



# General maintenance knowledge required for practical driving test

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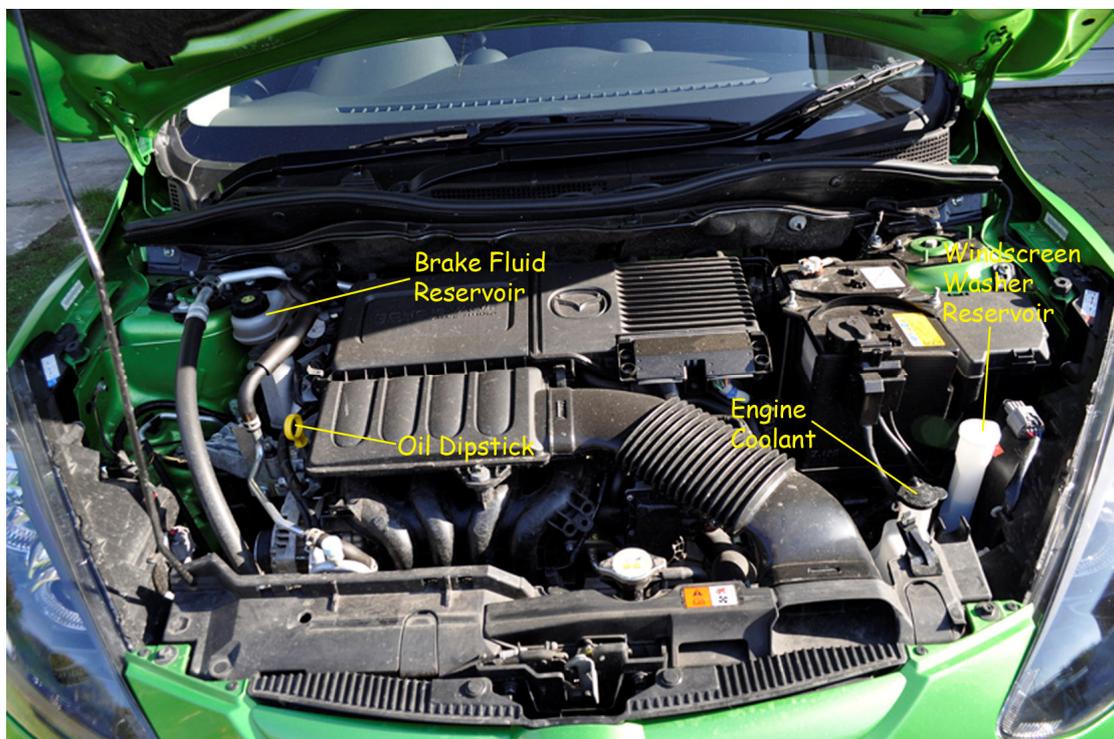
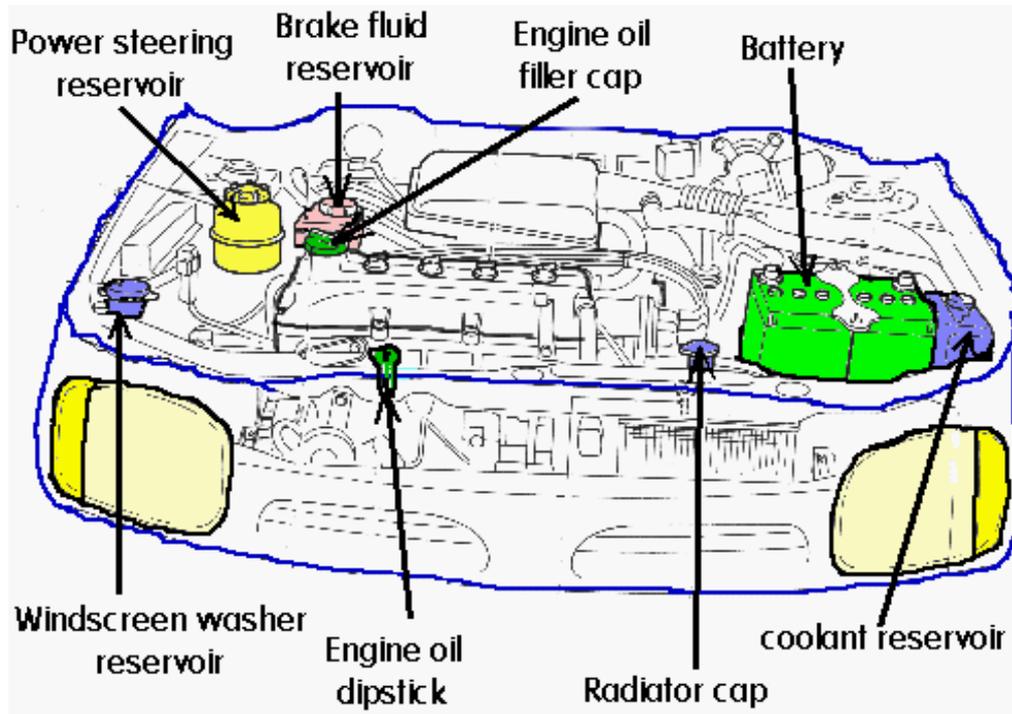
From 1st September 2003 the examiner will ask candidates 2 "show me/tell me" questions at the start of the test. Should the candidate fail to answer either one or both questions correctly, this would be assessed as 1 driving fault and would not therefore constitute a reason for failing the test in its own right.

