



**YANMAR CO.,LTD.**

<b>Messrs : AMMANN</b>	Solution No.				
	Rev. No.				
	Drawing No.	G2-14120-0290			
	Revision	(18/MAY/10)Registered by YDSL-10090.			

## Engine Specification

Model name	L48N5AF3T0AAAN ( Design model ID : 714121D ) ( Production model ID : 114127i )
Type	4-stroke, vertical-cylinder, air-cooled diesel
Use for	Stamper , Hand start
Dev. Request No.	YI DEVREQ-072-2009

18 MAY. 2010

**YANMAR CO.,LTD.**

Sending to	
YI Engineering	1

Rev. No.				
Drawing No.			G2-14120-0290	

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Remarks :

<b>Sebango Code:</b>	<b>MH</b>	<b>PT</b>
Assy / B1:		
TB / C1:		
PACK / F1:		
Prod. Eng:		
Date:		

Power System Operations Division Engine Development Dept.		
Application Engineering Dept.		
Manager	Checked	Drawn
<i>R. Harker</i>	<i>T. Sasaki</i>	<i>Yamashita</i>

*#.ogawa*

Rev. No.				
Drawing No.		G2-14120-0290		

## 1. Engine Specification

Model name			L48N5AF3T0AAAN
Combustion system			Direct injection
No. of cylinder-bore × stroke		mm	1-φ 70×57
Displacement		liter	0.219
Output	Continuous	kW/min <sup>-1</sup>	* 2.8 ( 3.8PS, 3.8HP ) / 3000
	Maximum	kW/min <sup>-1</sup>	* 3.1 ( 4.2PS, 4.2HP ) / 3000
PTO Shaft	PTO position		Crankshaft
	Direction of rotation		Counterclockwise viewed from PTO side
Injection Timing (FIC-air)		deg.	16.5±1.0 bTDC
Fuel	Oil selection		Diesel fuel
	Tank capacity	liter	2.4
Lubricating system			Forced lubricating system
Lubricating	Oil capacity	liter	0.8 (effective, 0.25)
	Oil selection		SAE 10W30, API grade CD or higher
Cooling system			Forced air cooling by flywheel fan
Starting system			Recoil starter
Governor			All speed type, mechanical
Balancer shaft			Single balancer shaft
Air cleaner			Wet type paper element filter
Exhaust silencer			Expansion silencer with cover
Generator (at 3600min <sup>-1</sup> )			-----
Dimensions		mm	Indication in outline drawing
Dry weight		kg	Approx. 27.0

\* Output is given for normal atmosphere conditions and specs, which are defined as follows:

- Atmospheric pressure : 100kPa (750mmHg)
- Atmospheric temperature : 25°C (298K)
- Relative humidity : 30%

[Notice] Spec of air cleaner is without pre-cleaner and pipe.

## 2. Engine Performance

Speed at no load	Minimum	min <sup>-1</sup>	1200 or more	PTO Shaft (Without minimum idling speed adjust bolt. Adjustable figure by your end.)
	Maximum		3175±30	
Governor regulation	Instantaneous speed difference	%	8 or less	at continuous output
	Permanent speed change		5 or less	
	Recovery time	sec.	5 or less	
	Speed fluctuation	min <sup>-1</sup>	30 or less	
Permissible angle of inclination	Continuous	deg.	20	Operation of up to 3 minutes
	Intermittent		30	
Lowest start temperature	Re-coil starting	°C	0	Without starting aid agent
	Electric starting		-10	
Noise level at continuous rating output (Mean of four direction)		dB(A)	89.5	at continuous output distance : 1m height : 0.5m with STD silencer on

