

Vehicle Technical Specifications



Vehicle: Ford Mustang FR500S (08) Class: GTS

DRAFT VTS Approved for Racing

Vehicle Ford
Manufacturer: _____

Year and Model: Mustang FR500S (08)

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

E-Mail: tech@sccapro.com
Phone: (785) 357-7223
Fax: (785) 233-7223
Packages: 6700 SW Topeka
Blvd.
Building 300
Topeka, KS 66619

Vehicle Technical Specifications



Vehicle: Ford Mustang FR500S (08) Class: GTS

Vehicle Manufacturer: Ford

Year and Model: Mustang FR500S (08)

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.

Vehicle Technical Specifications



Vehicle: Ford Mustang FR500S (08) Class: GTS

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>See Appendix A</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>4.6L SOHC 3 valve</u>	2.A.3. Number of Cylinders:	<u>8</u>
2.A.2. Maximum Displacement:	<u>4.6L/286 CID</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>90 mm</u>
2.A.6. Max. Compression Ratio:	<u>9.8:1</u>	2.A.8.b. Hole Diameter:	<u>TBA</u>
2.A.8. Restrictors:	<u>TBA</u>	2.A.10. Direction of Engine Rotation:	<u>Clockwise</u>
2.A.8.a. Percentage Restriction:	<u>TBA</u>		
2.A.9. Cylinder Firing Order:	<u>13726548</u>		

2.B. Cylinder Block

2.B.1. Part Number:	<u>TBA</u>	2.B.3. Maximum Cylinder Bore:	<u>90.2 mm</u>
2.B.2. Cylinder Block Material:	<u>Aluminum</u>		

2.C. Cylinder Head

2.C.1. Part Number:	<u>TBA</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>1</u>
2.D.2. Maximum Valve Head Diameter:	2.D.2.a. Intake:	<u>TBA</u>	2.D.2.b. Exhaust:	<u>TBA</u>

2.E. Intake Port Dimensions

2.E.1. At Intake Manifold Face	2.E.1.a. Height:	<u>TBA</u>	2.E.1.b. Width:	<u>TBA</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>TBA</u>	2.F.1.b. Width:	<u>TBA</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>TBA</u>	2.G.1.b. Approved:	<u>TBA</u>
2.G.2. Reciprocating Assembly Mass:	2.G.2.a. Stock:	<u>TBA</u>	2.G.2.b. Minimum:	<u>TBA</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>TBA</u>	or 2.H.2. SCCA Profile Number:	<u>TBA</u>
2.H.3. Rocker Arm Ratio:	<u>TBA</u>	2.H.4. Valve Actuation:	<u>Pivot Ball / Rocker Arm</u>
2.H.5. Type of Cam Follower:	<u>TBA</u>		

2.I. Crankshaft

2.I.1. Part Number:	<u>TBA</u>	2.I.3. Minimum Mass:	<u>Stock</u>
2.I.2. Stock Mass:	<u>TBA</u>		

2.J. Flywheel

2.J.1. Stock Ring Gear Diameter:	<u>TBA</u>		
----------------------------------	------------	--	--

2.L. Intake Manifold

Vehicle Technical Specifications



Vehicle: Ford Mustang FR500S (08) Class: GTS

2.L.1. Part Number:	<u>TBA</u>		
2.L.2. Stock Port at Cylinder Head Face: 2.L.2.a. Height:	<u>TBA</u>	2.L.2.b. Width:	<u>TBA</u>
2.L.3.a. Allow Port Match to Head:	<u>No</u>	2.L.3.b. Port Matching Depth:	<u>Not Applicable</u>
2.L.4.a. Throttle Body Bore Dia.:	<u>Alternative 62 MM</u>	2.L.4.b. Throttle Body Part Number:	<u>Alternative# M9926-3V</u>
2.L.5. Number of Throttle Bodies:	<u>1=</u>	2.L.6. Butterflies per Throttle Body:	<u></u>
2.L.7. Intake Manifold Material:	<u></u>	2.L.8. Manifold Pieces:	<u></u>
2.L.9.a. Intermediate Port Matching Allowed:	<u>No</u>	2.L.9.b. Depth from Face:	<u>Not Applicable</u>

2.M. Required Engine Seal Locations

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

2.N. Engine Miscellaneous:

Alternate: Ford racing 4.6L 3V RH/LH high flow head (M-6049-463VP3/M-6050-463VP3)
 Alternate: Ford Racing 2005-10 Mustang GT 4.6L 3V camshafts (M6550-3V)
 Alternate: Ford Racing 4.6L EFI Manifold (M9424-463V)
 Alternate: Ford Racing 4.6L EFI 62mm Throttle Body Alternate: M9926-3V
 Ford racing 3V 4.6L Head Changing Kit (M606703V46) is allowed. Ford Racing oil pan (M6675-R50) is allowed For the 2010 race at Miller only: If Ford Stage 1 cylinder heads are used then a 5.0L stroke kit is allowed. Ford supplied fuel sample port is allowed.

2008 Ford Mustang FR500S 4.6 3 Valve Engine Modifications. These modifications can be used through the 2012 race season when they will no longer be allowed.

- 1) LMESBL10-3VB 5.0 stroker shortblock 12cc balanced \$4995.00 (1)
- 2) LME46CNC3VST Stage 3 cylinder heads \$2895.00 (1)
- 3) 15-794 canton oil pan \$350.00 (2)
- 4) M-6550-3V camshafts \$799.00 (3)
- 5) M-9929-3V 62mm throttle body \$575.00 (3)
- 6) M-9424-463V intake manifold \$550.00 (3)
- 7) 4.6 modular crankshaft scraper \$129.00 (1)
- 8) 3V cam phaser kit \$129.00 (1)

The above Cylinder heads are already approve using the ford part#M-6049-463-VP3 and M-6050-VP3 Livernois Motorsports is the supplier for Ford Racing Cylinder Heads.

The above 5.0 kit uses a stock 4.6 engine bore and a 3.75" stroke

Features:

- ♦ Custom Livernois Forged Steel Stroker Crankshaft
- ♦ Livernois Exclusive Diamond Forged (2618) Pro-Series Pistons
- ♦ Diamond Rings, Locks, and Wrist Pins
- ♦ Manley H-Beam or I-Beam Rods w/ ARP 2000 Bolts
- ♦ Clevite Tri-Armor Coated Bearings
- ♦ Limited One Year Warranty - Click [here](#) for Details

Vehicle Technical Specifications



Vehicle: Ford Mustang FR500S (08) Class: GTS

6.F. Body Miscellaneous:

The roll cage as delivered in the vehicle is allowed. The fuel cell as delivered in the vehicle is allowed.

The following body parts are allowed:

Comp-800-68 G-Stream Comp 800 Wing 12"x 68"

D-Strut G-Stream D-type Strut mount kit

S197-Splitter G-Stream S197 Mustang splitter kit in carbon

TR-S197-Hood Tiger Racing 2005-09 Super Louver Hood cf

TR-S197-Trunk Tiger Racing 2005-09 trunk in carbon fiber

The rear wing is allowed to be 1" above the roof .