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### ISR GUIDE

Rules are divided into the major sections listed below. Under each section is a list of the snowmobile components covered in the section. The rules in "GENERAL RULES AND REGULATIONS" apply to all forms of racing unless otherwise stated in a specific chapter.

#### ENGINE

ENGINE  
ENGINE MOUNTS  
AIRBOX  
CARBURETORS  
FUEL INJECTION  
COOLING SYSTEM AND HEAT EXCHANGERS  
EXHAUST AND SILENCER  
FUEL PUMP  
FUEL SYSTEM  
INTAKE  
OIL SYSTEM  
SPARK PLUGS  
SUPERCHARGERS  
THROTTLE  
TORQUE ARMS  
HARMONIC BALANCER

#### DRIVE

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CLUTCHES  
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TRACK DRIVE SPROCKETS AND NON-DRIVING WHEELS

#### SKI SUSPENSION & STEERING

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SWAYBAR  
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TSS STRUTS  
SKI SHOCKS AND SPRINGS  
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#### SKIS & SKI RUNNERS

WEAR BARS / SKI RUNNERS / CARBIDES  
SKIS

#### TRACK SUSPENSION

SLIDE RAILS, SHOCKS AND SPRINGS  
HYFAX  
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#### TRACK & TRACTION

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TRACK  
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#### FRAME & BODY

BELLY PAN  
BULKHEAD  
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FOOT PEGS  
FOOT STIRUPS  
FUEL LINES  
FUEL TANKS  
HOOD  
OEM TAGS  
PARACHUTE  
ROLL CAGE  
SEAT  
SNOW FLAPS  
TUNNEL  
VENTS

#### IGNITION & ELECTRICAL

BATTERY  
HEADLIGHT / TAILLIGHT  
ELECTRICAL WIRING  
MAGNETO / STATOR / LIGHTING COIL  
IGNITION  
TACHOMETER  
SPEEDOMETER  
HEAT GAUGES  
ELECTRIC START  
FLYWHEEL

### GLOSSARY OF TERMS

**AFTERMARKET** Refers to parts or assemblies that are produced and/or sold by companies other than the OEM snowmobile manufacturer. Also refers to companies that produce and/or sell non-OEM parts and assemblies.

**BODY** The snowmobile body consists of the hood, side panels, dashboard, seat and other parts that cover the engine, drive system and suspension.

**BULKHEAD** The portion of the snowmobile frame to which the engine and front suspension are attached. The bulkhead is permanently affixed to the front of the tunnel.

**CC or DISPLACEMENT** The volume (measured in cubic centimeters) displaced by a piston(s) having traveled through one entire stroke in a cylinder(s).

**CHASSIS** The snowmobile chassis is the combination of the frame, suspension and body.

**Commercially Available**

*Parts and components are considered to be commercially available when offered for general sale by any company or service provider. To be considered commercially available the manufacturer/ vendor/ service provider must be able to provide a like component to anyone requesting such component. Parts that are limited in availability in order to give any one person or company a competitive advantage will not be allowed to be used. All parts must be available to any competitor upon request to purchase at fair market value of like or similar components. Normal build times are acceptable, but in no case may such build schedules preclude anyone from getting a like comparable component. Provider of any product must provide on demand from ISR or a SMDG member represented by ISR, proof of product liability insurance, or documentation of self insurance in respect to product sold, vended or component modified and resold as improved or enhanced. From time to time, ISR will investigate claims that a particular item is not commercially available as defined. If the part or component is determined not to be commercially available, then it may be disallowed from all competition that requires it to be commercially available.*

**DRAG RACE**

A straight-line acceleration event between two or more machines over a specified distance where results are determined by order of finish.

**EMERGENCY VEHICLE** A properly licensed and equipped emergency vehicle to transport injured persons (normally called a rescue vehicle or ambulance). Said vehicle will be fully equipped to include oxygen, first aid, burn equipment, splints, backboard and stretcher. This vehicle shall have all emergency equipment.

**FRAME** The snowmobile frame is the structure that holds the engine, driver system, suspension and bodywork.

**FUEL INJECTION** A means of forcing gasoline into a cylinder, other than by a carburetor. Any unit that does not depend on the engine's vacuum to draw fuel into the engine will be considered as a fuel injection unit.

