2020 Super Late Model Rules

Updates for the 2020 season are in blue text

The Unified Northern Drivers Racing Association (hereby known as TUNDRA) Super Late Model Series works close in conjunction with the Unified Motorsports Association of Asphalt Racing (hereby known as UMA). *There are variances in the TUNDRA rule book to promote competition as a traveling series. Please note these variances when attending events.*

General
These rules and regulations are designed to govern driver and crew member conduct during TUNDRA racing events. By participating in these events, all drivers are required to comply with these rules. While TUNDRA makes no claim of guaranteed safety, these rules are enforced as a guide for the conduct of the sport. TUNDRA is in the entertainment business. Drivers, Owners, Crew and TUNDRA Staff cooperate to provide this exciting level of entertainment. All rules, race scheduling and structure, are designed and implemented to support a balance between competition and entertainment value. Drivers and crew are required to conduct themselves as professionals at all times. TUNDRA may change any rule at any time in an effort to reduce the cost of racing, maintain equal competition, or improve safety.

Procedural Rules: *See TUNDRA Procedural Rule Book.*

Rules Infraction Policy: TUNDRA Management may suspend or fine any driver, team member, or car owner for violation of track rules, policies, or procedures. Management has right to confiscate any item that is in violation of the rules.

1. ELIGIBLE CARS & BODIES
1a. TUNDRA allows the Five Star New Late Model Body (now named the ABC NextGen Body) for competition with no weight penalty. Body must be mounted to Five Star/TUNDRA Referee specifications with allowances same as traditional roof Five Star/TUNDRA body rules. No trimming of front nose, must remain full length as manufactured. All competing cars will be full-sized, stock American manufactured passenger car bodies that conform to the current TUNDRA/Five Star Body rules are allowed, 2009 or newer. The Five Star Referee will be the official method of body including tread width. Refer to rulebook body guidelines posted at http://www.fivestarbodies.com No attempt to get any aero advantage allowed, panning of nose or sides, windows, side skirts, noses, tail panels, etc. Five Star Bodies or flat 12 inch side vent windows only, 3 window braces front and 2 rear window braces, must be approved. Clear polycarbonate quarter panel windows with a minimum thickness of .090 inch must be used in all cars. No cutting, lightening, or excessive trimming around windows or drilling of holes in any body panels or windows to exhaust air. No panels allowed to extend tops of doors, add to TUNDRA/Five Star Rules MEASUREMENT “A" Must be a minimum of 11.5 inches and nose measurement must be 20 inches minimum from hood to bottom of the nose. Right side door inner panel must drop down from the door and must be official approved. Body measurements based on 4” blocks front and 4”blocks rear.

1b.SPOILER-All spoilers will have a minimum 3/16" thick clear polycarbonate blade with no lettering and a maximum width of 60” measured across back of spoiler and maximum blade height of 6.5”. Spoiler must be centered on bumper cover with each blade measuring maximum of 29-3/4”with a minimum 1/2 inch to maximum 5/8 inch split in the center to accommodate the centerline template. Minimum spoiler angle - 55 degrees. Rear bumper cover; top height 34-7/8” max at base of spoiler on centerline; max spoiler height is 41.5”on 4” blocks. Rudders or forward mounted brackets will not be permitted.

1c.WHEELBASE: Wheelbase 103” plus or minus 2” **Minimum wheelbase allowed is 101”**

1d. TREAD WIDTH-Front and rear tread width is a maximum of 66”. (Over 66 inch's Not Allowed) (No weight reduction allowed for less than 65”). Measurement taken with frame height set no lower in front than 3.5”on left side and 4” on right side.

2. ENGINES
Officials and appointed participants retain the right to adjust weight rules to promote competition among motor combinations. Engine Certification thru Wegner Automotive guidelines.
(Any Engine not listed could be certified by the TUNDRA/UMA for competition)
2a. All part numbers must remain on all engine parts
2b. No engine parts may be composite.
2c. Block must be cast iron. (Exception: Pre-Approved spec engine)
2d. No 18 degree or SB-2 Chevrolet heads. (unless approved by TUNDRA/UMA Certification)
2e. Antifreeze is strictly prohibited

2g. ENGINE LOCATION
All engines must be located so that the center of the furthest forward spark plug is no more than 4-inches behind the front axle centerline. All Engines allowed up to 4-inch engine set back. All engine location measurements will be made with the frame height set at 3.5” front and 4”rear. Out of tolerance engine setback cars may be subject to a weight & or points penalty & or fine.

3. ACE TYPE ENGINES
A. Must be able sell heads, complete for $2500.00 (hardware, valves, valves springs, retainers, keepers and guide plates.) Heads must be stock out of box.
B. Valves 11/32 valve stem or 5/16 valve stem may be used.
C. No titanium valves allowed.
D. All valve spring sizes must be 1.55 max.
E. No shaft rocker arms allowed except on Mopar engines.
F. Steel or titanium valve spring retainers are permissible.
G. Maximum 4 stage oil pump.
H. May have one extra water line per head.
I. Valve job may be blended into combustion chamber 3/8 inch from seat.
3a. ACE ENGINE MANIFOLDS-Any production type intake manifold allowed - provided it is readily available to all competitors from local race part suppliers. (max cost $375.00) maximum height of manifold is 7.25" (including any carb spacer and gaskets) the manifold height will be measured from the base of carb to top of cylinder block. Only one flat gasket with a maximum of .120 may be used between intake manifold and cylinder head - no spacer or wedge type gaskets allowed. No additional material

