YANMAR CO.,LTD.

	Solution No.				
Rev. No.	M1				
Drawing No.	G2-14120-0260				
Revision	(01/DEC/09)Registered by YDSLU-09167.				

M1(26/APR/10)The specifications are changed as follows.
(1)According to the EC Machinery Directive, we changed label.
(YDSLU-10011)

Messrs : EP BARRUS

Engine Specification

Model name	L48N6CF1F7AA （Design model ID : 714121A） （Production model ID : 114127G）
Type	4-stroke, vertical-cylinder, air-cooled diesel
Use for	Vibrating plate , Hand start
Dev. Request No.	YI DEVREQ-157-2007

01 DEC. 2009

YANMAR CO.,LTD.

Sending to	
YI Engineering	1

Rev. No.	M1				
Drawing No.			G2-14120-0260		

Contents

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B2-14120-0260		Outline	1	
~~① G2-14120-2030~~ G2-14720-2030		Labels	1	
G2-14120-1010		Performance curve	1	
C2-14110-0010		Tools	1	
————		Wiring	–––	

Remarks :

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

Power System Operations Division Engine Development Dept.
Application Engineering Dept.

Manager	Checked		Drawn
	T. Sasaki	Yamachi	R. Murakami

H. Ogawa

Rev. No.	M1				
Drawing No.			G2-14120-0260		

1. Engine Specification

Model name			L48N6CF1F7AA
Combustion system			Direct injection
No. of cylinder-bore × stroke		mm	1-ϕ70×57
Displacement		liter	0.219
Output	Continuous	kW/min^{-1}	* 3.1 (4.2PS, 4.1HP) / 3600
	Maximum	kW/min^{-1}	* 3.5 (4.7PS, 4.6HP) / 3600
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^{-1})			NA
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℃ (298K)
- Relative humidity : 30%

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

2. Engine Performance

Speed at no load	Minimum	min^{-1}	1200 or more	PTO Shaft (Without minimum idling speed adjust bolt. Adjustable figure by your end.)
	Maximum		3800±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^{-1}	30 or less	
Permissible angle of inclination	Continuous	deg.	20	
	Intermittent		30	Operation of up to 3 minutes
Lowest start temperature	Re-coil starting	℃	0	Without starting aid agent
	Electric starting		-10	
Noise level at continuous rating output (Mean of four direction)		dB(A)	91.5	at continuous output distance : 1m height : 0.5m with STD silencer on

Rev. No.	M1				
Drawing No.			G2-14120-0260		

3. Details of specifications Base model : L48N6CA1T1AA

System	Part Name	STD Spec.	Specification	Remarks
Fuel System	Pump, Fuel Injection	714139-51200	←	4NS, Left40° (Made in Yanmar FIE)
	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	114399-77560	NA	
	Air heater	NA	←	
	Dynamo Assy.	114399-78280	NA	
PTO & Flange	Crankcase cover	114299-01450	←	STD (D)
	Crank shaft	11429C-21050	←	(Fm-a-9)E-D type
	Key, Crank shaft	160642-21150	←	For E-D type, 4.7X30
Intake and Exhaust System	Air cleaner	①~~114250-12570~~ 114120-12550	←	(Gm-a-5)STD ① (W/O Label)
	Pre cleaner	NA	←	
	Intake bend	114771-12010	←	(Gm-b-4)STD
	Muffler	11429C-13500	114770-13551	(Gm-c-10)Low noise type
Starting System	Recoil starter Assy.	114299-76050	←	(Hm-a-3)STD, Recoil angle:R1
	Plunger, Starting	114299-76600	←	
	Starting motor	114362-77011	NA	W/ cover (114399-01700)
Speed Control System	Governor lever Assy.	114295-61170	←	2 lever type
	Control device Assy.	714210-66100	114210-66550	(Im-a-3)Friction plate type, ① W/ Pictorial label
	Spring, Regulator	114770-66010	←	SP : 1-B , Paint mark : NA
	Fuel limiter Assy.	114211-66600	←	For 3000/3600min^{-1}
Decomp. System	Remote decomp.	NA	←	
	Bonnet	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.	①~~114351-77500~~ 114220-77500	NA	
	Connector	NA	←	
	Deflector	114299-13800	←	
	Orifice	NA	←	
	Tools	114299-92590	←	
	Operation manual	0ALN0-G00100	←	English
	Label, Hot surface	① 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

