

# 2018 RULE BOOK



Revision: March 6, 2018

**OFFICIAL ISP TRUCK SPONSOR**

**Let ISP help you make your best deal!**

**Pick up your card at the ISP trailer and  
hand it to your  
Schimmer's Sales Associate.**

**SOME THINGS IN FARMING  
ARE BEYOND YOUR CONTROL.  
CHOOSING A SEED ADVISOR  
ISN'T ONE OF THEM.**

You can't do much about the weather. But you can choose who you'll trust to help you select your corn hybrids and soybean varieties. And nobody offers a more technologically-advanced lineup than Syngenta. Our growing network of expert Syngenta Seed Advisors is ready to help you select the best combination of traits, genetics and crop protection for every acre you farm. From planting through harvest, we're here for only one reason: to help you grow more corn and soybeans.

**GROW more  
corn**

 **GoldenHarvest**  
Corn

 **NK** Soybeans

Your local Syngenta Seed Advisor is:  
**Illinois Valley Seed**  
(309) 338-1576

**Illinois Valley Seed**  
Havana, Illinois

**syngenta®**

## Board Members

---

### **President**

Scott Vivian, Amboy 815-440-8320

### **Vice-President**

Matt Bauer, Mendota 815-712-9531

### **Secretary**

Dwight Frick, Mendota 815-878-1106

### **Treasurer**

Brenda Gratz, Harvard 815-560-1716

### **Tech Officials**

Mike Sauter, Tonica Sanctioned Tractor 815-488-3481

Jeremy Beetz, Mendota Sanctioned Truck 815-739-6172

Jason Wehrli, Sandwich 815-712-0545

### **Track Directors**

Aaron Rogers, Somonauk 815-252-4597

Marty Covert, Sandwich 815-593-0575

Mike Fidler, Poplar Grove 815-742-2936

### **Advertising Director**

Jason Yakey, Cherry Valley 815-994-8171

### **Information Technology Director**

Ian Radtke, Washington Il 309-397-8372

For announcements, schedule, pull results, and other info find ISP on the Web at:

[www.IlliniStatePullers.com](http://www.IlliniStatePullers.com)

<https://www.facebook.com/IlliniStatePullers>

# Contents

---

<b>Board Members</b>	<b>3</b>
<b>General Rules</b>	<b>6</b>
<b>Classes Offered</b>	<b>7</b>
<b>Contest Rules</b>	<b>7</b>
<b>Point System</b>	<b>8</b>
<b>Registration</b>	<b>8</b>
<b>Track Guidelines</b>	<b>9</b>
<b>Protests</b>	<b>10</b>
<b>General Tractor Safety Rules</b>	<b>11</b>
<b>NA Super Stock Rules</b>	<b>13</b>
<b>General Rules</b>	<b>13</b>
<b>Engine</b>	<b>14</b>
<b>Turbo Diesel Rules</b>	<b>14</b>
<b>6,000# NA Rules</b>	<b>15</b>
<b>6,000# LSS Rules</b>	<b>16</b>
<b>General Rules</b>	<b>16</b>
<b>Drawbars</b>	<b>17</b>
<b>Clutches and Flywheels</b>	<b>18</b>
<b>Engines</b>	<b>19</b>
<b>Chassis</b>	<b>21</b>
<b>Exhaust Systems</b>	<b>23</b>
<b>Fuel and Fuel Containers</b>	<b>23</b>
<b>Kill Switches</b>	<b>23</b>
<b>Safety</b>	<b>24</b>
<b>Seats and Fenders</b>	<b>26</b>
<b>Stabilizer Bars</b>	<b>26</b>
<b>Turbochargers</b>	<b>26</b>
<b>Tires</b>	<b>27</b>
<b>Weights</b>	<b>27</b>
<b>6,500# Open Rules</b>	<b>28</b>
<b>6500 Modified Rules (2017 ver.)</b>	<b>28</b>
<b>6500 Modified Diesel Rules</b>	<b>30</b>
<b>10,000# Pro Farm Rules</b>	<b>31</b>
<b>General</b>	<b>31</b>

<b>Engine/Turbo Combinations</b>	<b>31</b>
<b>12,000# 2Hot2Farm Rules</b>	<b>32</b>
<b>General Truck Safety Rules</b>	<b>34</b>
<b>6500# Altered Stock Truck Rules</b>	<b>35</b>
<b>General Rules</b>	<b>35</b>
<b>Gas Rules</b>	<b>36</b>
<b>Diesel Rules</b>	<b>36</b>
<b>6200# Super Stock Truck Rules</b>	<b>37</b>
<b>7800# Pro Stock Diesel 4x4 Rules</b>	<b>39</b>
<b>Safety</b>	<b>39</b>
<b>Driveline</b>	<b>39</b>
<b>Body</b>	<b>39</b>
<b>Weight</b>	<b>40</b>
<b>Engine/Turbo</b>	<b>40</b>
<b>8000# Hot Street Diesel Trucks</b>	<b>41</b>
<b>Safety</b>	<b>41</b>
<b>Driveline/chassis/suspension</b>	<b>41</b>
<b>Body</b>	<b>42</b>
<b>Weight/hitch</b>	<b>42</b>
<b>Engine/turbo</b>	<b>43</b>
<b>Class Representatives</b>	<b>44</b>
<b>Class Representative Responsibilities</b>	<b>44</b>

## General Rules

---

- 1) The board of directors of Illini State Pullers will consist of 12 members elected by the general membership, 6 directors representing tractors, and 6 directors representing trucks. Board terms will be three years.
- 2) Member Competition License fee will be \$50/individual/year. Member Competition License increases to \$100 after April 15 (excludes day hook members). Competition Vehicle fee will be \$100/vehicle/class/year. Competition Vehicle fee increases to \$200 after April 15. One-day vehicle certification fee of \$30/class. Day hook requires Member Competition License.
- 3) Each Member Competition License will have one vote on track guidelines and safety issues. On performance issues, each paid Competition Vehicle with a minimum of two hooks in that class will have one vote. The board will then determine in a closed session whether the new rules will be approved or denied.
- 4) Harassment, arguing, derogatory language, etc., addressed towards competing members, track officials, board members, or anyone affiliated with ISP at any time during said season will result in disqualification and loss of points and prize monies due the offender's pulling vehicle from the season, contingent upon board review.
- 5) All Competition Vehicles must be driven by a Member Competition License holder of the association. Drivers must be at least 16 years of age. 16 and 17 year olds must have written parental permission.
- 6) Prior to competing all competitors are required to have an ISP Tech List Form on file with Illini State Pullers stating competitor's clutch, flywheel and bell housing components are SFI-approved where applicable. Competitor's rollover protection must meet ISP class rules.
- 7) Consumption of alcohol is not allowed by competitors before they pull or by volunteers while helping.
- 8) ISP has the right to refuse membership.
- 9) All decisions of the ISP board shall be final. A majority shall consist of at least six board members.

## Classes Offered

---

**Naturally Aspirated Tractors:**

5,000# NA/SS; 7,000# NA/SS; 6,000# NA

**Turbo Tractors:** 6,000# Light Super Stock;  
10,000# Pro Farm; 12,000# Too Hot To Farm

**Modified Tractors:** 6,500# Open

**Altered Stock Trucks:** 6,500#

**Super Stock Trucks:** 6,200#

**Pro Stock Diesel Trucks:** 7,800#

**Hot Street Diesel Trucks:** 8,000#

## Contest Rules

---

- 1) Vehicle will be weighed with the driver in seat.
- 2) Two certified vehicles will be weighed to verify the accuracy of scales.
- 3) Non-certified vehicle must have basic safety equipment. Driver to have paid day hook fee and have Member Competition License in order to pull.
- 4) Certified vehicles must meet all safety requirements.
- 5) Vehicles meeting all safety equipment rules, but not other eligibility requirements, will be allowed to pull in one ISP-sanctioned event, at the discretion of the tech official, before being certified.
- 6) If vehicle or equipment is changed or modified, such as changing weights or tires, vehicle must be recertified.
- 7) One certification sticker is required for each class in which the vehicle is entered. Sticker must be prominently displayed.
- 8) All vehicles will go through tech inspection and must be certified. Competitors' refusal to allow inspection/spot check of a pulling vehicle by an ISP board member or contest official will result in disqualification from event and will render vehicle and driver ineligible until vehicle is allowed to be inspected.
- 9) All competitors are required to sign and date a form indicating his or her vehicle adheres to the safety equipment requirements set forth by the current ISP rulebook including clutch and flywheel requirements. A copy of this form is to be retained by the association.
- 10) Judges decisions are final. There is no appeal process. Disagreement will result in disqualification.

## Point System

---

- 1) Points will be awarded at all sanctioned pulls as follows: 1st place - 15 points, decreasing by 1 through 15th place. In addition, one point will be awarded for each hook.
- 2) Points will be awarded to certified vehicles in their respective order of finish, regardless of placing of non-certified vehicles in that class. Points will be awarded to the vehicle not the driver, but driver must be a member to receive points.
- 3) If for any reason a class or classes are cancelled, every vehicle signed in will receive 6 points.
- 4) Points will not be awarded until after the vehicle has been certified.
- 5) All ties will receive points added together, then split between the vehicles.
- 6) All pullers and vehicles must be paid ISP members to pull at any ISP sanctioned events.
- 7) Sponsor stickers to be displayed on vehicle (truck/tractor) prior to second ISP event for vehicle, in order for vehicle to be awarded points.
- 8) Disqualification of a vehicle will receive last place points only, except in a pull-off. Disqualified vehicle will be placed ahead of breakage vehicle.
- 9) Allow last place points for breakage or mechanical failure at event. Vehicle must be capable of moving to track under its own power to receive points. No points or money for vehicle hauled to the pull broken.
- 10) In the event of a tie in points, the tie-breaker will be the vehicle with the highest finishing order. (i.e.: 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup> place finishes) In the event that both vehicles have an equal finishing order, the vehicle that has hooked at the most ISP events will be the tie-breaker.

## Registration

---

- 1) All pullers will register for entry 1/2 hour prior to the start of the pull. Late entry will not be accepted resulting in that vehicle not competing in said event. Member may enter other member's vehicle without vehicle being present without penalty.
- 2) Vehicle may not enter more than once in any class. Tractors may enter in up to three classes.
- 3) When drawing for position, if a member has more than one vehicle, or is registering in more than one class prior to pick, they must state which class is being drawn for.
- 4) NO teching will be done within 1 hour of the event scheduled start time.

## Track Guidelines

---

- 1) Keep in mind the safety of the crowd and yourself when operating your vehicle on and off the track; driver must have complete control at all times on the track and in the pits. Judges have the right to disqualify any vehicle not being operated safely. Judges consist of ISP board members and contest officials.
- 2) Each vehicle will have the hitch height measured prior to hooking to the sled.
- 3) A 100-foot restart line will normally be used. Any driver attempting to stop prior to the 100 foot mark will be allowed one restart this restart should take place immediately, if broke vehicle may re-pull again at the end of the class, which will be the second attempt.
- 4) If the sled is reset after first vehicle has pulled, the remaining vehicles will pull in the order drawn beginning where the class was stopped. The first puller in the class will be allowed to re-pull immediately, or drop to last, if the sled is reset on the first pull in the class only. The decision to take the pull or drop back must be made before leaving track.
- 5) If necessary, a sled reset will be made before  $\frac{1}{2}$  the class has run, maximum of 4 vehicles.
- 6) Any vehicle out of bounds will be disqualified. Sled out of bounds is allowed. Marked or unmarked there will be an out of bounds line extending to and past the designated full pull to assure that the pulling vehicle remains inbounds while hooked to the sled unless otherwise noted at the drivers meeting. First puller retains the option re-pull if vehicle goes out of bounds.
- 7) Weight lost or touching the ground while vehicle is hooked to sled will be disqualified. Loss of other equipment will not be grounds for disqualification. First puller retains option to re-pull.
- 8) If there is any discrepancy with the sled operation, a kill switch is pulled due to error by the sled operator, the vehicle involved will be allowed to re-pull. This re-pull should occur immediately, or at the end of the class, as determined by the driver.
- 9) In a pull-off, vehicles must hook in the order they originally pulled. There will be no 100-foot restart, or first puller option. Drivers and judges can decide to not pull-off, decision must be unanimous. Disqualification in a pull-off will result in puller being awarded last place available for those pulling off.
- 10) No riders in or on any competition vehicle at any time.
- 11) Drivers must remain seated at all times.
- 12) Vehicle should not be left running unattended in the pits or staging area.

- 13) Violation of any rule shall constitute a disqualification. Any vehicle disqualified will lose their entry fee.
- 14) Vehicles found to be illegal will be disqualified for one year. Disqualification includes vehicle, driver, and owner.
- 15) Changes to these guidelines may result at the judge's discretion. Changes will be communicated at the drivers meeting prior to the start of the pull.
- 16) All exhibition pulls will be made at the end of the pulling event if possible.
- 17) If vehicle is beyond 100 ft. and the sled operator has pulled the kill switch due to safety reasons, pull will be measured at that point.
- 18) No persons will be allowed on the track while vehicle is hooked to the sled unless an emergency).
- 19) Repeated loss of fluid will result in disqualification. Please use catch can if vehicle repeatedly losses fluid.
- 20) Maximum reasonable pull distance will be established prior to the start of each pull and specified at the drivers meeting. If the max pull distance is exceeded vehicles will pull off or sled will be reset.

## Protests

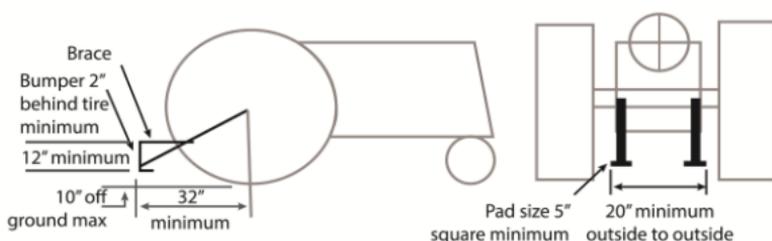
---

- 1) If a certified vehicle is protested, protest must be made during the pulling event. Protests must be made in writing in protester's own class. The same protester cannot protest the same vehicle more than once during any given year.
- 2) If any puller is protested for weight, protester must weigh his/her vehicle along with puller. If both vehicles are overweight, other vehicles will be weighed to determine the accuracy of the scales.
- 3) Any competing vehicle may be protested for a \$250 protest fee. Protest fee must be presented to tech official before end of said event. Tech official will notify protested competitor. At the discretion of the tech official, Protested vehicle and Protester's vehicle will be placed under the control of tech official until protest has been executed. Person in the right shall receive the protest fee minus \$50 retainer fee for tech official regardless of outcome. Tech official may at his or her discretion grant a one-event grace period for vehicle non-compliance depending on the seriousness of the infraction. (Examples: faulty neutral switch or faulty reverse light.)
- 4) Vehicle found to be illegal will be disqualified for one year. Disqualification includes vehicle, driver, and owner.

- 5) If a vehicle is found to be illegal because of cubic inches, fuel, or heads, driver and owners are disqualified for life.
- 6) Any competing vehicle representative may protest the operation of event if submitted in writing within 15 minute of last vehicle of ISP event.

## General Tractor Safety Rules

- 1) All tractors must be equipped with workable rear wheel brakes.
- 2) All engine driven fans must be shrouded with steel 1/16" min. 360 degrees, at least as wide as the fan blades.
- 3) Tractors must have wide front end.
- 4) Tractors must have rear wheel stabilizer bars. Bars must extend a minimum of 32" behind center of rear axle. Pads must not be more than 10" off the ground. Pads must be a minimum of 5" square. Pads must be a minimum of 20" apart. Bars must not interfere with drawbar. No cross bars beyond the point of hook. One jack under one pad must support that side of the tractor in the heaviest weight class that tractor is certified in. Each stabilizer must have a vertical bumper, which extends up 12" from the skid pad. The bumper must be supported with a brace, materials to be of the same strength as the stabilizer bars. The vertical bumper must extend at least 2" rearward of the rear tire and must withstand severe impact of the sled. Stabilizer bar or bar assembly not to be mounted to the drawbar assembly. (See diagram below)



- 5) All tractors, excluding John Deere 2 cylinder, must be equipped with an approved scatter blanket. Blanket must be secured 360 degrees around flywheel, and must cover a minimum of 75% of flywheel; any non-covered area must be on the bottom.
- 6) Steel flywheels are required. Tractor owner must verify compliance in writing at time of certification.
- 7) Exposed flywheels must have a bolt tapped in the end of the crankshaft with a washer 1/2" larger than the diameter of the crankshaft. The bolt must be at least 3/8" diameter, and 1/2" long.
- 8) All John Deere clutch covers shall be removed or securely bolted.
- 9) All exposed driveshaft couplers shall be covered 360 degrees with a minimum of 3/8" steel minimum of the width of the coupler.

- 10) Rain caps may not be used. All exhaust must discharge vertically upward above the highest point of the tractor.
- 11) All tractors must have a kill switch that will cut power to the coil on spark ignition engines or ground the magneto on magneto equipped, spark ignition systems or diesel engines require an air intake shut-off and a fuel pump shut-off if feasible. Switch must have a 2" diameter ring and be located in an area above the hook point, not more than 6" to either side of tractor centerline, must be at least 18" behind the center of rear axle, and at least 24" above hook point. Weights must not interfere with access to switch.
- 12) All tractors are required to have motor shields. Motor shields will be at least .060-inch steel or .090-inch aluminum. The shield must cover the complete length of the block casting and will be from the sheet metal/hood to 2" below bottom of crankshaft throw. Shields must be securely fastened, but easily removable without the use of tools (i.e. wing nuts, hitch clips, etc.).
- 13) All tractors must be equipped with a spring-loaded throttle, all throttles must return to idle when released.
- 14) Weights must be safely secured to tractor. Any weight lost or touching the ground while tractor is hooked to sled is a disqualification in that class.
- 15) Tractor must be equipped with minimum of one 2 1/2 lb. dry chemical or halon fire extinguisher. Fire extinguisher must have working gauge, be fully charged, and in working condition. Fire extinguisher must be mounted convenient to operator.
- 16) All tractors must have fenders to withstand a force of 300 lbs. Must be at least 6-inch wide at the bottom increasing to at least 36" wide at the top, and have a 6-inch curve toward the top of the tire.
- 17) Drivers must remain seated at all times.
- 18) All tractors with fuel cell under hood are required to have a metal safety shield (.060" steel or .090" aluminum) between engine and fuel cell.
- 19) All diesel tractors are required to have a mechanical shut-off three-position valve in the fuel line before injection pump, operable from the seat.
- 20) All drivers are required to wear full-faced helmet Snell 1985 or newer, with chin strap fastened while hooked to sled and minimum SFI spec 3.2a-1 fire suit including jacket, pants, shoes, gloves, and head sock. Anytime a sanctioned vehicle is hooked to a sled at an ISP event this gear is required.
  - a) If you use a helmet with a fire retardant lining and flame retardant neck skirt, no head sock is required.
- 21) Roll-over protection with seat and back rest, and seat belt required for all tractors. Rollover protection must be strong enough to lift rear of tractor.
- 22) All vehicles must have working amber neutral safety light and a clear reverse light on the rear of the vehicle visible to the hooker and unhooker. Minimum of 1.5 inch diameter

- 23) ALL TURBOS must be behind a grill or screen of ISP tech approval. If turbo intake protrudes through grill/screen, 5/16" cross bolts in X pattern are required.
- 24) ALL TURBOS must have a minimum of 1/8" cable with a minimum of 2 clamps crossing in an X pattern from center section to intake compressor housing.

## NA Super Stock Rules

---

### General Rules

- 1) Weight for the 5000 will be 5100# with driver.  
Weight for the 7000 will be 7100# with driver.
- 2) All General Tractor Safety Rules apply.
- 3) Contest open to agricultural tractors with rubber tires.  
No four-wheel drives, no dual tires, tire studs, or chains permitted.
- 4) Tractors must be stock in appearance to the extent that a tractor shall look like a particular model manufactured by that company. Hoods are required.
- 5) The block and crankcase shall be used by the same manufacturer, same number of cylinders, and same configuration. Bell housing, crankcase and backing plate to be of same number of cylinders, same manufacturer and must bolt together without modification.
- 6) Rear engine plate must be in original location. Rear end must be OEM (produced by same manufacturer as engine) and bolt together without modification.
- 7) Tractors must have serial numbers in the proper place that can be easily read. Tampering or grinding of numbers shall be cause for disqualification.
- 8) Minimum drawbar length is 18 inches from the center of the rear axle to the point of hook. Maximum hitch height is 20 inches at hitch point. (Hitch device must be no less than 1 inch thick. Must have 3 inches wide by 3 3/4 inches long opening parallel with the ground.), pulling point may not be more than 1 1/2 inch from back edge of hitch. Hitch must be clearly accessible. Hitch must be frame mounted, rigid in all directions, and shall be constructed so that in the event of breakage, the drawbar supports do not pull from a top link or brace above the center of the rear axle.
- 9) Drawbar will be checked on the scale at each event, if no scale is provided hitch will be checked on the flattest ground available.
- 10) Tractors shall have a maximum wheelbase of 114 inches. The maximum overall length shall be 13 feet measured from the center of axle to forward most portion of the vehicle. The front tow hitch is not included in length measurement.
- 11) ALL RULES FROZEN UNTIL END OF 2020 SEASON

## Engine

- 1) Heads must be manufactured by same company as engine block. No aluminum, steel billet heads allowed. No machining of head for accepting a casted, recasted, billet or any other type of insert allowed. No cut heads allowed.
- 2) All gas engines must be naturally aspirated. No turbos blowers, or superchargers.
- 3) No pressurized tanks except LP gas as only fuel source.
- 4) Single fuel source while pulling, blended fuels allowed. No nitro methane
- 5) No direct fuel injection into head or combustion chamber other than diesel fuel. Diesel injection pump must be mechanical.
- 6) P-pump or smaller pump is allowed on NA diesels. No sigma injection pumps and or electronically controlled injection pumps are allowed on NA diesel engines.
- 7) No overhead camshafts allowed except John Deere 2 cylinder engines.
- 8) NA V8 Perkins diesel allowed aftermarket heads on diesel fuel only, max 2 valves/cyl, valves must be parallel with each other, must be push rod motor, no overhead cam.

## Turbo Diesel Rules

- 1) NASS General Rules apply except for rules 5 & 6.
- 2) All NASS Engine Rules apply.
- 3) 380 ci limit, no decubing allowed.
- 4) 5.9 Cummins allowed in any tractor.
- 5) 2 valves per cylinder maximum.
- 6) Diesel fuel only, any fuel system allowed.
- 7) 3500 RPM maximum, no tolerance.
- 8) Tractor must be equipped with ISSPRO 019R8906, 2-wire sensor. Wire must be in full view and be connected to a standard 110volt female, grounded receptacle located in similar position as kill switch might be located.
- 9) Turbo/intercooler configurations:
  - a. 100% stock S360 box turbo 2.36-inch max part #177272 or any production box turbo, up to S360 box turbo 2.36 inches, **with** intercooler.
  - b. 100% stock S366 box turbo 2.6-inch max part #177281 or any production box turbo, up to S366 box turbo 2.6 inches, **without** intercooler.
- 10) No modifications are allowed to turbo charger except exhaust housing can be switched to accept AR 83, 88, 91, or 100 types housing. No modifications to compressor housing or inner parts of charger such as turbine wheel compressor wheel Etc. NO BILLET WHEEL assembly allowed for performance. Modification for fitment for exhaust

routing, intake routing, air shut off will be allowed as not considered a performance factor

- 11) \$750 claimer on all turbos
- 12) Single port water injection allowed.
- 13) Turbocharger must be under stock hood or shrouded end to end and 360 degrees around with .060 steel or heavier. Turbo charger must be shrouded if under a fiberglass hood. Exhaust pipes must have two 3/8" grade 5 bolts set within 1" at 90 degrees to each other in the exhaust.
- 14) All 6000 Super Stock chassis rules apply with exception of SFI roll over protection. Subject to board approval.

## 6,000# NA Rules

---

- 1) Weight will be 6000# with driver.
  - a) 100# allowance will be given for safety equipment.
- 2) Cubic in limit – 670 cubic inches with a 1% variance.
- 3) Tractor must be equipped with ISSPRO 019R8906, 2-wire sensor. Wire must be in full view and be connected to a standard 110volt female, grounded receptacle located in similar position as kill switch might be located.
  - a) 2500 RPM limit for spark ignition, 440 cubic inch or less run 2,800 rpm. 1% allowance for rpm limits on spark ignition tractors only.
  - b) 3500 RPM for diesels with steel flywheel, no rpm allowance.
- 4) Aftermarket intake and exhaust allowed. Exhaust must exit vertically.
- 5) Heads must be manufactured by same company as engine block. No aluminum, steel billet heads allowed. No machining of head for accepting a casted, recasted, billet or any other type of insert allowed. No cut heads allowed.
- 6) All engines must be naturally aspirated. No turbos, blowers, or superchargers.
- 7) No pressurized tanks except LP gas as only fuel source.
- 8) No direct fuel injection into head or combustion chamber other than diesel fuel. Diesel injection pump must be mechanical.
- 9) P-pump or smaller pump is allowed on diesels. No sigma injection pumps and or electronically controlled injection pumps are allowed on diesel engines.
- 10) No overhead camshafts allowed except John Deere 2 cylinder engines.
- 11) Gas, diesel and LP as single source fuel only. Blended fuels allowed as provide by manufacture. No additives are allowed in fuel except those additives blended in by manufacturer or refinery. No nitro methane. Fuel injection on diesel only.
- 12) Tractors shall have one carburetor with no more barrels than original factory equipment for that make and model. Carburetor shall draft same direction as original.

John Deere 2-cylinders may run two carburetors on alcohol subject to Board approval.

- 13) Tire size limit – 18.4 x 38. Cut tires allowed.
- 14) Electric fans allowed.
- 15) Wheelbase must be the same as the model of tractor represented.
- 16) Driveline housing excluding rear engine plate shall be constructed using OEM parts by the same manufacturer. Components must bolt together without external modification. Fabricated rear engine plate no more than 2 inches in thickness is allowed.
- 17) Contest open to agricultural tractors with rubber tires. No four-wheel drives, no dual tires, tire studs, or chains permitted.
- 18) Tractors must be stock in appearance to the extent that a tractor shall look like a particular model manufactured by that company. Hoods are required.
- 19) Tractors must have serial numbers in the proper place that can be easily read. Tampering or grinding of numbers shall be cause for disqualification.
- 20) Minimum drawbar length is 18 inches from the center of the rear axle to the point of hook. Maximum hitch height is 20 inches at hitch point. (Hitch device must be no less than 1 inch thick. Must have 3 inches wide by 3 ¾ inches long opening parallel with the ground.), pulling point may not be more than 1 ½ inch from back edge of hitch. Hitch must be clearly accessible. Hitch must be frame mounted, rigid in all directions, and shall be constructed so that in the event of breakage, the drawbar supports do not pull from a top link or brace above the center of the rear axle.
- 21) Maximum hitch height will be certified at time of tech.
- 22) General tractor rules and regulations apply with the following exceptions.
  - a) Eligibility of Tractors (page 13): Number 3 and 4 will not apply to the 6,000 NA class
  - b) Engine (page 14): Number 8 will not apply to the 6,000 NA class
  - c) Mandatory high-backed seat
- 23) Vehicle rollover protection meeting ISP Guidelines is highly recommended. (See section on *General Tractor Safety Rules*, Rule 22)
- 24) All track guidelines apply.
- 25) All general tractor safety rules (page 12) apply except: 3, 18, 19 & 21.
- 26) All rules will be locked until the end of the 2018 season.

## 6,000# LSS Rules

---

### General Rules

- 1) Class competes at a maximum weight of 6,000 lbs for alcohol, and 6,100 lbs. for Diesel, with ag chassis.

- 2) Component tractors allowed: Alcohol at 5800 lbs., Diesel at 5900 lbs.
- 3) Tractors conforming to SCWTP or BSTPA LLSS rules may compete at 6250 lbs.
- 4) Tractors are allowed with a 505 cubic inch limit.
- 5) All competitors are required to utilize a 5-point driver restraint harness and driver seat mounted to the roll cage structure independent of the tractor chassis. The 5-point driver restraint harness must be a quick release design and be securely fastened during competition.
- 6) No tying down competition vehicle to drawbar or drawbar support while in transport.
- 7) All competing vehicles must be equipped with working rear wheel brakes.
- 8) All tractors wanting to compete in 6000# Light Super Stock class are required to meet all rules for the class including cubic inch limits.
- 9) Once entries have closed, if team-mates have drawn numbers which make back-to-back hooks, the second vehicle will drop one position on the lineup sheet.

The only place not permitted will be the last two hooks of the class.

## **Drawbars**

- 1) Drawbars, hitching devices and drawbar supports shall be constructed of steel.
- 2) Drawbars shall meet the following: drawbar to be a minimum of 2 square inches total steel material at any point. This includes the area of the pin with the pin removed. The pin will be a minimum of 7/8 inch. Drawbar must be equipped with a steel hitching device not more than 1.5 x 1.5 square, (or 1.5 round), and with an oblong shaped hole 3.75 inches long and 3 inches wide.
- 3) All drawbars shall be constructed so that in the event of drawbar breakage, the drawbar supports do no pull from a top link or brace above the center line of the rear wheels of the vehicle. Any vehicle with the drawbar hold up device above the centerline of the rear wheels must have a single pin break away type (slide out) drawbar.
- 4) The drawbar hold up device is to be within 6 inches maximum forward of hook point.
- 5) Drawbars are to be rigid in all directions and must have a device to support the drawbar from side to side movement a maximum of 6 inches forward of the hook point.
- 6) Drawbars must have the pivot pin on the same plane as the hitch point and parallel to the ground with 1.5 inches, plus or minus, per foot of length, (or 10 degrees or less of the drawbar angle).
- 7) Drawbars cannot be shorter than 18 inches. A drawbar which has provisions to be made shorter than legal length is not acceptable as a legal drawbar.
- 8) Drawbar height is not to exceed 20 inches.

- 9) No portion of the vehicle may interfere with the sled, chain or hook during a pull or while being hooked or unhooked.
- 10) An area 5 inches wide and 12 inches high immediately above and below the drawbar must be free of all obstructions including weights, stabilizer bars and second drawbars for the ease of hooking and unhooking. Second drawbars are not required.
- 11) Tech officials must be able to visually inspect the drawbar area of competition vehicle.
- 12) Drawbars and stabilizer bars / wheelie bars are not to be connected.
- 13) No trick hitches; no cam type rear ends.
- 14) Drawbar height or distance from center of axle / center of rear wheels cannot change during pull.

## **Clutches and Flywheels**

- 1) Competition vehicle is required to use an SFI SPEC 1.1 or SFI 1.2 steel plate or steel billet flywheel. NTPA stamped flywheels are acceptable. The flywheels must be made of steel with the following mechanical properties; tensile strength of 60,000 psi, yield strength of 40,000 psi. If an aluminum flywheel is used it must be SFI SPEC 1.1.
- 2) Positively no gray cast metal allowed in any flywheel and clutch component.
- 3) Competition vehicle is required to have an SFI SPEC 4.2 bell housing blanket (an expired renewal date on an SFI SPEC 4.2 bell housing blanket will be accepted).
- 4) Bell housing blanket must meet the following construction criteria; 17 inches wide and long enough to wrap around the bell housing with at least 6 inches overlap, secured with six 2 inch wide nylon web straps with a steel D-ring on one end and sewn the length of the blanket (except for the overlap area) and long enough to pass back through steel D-ring and be tied in a saddle cinch along with four 2 inch nylon web retaining straps each at the front and back of the blanket.
- 5) Bell housing blanket straps are to be fastened forward and rear of the clutch / flywheel assembly. All straps must be securely fastened and the blanket must be secure against the rear face of the engine block.
- 6) The flywheel, clutch and pressure plate components must be SFI approved and numbered components. Other than a product of an SFI-approved manufacturer is exempt from certification as long as they are NTPA stamped.
- 7) No lighting holes allowed on the transmission face of the bell housing. One cooling hole allowed, maximum 2 inches in diameter on the face of the bell housing.
- 8) Bell housing may not be welded or repaired in the explosion area of the bell housing.
- 9) No chemical milling.

- 10) The inspection / maintenance hole in the bell housing shall not extend farther forward at its top edge than flush with the cross shaft hole nor farther downward at its bottom edge than to allow one ½ inch bolt diameter edge distance for fastening holes in both the bell housing and the inspection / maintenance hole cover. The length of the inspection / maintenance hole shall be no more than 8.5 inches, measured in a straight line, and the ends of the hole shall be smoothly and fully radiused to produce an oval shape.
- 11) There shall be twelve 5/16 inch grade 5 or better cap screws securing the cover to the bell housing. The cover must have a plate or fillet that fits flush inside of the housing. The cover and fillet must be steel. The fillet must be welded to the cover and all bolts must be flush to the inside.
- 12) There must be five bolts used to secure the transmission to the bell housing, 3/8 inch minimum diameter or four ½ inch bolts.
- 13) All bell housings must be flush on the inside surface.
- 14) SFI certified bell housing with Crower stand adjustment slot are acceptable.
- 15) Add four additional bolts to fasten the bell housing to block saver plate. These bolts are to be 3/8 inch grade 5 and between existing bolts on the top half of the bell housing, along with 5 evenly spaced bolts between block saver and bell housing on lower half.
- 16) Titanium approved for bell housing.
- 17) Only mechanically activated clutches allowed.

## **Engines**

- 1) Must use a 2wd drive tractor stock engine block or OEM block that will operate with the stock crankshaft for that model without any alterations for chassis mounting. Engine upgrades allowed. Engine must be of same manufacturer of chassis and sheet metal. A legal entry will be determined by the tech officials.
- 2) The OEM engine cannot be modified externally in any way except for normal repair or for mounting of fuel injection pumps.
- 3) Internal webbing and water jacket to remain intact with provisions to re-bore block be provided.
- 4) Deck plates allowed thickness of ¾" with gasket included.
- 5) An external hold down device is allowed to hold head to block. This device connects top of head to bottom of block, and must remain behind side shields.
- 6) All engines must be secured and held rigid to chassis.
- 7) Engines cannot move independent of rear end / transmission housing.
- 8) No auxiliary internal combustion engines are allowed on board to drive pumps, accessories, etc.
- 9) One piece engine main cap bearings allowed. One-piece main cap not considered a girdle.

- 10) If Illini State Pullers Board of Directors or Tech Committee doubts the legality of an entry, contestant must verify 150 units of the tractor in question have been manufactured. A notarized statement from the manufacture is required stating part numbers to prove legality of entry.
- 11) Penalty for illegal engine block shall be suspension of membership and loss of points for one year and ten days from the date of infraction.
- 12) Cubic inch limit is 505 cubic inches.
- 13) Only two parallel valves per cylinder, with exception of diesel oem hemi style head. OEM canted valves allowed provided valves are parallel with each other.
- 14) No overhead cams allowed.
- 15) No computer controlled electronic fuel systems allowed.
- 16) Intercoolers allowed on all diesel engines and alcohol engines with 360 ci or less.
- 17) A deflection shield is required on both sides of the engine. Shields must extend the complete length of the block casting and be securely fastened. Shields must extend from sheet metal (hood) to 2 inches below bottom center of crankshaft throw and be securely fastened. Shields may extend beyond or cover starter or fuel pump. Shields shall be constructed of aluminum or steel a minimum of 0.060 inch thick or safety blanket material. Shields must be solid – motor mounts, filters, fuel injection pumps, steering rods; etc cannot serve as part of shield. Solid frame rails with no holes can serve as part or all of the shield, providing it covers required areas of block casting. It is recommended that a quick release fastener be used. Use of bolts, nuts, screws, locks are discouraged, (Reason: ease of access in emergency – fire, run-off, etc.). Any competition vehicle with that requires tools for the removal of side shields must be equipped with an on-board fire control system. System must place one nozzle on each side of engine, inside the engine compartment. Not to be attached to the sheet metal.
- 18) A metal deflection shield between driver and engine from top of the hood to top of torque tube or transmission housing or clutch housing from side shield to side shield is required. No holes except for controls. Holes not to exceed ½ inch larger than control.
- 19) Shielding on all V or Y type engines must extend from the base of the head or the upper most point of piston travel to 2 inches below bottom center of crankshaft throw and be securely fastened.
- 20) Side shields must be mounted independently of the engine block. Motor mount, block saver plate and header mounting or chassis mounting is acceptable.
- 21) Inner Side Shields: 1/8-inch thick steel or 1/4-inch thick aluminum shall be the size of the length of engine block and extend from center of crank shaft to top of block. Shields must be securely fastened.

- 22) All tractors required to shield all rotating mass mounted to front of crankshaft 360 degrees from front of engine block to one inch in front of the rotating mass. Shield to be from frame rail to frame rail by a minimum of 0.125 inch steel or aluminum and fastened to the frame on each side by a minimum of two evenly spaced bolts 3/8 inch grade 5 minimum. The remainder of the 360 degree shield will be the side shields and hood shielding. *Note: Shield may be notched to allow belt to pass through and beneath the frame to drive pumps.*
- 23) All engine crankcase venting (blow by tubes) must be vented below the heads of that engine and extended down to the engine pan. All blow by tubes must exit forward of rear tires.
- 24) All competing vehicles must be equipped with a dead-man throttle. All throttles in a forward-rearward direction shall be closed in the rearmost position. No hydraulic throttle linkage allowed. Must be positive, two-way mechanical linkage. All foot throttles must have toe straps.
- 25) All diesel engines will have a visible return to idle spring on fuel injection pump throttle arm.
- 26) A bolt in the crankshaft to hold damper pulley is required.
- 27) All engine fans must be shrouded with 1/16 inch steel or thicker, 360 degrees. Electric fans excluded.
- 28) Turbocharged engines are required to have one (1) cable that must surround the engine block and head. This cable must be placed between first and second cylinder through the exhaust manifold port area. Cable must be a minimum of 3/8 inch thickness. Cable must have a minimum of two (2) clamps at the splice. Cables must have approximately 4 inches of slack.
- 29) All diesel engines are required to install a three (3) way dump valve (manual) ahead of the injection pump to be operated from the dash panel.
- 30) Computer-controlled electronic water injection allowed, (only on diesel tractors).
- 31) All ether bottles (starting aids) must be placed outside of engine compartment.
- 32) All fuel lines to be steel braided or high pressure reinforced rubber. No plastic tubing allowed.
- 33) The following formula will be used for calculating cubic inch displacement on any piston type engine:  $.785 \times \text{stroke} \times \text{bore} \times \text{bore} \times \text{number of cylinders}$ .

## Chassis

- 1) Must utilize stock engine block or OEM block that will operate with the stock crankshaft for that model without any alterations for chassis mounting.
- 2) The stock transmission housing or manufacturer's replacement and the stock final drive housing or manufacturer's replacement.
- 3) Allow tractors with cast tub (belly type) frame (i.e. Oliver, CockShutt, White) to remove complete frame from front of transmission housing.

- 4) Any alteration to the chassis shell must have written approval of the Illini State Pullers Board of Directors.
- 5) If you modify the external transmission you must have a full frame chassis – NO sub frame connectors, tie bars, or latter bars. The housing must be dimensionally intact.
- 6) Engine and clutch housing to remain in original location and mounted solid as intended by original manufacturer.
- 7) The tractor chassis and frame must remain stock from the rear of the engine block to the rear of the tractor on all tractors.
- 8) The OEM engine cannot be modified externally in any way except for normal repair or for mounting of fuel injection pumps.
- 9) Must have wide front end axles. Front wheels shall track within the rear wheels.
- 10) The clutch housing, transmission case, rear end housing and axle housings must be OEM. No aluminum replacements.
- 11) Cut off axle housings allowed. End cap bolts must attach two halves of axle. Welding not recommended.
- 12) Hood and grill must be in place as intended by the manufacturer.
- 13) Sheet metal to be stock length and in stock location. Criteria to be to maintain original appearance.
- 14) Upgrading of sheet metal allowed to OEM dimensions and style, subject to Illini State Pullers Board of Directors approval.
- 15) Maximum wheel base of 114 inches unless originally produced with longer wheel base, then must remain stock length.
- 16) Maximum length 13 feet from the center of rear wheel to forward most portion.
- 17) Any OEM modular or composite tractor must meet all component tractor rules, i.e. John Deere 8420.
- 18) Planetaries are considered part of final drive and are not removable.
- 19) All tractors must either run safety tie bars mounted to rear axle housing with at least four axle housing bolts and extending forward to flywheel area and fastened to side of block or main frame with at least two 5/8 inch bolts, or a one piece frame extending from front of tractor to rear axle housing mounting bolts. Tie bars or frame must be sufficient strength to support weight of tractor with the bolts removed.
- 20) All safety blankets must be on the inside of tie bar and the tie bar must be fastened forward of the rear of the engine block.
- 21) All tractors that utilize a tube ladder type frames must be covered on the outside with steel or aluminum 0.060 thick.
- 22) All tractors are required to have a tow hitch on the front of the vehicle. The hitch can extend a maximum of 6 inches ahead of the furthest front portion of the vehicle, (hitch will not be counted in length when

measuring vehicle). The hitch must have a 3 inch diameter hole, preferably positioned horizontally and strong enough to push or pull vehicle at its heaviest weight. The device should be used for no other purpose.

### **Exhaust Systems**

- 1) All exhaust systems must discharge vertically. The height to be a minimum of one foot (12 inches) above the bend of the pipe which discharges vertically measured from the top of the pipe to bottom of bend. Vertical is defined as being within 10 degrees (with 5 degrees variance), in any direction of being plumb.
- 2) All exhaust pipes must be securely attached.
- 3) Rain caps cannot be used.
- 4) No megaphone pipes allowed.
- 5) Venturi-type headers acceptable.
- 6) Turbocharged engines must have two 3/8 inch grade 5 bolts in either (or both) vertical portion, or horizontal portion of exhaust pipes. Bolts are to be installed 90 degrees of each other and within one inch of each other.

### **Fuel and Fuel Containers**

- 1) All forms of nitro methane including nitrous oxide and propylene are illegal as a fuel or fuel additive for pulling. Legal fuels are alcohol, water, diesel fuel, gasoline or propane gas. No oxygen carrier or combustion accelerators are allowed. Methanol alcohol is a clear, colorless liquid with a mild odor at ambient temperatures. No additives are allowed in diesel fuel except those additives blended by the fuel manufacturer or refinery. Fuels may be checked by tech official at any event at any time.
- 2) No pressurized fuels allowed except in U.L. approved pressure tanks. No oxygen allowed.
- 3) No electronic fuel injectors or metering devices allowed.

