

LOTUS EUROPA

Owners Handbook Supplement

North American Federal Specification

This Supplement should be read in conjunction with the Lotus Europa Owners Handbook (54T324)

LOTUS CARS (Service) LTD. NORWICH NORFOLK NOR 92W ENGLAND

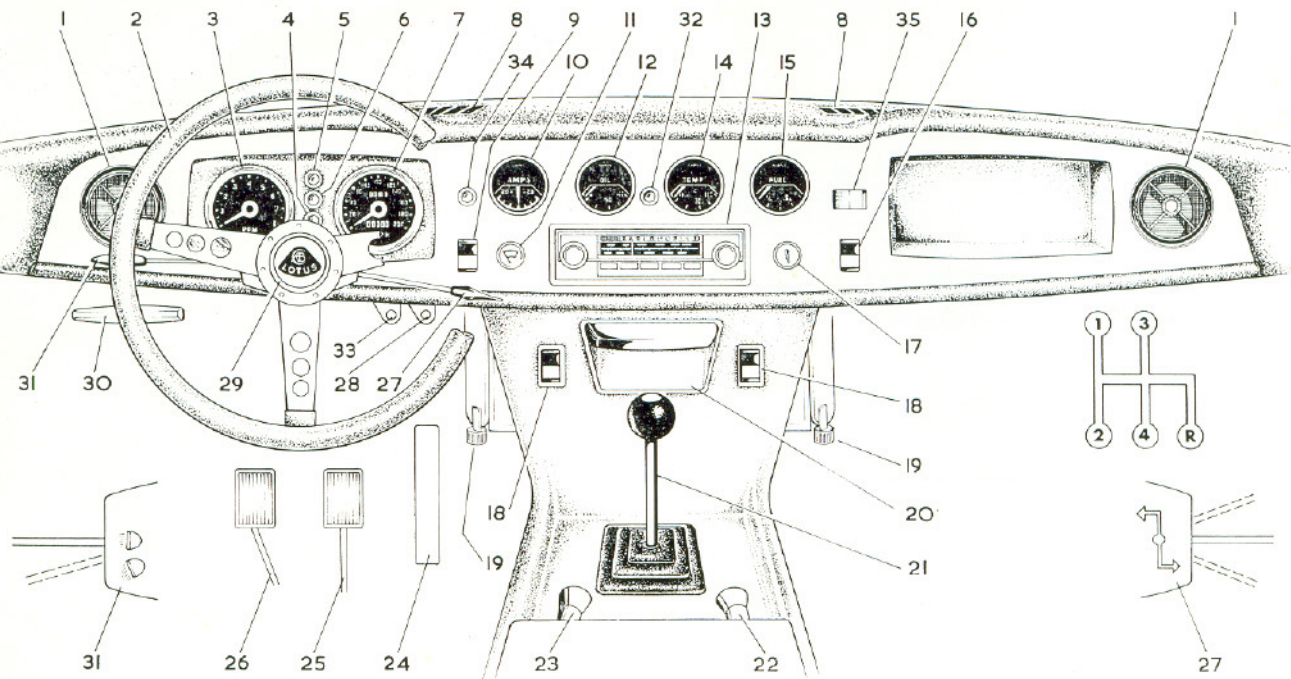
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Part No. 54T324/NA

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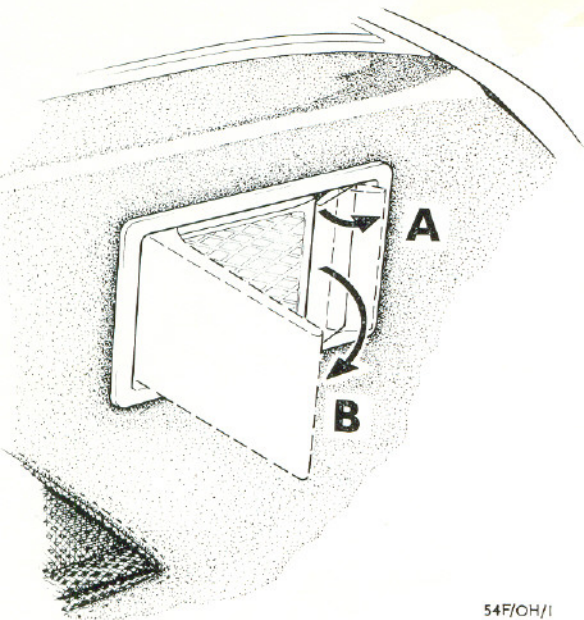


