

## Type Approval Certificate Extension

*This is to certify* that Certificate No. 08/10094(E1) for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

<b>PRODUCER</b>	RYCO Hydraulics
<b>PLACE OF PRODUCTION</b>	RYCO Hydraulics Pty. Ltd. 19 Whitehall Street, Footscray, Victoria 3011 Australia RYCO Hydraulics Sdn. Bhd. Plot 207, Kuala Ketil Industrial Estate, 09300 Kuala Ketil, Kedah Darulaman, Malaysia RYCO Hydraulics (Dalian) Ltd. 38 Ying Ri Road, Ying Cheng Zi Industrial Zone, Gan Jing Zi District, Dalian 116036 China
<b>DESCRIPTION</b>	Flexible Hoses of Non-Metallic Material with Permanently Fitted Couplings, Designations: Diehard H15D
<b>TYPE</b>	SAE 100R15
<b>APPLICATION</b>	For use on ships and offshore installations classed with Lloyd's Register, as short lengths in systems of fresh and seawater, water based hydraulics, pneumatics, fuel and lube oil.
<b>DESIGN CODE STANDARD</b>	Part 5, Chapter 12 of Lloyd's Register's Rules and Regulations for the Classification of Ships (July, 2013) Part 5, Chapter 10 of Lloyd's Register's Rules and Regulations for the Classification of Mobile Offshore Units (September 1996 plus Notices Nos. 1, 2, 3, 4, 5 & 6 as applicable) Fire Resistant Testing according to ISO 15540/15541
<b>RATINGS</b>	Sizes: DN 19 to DN 51 Maximum Working Pressure: 420 bar Service Temperature: -40°C to +121°C
<b>Certificate No.</b>	08/10094(E2)
<b>Issue Date</b>	01 October 2013
<b>Expiry Date</b>	30 September 2018
<b>Sheet</b>	1 of 2

  
N. Nagamune  
Yokohama Technical Support Office  
Lloyd's Register Group Limited

*Lloyd's Register Group Limited, registered office:  
71 Fenchurch Street, London EC3M 4BS*

**RATINGS (Continued)**

Coupling Material: Carbon Steel AISI/SAE 12L14 (Standard),  
Stainless Steel (Option)  
Electroplated Fe/Zn12c acc. to AS1789

**OTHER CONDITIONS**

The hoses may be used for the following working conditions

DIEHARD H15D	DN (mm)	Max. Pressure (bar)
H1512D	19	420
H1516D	25	420
H1520D	31	420
H1524D	38	420
H1532D	51	420
Temperature Range: -40°C to +121°C		

Where synthetic rubber hoses are used for oil fuel supply to burners, the hoses are to have external wire braid protection in addition to the integral wire braid.

Carbon steel couplings are to be normalised for temperatures below -10°C.

In all cases the hoses are to be installed in accordance with the manufacturer's instructions and tested to the satisfaction of the attending surveyor.

*"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 Group Limited of any modification or changes to the equipment in order to obtain a valid certificate."*

*The attached Design Appraisal Document No. 08/10094(E2) and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

All other details remain as the previous Certificate No. 08/10094(E1) to which this extension should be attached.

Certificate No. 08/10094(E2)  
Issue Date 01 October 2013  
Expiry Date 30 September 2018  
Sheet 2 of 2

N. Nagamune  
Yokohama Technical Support Office  
Lloyd's Register Group Limited

Lloyd's Register Group Limited, registered office:  
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