



# SERVICE BULLETIN

Date: 25.01.08

Model: Exige Cup 260

Number:  
2008/05

**CLASS 3**

Service Manager	Service Reception	Supervisor	Parts Manager

**TITLE:** Introduction of Fully Type Approved Lotus Sport Exige Cup 260.

**REASON:** Further to Service Bulletin 2007/04 introducing the Lotus Sport Exige Cup 255 as a post registration official factory conversion of the '07 Exige S by the Lotus Sport workshops, an '08 based Cup 260 specification has now been fully type approved to allow regular factory build for sale in selected territories.

The Exige Cup 260 specification is based on the 2008 model year Exige S (220 PS) with the following differences:

### IDENTIFICATION

VIN character 4 identifies the engine specification. 260 PS = A  
First Cup 260 2008 VIN serial number = 0712

### ENGINE MANAGEMENT

Power is increased from 220 to 260 PS by the following means:

- Reprofiled chargecooler roof duct with extended and enlarged intake (as 240 Performance Pack).
- Increased output fuel pump.
- Unique engine management T4e calibration. ECUs supplied only on exchange basis against V.I.N.

### POWERTRAIN SYSTEMS

- Accusump engine oil reservoir.
- Uprated lightweight clutch cover and steel spring hub friction plate.
- Clutch release damper restriction.
- Torsen type Limited Slip Differential (LSD).
- Variable Traction Control.
- Variable Launch Control (Note; this is a competition feature, the use of which will invalidate associated warranty).

### BRAKES

- Enlarged, 308mm diameter, ventilated front discs mounted on alloy adaptors. Note that these discs are handed.
- Longer wheel bolts (refer to Service Notes section JJ.8A), with no security coded bolt.
- A.P. Racing, alloy, four piston front callipers.
- Pagid RS14 front and rear brake pads.
- Stainless steel braided brake hoses.
- Standard DOT 4 brake fluid. For cars used in competition or driven in a similar manner, Castrol Synthetic Racing Fluid (SRF) is recommended.

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### *Brake Bedding Procedure*

These competition oriented brakes require a brake bedding-in procedure to be followed before the brakes are used to their full potential. This also applies if and whenever new brake pads and/or discs are fitted. Failure properly to bed-in the brake components may result in glazed pads, and/or poor brake performance, and/or damage to the brake discs, and will invalidate any related warranty. Note that there is no warranty on brake discs for the Cup 260 - see Warranty heading later in this bulletin.

The brake bedding procedure is based on A.P. Racing recommendations and is fully detailed on attached document LSL534b. This should be carried out on all dealer demonstrator stock as part of the PDI process. Ensure that the customer's Owner's Handbook package contains this leaflet, and that its importance is fully understood. Customers should also be made aware that these brakes are competition focused, and as such, will not offer the same degree of refinement exhibited by the standard brakes.

**This advice is equally applicable to any Exige fitted with these 'big brakes', e.g. Exige S with the Performance Pack option. Check that any such car has this leaflet included in the handbook wallet.**

### SUSPENSION & WHEELS

- Bilstein or Ohlins spring/damper units with damping adjustment and adjustable spring platforms (refer to Service Notes manual A120T0327J for details).
- Stiffened and adjustable front anti-roll bar with hard mounts.
- Hi-power silver version of current cast 16-spoke Exige wheel with A048 tyres.

### BATTERY ISOLATOR & ON-BOARD FIRE EXTINGUISHER

- FIA compliant, on-board, plumbed-in, fire extinguisher system with bottle mounted in front of passenger seat beneath a plastic shroud, and operated by external and internal push buttons. Operating instructions are supplied by the system manufacturer and must be read and understood by the vehicle owner, especially the requirement to arm the system before the operating buttons become active. **To comply with race regulations**, the plastic cover over the bottle must be removed to allow the pressure gauge to be read.
- Safety battery isolator switch operated by external and internal push buttons. This system uses a sealed high current relay and a built-in coil economiser to reduce the power consumed in the battery 'on' condition. Included in this circuit is a dump resistor and Transil diode to prevent the engine from running off alternator output (with battery isolated), and to protect the alternator from current surge damage. All these components are mounted on the LH rear wheelarch. When the isolator switch is activated, all electrical systems are switched off with the exception of the alarm/immobiliser.

