



December 15, 2021

To: Users of SFI Specs 10.4
From: SFI Foundation, Inc.
Subject: Spec 10.4B, Revision, effective December 3, 2021

The above referenced SFI Specs for Side Steer Roadster Roll Cage, 7.50 Seconds E.T. and Slower have been revised, effective December 3, 2021. The revised version is designated as SFI Specs 10.4B 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.1:

1. All structural material for the roll cage (tubing, flat bar, etc) must be normalized SAE 4130 chromemolybdenum steel (4130N) purchased to the requirements of military specification MIL-T-6736B and its subsidiary documents or equivalent, Docol R8 Steel Tube, or mild (carbon and alloy; seamed or seamless round; as welded hot rolled, round; mandrel drawn & special smooth inside diameter, round; as welded cold drawn, round; hot finished, round; cold worked, round; rough turned seamless) steel tubing purchased to the requirements of ASTM A519 or A513 and their respective subsidiary documents or equivalent. Throughout this specification tubing diameter and wall thickness for 4130N and Docol R8 are nominal sizes; however, considering the numerous methods of manufacture for mild steel, accompanied by all of the varied specification tolerances, the material requirements are:

- a. **Where** round tubing 1 3/8" diameter or larger **is specified**, the nominal wall thickness is .118".
- b. **Where** tubing less than 1 3/8" diameter **is specified**, the nominal wall thickness is .108".

- c. Exception: for round tubing used for helmet guards (#50) and floor X (#4), the nominal wall thickness is .083”.
- d. For square and rectangular tubing, the nominal wall thickness is .058”.
- e. Plate thickness and bolt diameters are minimum requirements, unless otherwise specified.

Section II.11:

11. Any hole in a chassis tube 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.12:

12. Diagonals and "K" members can 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 IV.2.f:

- f. The floor consists of an “X” (#4) of 5/8" x .058" tubing. The Center Floor X Brace (#4) must be at least as long as the inside width of the Frame Rails (#2). Two or more floor Xs may be used as long as the sum of the individual lengths of the Xs is at least equal to the inside width of the Frame Rails (#2). In lieu of the floor X, a K or X member of 1" x .058" at least half as long as the width of the inner frame rails is also acceptable.

Section IV.2.g:

- g. The Shoulder Hoop(s) (#10A & #10B) must be 1 1/2" x .058" tubing. If 1 5/8" x .083" tubing is used for the Shoulder Hoop(s) (#10A & #10B), Shoulder Hoop Uprights (#11, #14 & #15), Frame Rails (#2), Passenger Side Outrigger (#5B), and Passenger Side Rocker Bar (#6B), then inner Forward, Intermediate, and Rear Bay Diagonals (#22, #23 & #24) are not required. The outer Forward, Intermediate, and Rear Bay Diagonals and uprights are still required for this configuration. It is acceptable for the shoulder hoop to be fabricated by welding together three pieces of straight tubing.

Section IV.2.h:

- h. The Driver's Leg Retention Bar (Dash Bar) (#17) may be installed with bolts or welded.

Section IV.3.c:

- c. For all side steer roadsters, the roll cage shall be supported by a total of eight (8) gussets: two (2) on the Primary (Front) Roll Cage Hoop (#42), four (4) on the Secondary (Rear) Roll Cage Hoop (#43A), and two (2) on the Rear Roll Cage Uprights (#44). Roll Cage Gussets (#41) shall be minimum 1 1/2" x .065" tubing, 1 3/4" x 1" x .058" rectangular tubing, or .120" thickness flat plate. Tube gussets must be installed at 40° minimum to 50° maximum with respect to the shoulder hoop(s) (#10A & #10B) and must be at least 3" (7.6cm) long on the short side. Plate gussets must be at least 3" long by 3" high (7.6cm x 7.6cm) and must be flush with the outside surface of the roll cage tubes and shoulder hoops. Plate gussets must be fully welded on the outside, around the end and 1" minimum on the inside. Plate gussets may be shaped and are allowed a maximum of three (3) lightening holes consisting of one 1/2" (12.7 mm) diameter and two 3/8" (9.5 mm) diameter holes maximum. Plate gussets must have a minimum of 3/8" (9.5 mm) between from any edge to a hole, or from one hole to another. All gussets must be fully welded to the roll cage members and the shoulder hoops.

Note: Some side steer roadster roll cages may be certified to the current revisions of other SFI Roll Cage Specifications, but for all side steer street roadsters, no matter what specification they are certified to, all eight of the roll cage gussets (#41) described and shown in this paragraph are required.

Section IV.3.d:

- d. The Primary (Front) Roll Cage Hoop (#42) must be installed to Shoulder Hoop(s) (#10A & #10B) at a minimum angle of 15° from vertical.

Section V.1:

1. The Main 4-Link Cross Member (#1) can be three (3) pieces and there must be a minimum of two (2) Floor Gussets (#39) of 4130N tubing of 1 5/8" x .083" or 1 3/8 x .049 or 1 1/4 x .058 or 1 1/8 x .065 or 2 x2 x .058, or mild steel tubing of 1 3/8 x .118 or 1 1/4 x .108 or 1 1/8 x .108 or 2 x 2 x .058 or 1 5/8" x .118". The Floor Gussets (#39) must be coincident with the center section of the Main 4-Link Cross Member (#1) at the intersection point of the Frame Rails (#2A) and extend rearward to the outer sections of the Main 4-Link Cross Member (#1).

Thank you,

SFI Foundation, Inc.