54F/DH/3

Fig. 1 Facia panel and controls

Key to Fig. 1

1. Face level ventilators
 2. Steering wheel
 3. Tachometer
 4. Ignition warning lamp
 5. Headlamp main beam warning lamp
 6. Direction indicators warning lamp
 7. Speedometer
 8. Demister vents
 9. Lighting switch
 10. Ammeter
 11. Windscreen wiper/washer control
 12. Oil pressure gauge
 13. Radio
 14. Water temperature gauge
 15. Fuel gauge
 16. Heater fan switch
 17. Ignition/starter switch
 18. Door window operating switches
 19. Heater air direction control
 20. Ashtray
 21. Gearshift lever
 22. Choke control
 23. Heater air temperature control
 24. Accelerator pedal
 25. Brake pedal
 26. Clutch pedal
 27. Direction indicator switch
 28. Speedometer trip control
 29. Horn switch
 30. Handbrake
 31. Headlamps dipswitch
 32. Brake fail warning lamp
 33. Brake fail warning lamp test switch
 34. Hazard warning lamp
 35. Hazard warning switch
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54F/OH/I

Fig. 2 Remote control operation

A—Locking Flap.

B—Remote control.

Door lock remote control

To open the door, push the small flap 'A' forwards to release the lock, then pull out the larger flap 'B' which is pivoted at its rear edge.

Note that the locking flap 'A' can only be operated when the door is shut.

Brake fail warning lamp

The lamp located in the centre of the facia panel, 32 will glow RED if a failure occurs anywhere within the braking system.

A test switch (33) is provided as a means of checking for bulb failure in the warning lamp.

Hazard warning lamp

This lamp (34), located on the facia panel above the lighting switch, will flash in unison with all four direction indicators, when the switch (35) is operated.

Bulb failure in any of the direction lamps will be indicated by the warning lamp either failing to flash, or to flash rapidly.

Brakes

The brakes are hydraulically operated through a tandem master cylinder supplying dual systems.

Briefly, the braking system is split into two separate hydraulic units with its own master cylinder, two brakes (either front or rear). The object of the dual systems being, that in the event of a leak developing or the unlikely case of a brake pipe splitting, at either front or rear of the car, the driver is not in the position of having no brakes and is thus able to stop in the event of failure.

Also incorporated in the hydraulic system is a 'brake fail' warning lamp. The lamp will glow RED if a failure occurs anywhere within the hydraulic system.

Bleeding the system to expel air is not a routine maintenance operation and should only be necessary when some part of the system has been disconnected or fluid drained off, thereby allowing air to enter. We strongly recommend that this work be entrusted to your Lotus Dealer, as both systems must be bled simultaneously.

Should any work become necessary to the braking system, in the interests of safety it is recommended that such work be entrusted to your Lotus Dealer.

WARNING—Under no circumstances must the tandem master cylinder be bled under pressure.

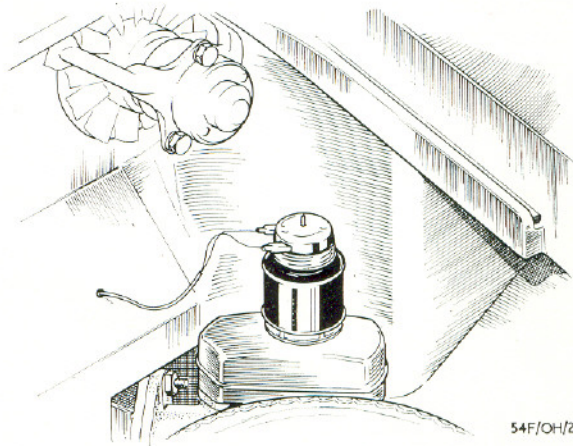


Fig. 3 Tandem master cylinder.

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EXHAUST EMISSION CONTROL

The exhaust emission control used on the Lotus Europa in order that the vehicle may conform to the applicable Federal requirements, is the Renault DCS system.

