TECHNICAL BULLETIN



NWAAS18 - 1 - 1/3/18

TO: ALL NASCAR WHELEN ALL-AMERICAN SERIES OWNERS, CREW CHIEFS AND DRIVERS:

Effective January 1, 2018 – The following are amendments to the 2017 NASCAR Whelen All-American Series Rule Book that will be incorporated into the 2018 NASCAR Whelen All-American Series Rule Book:

NOTICE: All NASCAR Rule Books and Technical Bulletins may be accessed by any licensed NASCAR Member by visiting www.NASCARmembers.com.

NOTICE

ALL MODEL, ENGINE OR EQUIPMENT CHANGES OR MODIFICATIONS NOT SPECIFICALLY ADDRESSED IN THIS RULE BOOK BY NASCAR MUST BE SUBMITTED TO NASCAR, IN A COMPLETED FORM/ASSEMBLY FOR CONSIDERATION OF APPROVAL, ON OR PRIOR TO SEPTEMBER 5, 2018, UNLESS OTHERWISE AUTHORIZED BY NASCAR TO BE CONSIDERED FOR COMPETITION FOR THE 2019 SEASON. ALL EQUIPMENT IS SUBJECT TO THE APPROVAL OF TRACK OFFICIALS. TRACK OFFICIALS MAY ASSESS WEIGHT PENALTIES FOR RACE EQUIPMENT DEEMED AS NOT IN COMPLIANCE WITH THESE RULES. RACE EQUIPMENT WILL NOT BE CONSIDERED AS HAVING BEEN APPROVED BY REASON OF HAVING PASSED THROUGH INSPECTION AT ANY TIME OR ANY NUMBER OF TIMES UNOBSERVED OR UNDETECTED. ANY RACE EQUIPMENT WHICH DOES NOT CONFORM TO SPECIFICATIONS OR TOLERANCES CONTAINED IN THE 2018 NASCAR RULE BOOK, OR IS NOT OTHERWISE APPROVED BY NASCAR, MAY NOT BE USED IN COMPETITION IN 2018.

PRIOR TO PRODUCTION, ANY NEW RACE EQUIPMENT TO BE CONSIDERED FOR APPROVAL FOR COMPETITION MUST BE SUBMITTED TO NASCAR FOR APPROVAL. AT THE MANUFACTURER'S EXPENSE, THE MANUFACTURER MUST PROVIDE ALL INFORMATION, MATERIALS, ELECTRONIC FILES, RACE EQUIPMENT AND FULL-SCALE RACE VERSION VEHICLE(S) AS REQUESTED BY NASCAR. MANUFACTURER MUST ALSO PROVIDE TO NASCAR ANY RACE EQUIPMENT TO BE USED AS COMPARISON ITEMS FOR INSPECTION PURPOSES ALONG WITH ANY REQUIRED MANUFACTURER TEMPLATES.

20F - 1.1 Late Model Stock Car Races

Late Model Stock Car Races are open to eligible 2000 through 2006 approved steel body models of passenger vehicle production sedans and the approved 2007 through 2018 composite body models. The approved composite body models are the only 2007 through 2018 models permitted. These bodies must remain as manufactured and meet all other specifications as set forth in Section 20F. The 2007 through 2018 composite body panels must have the manufacturer/NASCAR-approved logo imbedded into the composite material. Interchanging of parts or components from the steel bodied 2006 and prior bodies and the 2007 through 2018 composite bodies will not be permitted. Only previously approved plastic fenders and previously approved plastic bumper covers will be permitted on the 2006 and prior steel bodies. Interchanging of manufacturer's parts or components will not be permitted.

All bodies must be mounted on the centerline of the tread width and the frame.

