



QUALITY ASSURANCE SPECIFICATIONS™

SFI SPECIFICATION 36.3

EFFECTIVE: JANUARY 30, 1997*

PRODUCT: Drag Boat Capsule Roll Cage

I. OBJECT

SFI Specification 36.3 is a design and construction quality assurance standard for a Drag Boat Capsule Roll Cage used in the sport of drag boat racing competition. This specification is concerned only with the protective characteristics of the driver area in the event of a crash and not with the racing performance properties of the capsule.

A representation of compliance with SFI Specification 36.3 is not an indication nor an assurance that the roll cage will provide adequate driver protection in all situations of a vehicle crash or mishap. It is suggested, however, that roll cages which do not comply with these designs and construction quality assurance standards may not perform their intended function, nor might they provide adequate protection to a driver in a crash situation.

This specification is advisory only. There is no agreement between SFI nor any other party to be guided by it, and its use by any association, organization, manufacturer or individual is entirely voluntary. SFI will not accept any responsibility for consequences resulting from its application.

SFI shall not approve or disapprove any piece of equipment or item, either officially, or unofficially, irrespective of its compliance with SFI Specification 36.3 or recommended practices.

II. BASIC CONSTRUCTION PRACTICES

1. All structural material for the roll cage must be normalized SAE 4130 chrome-molybdenum steel (SAE 4130N) purchased to the requirements of military specification MIL-T-6736B and its subsidiary documents or equivalent. Throughout this specification tubing diameters and wall thicknesses are minimum requirements, unless otherwise specified.

2. All welded joints indicated by this specification must be welded by the TIG (Tungsten Inert Gas) or MIG (Wire Feed) process, and must employ a steel filler metal which is compatible with the base metal. All welds must comply with generally accepted welding practices.
3. The manufacturer must label each chassis with the manufacturer's name and serial number, as well as the date of manufacture of the chassis. Such identification shall be on the upper frame rail in the roll cage area.
4. All butt welds must have visible reinforcement or interior sleeve(s) with visible rosette welds.
5. Diagonals and "K" members can be oriented in any direction, unless otherwise specified. Example: left to right, top to bottom, forward to rear, etc.
6. No components may be clam-shelled in order to satisfy outside diameter or wall thickness requirements. Roll cage components above the upper frame rails may not be repaired by splicing, patching, clam-shelling, etc. All other components may be repaired by splicing, patching, clam-shelling, etc. according to generally accepted aircraft repair procedures. Each splice joint must have an insert of 6" (15.2cm) minimum 3" (7.6cm) on each side of the joint center line).

III. DESIGN AND FABRICATION STANDARDS

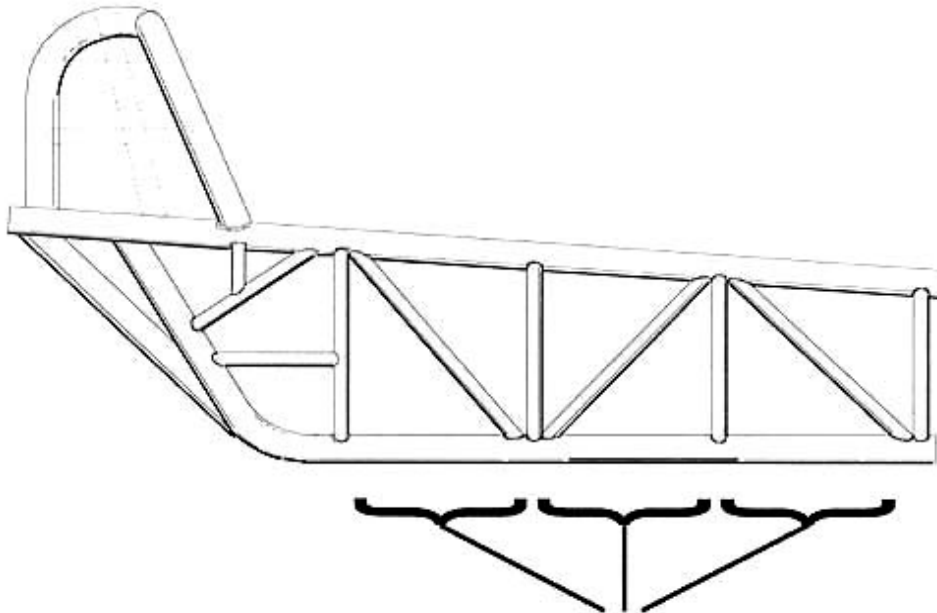
1. ROLL CAGE

- a. The entire roll cage shall be constructed of 1 1/4" x .065" tubing and there must be a minimum of four (4) points of attachment to the top frame rails and shoulder hoop(s).
- b. Helmet guards of 3/4" x .065" tubing on each side are optional.

