



NATIONAL QUARTER SCALE PULLING

2019 NQS EVENTS

February 1 & 2

White Pine, TN

Walters State Great Smokey Mountains Expo Center, 1615 Pavilion Drive, White Pine, TN 37890
 Contact: Jody Possey 1(865)387-1549
 www.PoseyPullingTeam.com
 Classes: PS, SS, PO, PST, PVT, SA, Outlaw, PVT-Stockhead, & 1100 LP Diesel
 Latitude: 36.130111 Longitude: 83.293641
 *Second track just for local classes!

March 14 & 15

Harrisburg, PA

PA Farm Show Complex, 2300 N Cameron St., Harrisburg PA 17110
 Contact: Doug Diehl 1(301)491-5054
 Daryl Musser 1(717)729-1103
 Pre-Entry only. See website for classes.
 www.keystonegtp.com

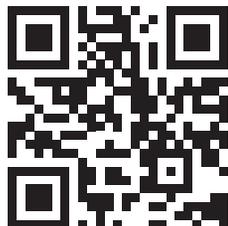
March 29 & 30

Richmond, KY

Madison County Fairgrounds, 3237 Old Irvine Rd, Richmond, KY 40475
 Contact: Julian Stahl 1(563)659-5276
 Kenny Cornelison 1(859)200-3747
 www.nqspulling.org
 Classes: PS, SS, PO, PST, PVT, SA, Outlaw, PVT Stockhead twins, LSP Diesel, 1 Cylinder Factory Stock, SS X-Class and Prostock Diesel

www.NQSpulling.org

Scan the QR code to easily visit the official National Quarter Scale Pulling website.



October 4 & 5 (tentative)

Princeton, IN

Gibson County Fairgrounds, 709 N. Embree Street, Princeton, IN 47670
 Princeton Fall Nationals 19th Annual Tri State Tractor Pullers Association
 Contact: Brandon Hess
 hessbros.livestock@gmail.com or burkhartmax@yahoo.com
 www.NQSpulling.org
 Classes: PS, SS, PO, PST, PVT, SA, 30 Cubic Inch, SS, carb only, Lt. Pro., LPS Diesel

November 1 & 2

Liberty, KY

Central Kentucky Ag/ Expo Center, 678 Wallace Wilkinson Blvd, Liberty, KY 42539
 Contact: Julian Stahl 1(563)659-5276 or
 Kenny Cornelison 1(859)200-3747
 www.NQSpulling.org
 Classes: PS, SS, PO, PST, PVT, SA, Outlaw, PVT Stock Head Twin, LPS Diesel, 1 Cylinder Factory Stock, PS, SS X-Class, Prostock Diesel

NOS HITCH HEIGHT LEGEND

CLASS PRO OUTLAW	
SUPER STOCK	#1050 13"
PRO V W/AFTERMARKET	
OR WELDED HEAD	#1000 12.25"
PRO V W/STOCK HEAD	#1025 12.5"
CLASS PST (PRO, SUPER, TWIN)	
PRO STOCK	#1050 13"
SUPER STOCK W/CARB	#1020 12.5"
PRO V W/STOCK HEAD	#1000 12.25"
39 CUBE TWIN	#1000 12.5"
CLASS PRO V-TWIN	
AFTERMARKET OR WELDED HEAD	#1000 12.25"
PRO V- TWIN WITH STOCK HEAD	#1050 13"
39 CUBE	#1075 13"
CLASS – SUPER STOCK X (LIGHTNING HEATS)	
SUPER STOCK W/CARB	#1050 13"
SUPER STOCK W/INJECTION	#1020 13"
CLASS – OUTLAW	
STOCK ALTERED	#1100 13"
LITE PRO (CHOICE)	#900 12.5" OR #925 12"

1. **General Rules:** Rules apply to all classes unless otherwise specified
 - A. TRACK OFFICIALS DECISION WILL BE FINAL. ANY DISAGREEMENT ON THEIR DECISION ON ANY POINT OF CONTROVERSY WILL RESULT IN DISQUALIFICATION FOR THAT CLASS FOR THE DAY. *The track officials have the final say on what happens on the track.*
 - B. YOUR TRACTOR MUST MEET ALL SAFETY AND SHIELDING REQUIREMENTS PRIOR TO HOOKING OTHERWISE YOU WILL NOT BE ALLOWED TO COMPETE AND THERE WILL BE NO REFUND OF ENTRY.