### **Kill Switches**

- 1) All competing vehicles with spark ignition must use a waterproof, dust proof tether type safety switch as an ignition kill switch and it must be in working order at all times. All diesel competing vehicles must have an air shut-off in working at order at all times.
- 2) On a spark ignition tractor, the kill switch must break or ground the ignition circuit. Spark ignition tractors with electric fuel pump(s), the kill switch must also break current to the fuel pump(s)
- 3) On a diesel tractor, the kill cable must activate the air shut-off. A cable may be used for this purpose, but must have positive type enclosed cable for the air shut-off. The cap must have a spring loaded closing mechanism. System to be deemed acceptable must at least prevent from building boost. It is recommended that a gasket / seal arrangement be used to more effectively shut off

air flow. Door or rain cap air shut offs (no “butterfly” type) will be required on all self-ignition engines with a separate control for the driver. No electrical operated air shut-offs allowed. Air shutoff or kill switch must be accessible from seat.

- 4) Track officials and/or tech inspectors have the option of checking kill switches as they feel is adequate at any event. It is recommended that all kill switches be checked on all competing vehicles at every event.
- 5) All kill switches must be mounted independent of drawbar and/or wheelie bars / stabilizer bars.
- 6) The kill switch must be located in the rear center (maximum of 6 inches off center in any direction), approximately four feet above the hook point.
- 7) The break-away kill switches must have attached to them a minimum of a 2 inch diameter ring, with a minimum 1/8 inch cross-sectional thickness. The cable from the sled will be attached to this ring.
- 8) Portion of the kill switch and mounting bracket(s) must be able to withstand 32 pounds of pull per switch when pulled independently or collectively.
- 9) Kill switch ring must be secured with a single nylon tie wrap (1/8 inch). The tie wrap must be broken for a re-pull. Illini State Pullers will supply the 1/8 inch tie wraps for uniformity. Competitors will be responsible for replacing the kill switch mechanism and securing the tie wrap once kill switch is checked by tech official.
- 10) If vehicle has kill switch or shut-off located in a legal position, and during the pull it is pulled and the nylon strap is broken, and the presiding judge inspects and finds switch capable of operating properly under normal conditions, vehicle will be allowed to re-pull immediately or drop six positions. Decision to drop must be made before vehicle leaves the track. It is the puller's responsibility to see that the switch is checked by the official before leaving the track.
- 11) All ignition engines must have bar type master shut-off switch for all motors in working order within easy reach of the driver.
- 12) Diesel and fuel injected engines must have a fuel shut-off valve control within easy reach of driver (your normal fuel shut-off on diesel pump). Fuel injected ignition engines, fuel shut-offs to be located between fuel pump and injection nozzle.
- 13) The use of OHM meters and buzz boxes will not be allowed. The pulling vehicle can be started to check the kill switch or a light to show ignition circuit interruption may also be used to prove kill switch operation.

## Safety

- 1) If an Illini State Pullers track official or tech official feel a vehicle is unsafe, they have the right not to allow vehicle to pull. Track official or tech official has the right to bar a competition vehicle from competing if he

- or she believes that the vehicle has a potential safety problem.
- 2) All pulling vehicles must be equipped with a minimum of 2-pound Halon type or 2½-lb dry-powder type fire extinguisher, full charged with a gauge, in working condition and convenient to the operator.
  - 3) All drivers are required to wear a fire suit that meets SFI specification 3.2A-1.
  - 4) All drivers must wear helmets that meet or exceed Snell 1985 rating or must meet SFI specification 41.2. No modifications or alterations of the helmet are allowed. All chin straps must be fastened. Helmets with fire retardant lining and a flame retardant neck shirt allowed. If you use a helmet with a fire retardant lining and flame retardant neck skirt, no head sock is required. Once a helmet has suffered a severe impact, it must be replaced or sent to manufacturer for re-inspection.
  - 5) All drivers are required to wear a full 360 degree neck collar meeting SFI specification 3.3 or a Hahn's device.
  - 6) Flame retardant underwear is highly recommended with the use of any protective clothing.
  - 7) A capable operator must be in the driver seat while vehicle is running.
  - 8) A reverse safety light system is required all competition vehicles. A white light automotive quality minimum 1.5 inches in diameter, must be mounted directly above or below the safety kill switch at the rear of the vehicle. A light in the driver's compartment must be operated off the same system. Both lights are to be activated by a shift lever such that it will be lit only when the vehicle is in reverse.
  - 9) All pulling vehicles must be equipped with a starter interrupter switch on the gearshift which will allow starter engagement only in neutral position.
  - 10) All pullers will have fire protection equipment and helmets on any time while on the track and driver is on the pulling vehicle, or the puller will be disqualified.
  - 11) All drivers must wear full fire protection including full face helmets with shield, head sock, fire gloves, fire shoes and SFI certified fire suites. It is recommended that the face shield be in the down position during competition.
  - 12) Head socks / neck skirts must be inside of driving suite. Nothing exposed while competitor is sitting in seat ready to compete.
  - 13) Each member of the competitor's crew must be properly attired when present in the staging or in the competition area. Shoes are mandatory. Tank tops, bare torsos or muscle shirts are not acceptable in the staging or competition.
  - 14) No tarp straps will be allowed for any use on pulling vehicles.
  - 15) All vehicles carrying on board start batteries must have a quick disconnect method.

- 16) All vehicles must utilize a roll cage that meets SFI specification 47.2 along with a 5 point quick release harness and driver seat mounted to the roll cage structure. Failure to use 5 point release harness while competing will result in automatic disqualification. Competitors are required to complete a notarized statement saying his or her roll cage meets SFI specification 47.2.
- 17) All vehicles are required to have a quick release, removable or swing away steering wheel for ease of extraction of driver in event of injury.

### **Seats and Fenders**

- 1) All vehicles must a shield between driver and tire, (does not have to be a fender), to consist of a solid barrier between driver and any part of the rear tires sufficient to be able to support the weight of driver. The barrier must be a minimum of 6 inches wide at the bottom, increasing to a minimum of 36 inches at the top and the barrier must curl a minimum of 6 inches from vertical out over the tire in the same configuration as the tire.
- 2) Fenders or tire shields must be constructed so that when the driver is seated and the hands are on the wheel, he or she cannot touch the rear tire with any part of his body.

### **Stabilizer Bars**

- 1) Stabilizer bars are required (no wheels allowed). the drawbar assembly will not in any way be attached to the stabilizer bar assembly. (See page 8)
- 2) The stabilizer bar must extend a minimum of 32 inches behind a line drawn from the center of the wheel to the ground. Pad must not be more than 10 inches off the ground at 32 inch point and be measured during hitch check before competition. The stabilizer pad must be a minimum of 5 inches square with a minimum of 20 inches allowed from outside of one pad to the other. No crossbars between stabilizer bars allowed behind point of hook.
- 3) In addition to the stabilizer bars, there must be a brace that extends vertically 12 inches from the rear most tip of the skid pads. There must be a support brace extending inward to frame, axle or top of stabilizer bar arms. Materials used must be of minimum strength of materials used for stabilizer bars. Design and material must withstand severe impact of sled. Vertical brace should extend rearward a minimum of 2 inches from the radius of the tire.

### **Turbochargers**

- 1) All turbochargers not under the hood must be completely shrouded, except for inlet and exhaust pipes with a minimum 0.060 inch steel. Turbochargers under fiberglass hoods must be completely shrouded with

- 0.060 inch metal under the area of the fiberglass, except for inlet and exhaust pipes.
- 2) The tubing on the pressure side of a turbocharger to the intake must be under the hood or side shields or be bolted or strapped securely.
  - 3) Tractors limited to 4 turbochargers: 3 pressure stages on diesel and 2 pressure stages on alcohol. 360 cubic-inch displacement (cid) or less can run billet wheels. 360cid to 505cid alcohol engines with more than one-atmosphere turbo are limited to mass production OEM cast compressor wheels on the atmosphere turbo. (Billet compressor wheels are not allowed on top turbos of greater than 360cid 3 and 4-turbo alcohol engines)

## **Tires**

- 1) No dual tires, tire stubs or chains permitted.
- 2) No radial tires (drive tires) allowed.
- 3) Rear tires are limited to a width of 30.5 inches. (Width is determined by tire manufacturer)
- 4) Rim diameter limited to 32 inches on tires 24.5 inches or wider. (Width is determined by tire manufacturer)
- 5) 20.8 x 38 tire, or narrower, is allowed on 38 inch diameter rims. No tire width wider than 20.8 allowed on a 38 inch diameter rim.
- 6) No larger rim diameter allowed than 38 inches.

## **Weights**

- 1) Weights must be securely fastened and no transfer of weight while vehicle is moving will be allowed.
- 2) Weights must not extend rearward beyond rear tires.
- 3) Any weight lost while hooked to the sled and under the green flag will be cause for disqualification. If weight touches the ground although they may still be attached to the pulling vehicle, pull will be disqualified (internal breakage excepted).
- 4) All moveable weights shall be steel or cast, minimum of 10 pounds.
- 5) No liquid or powdered substance allowed for weight purposes.
- 6) Weights must not interfere with the kill switch, drawbar or chain.
- 7) The area 5 inches wide and 12 inches high immediately above and behind the drawbar must be free of all obstructions (including weights, wheelie bars and second drawbars) for ease of hooking and unhooking.
- 8) No tarp straps will be allowed to secure weights.
- 9) Certify weight on cert. scale if possible with random checks thru season.

## 6,500# Open Rules

---

- 1) All vehicles must comply with all general truck and tractor safety rules
- 2) Light super tractors must run their sanctioned weight
- 3) Tractors meeting the 2017 mod tractor rules will have points priority.
- 4) This open class will be on a trial basis for the 2018 season.

### 6500 Modified Rules (2017 ver.)

- 1) Weight to be 6500 lb.
- 2) No portion of tractor may interfere with the sled, chain or hook. An area 6 inches wide and 12 inches above the drawbar must be free of all obstructions.
- 3) Drawbar must be of steel construction and no less than 1 inch thick and have an opening 3 inches by 3 <sup>3</sup>/<sub>4</sub> inches. Hitch must rigid in all directions. Any device used to raise the hitch while pulling is not allowed.
- 4) Pulling point cannot be more than 1 <sup>1</sup>/<sub>2</sub> inches from back edge of drawbar.
- 5) All vehicles are required to have vertical bumpers at the rear most part of vehicle to prevent tires from climbing buckboard on sled. Bumper to be a minimum of 24 inches from ground, and extend a minimum of 8 inches vertically. Bumper to be of rigid construction.
- 6) Kill switches are mandatory. Kill switch will be checked with the engine running. Kill switch may be secured with a 15# rated zip tie supplied by tech official
- 7) Tip over bars must meet ISP requirements.
- 8) Must have a roll cage meeting SFI specifications. 2 inches x.095 chrome molly or 2 inches x.120 mild steel. Must be equipped with a 5pt. harness.
- 9) Kill switch location is to be 48 inches above and up to 6 inches off center of hitch. Kill switch cannot be attached to hitch in any way. No tape allowed to prohibit pulling switch.
- 10) Pulling vehicles must have a neutral safety switch that will prevent tractor from being started in gear.
- 11) Traction tires are limited to a maximum 30.5 x 32. No radial drive tires allowed.
- 12) All vehicles to comply with 20 inches maximum drawbar height. Drawbar minimum length of 18 inches from center of rear axle to point of hook. Drawbar heights to be checked before each hook by designated individuals..
- 13) Tractors must have a wide front end. Front tires must track within the rear tires.
- 14) Tractor chassis is limited to 14 ft. from the center of the rear axle to the forward most point, tow hooks are mandatory but are not included in the length. Must have 2 inches opening min.

