

MAIN DIESEL GENERATOR  
ENGINE AUTO. CONTROL  
PANEL

DAIHATSU DIESEL MFG. CO., LTD.

TECHNICAL DEPARTMENT

SHIGA JAPAN

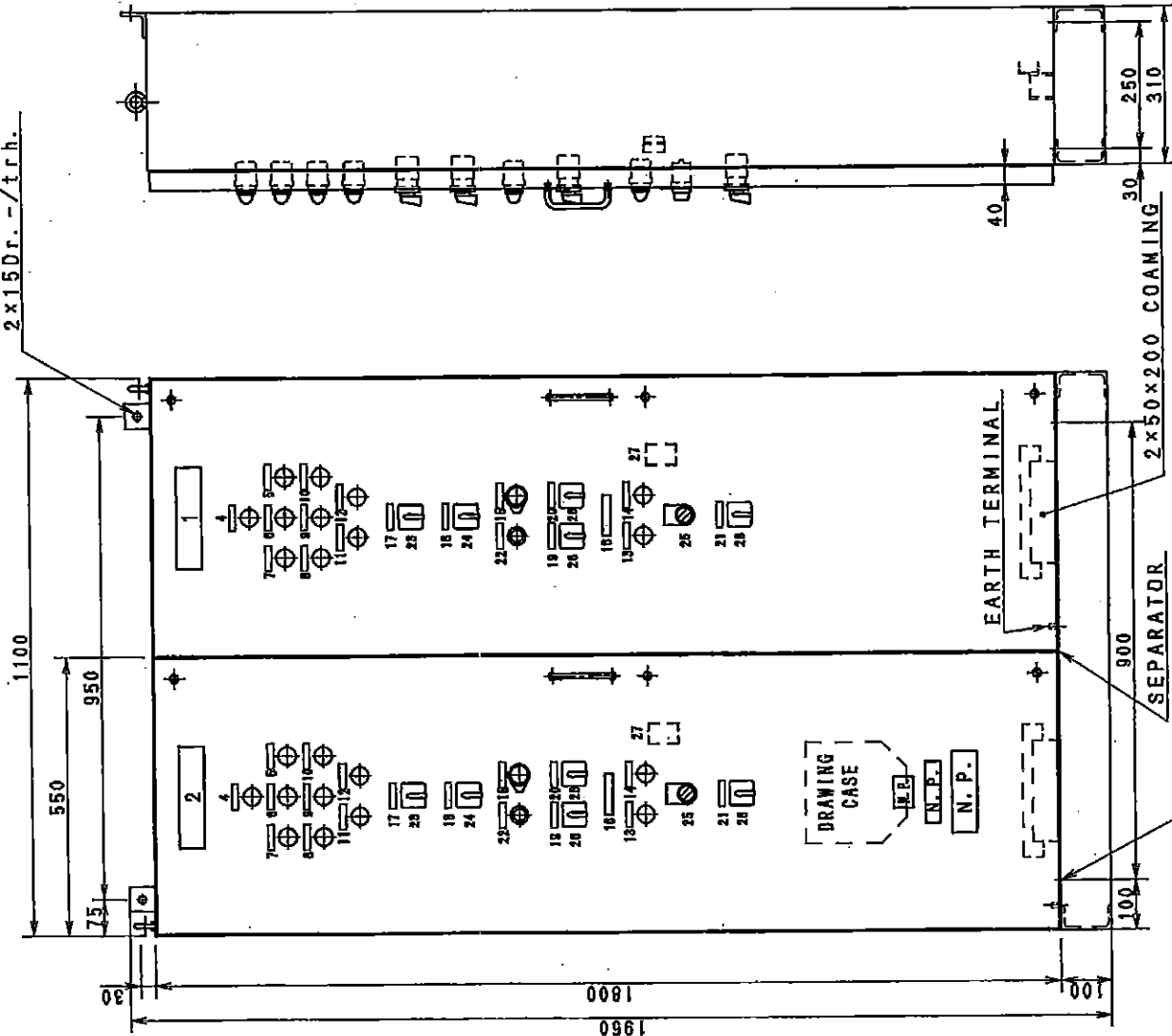
PURCHASE No. AQA20004260A

HULL No.	H2431/32/33	DRAWN BY	N. Hatano
TYPE	ME	CHECKED BY	<i>Y. Terachi</i>
LIST No.	AQA10003771C		
DATE	Jun. 18, 2007	APPROVED BY	<i>A</i>
REVISION	B:2007/02/07 C:P. 8, 9, 16, 17, 24, 25, 32, 33 2007/11/27		

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2008/09/16 TECHNICAL DEPARTMENT

