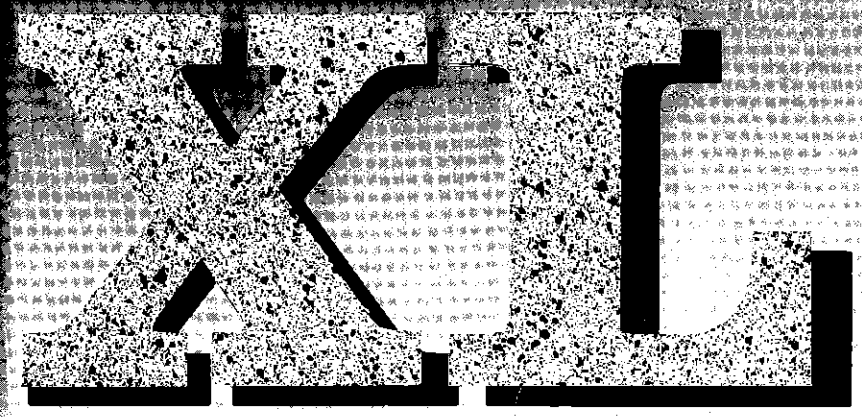
PREVOST



SERIES MOTORCOACH

OPERATOR'S MANUAL

PA-1118

PREVOST

November 11, 1994

Dear customer,

Our current XL Operator's Manual is actually under revision and we plan that the final version will be ready by next January 1995.

In order to better inform you and to give the most updated information which is available at this moment, we decided to include in the Technical Publication Box, supplied with your new vehicle, a copy of the Owner's Manual used for our XL Bus Shells owner's.

You will see in this manual that some pages will not apply to your coach, so as soon as the final version of the revised XL Operator's Manual will be finished, we will send you a copy of this new manual.

We apologize for the inconvenience this situation may create, but rest assured that we are doing our best to keep you informed on our products.

Best regards!

Denis Vallée, Manager,
Technical Publications Dept.

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INTRODUCTION

We would like to take this opportunity to thank you for having chosen a PREVOST product. The XL motorcoach has been equipped with the latest technological systems, and has been remodeled to a new look. Rest assured that it has been manufactured according to quality standards that define the PREVOST coaches.

We suggest that you read this manual carefully to help assure an enjoyable and troublefree operation of your new coach, while ensuring maximum comfort and safety of your passengers. This manual should be kept in vehicle for convenient reference at all times. We also suggest that it remains with the vehicle at the time of resale. Please notify PREVOST CAR INC. if the vehicle ownership is transferred so that our records can be kept current.

Your vehicle may not have all the equipment described in this manual. Therefore, you may find explanations for equipment not installed on your vehicle.

Text, figures and specifications given are based on the latest information available at the time of printing. Since improvement is a constant goal at PREVOST, we reserve the right to make changes at any time without notice and without incurring any obligation.

The following words are used to emphasize particular information:

WARNING: Identifies instructions which if not followed, could result in personal injury.

CAUTION: Denotes instructions which if not followed, could cause serious damages to vehicle components.

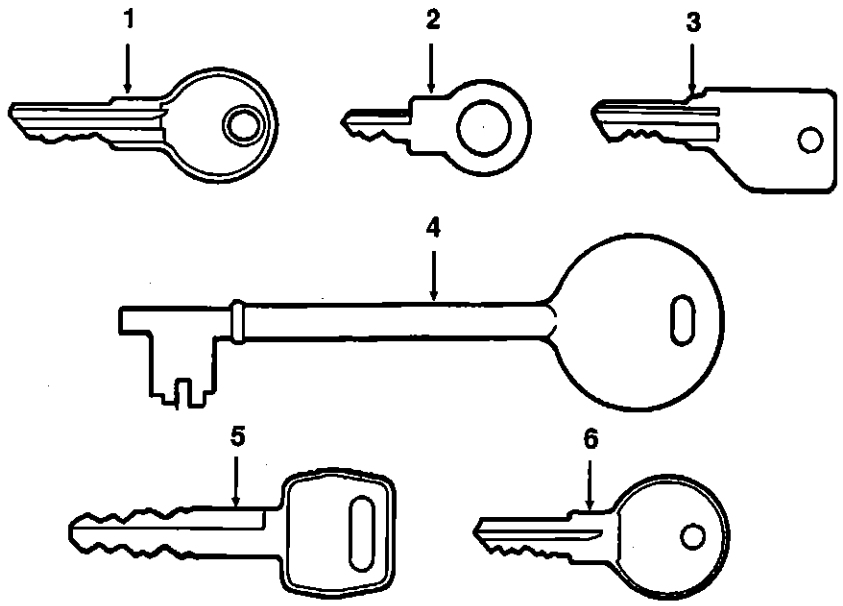
NOTE: Indicates supplementary information needed to fully complete an instruction.

For your own protection and to ensure a longer service life of your coach, heed our "CAUTIONS", "WARNINGS" and "NOTES". Ignoring them could result in extensive damage and/or serious personal injury.

OPERATING INSTRUCTIONS

KEYS

According to optional equipment, up to six different key models may have been provided with the vehicle, which are used as described hereafter.



OEBX0201

1. Ignition switch

Use this key to activate electrical circuits and/or to start engine.

2. Tachograph

Use this key to open the tachograph cover for card replacement.

3. Towel and toilet tissue dispensers

Use this key when both dispensers must be refilled.

4. Lavatory door lock

Use this key to unlock the lavatory door or to prohibit access to lavatory.

5. Exterior compartments

Use this key to lock or unlock any exterior compartment door. It is also possible to lock or unlock the baggage compartment doors from the inside using a switch (see page 2-4) located on L.H. side control panel.

6. Video system compartment lock

Use this key to lock or unlock the video compartment in the first front R.H. parcel rack. If vehicle is equipped with a TV monitor over the step, this key also opens the TV receptacle.

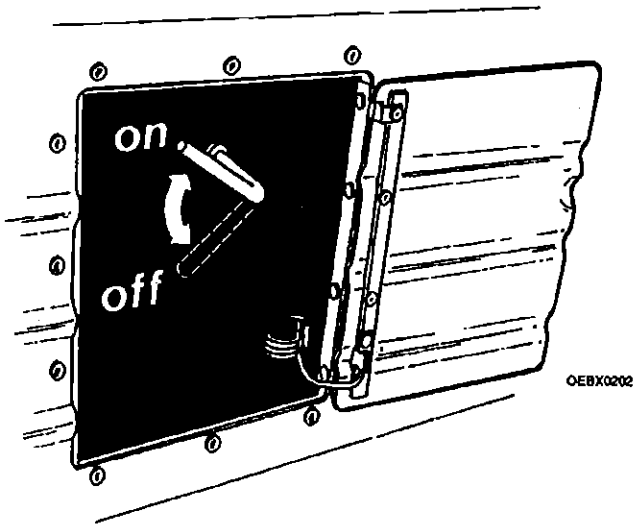
NOTE: For your protection against theft:

A) Record the key numbers and keep them in a safe place. Do not keep them in the vehicle.

B) It is advisable to deposit a duplicate of each of these keys in a safe place, so they can be obtained without difficulty in case of loss.

MAIN BATTERY DISCONNECT SWITCH

One manual switch for the 12 and 24 volt systems is located next to the L.H. side rear baggage compartment door.

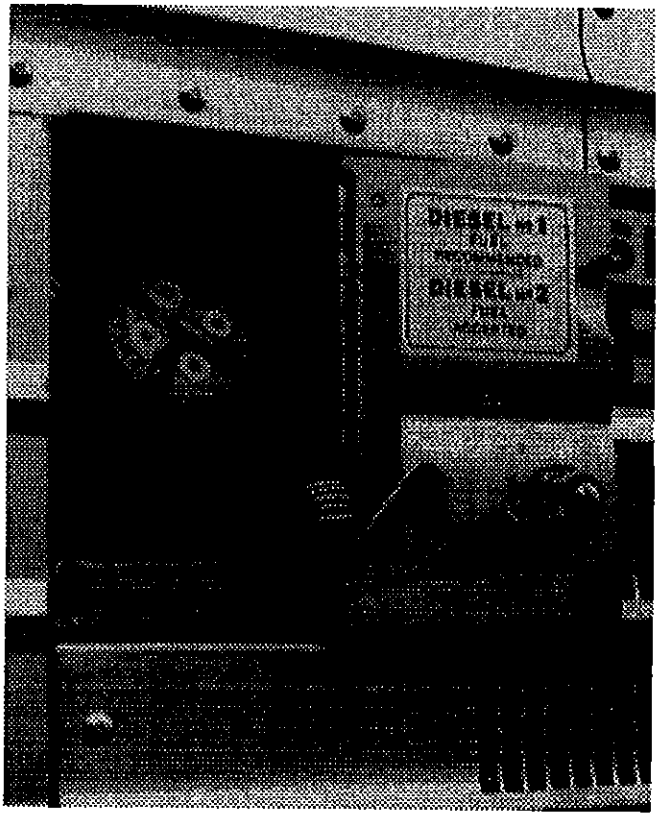


CAUTION: When coach is parked overnight or for an extended period of time, the main battery disconnect switch should be set to the *"OFF"* position.

NOTE: When the main battery disconnect switch is set to the *"OFF"* position, all electrical supply from the batteries is cut off, with the exception of the ECU (Electronic Control Unit), ECM (Electronic Control Module), electric horn, tachograph clock, fire detectors and the preset radio station programming memory.

FUEL TANK FILLING

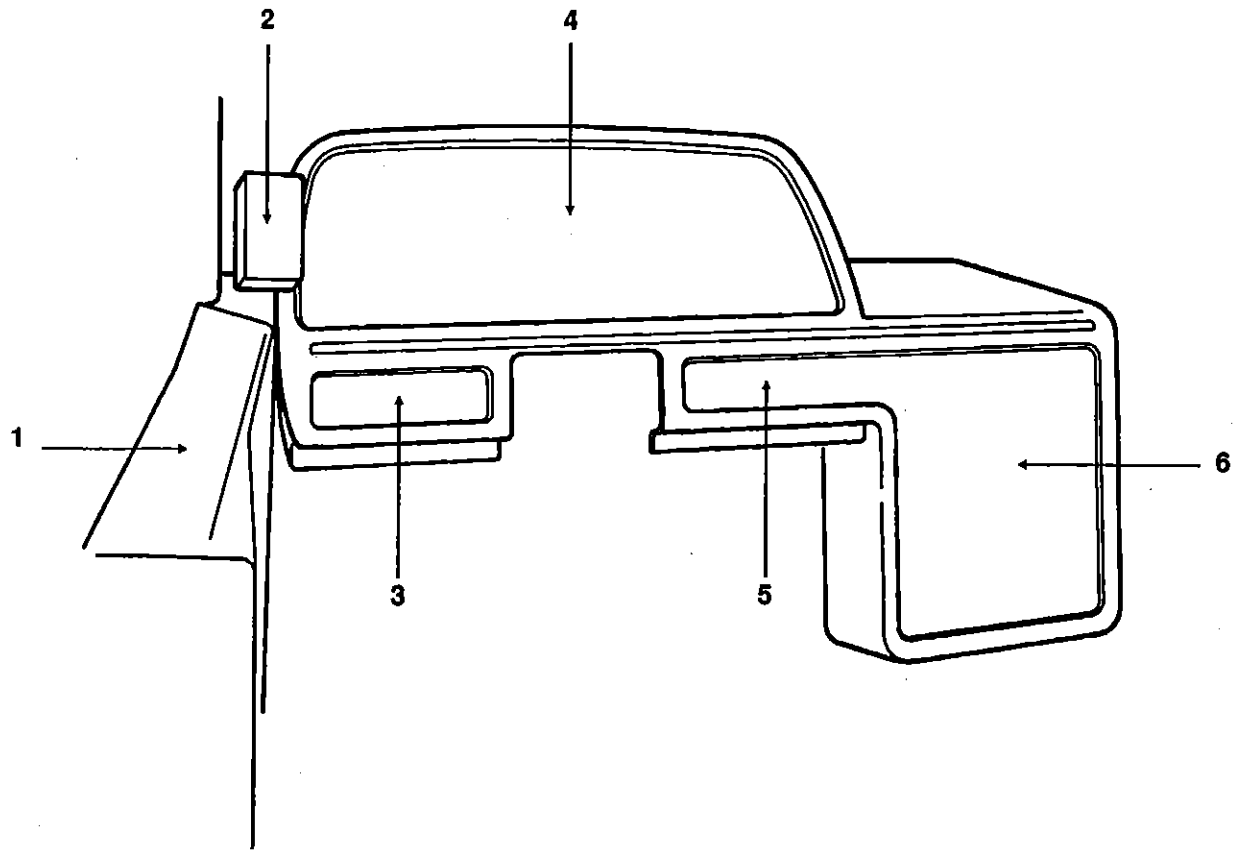
Fuel filler neck is accessible by opening a small door located on R.H. side, amidships of vehicle (see page 2-24). Use the appropriate key if the optional lock is installed.



NOTE: Provided vehicle is parked level, automatic nozzle will shut off when tank will be approximately 95% full.

CAUTION: Do not fill to more than 95% of fuel tank capacity.

CONTROL AND INSTRUMENT PANELS



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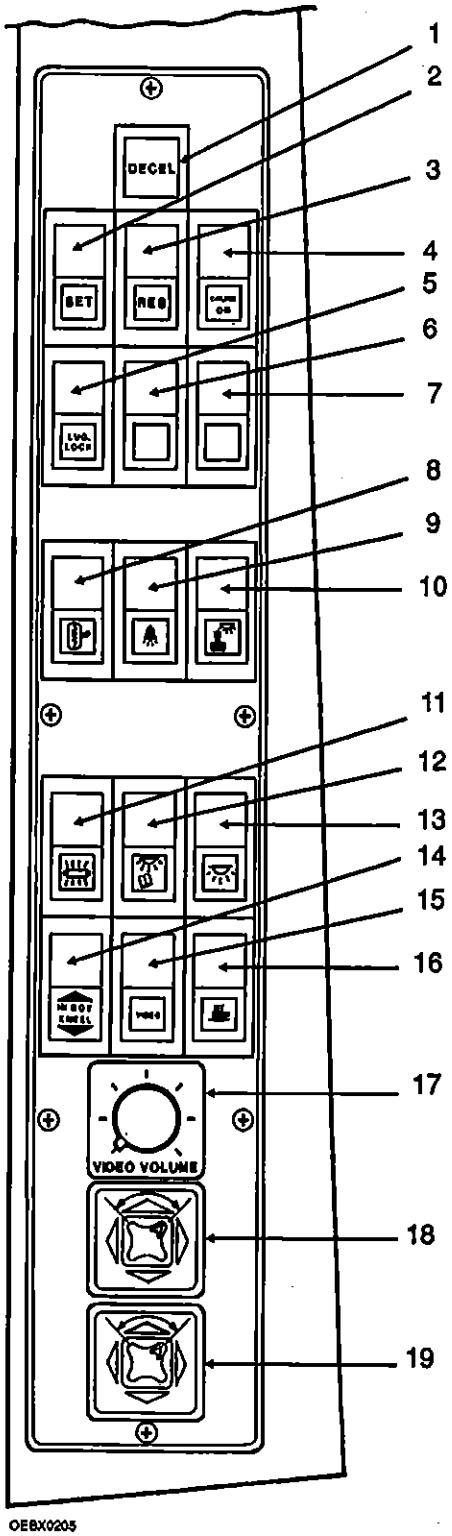
L.H. SIDE CONTROL PANEL



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Switches

1. Decel

See cruise control operation in following page.

2. Set

See cruise control operation in following page.

3. Resume

See cruise control operation in following page.

4. Cruise

See cruise control operation in following page.

5. Baggage door lock

Push up rocker switch to unlock the baggage doors and push down to lock.

6. Blank for additional switch

7. Blank for additional switch

8. Exterior mirror heating switch

Push down rocker switch to heat both outside mirrors.

9. Passenger and hostess chime

Push down rocker switch to activate chime systems allowing operation of chime and hostess buttons by passenger.

10. Driver's lights

Push down rocker switch to turn on the two ceiling lights above driver. These lights are frequently used for nighttime operation when passengers board or leave the coach.

11. Fluorescent lighting

Push down rocker switch to turn on the interior fluorescent lights, located under parcel racks. Use of these lights should be avoided when engine is not running.

12. Reading lamps

Reading lamps are controlled by two different switches. Push down this rocker switch to energize the whole reading lamp circuit. Individual reading lamp can then be activated by each passenger using the switch incorporated in reading lamp body.

Reading lamps are mounted under parcel racks and can be focused to provide proper illumination for each passenger.

13. Dome lights

Push down rocker switch to turn on the aisle dome lights located on front of parcel racks.

14. Kneeling and hi-buoy

To use kneeling system, push down switch momentarily to lower front of vehicle, and up momentarily to raise it to its initial position. To use hi-buoy system, push up switch until front of vehicle is raised to the desired height (see page 3-2).

NOTE: To return to normal height after using the hi-buoy system, push down switch momentarily to lower front of vehicle, and up momentarily to raise it to its normal position.

15. Video system

Push down rocker switch to turn on TV monitors, TV converter and the video cassette player.

NOTE: When radio is on and video system switch is activated, the speakers of the passenger section will be shut off and connected to the video system. However, the driver's speakers will still be connected to the radio.

16. Galley

Push down rocker switch to energize the galley circuit.

17. Volume

Turn button clockwise to increase volume of video.

18. L.H. outside mirror control

Turn pointer knob to the left or right accordingly to adjust mirror head or convex mirror, then push button in the appropriate direction to adjust the selected mirror to the desired angle.

19. R.H. outside mirror control

Turn pointer knob to the left or right accordingly to adjust mirror head or convex mirror, then push button in the appropriate direction to adjust the selected mirror to the desired angle.

CRUISE CONTROL

Introduction

The cruise control is an automatic speed control system that allows you to maintain a constant cruising speed above 35 mph (55 km/h) without depressing the accelerator pedal. The four control switches are located on a panel in driver's compartment (see page 2-4).

WARNING: Do not use the cruise control system when driving conditions do not permit maintaining a constant speed, such as in heavy traffic or on roads that are winding, icy, snow covered, slippery, or with a loose driving surface.

Setting vehicle speed

To turn on the system, push down *"Cruise"* rocker switch, set the vehicle speed by accelerating to the desired speed and momentarily press and release the *"Set"* switch, then remove your foot from accelerator pedal. This sets the cruising speed and stores it in memory, thus maintaining speed automatically.

NOTE: Cruise control system will not accept speed settings, nor will the *"Resume"* switch operate below approximately 35 mph (55 km/h).

Increasing set speed

Vehicle speed setting may be increased by one of the following methods:

1. Press and hold the *"Resume"* switch until the desired speed is obtained. Releasing the *"Resume"* switch will set the new higher speed.

2. Depress accelerator pedal until the desired speed is obtained, then press and release the *"Set"* switch.

NOTE: When driving with cruise control in use, the speed may be increased for passing, etc., by depressing the accelerator in the usual manner. Once the foot is removed from the accelerator pedal, the cruise control will return to the previous set speed.

For vehicles equipped with a manual transmission, the cruise control will be deactivated by depressing clutch pedal, and activated again when pedal is released.

Decreasing set speed

Vehicle speed setting may be decreased by one of the following methods:

1. Press and hold the *"Set"* switch until the desired lower speed is obtained. Releasing the *"Set"* switch will set the new speed.

2. The cruise control can be disengaged without losing the speed memory by either of two methods:

a) Lightly apply the brakes

b) Momentarily press the *"Decel"* switch button.

After either of these disengagements, you may return to the previously set speed by pressing and releasing the *"Resume"* switch, provided the speed is higher than 35 mph (55 km/h).

The cruise control is completely shut off and the speed memory is lost by turning off the *"Cruise"* rocker switch.

NOTE: If speed drops below 35 mph (55 km/h), the setting instructions must be repeated, because the cruise control is inoperative below this speed.

When the cruise control automatic operation is cancelled, any objectionable vehicle motion can be minimized by depressing accelerator lightly before disengaging cruise control.

VIDEO SYSTEM REMOTE CONTROL

Press on video system switch located on L.H. side control panel to turn on video cassette player, TV converter and TV monitors.

Remote control must be connected to the video cassette player. Refer to figure 1.

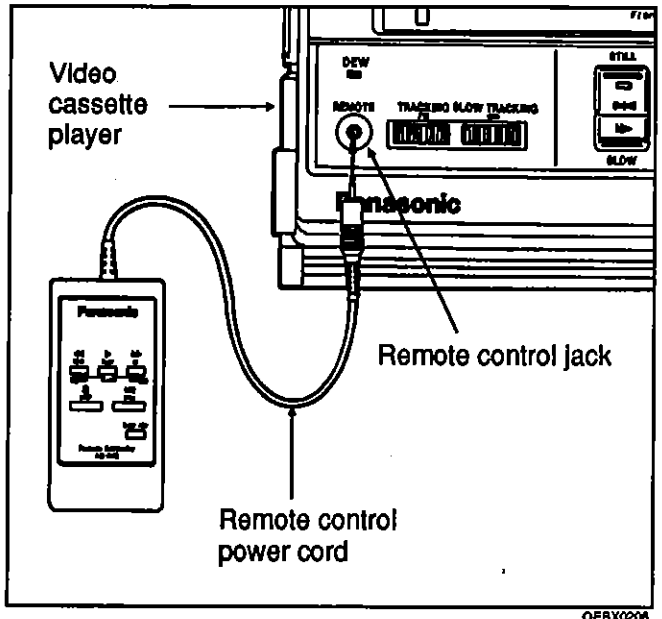


FIG. 13

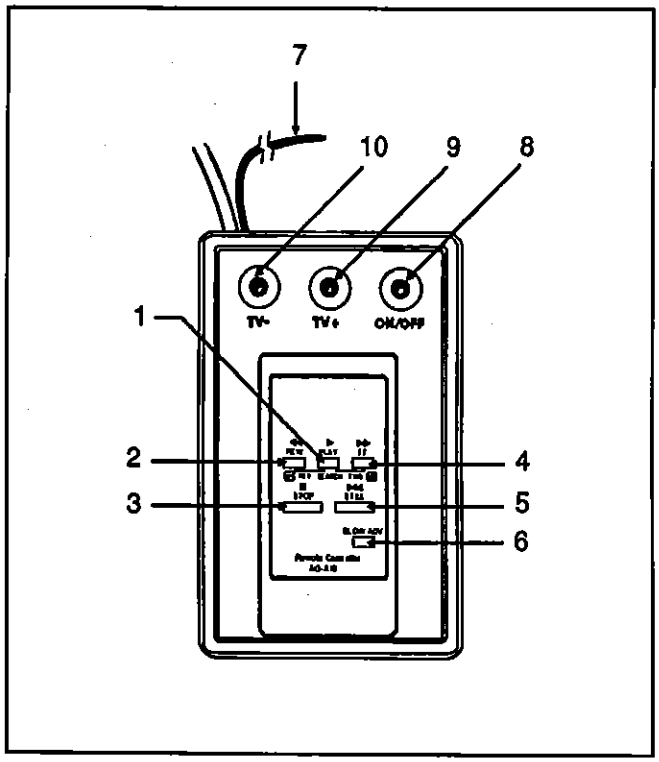


FIG. 14

NOTE: The volume button is located in L.H. side control panel.

NOTE: The video operation without the remote control is outlined in the manufacturer's instruction manual, which is located in the video cassette player compartment.

1. Play button

Press this button to play back the recorded tape.

2. Rewind button

Press this button to rewind tape. When pressed and held during playback, the reserve search mode is engaged with the tape running.

3. Stop button

Press this button to stop the tape.

4. Fast forward button

Press this button to fast forward the tape. When pressed and held during playback, the forward search mode is engaged with the tape running.

5. Still button

During playback, press this button to view a still picture. Press this button once more to release from still mode.

6. Slow advance button

When noise appears with the still playback image, press this button to clear noise from still picture.

7. M2 Jack

Insert into the *"Remote"* outlet on front of the video.

Refer to figure 1.

8. Video or TV converter button

Press to select video or TV converter.

NOTE: When you turn on *"Video switch"* on side control panel, the video will turn on automatically.

9. Channel Up button

Press and release to select next higher channel.

Press and hold to scan upward.

10. Channel Down button

Press and release to select next lower channel.

Press and hold to scan downward.

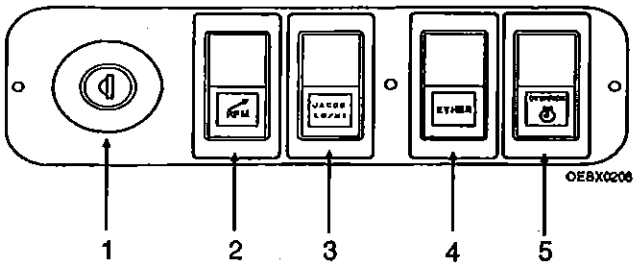
*** Mute**

Press and release TV + and TV - simultaneously once to turn sound off.

Press again simultaneously to turn sound on.

For these 2 last operations, hold button during 3 seconds and release.

L.H. LOWER CONTROL PANEL



Switches

1. Ignition

This switch has four positions:

"ACCESSORIES": Turn key counterclockwise; only the accessories are operative and key cannot be removed.

"OFF": No ignition and key can be removed.

"ON": Ignition is on and key cannot be removed.

"START": Turn key to this position to start engine, then release as soon as engine is started. Key will automatically return to *"ON"* position. Ignition key must be returned to *"OFF"* position before trying to restart.

WARNING: Do not engage starter for more than 15 seconds. Allow starter to cool before engaging starter again. This will prevent starter overheating and will allow the time delay relay to cool.

2. Fast idle

Push down rocker switch to engage fast idle, thus increasing engine speed to approximately 1100 rpm. Use this switch for extended stops.

NOTE: If parking brake is released and/or transmission is shifted with the engine running at fast idle, engine will reduce its speed to idle and maintain this rpm as long as parking brake is not applied and/or transmission is in neutral position.

If engine is stopped with the fast idle switch in the *"ON"* position, this control will be automatically cancelled when restarting the engine. The driver must depress, then reset the rocker switch to actuate fast idle again. Generally, fast idle should be reduced to low idle before shutting off engine.

3. *"Jacobs"* engine brake

Push down rocker switch to the first position to actuate system to half engine brake and press to the second position for a full application of engine brake (see page 3-1).

NOTE: Engine brake is operative only when accelerator pedal is released, and when engine speed is over 900 rpm.

Each time the engine brake is in operation, the stoplights will automatically light up.

4. Cold starting aid

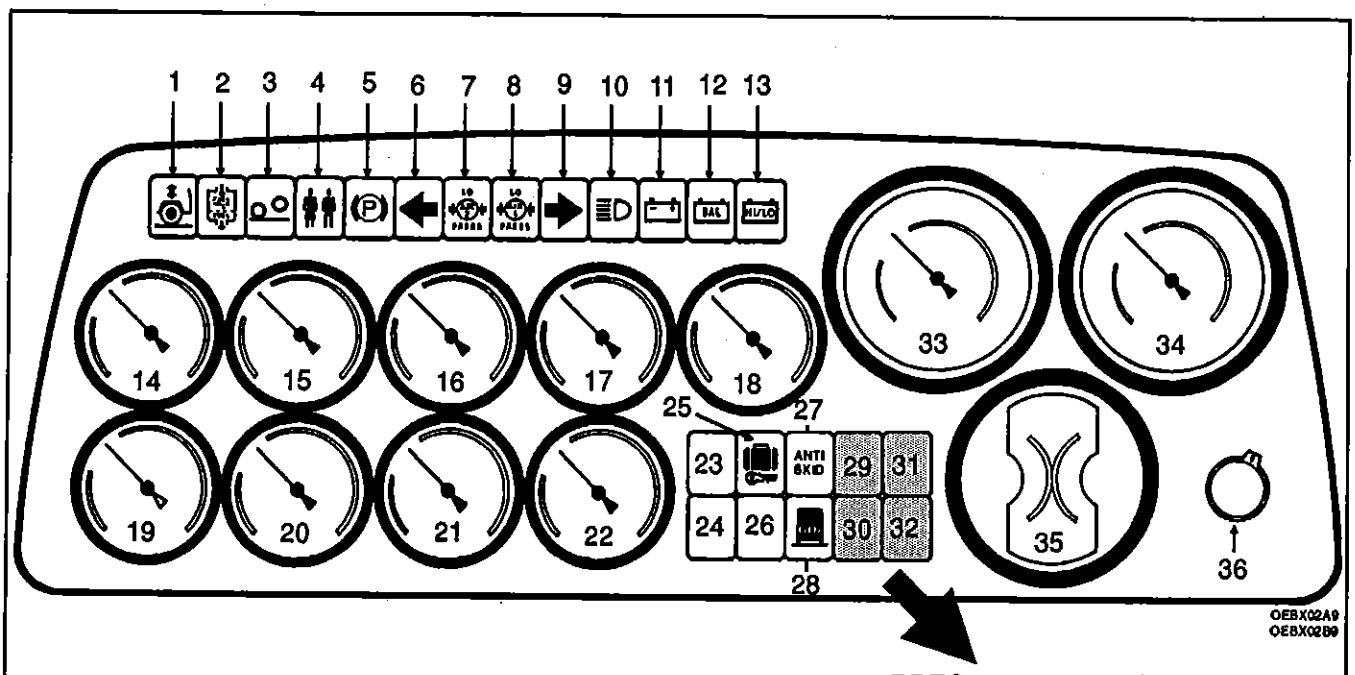
Activates the cold starting device in engine compartment (refer to heading *"Cold starting aid"* page 4-4).

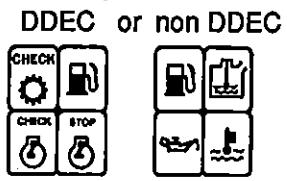
5. *"Stop Engine"* override

Push down rocker switch to cancel the emergency shutdown procedure during a 30 second period. One pulse is sufficient for each 30 second period and must be made before the end of the 30 second delay period (see *"Stop Engine"* page 2-11).

CAUTION: The *"Stop Engine"* override must be used only in emergency cases, such as to move vehicle out of traffic. Excessive use of this switch could cause serious damage to the engine.

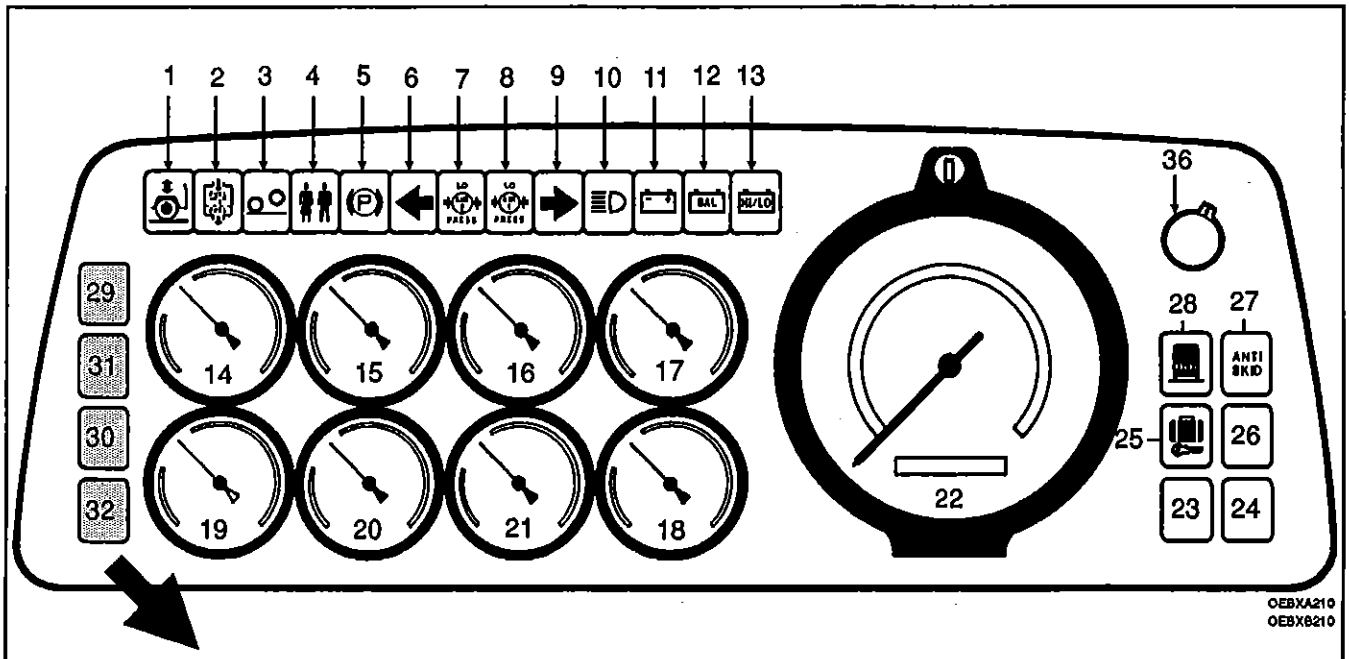
DASHBOARD (without tachograph)



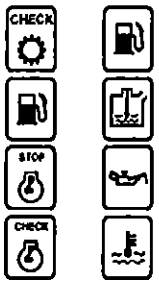


1. Kneeling, hi-buoy
2. Water separator
3. Tag axle raised or unloaded
4. Lavatory door lock indicator light
5. Parking brake
6. Left turn signal
7. Low secondary air pressure
8. Low primary air pressure
9. Right turn signal
10. High beams
11. Battery
12. Battery equalizers
13. High or low battery voltage
14. Secondary air system pressure gauge
15. Engine coolant temperature gauge
16. Engine oil pressure gauge
17. Transmission oil temperature gauge
18. Turbo boost pressure gauge
19. Primary air pressure gauge
20. Fuel gauge
21. Voltmeter
22. Differential oil temperature gauge
23. Blank for additional indicator/warning light
24. Blank for additional indicator/warning light
25. Baggage compartment door lock indicator light
26. Blank for additional indicator/warning light
27. Antilock braking system
28. Stoplights
29. Low fuel level (non DDEC)
29. Check transmission (DDEC)
30. Engine oil pressure (non DDEC)
30. Check engine (DDEC)
31. Low coolant level (non DDEC)
31. Low fuel level (DDEC)
32. High coolant temperature (non DDEC)
32. Stop engine (DDEC)
33. Speedometer
34. Tachometer
35. Pyrometer
36. Instrument & switch brightness control

DASHBOARD (with tachograph)



DDEC or non DDEC



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31. Low fuel level (DDEC)
32. High coolant temperature (non DDEC)
32. Check engine (DDEC)
36. Instrument & switch brightness control

DASHBOARD

Indicator/warning lights and instruments

1. Kneeling, hi-buoy

Lights when kneeling or hi-buoy system is operating (see page 3-2).

2. Water separator

Lights when water separator must be drained (see pages 4-7, 6-8).

3. Tag axle raised or unloaded

Lights when tag axle is raised or when tag axle suspension air springs are unloaded. Moreover, a beep will sound to warn driver that axle is raised or that suspension air springs are unloaded.

4. Lavatory door lock indicator light

Illuminates when the lavatory door is locked.

5. Parking brake

Lights when parking brake is applied (see page 2-14).

6. Left turn signal

Flashes when the left turn signal is selected with the multifunction lever.

7. Low secondary air pressure

Lights when secondary air pressure is too low.

8. Low primary air pressure

Lights when primary system pressure is too low.

9. Right turn signal

Flashes when the right turn signal is selected with the multifunction lever.