### Notes:

- The internal buttons are mounted in the otherwise unused radio aperture, and external buttons in the LH rear quarter body. Red button for fire extinguisher; Green button for battery isolator.
- Press the red button **in** to activate extinguisher; press green button **in** to **connect** battery. Press a second time (out) to isolate battery, but note that the extinguisher, once activated, will continue to discharge until emptied.
- An anti-tamper plug is threaded into the external button recess. Use a coin or screwdriver to remove. **To comply with race regulations**, the cover must be removed.
- Note that the battery isolator feature is designed to comply with FIA motorsport regulations for use in emergencies, and if the isolator button is used when the engine is running, or within 15 seconds of keying off the ignition, a fault code P0601 will be set and the MIL illuminated at the next key-on. The code can be cleared using the Lotus TechCentre or allowing 3 fault free drive cycles.
- The standard PFK 457 security alarm system will continue to function with the battery connected or isolated, in order to allow use of the button to minimise other sources of quiescent drain on non-motorsport cars. **To comply with race regulations** when the button is activated, the alarm/immobiliser must first be disabled. Before motorsport use, remove the alarm fuse located on the LH rear wheelarch in the rear luggage compartment, unplug the adjacent alarm harness connector from socket A, and transfer to socket B.

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- With the isolator button pressed in (battery connected), there will be an additional 140 mA drain with ignition off due to the isolator circuitry. Park time may be limited to around 4 days. With the button out (battery isolated), this additional drain is eliminated, and park time will be around 2 weeks with the alarm system operative. If the car is to be stored for longer than this period, the alarm fuse should be removed, or a battery conditioner connected where facilities allow.

#### BODY & INTERIOR

- T45 seat belt anchorage frame.
- Chassis drilled and roof panel fettled to accept full FIA compliant roll cage (supplied separately and dedicated to that specific car). Once fitted, the car should be used only on track.
- Airbag style interior but with **NO** airbags. 'Exige 260' badge replaces 'Airbag' wording on fascia. Non-pyrotechnic 3-point inertia reel seat belts are fitted as standard. 4-point harnesses supplied separately for dealer fitment if required, and for use only on track.
- No central door locking.
- Pro-Bax sports seats trimmed in black Alcantara/carbon effect leather with embroidered Exige logo in headrest.
- Door trim inserts trimmed in black carbon effect leather.
- 'Lotus Sport' build plaque on dashboard with build number.
- 'Lotus Sport' decal on each front quarter panel.
- 'Cup 260' decal on rear transom.
- Lotus Sport windscreen visor strip supplied separately.
- Black rear diffuser.

#### WARRANTY

Warranty terms are amended as follows:

- Any car with a V.I.N. character 12 of 'H' or 'J' is built for motorsport only, and is not approved for road use in any territory. As such the vehicle carries no Lotus warranty other than that required by law.
- If the car has ever been used on road or track with 'slick' or equivalent racing tyres, warranty is void.
- If the Launch Control facility is utilised, warranty on related powertrain components is void.
- Clutch assembly and brake discs are excluded.

#### TECHNICAL DATA

Peak power (1999/99/EC)	191.5 kW (260.4 ps, 256.8 hp) @ 8,000 rpm
Peak torque (1999/99/EC)	236 Nm (174.2 lbf.ft) @ 6,000 rpm

# 'Big Brake Kit' Bedding-In Procedure

LSL534b

**Exige S models specified with the 'Performance Pack' and other Elise/Exige variants fitted with 4-piston front callipers, require a brake bedding-in procedure to be followed before the brakes are used heavily. This procedure should also be applied if and whenever new brake pads and/or discs are fitted. Failure properly to bed-in the brake components will invalidate any related warranty.**

