

SNOWMOBILE DRAG RACING ONTARIO

PRO STOCK CLASSES AND RULES (PRO STOCK 1000 & TURBO AT BOTTOM)

\$30.00/CLASS ENTRY FEE (Includes insurance fee)

CLASS/MAXIMUM CC	MINIMUM COMBINED WEIGHT
Pro stock 600	600 LBS (550 for 2-cylinder engine)
Pro stock 700	600 LBS (550 for 2-cylinder engine)
Pro stock 800	625 LBS (550 for 2-cylinder engine)
Pro Stock 1000	625 LBS (550 for 2-cylinder engine)
Pro Stock Turbo	725 LBS (for 3 & 4 cylinder engine) 710 lbs (for 2-cylinder engine)

GENERAL REQUIREMENTS

1. Tethers are required in Pro Stock classes.
2. Tek-Vests are required in Pro Stock classes.
3. Race Director/Technician shall have the authority to determine structural integrity.
4. Minimum combined weight is the weight of the snowmobile and the driver.
5. OEM serial numbers are not required, but engine and frame must have unique identification numbers that identify the OEM model and year.
6. The OEM for the model frame, engine, seat and fuel tank must be used. All parts and components including the hood, seat, engine, drive and chassis must retain OEM stock appearance for the model
7. The OEM for the model frame including bulkhead and tunnel must be used as structural members to mount the engine, drive components and suspension. Tunnel may be repaired or replaced.
8. An OEM for the brand "like chassis" may be substituted for the OEM chassis. "Like chassis" must have the same front suspension concept as the original chassis (i.e. trailing arm, "A" arm, or strut). When engine is installed in the "like chassis", the crankshaft must be in the OEM location for the chassis. The engine installation must conform to the engine location rules.
9. Any snowmobile may be reclassified in the interest of fair competition.
10. Any alterations allowed in Stock and Improved Stock classes are also allowed.
11. No change or modification is allowed unless specifically allowed by these rules. If these rules do not specifically allow a change or modification, then it must be assumed that the change or modification is not allowed.

ENGINE

1. Crankcase, cylinders and crankshaft must be from the same stock qualified model. Must retain original number of cylinders.
2. Crankcase may be modified internally provided the engine retains its complete external stock appearance and dimensions.
3. The only external modification allowed to the crankcase is, to the cylinder mounting surface and must be covered by the OEM for the engine cylinder base gasket.
4. Crankshaft must be OEM for the model.
5. Crankshaft may be modified.
6. Stroke may be changed. Connecting rod length may be changed.
7. Four-cylinder crankshaft gears may be changed with any OEM crankshaft gear.
8. Cylinders must be OEM for the model and mounted in OEM location and orientation.

