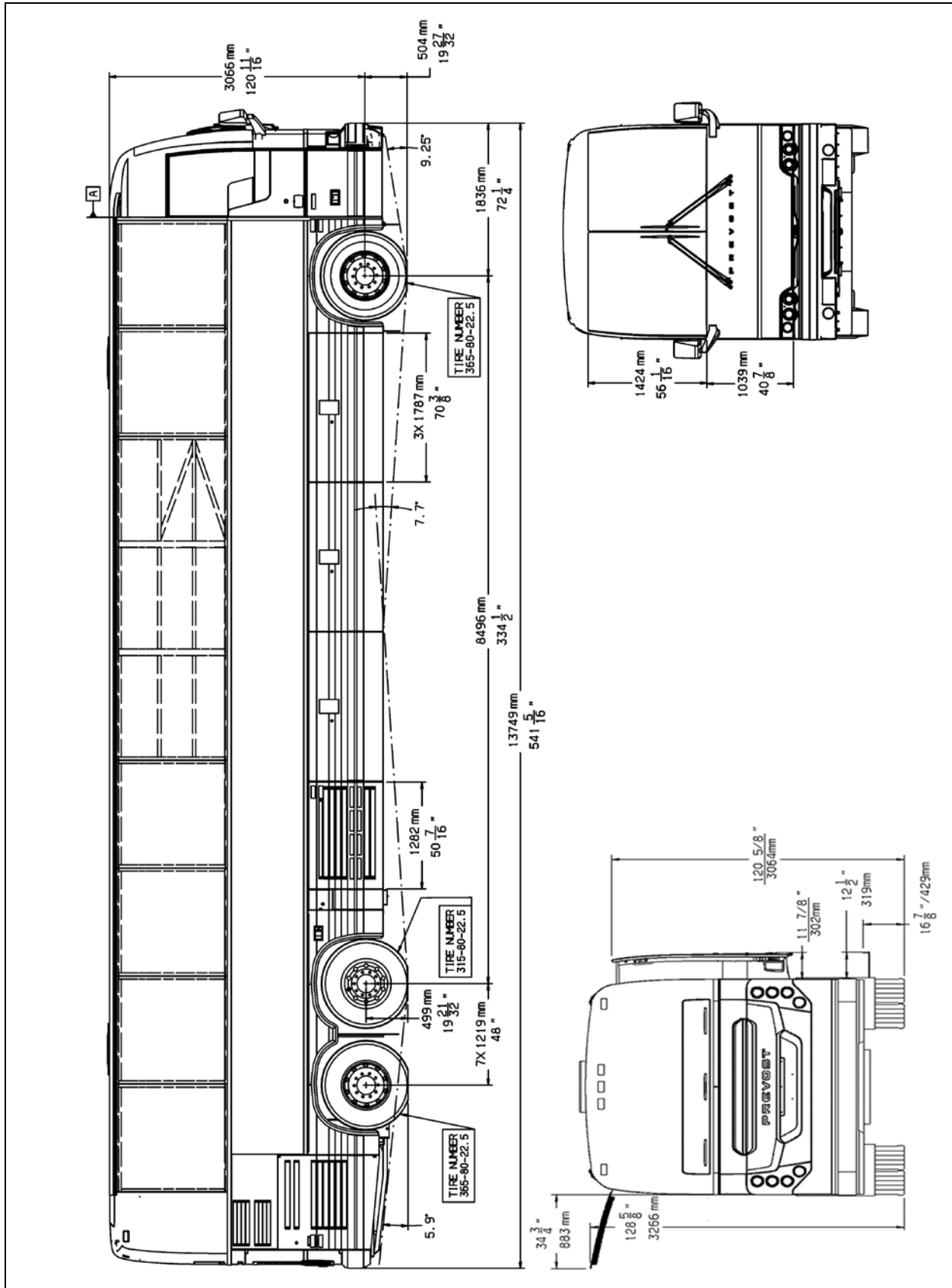


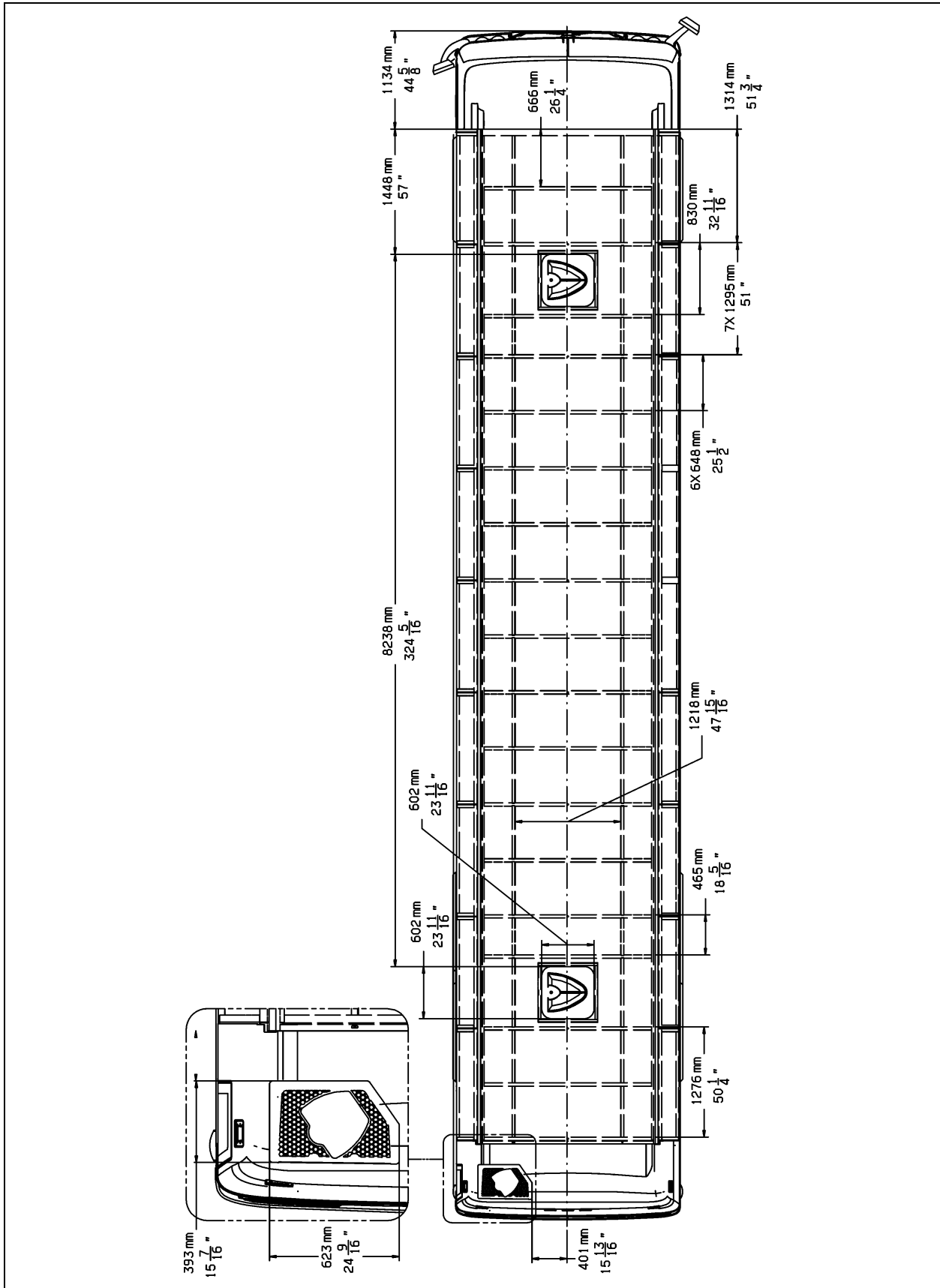
DIMENSIONS AND WEIGHTS	5
CAPACITIES	5
FUEL TYPE	5
BIODIESEL FUELS.....	5
WHEELS AND TIRES	6
RECOMMENDED TIRE INFLATION PRESSURE AT MAXIMUM COLD LOAD.....	6
BELTS	6
ENGINE	7
ALLISON TRANSMISSION	7
X3-45 VIP MOTORHOMES.....	7
X3-45 VIP FOR COMMERCIAL USE.....	7
GEAR RATIOS.....	7
PROPELLER SHAFT	7
BRAKES	7
BRAKE CHAMBER EFFECTIVE AREA:.....	7
AIR SYSTEM	7
ANTI-LOCK BRAKING SYSTEM (ABS)	7
TROUBLESHOOTING AND TESTING	8
AUTOMATIC TRACTION CONTROL (ATC) – ELECTRONIC STABILITY CONTROL (ESC)	8
STEERING	8
ELECTRICAL SYSTEM	8
SUSPENSION	8
INDEPENDENT FRONT SUSPENSION.....	8
DRIVE AXLE	9
TAG AXLE.....	9
ALIGNMENT SPECIFICATIONS	9
COOLING SYSTEM	10
FUEL SYSTEM	10
EXHAUST SYSTEM	10
HEATING AND AIR CONDITIONING	10
OIL SPECIFICATIONS	11
ENGINE.....	11
ALLISON AUTOMATIC TRANSMISSION	11
DIFFERENTIAL.....	11
FAN RIGHT ANGLE GEARBOX	11
POWER STEERING RESERVOIR.....	11
PLATES AND CERTIFICATION	11
SAFETY CERTIFICATION	12

