



LOTUS EUROPA

PART NUMBER
HLR 681

The HERMES HLR 681 Performance Kit

To fit the Lotus Europa Series I, II, 1470cc and 1565cc models.

General Information

This Hermes kit includes every part necessary to adapt your Lotus Europa to twin choke side-draught carburation, which is renowned throughout the World as the finest and most accurate and sophisticated carburation equipment available. The inlet manifold is cast in high quality aluminium alloy, with a specially designed core shape giving maximum possible flow through the ports, and has proved very efficient right through the rev range. The exhaust manifold is fabricated by hand in high grade mild steel tubing, to a specification prepared and tested by Hermes to give the best extraction results for the particular characteristics of the Europa engine, and the degree of craftsmanship is such that the margin of error in the tube lengths is less than 3/16ths in. To complete the system, a new silencer box has been designed, to give the least resistance to the exhaust gas flow, combined with very efficient silencing action.

The carburetter comes ready jetted, and only requires the idle adjustment to be made when the kit has been fitted. No further adjustment should be necessary throughout the life of the car, and your service agent should be advised of this.

The advantages gained by fitting this Hermes kit are numerous starting with an overall gain in power and torque of about 25%. Engine flexibility is vastly improved, and it will pull smoothly in top gear from 12 to 120 mph! Both hot and cold starting are very much easier, having none of the 'lag' of the standard system; the throttle response is greatly improved, as is the throttle action, allowing more precise and accurate gear changing, and a general improvement in precise throttle control.

In spite of the open trumpets of the carburetter, the car is not very noisy, only emitting a pleasantly deep 'burble' from the carburetter, and a crisp but subdued exhaust note. For those people who would prefer it, an air cleaner system is available, but due to its location high up under the body moulding, this would only prove necessary in the most dusty conditions.

Fuel consumption is not adversely affected, due to the far greater efficiency of the Hermes system, and in fact the prototype car actually recorded an improvement over the standard of about 5%!

The kit is designed to be easy to fit, taking about four-six hours, and only requiring the tools as listed in the fitting instructions.

FITTING INSTRUCTIONS

This conversion should be carried out with the engine completely cold, and it may be found easier to remove the engine cover for ease of access.

Remove the boot box by unscrewing the two 2B.A. screws at the front of the box floor. Disconnect the battery, on S1 models remove battery.

Remove the rear grill (four cross-head screws). This has to be replaced eventually with the hole for the exhaust pipe at the other end, and if the registration plate is fixed here it must be reversed.

Pull the breather tube off the air cleaner, and remove the cleaner box top by undoing the nut in the centre. Lift out the cleaner element, undo the three cleaner box mounting nuts (10 mm), being careful not to drop any of the nuts, washers or spacers down the carburetter throats.

Undo the nut (10 mm) holding the breather pipe to the side of the rocket cover, and remove the pipe from the car.

Disconnect the carburetter heating-element wire both from the carburetter and the coil and remove it. Disconnect the fuel and vacuum advance lines from the carburetter, and remove the vacuum line. Disconnect the choke cable (8 mm and spring clip). Take off the throttle linkage push rod.

Undo the silencer mounting bolts, (1 x 17 mm at the gearbox bell housing, which must be put back and tightened after the silencer has been removed, and 2 x 13 mm at the rear of the gearbox). Release the flange clip at the front of the silencer, then lift it out. Immediately reinsert the bottom 13 mm bolt and tighten it as this is not used for mounting the new silencer, but does hold the suspension link mount. Undo the flange clamp holding the down pipe to the exhaust manifold, and remove the pipe (13 mm at both ends of the clamp bolts).

Undo the hose clips securing the water hose from the pump to the header pot at the pump end, and from the pot to the pipe at the pipe end, being careful to catch as much of the coolant as possible, as this can be used again. Release the heater tap and cable from the header pot (three cross-head screws) and the 13 mm nut securing the pot to the chassis, which is located within the chassis member, then remove the pot from the car. Disconnect the heater switch cable from the tap.

Loosen the clip and pull the front manifold heating hose off the head connection, again catching the coolant. Repeat at the water pump connection.

The manifold can now be removed complete with the carburetter by undoing

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the four 13 mm nuts, and two allen nuts (6 mm or 15/64th in. allen key).

Re-route the main starter cable, and the other wires in the same loom, inside instead of over the chassis member so that it is well clear of the exhaust. Make quite sure that the starter cable cannot possibly touch the chassis when the engine rocks.

Cut the water pipe (going from the swirl pot to the radiator) 12½ in. from the open end, measured on the outside of the bend. Now cut 3¼ in. from the long end of the bent pipe removed. Using the original swirl-pot-to-radiator pipe flexible hose, join the bent pipe (shortest end towards the radiator) into the radiator pipe. Cut 2¼" off the pipe offcut and use this to join the two 90° elbows into an 'S'. Cut about ¾" off the swirl pot outlet, to give a good clearance from the carburetter when the hose is fitted. Fit the 'S' and tighten all clips. Don't forget when cutting the pipe—remove all burrs . . . It may be found easier to mount the exhaust manifold on to the car before completing the water system, and it must be checked that there is adequate clearance between the water pipe and exhaust manifold.

