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INTRODUCTION

WELCOME TO THE GILLIG PHANTOM

This handbook was written to acquaint you, the driver, with the various features and operating techniques of this vehicle. Keep in mind that this manual is intended as a supplement to your employer's driver training program, not as a substitute for it.

Study this manual thoroughly before you try to drive the bus. Some of the features and procedures described here may not be your direct responsibility, but you will need to have a complete understanding of the bus and all its systems in order to drive it safely.

Some of the special equipment installed in your bus (such as audio-visual devices, P.A. systems, 2-way radios, etc.) may not be covered by this manual. Any questions about this equipment should be directed to your supervisor or your company's driver training expert.

This manual consists of four chapters, each devoted to a specific area of vehicle operation. Chapter 1 – *Driver's Compartment* covers the driver's controls and accessories. Chapter 2 – *Passenger Area* deals with emergency exits and equipment, wheelchair seating, and other features of the Phantom's interior. Chapter 3 – *Bus Operation* describes the procedures used during bus startup and operation. Chapter 4 – *Lift Operation* covers the operation of the special Lift-U wheelchair lift used to ease access for disabled passengers.

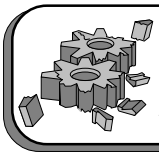
The Gillig Phantom is the result of Gillig's century of transportation and coach-building expertise. The Phantom is a tough and reliable workhorse, designed to meet your transit needs of today and beyond.

NOTICES, CAUTIONS, AND WARNINGS

When reading this manual, be sure to pay careful attention to the **WARNING**, ***CAUTION***, and *NOTICE* boxes which can be found in all sections (see below for examples). It is your responsibility to learn the instructions found in these boxes; failure to do so may result in damage to the bus or even serious injury to you and your passengers.

NOTICE

Describes an essential procedure for proper bus operation.



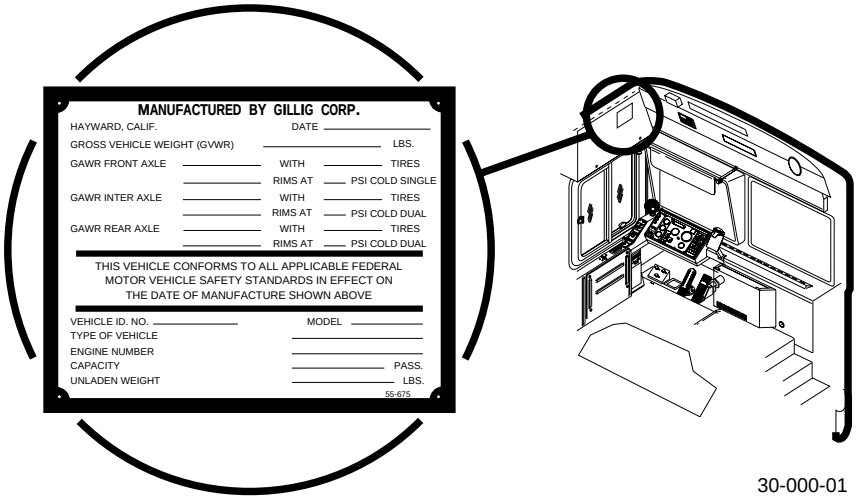
CAUTION

Cautions the driver of hazards which could damage or destroy the bus or its components.

WARNING

Warns the driver of dangers which could cause injury or death to the driver, passengers, or others.

MAXIMUM WEIGHTS



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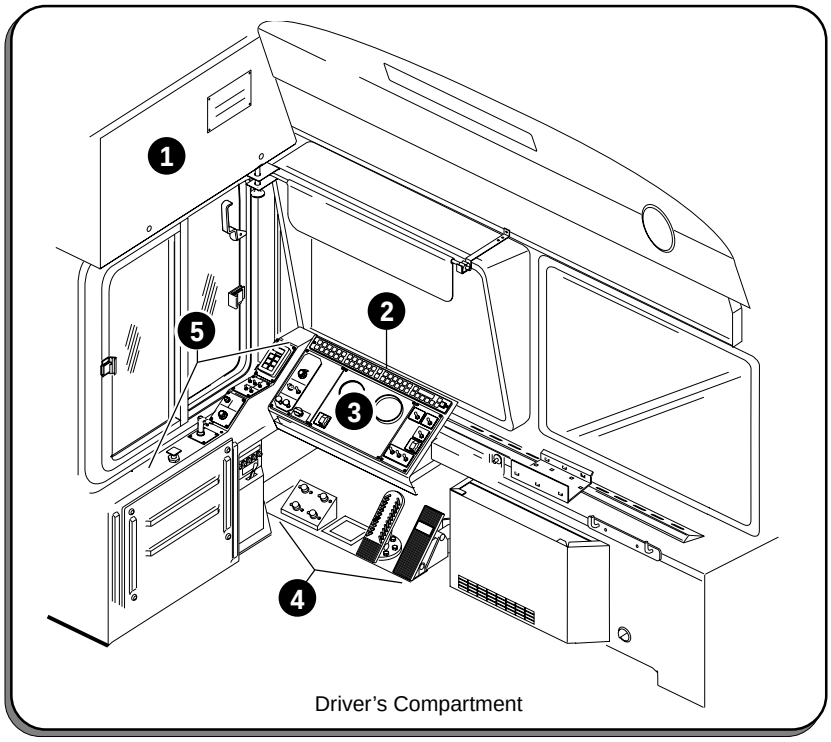
VIN Tag Location

The Gillig Phantom is designed to operate safely at or below specific gross vehicle weight (GVW) figures. GVW figures are displayed on the VIN tag, which can be found on the electrical compartment door above the driver's seat. Do not operate the bus if gross weight exceeds these figures.

Any changes or modifications to this vehicle without the written permission of Gillig Corporation, regardless of the intended purpose, void Gillig Corporation's warranty obligation. This Driver's Handbook and the accompanying Service Manual specifically cover permissible and recommended adjustments to the vehicle's equipment.

NOTES

CHAPTER 1– DRIVER'S COMPARTMENT



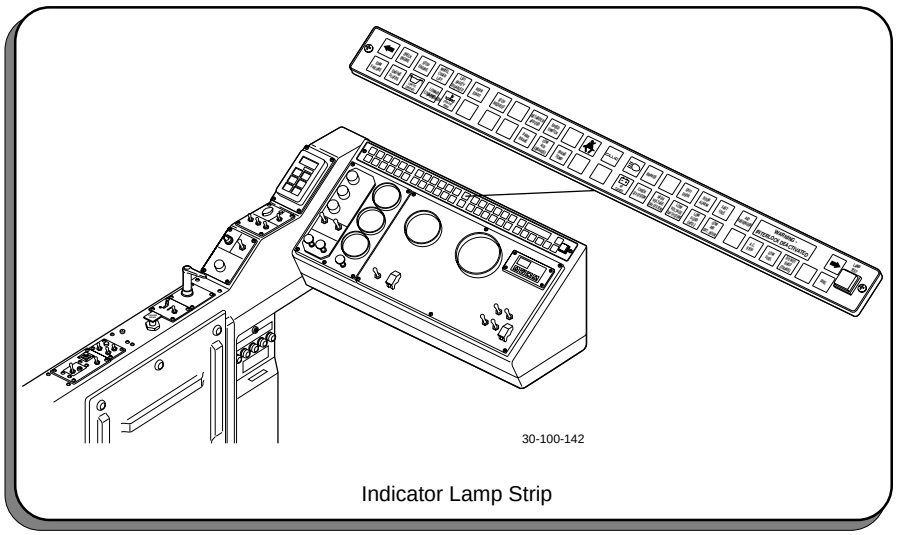
Driver's Compartment

Welcome to your new "office" – the Phantom bus driver's compartment. Take a look around and familiarize yourself with its features, including:

1. **Electrical Component Compartment**
2. **Indicator Lamp Strip**
3. **Dash Panels**
4. **Floor Mounted Controls**
5. **Driver's Console**

Continue reading this chapter for detailed descriptions of these and other features.

INDICATOR LAMP STRIP



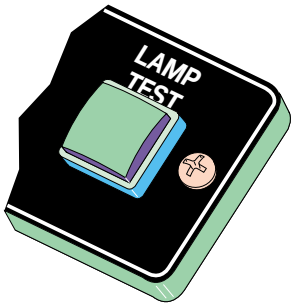
Indicator Lamp Strip

Located at the top of the instrument panel and easily visible from the driver's seat, the Indicator Lamp Strip features two rows of lights which inform the driver of important vehicle conditions.

Each indicator lamp has a colored plastic lens and an identifying symbol or words which become visible when the bulb lights. Some indicator lights have buzzers, alarms, or other audible signals connected to them.

Some indicator lamps come on during normal bus operation; others indicate mechanical problems. A few lights warn you about dangerous situations. For this reason, all drivers *must* learn the meaning of each of the indicator lamps before driving the bus. ***Never*** ignore an indicator lamp.

Indicator Lamp Test



Make sure that all the indicator lamps are working properly by using the "Lamp Test" button. The ignition must be on to use this button. To test the lamps, push and hold the "Lamp Test" button (located on the far right side of the Indicator Lamp Strip). All indicator lamps should light; any that remain dark require immediate service. Keep in mind that some lights may come on as a test for a few seconds after the ignition is turned on.

WARNING

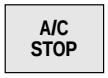
Failure to detect a problem or malfunction because of a bad indicator lamp bulb could result in damage to the bus or injury to the passengers! Always test the indicator lamps before driving.

Alarms

Some indicator lamps are connected to buzzers or alarms. In some cases, alarms alert the driver to extremely dangerous situations; in others they serve as reminders during normal operation.

Individual Indicator Lamps

Some of the following indicator lamps are active only with certain optional features which your bus may or may not have. Check with your supervisor to learn which lamps are functional on your bus.



A/C Stop

Indicates an air conditioning problem. This lamp should blink a few times when starting the air conditioning system. If the A/C Stop lamp stays on, turn off the air conditioning and report the problem to your supervisor.

AID PASSENGER **Aid Passenger**

Indicates that a passenger in the wheelchair seating area has requested a stop using the touch tape and will require assistance in exiting the bus.

ANTILOCK **Antilock**

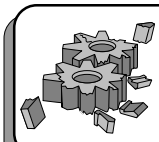
The Antilock Brake System (ABS) prevents wheel lockup and skidding on slippery road surfaces. The "Antilock" lamp indicates a problem with the ABS system. This light should come on briefly when the ignition is switched on; if you see it at any other time, contact your supervisor.

BRAKES **Brakes**

The "Brakes" indicator lamp lights when the service brakes are used or when the brake interlock system is activated (by opening the door, kneeling the bus, or operating the wheelchair lift).

CHECK (12V SYSTEM) **Check (12V System)**

Indicates a problem with the 12-volt electrical system. The bus should be checked by mechanics as soon as possible if this lamp comes on.



CAUTION

Operation of the bus after the "Check (12V System)" lamp comes on can cause serious damage to the electrical system.

CHECK ENGINE

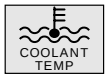
Check Engine

This lamp indicates that the engine's computer has detected a serious problem. Notify your supervisor immediately if this lamp comes on.

CHECK TRANS

Check Trans

This lamp comes on when the transmission's computer detects a serious problem. Shifts may be restricted if this happens. For example, the transmission might not shift from a forward gear to reverse, or from a low gear to a high one. If this lamp appears and stays lit while driving, the bus should be checked by service personnel immediately.



Coolant Temp

Indicates that the engine coolant is dangerously hot. If the overheating was caused by abnormal driving conditions, the engine can be cooled by running it at idle for a few minutes. However, it is a better idea to stop the engine and find the cause of the overheating problem.

CAUTION

Operation of the bus after the "Coolant Temp" lamp comes on can result in severe engine damage.

DOOR ALARM

Door Alarm

Warns the driver if someone pushes or pulls on the closed bus door, or gets caught between the closing door edges.

WARNING

Stop the bus *immediately* if the "Door Alarm" lamp lights when pulling away from a stop. This could indicate that a passenger is caught in the door and may be injured or killed!

EXIT DOOR

Exit Door

The "Exit Door" lamp comes on when the exit (rear) doors are open or unlocked.

WARNING

NEVER open the rear doors while the Stepwell Safety Guardrail is installed in the rear stepwell. Passengers may try to step over the guardrail and suffer injury.

FAST IDLE

Fast Idle

Indicates that Fast Idle engine speed has been selected using the switch on the Driver's Console. The bus cannot be driven with Fast Idle activated.

FIRE

Fire

When sensors detect dangerous temperatures in the engine compartment, the "Fire" warning lamp activates and the fire alarm bell sounds.

WARNING

If the Fire warning lamp and bell activate, you must IMMEDIATELY

1. **Stop the bus in a safe place.**
2. **Shut down the engine and apply the parking brake.**
3. **Open the door. Side windows can also be used as emergency exits. DO NOT TRY TO OPERATE THE WHEELCHAIR LIFT!**
4. **Evacuate all passengers. Physically disabled passengers should be carried off.**
5. **Extinguish the fire (if possible) with the fire extinguisher. Be very careful when opening engine compartment doors.**
6. **Shut off electrical power using the Battery Disconnect Switch, located in the battery compartment (see Chapter 3- *Bus Operation*).**

HIGH VOLTAGE (24V SYSTEM)

High Voltage (24V System)

Warns of problems involving the 24-volt electrical system. If this lamp comes on, park and shut down the bus immediately and have the electrical system checked by qualified service personnel.

CAUTION

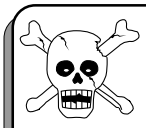
Continuous operation of the vehicle after the "High Voltage (24V System)" lamp is lit can cause battery fluid boiling, electrical system damage, and fires.

KNEEL **Kneel**

This lamp comes on with activation of the kneeling system. It remains on until the bus has been returned to normal ride height and the kneeling system has been deactivated.

