Chapter 1
Routine maintenance and servicing

Contents

Accelerator cable check and adjustment 9
Air conditioning refrigerant check 19
Air filter renewal 21
Automatic transmission fluid level check 4
Automatic transmission fluid renewal 23
Auxiliary drivebelt check and renewal 5
Body drain channel check 17
Brake fluid renewal 24
Clutch adjustment check and control mechanism lubrication 12
Coolant renewal 20
Driveshaft gaiter check 13
Emissions control systems check 29
Engine breather hose check 7
Engine oil and filter renewal 3
Front and rear disc pad check 14
Fuel filter renewal 8
Handbrake check and adjustment 15
Hinge and lock lubrication 18
Hose and fluid leak check 6
Idle speed and mixture check and adjustment 10
Ignition system check 22
Intensive maintenance 2
Introduction 1
Manual transmission oil level check 26
Pollen filter renewal 28
Rear brake shoe check - models with rear drum brakes 27
Road test 30
Spark plug renewal 11
Steering and suspension check 16
Timing belt renewal 25



Degrees of difficulty

Easy, suitable for novice with little experience

Fairly easy, suitable for beginner with some experience

Fairly difficult, suitable for competent DIY mechanic

Difficult, suitable for experienced DIY mechanic

Very difficult, suitable for expert DIY or professional

Servicing Specifications

Lubricants and fluids

Refer to the end of "Weekly checks"

Capacities

Engine oil	
TU engine - with filter	3.5 litres
TU engine - without filter	3.2 litres
XU engine (8-valve) - with filter	5.0 litres
XU engine (8-valve) - without filter	4.5 litres
XU engine (16-valve) - with filter	5.3 litres
XU engine (16-valve) - without filter	5.0 litres
Cooling system (approximate)	7.0 litres
Manual gearbox	2.0 litres
Automatic transmission:	
Drain and refill	2.4 litres
After overhaul	6.2 litres
Power steering system	0.7 litres
Fuel tank	70 litres

Engine

Oil filter type	Champion F104

Cooling system

Antifreeze mixture:	
28% antifreeze	Protection down to -15°C(-5°F)
50% antifreeze	Protection down to -30°C(-22°F)

Fuel system

Idle speed:	
TU carburettor engine	850 ± 50 rpm
XU carburettor engine	900 ± 50 rpm
XU5 and TU3 single-point injection (not adjustable)	850 ± 50 rpm
Bosch L3.1 multi-point injection	925 ± 25 rpm
Other multi-point injection systems (not adjustable)	850 ± 50 rpm
Idle mixture CO content:	
TU carburettor engine	0.8%
XU carburettor engine	0.5%
XU5 and TU3 single-point injection (not adjustable)	Less than 0.5 %
XU5, XU7, XU9, XU10 multi-point injection (not adjustable)	Less than 1.0 %
Air filter element:	
TU engine	Champion V401
XU engine	Champion U543
Fuel filter	Champion L101, L206, L132 or L135

Ignition system

Spark plugs:	
TU and XU carburettor engines	Champion C9YCC
XU injection 8-valve engines	Champion C7YCC
XU injection16-valve engines	Champion RC7BMC
Spark plug electrode gap*:	
8-valve engines	0.8 mm
16-valve engines	1.6 mm
Ignition HT lead resistance	Approximately 600 ohms per 100 mm length

**The spark plug gap quoted is that recommended by Champion for their specified plugs listed above.*

Brakes

Front/rear brake pad friction material minimum thickness	2.0 mm
Rear brake shoe friction material minimum thickness	1.0 mm

Tyre pressures

See end of "Weekly Checks".

Torque wrench settings

	Nm	lbf ft
Engine oil drain plug	27	20
Manual gearbox drain plug	30	22
Roadwheel bolts	85	63
Spark plugs	27	20

The maintenance intervals in this manual are provided with the assumption that you will be carrying out the work yourself. These are the minimum maintenance intervals recommended by the manufacturer for vehicles driven daily. If you wish to keep your vehicle in peak condition at all times, you may wish to perform some of these procedures more often. We encourage frequent maintenance, because it enhances the efficiency, performance and resale value of your vehicle.

If the vehicle is driven in dusty areas, used to tow a trailer, or driven frequently at slow speeds (idling in traffic) or on short journeys, more frequent maintenance intervals are recommended.

When the vehicle is new, it should be serviced by a factory-authorised dealer service department, in order to preserve the factory warranty.

Every 250 miles (400 km) or weekly

- ☐ Refer to *"Weekly checks"*

Every 6000 miles (10 000 km) or 6 months - whichever comes sooner

- ☐ Renew engine oil and filter (Section 3)
- ☐ Check the automatic transmission fluid level (Section 4)
- ☐ Check the condition of the auxiliary drivebelt (Section 5)
- ☐ Check all underbonnet components for fluid leaks (Section 6)

Every 12 000 miles (20 000 km) or 12 months - whichever comes sooner

In addition to all the items listed above, carry out the following:

- ☐ Check condition and security of engine breather hoses (Section 7)
- ☐ Renew the fuel filter (Section 8)
- ☐ Check the condition of, and adjust as necessary, the accelerator cable (Section 9)
- ☐ Check the idle speed and mixture (CO) adjustment. Clean the fuel filter in the carburettor (where applicable) (Section 10)
- ☐ Renew the spark plugs (Section 11)
- ☐ Check and adjust the clutch pedal travel (Section 12)
- ☐ Check the condition of the driveshaft rubber gaiters (Section 13)
- ☐ Check front and rear disc brake pads for wear (Section 14)
- ☐ Check the operation of the handbrake and adjust as necessary (Section 15)
- ☐ Check the steering and suspension components (Section 16)
- ☐ Check and unblock all door and sill drain channels. Also check the heater drain tube (Section 17)

Every 18 000 miles (30 000 km) or 18 months - whichever comes sooner

In addition to all the items listed above, carry out the following:

- ☐ Lubricate all hinges and locks (Section 18)
- ☐ Check the air conditioning system refrigerant (Section 19)

Every 24 000 miles (40 000 km) or 2 years - whichever comes sooner

In addition to all the items listed above, carry out the following:

- ☐ Renew the coolant (Section 20)
- ☐ Renew the air filter element (Section 21)
- ☐ Check the ignition system and ignition timing (Section 22)
- ☐ Renew the automatic transmission fluid (Section 23)
- ☐ Renew the hydraulic fluid in the braking system (Section 24)

Every 36 000 miles (60 000 km) or 3 years - whichever comes sooner

In addition to all the items listed above, carry out the following:

- ☐ Renew the timing belt (Section 25)
- ☐ Check and if necessary top-up the manual transmission oil level (Section 26)
- ☐ Inspect the rear brake drum linings for wear (Section 27)

1•4 Maintenance schedule - models from 1994

The maintenance schedule for models from 1994 is given below. When compared with the schedule for earlier models, it will be seen that although the same operations are required, the frequency with which they are performed has changed considerably. The specified interval for most operations has been extended.

The description of the maintenance tasks in this Chapter follows the schedule prescribed for earlier models. When the interval for later models varies, this is of course indicated. However, the DIY owner may consider that it is well worth while observing the shorter intervals in any case.

We encourage frequent maintenance, because it enhances the efficiency, performance and ultimately, the resale value of your vehicle.

If the vehicle is driven in dusty areas, is used to tow a trailer, or driven frequently at slow speeds (idling in traffic) or on short journeys, more frequent maintenance intervals are recommended.

When the vehicle is new, it should be serviced by a factory-authorised dealer service department, in order to preserve the factory warranty.

Every 250 miles (400 km) or weekly

- ☐ Refer to *"Weekly checks"*

Every 9000 miles (15 000 km) or 12 months - whichever comes sooner

Note: *It is strongly recommended that the engine oil and filter be changed at least every 6 months, even if the mileage specified has not been covered.*

- ☐ Renew engine oil and filter (Section 3)
- ☐ Check the clutch adjustment (Section 12)
- ☐ Check all underbonnet components for fluid leaks (Section 6)
- ☐ Check the steering and suspension components (Section 16)
- ☐ Check the condition of the driveshaft rubber gaiters (Section 13)
- ☐ Check the automatic transmission fluid level (Section 4)
- ☐ Renew the pollen filter where fitted (Section 28)

Every 18 000 miles (30 000 km)

In addition to all the items listed above, carry out the following:

- ☐ Check the air conditioning system refrigerant (Section 19)
- ☐ Renew the spark plugs (Section 11)
- ☐ Renew the fuel filter - carburettor models (Section 8)
- ☐ Renew the automatic transmission fluid (Section 23)
- ☐ Check the ignition system and ignition timing (Section 22)
- ☐ Check the idle speed and mixture adjustment (Section 10)
- ☐ Check the emissions control system components (Section 29)
- ☐ Check the condition of the auxiliary drivebelt (Section 5)
- ☐ Lubricate the clutch control mechanism (Section 12)
- ☐ Check the condition of the front brake pads (Section 14)
- ☐ Check the operation of the handbrake (Section 15)
- ☐ Carry out a road test (Section 30)

Every 36 000 miles (60 000 km)

In addition to all the items listed above, carry out the following:

- ☐ Lubricate all hinges and locks (Section 18)
- ☐ Renew the air filter (Section 21)
- ☐ Inspect the rear brake drum linings for wear (Section 27)
- ☐ Check the condition of the rear disc brake pads (Section 14)
- ☐ Check and if necessary top-up the manual transmission oil level (Section 26)
- ☐ Renew the fuel filter - fuel injection models (Section 8)
- ☐ Renew the timing belt (Section 25) *see **Note** below.*

Note: Although the normal interval for timing belt renewal is 72 000 miles (120 000 km), it is strongly recommended that the interval is halved to 36 000 miles (60 000 km) on vehicles which are subjected to intensive use, ie. mainly short journeys or a lot of stop-start driving. The actual belt renewal interval is therefore very much up to the individual owner, but bear in mind that severe engine damage will result if the belt breaks.

Every 72 000 miles (120 000 km)

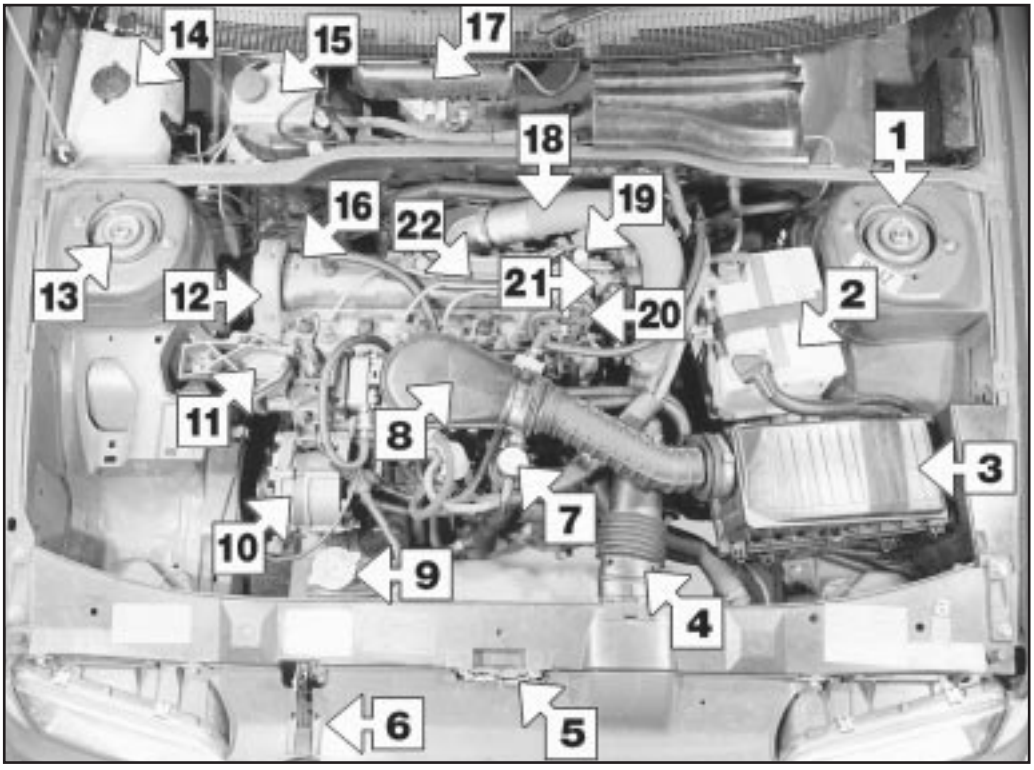
In addition to all the items listed above, carry out the following:

- ☐ Renew the timing belt (Section 25) - this is the interval recommended by Peugeot, but we recommend that the belt is changed more frequently, at 36 000 miles - see above.

Every 2 years (regardless of mileage)

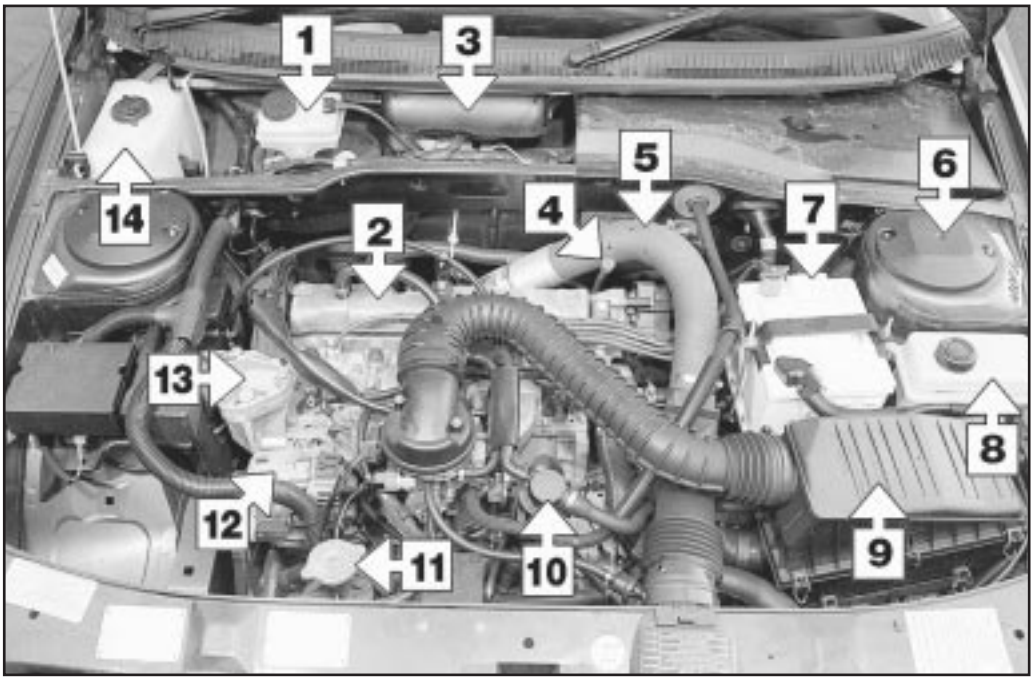
- ☐ Renew the coolant (Section 20)
- ☐ Renew the brake fluid (Section 24)

Underbonnet view of a 1580 cc carburettor engine



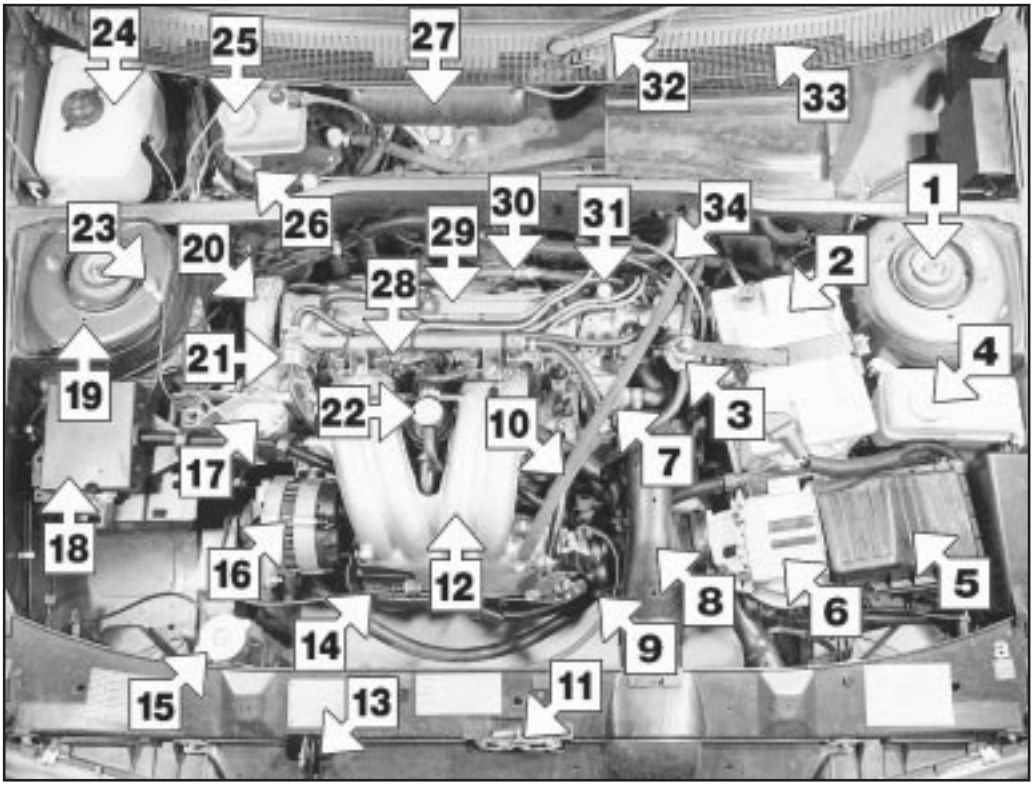
1 Left-hand suspension strut top mounting
2 Battery
3 Air filter housing
4 Cold air inlet duct
5 Bonnet lock
6 Bonnet release latch
7 Engine oil filler cap/tube
8 Carburettor air inlet duct (carburettor below)
9 Radiator (coolant filler) cap
10 Alternator
11 Right-hand engine mounting
12 Timing belt upper cover
13 Right-hand suspension strut top mounting
14 Windscreen wash reservoir
15 Brake hydraulic fluid reservoir
16 Camshaft cover
17 Windscreen wiper motor (beneath cover)
18 Hot air inlet duct
19 Engine oil level dipstick
20 Fuel pump
21 Distributor
22 Spark plug HT leads

Underbonnet view of a 1580 cc fuel injection engine



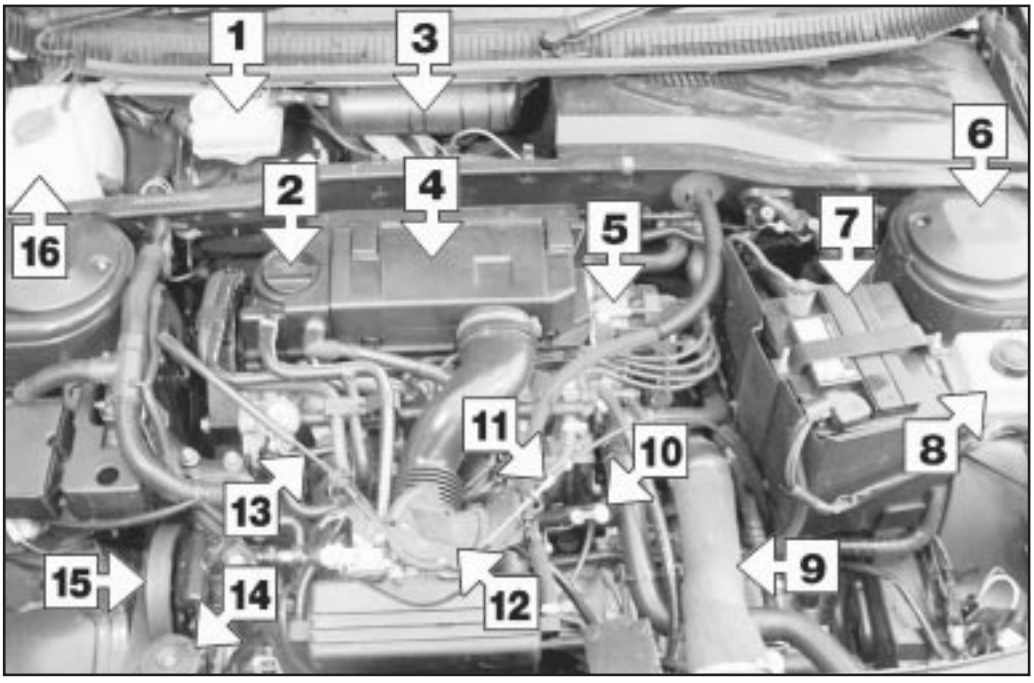
1 Brake hydraulic fluid reservoir
2 Valve cover
3 Windscreen wiper motor (beneath cover)
4 Engine oil level dipstick
5 Hot air duct
6 Left-hand suspension strut top mounting
7 Battery
8 Power steering fluid reservoir
9 Air cleaner
10 Engine oil filler cap/tube
11 Radiator (coolant filler) cap
12 Alternator
13 Right-hand engine mounting
14 Windscreen washer reservoir

Underbonnet view of a 1905 cc engine



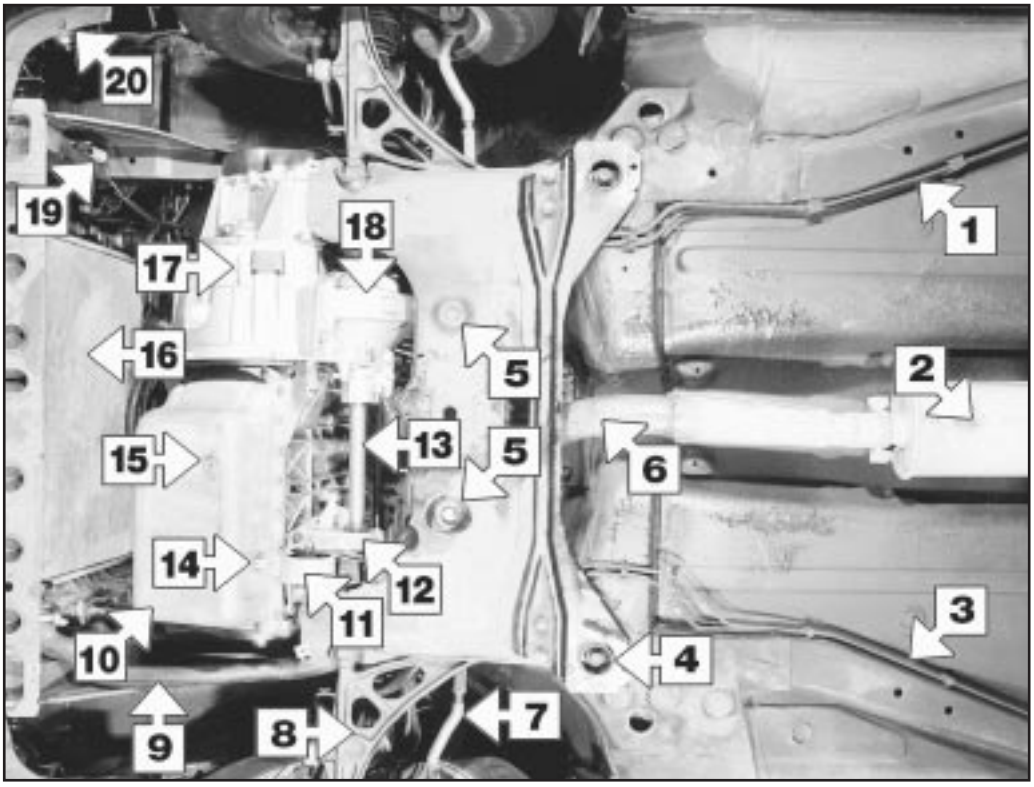
1 Left-hand strut top mounting
2 Battery
3 Fuel damper
4 Power steering fluid reservoir
5 Air filter cover
6 Fuel injection control unit
7 Thermostat housing
8 Cold air inlet
9 Throttle housing
10 Brake servo vacuum hose
11 Bonnet lock
12 Inlet manifold
13 Bonnet release latch
14 Accelerator cable
15 Radiator (coolant filler cap)
16 Alternator
17 Right-hand engine mounting
18 Fuel injection relay box
19 Right-hand strut top mounting
20 Camshaft drivebelt top cover
21 Fuel pressure regulator
22 Engine oil filler tube
23 Earth lead
24 Windscreen washer reservoir
25 Brake hydraulic fluid reservoir
26 Brake servo vacuum unit
27 Windscreen wiper motor
28 Fuel rail and injectors
29 Camshaft cover
30 Power steering hose
31 Engine oil level dipstick
32 Windscreen wiper arm
33 Air inlet grille (ventilation)
34 Distributor

Underbonnet view of a 1998 cc engine



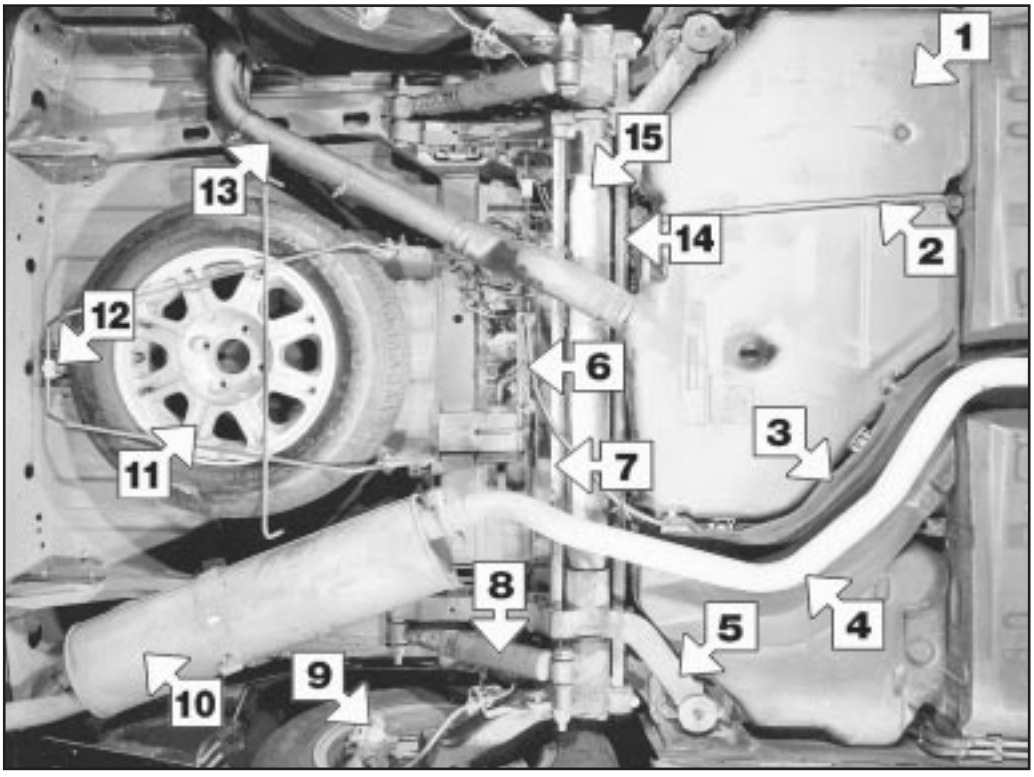
1 Brake system hydraulic fluid reservoir
2 Engine oil filler cap
3 Windscreen wiper motor (below cover)
4 Air cleaner cover
5 Ignition coil
6 Left-hand suspension strut top mounting
7 Battery
8 Power steering fluid reservoir
9 Inlet air duct
10 Engine oil level dipstick
11 Automatic transmission kickdown cable
12 Throttle housing
13 Accelerator cable
14 Radiator (coolant filler cap)
15 Auxiliary drivebelt
16 Windscreen washer fluid reservoir