may be added to manifold. No grinding or polishing of any part of the manifold except you may match port the runners a maximum of 1".
3b. ACE ENGINE PISTONS-Flat top pistons only - no part of piston may protrude above top of cylinder. (maximum) compression ratio 10.5 to 1 (10.510 is illegal). Maximum engine displacement for GM and Ford is 362 c.i. inches, Dodge will be 362 c.i. and minimum 350 c.i. for GM, 346 c.i. for Ford.
3c. ACE ENGINE CAMSHAFT-The max lift on any roller cam is .625. Duration rule is 270 at 50 thousandths. No mushroom type lifters. Inlayed cams are prohibited. The maximum rocker ratio is 1.6 to 1. Rev kits of any type are prohibited. Only steel push rods (titanium, aluminum or graphite are prohibited). No roller bearing camshaft journals. Magnetic steel lifters no ceramic.
3d. ACE ENGINE CONNECTING RODS-Only approved steel rods allowed. No titanium, aluminum, graphite or stainless steel. Rods using 3/8" bolts are allowed.
3e. ACE ENGINE BLOCKS-Must be standard factory production cast iron. (Only 010 or bow-tie approved). No aluminum blocks permitted. No altering of engine block permitted. Absolutely no griding or lighting of blocks. The use of aftermarket blocks will be allowed in Ace engines. The engine builder must be on the approved engine builder list. No big bore short stroke ace engines will be allowed. No carbon composite or light weight blocks allowed.
3f. ACE ENGINE CRANKSHAFT-Standard steel type only, minimum allowed weight of 43 lbs. (or stock type for block used) stock angle crankshaft allowed. No Honda journal crankshafts. Stroke 3.400 min to 3.500 maximum. LS firing order may be used. Minimum 1.980-rod journals or any under sized journals under factory dimensions.
3e. ACE INSPECTION-A 1.5” plug must be installed in the oil pan for inspection purposes. This hole must be directly under or side of the rod journal. If a windage tray is used, a hole must be provided in line with the hole in the oil pan. Cylinder head removal after any race may be required for inspection purposes.

4. (9 to 1) ALUMINUM HEAD ENGINES
4a. ENGINE BLOCK- Block must be cast iron: (Exception: Pre-Approved spec engines)
No carbon composite or light weight blocks allowed. Must be stock appearing.
4b. CRANKSHAFT-Standard steel type only, minimum allowed weight of 38 lbs., stock angle crank shaft allowed.
4c. PISTONS-No part of piston may protrude above top of cylinder. 9 to 1 aluminum headed motors will have a 9.5 to 1 compression ratio (a ratio of 9.51 to 1 or higher will not be allowed).
Maximum engine displacement of 362 c.i. and minimum 347 c.i. aluminum headed motors may use dished or inverted dome pistons.
4d. CONNECTING RODS-Only approved steel rods allowed. No titanium, aluminum, graphite rods or stainless steel are allowed.
4e. CAMSHAFT-Only steel push rods (titanium, aluminum or graphite are prohibited). 9 to 1 aluminum headed engines are allowed roller cams and rev kits.
4f. CYLINDER HEADS-All cylinder heads must be approved by TUNDRA/UMA and all modifications must be submitted to the TUNDRA/UMA before any proposed modifications will be approved. All cast in part numbers must remain unaltered. Painting and /or coating of the heads will not be permitted. No 18-degree GM heads. Heads that are already approved are on file with the TUNDRA/UMA Officials. All other heads must be approved prior to any competition by TUNDRA/UMA Official. For all 9.5 compression motors the cylinder heads must be acceptable to TUNDRA/UMA officials and meet the following requirements: Only steel or titanium valves will be permitted. Only magnetic steel valve springs will be permitted and only 2 valves per cylinder will be permitted, there are no valve size restrictions. Internal polishing and porting will be permitted. Spark plug holes must remain in stock

location. Valve angle must remain within 2 degrees of stock angle; valves must remain in the stock location in relation to the cylinder bore center line.

4g. INTAKE MANIFOLDS-No fabricated intakes must be made of aluminum. Only one flat gasket with maximum of .120 may be used between intake manifold and cylinder head. No spacer or wedge type gaskets allowed. May be polished and ported. Directional devices will not be permitted inside the intake manifold. Air holes will not be permitted to be opened in the intake manifold. Painting and /or coating of the intake manifold will not be permitted.

5. GM 604 CRATE ENGINE-(P/N# 88958604 or 19318604) The 604 Crate must be used as produced from factory with up to 4"maximum set back. Motor will be allowed one Holley 4 bbl 650 cfm carburetor #80541-1(with no modifications) and one .065 single paper gasket allowed with no adapter plate or spacer. All crate engines may not be altered from factory specs. Maximum timing is 34 degrees and must use a 6400 RPM chip; maximum compression can never be greater than 9.6:1. Any evidence of tampering with engine components will result in disqualification, confiscation, fine, and suspension for balance of season. TUNDRA/UMA Tech staff reserves the right to impound motors for inspection or dyno testing. Any updated crate engines will weigh 2750lbs. Weight adjustments may be made to retain competitive balance.
5a.UPDATED GM CRATE ENGINE-Crate engine with any or all of the following updates or any rebuilt crate engine will have a base weight of 2750lbs. Specific updates are; 1.6 rocker arms, Small Harmonic Balancer. Maximum compression can never be greater than 9.7:1. Maximum timing is 34 degrees. TUNDRA/UMA authorized rebuilt crate engines must be done by a certified rebuilder. Weight adjustments may be made to retain competitive balance.