LOW AIR (BRAKES) **Low Air (Brakes)**

Activated whenever air service brake pressure drops below 65 psi. Park the bus **immediately** if this lamp appears.



WARNING

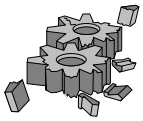
The bus must be parked IMMEDIATELY if the "Low Air (Brakes)" lamp lights or the Low Air Pressure Alarm sounds. Brake failure may occur if you ignore these warnings!

LOW AIR (FRT. DOOR) **Low Air (Frt. Door)**

Indicates that the front door mechanism is not receiving enough compressed air. If this lamp comes on, make sure the Front Door Air Power lever (located to your left on the side of the Driver's Console) is in the "ON" position; contact service personnel if this does not solve the problem.

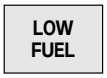
LOW COOLANT **Low Coolant**

Indicates a dangerously low engine coolant level. If you see this lamp come on, safely park the bus, shut down the engine, and contact service personnel.



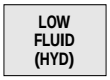
CAUTION

Operation of the bus after the "Low Coolant" lamp comes on can result in severe engine damage.



Low Fuel

Indicates that the fuel tank is less than 10% full.



Low Hydraulic Fluid

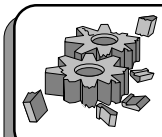
Indicates a low fluid level in the hydraulic system. If you see this lamp during operation, immediately park the bus and shut down the engine.

WARNING

Loss of hydraulic fluid can result in steering failure or engine overheating; leaking fluid is very flammable and can cause a fire. DO NOT operate a bus with low hydraulic fluid– park and shut it down immediately and contact service personnel for assistance.

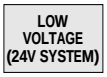
Low Oil (Engine)

If the engine's oil pressure drops too low, this lamp will come on and a buzzer will sound. If this happens, pull the bus over to a safe parking spot and shut down the engine *immediately!*



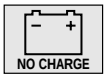
CAUTION

Operation of the bus after the "Low Oil (Engine)" lamp comes on can result in severe engine damage.



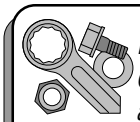
Low Voltage (24V System)

Indicates that less than a 25% charge remains in the batteries. If the "No Charge" lamp on the indicator strip is also on, a charging failure has occurred. At that point the bus is running on battery power only and should be returned to the service facility for repairs.



No Charge

This lamp is activated when the alternator fails to charge, which means the bus will soon have dead batteries. Call your supervisor for instructions if you see the "No Charge" lamp.



NOTICE

Continuous operation of the bus after the "Low Voltage (24V System)" and "No Charge" indicator lamps are lit may result in the complete discharge of batteries and engine failure.

Park Brake

Indicates that the parking brake is applied.

Rear Ignition

Indicates that the engine was started from the rear engine compartment. The bus cannot be driven when started in this way; to drive the bus, shut it down from the rear and restart it from the driver's seat.

RETARDER APPLIED

Retarder Applied

The "Retarder Applied" lamp comes on when the retarder (a device which uses the transmission to slow the bus) is in operation. If this lamp does not come on when the brake pedal is pressed or if it remains on during acceleration, a malfunction which requires service has occurred.

RETARDER DISABLED

Retarder Disabled

The "Retarder Disabled" lamp remains lit whenever the retarder has been switched off. If this lamp comes on, contact your supervisor to determine whether or not the retarder should be deactivated.

SPEED SWITCH

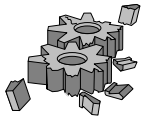
Speed Switch

This lamp comes on when bus slows to 3 mph or below. Speeds above 3 mph automatically disable the kneeling and brake interlock systems, door control, fast idle, and wheelchair lift functions.

STOP ENGINE

Stop Engine

The "Stop Engine" lamp comes on whenever the engine's computer finds a very serious problem (low oil pressure, high coolant temperature, low coolant level, etc.). If you see this lamp come on, safely park the bus and shut down the engine as soon as possible.



CAUTION

Operation of the bus after the "Stop Engine" lamp comes on can result in severe engine damage.

STOP REQUEST **Stop Request**

Indicates that a passenger has requested a stop using the stop request cable or touch tape.

TRANS TEMP **TransTemp**

This lamp warns the driver when the transmission overheats. If this happens, park the bus immediately and contact your supervisor.

WARNING
INTERLOCK DEACTIVATED **Warning- Interlock Deactivated**

Warns that the Door/Master Interlock Switch (located in the overhead Electrical Component Compartment) is in the "OVERRIDE" position, which means that the safety interlock system is turned off. In this situation, the bus can move unexpectedly, even if a door is open or the wheelchair lift is operating. Do not operate the bus with this indicator lamp on unless you have permission to do so from your supervisor!

WARNING

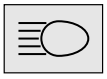
Bus operation is much more dangerous with the Interlock System deactivated! Always get permission from your supervisor before touching the Override switches in the Electrical Component Compartment.

Wheelchair Lift

Indicates that the Lift Master Switch (located on the Right Dash Panel) is in the "ON" position. The bus cannot be moved when this lamp is on (unless the Door/Master Interlock Override Switch is in the "OVERRIDE" position).

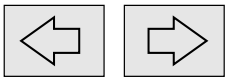
Fasten Seat Belts

Serves as a safety reminder by lighting for a few seconds after engine startup (and when the driver leaves and returns to the driver's seat).



High Beams

This lamp indicates that the high beam headlights, controlled by the floor-mounted dimmer switch, are on.



Turn Indicators

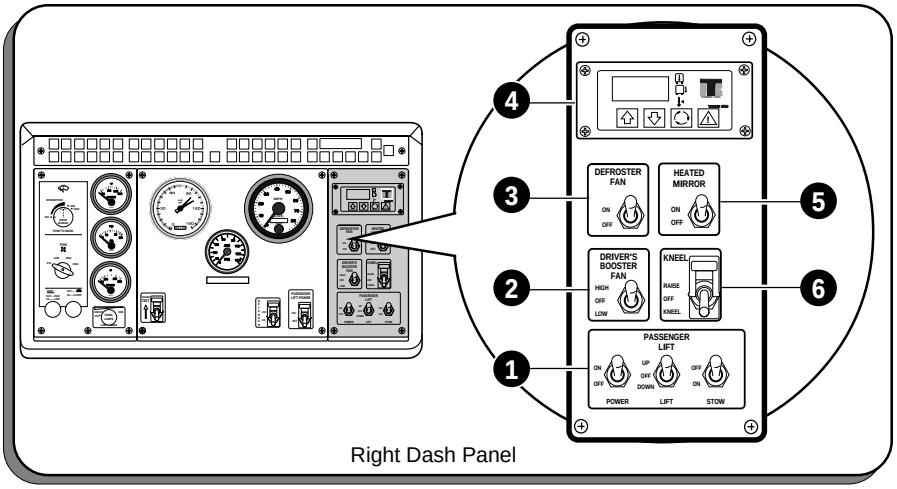
Separate indicators show activation of left or right turn signals; both lamps flash when the hazard lights are used.

DASH PANELS

The dash panels are located in front of the driver and contain switches and gauges designed to aid the driver in controlling the vehicle. There are three individual dash panels. Read the following sections for detailed descriptions of the switches, gauges, and controls found on these panels.

Right Dash Panel

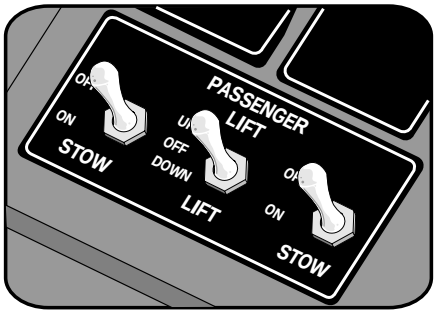
Contains switches which control various vehicle functions.



Right Dash Panel

❶ Passenger Lift Controls

These switches control the operation of the wheelchair lift. Refer to Chapter 4 – *Lift Operation* for lift instructions. All lift control switches should be kept in the "OFF" position when the lift is not in use.



WARNING

NEVER touch the either of the "Stow" switches while a passenger is on the lift platform! Stowage of an occupied lift could injure or kill your passenger!

❷ Driver's Booster Fan

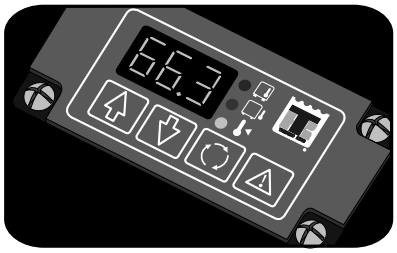
This switch controls the driver's booster fan, which provides cooled or heated air from the passenger heater or air conditioner to the driver's compartment. There are two fan speeds, "HIGH" and "LOW."

❸ Defroster Fan

This switch activates the auxiliary defroster fan mounted near the windshield. The defroster fan can be used for ventilation or window defogging.

❹ Temperature Control

This panel controls the interior temperature.



Increase Temperature Button. Raises the set temperature.

Decrease Temperature Button. Decreases the set temperature.

Readout Selector Button. Selects the temperature you want displayed on the LED readout.

Warning Code Button. Used by mechanics while servicing the air conditioner. Do not touch this button unless instructed to do so by your supervisor.

Bus Interior Temperature Light. Indicates that the LED readout shows the temperature inside the bus.

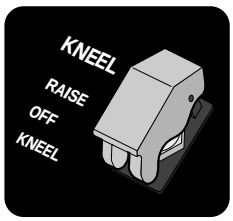
Bus Exterior Temperature Light. Indicates that the LED readout shows the temperature outside the bus.

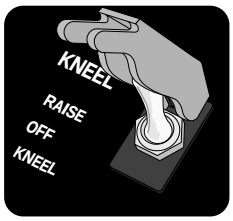
Set Temperature Light. Indicates that the LED readout shows the set temperature. This light should be lit when you use the ▲ and ▼ buttons.

❺ Heated Mirror

Heating elements in the outside rearview mirrors can be switched on to reduce icing and fogging in cold weather conditions. A timer shuts off the heating elements after a set time period.

❻ Kneel

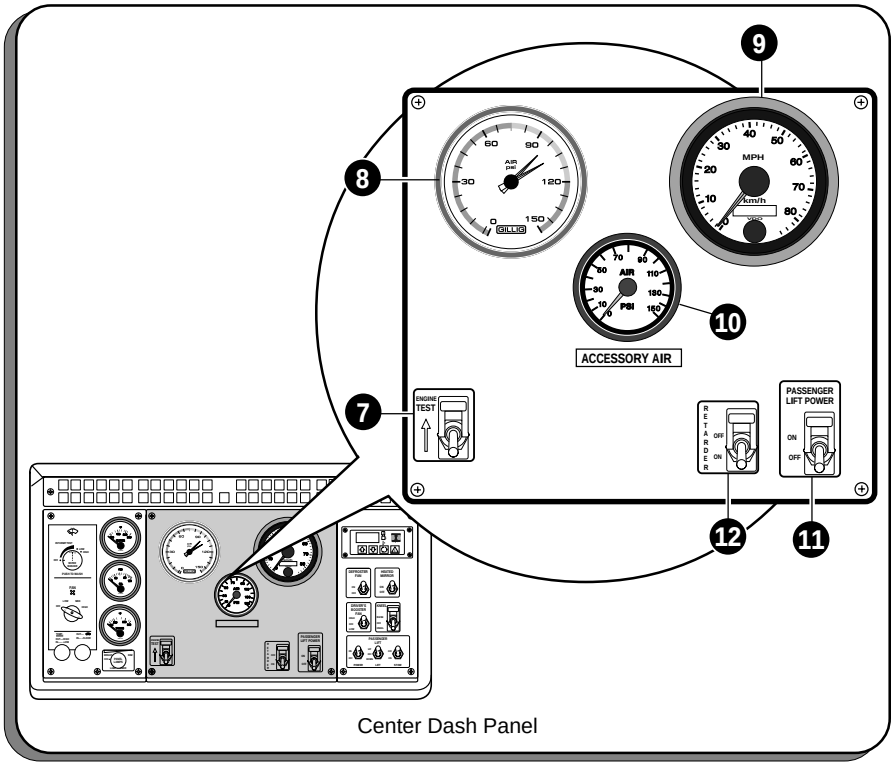




The kneeling system lowers the front of the bus about 3" below normal ride height to make passenger loading easier. In addition, an "over-raise" feature lets you raise the front of the bus to clear obstacles or speed bumps. To make the bus kneel, raise the toggle guard on the switch and hold the toggle in the "KNEEL" position until the bus drops to the correct height. When the bus kneels, the interlock system disables the throttle and applies the brakes. To raise the bus back to its normal ride height, push the switch toggle to the "RAISE" position and release it immediately. To use the over-raise feature, push and hold the toggle in the "RAISE" position until the bus reaches the desired height. Once the toggle is released, the front end will slowly drop back down to the normal ride height.

Center Dash Panel

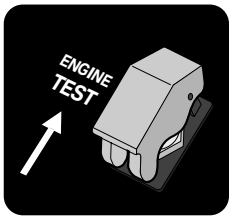
Contains important controls and instruments.

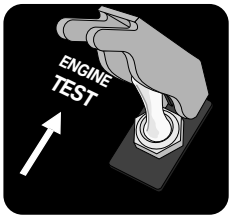


Center Dash Panel

7 Engine Test

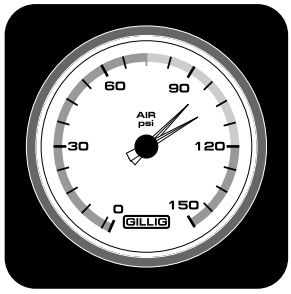
Mechanics use this switch to get information from the engine's computer. Do not use this switch unless you have specific instructions to do so from qualified service personnel.





