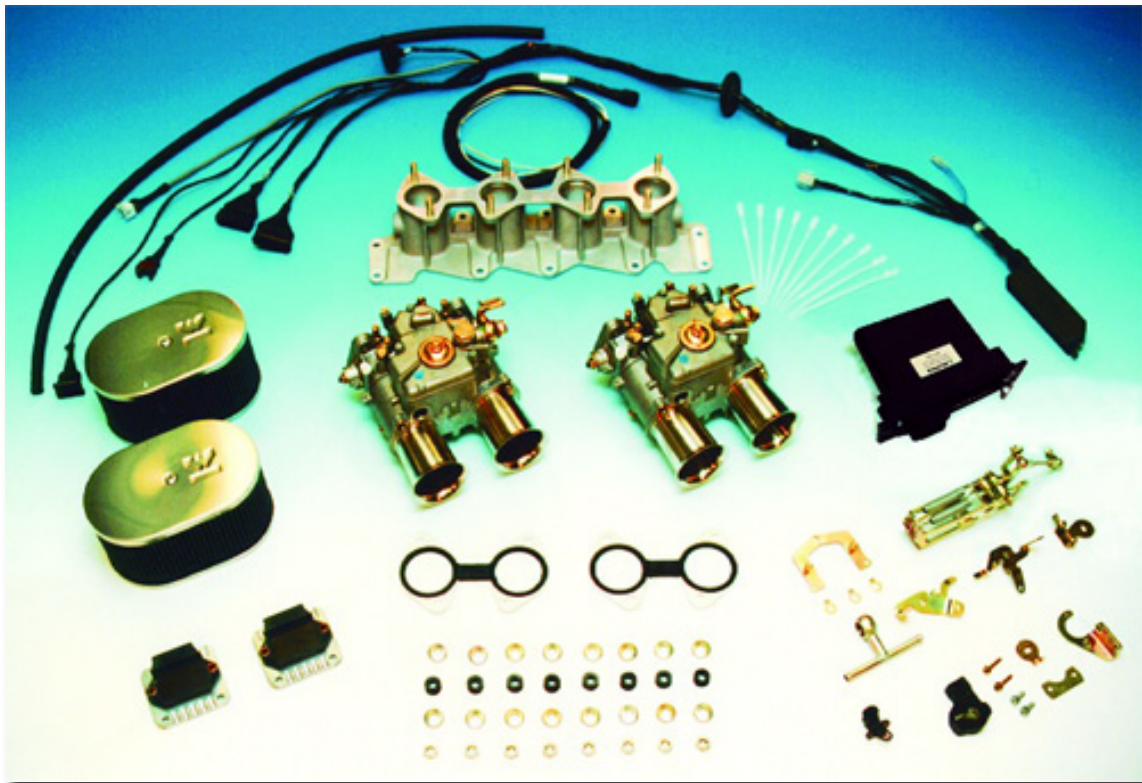




Weber Carburettor Performance Kit Fitting Instructions

K99001 / K99002

Ford Zetec 1.8 & 2.0 litre engines



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Introduction

These fitting instructions are written in order that a competent auto technician shall be able to install this performance kit for any particular engine. These instructions should be read through and fully understood before attempting to install the system to prevent mistakes being made.

N.B. If installing the Performance Kit to an engine that has been converted from automatic to manual transmission, it is necessary to change the flywheel timing sensor mounting sleeve, to that designed for manual transmission flywheels Ford Pt. No.

Performance Kit Contents

Ref. Nos.	Component	Qty.	Part Nos.
1	Inlet Manifold	1	MM5000
2	Inlet Manifold Mounting Stud M8 x 31mm	10	9990130800
3	M8 Nut	10	9990009700
4	M8 Plain Washer	10	9990006000
5	M8 Lock Washer	10	9900450600
6	Throttle Linkage Kit	1	LP1000/LP3000
7	Throttle Position Sensor (TPS) Kit	1	999026600
8	Carburettor Mounting 'O' Ring Plate	2	999027810
9	45 DCOE 152 Carburettor	2	1960006200
10	Mounting Grommet	8	9900557000
11	Cup Washer	16	9900557100
12	M8 Nyloc Nut	8	9990049500
13	Air Filter With Air Temperature Sensor	1	JRW516/ATS
14	Air Filter	1	JRW516
15	Fuel Line	900mm	9990001903
16	Hose Clip	4	9990001200
17	Alpha Ignition Kit	1	K97017

Instructions

This performance kit has been designed and developed for vehicles using the Ford Zetec 1800cc/2000cc engine units. As vehicle engine installations will vary, some minor modifications may be required. i.e. brake servo vacuum connection, see **Note 1**.

The carburettor installation can be carried out as a complete or partial sub-assembly, alternative each item can be fitted to the engine unit separately, which ever best suits the vehicles to which it is being fitted.

The carburettor assembly comprises the following main items:

- 1 x Inlet Manifold
- 2 x Weber DCOE Carburettors
- 1 x Throttle Linkage Kit
- 1 x Throttle Position Sensor Kit
- 2 x Air Filters

Inlet Manifold / Carburettor Assembly Fitting

Note 1 The **Inlet Manifold (1)** has a casting boss on No.1 and No.4 cylinder inlet tracts, to accept a servo line connection where required. As there are no standardised fittings for brake servo vacuum line connections, either one of these bosses may be drilled and threaded to accept the intended servo line connection.

