2 Weekly checks

Note:
See Recommended lubricants and fluids at the beginning of this Chapter before adding fluid to any of the following components. The vehicle must be on level ground when fluid levels are checked.

Engine oil level check

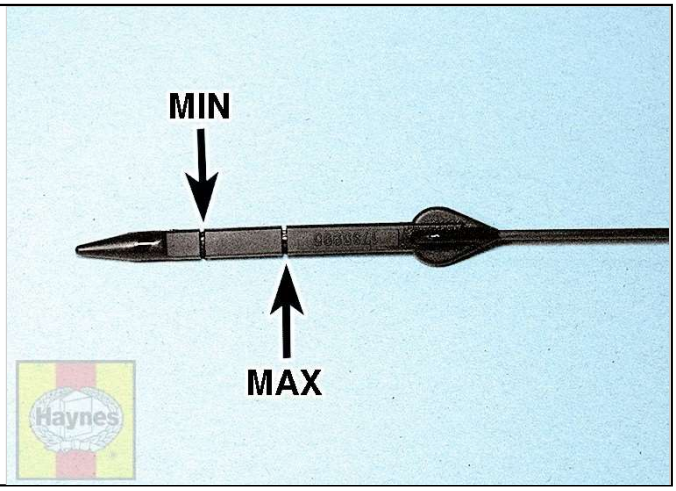
1 Engine oil is checked with a dipstick, which is located on the side of the engine **(see illustration)** . The dipstick extends through a metal tube down into the oil pan.

2.1 The dipstick top is often brightly colored for easy identification

2 The engine oil should be checked before the vehicle has been driven, or about 5 minutes after the engine has been shut off. If the oil is checked immediately after driving the vehicle, some of the oil will remain in the upper part of the engine, resulting in an inaccurate reading on the dipstick.

3 Pull the dipstick out of the tube and wipe all of the oil away from the end with a clean rag or paper towel. Insert the clean dipstick all the way back into the tube and pull it out again. Note the oil at the end of the dipstick. At its highest point, the oil should be between the two **(see illustration)** .

2.3 Note the oil level on the end of the dipstick, which should be between the upper (MAX) and lower (MIN) marks (approximately one quart of oil will raise the oil level from the lower mark to the upper mark)



4 It takes approximately one quart of oil to raise the level from the lower mark to the upper mark on the dipstick. Do not allow the level to drop below the lower mark or oil starvation may cause engine damage. Conversely, overfilling the engine (adding oil above the upper mark) may cause oil fouled spark plugs, oil leaks or oil seal failures.

5 To add oil, remove the filler cap located on the valve cover. After adding oil, wait a few minutes to allow the level to stabilize, then pull the dipstick out and check the level again. Add more oil if required. Install the filler cap and tighten it by hand only.

6 Checking the oil level is an important preventive maintenance step. A consistently low oil level indicates oil leakage through damaged seals, defective gaskets or past worn rings or valve guides. The condition of the oil should also be noted. If the oil looks milky in color or has water droplets in it, the cylinder head gasket may be blown or the head or block may be cracked. The engine should be repaired immediately. Whenever you check the oil level, slide your thumb and index finger up the dipstick before wiping off the oil. If you see small dirt or metal particles clinging to the dipstick, the oil should be changed (see Section 3).

Engine coolant level check

> **Warning:**
> Do not allow antifreeze to come in contact with your skin or painted surfaces of the vehicle. Rinse off spills immediately with plenty of water. Antifreeze is highly toxic if ingested. Never leave antifreeze lying around in an open container or in puddles on the floor; children and pets are attracted by it's sweet smell and may drink it. Check with local authorities about disposing of used anti-freeze. Many communities have collection centers which will see that antifreeze is disposed of safely.

7 All vehicles covered by this manual are equipped with a pressurized coolant recovery system. A plastic expansion tank (or coolant reservoir) is mounted alongside the radiator. As the engine heats up during operation, the expanding coolant fills the tank. As the engine cools, the coolant is automatically drawn back into the cooling system to maintain the correct level.

