

BULLETIN NO. 19/20-011 DATE: 1 Oct 19

TO: ALL ISR Oval Racing Affiliates

SUBJECT: USSA PRO STAR CUP CLASS PRO CHAMP

Clarifications will be in RED text.

**USSA PRO-STAR PRO STAR CUP CLASS
PRO CHAMPRevised 10/5/2019**

Areas of concern marked ***, ###. Please read whole document again.

USSA's 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.

The following clarifications have been made in response to questions posed by builders. Decisions for acceptable changes were based on ability to tech, cost reduction, and fairness to builders who have competed for the past several years. Requests that were a distinct builder or brand advantage were not allowed. Please review carefully. Clarifications will be in RED text.

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. (Update: Due to availability considerations, SPI OEM equivalent pistons may be used, with no modification. OEM and SPI will be the only allowable pistons. Tech inspection records will have weight and dimension specs of the replacement piston for verification purposes. Wrist pin bearings may be replaced with aftermarket, steel only. Rings must be OEM or SPI, to OEM spec. Cylinders may be re-plated for repair, however, no reweld of port areas, port matching, or other changes to the cylinder are allowed. Re-plated cylinders may be subject to additional tech inspection scrutiny.)
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. (Update: If V-Force reeds are used, "air guides" may be removed from the boot to accept the reed for fitment, no other modifications may be made to the reed boot.
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. *** (Update: Metal base gaskets with nylon/composite coatings will be allowed, however, the gasket thickness must be NO GREATER THAN .020 or .5mm only. Gaskets of GREATER (example.7) thickness's may not be used. This applies to all brand engines. One gasket only.) {See notes at bottom of document)
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.
- 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.
 - No smooth bore, flat slide or taper bore carburetors allowed.
 - No internal changes to carburetor body allowed.
 - No modification of a carburetor bore (venturi) is allowed.
 - Outside diameter of outlet spigot may be increased. (See illustration) (See #11)
 - Cut off straight portion at inlet.
 - Airbox, filter, tapered bell may be added to inlet end of carburetor.
 - Power jet carburetors and power jet carburetor kits are not allowed unless OEM for the model of engine.
 - Butterfly throttle valve carburetors are not allowed.
 - Larger than specified carburetors may not be downsized to meet these rules.
 - 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. (Carb adapters, reed boots if designed to accept boost bottles may have boost bottle ports plugged. Carb adapters that do not have boost bottle ports may be used, however, the only modification to the carburetor will be a sleeve to the outside of the mounting spigot to properly clamp the carburetor. No other modifications to the carburetor are allowed.)
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:
- Inner pipe must have at least 15 holes per square inch. Minimum hole size 1/16 in. (Minimum 3/8 in. sound absorbing material around the entire circumference of inner pipe).
 - Inner pipe (perforated core) must contact sound absorbing material (fiber or steel wool packing).
 - Outer pipe must be at least 3/4 in. larger than inner pipe.
 - Minimum silencer length 3 in.
- See illustration. NOTICE: Additional sound level restrictions may be adopted at any time.

The following requests have also been made and reviewed and the decisions are listed here.

Exhaust flanges may be aluminum or steel.

Aftermarket stators and pick-ups are not allowed.

No gasket surface machining or acid prep allowed.

Water pump must be stock and complete, no mods to pump cavity, impeller, or drive

No stud installation allowed to replace bolts or stock type fasteners in engine assembly. Heli-coils allowed.

***Base Gaskets: Any base gasket, paper or steel may be used however the following must be observed.

- No stacking of gaskets, one gasket per cylinder only.
- Gasket cannot be greater thickness than .5 mm-.020. Gasket may be less than .5-.020 but must be commercially available.
- Tech inspection tolerance factor for paper gaskets will be +/- .003.

We have been informed that some builders may wish to use the "big slide" 34 mm carb of Suzuki and in some cases Yamaha motorcycle vintage. This carburetor is NOT legal to be used. Round slide VM 34 only or the TMX that came in original stock trim as explained in rule #9 above.

It is encouraging to see the many questions coming to our office concerning this class, to us it is an indication of the great interest in building a competitive sled in this affordable new class.

Past Pro Lite class drivers can rest assured that no rules outside of weight have been changed in the construction of this class. All the above rules have been the operational guidelines for the class since the second year of competition.

The writer for ISR, (myself, Jerry Korinek) apologizes for any concerns raised in the way the original clarification document was written. I will try to be more concise in the future in these updates.

International Snowmobile Racing, Inc.