**WARNING; This procedure should be carried out only on a closed track or deserted straight road, paying appropriate consideration to any other track or road users. An observer passenger should be carried to assist in this regard.**

The purpose of brake pad bedding is to:

- ensure heat stabilisation and improve the cracking resistance of the cast iron discs. Cracks, or even disc failure can occur during the first few heavy stops if careful bedding is not carried out;
- transfer a layer of friction material onto the disc faces to achieve maximum performance;
- gradually increase the temperature in the components without causing thermal shock;
- stabilise compressible materials to avoid a spongy pedal;
- boil off volatile elements in the friction compound;
- align the pad and brake disc surfaces for full contact.

If the pads are not bedded-in correctly, or are used aggressively straight after fitting, pad glazing may occur. This condition results from resins in the pad material crystallising on both the pad friction surface and the brake disc surface, producing brake judder and vibration. Also, rapidly escaping volatile elements and moisture from the resin, in seeking an immediate escape route out of the friction compound, can create small fissures that can lead to cracking and chunking of the material. The potential for overheating and distortion of the brake discs will also be increased.

## **ROAD PROCEDURE:**

- After any type of brake servicing, before driving the car, pump the brake pedal to position the pads and ensure a firm pedal.
- Drive the vehicle cautiously to test function; brakes should be smooth with no vibrations or judder etc.
- Perform at least 30 light brake applications from 55 to 30 mph (90 to 50 km/h), preferably in blocks of 5. Leave at least ½ mile (1 km) between each block of 5 brake applications.
- For the next 100 miles (150 km), increase the braking pressures, avoiding if possible full stops from over 70 mph (110 km/h). Do not attempt any high-speed stops down to zero at this point, as only the pad faces will heat up with the mass remaining cool along with the mounting area.
- After another 100 miles (150 km) of slowly increasing the braking effort, full power stops can be used. By now the area around the caliper mounting bolts should be a light blue temper colour. This is a good indication that the correct heat soak has been achieved.
- The system is now ready for normal road use.

## **TRACK EVENTS:**

**WARNING: PLEASE BE AWARE THAT DISCS USED ON RACE TRACKS WILL BE SUBJECT TO HIGHER TEMPERATURES AND WEAR RATES THAN ACHIEVED WITH NORMAL ROAD USE. THIS CAN HAVE AN EFFECT ON THE LIFE OF THE DISC, ESPECIALLY WHEN USED WITH THE PAGID RS14 HIGH TORQUE COMPETITION PADS. BE AWARE THAT DISCS AND BRAKE PADS ARE CONSUMABLE ITEMS!**

- At the start of a session, perform at least one warming up lap for the brakes by gradually increasing the effort at each corner and not dragging the brakes under power (left foot braking).
- Perform at least one cooling down lap at the end of each session using minimal braking

**CAUTION: IF STOPPED WHEN THE BRAKES ARE VERY HOT, AVOID HOLDING THE CAR ON THE FOOTBRAKE UNTIL THE DISCS HAVE COOLED.**

- Check your brake system thoroughly after each event.
- Race circuit use of a road car is more exacting on the brake system than a fully prepared race car due to the following; lesser road car brake cooling, increased chassis weight, longer braking distances due to driver technique and tyre grip. Therefore it is very important to check your brake system thoroughly after any such use. Bear in mind that race cars on average cover less than 50 laps of a circuit before being serviced.

### *New pads on used discs:*

If new brake pads are to be fitted on used discs, it is recommended, taking appropriate health and safety precautions, to file a small chamfer on the leading edge of each pad to promote optimum bedding.

### Additional Notes:

- Discs must be regularly and frequently inspected for excessive heat crazing and cracking.
- Discs with cracks emanating from mounting holes/slots, inside diameter, scallops, or outside diameter should be changed immediately.
- After heavy and prolonged use some surface crazing will often be evident. If this turns into distinct surface cracks which are radiating towards the inside or outside diameter the disc should be changed. **IF IN DOUBT REPLACE**