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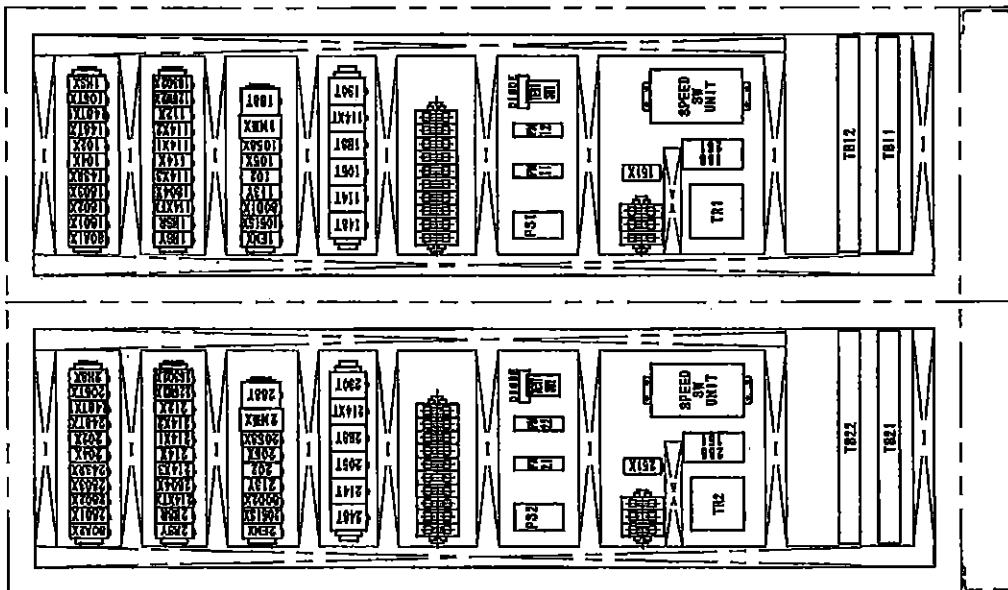
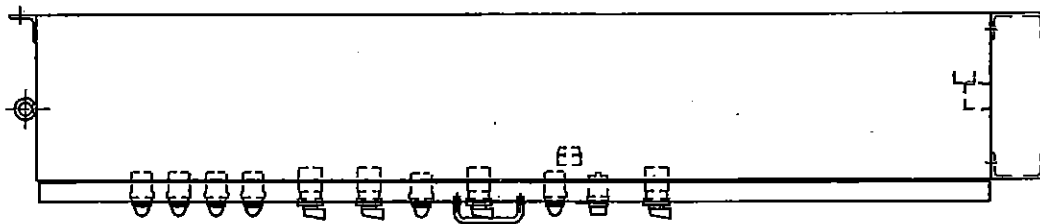
No.	MARK	NAME PLATE	NOTE
1	NP1	NO. 1 MAIN DIESEL GEN. ENG. AUTO. CONTROL. PANEL	N.P.
2	NP2	NO. 2 MAIN DIESEL GEN. ENG. AUTO. CONTROL. PANEL	N.P.
3			N.P.
4	WL11.21	CONTROL SOURCE	LAMP (WHITE)
5	GL11.21	START STAND-BY	LAMP (BLUE)
6	GL11.21	WARNING	LAMP (GREEN)
7	RL11.21	START FAILURE	LAMP (RED)
8	RL12.22	OVER SPEED	LAMP (RED)
9	RL13.23	L.O. LOW PRESS.	LAMP (RED)
10	RL14.24	C.E. W. HIGH TEMP.	LAMP (RED)
11	RL15.25	CIRCUIT TROUBLE	LAMP (RED)
12	RL16.26	EMERGENCY STOP	LAMP (RED)
13	WL1.2	SOURCE	LAMP (WHITE)
14	GL1.2	WARNING	LAMP (GREEN)
15	PBTM. PZPN	EMERGENCY STOP	PUSH BUTTON SWITCH PINLOCK (RED)
16	NP11	PRINING PUMP	N.P.
17	NP5	CONT. PMS	N.P.
18	NP8	LOCAL OPERATION	N.P.
19	NP7	AC24V SOURCE	N.P.
20	NP8	DC24V SOURCE	N.P.
21	NP9	AC440V SOURCE	N.P.
22	PBILT. PZ2LT	LAMP TEST	PUSH BUTTON SWITCH (BLACK)
23	143R.243R	LOCAL-REMOTE	CHANGE OVER SWITCH
24	143S.243S	STOP-START	OPERATION SWITCH PULL RETURN
25	143P.243P	ON-OFF-AUTO	OPERATION SWITCH
26	152.252	OFF-ON	DISCON SWITCH
27	SW1.592	F.O. SHUTOFF TEST-NORMAL	SWITCH (INSIDE)
28	152P.252P	OFF-ON	DISCON SWITCH