10. High beams

Lights when headlight high beams are selected (see page 2-15).

11. Battery

Lights when alternator is not operating properly.

12. Battery equalizers

Illuminates when battery voltage is not equalized.

NOTE: Before requesting any breakdown service, check that battery equalizer circuit breakers are reset. For their location, refer to heading *"Electric circuit protection"* page 4-12.

Allow 15 minutes after taking these corrective measures on the battery equalizers.

13. High or low battery voltage

Illuminates when battery voltage exceeds 30 volts or drops under 24 volts.

NOTE: According to the battery charge, this indicator light will normally turn on upon engine starting and remain on during a few seconds. This is caused by a normal voltage drop during starting.

14. Secondary air system pressure gauge

Indicates air pressure in the secondary system. Normal reading should vary from 95 to 125 psi (655 - 860 kPa).

15. Engine coolant temperature gauge

Indicates engine coolant temperature. Normal reading should range between 170 and 195 °F (76 - 90 °C).

NOTE: Engine is not considered overheating until above 215 °F (102 °C).

16. Engine oil pressure gauge

Indicates engine oil pressure. Normal reading should range between 50 and 70 psi (345 - 483 kPa) at cruising speed.

17. Transmission oil temperature gauge

Indicates temperature of transmission oil. Normal reading should vary between 160 and 250 °F (70 - 120 °C).

18. Turbo boost pressure gauge

Indicates turbo boost vacuum in inches of Hg or pressure in psi. Reading depends on engine rpm and load conditions.

19. Primary air system pressure gauge

Indicates air pressure in the primary system. Normal reading should vary from 95 to 125 psi (655 - 860 kPa).

20. Fuel gauge

Indicates the amount of fuel remaining in the fuel tank. If an auxiliary tank is installed, the fuel gauge shows the level in both tanks as the tanks are interconnected.

CAUTION: Operating the vehicle when the reading is below 1/8 full is not recommended.

21. Voltmeter

Indicates electrical system voltage. Normal reading should be 27.5 volts with engine operating.

22. Differential oil temperature gauge (without tachograph)

Indicates differential oil temperature. Normal reading should not exceed 250 °F (120 °C).

22. Tachograph (see page 2-12)

23. Blank for additional indicator/warning light

24. Blank for additional indicator/warning light

25. Baggage compartment door lock indicator light

Illuminates when one or several baggage compartment doors is (are) unlocked.

26. Blank for additional indicator/warning light

27. Antilock braking system

Lights until vehicle speed reaches 4 mph (7 km/h), and when the antilock system is not operating properly.

28. Stoplights

Lights when stoplights are activated.

29. Low fuel level (non DDEC)

Lights when approximately 12 US gallons (45 liters) remain in the tank. We recommend that you do not exceed a distance of 62 miles (100 km) after light has turned on. Fill vehicle as soon as possible.

29. Check transmission (DDEC)

As a light bulb check, this light illuminates with the ignition switch *"ON"*. After approximately two seconds, the light will turn off. If indicator turns on again, the *"ATEC"* system (Allison Transmission Electronic Control) has detected a problem. If the *"CHECK TRANS"* light turns on and subsequently, the *"DO NOT SHIFT"* light (on shift selector) turns out, there is a minor problem. If the problem disappears, the light will go out, but a trouble code will remain stored in the ECU (Electronic Control Unit) memory and may be read by setting the *"ATEC TEST"* switch to the *"ON"* position (see page 5-7).

NOTE: This indicator may also turn on when starting engine in extreme cold weather conditions (see page 4-5).

30. Engine oil pressure (non DDEC)

Lights when engine oil pressure is too low. As a light bulb and buzzer check, this light illuminates with the ignition switch *"ON"* before starting engine.

30. Check engine (DDEC without tachograph)

Will light if a minor engine malfunction is sensed by the DDEC (Detroit Diesel Electronic Control) system. This light will remain illuminated until malfunction is corrected. Furthermore, this indicator will flash to indicate engine malfunction code when the *"DDEC - TEST"* switch is set to the *"ON"* position (see page 5-6).

NOTE: As a light bulb and system check, this indicator will turn on with the ignition switch *"ON"*. The light will turn off after approximately five seconds.

30. Stop engine (DDEC with tachograph)

Lights when a major engine problem occurs. The engine power will automatically begin to decrease gradually and will be followed by a shutdown after 30 seconds. This 30 second delay period may be repeated using the *"Stop engine override switch"* on page 2-7.

NOTE: Once engine is stopped, it can not restart until malfunction is corrected.

As a light bulb and system check, this indicator will turn on with the ignition switch *"ON"*. The light will turn off after approximately five seconds.

31. Low coolant level (non DDEC)

Will light when coolant level is too low in surge tank.

31. Low fuel level (DDEC)

Lights when approximately 12 US gallons (45 liters) remain in the tank. We recommend that you do not exceed a distance of 62 miles (100 km) after light has turned on. Fill vehicle as soon as possible.

32. Check engine (DDEC with tachograph)

Will light if a minor engine malfunction is sensed by the DDEC (Detroit Diesel Electronic Control) system. This light will remain illuminated until malfunction is corrected. Furthermore, this indicator will flash to indicate engine malfunction code when the *"DDEC - TEST"* switch is set to the *"ON"* position (see page 5-6).

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NOTE: Once engine is stopped, it can not restart until malfunction is corrected.

As a light bulb and system check, this indicator will turn on with the ignition switch *"ON"*. The light will turn off after approximately five seconds.

32. High coolant temperature (non DDEC)

Will light when engine cooling system temperature is too high.

33. Speedometer

Indicates the vehicle speed. The odometer indicates the distance driven.

US models: miles

Canadian models: kilometers

34. Tachometer

Indicates engine speed in hundreds of revolutions per minute (rpm) and serves as a guide for proper gear shifting. It also aids the driver in preventing excessive engine speeds when going down grades with engine serving as a brake. Maximum allowable engine rpm is 2450.

35. Pyrometer

Indicates left and right exhaust manifold temperature in hundreds of °F. At cruising speed, normal reading should vary between 500 and 1100 °F according to operating conditions of vehicle.

36. Instrument & switch brightness control

Adjust as required. Brightness is progressively dimmed as control knob is further rotated in clockwise direction.

NOTE: Dashboard panel gauges show approximate readings and should not be relied upon for mechanical adjustments.

TACHOGRAPH

This multipurpose tachograph includes:

Speedometer

Indicates vehicle speed in mph or km/h.

Odometer

Indicates the vehicle accumulated mileage.

Tachometer

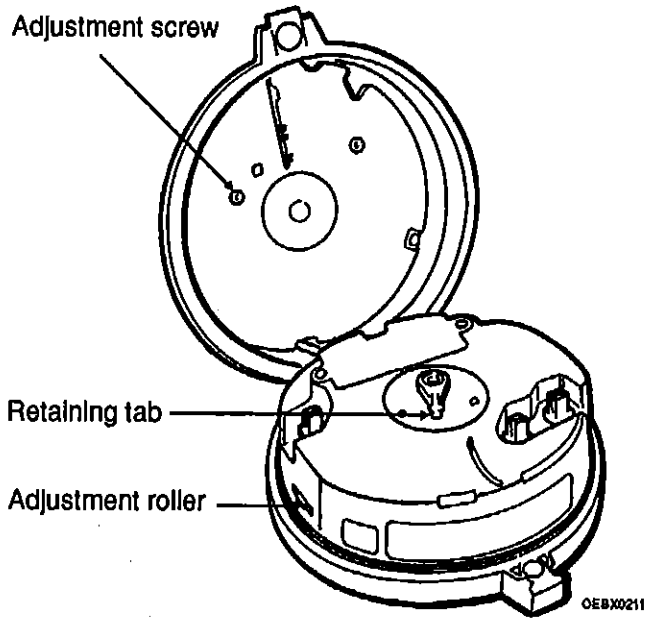
Indicates engine speed in hundreds of revolutions per minute (rpm).

Clock

Operates even if the main battery disconnect switch is set to the *"OFF"* position.

Paper recording (#59-0251) of speedometer and tachometer for a 24 hour or seven day period

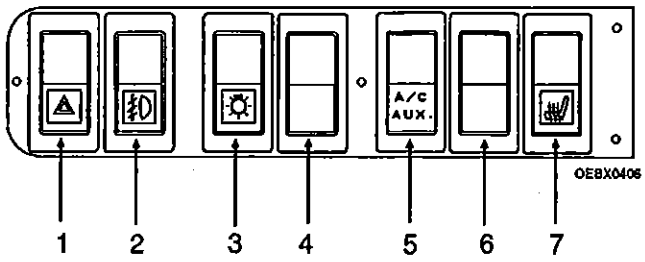
To change card inside tachograph, open the tachograph cover using the key provided, lift the card retaining tab, and replace card with the mph or km/h side facing the tab. Replace tab and close cover.



CAUTION: Do not run engine without card or with damaged card in tachograph as it may damage tachograph mechanism. Replace card as required.

To set clock, open the tachograph cover using the key provided, and turn the adjustment roller on L.H. side of tachograph.

R.H. LOWER CONTROL PANEL



Switches

1. Hazard flashers

Push down rocker switch and all turn signal lights will flash simultaneously, as well as their dashboard indicator lights.

2. Fog lights

Push down rocker switch to activate fog lights as well as clearance, tail, marker, step and destination sign lights. Before using fog lights, remove protective covers by pulling on their edges.

WARNING: Make sure engine is stopped and parking brake applied.

3. Exterior lighting switch

Push down rocker switch to first position to turn on marker, tail, clearance, step and destination sign lights, and push to second position to turn on headlights.

NOTE: Daytime running lights will be automatically cancelled when this switch is pushed to second position. For more details, refer to section "Safety" under heading *"Daytime running lights"*.

4. Blank for additional switch

5. Auxiliary A/C

Push down rocker switch to activate auxiliary A/C system (see page 4-10).

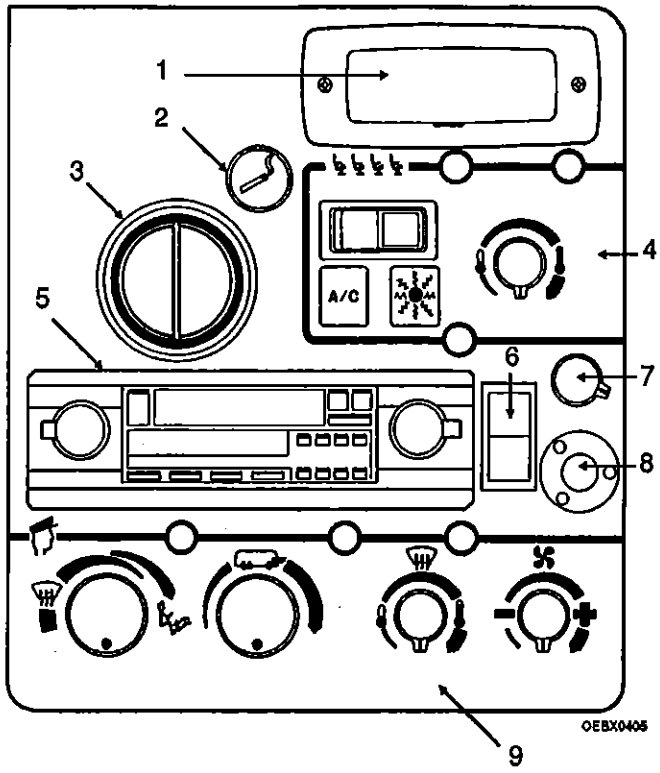
6. Blank for additional switch

7. Driver's seat heating

Push down rocker switch to activate heating element inside driver's seat cushions.

NOTE: The seat is provided with a thermostat which turns the heating element on and off. Element will keep on heating until temperature reaches approximately 90 °F (32 °C) and will resume heating at approximately 50 °F (10 °C).

CENTER CONSOLE



1. Ashtray

Push slightly on side of ashtray to open it. Remove ashtray by pressing on inner tab.

WARNING: Never use the ashtray as a waste paper receptacle as it could cause fire.

2. Cigarette lighter

Push in to activate, and it will spring back when ready to use. Replace lighter to initial (nonactivated) position. The socket of the cigarette lighter may also be used for 12 volt appliances with a maximum consumption of 130 watts (10 amps), such as a flashlight, a small vacuum cleaner, etc. Make sure the socket will not be damaged by appliances equipped with unsuitable plugs.

NOTE: Cigarette lighter and socket remain functional even after the ignition key is removed.

3. Adjustable louver

The louver is manually adjustable, so the heated or cooled air flow can be directed as desired.

4. Central A/C - heating system controls

These controls are used to obtain desired temperature inside vehicle (see page 4-9).

5. AM/FM stereo cassette receiver

Instructions for proper utilization of the sound system are included in the technical publication box delivered with the vehicle.

NOTE: When video switch is activated, the passenger section speakers are not connected to the radio.

6. Speaker selector switch

Push up rocker switch to operate the speakers in driver's section only. Push down rocker switch to operate the speakers in passenger section only. The central position operates driver's and passenger section speakers simultaneously.

7. PA system volume control

Turn clockwise to increase volume of PA system.

8. Microphone outlet

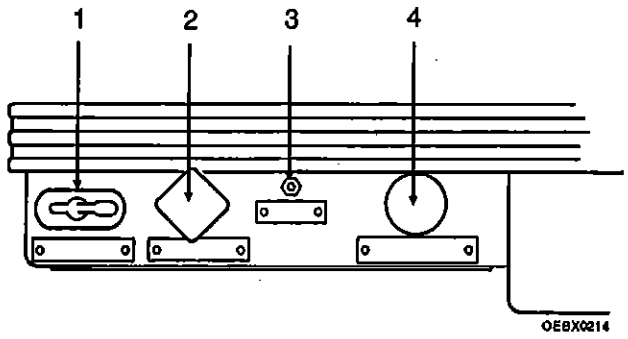
The PA system is equipped with a stereo attenuator which can be used when addressing to the passengers for a better comprehension.

9. Driver's A/C - heating system controls

These controls are used to obtain desired temperature in driver's compartment (see page 4-9).

R.H. LATERAL CONSOLE

Control valves



1. Tag axle up or unloaded

The tag axle is raised or only its air springs are unloaded according to the valve position (see page 4-16).

2. Parking brake

See *"Combination emergency and parking brakes"* under heading *"Brakes"* page 2-16.

3. Door override

In the event of possible malfunction of the front entrance door air lock mechanism, press this button to release air lock (see page 3-3).

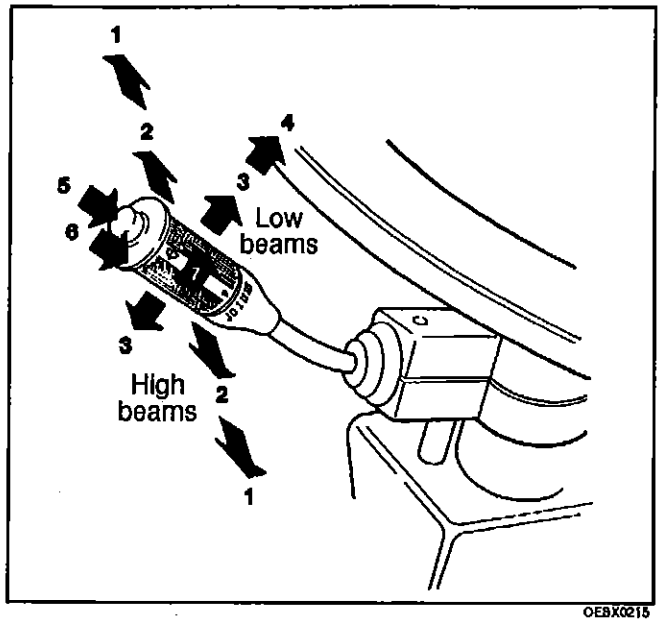
4. Parking brake override

If during normal operation, primary system air pressure drops below 40 psi (276 kPa), spring-loaded parking brakes will immediately be applied at full capacity on drive axle to stop vehicle.

Cause of pressure loss should be determined and corrected before proceeding.

However, vehicle may also be equipped with an optional parking brake release system which will allow driving the vehicle for a short period of time to a safe parking place. To operate, push and hold down the control knob located on R.H. lateral console while moving vehicle.

STEERING COLUMN CONTROLS



A. The multifunction lever is used to operate the following accessories:

1. Turn signal: Move the lever up to the second stop to signal a right turn, and down to the second stop to signal a left turn. When the turn is completed, the lever will automatically return to the horizontal position.

2. Lane change signal: Move the lever part way to the first stop, and hold it there. The lever will return to the horizontal position when it is released.

3. Headlight beam changer: High or low beams can be selected by respectively pushing the lever towards the dashboard or pulling it towards the driver.

4. Headlight flasher: High beams can be flashed momentarily by pulling the lever completely towards the driver and then releasing it.

5. Courtesy-type blinkers: Clearance lights can be turned on or off by pressing the button located at the lever tip.

6. Washer control: Push the external ring at the end of lever towards the steering column to activate windshield washers. When the ring is released, washers stop immediately but wipers will continue to run twice over to dry the windshield.

WARNING: In cold weather, windshield should first be warmed up with defroster before using washers, in order to prevent icing and serious visibility impairment.

CAUTION: Do not operate washers when windshield washer fluid level is insufficient to avoid damaging pump mechanism.

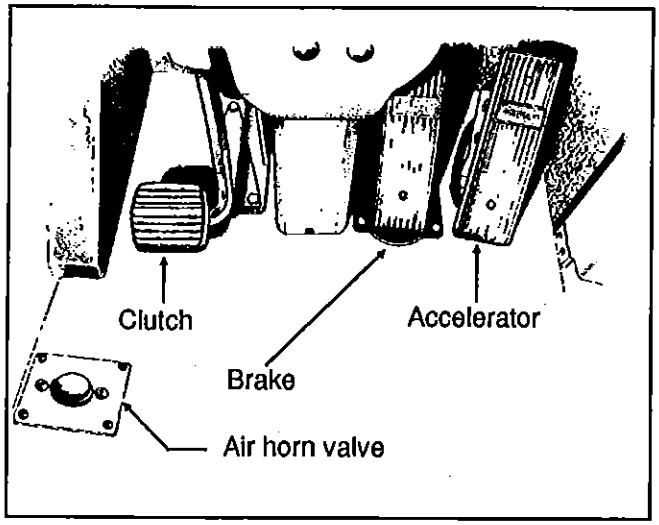
7. Windshield wipers: Turn lever forward to activate the two electrical synchronized arms; the first position corresponds to low speed and the second to high speed. Turn lever backward to activate intermittent mode.

CAUTION: Do not run wiper blades on dry windshields as this may scratch them. Always loosen frozen blades on windshield before operating wipers to avoid damaging their mechanism.

B. Electrical horn

Can be operated by pressing button at center of steering wheel (see page 3-5).

FOOT-OPERATED CONTROLS



OEBX0216

Air horn valve

Press on valve to operate air horn (see page 3-5).

Brakes

Service brakes

This vehicle is equipped with a dual braking system, the front brakes being independent of the rear brakes. This brake system becomes a modulated emergency system if a pressure drop occurs in the rear brake system.

Service brakes are applied by depressing the brake pedal, the rate of braking varying according to the gradual increase of pressure until the required rate of braking is obtained (see also ABS brake in page 3-1 if your vehicle is so equipped).

When brake pedal is depressed, vehicle rear stoplights automatically turn on.

For safe brake effectiveness, vehicle air system pressure should reach at least 95 psi (655 kPa) in both primary and secondary circuits.

A warning light turns on and a buzzer sounds when air pressure in one of the primary or secondary circuits drops below 70 psi (483 kPa). Vehicle must then be stopped and cause of pressure loss must be corrected before further operation.

Any problem or malfunction in the brake system must be reported at once to the maintenance personnel.

WARNING: *"Fanning"* or *"pumping"* brake pedal is not recommended. This practice will not increase brake system effectiveness, but will instead waste air and thereby reduces brake effectiveness.

***"Riding"* the brake by resting foot on brake pedal when not braking can cause abnormally high brake temperature, damage and wear of components, and loss of brake efficiency.**

Combination emergency and parking brakes

In normal operation, if air pressure in both brake circuits drops below approximately 40 psi (276 kPa), spring-loaded emergency parking brakes will immediately be applied at full capacity to the drive axle wheels to stop vehicle. In an extreme condition, the emergency brakes might be applied quite rapidly.

Spring-loaded parking brakes are applied by pulling up the control valve knob on the R.H. lateral console.

They have not been designed to be used as service brakes. In normal driving conditions, control valve knob must be pushed all the way down.

NOTE: Parking brakes can supplement service brakes to stop the vehicle in an emergency condition only. The stopping distance will be considerably longer than with a normal brake application.

Before releasing parking brakes by pushing down control valve knob, pressure gauges should be checked to ensure that brake system air pressure has built up to a minimum of 95 psi (655 kPa).

WARNING: Always apply parking brake before leaving driver's seat.

NOTE: Each time the parking brake is applied and ignition key is turned or left to the *"ON"* position, the stoplights automatically turn on.

Accelerator pedal

Controls engine rpm.

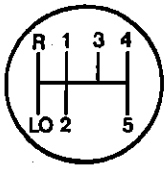
NOTE: Pedal will be inoperative when the *"DDEC-TEST"* switch in steering compartment is in the *"ON"* position.

Clutch pedal

Allows engagement and disengagement of manual transmission.

MANUAL TRANSMISSION

The manual transmission has 6 forward speeds, including creeper and one reverse. Shift lever to right of driver is used to select gears. It is equipped with a safety switch designed to prevent starter engagement if shift lever is not in neutral position.



OEBX0217

When shifting from neutral to first or in reverse gear, depress clutch pedal fully to activate clutch brake, thus easing shifting from neutral to a forward or reverse range.

CAUTION: Never fully depress clutch pedal with vehicle in motion as this may damage clutch brake mechanism.

Upshifting

Always start vehicle in motion with transmission in first gear, progressing to second, third, fourth and fifth. Do not skip gears. Do not shift to next higher gear until engine speed has reached 1900 rpm. Double-clutch method is recommended for shifting gears.

Downshifting

Double-clutch is also recommended for downshifting. Always change to lower gear to avoid engine lugging. Lower gears should be used for uphill or downhill driving, as well as operation on ice, snow or mud (minimum 1400 rpm).

Lower gears should be used when going down grade in order to make full use of engine compression. However, engine must never be allowed to operate at a higher speed than its maximum governed speed (2450 rpm).

Under normal driving conditions, it is not always necessary to downshift through all gears. Standard downshift from fifth to first gear should be made after coach is brought to a complete stop.

CAUTION: The shift selector lever should always be left in neutral position for parking vehicle.

Setting coach in motion should always be done at lowest possible speed to prevent unnecessary clutch wear.

For mountain driving, before descending a long or steep grade, reduce speed and shift into lower gear. Use lower gear ranges to control vehicle speed and avoid prolonged or frequent brake applications which would cause overheating and reduce brake effectiveness.

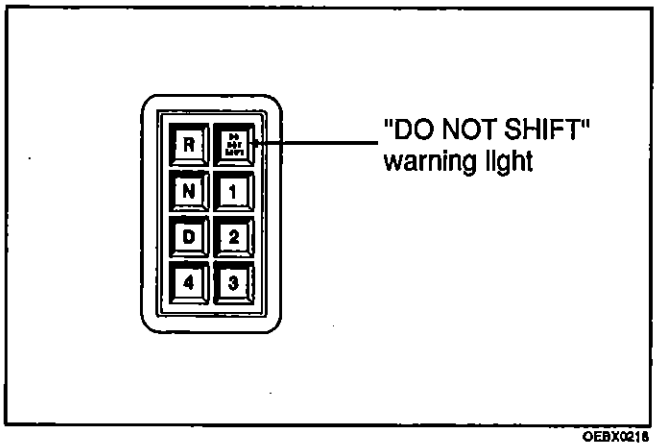
Shifting into lower gears on slippery surfaces should be done with caution. Sudden engine braking could cause drive wheels to skid, with possible loss of control.

AUTOMATIC TRANSMISSION

The operation and driving of a coach with an automatic transmission is similar to the driving of an automobile equipped with automatic transmission. Proper ranges should be selected according to driving speeds to improve vehicle performance and control. The transmission is fully automatic. Speed ratio of power converter changes automatically as vehicle speed increases and direct-drive goes in and out as necessary, modulated by vehicle speed, and accelerator position.

Push button-type range selector (ATEC)

The push button-type range selector, located on console at R.H. side of driver's seat, is totally electronic. The range selector displays seven or six push button pads: R (reverse), N (neutral), D (drive), 4 (fourth) only on 5-speed transmission, 3 (third), 2 (second), and 1 (first). The range selector also has a *"DO NOT SHIFT"* light and a warning tone.



OEBX0218

Operation

When any of the push button pad is pressed, a beep sounds and the pad lights up to indicate the transmission is ready to operate in the selected range. As a light bulb, buzzer and ATEC system check, the *"DO NOT SHIFT"* light will flash with the ignition switch *"ON"*. After about two seconds, the light and buzzer will turn off. If the light remains on or illuminates afterwards, the ATEC system (Allison Transmission Electronic Control) has detected a serious problem in the transmission, a buzzing tone sounds for 5 seconds, and a *"DO NOT SHIFT"* light turns on to warn the driver that the transmission is held-in-gear.

If another pad is depressed, the buzzing sound will continue until the original range is selected. If problem disappears, the light will go out, but a trouble code will remain stored in the ECU (Electronic Control Unit).

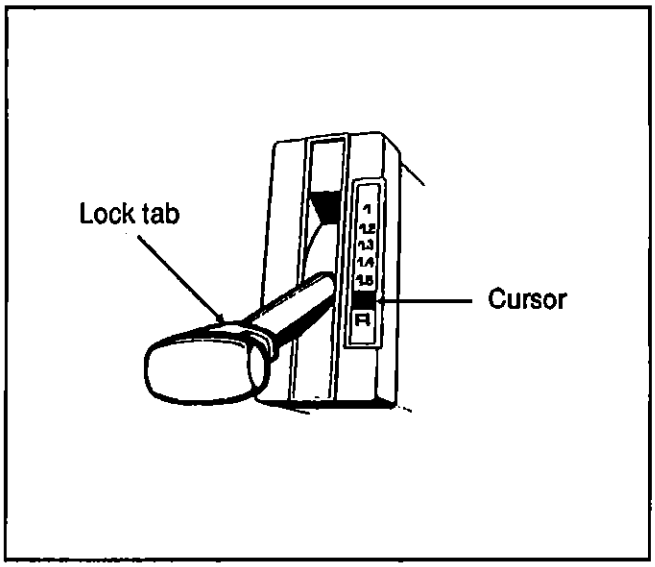
NOTE: This light may also turn on when starting in extreme cold weather conditions (see heading *"Transmission warm-up"*, page 4-5).

Range selector (NON ATEC)

The selector, located at R.H. side of driver's seat, has seven or six ranges: R (reverse), N (neutral), 1-5 (drive) only on 5-speed transmission, 1-4 (fourth range), 1-3 (third range), 1-2 (second range), 1 (first range).

Operation

Pull up lock tab to move selector, then release when red cursor is over the desired range.



OEBX0219

NOTE: The selector must be in Neutral (N) position to start engine.

AUTOMATIC TRANSMISSION OPERATION

A) Reverse (R)

Use this position for backing the vehicle. Vehicle should be completely stopped before shifting from a forward gear to reverse or from reverse to forward. Touch the reverse (R) pad, the light under the R pad will turn on and the reverse warning signal will be automatically activated upon selection of this range.

B) Neutral (N)

Use this position to start engine. Select neutral (N) when checking vehicle accessories, and for extended periods of engine idle operation; apply parking brake. The push button range selector will automatically select neutral when the ignition switch is turned on after engine has been shut off.

WARNING: Always apply parking brake before leaving driver's seat.

CAUTION: Detroit Diesel engines should not be idled for extended periods at *"low"* idle (approximately 550 rpm). For extended idling, engine should run at *"fast"* idle (approximately 1100 rpm).

C) Drive (D or 1-5) (1-4 on 4-speed transmission)

Use this high range for normal driving conditions. When this range is selected, the vehicle will start in first or second range and will automatically upshift to a higher range as output speed increases. As the vehicle slows down, output speed decreases, and the transmission automatically downshifts to the correct range.

NOTE: If a slick surface condition should occur with an ATEC system transmission, the ECU (Electronic Control Unit) will command converter operation (disconnect lockup) and inhibit downshifts for a period of time or until normal wheel speed has been restored.

NOTE: Manual shifting should only be used when required by traffic conditions as outlined hereafter.

D) Third (3 or 1-3) and fourth (4 or 1-4) ranges

Select these ranges when driving on moderate grades, or when load and traffic conditions require the use of restricted speed. Upshifting and downshifting are automatic.

E) Second range (2 or 1-2)

Select this range when operating in heavy and congested traffic. The transmission will start in first and automatically upshift second. When slowing, the transmission will automatically downshift to first range. Low ranges provide progressively greater engine and retarder braking power (the lower the range, the greater the engine braking power).

F) First range (1)

Select this range when pulling through mud and snow, or when driving up steep grades. This range provides maximum engine braking power.

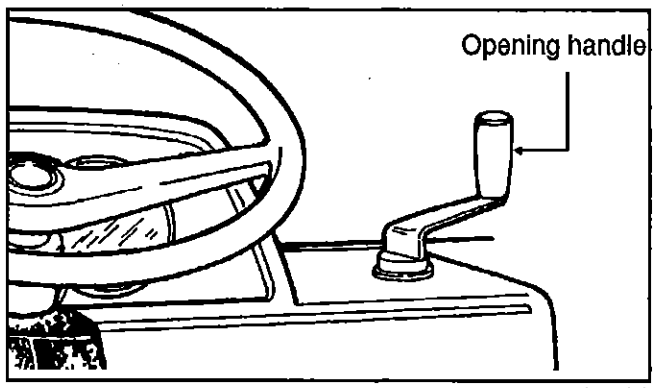
In the lower ranges (1, 2, 3 and 4), transmission will not upshift above the highest gear selected unless engine speed for that gear is exceeded.

DOOR

Inside operation

Entrance door is provided with an air-operated lock. Door is opened and closed by a handle, mounted directly on the dash to the driver's right, which automatically activates the air-operated lock to open or close door. Handle must be turned counterclockwise to open door and clockwise to close it.

CAUTION: Fully push clockwise on door handle to ensure door is properly closed by air lock mechanism before moving vehicle. Door handle should be manipulated slowly to prevent damage to air lock system components.



OEBX0220

Entrance door emergency opening

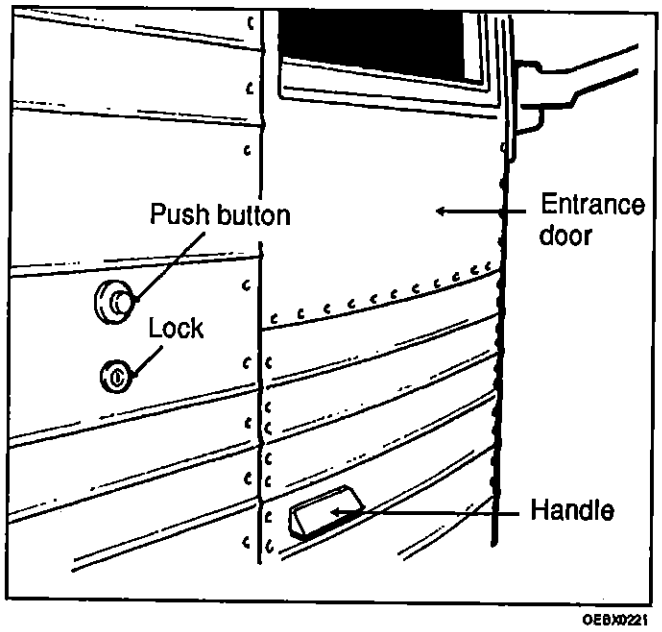
Use when normal opening system is not operative (see page 3-3).

Outside operation

Outside opening may be performed by pressing a button located to the left of entrance door and pulling the handle. To close door, simply push the door panel until door is almost closed and an air-lock system will then be activated automatically to complete closing. Use provided key to lock door from outside.

CAUTION: The door must have been previously unlocked to prevent damage to the door lock mechanism.

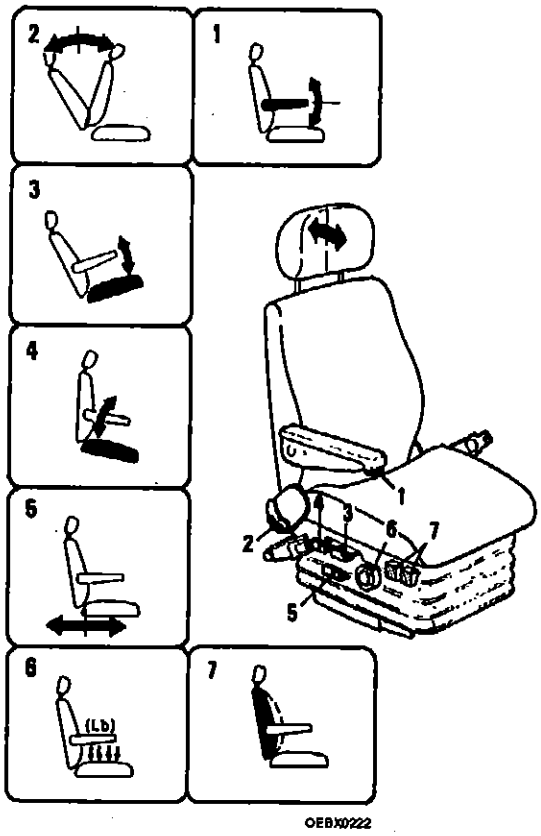
NOTE: When door is opened, the stepwell lights will turn on if exterior lighting switch is pushed down.



SEATS

Driver's seat

Only one type of driver's seat is available on this vehicle. The *"ISRI"* seat is offered in two models. The standard model has a mechanical suspension while the other one is equipped with air suspension. Both seats may be equipped with lumbar supports, heated cushions and adjustable armrests.



WARNING: Never adjust seat when driving vehicle as this could result in loss of vehicle control and cause injuries to the driver and passengers.

The *"ISRI"* can be adjusted to the most comfortable driving position according to the following instructions.

1. Turn control to adjust the desired height of the armrest.

NOTE: Do not apply pressure on armrest during its adjustment as this control will be more difficult to turn.

2. Lift lever to allow proper adjustment of the backrest angle.

3. Pull handle up, and push or pull on seat cushion to raise or lower the front section of the seat cushion.

4. Pull handle up, and push or pull on seat cushion to raise or lower the rear section of the seat cushion.

WARNING: Before proceeding with seat cushion adjustments, lower seat belt retractor to avoid pinching fingers between retractor and control knobs.

5. Pull handle up and slide seat forwards or backwards to adjust distance between driver and dashboard.

NOTE: This control may also be located at front of seat.

6. This control is used to adjust the seat suspension. Turn control clockwise to increase suspension resistance and counterclockwise to decrease.

NOTE: On an *"ISRI"* seat equipped with air suspension, the suspension is self-adjusting to the weight of the driver, thus deleting the suspension adjustment handwheel (6).

7. Push on upper section of rocker switches to inflate lumbar support bellows inside the seat backrest, and push on lower section of rocker switches to deflate bellows.

NOTE: Rear and front rocker switches are respectively for lower and upper lumbar support bellows.

