

CLASS CERTIFICATE
SNIPER CLASS

21632

INTERNATIONAL RACING ASSOCIATION
MEASUREMENT DATA SHEET

Use Standard Marking Procedure on this Form:

- (a) When NOT within the tolerance limits allowed, mark an "X" in the margin and state actual measurements.
- (b) Otherwise, do not write in the measurements of this boat except where specifically called for.
- (c) Draw a neat circle around number of each paragraph when you

- have verified or carried out all its details.
- (d) Thus, when your examination is completed, every paragraph number will be "circled" (indicating conformity); or will bear an "X" in the margin (something to be re-built or to be submitted to the International Measurement Committee for decision).

- 1. Measurers must fill in every blank space provided on this sheet. Each dimension shown must be verified by the measurer and if the dimension is not either the maximum or minimum or between the two, the measurer may recommend certificate good for local races only on home built boats, if discrepancy is MINOR and clearly shown. No discrepancies permitted on professionally built boats.
- 2. This boat must have been assigned a racing number by the Association which must be carved, burned, or molded into the centerboard trunks in an unobscured position. Minimum height of these numbers must be 1/2". Unless this is done, the boat cannot receive a Certificate of Measurement. In order to be eligible to race every boat must have an official decal for the current year, permanently attached to the starboard side just forward of the transom. Decals will be issued by the appropriate secretary for each year that dues are paid.

- 7. Mainsheet Bridle: Any type or location permitted. May be adjusted while racing.
- 8. Attachment of Jib Tack: Any method permissible. Height above deck may be adjusted while racing.
- 9. Mainsail Clew Outhaul: Any type permitted. May be adjusted while racing.
- 10. Sliding Goosenecks: May be on track or in slot in mast. May be swiveling and may incorporate roller reefing gear. Must have some means to prevent downward movement beyond position giving maximum legal length of luff. The position of the gooseneck may be changed while racing. The tack of the sail shall be so located that the bolt ropes do not deviate appreciably from a straight line.
- 11. In countries where Styrofoam or equivalent material cannot be secured, the use of flotation bags will be permitted. At least two bags must be used and be of approximately equal capacity. Twice as much flotation must be provided as is required with Styrofoam.
- 12. Movement of the mast, fore and aft or lateral, may be restrained by blocks at the deck level. Fore and aft guys may be used, with the fore guy attached to the mast no higher than the top band of the lower set of bands. Mast can not be moved at the maststep.

3. Official Racing Number of boat on trunk. 21632

4. Boat's Name _____

5. Full name(s) and address(es) of owner(s) (please print)
Steven Mangine
96 Timothy Rd.
Naugatuck, Conn. 06770

6. Name and charter number of the fleet in which this boat is expected to compete.

- 9. Boats must be measured by officially appointed or elected Fleet Measurers or by Class Measurers approved by SCIRA. No Certificate shall be acceptable unless recommended and signed by such a Measurer. Boats must be weighed at the start of each season, and the Measurer shall note the weight and the amount of ballast, if any, on the owner's SCIRA membership card. Sails are subject to remeasurement and to cancellation of approval at any time. They must be measured at the start of each season and so marked. On any measured item (mast, boom, rudder, or centerboard), only one can be measured and these items can be changed only on irreparable damage or loss, after the start of any racing season.

GENERAL RESTRICTIONS

- 7. Boats to be eligible to race in this class must be built to conform in every way to this data sheet. Boats that do not meet all these requirements shall be ineligible to receive a Certificate of Measurement but they must retain their identifying numbers. Such boats cannot take part in any open or closed regattas whatsoever. Owners of such boats shall be ineligible to join SCIRA. The measurer must notify the Executive Secretary of any boats that cannot pass these requirements, giving the boat number, and name and address of both the builder and owner.

- 8. Options. Nothing is optional in these plans, specifications or restrictions unless definitely stated as such. The stem must be a smooth curve. If the stem does not appear to be a smooth curve, the following offset shall be checked: 10 1/2" up from base line, 10 1/2"-11 3/8" back from stem head; 12" up, 7-11/16"-8 3/8" back; 15" up, 4 1/4"-5" back; 18" up, 2-3/16"-2 3/4" back. The purpose of the restrictions under which Snipe hulls and sails are approved is to insure that, to as great a degree as possible, all hulls and sails have identical racing capability. It is impossible to list every single variation that might turn up in the future, and it is impossible to make any set of restrictions in which, at some future date, someone cannot find what appears to be a legal means of obtaining some racing advantage. Any boat or sail having features which are not consistent with this purpose will not be approved and cannot race even though there is no specific restriction preventing the item in question. Improvements and changes will be made only when these changes do not obsolete older boats from the standpoint of racing capability or when they can be accomplished by anyone at reasonable expense.

