

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:**That the Manufacturer****Chief Fluid Systems Pty Ltd.
Sydney NSW, Australia**

is approved for the

Assembling of type approved hoses and couplings

The approval is granted on condition that

DNV GL class programme DNVGL-CP-0183 – Type approval – Flexible hoses

are complied with in all respect

Hose	Size
FC300	DN 38 & 51
Aeroquip GH493	DN 10, 12, 16, 19, 25, 31, 38 & 51
Aeroquip GH 663	DN 5, 6, 8, 10, 12, 16, 19, 25, 31, 38 & 51
GH 793	DN 6, 8, 10, 12, 16, 19, 25, 31, 38 & 51
EATON AEROQUIP FC500	DN 31, 38 & 51

Manufacturer(s) approved by this certificate is/are accepted to deliver according to DNV GL, DNV and GL rules.

Issued at **Høvik** on **2017-04-27**for **DNV GL**This Certificate is valid until **2020-04-26**.DNV GL local station: **Sydney**Approval Engineer: **Maheshraja Venkatesan**

Marianne Spæren Marveng
Head of Section

Job Id: **263.11-007122-1**
Certificate No: **AMT0000054**

Approval Scope

Chief Fluid Systems Pty Ltd is approved as a hose assembling company to deliver type approved hose assemblies (hose & coupling types as described in this certificate) to DNV GL vessels.

Products

Holder of this certificate is authorized to assemble hoses and end fittings as specified in below type approval certificates:

Certificate	Issue date	Expiry date	Hose type	Hose sizes
15652-00 HH	2015-04-16	2020-04-16	FC300	DN 38 & 51
P-15257	2015-10-21	2018-12-31	Aeroquip GH493	DN 10, 12, 16, 19, 25, 31, 38 & 51
TAP00000GD	2016-09-06	2021-09-05	Aeroquip GH 663	DN 5, 6, 8, 10, 12, 16, 19, 25, 31, 38 & 51
TAP00000DM	2016-09-05	2021-09-04	GH 793	DN 6, 8, 10, 12, 16, 19, 25, 31, 38 & 51
P-14702	2014-04-29	2018-06-30	EATON AEROQUIP FC500	DN 31, 38 & 51

Limitation

The approval is valid by considering all conditions in relevant type approval certificates during the validity of current certificate as well as the relevant type approval certificates & authorization letter.

Each hose assembly is to be hydraulic pressure tested to 1.5 times the maximum working pressure before delivery and to be delivered from the certificate holder with pressure test report with reference to the type approval certificate and this certificate.

Approval documentation

- Authorization letter from Eaton Hydraulic Group dated 2016-09-21
- Quality system (ISO 9001:2008) certificate 2015-3247 valid till 2018-02-19
- Crimp chart from Eaton DM/11/89
- Description about Hose crimping machine used
- Chief Training Modules matrix, list of Personnel & designated person responsible for the hose assembling (along with qualification records)
- Description/ flowchart showing production/ testing process of Chief Fluid Systems
- Description of hose pressure test bench Model SM2000
- Reference to testing procedure & testing instructions as referenced in 'CHIEF testing standards'
- Burst test report witnessed by DNV GL dated 2017-01-24
- Burst test report reviewed by DNV GL dated 2017-04-13

Certificate Retention Survey

For retention of the certificate, a DNV GL surveyor shall perform a survey before the expiry date of this certificate to verify that the conditions of approval are complied with. Any alteration to the approved condition during the period of validity, e.g. method of manufacture, maximum dimensions or conditions of supply, is to be reported to the Society. In addition, burst tests on every 3rd size of each type shall be witnessed by DNV GL surveyor.