Front underbody view of a 1905 cc engine model



1 Fuel lines
2 Front exhaust silencer
3 Brake lines
4 Front subframe rear mounting
5 Steering rack mountings
6 Exhaust downpipe
7 Steering tack rod
8 Lower suspension arm
9 Radiator lower hose
10 Engine oil sump
11 Rear engine mounting
12 Driveshaft intermediate bearing housing
13 Right-hand driveshaft
14 Oil temperature sensor
15 Engine oil drain plug
16 Radiator
17 Transmission housing
18 Differential housing
19 Cooling fan resistor
20 Horn

Rear underbody view of a 1905 cc engine model



1 Fuel tank
2 Fuel tank supporting strap
3 Heat shield
4 Exhaust pipe
5 Rear suspension side member
6 Handbrake cable equaliser mechanism
7 Rear suspension torsion bar
8 Rear shock absorber
9 Rear disc brake caliper
10 Exhaust rear silencer
11 Spare wheel (cover removed)
12 Spare wheel cradle support hook
13 Fuel filler hose
14 Rear anti-roll bar
15 Suspension cross-link

Maintenance procedures

1 Introduction

General information

1 This Chapter is designed to help the home mechanic maintain his/her vehicle for safety, economy, long life and peak performance.
2 The Chapter contains a master maintenance schedule, followed by Sections dealing specifically with each task in the schedule. Visual checks, adjustments, component renewal and other helpful items are included. Refer to the accompanying illustrations of the engine compartment and the underside of the vehicle for the locations of the various components.
3 Servicing your vehicle in accordance with the mileage/time maintenance schedule and the following Sections will provide a planned maintenance programme, which should result in a long and reliable service life. This is a comprehensive plan, so maintaining some items but not others at the specified service intervals, will not produce the same results.
4 As you service your vehicle, you will discover that many of the procedures can - and should - be grouped together, because of the particular procedure being performed, or because of the close proximity of two otherwise-unrelated components to one another. For example, if the vehicle is raised for any reason, the exhaust can be inspected at the same time as the suspension and steering components.
5 The first step in this maintenance programme is to prepare yourself before the actual work begins. Read through all the Sections relevant to the work to be carried out, then make a list and gather together all the parts and tools required. If a problem is encountered, seek advice from a parts specialist, or a dealer service department.

2 Intensive maintenance

1 If, from the time the vehicle is new, the routine maintenance schedule is followed closely, and frequent checks are made of fluid levels and high-wear items, as suggested throughout this manual, the engine will be kept in relatively good running condition, and the need for additional work will be minimised.
2 It is possible that there will be times when the engine is running poorly due to the lack of regular maintenance. This is even more likely if a used vehicle, which has not received regular and frequent maintenance checks, is purchased. In such cases, additional work may need to be carried out, outside of the regular maintenance intervals.
3 If engine wear is suspected, a compression test will provide valuable information regarding the overall performance of the main internal components. Such a test can be used as a basis to decide on the extent of the work to be carried out. If, for example, a compression test indicates serious internal engine wear, conventional maintenance as described in this Chapter will not greatly improve the performance of the engine, and may prove a waste of time and money, unless extensive overhaul work is carried out first.
4 The following series of operations are those most often required to improve the performance of a generally poor-running engine:

Primary operations

a) Clean, inspect and test the battery (see "Weekly checks").
b) Check all the engine-related fluids (see "Weekly checks").
c) Check the condition and tension of the auxiliary drivebelt (Section 5).
d) Renew the spark plugs (Section 11).
e) Inspect the distributor cap and HT leads - as applicable (Section 22).
f) Check the condition of the air cleaner filter element, and renew if necessary (Section 21).
g) Renew the fuel filter (Section 8).
h) Check the condition of all hoses, and check for fluid leaks (Section 6).
i) Check the idle speed and mixture settings - as applicable (Section 10).

5 If the above operations do not prove fully effective, carry out the following secondary operations:

Secondary operations

a) Check the charging system (Chapter 5A).
b) Check the ignition system (Chapter 5B).
c) Check the fuel system (Chapter 4).
d) Renew the distributor cap and rotor arm - as applicable (Chapter 5B).
e) Renew the ignition HT leads - as applicable (Section 22).

6000 Mile / 6 Month Service

3 Engine oil and filter renewal



Note: *On models from 1994, the maker's specified interval for this procedure is 9000 miles (15 000 km) or 12 months.*
Note: *A suitable square-section wrench may be required to undo the sump drain plug on some models. These wrenches cab be obtained from most motor factors or your Peugeot dealer.*
1 Frequent oil and filter changes are the most important preventative maintenance procedures which can be undertaken by the DIY owner. As engine oil ages, it becomes diluted and contaminated, which leads to premature engine wear.
2 Before starting this procedure, gather together all the necessary tools and materials. Also make sure that you have plenty of clean rags and newspapers handy, to mop up any spills. Ideally, the engine oil should be warm, as it will drain better, and more built-up sludge will be removed with it. Take care, however, not to touch the exhaust or any other hot parts of the engine when working under the vehicle. To avoid any possibility of scalding, and to protect yourself from possible skin irritants and other harmful contaminants in used engine oils, it is advisable to wear gloves when carrying out this work. Access to the underside of the vehicle will be greatly improved if it can be raised on a lift, driven onto ramps, or jacked up and supported on axle stands (see *"Jacking and Vehicle Support"*). Whichever method is chosen, make sure that the vehicle remains level, or if it is at an angle, so that the drain plug is at the lowest point. Where necessary remove the splash guard from under the engine.
3 Slacken the drain plug about half a turn; on some models, a square-section wrench may be needed to slacken the plug **(see illustration)**. Position the draining container under the drain plug, then remove the plug completely. If possible, try to keep the plug



3.3 Slackening the sump drain plug with a square-section wrench

HAYNES HiNT



As the engine oil drain plug releases from the threads, move it away sharply so the stream of oil issuing from the sump runs into the container, not up your sleeve!

pressed into the sump while unscrewing it by hand the last couple of turns **(see Haynes Hint)** .

4 Recover the sealing ring from the drain plug.

5 Allow some time for the old oil to drain, noting that it may be necessary to reposition the container as the oil flow slows to a trickle.

6 After all the oil has drained, wipe off the drain plug with a clean rag. Check the sealing washer for condition, and renew it if necessary. Clean the area around the drain plug opening, then refit and tighten the plug.

7 If the filter is also to be renewed, move the container into position under the oil filter which is located on the front side of the cylinder block, below the inlet manifold.

8 Using an oil filter removal tool if necessary, slacken the filter initially, then unscrew it by hand the rest of the way **(see illustration)**. Empty the oil from the old filter into the container, and discard the filter.

9 Use a clean rag to remove all oil, dirt and sludge from the filter sealing area on the engine. Check the old filter to make sure that the rubber sealing ring hasn't stuck to the engine. If it has, carefully remove it.

10 Apply a light coating of clean engine oil to the sealing ring on the new filter, then screw it into position on the engine. Tighten the filter firmly by hand only - **do not** use any tools. Wipe clean the filter and sump drain plug.



3.8 Using an oil filter removal tool to slacken the oil filter

11 Remove the old oil and all tools from under the car, then lower the car to the ground (if applicable).

12 Remove the dipstick then unscrew the oil filler cap from the cylinder head cover. Fill the engine, using the correct grade and type of oil (see *"Weekly checks"*). An oil can spout or funnel may help to reduce spillage. Pour in half the specified quantity of oil first, then wait a few minutes for the oil to fall to the sump. Continue adding oil a small quantity at a time until the level is up to the lower mark on the dipstick. Finally, bring the level up to the upper mark on the dipstick. Insert the dipstick, and refit the filler cap.

13 Start the engine and run it for a few minutes; check for leaks around the oil filter seal and the sump drain plug. Note that there may be a delay of a few seconds before the oil pressure warning light goes out when the engine is first started, as the oil circulates through the engine oil galleries and the new oil filter, before the pressure builds up.

14 Switch off the engine, and wait a few minutes for the oil to settle in the sump once more. With the new oil circulated and the filter completely full, recheck the level on the dipstick, and add more oil as necessary.

15 Dispose of the used engine oil safely, with reference to *"General Repair Procedures"* in the Reference section of this manual.

OIL CARE
FOLLOW THE CODE
OIL BANK LINE
0800 66 33 66

Note: It is antisocial and illegal to dump oil down the drain. To find the location of your local oil recycling bank, call this number free.

4 Automatic transmission fluid level check

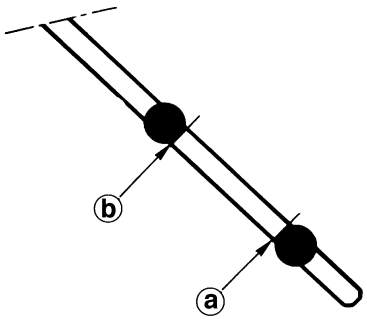
Note: *On models from 1994, the maker's specified interval for this procedure is 9000 miles (15 000 km) or 12 months.*

1 Take the vehicle on a short journey, to warm the transmission up to normal operating temperature, then park the vehicle on level ground. The fluid level is checked using the dipstick located at the front of the engine compartment, directly in front of the engine/transmission. The dipstick top is brightly-coloured (usually orange) for easy identification.

2 With the engine idling and the selector lever in the "P" (Park) position, withdraw the dipstick from the tube, and wipe all the fluid from its end with a clean rag or paper towel. Insert the clean dipstick back into the tube as far as it will go, then withdraw it once more. Note the fluid level on the end of the dipstick; it should be between the upper and lower marks **(see illustrations)**.



4.2a Withdrawing the automatic transmission dipstick



4.2b Automatic transmission fluid dipstick lower (a) and upper (b) fluid level markings

3 If topping-up is necessary, add the required quantity of the specified fluid to the transmission via the dipstick tube. Use a funnel with a fine mesh gauze, to avoid spillage, and to ensure that no foreign matter enters the transmission. **Note:** *Never overfill the transmission so that the fluid level is above the upper mark.*

4 After topping-up, take the vehicle on a short run to distribute the fresh fluid, then recheck the level again, topping-up if necessary.

5 Always maintain the level between the two dipstick marks. If the level is allowed to fall below the lower mark, fluid starvation may result, which could lead to severe transmission damage.

6 Frequent need for topping-up indicates that there is a leak, which should be found and corrected before it becomes serious.

5 Auxiliary drivebelt check and renewal

Note: *On models from 1994, the maker's specified interval for this procedure is 18 000 miles (30 000 km).*

Note: *Peugeot specify the use of a special electronic tool (SEEM C.TRONIC type 105 belt tensioning measuring tool) to correctly set the auxiliary drivebelt tension. If access to this equipment cannot be obtained, an approximate setting can be achieved using the method described below. If the method described is used, the tension should be*

1

checked using the special electronic tool at the earliest opportunity.

1 Except for XU9J4 16-valve engines, all models are fitted with one auxiliary drivebelt driven from the crankshaft pulley on the right-hand side of the engine. On non-air conditioning models the belt drives the alternator and power steering pump and its tension is adjusted manually. On models fitted with air conditioning it drives the alternator, power steering pump and the air conditioning compressor. On XU9J4 models a separate drivebelt drives the power steering pump from a pulley on the end of the camshaft.

Checking the auxiliary drivebelt condition

Except XU9J4 16-valve power steering drivebelt

2 Apply the handbrake, then jack up the front of the car and support it on axle stands (see "*Jacking and Vehicle Support"*). Remove the right-hand front roadwheel.

3 Remove the engine undercover and wheelarch cover as applicable.

4 Using a suitable socket and extension bar fitted to the crankshaft sprocket/pulley bolt, rotate the crankshaft so that the entire length of the drivebelt can be examined. Examine the drivebelt for cracks, splitting, fraying or damage. Check also for signs of glazing (shiny patches) and for separation of the belt plies. Renew the belt if worn or damaged.

5 If the condition of the belt is satisfactory, on models where the belt is adjusted manually, check the drivebelt tension as described below. On models with an automatic spring-loaded tensioner, there is no need to check the drivebelt tension.

XU9J4 16-valve power steering drivebelt

6 The power steering drivebelt is positioned on the left-hand end of the cylinder head. Examine the full length of the drivebelt for cracks, splitting, fraying or damage. If necessary turn the engine with a spanner on the crankshaft pulley or by engaging 4th gear and pushing the car (for safety, the car must be on level ground). Check also for signs of glazing (shiny patches) and for separation of the belt plies.

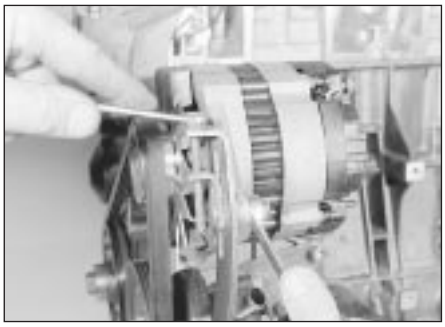
7 If the condition of the belt is satisfactory, check the drivebelt tension as described later in this Section.