2. Track Operations:

- A. Driver must put his tractor in a neutral position and be hand pushed to the sled. Tractor must be shut down before chain will be unhooked from tractor.
Flag men will enforce this rule for the safety of the track help. See Rule 1.
- B. No portion of the tractor shall interfere with the sled hitch during pull.
Many times the starting line becomes torn up, which will cause the front of the tractor to be lower than the rear tires. This may cause an interference of the cross bar for the wheelie wheels. The intent of the rule is not to interfere once the pull is underway. See Rule 1.
- C. Any portion of tractor touching boundary line during pull will result in disqualification. This would be limited to the front or the rear tires. There is no out of bounds once the tractor passes the full pull mark. See Rule 1. The entire tractor must pass the full pull mark.
- D. Two attempts will be allowed to start sled except in pull-offs. One attempt only in a pull-off.
An attempt is considered once the hook goes in the hitch and driver physically tries to start the tractor in motion by revving up the engine and attempting to release the clutch. See Rule 1.
- E. The first puller can drop five places which mean he or she will actually start in the 6th position or they can come back immediately. If they do drop, they drop to the 6th position.
- F. If a puller has a mechanical problem they have to drop back 6 positions (five more pull then they hook). If there are less than five tractors remaining, they have until the end of the heat plus five (5) minutes. If they are not able to hook within the allotted time they will receive last place in that heat. THE PULLER CAN NOT DROP TO ANOTHER HEAT - it would be unfair to the others in those heats.
- G. Driver will be disqualified if he or she delays contest.
A puller is expected to have their tractor running by the time the sled gets back to the starting point. If the puller delays more than 90 seconds he will have to drop as discussed in 2-F.
- H. Pulling position will be determined by drawing. The drawing should be done prior to the event for the heats.
- I. Driver must remain seated during pull. Drivers must have at least one hand on the steering wheel at all times.
- J. Weight transfer sled will be used. Either self-propelled or pull back. Must be a 3 foot chain with the hook point within 2 inches or less of the ground. All slam bars on sleds must be mechanically operated. No air, electrical or hydraulic slam devices accepted. Recommend all sleds be a single axle design. Tandem axle sleds tend to steer tractors once they are turned and tractors are more likely to become uncontrollable than with single axle sleds.
- K. Tractors must be operated in a safe manner at all times.
- L. All weights must be safely secured to the tractor. Any excessive or obvious loss of weights or components may be cause for disqualification. The flagman must make the call during the pull. Any disqualification for loss of weight or component must be made during the pull. A pull is started when the sled starts to move and is ended when the sled stops movement, even though the tractor may still be under power.
- M. Track officials have the right to restart the class anytime within the first seven (7), either for full pulls or short tracking.
- N. A tractor can only enter one time per class.
- O. A tractor engine can only pull one time during the finals, can not be switched from one tractor to another ... AKA "The Black Nichols Rule". A puller is able to put in a back up engine, but not from another tractor pulling in the same finals.

3. SAFETY:

- A. YOUR TRACTOR MUST MEET ALL SAFETY AND SHIELDING REQUIREMENTS PRIOR TO HOOKING OTHERWISE YOU WILL NOT BE ALLOWED TO COMPETE AND THERE WILL BE NO REFUND OF ENTRY.
- B. HELMETS AND FIRESUITS ARE MANDATORY IN ALL CLASSES, MUST BE ZIPPED AND SECURED. Fire suits must be a minimum requirement of SFI 3.2A/1. Helmets must

be a minimum requirement of Snell 95.

- C. All tractors are required to have a switch that will kill engine and fuel pump in case of chain or hitch breakage. The switch will be located within range of six (6") either side of center of back of tractor with a minimum of a 1.5" circle.
Make sure it has an adequate size ring in order to ease connecting to sled.
- D. All tractors must be equipped with a dead man throttle.
- E. A minimum one (1) pound dry chemical fire extinguisher or equivalent. A gauge on the fire extinguisher is required. They can either be dry chemical or CO₂-type extinguisher. The fire extinguisher must be full.
- F. All tractors must have a safety device to prevent turnovers. This device is to have wheels or skid plates. Wheels are to be at least 1" wide and 5" in diameter. Skid plates to have at least 3 square inches at ground contact point. Wheels or skid plates must be no less than 5" (tolerance: -1/4") behind the rear tires.
- G. All exhaust must discharge vertically and be securely attached. No more than 10 degrees out of straight upward allowed.
- H. ALL engines must have a scatter shield opposite the cam side of the motor; it must be of 1/8 in. steel or 3/16 in. aluminum. It must cover full height and width of block and be attached in a secure manner to frame and head or head plate. See Pro V-twin rules for V-Twin Shielding.
- I. All drivers should be clean and neatly attired. Tractors should be clean and painted. Drivers under 18 years of age must have signed parental consent on file.
- J. Obvious or excessive consumption of alcoholic beverages or drugs will be grounds for disqualification.
- K. All final drive belts must be covered top 180 degrees and all flywheel and clutch assemblies must be covered 360 degrees with 1/8" steel or 3/16" aluminum and be securely fastened to the frame or engine.
- L. Engine Dampers must meet requirements of SFI Spec 18.1 is required. A bolt is required to secure damper to crank. FLYWHEELS and STARTER PULLEYS must be of billet steel or aluminum (no cast or stamped steel pulleys). No welded on fins. All starter pulleys must have a retaining device to prevent pulley from coming off crankshaft.
- M. All tractors to be equipped with workable brakes.
- N. Fenders: Fenders must extend a minimum of 4" in width and must cover the front of tire to its furthest point forward. It is recommended that the foot step be connected to front of fender to avoid your foot being pulled in by the tire.
- O. NQS Tech official reserve the right to implement rule changes for safety and health reasons at any time.

