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## Section 1 – General Information

These are the official rules and car specifications for all sanctioned events of the Midwest Sprint Touring Series (MSTS). MSTS officials may need to update or alter rules at any time for the sake of an event or the sport. All decisions made by MSTS officials are final.

1. All cars entering will pay a draw fee of \$20 per show payable at draw.
2. There will be special event shows during the year that do not follow these formats. You will be informed of specific procedures. All racing programs are subject to change. Any such changes will be covered at the drivers meeting.
3. Raceceiver Radios are mandatory; we reserve the right to penalize drivers that don't run a functioning Raceceiver. No two-way radios will be allowed.
4. Transponders are required for all 2020 MSTS events. Westhold transponders will be used at Park Jefferson and are available from the track. All other tracks utilize My Laps transponders. Transponders are each team's responsibility.
5. MSTS points shall be awarded to drivers in accordance with the following schedule:

### A FEATURE POINTS

Place	Points	Place	Points
1	50	13	38
2	49	14	37
3	48	15	36
4	47	16	35
5	46	17	34
6	45	18	33
7	44	19	32
8	43	20	31
9	42	21	30
10	41	22	29
11	40	23	28
12	39	24	27

- 25 points will be awarded to all drivers that take a competitive green flag but fail to qualify for "A" feature.
- 10 points will be awarded to all drivers that make an effort to compete but fail to take a competitive green flag in Heat or Feature action.

## Section 2 - Event Procedures

1. Qualifying heat races will be held at all events. Lineups are determined by random pill draw. It is the responsibility of the driver, or a team representative to be present for the draw. Any team that fails to draw will be allowed to start at the tail of a Heat Race, but will receive no Passing Points. Only finishing points. No exceptions will be made.
2. The car count at the close of the drawing for qualifying heats will determine the number of heats to be run. The lowest number goes to the pole of the first heat race, the next lowest drawn number goes to the pole of the second heat, etc. Once pole position in each heat is filled, the next lowest number goes to the outside front row of the first heat, etc.
3. The passing point system will be used to determine starting positions in feature events (see below). The driver will receive points for passing as well as finishing position, with the eight drivers accumulating the most points from Heat Races redrawing for feature starting position. The remaining balance of drivers will go straight up by their passing point totals into "A" and "B" Feature(s).
4. Any driver failing to draw for heat races or pack racing surface (when requested) will not receive passing points, but only points accumulated through his finishing position in his heat race. In the event of a tie in passing points, the driver who first earned the points shall be aligned in front of any subsequent driver earning the same number of points (tie goes to the early heat). Passing points are figured on the posted starting grid.
5. Time Trials and/or a dash may be held at some shows.
6. A car and driver qualify as a team. Each driver can qualify only one car. No driver will be permitted to change cars after taking the green flag of his qualifying heat race without having to start at the back of assigned heat/feature. An exception to this rule will be in a two day race.
7. MSTS or their representative will advise drivers of the make-up of the number of heat races, main events, field maximum size and other pertinent information at the drivers meeting.

8. In the event a car drops out of the line-up for mechanical reasons, the balance of the field shall move straight forward. The exception being if 2 cars drop out from same row, then following cars will be crisscrossed.
9. The start will be official only upon the starter signaling with the green flag. In the event a pace car is used, all cars shall take their proper position behind it. In the event a pace car is not used, the pole car will set the pace which shall be consistent with track conditions and as required to keep the field in formation.
10. A White Line or Cone will be placed off the exit of Turn-4, at a point that the first row is on the front straightaway, for all double-file starts. The field must remain even until the front row reaches the cone or line. The Flag Man will be instructed not to throw the green flag until then. No on track warnings will be given.
11. On the initial start, any driver who advances position prior to the starter's signal when the front row reaches the cone or line will be docked two positions.
12. After one lap - the restarts will start single file – a cone may be used. The leader must start race from turn 4 cone and all cars must go outside of cone in the proper aligned order. Any car going inside of cone or hitting the cone or advancing before the cone will force a caution and will be penalized two positions.
13. Any car requiring a second push on start or restart of race will be placed at rear. The only exception is if a driver is stopped by an official. Instructions to stop will be delivered over the RACEceiver Radio.
14. Any car on or near the racing surface that delays the start or restart of any race shall be penalized one lap by Officials. A work area will be designated at drivers meeting.
15. Alternates will not be taken to fill any vacancies that occur.
16. Any car not running at a reasonable racing speed may be subject to disqualification for safety reasons.
17. Drivers will be directed on which cars are subject to scaling at the drivers meeting. Drivers must go directly to the scales. Any driver not going directly to the scales will be disqualified. The position of the scales will be disclosed during the drivers meeting. It is the responsibility of the drivers to know and understand where and how to get to the scales to avoid any penalties.

