

PREVOST

XL Series Motorcoach *TABLE OF CONTENTS*

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Controls/Instruments

KEYS

Depending on optional equipment, up to nine (9) different key models may have been supplied with your vehicle. They are used as described below:

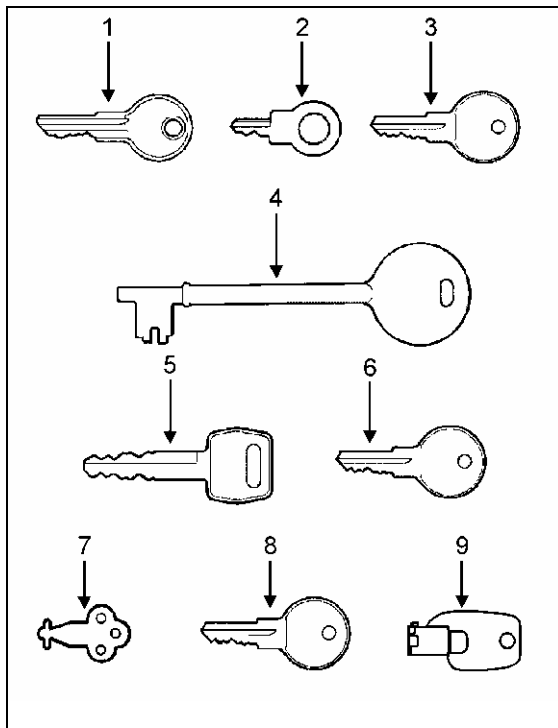


FIGURE 1
23014A

1. Ignition switch.
 2. Tachograph.
 3. Towel dispenser.
 4. Lavatory door lock.
 5. Entrance door lock.
Baggage compartments door lock.
Front electric compartment door lock.
Steering compartment door lock.
Rear service compartments door lock (XL-45 only).
Main power compartment (XL-45 only).
- NOTE:** *Baggage doors can also be remotely locked/unlocked using the Central Locking System Switch, located on L.H. Side Control Panel.*
6. Video system compartment door lock.
 7. Toilet tissue dispenser.
 8. Moist towel dispenser.
 9. Video monitor lock.

NOTE: *For added security, record the key numbers and keep this information in a safe place. Do not keep these records inside vehicle. It is also advisable to deposit a duplicate of each key in a safe place, so they can be obtained without difficulty in case of an emergency or loss.*

MAIN BATTERY DISCONNECT SWITCH

XL-40

The manual switch which connects or disconnects both the 12 and 24 volt systems is located next to the R.H. Side Rear Baggage Compartment door.

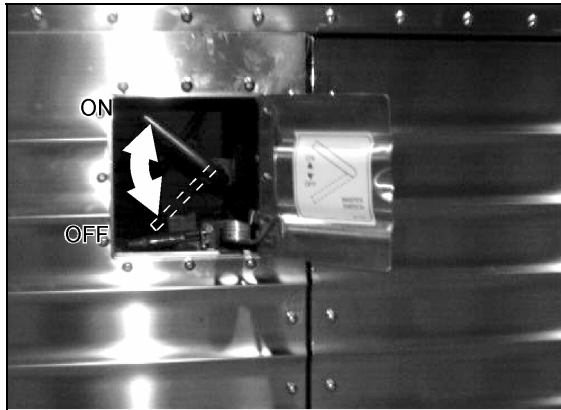


FIGURE 2

06047

XL-45

The toggle switch which disconnects both the 12 and 24 volt systems is located on the back wall of the Main Power Compartment. Use this switch for maintenance purposes only. The remote battery master switch which also disconnects both 12 and 24 volt systems is located on the L.H. lower switch panel (see item #2 on page 2-14).



FIGURE 3

06102A

CAUTION: When the vehicle is parked overnight or for an extended period of time, the main battery disconnect switch (XL-40) or the battery master switch (XL-45) (see page 2-14) should be set to the "OFF" position in order to avoid battery voltage imbalance.

NOTE: When the battery disconnect switch (XL-40) or the battery master switch (XL-45) is set to the "OFF" position, the electrical supply from the batteries is cut off, with the exception of the Fire Detection System, the Engine & Transmission Electronic Controls, the Auxiliary Heating System, the Battery Equalizers and the Digital Clock(s).

FUEL TANK FILLING

On XL-40 vehicles, the fuel filler neck is accessible by opening a small door located amidships on the R.H. side of the vehicle. On XL-45 vehicles, each of the two fuel filler necks is accessible by opening a small door located amidships on either the R.H. or L.H. side of the vehicle.



FIGURE 4

18013A

NOTE: Provided vehicle is parked level, an automatic nozzle will shut off when tank is filled to approximately 95% capacity.

CAUTION: Do not fill to more than 95% of fuel tank capacity. Do not "top off" the tank; doing so may result in fuel spillage when the fuel expands.

CONTROLS AND INSTRUMENT PANELS

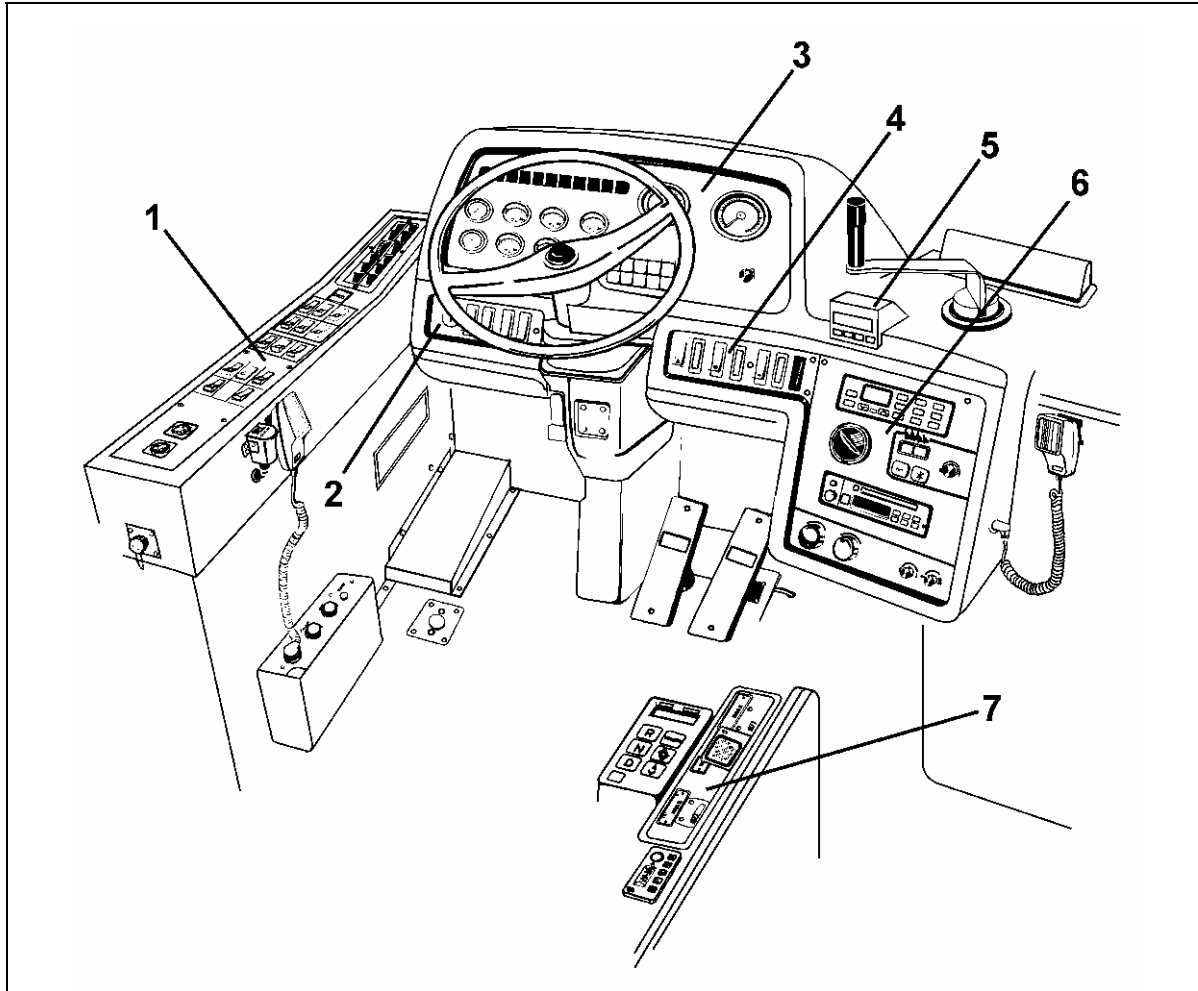


FIGURE 5
18114A

No.	Panel	Pg.	No.	Panel	Pg.
1	L.H. Side Control Panel	2-4	5	Detroit Diesel PRODRIVER™ Controls	2-20
2	L.H. Lower Switch Panel	2-14	6	R.H. Console	2-15
3	Dashboard (without Tachograph) Dashboard (with Tachograph)	2-7 2-8	7	R.H. Lateral Console	2-22
4	R.H. Lower Switch Panel	2-15			

L.H. Side Control Panel

1. Adjustable louver

The louver is manually adjustable, so the heated or cooled air flow can be directed towards driver or side window.

2. Cruise control switches (see page 2-5)

3. Baggage door lock (Optional)

Push up rocker switch to unlock the baggage doors and push down to lock. For additional information see page 2-38 under heading "Baggage compartment".

4. Transmission retarder (Optional) or **Engine retarder** (Optional) or **Blank**

Transmission retarder: Push down rocker switch to actuate transmission retarder. For system description, see page 4-4.

"Jacobs" engine retarder: Push down rocker switch to the first position to actuate system to 2/3 engine brake and press to the second position for a full application of engine brake. For system description, see page 4-3.

5. Destination sign

Push down rocker switch to energize the destination sign.

6. Exterior mirror heating switch

Push down rocker switch to operate the heating elements that clear frost, fog or thin ice from rear-view mirrors.

7. Stop/Service chime power switch

Push down rocker switch to power the chimes system (optional) which allows passenger operation of both the stop (disembarking) button and the service button. See page 2-44 for system description.

8. Driver's light switch (overhead lights)

Push down rocker switch to turn on the two (2) ceiling lights above driver. These lights are frequently used for nighttime operation when passengers board or leave the coach.

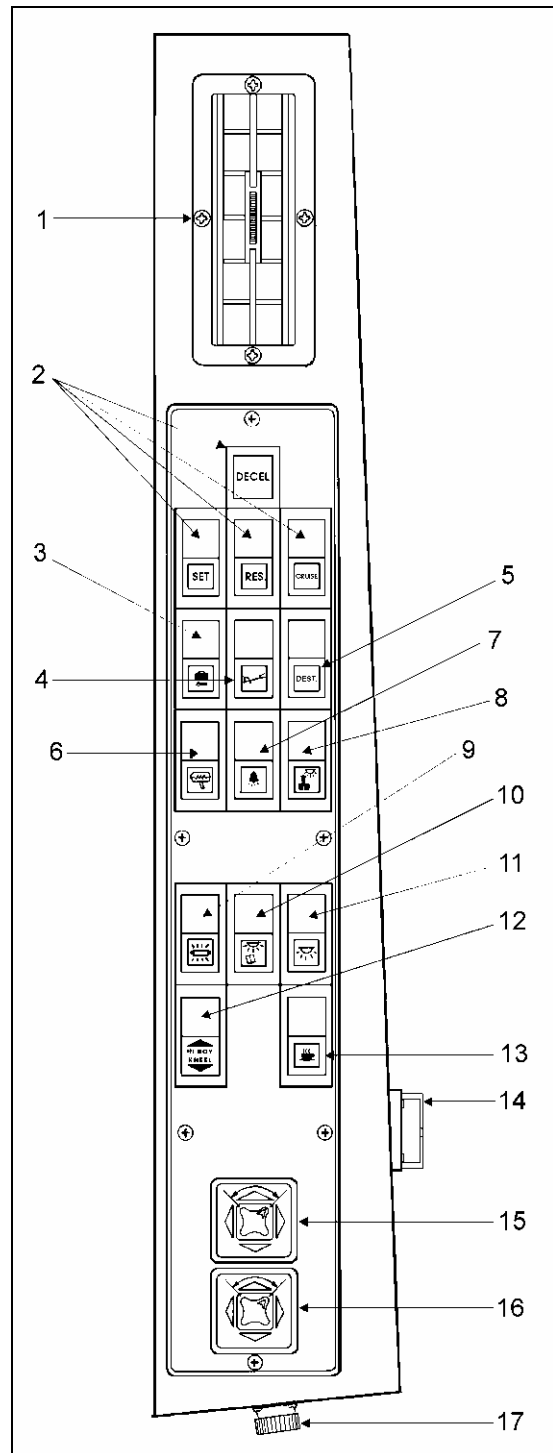


FIGURE 6: L.H. SIDE CONTROL PANEL

18108A

9. 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.

10. Reading lamps

Reading lamps are controlled by two (2) different switches. Push down this rocker switch to energize the whole reading lamp circuit. Individual lamps can then be activated by each passenger using the switch incorporated in lamp body. Reading lamps are mounted under parcel racks.

11. Dome lights

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

12. Kneeling/Hi-Buoy control switch (Optional)

Kneeling: Momentarily push down rocker switch to lower the front end of coach 4 inches (100 mm), and up to return the coach to normal driving height. See page 3-3 for system description.

Hi-Buoy: Push up and hold rocker switch to raise the front end of the coach or both front and rear ends (depending on option) 4 inches (100 mm). Release the rocker switch to return the coach to normal driving height. See page 3-3 for system description.

13. Galley power switch (Optional)

Push down rocker switch to energize the galley's electrical circuit.

14. Microphone jack

Driver's P.A. system microphone jack (see page 2-18 for details).

15. L.H. outside mirror control (Optional)

Turn pointer knob to the left for mirror head adjustments and to the right for convex mirror adjustments, then push down on either of the button's four (4) sides to adjust the selected mirror's viewing angle.

NOTE: If the mirror assemblies on your vehicle do not include convex mirrors, only one (1) "Outside Mirror Control" will be installed for both mirrors (replacing items 15 & 16).

To operate, turn pointer knob to the left for L.H. mirror adjustments and to the right for R.H. mirror adjustments, then push down on either of the four (4) sides to adjust the selected mirror's viewing angle.

16. R.H. outside mirror control (Optional)

Turn pointer knob to the left for mirror head adjustments and to the right for convex mirror adjustments, then push down on either of the button's four (4) sides to adjust the selected mirror's viewing angle.

17. Diagnostic data reader connector

Datalink for DDEC 3, WT World Transmission and ABS brakes.

CRUISE CONTROL

Introduction

The cruise control is an automatic speed control system that allows you to maintain a constant cruising speed above 20 m.p.h. (32 km/h) without depressing the accelerator pedal. The four (4) control switches are located on the L.H. side control panel (see page 2-4, items #2).

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 windy, 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, momentarily press and release the "SET" switch, and 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 20 m.p.h. (32 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.

decrease or increase in speed (respectively) of 0.6 m.p.h. (1.0 km/h) for every touch.

NOTE: *When driving with cruise control in operation, 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 set speed.*

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 applying the brakes, or
 - b) momentarily depressing 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 20 m.p.h. (32 km/h). The cruise control is completely shut off and the speed memory is lost when turning off the "CRUISE" rocker switch.

