

2015 Rules
Day Five
Big Block Shootout
Engine Masters

PREAMBLE

The 2015 Engine Masters Rules Document provides guidelines and minimum standards for the configuration and operation of engines to be entered into the Engine Masters Challenge competition. As a general rule, unless optional equipment or a modification is permitted by this Rules Document or by subsequent addendums to this Rules Document, it is prohibited. The 2015 Engine Masters Challenge Rules are designed to provide for the orderly conduct of the Event and to reduce the risk of injury to both participants and spectators during the Event.

It is ultimately the obligation of each participant to ensure that his/her conduct and engine comply with the applicable Engine Masters Challenge Rules and regulations, including amendments and modifications to the Rules. The Rules and regulations may be amended from time to time at the sole discretion of TEN: The Enthusiast Network, whether contained in this Rules Document, amended by written notification subsequent to this Document, or communicated prior to or during the Event. No express or implied warranty of safety shall result from publication or compliance with these Rules. They are intended as a guide for the conduct of the Event and are in no way a guarantee against injury or death to participants, spectators or others. Any reproduction or reprints of the 2015 Engine Masters Rules are not permitted for use in affiliation or conjunction with any other publication, competition, event, and/or for financial gain by any means without the express written consent of TEN: The Enthusiast Network.

Rules clarifications:

If you have a question regarding a rule or are contemplating a modification or a change in your proposed engine make, we highly recommend that you contact our Rules Committee. You will be required to email your question and/or a written description of your proposed modification or change to questions@enginemasters.com. The members of our Rules Committee will then review your question and/or proposed modification or change then provide you alone with an official written response within 14 working days. TEN: The Enthusiast Network will file a copy of your rule question and/or your planned modification along with the Rules Committee response for future reference as needed. Participants that do not have a rule clarification, modification or change authorization in writing from our Rules Committee may run the risk of disqualification from the contest. Verbal rule clarifications and/or modification or change authorizations will not be honored, so please check with our Rules Committee. If after reading the Rulebook you still have questions please correspond via email to questions@enginemasters.com. Please make sure your questions are specific and well prepared in advance.

TEN: The Enthusiast Network/Sponsor reserves the right, in the exercise of its reasonable discretion, to deny or suspend participation in Sponsor's event at any time to any person or entity based on: (a) a violation of the event rules; (b) conduct detrimental to the event or to the good will or image of Sponsor; (c) such person's or entity's failure to comply with any entry criteria, including the payment of any entry fees; or (d) any other conduct by such person or entity that Sponsor reasonably determines is unsuitable for the event or potentially damaging to the reputation of the event and/or Sponsor.

Please read the rules carefully. In order to participate you are required to sign a statement which is included in this Rules Document stating that you understand and agree to comply with the Rules and Statements contained herein.

GENERAL RULES

IMPORTANT DEADLINES AND DATES

March 30, 2015	Begin Acceptance of Applications
April 30, 2015	Participant and Alternate selections
May 15, 2015	Entry Fees and Rules Acceptance due
August 17, 2015	Publication of Official Dyno Run Schedule
August 24, 2015	Team Information sheet due
September 7, 2015	Hotel room block release date

COMPETITION

Competition will be divided into five classes. Each class will compete on a specific day. Each class will have specific rules that apply to that class. The winner of each class will be determined at the end of that day's competition.

ENTRY REQUIREMENTS

Applications will be available at www.enginemasters.com.

An individual may apply to be a participant in the Engine Masters Challenge so long as the participant acknowledges and agrees to conform to the rules. Official Engine Masters Challenge applications will be accepted by email and/or mail only.

Applicants must be at least 18 years of age. Any person who meets the Entry Requirements can submit an Engine Builder Application for review. The individual making and signing the application on behalf of the Team will be the designated Team Leader. It is expressly understood that any communication relative to the Team and its Competitive Entry, both in advance of the Competition and at the Event site, will be solely with the designated Team Leader.

The competition will be divided into five classes.

Each class will compete on a specific day.

Each class will have specific rules that apply to that class.

The winner of each class will be determined at the end of that day's competition.

All applications will be reviewed to determine eligibility. TEN: The Enthusiast Network, UPERFLOW/DTS, University of Northwestern Ohio employee/students and/or their immediate family members are not eligible to participate.

Engine Masters Challenge Event Management will determine participants at their sole discretion. All applicants will be notified of their selection by email only.

Participants will be required to post a non-refundable entry fee in the amount of \$300.00 within 30 days of his or her acceptance notification. Participants that fail to post the \$300.00 entry fee by the required date may be disqualified from the competition.

