

SNOCROSS JUNIOR CLASSES

TRANSITION 8-12

SPECIAL NOTICE

ALL SLEDS UTILIZED IN THIS CLASS MUST BE NON-CURRENT, OR A MINIMUM OF (1) ONE MODEL YEAR OLD.

Arctic Cat snowmobiles may be the current year offering and do not need to conform to the one-year rule for the 2021 season.

The rules committee may at any time during the racing season, review the restrictions of the designated models if a brand is dominating the class.

The following parameters must be adhered to:

1. This class is to be run as the only class on the racetrack. Designated sleds may be run together.
2. The class is for drivers that are 8 years old and not yet 13 years old. (It is not open to younger or older drivers.)
3. The snowmobile models eligible must be designated by ISR and the Rules Committee.

Stock legal production 600 cc Super Stock race snowmobiles will be the format for Transition classes. These sleds will be developed with specific manufacturer-based modifications and restrictions. The snowmobiles will be raced as produced with only the following changes.

1. This class will follow all the rules for the stock-based snow cross class.
2. Electronic control unit ECU will be reprogrammed with rev limit restrictions **(rev limited to maximum 6500 RPM)**
(Exception Polaris 2020 and older sleds can be 6600 RPM)
3. Restricted throttle kit not to allow more than 50% throttle opening must be installed designated throttle kit part numbers will be supplied by brand.
4. The exhaust valves will be blocked in the shut position.
5. Primary clutch engagement will be **4000 Max RPM. (Exception Polaris 2020 and older sleds can be 4100 RPM)** (measured with secondary Sheave movement)
6. Rider, running board blocks can be used.
7. **Programmable Tethers:** Also effective 1/3/2020 no competitor or mechanics in the transition class are allowed to possess a tether that is not programmed for the transition class when they are between their trailer-staging-racetrack-podium during any transition events or practice. If you are found with a non transition programmed tether it is grounds for a DQ.

SLED CRITERIA

1. No studs are allowed in this class.
2. 1 3/4" tracks are legal for all sleds.
3. The sleds listed below are also approved to continue to run in the class following the stock – based Sno cross class rules and the limitations listed below.
4. Pre-Heat "hole shot" function must be disabled
 - 2010 -2014 Arctic Cat 500 Sno Pro with approved performance rev limiting kit. Primary clutch engagement will be 4500 Max RPM. (measured with secondary Sheave movement)
 - 2014-2018 4000 Series with approved performance rev limiting kit. Primary clutch engagement will be 4500 Max RPM. (measured with secondary Sheave movement)
 - *Ski-Doo MXZ 600 – Limited Division*
 - *Ski-Doo MXZ TNT – Limited Division*
 - 2010-2014 MXZ 600 (Non-HO) Sport and 2010-2012 MXZ (Non-HO) TNT with approved performance limiting kit

JUNIOR NOVICE 10-13 AND GIRLS NOVICE 9-12

SPECIAL NOTICE

SLEDS UTILIZED IN THIS CLASS MUST BE NON-CURRENT, OR A MINIMUM OF (1) ONE MODEL YEAR OLD.

Arctic Cat snowmobiles may be the current year offering and do not need to conform to the one-year rule for the 2021 season.

The rules committee may at any time during the racing season, review the restrictions of the designated models if a brand is dominating the class. Stock legal production 600 cc Super Stock race snowmobiles will be the format for Junior Novice classes. These sleds will be developed with specific manufacturer-based modifications and restrictions. The snowmobiles will be raced as produced with only the following changes.

1. This class will follow all the rules for the stock-based snow cross class.
2. Electronic control unit ECU will be reprogrammed with rev limit restrictions (rev limited to maximum 6500 RPM) **(Exception Polaris 2020 and older sleds can be 6600)**

