

120/4 STROKE DIVISION

The intent of these classes is to establish races in which all can compete at their level of personal and equipment ability. The class structure is organized in such a way as to enable as many snowmobiles as possible a place to successfully compete. If class rules are not followed, the class name shall not be used and the class shall be run as a specialty class with ISR's prior approval. Once rules are abridged, the sanction is no longer in effect.

All 120/4 Stroke classes are stock based classes. 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.**

GENERAL COMPETITION AND SAFETY

It is recommended that 120/4 sleds and Kitty Cats not compete against each other.

1. If a driver is off his/her sled after an accident involving two or more sleds, the race will be red flagged.
2. Driver entry into an event is open to any qualified individual. The sanctioning body has the authority to evaluate all drivers to determine their qualifications.
3. A driver must compete for a full year in Stock 120/4 Class or in Kitty Cat racing and be six years of age before competing in any of the other 120/4 classes. (Except for Champ, Sprint, and Pro Stock classes drivers must be at least 7 years of age.) In addition, in Super Stock class a driver must be at least five years of age and have one year driving experience.
4. In Pro 206 and Open 206 classes, drivers must have at least one year experience in 120/4 classes and be at least 7 years old through 14 years old. Drivers who attain the age of 15 during the scheduled season may complete the season.
5. Drivers must not reach the age of 15 prior to published scheduled race season for the affiliate.
6. Both the owner and driver are responsible to ensure that their snowmobile and driver safety equipment conform to all the rules for the class in which they have entered. The applicable rules are published in the chapter, in the GENERAL RULES AND REGULATIONS section and from time to time, in ISR bulletins. Any driver that does not meet the requirements listed will be subject to disqualification and forfeiture of any prizes or awards, plus eligibility for the next two (2) races.
7. Two (2) laps are recommended in heats and five (5) laps in the final heats. Regional variations to lap counts allowed.
8. For restarts, the Snowmobiles will be arranged in a staggered line at a 45° angle to the track starting from left and going to the right.
9. Mandatory tech inspection of first place sleds.
10. The Race Director and/or Tech Director have the authority to determine structural integrity.
11. While driver is on course no radio communication between driver and crew is allowed.

MANDATORY DRIVER SAFETY EQUIPMENT

1. Helmets, upper body protection, shin guards, elbow guards and above the ankle boots are required in all classes.
2. See GENERAL RULES AND REGULATIONS, DRIVER SAFETY EQUIPMENT for details.

ENTRY FEES, PRIZES AND AWARDS

1. Recommended entry fees in 120/4 Racing - To be determined by the racing club. 2. Recommended awards – Trophies only (no prize money.)

GENERAL SNOWMOBILE RULES

1. Traction products allowed unless stated by the class.
2. Guide clips and/or track clips may be added to the track.
3. Carbide ski runners allowed.

4. Left side of handlebar may be straightened. Structural integrity must be maintained.
5. An extension may be added to the left handlebar. Maximum 3 inches wider, maximum 4 inches down. End must be capped.
6. Any separate front bumpers that extend away from the body must be padded.
7. In all oval racing that use picks, the rear of the tunnel must be enclosed with material comparable in strength to 0.063 aluminum sheet. The tunnel enclosure is required to reduce the possibility of skis and driver's extremities entering the tunnel area. The shaded area (see illustration) must be enclosed. The enclosure shall cover the rear and both sides and extend forward. The bottom of the enclosure shall be no higher than one (1) inch above the center of the rear axle (with the driver in place.) The rear of the enclosure shall be no further than 2.5 inches from the rear of the track.
8. Slide rail lubrication systems may be allowed, depending upon local, state, and/or federal laws and must utilize non-toxic and biodegradable lubricants.
9. Use of Heli-Coils are allowed in OEM location only.
10. In Stock, Super Stock and Improved Stock, snowmobile performance will be monitored and ISR Rules Committee may adopt rules changes to insure fair competition among the various models.
11. All metal ski hoops must be padded.
12. On board slide rail lubrication systems allowed in all classes, depending upon local, state, and/or federal laws, lubrication must be non-toxic and biodegradable. Pulse line may be added to engine for slide lube pump purposes.
13. A tachometer may be installed.
14. Data acquisition and data acquisition systems allowed.
15. Functioning taillight required