20F - 1.3 Approved Competition Models

The following are the only approved steel body models eligible for competition in 2018:

<u>YEAR</u>	<u>MAKE</u>	MODEL
2000 - 2005	Chevrolet	Monte Carlo
2006	Chevrolet	Monte Carlo SS
2001 - 2004	Dodge	Intrepid
2005 - 2006	Dodge	Charger
2000 - 2005	Ford	Taurus
2006	Ford	Fusion
2000 - 2003	Pontiac	Grand Prix

The following are the only approved composite body models eligible for competition in 2018:

YEAR	<u>MAKE</u>	MODEL
2007 - 2008	Chevrolet	Monte Carlo SS
2008 - <u>2018</u>	Chevrolet	Impala SS
2007 - <u>2018</u>	Dodge	Charger
2007 - <u>2018</u>	Ford	Fusion
2009 - <u>2018</u>	Toyota	Camry

20F - 2.1 Vehicle Bodies

Detailed maximum body width specifications have been added to the body diagram in the rear pages of the Rule Book. The vehicle body must be acceptable to Track Officials and meet the following requirements: Interchanging of parts or components from the steel bodied 2006 and prior bodies and the 2007 through 2018 composite bodies will not be permitted. The composite bodies must contain the approved composite roof (and components), approved composite or plastic type fenders and approved composite or plastic type quarter panels, approved front and rear bumper covers and approved hood. The approved door panels and deck lid must be steel or aluminum. Only previously approved plastic fenders and previously approved plastic bumper covers permitted on the 2006 and prior steel bodies.

- A. The 2000 through 2006 eligible steel bodies and the 2007 through 2018 eligible composite bodies will be volume production models as selected and approved. (See sub-section 20F-1.3)
 - B. through N. remains the same.

20F - 2.2 Overall Vehicle Weight

A. Throughout the Event, all vehicles must weigh a minimum of the following total weights and must maintain the minimum right side weight ready to compete (with fuel, oil, water, etc.) with driver:

<u>MANUFACTURER</u>	TOTAL WEIGHT	RIGHT SIDE WEIGHT
Ford D347SR Crate Engine	3100 lbs.	1400 lbs.
General Motors "Upgrade"	3100 lbs.	1400 lbs.
General Motors "Harrington Enforcer"	3100 lbs.	1400 lbs.
Dodge (Built)	3050 lbs.	1375 lbs.
Ford (Built)	3050 lbs.	1375 lbs.
General Motors (Built)	3050 lbs.	1375 lbs.
General Motors		
88958604 / 19318604 Crate Engine	3050 lbs.	1375 lbs.

B. through E. remains the same.

20F - 3.1.2 Rear Spoilers

A solid non-adjustable spoiler must be attached to the rear of the vehicle. All vehicle will be permitted to use a rear spoiler not exceeding five (5) inches in height and not more than 54 inches in width, measured around the back side of the spoiler, and must be attached to and centered on the rear of the vehicle. Spoilers must be solid 1/8 inch metal or 1/4 inch clear polycarbonate and control the flow of air over one (1) surface only. The rear spoiler blade must maintain the same thickness over the entire spoiler blade. Rudders or forward mounting brackets will not be permitted. A maximum of 39 inches from the ground to the top of the spoiler (with the driver in the vehicle) will be permitted. (The maximum spoiler height from the ground for the 2000 – 2002 Monte Carlo will be 40 inches in the center and 39 inches on each end.) The spoiler must maintain a maximum of five (5) inches in height. The rear spoiler angle must be set between 50 degrees and 60 degrees. Spoiler braces on the back of the spoiler will not be permitted. Non-adjustable rear spoiler supports will be permitted inside the trunk area.

In addition to applicable rules above the 2007 through 2018 composite body vehicles only: The spoiler must be slotted 5/8 inch in the center to fit the NASCAR overall template for each make of vehicle and must maintain the same contour as the production deck lid and quarter panels as viewed from above and behind. The spoiler must be mounted in such a way as not to flex or bend under pressure and must be mounted with a minimum of six (6), 1/4 inch diameter or larger bolts evenly spaced across the back of the deck lid. The spoiler mounting flange must not extend beyond the lower edge of the rear deck lid. The spoiler flange must not extend beyond the outer edge of the spoiler. Spoiler braces, if used, must be mounted on the back of the spoiler and there must be a maximum of three (3) spoiler braces per spoiler half with the spoiler braces located 4-1/2 inches inboard from the end of each spoiler half

and 4-1/2 inches to the left and right of each spoiler half at the center split. The remaining spoiler braces must be spaced equally between the side and center spoiler braces on each spoiler half. Each spoiler brace must bolt to the top of the spoiler not more than 1/2 inch down from the top and must bolt to the deck lid below the bottom of the spoiler. Each spoiler brace must not exceed a maximum one (1) inch width, including all mounting brackets and hardware. All spoiler braces, when used, must be acceptable to Track Officials.