NOTE: *Cruise control is inoperative when speed drops below 20 m.p.h. (32 km/h), therefore the setting instructions must be repeated if vehicle speed drops below this mark. When the cruise control system is canceled, objectionable vehicle motions are minimized by lightly depressing accelerator, before disengaging cruise control.*

WARNING: *It is important to know that toggling the "SET" or the "RESUME" switch will result in a*

Dashboard (without Tachograph)

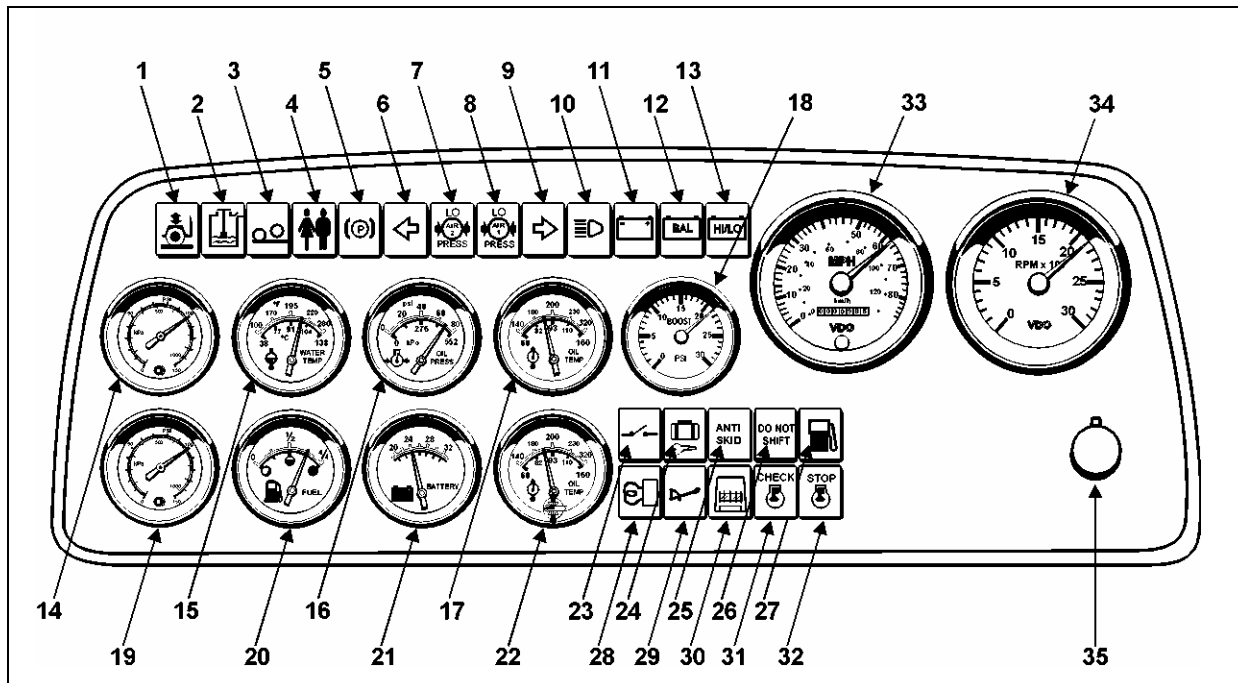


FIGURE 7

18113A

- | | |
|---|---|
| 01.....Kneeling/Hi-buoy, or Low Buoy, or High Buoy (All Optional), or Blank | 19..... Primary air pressure gauge |
| 02..... Water separator (Optional), or Blank | 20.....Fuel gauge |
| 03..... Tag axle unloading, or Retractable tag axle (Optional) | 21..... Voltmeter |
| 04..... Lavatory door lock | 22..... Differential oil temperature gauge (Optional), or Blank |
| 05..... Parking brake | 23..... Electrical systems (XL-45 only), or Blank |
| 06.....L.H. turn signal - Hazard | 24..... Baggage compartment door lock (Optional), or Blank |
| 07..... Low secondary air pressure | 25..... Antilock braking system (Optional), or Blank |
| 08..... Low primary air pressure | 26..... Transmission "DO NOT SHIFT" light |
| 09..... R.H. turn signal - Hazard | 27..... Low fuel level (Optional), or Blank |
| 10..... High beams | 28..... Preheating system (Optional), or Blank |
| 11..... Battery | 29..... Output retarder (Optional), or Blank |
| 12..... Battery balance | 30..... Brake light |
| 13..... High or low battery voltage | 31..... Check engine |
| 14..... Secondary air pressure gauge | 32..... Stop engine |
| 15..... Engine coolant temperature gauge | 33..... Speedometer-Odometer |
| 16..... Engine oil pressure gauge | 34..... Tachometer |
| 17..... Transmission oil temperature gauge (Optional), or Blank | 35..... Instrument and switch brightness control |
| 18..... Turbo boost pressure gauge (Optional), or Blank | |

Dashboard (with Tachograph)

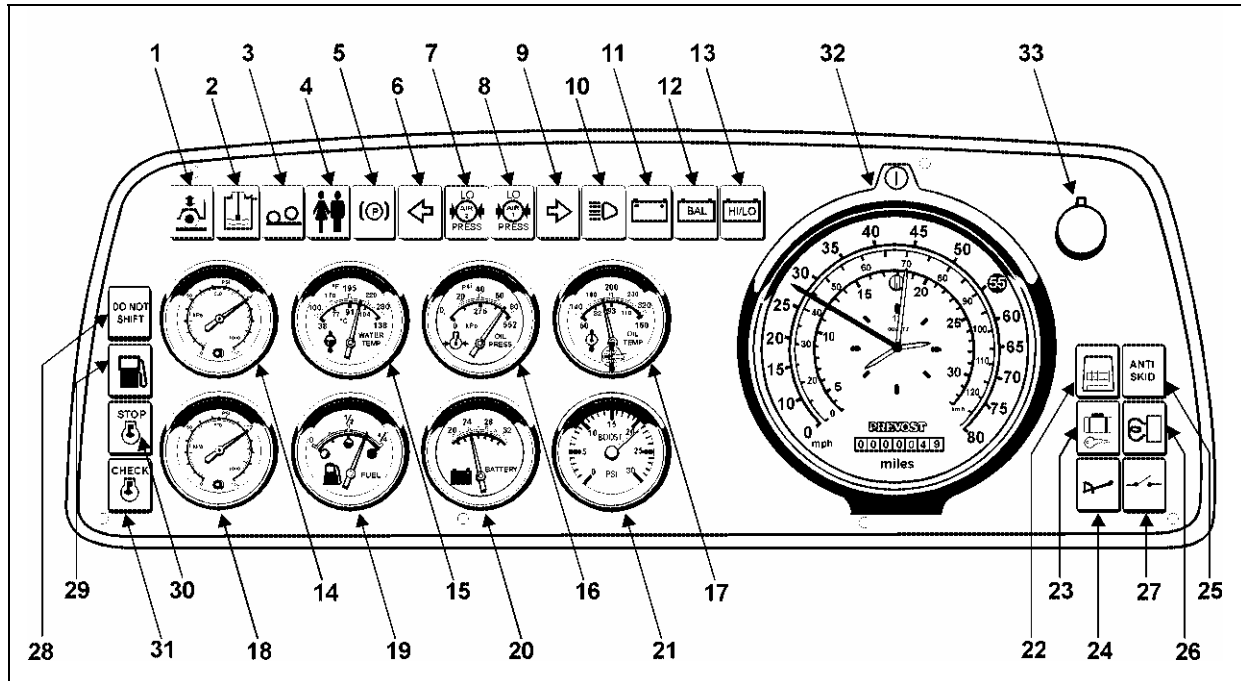


FIGURE 8

18112A

- | | |
|---|--|
| 01.....Kneeling/Hi-buoy, or Low Buoy, or High Buoy (All Optional), or Blank | 19.....Fuel gauge |
| 02.....Water separator (Optional), or Blank | 20.....Voltmeter |
| 03.....Tag axle unloading, or Retractable tag axle (Optional) | 21.....Turbo boost pressure, differential oil temperature gauge (Optional), or Blank |
| 04.....Lavatory door lock | 22.....Brake light |
| 05.....Parking brake | 23.....Baggage compartment door lock (Optional), or Blank |
| 06.....L.H. turn signal - Hazard | 24.....Output retarder (Optional), or Blank |
| 07.....Low secondary air pressure | 25.....Antilock braking system (Optional), or Blank |
| 08.....Low primary air pressure | 26.....Preheating system (Optional), or Blank |
| 09.....R.H. turn signal - Hazard | 27.....Electrical systems (XL-45 only), or Blank |
| 10.....High beams | 28.....Transmission "DO NOT SHIFT" light |
| 11.....Battery | 29.....Low fuel level (Optional), or Blank |
| 12.....Battery balance | 30.....Stop engine |
| 13.....High or low battery voltage | 31.....Check engine |
| 14.....Secondary air pressure gauge | 32.....Tachograph (Optional) |
| 15.....Engine coolant temperature gauge | 33.....Instrument and switch brightness control |
| 16.....Engine oil pressure gauge | |
| 17.....Transmission oil temperature gauge (Optional), or Blank | |
| 18.....Primary air pressure gauge | |

Dashboard indicator/warning lights and instruments



Kneeling/Hi-buoy (Optional), or **Low Buoy** (Optional), or **High Buoy** (Optional)

Lights when either of the three (3) Optional Suspension Systems is operating. See page 2-5 for Kneeling/Hi-buoy and High Buoy system descriptions and page 2-23 for Low Buoy.



Water separator (Optional)

Lights when the accumulated water in the diesel fuel filter/water separator should be drained (see page 6-7).



Tag axle unloading (Standard), or **Retractable tag axle** (Optional)

Depending on which system was installed on your coach, the indicator light will illuminate when the tag axle is unloaded or retracted. Furthermore, an alarm will sound, telling the driver that the axle is unloaded/retracted. See pages 2-23 & 4-21 for both system descriptions.



Lavatory door lock

Illuminates when the lavatory door is locked.



Parking brake

Lights when parking brake is applied (see page 2-23).



L.H. turn signal - Hazard

Flashes when L.H. turn signal is selected with multifunction lever or when hazard switch is turned on. (When hazard switch is turned on both L.H. and R.H. turn signals will flash.)



Low primary air pressure

Lights when air pressure in primary system is too low. For System information, see "BRAKES" on page 3-1.



Low secondary air pressure

Lights when air pressure in secondary system is too low. For System information, see "BRAKES" on page 3-1.



R.H. turn signal - Hazard

Flashes when R.H. turn signal is selected with multifunction lever or when hazard switch is turned on. (When hazard switch is turned on both L.H. and R.H. turn signals will flash.)



High beams

Lights when headlight high beams are selected.



Battery

Lights when alternator is not functioning properly.



Battery balance

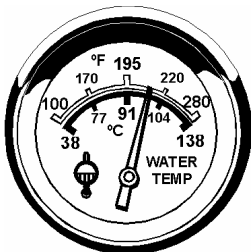
Lights when batteries are out of balance.

NOTE: Before seeking assistance, check that the demand for the 12 volt power is not exceeding rated amperage output of battery equalizer(s), and also check circuit breaker on battery equalizer(s) (for location, see page 4-17). Allow at least 15 minutes to balance batteries after corrective measures have been taken.



High or low battery voltage

Lights when battery voltage exceeds 30 volts or drops below 24 volts.



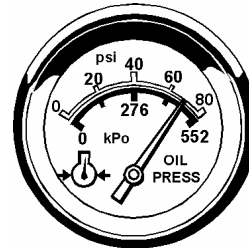
Engine coolant temperature gauge

Indicates engine coolant temperature. Normal reading should vary from 190 to 215°F (88 to 102° C).

In extremely hot weather and high altitude, the coolant temperature can reach 215°F (102°C) and more when climbing a long grade at full throttle. If this situation occurs, the "check engine" light will come on (at 217°F - 103°C) and the engine overtemperature protection system (EOP) will be activated. If the cooling system is properly maintained, the temperature should stabilize below the shut back temperature of

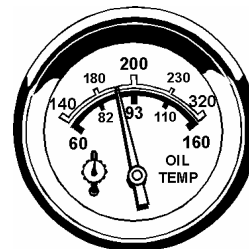
222°F (106°C) so the vehicle can operate normally. See also item # 31 on page 2-7.

NOTE: Engine is not considered "overheating" when below 215°F (102 °C).



Oil pressure gauge

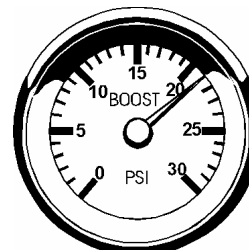
Indicates engine oil pressure. Normal reading at operating temperature should vary from 50 to 70 psi (345 to 483 Kpa) at cruising speed.



Transmission oil temperature gauge (Optional)

Indicates transmission oil temperature. Normal reading can vary from 160 to 250°F (70 to 120°C).

NOTE: On vehicles equipped with a transmission retarder, the temperature may rise to a maximum of 330°F (165°C) if operated for extended periods.

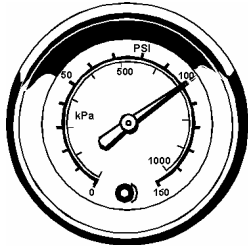


Turbo boost pressure gauge (Optional)

Indicates turbo boost pressure in psi. Reading depends on engine rpm and load conditions. It is

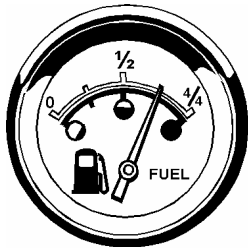
normal that pressure reaches the gauge's maximum level.

NOTE: If the "Differential oil temperature gauge" is not a chosen option on your vehicle, then "Turbo boost pressure gauge" will be located in its position.



Primary and secondary air pressure gauges (Brakes)

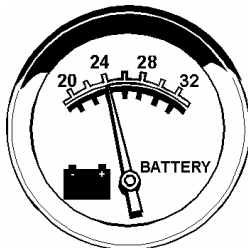
Indicate air pressure in the primary and secondary systems. Normal readings vary from 95 to 125 psi (655 to 860 Kpa).



Fuel gauge

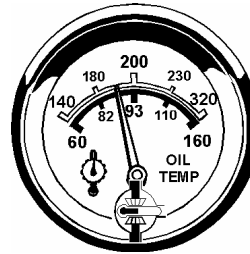
Indicates the amount of fuel remaining in the fuel tank. If your vehicle has an optional auxiliary tank, the gauge will show the total fuel level, as the tanks are interconnected.

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



Voltmeter

Indicates electrical system voltage. With engine operating, normal reading should be 27.5 volts.



Differential oil temperature gauge (Optional)

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

NOTE: If "Differential oil temperature gauge" is not a chosen option on your vehicle, then "Turbo boost pressure gauge" will be located in this position if it is a selected option.



Electrical systems indicator (XL-45), Dummy (XL-40)

Illuminates if the battery master switch (located on L.H. Lower Control Panel - see page 2-14) is left "ON" when ignition switch is turned "OFF".



Baggage compartment door lock indicator (Optional)

Will light if any one or several of the baggage compartment doors are unlocked.



Antilock braking system (Optional)

Lights until vehicle speed reaches 4 mph (7 km/h), and when the antilock braking system is malfunctioning.



Transmission "DO NOT SHIFT" light

See page 4-5 for description.



Low fuel level

XL-40 vehicles:

Lights when approximately 12 U.S. gallons (45 liters) of fuel remains in the tank.

It is recommended that you do not exceed a distance of 75 miles (120 km) after light has turned on. Light will illuminate "ON" & "OFF" just before running out of fuel. Fill tank as soon as possible.

XL-45 vehicles:

Lights when approximately 17 U.S. gallons (64 liters) of fuel remains in the tank.

It is recommended that you do not exceed a distance of 100 miles (160 km) after light has turned on. Light will illuminate "ON" & "OFF" just before running out of fuel. Fill tank as soon as possible.



Preheating system (Optional)

Lights when preheating system is turned on. For systems description, see pages 4-13 & 4-14.



Output retarder (Optional)

Lights when transmission's output retarder is activated. For system description, see page 4-4.



Brake light

Lights when brakes are activated.



Check engine

Will light if a minor engine malfunction is detected by the DDEC (Detroit Diesel Electronic Control) system. This includes any situation where the engine coolant reaches 217°F (103°C) because of cooling system problems or because of situations described on page 2-10 (Engine coolant temperature gauge). This light will remain illuminated until malfunction is corrected. Furthermore, this indicator flashes to indicate engine malfunction codes when the required procedure outlined on page 5-12 has been performed.

NOTE: As a light bulb and systems check, this indicator will illuminate when the ignition switch is turned "ON". After about five seconds the light will turn off.

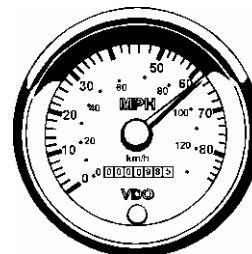


Stop engine

Will light when major engine problems occur. The engine power will automatically begin to decrease gradually and will be followed by an automatic shutdown after 30 seconds. This 30 second delay period may be repeated using the "Stop Engine Override Switch" outlined further on page 2-15 (item #5).

NOTE: Once engine is stopped, it cannot be restarted until malfunction is corrected.

As a light bulb and systems check, this indicator will illuminate when the ignition switch is turned "ON". After about five seconds the light will turn off.

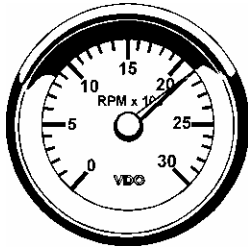


Speedometer-odometer

The speedometer indicates the vehicle speed. The odometer indicates the distance driven;

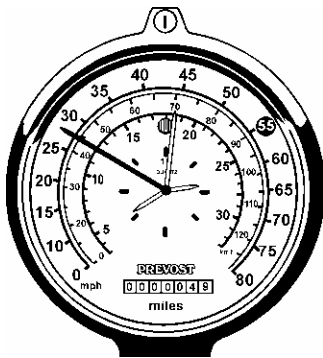
U.S. vehicles: Miles/Kilometers (Miles predominant)

Canadian vehicles: Kilometers/Miles (Kilometers predominant)



Tachometer

The tachometer indicates the operating speed of the engine in hundreds of revolutions per minute (RPM x 100). The tachometer serves as a guide for gear shifting, and helps prevent engine overspeeding when going downhill with the Jacobs engine brake operating. The maximum allowable engine speed is 2,450 rpm.



Tachograph (Optional)

Speedometer

Indicates coach speed in miles per hour (mph - US models) or Kilometers per hour (km/h - Can. models).

The speed-warning light, located in the lower section of the dial, is set by the adjusting screw

located in the left half of the tachograph body. The speed at which the warning occurs is displayed in a small window.

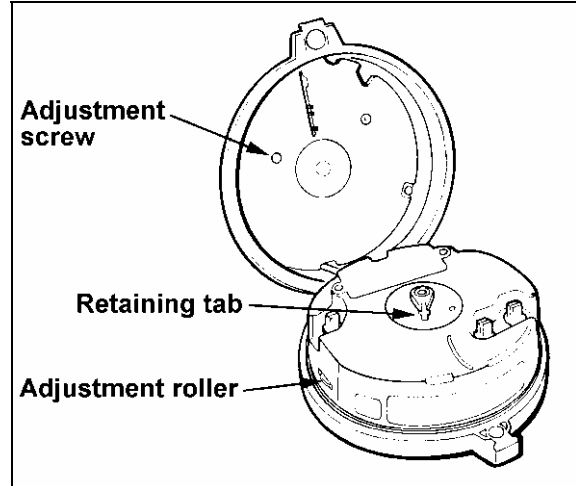


FIGURE 9

18115B

CAUTION: The Tachograph is factory programmed. Do not change dip-switch positions.

Odometer

The odometer registers the distance traveled either in miles (US models) or kilometers (Can. models).

Tachometer

Indicates the operating speed of the engine in hundreds of revolutions per minute (RPM x 100). The tachometer serves as a guide for gear shifting, and helps prevent engine overspeeding when going downhill with the Jacobs engine brake operating. The maximum allowable engine speed is 2,450 rpm.

Clock

The clock operates continuously, even if the main battery disconnect switches are set to the OFF position. To set the clock, open the tachograph cover using the key provided, and set the time using the thumb wheel on the L.H. side of the tachograph.

