

2025 NASCAR Ontario Pro Sprints Rulebook for GBS

- All Race Teams are expected to read and follow the GBS General Track Rules.
- Minimum age: 14 years old

Denotes any changes, corrections, or elaborations for the 2025 race season

General Rules

1. All **NEW CONSTRUCTED CARS** must be made in the down-tube chassis style only. Rule was implemented in 2017, NO EXCEPTIONS. **EXISTING CARS**, meaning cars that have been converted from a non-suspended "Midget" may stay a mid-rail style chassis, but must conform to all other dimensional rules.

Chassis Specifications

1. The main chassis including both platform and roll cage main hoops will be constructed with one of the following:
 - Round 4130N Chrome Moly or Docol R8 tubing 1½" diameter by .083" wall thickness or 1¼" by .083" wall thickness.
 - Round 1020/1026 DOM tubing 1¼" diameter by .095" wall thickness.
2. UNDER NO CIRCUMSTANCES ARE HOLES TO BE DRILLED IN ANY PART OF THE PLATFORM OR ROLL CAGE TO LIGHTEN A CAR. This includes the method of drilling any holes for body panel fastening. Weld-on tabs (example; Dzus/quarter turn fastener tabs) will be the only acceptable method of fastening.
3. For main chassis, absolutely no CREW (Cold Rolled Electrically Welded seam) tubing will be allowed.

Suspension

1. Front axle must be one piece, and can be fabricated with any of the following steel options:
 - 1½" diameter by .083" to .125" wall thickness
 - 1¼" diameter by .083" to .095" wall thickness
 - 1½" diameter by .083" to .095" wall thickness
 - 1¾" diameter by .083" wall thickness
2. The front axle offset is to be plus/minus 2" left front and 3" right front compared to rear tires.
3. The rear axle must be one piece, and have no slipper hubs. 1¾" Aluminum splined micro sprint style or 1¼" to 1¾" keyed karting style steel axle. Any or all other axles must be approved by series officials.
4. Track/Panhard mounting bar must be supported on top and bottom. No single post mounting, must be contained within 2 horizontal bars.

Fuel Tanks and Lines

1. Pumped fuel or race fuel allowed.
2. No alcohol, nitrous, or oxygenated additives allowed.
3. Track officials reserve the right to randomly test fuel at any point during race season.
4. Fuel cells are mandatory. Cells are preferred to be sourced from a fuel cell manufacturer (example JAZ Products #290-004-01 or 290-103-01). They may be constructed from aluminum to conform to chassis design, but must have an internal bladder.
5. Aluminum tanks must be fabricated from ¼" thick material.
6. Cells can be located in the fiberglass tail-piece with only the bottom section being open for removal. A fire wall is mandatory and can be the front side of the tail-piece. Fuel cells can also be located behind the driver's seat with an aluminum firewall surrounding the entire front and two sides. Any partial deflector on the top side is acceptable and recommended.

7. Fuel lines from the cell to the fuel pump must have a protective covering over them to prevent tears and cuts in areas around the chain and CVT belt.
8. Fuel line coverings must meet technical approval, braided steel is strongly recommended.
9. All cars must have a fuel shut off valve located **in the open** on the right side, so that it is easily accessible by track officials. The valve must be mounted away from the chain or CVT belt drive as much as reasonably possible.
10. All fuel tanks must have approved cell caps with a vent ball valve, also called a rollover check valve.
11. Custom made fuel cells are allowed, and will be reviewed for safety by series officials at technical inspection.

Chassis Door Bars

1. All sidebars must be constructed of a minimum 1" by .095" wall thickness seamless round steel tubing.
2. The left side must have two parallel bars. The top bar must be mounted at 18 to 26 inches above the top of the platform rail. The bottom bar is to be mounted parallel between 6 and 8 inches (inside dimension) below the upper bar, with at least 2 vertical bars joining them together. 1 Vertical bar from lower side bar to the platform is also mandatory (can be incorporated to be the 4-link mounting bar).
3. The right side must have at least one side bar at the same height as the top left bar, mounted 18 to 26 inches above the top of the platform rail in order to protect the driver's shoulder.
4. A vertical bar must be mounted diagonally between the upper side bar and the top roll cage bar, on both sides. Often referred to as the "Hughy" bar.
5. All bars must be welded, no fold down "Hughy" bars.

Steering

1. Steering shaft can be either a solid $\frac{5}{8}$ " diameter shaft or a minimum hollow $\frac{3}{4}$ " x .083" wall thickness tube.
2. **Locking collars must be placed on front sides of heim joint hangers to prevent the shaft from contacting the driver in the event of an accident.**
3. Steering shaft can also be a collapsible style (Sweet Mfg., Hyper Racing, etc.)
4. Steering wheels must have a quick release only.
5. Quick release steering wheels must fit snug and tight. Loose fitting wheels will not pass tech inspection and must be replaced. Also, there must not be any plastic parts on the quick release.
6. **All steering bolts or nuts must be drilled, cotter pinned, and/or safety wired where possible.** Stover nuts may be used without cotter pins or safety wire as a bare minimum, but not recommended. **If using a spindle with bolt-on steering arms, a Nord-loc washer is recommended to use on the bolts that fasten the two together.**
7. Spindle nuts to hold on front hubs **MUST** be drilled and cotter pinned. Castle nut is also acceptable when used with a cotter pin. Hyper, Bicknell, etc., style spindles must use a nylock nut as well as a c-clip or external snap ring.
8. A rack and pinion steering box is allowed.

Clutch

1. Snowmobile drive (CVT) only.
2. CVT drive must be securely enclosed to contain debris in the event of a wreck or clutch failure.

Chain and Clutch Guard

1. Chain and clutch guards are mandatory.
2. Chain and clutch guards must **have mounting points at front and rear** as a bare minimum.
3. The clutch guard must consist of **a vertical plate on the drivers side separating the primary (drive) clutch area from the drivers seat area. The plate must extend far enough down to encapsulate the end of the clutch bolt.**
4. Chain and clutch guards must be made of .125" aluminum or .063" steel as a minimum. Absolutely no plastic guards allowed **for either.**
5. **No vent holes allowed to be drilled in either guard.**

Brakes

1. Hydraulic brake systems only and must be in good working condition.
2. Rear brakes are mandatory and front brakes optional.
3. All master cylinder, caliper, and rotor bolts and/or nuts must be either cotter pinned, safety wired, or have stover nuts. **Nylock nuts are not allowed to be used on brake rotor mounting.**

Wheels, Tires, and Hubs

1. 8" or 10" diameter wheels and tires only. **Going forward, in the interest of product availability and keeping costs in check, this will be exclusively an 8" diameter wheel and tire series. No new constructed cars to utilize 10" diameter wheels and tires (only 3 cars exist at this current time).**
2. Adhesive wheel weights are allowed on the back side of the rim for the purposes of balancing, but must be covered with aluminum tape to prevent them from coming off while on-track. No clip-on style weights allowed.
3. Both rear wheel hubs must be retained by a snap ring or safety clip, depending on axle style mentioned previously.
4. No American Racer SD-44 tires.

Shocks and Coil-over Springs

1. **Any manufacturer of steel small body non-rebuildable shocks allowed (Pro SB Series, Afco 1500 series, etc.).**
2. **Only QA1 small body rebuildable shocks will be allowed in either steel or aluminum body (70 Series, 80 Series, 7Q Series, 8Q Series, etc).**
3. No torsion bars, no sway bars, and no bump stops. No shock should be installed intending to make it bottom out (act as a bump stop). **Chassis will contact the ground before shock bottoms.** No internal modifications **allowed besides revalving.**
4. Shock mounting location in newly constructed cars must be in the upright position.
5. No cantilever type suspensions allowed.
6. **Only 1 shock per corner of car.**
7. 1 7/8" or 2 1/2" diameter coil springs only, 8" or 10" length.

Weights and Percentages

1. Car and driver shall weigh no less than 725 lbs. **This includes, but isn't limited to pre and post race technical inspection. Track scales are deemed as correct at all times as mentioned above.**
2. Maximum left side weight percentage will not exceed **55%.**
3. Any removable weight must be securely bolted down and inside the perimeter of the main chassis platform. For every 5 lbs. of lead, it must be mounted with one 3/8" bolt, large washers, and lock nut.
4. Any removable weight must be painted white with your car number clearly indicated on it.
5. Any cars utilizing excessive lead weight should consider the use of a steel floor pan.

Bumpers (Front and Rear)

1. Shall be constructed of steel tubing, minimum 3/4" outside diameter with a .065" wall thickness, or maximum of 1" diameter with a .065" wall thickness.
2. All bumpers must be secured with 1/4" bolts and lock nuts. No clips allowed.
3. **Front bumpers** must be flat, and not have a projected or pointed profile (arrow shaped). Front bumpers must not be smaller than 12" wide, yet must not extend beyond the width of the chassis platform.
4. The lower horizontal bar must not be any higher than a maximum of 6" off the ground.
5. **Front bumpers** must be constructed of 2 horizontal bars at a minimum of 4" and a maximum of 6" apart, measured center to center.
6. The front bumper's upper hoop must be attached to the lower hoop by at least 2 vertical bars.
7. No weight can be added to the front bumper.

8. A 12" crush zone is mandatory between the drivers feet and the front bumper when the pedals are fully engaged.
9. **Front bumper** must be attached on at least 2 points with ¼" bolts. No clips are allowed.
10. **Rear bumper** must be fastened to the main frame rail and/or back of the cage hoops, in at least 4 points, with ¼" bolts. No clips allowed.
11. The lower horizontal bar must be a maximum of 6" off the ground.
12. **Rear bumpers** must be constructed of 2 horizontal bars with a minimum of 5", and a maximum of 7" apart, measured center to center.
13. The upper and lower hoop must be supported by at least 2 vertical bars.
14. **Rear bumpers** must extend a minimum of 12" behind the fuel cell.
15. **Rear Bumper** must resemble a Sprint-style rear bumper and come to a single vertical post or 12" maximum flat back.

Nerf (Side) Bars

1. Nerf bars are mandatory on both sides of the car, and are to be constructed of round steel tubing with a minimum of ¾" outside diameter by .065" wall thickness and a maximum of 1" diameter by .065" wall thickness.
2. Nerf bars are to be a minimum of 24" in length measured from the rear of the nerf bar closest to the rear tire, in a straight line, to the front of the nerf bar, behind the front tire.
3. The lower horizontal bar is to be a **maximum of 3" off the ground. Measured on center.**
4. The upper horizontal bar must have a **minimum height of 5" and a maximum height of 14" measured from the ground. Measured on center.**
5. Nerf bars must not extend beyond the outside of the front and the rear wheels. This means the bars must not exceed beyond the outside of a straight line being determined from the outside of the front wheel to the outside of the rear wheel.
6. Nerf bars must have a minimum of 3 mounting points, **and secured with ¼" bolts and lock nuts. No clips allowed.**

Floor Pan

1. The car shall have a floor pan mounted securely under or above the main platform rails. It is to cover a minimum area from the front platform rail to the front of the driver's seat.
2. The floor pan may be constructed from either aluminum or steel, but must be sufficient thickness for driver to stand up on when entering or exiting the car.
3. Floor pan design and condition may be disallowed by technical inspector.

Car Dimensions

1. Wheel base shall be a minimum of 50", and not exceed a maximum of 60". Measured center of front axle to center of rear axle with car at ride height.
2. The maximum overall width of the car shall not exceed 60", measured from outside of rim to outside of rim.
3. The maximum overall length of the car shall not exceed 114".
4. Motors must be mounted on the right side of the car, ahead of the rear wheels.

Front Hoops

1. Any existing cars that have a front hoop, it must be fabricated from a minimum 1" steel tubing.
2. Hoop must be completely surrounding the driver's feet.
3. 2 Vertical bars must join the platform to the hoop at the front of the car.
4. Hoops must be welded completely, no slip joints.
5. The front hoop will be 2" higher than the driver's feet, as measured from the bottom of the tube.
6. **As previously mentioned, as of 2017 ALL NEW CONSTRUCTED CARS MUST BE DOWNTUBE STYLE CHASSIS CARS!**