20F - 3.2.2 Rear Window

A. remains the same.

B. The rear window width will be determined by measuring down three (3) inches from the top of the rear window at the edge of the roof on the roof centerline. The minimum width of the rear window for the following models must be:

		MINIMUM
<u>YEAR</u>	<u>MODEL</u>	MEASUREMENT
2000 - 2002	Chevrolet Monte Carlo	47-1/2 inches
2003 - 2005	Chevrolet Monte Carlo	46 inches
2006 - 2007	Chevrolet Monte Carlo SS	46 inches
2008 – <u>2018</u>	Chevrolet Impala SS	46 inches
2001 - 2004	Dodge Intrepid	43 inches
2005 - 2006	Dodge Charger	43 inches
2007 - <u>2018</u>	Dodge Charger	43 inches
2000 - 2005	Ford Taurus	43 inches
2006	Ford Fusion	43 inches
2007 – <u>2018</u>	Ford Fusion	46 inches
2000 – 2002	Pontiac Grand Prix	47-1/2 inches
2003	Pontiac Grand Prix	46 inches
2009 – <u>2018</u>	Toyota Camry	46 inches

The roof, "B" post and "C" post must remain as manufactured.

20F - 3.5 Doors

A. The maximum outside width of the door panels must not exceed 77-1/2 inches. Door panel size and configuration must match from left side to right side. Door panels, of not less than 24 gage (0.025 inch thick) magnetic sheet steel, must be the same size and configuration as the NASCAR-approved model. Straight or slab door panels will not be permitted. The door panels must be roll-formed evenly so the top and bottom edge of the door panel including the rocker panel trim moldings is a minimum of 1-1/2 inches inside the outermost roll of the door panel, mid-way down the door panel, at any point between the front and rear tires. All door panels must be securely fastened to the front fender and the rear quarter panel in a manner acceptable to Track Officials. For all 2007 through 2018 approved composite bodies only, approved .040 inch minimum thickness aluminum door panels will be permitted. The approved door panel must be a one-piece design only, maintaining dimensions for the approved model vehicle and must be approved and be acceptable to Track Officials. The approved composite body aluminum door panels must be used as manufactured.

- B. For all 2007 through <u>2018</u> approved composite bodies, only 24 gage (0.025 inch thick) steel or .040 inch minimum thickness aluminum door panels will be permitted.
 - C. and D. remains the same.

20F - 3.5 Doors

A. The maximum outside width of the door panels must not exceed 77-1/2 inches. Door panel size and configuration must match from left side to right side. Door panels, of not less than 24 gage (0.025 inch thick) magnetic sheet steel, must be the same size and configuration as the NASCAR-approved model. Straight or slab door panels will not be permitted. The door panels must be roll-formed evenly so the top and bottom edge of the door panel including the rocker panel trim moldings is a minimum of 1-1/2 inches inside the outermost roll of the door panel, mid-way down the door panel, at any point between the front and rear tires. All door panels must be securely fastened to the front fender and the rear quarter panel in a manner acceptable to Track Officials. For all 2007 through 2018 approved composite bodies only, approved .040 inch minimum thickness aluminum door panels will be permitted. The approved door panel must be a one-piece design only, maintaining dimensions for the approved model vehicle and must be approved and be acceptable to Track Officials. The approved composite body aluminum door panels must be used as manufactured.

B. For all 2007 through <u>2018</u> approved composite bodies, only 24 gage (0.025 inch thick) steel or .040 inch minimum thickness aluminum door panels will be permitted.

C. and D. remains the same.

20F - 3.6 Fenders / Quarter Panels / Rocker Panels

The maximum outside width of the front fenders, quarter panels and rocker panels must not exceed 77-1/2 inches with the following exception. The maximum width across the front fenders at the location where the front fenders attach to the front bumper cover must not exceed 78 inches. Front fenders, quarter panels and rocker panels configuration must match from left side to right side. The front fenders, quarter panels, and rocker panels must be acceptable to Track Officials and meet the following minimum requirements:

A. The front fenders and quarter panels must be one-piece only and be of not less than 24 gage (0.025 inch thick) magnetic sheet steel and must be installed in their standard location as referenced by the approved model vehicle. As an option the front fender from an approved manufacturer must be made from flexible, rubberized plastic type material maintaining dimensions for the approved model vehicle and must be approved and be acceptable to Track Officials. If the flexible, rubberized plastic type fender is used it must be used as manufactured. Fiberglass fenders will not be permitted with the exception of the 2007 through 2018 approved composite bodies. When measured anywhere across the rear of the vehicle, a maximum of three (3) inches difference (plus or minus) from a stock production vehicle will be permitted. When cutting the front fenders or quarter panels for clearance, the only modifications permitted will be cutting for tire clearance with a maximum of 10 inches measured from the edge of the wheel to the edge of the front fender or quarter panel.

