

OUTLAW 600

Outlaw 600 is a stock based engine class with a spec concept chassis. Outlaw 600 competitors are to be aware that first year performance levels or safety issues may cause the class to have mid season rule changes in a effort to improve safety or equalize performance.

OUTLAW 600 GENERAL REQUIREMENTS

1. All Outlaw 600 sleds must have a single 121X15 rubber track and 3 ski's. The sled must have a full roll cage located to the left of the tunnel and a 600 cc engine reverse mounted with clutches to the right hand side of the machine. The engine must be located in front of the tunnel/track.
2. The brand of engine, hood, and logo's need not match.
3. All snowmobiles must comply with general rules section unless otherwise noted.
4. Outlaw 600 sleds must weigh 795 pounds minimum with the driver in place after a race event. The sled must weigh a minimum of 575 pounds without the driver, prerace. Ballast may be added to the sled to meet weight rules. The ballast must be securely mounted with two fasteners of 5/16 inch diameter minimum. The ballast must be fastened to frame or to a ballast pan welded to the frame, or utilize commercial frame tube mounts to securely fasten it to the chassis. All ballast must be painted black.
5. Maximum width of the chassis is 54 inches measured at the outside of the skis. Minimum width at the same measurement point is 51 inches.
6. Maximum length is 82 inches, minimum length 78 inches, determined by measurement from ski mounting bolt centerline, to centerline of rear idler axle wheel .
7. No titanium, magnesium, or carbon fibre is allowed anywhere in the construction of the sled.
8. No remote adjusters are allowed on front or rear shocks.
9. The sled seat must be constructed of a minimum 1/8 inch thick aluminum commercially available seat with head rest.
10. A five point safety harness must be installed per requirements in General Rules Enclosed Cockpit Sleds.
11. Hahns devices or other commercially available neck and head restraint devices are recommended.
12. The sled must have an on board Halon type fire suppressant system per enclosed cockpit rules in General Rules Section.
13. The driver must use approved Sprint car style arm restraints. See General Rules Section under Enclosed Cockpit.
14. Window nets may also be used, but are not intended to replace an arm restraint
15. Driver is required to wear an approved automotive style firesuit while driving the unit. The firesuit must be the final layer of clothing the driver is wearing and no other clothing can be worn over the firesuit.

ENGINE

1. Only the consumer production engines are allowed. No snow cross 200 build-300 build or 500 build engines are allowed. All engines must use the brand specific OUTLAW pipe/carb restrictor kit with no alterations except tailpipe. Hooper Racing Engines is the only approved vendor of the kits.
2. Allowable engines are: Arctic Cat 600 Twin 2004-2008, Polaris XC 600 Twin, 2000-2005 (64mm stroke)Ski Doo 600 HO 2003-2007 and Yamaha 94-99 600 Twin.
3. No overbore is allowed.
4. Oil injection pump mechanism and thermostats may be removed.
5. No modifications to the crankshaft or crankcase except for as follows: Four (4) 1/8 diameter holes may be drilled into the crankcase to aid in lubrication of crank bearings. An additional vacuum port may be drilled into the crankcase to utilize and additional pump for slide lube delivery.

6. Allowable cylinder modifications are as follows.

a. Exhaust ports may be modified but original flange angle and length must be maintained

b. Exhaust valves may be modified, removed or replaced.

c. Crankcase mounting deck height may be raised with gaskets or shims.

No other cylinder modifications allowed.

7. Pistons must be OEM stock or exact oem replacement pistons. Lightweight pistons are not allowed. Piston weight will be verified against stock piston specifications.

8. No modification to OEM or OEM replacement pistons is allowed.

9. Cylinder head may be modified but original stock spark plug location must be retained.

10. Carbs must be OEM as produced from the engine manufacturer with no modifications to the carb bore. Class restrictions to each individual engine and carb combination will be dictated by the equalization rules set in place. (Refer to chart for proper carb restriction) Slides may be cut but no additional material may be added. Jets, needles and other tuning components may be replaced.

11. No airbox allowed. Any filter, screen, or plenum may be used, but no method of pressurizing air inlet to the carbs will be allowed. This is at the discretion of the technical inspector.

12. Original water pump must be used without modification.

13. Any engine mount, or engine mount torque limiter or retainer may be used.

14. The only exhaust allowed for any brand engine will be approved vended Outlaw 600 Twin spec pipes with engine brand specific exhaust mount flanges. No modification of any kind to the pipes or flanges will be allowed. The inside diameter of tailpipes and silencers is not restricted. Pipes may be painted or coated to a maximum of .005 inch thick. No heat wrap, heat tape or other method of insulation is allowed. No holes in the pipes or flanges for temperature probes are allowed.