9. Cylinder may be modified internally provided the engine retains its complete external stock appearance and dimensions.
10. Cylinder overbore is limited to a 2% increase in displacement over the cc limit for the class.
11. Cylinder may be bored up or sleeved down.
12. OEM cylinder outer shell dimensions' modification must be within .020 inches (1/2mm) per side/.040 inches (1mm) overall of the OEM cylinder dimensions. Modification must be blended into original casting to retain OEM appearance.
13. Cylinder height may be modified to change port height. If a plate is used to raise cylinder height, the plate, including gaskets, cannot exceed 1/2 (.500) inch.
14. Cylinder head(s) must be OEM for the model. The cylinder head may be modified internally including changing replaceable combustion chambers and machining out combustion chambers to use replaceable inserts. The visible, outer portion of the cylinder head or cylinder head cover must remain stock appearing and the spark plug must maintain OEM location.
15. Any carburetor may be used. Only one venturi allowed per cylinder.
16. Intake concept and location must remain OEM for the model.
17. Fuel injection allowed.
18. No turbo-chargers, super-chargers or nitrous allowed.
19. Intake concept and location must remain OEM for the model engine with the exception that EFI models may be changed to carburetor induction.
20. Reeds and reed cage may be replaced or modified so long as the outside dimensions of the cylinder or crankcase are not compromised. External plate may be thicker. No welding or bonding to cylinder or crankcase to accommodate reed assembly allowed. Reed assembly changes must be accomplished by bolting only.
21. Other engine components allowable for modification or replacement: Bearings, Rods, Pistons, pins and rings, Gaskets, Bolt-on intake and exhaust flanges, Fuel pump and Engine mounts. Airboxes may be removed.
22. Engine must retain original cooling concept. (Liquid, fan or free-air cooling must be retained but cooling circuits can be modified or removed.)
23. Water pumps may be removed.
24. Radiators and ducting may be used but must not change OEM appearance. Radiator must not protrude beyond the belly pan and must be within 1/4 inch of the belly pan. Maximum opening in belly pan is 100 square inches. Radiator must be functional.
25. Any functionally silenced exhaust system allowed. Exhaust outlet must not protrude more than 3" beyond the chassis or hood configuration. A commercially available, functionally silenced muffler/silencer must be installed and operational.
26. Exhaust outlet must exit body downward and rearward. (If OEM exhaust exits behind driver, pipe need not go downward). Exhaust pipe must not extend more than 3" beyond chassis or body.

DRIVE

1. Any primary or secondary clutch may be used.
2. Clutch jackshaft may be changed or modified (no welding on jackshaft).
3. Relocation of crankshaft, jackshaft, drive shaft (front drive axle) allowed.
 - i. Crankshaft may be moved up or down, forward or backward as long as engine and primary and secondary clutch is within confines of the hood, console, and side panels and front close off panel on the bulkhead.
 - ii. No altering of bulkhead for engine movement other than the engine mounts or engine plate to hold engine.

- iii. Crankshaft to jackshaft center to center is allowed +/- 1" tolerance from OEM specification for the model.
- iv. Chain case may be moved anywhere on side of bulkhead or tunnel, however jackshaft must remain on top of tunnel or front side of bulkhead. Left side drive axle bearing, bearing carrier, and bolts may not be below tunnel or bulkhead side.
- v. Any OEM or aftermarket chain case allowed.
- vi. Jackshaft to rear axle of suspension center to center distance measurement may not exceed 64" measured in a parallel line with and adjacent to the top of tunnel.
4. Any track drive sprocket and nondriving wheels allowed on the track drive axle. Unless specified, no changes in drive, frame, or suspension allowed to accept track drive sprockets.
5. Drive reduction system must be OEM for the model concept (i.e. chain, belt, or gear). Chain case/gear case and cover may be from any stock qualified model within the brand.
6. Chain case/gear case modification is not allowed. Chain case/gear case must be functionally driving the snowmobile with the OEM for the model drive concept (i.e. chain, belt or gear).
7. Any chain, belt, sprockets, and gears allowed for drive reduction system.
8. Brake assembly may be on either the jackshaft or the track drive axle.
9. Brake caliper may be either dual opposing piston or single piston type.
10. Minimum brake disk diameter is 7.0 inches. (If brake disk is mounted to track drive axle and a dual opposing piston caliper is used, the disk minimum diameter is 6".)
11. Pro Stock qualified snowmobiles need not comply with Modified brake requirements when jumping up into Modified classes.

SKI SUSPENSION & STEERING

1. Front suspension components including struts, arms, spindles, rod ends, spherical joints, tie rods, linkages, IFS trailing arms and radius rods must remain OEM design concept but may be changed in shape and appearance. All must remain in the OEM location on the chassis.
2. Sway bar and links may be removed. If sway bar is disconnected, it must be removed.
3. Sled must have a minimum ride height of 3" measured at the lowest point of the bulkhead/skid plate. Measurement point to be centered directly in front of the track drive area, (using the spindle centers to determine center point of bulkhead) and must retain 2" of remaining compression travel with driver on snowmobile.
4. Material substitution is allowed. Replaced components must be as strong or stronger than OEM components.
5. Shock absorbers may be replaced. Any commercially available, hydraulically or air damped shocks may be used. Shocks must remain in a location + or - 3" from original OEM location.
6. Spindles may be strengthened or replaced with a stronger spindle. Spindle height must remain within 10% of the original OEM dimensions.
7. Minimum ski stance (center to center of the ski runners) is 40 inches.
8. Ski widening devices allowed. No maximum ski stance width.
9. Handlebars, handlebar grips and controls may be modified.