Auxiliary drivebelt (early models) - removal, refitting and tensioning

Removal

8 Loosen the alternator pivot and link bolts, then unscrew the adjuster bolt to release the drivebelt tension **(see illustration)**.

9 Remove the drivebelt from the alternator, crankshaft and where necessary the power steering pulleys.



5.8 Loosening the alternator adjustment bolts (early models)

Refitting and tensioning

10 Locate the drivebelt on the pulleys making sure it is correctly engaged with the grooves.

11 The belt tension must be adjusted so that with moderate thumb pressure applied mid-way along the belt's longest run, it can be deflected by approximately 6.0 mm. Turn the adjuster bolt in or out to obtain the correct tension, then tighten the pivot and link bolts **(see illustration)**.

Auxiliary drivebelt (models with a manually-adjusted tensioning pulley) - removal, refitting and tensioning

Removal

12 If not already done, proceed as described in paragraphs 2 and 3.

13 Disconnect the battery negative lead.

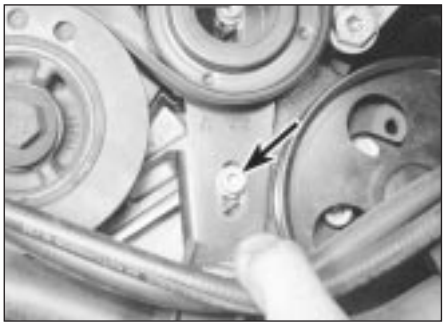
14 Slacken the tensioner pulley bracket adjustment/mounting bolts (one located in the middle of the pulley and the other located below on the bracket **(see illustration)**.

15 Fully tighten the adjustment bolt to its stop, then slip the drivebelt from the pulleys **(see illustration)**.

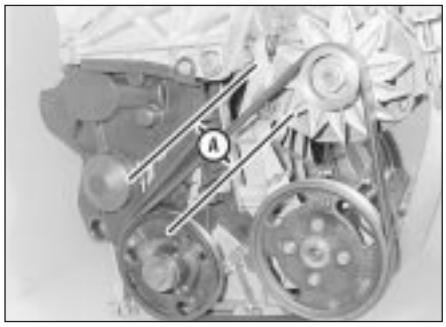
Refitting

16 If the belt is being renewed, ensure that the correct type is used. Fit the belt around the pulleys, and take up the slack in the belt by tightening the adjuster bolt. Ensure that the ribs on the belt are correctly engaged with the grooves in the pulleys.

17 Tension the drivebelt as described in the following paragraphs.



5.14 Tensioner pulley bracket lower mounting bolt (arrowed)



5.11 Alternator drivebelt deflection (A)

Tensioning

18 If not already done, proceed as described in paragraphs 2 and 3.

19 Correct tensioning of the drivebelt will ensure that it has a long life. A belt which is too slack will slip and perhaps squeal. Beware, however, of overtightening, as this can cause wear in the alternator bearings.

20 The belt should be tensioned so that, under firm thumb pressure, there is approximately 5.0 mm of free movement at the mid-point between the pulleys on the longest belt run (see the note at the start of this Section).

21 To adjust, unscrew the adjustment bolt until the tension is correct, then rotate the crankshaft a couple of times, and recheck the tension. Securely tighten the tensioner pulley bracket adjustment/mounting bolts.

22 Reconnect the battery negative lead.

23 Refit the engine undercover and wheelarch cover. Refit the roadwheel, and lower the vehicle to the ground.

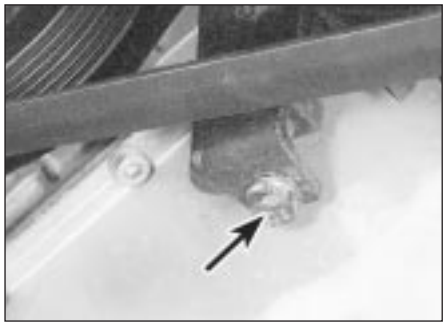
Auxiliary drivebelt (models with an automatic spring-loaded tensioner pulley) - removal, refitting and tensioning

Removal

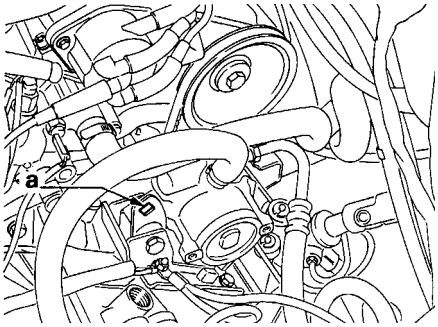
24 If not already done, proceed as described in paragraphs 2 and 3.

25 Disconnect the battery negative lead.

26 Using a square drive key in the square hole in the bottom of the automatic adjuster bracket, turn the bracket anticlockwise to release the tension on the belt. Hold the bracket in this position by inserting a 4.0 mm



5.15 Auxiliary drivebelt tension adjustment bolt (arrowed)



5.38 Square cut-out in power steering pump bracket (a) on XU9J4 16-valve models

Allen key through the special hole and tightening the peg.

27 Unscrew the mounting bolts and remove the tensioner roller, then slip the auxiliary drivebelt from the pulleys.

28 Check that the tensioner pulleys turn freely without any sign of roughness.

Refitting and tensioning

29 If the belt is being renewed, ensure that the correct type is used. Fit the belt around the pulleys making sure that it is engaged with the correct grooves in the pulleys.

30 Refit the tensioner roller and tighten the mounting bolts.

31 Using the square drive key hold the automatic adjuster, then release the peg and slowly allow the tensioner to tighten the belt. Check again that the belt is correctly located in the pulley grooves.

32 Reconnect the battery negative lead.

33 Refit the engine undercover and wheelarch cover. Refit the roadwheel, and lower the vehicle to the ground.

Power steering pump drivebelt (XU9J4 16-valve) models

Removal

34 Drain the hydraulic fluid from the system as described in Chapter 10.

35 Loosen the pump mounting bolts and remove the drivebelt.

36 Disconnect the high and low pressure unions on the pump.

37 Remove the bolts and lift off the pump.

Refitting and tensioning

38 Refit in reverse order, then tension the belt by applying a torque of 55 Nm for a new belt and 30 Nm for a used belt by using the square of a torque wrench in the square cut-out in the pump bracket, tightening the mounting bolts while the torque tension is maintained **(see illustration)**.

39 Fill and bleed the system (see Chapter 10).

6 Hose and fluid leak check

Note: *On models from 1994, the maker's specified interval for this procedure is 9000 miles (15 000 km) or 12 months.*

1 Visually inspect the engine joint faces, gaskets and seals for any signs of water, oil or fuel leaks. Pay particular attention to the areas around the camshaft cover, cylinder head, oil filter and sump joint faces. Bear in mind that, over a period of time, some slight seepage from these areas is to be expected. What you are really looking for is any indication of a serious leak. Should a leak be found, renew the offending gasket or oil seal by referring to the appropriate Chapters in this manual.

2 Also check the security and condition of all the engine-related pipes and hoses. Ensure that all cable-ties or securing clips are in place and in good condition. Clips which are broken or missing can lead to chafing of the hoses, pipes, or wiring, which could cause more serious problems in the future.

3 Carefully check the radiator hoses and heater hoses along their entire length. Renew any hose which is cracked, swollen, or deteriorated. Cracks will show up better if the hose is squeezed. Pay close attention to the hose clips that secure the hoses to the cooling system components. Hose clips can pinch and puncture hoses, resulting in cooling system leaks. If the original Peugeot crimped-type hose clips are used, it may be a good idea to replace them with standard worm-drive hose clips.



A leak in the cooling system will usually show up as white or rust coloured deposits on the area adjoining the leak

4 Inspect the cooling system (hoses, joint faces, etc.) for leaks **(see Haynes Hint)**.

5 Where any problems of this nature are found on system components, renew the component or gasket, referring to Chapter 3.

6 Where applicable, inspect the automatic transmission fluid cooler hoses for leaks or deterioration.

7 With the vehicle raised, inspect the petrol tank and filler neck for punctures, cracks, and other damage. The connection between the filler neck and tank is especially critical. Sometimes, a rubber filler neck or connecting hose will leak due to loose retaining clamps or deteriorated rubber.

8 Carefully check all rubber hoses and metal fuel lines leading away from the petrol tank. Check for loose connections, deteriorated hoses, crimped lines, and other damage. Pay particular attention to the vent pipes and hoses, which often loop up around the filler neck, and can become blocked or crimped. Follow the lines to the front of the vehicle, carefully inspecting them all the way. Renew damaged sections as necessary.

9 From within the engine compartment, check the security of all fuel hose attachments and pipe unions, and inspect the fuel hoses and vacuum hoses for kinks, chafing and deterioration.

10 Where applicable, check the condition of the power steering fluid hoses and pipes.

12 000 Mile / 12 Month Service

7 Engine breather hose check

Check the condition and security of all engine breather hoses.

Where the engine has covered a high mileage, remove the hoses and clean any sludge from them.

8 Fuel filter renewal

Warning: Before carrying out the following operation, refer to the precautions in "Safety first!" and follow them implicitly. Petrol is a highly-dangerous and volatile liquid, and the precautions necessary when handling it cannot be overstressed.

Note: *On models from 1994, the maker's specified interval for this procedure is 18 000 miles (30 000 km) for carburettor models, and 36 000 miles (60 000 km) for fuel injection models.*

Carburettor models

1 The fuel filter is connected into the fuel hose between the pump and the carburettor in the engine compartment **(see illustration)**.

2 To remove the filter, release the retaining clips and disconnect the fuel hoses from the filter. Where the original Peugeot crimped-



8.1 Fuel filter location on carburettor models

type hose clips are fitted, cut them off and discard them; use standard worm-drive hose clips on refitting.

3 Note the direction of the arrow marked on the filter body. Unclip the filter from its retaining bracket, and remove it from the vehicle.

4 Connect the fuel hoses to the new filter. Make sure that the arrow on the filter body is pointing in the direction of the fuel flow, ie. towards the fuel pump. Secure the hoses in position by securely tightening the retaining clips, then clip the filter back into position in its retaining bracket.

5 At the same time, check the fuel reservoir tank on the side of the carburettor for sediment. Remove the reservoir as necessary for cleaning.

6 The fuel connections on the reservoir are as follows.

a) Top hose - return to tank.
b) Middle hose - supply from pump via filter.
c) Lower hose - to carburettor inlet.

Fuel injection models

7 The fuel filter is situated underneath the rear of the vehicle, mounted on the right-hand side of the fuel tank. To gain access to the filter, chock the front wheels, then jack up the rear of the vehicle and support it on axle stands (see "*Jacking and Vehicle Support*").

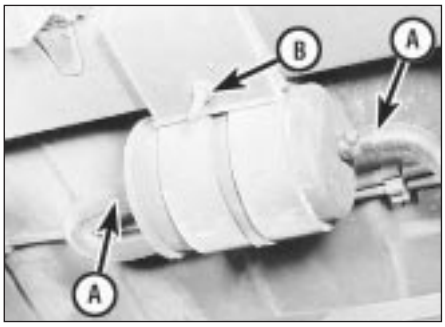
8 Clamp the fuel hose on the tank side of the filter. Bearing in mind the information given in the relevant Part of Chapter 4 on depressurising the fuel system, release the clips and disconnect the fuel hoses from the filter. Be prepared for fuel spillage **(see illustration)**.

9 Note the direction of the arrow marked on the filter body. Slacken the retaining clamp screw, then slide the filter out of the clamp, and remove it from underneath the vehicle.

10 Dispose safely of the old filter; it will be highly-inflammable, and may explode if thrown on a fire.

11 Slide the new filter into position in the clamp, ensuring that the arrow on the filter body is pointing in the direction of the fuel flow, ie. towards the throttle body/fuel rail. This can be determined by tracing the fuel hoses back along their length.

12 Connect the fuel hoses to the filter, and secure them in position with their retaining clips. Remove the hose clamp.



8.8 Fuel filter on fuel injection models showing fuel hoses (A) and clamp bolt (B)

13 Start the engine, and check the filter hose connections for leaks. Lower the vehicle to the ground on completion.

9 Accelerator cable check and adjustment

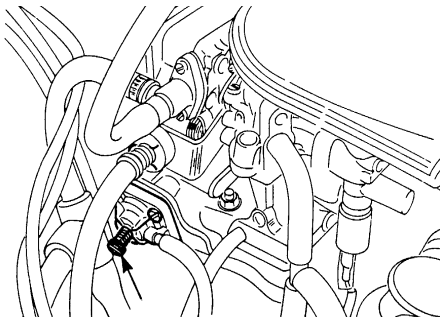
Refer to Chapter 4A or 4B.

10 Idle speed and mixture check and adjustment

Note: *On models from 1994, the maker's specified interval for this procedure is 18 000 miles (30 000 km).*

1 Before checking the idle speed and mixture setting, always check the following first:

a) Check that (where adjustable) the ignition timing is accurate (Chapter 5B).
b) Check that the spark plugs are in good condition and correctly gapped (Section 11).
c) Check that the accelerator cable (and on carburettor models, the choke cable) is correctly adjusted (refer to the relevant Part of Chapter 4).
d) Check that the crankcase breather hoses are secure, with no leaks or kinks (Sections 7 and 29).
e) Check that the air cleaner filter element is clean (Section 21).
f) Check that the exhaust system is in good condition (refer to the relevant Part of Chapter 4).
g) If the engine is running roughly, check the compression pressures and valve clearances as described in Chapter 2.
h) On fuel injection models, check that the fuel injection/ignition system warning light is not illuminated (refer to the relevant Part of Chapter 4).



