SFI FOUNDATION INC.™

QUALITY ASSURANCE SPECIFICATIONS™

SFI SPECIFICATION 30.1 EFFECTIVE: JUNE 17, 1999*

PRODUCT: Automatic Transmission Flexplate Shields

1.0 GENERAL INFORMATION

1.1 This SFI Specification establishes uniform test procedures and minimum standards for evaluating and determining performance capabilities for Automatic Transmission Flexplate Shields 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 are 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 30.1" 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 Automatic Transmission Flexplate Shields that meet or exceed the SFI Specification 30.1 test standards, by complying with the requirements of the SFI Specification 30.1 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 Automatic Transmission Flexplate Shields in compliance with all requirements of the SFI Specification 30.1 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 Automatic Transmission Flexplate Shields are used to deflect radial explosion fragments from a flexplate failure.

2.2 Flexplate Shields shall be inspected every five years by the certifying manufacturer for recertification. 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 Flexplate Shield pertaining to this specification shall remain as constructed by the certifying manufacturer and not modified.

2.4 A Certification Card is a document provided by the original manufacturer indicating the serial number(s) of components certified by the original manufacturer as being in conformance with this specification.

3.0 CONSTRUCTION

Automatic Transmission Flexplate Shields may be constructed by any method or may use any material that can meet the performance requirements of the specification. Any Automatic Transmission Flexplate Shield shall be able to be mounted without modification of any drive component.

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4.0 MODEL CLASSIFICATION

If all other factors remain the same, a change in the diameter of the Flexplate Shield is not considered a model change.

5.0 TESTING

Test samples shall be fully processed new Flexplate Shields which are representative of Flexplates Shields currently produced or to be produced. All necessary mounting hardware along with mounting instructions shall be supplied with the Flexplate Shield.

5.1 RADIAL FRAGMENT DEFLECTION

5.1.1 SAMPLES

For a given model, the largest outside diameter shall be tested.

5.1.2 APPARATUS

The fixture shall provide an environment similar to the rear portion of an engine block. A suitable containment chamber shall be used to protect test personnel. The fixture shall incorporate the following features:

A. A tachometer with an accuracy of ±2% at 10,500 revolutions per minute {rpm}.

B. A 14 inch (35cm) diameter, 6 pound (2.73kg) or equivalent flexplate, with ring gear, shall be used. The flexplate shall be modified to burst (in six (6) pieces of approximate equal size) between 9,500 and 10,500 rpm.

C. A spindle that can be driven to a rotational speed of 10,500 rpm and allow attachment of the tachometer. The spindle shall accept the flexplate in a manner similar to actual use and allow it to be attached rigidly and concentrically.

D. An automatic transmission bellhousing compatible with the flexplate and shield.

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5.1.3 PROCEDURE

A. Mount the flexplate to the spindle .650 inches (±.050 inches) from the transmission mounting surface and attach the tachometer at an appropriate point.

B. Attach the bellhousing to the fixture with the axis of the bellhousing concentric with the axis of the spindle.

C. Mount the shield to the bellhousing and fixture per the certifying manufacturer's installation instructions. The appropriate mounting points shall be added to the fixture to simulate the mounting points as required in the installation instructions. The hardware supplied by the certifying manufacturer (if required) shall be used to mount the Flexplate Shield to the bellhousing and mounting points.

D. The flexplate shall be driven to a rotational speed between 9,500 and 10,500 rpm and maintained at that level until it bursts.

6.0 PROOF OF COMPLIANCE

Automatic Transmission Flexplate Shield manufacturers are required to provide the following information to enroll in this program:

6.1 TEST RESULTS

Test results shall be documented in a test report.

6.1.1 RADIAL FRAGMENT DEFLECTION/PENETRATION

The Flexplate Shield shall be considered acceptable if it deflects the burst fragments and remains attached to the test fixture. There shall be no penetration of any fragments through the rigid material of the shield.

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. 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:

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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.

7.1.7 Component name and description.

7.1.8 Accompanied by "Before" and "After" photos.

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 30.1 Program, the manufacturer must submit to SFI all information delineated in the Proof of Compliance section. This information shall be provided for each Automatic Transmission Flexplate Shield 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.

Note: A model certification is based on a successful test of a Flexplate Shield with the largest diameter. A Flexplate Shield variation shall not be considered certified under this model if it is later produced with a larger diameter unless it is also successfully tested.

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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 Automatic Transmission Flexplate Shield 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 certifying manufacturer may advertise, present and offer the Automatic Transmission Flexplate Shields for sale with the representation that their product meets SFI Specification 30.1. 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 punch out sticker which shall be placed on the outside surface of the Flexplate Shield. Holes (1/8" (3.2mm) diameter) shall be punched in each sticker indicating the month and year the Flexplate Shield is manufactured / recertified. Alternately, the conformance label may be placed on a certification card. Besides placing the label on the part or certification card, the serial number of the label along with the date shall be permanently marked on the outside surface of the Flexplate Shield. For periodic inspection, the old label shall be removed and the foregoing procedure shall be followed using a new label. 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 30.1" 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 30.1, Automatic Transmission Flexplate Shield, Program, must demonstrate full compliance with the requirements of this specification within ninety (90) days of the latest effective date.

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