

GENERAL ENGINE DATA

Type	4-Cycle, Water Cooled	
Aspiration	Turbo-Charged, Inter Cooler (Fresh water to Cooler)	
Cylinder Arrangement	60°V	
No. of Cylinders	16	
Bore mm(in.)	170	(6.69)
Stroke mm(in.)	180	(7.09)
Displacement liter(in ³)	65.37	(3989)
Compression Ratio	14.0:1	
Dry Weight - Engine only - kg(lb)	6680	(14729)
Wet Weight - Engine only - kg(lb)	6830	(15060)

PERFORMANCE DATA

Steady State Speed Stability Band at any Constant Load		
Electric Governor - %	±0.25 or better	
Maximum Overspeed Capacity - rpm	2100	
Moment of inertia of Rotating Components - kgf·m ² (lbf·ft ²)	80.83	(1918.5)
(Includes Std. Flywheel)		
Cyclic Speed Variation with Flywheel at 1800rpm	1/215	

ENGINE MOUNTING

Maximum Bending Moment at Rear Face of Flywheel Housing - kgf·m(lbf·ft)	450	(3255.6)
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AIR INLET SYSTEM

Maximum Intake Air Restriction (Includes piping)		
With Clean Filter Element - mm H ₂ O (in.H ₂ O)	400	(15.7)
With Dirty Filter Element - mm H ₂ O (in.H ₂ O)	635	(25.0)

EXHAUST SYSTEM

Maximum Allowable Back Pressure - mm H ₂ O (in.H ₂ O)	600	(23.6)
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LUBRICATION SYSTEM

Oil Pressure at Idle - kgf/cm ² (psi)	2 ~ 3 (29 ~ 43)	
at Rate Speed - kgf/cm ² (psi)	5 ~ 6.5 (71 ~ 93)	
Maximum Oil Temperature - °C(°F)	110	230
Oil Capacity of Standard Pan	High - liter (U.S.gal)	200 (53)
	Low - liter (U.S.gal)	140 (37.0)
Total System Capacity (Includes Oil Filter) - liter (U.S.gal)	230 (60.8)	
Maximum Angle of Installation (Std. Pan)	Front Down	5°
(Engine Only)	Front Up	5°
	Side to Side	22.5°

COOLING SYSTEM

Coolant Capacity of Jacket (Engine only) - liter (U.S.gal)	140	(37.0)
Coolant Capacity of Air cooler (Engine only) - liter (U.S.gal)	30	(7.9)
Maximum External Friction Head at Engine Outlet - kgf/cm ² (psi)	(For Jacket and Air Cooler)	
	0.35	(5.0)
Maximum Static Head of Coolant above Crankshaft Center - m(ft)	10	(32.8)
Standard Thermostat (modulating) Range of Jacket - °C(°F)	71 ~ 85 (160 ~ 185)	
Standard Thermostat (modulating) Range of Air Cooler - °C(°F)	42 ~ 55 (108 ~ 131)	
Maximum Coolant Temperature at Engine Outlet of Jacket - °C(°F)	98	(208)
Minimum Coolant Expansion Space - % of System Capacity	(For Jacket and Air Cooler)	
	10	(0.4)
Maximum Coolant Temperature at Intercooler Inlet, PTAW type - °C(°F)	45	(113)
Maximum Air Restriction on Discharge Side of Radiator and Fan - mm H ₂ O(in.H ₂ O)	10	(0.4)

APPLICATION : GENERATOR

Pub. No. T13-0636-E

Certified for US EPA-Tier 2 / Constant Speed

Standard Model [2000kWe/60Hz]

mitsubishi

S16R-Y2PTAW2-1

SPECIFICATION SHEET

DIESEL ENGINES

FUEL SYSTEM

Fuel Injector	_____	Mitsubishi PS8 Type × 2
Maximum Suction Head of Feed Pump - mm Hg (in. Hg)	_____	75 (3.0)
Maximum Static Head of Return Pipe - mm Hg (in.Hg)	_____	150 (5.9)

STARTING SYSTEM

Battery Charging Alternator - V- Ah	_____	24-30
Starting Motor Capacity - V - kW	_____	24-7.5 × 2
Maximum Allowable Resistance of Cranking Circuit - m	_____	1.5
Recommended Minimum Battery Capacity		
At 5°C (41°F) and above - Ah	_____	300
Below 5°C (41°F) through - 5°C (23°F)	_____	600

The specifications are subject to change without notice.