**Gusseting/Reinforcement**

*Gusseting is defined as bracing or reinforcing of:*

- *Joints, weldments, castings, extrusions and forgings used in the structure of the vehicle.*
- *Gusseting can be used to strengthen key areas (especially in Stock classes) where stress loads of competition may exceed original design parameters.*
- *Gusseting/ Reinforcement may be used by manufacturers to alleviate an infield design issue that causes safety related failures in front or rear suspensions, steering components, or chassis/frame structure. If done by a manufacturer the reinforcing part or component must be provided to all competitors who are racing that particular unit or model at no charge. Manufacturers need not supply these items to sleds that are not involved in competition.*
- *Material to perform these duties may be welded to, bolted to, riveted to, heat shrunk and press fit to, or encapsulated by covering with like or dissimilar materials, the actual object/component being reinforced.*
- *Upon pre race safety inspection Technical inspectors may require chassis builders to reinforce certain areas upon review of ISR, a competent Technical Inspector and the appropriate SMDG member/members who have expertise in the area.*

**HOT PIT or STAGING** An area adjacent to the racecourse where drivers and snowmobiles are staging to race. This must be a restricted access area where all who enter have signed the release and waiver and have been specifically allowed to enter by race officials. Entry is restricted to drivers who are actively staging for a race and their crewmembers that must be at least 14 years of age. The Race Director may limit the number of crewmembers allowed. (See **PIT, COLD PIT or PADDOCK AREA** for more information.)

**INDEPENDENT FRONT SUSPENSION** An independent front-end suspension is any suspension where the ski spindle functions independently of chassis.

**MARGINAL SNOW WHEEL** A wheel that is mounted to or near the slide rail and relieves pressure on the slide runner (hyfax) so as to reduce friction and wear.

**MODIFIED** A class of racing in which the competitors may change the stock part(s) of the snowmobile.

**NON-DRIVING (IDLER) WHEEL** A wheel fixed to the track drive axle that functions to guide the track, not to drive the track.

**OEM** Original Equipment Manufacturer (snowmobile manufacturer)

**OEM FOR THE MODEL** Parts or components used in the original manufacture of a specific make, model and year snowmobile.

**OVAL TRACK** A racecourse that includes two or four left hand turns on prepared, groomed and maintained track.

**PIT, COLD PIT or PADDOCK AREA** A designated area in which race vehicles (and often trucks and trailers) are parked and equipment prepared for a race. This area may be limited access or not. It is recommended that all who enter sign the release and waiver. Parent or guardian must supervise children at all times. Practice and/or testing are not allowed. Race officials must control speed in this area. Snowmobile warm-up must be done with approved stand and there may be other restrictions dictated by the rules for the event. (See **HOT PIT or STAGING** for more information.)

**PRESSURE CHARGING OF INTAKE SYSTEM** Any device which increases the pressure in the intake system above atmospheric pressure is defined as a pressure charging device and will not be allowed to compete directly with normally aspirated engines. Pressure charging devices include: turbochargers, superchargers, nitrous oxide injector, air ducts which use vehicle velocity to increase inlet pressure, etc. The Race Director and Tech Inspector will determine the legality of the intake system.

**PROMOTER** That person or organization which conceives, organizes and advertises a snowmobile race or races.

**PROPERLY FILED PART OR COMPONENT** OEM parts and components for which the snowmobile manufacturer has provided ISR with part numbers and other details. Some, but not all of these properly filed parts are allowed for use in some Stock classes. See applicable section(s) in the rules.

**PUMP GASOLINE** Gasoline (including some racing and aviation gasoline) that is purchased from a normal consumer service station or other source, and produced for general all-purpose use in internal combustion engines. Does not include gasohol.

**QUALIFIED ATTENDANT FOR EMERGENCY VEHICLE**

Doctor, nurse (RN or LPN) or other certified first aid trained personnel. These persons shall have at least a current American Red Cross Advantage Card or the medical equivalent such as a current EMT certification. "First Responders" do not qualify.

**REAR AXLE IDLER WHEEL** A wheel that rotates on the rear axle of the track suspension.

**SANCTIONING BODY** An organization employed by the PROMOTER to conduct a race according to established rules and guidelines.

**SNOWMOBILE** An engine powered, track driven vehicle with a C.V.T. (continuously variable transmission) that is steered by two skis. (Other vehicles will be considered for inclusion into specialty classes by ISR and the Rules Committees.)

**SNOWMOBILE SUSPENSION** The mechanical parts of a snowmobile that support the remainder of the machine.

**SPONSOR** A firm that gives awards or monies to the promoter or association for services offered and advertising.

**STOCK** or **STOCK QUALIFIED** The status that is given certain snowmobiles that meet ISR requirements for quantity produced and technical specifications.

**STOCK APPEARING/APPEARANCE** Except for certain racing modifications allowed by rules, a "stock appearing" snowmobile is to look like a production snowmobile and have the same body measurements as a production snowmobile on the show room floor.

**STOCK QUALIFIED MODEL** A specific year and model snowmobile that has been produced in sufficient quantity and for which ISR has received the necessary documentation.

**TRACK DRIVE SPROCKET** A sprocket wheel that is fixed to the track drive axle and engages the track.

**TUNNEL** The rear portion of the snowmobile frame to which the rear suspension and seat are mounted. The tunnel is permanently affixed to the bulkhead to form the FRAME.