

TRANSMITTAL OF MITSUBISHI HIGH SPEED DIESEL ENGINE DOCUMENT

ORDERED BY

CUSTOMER

	PART NAME	PART No.	FOR APPR.		FOR APPR.						ENGINE TYPE			
			N	D	N	D	N	D	N	D	N	D	S6K-DT65SAG	
1	S6K-DT65SAG SPEC.	SPC-S6K-T-347	P	A	P	B						A: First offer		
2	S6K-T ENGINE ASSY	34300-02520	P	A								B: Addition of China Emission Regulation Label (Export Only Label)		
3	S6K-DT65SAG ENG ASSY	34300-02521			P	B								
4	ACCESSORIES (WITH ENGINE)		P	A	P	B								
5														
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22											D			
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25											C			
26														
27														
28											B	H. Komatsu T. Hirose Mar. 14. 2016	ref. spec	
29														
30														
31											A	A. Izaka Jun. 30. 09	ref. spec	
32														
33											DATE	APPROVED	CHECKED BY	CC
34											ORDER			
35														

N:NUMBER, D:DATE  
P:PDF



**SPECIFICATIONS**  
Used for 100kVA generator

MITSUBISHI HIGH SPEED DIESEL ENGINE  
△ MODEL MITSUBISHI S6K-DT65SAG

( For GENERATOR OEM, 1500rpm )

APPLICATION  
FOR APPROVAL



PLEASE RETURN AFTER APPROVAL

APPROVED		REMARKS		
DATE · SIGNATURE				
DATE Jun. 30. 2009				
MITSUBISHI HEAVY INDUSTRIES, LTD.				
CHG	DATE	APPROVED	CHECKED	DRAWN
		<i>H. Komatsu</i>	<i>H. Komatsu</i>	T.SHIMIZU
△	Mar. 14. 2016			

P	サ技
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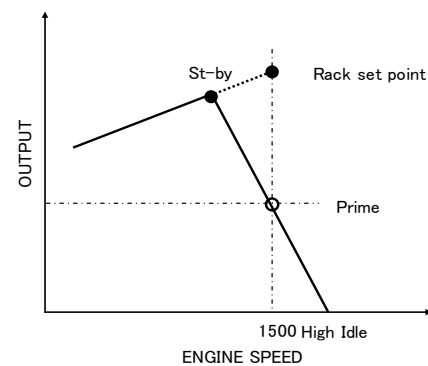
**Revised record**

No.	Date	Items	New	Old	Remarks	
0	Jun. 30. 2009	First offer.				
△	Mar. 14. 2016	Model	S6K-DT65SAG	S6K-T		
		MHI No.	34300-02521 (1/2-CHG0, 2/2-CHG0)	34300-02520	Addition of China emission label(Export only) Removal of oil pressure unit	
		Regulations	National Standard of the People's Republic of China GB20891-2014 Export Only engine family; G3MVXLL0637KTZ (engine type; KTZ-S6K-PA1)	No emission regulated type	Change of spec	
		Rating conditions(Without fan)	ISO 15550	JIS B 8002		
		Fuel consumption			Update of specific fuel consumption value	
		Tolerance	—	±5%		
		Oil consumption	Approx.0.1~0.3% of fuel consumption <Reference value> @ Full load, Rated speed	Within 3.0g/kW-h	Change of notation to latest	
		Flywheel	11-1/2 inch	SAE #11-1/2	Correction	
		Engine attached items&Reference drawings change				
		UNIT,PRESSURE GAGE	—	05202-50100	Stop production of supplier	
		UNIT,THERMOMETER	MD366-869	05204-50300	Interchangeable	
STARTER	32B66-12301	32B66-12300				

# 1. Principal Particulars of Diesel Engine

## General Specification

Standard	All items, unless otherwise specified, are in accordance with JIS and maker's standards
Model	Mitsubishi S6K-T
△	S6K-DT65SAG
△	MHI No. 34300-02521 (1/2-CHG0, 2/2-CHG0)
Application	Generator
△ Regulations	National Standard of the People's Republic of China GB20891-2014 Export Only engine family; G3MVXLL0637KTZ (engine type; KTZ-S6K-PA1)
Type	4 cycle water-cooled, vertical overhead valve, cylinder in line, direct injection type
Number of cylinders	6
Bore × Stroke	102mm × 130mm
Piston displacement	6.373 liters
Compression ratio	17 : 1
Rotation	Anti-Clockwise rotation as viewed from flywheel side
Firing order	1-5-3-6-2-4
Engine weight(Dry)	Approx. 475kg
Dimensions(Length)	Approx. 1163mm
(Width)	Approx. 741mm
(Height)	Approx. 976mm
Inclination(Continuous)	Max.15°
(Temporary)	Max.15°
Fuel	ASTM diesel fuel oil No.2-D(JIS K2204 gas oil specification No.2 or 3)
Lubricating oil	API classification service CF,CF-4 or CH-4 class
Output(Without fan)	Spec.Rating Breaking in around 50hr
Rated speed	1500rpm St-by ; 89.7kW Prime ; 81.6kW
Rack set point	89.7kW/1500rpm (With Fan St-by;88kW) (With Fan Prime,80kW)
Rating tolerance	±5% of nominal
Low Idle	1000±20rpm
High Idle	1583(0/-20)rpm
△ Rating conditions(Without fan)	ISO 15550 Total barometric pressure : 100kPa Air temperature : Relative humidity : 30%
Fuel consumption	230g/kW-h at Prime output and standard air conditions(Without fan)
△	
△ Oil consumption	Approx.0.1~0.3% of fuel consumption<Reference value>@ Full load, Rated speed



Fuel injection timing	16°BTDC
Mean effective pressure	1.02MPa{ 10.4kgf/cm <sup>2</sup> } at Prime(Without fan)
Piston speed	6.5m/s at 1500rpm

**Fuel system**

Fuel injection pump	In-Line type
Fuel injection nozzle	Multi-Hole type
Governor	Mechanical centrifugal type
Fuel filter	Filtering paper type
Fuel pump	Yes(Engine attached)

**Lubricating system**

Lubricating system	Forced lubrication by gear pump
Lubricating oil filter	Filtering paper type, full flow
Oil pressure	0.2~0.4MPa{ 2~4kgf/cm <sup>2</sup> } at duty run 0.1MPa{ 1kgf/cm <sup>2</sup> } min. at low idling
Oil capacity	Approx. 20.5 liters (Oil pan high level 19 liters, Oil filter etc.) Approx. 1.5 liters, High ~ Low Approx. 5.2 liters)
Oil dipstick	Standard dipstick
Oil pressure switch	Yes
Oil pressure unit	Yes
Oil cooler	Plate type

**Cooling system**

Cooling system	Forced circulation of fresh water by centrifugal pump with thermostat
Engine water capacity	Approx. 9 liters
Cooling fan	580mm diameter, 7 blades, pusher
Water pump pulley	PCD 150.5mm
Pulley ratio	1.15 ( Crankpulley : Water pump pulley = 173:150.5 )
Fan spacer	60mm thickness
Water temp. switch	Yes
Thermo. Unit	Yes
Thermostat	Open at 71deg.C - full open at 85deg.C

**Electrical system**

Alternator	24V-35A
Voltage regulator	IC type (Built in alternator)
Regulator set voltage	28.5 ± 0.5V
Alternator pulley	PCD 80mm
Starting system	Electric starting
Starter motor	24V-5kW
Air heater	22V,95A
Engine shut off system	Electric solenoid (ETS)

**Intake and Exhaust system**

Air intake	Engine rear side of turbo charger
Exhaust outlet	Engine front side of turbo charger
Induction Resistance	Max 1.96kPa{200mmH <sub>2</sub> O}(Initial stage)
Exhaust Back Pressure	Max 4.0kPa{408mmH <sub>2</sub> O}

**Turbo system**

Manufacturer	Mitsubishi Heavy Industries,Ltd.
Type	TD06H

**<Remarks>**

Engine color	Black(MHI standard color)
△ Flywheel	11-1/2 inch
Flywheel housing	SAE #3