8 The coolant level in the reservoir **(see illustration)** should be checked regularly. **Warning:** *Do not remove the expansion tank cap to check the coolant level when the engine is warm!* The level in the reservoir varies with the temperature of the engine. When the engine is cold, the coolant level should be above the LOW mark on the

reservoir. Once the engine has warmed up, the level should be at or near the FULL mark. If it isn't, allow the engine to cool, then remove the cap from the reservoir and add a 50/50 mixture of ethylene glycol based antifreeze and water. Don't use rust inhibitors or additives.

2.8 The coolant level varies with the temperature of the engine. When the engine is cold, the coolant level should be between the "KALT/COLD" mark on the expansion tank. When the engine hot, the level will rise above the "KALT/COLD" mark

9 Drive the vehicle and recheck the coolant level. If only a small amount of coolant is required to bring the system up to the proper level, water can be used. However, repeated additions of water will dilute the antifreeze and water solution. In order to maintain the proper ratio of antifreeze and water, always top up the coolant level with the correct mixture. An empty plastic milk jug or bleach bottle makes an excellent container for mixing coolant.

10 If the coolant level drops consistently, there may be a leak in the system. Inspect the radiator, hoses, filler cap, drain plugs and water pump. If no leaks are noted, have the expansion tank cap pressure tested by a service station.

11 If you have to remove the cap, wait until the engine has cooled completely, then slowly unscrew it **(see illustration)** . If coolant or steam escapes, let the engine cool down longer, then remove the cap.

2.11 If it is necessary to add coolant, wait until the engine is cold, then slowly unscrew the expansion tank cap to release any pressure present in the cooling system

12 Check the condition of the coolant as well. It should be relatively clear. If it's brown or rust colored, the system should be drained, flushed and refilled. Even if the coolant appears to be normal, the corrosion inhibitors wear out, so it must be replaced at the specified intervals.

Brake and clutch fluid level check

Warning:
Brake fluid can harm your eyes and damage painted surfaces, so use extreme caution when handling or pouring it. Do not use brake fluid that has been standing open or fluid that is more than one year old. Brake fluid absorbs moisture from the air, which can cause a dangerous loss of brake effectiveness. Use only the specified type of brake fluid. Mixing different types (such as DOT 3 or 4 and DOT 5) can cause brake failure.

13 The brake master cylinder is mounted at the left (driver's side) rear corner of the engine compartment. The clutch hydraulic system is also served by this reservoir.

14 The fluid level is checked by looking through the plastic reservoir mounted on the brake master cylinder **(see illustration)** . The fluid level should be between the MAX and MIN lines on the reservoir. If the fluid level is low, wipe the top of the reservoir and the cap with a clean rag to prevent contamination of the system as the cap is unscrewed. Top up with the recommended brake fluid, but do not overfill.

2.14 The MAX and MIN marks are indicated on the side of the brake fluid reservoir (the fluid level must be maintained between these marks

15 While the reservoir cap is off, check the master cylinder reservoir for contamination. If rust deposits, dirt particles or water droplets are present, the system should be drained, flushed and refilled by a dealer service department or other repair shop.

16 After filling the reservoir to the proper level, make sure the cap is seated to prevent fluid leakage and/or contamination.

17 The fluid level in the master cylinder will drop slightly as the disc brake pads wear. A very low level may indicate worn brake pads. Check for wear (see Section 9).

18 If the brake fluid level drops consistently, check the entire system for leaks immediately. Examine all brake lines, hoses and connections, along with the calipers, wheel cylinders and master cylinder.

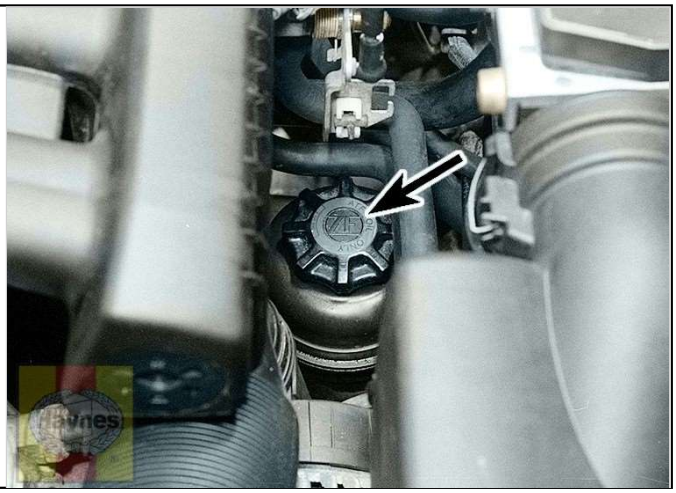
19 When checking the fluid level, if you discover one or both reservoirs empty or nearly empty, the brake or clutch hydraulic system should be checked for leaks and bled (see Chapters 8 and 9).