Headrest

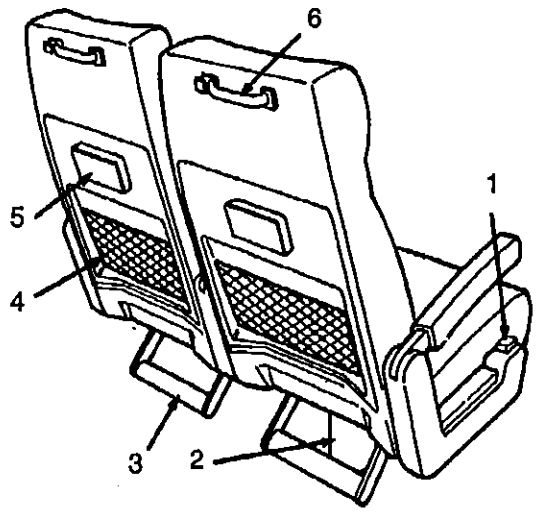
Tilt toward the front or the rear to position headrest horizontally.

Heated cushions

The *"ISRI"* seat may also be equipped with heated cushions operated by a switch on L.H. side control panel.

Passenger seat

All seats are track mounted to facilitate change in seating arrangements. Each seat is mounted on an oval aluminum pedestal to ease cleaning between pedestal and side wall of vehicle.



1. Backrest setting push button
2. Oval aluminum pedestal
3. Footrest
4. Newspaper holder
5. Ashtray
6. Grip handle

OEBX0223

Passenger seat backrest may be tilted and set conveniently by means of a push button on side of seat cushion. Depress and hold push button in position, then push backrest backward to the desired angle; the backrest will remain in the desired position when push button is released. Seat back adjustment mechanism is hydraulic and equipped with a pull-off spring.

A fold-down, spring-loaded type armrest is installed on the aisle side and lowers automatically. The return mechanism is installed in the armrest pivot. Between passenger seats, the same armrest type is installed but is not spring loaded, thus allowing the armrest to stay in a lifted position for passenger convenience. Another armrest is installed on the window side, but this one is fixed.

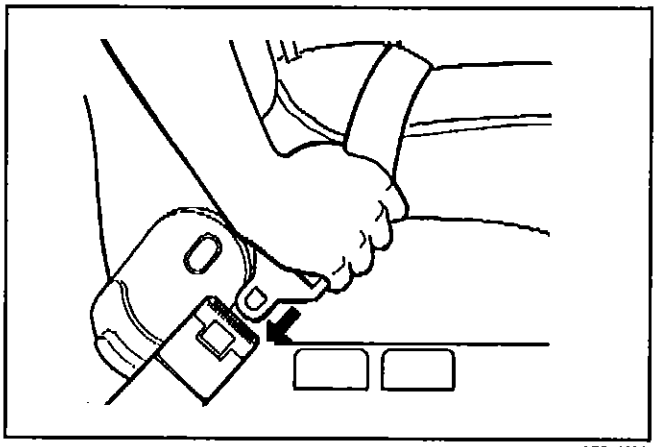
Passenger seat may be equipped with the following items: ashtray, tumbler holder, newspaper holder, grip handle and footrest.

Swivel seats

Vehicle may be equipped with two swivel seats at rear in the card table locations, in order to offer privacy to passengers. To operate swivel seats, remove both seat cushions and the four retaining wing screws. Pull seat towards aisle and rotate seat counterclockwise. Finally, align mounting holes and reinstall wing screws before replacing cushions. Instructions are affixed on seat frame under seat cushion.

Seat belt

Driver's seat is equipped with a retractable seat belt as required by state and federal regulations. To fasten seat belt, pull latch plate slowly and insert it into the buckle until it clicks. No special adjustment is required as the reel device is self-adjusting. If seat belt operation becomes defective, report to maintenance personnel.

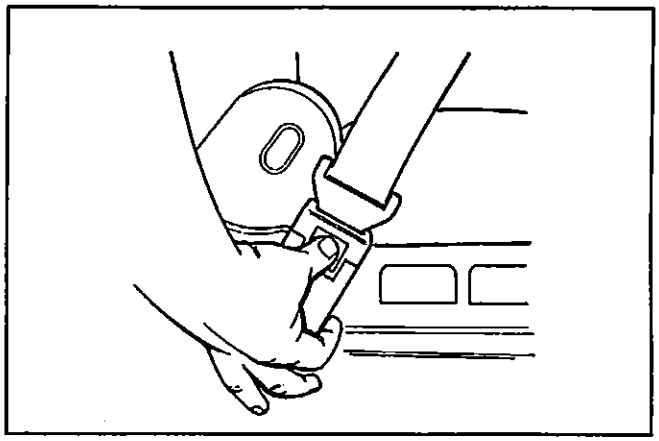


OEBX0224

NOTE: The seat belt must be pulled out slowly and continuously, otherwise it will lock the reel before the latch plate reaches the buckle. If this happens, allow the belt to retract completely and repeat the procedure correctly.

WARNING: A snug fit with the lap belt positioned low on the hips is necessary to prevent the possibility of severe injuries in case of an accident. Also, belt should not be worn twisted; do not let belt or belt hardware become damaged by pinching it in seat mechanism. Do not wear belt over rigid or breakable objects in or on your clothing, such as eyeglasses, pens, keys, etc. as these may cause injuries.

CAUTION: Belt must not rub against sharp objects. Never bleach or dry clean safety belt.



OEBX0225

To unfasten belt, press red button in center of buckle and allow belt to retract. If belt does not fully retract, pull it out and check for kinks or twists. Make sure that it remains untwisted as it retracts.

MIRRORS

Exterior mirrors

The vehicle is equipped with two exterior mirrors, which are provided with a convex miror and an electric heating system to ensure a good visibility in extreme weather conditions. These mirrors can also be tinted, thus antiglare. Integral thermostats are installed in both mirrors to avoid continual heating. Use the appropriate switch on the L.H. side control panel to activate the defroster system on both mirrors simultaneously.

Mirrors can also be provided with an optional electric control using the appropriate switches on the L.H. side control panel, or manually according to the following method.

NOTE: Adjust mirrors before driving and after adjusting your seat to the proper driving position. It is important for safe driving that you have a good rear vision on each side of the vehicle.

Mirror arm angle can be adjusted in order to obtain desired vehicle width. To adjust, loosen adjusting *"Allen"* screw (1) located at body end of mirror arm. Adjust mirror arm to the desired position, then tighten adjusting screw.

CAUTION: Do not overtighten.

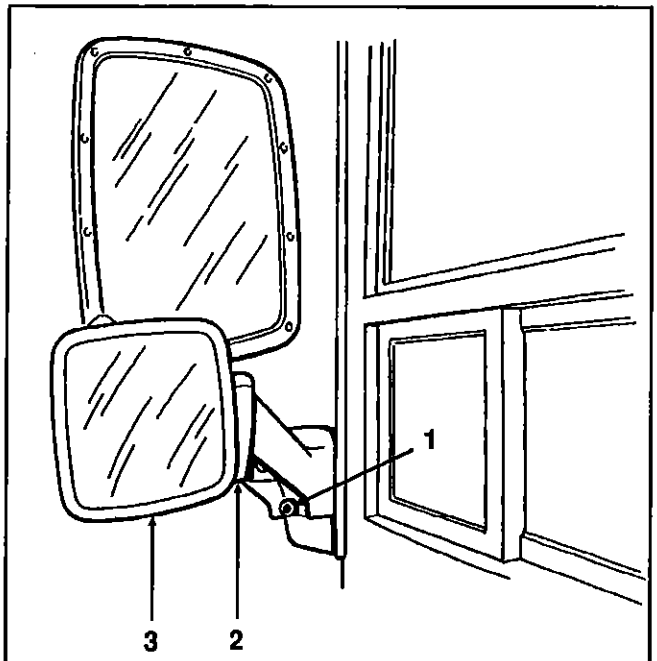
Mirror head can be rotated and/or tilted by loosening the adjusting *"Allen"* screw (2) located at the base of the mirror head. Adjust to desired position, then tighten adjusting screw.

CAUTION: Do not overtighten.

Convex mirror head can be rotated and/or tilted by loosening the adjusting nut located at the rear of this mirror. Adjust to desired position, then tighten adjusting nut.

WARNING: Objects in convex mirror are closer than they appear.

CAUTION: Do not overtighten.



(1) To adjust mirror arm angle
(2) To rotate and/or tilt mirror head
(3) Convex mirror

OEBX0226

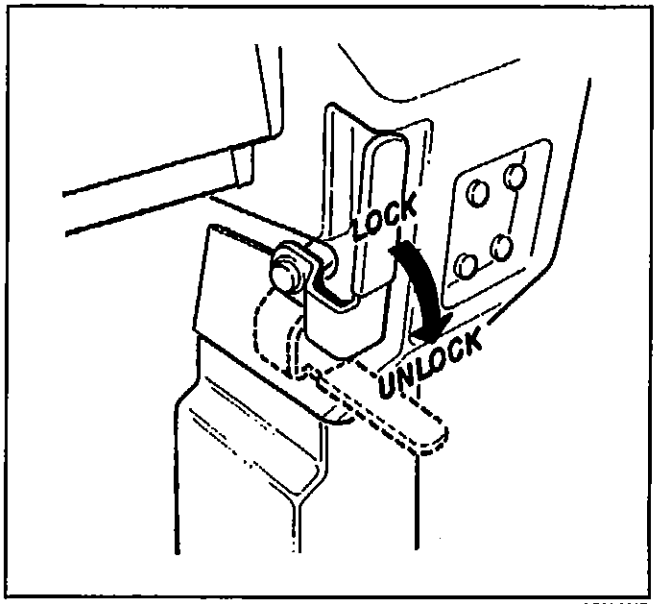
Interior mirror

This mirror is in the upper centre of coach and enables the driver to watch circulation in the aisle. Adjust to desired position without loosening any screw.

TILT STEERING WHEEL AND TELESCOPIC STEERING COLUMN

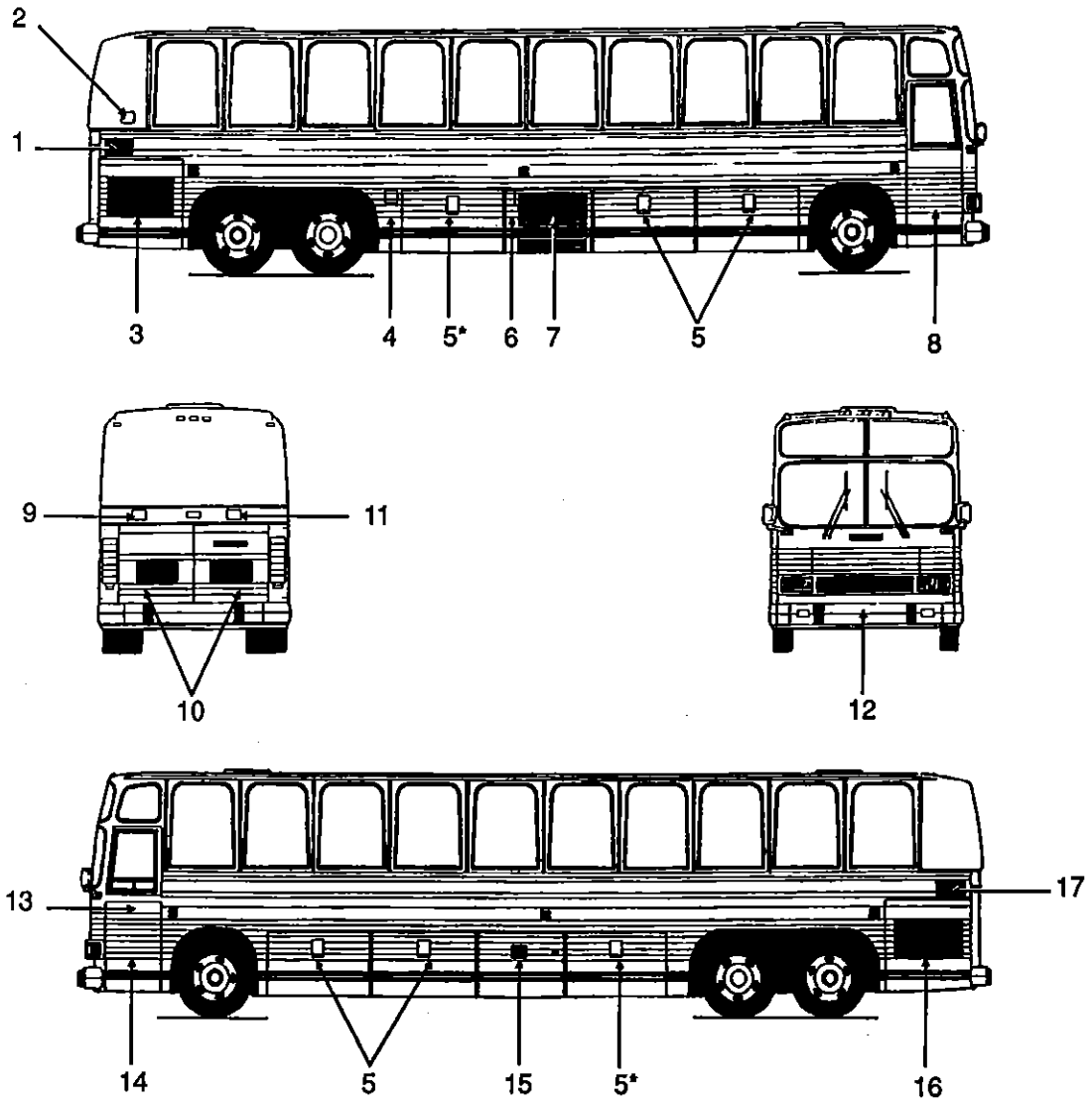
To unlock, use the handle located to the left of steering column. Pull handle down to permit a variation of 11 degrees in steering wheel angle, and a telescopic steering movement of two inches (5 cm). Push handle up to lock tilt and telescopic mechanism.

WARNING: Never try to adjust the mechanism while the vehicle is in motion. Steering may move unexpectedly and could cause sudden loss of vehicle control, thus resulting in personal injuries for you and your passengers.



OEBX0227

EXTERIOR COMPARTMENTS



1. Engine air intake duct
2. Lavatory access door
3. Engine R.H. side door
4. Main battery disconnect switch door
5. Baggage compartment

5*. Baggage compartment
(access to battery compartment)

6. Fuel tank filling door
7. Condenser compartment
8. Entrance door
9. Coolant surge tank filling door
10. Engine compartment rear doors
11. Engine oil reserve tank filling door
(block heater and water heater plug (optional))
12. Spare wheel compartment
13. Front electrical compartment
14. Steering compartment
15. A/C & heating compartment
16. Engine L.H. side door
17. Engine air intake duct

OE8X0228

The above figure identifies all compartment and access doors. This section will explain how to open and close main doors.

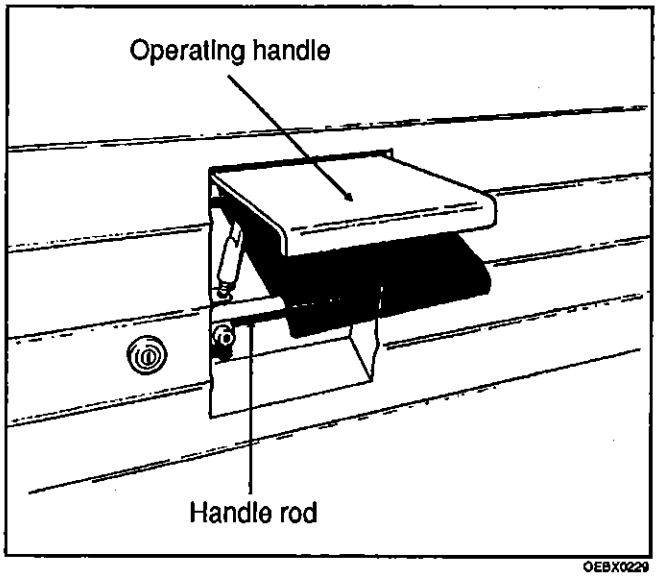
NOTE: When the door is provided with a lock, refer to page 2-1 to select the appropriate key.

Baggage compartments

An optional central door lock system may be installed on the six large baggage compartments only. The switch is located on the L.H. side control panel. Push up rocker switch to unlock the doors and push down to lock. An indicator light will illuminate on dashboard if one or several baggage compartment doors are unlocked.

The baggage compartment doors may also be locked or unlocked from outside using the key provided.

To open a baggage compartment door, insert fingers under lower edge of operating handle, pull out and up to unlatch door, grab handle rod and pull up compartment door. The opening action is assisted by gas cylinders which also hold the door in the open position.



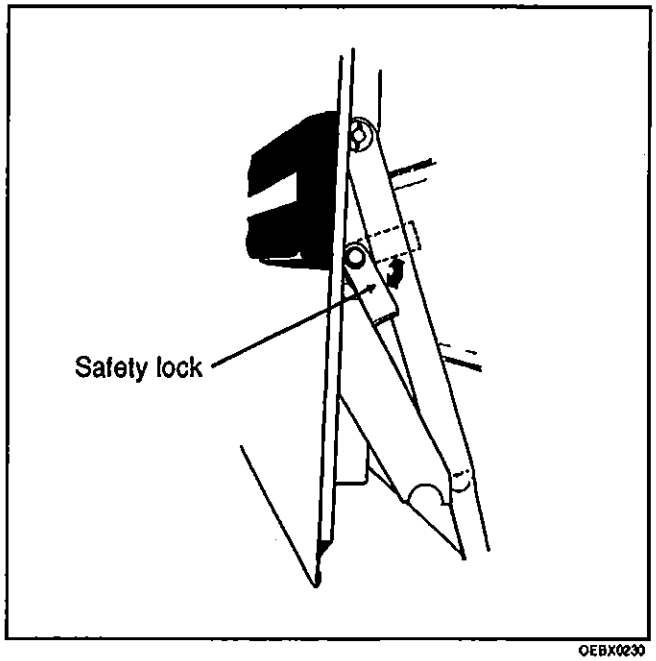
OEBX0229

Opening of baggage compartment door will actuate a microswitch that will turn on the compartment lights.

NOTE: In case of malfunction or special conditions, turn, push and hook safety lock to keep the door securely opened.

To close the door, push up by its handle rod to release safety lock and replace in its initial position to close compartment door.

To close a baggage compartment door, first release safety lock, then pull handle rod out and down as far as door will allow and push down handle to complete procedure and latch door.



OEBX0230

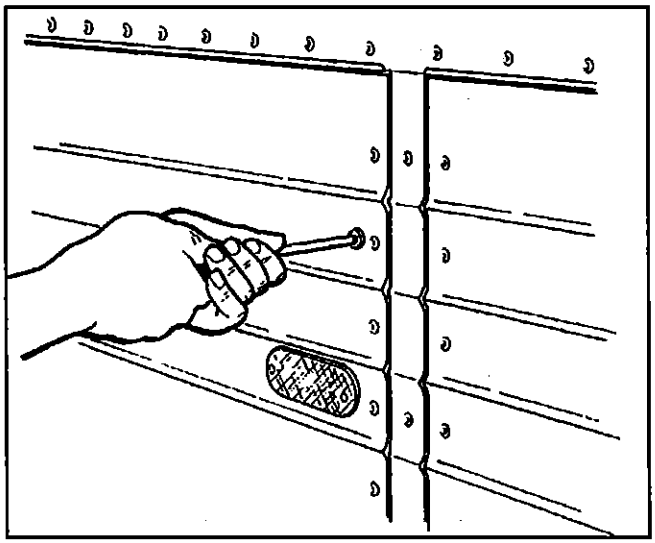
WARNING: Always open and close baggage compartment doors using the handle rod ONLY. Keep hands off all door edges.

CAUTION: Do not slam baggage compartment doors. This can only damage door weatherstrip and/or locking mechanism.

NOTE: To prevent theft or vandalism, always lock baggage compartment doors before leaving vehicle.

A/C & heating and condenser compartment doors

The A/C & heating and condenser compartment doors can be opened by removing the *"Philipps"* retaining screws and then pulling on the door.


OEBX0231

Spare wheel and tire compartment

The front bumper is of the *"reclining type"*. To open, carefully remove the large bolt at each end using the wheel nut wrench, then lower the bumper slowly as it is quite heavy.

WARNING: This compartment has not been designed for storage. Never leave any loose object in this area as it may interfere with steering linkage mechanism.

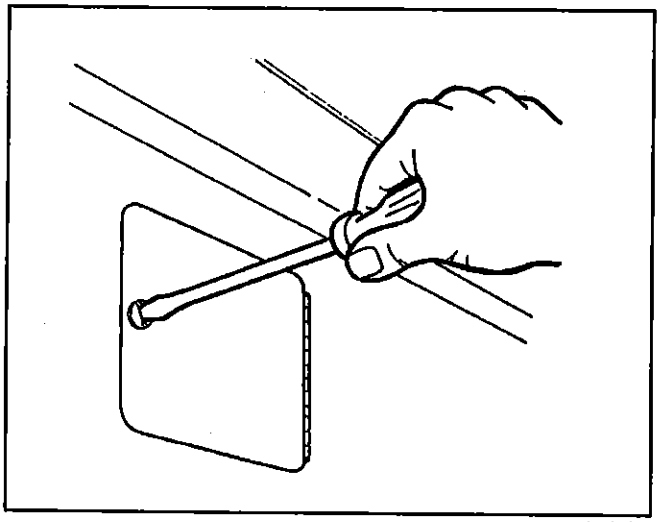
CAUTION: The two bumper retaining bolts should be checked to make sure they are firmly tightened after compartment panel has been closed (see also page 4-14).

Service doors

The doors #2, 9, 11, 13 and 14 can be opened by turning the slotted head *"Dzus"* fasteners 1/4 turn counterclockwise and then pulling on the door.

Doors #13 and #14 are provided each with a microswitch which when actuated, will turn on the compartment light.

CAUTION: Special care must be taken not to damage the paint around the *"Dzus"* fasteners when using a screwdriver or a coin.

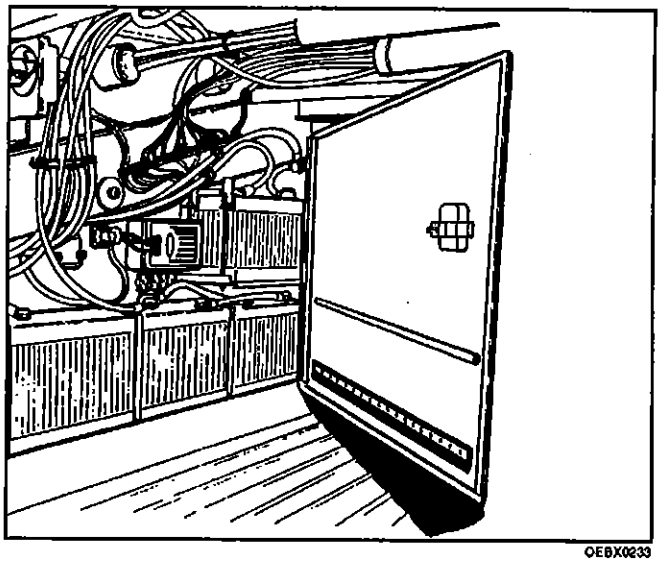


OEBX0232

Battery compartment

Batteries are accessible by means of an access door which is located on the back wall of the rear baggage compartment (#5*). To open this access door, take out the handle from its cavity, turn 1/4 turn counterclockwise and pull on the handle.

WARNING: Lead-acid batteries generate explosive gases. Keep sparks, flame and lighted cigarettes away from battery compartment.



OEBX0233

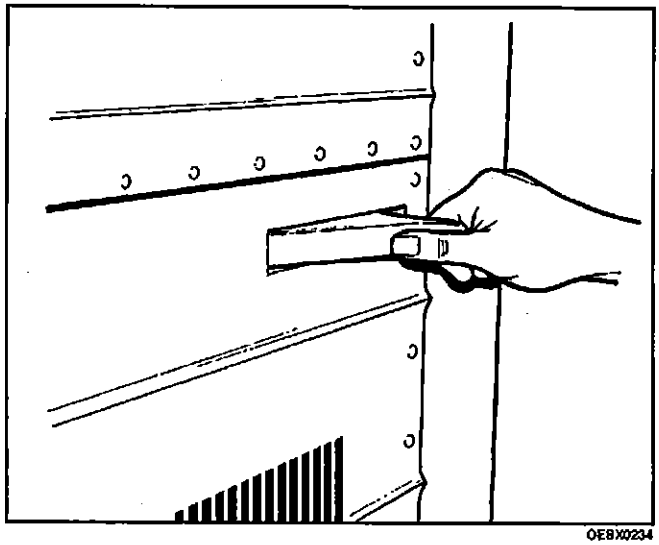
Engine compartment

Two rear doors and one R.H. side door are provided to allow access to the engine compartment. To open rear doors, turn lock release handle counterclockwise and pull open doors. Doors are held in open position by a mechanical locking device located at top of each door. A switch located on R.H. side of rear junction box can be used to actuate the engine compartment lights.

To close doors, first release mechanical locking device by pushing its side with fingers, then push doors back to closed position, always starting with left (driver's side) door.

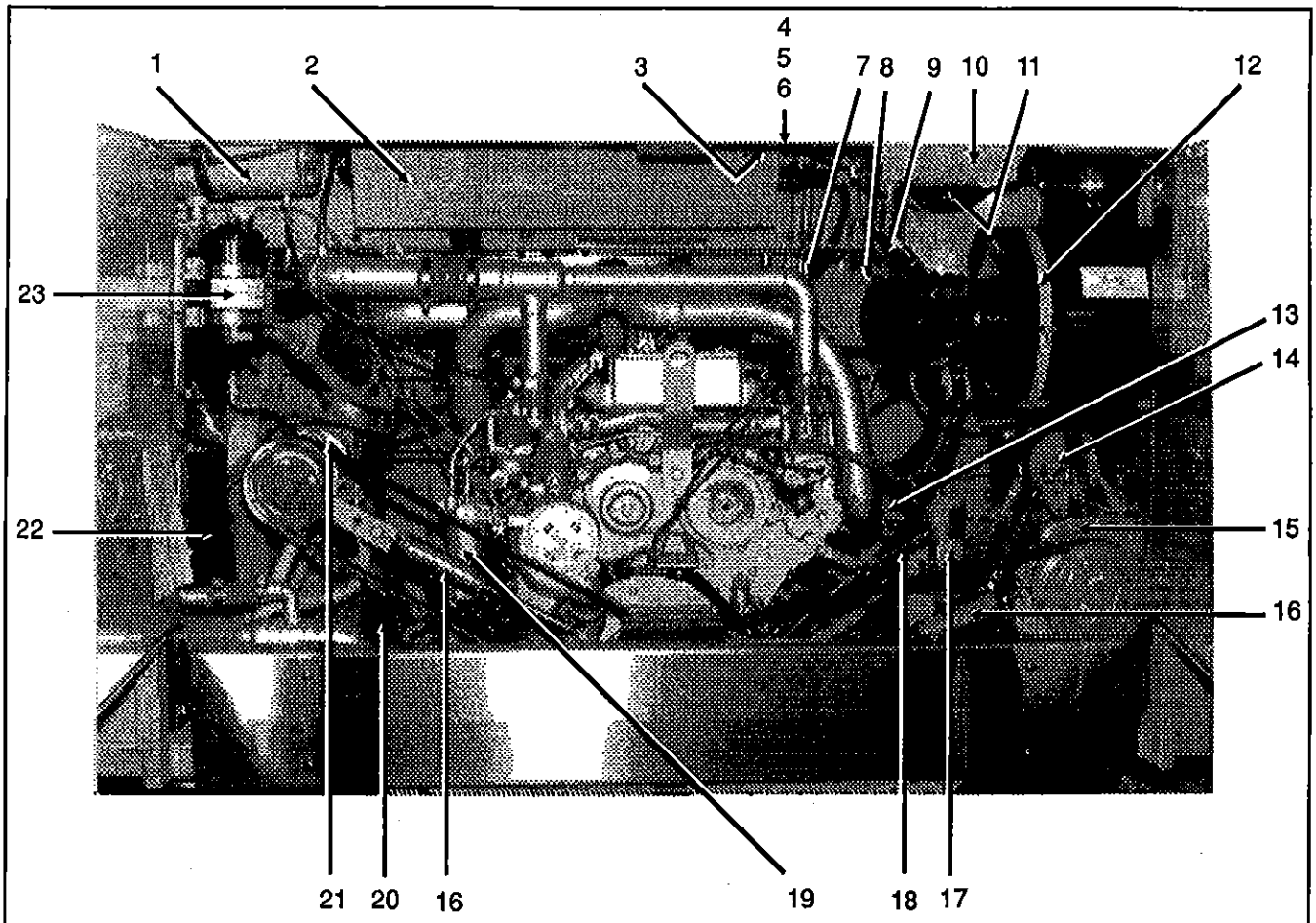
The side door can be opened by pulling the release handle and then pulling on the door.

NOTE: An engine L.H. side compartment door, which opens similarly to the R.H. side compartment door, is designed to provide access to the radiator, and if vehicle is so equipped, to the shutter, condenser, and central heating system manual valves.



OEBX0234

Engine compartment components



Component identification:

1. Coolant surge tank
2. Rear junction box
3. Belt tensioner cylinder two-way control valve
4. Engine compartment light switch
5. Starter selector switch; "REAR", "OFF" or "NORMAL" position
6. Rear start push button switch
7. Cold weather starting fluid cup
8. Fire detector
9. Engine oil pressure gauge
10. Engine oil reserve tank
11. Engine coolant temperature gauge
12. Engine air cleaner
13. Transmission oil dipstick
14. Engine primary fuel filter
15. A/C compressor (central system)
16. Belt tensioner cylinder
17. Fuel filter/water separator
18. Engine oil dipstick
19. Engine secondary fuel filter
20. Muffler
21. Radiator fan gearbox
22. Radiator
23. Power steering oil tank

OEBX0235

INTERIOR COMPARTMENTS

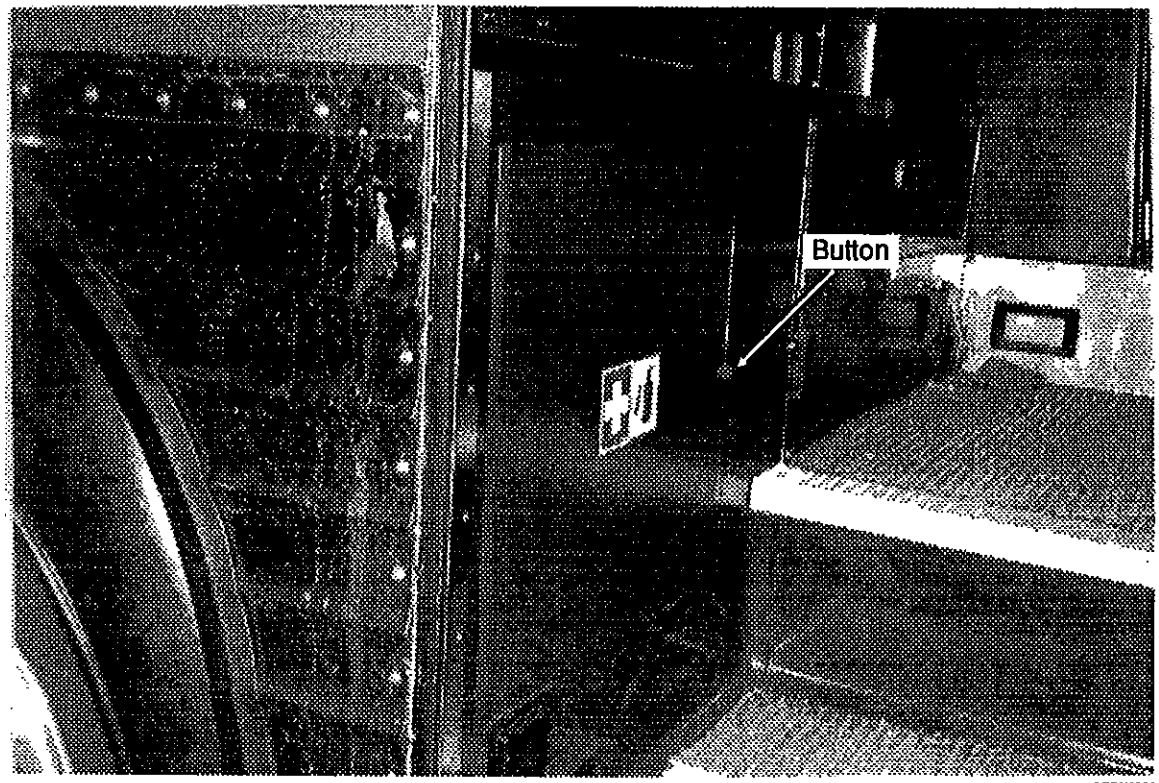
Safety equipment compartment

A safety equipment kit for use in case of an emergency can be found in entrance door section, below modesty panel, behind the small fiberglass door and includes a first aid kit and fire extinguishers.

To open access door, turn door button counterclockwise, lightly pull out button, then slide the door towards center of vehicle while holding the door. Reverse procedure to close.

Parcel rack compartment

These overhead compartments on each side of coach are used to store passenger small baggages and personal effects. They can be of the closed type; open door by pulling out its handle.



ACCESSORIES

Driver's accessories

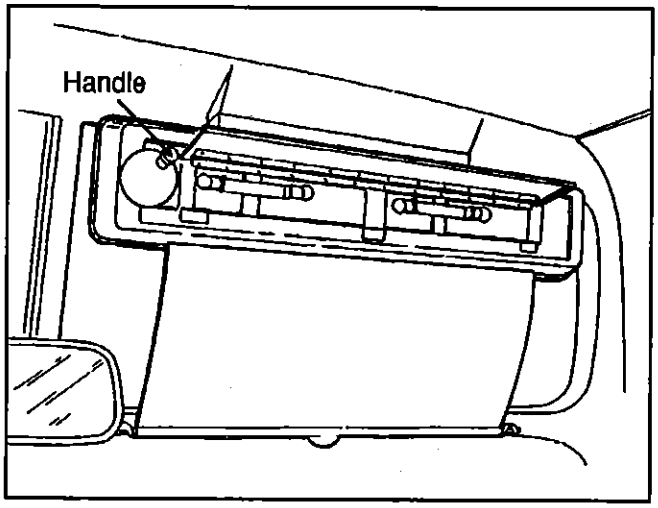
Spare parts

A kit of spare parts is supplied with your vehicle. It includes bulbs, solenoids, circuit breakers, belts, etc..., and is located in the first baggage compartment.

Destination sign

Proceed as follows to operate.

Pull handle to unlock and rotate clockwise or counterclockwise until desired destination has been selected. Release handle to lock.



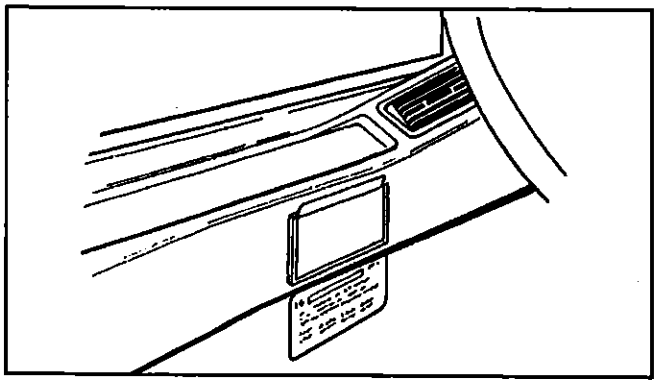
OEBX0306

NOTE: The destination sign is equipped with a light which illuminates automatically when the headlight or fog light switch is activated.

