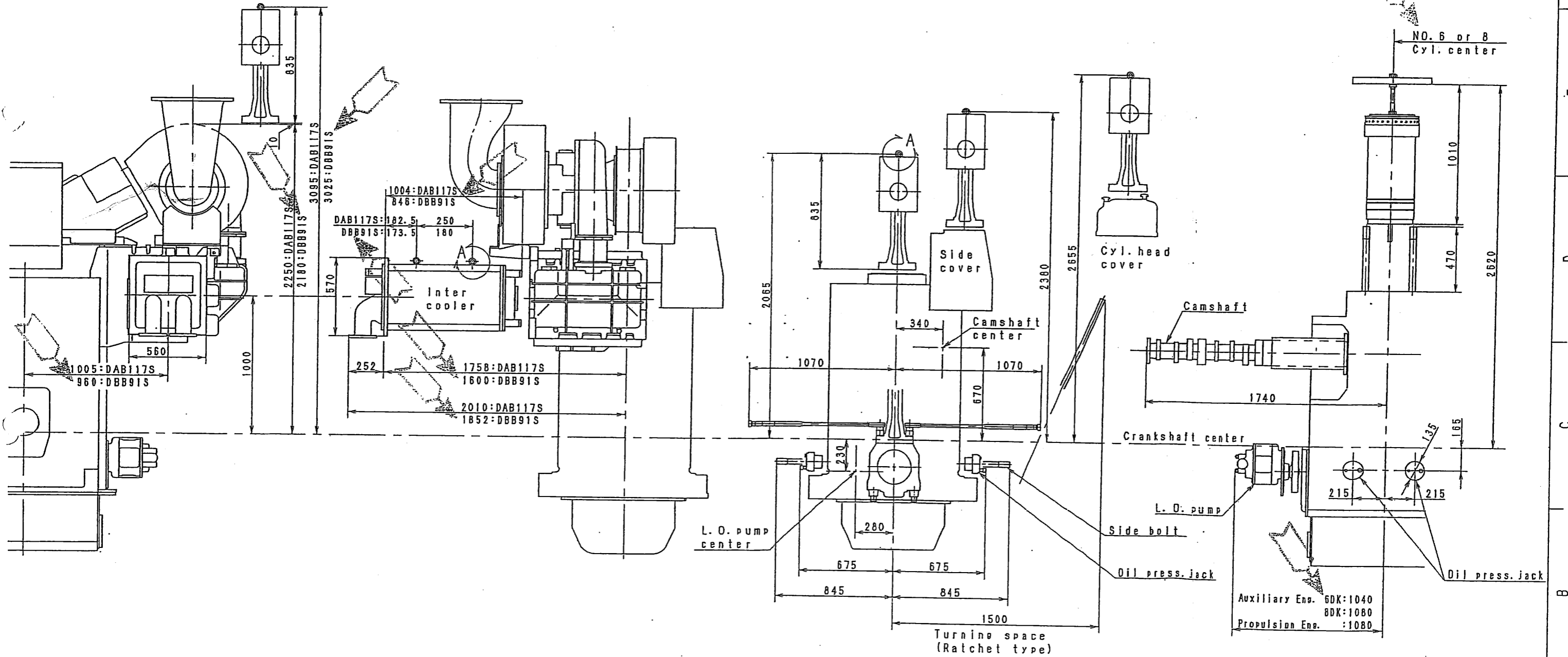
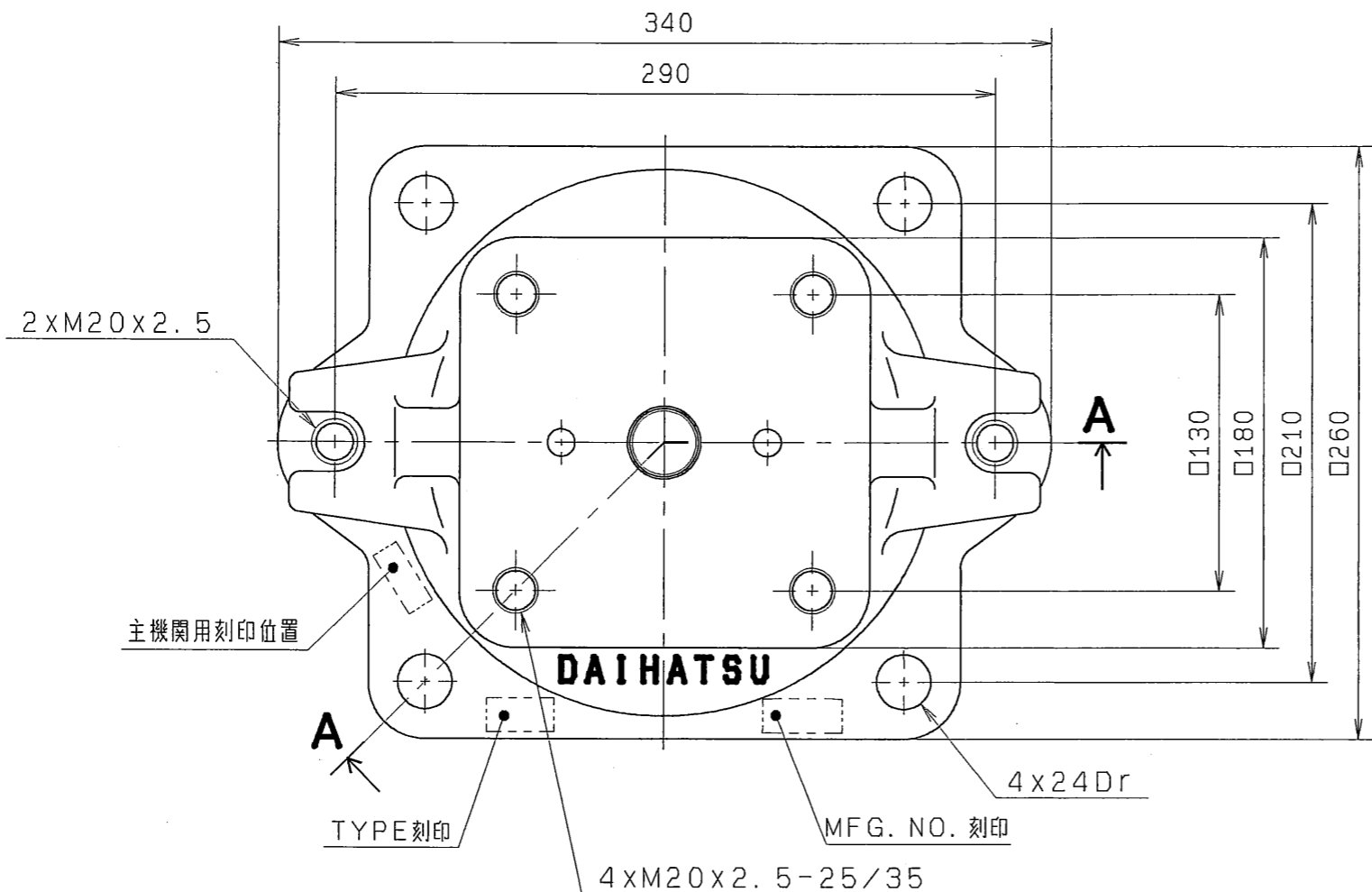


Detail "A"

