



Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer	Parker Hannifin Corporation
Address	30240 Lakeland Blvd, Wicliffe, OH, 44092, United States
Place of Production	Parker Hannifin Corporation 1501, Hayes Drive, Manhattan, Kansas, 66502, United States
Type	Flexible Hoses
Trade Name	777 CP/ST/TC with Series 43 End fittings- Sizes 6,8,10,12 and 16
Application	Petroleum base hydraulic fluids and lubricating oils within a temperature range -40°C to +125°C (-40°F to +257°F) Polyol ester fluids up to +65°C (+150°F) Water, water/oil emulsion and water/glycol hydraulic fluids up to +85°C (+185°F) Air up to +70°C (+158°F)
Specified Standard	Lloyd's Register Rules and Regulations for Classification of Ships Part 5 Chapter 12. ISO 18752 ISO 15540 and 15441 - Ships and Marine Technology - Fire Resistance

Gopal Nair

Piping & Pressure System Principal Specialist
to Lloyd's Register North America, Inc.
A member of the Lloyd's Register group

1330 Enclave Parkway, Houston, Texas, 77077,
United States

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Ratings	4000 psi (280 bar).
Additional Tests	Refer to the Design Appraisal Document for all test results.
Other Conditions	<ol style="list-style-type: none">1. Flexible hoses are not to be used in high pressure fuel oil injection systems.2. Flexible hoses are to be limited to a length necessary to provide for relative movement between fixed and flexibly mounted items of machinery/equipment or systems.3. Flexible hoses are not to be used to compensate for misalignment between sections of piping.4. All hoses are to be clearly marked as per the relevant ISO standard and manufacturer's instructions.5. Parker 43 series end fittings are to be installed as per manufacturer's procedure by qualified personnel.6. Hose assemblies are not to be installed where they may be subjected to torsional deformation (twisting) under normal operating conditions.

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register North America, Inc. of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document Q/ADSO/23-0264/001/GN and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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**LLOYD'S REGISTER TYPE APPROVAL – DESIGN APPRAISAL DOCUMENT****Issue by: America's Technical Support Office****Issued to: Parker Hannifin Corporation****For: Flexible Hoses 777CP/ST/TC Sizes 6,8,10, 12 and 16 with 43 Series end fittings**

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register Type Approval System Procedure TA14 Version 04 (September 2020) and this Design Appraisal Document forms part of the Certificate.

APPROVAL DOCUMENTATION

Lloyd's Register Type approval application check list 23 March 2023

PQA Lloyd's Register Chicago Office dated 14 Dec 2023 – Parker Hannifin Manhattan – Kansas

TEST REPORTS

1	777ST-12 (M467) – Design Validation Plan Report	
2	777ST-16 (M496) – Design Validation Plan Report	
3	777TC-12 (M446)- Design Validation Plan Report	
4	777TC-16 (M455A)- Design Validation Plan Report	
6	Burst Test Results 777TC-1 & 777ST-16 dated 12 /17/2021	
7	Catalog 4400 US – 43 Series End fittings	
8	HS-K43 43 Series End fittings	
9	ISO 15440 Fire test Report 777 ST-6- 22 nd June 2021	
10	ISO 15440 Fire test Report 777 TC-6- 22 nd June 2021	
11	ISO 15440 Fire test Report 777 ST-12- 6 th Aug 2019	
12	ISO 15440 Fire test Report 777 ST-16 -16 th July 2020	
13	ISO 15440 Fire test Report 777 TC-12- 6 th Aug 2019	
14	ISO 15440 Fire test Report 777 TC-16- 16 th July 2020	
15	T-987 777TC-6 ISO 18752 Test Summary	
16	T-988 777ST-6 ISO 18752 Test Summary	
17	T-989 777TC-8 ISO 18752 Test Summary	
18	T-990 777ST-8 ISO 18752 Test Summary	
19	T-991 777TC-10 ISO 18752 Test Summary	
20	T-992 777ST-10 ISO 18752 Test Summary	
21	T-969 777 CP Style Engineering Report	

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Gopal Nair
Principal Specialist
Lloyd's Register North America, Inc.
Phone - Cell -281 610 2695
Gopal.nair@lr.org
1330 Enclave Parkway
Suite 200, Houston, Texas, 77077

Supplementary Type Approval Terms and Conditions

Type Approval certifies that a representative sample of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any product(s) designed or manufactured otherwise than in strict conformity with the said representative sample.

Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with.

Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations. Lloyd's Register North America, Inc reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the Lloyd's Register Type Approval System Procedure.