10.4a Idle speed adjustment screw (arrowed) on models with idle compensation

2 Take the car on a journey of sufficient length to warm it up to normal operating temperature. **Note:** *Adjustment should ideally be completed within two minutes of return, without stopping the engine. If the radiator electric cooling fan operates, wait for the cooling fan to stop. If adjustment takes longer than stated, regularly clear any excess fuel from the inlet manifold by revving the engine two or three times to about 2000 rpm, then allow it to idle again.*

Carburettor models

3 Ensure that all electrical loads are switched off, and that the choke lever is pushed fully in. If the car does not have a tachometer, connect one following its manufacturer's instructions. Note the idle speed, and compare it with that specified. **Note:** *Models with air conditioning have an idle compensation device, and the air conditioning compressor must be running while the idle speed is being checked and adjusted.*

4 Using a suitable flat-bladed screwdriver, screw in the idle adjusting screw (to increase the speed) or out as necessary to obtain the specified speed. The screw is located on the carburettor on non-air conditioning models, and on the idle compensating device on air conditioning models **(see illustrations)**.

5 The idle mixture (exhaust gas CO level) is set at the factory, and should require no further adjustment. If, due to a change in engine characteristics (carbon build-up, bore wear etc) or after a major carburettor overhaul, the mixture becomes incorrect, it can be reset. Note, however, that an exhaust gas analyser (CO meter) will be required to check the mixture, and to set it with the necessary standard of accuracy. If this is not available, the car must be taken to a Peugeot dealer for the work to be carried out.

6 Follow the exhaust gas analyser manufacturer's instructions to check the exhaust gas CO level. If adjustment is required, it is made via mixture adjustment



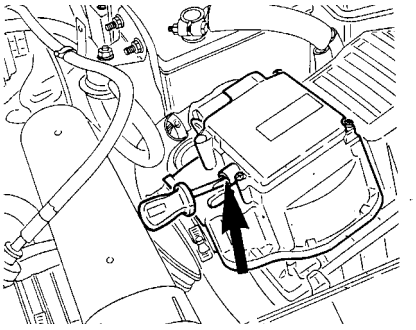
10.4b Idle speed adjustment screw



10.7 Idle mixture adjustment screw (arrowed)



10.10 Adjusting the idle speed screw on the Bosch L3.1 injection system



10.13 Mixture (CO) adjustment screw on the Bosch L3.1 injection control unit

screw located on the carburettor. The screw is covered with a tamperproof plug to prevent unnecessary adjustment. To gain access to the screw, use a sharp instrument to hook out the plug.

7 Using a suitable flat-bladed screwdriver, turn the mixture adjustment screw by very small amounts until the level is correct **(see illustration)**. Screwing it in (clockwise) weakens the idle mixture and reduces the CO level; screwing it out will richen the mixture and increase the CO level.

8 When adjustments are complete, disconnect any test equipment, and fit a new tamperproof plug to the mixture adjustment screw. Recheck the idle speed and, if necessary, readjust.

Fuel injection models

Bosch L3.1-Jetronic system

9 Ensure that all electrical loads are switched off. If the car does not have a tachometer, connect one following its manufacturer's instructions. Note the idle speed, and compare it with that specified.

10 The idle speed is adjusted using the idle speed adjustment screw on the throttle housing **(see illustration)**. Turn the screw clockwise to decrease the idle speed, or anti-clockwise to increase the speed.

11 The idle mixture (exhaust gas CO level) is set at the factory, and should require no further adjustment. If, due to a change in engine characteristics (carbon build-up, bore wear etc) or after a major overhaul, the mixture becomes incorrect, it can be reset. Note, however, that an exhaust gas analyser (CO meter) will be required to check the mixture, and to set it with the necessary standard of accuracy. If this is not available, the car must be taken to a Peugeot dealer for the work to be carried out.

12 Follow the exhaust gas analyser manufacturer's instructions to check the exhaust gas CO level. If adjustment is required, it is made via mixture adjustment screw located on the airflow meter (see Chapter 4C). The screw may be covered with a tamperproof plug to prevent unnecessary adjustment. To gain access to the screw, use a sharp instrument to hook out the plug.

13 Using a flat-bladed screwdriver, turn the mixture adjustment screw by small amounts until the level is correct **(see illustration)**.

14 When adjustments are complete, disconnect any test equipment, and fit a new tamperproof plug to the mixture adjustment screw. Recheck the idle speed and, if necessary, readjust.

Bosch ML4.1 Motronic system

15 The idle speed is non-adjustable. It is controlled by the idle speed regulator valve.

16 The idle mixture (exhaust gas CO level) is set at the factory, and should require no further adjustment. If, due to a change in engine characteristics (carbon build-up, bore wear etc) or after a major overhaul, the mixture becomes incorrect, it can be reset. Note, however, that an exhaust gas analyser (CO meter) will be required to check the mixture, and to set it with the necessary standard of accuracy. If this is not available, the car must be taken to a Peugeot dealer for the work to be carried out.

17 Follow the exhaust gas analyser manufacturer's instructions to check the exhaust gas CO level. If adjustment is required, it is made via mixture adjustment screw located on the airflow meter **(see illustration)**. The screw may be covered with a tamperproof plug to prevent unnecessary adjustment. To gain access to the screw, use a sharp instrument to hook out the plug.

18 Turn the screw clockwise to increase and anti-clockwise to decrease CO content until the specified CO level is obtained.

19 When adjustments are complete, disconnect any test equipment, and fit a new tamperproof plug to the mixture adjustment screw.

Bosch LU2-Jetronic system

20 The idle mixture is not adjustable and is automatically regulated by the ECU.

21 To check the idle speed connect a tachometer to the engine, then run the engine at idle speed.

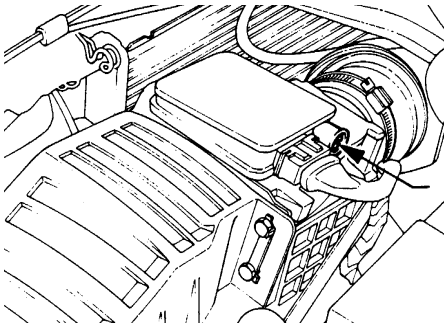
22 Turn the idle speed adjustment screw to obtain the specified idle speed **(see illustration)**.

23 When adjustments are complete, disconnect any test gear from the engine.

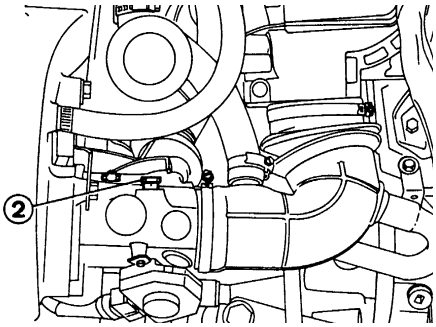
Bosch Motronic MP3.1 system

24 Ensure that all electrical loads are switched off. If the car does not have a tachometer, connect one following its manufacturer's instructions. Note the idle speed, and compare it with that specified.

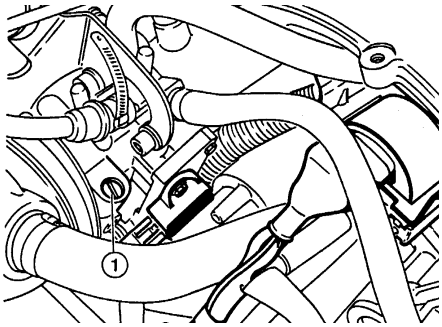
25 Turn the idle speed adjustment screw to obtain the specified idle speed **(see illustration)**.



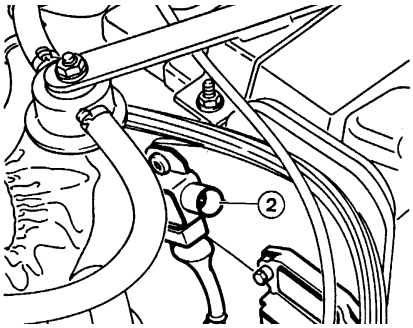
10.17 Mixture (CO) adjustment screw (arrowed) on Bosch ML4.1 Motronic system



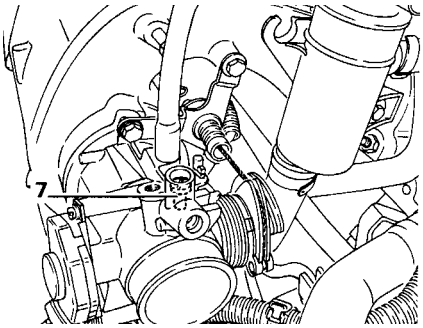
10.22 Idle speed adjustment screw (2) on the Bosch LU2-Jetronic injection system



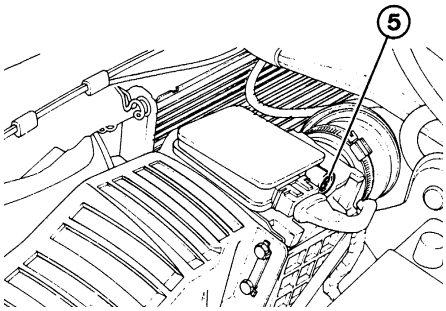
10.25 Idle speed adjustment screw (1) on the Bosch Motronic MP3.1 system



10.27 Mixture (CO) adjustment screw (2) on the Bosch MP3.1 fuel injection system



10.32 Idle speed adjustment screw (7) on the Bosch Motronic M1.3 injection system



10.35 Mixture adjustment screw (5) on the Bosch Motronic M1.3 fuel injection system

26 The idle mixture (exhaust gas CO level) is set at the factory, and should require no further adjustment. If, due to a change in engine characteristics (carbon build-up, bore wear etc) or after a major overhaul, the mixture becomes incorrect, it can be reset. Note, however, that an exhaust gas analyser (CO meter) will be required to check the mixture, and to set it with the necessary standard of accuracy. If this is not available, the car must be taken to a Peugeot dealer for the work to be carried out.

27 Follow the exhaust gas analyser manufacturer's instructions to check the exhaust gas CO level. If adjustment is required, it is made via mixture adjustment screw **(see illustration)**. The screw may be covered with a tamperproof plug to prevent unnecessary adjustment. To gain access to the screw, use a sharp instrument to hook out the plug.

28 Turn the screw clockwise to increase and anti-clockwise to decrease CO content until the specified CO level is obtained.

29 When adjustments are complete, disconnect any test equipment, and fit a new tamperproof plug to the mixture adjustment screw.

Bosch Motronic M1.3 fuel injection system

30 The idle speed is only adjustable on the XU9JA/Z engine - on other engines it is controlled by the ECU and idle speed control valve.

31 Ensure that all electrical loads are switched off. If the car does not have a tachometer, connect one following its manufacturer's instructions. Note the idle speed, and compare it with that specified.

32 Turn the idle speed adjustment screw to obtain the specified idle speed **(see illustration)**.

33 The idle mixture (CO) is only adjustable on the XU9J4/K engine - on other engines it is controlled by the ECU.

34 The idle mixture (exhaust gas CO level) is set at the factory, and should require no further adjustment. If, due to a change in engine characteristics (carbon build-up, bore wear etc) or after a major overhaul, the mixture becomes incorrect, it can be reset. Note, however, that an exhaust gas analyser (CO meter) will be required to check the mixture, and to set it with the necessary standard of accuracy. If this is not available, the car must be taken to a Peugeot dealer for the work to be carried out.

35 Follow the exhaust gas analyser manufacturer's instructions to check the exhaust gas CO level. If adjustment is required, it is made via mixture adjustment screw located on top of the airflow meter assembly **(see illustration)**. The screw may be covered with a tamperproof plug to prevent unnecessary adjustment. To gain access to the screw, use a sharp instrument to hook out the plug.

36 Turn the screw clockwise to increase and anti-clockwise to decrease CO content until the specified CO level is obtained.

All other fuel injection systems

37 Experienced home mechanics, with a considerable amount of skill and equipment (including a tachometer and an accurate exhaust gas analyser) may be able to check the exhaust CO level and the idle speed. However, if these are found to be in need of adjustment, the car *must* be taken to a suitably-equipped Peugeot dealer.

38 On models with a Magneti Marelli engine management (fuel injection/ignition) system, adjustment of the mixture setting (exhaust gas CO level) is possible, but adjustments can only be made by reprogramming the engine management ECU using special electronic test equipment which is connected to the diagnostic connector (see Chapter 4).

39 On all other vehicles, adjustments are not possible. If the idle speed or the exhaust gas CO level is incorrect, there must be a fault in the engine management system, and the vehicle should be taken to a Peugeot dealer for testing (see Chapter 4).

11 Spark plug renewal

Note: *On models from 1994, the maker's specified interval for this procedure is 18 000 miles (30 000 km).*

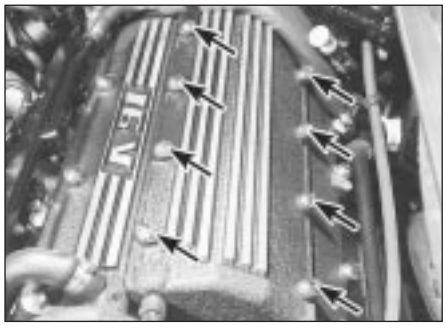
1 The correct functioning of the spark plugs is vital for the correct running and efficiency of the engine. It is essential that the plugs fitted are appropriate for the engine (the suitable type is specified at the beginning of this Chapter). If this type is used, and the engine is in good condition, the spark plugs should not need attention between scheduled replacement intervals. Spark plug cleaning is rarely necessary, and should not be attempted unless specialised equipment is available, as damage can easily be caused to the firing ends.

2 On 16-valve models, to gain access to the spark plugs, the access cover fitted over the centre of the cylinder head must first be removed. Undo the eight bolts, noting the position of the wiring retaining clip, and remove the cover **(see illustration)**.