4. Chassis:

- A. Open to two-wheel drive, rubber tired tractors, no dual wheels, chains or spikes. TIRES MUST BE NO LARGER THAN 26X12X12 FOR ALL TRACTORS.
- B. All tractors must have at least a 3" seat back on all seats. Seat back must be rigid enough not to flex down excessively when leaned upon. 45 degree angle max
- C. Drawbar will be horizontal and stationary in all directions. With hitching device not more than 3/4" in thickness and must have a 1 1/2" width/depth for hook. Pulling point may not be more than 3/4" from back edge of hitching device parallel to and not more than 13" above the ground.
Pulling hitch should be made of steel.
- D. No portion of any tractor may exceed 6 feet in width. No portion of any tractor (except stock altered) may exceed 8 feet forward of the center of the rear wheel, including weights. Stock Altered is 7 feet forward of the center of the rear wheel.
No tolerance on the overall length.
- E. No weights to extend beyond rear tires.
- F. All Tractors must have a hood and Grill

5. Fuel:

- A. All tractors in all classes are to run Methanol (unless otherwise specified), with no additives. There are two U.S. Federal Grades. Grade A and AA. Either grade is permitted to use. Pullers should ensure that the methanol they purchase meets federal standards of purity. Methanol is tested at all NQS events by various chemical analyses as considered appropriate by the NQS Fuel Tech personnel. Deviation from the standards listed below in the fuel sample will result in disqualification. Methanol is a hygroscopic substance and readily absorbs moisture from the air, which rapidly renders methanol illegal as a fuel for use in NQS pulling. Pullers are cautioned to keep methanol containers tightly sealed at all times to minimize the absorption of water.

B. Specification for Pure Methanol:

Parameter	Grade A	Grade AA
Methanol Content, wt%, min	99.85%	99.85%
Acetone & Aldehydes, ppm, max	30	30
Acetone, ppm, max	20	20
Ethanol, ppm, max.	10	10
Acid(acetic acid), ppm, max	30	30
Water Content, ppm, max	1500	1000
Specific Gravity @ 20 °C	.7928	.7928
Permanganate Time, min.	30	30
Residual on evaporation, g/100ml	.001	.001

- Odor Characteristic
- Platinum-Cobalt scale, mix: 5:5
- Appearance: Colorless-clear
- Carbonizable impurities

- C. Diesel fueled tractors must run diesel only with a dielectric value of no greater than 4.9 or less than 2.2. The dielectric meter shall use Cyclohexane to establish the zero reference point in determining all diesel fuel dielectric constant values. The use of additives containing oxygen, such as nitro methane, propylene oxide, dioaxane, MTBE, alcohol (methanol), or nitrous oxide is prohibited. These additives, and others of the oxygen-bearing family, will significantly change the dielectric values of diesel fuel.
- D. Gas: must be either VP C-12 or VP C-15 unless otherwise noted. No oxygenated fuels allowed.
- E. Fuel Injection is allowed in Super Stock, Nitro 30 Cubes in Lite Pro. Unlimited and Open Super Stock Classes (non-diesel-fueled engines).
- F. No pressurized fuel tanks
- G. No Nitrous Oxide.
- H. Propylene Oxide is prohibited in all classes.

6. Tear Down and Illegal Vehicles

- A. All top money winners will have their engines checked for legality. Teching will include, but not limited to the engine. Remember, if you don't want the NQS tech official to see parts of your engine that is not involved with the tear down process, cover it up. Any person who refuses to be inspected for eligibility by routine check of money winners shall not be allowed to enter and/or pull in the class in question until legality is checked. See Rule 1.
- B. Protest of a competitor's vehicle must be filed in writing to a track official within 15 minutes of conclusion of class. A \$250.00 cash protest fee must be submitted at that time. Tear down of protested vehicle must be done by a qualified tech official with the proper testing equipment. Only the tech person and the owner of the protested vehicle are allowed to be present at the time of the tear down. If the vehicle is found to be illegal the protest fee will be returned. If the vehicle is legal the protested vehicle owner will receive the fee. Illegal vehicles will be disqualified for all pertaining classes entered for that event.
- C. NQS Tech Officials can overrule any misprints in these rules.