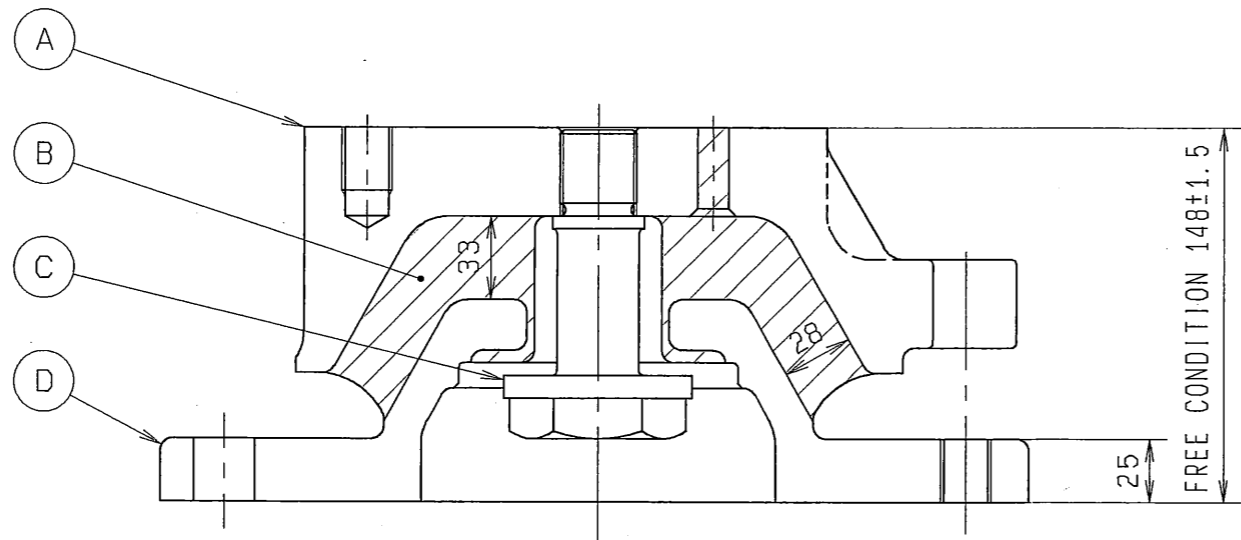
NAME OF PARTS	MASS OF PARTS
TURBOCHARGER ASSY.	MET30SR 500Kg
	MET26SR 310Kg
INTER COOLER ASSY.	DAB117S 500Kg
	DBB91S 450Kg
CYLINDER HEAD ASSY.	280Kg
PISTON & CONNECTING ROD ASSY.	140Kg
CYLINDER LINER ASSY.	200Kg
CAMSHAFT ASSY.	110Kg
L. O. PUMP ASSY.	80Kg
C. W. PUMP ASSY.	65Kg



APPROVED	A. Takano	LIST NO.	ADK28-0261-4 (10) #004	MATERIAL	GROUP	SCALE
CHECKED	O. Kimura	BEFORE		MASS.	QTY.	A2
DRAWN	N. Hatano	REF.	351124	TYPE	DK-28	29373
DATE	Jul. 4, 2000	DAIHATSU DIESEL MFG. CO., LTD.		NAME ENGINE DISASSEMBLING SPACE-FT		
			OSAKA JAPAN	PARTS NO.	QB22300770	C Z



TYPE	1	2	3	4
SPRING RATE Kc (kN/mm)	12.3	15.7	20.1	25.5
MAX. LOAD(kN)	40.2	51.0	65.7	74.5
WEIGHT(N)	APPROX. 294			



ITEM	NAME	MATERIAL	QTY
(A)	UPPER PLATE	FCD450	1
(B)	RUBBER	NR	1
(C)	STOPPER BOLT	S43C	1
(D)	LOWER PLATE	FCD450	1

EACH NO. REPRESENTS PART NO. IN CONTROL LIST.
(LIST NO. NN00177_01, 02, 03, 04)

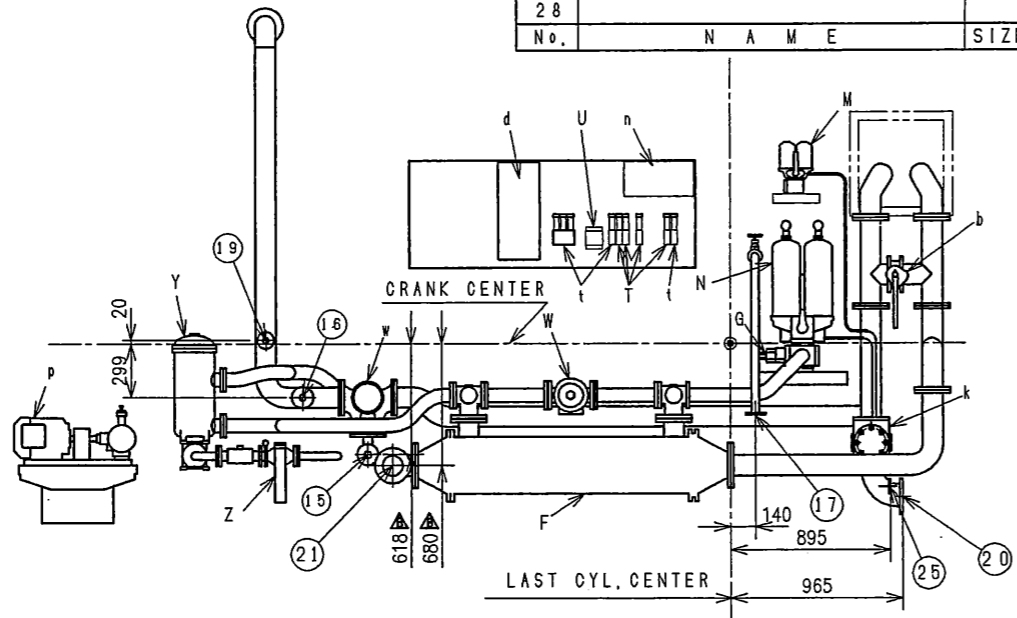
Section "A-A"