❽ Air Pressure Gauge

The green needle shows the air pressure in the primary (rear) air brake supply tank and the red needle shows the air pressure in the secondary (front) air brake supply tank. Air pressure at full operation must be **at least 85 psi** in both air tanks. Both needles on this gauge should show readings in the 100 to 120 psi range during normal driving.

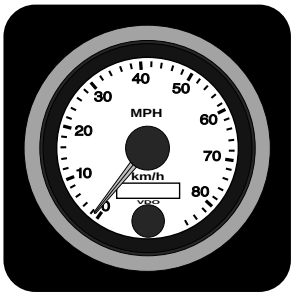


WARNING

Safe operation of the bus requires air pressure of at least 85 psi. Do not move the bus if either of the needles on the air pressure gauge shows a level below 85 psi.

❾ Speedometer

The needle indicates bus speed in miles per hour (mph) and kilometers per hour (kph). The odometer records total distance traveled up to 999,999.9 miles. The LCD display below the speedometer needle can be made to display either trip mileage or total mileage, using the button at the lower edge of the gauge face to switch between the two display modes.



❿ Accessory Air Gauge

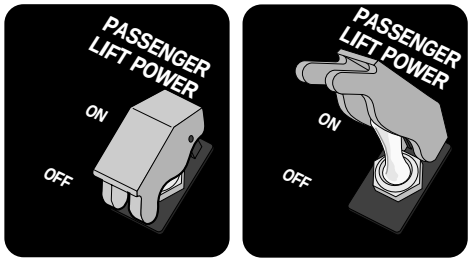
This gauge shows the air pressure in the accessory air tank, which provides compressed air to the suspension and door systems. Do not move the bus until this gauge indicates at least 85 psi. If the needle of this gauge drops to 70 psi or below and remains there, safely park the bus and contact service personnel.

NOTICE

Use of the kneeling system may temporarily cause a low pressure reading on the Accessory Air Gauge.

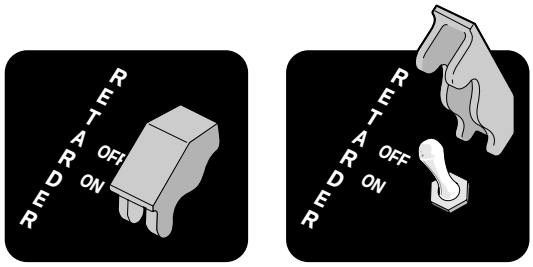
⓫ Passenger Lift Power

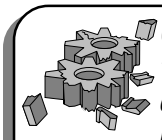
This switch must be placed in the "ON" position before using any of the other lift controls. Refer to Chapter 4– *Lift Operation* for complete lift instructions.



⓬ Retarder

The retarder uses the transmission to help slow the bus, saving wear and tear on the brakes. Lifting the switch guard and moving the toggle to the "OFF" position disables the retarder.



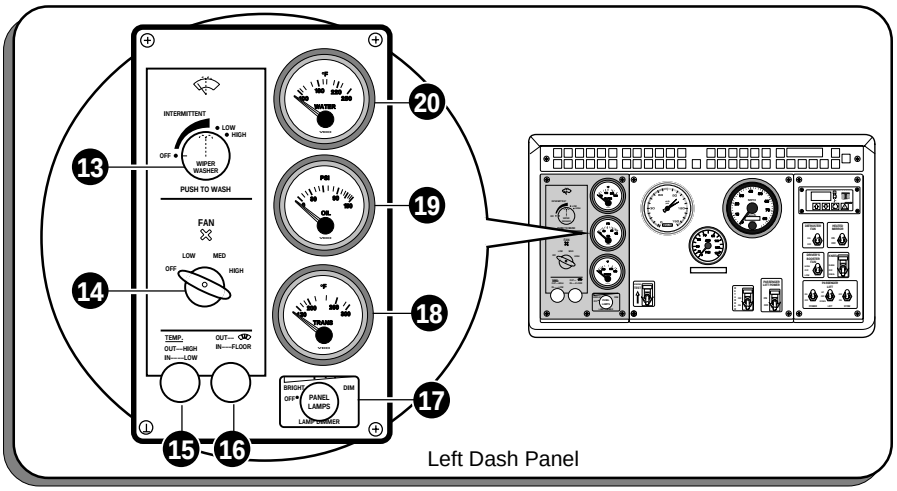


CAUTION

The retarder may cause the transmission fluid to overheat when driving on long downhill grades. If this happens, switch off the retarder and use the brakes to slow the bus until the transmission cools off.

Left Dash Panel

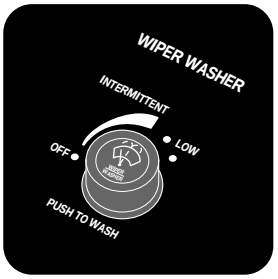
Contains switches and controls for various vehicle functions.



Left Dash Panel

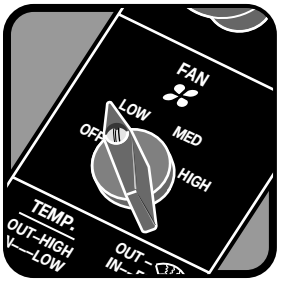
13 Washer/Wiper

This knob controls the windshield wipers and windshield washer. To activate the wipers, turn the knob clockwise until the desired wiper speed is reached. To wash the windshield, push the knob in while the wipers are running.



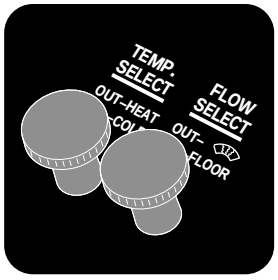
14 Driver's Area/Defroster Fan

This switch ensures that you get comfort and clear visibility by controlling the heating and defrosting fan for the driver's area and windshield. Turning this switch to the "LOW," "MED," or "HIGH" positions will direct cooled or heated air to the driver's area or windshield, depending on the settings of the two knobs directly below this control.



⓯ Driver's Heater Temperature

Use this knob to control the temperature of the air blowing from the driver's heater or defroster vents. Pulling the knob out makes the air hotter; pushing it back in makes the air cooler.

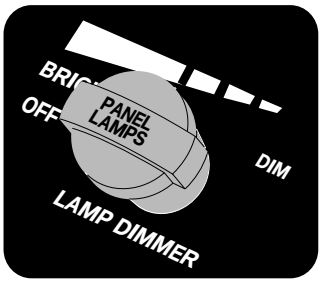


⓰ Heat/Defrost Airflow Select

This knob directs the air to the driver's heater and defroster. For more air from the defroster vents, pull the knob out. For more air from the floor vents, push the knob in.

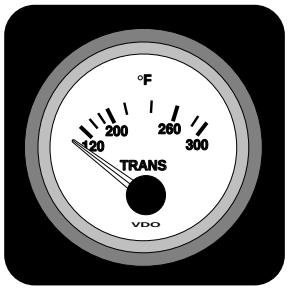
⓱ Lamp Dimmer

This knob controls the brightness of the gauges and dash panel lights when the headlights or marker lights are on. To dim the panel lamps, turn the knob clockwise.



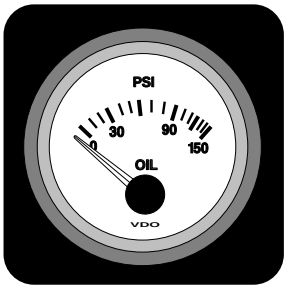
⓲ Transmission Temperature Gauge

Indicates the temperature of the transmission fluid. If the transmission temperature rises over 250º, safely park the bus, shift the transmission into Neutral, and run the engine at Fast Idle for a few minutes. If this does not solve the overheating problem, shut down the engine and contact service personnel.



⓳ Oil Pressure Gauge

Shows engine oil pressure in psi and kPa. This gauge should be checked frequently.

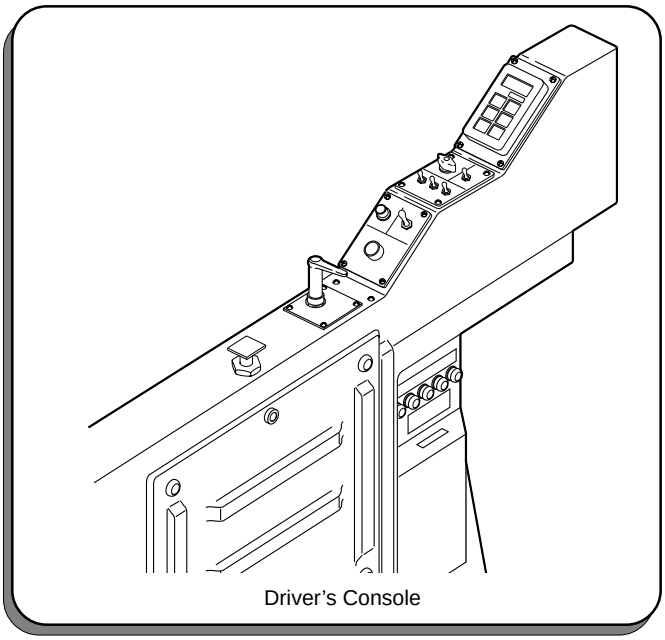


⓴ Water Temperature Gauge

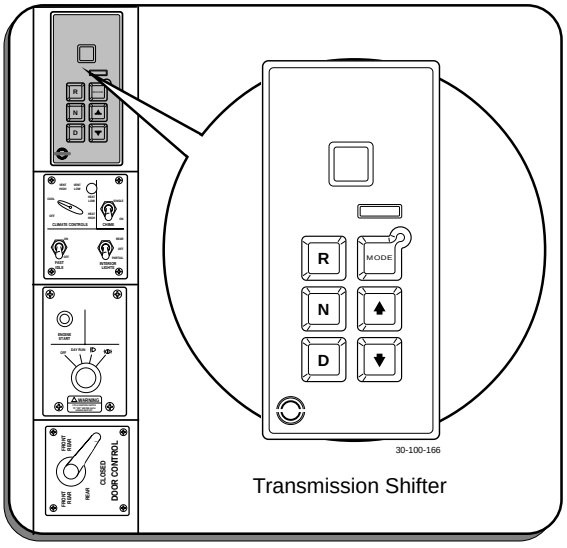
Indicates the engine coolant temperature in Fahrenheit (ºF) and Celsius (ºC). The temperature will vary depending on bus load, speed, and outside temperature. Allow the engine coolant temperature to reach at least 140ºF before shifting the transmission out of Neutral.

DRIVER'S CONSOLE

The Driver's Console is located to the driver's left. Shifting, engine starting, door operation, and parking brake activation are all controlled from its panels.



Driver's Console



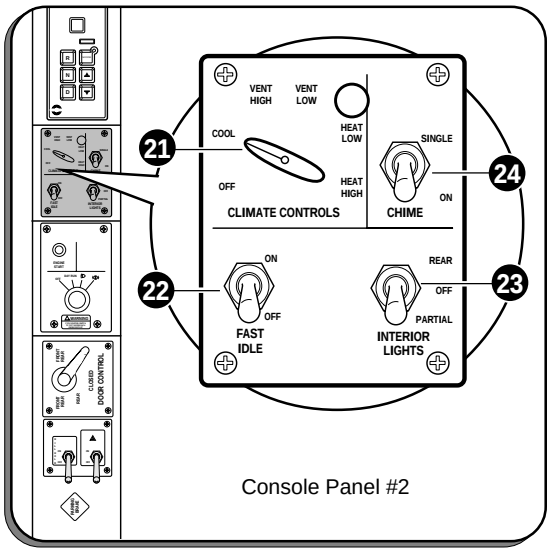
Transmission Shifter

Transmission Shifter

The electronic shifter features touch-sensitive selector pads. For complete instructions on using the shifter, please see Chapter 3 – *Bus Operation.*

Console Panel #2

This panel, located just to the rear of the shifter, contains many important controls that you will be using frequently.



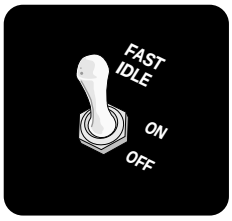
Console Panel #2

21 Climate Controls

The Climate Controls selector lets you control the temperature inside the bus. To cool the interior of the bus, select the "COOL" setting, which turns on the air conditioning. The "VENT HIGH" and "VENT LOW" settings bring outside-temperature air into the bus. If the bus gets too cold inside, choose the "HEAT HIGH" or the "HEAT LOW" settings.

22 Fast Idle

The "Fast Idle" switch raises the engine idle speed, which is useful for quickly warming up the engine and building air pressure at initial startup.



NOTICE

You must turn off the Fast Idle switch before moving the bus.

㉓ Interior Lamps

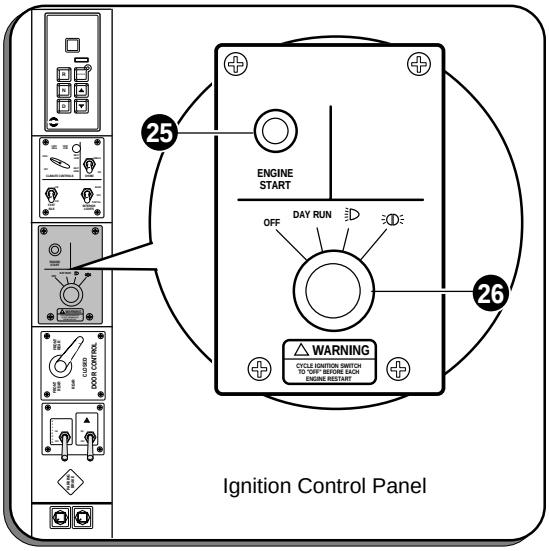
To turn on all the interior lamps in the bus, select the "ALL" toggle position. The "PARTIAL" setting turns on some of the interior lamps for decreased glare.

