Menu

YANMAR CO.,LTD.

	Solution No.				
Rev. No.					
Drawing No.	G2-14320-0710				
Revision	(24/SEP/09)Registered by YDSLU-09132.				

Messrs: EP BARRUS

Engine Specification

Model name	L100N5CA1F1AAS5 （Design model ID : 714322W） （Production model ID : 114323Y）
Type	4-stroke, vertical-cylinder, air-cooled diesel
Use for	Generator , Starting motor
Dev. Request No.	YI DEVREQ-048-2009

24 SEP. 2009

YANMAR CO.,LTD.

Sending to	
YI Engineering	1

Rev. No.					
Drawing No.			G2-14320-0710		

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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

H. ogawa

Rev. No.					
Drawing No.			G2-14320-0710		

1. Engine Specification

Model name			L100N5CA1F1AAS5
Combustion system			Direct injection
No. of cylinder-bore × stroke		mm	1-ϕ86×75
Displacement		liter	0.435
Output	Continuous	kW/min^{-1}	* 5.7 (7.7PS, 7.6HP) / 3000
	Maximum	kW/min^{-1}	* 6.5 (8.8PS, 8.7HP) / 3000
PTO Shaft	PTO position		Crankshaft
	Direction of rotation		Counterclockwise viewed from PTO side
Injection Timing (FIC-air)		deg.	12.0±1.0 bTDC
Fuel	Oil selection		Diesel fuel
	Tank capacity	liter	5.4
Lubricating system			Forced lubricating system
Lubricating	Oil capacity	liter	1.6 (effective, 0.6)
	Oil selection		SAE 10W30, API grade CD or higher
Cooling system			Forced air cooling by flywheel fan
Starting system			Starter motor with recoil starter
Governor			All speed type, mechanical
Balancer shaft			Single balancer shaft
Air cleaner			Dry type paper element filter
Exhaust silencer			Expansion silencer with cover
Generator (at 3600min^{-1})			Flywheel dynamo : 12V-15A
Dimensions		mm	Indication in outline drawing
Dry weight		kg	Approx. 53.5

* 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		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^{-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 five direction)		dB(A)	92.5	at continuous output distance : 1m height : 0.5m with STD silencer on