DATE	2002/11/06	HIGASHIUCHI
△ HITS部品コードをKIDS部品コードに書き換え		

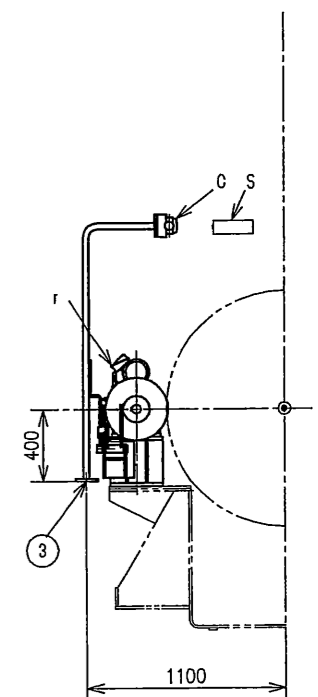
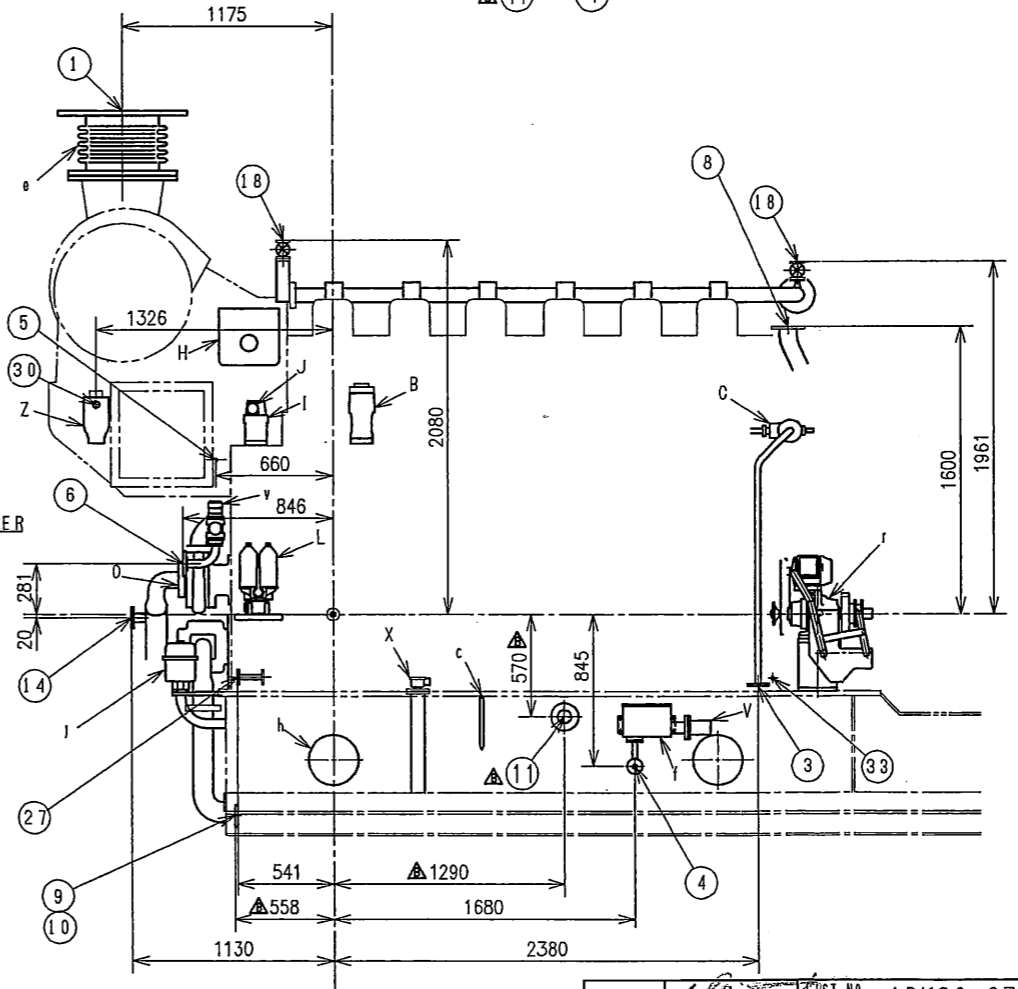
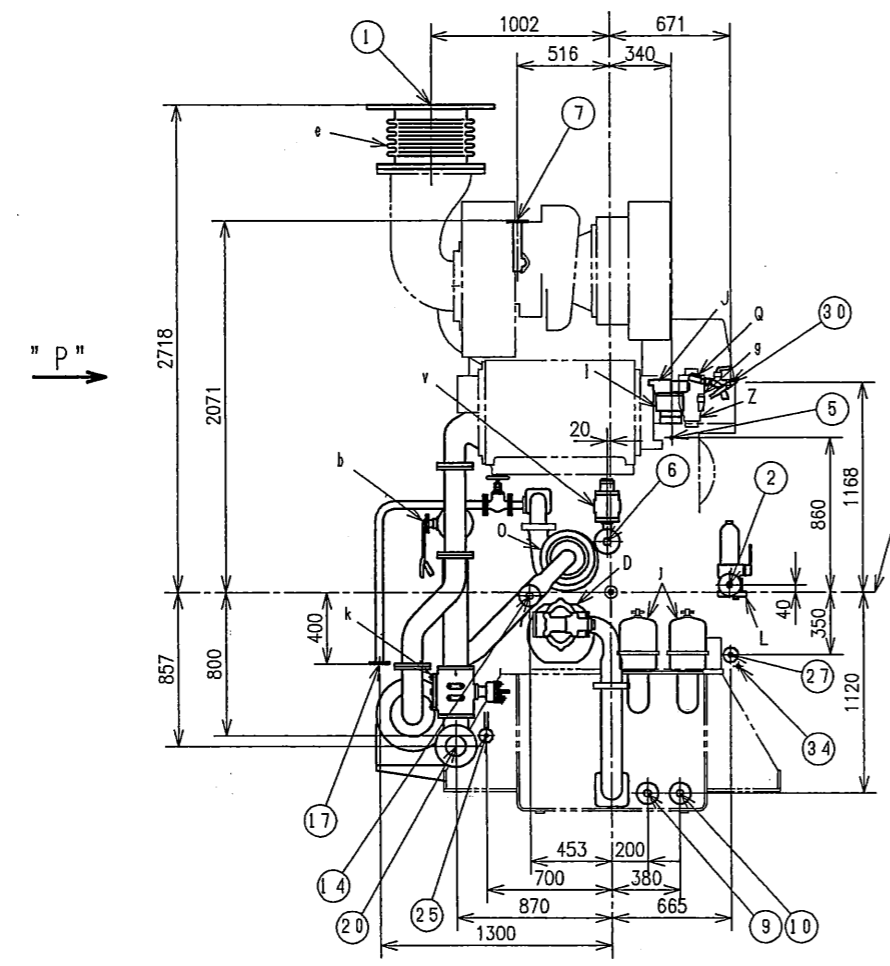
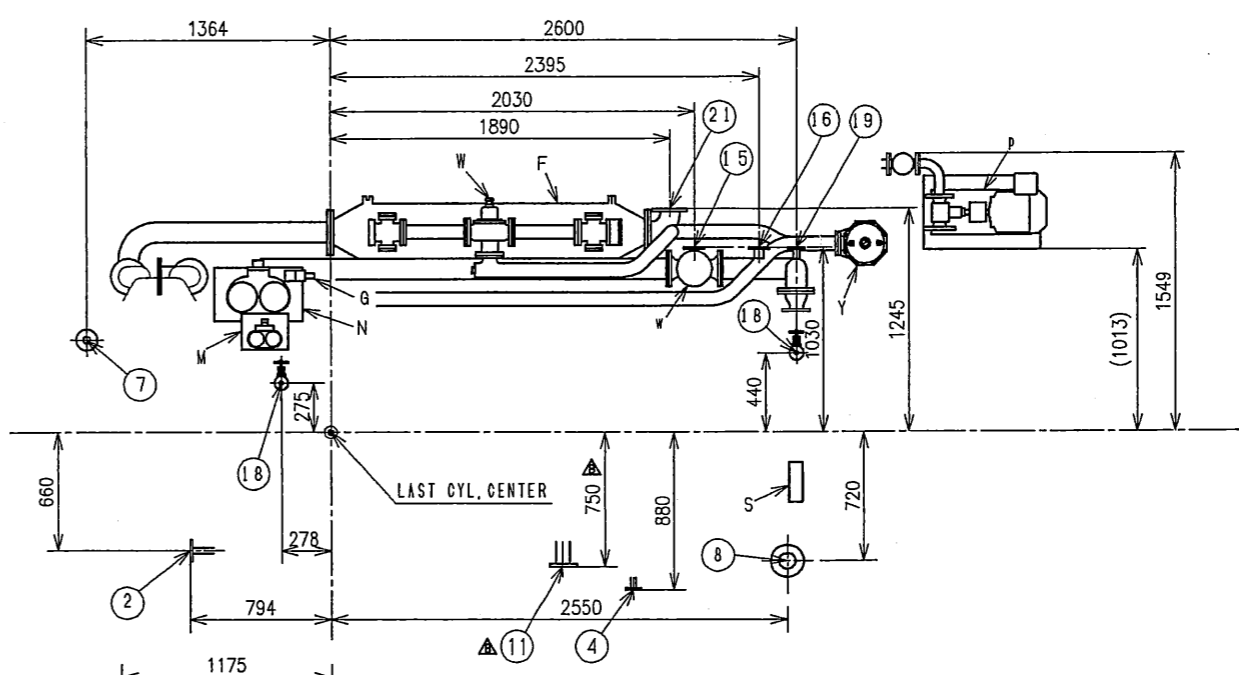
APPROVED	MIYAMOTO ICHIRO	LIST NO.	NN00177	MATERIAL	KUMI	GROUP	O	SCALE	1:3
CHECKED	FUJII KEIJI	BEFORE		MASS.	-	A	QTY.	-	⊕ 3 A3
	IINO SHINGO	REF.	-	TYPE	ALL				
DRAWN	HIGASHIUCHI NOBUYOSHI	DAIHATSU DIESEL MFG. CO., LTD. OSAKA JAPAN			NAME クミタテズ: コニカル: 5000E				
DATE	2002/11/06				ASSY.: CONICAL: 5000E				
					PARTS NO.	NN00177K001	A	*	

x	HT-FW THERMOSTAT VALVE
v	MAIN AIR STARTING VALVE
u	PRESSURE TRANSMITTER
s	TURNING MOTOR
r	CONNECTION FOR T/C CLEANING
q	LT FRESH WATER INLET
p	LO PRIMING PUMP(MOTOR DRIVEN)
o	CONTROL VALVE BOX
m	
l	
k	LT-CFW AUTO SHUT OFF VALVE
j	BY-PASS FILTER
i	
h	LO TANK CLEANING HOLE
g	STARTING OPERATION VALVE
f	COLLECT BOX
e	EXPANSION JOINT
d	JUNCTION BOX
c	LO TANK LEVEL GAUGE
b	WATER BUTTERFLY VALVE
a	
z	SLUDGE COLLECTOR
y	LO AUTO FILTER
x	LO TANK LEVEL SWITCH
w	LO THERMOSTAT VALVE
v	LEVEL SWITCH(FO LEAKED OIL)
u	THERMAL SWITCH
t	PRESSURE SWITCH
s	FUEL SHUT DOWN DEVICE
r	
q	HANDLE SWITCH
p	
o	FRESH WATER PUMP
n	LUB. OIL FINAL FILTER
m	LUB. OIL FILTER FOR TURBIN
l	FUEL OIL FINAL FILTER
k	
j	GOVERNOR MOTOR
i	GOVERNOR
h	GAUGE BOARD
g	LUB. OIL RELIEF VALVE
f	LUB. OIL COOLER
e	
d	LUB. OIL PUMP
c	FUEL OIL RELIEF VALVE
b	FUEL OIL INJECTION PUMP
a	
MARK	N A M E