3. Restricted throttle kit not to allow more than 50% throttle opening must be installed designated throttle kit part numbers will be supplied by brand.
4. The exhaust valves will be blocked in the shut position.
5. Primary clutch engagement will be 4000 Max RPM. **(Exception Polaris 2020 and older sleds can be 4100 RPM)** (measured with secondary Sheave movement)
6. Rider, running board blocks can be used.
7. Studs are allowed in this class.
8. 1 ¾" tracks are legal for all sleds.
9. The sleds listed below are also approved to continue to run in the class following the stock – based Sno cross class rules and the limitations listed below.
10. Pre-Heat "hole shot" function must be disabled
 - 2010 -2014 Arctic Cat 500 Sno Pro with 50% throttle opening installed Primary clutch engagement will be 5000 Max RPM. (measured with secondary sheave movement)
 - 2014-2019 4000 Series with 50% throttle opening installed. Primary clutch engagement will be 5000 Max RPM. (measured with secondary Sheave movement)
 - Ski-Doo MXZ 600 -Limited Division
 - Ski-Doo MXZ TNT- Limited Division
 - 2010-2014 MXZ 600 (Non-HO) Sport and 2010-2012 MXZ (Non-HO) TNT with approved performance limiting kit

Performance Kits for 2009 – 2017 ARCTIC CAT ZR 6000 R SX

- [Junior 14-15 & 16-17:](#)
- **Part #** **Description**
- 1705-359 50% Throttle Block Kit including Calibration tool
- [Junior Novice 10-13 Rules](#)
- **Part #** **Description**
- 1705-359 50% Throttle Block Kit including Calibration tool
- **0708-664** Power valve Stop kit
- CDI box must be re-programmed to limit Max Engine RPM to 6500 RPM's along with disabling the "HOT START" Function.
- Please ship CDI box to Arctic Cat Race Dept. 17442 US HWY 59 NE, Thief River Falls, MN 56701 Please include prepaid return Postage along with proper shipping address.
- **CLASS RULES:** 50% throttle block, 4000 Max clutch engagement RPM (no clutch calibration parts included)
- "HOT START" function must be disabled; Power valves must be positively locked in the closed position with a MAX of 6500 Engine RPM's.
- [Transition 8-12 Rules](#)
- **Part #** **Description**
- 1705-359 50% Throttle Block Kit including Calibration tool.
- **0708-664** Power Valve Stop Kit
- CDI box must be re-programmed to limit Max Engine RPM to **6500** RPM's along with disabling the "HOT START" Function.
- Please ship CDI box to Arctic Cat Race Dept. 17442 US HWY 59 NE, Thief River Falls, MN 56701 Please include prepaid return Postage along with proper shipping address.
- **CLASS RULES:** 50% throttle block, 4000 Max clutch engagement RPM (no clutch calibration parts included)
- "HOT START" function must be disabled; Power valves must be positively locked in the closed position with a MAX of 6500 Engine RPM's.

Performance Kits For 2010-2014 500 ARCTIC CAT Sno Pro & 2015-2017 ZR 4000 RR

- [Transition 8-12,](#)
- 50% throttle and 6500 MAX Engine REV Limit
- **Part #:** **Description**
- 0709-094 Includes Calibration Tool

ECU must be Re-programmed for a 6500 MAX Engine RPM. Please ship CDI box to Arctic Cat Race Dept. 17442 US HWY 59 NE, Thief River Falls, MN 56701 Please include prepaid return Postage along with proper shipping address

- [Junior Novice 10-13](#),
- 50% Throttle Kit
- **Part #:** **Description**
- 0709-094 Includes Calibration Tool
- [To Download Arctic Cats Part # list Click Here](#)

Performance Kits for 2008 – 2019 SKI-DOO MXZx 600 R

Junior 14-15 & 16-17:

- **Order Throttle Block and Calibration Tool**
- **Part #** **Description**
- 486010017 Calibration Tool, 2013 and older MXZx 600 RS
- 486014022 Calibration Tool, 2014 and newer MXZx 600 RS
- 486900170 50% Throttle Block
- [Junior Novice 10-13](#)
- **Part #** **Description**
- 486016023 Junior Novice 10-13, 2013 and older MXZx 600 RS
- 486016024
- **Junior Novice 10-13**, 2014 – 2015 MXZx 600 RS 486016025
- **Junior Novice 10-13**, 2017 MXZx 600 RS Kit Contains: 6500 max RPM ECM, preheat “hole shot” function disabled
- 50% Throttle block
- RAVE block cap
- Calibration tool
- Clutch calibration parts
- Misc. Hardware & Instructions
- 4000 Max clutch engagement RPM
- **Transition 8-12**
- **Part #** **Description**
- 486016020 **Transition 8-12**, 2013 and older MXZx 600 RS
- 486016021 **Transition 8-12**, 2014 - 2015 MXZx 600 RS
- 486016022 **Transition 8-12**, 2017 MXZx 600 RS
- Kit Contains:
- 6500 max RPM ECM, preheat “hole shot” function disabled
- 50% Throttle block
- RAVE block cap
- Calibration tool
- Clutch calibration parts
- Misc. Hardware & Instructions
- 4000 Max clutch engagement RPM