A candidate will have to either **SHOW** or **EXPLAIN** how to do simple maintenance tasks. At the start of the practical test the Examiner will ask the pupil a 'Tell Me' question, for example **"Tell me how you would check the indicators are working on this vehicle.** This would be followed by a 'Show Me' question, for example **"Show me where to check the oil level"**. A candidate will not FAIL a Driving Test for a wrong answer however they will get ONE Driving Fault if they are wrong. This test will be included inside the existing time limit for the practical test which means less time spend out on the road. This section has been designed to help you through this element of the practical test.

When performing any inspection or maintenance work on your vehicle, always take care to prevent serious accidental injury to yourself or damage to the vehicle. The following are **general** precautions which should be observed.

- Park your vehicle on a level surface, apply the hand brake and chock the wheels to prevent the vehicle moving. If you have a automatic, move the control lever to neutral ("N").
- Turn off the engine and wait until it cools down. Do not work while the engine is hot.
- If you have to work with the engine running, keep your hands, clothing, hair and tools away from moving parts such as the fan belt and fans. It is advisable to remove ties and jewellery, such as rings, watches.
- If the engine is running in a enclosed space such as a garage, make sure there is proper ventilation for exhaust fumes.
- Never get under the vehicle while it is only supported by a jack. Support the vehicle with safety stands.
- Never smoke and keep flames and sparks away from the fuel and battery.
- Never connect or disconnect either the battery or any other electrical components while the ignition is switched on.

## Location of parts



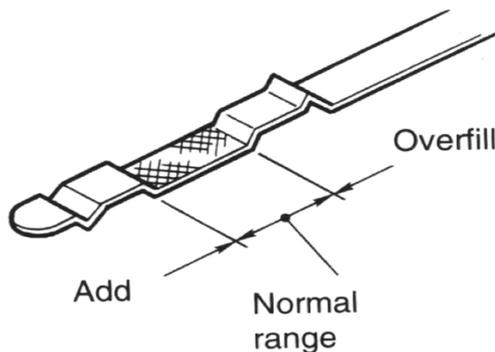
**My engine**

## The maintenance items listed should be performed weekly.

**Caution!** Oil Level should be checked regularly. Using too little or too much oil can damage the engine.

It is normal to add some oil between maintenance intervals depending on the severity of the operating conditions.

1. Park the vehicle on level ground and apply the handbrake.



2. Run the engine until it reaches operating temperature.

3. Turn off the engine. Wait a few minutes for the oil to drain back into the oil pan.

4. Remove the dipstick and wipe it clean with a dry cloth. Re-insert it fully.

5. Remove the dipstick again and check the oil level. It should be between the "H" and "L" marks. If the oil is below the "L" mark, remove the oil filler cap and pour recommended oil through the

opening. **Do not overfill.** or you'll be burning it off, creating unwanted exhaust smoke. Worse, it could blow an oil seal.

6. Recheck oil level with dipstick.

## Checking Coolant Level

**Caution!** Never remove the radiator cap when the engine is hot. Serious scalding could be caused by hot fluid under high pressure escaping from the radiator. Wait until the engine and radiator cool down.



Check the coolant level in the reservoir tank when the engine is cold. If the coolant level is below the "MIN", add coolant up to the "MAX" level.

