

Vehicle Technical Specifications

Vehicle: Lotus Exige S (2007) Class: GTS



DRAFT VTS Approved for Racing

Vehicle Manufacturer: Lotus

Year and Model: 2007 Exige S

This draft of the listed vehicle's VTS is posted with the specifications that we currently have for the vehicle. If a specification is **highlighted in green**, we are waiting to acquire that information from the manufacturer, or from certified documentation provided by the team(s). If a specification is **highlighted in yellow**, that specification is under review and may not be set until all blanks in the VTS sheet are completed. The specifications that are listed, and not highlighted, are considered to be a work in progress and may be changed without being posted by technical bulletin. Therefore, competitors may use the specifications listed to begin preparing their vehicles. The missing specifications will be added as they are received.

When a vehicle is in this draft form, it will be permitted to compete in any World Challenge competitions. Once the World Challenge Technical Staff has determined that this specific vehicle has demonstrated reasonable performance in relationship to other cars competing in the series and all specifications have been obtained, then this VTS sheet will be removed from DRAFT status and transformed into a final VTS. From that time forward, all changes to the VTS will be subject to VTS change request approvals.

Competitors needing a specification that is not listed should contact the World Challenge Technical Department to find out when that specification will be available and should not make assumptions as to what these specs might be unless otherwise directed to do so by the World Challenge Technical Department.

SCCA Pro Technical Department

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This specifications form was developed by SCCA Pro Racing and will be used by the TECHNICAL MANAGER to establish technical compliance for vehicles competing in the SCCA PRO RACING WORLD CHALLENGE series. The TECHNICAL MANAGER can also use, but is not limited to also using the following items to check compliance: Electronic Parts Catalog (EPC), Technical Information System (TIS), and the FIA/ASN Homologation forms (or equivalent documentation).

The specifications within this form include all modifications that have been approved by SCCA Pro Racing specifically for the vehicle model(s) and year(s) listed on this page. The parts, specifications and assemblies used shall be those for the unmodified stock vehicle, those permitted within the Pro Racing Regulations (PRR) and/or within this VTS. If the stock parts, specifications and/or assemblies exceed the performance potential of those approved with this form, then the parts, specifications and/or assemblies used shall meet those listed within this form.

Refer to SCCA PRR and Appendix A. for rules regarding all vehicle specifications not specifically listed within the VTS.

The most current rules can be downloaded from the official website: www.world-challenge.com and look under the "Competitors" section for the latest Technical Bulletins, Participant Bulletins, and Appendix A.

The Vehicle Technical Specification sheet is a permissive document. The exact configuration of any modification allowed within this VTS is subject to the approval of the TECHNICAL MANAGER.

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1. General Vehicle Description

1.A. Body Type:	<u>Coupe</u>	1.B. Engine Location:	<u>Rear</u>
1.C. Drive Wheels:	<u>Rear</u>	1.D. Wheelbase:	<u>2300 mm</u>
1.E. Induction Type:	<u>Supercharged</u>	1.F. Competition Weight:	<u>See Appendix A</u>
1.G. Weight Distribution:	<u>See Appendix A</u>		

2. Engine

2.A.1. OEM Engine Designation:	<u>Toyota 2ZZ-GE</u>	2.A.3. Number of Cylinders:	<u>4</u>
2.A.2. Maximum Displacement:	<u>1840 cc</u>	2.A.5. Rev Limit Method:	<u>ECU</u>
2.A.4. Rev Limit:	<u>See Appendix A</u>	2.A.7. Maximum Piston Stroke:	<u>85.0 mm</u>
2.A.6. Max. Compression Ratio:	<u>11.5:1</u>	2.A.8.b. Hole Diameter:	<u></u>
2.A.8. Restrictors:	<u></u>	2.A.10. Direction of Engine Rotation:	<u>Clockwise</u>
2.A.8.a. Percentage Restriction:	<u></u>		
2.A.9. Cylinder Firing Order:	<u>1.3.4.2</u>		

2.B. Cylinder Block

2.B.1. Part Number:	<u>Lotus A120E6139S</u>	2.B.3. Maximum Cylinder Bore:	<u>82.0 mm</u>
2.B.2. Cylinder Block Material:	<u>Aluminum</u>		

2.C. Cylinder Head

2.C.1. Part Number:	<u>Lotus A120E6139S</u>
2.C.2. Cylinder Head Material:	<u>Aluminum</u>

2.D. Valve System

2.D.1. Number of Valves Per Cylinder:	2.D.1.a. Intake:	<u>2</u>	2.D.1.b. Exhaust:	<u>2</u>
2.D.2. Maximum Valve Head Diameter:	2.D.2.a. Intake:	<u>34 mm</u>	2.D.2.b. Exhaust:	<u>29 mm</u>

2.E. Intake Port Dimensions

2.E.1. At Intake Manifold Face	2.E.1.a. Height:	<u>38 mm</u>	2.E.1.b. Width:	<u>53 mm</u>
2.E.2. Intake Port Work Allowed:	<u>No</u>	2.E.2.a. Depth From Face:	<u>Not Applicable</u>	

2.F. Exhaust Port Dimensions

2.F.1. At Exhaust Manifold Face:	2.F.1.a. Height:	<u>32 mm</u>	2.F.1.b. Width:	<u>40 mm</u>
2.F.2. Exhaust Port Work Allowed:	<u>No</u>	2.F.2.a. Depth From Face:	<u>Not Applicable</u>	

