

**EASTERN STATES**

**SNOWMOBILE**

**DRAG RACING ASSOCIATES**



**SAFE, FAIR AND EQUITABLE**

**RULES AND GUIDELINES**

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!A-Revised Weights I/S

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- Notes:
1. Items written in **Red** pertain to Race Program Safety.
  2. Items in **Blue** are new Rules or changes made for 2017.
  2. Items in **Brown** are the revision 1 additions or changes.

**Revision No. 1 changes and revisions in the following sections and Pages:**

**Sect. 1 Pgs. 4 and 8 / Sect, 3 Pgs.15 and 16 / Sect. 4, pg. 20 / Sect. 5, Pg.25  
Sect. 7, Pgs. 33 and 34 / Sect. 8, Pg. 37 / Sect. 9, Pg. 41 / Sect. 11, Pg. 49  
Section No. 14, Class weights, Page 61.**

## SECTION No. 1

# Code of Ethics and Enforcement/Disciplinary Rules

**EASTERN STATES SNOWMOBILE DRAG RACERS RULES ASSOCIATES (ESSDRA)****FAIR AND EQUITABLE RACING FOR ALL****CODE OF ETHICS and ENFORCEMENT/ DISCIPLINE RULES.****GENERAL:**

1. These rules apply to the following Snowmobile Drag Racing Associates located in the Northeastern USA and each Associates affiliate including representatives from the States of New York, New Hampshire, Vermont, Maine, Massachusetts, Connecticut, Rhode Island and any Promoter that should choose to incorporate these rules into their race program. Any incorporation of these rules into a snowmobile drag race event, either grass or Ice/snow should be announced such that the proper representatives from ESSDRA can assure complete awareness and execution of the rules. A race event using these rules must also be Technically advised and inspected by an approved ESSDRA Associate.
2. These rules are “recommended” rules as written and adopted by the Rules committee consisting of select representatives from the major Snowmobile Drag Racing Associates in the Northeast USA. If so desired the operating Associates must adopt and then apply these rules to their snowmobile drag racing activities.
3. At all races a mandatory meeting(s) will be held (Driver’s meeting) at an announced time and place prior to the race beginning in order to discuss the track outline and any special course requirements. The meeting must be attended by all drivers and /or Team representatives. Any questions or discrepancies will be addressed and clarified at this time. The meeting will be conducted by the Race Director and Safety/Tech advisor.
4. Fire extinguishers are recommended to be in each Team Pit area and must be a 5 pound, type ABC extinguisher. The Race director and Race promoter will be responsible for all track fire extinguishers with a minimum of (2) located in the paddock, staging and starting line area. At least two (2) more extinguishers must be located at the finish line and shutdown areas. Location of all extinguishers must be identified and marked accordingly.
5. All participants, including the owners, drivers, pit crew members and event spectators attending an associated race at any venue will be subject to disciplinary actions.
6. Penalties may include suspensions, fines, disqualifications, expulsion from the venue, or any combination that may be selected by the Venue administration in cooperation with the Associates Race Director and the Local policing authorities.
7. The Associated Race director will be allowed all rights and responsibilities for running the race in cooperation with the host venue and may have removed, any person or persons from the pits, staging area and viewing stands if they are deemed to be unruly and /or in violation of any Associate rule or requirement.
8. No driver will operate a sled in such a matter that it will endanger other drivers, Pit crew members

race officials and spectators. Such operation is subject to discipline.

9. Vulgarity and offensive language or imprudent actions can result in disciplinary actions and ejection from the race venue.
10. Clothing displaying any vulgar language or pictures will not be allowed. Offender(s) is subject to disciplinary action if not corrected.
11. Owner, driver, Pit crew members will accept all responsibility for the team's actions and accept the fact that there are pending risks to others regarding their actions.
- 12. In consideration of allowing any Team to race and participate in the Race activities, said Team and its owner, driver and members hereby accept the terms for responsible actions and will not sue the Associates body or any representative(s) of the race Venue and its organization, heirs, assigned officers, Board of directors, employees, sponsors or owners of the properties upon which the race event is held. The Team owner, driver, crew members and spectators must also agree to fully release and hold harmless from any further actions, the Associates body responsible for the race operations.**
13. The driver will be held responsible always for the actions of crew with respect to track guidelines.
14. All sleds participating in the race event are subject to a Safety and Technical inspection and when passed become the full responsibility of the driver.

#### **FUELS:**

- 15. All fuels will be subject to mandatory testing during the race at a time TBD by the Race director.**
16. Guidelines and procedures for testing fuel will be determined by the Race Rules Committee.
17. Only Pump gas that comply to the rules will be allowed. Commercially available fuel from cans and drums are allowed but limited (**Q16, VP Import, and Oxygenated fuels are allowed in Outlaw/ Power Adder and Lake Racer Classes only**) The fuel or gasoline may be mixed with any commercially available oil, synthetic oil, or petroleum based lubricants.
18. Use of oil or additives, including gasohol or any additive that adds or provides power boosting characteristics are strictly forbidden in all Classes **except those stated above**. Some of those additives that are considered illegal include alcohol, nitrates, methane, ethanol and any oxygen adding additive.
19. Ether aerosol cans are allowed as a starting additive only and any container with ether must remain at the owner/driver's pit location.
20. Drivers must allow officials to test their sled's fuel at any time.
- 21. Cheating: If a sled is caught during a Technical inspection or any time during the race with**

**an illegal fuel the Owner/driver will be subject to disciplinary actions depending on the time and place the illegal action is detected, i.e. If a sled is determined to be non-compliant to the Fuel use and application race rules for its Class rules during the initial Technical and Safety inspection then the Team will be allowed to make corrective actions and return for a final Technical inspection. If the Team is caught using illegal Fuel, or protested for that possibility (to be determined by the Tech inspector and Race director) during the race then the fuel will be tested and analyzed for its content of either masking agents, alcohol, illegal octane boosters or if it is an outlawed/ unqualified fuel. The level of disciplinary action will be determined by the Race director with assistance from the Tech inspector.**

**NOTE: If the Team driver and the Team sled are found in violation of the Fuel requirements during the race then the driver and sled will be subject to a fine of no less than \$250.00, sled and driver disqualification and possible ejection from the Race venue. The result of the Owner /Team and driver's actions will be made Public notice and the illegal sled eliminated from participation in any races for the remainder of the season.**

### **CLEAN OUT STANDS AND WARM UP STANDS.**

1. A stand that catches and retains any dirt, debris, traction products, track lugs or other track components thrown by a track is mandatory and must be used at all times during any warmups in the Pit or when staging the sled in the hot pit areas. The stand must be a 3-sided stand with rigid 1/8" thick aluminum or equal guards and components capable of containing the thrown debris. The stand must have the ability to lift the complete sled track a minimum of 2" off the ground and then have the sled secured such that it cannot break away. The stand must be used anytime the sled track is raised or the sled is run in the pit area.
2. Backboards, (Recommended 3/4" dia. Plywood construction) in the Hot pits are required and must be a minimum of 4' high and 8' wide supported in place behind each sled that is being staged in the Hot Pit area. When the sled is running in the hot pit area it must also be on its stand and the stand must be up against the backboard. No member of the race team or person(s) at any time will stand behind the sled stand when the sled is running. The sled tether must always be in the operator's hand and engaged to the sled when the sled is running.
3. Failure to abide by this "Stand" Rule regarding all personal safety will result in possible disqualification.

### **ILLEGAL ACTIONS AND PENALTIES.**

22. At the finish of the FINAL race in each class the winning and 2<sup>nd</sup> place sled after weighing out, must report immediately to the Technical Inspection Area for tech inspection and review. The sled must remain at the review location and be attended by a team member unless the sled is scheduled for entry into another race. This being the case then the sled must return to the technical inspection area after its last race and cannot leave until fully inspected and passing Tech. No return by the sled or driver to the sled's pit or support trailer is allowed at any time after a 1<sup>st</sup> or 2<sup>nd</sup> place finish and if such action occurs then the sled is subject to immediate disqualification.

- 23. Cheating: If a sled is caught during a Technical inspection with an illegal part, sled dimension, or is violation of a stated rule the Owner/driver will be subject to disciplinary actions. Depending on the time and place the illegal action is detected, i.e. If a sled is determined to be non-compliant to the race rules and its Class rules during the initial Technical and Safety inspection, then the Team will be allowed to make corrective actions and return for a final Technical inspection. If illegal action is protested and confirmed during the race then the sled and driver will be immediately disqualified. The same will hold true for any parts or actions by the Teams that may be deemed illegal by other drivers or team owners and protested as such after the race. Depending on the illegal action determined after the race during a tear down or obvious inspection then the level of disciplinary action will be determined by the Race director with assistance from the Tech inspector.**
24. Drinking of alcoholic beverages or intoxicating beverages of any type or use of any intoxicating type drugs is forbidden at the Venue and prohibited at any sanctioned event. Prohibited areas include the Pits, hot pits, staging area, parking lots and spectator viewing area.
25. Any person or persons found to be under the influence of or participating in the using of an intoxicating drink or drugs will be subject to arrest and / or eviction from the venue.
26. Any prescription drug use by the owner, driver or members of the crew must be reported to the race director.

