

7

Maintenance

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MAINTENANCE SERVICES

Maintenance Services

You should exercise the utmost care to prevent damage to your vehicle and injury to yourself whenever using this manual for maintenance or inspection.

Should you have any doubts concerning the inspection or servicing of your vehicle, we strongly recommend that you have a reliable and qualified service shop perform this work, preferably an Authorized Xedos Dealer.

An Authorized Xedos Dealer has factory-trained technicians and genuine Xedos parts to service your vehicle properly. For expert advice and quality service, see an Authorized Xedos Dealer.

Inadequate, incomplete, or insufficient servicing may result in operational problems with your vehicle that could even lead to vehicle damage, an accident, or personal injury.

Owner's Responsibility

Maintenance Services and Record Retention are the owner's responsibility.

You should retain evidence that proper maintenance has been performed on your vehicle in accordance with scheduled maintenance, services chart starting on the following page.

Detailed warranty information is also provided with your Xedos vehicle.

Claims made during the warranty term will not qualify under any warranty if they result from lack of maintenance rather than from defective material or workmanship. We recommend that such maintenance be performed by an Authorized Xedos Dealer using genuine Xedos parts.

Scheduled Maintenance Services

NOTE

After 80,000 km (48,000 miles) or 48 months, continue to follow the described scheduled maintenance items and intervals periodically.

Emission control and related systems:

The ignition and fuel systems are vitally important to the proper operation of the emission control and related systems, as well as for efficient engine operation.

It is strongly recommended that all servicing related to these systems be done by your Authorized Xedos Dealer.

MAINTENANCE SERVICES

I : Inspect: Visual examination and/or functional measurement of system's operation or performance
A: Adjust: Examination resulting in adjustment or replacement **R**: Replace or change **T**: Tighten

MAINTENANCE ITEM	MAINTENANCE INTERVALS		Number of months or km (miles), whichever comes first							
	Months*¹			12		24		36		48
	km × 1000	1.0	10	20	30	40	50	60	70	80
	Miles × 1000	0.6	6	12	18	24	30	36	42	48
Exhaust manifold bolts and nuts		T				T				T
Drive belts* ²		A		A		A		A		A
Engine timing belt* ³		Replace every 100,000 km (60,000 miles)								
Engine oil* ⁴		R	R	R	R	R	R	R	R	R
Oil filter* ⁴			R	R	R	R	R	R	R	R
Cooling system (including coolant level adjustment)				I		I		I		I
Engine coolant		Replace every 2 years								

*1 Major service interval at 12 months/20,000 km (12,000 miles)

Lubrication service based on distance only 10,000 km (6,000 miles) not time

*2 Adjust alternator and water pump drive belt, power steering and air conditioner drive belt, if equipped.

*3 Replacement of timing belt is required at every 100,000 km (60,000 miles). Failure to replace timing belt may result in damage to the engine.

*4 If the vehicle is operated under the following conditions, it is suggested that the engine oil and oil filter be changed more often than at usual recommended intervals.

a) Driving in dusty conditions.

b) Extended periods of idling or low speed operation.

c) Driving for a prolonged period in cold temperatures or driving only short distance regularly.

MAINTENANCE SERVICES

I : Inspect: Visual examination and/or functional measurement of system's operation or performance
A: Adjust: Examination resulting in adjustment or replacement **R**: Replace or change

MAINTENANCE ITEM	MAINTENANCE INTERVALS	Number of months or km (miles), whichever comes first									
		Months* ¹			12		24		36		48
		km × 1000	1.0	10	20	30	40	50	60	70	80
		Miles × 1000	0.6	6	12	18	24	30	36	42	48
Idle speed				A		A		A		A	
Air cleaner element** ⁵				I		R		I		R	
Fuel filter						R				R	
Fuel lines and hoses				I		I		I		I	
Initial ignition timing				I		I		I		I	
Spark plugs				A		A		A		A	
E.G.R. system (2.0 litre)				I		I		I		I	
Evaporative system				I		I		I		I	
Dash pot (1.6 litre)				A		A		A		A	
Battery condition				I		I		I		I	
All electrical systems* ⁶			I	I	I	I	I	I	I	I	

*1 Major service interval at 12 months/20,000 km (12,000 miles)

Lubrication service based on distance only 10,000 km (6,000 miles) not time

*5 If the vehicle is operated in very dusty or sandy areas, inspect and, if necessary, replace more often than at usual recommended intervals.

*6 This is a full function check of all electrical systems, i.e., all lights, washers (including condition of blades) electric windows, sun roof, horn, etc..

MAINTENANCE SERVICES

I : Inspect: Visual examination and/or functional measurement of system's operation or performance
A: Adjust: Examination resulting in adjustment or replacement **R**: Replace or change

<div style="display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; margin-right: 5px;">MAINTENANCE INTERVALS</div> <div style="font-weight: bold; margin-left: 5px;">MAINTENANCE ITEM</div> </div>	Number of months or km (miles), whichever comes first									
	Months* ¹			12		24		36		48
	km × 1000	1.0	10	20	30	40	50	60	70	80
	Miles × 1000	0.6	6	12	18	24	30	36	42	48
Head light alignment			A		A		A		A	
Clutch pedal		I	I	I	I	I	I	I	I	
Brake lines, hoses, and connections			I		I		I		I	
Brake pedal		I	I	I	I	I	I	I	I	
Brake and clutch fluid* ⁷		I	I	I	R	I	I	I	R	
Parking brake			A		A		A		A	
Power brake unit and hoses			I		I		I		I	
Disc brakes			I		I		I		I	
Power steering fluid		I	I	I	I	I	I	I	I	
Power steering system and hoses			I		I		I		I	
Steering and front suspension			I		I		I		I	
Manual transaxle oil					A				R	
Automatic transaxle fluid level			I		I		I		I	

*1 Major service interval at 12 months/20,000 km (12,000 miles)
 Lubrication service based on distance only 10,000 km (6,000 miles) not time

*7 Replace every 2 years.

If there has been continuous hard driving, mountain driving, or if the brakes are used extensively or the vehicle is operated in extremely humid climates, the brake fluid should be changed annually.

MAINTENANCE SERVICES

I : Inspect: Visual examination and/or functional measurement of system's operation or performance
 A: Adjust: Examination resulting in adjustment or replacement T: Tighten

MAINTENANCE INTERVALS		Number of months or km (miles), whichever comes first									
		Months* ¹			12		24		36		48
		km × 1000	1.0	10	20	30	40	50	60	70	80
		Miles × 1000	0.6	6	12	18	24	30	36	42	48
Drive shaft dust boots					I		I		I		I
Bolts and nuts on chassis and body			T		T		T		T		T
Body condition (for rust, corrosion, and perforation)		Inspect annually									
Exhaust system heat shield							I				I
Tyres (including spare tyre, with inflation pressure adjustment)					I		I		I		I
Hinges and catches					A		A		A		A
Underside of vehicle					I		I		I		I
Seat Belts					I		I		I		I
Air conditioner system (if equipped)	Refrigerant	Inspect the refrigerant amount annually									
	Compressor	Inspect the operation annually									
Road test					I		I		I		I

*1 Major service interval at 12 months/20,000 km (12,000 miles)
 Lubrication service based on distance only 10,000 km (6,000 miles) not time

Routine Service

It is strongly recommended that the following items be checked daily and/or weekly.

- **Engine Oil Level**
(page 7-11)
- **Engine Coolant Level**
(page 7-14)
- **Brake and Clutch Fluid Level**
(page 7-18)
- **Washer Fluid Level**
(page 7-24)
- **Tyre Inflation Pressure**
(page 7-34)

Maintenance Service Precautions

When performing any inspection or maintenance work on your vehicle, always exercise care to reduce the risk of personal injury or damage to the vehicle.

Here are some general precautions that should be closely observed in carrying out any service operation.

- Do not work on the engine while it is hot. Always turn it off and allow it to cool.
- If you must work with the engine running, make sure that no article of clothing, including neckties and handkerchiefs, can become entangled by any moving parts. Remove watches, bracelets, rings, necklaces, and similar items. Keep hands, clothing, hair, and tools away from moving fans and drive belts.
- Never get under the vehicle while it is supported by a jack. If it is necessary to work under the vehicle, use safety stands.
- Keep smoking materials, flames, and sparks away from the battery and all fuel and fuel-related parts.
- Never connect or disconnect either the battery or any transistorized component while the ignition switch is ON(II).

- When connecting the battery cables, pay special attention to their polarities. Never connect a positive cable to a negative terminal or a negative cable to a positive terminal.
- Remember that the battery, ignition cables, and vehicle wiring carry high currents or voltage. Be careful not to cause a short circuit.
- When performing any checks in an enclosed space with the engine running, such as in a garage, be sure there is proper ventilation.
- There are strict environmental laws regarding the disposal of waste oils and fluids. Please dispose of your waste carefully and with due regard to the environment.

We recommend that you entrust the oil and fluid changes of your vehicle to an Authorized Xedos Dealer.

You should be aware that improper or incomplete servicing may result in operating problems. This section gives instructions only for those items that are relatively easy for an owner to perform.

MAINTENANCE SERVICES

Performing do-it-yourself maintenance during the warranty period may affect your warranty coverage. Read the separate Xedos Warranty statement for details and suggestions. If in doubt about any servicing, have it done by an Authorized Xedos Dealer.