Diagram Chart

The diagram chart recording speedometer and tachometer data covers a 24-hour period. Open the tachograph cover using the key provided, then insert the diagram chart with the MPH or KM/H side facing up. Make sure the chart is correctly positioned on the drive boss before closing the cover.

CAUTION: To prevent damage to the mechanism, do not run the engine with a damaged diagram chart or without a diagram chart. Install a dummy plastic card (Prévoist part no. 590251) if the coach is operated without a diagram chart.

Instrument & switch brightness control

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

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

L.H. lower switch panel

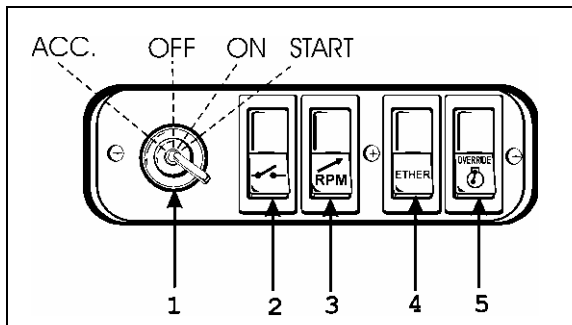


FIGURE 10

18116A

Switches

1. Ignition

The ignition switch has four (4) positions:

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

"OFF": Ignition is "OFF" and key can be removed.

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

"START": Starting position; spring-loaded ignition switch returns to "ON" position after starting. Ignition key must be returned to "OFF" position before trying to restart.

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

2. XL-40: Blank for additional switch.

2. XL-45: Battery master switch

Both the 12 volt and the 24 volt systems are activated by the master switch. The indicator light (located on dashboard - see page 2-7, item #23) will illuminate if switch is left "ON" when ignition switch is turned "OFF".

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

NOTE: When battery master switch is set to the "OFF" position, the electrical supply from the batteries is cut off, with the exception of the Fire Detection System, the Prodriver™, the Engine & Transmission Electronic Controls, the Auxiliary Heating System, the Battery Equalizer and the Tachograph power supply.

3. Fast idle

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

CAUTION: Idling produces sulfuric acid which breaks down the oil and eats into bearings, rings, valve stems and engine surfaces. If you must idle the engine, the high idle function should be used.

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 the neutral position. If engine is stopped with the fast idle

switch in the "ON" position, this control will automatically be canceled when restarting the engine; the driver must then shut off, and reset rocker switch to reactuate fast idle. Fast idle should be reduced to low idle before shutting off engine.

4. Ether cold starting aid (Optional) or Blank

Activates ether cold starting device in engine compartment (see "Cold weather starting" page 4-7).

5. "Stop Engine" override

Push down rocker switch to reset the 30 second delay period and the shutdown procedure. This switch can be repeatedly depressed, i.e. **one (1) pulse is sufficient for each 30 second period**, for engine power in an emergency situation.

NOTE: The stop engine override switch will be operative only if it has been depressed before the end of the 30 second delay period.

CAUTION: The "Stop Engine" override must be used only in emergency situations to bring vehicle to a safe stop. Excessive use of this switch could cause serious damage to the engine.

2. Fog lights (Optional) or Blank

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

WARNING: Before removing protective covers, stop engine and apply parking brake.

3. Exterior lighting switch

Push down rocker switch to the first position to activate clearance, tail & marker lights and to the second position for headlights.

4. Blank for additional switch

5. Auxiliary A/C (Optional) or Blank

Push down rocker switch to activate auxiliary A/C system (see page 4-13, item #9).

6. Blank for additional switch

7. Blank for additional switch

R.H. lower switch panel

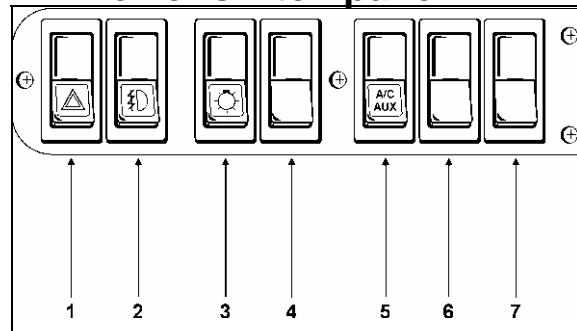


FIGURE 11

18021C

Switches

1. Hazard flashers

Push down rocker switch and all turn signal lights will flash simultaneously. Turn signal indicator lights in dashboard will also flash.

R.H. console

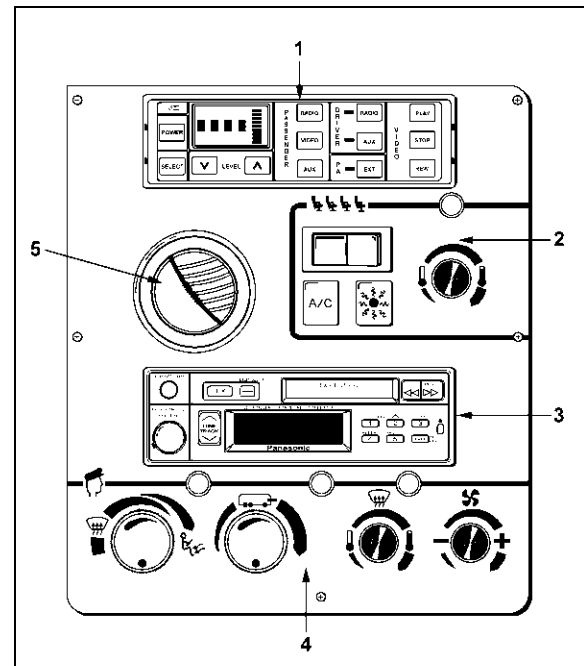


FIGURE 12

18111A

1. Audio/Video control unit

The control unit is used to control audio and video in the coach.

For more information refer to the Audio/Video Control Unit section below.

2. Central A/C - heating system controls

These controls are used to obtain desired temperature inside vehicle. For system description see page 4-11.

3. AM/FM stereo cassette receiver with CD changer remote

Instructions for proper utilization of AM/FM stereo unit are included in the technical publications package supplied with the coach.

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

These controls are used to obtain desired temperature in driver's area. For system description see page 4-12.

5. Adjustable louver

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

NOTE: An additional adjustable louver is located on L.H. side control panel to defrost window. A third adjustable louver is located at extreme right of dashboard and can be used to concentrate warm air on windshield area used to view exterior R.H. side mirror.

AUDIO/VIDEO CONTROL UNIT

The control unit allows the driver to control up to three audio selections. The unit also contains a video section for controlling the video cassette player (VCP).

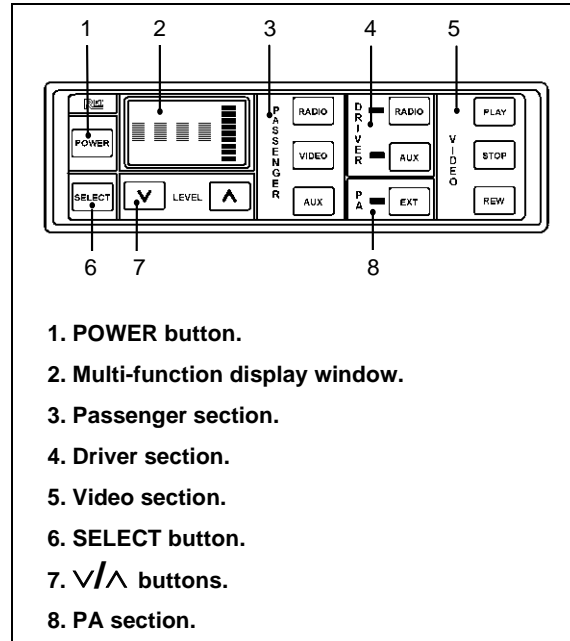


FIGURE 13

23112

- 1. POWER button.
- 2. Multi-function display window.
- 3. Passenger section.
- 4. Driver section.
- 5. Video section.
- 6. SELECT button.
- 7. V/^ buttons.
- 8. PA section.

1. Adjusting the sound

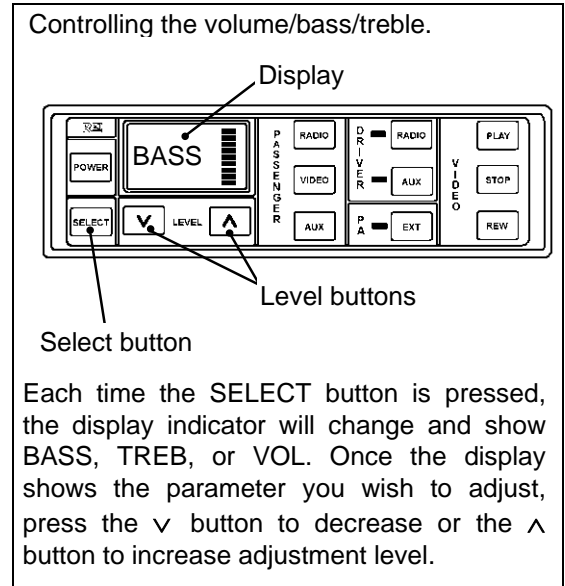


FIGURE 14

23113

2. Controlling the Passenger Section

The three buttons (RADIO, VIDEO, and AUX) in the PASSENGER section are used to control what audio input is being sent to the passenger's speakers. The display will indicate the current selection. If the current selection button is pressed again, the passenger's audio will be muted. The display will indicate this by alternately displaying the current selection and MUTE. The audio will be restored if any of the level controls are activated or the Passenger Selection buttons are pressed again. See figure 16 for the functions of the buttons in the passenger section.

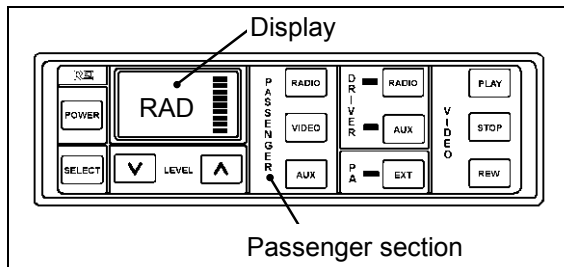


FIGURE 15 23114

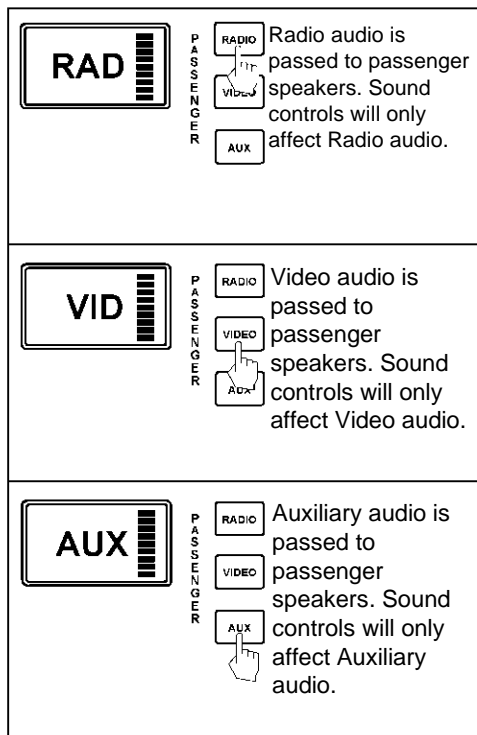


FIGURE 16 23115

3. Controlling the Video Section

Once the VIDEO button is pressed, the video system goes into a ten second delay. This is to allow the VCP time to position the tape. This is indicated by the display flashing VID on and off. During this time, there will be no passenger audio. If a video function button is pressed during this time, the command will be retained and performed after the delay is complete.

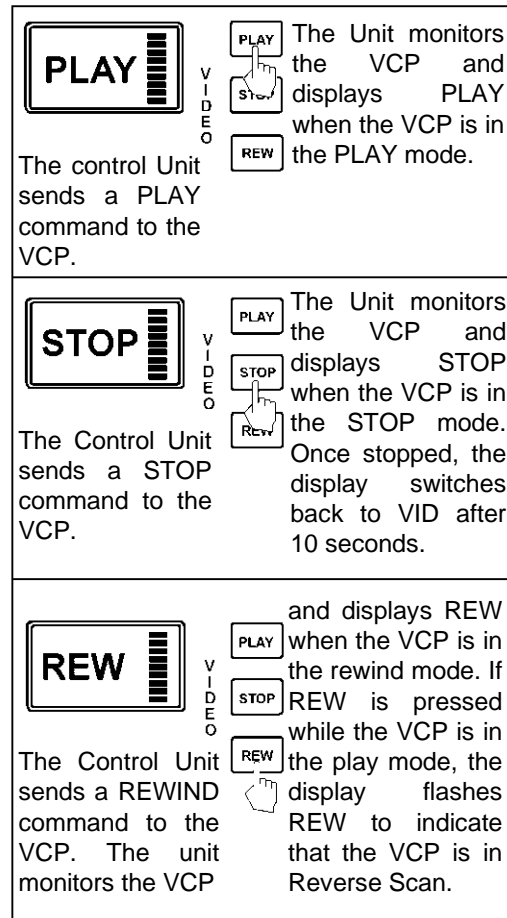


FIGURE 17 23116

4. Controlling the Driver Section

The driver may select between the radio or the auxiliary audio. The current selection is indicated by the LED next to the button. Pressing the active button a second time will mute the driver's audio. To restore the driver's audio, press the desired driver's selection button. The driver's sound is

controlled by the Volume and Tone controls on the front of the radio. These controls have no effect on the passengers audio. The radio must be in the "On" position in order to have radio audio available for either the passengers or the driver.

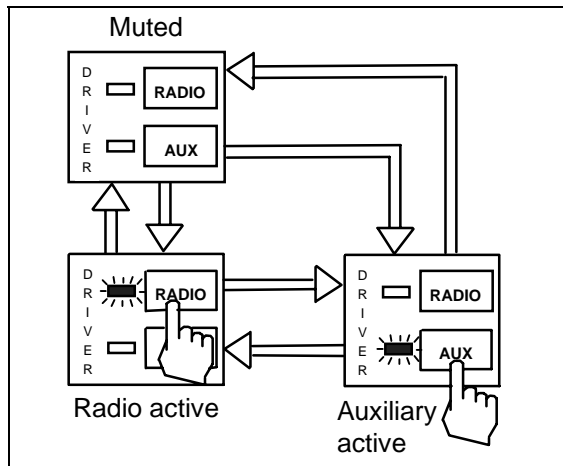


FIGURE 18

5. Controlling the PA Section

The external speaker option (EXT) of the PA section is not used as only internal speakers are installed at the factory.

**PUBLIC ADDRESS (P.A.)
Microphone jacks**

There are two (2) standard PA system microphone jacks installed on vehicle; one just below driver's L.H. side control panel and the other on central console. Five (5) optional microphone jacks can be installed in the following locations:

- One on back of modesty panel.
- One on back of driver's guard.
- One on R.H. lateral panel.
- One on lavatory's exterior front wall.
- One on parcel rack of owner's choice.

Whenever any of the microphone inputs are activated, the control unit switches over to the PA mode. The PA has priority over all the other

selections. When activated, all other audio is muted and the radio cassette player is stopped. The PA system may be activated even when the control unit's Power button is not activated. When this is done, there is a short delay while the amplifier is powering up.

As an option, a wireless microphone (fig. 19) and receiver (fig. 20) may also be installed. To operate the wireless microphone, simply slide the microphone power switch to the ON position and push in the receiver power switch.

The 9 volt battery of the microphone should be replaced if the battery-low indicator (LED) stays on when the power switch is at the ON position (if the battery is good, the indicator will only flash once as the switch is slid to the ON position.)

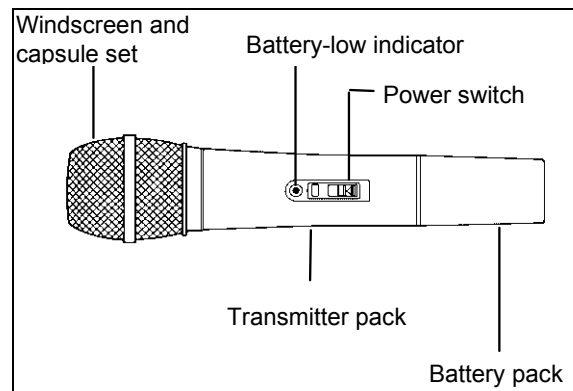


FIGURE 19: WIRELESS MICROPHONE

23119

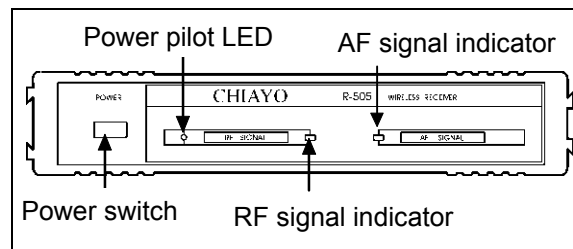


FIGURE 20

23120

The back-up PA system is provided in the event that the PA function of the control unit is not operating properly. Figure 21 shows the location of the back-up PA system.

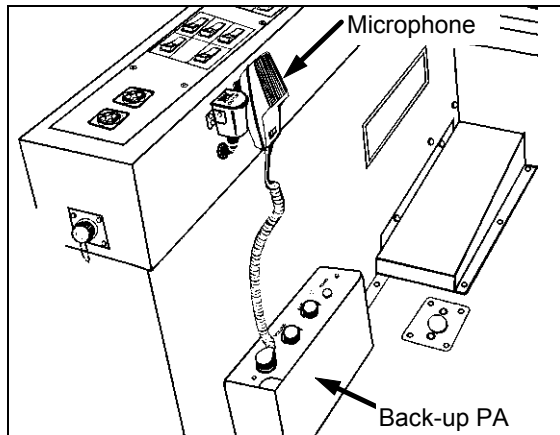


FIGURE 21 23121

Interphone (Optional)

Use the Interphone for communications between driver and host/hostess. Master receiver is located in driver's area and secondary receiver is installed on lavatory exterior front wall. To use system, simply unhook receiver and press button identified with an asterisk (*); buzzer will sound at other end.