Rev. No.					
Drawing No.			G2-14320-0710		

3. Details of specifications Base model : L100N6CA1T1AA

System	Part Name	STD Spec.	Specification	Remarks
Fuel System	Pump, Fuel Injection	714339-51200	714339-51210	1NX, Left40° (Made in Yanmar FIE), 3000min^{-1}
	Nozzle, Fuel Injection	714339-53200	←	Made in Yanmar FIE
	Fuel oil tank	114310-55010	←	(Bm-a-1) 5.4L, Color:Yanmar Black
	Tank stay (A	114210-55210	←	
	Tank stay (B	114310-55230	←	
	Fuel oil filter	NA	←	
	Fuel oil pipe, Return	114339-59300	←	For Yanmar FIE
	Fuel oil pipe, Pump	114780-59010	←	
	Fuel injection pipe	114310-59800	←	
	Cut-valve, Fuel oil	NA	←	
Lubricating System	Cap Assy., Lo supply	114699-01760	←	Cap assy. X2
	Cover, Lub. Oil pump	114299-32070	←	
	Filter, Lub. Oil	114299-35110	←	
	Oil pressure switch	NA	121252-39450	(Cm-a-3)0.5kg/cm^2
Cooling System	Flywheel	114699-21600	←	(Dm-a-3)STD (DE type)
	Engine cover	114310-45300	←	(Dm-c-1)Full cover type
	Case, Cooling Fan	114310-45100	←	(Dm-b-3)STD, Color:Yanmar Italian gray
Electric System	Electric Regulator & Harness	114399-77560	←	For 12V-15A dynamo
	Air heater	NA	←	
	Dynamo Assy.	114399-78280	←	Output : 12V-15A
PTO & Flange	Crankcase cover	114310-01450	←	STD
	Crank shaft	114310-21030	←	(Fm-a-1)E-D type
	Key, Crank shaft	160842-21150	←	For E-D type, 6.3X50
Intake and Exhaust System	Air cleaner	114310-12511	←	(Gm-a-1)STD
	Pre cleaner	NA	←	
	Intake bend	NA	←	
	Muffler	11431C-13550	←	(Gm-c-1)STD
Starting System	Recoil starter Assy.	114699-76073	←	(Hm-a-1)STD, Recoil angle:R5
	Plunger, Starting	NA	←	
	Starting motor	114362-77011	←	(Hm-b-1)STD, 12V-0.8kW
Speed Control System	Governor lever Assy.	114311-61500	←	2 lever type
	Control device Assy.	714210-66100	114210-66550	(Im-a-3)Friction plate type
	Spring, Regulator	114320-66010	←	SP : 0-C , Paint mark : Red
	Fuel limiter Assy.	114320-66600	114211-66600	For 3000/3600min^{-1}
Decomp. System	Remote decomp.	NA	←	
	Bonnet	114310-11950	←	(Lm-a-1)STD
Others	Cylinder block	114310-01020	←	
	Cam shaft	114320-14010	←	
	Balancer shaft	114310-28010	←	
	Flange	NA	←	
	Cover, Tiller	NA	←	
Standard Loose Parts	Key switch panel Assy.	114351-77500	←	(Hm-c-1)
	Connector	NA	←	
	Deflector	114699-13800	←	
	Orifice	NA	←	
	Tools	114299-92590	←	
	Operation manual	0ALN0-G00100	←	English
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	DRAFT ANG. 鋳造抜テーパ	OUTSIDE	INSIDE	CAST WALL THICK 鋳造肉厚	NOMINAL DIM.		5 TO	10 TO	18 TO	30 TO
		2/100	3/100		DIVISION	5 MAX	: 10	: 18	: 30	: 50
		3/100			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	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.