- Approved Options not covered elsewhere:
- 1. Self-bailing cockpit: No restriction on method of construction. Bailing equipment must still be carried.
 - 2. Hiking Straps: No restriction on number or location.
 - 3. Tiller Extension: No restriction on cross section or length.
 - 4. Boom Vang: No restriction on type. May be used at any time.
 - 5. Cleats for Jib Sheets or Mainsail Sheets: No restriction on number, type, or location.
 - 6. Jib Fairleads: Any type or location permitted.

See "Instructions for Fleet Measurers" in the Rule Book.

HULL - Fiberglass

10. Check hull materials below. Where O.K., use check-mark. Give actual dimension only when found different.	
Molded depth of frames - - - - - (2 1/4")	
Frames must be located within 3/4" of station lines and must be straight. No curvature allowed.	
Thickness of frames - - - - - (3/4")	
(Frames may be made of fir exterior plywood in one piece or in four pieces joined by suitable gussets at the chine and floor timbers at the keel.)	
Thickness of gussets at chine - - - - - (3/4")	
(Gussets at chine may be made of 1/4" fir exterior plywood if double, and 1/2" fir exterior plywood if single.) No gussets required if the frames are made in one piece.	
Dimensions of chine pieces - - - - - (3/4"x1 1/2")	
Dimensions of clamps - - - - - (3/4"x1 1/2")	
Clamps shall be bonded to the side of the boat at the sheer on plywood hulls. They may be installed in this manner on fiberglass or planked hulls or may be omitted entirely.	
Thickness of side planking - - - - - (3/4")	
Thickness of bottom planking - - - - - (3/4")	
Thickness of sides of trunk:	
3/8" minimum, 1/2" recommended - - - - -	
Thickness of sides of centerboard trunk - (1/2")	
Thickness of transom (estimate acceptable) (3/4")	
A 3/4" exterior plywood transom may be used.	
Thickness of deck - - - - - (1/2")	
Deck may be made of 1/4" exterior plywood.	
Dimensions of transom cheek pieces - (3/4"x2 1/4")	
Width and thickness of keel batten - (3/4"x5")	
Width and thickness of keel - - - (3/4"x4")	

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11. Planking. Minimum thickness $\frac{3}{4}$ " throughout the sides and bottom of the hull. Double or triple planking may be used but the total thickness must be $\frac{3}{4}$ ". For boats in countries other than the United States where suitable light-weight wood for planking is not readily available, the use of $\frac{1}{2}$ " mahogany planking (unit weight of .0185 pounds per cubic inch or greater) will be allowed, upon appeal by the National Secretary made to the International Rules Committee. When the $\frac{1}{2}$ inch mahogany planking is used, it will also be required that the frames, keel, keel batten, stem and centerboard trunk be made of mahogany, and to dimensions as shown in the Measurement Data Sheet, except as altered in this paragraph. The thickness of the keel will be $\frac{1}{2}$ inch and the thickness of the keel batten will be 1 inch. In any case, uniform thickness will be required throughout the sides and bottom of the hull. Canvas or other filler between layers shall not be considered as part of this dimension. Transom must be $\frac{3}{4}$ " thick.

12. Hull Structure. The entire hull must be built like the plans and specifications and restrictions. Kind of wood used is optional but the minimum weight limit must be observed. The materials specified in plans are best suited.

14. No tapered timbers, frames, etc., permitted.

15. The dimensions as given above are minimum for all sizes. They are the sizes specified in plans.

16. Keel width minimum 4" on flat under surface from stern to frame 2, and minimum 2" wide at frame 1.

17. Holes cut in any part of frame structure for lightening hull are forbidden.

18. Snipe hulls may also be built of fiberglass or plywood. The specifications and restrictions on the use of these materials are listed in supplements following paragraph 75.

