



Confirmation of Product Type Approval

Company Name: PARKER HANNIFIN CORP.

Address: 101 PARKER LANE ALLIANCE NE 69301 United States

Product: Hose, Non Metallic, High Pressure

Model(s): 387TC and 387ST (Sizes -4, -6, -8, -10, -12, -16, -20, -24 and -32)

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	20-HS1949016-PDA-DUP	05-FEB-2020	04-FEB-2025
Manufacturing Assessment (MA)	23-5592042	19-APR-2023	18-APR-2028
Product Quality Assurance (PQA)	NA	NA	NA

Tier

5 - Unit Certification Required

Intended Service

Marine and Offshore Applications - Petroleum based Hydraulic Fluids and Lubrication Oils.

Description

Non-Metallic Flexible Hydraulic Hose.

Ratings

387TC Abrasion Resistant Rubber Covered and 387ST High Abrasion Resistant Rubber Covered.

Size: -4 to -32; MAWP: 3000 psi;

Burst Pressure: 12000 psi;

End Fitting: Sizes -4 to -16 Parker Hannifin 43 and 48 Series, Size -20 Parker Hannifin 43 and 77 Series, and Sizes -24 and -32 Parker Hannifin 77 Series;

Applications and Temperature Range:

Petroleum-base hydraulic fluids and lubricating oils, -40°F to +257°F (-40°C to +125°C)

Water, water/oil emulsion, and water/glycol hydraulic fluids, up to +185°F (+85°C)

Polyol ester fluids, up to +150°F (+65°C)

Air, up to +158°F (+70°C)

Service Restrictions

- i) Unit Certification is required for this product.
- ii) Flexible Hose assemblies are not applicable in high pressure fuel oil injection systems.
- iii) The types of end connections utilized (e.g. threaded, flanged, etc.) are to comply with the applicable requirements and limitations of the Marine Vessels Rules 4-6-2/5.7.3 b)
- iv) Flexible hoses are not applicable to hoses intended to be used in fixed fire extinguishing systems.
- v) All Flexible Hose assemblies are to be burst tested to demonstrate they are able to withstand a pressure not less than four times its design pressure in accordance with Marine Vessels Rules 4-6-2/5.7.5 b)
- vi) Fittings made of Aluminum are not to be used on the Hose Assembly

Comments

- i) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
- ii) The Flexible Hoses are to be complete with factory assembled end fittings or factory supplied ends made of steel only and installed in accordance with manufacturer's procedures in accordance with Marine Vessel Rules 4-6-2/5.7.3 b)
- iii) Hose assemblies are to be installed only when flexibility is required and are not to be subject to torsional deflection under normal conditions. In addition, the length of the hose is to be limited to that required for flexibility only as indicated in Marine Vessels Rules 4-6-2/5.7.4.
- iv) Flexible Hoses are to be permanently marked by the manufacturer with the following details: Hose manufacturer's name or trademark, date of manufacturer (month/year), designation type reference, nominal diameter, pressure and temperature rating in accordance with Marine Vessels Rules 4-6-2/5.7.6.

Notes, Drawings and Documentation

Drawing No. GHS-387TC, Rev C, Hydraulic Hose Specification

Drawing No. GHS-387ST, Rev B, Hydraulic Hose Specification

Drawing No. 387 Hydraulic Hose Product Catalog

Drawing No. HS-D02, Hose to Fitting Compatibility Matrix (Page 3 off 22)

Report Test No. T-771, Burst and Impulse Test Results for 387TC/ST Hoses, 2020-01-07, Parker Hannifin HPD

The following reference drawings and test reports refer to the previous PDA no. 15-HS1281528-2-PDA.

Drawing No. Physical Test Data Matrix

Drawing No. 630 Rev M cover material

Drawing No. 1124 Rev H, Inner Tube Material

LAPI LABORATORIO PREVENZIONE INCENDI, ITALY, Fire Test, 06/25/2014

Test Report No. 940.OIS0110/14 - 387TC-4(43)

Test Report No. 943.OIS0110/14 - 387TC-4(48)

Test Report No. 941.0IS0110/14 - 387TC-10(43)

Test Report No. 944.0IS0110/14 - 387TC-10(48)

Test Report No. 1451.0IS0110/14 - 387TC-16 (43) 09/19/2014

Test Report No. 945.0IS0110/14 - 387TC-16 (48)

Test Report No. 1134.0IS0110/14 - 387TC-20(77) 07/21/2014

Test Report No. 947.0IS0110/14 - 387TC-32(77)

LAPI LABORATORIO PREVENZIONE INCENDI, ITALY, Fire Test, 07/13/2015

Test Report 819.0IS0110/15: ISO 15540 Fire Test Cert 387ST-4 (43 series)

Test Report 818.0IS0110/15: ISO 15540 Fire Test Cert 387ST-4 (48 series)

Test Report 820.0IS0110/15: ISO 15540 Fire Test Cert 387ST-16 (43 series)

Test Report 821.0IS0110/15: ISO 15540 Fire Test Cert 387ST-16 (48 series)

Test Report 822.0IS0110/15: ISO 15540 Fire Test Cert 387ST-32 (77 series)

PARKER HANNIFIN HPD, ISO 18752 Assemblies Pressure Test, 06/13/2013

Test Report No. W18231 page 2, Lab Test Request Results

Test Report No. W18506 page2, Lab Test Request Results

Test Report No. W19149 page2, Lab Test Request Results

Test Report No. W19231 page2, Lab Test Request Results

Test Report No. W20225 page1, Lab Test Request Results

Test Report No. W20248 page1, Lab Test Request Results

Test Report No. W20253 page1, Lab Test Request Results

Test Report No. W20362 page1, Lab Test Request Results

Test Report No. W20379 page1, Lab Test Request Results

Test Report No. W20426 page1, Lab Test Request Results

PARKER HANNIFIN HPD, Burst Test, 06/25/2014

Test Report No. W20965, 387TC-4 DNV Witness Test Report

Test Report No. W20966, 387TC-4 DNV Witness Test Report

Test Report No. W20967, 387TC-6 DNV Witness Test Report

Test Report No. W20968, 387TC-6 DNV Witness Test Report

Test Report No. W20969, 387TC-8 DNV Witness Test Report

Test Report No. W20970, 387TC-8 DNV Witness Test Report

Test Report No. W20971, 387TC-10 DNV Witness Test Report

Test Report No. W20972, 387TC-10 DNV Witness Test Report
Test Report No. W20973, 387TC-12 DNV Witness Test Report
Test Report No. W20974, 387TC-12 DNV Witness Test Report
Test Report No. W20975, 387TC-16 DNV Witness Test Report
Test Report No. W20976, 387TC-16 DNV Witness Test Report
Test Report No. W20977, 387TC-20 DNV Witness Test Report
Test Report No. W20978, 387TC-20 DNV Witness Test Report
Test Report No. W20979, 387TC-24 DNV Witness Test Report
Test Report No. W20980, 387TC-32 DNV Witness Test Report
Test Report No. W22086_387TC-24_1, Lab Test Request, Rev: A
Test Report No. W22087_387TC-32_1, Lab Test Request, Rev: A

PARKER HANNIFIN HPD, General Tests - 2/10/2015 - 3/27/2015

Test Summary Report T-508A 387ST-4 (43)
Test Summary Report T-508B_387ST-4 (48)
Test Summary Report T-509A 387ST-6 (43)
Test Summary Report T-509B 387ST-6 (48)
Test Summary Report T-510A 387ST-8 (43)
Test Summary Report T-510B 387ST-8 (48)
Test Summary Report T-511A 387ST-10 (43)
Test Summary Report T-511B 387ST-10 (48)
Test Summary Report T-512A 387ST-12 (43)
Test Summary Report T-512B 387ST-12 (48)
Test Summary Report T-513A 387ST-16 (43)
Test Summary Report T-513B 387ST-16 (48)
Test Summary Report T-514A 387ST-20 (43)
Test Summary Report T-514B 387ST-20 (77)
Test Summary Report T-515 387ST-24 (77)
Test Summary Report T-516 387ST-32 (77)

PARKER HANNIFIN HPD, Burst Test, 08/26/2015

Test Report No. W22384, Rev. A, DNV Witness Test_387ST-4_43 series
Test Report No. W22385, Rev. A, DNV Witness Test_387ST-4_48 series

Test Report No. W22388, Rev. A, DNV Witness Test_387ST-8_43 series
Test Report No. W22389, Rev. A, DNV Witness Test_387ST-8_48 series
Test Report No. W22390, Rev. A, DNV Witness Test_387ST-10_43 series
Test Report No. W22391, Rev. A, DNV Witness Test_387ST-10_48 series
Test Report No. W22394, Rev. A, DNV Witness Test_387ST-16_43 series
Test Report No. W22395, Rev. A, DNV Witness Test_387ST-16_48 series
Test Report No. W22396, Rev. A, DNV Witness Test_387ST-20_43 series
Test Report No. W22397, Rev. A, DNV Witness Test_387ST-20_77 series
Test Report No. W22399, Rev. A, DNV Witness Test_387ST-32_77 series

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 04/Feb/2025 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

ABS Rules

2020 ABS Rules for Building and Classing Marine Vessels 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-6-2/5.7
2020 ABS Rules for Building and Classing Mobile Offshore Units 1-1-4/9.7, 1-1-A2, 1-1-A3, 4-2-1/11.29
2020 ABS Rules for Facilities on Offshore Installations 3-4/5.11.5, A2/Table 1 (Marine Support only)
2019 ABS Guide for the Classification of Drilling Systems 4-2/7

International Standards

ISO 1402:2009 Rubber and plastics hoses and hose assemblies - Hydrostatic testing;
ISO 6803:2017 Rubber or plastics hoses and hose assemblies - Hydraulic-pressure impulse test without flexing;
ISO 7233:2006 Rubber and plastics hoses and hose assemblies - Determination of resistance to vacuum;
ISO 7326:2006 Rubber and plastics hoses - Assessment of ozone resistance under static conditions;
ISO 15540:1999 Ships and marine technology - Fire resistance of hose assemblies - Test methods;
ISO 6945:1991 Rubber hoses - Determination of abrasion resistance of the outer cover;
ISO 18752:2014 Rubber hoses and hose assemblies - Wire or textile-reinforced single-pressure types for hydraulic applications - Specification.

EU-MED Standards

NA

National Standards

NA

Government Standards

NA

Other Standards

NA



A handwritten signature in blue ink, appearing to read "James J. White".

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 04-Oct-2023 7:48

ABS has used due diligence in the preparation of this certificate, and it represents the information on the product in the ABS Records as of the date and time the certificate is printed.

If the Rules and/or standards used in the PDA evaluation are revised or if there is a design modification (whichever occurs first), a PDA revalidation may be necessary.

The continued validity of the MA is dependent on completion of satisfactory audits as required by the ABS Rules. The validity of both PDA and MA entitles the product to receive a **Confirmation of Product Type Approval**.

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or prior to the effective date of the ABS Rules and standards applied at the time of PDA issuance. ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. The manufacturer is responsible to maintain compliance with all specifications applicable to the product design assessment. Unless specifically indicated in the description of the product, certification under type approval does not waive requirements for witnessed inspection or additional survey for product use on a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.