FACTORY SUPER CARS

CLASS OVERVIEW
Factory Super Cars is an eliminator designed for the Detroit-based OEM companies to compete heads-up with the 2008 and newer factory drag racing cars dubbed Chevrolet COPO, Dodge Drag Pak, and Ford Cobra Jet. It is the rebirth of factory muscle car drag racing on the quarter-mile dragstrip. Different year engine configurations may be transplanted into different year bodies as long as they are the same make and model. Example: 2017 Copo engine may be transplanted into a 2008 Camaro. Cross breeding of brands is strictly prohibited.

Note: This set of class rules is presented to all competitors under the assumption that any modifications not specifically written within these rules shall be deemed illegal, unless the competitor has the expressed written consent from the NMCA Tech Director.

RACING FORMAT
This class will be an all run, heads-up field, NHRA Pro Ladder, on a .500 Pro Tree, Autostart.

CLASS DESIGNATION = FSS

<table>
<thead>
<tr>
<th>ENGINE</th>
<th>POWER ADDER</th>
<th>BASE WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ford 330 (2008 – 2012)</td>
<td>2.3L TVS / Eaton</td>
<td>3275</td>
</tr>
<tr>
<td>Ford 302 (2010 – 2016)</td>
<td>2.9L Whipple</td>
<td>3450</td>
</tr>
<tr>
<td>Ford 327 (2019)</td>
<td>3.0L Whipple</td>
<td>3575</td>
</tr>
<tr>
<td>Ford 351 (2019)</td>
<td>2.9L Whipple</td>
<td>3575</td>
</tr>
<tr>
<td>GM 327 (2012)</td>
<td>2.9L Whipple</td>
<td>3275</td>
</tr>
<tr>
<td>GM 350 (2014 - 2018)</td>
<td>2.9L Whipple</td>
<td>3450</td>
</tr>
<tr>
<td>GM 350 (2019)</td>
<td>2.65L Magnuson</td>
<td>3525</td>
</tr>
<tr>
<td>Mopar 354 (2015)</td>
<td>2.9L Whipple</td>
<td>3500</td>
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</tbody>
</table>

REQUIREMENTS & SPECIFICATIONS

ENGINE: 1

BLOCK
Must be same make as car used, NMCA or NHRA-accepted aftermarket cylinder blocks permitted. Equipment other than original factory-installed prohibited. Engine must remain in stock location — height, setback, etc. Cylinder bores must not exceed .080-inch overstock. Bores are measured at top of cylinder where ring wear is not evident. Normal balance job (i.e., one piston/rod assembly untouched) permitted. Otherwise lightening of component parts prohibited. All throttle bodies, manifolds, heads, etc. must be tightened to prevent any air or fuel leaks. Vacuum lines must be securely connected or blocked off. Stroke tolerance is +/- .015-inch. Cylinder blocks may be sleeved. O-ringing cylinder blocks are prohibited.
HARMONIC BALANCER
SFI Spec 18.1 balancer is required.

CRANKSHAFT
Stock OEM, NMCA or NHRA accepted aftermarket crankshaft mandatory. Aftermarket crank must retain OEM configuration. Lightening of crankshaft other than normal balance job prohibited.

CONNECTING RODS
Stock or NMCA accepted aftermarket connecting rods are permitted. Length must be stock +/- .025-inch center to center. The use of connecting rod and crank spacer bearing is prohibited. The combined weight of the piston, pin, rings and connecting must be equal to or greater than the NHRA stock replacement minimum assembly weight.

PISTONS & PINS
Stock or NMCA accepted aftermarket pistons and pins are permitted. Aftermarket pistons may be forged or cast and must retain as-cast or as-forged head configuration. Piston must the same overall design with the same dome and/or dish configuration as the factory OEM piston. The pistons must retain the correct number, location, depth and width of ring groves. Any steel wrist pin of OEM diameter permitted. Any modifications to the piston and/or pin are prohibited.