Performance kits for 2010 – 2017 MXZ 600 Sport & TNT (Non-HO)

Kit Details Transition 8-12

- Part #: 486014055
- Kit Contains:
- 6200 max RPM ECM
- 50% Throttle block
- RAVE block cap
- Calibration tool
- Misc. Hardware & Instructions
- **Kit Details Junior Novice 10-13**
- Part #: 486014058

- Kit Contains:
- 50% Throttle block
- RAVE block cap
- Calibration tool
- Misc. Hardware & Instructions
- [To Download Ski-Doo Part # list Click Here](#)

2008-2016 POLARIS IQR 600 2021 600R

- **Junior 14-15 & 16-17**
- **Part #** **Description** **Kit consists of:**
- **0818029** 50% throttle block kit 50% throttle asm & calibration tool
- **0818017** 50% throttle block kit 50% throttle asm & calibration tool

- **Junior Novice 10-13**
- **Part #** **Description** **Kit consists of:**
- **0818017** Jr Novice restriction kit 50% throttle asm & calibration tool

- Exhaust valve block cap
- Clutch weights/spring
- (4100 max engagement)
- CDI box reflash
- (6600 rpm limiter/no Dragon)
- Clutch weights/spring

- **Transition 8-12**
- **Part #** **Description** **Kit consists of:**
- **0818017** Transition restriction kit 50% throttle asm & calibration tool
- Exhaust valve block cap.
- Clutch weights/spring
- (4100 max engagement)
- CDI box reflash
- (6600 rpm limiter/no Dragon)
- [To Download Polaris Part # list Click Here](#)

JUNIOR 14-15

1. This class will follow all the rules for the stock-based snow cross class.
2. Restricted throttle kit not to allow more than 50% throttle opening must be installed designated throttle kit part numbers will be supplied by brand.

JUNIOR ADVANCEMENT

WHEN AN ISR COMPETITOR REACHES THE AGE OF 14 YEARS AND QUALIFIES FOR JUNIOR COMPETITION, HE/SHE MAY BE ADVANCED UP TO THE NEXT LEVEL, BUT ONLY AFTER FULLFILLING ALL REQUIREMENTS BELOW:

AFFILIATE RESPONSIBILITIES

1. Before an affiliated sanctioning body may advance Junior drivers, it must have a bona fide junior program.
2. The affiliate's board/driver classification committee is responsible for verifying a Junior's driving ability.
3. Junior competitors shall be required to perform practice laps/runs from time to time to allow race officials to observe their progress in learning the handling skills required to advance.
4. Junior advancement is at the discretion of the driver's classification committee and can be reviewed at any time. The committee has the authority to advance, demote or deny advancement to any driver. The decisions of the classification committee are final.
5. The affiliate board/driver classification committee will not advance drivers until all DRIVER/PARENTAL RESPONSIBILITIES have been fulfilled and all completed and signed documents are on file.

DRIVER / PARENTAL RESPONSIBILITIES

1. A Junior competitor must compete in at least one entire event in a class before becoming eligible for advancement.
2. Before a Junior may advance to a senior class, he/she must meet the Junior advancement requirements established by the affiliate's board/driver advancement committee.
3. He/she must petition the affiliate's board, in writing, requesting that he/she be allowed to advance.
4. The request for advancement must be accompanied by all new consent and release forms (as specified above).
5. The request must be approved in writing by the affiliate board to advance.
6. Before advancing to a Pro Division class, the Junior must be at least 16 years of age.
7. Parents may request for their child to stay in a lower class if they feel the driver needs more experience to develop track and driving skills.