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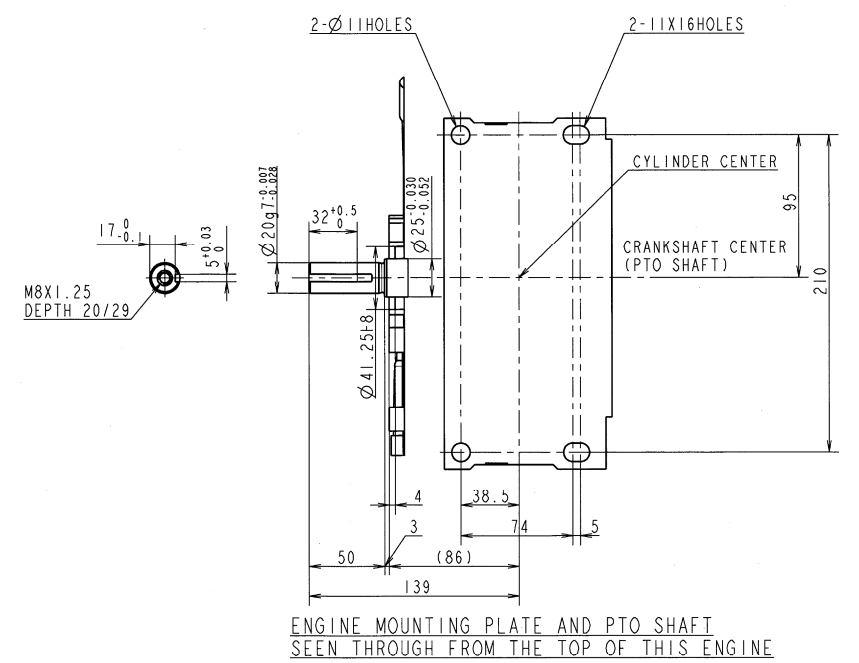
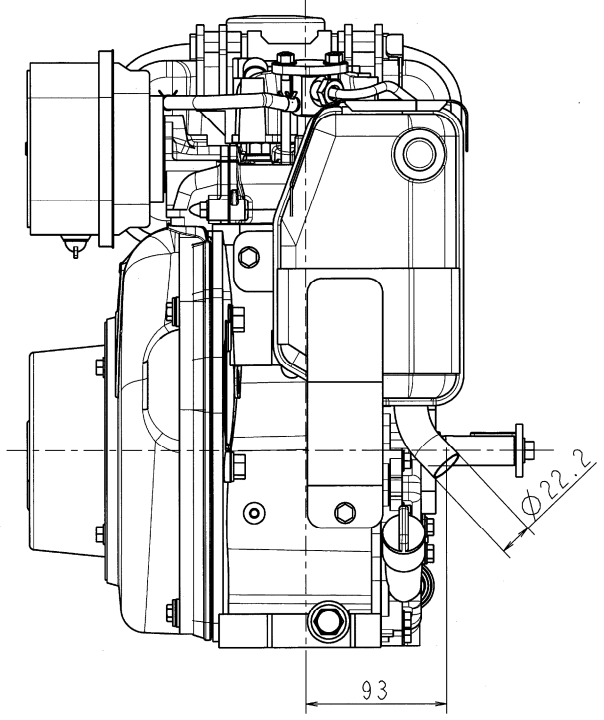
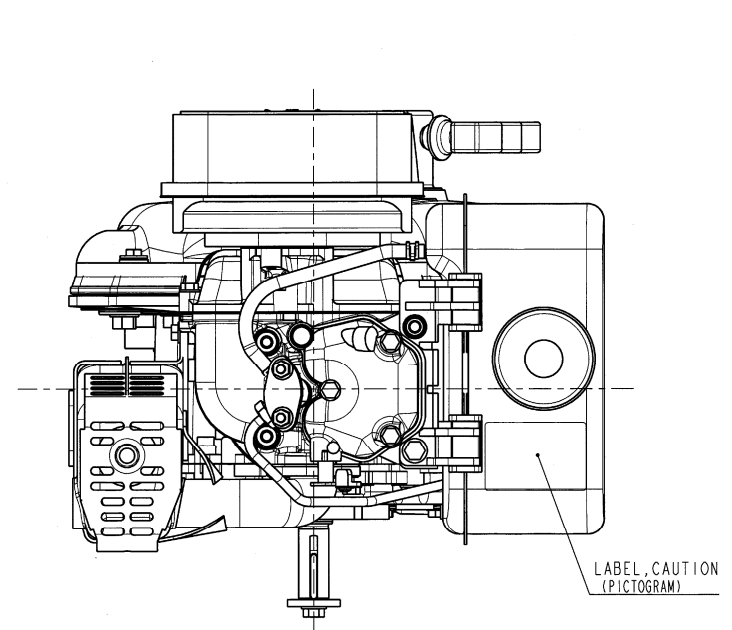
### 3. Details of specifications Base model : L48N6AF3R4AACD