Pro Stock:

1. 1050 lbs max
2. 50.5 in.³
3. Single cylinder Pro-Stock is defined as having a one cylinder, air cooled four cycle flat head, two valves same side, commercially produced manufactured cast block engine. Sleeves and welding permitted. Commercially produced manufactured cast block means made by Kohler, Wisconsin, Briggs, Tecumseh and etc. If copy is being made, copied block must meet basic manufactures specs for that engine being copied. Crank and cam location, deck height, two valves same side, valve angle (maximum valve angle of 6 degrees), intake and exhaust port location and factory head gasket bolt pattern.
4. No reverse port engines.
5. A stock appearing Kohler type carburetor must be used if other than stock for the model engine being used. Standoff pipe or ram tubes are permitted. Choke may be removed. Single carburetor only. Air restricting venturi must be in stock position and carburetor not to be larger diameter than 1.200". Air controlled by butterfly in stock position in carburetor, no slides, no injection, naturally aspirated only. No air entering after 1.200" restriction. Venturi must be round in shape.

6. Methanol only. See Rule 5.B
7. Wheelbase 56 inches maximum.
8. Overall length 96 inches maximum.
9. Top placing tractors will be checked for, but not limited to: Fuel, Deck Height, Carburetor, Cubic Inch and Factory Head Gasket Bolt Pattern. in.³: 50.500 in.³ zero tolerance. Formula for in.³ is Measured bore x measured bore x measured stroke x .785 = in.³. All bores measured 90 degrees from thrust side. Stock Head bolt pattern, stock head gasket must fit over studs or bolts.
10. 48 cubic inch stock appearing block K-series Kohler engines will be allowed to run with the same weight/hitch as the Pro Stock. 48c.i. engines will have the same rules as the 50.5 Pro stocks, with the following exceptions. Stock Appearing Block K-Series Kohler Engine, open carburetion (no fuel injection), external welding allowed on the blocks (all-thread okay), if engine is sleeved, sleeve cannot be externally visible. Must have head/block restraint.

Super Stock:

1. 1050 lbs max
2. 50.5 in.³
3. Single cylinder Super Stock is defined as any tractor having one cylinder, air cooled four cycle, flat head, two valves same side of engine.
4. No reverse port engines.
5. Any type of Naturally Aspirated induction is permitted.
6. Methanol only. See Rule 5.B
7. Wheelbase 56 inches maximum.
8. Overall length 96 inches maximum.
9. Top placing tractors will be checked for, but not limited to: Fuel and Cubic Inch Limit. 50.500 in.³. Zero tolerance. Formula for cubic inch is Measured bore x measured bore x measured stroke x .785 = Cubic Inch All bores measured 90 degrees from thrust side.

Super Stock Carbureted only:

1. Same rules as Super Stock but is limited to carbureted engines only
2. One single throat carburetor is recommended and suggested.

30 Cubic Inch:

1. 950 lbs. max
2. 30 in.³
3. Single cylinder 30 Cube is defined as any tractor having one cylinder, air cooled four cycle, flat head, two valves same side of engine.
4. No reverse port engines.
5. Any type of Naturally Aspirated induction is permitted.
6. Methanol only. See Rule 5.B
7. Wheelbase 56 inches maximum.
8. Top placing tractors will be checked for, but not limited to: Fuel and Cubic Inch Limit. 30.000 in.³. Zero tolerance. Formula for cubic inch is Measured bore x measured bore x measured stroke x .785 = Cubic Inch All bores measured 90 degrees from thrust side.

Pro V-Twin:

1. Maximum engine size is 45.5 cubic inches
2. Engines with aftermarket/and or welded stock heads will run at 1000# with a 12.5" hitch. Stock head engines with no welding will run @ 1050# with a 13" hitch. On stock head engines only minimal epoxy will be allowed, no excessive use on the external portion of the intake port. Maximum allowable amount would be an area of not more the 1 square inch per head. Intake manifold must bolt directly to the stock intake flange on head with a maximum of .030" thick intake gasket. Adapters or flange extensions are Illegal. Switching of heads from one model and type to another is illegal.
3. Engine shielding rules: 1/8" steel or 3/16 aluminum on external side of cylinder extending from head gasket to frame.
4. Shield must be attached to frame at the bottom and to the flywheel shield at the top to make rigid.
5. Wheelbase 56 inches maximum.
6. Overall length 96 inches maximum.
7. Engines: Must be a commercially available lawn and/or garden tractor factory air-cooled engine. Only configuration accepted is V-twin type.
8. Carburetor: Limited to one (1) carburetor with one (1) venturi with one (1) throttle butterfly. Maximum venturi size will be 1.200". No air entering after the 1.200" restriction.
9. Steel flywheel mandatory, along with the general flywheel shielding rules of 1/8" steel or 3/16" aluminum 360 degrees.
10. Fuel: Methanol or Gas. See Rule 5

Pro Outlaw:

1. NQS Super Stock and NQS Pro V-Twin. Super Stock and stock head twins with no welding runs together. See Hitch legend for weight and

hitch height

- These rules can be changed in order to promote fairness of the type's tractors at any time during the season.

