distinct sounds for identification purposes:

- Single ring: A passenger wants to disembark.
- Double ring: A passenger using a mobility aid wants to disembark. Deploy the ramp.

MOBILITY AID BELL PUSHES

Bell pushes with a "wheelchair" legend are flush mounted to the wall within designated mobility aid seating areas. These bell pushes activate a ramp "warning lamp" within the driver's station and can be cancelled by the driver's operation of any door.

REVERSE ALARM

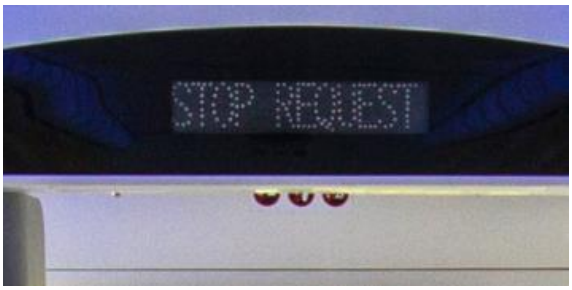
A warning beeper is fitted in the rear of the vehicle body to alert individuals when the vehicle is reversing. It operates only when the reverse gear is engaged and thus does not require an override button.

STOP REQUEST INDICATOR

Two LED bus stopping lights with red lenses are activated when any bell is pushed and extinguished when the entrance or exit door is cycled. They are fitted in the following positions:

- Rear bulkhead panel, facing forward.
- Front header above front well wheels, facing rear.

"Stop Request" will also appear on the interior destination sign in the passenger area.



DESTINATION SIGNS

OVERVIEW

24V DC power is supplied to Luminator destination signs using the main ignition switch (Bus Run). Destination signs do not run on the multiplex system.

FRONT DESTINATION SIGN

The front destination sign includes an electronic front display in a GRP housing above the front windshield dash. The display is fixed into a steel frame incorporated within the GRP housing.

SIDE DESTINATION SIGN

The side destination display is located at the top front corner of the first window behind the entrance door.

REAR DESTINATION SIGN

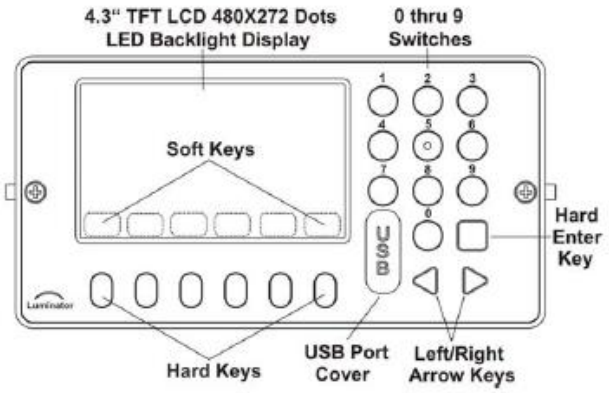
The rear destination sign is located below the upper deck rear dummy window, near the centerline.

It also functions as a "911" and "Route No." sign by activating the switch in the driver's side console. Momentary switch control for "Yield" is provided from the side console switch through a 7-second delay timer module.

Refer to **cancelling an emergency message** for further instructions.

LUMINATOR CONTROL CONSOLE

The header panel above the driver's seat includes an Operator's Display and Keyboard (ODK4). This is the vehicle operator's control and monitoring device, through which sign system operation can be checked or changed. The ODK4 stores and issues control signals and display messages to all of the destination signs. The vehicle operator uses the ODK4 to control and verify the sign system's message displays during normal operation.



ENTERING A ROUTE

To enter a route number, press the ROUTE key on the ODK4 default screen. After consulting your Transit Authority code list, use the arrow keys on the keypad to type the desired route code. Press SELECT to confirm.

The route number just entered will display on the ODK as well as on the destination signs.

Note: To change a route number, use the right arrow key to move the square cursor to the end of the string. Then, use the left arrow key to move cursor back to the left to erase existing numbers. Enter a new route number and press SELECT to confirm.

ENTERING A PUBLIC MESSAGE

Note: A valid destination must be entered before entering a public message.

To set a public message to be displayed on the destination signs, press the P/R key on the default screen. After consulting your Transit Authority code list, use the arrow keys on the keypad to type the message number code. Press ENTER to confirm.