If the reservoir tank is empty, check the coolant level in the radiator **when the engine is cold**. If coolant level is not at the top of the radiator, fill with undiluted coolant up to the filler opening and also add it to the reservoir tank up to the "MAX" level.

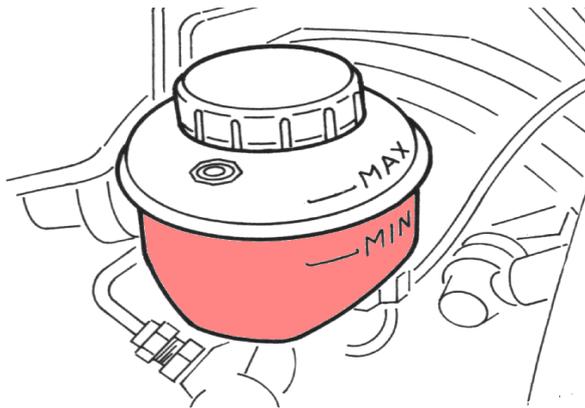
**NOTE:** Some older vehicles do not have a coolant reservoir tank. If this is the case for your vehicle, then just remove the radiator cap and check the coolant is up to the filler opening.

## Brake/Power Steering Fluid Level

**Caution!** Brake and Power steering fluid are poisonous and should be stored carefully in marked containers out of reach of children.

Use only **NEW** brake fluid. Old fluid may be contaminated which may result in damage to the braking system.

Do not spill fluid on painted surfaces. This will damage the paint. If fluid is spilled, wash with water as soon as possible.



Check the fluid in the reservoir. If the fluid is below the "MIN" level or the brake warning light comes on, add brake fluid up to the "MAX" line.

If the fluid is added frequently, the system should be thoroughly checked by a competent mechanic because the system may have developed a leak.

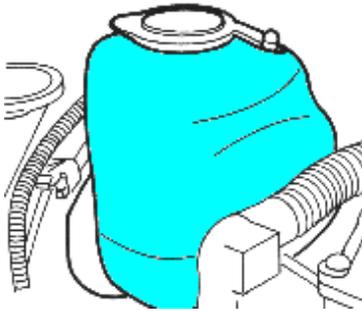
**Notes for Power Steering owners** The Power steering Fluid level should be checked when the fluid is cold

- *DO not Overfill*
- *Use only steering fluid recommended for your vehicle.*

## Windscreen Washer Fluid

**Caution!** Do not substitute engine anti-freeze for screen wash solution. This may result in damage to the paint.

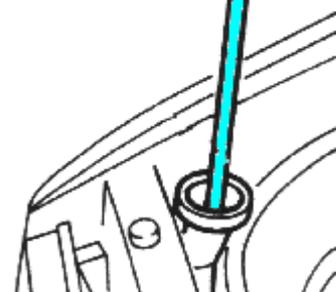
Do not use washing up liquid. It contains salt which could ruin your paint work.



If your windscreen washer has a bottle (as shown **LEFT**), flip the tab open. Fill the bottle to the neck using windscreen washer fluid or water. During winter months water is likely to freeze so make sure 50% windscreen washer fluid is added. **DO NOT USE ANTI-FREEZE.**

Some vehicles have washer bottles with only the

filler tab visible. With these bottles, you check the fluid level by using your finger to plug the centre hole of the cap assembly (as shown **RIGHT**), then remove it from the bottle. Fluid will be retained in the tube to indicate the current bottle level.



## Tyres

**Caution!** Remember tyre age. Never use a tyre over **Six Years old**, regardless of whether it has been used or not.

At least every week check the tyre pressure (including spare). Incorrect tyre pressure may adversely affect tyre life and vehicle handling. Tyre pressure should be checked when tyres are **cold** after the vehicle has been parked for three or more hours, or driven less than 1 mile. **COLD** tyre pressures are shown on garage forecourt. Different vehicles have different tyre pressures so check the charts.

Insufficient pressure can lead to overheating of the tyre and subsequently internal damage. At high speeds, this could result in tread separation and even bursting of the tyre.

Tyres should also be inspected for wear, cracking, bulging, or objects caught in the tread. If excessive wear, cracks, bulging, or deep cuts are found, the tyre should be replaced.

Most new tyres have a built-in tread wear indicator (See diagram RIGHT). When wear indicator is visible, the tyre should be replaced.