VIDEO CASSETTE PLAYER

Activate all video system components by depressing the POWER and VIDEO buttons located on the Audio/video control unit mounted on R.H. console. The VCP can be operated from the control unit and VCP front panel.

NOTE: The video will not operate unless the control unit is energized and the VIDEO button depressed. After the audio/video control unit is energized, there is a ten second delay before the VCP and monitors power on.

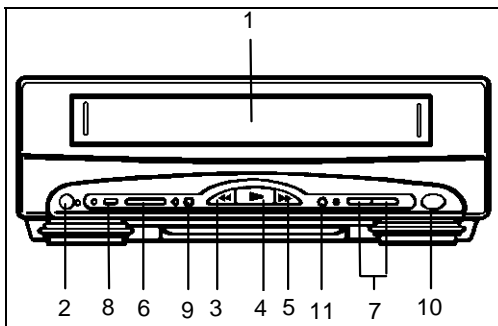


FIGURE 22 23117

1. Video Cassette Compartment

2. Power button

3. Rew (Rewind/Reverse Picture Search) button

Push to rewind the video tape. When a tape is playing, momentarily press to engage the reverse search mode.

4. Play button

Push to play the video tape. When auto tracking is working, the PLAY indicator light blinks.

5. FF (Fast forward/Forward Picture Search) button

Push to fast-forward the video tape. Push momentarily to engage the forward search mode.

6. Stop/Eject button

Push to stop video tape play.

7. Tracking Control Knob.

Use this control during playback to correct picture alignment.

8. Auto Repeat Button

Push this button to turn on the auto repeat feature. With this feature activated, the VCP automatically rewinds the tape and returns to the play mode. If this feature is not activated, the VCP rewinds and ejects the tape when the end of the tape is reached.

9. Record Button

10. Infrared Remote Sensor

Receives information from the infrared remote control.

11. Record Speed Button

TV TUNER

1. Power Button

Turns unit on or off.

2. Power Indicator

Dim light when power present but unit turned off. Bright light when unit is turned on.

3. Auto Programming Button

Press once to program tuner.

4. Channel Change Buttons.

Press once to change channel.

5. Infrared Sensor

Provided for optional remote control.

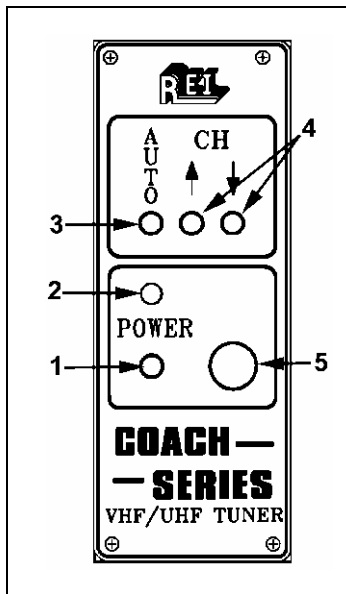


FIGURE 23 23118

Engine data display & computer - ProDriver™

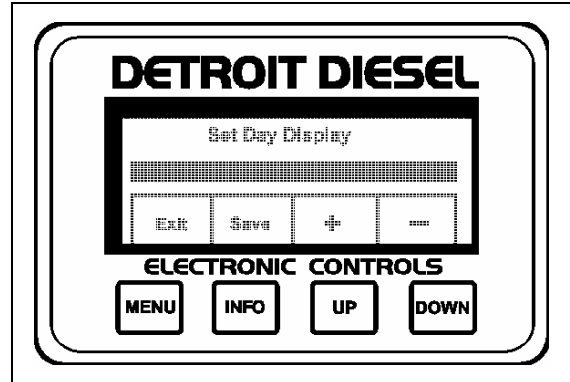


FIGURE 24 18034

ProDriver™ is a graphic device that displays and records operational data transmitted by the Detroit Diesel Electronic Controls (DDEC) on the diagnostic data link. It utilizes a vacuum fluorescent (VF) display for wide viewing angles and excellent visibility in all ambient light conditions.

ProDriver™ has many driver friendly features designed to provide instantaneous feedback to the driver. This allows him to understand the effect of his actions on engine and vehicle performance. There are two (2) display screens automatically shown, which offer real time feedback based on the vehicle activity. Should an alert message be sent out by the ECM, the driver will be shown what is wrong and how the engine power will change.

Data available from ProDriver™ includes:


- Instantaneous and average fuel economy
- Trip time, miles, fuel used, fuel economy, average speed
- Driving time, percentage, miles, fuel used, fuel economy
- Idle time, fuel and percentage
- Cruise time, percentage, miles, fuel used, fuel economy
- Top gear time, percentage, miles, fuel used, fuel economy
- VSG (Variable Speed Governor) time, fuel used, and percentage


- Overspeed time and percentage for two (2) speed thresholds
- Over-rev time and percentage
- Maximum vehicle speed and RPM
- Coasting time and percentage
- Automated oil change interval tracking
- Hard braking incident records
- Driver initiated incident records
- Stop and check engine code logs.
- Optimized Idle[™] active time, idle time, and estimated fuel savings
- J1587 data link timeouts and power interruptions
- Leg time, miles, fuel used, fuel economy, average speed, and cruise time and percentage
- Accident Incident Records.



ProDriver[™] - Quick Reference

NOTE: The following information is only for reference and does not attempt to teach how to operate the ProDriver[™]. You must refer to Detroit Diesel ProDriver[™] User Manual (6SE701 9511), for a full description on how to set up and operate your ProDriver[™] display.

Button functions

 Displays main menu or previous menu level.

 Displays selected menu options; saves new data.

 /  Move selection arrow up or down, or move from screen to screen when multiple screens are available

Button combinations

Press  and  at the same time to store an incident record.

Special button functions

Alternate labels are displayed along the bottom of the screen directly over each button when the buttons are used to perform special functions.

DISPLAY SCREENS

Idle time

Automatically displayed when engine is idling. Shows idle time for current leg of the trip and as a percentage of engine running time. A bar graph shows the idle percentage compared to the fleet goal.

Fuel economy

Automatically displayed when the vehicle is moving. Shows average fuel economy for current leg of the trip digitally and as a bar graph, with the fleet goal centered on the screen. Instantaneous economy is shown as a series of arrows. UP arrows show an improving leg average, while DOWN arrows show a decrease. The number of arrows shows the amount of change.

Warning screens

Speeding, over revving, excessive idling and oil change screens will be displayed until acknowledged by pressing any button or the condition ceases. The display will return to the screen previously shown.


Alert screens

Shown if a warning condition exists with the engine. Will be displayed until acknowledged by pressing any button.

NOTE: Menu displays are available only when the vehicle is stationary. The display may be viewed with the ignition OFF by pressing "MENU".

To edit the main menu at idle

IDLE SCREEN,  = MAIN MENU,

 = IDLE SCREEN.

To review leg summary information at idle

IDLE SCREEN, **INFO** = SUMMARY 1,
INFO = SUMMARY 2, **INFO** = IDLE SCREEN.

To review trip summary information at idle

IDLE SCREEN, **MENU** , → TRIP SUMMARY,
INFO = view trip summary page 1,
INFO or **DOWN** = view trip summary page 2.
 Continue to press **INFO** or **DOWN** to view all
 the trip summary pages.
MENU = Main Menu, or
MENU , **MENU** = Idle Screen

To review leg summary info while in motion

ECONOMY SCREEN, **INFO** = SUMMARY 1,
INFO = SUMMARY 2, **INFO** = ECONOMY
 SCREEN.

Display brightness

Temporary adjustments may be made while in
 the Fuel Economy, Idle or Leg Summary
 screens by pressing:



The normal setting returns the next time the
 engine is started.

Entering driver ID

From the Main Menu screen, →
 Configuration **INFO** , → Driver ID **INFO** ,
 Press **UP** to increment the selected digit.
 Press **DOWN** to select the next digit to the right.
 Press **INFO** to save the completed entry or
 press **MENU** to exit without saving changes.

R.H. LATERAL CONSOLE

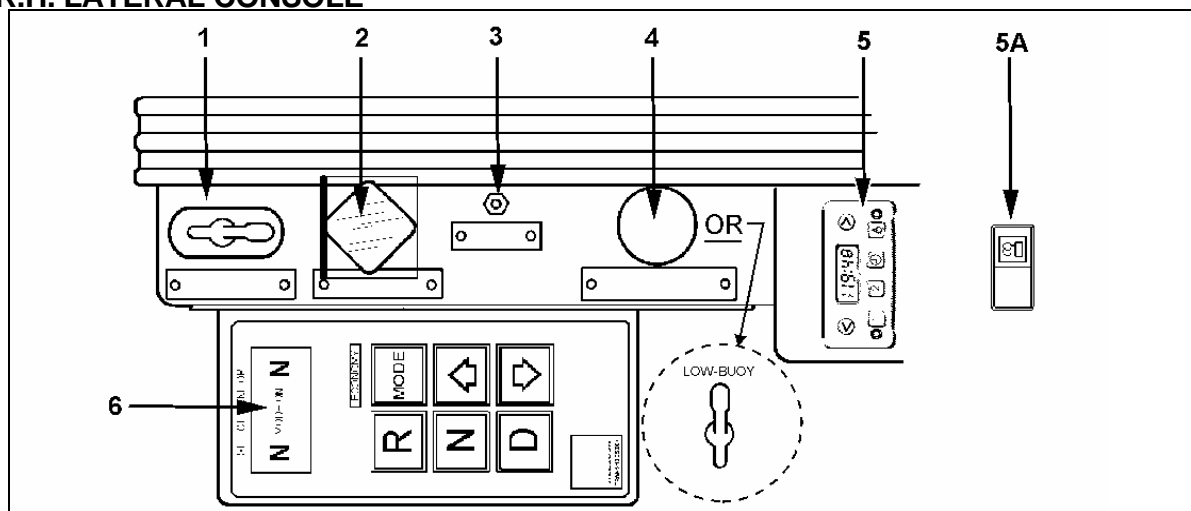


FIGURE 25

18117A

1. Tag axle unloaded or retractable

Vehicle can be fitted with either the standard tag axle unloaded system or the optional retractable tag axle system. When valve is switched to the "Wheels up" position, the tag axle air springs are unloaded (depleted) with the tag axle unloaded system or, tag axle is raised with the retractable tag axle system. For both systems' descriptions, see page 4-21.

2. Parking brake control

See "Combination emergency and parking brakes" on page 2-28.

3. Door override

In the event of a malfunction in the front entrance door air lock mechanism, press this button to release air lock (see page 3-4).

4. Parking brake override (Optional) or Low-Buoy (Optional)

Parking brake override: If during normal operation, primary system air pressure drops below 40 psi (276 kPa), spring-loaded parking brakes will automatically 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 (Parking brake override) which will allow driving the vehicle for a short period of time to a safe parking area. To operate, push and hold down the control knob with vehicle in motion.

Low-Buoy: Low-buoy option is used to lower the coach by approximately 4 inches (100 mm) when valve is positioned towards "LOW-BUOY". For system description, see page 3-3.

5. Auxiliary Preheating System Timer (Optional) (WEBASTO (shown) OR ESPAR)

See pages 2-46 & 2-47 for description of both heaters.

5A. Preheater switch

Push down rocker switch to turn "ON" Preheating system; supplementing Central Heating System when required. Preheater will turn "ON" and "OFF" automatically depending on coolant temperature.

6. Transmission push-button shifter

Use shifter to select forward, neutral or reverse gears of transmission. "AUTOMATIC TRANSMISSION" system operations are described hereafter.

AUTOMATIC TRANSMISSION

The operation and driving of this vehicle with an automatic transmission is similar to that of an automobile equipped with an 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.

Range selection - Push-button shifter

The push-button shifter is used by the operator to select Neutral (N), Reverse gear (R), or a range of forward gears. When a forward gear range has been selected, the transmission starts in the lowest gear of the range and, as conditions permit, automatically upshifts until the highest gear in the selected range is in use.

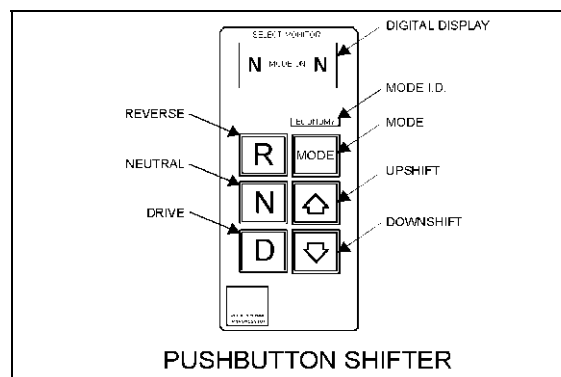


FIGURE 26

18015

The digital display indicates the readout of two (2) digits:

- SELECT** - Range of gears selected by the operator.
- MONITOR** - Current gear of transmission operation.

Each time a button is pressed on the shifter a short "beep" will be heard to identify that the ECU has received instructions to change operation. The function of each button is as follows:
Select **REVERSE** gear by pressing "R".

Select **NEUTRAL** by pressing "N". Note the raised edge around the "N" button so the driver can orient his hand to the push-buttons by touch, without looking at the display. It is not necessary to press this button prior to starting the vehicle.

Select **DRIVE** range by pressing "D". The highest forward gear will appear on the *SELECT* display and the transmission will shift to the starting gear as indicated on the *MONITOR* display.

The *UPSHIFT* and *DOWNSHIFT* (arrow) buttons are used to shift to a higher (if not in "D") or lower (if not in "1") range selected. One press changes the range selected by one range. If the button is pressed continuously, the range selected continues to change up or down until the button is released or until the highest or lowest possible range of gears is selected.

Function of the mode button

This button is used to invoke a special function (mode) that has been programmed into the ECU. The two most common modes are:

- ⌚ the "ECONOMY" mode which allows for more efficient operation of the transmission and thereby helps contribute to improve fuel economy. The mode status will be indicated on the digital display by lighting "MODE ON" when the function has been selected.
- ⌚ the "PERF" (performance) mode which allows for higher performance than the economy mode but with a higher fuel consumption. The mode status will be indicated on the digital display by lighting "MODE ON" when the function has been selected.

Shift schedule

PRIMARY - This shift schedule is used each time the vehicle is started. Typically, this is used for normal vehicle operation.

SECONDARY - This is an alternate shift schedule that the ECU may use upon request. Select the secondary shift schedule (*ECONOMY*) via the **MODE** button.

HOLD UPSHIFT - This shift schedule permits upshifts if an overspeed condition should occur by the transmission remaining in a lower range. These shifts occur at speeds higher than normal upshifts.

In most cases the control system logic protects the transmission from abuse. Such actions as full throttle neutral-to-range shifts and high speed direction changes are inhibited.

Operation

When a push-button pad is depressed, a beep sounds and the pad lights up indicating the transmission is ready to operate in the selected range. When the electronic control system detects a serious problem in the transmission, a buzzing tone sounds for 5 seconds, and the "DO NOT SHIFT" light on the dashboard (see page 2-11) illuminates 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.

NOTE: As a light bulb and systems check, the "DO NOT SHIFT" light will illuminate when the ignition switch is turned "ON". After about two seconds the light will turn off. If the "DO NOT SHIFT" light remains on, the self-diagnostic system has detected a problem. If the problem disappears, the light will go out, but a trouble code will remain stored in the ECU.

A) Reverse (R)

Use this position to back up vehicle. Stop completely before shifting from forward to reverse or from reverse to forward. Touch the reverse (R) pad, the pad will light up and the reverse warning signal will be activated.

B) Neutral (N)

Use this position to start engine. Select neutral (N) when checking vehicle accessories, and for extended periods of engine idle operation; parking brake must then be applied. The pushbutton shifter will automatically select neutral when the master switch is turned on.

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

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

Do not allow your vehicle to "coast" in Neutral. This practice can result in transmission damage. Also, no engine braking is available in Neutral.

C) Drive (D)

Use this position for all normal driving conditions. After touching this pad, 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. If a locked brake or a slick surface condition should occur, 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: *The transmission should normally be allowed to shift itself, but manual shifting can be used as described below.*

D) Fourth (4) and Third (3) ranges

Select these ranges when driving on moderate grades, or when load and traffic conditions require the use of limited speed.

E) Second (2) range

Select this range when operating in heavy and congested traffic. The transmission will start in first and automatically upshift to 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(*) and retarder(*) braking effect).

F) First (1) range

Select this range when pulling through mud and snow, or when speed control is needed for driving up steep grades. This range also provides maximum engine(*) braking power or retarder(*) braking effect. In the lower ranges (1, 2, 3, and 4), transmission will not upshift above the highest gear selected unless recommended engine governed speed for that gear is exceeded.

CAUTION: *Service brakes (foot pedal) should not be used to control the speed of vehicle on long, steep descents. Instead, lower transmission ranges should be used (in conjunction with output retarder(*)). When descending in lower ranges, care must be taken that engine speed does not exceed 2450 rpm. This procedure keeps service brakes cool and ready for emergency stopping.*

- (*) - Refers to "JACOBS engine brake" and "Transmission output retarder" options. See pages 4-3 & 4-4 for details regarding both systems.

**MANUAL TRANSMISSION
6 OR 7-SPEED**

The manual transmission has 6 or 7 forward speeds (including creeper) and one reverse.

NOTE: *A Spicer PS145-7A, 7-speed transmission, is specified with the 12.7 liter, series-60, 400-horsepower engine and a PS130-6B, 6-speed, is specified with the optional 11.1 liter, 325-horsepower engine.*

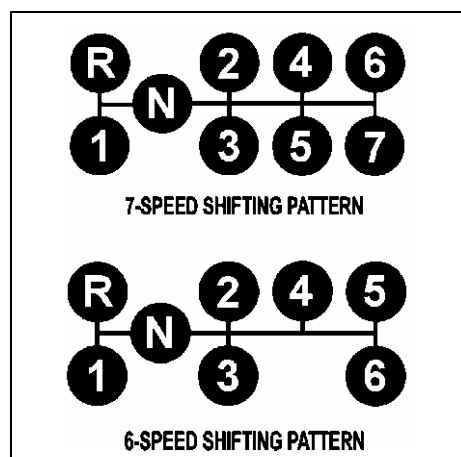


FIGURE 27

07008

The transmission shift lever located to the right of the driver's seat is used to select gears. The coach is equipped with a safety switch to prevent accidental starter engagement if the shift lever is not in the neutral position.