FOUR STROKE 120 CLASSES

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.

ELIGIBLE DRIVERS

Stock 120: These are classes for 4-12-year-old drivers.

Champ 120: These are classes for drivers aged 6-12. All other technical rules apply.

At times, regional or national rules may apply, but in any case, competitors will not be younger than 4 years of age.

ELIGIBLE SNOWMOBILES

Arctic Cat Z 120, Z 120 Sno Pro

Bombardier Mini Z

Polaris XCR 120

Yamaha SRX 120

SNOW CROSS DIVISIONS

Speed Limited Snow Cross

Snow Cross Stock

Improved

Champ 120

REGIONAL SPECIALTY CLASSES

Open 206

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

Specialty Classes

1. Can be any 120/4 racing event that does not fall under any of the specific circuits or classes but meets established ISR safety standards and qualifies for ISR insurance coverage.
2. All specialty classes must be approved by ISR and the Race Rules Committee.

GENERAL COMPETITION AND SAFETY

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.
4. In Champ 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, and above the ankle boots are required in all classes.
2. Mouth guards are mandatory in Sno-Cross and any other race over uneven terrain. Mouth guards must remain in place for the duration of the race.
3. See GENERAL RULES AND REGULATIONS, DRIVER SAFETY EQUIPMENT for details.

ENTRY FEES, PRIZES AND AWARDS

1. Recommended entry fees in 120/4 Racing - \$15.00 in all classes.
2. Recommended awards – Trophies only (no prize money).

GENERAL SNOWMOBILE RULES

1. (All classes in Sno-cross) No traction products allowed.
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 (see illustration.) 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. Slide rail lubrication systems may be allowed, depending upon local, state, and/or federal laws and must utilize non-toxic and biodegradable lubricants.
8. Use of Heli-Coils are allowed in OEM location only.
9. In Stock and Improved Stock, snowmobile performance will be monitored and IKCR Rules Committee may adopt rules changes to insure fair competition among the various models.
10. All metal ski hoops must be padded.
11. 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.
12. A tachometer may be installed.
13. Data acquisition and data acquisition systems allowed.
14. Taillight required

STOCK CLASS RULES

GENERAL

1. The snowmobile must have original OEM for the model engine, hood, track, frame, seat, cowl, gas tank, carburetion, 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. Sparkplugs 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 Ski Doo racers can use Polaris valve springs meeting ISR Valve Spring Criteria**
 - 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. 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, in conjunction with ISR Bulletin 12/13-009.

Valve Spring Criteria

A.		B.		Seated hgt	Open hgt	Seated press.	Open press.
Wire Dia.		Ski Doo					
Ski Doo	.078+-.002	Arctic Cat	0.875	0.613	20 lb.	25 lb.	
A C 2009<	.090+-.002	AC 2009<	0.955	0.735	26 lb.	35 lb.	
AC/2010	.078+-.002	AC 2010	0.574	0.574	20 lb.	24 lb.	
Polaris	.090+-.002	Polaris	0.678	0.678	15 lb.	21 lb.	
			0.850	0.625	27 lb.	38 lb.	

Accuracy of this test will be based on the tester used and the measuring tool used for checking heights.

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.

SPECIAL NOTICE

ENGINE REV LIMITERS will be imposed on all Stock and IMPROVED STOCK 120 class snowmobiles for the 2019-2020 season to equalize performance levels between all brands.

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. Clutch may be replaced with aftermarket clutch of the same basic centrifugal design. Disc style drive clutches are not legal because they are not the same centrifugal design. (No variable ratio systems allowed.)
3. Stock drive clutch engagement must be maintained. Brake band may be changed to fit clutch.
4. No belt drives allowed.
5. Chain guard must be in place.
6. Sprocket ratio changes may be required by circuits in order to equalize performance between the various models.
7. 120 Sno X class Polaris gearing 420 ratio which is Stock for the sled. All Cat, Yam and Ski doo allowed to run 410 gear ratios. This can be achieved with #35 chain or #40/420 chain, tooth count on sprockets must equal ratio required.
8. Chain tensioner may be replaced with commercially available aftermarket tensioner.
9. Number 40/420 Drive chains allowed.