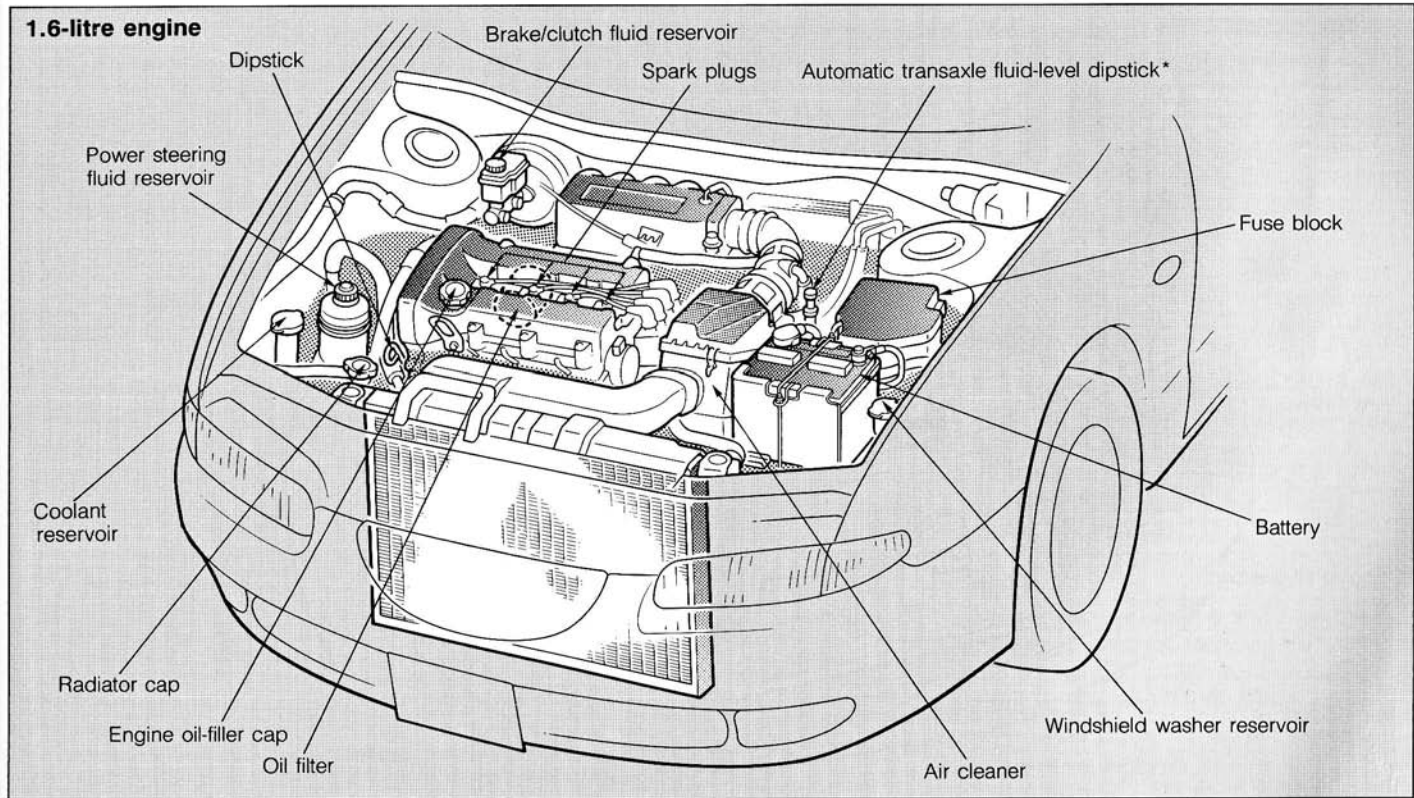
WARNING!

- *On vehicles equipped with an automatic transaxle, do not release the bonnet latch until the selector lever has been securely latched in P (Park) and the parking brake has been firmly set. Turn the ignition switch off unless it is necessary to check systems with the engine running. If the vehicle has a manual transaxle, do not release the bonnet latch unless the ignition switch is first turned off, the shift lever is placed in 1 (First), and the parking brake is firmly set.*
- *With a manual transaxle, if it is necessary to check beneath the bonnet with the engine running, place the shift lever in NEUTRAL*

and set the parking brake firmly. Unexpected and possibly sudden vehicle movement may occur if these precautions are not taken.

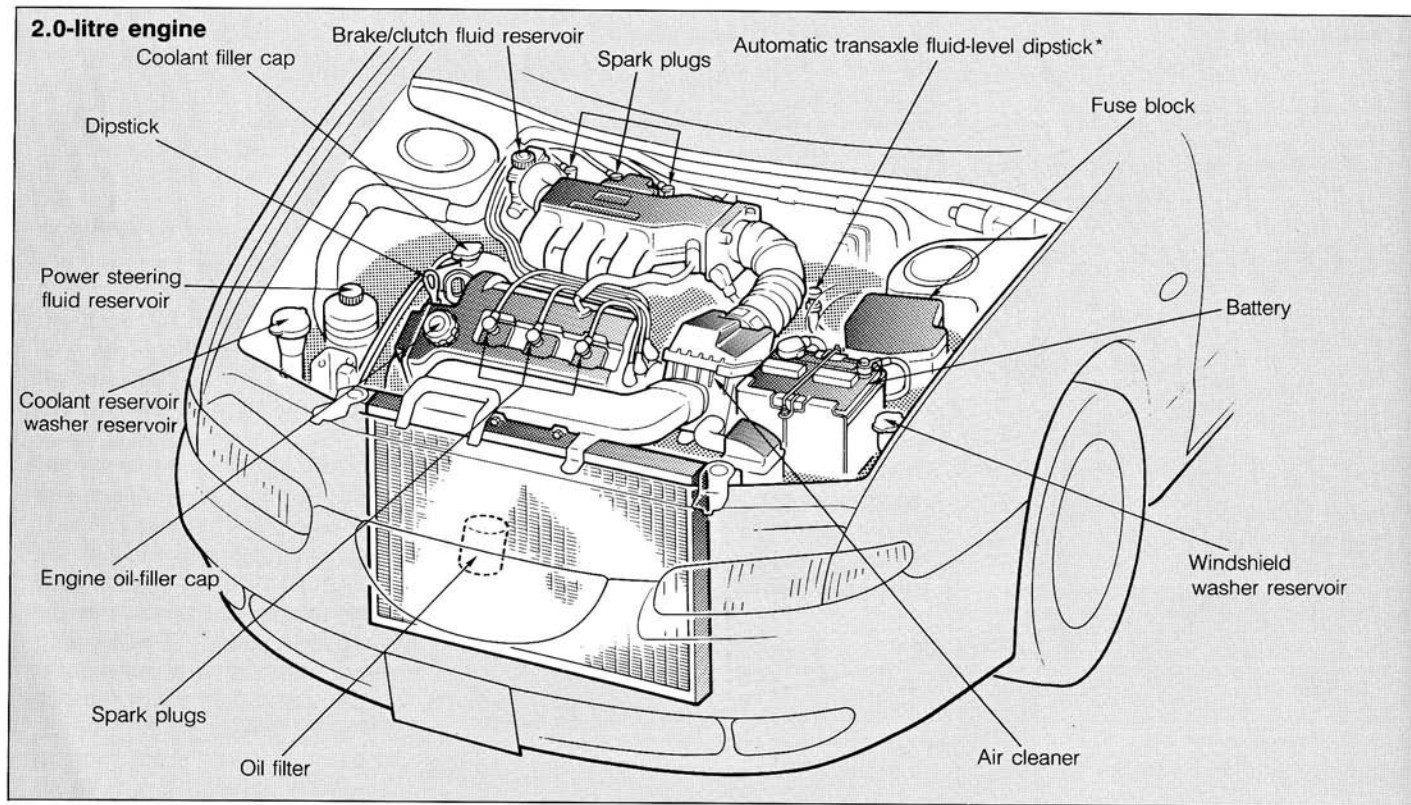
- *To avoid the possibility of personal injury, you should always turn off the ignition switch and remove the key before working under the bonnet unless the procedure specifically requires otherwise. If it requires running the engine while working under the bonnet, do not permit any clothing, such as neckties or handkerchiefs, near the engine or cooling fan. They can become entangled in moving parts and result in personal injury and damage to the vehicle. Also remove watches, bracelets, and rings for safety.*

Engine Compartment Overview

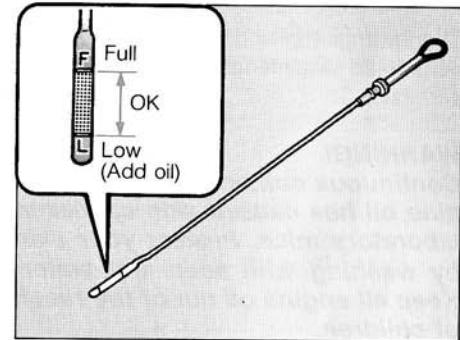
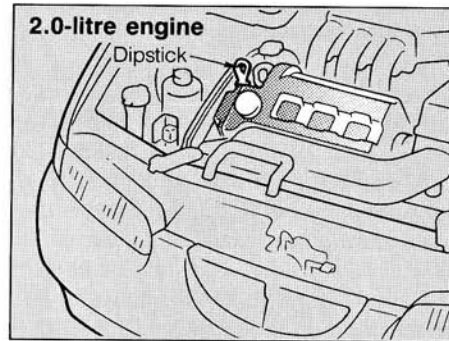
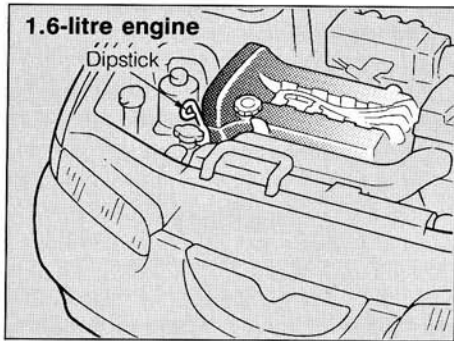


*Some models.

ENGINE COMPARTMENT



Checking Engine Oil Level



1. Be sure the vehicle is on level ground.
2. Warm up the engine to the normal operating temperature.
3. Turn off the engine and wait 5 minutes for the oil to return to the oil pan.
4. Pull out the dipstick, wipe it clean, and reinsert it fully.
5. Pull the dipstick out again and check the level. If the level is between F and L, it is adequate.
If it is near or at L, add enough oil to bring the level to F.
Do not overfill.

NOTE

The distance between L and F on the dipstick represents the following.

1.6-litre engine:

0.8 litre (0.85 US qt, 0.7 Imp qt)

2.0-litre engine:

1.0 litre (1.1 US qt, 0.9 Imp qt)

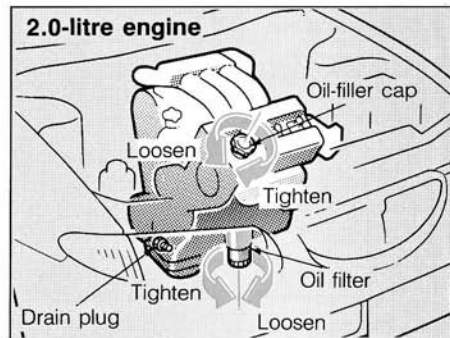
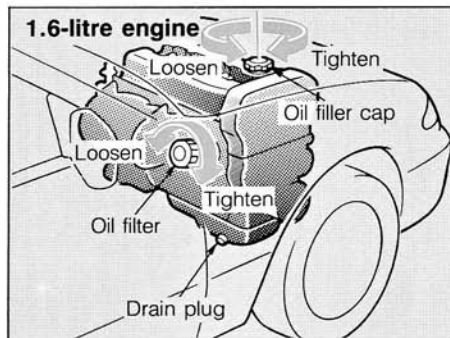
ENGINE OIL AND OIL FILTER

Changing Engine Oil and Filter

Change engine oil and filter according to the Scheduled Maintenance on page 7-2 through 7-6.

