

Certified for US EPA-Tier 2 / Constant Speed

Standard Model [800kWe/60Hz]

S12A2-Y2PTAW-2

SPECIFICATION SHEET

MITSUBISHI

DIESEL ENGINES

GENERAL ENGINE DATA

Type	4-Cycle, Water Cooled
Aspiration	Turbo-Charged, Inter Cooler (Fresh water to Cooler)
Cylinder Arrangement	60°V
No. of Cylinders	12
Bore mm(in.)	150 (5.91)
Stroke mm(in.)	160 (6.30)
Displacement liter(in ³)	33.93 (2071)
Compression Ratio	15.3:1
Dry Weight - Engine only - kg(lb)	3380 (7453)
Wet Weight - Engine only - kg(lb)	3600 (7938)

PERFORMANCE DATA

Steady State Speed Stability Band at any Constant Load	
Electric Governor - %	±0.25 or better
Maximum Overspeed Capacity - rpm	2400
Moment of inertia of Rotating Components - kgf·m ² (lbf·ft ²)	37.7 (894.8)
(Includes Std. Flywheel)	
Cyclic Speed Variation with Flywheel at 1800rpm	1/449

ENGINE MOUNTING

Maximum Bending Moment at Rear Face of Flywheel Housing - kgf·m(lbf·ft)	200 (1447)
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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)	4 ~ 6 (57 ~ 86)
Maximum Oil Temperature - °C(°F)	110 (230)
Oil Capacity of Standard Pan High - liter (U.S.gal)	100 (26.4)
Low - liter (U.S.gal)	80 (21.1)
Total System Capacity (Includes Oil Filter) - liter (U.S.gal)	120 (31.7)
Maximum Angle of Installation (Std. Pan) Front Down	9.5°
(Engine Only) Front Up	11°
Side to Side	22.5°

COOLING SYSTEM

Coolant Capacity of Jacket (Engine only) - liter (U.S.gal)	86 (22.7)
Coolant Capacity of Air cooler (Engine only) - liter (U.S.gal)	14 (3.7)
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)	65 ~ 85 (149 ~ 185)
Standard Thermostat (modulating) Range of Air Cooler - °C(°F)	35 ~ 50 (95 ~ 122)
Maximum Coolant Temperature at Engine Outlet - °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

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MITSUBISHI

S12A2-Y2PTAW-2

SPECIFICATION SHEET

DIESEL ENGINES

FUEL SYSTEM

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

STARTING SYSTEM

Battery Charging Alternator - V- Ah	_____	24-25
Starting Motor Capacity - V - kW	_____	24-6.0 × 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)	_____	500

The specifications are subject to change without notice.

APPLICATION : GENERATOR

Dec. '06 Printed in Japan

Pub. No.T13-0471-E



Certified for US EPA-Tier 2 / Constant Speed

Standard Model [800kWe/60Hz]

S12A2-Y2PTAW-2

SPECIFICATION SHEET

MITSUBISHI

DIESEL ENGINE

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		12			
Bore	mm (in.)	150 (5.91)			
Stroke	mm (in.)	160 (6.30)			
Displacement	liter (in. ³)	33.93 (2071)			
Brake Horse power without Fan	HP (kW)	1207 (900)	1099 (820)		
Brake Mean Effective Pressure without Fan	kgf/cm ² (psi)	18.0 (256)	16.4 (233)		
Mean Piston Speed	m/s (ft/min)	9.6 (1890)	9.6 (1890)		
Maximum Regenerative Power Absorption Capacity without Fan	HP (kW)	125 (93)	125 (93)		
Intake Air flow	m ³ /min (CFM)	88 (3107)	75 (2648)		
Exhaust Gas Flow	m ³ /min (CFM)	232 (8192)	200 (7062)		
Coolant Flow	liter/min (U.S. GPM)	1100 (291)	1100 (291)		
Coolant Flow to Intercooler (PTAW only)	liter/min (U.S. GPM)	470 (124)	470 (124)		
Cooling Air Flow (Std. Fan)	m ³ /min (CFM)	-	-		
Allowable Fan Loss Horse Power	HP (kW)	51 (38)	51 (38)		
Radiated Heat to Ambient	kcal/hr (BTU/min)	66155 (4375)	56798 (3757)		
Heat Rejection to Coolant	kcal/hr (BTU/min)	308721 (20418)	265058 (17531)		
Heat Rejection to Air Cooler (PTAW Version)	kcal/hr (BTU/min)	242567 (16043)	208260 (13774)		
Heat Rejection to Exhaust	kcal/hr (BTU/min)	813498 (53804)	658220 (43534)		
Noise Level (1 m height & distance) (excludes, Intake,Exhaust & Fan)	dB(A)	105	103		