**2. Engine attached items&Reference drawings**

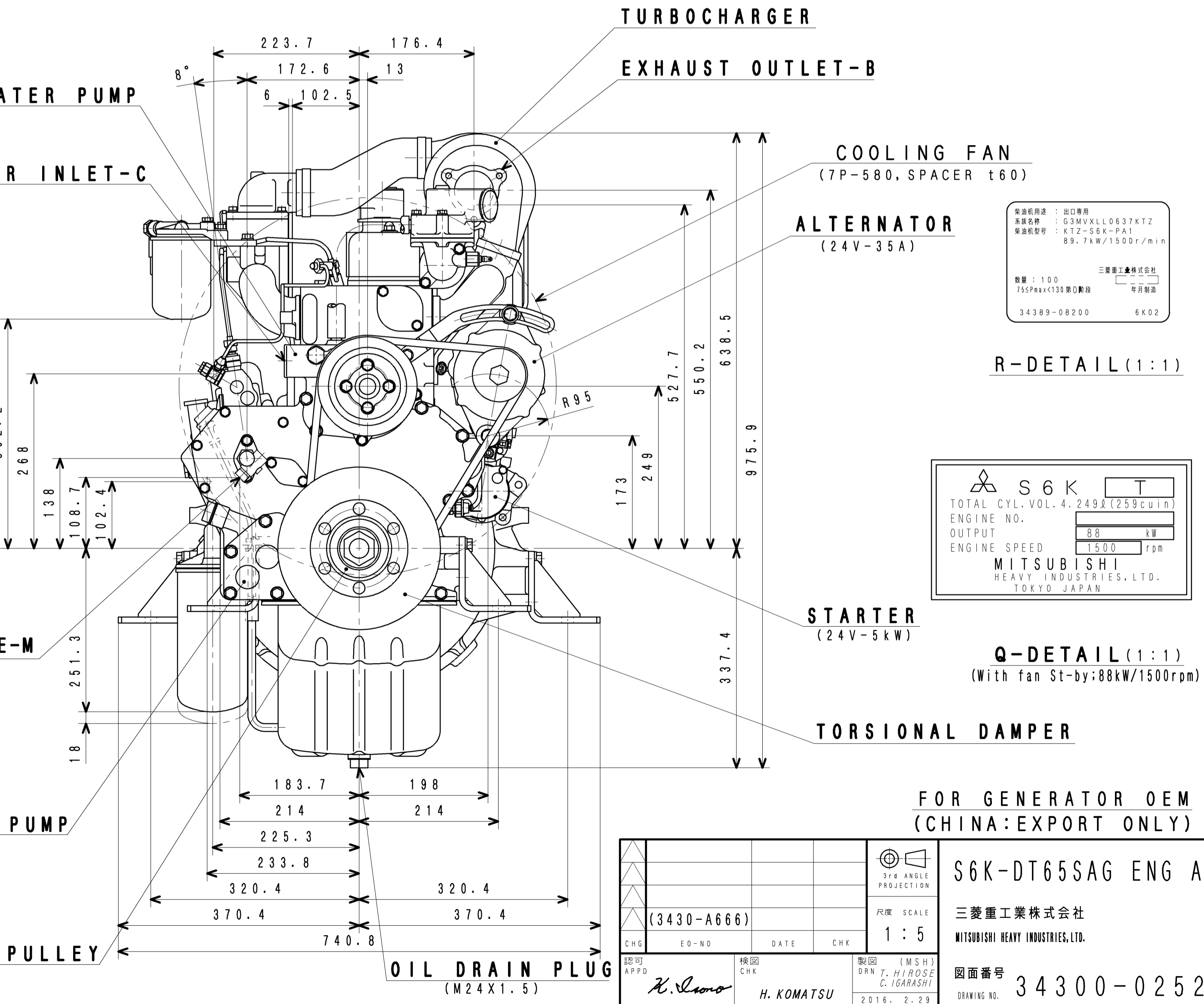
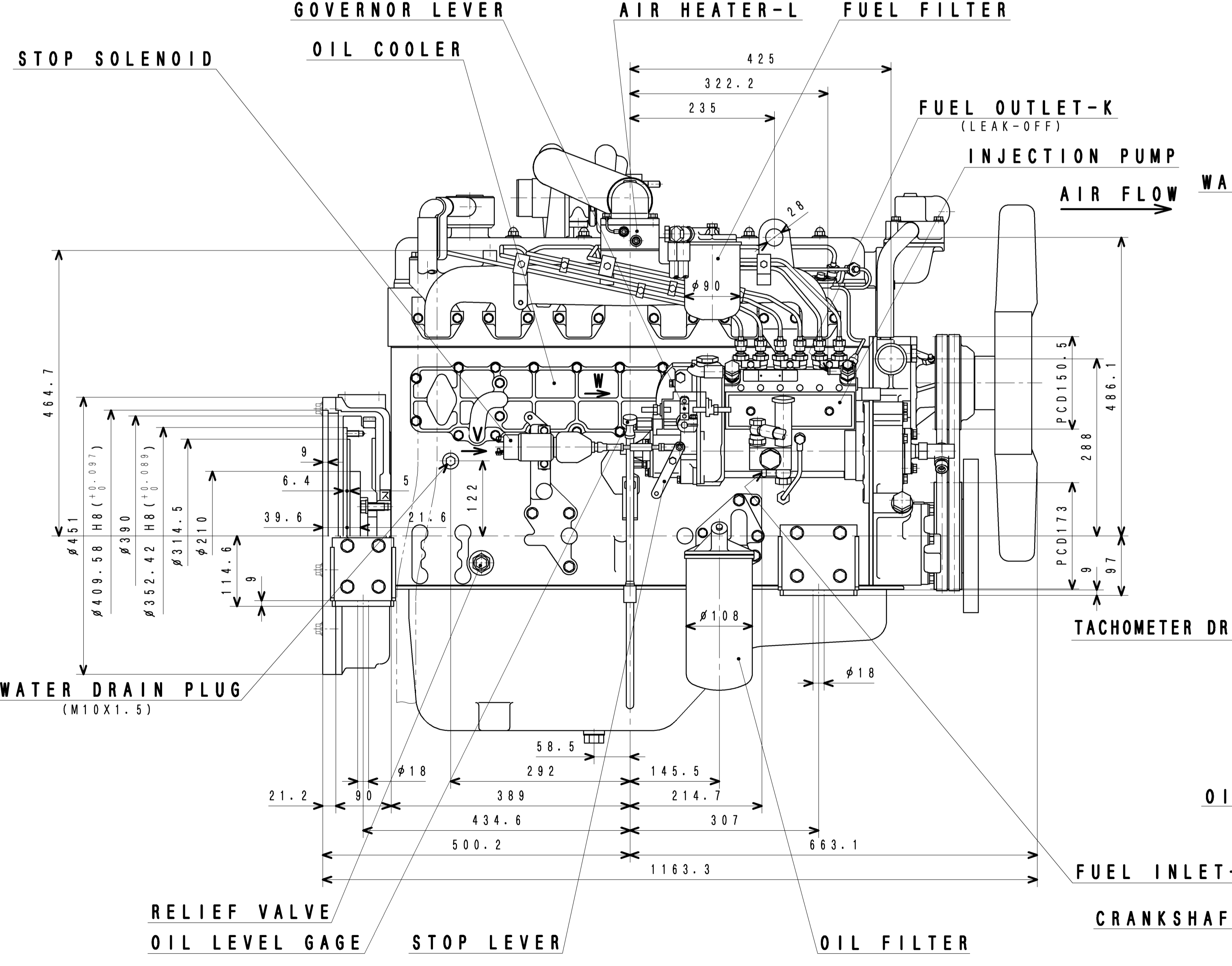
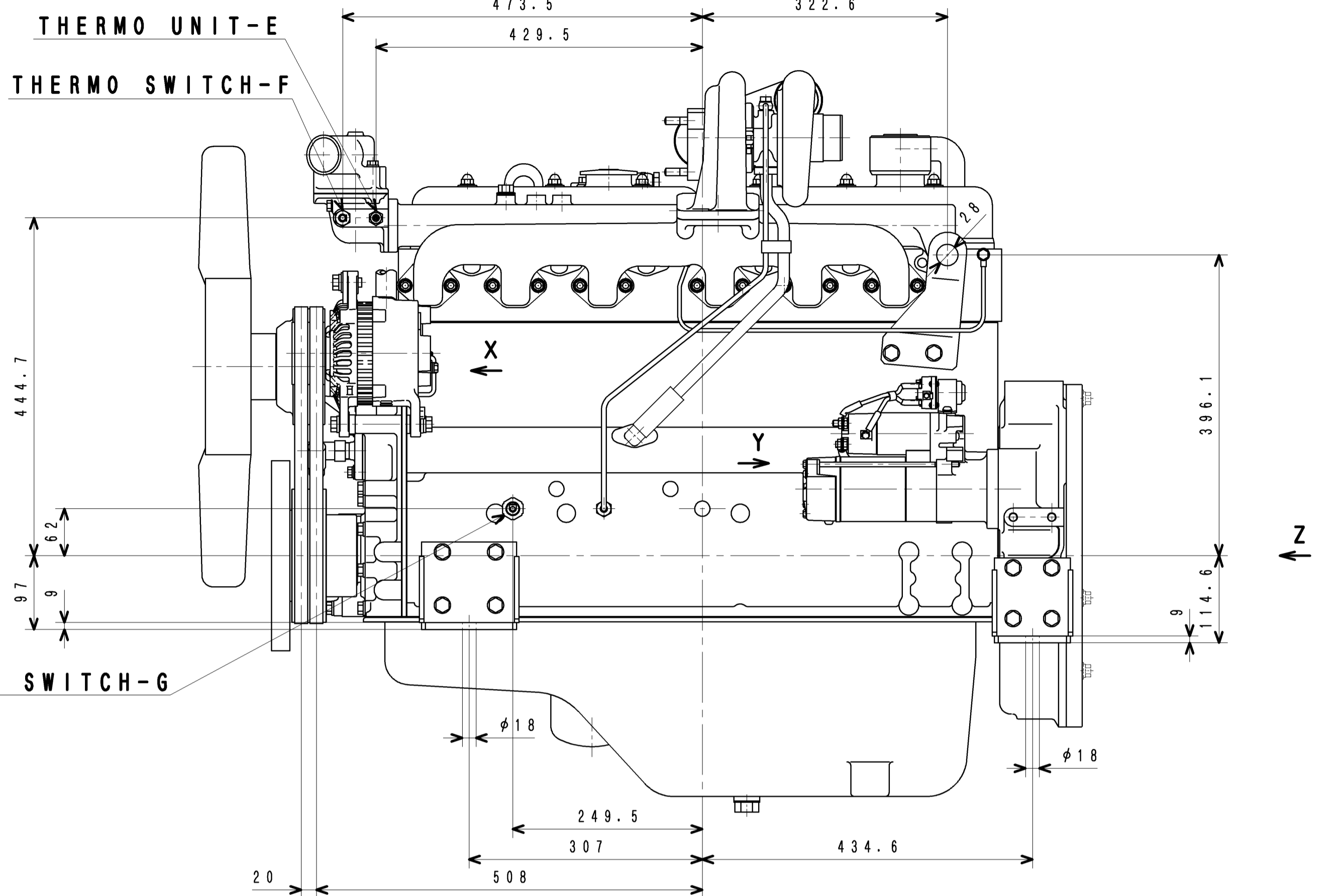
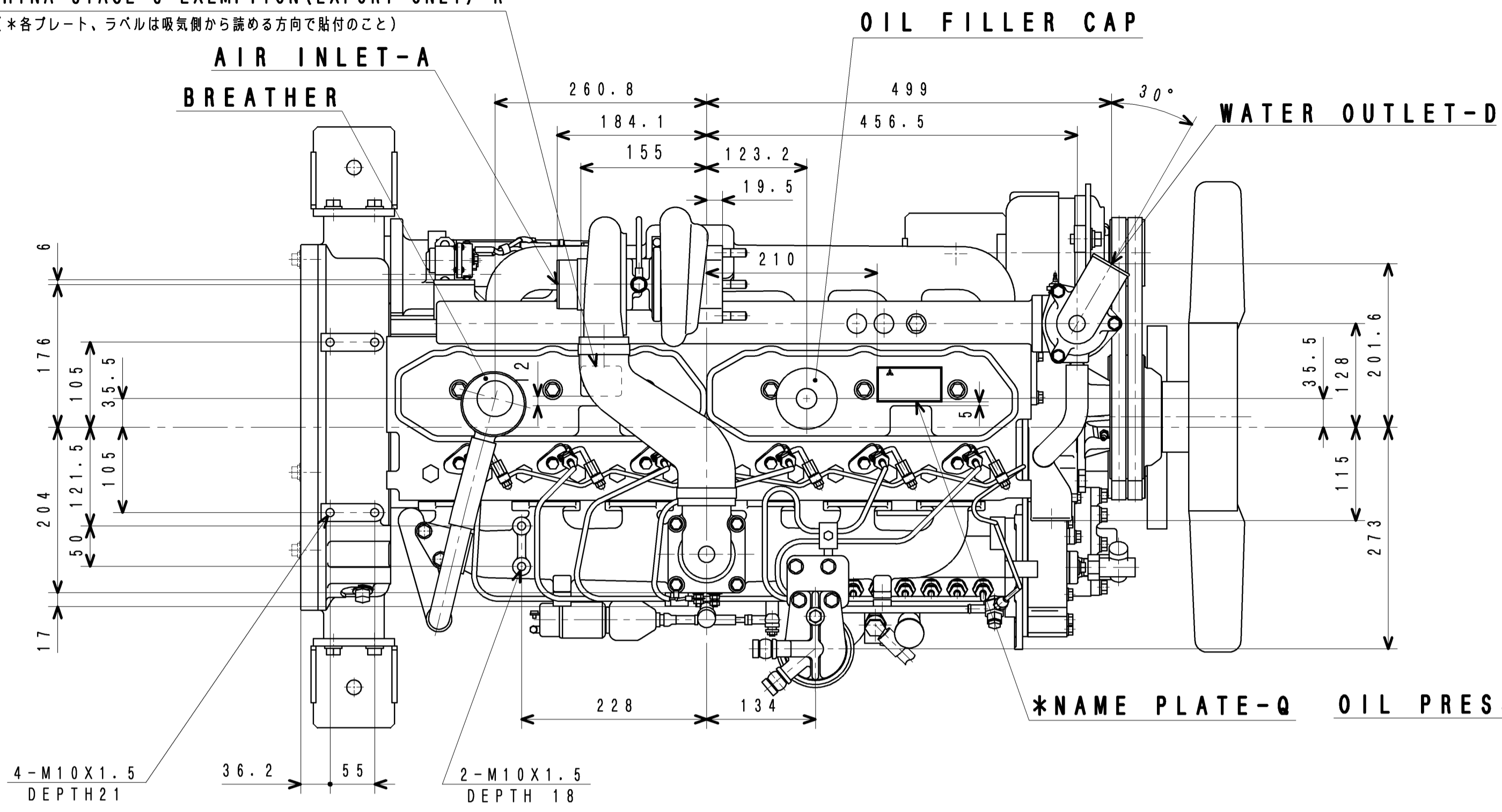
	Parts Name	Drawing No.	Q'ty	Remarks		
	WIRING DIAGRAM	34290-07021	-	Reference(only for)	A4	
1	SWITCH,OIL PRESSURE	MC840-219	1		A4	
2	SWITCH, THERMO	MC880-900	1		A4	
△	3					
△	4	UNIT,THERMOMETER	MD366-869	1	A4	
	5	STOP SOLENOID(ETS)	34287-01300	1	STOP SOLENOID KIT 34387-00030	A4
△	6	STARTER	32B66-12301	1		A4
	7	AIR HEATER	36766-11502	1		A4
	8	FILTER ASSY,FUEL	34362-00012	1		A4
	9	ALTERNATOR	34368-04100	1		A4
	10	OIL FILTER	34340-10022	1		A4
	11	COOLING FAN	34348-00201	1		A4
	12	L-JOINT	30625-35020	1		A4

**3. Accessories(Loose supply parts)**

	Parts Name	Parts No.	Q'ty	Remarks	
1	TIMER CONTROL	32B90-02400	1		A4
2	CONNECTOR,3P	MM409-661	1		A4
3	CONNECTOR,4P	MM409-663	1		A4
4	CONNECTOR,2P	MH052-231	1		A4

Note:Drawing No. Subject to alteration without notice

\*LABEL, CHINA STAGE 3 EXEMPTION (EXPORT ONLY) - R  
 (\*各プレート、ラベルは吸気側から読める方向で貼付のこと)



製造用途	出口専用
製造名称	CGMVKLL063KT2
製造規格	KTZ-S6K-PA1
	88.7kW/1500r/min
数量	100
755Pmax<138mm口径	年月製造
34389-08200	6K02

S6K T	
TOTAL CYL. VOL.	4.249L (259CUIN)
ENGINE NO.	
OUTPUT	88 kW
ENGINE SPEED	1500 rpm
MITSUBISHI HEAVY INDUSTRIES, LTD. TOKYO, JAPAN	

Q-DETAIL (1:1)  
 (With fan St-by: 88kW/1500rpm)