36		27	FO FILTER DRAIN	20A	18	AIR VENT (TO EXPANSION TANK)	15A	9	LUB. OIL CHARGE PORT	40A	
35		26			17	WARMING INLET PORT	25A	8	MIST GAS OUTLET (ENGINE)	80A	
34	STEAM OUTLET (PIPE TRACE)	Ø10	25	LO FILTER (NO. 2&TURBIN) BLOW OFF DRAIN	15A	16	HT-FW OUTLET (TO LT-WF LINE)	40A	7	MIST GAS OUTLET (TURBIN)	40A
33	STEAM INLET (PIPE TRACE)	Ø10	24			15	HT-FW INLET (TO THERMOSTAT VALVE)	40A	6	STARTING AIR INLET	40A
32			23			14	HT-FW INLET (FROM EXPANSION TANK)	40A	5	CONTROL AIR INLET	Ø10
31			22			13			4	COLLECT BOX DRAIN	20A
30	CONNECTION FOR T/C CLEANING	15A	21	LT FRESH WATER OUTLET	100A	12			3	FUEL OIL OUTLET	25A
29			20	LT FRESH WATER INLET	100A	11	LUB. OIL OVERFLOW PORT	65A	2	FUEL OIL INLET	25A
28			19	WARMING OUTLET PORT	25A	10	LUB. OIL DISCHARGE PORT	40A	1	EXHAUST GAS OUTLET	500A
No.	N A M E	SIZE	No.	N A M E	SIZE	No.	N A M E	SIZE	No.	N A M E	SIZE



View "P"



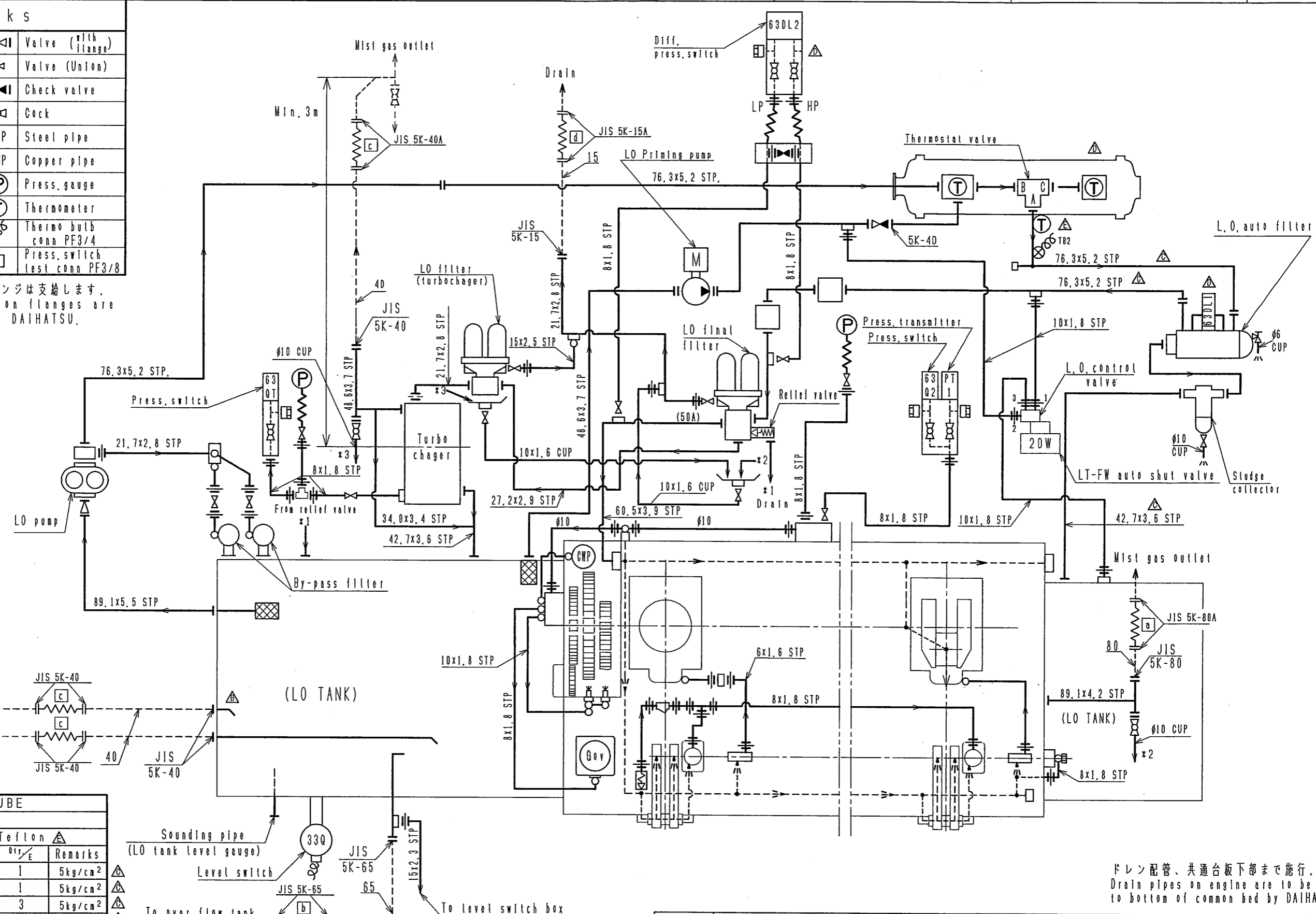
▲	Add. 11 (Lub. Oil overflow port), Rev. 9, 10 (Lub. oil Charge/Discharge port) position etc.	2008/07/31	H. K.
▲	FIRST DRAWING	2007/11/28	N. H.
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APPROVED	<i>L. Miyama</i>	LIST NO.	ADK28-0741-4	MATERIAL	APRV.	GROUP	8	SCALE	1:30
CHECKED	<i>F. Tsuchida</i>	BEFORE		WASS.	PTY.				A2
DRAWN	KAWAUCHI HIROSHI	REF.		TYPE	6DK-28				
DATE	2008/07/31			NAME	ギソウス:				
					ARRANGMENT OF FITTING: :				
				PARTS NO.	AQA10005767		B	*	

DAIHATSU DIESEL MFG. CO., LTD.
OSAKA JAPAN

Remarks			
+	Flange	II	Valve (with flange)
	Union joint	⊗	Valve (Union)
+	Bite joint	II	Check valve
	Spectacle flange	⊗	Cock
○	Banjo joint	STP	Steel pipe
△	Reducer	CUP	Copper pipe
~	Flexible tube	P	Press. gauge
	Orifice	T	Thermometer
—	By DAIHATSU	⊗	Thermo bulb conn PF3/4
---	By SHIPYARD	□	Press. switch test conn PF3/8

(注) JIS標準の相フランジは支給します。
 (NOTICE) JIS Companion flanges are supplied by DAIHATSU.



FLEXIBLE TUBE					
RULE: GL					
M: Metallic			T: Teflon		
No.	Size	Length	Max. Press.	Qty.	Remarks
a	80A	700	M	1	5kg/cm ²
b	65A	600	M	1	5kg/cm ²
c	40A	500	T	3	5kg/cm ²
d	15A	400	T	1	5kg/cm ²

ドレン配管、共通台板下部まで施行。
 Drain pipes on engine are to be led to bottom of common bed by DAIHATSU.