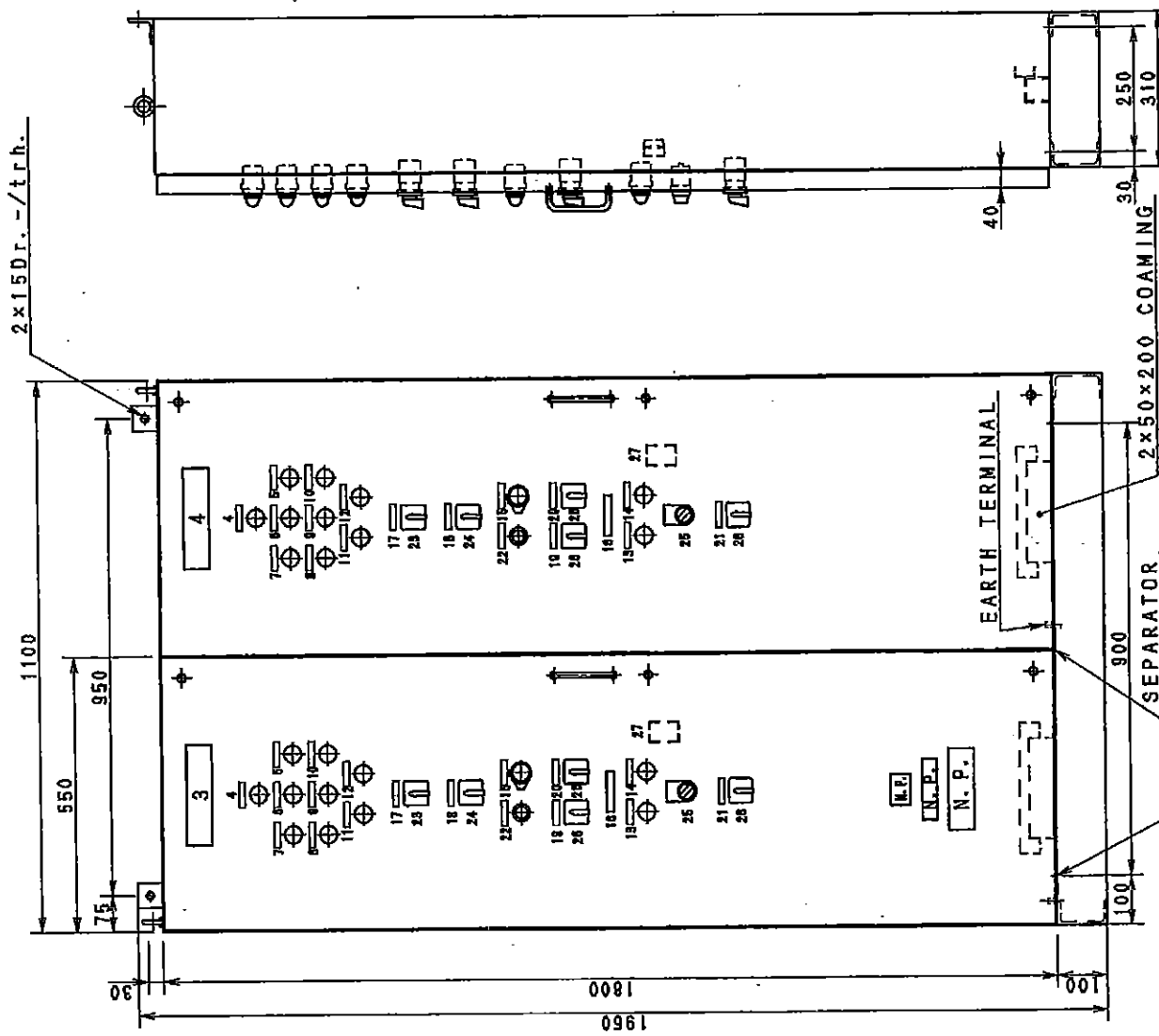
BEFORE REF.	SCALE	TYPE	ME
H. KAWAUCHI	3rd. ANGLE		
DATE Feb. 7. 2007			
DAIHATSU DIESEL MFG. CO., LTD.		NAME	OUTLINE
			MAIN DIESEL GEN. ENG. AUTO. CONTROL PANEL

5) CONSUMPTION POWER (BY ONE ENGINE)  
 AT STARTING 50W  
 AT RUNNING 25W (MIN)  
 AT STOPPING 70W (MAX)

- 1) INTERNAL WIRING OF STRANDED TYPE
- 2) AND FLAME RETARDANT
- 3) PROTECTION GRADE : IP44
- 4) PANEL COLOR : MUNSELL : 7.5B67/2
- 5) WEIGHT : abt. 300kg

4x15Dr. - /tr.h.