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Dec. '06 Printed in Japan

Pub. No. T13-0636-E



www.frontierpower.com

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Standard Model [2000kWe/60Hz]

S16R-Y2PTAW2-1

SPECIFICATION SHEET

MITSUBISHI

DIESEL ENGINES

ENGINE RATING

All data represent net performance with standard accessories such as air cleaner, inlet /exhaust manifolds, fuel oil system, L.O. pump, etc. under the condition of 100kPa(29.6inHg) barometric pressure, 77°F(25°C) ambient temperature and 30% relative humidity.

ITEM	UNIT	STAND-BY POWER	PRIME POWER		
		60Hz	60Hz		
Engine Speed	rpm	1800	1800		
No. of Cylinders		16			
Bore	mm (in.)	170 (6.69)			
Stroke	mm (in.)	180 (7.09)			
Displacement	liter (in. ³)	65.37 (3989)			
Brake Horse power without Fan	HP (kW)	2923 (2180)	2657 (1982)		
Brake Mean Effective Pressure without Fan	kgf/cm ² (psi)	22.7 (323)	20.6 (293)		
Mean Piston Speed	m/s (ft/min)	10.8 (2126)	10.8 (2126)		
Maximum Regenerative Power Absorption Capacity without Fan	HP (kW)	258 (192)	258 (192)		
Intake Air flow	m ³ /min (CFM)	206 (7274)	185 (6532)		
Exhaust Gas Flow	m ³ /min (CFM)	544 (19209)	490 (17302)		
Coolant Flow	liter/min (U.S. GPM)	1850 (489)	1850 (489)		
Coolant Flow to Intercooler (PTAW only)	liter/min (U.S. GPM)	920 (243)	920 (243)		
Cooling Air Flow (Std. Fan)	m ³ /min (CFM)	-	-		
Allowable Fan Loss Horse Power	HP (kW)	67 (50)	67 (50)		
Radiated Heat to Ambient	kcal/hr (BTU/min)	154827 (10240)	139347 (9216)		
Heat Rejection to Coolant	kcal/hr (BTU/min)	670918 (44374)	603836 (39937)		
Heat Rejection to Air Cooler (PTAW Version)	kcal/hr (BTU/min)	670918 (44374)	603836 (39937)		
Heat Rejection to Exhaust	kcal/hr (BTU/min)	1789333 (118344)	1593690 (105405)		
Noise Level (1 m height & distance) (excludes, Intake,Exhaust & Fan)	dB(A)	113	110		