WARNING!

Continuous contact with USED Engine oil has caused skin cancer in laboratory mice. Protect your skin by washing with soap and water. Keep all engine oil out of the reach of children.



1. Warm up the engine for a few minutes and then turn it off. Remove the oil-filler cap.
2. Drain the oil into a suitable container after removing the oil-filler cap and drain plug.

Both the oil and the engine are hot. Do not burn yourself.

3. Remove the engine oil filter with an oil-filter wrench.
4. Use a clean rag to clean the mounting surface of the oil filter on the engine.
5. Apply a small amount of engine oil to the rubber seal of a new oil filter.
6. Install the oil filter and tighten it. (Please refer to the oil filter caution label for tightening instructions.)
7. Replace the drain plug tightly after the oil has thoroughly drained.
8. Refill the engine with new oil to the F mark on the dipstick.

Do not overfill.

9. Refit the oil-filler cap securely.
10. Start the engine and inspect around the oil filter seal for leaks.
11. Turn off the engine and wait 5 minutes for the oil to return to the oil pan.

Check the oil level and fill to the F mark if necessary.

Oil capacity

1.6-litre engine:

With oil filter	3.6 litres (3.8 US qt, 3.2 Imp qt)
Without oil filter	3.2 litres (3.4 US qt, 2.8 Imp qt)

2.0-litre engine:

With oil filter	4.0 litres (4.2 US qt, 3.5 Imp qt)
Without oil filter	3.7 litres (3.9 US qt, 3.3 Imp qt)

NOTE

Use only the specified engine oil (refer to chart on page 7-43).

CAUTION

- **Follow these instructions carefully. An improper oil filter installation can cause oil leakage and engine damage.**
- **Although oil filters may have the same external appearance, their internal designs differ significantly. These filters are not interchangeable. To avoid potential engine damage, use only the specified filter for each application.**

ENGINE COOLING SYSTEM

Engine Cooling System

The cooling system is a high-pressure type with a reservoir and is filled with year-round antifreeze coolant at the factory.

Check the antifreeze protection and coolant level at least once a year—at the beginning of the winter season—and before traveling to a colder climate.

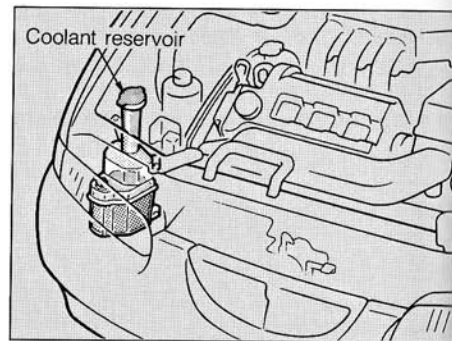
WARNING!

- ***Never attempt to remove the radiator cap or coolant filler cap while the engine is operating. Doing so might lead to cooling system and engine damage and could result in serious personal injury from escaping hot coolant or steam. Turn off the engine and wait until it has cooled. Even then, use extreme care when removing the radiator cap or coolant filler cap. Wrap a thick cloth around it, and turn it counterclockwise slowly to the first stop. Step back while the pressure is released from the cooling system. When you are sure all the pres-***

sure has been released, press down on the cap—still using a cloth—turn it, and remove it.

- ***Even if the engine is not operating, do not remove the radiator cap or coolant filler cap while the engine and radiator are hot. Scalding hot coolant and steam may still blow out under pressure; this could cause serious injury.***

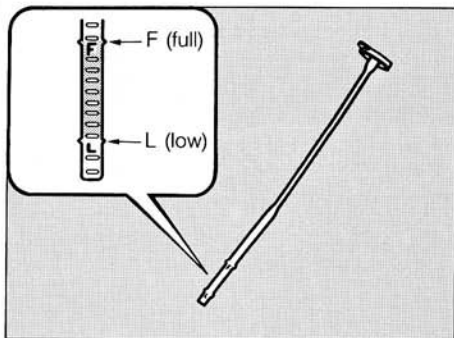
Checking Coolant Level



Check the condition and connections of all cooling system hoses and heater hoses. Replace any swollen or deteriorated hoses.

The coolant level should be full in the radiator and between F (full) and L (low) on the coolant level gauge when the engine is cool.

Changing Coolant



The coolant dipstick is attached to the reservoir cap. Check the coolant level with the level gauge.

1. Remove the reservoir cap with the dipstick.
2. Wipe it clean and reinsert it.
3. Pull the dipstick out again. The coolant level should be between L and F.

If the level is near or at L (low), add enough specified coolant to provide protection against freezing and corrosion and to bring the level to F (full). **Do not overfill.** If frequent additions are required, see an Authorized Xedos Dealer for a cooling system inspection.

Change coolant according to the Scheduled Maintenance Charts.

CAUTION

- Use only soft (demineralized) water in the coolant mixture.
 - The engine in your vehicle has aluminium engine parts and must be protected by an ethylene-glycol based coolant to prevent corrosion and freezing.
- DO NOT USE alcohol or methanol antifreeze or mix them with the specified coolant.**
- Do not use a solution that contains more than 60 percent antifreeze, which would reduce the effectiveness of solution.

For mixture percentage, refer to the following table.

Protection	Mixture percentage (volume)	
	Antifreeze solution	Water
Above -16°C (3°F)	35	65
Above -26°C (-15°F)	45	55
Above -40°C (-40°F)	55	45

WARNING!

To prevent burning yourself, do not remove the radiator cap or coolant filler cap or loosen the drain plug if the engine is hot.

ENGINE COOLING SYSTEM

Engine Cooling System

The cooling system is a high-pressure type with a reservoir and is filled with year-round antifreeze coolant at the factory.

Check the antifreeze protection and coolant level at least once a year—at the beginning of the winter season—and before traveling to a colder climate.

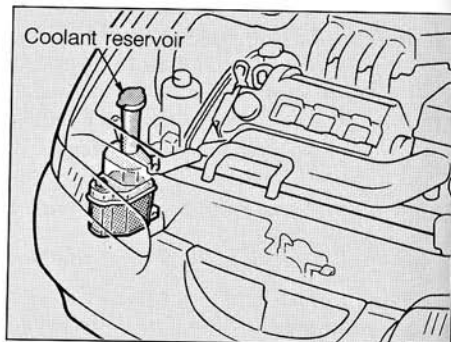
WARNING!

- **Never attempt to remove the radiator cap or coolant filler cap while the engine is operating. Doing so might lead to cooling system and engine damage and could result in serious personal injury from escaping hot coolant or steam. Turn off the engine and wait until it has cooled. Even then, use extreme care when removing the radiator cap or coolant filler cap. Wrap a thick cloth around it, and turn it counterclockwise slowly to the first stop. Step back while the pressure is released from the cooling system. When you are sure all the pres-**

sure has been released, press down on the cap—still using a cloth—turn it, and remove it.

- **Even if the engine is not operating, do not remove the radiator cap or coolant filler cap while the engine and radiator are hot. Scalding hot coolant and steam may still blow out under pressure; this could cause serious injury.**

Checking Coolant Level

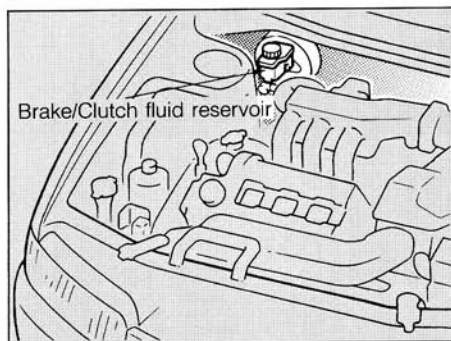


Check the condition and connections of all cooling system hoses and heater hoses. Replace any swollen or deteriorated hoses.

The coolant level should be full in the radiator and between F (full) and L (low) on the coolant level gauge when the engine is cool.

BRAKES

Checking Brake/Clutch Fluid Level

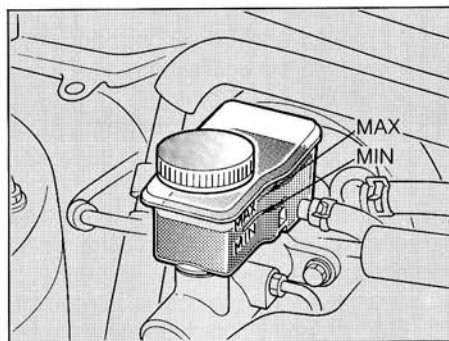


The brake fluid reservoir includes the clutch fluid reservoir.

Check the fluid level in the reservoir periodically; it should be between MAX and MIN on the reservoir.

Before adding fluid, clean the area around the reservoir cap thoroughly to prevent brake/clutch fluid contamination.

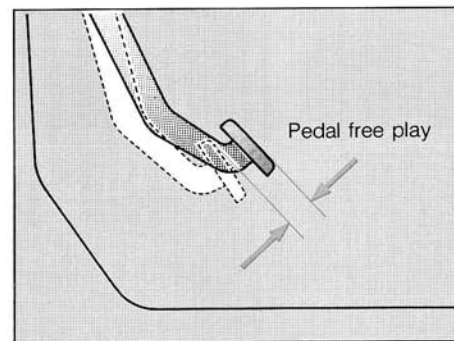
If the level is low, add fluid to the MAX level. The level will fall with accumulated distance. This is a normal condition associated with wear of brake/clutch linings. If the fluid level is excessively low, have the brake/clutch system checked by an Authorized Xedos Dealer.



