

## Section K1

## Introduction

The fuel systems fitted to these cars are basically similar in design, irrespective of the vehicle's intended domicile and a large number of components are interchangeable. A detailed inspection of the numerous build specifications is illustrated in Figure K1.

For information relating to the fuel evaporative emission control system, refer to the appropriate section of Chapter U.

**Before draining the fuel system refer to Chapter A - Precautions for information relating to this exercise.**

**Fuel tank**

The fuel tank is located either beneath the luggage compartment floor, or on cars destined for U.S.A. and Canada, between the rear seat and luggage compartment.

It is most important that only the correct type and grade of fuel is used when adding fuel to the tank and reference should be made to the table below.

Country	Fuel
Australia	97 octane (Min.)
Japan	88 RON (Min.) Unleaded
U.S.A. and Canada	91 octane (Min.) Unleaded
Cars destined for all other countries	97 octane (Min.) 4 star where B.S. 4040 is applicable

**Warning**

Do not add cleaning agents to the fuel.

**Fuel filter (main)**

The main fuel filter is located on either the centre crossmember or below the forward edge of the luggage compartment floor dependent upon the specification of the vehicle.

At the intervals specified in the service schedules the fuel filter element should be discarded and a new one fitted.

**Fuel pump**

Either a twin S.U. fuel pump assembly or a Pierburg fuel pump is fitted dependent upon the vehicle specification.

The fuel pump will only operate either when the engine is being cranked by the starter motor or when there is engine oil pressure.

**Check valve**

The valve which is fitted to cars destined for Canada, Japan and U.S.A. is situated adjacent to the centre crossmember and allows fuel to pass along the feed line only when the pump is operating.

The check valve seals the fuel feed line in the event of vehicle rollover.

**Fuel cooler**

The fuel cooler is located adjacent to the refrigeration compressor; the refrigerant of the air conditioning system is used to cool the fuel before it enters the carburetters. A fuel cooler is fitted to cars destined for Canada, Japan and U.S.A.

**Carburetter(s)**

The carburetter(s) are fitted on top of the inlet manifold assembly.

Two different carburetter assemblies are used depending upon the vehicle model and intended domicile.

Twin S.U. HIF7 (Horizontal Integral Float Chamber) side draught constant depression carburetters with 4,76 cm. (1.875 in.) choke bores are fitted to the majority of the models.

The only exceptions are the Corniche and Camargue models produced for countries other than Australia, Canada, Japan and U.S.A. These cars are fitted with a Solex 4A1 carburetter which is a four barrel down draught type with mixing chambers.

**Carburetter fuel filters**

Auxiliary fuel filters are fitted to the carburetter assemblies.

On the twin S.U.HIF7 assemblies a paper filter element is fitted into a small housing on the side of each carburetter.

The Solex 4A1 carburetter has a spring loaded nylon filter fitted into the carburetter fuel inlet pipe.

At the mileages specified in the service schedules the paper filters (S.U.HIF7) should be discarded and new filter elements fitted. The nylon filter (Solex 4A1) should be cleaned by blowing compressed air through the assembly.

**Fuel recirculation valve**

A valve is fitted into the fuel return line on cars destined for Canada, Japan and U.S.A. (i.e. those cars fitted with fuel recirculation systems). The flow of fuel from 'A' bank carburetter is restricted

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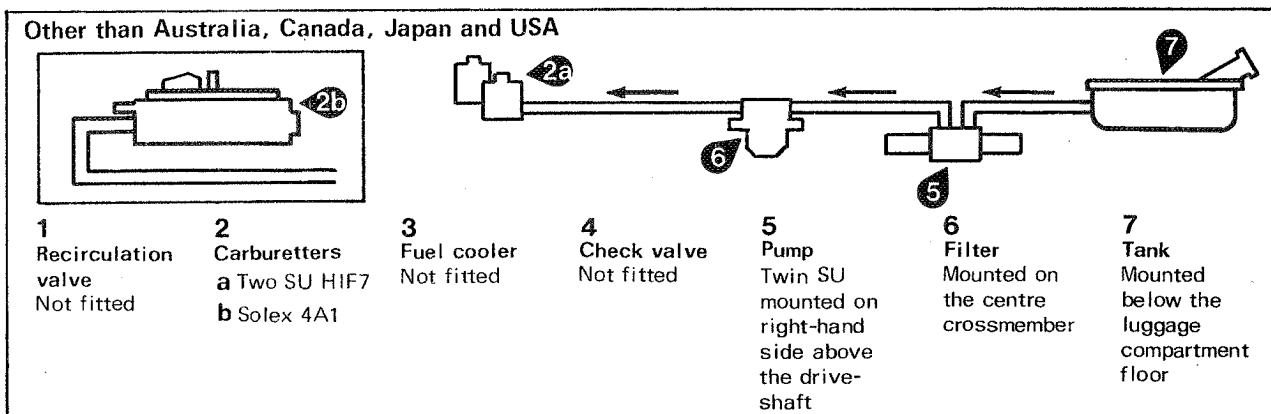
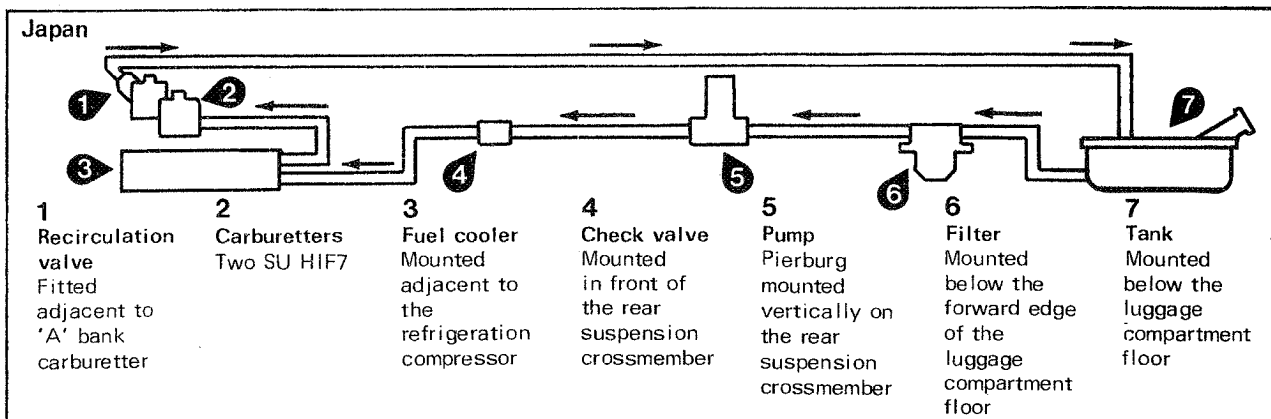
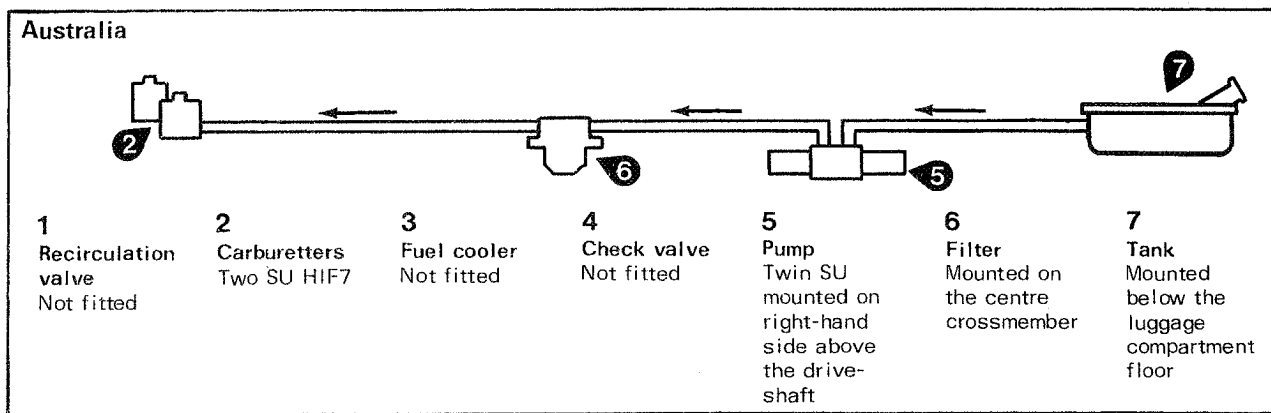
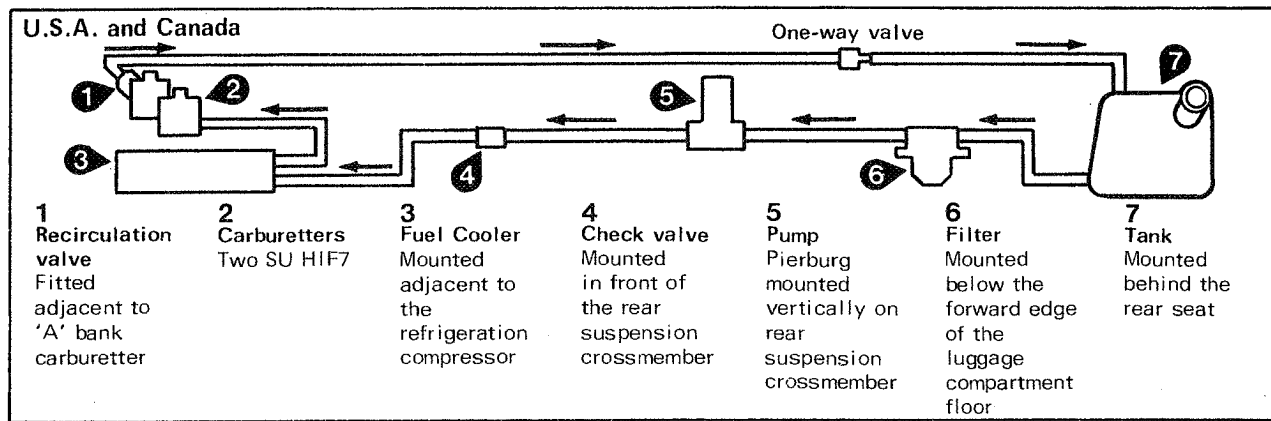


