"Edmonton & Area's Only Paved Oval Race Track"

2024 NASCAR THUNDER CAR RULES

ONE OF THE CHEAPEST WAYS TO GET INVOLVED IN STOCK CAR RACING!

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1.0 GENERAL RULES

1.1 Can Race any North American Car, 1955 or newer. Steel bodied cars only.
1.2 Minimum wheel base 98". Rear wheel drive only.
1.3 All doors must be bolted, riveted or welded shut. Steel door skins only.
1.4 All interior body panels must be left intact. Only the inner door panels where the roll cage extends out to meet the d door skin can be removed.
1.5 The inner fender wells of the front fenders can be removed so that the front suspension can be inspected.
1.6 All flammable materials must be removed.
1.7 All breakable materials must be removed (i.e. plastic grills, head lights, etc.)
1.8 Windshields are mandatory. Bars or mesh are not acceptable. All glass must be removed except for the windshield. Side and rear windows must be open and clear, no Lexan. No aerodynamic devices to keep air out of the cockpit. No tunnelling or boxing in of the driver's compartment.

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1.9 Frame must match body "make-to-make", "model-to-model", and "year-to-year".

1.10 Inner panels and hinges must be left intact in both the hood and trunk lid.

1.11 Excessive stripping is not allowed. It will now carry weight penalties. Example: Stripped interior panels on hood (100 lb. Penalty) - stripped trunk lid (100 lb. Penalty). Lead weight will be added as per Tech Person's direction.

1.12 Window net with quick release is mandatory.

1.13 Minimum 24" numbers on doors and minimum 36" numbers on roof.

1.14 All holes in driver compartment must be sealed.

1.15 Mirrors are allowed but may be removed at Track Management's discretion.

1.16 No lead or ballast. Except in case of Rule 1.11. One battery per car – automotive type only.

1.17 Body mounts must be stock height but may be replaced with polyurethane or steel. Body mounts are not allowed to be removed to lower the body on the frame. Body must remain at stock height on frame.

1.18 Five Star plastic nose (FIV600-410) is now an acceptable replacement for stock part. GM Metric cars, minimum 1 3/4" .095 round tube bumper under plastic.

1.19 Appearance Rule: All cars are expected to have clean, straight bodies. Over the winter months damaged panels, front and rear bumper covers etc. should be replaced. Cars should be freshly painted if needed. Numbers should not be "spray bombed" on. Professionally cut vinyl lettering is the preferred method. NASCAR contingency decals should be replaced when damaged. All cars must start the day's event with all body parts intact (i.e. bumper covers, fenders, etc.).

2.0 ROLL CAGE

2.1 Roll cage must be constructed of minimum 1 ¾" X .095 wall tubing and as per attached diagrams. No front hoops or rear hoops are allowed. No bars forward of windshield posts on 4 point style cages. Must be mounted to as wide as possible steel plate which will be bolted or welded to the floor. Minimum of 3 door bars on the driver side. On Enduro style cages, door bars must run parallel to rocker panel and must extend past door hinge pillar into front fender. Radiator protection is okay as long as it doesn't connect back to the main cage. Stock radiator saddle must be left intact. Radiator protection must not be exposed or visible. Must be covered by grill or nose piece. All cages must have two intermediates that run vertical between the bottom door bar to the rocker panel on the driver side only.

2.2 A racing seat is mandatory and must be mounted to cage.

2.3 A 5-point harness is mandatory. It must be mounted to the roll cage.

2.4 Roll bar padding is required on door bars and any bar that may come in contact with the driver's head, arms, legs, etc.

2.5 Extremely rearward mounted cages will be discouraged and could be subject to handicapping penalties. Call Horizon Motorsports Ltd. for clarification.

3.0 ENGINE

3.1 Engine must be stock to year, make and model of the car. It must be mounted in stock position. Replacement is limited to availability in production year of car. Exception for late 1970's or early to mid 1980's metric frame G.M. mid-size cars (Malibu, Regal, Monte Carlo, etc.) will be allowed to run engines up to 350 cubic inch. No 400 cubic inch small block Chevrolet allowed in any car under 112" wheelbase and must also be available in that model and year of car.

3.2 Must use stock rods and crankshaft. No grinding on rod beams.

3.3 Stock replacement pistons only. Flat top or dished pistons only. No domes. Pistons must have four valve reliefs, where applicable. No light weight pistons. No two ring pistons.

