SFI FOUNDATION INC.

QUALITY ASSURANCE SPECIFICATIONS™

SFI SPECIFICATION 15.4 EFFECTIVE: APRIL 9, 2026*

PRODUCT: Top Fuel and Funny Car Drag Race Drive Beadlock Wheels

1.0 GENERAL INFORMATION

1.1 This SFI Specification establishes uniform test procedures and minimum standards for evaluating and determining performance capabilities for Top Fuel and Funny Car Drag Race Drive Beadlock Wheels used by individuals engaged in competitive motorsports.

1.2 The procedures, test evaluations and standards contained herein, are intended only as minimum guidelines for construction and evaluation of products. Certification that products meet such minimum standards is made by the product manufacturer and products are not certified, endorsed or approved by SFI under this program.

1.3 Use of the "This Manufacturer Certifies That This Product Meets SFI Specification 15.4" logo/designation, the authorized artwork style, or conventional lettering by a manufacturer, on a subject product, is intended only to indicate that the manufacturer of the product has represented that they have submitted the product to the recommended tests, with positive results, in compliance with the standards established herein.

1.4 This SFI Specification requires a demonstration that the product of a manufacturer meets or exceeds the requirements when the manufacturer enters the program; and on a periodic basis thereafter. Any manufacturer may participate in the program by providing Top Fuel and Funny Car Drag Race Drive Beadlock Wheels that meet or exceed the SFI Specification 15.4 test standards, by complying with the requirements of the SFI Specification 15.4 program, and by signing a licensing agreement with the SFI Foundation, Inc.

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1.5 Compliance with this specification is entirely voluntary. However, when a manufacturer provides Top Fuel and Funny Car Drag Race Drive Beadlock Wheels in compliance with all requirements of the SFI Specification 15.4 and enters into the licensing agreement with the SFI Foundation, Inc., they may certify that compliance with such standards is in accordance with the guidelines established herein.

1.6 Manufacturers wishing to participate in the program, in addition to the other requirements of this specification, must label each of their products with the manufacturer's name, trademark or symbol as well as the date of manufacture of the product.

1.7 No manufacturer may display the SFI logo/designation on their product unless the manufacturer has signed a licensing agreement with SFI and has successfully complied with all the requirements of this specification and the self-certification program.

2.0 DEFINITIONS

2.1 Top Fuel and Funny Car Drag Race Drive Beadlock Wheels are wheels intended for high speed competition on a straight track that does not require the vehicle to make turns while at racing speed.

2.2 Top Fuel and Funny Car Drag Race Drive Beadlock Wheels shall be inspected by the certifying manufacturer for recertification every 12 months after the date of original certification. When a wheel is determined to be acceptable for continued service, a new conformance label marked with the inspection date shall be used.

2.3 Any wheel pertaining to this specification shall remain as constructed by the original manufacturer and not modified. End users shall not intermix wheel components of different manufacturer brands, or wheel certification shall be voided.

2.4 Beadlock Ring: The parts of the wheel, whether welded, bolted, or formed as part of the wheel, that clamps and retains the tire bead. Each wheel conforming to this spec has 4 Beadlock Rings.

2.5 Effective March 8, 2019, painting or powder coating is not permitted on any new wheel certified, or to be certified to SFI 15.4. Effective January 1, 2022, painted or powder coated wheels may not be recertified to SFI 15.4.

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3.0 CONSTRUCTION

3.1 ACCEPTABLE MATERIALS

Top Fuel and Funny Car Drag Race Drive Beadlock Wheels may be constructed by any method or may use any material that can meet the performance requirements of the specification with the exception that the components in Table 1 below must meet the material and mechanical properties as shown. Weld filler metal 5356 or 4043 shall be used for all construction welds.

Table 1

Component	Material	Minimum Yield Strength psi (kg/cm^2)	Minimum Tensile Strength psi (kg/cm^2)	Minimum Percent Elongation
Bolt-on Beadlock Ring	7075-T6 Aluminum	65,000 (4,570)	75,000 (5,273)	7
Center Bolt Reinforcing Ring (.125”)	4130 Steel, Normalized or Annealed	-	-	-

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3.2 BEADLOCK ATTACHMENT

Beadlock rings shall be 17.25” maximum OD for both weld-on rings and bolt-on rings. There shall be a minimum of 24 to a maximum of 28, size 5/16" diameter fasteners used to attach the beadlock ring according to the minimum dimensions shown in the below illustration. There shall be a minimum .300” of material under the fastener heads. The centerline of the bolt holes shall be a minimum of .500” from the inside diameter of the Beadlock rings.