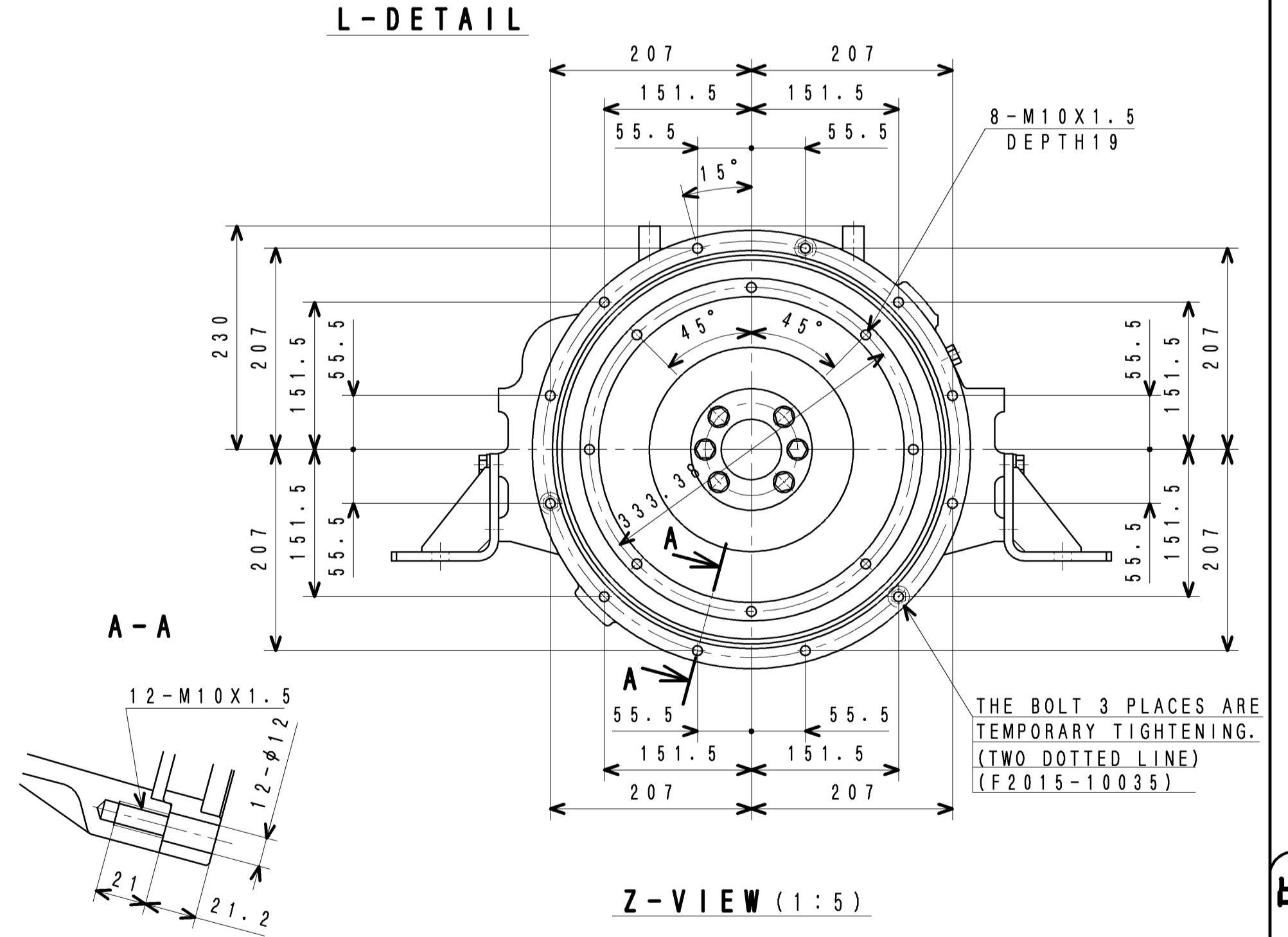
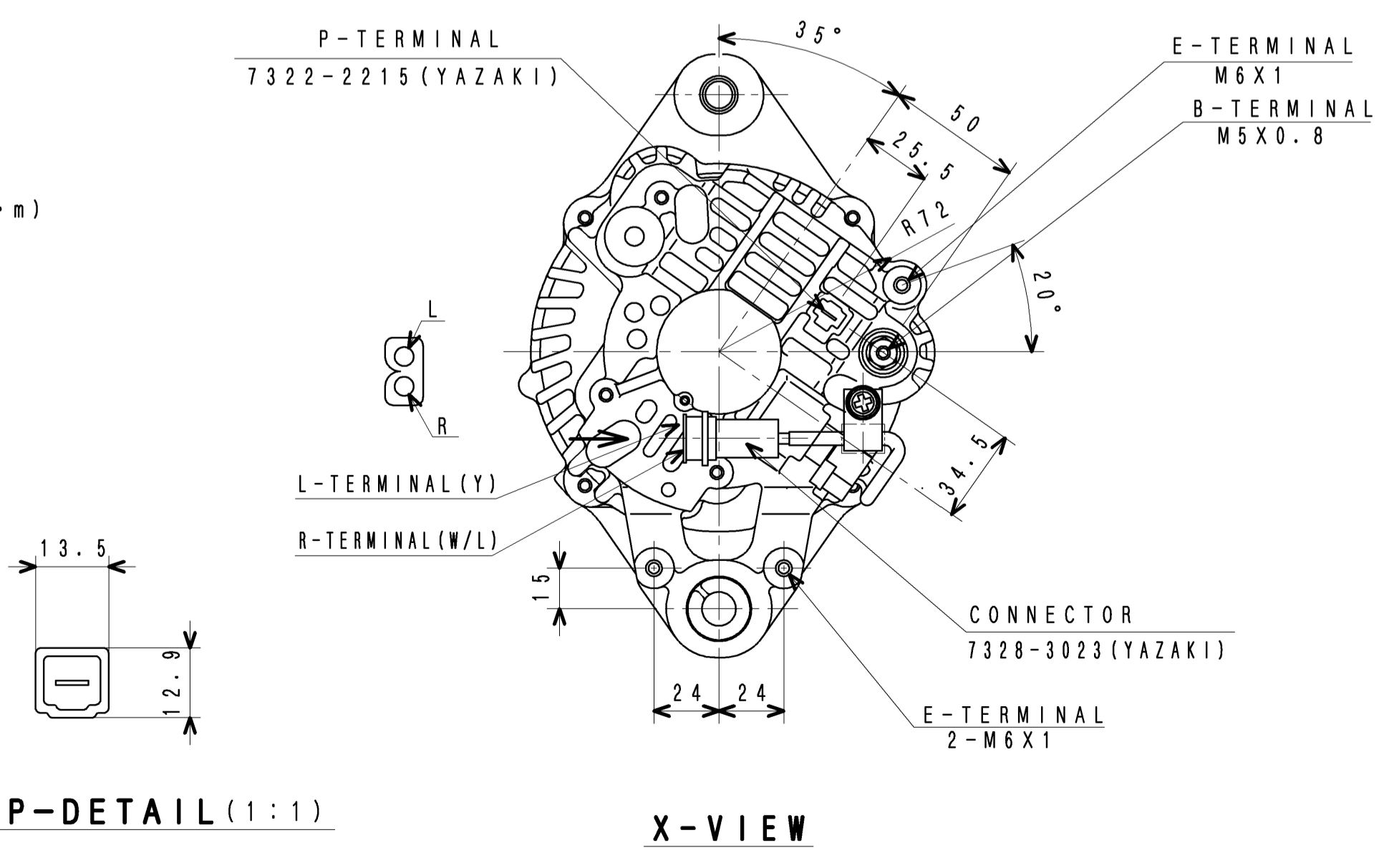
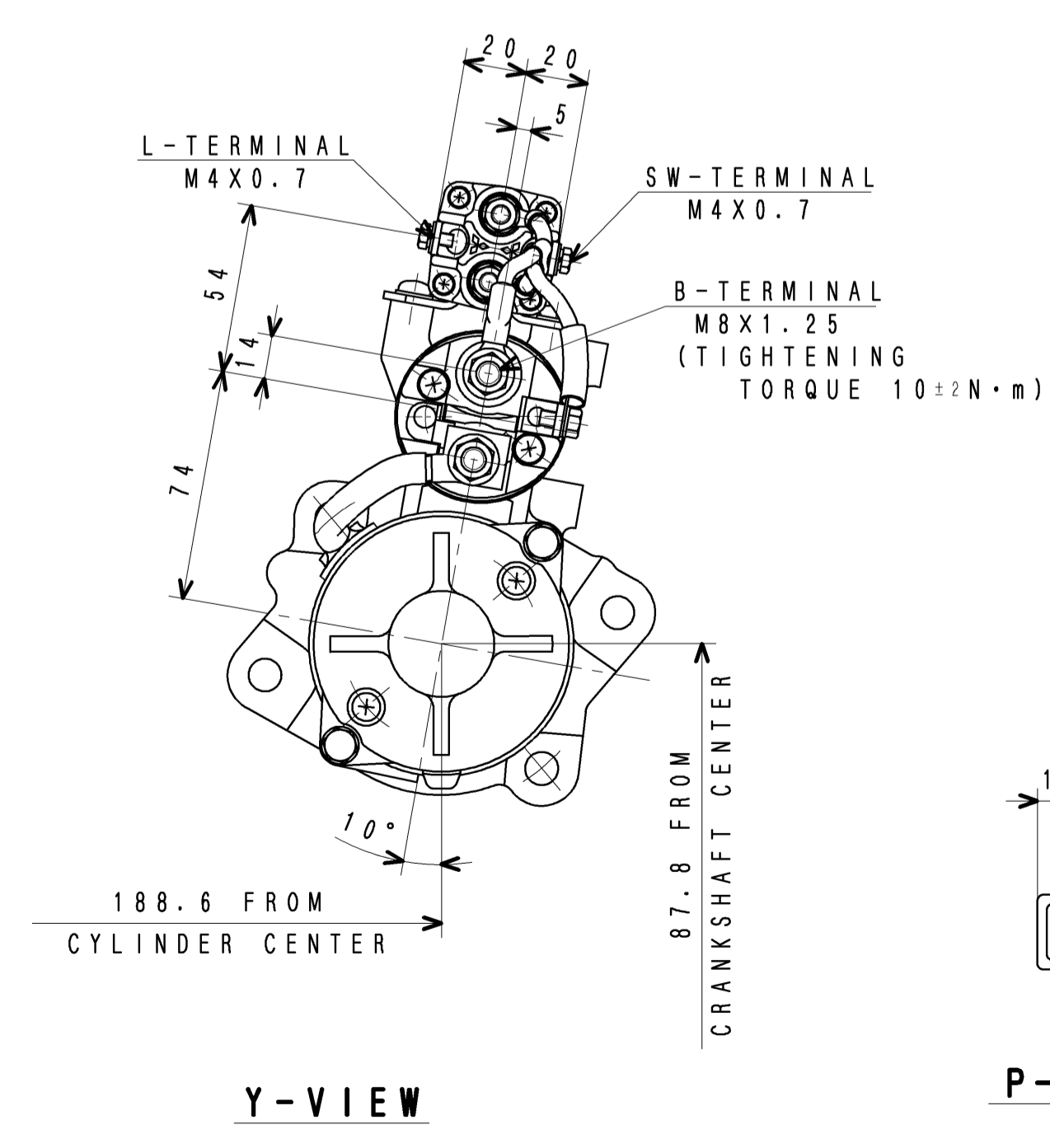
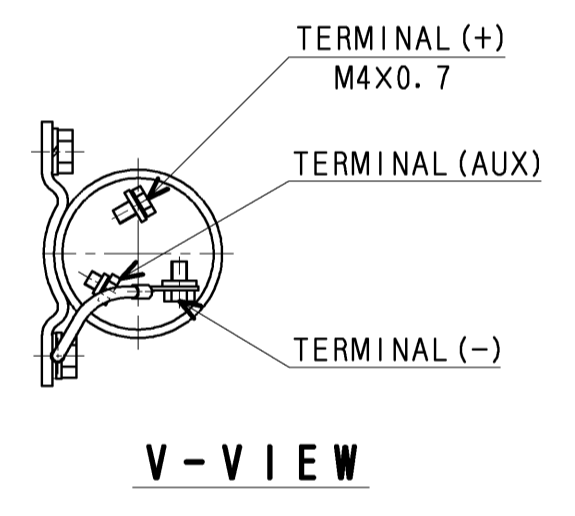
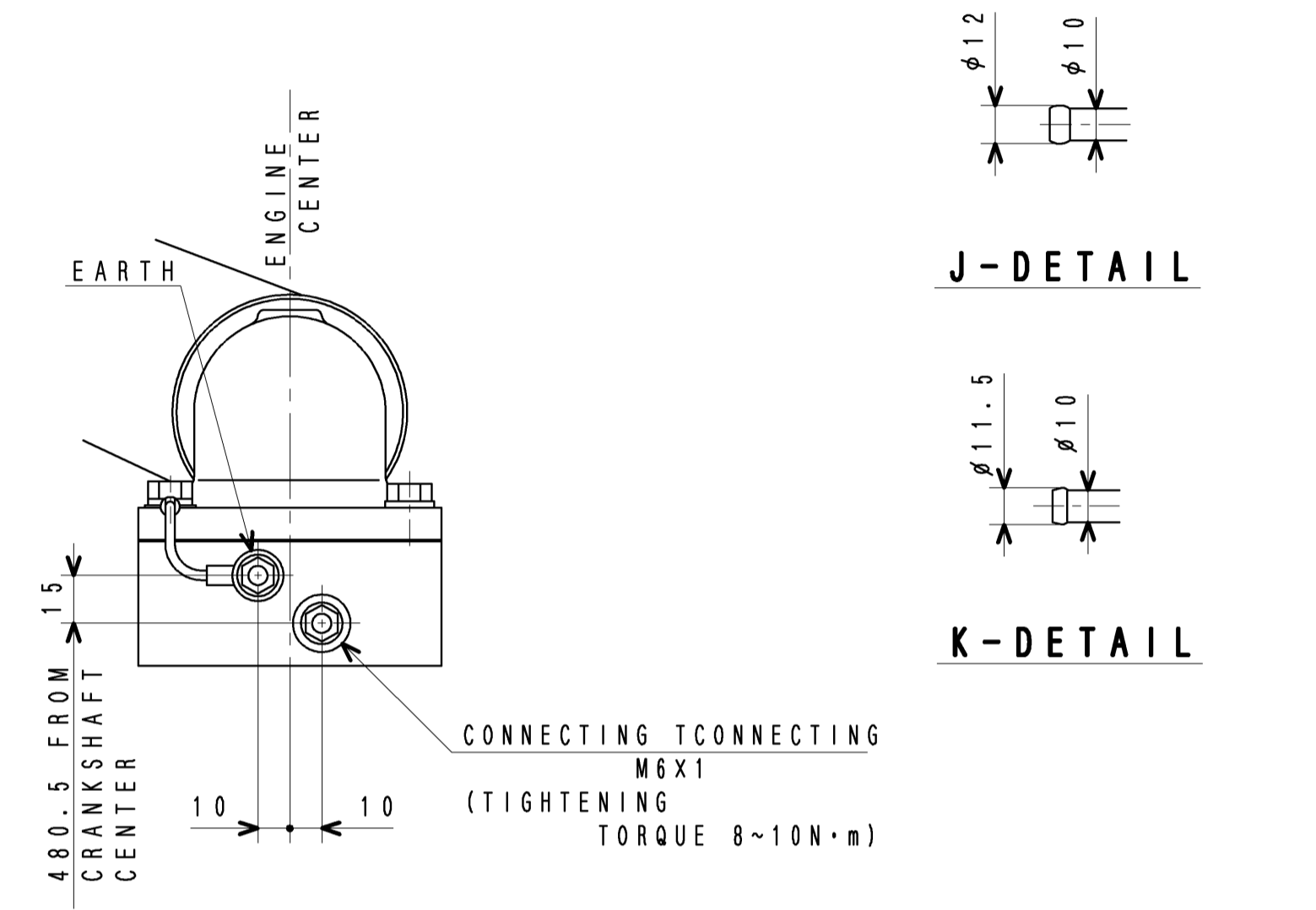
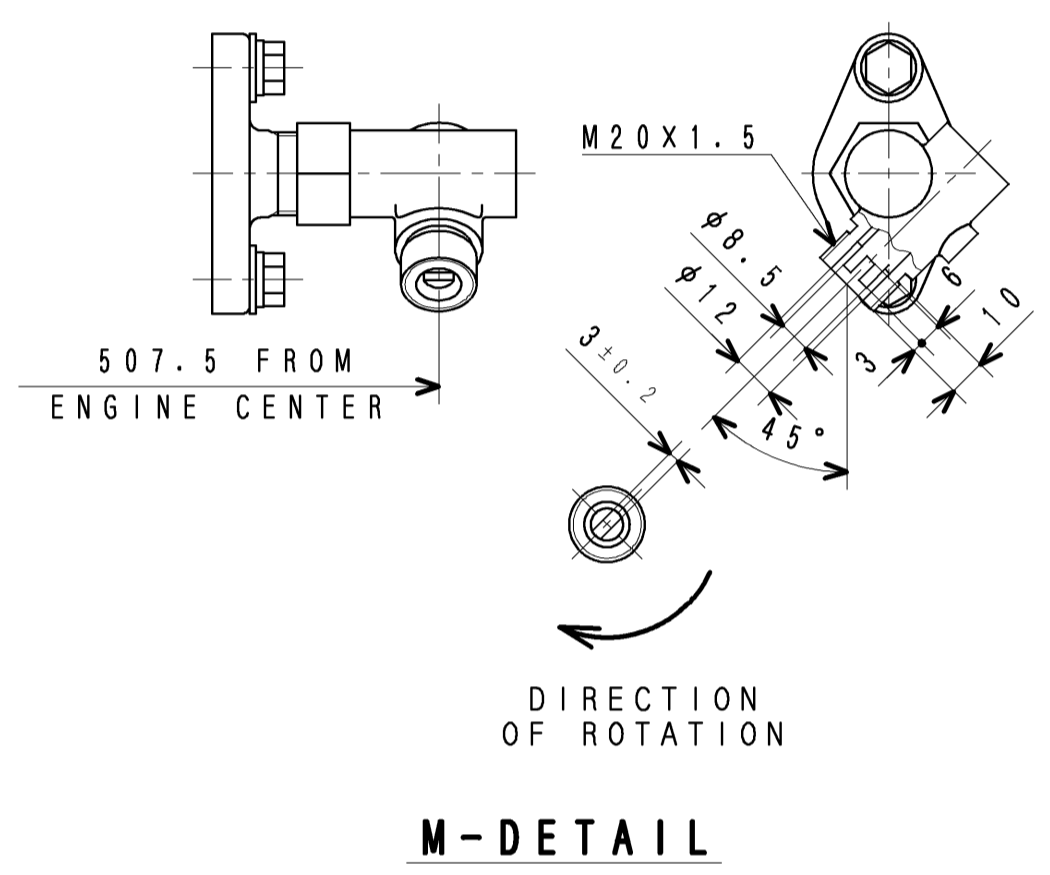
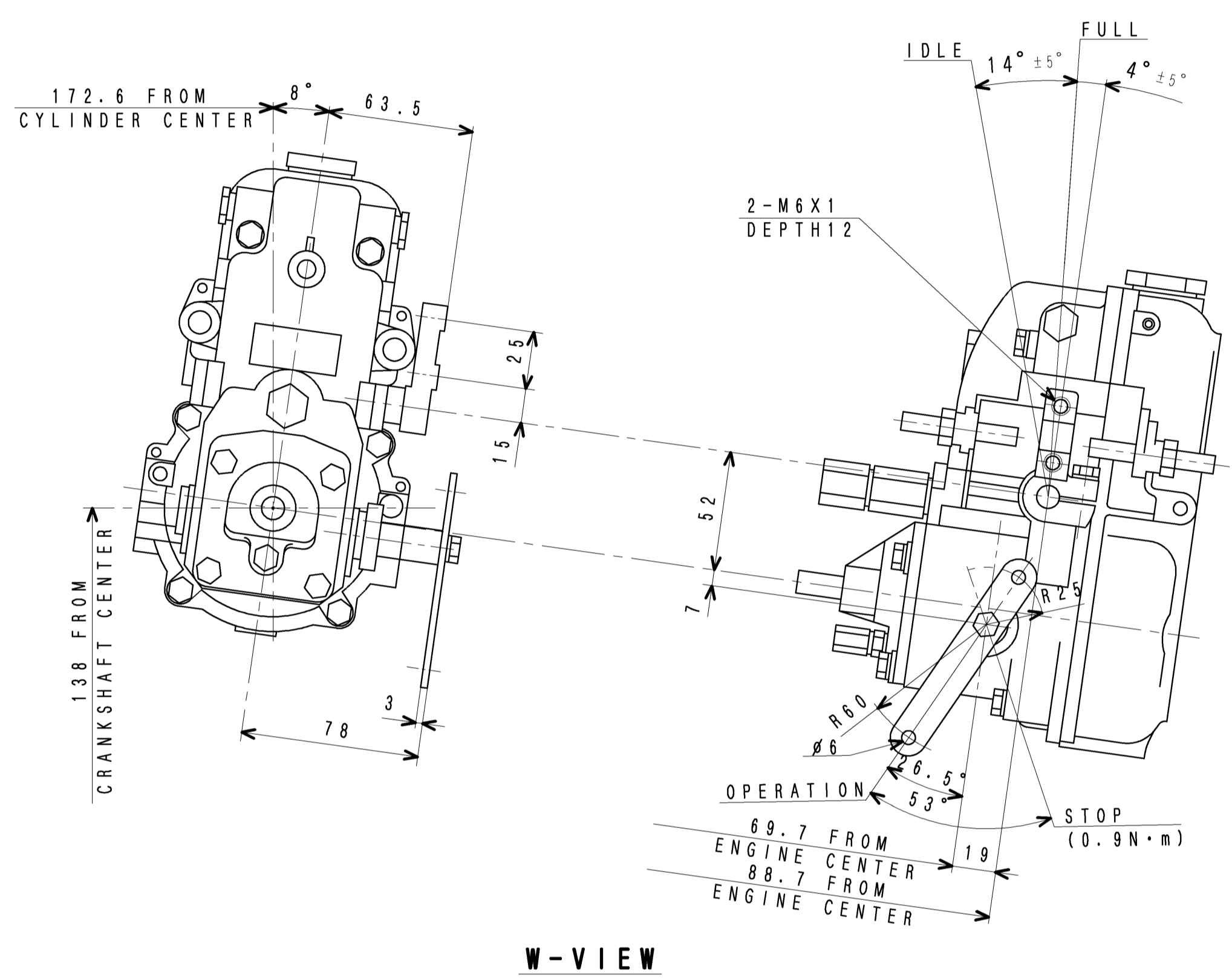