- 15) All frames are to be rigid with no pivot points.
- 16) Tractors are to have good working rear brakes.
- 17) Modified tractors with the frame bolted to the transmission shall also be bolted to the axle housing to prevent splitting of tractor AG rear ends. Must be of sufficient strength to support the weight of the tractor in the heaviest class being entered with bolts removed from plate of transmission or rear end.
- 18) A working back-up light must be visible to driver.
- 19) Tractors must have minimum of 6 inches wide fender / shield over tires, and provide protection so driver cannot touch rear tire with any part of body while seated, and belted in.
- 20) Engine couplers and flex plates or starter gears need to be covered with ¼ inch steel or 3/8 inch aluminum 360 degrees around and full length
- 21) Multiple alcohol injection, supercharged or turbine tractors must designate which engine is being used per event.
- 22) Turbine engines limited to T53-L13.
- 23) Motors limited to.
  - a) 650 cubic inch alcohol injection
  - b) 575 cubic inch supercharged w/ 871 supercharger
  - c) 1100 cubic inch naturally aspirated single or multiple engines on carburetor and maximum 93 octane pump gasoline. O.E.M. style cast or aluminum heads with stock intake and exhaust runner placement and valve angles not to be more than 2 degrees out of stock position.
  - d) Other engine configurations are subject to approval by board, [including but not limited to diesel automotive type.]
  - e) No V-12 engines allowed.
- 24) No dual ignition systems allowed only two valves and one spark plug per cylinder.
- 25) Blower overdrive limited to 15% for wedge motors and 10% for hemi powered tractors.
- 26) Turbine shielding 3/8 inch steel 360 degrees, 5 inches before and 10 inches after turbine hot section.
- 27) Superchargers limited to 871 cfm unit, turbo charged gasoline automotive V-8 engine allowed. Screw blowers prohibited.
- 28) Supercharger drive components must be shielded, wider than all components idler, belt. and pulleys. Must cover top and sides, and be securely mounted. Must extend beyond bottom pulley.
- 29) Supercharger restraint system required, subject to tech inspection approval.
- 30) Exhaust must exit vertical plus or minus 10 degrees.
- 31) Exhaust must be min.12 inches tall from bottom of bend to top of discharge.
- 32) Harmonic balancer shield must be ¼ inch steel band 1 inch wide, 360 degrees around harmonic balancer. Must have straps ¼ inch x 1 inch that will keep harmonic balancer from working forward. SFI excluded.

- 33) Engine side shields are required and must be a minimum of .060 thick for automotive type and .120 for industrial inline engines, must extend from base of the head to 2 inches below the center of crank shaft.
- 34) Automatic transmissions must have approved blanket(s) from back of block to tail shaft. No steel shielding allowed. SFI flex plate.
- 35) Tractors must have automatic reverse lockout.
- 36) Tractors must have a dead man throttle opened in a forward position. And a minimum two return springs.
- 37) U-joints and drive shafts shielded 360 degrees the total length. (5/16 inches STL 3/8 inch alum)
- 38) Tractors must be equipped with minimum of one 2 ½ lb. fire extinguisher, must have working gauge and be fully charged. Be in working condition and mounted convenient to operator.
- 39) Tractors with on board battery / batteries must have a master disconnect switch.
- 40) Skid plates are required, must be mounted in line with each frame rail and extend from the center of the front axle forward. Skid must be securely mounted and braced to the chassis. Must be a minimum of 4 inches wide and 12 inches long, with a minimum 6- inch curve. Must support weight of front end with a jack. Maximum ground clearance is bottom of wheel rim, not to exceed 4 inches.
- 41) Vehicles that use a clutch must have an S.F.I. approved clutch, flywheel, and bell housing.

## 6500 Modified Diesel Rules

- 1) All chassis and safety rules apply. Additionally an air shutoff controlled by both the sled and the driver must be in position to cut air supply to the engine before the turbo inlet. A three way dump valve controlled by the operator should be in line before the fuel injection system.
- 2) All turbochargers must be completely shrouded, except for inlet and exhaust pipes with a minimum 0.060 inch steel.
- 3) 405 ci. Displacement maximum with a 3.00" turbo or up to 466 ci displacement maximum with a 2.6" turbo.
- 4) Any engine that originally ran on diesel must run on diesel fuel only. No conversion to spark ignition allowed even if a spark ignition option was available. Any fuel system allowed.
- 5) Use of OEM mass production diesel block and head only. No aftermarket, re-cast, billet blocks or heads allowed.
- 6) Water injection is allowed and only water.
- 7) No inter or after coolers allowed.
- 8) Turbo charger will be limited to a single turbo with a maximum inlet of 2.6" for a 466 ci maximum displacement and 3.0" for a 405 ci displacement or smaller. The inlets to be measured with 2.65" slug or 3.05" slug, as

- applicable for the appropriate inlets, the slug may not contact the compressor wheel when inserted into the air inlet. SMOOTH BORE ONLY, NO MWE GROOVE, slots or any other source of air permitted. The compressor wheel must protrude into the 2.6" or 3.0" opening a minimum of .125".
- 9) If a stock turbo is used and it has a MWE groove then the map ring must be 100% stock and the turbo must remain 100% stock. Maximum "stock" turbo size allowed is 2.36" to be measured with a 2.4" slug. The compressor wheel must protrude into the 2.36 opening a minimum of .125 and be stock for that turbo. Stock turbo being used must be a stock turbo that was OEM for the engine being used. NO EXCEPTIONS! This is to be provable by a factory part number to be available upon request.
  - 10) Balance of modified tractor rules also apply in their entirety to the Diesel Modified Tractor rules.

## 10,000# Pro Farm Rules

---

### General

- 1) All Pro Farm tractors must satisfy all rules in the GENERAL TRACTOR SAFETY RULES.
- 2) Badger State Tractor Pullers 10,000 lb Pro Farm rules will be used for any rule not exclusively covered by this book and can be found at [BSTPonline.com](http://BSTPonline.com)
- 3) Cut tires allowed.
- 4) 20.8 x 38 or 18.4 x 42 tires
- 5) 10,000 lbs with driver and full of fuel.
- 6) Steel flywheel and clutch assemblies required.
- 7) Clutch scatter blanket required. Tied front and back.
- 8) Tractors with a RPM limit are required to have an ISP RPM monitoring device plug on rear of tractor.

### Engine/Turbo Combinations

- 1) 466 Hot Farm - 466 CI, 3x3 smooth bore turbo, unlimited RPM, NO intercooler.
- 2) 466 Pro Farm – 466 CI, 3x3.7 smooth bore turbo, 3500 RPM, intercoolers allowed.
- 3) 640 Pro Farm – 640 CI, 3x3.7 smooth bore turbo, 3000 RPM, intercoolers allowed.

## 12,000# 2Hot2Farm Rules

---

1. **Engine:** 480 cubic inch maximum (zero tolerance). Decubing allowed. OEM cylinder heads for model or series of engine only. Intake and exhaust manifolds must be OEM ag application from engine manufacturer, and must bolt directly to the head without spacers or adapters. OEM replacement blocks allowed; must have stock engine-mounting plate that is made for the replacement motor and looks stock. ISP general rules regarding replacement motors apply.
2. **Fuel:** Diesel fuel only as a primary fuel. Blended fuels and biodiesel allowed.
3. **Pump:** Bosch A or MW series pumps with maximum of 12mm plunger, or stock-appearing pump for make and model of tractor. No P-Pumps.
4. **Turbo:** Out-of-the-box Borg-Warner S360 (part number 177272 new, or 477272 remanufactured). Inducer bore diameter 2.42". No modifications to the turbo of any kind are allowed, with the following exceptions:
  - a) May choose any stock production exhaust housing available from Borg-Warner for S360 turbo (AR ratios of 0.83, 0.88, 0.91, or 1.00)
  - b) Thrust bearing may be upgraded to heavy duty 360 degree style.
  - c) External modifications to intake or exhaust housings allowed strictly for adaptation to intake and exhaust plumbing, or exhaust manifold.

May also use any other stock, unmodified, production turbo with inducer bore diameter of 2.42" or smaller (without a reducer slug). \$750 claimer on all turbos.
5. **Intercoolers:** Ag application intercoolers from engine manufacturer allowed, provided that manifold bolts directly to cylinder head without spacers or adapters. Modifications to manifold for intake plumbing adaptation allowed. Liquid source for intercooler core must be directly shared with engine block/head (no dry blocks). Cooling system must utilize single water pump and single fill location (electric water pump allowed). Nothing colder than ambient (ice, evaporative cooling, etc.) can be utilized as a cooling agent, either directly, or through a heat exchanger, anywhere in the cooling system or intake system. Nothing can be injected anywhere in the intake air stream.

- 6. RPM Limit:** 3000 rpm maximum, as monitored from sled, or random spot check. Disqualification determined by ISP board review. Tractor must be equipped with ISSPRO #R8906, 2-wire speed sensor with single magnet mounted to speed target (one pulse per engine revolution). Wire harness must be in full view and be connected (without splices) to a standard 110V female, grounded receptacle located in similar position as kill switch connection with clear access for sled hook-up.
- 7. Tires:** 20.8 x 38 or 18.4 x 42 maximum. Ag tires only. Top-cutting allowed (no alterations to front of lugs or face of tire). Any rim width or wheel style allowed.
- 8. Weight:** 12,000 lb.
- 9. Chassis:** Tractor to remain stock appearing with stock wheelbase for make and model (within 4" variance). Factory style ROPS or roll-cage required (See General Tractor Safety Rule 22). Front weight bracket must be in stock location. PTO, 3-point, and rock-shaft may be removed.
- 10. Safety:** All general safety rules apply, with the exception of Rule 19 (fuel dump valve requirement).
- 11. Rules Lock:** All performance rules locked through the 2020 season.