- B. remains the same.
- C. Excessive modifications to the rocker panels will not be permitted. Rocker panels on the left and right sides must match and be the same size and shape. The rocker panels must completely fill in the area between the main frame rails and door panels for the entire length of the main frame rails. The

rocker panels must be magnetic sheet steel and remain straight and parallel with the frame rails. The rocker panels on the 2007 through 2018 composite bodies may be magnetic sheet steel or composite material. Vertical rocker panel extensions, made of plastic type material, a maximum thickness of 3/16 inch and a maximum height of four (4) inches will be permitted. They must be installed vertical and flush with the outer sheet metal at the bottom of both left side and right side rocker panels, and be the same front to rear length as the rocker panels. The vertical rocker panel extensions must be stationary, securely fastened, single layer and must be mounted parallel to the rocker panel. The rocker panel extension must be secured in a manner that will prevent movement of the rocker panel extension while in competition and maintain a minimum ground clearance of four (4) inches.

D. For all 2007 through <u>2018</u> approved composite bodies only, approved composite or plastic type material quarters panels and fenders will be permitted. The approved quarter panel and fender must be a one-piece design only, maintaining dimensions for the approved model vehicle and must be approved and be acceptable to Track Officials. The approved composite or plastic type material quarter panel and fender must be used as manufactured.

E. When Five Star stock car body 2007 through 2012 rear quarter panels are used, a quarter panel extension may be added to the lower edge of the rear quarter panel behind the rear wheel opening. The quarter panel extension on the right side must not be more than 2-3/4 inches in height at the rear of the wheel opening and must not be more than 1-5/8 inches in height at the rear of the lower edge of the rear bumper cover. The quarter panel extension on the left side must not be more than 2-3/8 inches in height at the rear of the wheel opening and must not be more than one (1) inch in height at the rear of the lower edge of the rear bumper cover. The factory flange on the bottom of the rear quarter panels must not be removed. 2018 Five Star stock car body rear quarter panels will be manufactured to include the quarter panel extensions that are permitted on the 2007-2012 quarter panels. The 2018 approved quarter panels must be used as manufactured.

20F - 3.8 Hoods / Roof

The hood and roof must be acceptable to Track Officials and meet the following requirements:

- A. through F. remains the same.
- G. For all 2007 through 2018 approved composite bodies only, approved composite roofs will be permitted. The roof panel must be of a design which will include the windshield bed and "A" posts, and the rear window bed, the "B" and "C" posts and side window(s). When the approved composite body is used it must be used as manufactured. All panels must be flange-mounted and remain as manufactured. The windshield bottom bed, "B" post, "C" post and side windows and the rear window bed may be separate pieces as long as they are flange-mounted and remain as manufactured. These body panels must conform to the NASCAR-approved manufacturer templates and the NASCAR-approved body and component specifications. The roof must be securely attached to the roll cage at each corner according to the manufacturer's specification.
 - H. remains the same.

20F - 3.9 Rear Deck Lids / Trunks

Rear deck lids, of not less than 24 gage (0.025 inch thick) magnetic sheet steel, and the trunk area must be acceptable to Track Officials and meet the following requirements:

A. The rear deck lid area must maintain the same dimensions and body lines as a standard production vehicle. Positive magnetic solid steel pin fasteners must be used on the right and left sides of the deck lid. All removable deck lid pins must be a minimum of 1/8 inch diameter and must have a minimum one (1) inch inside diameter vertical loop to facilitate ease of removal. Metal deck lid pin bezels must be installed at all times. The location of the pins and bezel plates must not interfere with the installation of any NASCAR inspection templates. Holes and/or other modifications that, in the judgment of the Track Officials, were made with the intent of weight reduction will not be permitted. For all 2007 through 2018 approved composite bodies, only 24 gage (0.025 inch thick) sheet steel or minimum 0.040 inch thick sheet aluminum deck lids will be permitted. When closed, the deck lid must be sealed around the entire perimeter of the deck lid opening.