3.4 Cylinder heads must be in stock condition. Small block Chevrolet 305 cubic inch cylinder heads may be used on a 350 cubic inch engine but must retain stock valve size or maximum 1.84 intake and 1.5 exhaust. All other small block Chevrolet heads will have a maximum valve size of 1.94 intake and a 1.5 exhaust. No "double bump" heads (461, 462, etc.). No Vortec cylinder heads. No angle plug heads. No machine work, no grinding, no polishing, etc. Any grinding marks on the intake or exhaust ports will result in an automatic

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disqualification. No machining in bowl area. Stock casting lines and flash must remain in stock condition and be visible. You cannot install larger valves in small valve heads. No cutting back of valves. No machining in combustion chamber. No unshrouding of intake valve by machining into the side of the combustion chamber.

No angle milling of heads. Small block Chevrolet minimum combustion chamber sizes are:
350 cubic inch, cylinder head – 74 cc.
305 cubic inch, cylinder head – 56 cc.

Small block Chevrolet press in rocker arm studs only. No gasket matching. Heat riser block off plate is okay. No enlarging of push rod holes. Technical Officials will have the final say on whether any cylinder heads have been illegally ground, polished, machined, etc.

No outside "experts opinion" or "letters" will be accepted. Valve train components must be stock as produced. No 1.6 rocker arms on small block Chevrolets.

3.5 Cast iron intake and exhaust manifolds only. No Corvette manifolds or Ram Horn Exhaust manifolds. See (Figure 3.5) for approved exhaust manifolds for small black Chevrolet engines.

3.6 No headers, no aluminum intake. No gasket matching, no grinding or polishing of any kind on Intake or Exhaust manifolds. Quiet mufflers are mandatory. Maximum 90 DBA at 100 feet. Avoid the use of "bottle style" mufflers, as they are too loud. See (Figure 3.5A)

3.7 Stock carburetors only. No Holley, double pumper or aftermarket performance carburetors. Carburetors must bolt directly to intake without any alterations and using only ONE (Maximum 1/4") gasket. No adapter plates. No fuel injection. All cars can run either stock 2 or 4 barrel carburetors. Stock carburetors must be unaltered.

3.8 Hydraulic lifter aftermarket or OEM camshafts only. Small block Chevrolet maximum camshaft lift .390 " intake and .410" exhaust. No hydraulic roller cams. No overhead cams. Double roller timing chains okay. Dodge & Ford call for lift numbers.

3.9 Valve springs and retainers must be stock or direct OEM replacement with no machining of spring seats, no barrel, beehive or coneshaped valve springs are allowed. GM Small Block Chev maximum valve spring diameter 1.250 inches.

3.10 Mechanical fuel pumps only. No aluminum fuel pump push rods.

3.11 No performance ignition parts. Stock coils only.

3.12 Air cleaners/filters are mandatory. No high flow aftermarket air cleaners. Stock air cleaners or aftermarket with flat bottom are okay.

3.13 Stock hood scoops must be blocked off. No aftermarket hood scoops.

3.14 No aftermarket oil pans or Accu-sumps.

3.15 No aluminum water pumps on small block Chevrolets.

4.0 DRIVETRAIN

4.1 Manual transmission must have an approved scatter shield and/or a ¼" steel plate shield that follows the contour of the transmission hump.

4.2 No aluminum clutch components. No machining to reduce weight. Flywheel must be cast iron or steel. Clutch disc must be steel with spring center. Clutch lining must be organic. Minimum weight of clutch-flywheel 40 lbs. (See Figure 4.2).

4.3 Automatic transmissions must use full size stock torque converter. No powerglide transmissions. 1982 and newer Firebirds and Camaros must run an automatic transmission ONLY.

4.4 Rear ends must be stock to make and model of car. No interchanging of rear ends. No disc brake rear ends in Firebirds or Camaros.