### **PROTEST PROCEDURE:**

1. Regardless of any sled passing the initial safety and Technical inspection, the sled will be subject to a complete inspection and possible tear down after the race.
- 2. After a sled completes registration and its initial Safety and technical inspection it will be subject to additional inspections at any time during the race. At the discretion of the Tech Director any sled can be selected for a mandatory tear down and inspection.**
3. Any driver refusing a tear down or mandatory inspection will be disqualified.
4. A formal protest Procedure will include a written request by the driver in the Class in question. Each formal protest must be accompanied by a protest fee of \$200.00 (Two Hundred Dollars).
5. A “General” protest is not acceptable but must be a protest that is represented in writing by description and due reason by the party making the formal protest.
6. Driving infractions are not able to be protested formally but must be reported to the Race director at the time of the infraction.
7. Race Director / Technical Inspector decisions are considered final and no formal protest can be directed as such regarding their judgements.
8. Any protest of a class or Team sled(s) violations must be placed within 30 minutes of the event completion or subject class ending, whichever comes first.

9. Proper protests must be addressed by the Associates body and its assigned representatives prior to finalizing the Class race results.
10. If a protest is found to be confirmed then the subject sled(s) and its Driver/Team Owner will be subject to a Formal Identification as a “Cheater” when Race results are issued.
11. An Appeals Process will be allowed for the protested party and must be directed to a ESSDRA Rules Committee representative. Any protest appeal must be received by the Race Director of the Sanctioned race within 10 days of a confirmed protest.

### **RACE DIRECTOR RESPONSIBILITIES**

1. All Race directors and Technical directors must be approved and recognized by the Associated group belonging to the Eastern States Snowmobile Drag Racing Associates.
2. **Conduct of the race, track design and any final determinations regarding rules, ethics and Tech Inspection locations will be the responsibility of the Race director.**
3. The race director is the Voice of Authority and has all the rights to assign track officials and Safety/ Technical inspectors.
4. The race director may not have a vested interest in the race or results of the race he or she is associated with.
5. **Race directors can compete in races except those in which they officiate.**
6. The race director may cancel or postpone any race in that any condition may endanger the racers, Crew members and spectators. Due and proper notice of this condition must be given in advance. The race director may shorten the race for any reason but must provide an adequate notice in advance.
7. Only the drivers will have the authority to have a discussion with the Race director before, during or after the race.
8. Decisions by the race director may be reviewed by the Board of Directors of the associated group running the race.
9. The Race director with the assistance of the technical inspector may determine if a sled does not have the proper integrity to be a safe race sled.
10. The Race director is responsible for determining if the track has proper dimensions, and is safe with respect to the pit, staging, Tech. inspection, track and shutdown areas.
11. The Race director is responsible for the integrity and Testing/ Operation of all Timing equipment.



12. Any appeal of a Race director's decision(s) must be provided formally and then allowed a fair amount of time for response.
- 13. The Race director has the authority to add additional classes and the rules that apply will be applied at his discretion using a class or classes that are already rule defined in this document. Example: Add classes such as Pro Mod 600, Pro Mod 700 and Improve Stock Turbo.**

END OF SECTION 1

## SECTION No. 2

### Stock Rules

## STOCK CLASSES

### SNOWMOBILE GENERAL REQUIREMENTS

1. Snowmobiles must use OEM clutch, suspension, gas tank, cowl, hood and engine for the snowmobile's year and model.
2. Factory options are not allowed, unless available by the manufacturer to all Race teams.
3. Snowmobile and driver must weigh the manufacturer's OEM weight **plus 200 pounds**.
4. The snowmobile must be equipped with a Tether switch and cord that can be attached to the Driver at all times when the snowmobile is running. This switch is in addition to the emergency shutdown button which also must remain functional.

### ENGINE

1. No component of the engine may be altered to the engine. Blueprinting of the engine is not allowed. No removal of material will be allowed. This includes port matching, polishing, deburring, glass or sand blasting surfaces or material removal for the purpose of engine balancing or other reasons.
2. Maximum cylinder overbore wear may not exceed .020 Inches (1/2mm).
3. Replacement pistons must be OEM for the model.
4. There will be no more than one-cylinder base gasket to a cylinder and no changes in engine dimensions can be made by gasket adjustments.
5. No modification to carburetor body will be allowed.
6. On snowmobiles with OEM, EFI modules; The ECU, Electronic Control Modules may be used. The module must run in conjunction with the OEM, ECU and ECU Harness. (Stand-alone ignitions are not allowed)
7. On snowmobiles equipped with EFI: you are allowed to replace the non-adjustable fuel pressure regulator with any commercially available, mechanically adjustable fuel pressure regulator. The regulator must be installed in a way that it is not accessible to the driver who is operating the snowmobile.
8. Air box may not be modified. It may be removed. If removed, it must be replaced with commercially available air cleaner. A redesigned airbox is not allowed.
9. No additional fuel pumps may be added.
10. Oil injection pump must remain functional and in place. Lines may be removed and plugged. Pre-mix gasoline may be used.

11. Engine must retain OEM for the model cooling system.
12. The cooling circuits cannot be modified or removed. Thermostats may be removed.
13. OEM heat exchanger for the model may be moved to any place on the top, side or under the tunnel and must remain functional.
14. The complete OEM exhaust system must be used as provided by the manufacturer for the model.

## **DRIVE**

1. Any springs, weights and ramps may be used in the clutches. There is no maximum clutch engagement RPM.
2. No modifications on clutches to accommodate additional springs and weights will be allowed.
3. No removing or adding of material allowed on clutches unless otherwise specified.
4. Material may be removed but not added to primary ramps or weights.
5. Drive belt need not be OEM for the model.
6. Any chain and sprockets may be used.
7. Track sprockets/drivers must remain OEM for the brand.
8. OEM for the model brake system must remain as produced by the manufacturer and must be fully functional and mounted in the OEM location.
9. OEM clutch guard for the model primary clutch system must remain as produced by the manufacturer and must be fully functional and mounted in the OEM location.

## **SKI SUSPENSION AND STEERING**

1. Any steel or titanium suspension springs are allowed.
2. Ski Suspension must maintain a minimum of two (2) inches of travel with driver on snowmobile.
3. Shocks must be OEM for the model and remain in the OEM location. Spacers may be added internally to limit rebound travel, but not compression travel.
4. Radius rods may be located anywhere on the trailing arm where the manufacturer has drilled or partially

drilled for the radius rod mounting holes.

## **SKIS AND RUNNERS**

1. Aftermarket skis are allowed. Minimum ski length is 40 Inches. Ski width may not be trimmed. Skis may not be interchanged between brands.
2. Ski runners may be removed or replaced.

## **TRACK SUSPENSION**

1. The complete suspension must be used as provided by the manufacturer. Track suspension may be located anywhere in the tunnel where the manufacturer has drilled or marked for mounting holes. Pre-drilled plates may be drilled out to facilitate suspension adjustment.
2. Any titanium or steel suspension springs are allowed.
3. Two (2) Inches of travel with driver on snowmobile must be maintained with the track suspension.
4. Additional marginal snow wheels may be added.
5. Rear axle idler wheels must remain OEM for the model. OEM for the model rear idler wheels may be added to the rear axle.
6. Shocks must remain OEM for the model and remain in the OEM location. Spacers may be added internally to limit rebound travel.
7. No device may be added that stops the suspension from operating through its normal bottoming action.

## **TRACK AND TRACTION**

1. The track must be OEM for the year and model or one of the tracks listed below: CAMOPLAST: 9811R, 9812R, 9813R, 9814R, 9843R, 9844R, 9845R, 9846R, 9862R, 9902R, 9926R, 9927R, 9810R, 9861R, 9904R, 9929R, 9937R, 9976R, 486700025, 486700040 KIMPEX: 04-848K.
2. No modifications allowed installing a track unless otherwise stated.
3. No cutting, trimming or shaving of the track. The track must be used as produced by the molder of the track.
4. Minimum lug height from the flat of the track is 0.50 inch.

5. The track cannot be reversed.
6. Track clips and guide clips may be replaced when worn.
7. Any traction device must not extend more than .750 inch above the highest point of the track.

### **FRAME AND BODY**

1. Width will be as produced the OEM manufacturer.
2. No chassis alterations, additions or removals which alter stock appearances or dimensions are allowed.
3. Tunnel can be repaired but must remain as produced for the model length.
4. Windshield and windshield molding may be removed.
5. No extra venting allowed.
6. The OEM fuel tank is the only tank that can be used for fuel supply.