ELIGIBILITY

All Team participants must be at least 18 years of age at the time of the Event in order to compete in the Engine Masters Challenge.

Engine Masters Challenge Management or Event Officials reserve the right to tech or inspect an engine for any reason and also reserve the right to disqualify or deny any Team the right to compete if management deems the Team or Engine ineligible.

or unsafe for any reason. Event Management's decision on engine's eligibility is final.

Each participant agrees that any disputes concerning any facet of the event, the rules of the Engine Masters Challenge, or any decision of Engine Masters Officials whether or not incident to the event, shall be resolved pursuant to the procedures provided for in the Rules.

Each participant agrees to be bound by the Engine Masters Rules and any decision of the Engine Masters Challenge Event Management, Competition Director, Event Manager and/or Rules Committee, and if requested by a member of Event Management, agrees to voluntarily submit his/her engine for inspection or impoundment by any member of Event Management to ascertain the legality of the participant's engine.

Each participant agrees to release and waive TEN: The Enthusiast Network, Engine Masters Magazine, the Engine Masters Challenge, its sponsors and affiliates from any liability related to the rules of conduct of the Event. Each participant will be required to sign any Liability Waivers as required specific to the Event.

If during the Event a participant requires medical attention by medical personnel the participant must obtain a written release by medical personnel and submit it to Engine Masters Officials before returning to competition. Failure to comply with advice of medical personnel will result in disqualification.

EVENT CREDENTIALS

In consideration of being permitted to enter, and by being issued credentials (passes) to the Engine Masters Event, all Team members and any other holders of Event credentials agree as follows:

All rights to advertising, promotion, filming, recording, existing and other exploitations of the Event, the participants and engines entered in the Event and their activities at the site of the Event, before, during and after the Event and reasonably related to the Event, are reserved to TEN: The Enthusiast Network and its assigns.

Participants hereby grant TEN: The Enthusiast Network, Engine Masters Challenge, and its assigns:

Full and unconditional permission to make still and motion pictures and any other type(s) of audio or visual recordings of them and their engine's participation in the Event and their activities at the site of the Event, before, during and after the Event and reasonably related to the Event; and the exclusive, worldwide and perpetual rights to use the same, together with their names, likenesses and biographies of participants and the names, likenesses and date of, or relating to, their entered engines for publicity, advertising, exhibition or exploitation, whether or not for profit, in print, audio, video and other communications media by reproduction and sale or other distribution by any and all means.

Further, Participants agree that without prior consent of TEN: The Enthusiast Network they shall not take any still or motion pictures or make any audio or visual recordings of the Event, participants therein, or activities at the site of the Event for reasons other than the personal, in-home use of the participant or cause or permit others to do so or use the same.

Participants also agree that TEN: The Enthusiast Network shall have exclusive, worldwide, perpetual and universal use of any pictures or recordings made or used in violation of this paragraph.

Participants agree that, without prior written consent of TEN: The Enthusiast Network they shall not offer for sale, sell, give away or otherwise distribute, at the site of the Event, any token, any souvenir, any product or anything of value, or permit others to do so.

Holders of credentials or passes are subject to and bound by the Rules of TEN: The Enthusiast Network and the Engine Masters Challenge, whether contained in this Rules Document, amended by written notification subsequent to this Document, or communicated prior to or during the Event. Those persons holding staging area/competition area credentials may be subject to and bound by additional rules and/or restrictions.

Any transfer of credential or misuse of credential is subject to a fine of not less than \$200, forfeiture of the credential, and ineligibility to participate in the Event or hold a credential to the Event for a period of one (1) year.

Engine Masters Challenge Event Management shall retain the authority at all times to remove any person at their discretion.

TEN: The Enthusiast Network and the Engine Masters Challenge Event Officials have the authority to refuse return of entry/registration fees and to revoke credentials for any participant whom they believe has fraudulently violated the application, entry, or registration procedures.

CONDUCT

No alcohol or drugs at Event will be permitted. This policy will be strictly enforced and presence of alcohol or drugs will automatically disqualify the Team and engine(s) from competition. Any participant who is under the influence of alcohol or drugs will be disqualified immediately, and subject to forfeiture of event entry fees, ineligibility for any awards and/or contingency monies, possible fines as determined by Event Management, and/or probation or suspension from participating in future Events.

