Confirmation of Product Type Approval

Company Name: PARKER HANNIFIN CORP.

Address: 101 PARKER LANE ALLIANCE NE 69301 United States

Product: Non-metallic Flexible Hydraulic Hose

Model(s): 187TC, 187ST

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	21-2096915-PDA-DUP	24-MAR-2021	23-MAR-2026
Manufacturing Assessment (MA)	23-5592042	19-APR-2023	18-APR-2028
Product Quality Assurance (PQA)	NA	NA	NA

Tier
3 - Type Approved, unit certification not required

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

Description
Hydraulic hose - No-skive type - Wire reinforced - 1000 psi - ISO 18752

High-nitrile synthetic rubber inner tube. One or two steel wire braids reinforcement.

187TC - ToughCover: Synthetic rubber abrasion resistant. Fair resistance to ozone and cold flexibility.

187ST - SuperTough Cover: Synthetic rubber high abrasion resistance with a special polyethylene coating (UHMWPE). High resistance to ozone and cold flexibility.

ISO 18752 for hose type AC for sizes no. -8 through -32 and AS for sizes no. -40 and -48.

Parker Coupling Parkrimp / Variable Crimper Series 43 of carbon steel for sizes no. -8 through -48 and Series 48 for sizes no -24 through -48.

Ratings
Model 187TC - MSHA IC-40/26 - MAWP: 1000 PSI

Size (I.D.) - 1/2, 5/8, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3 inch (Part no. 187TC-8, -10, -12, -16, -20, -24, -32, -40, -48)

Temperature Range: -40 ºF to +257 ºF (-40 ºC to +125 ºC)

Petroleum-base hydraulic fluids and lubricating oils, -40 °F to +257 °F (-40 °C to +125 °C), except for sizes 2-1/2 inch and 3 inch (no. -40 and -48), -40 °F to +212 °F (-40 °C to +100 °C)

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

Polyol ester fluids, up to +15 0°F (+65 °C)

Air, up to +158 °F (+70 °C)

Model 187ST - MSHA IC-40/27 - MAWP: 1000 PSI

Size (I.D.) - 1/2, 5/8, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3 inch (Part no.197ST-8, -10, -12, -16, -20, -24, -32, -40, -48)

Temperature Range: -40 ºF to +257 ºF (-40 ºC to +125 ºC)

Petroleum-base hydraulic fluids and lubricating oils, -40 °F to +257 °F (-40 °C to +125 °C), except for sizes 2-1/2 inch and 3 inch (no. -40 and -48), -40 °F to +212 °F (-40 °C to +100 °C)

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

Polyol ester fluids, up to +15 0°F (+65 °C)

Air, up to +158 °F (+70 °C)

See "pdf" attachment 187TC/ST Hydraulic Hose Manufacturer Specification.

Service Restrictions
i) Unit Certification is not required for this product. If the manufacturer or purchaser requests an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

ii) Flexible Hose assemblies are not applicable in high-pressure fuel oil injection systems.

iii) The type of end connection utilized (e.g. threaded, flanged, etc.) is to comply with the applicable requirements and limitations of the Marine Vessel 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 Vessel 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 4-6-2/5.7.3b).

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 Vessel 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 Vessel Rules 4-6-2/5.7.6.

Notes, Drawings and Documentation

Drawing No. 230802 - GHS-187TC Hose Specification, Rev. A

Drawing No. 230802 - GHS-187ST Hose Specification, Rev. A

Drawing No. MSHA IC-40/26, "TC" Hydraulic Hose Cover Compound

Drawing No. MSHA IC-40/27, "ST" Hydraulic Hose Cover Compound

Drawing No. 1878.0IS0110/18, Fire Test ISO15540 187TC-8, Lapi Laboratorio, Italy

Drawing No. 1879.0IS0110/18, Fire Test ISO15540 187ST-20, Lapi Laboratorio, Italy

Drawing No. 1880.0IS0110/18, Fire Test ISO15540 187ST-48, Lapi Laboratorio, Italy

Drawing No. SAE J1942-1, 187TC, Parker Lab Test Request Results

Drawing No. SAE J1942-1, 187ST, Parker Lab Test Request Results

Drawing No. W25955, 187TC-8, Burst Test Report, Parker Lab Test Request Results

Drawing No. W25955, 187TC-12, Burst Test Report, Parker Lab Test Request Results

Drawing No. W25955, 187TC-20, Burst Test Report, Parker Lab Test Request Results

Drawing No. W25955, 187TC-32, Burst Test Report, Parker Lab Test Request Results

Drawing No. W25955, 187TC-48, Burst Test Report, Parker Lab Test Request Results

Drawing No. W25955, 187ST-8, Burst Test Report, Parker Lab Test Request Results

Drawing No. W25955, 187ST-12, Burst Test Report, Parker Lab Test Request Results

Drawing No. W25955, 187ST-20, Burst Test Report, Parker Lab Test Request Results

Drawing No. W25955, 187ST-32, Burst Test Report, Parker Lab Test Request Results

Drawing No. W25955, 187ST-48, Burst Test Report, Parker Lab Test Request Results

Term of Validity
This Product Design Assessment (PDA) Certificate remains valid until 23/Mar/2026 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
The Rules for Conditions of Classification, 2021 Marine Vessel Rules 1-1-4/7.7, 1-1-A3,1-1-A4, which covers the following:

2021 Rules for Building and Classing Marine Vessels: 4-6-2/5.7.

The Rules for Conditions of Classification, Offshore Units and Structures, 2021 Mobile Offshore Units 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:

2021 Rules for Building and Classing Mobile Offshore Units: 4-2-1/11.29;

2021 Rules for Facilities on Offshore Installations 3-4/5.11.5, A2/Table 1-Marine Support only;

2021 Guide for the Classification of Drilling Systems 4-2/7-Support Systems.

International Standards
ISO 18752:2014 Rubber hoses and hose assemblies - Wire- or textile-reinforced single-pressure types for hydraulic applications - Specification

ISO 15540:2016 Ships and marine technology - Fire resistance of hose assemblies - Test methods

ISO 6945:1991 Rubber hoses - Determination of abrasion resistance of the outer cover

EU-MED Standards
NA

National Standards
SAE J1942:2019 Hose and Hose Assemblies for Marine Applications.

Government Standards
NA

Other Standards
NA

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 04-Oct-2023 7:50

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.