Power steering fluid level check

20 Check the power steering fluid level periodically to avoid steering system problems, such as damage to the pump. **Caution:** *DO NOT hold the steering wheel against either stop (extreme left or right turn) for more than five seconds. If you do, the power steering pump could be damaged.*

21 The power steering fluid reservoir is located on the left side of the engine compartment, and is equipped with a twist-off cap with an integral fluid level dipstick **(see illustration)** .

2.21 The power steering fluid reservoir is located near the front of the engine compartment. Wipe off the area around the cap, then unscrew the cap/dipstick from the reservoir

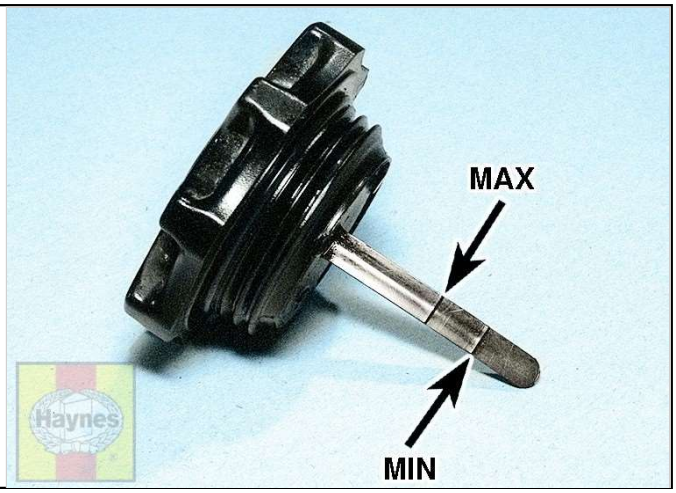


22 Park the vehicle on level ground and apply the parking brake.

23 Run the engine until it has reached normal operating temperature. With the engine at idle, turn the steering wheel back-and-forth several times to get any air out of the steering system. Shut the engine off, remove the cap by turning it counterclockwise, wipe the dipstick clean and reinstall the cap without screwing it down.

24 Remove the cap again and note the fluid level on the dipstick. It must be between the two lines **(see illustration)** .

2.24 Check the fluid level with the dipstick (rest the cap on the reservoir's filler neck - don't screw it into place). The fluid level should be between the MIN and MAX marks



25 Add small amounts of fluid until the level is correct. **Caution:** *Do not overfill the reservoir. If too much fluid is*

added, remove the excess with a clean syringe or suction pump. Reinstall the cap.

26 Check the power steering hoses and connections for leaks and wear.

27 Check the condition and tension of the drivebelt.

Windshield washer fluid level check

28 Fluid for the windshield washer system is stored in a plastic reservoir in the engine compartment **(see illustration)** .

2.28 The windshield washer fluid reservoir is located in the front right corner of the engine compartment

29 In milder climates, plain water can be used in the reservoir, but it should be kept no more than two-thirds full to allow for expansion if the water freezes. In colder climates, use windshield washer system antifreeze, available at any auto parts store, to lower the freezing point of the fluid. This comes in concentrated or pre-mixed form. If you purchase concentrated antifreeze, mix the antifreeze with water in accordance with the manufacturer's directions on the container. **Caution:** *Do not use cooling system antifreeze - it will damage the vehicle's paint.*