CYLINDER HEADS
Must be correct casting number for year engine combination claimed. CNC porting of Intake runner, exhaust runner, and combustion chamber is permitted. Changing the configuration of the Combustion Chamber is prohibited. Welding, epoxying any part of the intake, exhaust port is prohibited. Spark-plug hole must maintain stock location, size, and angle as machined by the OEM: spark plug adapters prohibited. Intake and exhaust manifold adapter plates prohibited. Valve-guide centerlines must maintain the stock lateral and front-to-back location as machined by the OEM. Cylinder heads are additionally restricted in that they must retain original-size valves at original angles +/- 1 degree and must be able to hold original cylinder-head volume. Runner volumes may not exceed the current Super Stock cylinder-head volumes as listed on www.NHRARacer.com. External modifications beyond normal repair prohibited. Final acceptance as determined by NMCA. Intake side of head may not be cut into any part of valve cover bolt holes or intake mounting holes. Valve-cover bolt holes must remain unaltered and in their original location. The following are permitted: polylocks, jam nuts, screw-in larger-diameter rocker studs or pinned studs, bronze-wall valve guides, cylinder head studs. Valve
spring umbrellas optional. Cylinder head may have all of the seats replaced. Any valve-job permitted, O-ringing head prohibited.

SUPERCHARGER
Must be correct year, make and model specified for cars engine. Sandblasting, grinding, flash removal, dry film coating, or any other modification to Supercharger prohibited.

Supercharger permitted pulley chart

<table>
<thead>
<tr>
<th>YEAR</th>
<th>BRAND</th>
<th>CID/HP</th>
<th>SUPERCHARGER</th>
<th>UPPER</th>
<th>LOWER</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014-2015 Camaro COPO 350</td>
<td>530 HP</td>
<td>2.9L Whipple</td>
<td>3.250</td>
<td>8.000</td>
<td></td>
</tr>
<tr>
<td>2016-2018 Camaro COPO 350</td>
<td>580 HP</td>
<td>2.9L Whipple</td>
<td>3.250</td>
<td>8.000</td>
<td></td>
</tr>
<tr>
<td>2017-2018 Camaro COPO 350</td>
<td>590 HP</td>
<td>2.9L Whipple</td>
<td>3.125</td>
<td>8.000</td>
<td></td>
</tr>
<tr>
<td>2019 Camaro COPO 350</td>
<td>630 HP</td>
<td>2.65L Magnuson 34J/32R</td>
<td>3.350</td>
<td>8.000</td>
<td></td>
</tr>
<tr>
<td>2015 Challenger Drag Pak 354</td>
<td>530 HP</td>
<td>2.9L Whipple</td>
<td>3.000</td>
<td>7.950</td>
<td></td>
</tr>
<tr>
<td></td>
<td>540 HP</td>
<td>2.9L Whipple</td>
<td>3.000</td>
<td>7.950</td>
<td></td>
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<tr>
<td>2008 Mustang Cobra Jet 330</td>
<td>425 HP</td>
<td>2.3L Eaton</td>
<td>2.911</td>
<td>8.125</td>
<td></td>
</tr>
<tr>
<td>2010 Mustang Cobra Jet 330</td>
<td>435 HP</td>
<td>2.3L Eaton</td>
<td>2.754</td>
<td>8.125</td>
<td></td>
</tr>
<tr>
<td></td>
<td>500 HP</td>
<td>2.9L Whipple</td>
<td>3.970</td>
<td>8.125</td>
<td></td>
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<tr>
<td>2012 Mustang Cobra Jet 330</td>
<td>450 HP</td>
<td>2.3L Eaton</td>
<td>2.911</td>
<td>8.125</td>
<td></td>
</tr>
<tr>
<td></td>
<td>510 HP</td>
<td>2.9L Whipple</td>
<td>3.970</td>
<td>8.125</td>
<td></td>
</tr>
<tr>
<td>2013 Mustang Cobra Jet 302</td>
<td>500 HP</td>
<td>2.9L Whipple</td>
<td>3.500</td>
<td>8.000</td>
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<tr>
<td>2014 Mustang Cobra Jet 302</td>
<td>525 HP</td>
<td>2.9L Whipple</td>
<td>3.375</td>
<td>8.000</td>
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<tr>
<td></td>
<td>560 HP</td>
<td>2.9L Whipple</td>
<td>3.000</td>
<td>8.000</td>
<td></td>
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<tr>
<td>2016 Mustang Cobra Jet 302</td>
<td>565 HP</td>
<td>2.9L Whipple</td>
<td>3.250</td>
<td>8.000</td>
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<tr>
<td></td>
<td>575 HP</td>
<td>2.9L Whipple</td>
<td>3.250</td>
<td>8.000</td>
<td></td>
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<tr>
<td>2019 Mustang Cobra Jet 327</td>
<td>610 HP</td>
<td>3.0L Whipple</td>
<td>3.750</td>
<td>8.000</td>
<td></td>
</tr>
<tr>
<td>2019 Mustang Cobra Jet 351</td>
<td>570 HP</td>
<td>2.9L Whipple</td>
<td>3.500</td>
<td>8.000</td>
<td></td>
</tr>
</tbody>
</table>

INTERCOOLING
Factory OEM intercoolers and intercooler tanks must be retain for year, make and model being claimed.