1. Remove the original inlet manifold mounting studs from the cylinder head. This can be achieved by locking together two of the **M8 Nuts (3)** provided.
2. Fit the ten new **Inlet Manifold Mounting Studs (2)** into the cylinder head, by once more locking together two of the **M8 Nuts (3)** provided.
N.B. Do not over tighten Max. Torque 7 Nm (5 lb/ft).
3. Fit the new **Inlet Manifold (1) / Carburettor Assembly** to the cylinder head using a suitable silicone based (RTV) joining compound, and secure using the new **M8 Nuts (3)**, **Plain Washers (4)**, and **Lock Washers (5)** provided.

Throttle Linkage Fitting

The **Throttle Linkage System Kit (6)** supplied will cover both **LP1000** and **LP3000** applications and can therefore be fitted either above or below the carburettors, which ever is preferable for the individual vehicle.

It is recommended that the throttle linkage with the corresponding lever be fitted to the Carburettor before fitting to the **Inlet Manifold (1)**.

Detailed instructions for assembly and fitting the throttle linkage are included within the **Throttle Linkage System Kit (6)**.

Throttle Position Sensor Fitting

Mount the **Throttle Position Sensor** to the carburettor as shown in the detailed instructions included within the **TPS Kit (7)**.

N.B. The setting procedure is to be carried out during the fitting of the **Alpha Ignition Kit K97017 (9)** as detailed within the ignition kit instruction.

Carburettor Fitting

1. Place the carburettor '**O**' **Ring Mounting Plates (8)** onto the inlet manifold studs.
2. Mount each **Carburettor (9)** to the **Inlet Manifold (1)**, using one **Rubber Mounting Grommet (10)** between two **Cup Washers (11)**, to every flange location. Finally fit the **M8 Nyloc Nuts (12)** and tighten gradually in a diagonal formation until a gap of approximately 2.0mm exists between the two **Cup Washers (11)**. DO NOT OVER TIGHTEN.
3. With both carburettors fitted to the **Inlet Manifold (1)**, the throttles can be initially balanced, by manually holding the throttle closed (on the carburettor to which the linkage is mounted), thus compressing the sprung loaded plunger of the balance lever on the second carburettor. Ensure that the idle speed adjustment screw (on the first carburettor), is unscrewed until it no longer contacts the throttle lever.
4. Next whilst holding the throttle closed, turn the balance adjustment screw until it contacts the balance tab of the throttle lever on the other carburettor. This should ensure that both carburettor throttle plates are fully closed, the idle speed adjustment screw should then be set to open the throttles approximately 1 turn.

On completion of the of the performance kit once the engine has been started the carburettors must be balanced using a suitable air flow meter. An air flow meter, is available from WEBCON UK LTD. '**Synchrometer**' Pt. No. **9800100000**.

Air Filter Fitting

N.B. One of the **Air Filter Units (13)**, has an Air Temperature Sensor fitted. Fit this air filter to whichever carburettor best suits the installation, in respect of the wiring loom connection.

1. Remove the four air horns from the carburettors by removing both nuts, securing tabs and lock washers from each air horn.
2. Remove the top plate and filter element from both **Air Filter Units (13)**.
3. Place the two air filter base plates onto the carburettors using the gaskets provided with the filter units. Refit the air horns and secure with the original fixings.
N.B. Do not fit the air filter elements and top plates until the **Carburettors (9)** have been correctly adjusted after the engine has been run.

Fuel Line Connection

1. Connect the fuel supply to the carburettors using the **Fuel Line (14)** and **Hose Clips (15)** provided. The fuel union connections on the two **Carburettors (9)** may be repositioned as required to achieve the best fuel line routing.

Alpha Ignition Kit Installation

The fitting of the **Alpha Ignition Kit (16)** must be carried in accordance with the instructions provided with the kit **K97017 (16)**.

N.B. The air temperature sensor and the corresponding wiring loom connector differ from those detailed in the ignition instruction booklet.

Carburettor Adjustment Procedure

The carburettor adjustment procedure can only be carried out following the completion of the **ALPHA Ignition Kit K97017 (16)** installation.

Equipment required:-

- Accurate Rev Counter
- Air Flow Meter (**Synchrometer Pt. No. 9800100000**)
- C.O. Exhaust Gas Analyser

1. Start and run the engine until normal operating temperature is reached. It may be necessary to reset the idle speed adjustment screw, and each of the four idle mixture screws (equally) anti-clockwise to prevent spitting caused by a lean mixture.
2. Check and adjust the throttle balance screw to equalise the air flow readings.
3. With the engine at normal operating temperature adjust the idle speed adjustment screw to 900 RPM.
4. Adjust each of the four idle mixture screws* (in turn) to obtain the highest RPM, then turn clockwise until the idle speed drops slightly.
5. Re-check the balance flow readings, and reset the idle speed to 900 RPM if necessary.
6. Observe the exhaust gas analyser C.O. values, then make equal adjustments to the idle mixture screws, to attain a value of C.O. 2.5 - 3.0 % vol., whilst making any necessary idle speed adjustments to maintain 900 RPM.

* N.B. During adjustment of the idle mixture it should not be necessary to turn the screws to the point that they come into contact with mixture discharge port orifice. Damage to either the port or the mixture screw will occur if tightened beyond the point of contact with the discharge port orifice.



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