

Vehicle Technical Specifications

Vehicle: Chevrolet Corvette Z51 (2005-2007) Class: GTS



DRAFT VTS Approved for Racing

Vehicle Manufacturer: Chevrolet

Year and Model: Corvette Z51 (2005-2007)

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>Front</u> |
| 1.C. Drive Wheels: | <u>Rear</u> | 1.D. Wheelbase: | <u>2685 mm</u> |
| 1.E. Induction Type: | <u>Naturally Aspirated</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>LS2</u> | 2.A.3. Number of Cylinders: | <u>8</u> |
| 2.A.2. Maximum Displacement: | <u>5983 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>92.1 mm</u> |
| 2.A.6. Max. Compression Ratio: | <u>10.9:1</u> | 2.A.8.b. Hole Diameter: | <u></u> |
| 2.A.8. Restrictors: | | 2.A.10. Direction of Engine Rotation: | <u></u> |
| 2.A.8.a. Percentage Restriction: | <u></u> | | |
| 2.A.9. Cylinder Firing Order: | <u>1.8.7.2.6.5.4.3</u> | | |

2.B. Cylinder Block

| | | | |
|---------------------------------|--------------------------------|-------------------------------|------------------|
| 2.B.1. Part Number: | <u>General Motors 12568950</u> | | |
| 2.B.2. Cylinder Block Material: | <u>Aluminum</u> | 2.B.3. Maximum Cylinder Bore: | <u>101.68 mm</u> |

2.C. Cylinder Head

| | |
|--------------------------------|--------------------------------|
| 2.C.1. Part Number: | <u>General Motors 12564243</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>1</u> | 2.D.1.b. Exhaust: | <u>1</u> |
| 2.D.2. Maximum Valve Head Diameter: | 2.D.2.a. Intake: | <u>50.8 mm</u> | 2.D.2.b. Exhaust: | <u>39.4 mm</u> |

2.E. Intake Port Dimensions

| | | | | |
|----------------------------------|------------------|---------------------------|-----------------------|--------------|
| 2.E.1. At Intake Manifold Face | 2.E.1.a. Height: | <u>Stock</u> | 2.E.1.b. Width: | <u>Stock</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>Stock</u> | 2.F.1.b. Width: | <u>Stock</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>154.9 mm</u> | 2.G.1.b. Approved: | <u>154.9 mm</u> |
| 2.G.2. Reciprocating Assembly Mass: | 2.G.2.a. Stock: | <u>1292.8 g</u> | 2.G.2.b. Minimum: | <u>1292.8 g</u> |
| 2.G.3. Aftermarket Rods Allowed: | <u>No</u> | 2.G.4. Aftermarket Pistons Allowed: | <u>No</u> | |

2.H. Camshaft

| | | | | |
|------------------------------|-------------------------|-------------------------|-----------------------------|---------|
| 2.H.1. Part Number: | <u>GM 12574519</u> | or | 2.H.2. SCCA Profile Number: | <u></u> |
| 2.H.3. Rocker Arm Ratio: | <u>1.7:1</u> | 2.H.4. Valve Actuation: | <u>Pushrod</u> | |
| 2.H.5. Type of Cam Follower: | <u>Hydraulic Roller</u> | | | |

2.I. Crankshaft

| | | | |
|---------------------|--------------------------------|----------------------|----------------|
| 2.I.1. Part Number: | <u>General Motors 12570249</u> | | |
| 2.I.2. Stock Mass: | <u>22.8 kg</u> | 2.I.3. Minimum Mass: | <u>22.8 kg</u> |

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2.J. Flywheel

2.J.1. Stock Ring Gear Diameter: 355 mm

2.L. Intake Manifold

2.L.1. Part Number: GM 12572170

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

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.: 90 mm 2.L.4.b. Throttle Body Part Number: GM 12570790

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

2.L.7. Intake Manifold Material: Nylon 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. Engine Miscellaneous:

Installation of a dry sump system is permitted.

3. Drivetrain

3.A. Transmission

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

3.A.3. Gear Ratios: 3.A.3.a. 1st: 2.97 3.A.3.b. 2nd: 2.07 3.A.3.c. 3rd: 1.43

3.A.3.d. 4th: 1 3.A.3.e. 5th: 0.71 3.A.3.f. 6th: 0.57

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

3.C. Final Drive

3.C.1. Axle Ratio: 3.42

3.D. Drivetrain Miscellaneous

4. Suspension

4.A. Suspension Type: 4.A.1. Front: Independent SLA 4.A.1. Rear: Independent SLA

4.B. Suspension Miscellaneous

5. Chassis

5.A. See Technical Department for information

5.B. Chassis Miscellaneous

Alternate brake calipers with a maximum of four pistons are permitted.
Two piece steel / aluminum brake rotors are permitted, up to 5% larger than Z51 rotor size.

6. Body

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

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6.D. Maximum Body Width: 1844 mm

6.F. Body Miscellaneous: