SFI FOUNDATION INC.™

QUALITY ASSURANCE SPECIFICATIONS™

SFI SPECIFICATION 4.3 EFFECTIVE: JULY 24, 2023*

PRODUCT: Centrifugal Supercharger and Turbo Compressor Blankets

1.0 GENERAL INFORMATION

1.1 This SFI Specification establishes uniform test procedures and minimum standards for evaluating and determining performance capabilities for Centrifugal Supercharger and Turbo Compressor Blankets 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 4.3" 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 Centrifugal Supercharger or Turbo Compressor Blankets that meet or exceed the SFI Specification 4.3 test standards, by complying with the requirements of the SFI Specification 4.3 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 Centrifugal Supercharger or Turbo Compressor Blankets in compliance with all requirements of the SFI Specification 4.3 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 Centrifugal Supercharger and Turbo Compressor Blankets are a one-piece flexible blanket that wraps around the compressor housing.

2.2 Centrifugal Supercharger and Turbo Compressor Blankets shall be inspected for modification and deterioration every two years. If it is acceptable, it may be recertified by the manufacturer. If the blanket is not acceptable, it must be replaced. When a unit is determined to be acceptable for continued service, a new conformance label marked with the inspection date shall be used.

2.3 Any Centrifugal Supercharger or Turbo Compressor Blanket pertaining to this specification shall remain as constructed by the original manufacturer and not modified.

3.0 CONSTRUCTION

Centrifugal Supercharger and Turbo Compressor Blankets may be constructed by any method or may use any material that can meet the performance requirements of the specification.

4.0 MODEL CLASSIFICATION

The major factors for model determination are materials, material thickness and mounting configuration. A variation of any of these parameters is considered a model change and requires additional testing.

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5.0 TESTING

5.1 PENETRATION RESISTANCE

This test is based on Military Standard 662D, "Ballistic Test for Armor" (MIL-STD-662D).

5.1.1 SAMPLES

One square sample, 15 by 15 ±1 inch (38.1 by 38.1 ±2.5 centimeters) shall be supplied. The sample shall have the identical layer fabric, layer order and construction, thread and stitch composition, and overall assembly as that of the blanket that is being evaluated.

5.1.2 APPARATUS

The apparatus shall comply with MIL-STD-662D.

A. PROJECTILE

Caliber .22 - Type 2, fragment simulators conforming to MIL-P-46593A shall be used.

5.1.3 PROCEDURES

The sample shall be tested in accordance with MIL-STD-662D for the Ballistic Limit, V_{50} BL(P). The maximum velocity span shall be 150 feet per second {fps} (46 meters per second {mps}).

5.1.4 INTERPRET RESULTS

The V_{50} BL(P) shall be calculated by taking the arithmetic mean of the two highest partial, and the two lowest complete, penetration impact velocities within the allowable velocity span.

5.2 ATTACHMENT STRENGTH

5.2.1 SAMPLES

One fully processed new Centrifugal Supercharger or Turbo Compressor blanket.

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5.2.2 APPARATUS

Rigid mounts capable of loading the blanket assembly in tension. The mounts shall be smooth, have a minimum radius of 1.625 inches, and be mounted to the bed and cross head of a tensile test machine.

5.2.3 PROCEDURES

Apply an increasing load to the strap. Continue until a load of 800 lbs. applied, hold for 10 seconds, and release. Measure the amount of slippage at any adjuster.

6.0 PROOF OF COMPLIANCE

Centrifugal Supercharger and Turbo Compressor Blanket manufacturers are required to provide the following information to enroll in this program:

6.1 TEST RESULTS

6.1.1 PENETRATION RESISTANCE

The ballistic resistance of the sample shall be greater than or equal to a V_{50} BL(P) of 1125 (343 mps).

6.1.2 ATTACHMENT STRENGTH

The blanket assembly shall withstand the test load, and any slippage through any individual adjuster or latch must be less than 1”.

7.0 TEST REPORTS

A separate test report, or set of test reports if required, shall be submitted for each product type and 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. A test report shall be submitted for each component, if tested separately. 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.

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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 Pre and post-test photographs of the submitted samples.

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 4.3 Program, the manufacturer must submit to SFI all information delineated in the Proof of Compliance section. This information shall be provided for each Centrifugal Supercharger and Turbo Compressor Blanket 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 24 month period following the date of the initial design validation test for each model of Centrifugal Supercharger or Turbo Compressor Blanket 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 Centrifugal Supercharger and Turbo Compressor Blankets for sale with the representation that their product meets the SFI

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Specification 4.3. 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" label for the blanket. The label shall be marked with the month and year the part is sold and be placed on the outside surface. The label may be protected by lamination if needed. For a periodic inspection, the old label shall be removed, and the foregoing procedure shall be followed using a new label. The serial number should also 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.

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 4.3" 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.

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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 4.3, Centrifugal Supercharger and Turbo Compressor Blankets, Program, must demonstrate full compliance with the requirements of this specification within ninety (90) days of the latest effective date.

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