

SECTION 7 SAFETY FEATURES AND EQUIPMENT

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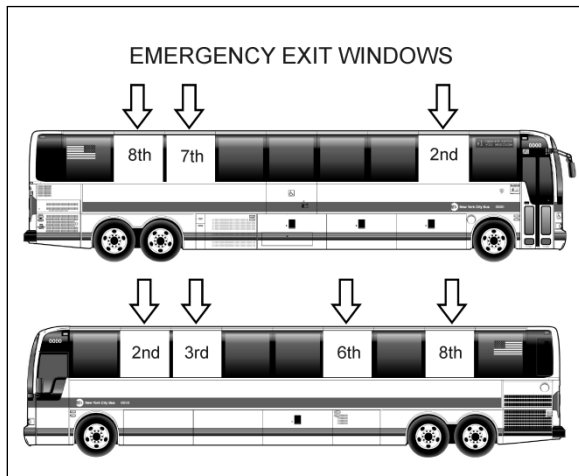
7-2 SAFETY FEATURES AND EQUIPMENT

EMERGENCY EXITS

Locate and learn how to use all possible emergency exits. It is good practice to inform passengers of the location of exits and how to use them in case of an emergency.

SIDE WINDOWS

Some side windows can be opened from the inside for emergency exit. A riveted tag located on the bottom of each passenger window indicates the location of the nearest emergency exit.

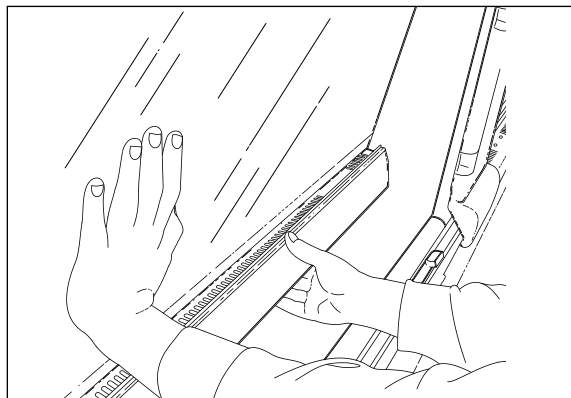


EMERGENCY EXIT WINDOWS (X3-45)

18617_2

To open a side window emergency exit, tilt up the release bar and push the bottom of the window outwards, as illustrated below. The window is hinged from the top and will not fall out.

To close the window, tilt up the release bar and pull the window back. Push down the release bar to lock shut.

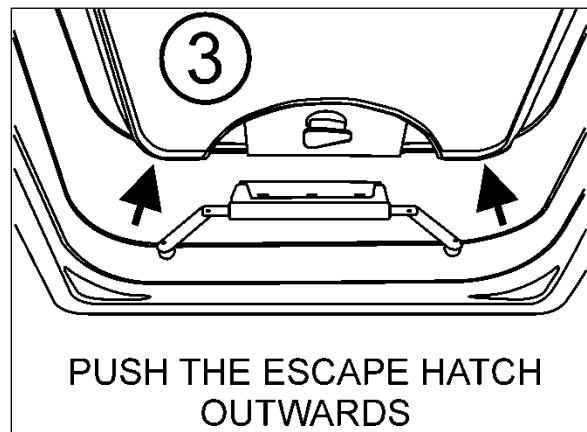
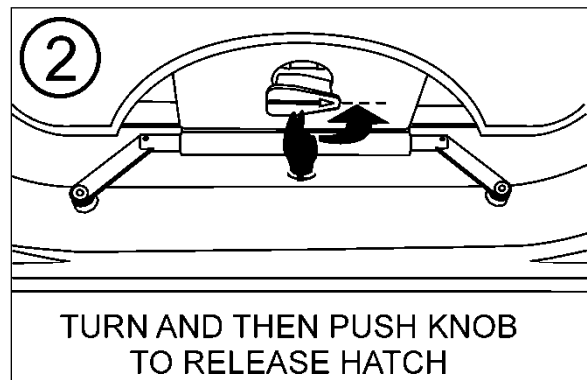
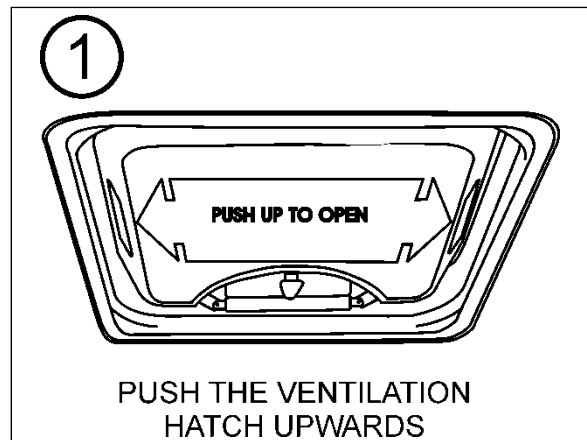