### **IGNITION & ELECTRICAL**

1. Ignition must be OEM for the year and model. CDI module may be reprogrammed.
2. No aftermarket device is allowed for the purpose of launch control or traction control.
3. Lighting coil must remain in place.
4. Stock class is allowed to add or remove tachometers, speedometers or heat gauges.
5. Headlight assembly may be removed (opening must be closed).
6. Aftermarket sensors of any type can be installed, but must be functional.

**END of SECTION 2**

## SECTION No. 3

Improve Stock Rules

## **IMPROVED STOCK CLASSES AND RULES**

**If the rules do not specifically allow a change or modification, then it must be assumed that the change or modification is not allowed.**

### **GENERAL SNOWMOBILE REQUIREMENTS**

1. Snowmobile must begin as a stock snowmobile.
2. Any modification allowed in stock will be allowed in improved stock.
3. Minimum combined weight is the weight of the snowmobile and the driver or as a minimum, must meet the combined weight as **listed for each individual snowmobile cc engine size class in Section 14 of this rules package.**
4. The snowmobile must have original OEM for the model engine, suspension, frame, fuel tank and seat. **Factory options must be a valid OEM part and are not allowed unless approved by the Tech Director.**
5. **The snowmobile must be equipped with a Tether switch and cord that can be attached to the Driver at all times when the snowmobile is started and/or running. This switch is in addition to the emergency shutdown button which also must remain functional.**

### **ENGINE**

1. Engine may be modified internally, but retain its external stock appearance and dimensions.
2. Cylinders must be OEM for the model, but retain its external stock appearance and dimensions.
3. The cylinders may be raised to change the port height. If a plate is used to raise cylinder height, the plate, including gaskets, cannot exceed 0.50 inch in thickness.
4. Engine may be bored up to class limit. A 1% overbore is allowed.
5. Crankshaft and crankcase shall be OEM for the model. Stroke must be OEM specification for that model.
6. Cylinder head(s) must be OEM for the model. Internally the head may be modified; externally the head must be appear as OEM.
7. Engine components allowable for modification or replacement:  
  
Pistons, Rings, Bearings, Rods, Piston pins, Gaskets



8. Reeds and reed blocks may be changed, but must not change the outside dimensions of the cylinder or crankcase.
9. Carburetors must be OEM for the model, internal modifications are allowed.
10. On snowmobiles with Electronic Fuel Injection, **the throttle body may be modified for increased fuel flow but must not exceed a 56mm diameter.** No welding of the throttle allowed. Systems that allow increased fuel delivery may be used in conjunction with the stock control module. OEM for the model throttle plate (butterfly) must be used without modification.
11. Modifications may be made to the air box. Air box may be removed and air filters may be used.
12. Oil pumps may be removed; if the pump is removed the oil tank must be removed.
13. Flywheel may not be removed.
14. Torque arms allowed.
15. Rigid motor mounts allowed. OEM engine mounting location must be maintained.
- 16. Cooling systems must remain installed. System may be modified or relocated.**
17. Any functionally silenced exhaust system allowed.
18. Exhaust outlet must exit body in a rearward and downward direction not extending more than 3” from the snowmobile.

### **DRIVE**

1. No restriction on what primary and secondary clutch may be used.
2. Clutches may be modified.
3. Jackshafts may be changed to accommodate a clutch change. No welding allowed on jackshaft. Location of shaft must be maintained in OEM location.
4. A manufactured or modified original clutch guard, separate from the cowl, for the model primary clutch system must be provided and provide adequate protection from a primary clutch explosion that would cast parts in all directions. The minimum thickness of the guard shall be .090 in thickness and manufactured from aluminum or equivalent sheet metal. The guard must cover an area down to the center of the Clutch bolts and must be provided with a separate bottom belly pan protection beneath the clutches and a foot plate guard. The guards must have sufficient mounting plates and

reinforced with belting or meet approval of the Technical Director. The manufactured guard must be fully functional and mounted in the OEM location.

### **SKI SUSPENSION AND STEERING**

1. Ski suspension and shocks must be OEM for the model and remain in OEM location.
2. Ski stance must be OEM for the model.
3. A minimum of two inches of travel with driver on snowmobile must be maintained.

### **SKIS AND SKI RUNNERS**

1. Aftermarket skis allowed. Minimum aftermarket ski length must be 40 inches.

### **TRACK SUSPENSION**

1. OEM suspension for the model sled must be used. OEM location must be maintained.
2. Two (2) inches of downward travel with driver on snowmobile must be maintained.
3. Shocks shall be OEM for the model and remain in OEM location.
4. Long track rails and rail extensions allowed. Suspension components must remain OEM stock for the model. An approved tunnel enclosure must be added. **Enclosure must be a minimum of .125" thick aluminum thick, extend a minimum of 2" behind the track, be the same width as the tunnel and installed such that the bottom of the enclosure is at the centerline of the rear axle and the rear provides a mounting surface for the rear flap.**

### **TRACK & TRACTION**

1. Any commercially available one-piece molded rubber track is allowed. No cleated tracks.
2. Track must remain as produced by manufacturer. No cutting or trimming of the track is allowed.
3. Minimum lug height from the flat of the track is 0.50 inch.
4. Any traction device must not extend more than 0.750 inch above the highest point of the track.

**FRAME & BODY**

1. Any chassis alterations, additions or removals, which alter the stock appearance or dimensions are not allowed. Tunnel can be repaired but must maintain OEM length.
2. The OEM fuel tank must be the only tank that can be used for fuel supply.
3. Any hood or side panels that maintain stock appearance must remain in place.

**IGNITION & ELECTRICAL**

1. Ignition must be OEM for the model.
2. No aftermarket device is allowed that interrupts ignition for the purpose of launch control or traction control.
3. Lighting coil must remain in place.
4. Tachometers, speedometers and/or heat gauges may be added or removed. All open instrument holes must be closed.
5. Wiring harnesses and instrument drive cables may be removed.
6. Headlight assembly may be removed; headlight consoles are not considered part of headlight assembly.

END of SECTION 3

## SECTION No. 4

Improve Stock 1000 Rules

## **IMPROVED STOCK 1000 RULES**

### **GENERAL REQUIREMENTS**

1. The snowmobile must be equipped with a Tether switch and cord that can be attached to the Driver at all times when the snowmobile is started and/or running. This switch is in addition to the emergency shutdown button which also must remain functional.
2. Minimum weight is: **seven hundred seven hundred – fifty (750) pounds** for Triple and Four-cylinder models and six hundred and eighty-five (685) pounds for 2-cylinder models.
3. Maximum overall length of the sled must not exceed 144”.
4. Four stroke engines must remain in Stock trim.
5. A manufactured or modified original clutch guard, separate from the cowl, for the model primary clutch system must be provided and provide adequate protection from a primary clutch explosion that would cast parts in all directions. The minimum thickness of the guard shall be .090 in thickness and manufactured from aluminum or equivalent sheet metal. The guard must cover an area down to the center of the Clutch bolts and must be provided with a separate bottom belly pan protection beneath the clutches and a foot plate guard. The guards must have sufficient mounting plates and reinforced with belting or meet approval of the Technical Director. The manufactured guard must be fully functional and mounted in the OEM location.
6. **OEM Track/ Suspension Extensions kits will require the addition of a Tunnel extension piece as provided by an aftermarket provider or manufactured by the owner. This extension must be manufactured from a minimum of .125 thick aluminum or equal and must extend down to the centerline of the rear axle. The extension must be the same width of the existing tunnel and extend to a point in the rear a minimum of 2” behind the track and be designed such that the snow flap can be attached similar to a stock appearing flap. The Flap must be attached such that with the driver on the sled the flap touches the ground.**

### **ENGINE**

1. Any stock qualified model may be used and the engine may be bored up to class limit. A one (1) percent over class cc allowed (1010cc).
2. Rod center to center may be changed.

3. Stroke may be changed.
4. Crankshaft may be modified or replaced.
5. Chain case gears may be changed.
6. Cylinders may be modified but must retain complete OEM dimensions. If an OEM cylinder is modified it must remain within .020 inches (1/2mm) per side, .040 inches (1mm) overall of the OEM cylinder exterior shell dimensions. Modifications must be blended in to retain OEM appearance.
7. Any aftermarket cylinder for the model sled is allowed. The exterior of an aftermarket cylinder may not be modified.
8. Cylinders may not be interchanged between brands. Welding on crankcase is not an acceptable method to adapt aftermarket or other OEM cylinders to crankcase.
9. Any commercially available head allowed.
10. Intake concept and location will remain OEM for the model.
- 11. The reed valve mounting area on the crankcase may be modified to change reed angle but must remain OEM. The upper surface of the intake tract may be reinforced by welding or bonding. Side and bottom welding of the mounting area is not allowed. Minimum reed valve cage dimension is limited to a maximum of 88mm. A template may be used by the tech inspector to determine if the reed valve mounting area is an illegal or oversize intake track. Illegal Reed Tract size and Reed cage will result in elimination from I/S and require the Owner / Driver to determine if the sled is bumped up to the Pro-Stock class.**
12. More than one OEM type fuel pump allowed.
13. Carburetors may be modified or replaced. Flange can be modified internally.
14. Air box may be removed.