4.5 Spider gears can be welded. A "Posi" or "Limited Slip" spool and mini spool differential are acceptable.

4.6 Driveshaft hoop is required. No aluminum driveshafts, steel only.

4.7 Automatic transmission torque converter dust cover must be removed to ease inspection of torque converter.

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5.0 TIRES

5.1 Spec DOT Racing Tire Hoosier 790 Compound in the following sizes:

- 27.0/7.0-15
- 26.5/7.0-15

Available only through Edmonton Int'l Raceway

5.2 Maximum Tire Sizes Allowed for street radial tires:

- 235/70/15 for 15" Rims
- 225/60/16 for 16" Rims

5.3 Maximum speed rating "V".

5.4 Any size tire for stagger on Left Rear okay.

6.0 BATTERY

6.1 Battery must be securely mounted and in sealed container if in driver's compartment.

7.0 SUSPENSION

7.1 All cars must have a minimum ground clearance of 6 inches measured at the lowest point of frame.

7.2 No altering of suspension parts. All components must be mounted in stock location using stock adjustments.

7.3 No weight jack bolts. One only adjustable spring spacer such as "Alstar Performance" Part #ALL56118 will be permitted on the right front spring or left rear spring only (See Figure 7.3). No excessive modifications will be allowed when installing this spacer. Shock must run through center of spacers in stock position. No other style of spacers or weight jacks will be allowed.

7.4 "Stock Replacement" racing shocks allowed. Shocks must be mounted in stock location. No coilover type shocks. No shock extensions.

7.5 Stock sway bars permitted if mounted with stock components. One only sway bar adjuster allowed. (See Figure 7.6). No rear sway bars.

7.6 Racing springs allowed but must fit in stock mounts without modification.

7.7 Stock replacement ball joints must be used and must match stock item in height, length and size and must install without modification to mounting holes, etc.

7.8 Wheel base length must be the same on both the right and left side of the car.

7.9 Steel wheels are okay. Maximum 7" width for 98" to 112" wheel base cars. Maximum 8" width for 113" and up wheel base cars. Wheels must be reinforced or double centered. Approved racing wheels are okay. Wheel offsets must be the same all the way around the car. No using wheels with more offset on the right side of the car to build left side weight. Maximum/minimum wheel offset is 3" measured from the inside edge of the rim where the tire beads to the center of the rim that bolts to the axle and/or disc. No wheel spacers.

7.10 Use only 1" wheel nuts. A larger wheel stud is recommended.

7.11 Polyurethane or steel suspension bushings that replace stock rubber bushings are okay.

7.12 All springs must be steel. No composite materials allowed.

7.13 Spring rubbers okay.

7.14 Lower bocks OK on leaf spring cars subject to ride height Rule 7.1.

8.0 FUEL SYSTEM

8.1 Approved racing fuel cell is recommended.

8.2 Maximum 12 gallon capacity.

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8.3 Steel tank is okay if professionally welded. No boat tanks.

8.4 Must be mounted in the trunk area as far forward as possible. Tank is to be mounted as not to slide or shift. Fuel cell and fuel cell cage must be a minimum of 12" off the ground. A 12" go, no-go gauge must be able to slide under the fuel cell and cage without interference. All fuel cell cages and mountings are subject to pproval.

8.5 No gravity feed fuel lines. All lines must exit top of tank.

8.6 Vent lines must have check valves.

8.7 No fuel lines in driver/passenger compartment.

8.8 A fire wall of steel must separate the driver from fuel tank/cell.

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9.0 RADIATOR

9.1 Radiators must be mounted in stock location in stock radiator saddle. No manufactured radiator saddles.
9.2 Radiators must have at least a 1 litre catch can.
9.3 No electric fans
9.4 Aftermarket aluminum radiators are okay but must meet rule 9.5.
9.5 Larger radiators may be used but must fit stock mounts without major modifications.

10.0 BRAKES

10.1 Stock brakes only. No brake bias adjusters.
10.2 Front drum brakes may be exchanged with disc brakes as long as disc brake spindles are the same dimensions as the ones they are replacing. Call for details.
10.3 Brakes must be operating on all 4 wheels.

If you don't read it in the rules, it does not mean that it is legal. Always call first! All interpretation of the rules is done by Horizon Motorsports Ltd. Any illegal parts will be confiscated so that they do not make their way back into the system. Confiscated illegal parts will be destroyed. In the event of a tear down or protest, the Driver will be notified of the decision by mail.

Horizon Motorsports Ltd. also reserves the right to handicap any car it sees fit by whatever means it sees fit in order to create a level playing field. Handicapping is done to discourage those who spend too much money on their car in this entry level, economy class.