GEN. TOL. 一般公差	OUTSIDE	INSIDE
DRAFT ANG. 鋳抜テーパ勾配	2/100	3/100
	3/100	

CAST WALL THICK 鋳肉厚差	NOMINAL DIM.		5 TO	10 TO	18 TO	30 TO
	DIVISION	5 MAX	= 10	= 18	= 30	= 50
	SANDMOLD	±1.0	±1.5	±2.0	±3.0	±3.5
	SHELL	±0.8	±1.0	±1.5	±2.0	±2.0

L.-CAST 鋳造寸法	120 MAX	120 TO = 250	250 TO = 400	400 TO = 800	800 TO = 1600	1600 TO = 3150
	±1.5	±2.0	±3.0	±4.0	±5.0	±7.0
	±1.0	±1.5	±2.0	±3.0	±4.0	±6.0

L.-CHIP 削り						
	0.5 TO = 6	±0.1	400 TO =1000	±0.8		
	6 TO = 30	±0.2	1000 TO =2000	±1.2		
	30 TO =120	±0.3	2000 TO =4000	±2.0		
	120 TO =400	±0.5				

ANG.-CHIP 角度削り		
	10 MAX	±1DEG.
	10 TO = 50	±30MIN.
	50 TO =120	±20MIN.
	120 TO =400	±10MIN.
	400 MIN	± 5MIN.

FIGURE DIMENSION

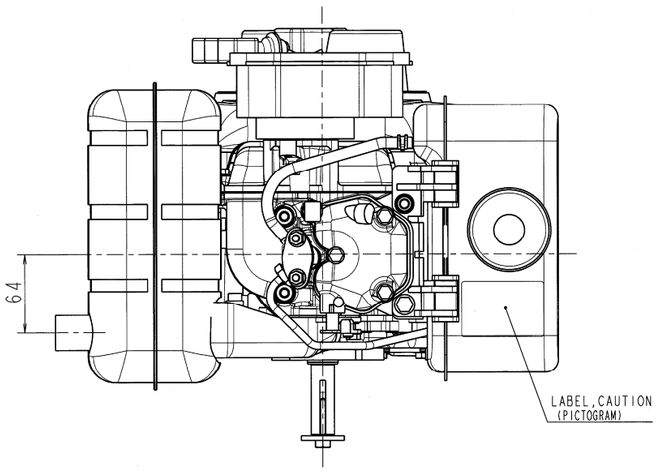
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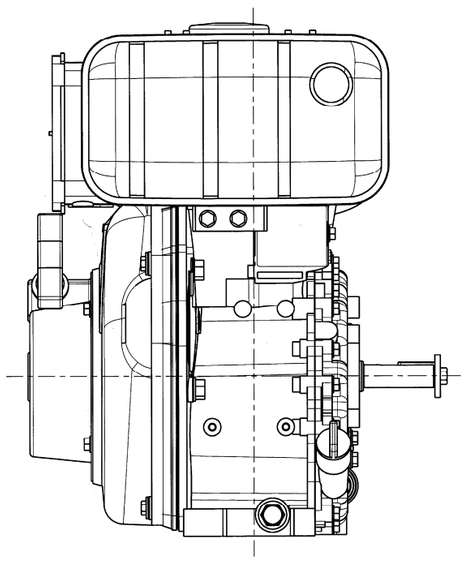
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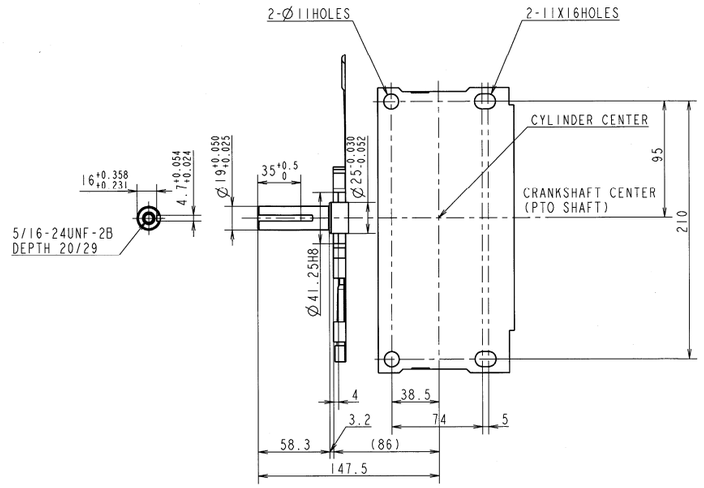
3RD ANGLE PROJECTION