Roll Cage and Cockpit Specifications

1. The roll cage must have a minimum height of 40" from the top of the lower platform rail, to the top of the cage hoop.
2. The top of the drivers helmet must be at least 4" below the top of the horizontal roll cage hoops or halo.
3. Halo design must be approved if added.
4. The roll cage must be welded to the chassis in at least 6 locations and under no circumstances be bolted to the chassis platform rails.
5. The top of the roll cage must have gussets in all 4 corners.
6. No sharp edges shall be left anywhere on the roll cage or brackets of the car. Weld spatter, weld wire, poor weld tie-ins etc., to be cleaned and blended.
7. The roll cage must have 2 vertical bars mounted behind the drivers head in an inverted v shape. Minimum tubing size is ¾" diameter by .083" wall thickness.
8. The driver must be able to climb through the opening in the top of the roll cage (by themselves in decent timing in the event of a fire).
9. **If the additional halo is added it must be fabricated from a minimum of 1" diameter tubing by .083" wall thickness to a maximum of 1¼" diameter tubing by .095" wall thickness. The halo must tie into the sides and the rear of the roll cage (minimum 3 points of contact).**
10. There must be 2 vertical bars between the downtubes and chassis platform rails to stop contact of the front axle from hitting the drivers feet or pedal assembly in the event of an accident. **These bars are to be no more than 3" behind the rear edge of the front axle.**
11. There must be a minimum of 1" by .083" wall thickness vertical bar(s) to stop contact of the rear axle from hitting the seat and/or the fuel cell in the event of an accident.
12. **It is recommended that a minimum of 1" by .083" wall thickness bar(s) are incorporated** to protect the driver's legs from a car entering from the top side. The location is recommended as a diagonal bar from the steering column bar to the main hoop where the front axle stop bars are located.

Seats

1. No hand made seats will be accepted.
2. The use of containment seats are highly recommended and are mandatory for anyone competing under the age of 18.
3. Any conventional brand name seat that has head and shoulder supports added, will need to be inspected and authorized by the technical inspector before the first race.
4. Seats must be bolted in at least 4 places (2 in the base with 2 in the back rest somewhere near shoulder height) with a minimum of ⅜" bolts, large washers, and nylock nuts.
5. Head supports (both left and right side) are mandatory when using conventional style seats.

Body Design

1. The front nose section may be a wedged hood or a standard sprint car style.
2. The front nose can be made of aluminum, fibreglass, or poly fibre substitute.
3. Nose panels must fit the chassis.
4. Body panels must be secured in place all the times, including hood and tail sections.
5. **Cars must be in a neat and presentable fashion at all times.** Excessive rubber marks and/or chain lube will not be tolerated.
6. All side and rear panels must be inside the bumpers and nerf bars.
7. All cars must meet a traditional sprint car look and design.
8. **No panels that interfere with the drivers peripheral vision (visors, left side enclosures, right side enclosures, etc.).**

Numbers and Lettering

1. Car numbers and lettering must be done professionally or in a professional manner.
2. Car numbers and lettering must be in a contrasting colour to the car scheme, and be highly visible from any point on the track.
3. Numbers must appear on the rear section of the car, being at least 6" in height.

4. Numbers must appear on the wing of the car being a minimum of 8" and maximum of 10" in height on the right side panel, and a minimum of 12" and maximum of 15" in height on the left side panel.
5. No duplicate car numbers, **a letter must follow to distinguish individual competitors from each other for the ease of identification by the track announcer or spectators.**

Wings

1. Wing is to be a Sprint Car style, with offset left and right side boards.
2. Offset side boards 4" to 8" **in bottom edge height.**
3. All wings must have a quick release system for easy access by the emergency crew or series officials.
4. Driver must be able to get out without assistance.
5. **Junior Sprint style 8 sq.ft. wings may be purchased and used from a manufacturer, as long as they have a solid one piece center section. All other fabricated wings refer to Wing Specification Diagram for acceptable dimensions.**

Mirrors

1. **No mirrors of any kind will be allowed.** This leads to mirror driving and blocking. How these cars are laid out in relation to driver seating position, makes the driver being over-taken well aware that someone is around you.

Safety Harness/Seat Belts

1. All cars must have a five point safety harness installed properly (example being bolt-in or wrap-around style).
2. To accommodate driver comfort and fitment, the reduced width HANS-style shoulder belts are recommended (reduces from 3" to 2" width where it overlaps the device).
3. Belts with a manufactured date will expire after 5 years. Belts with the new SFI tag, listing expiry date, will be valid until the end of the season indicated on the tag.

Window Nets

1. Triangle shaped Sprint-style window nets are required on both sides of the car.
2. Front window steel mesh is recommended, but not mandatory.

Ignition/Kill Switch

1. All cars must have an ignition kill switch. It is to be mounted on the dash at the right front downpost of the chassis, **or on the right side door bar**, where it is accessible by both driver and safety crew.
2. All spark plug wires must have a tie wrap attached to them, with a tail being a minimum of 6" in length, or loop mounted.