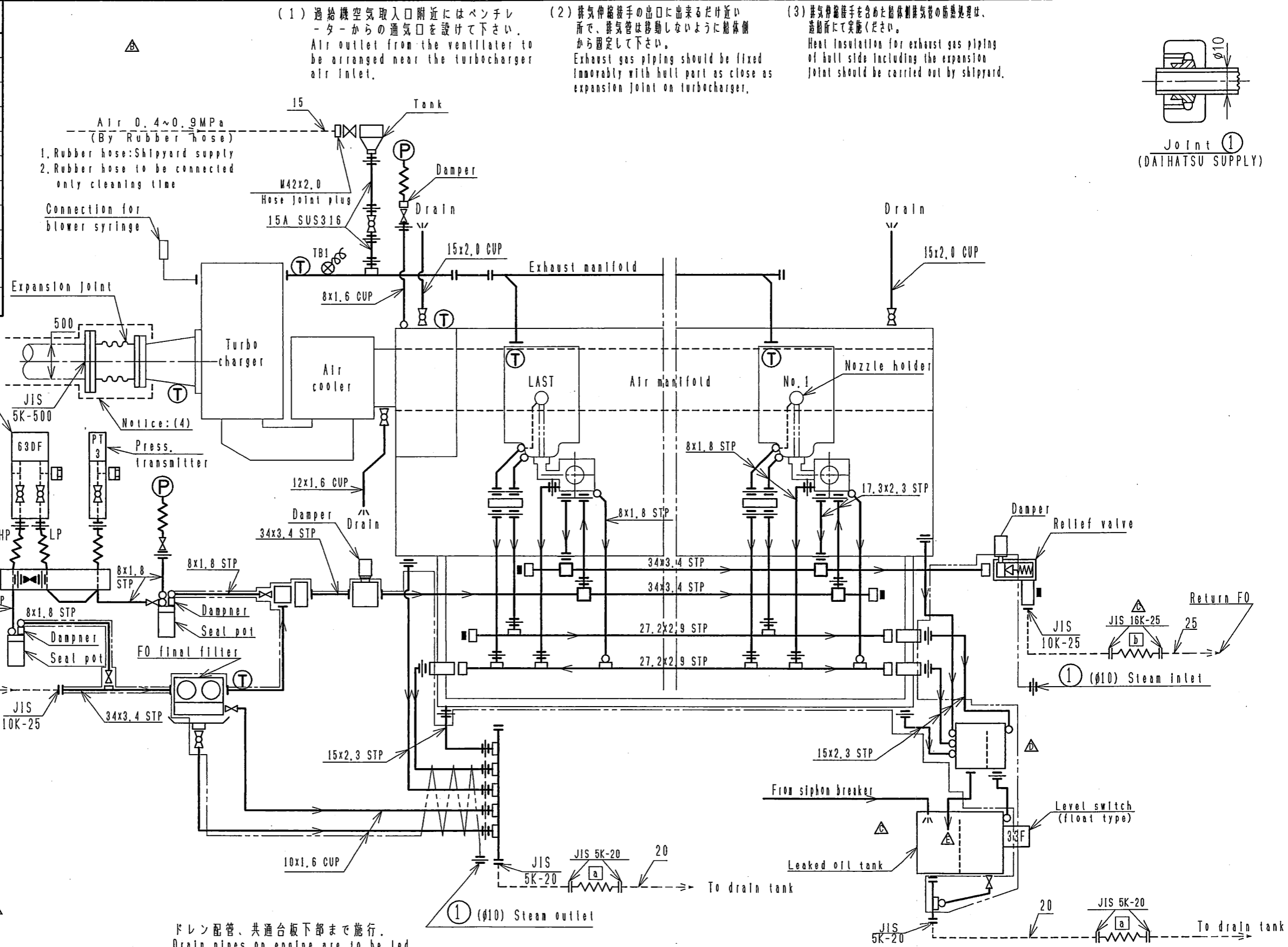
△	Rev. Flexible tube, Eng. Inlet thermometer & thermo-bulb	2008/07/31	H. K
△	Add. 63DL1, 63DL2, thermometer at LO cooler outlet	2008/01/09	N. H
△	Chg. Flexible tube, pipe size	2007/11/27	N. H
△	Rev. Note, L.O. charge port	2007/02/08	M. O
△	FIRST DRAWING	2007/01/18	N. H

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APPROVED	<i>A. Takahashi</i>	LIST NO.	ADK28-0741-4	MATERIAL	APRV.	GROUP	0	SCALE	-
CHECKED	<i>T. Terachi</i>	BEFORE		MASS.	-	QTY.	-		A3
DRAWN	<i>K. Kawachi</i>	REF.	-	TYPE	6DK-28				
DATE	2008/07/31	DAIHATSU DIESEL MFG. CO., LTD.			NAME				
		OSAKA JAPAN			L.O. PIPING SYSTEM::				
					PARTS NO. AQA10003776				

外部配管フランジ付

Remarks			
+	Flange		Valve (with flange)
+	Union joint		Valve (Union)
+	Bite joint		Check valve
o	Banjo joint		Cock
- - -	Flexible tube	STP	Steel pipe
- - -	By DAIHATSU	CUP	Copper pipe
- - -	By SHIPYARD		Press. gauge
- - -			Thermometer
- - -	Steam trace with lagging		
- - -			Thermo bulb conn. (PF3/4)
- - -			Press. switch test conn PF3/8



(注) JIS標準の相フランジは支給します。
(NOTICE) JIS Companion flanges are supplied by DAIHATSU.

FLEXIBLE TUBE					
RULE:GL					
T:Teflon			R:Rubber		
No.	Size	Length	Mat. orial	Qty.	Remarks
a	20A	400	T	2	5kg/cm ²
b	25A	500	T	2	10kg/cm ²

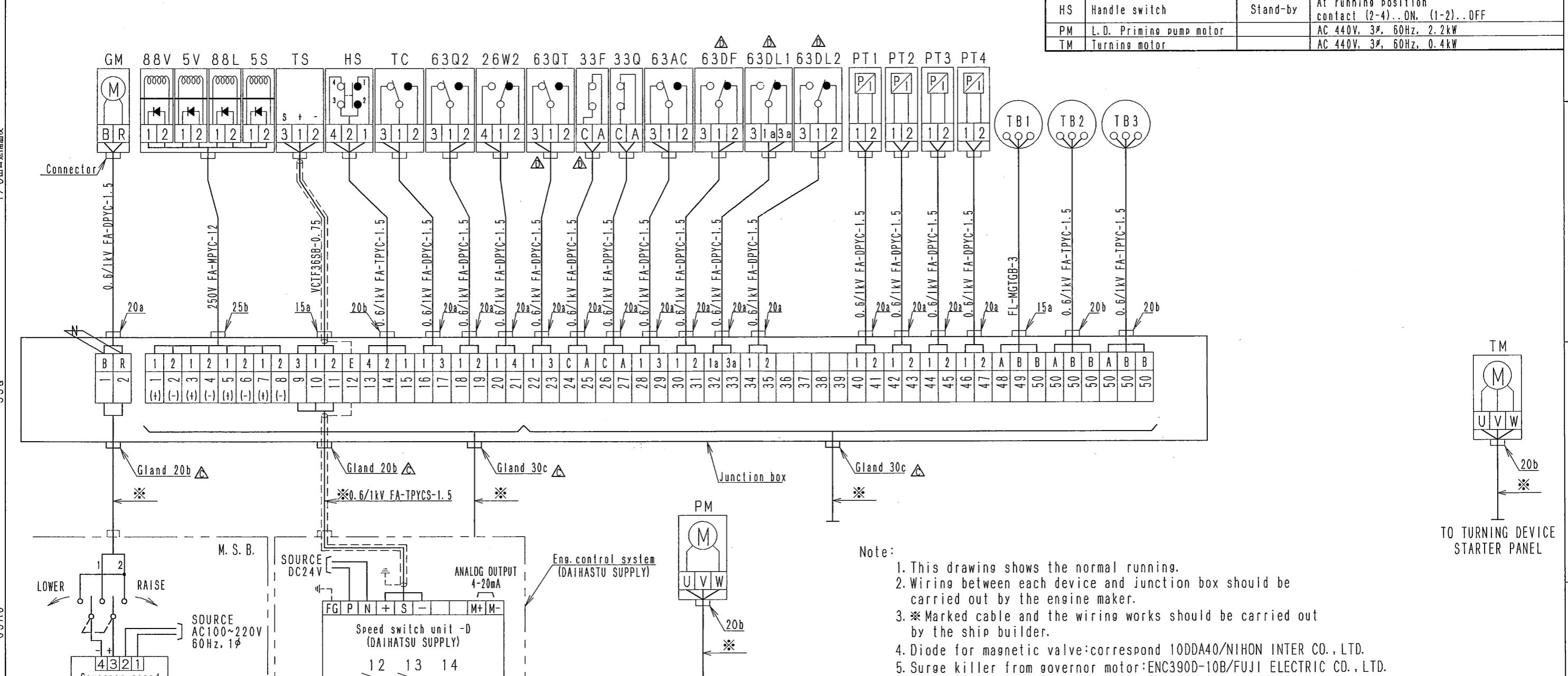
Rev.	Description	Date	By
△	Rev. Flexible tube, FO leak pipe	2008/07/31	H. K
△	Add. 63DF, Chg. Leak oil piping	2008/01/09	N. H
△	Chg. Level SW box, flexible tube	2007/11/27	N. H
△	Rev. Note	2007/02/08	M. O
△	FIRST DRAWING	2007/01/18	N. H