SKIS AND SKI RUNNERS

1. Any commercially available OEM appearing or aftermarket ski may be used.
2. Minimum ski length is 20".

TRACK SUSPENSION

1. Any track suspension allowed that can be installed within the confines of the tunnel.
2. Material substitution is allowed. Replaced components must be as strong or stronger than OEM components.
3. Shock absorbers may be replaced. Only commercially available, hydraulically or air damped shocks specified for use on a snowmobile are allowed.
4. Outboard mounted shocks do not compromise OEM stock appearance.
5. Commercially available long track kits allowed. Kit must be used in its entirety.
6. Must be a minimum of 2" of remaining compression travel with driver on snowmobile.

TRACK & TRACTION

1. Any commercially available one-piece molded rubber track allowed. No cleated tracks allowed.
2. Track and track suspension must fit within the confines of the tunnel.
3. Track lug height may be trimmed to a minimum of ½ inch lug height. No other track trimming allowed.
4. Holes for traction products must be a minimum distance of 5/8 inch from track edge or any other hole or opening in the track. A maximum of 2 holes allowed in each track segment outside of each slide rail. A maximum of 4 holes allowed in each track segment inside the slide rails. (A total of 8 holes per track segment.)

FRAME AND BODY

1. The OEM for the model frame including bulkhead and tunnel must be used as structural members to mount the engine, drive components and suspension components. Tunnel may be repaired or replaced.
2. Chassis reinforcement allowed. No lightening holes can be drilled that alter the outside appearance for the model.
3. Structural integrity must be maintained. Replaced components must be as strong or stronger than OEM components. The Race / Tech Director shall have the authority to determine structural integrity.
4. Access openings for component accessibility will be allowed, but must be closed with original type materials, i.e., hinged clutch covers.
5. Snowmobiles using production or aftermarket tunnels that measure less than 1/8" or .125 inch in thickness shall add additional sheet or sheets of metal to the tunnel to achieve .125 thickness. Tunnels 1/8-inch (.125) thick or thicker do not require this added sheet.
6. Hood to belly pan molding must remain intact. The molding may be lightened as long as it does not alter the outside OEM appearance.
7. Seat must remain in OEM contour and be stock appearing. Seat may be lowered equally front to rear, but must be at least 6" thick (or OEM height if less than 6") at its minimum dimension (seat height will be measured from the top of original tunnel to top of seat in rider less state. Measurements will be made at the lowest point of the seat. The rigid console cover may be lowered to blend into seat contour. Seat must maintain 24" of contact with the tunnel. Aftermarket seats may be used that conform to the above stated rules concerning OEM seat. No fiberglass or carbon fiber seats, seat must be of conventional style (padding and upholstery) and commercially available.
8. The outside gas tank shell must remain intact and in its OEM location. The fuel tank may be modified to accommodate a fuel cell. The fuel cap may be replaced with the fuel cell cap. All fuel must be

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contained in the OEM for the model fuel tank location. The use of a fuel cell used within the above rule will not compromise OEM appearance.

9. Front air dams allowed. Must be a minimum of 2" above the ground with front suspension totally compressed.

10. Except for front air dam (which requires 2" clearance), all other parts and components must maintain a minimum of 1" ground clearance with the suspension fully compressed.