5b. REV LIMITING CHIP-The use of a 6400 Rev Limiting Chip will also be used. TUNDRA may change chips at random and may check chips at any time. All wiring must be sealed. No unplugged wiring. All ignition boxes must be mounted on the passenger side, in plain view, and out of reach of the drive and all wires to the distributor must be run separately and not part of a bigger loom or wiring harness. Noncompliance to any of the above statements will void you from having a TUNDRA/UMA Certified Engine and the weight for a TUNDRA/UMA Certified Engine

5c. CARBURETOR GM 604 CRATE-1-Holley 650 CFM 4150 HP carburetor, part number 80541. Carburetor must be securely fastened to the intake manifold and fully operational of all 4 barrels and include one (1) .0625-inch (1/16") or smaller flange gasket. Drop-in spacers, alteration, physical changes, machining, re-shaping or tampering with any part of the original parts, internal or external, is prohibited. Following is a listing of tuning and replacement parts permitted for use on the Holley 4150 HP Carburetor. Only genuine Holley replacement parts are permitted and must match exactly parts replaced. a. Jets b. Bleeds c. Needle and Seat d. Emulsion bleeds e. Power Valves f. Accelerator pump nozzles g. Accelerator pump cam h. Floats include all offered by Holley for the HP 4150/650 CFM Carburetor i. Floats maybe modified/angel cut. The use of any type Epoxy on the Holley 650 CFM 4150 HP carburetor, part number 80541-1 is prohibited. Coating of any type or the use of coatings on the Holley 650 CFM 4150 HP carburetor, part number 80541-1 is prohibited.

5d.CRATE HEADERS-Any header with MSRP of less than $450.00 maybe used. No Try Y headers will be allowed. No merge collectors. A header will consist of all parts inclusive to the final exhaust pipes. Exhaust must exit behind driver and meet 100 decibels Maximum at 100 feet. Mufflers are highly recommended are not to be tampered with or hollowed. Any collector may be used without a cone style inserts. No one off custom header allowed. Mufflers are Mandatory for Exhaust that exits from door

must be flush and must have door flange and mounted flush to door. Any car not meeting the 100 decibels will add 25 lbs. minimum for the night & issue be rectified before next event.

6. SOUTHERN SUPER PARTS ENGINE (SSPE) (May be Claimed for $21,000 plus pulling fee)
6a. SSPE Cylinder Heads-Listed Brodix Cylinder Heads only. Heads may be surfaced to achieve proper compression ratio. Absolutely no other work of any kind will be permitted to the intake ports, exhaust ports, or combustion chambers. Ford part #: SP STS T-1 F STD 225-SSPE. Must retain minimum valve angle of 20°. Chevy Part #: SP STS T-1 STD 227-SSPE. Must retain min. valve angle of 21°. Multi-angle valve job permitted. Absolutely no blending of valve job below valve seat permitted. Chamber must retain shape 3/8" above valve seat. Minimal blending due to multi-valve jobs permitted. Maximum valve size: Intake 2.08", Exhaust 1.60", Stem size 11/32". Intake valve may be titanium or stainless steel. Exhaust must be stainless steel. No Titanium valve springs permitted. Maximum racer cost: $425.00 per set. Titanium retainers permitted. Lock angles not specified.
6b. SSPE Manifolds-Intake must remain stock. Absolutely no match porting or blasting of any kind permitted. Slotting of bolt holes, water lines and matching of sides allowed. Ford part #: Edelbrock 2928, 2929, or 2934 only. Chevy part#: Edelbrock 2814 or 2892 only.
6c. SSPE Pistons-Maximum Engine displacement is 362 cubic inches. Maximum compression ratio is 11.5:1 with +.5 tolerance. Any flat top piston permitted with 927 wrist pin and .043 x .043x 3mm ring package only. Pistons must not extend out of the top of engine block. Maximum racer cost of $1400.00 per set.
6d. SSPE Camshaft-Camshaft must be Competition Cam Part #: 21151712. Camshaft must be installed on 104° intake centerline +/- 1°. Roller lifters, maximum racer cost of $700.00 per set. Maximum lift of .715" while using 1.6 rockers checked at valve with zero lash. Maximum 1.6 rocker arm racer cost of $1,500.00 per set. Magnetic-type push rods only. No keyway guided lifters permitted.
6e. SSPE Connecting Rods-Connecting rods: Minimum rod journal size 1.850". Absolutely no pistonguided rods permitted. Maximum racer cost of $1400.00 per set. No titanium rods permitted. Minimum rod weight 560 grams.
6f. SSPE Blocks-Cast Iron engine blocks only. 23g. SSPE Crankshaft-Crankshaft must have a minimum weight of 40 pounds (with front timing pulley or sprocket). Minimum main size Chevy 2.300/ Ford 2.250. Maximum advertised racer cost of $1400.00 23h. SSPE MISC-Maximum 5 stage dry sump oil pump permitted. Maximum racer cost of $1,250.00. Oil pan must have 1" inspection hole. Absolutely no sectional pans permitted. Open box pans only (NO windage tray / scrapers etc.). Maximum racer cost of $550.00. 14. Ignition System may only be FAST Ignition part # 6000-6701. Mount on right side of car dials point out the passenger side. The mag positive & negative shall be a maximum length of 62 inches. Must be remain uncut or spliced and on top of dash in clear view. Mandatory 8000 RPM Rev Limiter must be installed and fully functional. Absolutely no crank trigger pickups permitted. Cylinder head removal after any race may be required for inspection purposes.