9-2 Technical Information

DOT CERTIFICATION PLATE	12
VEHICLE IDENTIFICATION NUMBER (VIN)	12
COACH FINAL RECORD	12



LE MIRAGE XLII OVERALL DIMENSIONS



LE MIRAGE XLII OVERALL DIMENSIONS


DIMENSIONS AND WEIGHTS	X3-45 VIP
Overall length (including bumpers)	45' (13,7 m)
Overall width	102" (2,59 m)
Overall height	143" (3,63 m)
Wheelbase (center of front axle to center of drive axle)	334½" (8496 mm)
Floor height from ground	48 1/2" (1,23 m)
Ground clearance	11" (280 mm)
Step height from ground	15" (380 mm)
Step height (other steps)	7" (178 mm)
Headroom	89" (2261 mm)
Entrance door opening width	30" (762 mm)
Front overhang	72¼" (1836 mm)
Rear overhang	82¾" (2102 mm)
Front track	85.9" (2,18 m)
Drive track	76.7" (1,95 m)
Rear track	83.6" (2,12 m)
Turning circle radius (exterior front corner)	44'-3" (13487 mm)
	X3-45 VIP
Curb weight (before conversion)	N/A
Gross Vehicle Weight Rating (G.V.W.R.)	55,500 lb (25 174 kg)
Front axle Gross Axle Weight Rating (G.A.W.R.)	19,000 lb (8 618 kg)
Drive axle (G.A.W.R.)	22,500 lb (10 206 kg)
Tag axle (G.A.W.R.)	14,000 lb (6 350 kg)

The Gross Vehicle Weight Rating (G.V.W.R.) and the Gross Axle Weight Rating (G.A.W.R.) for front drive and tag axles are listed on a certification plate located on the L.H. control panel in driver's section.

CAPACITIES	X3-45 VIP
Volvo D13 Engine oil (in crankcase)	38 U.S. qrts (36 l)
Fuel tank (legal capacity equal to 95% of volume)	208 U.S. gal. (787 l)
Cooling system	24 U.S. gal. (91 l)
Allison Transmission (does not include external circuit)	6 U.S. gal. (23 l) 6.9 U.S. gal. (26 l) with retarder
Differential oil	20 U.S. qts (18,7 l)
Power steering reservoir	4.0 U.S. qts (3,8 l)
A/C compressor oil	4.5 U.S. qts (4,3 l)
Windshield washer reservoir	5.3 U.S. gal. (20 l)
Refrigerant	24.1 lb (11 kg)
Toilet septic tank	23.8 US gal. (90 liters)

FUEL TYPE

Diesel engines for 2007 and later model year vehicles are designed to operate only with **Ultra Low Sulfur Diesel** (ULSD) fuel, which can contain no more than 15 ppm sulfur.

	CAUTION
<p>ULSD fuel is necessary to avoid fouling the engine's Exhaust Aftertreatment System. Use of fuel other than ULSD will reduce the efficiency and durability of the engine.</p>	

BIODIESEL FUELS

Biodiesel up to a maximum of 20% blend (B20) may be used and will not affect the manufacturer's mechanical warranty as to engine and emissions system related components, provided the biofuel used in the blend conforms to ASTM D6751, B1 to B5 blends conform to ASTM D975, and B6 to B20 blends conform to ASTM D7467. Also, any engine performance problem related to the use of biodiesel fuel would not be recognized nor considered as Volvo or Prevost's responsibility.