## General Truck Safety Rules

---

- 1) Seatbelts are required and must be worn during the pull. Driver must be inside truck while going down track.
- 2) Truck must have kill switch that will cut power to the coil on spark ignition engines; diesel engines require an air shut off; if truck has electric fuel pump switch must break current to fuel pump. Switch must have 2" diameter ring and be located in truck centerline, and no more than 6" from the rear most part of truck. Pulling vehicle must have neutral safety switch to prevent crank up in gear.
- 3) All trucks must have a SFI approved flywheel and rotating clutch parts. SFI numbers must be given to tech official at time of certification.
- 4) All trucks must have a steel bell-housing or approved scatter blanket. Blanket must be secured 360 degrees around flywheel or side shields.
- 5) All trucks with automatic transmissions must have an approved scatter blanket, which must cover 360degrees around converter and valve body; or SFI approved side shields, which must cover top and sides with additional shield on bottom of transmission of .060 inch steel or .090inch aluminum.
- 6) All engine drive fans must be shrouded with steel 1/16" min.360 degrees, at least as wide as the fan blades.
- 7) Truck must have motor shields if inner fenders are removed or made of plastic or do not adequately cover engine. Motor shield must be .060 inch steel or .090inch aluminum, and must extend from the bottom of the head to the top of the frame rail, the entire length of block.
- 8) Each drive shaft must have 2 loops made of 3/8" x 3/4" thick aluminum, 5/16 inch x 3/4 inch wide steel, or 1/4" x 1" wide steel minimum. Driveshaft between the transmission and transfer case need only 1 loop if drive shaft is no more than 12" long.
- 9) Each U joint must be shielded 360 degrees made of minimum 3/16 inch thick aluminum or 1/8 inch thick steel and must be at least 6 inches wide and tethered to the frame with a 2 inches nylon strap with bolts and washers
- 10) Weights must be safely secured, no weights in cab. Weight lost or touching the ground while truck is hooked to sled is a disqualification.
- 11) Fuel tank may not be located in cab, no fuel tanks in engine compartment.
- 12) Truck must be equipped with minimum of one 2 1/2 lb. dry chemical or halon fire extinguisher. Fire extinguisher must have working gauge, be fully charged, and in working condition. Fire extinguisher must be mounted convenient to operator.
- 13) If vehicle originally had doors, they must be on and closed during pull. Driver's door must open from the inside and outside.

- 14) Truck must have ¼" steel shield 1" wide 360 degrees around harmonic balancer, water pump may be used, SFI excluded. All must have straps ¼" x 1" that keep harmonic balancer from working forward.
- 15) All drivers are required to wear full-faced helmet Snell 1985 or newer, with chin strap fastened while hooked to sled and minimum SFI spec 3.2a-1 fire suit including jacket, pants, shoes, gloves, and head sock. Anytime a sanctioned vehicle is hooked to a sled at an ISP event this gear is required.
  - a) If you use a helmet with a fire retardant lining and flame retardant neck skirt, no head sock is required.
- 16) All vehicles must have working amber neutral safety light and a clear reverse light on the rear of the vehicle visible to the hooker and unhooker. Minimum of 1.5 inch diameter.
- 17) ALL TURBOS must be behind a grill or screen of ISP tech approval. If turbo intake protrudes through grill/screen, 5/16" cross bolts in X pattern are required.
- 18) ALL TURBOS must have a minimum of 1/8" cable with a minimum of 2 clamps crossing in an X pattern from center section to intake compressor housing.

## 6500# Altered Stock Truck Rules

---

### General Rules

- 1) Truck must have stock truck frame and original front suspension in place (springs, hangers, U-bolts and shackles) traction bars are allowed. Flatbeds or truck bodies different from frame must be approved by the board of directors. Truck frame shall designate make and model of truck. No air bags allowed. Blocks or stops allowed.
- 2) Trucks may use any automotive rear axle, one transmission and transfer case, automotive type front housing, 1-ton max. 137 inch wheelbase maximum
- 3) Truck must have all body components; fenders, hood, side doors, roof and factory firewall. No fiberglass body parts allowed. Fiberglass cowls allowed.
- 4) Truck must have full floor that is securely fastened, made of wood, steel, aluminum; factory beds cannot be gutted.
- 5) Tires must be DOT approved on 10" rim Max, no cutting or grooving, no duals or chains. Front and rear tires must track within centerline of each other. Maximum tire size of 35" or equivalent. Siped tires allowed. Sipes must be perpendicular to bead.
- 6) Engine must be in OEM location, or no less than 14" from the centerline of front axle to front of bellhousing. All engine components must fit

behind radiator in stock location, and underneath hood. Cowls or scoops allowed 3" cowl height maximum.

- 7) All gas engines must be naturally aspirated, single turbo on diesel engine only. No pressurized tanks except LP gas as single full source, no methyl alcohol. Diesel fuel only on compression ignition. Gasoline only on spark ignition. Diesel additive will only be allowed for lubricating purposes.
- 8) Exhaust must have muffler, exhaust must exit behind cab.
- 9) No hanging weights, factory bumper in stock location, no push bumpers, no snowplows, and no tube bumpers (front bumpers only) weights must not be visible
- 10) Maximum hitch height is 26 inches at hitch point. Hitch must be frame mounted and rigid in all directions. Hitch device must be no less than 1" thick. Must have 3 inches wide by 3 3/4-inch long opening parallel with the ground. Pulling point may not be more than 1 1/2 inches from back edge of hitch. Hitch must be clearly accessible and hooking point to be no closer than 27% of wheelbase when measured back from centerline of rear axle. Hitch must be only frame mounted.
- 11) Hitch height adjuster(s) / support(s) must be frame mounted and cannot attach to rear end housing.
- 12) Trucks with hydraulic suspension must have device disabling hydraulics during pull.
- 13) Trucks must have working brakes. Driveshaft brake allowed for rear only.
- 14) Must have rear bumper to withstand sled impact.

## Gas Rules

- 1) Truck engines must be of same make and manufacturer. Block and heads must be cast iron; head must bolt on without any modifications. Aftermarket cast iron blocks allowed, but must be an OEM replacement.
- 2) Cubic inch limit; 480 + 5
- 3) Any four-barrel carburetor allowed. Stock fuel injection allowed only if available by manufacturer for year, make and model.
- 4) Must have casted intake manifold: no sheet metal, fabricated, or billet machined intakes allowed.
- 5) All General Altered Stock Truck rules apply

## Diesel Rules

- 1) 450 Cubic inch limit.
- 2) Must have casted intake manifold: no sheet metal, fabricated, or billet machined intakes allowed.
- 3) Single turbo only.
- 4) Turbocharger: 2.6" inlet to be measured with 2.65 slug.

- 5) Bushing allowed to downsize turbo, bushing must be round, .75" long and within .050" of compressor wheel. Compressor wheel must protrude min 1/8" into housing a 3.0" diameter MWE allowed .250" max width for MWE groove.
- 6) Single port water injection.
- 7) Production block only allowed in 1 ton or smaller pickup only.
- 8) Must have OEM heads.
- 9) OEM style fuel injection system to engine model. P7100 max. Common rail systems allowed 2 high pressure pumps max. \*Grandfather trucks currently not meeting rule in 2017 season.
- 10) A mechanical shutoff, three-position valve, controlled from the seat must be placed in the fuel line before the injection pump.
- 11) Must have air intake shut-off. Electric shut off required if equipped with electric supply pump. Electronically controlled fuel systems must be controlled by kill switch. Safety switches to be located as specified in general truck safety rules.
- 12) Exhaust to have two 3/8" bolts in an X pattern through pipe within 3" of the turbo. Altered stock class must have exhaust exiting up behind the cab.
- 13) All General Altered Stock Truck rules apply.

## 6200# Super Stock Truck Rules

---

- 1) Trucks must have stock frame with original front suspension in place (springs, hangers, U-bolts, and shackles) traction bars are allowed. Flatbeds or truck bodies different from frame must be approved by board. Blocks are allowed, rear leaf springs optional, 133-inch maximum wheelbase.
- 2) Super Stock trucks may use any rear axle, any transmission and transfer case. Front axle must be 1 ton maximum axle housing.
- 3) Trucks must have all body components; fenders, hood, side doors, roof and any firewall. No holes in firewall except for gauges. No fiberglass body parts allowed. Fiberglass hoods allowed. Tilt bodies are allowed.
- 4) Trucks must have box liner or custom tonneau covers securely fastened if floor is removed.
- 5) Tires must be DOT approved on 10" rim Max, no cutting or grooving, no duals or chains. Front and rear tires must track within centerline of each other. Maximum tire size of 35" or equivalent. Siped tires allowed. Sipes must be perpendicular to bead.
- 6) Truck and engine must be of same manufacturer, may use different motor if approved by ISP board. Block and heads must be cast iron. Head must bolt on without any modifications. Aftermarket cast

- iron block allowed, but must be OEM replacement. Hemi heads allowed.
- 7) Engine must be in engine compartment, all engine components must fit behind radiator in stock location, no holes in hood except to clear headers, cowl induction hood and hood scoops allowed no higher than 3" unless approved by board. Air cleaners may protrude into cowl or scoop not to exceed three inches above stock hood height.
  - 8) Cubic inch limit 540 + 5.
  - 9) Gas engines only, must be spark ignition and naturally aspirated no methyl alcohol.
  - 10) Any four-barrel carburetor allowed, with any intake manifold. Stock fuel injection allowed only if available by manufacture for year, make, and model.
  - 11) Truck may have open exhaust or headers, which may exit up or back, not out.
  - 12) Weight may be added to front of the truck, weight or frame may not extend more than 60" from the centerline of the front axle. Wheels on weight bar 5" min dia. Must be mounted below the lowest point of weight bar and be able to carry weight of vehicle.
  - 13) Maximum hitch height is 26 inches at hitch point. Hitch must be frame mounted and rigid in all directions. (Hitch device must be no less than 1" thick. Must have 3" wide by 3 3/4" long opening parallel with the ground.) and pulling point may not be more than 1 1/2" from back edge of hitch. Hitch must be clearly accessible and hooking point to be no closer than 27% of wheelbase when measured from centerline of rear axle.
  - 14) Torque arms or lifting device on rear end capable of raising hitch height while pulling is not allowed.
  - 15) Trucks with hydraulic suspension must have device to disable hydraulics during pull.
  - 16) Trucks must have working brakes. Driveshaft break allowed.
  - 17) Truck must have vertical bumpers of rigid construction, the bottom of which must be 24" maximum from the ground and must extend upward 8" minimum. Bumpers must withstand a severe impact of the sled.
  - 18) Trucks must have safety lock to hold up the body on tilt body trucks. Tilt bodies may be raised for starting purposes, but must be in the lowered position before moving under its own power.