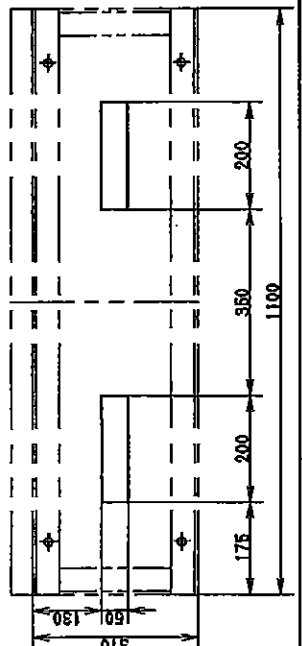
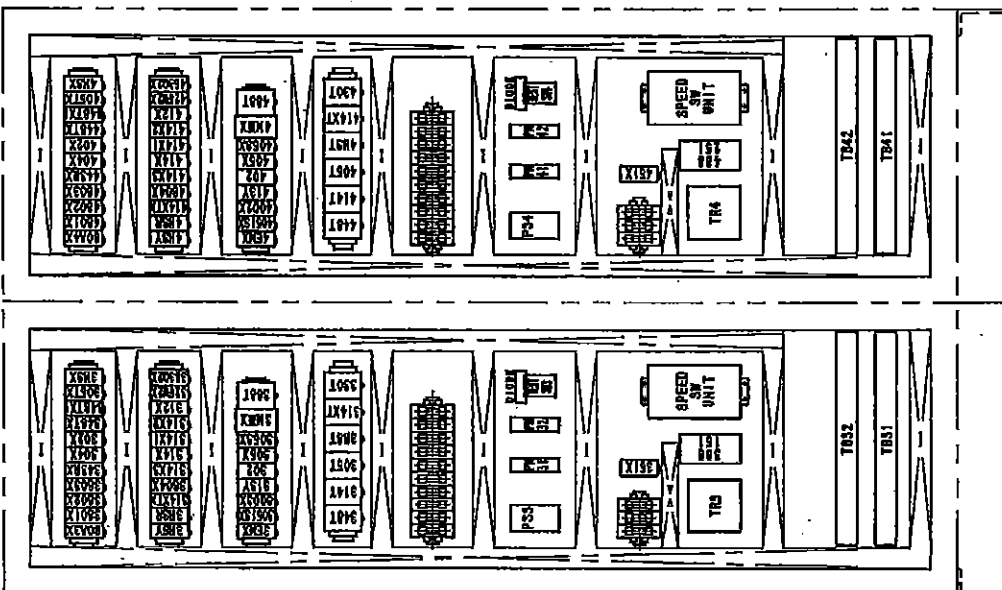
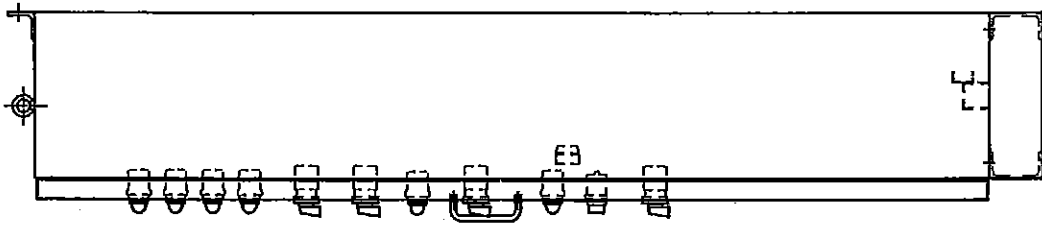




No.	MARK	NAME PLATE	NOTE
1	NP3	NO. 3 MAIN DIESEL GEN. ENG. AUTO. CONTROL. PANEL	N. P.
2	NP4	NO. 4 MAIN DIESEL GEN. ENG. AUTO. CONTROL. PANEL	N. P.
3			N. P.
4	WL31. 41	CONTROL SOURCE	LAMP (WHITE)
5	BL31. 41	START STAND-BY	LAMP (BLUE)
6	GL31. 41	RUNNING	LAMP (GREEN)
7	RL31. 41	START FAILURE	LAMP (RED)
8	RL32. 42	OVER SPEED	LAMP (RED)
9	RL33. 43	L.O. LOW PRESS.	LAMP (RED)
10	RL34. 44	C.F.W. HIGH TEMP.	LAMP (RED)
11	RL35. 45	CIRCUIT TROUBLE	LAMP (RED)
12	RL36. 46	EMERGENCY STOP	LAMP (RED)
13	WL3. 4	SOURCE	LAMP (WHITE)
14	GL3. 4	RUNNING	LAMP (GREEN)
15	PRSEN. PB4EN	EMERGENCY STOP	PUSH BUTTON SWITCH PINLOCK (RED)
16	NP11	PRIMING PUMP	N. P.
17	NP5	CURT. POS.	N. P.
18	NP6	LOCAL OPERATION	N. P.
19	NP7	AC220V SOURCE	N. P.
20	NP8	PC24V SOURCE	N. P.
21	NP9	AC440V SOURCE	N. P.
22	PB3LT. PB4LT	LAMP TEST	PUSH BUTTON SWITCH (BLACK)
23	343R. 443R	LOCAL-REMOTE	CHANGE OVER SWITCH
24	343S. 443S	STOP-START	OPERATION SWITCH PULL RETURN
25	343P. 443P	ON-OFF-AUTO	OPERATION SWITCH
26	352. 452	OFF-ON	DISCON SWITCH
27	372. 472		
27	SW3. SW4	F.O. SHUTDOWN TEST-NORMAL	SWITCH (INSIDE)
28	352P. 452P	OFF-ON	DISCON SWITCH

BEFORE REF.	SCALE	TYPE	ME
DRAWN H. KAWAUCHI	3rd. ANGLE		OUTLINE
DATE Feb. 7. 2007		NAME	MAIN DIESEL GEN. ENG. AUTO. CONTROL PANEL
DAIHATSU DIESEL MFG. CO., LTD.			