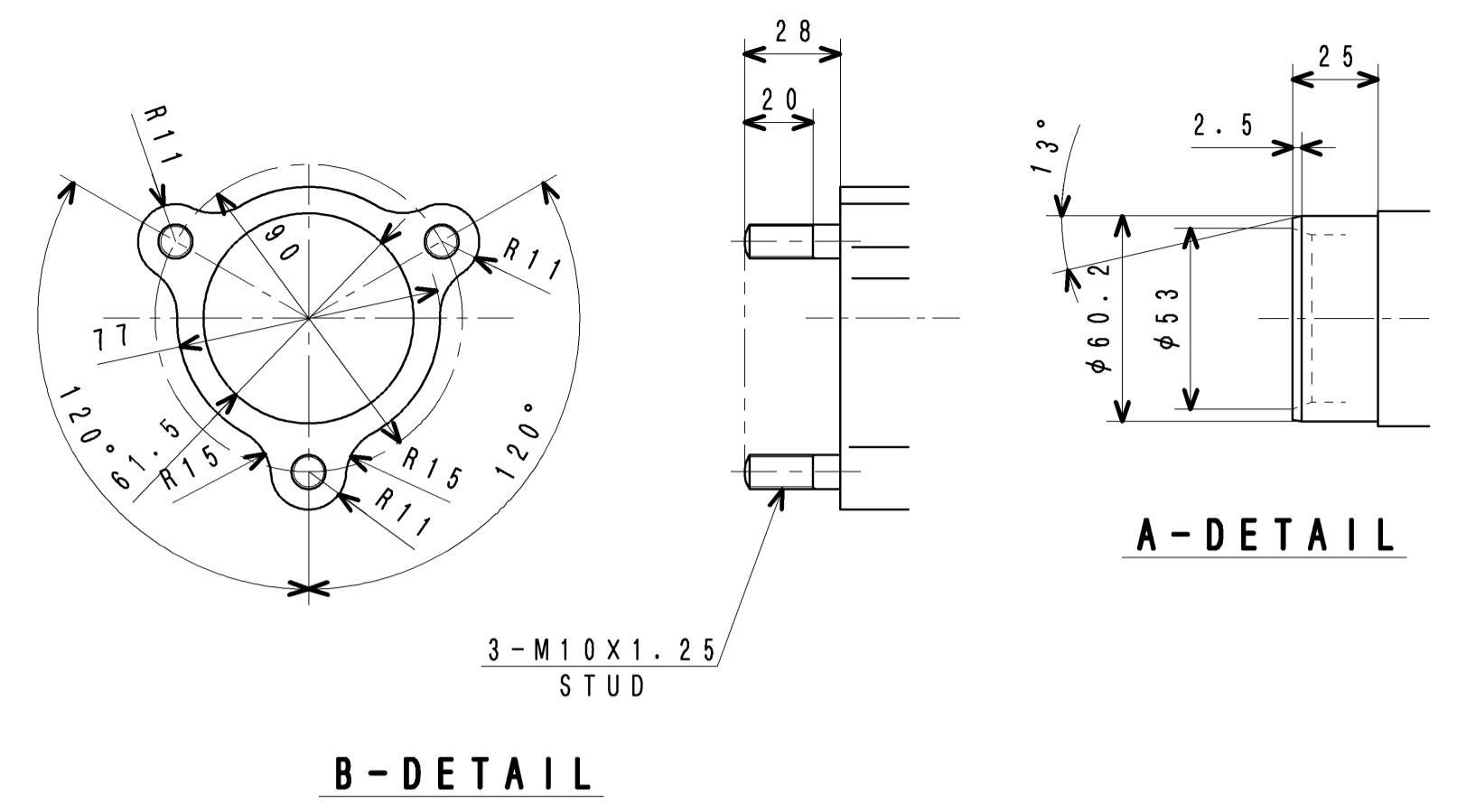
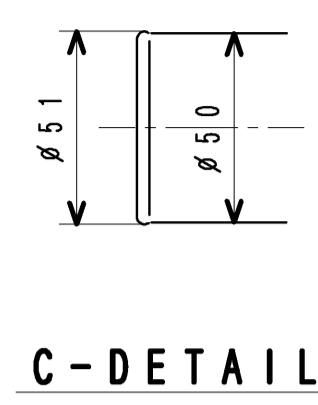
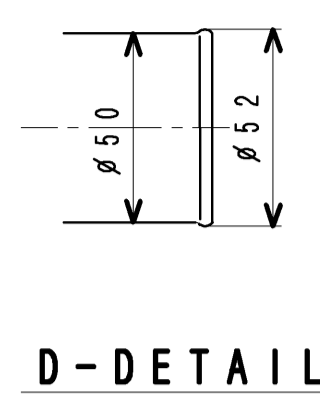
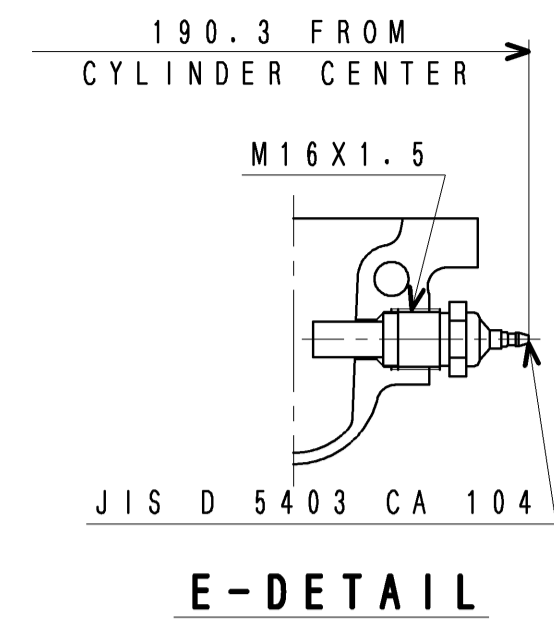
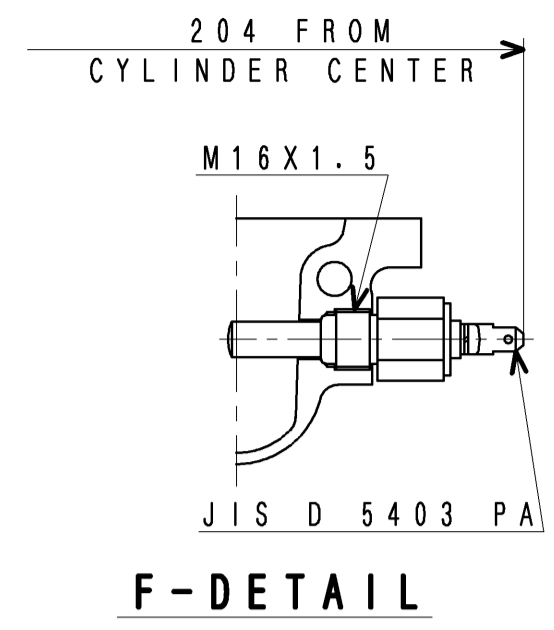
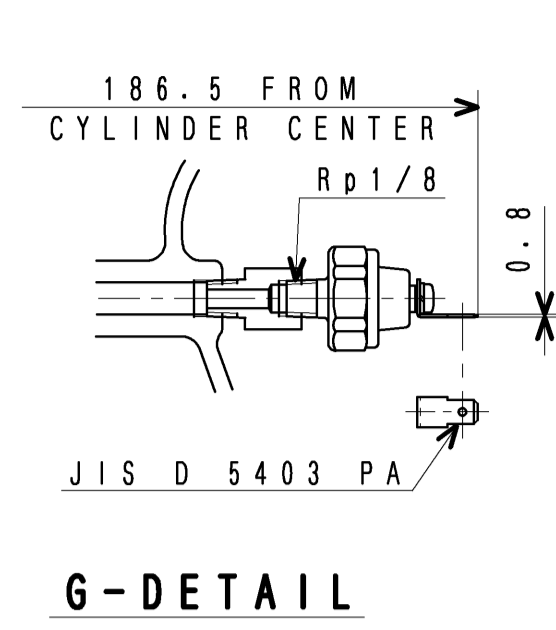
FOR GENERATOR OEM  
 (CHINA: EXPORT ONLY)