GENERAL

1. The snowmobile must have original OEM for the model engine, hood, track, frame, seat, cowl, gas tank, carburation, air-box, suspension and clutch supplied by the manufacturer for the model. Named components must be OEM for the model and year. Or properly filed OEM replacement parts that supersede the original OEM parts. Factory options are not allowed.
2. Engine RPM and vehicle speed may be monitored at the discretion of the Race Director.

ENGINE

1. Unless otherwise stipulated in this section, all governor linkage must be intact, in place and functional. Any governor spring may be used. Governor gear may be removed.
2. Replacing chain tensioner with commercially available aftermarket tensioner is allowed.
3. No component of the engine (included head, valves, and cam) may be altered, changed or enlarged from the engine manufacturer's original stock specifications nor may any additional components be added to the engine.
4. Maximum cylinder bore for wear or cylinder repair cannot exceed .020 inches (.50MM)
5. Stock OEM Pistons up .020 (.50MM) only are allowed for replacement.
6. Blueprinting of engines is not allowed. No removal material whatsoever will be allowed. This is to include polishing, port matching, deburring, glass or sand blasting surfaces or material removal for engine balancing or other reasons.
7. No changes in engine dimensions can be made by gasket adjustments.
8. Spark plugs do not necessarily have to be OEM stock. Spark plugs may not be machined to seat deeper in the head, plug gaskets may not be altered, and plug indexing is not allowed.
9. No carburetor/air silencer changes allowed. Filter material may be added or removed.
10. Jetting changes are allowed.
11. Remote adjustable main jet system allowed.
12. Exhaust must be OEM as produced for the model. The OEM exhaust system must be used in its entirety. No internal or external modifications allowed. No welding allowed, even for repair. Muffler components and/or silencing material must be intact at all times.

13. To equalize performance between the manufacturer's' models the following changes are allowed.

- a. Ski-Doo racers can change valve springs t Honda P/N 14751-ZE1- 000
- b. Arctic Cat 120 racers can upgrade to the 120 SnoPro kit consisting of valve springs and cam. (spring number 129-21-90700). The kit must be used in its entirety.
- c. springs, in conjunction with ISR Bulletin 12/13-009.

2010 to current Arctic cat with Yamaha engines and Yamaha SRX 120 models can upgrade to the Yamaha/Arctic Cat performance kit consisting of camshaft, and valve springs.

14. Polaris part # 0681-545 valve guide may be used on Arctic Cat 120 models. Valve guide may be shortened to the valve guide specifications for the Suzuki engine only.

BEGINNER STOCK

1. Must be completely stock with absolutely no modifications done to engine, suspension, or chassis.
2. Governor Gear inside the engine must be in place.
3. Must have stock exhaust.
4. Lowering of suspension is allowed but not recommended.
5. Carbides can be used for steering traction.
6. Ice racing screws for the track are aloud. No ice racing picks.
7. For \$80.00 MMSRA has 1 carbide and ice racing screws for sale to set up for Beginner Stock.
8. This class is designed for the family that would like to come out and try racing with there own stock 120 sled.

STOCK CLASS

NOTICE

ENGINE REV LIMITERS will be imposed on all Stock, Super Stock and Improved Stock 120 class snowmobiles to equalize performance levels between all brands.

Tech will be done on first, second and third for the final race. If the engine revs above 6850 rpm the racer will be disqualified.

To enhance the durability of the Honda GX120 engine used in production Ski Doo Mini 120 and Mini-Rev Snowmobile, a valve "rotator" Ski Doo part number H14781-ZE1-000 may be fitted on the intake valve.