SIDE WINDOW EMERGENCY EXIT

18391

ROOF HATCH

A roof ventilation hatch, designed to be opened by occupants is installed in the roof at the rear of the vehicle. Another roof hatch is located in the front of the vehicle. The hatches can serve as emergency exits. In case of an emergency, push the ventilation hatch upwards (1). Turn knob $\frac{1}{4}$ turn (arrow pointing "TO EXIT") and then push knob to release the hatch (2). Push the escape hatch outwards (3). A decal with operating instructions is located on the hatch.



EMERGENCY ROOF ESCAPE OPENING

NOTE

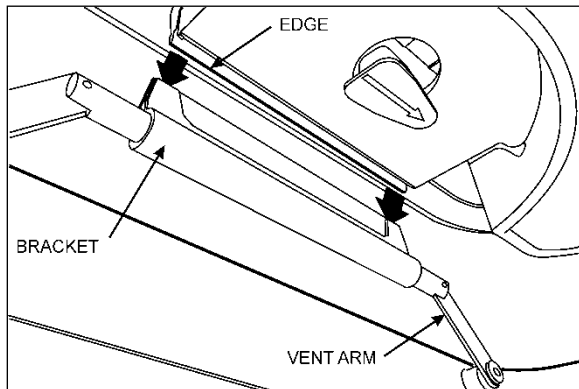
In the event of ventilation blower motor failure, the roof hatch may be used to aid ventilation by pushing the hatch upwards.



CAUTION

Be aware of reduced vehicle overhead clearance when driving under overpasses with the roof hatch open.

To latch escape hatch after use, vent arms must be pushed upright in FULL OPEN VENT position. Insert edge firmly between the two sections of the bracket and then return knob to original position (arrow pointing "LATCHED") to lock the hatch. Finally, pull the hatch in to closed position, one side at a time.



ROOF ESCAPE LATCHING

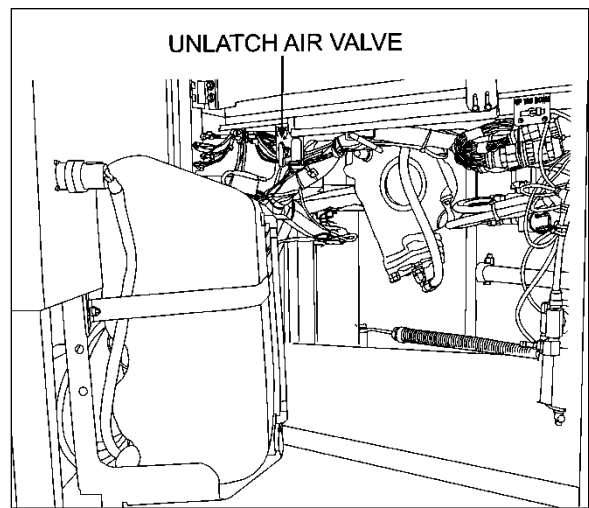
EMERGENCY ENTRANCE DOOR OPENING

An emergency release air valve located on the dashboard R.H. side near the entrance door allows emergency depletion of the door and latching cylinders. Another unlatch valve is located in the front service compartment and allows opening the door from the outside. To open the door in an emergency situation, first turn the unlatch valve in the direction of the arrows and push (or pull) the door open. To close the door after emergency opening, return the valve to its initial position, open the door using the door cylinder, then close the door normally.