- 1) INTERNAL WIRING OF STRANDED TYPE
- 2) AND FLAME RETARDANT
- 3) PROTECTION GRADE
- 4) PANEL COLOR: MUNSSELL : abt. 300k<sub>g</sub>
- 5) CONSUMPTION POWER (BY ONE ENGINE)
  - APX. [ AT STARTING 50W (MIN)
  - [ AT RUNNING 25W (MIN)
  - AT STOPPING 70W (MAX)

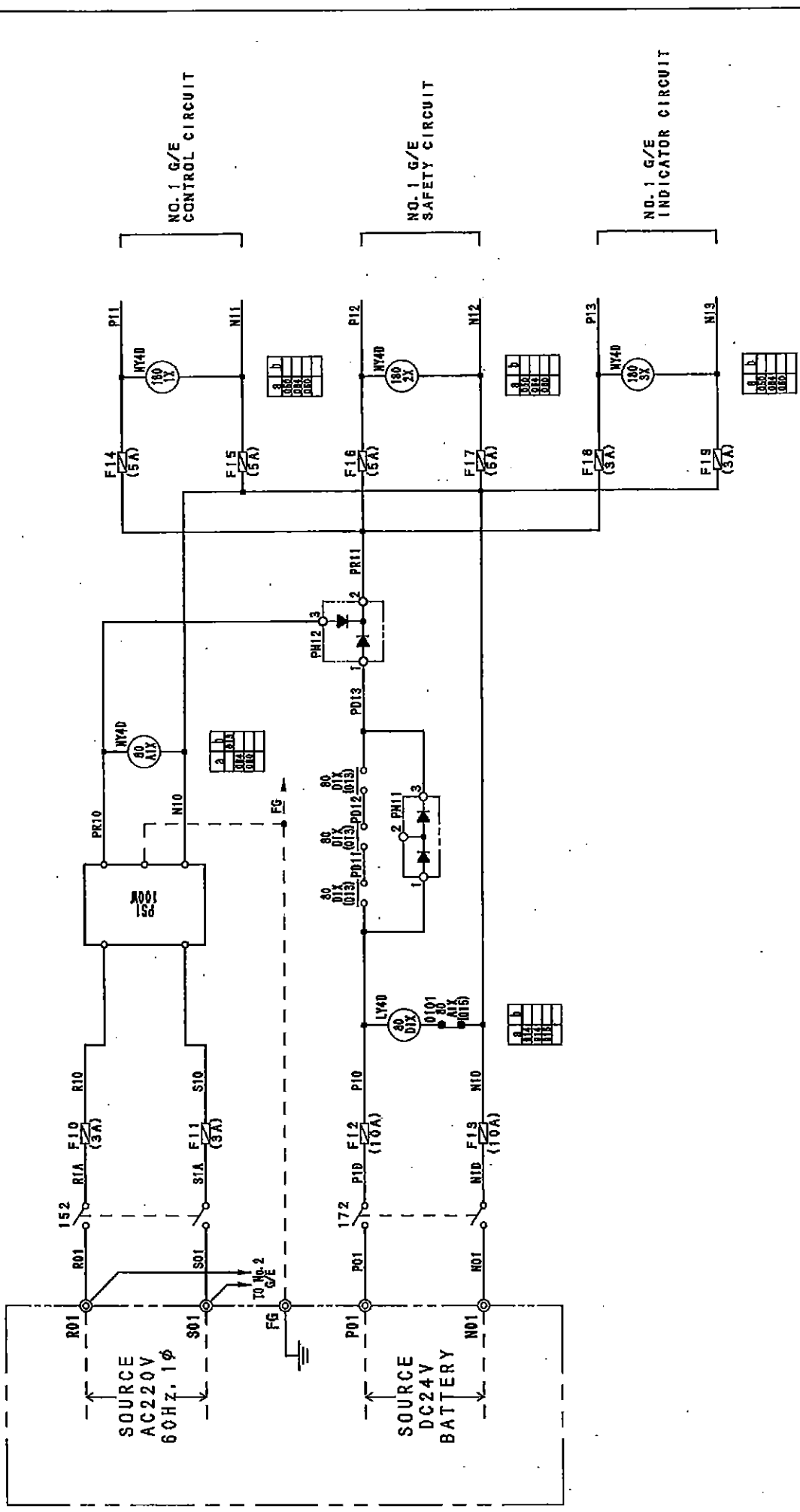


No.	SYMBOL	DISCRIPTION	Q'TY	TYPE & SPEC	REMARK
1	388, 488	MAGNET SWITCH	2	M50-N12XP TH: 1.7A (2a)	AC110V 60HZ
2	351, 451				
3	TR3, 4	TRANSFORMER	2	440/110V	
4	PS3, 4	DC POWER UNIT	2	AC220 → DC24V	
5	F38, 39, 39a, 39b, 39c, 39d, 39e, 39f, 39g, 39h, 39i, 39j, 39k, 39l, 39m, 39n, 39o, 39p, 39q, 39r, 39s, 39t, 39u, 39v, 39w, 39x, 39y, 39z, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	FUSE	14	NC-1 (3A)	
6	F4-37, 47	FUSE	8	NC-1 (5A)	
7	F32, 33, 42, 43	FUSE	4	NC-1 (10A)	
8		TIMER	14	H3CR-A DC24V	WITH SOCKET
9		AUX. RELAY	10	LY4D DC24V	WITH SOCKET