### Passing Point Scale

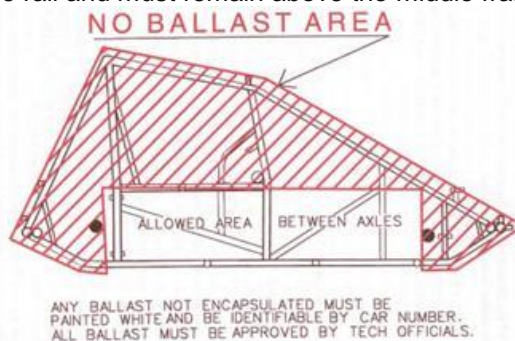
	Start											
	1	2	3	4	5	6	7	8	9	10	11	12
1	100.0	105.0	110.0	115.0	120.0	125.0	130.0	135.0	140.0	145.0	150.0	155.0
2	91.5	93.0	98.0	103.0	108.0	113.0	118.0	123.0	128.0	133.0	138.0	143.0
3	83.0	84.5	86.0	91.0	96.0	101.0	106.0	111.0	116.0	121.0	126.0	131.0
4	74.5	76.0	77.5	79.0	84.0	89.0	94.0	99.0	104.0	109.0	114.0	119.0
Finish	5	66.0	67.5	69.0	70.5	72.0	77.0	82.0	87.0	92.0	97.0	102.0
6	57.5	59.0	60.5	62.0	63.5	65.0	70.0	75.0	80.0	85.0	90.0	95.0
7	49.0	50.5	52.0	53.5	55.0	56.5	58.0	63.0	68.0	73.0	78.0	83.0
8	40.5	42.0	43.5	45.0	46.5	48.0	49.5	51.0	56.0	61.0	66.0	71.0
9	32.0	33.5	35.0	36.5	38.0	39.5	41.0	42.5	44.0	49.0	54.0	59.0
10	23.5	25.0	26.5	28.0	29.5	31.0	32.5	34.0	35.5	37.0	42.0	47.0
11	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5	30.0	35.0
12	6.5	8.0	9.5	11.0	12.5	14.0	15.5	17.0	18.5	20.0	21.5	23.0

### Section 3 - Engine Rules

1. All engines maximum 360 C.I. (2% allowance when tubing for C.I.)
2. Only ASCS Aluminum heads are allowed, or cast steel heads allowed.
3. Only 23 degree heads will be allowed. Offset rocker arms will be allowed if the offset does not exceed .250". No raised runner heads allowed. Titanium valve retainers will be allowed. Any Ford cast iron head will be allowed.
4. Any size length nozzle allowed in the injectors. Injectors: 2 3/16 inch maximum inside diameter of injector stack- 2 3/16 inch at least 3 inches in length. Note: Larger injectors may be used, but sleeves a minimum of 3 inches in length must be installed in stacks above the Butterflies. (bevels, tapers, etc. are NOT included in the 3" measurement of the 2 3/16 inch diameter restrictor). This sleeve must seal with the injector stack. No claim.