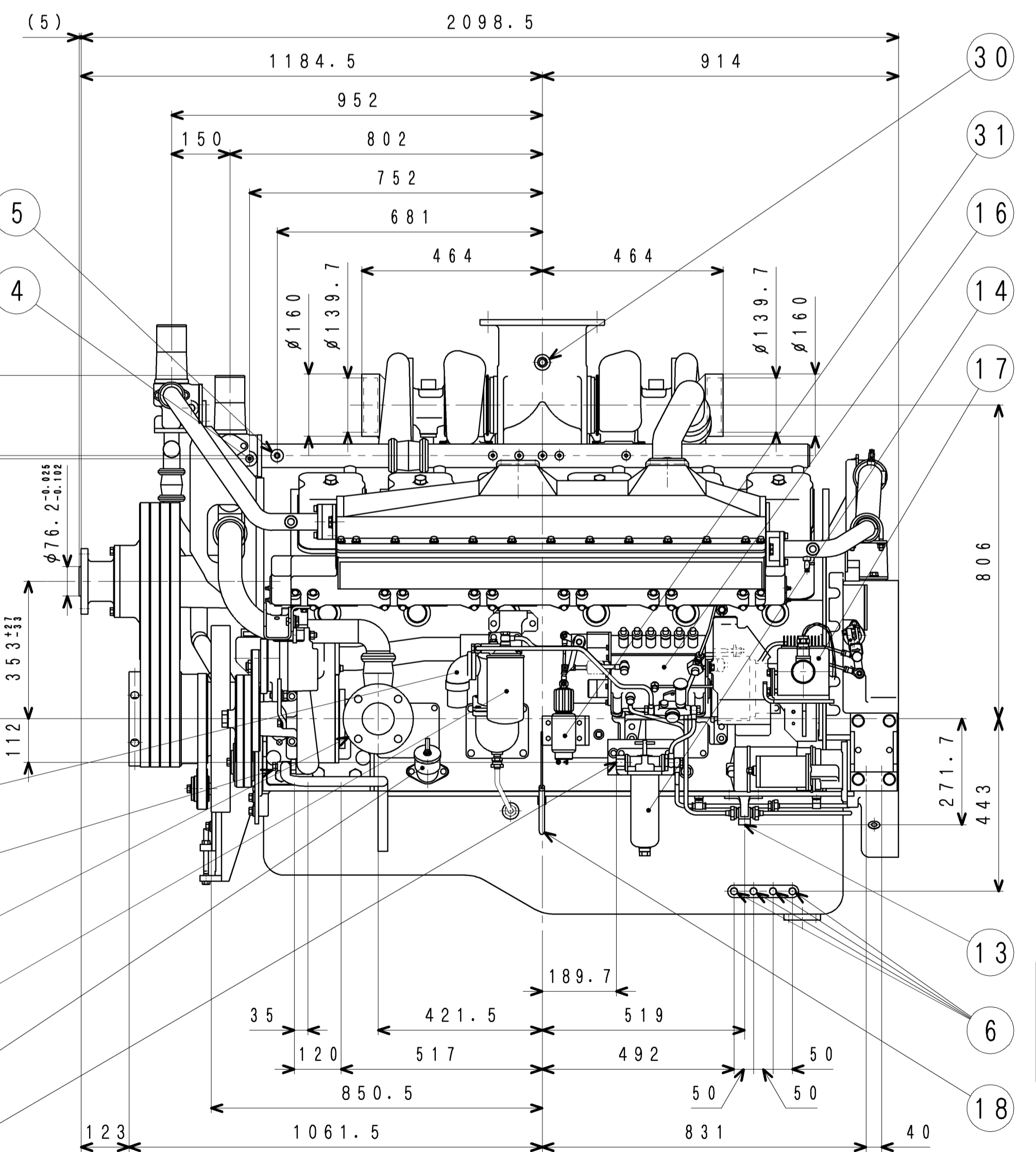
