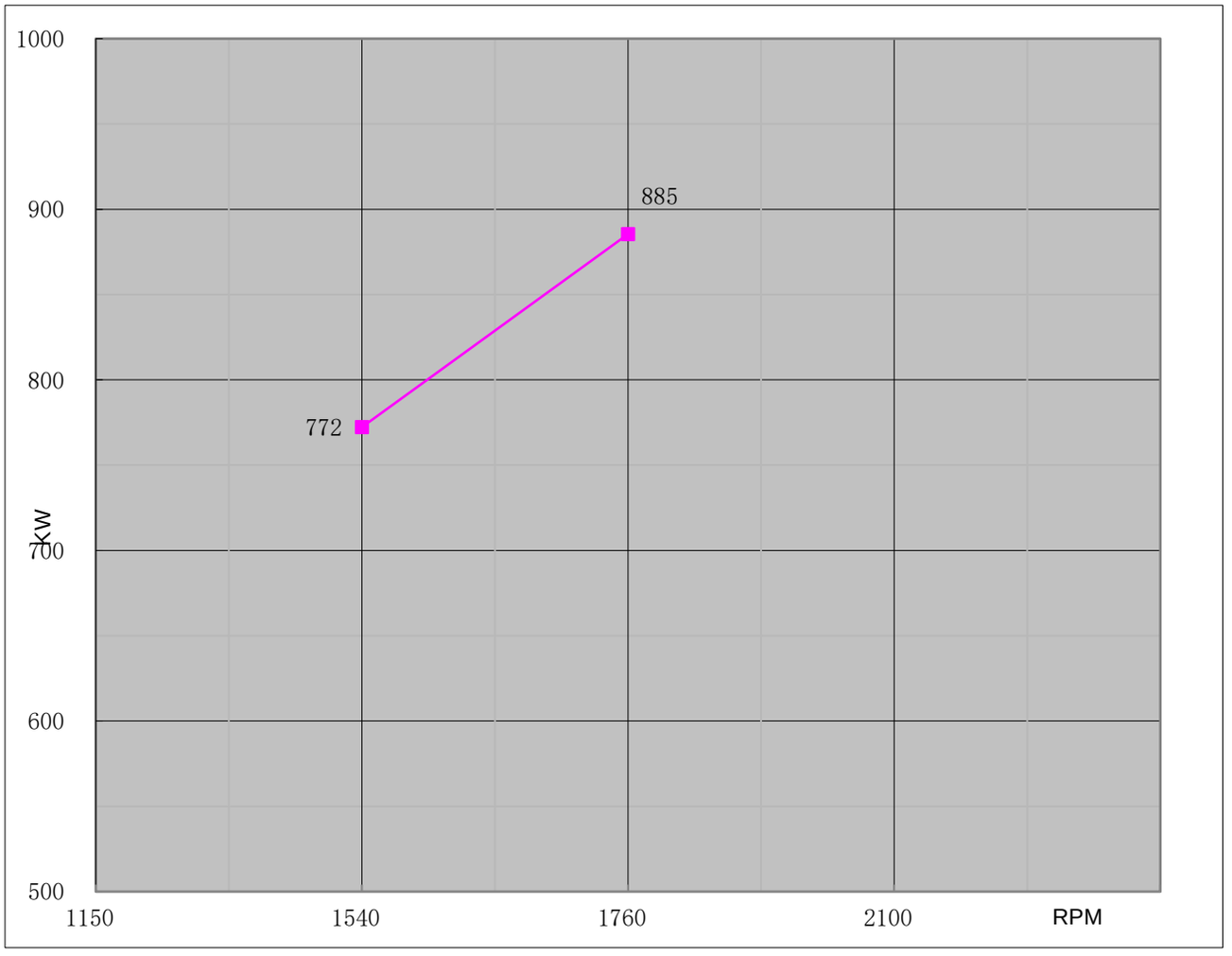
DIESEL ENGINE

Engine Model	CH12-159-E	Curve No.	C12159F	Date	2020/10/24

Displacement	38.00 L	Aspiration	Turbocharged+Water cooled	Power Standard	UL/FM
Bore	159 mm	Cylinder Qty.	12，V-Type	885 KW @ 1760 r/min	
Stroke	159 mm	Fuel System	Mechanical	1187 HP @ 1760 r/min	



Torque

Speed	Torque	
RPM	N-m	lb-ft.
1150		
1540	4789	3532
1760	4805	3543
2100		

Output Power

Speed	Output Power	
RPM	KW	HP
1150		
1540	772	1036
1760	885	1187
2100		

Fuel Consumption

Speed	Consumption	
RPM	g/KW-HR	lb/BHP-HR
1150		
1540	205	0.337
1760	200	0.329
2100		