10		AUX. RELAY	48	MY4D DC24V	WITH SOCKET
11	1NSZ, 1MX, 2NSZ, 2MX	AUX. RELAY	4	G68-1114P-FD-US DC24V	WITH SOCKET
12	351Z, 451Z	AUX. RELAY	2	MY4 AC110V	WITH SOCKET
13	PH1, 41	DIODE MODULE	2	PD308	
14	PH2, 42	DIODE MODULE	2	PC308	
15		SPEED SWITCH UNIT-0	2	NN0262001A	
16		DIODE	8		

BEFORE REF.	SCALE	TYPE	ME
DATE	3rd. ANGLE	NAME	INTERNAL
DAI HATSU DIESEL MFG. CO., LTD.		MAIN DIESEL GEN. ENG. AUTO. CONTROL PANEL	

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010 011 012 014 015 016 017 018 019



CIRCUIT DIAGRAM 01  
NO. 1 SOURCE CIRCUIT

BEFORE REF.	SCALE	TYPE	ME
H. KAWAUCHI	3rd. ANGLE		
DATE Feb. 7, 2007			
DAIHATSU DIESEL MFG. CO., LTD.			
CIRCUIT DIAGRAM 01 NO. 1 SOURCE CIRCUIT			
NAME			
NO. 1 MAIN DIESEL GEN. ENG. AUTO. CONTROL PANEL			

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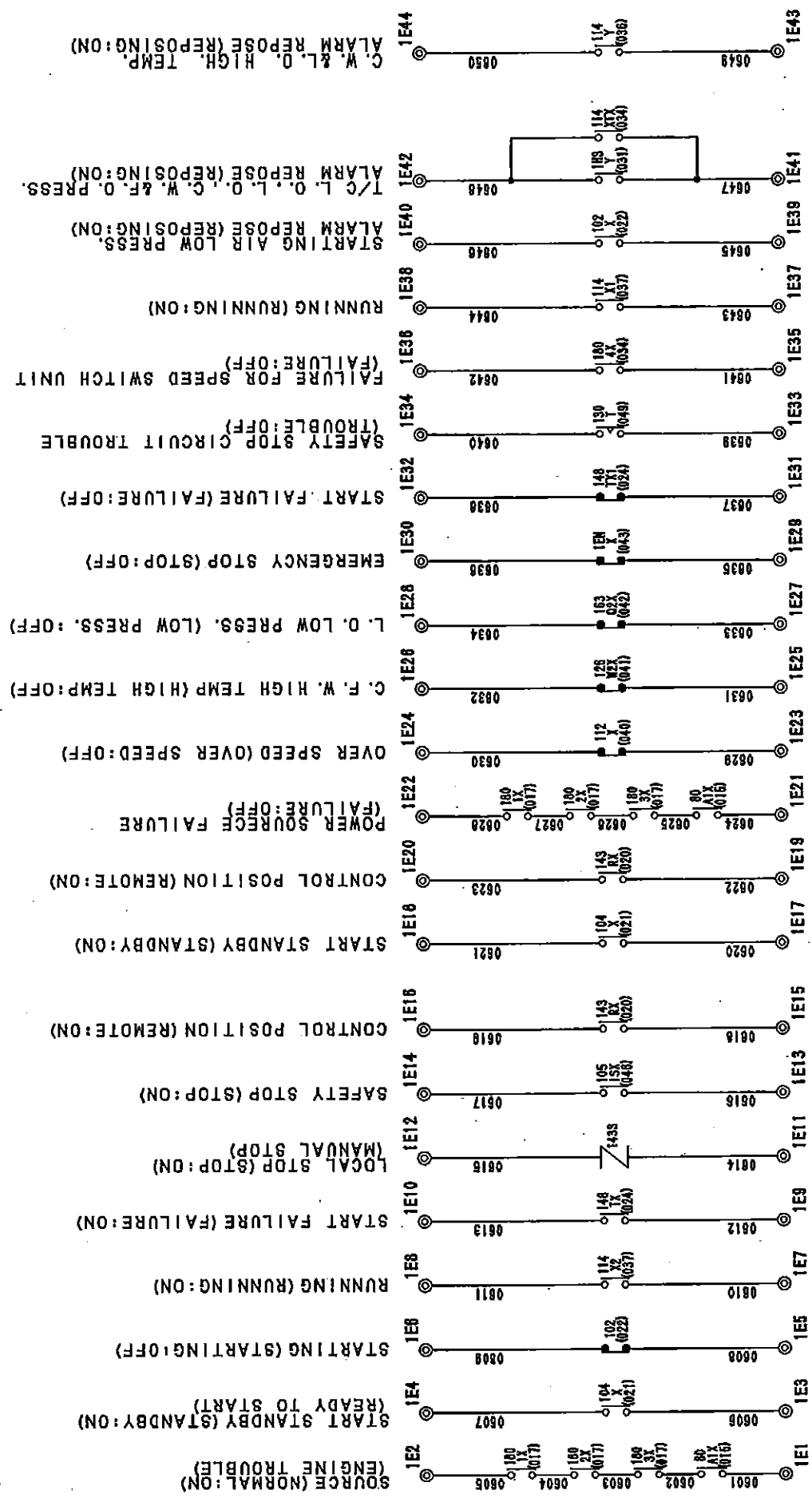