3 On other models, to improve access to some of the plugs, it may be necessary to remove the air inlet duct (refer to Chapter 4 for further information).

4 On 1998 cc 16-valve models, pull the HT coils off the spark plugs. If necessary, to remove the possibility of the HT coils being connected to the wrong spark plugs on refitting, mark the coils 1 to 4 (No 1 cylinder is at the transmission end of the engine).

5 On all other models, if the marks on the original-equipment spark plug (HT) leads cannot be seen, mark the leads 1 to 4, corresponding to the cylinder the lead serves (No 1 cylinder is at the transmission end of the engine). Pull the leads from the plugs by gripping the end fitting, not the lead, otherwise the lead connection may be fractured **(see illustration)**.



11.2 On 16-valve models undo the eight bolts (arrowed) and remove the access cover to reach the spark plugs



11.5 Pulling the HT leads from the spark plugs



11.7 Tools required for spark plug removal, gap adjustment and refitting



11.12 Measuring the spark plug gap with a feeler blade

6 It is advisable to remove the dirt from the spark plug recesses, using a clean brush, vacuum cleaner or compressed air before removing the plugs, to prevent dirt dropping into the cylinders.

7 Unscrew the plugs using a spark plug spanner, suitable box spanner, or a deep socket and extension bar **(see illustration)**. Keep the socket aligned with the spark plug - if it is forcibly moved to one side, the ceramic insulator may be broken off. As each plug is removed, examine it as follows.

8 Examination of the spark plugs will give a good indication of the condition of the engine. If the insulator nose of the spark plug is clean and white, with no deposits, this is indicative of a weak mixture or too hot a plug (a hot plug transfers heat away from the electrode slowly, a cold plug transfers heat away quickly).

9 If the tip and insulator nose are covered with hard black-looking deposits, then this is indicative that the mixture is too rich. Should the plug be black and oily, then it is likely that the engine is fairly worn, as well as the mixture being too rich.

HAYNES HiNT



It is often difficult to insert spark plugs into their holes without cross-threading them. To avoid this possibility, fit a short length of 5/16 inch internal diameter rubber hose over the end of the spark plug. The flexible hose acts as a universal joint to help align the plug with the plug hole. Should the plug begin to cross-thread, the hose will slip on the spark plug, preventing thread damage to the cylinder head.

10 If the insulator nose is covered with light tan to greyish-brown deposits, then the mixture is correct, and it is likely that the engine is in good condition.

11 The spark plug electrode gap is of considerable importance as, if it is too large or too small, the size of the spark and its efficiency will be seriously impaired. The gap should be set to the value given in the Specifications at the beginning of this Chapter.

12 To set the gap, measure it with a feeler blade, then bend the outer plug electrode until the correct gap is achieved **(see illustration)**. The centre electrode should never be bent, as this may crack the insulator and cause plug failure, if nothing worse. If using feeler blades, the gap is correct when the appropriate-size blade is a firm, sliding fit.

13 Special spark plug electrode gap adjusting tools are available from most motor accessory shops, or from some spark plug manufacturers.

14 Before fitting the spark plugs, check that the threaded connector sleeves (on top of the plug) are tight, and that the plug exterior surfaces and threads are clean. It is very often difficult to insert spark plugs into their holes without cross-threading them. To avoid this possibility, fit a short length of hose over the end of the spark plug **(see Haynes Hint)**.

15 Remove the rubber hose (if used), and tighten the plug to the specified torque (see *"Specifications")* using the spark plug socket and a torque wrench. Refit the remaining plugs in the same way**.**

16 Connect the HT leads in the correct order, and refit any components removed for access. On 1998 cc 16-valve models, connect the HT coils in their correct order.

12 Clutch adjustment check and control mechanism lubrication

Note: *On models from 1994, the maker's specified interval for this procedure is 9000 miles (15 000 km) or 12 months for clutch adjustment, and 18 000 miles (30 000 km) for lubrication.*

1 Check that the clutch pedal moves smoothly and easily through its full travel.

2 The clutch itself should function correctly, with no trace of slip or drag.

3 Where possible, adjust the clutch cable if necessary, as described in Chapter 6.

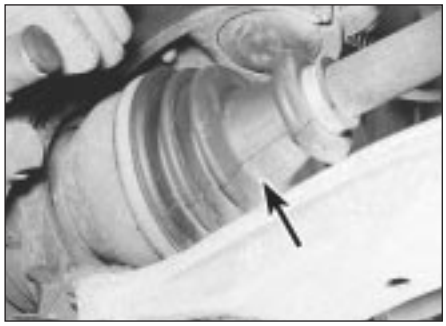
4 If excessive effort is required to operate the clutch, check first that the cable is correctly routed and undamaged. Remove the pedal, and make sure that its pivot is properly greased. Refer to Chapter 6 for further information.

13 Driveshaft gaiter check

Note: *On models from 1994, the maker's specified interval for this procedure is 9000 miles (15 000 km) or 12 months.*

With the vehicle raised and securely supported on stands, turn the steering onto full lock, then slowly rotate the roadwheel. Inspect the condition of the outer constant velocity (CV) joint rubber gaiters, while squeezing the gaiters to open out the folds **(see illustration)**. Check for signs of cracking, splits, or deterioration of the rubber, which may allow the grease to escape, and lead to water and grit entry into the joint. Also check the security and condition of the retaining clips. Repeat these checks on the inner CV joints. If any damage or deterioration is found, the gaiters should be renewed without delay as described in Chapter 8.

At the same time, check the general condition of the CV joints themselves, by first holding the driveshaft and attempting to rotate



13.1 Check the condition of the driveshaft gaiters (arrowed)

the wheel. Repeat this check by holding the inner joint and attempting to rotate the driveshaft. Any obvious movement indicates wear in the joints, wear in the driveshaft splines, or a loose driveshaft retaining nut.

14 Front and rear disc pad check

Note: *On models from 1994, the maker's specified interval for this procedure is 18 000 miles (30 000 km) for the front brake pads, and 36 000 miles (60 000 km) for the rear brake pads or shoes.*

1 Firmly apply the handbrake, then jack up the front or rear of the car (as applicable) and support it securely on axle stands (see *"Jacking and Vehicle Support"*). Remove the front or rear roadwheels.

> **HAYNES HiNT** ***For a quick check, the thickness of friction material remaining on each brake pad can be measured through the aperture in the caliper body.***

2 If any pad's friction material is worn to the specified thickness or less, *all four pads must be renewed as a set.*

3 For a comprehensive check, the brake pads should be removed and cleaned. The operation of the caliper can then also be checked, and the condition of the brake disc itself can be fully examined on both sides. Refer to Chapter 9 for further information.

15 Handbrake check and adjustment

Note: *On models from 1994, the maker's specified interval for this procedure is 9000 miles (15 000 km) or 12 months.*

Refer to Chapter 9.

16 Steering and suspension check

Note: *On models from 1994, the maker's specified interval for this procedure is 9000 miles (15 000 km) or 12 months.*

Front suspension and steering check

1 Raise the front of the car, and support on axle stands (see "*Jacking and Vehicle Support"*).

2 Inspect the balljoint dust covers and the steering rack-and-pinion gaiters for splits, chafing or deterioration. Any wear of these components will cause loss of lubricant, with dirt and water entry, resulting in rapid deterioration of the balljoints or steering gear.

3 On vehicles with power steering, check the fluid hoses for chafing or deterioration, and the pipe and hose unions for fluid leaks. Also check for signs of fluid leakage under pressure from the steering gear rubber gaiters, which would indicate failed fluid seals within the steering gear.

4 Grasp the roadwheel at the 12 o'clock and 6 o'clock positions, and try to rock it **(see illustration)**. Very slight free play may be felt, but if the movement is appreciable, further investigation is necessary to determine the source. Continue rocking the wheel while an assistant depresses the footbrake. If the movement is now eliminated or significantly reduced, it is likely that the hub bearings are at fault. If the free play is still evident with the footbrake depressed, then there is wear in the suspension joints or mountings.

5 Now grasp the wheel at the 9 o'clock and 3 o'clock positions, and try to rock it as before. Any movement felt now may again be caused by wear in the hub bearings or the steering track-rod balljoints. If the outer balljoint is worn, the visual movement will be obvious. If the inner joint is suspect, it can be felt by placing a hand over the rack-and-pinion rubber gaiter and gripping the track-rod. If the wheel is now rocked, movement will be felt at the inner joint if wear has taken place.

6 Using a large screwdriver or flat bar, check for wear in the suspension mounting bushes by levering between the relevant suspension component and its attachment point. Some movement is to be expected, as the mountings are made of rubber, but excessive wear should be obvious. Also check the condition of any visible rubber bushes, looking for splits, cracks or contamination of the rubber.

7 With the car standing on its wheels, have an assistant turn the steering wheel back and forth, about an eighth of a turn each way. There should be very little, if any, lost movement between the steering wheel and roadwheels. If this is not the case, closely observe the joints and mountings previously described. In addition, check the steering column universal joints for wear, and also check the rack-and-pinion steering gear itself.

Rear suspension check

8 Chock the front wheels, then jack up the rear of the car and support on axle stands (see *"Jacking and Vehicle Support"*).



16.4 Check for wear in the hub bearings by grasping the wheel and trying to rock it

9 Working as described previously for the front suspension, check the rear hub bearings, the suspension bushes and the shock absorber mountings for wear.

Suspension strut/ shock absorber check

10 Check for any signs of fluid leakage around the suspension strut/shock absorber body, or from the rubber gaiter around the piston rod. Should any fluid be noticed, the suspension strut/shock absorber is defective internally, and should be renewed. **Note:** *Suspension struts/shock absorbers should always be renewed in pairs on the same axle.*

11 The efficiency of the suspension strut/shock absorber may be checked by bouncing the vehicle at each corner. Generally speaking, the body will return to its normal position and stop after being depressed. If it rises and returns on a rebound, the suspension strut/shock absorber is probably suspect. Examine also the suspension strut/shock absorber upper and lower mountings for any signs of wear.

17 Body drain channel check

Check and unblock all door and sill drain channels. Also check the heater drain tube located at the rear of the engine compartment.

18 000 Mile / 18 Month Service

18 Hinge and lock lubrication

Note: *On models from 1994, the maker's specified interval for this procedure is 36 000 miles (60 000 km).*

1 Work around the vehicle, and lubricate the hinges of the bonnet, doors and tailgate with a light machine oil.

2 Lightly lubricate the bonnet release mechanism and exposed section of inner cable with a smear of grease.

3 Check carefully the security and operation of all hinges, latches and locks, adjusting them where required. Check the operation of the central locking system (if fitted).

4 Check the condition and operation of the tailgate struts, renewing them if either is leaking or is no longer able to support the tailgate securely when raised.

19 Air conditioning refrigerant check

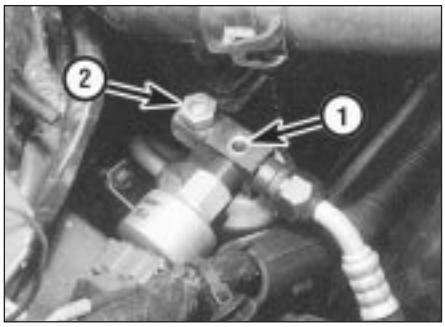
Note: *On models from 1994, the maker's specified interval for this procedure is 18 000 miles (30 000 km).*

Warning: Do not attempt to open the refrigerant circuit. Refer to the precautions given in Chapter 3.

1 In order to check the condition of the refrigerant, a humidity indicator and a sight glass are provided on top of the drier bottle, located in the front, left-hand corner of the engine compartment **(see illustration)**.

Refrigerant humidity check

2 Check the colour of the humidity indicator. Blue indicates that the condition of the refrigerant is satisfactory. Pink indicates that the refrigerant is saturated with humidity. If the indicator shows red, the system should be drained and recharged, and a new drier bottle should be fitted. **Note:** *The system should be drained and recharged only by a Peugeot dealer or air conditioning specialist. **Do not** attempt to carry out the work yourself, as the refrigerant is a highly-dangerous substance (refer to Chapter 3).*



19.1 Air conditioning system drier bottle sight glass (1) and humidity indicator (2)

Refrigerant flow check

3 Run the engine, and switch on the air conditioning.

4 After a few minutes, inspect the sight glass, and check the fluid flow. Clear fluid should be visible - if not, the following will help to diagnose the problem:

a) Clear fluid flow - the system is functioning correctly.
b) No fluid flow - have the system checked for leaks by a Peugeot dealer or air conditioning specialist.
c) Continuous stream of clear air bubbles in fluid - refrigerant level low - have the system recharged by a Peugeot dealer or air conditioning specialist.
d) Milky air bubbles visible - high humidity (see paragraph 2).

1

24 000 Mile / 2 Year Service

20 Coolant renewal

Note: *On models from 1994, the maker's specified interval for this procedure is every 2 years, regardless of mileage.*

Cooling system draining

Warning: Wait until the engine is cold before starting this procedure. Do not allow antifreeze to come in contact with your skin, or with the painted surfaces of the vehicle. Rinse off spills immediately with plenty of water. Never leave antifreeze lying around in an open container, or in a puddle in the driveway or on the garage floor. Children and pets are attracted by its sweet smell, but antifreeze can be fatal if ingested.

1 With the engine completely cold, remove the expansion tank filler cap. Turn the cap anti-clockwise until it reaches the first stop. Wait until any pressure remaining in the system is released, then push the cap down, turn it anti-clockwise to the second stop, and lift it off.