30 Before installing the cap, make sure the filter screen is clean **(see illustration)** .

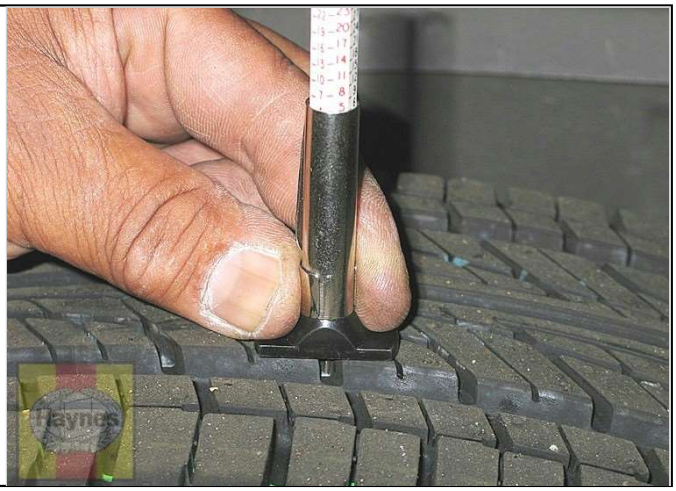
2.30 Before adding fluid to the washer reservoir, make sure the filter screen is clean

Tire and tire pressure checks

31 Periodic inspection of the tires may save you the inconvenience of being stranded with a flat tire. It can also provide you with vital information regarding possible problems in the steering and suspension systems before major damage occurs.

32 Tires are equipped with 1/2-inch wide bands that will appear when tread depth reaches 1/16-inch, at which time the tires can be considered worn out. Tread wear can be monitored with a simple, inexpensive device known as a tread depth indicator **(see illustration)** .

2.32 Use a tire tread depth indicator to monitor tire wear - they are available at auto parts stores and service stations and cost very little



33 Note any abnormal tire wear **(see illustration)** . Tread pattern irregularities such as cupping, flat spots and more wear on one side that the other are indications of front end alignment and/or balance problems. If any of these conditions are noted, take the vehicle to a tire shop or service station to correct the problem.

2.33 This chart will help you determine the condition of the tires, the probable cause(s) of abnormal wear and the corrective action necessary

34 Look closely for cuts, punctures and embedded nails or tacks. Sometimes a tire will hold air pressure for a short time or leak down very slowly after a nail has embedded itself in the tread. If a slow leak persists, check the valve stem core to make sure it is tight **(see illustration)** . Examine the tread for an object that may have embedded itself in the tire or for a “plug” that may have begun to leak (radial tire punctures are repaired with a plug that is installed in the puncture). If a puncture is suspected, it can be easily verified by spraying a solution of soapy water onto the puncture **(see illustration)** . The soapy solution will bubble if there is a leak. Unless the puncture is unusually large, a tire shop or service station can usually repair the tire.

2.34a If a tire loses air on a steady basis, check the valve core first to make sure it's snug (special inexpensive wrenches are commonly available at auto parts stores)

2.34b If the valve core is tight, raise the corner of the vehicle with the low tire and spray a soapy water solution onto the tread as the tire is turned slowly - leaks will cause small bubbles to appear

35 Carefully inspect the inner sidewall of each tire for evidence of brake fluid leakage. If you see any, inspect the brakes immediately.

36 Correct air pressure adds miles to the lifespan of the tires, improves mileage and enhances overall ride quality. Tire pressure cannot be accurately estimated by looking at a tire, especially if it's a radial. A tire pressure gauge is essential. Keep an accurate gauge in the glove compartment. The pressure gauges attached to the nozzles of air hoses at gas stations are often inaccurate.

37 Always check tire pressure when the tires are cold. Cold, in this case, means the vehicle has not been driven over a mile in the three hours preceding a tire pressure check. A pressure rise of four to eight pounds is not uncommon once the tires are warm.

38 Unscrew the valve cap protruding from the wheel or hubcap and push the gauge firmly onto the valve stem **(see illustration)** . Note the reading on the gauge and compare the figure to the recommended tire pressure shown in your owner's manual or on the tire placard on the passenger side door or door pillar. Be sure to reinstall the valve cap to keep dirt and moisture out of the valve stem mechanism. Check all four tires and, if necessary, add enough air to bring them to the recommended pressure.

2.38 To extend the life of the tires, check the air pressure at least once a week with an accurate gauge (don’t forget the spare!)

39 Don’t forget to keep the spare tire inflated to the specified pressure (refer to your owner’s manual).