NOTE: The driver's name can be written on an optional nameplate holder on destination sign.

License holder

A license holder is provided on L.H. side of driver. You may also use this holder for your warranty registration card.



OEBX0238

Driver's window

Press the side of the handle to unlock it, then slide the window open. Reverse operation to close window.

Driver's fan

An optional fan can be mounted on dashboard to accelerate defrosting. Loosen the wing nut to adjust at desired position.

Microphone outlets

Five microphone outlets for the PA system can be installed to the following locations:

- One outlet for the driver on side of the L.H. side control panel (standard)
- One outlet on the center console (standard)
- One outlet on the modesty panel
- One outlet on driver's guard
- One outlet on the front end of left heating duct
- One outlet on the lavatory wall, at rear of the last row of seats
- One outlet on parcel rack of owner's choice

Upon request, an outlet allowing communication only between the hostess and driver can be installed. This outlet is located in the rear section of coach, and its location will depend on the equipment layout at rear.

NOTE: Upon request, microphone outlets can be installed in other locations.

NOTE: The PA system is equipped with a stereo attenuator and a volume control, which can be used when addressing to the passengers for a better comprehension.

Blind

A blind is installed on the L.H. side window of driver's section (see page 3-5).

Driver's coat hook

A driver's coat hook is installed at rear upper left side of driver's compartment.

WARNING: Check that coat is securely hooked and that it will not impair driver's vision and movements, which could cause sudden loss of vehicle control, thus resulting in personal injuries for you and your passengers.

Adjustable louvers

This vehicle is provided with several adjustable louvers connected to the A/C and heating system. These can be adjusted manually so the heated or cooled air flow can be directed as desired.

Ajustable louvers are located as follows:

One on L.H. side control panel

Two on L.H. side of driver's seat backrest

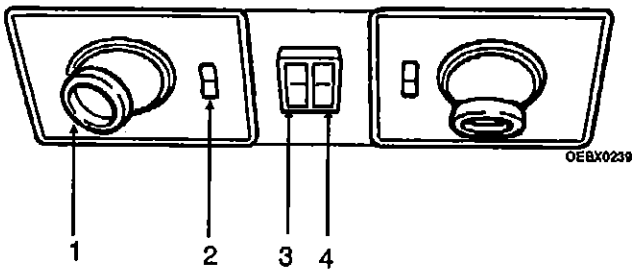
One on center console

One over the step, near door

NOTE: The adjustable louver located on L.H. side control panel is used to defrost driver's window.

Passenger accessories

Reading lamp



1. Reading lamp

Adjust to the desired angle.

2. Reading lamp switch

Press to turn reading lamp on or off.

3. Hostess signal switch

Push on rocker switch to activate chime in driver's area. A light is provided inside rocker switch to indicate passenger position to the hostess.

4. Driver's signal switch

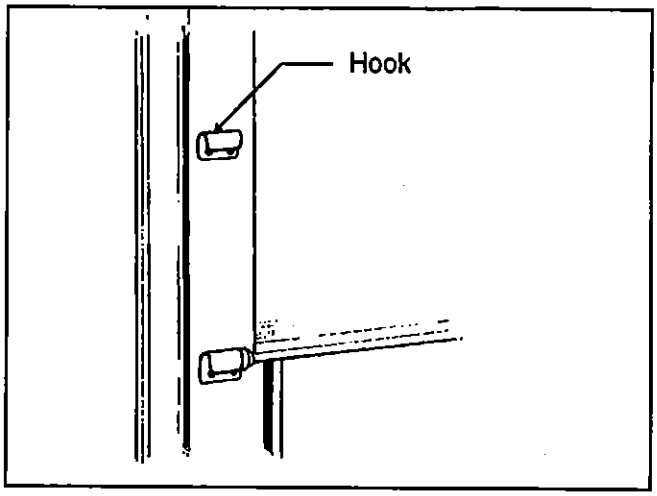
Push on rocker switch to activate chime in driver's area, thus indicating that the passenger wants to get off at next stop.

Waste container

A waste container for passengers is located behind the last R.H. row of seats near the lavatory.

Blind

Each passenger window may be provided with a blind. Pull shade and lock in first or second hook as desired.

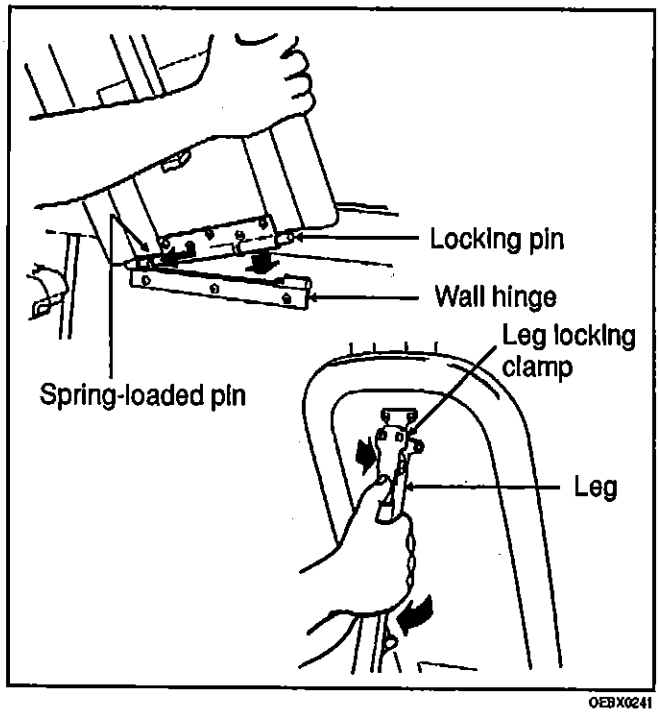


Card table

Two easy-to-install card tables are provided as standard equipment. They are stored in the parcel racks in their own protective envelopes.

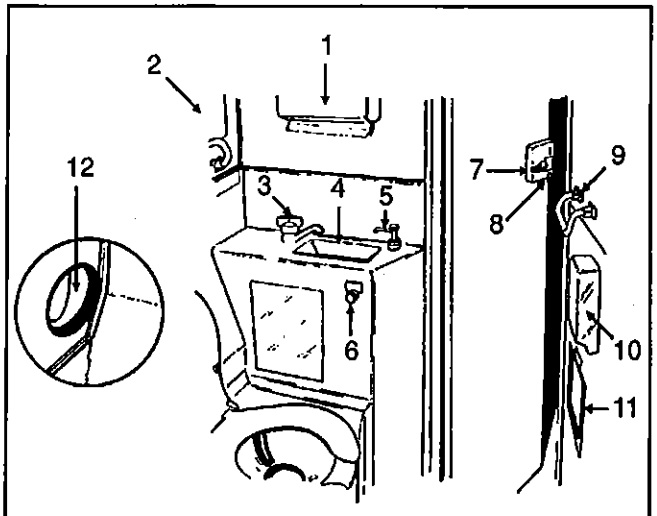
To install card table, remove it from its protective envelope and hold at 45° with side wall. Card table spring-loaded pin should be inserted into the vehicle side wall hinge. Card table spring-loaded pin mechanism will automatically lock card table into side wall hinge.

When card table has been securely fastened to side wall hinge, leg can be brought down at right angle to open position by pushing down the leg locking clamp. Table is now set and ready to use.



Lavatory

The lavatory is located in the rear R.H. corner of coach and is equipped with the following items:



1. Towel dispenser
2. Mirror
3. Water supply valve
4. Washbasin
5. Liquid soap dispenser
6. Flush button (timed)
7. Door handle
8. Door lock
9. Grip handle
10. Hygienic toilet tissue dispenser
11. Waste paper container (trap)
12. Access door cleaning

OEBX0242

Locking the door from inside will illuminate outside signs which are mounted on the outer wall of lavatory, an indicator light on the dashboard and the fluorescent in the lavatory. A night-light turns on when headlight switch is actuated.

In case of emergency, passenger can actuate a buzzer that will sound in driver's area. The button, along with the instructions, are affixed to the inner wall of lavatory for maximum passenger security.

The lavatory has its own ventilation system that operates only when ignition switch is in the *"ON"* position.

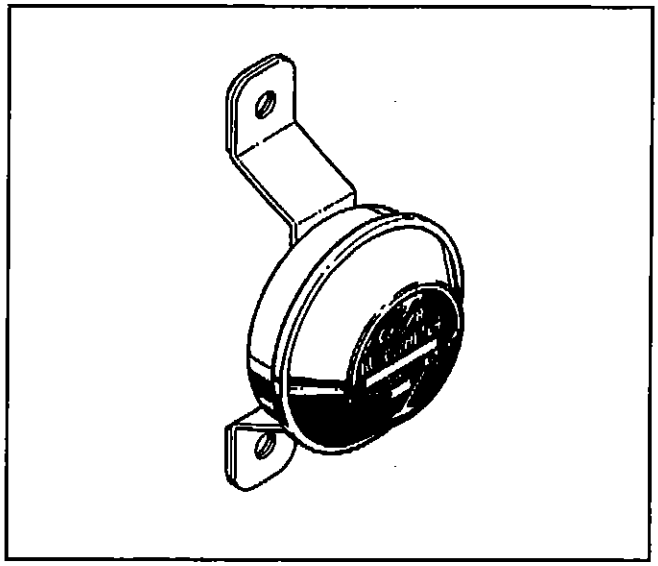
An optional auxiliary lavatory tank allows main tank to be drained through manual opening of an interconnecting tank valve. Lavatory can then be operated for longer periods until coach can be serviced at a facility equipped with disposal facilities.

The fresh water tank is located behind the mirror. It may be equipped with a thermal drain valve, which will drain the tank when water temperature gets near the freezing point to prevent damaging the tank. An immersion block heater for the lavatory water tank is also available, and can be connected to a 110-120 volt AC power source through an extension cord by the engine oil reserve tank filling door.

A lavatory access door is provided on R.H. sidewall to facilitate lavatory compartment cleaning. This trap can be opened from the exterior only. For draining and filling reservoir, refer to section dealing with the maintenance.

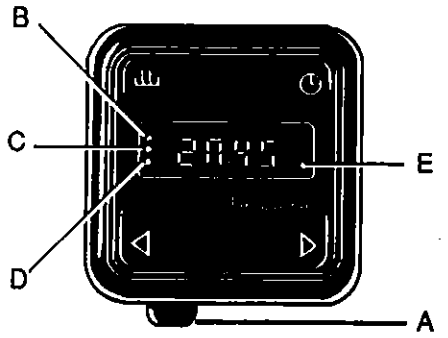
HUBODOMETER

A wheel hubodometer is installed on the R.H. side of the drive axle. It indicates the total distance in miles or kilometers covered by the coach since leaving the factory, including road testing.



OEBX0243

WATER HEATER TIMER



OE380206

This timer located on L.H. side control panel is used to program the starting and stopping time of the preheating system.

CAUTION: The preheating system should not operate for more than one hour before starting the engine as this could discharge batteries.

Time display

Pull lever A forward*

Time setting

Pull lever A forward and press on ◁ or on ▷

Heating startup

(possible regardless of preselection)

Press on

Display of heating time in minutes, operation indicator light E is flashing

Heating startup, continuous operation

Pull lever A forward and press simultaneously on

Heating shutoff

Press on . With automatic delay to allow cooling

Preselection of heating startup time

Memorization of 3 startup times

Display of memorized times

(heating will turn on automatically at preselected time)

Press once on : Heating is set for the 1st startup time**, indicator light B is on.

Press twice on : Heating is set for the 2nd startup time**, indicator light C is on.

Press three times on : Heating is set for the 3rd startup time**, indicator light D is on.

Neutral position: Press four times on : No display or display of time*. No preselected startup time

Setting of startup times**:

1st memory: Press momentarily on B is on

2nd memory: Press momentarily on C is on

3rd memory: Press momentarily on D is on

Setting of startup time by pressing on ◁ or ▷

Neutral position: press once again on :

No display or display of time*, the preset times are still in memory

* Eventually permanent display of time with the vehicle ignition switch on

** Display of heating startup time turns out after approximately 20 seconds, or time display*

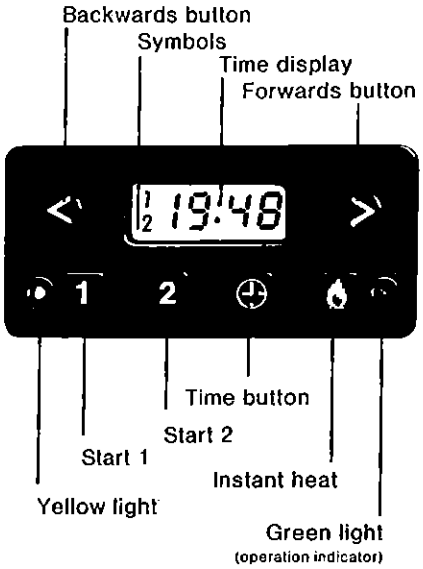
WARNING: Preheating system must not operate when vehicle is parked inside or during fuel fill stops.

NOTE: Preheating system uses the same fuel as the engine.

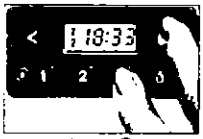
In case of failure:

1. Shut off and turn on heating.
2. Check main circuit breaker and overheating switch.
3. Have it repaired in a specialized shop.

Operation with digital timer



1. To set the clock ...

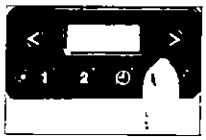


if the time display – e.g. 18:33 – is wrong, or if it flashes 8:88, press button ⏲ and at the same time press either ‹ (backwards) or › (forwards). The longer you hold the button down, the quicker the display changes. The last few minutes are set accurately by quick pushes. Adjust to get exact time, e.g. 19:48. The display fades after 20 secs.

2. Do you want to know the time?

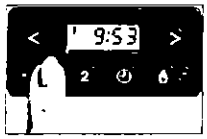
Just press button ⏲ at any time. The display appears again.

3. You can get instant heat ...



with the button ⏻, which switches your heater on (or off) immediately. The green light is on while the heater is switched on.

4. ... or you can programme the heater to come on up to 24 hours ahead.

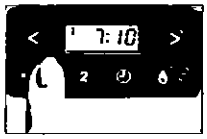


Press button 1 – and the display shows the time at which the heater will start. You can alter starting time by pressing button ‹ (backwards) or › (forwards).
The longer you press the button, the faster the display changes. The last few minutes are set accurately by quick pushes.
The display fades after 20 secs. The symbol 1 remains in the display, and the yellow light stays on. Your starting time is now activated.

5. Button 2 allows you to programme a second starting time

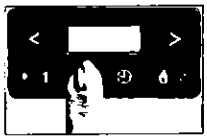
Press button 2 , which de-activates starting time 1. Then proceed as in (4).
The activation of the second starting time is indicated by the symbol 2.

6. Do you want to check (or activate) your starting time?



Press button 1 or 2 briefly. The display shows, for 20 secs., the programmed starting time. This activates the timer to start the heater at the time shown.

7. Do you want to cancel a programmed start?



Press button 1 or 2 briefly. The appropriate number in the display goes out, together with the yellow light.

ENGINE BRAKE SYSTEM ("JACOBS")

The *"Jacobs"* brake is a diesel engine retarder that uses the engine itself to aid in slowing and controlling the vehicle. When activated, the *"Jacobs"* brake alters the operation of the engine exhaust valves so that the engine works as a power-absorbing air compressor. This provides a retarding action to the wheels.

The engine brake is a vehicle-slowing device, not a vehicle-stopping device. It is not a substitute for the service braking system. The vehicle service brakes must be used to bring the vehicle to a complete stop.

Effectiveness of the engine brake system will vary according to transmission range in use. The engine brake system is more effective in lower ranges and at higher engine speeds.

WARNING: When descending significant grades, use service brakes as little as possible. If engine does not slow vehicle to a safe speed, apply service brakes and shift to a lower range. Let the engine (and engine brake) retard the vehicle. Keep brakes cool and ready for emergency stopping.

NOTE: Each time the engine brake system is in operation, the stoplights will automatically light up.

ABS BRAKES (antilock braking system)

The purpose of the antilock braking system is to preserve the stability and steerability of a vehicle during braking, and to minimize its stopping distance whatever the road conditions.

On slippery roads and more generally in emergency situations, overbraking frequently induces wheel locking.

Antilock braking system provides maximum braking performance while maintaining adequate steerability on slippery roads.

Also, on smooth or slippery surfaces, the stopping distance with locked wheels is greatly extended; on rough surfaces the problem is tire abrasion.

The basis of ABS is constant monitoring of the wheel behaviour during braking. Sensors on each wheel of axles 1 and 2 continually measure the wheel speed during braking and this information is transmitted to a four-channel electronic processor which senses when any wheel is about to lock. Modulating valves quickly adjust the brake pressure (up to 5 times per second) to prevent wheel locking. Each wheel is therefore controlled according to the grip available between its tire and the road.

In this way the vehicle is brought to a halt in the shortest possible time, while remaining stable and under the control of the driver.

CAUTION: People following you may not be able to brake as fast as you on slippery roads; so where possible, give a prior warning by depressing lightly brake pedal several times before braking.

AUTOMATIC FRONT BRAKE LIMITING SYSTEM

During normal service brake application, this optional system automatically reduces application pressure to the front axle brakes. However, as brake application pressure is increased, the percentage of reduction is decreased until at approximately 60 psi (415 kPa) full pilot pressure is delivered.

This system is designed to preserve some steerability of vehicle during normal braking.

Pressure delivered to the valve supply port is reduced by 50% as it passes through the delivery port. The 50% reduction occurs only when brake application pressure to the supply port of the valve is between 40 and 60 psi (275-415 kPa), while applications above 60 psi (415 kPa) are not reduced at all.

KNEELING SYSTEM

This system enables passengers to board or leave vehicle without any difficulty by lowering the front end. The operation of this system is very fast, as only 5 seconds to lower and 9 seconds to raise vehicle are required.

NOTE: This vehicle is equipped with an interlock system which will automatically apply the parking brake when the kneeling system is activated.

To operate, stop vehicle, set transmission to neutral position, then push down rocker switch located on the L.H. side control panel; the parking brake will automatically apply, a warning flasher will illuminate, and a beep will sound to indicate lowering of front of vehicle.

To raise front of vehicle to its normal height, push up rocker switch. The front end will raise rapidly until the parking brake interlock and indicator light turn off. Release parking brake and shift transmission to desired range.

NOTE: The kneeling system does not operate when vehicle speed is over 5 mph (8 km/h). Consequently, the driver cannot operate inadvertently the kneeling system at high speed.

CAUTION: Avoid parking too close of sidewalk or any other obstacle that could damage vehicle during kneeling.

HI-BUOY

This system is used to raise front of vehicle to allow an extra ground clearance to facilitate a down or up motion on a loading dock or for a particular situation.

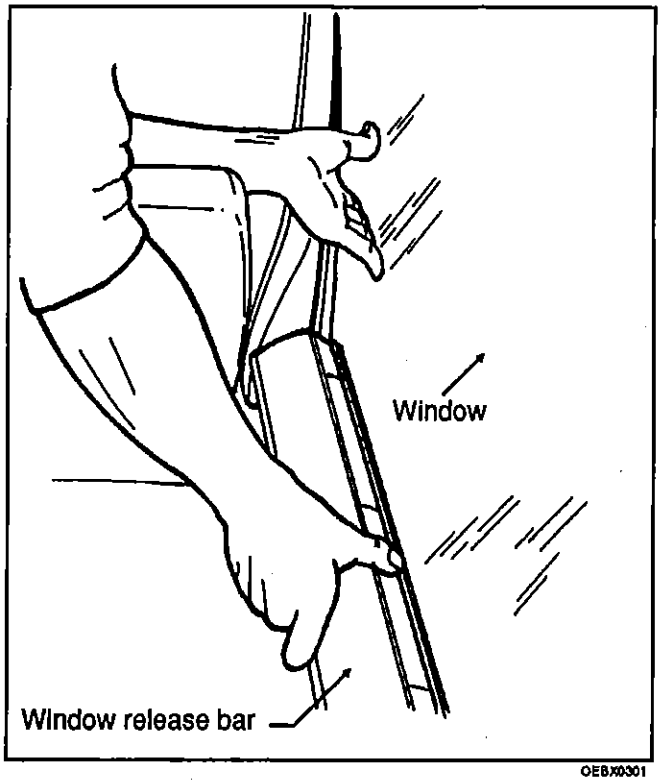
EMERGENCY EXITS

Side windows

Some side passenger windows can be opened from the inside for emergency escape. A decal indicating location of nearest emergency exit window is affixed at bottom of each side window. The upper section of each emergency side window is provided with two blue lights which are turned on by means of the headlight switch on the R.H. lower switch panel.

To open window, slide fingers under release bar, lift release bar, then push out window at bottom. Instruction decals are affixed to the release bar of each emergency exit window.

To close window, lift window release bar and pull window towards inside.



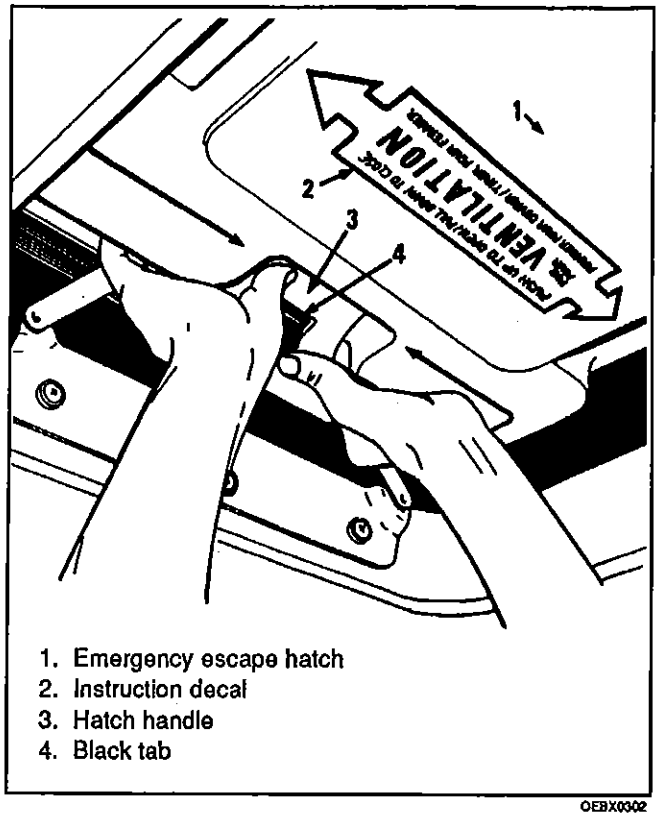
CAUTION: All emergency exits should be kept closed during normal operation to prevent damage. Windows should not be slammed closed to avoid impairment of emergency exit system.

Emergency roof escape

The emergency escape hatch located in the roof at rear of vehicle is designed to be opened from inside by passengers. An emergency roof hatch located in front may be provided as an option. To open in the event of an emergency, push out ventilation hatch fully, then press black tab backward and push handle out still pressing black tab, in order to release emergency hatch catch. An instruction decal with complete operating instructions is affixed to the escape hatch.

NOTE: Emergency roof escape(s) can be opened to provide ventilation in the event of ventilation blower motor failure by simply pushing it (them) upward.

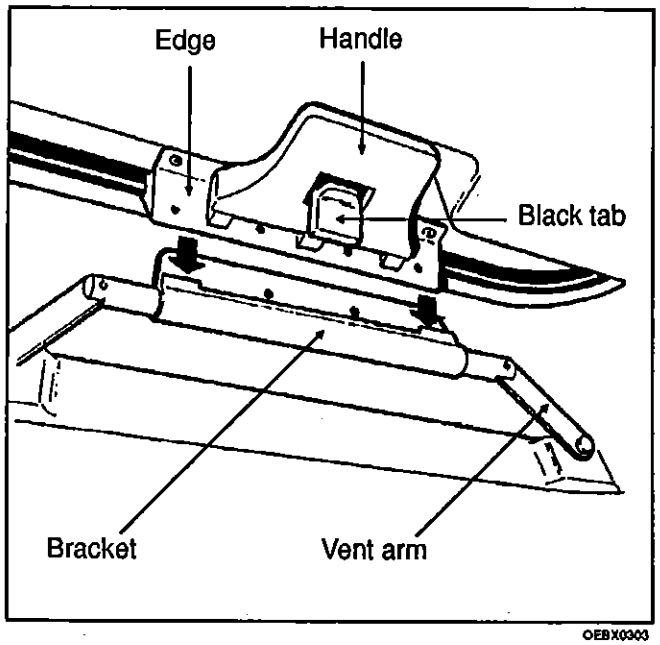
CAUTION: Beware of low overhead clearances if running with roof hatch(es) open.



1. Emergency escape hatch
2. Instruction decal
3. Hatch handle
4. Black tab

OEBX0302

To relatch handle after use, vent arms must be pushed upright in *"full open vent"* position, then insert edge between the two sections of the bracket and pull handle in to lock hatch. Finally, pull hatch in to close, one side after the other.



OEBX0303

Emergency opening of entrance door from inside

In the event of possible malfunction of the front entrance door air lock mechanism, press control button located on R.H. lateral console to release mechanism, and complete the opening by turning counterclockwise the entrance door opening handle.

SAFETY EQUIPMENT

First aid kit

A first aid kit has been installed in the safety equipment compartment.

Fire extinguishers

Two extinguishers are provided in the safety equipment compartment. Make sure that you know its operation in case of an emergency situation.

Emergency warning reflectors

A kit of three triangular reflectors is provided for emergency situations to warn other drivers. This device indicates an emergency situation by reflecting the light emanating from a light source. The three reflectors should be placed as illustrated on box cover. These reflectors comply with FMVSS 125 (Federal Motor Vehicle Safety Standards). This kit is located at right in the first R.H. side baggage compartment.

Jack/tools

The first R.H. side baggage compartment is also provided with a kit for jacking vehicle. Kit includes a 12.5 ton hydraulic jack and a wheel nut wrench.

ALARM SYSTEM

As an added protection to indicator lights, Prevost coaches are equipped with an audible alarm system which informs the driver of the operating conditions.

Indicator light	Audible alarm	Condition
Air primary	Buzzer	Low air pressure
Air secondary	Buzzer	Low air pressure
"Do not shift"	Buzzer	Inhibits shifting of transmission
N/A	Buzzer	Lavatory emergency button is activated
Low pressure	Buzzer	Low engine oil pressure
Low coolant	Buzzer	Low coolant
N/A	Chime	Button activated by passenger
Fire	Bell ringing	Fire in engine compartment
Fire	Bell ringing	Fire in battery compartment
Front kneeling	Beep	Front kneeling position is selected
Tag axle	Beep	Tag axle raised

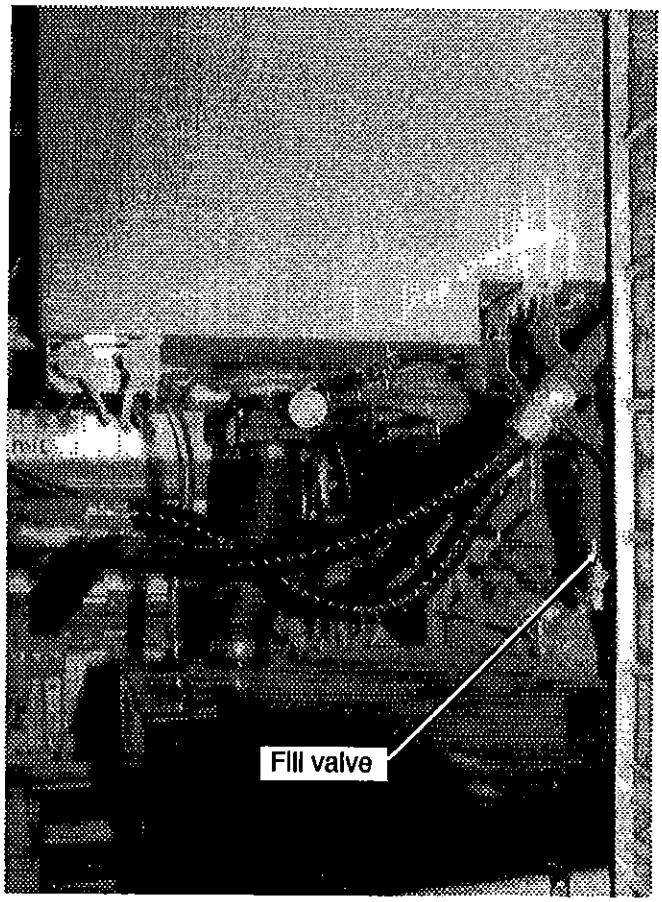
NOTE: Primary and secondary low air pressures are detected by the same alarm; there is also one unit that serves for fire detection.

BACK-UP ALARM

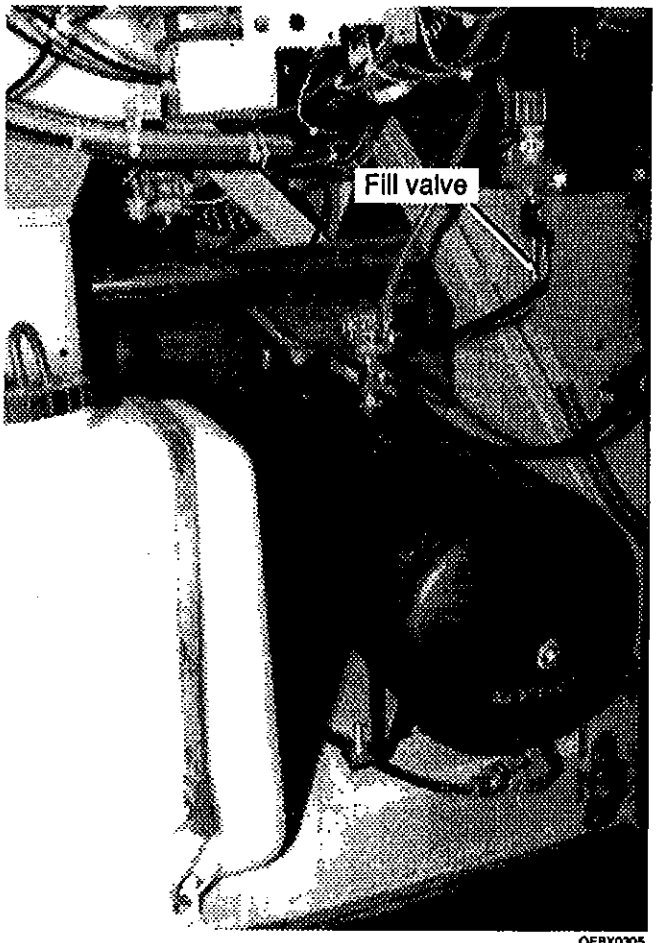
The back-up alarm alerts pedestrians that the vehicle will be moving in reverse range. Driver should take extra precautions when backing up. If in doubt, ask someone to guide you. Alarm will automatically operate when the reverse range is selected.

AIR SYSTEM EMERGENCY FILL VALVE

This vehicle is equipped with two air system emergency fill valves to supplement the air system when air pressure is low and engine cannot be operated. One of these valves is located over the lavatory sump tank in engine compartment and accessible by the engine R.H. side access door. The other is located in steering compartment over the accessory air tank.



Engine compartment



OEBX0305

Steering compartment

These two air system emergency fill locations are fitted with the same valve stems as standard tires, and can be filled by any standard external air supply line.

The emergency fill valve mounted in engine compartment will supply air for all systems (brakes, suspension and accessories), while the steering compartment fill valve will supply air for accessories only.

CAUTION: Air filled through these two points will flow through the standard air filtering system. Do not fill air through any other points, and never exceed 120 psi (827 kPa).

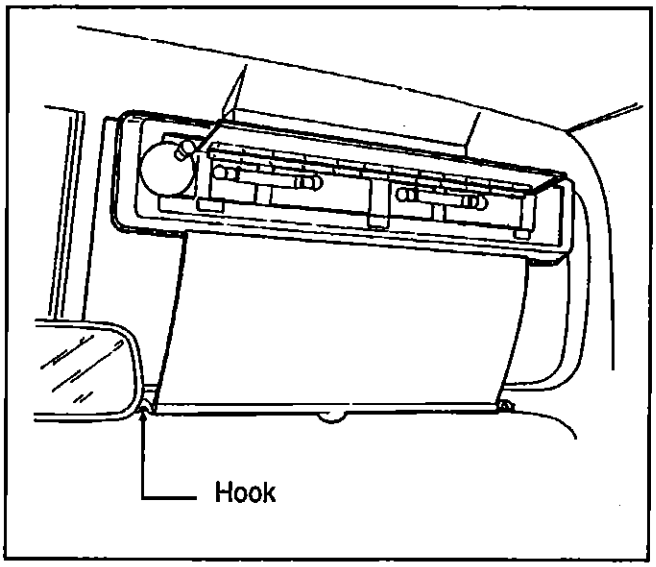
MUD FLAPS & SPLASH GUARDS

Mud flaps are installed behind each wheel of front and tag axles in order to minimize dirt on the lower panels of vehicle and to reduce stone projections on following vehicles. Splash guards may also have been installed behind each dual wheel of the drive axle in order to reduce stone projections on tag axle wheels.

BLINDS

The vehicle is provided with three blinds: one optional on driver's window and two on windshield. To operate a blind, pull it down by its tab to the appropriate position and release it; the blind will remain automatically in position. To lift, pull on the release cord beside the blind for the front blind, and push down tab at left on roller casing for the driver's blind.

To operate R.H. windshield blind, pull it by its tab and position bar in the hooks in middle of windshield.



OEBX0306

HORNS

Air horns

The air horns must be used only on highways. When the push-button valve located on the floor at the driver's left is activated, the valve releases air which sounds the horn.

Electric horns

Use the electric horns in cities and suburban areas. They are activated by a button located in the center of the steering wheel.

DAYTIME RUNNING LIGHTS

This system turns on automatically the low beams at a lower intensity as soon as engine is started and parking brake is released.

This system will be cancelled:

- when engine is stopped
- when parking brake is applied
- when normal headlights are turned on

WARNING: Never run vehicle at night with these lights only as they have a lesser intensity.

FOG LIGHTS

Optional halogen fog lights may have been installed to allow the driver a better visibility in foggy weather, or to improve the range of vision just ahead of the coach. They are also a useful *"active safety"* factor.

NOTE: Some states or provinces may restrict the use of these lights. Verify regulations governing each state or province before using fog lights.

MINOR DEFECTS & DRIVING HINTS

GENERAL INFORMATION

Starting engine from driver's compartment

Start or stop the engine according to the following instructions:

CAUTION: Before driving coach, read the entire section of this manual.

Starting engine

1. Make sure the starter selector switch in engine compartment is set to the *"NORMAL"* position, i.e. starting engine from front of vehicle, and that main battery disconnect switch is set to the *"ON"* position.

2. Make sure the parking brake control button is pulled all the way up, so that the spring-loaded parking brakes are applied.

3. Make sure transmission is in neutral.

4. Turn ignition key to *"START"* position, then release it as soon as engine starts.

NOTE: If engine does not start, ignition key must be returned to *"OFF"* position prior to restarting, otherwise key will not turn to *"START"* position.

CAUTION: Do not engage starter for more than 15 seconds at a time. If engine does not start within 15 seconds, release ignition key and allow starter to cool for one minute before engaging starter again. This will help to prevent starter overheating and will allow the time-delay relay to cool.