## 7800# Pro Stock Diesel 4x4 Rules

---

### Safety

- 1) General truck safety rules 1-14. All apply. No exceptions.
- 2) Truck must have neutral safety switch to make truck incapable of being started in gear.
- 3) Mechanical 3-way dump valve, controlled from seat must be placed in fuel line as close to injection pump as possible to open pump supply to atmosphere.
- 4) Must have air intake shut-off. Electric shut off required if equipped with electric supply pump. Electronically controlled fuel system must be controlled by kill switch. Safety switches to be located as specified in general truck safety rules. Safety switch to have 2-inch metal ring at end. Safety switch will be tied off with nylon tie strap upon inspection.
- 5) Intercoolers must be shielded. If intake is through grill 5/16" bolts in X pattern required.
- 6) Axle caps required .060 minimum, cannot be fastened to axle bolts.
- 7) Tethers required on U-joint shields.
- 8) All drivers are required to wear a fire suit that meets SFI specification 3.2A-1.
- 9) All drivers must wear helmets that meet or exceed Snell 1985 rating or must meet SFI specification 41.2. No modifications or alterations of the helmet are allowed. All chin straps must be fastened. Helmets with fire retardant lining and a flame retardant neck shirt allowed. If you use a helmet with a fire retardant lining and flame retardant neck skirt, no head sock is required. Once a helmet has suffered a severe impact, it must be replaced or sent to manufacturer for re-inspection.
- 10) All drivers are required to wear a full 360 degree neck collar meeting SFI specification 3.3 or a Hahn's device.
- 11) Flame retardant underwear is highly recommended with the use of any protective clothing.

### Driveline

- 1) Trucks may use any automotive front or rear axle, transmission and one transfer case.
- 2) Fabricated housing allowed. No planetaries allowed.

### Body

- 1) Truck must have full size steel or OEM type body only, no fiberglass unless OEM installed. Vehicle must have full firewall with no holes except for controls, holes not to exceed 1/2" larger than controls. Guttled box allowed, full tonneau cover required with gutted box.
- 2) Complete factory frame rails required.
- 3) 158-inch wheel base max.
- 4) Truck must have working front suspension and axle placed in proper location to be determined by truck

frame and body. Adjustable front shocks or suspension stops must be mechanical. Pneumatic, hydraulic, and electric adjustable stops not allowed. No hydraulics or other assisting devices of any type on front or rear suspension, hitch or weight bar.

- 5) Maximum hitch height 26" at hook point. Hook point to be no closer than 44" to centerline of rear axle. Hitch must be frame mounted and ridged in all directions. Hitch must be centerline of rear axel or behind. Hitch angle from pivot point to hook point may not exceed 25 degrees. Hitch device must be no less than 1" thick and maximum 1.5" thick. Hitch opening must have 3" wide by 3 3/4" long. Opening may not be more than 1 1/2" from back edge of hitch. No hitch supports or adjusters fastened to rear axel housing shall be above the centerline of the rear axel. Pivot point of drawbar may be no further forward than the centerline of the rear axel. Hitch must be clearly accessible.
- 6) Torque arms or lifting device on rear end capable of raising hitch height while pulling is not allowed. No L or trick style hitches allowed.
- 7) Brakes on both front wheels required.
- 8) Truck must have vertical bumpers of rigid construction, the bottom of which must be 24 inches maximum from the ground and must extend upward 8 inches minimum. Bumpers must withstand a severe impact of the sled.
- 9) Tires must be DOT approved on 10 inches rims max, no cutting or grooving, no chains. 35 inches or equivalent tires max. Tires must track within centerline of each other. Duals allowed.

## Weight

- 1) 7,800 lbs. max with driver.
- 2) Weight may be added to front of the truck, weight or frame may not extend more than 60 inches from the centerline of the front axle. Wheels on weight bar 5 inches minimum diameter. Must be mounted below the lowest point of weight bar and be able to carry weight of vehicle.

## Engine/Turbo

- 1) Diesel fuel only.
- 2) Water injection allowed, pump lubricant only.
- 3) Front of engine block cannot be more than 17 inches from centerline of the front axle.
- 4) Turbocharger will have a smooth-faced intake housing, limited to a 3.6" inlet, (no MAP ring) with all air entering through the 3.6" opening. Intake wheel must protrude a minimum of 1/8" inside opening. Opening to be measured with a 3.65" slug.
- 5) OEM Production block, available in 1-ton or smaller pickup only. 450 cubic-inch max. Deck plates allowed.
- 6) After-market cast cylinder heads allowed. Must accept OEM spec head gasket.

- 7) Fuel pumps, 1 barrel / plunger per cylinder, P pump max, no billet or sigma pumps.
- 8) Exhaust to have two 3/8-inch bolts in an X pattern through pipe as close to turbo as possible. Exhaust must exit up, thru hood or behind cab.

## 8000# Hot Street Diesel Trucks

---

### **Safety**

1. General Truck Safety Rules 1-18 apply.

### **Driveline/chassis/suspension**

1. The OEM chassis is mandatory. The engine must be in the OEM location for the body used. The vehicle must retain the full OEM chassis. Wheel tubs, back half conversions, tube chassis prohibited.
2. Functional hydraulic brakes are mandatory front and rear.
3. 1 ton or smaller OEM type transmission and transfer case is mandatory. No Drop boxes or reverser style transmission.
4. Front axle must be 1 ton or smaller, no fabricated housings. Blocks, stops, or limiting straps are permitted. Traction bars and other like devices are permitted. Lift kits are permitted.
5. Rear axle must be 1 ton or smaller, no fabricated housings. Blocks, stops, or limiting straps are permitted. Traction bars and other like devices are permitted. Rear suspension must maintain a minimum compression shock travel of 1". Stops must be adjustable and removable. No solid rear suspension allowed. If equipped with air bags, the compressor must be disconnected or valve stem to bags removed. Air bags cannot be filled.
6. Must retain the original OEM power steering. Non-OEM power assist methods are prohibited.
7. Tires must be DOT approved, 10" rim width max. No cutting or grooving. No chains. Front and rear tires must track within centerline of each other. Max tire size 35". Dual rear tires allowed, must be run on factory equipped dually trucks with accompanying dually rear beds. Dually trucks will be limited to the OEM tire size.

## Body

1. Must use OEM truck body, including a full bed floor. The body must retain full sheet metal. Aftermarket hoods are permitted, no fiberglass. The hood must be closed and securely latched while the vehicle is hooked to the sled. The complete OEM firewall and OEM cab floor is mandatory.
2. Batteries must be securely mounted. No batteries in the cab or in front of the radiator core.
3. Radiators must be in the stock location and be of at least factory size for the specific model truck.
4. A complete interior, including factory dash, door panels, carpet/rubber floors, headliner, etc. is mandatory. Two factory front seats are mandatory and must be fully upholstered. The use of hand throttles is prohibited.
5. Complete headlight and taillight assemblies are mandatory and must be operative. Headlights cannot be on while hooked to the sled. Complete OEM glass windshield and windows are mandatory. Windows must be operative per factory specifications that is they must open and close via OEM electrical or mechanical means. All factory lights, signals, horn, windows, etc. must be retained and be operative.
6. OEM style fuel tank is mandatory. Fuel cells are not allowed.
7. Must have rear bumpers/sled stops to withstand an impact from sled.

## Weight/hitch

1. Truck weight max 8000 LBS with driver. Trucks weighing less than 8000lbs are permitted to add additional ballast to meet the 8000lbs max weight. Any additional weight must be securely fastened on the truck, no weights in cab. Trucks weighing from the factory over 8000lbs can pull with a “grace” of up to 9000lbs. However, no additional weight ballast is permitted, and vehicle will be subject to 24” MAX hitch height. Any final decisions rest with the tech officials.
2. No weight boxes, bars, or hanging weight ahead of the front bumper except for standard cab long bed wheelbase; this wheelbase configuration can hang weight on a removable style bracket with removable weights only, No boxes or permanently fixed brackets. Front bumper must be in the stock location.
3. Hitch must be a Reese style frame only mounted receiver type hitch and solid in all directions. No drawbar type hitches allowed. Hitch cannot

protrude thru bed floor. Reinforcements of the frame permitted but must not extend forward of the centerline of rear axle or to the axle housing. Trick hitches are prohibited.

4. Max hitch height 26" at hook point. Hook point hole may not be more than 1 1/2" from back edge of hitch and must have 3" wide by 3 3/4" long opening parallel to the ground. Hook may be no more than 1 1/2" thick and no less than 1" thick. Hooking point must be no less than 44" back from the center of the rear axle. Hitch must be clearly accessible, bumpers or roll pans may be notched.

## Engine/turbo

1. The engine is limited to an OEM make-specific compression ignition engine available as an option in a 1 ton or smaller truck. The engine does not need to be OEM make specific to the chassis (I.E. Cummins in a Ford chassis is allowed). Filled engine blocks are prohibited. Aftermarket cast cylinder heads are allowed.
2. All trucks must have exhaust exit going upward and rearward of the truck cab. Exhaust exiting through the hood or the fender-well are prohibited. A 90 degree turn up pipe is required for exhaust exiting at the stock location/horizontal angle. Must have two 3/8" bolts that cross 1" apart from each other within 3" of the turbo outlet.
3. #1 or #2 diesel ONLY.
4. The use of multiple high pressure common-rail fuel pumps is permitted. The use of multiple HPOP's in Ford Powerstroke is permitted. P7100 Pump max for mechanical systems. Mechanical injection pumps are recommended to have a mechanical fuel shut off.
5. NITROUS OXIDE, PROPANE INJECTION, AND WATER METHANOL ARE NOT PERMITTED. NO INJECTABLES OF ANY KIND ARE ALLOWED!
6. Aftermarket intake manifolds and turbo intakes are permitted. Air filters are not required. Intake piping to turbocharger may not extend outside the OEM body.
7. Air to air intercoolers and factory equipped air to water intercoolers (6.7 Powerstroke) are permitted. NO air to water intercoolers allowed on vehicles that did not come from the factory with them. Intercooler must be in the factory location. If the truck did not come with a factory intercooler, it must be mounted in front of the radiator and behind the grille.

8. All engines turning 4500rpm and higher must be equipped with a harmonic balancer or damper meeting SFI 18.1
9. You may utilize the factory turbocharger, or any aftermarket turbo in a single or sequential application. All turbos and affixed piping must fit under the hood of the truck and may not extend outside of the factory body work. Cowl hoods are allowed.

The ISP HOT STREET DIESEL CLASS is a class designed specifically for street driven trucks that do not meet the “stock street diesel” rules. A valid DOT registration and License plates are mandatory. All drivers must have a valid state driver’s license. 2wd or 4wd trucks are allowed. Trucks may be trailered to the event. Tow vehicles are prohibited. The truck must drive to the staging area and onto the track under its own power.

## Class Representatives

---

5000 # NA/SS	Ken Mersman	815-355-2700
7000# NA/SS	Steve Little	815-739-2962
6000# NA Tractors	Taylor Brooks	309-231-7309
6000# SS Tractor	Tom Meinhardt	815-303-9317
10000# Pro Farm	Scott Burkhardt	815-543-4621
12000# 2Hot2Farm	Jason Hasbrook	815-866-2712
6500#AS 4x4	Jeremy Moss	815-739-5797
6200# SS 4x4	Kirk Parks	630-816-5546
7800# Pro Street 4x4	Ivan Harvell	815-739-6618
6500# Mod Tractor	Don Post	815-761-4814

## Class Representative Responsibilities

Class Representatives will be responsible for measuring drawbars and running the scale, or appointing someone to do so, for their respective classes at each event.