15. Hooper Racing will be the only approved vendor for the spec pipe. A method of identification and sequence will be in operation.

16. No heat exchangers allowed. Radiators must be used for cooling, and must be mounted in front of the snowmobile chassis and all suspension components. No bumper or protective device is allowed in front of the radiator.

17. No electric fuel pumps are allowed to supply fuel to the engine. Fuel pump must be conventional vacuum operated snowmobile type.

DRIVE

1. Any OEM stock production clutch is allowed. No modifications are allowed to the drive clutch. Tuning components may be replaced but the clutch must not be modified to accept any component.

2. Both drive and driven clutch must located on right side of tunnel.

3. No machining, grinding, cutting or welding allowed on clutches unless otherwise specified.

4. Clutch guard must fully enclose both clutches and may be vented from the backside or bottom only.

5. Minimum thickness of clutch guard shall be .095 steel or 3/16 aluminum. No additional guard or nerf bar is allowed around or near the clutches. Clutch guard must be mounted to chassis with four (4) 5/16 bolts. The bolts must be located in chassis structure that will support the clutch guard in case of accident or explosion. These fasteners will not be allowed to be attached to the tunnel material only. Additional material to reinforce the pinch point of the bolt must be used.

6. Any fully enclosed chaincase/gearbox allowed. The case must be mounted on the left side of the tunnel and be driven by a solid steel jackshaft from the driven clutch.

7. Center distance from jackshaft to track shaft shall be 6.250 inches minimum and 7.500 inches maximum.

8. No belt drive chain cases allowed.

9. Final drive must be accomplished with a set of gears with a internal 6 spline drive, one inch wide, solid steel midget car racing quick change gears.

10. The track drive shaft must be solid steel and use any OEM plastic 9 tooth drive sprocket. No aftermarket track drive sprockets allowed.

11. The clutch may be cooled with an auxillary electric fan and appropriate ducting. Fan discharge cannot enter the engine area.

BRAKES AND THROTTLE CONTROLS

1. Brake rotor must be steel material, 7.5 inch minimum diameter and minimum 3/16 inch thick. The rotor must be mounted on the right side of the track drive shaft inside the tunnel.
2. Any commercially available hydraulic brake caliper allowed.
3. Any commercially available master cylinder allowed. The master must be of a design intended for foot operation. No stock or modified hand actuated master cylinders allowed.
4. Brakes must be foot operated.
5. An auxiliary electric fan may be used to cool the brake disc, caliper, and caliper housing. Ducting must discharge under/inside the tunnel.
5. The throttle must be foot operated and have a solid stop under the pedal. A second or redundant spring must be added to aid in throttle return.

SKI SUSPENSION AND STEERING

1. All sleds in this class must use a four (4) bar trailing arm design front suspension with minimum 24 inch long trailing arms measured from rear mount bolt center to center of spindle weldment. The maximum caster angle allowed on the trailing arm shall be 30 degrees.
2. Maximum width shall be 54 inches measured outside of skis in a straight ahead position.
3. Minimum width shall be 51 inches measured at the outside of skis in a straight ahead position.
4. Only Fox coilover steel or aluminum body shocks are allowed for ski suspension positions. Shocks shall not be adjustable, or have remote reservoirs.
5. Only two skis are allowed on the front of the sled.
6. The third ski must be mounted behind the roll cage.
7. Left rear ski suspension must be a single trailing A-frame design with a Fox aluminum or steel body coil over shock. The maximum distance between the track and the left rear ski is 20 inches. The rear of the trailing ski cannot extend past the center line of the rear idler wheel in the track suspension. No cutting edge or wear bar is allowed on this trailing ski.
8. The trailing ski must be fixed in lateral location and cannot be steered in any manner.
9. All skis must be Wahl wide Champ ski #03-067 or #03-069A with no modifications to bottom surface. Front skis must be a minimum of 14 inches long excluding the ski loop. Rear (trailing) ski must be a minimum of 12 inches long and loop may be removed.
10. Only one six inch carbide per front steering ski allowed. No other cutting edges allowed.
11. Any sway bar may be used.
12. Steering must be controlled through the use of rods, heim joints, and bell cranks. No rack systems, no gearbox systems allowed.
13. The steering shaft must have either a collapsible U-bend, splined sliding sleeve allowing for a minimum of 4 inches of movement, or sleeve with a lightweight shear mechanism that allows for 4 inches of travel in event of collision.
14. Steering wheel must be used but may only rotate 175 degrees maximum from steering stop to steering stop.
15. Full circle, partial circle or butterfly wheels allowed.
16. Steering wheels are allowed to be mounted to a quick release hub, for removal for ease of entry or egress to the cockpit. Quick release hub must be a commercially available product, no homemade or one off components allowed.
17. Right ski must be offset from track 11 to 13 inches. This is measured from right edge of track to right edge of ski in straight ahead position.

