

EUROPA
1974 LOTUS CLINIC ANNUAL

ELECTRICAL

Fusebox on Europa S1 -- the Fusebox on the S1 is located directly below one of the engine compartment vents and is thus exposed to the weather. To stop problems with corrosion and shortening out I removed the fusebox (be sure to mark the wires and tabs), cleaned it up and remounted it in a plastic soap box, threading the wires through poles in the side of the box which are easily cut; I then sealed up the holes with a glue and taped the box shut with electrical tape. It's very weather tight.

ENGINE

Any Europa (Renault) owner wanting to increase his oil capacity and filtering capabilities will be interested to know that Fram's HPK-5 (Ford Bypass Adaptor) spins easily onto the Renault Block (it fits any block with 1/2" standard Renault Nipple). When combined with either the single or the dual filter adaptor (also Fram) your prayers will be answered.

Note: Use the same filter(s) you have been as the recommended HPI is too restrictive to maintain correct pressure.

For additional information, contact me.

Thanks, Bill McCubbin

BODY & INTERIOR

Scuppers for Engine Compartment Air Vents -- In order to prevent the weather from getting on the engine through these vents, a pair of drains were made to fit under these vents to catch the water. This was done by adding a piece of sheet aluminum underneath the hood which covers the entire engine portion of the hood (i.e., not the trunk area); this aluminum was cut out and flanged down under the vents and the drains, or scuppers, were suspended from these flanges; the drains were angled forward and the water flows out holes in the end and into a down spout arrangement. It is a little bit too complicated to describe the actual fabrication of this affair; if anyone is interested please write and I will send a few photos and more of the details. Needless to say this decreases heat dissipation but I haven't had any problems with that so apparently it's not that important; I plan to add another air scoop behind the driver's door to feed the carb and cool the engine compartment but haven't done so yet (the "other" air scoop is on the same place opposite side and has the oil radiator mounted behind it).

Drain to Keep Water Off Back of S1 Taillights -- The two drain holes in the back of the trunk lip on S1's pour water on the rear

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BODY & INTERIOR (continued)

of the taillights, i.e., the wiring, etc. (This isn't a problem on S2's as the taillights are mounted in a "pod" as I understand it.) To prevent this find two pieces of flared tubing (3/16" or thereabouts and an inch or two long), then widen the holes to accommodate the tubing so that the flare of the tube is flush with the body and epoxy into place, finally attach rubber hoses to the pipes and secure to floor.

Front and Rear Trunk Insulation -- The foam insulation on the front trunk causes problems in the winter as it will absorb water and if the temperature falls it will freeze and seal the trunk very securely shut. To solve this problem remove the foam rubber and glue "Snow-King (TM) 100% Vinyl Rubber Gasket Door and Window Weatherstrip No. V18" (which is shaped like P) on the inner edge of the trunk lid, i.e., the flat portion against the inner lip and round portion underneath the trunk lip so it makes contact with the trough in which the trunk lid sits; use a contact rubber cement. On the rear trunk, water will leak in that portion of the trunk that is directly behind the rear window. This can be alleviated by gluing a strip of good old Snow-King along this area about in the middle of the vertical "lip" against which the edge of the trunk meets up.

Jim Scherer

Trunk Removal -- The trunk in my S1 Europa is secured to the "U" shaped cross bar with two bolts, and I believe this is the case with the S2 also. Removing the trunk involved the inconvenience of having one person put a wrench on the bolt inside the "U" bar and another person loosen the nut. To make trunk removal a one-man operation find two bolts of the same diameter but slightly longer. Remove the trunk, insert the bolts up through the holes (without the trunk in place), add the nuts and tighten them up. Widen the holes in the floor of the trunk to clear the nuts. Re-install the trunk, add washers and a second pair of nuts. To remove the trunk then only requires this second pair of nuts to be removed.

Keeping Warmer -- Europa owners who live in cold climates can motor around a bit warmer if some attention is directed to sealing (cold) air leaks into the cockpit. There were two major leaks in my S1 that I would imagine would be present on the S2 and T/C also. The first air leak has air coming from the plenum chamber, through the slot in the lip of the trunk lid through which the "tongue" of the trunk lock passes, through the slot in the body where the "tongue" of the lock catches and into the inside of the car, behind the dashboard then onto your feet;

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BODY & INTERIOR (continued)

this may sound a bit farfetched but there is a large quantity of air that enters the car this way with the fresh air inlets closed and air being forced through the heater. To seal this, bend up a little box out of thin gauge aluminum, open on one side, and then "sandwich" this box between the metal facing plate attached to the body and the body, with the box itself being inserted into the slot so that it forms a housing in which the "tongue" of the lock fits (Careful: only remove one of the facing plate screws at a time or else you will have to remove the dashboard to line up the plate on the inside). To locate the second leak look at the passenger side of the trough in the front of the plenum chamber; you will notice a raised "tunnel" running fore and aft crossing the trough; looking above the spare tire at this tunnel you will notice that several wires enter this tunnel (to go inside the car) but there is also ample room left for cold air to enter the cockpit by the same route. Using some sponge rubber on the outside and some soft putty on the inside of the car, this leak can be sealed up. While you're at it you might also check for leaks where the steering column passes through the front cross beam, and while driving, check your fresh air inlets to see that they are sealing completely.

Jim Scherer

Steering Wheel Exchange -- Due to the relatively small number of Lotus cars produced, manufacturers of custom or replacement steering wheels normally do not list adaptors for our cars. Therefore if one wishes to change wheels he is stuck with adapting a wheel and possibly altering some of the components to a point that the stock wheel cannot be re-installed. Here is a method of adapting a custom steering wheel and still be able to return the stock unit into place in minutes.