S6K-DT65SAG ENG ASSY	
三菱重工業株式会社	
MITSUBISHI HEAVY INDUSTRIES, LTD.	
図面番号	34300-02521 1/2
DRW	T. HIROSE
CHK	C. IGARASHI
DATE	2016. 2. 29
CHG	
ED-NO	
DATE	
CHK	
DRW	H. KOMATSU
CHK	
DATE	

出図  
 MHI  
 相模原  
 2016  
 3.17

M/C





FOR GENERATOR OEM (CHINA: EXPORT ONLY)

S6K-DT65SAG ENG ASSY

三菱重工業株式会社  
MITSUBISHI HEAVY INDUSTRIES, LTD.

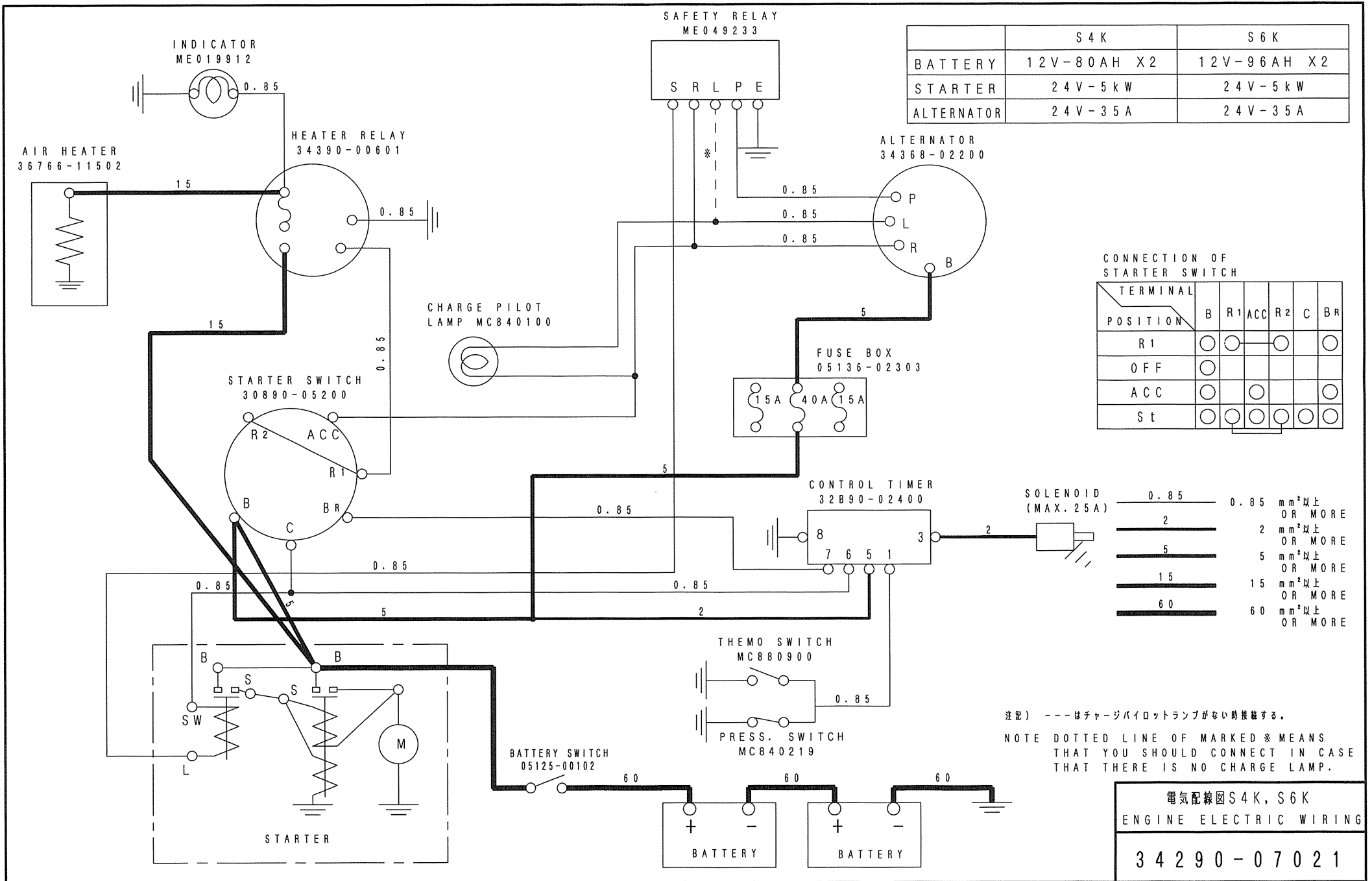
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承認 APPD H. Komatsu	検閲 CHK H. KOMATSU	製図 (M.S.H.) DRN T. HIROSE C. IGARASHI	2016. 2. 29
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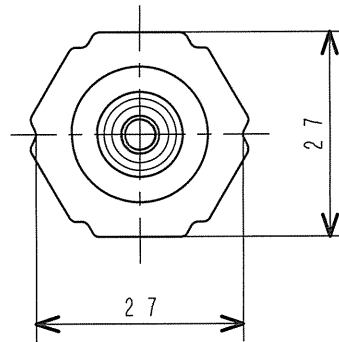
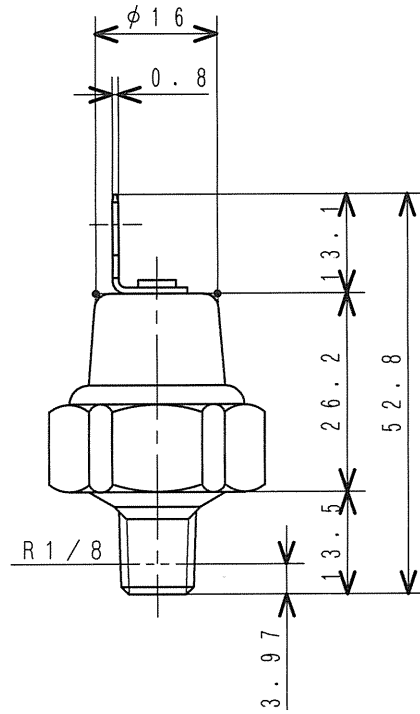
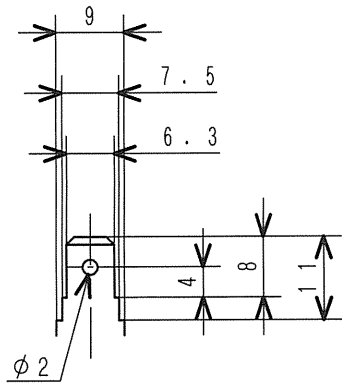
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出図  
MHI  
相模原  
2016  
3.17

M/C



電気配線図S4K, S6K  
ENGINE ELECTRIC WIRING  
34290-07021



仕 様

SPECIFICATIONS

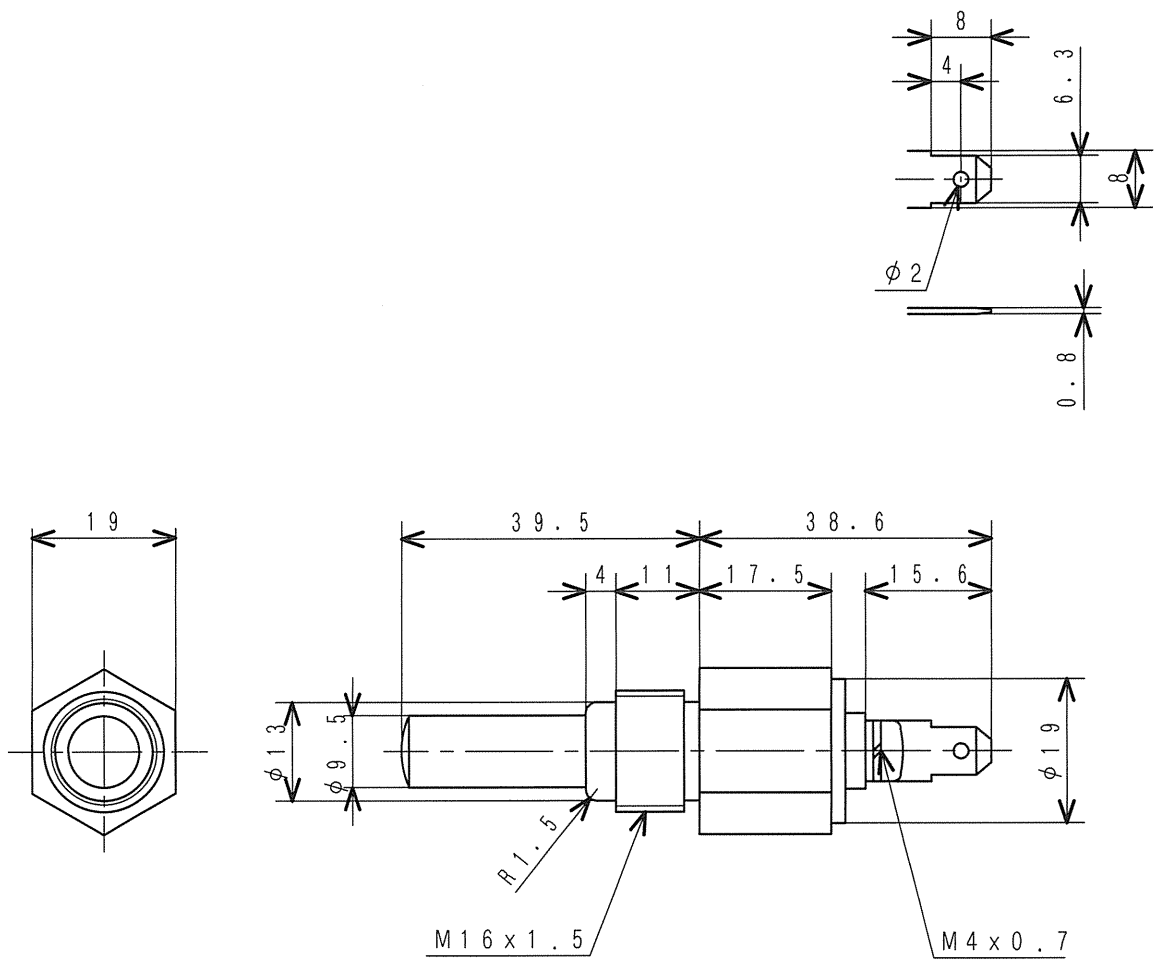
作 動 圧 力 OPERATING PRESS.	49 kPa {0.5 kgf/cm <sup>2</sup> }
作 動 電 圧 OPERATING VOLT.	12 V - 5 W 24 V - 5 W

オイルプレッシャスイッチ

SWITCH, OIL PRESSURE

MC840-219

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部品番号 PART No.	作動温度 OPERATING TEMP.		
MC880-900	温度下降時 DECREASE	≦ 100℃±4℃	で接点開 OPEN
	温度上昇時 RISE	≧ 100℃±2℃	で接点閉 CLOSE
MC880-901	温度下降時 DECREASE	≦ 105℃±4℃	で接点開 OPEN
	温度上昇時 RISE	≧ 105℃±2℃	で接点閉 CLOSE

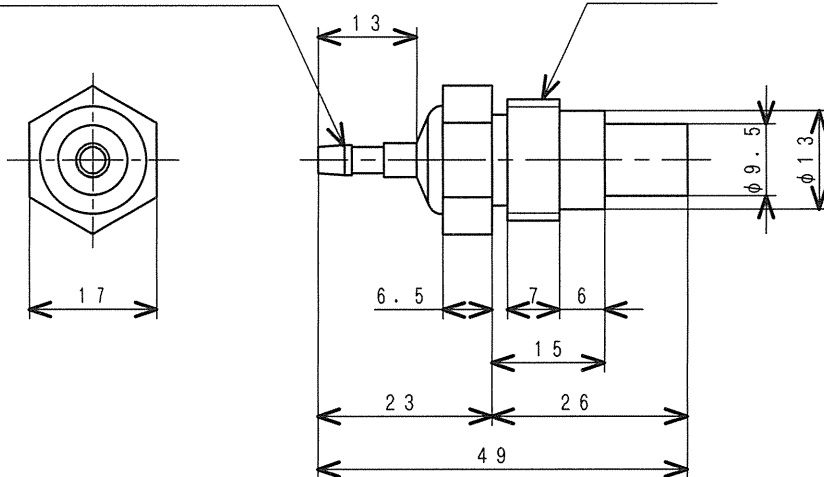
定格負荷 RATED LOADED	1A以下 MAX.	0.5A以下 MAX.
定格電圧 RATED VOLT.	12V	24V

サーモスイッチ  
SWITCH, THERMO

MC880-900

JIS D 5403 CA104

M16X1.5

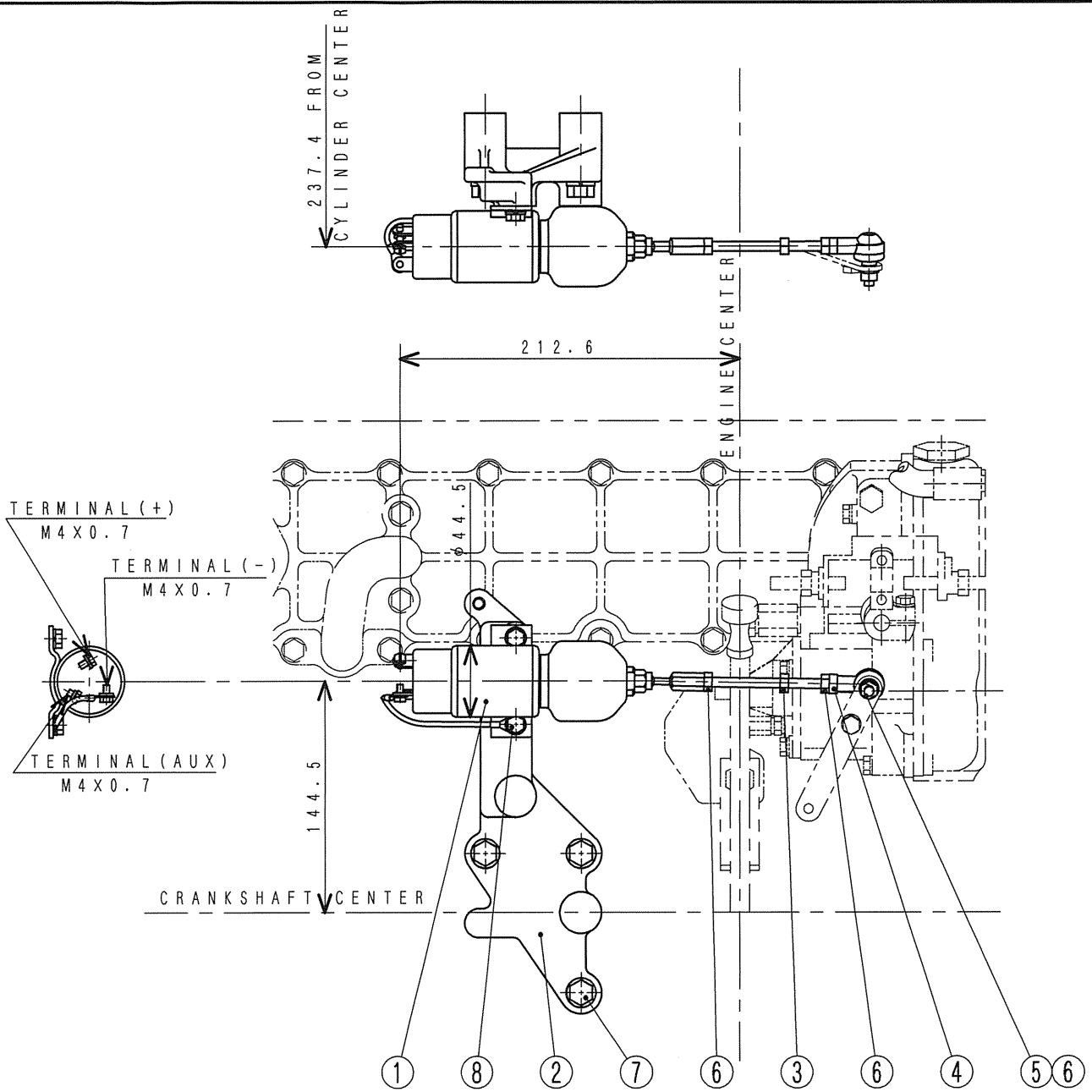


温度 (°C) TEMPERATURE	50	67	70	100	102	110	135
抵抗 (Ω) RESISTANCE	80	44.6	40.9	17.6	16.5	12.8	7

サーモメータユニット  
UNIT, THERMOMETER

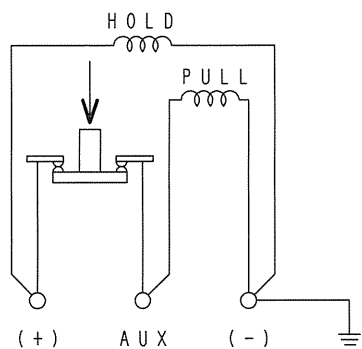
MD366-869

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仕様 (20℃にて)  
SPECIFICATIONS (AT 20℃)