Participants at the Engine Masters Challenge Event are expected, at all times, to conduct themselves in a professional and non-disruptive manner. Any participant who, in the sole and absolute judgment of Engine Masters Challenge Event Management:

- 1) Verbally or physically threatens another participant, Event Official, spectator, or any other person; or
- 2) Uses vulgar, abusive or derogatory language; or
- 3) Engages in unprofessional and/or unsportsmanlike conduct detrimental to the Event; or
- 4) Causes deliberate delay of the Event; or
- 5) Otherwise creates a condition or circumstance that is unsafe, unfair, or out of order, shall have violated the rules and regulations of the Engine Masters Challenge Event, creating just cause for disqualification, and/or ejection from the Event, and may also result in fines, probation and/or suspension from participating in future Events.

Disqualification or ejection due to conduct may result in the any or all of the following penalties as determined by Engine Masters Challenge Event Management at their sole discretion:

- 1) Participant may be required to forfeit their scheduled run placement, contingency and/or prize monies, and/or Event awards;
- 2) Participant may be fined. (Fine will be determined by Event Management.)

In the event of disqualification or ejection due to conduct, no refunds of the entry fees or any other Event fees will be permitted. It is expressly understood that violation of conduct rules is serious, and will be addressed accordingly. The decision(s) of Engine Masters Event Management shall be final and non-appealable; provided, however, that with a showing of reasonable and good cause, the Engine Masters Event Management may, without liability, reverse or revise their decision(s) at their sole discretion.

Safety conduct dictates that all engines must be handled and operated in a safe manner at all times within the confines of the Event, including but not limited to the uncrating/crating area, staging area, tuning area, inspection area, dyno cells, and any photography areas.

No participant engines may be operated during the Event at any time other than the entry's assigned dyno run time without prior authorization of Event Management. Event Officials have the right to stop and disqualify any engine if it is not being handled and/or operated in such a manner as would be considered safe.

APPAREL

All members of the Participant's Team must be properly attired when present in any of the Event venue staging or competition areas. Close-toed shoes are mandatory. Bare torsos, tank tops or muscle shirts are not allowable in any areas of the Event venue.

PROCEDURAL RULES

COMMERCIALLY AVAILABLE

Commercially Available is defined as: any engine component(s) that are or were available for purchase by consumers. Engine component(s) that are or were designed and/or manufactured outside the United States are acceptable as long as they meet all other rules criteria. Participants may be required to provide proof of purchase and/or undisputable proof of availability for purchase of any contested engine component(s) or face possible disqualification from the competition.

RUNNING ORDER

A participating Team's competition running order position will be determined by Engine Masters Management. Team numbers and running positions are not transferable. The running order will proceed from highest to lowest. The highest number assigned will be the first engine in the running order; the next lower number will be the second engine in the competition running order, and so on. Engines will be quarantined based on that day's position as the day progresses. Engine Masters Challenge Event Officials have the option of allowing participants whose engines to leave the event but only after their engine has been released by Engine Masters Management.

WITHDRAWAL OF AN ENTRY

For a competing Team to withdraw and be eligible to receive a partial refund of the entry fee, the Team Leader is required to notify Engine Masters Challenge Management in writing of their withdrawal prior to June 15, 2015. If the participant does not officially withdraw in writing prior to June 15, 2015 the participant may forfeit his/her entry fee. Once a participant withdrawn, that participant may not re-enter the Event during the current year.

TRANSPORTATION OF ENGINES

Participants are responsible for coordinating and scheduling the shipment and funding necessary for their engine transportation to and from the Engine Masters Challenge Event Venue.

All Participants' engines must be delivered to the Event Venue at least 24 hours prior to their scheduled run time, as published in the Official Dyno Run Schedule. The competition dates and required engine delivery dates are as follows:

Friday, October 9th -- engine must arrive NO LATER than Wednesday, 24 hours prior to scheduled run time)

Any engine that arrives past the above prescribed dates and times may be disqualified from the competition.

All competing engines, parts and tools must be crated or secured to an acceptable engine holding device that permits easy movement & engine protection through use of fork lift (no loose engines) and delivered to the address below. Each competitive team will be permitted to ship and/or deliver a maximum of 2 engine crates.

Shipping address:

*University of Northwestern Ohio
Attn: Engine Masters Challenge
1744 Hartzler Rd.
Lima, OH 45805*

TOOLS & PARTS

Approved/accepted participants are required to supply all necessary tools, spare parts, jets, gaskets, timing light, shop towels, etc. in order to complete their final engine assemblies, tuning adjustments, modifications and/or repairs. Tools, spare parts, jets, gaskets, timing lights, shop towels, etc will not be supplied by the dyno facility or by TEN: The Enthusiast Network, except for those specific items needed to install and remove the engine from the dyno.