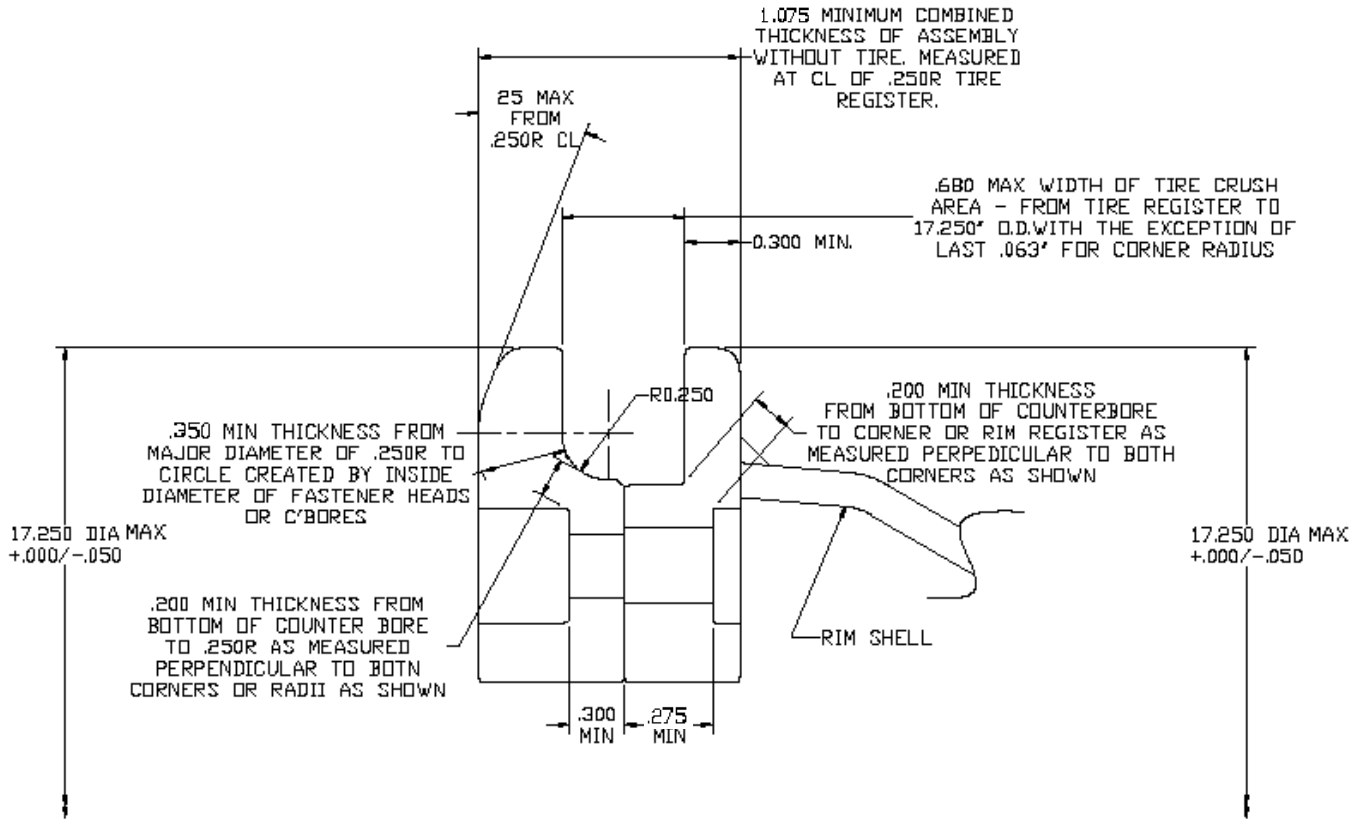

Figure 1

3.3 LIGHTENING POCKETS

There shall be no lightening pockets on the inside/mating surfaces of the beadlock rings. No lightening pockets may extend beyond the beadlock fastener bolt circle centerline.

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4.0 MODEL CLASSIFICATION

If all other factors remain the same, a dimensional change in width, offset and/or the mounting bolt pattern is not considered a model change.

5.0 TESTING

Test samples shall be fully processed new wheels which are representative of wheels currently produced or to be produced. For a given model, the wheel with the largest width, the largest offset and the smallest bolt pattern shall be tested.

5.1 DYNAMIC CORNERING FATIGUE

The wheel shall be tested and evaluated in accordance with the SFI Technical Bulletin 5.0, Dynamic Cornering Fatigue, with the differences stated hereinafter. The bending moment (test load) shall be 1,700 foot pounds {ft-lb}. The wheel shall be subjected to 30,000 cycles.

5.1.1 PROCEDURE

Before the test, verify all functional fasteners for the manufacturer specified torque or if not possible, check that they are secure. Perform the test and record the test load used and number of cycles completed.

5.1.2 INSPECTION

Inspect for any evidence of new fractures or propagation of any existing fractures of any part of the wheel. The front face shall be inspected while the wheel is under full load, with hand rotation of the wheel.