However, Volvo engines are certified to comply with U.S. EPA and California emissions standards based upon the use of *test fuels* with

9-6 Technical Information

specifications established by these regulatory agencies.

Alternative fuels, including biodiesel, that are not substantially similar to the required *test fuels* may adversely affect engine emissions compliance. As a result, Volvo does not warrant the engine will conform to applicable Federal or California emissions limits when operated on biodiesel or other alternative fuels that are not substantially similar to specified test fuels used for certification.

Additional maintenance is required and is covered in the maintenance manual "Fuel system" section.

WHEELS AND TIRES

Accuride steel wheels9" X 22½"
 Alcoa aluminum forged wheels9" X 22½"
 Except inner drive axle (steel).....8¼" X 22½"
 Alcoa aluminum forged wheels
 (for super single tire)14" X 22½"
 Tires 315/80 R22.5 load range "L"
 Tires 365/70 R22.5 load range "L"
 Tires (super single) 455/55 R22.5 load range "L"

RECOMMENDED TIRE INFLATION PRESSURE AT MAXIMUM COLD LOAD

The recommended tire inflation pressures are given in the applicable documents supplied with the vehicle. In addition, maximum cold tire inflation pressures are listed on the Department of Transport's certification plate, affixed on the panel behind the driver's seat. For special tire selection, a "PREVOST COACH SPECIAL SPECIFICATION" chart is supplied with the vehicle and is affixed next to the DOT certification plate, located on the left wall close to the driver's seat.

NOTE

Bus Shells vehicles, before being converted, are not at their maximum weight and tire pressures are adjusted at lower level than the maximum allowed appearing on the DOT plate. Tires pressure must be re-adjusted once converted.



WARNING

Special tire selection may lower maximum allowable speed limit, even below posted speed limit. For maximum safety, check with tire manufacturer.

Vehicles equipped with TPMS: The TPMS target pressures are factory set to equal the prevailing tire pressure at delivery time. When tire pressures are increased to account for higher vehicle weight, the TPMS set point need to be increased accordingly.

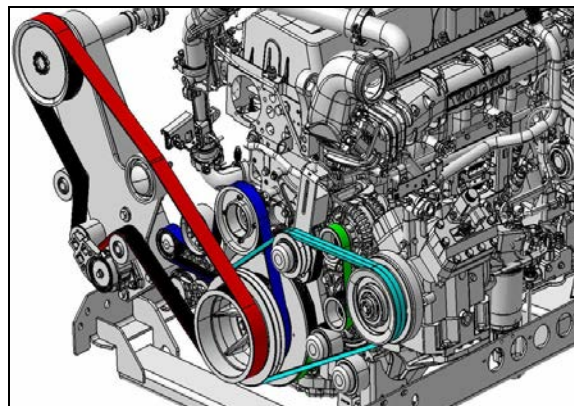


CAUTION

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

For non standard tire and wheel specifications, see Prevost tire pressure tabulation in "Coach Final Record" or special specification chart affixed next to the DOT certification plate.

BELTS



Use	Model	Qty
Cooling fan drive belt	Multi V-14 Rib 14PK2665	1
A/C system Bitzer 4NFCY compressor	V Belt BX71	2
Alternator (twin Bosch)	Multi-V-8 Rib 8PK1575	1
Alternator (emergency)	Multi-V-8 Rib 8PK1512	1

Use	Model	Qty
Coolant pump	Multi-V-10 Rib 10PK1512	1

NOTE
Belts specifications may vary. For proper belt selection, always consult your vehicle Coach Final Record.

ENGINE

Volvo D13 engine displacing 12.8 liters. The engine is an inline six cylinder, four stroke, turbocharged, air to air charge cooled, diesel engine with SOHC with 4 valves per cylinder.

Power500 HP (373 kW)
Torque 1,770 lbf•ft (2400 Nm)
Recom. cruise speed range 1400-1800rpm
Full dress, dry weight2519 lb

ALLISON TRANSMISSION

X3-45 VIP MOTORHOMES

Allison World MH4000 electronically controlled six speed automatic transmission (MH4000R with the optional output retarder).

X3-45 VIP FOR COMMERCIAL USE

Allison World B500 electronically controlled six speed automatic transmission for Commercial Application (B500R with the optional output retarder).