㉔ Chime

This switch controls the chime which sounds when a passenger requests a stop. Placing the toggle in the "SINGLE" position causes the chime to ring only once per stop, when the first passenger requests a stop; the chime will not sound again until you open and close a door. The "ON" position causes the chime to ring every time a passenger requests a stop.

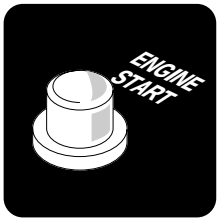
Ignition Panel

This panel, located just to the rear of Console Panel #2, contains the controls for ignition and starting.



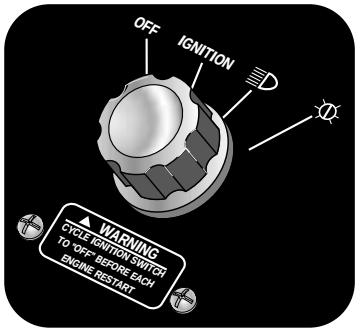
Ignition Control Panel

㉕ Engine Start



Once the proper "RUN" position has been selected on the Ignition Select Switch, the starter can be activated using this button. (See Chapter 3 – *Bus Operation* for starting instructions).

㉖ Ignition Select Switch



This is the Phantom's master switch, controlling the ignition and exterior lights.

For daytime operation, turn the selector knob to the "IGNITION" position (on some buses this switch position may be labeled "DAY RUN").

For night driving, choose the ≡D (Night Run) switch position. This mode turns on the headlights and other exterior lights in addition to the ignition.

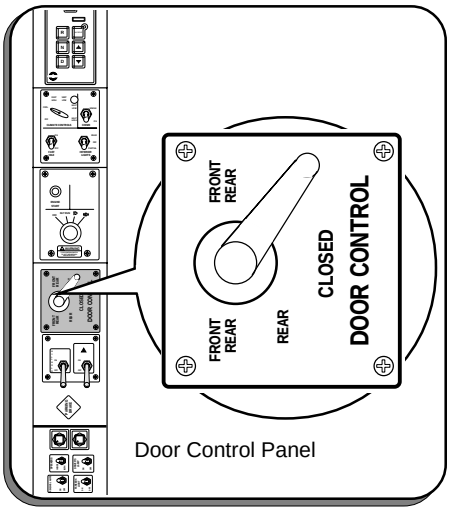
When the bus must be readily visible to traffic when parked at night, set the Ignition Select Switch to the -◐- (Marker Lights) position. This mode turns on the exterior lights but not the ignition.

NOTICE

It is OK to change the setting of the Ignition Select Switch from "DAY RUN" or "IGNITION" to ≡D (Night Run) while the engine is running, but you should ***NEVER*** *change the setting to "OFF" or -◐- (Marker Lights) during operation, as the engine will immediately shut down. Any mode changes using the Ignition Select Switch should be made with the bus completely stopped, the transmission in Neutral and the parking brake applied.*

Door Control Panel

The handle which controls the entrance and exit doors can be found on this panel, immediately to the rear of the Ignition Panel



Door Control Panel

Door Control

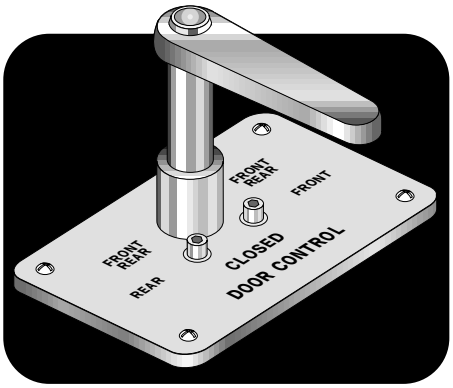
The door control handle can be moved to any one of the following positions:

Front/Rear: Front door open, rear door unlocked.

Front: Front door open, rear door locked.

Closed: Both doors closed and locked.

Rear: Rear door unlocked, front door closed.

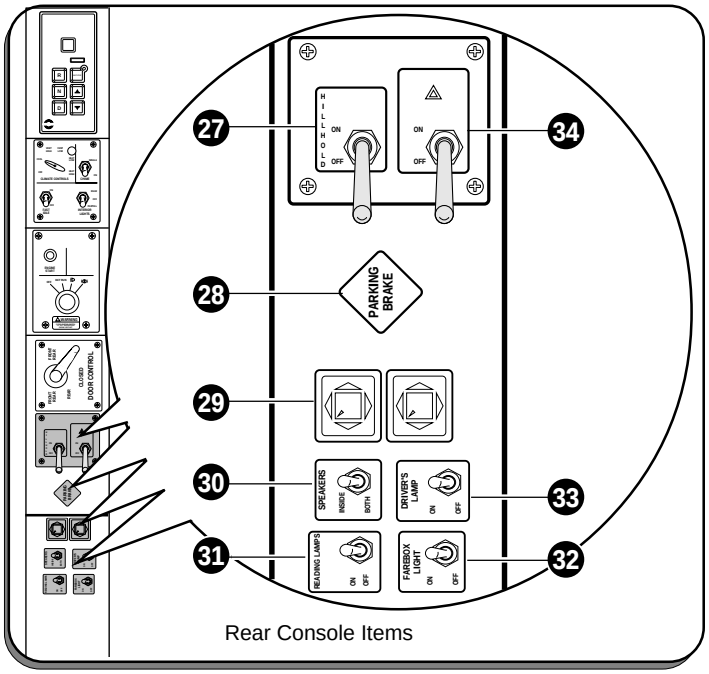


WARNING

Stop the bus *immediately* if you see the "Door Alarm" indicator lamp or hear the Door Warning buzzer when pulling away from a stop. This could indicate that a passenger is caught in the door!

Rear Console

Many important controls are mounted on the rear area of the driver's console.



Rear Console Items

27 Hill Holder

The Hill Holder feature applies the service brakes (without having to use the brake pedal) when this momentary switch toggle is held in the "ON" position. The Hill Holder feature is meant to be used ***only*** for short periods with the engine running. Because the Hill Holder only works with the engine running and the switch held in the "ON" position, it does not take the place of the parking brake! When you let go of the switch, the brakes are released.

WARNING

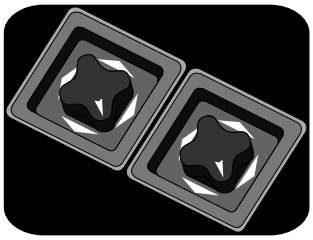
NEVER use the Hill Holder as a parking brake!

28 Parking Brake

The yellow knob next to the door control is the parking brake. To apply the parking brake, pull up on the knob; to release the parking brake, push the knob back down.

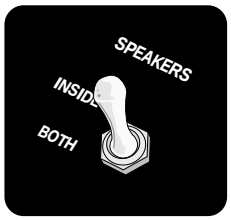
29 Power Mirrors

Both of the outside mirrors can be adjusted from the driver's seat using these controllers. Choose the left controller for the left (street) side mirror or the right controller for the right (curb) side mirror, then use the controller's knob as a joystick to adjust the mirror for the best view.



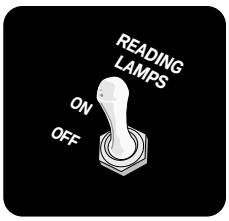
30 Speakers

Use this switch to select the speakers you want the P.A. system to use. Put the toggle in the "INSIDE" position for people inside the bus to hear the P.A. system. To make announcements to your passengers and people outside the bus, use the "BOTH" switch position.



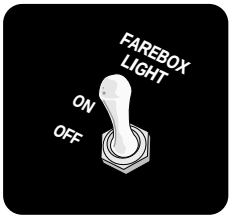
31 Reading Lamps

This switch provides power to the reading lamps located over the passenger seats.



㉜ Farebox Light

Use this switch to turn on the light mounted above the farebox.

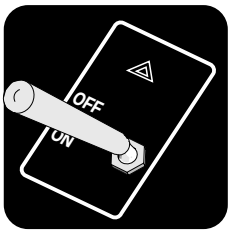


㉝ Driver's Lamp

This switch controls the driver's lamp, which is mounted above the driver's console and is useful for map reading and paperwork.

㉞ Hazard Lights

The hazard lights flash continuously when this switch is in the "ON" position. There may be a short delay before the hazard lights begin flashing when this switch is used.

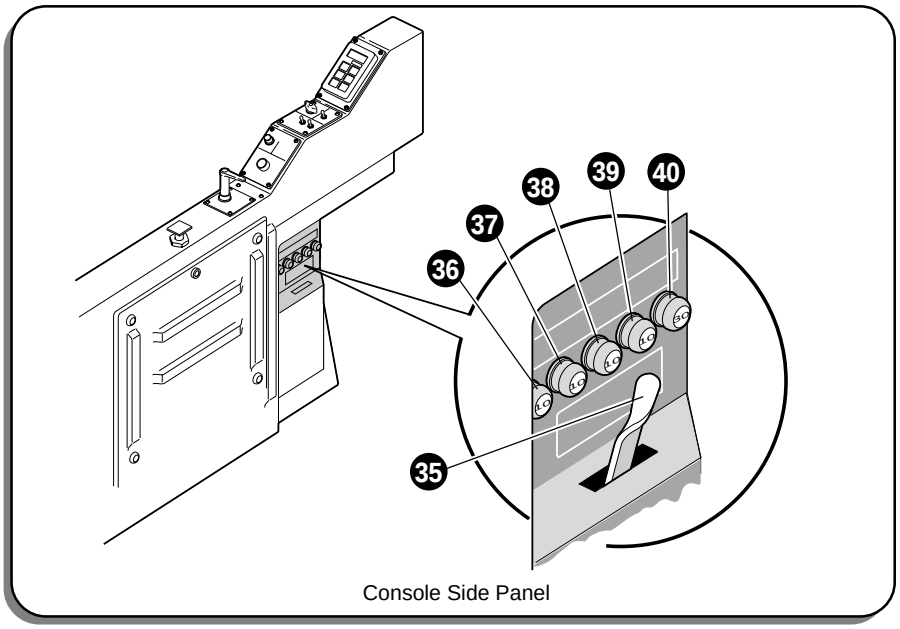


NOTICE

The use of hazard lights for long periods with the engine shut down can drain the batteries

Console Side Panel

This panel, located on the side of the driver's console (near your left front knee as you sit in the driver's seat) contains 5 circuit breakers and the Front Door Air Power lever.



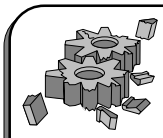
Console Side Panel

35 Front Door Air Power Lever

This small metal lever controls the air pressure to the front door. When the lever is in the "ON" position, the front door operates normally and can be opened and closed by using the Door Control on the Driver's Console. With the lever in the "OFF" position, the front door can be opened and closed by hand. This lever should be the first thing you check if the "Low Air – Front Door" indicator lamp is lit.

Circuit Breakers

These circuit breakers protect the Phantom's electrical system from damage and fire. When a circuit overloads or malfunctions, the button on its circuit breaker will pop out and power will be cut off to the circuit.



CAUTION

Do not touch the circuit breakers unless specifically authorized to do so by your supervisor. Always contact a supervisor or service personnel in the event of an electrical problem.

36 The "ACC" circuit breaker protects the destination sign and rear door.

37 The first "IGN" circuit breaker protects the master ignition circuit.

38 The next "IGN" circuit breaker protects the starter and fast idle circuit.

39 The  circuit breaker protects the marker and tail lights.

40 The  circuit breaker protects the headlights.

If one of the above circuits stops working, check the appropriate circuit breaker to see if the button has popped out. If it has (*and* you are authorized by you supervisor to do so), reset the circuit breaker by pushing the button back in. If the button pops back out immediately or after a short period, a serious and potentially dangerous electrical problem has occurred. Contact service personnel for further instructions.

STEERING WHEEL

The Gillig Phantom features a fully adjustable steering wheel which, in combination with the adjustable driver's seat, permits drivers of all shapes and sizes to comfortably operate the bus.

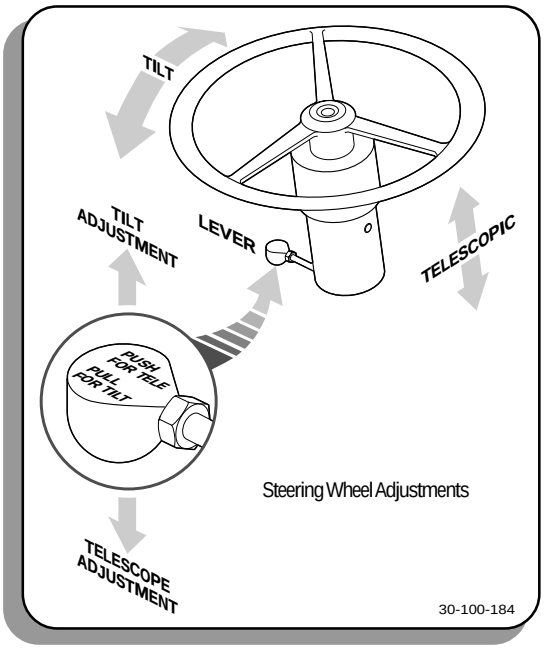
WARNING

The steering wheel should be adjusted only when the bus is standing still with the transmission in Neutral and the parking brake applied. Never adjust the steering wheel while the bus is moving!

Both the angle (or tilt) of the steering wheel and the length of the steering column (telescope) can be adjusted. The Steering Column Adjustment Lever, located on the left side of the steering column, controls both of these adjustments.

To adjust the tilt of the steering wheel, pull up on the lever and, while holding the lever up, move the steering wheel to the most comfortable angle. Release the lever to lock the wheel tilt into place.