060 061 062 063 064 065 066 067 068 069

FOR MAIN SWITCH BOARD

FOR ENGINE CONTROL ROOM CONSOLE



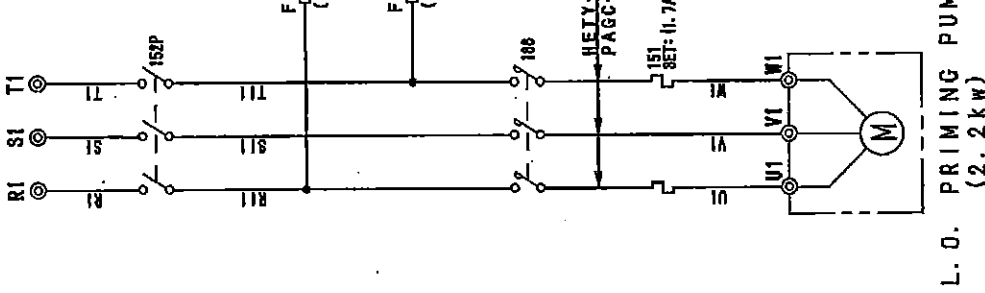
CIRCUIT DIAGRAM NO. 1 CONTACT CIRCUIT

BEFORE REF.	SCALE	TYPE	ME
H. KAWAUCHI	3rd. ANGLE		
DATE Feb. 7, 2007			
DAIHATSU DIESEL MFG. CO., LTD.		NAME	
		CIRCUIT DIAGRAM NO. 1 CONTACT CIRCUIT	
		NO. 1 MAIN DIESEL GEN. ENG. AUTO. CONTROL PANEL	

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070 071 072 073 074 075 076 077 078 079

SOURCE  
AC440V 60Hz 3φ



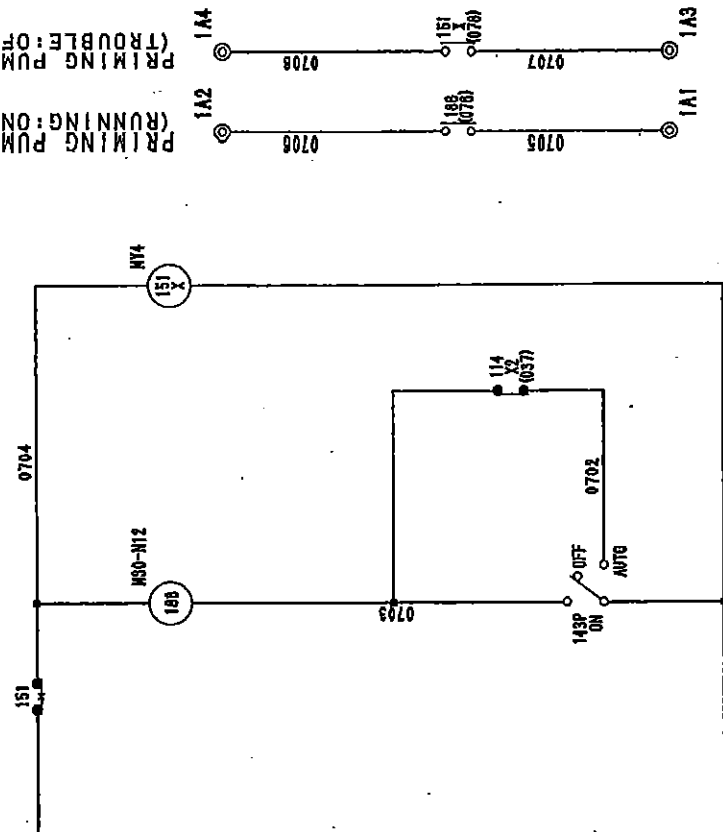
L. O. PRIMING PUMP  
(2.2 kw)