GEAR RATIOS

1st3.510
2nd1.906
3rd1.429
4th1.000
5th0.737
6th0.639
Reverse4.801
Converter.....1.9
Differential ratio4.30
Differential ratio (optional)3.91
Differential ratio (optional)4.10
Differential ratio (optional)4.56

Differential ratio (optional)..... 4.88

PROPELLER SHAFT

Hayes-Dana SPL250 type tubular shafts. It is provided with heavy-duty universal joints.

BRAKES

The features of the braking system include a dual system where the front and rear circuits are completely independent from each other. The brakes are Knorr-Bremse air operated disc type brakes with ABS and automatic slack adjusters on front drive and tag axles. Model 24/24 spring brakes on drive axle provide emergency and parking brakes. Emergency brake application will be automatic if pressure drops below 40 psi. At 60 psi a warning light and buzzer will come on so the driver can bring the vehicle to a safe stop simply by a conventional application of the foot brake pedal.

BRAKE CHAMBER EFFECTIVE AREA:

Front axle 24 in² (service)
Drive axle24 in² (service)
.....24 in² (emergency/parking)
Tag axle 14-16 in² (service)

AIR SYSTEM

Compressed air is provided by a twin cylinder, 31.8 cfm Wabco, gear-driven, water-cooled and engine oil lubricated air compressor.

ANTI-LOCK BRAKING SYSTEM (ABS)

The anti-lock braking system has one Electronic Control Unit (ECU) controlling a four channel system. One wheel slip sensor is mounted at each front axle and drive axle wheel. The Tag axle wheels are slave to the drive axle wheels.

The Electronic Control Unit (ECU) is maintenance free. Its operating voltage is 24 ± 6 volts DC. The thermal operating range for the ECM is from -40 to 167°F (-40 to 75°C).

The solenoid control valves are maintenance free. Their operating voltage is 24 (+4.8, -2.4) volts DC. The rated current draw is 1.65 amps. The thermal operating range of the solenoid control valves is from -40 to 176°F (-40 to 80°C).

TROUBLESHOOTING AND TESTING

For troubleshooting and testing of the vehicle's anti-lock braking system, refer to Meritor WABCO Maintenance Manual: "Anti-Lock Brake Systems For Trucks, Tractors and Buses" or use dashboard Driver Information Display (DID), Diagnostics Mode under "Brake ECU".

AUTOMATIC TRACTION CONTROL (ATC) – ELECTRONIC STABILITY CONTROL (ESC)

In addition to the ABS function, vehicle may be equipped with an advanced model of Bendix EC-60 controller to provide an **Automatic Traction Control (ATC)** feature. Bendix ATC can improve vehicle traction during acceleration, and lateral stability while accelerating through curves. ATC utilizes **Engine Torque Limiting (ETL)** where the ECU communicates with the engine's controller and/or **Differential Braking (DB)** where individual wheel brake applications are used to improve vehicle traction.

The EC-60 advanced model controller also provides ABS-based stability features referred to as **ESC® Electronic Stability Control**.

Refer to Maintenance Manual, Section 12: Brake and Air System for more information on this system.



CAUTION

Even with ESC-equipped vehicles, the driver remains responsible for ensuring vehicle stability during operation.



DANGER

ESC may reduce the vehicle speed automatically.

ESC can make the vehicle **decelerate automatically**. ESC can slow the vehicle with or **without the operator applying the brake**, and **even when the throttle is being applied**.

STEERING

- ZF 8098 integral hydraulic assisted steering gear;
- Variable assistance in function of speed is optional.

- Volvo hydraulic pump gear driven from engine drive.
- Hydraulic reservoir and dipstick accessible from engine compartment.
- System pressure: 2175 psi (150 bars).
- Steering wheel diameter 20". Tilt steering wheel and telescopic steering column; pneumatically locked with foot operated switch for adjustment.
- Number of turns: 5¾.
- Outside turning radius: See Dimensions and Weight.

ELECTRICAL SYSTEM

- 24 volt, negative ground
- 12 volt exterior lighting
- Two 28 volt, 120 amp, self-regulated, belt-driven, air-cooled HD 10 Bosh alternators.
- Four 12 volt, group 31 format maintenance-free batteries connected in series/parallel. Cold cranking capacity is 950 amps (each battery) with a reserve capacity of 195 minutes.
- 100 amp battery equalizer.
- 12 volt, 145 amp, air-cooled, belt-driven, additional alternator (optional).

SUSPENSION

Goodyear rolling lobe type air springs (bellows) are used throughout.