ISR Stock Class Gearing Info for #35 chain and Sprockets

4.10 ratio for Arctic Cat, Yamaha, and Skidoo 120 and 4.20 ratio on Polaris 120 cannot be achieved with #35 chain sprocket combinations.

Listed are the only legal #35 chain sprockets combinations. (All Brands in competition)

4.10 ratio will be 12- 50, 13-54, 14-58

4.20 ratio will be 12-51, 13-55

Or go to OEM chain

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 pucks.
6. Handlebars must be intact at the start of each race day. Any commercially available handlebar allowed. May be altered to fit the driver. Open ends must be capped. Handlebars must be padded. Column or post must remain in its OEM position. Grips may be modified or replaced.

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, Acetal/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.
5. Sno-cross and other rough terrain races – Stock 120/4 stroke rules apply with the exception that commercially available OEM or aftermarket shocks and springs allowed.
6. If the unit did not come with a rear shock you are allowed a shock upgrade kit for the rear suspension

TRACK & TRACTION

1. Any commercially available molded rubber track may be used. Track must fit within frame and suspension without modification to frame, or suspension. Track drivers matching the pitch of the track may be used. Track must be used as produced by the molder. Any hyfax allowed.
2. The OEM fixed upper carrier idlers may be reduced in dimension by 3/8 (.375) from the original for the model filed spec.
3. Track clips (guide clips) may added.

LEMANS RACING ONLY:

1. Specialized traction.
 - a. Maximum of two points per track segment.
 - b. No studs on outside belts.
 - c. Studs must be unsharpened insert carbine only.
 - d. Refer to Snow Cross traction rules for placement and type of stud.

IGNITION & ELECTRICAL

1. An ignition tether switch must be installed and functional.
2. Headlight must be OEM for the model.
3. Taillight must always be operational/illuminated .
4. Taillight used must be as bright or brighter than OEM. This visual check shall be taken at engine idle.
5. Ignition and generating systems must be OEM for the model. No modifications allowed.

FRAME & BODY

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

IMPROVED STOCK RULES

GENERAL

1. Snowmobile must conform to Stock class rules unless stated otherwise in this section.

DRIVE

1. Gear ratio may be changed.
2. **#35 chain may be used Listed. (All Brands in competition)**
3. Clutch may be replaced with aftermarket clutch of the same basic centrifugal design. Disc style drive clutches are not legal because they are not the same centrifugal design.
4. (No variable ratio systems allowed.) Brake band may be changed to fit clutch.

CHAMP CLASS

GENERAL

1. Modifications allowed in other 120/4-stroke classes are allowed in Champ

ENGINE

1. Any OEM 120 engine allowed. Modification and/or replacement of parts is limited to items listed in this section.
2. Engine components allowed for modification or change from OEM.
 - a. Cam shaft – maximum .290 Inch Valve lift
 - b. Valves and seats, and guides.
 - Maximum intake valve diameter 25.2mm
 - Maximum exhaust valve diameter 24.2mm
 - Minim valve stem diameter 5.5mm (+- .15mm)
 - c. Valve springs and retainers
 - d. Tappets and push rods
 - e. Governors may be removed.
 - f. Connecting rod.
 - g. Carburetor insulator block may be modified but must maintain stock thickness dimension.
 - h. Rocker Arm Pivot Studs and pivots.

Engine overbore may not exceed .020" (0.50mm) of standard bore size for the model.

3. Engine stroke must be stock as manufacturers filed specifications.
4. Engine components allowed to be modified but must begin as OEM for engine model.
 - a. Bearings
 - b. Crankshaft
 - c. Piston and rings
 - d. Gaskets
 - e. Cylinder head and intake manifold
 - f. Cylinder
 - g. Crankcase
 - h. Rocker arms
 - i. Intake Manifold
 - j. Fan Shroud
 - k. Carburetor insulator block may be modified but must maintain stock thickness dimension.
 - l. Rocker Arm Stud
5. Carburetor may be bored and modified, but must begin as OEM supplied for the engine's model. A velocity Stack may be added to the intake side of carburetor.
6. A snowmobile type diaphragm fuel pump may be added. A pulse fitting may be added to the intake tract to be used to operate the diaphragm fuel pump.
7. The exhaust system may be modified or replaced. The exhaust system must be functionally silenced. The following minimum standards for straight-thru silencers are required:

- a. Inner pipe must have at least 15 holes per square inch. Minimum hole size 1/6 in. (Minimum 3/8 in. sound absorbing material around the entire circumference of inner pipe).
 - b. Inner pipe (perforated core) must contact sound absorbing material (fiber or steel wool packing).
 - c. Outer pipe must be at least ¼ inch larger than inner pipe.
 - d. Minimum silencer length 3 inches.
8. Outlet pipe must point downward and cannot protrude beyond machine width.
 9. Removal of recoil mechanism and starter cup to use 12-volt remote electric starter is allowed. The recoil cover must be maintained. A 1.5-inch hole may be drilled in recoil cover to insert starter drive.
 10. Valve cover may be modified to stabilize rocker arm stud. Stud girdles may be added. Breather fitting may also be added.

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 Sno-cross is 20 inches.
2. Ski loop must conform to GENERAL RULES AND REGULATIONS.
3. Ski runners must meet competition and safety requirements for the type of racing (i.e. Oval or Sno-cross).

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
8. only. Material must be a minimum of .062" thick.

IGNITION & ELECTRICAL

1. Ignition coil must be OEM for model. Flywheel must be replaced with an aftermarket billet aluminum flywheel designed for the application. Lighting coil may be removed.
2. Taillight must be illuminated at all times while on the racing surface, whether the engine is running or not.

SEMI PRO 206**GENERAL**

1. The 206 Local Option Semi Pro class combines the rules for Stock Chassis and Drive with a 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 jet allowed.
5. Final drive track drivers can be replaced. OEM number of teeth must be maintained.
6. Sno-cross and other rough terrain races – Stock 120/4 stroke rules apply with the exception that commercially available running boards may be ran.

AGE LIMITS

1. Competitors must be 6 years of age..

ENGINE

[Refer to LO 206 ENGINE SECTION](#)

DRIVE

1. Stock 120/4 stroke rules apply.
2. 10/32 gear sets will be allowed
3. Final drive shaft may be changed but must be same material type (steel to steel) and bearing dimension as OEM.

SKI SUSPENSION AND STEERING

1. Sno-cross and other rough terrain races – Stock 120/4 stroke rules apply with the exception that commercially available OEM or aftermarket shocks and springs allowed.
2. If the unit did not come with a rear shock you are allowed a shock upgrade kit for the rear suspension

PRO 206**GENERAL**

1. The 206 Local Option Pro class combines the rules for 120 racing with a 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.
6. Sno-cross and other rough terrain races – Stock 120/4 stroke rules apply with the exception that commercially available running boards may be ran.

AGE LIMITS

1. Competitors must be 7 years of age. Drivers reaching 14 years of age during the season may finish the season in that class.

ENGINE

[Refer to LO 206 ENGINE SECTION](#)

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. Disc style drive clutches are not legal because they are not the same centrifugal design.
4. (No variable ratio systems allowed.) Brake band may be changed to fit clutch.

SKI SUSPENSION AND STEERING

1. Sno-cross and other rough terrain races – Stock 120/4 stroke rules apply with the exception that commercially available OEM or aftermarket shocks and springs allowed.
2. If the unit did not come with a rear shock you are allowed a shock upgrade kit for the rear suspension.

SPEED LIMITED CLASSES**GENERAL**

1. This is an alternative means of conducting 120/4 stroke races that required that all competitor govern the speed of their snowmobiles according to the class rules.
2. A test course should be provided which will allow competitors to check the maximum speed of their sled before the event. (It is recommended that the speed be displayed on a large visual display.)
3. A radar gun or other device will be used at the fastest portion of the track during the races. (It is recommended that the speed be displayed on a large visual display.)
4. Recommended classes:
Class One - 15 mph, Drivers aged 4 through 5. Class Two - 18 mph, Drivers aged 6 through 12.
5. There must be no class speed more than 18 mph.
6. To ensure safe competition, the Race Director must evaluate the course and the class speed limits and make changes as necessary.
7. Violators of the class speed limit will be reclassified to last place finishing position.
8. Driver safety equipment, sled equipment and course requirements from the 120/4 STROKE RACING section apply.
9. A snowmobile and driver safety inspection will be conducted before racing. Post-race technical inspection will be conducted in the event of a protest only.