B. remains the same.

20F - 3.12.1 Templates

A. remains the same.

B. The templates that are currently available for track use for the 2000 through 2006 steel bodies and the 2007 through 2018 composite body are:

Template "A" Centerline - front to rear template from the bottom of the windshield back to the rear bumper cover

Template "B" Centerline/Nose – from the windshield base forward across the hood, down the nose to the ground

Template "B-3" Horizontal Nose – following the bumper line approximately 15-1/2 inches up from the ground

Template "D-L" Left Fender/Nose – approximately 24 inches left of the nose centerline on the bumper cover and directed at the "A" post/windshield intersection

Template "D-R" Right Fender/Nose - approximately 26-1/2 inches right of the nose centerline on the bumper cover and directed at the "A" post/windshield intersection

Template "G" Back of Roof (side to side) across the back edge of the roof, down the quarter windows and down around the radius of the quarter panel, 90 degrees to the roof

Template "H" Rear Window (side to side including "C" post) – approximately 16 inches down from the top of the rear window, across the "C" post ending on top of the quarter panel shelf 90 degrees to the rear window.

20F - 4.1 General Engine Eligibility

The eligible engines must be production engines as determined, selected, and approved by NASCAR. It is mandatory that all major components (engine blocks, heads, etc.) be produced by the manufacturer for sale to the public in a regular product offering. Prior to being used in competition, all major engine and component parts must be submitted, in a completed form/assembly to the office of the NASCAR Technical Coordinator, Touring Series on or prior to September 5, 2018 of the preceding season for consideration of approval and approved by NASCAR. Each such part may thereafter be used until it is determined that such part is no longer eligible.

A. Only engines of a type approved by NASCAR in sub-section 20F-5.4 will be permitted.

• The Ford D347SR crate-type engine will be permitted and must be used as supplied by the manufacturer and/or per the specifications manual provided by the manufacturer.

- The General Motors #88958604 or # 19318604 crate-type engine will be permitted and must be used as supplied by the manufacturer and/or per the specifications manual provided by the manufacturer.
- The General Motors "Harrington Enforcer" engine will be permitted and must be used as supplied by the engine supplier and/or per the specifications manual provided by the engine supplier. The engine may be purchased as a complete engine assembly or in kit form.
- The General Motors "Upgrade" engine kit will be permitted and must use engine components as per the specifications manual provided. The Edelbrock part #2701 intake manifold will be the only intake manifold permitted and must remain as supplied without any modifications. The maximum rocker arm ratio permitted will be 1.6.

NOTE: The engines listed below will be not be permitted following the completion of 2019 racing season:

<u> Manufacturer</u>
Dodge (Built)
Ford (Built)
General Motors (Built)

B. Engines may be interchanged within any approved corporate body manufacturer's line.

C. Any changes or updates by the manufacturers or suppliers must be approved by NASCAR before being permitted to compete in the NASCAR Late Model Stock Car Division.

20F - 5.1 Engine Location

A. All General Motors open/built engines (including the GM 88958604 or #19318604 crate engine), General Motors "Harrington Enforcer", General Motors "Upgrade" and the Ford D347SR crate engine must be located so the center of the forward most spark plug hole on the right side of the engine block is in line or a maximum of one (1) inch forward of the center of the right front upper ball joint. The Ford and Dodge open/built engines must be located so that the front of the cylinder head on the right side is in line or a maximum of one (1) inch forward of the center of the right front upper ball joint.