7. CARBURETORS
7a. All cars will use **Holley 4412 style 2bbl** approved carburetor.
(**Exception** 604 crate & 5.3LS may use Holley 650cfm 4bbl 4150 HP carburetor, part # 80541)
All 4 barrels of Holly 650cfm must be fully operational at all times, no secondary's disconnected
7b. The HP or parts may also be used. **The Ultra series will not be allowed.**
7c. All carbs must pass all TUNDRA gauges and specs.
7d. Boosters must be stock appearing and as cast for carbs style and no extra holes may be drilled. May not be tapered. Must also be in stock location in body. No modifications of boosters allowed.
7e. These parts must be TUNDRA gauge legal. Throttle bores, Boosters and Booster legs

Throttle plates, Throttle shafts, Main body. Metering blocks must be stock as cast for carb style and no extra holes may be drilled. Block may be plugged and may be machined but must remain stock appearing no aftermarket blocks.

7f. HOLLY 650 CFM 4150 HP CARBURETOR-(allowed on 604 Crate & 5.3L LS Only) part number 80541. Carburetor must be securely fastened to the intake manifold and fully operational of all 4 barrels and include one (1) .0625-inch (1/16") or smaller flange gasket. Drop-in spacers, alteration, physical changes, machining, re-shaping or tampering with any part of the original parts, internal or external, is prohibited. Following is a listing of tuning and replacement parts permitted for use on the Holley 4150 HP Carburetor. Only genuine Holley replacement parts are permitted and must match exactly parts replaced. a. Jets b. Bleeds c. Needle and Seat d. Emulsion bleeds e. Power Valves f. Accelerator pump nozzles g. Accelerator pump cam h. Floats include all offered by Holley for the HP 4150/650 CFM Carburetor i. Floats maybe modified/angel cut. The use of any type Epoxy on the Holley 650 CFM 4150 HP carburetor, part number 80541-1 is prohibited. Coating of any type or the use of coatings on the Holley 650 CFM 4150 HP carburetor, part number 80541-1 is prohibited.

8. CARB ADAPTER (SPACER) RULE: 1-1/8" max thickness w/gaskets. Original orientation required. Adaptors are one piece only. Tapered or Beveled Adapters Allowed. All Sealed Engine Packages must use builder certified adapter specific to approved engine package. **LS Spec Engines 5.3L must use Wegner #WA0349 adapter only for the Holley 4412 2bbl. (This Does Not Apply to Crate Engine Packages)**

9. FUEL AND FUEL CELL

9a. No oxygen bearing or performance enhancing additives may be introduced into the inductions or fuel supply, either at the fuel cell or upstream in the system.

9b. Violations will result in immediate disqualification from the event; forfeiture of owner and driver points, and monies/contingencies earned for the event. A series fuel to be determined will be mandatory at all events. Ethanol (E-85) will be permitted on a test basis only. Fuel cells with rubber bladders fuel cell plates or fuel cell tubs are mandatory. Teams are responsible to verify that fuel cells and bladders are up to date and in good condition.

9c. Fuel cell must be mounted behind quick change cover, between frame rails. No part of fuel cell can be ahead of the quick change rear cover. "U-shaped" fuel cells designed to wrap around the quick change are allowed, but must be moved back from "normal" position so all parts of the cell are behind the quick change cover. Front side of cell is to be no closer than 11" to the back of the rear end tube.

9d. Fuel cell must be banded both ways with two steel straps each way. 1-inch minimum straps. Fuel cell can 1/8 thick steel with one-inch lip. Front, bottom and rear will be one piece. The top of the box will use current 18 or 20 gauge top with 1 inch by 1/8 steel straps with two in each direction. All fuel cell cans must be magnetic steel.

9e. All fuel cells must have check balls in place.

9f. Racing pump fuel only any over the axle style rear tail style chassis must use approved 1/8 inch magnetic steel fuel cell can. Any chassis with incorrect fuel cell can, will be asked to change or be disqualified. The cell must be bolted in with a minimum of 14-3/8 bolts with flat washers on top and lock washers on bottom. The top for this cell will be 18 ga steel with steel straps in both directions.

9g. Fuel cell minimum height 10 inches; Fuel cell height will be measured based on TUNDRA/UMA certified 3-1/2" blocks in the front and 4" blocks in the back. Any car not meeting the 10" Minimum Height will add 25lbs minimum for the night & issue be rectified before next event.