**Cars, light vans and light trailers** must have a tread depth of at least 1.6mm across the central three-quarters of the breadth of the tread and around the entire circumference.

**Motorcycles, large vehicles and passenger carrying vehicles** must have a tread depth of at least 1mm.

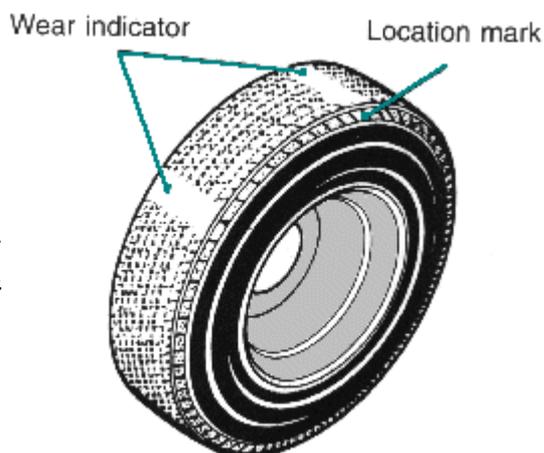
**WARNING** Do not use a deformed wheel even if it has been repaired. Such wheels could have structural damage and could fail without warning.

Unbalanced wheels may affect vehicle handling and tyre life. Even with regular use, wheels can get out of balance. Therefore, they should be balanced as required.

Motorists are failing to check the condition of their tyres, which could have fatal consequences. Although tyres are critical for the safety of all road users, many motorists are in breach of, and, oblivious to, the legal 1.6mm tread depth requirement, and may have tyres classified as severely damaged. With a maximum fine of £2,500 per tyre with discretionary disqualification including three penalty points, motorists could be in for a nasty shock, if caught driving with illegal tyres.

### Quick look at the top tips to ensure tyres are legal and in top condition:

- Examine tyres every two weeks for signs of damage, uneven wear, splits or cracks.
- Keep track of tyre tread depth by purchasing an easy-to-use tread depth gauge. The legal requirement is 1.6mm, but many manufacturers recommend changing at 2mm or even 3mm.



- Check tyres are inflated to the correct pressure every week using a reliable gauge. Do this when the tyres are cold.
- Tyres will wear at different speeds especially between front and back. Don't presume all tyres will be in the same condition.
- Ask a garage to check the vehicle's tracking every six months, or after any collision or heavy kerb impact. Incorrect tracking leads to uneven and accelerated tyre wear.
- Aggressive driving styles can take thousand of miles from the life expectancy of tyres. Harsh acceleration and braking will reduce the tread significantly.
- When changing tyres, never risk buying part worn or second-hand tyres, a brand new tyre or retread is always a safer investment.

#### **How to change a tyre:**

We're learning all the time. So the next time you have a damaged or flat tyre, don't look for a mechanic. Just follow these simple steps and change it yourself.

**When on a motorway:- Never change a flat tyre on the hard shoulder. Breakdown patrols are trained to do roadside repairs safely, while their flashing lights are much more noticeable than your car's hazard lights.**

- Choose a safe place to stop away from the main carriageway and ensure your passengers get out of the car and wait in a safe area away from other traffic.
- Switch on the hazard warning lights to alert other road users. Apply the handbrake and engage 1st gear 9 select 'P' for an automatic transmission)
- Ensure the jack is positioned on firm, level ground. Do not position the jack on metal gratings or manhole covers.
- If jacking on a slope, place chocks (a house brick would do) at the front and rear of the wheel diagonally opposite the one to be removed.
- Before raising the car, remove the wheel trim and use the wheel nut spanner to slacken each of the wheel nuts anti-clockwise.
- Turn the jack clockwise to raise the car until the tyre is clear of the ground.
- Remove the wheel nuts and the wheel
- Fit the spare wheel and tighten the wheel nuts (domed side towards the wheel) until the wheel is firmly seated.
- Lower the car and remove the jack and the wheel chocks, then FULLY tighten the wheel nuts in diagonal sequence.
- Refit the wheel trim.

It's as simple as that!

## Wiper blades

**Caution!** When cleaning the Wiper blades do not use strong household soap, strong chemical detergents, petrol or solvents.

If your windscreen is not clear after using the windscreen washer, here are tell-tale signs of worn out wiper blades.

