

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Flexible Hoses of Non-Metallic Material with Permanently Fitted Couplings**with type designation(s)
221FR with Parker couplings series 26

Issued to

**Parker Hannifin Hose Products Division
Wickliffe OH, United States**

is found to comply with

**DNVGL-OS-D101 – Marine and machinery systems and equipment, Edition July 2015
DNV GL rules for classification – Ships Pt.4 Ch.6 Piping systems
DNV GL class programme DNVGL-CP-0183 – Type approval – Flexible hoses****Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.****Temperature range: -20 to +100°C (see application)****Max. working press.: 500 psi (3.5MPa)****Sizes: 1/4" to 7/8"**Issued at **Høvik** on **2017-11-06**This Certificate is valid until **2022-11-05**.for **DNV GL**DNV GL local station: **New York**Approval Engineer: **Sinisa Sedlan**

**Marianne Spæren Marveng
Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



Job Id: **262.1-011084-9**
Certificate No: **TAP000013R**

Product description

A single wire braid reinforced, rubber covered hose; meets or exceed all the requirements specified in SAE J1527 Style R3 USCG Type A1 and SAE J1942 standards.

Inner Tube: Synthetic rubber
Reinforcement: One braid steel wire
Cover: Synthetic rubber, blue, MSHA accepted

Couplings:
Parker Coupling Series 26 of carbon steel, or brass, or 316 stainless steel.

The rubber hoses are manufactured at the following Parker Hannifin locations:
Manhattan, Kansas; Alliance, Nebraska

The couplings are manufactured at the following Parker Hannifin locations:
Manitowic, Wisconsin; Mason, Michigan; Yangsan, Korea; Chomotov, Czech Republic; Muecke, Germany; Bielefeld, Germany

Application/Limitation

This certificate is valid for the specific assembly of hose and coupling type as specified, assembled and delivered by the holder (named as manufacturer) of this certificate.

The hose is designed for use with:

- marine fuels within a temperature range of -20°C to +100°C (-4°F to +212°F)
- petroleum base hydraulic fluids and lubricating oils within a temperature range of -20°C to +100°C (-4°F to +212°F)
- water, water/oil emulsion and water/glycol hydraulic fluids up to +85°C (+185°F)
- air up to +70°C (+158°F)

Manufacturer No.	Hose I.D.		Maximum working pressure	
	Inch	mm	psi	Bar
-5	1/4"	6.3	500	35
-6	5/16"	8	500	35
-8	13/32"	10	500	35
-10	1/2"	12.5	500	35
-12	5/8"	16	500	35
-16	7/8"	22	500	35

* size designations are in accordance with SAE J1527 Table 1

Flexible hoses are only to be used in short lengths where it is necessary due to vibrations or flexible mounting of the machinery. The hoses shall not replace/be used where permanent piping is possible/required.

All hose assemblies delivered under the DNV GL type approval scheme shall be subject to a pressure test at 1.5 times the maximum working pressure and shall be delivered with the pressure test report with reference to the type approval certificate.

This certificate is valid for the specific assembly of hose and coupling type as specified, assembled in:

- Parker Hannifin, 125 E. Meadowview Road, Greensboro, NC, 27406
- Parker Hannifin, 3737 West River Drive, Davenport, IA, 5280

and delivered by the holder (named as manufacturer) of this certificate.

The hoses must only be fitted in places where they are always accessible.

The hoses are to be mounted in accordance with the manufacturer's instructions.

It must be possible to shut off from the system all flexible hoses used in systems for compressed air, lube oil, fuel oil and petroleum base hydraulic oil.

Hoses covered by this certificate shall not be used in oil supply lines to burners.

Type Approval documentation

Tests carried out

Impulse, burst, cold flexibility, oil resistance, ozone, vacuum, cover adhesion, change in length, dimensional check, fire test.

Marking of product

For traceability to this Type Approval, the products are at least to be marked with:

- Manufacturer's name or trade mark
- Type designation
- Maximum working pressure
- Size

Periodical assessment

For retention of the Type Approval, DNV GL Surveyor shall perform a periodical assessment every second year, to verify that the conditions for the type approval are complied with and to witness burst tests on every 3rd size of each type.

The tests are to be performed with the type of couplings fitted that are Type Approved with the hoses.