DECK - Fiberglass

19. Forward deck. This must extend the full width of the boat to a point no further than $24\frac{1}{2}$ " ahead of the aft end of the dagger board slot, or 1" ahead of the forward end of the centerboard slot. Maximum crown of deck 5". The top of the sprayboards must be minimum 2" vertically above the deck for minimum 2' of their respective lengths. Maximum projection of deck or sheer molding beyond sheer is $1\frac{1}{4}$ " in a horizontal plane, perpendicular to the sheer.

20. After deck minimum 18" in length.

21. If the deck is covered with $\frac{1}{2}$ " planking, 16 deck beams, $\frac{3}{4}$ " x 2", shall be used. If the deck is covered with $\frac{1}{4}$ " plywood, the following simplified structure may be used:

Ahead of and in back of the cockpit, there shall be two $\frac{3}{4}$ " x $1\frac{1}{2}$ " fore and aft stiffeners, one on each side of the centerline, with the $1\frac{1}{2}$ " dimension vertical, and one $\frac{3}{4}$ " x $1\frac{1}{2}$ " fore and aft stiffener on the center line. This may lay flat. There shall be $\frac{3}{4}$ " x 3" deck beams near station 1 and station 2, and at the fore and aft ends of the cockpit. If the aft end of the cockpit is forward of station 5, there shall be an additional deck beam between it and the transom. Approximately equally spaced between the deck beams at the fore and aft ends of the cockpit, there shall be two stiffeners from the side of the boat to the cockpit side rail on each side, and also from the side rail to the chine piece. Minimum thickness of these stiffeners $\frac{3}{8}$ ". Fore and aft members shall be spruce or equivalent; deck beams and stiffeners may be either plywood, spruce, or equivalent wood.

COCKPIT

22. Greatest length of cockpit $27\frac{1}{2}$ " Greatest width $27\frac{3}{4}$ " Maximum width of cockpit 36"; on boats meeting new flotation requirements 40". If the deck alongside the cockpit curves down on a radius, the maximum width shall be checked at the intersection of the deck with a plane two inches below the sheer. Cockpit corners may be square or rounded to any desired radius.

23. Use of floorboards is optional.

CENTERBOARD

24. Check type on this boat. Dagger Pivoted

25. Verify dimensions with sketch. No other shapes permitted. Slot in dagger board trunks maximum $1\frac{1}{2}$ " longer than the width of board and no more than $\frac{1}{2}$ " in width. Boards must be of uniform thickness except within 1" of edges which may be tapered off. Dagger board may be cut out for lightness either radius or straight cut. (See plans.) The top of the front leg of a daggerboard may be sloped back at an angle not greater than 45 degrees, starting at a point 12" above the centerpunch mark $33\frac{1}{2}$ " from the bottom of the board.

26. A dagger board cannot be used in the slot of a pivoted center-board. The centerboard must be restricted in such a manner that not less than 12 inches extends below the keel when the board is at its maximum height.

27. No center-board of either type shall exceed 80 lbs. in weight. The dimensions for boards as given on the sketch on the back of this sheet must be adhered to. All types of center-boards must be made of one single kind of metal. There shall be no inserts or other means of changing the distribution of the weight. Aluminum boards may be made of any hard aluminum alloy. 6061T6 or its equivalent is recommended. Minimum thickness of aluminum boards $\frac{1}{4}$ ". Minimum thickness of steel or bronze boards $3/16$ ". Recommended minimum thicknesses are $5/16$ " for aluminum and $\frac{1}{4}$ " for steel or

bronze Only one center-board shall be permitted to be measured. Only steel bronze, aluminum boards are approved. Centerboard material Alum shape 30 thickness $\frac{3}{8}$ " weight 30

RUDDER

28. See that rudder is substantially made. See that tiller is strong and attached firmly to rudder head in such a manner that it cannot be slid fore and aft. There shall be a suitable means of preventing rudder from falling off with boat inverted.

29. Thickness above waterline $1\frac{1}{2}$ " ($\frac{3}{4}$ " minimum)

30. The length from the point on the rudder which is projected from the bottom of the keel at the transom, measured diagonally across to the most distant point on the radius at the bottom of the rudder should be $1'-11\frac{1}{2}"$ (allowance 1" plus or minus).