STAGING & PREPARATION

Participants will be asked to uncrate and load their engine on the Dyno cart the day prior to their scheduled assigned run time. The participating Team must be present during preparation and installation on the Dyno Cart. The engine must be in overall good shape and safe operating condition, and must be properly installed on the Dyno cart.

Management reserves the right to preliminarily tech an engine while it is eligible for participation in order to determine if any modifications need to be made in order for the entry to meet the Technical Rules and requirements. Management or Event Officials reserve the right to disqualify or deny any entry the right to compete if management feels the entry is unsafe for any reason. Engine Masters Challenge Event Management or Event Official's decision on engine's eligibility is final.

It is the participant's responsibility to present his/her engine to the staging area in the proper running position and be ready to compete when his/her position is reached in the running order. Any deliberate delay that Event Officials determine may result in the participating Team gaining a competitive advantage will result in disqualification. However, if the participant makes an effort to compete and a delay occurs that does not result in the team gaining a competitive advantage, Event Officials may extend the opportunity to the Team to make their competition appearance.

INSTRUMENTATION

Instrumentation for recording the engine's performance will be provided by the SUPERFLOW/DTS dynamometer operating software and hardware. The channels that will be recorded and available to the participants will be: speed RPM, indicated torque, indicated horsepower, corrected torque, corrected horsepower, oil pressure, fuel pressure, water temperature, barometric pressure, relative humidity, carburetor air temperature, fuel flow, oil temperature, air/fuel ratio - left and right (2 channels), brake specific fuel consumption, and correction factor.

DATA ACQUISITION

Data acquisition systems are permitted as part of the operating engine management system or ignition system of the engine. Sensors in addition to those listed as provided under Instrumentation for the operation of the engine management system for data acquisition are legal unless otherwise stated as prohibited.

DYNO PULLS

Team Leader must be present during their dyno pulls. Dyno pulls will be conducted as follows. Engines will be placed on an assigned dyno. Participants will assist the on-site officials and dyno facility personnel in completing the necessary dyno connections and final engine assemblies. Each team leader will then be required to review and sign a Dyno Checklist form, which confirms the engine is ready to compete. The team leader will be given up to 35 minutes to start, prepare, warm-up the engine and do whatever they wish once the command to start is given. For scoring purposes, during this 35 minute period the team leaders engine is required to make a minimum of three medium acceleration scoring pulls in any order the team leader deems acceptable. The team leader may make any changes or any number of pulls during the "35 minute period". At the completion of the "35 minute timer period" or at any point during the 35 minute timer period the team leader may elect to stop. The team leader then selects the THREE pulls to be used for scoring purposes. The team leaders engine shall be removed from the dyno.

CORRECTION FACTOR

Correction factor to be used during the contest will be SAE J607 STD. Barometric pressure, temperature, & humidity inputs are used as data inputs to Superflow/DTS software to arrive at corrected torque & corrected horsepower figures.

SCORING

Minimum RPM for scoring purposes – 3000 RPM. Maximum RPM for scoring purposes – 7000 RPM. Performance rankings for the competition pulls will be computed using average corrected torque, average corrected horsepower, numbers from the Superflow/DTS dyno. Each entry's scoring is a direct result of a Team's engine Dyno performance, and resulting scores are specific to the engine. Points and scores are not transferable from a Team's engine to another engine entry by the same Team, nor are points and scores transferable from one Team to another Team.

If an event is postponed for any reason prior to the start of the scheduled run, it is necessary that any engine and Team still eligible for event competition be in attendance at the rescheduled date and time to be eligible for all scores and any contingency monies and/or awards. If an event is postponed and/or disrupted and rescheduled due to weather or other conditions, natural disasters, acts of God, etc., participants unable to return will not be eligible for any final placement and/or contingency monies, and will be listed as Did Not Finish (DNF) in the Event competition postings. Scored qualifying pulls will consist of three medium acceleration pulls with scoring data recorded from 3000 rpm and ending at 7000 rpm.

Average corrected torque from each of the three scored qualifying pulls will be added together to arrive at an average corrected torque quotient.

Average corrected horsepower from each of the three scored qualifying pulls will be added together to arrive at an average corrected horsepower quotient.

To compensate for the different engine displacements, the average corrected torque quotient for 3 dyno pulls and the average corrected horsepower quotient for 3 dyno pulls are added together.

The sum of the average corrected torque quotient and the average corrected horsepower quotient are multiplied by 1000 and then divided by the claimed cubic inch displacement of the engine. This will yield a quotient number to be used for scoring for engine dyno results. Final quotient numbers are recorded to one decimal place on scoring form.