Radio Communication

1. One-way radios must be worn by all drivers while on track and set to the speedway's frequency and/or channel for communication.
2. **No two-way communication is allowed.**
3. It is the drivers responsibility to ensure their one-way radio is working at all times. ALWAYS have extra batteries on hand.
4. Penalties for not obeying instructions given by race control over the one-way can be, but are not limited to, loss of laps, overall finishing position, disqualification, loss of points and/or money.

Computers

1. The use of a Data Logger is allowed but cannot be wired to the CDI box (example Mychron, Digatron, etc.).

2. A separate gauge may also be utilized for monitoring EGT's (example Koso).

Transponders

1. All cars must have a working transponder while on-track. It must be mounted 12" behind the center of the front axle.
2. Location (height-wise) must be verified by technical inspector in order to confirm proper transmitting signal strength.

Driver Safety Equipment

1. All helmets must have the proper Snell rating label inside. SA2020 is currently the newest available (SA2025 to be released October 1st, 2025). **This will be the last year for SA2015 helmets.**
2. Drivers must have and wear a full body fire retardant suit (NOMEX). A 1 piece full-body fire suit is recommended or a 2 piece as long as it's fitted properly. Drivers must ensure there are no gaps between pants and jackets where flames can burn waistlines, or worse.
3. Drivers must use/wear approved arm restraints at all times on-track.
4. Drivers must wear fire retardant racing gloves and shoes.
5. If drivers are found to be without any of the above safety items, they will not be allowed to compete and/or disqualified if found after-the-fact.
6. All race competitors must have a fire extinguisher readily available to them in their pit stall while at the track.

Motor Guidelines – 440cc Engines

1. **Moving ahead with engine availability and promoting commonality throughout the series, a 440cc engine will only be permitted for your first season of competition. ONLY exception being that if you incur a Polaris 550cc engine failure you may return to using your 440cc engine for the following race night.**
2. The series reserves the right to rule against any part that is questionable in its specification or alteration. Penalties may include loss of points, money, or suspension. The series reserves the right to maintain close competitive racing.
3. If you are unsure of anything and need clarification on any engine rules, please reach out and ask the series directors.
4. Stock production 440cc snowmobile engines only.
5. Only fan cooled or air cooled engines allowed. Twin cylinder only. No limited production or limited build race engines allowed. No cross of manufacturers parts allowed.
6. No turbos or supercharging are allowed. No nitrous oxide systems allowed.
7. The motor must originate from a stock 440cc or smaller production snowmobile.
8. Motor stroke length may not be changed or altered in any way. OEM or equivalent replacement only.
9. Oil injection pumps may be removed from the engine.
10. The OEM quantity of cylinders MUST be maintained.
11. Crankcase - OEM for that manufacturer and model only.
12. Crankshaft - must be OEM for that manufacturer and model and may not be altered in any way. No alloy substitutions allowed, and no de-stroking of the crankshaft is allowed.
13. Cylinder - must be mounted to the crankcase as originally designed by the manufacturer for the model and for the purpose of snowmobiling. No de-sleeving of cylinders.
14. You may over-bore a cast cylinder liner, but not exceed .060" over the OEM bore diameter spec for the model. Pistons must be readily available from the OEM or aftermarket. No "minimum quantity of 12" type order pistons.
15. Cylinder heads - must be OEM for that model and manufacturer, and spark plug location must also remain OEM. Spark plug quantity must remain consistent with the OEM.
16. Connecting rods must maintain OEM or aftermarket equivalent, and must be exact replacement that is readily available. Must be the same alloy as used by the OEM manufacturer. Rod may not be altered in any way.

17. Ignition - Flywheel - Stator - CDI - must all be OEM for that manufacturer and model. No opened or reflashed CDI boxes allowed. Flywheel cannot be altered in any way from how it was supplied from the OEM.
18. Fan/Fan Blades - cannot be removed or altered and must be functional at all times.
19. Recoils - must be complete and functional at all times, even if the electric start option is used.
20. Timing is a non-tech area as are Coils, Wires, and Spark Plugs.
21. **The 440cc Polaris Fuji engine found in the XCF and Pro-X models will only be allowed to compete in stock form. No internal or external performance modifications allowed.**

Carburetion

1. No fuel injection allowed.
2. Carburetors - single or twin allowed. Single must not exceed 44mm bore, and twin must not exceed 38mm bore each.
3. **The 440cc Polaris engine found in the XCF and Pro-X models MUST use the Mikuni VM34 carburetors as supplied by the OEM. No alterations allowed besides jetting.**
4. Carburetors and air intake filtration system must face the rear of the car.
5. No modification of intake boots allowed to add boost/equalization bottle.