10. EXHAUST SYSTEM-TUNDRA Super Late Models must meet a rating of 100 decibels Max @ 100FT. All exhaust highly recommended to exit under car to meet this requirement. Mufflers are highly

recommended are not to be tampered with or hollowed. Any collector may be used without a cone style inserts. No one off custom header allowed. Mufflers are Mandatory for Exhaust that exits from door must be flush and must have door flange and mounted flush to door. Any car not meeting the 100 decibels will add 25 lbs. minimum for the night & issue be rectified before next event.

11. WEIGHT COMBINATIONS

11a. All cars will be allowed up to a maximum left side weight percentage up to 60%

11b. All added weight must be solid LEAD OR STEEL no tungsten. Must also be painted White with car numbers on weights. Lead must be in solid blocks.

11c. Drivers may not drop more than 75 lbs from one race to another with engine/weight combination switch. A driver that is part of a "team" also may not drop more than 75 lbs when substituting for another driver.

Engine-Weight Chart / Gas allowance is one half pound per lap.

WEIGHT	Approved Engines	CARB ALLOWED	RPM CHIP	NOTES
See Below*	**GM Certified 604 Crate**	**Holley 650cfm 4bbl 4150 HP part # 80541**	**All tracks w/6400 Chip**	
2750	**Non-Certified or updated 604 Crate**	**Holley 650cfm 4bbl 4150 HP part # 80541**	**All tracks w/6400 Chip**	**All Tracks**
2700	**LLM Big-8 Concept w/LLM Shocks**	**Holley-4412 500 cfm 2bbl**	**-**	
2700	**Wegner 5.3L sealed engine**	**Holley-4412 500 cfm 2bbl**	**All tracks w/7600 Chip**	
2750	**Wegner 5.3L sealed engine**	**Holley 650cfm 4bbl 4150 HP part # 80541**	**All tracks w/7600 Chip**	
2750	**ACE Engine**	**Holley-4412 500 cfm 2bbl**	**-**	
2750	**9 to 1 aluminum engines**	**Holley-4412 500 cfm 2bbl**	**-**	
2750	**Mcgunegill sealed engine**	**Holley-4412 500 cfm 2bbl**	**All tracks w/7600 Chip**	
2750	**TESAR sealed engine**	**Holley-4412 500 cfm 2bbl**	**All tracks w/7600 Chip**	
2750	**Hamner sealed engine**	**Holley-4412 500 cfm 2bbl**	**All tracks w/7600 Chip**	
2750	**Wegner 6.0L sealed engine**	**Holley-4412 500 cfm 2bbl**	**All tracks w/8000 Chip**	
2750	**SSPE**	**Holley-4412 500 cfm 2bbl**	**All tracks w/ 8000 chip**	

*GM Certified 604 crate weights for 2019 TUNDRA events

- WIR – 2550
- Marshfield – 2600
- State Park – 2650
- Jefferson – 2650
- Golden Sands – 2650
- Dells – 2600

(Any Engine not listed in above chart could be certified by the TUNDRA/UMA for competition) Certification standards will determine whether weight is added or subtracted to any given engine combination. Certification process is performed by Wegner Motorsports Inc. in Markesan WI. Unlisted engine packages not in above chart will have a weight of 2850 with a 4412 2-barrel carburetor unless the certification process for competition has been completed as described above. Unlisted engine packages will be handled on a case by case basis.

12. AIR INTAKE/AIR BOX/RADIATOR/COOLING

12a. Air intake boxes are permitted for the carburetor with cowl inlet only. The back of the cowl induction box must be flat or must be stock Five Star or AR part. No additions to or devices for directing the flow of the air into the air cleaner or air cowl intake box are permitted. You may not grab or funnel air into air intake box in any fashion. No type of forward air intake allowed. Air cleaner is mandatory to act as a flame arrestor. No additives allowed in air filter.

12b. Radiator mounted in front of engine, between frame horns.

12c. Fan protection required and overflow tank recommended.

12d. Water pump must be stock type in stock location. Electric water pumps are NOT allowed.

12e. Antifreeze is strictly prohibited.

12f. Standard opening for the grill screen area only as approved for ABC manufacturers' production, must be maintained at all times. Only ABC approved manufacturers' mesh screen may be used for the radiator opening in the nose with a minimum of 3/16" stainless mesh.

12g. Tape may NOT be used on the radiator grill opening and/or brake ducts in the nose at anytime. Tape is not to be used anywhere on the car to control the flow of air or to seal/secure seams between any body panels or spoiler blades (unless approved for repairs).

12h. The duct work between the nose and the radiator may be no wider than 29" at any point and also must not be any wider than the radiator at its connection point. The duct work shall consist of a one piece flat bottom and the sides and top panels may be either flat or curved construction. The smallest (narrowest) vertical dimension point of the side panels is 4 ¾" in height and the narrowest across dimension of the top panel is 21 ¼". The interior of air box between nose and radiator shall be clear of any added devises or obstructions that interrupt deflect or obstruct incoming air to the radiator. Openings for brake cooling ducts are permitted off of the sides of air box but may not extend into interior of duct work. A Five Star C-5 air flow plastic duct or Bump-N-Run bag product or AR Body EZ Max plastic duct system may be substituted in lieu of conventional aluminum duct work. No Carbon fiber allowed in this process. No types of under-body air deflectors allowed. Approval of any design of air box duct work shall be the decision of tech officials and/or competition director.

13. CLUTCH

13a. 5.5 inch or larger will be the only clutch allowed. Max price MSRP. $1600

13b. Absolutely no carbon fiber or poly clutches allowed.