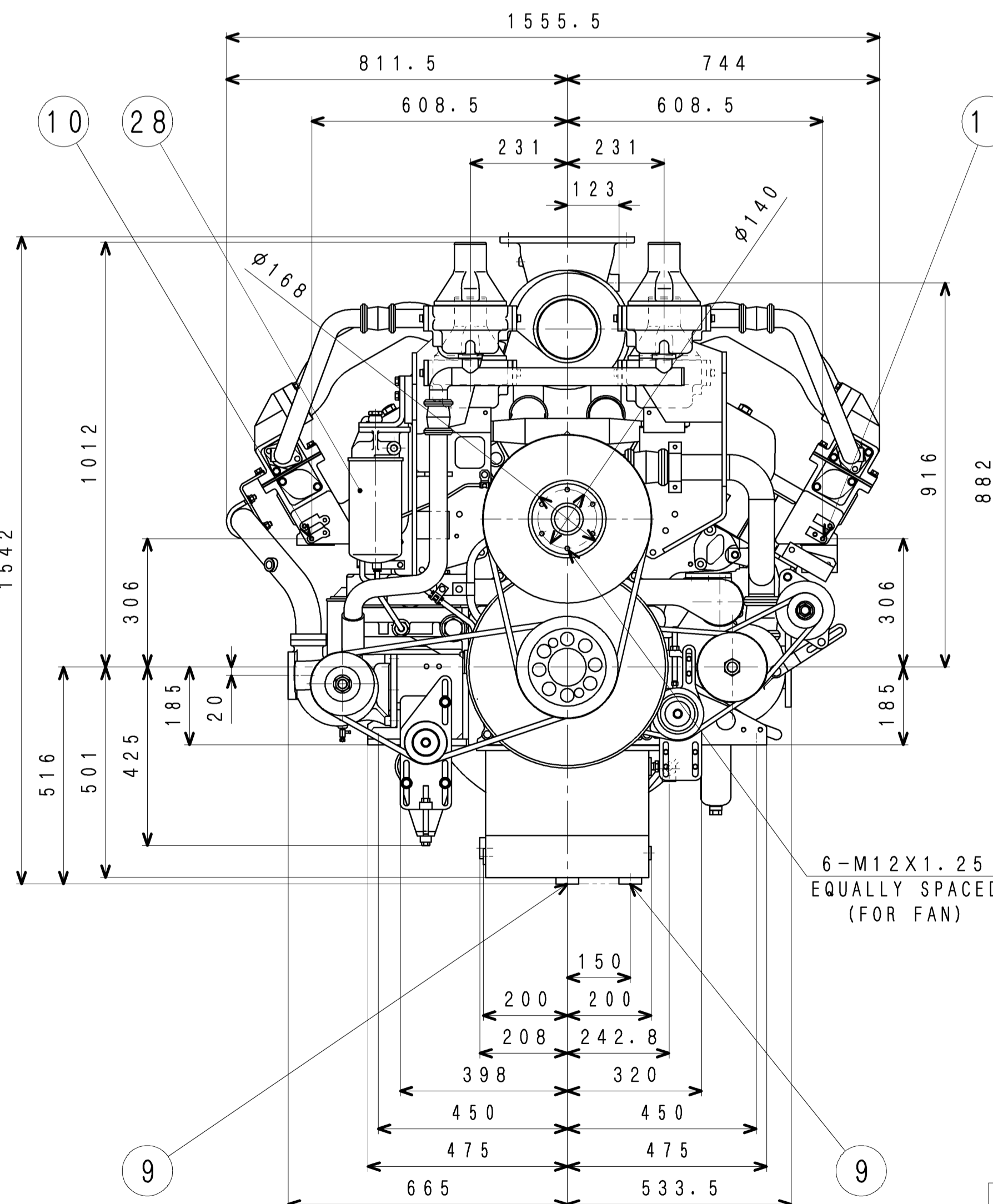
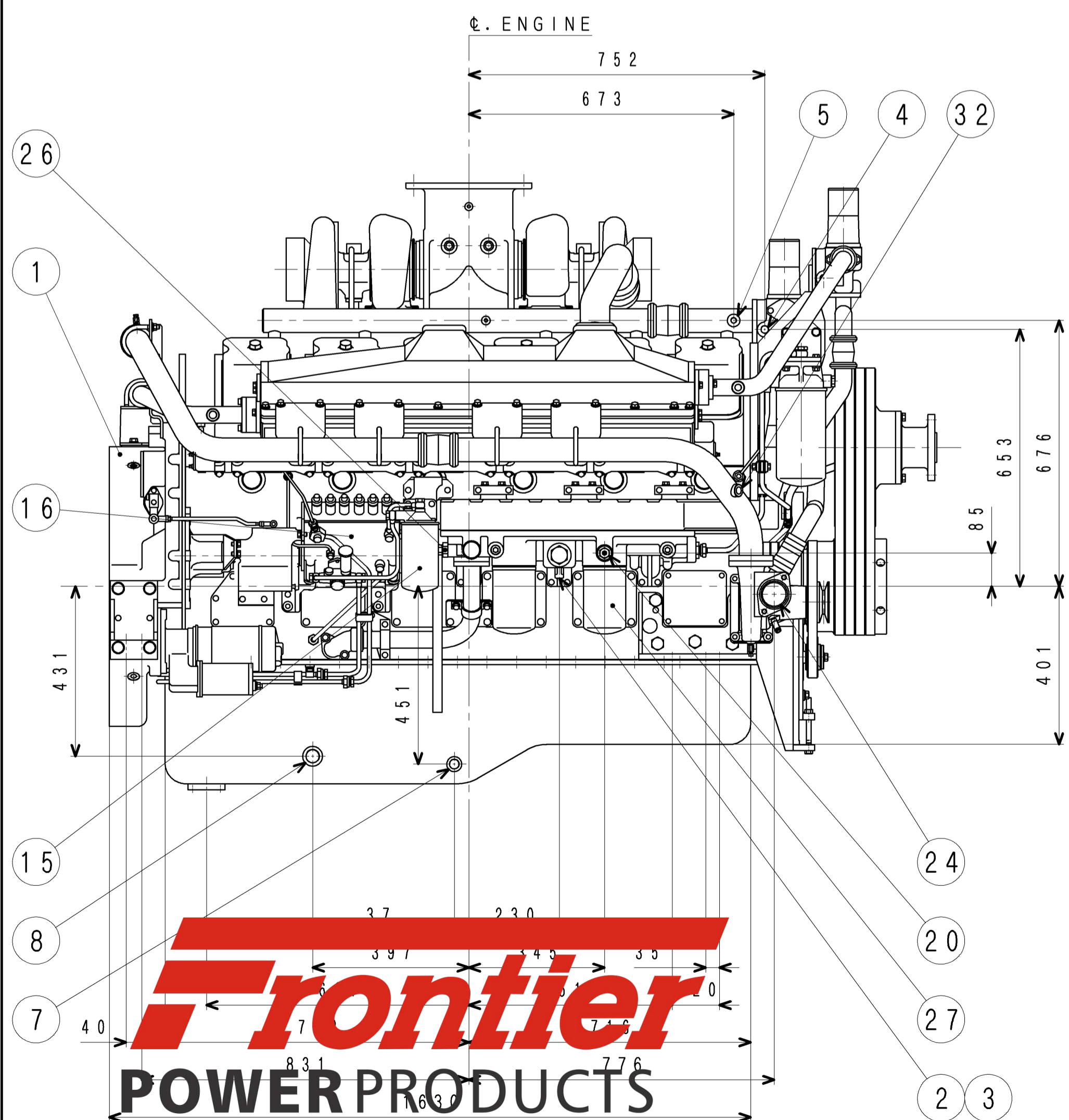