#### **IGNITION & ELECTRICAL**

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

END of SECTION 4

## SECTION No. 5

Pro Stock 600 – 800 cc Rules

## **PRO STOCK CLASSES AND RULES ( 600cc – 800cc)**

If these rules do not specifically allow a change or modification, then it must be assumed that the change or modification is not allowed.

### **GENERAL REQUIREMENTS**

1. **Minimum weight: is six hundred (600) pounds for Triple in the Pro Stock 600 and 700 classes** and five hundred and fifty (550) pounds for 2-cylinder models. The 800 Pro Stock minimum weight is 625 lbs. for the triple and 550 lbs. for the twin cyl.
2. Pro Stock snowmobiles must originate as stock snowmobiles.
3. **Engine must have unique identification numbers that identify the OEM model and year.**
4. **The OEM part for the model frame, engine, seat and fuel tank must be used except starting in 2017 the Owner will have the option to change the Fiberglass hood to a later year model OEM style. The change can be made but must maintain a belly pan from the original model on the sled body. This change to a later model appearing hood must be safely attached and retain a Stock hood appearance. The technical inspector will determine safety and integrity prior to the sled being entered into a race class.** Unless the Hood change is made the specific parts and components including the hood, seat, engine, drive and chassis must retain the original OEM stock appearance for the model year sled.
5. The OEM for the model frame including bulkhead and tunnel must continue to be used as structural members to mount the engine, drive components and suspension.
6. An OEM for the brand “like chassis” must have the same front suspension concept as the original chassis. When engine is installed in the “like chassis”, the crankshaft must be located in the OEM location for the chassis. The engine installation must conform to the engine location rules.
7. Any alterations allowed in Stock and improved Stock chassis are also allowed.
8. **The snowmobile must be equipped with a tether switch and cord that can be attached to the Driver at all times when the snowmobile is started and/or running. This switch is in addition to the emergency shutdown button which also must remain functional.**

### **ENGINE**

1. Crankcase, cylinders and crankshaft must be from the stock model. Engine must retain original number of cylinders.



2. Crankcase may be modified internally provided the engine keeps its complete outside stock appearance and dimensions except as noted in these rules.
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. Crankcase must be OEM for the model and mounted in OEM location.**
5. Stroke may be changed.
6. Cylinders must be OEM for the model and mounted in OEM location.
7. Cylinder may be modified internally however the engine must retain its complete external stock appearance and dimensions except as noted in these rules.
8. Cylinder overbore is limited to a 2% increase in displacement over the cc limit for the class.
9. Cylinder may be bored up or sleeved down.
10. OEM cylinder exterior 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.
11. Cylinder height may be modified to change port height. If a plate is used to raise cylinder height, the plate, including gaskets, cannot exceed  $\frac{1}{2}$  (.500) inch.
12. Cylinder head(s) must be OEM for the model. The cylinder head may be modified internally. The visible, exterior portion for the cylinder head or cylinder head cover or cylinder head cover must remain stock appearing and the spark plug must maintain OEM location.
13. Any carburetor may be used. Only one venturi allowed per cylinder.
14. Fuel injection not allowed unless OEM for the model engine.
15. No power adders allowed.
16. Intake concept and location must remain OEM for the model engine.
- 17. 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. Side and bottom welding of the mounting area is not allowed. Minimum reed valve cage dimension is limited to a maximum of 88mm.**
18. Other engine components allowable for modification or replacement:

Bearings, Pistons, pins and rings  
 Rod, Gaskets  
 Bolt-on intake and exhaust flanges  
 Fuel pump, Engine mounts  
 Air boxes may be removed.

19. Engine must retain original cooling concept. Water pumps may be removed.
20. Radiators and ducting may be used but must not change OEM appearance.
21. Any functionally silenced exhaust system is allowed.
22. Exhaust outlet must exit body in a rearward and downward direction not extending more than 3” from the snowmobile.

### **DRIVE**

1. Any primary or secondary clutch may be used.
2. Clutch jackshaft may be changed or modified welding on jackshaft is not allowed.
3. **Relocation of crankshaft to jackshaft is allowed. Relocation may be in any direction that is perpendicular to crankshaft with a +/- 1” tolerance. The relocation distance of the shafts combined cannot exceed 1.0 inch. Any OEM or aftermarket case is allowed.**
4. Any track drive sprocket and non-driving wheels allowed on the track drive axle.
5. Drive reduction system must be OEM for the model.
6. **Chain case/gear case must be functionally driving the snowmobile with the OEM for the model drive concept. No altering of the bulkhead is allowed other than Engine mounts or engine plate.**
7. Any chain, belt, sprockets, and gears allowed for drive reduction system. No modification allowed to chain case for installation of these parts.
8. Brake assembly may be on either the jackshaft or the track drive axle.
9. Minimum brake disk diameter is 7.0 inches.
10. **A manufactured or modified original clutch guard, separate from the cowl, for the model primary clutch system must be provided and provide adequate protection from a primary clutch explosion that would cast parts in all directions. The minimum**

thickness of the guard shall be .090 in thickness and manufactured from aluminum or equivalent sheet metal. The guard must cover an area down to the center of the Clutch bolts and must be provided with a separate bottom belly pan protection beneath the clutches and a foot plate guard. The guards must have sufficient mounting plates and reinforced with belting or meet approval of the Technical Director. The manufactured guard must be fully functional and mounted in the OEM location.

### **SKI SUSPENSION & STEERING**

1. Front suspension components 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. Shock absorbers may be replaced. All must remain in OEM location.
4. Spindles may be strengthened or replaced with a stronger spindle.
5. Minimum ski stance is 40 inches.
6. Ski widening devices allowed.
7. Handlebars, handlebar grips and controls may be modified.
8. Minimum of 2 inches of travel with driver on snowmobile.

### **SKIS AND SKI RUNNERS**

1. Any commercially available aftermarket ski may be used. Minimum ski length is twenty inches.

### **TRACK SUSPENSION**

1. Any track suspension allowed that can be installed within the tunnel.
2. Material substitution is allowed. Replaced components must be as strong as or stronger than OEM components.
3. Shock absorbers may be replaced.
4. The suspension must maintain a minimum of 2 inches of travel with driver on snowmobile.
5. Commercially available long track kits allowed.

## **TRACK & TRACTION**

1. Any commercially available molded rubber track allowed. No cleated tracks allowed.
2. Track and track suspension must fit within the tunnel.
3. Track lug height may not be trimmed. The track lug height will be a minimum of 0.50 inch.
4. No other track trimming allowed.
5. 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 track segment inside the slide rails. (A total of 8 holes per track segment.)
6. Any traction device must not extend more than 0.750 inch above the highest point of the track.

## **FRAME AND BODY**

1. The OEM for the motor frame including bulkhead and tunnel must be used as structural members to mount the engine, drive components and suspension components.
2. Chassis reinforcement allowed.
3. Structural integrity must be maintained. Replaced components must be as strong as or stronger than OEM components.
4. Access openings will be allowed.
5. Frame must have a sheet of metal the same thickness as the tunnel permanently fastened to the topside or underside of the tunnel. The sheet of metal shall be the same width as the tunnel and shall extend from the rear of the tunnel to the bulkhead.
6. **OEM or Aftermarket Track / Suspension Extensions kits may be utilized but will require the addition of a Tunnel extension piece as provided by an aftermarket provider or manufactured by the owner. This extension must be manufactured from a minimum of .125 thick aluminum or equal and must extend down to the centerline of the rear axle. The extension must be the same width of the existing tunnel and extend to a point in the rear a minimum of 2” behind the track and be designed such that the snow flap can be attached similar to a stock appearing flap. The Flap must be attached such that with the driver on the sled the flap touches the ground.**

7. The maximum length of the sled must not exceed 144”.
8. OEM for the applied Hood to belly pan molding must remain intact.
9. **Seat must remain in OEM contour and be stock appearing for the OEM model or later model design change.** Seat may be lowered equally front to rear, but must be at least six (6) inches thick at its minimum dimension, seat height will be measured from the top of original tunnel to top of seat.
10. 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 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.
11. Front air dams allowed. Must be a minimum of 2 inches above the ground with front suspension totally compressed, all other parts and components must maintain a minimum of 1-inch 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. Any instrumentation allowed. Tachometer, speedometer or heat gauges may be added or removed. Open instrument holes must be closed.
3. Electrical wiring may be removed.
4. Headlight assembly may be removed.