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APPROVED		LIST NO.	ADK28-0741-4	MATERIAL	APRV.	GROUP	0	SCALE	-
CHECKED		BEFORE		MASS.	-	QTY.	-		A3
DRAWN	KAWAUCHI HIROSHI	REF.		TYPE	6DK-28				
DATE	2008/07/31	DAIHATSU DIESEL MFG. CO., LTD.			NAME FO&EXH. ガス ケイトウズ::				
				OSAKA JAPAN			PARTS NO. AQA10003774		

外部配管フランジ付 圧力SWテスト用座 (PF3/8) T/C出口温度計 F0圧力発信器 (PT3, T/C出口温度計座 (PF3/4) 各筒出口温度計 (PF3/4)

1				2				3				4				5				6				7			
MARK	NAME	USE	NOTE		MARK	NAME	USE	NOTE	REMARKS	MARK	NAME	USE	NOTE	REMARKS	MARK	NAME	USE	NOTE	REMARKS								
TB1	Exh. gas T/C inlet temp.	IND. & Alarm	Over 580 °C		63Q2	L.O. Press. switch	Stop	Below 0.2 MPa (1-2) ON	Normal open	GM	Governor motor	Speed control	Hydraulic constant speed governor control DC 24V		88V	Start air magnet. valve	Start	DC 24V, about 0.7A									
TB2	L.O. engine inlet temp.	IND. & Alarm	Over 65 °C		26W2	HT-FW Thermal switch	Stop	Over 90 °C (1-4) ON		14	Low speed switch	Engine start	Over speed about 300min ⁻¹ contact (14C-14A) ON		13	Low speed switch	Engine start	Over speed about 300min ⁻¹ contact (13C-13A) OFF									
TB3	HT-FW engine outlet temp.	IND. & Alarm	Over 85 °C							12	Over speed switch	Stop	Over speed 112~115%, contact... (12C-12A) ON														
					33F	Level switch (Leaked oil tank)	Alarm	When F.O. High press. pipe broken contact (A-C) OFF	Normal close						TS	Speed sensor	Speed detect	Pulse sensor type									
					33Q	Level switch (Lub. oil sump tank)	Alarm	When L.O. sump tank low level contact (A-C) OFF							5V	Fuel shut down magnetic valve	Control & safety	DC 24V, 0.7A, Fuel shut down when solenoid magnetized	Exciting trip								
PT1	L.O. engine inlet press.	IND. & Alarm	Below 0.25 MPa		63QT	T/C LO Press. switch	Alarm	Below 0.06 MPa (1-3) OFF							5S	Fuel shut down magnetic valve	Safety	DC 24V, 0.7A, Fuel shut down when solenoid magnetized									
PT2	HT-FW engine inlet press.	IND. & Alarm	Below 0.15 MPa												88L	Fuel control piston magnetic valve	Fuel control	DC24V, 0.7A FO control in starting process when solenoid magnetized									
PT3	F.O. engine inlet press.	IND. & Alarm	Below 0.35 MPa											TC	Turning safety switch	Stand-by	When turning bar used Below 0.2MPa (1-3)..... OFF	Normal close									
PT4	S.A. engine inlet press.	IND. & Alarm	Below 1.5 MPa											HS	Handle switch	Stand-by	At running position contact (2-4) .. ON, (1-2) .. OFF										
63DF	Differential Press. switch (F.O. Eng. inlet Filter)	Alarm	Over 0.1 MPa (1.0 bar) (1-2) OFF	△	63AC	Cont. air press. switch	Alarm	Below 0.6 MPa (1-3) OFF		PM	L.O. Priming pump motor		AC 440V, 3φ, 60Hz, 2.2kW		TM	Turning motor		AC 440V, 3φ, 60Hz, 0.4kW									
63DL1	Differential Press. switch (L.O. Eng. inlet Filter)	Alarm	Over 0.08 MPa (0.8 bar) (1a-3a) OFF	△																							
63DL2	Differential Press. switch (L.O. Eng. inlet Filter)	Alarm	Over 0.1 MPa (1.0 bar) (1-2) OFF	△																							



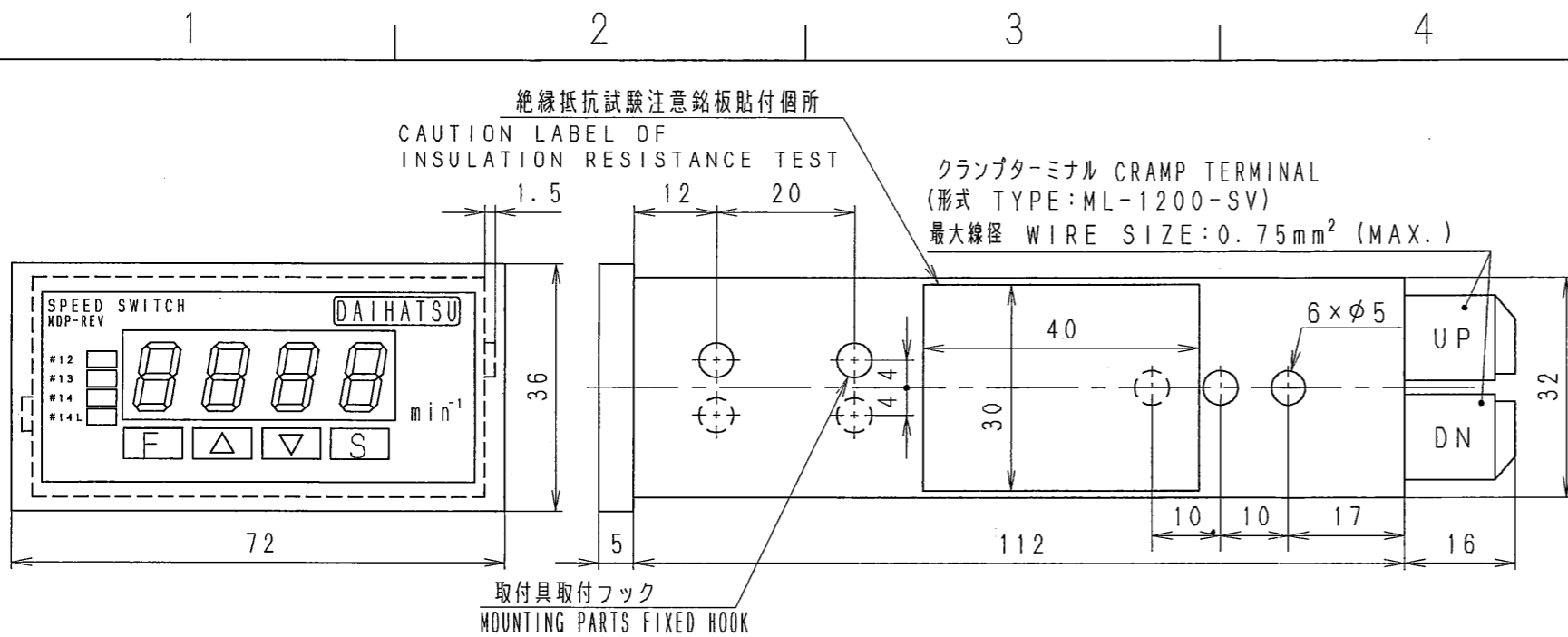
- Note:
- This drawing shows the normal running.
 - Wiring between each device and junction box should be carried out by the engine maker.
 - * Marked cable and the wiring works should be carried out by the ship builder.
 - Diode for magnetic valve: correspond 10DDA40/NIHON INTER CO., LTD.
 - Surge killer from governor motor: ENC390D-10B/FUJI ELECTRIC CO., LTD.