REV: A

Engine Data Sheet

Engine Model	CH12-159-E	**Date**	**2020/10/24**
Drawing No.	CH12-159-E-00	**Document No.**	**DS12159F**
Rated Power	**1187 HP @ 1760 RPM**	**Performance Curve No.**	**C12159F**
	885 KW @ 1760 RPM	**Version**	**A**

GENERAL ENGINE DATA				
	Type		4 Cycle;V-Type; water cooled; 12 Cylinder	
	Aspiration		Turbocharged +Water Cooled	
	Bore and Stroke		mm×mm	159x159
	Cylinder Liner Type		☑ Wet	☐ Dry
	Displacement		L	38
	Compression Ratio		13.9:1	
	Firing Order		1R-6L-5R-2L-3R-4L-6R-1L-2R-5L-4R-3L	
	Combustion System		Direct Injection	
	Rotation Viewed from flywheel		Counter Clockwise	
	Valves Per Cylinder		Intake :2 Exhuast :2	
	Valves lashes at cold	Intake	mm	0.36
		Exhaust	mm	0.69
	Charge Air Cooling Type		Raw Water	
	Dry Weight Approx.		kg	4590
	Dimension Approx. (L*W*H)		mm	2545*1475*1760
	Flywheel/ Flywheel House Dimension		18"/ SAE 0	
EXHAUST SYSTEM				
	Exhaust Gas Temp.		℃	612 @ 1760rpm
	Exhaust Gas Flow		m^3/h	11902 @ 1760rpm
	Max. Allowable Back Pressure		kpa	10
	Minimum Exhaust Pipe Diameter		DN	2x200
	Minimum exhaust pipe diameter is based on 6 meter of pipe, one elbow, and a silencer. Pressure drop no greater than one half the max. allowable back pressure			
AIR INTAKE SYSTEM				
	Air Cleaner Type		Dry Type	
	Air Flow		m^3/h	5630 @1760rpm
	Max. Allowable Air Inlet Restriction		kpa	6
LUBRICATION SYSTEM				
	Oil Capacity		L	130
	Engine Normal Operating Sump Oil Temp.		℃	80-115
	Normal Operating Oil Pressure Range		bars	3~4.5
	Oil Pressure at Idle		bar	>1
COOLING SYSTEM				
	Coolant Capacity - Engine + Heat Exchanger		L	210
	Thermostat Range	Start Open	℃	80
		Full Open	℃	90
	Coolant Pressure Cap		bar	0.9
	Raw Water Working Pressure Range at Heat Exchanger		bar	5
	Engine Normal Operating Coolant Temp.		℃	80-93
	Engine Coolant Flow at Full Load		m^3/h	42

Engine Data Sheet

Minimum Raw Water Flow @ Engine Speed (rpm)		1540	1760
Raw Water Temperatures to 16 ℃ (m^3/h)		16	20
Raw Water Temperatures to 38 ℃ (m^3/h)		21.5	25.5
Raw Water Pipe Size	Raw Water Inlet	G2"	
	Raw Water Outlet	G2 1/2"	
HEATER SYSTEM			
Wattage		W	2x4500
Voltage AC		V	220
ELECTRICAL SYSTEM-DC			
System Voltage(Nominal)		V	24
Starter motor		Kw	2x8.9
Recommended Battery Capacity		AH	200
Cold Cranking Amperes @ -18℃ (0°F)		CCA	1000
Charging Alternator Output		Amps	70
FUEL SYSTEM			
Injection Pump			
Injection Advance Angle		°	IC（-4.67 ~ -4.78mm）
Minimum Supply line Size		mm	19
Minimum Return line Size		mm	16
Fuel Management Control		Mechanical	
Idle Speed		rpm	650
Governed Speed Rate		%	<10
Engine Performance Data			
All data is based on the engine operating with fuel system, lubricating oil pump, air cleaner, and alternator; not included are compressor, fan, optional equipment, and driven components.;Data is based on operation at SAE standard J1394 conditions of 300ft (91,4m) altitude, 29.61 in.(752mm) Hg dry barometer, and 77°F (25°C) intake air temperature, using 0# diesel fuel follow the standard GB 252-2011.			
Altitude above which output should be Limited		m (ft.)	91 (300)
Correction Factor per 305m.(1,000ft.) above Altitude Limit		3%	
Temperature above which output should be Limited		°C (°F)	25 (77)
Correction Factor per 5.6°C (10°F) above Temperature Limit		1%	

Remark:

1.All daa certified within 5%;
2.TBD - To Be Determined;
3.N/A - Not Applicable;