CAUTION

- **Use only the specified brake/clutch fluid. (Refer to chart on page 7-43.)**
- **Do not mix different types of fluid.**
- **In the event the brake/clutch system requires frequent supplies of fluid, the vehicle should be inspected by an Authorized Xedos Dealer.**

Checking Brake Pedal

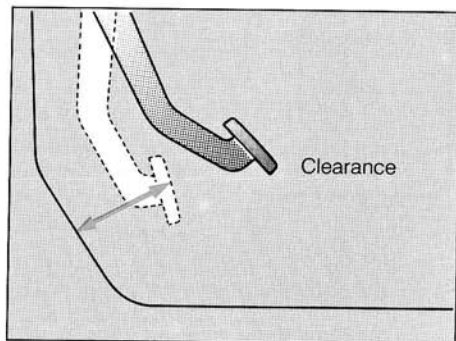


CHECKING PEDAL FREE PLAY

Turn off the engine and depress the brake pedal several times to deplete the vacuum in the power brake unit. Gently depress the brake pedal by hand and measure the distance it moves until slight resistance is felt. If the free play is more or less than specified, have the brakes adjusted by an Authorized Xedos Dealer.

Pedal free play: 4—12mm (0.16—0.47 in)

Checking Parking Brake

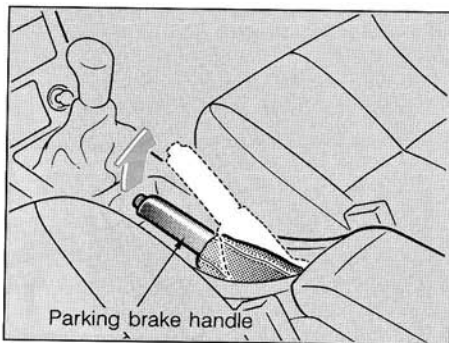


CHECKING PEDAL CLEARANCE

Start the engine and check the brake pedal for smooth operation and proper clearance when it is fully depressed (approximately 60 kg [132 lb, 589 N]). The clearance is measured between the centre of the upper surface of the brake pedal pad and the floorboard without the carpet.

If it is less than about 85mm (3.3 in), have the brakes adjusted by an Authorized Xedos Dealer.

Clearance: about 85mm (3.3 in) min



Check the stroke of the parking brake by counting the number of clicks heard while fully applying it from the released position. Also, the parking brake alone should securely hold the vehicle on a fairly steep grade. If the number of clicks is more or less than specified, have the parking brake adjusted by an Authorized Xedos Dealer.

Stroke:

5—7 clicks at a force of 10 kg (22 lb, 98 N)

Checking Power Brakes

Check the power brakes for proper operation.

- Depress the brake pedal a few times and then hold it down. Start the engine and the pedal should drop slightly.
- Depress the brake pedal, stop the engine, and hold the pedal down for about 30 seconds. The pedal should neither drop nor rise.
- Restart the engine, let it run for about a minute, and turn it off. Then firmly depress the brake pedal several times. The pedal travel should decrease with each subsequent stroke.

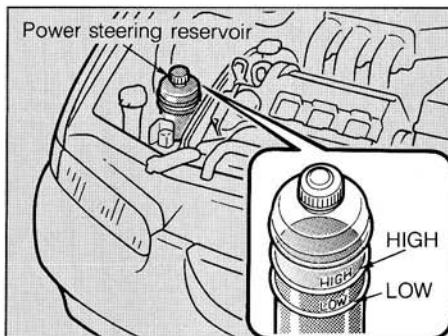
If the brakes do not operate properly, have the brake system checked by an Authorized Xedos Dealer.

CLUTCH, POWER STEERING

Checking Clutch Fluid Level

Refer to page 7-18 brake/clutch fluid level.

Checking Power Steering Fluid Level



Check the fluid level in the power steering reservoir periodically; it should be between HIGH and LOW on the reservoir. If the level is low, add fluid to the HIGH level.

In the event the power steering system requires frequent supplies of fluid, the vehicle should be inspected by an Authorized Xedos Dealer.

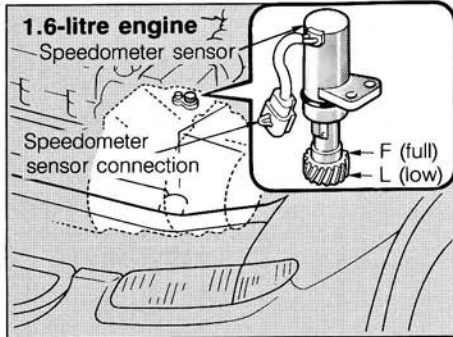
CAUTION

To avoid damage to the power steering pump, do not operate the vehicle for prolonged periods with a low power steering fluid level.

NOTE

Use only specified power steering fluid. (Refer to chart on page 7-43.)

Checking Manual Transaxle Oil Level

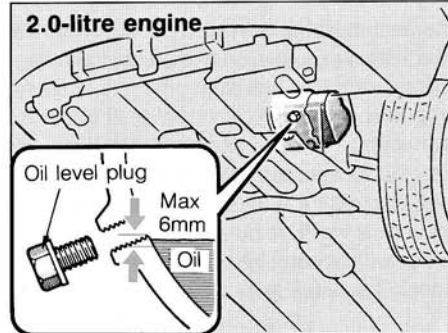


1.6-litre engine

1. Park the vehicle on level ground and set the parking brake firmly. Turn the engine off.
2. Disconnect the speedometer sensor connector. Remove the speedometer sensor from the transaxle.
3. Wipe the speedometer sensor clean and reinsert it.
4. Pull it out again. The oil level should be between L and F, as illustrated.

If the level is low, check for leaks before adding oil.

Do not overfill.



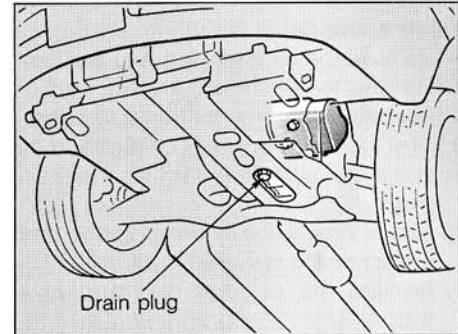
2.0-litre engine

1. Position the vehicle level on safety stands or a chassis hoist. Set the parking brake firmly.
2. Remove the oil level plug from the transaxle case.
3. Check the oil level. The oil level should be within 6mm (0.24 in) of the oil-level plug.

If the level is low, check for leaks before adding oil.

Do not overfill.

Changing Manual Transaxle Oil



1.6-litre engine

1. Disconnect the speedometer sensor connector. Remove the speedometer sensor from the transaxle.
2. Remove the drain plug and the washer from the bottom of the transaxle case.
3. After the oil has drained completely, reinstall a new washer and tighten the drain plug.
4. Add oil through the speedometer sensor hole until it reaches the specified level.
5. Install the speedometer sensor to the transaxle. Connect the speedometer sensor connector.

2.0-litre engine

1. Remove the oil level plug and washer.
2. Remove the drain plug and the washer from the bottom of the transaxle case.
3. After the oil has drained completely, reinstall a new washer and tighten the drain plug.
4. Add oil through the oil level plug hole until it reaches the specified level.
5. Reinstall the oil level plug and new washer.

NOTE

Use only specified manual transaxle oil. (Refer to chart on page 7-43.)

Checking Automatic Transaxle Fluid Level

The automatic transaxle fluid level should be checked regularly. Take the following precautions to measure the fluid level properly.

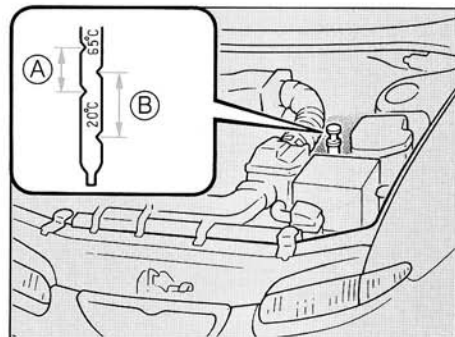
The volume of the transaxle fluid changes with the temperature. For that reason, it is best to check the level after having driven the vehicle for 30 minutes. If necessary, however, the fluid can also be checked when the vehicle has not been driven.

WARNING!

To avoid sudden movement of the vehicle, set the parking brake and depress the brake pedal while shifting the selector lever.

CAUTION

- **Low fluid level causes transaxle slippage. Overfilling can cause foaming, loss of fluid, and transaxle malfunction.**
- **The use of a nonspecified fluid could result in transaxle malfunction and failure.**



1. Park the vehicle on level ground and set the parking brake firmly.
2. Idle the engine for about 2 minutes. Depress the brake pedal; move the selector lever through all ranges and set it in P (Park) position.
3. With the engine still idling, pull out the dipstick, wipe it clean, and reinsert it fully.
4. Pull the dipstick out again.

The proper fluid level is marked as follows.

Use fluid scale (A):

If the vehicle has been driven and the fluid is warmed to normal operating temperature of approximately 65°C (149°F), the fluid level must be within the (A) scale.

Use fluid scale (B):

If the engine has not been running and the outside temperature is approximately 20°C (68°F), the fluid level must be within the (B) scale.

NOTE

- Use the cold scale as a rough reference only.
- If the outside temperature is lower than 20°C (68°F), start the engine and measure the fluid level after letting the engine reach operating temperature.
- If the vehicle has been driven for an extended period at high speeds or in city traffic in hot weather, it is usually best to measure the fluid level after stopping the engine and allowing the fluid to cool for 30 minutes.

When inserting the dipstick, be sure to insert it completely. When adding fluid, do so while measuring with the dipstick to make sure the fluid level does not go beyond the Full position.

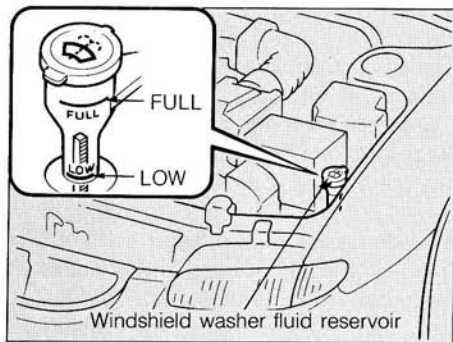
Do not overfill.

NOTE

Use only the specified automatic transaxle fluid. (Refer to chart on page 7-43.)

OTHER LUBRICANTS AND FLUIDS

Checking Washer Fluid Level



Check fluid level in the washer fluid reservoir and add fluid if necessary.

The top of the float should be between FULL and LOW.