System	Part Name	STD Spec.	Specification	Remarks
Fuel System	Pump, Fuel Injection	714139-51200	714139-51210	4NX, Left40° (Made in Yanmar FIE), 3000min <sup>-1</sup>
	Nozzle, Fuel Injection	714139-53200	←	Made in Yanmar FIE
	Fuel oil tank	11429C-55010	←	(Bm-a-3) 2.4L, Color:Yanmar Black C
	Tank stay (A)	114299-55210	←	
	Tank stay (B)	114299-55230	←	
	Fuel oil filter	NA	←	
	Fuel oil pipe, Return	114120-59300	←	For Yanmar FIE
	Fuel oil pipe, Pump	114780-59010	←	
	Fuel injection pipe	114120-59800	←	
	Cut-valve, Fuel oil	NA	←	
Lubricating System	Cap Assy., Lo supply	114299-01760	←	Cap assy. X2
	Cover, Lub. Oil pump	114299-32070	←	
	Filter, Lub. Oil	114299-35110	←	
	Oil pressure switch	NA	←	
Cooling System	Flywheel	114299-21590	←	(Dm-a-1)STD (DE type)
	Engine cover	114299-45210	←	(Dm-c-5)Cylinder cover only
	Case, Cooling Fan	11429C-45100	←	(Dm-b-1)STD, Color:Yanmar Italian gray
Electric System	Electric Regulator & Harness	NA	←	
	Air heater	NA	←	
	Dynamo Assy.	NA	←	
PTO & Flange	Crankcase cover	114299-01450	←	STD (D)
	Crank shaft	11429C-21020	←	(Fm-a-18)D type
	Key, Crank shaft	22512-050300	←	For D type, 5.0X30
Intake and Exhaust System	Air cleaner	114120-12570	←	(Gm-a-7)Big type (W/O Label)
	Pre cleaner	NA	←	
	Intake bend	114771-12010	←	(Gm-b-4)STD
	Muffler	114288-13500	114120-13500	Special part for AMMANN
Starting System	Recoil starter Assy.	114299-76050	Recoil angle is different	(Hm-a-3)STD, Recoil angle:R5
	Plunger, Starting	114299-76600	129100-61850	Blind plug
	Starting motor	NA	←	W/ cover (114399-01700)
Speed Control System	Governor lever Assy.	114295-61170	←	2 lever type
	Control device Assy.	114349-66110	714210-66100	(Im-a-1)General type, W/ Pictorial label
	Spring, Regulator	114770-66010	←	SP: 1-C , Paint mark : NA
	Fuel limiter Assy.	114211-66600	←	For 3000/3600min <sup>-1</sup>
Decomp. System	Remote decomp.	NA	←	
	Bonnet	114295-11991	114295-11951	(Lm-a-5)STD
Others	Cylinder block	11429C-01020	←	
	Cam shaft	11429C-14010	←	
	Balancer shaft	114771-28011	←	
	Flange	NA	←	
	Cover, Tiller	NA	←	
Standard Loose Parts	Key switch panel Assy.	NA	←	
	Connector	NA	←	
	Deflector	114299-13800	NA	
	Orifice	NA	114299-59850	
	Tools	114299-92590	NA	
	Operation manual	0ALN0-G00100	←	English
	Label, Hot surface	114220-07130	←	
Remarks	Fuel oil limiter	Locked by wire		
	High idle adjust bolt	Locked by wire		
	Lubricating oil	Not provided		
	Delivery style	Cardboard box		