PST (Pro/Super/Twin):

- NQS Pro Stock and NQS Super Stock with open carburetor (no fuel injection), 39 cubic inch and all run together. See hitch legend for weight and hitch height. Pro V-twin stock head no welding tractors run 1000# and 12.5" hitch and 39 cubic inch V-twin can run at 1050# with 13" hitch.
- 48 cubic inch stock appearing block K-series Kohler engines will be allowed to run with the same weight/hitch as the Pro Stock. 48c.i. engines will have the same rules as the 50.5 Pro stocks, with the following exceptions. Stock Appearing Block K-Series Kohler Engine, open carburetion (no fuel injection), external welding allowed on the blocks (all-thread okay), if engine is sleeved, sleeve cannot be externally visible. Must have head/block restraint.
- These rules can be changed in order to promote fairness of the type's tractors at any time during the season.

Stock Altered:

- Single cylinder four cycle flathead engines only.
- Engines must be Kohler, Wisconsin, Tecumseh or Briggs.
- Engine blocks must have an OEM stock appearance. The current approved blocks are the K-Series Kohler block and the MWSC Stock Altered block. Any new blocks must be submitted to the NQS for approval prior to entry.
- Engines must be factory productions or their OEM replacement with factory deck height.
- Stock Head bolt pattern = stock head gasket must fit over studs or bolts.
- Stock Head bolt location and head bolt size.
- Maximum crankshaft stroke 3.25"
- Maximum engine bore 3.780"
- 36.5000 cubic inch limit
- Maximum engine valve size 1.380
- Maximum engine valve lift .330"
- Maximum carburetor venturi size 1.00", no air entering after 1.00" restriction, venturi must be round in shape.
- Carburetor must be mounted to the engine with no more than 1" spacer
- No reverse port engines allowed carburetor must go to the original intake port.
- Carburetor must be a stock appearing Kohler-type
- Billet heads permitted
- Porting and polishing allowed
- No external welding or external modifications allowed
- All thread through finned area is acceptable
- Welding permitted in crankcase area of the block for repair.
- Methanol only. See Rule 5.B
- Must run a factory appearing hood and grill.
- Tractors must have garden tractor rear-ends.
- Tractors must use stock appearing garden tractor frames.
- Frames should maintain factory length, but not mandatory.
- Weight Class 1050 lbs., other weight classes may be pulled.
- Wheelbase: 52 inches maximum
- Top placing tractors will be checked for, but not limited to: Fuel, Bore, Stroke, Carb Size, Valve Lift & Valve Size and deck height. Cubic Inch: 36.500 Cu. In. No Tolerance. Formula for CU. IN. is Measured bore x measured bore x measured stroke x .785 = Cu. In. All bores measured 90 degrees from thrust side.
- If running a factory Kohler produced block the maximum size bore will be 3.830" with a maximum cubic inch of 37.500.

30. Parameter	Measurement	Tolerance
Stroke	3.250"	0.010", must not exceed in ³ limit
Bore	3.780"	0.010", must not exceed in ³ limit
Carb	1.000"	0.001"
Valve Lift	0.330"	0.005"
Valve Size	1.380"	0.001"

- Head Bolt Pattern: Stock Gasket must fit over head studs or bolts.

Outlaw Class:

- NQS Stock Altered run at 1100# 13" hitch
- NQS Lite Pro run either at 900# and 12.5" hitch or 925# and a 12" hitch.
- NQS 30 cubic inch run up to 1100# and 13" hitch.
- These rules can be changed in order to promote fairness of the type's tractors at any time during the season.

Lite Pro Stock:

- 950 & 1000 lbs. weight classes
- 13 inch hitch height.
- 37.5 in.³
- Single cylinder four cycle flathead engines only
- No reverse port engines.
- Engines must be Kohler, Wisconsin, Tecumseh or Briggs.
- Methanol only. See Rule 5.B
- Engine blocks must have an OEM stock appearance. The current approved blocks are the K-Series Kohler block and the MWSC Stock Altered block. Any new blocks must be submitted to the NQS for approval prior to entry.
- Engines must be factory productions or their OEM replacement with factory deck height.
- Stock Head bolt pattern =>stock head gasket must fit over studs or bolts.
- Maximum carburetor venturi size 1.20", no air entering after 1.20" restriction, venturi must be round in shape.
- Carburetor must be a stock appearing Kohler-type
- Billet heads permitted
- Porting and polishing allowed
- Port welding allowed, but no bore welding
- Maximum wheel base is 56".
- Nitro 30 cubic Inch engines are part of this class. Engines have a maximum venturi size 1.200" for carburetor or 1.200" throat for fuel injected engines. Methanol fueled engines can have any type of Naturally Aspirated induction. For Methanol See Rule 5.B. Only Nitro methane will be accepted for Nitro, no other types allowed. They will pull at the same weight.
- Top placing tractors will be checked for, but not limited to: Fuel and Cubic Inch Limit. 37.5 in³. Zero tolerance. Formula for cubic inch is Measured bore x measured bore x measured stroke x .785 = Cubic Inch All bores measured 90 degrees from thrust side.
- NQS 30 Cubic Inch tractor can run in this class at 1000# with a 13" hitch.
- Top placing tractors will be checked for, but not limited to: Fuel, Bore, Stroke, Carb Size, head bolt pattern and deck height. Formula for CU. IN. is Measured bore x measured bore x measured stroke x .785 = Cu. In. All bores measured 90 degrees from thrust side

39 Cubic Inch V-Twin:

- 1050 lbs. max
- 39 in.³ max
- Engine shielding rules: 1/8" steel or 3/16" aluminum on external side of cylinder extending from head gasket to frame. Shield must be attached to frame at the bottom and to the flywheel shield at the top to make rigid.
- Engines: Must be a commercially available lawn and/or garden tractor engine. Only configuration accepted is V-Twin type.
- Cylinder Head: Must be stock head with no external welding. Only minimal epoxy will be allowed, no excessive use on the external portion of the intake port. Maximum allowable amount would be an area of not more than 1 square inch per head. Intake manifold must bolt directly to the stock intake flange on head with a maximum of .030" intake gasket. Adaptors or flange extensions are illegal. Switching of heads from one model and type to another is illegal.
- Carburetor: Limited to one (1) carburetor with one (1) venturi with one (1) throttle butterfly. Maximum venturi size will be 1.200". No air entering after the 1.200" restriction.
- Steel flywheel mandatory, along with the general flywheel shielding rules of 1/8" steel or 3/16" aluminum 360 degrees.
- Fuel: Methanol or Gas. See Rule 5
- Wheelbase 56 inches maximum.
- Overall length 96 inches maximum.
- Top placing tractors will be checked for, but not limited to: Fuel and Cubic Inch Limit. 39 in³. Zero tolerance. Formula for cubic inch is Measured bore x measured bore x measured stroke x .785 = Cubic Inch All bores measured 90 degrees from thrust side.

Open Super Stock Class:

- All General Rules and Super Stock Rules apply, except the following: Shielding: Engine shielding rules: 1/8" steel or 3/16" aluminum on external side of cylinder extending from head gasket to frame. Shield must be attached to frame at the bottom and to the flywheel shield at the top to make rigid. V-Twins: 1/8" steel or 3/16" aluminum on external side of cylinder extending from head gasket to frame. Shield must be attached to frame at the bottom and to the flywheel shield at the top to make rigid.
- 1050 lbs. max.
- Motorcycle, aircraft, marine or automotive type engines are not permitted. Block may be copied, but must meet basic

Unlimited Class:

1. This class is for specific built tractors only.
2. 1150# maximum weight and 13" hitch.
3. Limited to a maximum of 3 cylinders, block and head can be billet, but must be based upon an OEM produced lawn and garden or compact tractor engine.
4. Fuel is limited to methanol or diesel. No pressurized fuel tanks. Electric vehicles are allowed.
5. Turbocharging or supercharging allowed.
6. Wheelbase 56 inches maximum.
7. 26 x 12 x 12 tire size maximum.

Limited Twin Rules:

1. The intent of this class is to have an economical build that should make similar horsepower and torque as an NQS SS engine for hopefully 1/5 the cost. It is open to v-twin and flat head opposed twin engines.
2. All General rules apply.
3. V-Twin and opposed twin engines. Engines with a factory horsepower rating of 27hp or less.
4. Maximum of 52.5 Cubic Inch or less.
5. Open RPM
6. Any type of ignition is allowed.
7. Fuel is to be pump gas with no additives. No oxygen bearing
8. Steel flywheels are mandatory.
9. No portion of any tractor may exceed 8 feet forward of the center of the rear wheel, including weights. 56" Wheelbase maximum.
10. Engines must run stock heads (no recast) with no external modifications. V-twin engines must have factory rockers and pushrods. Copper head gaskets are allowed. Factory shrouding is optional.
11. Carb must be stock for make and model of engine, adjustable main jets are allowed. Air cleaner adaptors/velocity stacks are allowed. Two (2) barrel carbs and manifolds are NOT allowed and cannot be used.
12. Maximum tire size is 26x12x12. Tire cutting allowed.
13. Weight class is 1050 lbs. Some pulls may allow more than one weight class.
14. Must use stock appearing garden tractor frame, but may be modified for engine installation. Aftermarket sheet metal is allowed.