Exhaust

1. Single exhaust pipe only with an adequate silencer. NO open stingers.
2. Exhaust must be pointed in a direction as to not affect other drivers positioned right beside the car, whether it be in lineups or on-track.
3. Cars with obnoxiously loud exhaust will be asked to remedy the sound level by the next scheduled event.

Motor Guidelines – 550cc Spec Engines

1. The series reserves the right to maintain close competitive racing, and teams deemed to dominate with respect to questionable engine performance may be issued an extensive tech inspection.
2. Engine - only a Polaris Fuji/Liberty EC55PM(A) engine is allowed as supplied by the manufacturer for the purpose of snowmobiling.
3. There will be NO machining of any parts on the EC55PM(A) engine outside of what is stated herein.
4. NO aggressive sandblasting of any kind to any parts of the EC55PM(A) engine internally. External sandblasting, only for the purpose of cleaning the engine will be allowed. Excessive material removal will be deemed illegal.
5. NO use of acid on the interior or exterior of any EC55PM(A) engine part in order to lighten, remove material, and/or cover up a repair. The only time the use of an acid is allowed is in the aid of cleaning aluminum piston material from a cylinder wall.

Exhaust (Y-pipe and Expansion Chamber)

1. Ontario Pro Sprints Aaen Performance developed pipe or stock OEM exhaust pipe only with an adequate silencer. NO open stingers.
2. Y-pipe must be OEM EC55PM(A) only with no alterations. Early ball style or later donut style are both allowed.
3. Interior welds of OEM Y-pipe are a non-tech item, and can be blended smooth.
4. Y-pipe to be installed with only one set of exhaust to cylinder gaskets.

Carburetion

1. Only the Mikuni VM34 carburetors as supplied by the OEM can be used.
2. Intake boots can be OEM or aftermarket equivalent and readily available.
3. Boot clamps are a non tech item but must be installed and used.

Coatings

1. NO additional coatings of any kind on the internal engine parts. Only exception being coatings that are supplied on the aftermarket piston skirts.
2. No painting/coating of any external engine parts besides exhaust components (Y-pipe and Expansion Chamber).
3. A coating of any kind not outlined herein will be assessed penalties from the technical director.

Balancing

1. There will be NO additional balancing of any rotating part listed in these rules for the 550cc Spec Engine program other than what is done by the manufacturer at the time of production.

Piston and Rings

1. OEM or aftermarket equivalent replacement pistons only (Examples being Pro X, SPI, Wiseco, Wossner, etc.)
2. No extra machining or lightening of pistons. Must be used as supplied by the manufacturer.
3. Piston pin can be OEM or aftermarket equivalent (usually paired and supplied with aftermarket pistons). No extra machining or lightening of piston pins. Must be used as supplied by the manufacturer.

Case Reed

1. Reed cages are to be an OEM part only. Polaris part numbers 3086386 (1999-2021), 3023394 (2022-2025).
2. Reed peddles are to be an OEM part or aftermarket equivalent, but must remain OEM dimensions.
3. Absolutely NO modifications are allowed to the reed cage or peddle stop. No porting or reshaping of either component.

Electric Start

1. Electric start is allowed.
2. Can be OEM or aftermarket equivalent components.
3. Battery location must be between main platform rails, securely fastened, terminals and terminal posts covered, and away from any potential arcing hazards.
4. AGM or Lithium style batteries only.

P.E.R.C. Reverse (Polaris Electronic Reverse Control)

1. P.E.R.C. is allowed. If the snowmobile the engine assembly was removed from came equipped with this system, feel free to use it if desired.

Spark Plugs

1. Manufacturer of your choice / open.
2. Heat range of your choice / open.
3. Must have the manufacturer's crush seal installed and in use.

Shroud and Recoil Parts

1. Must be OEM only as supplied by the manufacturer. No substitutions allowed.
2. No alterations or removal will be allowed.