Rounding of numbers will be utilizing standard rounding:

Example $2232.96 = 2233.0$

Claiming a cubic inch less than actual calculated cubic inch as stated in the ENGINE-displacement section of these rules, shall result in disqualification. Claiming a cubic inch 5 or more cubic inches greater than actual calculations shall result in disqualification.

TIE BREAKING

If a tie exists for position the following steps shall be used to break the tie:

Step 1: If a tie exists use the highest two peak corrected torque scores using SAE J607 correction factors & the highest peak two corrected hp scores using SAEJ607 correction factors to find a quotient.

Step 2: If a tie still exists after step 1, use the single highest peak corrected torque score using SAE J607 correction factors & the single highest peak corrected hp score using SAE J607 correction factors to find a quotient.

Step 3: If a tie still exists after the above two tie breaker steps, the tie shall be decided by coin flip.

POSTING OF SCORING

Scoring of all competing Teams' entries will be posted after a review of the Dyno figures on all days.

RULES NOTIFICATION AND ENFORCEMENT

The Engine Masters Rules are effective upon date of release and publication of the Rules, regardless of when a participant receives actual notice. The current Engine Masters Rules and all Addendums and Amendments are posted on the website www.enginemasters.com. The Engine Masters Rules are applicable only to the Engine Masters Challenge Event.

An amendment is effective upon date of publication by Engine Masters, regardless of when a participant receives actual notice. Special Rules, Addendums, and/or Amendments may be made by Engine Masters Event Management at its sole discretion for the Event at any time due to extraordinary conditions. Such special rules, addendums, and/or amendments shall immediately apply to the conduct of the Event if they are published or announced prior to the commencement of the Event by means of website distribution and/or an email communication, and/or written memorandum at the Event site, and/or pre-event participant's meeting.

With respect to Rules Modifications, The Rules Committee may find it necessary to make changes, additions, clarifications, or modifications to the rules at any time prior to the event. TEN: The Enthusiast Network reserves the right to make such changes as deemed necessary at its sole discretion. Any such changes will be posted as a dated amendment to the rules document, available for viewing by participants at www.enginemasters.com. We strongly recommend monitoring the posted rules throughout the period leading up to the competition to keep current with any rules modifications.

TEN: The Enthusiast Network and/or Engine Masters Challenge Event Officials reserve the right to tear down any engine for a rules enforcement inspection. Engine Masters Challenge personnel will conduct and/or supervise all teardowns. Any participant found to be in violation of the rules or refusing to comply with an inspection request may be disqualified from the contest. It is the participant's responsibility to verify the legality of all parts, components and/or modifications on their engine.

Calls of judgment by Event Officials are not subject to appeal or protest and shall be final. Any violation pertaining to safety procedures and/or safety equipment may not be appealed or protested.

PROTEST PROCEDURES

Team leader protests must be filed in writing with the proper Engine Masters Official no later than when the final engine in the specific session for that day completes their respective pulls to be used for scoring purposes. Team leader protests may only be filed by the team leader signing the official Dyno Checklist. TEN: THE ENTHUSIAST NETWORK™ reserves the right to reject any protest filed that it determines, in its sole and absolute discretion, is frivolous or is intended to harass another participant or to otherwise gain some unfair competitive advantage. Protest by Event Officials may be entered at any time during the event at no charge.

Participant protests must specify the infractions and/or items protested.

Any external protest – fee.....\$ 100

Any protest other than external – fee..... \$ 250

Any engine protested shall be required to be inspected to determine compliance with an external protest. Failure or refusal to disassemble an engine upon demand from an Event Official will result in the removal of the engine from further competition and will additionally be cause for removal of the engine, owners, and Team or crewmembers from the facility.

Protests must be accompanied by a protest fee as outlined above. The protest must be made in writing and must specifically identify in detail the nature of the violation and must be accompanied by the protest fee as prescribed above. The Engine Masters Challenge Rules Committee shall investigate and decide the protest as promptly as possible and shall inform both the protesting party and the party who is protested against of its decision.

If the protest is sustained, the protest fee, less the cost of any technical department inspection expense, shall be returned to the protesting member.

If the protest is not sustained, the protest fee, less the cost of any required inspection expense, shall be forfeited to the protested member.

An engine protested for an external protest and found to be out of compliance with the requirements of the rules will be given the opportunity to make necessary changes to be in compliance with the requirements of the rules if the protested motor has not yet made its competitive Dyno pulls. Team leader protests may only be filed by the registered team leader of the protesting Team that is competing in the Event.