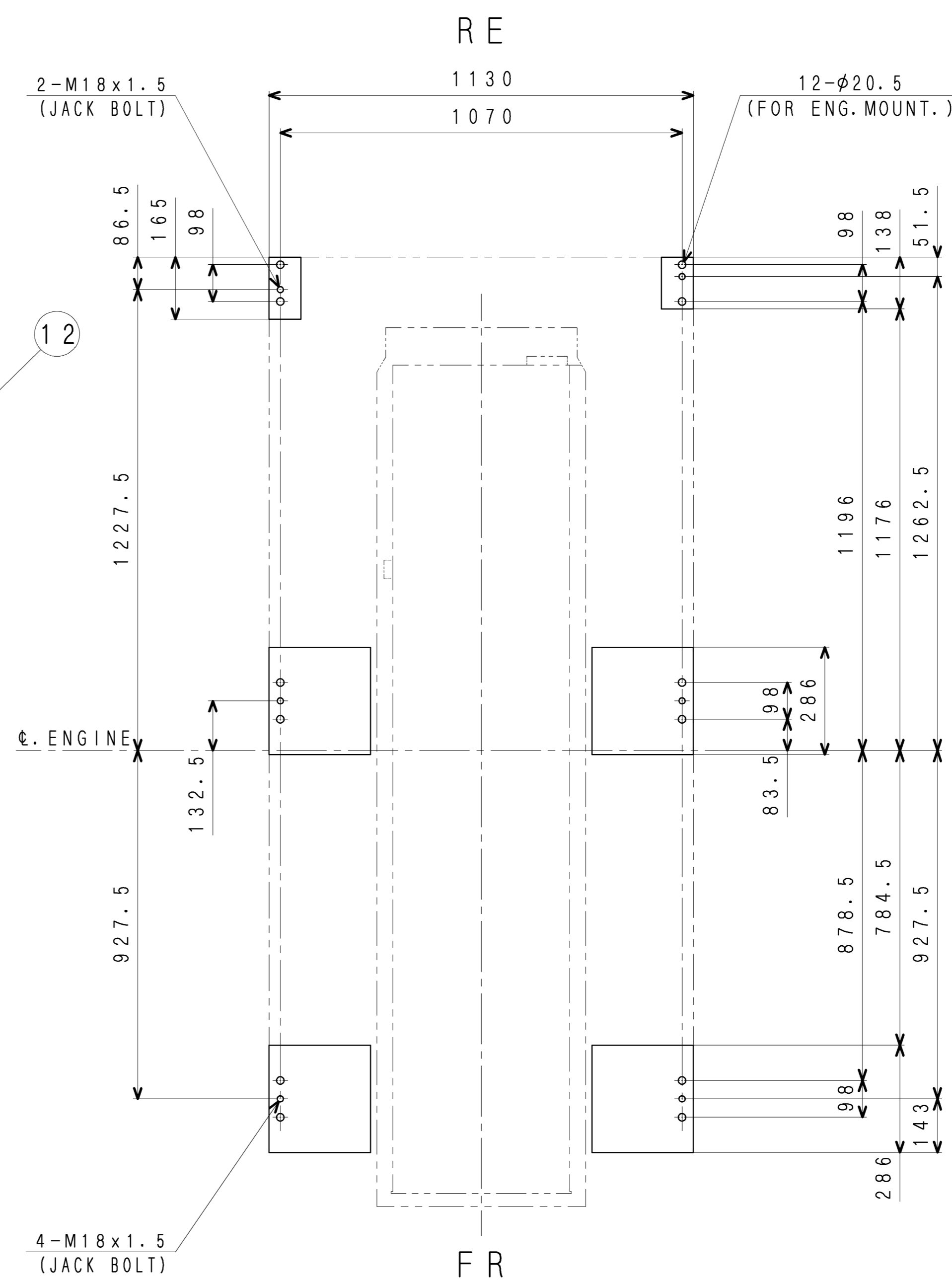
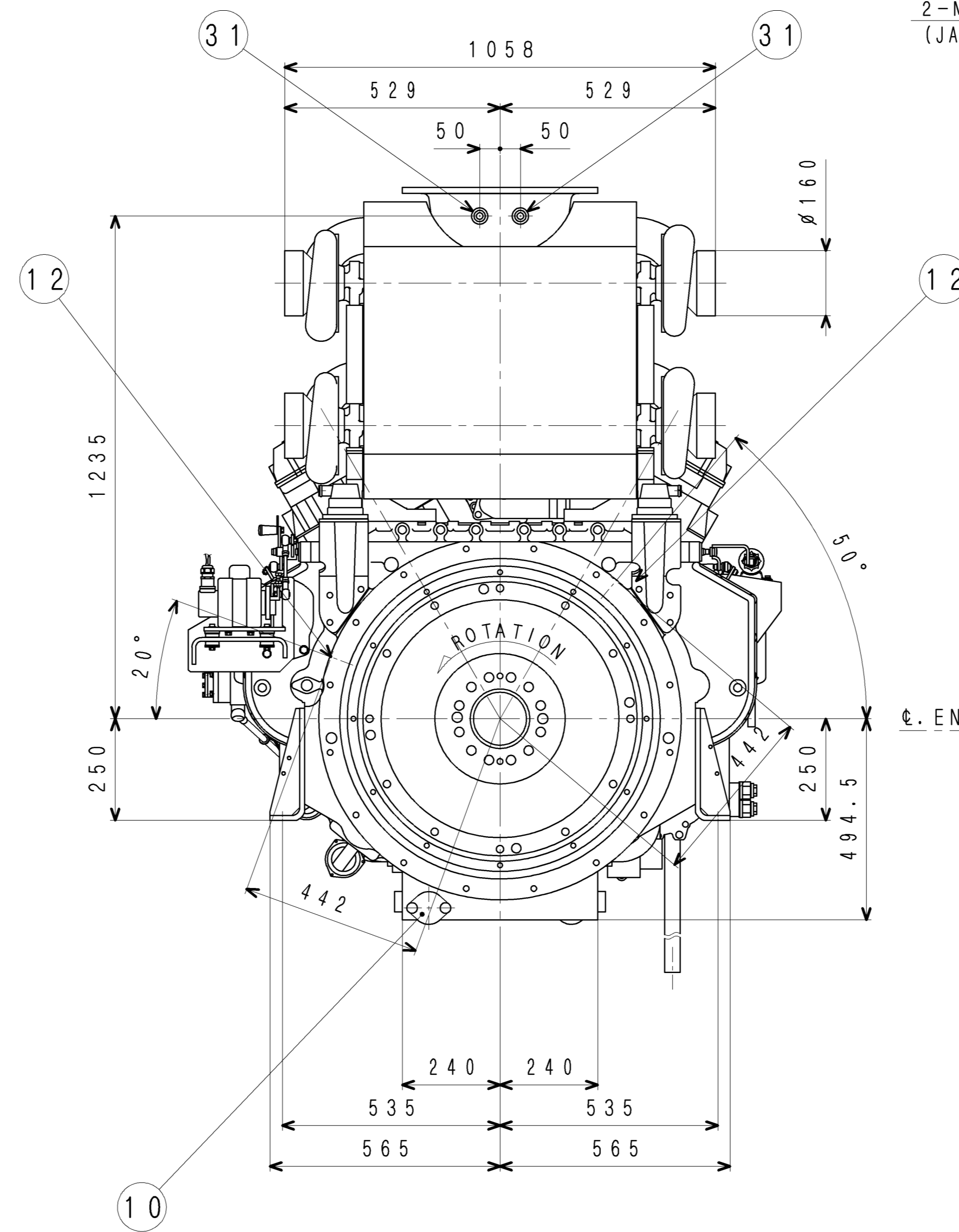