Fig. K1 Fuel systems

at the pipe fitting by a small drilling, this restriction to the flow of fuel returning to the fuel tank is the recirculation valve and is used to maintain a predetermined pressure in the fuel feed side of the system.

#### **Float chamber drain valve**

On cars equipped with twin S.U.HIF7 carburetters a float chamber drain valve is fitted at the front of the engine, adjacent to the oil filter. This valve is connected to the fuel receiver which is part of the mixture weakening device.

If flooding occurs the head of fuel in the receiver is sufficient to open the drain valve thus preventing engine stalling if the float chamber needle valves stick.

#### **Non-return valve**

On cars destined for U.S.A. and Canada a one-way valve is incorporated into the return line to prevent the 'back-flow' of fuel.

#### **Air intake system**

On cars fitted with S.U.HIF7 carburetters a temperature controlled air intake system is used. A vacuum operated blending valve attached to the air cleaner assembly is controlled by a thermal sensor in the air intake. This valve blends hot air from a pick-up scoop adjacent to the exhaust manifold with cold air from under the front wing, thus within the limitations of the system, maintaining the intake air at a constant temperature as it enters the carburetters.

#### **Automatic choke**

All cars are fitted with an automatic choke.

On cars fitted with twin S.U.HIF7 carburetters an automatic (bi-metal operated) strangler choke butterfly valve controlled by hot air from a stove pipe in the exhaust manifold, is used.

On cars fitted with the Solex 4A1 carburetter operation of the choke is achieved by the action of a bi-metal coil attached to the choke butterfly valves. The bi-metal coil is heated by an electrical heater within the bi-metal housing. Engine coolant keeps the bi-metal coil hot during 'hot soak' conditions.