OILING SYSTEM
Any oil pan permitted. Stock or aftermarket OEM type oil pump is permitted. Oil pump location, oil pump drive, and complete oiling system must remain as originally produced. The use of an accumulator is permitted. All entries must have a properly fitting lower engine oil containment device.

COOLING SYSTEM
Full size stock type radiator for year, make and model being claimed is required. Aluminum radiators are permitted. Any cooling fans are permitted. Any aftermarket factory OEM type
water pump is permitted. Water pump must bolt onto the factory location without any modifications.

FUEL SYSTEM
Any electric fuel pump permitted. Electric fuel pump must shut off with vehicle’s ignition switch or master cut-off switch. Fuel lines may be changed to any size line with in-line fuel filters and fuel regulators permitted. Factory gas tanks and aftermarket fuel cells are permitted. When using a fuel cell, a rear firewall of a minimum .032 inch aluminum or .024 inch steel must be installed to totally seal driver compartment from fuel cell.

FUEL INJECTION
Electronic fuel injection permitted. Larger fuel injectors permitted, provided no modification or re-drilling of manifolds is performed. Only one injector per cylinder permitted.

THROTTLE BODY
Must be correct year, make and model specified for cars engine. Sandblasting, grinding, flash removal, dry film coating, or any other modification to throttle body prohibited. If OEM throttle body(s) was equipped with electronic throttle control (i.e., drive by wire), the throttle body(s) may be adapted to mechanical throttle linkage if an aftermarket OEM-type electronic-fuel injection system is used.

AIR INLET TUBE
Optional. If used, air inlet tube must be OEM automotive or retain OEM configuration. Air inlet tube may be cut or trimmed, epoxying prohibited. If using current engine combination in an older model year air inlet tube and must be approved by NMCA Technical Services before use.

FUEL
Gasoline is the only acceptable fuel allowed. NMCA reserves the right to inspect fuel at any time during competition. Failure to pass Fuel Check is grounds for disallowance of the run during competition and disqualification from the event during eliminations. Fuel must read no greater than “0” on the Kavlico Model FT-K01 Fuel Check meter. No oxygenated fuels permitted.

DRIVETRAIN: 2

AUTOMATIC TRANSMISSION
Any model transmission, same make as car, with a maximum of three forward speeds. Transmission case must be OEM or aftermarket OEM replica from a standard, automotive application as found in the Official NHRA Stock Car Classification Guide. Aftermarket case must
meet SFI Spec. 4.1. NHRA-accepted adapter plates permitted. Modifications to shifting patterns are permitted, provided full shift pattern is retained. Full shift pattern must include park and reverse. Any gear change must occur as a result of an internal function of the transmission or from direct action by the driver. Shifting with the use of pneumatic, electric, hydraulic, etc. is prohibited. Lockup converters of any kind are prohibited. Wires for a trans brake, line lock, starting line enhancer (bump box), wheel speed, driveshaft speed or GPS signal to transmission prohibited. Deepened stock or aftermarket transmission oil pans permitted. Functional neutral safety switch mandatory. Transmission brake prohibited. Starting line staging devices are prohibited. Tailshaft modifications for bushing replacement, or NHRA-accepted aftermarket tailshaft permitted. Must be equipped with a transmission shield meeting SFI Spec 4.1. Any car running quicker than 9.99, SFI 29.1 automatic transmission flexplate and SFI 30.1 flexplate shield mandatory. See General Regulations 2:12, 2:14

Lockup Torque Convertor prohibited.

**TRANSMISSION, MANUAL**
Manual transmission prohibited.

**DRIVELINE**
Any steel or aluminum driveshaft is required. Carbon fiber driveshaft is prohibited. Driveshaft safety loop is required.

**BRAKES, STEERING & SUSPENSION:**

**BRAKES**
Front and rear hydraulic brakes are required. Carbon brakes are prohibited. Automated brakes are prohibited. The application and release of the brakes must be a function of the driver. Dual reservoir master cylinder is required. Line-lock is permitted only on the front wheels using one line-lock button and solenoid. Any other electrical, pneumatic, hydraulic, etc. switch in braking system is prohibited.

