



DET NORSKE VERITAS TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. M-11282

This Certificate consists of 3 pages

This is to certify that the

Diesel Engine

723.10

with type designations

4045DFM70, 4045TFM75, 6068TFM75, 6068TFM76

Manufactured by

John Deere Engine Works

Waterloo, Iowa, United States

is found to comply with

Det Norske Veritas' Rules for Classification of Ships/High Speed and Light Craft

Application

The approval is valid for propulsion, auxiliary and emergency duty.

Type	4045DFM70, 4045TFM75, 6068TFM75, 6068TFM76
Rating	see page 2

Place and date
Høvik, 2009-08-21
for Det Norske Veritas AS

This Certificate is valid until
2013-06-30

Tomas Heber Tronstad
Head of Section

Local Office
DNV New York

Hans-Kristian Eriksen
Surveyor

Product description

Four stroke diesel engine

Cylinder bore: 106 mm

Piston stroke: 127 mm

No of cylinders: 4 and 6 in-line

Application/Limitation

The approval is valid for propulsion, auxiliary and emergency duty with the following ratings:

Engine model: 4045DFM70

	Auxiliary/emergency	Propulsion
Rated cont. output:	40 kW	46 kW
Engine speed:	1500 RPM	1800 RPM
		60 kW
		2500 RPM

Engine model: 4045TFM75

	Auxiliary/emergency		Propulsion
Rated cont. output:	55 kW	73 kW	101 kW
Engine speed:	1500 RPM	1800 RPM	2600 RPM

	6068TFM76		6068TFM75
	Auxiliary/emergency		Propulsion
Rated cont. output:	89 kW	110 kW	150 kW
Engine speed:	1500 RPM	1800 RPM	2500 RPM

Type Approval documentation

Tests carried out

Type test carried out 99-10-07

Marking of product

The product to be marked with manufacturer's name or trademark and type number designation.

Certificate retention survey

For retention of the Type Approval, DNV shall perform a survey every second year and before expiry date of this certificate to verify that the conditions of the type approval are complied with.

Other conditions

Flexible hoses for flammable fluids to be type approved by DNV.

The engines shall be equipped with double walled high pressure fuel pipes with leakage alarm.

Additional surface heat protection has to be fitted between cylinder head and exhaust manifold in order to meet the requirement to max. 220 deg. C surface temperature.

Ref. Nogva heat protection arrangement.

Electric wiring, instrumentation and automation are not included in the type approval.

DNV product certificate is not required.

END OF CERTIFICATE

Notice: This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.

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