DRIVE

1. Brake must be functional and operational at all times.
2. OEM drive clutch must be used with no modifications.
3. Stock drive clutch engagement must be maintained.
4. No belt drives allowed.
5. Chain guard must be in place.
6. OEM gear ration must be maintained.
7. Sprocket ratio changes may be required by circuits to equalize performance between the various models.
8. Chain tensioner may be replaced with commercially available aftermarket tensioner.
9. Number 40/420 Drive chains allowed.

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 are not allowed in Stock classes unless furnished as OEM and properly filed.
4. Suspension travel may be limited by means of tie down only. Suspension travel must be maintained. No rigid suspensions allowed.
5. Ski-Doo Mini z can modify the rubber front suspension puck's.

SKIS & SKI RUNNERS

1. Ski must be OEM for the model and year or a commercially available aftermarket ski with a minimum overall length of 20 inches.
2. Ski suspension components must be OEM.
3. Ski loops must be added. Minimum 1-inch wide, minimum 5/16-inch-thick material must be used. Loop must have minimum diameter of 3 inches. (Nonmetallic loops only) Non- Metallic is defined as: UHMW, Nylon, Acetyl / Delrin type polymer materials only. If metallic loops are used refer to General Snowmobile rules sections for description and clarification.

TRACK SUSPENSION

1. The complete suspension must be used as furnished and filed by the manufacturer. No options allowed. Shocks must be OEM for the model. OEM for the model suspension mounting points must be used.
2. Seals may be removed from bearings in bogie wheels, rear idler wheels and/or rear idler sprockets.
3. Commercially available marginal snow wheels may be added to the slide rails. (Rear axle idler wheels must remain OEM for the model.)
4. Suspension travel may be limited by means of limit straps only. Suspension travel must be maintained. No rigid suspensions allowed.

TRACK & TRACTION

1. Any commercially available molded rubber track may be used.
2. Track must fit within frame and suspension without modification to frame, or suspension.
3. Track matching the pitch of the track may be used. Track must be used as produced by the molder. Any hyfax allowed.
4. The OEM fixed upper carrier idlers may be reduced in dimension by 3/8 (.375) from the original for the model filed spec.
5. Track studs must not extend more than 3/8 inch above the highest point of the track. Track clips (guide clips) may added.

FRAME & BODY

1. OEM hood must be maintained without modification. Hood may be painted any colour except in orange.
2. Windshield may be removed, modified or replaced. Windshield must have safety trim.
3. All sharp edges must be padded. Welding for repair will be allowed on the chassis. The repair must not alter the general design concept of the component or chassis.

IGNITION & ELECTRICAL

1. An ignition tether switch must be installed and functional.
2. Headlight and taillights must be OEM for the model.
3. OEM taillight must be operational/illuminated in its stock configuration.
4. A battery operated taillight may be used instead of an OEM taillight.
5. Ignition and lighting systems must be OEM for the model. No modifications allowed.

EXHAUST

1. Modified exhaust systems are allowed.

ENGINE

1. ISR Legal valve springs are allowed.

SUPER STOCK 120

GENERAL

1. Snowmobile must conform to Stock 120 class rules unless stated otherwise in this section.
2. Slide rail lubrication systems allowed.

DRIVE

Drive gear is a 10 tooth using a 40 or 420 chain.

Driven sprocket on the Arctic Cat and Yamaha is a 34 tooth sprocket using a 40 or 420 chain.

Driven sprocket on the Polaris and Ski Doo is a 32 tooth sprocket using a 40 or 420 chain.

EXHAUST

1. Modified exhaust systems are allowed.

IMPROVED STOCK 120

GENERAL

1. Snowmobile must conform to Stock 120 class rules unless stated otherwise in this section
2. Slide rail lubrication systems allowed.