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EDMONTON INTERNATIONAL RACEWAY THUNDER CAR RULES FOR FORD MUSTANGS 2024 RACE SEASON

In efforts to give the Ford racer more competitive options, the 1982 and newer Mustang and Capri Models are now included in the Thunder Car Class. This model of Ford Cars must conform to current Thunder Car rules and to "Mustang Specific" rules as listed below:

ENGINE

1.1 Maximum 302 cubic inch (5 litre) engine plus .030 overbore allowed. No stroking or de-stroking. Standard production car blocks only. No SVO, GT-40 or Boss Engines.

1.2 No grinding connecting rod beams. Must use stock rods and crankshaft.

1.3 Flat top or dish pistons only. No domes. Stock replacement piston only. Must have 4 valve reliefs where applicable. No light weight pistons. No two ring pistons.

1.4 Stock cylinder heads. See details in Thunder Car Rules (3.4). Maximum size 1.78 Intake and 1.48 Exhaust. Minimum combustion chamber size 58 cc.

1.5 Stock valve train and rocker arms, etc.

1.6 Cast Iron Stock intake only. Stock 2 Barrel carburetor only. NO HOLLEY CARBURETORS. MOTORCRAFT CARBURETOR ONLY.

2100 or 2150 model carburetor Only. Must bolt directly to stock cast iron 2-Barrel Intake Manifold without the use of any type of adapter using only ONE (Maximum 1/4") gasket.

1.7 No aftermarket or OEM Performance camshafts. Hydraulic lifters only. Flat tappets only. No roller cams. Maximum lift .381 Intake and .395 Exhaust. Maximum duration 183 degrees intake and 192 degrees Exhaust (Ford #D50Z6250A, Clevite 774).

1.8 All Ford Mustangs MUST run an automatic transmission ONLY.

Because the Mustang is new to the Thunder Car Class. Horizon Motorsports Ltd. reserves the right to adjust and/or change the rules to create a level playing field.

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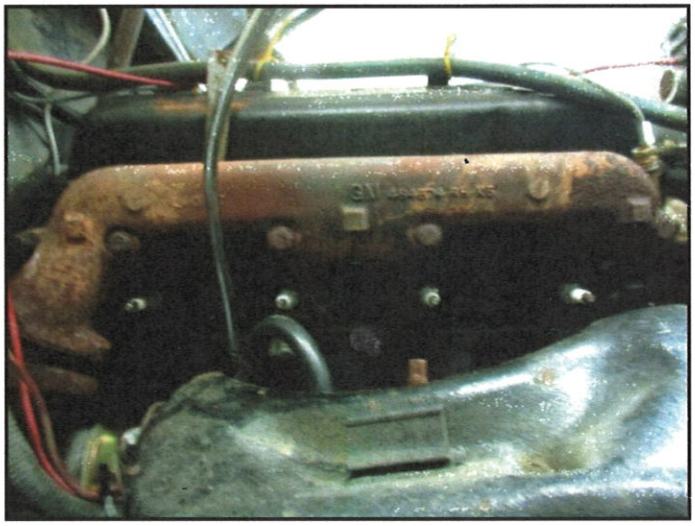
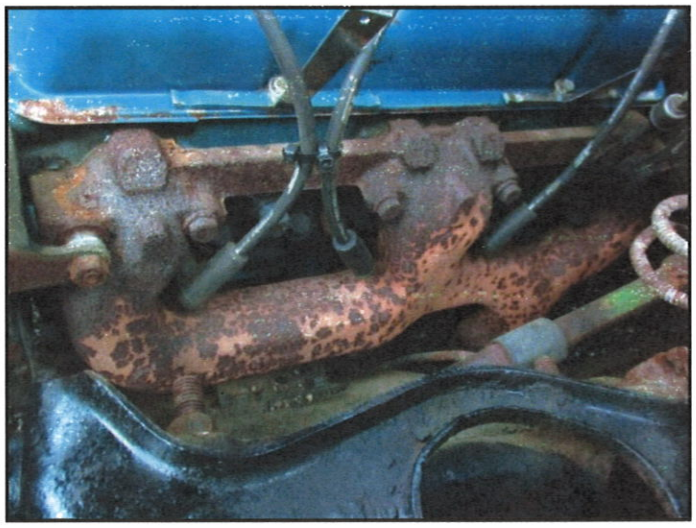
FIGURE 3.5