When shifting from neutral to first or reverse gear, depress the clutch pedal fully to activate the clutch brake. This makes it easier to shift from neutral to forward or reverse.

CAUTION: To avoid damaging the clutch brake mechanism, do not fully depress the clutch pedal when the coach is in motion.

Upshifting

Always start moving the coach forward with the transmission in first gear, then shift to second, third, fourth, fifth, sixth and seventh gears (if applicable). Do not skip gears. Do not shift to the next higher gear until the engine speed has reached 1,900 rpm. Double clutching is recommended for shifting gears.

Downshifting

Double-clutching is also recommended for downshifting. Always change to a lower gear to avoid engine lugging. Use lower gears when driving uphill or downhill, and when driving on ice, snow or mud (minimum 1,400 rpm).

Use lower gears when driving downhill to make full use of engine compression. Never let the engine operate above 2,450 rpm.

Under normal driving conditions, it is not always necessary to downshift through all gears. Downshift from seventh to first gear after bringing the coach to a complete stop.

CAUTION: Never let the engine operate above 2,450 rpm.

CAUTION: Always leave the shift selector in neutral when the coach is parked.

CAUTION: To prevent premature clutch wear, always start driving the coach with the transmission in first gear.

CAUTION: Before ascending or descending a long or steep grade, reduce speed and shift to a lower gear. Use lower gears to control speed and avoid prolonged or frequent braking which will result in brake overheating and reduce brake effectiveness. To reduce brake wear, use the Engine Retarder System "JACOB" when descending a steep grade.

WARNING: Shifting to lower gears on slippery surfaces should be done with caution. Sudden engine compression braking could cause drive wheels to lock-up, and may result in loss of control.

STEERING COLUMN CONTROLS

Multifunction lever

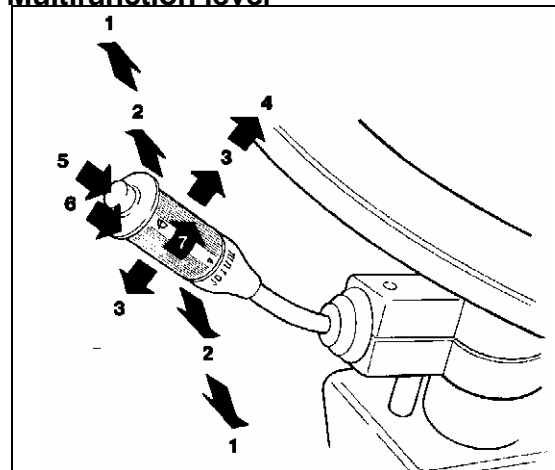


FIGURE 28

18024

Use the "Multifunction lever" to operate the following accessories:

1. Turn signal

Move the lever up to upper position 1 to signal a right-hand turn, and down to lower position 1 to signal a left-hand turn. When the turn is completed, the signal will be canceled and lever will automatically return to its initial position.

2. Lane change signal

Move the lever up or down, part way to either positions 1, and hold it there. The lever will return to its initial position when released.

3. Headlight beam changer

High beams or low beams can be selected by respectively pushing the lever towards the dashboard or by 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 (blinkers) can be operated by pressing the button located at the tip of lever.

6. Washer controls

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 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: To avoid damaging pump mechanism, never operate washers when windshield washer fluid level is insufficient.

7. Windshield wipers

Turn lever forward to activate the two (2) elect/synchro arms; the first position corresponds to low speed and the second to high speed. Turn lever backwards to activate intermittent mode.

CAUTION: Do not run wiper blades on dry windshields as this may cause scratches. To avoid damaging wiper mechanism, always loosen frozen blades from windshield before operating wipers.

Electric horns

Can be activated by pressing button in center of steering wheel.

Transmission retarder lever (Optional)

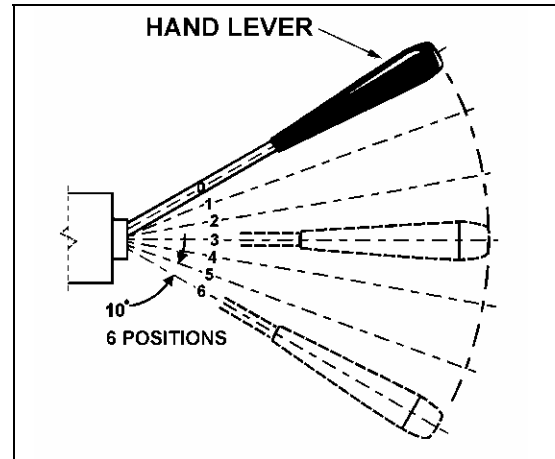


FIGURE 29 18018A

Located on R.H. side of steering column. Use lever to select transmission's retardation level ("OFF" or 1 to 6). For system description, see page 4-4.

FOOT-OPERATED CONTROLS

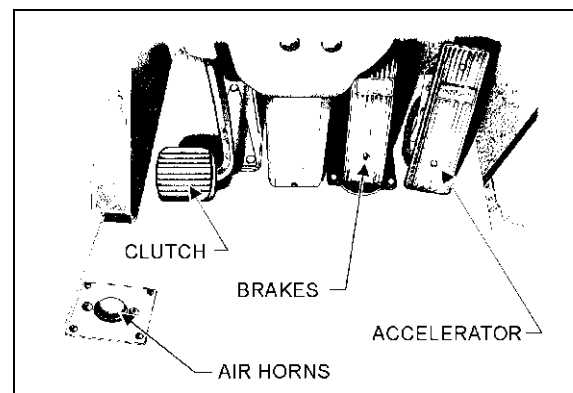


FIGURE 30 18118

AIR HORNS

Use the air horns only on highways. Air is released and the horn is activated when the push-button valve, located on the floor at driver's L.H. side, is depressed.

CLUTCH PEDAL

Used to engage and disengage the manual transmission.

BRAKES

Service brakes

This vehicle is equipped with a dual braking system, the front brakes being independent of the rear brakes. Normally both systems are activated by the single brake pedal. 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. When brake pedal is depressed, vehicle stoplights automatically light up.

For system information, see "BRAKES" on page 3-1.

Combination emergency and parking brakes

The spring-loaded, manually operated parking brake is activated by pulling up on the control valve knob located on R.H. lateral console (see item #2 on page 2-22).

This same brake system will automatically be applied in an emergency situation, whenever the control valve supply pressure drops below 40 psi (275 kPa).

For system information, see "BRAKES" on page 3-1.

ACCELERATOR PEDAL

Controls engine rpm.

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

TILT STEERING WHEEL AND TELESCOPIC STEERING COLUMN

To unlock, use the handle located on the steering column's left hand side. Pull handle down to permit a maximum variation of 11° in steering wheel angle, and a telescopic wheel movement of 2" (5 cm). Push handle up to lock both mechanisms.

WARNING: Never try to adjust the steering wheel while the vehicle is in motion; wheel could move unexpectedly, making you lose control of the vehicle.

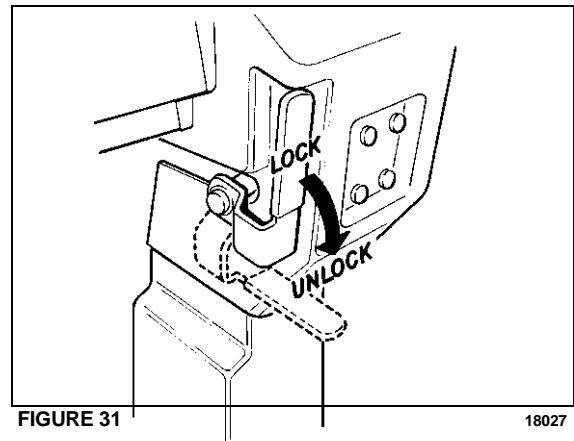


FIGURE 31

18027

ENTRANCE DOOR

Inside operation

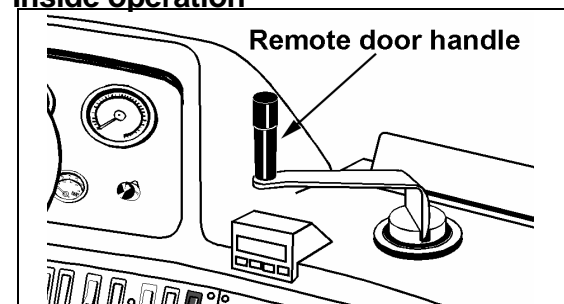


FIGURE 32

18119A

Entrance door is supplied with an air-operated locking system. The 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. Handle must be turned counterclockwise to open door and clockwise to close.

CAUTION: Door handle must be fully pushed in (clockwise) to ensure that air locking mechanism has properly closed door. Door handle should be manipulated slowly to prevent damage to the air locking system components.

Emergency opening

In the event of a malfunction in the door air lock mechanism, press the door override button on R.H. Lateral Console (see pages 2-23 & 3-4).

Outside operation

Open the door from the outside by first depressing push-button on L.H. side of door and then pulling on door handle. To close, simply push in door; air locking system will automatically be activated and will complete closing. Use supplied key (see page 2-1) to lock door from the outside.

CAUTION: Before closing door from the outside, make sure keylock is in the unlocked (fully counterclockwise) position so as to avoid damage to the mechanism.

NOTE: When opening door, the stepwell lights will turn on if exterior lighting switch (see page 2-15, item #3), located on R.H. Lower Switch Panel, is "ON".

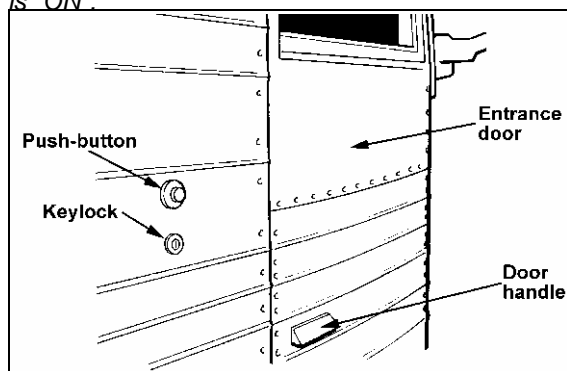


FIGURE 33

18120A

SEATS

Driver's seat - "ISRI"

Two distinct "ISRI" model driver's seats may be supplied with your vehicle: one with mechanical suspension (std), and the other with a sophisticated air suspension system (opt). Both seats may be equipped with lumbar supports and adjustable armrests. Seats can be adjusted to the desired driving position by following the instructions listed below:

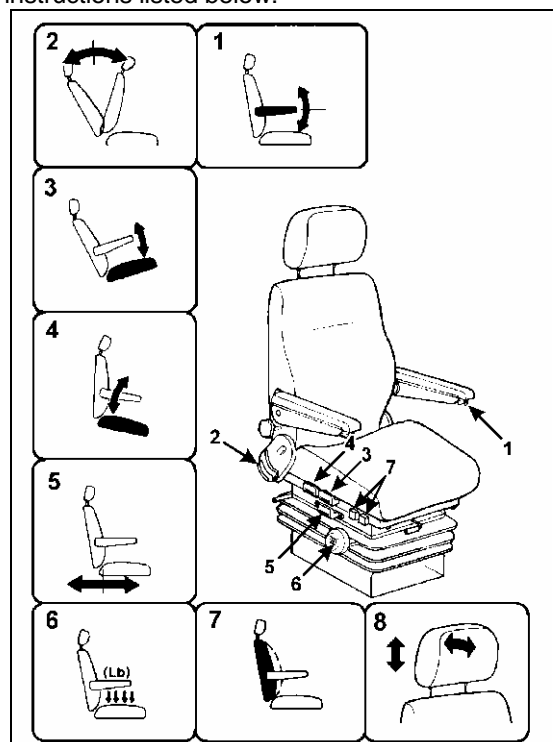


FIGURE 34: MECHANICAL SUSPENSION SEAT OFH3B220

WARNING: Never try to adjust seat while driving vehicle as this could result in loss of vehicle control.

NOTE: Seat controls can be located either on the seat's L.H. or R.H. side.

1. Rotate control knob to select desired armresting angle. When not in use, raise armrest parallel with backrest.

2. Lift lever to select proper adjustment angle of backrest.

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

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

6. For maximum suspension performance, rotate handwheel until your body weight is selected on indicator.

NOTE: On "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.

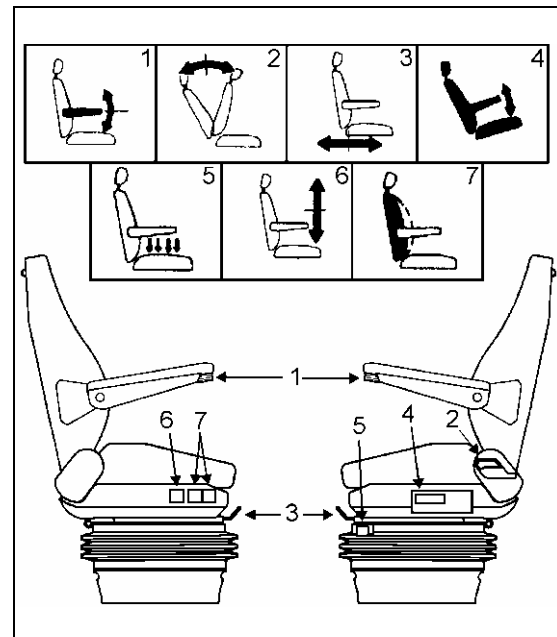


FIGURE 35: PNEUMATIC SUSPENSION SEAT 18026A

WARNING: Never try to adjust seat while driving vehicle as this could result in loss of vehicle control.

1. Rotate control knob to select desired armresting angle. When not in use, raise armrest parallel with backrest.

2. Lift lever to select proper adjustment angle of backrest.

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

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

5. For maximum suspension performance, push down on knob until required weight is reached.

6. Press on "+" or "-" to respectively raise or lower driver's seat.

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.

Seat belts - Driver's seat

Each driver's seat is equipped with a retractable seat belt as required by State, Provincial and Federal regulations. To fasten, pull seat belt out of the retractor and insert the latch plate into the buckle until it clicks. No special adjustment is required since the reel device is self-adjusting. If seat belt operation becomes defective, report to Manufacturer's Service Center.

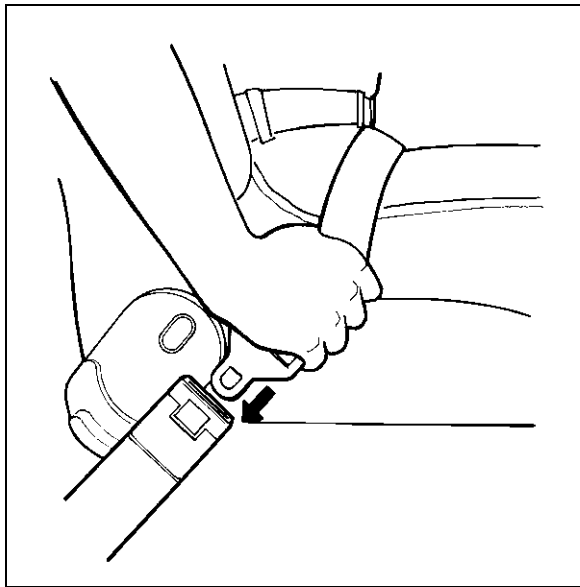


FIGURE 36

18028

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 ensure motorist's safety. Belt should not be worn twisted; avoid pinching belt and/or belt hardware in seat mechanism. Do not wear belt over rigid or breakable objects, such as eyeglasses, pens, or keys as these may cause injuries.

CAUTION: Never bleach or dry clean safety belt.

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.

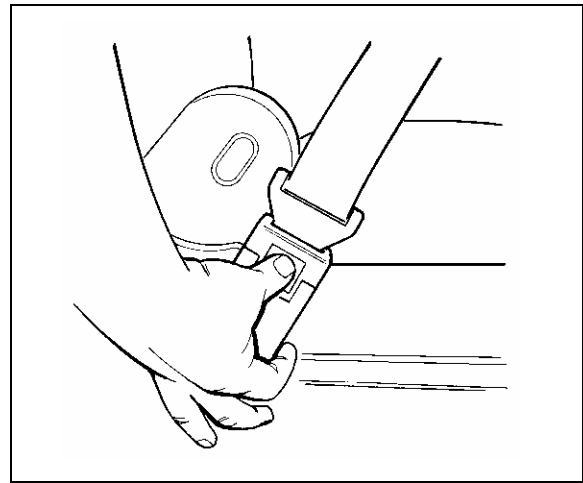


FIGURE 37

18029

WARNING: Seat belts should always be worn by motorists using seats supplied with belts since this is required by most State and Provincial laws.

Passenger seats

Passenger seats may be equipped with grip handles, ashtrays, newspaper holders, tables, audio control modules and footrests.

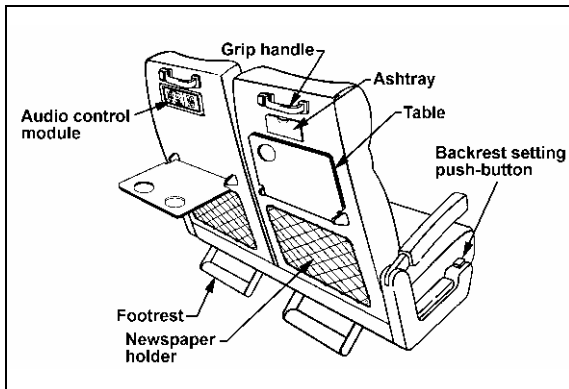


FIGURE 38 18121A

All seats are track-mounted so that the seating configuration can be changed (2 + 2 or 2 + 1). Each seat is mounted on oval aluminum pedestals to make it easier to clean between the pedestal and side wall.