定格電圧 RATED VOLT.	DC 24 V	
	プルインコイル PULL IN COIL	ホールディングコイル HOLD IN COIL
定格電流 RATED CURRENT	24.6 A	0.5 A
引張力 TENSILE FORCE	89 N {9 kgf}	180 N {18 kgf}



配線図  
WIRING DIAGRAM

8	F1825-06012	BOLT W/ASSY	2
7	F2005-10055	BOLT W/ASSY	3
6	F2300-06000	NUT	3
5	F2515-06000	WASHER, SPRING	1
4	32563-06100	L-JOINT	1
3	34287-02603	ROD, SOLENOID	1
2	34387-10800	BRACKET, SOLENOID	1
1	34287-01300	SOLENOID	1
SYM	PART No.	PART NAME	QTY

ストップ ソレノイド キット

STOP SOLENOID KIT (S6K)

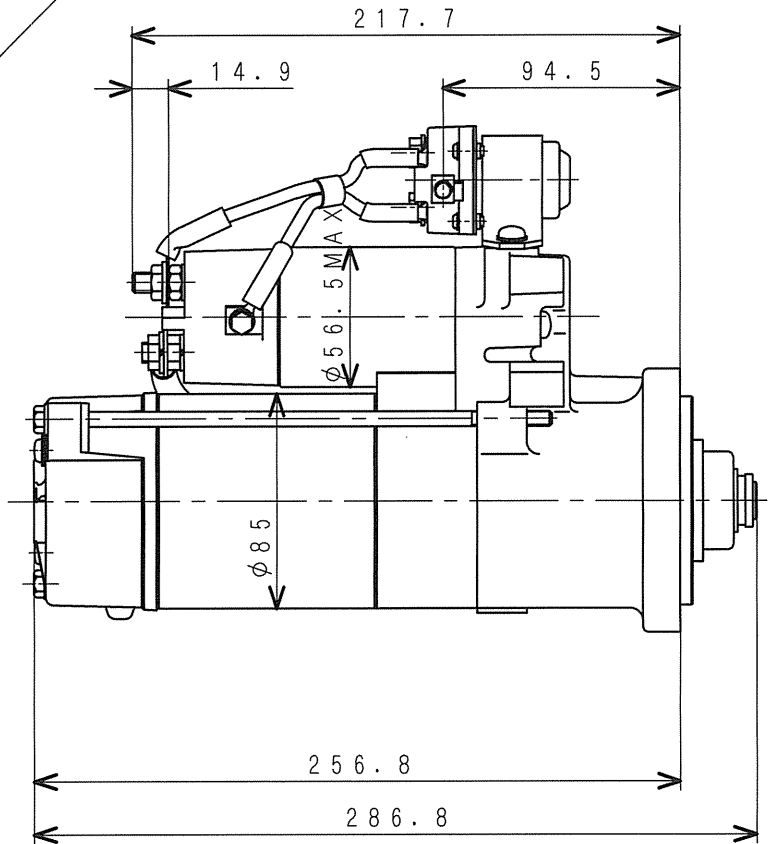
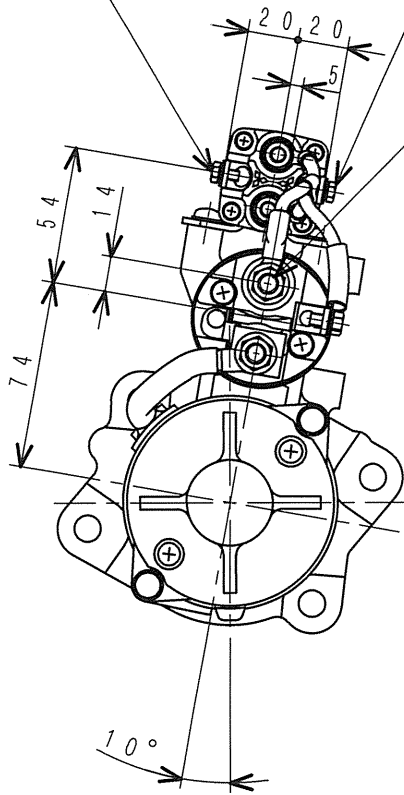
34387-00030



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L-TERMINAL  
M4X0.7  
(FOR SAFETY RELAY)

SW-TERMINAL  
M4X0.7

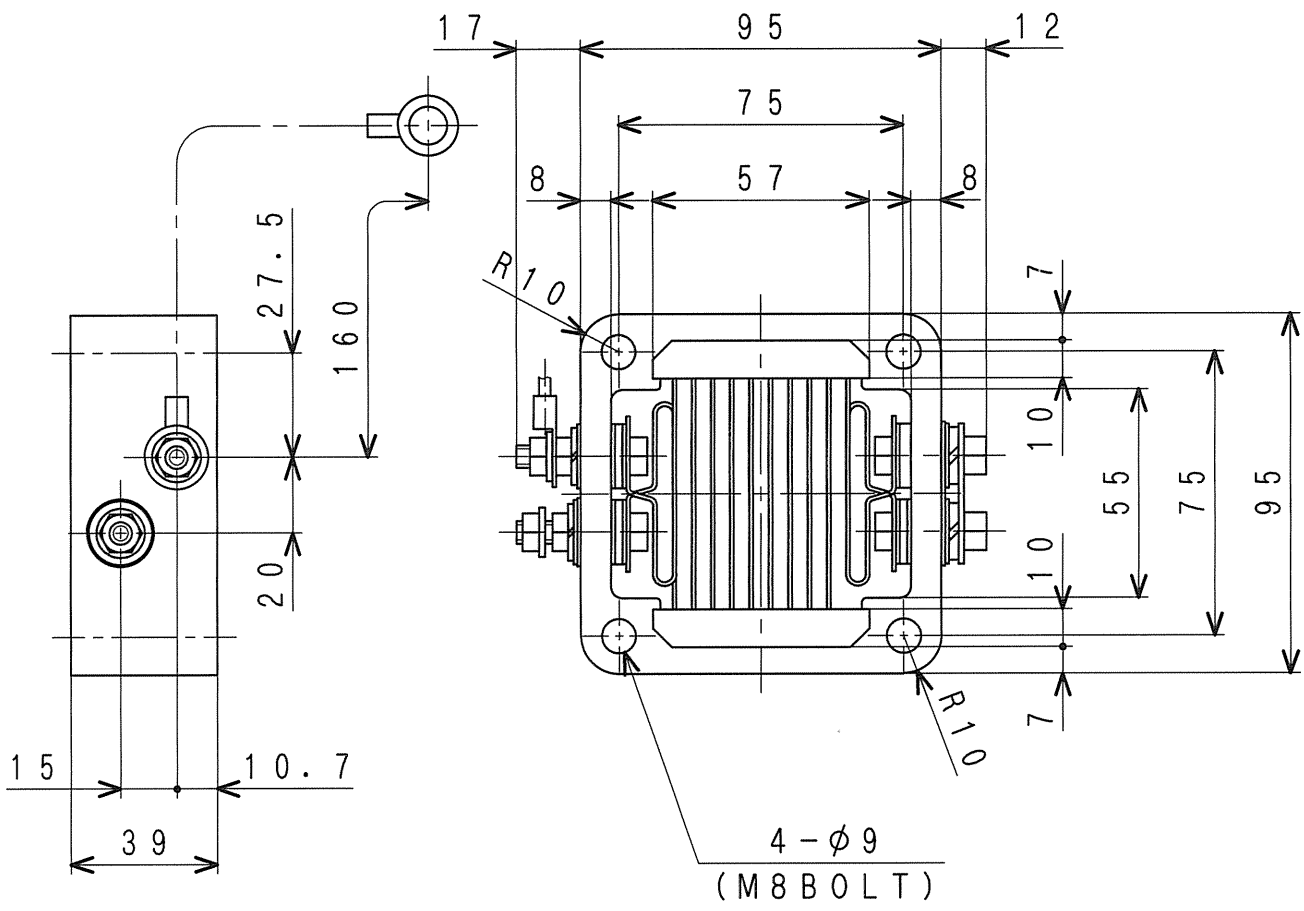
B-TERMINAL  
M8X1.25  
(TIGHTENING  
TORQUE  $10^{+2}_0$ N·m)



MODEL	PART NO.	RATED OUTPUT OF STARTER	BATTERY (REFERENCE)
S4K, S6K	32B66-12301	24V-5kW	S4K: 80AH X2  S6K: 96AH X2 

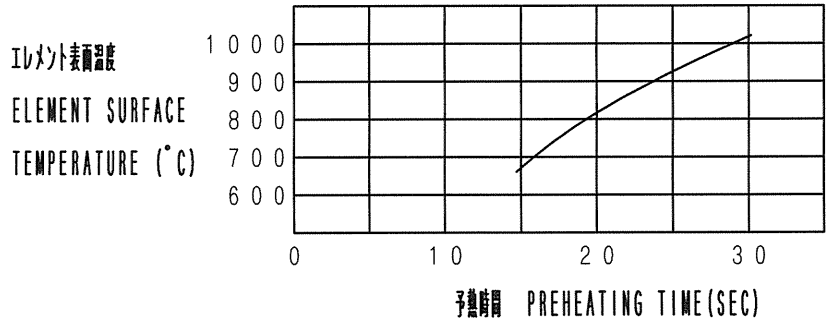
スタータ  
STARTER (24V-5kW)

32B66-12301



仕 様  
SPECIFICATIONS

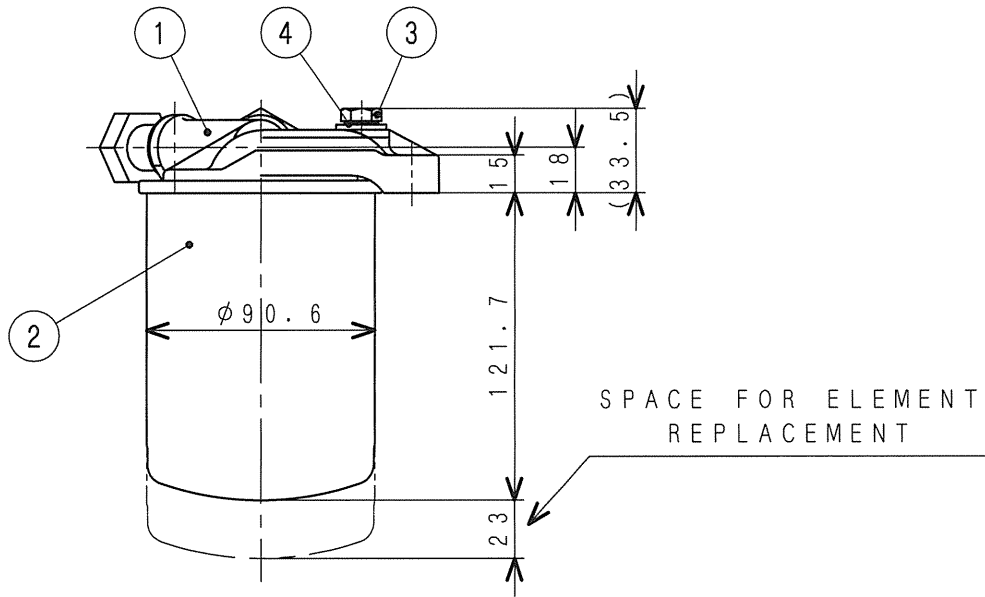
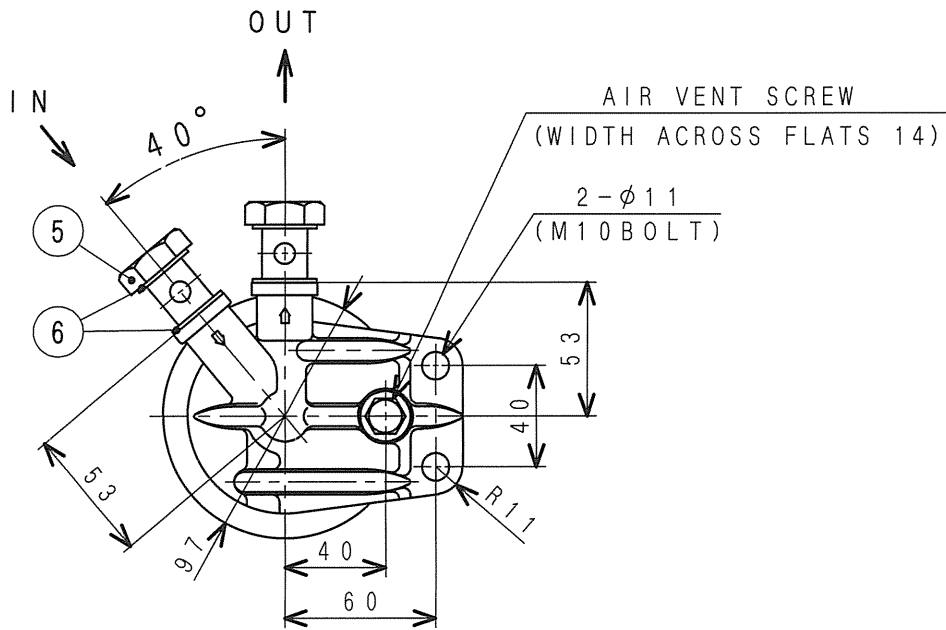
容 量 CAPACITY	2.1 kW
定 格 電 圧 RATED CURRENT	9.5 A ± 10% (AT 22 V)



エア ヒーター アッシー  
AIR HEATER ASSY

36766-11502





2. FILTER TIGHTENING TORQUE:  $13.7 \pm 2.0 \text{ N} \cdot \text{m}$  ( $1.4 \pm 0.2 \text{ kgf} \cdot \text{m}$ )  
 NOTE 1. THEN TIGHTEN  $3/4 \sim 1$  TURN AFTER GASKET CONTACTS BASE.