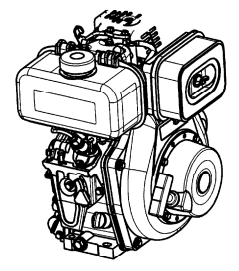
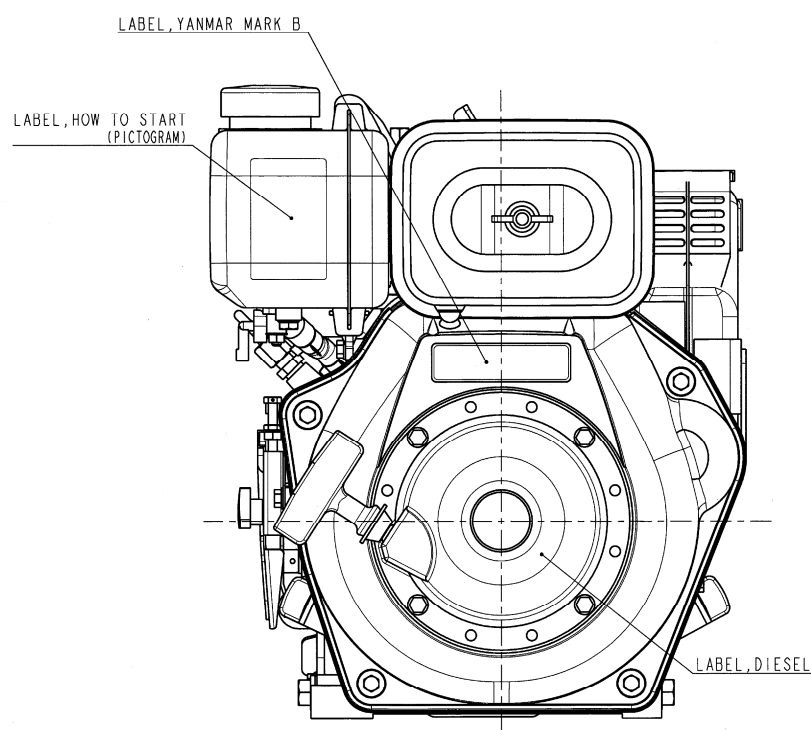
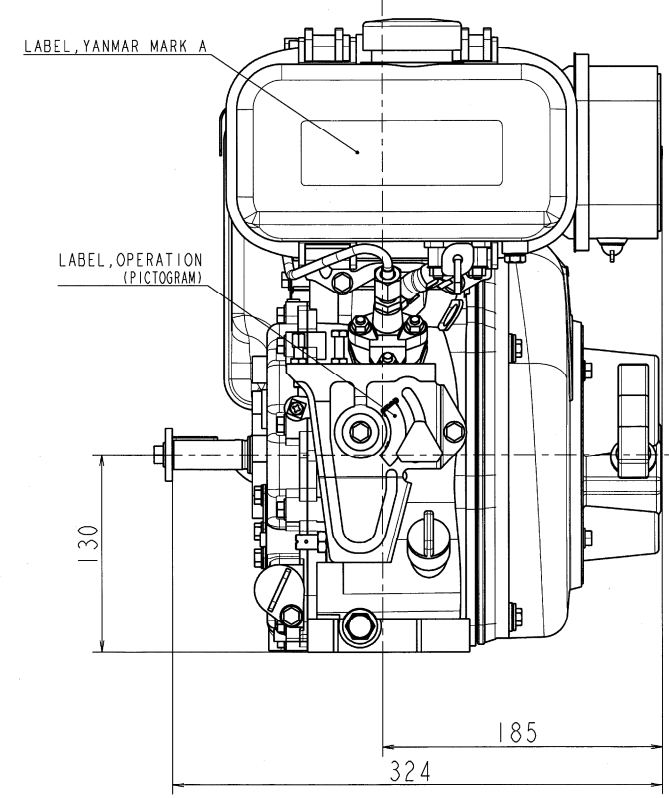
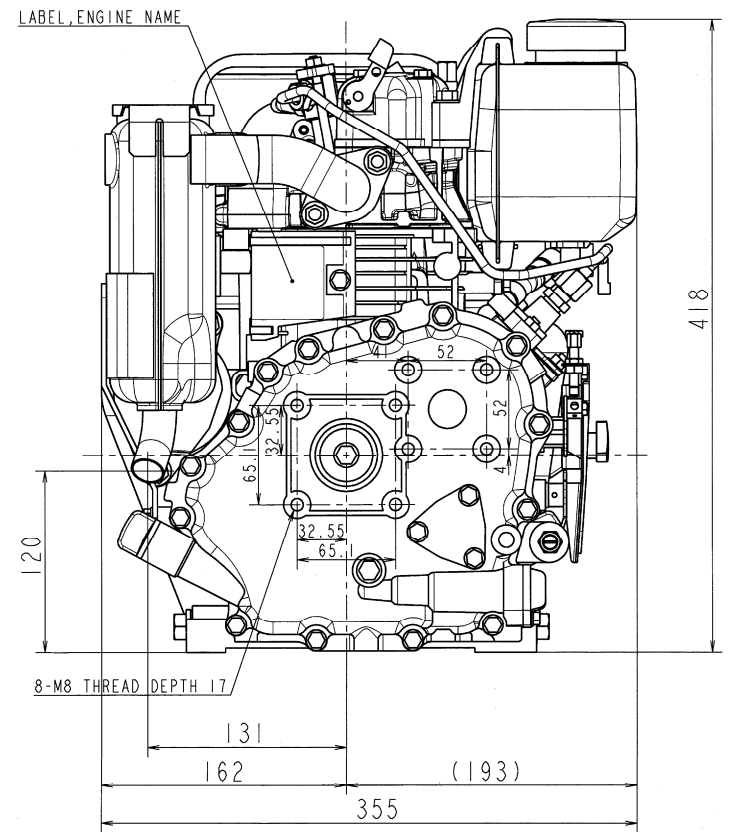
NEED	PURCHASING SPECIFICATION	REQUEST FOR APPROVAL					DELIVERY DRAWING					INSPECTING STANDARD					QC-PROCESS									
		OUTSIDE	INSIDE	CASE WALL THICKNESS	NOMINAL DIM. DIVISION	SANDMOLD	SHELL	5 MAX	10	18	30	50	120 MAX	250	400	800	1600	3150	0.5 TO 6	6 TO 30	30 TO 120	1000 TO 2000	2000 TO 4000	10 MAX	10 TO 50	50 TO 120