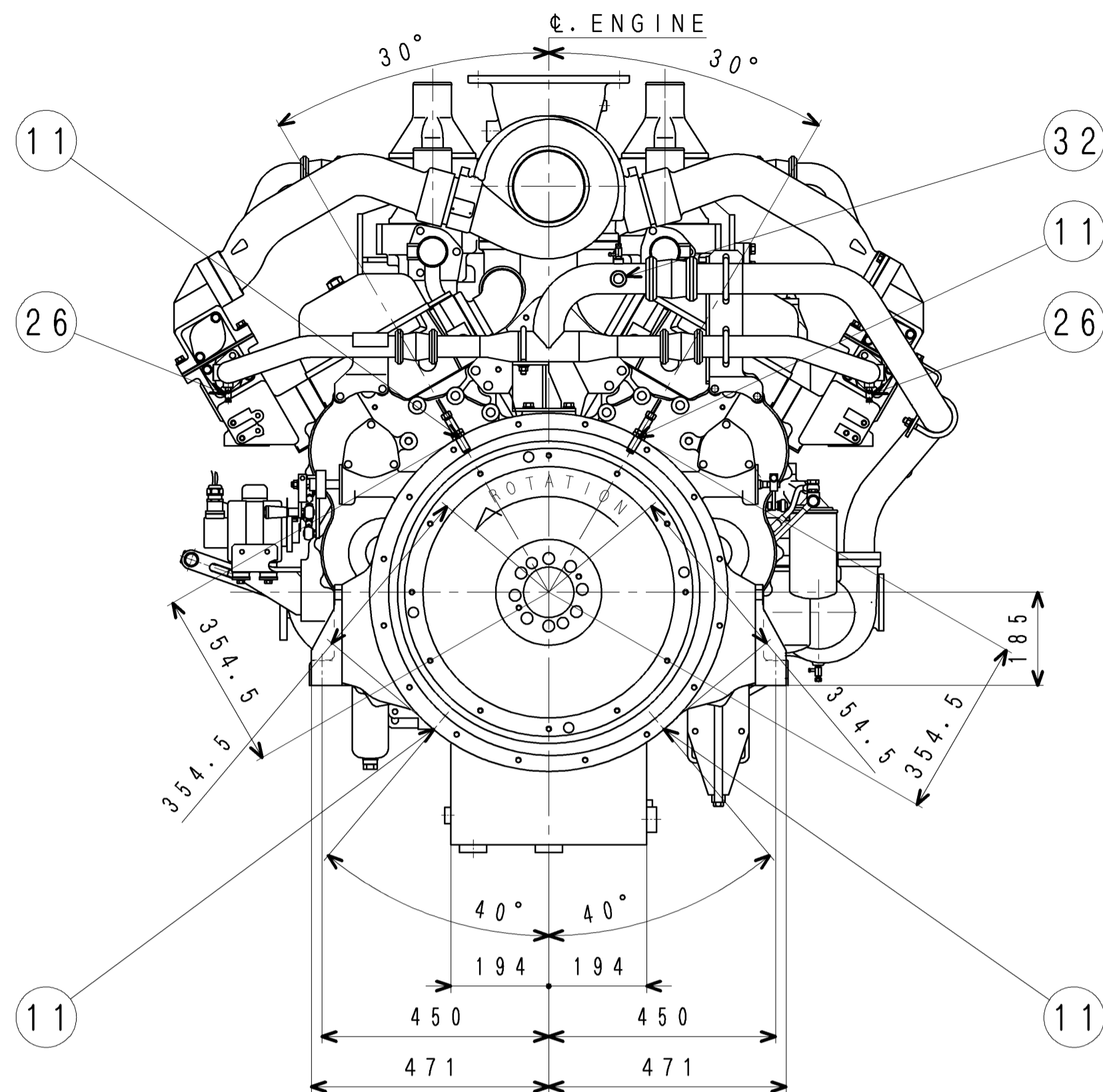
