



# QUALITY ASSURANCE SPECIFICATIONS™

SFI SPECIFICATION 44.1

EFFECTIVE: AUGUST 11, 2005\*

PRODUCT: Stock Car Wheel Spacers

## 1.0 GENERAL INFORMATION

- 1.1 This SFI Specification establishes uniform test procedures and minimum standards for evaluating and determining performance capabilities for Stock Car Wheel Spacers.
- 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 44.1" 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 Stock Car Wheel Spacers that meet or exceed the SFI Specification 44.1 test standards, by complying with the requirements of the SFI Specification 44.1 program and by signing a licensing agreement with the SFI Foundation, Inc.

- 1.5 Compliance with this specification is entirely voluntary. However, when a manufacturer provides Stock Car Wheel Spacers in compliance with all requirements of the SFI Specification 44.1 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 Wheel: For this specification, it shall be the specially constructed circular structure, an assembly of a rim and a center directly connected.
- 2.2 Center: The structural (load carrying) section of the wheel that includes the mounting hub or flange and extends outward to connect to the rim. It is also called a disc or a spider.
- 2.3 Rim: The supporting member for the tire or tire and tube assembly.
- 2.4 Service Life: The service life of Stock Car Wheel Spacers is five (5) years from the date of manufacture and they must be replaced at or before that time.
- 2.5 Spacer: Specially constructed device which, when mounted between the mounting surface of the wheel center and spindle of the race car, can adjust the location of the wheel and assist in determining tread width.

## 3.0 CONSTRUCTION

- 3.1 Stock Car Wheel Spacers produced under this specification shall be made from magnetic steel.
- 3.2 Stock Car Wheel Spacers shall be a minimum outside diameter of 6.690"  $\pm$  .015" with a five (5) lug pattern on a 5-inch bolt circle. The spacer shall have an inside diameter of 3.170" minimum, 3.500" maximum.

3.3 Stock Car Wheel Spacers shall be of any thickness between .062"  $\pm$ .002" and .250"  $\pm$ .007" (.060" and .257").

#### 4.0 MODEL CLASSIFICATION

A single design of wheel spacers of a particular diameter and thickness as produced and processed dimensionally in a specific manner with specific materials. For this reason, any variation in material constitutes a different model.

#### 5.0 TESTING

##### 5.1 MECHANICAL PROPERTIES

###### 5.1.1 SAMPLES

Test bars used in determining mechanical properties shall be machined from finished products. Use of standard test bars of a like material is not acceptable.

###### 5.1.2 APPARATUS

A standard tensile test machine shall be used. The machine shall be capable of applying the required tensile load in accordance with ASTM E-8 and shall have adequate instrumentation to verify the test load. The test machine shall also be in calibration and traceable to the National Institute of Standards and Technology.

###### 5.1.3 PROCEDURE

Record the physical dimensions of the test bar. Increase the tensile load until the test bar breaks. Record the load and elongation in accordance with ASTM E-8 test procedures.

###### 5.1.4 INTERPRET RESULTS

Determine the yield strength, tensile strength and elongation for each sample.

## 6.0 PROOF OF COMPLIANCE

Stock Car Wheel Spacer manufacturers are required to provide the following information to enroll in this program:

### 6.1 TEST RESULTS

#### 6.1.1 MECHANICAL PROPERTIES

For the material used, the component shall have mechanical properties in accordance with minimums listed in Table 1. All strength values are in pounds per square inch/kilogram per centimeter square.

Table 1		
Material	Minimum Yield Strength psi (kg/cm <sup>2</sup> )	Minimum Tensile Strength psi (kg/cm <sup>2</sup> )
Mild and Cold Finished Steel	40,000 (2,812)	60,000 (4,218)

## 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 along with the report date and page number 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 Actual date of the test.

7.1.5 Specification number and effective date.

7.1.6 Product name, description and model designation.

## 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 44.1 Program, the manufacturer must agree that the product to be tested will be obtained on a commercial basis through an outlet in the normal stream of commerce. This testing shall be done for each Stock Car Wheel Spacer model offered by the applicant that is to be included in the program. Any change in design, materials and/or methods of manufacturing not specifically excluded is considered a model change and, therefore, requires initial design validation.

## 9.0 PERIODIC REVALIDATION

Test reports with successful test results must be submitted to SFI at least once every 12 month period following the date of the initial design validation test for each model of Stock Car Wheel Spacer 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.

## 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 Stock Car Wheel Spacers for sale with the representation that their product meets the SFI Specification 44.1. 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 sticker which shall be placed on the surface of the spacer, visible when mounted. 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 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, when their products are not in compliance with the requirements of this specification or when they are not in compliance with the SFI Quality Assurance Program 44.1. Decertification will provide SFI the right to effect any and all remedies which are available to SFI in the licensing agreement.

## 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. Within thirty days following a request for appeal, the SFI Foundation Inc. will schedule a hearing at an appropriate site to discuss the specific details of the case. If the decertification decision involves the a special case of fatigue or performance test failure, the hearing may, at the option of the audit bureau representative, take place at the appropriate test laboratory.

## 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 44.1" 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 44.1, Stock Car Wheel Spacer Program must demonstrate full compliance with the requirements of this specification within ninety (90) days of the latest effective date.

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