INDEPENDENT FRONT SUSPENSION

- 2 Bellows (14") for a G.A.W.R. of 19,000 lb;
- 2 Shock absorbers;
- 2 Upper V-Links;
- 2 Lower V-Links;
- 2 Torque rods;
- 2 Steering Levers;
- 1 Leveling valve;
- 1 sway bar (1¾" diameter).

DRIVE AXLE

1 Lateral Panhard rod.

- 4 Bellows (11");
- 4 Shock absorbers;
- 3 Radius rods;
- 1 Panhard rod;
- 2 Leveling valves.

TAG AXLE

- 2 Bellows (11");
- 2 Shock absorbers;
- 3 Radius rods;

ALIGNMENT SPECIFICATIONS

Use static wheel alignment systems which work with angle measurements only, such as Josam or Hunter systems. Static alignment specifications are listed in the following tables:

INDEPENDENT FRONT SUSPENSION						
	Minimum value		Nominal value		Maximum value	
Load	Non-converted	Converted	Non-converted	Converted	Non-converted	Converted
Right camber (degrees)	0.20°	-0.20°	0.30°	0.0°	0.50	0.20°
Left camber (degrees)	0.20°	-0.20°	0.30°	0.0°	0.50	0.20°
Right caster (degrees)	2.55°		2.8°		3.05°	
Left caster (degrees)	2.55°		2.8°		3.05°	
Total toe (degrees)	0.02°	0.04°	0.04°	0.06°	0.06°	0.08°

DRIVE AXLE			
	Minimum value	Nominal value	Maximum value
Thrust angle (degrees)	±0.11°		
Total toe	0.18° toe-in	0°	0.18° toe-out

TAG AXLE			
	Minimum value	Nominal value	Maximum value
Thrust angle*	-0.02	0	0.02
Total toe	0.08° toe-in	0°	0.02° toe-out

COOLING SYSTEM

- Copper fin radiator and aluminum charge air cooler arranged one behind the other, Valeo made.
- 3 speed fan clutch ECU controlled.
- Rubber insulated from the body.
- Expansion tank above radiator and remote mounted.
- System pressure 14 psi.
- One (1) 185° F thermostat.
- System capacity 24 us gal.
- Coolant filter.
- Radiator fan: 34 inches (LE MIRAGE XLII) or 36 inches (X3-45 VIP) fan, belt and shaft driven.

FUEL SYSTEM

208 US gallons polyethylene polyethylene equipped with:

- Anti-spill device.
- Safety filler caps, providing filling access on both sides of vehicle.
- Pressure relief valve.
- Electric fuel gage.
- Fuel cooler.
- Low level signal at 26 us gallon/98 liters.
- Primary filter 25 microns (standard).
- Fuel pro 382 filter available as an option as a primary filter.
- Secondary filter 3 to 5 microns.
- Shut-off valve on fuel supply line.

EXHAUST SYSTEM

One all stainless steel exhaust system including:

- Catalytic converter to reduce NOx.
- FleetGuard assembly made of a DOC (Diesel Oxidation Catalyst and a DPF (Diesel Particulate Filter). Noise, vibration and heat insulated. This assembly is mounted to the bus structure and is accessible through an exterior access door.

- Tail pipe diffuser and rain deviation device.
- Exhaust pipe with Insulation and a flexible section.
- Exhaust to rear left hand top of rear cap.

HEATING AND AIR CONDITIONING

Two air conditioning systems are available: the large capacity (central HVAC system) or the small capacity A/C (small HVAC system). Vehicles equipped with the large capacity A/C benefit from a combination heating and cooling system that provides adequate capacity of conditioned and filtered air for all climatic conditions. Fresh air is drawn into the system from the left (driver's) side of the vehicle. Return air is taken from the middle of the vehicle. The driver's heater and defogger are controlled separately from the central unit. An air mixture selector enables air to be drawn into the system from outside the vehicle or recirculated. Driver's air provides cooling for the driver's area only, maximizing available baggage space for other uses. The small capacity A/C enables cooling the driver's area only.