Plain water may be used if washer fluid is not available. However, use washer solution in cold climates to prevent freezing.

Body Lubrication

All moving points of the body, such as door and bonnet hinges and locks, should be lubricated each time the engine oil is changed. Use a nonfreezing lubricant on locks during cold weather.

Make sure the engine bonnet's secondary latch keeps the bonnet from opening when the primary latch is released.

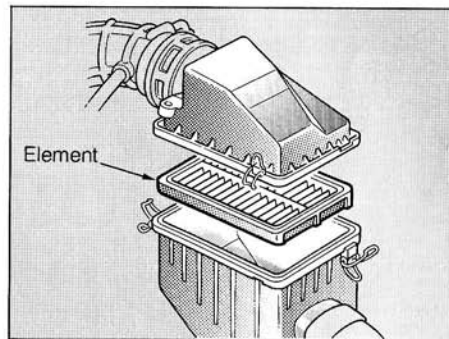
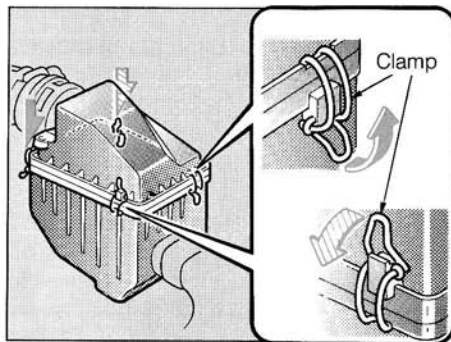
WARNING!

Do not use radiator coolant or anti-freeze in the washer fluid reservoir. Radiator coolant can severely affect visibility when sprayed on the windshield and may cause damage to paint and body trim.

Air Cleaner

ELEMENT REPLACEMENT

A viscous paper air cleaner filter is used. It must be replaced when necessary, and it should not be cleaned and reused.



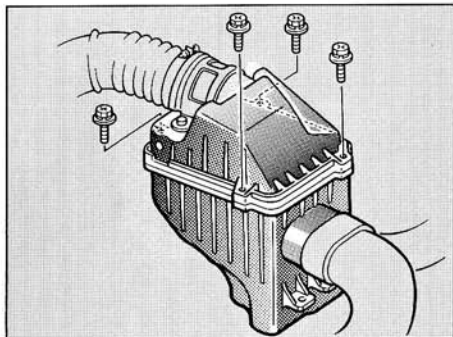
1.6-litre engine

1. Unfasten the clamps of the air cleaner cover.
2. Wipe the inside of the air cleaner and cover with a damp cloth.

3. Replace the air cleaner element.
4. Install in the reverse order of removal.

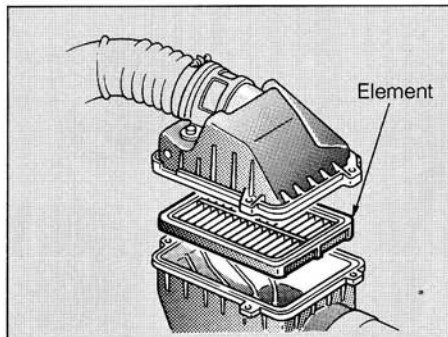
Replace the element according to the Scheduled Maintenance Charts.

AIR CLEANER



2.0-litre engine

1. Remove the attaching bolts of the air cleaner cover.
2. Wipe the inside of the air cleaner and cover with a damp cloth.



3. Replace the air cleaner element.
4. Install in the reverse order of removal.

Replace the element according to the Scheduled Maintenance Charts.

NOTE

If the vehicle is operated in extremely dusty or sandy areas, replace this element more often than at the usual recommended intervals.

CAUTION

Do not drive with the air cleaner removed or excessive engine wear will result.

Driving without an air cleaner encourages backfiring, which could cause a fire in the engine compartment.

Wiper Blades

WIPER BLADE MAINTENANCE

CAUTION

Commercial hot waxes applied by automatic car washes have been known to affect the cleanability of the window.

Contamination of either the window or the wiper blades with foreign matter can reduce the effectiveness of the window wipers. Common sources of contamination are insects, tree sap, and hot wax treatments used by some commercial car washes. If the blades are not wiping properly, clean both the window and the blades with a good cleaner or mild detergent, and rinse thoroughly with clear water. Repeat if necessary.

CAUTION

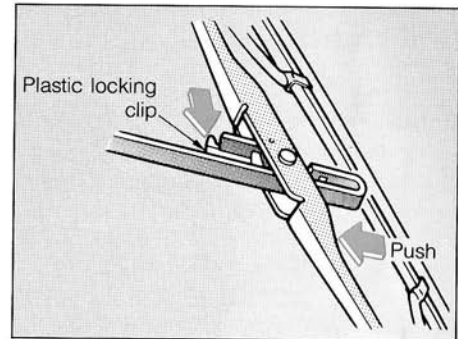
To prevent damage to wiper blades, do not use petrol, kerosene, paint thinner, or other solvents on or near them.

WINDSHIELD WIPER BLADE REPLACEMENT

When the wipers no longer clean adequately, the wiper blades may be worn or cracked, requiring replacement.

CAUTION

To prevent damage to the wiper arms or other components, do not attempt to move the wipers manually.

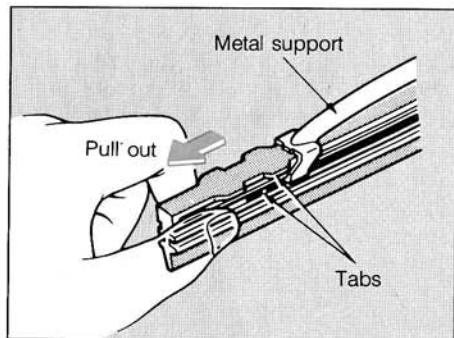


1. Raise the wiper arm and turn the wiper blade assembly to expose the plastic locking clip. Compress the clip and slide the blade assembly downward; then lift it off the arm.

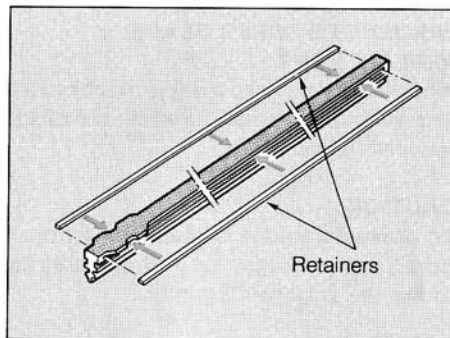
CAUTION

Do not allow the wiper arm to fall against the windshield.

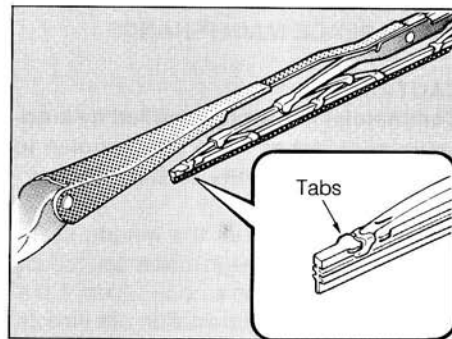
WIPER BLADES



2. Firmly grasp the end of the blade rubber and pull until the tabs are free of the metal support.



3. Remove the metal retainers from the blade rubber and install them in new blade rubber.



4. Carefully insert a new blade rubber and install the blade assembly in the reverse order of removal.

CAUTION

Do not bend the metal retainers.

NOTE

Install the blade so that the tabs are toward the bottom of the wiper arm.

Battery

Your Xedos vehicle has a maintenance free battery so you never have to add distilled water to it.

If you have any problems with your battery, have it checked at your Authorized Xedos Dealer.

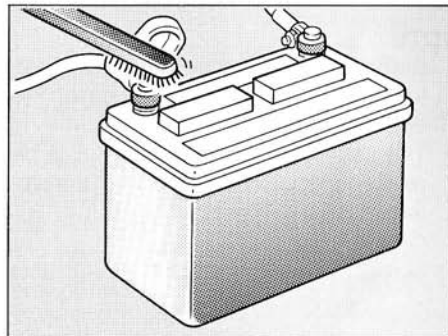
WARNING!

- **Keep lighted cigarettes and all other flames or sparks away from the battery. Hydrogen, which is a highly combustible gas, is always present in battery cells.**
- **Keep batteries out of the reach of children because batteries contain SULPHURIC ACID. Prevent its contact with skin, eyes, clothing, and the vehicle.**
- **If electrolyte gets into your eyes, flush them with clean water for at least 15 minutes and get immediate medical attention. If possible, continue to apply water with a sponge or cloth while en route to the medical office.**
- **If electrolyte gets on your skin, thoroughly wash the contacted**

area. If you feel a pain or a burning sensation, get medical attention immediately.

- **When working near a battery, wear eye protection. Always provide ventilation.**

When lifting a plastic-cased battery, excessive pressure on the end walls could cause acid to spew through the vent caps, resulting in personal injury. Lift with a battery carrier or with your hands on opposite corners.



MAINTENANCE

For best battery service:

- Keep battery securely mounted.
- Keep battery top clean and dry.
- Keep terminals and connections clean, tight, and coated with petroleum jelly or terminal grease.
- Rinse any spilled electrolyte from the battery immediately with a solution of water and baking soda.
- If the vehicle is not going to be used for an extended time, disconnect the battery cables.

BATTERY, BELT TENSIONS

NOTE

- Before performing maintenance the battery, turn off all accessories and stop the engine.
- The negative (–) battery cable must be removed first and installed last if the battery is disconnected.

Checking Belt Tensions

Apply moderate thumb pressure (approximately 10 kg, 22 lbs, 98N) midway between pulleys, and check the deflection.

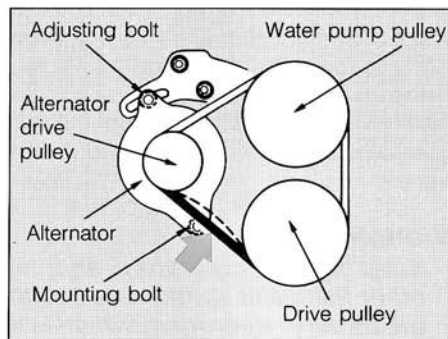
WARNING!