APPROVED EXHAUST MANIFOLD

FIGURE 3.5

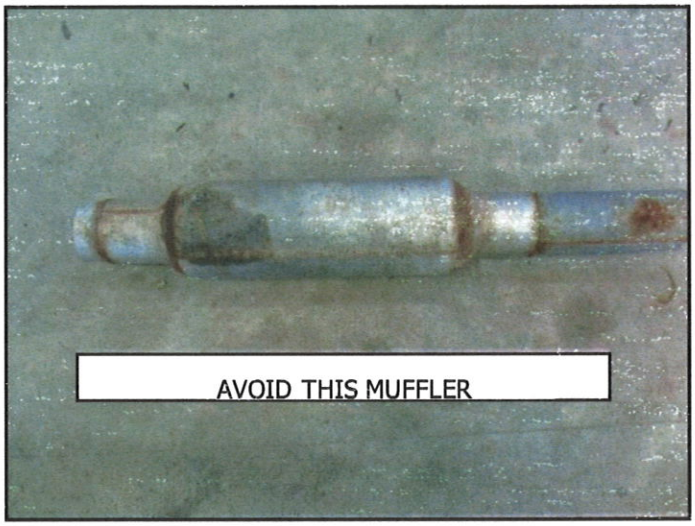


APPROVED EXHAUST MANIFOLD

FIGURE 3.5A

APPROVED MUFFLER

FIGURE 3.5A



AVOID THIS MUFFLER

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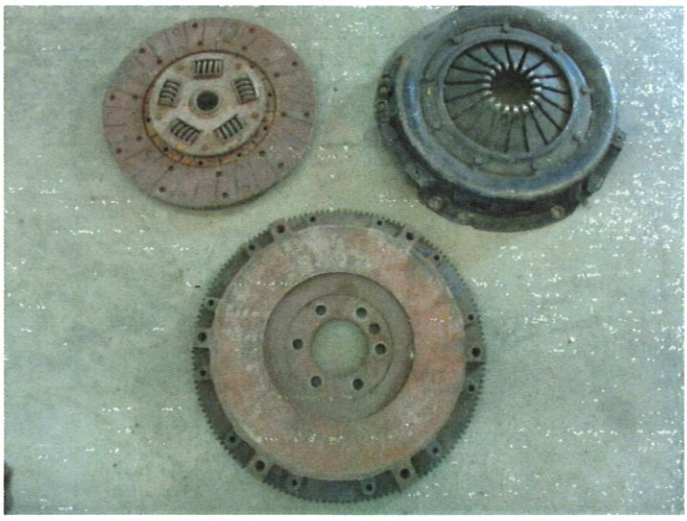
FIGURE 4.2



Flywheel, Pressure Plate, Disc
Combined weight not to be less than 40 lbs.