INTERIOR EMERGENCY RELEASE AIR VALVE

12164



UNLATCH AIR VALVE LOCATION

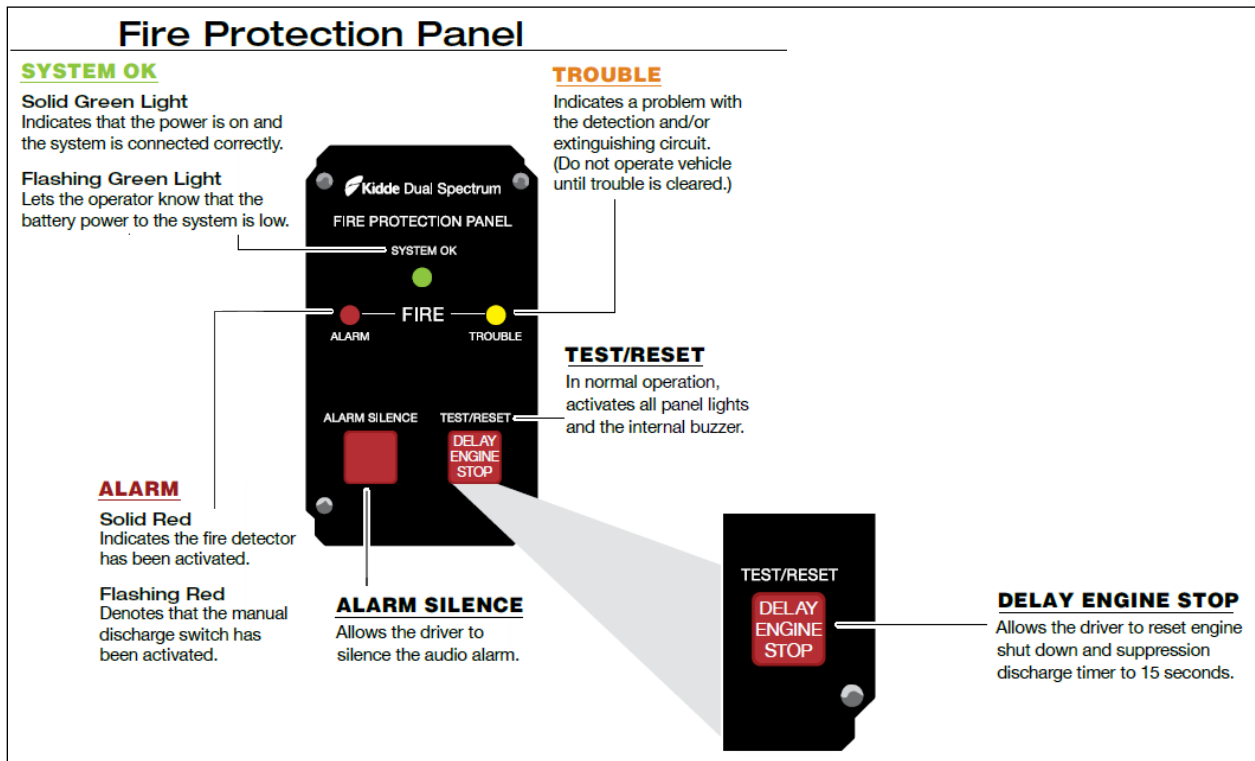
12209

EMERGENCY EQUIPMENT

FIRE SUPPRESSION SYSTEM (AFSS)

The coach is equipped with the Automatic Fire Detection and Suppression System (AFSS).




See below, a brief description of the system, the visual information provided and how it should be operated if a fire is detected.





