

## **NMRA FORD MUSCLE**

### **CLASS DESIGNATIONS & INDEX**

AAA/FM	9.50
AA/FM	10.00
A/FM	10.50
B/FM	11.00
C/FM	11.50
D/FM	12.00
E/FM	12.50
F/FM	13.00
G/FM	13.50
H/FM	14.00
I/FM	14.50
J/FM	15.00
K/FM	15.50
L/FM	16.00

#### **Class Description**

Ford Muscle is an index-style foot brake only class for all domestic Ford product vehicles. Classification will be based on a visual inspection and an E.T. range.

#### **Qualifying Information, Ladder Type, & Tree**

All Run, NHRA Sportsman Ladder, .500 Full Tree, Handicap Start. Auto Start. Courtesy Stage.

A 32 or less car field will be ladder on a sportsman ladder.

A 33 or greater car field is randomly paired and run until the field reaches 32 cars or less. When the field reaches 32 or less cars a sportsman ladder for the number of cars remaining will be used to pair the cars. Car placement on this ladder will be determined based on reaction time from the last round that was randomly paired.

Qualifying will be determined off closest to index during qualifying sessions.

All Ford Muscle class participants must declare & have posted the FM class of choice prior to the 1st scheduled qualifying run in their respective eliminator or at the time of technical inspection. If you fail to declare your index, you will automatically be placed in the "H" index class.

Competitors may change classes up to 30 minutes following the first Qualifying session:

Ford Muscle competitors are allowed to enter True Street, providing Car meets all True Street Class requirements. Once Qualifying has begun, No True Street runs will count towards Ford Muscle Qualifying. Once Qualifying has begun, competitors may not make additional time trial

hits unless the Ford Muscle Competitor purchases a True Street Tech Card. If the competitor choses to do so, that competitor may make the True Street Time Trials and Eliminations only.

If weather or any other extraordinary occurrence effects eliminations the Competition Director reserves the right to allow personal index changes between rounds.

#### **ELIGIBLE YEAR MODELS AND BODY STYLES**

All 1940 and newer, make and model vehicles produced by Ford Motor Company in the United States are eligible for competition. Pick-ups and SUV's allowed.

#### **RADIATOR:**

OEM production-style or aftermarket radiator is required and must be mounted in stock location. Stock core support is required.

Water pump: Any aftermarket (belt drive or electric drive) pump permitted.

COOLING FANS: Any permitted.

#### **ENGINE**

Must be of the same engine family as the vehicle was originally produced with any internal engine modification permitted.

#### **EXHAUST**

All entries allowed to use tubular headers. Adapter plates permitted to bolt headers to cylinder head. Exhaust must be directed out of car body, away from driver and fuel tank.

#### **HEADERS & COLLECTORS:**

Any headers and/or collectors permitted. Must be equipped with NHRA approved header collector tether.

#### **EXHAUST TUBING/SIZE:**

Any tubing size permitted.

#### **TAILPIPE & EXHAUST RULES:**

Not required.

#### **MUFFLER REQUIREMENTS:**

Not required.

#### **FUEL DELIVERY SYSTEM**

Fuel cells, electric or mechanical fuel pumps, pressure regulators, and any line size permitted.

Fuel pump must shut off with a master electrical switch. Stock gas tank (if used) must be retained in factory location. Modified fuel pickups & outlet permitted.

Aftermarket/fabricated fuel tank or cell permitted. Must be located in trunk area. If tank or fuel filler is inside trunk, a bulkhead of minimum .032" aluminum or .024" steel must be used between trunk and driver compartment, and tank must be vented to outside of car. When

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used, fuel cells must have a metal box protecting the part of the fuel cell that is outside the trunk floor. Non-metallic fuel cells or tanks must be grounded to frame. See NHRA General Regulations Section 1.5.

**GASOLINE:**

Gasoline and commercially available E-85 are the only permitted fuels in Ford Muscle.