GEN. TOL.	DRAFT ANG.	CAST	L-CHIP	ANG. CHIP
3/100	3/100	±1.0 ±0.8	±1.0 ±1.5 ±2.0 ±3.0 ±4.0 ±5.0 ±6.0	±0.8 ±1.2 ±2.0 ±2.0 ±5MIN

FIGURE DIMENSION	GT. CODE
	○ AND √: RADIAL



ENGINE MOUNTING PLATE AND PTO SHAFT SEEN THROUGH FROM THE TOP OF THIS ENGINE



With respect to the use of environmentally hazardous substances for the parts, the substances in use shall conform to the requirement specified in YIS V-001J, "Restrictions of use for Environmentally Hazardous Substances".

本製品の環境負荷低減の取組として、YIS V-001J「環境負荷低減の取組」の要件に準拠すること。

3D-CAD	NOTICE
GEOMETRICAL TOLERANCE	SYMBOL
KIND OF TOLERANCE	STRAIGHTNESS TOLERANCE
FORM	CIRCULARITY TOLERANCE
PROFILE OF LINE TOLERANCE	FLATNESS TOLERANCE
PERIODICITY TOLERANCE	PARALLELISM TOLERANCE
PERPENDICULARITY TOLERANCE	ANGULARITY TOLERANCE
POSITIONAL TOLERANCE	COINCIDENCE TOLERANCE
LOCATION	FORM TOLERANCE
FINISH	TEXTURE TOLERANCE
LOCATION	TEXTURE TOLERANCE

WEIGHT (RAW)	(± X) kg	C. MANAGER'S MANAGER	
WEIGHT (CALC.)	(± X) kg		
S. ENGINEER	MANAGER	MODEL	SCALE FREE
CHECKED	SPECIALIST	QTY	MATERIAL
DESIGNED	DRAWN	DATE: Y.M.D NAME	OUTLINE
		18 MAY. 2010	L48N5AF3TOAAAN OUTLINE
YANMAR		CODE	B2-14120-0290 A1
POWER SYSTEM OPERATIONS DIV., YANMAR CO., LTD.			

# LABELS

G2-14720-2010

No.	LABELS	PLACE	CONTENTS
1	LABEL, ENGINE NAME	COVER, CYLINDER	-----
2	LABEL, YANMAR MARK (A	FUEL OIL TANK	THE FOLLOWING DETAILS
3	LABEL, CAUTION	FUEL OIL TANK	//
4	LABEL, HOW TO START	FUEL OIL TANK	//
5	LABEL, YANMAR MARK (B	CASE, COOLING FAN	//
6	LABEL, DIESEL	RECOIL STARTER	//
7	LABEL, OPERATION	REGULATOR HANDLE	//
8	LABEL, HOT SURFACE	(LOOSE PART)	//