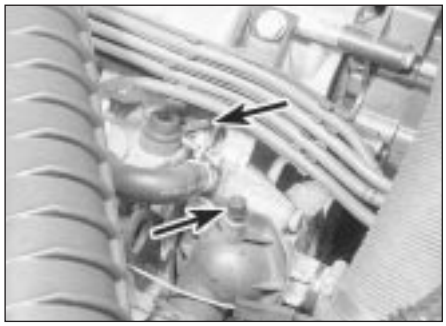
2 Position a suitable container beneath the coolant drain outlet at the lower left-hand side of the radiator.

3 Loosen the drain plug (there is no need to remove it completely) and allow the coolant to drain into the container. If desired, a length of tubing can be fitted to the drain outlet to direct the flow of coolant during draining **(see illustration)**.

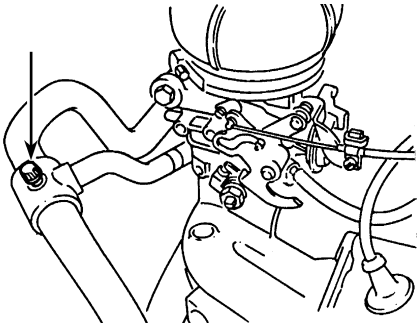


20.3 Radiator drain outlet (arrowed)

4 To assist draining, open the cooling system bleed screws. On all except 1.4 litre engines, the bleed screws are located in the thermostat cover and thermostat housing. On 1.4 litre engines, the bleed screws are located in the thermostat housing, and in the cylinder head coolant bypass hose. Additionally, on 2.0 litre XU10J4 engines, there is a bleed screw located in the coolant bypass hose behind the cylinder head. All models also have a bleed screw located at the top left-hand corner of the radiator **(see illustrations)**.



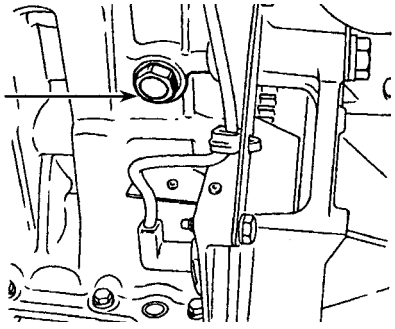
20.4a Cooling system bleed screws on thermostat housing and cover (arrowed) - 1.6 litre engine shown



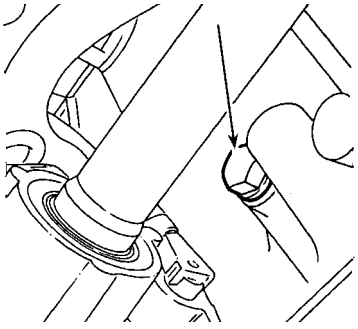
20.4b Coolant bypass hose bleed screw (arrowed) - 1.4 litre engine



20.4c Radiator bleed screw (arrowed)



20.5a Cylinder block drain plug location (arrowed) - 1.4 litre engine



20.5b Cylinder block drain plug location (arrowed) - 2.0 litre engine

5 On 1.4 litre and 2.0 litre engines, when the flow of coolant stops, reposition the container below the cylinder block drain plug. On 1.4 litre engines, the drain plug is located at the front left-hand end of the cylinder block. On 2.0 litre engines, the drain plug is located at the rear left-hand end of the cylinder block, next to the rear engine mounting **(see illustrations)**. On 1.6, 1.8 and 1.9 litre engines, no cylinder block drain plug is fitted.

6 Where applicable, remove the cylinder block drain plug, and allow the coolant to drain into the container.

7 If the coolant has been drained for a reason other than renewal, then provided it is clean and less than two years old, it can be re-used, though this is not recommended.

8 Refit and tighten the radiator and cylinder block drain plugs, as applicable, on completion of draining.

Cooling system flushing

9 If coolant renewal has been neglected, or if the antifreeze mixture has become diluted, then in time, the cooling system may gradually lose efficiency, as the coolant passages become restricted due to rust, scale deposits, and other sediment. The cooling system efficiency can be restored by flushing the system clean.

10 The radiator should be flushed independently of the engine, to avoid unnecessary contamination.

Radiator flushing

11 To flush the radiator, first tighten the radiator drain plug, and the radiator bleed screw, where applicable.

12 Disconnect the top and bottom hoses and any other relevant hoses from the radiator, with reference to Chapter 3.

13 Insert a garden hose into the radiator top inlet. Direct a flow of clean water through the radiator, and continue flushing until clean water emerges from the radiator bottom outlet.

14 If after a reasonable period, the water still does not run clear, the radiator can be flushed with a good proprietary cleaning agent. It is important that the manufacturer's instructions are followed carefully. If the contamination is particularly bad, insert the hose in the radiator bottom outlet, and reverse-flush the radiator.

Engine flushing

15 To flush the engine, first refit and tighten the cylinder block drain plug (where applicable), and tighten the cooling system bleed screws.

16 Remove the thermostat as described in Chapter 3, then temporarily refit the thermostat cover.

17 With the top and bottom hoses disconnected from the radiator (see Chapter 3 - it may be preferable to disconnect the bottom hose from the engine), insert a garden hose into the radiator top hose. Direct a clean flow of water through the engine, and continue flushing until clean water emerges from the radiator bottom hose.

18 On completion of flushing, refit the thermostat and reconnect the hoses with reference to Chapter 3.

Cooling system filling

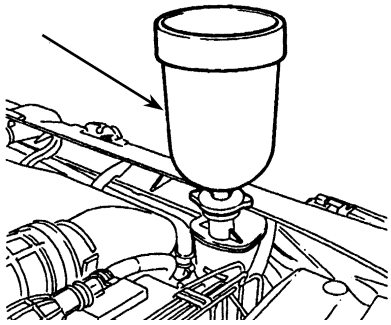
19 Before attempting to fill the cooling system, make sure that all hoses and clips are in good condition, and that the clips are tight. Note that an antifreeze mixture must be used all year round, to prevent corrosion of the engine components (see following sub-Section). Also check that the radiator and cylinder block drain plugs, as applicable, are in place and tight.

20 Remove the expansion tank cap.

21 Open all the cooling system bleed screws (see paragraph 4).

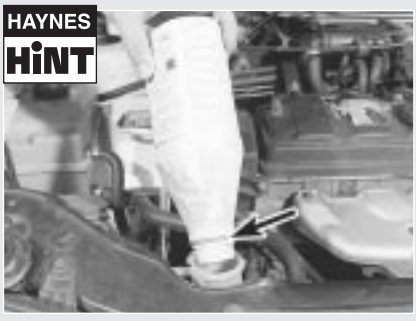
22 Some of the cooling system hoses are positioned at a higher level than the top of the radiator expansion tank. It is therefore necessary to use a "header tank" when refilling the cooling system, to reduce the possibility of air being trapped in the system. Although Peugeot dealers use a special header tank, the same effect can be achieved by using a suitable bottle, with a seal between the bottle and the expansion tank **(see illustration and Haynes Hint)**.

23 Fit the "header tank" to the expansion tank and slowly fill the system. Coolant will emerge from each of the bleed screws in turn, starting with the lowest screw. As soon as coolant free from air bubbles emerges from the lowest screw, tighten that screw, and watch the next bleed screw in the system. Repeat the procedure until the coolant is



20.22 Peugeot cooling system "header tank" in position

HAYNES HiNT



Cut the bottom off an old antifreeze container to make a 'header tank' for use when refilling the cooling system. The seal at the point arrowed must be as airtight as possible

emerging from the highest bleed screw in the cooling system and all bleed screws are securely tightened. Keep the "header tank" full during this procedure.

24 Once all the bleed screws are securely tightened, remove the "header tank" and refit the expansion tank cap.

25 Start the engine, and run it at 1500 rpm. Maintain this engine speed until the radiator cooling fan has cut in and out three times.

26 Allow the engine to run at idle speed for a few minutes.

27 Stop the engine, and wait for at least ten minutes.

28 Place a large wad of rag around the expansion tank cap, and around your hand, then carefully remove the expansion tank cap. Turn the cap anti-clockwise until it reaches the first stop. Wait until any pressure remaining in the system is released, then push the cap down, turn it anti-clockwise to the second stop, and lift it off.

Warning: Take precautions against scalding, as the cooling system will be hot.

29 Check the coolant level, and if necessary top-up the expansion tank to just above the "MAXI" level mark (see *"Weekly checks"*).

30 Refit the expansion tank cap.

Antifreeze mixture

31 The antifreeze should always be renewed at the specified intervals. This is necessary not only to maintain the antifreeze properties, but also to prevent corrosion which would otherwise occur as the corrosion inhibitors become progressively less effective.

32 Always use an ethylene-glycol based antifreeze which is suitable for use in mixed-metal cooling systems. The quantity of antifreeze and levels of protection are indicated in the Specifications.

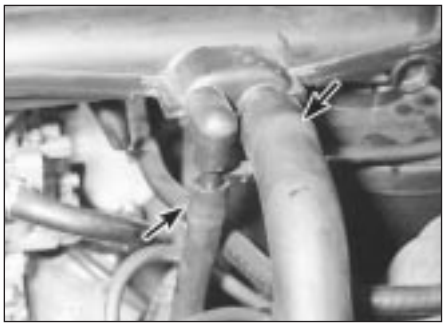
33 Before adding antifreeze, the cooling system should be completely drained, preferably flushed, and all hoses checked for condition and security.

34 After filling with antifreeze, a label should be attached to the expansion tank, stating the type and concentration of antifreeze used, and the date installed. Any subsequent topping-up should be made with the same type and concentration of antifreeze.

35 Do not use engine antifreeze in the windscreen/tailgate washer system, as it will cause damage to the vehicle paintwork. A screenwash additive should be added to the washer system in the quantities stated on the bottle.

21 Air filter renewal

Note: *On models from 1994, the maker's specified interval for this procedure is 36 000 miles (60 000 km).*



21.1 On TU models disconnect the hoses from the front of the duct . . .



21.2a . . . then release the air cleaner lid retaining clips, and the duct clip . . .



21.2b . . . and remove the duct, positioning it clear of the air cleaner housing



21.3 Removing the air cleaner element on TU models

TU models

1 Slacken the retaining clips (where fitted), and disconnect the vacuum hose and breather hose from the front of the air cleaner housing-to-carburettor/throttle body duct **(see illustration)**. Where the crimped-type Peugeot hose clips are fitted, cut the clips and discard them; use standard worm-drive hose clips on refitting.

2 Slacken the retaining clip securing the duct to the carburettor/throttle body. Release the retaining clips securing the lid to the top of the air cleaner housing. Lift the duct and air cleaner lid assembly away, and position it clear of the air cleaner housing **(see illustrations)**.

3 Lift the air cleaner element out of the housing **(see illustration)**.

4 Fit the new element into the housing, and secure it in position with the retaining clips.

5 Refit the sealing ring to the top of the filter (where fitted), and refit the air cleaner-to-carburettor/throttle body duct. Ensure that the duct and its sealing rings are correctly seated, and securely tighten the retaining clips.

6 Reconnect the vacuum and breather hoses to the duct, and secure them in position with the retaining clips (where fitted).

XU models (except XU10J4 16-valve) with side-mounted air cleaner

7 Disconnect the air duct from the filter housing cover to the carburettor/airflow meter at the filter housing end **(see illustration)**.

8 Release the clips and lift off the air cleaner top cover **(see illustration)**.

9 Withdraw the filter element from the air cleaner body **(see illustration)**.

10 Fit the new element in position in the air cleaner body making sure that it is the right way round.



21.7 Air filter housing cover located in the left-hand front of the engine compartment



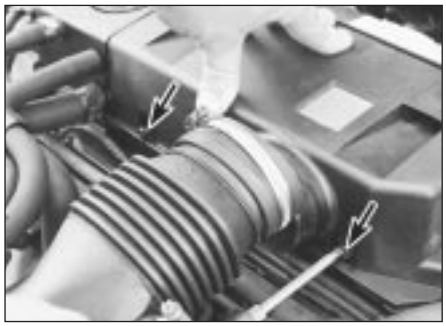
21.8 Lifting off the top cover



21.9 Removing the air filter element



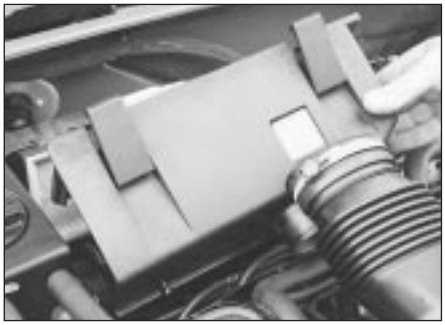
21.13 Disconnect the intake duct from the front of the cylinder head cover . . .



21.14a . . . then slacken the retaining screws (arrowed) . . .



21.14b . . . and release the retaining clips



21.14c Lift off the filter cover . . .



21.14d . . . and withdraw the filter element

11 Refit the top cover and attach the clips.
12 Reconnect the air duct.

XU models (except XU10J4 16-valve) with top-mounted air cleaner

13 Slacken the retaining clip, and disconnect the inlet duct from the front of the cylinder head cover **(see illustration)**.
14 Slacken and remove the two retaining screws situated at the front of the cylinder head cover, then release the two air filter cover retaining clips. Remove the filter cover from the cylinder head cover, and withdraw the filter element **(see illustrations)**.
15 Fit the new element in position in the cylinder head cover. Refit the filter cover, and secure it with its retaining screws and clips.
16 Reconnect the inlet duct to the cylinder head cover, and tighten its retaining clip.

XU10J4 16-valve models

17 Disconnect the air duct and remove the cover from the end of the air cleaner body.
18 Withdraw the air filter element noting which way round it is fitted.
19 Fit the new element in the body, ensuring that it is fitted the correct way round.
20 Refit the cover and air duct.