END of SECTION 5

## SECTION No. 6

### Pro Stock 1000 Class Rules

## **PRO STOCK 1000 RULES**

### **GENERAL REQUIREMENTS**

**If the rules do not specifically allow a change or modification, then it must be assumed that the change or modification is not allowed.**

- 1. Rules established for the 600cc, 700cc and 800cc Pro Stock Classes shall apply to the 1000cc Class with the following additions.**
2. Minimum combined weight of snowmobile, fuel, driver and driver gear is 625 lbs. for a triple and 550lbs. for a twin.
3. The snowmobile must be equipped with a tether switch and cord that can be attached to the Driver at all times when the snowmobile is started and/or running. This switch is in addition to the emergency shutdown button which also must remain functional.
4. A manufactured or modified original clutch guard, separate from the cowl, for the model primary clutch system must be provided and provide adequate protection from a primary clutch explosion that would cast parts in all directions. The minimum thickness of the guard shall be .090 in thickness and manufactured from aluminum or equivalent sheet metal. The guard must cover an area down to the center of the Clutch bolts and must be provided with a separate bottom belly pan protection beneath the clutches and a foot plate guard. The guards must have sufficient mounting plates and reinforced with belting or meet approval of the Technical Director. The manufactured guard must be fully functional and mounted in the OEM location.

### **ENGINE**

1. Aftermarket cylinders for the brand are allowed.
2. Cylinders must be commercially available.
3. Cylinders may be interchanged between brands.
4. Any commercially available cylinder head allowed.
5. No Turbos or Fuel Injection systems are allowed except for a trial exception stated in the next paragraph No.6.
- 6. Starting in the 2017 season the 1000cc twin engine with the OEM Fuel Injection will be allowed to enter the 1000cc Pro Stock Class. This is a "Trial" class only and will be observed by the Rules committee for its impact and effect on the total class results. The EFI Throttle body may be modified but the butterfly diameter must not**

exceed 56mm in diameter.

7. The reed valve mounting area on the engine crankcase may be modified to change reed angle but must remain OEM. The upper surface of the intake tract may be reinforced by welding or bonding. Side and bottom welding of the mounting area is not allowed. A template will be used by the Technical inspector to determine if the reed valve accept mounting area is illegal, has improper welding on the sides and bottom of the reed tract or has an oversize intake track installed on the crankcase.
8. If the Engine Reed Tract assembly does not fit the “Template” and is determined illegal, then the owner/driver will have to select an option, as proposed below that will allow the subject sled to continue racing in a Class that will be TBD by the selected option. Those options are as follows:
  - a. Replacement with a legal reed size (maximum diameter = 88mm) and running the P/S 1000 class.
  - b. Adding 30 lbs. to sled weight and running the class.
  - c. Jumping the sled up to the 1000cc Pro Mod class w/o changes.

#### **IGNITION & ELECTRICAL**

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

END of SECTION 6



## SECTION No. 7

### Pro Mod Class Rules

**PRO MOD CLASSES AND RULES    800/1000-1050 & 4-stroke Turbo  
**GENERAL SNOWBILE REQUIREMENTS****

1. Race Director shall have the authority to determine structural integrity.
2. The snowmobile must be Stock Appearing.
3. The Owner will have the option to change the Fiberglass hood to a later year model OEM style but must maintain a belly pan on the sled body. This change to a later model appearing hood must be safely attached and retain a Stock hood appearance. The technical inspector will determine safety and integrity prior to the sled being entered into a race class. Otherwise specific parts and components including the hood, seat, engine, drive and chassis can retain the original OEM stock appearance for the model year sled.
4. Weight for this Class is Up to 816cc = 625lbs. 1000cc – 1050cc = 625lbs.  
**725lbs. for 4-strke Turbo**
5. The overall length of the sled must not exceed 144” (inches).
6. The snowmobile must be equipped with a tether switch and cord that can be attached to the Driver at all times when the snowmobile is started and/or running. This switch is in addition to the emergency shutdown button which also must remain functional.

**ENGINE**

1. **The engine must be from a stock qualified snowmobile 800 and 1000cc class. Aftermarket cylinders allowed on 1000cc up to 1050 cc displacement. OEM or aftermarket cylinders will be allowed in the 800cc and 1000cc Pro Mod class starting 2017.**
2. **Fuel Injection systems will be allowed on both 2 and 3-cyl. Engines.**
3. After market EFI and throttle body assemblies will be allowed.
4. Turbos will be allowed but must be the standard production, Arctic Cat or Yamaha model on all sleds with a cast wheel. Technical inspection will be done to assure Turbo being used is in compliance.
5. Cylinder maximum overbore is limited to two (2) percent over the cc displacement for the class, except for the 1050 cc displacement rule. **No overbore of Turbo sleds are allowed.**
6. Cylinder, crankcase, crankshaft and heads may be interchanged within the brand.
7. Welding on the crankcase allowed.

8. Induction concept and location must remain OEM for the 3-cyl. models.
9. Any carburetor **or fuel injection** may be used. Only one venturi allowed per cylinder.
10. No power adders allowed.
11. Exhaust outlet must exit body in a rearward and downward direction not extending more than 3" from the snowmobile.
12. Exhaust system must be functionally silenced.

### **SKI SUSPENSION AND STEERING**

1. Minimum of 2 inches of travel with driver on snowmobile.
2. Ski suspension must have at least one hydraulic shock absorber on each side.

### **SKIS & SKI RUNNERS**

1. Any commercially available OEM or aftermarket ski may be used.
2. Minimum ski length is twenty inches.

### **TRACK SUSPENSION**

1. Must be a minimum of 2 inches of travel with driver on snowmobile measured at the rear bumper.

### **TRACK & TRACTION**

1. Any commercially available rubber track allowed. No cleated tracks allowed.
2. **The track lug height may be trimmed to a minimum of 0.50-inch lug height. An OEM or Aftermarket track can be used with a maximum lug height of 0.50.** No other track trimming allowed.
3. Minimum track width is 13.5 inches.
4. Any traction device must not extend more than 0.750 inch above the highest point of the track.

### **FRAME & BODY**

1. All Pro Modified snowmobiles will have a sheet of metal the same thickness as the tunnel

material permanently fastened to the top or bottom side of the upper tunnel surface. The sheet metal shall be the same width as the tunnel and shall extend from the rear of the tunnel to the horizontal centerline of the track drive axle. Tunnels 1/8-inch (.125) thick or thicker do not require this added sheet provided that the 1/8-inch (.125) tunnel extends to the horizontal centerline of the track drive axle. **Aftermarket or Owner manufactured chassis are allowed.**

2. **Any track / suspension Extension kits will require the addition of a Tunnel extension piece as provided by an aftermarket provider or manufactured by the owner. This extension must be manufactured from a minimum of .125 thick aluminum or equal and must extend down to the centerline of the rear axle. The extension must be the same width of the existing tunnel and extend to a point in the rear a minimum of 2” behind the track and be designed such that the snow flap can be attached similar to a stock appearing flap. The Flap must be attached such that with the driver on the sled the flap touches the ground.**
3. Hood must have top and side cowling and must contain at least one thousand three hundred (1300) square inches.
4. A skid plate is required.
5. Front air dams allowed. Must be a minimum of 2 inches above the ground at full compression.

### **DRIVE**

1. Carbon fiber brake discs are allowed.
2. Aluminum brake discs not allowed.
3. **A manufactured or modified original clutch guard, separate from the cowl, for the model primary clutch system must be provided and provide adequate protection from a primary clutch explosion that would cast parts in all directions. The minimum thickness of the guard shall be .090 in thickness and manufactured from aluminum or equivalent sheet metal. The guard must cover an area down to the center of the Clutch bolts and must be provided with a separate bottom belly pan protection beneath the clutches and a foot plate guard. The guards must have sufficient mounting plates and reinforced with belting or meet approval of the Technical Director. The manufactured guard must be fully functional and mounted in the OEM location.**

### **IGNITION & ELECTRICAL**

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

END of SECTION 7

## SECTION No. 8

### Heavy Mod Class Rules

## **HEAVY MOD CLASSES AND RULES**

### **GENERAL REQUIREMENTS**

- 1, 1, Class is for up to 816cc and 1050cc engine displacements 2 and 3-cyl. only.**
  1. Maximum overall length of the sled will not exceed 144 inches.
  2. Race Director shall have the authority to determine structural integrity.
  - 3. 4-Stroke powered snowmobiles are allowed in the up to 1000cc Heavy Mod. Turbo chargers no longer allowed.**
  - 4. The snowmobile must be equipped with a tether switch and cord that can be attached to the Driver at all times when the snowmobile is started and/or running. This switch is in addition to the emergency shutdown button which also must remain functional.**

### **ENGINE**

1. The engine must be an engine manufactured for snowmobile use, watercraft crankcase and crankshaft from a snowmobile manufacturer may be used. Both 2=cylinder and 3 cylinder engines are allowed.
- 2. Cylinder maximum overbore is two (2) percent over the cc displacement for the up to 800cc class. Heavy Modified 1000 maximum overbore is defined as five (5) percent over the cc displacement (One Thousand-fifty) 1050cc for the class.**
3. No Nitrous systems, super charging or turbo charging allowed .
4. After market Fuel Injection systems are allowed for any 2=cylinder engine. **Aftermarket EFI and throttle body is allowed.**
5. Exhaust outlet must exit body in a rearward and downward direction not extending more than 3” from the snowmobile.
6. Exhaust system must be functionally silenced.
7. There are no Reed cage installation restrictions for the engine crankcase. Side welding or Devcon application is allowed.