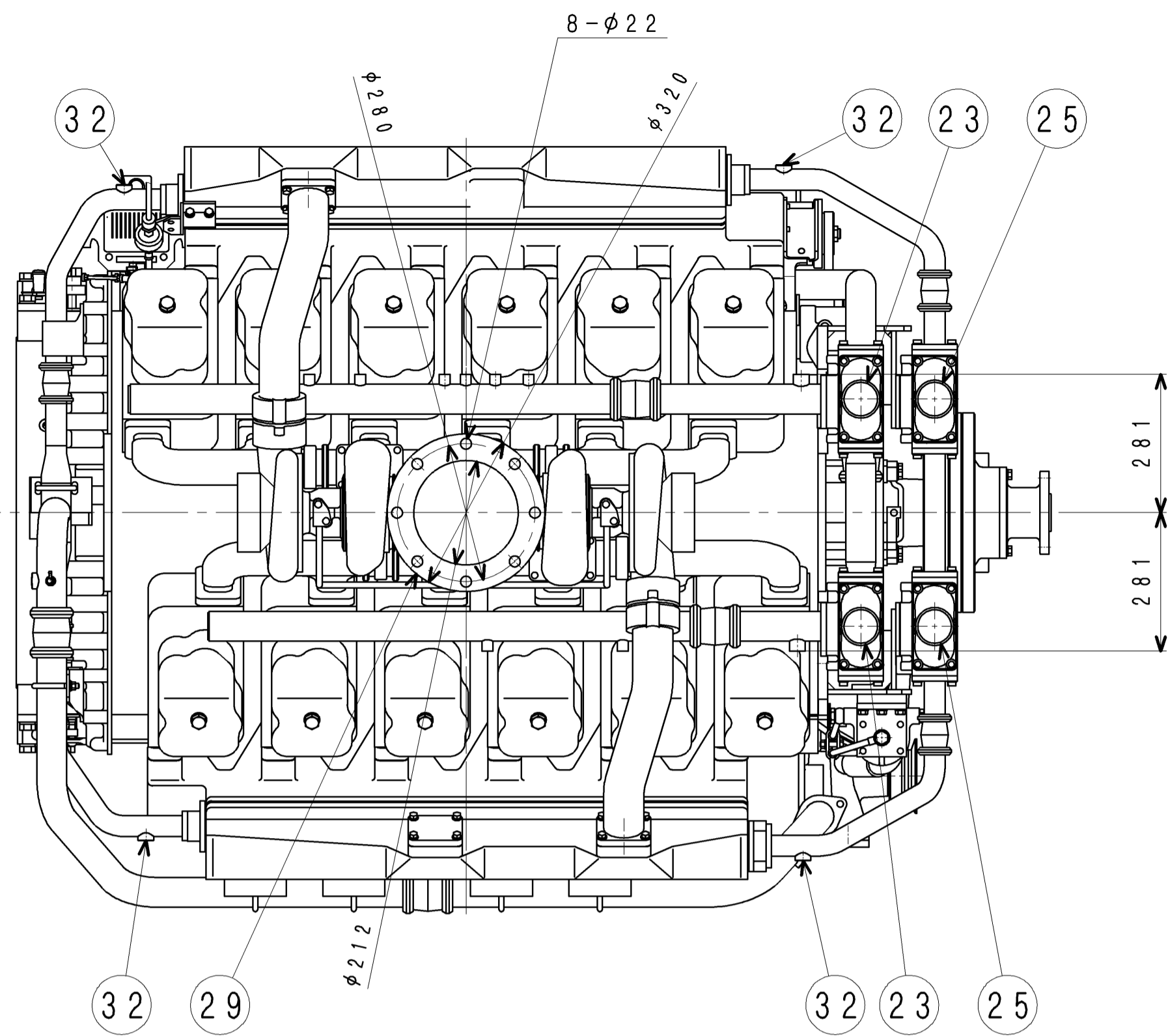
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APPLICATION : GENERATOR