CAUTION: For a vehicle equipped with a DDEC engine, no pressure on accelerator pedal must be applied before starting. A pedal application will induce a fault information to the Electronic Control Unit, thus affecting the fuel system control.

If acccelerator pedal is depressed inadvertently, release it and wait approximately 30 seconds before resuming starting procedure.

CAUTION: Special precautions are necessary with turbocharged engines to avoid possible turbine damage. After starting, run the engine at low idle for two minutes to allow flowing of lubricant to the turbocharger. Afterwards, run at fast idle and check oil pressure before attempting to drive the vehicle.

Stopping engine

1. Apply parking brake then set transmission to neutral position.

2. Allow engine to run at idle for at least two minutes, then shut off engine. This will ensure that the turbine speed has dropped, and the engine exhaust gas temperature is down to approximately 300 °F (150 °C). If engine is equipped with pyrometers, temperature can be observed.

CAUTION: Do not shut the engine down directly from high rpm.

If vehicle is parked and left unattended for an extended period of time, main battery disconnect switch should be set to the *"OFF"* position.

Starting engine from engine compartment

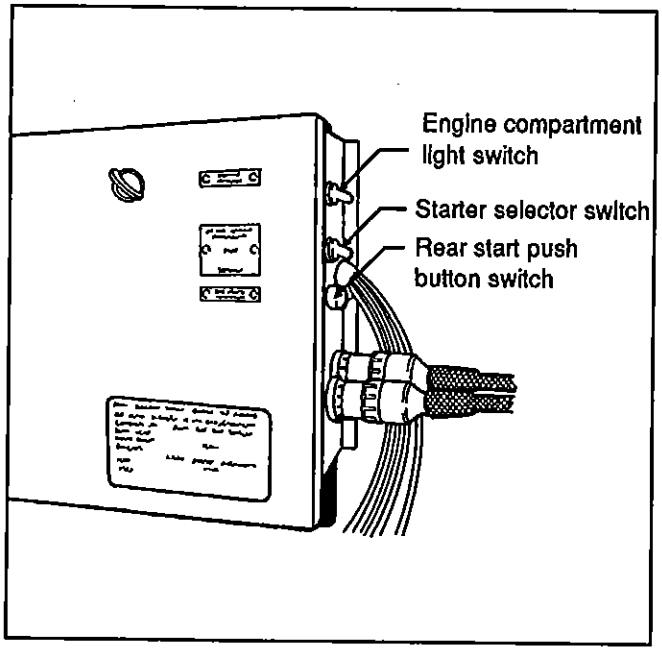
The following procedure is used to start and stop the engine from the engine compartment. Switches for starting and stopping the engine are mounted on the R.H. side of rear junction box.

Starting engine

WARNING: Before attempting to start engine from engine compartment, make sure parking brake is applied and transmission is in neutral.

1. Make sure starter selector switch is set to the *"REAR START"* position and the battery main disconnect switch to the *"ON"* position.

2. Press starter push button switch and release as soon as engine starts.



WARNING: Stay away from moving parts and do not wear loose clothes.

CAUTION: Steps previously explained with respect to starter use from the driver's area also apply in this situation.

Stopping engine

Stop only by setting the starter selector switch to the *"OFF"* position.

DETROIT DIESEL ELECTRONIC CONTROL (DDEC) SYSTEM

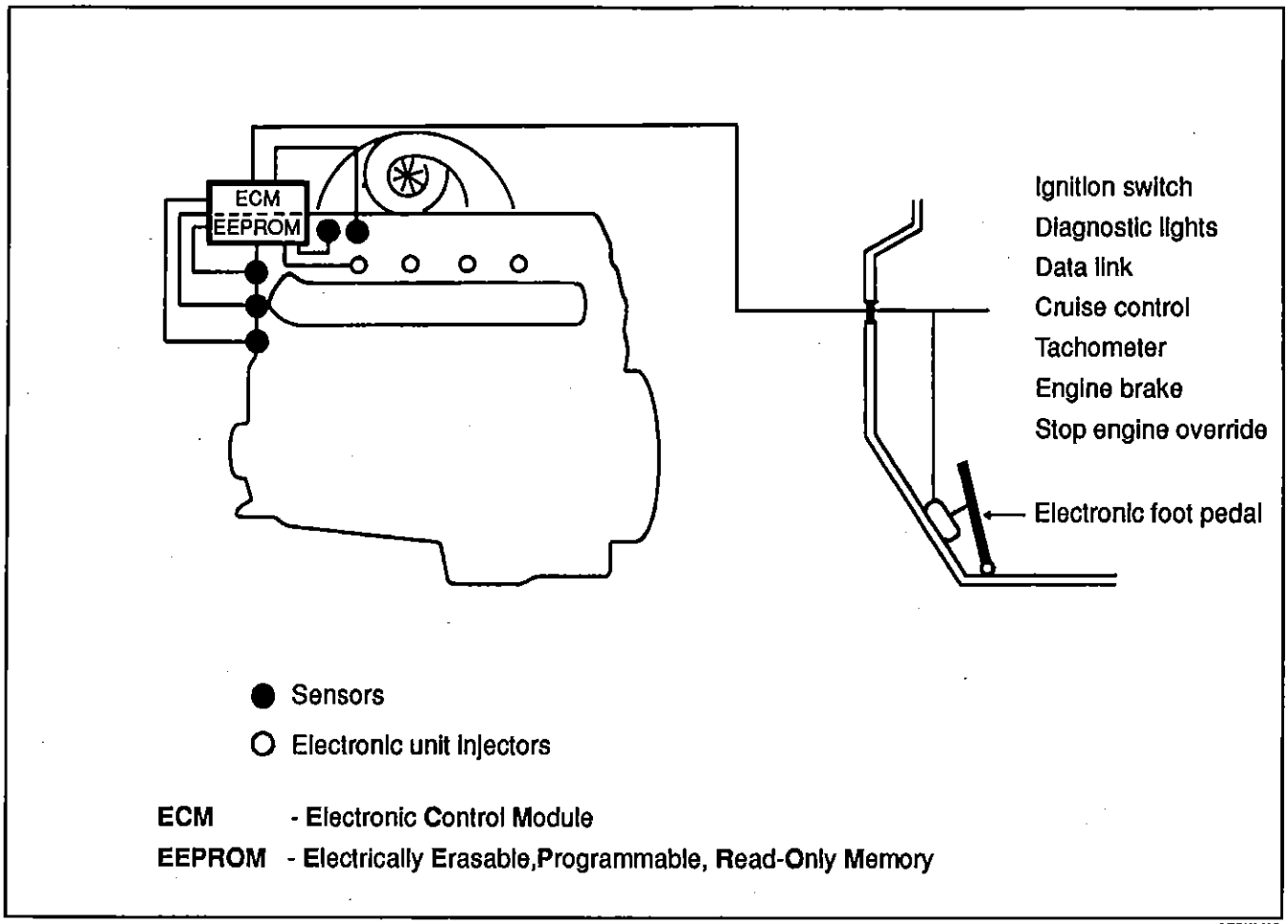
DDEC is an advanced technology electronic fuel injection and control system for Detroit Diesel engines. As an integral part of the engine, the DDEC system provides a number of performance features and driver benefits, including improved fuel economy and performance, reduced cold smoke, reduced maintenance and repair cost. These advantages are obtained by optimizing control of the critical engine functions which affect fuel economy, engine reliability and the performance of the injectors.

Its major components include an Electronic Control Module (ECM), Electronic Unit Injectors (EUI), electronic throttle pedal and sensors. The ECM is the brain of the DDEC system and is located over the engine between both cylinder heads. Within the ECM is the Electrically Erasable, Programmable, Read-Only Memory (EEPROM) that provides instructions for basic engine control functions such as rated speed and power, engine governing, cold start logic and diagnostics, plus an engine protection system.

The ECM continuously monitors and analyzes the DDEC system during engine operation with electronic sensors. The Electronic Unit Injectors (EUI) operate a similar principle to the mechanical unit injector system. However, a solenoid-operated control valve performs the injection timing and metering functions which make injector timing much simpler and more precise.

DDEC provides the capability to quickly diagnose system malfunctions by a self-diagnostic system; the self-diagnostic system monitors all engine sensors and electronic components and recognizes system faults and other engine-related problems by providing the technician with a diagnostic code. The DDEC system will illuminate the dashboard *"CHECK ENGINE"* and *"STOP ENGINE"* lights which are integral parts of the electronic diagnostic system. These lights are designed to indicate a problem and transmit a coded signal to the technician to locate the defective component. To ease troubleshooting and obtain pertinent data logged in the ECM (Electronic Control Module) memory, use a DDL reader (not supplied by manufacturer). Plug reader in receptacle located at ceiling of steering compartment. You can also set the *"DDEC-TEST"* switch to the *"ON"* position to service this electronic system (refer to *"DDEC Diagnostic Codes"* in the *"Technical Description"* section).

The major components of the DDEC system are as follows:



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ALLISON TRANSMISSION ELECTRONIC CONTROL (ATEC) (for automatic transmission with push button shift selector)

The ATEC system consists mainly of four elements: Electronic Control Unit (ECU), electronic throttle pedal, speed sensor, and shift selector. These components work together to electronically control the transmission functions. The throttle sensor, speed sensor, and shift selector transmit information to the ECU. The ECU processes this information and then sends signals to actuate specific solenoids located on the control valve body in the transmission. The action of the solenoids affects hydraulic circuits, which in turn control the upshifts, downshifts, and lock-up functions. In addition to controlling the operation of the transmission, the ATEC monitors the system for abnormal conditions.

When one of these conditions is detected, ATEC is programmed to automatically respond in a manner which is safe for the driver, the vehicle, and the transmission. To do this, ATEC turns on the *"CHECK TRANS"* light on the dashboard or turns on both, the *"CHECK TRANS"* and the *"DO NOT SHIFT"* lights in shift selector. The *"CHECK TRANS"* light is a part of the built-in electronic service diagnostic system. It serves as a problem indicator and flashes a coded signal to locate the malfunctioning component.

To enhance troubleshooting and to allow interrogation of the ECU (Electronic Control Unit) for valuable service information, a diagnostic analyser (not supplied by the manufacturer) can be used. To use it, plug the appropriate connector in the terminal located at ceiling of steering compartment. You can also set the *"ATEC-TEST"* switch to the *"ON"* position in order to service this electronic system (refer to the *"ATEC diagnostic codes"* in the *"Technical Description"* section).

AUTOMATIC TRANSMISSION

Importance of proper oil level

1. Maintaining the proper oil level is very important. The transmission oil is used to apply clutches and to lubricate and cool the components. If the oil level is too low, the result can be poor performance because clutches will not receive adequate oil supply. If the oil level is too high, overheating results from the oil being churned and aerated.

2. Always check the oil level at least twice to ensure that an accurate check is obtained.

3. Transmission input speed and oil temperature significantly affect the oil level. An increase in input speed lowers the oil level; an increase in oil temperature raises the oil level. Thus, the oil level must always be checked with engine running at idle (approximately 600 rpm), parking brake applied, and transmission in neutral. A final check of the oil level must be made when the transmission reaches normal operating temperature (160-250 °F; 70-120 °C).

Fill pipe protection

When adding oil or checking oil level, dirt or foreign material must not be allowed to enter the filler tube. Before removing the dipstick, clean around the end of the filler tube. Refer to heading *"Checking oil level"* in *"Care & Maintenance"* section.

Lock-up clutch

Engagement and release of the lock-up clutch occur automatically and should not be mistaken for range shifts. If you are a *"shift counter"*, it will be helpful to know when lock-up can occur. The lock-up engages after the load is rolling and the torque demand is low. Engagement of the lock-up clutch provides direct drive from engine to transmission. When the speed sensor senses a reduction in speed, the ECU will direct the lock-up shift valve to release the lock-up clutch, according to the programmed shift schedule. Release of lock-up clutch provides a torque converter drive from engine to transmission.

MANUAL TRANSMISSION

Importance of proper oil level

Do not overfill transmission. Overfilling can result in oil overheating and breakdown of its properties and cause deposits which will hinder the proper operation of the transmission. However, if oil level is too low, gears will be insufficiently lubricated.

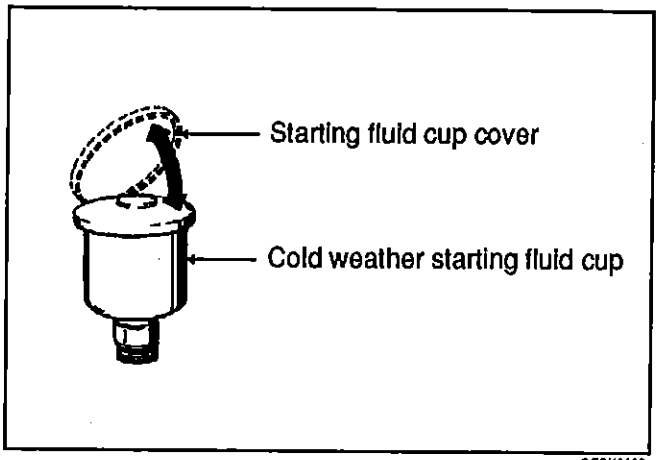
COLD WEATHER STARTING

Cold starting aid (ether)

The vehicle is equipped with an ether cold starting aid designed to ease engine starting when temperature is below 35 °F (2 °C). Two types of cold starting aid are available: manually operated and electrically operated.

Manually-operated type

On vehicles equipped with a manually-operated cold starting aid, the starting fluid cup is located on top of the air intake duct. To use cold weather starting fluid, lift cover of the starting fluid cup, insert one 7 cc capsule, shut cover tightly, and then start engine from engine compartment according to procedure outlined under heading *"General Information"*. Be sure to remove empty capsule before inserting a new one.



WARNING: FIRE HAZARD - Starting fluid used in the capsules is highly flammable, toxic, and possesses sleep-inducing properties. Do not smoke while using or handling capsules, and keep away from flame or high temperatures. Avoid inhaling fumes produced by starting fluid.

CAUTION: This pratice should be performed only when absolutely necessary. If required, we recommend that the starting fluid be used only in 7 cc capsule form, one at the time. Excessive use of fluid could result in serious engine damage.

Electrically-operated type

On vehicles equipped with an electrically-operated cold starting aid, the control rocker switch is located near the ignition switch on the L.H. lower switch panel. This switch is provided with a locking mechanism to avoid accidental use when engine is running. To activate the ether starting aid, proceed as follows:

1. Prior to cranking engine, slide down lock tab while pressing rocker switch for 3 seconds to fill solenoid valve.
2. Release switch to discharge shot.
3. Allow 3 seconds for shot to discharge.
4. Start engine, use additional shots if necessary to keep engine running.

CAUTION: This practice should be performed only when absolutely necessary. Excessive use of fluid could result in serious engine damage.

Engine block heater

The vehicle is equipped with an engine immersion-type electric block heater to assist cold weather starting. The heater male plug is easily accessible through the engine oil reserve tank access door. To use it, connect a female plug of an electrical extension cord to the heater plug. The extension cord must be plugged into a 110-120 V AC power source only. The engine block heater should be used whenever the vehicle is parked for an extended period of time in cold weather and a suitable power source is available.

CAUTION: Use only a 110-120 V AC power source. Extension cord must be of the grounded type (three prongs) and have a minimum rated capacity of 15 amps. Be sure to disconnect cord and close access door before starting and/or moving the vehicle.

Engine warm-up

After starting the engine, run it at low idle for two minutes to allow flowing of lubricant to the turbocharger, then increase speed to fast idle for warm-up period by using *"FAST IDLE"* switch located next to the ignition switch on L.H. lower switch panel. Run the engine at fast idle and no load for about five minutes to allow it to warm-up before applying a load. Parking brakes should be kept applied throughout warm-up. Gauges and indicator lights should be monitored to check that all conditions are normal. If an abnormal condition should develop, stop engine immediately and have condition corrected.

WARNING: Never let the engine run in an enclosed, non-ventilated area. Exhaust fumes from the engine contain dangerous gas which can be fatal if inhaled.

NOTE: The engine will come up to normal operating temperature shortly after you start driving; if possible, avoid going to full throttle until engine coolant temperature reaches 140 °F (60 °C).

Transmission warm-up

ATEC automatic transmission

When temperature is below -20 °F (-29 °C), the *"DO NOT SHIFT"* and *"CHECK TRANS"* lights will stay *"ON"* after the engine is started. The transmission will stay in neutral, regardless of the gear range selected until it warms past -20 °F (-29 °C). At that point, the *"DO NOT SHIFT"* light will turn off and the transmission will operate only in first gear or reverse. When the *"CHECK TRANS"* light goes out at 20 °F (-7 °C), the transmission is warm enough to safely operate in all gear ranges.

Automatic transmission without ATEC system

Even though the automatic transmission without the ATEC system is not provided with a protection system inhibiting any gear range selection in cold weather, it is recommended to warm up transmission before selecting a range (see previous heading *"ATEC automatic transmission"*).

JUMP STARTING

Whenever it becomes necessary to start the engine while batteries are discharged, use another power source of the same voltage (24 volt DC), negative grounded and proper jumper cables.

WARNING: Procedures other than those below could cause injury or damage from battery acid spray, explosion, or charging system overload.

Never connect to the negative post of the discharged battery.

Never allow the two vehicles or the jumper cable clamps to touch each other.

Never attempt to jump start a vehicle if the discharged battery fluid is frozen or if the battery fluid level is low, as the battery may rupture or explode.

Do not jump start vehicles equipped with maintenance-free batteries if the test indicator is light yellow.

Turn off all lights, heaters and other electrical accessories. Make sure the parking brake is applied and the transmission is set to *"NEUTRAL"* before attempting to jump start the engine.

Wear eye protection and remove rings, watches with metal bands and other metal jewelry.

1. Remove the protective cap from the positive booster block terminal, located in right side of engine compartment. Access is possible through the R.H. side engine compartment door.

2. Connect one end of the red jumper cable to the positive (+) post of the booster power source.

3. Connect the other end of the red jumper cable to the positive (+) terminal of booster block.

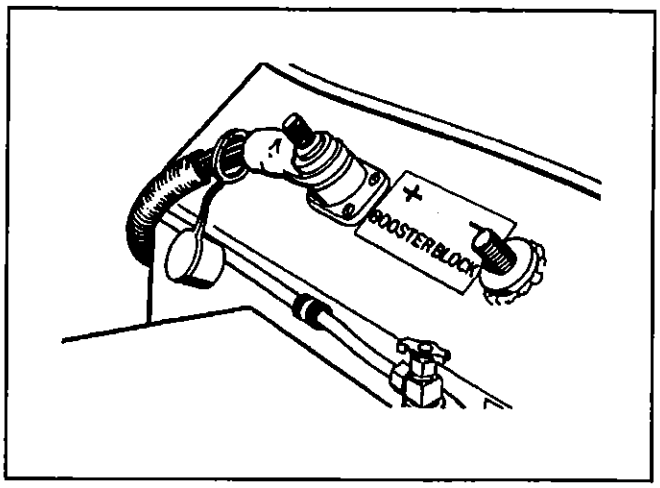
4. Connect one end of the black jumper cable to the negative (-) post of the booster power source.

5. Connect the other end of the black jumper cable to the negative (-) terminal of booster block.

6. Start the engine in the vehicle that is providing the jump start. Let the engine run for a few minutes, then start the engine in the vehicle that has the discharged batteries.

7. To remove the cables, perform the above procedure in reverse order, then replace the protective cap on the positive booster block terminal.

NOTE: Jumper cables must withstand 500 cranking amperes. If cable length is 20 feet (6 m) or less, use 2/0 (AWG) gauge wires. If cable length is between 20-30 feet (6-9 m), use 3/0 (AWG) gauge wires.



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DAILY INSPECTION

With engine stopped

General

Check vehicle general condition and visually inspect for loose bolts and nuts. Verify all exterior lighting.

Tires and wheels

All tires should be checked, including the spare tire. Check all wheels for loose nuts. On both models, aluminum alloy and steel wheel nuts should be tightened to a torque of 450-500 lbf•ft (610-680 N•m).

Leaks

Check thoroughly under coach and in compartments. Report any leak to service personnel.

Doors

Make sure that all exterior doors and windows are closed.

Tools and spares

Check for wheel nut wrench, door keys, spare belts, reflectors and jack.

Air system

Open drain cocks on air and accessories tanks to purge water, then close (see page 6-7).

Water separator

Loosen bleed screw to purge separator; tighten screw (see page 6-8).

Coolant level

The cooling system is completely filled when the coolant (cold) is visible in the sight glass on the right side of the surge tank. If topping-up is necessary, fill the system with the same mixture ratio already used in the system (50-50). Refer to the *"Maintenance Manual"* for more details.

WARNING: Hot engine coolant is under pressure. Never remove cap until coolant has cooled.

Wheel bearings

Check oil level in sight glass (see page 6-6).

CAUTION: During a fuel stop, especially if a brake job has been performed a short time ago, apply hand on wheel bearing cover and check for overheating.

Washer reservoir

Check that it is full. To prevent the windshield washer fluid from freezing during the winter, use antifreeze windshield washer.

Engine oil

Check oil level; refill directly into engine or from reserve tank (see page 6-4).

NOTE: Coach must be on level ground.

Manual transmission

Check oil level (see page 6-4).

Power steering oil tank

Check oil level (see page 6-6).

Belts

Check for worn belts.

Belt tensioners

Visually check belt tension and tensioner shaft length (see page 6-9).

Extinguishers

Ensure that first aid kit is in place and that fire extinguishers are in working order (see page 6-8).

Seats

Make sure all seats and seat cushions are firmly attached.

Emergency exits

Check that emergency exits can be easily opened.

Lavatory

Inspect for cleanliness, supply of paper, towels and water.

Driver's compartment

Adjust mirrors and seat.

With engine running

Leaks

Inspect around vehicle and listen for any air leak.

Turbocharger

Look for any leaks or unusual sounds coming from the turbo compressor.

Automatic transmission

Check oil level (see page 6-5).

Gauges and buzzers

Gauges should be in normal position, indicator lights and buzzers off.

Fuel level

Be sure level is sufficient.

Service brakes

Check for pressure build-up. With engine stopped and no brake applied, loss should not exceed 3 psi/min (21 kPa/min). Make a full brake application; loss should not exceed 7 psi (48 kPa).

Parking and emergency brakes

With air pressure above 65 psi (448 kPa), lower presssure with brake pedal applications, check that buzzer works and that control button lifts up. Wait until air pressure exceeds 95 psi (655 kPa) before releasing parking brakes.

RECOMMENDATIONS

- Make sure the basic principles of operation of the vehicle are understood.

- Maintain the vehicle in good running condition.

- Do not drive vehicle with an extremely low fuel level. Unlike a gasoline engine, if a diesel engine runs out of fuel it will not simply restart after fuel is added to the tank. Air must be bled from the engine fuel line. Refer to the *"Maintenance Manual"* for more details.

- Allow engine to run at slow idle for at least 2 minutes before turning it off.

- Engine should always be at idle speed when shifting from neutral to reverse or forward range.

- Automatic transmission shift pattern does not include a park position. Parking brake must therefore be applied to hold vehicle when it is unattended. Gearshift should then be in neutral position. If engine is stopped without applying the parking brake, a warning buzzer will sound until the parking brake is applied and your foot is removed from the brake pedal.

- Perform procedures as detailed in this manual.

- Unless otherwise specified, engine should be turned *"OFF"* for all lubrication and maintenance procedures.

- Do not attempt to push-start or pull-start the vehicle.

- Do not tow vehicle without first removing the drive axle shafts or disconnecting the propeller shaft. Internal lubrication of the automatic transmission is inadequate when the vehicle is towed.

- Chemical fire extinguishers are located in safety equipment compartment. In case of fire, get everyone out of the vehicle, then think of your own danger before attempting to fight the fire.

- When driving on ice or snow, any acceleration or deceleration should be done gradually.

NOTE: Normal operation as well as some emergencies or abnormal conditions are covered in this manual. Any malfunction interfering with satisfactory operation should be corrected immediately, particularly when safety may be involved.

HEATING AND AIR CONDITIONING

Ventilation

Driver should always try to introduce as much circulation of outside fresh air as possible without hampering heating and air conditioning systems. Under extreme temperature conditions however, when maximum capacity is required, the adjustable intake dampers (see following pages) should be closed.

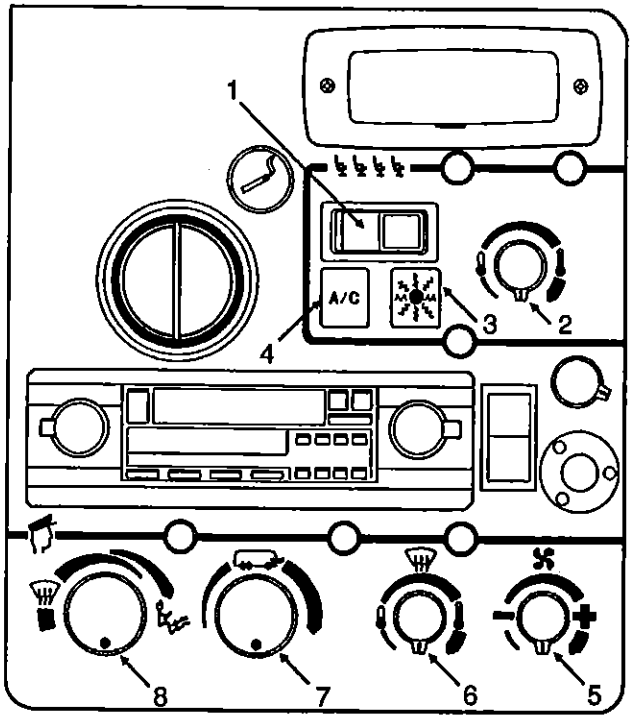
It should be remembered that the inside of vehicle should always be slightly pressurized to minimize the entrance of dust and moisture.

Vehicle heating and air conditioning systems have been designed to allow circulation of some outside fresh air, so windows should be kept closed at all times.

In case of air conditioning system failure, substitute ventilation may be provided by opening roof-mounted emergency vent(s).

NOTE: The driver's heating and defrost systems are independent from the central system.

Central A/C - heating system



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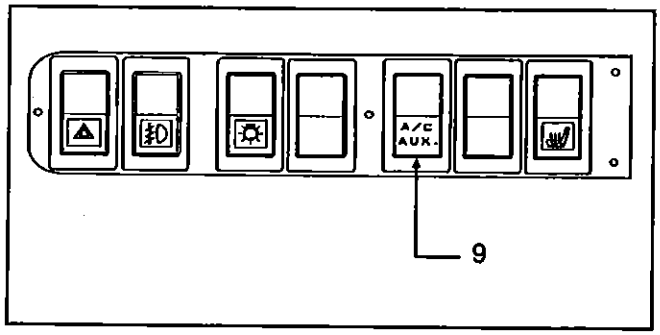


OE8X0406

1. *"A/C - heat"* switch

This switch has three positions: *"A/C - OFF - HEAT"*. Set the switch to:

- *"A/C"* position (L.H. side) when the interior of the vehicle needs to be cooled or dehumidified.

- *"Heat"* position (R.H. side) when the interior of the vehicle needs to be warmed or ventilated.

- *"OFF"* position (center) before stopping vehicle engine.

NOTE: Fuel economy is slightly reduced when "A/C" position is used.

To operate air conditioning system when vehicle is stationary, engine should run at fast idle. During operation of air conditioning system, windows should be kept closed and door not left open longer than necessary.

In order to prevent battery discharge, A/C - heating system will not operate if vehicle charging system is not working properly.

CAUTION: *"A/C"* position should not be used when outside temperature is below 40 °F (5 °C).

While the A/C system is running, make sure the vehicle is parked at least 4 feet (1,2 m) from other vehicles to allow a sufficient air flow through the condenser core.

2. Temperature control

Once the *"A/C - heat"* switch is set to the proper position, select the desired temperature by turning the temperature control knob clockwise to raise or counterclockwise to lower temperature. Only a slight movement of knob is generally sufficient to change heat setting.

Temperature control knob is used to select interior temperature within the range of 65 to 78 °F (18 to 26 °C). Once temperature is selected, system will automatically maintain it within close limits.

3. *"Heat"* indicator light

This indicator will be illuminated when hot water is circulating through the water valve, no matter which mode has been selected (A/C or heating).

4. *"A/C"* warning light

This light is designed to light up when the *"A/C"* system is not working properly. If this happens, first stop *"A/C"* system, then perform the following checks:

- Check the condenser for obstruction. Clean if necessary. Refer to the *"Maintenance Manual"*.

- Check that the evaporator and condenser motors are operating.

- Check evaporator filter for cleanliness. Clean or replace as required. Refer to *"Care and Maintenance"* section.

- Check the air return duct(s) for obstruction. Ducts are located on the evaporator compartment. Clean if necessary.

After these checks, test the system. If the *"A/C"* warning light does not turn off, set the *"A/C - heat"* switch to *"OFF"* position, and seek qualified service assistance.

Driver's compartment A/C - heating system

5. Fan speed control

Turn knob clockwise to the first position to obtain minimum air flow and to start *"Driver's heating system"* to circulate warm, cool, or outside air according to settings of temperature control knob (driver), *"A/C-heat"* switch and *"recirc.-fresh air"* control. Turn clockwise again to obtain the desired ventilation speed.

6. Temperature control

Once the *"A/C-heat"* switch is set to the A/C position and fans are on, select the desired temperature by turning the temperature control knob clockwise to raise or counterclockwise to lower temperature. Only a slight movement of knob is generally sufficient to change temperature setting.

Temperature control knob is used to select interior temperature within the range of 65 to 78 °F (18 to 26 °C). Once temperature is selected, system will automatically maintain it within close limits.

At extreme clockwise position, full heat will be maintained.

WARNING: Excessive high temperature in driver's zone could induce drowsiness, affecting driver's ability to operate the coach safely.

NOTE: Driver's air conditioning system will only operate simultaneously with main air conditioning system, but heating and defrost systems are independent from main system.

Driver's A/C and heating system also affects the two front rows of passengers seats, and should be used in concert with main system, not in opposition.

7. *"Recirc.-fresh air"* control

This knob should normally be rotated clockwise to allow maximum fresh air admission. When outside temperature is extremely high and maximum cooling is required or when outside temperature is extremely low and maximum heating is required, the knob should be rotated counterclockwise to shut off the fresh air admission, thus recirculating the air inside vehicle. This position should also be selected when driving vehicle on dusty roads and in air- polluted areas to avoid admission of contaminated air inside vehicle.

WARNING: Keep in mind that the *"Recirc.-fresh air"* control must be reset to the *"fresh air"* position following these special road conditions in order to prevent contamination of air in driver's section.

NOTE: In order to improve air circulation when A/C system is inoperative, open the roof escape(s) and position the *"recirc.-fresh air"* control to the extreme right position (fresh air).

8. *"Feet air outlet"* control

This control is used to control the air flow delivered under the dash on the driver's side. Turn control knob clockwise to increase air flow and counterclockwise to decrease.

9. *"A/C auxiliary"* switch

Push down rocker switch to actuate the auxiliary A/C system located at rear of coach to supplement the central A/C system. This system will operate only if central A/C system is operating.

How to use the controls

• To ventilate

Turn the *"temperature"* control knobs to the maximum counterclockwise position (cool), turn the *"recirc.-fresh air"* control knob to the maximum clockwise position (fresh air), then set the *"A/C - heat"* switch to the *"heat"* position and turn the fan speed control knob to the desired position.

• To heat

To ensure maximum efficiency of the heating system, set the *"A/C - heat"* switch to the *"heat"* position, switch the fan speed control to the highest speed position, then adjust the temperature control knobs to a comfortable setting.

• To defrost

To obtain the maximum defrosting efficiency, switch the *"fan"* speed control to the highest speed position, set the *"A/C-heat"* switch to the *"Heat"* position, turn the *"recirc.-fresh air"* control knob to the maximum clockwise position (fresh air), turn the *"feet air outlet"* control knob to the maximum counterclockwise position (defrost position), then turn the *"temperature"* controls to the maximum clockwise position (warm).

• To dehumidify

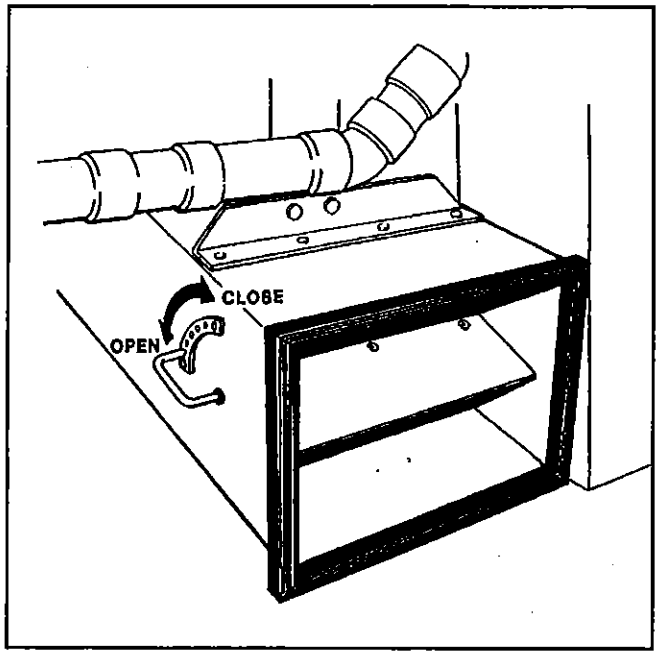
Since an air conditioner dehumidifies as it cools, you can use it in cool weather to help in drying air. Set the *"A/C - heat"* switch to the *"A/C"* position and for more efficiency, push down *"A/C auxiliary"* switch, then adjust the *"temperature"* controls to a comfortable setting. With this set-up, the A/C and heating will run simultaneously, thus drying air as it flows through the evaporator and then heating it as it flows through the heater radiator.

CAUTION: *"A/C"* position should not be used when outside temperature is below 40 °F (5 °C).

• To turn everything OFF

Set the *"A/C-heat"* switch and *"fan speed"* control knob to the *"OFF"* position.

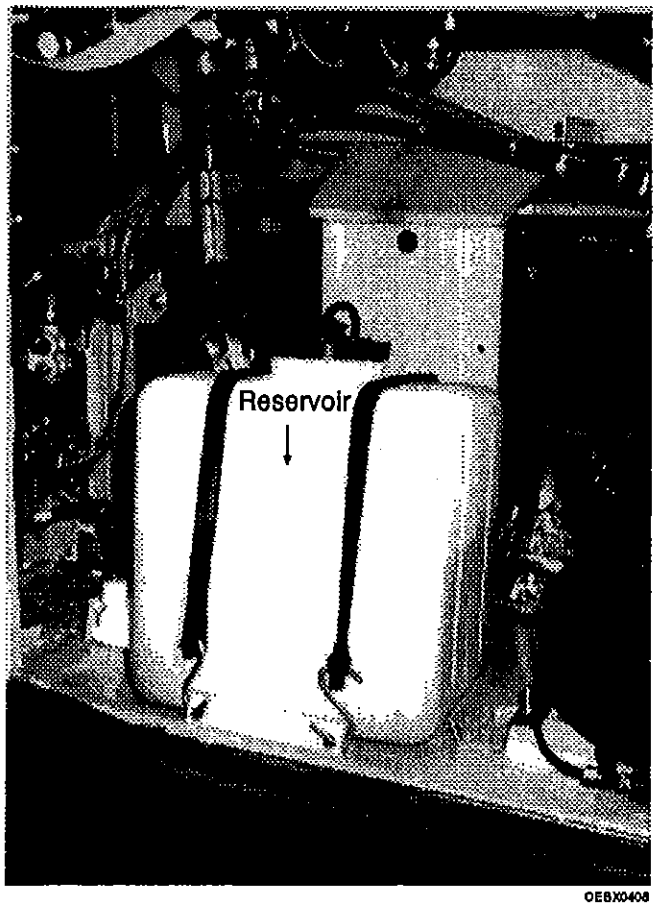
An adjustable air intake damper is located in the evaporator compartment (third compartment on the left side of vehicle). The damper should normally be open. Under extreme temperature conditions only, it can be closed or partially closed according to the inside temperature reached in the coach, to block the addition of ambient air and heat or cool only the air that is in the coach. As soon as extreme heating or cooling is no longer required, the damper should be reopened.