5.2 DYNAMIC RADIAL FATIGUE

The wheel/tire combination shall be tested and evaluated in accordance with the SFI Technical Bulletin 5.0, Dynamic Radial Fatigue, with the differences stated hereinafter. The radial load shall be 2,000 lb (910kg). The wheel shall be subjected to 400,000 cycles.

5.2.1 PROCEDURE

Before the test, verify all functional fasteners for the manufacturer specified torque or if not possible, check that they are secure. Perform the test. In the event of test tire failure while testing, it is acceptable to mount another test tire and continue the test. Record the test load used and number of cycles completed.

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5.2.2 INSPECTION

Inspect the rim for any evidence of new fractures or propagation of any existing fractures of any part of the wheel. The front face shall be inspected while the wheel is under full load.

5.3 DEFLECTION

5.3.1 APPARATUS

The test machine shall have the capability of applying an increasing bending moment to the wheel while the angular deflection between the bolt circle plate and outer rim cylinder is being measured.

5.3.2 PROCEDURE

The bending moment shall be applied in a plane through the centerline axis of the wheel. The measurements may be taken manually or automatically. If measured manually, the bending moment increment between measurements is not to exceed 250 ft-lb. Before testing, torque the lug nuts to the values recommended by the manufacturer. Optionally, the bending moment can be increased to 1500 ft-lb then reduced to zero and the lug nuts re-tightened to the correct values before the actual test. The moment shall be increased until 12,000 ft-lb is reached or any of the appropriate failure criteria occur during the test (see Paragraph 6.2.3).

5.3.3 INTERPRET RESULTS

A plot shall be generated which shall have the bending moment as the ordinate values with the angular deflection in degrees as the abscissa values. Load may be substituted for bending moment and linear deflection may be substituted for angular deflection as long as the distances involved remain constant. The scales of the axes shall be linear and adjusted such that the proportional section of the plotted line is between 35 and 55 degrees in relation to the absciss axis.

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6.0 PROOF OF COMPLIANCE

Top Fuel and Funny Car Drag Race Drive Beadlock Wheel manufacturers are required to provide the following information to enroll in this program:

6.1 LETTER OF CERTIFICATION

For initial design validation, a letter of certification shall be submitted. It shall include the name, title and signature of a representative from the manufacturer along with the date signed. The letter shall state that the wheels conform to Tire and Rim Association specifications. The Tire and Rim Association has established specifications for the cross sectional profile of rim contours. Top Fuel and Funny Car Drag Race Drive Beadlock Wheels shall follow their standard for 5 degree drop center rim contours, J(ISO) contours. The wheel must conform to the specifications in effect when it is manufactured.

6.2 TEST RESULTS

Test results shall be documented in a test report.

6.2.1 DYNAMIC CORNERING FATIGUE

A wheel shall be considered to have failed if any of the following occurs:

A. A visually detected new fracture or propagation of any existing fracture of any part of the wheel.

B. One or more lug nuts loosening to less than 60 percent of the initial torque.

C. Inability of the wheel to sustain the applied load for the required number of cycles.

D. A functional fastener cracks or breaks off during the test.

E. A functional fastener loosens during the test to less than 80 percent of its installed torque. If measurement of torque is not possible, a functional fastener loosens to touch or is found loose when inspected with a commercially available device designed for this function.

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6.2.2 DYNAMIC RADIAL FATIGUE

A wheel shall be considered to have failed if any one of the following occurs:

A. A visually detected new fracture or propagation of any existing fracture of any part of the wheel.

B. One or more lug nuts loosening to less than 60 percent of the initial torque.

C. Inability of the wheel to sustain the applied load for the required number of cycles.

D. Loss of air through the rim on tubeless type wheels.

E. A functional fastener cracks or breaks off during the test.

F. A functional fastener loosens during the test to less than 80 percent of its installed torque. If measurement of torque is not possible, a functional fastener loosens to touch or is found loose when inspected with a commercially available device designed for this function.

6.2.3 DEFLECTION

The wheel is acceptable if the bending moment of 12,000 ft. lb. is successfully reached without any of the following failure criteria occurring:

A. If at any point of the test the measured deflection continues to increase with no increase in applied moment, then the test shall be considered a failure.

B. If at any point of the test any of the wheel retention devices such as studs, lug nuts, machine or fixture attachment components become loose, distorted or non functional, the test shall be considered a failure.

C. If visual cracks larger than 0.50 inch long are observed in any portion of the wheel during or subsequent to the completion of the test, it shall be considered a failure.

D. If any pieces or fragments of the wheel become separated or dislodged from the wheel during or after the test it shall be considered a failure.