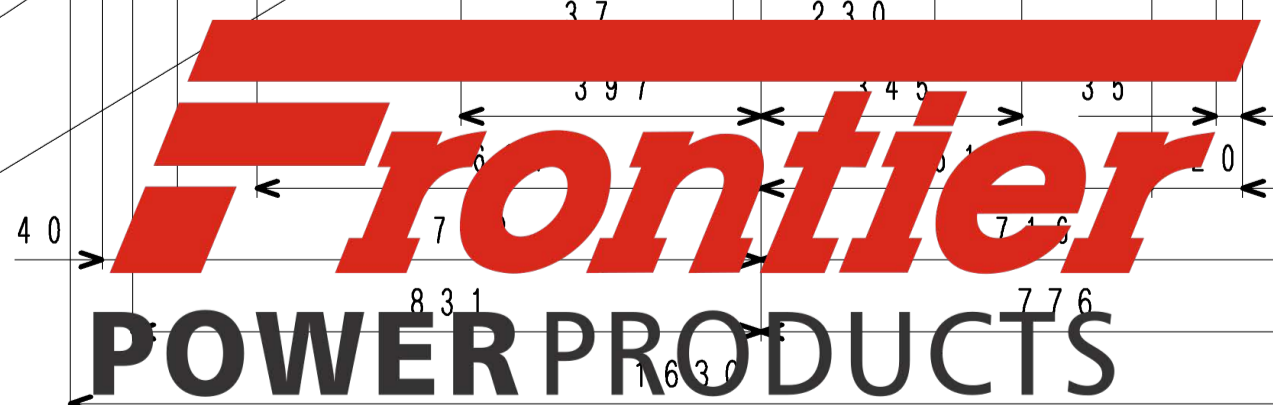
Pub. No.T13-0471-E

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NO.	PARTS NAME	SIZE	REFERENCE
1	FLYWHEEL & HOUSING		32696-21001
2	OIL PRESS. GAGE UNIT JOINT	Rc1/8	32696-01013
3	OIL PRESS. SWITCH JOINT	Rc1/8	
4	THERMOMETER UNIT JOINT	Rc1/2	
5	THERMOSWITCH JOINT	M16x1.5	
6	OIL PAN (A) JOINT	M20x1.5	
7	OIL PAN (B) JOINT	Rc3/4	
8	OIL PAN (C) JOINT	M36x1.5	
9	OIL PAN (D) JOINT		
10	AIR PRESS. GAGE JOINT	Rc1/8	
11	PICKUP JOINT	UNF5/8-18	
12	FUEL INLET PIPE JOINT	Rc3/4	
13	FUEL RETURN PIPE JOINT	Rc1/2	32696-01013
14	FUEL PRIMARY FILTER		
15	FUEL SECONDARY FILTER		
16	FUEL INJECTION PUMP		
17	GOVERNOR		
18	OIL LEVEL GAGE		
19	OIL FILLER		
20	OIL BY-PASS ALARM SWITCH	M5x0.8	32696-01013
21	BREATHER JOINT	φ50.8	
22	WATER INLET PIPE JOINT	80A	32696-01013
23	WATER OUTLET PIPE JOINT	φ76.2	32696-01013
24	WATER INLET PIPE JOINT (A/C)		32696-01013
25	WATER OUTLET PIPE JOINT (A/C)	φ76.2	
26	WATER DRAIN COCK		
27	OIL FULL-FLOW FILTER		
28	OIL BY-PASS FILTER		
29	EXHAUST FLANGE	200A	
30	THERMOMETER, EX. JOINT	G3/4	32696-01013
31	STOP SOLENOID		
32	WATER PIPE JOINT	Rc1/2	



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(3) GOVERNOR IS W/W PROACT.
 (2) TURBOCHARGER IS MHI TD10.
 NOTES (1) THIS IS S12A2-Y2PTAW ENGINE DRAWING FOR US EPA-TIER2 REGULATION.
 TABLE 1 SHOWS ENGINE MODEL.