System Operation

The protection panel and manual discharge is located in the operator's area and displays a number of lights which indicate the status of the system.

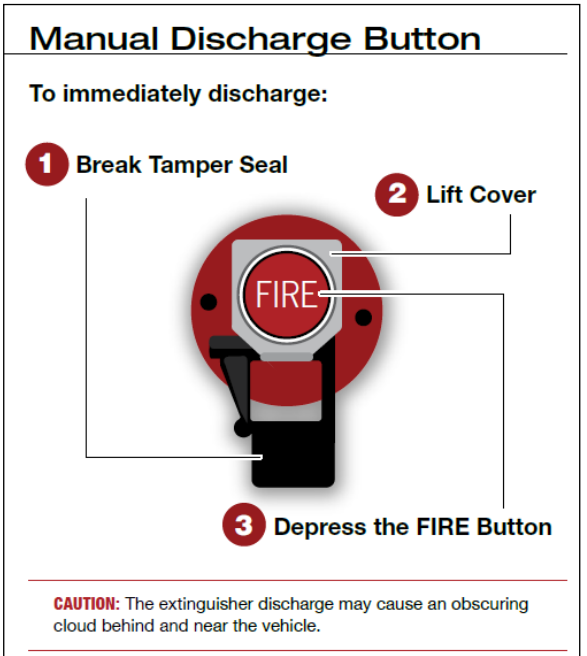
If a FIRE is detected:

-  ALARM light illuminates
-  The internal buzzer sounds
-  15 second count down begins for engine shut down and suppression discharge

NOTE: If you are not prepared to bring the vehicle to a safe stop you will need to depress the **DELAY ENGINE STOP** button.

-  Upon expiration of timer, engine shuts down
-  Suppression agent will discharge

NOTE: Activation of the manual discharge button will shut down the engine and immediately discharge the suppression system.



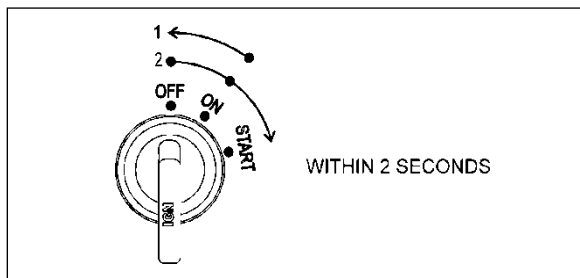
KIDDE IMAGES

Starting the Vehicle after Triggering Of a Fire Alarm

The vehicle may be started after a fire alarm without resetting the system. Refer to ignition switch sequence below. This will not reset the system; rather it will instruct the vehicle's multiplex system to ignore vehicle interface outputs from the protection panel. This feature is intended to be used only in emergency situations that require the vehicle to be restarted and moved a short distance prior to system reset. It should not be performed if the cause of the fire alarm has not been clearly identified and corrected.

To start the vehicle, perform this ignition switch sequence within 2 seconds:

1. From the on position, turn to **OFF**
2. Return to ON and START.



TIRE PRESSURE MONITORING SYSTEM (TPMS)

The coach is equipped with a Tire Pressure Monitoring System (TPMS). The system monitors tire temperature and pressure.

If pressure and/or temperature exceed a certain value for a set number of seconds, a warning buzzer will be heard and a message will appear in the DID. The following paragraphs describe four different situations it might occur.

1) CRITICALLY LOW PRESSURE WARNING



A critically low pressure warning will trigger if a tire pressure falls below 45 psi. An audible warning sound

will be heard and the check pictogram remains illuminated.

2) HIGH TEMPERATURE WARNING



High temperature warning will trigger if a tire temperature rise above 194°F/90°C. An audible

warning sound will be heard and the check pictogram flashes.

3) HIGH TEMPERATURE ALARM



It indicates a critical alert. A high temperature alert will trigger if a tire temperature rise above 212°F/100°C. An

audible warning sound will be heard and the stop pictogram flashes. Stop the vehicle as soon as possible.