Passenger seat backrests can be tilted by using the push-button located on the side of the seat cushion. Depress and hold push-button, then adjust backrest to the desired angle. Release push-button to lock backrest in position. The hydraulic seat back adjustment mechanism is equipped with a pull-off spring.

One folding armrest is installed on the aisle side of the passenger seat and is spring-loaded to lower automatically. The other folding armrest is located between the two seats and can be raised for passenger convenience. A fixed armrest is installed on the window side of the seat.

Swivel seats

The coach can be equipped with two optional sets of swivel seats to allow installation of card tables. The swivel seat can be rotated for passenger privacy. To rotate seats, unscrew the wing nut from under each seat cushion then remove cushions. Remove the four wing screws, pull seats toward the aisle and rotate the seat counterclockwise. Align mounting holes, secure with wing screws and install seat cushions.

NOTE: Instructions for making swivel seat adjustments are affixed on the rear frame under the seat cushion.

Tour guide seat (Optional)

The optional tour guide seat is installed on driver's R.H. side over front steps. The seat folds up automatically when host/hostess stands up for convenience when embarking and disembarking passengers.

The tour guide seat can easily be removed and stored in parcel racks by simply lifting and unhooking seat assembly.

MIRRORS

Interior mirror

The interior rearview mirror is located between windshields, above driver's area. It enables the driver to see passenger circulation in the aisle. Adjust to desired viewing angle by hand without loosening screw.

Exterior mirrors

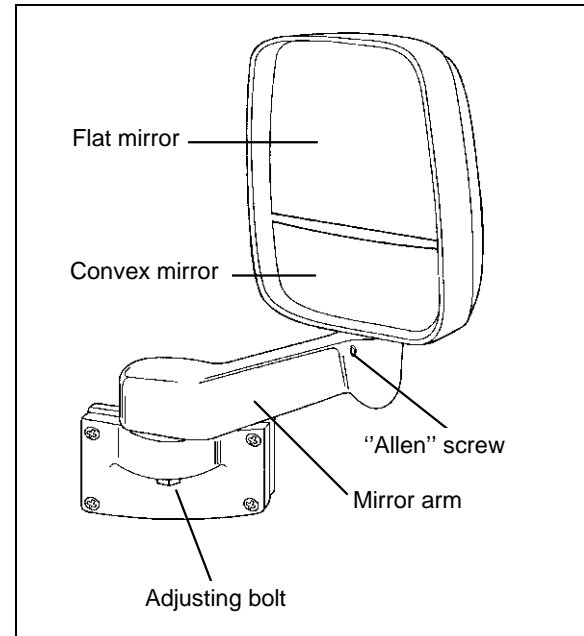


FIGURE 39: STANDARD MIRROR 18035A

Your vehicle is equipped with two (2) exterior mirrors. These mirrors have an electric heating system which serves to minimize ice and condensation in extreme weather conditions. Integral thermostats are installed in both mirrors to avoid continual heating. Use the appropriate switch on the L.H. side control panel (item #6 on page 2-4) to activate the defroster system on both mirrors simultaneously.

The standard mirrors can easily be adjusted by using the remote control knobs located on L.H. side control panel (items #15 & 16 on page 2-4).

On the optional two-glass mirror, only the flat mirror can be remotely adjusted. The convex mirror must be adjusted manually.

The exterior mirrors can be manually adjusted as per the following method:

- To obtain desired vehicle width, adjust the mirror arm angle by loosening the adjusting "Allen" screw located at body end of mirror arm. Adjust mirror arm to desired position, then tighten adjusting screw.

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

CAUTION: Do not overtighten. Do not install a convex mirror on the heated mirror glass. This prevents even distribution of heat in the heated mirror and could cause the glass to break.

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

Mirrors should not extend beyond body of coach any more than necessary.

NOTE: It is important for safe driving that you have good rear vision on each side of the vehicle; therefore, adjust mirrors **before** driving and immediately after adjusting your seat.

CAUTION: Do not overtighten.

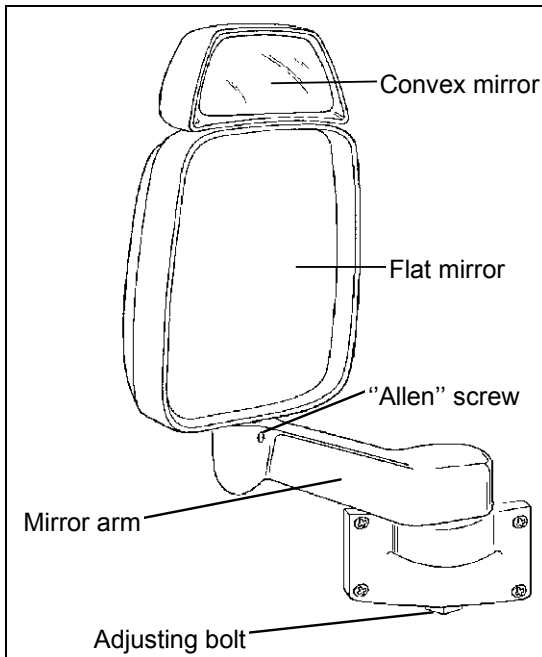


FIGURE 40: OPTIONAL MIRROR 18036A

EXTERIOR COMPARTMENTS (XL-40)

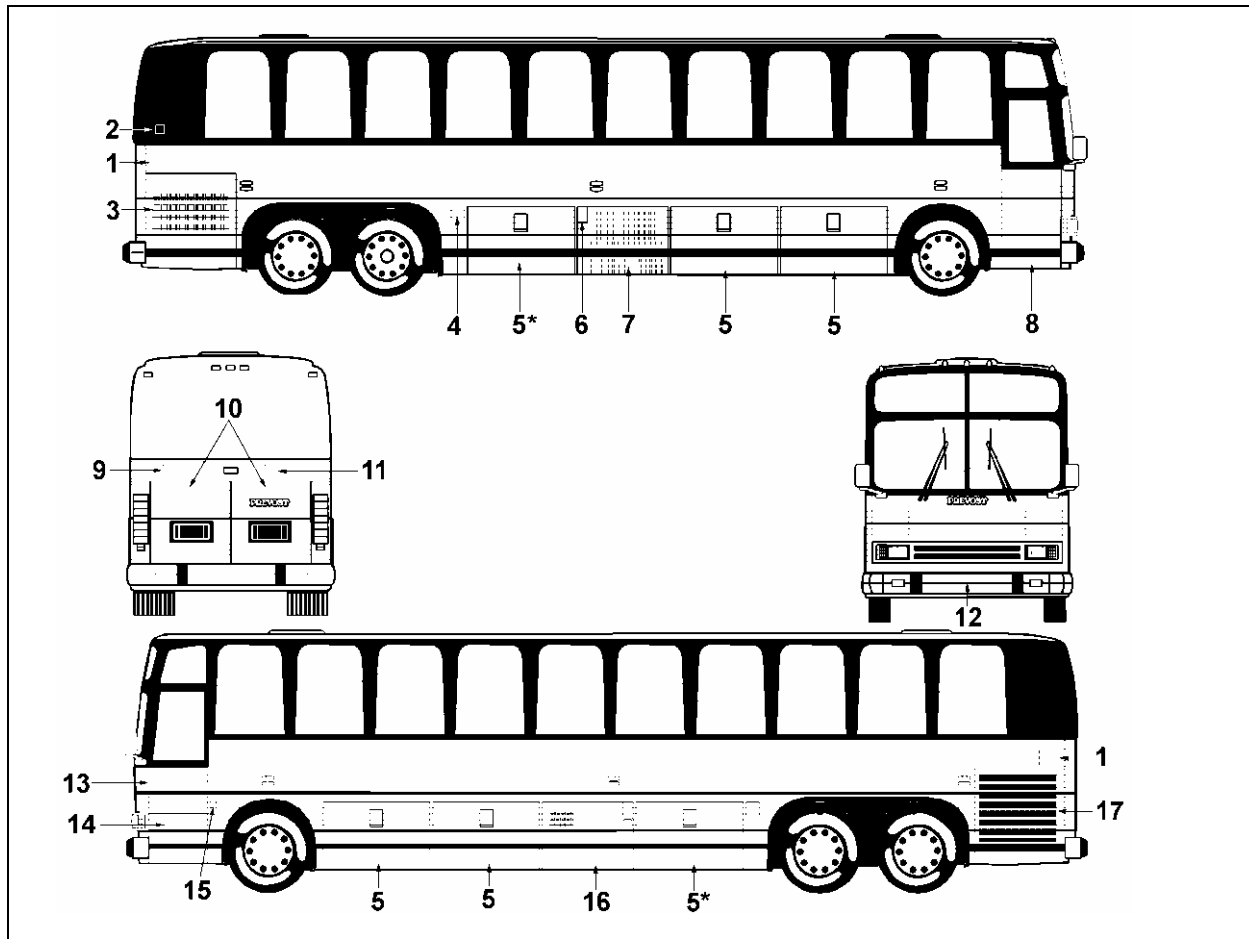


FIGURE 41: XL-40 EXTERIOR COMPARTMENTS

18030B

- | | |
|---|---|
| 01..... Engine air intake duct | 10..... Engine rear doors |
| 02..... Lavatory access door | 11..... Engine oil reserve tank filling,
Block heater plug &
(Water heater plug [Optional]) |
| 03..... Engine R.H. side door | 12..... Spare wheel & tire compartment |
| 04..... Main battery disconnect switch door | 13..... Front electrical compartment |
| 05..... Baggage compartment
(* Access to battery compartment) | 14..... Steering compartment |
| 06..... Fuel tank filling door | 15..... 110 volt interior lighting (Optional) |
| 07..... Condenser compartment | 16..... A/C & Heating compartment |
| 08..... Entrance door | 17..... Engine L.H. side door |
| 09..... Coolant surge tank filling door | |

The above figure identifies all exterior compartments and access doors. See page 2-36 for securing and accessing procedures.

NOTE: If doors are supplied with locks, refer to page 2-1 to select the appropriate key.

EXTERIOR COMPARTMENTS (XL-45)

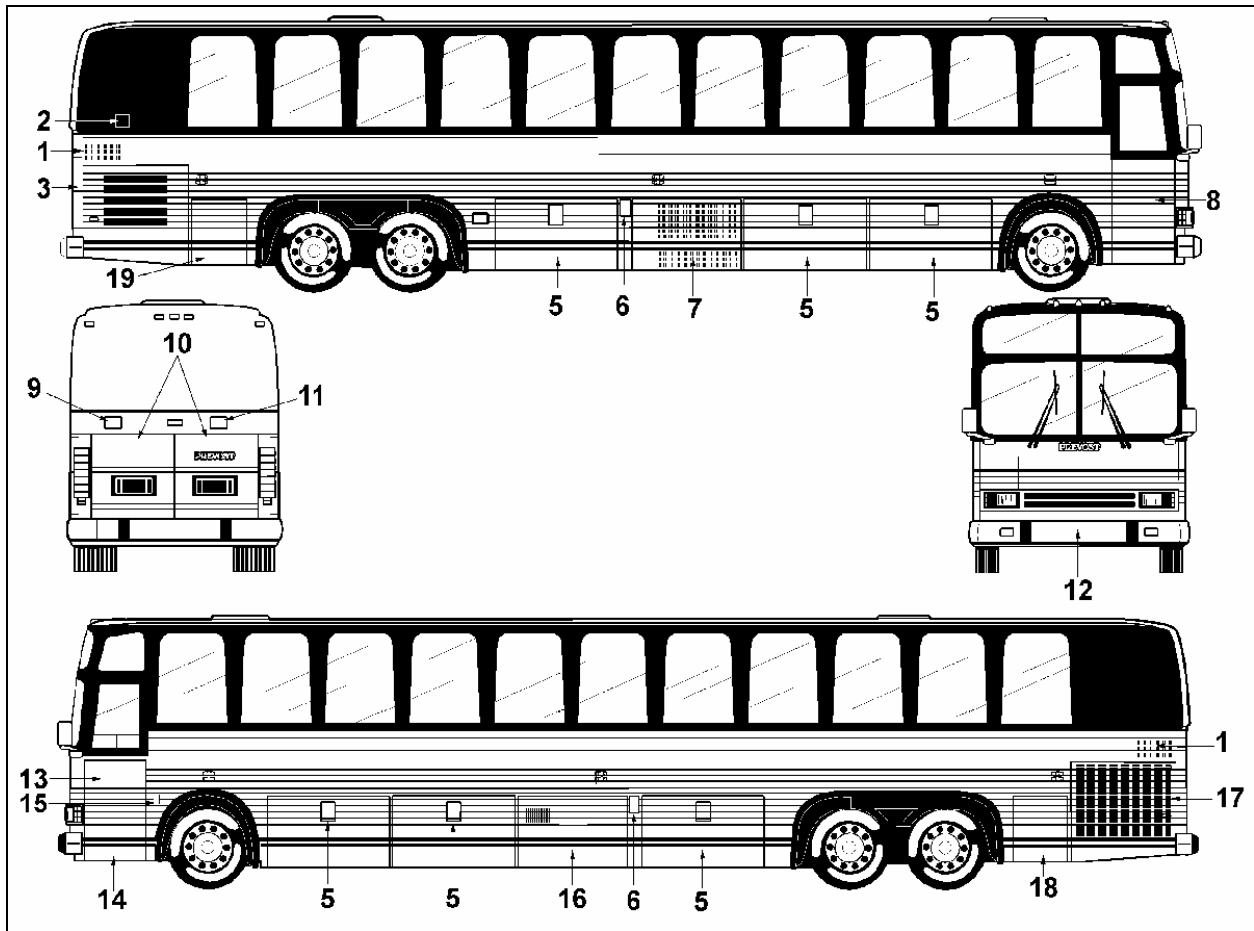


FIGURE 42: XL-45 EXTERIOR COMPARTMENTS

18031B

- | | |
|---|---|
| 01..... Engine air intake duct | 11..... Engine oil reserve tank filling, Block heater plug & (Water heater plug [Optional]) |
| 02..... Lavatory access door | 12..... Spare wheel & tire compartment |
| 03..... Engine R.H. side door | 13..... Front electrical compartment |
| 04..... N/A | 14..... Steering compartment |
| 05..... Baggage compartment | 15..... 110 volt interior lighting (Optional) |
| 06..... Fuel tank filling door | 16..... A/C & Heating compartment |
| 07..... Condenser compartment | 17..... Engine L.H. side door |
| 08..... Entrance door | 18..... L.H. side rear service compartment |
| 09..... Coolant surge tank filling door | 19..... Main power compartment |
| 10..... Engine rear doors | |

The above figure identifies all exterior compartments and access doors. See page 2-36 for securing and accessing procedures.

NOTE: If doors are supplied with locks, refer to page 2-1 to select the appropriate key.

Engine compartment doors

(doors #3 & 10)

For access to the engine compartment, two rear doors and one R.H. side door are provided. 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.



FIGURE 43

01009A

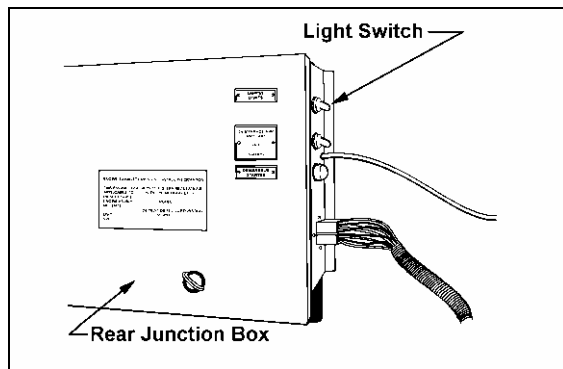


FIGURE 44

01010A

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 in with fingers, then return doors to closed position; always starting with left (driver's side) door.

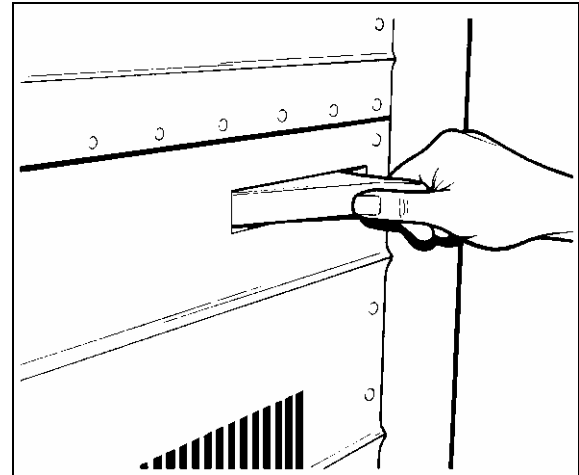


FIGURE 45

18037

The side door can be opened by pulling the release handle and then pulling on the door. The engine L.H. side compartment door, which opens similarly to the R.H. side compartment door, is designed to provide access to the radiator.

Engine air intake ducts

(items #1)

Engine air intake ducts are not accessible; they are designed only for engine compartment air circulation.

Fuel tank filling door

(door #6)

Fuel filler neck is accessible by simply pulling out door's R.H. side finger notch.

Note: *XL-45's have filler necks on both sides of vehicle.*

Entrance door

(door #8)

See instructions on page 2-28.