### **DRIVE**

1. Must have a twin opposed piston caliper braking system with a minimum 3/16 (.015-inch tolerance) inch thick, 7.0-inch minimum diameter brake disc, mounted on the drive axle. Brake disc may be milled or drilled in the original pad contact area. The disc pad contact

area may not be reduced more than 15% of the original pad contact area.

2. A manufactured or modified original clutch guard, separate from the cowl, for the model primary clutch system must be provided and provide adequate protection from a primary clutch explosion that would cast parts in all directions. The minimum thickness of the guard shall be .090 in thickness and manufactured from aluminum or equivalent sheet metal. The guard must cover an area down to the center of the Clutch bolts and must be provided with a separate bottom belly pan protection beneath the clutches and a foot plate guard. The guards must have sufficient mounting plates and reinforced with belting or meet approval of the Technical Director. The manufactured guard must be fully functional and mounted in the OEM location.

### **SKI SUSPENSION AND STEERING**

1. Minimum of 2 inches of travel with driver on snowmobile.
2. Minimum ski stance is 40 inches. No maximum ski stance width.
3. Ski suspension must have at least one hydraulic shock absorber on each side. Snowmobiles built before January 2006 are exempt.

### **TRACK SUSPENSION**

1. The ski suspension must maintain a minimum of 2 inches of travel with driver on snowmobile.

### **TRACK & TRACTION**

1. Any commercially available rubber track allowed. No cleated tracks allowed.
2. Track lug height may not be trimmed. Aftermarket track lug height must be a minimum of 0.50-inch lug height. No other track trimming allowed.
3. Minimum track width is 13.5 inches.
4. Any traction device must not extend more than 0.750 inch above the highest point of the track.

### **FRAME & BODY**

1. Snowmobiles must have a sheet of metal the same thickness as the tunnel material permanently fastened to the top or bottom side of the upper tunnel surface. The sheet metal shall be the same width as the tunnel and shall extend from the rear of the tunnel to the horizontal centerline of the track drive axle. Tunnels 1/8-inch (.125) thick or thicker

do not require this added sheet provided that the 1/8-inch (.125) tunnel extends to the horizontal centerline of the track drive axle.

2. Hood must have top and side cowling and must contain at a minimum one thousand three hundred (1300) square inches.
3. A skid plate (belly pan) is required.

END of SECTION 8



## SECTION No. 9

### Open Mod Classes

## OPEN MOD CLASSES AND RULES

### GENERAL REQUIREMENTS

1. Competition is open to any snowmobile up to 816cc (800cc class) and up to 1050cc (1000cc Class).
2. **Minimum wet weight is Two Hundred and fifty (250) pounds, dry weight. 4-stroke with restrictor plate = 625lbs.minimum weight with driver.**
3. **800cc - 1050cc and 4-stroke maximum overall length 144 inches.**
4. The Race Director shall have the authority to determine structural integrity.
5. **The snowmobile must be equipped with a tether switch and cord that can be attached to the Driver at all times when the snowmobile is started and/or running. This switch is in addition to the emergency shutdown button which also must remain functional.**

### ENGINE

1. The engine must be an engine manufactured for snowmobile use, watercraft crankcase and crankshaft from a snowmobile manufacturer may be used.
2. Cylinder maximum overbore is two (2) percent over the cc displacement for the 800cc class. Heavy Modified 1000 maximum overbore is defined as **five (5) percent over the cc displacement (One Thousand-fifty) 1050cc for the class.**
3. **No Nitrous systems allowed.**
4. **4-stroke Turbo charging allowed. Turbo chargers must be the Stock turbocharger as provided by the OEM or the owner has an option to use the Arctic Cat Standard Turbo. No Billet turbo wheels are allowed and the wheel must be the cast wheel as manufactured by the OEM. Restrictor plates must be install as per rule No.2. and next section.**
5. **Fuel Injection allowed on 2-cyl. and 4 stroke engines only**
6. Exhaust outlet must exit body in a rearward and downward direction not extending more than 3" from the snowmobile.
7. Exhaust system must be functionally silenced.
8. There are no Reed cage installation restrictions for the engine crankcase. Top, bottom and side welding or Devcon applications are allowed on the Reed tract body.

## **DRIVE**

1. Must have a twin opposed piston caliper braking system with a minimum 3/16 (.015-inch tolerance) inch thick, 7.0-inch minimum diameter brake disc, mounted on the drive axle. Brake disc may be milled or drilled in the original pad contact area. The disc pad contact area may not be reduced more than 15% of the original pad contact area.
2. A manufactured or modified original clutch guard, separate from the cowl, for the model primary clutch system must be provided and provide adequate protection from a primary clutch explosion that would cast parts in all directions. The minimum thickness of the guard shall be .090 in thickness and manufactured from aluminum or equivalent sheet metal. The guard must cover an area down to the center of the Clutch bolts and must be provided with a separate bottom belly pan protection beneath the clutches and a foot plate guard. The guards must have sufficient mounting plates and reinforced with belting or meet approval of the Technical Director. The manufactured guard must be fully functional and mounted in the OEM location.

## **SKI SUSPENSION AND STEERING**

1. Minimum of 2 inches of travel with driver on snowmobile.
2. Minimum ski stance is 40 inches. No maximum ski stance width.
3. Ski suspension must have at least one hydraulic shock absorber on each side. Snowmobiles built before January 2006 are exempt.

## **TRACK SUSPENSION**

1. The ski suspension must maintain a minimum of 2 inches of travel with drier on snowmobile.

## **TRACK & TRACTION**

1. Any commercially available rubber track allowed. No cleated tracks allowed.
2. **Original track lug height may not be trimmed. Minimum Aftermarket track lug must be a minimum of 0.50-inch lug height. No other track trimming allowed.**
3. Minimum track width is 13.5 inches.
4. Any traction device must not extend more than 0.750 inch above the highest point of the track.

**FRAME & BODY**

1. Snowmobiles must have a sheet of metal the same thickness as the tunnel material permanently fastened to the top or bottom side of the upper tunnel surface. The sheet metal shall be the same width as the tunnel and shall extend from the rear of the tunnel to the horizontal centerline of the track drive axle. Tunnels 1/8-inch (.125) thick or thicker do not require this added sheet provided that the 1/8-inch (.125) tunnel extends to the horizontal centerline of the track drive axle.
2. Hood must have top and side cowling and must contain at a minimum one thousand three hundred (1300) square inches.
3. A skid plate (belly pan) is required.

END of SECTION 9

## SECTION No. 10

### 4 – Stroke Snowmobiles in 1000cc Open Mod Class Rules

## **4-STROKE POWERED SNOWMOBILES IN 1000CC OPEN MOD CLASS**

1. Minimum combined weight of a 1000cc sled entry is **625 lbs.**
2. Identification tags and stampings on turbochargers must remain intact as purchased.
3. 4-Stroke powered snowmobiles in the 1000cc class may incorporate a turbocharger with the following restrictions: A ¼ inch thick restrictor plate installed before the turbo fresh air intake with a maximum bore size of 56mm. The bore must be straight with no taper or chamfer; the OEM for the model engine cylinder head (internal modifications allowed); and air to air intercooler only, no water injection.

### **ENGINE**

1. The engine must have been manufactured for snowmobile use.
2. Cylinder maximum overbore is limited to two (2) percent over the cc displacement for the class.
3. Open modified 1000 maximum overbore is limited to five percent over the cc displacement (1050cc) for the class.
4. No Nitrous Power Adder is allowed.
5. No aftermarket turbo chargers are allowed, OEM only and Turbo must run the stock Turbo wheel. No Billet wheels allowed. Fuel injection allowed.
6. Exhaust outlet must exit body in a rearward and downward direction not extending more than 3” from the snowmobile.