SMALL HVAC SYSTEM	
Air conditioning capacity	2 tons
Refrigerant type	134a
Air flow	450 cfm (12,7 m ³ /min)

COMPRESSOR (For small HVAC system)	
Number of cylinders	7
Operating speed	700 to 6 000 rpm
Oil capacity	6.0 U.S. oz (0,18 l)
Approved oil	SP-20 (PAG)

CENTRAL HVAC SYSTEM	
Air conditioning capacity	7.5 tons
Refrigerant type	134a
Heating capacity	152 000 Btu/h
Air flow	2 600 cfm (73,6 m ³ /min)

COMPRESSOR (for central A/C)	
Number of cylinders	4
Operating speed	500 to 3500 rpm
Oil capacity	2.6 U.S. qts (2,5 l)
Approved oil	Bitzer BSE55 (POE)

OIL SPECIFICATIONS

ENGINE

For the Volvo D13H engine, we recommend using SAE 10W-30 oil meeting *EO-O Premium Plus* or *Volvo VDS-4*.

Volvo VDS-4 oils exceed API service category CJ-4 oils.

ALLISON AUTOMATIC TRANSMISSION

Allison World Transmission recommends the following fluids:

- Castrol TranSynd™ or TES-295 specification equivalent fluid;
- TES-389 specification equivalent fluid;;

DIFFERENTIAL

Multigrade gear oil meeting MIL-PRF-2105E: 85W140 is recommended for use in drive axle. This lubricant performs well over a broad temperature range, providing good gear and bearing protection in a variety of climates. If temperature drops below 10°F (-12°C), 80W90 should be used, and below -15°F (-26°C), 75W90 should be used. In extreme conditions or for better performance, full synthetic gear oil can be used.

FAN RIGHT ANGLE GEARBOX

Use Shell synthetic transmission oil MA 75W90 or equivalent.

POWER STEERING RESERVOIR

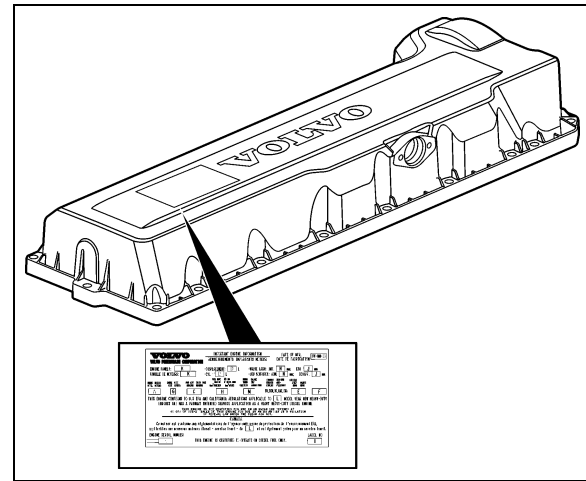
Use Automatic Transmission Fluid (ATF) Dexron-IIe or Dexron-III for this system.

PLATES AND CERTIFICATION

The main components of the vehicle such as engine, transmission, axles and chassis are

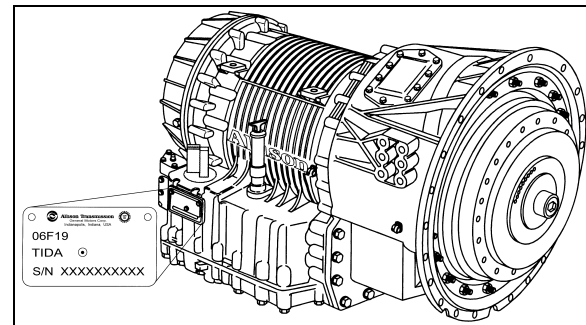
identified by different serial numbers. It may be necessary to locate these numbers for warranty purposes.

The engine data plate is located on the rocker cover. The engine serial and model number and a list of the optional engine equipment are written on this plate. Refer to this information when ordering replacement parts. Also the engine data plate certifies that the engine conforms to federal and any state exhaust emissions regulations.



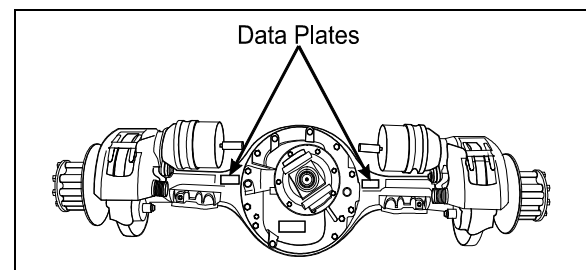
VOLVO D13 ENGINE DATA PLATE

00052



TRANSMISSION DATA PLATE

07139



DRIVE AXLE

11019

9-12 Technical Information



INDEPENDENT FRONT SUSPENSION

16176

SAFETY CERTIFICATION

Vehicle components meet specifications and standards as follows:

- Material and parts conform to ASTM and/or SAE standards in effect at the time of manufacture.
- All factory-installed interior materials meet FMVSS 302 for fire resistance.
- Certified according to Provincial, State and Federal Safety standards (Canadian and US) BMCSS, FMVSS and CMVSS.
- Other applicable certification labels are affixed to the component.