CAREER

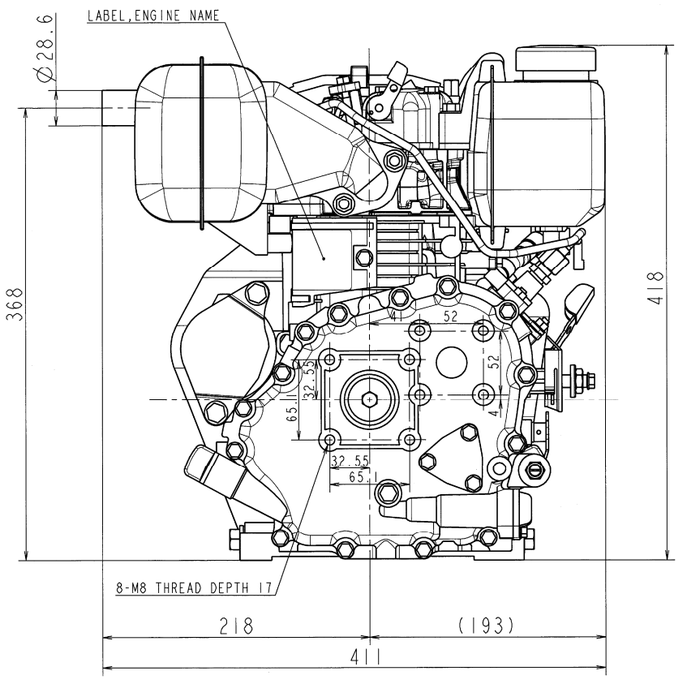
MI(26/APR/10)ACCORDING TO THE EC MACHINERY DIRECTIVE, WE CHANGED LABEL. (YDSLU-10011)(YDSLB-10044)

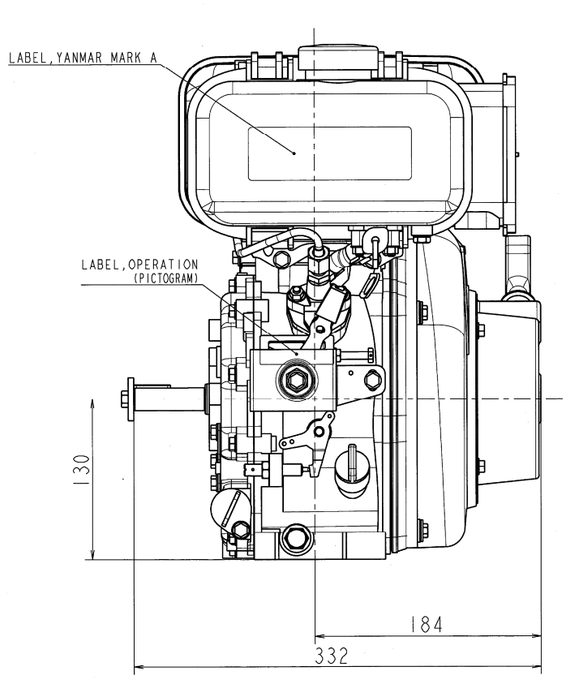


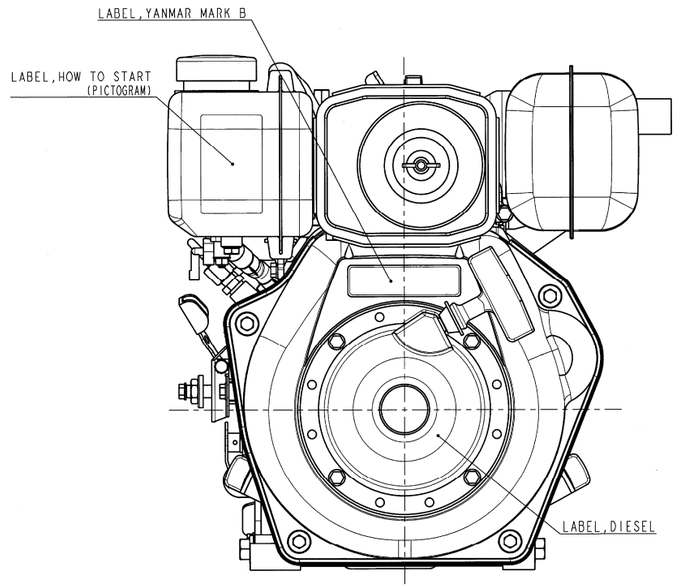


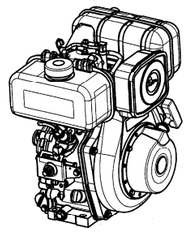


ENGINE MOUNTING PLATE AND PTO SHAFT SEEN THROUGH FROM THE TOP OF THIS ENGINE









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-0001J, "Restrictions of use for Environmentally Hazardous Substances".