### **DRIVE**

1. Modified 1000cc classes and above must have a twin opposed piston caliper braking system with a minimum 3/16 (.015-inch tolerance) inch thick; 7.0 inch minimum diameter brake disc, mounted on the drive axle. Any manufactured brake disc may be milled or drilled in the original pad contact area (all pads inclusive). The disc pad contact area may not be reduced more than 15% of the original pad contact area.
2. A manufactured or modified original clutch guard, separate from the cowl, for the model primary clutch system must be provided and provide adequate protection from a primary clutch explosion that would cast parts in all directions. The minimum thickness of the guard shall be .090 in thickness and manufactured from aluminum or equivalent sheet metal. The guard must cover an area down to the center of the Clutch bolts and must be provided with a separate bottom belly pan protection beneath the clutches and a foot plate guard. The guards must have sufficient mounting plates and

reinforced with belting or meet approval of the Technical Director. The manufactured guard must be fully functional and mounted in the OEM location.

### **SKI SUSPENSION AND STEERING**

1. The ski suspension must maintain a minimum of 2 inches of travel with driver on snowmobile.
2. Minimum ski stance is 40 inches.
3. Ski suspension must have at least one hydraulic shock absorber on each side. Snowmobiles before January 1, 2006 are exempt.

### **TRACK SUSPENSION**

1. The suspension must maintain a minimum of 2 inches of travel with driver on snowmobile.

### **TRACK & TRACTION**

1. Any commercially available rubber track allowed. No cleated tracks allowed.
2. **Track lug height may not be trimmed. Any aftermarket track must maintain a minimum of 0.50-inch lug height. No other track trimming allowed.**
3. Minimum track width is 13.5 inches.
4. Any traction device must not extend more than 0.750 inch above the highest point of the track.

### **FRAME & BODY**

1. Snowmobiles must have a sheet of metal the same thickness as the tunnel material permanently fastened to the top or bottom side of the upper tunnel surface. The sheet metal shall be the same width as the tunnel and shall extend from the rear of the tunnel to the horizontal centerline of the track drive axle. Tunnels 1/8-inch (.125) thick or thicker do not require this added sheet provided that the 1/8-inch (.125) tunnel extends to the horizontal centerline of the track drive axle.
2. A skid plate (belly pan) is required.

**IGNITION & ELECTRICAL**

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

END of SECTION 10



## SECTION No. 11

Lake Racer / Power Adder / Outlaw  
Classes

## LAKE RACER / POWER ADDER OUTLAW

### GENERAL SNOWMOBILE REQUIREMENTS

1. Race Director shall have the authority to determine structural integrity and ability for safe and reliable race operation.
2. **The Race director shall have the authority to determine if the Power Adder class will include and can add an additional “Normally Aspirated” Power Adder Class.**
3. Competition is open to any snowmobile, either production or one of a kind experimental unit.
4. Engine displacement is limited to a maximum of 2000cc in the Outlaw class
5. **Minimum weight with driver is 710 pounds for 1051cc up to 2000cc limit Lake Racer class, 650 lbs. for an additional up to 999cc.**
  - Outlaw 2-stroke Nitrous = 585 lbs. with driver.**
  - Outlaw 2-stroke Turbo = 625 lbs. with driver.**
  - Outlaw, 4-stroke, Nitrous or Turbo = 650 lbs.**
6. Maximum overall length is 144 inches.
7. All rules in the Power Adder / Outlaw Class are subject to change by the Race Director, i.e. number of sleds in a race, lane separations, race distance and shutdown distance at any time and without any period of delay.
8. **The snowmobile must be equipped with a tether switch and cord that can be attached to the Driver at all times when the snowmobile is started and/or running. This switch is in addition to the emergency shutdown button which also must remain functional.**

### ENGINE

1. The engine must be from a stock-qualified snowmobile.
2. The race Committee will determine the validity of the engine being used if there is a question.
3. **For Power Adder / Outlaw, one power adder allowed, i.e. Super charger, Turbo-Charger, or Nitrous Injection System. Oxygenated Fuel is allowed in Power Adder / Outlaw / Lake racer Classes only, i.e. VP Q16 or VP import and Methane.**
4. **Fuel injection systems are allowed on any 2-cyl. Engine. After market Fuel injection and throttle bodies are allowed.**

5. Exhaust systems must be designed in a fashion that does not direct the exit at the driver, competitor or spectator.
6. Exhaust system must be functionally silenced.

### **DRIVE**

1. Any CVT type primary and secondary clutch may be used.
2. Clutches may be modified.
3. A manufactured clutch guard for the primary clutch system must be provided and provide adequate protection from a primary clutch and/or drive belt explosion that would cast parts in all directions. The minimum thickness of the guard shall be a minimum of .090 in thickness and manufactured from aluminum or equivalent sheet metal. The guard must be provided with a sufficient mounting plate and reinforced with belting or meet approval of the Technical Director. The manufactured guard must be fully functional. This guard installation should also include an isolation panel of the same thickness and located between the clutch guard and engine compartment. The guard must provide complete hand and body protection for the driver.  
Clutch cover must have full facial coverage and 360-degree elliptical coverage in the direction of clutch/belt travel. If the clutch cover is fastened to the existing belly pan, the area below the clutches must be covered with .090-inch aluminum or equivalent steel material, belting is recommended, but not mandatory. Clutch cover and related belting must be securely fastened.
4. Backside of clutches must be covered by a portion of the clutch cover or by a bulkhead of comparable material.
5. Lake Racer class sleds must have a twin opposed piston caliper braking system with a minimum 3/16 (.015-inch tolerance) inch thick, 6.0-inch minimum diameter brake disc, mounted on the drive axle.

### **SKI SUSPENSION AND STEERING**

1. The front suspension must remain OEM design concept but may be changed in shape and appearance.
2. Material substitution is allowed.

### **SKIS & SKI RUNNERS**

1. Any OEM or similar aftermarket ski may be used. On the Lake Racer sled the skis must be original length and width for the model/make of the snowmobile
2. For the Power adder/ Outlaw Class the minimum ski length is twenty inches and must

be an aftermarket available product.

END of SECTION 11

## Section 12

### Mini 120cc, Stock Sleds and Mini Modified Classes

### **120cc Mini Stock Class & Mini Modified Sleds**

1. The intent of this class is to establish races in which all can compete at their level of personal and equipment ability. The class(s) structure is organized in such a way as to enable as many snowmobiles as possible a place to compete.
2. All 120cc classes are stock based classes. No weight Limits are imposed.
3. No change or modifications are allowed unless specifically stated by the owner and noted by the Tech inspector.
4. If Modifications are declared or found to be present then the subject Mini sled must run in the modified class. Modifications that exclude the Mini from a Stock class include but is not necessarily limited to:

Exhaust pipe and /or can is a non-OEM or an aftermarket pipe(s)  
 Engine cc greater than 120cc  
 Non-OEM engine installed  
 Mini-Modified engine cc must not exceed 250cc, 1-cyl. or 440cc, 2-cyl.  
 Non-OEM hood with chassis modifications.  
 Chassis modifications to OEM tunnel to increase length  
 Longest than non-OEM or aftermarket track installations must have tunnel  
 Extensions with guard extending down to the centerline of the rear axle.  
 No power adders. No Nitrous or Turbos allowed.

5. Class is for Riders ages 5 – 12 yrs. Of age
6. Eligible Snowmobiles:  
  

Arctic Cat Z 120, Z120 Sno-Pro, Bombardier Mini Z, Yamaha SRX 120 and Polaris XCR 120
7. Except for Mini-modified, all eligible 120 cc sleds must run the same manufacturer engine for the model sled as provided by the manufacturer.
8. New 206cc and /or 2018 Arctic cat ZR200 and Yamaha Snoscoot will be required to run in the Mini- Modified Class.

### **Entry Fees, Prizes and Awards**

9. Entry fees for this class are as noted by the Associates Body for the race in cooperation with the Race director and Sponsors. Primarily the Entry fee for the Mini Classes are necessary in order to cover Insurance fees and class preparation.
10. Recommended Awards: Trophies (no prize money) will be presented to all drivers. 1<sup>st</sup> and 2<sup>nd</sup> place finishes in each Mini class will be duly recognized

**A. General Competition and Safety**

1. All Owner/parent and drivers are required to have a signed written permission or waiver regarding the driver's ability to drive the race sled. The waiver identifies the limits of liability provided by the Associates group before a race with the identified driver can be run.
2. In the event that a driver is off his/her sled after an incident involving one or more sleds, the race will be stopped.
3. Two sleds will start at the same time, using the 2 lanes as necessary and designated by the Race director or Starter. Single runs may be made at the request of the Parent or immediate driver supervisor.
4. Driver entry into this event is open to any qualified individual. This class is open to children of an age and experience limit to create a fun and safe atmosphere to encourage new competitors.
5. Both the owner/parent and the driver are responsible to ensure that their snowmobile and driver safety equipment conform to all of the rules of the class which they have entered (see next section).
6. Any owner/parent and driver that does not meet the requirements listed will be subject to disqualification and forfeiture of any prizes or awards, plus ineligibility for the next (2) races.

