SFI FOUNDATION INC.

December 15, 2021

To: Users of SFI Specs 2.4

From: SFI Foundation, Inc.

Subject: Spec 2.4D, Revision, effective December 3, 2021

The above referenced SFI Specs for Front Engine Dragster Roll Cage 6.00 to 7.49 Seconds have been revised, effective December 3, 2021. The revised version is designated as SFI Specs 2.4D and is immediately available from SFI for use by sanctioning bodies and chassis builders.

The extent of these revisions is indicated by underlining and highlighting as follows, and this document may be used in conjunction with the prior version of each Spec:

Section II.4:

4. Holes in the frame rail must have visible reinforcement with an oval or circular patch/cap, equal in area to the hole size. Any hole that exceeds 33% of the diameter of the parent tube must have a tube-type reinforcement. Nominal thickness .049" material must be used for all reinforcement and must be welded around the outside perimeter.

Section II.7:

7. All step-down splice welded joints (e.g., an upper frame rail that steps down from 1-1/2" od to 1-3/8" od) in all roll cage/frame area must be installed at a 30º minimum to 45º maximum angle with respect to the tube axis unless otherwise specified. This does not apply to butt weld joints such as the typical joint in the upper or lower frame rails behind the driver; those joints do require reinforcement as noted in paragraph ii.5 of the specifications.

Section II.8:

8. Diagonals and "K" members may be oriented in any direction, unless otherwise specified. Example: left to right, top to bottom, forward to rear, etc. Side bay and floor diagonals, X-members, and K-members must intersect within three tubing diameters of the intersection of the upright or cross member and the frame rail within the same plane (measured edge-to-edge, using tube diameter of the diagonal, X, or K.)

Section III.1.b:

b. The forward roll cage hoop (#1) must be installed to the shoulder hoop(s) (#3) at a minimum angle of 15° from vertical.

Section III.2.c:

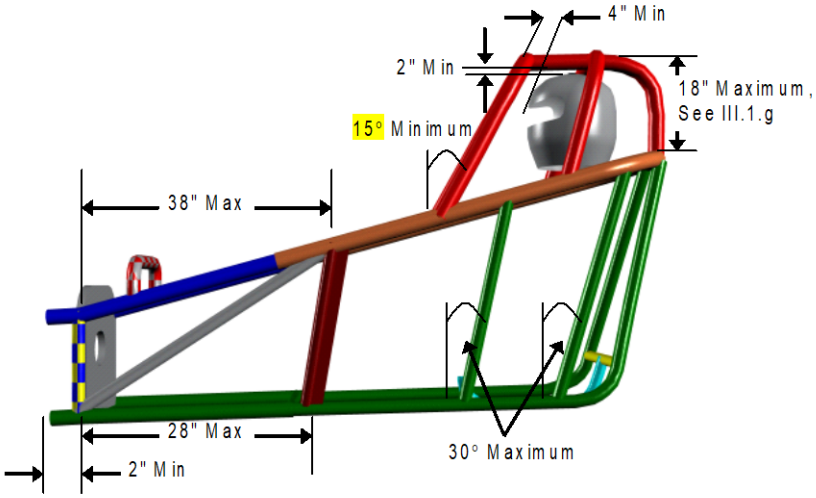
c. The forward (#10) and rear (#11) seat uprights (30° from vertical maximum) must be 1 1/4" x .058" tubing. For designs that do not use a transition of the lower frame rails (#17) as two back brace uprights (#19), the two back brace uprights (#19) must be 1 1/4" x .058" tubing or a single back brace upright (#20) must be 1 1/4" x .065" tubing. If a parachute(s) anchoring point is attached only to any single rear back brace upright (#20) or if a push-bar is attached to any single rear back brace upright (#20) then 1 3/8" x .095" tubing is required for that upright. Non-vertical uprights (i.e., greater than 30 degrees from vertical) are not permitted.

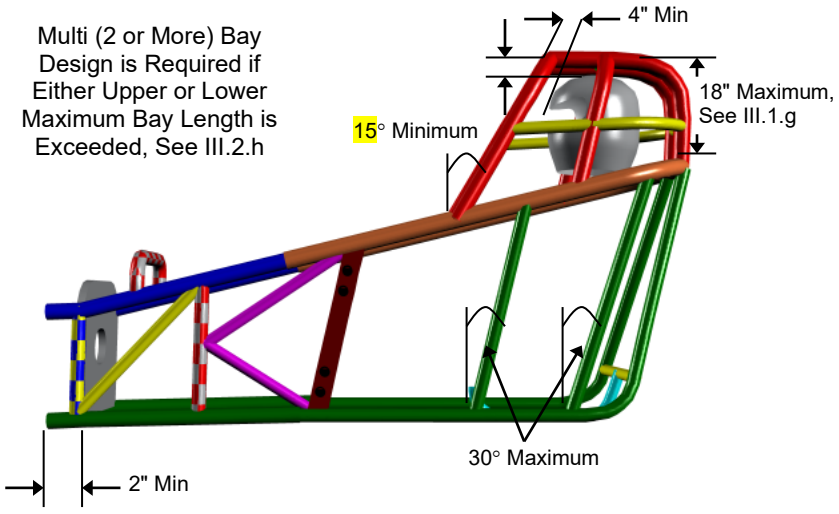
Section III.2.g:

g. The seat must be supported by either a 1" x .058" tube or 1 1/2" x .125" flat bar cross member (forward seat cross member {#14}) welded directly to either the lower frame rails (#16) or to the forward seat uprights (#10). Alternately, (#14) 1" x .058" specification seat bars/cross members may be multi-piece and may attach to components other than the lower frame rails and uprights, but (#14) must tie into and/or be continuously supported by components of at least 1" x .058" and be supported by components equivalent to the lower frame rails and uprights (such as diagonals).

Section III.2.h:

h. The side bays between the motor plate uprights (#9) and the rear end uprights (#8) must contain diagonals (#22) of 1 1/4" x .049" or 1 1/8" x .058" tubing or X's or K's (#23) of 1" x .049" or 7/8" x .058" tubing. The maximum lengths of a bay are 38 inches (96.5cm), as measured along the upper frame rails (#4) and 28 inches (71.1cm) as measured along the lower frame rails (#16). Bays exceeding any maximum length must be divided by an upright (#21) of 1 1/8" x .058" tubing and contain diagonals (#22) of 1" x .058" tubing or X's or K's (#23) of 7/8" x .049" or 3/4" x .058" tubing in each bay created by the division.





Section III.2.j:

j. The upper frame rails (#4) must be 1 3/8" x .058" tubing and extend to the shoulder hoop(s) (#3). The shoulder hoop(s) (#3) must be 1 1/2" x .058" tubing and extend from ahead of the rear end uprights (#8) to and around the rear of the car. The upper frame rails (#4) and/or shoulder hoop(s) (#3) must contain an .058" wall interior roll bar reinforcement tube in each side. The interior reinforcement tubes must match the internal diameters of the upper frame rails (#4) and/or shoulder hoop(s) (#3) and visible rosette welds are required. See Detail A on page 7.

The forward edges of the forward seat uprights (#10) must be at least one (1) inch (25.4mm) but not more than six (6) inches (15.2cm) behind the rear edges of the forward roll cage hoop (#1) with the reinforcement tubes extending one (1) inch (25.4mm) minimum ahead of the forward edge of the forward roll cage hoop (#1) to one (1) inch (25.4mm) minimum behind the rear edges of the forward seat uprights (#10).

or

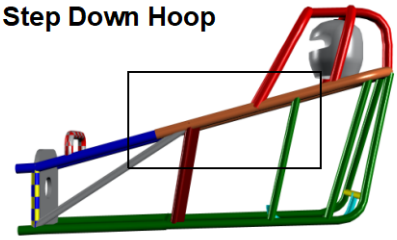
The rear edges of the rear end uprights (#8) must be at least one (1) inch (25.4mm) but not more than six (6) inches (15.2cm) in front of the forward edge of the forward roll cage hoop (#1) with the reinforcement tubes extending one (1) inch (25.4mm) minimum ahead of the forward edges of the rear end uprights (#8) to one (1) inch minimum behind the rear edges of the forward roll cage hoop (#1). See Detail B on page 7.

If one size (1 1/2" x .058" tubing) upper frame rails (#4) and shoulder hoop(s) (#3) are used, butt weld splicing is permitted between the center lines of the forward roll cage hoop (#1) and the forward seat uprights (#10). If butt weld splicing is used here, an interior sleeve is required, extending a minimum of three (3) inches (7.6cm) on each side of the seam. See Details A and B on page 7. Butt weld splicing of the shoulder hoops (#3) is also permitted in the rear center. If butt weld splicing is used here, an interior sleeve is required.

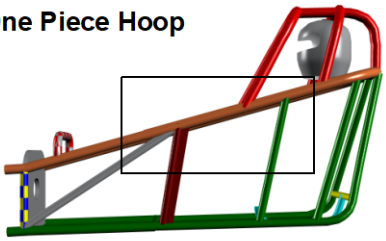
Telescoping continuations of the upper frame rails (#4) into the shoulder hoop(s) (#3) and roll bar reinforcement tubes may be one and the same if the minimum dimensions of each and all are met. See Details A and B on page 7. Roll bar reinforcement tubes and the butt weld interior sleeves may be one and the same if the minimum dimensions of each and all are met. For requirements of chassis built prior to 2006 without an internal roll bar reinforcement, consult the “SFI 2.4 Legacy Tech Advisory” document available from SFI.