FIGURE 7.6

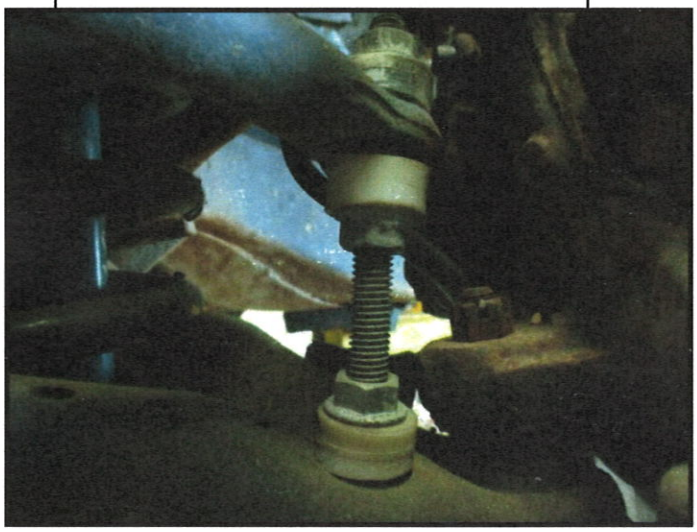
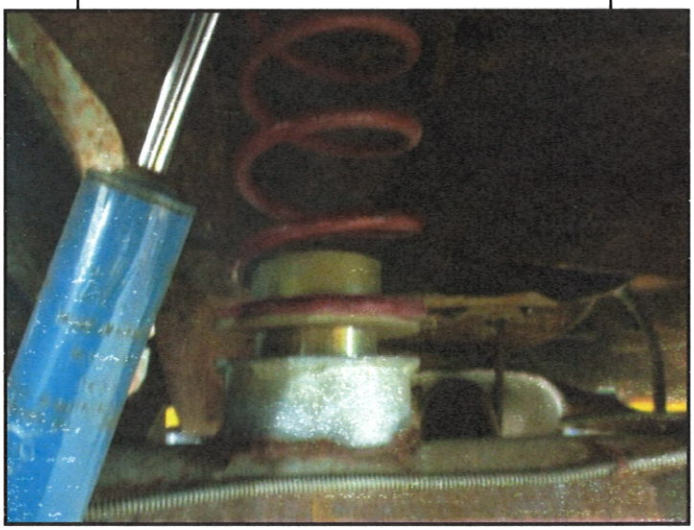
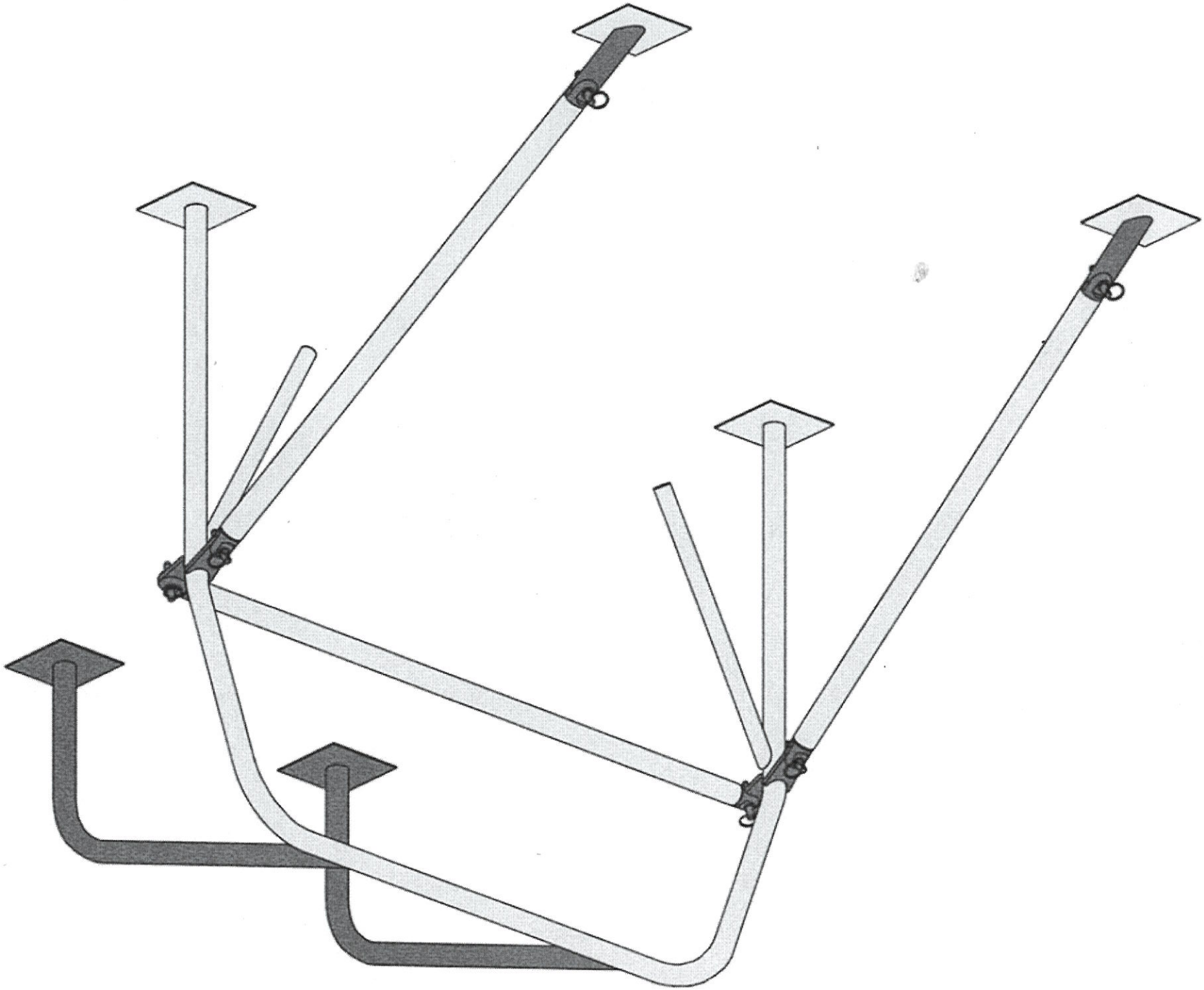