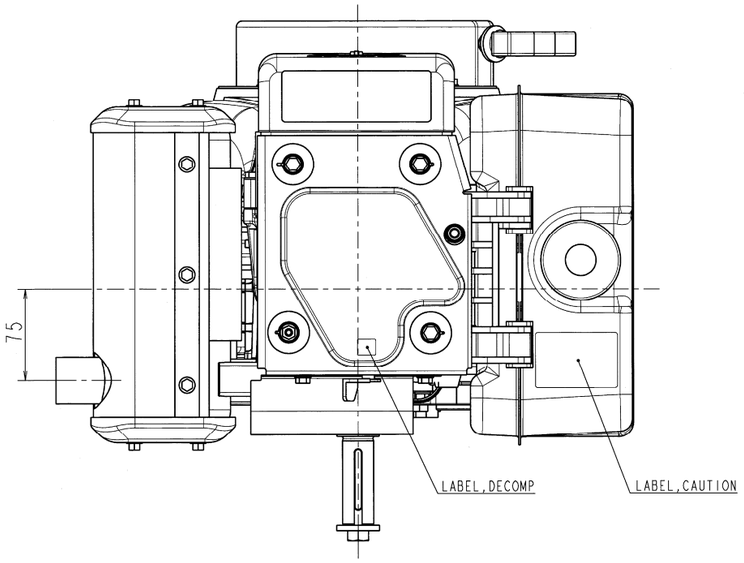
3RD ANGLE PROJECTION

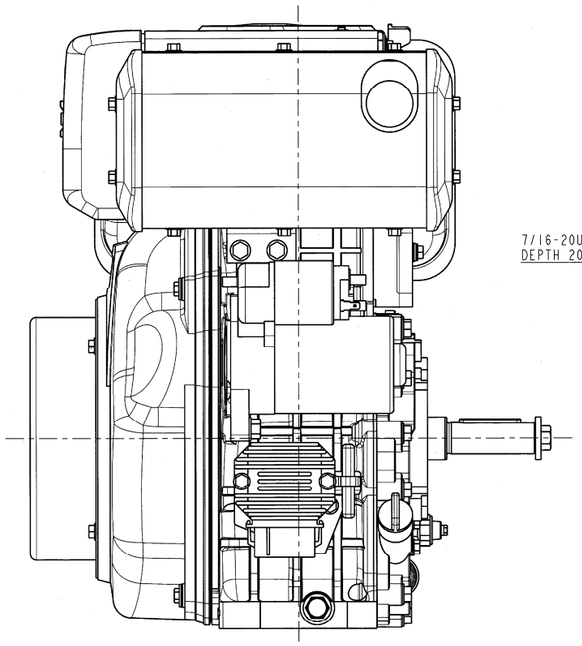
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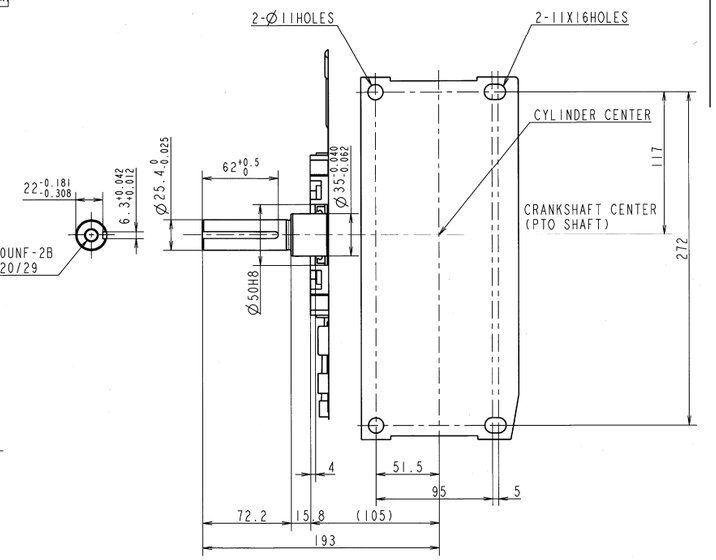
