# 6500# Outlaw Tractors

## Eligibility of Contestant

1. All competitors are required to have on file with Illiana Pullers Association before competing in the 6500 Outlaw class a notarized form / statement stating competitor's flywheel and bell housing components are SFI approved. A new notarized form / statement must be on file each year before competition vehicle is allowed to compete. A form may be obtained from the Illiana Pullers Assoc. Board of Directors

## General Rules

1. Class competes at a maximum weight of 6500 lbs

   Tractor with updraft carburetor (s) may weigh up to 7000 lbs

2. All competing vehicles must be equipped with working rear wheel brakes.
3. No shifting allowed while under competition (ie Torque Amplifier, Etc.)
4. **NO WATER Injection of any type allowed. All water equipment must be taken off.**

## Drawbars

1. All drawbars shall be constructed so that in the event of drawbar breakage, the drawbar supports do not pull from a top link or brace above the centerline 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 breakaway type (slide out) drawbar. The drawbar hold up device is to be within 6 inches maximum forward of hook point.

2. Drawbars cannot be shorter than 18 inches from center of axel. A drawbar, which has provisions to be made shorter than legal length, is not acceptable as a legal drawbar.

3. Drawbar height is not to exceed 20 inches.

## 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.

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.

**Engines**

1. Each competing vehicle must have a working RPM pick up on their vehicle. The cord must be wired uninterrupted to the rear of the vehicle and is to be mounted on the back of the vehicle directly above the drawbar area. The cord must be visible from the point of pick up to the rear of the vehicle. The cord must run outside of transmission blanket and all sheet metal. The cord must have a factory female end at the plug end. The pick- up MUST be in working order during competition. If a competitor's pick up does not work at an event, a competitor may be hand tached immediately after leaving the track after a competitive pass. A competitor must be tached trackside. If a competing vehicle leaves the track area before being tached, the vehicle will be disqualified. The plug in must be a molded end (Extension cord end) it must be ran where it can be seen and not hidden.

2. If a competitor's pick up does not work at an event, they have until the next event to repair the problem. A competitor will not will be eligible to compete 2 event entries in a row without a working pick up.

3. A legal Outlaw entry shall consist of an OEM block or the OEM designated replacement block for the 2wd agricultural make of vehicle being entered.

4. An engine upgrade will be allowed. Engine upgrade must be of the same manufacturer of chassis and sheet metal. (I.e. no John Deere engine in an International chassis) The board of directors will determine a legal entry for an engine upgrade.

5. No aftermarket cylinder heads allowed

6. Only two parallel valves per cylinder. OEM canted valves allowed.

7. Fuel distribution is limited to a P7100 Series injection pump, carburetor(s), or fuel injection

8. The following motor limitations apply:

    a. Naturally Aspirated (gasoline or propane) engines limited to 3500 rpm and unlimited cubic inch. No overage on RPMS will be allowed. You will be disqualified is over on RPMS.

b. 380 cubic inch diesel with a single 3lm base (or replacement) turbo charger with a 2.33" inducer bore restrictor limited to 3000 rpm. No downsizing engine to meet 380 CID.

c. 380 cubic inch gas/propane with a single 3lm base (or replacement) turbo charger with a 2.33" inducer bore restrictor limited to 3000 rpm. Carburetor(s) or mechanical fuel injection is allowed. Engine is allowed a maximum of four (4) cylinders. No downsizing engine to meet 380 CID.

d. The turbocharger is limited to a 2.33" inlet on the compressor side. The turbo charger is lmited to a single 2.33 inch inlet on compressor side. A single .250 MAP groove will be allowed. . All provisions allowing air to the wheel other than via the bore and map groove are prohibited.

9. Legal fuels are diesel fuel, gasoline (E85 & C85 considered gasoline), or propane gas

10. No intercoolers allowed. (Updraft carbureted engines may run ice box before carb)

11. The OEM engine cannot be modified externally in any way except for normal repair or for mounting of fuel injection pumps.

12. Engines cannot move independent of rear end / transmission housing.

13. No auxiliary internal combustion engines are allowed on board to drive pumps, accessories, etc.

14. 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

15. Side shields must be mounted independently of the engine block. Motor mount, block saver plate and header mounting or chassis mounting is acceptable.

