

# **JUNIOR**

## **SNOW SHACK FORMULA 340 RULES**

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 RULES**

1. Class is for junior drivers ages 10-15 years of age. If child turns 16 during the racing season, he/she may remain in class till end of season.
2. The snowmobile must originate from 1986-2000 Polaris Indy. Engine must be 1986-2000 Polaris 340 fan cooled with 30mm carburetors.
3. The brand of hood, engine and logo need not match.
4. Removal of any material from total snowmobile by means of heat, acid, drilling, grinding, sand blasting, peening, substitution, or total elimination will not be allowed unless otherwise specified here.
5. Minimum weight is 350 pounds.
6. Maximum overall width of sled is 45 inches.

### **ENGINE**

1. No component of the engine may be altered, changed or enlarged from the engine manufacturer's original stock specifications, nor may any additional components be added to the engine.
2. Blueprinting is not allowed. No removal of material whatsoever allowed. This is to include polishing, port matching, deburring, glass or sand blasting surfaces or material removal for the purposes of engine balancing or other reasons.
3. No changes in engine dimensions can be made by gasket adjustments.
4. Maximum cylinder overbore for wear or cylinder repair cannot exceed .020 inch.
5. Any brand pistons, rings and engine gaskets are allowed for replacement.
6. Carburetors must be 30mm Mikunis. Replacing OEM carburetor slide valve and replacement jet components without modification allowed. No modification to carburetor body allowed.
7. Air box and oil injection system may be removed.
8. Cooling system must remain completely stock and in the OEM location.
9. Spark plugs, spark plug wires and connectors do not have to be OEM.
10. The exhaust system must be OEM for the model and be mounted in the OEM location with no modifications.
11. No changes or repairs allowed to "Y" pipe.
12. Engine must remain in stock location and must use stock engine plate and mounts. Torque limiters allowed.
13. An additional vacuum port may be drilled into the crankcase to utilize an additional pump for slide lube delivery.

### **DRIVE**

1. Drive clutch must be Polaris.
2. Any commercially available driven clutch and internal components allowed.
3. Clutches and components may be modified.

4. Chain case and track shaft must remain stock and in stock location; no modifications or lightening allowed. Chain and sprocket ratio may be changed. Belt drive system is not allowed.
5. Jackshaft with a key may be replaced with a jackshaft of the same model and material with splines.
6. Any OEM appearing, solid, and of like material, (steel) replacement jackshaft may be used.
7. Any 8" (inch) OEM steel brake disc and hub may be used. The disc may not be modified in the pad contact area. No wave disc allowed. No aluminum or titanium hubs allowed.
8. Any commercially available brake master cylinder will be allowed.
9. Any OEM Polaris brake caliper will be allowed. Caliper must attach to the existing chain case without modification to the chain case. Caliper may be modified to fit chain case.
10. Brake cooling duct, inside the hood, is allowed.

#### **SKI SUSPENSION & STEERING**

1. Ski suspension and steering must be OEM for the model unless otherwise specified.
2. Radius rods and tie rods may be replaced or modified.
3. Maximum total offset allowed is 1 inch, measured from the center of bulkhead.  
**EXAMPLE:** 23 inches from the center of bulkhead to the outside right ski and 22 inches from center of bulkhead to the outside left ski = 45 inches outside ski stance with 1 inch total offset.
4. Must use all original suspension mounting points on chassis and struts.
5. May use any spring or spring adjusters. Titanium springs are not allowed.
6. Any hydraulic shock or gas charged hydraulic shock allowed. No clickers or external adjusters allowed.
7. Any sway bar is allowed.
8. Limiter strap allowed, but must maintain two and a half (2.5) inches of usable downward travel with the driver seated. Travel measured at the front bumper.
9. Suspension components may be reinforced but no geometry changes are allowed except camber.
10. The steering column and handlebars may be relocated and/or replaced. Extensions may be added to suit the driver. The handlebar and column material must be of same as the OEM material with the same wall thickness (or greater) and tubing outside diameter as the OEM components. The use of a universal joint is not allowed.
11. Throttle lever may be replaced but must be thumb operated with a direct mechanical operated mechanism on rear side of right handlebar.

#### **SKIS & SKI RUNNER**

1. OEM (for the brand) or aftermarket skis allowed. Must conform to ISR General Competition Rules. Ski mount on spindle may be narrowed to allow ski mounting.
2. Minimum flat length of ski bottom is 14 inches. Minimum ski width is 3 1/4 inches.
3. Reinforcement is allowed on the top of the ski board only.
4. Maximum carbide length is 6" inches per ski. Must be one continuous cutting edge with no other sharp edges on the ski.

#### **TRACK SUSPENSION**

1. Complete track suspension and components **MUST** be OEM stock for the model unless otherwise specified.
2. Track suspension must maintain a minimum of 2 inches of useable, vertical travel with the driver seated.

3. May drill new holes in tunnel or rail to change mounting locations. May not drill excessive amount of holes for lightening.
4. May modify or replace springs. Titanium springs are not allowed.
5. Shock absorbers may be replaced with hydraulic or gas charged hydraulic shocks.
6. May remove front shock.
7. May relocate rear shock.
8. May change or add limiters to front and rear of track suspension. No remote limiter adjusters allowed.
9. May add or subtract marginal snow wheels and their mounts.
10. May add slide lubrication system.

#### **TRACK & TRACTION**

1. Any commercially available 121-inch by 15 inch is allowed. Minimum track lug height is 0.50 inch. No other track size is allowed.
2. The track must be used as produced by the molder of the track. No cutting or other modifications allowed.
3. No weld on hooker's plates.
4. No studs allowed directly under rails.
5. Traction products must conform to ISR Oval Sprint requirements.

#### **FRAME & BODY**

1. Must use 1986-2000 Polaris Indy chassis.
2. Chassis may be reinforced.
3. May alter or replace hood, windshield, belly pan, seat, fuel tank and foot stirrups.
4. May remove bumpers, dash panels, oil tank, lights and wiring.

#### **IGNITION & ELECTRICAL**

1. Ignition system **MUST** be OEM stock for this engine, no modification allowed. May not lighten flywheel.
2. Instruments, gauges and headlight may be removed.
3. Any tach is allowed.
4. A DOT approved LED taillight must be illuminated whenever the snowmobile is on the racing surface, whether the engine is running or not.

#### **ADDITIONAL INFO**

For the families who may plan on their child continuing competition beyond this class, and advancing to the ISR FORMULA 500 class, it is advised to build your chassis based on that rule base.

Current ISR Legal FORMULA 500 chassis' are allowed with Polaris 340 Fan Cooled engine.

For questions about class, call Snow Shack 715-536-6077 or Jeff Brown 715-536-9681