2. フィルタ締付けトルク:  $13.7 \pm 2.0 \text{ N} \cdot \text{m}$  ( $1.4 \pm 0.2 \text{ kgf} \cdot \text{m}$ )  
 注 記 1. 取付けはシール面にガスケットが接触してから  $3/4 \sim 1$  回転締付けて下さい。

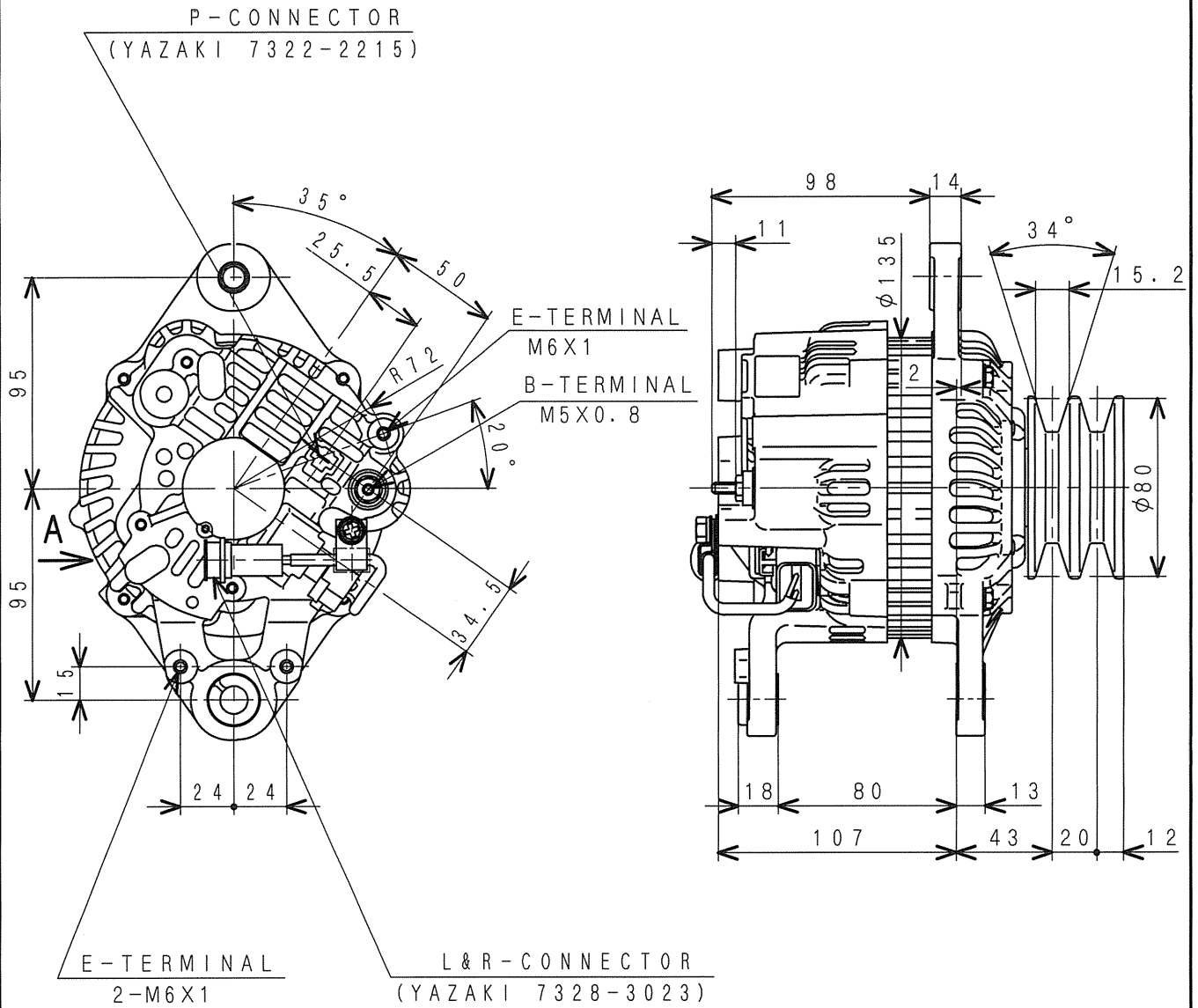
仕 様  
 SPECIFICATIONS

ろ過面積 FILTRATION AREA	3800 cm <sup>2</sup>
定格流量 RATED FLOW	3 l/min
乾燥重量 WEIGHT	830 g

6	MH035-069	GASKET	4
5	MH037-087	BOLT, EYE	2
4	MH035-067	GASKET	1
3	ME016-894	PLUG, AIR	1
2	34362-00101	ELEMENT, FUEL	1
1	ME035-672	HEAD, FUEL FILTER	1
SYM	PART No.	PART NAME	QTY

ヒュエルフィルタアッシ  
 FILTER ASSY, FUEL

34362-00012



A

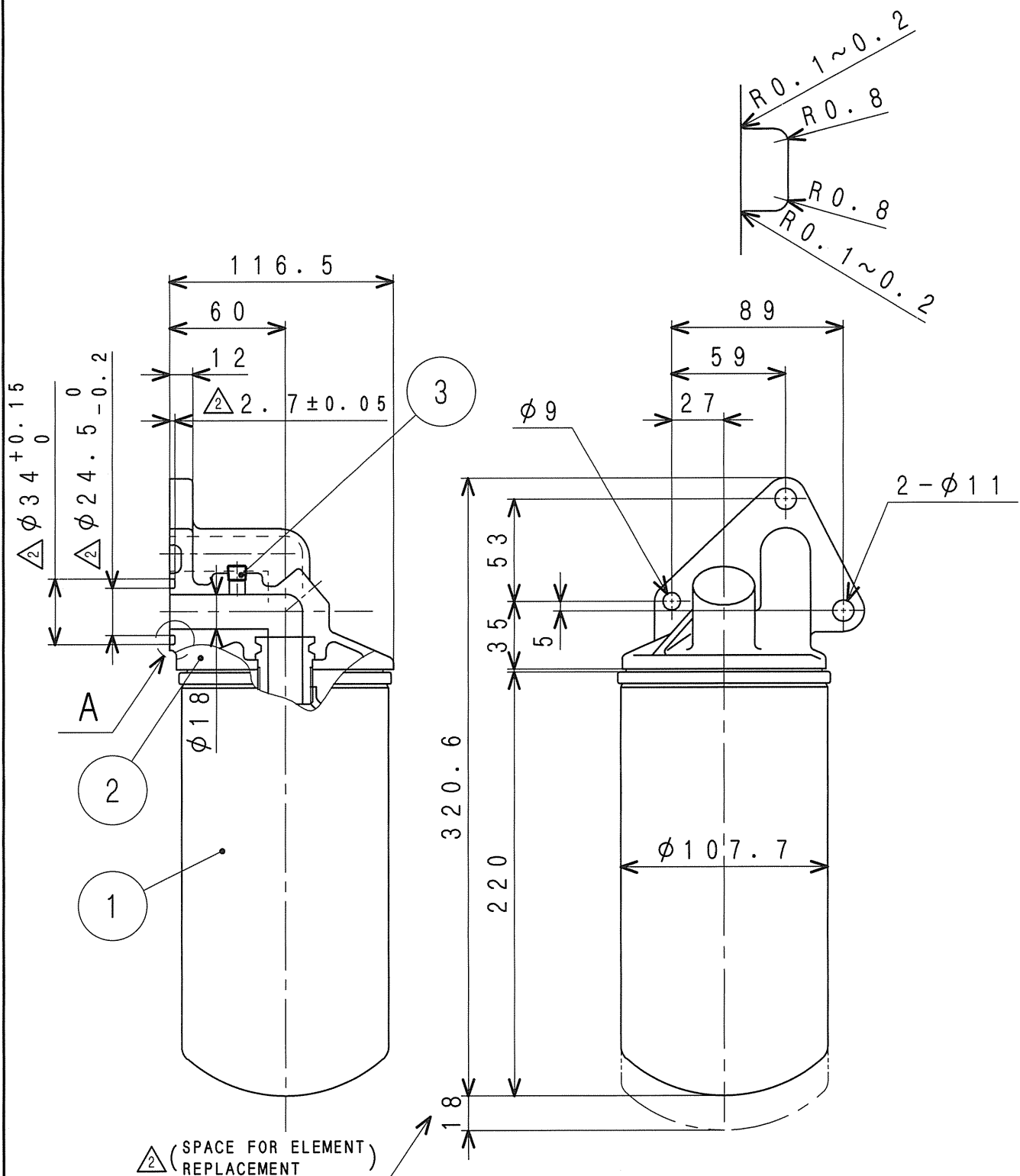


オルタネータ  
ALTERNATOR (24V-35A)

34368-04100

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△ DETAIL - A



仕様 SPECIFICATIONS

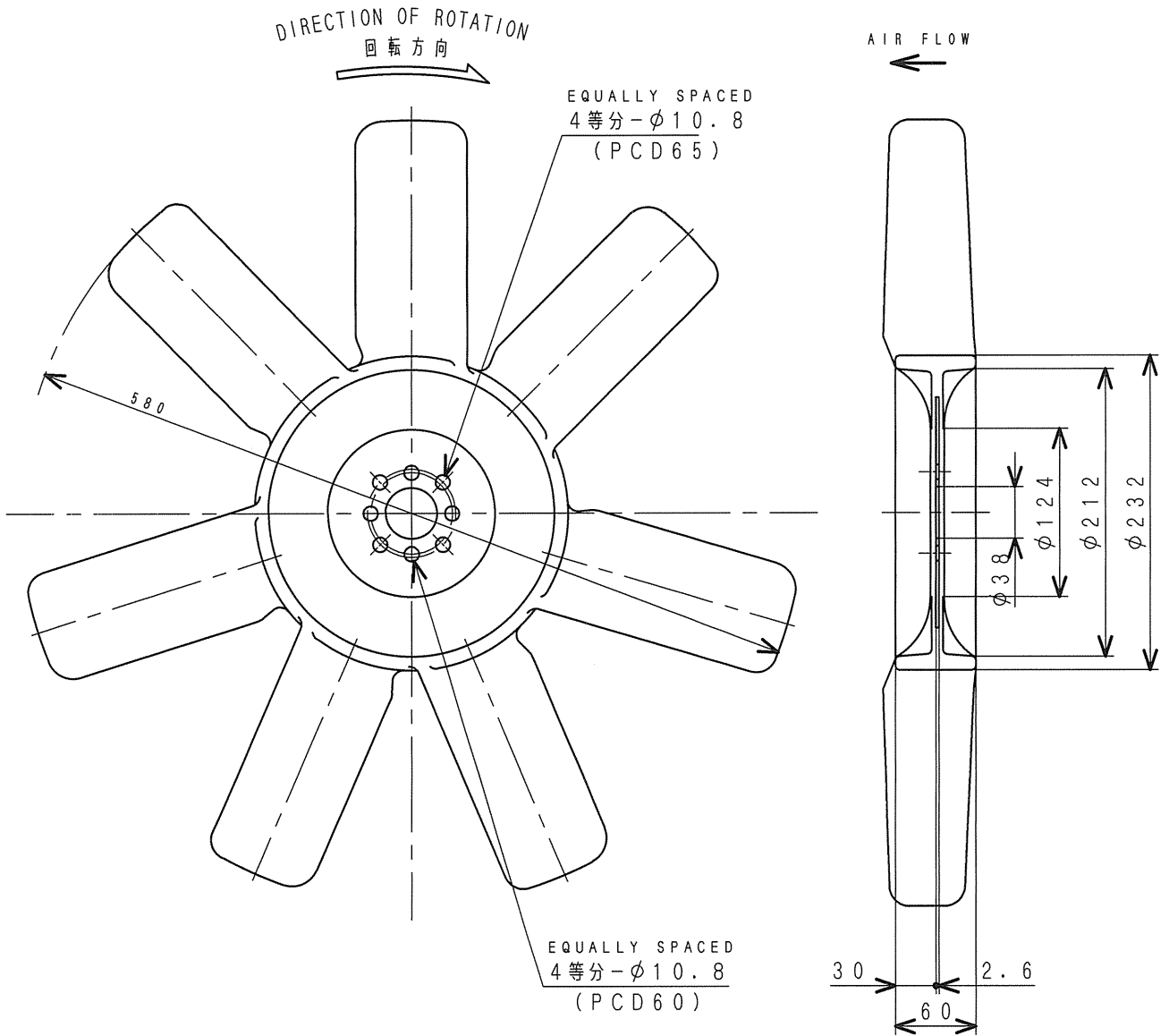
ろ過面積 FILTRATION AREA	0.5 m <sup>2</sup>
-------------------------	--------------------