SNOWMOBILE REQUIREMENTS

1. Snowmobiles must conform to the rules of the Improved Stock Class for 120/4 Stroke Racing

COURSE REQUIREMENTS**SNO-CROSS**

1. Refer to Sno-Cross track layout in the Appendix.
2. Course width and length may be adjusted to suit the size and performance of the 120/4 sleds.
3. Course safety must not be compromised.
4. The track must have a 25-foot (minimum) spectator safety buffer zone and barrier.

200 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 200 DIVISION 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.

ELIGIBLE DRIVERS SNOWCROSS

See Matrix for specific ages for competition.

ELIGIBLE SNOWMOBILES

Arctic Cat ZR 200

Yamaha Sno-Scout

200 CLASSES SNOWCROSS DIVISIONS

Stock

Improved Stock

AGE LIMITS

STOCK 6-12

IMPROVED STOCK 7-16

STOCK CLASS

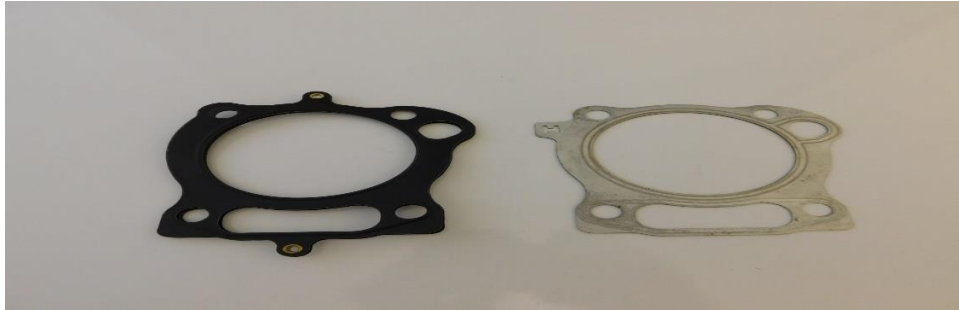
1. The snowmobile must have original OEM for the model engine, hood, track, frame, seat, cowl, gas tank, carburetion, air-box, suspension and clutch supplied by the manufacturer for the model. Named components must be OEM for the model and year. Or properly filed OEM replacement parts that supersede 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. Factory 6000 rpm rev limiter must be intact and functional.
2. 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
3. Maximum cylinder bore for wear or cylinder repair cannot exceed .020 inches (.50MM)
4. Stock OEM Pistons up .020 (.50MM) Only are allowed for replacement.
5. 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.
6. No changes in engine dimensions can be made by gasket adjustments.
7. Spark plugs do not necessarily have to be OEM stock. Sparkplugs may not be machined to seat deeper in the head, plug gaskets may not be altered, and plug indexing is not allowed
8. No carburetor/air silencer changes allowed. Filter material may be added or removed.
9. Jetting changes are allowed.
10. Remote adjustable main jet system allowed.

11. 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 always. Wrapping of the pipe is not allowed.

CLARIFICATION: THE FOLLOWING PHOTO SHOWS THE LEGAL HEADGASKETS AVAILABLE. DIMENSIONS AND THICKNESS ARE THE SAME, HOWEVER CONSTRUCTION METHODS VARY.