Gaskets (Head and Base)

1. Head gasket - OEM or aftermarket equivalent only.
2. Base gasket - material is a non-tech item, but must be used to achieve proper cylinder height. With OEM Nikasil cylinders (2007-2025) the requirement is a minimum base gasket thickness of .070" and a maximum thickness of .077". With OEM Cast Iron lined cylinders (1999-2006) the requirement is a minimum base gasket thickness of .070" and a maximum thickness of .085". This is all dependent as to which era of cylinder head is chosen to use.
3. TXM Motorsports Base Gasket Kit - Garlock Performance Blue-Gard 3000 material - 1 piece .065" thickness and 1 piece .015" thickness stacked together per cylinder.
ASA Custom Fabrication Gasket Kit (readily available thru Adrian and Brent Kemps) - Cometic Gasket material - 1 piece .015" thickness, 1 piece aluminum .050" thickness, and 1 piece .012" thickness stacked together per cylinder.

Ignition

1. Must be OEM only and of the 4 possible CDI's configurations for the EC55PM(A) engine.
 - 1999-2002 small plug CDI (known as XCF style)
 - 2002-2003 big plug CDI (known as Pro x style)
 - 2003-2007 8 plug P.E.R.C. style
 - 2008-2019, 2022-2025 6 plug P.E.R.C. style
 - 2020-2021 8 plug P.E.R.C. style (discontinued from Polaris)
2. CDI - cannot be opened or reworked/reflashed in any way. This is not allowed.
3. Must use OEM flywheel for each model year of CDI that is used.
4. Stator - no rewind stators. OEM or aftermarket equivalent and readily available.
5. Flywheel - cannot be altered in any way from OEM manufacturers design.
6. Fan blades - cannot be removed or machined.
7. Coil, caps, and wires are to be OEM or aftermarket equivalent and readily available.

Cylinder Head

1. OEM cylinder head with EC55PM or EC55PMA casting mark.
2. May have a single cut in the exact center of the head to allow for better servicing of the engine, by being split into 2 pieces.
3. No welding of gasket surface area or spark plug sealing surface area.
4. Air cooling fins may be welded for the purpose of repairing damage only.
5. Welding repairs must be reported to technical director and may be subject to having the motor checked prior to the next event.
6. Only the cylinder head gasket and squish band surfaces are to be machined to achieve the following specifications.
7. Head to piston squish must be measured on both sides of the piston above the pin area. Both measurements are taken and divided by 2 to get an average squish value. Squish for the early EC55PM head or later EC55PMA head is set at a minimum of .050".
8. Cylinder head compression is set at a maximum of 146 psi (hot) using a known good compression test gauge.
9. Minimum combustion chamber volume is set at 27.0cc for the Nikasil cylinders and 26.0cc for the Cast Iron cylinders. Validated by the use of a Barrett style tool.

Crankshaft Seals

1. May be OEM or an exact replacement from aftermarket suppliers and be readily available.

Crankcase

1. The 550cc Spec Engine can use either the OEM EC45PM or EC55PM(A) cases.

2. Liquid Case sealant is your choice / open.
3. Crankcase base gasket surface cannot be welded or machined.
4. Cases can only be welded or machined for the purpose of repair from damage.
5. Oil injection pump and gear drive may be removed, and the case opening sealed by a cover made from a material of your choosing.
6. Oil line brass injection nozzles may be sealed up, but must NOT be removed.

Crankshaft and Rods

1. Must be an OEM part only. Absolutely no substitutions.
2. Crankshaft bearings and connecting rods may be OEM or substituted with aftermarket parts, but must be exact replacements for OEM and be readily available. Must be the same alloy used by the OEM.
3. No rod resizing allowed, that would allow for larger or smaller bearings to be used.
4. No offset crank rod pins allowed.
5. No ceramic style ball bearings or polymer style cages allowed.
6. No coatings can be applied to the bearings or crankshaft parts.