## Section 4 - Chassis Specifications

1. **Weight Rule: Weight rule is 1475 lbs., including the driver, at the conclusion of the race.** Any bolt-on weight must be painted white and the car number must be on the weight. Loss of any bolt-on weight during competition will disqualify the individual from that event. Bolt-on weight can only be added in the areas designated in the accompanying diagram. The weight must be securely attached and must remain in place during a race. It must not be moved or removed during a red flag situation. We reserve the right to disqualify any individual whose weight mounting procedure does not meet our specifications. (see illustration above)
2. Chassis pass any test prescribed by the safety inspectors. The roll cage must be of a four-post design. No dirt champ cars. No elliptical (oval shaped) tubing used on or as part of the main frame structure. Minimum wheel-base of 83 inches, maximum wheel-base of 90 inches. No pieces may be added to the frame so as to resemble, imitate or be specifically designed to deflect, trap or form a wind break of any nature, except those used to cool/protect the motor and braking system. No roadster type chassis allowed, only sprint appearing type bodies, tails and hood will be allowed.
3. **All chassis are required to have additional bars installed to support and decrease the span between the front and rear uprights in the driver's area. The support bars must be in addition to the front and rear uprights. Any attempts to manipulate the front and rear uprights to conform to these measurements will not be allowed. These additional bars will be minimum 1.375 X .083 ASTM4130 normalized steel or equivalent material.**
4. Titanium front axles nerf bars and/or rear bumpers will not be permitted. Nerf bars and rear bumpers must be made from magnetic steel and/or stainless steel. Left and Right Nerf bars must attach to the chassis at three points. The bumpers must be a minimum of one (1) inch in diameter and have a minimum material thickness of .065 inches. The nerf bars must not extend past the outside edge of the tires.
5. No aluminum frames or draglinks. Tie Rods and Left Front Radius Rods may be aluminum, but highly recommended they be 4130 steel with magnetic steel rod ends. Swaging of the tubing will not be permitted. The drag links must be tethered to the frame with a minimum of one (1) inch nylon webbing.
6. Carbon Fiber connecting rods having to do with suspension or steering are not permitted.
7. All drive lines must be broken in the coupler or rear slider, fully enclosed and contains no more than one U-joint or C-V joint. No torque arm drive lines allowed. A safety strap or hoop that is securely attached to the chassis is required. Driveline components may not be Carbon Fiber.
8. Mufflers: When mandatory: Schoenfeld part #14272735-78. Loss of muffler will result in disqualification when mufflers are required.
9. Headers: Must be a minimum of .045.
10. Steel, Aluminum or Titanium brake rotors only.
11. The maximum distance from the leading edge of the front bumper to the leading edge of the front torsion tube is a maximum of 8". The maximum distance from the leading edge of the front bumper to the leading edge of the front axle is 23 1/2 inches.
12. No hollow, tubular or drilled out bolts allowed.
13. The right side opening must be a minimum of 10 inches vertical at any point and 21 inches horizontal.
14. The right side panel (armguard) will be permitted to extend a maximum of 7 inches as measured from the outside edge of the middle frame rail and must remain above the middle frame rail.



15. Ballast Areas Allowed

## Section 5 - Wings

### Top Wing:

1. Center Foil maximum size of 25 square feet with a maximum width of 60 inches with a one degree plus or minus tolerance.
2. Center Foil shall be fully sheathed in aluminum. Vent holes are strictly prohibited.
3. No wicker bills or Gurney lips permitted on Center Foil, unless center foil is totally flat then a two-inch wickerbill is allowed.
4. Other than the slider mechanism, no moving parts allowed on or in foil structure.
5. The 12-inch section located at the rear of the Center Foil must not have the belly/curl arc out of proportion with the rest of the Center Foil. The belly/curl arc must span the entire length of the Center Foil and appear to be a gradual arc with the deepest point no further back than 48 inches from the leading edge. As measured on a 12-inch straight edge, the belly at 6 inches from the rear of the Foil may not be deeper than  $\frac{1}{2}$  inch. There is zero tolerance on this  $\frac{1}{2}$  inch depth. It is suggested that the wing blue print specify  $\frac{15}{32}$ -inch depth, so that if any deflection or movement of the wing occurs, the depth will not exceed the  $\frac{1}{2}$  inch specification. (This  $\frac{1}{2}$  inch measurement ensures that the belly/curl arc is gradual.)
6. The belly/curl arc must start at the radius of the Center Foil's leading edge and shall not exceed a depth of  $2\frac{1}{2}$  inches. Center Foil thickness cannot exceed 9 inches. Center Foil top surface from side to side must remain flat. Center Foil must be one-piece construction. No split or bi-wings will be permitted. Wings must be fabricated of metal alloys only. No fiberglass, carbon fiber or other similar material may be used in the basic framework of the wings. Top wing must not extend beyond outside of rear tires.
7. Two stationary foils or rudders will be allowed to run the entire length of the underneath portion of the top wing. Maximum height proportions are 1 inch at the front and 3 inches at the rear. Nowhere shall the foil exceed 3 inches in height. The top wing can be cockpit/driver adjustable.