△	Add. 63DF, 63DL1, 63DL2	2008/01/09	N. H
△	Chg. Gland size, 63QT set, speed sensor	2007/11/27	N. H
△	Rev. Note	2007/02/08	M. O
△	FIRST DRAWING	2007/01/18	N. H

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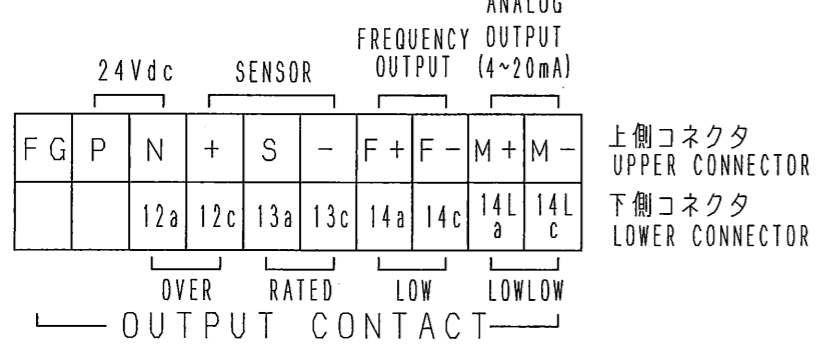
APPROVED	ISE WAKISHI	LIST NO.	ADK28-0741-4	MATERIAL	APRV.	GROUP	0	SCALE	-
CHECKED		BEFORE		MASS.	-	QTY.	-		A3
DRAWN	HATANO NAKAZU	REF.	-	TYPE	DK-28				
DATE	2008/01/09			NAME	ケッセンズ:				
				DAIHATSU DIESEL MFG. CO., LTD. OSAKA JAPAN					
				WIRING DIAGRAM::					
				PARTS NO.	AQA10003778			D	*

F.O. inlet temp. 70-10式 (33F) 63AC

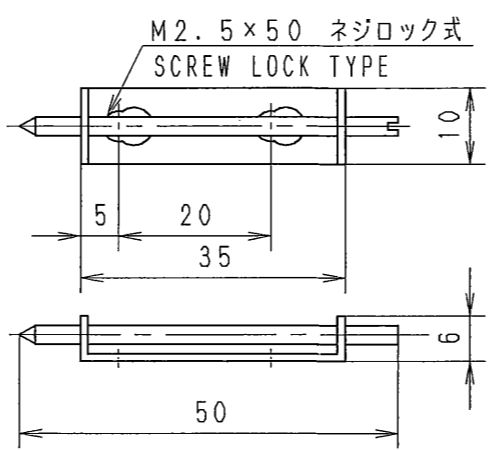


電源	POWER VOLTAGE	DC24V (±25%) リップル10%以下	24VDC (±25%) RIPPLE 10% OR LESS
消費電力	POWER CONSUMPTION	最大3.2W	3.2W MAX.
計測精度	MEASURING ACCURACY	0.05%±1digit at F.S. ±0.5% at F.S. (アナログ出力)	0.05% 1 digit at F.S. ±0.5% at F.S. (analog output)
計測範囲	MEASURING RANGE	2Hz~7kHz/0~9990min ⁻¹	2Hz to 7kHz / 0 to 9990 min ⁻¹
入力	INPUT	パルスセンサ出力信号 (ロー: 8V以下) (ハイ: 15V以上)	PULSE SENSOR OUTPUT SIGNAL (LOW: under 8V) (HI.: Over 15V)
出力	アナログ出力 ANALOG	4~20mA (負荷抵抗最大500Ω)	4 to 20mA (load resistance 500Ω MAX.)
	接点出力 CONTACT	AC・DC100V 0.1A (無電圧半導体接点)	100VAC/VDC 0.1A (voltage free contact)
	周波数出力 FREQUENCY	1Hz/1回転 (60Hz以下は除く) 0~15V (負荷抵抗5kΩ以上)	1Hz/1ROTATION (without under 60Hz) 0 to 15V (load resistance 5kΩ over)
表示	デジタル表示 DIGITAL DISPLAY	7セグメントLED (赤) ×4桁 (輝度調整有り)	7SEGMENTS LED × 4 DIGITS (WITH DIMMER)
	LED表示 LED LAMP	#12 (赤), #13 (緑) #14 (緑), #14L (緑)	#12 (RED), #13 (GREEN) #14 (GREEN), #14L (GREEN)
絶縁抵抗	INSULATION RESISTANCE	導体部-箱体間 20MΩ以上 DC50V	CONDUCTOR-BODY OVER 20MΩ 50VDC
耐電圧	DIELECTRIC STRENGTH	接点出力-箱体間 AC1500V 1分間	CONTACT OUTPUT-BODY 1500VAC 1min.
使用温度	OPERATING TEMP.	+5~+55℃	+5 to +55℃
保存温度	STORAGE TEMP.	-20~+65℃	-20 to +65℃
相対湿度	RELATIVE HUMIDITY	95%以内 (但し、結露がないこと)	WITHIN 95% (NON CONDENSATION)
雰囲気	ATMOSPHERE	腐食性ガスがないこと	WITHOUT CORROSIVE GAS
振動	VIBRATION RESISTANCE	5~13.2Hz ±1mm, 13.2~100Hz 0.7G	
衝撃	SHOCK RESISTANCE	10G以内	WITHIN 10G
材質	MATERIALS	グラスファイバー強化樹脂	PLASTIC WITH GLASS FIBER
塗装色	BODY COLOR	樹脂自然色 (黒)	BLACK (PLASTIC NATURAL COLOR)
重量	WEIGHT	0.2kg	

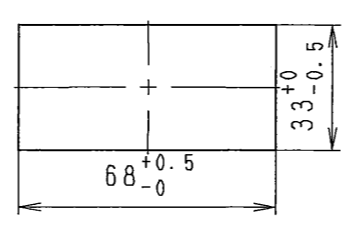
入出力コネクタ
I/O CONNECTOR



取付具 (付属品)
MOUNTING PART (ACCESSORIES)



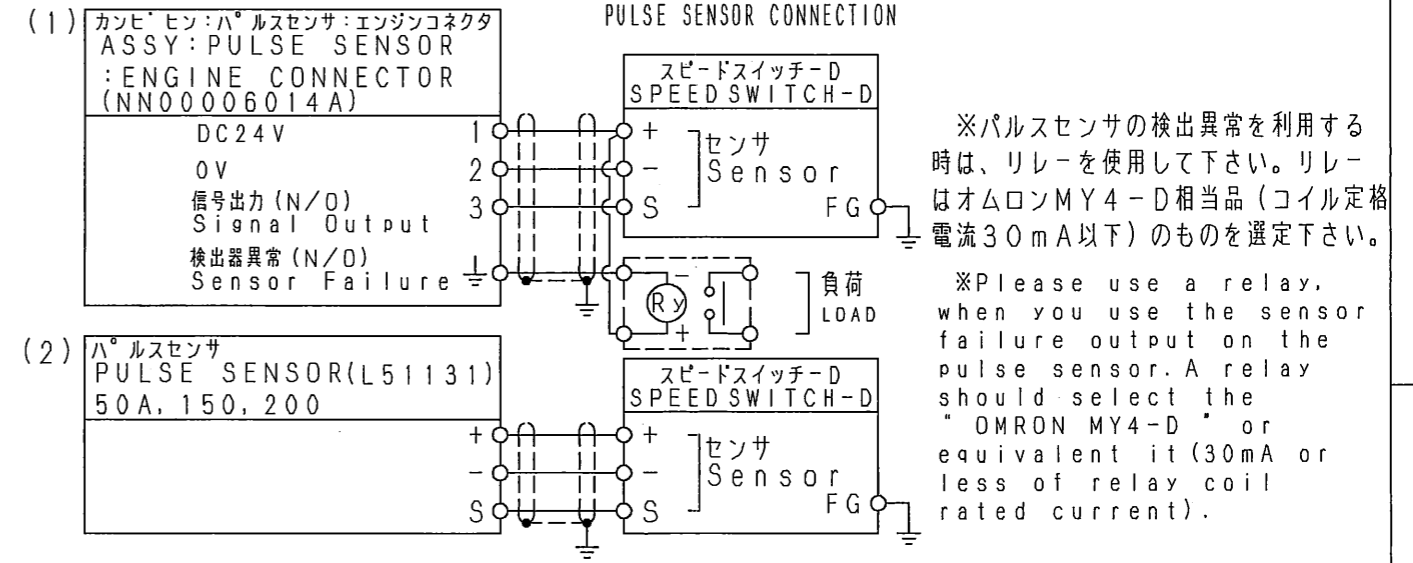
パネルカット
PANEL CUT



端子番号	用途	TERMINAL NUMBER	OBJECT
FG	: フレームグランド	FRAME GRAND	
P	: DC24V		
N	: 0V		
+	: DC24V	PULSE INPUT	} センサ } SENSOR
S	: パルス入力		
-	: COM		
F+	: 周波数出力	FREQUENCY OUTPUT	} オプション } OPTION
F-	: COM		
M+	: 電流出力	CURRENT OUTPUT	
M-	: COM		

- 1 2 a : #12 検知接点 #12 DETECTION CONTACT OUTPUT
- 1 2 c : #13 検知接点 #13 DETECTION CONTACT OUTPUT
- 1 3 a : #14 検知接点 #14 DETECTION CONTACT OUTPUT
- 1 3 c : #14L タイマー接点 #14L TIMER CONTACT OUTPUT
- 1 4 a : #14L タイマー接点 #14L TIMER CONTACT OUTPUT
- 1 4 c : (*使用にあたっては「マニュアル」参照のこと REFER TO THE MANUAL.)