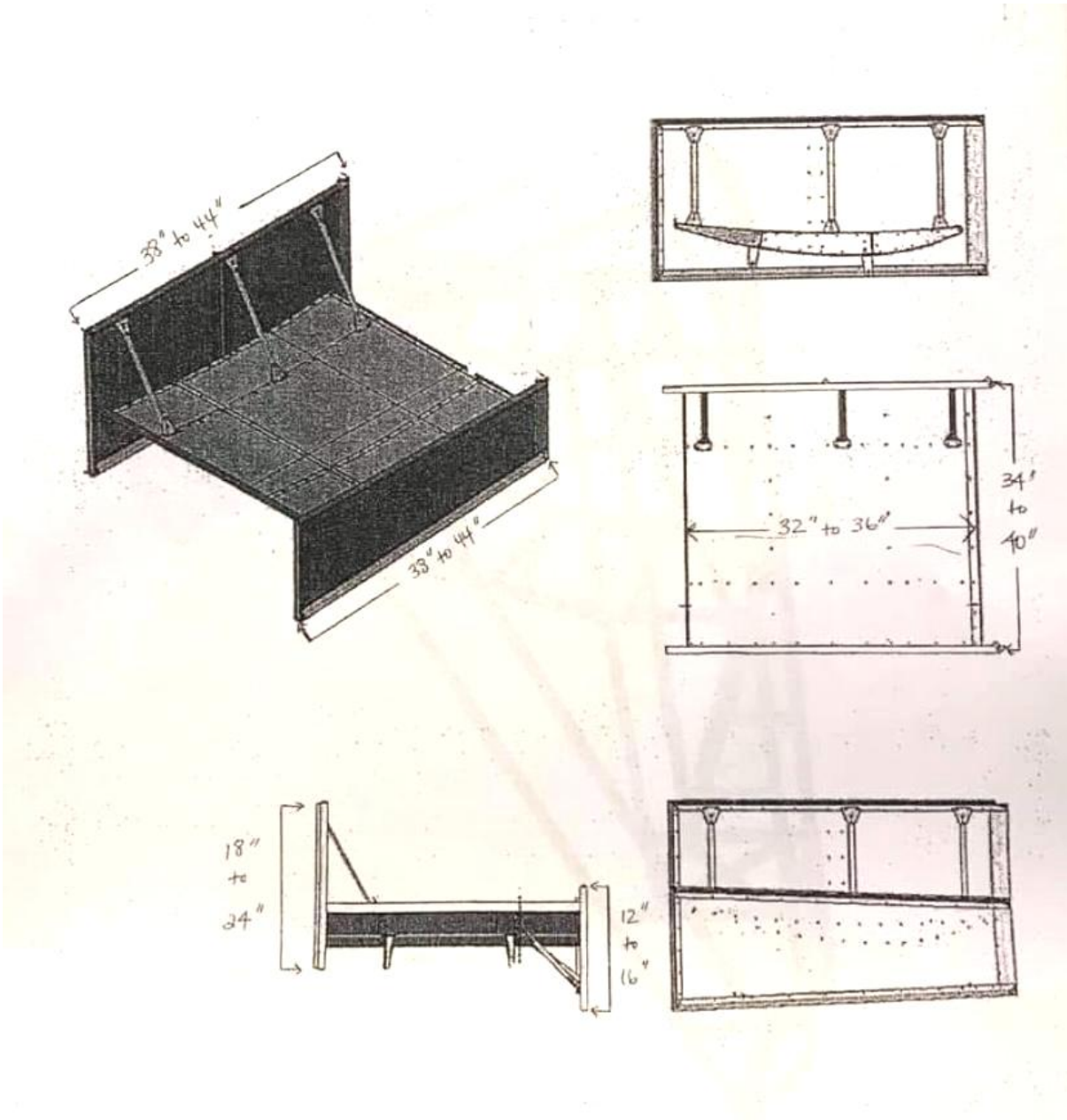
Cylinders

1. EC55PM cylinders only. Can be early EC55PM with Cast Iron liner, or later EC55PM(A) Nikasil cylinders.
2. Re-sleeving is allowed but will be inspected diligently, if deemed questionable, they will not be allowed to be used.
3. If early Cast Iron liner EC55PM cylinder is used, it can be bored to a maximum of .040" oversize (**largest OEM or readily available aftermarket size**).
4. No over boring of Nikasil cylinders allowed.
5. No removal of any material in any way to the intake or exhaust tract of either style of cylinder.
6. No excessive chamfering to ports on stock or bored oversize cylinders allowed.
7. Early EC55PM cylinders with decompression ports may have opening closed off, done from exhaust side only.

NOTE: in the spirit of equalizing competition, changes may be made to these rules as required. All drivers, car owners, and/or teams will be advised of any rule changes in advance.

Non-compliance with the specifications outlined herein may subject violating driver to disqualification, loss of money, points, and possible suspension.

All decisions by the series promoters and technical directors will be final. All rules are subject to the interpretation and judgement of the officials in charge. All equipment not governed by the rules is to be submitted for approval prior to usage. No equipment will be considered approved by reason of having passed technical inspection unobserved. Rules apply to all race events.



Wing Specifications Diagram