PAYOUT/PURSE

An engine must compete and its finishing position be verified before the entry may be eligible for payout/prize money as specified in the rules. Engines eligible for

winner's and runner up's payout in each class will be subject to teardown for tech inspection verification after eliminations are held.

Payout will be by cash purse payable by The Enthusiast Network. This is NOT a contingency payout. Total available purse will be determined by the number of Event Product Sponsors, with \$900 in cash awards per sponsor available for each of the (5) days' competition. The purse will be divided as follows:

Class Winner: \$700 per product sponsorship

Second Place: \$200 per product sponsorship

Any participant disqualified for mechanical non-compliance loses all awards and/or contingency monies for the Event. In cases involving rule infractions of a flagrant nature resulting in disqualification and ejection for any reason as determined by Event Management and/or The Enthusiast Network personnel, the participant will not be eligible for any payout monies for that event.

TECHNICAL RULES

(NOTE: This class WILL use a cubic inch divider in scoring to compensate for varied engine displacement. Scored test rpm range 3000-7000 rpm)

ENGINE

Normally aspirated domestic V8 production passenger car big block engine types only. Pontiac, AMC, Oldsmobile, Cadillac Pontiac, Buick, Ford FE, Ford 385 series including Boss 429, Chevrolet big block including 10.2-inch deck blocks and W-Series, Chrysler B and RB Wedge permitted. Chrysler Hemi engine prohibited.

Power adders prohibited. Any method of artificially heating and/or cooling engine fluids, fuel, and/or air prohibited (not to include thermal or friction coatings). This includes, but is not limited to, heating and/or cooling by mechanical device such as an external cooler or radiator/heat exchanger, pre-heating or cooling of any fluids with an oil heater or fuel heater/cooler, or the addition of a temperature-altering device designed to cool or heat the incoming air charge by mechanical means such as an intercooler, chemical means such as a chemical to cool either the incoming air/fuel charge or intake manifold, or electrical means such as an electric oil heater inside or outside the engine. Aftermarket SFI spec 18.1 harmonic balancer mandatory.

DISPLACEMENT

Minimum displacement 450 cubic inches. Maximum displacement unlimited. Cubic inch is calculated by bore x bore x stroke x 6.2832. Bore is measured at top of cylinder where ring wear is not evident. Bore and stroke are measured to the third decimal place, i.e. 0.001. Cubic inches are calculated to one (1) decimal place i.e. 350.0. Any part of a cubic inch is rounded up to the next highest inch (i.e. 301.2 = 302) for the purpose of claimed cubic inch of engine as used in scoring. The cubic inch used in scoring will be a whole number; no decimal part will be used.

ENGINE BLOCK

Any domestic OEM passenger car block of an eligible engine type, or commercially available cast iron or cast aluminum aftermarket OEM replacement engine block permitted. Engine block must retain OEM cylinder bore spacing and OEM block angle. Lifter bores may be bushed. The responsibility for adapting to the SUPERFLOW/DTS dyno cart is that of the participant.

MOTOR PLATES

Front style "motor plates" prohibited.

CRANKSHAFT

Any commercially available crankshaft permitted.

CYLINDER HEADS

OEM passenger car or commercially available replacement style two valve per cylinder cast iron or cast aluminum cylinder heads that meet all other rules with the manufacture's identification, such as stamped, etched, engraved, or machined numbers permitted. Cylinder heads must retain the passenger car production port configuration. Any valve seat size and/or valve size permitted. Any commercially available stainless steel valves permitted. Titanium valves and/or springs prohibited. Titanium retainers permitted.

Unlimited porting permitted. Welding, and/or filling the inside of the intake ports, exhaust ports and/or combustion chambers prohibited. Modifications to the exterior surfaces of the intake and/or exhaust ports, such as welding and/or adding additional material to increase port size or to alter the port design prohibited. Altering the placement of the valves or sparkplug from the cylinder head's as-manufactured configuration prohibited. Flange adapters that connect the exhaust ports to the header prohibited.

IGNITION

Commercially available

CARBURETION

Single (One) 4150 carburetor only. Minimum throttle shaft - .085" measured at thinnest point; minimum throttle plate thickness - .040" measured at thinnest point. Cutting and reassembling carburetor prohibited. Slide valve carburetor prohibited. Carburetor must have four individual venturi and four individual throttle blades as per OEM for a 4150 style carburetor.