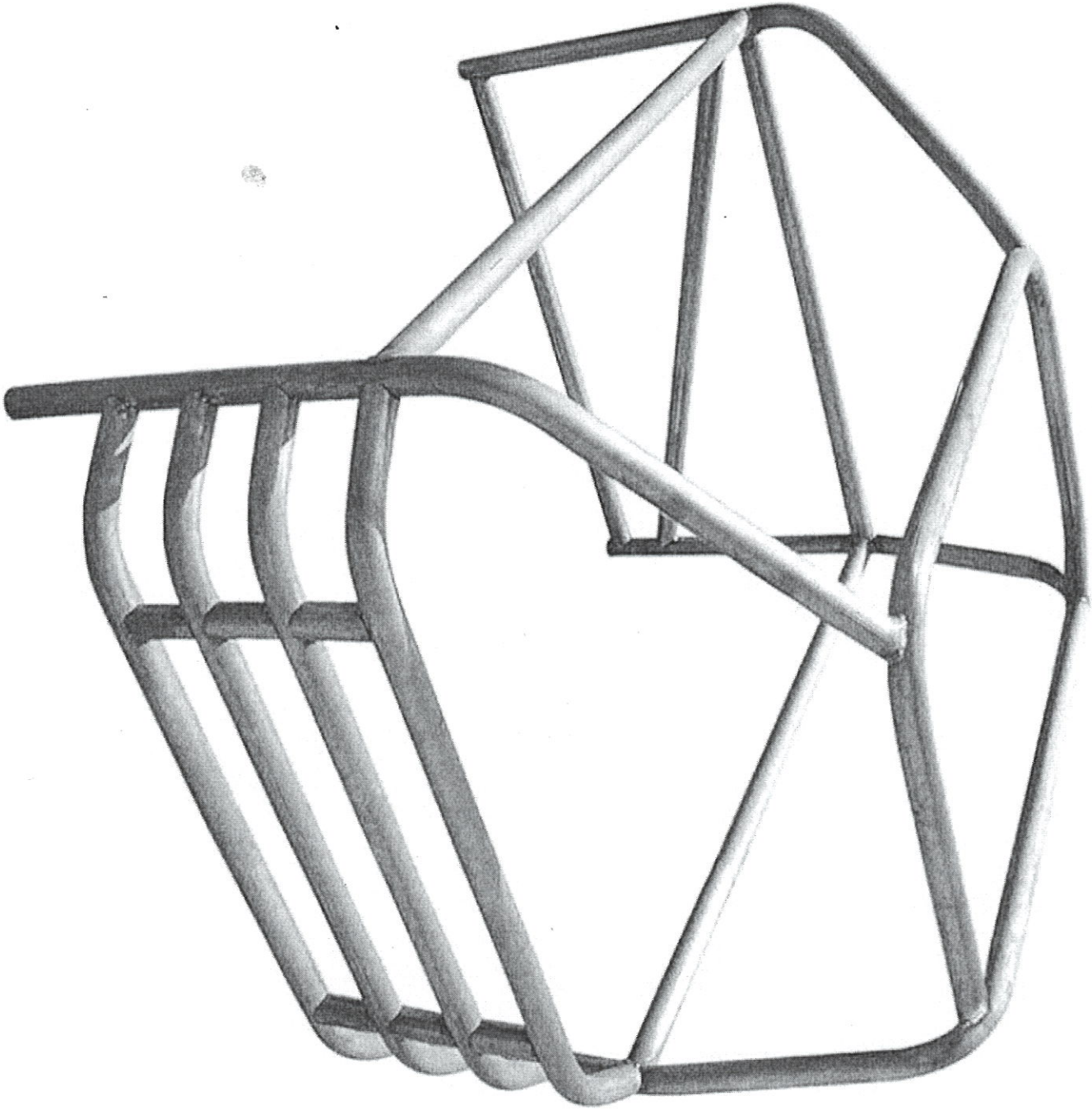


FIGURE 7.3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