- **Remove the key from the ignition switch before checking belt tension.**
- **Keep hair, loose clothing, neckties, necklaces, and similar articles away from drive belts, especially when the engine is running. ALWAYS REMOVE ALL TOOLS from the engine compartment before attempting to start the engine. Any of the above items could become entangled in the belts and cause severe personal injury or damage to the vehicle, or both.**

NOTE

If the drive belt becomes worn, cracked, or frayed, it should be replaced.

(1.6-litre engine)



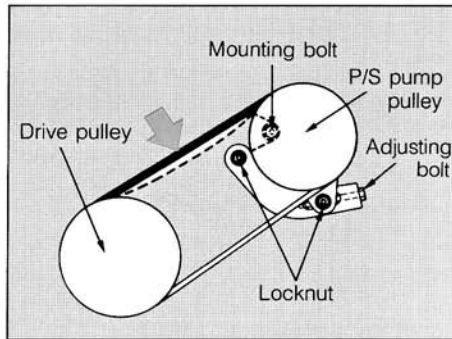
ALTERNATOR DRIVE BELT

Deflection	
New	Used
8–9mm (0.31–0.35 in)	9–10mm (0.35–0.39 in)

Adjustment

1. Loosen the alternator mounting bolt and adjusting bolt.
2. Move the alternator to obtain proper belt tension.
3. Tighten the bolts and recheck the deflection.

(2.0-litre engine)

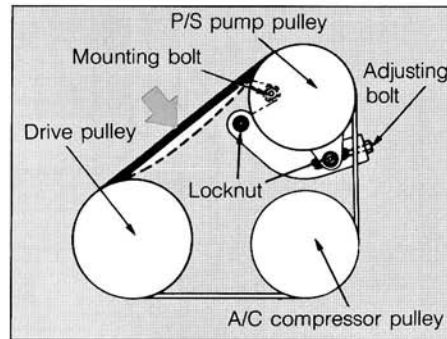


POWER STEERING (P/S) PUMP DRIVE BELT

Deflection	
New	Used
8—9mm (0.31—0.35 in)	9—10mm (0.35—0.39 in)

Adjustment

1. Loosen the mounting bolt and locknuts.
2. Turn the adjusting bolt until the correct tension is obtained.
3. Tighten the locknuts and mounting bolt and recheck the deflection.

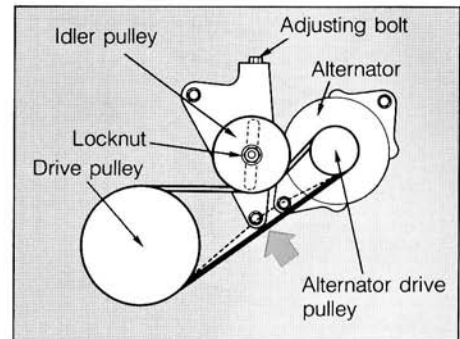


AIR-CONDITIONER (A/C) AND POWER STEERING (P/S) PUMP DRIVE BELT*

Deflection	
New	Used
8—9mm (0.31—0.35 in)	9—10mm (0.35—0.39 in)

Adjustment

1. Loosen the mounting bolt and locknuts.
2. Turn the adjusting bolt until the correct tension is obtained.
3. Tighten the locknuts and mounting bolt and recheck the deflection.



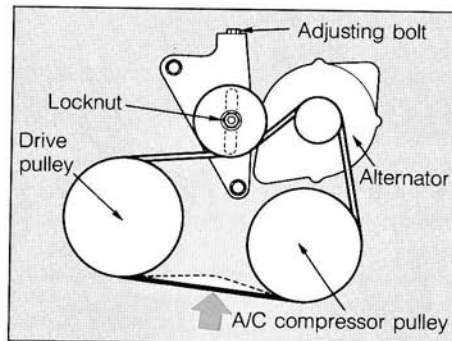
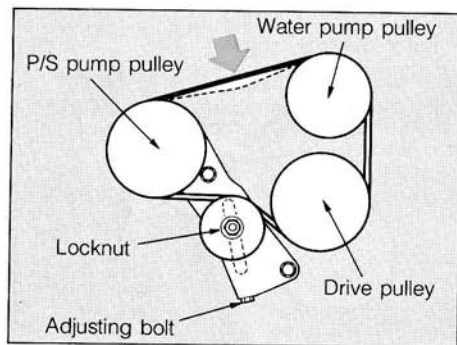
ALTERNATOR DRIVE BELT

Deflection	
New	Used
6—7mm (0.24—0.28 in)	7—8mm (0.28—0.31 in)

Adjustment

1. Loosen the locknut.
2. Turn the adjusting bolt until the correct tension is obtained.
3. Tighten the locknut and recheck the deflection.

BELT TENSIONS, SPARK PLUGS



POWER STEERING (P/S) PUMP DRIVE BELT

AIR-CONDITIONER (A/C) AND ALTERNATOR DRIVE BELT*

Deflection	
New	Used
6—7mm (0.24—0.28 in)	7—8mm (0.28—0.31 in)

Deflection	
New	Used
5.5—6.5mm (0.22—0.26 in)	6.5—7.5mm (0.26—0.30 in)

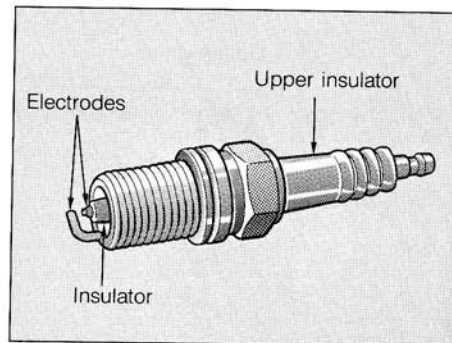
Adjustment

1. Loosen the locknut.
2. Turn the adjusting bolt until the correct tension is obtained.
3. Tighten the locknut and recheck the deflection.

Adjustment

1. Loosen the locknut.
2. Turn the adjusting bolt until the correct tension is obtained.
3. Tighten the locknut and recheck the deflection.

Spark Plugs



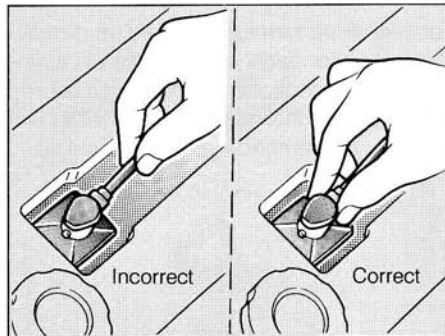
If necessary, clean the electrodes with a fine wire brush and carefully scrape the carbon off the insulator with a small file. The spark plugs should then be blown clean with compressed air and the upper insulator wiped clean.

REPLACING SPARK PLUGS

WARNING!

The spark plugs may be hot. Do not burn yourself.

1. Clean any dirt from around the spark plug base of each spark plug.
2. Remove the plugs with a spark plug wrench.
3. Install each new plug by hand as far as it will go. If necessary, a spark plug wrench may be used as an extension. If a plug does not turn in smoothly, remove it and try again to ensure the correct engagement of the threads on the spark plug with the threads in the cylinder head.
4. Tighten the plugs with a spark plug wrench. Do not overtighten.
5. Make sure the spark plug leads are installed in the correct order. Fasten the boot squarely over the end of each plug.

**CAUTION**

- **The spark plugs must be securely tightened, but not overtightened. A plug that's too loose can get very hot and possibly damage the engine; one that's too tight could damage the threads in the cylinder head.**
- **Be sure the socket wrench is fit squarely over the spark plug.**

NOTE

- When removing or unfastening the spark plug cable leads, pull the boot, not the lead itself.
- When installing the plugs, use a small amount of antiseize compound or molybdenum-based thread lubricant on the first few threads.

Tyre Care

RECOMMENDED SPARK PLUGS

1.6-litre engine

NGK	BKR5E11, BKR6E11
NIPPONDENSO	K16PR-U11, K20PR-U11

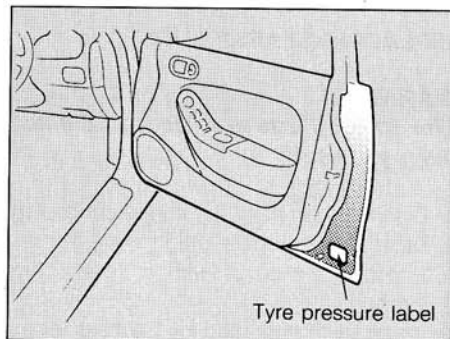
2.0-litre engine

NGK	BKR5E11, BKR6E11, BKR7E-11
NIPPONDENSO	K16PR-U11, K20PR-U11, K22PR-U11

For proper performance, safety, and maximum fuel economy, you must always maintain recommended tyre inflation pressures and stay within the load limits and weight distribution recommended for your vehicle.

CAUTION

Never use spark plugs with an improper heat range; they will adversely affect engine performance and durability.



INFLATION PRESSURES

All tyre pressures (including the spare) should be checked monthly when the tyres are cold. Recommended pressures must be maintained for the best ride, top vehicle handling, and minimum tyre wear. Refer to tyre inflation pressure chart on page 9-4.

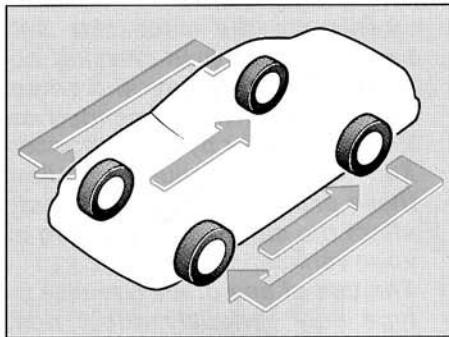
NOTE

- Warm tyres normally exceed recommended pressures. Do not release air from warm tyres to adjust the pressure.

- Underinflation results in excessive wear, poor handling, reduced fuel economy, and the possibility of blowouts of overheated tyres. Also, low tyre pressure can cause poor sealing of the tyre bead. If the tyre pressure is excessively low, wheel deformation and/or tyre separation are possible. So keep your tyre pressures at the proper levels. If a tyre frequently needs refilling, have it checked by an Authorized Xedos Dealer or a tyre shop.
- Overinflation produces a harsh ride, handling problems, excessive wear at the centre of the tyre tread, and a greater possibility of damage from road hazards.

WARNING!

Overinflation or underinflation can reduce tyre life, adversely affect vehicle handling, and lead to sudden tyre failure. This could result in loss of vehicle control.