5000 Governor Class:**V-Twin 5000 Governor:**

1. 1050lbs. max.
2. 30 HP Block Max - Must be garden tractor block. No recast, billet or plated heads. 60 cubic inch maximum size.
3. No welding on outside of heads. Putty permitted.
4. Stock manifolds only - 2 barrel, plastic, horizontal or vertical. Must have factory part number. No homemade plenums. Carb/manifold spacers are allowed. Carb - 1.200 Venturi max. Single or two barrel carbs permitted.
5. Factory electronic fuel injection for make and model is allowed.
6. Any ignition is allowed.
7. Electric fuel pumps allowed.
8. Fuel: Gas or methanol.
9. Wheelbase 56 inches maximum.
10. Any 26x12x12 tire allowed.
11. All General Safety Rules apply.

1 Cylinder 5000 Governor:

1. 1050lbs. max.
2. Factory or OEM Block only 16 HP Block Max. No aftermarket blocks Allowed. No welding on blocks allowed.
3. Recast or billet heads allowed.
4. Carb - 1.200 Venturi max.
5. Any ignition is allowed.
6. Electric fuel pumps allowed.
7. Fuel: Gas or methanol.
8. Wheelbase 56 inches maximum.
9. Any 26x12x12 tire allowed.
10. All General Safety Rules apply.

V-Twin Hot Stock:

1. All General rules apply, except for the following: No fire suits are required, but helmets are.
2. V-Twin and Opposed Twin Engines Only. Engines with a factory horsepower rating of 25hp or less, they are governor to a maximum RPM of 4,500 RPM.
3. Fuel is to be VP C-12 (green in color) with no additives.
4. Steel flywheels are mandatory.
5. No portion of any tractor may exceed 7 feet forward of the center of the rear wheel, including weights. 52" Wheelbase maximum.

6. Limited to stock factory stroke for that model engine with a maximum over bore of 1mm or less. Opposed flathead engines are limited to .030" overbore. Must run stock heads (no recast) with no external modifications. Engine must be stock appearing on the outside of the engine. Factory shrouding is optional.
7. Wheelbase 52 inches maximum.
8. Maximum tire size is 26x12x12. Tire cutting allowed.
9. Weight class is 1050 lbs.
10. Carb must be stock appearing for make and model being entered. Velocity stacks allowed. Maximum carburetor venturi size 1.00", no air entering after 1.00" restriction, venturi must be round in shape. 2 barrel carbs allowed if factory equipped and with each venturi is smaller than 22mm. No external modifications to stock intake manifold. No standoff (ram tubes) permitted.
11. Must use stock appearing garden tractor frame, but may be modified for engine installation. Aftermarket sheet metal is allowed.
12. Must use stock appearing garden tractor frame, but may be modified for engine installation. Aftermarket sheet metal is allowed.

Factory Stock:**V-Twin Factory Stock:**

1. All General rules apply, except for the following: No fire suits are required, but helmets are.
2. V-Twin and Opposed Twin Engines Only. Engines with a factory horsepower rating of 25hp or less, they are governor to a maximum RPM of 4,250 RPM.
3. Fuel is to be pump gas with no additives. No oxygen bearing fuels.
4. Steel flywheels or Stock flywheels, if rules are modified to allow more than 4,250 RPM, then steel flywheels are mandatory.
5. No portion of any tractor may exceed 7 feet forward of the center of the rear wheel, including weights. 52" Wheelbase maximum.
6. Limited to stock factory stroke for that model engine with a maximum over bore of 1mm or less. Opposed flathead engines are limited to .030" overbore. Must run stock heads (no recast) with no external modifications. Engine must run all stock factory internal parts for make and model being entered. Must have factory rockers, lifters, valves, valve springs and pushrods. Pistons must have factory unaltered dish. Copper head gaskets and adjustable main jets are permitted. Factory shrouding is optional.
7. Carb must be stock unaltered, adjustable main jets are allowed. Air cleaner adaptors/velocity stacks are allowed.
8. Wheelbase 52 inches maximum.
9. Maximum tire size is 26x12x12. Tire cutting allowed.
10. Weight class is 1050 lbs. Some pulls may allow more than one weight class.
11. Must use stock appearing garden tractor frame, but may be modified for engine installation. Aftermarket sheet metal is allowed.

1 cylinder Factory Stock:

1. All General rules apply, except for the following: Fire suits are not required, but helmets are required.
2. Engines are governor to a maximum RPM of 4,250 RPM. Classes will be 14 hp and less and 15hp and above. RPM will be checked after the tractor makes its run, no tolerance. Stock Blocks only, no aftermarket.
3. Fuel is to be pump gas with no additives. No oxygen bearing fuels.
4. Steel flywheels or Stock flywheels, if rules are modified to allow more than 4,250 RPM, then steel flywheels are mandatory.
5. No portion of any tractor may exceed 7 feet forward of the center of the rear wheel, including weights. 52" wheelbase maximum.