OR

Single (One) 4500 carburetor only. Minimum throttle shaft - .085" measured at thinnest point; minimum throttle plate thickness - .040" measured at thinnest point. Cutting and reassembling carburetor prohibited. Slide valve carburetor prohibited.

Carburetor spacer limited to total height of 1.200-inch including gaskets. Water or any other auxiliary fluid injection systems prohibited. Engines must be equipped with a single point rearward-pull mechanical throttle linkage compatible with the dyno actuation linkage. A bracket providing an anchor point for the dyno throttle cable and a compatible linkage ball is required at the pull point. A diagram detailing the requirement will be provided to all accepted EMC participants.

All engines will utilize a pre-pump fuel filter, electric fuel pump and regulator and supply line filter supplied by the dyno facility and each engine builder utilizing a carburetor will determine the fuel pressure. Both single and dual feed applications, will be given one (1) type 8 AN connection fuel line located on the SUPERFLOW/DTS dyno chassis approximately 46 inches from your carburetor, so design your system accordingly.

FUEL INJECTION

Single injector per cylinder. Commercially available single central 4150 or 4500 flange throttle body only. Single or four-throttle plate throttle body only. Throttle body spacer limiter to total height of 1.200-inch including gaskets.

Knock (detonation) sensors prohibited. Water or any other auxiliary fluid injection systems prohibited. The throttle body must be equipped with a single point rearward-pull mechanical throttle linkage compatible with the dyno actuation linkage. A bracket providing an anchor point for the dyno throttle cable and a compatible linkage ball is required at the pull point. A diagram detailing the requirement will be provided to all accepted EMC participants.

Fuel pressure regulation will be provided by a system consisting of pre-pump filter, electric fuel pump, regulator and supply line filter as part of the dyno fuel system. Fuel pressure will be set at 65 psi maximum on the dyno fuel pressure gauge. Fuel pressure will be set prior engine start up (engine off). This is a Supply and Return system. A single -8 AN fitting will be required for fuel hook-up to the fuel rails and will be provided approximately 46 inches from center of engine as locked down on SUPERFLOW/DTS dyno. A single -8 AN fitted and return fuel line will be supplied to fuel tank.

Fuel Injection ECU components must be mounted on a plate attached to the flywheel side of the engine block.

AIR SUPPLY

Air Supply to engines of all types will be provided by 18" (inches) circle "cone" hood (same as previous competitions and photo available on line) that will be positioned over the center of the engine approximately 6" from top of carburetor or center mounted throttle body. Fan that supplies air supply will remain on at all times after the command to start engine is given.

AIR FILTER

Not permitted. Heat shields or plates between the intake manifold and carburetor or throttle body prohibited. This includes any structure deemed by the event personnel as designed to take advantage of airflow in dyno installation. Structure such as ram tubes, velocity stacks, etc. attached to the inlet portion of the carburetor/throttle body are prohibited.

CAMSHAFT/LIFTERS/VALVE LIFT

CAMSHAFT

Camshaft must maintain OEM journal diameters as originally manufactured in production. Roller cam bearings prohibited. Custom-designed and custom-ground camshafts permitted.

LIFTERS

Commercially available

VALVE LIFT

Any valve lift permitted.

CAMSHAFT DRIVE

Commercially available.

INTAKE MANIFOLD

Commercially available cast aluminum or cast iron single four barrel. Tunnel Ram intake manifolds prohibited. All carburetors/throttle bodies must mount directly to the intake manifold flange or to an adaptor/spacer with no more than 1.200-inches combined gasket and/or spacer thickness between the intake manifold and the carburetor/throttle body flange.

Porting interior surfaces of the intake permitted. Welding and/or epoxy filler prohibited. Using an intake manifold that is designed on a different make or family of engine prohibited. Intake manifolds may not be drilled and tapped for additional coolant paths. Maximum thickness between intake manifold & cylinder head 0.100" measured with a "go-no go" gauge with engine assembled as to be run.

CONNECTING RODS

Commercially available steel connecting rod.

PISTONS AND RINGS

Any commercially available pistons permitted. Vertical gas ports permitted. The ring package must consist of two compression rings and a single oil ring assembly. Compression rings must be 0.040" or thicker rings. 3-mm minimum oil ring assembly.

COMPRESSION RATIO

Compression ratio limited to 11.5:1

ROCKER ARMS

Any OEM or commercially-available rocker arm permitted.