**TYRE ROTATION**

To equalize tread wear, it is recommended that the tyres be rotated every 10,000 km (6,000 miles) sooner if irregular wear develops. During rotation, check the tyres for correct balance.

When rotating tyres, check for uneven wear and damage. Abnormal wear is usually caused by incorrect tyre pressure, improper wheel alignment, out-of-balance wheels, or severe braking.

After rotation, be sure to bring the front and rear tyre pressures to specification and check lug nut tightness.

Use of unidirectional tyres

The direction of tyre rotation is decided according to the tread pattern, which affects the tyre's performance in wet conditions. The unidirectional tyres must be installed according to the rolling direction marks. These marks are molded into the side wall of the tyres.

CAUTION

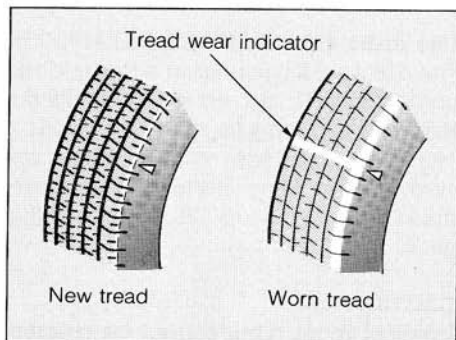
Unidirectional tyres cannot be rotated from the right side of the vehicle to the left. If they are rotated from right to left, tyre performance may be reduced in wet conditions.

NOTE

Disc brake pads should be inspected for wear whenever tyres are rotated.

CAUTION

Rotate radial tyres that have an asymmetric tread pattern only from front to rear and not from right to left.



TYRE REPLACEMENT

If the tyre is worn evenly, a tread wear indicator will appear as a solid band across the tread. Replace the tyre when this happens. Replacement of an unevenly worn tyre may be necessary before an indicator band appears across the entire tread.

WARNING!

- **When replacing tyres, never mix radial, bias-belted, and bias-type tyres. Use only the tyre sizes listed on the tyre label attached to your vehicle, on the driver's door. Make sure that all tyres and**

Spare Tyre

Check the spare tyre at least monthly to be sure it is properly inflated and stored securely.

wheels are the same size and have the same load-carrying capacity. Use only tyre and wheel combinations recommended on the tyre label or by an Authorized Xedos Dealer. Failure to follow these precautions can adversely affect the safety and handling of your vehicle.

- **The use of any other tyre size or type may seriously affect ride, handling, ground clearance, tyre clearance, and speedometer calibration.**
- **Driving on worn-out tyres is very hazardous and will reduce braking effectiveness, steering accuracy, and traction.**

Wheels

WHEEL REPLACEMENT

When replacing wheels for any reason, make sure the new wheels are equivalent to original factory units in diameter, rim width, and offset.

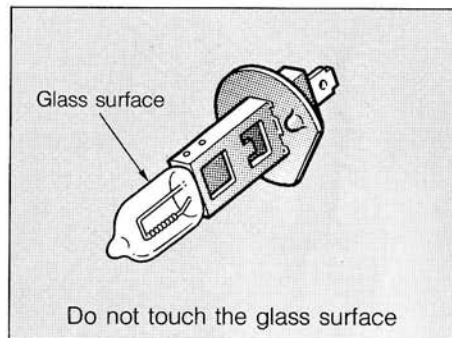
Proper tyre balancing provides the best riding comfort and helps reduce tyre tread wear. Out-of-balance tyres can cause annoying vibration and uneven tyre wear, such as cupping and flat spots.

CAUTION

A wrong-sized wheel may adversely affect wheel life and bearing life, braking and stopping abilities, handling characteristics, ground clearance, body-to-tyre clearance, snow chain clearance, speedometer calibration, headlight aim, and bumper height.

Headlights

Your vehicle's headlights have replaceable halogen bulbs. A burned-out bulb can be replaced without disturbing the headlight body.



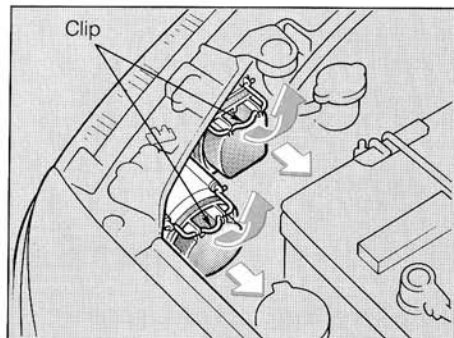
HALOGEN BULBS

Halogen bulbs contain pressurized gas that will produce flying pieces of glass if broken. Always handle them carefully and avoid scratches and abrasion. If the bulbs are lit, avoid their contact with liquids. Never touch the glass with bare hands. Residual oil may cause the bulb to overheat and burst when lit. A bulb should be operated only when installed in a headlight.

If a bulb becomes damaged or cracked, replace it immediately and carefully dispose of it.

Keep bulbs **out of the reach of children.**

LIGHT BULBS

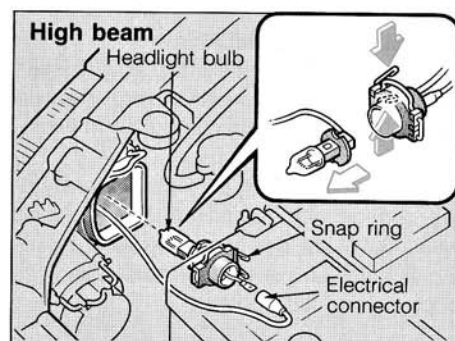
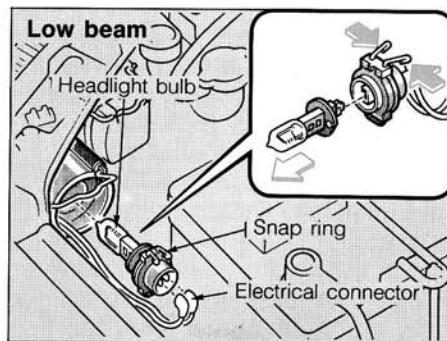


HALOGEN HEADLIGHT BULB REPLACEMENT

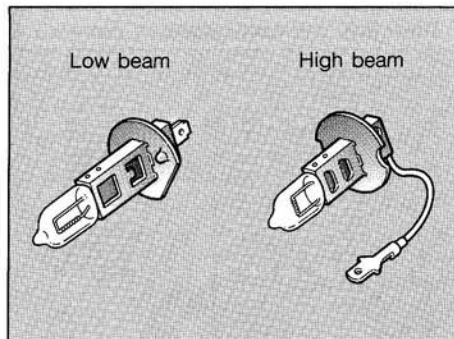
WARNING!

Wear eye protection when changing a bulb. Allow the bulb to cool before handling it.

1. Make sure the headlight switch is off.
2. Lift the bonnet and locate the bulb installed in the rear of the headlight body.
3. Unfasten the clip of the sealing cover.



4. Pinch the snap ring and carefully remove the headlight bulb from its socket in the reflector by gently pulling it straight backward out of the socket. Do not rotate the bulb while removing it.
5. Remove the electrical connector from the bulb by pulling it.
6. Install the new bulb in the reverse order of removal.

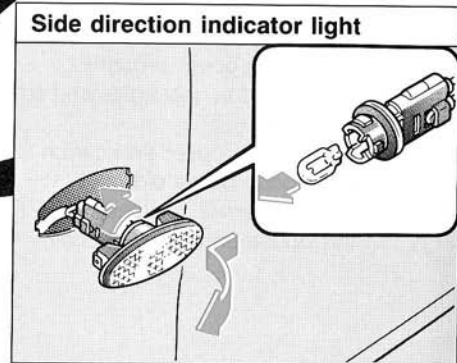
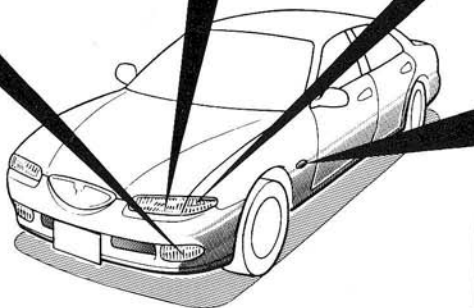
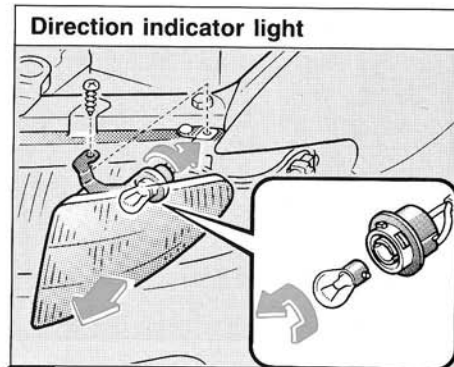
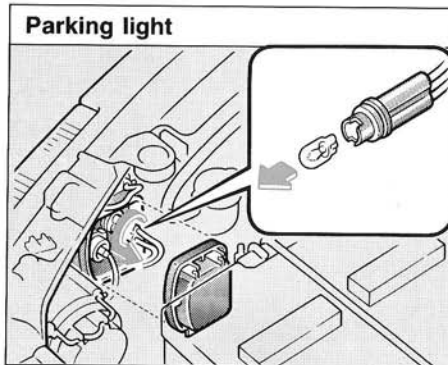
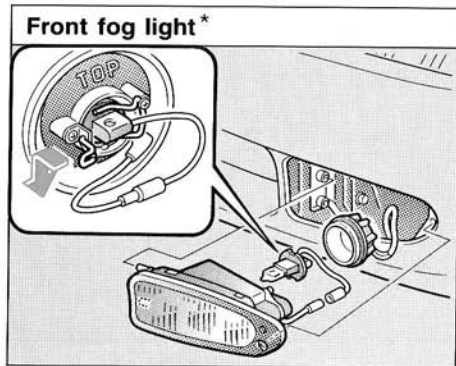