B. remains the same.

20F - 5.6.1 Eligibility

To be eligible, the cylinder heads must be acceptable to Track Officials and meet the following requirements:

A. through G. remains the same.

H. Only Chevrolet (current design), part number 10134392, casting number 14011034, and part number/casting number 12480034 cast iron cylinder heads with a 23 degree valve angle will be permitted. Only Dodge-Mopar W2 (current design), part number P5249769, casting numbers 4532693 or 5249769, closed chamber with an 18 degree valve angle cast iron cylinder heads will be permitted. Only Ford, part number M-6049-N351, cast iron cylinder heads with a 10 degree valve angle will be permitted. Only World Products Sportsman II SBC part number 011150, casting number 1-037, aftermarket cast iron cylinder heads with a 23 degree valve angle will be permitted as a replacement for the Chevrolet part number 10134392, casting number 14011034 cylinder head. These World

Products Sportsman II SBC cylinder heads must be the current design with the manufactured date of 4/13 and later stamped on the cylinder head. These World Products Sportsman II SBC cylinder heads must conform to all the cylinder head rules in Section 20F – 5.6 thru Section 20F - 5.6.3 of the 2018 NWAAS Rule Book, Late Model Stock Car Division. When the World Products Sportsman II SBC cylinder heads are used the vehicle must weigh a minimum of 3100 pounds total and a minimum of 1390 pounds on the right side.

I. remains the same.

20F-5.10.1 Eligibility

- A. All engines in the Late Model Stock Car Division:
 - 1. When the open/built and General Motors upgrade engines are used the carburetors listed below are the only carburetors permitted.
 - Holley 500 CFM-HP two (2) barrel, part # 80583-1
 - Holley 500 CFM Ultra HP two (2) barrel (aluminum body) Part # 4412HB (Hard Core™ Gray)
 - Holley 500 CFM Ultra XP two (2) barrel (aluminum body) Part # 4412HBX (Hard Core™ Gray)
 - Holley 500 CFM Ultra HP two (2) barrel (aluminum body) Part # 4412BK (Tumble polished aluminum with Black™ Metering block & baseplate)
 - Holley 500 CFM Ultra XP two (2) barrel (aluminum body) Part # 4412BKX (Tumble polished aluminum with Black™ Metering block & baseplate)

See B. and C. below for Holley carburetor rework guidelines.

- 2. When the Ford D347SR and General Motors (part #'s #88958604 or #19318604) crate engines are used the carburetors listed below are the only carburetors permitted.
 - Holley 390 CFM four (4) barrel, Part # 80507-1
 - Holley 650 CFM four (4) barrel, Part # 80541-1
 - Holley 650 CFM four (4) barrel, Part # 80541-2

See D. below for Holley carburetor rework guidelines.

- 3. When the General Motors "Harrington Enforcer" is used the carburetors listed below are the only carburetors permitted.
 - Holley 650 CFM four (4) barrel, Part # 80541-1
 - Holley 650 CFM four (4) barrel, Part # 80541-2

See D. below for Holley carburetor rework guidelines.

B. through D. remains the same.

20F - 5.10.2 Carburetor Spacer / Gaskets

A. Only a one-piece, solid, aluminum carburetor spacer, a minimum 0.700 inch, maximum 0.750 inch in thickness, must be installed between intake manifold and carburetor on all open/built engines. The spacer must be centered on the intake manifold and have two (2) round holes with 1-11/16 inch diameter openings for the 500 CFM-HP carburetor located in the center that match the base of the carburetor. Holes must be cut perpendicular with the base of the carburetor. Taper, bevels, or any modifications will not be permitted.

B. A one-piece, solid, aluminum two (2) hole tapered (super sucker style) carburetor spacer, one (1) inch maximum thickness will be permitted on the General Motors "Upgrade" engine only. The spacer must be centered on the intake manifold.

- C. A one-piece, two (2) hole <u>non-metallic</u> gasket, maximum 0.065 inch thickness that matches the exterior dimensions of the carburetor throttle base plate, must be installed between the carburetor and spacer. A one-piece non-metallic gasket maximum 0.065 inch thickness must be installed between the spacer and intake manifold. The gasket must not be larger than the top of the intake manifold.
- D. A one-piece, solid, open aluminum carburetor spacer, one (1) inch in thickness, will be permitted between intake manifold and carburetor on the <u>General Motors</u> #88958604, #19318604 crate-type <u>and the General Motors "Harrington Enforcer"</u> engines. The (1) inch spacer may be utilized on the Ford D347SR crate- type engines with the 390 carburetor.