OEBX0407

WINDSHIELD WASHER RESERVOIR

Windshield washer reservoir is located in front left compartment (steering compartment) below driver's floor. This reservoir has a capacity of approximately 5 US gallons (19 liters). Its screw-on type cover is provided with a removable cap to ease windshield washer reservoir filling. Reservoir supply should be checked regularly.



OEBX0408

Spray jets are mounted under windshield wiper arms. The reservoir fluid is forced by air pressure through rubber tubes into spray jets and onto windshield.

ELECTRIC CIRCUIT PROTECTION

Two types of cutoff device are installed to protect the electric circuits of vehicle: fuses and manually-resettable circuit breakers. If an electrical device is inoperative, check the corresponding cutoff device.

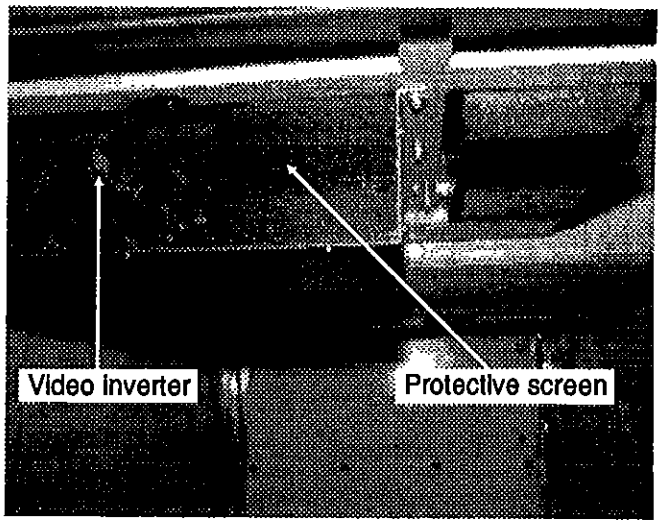
CAUTION: Never replace a fuse with a higher-rated one since severe damage to the electrical system will occur.

Replace burned fuses which are located as follows:

At ceiling of the last L.H. side baggage compartment (for vehicle equipped with video system)

Video inverter	2 amps (qty: 2)

To gain access to the fuses, remove the protective screen at front of inverter.



OEBX0409

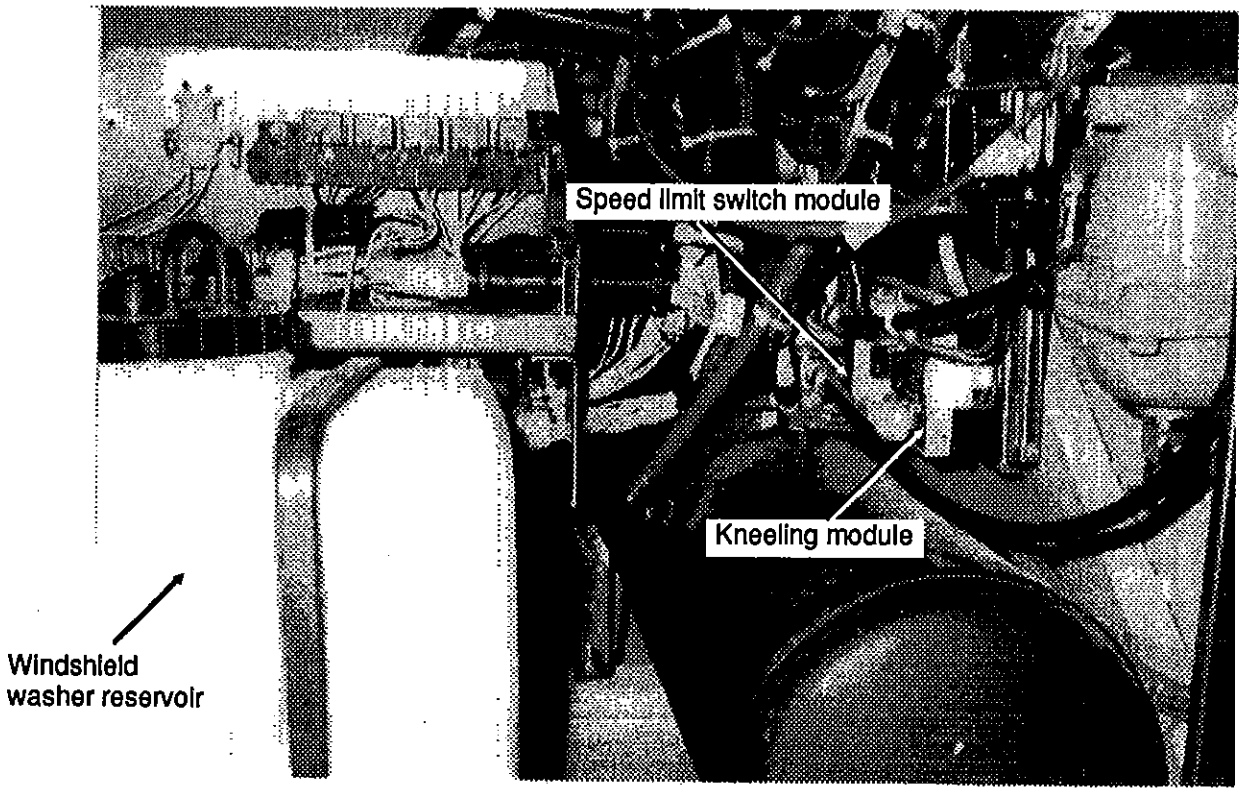
L.H. side baggage compartment

In steering compartment

Kneeling module	3 amps (qty: 1)
Speed limit switch module	3 amps (qty: 2)

R.H. console (at back of the temperature control buttons)

Temperature control	1.5 amps (qty: 2)



OEBX0410

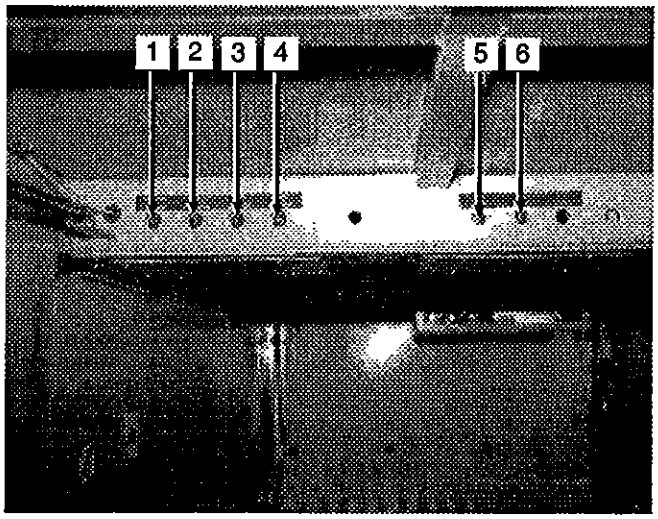
Steering compartment

Most of the manual circuit breakers are located in the front and rear junction boxes and in the battery compartment. An identification decal is affixed inside the panel of each of these compartments. Moreover, two breakers are located in the steering compartment, eight in the last baggage compartment (of which six are for high load), which are used for the main circuits and accessible from the R.H. side of compartment. All these breakers, if tripped, may be reset manually by pressing on the red button.

The manually-resettable circuit breakers are identified as follows:

Last R.H. side baggage compartment

1. Condenser fan motor — 105 amps - 24 volts
2. Evaporator fan motor — 105 amps - 24 volts
3. Rear junction box — 90 amps - 24 volts
4. Front junction box — 90 amps - 24 volts
5. Front junction box — 90 amps - 12 volts
6. Rear junction box — 70 amps - 12 volts

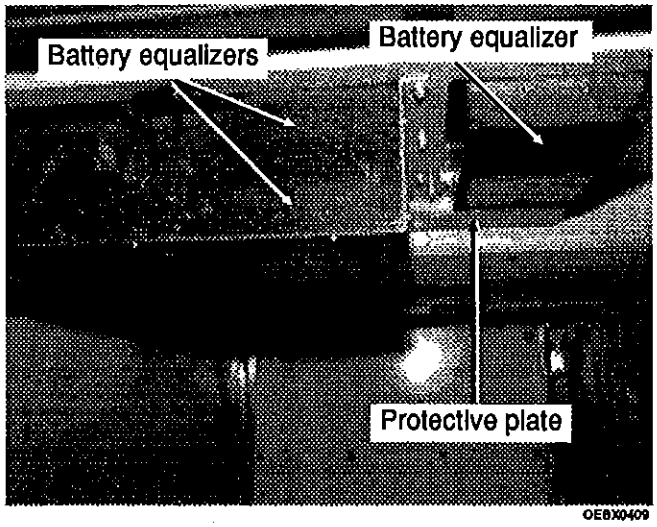


OEBX0411

Ceiling of last L.H. side baggage compartment

Battery equalizers (*"Vanner"*) 35 amps - 12 & 24 volts

To gain access to the reset button, remove the protective plate at the extremity of battery equalizers. The reset buttons are located at the end of each battery equalizers.

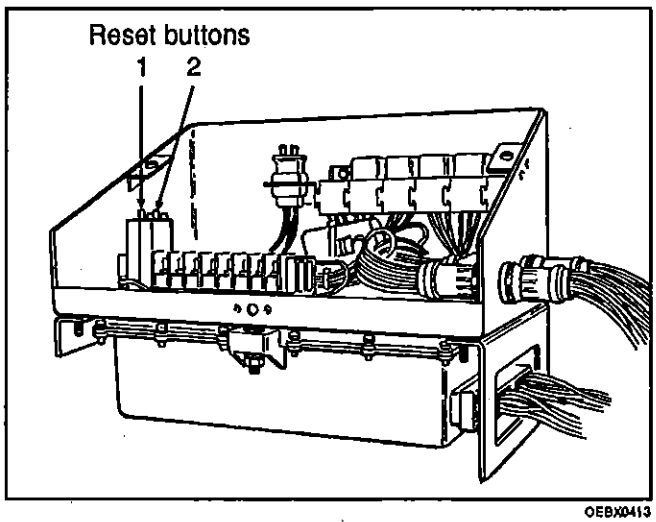


OEBX0409

Steering compartment

1. Electronic control unit feed (ATEC) — 6 amps - 12 volts
2. Electronic control module feed (DDEC) — 8 amps - 12 volts

To gain access to these breakers, open the steering compartment door. These breakers are located over the windshield washer reservoir.



OEBX0413

TIRES

Tire pressure

The condition and pressure of the tires can greatly affect both useful tire life and road safety.

NOTE: The recommended tire inflation pressures are given in the *"Technical Description"* section.

At regular intervals, verify the tire pressures. Use an accurate tire pressure gauge when checking inflation pressures. Never exceed the recommended maximum tire inflation pressure.

Cold tire inflation pressure means: When a vehicle has not been driven for at least three hours or less than 1 mile (1,6 km).

WARNING: Incorrect tire pressures cause increased tire wear and adversely affect road holding of the vehicle, leading to loss of vehicle control.

NOTE: Always include the spare tire during a pressure verification.

Changing wheels

Tire failure is a rare event these days. In case of a flat tire, move vehicle to the side of the road, at a safe distance and apply the parking brake. Remember to switch *"ON"* the hazard flashers and to set up the triangular reflectors at an adequate distance to warn other vehicles, according to the highway code regulations.

Spare wheel and tire are stored in a compartment directly behind the reclining front bumper. Wheel nut wrench can be used to unscrew the two bumper retaining bolts. Lower bumper slowly as it is quite heavy.

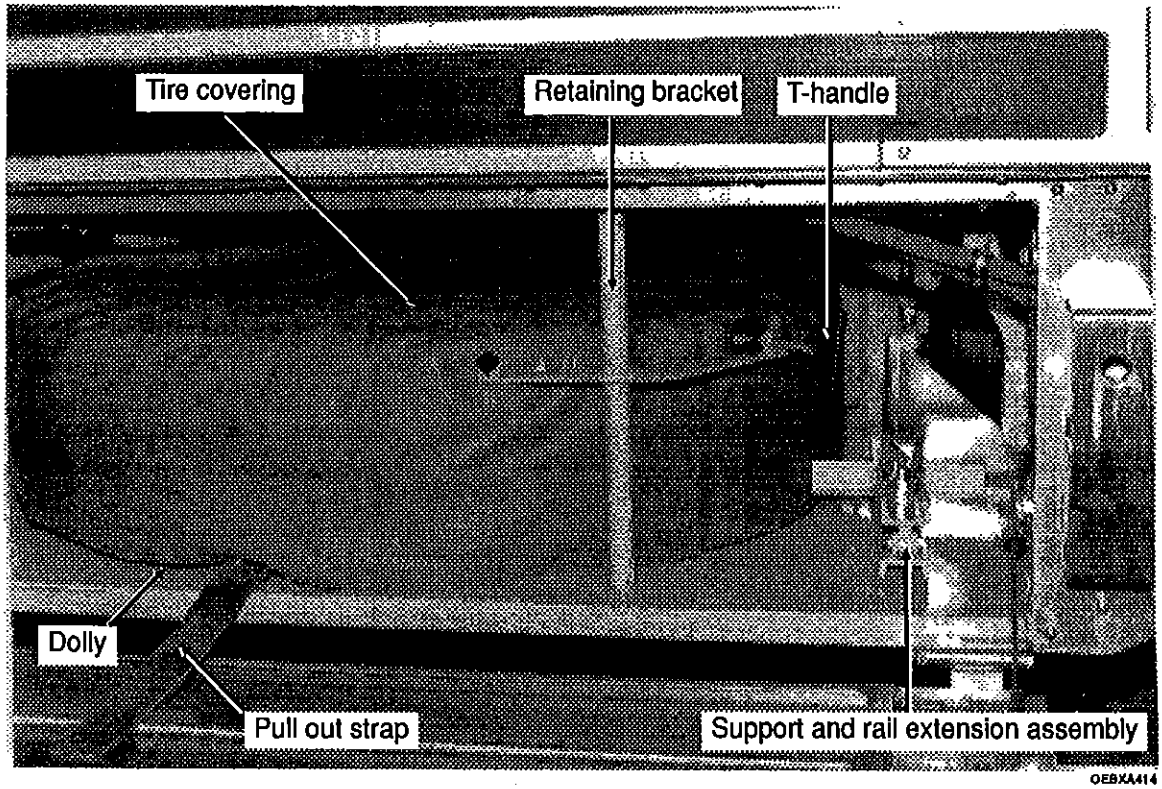
NOTE: It is recommended that two persons perform the above operation.

WARNING: This compartment has not been designed for storage. Never leave any loose object in this area as it may interfere with steering linkage mechanism.

Removing spare wheel and tire from compartment

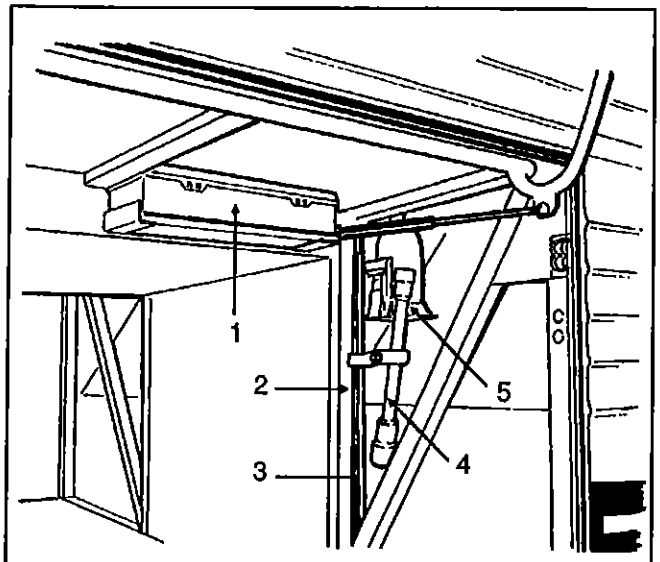
To pull out spare wheel and tire, open reclining bumper according to previous instructions. Unscrew the wing nut retaining the support and rail extension assembly stored at right of wheel, then take out the assembly. Fix it by matching its two holes to the corresponding mounting pins located in front center of spare tire compartment. Unscrew the T-handle of retaining bracket to release the wheel and dolly assembly and pull out bracket. Pull out spare wheel using the strap as illustrated. Remove tire covering, then separate spare wheel and tire from its dolly by unscrewing the two mounting nuts.

CAUTION: Check that bumper is safely hooked in place, and that retaining nuts are firmly tightened after bumper compartment has been closed.



NOTE: Reinstall support and rail extension assembly, then secure tire with retaining bracket before moving vehicle.

Jack and wheel nut wrench are stored at right in the first R.H. side baggage compartment.



1. Triangular reflector box
2. Jack bar
3. Wheel nut wrench extension
4. Wheel nut wrench
5. Hydraulic jack

OE8X8414

Check the inflation pressure of the spare tire periodically to keep it ready for use. Inflate spare tire to the pressure of the tire which has the highest pressure on the vehicle.

Check periodically that spare tire retaining bracket is tightly held in order to prevent tire from moving inside compartment.

Procedure

Step 1

Stop engine, apply parking brake, take jack and wrench out of the right front baggage compartment, then pull out the spare wheel and tire.

Step 2

- Wheel with cover

Remove cover before proceeding with step 3.

- Wheel with hub cap

Remove cap with the appropriate wrench before proceeding with step 3.

Step 3

Loosen all wheel nuts (counterclockwise on the R.H. side and clockwise on the L.H. side) about one turn with the wrench provided. Do not yet remove the nuts.

Step 4

One jacking point on each side of each axle is provided on vehicle. Refer to heading *"Jacking points"* in this section.

WARNING: Before changing a wheel, be sure the ground is level and firm. If necessary, place a board under the jack.

Jacking from any other point may damage the vehicle or may result in personal injuries.

Step 5

Use the hydraulic jack to raise vehicle. Raise vehicle to the required height to change the wheel.

WARNING: Do not raise the vehicle until you are sure the jack is securely engaged.

Passengers must not remain in vehicle when it is jacked up.

Step 6

Fully unscrew the wheel nuts and remove wheel. Place the spare wheel, replace nuts and tighten them slightly in a crisscross sequence before lowering the vehicle.

Step 7

To lower vehicle, unscrew the hydraulic valve on the jack slowly, till tire touches ground.

Step 8

Tighten the nuts firmly in a crisscross sequence with the wrench to the appropriate torque.

NOTE: The appropriate tightening torque of the nuts should be 450-500 ft•lbs (610-680 N•m). This torque can be obtained with the wrench by any person of average strength. If in doubt about the correct tightness of the wheel nuts, have it checked with a torque wrench.

Step 9

Fully lower the vehicle and remove jack. Correct the air pressure of the spare tire according to the cold tire inflation pressures.

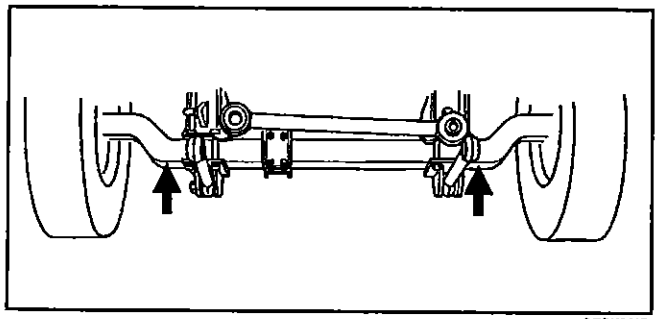
Step 10

Securely store damaged wheel in spare tire and wheel compartment, and have the flat tire repaired and the wheel rebalanced as soon as possible.

JACKING POINTS

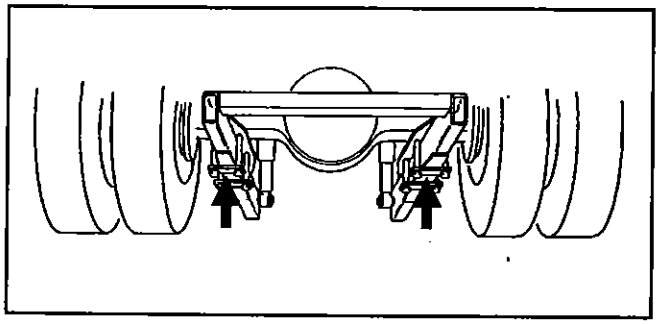
One jacking point on each side of each axle is provided on vehicle. Refer to the following illustrations for details.

CAUTION: Remember that only these jacking points must be used.



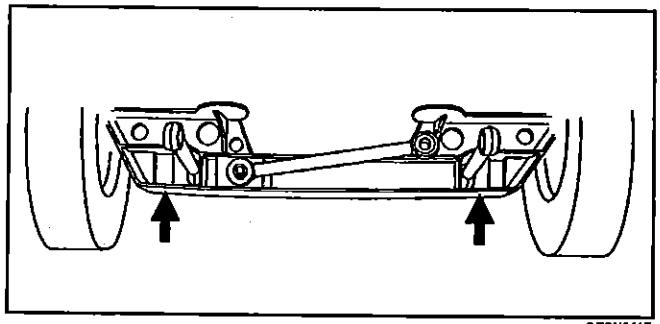
OEBX0415

Jacking points on front axle



OEBX0416

Jacking points on drive axle



OEBX0417

Jacking points on tag axle

CAUTION: The jacking points on tag axle must be used only for lifting this axle.

CAUTION: Always raise tag axle before lifting vehicle to prevent damage to suspension components.

Different kind of hydraulic jacks can be employed, but remember that only these jacking points must be used. Moreover, according to the vehicle weight distribution per axle, jacks must support the following capacities:

Front axle: 13,000 lbs (5 900 kg)

Drive axle: 22,000 lbs (9 979 kg)

TOWING

Two tow eyes are provided under each bumper. Towing should be done from these points only by means of a solid link tow bar and a safety chain. This recommended method prevents damaging the vehicle. If required, connect an auxillary air supply to the vehicle to allow actuating of the vehicle brakes. For vehicles equipped with an automatic transmission, the engine cannot be started by pushing or towing vehicle.

WARNING: Never allow passengers to ride in a towed vehicle for any reason whatsoever.

CAUTION: Transmission lubrication is inadequate when towing. With either automatic or manual transmission, disconnect the propeller shaft or remove the axle shafts to avoid serious damage to transmission.

NOTE: When the propeller or axle shafts are reinstalled, ensure the nuts are tightened to the appropriate torques and the axle shafts are properly installed (R.H. & L.H.) and/or the propeller shaft is properly phased. Refer to the *"Maintenance Manual"* for torque values.

RETRACTABLE TAG AXLE

Operation of the tag axle is controlled by a valve located on the right lateral console. The valve can be flipped to elher one of the two positions, *"Wheels up"* or *"Wheels down"*. Axle will automatically be raised or lowered by air pressure according to valve position (see fig. page 2-14).

Tag axle service brakes operate only when axle is down. Never lower tag axle while vehicle is moving. When tag axle is up, the corresponding indicator light will illuminate, and a beep will sound to remind you that axle is up. Tag axle can be raised in tight maneuvering areas as in a parking lot or to help in turning a short corner, thus shortening the wheelbase and allowing tighter turning. Raising tag axle transfers extra weight and additional traction to the drive wheels on a slippery surface.

CAUTION: Always raise tag axle before lifting vehicle to prevent damage to suspension components.

After either of the above uses, vehicle must be stopped, then tag axle must be lowered before resuming normal driving.

TAG AXLE UNLOADED

This standard system allows to unload the tag axle air springs without raising axle. This system is controlled by the same valve that applies to the retractable tag axle, and is used for the above special situations. However, operator must heed the same recommendations that apply to the retractable axle.

TECHNICAL DESCRIPTION

DIMENSIONS

Overall length	40' (12 192 mm)
Overall width	102" (2 591 mm)
Overall height (over closed roof hatch(es))	130.7" (3 320 mm)
Entrance door opening	26" (660,4 mm)
Headroom (floor to ceiling)	76.5" (1 943 mm)
Aisle width	14" (356 mm)
Step height from ground	15" (381 mm)
Other step height	8.5" (216 mm)
Floor height from ground	48.37" (1 354 mm)
Ground clearance	11" (279,4 mm)
Wheelbase (center of front axle to center of drive axle)	280" (7 112 mm)
Front overhang	69.5" (1 765 mm)
Rear overhang	82.5" (2 095 mm)
Front track	85.67" (2 176 mm)
Drive track	76.5" (1 943 mm)
Rear track (tag axle)	82" (2 083 mm)
Turning circle radius (exterior front corner)	43' (13 106 mm)

WEIGHTS

Curb weight (for vehicle equipped with a manual transmission and a 6-cylinder engine)	27 395 lbs (12 425 kg)
Gross vehicle weight rating	38 000 lbs (17 235 kg)

Gross axle weight rating

- Front axle	13 000 lbs (5 897 kg)
- Drive axle	22 000 lbs (9 979 kg)
- Tag axle	10 000 lbs (4 536 kg)

The Gross Vehicle Weight Rating (G.V.W.R.) and the Gross Axle Weight Ratings (G.A.W.R.) for front, drive and rear axles are listed on a certification plate located on the panel at the L.H. side of driver's seat, under the side control panel.

STORAGE VOLUME

Exterior baggage compartments:	315 ft^3 / 8,9 m^3
Parcel racks:	75 ft^3 / 2,13 m^3

SEATS

Seating capacity: 43 to 51 passengers

Several seating layouts may be achieved through a combination of available equipment with the addition or removal of some items such as passenger seats, card table(s), galley, lavatory.

CAPACITIES

Engine oil

- Crankcase	
6-cylinder engine	19.5 US qts (18,5 liters)
8-cylinder engine	23 to 25 US qts (22 to 24 liters)
- Filter	2 US qts (2 liters)
- Cooler	1.5 US qts (1,4 liters)
- Reserve tank	10 US qts (9,5 liters)

Fuel tank

- Standard	160 US gal (606 liters)
- Optional (auxiliary tank)	90 US gal (341 liters)

Cooling system

24 US gal (91 liters)

Transmission

- Automatic (external circuits excluded)	30 US qts (28,4 liters)
- Manual	20.5 US qts (19 liters)

Differential oil

13.7 US qts (13 liters)

Power steering reservoir

9.6 US qts (9,1 liters)

A/C compressor

1.13 US gal. (4,3 liters)

Windshield washer reservoir

5 US gal. (19 liters)

FUEL TYPE

ASTM specification	D-975
Recommended grade	1-D
Acceptable grade	2-D

WHEELS AND TIRES

Steel wheels	8.25 X 22.5
Aluminum-forged wheels	8.25 X 22.5

Tire size

- 12 R 22.5 (std)
- Michelin "315/80R 22.5" or equivalent

Recommended tire inflation pressure (cold)

- Front axle	110 psi (760 kPa)
- Drive axle	100 psi (690 kPa)
- Tag axle	80 psi (550 kPa)

CAUTION: These tire pressures are established in accordance with the maximum allowable load on each axle. A lower pressure is recommended if the axle load is less than the above specifications. Weigh coach fully loaded and pressurize according to tire manufacturer's recommendations.

Each tire should have a minimum load capacity (single) of 7,200 lbs (3 273 kg) at 120 psi (825 kPa).

NOTE: It is recommended that vehicle be equipped with the same type of tires.

BELTS

Radiator fan drive

Make:	Gates
Model:	3A-92
Qty:	1

Radiator fan drive with thermostatic option

Make:	Gates
Model:	3A-89
Qty:	1

A/C system compressor drive

Make:	Gates
Model:	CX 96
Qty:	2

TRANSMISSION

Automatic

Lockup clutch

Four-speed automatic transmission

Gear	Ratio
1st	3.69
2nd	2.02
3rd	1.38
4th	1.00
Rev.	6.03
Converter	2.02

Five-speed automatic transmission (with and without ATEC system)

Gear	Ratio
1st	3.69
2nd	2.00
3rd	1.58
4th	1.25
5th	1.00
Rev.	9.65
Converter	2.02

Manual

Hydraulic clutch

Six-speed manual transmission

Gear	Ratio
L	8.53
1st	4.87
2nd	3.00
3rd	1.90
4th	1.33
5th	1.00
Rev.	8.53

DRIVE AXLE

Ratio	3.58 : 1 (std)
	3.73 : 1 (opt)

ALIGNMENT

Front axle

- Toe in	1/8 ± 1/32" (3 ± 0,8 mm)
- Caster	+2 1/2 to +4 3/4° (+3° desired)
- Camber (R.H.)	- 1/8 ± 7/16°
- Camber (L.H.)	+3/8 ± 7/16°

Tag axle

- Toe in	0 ± 1/32" (0 ± 0,8 mm)

BRAKES

Air-operated drum type on all axles

Brake dust shields on all axles (opt)

Dual system plus parking brake

30-36 drum-type spring brakes on drive axle

Two-cylinder, engine gear-driven, water-cooled and engine oil lubricated air compressor

Air dryer

Nylon color-coded air lines

ABS system on all axles with dashboard warning light (opt)

Automatic slack adjuster (opt)

ANTILOCK BRAKING SYSTEM (ABS)

Components: Electronic control module (ECM)
Solenoid control valves
Sensors
Clamping bushes
Wiring harnesses

Electronic control module technical data

Voltage:	24 ± 6 volts
Thermal operating range:	-40 to 167 °F (-40 to 75 °C)

Protection system for sealed multi-pin plug according to DIN 40050

Electrical connection is made through a 35 pin plug

Maintenance: none

Solenoid control valve technical data

Voltage:	24 (+4.8, -2.4) volts
Current:	DC
Rated current:	1.65 amps

Protection system according to DIN 40050

Maximum service pressure:	10 bars (145 psi)
Thermal operating range:	-40 to 176 °F (-40 to 80 °C)
Electrical connector:	894 601 010 2

Installation: Maximum pipe length between solenoid control valve and brake cylinder is 5' (1,5 m); pipe diameter is 3/8" (10 mm) venting downward at an angle of 15° on the vertical plane.

Maintenance: none

Sensor technical data

Two-core screened cable:	AWG 18 (1 mm^2)
Force needed to tear out lead:	11.2 lbs (50 N)
Force needed to pull off shrink-fitted tube:	11.2 lbs (50 N)

Protection system according to DIN 40050

Thermal operating range:	-40 to 176 °F (-40 to 80 °C)

STEERING

Tilt steering wheel and telescopic steering column

Hydraulic-assisted steering gear

System pressure:	1500 psi (10 343 kPa)
Steering wheel diameter:	20" (50 cm)
Number of turns:	5 3/4
Outside turning radius:	43' (13 106 mm)

SUSPENSION

Front axle

- 2 air springs (11") (for a G.A.W.R. of 12,800 lbs (5 820 kg) with 315/80R 22.5" maximum tires)
- 2 shock absorbers
- 4 longitudinal radius rods
- 1 transversal radius rod
- 1 height control valve
- Sway bar
- High buoy (extra lift suspension) or low buoy (extra low suspension) are also offered as optional equipment

Drive axle

- 4 air springs (11")
- 4 shock absorbers
- 3 longitudinal radius rods
- 1 transversal radius rod
- 2 height control valves

Tag axle

- 2 air springs (11")
- 2 shock absorbers
- 4 longitudinal radius rods
- 1 transversal radius rod
- Unloaded (std) or retractable (opt)

ELECTRICAL SYSTEM

24 & 12 volt negative grounded

270 amp, self-rectified, gear-driven, oil-cooled *"Delco"* alternator lubricated by engine circuit

Four model 31, 12 volt maintenance-free batteries, each with a 625 cold cranking amp capacity at 0 °F (-18 °C)

Battery equalizer(s)

One 12 and 24 volt manual disconnect switch

Wiring protection: fuses and manually-resettable circuit breakers

Fuses:

Video inverter:	2 amps (qty: 2)
Kneeling module:	3 amps (qty: 1)
Speed limit switch:	3 amps (qty: 2)
Temperature control:	1.5 amps (qty: 2)

SOUND SYSTEM

Twelve Hi-Fi speakers in passengers' section (std)

Two Hi-Fi speakers in driver's area (opt)

"Blaupunkt" deluxe cassette receiver (opt)

PA system with volume control (std)

Microphone outlets (two std)

VIDEO SYSTEM (opt)

TV converter (*"Starcom 7V"*) with remote control

"Panasonic" videocassette player

- Model: VHS ag-1000B with remote control

TV monitors mounted under parcel racks

- Model: ST-1001

OIL SPECIFICATIONS

Engine

Heavy-duty engine oil SAE 40 meeting MIL-L-2104D specification. Some engine operating conditions may require exceptions to this recommendation. They are as follows:

1. For continuous high temperature operation (over 100 °F (38 °C) ambient or 200 °F (93 °C) coolant out) the use of a SAE grade 50 lubricant is recommended.

2. At ambient temperatures below freezing where starting aids are not available or at very cold temperatures (0 °F (-18 °C) to -25 °F (-32 °C), the use of multiviscosity grade 15W-40 or monograde SAE 30 lubricants will improve startability.

Transmission

Automatic

The transmission must be filled with *"Dexron"* or *"Dexron II"* automatic transmission fluid.

Manual

Same as engine oil.

Differential

Multigrade gear lubricants are recommended for use in drive axle. These lubricants perform well over broad temperature ranges, providing good gear and bearing protection in a variety of climates.

Two categories of multigrade gear lubricants may be used according to the climate in which you drive.

SAE 85W-140 (above 10 °F (-12 °C))

SAE 75W-90 (below 10 °F (-12 °C))

Fan gearbox

General purpose gear SAE 90 grade lubricant is recommended for the fan gearbox.

Power steering reservoir

This reservoir must be filled with *"Dexron"* or *"Dexron II"* automatic transmission oil.

Wheel bearings

The front and tag axle wheel bearings must be filled to the level mark in the cap using SAE 90 oil. Drive axle wheel bearings are lubricated by the differential oil. Maintain differential oil level to ensure adequate lubrication of drive axle wheel bearings at all times.

On vehicles equipped with grease-lubricated wheel bearings, pack with wheel bearing grease.

A/C compressor oil

Fill with approved oils:

Calumet Refining Co. R030
Texaco WF68
Witco Chemical Corp. Sunlso 4GS

Clutch master cylinder

This reservoir must be filled with DOT 3 heavy-duty brake fluid.