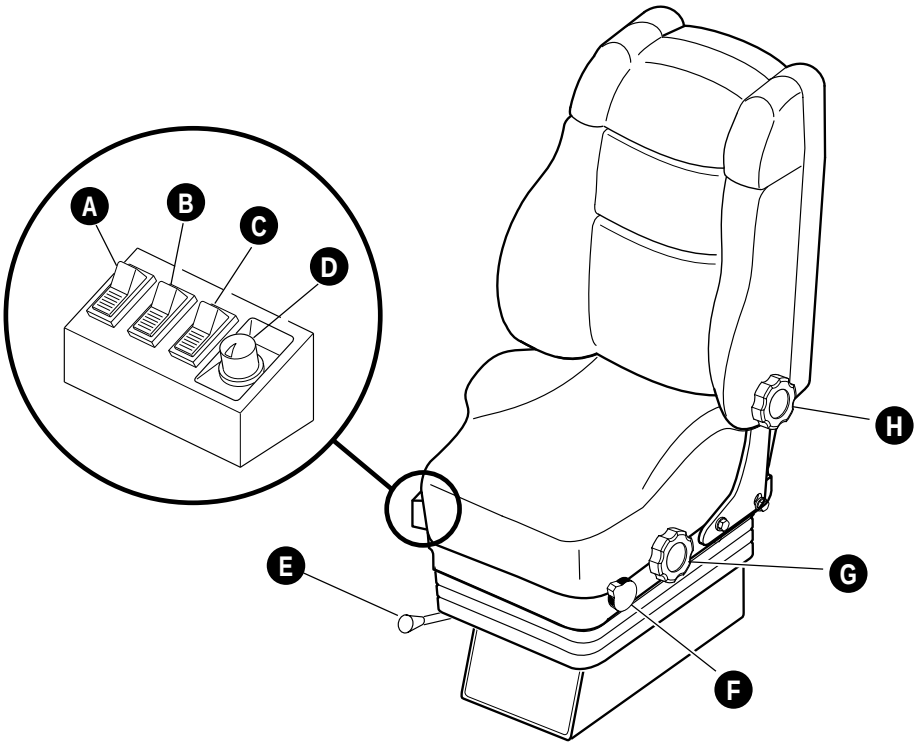
To adjust the length of the telescoping steering column, push down on the lever and, while holding the lever down, lift or push the steering wheel to the proper height. Release the lever to lock the steering column length.



Steering Wheel Adjustments

DRIVER'S SEAT

Your Gillig Phantom bus comes equipped with a comfortable U.S.S.C. driver's seat which can be adjusted to fit the needs of nearly every driver.



U.S.S.C. Driver's Seat

WARNING

The seat should be adjusted ONLY when the bus is standing still with the transmission in Neutral and the parking brake applied.

A This button operates the side bolster adjustors. To increase the distance between the seat sides, push on the upper half of the rocker switch. To move the seat sides closer together, push on the lower half of the rocker switch.

B To adjust the upper lumbar back support air cushions, use this switch. Pushing the lower part of the rocker switch inflates the air cushions; the upper part of the rocker switch deflates them.

C To adjust the lower lumbar back support air cushions, use this switch. Pushing the lower part of the rocker switch inflates the air cushions; the upper part of the rocker switch deflates them.

D Pressing and holding this button allows you to slide the seat forward or backward. Release the button when the seat is positioned correctly.

E The small red handle found under the seat base can be used as a substitute for Button **D** when sliding the seat fore and aft.

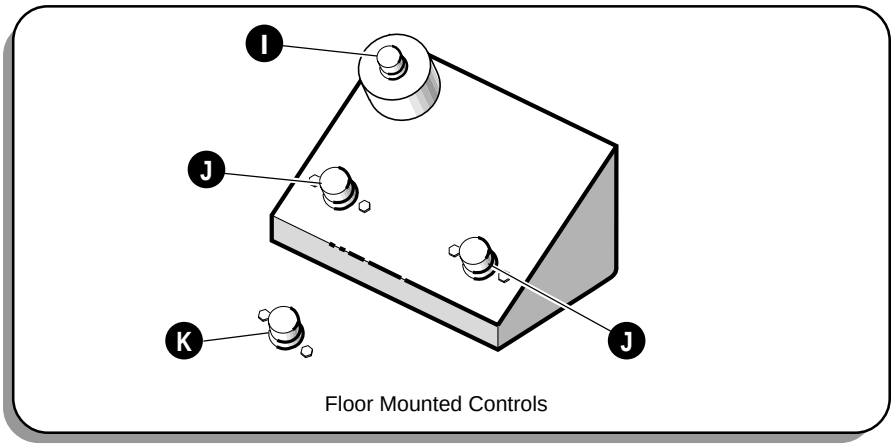
F The knob located near the front of the seat cushion's left side controls the seat height. To adjust the height of the seat, twist the knob until the seat reaches the desired level. To make it easier to leave the seat, push the knob in to lower the seat all the way down; pull the knob back out to restore the seat to its driving height.

G Seat tilt is adjusted using the large knob located on the left side of the seat cushion. Turning this knob causes the entire seat to lean forward or back.

H The large plastic knobs located on the seat back where it joins the cushion are used to adjust the angle of the seat back.

FLOOR-MOUNTED CONTROLS

The controls for the service brakes, throttle, turn signals, P.A. microphone, and headlight dimmer are all located at the driver's feet.



Floor Mounted Controls

I Silent Alarm Button

This button causes the front destination sign to flash an emergency "Call Police" message. No sign of this will be visible inside the bus. Always follow your employer's guidelines for dealing with emergency situations on the job.

J Turn Signal Switches

The turn signal will flash only as long as your foot holds the switch down. The left switch activates the left signal and the right switch activates the right signal.

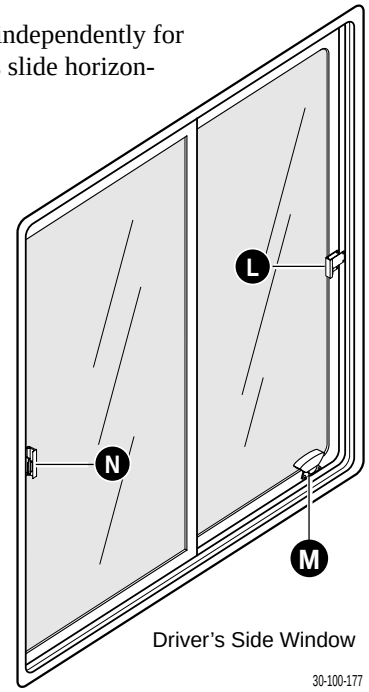
K Dimmer Switch

This switch, mounted on the floor close to the base of your seat, is used to choose between low beam and high beam headlights. Press the switch with your heel once to activate the high beams; press it once more to switch back to normal low beams.

DRIVER'S SIDE WINDOW AND SUN SCREENS

Driver's Side Window

Each half of the driver's window can be opened independently for hand signaling and fresh air. The window panels slide horizontally and are opened using three latches:



Driver's Side Window

30-100-177

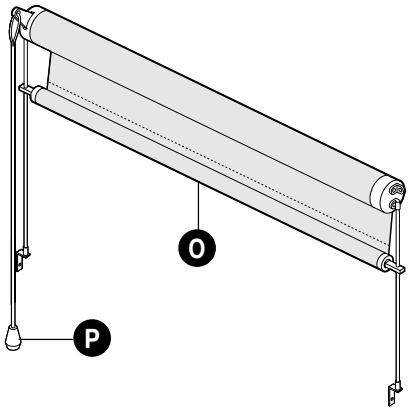
L The forward latch releases the front panel. Once released, the panel can be slid open. There are two locking positions available once the window is open; to lock it into an open position, pull the window all the way back using the forward latch, then push forward until the lock engages.

M The lower slider releases the front window panel from the locked position, enabling the driver to move the window panel. To use the slider, push the handle in the proper direction and slide the panel to the desired position.

N The rear latch releases the rear panel. There are no open locking positions for this panel; to open the window, simply release the latch and slide the panel forward.

Sun Screens

The Phantom is equipped with pull-down screens to protect the driver from sun glare. To use one of the screens, gently pull down at point **O** to the desired level. A ratchet mechanism will keep the shade at the chosen level. To retract the screen, pull down on the knob located on the left side of the screen assembly (point **P**).



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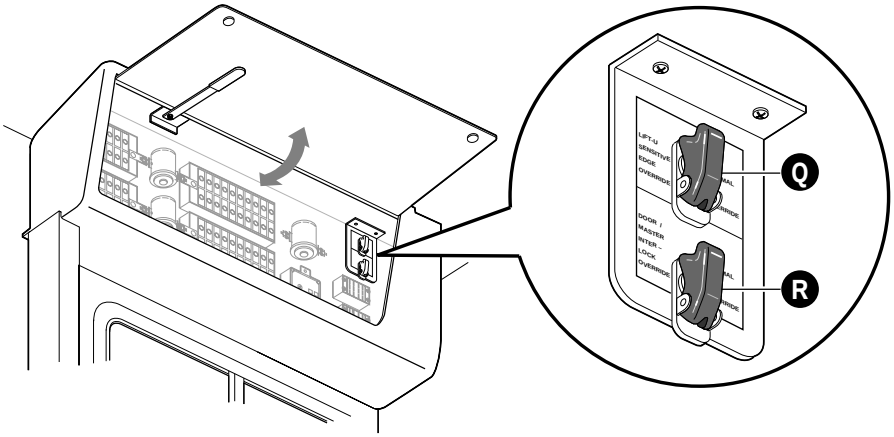
ELECTRICAL COMPONENT COMPARTMENT



Electrical Component Compartment

Located directly above the driver's side window, this compartment houses the Override Switches. To open the door, twist the two knobs at the lower corners and lift the door up. Pull out the prop to hold the door open.

Q Lift-U Sensitive Edge Override Switch

Refer to the "Lift Controls" section of Chapter 4 – *Lift Operation* for information on this switch and other safety-related wheelchair lift features.

WARNING

The Sensitive Edge Override Switch should NEVER be placed in the "OVERRIDE" position when a passenger is on the lift!

R Door/Master Interlock Override Switch

This switch deactivates the interlock system in the event of a "false alarm" malfunction which prevents the bus from being moved. **Always** get permission from your supervisor before touching this switch!

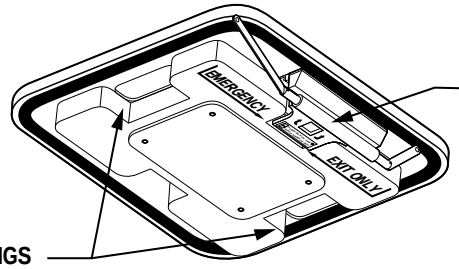
WARNING

Placing the Door/Master Interlock Override Switch in the "OVERRIDE" position can result in unexpected movement of the bus!

CHAPTER 2 – PASSENGER AREA

EMERGENCY EXITS

Roof Vents/Escape Hatches



The Roof Vents, located along the center of the roof, function as ventilation sources as well as emergency exits in the event of a bus rollover.

Pushing up the handle moldings pops the hatch up for ventilation. To close the hatch, pull down on the handle moldings. An extension bar, located behind the driver's seat, makes it easier to reach the forward vent.

Emergency Exiting

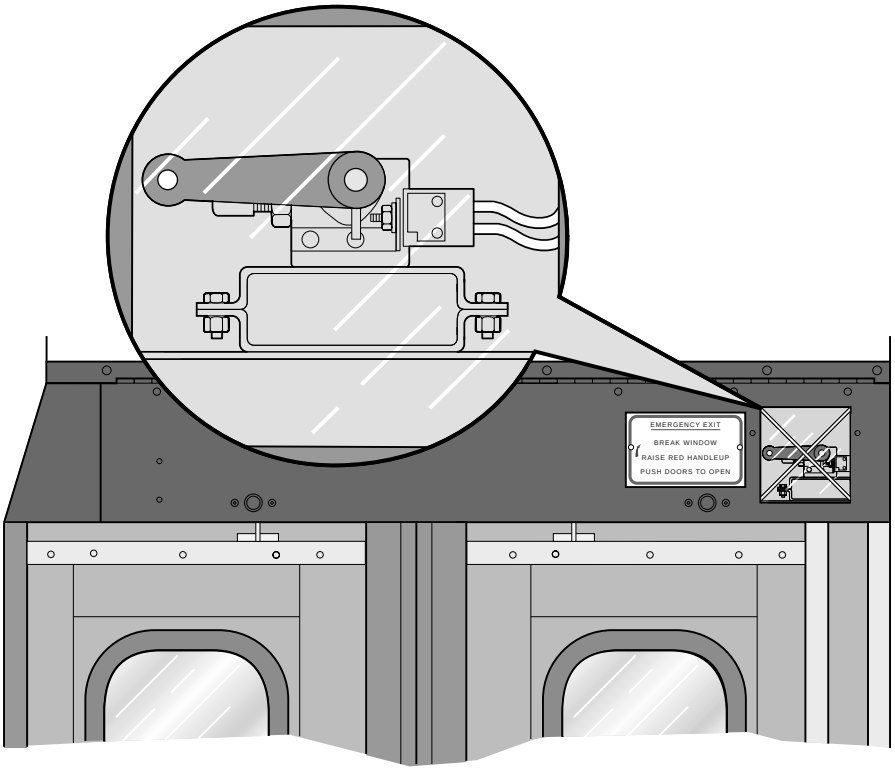
1. Push the black tab towards the rear of the bus.
2. Push the paddle handle up towards the roof. Notice that the notch on the tab appears. This will release the lock and allow the hatch to swing open towards the front of the bus.

Resetting the Escape Hatch

1. Push up on both hatch springs.
2. Center the hatch over the opening.
3. Push the tab back towards the rear of the bus.
4. Pull the paddle down and over the tab's notch.
5. Pull the handle moldings straight down until the trigger snaps into the notch of the paddle handle.