18. The front bulkhead to which the front suspension components are attached must be a minimum of 9 inches high above the floor pan (from floor pan to upper member) and must have a minimum width dimension of 30 inches to allow for safe location of the drivers feet, foot box construction, and ability to operate controls.

TRACK SUSPENSION

1. Track and suspension must be contained inside the tunnel. No outboard shocks or linkages allowed.
2. Only one shock may be used in the rear track suspension. The shock must be a Fox standard non adjustable shock, or a non adjustable, non rebuildable factory steel or aluminum shock.
3. Devices which link front and rear skid frame movement are not allowed. (No coupled suspension) The rear of the skid frame must travel and react independently of the front torque arm of the rear suspension.
4. A maximum 8 inch rear idler wheel is allowed
5. Slide Lube systems allowed. Tank (reservoir) must be mounted on the left of the tunnel.

TRACK & TRACTION

1. Only a Camoplast #9997R track will be allowed.
2. The track must be used as produced by the molder of the track. No cutting or other modifications allowed.
3. One hole (to be specified) may be cut in the track to aid in adjustment of front rail limiter.
4. No weld on hooker plates allowed.
5. The only Stud allowed will be the "Woody's Outlaw" stud and must be used as supplied. No sharpening or modifications allowed. The only legal backer plate will be the Woodys part # AWA-3700. No modification is allowed to the backer plate or the track when mounting the studs. Maximum number of studs allowed will be 384.

A maximum of two (2) studs per row are allowed on the outside belts of the track.

FRAME & BODY

1. Left bottom frame rail must be a minimum 1 ¼ x .083 steel square tube, and must extend from front of drivers foot box to behind rear main roll cage arch.
2. Rear roll cage arch must be welded to top of frame rails and must be located and securely attached to the left side of the tunnel 17 to 20 inches ahead of the center of the rear idler wheel. Rear roll cage arch must be one continuous piece and cannot be angled more than 15 degrees from vertical.
3. Upper half of rear roll cage arch must be supported by at least one diagonal brace on each side. This must be located beside the driver's shoulders. One additional brace is required behind the seat.
4. Roll cage must be made of minimum 1 ¼ x.083 DOM seamless steel tubing.
5. All roll cages must have 2 arch shaped structures extending at least 4 inches above the driver connected by 2 horizontal 1 ¼ x.083 tubes forming an opening large enough and in a shape conducive to the driver using as an exit if needed.
6. The front arch member need not be one continuous piece.
7. Minimum inside width of roll cage is 20". Minimum length inside roll cage is 24" measured 18inches up from floor pan.
8. Side bars of roll cage must bow outward minimum 5 inches each side and top side bars must be minimum 17 inches vertical from the floor of the cage.
9. Left side of roll cage must have either 3 bowed sidebars with connectors welded between all three and the main frame rail, or 2 horizontal side bars and 3 vertical bars connecting from second side bar to frame rail. All horizontal and vertical bars on left hand side of roll cage must be plated in the driver's area. Steel minimum .074 in thickness must be used. Plating shall extend from front vertical corner post of cage to rear vertical post of cage. Plating may be on top of cross bars in roll cage, or may be fitted between cross bars of cage. In either method the plating must be securely welded as to become a structural component of the cage. An additional 8 inches of plating must be located on the rear of the cage from the left rear vertical corner post inward behind the driver, to prevent intrusion into cage area from the rear.
10. All roll cage tubes that may come into contact with driver's helmet, elbows, knees or lower leg must be covered with approved high density roll cage protection foam material.
12. Tunnel must be a minimum .080 material. Maximum width is 18 inches wide outside dimension and must fully enclose track to within 5 inches of the ground with rider in sled.
13. Sled must have a minimum 22 gauge steel or 1/8 inch aluminum panel between driver and engine.