DRIVE

1. Gear ratio may be changed.
2. #35 chain may be used
3. Clutch may be replaced with aftermarket clutch of the same basic centrifugal design. (No variable ration systems allowed.) Brake band may be changed to fit clutch.

EXHAUST

1. Modified exhaust systems are allowed.

GIRLS 120

1. Stock 120 and Super Stock 120 can race in this class
2. All the rules to Stock 120 and Super Stock 120.
3. No boys to race in this class.

PRO 206

AGE LIMITS

Competitors must be 7 years of age with one year of driving experience. Drivers reaching 14 years of age during the season may finish the season in that class.

GENERAL

1. The 206 Pro class combines the rules for 120 racing with a 206 spec engine rule. All chassis rules are the same as 120 STOCK CLASS.
2. Snowmobile must be an ISR designated 120/4-stroke model that complies with the GENERAL RULES AND REGULATIONS section.
3. Unless otherwise specified, 120/4 Stroke Stock rules apply
4. Externally adjustable main jets allowed.
5. Final drive track drivers can be replaced. OEM number of teeth and diameter must be maintained.

ENGINE

1. Refer to the LO 206 Engine Section
2. Must use LO 206 Exhaust. No modifications.

DRIVE

1. Improved Stock 120 rules apply. No belt drives.

SKI AND SUSPENSION

1. Stock 120 rules apply.

OPEN 206

AGE LIMITS

Competitors must be 7 years of age with one year of driving experience. Drivers reaching 14 years of age during the season may finish the season in that class.

GENERAL

1. The OPEN 206 class combines the rules for Champ Chassis and Drive with a spec engine rule. All chassis rules are the same as Champ 120.

ENGINE

1. Refer to the LO 206 Engine Section
2. Exhaust may be modified.

DRIVE

1. Clutching in open. CVT type transmission allowed. Drive components must be commercially available.
2. A metal clutch/chain cover must be in place at all times during operation. It must cover clutches, gears, belts, chains, starter cups, and any other rotating components.
3. Brakes must be properly operable at all times.
4. Track drive sprockets may be modified or changed.
5. Jackshaft allowed.

SKI SUSPENSION AND STEERING

1. Ski suspension and steering may be changed or modified. Materials and components must meet or exceed OEM strength and structural integrity. Must maintain suspension travel with driver seated. No rigid suspensions.
2. The structural integrity of the steering and suspension systems must be maintained.
3. Maximum ski stance is 34 inches (measured between ski runner cutting edges)

SKI AND SKI RUNNER

1. Skis may be changed to commercially available aftermarket skis.
 - a. Minimum length for Oval is 12 inches.
2. Ski loop must conform to GENERAL RULES AND REGULATIONS.
3. Ski runners must meet competition and safety requirements for Ice Oval Racing.

TRACK SUSPENSION

1. Track suspension may be altered, relocated or replaced. Structural integrity must be maintained.
2. Suspension must maintain a minimum of 2 inches of useable, vertical travel with the driver seated.
3. Track and track suspension must fit and be mounted within the confines of the tunnel.
4. Slide rail lubrication systems may be allowed, depending upon local, state, and/or federal laws and must utilize non-toxic and biodegradable lubricants.

TRACK AND TRACTION

1. Track must conform to Stock class rules.
2. Track may not be reversed.
3. Traction control devices must conform to rules in Stock class.

FRAME AND BODY

1. Snowmobile length must not exceed OEM for the model length by more than 2 inches (ski loop to rear of tunnel).
2. Overall body width must be within 2 inches of OEM for the model body width.
3. Bumpers must be padded (no sharp edges exposed).

4. Snow flap must be touching ice with driver aboard.
5. Belly pan and hood may be replaced. Belly pan and hood are required components.
6. Bulkhead may be modified or replaced: it must remain within 1 inch of the length and 1 inch of the width of the OEM bulkhead.
7. Tunnel may be modified or replaced using aluminum material only. Material must be a minimum of .062" thick.
8. Must have tail light.