31. The width of blade below waterline minimum $9\frac{3}{8}"$ at any point. This measurement is taken across rudder at approximately right angles to its leading edge.

32. Metal rudder blades are prohibited. While pivoting rudders are desirable because of purely local conditions, they may be used for local point score races only. They may not be used in any regattas or championships. Tillers must be direct connected and all above the aft deck. Rudder must at all times be submerged as shown in the plans. Vertical adjustments or changes in angle are not permitted. Rudder must be attached to the transom and as close to the transom as conveniently possible with $1\frac{1}{2}"$ maximum clearance.

MAST, BOOM AND RIGGING

33. Only one mast shall be measured.

34. The minimum allowable length from sheer molding shall not be under 20'-1".

35. The center line of the mast shall be located 60 to 71 inches aft of the stem. This measurement shall be taken to the mast step. Where the mast is stepped on the keel, the hole in the deck where the mast goes through the deck shall have a maximum size of 8" x 8" or 10" in diameter if round.

36. Mast may be stepped on deck provided height above sheer is correct. Rotating masts and any means of artificially inducing bending prohibited.

37. The mast must be minimum $1\frac{1}{2}"$ athwartships at the top band or at any point below.

38. If mast is made of wood, it must be minimum 2" athwartships and minimum 3" fore and aft at deck. If mast is round (not streamlined), the dimension at deck must be minimum $2\frac{1}{2}"$ in diameter. Give dimensions of this mast _____

39. "Cobra"

41. Measure distance from sheer to the intersection of the jib stay with surface of the mast . . . See sketch on measurement drawing for method of determining the intersection. Dimensions may be 15' maximum, 14'9" minimum. Shroud intersection must be within 2" above or 4 below. If a tube projecting in front of the mast is used for the jib halyard, the tube shall be attached to the mast by a strap running from the front of the tube to the front of the mast, the intersection with the mast being between 14'9" and 15'0" above the sheer. The tube shall not project more than 4" from the front of the mast and the forestay and the strap shall form a straight line when the forestay is under tension in its normal position.

42. Halyards must be used, and they must lead down the mast toward the boat, alongside or inside the mast. The length of the luff of the mainsail shall be limited while racing by the following means:

Bands 1" wide shall be painted around the mast in color to contrast with the color of the mast, the bands being located as follows:

1. The lower edge of the top band to be not more than 20 feet $\frac{1}{2}$ inch above the sheer.
2. Two more bands whose lower edges are 6" and 12" below the lower edge of the top band.
3. Three additional bands, the upper edge of each band being a maximum of $16'9\frac{1}{2}"$ below the lower edge of the corresponding top band.

In racing, the sail must be set so that the edge of the sail is limited at the top by the lower edge of one of the bands, and at the bottom by the top edge of a corresponding band. Tape which is not readily removable and which soon becomes as permanently attached as paint (such as one mil mylar) may be used for bands. The lowest pair of bands is optional.

43. Length of boom shall be 8'8" maximum, 8'6" minimum, measured from the aft side of the mast (the aft side of the mast includes the sail slot and material enclosing the bolt-rope). The foot of the mainsail shall not be stretched beyond the following limit while racing: the aftermost edge of the sail at the clew shall not be farther aft than the forward edge of a band 1" wide, and forward side of which is $8'4\frac{1}{8}"$ aft of the aft side of the mast or a projection thereof downward.

44. The maximum depth of boom no matter what type or material shall be 4" at its widest point, minimum $3\frac{1}{2}"$ for a wood boom. Check $3\frac{1}{4}$ " Maximum width at any point 3". Minimum thickness of plank boom $\frac{3}{4}"$. If slotted boom is used, the maximum depth of 4" includes the wood forming the slot.

45. Aluminum extrusions may be used for masts and booms and may be tapered subject to Para. 37. Masts must be made of alloy 6061T6 or equivalent. Booms may be made of alloy

one two

6063T6 or equivalent. Weight of mast without winches, hal-yards, stays, or spreaders, including only the bare mast and fittings for stays, spreaders, and butt end must be at least 15½ lbs. if stepped on deck, or 17 lbs. if stepped on keel. Center of gravity in the condition when weighed must be at least 70 inches above the upper band of the lower set of bands if deck stepped, or at least 60 inches if keel stepped. Masts having an athwartship dimension of 2½" or less must use spreaders.