14. Bumpers or nerf bars allowed only on rear of sled. No bumpers or nerf bars on front or right side of sled. All bumper ends must be capped or plugged.
15. Minimum ground clearance (ride height) is 3 inches and the sled must have 2.5 inches of usable vertical suspension travel front and rear.
16. No body panels may extend more than 24 inches above the ground or 1 inch in front of the ski loops.
17. On the right hand side of the roll cage no body panels may extend rearward past the junction of the tailpipe to the expansion chamber.
17. No body panels may cover skis or trailing arms
18. No body panels may cover clutches or right side of tunnel. Entire right side of tunnel must be exposed except for the clutch guard.
19. The nose (front body structure) of the sled must be a minimum of 20 inches wide and a maximum of 32 inches wide and the front leading surface must be within 25 degrees of vertical. No pointed or wedge shaped cones allowed.
20. Floor pan under driver must be minimum .060 aluminum or 22 gauge steel. Floor pan must not extend rearward under the fuel cell. Fuel cell to be so positioned and mounted that any lost fuel is directly deposited on the ground and cannot migrate into driver's compartment.
21. A 3 gallon maximum fuel cell with steel protective box must be used. The cell container must be securely fastened behind the roll cage within two inches of the tunnel. The container must be strapped down with two metal straps.
22. All fuel line from fuel cell to fuel pump must be braided steel protected. Fuel line may not run through driver's compartment.
23. The cell must have a minimum 22 gauge steel panel over the top of the cell and a minimum 22 gauge steel panel across the entire width of the roll cage extending up a minimum of 17 inches from the floor pan.
24. Fire extinguisher bottle/ system must be mounted behind driver, in a horizontal position. It must be mounted to the floor pan securely observing manufacturers recommendations for mounting. It is suggested that the fire suppression system be plumbed so that a minimum of one nozzle is directed to the driver's compartment, and one nozzle is directed to the fuel cell area. Additional nozzles if used may be directed to the engine/ carburetion area.
25. No mirrors are allowed anywhere on sled.
26. A windshield/windscreen, if used must only be placed in front of the driver. Windshield must be of a design that protects driver from elements and debris only. No aero effect windshields allowed.
27. Six (6) inch minimum numbers must be displayed on each side of the sled and a four (4) inch minimum number must be displayed on the rear tunnel enclosure.

IGNITION & ELECTRICAL

1. Any production snowmobile ignition allowed. Ignition must be used as a complete package. No intermingling of components allowed.
2. No lightening of flywheel is allowed.
3. No modification or removal of ignition components in a particular set up is allowed.
4. A rollover kill switch must be used that shuts off the engine in case the vehicle rolls over. This switch must operate independent of the normal kill circuit.
5. A spec LED taillight (Yamaha #8GC-84710-02) must be used. No exceptions. Light must be illuminated at all times while on the racing surface, whether the engine is running or not.
6. No electric fuel pumps allowed for fuel delivery.
7. Tachometers and water temperature gauges only, may be added or removed. No other data acquisition devices may be used. Any testing sensors may not be in place at a competitive event. Playback tach's allowed.
8. Spark plugs, spark plug wires and connector do not have to be OEM.
9. No radio communication between driver and crew or "spotter" allowed.
10. The tether switch must be mounted to the right of the driver and high enough in the chassis so that it is in full view at all times
11. All sleds in the class must use a sealed 12 volt battery capable of running the taillight continuously for 15 minutes minimum.

*Revisions Update 12-13-11

600 Outlaw Class

Rules Update #2

12-14-11

Page 69 –Outlaw General Requirements

#4. Outlaw 600 sleds must weigh 895 pounds minimum with the driver in place after a race event. There is no minimum weight requirement for the chassis only. Ballast may be added to the sled to meet weight rules. The ballast must be securely mounted with two fasteners of 3/8 inch diameter for ballast up to 25 pounds, and four fasteners of 3/8 inch diameter for ballast over 25 pounds but less than 50 pounds. No ballast in excess of 50 pounds will be allowed. Ballast may not be mounted more than 12 inches above the floor pan. The ballast must be fastened to the frame or to ballast pan welded to the frame, or utilize commercial frame tube mounts to securely fasten the ballast to the chassis. All ballast must be painted black and carry the number of the race sled.

This section precluded the original rulebook #4 on page 69, and ISR rules update 11/12-003 dated Nov 28, 2011. All other parts of the bulletin remain in effect.

In addition:

Ski Suspension and Steering, #12, Page 70.

The text in #12 as printed is removed and is replaced with and shall read as follows:

Any manual steering system allowed. A maximum of 360 degrees of steering wheel rotation is required. Solid stops are required on the steering shaft to prohibit more than 360 degrees of rotation of the steering shaft. Rack and pinion boxes are allowed. Steering reducer drive mechanisms allowed. Full round steering wheels are required.