The Renault Double Carburation System (DCS) is an exhaust emission control which modifies the induction system of the standard engine to achieve emission control by minimizing the initial formation of unburned hydrocarbons and of carbon-monoxide.

Technical Specification

Ignition timing (static)	T.D.C.
Engine capacity	1565 cc. (95.5 cu. in.)
Engine idling r.p.m.	1050 \pm 25
Ignition distributor contact breaker points gaps	.016/.020 in.
Fuel grade	Premium

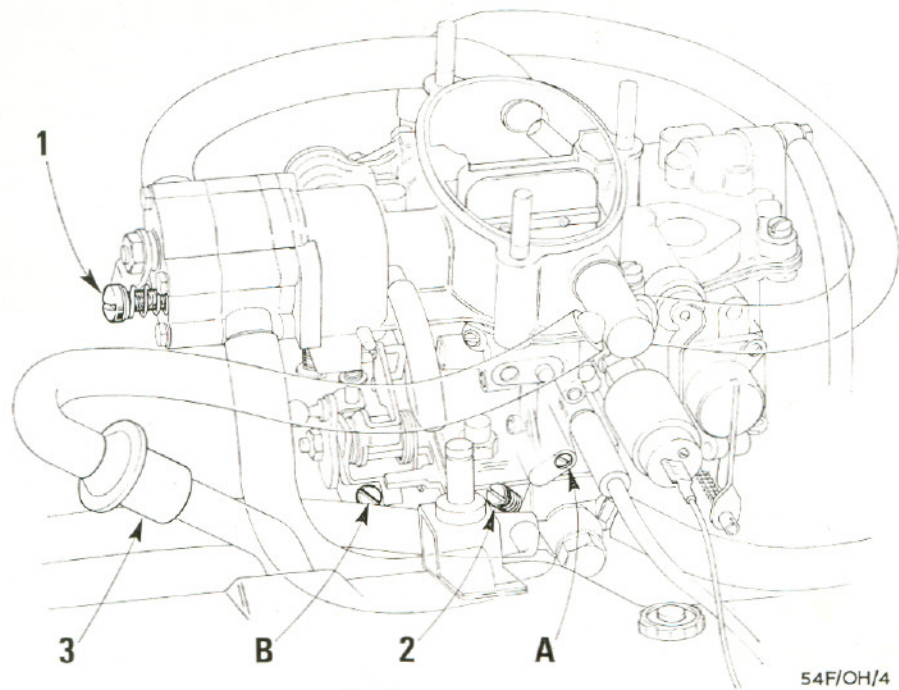
Ignition distributor initial timing

The correct initial timing of the ignition distributor is obtained by aligning the timing notch on the flywheel with the 'O' mark located on the side of the timing window of the clutch housing, rotating the ignition distributor so that its contact points just begin to open, then locking the ignition distributor in this position.

Normal idle

The Solex 26-32 DIDSAs carburetter which is used with the Renault DCS system does not have an idle speed adjustment screw acting on the opening of the throttle plate to obtain the required flow of air. The screw acting on the opening of the throttle has been replaced by a screw acting directly on the flow of air through the external idle air circuit.

The screw acting on the air flow is designated 'air screw', and the screw acting on the air/fuel mixture is designated 'petrol screw' (1 and 2 respectively of Fig. 4).



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1. Air adjustment screw
2. Petrol screw
3. Flame arrestor

Fig. 4

A. & B. These adjustments are Factory set and **MUST NOT** be disturbed.

Procedure

Ensure that the ignition system is in good operating condition and that its adjustments are within specifications.

Connect an electronic tachometer which is accurate to $\pm 2.5\%$.

Run the engine until it reaches normal operating temperature (i.e. until the radiator fan starts running).

First step (Fig. 4)

The aim here is to adjust both the air adjustment screw (1) and the petrol adjustment screw (2) so that when normal idle speed has been adjusted at 1050 r.p.m. by the air adjustment screw, turning the petrol adjustment screw clockwise, or anti-clockwise, lowers the engine r.p.m.

To obtain this condition proceed as follows:—

1. Turn the air adjustment screw (1) until 1125 r.p.m. is obtained.
2. Turn the petrol adjustment screw (2) until

the idle speed reaches the maximum obtainable.