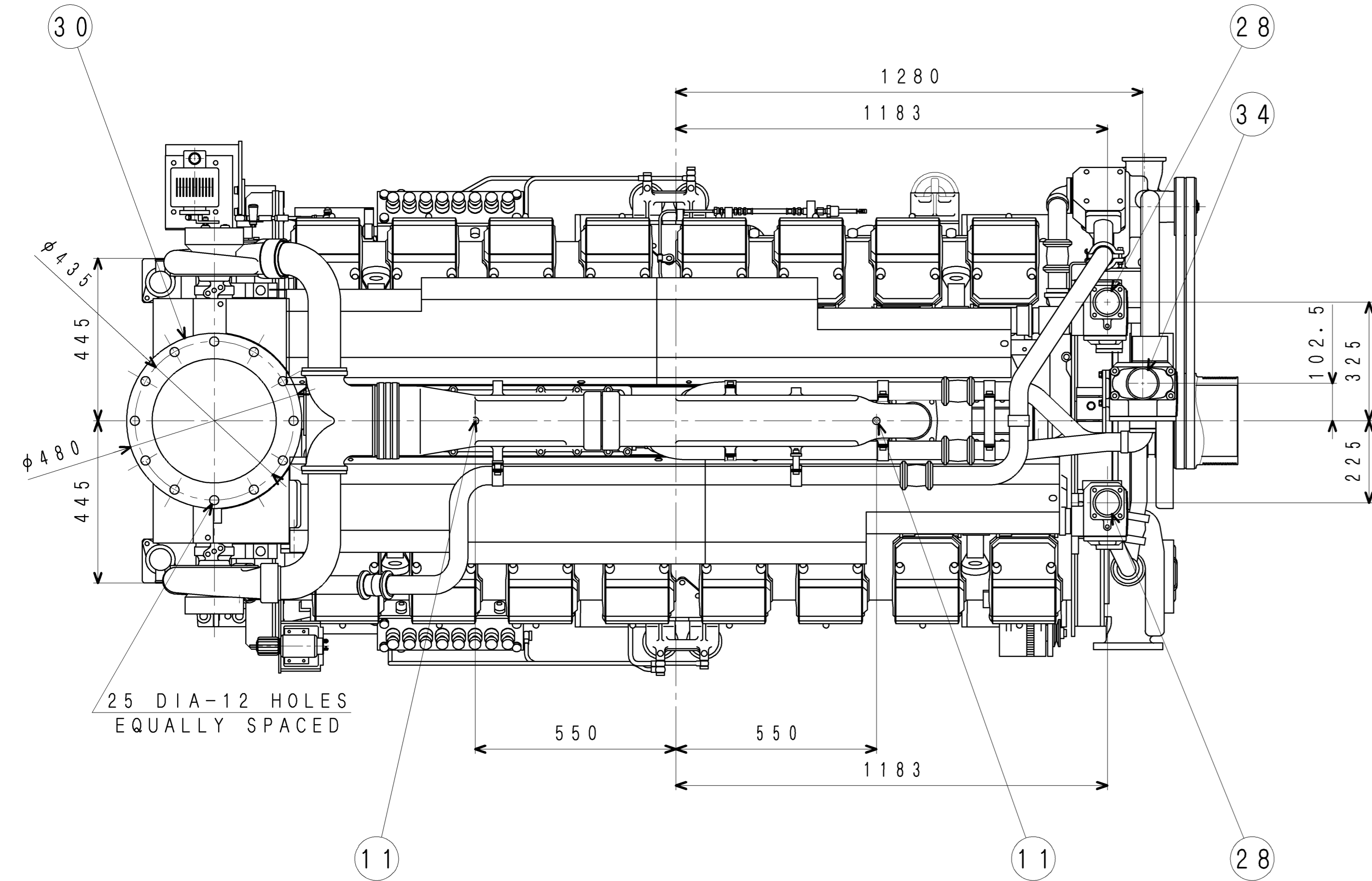
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APPLICATION : GENERATOR