**NITROUS OXIDE:**

Permitted, must be commercially available and installed per manufactures installation instructions.

**OIL SYSTEM**

Dry-sumps prohibited. Oil pump must remain in stock location. Oil pan capacity may be increased. Oil pan modifications permitted to fit body/chassis configuration.

**SUPERCHARGER / TURBO CHARGERS**

Factory and Aftermarket Superchargers and Turbos permitted.

**BLOCK**

Cast iron or aluminum aftermarket blocks permitted, but must retain original external appearance.

**ENGINE LOCATION\ MOUNTS**

Engine must be in stock location. Block and/or heads must not touch stock firewall. Firewall must be in stock location. Solid engine mounts permitted. The use of motor plates Allowed.

**HEADS**

Aftermarket cylinder heads permitted, but must retain original overall appearance for engine declared. Any internal cylinder-head modifications permitted.

**VALVETRAIN**

Any valve train permitted with the following restrictions: exposed aftermarket gear or belt drives prohibited. Any timing device must fit beneath the stock type front timing cover.

**CARBURETOR**

OEM style two 4 barrel or three 2 barrel carburetors permitted. Carburetors are restricted to the following manufactures: Holley, Edelbrock, Carter, Rochester, Demon, Quick Fuel Technologies, and Ford-Autolite-Motorcraft. Choke horn, choke plate, choke shaft, choke linkage, and choke mechanism may be removed.

**FUEL INJECTION**

Vehicle originally equipped with fuel injectors may replace original OEM units with a readily and commercially available aftermarket unit. Engines originally equipped with a carburetor can be

converted to a readily and commercially available aftermarket fuel injection system. Throttle body or direct port fuel injection only.

#### **INTAKE MANIFOLD**

Manifold restricted to factory cast iron, OEM cast aluminum, or aftermarket cast aluminum units readily available to the general public, no hand fabricated or sheet metal units permitted. Any single plane (360 degree) or dual plane (180 degree) unit permitted which does not extend carburetor(s) or fuel injection above plane of hood.

#### **SOLENOIDS:**

Prohibited.

#### **AFTERCOOLER/INTERCOOLER:**

Permitted

### **DRIVETRAIN**

#### **CLUTCH**

Clutch operation must be manually applied and disengaged with foot during run, without the assist of electric, hydraulic or pneumatic devices. Multi stage, variable release, or lock up type of any description is prohibited. Throwout bearing must release all fingers or levers simultaneously.

#### **DRIVESHAFT:**

Any permitted.

#### **REAREND:**

Any automotive type rearend permitted.

#### **MANUAL TRANSMISSIONS**

OEM or aftermarket transmissions with a maximum of 6 forward speeds permitted. Clutchless transmissions prohibited. All shifts must be made manually without the aid of electric, hydraulic or pneumatic devices. Starting line rev limiters prohibited. Torque converters not permitted with this type transmission.

#### **PURPOSE BUILT TRANSMISSIONS:**

Prohibited.

#### **AUTOMATIC TRANSMISSIONS**

(OEM American transmissions or replicas of OEM American transmissions that use planetary gears) Automatic transmissions originally produced by any American automobile manufacturer or replicas of an automatic transmission produced by any American automobile manufacture mandatory. Lock-up transmissions/torque converters prohibited. Transmission-to-engine adapters permitted. **All shifts must be made manually without the aid of electric or pneumatic devices.**

Transbrake prohibited. In those classes that prohibit trans-brakes the following will be used to enforce the rule. A competitor may elect to leave the trans-brake solenoid installed in the transmission, however any/all physical wiring must be removed to the solenoid while the vehicle is in competition.

Starting line rev limiters prohibited. Clutch not permitted with this type transmission.

## BRAKES & SUSPENSION

### BRAKES

The braking system may be upgraded. All cars must have front and rear hydraulic brakes. Automated brakes or any type of traction control is prohibited. Application and release of brakes must be a function of the driver's foot. Line loc permitted on front wheels only. Any other electric, pneumatic, or hydraulic device in the system is prohibited.

