

**BULLETIN NO. 18/19-009      DATE: 17 June 19**

**TO: ALL ISR Oval Racing Affiliates**

**SUBJECT: USSA PRO STAR CUP CLASS ERDC/USSA  
*PRO CHAMP***

Updated 6/17/19

**EAGLE RIVER WORLDS CHAMPIONSHIP CLASS FOR 2020  
EVENT  
USSA PRO STAR CUP CLASS  
ERDC/USSA  
  
PRO CHAMP**

This class uses the same rules as Pro Lite, with the change from combined weight to a spec weight for sled only. 400 pounds is specified as the control weight to allow for existing sleds that have some internal titanium components, and other lightweight materials that are allowed in the class. This weight would tend to equalize all the sleds in the field.

USSA will offer Pro Lite as written and froze till 2021, on Saturday of each of the selected events. On Sunday during the 2020 season USSA will offer the additional purse, points, and awards for the Pro Star Cup series, and the class required for this event will be the Pro Champ class.

**PRO CHAMP**

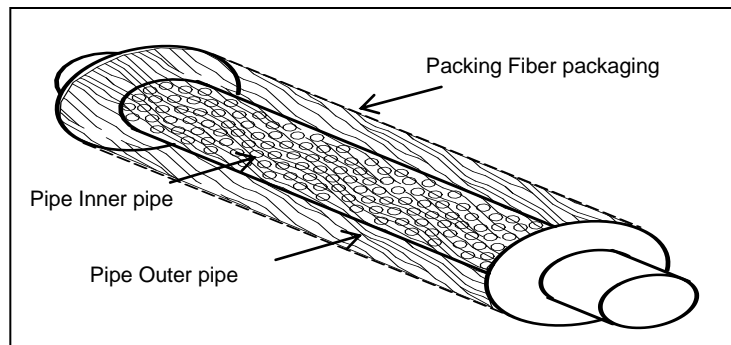
**GENERAL RULES**

1. Only single-track snowmobiles allowed.
2. Any changes or alterations allowed in the Stock classes are allowed.
3. The brand of engine, hood and logo need not match.
4. All snowmobiles must comply with GENERAL RULES AND REGULATIONS section.
5. Snowmobile weight will be 400 pounds minimum, without driver.
6. Maximum overall width is 45 inches.
7. The class rules will be froze till the 2021 season.

**ENGINE**

1. The designated engine must originate from a stock qualified 1995 or newer two-cylinder snowmobile. The displacement of the stock qualified engine must be no more than 440cc (as produced and filed by the manufacturer). Clarification: The engine must be ran/used in a totally stock configuration. No changes to the cylinders, crankcase, crankshaft, or ignition components are allowed. Ignition mapping is allowed. The only change to the engine itself will be modifications to the cylinder head insert cups, to control compression ratio. Refer to General rules for Stock class for further information.
2. The cylinders must be located on the engine, with the intake and exhaust ports in OEM/stock orientation to the crankcase.
3. Engine stroke may not be changed or altered.
4. Engine oil injection pump may be removed.
5. If engine is of reed valve design, reeds used must either be OEM or V-Force brand reeds for the engine only. V-Force reeds designed for other brands of engines may not be used. Reed application must be brand specific.
6. Heads may be machined to allow insertion of combustion chamber cups.
7. Maximum cylinder base gasket thickness shall be .5mm (.020) and only one base gasket per cylinder may be used.
8. Engine mounting plates and brackets may be altered, removed or replaced. Rubber isolation mounts may be changed or removed
9. Mikuni VM 34 round slide carburetor only (34.1mm maximum bore size). Only one carburetor per cylinder.
  - a. Any 34 MM or 34 MM TMX Mikuni Carburetor supplied in original stock trim with the engine is legal. If the 440-cc engine was supplied as stock with a larger than 34 mm carb, it may not be used. If the 34 MM TMX series carb is used the competitor may not enter the sled in Champ competition as it will not be legal for the class. All sleds using 34mm VM carbs may enter Champ class as they are in legal trim. (Clarification 1/8/15)
  - b. No smooth bore, flat slide or taper bore carburetors allowed.
  - c. No internal changes to carburetor body allowed.