Limited Pro Stock Diesel Class:

1. Engine must be commercially produced with at least 1000 units built. Engines may be no more than 3 cylinders. May be liquid or air cooled. Engine block must have factory casting model and serial numbers visible and not ground off. Ag or industrial engines only; no automotive or motorcycle engines. No cut down cylinder engines allowed.
2. Engine will be no more than 70 cubic inches. This is based on the factory casting numbers. No sleeving down or de-stroking larger engines.
3. Water injection will be allowed. Must be plain water only. Combustible agents (alcohol, oxygenators) are NOT allowed in water injection. Soluble oil Lube additives are permitted.
4. Engine modifications are permitted = Rods, Pistons, Cam, Fuel system.
5. Engine must have OEM intake manifolds and exhaust manifolds, polishing is permitted. No tube headers or intakes.
6. Head work is permitted on stock OEM heads. No Billet heads. No overhead cams. Must be indirect injection. No converting from indirect to direct. Injectors must remain in stock location.
7. Injector and injector pump modifications allowed. No Billet injector

- pumps.
- 8. Must be "Cam Box" or "PFR" injection pump. No electronic or common rail injection systems.
- 9. Turbo charging is permitted, but limited to a single turbo only. Turbo will be fitted with a shut down guillotine on the compressor inlet side of the turbo. Exhaust "L" of turbo must have minimum of 5/16" cross in elbow with exhaust to discharge vertically.
- 10. Electric fuel supply pump is permitted with positive power wire to have shut off disconnect at rear of tractor.
- 11. No propane, nitrous injection or any type of secondary fuel system of any kind will be permitted.
- 12. All tractors must be compression ignition and use Diesel fuel only. No spark plugs or alcohol as a fuel. Diesel fuel must be NTPA or NQS legal.
- 13. Stock frames, stock appearing frame rails, and tube frames are permitted. Tube frames must be covered with sheet metal. 56" wheelbase maximum.
- 14. This class is for stock appearing tractors with full hood, grill and side shields. Must be recognizable as an actual modern production garden tractor or small farm tractor. Hood and grille can be from a different

- make than frame/rear end. Has to look like a tractor.
- 15. Must use garden tractor drive line components, modifications are allowed. Internal gears, front reduction housing and planetaries are allowed. No cut down automotive rear ends.
- 16. Full metal side shields to cover engine area minimum 16 gauge steel or 14 gauge aluminum.
- 17. Must run 5/16" cable around oil pan over top of valve cover in a complete circle connected with (2) cable clamps.
- 18. Must run billet steel flywheel.
- 19. Clutch assembly and flywheel must be surrounded 360 degrees with 1/8" steel or 3/16" aluminum. This is also to include cast iron front balancer pulleys. SFI approved front dampers need not be shielded.
- 20. 1100 & 1150 lbs. weight classes
- 21. Kill switch device mounted on rear of tractor must disconnect power to electric fuel pump along with activating turbo guillotine.
- 22. Helmet face shield or goggles required. Gloves are recommended.
- 23. No belt driven cooling fans. Electric fans only.
- 24. Intercoolers and ice boxes are not permitted.
- 25. All NQS rules not in conflict with these apply.

Track & Pull Notes

Midwest Machine 306 Welton Ave, Welton, IA (563) 659-5555

Midwest Machine, our manufacturing facility is over 10,000 square feet and is directly across the street from Midwest Super Cub. some of the machines we have to manufacture our parts are 4 CNC vertical machining centers of which three have a 4th axis. One CNC lathe and 2 CNC lathes with live tooling and programmable C axis and a 5 axis Flow abrasive water jet. To Make the gears we have 4 Fellows Gear Shapers, 2 Barber-Coleman Gear Hobbers and to finish the gears (and other parts) to smooth polished like finish we have 2 vibratory finishing machines. We also have a Landis cylindrical grinder, 2 Sunnen rod hones, a 6x12 surface grinder a hydraulic press and a Harrison M500 manual lathe. The 2 Storm Vulcan camshaft grinders and 2 Van Norman 465 Crankshaft grinders have been moved to Midwest Super Cub side of the street. The Midwest Machine Shop makes parts for Midwest Super Cub, but also for other outside vendors. Besides making parts for tractors and other vendors,, we also can cut decorative tile, promotional items, glass trophies, indoor or outdoor signs for businesses. We can cut paper, plastic, wood,copper, to glass or granite, from thin to 6" thick steel or other metals with the Flow waterjet and machine your parts from a print. Let us know if you have a project that Midwest Machine can help you complete.