HEATING AND AIR CONDITIONING

Driver's system

- Air conditioning capacity: 2 tons
- Refrigerant type: Freon R-12
- Heating capacity: 37,800 Btu/hr
- Air flow: 450 cfm (12,74 m^3/min)
- Solid-state type with thermistor probe
- Rheostatic-type adjustment
- Adjustment range 65-78 °F (18-25 °C) and full heating position

Central system

- Air conditioning capacity: 7.5 tons
- Refrigerant type: Freon R-12
- Heating capacity: 152,000 Btu/hr
- Air flow: 2,700 cfm (76,45 m^3/min)
- Fresh air: 20% max
- Recirculated air: 80% min
- Electric water pump: 18 gal/min (82 l/min)
- Control system:
  - -- Reheating principle to control the temperature and humidity of the system
- Solid-state type with thermistor probe on return air box
- Rheostatic-type adjustment
- Adjustment range 65-78 °F (18-25 °C)
- Condenser and evaporator features:
  - -- Two blowers (each)
  - -- One blower motor

    Model: Prévost
    Type: T 19
    Compound winding
    Speed: 1750 rpm
    P: 1.17 kW
    Voltage: 27.5
    Amperage: 57

A/C COMPRESSOR

Number of cylinders:	6
Operating speed:	400 to 2200 rpm (1750 rpm, nominal)
Minimum speed for lubrication:	400 rpm
Maximum hp:	14.7
Maximum capacity of refrigeration:	9 tons

DDEC II DIAGNOSTIC CODES

To read codes:

Use a diagnostic data reader (not furnished by the manufacturer) or set the "DDEC TEST" switch to the "ON" position. This switch is located in the upper section of steering compartment. This latter method will illuminate the "Check engine" light located in dashboard, in a series of flashes separated by a pause. A code "43" consists of four flashes, followed by a short pause, then three flashes in quick succession.

Error Code #	Description	Error Code #	Description
11	Power Take-Off Sensor Lo Volt	38	Fuel Prs Sensor Lo Volt
12	Power Take-Off Sensor Hi Volt	41	Timing Reference Sensor
13	Coolant Sensor Lo Volt	42	Synchronous Ref Sensor
14	Eng Temp Sensor Hi Volt	43	Low Coolant Level
15	Eng Temp Sensor Lo Volt	44	Engine Overtemperature
16	Coolant Sensor Hi Volt	45	Low Oil Pressure
21	Throttle Pos Sensor Hi Volt	46	Low Battery Voltage
22	Throttle Pos Sensor Lo Volt	47	Hi Fuel Pressure
23	Fuel Temp Sensor Hi Volt	48	Lo Fuel Pressure
24	Fuel Temp Sensor Lo Volt	51	EEPROM Error
25	No Codes	52	ECM - A/D Fail
26	Power Control Enabled	53	EEPROM Memory Failure
31	Fault On Auxiliary Output	54	Vehicle Speed Sensor
32	ECM Backup System Fail	55	Proprietory Comm. Link
33	Turbo Bst Sensor Hi Volt	56	ECM - A/D Fail
34	Turbo Bst Sensor Lo Volt	58	Cruise Ctl Switches
35	Oil Prs Sensor Hi Volt	61-68	Inj Response Time Long
36	Oil Prs Sensor Lo Volt	71-78	Inj Response Time Short
37	Fuel Prs Sensor Hi Volt	85	Engine Overspeed

DDEC: Detroit Diesel Electronic Control

ECM: Electronic Control Module

EEPROM: Electrically Erasable Programmable Read-Only Memory

ATEC DIAGNOSTIC CODES

To read codes:

Use a diagnostic data reader (not furnished by the manufacturer) or set the "ATEC TEST" switch to the "ON" position. This switch is located in the upper section of steering compartment. This latter method will illuminate the "Check Trans" light in dashboard, in a series of flashes separated by a pause. A code "12" consists of one flash, followed by a short pause, then two flashes in quick succession.

Diagnostic codes and system response for 6/700 series Allison Transmission Electronic Control

Code	Description	"DO NOT SHIFT" Light	Transmission Response	Clearing the "CHECK TRANS"
12	Low fluid pressure/level	OFF	Inhibits high gear	Next valid lube pressure/level
13	Low input voltage: In neutral	ON	Hold in neutral	Acceptable volts
	In range	OFF	May not shift	Not turned on
14	Forward pressure switch	OFF	Normal operation	Next valid signal
15	Reverse pressure switch	OFF	Normal operation	Next valid signal
21	Throttle sensor, in error zone	OFF	Full throttle assumed	ECU power OFF/ON
22	Speed sensor	ON	Drop LU & hold in gear	ECU power OFF/ON
23	Shift selector (primary)	OFF	Hold in last range	Next valid range
24	Fluid temperature:			
	cold below -25 °F (-32 °C) No Code	ON	Hold in neutral	Temp above -25 °F (-32 °C)
	cool -25 to 20 °F (-32 to -7 °C) No Code	OFF	Inhibits upshifts	Not turned on
	hot above 270 °F (132 °C)	OFF	Inhibits high gear	Temp below 270 °F (132 °C)
31	Shift selector (secondary)	OFF	Hold in last range	Next valid range
32	Wrong direction signal	OFF	Shift to neutral	Select neutral
33	Temp. sensor, in error zone	OFF	Normal operation	Next valid temp
34	PROM check	ON	Drop LU & hold in gear	ECU power OFF/ON
41	J solenoid (neutral) on test			
	Below specified output rpm*	OFF	May not shift	ECU power OFF/ON
	Above specified ouput rpm*	ON	Drop LU & hold in gear	ECU power OFF/ON
42	F solenoid (fwd/rev) on test			
	Below specified ouput rpm*	OFF	May not shift	ECU power OFF/ON
	Above specified output rpm*	ON	Drop LU & hold in gear	ECU power OFF/ON
43	D solenoid on test			
	Below specified output rpm*	OFF	May not shift	ECU power OFF/ON
	Above specified output rpm*	ON	Drop LU & hold in gear	ECU power OFF/ON
44	C solenoid on test			
	Below specified output rpm*	OFF	May not shift	ECU power OFF/ON
	Above specified output rpm*	ON	Drop LU & hold in gear	ECU power OFF/ON

Code	Description	"DO NOT SHIFT" Light	Transmission Response	Clearing the "CHECK TRANS"
45	B solenoid on test			
	Below specified output rpm*	OFF	May not shift	ECU power OFF/ON
	Above specified output rpm*	ON	Drop LU & hold in gear	ECU power OFF/ON
46	A solenoid on test			
	Below specified output rpm*	OFF	May not shift	ECU power OFF/ON
	Above specified output rpm*	ON	Drop LU & hold in gear	ECU power OFF/ON
51	G solenoid (lockup)	OFF	Possible loss of lockup	Valid signal
52	E solenoid (trim boost)	OFF	Possible full trim boost	Valid signal
53	H solenoid (neutral)			
	On test	OFF	May not shift	ECU power OFF/ON
	Off test	ON	Drop LU & hold in gear	ECU power OFF/ON
54	A,B,C,D,F & J solenoids off test	ON	Drop LU & hold in gear	ECU power OFF/ON
66	Bi-directional comm. link	ON	No modulation of shifts	Valid BDCL signal
69	Electronic control unit test	ON	Drop LU & hold in gear	ECU power OFF/ON

Notes:

1) For all errors, the "CHECK TRANS" light will illuminate immediately.

2) Except for Codes "22 and 69", lockup clutch will not be dropped until the retarder or compression brake (if used) shuts off.

3) Engine restart will usually turn ECU power OFF/ON.

*** Speed specified by transmission.**

LIGHT BULB DATA

APPLICATION	PREVOST PART NO.	TRADE OR SAE NUMBER	WATTS OR CANDLE POWER	VOLTS	QTY
EXTERIOR LIGHTING					
Headlight	93-0291	H-87-TK	45 W/65 W	12	2
Fog	56-1882	H3 (Osram)	55 W	12	2
License plate (sealed)	93-0266	---	---	12	2
Side directional	56-0596	1895	2 cp	12	12
Side marker	56-0596	1895	2 cp	12	12
Identification	56-2059	194	2 cp	12	6
Clearance	56-2059	194	2 cp	12	4
Front directional (hazard & marker)	56-2135	T 3057	32 cp/2 cp	12	2
Rear directional	56-0589	1156	32 cp	12	8
Stop	56-0589	1156	32 cp	12	8
Back-up	56-0589	1156	32 cp	12	4
Center stop	56-0589	1156	32 cp	12	1
Tail	56-0123	67	4 cp	12	4
Baggage compartment	56-0601	456	2 cp	24	24
Condenser compartment	56-0601	456	2 cp	24	2
Engine compartment	56-0601	456	2 cp	24	6
Electric compartment	56-0601	456	2 cp	24	2
Steering compartment	56-0131	307	21 cp	24	1
INTERIOR LIGHTING					
Check engine	56-2048	E-9 (Norma)	2 W	12	1
Stop engine	56-2048	E-9 (Norma)	2 W	12	1
Flasher indicator	56-2048	E-9 (Norma)	2 W	12	2
Other indicator - 1/unit	56-2049	(Osram)	2 W	24	AR
Step	56-0135	623	6 cp	24	4
Lavatory	56-1553	78236	10 W	24	2
Lavatory night-light	56-0601	456	2 cp	24	1
"Lavatory occupied"	56-0702	1843	.2 cp	24	2
Parcel rack	56-0144	1820	1.6 cp	24	12
Turbo boost	56-1167	3899 (Osram)	3 W	24	1
Tachograph	56-1006	1-405-804	1.2 cp	24	3
Other gauge - 1/unit	56-0145	1829	1 cp	24	AR
Driver's area	56-1553	78236	10 W	24	4
"Emergency exit"	56-0702	1843	.2 cp	24	14
Aisle	56-0141	1251	3 cp	24	6
Switch - 1/unit	56-1123	2741 (Osram)	1 W	24	AR
Reading	56-2033	961-4940	8 W	24	AR*
Fluorescent	83-0102	F15T8 CW	15 W	---	21
Destination sign	56-0125	931F	15 W	12	4
Parcel rack front neon	83-0108	PL7	7 W	---	14
Shift selector (ATEC)	56-1930	16005999	---	12	8
Shift selector (NON ATEC)	56-0394	72601	2 W	24	2
Rear roof	56-1553	78236	10 W	24	2
R.H. console control nomenclature	56-0472	327	.34 cp	24	7

* Determined by the number of passenger seats

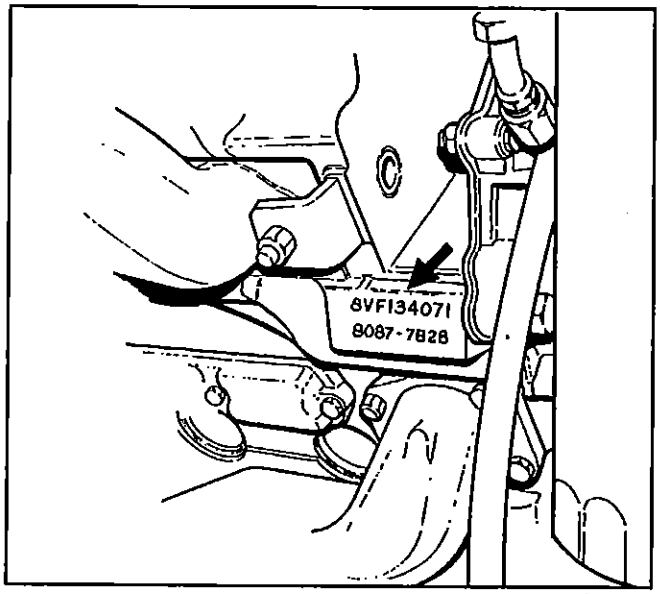
DATA PLATES AND CERTIFICATION

Data plates

The main components of vehicle such as engine, transmission, axles and chassis are identified by different serial numbers. It may be necessary to locate these numbers for warranty purposes.

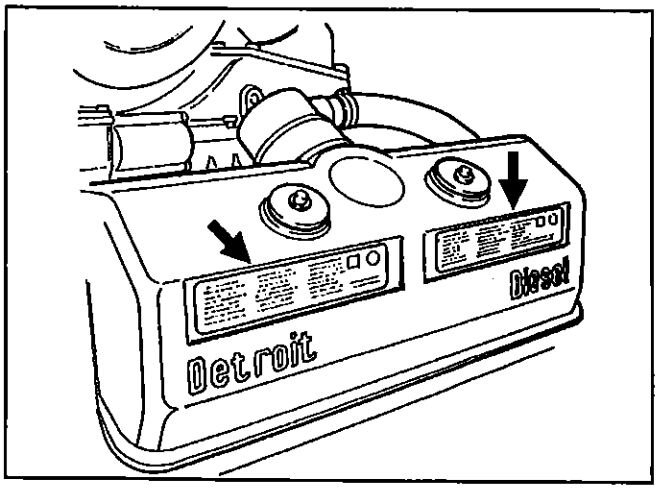
Engine

The engine number is stamped on the cylinder block under the exhaust manifold (oil filter side) close to the water pump.



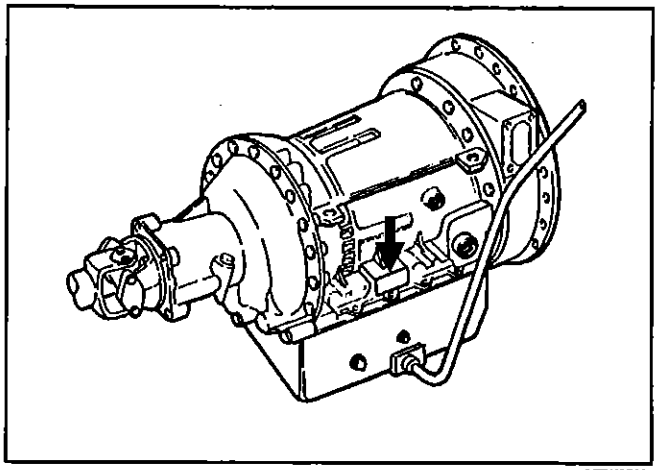
OEBX0501

In addition, two option plates made of laminated paper are located on the rocker cover (starter side). Contents of the option plates include the engine serial and model numbers and a list of the optional equipment on the engine. The information is primarily for use when ordering replacement parts.



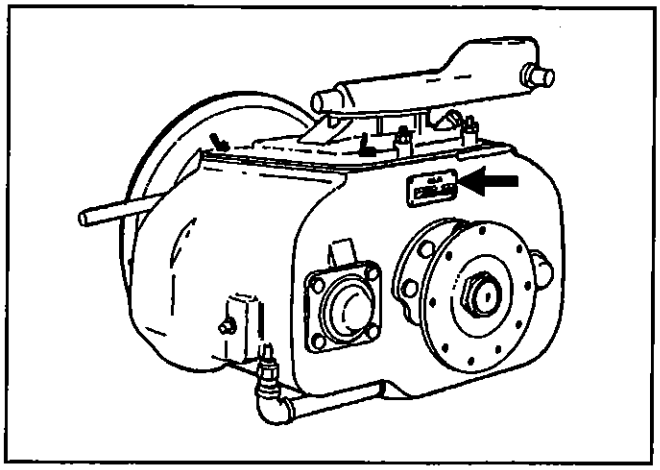
OEBX0502

Automatic transmission



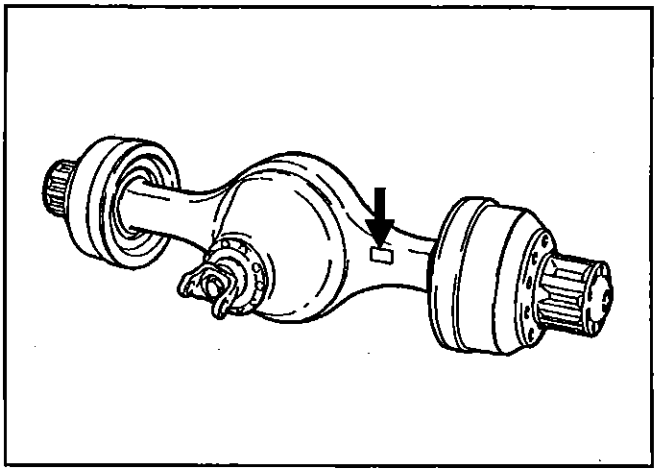
OEBX0503

Manual transmission



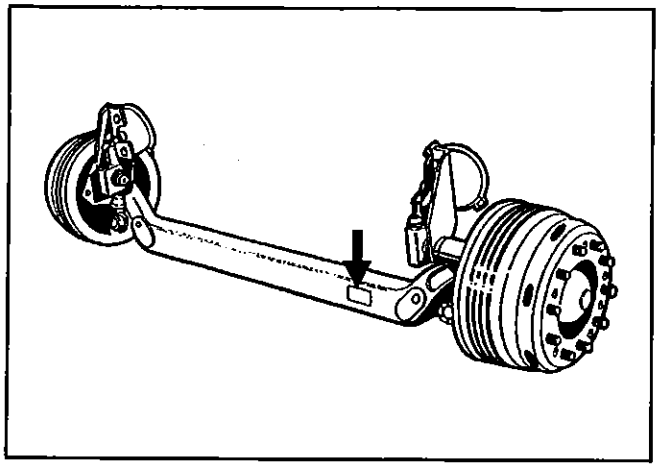
OEBX0504

Drive axle



OEBX0505

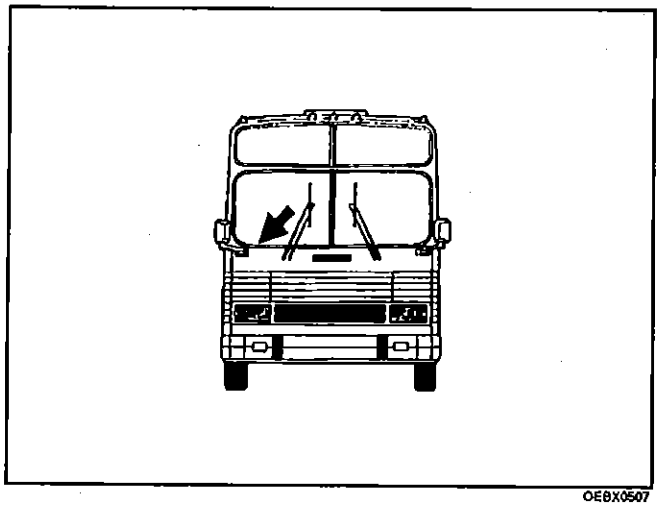
Front axle



OE8X0506

VIN

The vehicle identification number is stamped on a plate located on dashboard louver (entrance door side), so that it is visible from the outside through the windshield. It is extremely important to give the correct vehicle identification number when ordering replacements parts. Use of these numbers will prevent delay and errors in obtaining the correct material.



OE8X0507

NOTE: We strongly recommend that you take note of all the serial numbers on the vehicle and supply them to your insurance company. They may be useful.

Coach final record

This is a complete and detailed record of all data pertaining to the assembly of the vehicle. This information sheet is included in the technical publication box delivered with the new vehicle and should be filed in the owner's office where it will be readily available for references.

Safety certification

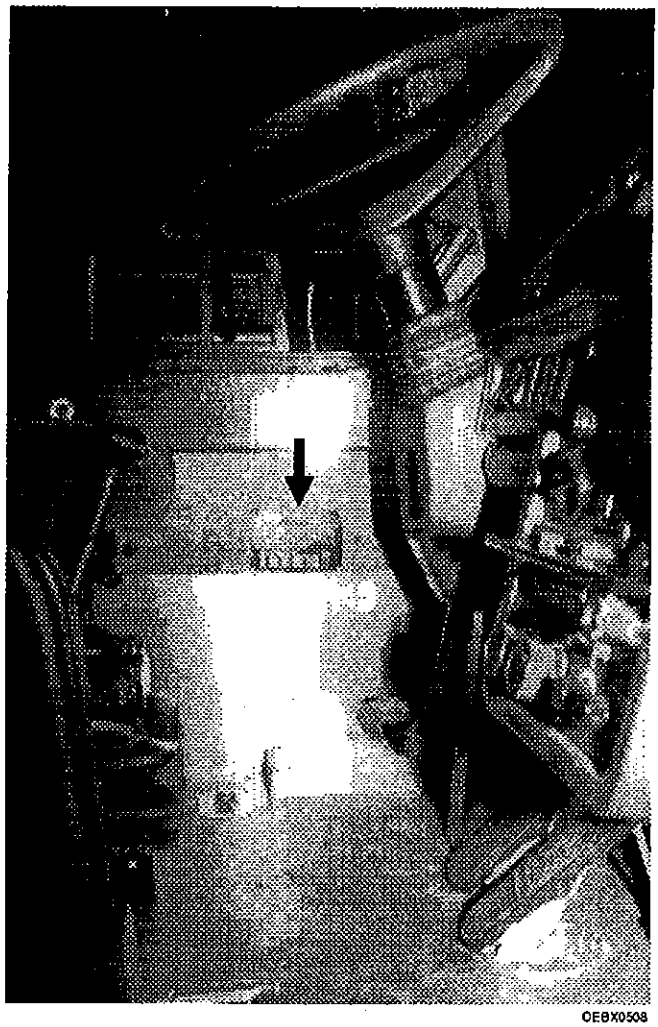
All the components on this vehicle meet the government requirements:

- Material and parts conform to ASTM and/or SAE standards in effect at time of manufacturing.
- All factory-installed interior materials meet F.M.V.S.S. 302 on fire resistance.
- Certified according to Provincial, State and Federal Safety standards (Can. & US) B.M.C.S.S., F.M.V.S.S., C.M.V.S.S.

Other certification labels are affixed to the specific components on the vehicle.

DOT certification label

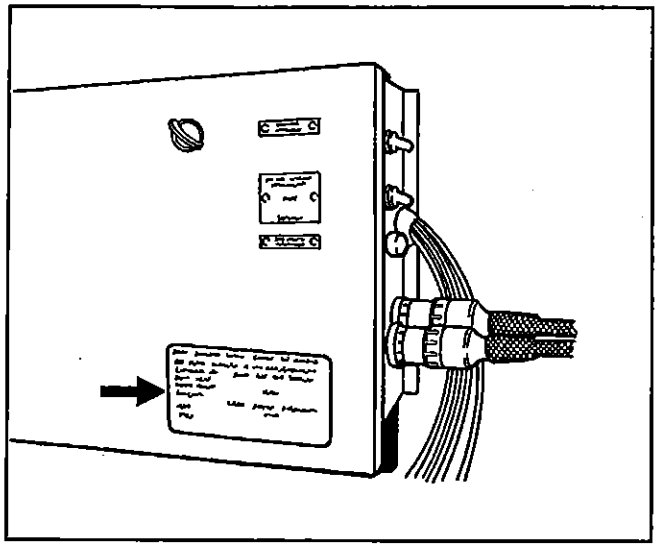
This is your assurance that your new vehicle complies with all applicable Federal Motor Vehicle Safety Standards which were in effect at the time the vehicle was manufactured. You can find this label on the wall at the L.H. side of driver's seat, under the side control panel.



OE8X0508

EPA engine label

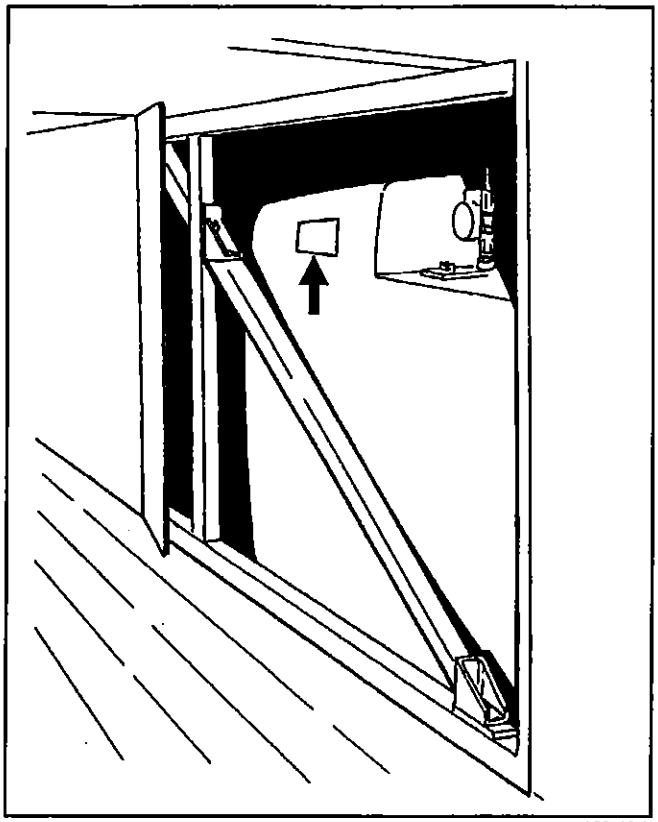
The exhaust emission certification label affixed on the lower R.H. side corner of the rear junction box certifies that the engine conforms to federal and any state exhaust emission regulations. It gives the operating conditions at which certification was made.



OEBX0401

Fuel tank label

The fuel tank label is affixed on side of fuel tank. To read this label, open the last baggage compartment door, locate the fuel tank access panel then remove it by unscrewing the Phillips head retaining screws.



OEBX0510

NOTE: Optional auxiliary fuel tank has a label affixed to the side of the tank and can be easily read by opening the second baggage compartment door.

CARE AND MAINTENANCE

INTERIOR CLEANING

The importance of keeping the interior of your coach clean and spotless is a passenger-generating incentive, obvious to most operators.

However, a vehicle in regular and extended use is an easy target for deliberate and involuntary staining and marking by passengers.

The following sections deal with stain and mark removal on the exterior body of the coach, as well as remedies for cleaning the interior compartment that may help coach operators.

NOTE: Most of the cleaning products that are mentioned may be available through a cleaning specialist representative. It is not recommended that you treat new fabrics with any stain protector. Prompt and correct cleaning will remove most stains. *Incorrect treatment will only increase the damage. In questionable cases, always seek expert advice.* Information is true and acurate and is given to the best of our knowledge; however, all recommendations or suggestions are made with reserve since the conditions of application are beyond our control.

Seat upholstery

Normal cleaning

Beat the fabric with a blunt object such as a wooden paint mixer and clean the dust, dirt and grit, with a vacuum cleaner equipped with an upholstery nozzle. Clean as often as possible. The fabric is so designed to retain dirt and grit hidden inside its structure, thus presenting a clean seat to user. Grit will cause abrasion of the fabric and reduce the seat upholstery life. The upholstery nozzle should always be moved with the grain of the fabric.

Removal of stains, liquids and other marks

Do not use soap, soap powder, ammonia, bleach, and especially soda, or any product containing these ingredients. Serious damage could occur to either the dyestuffs or to the wool in the fabric. The two general methods of cleaning wool plush are:

Method 1

Apply a noninflammable solvent (Trichlorethylene) with a clean, white absorbent rag. Clean small areas by working from the outer edge towards the center of the stain. Blot frequently with a dry cloth to avoid rings.

WARNING: Open windows and doors to provide adequate ventilation.

Method 2

Moisten the stain with a solution of household detergent and lukewarm water. ***Do not soak***. Rub stain with a damp cloth, rinsing cloth between each treatment.

CAUTION: Do not use soap, soap powder, ammonia, soda, bleach or any product containing such ingredients.

Beverage stains

Use method 1. If stain persists, try methylated spirits.

Alcoholic liquids

Moisten with water followed by method 2.

Burns

Scrape blackened area with a knife and treat with method 2. Extensive burns require expert attention.

Cosmetics

Use method 1 followed by method 2.

Ink

Use method 2. If brown stain remains, treat as rust.

Blood stains

Use method 2.

Urine

Use method 2.

Vomit

Use method 2.

Copying ink - ballpoint ink

Treat with methylated spirits, blotting frequently to avoid ink spreading. Use cleaning method 2 to complete the treatment.

Marking ink (felt-tip pens)

Treat with Methyl Ethyl Ketone (M.E.K.) followed by method 2.

Oil, grease & paint

Remove surplus substance with a knife or spoon, then treat with method 1 followed by method 2. If stains should reappear, repeat cleaning process.

Rust

Use method 2 followed by an application of a warm solution of oxalic acid. Complete treatment with water.

Tar

Soften with benzene and then treat with method 1 followed by method 2.

Chewing gum

Soften with cyclohexanone and scrape off carefully with a knife.

Plastic and vinyl

Use a clean, damp cloth or sponge to keep this trim free from dust. For other sollage, use a lukewarm all purpose cleaning solution or a mild saddle soap for vinyl trim. Remove water spots and soap traces with a clean, damp cloth or sponge. Use a clean, soft cloth to rub dry.

Grease, tar or oil stains can be removed with a clean cloth or sponge soaked with an all purpose cleaner or with a solvent-type vinyl cleaning agent.

Occasionally, apply a colorless vinyl or leather preservative to retain the material luster and pliability.

Windows

To clean inside surface of the windows, use a commercial glass cleaner or a 10 to 1 mix of water and white vinegar. Keep all the windows clean for maximum visibility.

Stainless steel

Use a stainless steel cleaner available at any automotive washing and cleaning specialist (or order Prevost part #68-0356) and follow manufacturer's instructions.

Pressure laminates

Normal maintenance consists in wiping formica surfaces with a damp cloth and detergent. Generally, remove spillage at once to minimize any permanent stain.

To remove stains, first try cleaning the affected area with a household detergent, methylated spirits or mineral turps. If the stain is still present, use a mild abrasive and water solution.

Carpet

The carpet will wear well, if you vacuum-clean often in order to avoid dust and dirt to penetrate into its fibers.

Rubber components

Should be treated only with pure water or glycerin.

EXTERIOR CLEANING

The paint on your vehicle is very durable, but must be protected from losing its luster due to exterior conditions. Therefore, wash and wax your vehicle often. The longer the dirt is left on the paint, the greater the risk of damaging the glossy finish, either by scratching if the dirt is rubbed into the paint, or simply by the chemical effect dirt particles have on the paint surface.

Begin by spraying water over the entire coach to remove all loose dirt, then wash with a car washing-soap in the concentration recommended by the manufacturer. Rinse afterwards with a generous stream of water.

The vehicle paintwork needs polishing or preserving when water no longer forms droplets on the surface.

CAUTION: Do not use hot water. Lukewarm to cool water is less harmful for the paint. Do not use any solution that can damage the body paint.

Do not aim the water jet directly into openings such as the A/C & heating compartment door grille to avoid water penetration in the fresh air intake duct. If the water jet is under high pressure, avoid aiming the jet directly on condenser and radiator doors as the fins of cores may be damaged.

Do not wash or wax your vehicle in direct sunlight.

The underside of the vehicle picks up dirt and road salt used to keep streets and highways free of snow and ice. To protect against corrosion, it is important to remove mud, debris and road salt from the underside with a powerful water jet. Be sure to include the wheelhousings, bumpers, muffler, tailpipe and brackets. This should be done twice a year and is best accomplished after the vehicle has been driven through a heavy rain. The exterior of the coach, engine, engine compartment, aluminum wheels and mirrors should always be washed as soon as possible after accumulating road salt. Let engine and exhaust cool down before washing.

Tar or oil

Do not allow tar or oil to remain on the paint. Remove as soon as possible with a cloth soaked with a special paint cleaner. If you do not have a tar or oil remover, you may use turpentine. After applying a cleaner, always wash with a lukewarm soap water solution and apply a new coat of wax.

Insects

Remove as soon as possible with a lukewarm soap water solution or insect remover.

Tree sap

Do not allow tree sap or bird droppings to harden on the paint. Remove with a lukewarm soap water solution.

Windows

Keep silicone sprays off the windshield to avoid wiper smear in rain. Clean all windows regularly to remove road film and bus-wash wax buildup. Use a lukewarm soap water solution or an alcohol-based cleaning agent. If a chamois is used for polishing the glass, it should exclusively be used for that purpose.

Wiper blades

If wiper blades are frozen, remove ice gently by hand to avoid blade damage. Remove all wiper blades periodically and clean them thoroughly with an alcohol-based cleaning solution. Use a sponge or soft cloth and wipe lengthwise. Replace wiper blades when they are damaged or do not clean well.

Stainless steel

Use a stainless steel cleaner available at any automotive washing and cleaning specialist (or order Prevost part #68-0356) and follow manufacturer's instructions.

OIL LEVEL VERIFICATION

Engine

Check engine oil level daily or before each trip; if required, add oil to bring level to the appropriate mark on dipstick. Ideally, check engine oil level when oil is warm with vehicle on a level surface, as for instance during every fuel filling. First, stop engine and wait at least 10 minutes for the oil to drain back into the oil pan. Then, pull out the dipstick, wipe clean and reinsert the dipstick fully down for an accurate reading. Pull out the dipstick again and check the oil level on the dipstick.

Maintain oil level between the two marks on the dipstick, and never allow it to drop below the "L" mark. If required, add oil by opening the oil reserve tank drain valve, observe oil quantity through tank sight glass, then check engine oil level again on dipstick. No advantage is gained by having oil level above the "F" mark. Do not forget to close oil reserve tank valve once the desired oil level is reached.

OEBX0601

NOTE: The oil level dipstick and oil reserve tank locations are illustrated in figure of page 2-27.

NOTE: For vehicles equipped with a manual transmission, the engine oil fill valve is the one nearest to the engine compartment rear door.

Manual transmission

Check oil level when engine is stopped and cold. Open engine compartment R.H. access door, and check level on dipstick located at right of engine near transmission. Maintain level to the *"FULL"* mark on dipstick.

NOTE: Clean around end of fill tube before removing dipstick to prevent dirt and foreign matter from contaminating oil.

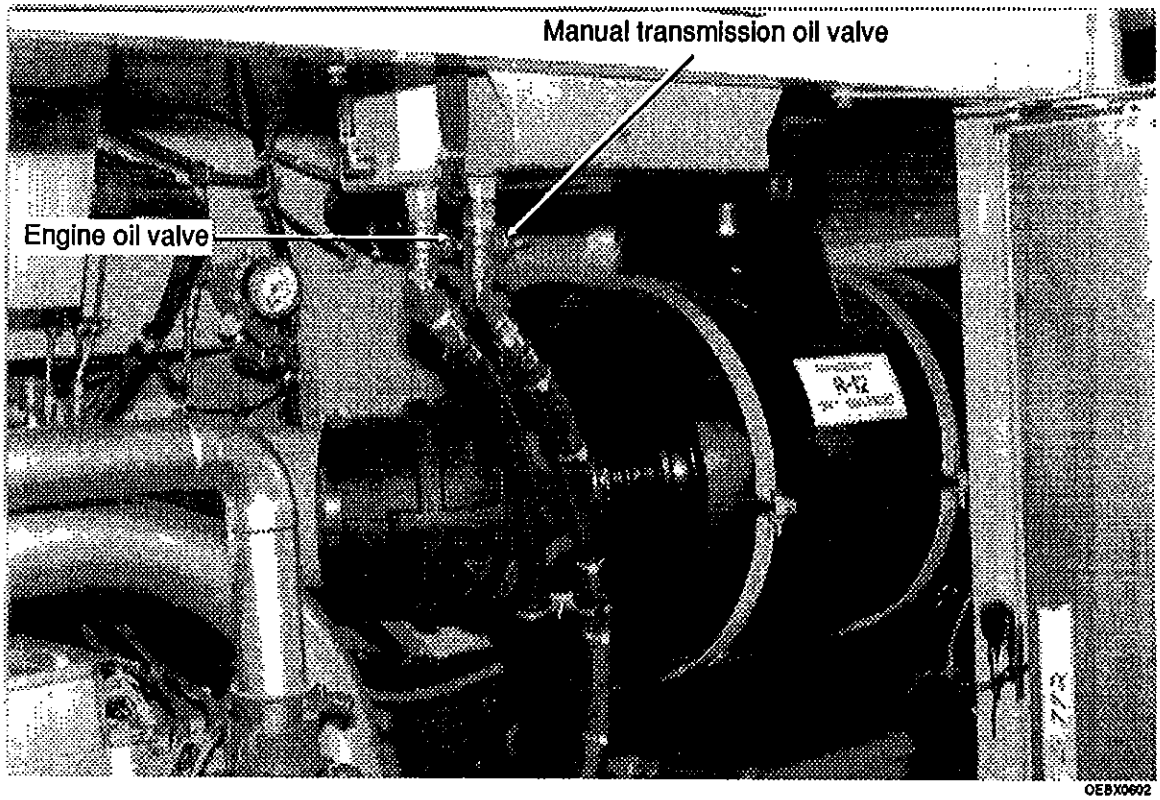
Refill

The vehicle is equipped with an oil reserve tank in engine compartment. This tank is also used for the engine oil. Proceed as follows to refill transmission:

1. Open valve under oil tank which is the most remote from the engine compartment rear door.

2. Allow oil to discharge in transmission until *"FULL"* mark on dipstick is reached, then close valve. Check oil reserve tank level through the sight glass located on its side.