13c. Bell housing must have a minimum 2 1/2" hole at bottom (to allow a clear view of clutch).

13d. Only standard material clutches allowed. No Slipper or Centrifugal clutches allowed.

14. TRANSMISSIONS

14a. Bert or Brinn style transmissions are allowed.

14b. No bottom load transmissions.

14c. Must have two forward and 1 reverse working gears minimum.

14d. One single lever shifter. No push or pull rods.

14e. Must be self starting

14f. Transmission shaft drop offset minimum of 5"(using a straight edge measured from the bottom of transmission to the center of the tail shaft)

14g. The transmission area will continue to be monitored, we encourage teams to NOT buy the latest options as they will likely NOT be allowed in the coming seasons.

15. BRAKES
15a. All cars must have functioning brakes on each wheel.
15b. Maximum 4 piston brake calipers.
15c. Fixed mounted or floating rotors only. Steel rotors only. No Carbon Fiber or aluminum rotors.
15d. Maximum MSRP $500 limit on brake calipers
15e. All air for brake blowers for front wheels must be taken from nose or radiator air box only, may not pull air from under car at any time. Max 2 per each wheel. Air must only be blown on brake rotors. Ultra-cool Fans may also be used. Carbon Fiber fans are not approved.
15f. Knob-type brake bias adjusters are allowed.

16. SHOCKS
16a. Maximum cost on racing shocks is MSRP $850 for a complete unit
16b. All conventional type other shocks that are now in use may be used.
16c. One shock and spring per wheel and or corner.
16d. No shock blankets or covers allowed
16e. Any bump spring or bump rubber allowed.
16f. No electronic shocks permitted. Shocks must be mechanical and no part of the shock or suspension may utilize electricity. No Magnetic Shocks.
16g. Use of eliminators is allowed.
16h. Any new JRI, Ohlins, Penske, or redesigned shock body from these companies will not be allowed in competition. The limit on shock cost will stay the same or as listed above. Conventional shocks now in use: Afco, Bilstein, Integra, Koni, Pro, QA1 Any other shock will need official approval before use in Competition. Any of these companies making new products not in use at this time as of 12/15/18 will also have to be approved. 4 way adjustable shocks will be closely monitored & are subject to change at tech discretion. Any driver using shocks that are double adjustable or less (on all four corners) will be given a 25 lb weight break beginning in 2021.

17. ROLL CAGE CONSTRUCTION-The following is the minimum specification requirements for roll cage construction approved for TUNDRA/UMA competition. TUNDRA/UMA officials reserve the right to sonic test any or all, structural chassis members at any time during a sanctioned event. Structural chassis member(s) found in violation of minimum requirements render that chassis ineligible for competition until minimum standards are met or exceeded. Drilling holes to lighten any part of the body, chassis, suspension or bolts is not permitted. Only steel round; rectangular or square tube is approved for roll cage or chassis construction of any main or supporting substructures. Wall thickness; size and/or diameters are specified where necessary. A four-point (4) roll cage structure utilizing a minimum 1.75-inch x .090-inch (1-3/4”x.090”) od d.o.m. steel tubing is mandatory. The entire structure must be welded to the primary frame structure with a minimum of four (4) horizontal driver side door bars. A minimum of 2” x 3” x .095” wall steel tubing is mandated for main frame rails. Main frame rails are identified as midsection rails. Main frame rails and side rails must be located within the normal tread width of the car. A minimum of 2” x 3” x .083” wall steel tubing for front clip rails, rear clip kick-up rails need to be a minimum of 2”x2” square x.083” wall. No material substitution permitted. Roll cage structure must be braced to the front frame stub, with the hoop section surrounding the engine compartment; running rearward with diagonal member’s connection to the rear frame section. Nose, right side kick outs and rear bumper cover supporting structures must be a minimum 1.500-inch x .063- inch OD steel tube. No material substitution permitted absolutely no aluminum allowed on the structure of the chassis.

18. DRIVER SIDE DOOR PLATES

1. Left side driver support bars or plates are mandatory.
2. No material substitution is permitted.
3. All support bars or plate installation is subject to approval.
4. All plates must be steel.

See options listed below Plan A or Plan B

Plan A – 0.125-inch, 1/8" solid steel plate bolted to the left side door portion of the roll cage. Doorplate must be bolted to the roll cage using a minimum of six (6) each 3/8" (.375-inch) aircraft quality bolts and washers. Welding of the plate to the roll cage is prohibited.

Plan B – minimum 0.125-inch (1/8") thickness steel plate must be welded to the space between each left-side door bar. Offset chassis right side door bars commonly called the outrigger or the kick-up bar, must be constructed of a minimum 1.250-inch x .065-inch wall round or square steel stock. Front of outrigger bar must go to right front frame behind right wheel. All supporting substructure must be constructed of 1-inch x .063-inch wall round or square steel stock. No material substitutions permitted.

19. DRIVESHAFT

The drive shaft shall be made of steel or aluminum only. Carbon-fiber drive shafts are not permitted. Containment hoops (2 required), constructed of a minimum 0.1875-inch thick steel, are mandatory and the forward hoop Must be 4-5 inches minimum behind front yoke.