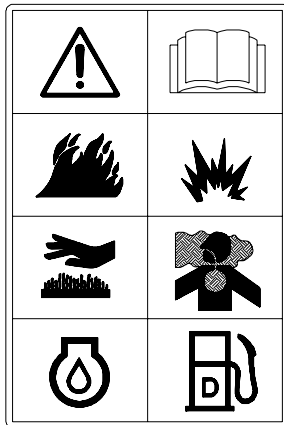
② LABEL, YANMAR MARK (A



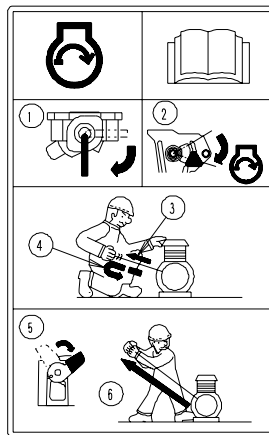
⑤ LABEL, YANMAR MARK (B



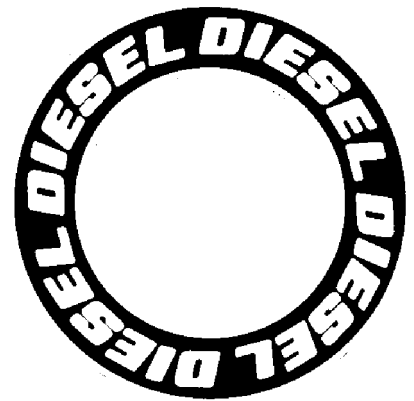
③ LABEL, CAUTION



④ LABEL, HOW TO START



⑥ LABEL, DIESEL



⑦ LABEL, OPERATION



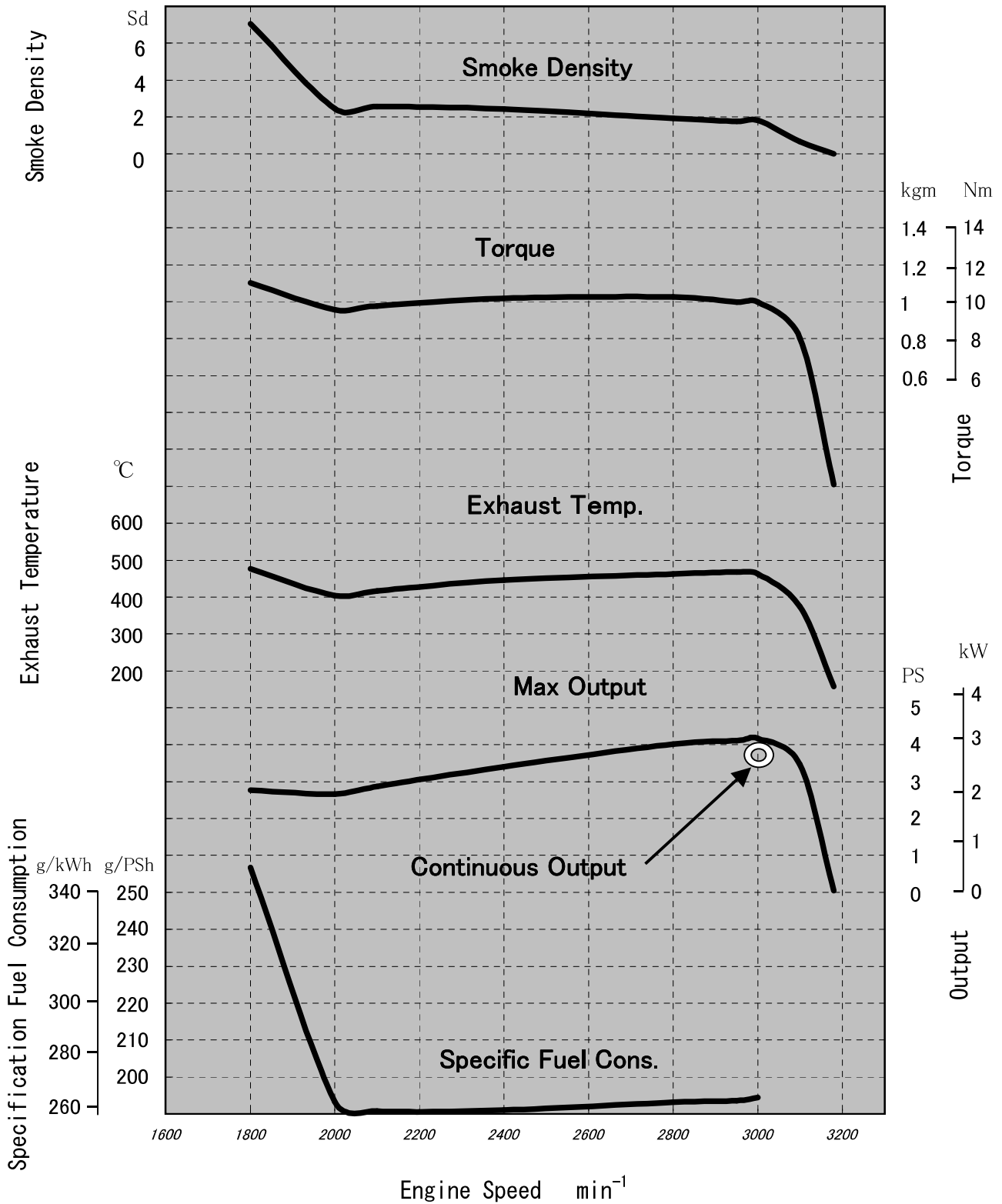
⑧ LABEL, HOT SURFACE(LOOSE PART)



# PERFORMANCE CURVES

G2-14120-1020	M1
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## L 4 8 N 5



Notes : This performance is under the following condition.  
 After 30hrs. initial running  
 Atmospheric conditions : Temperature 298K (25°C)  
 Pressure 100kPa (750mmHg)  
 Humidity 30%