ENGINE COMPARTMENT COMPONENTS

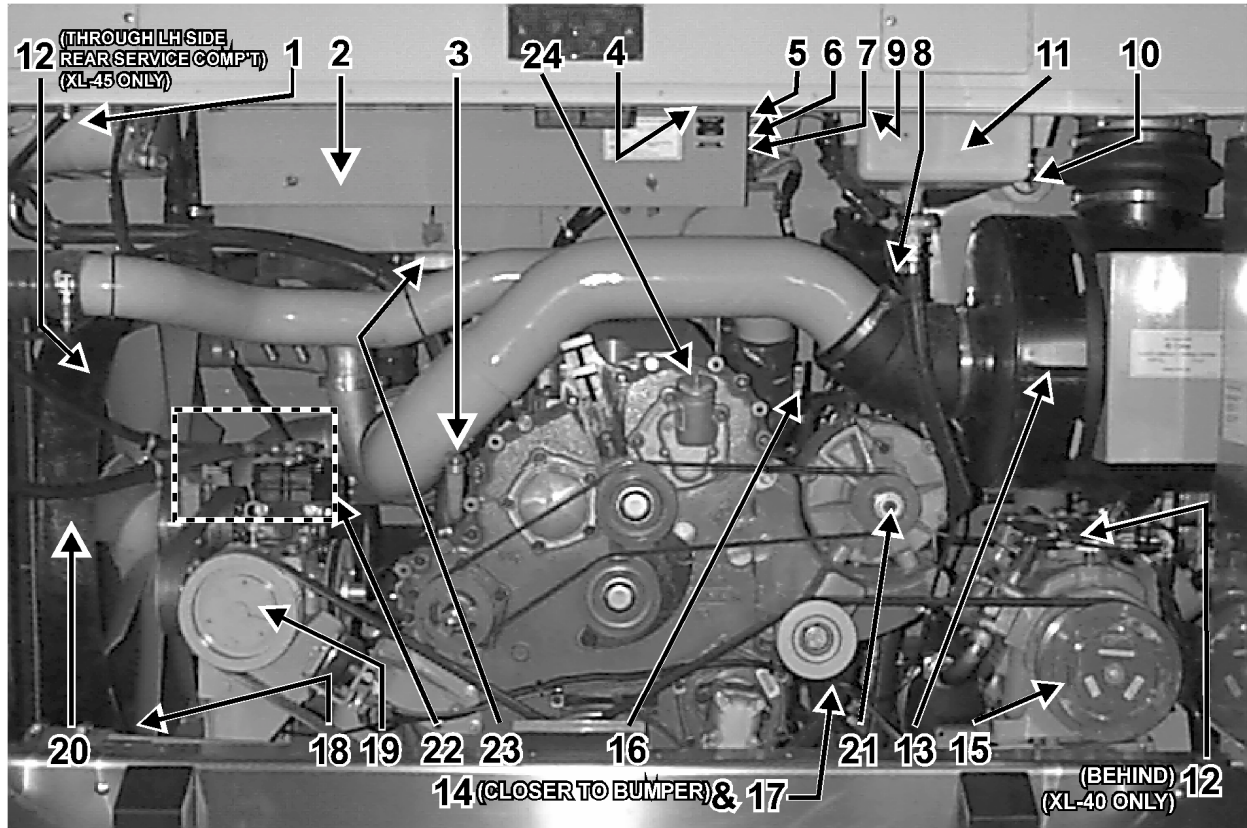


FIGURE 46

01014A

Components identification:

- | | |
|---|---|
| 01.....Coolant surge tank | 12.....Preheater (Webasto or Espar) |
| 02.....Rear junction box | 13.....Engine air cleaner |
| 03..... Transmission oil dipstick (Auto. trans. only)
Engine oil dipstick (Manual trans. only) * | 14..... Engine primary fuel filter |
| 04..... Belt tensioner pressure releasing valve | 15..... A/C compressor (Central system) |
| 05..... Engine compartment light switch | 16..... Engine oil dipstick (Auto. trans. only) |
| 06..... Starter selector switch | 17.....Engine secondary fuel filter |
| 07.....Rear start push-button switch | 18.....Muffler |
| 08..... Power steering oil tank | 19..... Radiator fan gearbox |
| 09.....Engine oil pressure gauge | 20..... Radiator |
| 10..... Engine oil temperature gauge | 21.....Alternator 24V 270A |
| 11..... Engine oil reserve tank | 22..... A/C compressor (Auxiliary system) |
| | 23..... Fire detector |
| | 24..... Engine oil filler cap |

(*) - There is no Manual Transmission Dipstick; to check oil level, use the fill plug located on transmission (see page 6-5).

Baggage compartment
(doors #5)

An optional elect. door locking system may be installed on all baggage compartment doors. The switch is located on the L.H. side control panel (see item # 3 on page 2-4). Push up rocker switch to unlock the doors and push down to lock.

An indicator light will illuminate on dashboard if one (1) or several baggage compartment doors are unlocked.

The baggage compartment doors may also be locked or unlocked from outside using the key provided (see "KEYS" on page 2-1)

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.

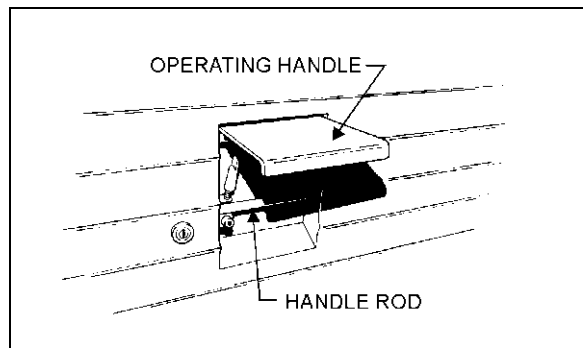


FIGURE 47 18043

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

NOTE: In case of malfunction or special conditions, use the safety lock to keep the door securely opened.

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

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 weather stripping and/or locking mechanism.

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

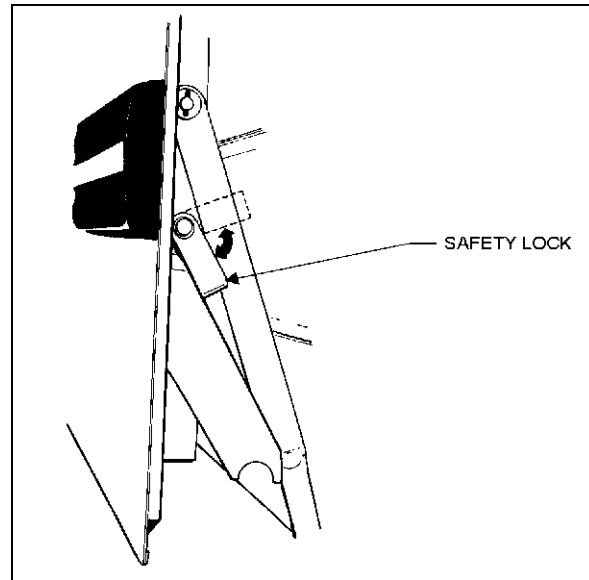


FIGURE 48 18038

Spare wheel & tire compartment
(door #12)

The front bumper is of the "reclining-type". To open, carefully remove the large bolt at each end using the wheel nut wrench, then slowly lower the bumper (see also page 4-19).

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

Additional care should be taken when opening this compartment since bumper weights 100 lbs (45 kg).

CAUTION: After compartment panel has been secured, the two (2) bumper retaining bolts should be checked to make sure they are tightly fastened.

A/C & heating and Condenser compartment doors

(doors # 7 & 16)

The A/C & heating and Condenser compartment doors can be opened manually or mechanically, depending on options. Open the door manually by first, removing the "Phillips" retaining screws (qty = 2) and then pulling on side of door where screws are located.

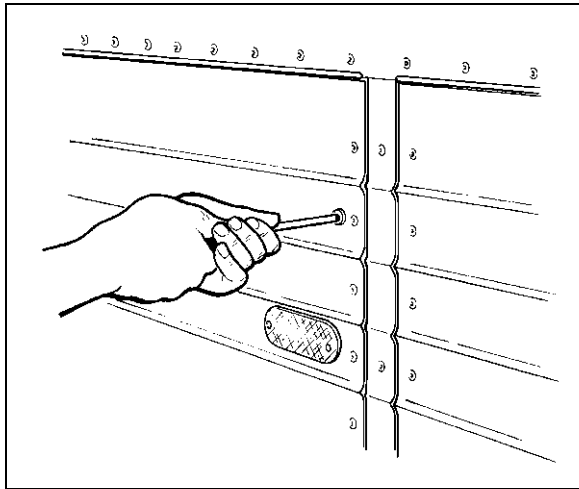


FIGURE 49 18039

Open the door mechanically by first opening the Baggage Compartment located aft of A/C or Condenser Compartment, then pull on door knob (see fig. below).

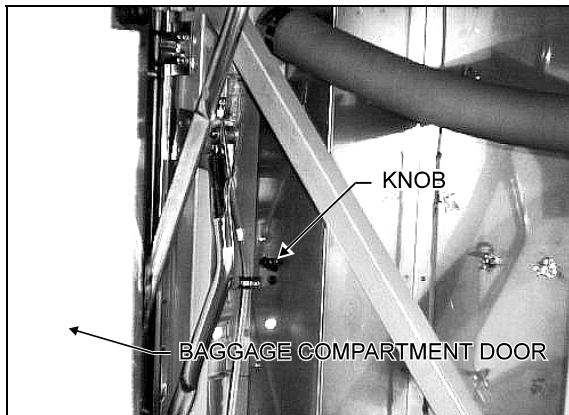


FIGURE 50 18056

Service doors

(doors #2,9,11,13 & 14)

Service doors can be opened by turning the slotted head "Dzus" fasteners 1/4 turn counterclockwise and then pulling on the door.

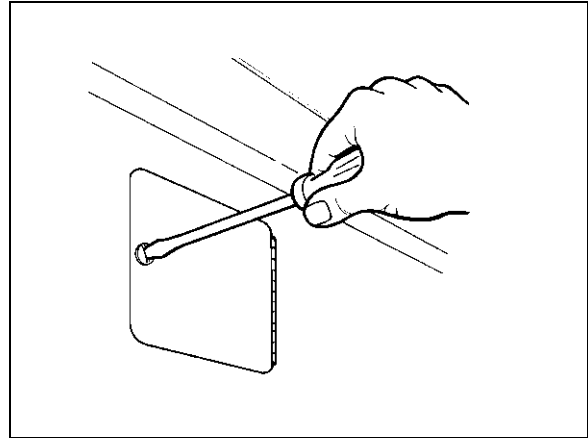


FIGURE 51 18044

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

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

L.H. side rear service compartment and main power compartment (XL - 45 only) (doors #18 & 19)

To access these compartments, use key provided (see "KEYS" on page 2-1). To secure, simply push in door.

WARNING: These compartments are designed to give access to compartment components only and cannot be used for storage.

Battery compartment (XL-40 only)

(access through door #5 with *)

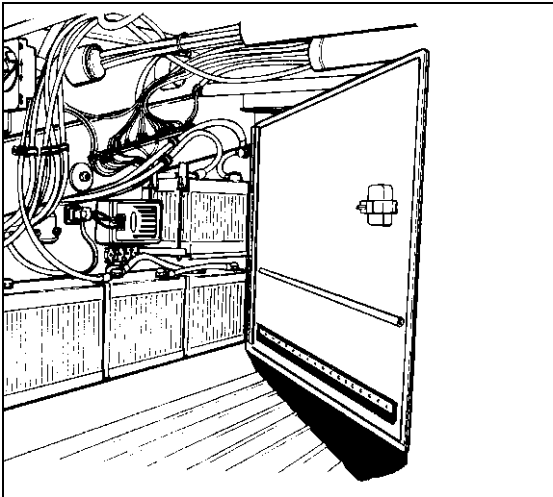


FIGURE 52 06103

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

INTERIOR COMPARTMENTS

Lavatory

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

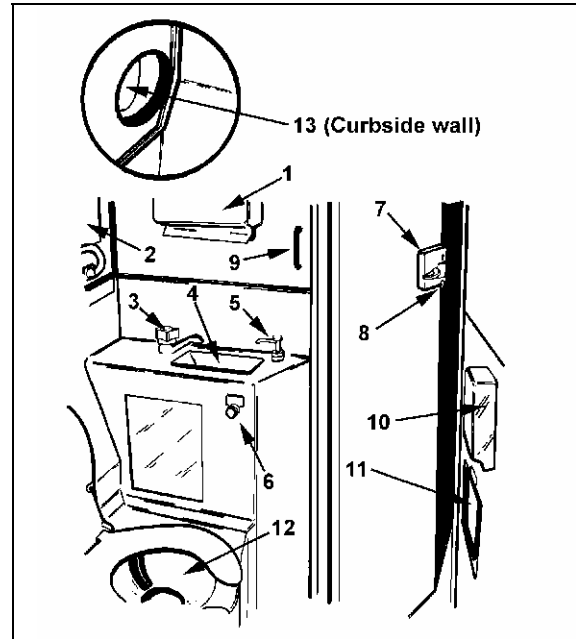


FIGURE 53 23015A

- 01..... Towel dispenser
- 02..... Mirror
- 03..... Water supply valve (faucet)
- 04..... Washbasin
- 05..... Liquid soap dispenser
- 06..... Flush button (timed)
- 07..... Door handle
- 08..... Door lock
- 09..... Grip handle
- 10..... Hygienic toilet tissue dispenser
- 11..... Waste paper container (trap)
- 12..... Toilet
- 13..... Access door (cleaning)

Locking the lavatory door from the inside will illuminate a incandescent light in the lavatory, an exterior "occupied" sign and an indicator light on Dashboard (see item #4 on pages 2-7 & 2-8). Compartment night-light is lit when vehicle headlights are "ON".

If emergency assistance is required, the lavatory occupant can actuate a buzzer that will sound in driver's area. The buzzer's push-button (c/w instruction label) is located on the inner curbside wall of lavatory.

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

An auxiliary sump tank (optional) allows main tank to be drained by manually opening an interconnecting tank valve. Lavatory can then be operated for longer periods until coach can be serviced at a facility equipped for disposal.

The fresh water tank, located behind compartment mirror, may be equipped with a thermal drain valve that will drain the tank when water temperature approaches the freezing point preventing damage to the tank. An immersion water heater for the lavatory fresh water tank is also available; it can be connected to a 110-120 volt AC power source through an extension cord by the engine oil reserve tank filling door (see item 11 on pages 2-34 & 35).

An access door is also provided on curbside wall to facilitate lavatory compartment cleaning. This door can only be opened from the outside. For reservoir draining and filling, see page 6-11.

Parcel racks

Passenger carry on luggage is stored in overhead compartments on each side of the coach. An optional video cassette player can be installed in the first or second front L.H. side parcel rack.

To open the closed-type parcel racks, pull the door handle up to release the latch, then lift the door open. A pressurized cylinder mechanically assists in opening the door and also holds it open.

NOTE: An optional lock can be installed on video system parcel rack door. See page 2-1 for key selection.

Safety equipment compartment

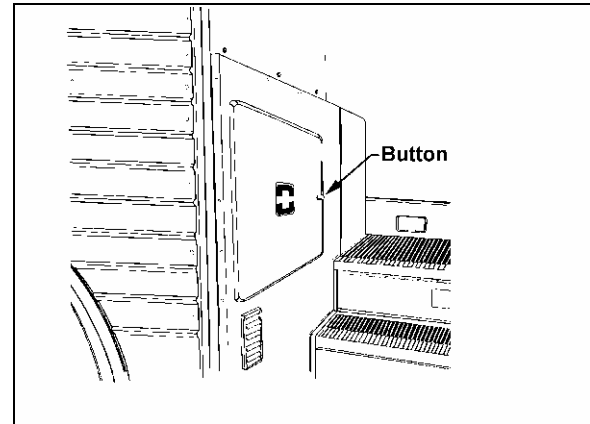


FIGURE 54
23016

The safety equipment compartment, located above L.H. side of entrance stairwell, includes a first aid kit and may also include a fire hatchet.

To open access door, turn button counterclockwise, lightly pull on button, then (while holding door with both hands) slide door towards center of vehicle. Reverse procedure to close door.

ACCESSORIES

Back-up camera/TV monitor (Optional)

The back-up camera/TV monitor system provides the driver with visual assistance when backing-up.

The monitor is located on post between driver's window and windshield.

The system switches on automatically when the transmission is put in the reverse (R) range.

Driver's window

Pull handle towards you to unlock, then slide window open. Reverse operation to close window.

Mechanical destination sign (Optional)

To change the name on your destination sign simply pull to unlock handle and rotate until sign shows desired destination. Release handle to lock.

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

Also, the driver's name can be written on an optional nameplate holder on destination sign.

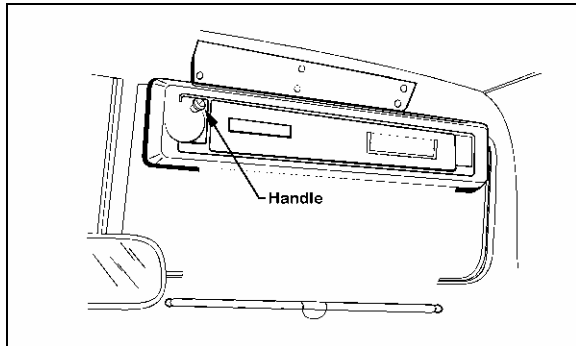


FIGURE 55 23017A

Electrical destination sign (Optional)

Turn the optional destination sign lighting on and off using the rocker switch located on the L.H. control panel.

Depress the selector switch until the desired destination appears in the sight glass and is aligned with the arrow.

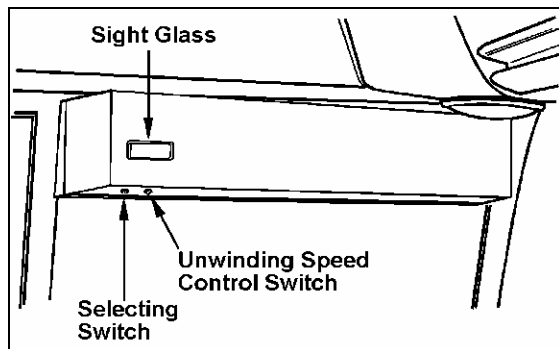


FIGURE 56 23122

Electronic destination sign (Optional)

To change the destination, depress the selecting switches until the desired destination appears in the LCD display.