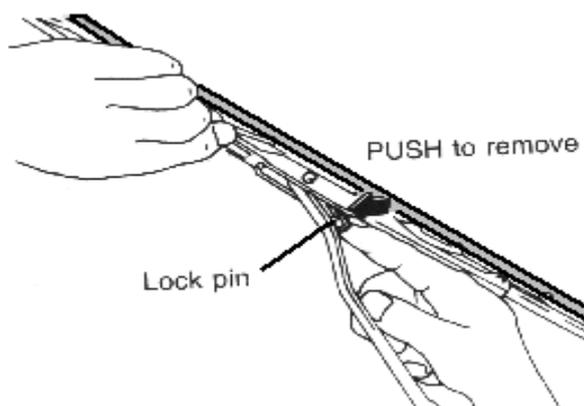
- **Lines appearing on windscreen** - A wiper blade's rubber can harden or become damaged with age, leaving fine beads of water on the windscreen.
- **Bands appearing on windscreen** - Hardened or aging wiper rubber can cause thicker bands of water on the screen.
- **Lace Curtains** - Arm defects or long periods in the parked position can deform the wiper blade lip, causing a veil affect across the windscreen. This means visibility danger is greatest when passing other vehicles at night.
- **Chattering** - A deformed wiper element can cause blades to judder across the screen, leaving radial streaks.
- **Unwashed Margins** - A deterioration in the wiper blades or decreased wiper pressure can leave parts of the windscreen unclear.
- **Noise** - Noisy wipers may be a sign that the wiper element is deformed or hardened, so that the wiper blade structure is worn.
- **Judder** - A deformed wiper element, wrong adaptor or blade aging can result in jerky and noisy wiper arm movement
- **Wind Lift** - If high speeds persistently cause the wiper to miss parts of the screen, either the wiper blade or wiper arm should be replaced.

Clean the outside of the windscreen with a mild detergent. Your windscreen is clean if beads do not form when rinsing with clear water.

Clean the blade by wiping it with a cloth soaked in a washer solution. Rinse the blade with clear water. If the windscreen is still not clear after cleaning blades and using the wiper, replace the blades.

### To replace the blades

- Pull the wiper arm up
- Push in the lock pin (see diagram RIGHT). Move the wiper blade down the arm until the lock pin is clear, then remove the blade completely.
- Insert a new wiper blade to the wiper arm until the pin clicks into place.

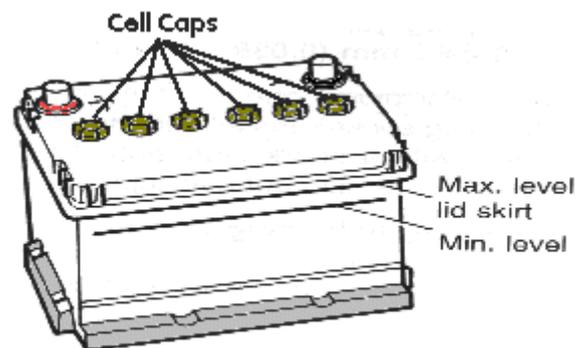


**Lights** Make sure that the headlights, stop lights, rear lights, parking lights, indicator lights, and other lights are all operating properly.

## Battery

**Caution!** Do not expose the battery to flames or electrical sparks. Hydrogen gas generated by battery action is highly combustible. Do not allow battery fluid to contact your skin, eyes, fabrics or paint work.

- Keep battery surface clean and dry. Any corrosion (That 'white powder' that appears around the terminals) should be washed off with a solution of baking soda and water.
- Make certain the terminal connections are clean and securely tightened.
- If the vehicle is not to be used for 30 days or longer, disconnect the negative "-" battery terminal cable to prevent battery discharge



Normally the battery does not require additional water, however adding distilled water may be necessary during the battery life. It should be between the "MIN" mark and the edge of the lid (See diagram on the LEFT).

If it is necessary to add fluid, add only *DISTILLED* water to raise the level in each cell to the maximum mark. **Do not overfill.**

To add water to the cells first remove the cell caps.

Add *distilled water* up to the "MAX" level.

Refit the cell caps ensuring that they are securely fastened

## Minor and Major Vehicle Service

Minor and Major servicing is required to ensure good engine and emission control, and to keep the vehicle in good mechanical condition.

Always refer to your 'Maintenance schedule' on your vehicle. Vehicles today have been designed to have minimum maintenance requirements with longer service intervals to save you both time and money.