22 Ignition system check

Note: *On models from 1994, the maker's specified interval for this procedure is 18 000 miles (30 000 km).*

Warning: Voltages produced by an electronic ignition system are considerably higher than those produced by conventional ignition systems. Extreme care must be taken if working on the system with the ignition switched on. Persons with surgically-implanted cardiac pacemaker devices should keep well clear of the ignition circuits, components and test equipment.

1 The ignition system components should be checked for damage or deterioration as described under the relevant sub-heading.

Ignition systems incorporating a distributor

General component check

2 The spark plug (HT) leads should be checked whenever new spark plugs are installed in the engine.
3 Ensure that the leads are numbered before removing them, to avoid confusion when refitting. Pull the leads from the plugs by gripping the end fitting, not the lead, otherwise the lead connection may be fractured.
4 Check inside the end fitting for signs of corrosion, which will look like a white crusty powder. Push the end fitting back onto the spark plug, ensuring that it is a tight fit on the plug. If not, remove the lead again, and use pliers to carefully crimp the metal connector inside the end fitting until it fits securely on the end of the spark plug.
5 Using a clean rag, wipe the entire length of the lead to remove any built-up dirt and grease. Once the lead is clean, check for burns, cracks and other damage. Do not bend the lead excessively, or pull the lead lengthways - the conductor inside might break.
6 Disconnect the other end of the lead from the distributor cap. Again, pull only on the end fitting. Check for corrosion and a tight fit in the same manner as the spark plug end. If an ohmmeter is available, check the resistance of the lead by connecting the meter between the spark plug end of the lead and the segment inside the distributor cap. Refit the lead securely on completion.
7 Check the remaining leads one at a time, in the same way.
8 If new spark plug (HT) leads are required, purchase a set for your specific car and engine.
9 Remove the distributor cap by unscrewing its retaining screws. Wipe it clean, and carefully inspect it inside and out for signs of cracks, carbon tracks (tracking) and worn, burned or loose contacts; check that the cap's carbon brush is unworn, free to move against spring pressure, and making good contact with the rotor arm. Also inspect the cap seal for signs of wear or damage, and renew if necessary. Remove the rotor arm from the distributor shaft and inspect it **(see illustration)**. It is common practice to renew the cap and rotor arm whenever new spark plug (HT) leads are fitted. When fitting a new cap, remove the leads from the old cap one at a time, and fit them to the new cap in the exact same location - do not simultaneously remove all the leads from the old cap, or firing order confusion may occur. On refitting,



22.9 The rotor arm is a push fit on the distributor shaft

ensure that the arm is securely pressed onto the shaft, and tighten the cap retaining screws securely.

10 Even with the ignition system in first class condition, some engines may still occasionally experience poor starting, attributable to damp ignition components. To disperse moisture, a water-dispersant aerosol can be very effective.

Ignition timing check and adjustment

11 Check the ignition timing as described in Chapter 5B.

Static (distributorless) ignition systems

General component check

12 On all except 1998 cc 16-valve models, check the condition of the HT leads as described above. On 1998 cc 16-valve models, there are no HT leads, so the only relevant check is that all the primary (LT) circuit wiring connectors are clean and free of corrosion.

Ignition timing check and adjustment

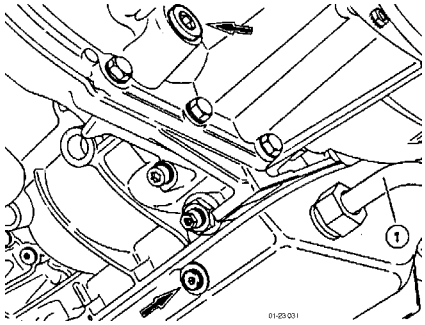
13 Refer to Chapter 5B.

23 Automatic transmission fluid renewal

Note: *On models from 1994, the maker's specified interval for this procedure is 18 000 miles (30 000 km).*

1 Take the vehicle on a short run, to warm the transmission up to normal operating temperature.

2 Park the car on level ground, then switch off the ignition and apply the handbrake firmly. For improved access, jack up the front of the car and support it securely on axle stands (see "*Jacking and Vehicle Support"*). Note



23.3 Automatic transmission fluid drain plugs (arrowed). Transmission is refilled via the dipstick tube (1)

that, when refilling and checking the fluid level, the car must be lowered to the ground, and level, to ensure accuracy.

3 Remove the dipstick, then position a suitable container under the transmission. The transmission has two drain plugs: one on the sump, and another on the bottom of the differential housing **(see illustration)**.

4 Unscrew both drain plugs, and allow the fluid to drain completely into the container.

Warning: If the fluid is hot, take precautions against scalding. Clean the drain plugs, being especially careful to wipe any metallic particles off the magnetic insert. Discard the original sealing washers; these should be renewed whenever they are disturbed.

5 When the fluid has finished draining, clean the drain plug threads and those of the transmission casing. Fit a new sealing washer to each drain plug, and refit the plugs to the transmission, tightening each securely. If the car was raised for the draining operation, now lower it to the ground. Make sure that the car is level (front-to-rear and side-to-side).

6 Refilling the transmission is an awkward operation, adding the specified type of fluid to the transmission a little at a time via the dipstick tube. Use a funnel with a fine mesh gauze, to avoid spillage, and to ensure that no foreign matter enters the transmission. Allow plenty of time for the fluid level to settle properly.

7 Once the level is up to the MAX mark on the dipstick, refit the dipstick. Start the engine, and allow it to idle for a few minutes. Switch the engine off, then recheck the level, topping-up if necessary. Take the car on a short run to fully distribute the new fluid around the transmission, then recheck the fluid level as described in "*Weekly checks*".

24 Brake fluid renewal

Note: *On models from 1994, the maker's specified interval for this procedure is every 2 years, regardless of mileage.*

Warning: Brake hydraulic fluid can harm your eyes and damage painted surfaces, so use extreme caution when handling and pouring it. Do not use fluid that has been standing open for some time, as it absorbs moisture from the air. Excess moisture content can cause a dangerous loss of braking effectiveness.

1 The procedure is similar to that for the bleeding of the hydraulic system as described in Chapter 9, except that the brake fluid reservoir should be emptied by siphoning, using a clean poultry baster or similar before starting, and allowance should be made for the old fluid to be expelled when bleeding a section of the circuit.

2 Working as described in Chapter 9, open the first bleed screw in the sequence, and pump the brake pedal gently until nearly all the old fluid has been emptied from the master cylinder reservoir. Top-up to the "MAX" level with new fluid, and continue pumping until only the new fluid remains in the reservoir, and new fluid can be seen emerging from the bleed screw. Tighten the screw, and top the reservoir level up to the "MAX" level line.

HAYNES HiNT

Old hydraulic fluid is invariably much darker in colour than the new, making it easy to distinguish the two.

3 Work through all the remaining bleed screws in the sequence until new fluid can be seen at all of them. Be careful to keep the master cylinder reservoir topped-up to above the "MIN" level at all times, or air may enter the system and greatly increase the length of the task.

4 When the operation is complete, check that all bleed screws are securely tightened, and that their dust caps are refitted. Wash off all traces of spilt fluid, and recheck the master cylinder reservoir fluid level.

5 Check the operation of the brakes before taking the car on the road.

36 000 Mile / 3 Year Service

25 Timing belt renewal

Note: *On models from 1994, the maker's specified interval for this procedure is 72 000 miles (120 000 km).*

Refer to the relevant Part of Chapter 2.

26 Manual transmission oil level check

Note: *On models from 1994, the maker's specified interval for this procedure is 36 000 miles (60 000 km).*

Note: *A suitable square-section wrench may be required to undo the transmission filler/level plug on some models. These wrenches can be obtained from most motor factors or your Peugeot dealer.*

Haynes Hint: It may be possible to use the square end fitting on a ratchet handle (as found in a typical socket set) to undo the plug.

1 Park the car on a level surface. The oil level must be checked before the car is driven, or at least 5 minutes after the engine has been switched off. If the oil level is checked immediately after driving the car, some of the oil will remain distributed around the transmission components, resulting in an inaccurate level reading.

2 Turn the steering wheel on full left-hand lock, then where applicable remove the cover for access to the left-hand side of the transmission.

3 Wipe clean the area around the filler/level plug, which is on the left-hand end of the transmission. Unscrew the plug and clean it; discard the sealing washer **(see illustration)**.

4 The oil level should reach the lower edge of the filler/level hole. A certain amount of oil will have gathered behind the filler/level plug, and will trickle out when it is removed; this does *not* necessarily indicate that the level is correct. To ensure that a true level is established, wait until the initial trickle has stopped, then add oil as necessary until a trickle of new oil can be seen emerging **(see illustration)**. The level will be correct when the flow ceases; use only good-quality oil of the specified type.



26.3 Using a square-section wrench to unscrew the transmission filler/level plug (MA transmission shown)



26.4 Toping-up the transmission oil level

5 Filling the transmission with oil is an extremely awkward operation; above all, allow plenty of time for the oil level to settle properly before checking it. If a large amount had to be added to the transmission, and a large amount flows out on checking the level, refit the filler/level plug and take the vehicle on a short journey so that the new oil is distributed fully around the transmission components, then recheck the level when it has settled again.

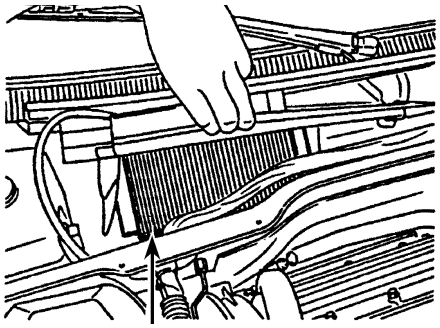
6 If the transmission has been overfilled so that oil flows out as soon as the filler/level plug is removed, first check that the car is completely level (front-to-rear and side-to-side), and allow any surplus oil to drain off into a suitable container.

7 When the level is correct, fit a new sealing washer to the filler/level plug. Refit the plug, tightening it to the specified torque wrench setting. Wash off any spilt oil then where applicable refit the access cover.

27 Rear brake shoe check - models with rear drum brakes

Note: *On models from 1994, the maker's specified interval for this procedure is 36 000 miles (60 000 km).*

Remove the rear brake drums, and check the brake shoes for signs of wear or contamination. At the same time, also inspect the wheel cylinders for signs of leakage, and the brake drum for signs of wear. Refer to the relevant Sections of Chapter 9 for further information.



28.4 Removing the pollen filter from the heater air intake duct

28 Pollen filter renewal

Note: *On models from 1994, the maker's specified interval for this procedure is 9000 miles (15 000 km) or 12 months.*

1 On later models, a pollen filter is fitted.

2 Open the bonnet.

3 Release the securing clips, and withdraw the plastic cover from the heater air inlet in the passenger's side of the scuttle at the rear of the engine compartment.

4 Unclip the pollen filter from the heater air inlet duct **(see illustration)**.

5 Refitting is a reversal of removal.

29 Emissions control systems check

Note: *On models from 1994, the maker's specified interval for this procedure is 18 000 miles (30 000 km).*

1 Details of the emission control system components are given in Chapter 4D.

2 Checking consists simply of a visual check for obvious signs of damaged or leaking hoses and joints.

3 Detailed checking and testing of the evaporative and/or exhaust emission systems (as applicable) should be entrusted to a Peugeot dealer.

30 Road test

Note: *On models from 1994, the maker's specified interval for this procedure is 18 000 miles (30 000 km).*

Instruments and electrical equipment

1 Check the operation of all instruments and electrical equipment.

2 Make sure that all instruments read correctly, and switch on all electrical equipment in turn, to check that it functions properly.

Steering and suspension

3 Check for any abnormalities in the steering, suspension, handling or road "feel".
4 Drive the vehicle, and check that there are no unusual vibrations or noises.
5 Check that the steering feels positive, with no excessive "sloppiness", or roughness, and check for any suspension noises when cornering and driving over bumps.

Drivetrain

6 Check the performance of the engine, clutch (where applicable), transmission and driveshafts.
7 Listen for any unusual noises from the engine, clutch and transmission.
8 Make sure that the engine runs smoothly when idling, and that there is no hesitation when accelerating.
9 Check that, where applicable, the clutch action is smooth and progressive, that the drive is taken up smoothly, and that the pedal travel is not excessive. Also listen for any noises when the clutch pedal is depressed.
10 On manual transmission models, check that all gears can be engaged smoothly without noise, and that the gear lever action is not abnormally vague or "notchy".
11 On automatic transmission models, make sure that all gearchanges occur smoothly, without snatching, and without an increase in engine speed between changes. Check that all the gear positions can be selected with the vehicle at rest. If any problems are found, they should be referred to a Peugeot dealer.
12 Listen for a metallic clicking sound from the front of the vehicle, as the vehicle is driven slowly in a circle with the steering on full-lock. Carry out this check in both directions. If a clicking noise is heard, this indicates wear in a driveshaft joint, in which case the complete driveshaft must be renewed (see Chapter 8).

Braking system

13 Make sure that the vehicle does not pull to one side when braking, and that the wheels do not lock prematurely when braking hard.
14 Check that there is no vibration through the steering when braking.
15 Check that the handbrake operates correctly, without excessive movement of the lever, and that it holds the vehicle stationary on a slope.
16 Test the operation of the brake servo unit as follows. Depress the footbrake four or five times to exhaust the vacuum, then start the engine. As the engine starts, there should be a noticeable "give" in the brake pedal as vacuum builds up. Allow the engine to run for at least two minutes, and then switch it off. If the brake pedal is now depressed again, it should be possible to detect a hiss from the servo as the pedal is depressed. After about four or five applications, no further hissing should be heard, and the pedal should feel considerably harder.