20. SUSPENSION

20a. Coil over or leaf style suspensions only.
20b. No computer or hand operated controlled suspension.
20c. No titanium axle shafts allowed.
20d. No cantilever, wishbone, or torsion type suspensions allowed.

21. FRONT SUSPENSION

21a. Independent front suspension with articulated upper and lower control arm(s) is mandatory.
21b. Type of shock absorbers and suspension springs are optional. One (1) shock absorber and spring per corner of the car is permitted.
21c. Front suspension adjustment must be done from under the car or by lifting the hood.
No holes in the hood, fenders or other body parts from the windshield forward to adjust front suspension component(s) are permitted.
21d. No suspension adjustment devices are permitted in the driver's compartment area or in reach of driver at any time in car. Weight transfer or suspension adjustment devices, adjustable while the car is under way are prohibited.
21e. Spring rubbers are permitted and must be removed manually. No removal devices may extend outside the body of the car or be accessible to the driver in the driver's compartment.
21f. Manual or power steering may be used. No electronic power steering allowed.

22. REAR SUSPENSION

22a. Non-independent, live axle type rear suspension is mandatory.
22b. Rear ends may be quick-change, **min 10 inch ring gears**, with full-floating hubs or 9-inch Ford type.
22c. No open tube rear ends permitted.
22d. Rear axle tubes must be steel. Max rear camber is + or - 1 degree measured w/the rear axle level.
22e. Material used for rear end center section is at the discretion of the team, hub pins must be steel.

22f. Rear end coolers are allowed, all pumps used to circulate fluid for the purpose of cooling the rear end, must be mounted in the center of the car.
22g. Remote rear suspension adjusters are permitted when accessible through the rear window. A maximum of three (3) one-inch (1") diameter holes are permitted in the rear window. Each hole can allow access to one adjustment device only. No adjuster may extend forward of the rear window area.
22h. Lift bar suspensions will be permitted. No 5th Coil Suspensions, No birdcage set-ups of any kind (3 or 4 link). No part of the trailing arm mounting may freely rotate around the rear end, must be welded or bolted in place.
20i. Aluminum tubes are discouraged but allowed on quick-change, must add 5 lbs. **ON** each tube.
20f. Starting in 2020 those not utilizing a spool will receive a 50 lbs weight penalty, 2021 only a spool will be allowed.

23. WHEELS
23a. Steel approved 5 lugs wheels only, must be 15x10. 15" diameter x 10" width
23b. Wheel must be 5x5 or wide 5 pattern only.
23c. Minimum wheel weight 17 lbs. Steel wheels only permitted.
23d. Bleeder and/or pop-off valve devices are not permitted
23e. Wheel Studs and Spacers: A minimum of five (5) lug nuts per wheel, minimum 0.625-inch (5/8") solid steel nuts, showing a minimum of two (2) threads through the nut, must extend through the lug nut when clamping the wheel to the hub. Wheel spacers, if used, must be made of steel or aluminum and a minimum 6.75 inches in diameter. Shims are not permitted when mounting wheel studs to hubs.

24. SAFETY
In all matters pertaining to safety, car owners, drivers and crew members must review and educate themselves in all safety standards. It is the responsibility of the car owners, drivers and crew members to install, wear and maintain all safety equipment as specified by manufacturer's instructions. This includes, but is not limited to, helmets, fires suits, racing suits, gloves, shoes, flame-resistant underwear, flame-resistant head sock, head and neck restraint systems, driver's racing seat and safety belts. Any Safety infraction will deem the car ineligible for competition until the infraction has been repaired or corrected and the car inspected.
24a. **DRIVER SEAT-** All driver seats must be manufactured by a recognized manufacturer of seat and safety equipment, multi-layer aluminum seat and approved by TUNDRA/UMA officials. Seats must remain "as purchased and produced", no holes or other modifications made for weight reduction. Homemade seats or sprint car type seats are not permitted. Seat construction must be solid aluminum sheet material from the seat bottom to above the driver shoulder area; must be fully padded, with padded pelvis, rib and shoulder supports on both the left and right side. Exception –Lajoie seat where construction is such that rib supports are not required. A head restraint system, manufactured by a recognized manufacturer of seat and safety equipment, is mandatory and subject to TUNDRA/UMA officials approval. Bolt on systems are approved for competition. Seats must be equipped with left and right leg extensions, fully padded, running from the edge of the seat to the entrance of the foot box area. 2. Recommendation – a minimum 1/8" (.125-inch) thick steel plate be mounted on the front of backside of the rear hoop of the mid-section in front of the left rear wheel. Plate should extend from the horizontal shoulder bar downward the height and width of the driver seat. Seat may not protrude outside 4 point upright or top cage halo.
24b. SEAT BELT AND SHOULDER HARNESS INSTALLATION-All seat belt and shoulder harness systems must me SFI specification 16.1, type. Belts must be dated ***within three years of competition date***. Minimum 3-inch wide lap belt, 3-inch wide shoulder harness and submarine strap required. Belts must be anchored to roll cage or frame, Grade "5" bolts and hardware required. Shoulder harness must not

be anchored lower than 2-inches below drivers shoulder height or 10 degrees. A minimum five-point harness system is mandatory. Competitors using the HANS device may use a standard three-inch (3") or the schroth racing two inch (2") wide should strap. The Schroth Racing should strap system has been specifically designed for use with the HANS device. Schroth part numbers are profi iii-6fh; hybrid iii-h, profi iii-6h.