17. All tractors are 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 fuel or oil pump.

18. 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.

19. 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.

20. All diesel engines will have a visible return to idle spring on fuel injection pump throttle arm.

21. A bolt in the crankshaft to hold damper pulley is required.

22. All engine driven fans must be shrouded with 1/16 inch steel or thicker, 360 degrees. Electric fans excluded.

23. 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.

24. All ether bottles (starting aids) must be placed outside of engine compartment.

25. All fuel lines to be steel braided or high pressure reinforced rubber. No plastic tubing allowed.

**Chassis**

1. Chassis must consist of OEM block or OEM designated replacement for make of tractor being entered. Block must remain in stock location and still maintain stock appearance for make & model sheet metal being entered. Vehicle being entered that feature an engine upgrade will be deemed legal by the board of directors.

2. The stock transmission housing or manufacturer's replacement and the stock final drive housing or manufacturer's replacement. The clutch housing, transmission case, rear end housing and axle housings. No aluminum replacements.

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 Illiana Pullers Association’s Board of Directors.

5. Must have wide front-end axles.

6. The OEM engine cannot be modified externally in any way except for normal repair or for mounting of fuel injection pumps.

7. Hood and grill must be in place as intended by the manufacturer.

8. Upgrading of sheet metal allowed to OEM dimensions and style, subject to the Board of Directors approval.

9. Maximum wheelbase of 114 inches.

10. Maximum length 13 feet from the center of rear wheel to forward most portion.

11. 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.

12. 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. All tractors that utilize a tube ladder type frames must be covered on the outside with steel or aluminum 0.060 thick.

13. It is STRONGLY recommended that all tractors have a tow hitch on the front of the vehicle. The hitch can extend a maximum of 6 inches ahead of the furthermost 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.

**Tires**

1) Maximum size is 18.4-38.

**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. Venturi type headers acceptable.

5. 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 Container**

1. All forms of nitro methane including nitrous oxide and propylene are illegal as a fuel or fuel additive. Legal fuels are diesel fuel, and gasoline or propane gas. No oxygen carrier or combustion accelerators are allowed. 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.

**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.

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 required on a diesel engine. 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. Control for driver not to be the same as for the sled. No electrical operated air shut-offs allowed.

4. All diesel engines must be equipped with an emergency shutdown air shut-off at the air intake, which can be utilized from the tractor seat.

5. Kill switches on spark ignition tractors must be checked with engine running.

6.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 check on all competing vehicles at every event.

7. All kill switches must be mounted independent of drawbar and/or wheelie bars / stabilizer bars.

8. The kill switch must be located in the rear center (maximum of 6 inches off center in any direction), approx four feet above the hook point.

9. The breakaway 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.

10. 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.

11. Kill switch ring must be secured with a single nylon tie wrap (1/8 inch). Competitors will be responsible for replacing the kill switch mechanism and securing the tie wrap once kill switch is checked by tech official.

12.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 official checks the switch before leaving the track.

13. Diesel engines must have a fuel shut-off valve control within easy reach of driver (your normal fuel shutoff on diesel pump).

**Safety**

1. If an Illiana Pullers Association track official or tech official feels 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. A capable operator must be in the driver seat while vehicle is running.

3. 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.

4. 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.

5. All drivers are required to wear a fire suit that meets SFI specification 3.2A-1. (IF ROLLCAGE IS USED)

6. 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 chinstraps 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. . (IF ROLLCAGE IS USED)

7. All drivers are required to wear a full 360-degree neck collar meeting SFI specification 3.3 or a Hahn's device. (IF ROLLCAGE IS USED).

8. All pulling vehicles must be equipped with a starter interrupter switch on the gearshift, which will allow starter engagement only in neutral position.

9. All pullers will have fire protection equipment and helmets on any time while on the track and driver are

10. Head socks / neck skirts must be inside of driving suit. Nothing exposed while competitor is sitting in seat ready to compete. . (IF ROLLCAGE IS USED)

11. If a roll cage is used it must meet 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.

12. 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. (IF ROLLCAGE IS USED)

**Seats and Fenders**

1. Appropriate seats required. IPA board approval required.

2. All vehicles must have a shield between driver and tire, 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.

3. Fenders required.

**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.

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.