4) TPMS MALFUNCTION



In case of system malfunction, the following warning popup message

will show on the DID to warn the driver that the TPMS might be disabled or unreliable.

Description

System includes the following elements:

- Special tire valves;
- RF sensor inside each tire, fixed to the valve;
- 3 antennas to receive the sensors RF signal (one in the front spare tire compartment, one above the L.H. side rear wheels and one above the R.H. side rear wheels);
- A TPMS receiver connected to the antennas and located in the front electrical compartment, above the CECM;

The section of the special tire valves located inside the tire is dome-shaped to allow fixing the sensor.

Sensors provide continuous tire pressure and temperature reading.

The normal sensor battery lifespan is 5 years. The remaining lifespan is displayed as a percentage in the TPMS display.

NOTE

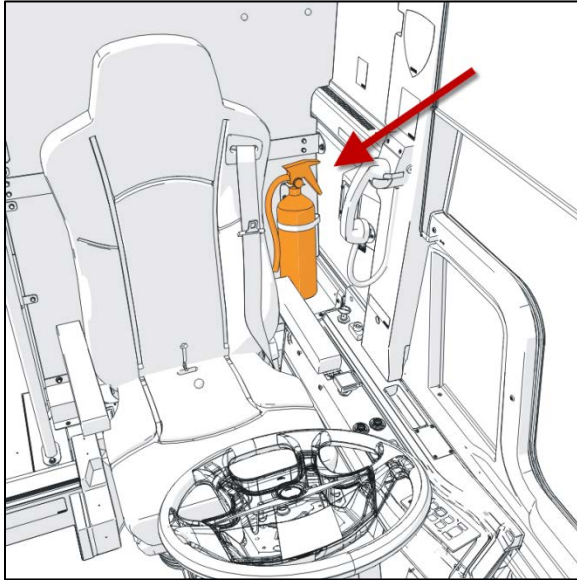
It is recommended to check the remaining battery lifespan when changing the tires in order to replace the sensors at the same time if they are due for replacement before the next change.

The screw fixing the sensor to the valve can only be used once because the threads are powder-coated to lock the sensor in place and prevent unfastening.

7-6 SAFETY FEATURES AND EQUIPMENT

FIRE EXTINGUISHER

The 5 lbs fire extinguisher is located on the driver's L.H. side. Instructions for use are found on the extinguishers.

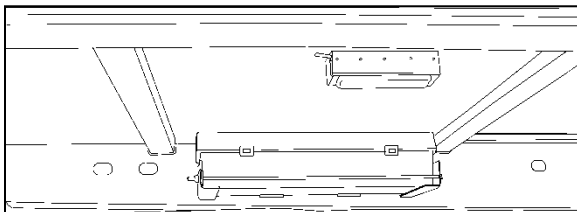


WARNING

Make sure you know how to operate the fire extinguishers in case of an emergency.

WARNING REFLECTORS

A kit containing three triangular reflectors is provided to warn other drivers on the road in case of a breakdown. The kit is located at the ceiling of the first baggage compartment. The reflectors provide visible warning of an emergency situation. The three reflectors should be placed as indicated on the box cover. These reflectors comply with FMVSS 125 (Federal Motor Vehicle Safety Standards).



WARNING REFLECTORS LOCATION

23376

HOISTING, JACKING POINTS & TOWING

For details concerning hoisting, jacking and towing points, refer to Maintenance Information MI14-01.

LIFTING AND TOWING

The towed vehicle must be lifted from the front end only. The tow truck must be equipped with the proper lifting equipment to reach under the front axle or the front tow eyes since no other lifting points are recommended. Lifting and towing from any other point are unauthorized as it may cause serious damage to the structure. Do not unload or raise the tag axle when lifting and towing to prevent overloading the drive axle.

1. Remove both drive axle shafts to prevent damage to the transmission. Plug axle tube to prevent oil loss. Refer to Rockwell's "Maintenance manual no.5" annexed at the end of Section 11: Rear Axle of the maintenance manual.