### SHOCK ABSORBERS

Each vehicle in competition must be equipped with one operative shock absorber for each sprung wheel. Shock absorbers may be either hydraulic or friction type, securely mounted and in good working order.

### STEERING

Manual or power assisted aftermarket steering system in stock location mandatory. Rack and Pinion steering prohibited unless OEM equipped.

### SUSPENSION

FRONT SUSPENSION: Stock type front suspension required for body used. Travel limiters permitted. Aftermarket springs permitted. Aftermarket, direct replacement bolt in, tubular A-arms permitted. Aftermarket commercially available tubular K-members permitted.

REAR SUSPENSION: Factory spring arrangement must be retained for body used. Leaf springs may be moved inboard for tire clearance. Coil spring vehicles may beef stock control arms or use aftermarket heavy-duty adjustable replacement control arms. Aftermarket springs permitted. Only bolt-on traction devices permitted. Aftermarket weld-on ladder bars, 4-link systems prohibited. Aftermarket coil over shocks permitted must be located in original shock location.

### WHEELIE BARS

Permitted.

### FRAME

Stock, unaltered frame rails required in front subframe. Tubular or rectangular crossmembers and/or "X" bracing permitted. Stock rear subframes required. If the stock rear frame is notched, a piece of the outer frame may be removed for tire clearance only. All notched area of frame rail must be re-covered in steel plate. The inner frame section must remain unaltered. Rear frame rail may not be sectioned. Subframes on unibodied cars may be joined under car.

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Maximum size material to be used; 2x3x1/8 inch rectangular tubing. If connector protrudes through floor, floor must be completely welded to connector.

#### **GROUND CLEARANCE**

Minimum 3 inches from front of vehicle to 12 inches behind centerline of front axle; 2 inches for remainder of vehicle, except oil pan and exhaust headers.

#### **WHEELBASE**

Must retain stock wheelbase with a maximum variation from left to right and front to back of 1 inch.

#### **TIRES & WHEELS**

##### **TIRES**

TIRES—FRONT: Front tires must have a minimum tread width of 4.5 inches.

TIRES—REAR: OEM street tires, drag radials or drag slicks permitted. Maximum actual measured tire size is as follows: Actual measured tread of tire is limited to 11.5 inches. Tire width will be measured after conclusion of run at scale area. Outside of rear tire must be within 3.5" of the inside of the fender at widest point. Tire tread may not extend outside fenders.

##### **WHEELS:**

Spindle-mount front wheels prohibited.

#### **INTERIOR**

##### **INTERIOR**

Must maintain stock appearance; including factory OEM dashboard, headliner, & steering column cover. Heater/air conditioners may be removed.

##### **CARPET**

Floor and tunnel where visible must be upholstered or carpeted. Headliner required.

##### **SEATS**

Upholstered OEM or aftermarket seats (2) in stock location are required. Rear seat may be removed; area must be carpeted or upholstered.

##### **DOOR PANELS**

Door panels must be covered and stock appearing.

##### **STEERING COLUMN**

Stock O.E.M. or stock type steering column required. Removable steering wheel permitted.

##### **GAUGES:**

Aftermarket gauges may be installed in factory dash.

##### **PEDALS/PEDAL LOCATION:**

Stock type pedals, linkage, and location required.

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**BODY**

Body must retain original type headlights, turn signals. OEM or OEM reproduction steel quarter panels and deck lid required. Original appearing fiberglass bumpers and hood/scoop permitted. The body must be finished & painted. Hood must cover engine compartment and intake system completely.

**ADVERTISING****GRAPHICS/LETTERING:**

Graphics/lettering for advertising or creative purposes permitted on entire body.