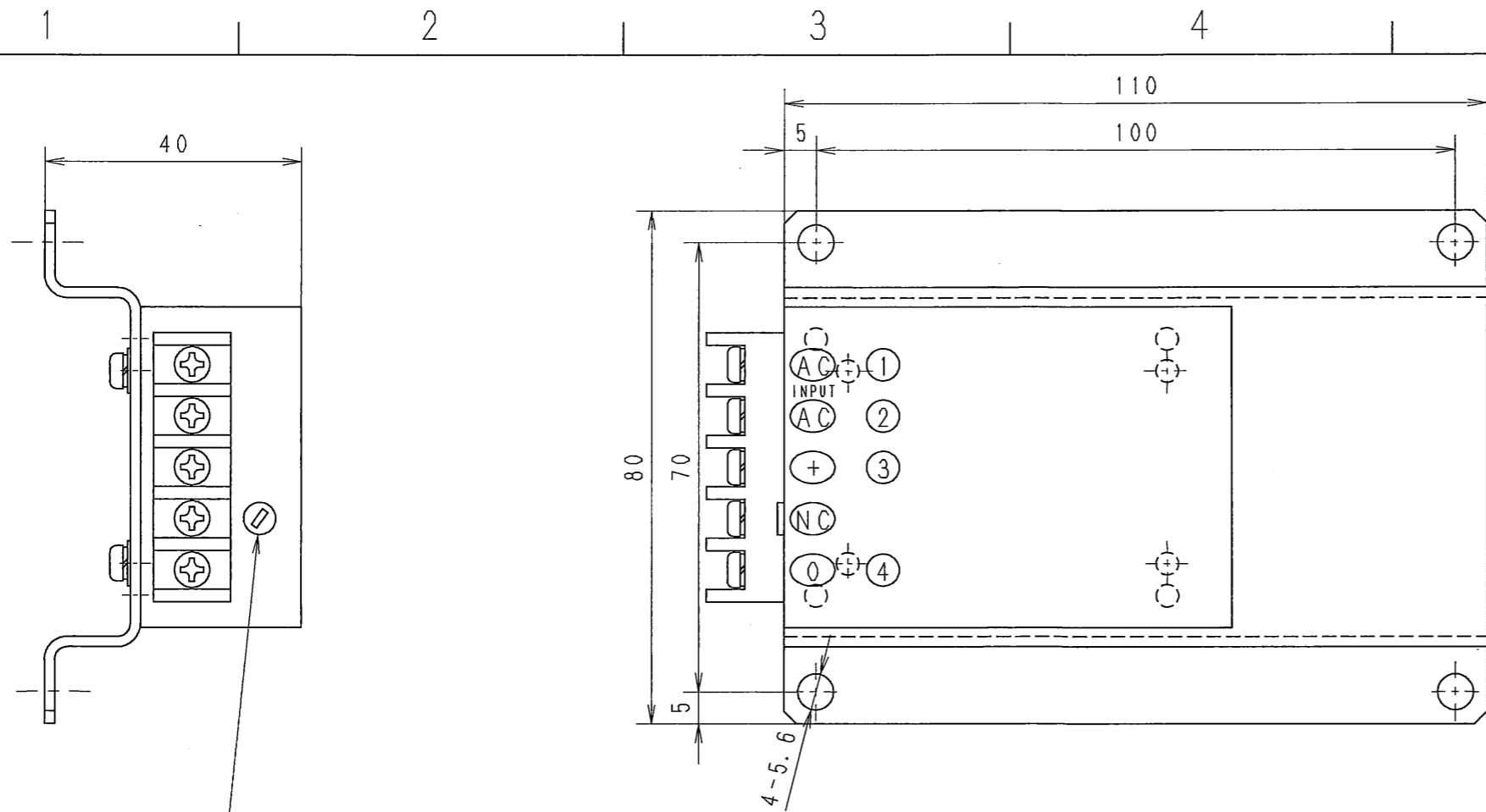
パルスセンサ接続図
PULSE SENSOR CONNECTION



E	(6~7-E) CHANGE	(E005098)	2007/02/23	T. N
D	(6~7-E) CHANGE		2006/03/15	T. NAKAMITSU
C	(4-D) ADD. "UP", "DN", φ6→φ5, 15→17		2005/12/08	K. YOSHIDA
B	(1~4-D) MDP-REV-D→MDP-REV, 6×φ6, (4~7-A~D) CHANGE		2005/02/14	K. YOSHIDA
△	FIRST DRAWING		2004/06/21	K. YOSHIDA

APPROVED	WOCHIDUKI WASARU	LIST NO.	NN00262	MATERIAL	ASSY.	GROUP	9	SCALE	1:1
CHECKED		BEFORE		MASS.	-	QTY.	-		A3
		REF.		TYPE	MES				
	CHUJYOU JYUNYA			NAME	カンビヒン:ソクドスイッチユニット:-D				
	(H)NAKAMITSU TOSHIO			ASSY.:	SPEED SWITCH UNIT:-D				
		DATE	2007/02/23	PARTS NO.	NN00262001A E *				

DAIHATSU DIESEL MFG. CO., LTD.
OSAKA JAPAN



電圧調整トリマー
V. ADJ: Voltage Adjustable Trimmer

SPECIFICATIONS

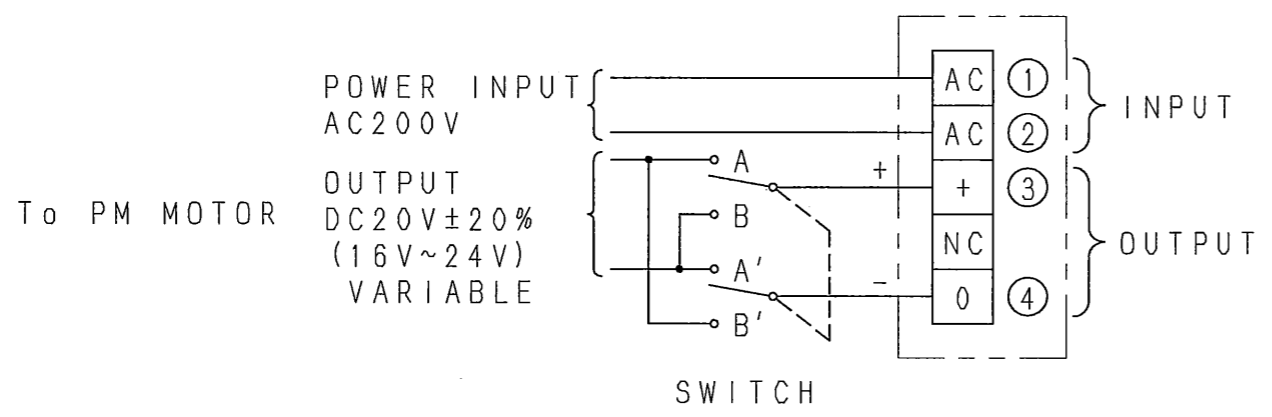
INPUT : AC200Vrms (175~264Vrms : 47~440Hz)
OUTPUT : DC20±20% (TO PM MOTOR)
(DC16~24V)

NOTE)

1. The Governor speed rise/lower change over switch should be arranged in between this unit and the motor.
(ガバナスピードの上げ下げ切りかえは、本装置の2次側にスイッチを設けて行ってください。)

CAUTION)

1. Do not stall the motor for a long time, it could burn out the motor or this unit
(長時間ガバナモータをストールさせた状態で放置するとモータや本装置の故障の原因となります。)



C	ADD INPUT ALLOWABLE RANGE	(E005839)	2007/08/08	K. M
B	CHANGE OF DRAWING	(E005811)	2007/08/01	T. N
△	FIRST DRAWING		2006/08/22	T. N
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APPROVED	CHUJYOU JYUNYA	LIST NO.	NN00031	MATERIAL	KUMI	GROUP	0	SCALE=1:1
CHECKED		BEFORE		MASS.	-	QTY.	-	⊙ E3 A3
		REF.	-	TYPE	MES			
DRAWN	(H)NITSUTAKE KYOKO	DAIHATSU DIESEL MFG. CO., LTD. OSAKA JAPAN		NAME ショウニソフ: ガバナコントロールユニット B: AC200V				
DATE	2007/08/08			APPROVAL: GOVN. CONTROL UNIT B: AC200V				
				PARTS NO.	NN00031K012	C	*	