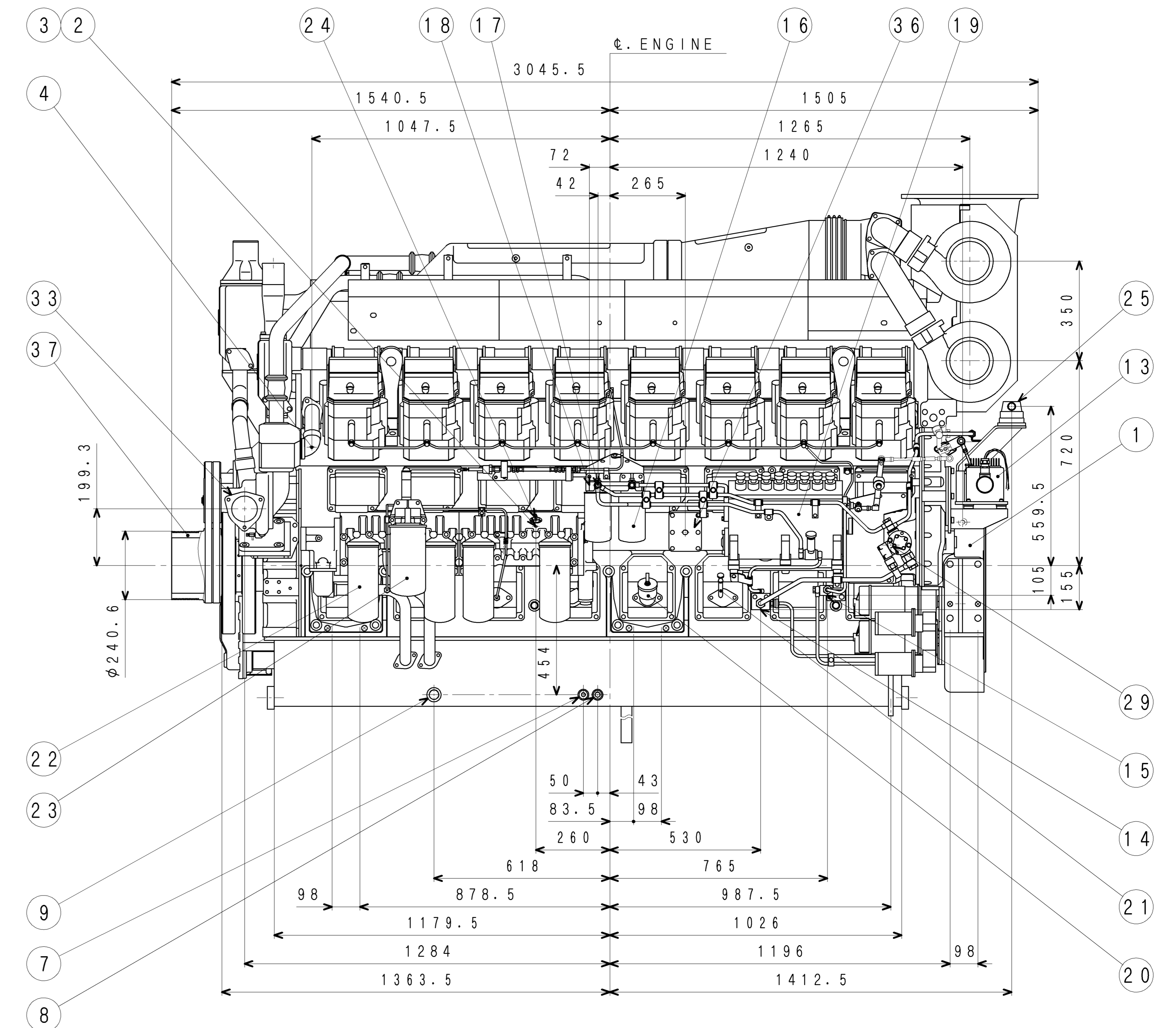
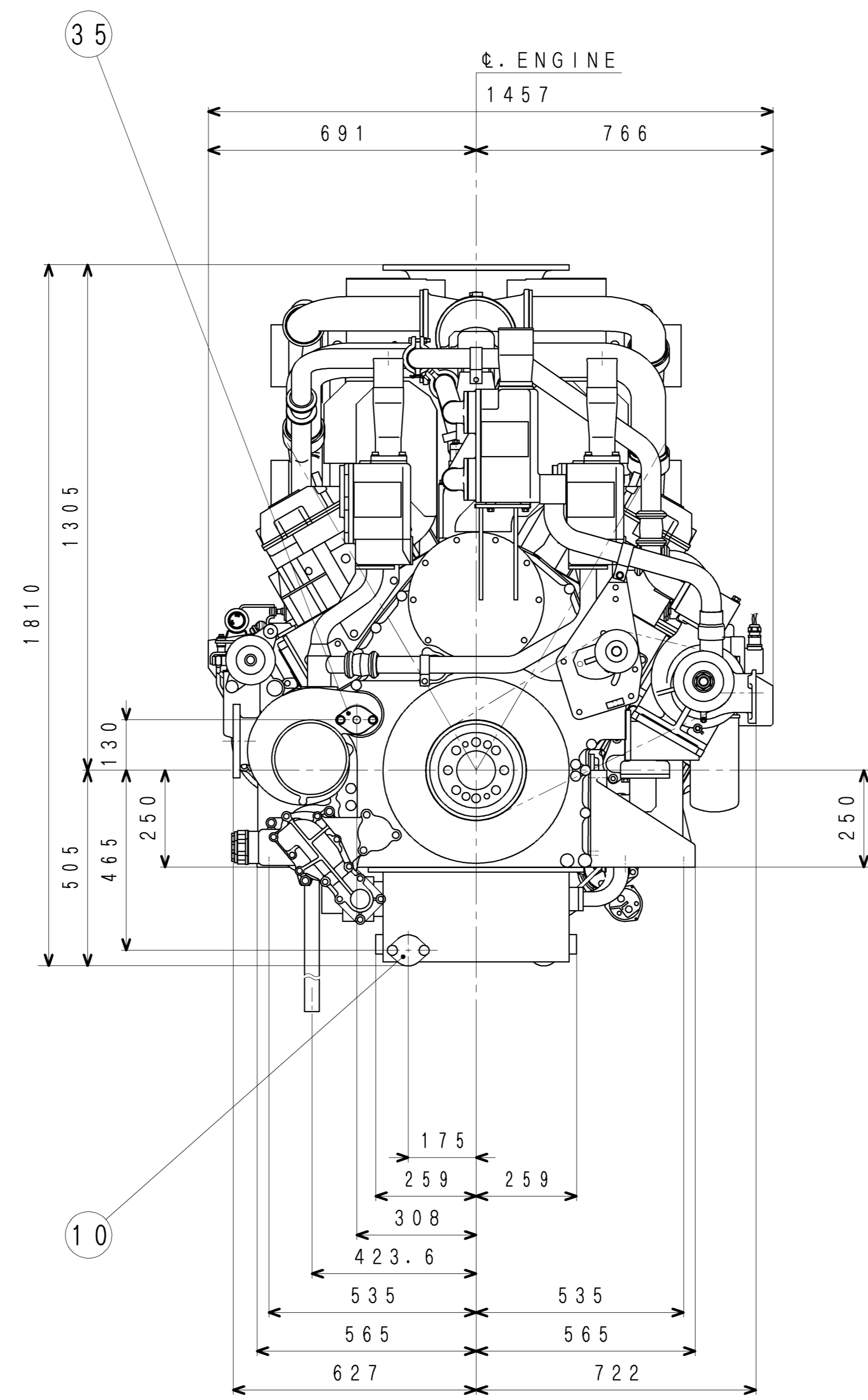
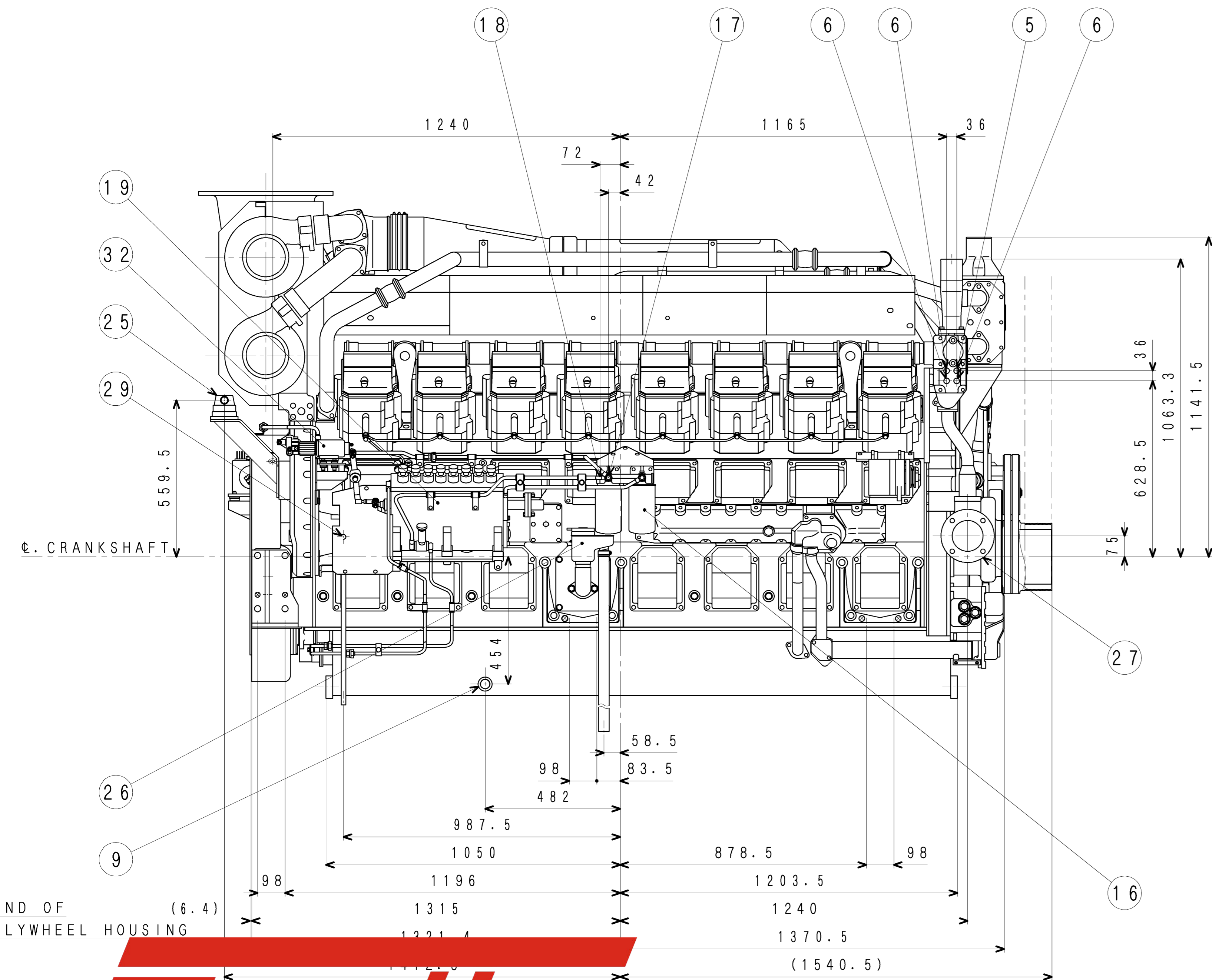
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NO.	PARTS NAME	SIZE	REFERENCE
1	FLYWHEEL & HOUSING		37896-21001
2	OIL PRESS. GAGE UNIT JOINT	Rc1/8	37896-01012
3	OIL PRESS. SWITCH JOINT	Rc1/8	
4	OIL PRESS. SWITCH JOINT	Rc3/8	
5	THERMOMETER UNIT JOINT	Rc1/2	
6	THERMOSWITCH JOINT	Rc1/2	
7	OIL PAN (A) JOINT	M16x1.5	
8	OIL PAN (B) JOINT	M20x1.5	
9	OIL PAN (C) JOINT	M36x1.5	
10	OIL PAN (D) JOINT		
11	AIR PRESS. GAGE JOINT	Rc1/8	
12	PICKUP JOINT	UNF5/8-18	37896-01012
13	GOVERNOR		
14	FUEL INLET PIPE JOINT	Rc3/4	37896-01012