**APPEARANCE**

All cars in competition must be painted or wrapped. Advertising graphics are permitted on the body. In order to be eligible for the NMRA official contingency program, all contingency sponsors' decals must be easily visible and located on the outside of the vehicle, on the rear quarter windows or rear window in a clear and organized fashion. Contingency decals may not be overlapped or modified. Other decals and sponsors may appear on bodywork, front end and on windows. 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. NMRA Windshield Banner: Decal needs to be located on the top of the windshield or just above the windshield located on the body.
2. NMRA 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.

**SPOILERS, WINGS:**

Aftermarket wings and/or spoilers prohibited.

**FIREWALLS:**

Stock firewall in stock location mandatory. Minor firewall modification for engine installation is permitted.

**FLOOR/TRUNK PAN**

Complete stock floor in stock location mandatory. Floor/Trunk Pan modifications permitted for clearance purposes of wheel tubs and fuel cell installation.

**HOOD/SCOOP**

OEM or original appearing fiberglass hood permitted. Hoodscoops limited to OEM equipment or period style. Hood scoop may be no higher than 4 inches from hood surface. The entire induction system must be completely covered by hood or scoop, which must be part of the vehicle hood.

**WINDSHIELDS/WINDOWS**

Must be OEM safety glass. All windows must be operative.

**BUMPERS:**

OEM or OEM reproduction steel or fiberglass bumpers required.

**FENDER SPLASH PANS**

OEM or OEM reproduction full-fender splash pans required. Splash pans may be trimmed to allow clearance for headers.

**GRILLE**

A full-production grille is required for the body style used. Covering in front of or behind the grille prohibited.

**WHEEL WELLS**

Aftermarket wheel tubs permitted. Material used to add to the width of the inner wheelwell may be steel or aluminum.

**OUTER FENDERS:**

Leading and trailing edges of fenders may be trimmed for tire clearance, maximum 2".

**RAM AIR:**

All aftermarket or fabricated ram-air units permitted.

**DOORS:**

Driver and passenger doors must be functional and operable from inside and outside of vehicle.

**ELECTRICAL**

**BATTERY:**

Battery may be relocated. Charging system optional.

**IGNITION**

Ignition systems limited to the following: OEM, Holley "HP" Annihilator, MSD 6 & 7 Series, Mallory HyFire 3RL1, Accel Blueprint & 300+, Crane Fireball HI-6, and Pertronix Flame Thrower. No accessories may be added or included to program timing changes except for start-up retard.



Any timing changes must be made by mechanically adjusting distributor or factory stock vacuum advance. Crank triggers and magnetos prohibited. Engine rev limiters, top end only, permitted.

8.5 STARTER: All entries must be self-starting with on-board starter.

#### **SUPPORT GROUPS**

Bracket racing aids such as optical sensors, delay boxes, stutter boxes, two-steps, and throttle stops prohibited. The application or use of any device, mechanical or electronic that permits the driver to ascertain the position of their vehicle in relation to the starting line is prohibited.

#### **ONBOARD DIAGNOSTICS\DATA RECORDERS ONBOARD**

Onboard diagnostics and data recorders used to monitor and record parameters such as a driveshaft speed, acceleration, nitrous timing, chassis strain, and suspension travel etc., prohibited. Wide band oxygen sensors permitted. "Playback" tachometers permitted. Laptops prohibited in vehicle.

#### **TOW VEHICLES**

Vehicles may not be towed in or to staging lanes. Vehicles may not be towed from the return road.

#### **STREET LEGAL REQUIREMENTS:**

Headlights and tail lights for year & make of body used mandatory. Head lights & tail lights required to be functional.

#### **WEIGHT**

Weight is not a tech item however excessive lightening as determined by the tech officials will not be permitted.

#### **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 mandatory for cars running 10.00 or slower.

A Valid NHRA competition license is mandatory for cars running 9.99 or quicker, at an NHRA Member Track. NHRA/IHRA competition license mandatory at an IHRA Member Track.

**Note:** It is ultimately the competitor's responsibility to familiarize themselves with the NMRA 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 NMRA 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.