The public message will appear on the ODK4 screen approximately 5 seconds after the code is entered.

To change or clear the public message display, use the left/right arrow keys to highlight a number. Press

CLEAR to erase it or DEL to delete an entire string. Input a new number, or press ENTER to confirm.

DEST A" AND "B" KEYS

The "DEST A" and "DEST B" key buttons allow for the storage of two route numbers at a time. Begin with programming Destination A by pressing the "DEST A" key on the default screen. Consult your Transit Authority code list and enter the destination code number using the number pad. Press ENTER to confirm. The destination will appear on the ODK4 screen approximately 5 seconds after the code is entered.

Repeat the same steps to program Destination B.

Note: To change a destination, use the right arrow key to move the square cursor to the end of the string. Then, use the left arrow key to move cursor back to the left to erase existing numbers. Enter a new destination code and press SELECT to confirm.

CANCELLING AN EMERGENCY MESSAGE

To clear an Emergency Message once it has been entered, one of two methods may be used, depending on how "AUTO OFF MODE" is set.

If "AUTO OFF MODE" is **enabled**, push the **SOS emergency toggle switch** again to open the emergency message circuit and signs will automatically return to the last destination that was set.

If "AUTO OFF MODE" is **disabled**, push the **SOS emergency toggle switch** to open the emergency message circuit, and then enter a destination code.

Note: To determine if "AUTO OFF MODE" is enabled or disabled, press the following on the ODK4:

Menu/ Config / Misc / Emerg/ Mode

To change the setting, press either "Enable" or "Disable" and press "Enter".

LIGHTS

HAZARD LIGHTS

The hazard lights switch, located on the driver's left side console, activates the 4-way flashing hazard lights. If the vehicle is powered down, this switch can still wake up key components necessary to carry out a 4-way hazard light function, provided that the battery disconnect switch in the engine bay is not disconnected.

KNEELING LIGHT

An LED wide angle lamp unit is located at the street side entrance door area at waist level. It flashes when the vehicle is kneeling and re-levelling.

DOOR LIGHT

One Truck-Lite single round LED light is positioned at the door shelf plate. It provides illumination to the pavement at the step edge.

Master control is available via the interior lighting and is operationally controlled using the multiplex system.

LIGHT/BUZZER TEST SWITCH

Located on the driver's lower side console, light and buzzer test switch tests the functionality of the lights and buzzer by activating all exterior lights and sounding the reverse buzzer.

DRIVER'S STATION LIGHT

Lights are fitted over the driver's seat and fare collection equipment. They are operated by the multiplex system.

Activation is controlled with a two-position switch located in the driver's cab, with one position allowing the light above the driver's seat to remain on.

Note: The driver's light is fixed, but the fare collection lamp is adjustable.

PASSENGER OVERHEAD LIGHTS

The passenger section of the vehicle is illuminated using LED strip lighting covered by white polycarbonate covers. One switch is used to operate all strips.

Lighting sequence is programmed as per customer specification.

INTERIOR LIGHTING SWITCH

The interior lighting switch is a three-position switch that activates either half of the passenger overhead lights (2nd position) or all of the overhead lights (3rd position).

CHAPTER 12 HVAC

HEATING

DEFROSTER SWITCHES

The fan speed of the windshield defroster system can be controlled using rocker switches, found on the driver's upper side console. The defroster system has two speeds: high (III) and low-medium (I-II).

Note: Defrost I-II must be turned off in order to activate high speed.

DRIVER'S FLOOR HEATER

The driver's floor heater is controlled by a standard rocker switch that activates the heater fans on the floor directly to the left of the driver's seat.

AIR CONDITIONING

A/C UNIT

The Spheros RG400 A/C Unit is mounted on the roof of the vehicle. It provides air conditioning to the bus and controls heating. The unit is operated by the **HVAC switch**.

DRIVER'S OVERHEAD FANS

Cold air can be directed onto the driver by turning on the HVAC switch and adjusting the driver's overhead fans above the driver's station.

A three-position rocker switch controls the pressure of air blown. The positions are Off, Low, and High.

A/C COMPRESSOR

The A/C compressor is mounted in the engine bay and is belt-driven by the engine. It activates in accordance with the system temperature, pressure switches, and programmed values of the set-point.

Note: The temperature of the air conditioning unit is pre-set and may not be changed or tampered with.