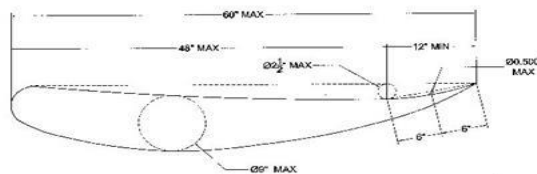
### Front Wing:

1. Center Foil maximum size of 6 square feet with a maximum width of 36 inches with a one degree plus or minus tolerance.
2. Center Foil shall be fully sheathed in aluminum. No vent holes allowed.
3. **Wicker bill up to 2 inches is allowed on nose wing, flat or dished.**
4. Maximum distance from the Center Foil front edge to the front edge of the front axle may not exceed 20 inches.
5. The Center Foil front edge must remain at least 1 inch behind the front edge of the front bumper. Center Foil top surface from side to side must remain flat.
6. Center Foil must be one piece. No split or bi-wings will be allowed.
7. Wings must be fabricated of metal alloys only. No fiberglass, carbon fiber or other similar material may be used in the basic framework of the wings.
8. The Front Wing must not extend beyond outside of front tires. The Front Wing may not be cockpit or driver adjustable while the car is stationary or in motion.
9. No moving parts allowed on or in foil structure.
10. The 5" section located at the rear of the front foil must not have a bell/curl arc that is out of proportion with the rest of the front foil. As measured on a 5-inch straight edge, the belly at  $2\frac{1}{2}$  inches from the rear of the foil may not be deeper than  $\frac{3}{8}$  inch. There is zero tolerance on this  $\frac{3}{8}$ -inch depth. It is suggested that the wing blue print specify  $\frac{11}{32}$ -inch depth, so that if any deflection or movement of the wing occurs, the depth will not exceed the  $\frac{3}{8}$ -inch specification (This  $\frac{3}{8}$  inch measurement ensures that the belly/curl arc is gradual).
11. The belly/curl arc must span the entire length of the front foil and appear to be a gradual arc with the deepest point, no further back than 12 inches from the leading edge. The belly/curl arc must start at the front foil's leading edge and shall not exceed a depth of 2 inches. Top foil thickness cannot exceed 3.6 inches.
12. No rudders or fins on Front Wings.

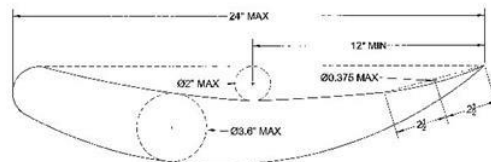
### Side Board Panels

1. All side board panels must be within an eight-degree plus or minus tolerance and be square to center foil.
2. Side panels may not be supported by braces whose section is not horizontal. All braces or supports shall be oriented thin edge to face the air stream. Only rectangular, round or oval metal braces not exceeding 1 inch in width may be used.
3. No aero section side panel brace material allowed.
4. No brace or support shall resemble a wicker bill or a split wing.
5. Top Wing, sideboards maximum size, 72 inches long and 30 inches tall. Panels must be of one- piece construction. Panels must be fabricated flat so as to have no turnouts or flaps made of more than 2 inches of material on the front or rear of panel and no more than 1 1/4 inches on the top or bottom. Panels must be mounted parallel and square to the center foil with no more than 1 1/2" of turnout as measured from the Center Foil. Only two (2) corners on the 2/3 of each top wing side board will be permitted. Each corner shall be set at a 90° angle with no tolerance. The leading edge of the side board may not be behind the leading edge of the Center Foil.
6. Front Wing side boards maximum size, 12 inches tall and 26 inches long with no more than one inch overhang from the center foil front edge to the side board front edge. Sideboards may have front, back, top and bottom turnouts of no more than 1/2 inch.

### Top Wing Diagram/Specifications



### Nose Wing Diagram/Specification



### Section 6 - Fuel

1. Methanol or Ethanol only, NO NITRO or additives allowed. Fuel subject to be checked anytime by officials. NOTE: Fuel samples may be taken for analysis and prize money may be withheld until results are known. (Penalty for fuel infraction will result in forfeiture of all points and money won during event detected, and a fine up to \$1000 for first infraction. 2nd infraction subject to suspension up to 1 calendar year.)