- d. No modification of a carburetor bore (venturi) is allowed.
  - e. Outside diameter of outlet spigot may be increased. (See illustration)
  - f. Cut off straight portion at inlet.
  - g. Airbox, filter, tapered bell may be added to inlet end of carburetor.
  - h. Power jet carburetors and power jet carburetor kits are not allowed unless OEM for the model of engine.
  - i. Butterfly throttle valve carburetors are not allowed.
  - j. Larger than specified carburetors may not be downsized to meet these rules.
  - k. Unless otherwise specified, the only carburetor changes allowed will be replacement of tuning parts. Modifications not allowed to tuning parts.
  - 10. No fuel injection or pressure charging is allowed.
  - 11. No "Boost Bottles" or methods of share air will be allowed. Engines that come stock with a shared air/boost bottle system will be required to remove the system completely from the engine. Carb adapters allowing fitment of shared air must be replaced.
  - 12. Air box may be removed or replaced.
  - 13. OEM cooling concept must be maintained.
  - 14. Engine torque arms, limiters, snubbers, and suppressors may be used.
  - 15. 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 1/8 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 3/4 in. larger than inner pipe.
    - d. Minimum silencer length 3 in.
- See illustration. NOTICE: Additional sound level restrictions may be adopted at any time.  
See rules above for dimensions.



#### DRIVE

- 1. Any commercially available drive and driven clutches and internal components may be used. Clutches and components may be modified.
- 2. Chain case and internal components may be altered, removed or replaced. Chains and sprockets may be altered, removed or replaced.
- 3. Jackshaft/track shaft may be altered, removed or replaced.

#### SKI SUSPENSION & STEERING

- 1. Front suspension components (arms, spindles, rod ends, spherical joints, the rods linkages, IFS trailing arms and radius rods) may be altered or replaced. Maximum overall width is 45 inches.
- 2. Front suspension springs may be altered or replaced.
- 3. Sway bars and links may be altered, removed or replaced.
- 4. Shocks and TSS struts may be altered, removed or replaced.
- 5. Snowmobile must maintain two (2) inches of useable vertical suspension travel.
- 6. Handlebars, column and controls may be altered or replaced. Aluminum handlebars allowed if produced by the OEM manufacturer.

#### SKI & SKI RUNNERS

- 1. Left ski may be a Wahl Bros. brand "wide" ski Wahl Bros part number 03-069 or may be a wide bottom flat ski, with an adjustable, (non-cutting, non-carbide wear edge) which can be placed anywhere on the ski blank. This wide flat bottom ski may be of any commercial brand or constructed by the chassis builder. The intent of this ski and its placement is to limit the aggressiveness of the ski assembly for steering purposes. Custom built skis that do not meet the criteria or are an attempt to increase the aggressiveness of the ski performance will be reviewed for acceptance on a ski by ski basis. [Click Here for Bulletin](#)
- 2. The left ski may not have more than 8 inches of carbide cutting edge.
- 3. Right ski may be of any design if it meets current ISR standards and description in General Rules

#### SUSPENSION

- 1. Track suspension may be altered or replaced.
- 2. Rear suspension to tunnel mounting locations is not restricted; safety and structural integrity must be maintained.
- 3. Snowmobile must maintain two (2) inches of useable vertical suspension travel.
- 4. The use of any (electric or mechanical) suspension limiters is not allowed.

#### TRACK & TRACTION

1. No cleated tracks allowed. Track must be commercially available, one-piece, molded rubber track. Track must be used as produced by the molder of the track. No modification allowed unless specified.
2. Minimum width is 13.5 inches. Minimum length of track is 103 inches. Minimum lug height is ½ inch.
3. Track must be “R” rated from the molder. It is recommended that the track be no more than 3 years old.
4. No titanium studs allowed.
5. No titanium backers (backing plates) allowed.
6. No carbon fiber (CF) backers (backing plates) allowed.

#### FRAME & BODY

1. Chassis/frame origination and modification are not limited or restricted. Maximum width is 45 inches.
2. Any hood allowed. May be cut out behind the windshield for additional venting. Headlight fairing or cowling may be removed. Dash and/or console may be altered, removed or replaced.
3. Windshield not required.
4. Fuel tanks may be altered or replaced.
5. Seat may be altered or replaced.
6. No radiator may protrude from or thru the hood or chassis.
7. Heat exchangers may be mounted on the front and bottom surfaces of the belly pan if mounted flush to the pan.

#### IGNITION & ELECTRICAL

1. Ignition system must be current OEM for the brand and be available through normal dealer channels. Ignitions may be reprogrammed.
2. Ignition components may not be modified for fitment to the engine. If an alternate ignition is used it must be of the same brand as the engine and must install on the engine in the standard mounting location and holes.
3. Instruments, gauges and headlights may be altered, removed or replaced.
4. A DOT approved LED taillight must be illuminated whenever the snowmobile is on the racing surface, whether the engine is running or not.

**International Snowmobile Racing, Inc.**