20F - 12.1 Coil Springs / Spring Mounts / Jacking Bolts

All downward chassis movement while the race vehicle is in competition must be limited only by the normal increasing stiffness of the springs or the bottoming of the chassis against the race track, whichever occurs first. As an option, <u>Track approved</u>, <u>external travel limiting devices</u> (bump stops) will be permitted on the front suspension only, one (1) on the left side and one (1) on the right side. <u>Travel limiting devices</u> (bump stops) on the rear suspension will not be permitted. Any travel limiting device or procedure that, in the judgment of Track Officials attempts to detract from or compromise the above, will not be permitted. Any device(s) such as chains, cables, etc. that limit the travel of the suspension either up or down will not be permitted. When jacking the vehicle, a minimum of two (2) inches of chassis movement is required before movement of the axle/tire assembly.

Only coil spring suspension will be permitted. All coil springs must be constructed using round magnetic steel wire, wound in a clockwise direction. Ovate and flat wire will not be permitted. The coil spring wire diameter must be the same size from the top to the bottom of the springs. All of the coils in a spring must be active. The coil springs in all four (4) wheels must be active in any and all suspension movement.

Coil spring suspension will be limited to either conventional type coil springs or coil over springs. The use of either type of spring on both the front and rear suspension, such as coil springs on the front and coil over springs on the rear, will be permitted. The use of a combination of spring types on both the front and rear suspension, such as a conventional coil spring on one side and a coil over spring on the opposite side, will not be permitted.

A. Coil-Over Springs

- 1. Front coil-over springs must mount to the stock appearing lower A-frames on the centerline of the lower ball joint. The front coil-over assembly must mount through the upper A-frame and remain vertical front to rear with the lower mount. Adjustable mounts of any type will not be permitted. The use of jacking bolts on the coil over assembly will not be permitted. Coil-over spring seats, if used, must be flat nylon or flat steel washer type or top hat style only. Thrust-type bearing plates will be permitted on the spring seats. Load centering spring perches of any type, including but not limited to hydraulic or rubber will not be permitted. Front coil-over springs must not exceed the nominal three (3) inches inside diameter for the entire length of the spring. The coil-over springs may be less than the nominal three (3) inches inside diameter at each end only to match the spring seat diameter. The free height of the bare front coil-over springs must not be more than 16 inches and must not be less than 10 inches. All coils must be evenly spaced after the first coil at the end of the spring.
- 2. remains the same.

- 3. Rear coil-overs must be permanently mounted on the outside of the rear sub-frame rails in the same location on the left and right side. Adjustable mounts of any type will not be permitted. The use of jacking bolts on the coil-over assembly will not be permitted. Coil-over spring seats, if used, must be flat nylon or flat steel washer type or top hat style only. Thrust-type bearing plates will be permitted on the spring seats. Load centering spring perches of any type, including but not limited to hydraulic or rubber will not be permitted. Both springs must be mounted to brackets on the rear axle housing in the same location on the left and on the right side. Rear coil-over springs must not exceed the nominal three (3) inches inside diameter for the entire length of the spring. The coil-over springs may be less than the nominal three (3) inches inside diameter at each end only to match the spring seat diameter. The free height of the bare rear coil-over springs must not be more than 16 inches and must not be less than 12 inches. All coils must be evenly spaced after the first coil at the end of the spring.
- 4. through 7. remains the same.

B. Front Coil Springs

1. through 9. remains the same.

C. Rear Coil Springs

- 1. and 2. remains the same.
- 3. The free height of the bare rear coil springs must not be more than <u>16</u> inches and must not be less than 11 inches.
- 4. through 11. remains the same.

20F - 12.4 A-Frames

- A. Through G. remains the same.
- H. The spring bucket in the lower A-frame must be round magnetic steel and must not exceed a maximum of 6-5/8 inches inside diameter. The spring bucket must not be flared or scalloped at the top or bottom. The distance from the center of the spring bucket to the center of the ball joint must not be less than 6-1/2 inches or more than 7-1/2 inches and must be the same on the left and right sides. A metal spring seat (helix) may be used in the bottom of the spring bucket. The metal spring seat (helix) must be bolted securely in place. When coil springs are used, the lower coil for the front spring must be in contact for 270 degrees with the lower spring seat (helix) at all times.
 - I. remains the same.

20F - 18 Roll Bars

- A. through G. remains the same.
- H. At the discretion of Track Officials, additional material and/or tubing may be required to be welded to any vehicle that does not conform to the January 1, <u>2018</u> roll cage or roll bar specifications as described in sub-section 20F-18.