Any section which may be used for a mast may be used for a boom. For booms only, a basic section 2½" deep and at least ¾" wide at its widest point may be used. The height of the boom at either end may be reduced for access to the bolt rope.

46. Boom and mast may be slotted to take sail bolt rope provided dimensions are met.
47. No restrictions on whisker pole length or its location.
48. Shroud anchorages must be not more than 4" in from the edge of deck, not counting sheer moulding. Anchorages of jib stay and shrouds may be under deck, but location and length of jib stay and shrouds must be incapable of change during a race. The use of elastic light line between the shrouds and the mast is permitted.
49. All boats must have regulation jib stay and two side shrouds as per plans and restrictions. No back stay may be used.
50. Side shrouds and jib stay must be as shown in plans (within allowable variations). All other rigging optional. So-called streamlined rigging not permitted. Running rigging optional. Double jib stays not permitted. If, in the opinion of the Measurer, the rig shall be considered unsound, weak or unseaworthy, the Measurer must not recommend a Measurement Certificate. Changes must not be made after the Certificate is issued, unless the owner has Measurer recheck the rig.

WEIGHT LIMIT

51. THE BOAT COMPLETE MUST BE WEIGHED. THIS WEIGHT DOES NOT INCLUDE ANCHOR, PADDLE, LIFE PRESERVERS, BAILING EQUIPMENT (unless permanently attached), SAILS, OR ANY OTHER LOOSE GEAR. IT DOES INCLUDE MAST, BOOM, RIGGING, MAINSHEET, CENTERBOARD, RUDDER, AND TILLER. BOATS THAT DO NOT MEET THE WEIGHT LIMIT MUST HAVE WEIGHT PERMANENTLY ADDED BEFORE THEY CAN BE GIVEN MEASUREMENT CERTIFICATES.
52. The weight of this boat as outlined above is 381 lbs.
Amount of ballast..... 9 lbs.
Weight of anchor (minimum weight 4 lbs.)..... 9 lbs.
53. All boats must be weighed before issuing a measurement certificate and must be re-weighed at the start of each season. The weight and the amount of ballast, if any, shall be noted on the membership card.
54. The Measurer shall either witness the weighing of the boat or require the owner to furnish a weight certificate signed by at least two witnesses and the owner as well as the owner of the scales, that the minimum weight of the boat complete complies with this paragraph. The minimum weight shall be 381 lbs., except in countries where the National Authority has determined that it will be in the best interest of the Association to have a 425 lb. minimum weight. A boat which weighs less will not be issued a Certificate under any conditions. Ballast, up to 10 pounds, may be permanently added under and attached to the deck; 20 pounds maximum on an all fiberglass boat (hull, deck, floorboards, etc.). If the boat's centerboard weighs less than 80 lbs., additional ballast may be carried, located in any visible place; the amount to be 80 lbs. less the centerboard weight when the minimum boat weight is 425 lbs., and 36 lbs. less the centerboard weight where the minimum boat weight is 381 lbs. All ballast must be installed where it may be seen and it shall be attached with peened over bolts or glass cloth except 10 lb., may be easily removable.
55. Weight certificates from builders will not be accepted.
56. All boats built after March 1, 1970 shall comply with the following flotation requirement: When the boat has been capsized and has remained in any position long enough to take in as much water as possible in high wave conditions, it shall, upon being righted, float so that the lowest point around the cockpit edge where water might enter the boat is at least 6" above the water when the boat is supporting 300 lbs. This may be accomplished by means of tanks, flotation bags, self-bailing cockpits, increased low density flotation material, or any other suitable means. Holes with maximum area 100 square inches may be made in the transom to facilitate drainage. Where transom drains are used to comply with this rule they should have a minimum area of 45 square inches.
- In boats meeting the requirements of this rule, the centerboard trunk may have a minimum height of 9" above the outside of the keel if the boat, after capsizing and being righted, floats high enough so that water will flow out of the trunk; otherwise, the trunk shall be 2" above the water level in the boat after capsizing and being righted.
57. If this boat has a weight certificate, it must be attached to this Measurement Data Sheet and sent to the class Secretary. A duplicate weight certificate may be retained by the owner.