ENGINE MODEL	OUTPUT (HP)	ENGINE SPEED (min ⁻¹)
S12A2-Y2PTAW-2	1207	1800

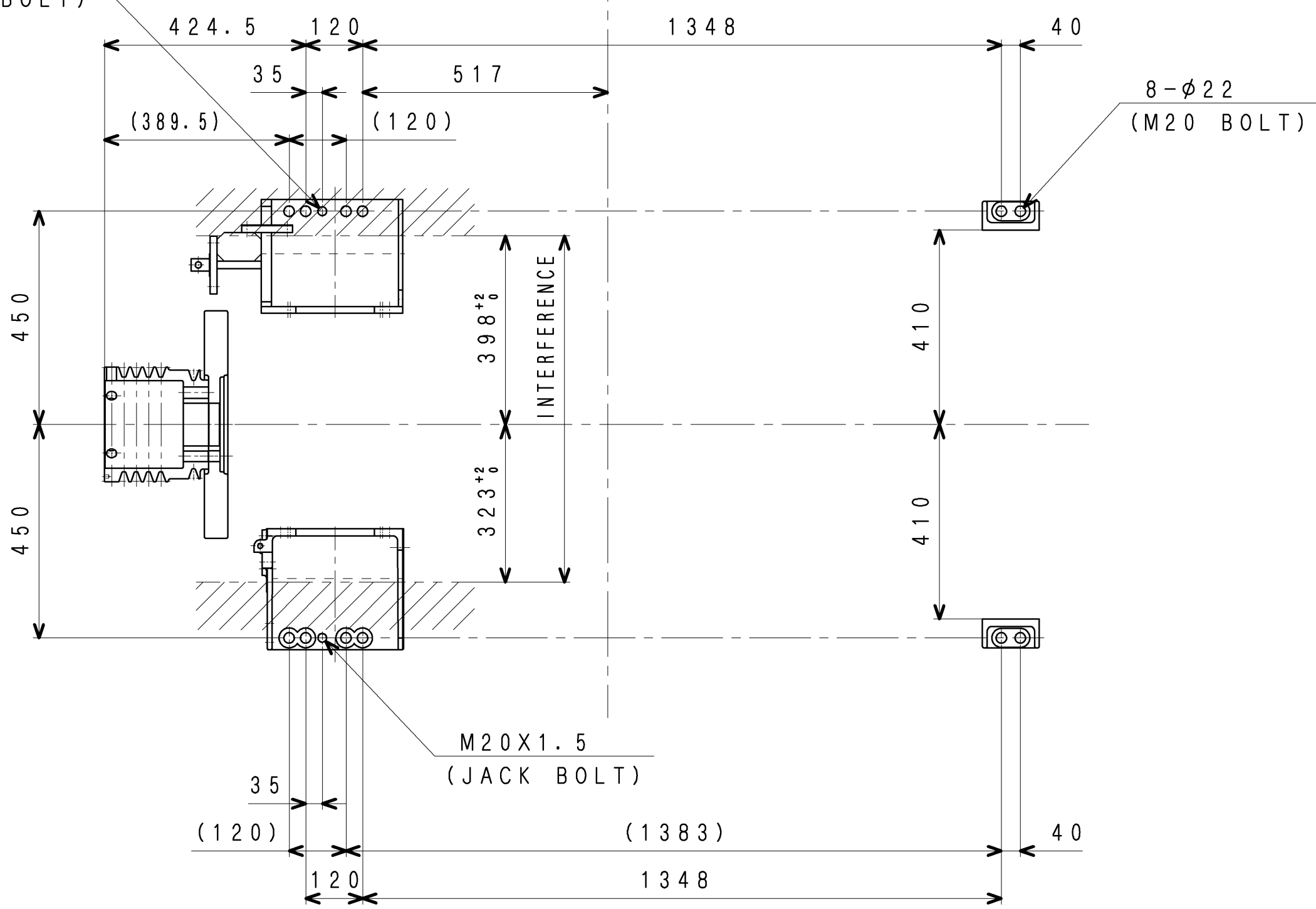
S12A2-Y2PTAW DIESEL ENGINE		3/4 ANGLE PROJECTION	
三菱重工業株式会社 汎用機・特車事業本部		尺規 SCALE	
MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS.		:	
図面番号 32696-00219		DRAWING NO.	
2006. 9. 1		2006. 9. 1	
1 3 5 7 9	2 4 6 8 10	1 2 3 4 5 6	7 8 9 10
◎ 図面	◎ 組立	◎ 組立品	◎ 部品

旧引
汎特
2007
1.24

FULL-CAO

M20X1.5
(JACK BOLT)

∅. ENGINE



出図
 汎特
 2006
 9.7

FULL-CAD

				 3rd ANGLE PROJECTION 尺度 SCALE :	
S12A2-Y2PTAW 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 HEADQUARTERS.					
図面番号 32696-00219 2/2 DRAWING No.					
認可 APPD 松下	検図 CHK 橋口	福田	谷戸	製図 DRN 齊藤	2006. 9. 1

- ③ 新図 サイズ ① 組立図 2 鋳鍛歯車品 3 板金溶接品 4 組立品
- 4 旧引図 A 3 5 切削品 6 その他(購入品)