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○ AND ⌭ : RADIAL

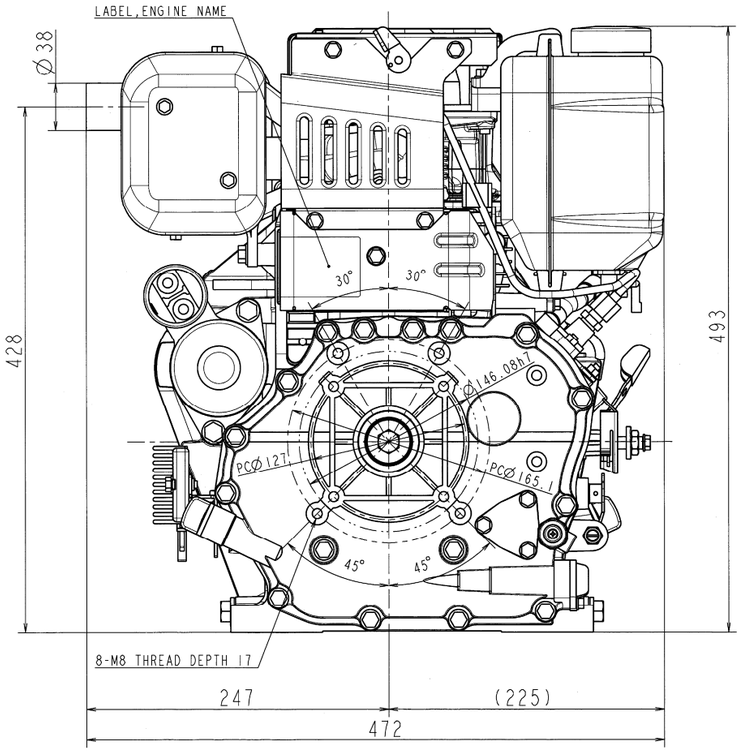
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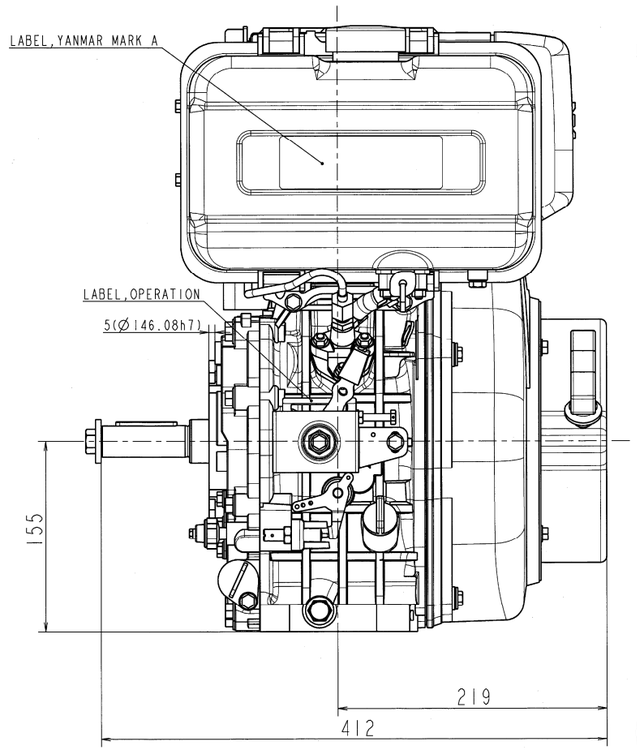