MISCELLANEOUS

58. Measurer must notify the owner of the following essential

requirements: Boat must carry wearable life preservers for all occupants at all times, and race committees may require wearing them when racing when they consider it necessary. Suitable paddle (or oar) and adequate hand bailing equipment must be carried. A sponge is not considered adequate. Electric bilge pumps are approved as auxiliary equipment. Anchor with a minimum weight of 4 lbs. must be carried with 50' of suitable line.

59. There shall be no advertising matter whatever on the outside of any boat or sails. Any boat infringing this ruling shall be subject to loss of measurement certificate. Measurers shall not issue a certificate to any such boat.
60. Give name and address of builder of boat _____
Chubasco Boats
61. Sliding seats, hiking boards, trapeze rigs, and other artificial methods of supporting the skipper's or crew's weight to balance the boat are prohibited. This does not prevent the use of hiking straps or any kind of line or cord attached to the boat within 8" of the top of the deck. It is permissible for the crew to hold on to the side stays.

SUPPLEMENT TO THE

MEASUREMENT DATA SHEET FOR THE CONSTRUCTION OF FIBERGLASS HULLS

Only professional boat builders can make fiberglass Snipe hulls. Effective January 1, 1965, the construction of fiberglass hulls will be allowed under the same tolerances as approved by IYRU and now in effect for wood hulls. The loft lines do not show any sheer molding. Part or all of a sheer molding may be molded with the hull.

The completed fiberglass hull must conform to the standard weight limitation of 381 pounds and/or comply with all weight specifications listed in Paragraph 54. The minimum weight of the bare, trimmed fiberglass hull including the trunk, floorboard supports, mast step, stay anchorages, and 6½ cubic feet of Styrofoam having a maximum weight two pounds per cubic foot for flotation shall be 195 pounds.

MATERIALS: Cloth woven roving or mat may be used, with either polyester or epoxy resins. Glass content must be at least 30% by weight.

FLOTATION: 6½ cubic feet of Styrofoam, Urethane foam, or equivalent having a density of 2 pounds per cubic foot maximum must be built into the hull. Balsa wood enclosed in resin-impregnated fiberglass cloth is considered equivalent. Supposedly airtight compartments are not considered adequate.

CLAMP: Optional. If used should be laminated in order to not deform hull.

TOLERANCE: All fiberglass boats are to be measured to standard tolerances.

The thickness of the hull must be uniform except where reinforced locally such as at the keel, the chine, the stem, the mast step, and where the stay anchorages and rudder gudgeons are attached. Increased thickness due to incorporation of flotation material in either the sides or bottom of the hull is not a violation of this requirement.

If desired, floorboards may be bonded directly to the bottom of the boat, omitting supports. A fiberglass and foam sandwich floor structure may be used.

DECKS: The deck may be plywood as specified in the measurement data sheet, or it may be fiberglass. In general, a fiberglass deck will require some type of double surface and core construction to secure adequate stiffness.

Each builder's method of construction must be approved by the Rules Committee.

SUPPLEMENT TO THE

MEASUREMENT DATA SHEET FOR THE CONSTRUCTION OF PLYWOOD HULLS

BOTTOM AND SIDES: Minimum thickness ¾ inch or nearest metric equivalent. The weight of the plywood used must be at least one pound, two and one-half ounces per square foot. If ¾ inch material is used throughout, fiberglass or other covering material may be used to bring the hull up to minimum weight.

KEEL: Same thickness as bottom—¾ inch or ½ inches (whichever used) x 4 inches wide. May be beveled so plywood overlaps it and is in turn beveled.

KEEL BATTEN: 1 inch thick. 7 inches wide.

CHINE PIECES: 1 x 2 inches. The top of the chine pieces may be beveled to be parallel to the bottom.

CLAMP: The clamp will be on the sheer next to the sides.

FLOTATION: Three cubic feet of Styrofoam must be installed in the hull. Restrictions for frames, deck beams, transom, trunk, deck, and etc. are not changed.

MINIMUM HULL WEIGHT: The hull including the centerboard trunk, mast-step, stay anchorages, and flotation, but not including the deck, deck beams, or cockpit framing shall weigh at least 195 pounds. Fiberglass or other covering material may be included in this weight.

FOR EXPERIENCED PROFESSIONAL BUILDERS: Optional methods of construction may be approved on application. One option presently approved permits use of fewer cross members but more longitudinal members, assembled with adequate tooling.