Emergency Door Releases

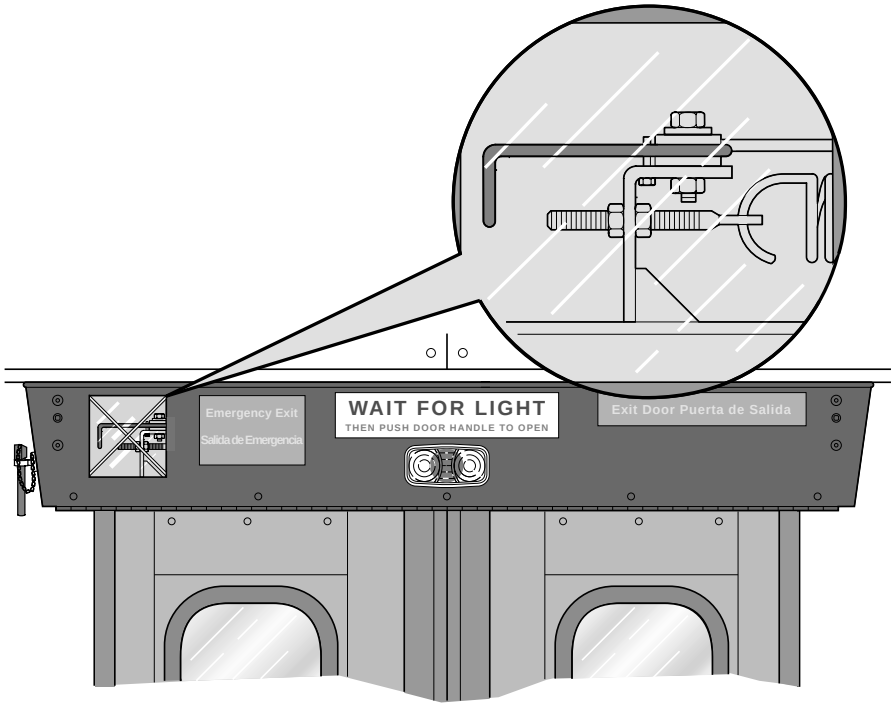
In an emergency, it may be necessary to open the bus doors by hand. To do this, the doors must be unlocked using the release valve or lever..



Front Door Emergency Release Valve

Front Door

The emergency air dump valve can be found on the right side of the panel directly above the doors. To use the valve, either break the glass or open the panel (using the two latches found on the front of the panel) and turn the red handle 90º upward. The doors will then push open easily.



Rear Door Emergency Release Lever

Rear Door

The emergency door release lever can be found on the left side of the panel directly above the doors. To use the valve, break the glass (using the small hammer chained to the side of the panel) or open the panel (using the two latches found in the panel's corners) and pull the red handle toward you. The doors will then push open easily.

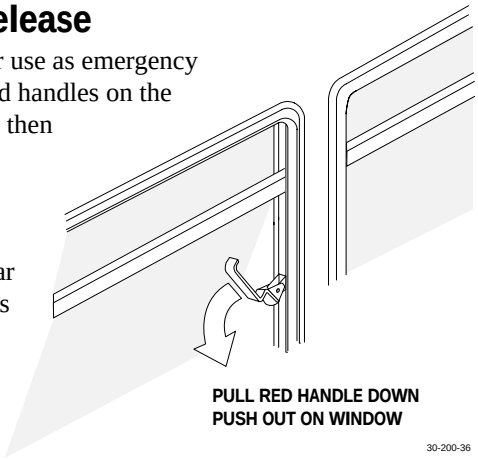
NOTICE

Using the Emergency Door Release Lever (when the ignition is on) will automatically disable the throttle and apply the service brakes.

Side Window Emergency Release

Some side windows can swing open for use as emergency exits. These can be identified by the red handles on the side. By pulling the red handle out and then pushing the window outward from the bottom, the window will swing out an open as far as necessary.

To close the window, push it outward far enough so that, when released, it swings back into place on its own. **Keep hands clear** and push out only as far as necessary for the window to shut securely. Make sure that the window is tightly shut and all the latches are properly secured.



EMERGENCY EQUIPMENT

Fire Extinguisher

The Phantom comes equipped with a chemical fire extinguisher. In case of fire, remove the safety pin from the trigger, aim the extinguisher at the base of the flames, and pull the trigger.

Safety Triangle Reflector Kit

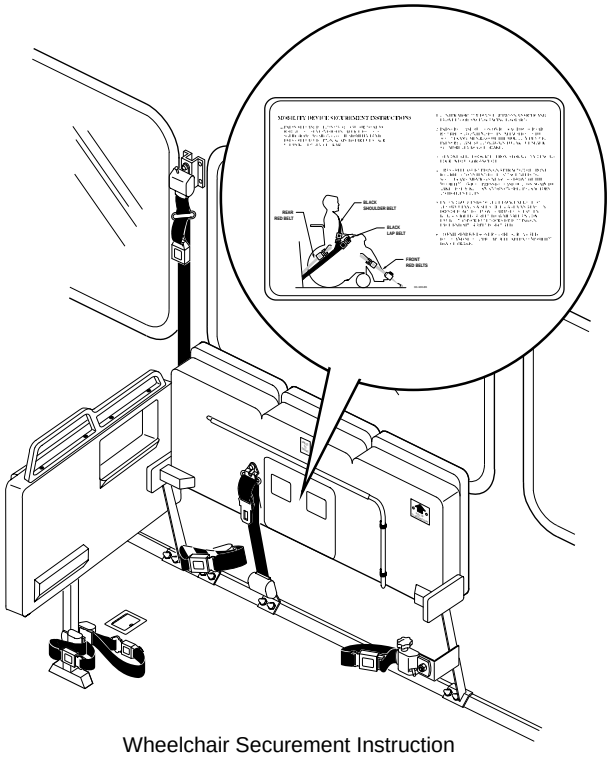
Each bus is equipped with a Safety Triangle Reflector Kit. In the event of an emergency, the triangles should be set at the front, side, and rear of the bus. When setting safety triangles, place the amber triangle in front of the bus and the red triangle to the rear.

Wheel Chocks

Wheel chocks are used to keep the bus from moving during emergency, break-down, or maintenance situations. Be sure that wheel chocks are placed firmly against the tires to prevent movement of the bus.

WHEELCHAIR SECUREMENT SYSTEM

For the safety of disabled passengers, the Phantom is equipped with securement systems designed to secure wheelchairs and other mobility devices (such as 3-wheeled scooters) in two seating locations near the front of the bus.



Wheelchair Securement Instruction
Decal Location

Instructions in the use of the wheelchair securement system are located on plaques mounted on the undersides of the folding seats in the wheelchair seating areas. To fold up the seat, pull toward you on the release latch (located on the underside of the seat and identified with a “RELEASE” decal) and lift up on the seat. For additional information on the use of the wheelchair securement system installed in your Phantom, refer to the instructional videotape produced by the seating manufacturer. This tape can be ordered through the Gillig Service Department by calling (510) 785-1500 or (800) 735-1500.

NOTES

CHAPTER 3 - BUS OPERATION

PRE-START CHECK

Before operating the Phantom bus, conduct a pre-start check in accordance with the official inspection procedures of your employer. The checklist below is provided as a **supplement** to your employer's pre-start inspection procedures. Some of the checks listed may be the responsibility of your company's mechanics or other service personnel; review this checklist with your driver trainer or supervisor to determine which areas you will be responsible for.

Exterior

- ☐ Tires and wheels in good condition.
- ☐ All access doors closed and locked.
- ☐ Mirrors intact and firmly attached.
- ☐ Windows secured and in good condition.

Engine Compartment

WARNING

The engine compartment is very dangerous! Only properly trained and qualified personnel should check fluids, inspect belts, etc.

- ☐ No fluid leakage in compartment or under the bus.
- ☐ Engine belts in good condition.
- ☐ Proper fluid levels.
- ☐ Air cleaner restriction indicator at acceptable level.

Lights

- ☐ Headlights.
- ☐ Brake lights.
- ☐ Tail lights.

- ☐ Backup lights.
- ☐ Marker and identification lights.
- ☐ Turn signals.
- ☐ Hazard lights.
- ☐ Interior lights.

Interior

- ☐ Wheelchair securement system intact and functional.
- ☐ Interior clean and free of debris.
- ☐ Roof hatches functional.
- ☐ Emergency window releases working.
- ☐ Access panels closed and latched.
- ☐ Wheelchair lift functioning normally.

Driver's Controls

- ☐ Fast Idle switch off.
- ☐ All wheelchair lift control switches off.
- ☐ Interlock Override Switches in "NORMAL" position.
- ☐ Kneel Switch in "OFF" position.
- ☐ All indicator lamps working.
- ☐ Mirrors properly adjusted.
- ☐ Seat and steering wheel properly adjusted.
- ☐ Doors working properly.
- ☐ Horn working.
- ☐ Seat belt fastened.

STARTING THE ENGINE

Before Starting the Engine

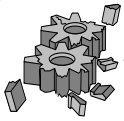
1. Close and lock all exterior access doors, making sure that all personnel remain safely clear of the bus.
2. Be sure the parking brake is applied and the transmission is in Neutral.
3. Make sure the Fast Idle switch is in the "OFF" position.

Starting the Engine

1. Set the Ignition Select Switch to DAY RUN or IGNITION for daytime operation, or ≣D (Night Run) for nighttime operation. Some indicator lamps will light up for a few seconds.
2. Test the indicator lamps using the Indicator Lamp Test Button (see Chapter 1 – *Driver's Compartment*).

WARNING

Cold-weather starting aids should be used only by trained personnel with proper metering equipment. Improper use of starting fluids can cause explosions, injury, and engine damage.



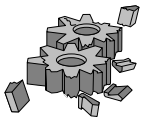
CAUTION

Do not crank the starter motor for more than 30 seconds at a time. Let the starter cool off for at least 2 minutes between starting attempts. If the engine will not start after 3 tries, have it checked by mechanics.

3. Press the starter button until the engine starts. **Do not press the throttle pedal during starting.**

WARNING

A runaway starter can overheat and start a fire. Power to the starter must be shut off using the Battery Cutoff Switch if the "Starter" indicator lamp stays on after you release the starter button.



CAUTION

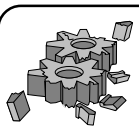
If the "Check Engine" and/or "Stop Engine" indicator lamps remain lit after startup, shut the engine down and check with service personnel.

4. Check the oil pressure gauge immediately after the engine starts. The gauge should show oil pressure within 15 seconds of starting. If the oil pressure gauge still reads zero after 15 seconds, shut the engine down **immediately** and have it checked by mechanics.

WARNING

Once the engine has started, do not try to drive the bus until the air pressure (according to both needles on the air pressure gauge) reaches at least 100 psi.

5. Run the engine at Fast Idle or part throttle until the air pressure gauge shows at least 100 psi and the Engine Coolant Temperature gauge indicates a temperature of at least 140º F. It is best to let the engine idle for 3 to 5 minutes before moving the bus.



CAUTION

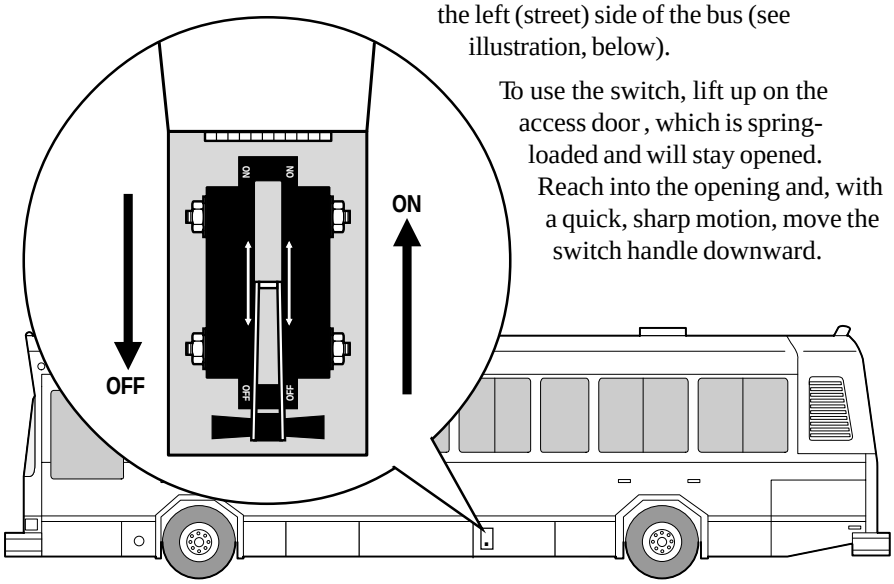
Do not idle the engine for very long periods (10 minutes or more). This can cause engine damage. If prolonged idling is necessary, use the Fast Idle setting.

BATTERY CUTOFF SWITCH

Shutting Off Electrical Power During Emergencies

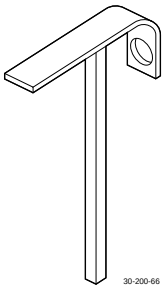
In an emergency, especially an electrical short or fire, you may need to shut off the flow of power to the electrical system of the bus. This is done using the Batter y Cutoff Switch, which can be found behind the small rectangular door located on the left (street) side of the bus (see illustration, below).

To use the switch, lift up on the access door , which is spring-loaded and will stay opened. Reach into the opening and, with a quick, sharp motion, move the switch handle downward.



Battery Cutoff Switch

The small access door is located in the larger Batter y Access Panel. If you cannot properly reach the switch through the small access door , you will need to open the Battery Access Panel using the "T" handle key tool, which should always be kept where you can reach it quickly . To use the "T" handle key tool, insert the square end into each of the access door's key openings and turn 90º. The door can then be lifted open.