本部品の環境有害物質の使用制限は、YIS V-0001J「環境有害物質の使用制限」の規定を満足すること。

3D-CAD

FORM	NOTICE	
	GEOMETRICAL TOLERANCE	
	KIND OF TOLERANCE	SYMBOL
	STRAIGHTNESS TOLERANCE	—
	CIRCULARITY TOLERANCE	○
	PROFILE OF LINE TOLERANCE	⌒
	FLATNESS TOLERANCE	▱
	CYLINDRICITY TOLERANCE	⌭
	PROFILE TOLERANCE OF SURFACE	⌓
ORIENTATION	PARALLELISM TOLERANCE	//
	PERPENDICULARITY TOLERANCE	⊥
	ANGULARITY TOLERANCE	∠
LOCATION	POSITIONAL TOLERANCE	⌖
	COAXILITY OR CONCENTRICITY TOLERANCE	◎
	SYMMETRY TOLERANCE	⌯
RUN-OUT	CIRCULAR RUN-OUT TOLERANCE	↗
	TOTAL RUN-OUT TOLERANCE	⌰

	C.MANAGER	S.MANAGER
小形工機営業部		

| WEIGHT (RAW) | kg (± %) | | | | | |

LABELS

G2-14720-2030

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)	〃

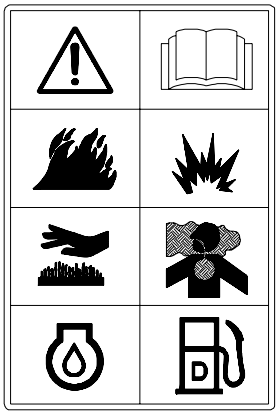
② LABEL, YANMAR MARK (A



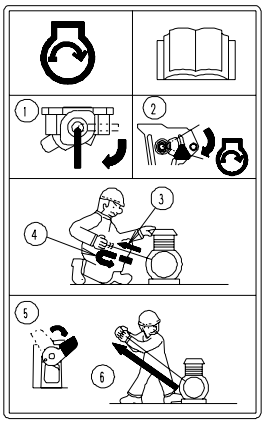
⑤ LABEL, YANMAR MARK (B



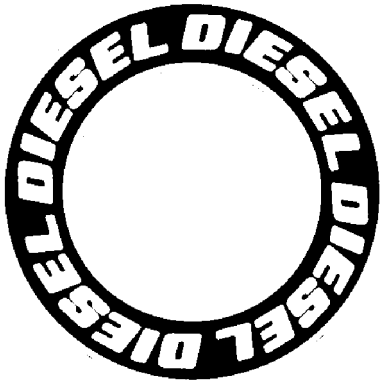