Unscrew the extreme right hand manifold mounting stud, and the right hand centre stud, from the head, preferably by double-nutting as this cannot damage the threads.

Carefully clean the manifold face on the head, and put on the new gasket supplied.

Lower the exhaust manifold in tail first, and ease it over the manifold studs. Now replace the two studs previously removed, and put the nuts on the two end studs, with plain washers. These can be tightened.

Mount the carburetter on to the manifold (studs at the bottom with spring washer, plain washer and nyloc nut in that order, behind the carburetter flange; and bolts with a plain washer then the rubber damper put through from the manifold, with a plain washer then nyloc nut behind the carburetter flange, at the top). Do not forget the 'O' ring assemblies, and above all—**DO NOT OVERTIGHTEN AS THERE SHOULD BE A SLIGHT DAMPING MOVEMENT BETWEEN THE CARBURETTER AND MANIFOLD.**

Mount the inlet manifold and carburetter on to the engine, using the 12 mm nuts supplied each side, and with the two allen nuts replaced in the centre, plain washers under each.

Put on the throttle push rod, and adjust the linkage as necessary to give full throttle without stretching the cable. It may be found necessary to adjust the pedal stop. Connect up the choke cable and the fuel line.

Remove the manifold heating pipes from the standard carburetter, and put them

back on the engine with the piece of aluminium tubing inserted. This merely short circuits rather than blanking off the take off points, and leaves the bleed point for the water system.

Fit the silencer, sliding it on to the junction box, then fitting the clamp to the silencer body. This fits to the remaining bolt of the original rear mount and to the top centre gearbox endplate mounting bolt. N.B.: It is important to start all the bolts into their threads before tightening any.

Refit the header pot, connecting the heater tap and cable as standard, but making sure the cable does not touch the exhaust pipes. A clip is provided to hold the cable up, which passes through the unused throttle stop hole. (Left hand side of carburetter.)

Top up the cooling system, using as much of the original coolant as is available, and finishing with ordinary tap water.

Refit the boot and connect up the battery. Refit the grill as previously instructed

Switch on and turn the starter over, pumping the throttle slowly till the engine starts. Allow the engine to warm up, then adjust the idle speed (the two mixture screws about 1¼ turns open) and the lever adjustment giving an idle speed of about 850-900 rpm.

When making the adjustment to the idle mixture screws, NEVER screw them down tight, as this will damage the taper. The screws should be adjusted, with the engine running at about 1,000 rpm till an even idle is achieved. Then slow the speed down with the lever adjustment. N.B.: The ignition timing may need to be advanced.

The conversion is now complete, and should prove thoroughly trouble free throughout the car's life. One or two things may be experienced when the carburetter is first run, however, though once cleared up should not re-occur.

1. If fuel is seen to drip from the carburetter trumpets, it is because the new fuel valve has not yet seated properly. A firm tap on the large brass nut by the fuel union (on top of the carburetter) using a light hammer and a drift, should seat the valve, and the drip will stop, and won't occur again. This should be carried out with the engine ticking over.

2. Again it is stressed that the carburetter must NOT be mounted solid to the manifold. If it is, then frothing will occur in the float chamber which prevents the fuel from flowing properly through the jets. About ¼"-½" of movement should be possible at the carburetter trumpets.

3. It will have been noted that the vacuum advance line has not been replaced, as it has not proved necessary with this type of carburation set up.

HERMES

The World's leading specialists in the manufacture of tuning and performance equipment for RENAULT engines and cars.

PART No.	DESCRIPTION.	QTY.	PART No.	DESCRIPTION.	QTY.
1	TWIN CHOKE CARB.	1	13	RADIATOR HOSE CLIP.	4
2	INLET MANIFOLD.	1	14	CARB BY PASS HOSE.	1
3	EXHAUST MANIFOLD.	1	15	BY PASS HOSE CLIP.	2
4	SILENCER.	1	16	IN MANIFOLD BOLT.	2
5	SILENCER CLAMP.	1	17	RUBBER BUSH.	2
6	CLAMP BOLT.	2	18	IN MANIFOLD STUD.	2
7	NYLOC NUT.	8	19	RUBBER O' RING.	4
8	FLAT WASHER.	6	20	CARB SPACER.	2
9	EX PIPE CLAMP.	1	21	CARB LINK ARM.	1
10	EX MANIFOLD NUT (BRASS)	2	22	SPRING WASHER.	4 2
11	EX MANIFOLD WASHER.	2		DESCRIPTIVE BROCHURE.	
12	RADIATOR HOSE.	2		HERMES ADHESIVE BADGE.	

* REPLACED BY DOUBLE SPRING WASHER

USE DOUBLE SPRING WASHER.