"T" Handle Key Tool

WARNING

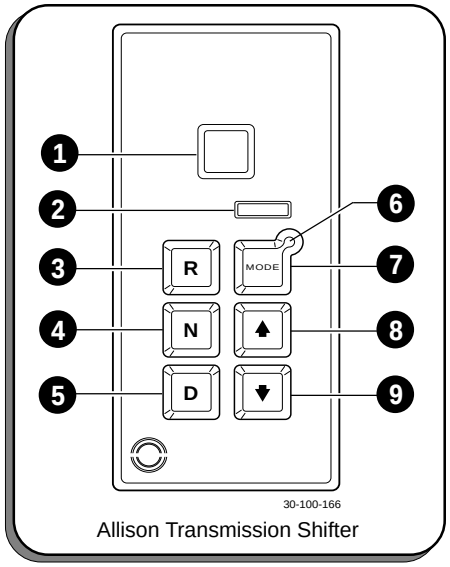
Be careful not to touch any electrical cables or connections when shutting off the Battery Cutoff Switch. These can get very hot.

SHIFTING THE TRANSMISSION

Shifter Controls

Transmission gear ranges are selected using the shifter control, located in the console at the driver's left. The shifter uses touch-sensitive pads to control the transmission.

Be sure to read the "Gear Selection " section of this chapter before driving the bus.



Allison Transmission Shifter

❶ Select Indicator
This readout indicates which gear range is currently selected by the shifter.

❷ Mode I.D. Label
A decal in this location identifies the secondary shift mode type (if any).

❸ Reverse Selector Pad
Pressing this pad selects Reverse in the transmission.

❹ Neutral Selector Pad
Pressing this pad will cause the transmission to shift into Neutral. A raised ridge surrounds this pad so that it can be easily located by touch.

❺ Drive Selector Pad
Pressing this pad selects the transmission's normal forward gear range.

❻ Mode Selection Indicator Light

This red L.E.D. lights up when the secondary transmission mode (if available on your Phantom bus) is selected.

❼ Mode Selector Pad

This pad is used to choose between the standard and secondary transmission modes on some buses.

❽ Upshift Pad

Pressing this pad selects the next higher forward gear range, provided the transmission is not already using the highest gear range.

❾ Downshift Pad

Pressing this pad selects the next lower forward gear range, provided the transmission is not already using the lowest gear range.

Gear Selection

NOTICE

Do not shift into gear when the engine is at Fast Idle. Make sure the Fast Idle Switch is in the "OFF" position before shifting out of Neutral.

CAUTION

Do not let the bus coast in Neutral. This can cause severe transmission damage.

WARNING

Always apply the service (pedal) brakes when shifting out of Neutral.

Reverse (R)

To back the bus, select the "R" button. Always bring the bus to a complete stop before selecting "R" or shifting from "R" to a forward gear. It is recommended that Neutral (N) be selected first when shifting between Reverse and any forward gear.

Neutral (N)

Always select Neutral when starting or shutting down the engine; it is a good idea to shift to Neutral first when changing from a forward gear to Reverse. **The bus must come to a complete stop before changing from a forward gear to Reverse or from Reverse to a forward gear.**

Drive 5 (D)

Select this position for normal driving conditions. When Drive is selected, the transmission starts in first gear and then automatically upshifts to second, third, fourth, and fifth as necessary. Once in Drive, the ▲ or ▼ pads can be used to limit the transmission to a lower gear range.

Drive 4 (4)

Select this range (by pressing the ▲ or ▼ pads) to provide engine braking while descending mild grades. In this range, the transmission starts in first gear and automatically upshifts to second, third, and fourth. It will not shift into fifth gear unless the engine exceeds governed speed.

Drive 3 (3)

Select this range (by pressing the ▲ or ▼ pads) for descending medium grades and for limiting vehicle speed to mid-range operation. In this range, the transmission starts in first gear and automatically upshifts to second and third. Further upshifts will not be made unless the engine exceeds governed speed.

Drive 2 (2)

Select this range (by pressing the ▲ or ▼ pads) for additional engine braking when descending steeper grades and when you want to limit bus speed to low mid-range operation. In this range, the transmission starts in first gear and automatically upshifts to second. Further upshifts will not be made unless the engine exceeds governed speed.

Drive 1 (1)

Select this range (by pressing the ▲ or ▼ pads) when driving on very steep grades and when an automatic upshift would take the engine out of its best operating range. The transmission will stay in first gear unless the engine exceeds governed speed.

SHUTDOWN AND PARKING PROCEDURE

Before Leaving the Driver's Seat

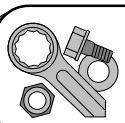
WARNING
Do not leave an idling bus unattended!

WARNING
Do not use the Interlock System as a parking brake!

WARNING
The transmission must be in neutral and the parking brake must be applied before leaving the driver's seat!

1. Apply the parking brake.
2. Shift the transmission into Neutral.
3. If parked on a grade, be sure to curb or block the wheels.

Shutting Down the Engine



NOTICE
Allow the engine to idle for at least 3 minutes before shutting the engine down. This allows the engine parts to cool properly .

1. Make sure the parking brake is applied, that the transmission is in Neutral, and that the bus is parked properly (see the instructions in the "Before Leaving the Driver's Seat" section, above).
2. Turn off all electrical accessories.
3. Allow the engine to idle for 3 to 5 minutes.
4. Select "OFF" using the Ignition Select Switch.

NOTES

CHAPTER 4 – LIFT OPERATION

The Phantom features the Lift-U wheelchair lift for the assistance of your passengers who could not otherwise board or exit the bus.

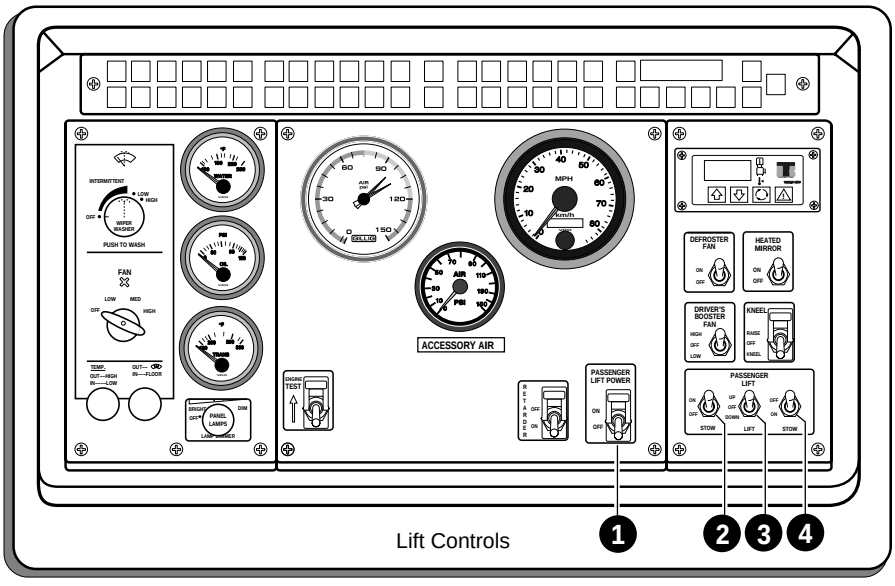
Although the Lift-U wheelchair lift is equipped with many safeguards and overrides, the safety of passengers using the lift depends on you, the driver. It is *your* responsibility to make sure that all of your passengers remain safe from harm during lift operation. For this reason, you *must* read and follow all of the information in the **Warning**, ***CAUTION***, and *NOTICE* boxes found in this chapter. Failure to do so can result in injury or even death to your passengers.

WARNING

If you have questions about any of the instructions in this chapter, contact your supervisor before trying to use the lift.

LIFT CONTROLS

The Phantom's lift control switches can be found on the lower area of the Center and Right Dash Panels. The Sensitive Edge Override Switch is located inside the Electrical Component Compartment.



Lift Controls

❶ Passenger Lift Power Switch

Located at the bottom edge of the right side of the Center Dash Panel, this switch is the master control for lift operation. This switch must be in the "OFF" position when the lift is not in use. The lift interlock system automatically applies the service brakes and disables the throttle when this switch is in the "ON" position.

❷ Left Stow Switch

Located on the left side of the Lift Controls panel at the bottom of the Right Dash Panel, this switch is used to stow the lift. The Left and Right Stow Switches must be pressed *at the same time* to stow the lift.

WARNING

NEVER touch either of the "Stow" switches with a passenger on the lift platform! Stowage of an occupied lift could result in serious injury or death.

❸ Lift Operation Switch

Located in the center of the Lift Controls panel at the bottom of the Right Dash Panel, this switch is used to operate the lift. The Passenger Lift Power Switch must be in the "ON" position for the Lift Operation Switch to function.

❹ Right Stow Switch

Located on the right side of the Lift Controls panel at the bottom of the Right Dash Panel, this switch is used to stow the lift. The Left and Right Stow Switches must be pressed *at the same time* to stow the lift.

Sensitive Edge Override Switch

WARNING

The Sensitive Edge Override Switch should NEVER be placed in the "OVERRIDE" position when a passenger is on the lift.

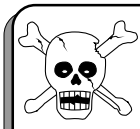
This switch can be found inside the Electrical Component Compartment, located above and to the left of the driver. To open the access door, twist the two knobs, pull the door open, and pull out the prop rod to hold the door in place. The Sensitive Edge Override switch is located in the upper right-hand area of the compartment.

WARNING

Lift passengers may not be able to react to a hazardous situation during lift operations. You must observe passengers during the entry, operation, and exit of the lift. You must also instruct the passenger as to the proper use of the lift. Be prepared to halt lift operation IMMEDIATELY if a hazardous situation develops!

Lift Safety Features

The wheelchair lift has two types of safety sensors to detect the presence of passengers in unsafe locations during a potentially dangerous operation. Each of these safety sensors provides protection only during specific times in the lift operation cycle. If a safety sensor gives a "false alarm," refer to the "In Case Of Lift Malfunction" section later in this chapter.



WARNING

NEVER put the Sensitive Edge Override Switch into the "OVER-RIDE" position when a passenger is on the wheelchair lift! This disables the lift's safety features and can result in serious injury or death to the passenger.

Pressure-Sensitive Strips

To prevent injury to the passenger from pinch points in the lift mechanism, pressure-sensitive strips are installed on either side of the lift platform. If, at any time during lift raising (when the Lift Operation Switch is in the "UP" position), either of these pressure-sensitive strips detects an obstruction, lift operation will stop immediately and the lift will begin to lower until the obstruction no longer touches the strip or the lift platform rests on the ground.

Pressure-Sensitive Mats

The lift platform features pressure-sensitive mats which detect the presence of passengers on the lift during lift stowage. If the Stow Switches are activated and the pressure-sensitive mats detect an object on the lift platform at any time before the curbside barrier reaches the stowed or step position, lift stowage will immediately halt. At this point, the lift will not function until the passenger or object is removed from the lift platform. After the object or passenger has been removed you must momentarily lower the lift to reactivate the control system.

USING THE LIFT

Loading Passengers Into The Bus

1. Bring the bus to a complete stop in an approved lift loading zone (a flat area 1 to 3 feet from the curb where the lift can be lowered onto a level, debris-free, unobstructed spot).
2. Set the parking brake and shift the transmission into Neutral.
3. Open the front door.
4. Instruct passengers to stand clear.
5. Activate the lift power by moving the Passenger Lift Power Switch into the "ON" position. This should activate the Lift Interlock System, which applies the service brakes, disables the throttle, and increases the engine idle speed.

CAUTION

If the lift hits something while lowering to pick up a passenger, have the passenger move clear of the lift landing area, stow the lift, and move the bus to a better spot.

6. Carefully observing the lift platform and lift loading zone to make sure that all persons are standing safely clear, push and hold the Lift Operation Switch to the "DOWN" position.
7. Hold the switch until the lift platform reaches ground level and the curbside barrier has lowered to form a ramp. If a person attempts to enter or exit the bus while the lift is being lowered, stop lift operation **immediately** and do not resume until all persons are clear of the lift.

WARNING

The distance between the second step and the lift platform may be more than 22 inches when the platform is at ground level. Persons attempting to step down or up across this distance could slip or trip. Do not allow walking passengers to use the lift entrance while the lift is deployed. Use caution to avoid a fall if you need to step down to assist a passenger during loading.

8. Instruct the passenger to enter the lift platform as follows:

   Wheelchair Passenger: Instruct the passenger to carefully enter the lift platform, center the wheelchair on the platform, lock the wheelchair's wheels, and firmly grasp the handrails.

   Standee Passenger: Instruct the passenger to carefully enter the lift platform, stand within the area outlined in yellow, and firmly grasp the handrails. Warn the passenger of the possibility of low overhead clearance.

WARNING

NEVER touch either of the "Lift Stow" switches with a passenger on the lift platform! Stowage of an occupied lift could result in serious injury or death.

9. Observe the passenger to be sure that he or she is clear of all moving parts and potential pinch points.

WARNING

ALWAYS check to be sure that the lift platform barriers are positioned properly when operating the lift. The curbside barrier should always be in barrier position except when the lift platform is at ground level; the roadside barrier should always be in barrier position except when the lift platform is at bus floor level. Passengers could fall from the lift if barriers do not deploy properly.

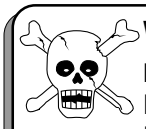
10. While continuing to observe the passenger for any danger signs, push the Lift Operation Switch to the "UP" position. Hold the switch in the "UP" position to raise the lift platform. Make sure the passenger stays clear of any pinch points and remains stable on the platform. If any difficulty, *no matter how minor*, develops, stop lift operation **immediately** and correct the problem before continuing. Hold the switch in the "UP" position and release it when the lift platform stops at bus floor level and the roadside barrier lowers to the bridge position.
11. Help the passenger exit the platform and proceed to the appropriate seating area.