CAUTION

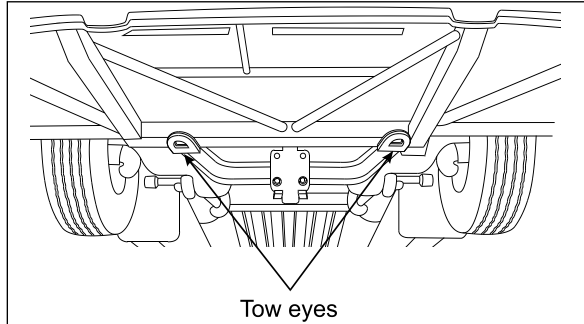
Transmission lubrication is inadequate when towing. With automatic, semi-automatic or manual transmission, the axle shafts or driveshaft must be disconnected to avoid serious damage to the transmission. Do not attempt to push or pull-start the coach.

2. If required, raise the front of the coach then install wooden blocks underneath front tires to allow lifting equipment to reach under the front axle.



Tow eyes as lifting point

- a) Use the tow eyes fixed to the vehicle frame between the front axle and the front bumper.



TOW EYES UNDER VEHICLE 18401

- b) Install axle forks onto tow bar, position axle forks around beam and into tow eyes.



ADEQUATELY SECURE THE TOW EYES TO THE TOW TRUCK LIFTING ATTACHMENT WITH CHAINS



AXLE FORK

Front axle as lifting point

- a) Use axle forks and lift the vehicle from under the front axle, and adequately secure the axle onto the tow truck lifting attachment with chains.



LIFTING FROM UNDER THE FRONT AXLE

- 3. Operate the engine when towing to maintain brake system air pressure. If the engine cannot be operated, connect an external air pressure line from the tow truck to the front towing air supply connector (see section 2 for the location). The emergency fill valve in the front service compartment does not supply air pressure to the brake system. The air pressure must be a minimum of 75 psi (520 kPa), and the line should be attached to the air line with a clip-on chuck.
- 4. Observe safety precautions when towing.



CAUTION

Do not tow the vehicle without external air pressure applied to the emergency fill valve if the engine does not operate. Without brake system air pressure, the brakes may apply automatically if system air drops below 40 psi (275 kPa). If failure prevents releasing the parking brakes with air pressure, disengage the parking brakes mechanically.



CAUTION

Make sure a safe distance is kept between the front of the coach and the tow truck. This space ensures that coach does not suffer damages when being towed.

7-8 SAFETY FEATURES AND EQUIPMENT



CAUTION

Make sure axle shafts or driveshaft are installed correctly after towing. Tighten axle shaft and driveshaft nuts to the correct torque settings. Do not invert shafts.

TOWING WITHOUT LIFTING



CAUTION

When towing vehicle without lifting, use only a tow truck with a solid link tow bar and related equipment. All other means of towing are unauthorized. Tow only from the front of the vehicle.

1. Remove both drive axle shafts to prevent damage to the transmission. Plug axle tube to prevent oil loss. Refer to Rockwell's "Maintenance manual no.5" annexed at the end of Section 11: Rear Axle of the maintenance manual.



CAUTION

Transmission lubrication is inadequate when towing. With automatic, semi-automatic or manual transmission, the axle shafts or driveshaft must be disconnected to avoid serious damage to the transmission. Do not attempt to push or pull-start the coach.