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7.0 TEST REPORTS

A separate test report, or set of test reports if required, shall be submitted for each product model. If more than one test facility is required to complete all necessary tests, then a separate test report shall be submitted from each one. The test facility shall assign a unique number to each test report. This number and the report date shall appear on each page. Each test report shall include:

7.1 RELEVANT INFORMATION

7.1.1 Manufacturer's name, contact name, address and telephone number.

7.1.2 Name, address and telephone number of the test facility.

7.1.3 Name and signature of the responsible test supervisor.

7.1.4 The actual date of the test.

7.1.5 Specification number and effective date.

7.1.6 Product name, description and model designation.

7.1.7 Component name and description.

7.1.8 Front and backside photos of the submitted wheel.

7.2 TESTS

Each test conducted shall be listed showing the test name, apparatus used, procedure used and test results obtained along with any other appropriate information.

7.3 AUTHENTICATION

Test reports shall be authenticated and stamped by a Professional Engineer who is registered in the state in which the testing is conducted. If necessary, SFI may allow an equivalent entity to provide authentication.

8.0 INITIAL DESIGN VALIDATION

To receive initial recognition from SFI as a participant in the SFI Specification 15.4 Program, the manufacturer must submit to SFI all information delineated in the Proof of Compliance section. This information shall be provided for each Top Fuel and Funny Car Drag Race Drive Beadlock Wheel model offered by the applicant that is to be included in the program. Any change in design, materials and/or methods of manufacturing not

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specifically excluded is considered a model change and, therefore, requires initial design validation.

Note: A model certification is based on a successful test of a wheel with the largest width, the largest offset and the smallest bolt pattern. A wheel variation shall not be considered certified under this model if it is later produced with a larger width, a larger offset and/or smaller bolt pattern unless it is also successfully tested.

9.0 PERIODIC REVALIDATION

Test reports with successful test results must be submitted to SFI at least once every ~~12~~ 24-month period following the date of the initial design validation test for each model of Top Fuel and Funny Car Drag Race Drive Beadlock Wheel manufactured by the participant. If multiple test reports are required to obtain all test results, then the earliest test date shall be used to determine when the periodic revalidation reports are due. Also, SFI shall retain the option to conduct random audit reviews. SFI shall purchase the product on a commercial basis and test for compliance to the specification. The submitting manufacturer shall reimburse SFI for all audit costs.

10.0 CERTIFICATION OF COMPLIANCE

Upon demonstration of successful compliance with all the requirements of the specification and the self-certification program and upon entering the licensing agreement with SFI, the manufacturer may advertise, present and offer the Top Fuel and Funny Car Drag Race Drive Beadlock Wheels for sale with the representation that their product meets the SFI Specification 15.4. Continuing certification is contingent upon the following additional considerations: (1) the product shall be resubmitted for testing following any change in design, materials and/or methods of manufacturing not specifically excluded, and (2) periodic revalidation test reports are submitted when due to SFI.

11.0 CONFORMANCE LABELS

The conformance label is a punch out sticker which shall be placed on the outboard weather surface of the wheel, visible when the tire is mounted. Holes (1/8" (3.2mm) diameter) shall be punched in each sticker indicating the month and year the wheel is manufactured/recertified. Besides placing the label on the part, the serial number of the label shall be permanently marked on the part. The permanently marked number should be on the inner surface of the center section, located between any two adjacent bolt holes on the bolt circle diameter. The serial number should appear on the customer invoice to aid in identification and tracking.

12.0 DECERTIFICATION

Participating manufacturers are subject to decertification when not in compliance with the requirements of this program or when their products are not in compliance with the requirements of this specification. Decertification will provide SFI the right to effect any and all remedies which are available to SFI in the licensing agreement.

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13.0 APPEAL PROCEDURE

In the event of decertification, the manufacturer is entitled to an appeal of the decision of SFI. Requests for appeal must be received by SFI no later than thirty days following receipt of the notice of decertification. Appeals of such decisions will be heard at the next meeting of the Board of Directors of SFI.

14.0 STATEMENT OF LIMITATIONS

Testing procedures and/or standards contained in this specification are intended for use only as a guide in determining compliance with the minimum performance requirements as defined herein. The granting and assignment of the "This Manufacturer Certifies That This Product Meets SFI Specification 15.4" logo/designation is in no way an endorsement or certification of product performance or reliability by SFI. SFI, its officers, directors and/or members assume no responsibility, legal or otherwise, for failure or malfunctions of a product under this program.

15.0 COSTS

All costs involved in this program will be absorbed by the submitting manufacturer.

16.0 COMPLIANCE PERIOD

As this specification is revised to reflect changes in technology and/or field conditions, to remain current, participating manufacturers in the SFI Specification 15.4, Top Fuel and Funny Car Drag Race Drive Beadlock Wheel, Program, must demonstrate full compliance with the requirements of this specification within ninety (90) days of the latest effective date.

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