2.G. Piston and Connecting Rod

2.G.1. Connecting Rod Length:	2.G.1.a. Stock:	<u>138 mm</u>	2.G.1.b. Approved:	<u>138 mm</u>
2.G.2. Reciprocating Assembly Mass:	2.G.2.a. Stock:	<u>1000 g</u>	2.G.2.b. Minimum:	<u>870 g</u>
2.G.3. Aftermarket Rods Allowed:	<u>Yes</u>	2.G.4. Aftermarket Pistons Allowed:	<u>Yes</u>	

2.H. Camshaft

2.H.1. Part Number:	<u>Lotus A120E6188S</u>	or 2.H.2. SCCA Profile Number:	<u></u>
2.H.3. Rocker Arm Ratio:	<u>1.575</u>	2.H.4. Valve Actuation:	<u>Rocker</u>
2.H.5. Type of Cam Follower:	<u>Finger</u>		

2.I. Crankshaft

2.I.1. Part Number:	<u>Lotus A120E6263S</u>	2.I.3. Minimum Mass:	<u>12.20 kg</u>
2.I.2. Stock Mass:	<u>12.20 kg</u>		

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2.J. Flywheel

2.J.1. Stock Ring Gear Diameter: 270 mm

2.K. Forced Induction Intake System

2.K.2. Supercharger Manufacturer and Model: Eaton M62

2.K.3. Compressor Inlet Diameter: 56.66 mm 2.K.4. Number of Compressors: 1

2.K.6.a. Number of Intercoolers: 1 2.K.6.b. Intercooler Locations: Above Engine

2.K.6.c. Intercooler Dimensions: 21 x 5 x 7.5 in

2.K.7. Permitted Modifications

2.K.8. Required Boost Sensor Location: TBD

2.L. Intake Manifold

2.L.1. Part Number: Lotus A128E0012F

2.L.2. Stock Port at Cylinder Head Face: 2.L.2.a. Height: 38 mm 2.L.2.b. Width: 53 mm

2.L.3.a. Allow Port Match to Head: No 2.L.3.b. Port Matching Depth: Not Applicable

2.L.4.a. Throttle Body Bore Dia.: 65 mm 2.L.4.b. Throttle Body Part Number: Lotus A120E06489S

2.L.5. Number of Throttle Bodies: 1 2.L.6. Butterflies per Throttle Body: 1

2.L.7. Intake Manifold Material: Aluminum 2.L.8. Manifold Pieces: 1

2.L.9.a. Intermediate Port Matching Allowed: No 2.L.9.b. Depth from Face: Not Applicable

2.M. Required Engine Seal Locations

2.M.1. Valve Cover Seal #1: _____

2.M.2. Oil Pan Seal #2: _____

2.N. Manifold Pressure Limit

2.N.1. Manifold Pressure Limit: See Appendix A

2.N.2. Over Shoot Time Limit: 300 ms

2.N.3. Tip In Time Limit: 1 s

2.N.4. Tip In Throttle Rate: 150 %/s

2.N.5. Lap Over Boost Time Limit: 2 %

2.N. Engine Miscellaneous:

Alternate Header permitted (Lotus Motorsports Part Number ALS3E0298F or PPE Part Number 320001SC)
Lotus Motorsports Oil / Water Heat Exchanger (Part Number ALS3E0298F) permitted.
Lotus Motorsports Exige Cup 255 Intercooler (Part Number BLS3E0169F) permitted.
Alternate Valves permitted (Supertech Part Number TIV-1031 Intake, TEV-1031 Exhaust)
Alternate Valve springs permitted (Eibach Part Number 20407.116)
Water to air intercooler permitted in stock intercooler location.
Alternate camshafts permitted (Piper Cams Part Number VVTLIBP285 intake, VVTLIBP285 exhaust.)

3. Drivetrain

3.A. Transmission Option 1

3.A.1. Number of Forward Speeds: 6 3.A.2. Manufacturer: Toyota

3.A.3. Gear Ratios: 3.A.3.a. 1st: 3.166 3.A.3.b. 2nd: 2.050 3.A.3.c. 3rd: 1.481

3.A.3.d. 4th: 1.166 3.A.3.e. 5th: 0.916 3.A.3.f. 6th: 0.725

3.A.4. Gear Shift Pattern: H Pattern 3.A.5. Gear Engagement: Syncromesh

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3.B. Transmission Option 2

3.B.1. Number of Forward Speeds: 6 3.B.2. Manufacturer: Toyota C60 / Kaaz Gears
3.B.3. Gear Ratios: 3.B.3.a. 1st: 2.929 3.B.3.b. 2nd: 2.176 3.B.3.c. 3rd: 1.700
3.B.3.d. 4th: 1.364 3.B.3.e. 5th: 1.167 3.B.3.f. 6th: 0.916
3.B.4. Gear Shift Pattern: H Pattern 3.B.5. Gear Engagement: Syncromesh

3.C. Final Drive

3.C.1. Axle Ratio: 4.529

3.D. Drivetrain Miscellaneous

Alternate 3rd (1.438) and 4th (1.105) ratios permitted for Transmission Option 1. Monkey Wrench Racing gears, Part Number MWR-430712.

4. Suspension

4.A. Suspension Type: 4.A.1. Front: Unequal A Arm 4.A.1. Rear: Unequal A Arm

4.B. Suspension Miscellaneous

5. Chassis

5.A. See Technical Department for information

5.B. Chassis Miscellaneous

Lotus Motorsport Exige Cup 255 Big Brake Kit (Part Number ELS3J0040J) permitted.

6. Body

6.B. Body Overhang: 2.B.1. Front: Stock 2.B.2. Rear: Stock

6.C. Stock Body Materials: _____

6.D. Maximum Body Width: 1730 mm

6.F. Body Miscellaneous:

Lotus Motorsports Exige Cup 255 roof permitted.
24" x 6" opening may be added on body above muffler.
Wing may be removed.