NOTE

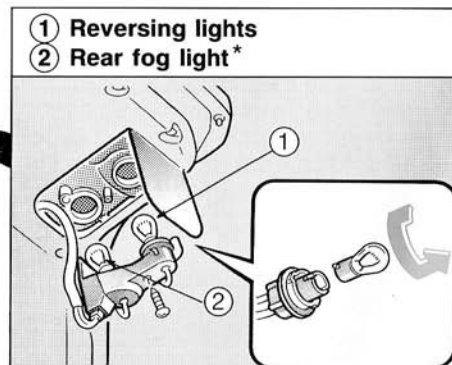
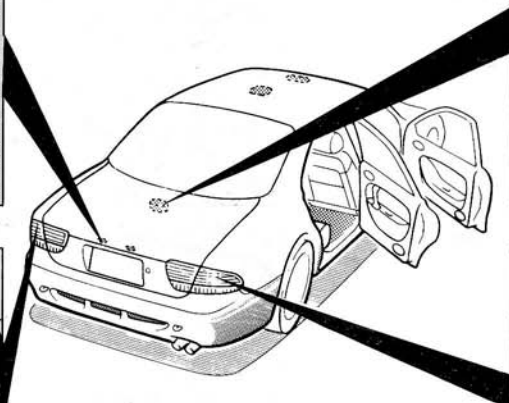
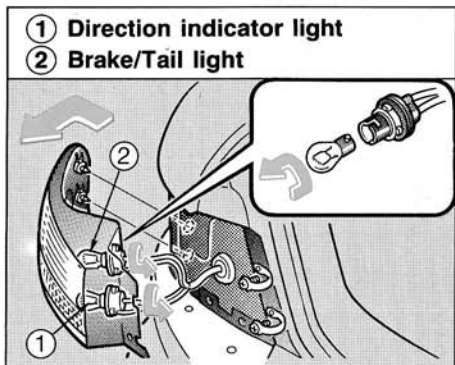
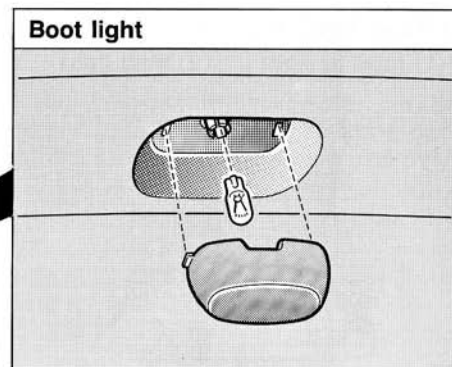
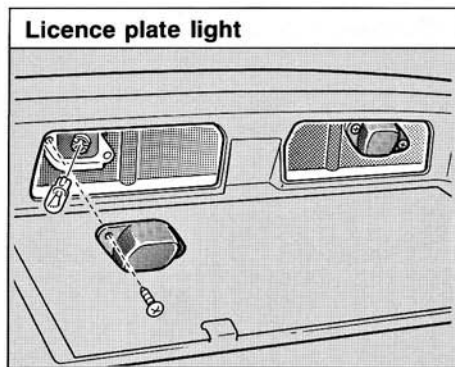
- Do not touch the glass portion of the bulb.
- Install the bulb properly.
- Install the sealing cover properly.
- Check the aim of the headlights and adjust if necessary.
- Use the protective cover and carton to promptly dispose of the old bulb.
- Your Xedos Dealer will be pleased to carry out this operation on your behalf.

LIGHT BULBS

Bulb Replacement (Front)



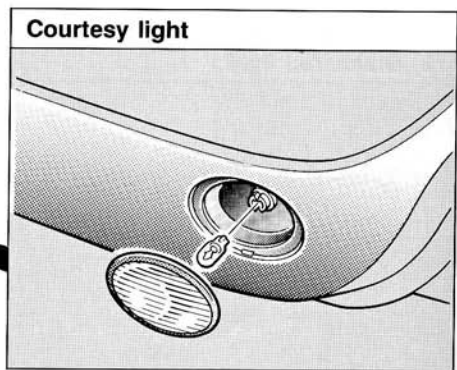
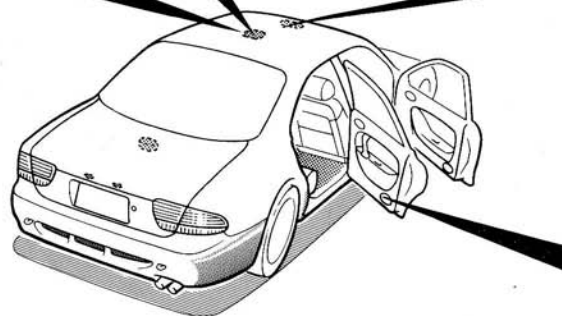
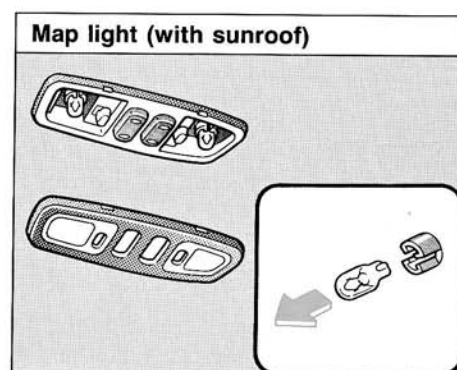
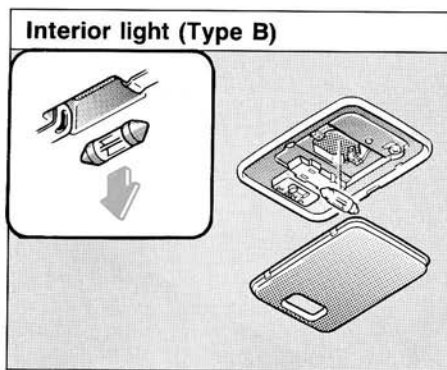
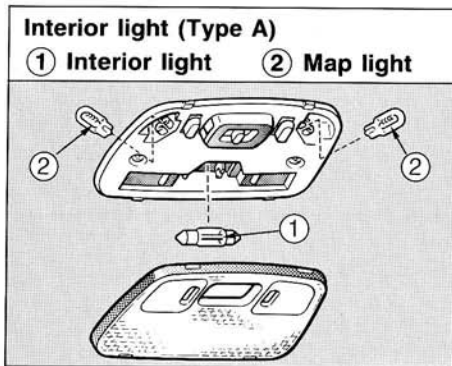
Bulb Replacement (Rear)



*Some models.

LIGHT BULBS

Bulb Replacement (Interior)



Recommended Lubricants

Lubricant	Classification
Engine oil*	API Service SG
Manual transaxle oil*	API Service GL-4 or GL-5
Automatic transaxle fluid	ATF M-III or Dexron® II
Power steering fluid	ATF M-III or Dexron® II
Brake/clutch fluid	SAE J1703 or FMVSS116 DOT-3

* Refer to the recommended SAE viscosity numbers on the next page.

To help achieve proper engine and power-train performance and durability, use only lubricating oils of the proper quality. The correct oils also help promote engine efficiency that results in improved fuel economy. Engine oils labeled Energy Conserving Oil are now available. They contribute to fuel economy by reducing the amount of fuel necessary to overcome engine friction and in other ways. Often these improvements are difficult to measure in everyday driving, but in a year's time, they can offer significant cost and energy savings. These oils are recommended for use in conjunction with the recommended API classification.

LUBRICANT SPECIFICATIONS

Recommended SAE Viscosity Numbers

Temperature Range for SAE Viscosity Numbers	
Temperature °C (°F)	
	-30 -20 -10 0 10 20 30 40 50
	-20 0 20 40 60 80 100 120
Engine oil	5W-30
	10W-30
Manual transaxle oil	75W-90
	80W-90

Engine oil viscosity (thickness) has an effect on fuel economy and cold-weather operation (starting and oil flow). Lower-viscosity engine oils can provide better fuel economy and cold-weather performance; however, higher-temperature weather conditions require higher-viscosity engine oils for satisfactory lubrication. Using oils of any viscosity other than those recommended could result in engine damage.

When choosing an oil, consider the range of temperature your vehicle will be operated in before the next oil change. Then select the recommended oil viscosity from the chart.

CAUTION BEFORE CHECKING LUBRICANTS

Always be sure to clean the area around any filler plug, drain plug, and dipstick before checking or draining any lubricant. This is especially important in dusty/sandy areas and when the vehicle is used on unpaved roads. Cleaning the plug and dipstick areas will prevent dirt and grit from entering the engine and other mechanisms they could damage.

Minor Troubleshooting Guide

The following procedures may help if any of the problems listed below should occur. These suggestions are intended only as emergency measures. If you are in doubt whether the problem is fully corrected, see your Authorized Xedos Dealer as soon as possible. Minor problems may lead to serious ones, if neglected.

ENGINE WILL NOT START

If the engine will not turn over, inspect these items:

1. Ignition switch.
2. Fuses, including fuse block in the engine compartment.
3. Battery and connections.
4. Cable connections to starter.

If engine turns over, inspect these items:

1. Fuel gauge, to see that the tank is not empty.
2. Ignition system-distributor leads, coil.
3. Spark plugs.
4. Fuel line and intake air system.

ENGINE STARTS, BUT ...

If the oil pressure warning light comes on, inspect these items:

1. Engine oil level.
2. Electric circuit and switch.

If the alternator warning light comes on, inspect these items:

1. Drive belt, to see that it is not broken or does not need adjustment.
2. Alternator.
3. Battery and connections.

If stalling occurs while idling, inspect these items:

1. Spark plugs.
2. Throttle body (adjustment by an Authorized Xedos Dealer).
3. Fuel line and intake air system.

If idling is rough, inspect these items:

1. Air cleaner element.
2. Spark plugs.
3. Throttle body (adjustment by an Authorized Xedos Dealer).

If acceleration is poor, inspect these items:

1. Ignition system including spark plugs.
2. Air cleaner element.
3. Fuel line and intake air system.

If overheating occurs, inspect these items:

1. Radiator coolant level.
2. Restriction of airflow through radiator.
3. Drive belt tension and condition.
4. Radiator electric cooling fan.
5. Engine oil level.
6. Thermostat.

If a flat spot occurs when accelerating, inspect these items:

1. Fuel lines and filter.
2. Air cleaner element.
3. Throttle body (by an Authorized Xedos Dealer).

If full engine power is not obtained, inspect these items:

1. Air cleaner element and fuel filter.
2. Spark plugs and ignition system.
3. Fuel line and intake air system.

ELECTRICAL SYSTEM PROBLEMS ...

If a light does not come on, inspect these items.

1. Bulb and fuse.
2. Terminal connections and system ground.

If Braking-Steering coordination is poor...

The braking and steering systems form an integrated system. If you detect a malfunction in any of their components, have your vehicle inspected immediately at your Authorized Xedos Dealer.