### Section 7- Tires and Wheels

1. Right Rear Hoosier Racing Tire, 105x16.0-15 Medium or 105x18.0-15 HARD. Tires may be Siped and Grooved.
2. Beadlocks recommended on all wheels.
3. All wheel covers must have a minimum of 5 attachment points if using dzus fasteners. Said dzus fasteners must be made of steel only. Wheel Covers having only 3 attachment points must be bolted-

on all three points utilizing a minimum 5/16", flanged steel bolt and an approved fastening (nut assembly) system. Approved fastening (nut assembly) systems:

- Keyser Manufacturing, part #100 7-101
- Wehrs Manufacturing Part # (WM377A-312 Aluminum 5/16) (WM377S-312 Steel 5/16)
- Triple X Chassis Part # SC-WH-7810 (for a 1" spring) / SC-WH-7820 (for a 1 3/8" spring)
- Smith Precision Products Part # MC-516-18
- Speedway Motors part # 910-07119

4. Maximum right wheel width is 18-inches, maximum left rear wheel width is 15 inches.
5. Left Front is the only tire you can run flat.
6. **The Left Rear tire must be a Hoosier Tire H12, D12, H15, RC1 or RaceSaver.**
  - **The Hoosier RD12 is not allowed effective immediately.**
7. No tire softeners, no conditioners, no altering of tires with any natural or un-natural chemicals, no hazardous or un-hazardous components or chemicals which alter the factory set baseline settings of a given tire.
8. All sidewall markings must visible at all times. No buffing or removing of the compound designations.

## **Section 8- Safety**

1. Any driver who exits their car and approaches another driver on a live racetrack may be subject to a fine of \$1,000 and/or be suspended for two calendar weeks from any MSTS sanctioned event. The offending driver will also forfeit their winnings for the night. This also includes family and crew members entering a live racetrack. Under caution, stay in your car. If you are in an unsafe situation, you may exit your car but stay with your car. Dark tracks and dark fire suits make you hard to see. Remember, actions done in anger can have dire consequences. A driver/team who willfully ignores/disobeys MSTS or track officials in a manner which delays the running of the night's program, or places others in danger, will also be subject to a fine of \$1,000 and/or be suspended for two calendar weeks from any MSTS sanctioned event.
2. All drivers are required to wear SNELL approved helmet, a fire retarding uniform, protective gloves and arm restraints during competition. Fire retardant underwear is highly recommended.
3. RACEceiver Radios are mandatory; we reserve the right to penalize drivers that don't run a RACEceiver. No two way radios will be allowed. Any driver who willfully ignores orders given by officials in such a way as to bring potential harm to another competitor, official, or fan will be expelled for the night.
4. All cars must be equipped with adequate seat belts, shoulder harness and crotch strap. MSTS strongly recommends a five point hookup with 3 inch belts. Full Containment Seat is highly recommended.
5. It is highly recommended, that the Steering Wheel is secured with a pull type, quick release hub or button style, quick disconnect. Use of removable pin style hubs is not recommended at all due to high risk of failure. It is the driver's responsibility to make sure the steering wheel is securely attached before entering the racing surface. Your safety is truly in your own hands.
6. An onboard fire suppression system is highly recommended on all cars with nozzles positioned as to coat the Engine, Driver, and Fuel Cell.
7. Front axle tethers are required for competition with MSTS.  
The following part numbers from ButlerBuilt are recommended.
  - BBP 4922-225 - 2 1/4" Axle diameter complete kit
  - BBP 4922-238 - 2 3/8" Axle diameter complete kit
  - BBP 4922-250 - 2 1/2" Axle diameter complete kit
8. A tether is required on both left, and right sides of the Front Axle. Tethers must be mounted from the Front Axle, just outside the Radius Rod hookups on both sides of the Front Axle, utilizing the aluminum mounting brackets provided by ButlerBuilt. Tethers must extend to the second upright of the frame and be attached below the front engine mounts. Tether must be attached with a slipknot around the upright. Crews cannot alter the intentions of the Axle Tethers.
9. If a car needs to be fired in the pits, the person in the car must be in full safety gear with seat belts properly attached.