15	FUEL RETURN PIPE JOINT	Rc3/4	37896-01012
16	FUEL FILTER		
17	FUEL PRESS. SWITCH JOINT	M14x1.5	37896-01012
18	FUEL PRESS. SWITCH JOINT	Rc3/8	37896-01012
19	FUEL INJECTION PUMP		
20	OIL FILLER		
21	OIL LEVEL GAGE		
22	OIL FULL-FLOW FILTER		
23	OIL BY-PASS FILTER		
24	OIL BY-PASS ALARM SWITCH		37896-01012
25	BREATHER (RE)		
26	BREATHER (SIDE)		
27	WATER INLET PIPE JOINT (J/W)	90A	
28	WATER OUTLET PIPE JOINT (J/W)		37896-01012
29	WATER DRAIN COCK		
30	EXHAUST FLANGE	350A	
31	THERMOMETER, EX. JOINT	G3/4	37896-01012
32	STOP SOLENOID		
33	WATER INLET PIPE JOINT (A/C)		37896-01012
34	WATER OUTLET PIPE JOINT (A/C)	φ89.1	
35	WATER HEATER INLET JOINT	Rc1/2	
36	WATER HEATER OUTLET JOINT	Rc1/2	37896-01012
37	FRONT ACCESSORY DRIVE		37896-25003



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(3) TURBOCHARGER IS MHI TD10.
(2) GOVERNOR IS W/W PROACTII.
NOTES (1) THIS IS S16R-Y2PTAW2 ENGINE DRAWING FOR US EPA-TIER2 REGULATION.
TABLE 1 SHOWS ENGINE MODEL.

ENGINE MODEL	OUTPUT (HP)	ENGINE SPEED (RPM)
S16R-Y2PTAW2	2923	1800

37896-00233
S16R-Y2PTAW2 DIESEL ENGINE
三菱重工業株式会社 汎用機・特車事業本部
MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINERY & SPECIAL VEHICLE DEPARTMENT.
図面番号 37896-00233
2006. 8. 25

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