CAUTION: Do not overfill transmission. Overfilling may result in oil breakdown due to excessive heat, and sludge deposits impairing proper operation of transmission. Overflow of oil escapes through seals and may cause clutch troubles.



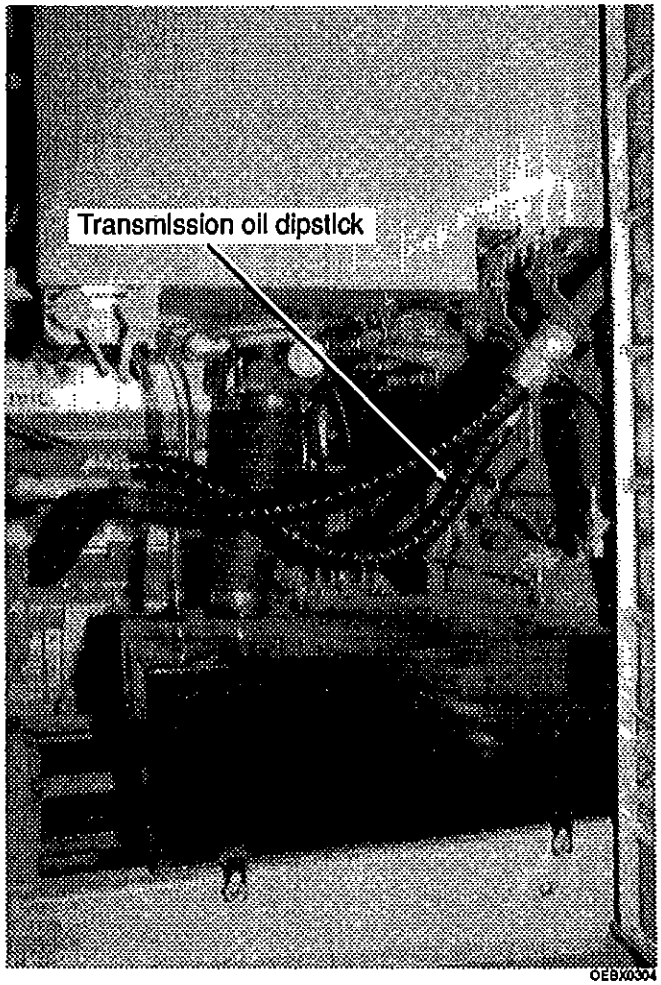
OEBX0602

Automatic transmission

Two checks must be made to ensure proper oil level in the transmission. A *"COLD CHECK"* must be made when the transmission oil temperature ranges between 60 and 140 °F (16 - 60 °C). This check is required to ensure that there is a sufficient quantity of oil to operate transmission safely until a hot check can be made. Perform *"A HOT CHECK"* when the transmission oil reaches its normal operating temperature (160 - 250 °F; 70 - 120 °C). This check is required to ensure that the oil is at the proper operating level.

Park the vehicle on a level surface. Apply the parking brake and operate the engine at 1000 - 1200 rpm for approximately one minute to purge air from the system. Allow engine to idle, then fill clutch cavities and circuits by shifting the transmission into *"Drive"* and then *"Reverse"*. Shift to *"Neutral"*.

The automatic transmission oil level dipstick is located near the engine and transmission junction, and is accessible through the engine compartment R.H. side door. Clean end of fill tube before removing dipstick. Dirt and foreign matter should not be allowed to enter the oil system since this could cause valves to stick, thus resulting in undue wear of transmission parts or clogged passages. To remove the dipstick, unscrew the cap approximately three turns, and pull out the dipstick.



Cold check

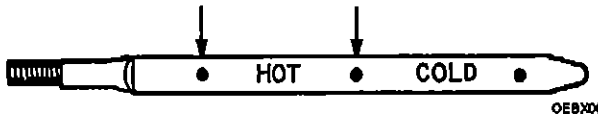
Run the engine until the oil temperature ranges between 60 and 140 °F (16 - 60 °C). With the engine idling, parking brake applied and transmission in neutral, wipe the dipstick clean and check the oil level. If the oil level registers in the *"COLD RUN"* band, the quantity of oil in the transmission is sufficient to operate the vehicle until transmission normal operating temperature (160 - 250 °F; 70 - 120 °C) is reached. If the oil level registers on or below the bottom line of the *"COLD RUN"* band, add oil to bring the level within the band. If the oil level registers above the *"COLD RUN"* band, drain oil to bring the level within the band. Afterwards, operate the vehicle and make a *"HOT CHECK"* when normal operating temperature is reached.

CAUTION: The oil level rises as oil temperature increases. Do no fill above the *"COLD RUN"* band before the transmission reaches its normal operating temperature.

Hot check

Be sure the oil temperature ranges between 160 and 250 °F (70 - 120 °C). With the engine idling, shift transmission from forward to reverse as mentioned previously, then shift transmission in *"Neutral"* and apply parking brake. Remove dipstick from fill tube and check oil level. If the oil level registers on or under the *"HOT RUN"* bottom line, add the required amount of oil to bring the oil level to the middle of the *"HOT RUN"* band. Approximately one (1) quart (0,9 liter) of oil is required to raise the oil level from the bottom line of the *"HOT RUN"* band to the middle of the *"HOT RUN"* band.

CAUTION: Never overfill transmission, as it may cause overheating and other troubles.



Power steering

The vehicle is equipped with an integrated power steering system. The power steering fluid reservoir is on the upper left-hand side of the engine compartment (see figure on page 2-27). To check fluid level, proceed as follows:

1. Stop engine and open both engine compartment rear doors.

2. Remove dipstick and wipe with a clean rag.

3. Insert dipstick in reservoir, then remove it again to check level.

4. Adjust level to *"FULL"* mark, using *"Dexron"* or *"Dexron II"* automatic transmission fluid.

Radiator fan gearbox

The radiator fan is belt driven from the engine crankshaft pulley through a drive shaft and a gearbox. The gearbox is equipped with a knurled dipstick, fitted on top of gearbox to verify oil level. Refer to figure in page 2-27. To check oil level, proceed as follows:

1. Stop engine.

2. Set battery main disconnect switch to the *"OFF"* position.

3. Open engine compartment doors and set engine starter switch to the *"OFF"* position.

4. Remove the dipstick located on gearbox and wipe with a clean cloth.

5. Reinsert dipstick, then remove it again to check level.

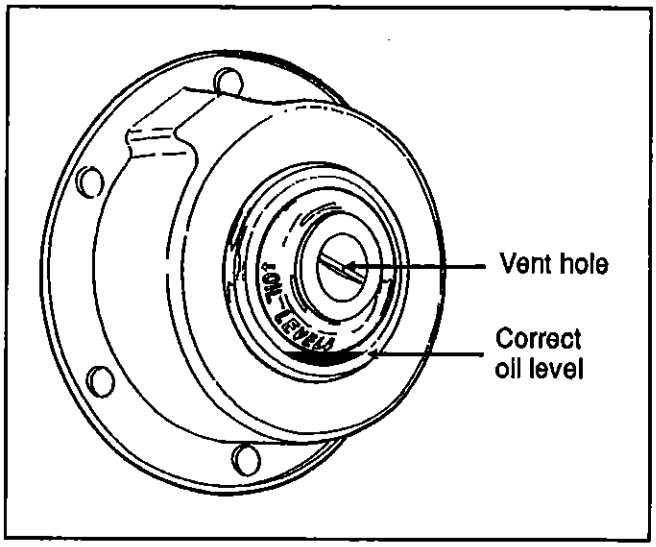
6. Adjust level to the upper notch on dispstick using SAE 90 general purpose lubricant.

7. Reset engine control box and battery main disconnect switch to the *"ON"* position, then close engine compartment doors.

Wheel bearings

The oil level for the front and tag axle wheel bearings must be maintained to the level mark in the cap. The level is determined by a line, indicated by arrows, that is incorporated to the plastic lense and passes underneath the words *"OIL LEVEL"*. To check oil level after vehicle has been driven, wait at least 15 minutes to ensure that oil has settled. Drive axle wheel bearings are lubricated by the differential oil. Maintain differential oil level to ensure adequate lubrication of drive axle wheel bearings at all times.

On vehicles equipped with grease-lubricated wheel bearings, pack with wheel bearing grease.



CAUTION: Wheel bearing oil fill cap is provided with a very small vent hole in its center. Insert occasionally a small tip to avoid hole restriction, as it prevents overpressure in bearing housing.

A/C compressor

The level is acceptable when the oil is visible in the sight glass on R.H. side of compressor. For an accurate reading, release air on belt tensioner, then level compressor. The oil level should be in center of sight glass. (For location see page 2-27).

Clutch pedal master cylinder

The fluid must be at strainer level of the reservoir, which is located under the dashboard near the clutch pedal.

COOLANT LEVEL VERIFICATION

The cooling system is completely filled when the coolant (cold) is visible in the surge tank sight glass (see page 2-27. If topping-up is necessary, fill the system by the surge tank filler cap with the same mixture ratio already used in the system (50-50). (Refer to the *"Maintenance manual"* for more details)

WARNING: Hot engine coolant is under pressure. Allow engine to cool before checking coolant level.

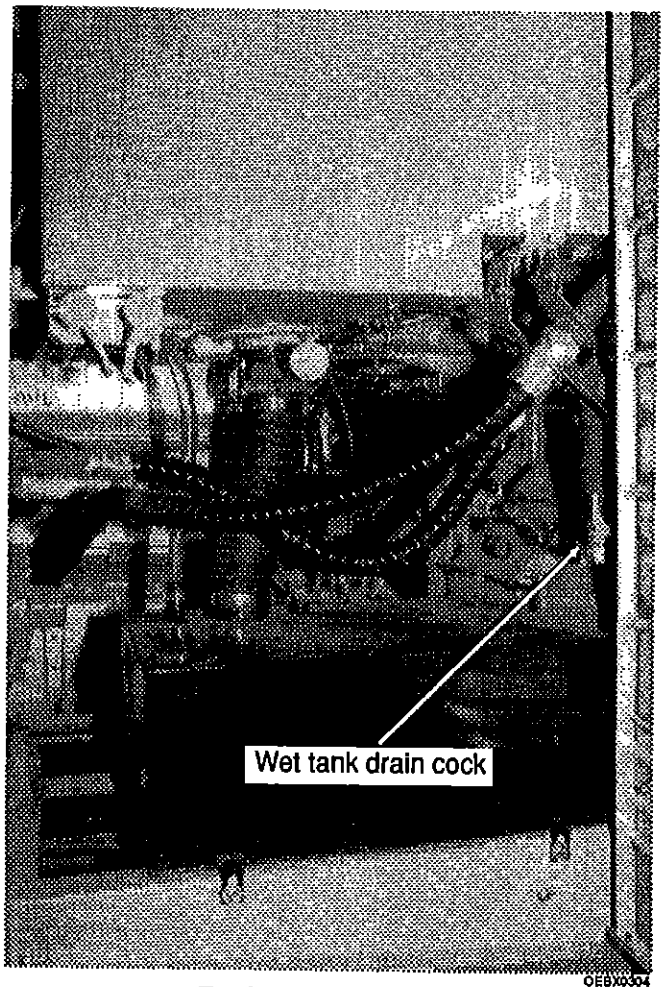
AIR TANKS

Your vehicle may be provided with six air tanks; the accessory tank and the wet tank must be purged daily before operating vehicle. The other tanks, primary, secondary, kneeling system (optional) and parking brake override (optional) must be purged each time oil is changed (10,000 miles (16 000 km) maximum intervals).

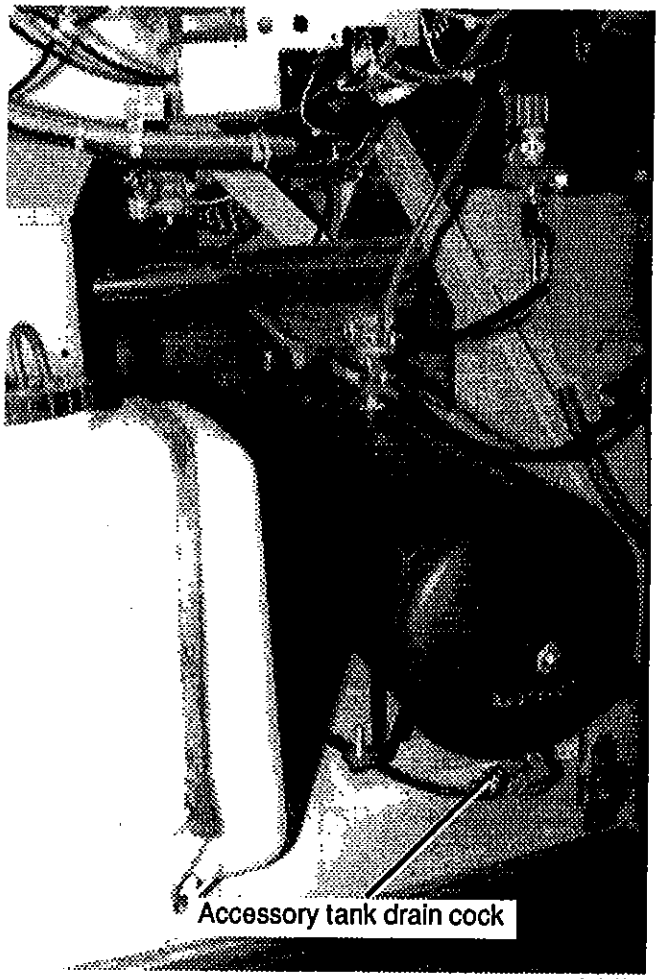
The accessory tank drain cock is accessible from the steering compartment, and an additional drain cock for the wet tank is installed in engine compartment and is accessible from the engine compartment R.H. side door. The other tanks, as well as the wet tank, are provided each with a drain valve underneath.

For more details on the location and maintenance of the air tanks, refer to section 12 in the *"Maintenance Manual"*.

Turn cock counterclockwise to drain tanks.



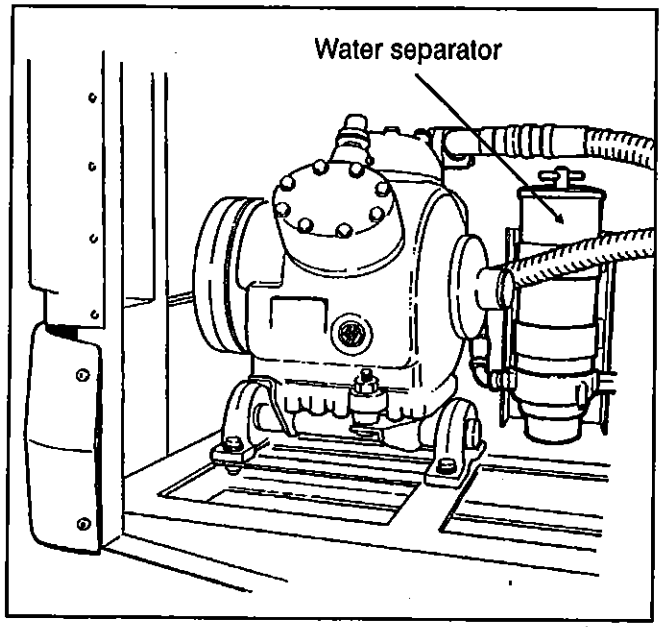
Engine compartment



Steering compartment

WATER SEPARATOR

An optional fuel/filter water separator is installed in engine compartment close to the A/C compressor, to prevent water infiltration in the engine fuel system. It should be drained periodically, or when the water separator indicator lamp lights in dashboard. Loosen bleed screw below separator a quarter of a turn to drain.



OEBX0609

FIRE EXTINGUISHERS

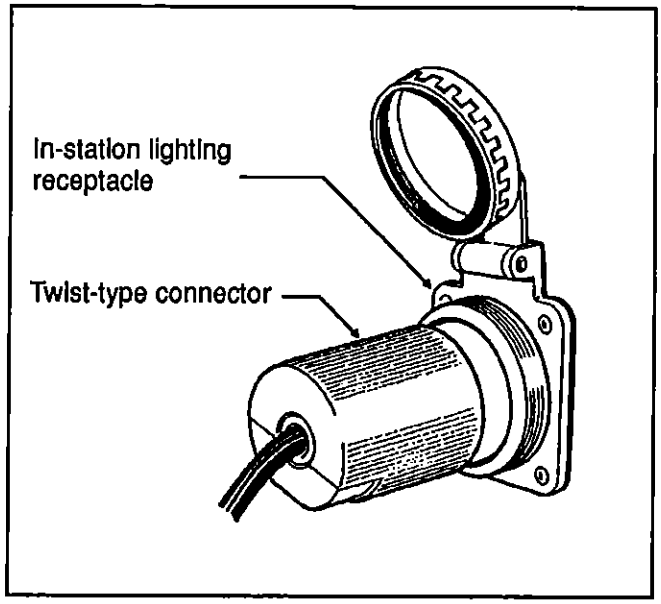
In order that fire extinguishers operate adequately in emergency situations, it is strongly recommended to inspect all units monthly.

- Check that pressure is adequate and recharge if required
- Check that seal on handle is intact
- Check that hose or nozzle is not restricted
- Keep fire extinguisher clean
- Note inspection date

110-120 VOLT IN-STATION LIGHTING

An optional exterior connection allows the use of a 110-120 volt lighting system when coach is being serviced or cleaned.

Receptable for in-station lighting is located at left front of coach between steering compartment door and front axle. The power cable connected at this point will illuminate the interior fluorescent lights. Its circuit breaker, located in steering compartment, is mounted beneath driver's floor and must be reset manually if opened.

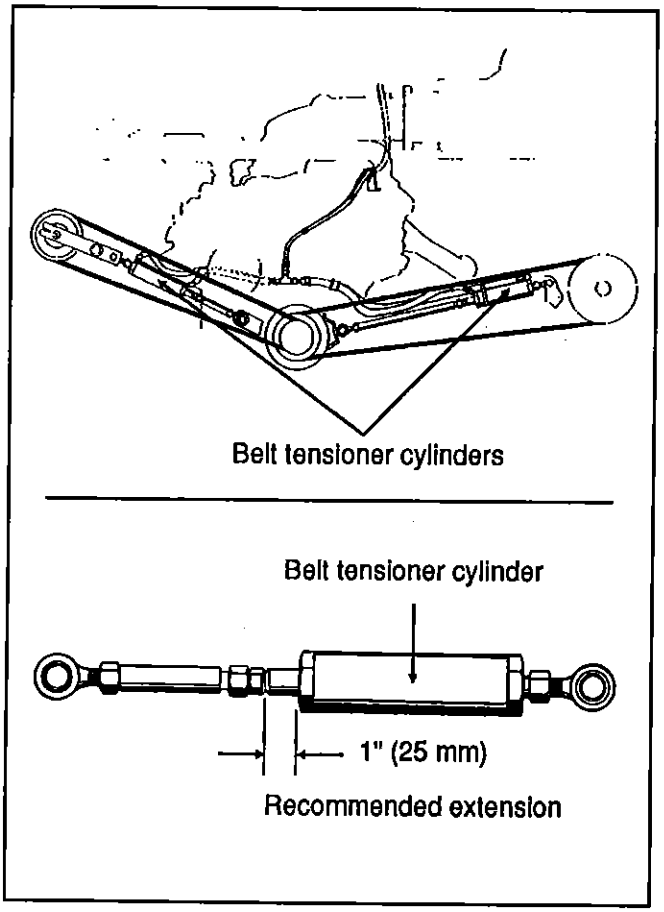


OEBX0610

BELT TENSIONERS

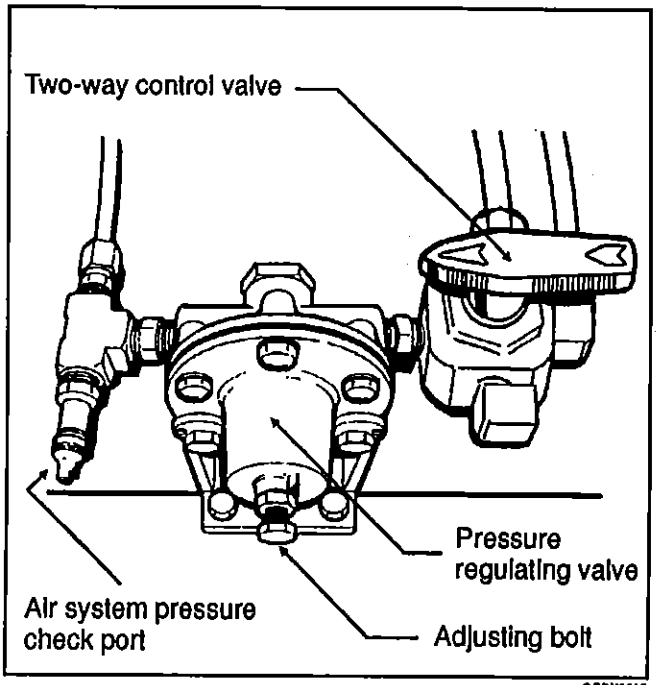
Radiator transfer fan and air conditioning compressor are driven by V-belts equipped with an air-operated tensioner, which should be adjusted as outlined hereafter.

Belt tension is provided by an air cylinder regulated at 75 psi (517 kPa); both cylinders can be adjusted by means of the adjusting bolt on the pressure regulating valve mounted in engine compartment above the doors (for location see page 2-27). For proper operation of the cylinder, adjust the rod to provide a 1" (25 mm) extension as shown.



OEBX0611
OEBX0612

For belt replacement, air pressure must be released from belt tensioners by means of the two-way control valve. This manually operated-type valve shuts air to the pressure regulating valve and directs air to the tensioner to reverse cylinder action. Before handling, operator should make sure that all engine stopping safety precautions have been observed.



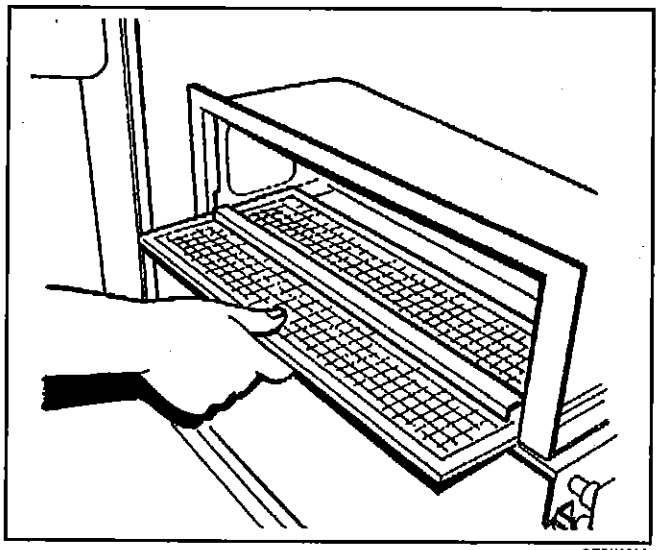
OEBX0613

A/C AND HEATING SYSTEM AIR FILTERS

For maximum air conditioning and heating system efficiency, air filters should be inspected and cleaned according to maintenance schedule (in *"Maintenance Manual"*) to ensure proper ventilation of the evaporator and heating radiator cores.

Driver's system

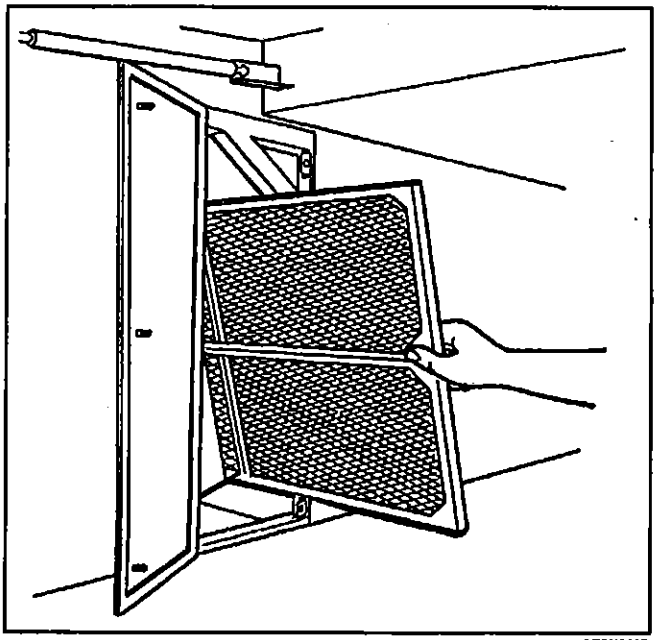
Air filter for driver's system is located under dashboard. To gain access, turn counterclockwise both 3/4 turn knurled fasteners of A/C and heating unit access panel located over entrance door steps, then lift and remove panel.



OE8X0614

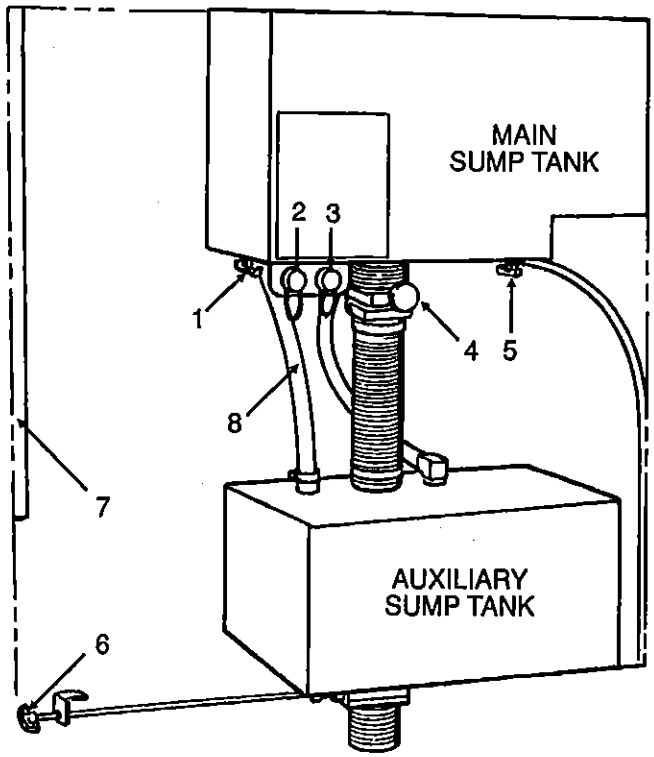
Central system

One air filter, located in the A/C and heating compartment, is used for the central system. To gain access, open the rearmost baggage compartment door, open the air filter access panel by unscrewing the three retaining screws, then slide out filter as a unit.



OE8X0615

LAVATORY MAINTENANCE



1. Main sump tank overflow cock
2. Fresh water tank fill connection
3. Toilet sump tank fill connection
4. Main sump tank drain valve
5. Fresh water tank drain cock
6. Auxillary sump tank drain valve
7. Fresh water tank vent and overflow indicator
8. Main sump tank overflow tube

OE8X0618

Draining and filling lavatory tanks should ideally be done by maintenance and service personnel. Draining instructions included in this section must be used only in case of an emergency, such as engine or heating system failure in freezing weather where the fresh water tank must be drained to prevent freezing, unless an appropriate power source is available nearby to connect the optional heating element which is accessible by the engine oil reserve tank fill door. The driver should supervise the servicing of his coach when away from home.

Fresh water reservoir draining

The fresh water reservoir can be drained by opening fresh water tank drain cock. Do not forget to close cock when draining is completed.

CAUTION: Under cold weather conditions, unless the fresh water reservoir heater is operating, water should not be left in reservoir as it might freeze and damage both reservoir and connecting lines.

NOTE: In the case of vehicles equipped with a water heater, it can be connected through the engine oil reserve tank filling door with a 110-120 volt power cord.

Fresh water reservoir filling

Plug the fresh water supply connector in the fresh water tank fill connection. Fill the reservoir until the overflow tube leaking at rear of coach signals that the reservoir is full.

WARNING: Never refill fresh water reservoir with antifreeze.

WARNING: If reservoir has not been drained for an extended period of time, the draining and filling operations must be repeated three times to eliminate all contaminated water and make sure that reservoir is clean.

Main sump tank draining

In order to drain tank, pull main sump tank drain valve until draining is over.

Main sump tank filling

Open the main sump tank overflow cock and connect a hose to the toilet sump tank fill connection. The main tank will be filled when water will start flowing to the auxiliary tank through the main sump tank overflow tube. Close main sump tank overflow cock.

CAUTION: In cold weather, add 2 gallons (9 litres) of antifreeze, such as ethylene glycol, in the toilet before filling main tank.

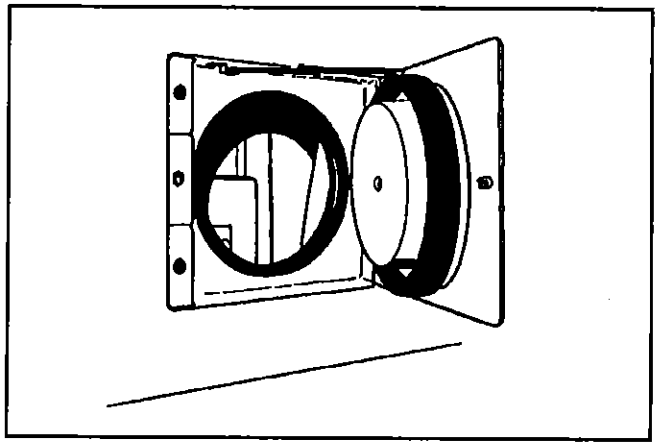
Auxiliary sump tank draining

Pull auxiliary sump tank drain valve handle. Close valve when draining is over.

NOTE: It is against the law to dump sump tank contents on the ground.

Cleaning cabinet

A lavatory access panel is provided on R.H. side wall to ease cleaning of lavatory. This panel can be opened from the outside only by unscrewing the 1/4 turn screw.



OEBX0617

When recirculating water in the toilet is soiled, drain main sump tank in optional auxiliary tank and perform the filling procedure of the main tank.

When an overall draining is required, clean main tank by repeating the draining and filling operations while leaving the auxiliary sump tank drain cock opened during this process. Close cocks and pour a pack of commercial toilet deodorant (Prevost part #90-0329) in toilet before adding the antifreeze and starting final filling of main tank.

WARNING: This pack of deodorant contains products that can be very irritating for the skin. Use rubber gloves when handling and clean toilet seat.

WARNING: The antifreeze must comply with the effective environmental act.

CAUTION: When cold weather is expected and there is no antifreeze solution in the tank, both sump tanks must be drained.

NOTE: If there is no antifreeze solution in the tank, there is less risk of frosting if engine is operating due to the heat it produces.

The vehicles leaving the factory do not have an antifreeze solution in the sump tanks.

FLEXIBLE HOSE MAINTENANCE

The performances of engine and equipment are greatly related to the ability of flexible hoses to supply lubricating oil, air, coolant, and fuel oil. Maintenance of hoses is an important step to ensure efficient, economical, and safe operation of the engine and related equipment.

Pre-starting inspection

Check hoses daily as part of the pre-starting inspection. Inspect hoses for leaks, and check all fittings, clamps, and ties carefully. Ensure that hoses are not resting on or touching shafts, couplings, heated surfaces including exhaust manifolds, any sharp edges, or other obviously damaging areas. Since any machinery vibrates and moves to a certain extent, clamps and ties can fatigue with time. To ensure proper support, inspect fasteners frequently and tighten or replace them as necessary.

Leaks

Investigate leaks immediately to determine if fittings have loosened or cracked, and also if hoses have ruptured or worn through. Take corrective action immediately. Leaks are not only potentially detrimental to machine operation, but can also result in added expenses caused by the need to replace lost fluids.

WARNING: Personal injury and/or property damage may result from fire due to the leakage of flammable fluids, such as fuel or lubricating oil.

Service life

A hose has a limited service life which is controlled by many factors. With this in mind, it is recommended that all hoses be thoroughly inspected annually. Look for surface damage or indications of twisted, worn, crimped, brittled, cracked, or leaking lines. Hoses having the outer surface worn through or a damaged metal reinforcement should be considered unfit for further service.

It is also recommended that all hoses in this vehicle be replaced during major overhaul and/or after a maximum of five service years. Replacement hose assemblies should always be at least equal to the O.E.M. equipment.

LUBRICATION

Lubrication intervals are based on recommendations for normal operating conditions. Where more severe service is encountered, more frequent attention will be required.

FIRST SERVICE ON NEW VEHICLE

Engine oil

Since engine break-in is done in factory, no preliminary oil change has to be done. Oil and filter change should be done every 10,000 miles (16 000 km).

Differential and manual transmission oil

Factory-filled oil in differential and manual transmission on new vehicle should be drained and refilled after 1,000 miles (1 600 km) and no more than 3,000 miles (5 000 km) of initial operation. Consequently, drain according to the break-in period, then every year or 50,000 miles (80 000 km).

Automatic transmission oil filter

Replace cartridge after 5,000 miles (8 000 km), and then every 25,000 miles (40 000 km).

Coolant system strainer

The coolant strainer is designed to recover the soldering residues trapped inside the coolant lines during their initial assembly; perform initial cleaning once vehicle has run approximately 3,000 miles (5 000 km), then every 50,000 miles (80 000 km).

NOTE: If additional soldering has been performed on any point of coolant piping, clean coolant system strainer as outlined on new vehicle (3,000 miles (5 000 km)).

OWNER ASSISTANCE

If you need assistance, proceed as follows:

1. Refer to the "SERVICE CENTER DIRECTORY" supplied with your vehicle.

2. Discuss the matter with the nearest PREVOST CAR INC. distribution center SERVICE DEPARTMENT PERSONNEL.

3. If your problem remains unsolved, contact your nearest PREVOST CAR INC. SERVICE REPRESENTATIVE at the following numbers:

WESTERN USA

(310) 325-6643

(800) 421-9958

CANADA

(418) 883-3391

Customer service

EASTERN USA

(201) 933-3900

(800) 223-0830 (United States only)

- Should you still not be satisfied, feel free to contact the SERVICE MANAGER at PREVOST CAR INC. (418) 883-3391

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SERVICE LITERATURE

Additional copies of the following service literature are available on request and at low cost. These will be helpful to your mechanics and drivers.

- **Maintenance Manual**
- **Operator's Manual**
- **Parts Manual**
- **Service Center Directory**

To order the desired manual(s), please contact your local distributor or write to:

PRÉVOST CAR INC.
ATT.: TECHNICAL PUBLICATIONS DEPARTMENT
Sainte-Claire, Québec
Canada
GOR 2VO

Specify the complete vehicle serial number. Allow 30 days for delivery.

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