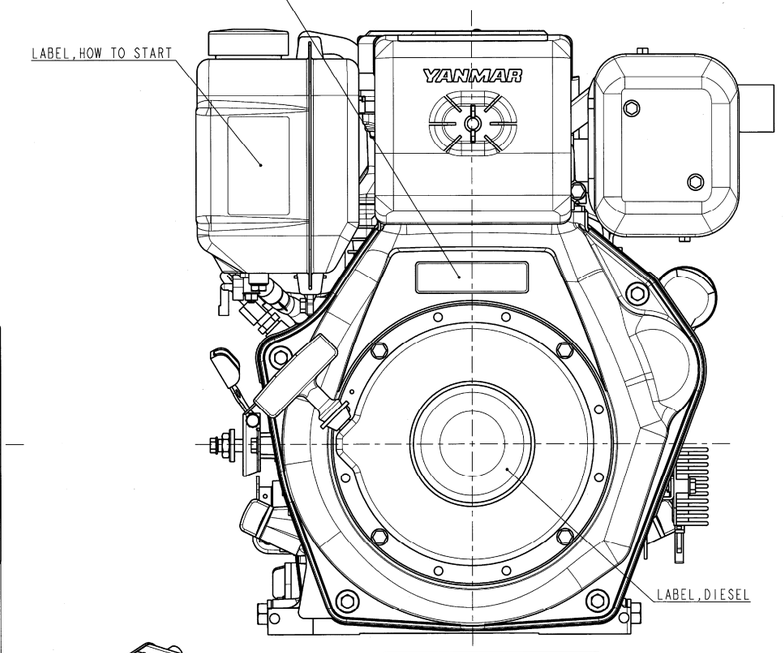


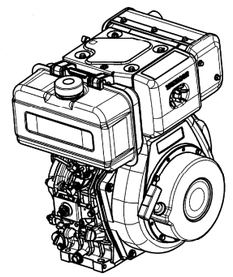


ENGINE MOUNTING PLATE AND PTO SHAFT SEEN THROUGH FROM THE TOP OF THIS ENGINE









WEIGHT (RAW)	kg (± %)	小谷工場発図	C.MANAGER	S.MANAGER
WEIGHT (CALC.)	kg (± %)			
S.ENGINEER	MANAGER Yamazaki	MODEL	SCALE	FREE
CHECKED H.Sakaguchi	SPECIALIST	QTY	MATERIAL	
DESIGNED H.Sakaguchi	DRAWN H. Ogawa	DATE: Y.M.D 24 SEP. 2009	NAME	OUTLINE

L100N5CAIFIAAS5 OUTLINE

YANMAR POWER SYSTEM OPERATIONS DIV., YANMAR CO., LTD.