First, the stock wheel is attached to the aluminum hub by means of seven (count 'em) steel rivets, which must be drilled out to remove the wheel from the hub. Take care to drill only as deep as necessary to remove the head of the rivet (3/8" drill).

Next pry the aluminum ring and old steering wheel up and off the old rivets. These rivets must now be drilled and tapped for the Allen head screws that will hold the new wheel.

Obtain a tap and drill of corresponding size and drill out the rivets to a depth of approximately three-quarters of an inch (I used a 1/4" x 20 thread tap and 7/32" drill). Next drill out both the aluminum ring and new wheel, clamped together,

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BODY & INTERIOR (continued)

to 1/4" or slightly larger. If you wish to install the old horn button, you must also drill out the larger hole in the center. This may be done by drilling a circle of smaller holes, knocking out the material to be removed, and filing the remainder to proper contour.

Tap all seven holes to a depth of at least 1/2". The new wheel may now be installed using seven 1/4" x 20 threads per inch x 3/4" Allen head set screws.

If you wish to change back to the stock wheel at anytime, drill out the seven holes in the wheel to slightly over 1/4". Install the same way as the custom wheel.

The wheel I chose was an eleven inch diameter, alloy centre, Formula Ford wheel with soft foam rim. It is extremely light and quickens the steering considerably. This wheel is available from "LeGrand Race Cars" of North Hollywood for about \$25.00.

B. L. Lansill

MISCELLANEOUS

For S1 The battery size that fits in the battery compartment in the floor of the trunk is size 22NF...I recently modified the quarter window, driver's side, on my S1 so that the forward corner (i.e., the "point" of the triangle) opens out about 4 inches; the two "tabs" of the vertical chrome bar of the window were modified to service as pivots - needless to say, this increased cockpit ventilation by about 500%. Rather than describe the procedure here, it's rather involved, any S1 owner (I assume there aren't many) who would like further details just drop me a line and I'll send some photos and additional information...

For S1/S2 The starter used on the Europa R16 engine is actually off of the R10 engine; it was used because of its smaller size. The R16 starter will in fact fit with minor modification: a slight bending of the flange of the frame to allow clearance for the end of the solenoid, and the addition of a properly insulated 2 inch metal tab to the cable connection of the solenoid to allow the cable to be attached at a point away from the frame; this will become clearer to you when attempting to utilize an R16 starter, and both can be done without much trouble...

For S1/S2; TC? In case anyone is still wondering, the TC type spoiler also fits the S1/S2 and is quite effective in eliminating high speed stability problems; no change in cooling or MPG was noted. I might add that the spoiler doesn't appear to fit at first but as the bolts are tightened up, a perfect fit is obtained...

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MISCELLANEOUS (continued)

For S1/S2 If your Europa is more than a few years old, it might be worthwhile to remove the top half of the fuel pump for cleaning; this can be done by removing the six screws that secure the top half to bottom half which can remain in place (if you're apt to hit the hot wire to the alternator with your screwdriver - causing sparks - you might disconnect the battery first). Once the top half is in hand, remove the "lid" by unscrewing the two screws - these will be very tight, and must be put back as tightly to prevent leaking - and you can clean out whatever accumulation of dirt, gas tank rust, etc. there is...

For S1/S2 S1's and other Europas for the European market have a single windshield wiper to wipe cleanly, in the process replacing the arm and the blade, and having to have the windshield replaced during this same time. On a hunch I tried a 13 inch blade and, presto, the problem was solved, I imagine, because the blade did not have to cover as much curvature in the windshield. Needless to say, 1 1/2" of area is lost at each end of the blade, but this can be compensated for by extending the arm out further as you don't look through the bottom portion of the wiped area anyhow...

For S1/S2; TC? Friction in the pedal assembly can contribute to high clutch effort. To check for friction disconnect the brake pedal from the push rod, and see if the pedal falls freely. If not, the trouble is with dirt entering either end of the pedal assembly; I removed the entire pedal assembly and found the problem to be confined to the ends. I think the ends could be cleaned without removing the pedal assembly; some oil after cleaning helps too.

EUROPA HEATER: Here is another "hot" tip for keeping warmer in your Europa if you happen to live in an area with cold winters. The hot water from the engine flows through the heat exchange element on one side of the heater first, then across to the heat exchange element on the other side and on back to the engine. I was recently cruising at 70 MPH in 15-20 degree weather and the hot air coming out on my feet wasn't all that hot; however, I found that the hot air coming out on the other side was very much warmer. Switching the heater hose connections (where the hose connects to the metal pipes underneath the car, right before going into the tunnel) has put warmer air on my side.

Jim Scherer

EUROPA REAR BRAKE HOSE: If you need a rear brake hose in a hurry, the brake hose from a Cricket is identical to the Lotus part. The Chrysler part number is 71244109 and listed for \$4.06 .

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MISCELLANEOUS (continued)

EUROPA THROTTLE CABLE: If you break your throttle cable, I have found a replacement which I consider superior. Throwaway the broken inner braided cable. Also discard the inner black neoprene cable but save the outer wound cable with the black plastic protective casing. Go directly to a VW parts house and purchase a VW Bus throttle cable. The part number is 211721555J. It should have a hook connection on one end. Hook this end through the gas pedal hole, crimp it shut with pliers, and feed the cable through the old cable housing. Cut the cable to the exact length you need and your troubles are now behind you.

Richard Flowers