2. Operate the engine when towing to maintain brake system air pressure. If the engine cannot be operated, connect an external air pressure line from the tow truck to the front towing air supply connector (see section 2 for the location). The emergency fill valve in the front service compartment does not supply air pressure to the brake system. The

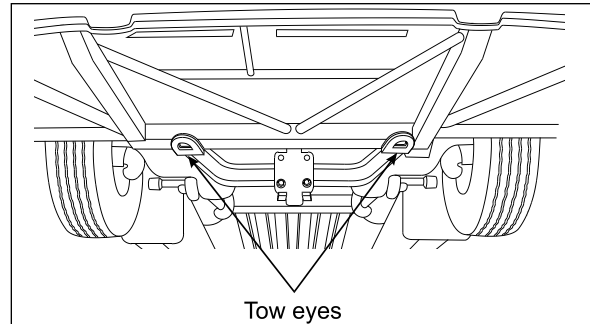
air pressure must be a minimum of 75 psi (520 kPa), and the line should be attached to the air line with a clip-on chuck.



CAUTION

Do not tow the vehicle without external air pressure applied to the emergency fill valve if the engine does not operate. Without brake system air pressure, the brakes may apply automatically if system air drops below 40 psi (275 kPa). If failure prevents releasing the parking brakes with air pressure, disengage the parking brakes mechanically.

3. Position the tow truck so that the tow bar contacts the front bumper of the vehicle.
4. Attach the tow truck chains only in the tow eyes of the vehicle and take up all the slack.
5. Use a safety chain as applicable.
6. Observe safety precautions when towing.



Tow eyes

TOW EYES UNDER VEHICLE

18401



CAUTION

Make sure axle shafts or driveshaft are installed correctly after towing. Tighten axle shaft and driveshaft nuts to the correct torque settings. Do not invert shafts.

EMERGENCY AIR-FILL VALVES AND QUICK CONNECTOR FITTINGS

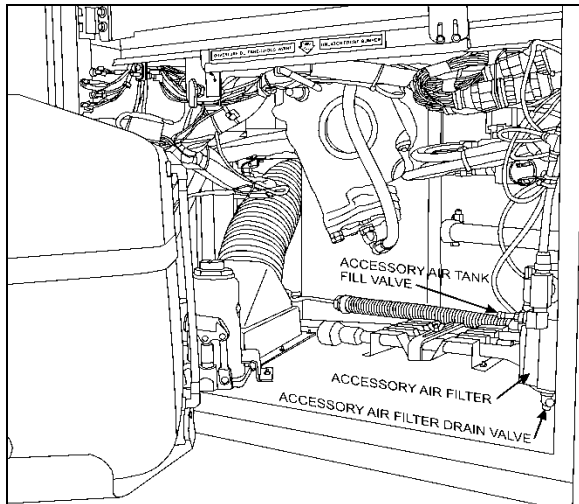
The vehicle is equipped with three (3) air system emergency air-fill valves to supplement the air system when air pressure is low and the engine cannot be operated.

Air system emergency valves are fitted with either standard tire valve stem or quick connector fitting. The air systems can be filled using any standard external air supply line.

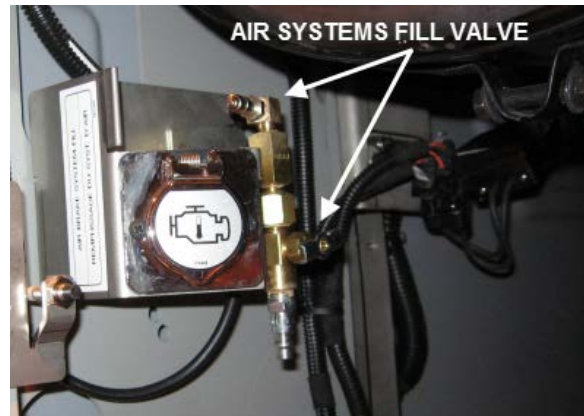
Air-fill valves are as follows:

- 1- One air-fill valve fitted with standard tire valve stem located in the engine compartment supplies air for all systems through the air dryer (brakes, suspension and accessories).
- 2- One air-fill valve fitted with standard tire valve stem located in the front service compartment supplies air for accessories only.
- 3- One quick connect air-fill fitting identified **AIR SUPPLY** located behind the flip down access door on the front bumper supplies air from a tow truck for all systems through the air dryer (brakes, suspension and accessories).