**SHOCKS/STRUTS**
No pneumatic or electronic shocks permitted unless such items are Factory OEM equipped. No additional reservoirs permitted.

**FRONT SUSPENSION**
Must retain complete stock front suspension system as produced by manufacturer for body used, aftermarket tie rods with Heim joints permitted. Travel limiters permitted. Sway bar optional. See NHRA General Regulations 3:4
REAR SUSPENSION
Must remain as produced by the OEM, NMCA or NHRA accepted except for the following: Coils may be changed (clamped or spaced) as long as stock mounting points are maintained. Solid bushings in rear suspension permitted. Cars with rear coil springs may relocate the upper control arm at rear-end attachment point. Rear trailing arms may be replaced with NHRA-accepted OEM-type aftermarket units. Aftermarket lower unit must be non-adjustable and have bushed ends (no heims). Aftermarket upper unit may be adjustable and use heim ends instead of bushings. Sway bar(s) optional. OEM or aftermarket torque arm permitted only on vehicles OEM-equipped with a torque arm. OEM torque-arm attachment points at rear end must be retained. See NHRA General Regulations 3:4.

WHEELIE BARS
Wheelie bars are permitted and cannot be longer than 48-inches or to the rear bumper, whichever is greater.

FRAME: 4

CHASSIS
All vehicles must have a chassis that meets the guidelines set by SFI for their respective speed and elapsed time. A valid NHRA serialized Chassis sticker is mandatory for any car running 9.99 or quicker, or 135mph or faster at a NHRA member track. Roll cage meeting SFI 25.5 is mandatory. See NHRA General Regulations 4:4, 4:11, 10:6.

FRAME
Front and rear frame rails must remain unaltered and in the stock locations. Rear frame rails may be notched for tire clearance only. Notching rear frame rails for rear end clearance/ride height purposes is prohibited. Sub frame connectors are permitted.

WHEELBASE
Entries must retain stock wheelbase dimensions of + or – 1 inch. Maximum wheelbase variation from left to right is 1 inch.

GROUND CLEARANCE
A minimum of 4 inches from the front of the vehicle to 12 inches behind front spindle centerline is mandatory. A minimum of 3 inches for the rest of the vehicle is mandatory (except for oil pan and exhaust headers).

TIRES & WHEELS: 5

TIRES
The use of 30-inches tall by 9-inches wide or smaller slicks is required. Rear tires may not exceed 10-inches wide regardless of wear. Tire tread may not extend outside of the fender.

**WHEELS**
Aftermarket racing wheels permitted.

**UPHOLSTERY**
Must have full factory type upholstery, including carpet, door panels, headliner, and factory dash. Driver’s seat is required and mounted in the stock location. Aftermarket front seats are permitted and must be upholstered. Rear seat, heater and A/C controls may be removed.

**STEERING COLUMN/WHEEL**
OEM or stock type steering column required. Steering column must have a factory appearance. Removable steering wheel is permitted.

**PEDALS & PEDAL LOCATION**
Stock type pedals and linkage in the factory location are required.

**BODY**
Body must retain original appearances and profiles for year, make and model being used. OEM body shell must be intact. Light weight body panels are restricted to hood, bumpers and deck-lid/truck-lid or hatch. Hood may be a lift-off style and deck-lid/trunk-lid or hatch must be hinged. Lift off style deck-lid/trunk-lid or hatch is prohibited. Alterations or aerodynamic modifications are prohibited.

**HOOD SCOOPS**
The use of aftermarket forward facing hood scoops is prohibited. Factory OEM hood scoops are permitted.

**COWL AREA**
Complete OEM cowl is required.

**GRILLE**
Grille must be full production for make, model and year being claimed. Covering in front of or behind the grille is prohibited.
**BUMPERS**
Complete stock bumpers, guards, and braces (front and rear) mandatory, consistent with make, model, year claimed. Energy absorbing apparatus may not be removed. Rear bumper cover or valance only (i.e., not the bumper) may be notched or slotted for clearance around wheelie bars. Opening maximum is to allow for wheelie-bar movement only. Removal of rear bumper cover or trimming rear bumper cover the full width of wheelie bar prohibited.

**FIREWALL**
Stock, unaltered firewall is required. Any holes in firewall must be sealed to separate the engine bay from interior.