3. Turn the air adjustment screw (1) until 1125 r.p.m. is obtained once again.
4. Turn the petrol adjustment screw (2) until the idle speed reaches the maximum obtainable.
5. Repeat operations '3' and '4' until the maximum idle speed which can be obtained by turning the petrol adjustment screw (2) is 1125 r.p.m.

Second step

The aim of the second step is to 'lean out' the mixture to the point where the idle speed is lowered to 1050 r.p.m. To perform this adjustment, proceed as follows:—

Turn the petrol adjustment screw (2) CLOCKWISE until the idle speed is lowered to 1050 r.p.m. Please note that particular care **MUST BE TAKEN** to ensure that this adjustment is performed with precision, because the level of carbon monoxide emissions depends for a large part UPON ITS ACCURACY.

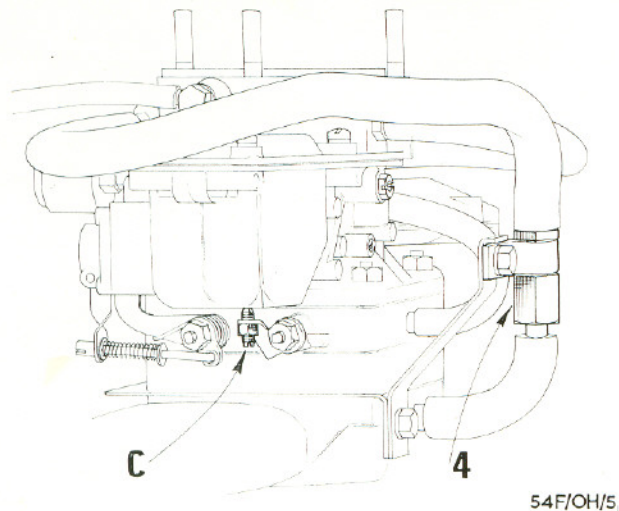


Fig. 5

4. AC valve C. This adjustment is Factory set and **MUST NOT** be disturbed.

Positive crankcase ventilation system (Fig. 5)

Crankcase fumes are drawn from the crankcase via the rocker cover. These fumes enter the engine intake system through tubing connected to the carburetor upper body.

Direction of flow of the fumes is controlled by an AC valve (4) located in the tubing connected to the intake manifold. This meters the flow of fumes to the intake manifold during times of high intake manifold vacuum, so that the major portion of the fumes are drawn into the carburetor. When intake vacuum drops, during more open throttle operation, spring tension in the valve overcomes the effect of the vacuum, opening the valve, and permitting full flow of fumes into the intake manifold.

A flame arrester (3 of Fig. 4) is located in the tubing to the carburetor. If due to some engine malfunctioning backfiring should cause flame to flash through the carburetor, the flame arrester prevents the flame passing through the tubing to the crankcase, thereby avoiding possible additional damage to the engine.

Maintenance of the system is based upon inspection and cleaning at the recommended intervals. The valve and flame arrester should be cleaned in paraffin, and the tubing inspected for possible leaks.

ADDITIONAL SERVICING INFORMATION

On vehicles equipped with Renault Double Carburation System Exhaust Emission Control, the following additional services to those given in the Service Voucher Book must be carried out.

At first 1,200 miles Free Service

Check condition of distributor points and adjust if necessary.

Check initial timing of distributor and adjust if necessary.

Check tightness of carburettor securing nuts.

Check engine idling r.p.m. and adjust if necessary.

Every 3,000 miles

Check, and adjust sparking plug gaps.

Check initial timing of distributor and adjust if necessary.

Check engine idling r.p.m. and adjust if necessary.

Every 6,000 miles

Check, and adjust sparking plug gaps, or replace if condition makes this necessary.

Check condition of distributor points and adjust if necessary.

Check initial timing of distributor and adjust if necessary.

Check engine idling r.p.m. and adjust if necessary.

Replace air cleaner element.

Clean 'PCV' system flame arrester.

Every 12,000 miles

Replace sparking plugs.

Check condition of distributor points and adjust if necessary.

Check initial timing of distributor and adjust if necessary.

Clean exposed parts of carburettor—DO NOT DISMANTLE.

Check tightness of inlet and exhaust manifolds and carburettor securing nuts.

Check engine idling r.p.m. and adjust if necessary.

Clean the 'AC' valve, or replace with new

valve.

Clean the 'PCV' system flame arrester.