DOT CERTIFICATION PLATE

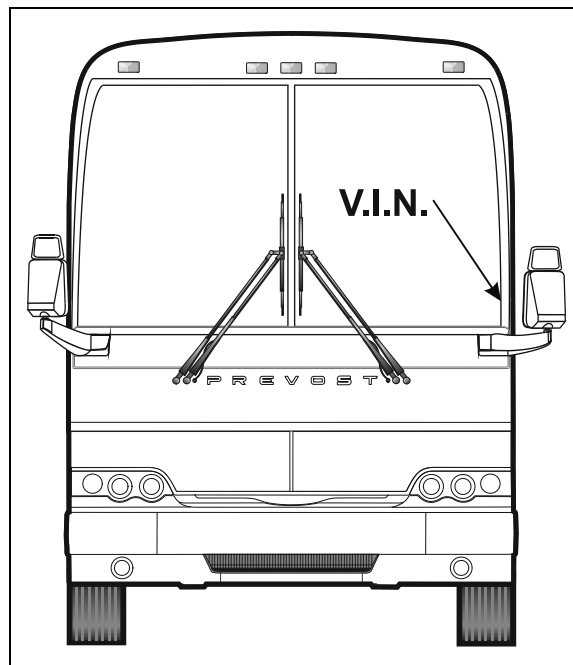
This certifies that vehicles manufactured by Prevest Car Inc. comply with all Federal Motor Vehicle Safety Standards at the time of manufacture. Information such as gross vehicle weight rating and tire pressure is also marked on this plate. The DOT Certification plate is affixed to L.H. control panel.

		PREVOST			
INCOMPLETE VEHICLE MANUFACTURED BY : PREVOST CAR INC. STE-CLAIRE, QUE.		DATE OF MFG. / DATE DE FAB.			
G.V.W.R. : 24721 KG. (54500 LBS). P.N.B.V. :		COLD INFLATION PRESS. / FROID KPA (PSI)			
AXLES/ESSTIEUX	G.A.W.R./P.N.B.E.	TIRES/PNEUS	RIMS/JANTES	SINGLE OR DUAL SIMPLE	OR DOUBLE
FRONT/AVANT :	8165 (18000)	365/70R22.5 (L)	22.5X10.5	724 (105)	S
INT. DIFF. :	10206 (22500)	315/80R22.5 (L)	22.5X9 (OUT) 22.5X8.25 (IN)	655 (95)	D
REAR/TANDEM :	6350 (14000)	365/70R22.5 (L)	22.5X10.5	552 (80)	S
THIS INCOMPLETE VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE. IF COMPLETED IN ACCORDANCE WITH THE INSTRUCTIONS OF INCOMPLETE VEHICLE DOCUMENTS FURNISHED PURSUANT TO CFR PART 568, CONFORMITY TO THE OTHER SAFETY STANDARDS IS NOT SUBSTANTIALLY AFFECTED BY THE DESIGN OF THE INCOMPLETE VEHICLE.					
VEHICLE IDENTIFICATION NO. / NO. IDENTIFICATION VEHICULE		#405444			

DOT CERTIFICATION PLATE

00016

VEHICLE IDENTIFICATION NUMBER (VIN)



VEHICLE IDENTIFICATION NUMBER

00017

The Vehicle Identification Number is stamped on a plate located on the windshield frame pillar (driver's side). The VIN is visible from the outside of the vehicle. Make sure the correct vehicle identification number is given when ordering replacement parts. Using the VIN when ordering parts will facilitate processing.

NOTE

Record the VIN in the vehicle documentation and keep with company records. The VIN will normally be used for vehicle registration and for obtaining vehicle insurance coverage.

COACH FINAL RECORD

The Coach Final Record is a record of all data pertaining to the assembly of the vehicle. This record is shipped to the new customer via a courier company. Retain this record in the company records office for reference and safe-keeping.