IGNITION AND ELECTRICAL

1. Any ignition may be used. Electrical stutter boxes, launch control and traction control allowed.

2. External electric starters are legal.

3. Any instrumentation allowed. Tachometer, speedometer or heat gauges may be added or removed. Open instrument holes must be closed.

4. Electrical wiring may be removed.

5. Headlight assembly may be removed (opening must be closed). Headlight consoles are not considered part of headlight assembly.

PRO STOCK 1000 RULES

1. Minimum combined weight of snowmobile, fuel, driver and driver gear is 625 lbs.

ENGINE

1. Aftermarket cylinders for the brand are allowed.

2. Cylinders must be commercially available.

3. Cylinders may not be interchanged between brands. Welding or bonding on a crankcase is not an acceptable method to adapt aftermarket cylinders.

4. Any commercially available cylinder head allowed.

5. The reed valve mounting area on the crankcase may be modified to change reed angle. The upper surface of the Intake tract may be reinforced by welding or bonding.

IGNITION & ELECTRICAL

1. Any ignition may be used.

2. Electrical stutter boxes, launch control and traction control allowed.

3. External electric starters are legal.

PRO STOCK TURBO

1. Class is open to all OEM 4-stroke snowmobiles only.

2. Engine and chassis combination used MUST have been available as a mass production OEM 4-Stroke snowmobile but does not need to be turbocharged from OEM.

3. IHI OEM unmodified turbocharger from an Arctic Cat F1100 turbo snowmobile or Yamaha Sidewinder/Thunder Cat must be used. This is a SPEC TURBO class with no other type of turbocharger allowed

4. NO OTHER turbochargers are allowed.

5. Race Director shall have the authority to determine structural integrity.

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6. Engine and chassis may NOT be interchanged between brands. Engine must have been available in chassis used.
7. No oxygenated fuels or any alcohol fuels allowed, gasoline only.
8. Class weights may be adjusted at any time by Race Director in the interest of fair competition.

ENGINE

1. Engine must have been OEM manufactured for mass production snowmobile use.
2. Aftermarket manufactured engine blocks and cylinder heads are NOT allowed.
3. Cylinder maximum overbore is limited to 2 percent over OEM bore size for block used.
4. Can be fuel injected or carbureted. Only one venturi per cylinder.
5. Air to Air Intercoolers only. Intercooler can be OEM or aftermarket. No artificial cooling of any way allowed to intercooler.
6. No supercharging, Methanol Injection, Nitrous Oxide, or any artificial performance enhancing fluids or gases allowed.
7. All snowmobiles may use a single OEM Artic Cat/Yamaha IHI turbocharger. The OEM turbocharger must not be modified in any way to enhance performance or compromise integrity and safety of turbocharger. OEM part numbers allowed 3007-806 and 3020-386.
8. Turbine housing and/or Compressor cover may be rotated or clocked to facilitate installation.
9. Aftermarket headers may be used. Relocation of turbocharger allowed. Exhaust system must fit within overall snowmobile maximum length, height, and width rules.
10. Any type of OEM or aftermarket intake manifold may be used.
11. The turbocharger maybe used as a functional silencer on approved engine and turbo combinations listed above.
12. Turbo exhaust must be constructed in a manner that the exhaust outlet is not directed at driver or competitor.
13. Any type of OEM or aftermarket standalone engine management allowed.
14. All internal engine modifications allowed if max displacement is not exceeded.
15. Remote hand starters are allowed.

FRAME and BODY

1. The OEM for the model frame and engine combination must be used.
2. Relocation of crankshaft, jackshaft, and driveshaft NOT allowed. Will allow .250 +/- of an inch of tolerance from actual shaft locations compared to OEM specifications to allow for production variations.
3. The OEM for the model frame including bulkhead and tunnel must be used as structural members to mount engine, drive components, and suspension. The tunnel maybe replaced or repaired.
4. The rear portion of tunnel to the rear of front track suspension mount maybe modified or replaced with aftermarket rear tunnel portion to aid in incorporating or fitting safe and effective tunnel enclosures.
5. Rear tunnel enclosure must meet specs for Pro Stock snowmobiles.
6. Snowmobiles using OEM tunnels that measure less than 1/8th inch (.125") thickness shall add additional sheet or sheets of metal to the tunnel to achieve .125" thickness.
7. Snowmobiles must resemble a stock model and profile. Minimum handlebar height of 30" from ground to center of tube.