One quick connector fitting identified **BRAKE** located behind the flip down access door on the front bumper supplies air for operation of the vehicle service brake from the tow truck.



AIR-FILL VALVE IN FRONT SERVICE COMPARTMENT
12210



AIR-FILL VALVE IN ENGINE COMPARTMENT 12211_1



QUICK CONNECTOR FITTINGS ON FRONT BUMPER



CAUTION

Air filled through the three emergency air-fill valves will pass through the standard air filtering-drying system. Do not exceed 144 psi (993 kPa).

EMERGENCY AND PARKING BRAKES

During normal operation, if air pressure in all brake circuits drops below 60 psi, spring-loaded emergency brake will be immediately applied at full capacity to the drive axle wheels to stop the vehicle.

Spring-loaded parking brake is applied by pulling up the control valve knob located on the L.H. lateral console.

Parking brake is not designed to be used as a service brake. For normal driving conditions, the control valve knob must remain in the down position.



DANGER

Always apply the parking brake before leaving the driver's seat.

NOTE

Only use the parking brake to supplement the service brake to stop the vehicle in emergency conditions. The stopping distance will be considerably longer than when using normal service brake.

NOTE

Before releasing the parking brake by pushing down the control valve knob, check the pressure gauges to make sure that the brake system air pressure is greater than or equal to 95 psi (655 kPa)

NOTE

A beep will sound if the ignition switch has been turned off without applying the parking brake. The same beep will sound if pressure is still applied to the service brake pedal.

NOTE

The stoplights will automatically turn on when the parking brake is applied when the ignition key is turned to the ON position.

DAYTIME RUNNING LIGHTS

The inner lamps which are the high beams illuminate automatically when the engine is started and the parking brake is released to serve as daytime running lights. The daytime running lights provide added safety by making the traveling vehicle more visible to other drivers during the day.

The daytime running lights system turns the headlights on when:

Engine is running;

Parking brake is released;

The exterior lighting switch is set to the OFF position or pressed to the first position.



WARNING

Do not drive with only the daytime running lights at night because the tail and marker lights are not turned on in that situation and the high beams can blind other drivers. For night driving, turn ON the headlights by depressing the exterior lighting rocker switch to the second position.

COMPARTMENT LIGHTING

Baggage compartments and front service compartment lights are automatically turned ON when the corresponding compartment door is opened. A pictogram will appear on the status bar of the Driver Information Display (DID) when a baggage compartment door is open.

BACK-UP ALARM

The back-up alarm alerts pedestrians and other drivers when the vehicle is being backed-up. Take extra precautions whenever backing-up. If necessary, use a guide to provide directions when backing-up. The alarm is automatically activated when the transmission is put in the reverse (R) range.

ESSENTIAL FUNCTIONS TO OPERATE THE VEHICLE (BASIC LIMP-HOME FUNCTIONS)

Even with a defective MCM (Master Chassis Module) or a CAN network problem, essential base functions are maintained to rear start the vehicle from the engine compartment and drive in a secure manner.

AVAILABLE FUNCTIONS

- Startup: Turn on the ignition in the driver's area and rear start the vehicle from the engine compartment,
- Opening the door: Functions normally,
- Closing the door: Manually pull on the door and it will lock automatically,
- Windshield wipers: Wipers functions at 1st speed only,
- Headlights: Low beams only,
- Directional signals: Rear and front only,
- Stoplights: 2 upper stoplights + high-mounted stoplight are functional,
- HVAC: Functional with set point fixed at 68°F (20°C), evaporator and condenser fixed at speed 1, defroster fixed at speed 4.



CAUTION

The following directives must be followed.

- Never connect a battery charger when the ignition is at the ON position on a vehicle with a CAN defective or certain functions will start up by themselves,
- Disconnect the charger before starting the vehicle, if not the default functions will not activate,
- If the default mode does not activate, try to turn the ignition OFF while ensuring that no charger is connected and then restart the vehicle.

7-12 SAFETY FEATURES AND EQUIPMENT