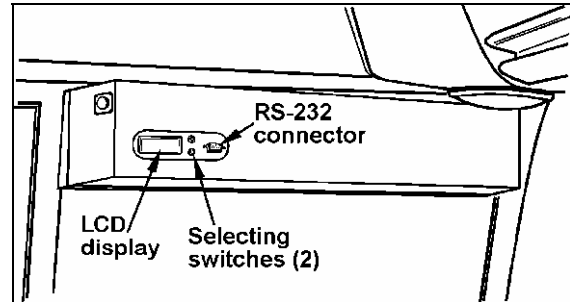


FIGURE 57 23123

NOTE: The destination sign must be programmed with a computer connected to the RS-232 connector prior to first use. Follow the instructions on the computer disk to install and run the software.

Driver's fan (Optional)

Driver's fan is mounted on dashboard and can be used to help defrost windshields or just give driver's area extra air circulation. Loosen the wing nut to redirect fan.

Driver's coat hook

Driver's coat hook is located on post at rear upper left side of driver.

WARNING: Make sure coat is securely hooked and that it will not impair driver vision and movement.

Waste container

Passenger area waste container is located at rear of vehicle in between lavatory front wall and passenger seats.

Blinds

The driver's area may be supplied with three blinds: one (1) on driver's side window and two (2) on windshield.

To operate driver side window and L.H. windshield blinds, pull down tab to the required position and then release; the blind will remain in position. To raise blind, pull on release cord on it's L.H. side.

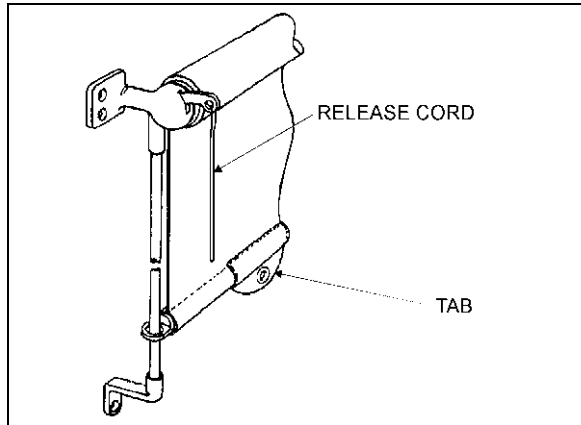


FIGURE 58 23019

To operate R.H. windshield blind, pull down tab and position bar in hooks on central beam. To raise blind, simply unhook bar then slowly lift blind.

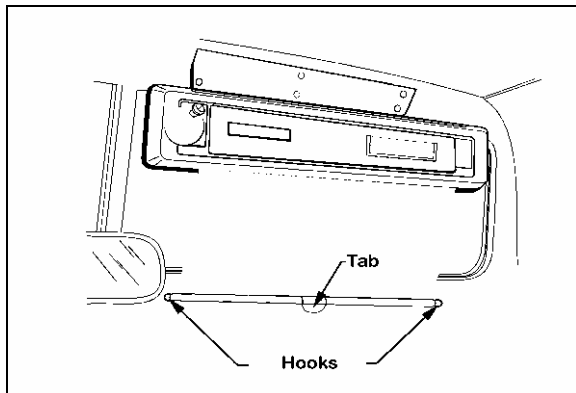


FIGURE 59 23020A

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

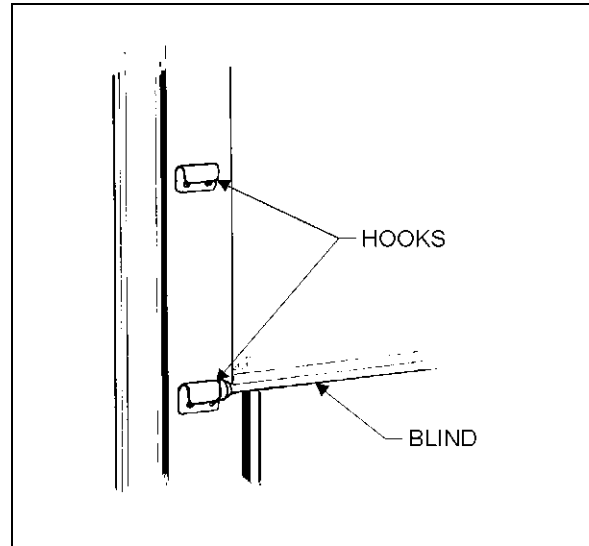


FIGURE 60 23021

Adjustable A/C & heating louvers

The vehicle is supplied with five (5) adjustable A/C & heating louvers. These can be adjusted manually so the heated or cooled air flow can be directed as desired.

Adjustable louvers are located as follows:

- One on L.H. side control panel.
- Two on L.H. side of driver's seat.
- One on center console.
- One over steps, near entrance door.

NOTE: The louver on L.H. side control panel can be used to defrost driver's window or airflow can be directed towards driver.

Mud flaps & splash guards

Mud flaps are installed behind front and tag axle wheels in order to minimize dirt on the lower panels of vehicle and to reduce stone projections on vehicles behind you. Optional 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.

Stop/Service/Reading lamp

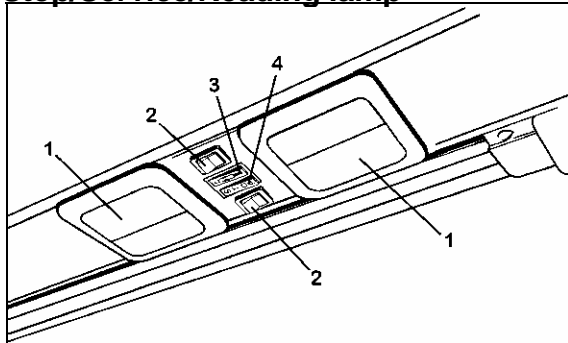


FIGURE 61

23022A

1. Reading lamp

Can be adjusted manually to desired angle.

2. Reading lamp switch

Press to turn reading lamp ON or OFF.

3. Hostess signal switch

Depress rocker switch to activate chime in driver's area. A light illuminates inside rocker switch to indicate passenger position to the hostess.

4. Driver's signal switch

Depress rocker switch to activate chime in driver's area indicating to driver the passenger's intention to disembark.

"Quick-Lounge" system (Optional)

"Quick-Lounge" is a quick-fit modular system providing luxurious seating accommodations for passengers.

This system occupies the same space as the paired seating configuration it replaces. The existing seat spacing remains unchanged.

Card tables

Two (2) card tables are supplied as standard equipment and are used in the passenger swivel seat configuration. The card tables are stored in the parcel racks in separate stowage bags.

To install the card table, hold it at 45° (degrees) to the side wall. Insert the spring-loaded pin first into the hinge, then insert locking pin. Push on the locking clamp to release the leg; then unfold leg until clamp locks into place.

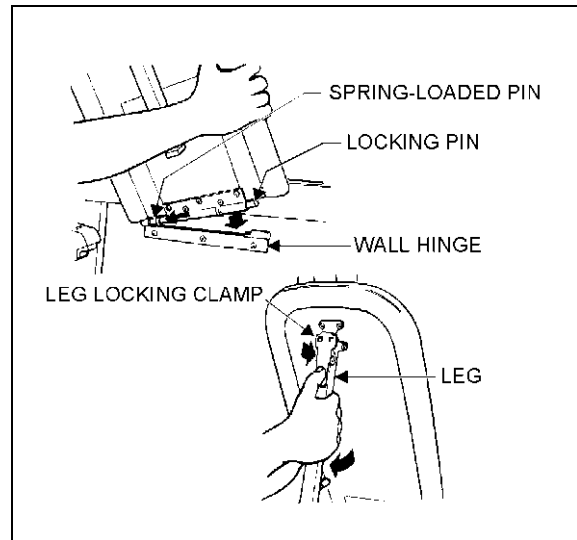


FIGURE 62

23023

Galley (Optional)

The Mini-Chef galley can include features such as a microwave oven and refrigerator to accommodate hot/cold food and beverage service. The galley's electrical power circuit is activated by a rocker switch located on L.H. side control panel (see item #13 on page 2-4).

Hubodometer (Optional)

A wheel hubodometer can be 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.

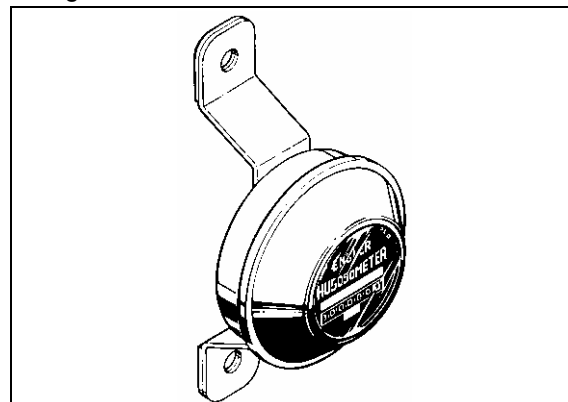


FIGURE 63

23024

Spare Parts Kit

A Spare Parts Kit is supplied with your vehicle; parts are stored in a cardboard box located inside the forward baggage compartment. Kit contents depend on certain vehicle options as shown below:

- 1** = Series 60 Engine + Full A/C System.
- 2** = Series 60 Engine + Full A/C System + 110 volt interior lighting.
- 3** = Series 50 Engine + Full A/C System.
- 4** = Series 50 Engine + Full A/C System + 110 volt interior lighting.

Part No.	Description	Quantity			
		Option 1	Option 2	Option 3	Option 4
561122	Light Bulb, 24V	2	2	2	2
561166	Light Bulb #464, 24V, 3W	2	2	2	2
562278	Light Bulb, 24V, 10W	4	4	4	4
561707	Relay, 24V	1	1	1	1
561797	Circuit Breaker, 3 Amp	1	1	1	1
561790	Circuit Breaker, 6 Amp	1	1	1	1
561791	Circuit Breaker, 8 Amp	1	1	1	1
561792	Circuit Breaker, 10 Amp	1	1	1	1
561793	Circuit Breaker, 15 Amp	1	1	1	1
561794	Circuit Breaker, 20 Amp	1	1	1	1
561795	Circuit Breaker, 25 Amp	1	1	1	1
561880	Light Bulb, 12V, 21W	3	3	3	3
561881	Light Bulb, 12V, 10W	2	2	2	2
561882	Light Bulb, 12V	1	1	1	1
506690	V-Belt, AX-74	3	3		
506688	Belt, Multi-V	1	1		
506669	Belt, Poly V12	1	1	1	1
506664	Belt, BX-97	1	1	1	1
061204	Cable assy (110 volt interior lighting)		1		1
506748	Belt, AX-72			1	
506691	V-Belt, AX-73				3

PREHEATING SYSTEM TIMERS (AUXILIARY) (Optional)

The timer, located on R.H. lateral console (see page 2-22 items 5 & 5A), is used to program the starting and stopping time of the preheating system. One of two optional Timers (*Espar* or *Webasto*) may be installed in your vehicle. The system indicator light, located on dashboard (see item #28 on page 2-7) illuminates when system is functional. The following offers system descriptions for both timers.

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

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 again.
2. Check main circuit breaker and overheating switch (*Espar*) or overheat fuse (*Webasto*).
3. Have system repaired in a specialized shop.

ESPAR (41 000 BTU)

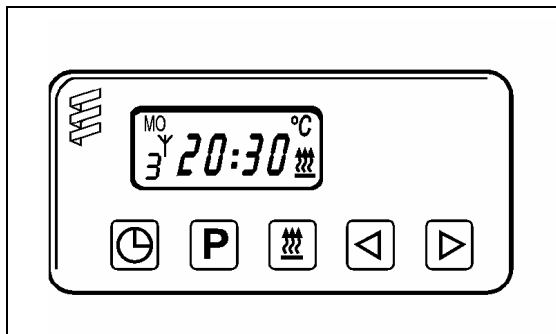


FIGURE 64

18045

Setting the time and weekday for the first time.

Press key briefly.

12:00 flashes on the display.

Set the clock time with < or >.

The time is stored as soon as it stops flashing.

Then the weekday flashes. Set the current weekday with < or >. It is stored as soon as it stops flashing. When the ignition is switched on, the clock time and weekday are displayed continuously. When the ignition is switched off, the display goes out after 15 seconds.

Setting the clock time and weekday.

Press key and hold it down until the clock time flashes. Proceed as described above. If you only want to change the clock time, press the key after setting the clock time to skip weekday adjustment.

After changing the weekday, flashing duration of the weekday can be reduced by pressing the key.



Heating without preselection when ignition is "Off".

Heating symbol = Observe operating display



Switching on heater. To switch on heater, press key briefly. Operating display appears.



Changing the heating duration once only. After power-on: To reduce heating duration: Press < key. To increase heating duration (to max. 120 minutes): Press > key.

Changing the heating duration permanently. Do not switch on . Press the < key and hold it down (approx. 3 seconds) until the display appears and flashes. Release key briefly. Then set the heating duration using the < or > key. The new heating duration is set when the display disappears.

Switching off heater. Press  key briefly. Operating display  disappears. The blower automatically continues to operate to cool the heater down.





Heating without preselection when ignition is "on."

Switch on the heater. Press  key briefly. The operating display  appears. The heating stays in operation until the ignition is switched off.

If the ignition is switched off, a residual heating period of 15 minutes remains. This can be extended to max. 120 minutes by pressing the  key or reduced by pressing the  key.

Heating operation preselection.

Setting and activating the memory for heating operation and the alarm clock.

Press **P** several times until the required memory No. (1, 2, 3) appears flashing on the display. Press  or  key briefly, and release. Then set the preselected time for the heater using the  or  key.

As soon as this stops flashing and the weekday flashes, set the weekday.

The preselected time and weekday are stored as soon as the time display disappears or changes over to clock time.

The memory number indicates what memory is activated. Only one memory can be activated.

WEBASTO (45 000 or 80 000 BTU)

OPERATION WITH DIGITAL TIMER

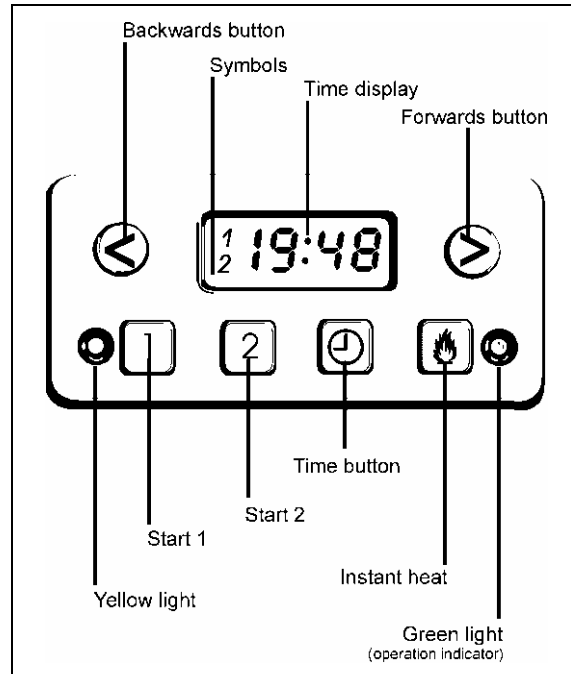






FIGURE 65 18046


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. 23:59. The display fades after 20 secs.



2. Do you want to know the time?

Just press  at any time. The display appears again.

3. You can get instant heat...

with the button 5, which switches your heater on (or off) immediately. The green light is on while the heater is switched on.

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

Press button "1"6 - and the display shows the time at which the heater will start. You can alter starting time by pressing button 7 (backwards) or 8 (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"9 allows you to program a second starting time

Press button "2"112, 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"1314 or "2"1516 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"1718 or "2"1920 briefly. The appropriate number in the display goes out, together with the yellow light.

Switching off heater. Press  key briefly.

Operating display  disappears. The blower automatically continues to operate to cool the heater down.

Heating without preselection when ignition is "on."

Switch on the heater. Press  key briefly. The operating display  appears. The heating stays in operation until the ignition is switched off.

If the ignition is switched off, a residual heating period of 15 minutes remains. This can be extended to max. 120 minutes by pressing the \triangleright key or reduced by pressing the \triangleleft key.

Heating operation preselection.

Setting and activating the memory for heating operation and the alarm clock.

Press **P** several times until the required memory No. (1, 2, 3) appears flashing on the display. Press \triangleleft or \triangleright key briefly, and release. Then set the preselected time for the heater using the \triangleleft or \triangleright key.

As soon as this stops flashing and the weekday flashes, set the weekday.

The preselected time and weekday are stored as soon as the time display disappears or changes over to clock time.

The memory number indicates what memory is activated. Only one memory can be activated.

WEBASTO (45 000 or 80 000 BTU)

OPERATION WITH DIGITAL TIMER

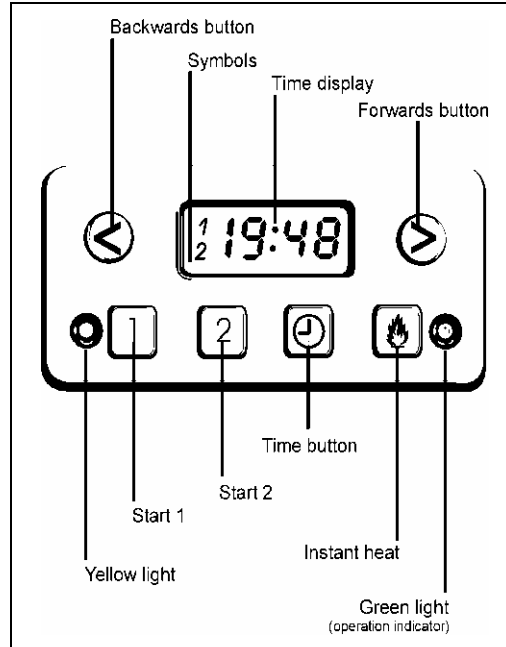




FIGURE 65 18046


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 \triangleleft (backwards) or \triangleright (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. 23:59. The display fades after 20 secs.



2. Do you want to know the time?

Just press  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 program 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 program 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.