2. FRAME

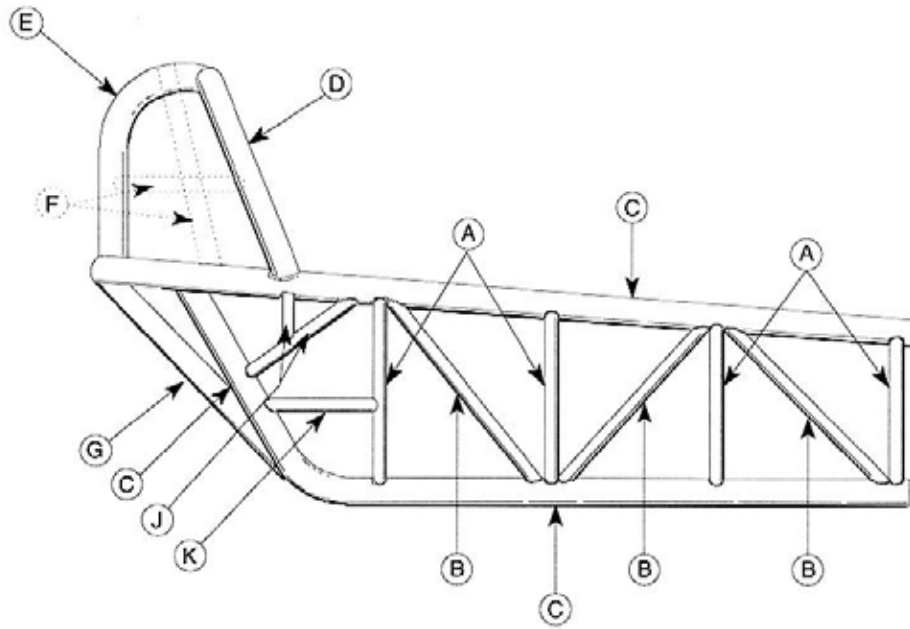
- a. Refer to Figures A through E for specifications, i.e., the minimum tube diameter and wall thickness of the SAE 4130N tubing used in the shoulder hoop(s), upper and lower frame rails, all uprights, and all braces.
- b. "Horizontal" within a maximum of $\pm 15^\circ$ from horizontal.
- c. "Vertical" within $\pm 30^\circ$ from vertical.
- d. "Diagonal" shall be any tubing member connected at joints of vertical and horizontal members at greater than 30° from vertical or 15° from horizontal.

In floor of cage, a diagonal is any member connecting axial and lateral members.



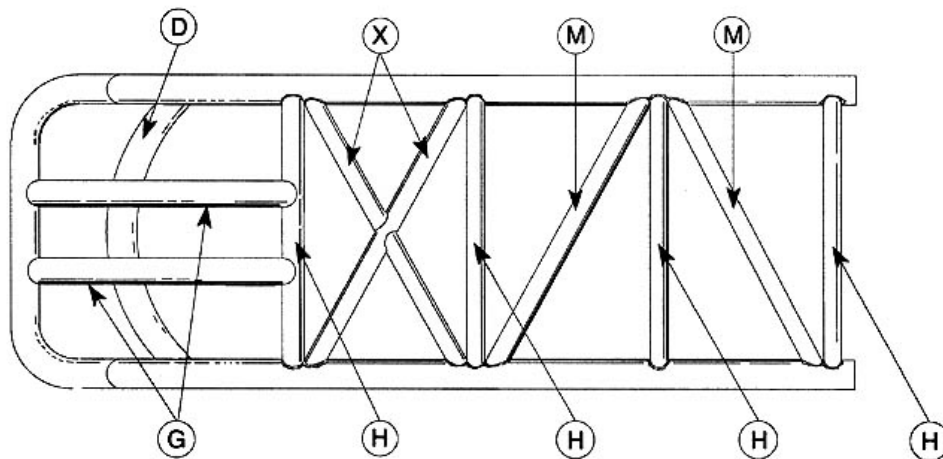
APPROXIMATE EQUAL SPACING
20 INCHES MAXIMUM

Figure A



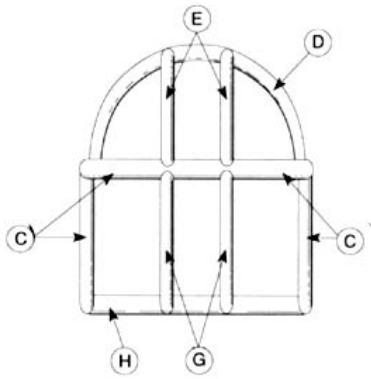
SIDE VIEW

Figure B

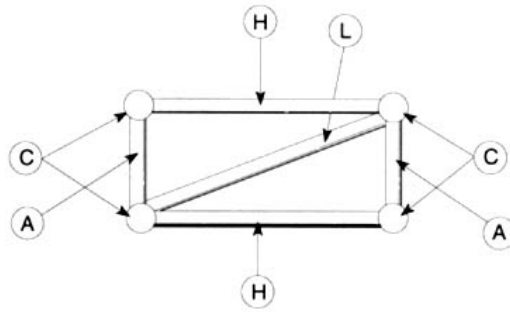


BOTTOM VIEW

Figure C



BACK VIEW
Figure D



FRONT VIEW
Figure E

III. Roll Cage Tubing Code

- (A) Four vertical members (on each side) - 3/4" x .058 wall minimum
- (B) Three diagonal members (on each side) - 3/4" x .058 wall minimum
- (C) Main side rails and rear hoop - 1-1/4" x .058 wall minimum
- (D) Roll cage hoop - 1-1/4" x .065 wall minimum
- (E) Head hoop supports - 1-1/4" x .065 wall minimum
- (F) Head guard (on each side) - 3/4" x .065 wall minimum - Optional
- (G) Rear support - 1-1/4" x .058 wall minimum
- (H) Five cross members - 3/4" x .058 wall minimum
- (X) "X" member(s) - 3/4" x .058 wall minimum
- (J) Roll cage support - 3/4" x .058 wall minimum
- (K) Seat belt attachment - 3/4" x .058 wall minimum
- (L) Front diagonal - 3/4" x .058 wall minimum
- (M) Two bottom diagonals - 3/4" x .058 wall minimum

IV. READING THE STANDARD

This specification provides minimum tubing diameter and tubing wall thickness dimensions for specific structural components of a roll cage as shown in this specification. Compliance with SFI Specification 36.3 requires that each structural component is in place and that the tubing diameters and wall thickness dimensions are equal to or greater than that required for each of the components.

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