CODE B2-14320-0710

DRAW SIZE A1

3D-CAD

NOTICE

GEOMETRICAL TOLERANCE		
FORM	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	⌖
	COAXIALITY OR CONCENTRICITY TOLERANCE	◎
	SYMMETRY TOLERANCE	⌯
RUN-OUT	CIRCULAR RUN-OUT TOLERANCE	↗
	TOTAL RUN-OUT TOLERANCE	⌰

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

本部への納入部品の使用禁止物質については、YIS V-0001(環境有害物質の使用制限)の規定に適合すること。

LABELS

G2-14220-2030

No.	L A B E L S	P L A C E	C O N T E N T S
1	LABEL, ENGINE NAME	COVER (CYLINDER	————————
2	LABEL, YANMAR MARK (A	F.O. TANK	THE FOLLOWING DETAILS
3	LABEL, CAUTION	F.O. TANK	〃
4	LABEL, HOW TO START	F.O. TANK	〃
5	LABEL, YANMAR MARK (B	FANCASE, COOLING	〃
6	LABEL, DIESEL	RECOIL STARTER	〃
7	LABEL, DECOMP	COVER,TOP	〃
8	LABEL, OPERATION	SPEED CONTROL DEVICE	〃

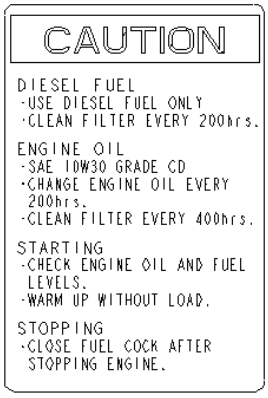
②LABEL, YANMAR MARK (A



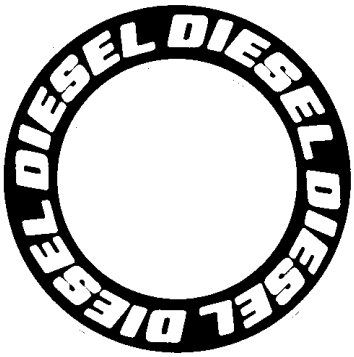
⑤LABEL, YANMAR MARK (B



③LABEL, CAUTION



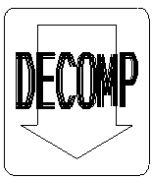
⑥LABEL, DIESEL



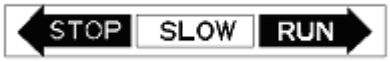
④LABEL, HOW TO START



⑦LABEL, DECOMP



⑧LABEL, OPERATION

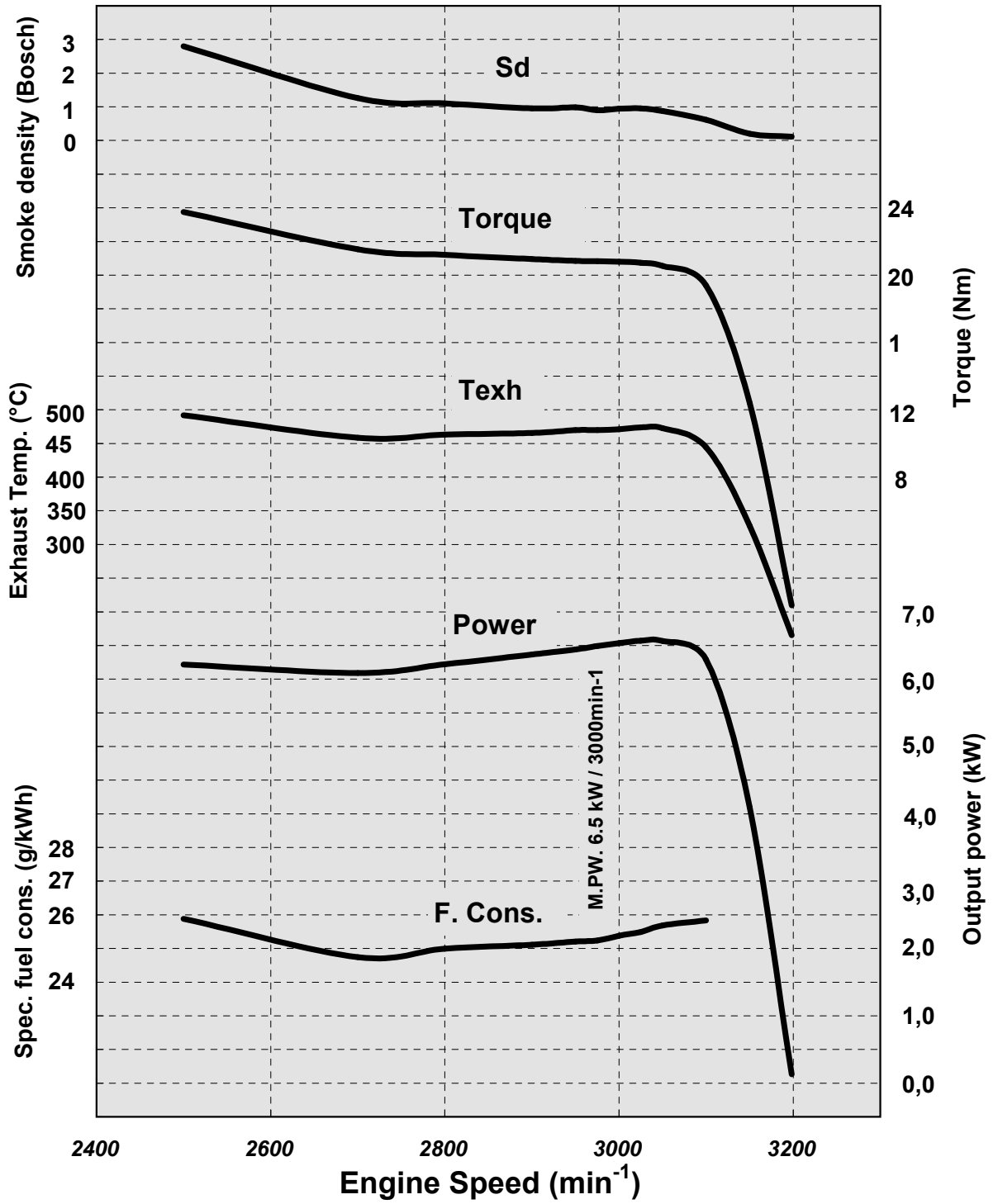


Rev.1(Oct. 12th, 2006) Updated with new test datas.

G2-14320-1020

L100N5 Model – Full Load Graph

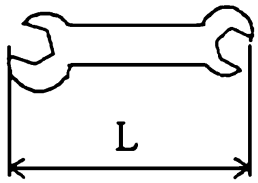
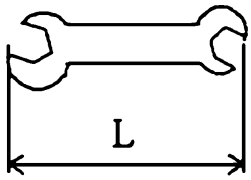
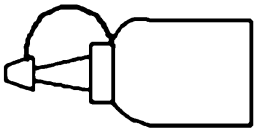
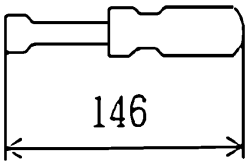
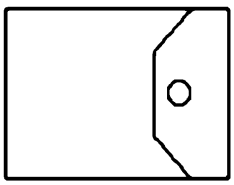
(for reference only)