8. The hood and belly pan may be removable if OEM appearance for the declared model and brand is maintained. One-piece hood with side panels or an air dam molded in are allowed.
9. Front air dams allowed. Must be a minimum of 2 inches above the ground with front suspension fully compressed.
10. Aftermarket body panels and approved duplications of production bodies of any material will be permitted.
11. No additional bodywork that changes stock appearance allowed.
12. Vent openings may be covered.
13. Aerodynamic devices, airfoils, and wings are prohibited.
14. Openings for component accessibility are allowed.
15. Cowl or gas tank area must blend into tunnel.

CLUTCH and DRIVE

1. Any primary or secondary clutch may be used and must be CVT belt designed for snowmobile use.
2. Clutch cover must meet requirements for Pro Stock snowmobiles
3. Jack shaft and drive shaft can be aftermarket manufactured with any type of material. No welding on shafts allowed.
4. Aftermarket track drivers allowed, fixed or roller.
5. Jackshaft, driveshaft, and crankshaft may not be moved from original location. There will be a no tolerance allowed for production variations.
6. Chain case must retain original OEM location and position in tunnel.
7. Chain case can be OEM or aftermarket. Drive reduction may use gear, belt, or chain to connect jackshaft to driveshaft. Chain case and gear case must be functionally driving snowmobile.
- 8) Any track drive sprockets and non-drive wheels allowed on track drive axle. Unless specified, no changes in drive, frame, or suspension allowed to accept track drive sprockets.

TRACK SUSPENSION, TRACK and TRACTION

1. Any commercially available one-piece molded rubber "R" rated track designated for racing by molder of track allowed. Studs may be no more than 3/4 inches above the highest point of track or track lug. Minimum lug height 1/2 inch. Maximum lug height 1.250 inches
2. Track can be from 121 inches to 165 inches if R or Race rated from molder of track. Note: Overall snowmobile length maximum is 144 inches.
3. Track lug height may be trimmed to a minimum 1/2-inch lug height. Minimum track width 13.5 inches.
4. Track suspension may be aftermarket or OEM. Any aftermarket suspension must maintain structural integrity.
5. Track suspension must have a minimum of 2 inches of remaining compression travel with driver on snowmobile measured at rear bumper.

SKI SUSPENSION, STEERING, and SKIS

1. Sled must have a minimum ride height of three (3) inches measured at the lowest point of the

bulkhead/skid plate. Measurement point to be centered directly in front of the track drive area, (using the spindle centers to determine center point of bulkhead) and must retain 2 inches of remaining compression travel with driver on snowmobile.

2. Stock spindles may be reinforced or replaced. Replacement spindles must have a minimum wall thickness of .120 inch and minimum outside diameter of .750 inch. An inspection hole is required if wall thickness is not visible.
3. If modifications to suspension parts are made, structural integrity must be maintained. Minimum ski stance (center to center of the ski runners) is 38 in
4. The use of aftermarket Front suspension maybe used.
5. Minimum ski length is 20 inches. Any commercially available OEM appearing of aftermarket skis maybe used.

BRAKES

1. Brake assembly maybe on either the jackshaft or track drive axle.
2. Brake caliper maybe either dual piston or single piston.
3. Brake disc must be minimum 3/16-inch-thick (.015-inch tolerance) 7-inch diameter. Only a steel manufactured brake disc is allowed. Aluminum, titanium, or carbon fiber brake discs are not allowed.
4. Braided steel brake lines are mandatory.
5. Brake driveshaft systems located outside of tunnel must be enclosed and shielded