③ LABEL, CAUTION



④ LABEL, HOW TO START



⑥ LABEL, DIESEL



⑦ LABEL, OPERATION



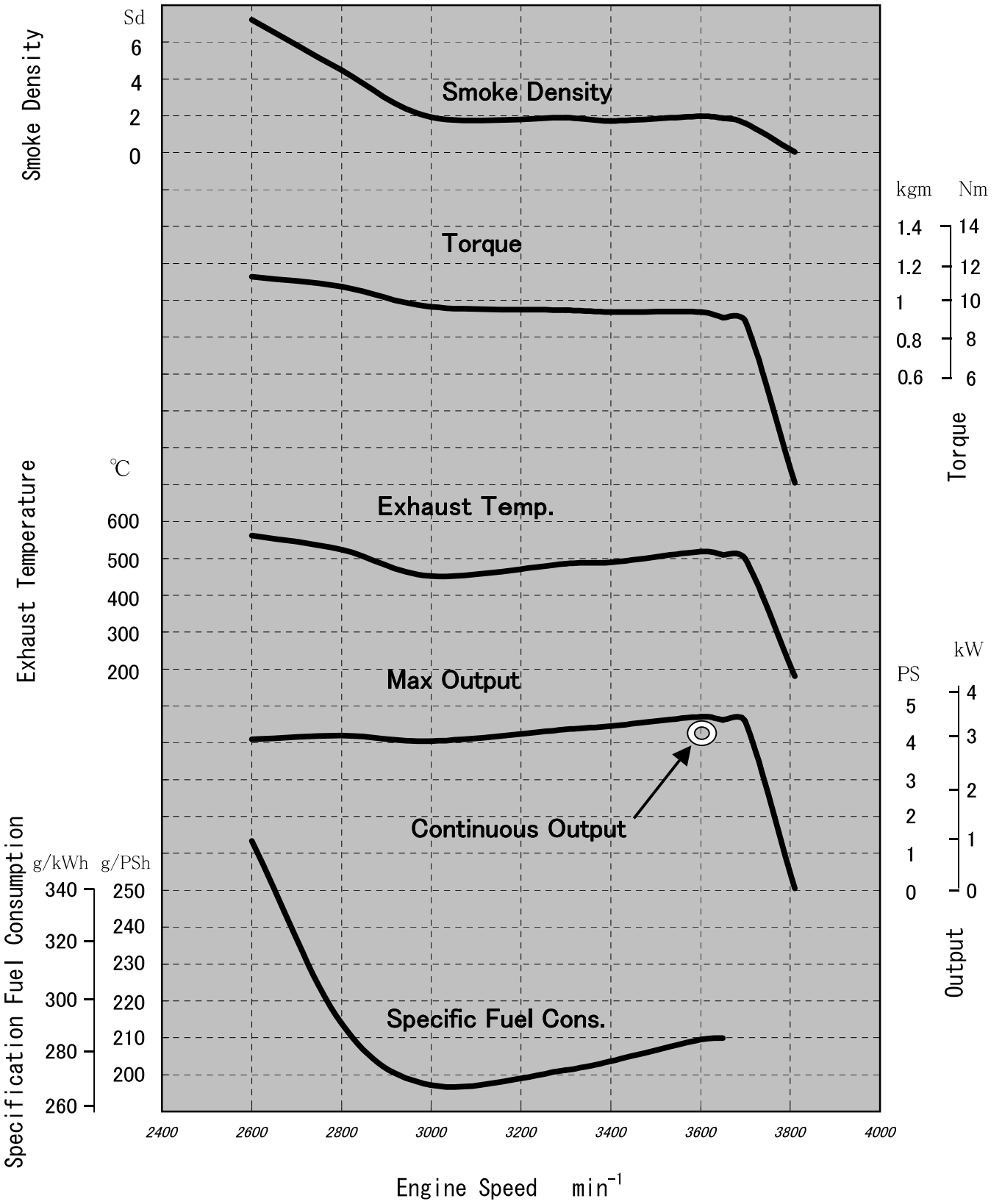
⑧ LABEL, HOT SURFACE(LOOSE PART)



PERFORMANCE CURVES

G2-14120-1010	M1

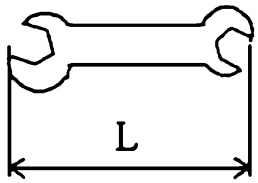
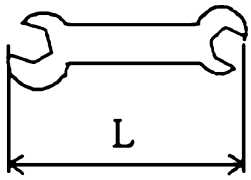
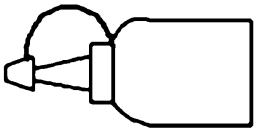
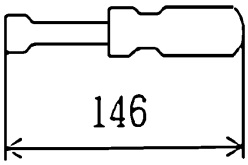
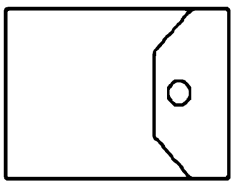
L 4 8 N 6



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

C2-14110-0010

標準工具　　ＴＯＯＬＳ

区分 ITEM		名称 DESCRIPTION	部品コード及び略図 PART NUMBER	材質 MATERIAL	個数 Q'ty	備考 NOTES
工具	1	両口スパナ WRENCH １４×１７	114299-92720 	UNI EN 10083/1 C40	1	L=163
	2	両口スパナ WRENCH １０×１２	114299-92710 	UNI EN 10083/1 C40	1	L=128
	3	油さし FEEDER,OIL	114299-92740 	合成樹脂 POLYETHYRENE	1	
	4	＋ーねじまわし SCREWDRIVER	114299-92730 	UNI EN 10083/1 C40 & 合成樹脂 PVC	1	
	5	工具袋 BAG,TOOL	114299-92600 	黒色ビニール PVC	1	