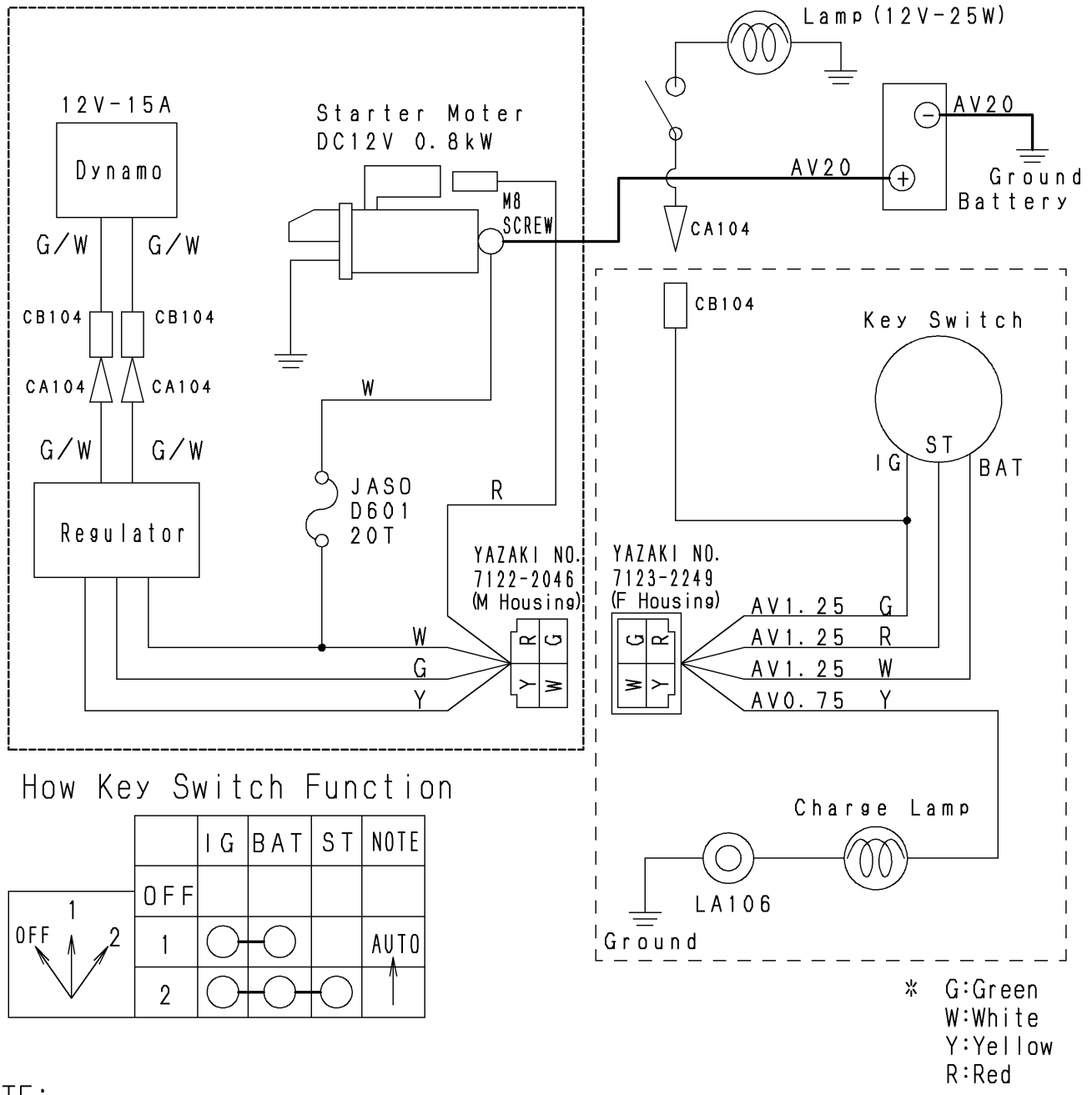
Notes : This performance is under the following condition.
After 30hrs. initial running
Atmospheric conditions : Temperature 298K(25℃)
Pressure 100kPa(750mmHg)
Humidity 30%

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	

E2-14110-0010



How Key Switch Function

NOTE:

1. Be sure to ground both engine and engine-driven machine
2. Section enclosed with dotted square is pre-wired at Yanmar factory.
   Section enclosed with alternate long and short dash line is the section included in engine pakcing.
   For this section, purchaser is expected to:
   1) connect 4P coupler.
   2) secure charge lamp ground (LA106) with bolt (M6)
   3) Receptacle of pin-type terminal (CB104) outputs up to 12V/25W.
3. Locally procure 1 battery (24Ah-36Ah)
   2 battery cable (AV20)
   3 lamp (12V-25W), switch and cable (AV1.25)