**B. Mandatory Driver Safety Equipment**

1. Helmets are required, upper body protection, (Tek-Vest or equal), hand and eye protection are required and above ankle boots are suggested but not required.

**C. General Snowmobile Rules:**

1. Guide clips and/or track clips may be added to the track. No cleated track allowed.
2. Carbide ski runners and track studs are allowed.
3. Any separate front and rear bumpers that extend away from the body must be padded.
4. All metal ski loops must be padded.
5. Any non-OEM clutches, used or applied in the Mini modified class, must be adequately guarded in order to completely protect the driver. Integrity of the guarding will be subject to the Tech inspector review and approval.

**DRIVE**

1. Brake must be functional and operational at all times.
2. Stock 120cc, OEM drive clutch must be used with no modifications.
3. Engine governors may be disabled or removed.
4. Stock drive clutch engagement must be maintained.
5. No belt drives allowed, unless in Mini-modified class.
6. Stock 120cc, Chain guard must be in place.

**Ski Suspension & Steering**

1. Front suspension must be OEM for the model.
2. Front suspension must remain in its Stock location.
3. Ski widening devices and/or height adjustment devices are not allowed in Stock classes unless furnished as OEM and properly filed. The above-mentioned devices are allowed in mini-modified only.
4. Suspension travel may be limited by means of limit straps only. No rigid suspension allowed, except in mini-modified class.

**Skis & Runners**

1. Ski must be OEM for the model and ear or a commercially available aftermarket ski with a minimum overall length of 20”.
2. Ski suspension components must be OEM.
3. Ski tips must have ski loops; steel loops must be padded.

**Track Suspension**

NOTE: Stock 120cc; The complete suspension must be used as furnished and filed by the manufacturer. No options allowed. Shocks must be OEM to the model, and the OEM suspension mounting points must be used.

Mini-modified sleds may be use altered stock suspension or a non-OEM aftermarket suspension. OEM options and aftermarket options are allowed on Mini-modified sleds only.



1. Seals may be removed from bearings in bogie wheels, rear idler wheels and/or rear idler sprockets.
2. Commercially available marginal snow wheels may be added to the slide rails.
3. Slide rail lubrication systems not allowed.

### **Track & Traction**

1. Any commercially available molded rubber track may be used. Track must fit within frame and suspension without modification to frame, suspension or drive.
2. Track studs must not extend more than  $\frac{3}{4}$ " above the highest point of the track.

### **Frame & Body**

1. Stock 120cc: OEM hood must be maintained without modification, but may be painted any color.
2. Mini-modified may use OEM or aftermarket hood.
3. Windshield may be removed, modified or replaced; must have safety trim.
4. All sharp edges must be padded.

### **Ignition & Electrical**

1. All sleds, all Classes: An ignition tether and OEM kill switch must be installed and functional.
2. Windshield may be removed, modified or replaced; must have safety trim.
3. Stock 120cc: Ignition system and headlights must be OEM for the model; no modifications allowed.
4. Mini-modified Sleds: Modified OEM or aftermarket ignitions are allowed. No lights are required on mini-modified sleds.

## Section 13

Junior Stock Open Class  
Up to 500cc Limit

**YOUTH / JUNIOR OPEN CLASS: STOCK ONLY**

**If the rules do not specifically allow a change or modification, then it must be assumed that the change or modification is not allowed.**

1. Class is for maximum 500cc, Fan cooled or Liquid cooled engines 2 or 3-cyl. Engines allowed.
2. All Owner/parent and drivers are required to have a signed written permission or waiver regarding the driver's ability to drive the race sled. The waiver identifies the limits of liability provided by the Associates group before a race with the identified driver can be run.
3. Class is open to Ages 13-16 yrs. old, male or female drivers.
4. 475 lbs. combined weight, driver with equipment and sled is minimum weight for the class
5. 5200 RPM is the maximum clutch engagement allowed.
6. Any changes allowed in the Stock Class, as detailed in the above rules for this Associates body will be allowed in the Youth Stock Class.
7. Class entry fees and awards will be at the discretion of the Associates body and race venue. No Cash prizes will be awarded in this Class. Awards may consist of merchandise and or Trophies or both.
8. All sleds in the Stock Youth /Junior Class must comply with all "General Rules" as stated in this Rules package.
9. Snowmobile dimensions and details must comply with all Stock Class rules and pass an inspection as directed by the sanctioned group Tech inspector.
10. Drivers are required to wear the following personal protective equipment:
  - a. Certified SNELL Foundation approved helmet or approved equal.
  - b. Eye protection in the form of Safety glasses, Goggles or face shield.
  - c. Gloves for hand protection.
  - d. No shorts or short sleeve shirts can be worn.
  - e. Protective vests or upper body protection, i.e. Tek-Vest / Saf-Jak or equal is required.
  - f. Ankle-high boots or safety shoes are required.
  - g. Shin guards are recommended but not required.
11. The snowmobile must be equipped with a tether switch and cord that can be attached to the Driver at all times when the snowmobile is running. This

switch is in addition to the emergency shutdown button which also must remain functional.

12. OEM clutch guard for the model primary clutch system must remain as produced by the manufacturer and must be fully functional and mounted in the OEM location
13. Up to 121" x 15" tracks only. No shaving or cutting of the track is allowed.
14. No more than 3 studs per track bar is allowed for a total of 144 studs. Maximum  $\frac{3}{4}$ " height above the track lug allowed.
15. Rules regarding this class may change from Associates body to Associates body, i.e. CMSRA to PRO area races but overall the rules must remain consistent with the General rules for safety.

END OF SECTION 13

## Section 14

### Class Weights

**CLASS WEIGHTS****Changes are underlined and in Italic**

Mini Stock and Mini Modified classes:	<b>No minimum weight requirement. Weight cannot be removed from the Stock 120cc or 206 cc sleds.</b>	
Youth / Junior Stock Open:	<b>475 lbs. Combined weight for the class</b>	
Stock Class:	<b>Snowmobile and driver with equipment including studs, Fuel and PPE must weigh the Manufacturer's OEM sled weight plus 200 lbs.</b>	
Improved Stock 600	<b><u>Triple = 700lbs.</u></b>	Twin = 645lbs.
Improved Stock 700	<b><u>Triple = 750lbs.</u></b>	Twin = 685lbs
Improved Stock 800	<b><u>Triple = 775lbs.</u></b>	Twin = 685lbs.
Improved Stock 1000	<b><u>Triple = 775lbs.</u></b>	Twin = 685lbs.
<b>Pro Stock 600</b>	<b>Triple = 600lbs.</b>	<b>Twin = 550lbs</b>
<b>Pro Stock 700</b>	<b>Triple = 600lbs.</b>	<b>Twin = 550lbs</b>
Pro Stock 800	Triple = 625lbs.	Twin = 550lbs
Pro Stock 1000	Triple = 625lbs.	Twin = 550lbs
<b>Heavy Mod All Class</b>	<b>550 lbs. up to 816cc, 2 and 3-cyl. 550 lbs. 1000cc up to 1050 cc, 2 and 3-cyl.</b>	
<b>Open Mod, All Classes</b>	<b>minimum weight = 250lbs. (dry weight w/o fuel) 4-stroke Powered = 625lbs. min. dry weight with restrictor plate turbo.</b>	
<b>Pro Mod All Classes</b>	<b>Up to 800cc = 625lbs. 1000-1050cc = 625lbs. Twin up to 1000cc = 550 lbs. <u>4-stroke Turbo = 725 lbs.</u></b>	
<b>Lake Racer</b>	<b>710 lbs. with driver for 1000cc – 2000cc 650 lbs. for additional class for up to 999cc</b>	
<b>Outlaw / Power Adder</b>	<b>2-stroke Nitrous = 585 lbs. sled and driver 2-stroke Turbo = 625 lbs. sled and driver 4-stroke Nitrous or Turbo = 650 lbs. sled and driver</b>	

**END OF ALL SECTION 14.****Notice to all Team owners, drivers and participants:**

**These rules apply to all ESSDRA Associates and all ESSDRA classes> All Team owners, Team members, Drivers, must be aware of these Rules and abide by them at all Races. These Rules are intended to be a guide only for conduct of the associates and allow for an orderly operation of any Associate race throughout the ESSDRA Region.**

**SAFETY is first priority at all Races and all Team members, Drivers and participants must be aware of the safety requirements at all races and abide by these guidelines accordingly.**

**The ESSDRA Mission:**

**TO ASSURE ALL SNOWMOBILE DRAG RACING IS CONDUCTED IN A SAFE, FAIR AND EQUITABLE MANNER.**