HEADERS

Chassis-style exhaust headers that run down and back from the front of the engine required. Port matching of the header flange permitted. Any diameter primary tubes and collectors permitted. Headers with slip-on style collectors acceptable. Crankcase ventilation systems that vent to any component of the exhaust system are permitted. Bungs for Lambda O2 sensors permitted. Thermal header wraps (such as Kevlar fabric) prohibited. Exhaust systems must be properly sealed from the header flange to the muffler inlet. Adaptor plates between cylinder head & header prohibited.

MUFFLERS

All engines will run with specified mufflers. Length of flexible tubing from exit of muffler to wall outlet is 15 & ½ feet. ID of flexible tubing is 6". Mufflers are provided at the event.

All engines must utilize two mufflers while running on the dyno; with a minimum distance of 21 1/2 -inches between the mufflers. H-pipes, X-pipes, or any such connection between the left and right headers and/or the exhaust system prohibited. A diagram of the requirements for exhaust hook-up to the dyno facility will be provided to all participants.

OIL PUMP/PAN/SCRAPER

Commercially available. No deeper than 12-inches from the crank centerline. Pan restricted to maximum of 2-inches wider than widest portion of pan rail. Sump configuration may be front, center, or rear sump. Full-length sump prohibited.

Commercially available cast or billet replacement style oil pump required. Oil pump must mount in factory location using OEM style provision for the engine type. Dry sump systems and vacuum pumps prohibited. Oil system accumulators prohibited. Engines that were OEM equipped with external oil pumps may utilize external oil feed line(s) with a maximum I/D of 5/8 inch. External oil feed line(s) connecting the OEM style external oil pump to the oil pan and/or the engine block permitted. Belt-driven external oil pumps prohibited. Electrically powered oil pumps prohibited. Drain plug must be ½-20 thread.

OIL

All engines must be shipped "dry". Engine will be required to use at least 5 quarts of oil. Participants will only use supplied oil for competition. Propylene Oxide or other oxidizing agents/substances prohibited. Oil is provided at the event.

OIL ADDITIVES

No oil additives permitted.

WATER PUMP

Belt driven mechanical water pumps or electrical water pumps permitted. Water pumps must be mounted in the OEM location. Water flow in and out of the water pump must be provided by the OEM block provisions only. Use of a cooling system thermostat prohibited. Water "feed" connections are limited to a set diameter of 1.25 inch I.D. and water "return" connections are limited to a set diameter of 1 inch I.D. Additional plumbing required to adapt engine to these sizes is participant's responsibility.

ELECTRICAL CONNECTIONS

Electrical connection & supply will be furnished in Engine Master Challenge updates.

It is the participant's responsibility to assure the electrical equipment on the engine will work with the SUPERFLOW/DTS dyno connectors at location.

STARTER

Starters will not be used in the competition and are prohibited. The SUPERFLOW/DTS dynos are equipped with a built-in starter.

FLYWHEEL/FLEXPLATE

Any commercially available, unmodified SFI-certified domestic manual STEEL transmission flywheel mandatory. Flexplates prohibited. Removal of starter ring gear permitted.

BELLHOUSING

Bellhousings will not be used in the competition and are prohibited.

COATINGS

Any commercially available performance coating permitted. The application of thermal and/or friction coatings can be performed at any time prior to the competition on any part. Coating a part is not considered a modification, and parts that cannot be legally modified, may be coated.

FUEL

All engines will run VP HP101 gasoline supplied at the event.

SIGNATURE AND ACCEPTANCE OF 2015 ENGINE MASTERS RULES
SIGN AND RETURN WITH ENTRY FEE NO LATER THAN APRIL 16, 2015

The undersigned Team Leader, on behalf of all members of their Team's Accepted Entry Application into the 2015 Engine Masters Challenge, hereby confirms that they have read, understand, agrees to, and will adhere to the Rules of the 2015 Engine Masters Challenge.

Additionally, the undersigned acknowledges that these Rules are effective upon date of release and publication of the Rules. It is also further understood that the Rules may be amended or modified by TEN: The Enthusiast Network and the Engine Masters Challenge Event Management at its sole discretion at any time in accordance with the provisions in this document, wherein such Amendments and/or Addendums are effective upon their date of publication on www.enginemasters.com, and/or by email communication to all Entrants, and/or by written memorandum to all Entrants, and/or by a pre-event participant's meeting.

It is expressly understood that it is the responsibility of the entrant to monitor the website and/or email or mail notification for any Rules Amendments, Addendums, Modifications, or Special Provisions. Entrant agrees to adhere to and abide by any such Rules Modifications that may be made subsequent to this document.

TEAM NAME: _____

Signature of Team Leader: _____

Printed Name: _____

Date: _____