Interior Reinforcement Tube

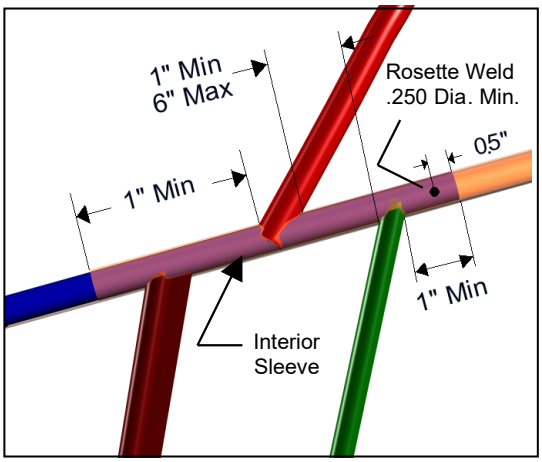
Step Down Hoop



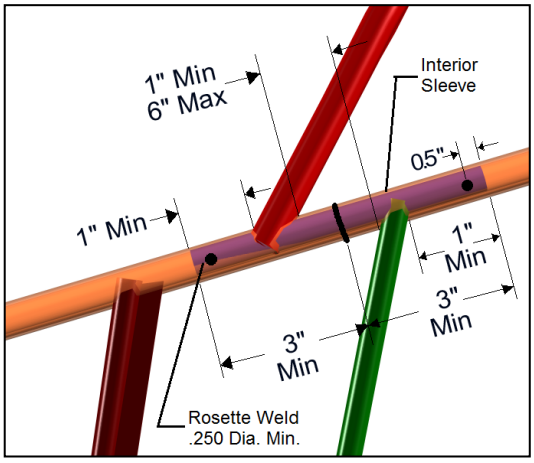
One Piece Hoop



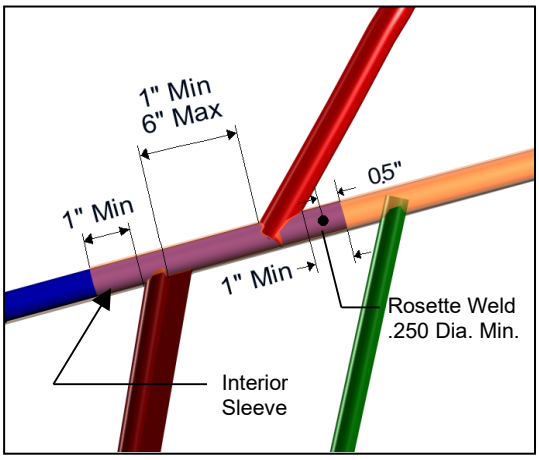
Detail A – Step Down Hoop
Interior Reinforcement Tube
As Upper Frame Rail Telescopes
into Shoulder Hoop,



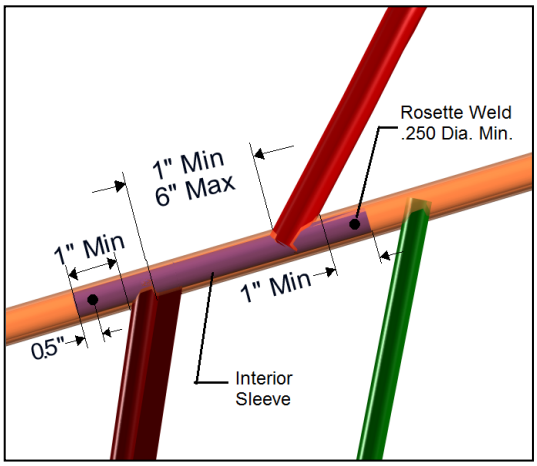
Detail A – One Piece Hoop
Interior Reinforcement Tube
Supported by Forward Seat
Upright (#10)



Detail B – Step Down Hoop
Interior Reinforcement Tube
As Upper Frame Rail Telescopes
into Shoulder Hoop,



Detail B
Interior Reinforcement Tube
Supported by Rear End Upright



Section IV.2:

2. BOLTED DIRECT

The rear end housing must have one (1) 1/4" (6.4mm) SAE 4130N steel plate welded on each side of the housing. The plates must be fully welded to the housing and the plates and welds must wrap around the housing a minimum of 180°. Welding on only one side is acceptable unless the plate exceeds 1/4" in thickness.

Section IV.5:

5. WELDED

The rear end housing must have one (1) 1/4" (6.4mm) SAE 4130N steel plate welded on each side of the housing. The plates must be fully welded to the housing and the plates and welds must wrap around the housing a minimum of 180°. Welding on only one side is acceptable unless the plate exceeds 1/4" in thickness. Each plate also must be welded to its adjoining rear end upright the full length of the upright (to two (2) rear end uprights (#8) per side for the "V" design the full length of the uprights) and to the upper (#4) and lower (#17) frame rails completely on one side of each plate, with 1/4" (6.4mm) minimum wrap around the upper (#4) and lower (#17) frame rails. The other side must be welded with one (1) inch (25.4mm) minimum skip welds.

Thank you,

SFI Foundation, Inc.