DRIVE

1. Brake must be functional and operational at all times.
2. **Stock drive clutch engagement must be maintained. OEM drive clutch rollers and spring must be stock, with no modifications. Driven clutch spring and helix must be OEM. Stock drive clutch engagement must be maintained. OEM drive clutch rollers must be stock, with no modifications. Driven clutch spring and rollers must be OEM. Aftermarket primary rollers of exact same size and weight may be used. (23X18) 18 gm weight. Only exception would be the OEM hi Alt kit 14 GM wt. No Shimming of primary cover or spring allowed.**
3. All guards and shields must be in place.
4. Final drive system must remain as produced. OEM 2.95:1 gear ratio must be maintained, no gear ratio changes 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 not be altered.
5. Handlebars must be intact at the start of each race day. Any commercially available handlebar allowed. May be altered to fit the driver. Open ends must be capped. Handlebars must be padded. Column or post must remain in its OEM position. Grips may be modified or replaced.
6. Handlebar (itself) may be removed and replaced. Method of affixing handlebar to the steering column must be approved by the technical inspector during safety inspection. ISR has no responsibility or gives no advisement in the method or materials selected to replace the handlebars in this class. Balance of steering column must remain in place and mounting locations must remain unchanged.

SKIS & SKI RUNNERS

1. The only skis that may be used will be Arctic Part # and Yamaha part # 8ML-F3730-XX, Ski, and handle (Ski loop) Ski only part # 8ML-F3710-XX
2. Ski suspension components must be OEM.
3. All Ski loops must be at least 1 inch wide and 5/8-inch-thick or one-inch diameter round material. Foam may be added to achieve the 1-inch dimension. Refer to General Snowmobile rules sections for description and clarification.
4. Carbide wear bars may be added.

TRACK SUSPENSION

1. The complete suspension must be used as furnished and filed by the manufacturer. Shocks must be OEM for the model. OEM for the model suspension mounting points must be used.
2. OEM available marginal snow wheels may be added to the slide rails. (Rear axle idler wheels must remain OEM for the model.)
3. Suspension travel may not be altered.

TRACK & TRACTION

1. OEM track must be used as produced.
2. No carbon fiber backers or titanium traction products allowed.
3. Tunnel protectors may be added.
4. In oval applications slide lubers may be added.
5. Track clips may be added.

FRAME AND BODY

1. Running board reinforcement kit or complete running board kit is legal. Kit must be commercially available. No one off repairs allowed.

FOR LEMANS RACING ONLY**1. Specialized traction.****a. Maximum of two points per track segment.**

- e. **No studs on outside belts.**
- f. **Studs must be unsharpened steel or insert carbide only.**
- g. **Screw traction components may be used in lieu studs.**
- h. **Refer to Snow Cross traction rules for placement and type of stud.**

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. Ignition and lighting systems must be OEM for the model. No modifications allowed.

FRAME & BODY

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

200 IMPROVED STOCK**GENERAL**

1. Snowmobile must conform to Stock class rules unless stated otherwise in this section.

ENGINE

1. OEM 6000 rpm rev limiter must be used. Rec Motors performance kit #
2. Performance Kit is the same for both Arctic and Yamaha models. All components supplied must be used. This includes the front suspension components supplied, must be used in the entirety of the kit.
- 3.

SKIS AND 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.

SKI SUSPENSION & STEERING

1. OEM Front suspension shocks may be replaced with commercially available aftermarket.
2. Front suspension must remain in its stock location. (Front suspension widening achieved when using the approved performance kit is allowed.)
3. Commercially available ski widening devices will be allowed. (no one off setups allowed)
4. Handlebars must be intact at the start of each race day. Any commercially available handlebar allowed. May be altered to fit the driver. Open ends must be capped. Handlebars must be padded. Column or post must remain in its OEM position. Grips may be modified or replaced.
5. Handlebar (itself) may be removed and replaced. Method of affixing handlebar to the steering column must be approved by the technical inspector during safety inspection. ISR has no responsibility or gives no advisement in the method or materials selected to replace the handlebars in this class. Balance of steering column must remain in place and mounting locations must remain unchanged.

TRACK SUSPENSION

1. The complete suspension must be used as furnished and filed by the manufacturer. OEM suspension shocks may be replaced with commercially available aftermarket. Spring spacers may be used to 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.)

DRIVE

1. Gear ratio may be changed, by using any commercially available chain sprocket kit or commercially available OEM belt style pulleys.
2. OEM primary and secondary clutch and belt must be used. Primary rollers and spring along with secondary spring maybe changed using commercially available parts only. Secondary helix must remain stock from OEM with no modifications.
3. Chain case/ gear/ pulley case must use a protective cover to keep drivers' extremities from contacting drive system.