24c. DRIVERS HELMET

1. Helmet Snell **SA-2015** helmet or newer required.
2. SFI or Snell approval sticker must be visible for TUNDRA officials' inspection.
3. Snell "M" or D.O.T. helmets not allowed.
4. Eye protection is mandatory at all times.

24d. **LEFT SIDE WINDOW NET-**Left side driver window net is mandatory. Construction must be web-type safety net with mechanical release. Net bar must be a minimum of .1875-inch (3/16") flat steel or .375-inch (3/8") round stock and run the entire length of the window net between mounting points. Mechanical release must be welded to the front or "a" pillar end of the bar. Spring-loaded releases are not approved for competition. Driver net must be secured in place and centered in the door area and must be secured to the upper roll cage horizontal member. Window nets must drop down. Must latch on top. No Fish net style window nets.

24e. FIRE SUPRESSION SYSTEM-A minimum five-pound (5) on-board fire suppression system, 10# fire suppression with multiple discharge points is highly recommended. Cold Fire systems recommended for cockpit usage. Must have gauge in view. Must be fully charged.

24f. DRIVER HEAD/NECK RESTRAINT SYSTEM AND DRIVER UNIFORM-Use of head and neck restraint devices is highly recommended. Approved devices are the HANS device, LFT Technologies R3, Simpson and the Hutchens ii device. Driver uniform must be a multi-layer, full-coverage, fire-retardant uniform specifically designed for racing, fire retardant gloves, socks, underwear, and shoes.

24g. CARBON FIBER USEAGE-Carbon fiber for safety use only in Helmets & Hans Devices. Carbon Fiber is NOT allowed for dash, panels, duct work, bolts, brake ducks, brackets, or braces made out of this material.

25. TIRES

Tire: Hoosier 3035 Left and 3045 Right

TUNDRA strictly prohibits any altering of tires physically and/or Chemical treatment of tires (softening) not permitted. TUNDRA Officials may impound tires to check for altering and/or chemical treatment of tires. Drivers and in some cases, Owners and Crew Members, will be severely penalized if they are suspected of altering and/or Chemical treatment of tires. Fines associated with this activity will be $500 for the first offense and $1000 for the second offense. In addition, disqualification from the event and loss of prize money and points. Drivers guilty of altering and/or chemical treatment of tires will also be suspended for the next night of racing. If a driver is found altering and/or chemical treatment of tires on the last night of competition, he/she will be disqualified for that night of points and prize money and deducted of all points from the previous night of competition.

26. TRACTION CONTROL AND ON-BOARD ANALYSIS

No equipment of this nature is permitted on any car or located in the pit area of any event and will subject the team(s) to Confiscation of equipment and penalties by TUNDRA. Only one camera pointing out front windshield allowed Multiple cameras not allowed. No computer or video analysis equipment of any kind allowed. Data Logging gauges or Data recording/acquisition equipment are not allowed.

27. IGNITION-No crank trigger ignition allowed. All ignition systems must be 12 volts. Only one 12 volt battery maybe used at any time. Ignition boxes may be switched by TUNDRA officials from car to car or

swapped with TUNDRA house ignition boxes. Wiring will follow in this rule. Approved Ignition boxes. (call for others that maybe used) Crane Crane Cams Ignition Hi-6r p/n 6000-6400, or Hi-6rc p/n 6000-6700, or Hi-6 p/n 6000-6440 MSD MSD6A, MSD 6T, MSD6AL, MSD 6ALN, MSD6 Connector: the 6 wire harness must be 24" long maximum and have a female 6 pin, weather pack connector. Only one ignition box allowed in car at any time. Car maybe wired for duel boxes but must have only one box in car while on track. 2. Box must be in clear view. Must be able to remove in five minutes. Non-compliance with the specifications outlined herein may subject the participants (owner/driver) to disqualification, loss of monies and points earned at the event. Owner/driver must provide tools to remove part.

28. TITANIUM HARDWARE: Titanium bolts, brackets, braces, are **not allowed.**

29. RADIOS: All drivers must have a spotter (labeled with car number or name) in the designated spotter area during all racing events. RACEceivers are mandatory for Race Director Communications

30. TOW HOOKS: **Tow hooks on front and rear required.**

31. TRANSPONDER: Mandatory, and located 8" forward from center of rear axle.

32. CHAMPIONSHIP POINTS & MONEY Championship points will be awarded per your finishing position. If driver is disqualified, drivers behind them do not advance.

33. LOCAL TRACK VISITING EXCEPTION: Cars from local neighboring tracks/series that have similar but differing rules, and/or similar performance, may be allowed to participate during the 2019 season in the interest of welcoming competition. These cars will be granted temporary eligibility status for two weeks at the discretion of TUNDRA officials on a case-by-case basis for eligibility and rule book conformity.

34. TECH INSPECTION: All cars are subject to inspection ANYTIME before, during, or after a race; Officials reserve the right to disqualify cars, require changes, confiscate illegal parts etc. Any interference with any official(s) and his/her duties will result in an automatic disqualification, and/or possible suspension. Disqualification (except weight violation) is retroactive to ALL previous events competed in that race meet. Any driver/owner refusing to allow the track officials to inspect his car will lose points and money earned for the night. Driver must provide their own tools for inspection.