Unloading Passengers From The Bus

1. Bring the bus to a complete stop in an approved lift loading zone (a flat area 1 to 3 feet from the curb where the lift can be lowered onto a level, debris-free, unobstructed spot).
2. Set the parking brake and shift the transmission into Neutral.
3. Open the front door.
4. Instruct passengers to stand clear.
5. Activate the lift power by moving the Passenger Lift Power Switch into the "ON" position. This should activate the Lift Interlock System, which applies the service brakes, disables the throttle, and increases the engine idle speed.
6. Carefully observing the lift platform and lift loading zone to make sure that all persons are standing safely clear, push and hold the Lift Operation Switch to the "UP" position.
7. Hold the switch until the lift platform reaches bus floor level and the roadside barrier has lowered to form a bridge between the lift platform and the bus floor. If a person attempts to enter or exit the bus while the lift is being raised, stop lift operation **immediately** and do not resume until all persons are clear of the lift.
8. Instruct the passenger to enter the lift platform as follows:

   Wheelchair Passenger: Instruct the passenger to carefully enter the lift platform, center the wheelchair on the platform, lock the wheelchair's wheels, and firmly grasp the handrails.

   Standee Passenger: Instruct the passenger to carefully enter the lift platform, stand within the area outlined in yellow, and firmly grasp the handrails. Warn the passenger of the possibility of low overhead clearance.



WARNING

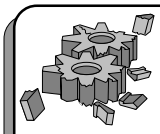
NEVER touch either of the "Stow" switches with a passenger on the lift platform! Stowage of an occupied lift could result in serious injury or death.

9. Observe the passenger to be sure that he or she is clear of all moving parts and potential pinch points.

WARNING

ALWAYS check to be sure that the lift platform barriers are positioned properly when operating the lift. The curbside barrier should always be in barrier position except when the lift platform is at ground level; the roadside barrier should always be in barrier position except when the lift platform is at bus floor level. Passengers could fall from the lift if barriers do not deploy properly.

10. While continuing to observe the passenger for any danger signs, push and hold the Lift Operation Switch in the "DOWN" position. Make sure the passenger stays clear of any pinch points and remains stable on the platform. If any difficulty, *no matter how minor*, develops, stop lift operation **immediately** and correct the problem before continuing. Hold the switch in the "Down" position and release it when the lift platform stops at ground level and the curbside barrier lowers to form a ramp.



CAUTION

If the lift hits something while lowering to drop off a passenger, stop lift operation IMMEDIATELY, return the lift platform to bus floor level, have the passenger return to the seating area, stow the lift, and move the bus to a better unloading spot.

11. Instruct the passenger to cautiously exit the platform.

WARNING

The distance between the second step and the lift platform may be more than 22 inches when the platform is at ground level. Persons attempting to step down or up across this distance could slip or trip. Do not allow walking passengers to use the lift entrance while the lift is deployed. Use caution to avoid a fall if you need to step down to assist a passenger during loading.

Stowing The Lift

WARNING

ALWAYS be sure that there are no passengers on the lift platform before you try to stow the lift. Serious injury or death could result if stowage of an occupied lift is attempted.

1. Clear the lift platform of all persons and objects. Instruct passengers to stay clear of the lift until it is stowed.
2. Simultaneously push the toggles of the Left and Right Stow Switches to the "ON" position. While observing the lift for any sign of trouble, hold the switches in the "ON" position until the lift platform returns to the fully stowed position.
3. Release the Stow Switches.
4. Move the Passenger Lift Power Switch to the "OFF" position and close the red safety cover. The bus should now be ready for normal operation.

IN CASE OF LIFT MALFUNCTION

Like any complex piece of machinery, wheelchair lifts can sometimes develop problems. In order to keep your passengers safe from harm, you should be ready to deal with the unexpected. For this reason, you should study this section so you will be ready in the unlikely event of a malfunction. In addition, you *must* learn and follow your employer's official guidelines regarding driver responsibilities in the event of wheelchair lift malfunction.

WARNING

ALWAYS contact your supervisor immediately if the lift malfunctions in any way. Do not take any of the actions listed in this section unless specifically authorized by your supervisor.

Safety Sensor "False Alarms"

Refer to the "Lift Safety Features" section earlier in this chapter for descriptions of the pressure-sensitive strips and mats installed on the wheelchair lift. If one of these safety sensors detects a problem on the lift when none is actually present, it may be necessary to override the sensors using the Sensitive Edge Override Switch.

Lift Will Not Raise Properly

If an unoccupied lift refuses to respond to the "UP" position of the Lift Control Switch, or if it begins to raise and then stops or drops back to ground level, there may be a problem with the pressure-sensitive strips on the lift platform. To override the pressure-sensitive strips, do the following (if authorized by your employer):

WARNING

The Sensitive Edge Override Switch should NEVER be placed in the "OVERRIDE" position when a passenger is on the lift.

1. Make sure there are no persons or objects on or near the lift platform.
2. Open the Electrical Component Compartment door (located above the driver's side window) and move the Sensitive Edge Override Switch to the "OVERRIDE" position.
3. Again checking to be certain that no persons are on or near the lift platform, push the Lift Control Switch to the "DOWN" position.
4. Push the Lift Control Switch to the "UP" position.
5. Once the lift has been fully raised, reset the Sensitive Edge Override Switch to the "NORMAL" position. Close the Electrical Component Compartment Door.

Lift Will Not Stow Properly

If an unoccupied lift refuses to respond to the Stow Switches, there may be a problem with the pressure-sensitive mats on the lift platform. To override the pressure-sensitive mats, do the following (if authorized by your employer):

1. Make sure there are no persons or objects on or near the lift platform.

WARNING

NEVER touch either of the "Lift Stow" switches with a passenger on the lift platform! Stowage of an occupied lift could result in serious injury or death.

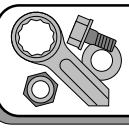
2. Open the Electrical Component Compartment door (located above the driver's side window) and move the Sensitive Edge Override Switch to the "OVERRIDE" position.
3. Again checking to be certain that no persons are on or near the lift platform, simultaneously push both of the Stow Switches to the "ON" position.
4. Closely observe the lift platform as it stows to ensure that everything is working properly.
5. Once the lift has been fully stowed, reset the Sensitive Edge Override Switch to the "NORMAL" position. Close the Electrical Component Compartment Door.

Manual Lift Operation

If the lift cannot be operated electrically, a hand pump and a series of valves can be used to operate the lift manually. If you are authorized by your supervisor to manually operate the lift in an emergency, use the following procedure:

NOTICE

Lift-U recommends that manual lift operation be done only as a temporary measure for removing passengers and not for passenger loading.



NOTICE

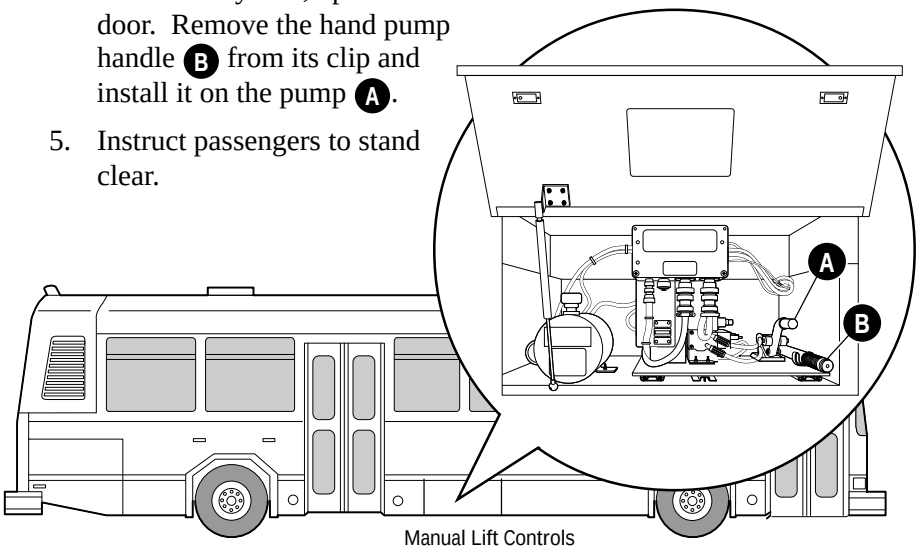
Do not exceed 75 ft-lbs of force against the pump handle.

Manually Operating The Lift

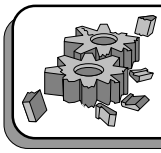
WARNING

During manual operation, all normal safety features and mechanical limits are bypassed. The lift platform and barriers will not position themselves and the lift will not stop when a passenger contacts the pressure-sensitive mats or strips. Use extreme caution when operating the lift manually- the danger of passenger injury or equipment damage is much greater than during normal operation.

1. Bring the bus to a complete stop in an approved lift loading zone (a flat area 1 to 3 feet from the curb where the lift can be lowered onto a level, debris-free, unobstructed spot).
2. Set the parking brake and shift the transmission into Neutral.
3. Open the front door.
4. Move the toggle of the Passenger Lift Power Switch into the "ON" position.
5. Locate the Lift Controls Access Door (see illustration below) on the center skirt area on the right (curb) side of the bus. Using the T-handle key tool, open the access door. Remove the hand pump handle **B** from its clip and install it on the pump **A**.
5. Instruct passengers to stand clear.



Manual Lift Controls



CAUTION

Activating the Passenger Lift Power Switch during manual operation is necessary to preserve the lift electrical logic.

Manually Deploying the Lift Platform

1. Refer to the decal on the inside of the Lift Controls Access Door to locate Valve **1B**. Push and hold the button on valve **1B** while pumping the handle of the manual pump.
2. When the lift platform is fully deployed, release valve **1B** and stop pumping.

Manually Operating The Curbside Barrier

To move the curbside barrier from the stowed position to the ramp or barrier positions, follow these instructions:

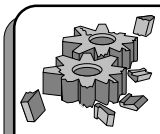
1. Locate valve **3B** using the decal on the Lift Controls Access Door.
2. While holding the button on valve **3B** down, pump the hand pump while observing the position of the curbside barrier.
3. For barrier position, release valve **3B** and stop pumping when the curbside barrier reaches a 90º angle relative to the lift platform. For ramp position, release valve **3B** and stop pumping when the curbside barrier is properly positioned.

To move the curbside barrier from the ramp or barrier position to the stowed position, or from the ramp position to the barrier position, follow these instructions:

1. Locate valve **3A** using the decal on the Lift Controls Access Door.
2. While holding the button on valve **3A** down, pump the hand pump while observing the position of the curbside barrier.
3. For barrier position, release valve **3A** and stop pumping when the curbside barrier reaches a 90º angle relative to the lift platform. For stowed position, release valve **3A** and stop pumping when the curbside barrier is properly positioned.

Manually Operating The Roadside Barrier

To move the roadside barrier from the bridge position to the barrier position, follow these instructions:



CAUTION

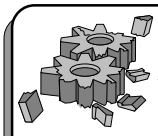
Always fully deploy the lift platform before attempting to operate the roadside barrier. The lift or the bus may be damaged if the roadside barrier is opened before the lift platform is fully deployed.

1. Locate valve **4A** using the decal on the Lift Controls Access Door.
2. While holding the button on valve **4A** down, pump the hand pump while observing the position of the roadside barrier. Continue holding the valve and pumping until the roadside barrier is at an angle of 82º from the lift platform surface.

To move the roadside barrier from the barrier position to the bridge position, follow these instructions:

1. Locate valve **4B** using the decal on the Lift Controls Access Door.
2. While holding the button on valve **4B** down, pump the hand pump while observing the position of the roadside barrier. Continue holding the valve and pumping until the roadside barrier is at an angle of 180º from the lift platform surface.

Raising Or Lowering The Lift Platform



CAUTION

Always fully deploy the lift platform before attempting to raise or lower the lift platform. The lift or the bus may be damaged if the lift is raised or lowered before the lift platform is fully deployed.

WARNING

Lift passengers could roll or fall off the platform if both barriers are not raised to the barrier position before raising or lowering the lift. Do not use the lift to transfer passengers if the barriers cannot be properly positioned.

To raise the lift platform, use the following steps:

1. Locate valve **2A** using the decal on the Lift Controls Access Door.
2. While holding the button on valve **2A** down, pump the hand pump while observing the position of the lift platform. Continue holding the valve and pumping until the lift platform is at the desired level.

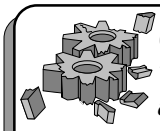
To lower the lift platform, use the following steps :

1. Locate valve **2B** using the decal on the Lift Controls Access Door.
2. While holding the button on valve **2B** down, pump the hand pump while observing the position of the roadside barrier. Keep in mind that the lift will not begin to lower immediately due to hydraulic system design. Continue holding the valve and pumping until lift begins lowering and reaches the desired level.

NOTICE

The lift platform may be raised or lowered as many times as necessary to load and unload passengers without stowing the lift after each cycle.

Manually Stowing The Lift



CAUTION

The lift may be damaged if the lift platform is not correctly aligned for the stowage operation. Be sure that the guide blocks on the lift platform line up with the slide channels before stowing.

To stow the lift manually, use the following steps:

1. Clear the lift platform of all persons and objects.
2. Warn all persons to stay clear of the lift area.
3. Move the curbside barrier into the stowed position. Move the roadside barrier into the bridge position.
4. Bring the lift platform to stow height by raising or lowering as required. Stow height is the height at which the guide blocks on the lift platform will line up with the slide channels.
5. Using the decal on the inside of the Lift Controls Access Door as a guide, locate valve **1A**.
6. While pressing and holding down the button on valve **1A**, pump the hand pump.
7. When the lift mechanism is within 12-18 inches from the fully stowed position, check guide block alignment and realign the lift platform as necessary.
8. Discontinue pumping when desired stow distance is achieved. For fully stowed position, stop pumping when the lift mechanism is fully bottomed within the slide channels. The curbside portion of the lift platform should be flush with the end of the slide channels while in the fully stowed position.

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