**FENDER SPLASH PANS**
Full, factory OEM or aftermarket inner fenders are required.

**WINDSHIELD & WINDOWS**
All Factory OEM glass is required and must be operational.

**FLOOR**
Complete stock floor, in the stock location is mandatory. Any holes in floor and/or transmission tunnel must be sealed.

**WHEEL WELLS**
Factory wheel wells/tubs are required.

**WING/SPOILERS**
Factory OEM rear wing/spoiler are permitted. Any adjustments to the wing/spoiler during a run are prohibited.

**STREET EQUIPMENT**
Headlights and operational taillights/brake lights are required.

**APPEARANCE**
All cars in competition must be painted or wrapped. Advertising graphics are permitted on the body. In order to be eligible for the NMCA official contingency program, all contingency sponsors’ decals must be easily visible and located on the outside of the vehicle. Failure to do so can result in the driver forfeiting all claimed contingencies for that particular event. The NMRA does require all entries to run the following decals:

1. NMCA Windshield Banner: Decal needs to be located on the top of the windshield or just above the windshield located on the body.
2. NMCA Drag Racing Series: Decals (2) must be located on each side of vehicle. Either on the side windows or decals can be located on the body right beside the side windows.
3. Class Sponsor: Decal must be located on the passenger’s side lower portion of the windshield.
4. VP Racing Fuels: Official Fuel decals (2) required. Must be located on each side of vehicle. (In a contingency decal manner)
5. Aerospace Winners Circle: Decals (2) must be prominently displayed on each side of vehicle. Failure to do so can result in the winning driver forfeiting his/hers Winner’s Trophy & Payout.
6. Class & Competition Numbers: Numbers must be easily visible/legible and located on the front, back, and both side windows

ELECTRICAL: 8

BATTERIES/CHARGING SYSTEM
Battery may be relocated and must be an automotive type

DISTRIBUTOR
Any battery operated, stock type ignition is permitted. Crank trigger systems prohibited unless OEM distributor-less ignition. Distributor-less ignition must retain OEM number of coils.

IGNITION
Two-step permitted. Two-step must be foot-activated through brake pedal, or pressure switch. Hand release prohibited. All wiring associated with the ignition system must be fully visible, labeled, and traceable. See NHRA General Regulations 8:3.

MASTER CUTOFF
A master cutoff switch is mandatory on all vehicles with a battery located in the trunk.

STARTER
Aftermarket starters, in stock location permitted.

SUPPORT GROUPS: 9

COMPUTER/DATA RECORDERS
Original OEM computer may be replaced with an aftermarket computer. Data recorders are permitted.

BRACKET RACING AIDS
The use of any bracket racings aids such as optical sensors, delay boxes, shutter boxes, throttle stops, etc. are prohibited. The use of any device (electrical or mechanical) that allows a driver to ascertain the position of their vehicle to the starting line is prohibited.
TOW VEHICLES
The use of tow-vehicles is permitted.

HEAD AND NECK RESTRAINT DEVICE/SYSTEM
A head and neck restraint device/system meeting SFI 38.1 mandatory and must display a valid SFI label. At all times that the driver is in the race vehicle, from the ready line until the vehicle is on the return road, driver must properly utilize an SFI 38.1 head and neck restraint device/system, including connecting the helmet as required for full functionality of the device. The head and neck restraint device/system, when connected, must conform to the manufacturer’s mounting instructions, and it must be configured, maintained, and used in accordance with the manufacturer’s instructions. Modification of the device is prohibited.

DRIVER
The driver when in the vehicle, from the ready line until the vehicle is safely stopped on the return road, is required to have all safety restraint systems (including the helmet) on and be securely fastened in the vehicle at all times.

CREDENTIALS
A Valid state or government issued driver’s license beyond a learner/s permit level is mandatory for cars running 10.00 or slower. A valid NHRA competition license is mandatory for cars running 9.99 or quicker, at a NHRA Member Track. A valid NHRA or an IHRA competition license is mandatory at an IHRA Member Track.

Note: It is ultimately the competitor’s responsibility to familiarize themselves with the NMCA class requirements as well as all NHRA safety requirements. The competitor agrees they bear the ultimate responsibility when it comes to safety and how it complies with the NMCA and NHRA rule books. The competitor also agrees that no one else other than the competitor is in the best position to know about how their particular race car has been constructed and how to safely operate it.