3	F5005-10001	PLUG, TAPER	1
2	34340-10101	ELEMENT, OIL	1
1	34340-00301	BRACKET	1
△ SYM	PART No.	PART NAME	QTY

MATERIAL: ADC他  
WEIGHT: 1.71kg

オイルフィルタアッシ  
OIL FILTER ASSY

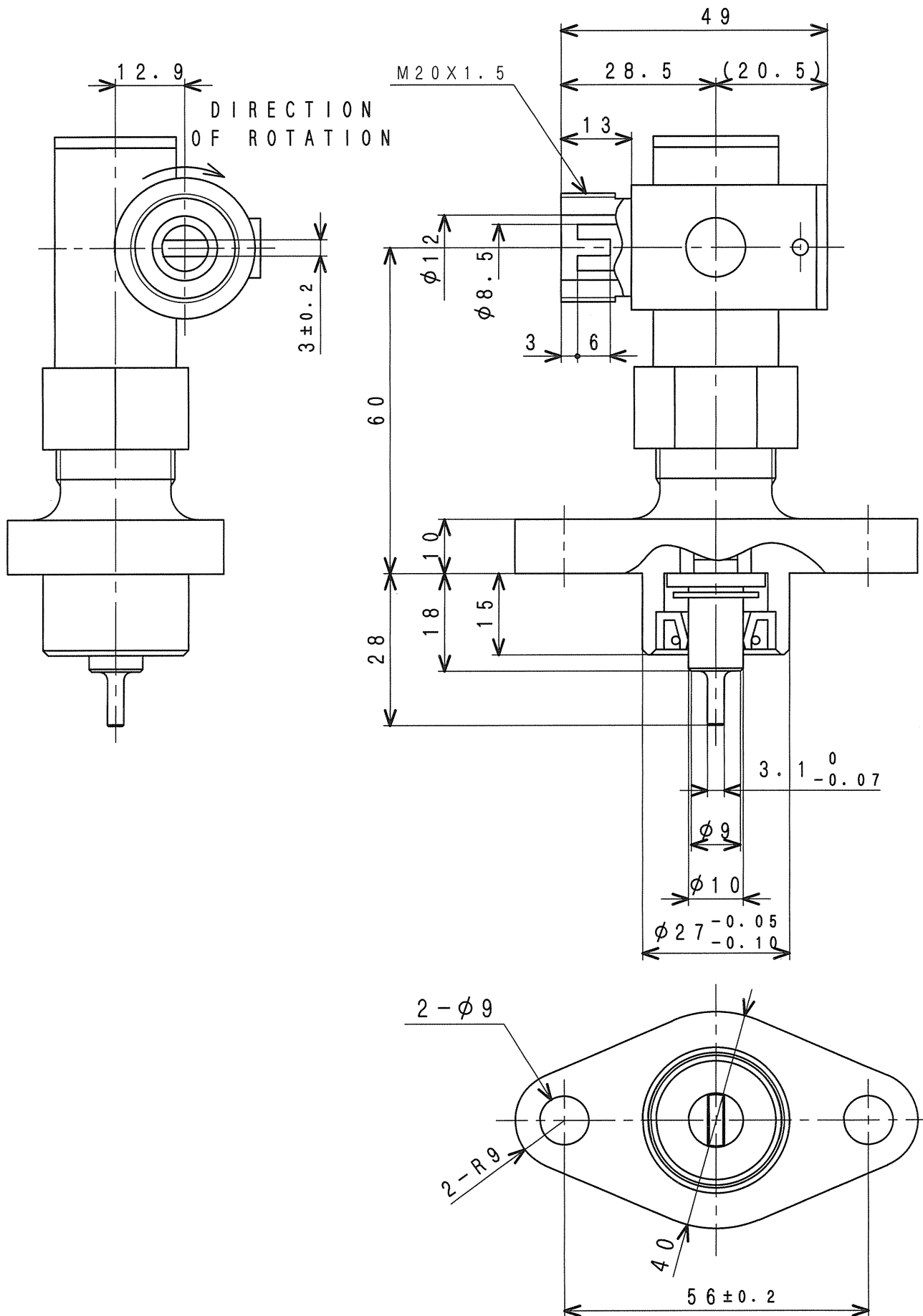
34340-10022△



クーリング ファン (プッシャー)  
FAN, COOLING (7P-580)

34348-00201

MHI CONFIDENTIAL



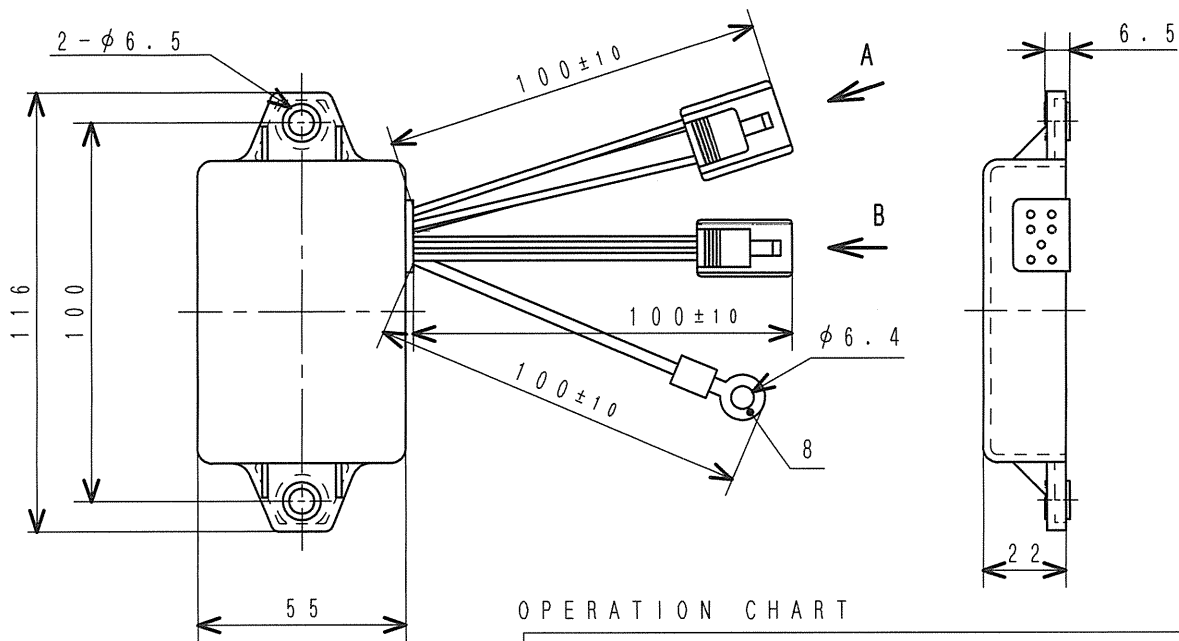
駆動軸と被駆動軸の回転比 1:1

ROTATION RATIO OF DRIVE & DRIVEN SHAFT IS 1:1

L-ジョイント  
L-JOINT

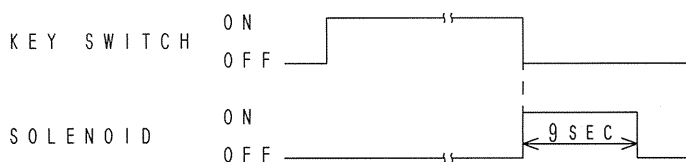
30625-35020

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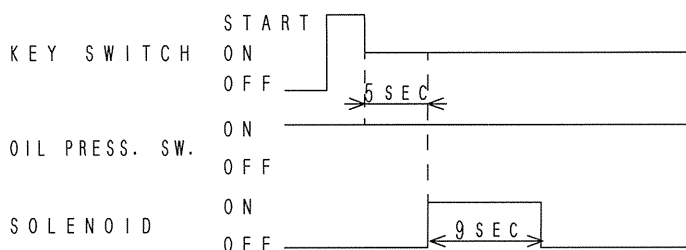


OPERATION CHART

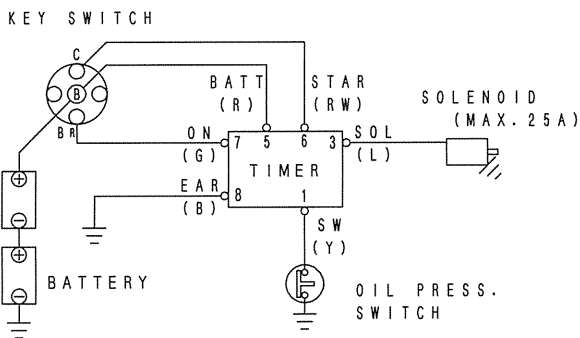
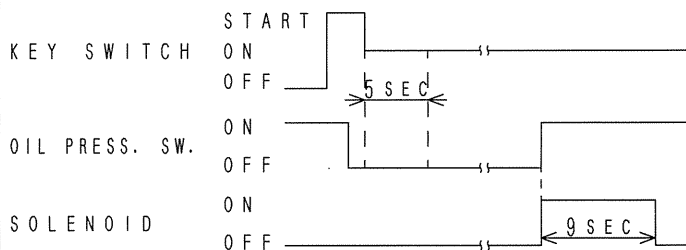
1. IN CASE THE KEY IS TURNED OFF.



2. IN CASE OIL PRESS. SW. IS ON ALL ALONG.



3. IN CASE OIL PRESS. SW. TURN ON AT ENG RUNNING.



配線図

WIRING DIAGRAM

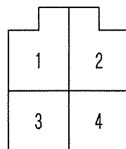
連続してキーON/OFF操作を繰り返さないこと。

NO CONTINUOUS KEY ON/OFF OPERATION PERMITTED.

部品番号 PART No.	電源電圧(標準) VOLTAGE	許容ソレノイド電流 SOL. MAX. CURRENT	使用温度範囲 AMBIENT TEMP.
32B90-02400	24 V	25 A	-30~+80°C (-22~+176°F)

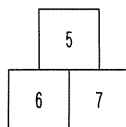
符号 SYM	線色 COLOUR	接続先 CONNECT FAR SIDE
1	YELLOW	油圧スイッチ OIL PRESS. SWITCH
2		(未使用) UNUSED
3	BLUE	ソレノイド(+) SOLENOID
4	BLUE	ソレノイド(-) SOLENOID
5	RED	バッテリー(+) BATTERY
6	RED WHITE	キースイッチ START KEY SWITCH
7	GREEN	キースイッチ ON KEY SWITCH
8	BLACK	アース EARTH

A-VIEW



4 POLES FEMALE  
CONNECTOR  
7323-2446 (YAZAKI)  
TO MATE WITH  
MM409-663 (MHI)  
7122-2446 (YAZAKI)

B-VIEW

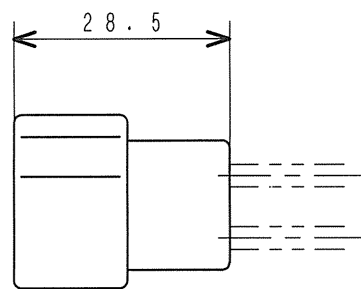
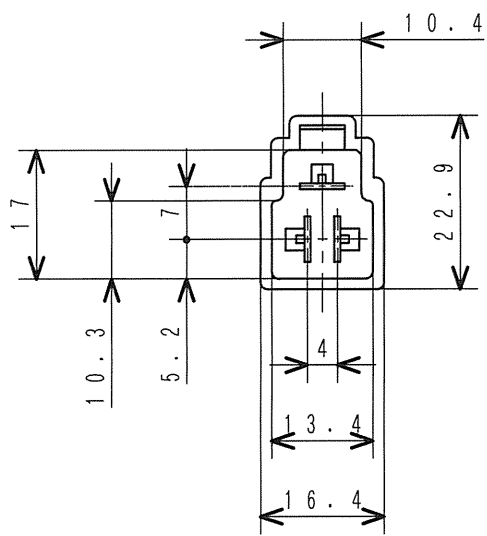


3 POLES FEMALE  
CONNECTOR  
7323-2237 (YAZAKI)  
TO MATE WITH  
MM409-661 (MHI)  
7322-2237 (YAZAKI)

コントロール タイマ (エマージェンシ リレー)

TIMER, CONTROL (RELAY, EMERGENCY)

32B90-02400

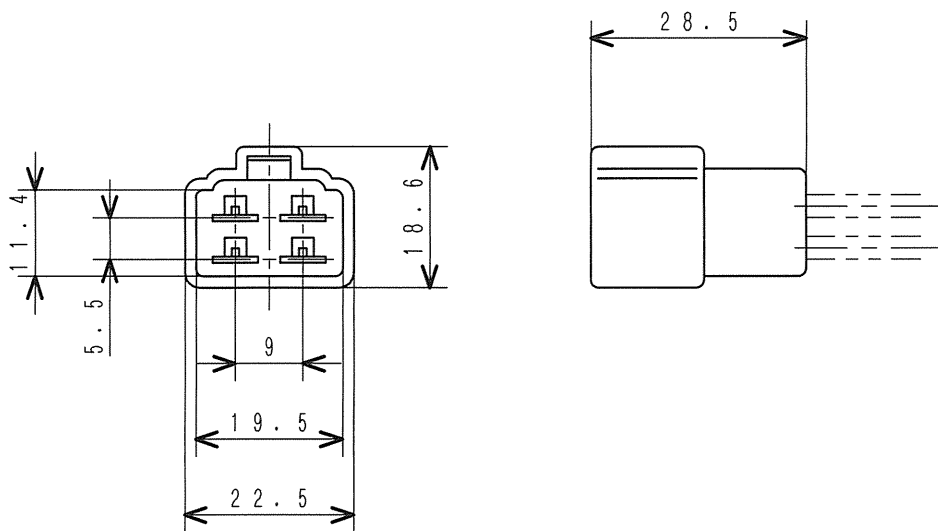


注記 コントロールタイマ用 (YAZAKI 7322-2237)  
 NOTE FOR CONTROL TIMER

コネクタ  
 CONNECTOR (3 POLES)

MM409-661

MHI CONFIDENTIAL



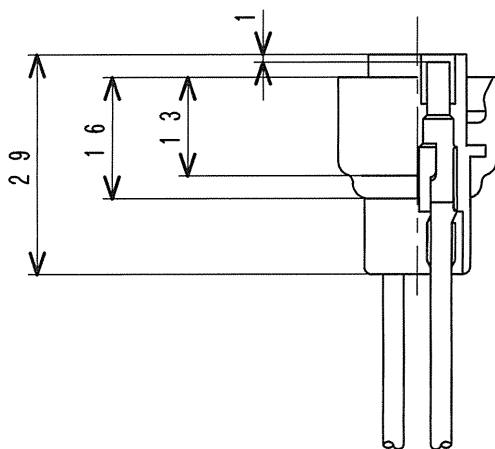
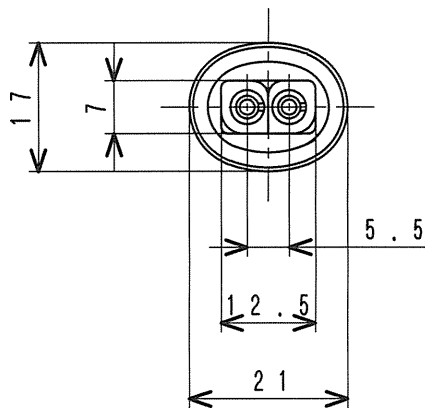
注 記 コントロールタイマ用 (YAZAKI 7122-2446)  
 NOTE FOR CONTROL TIMER

コネクタ  
 CONNECTOR (4 POLES)

MM409-663

MHI CONFIDENTIAL





注 記 タ\* イナモ L, R端子用 (SK ENG ALTERNATOR)  
油水分離付燃料フィルタ用

NOTE FOR L AND R TERMINALS OF ALTERNATOR (SK)  
FOR FUEL FILTER WITH WATER SEPARATOR

コネクタ  
CONNECTOR (2 POLES)

MH052-231

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