PRIMING PUMP  
SOURCE INDICATOR

PRIMING PUMP  
RUNNING INDICATOR

PRIMING PUMP RUNNING  
(RUNNING: ON)

PRIMING PUMP TROUBLE  
(TROUBLE: OFF)



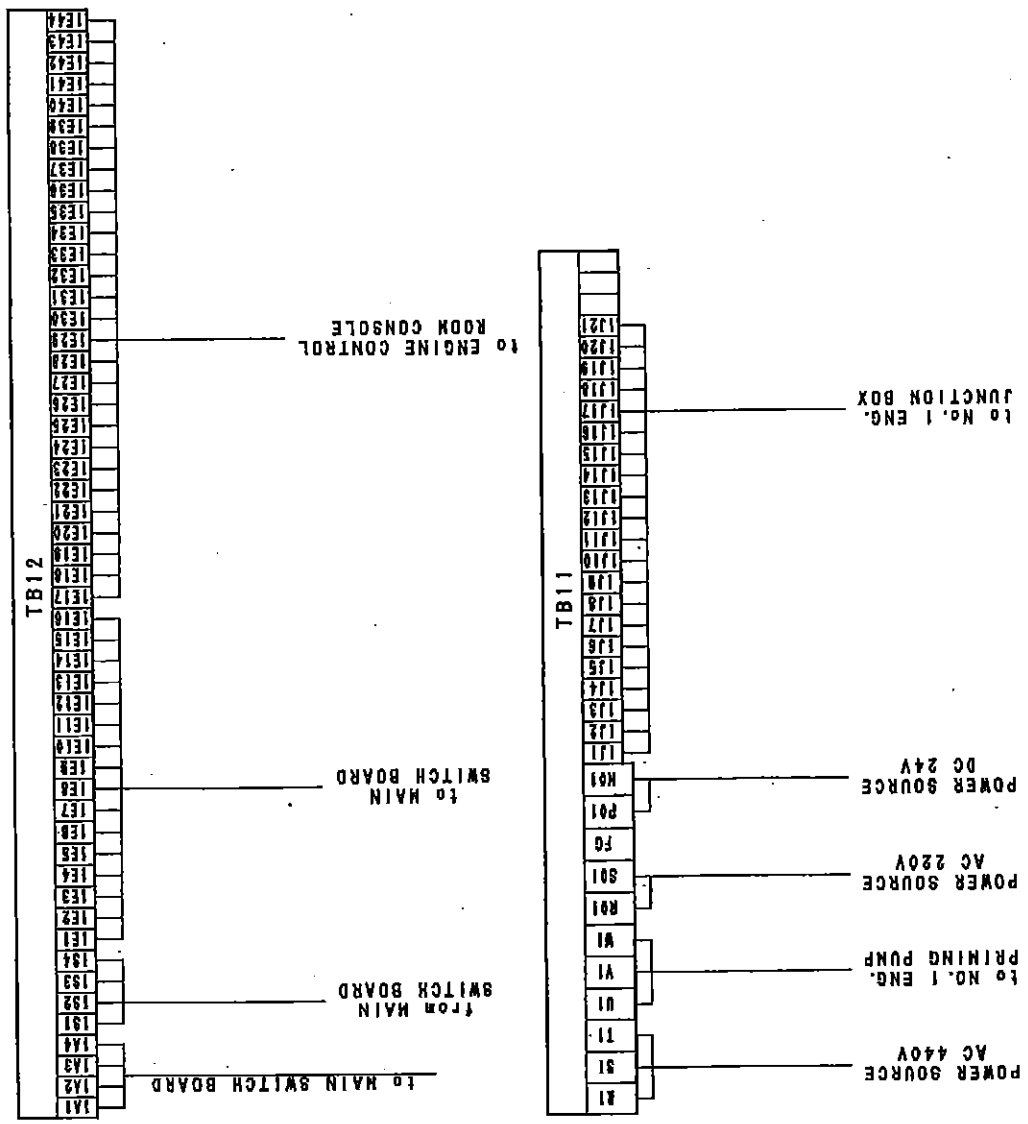
REV.	NO.	DATE

REV.	NO.	DATE

BEFORE	SCALE	TYPE	ME
REF.			
DRAWN H. KAWAUCHI	3rd. ANGLE		CIRCUIT DIAGRAM 07
DATE Feb. 7, 2007			NO. 1 PRIMING PUMP
DAIHATSU DIESEL MFG. CO., LTD.			NO. 1 MAIN DIESEL GEN. ENG. AUTO. CONTROL PANEL

CIRCUIT DIAGRAM 07  
NO. 1 PRIMING PUMP

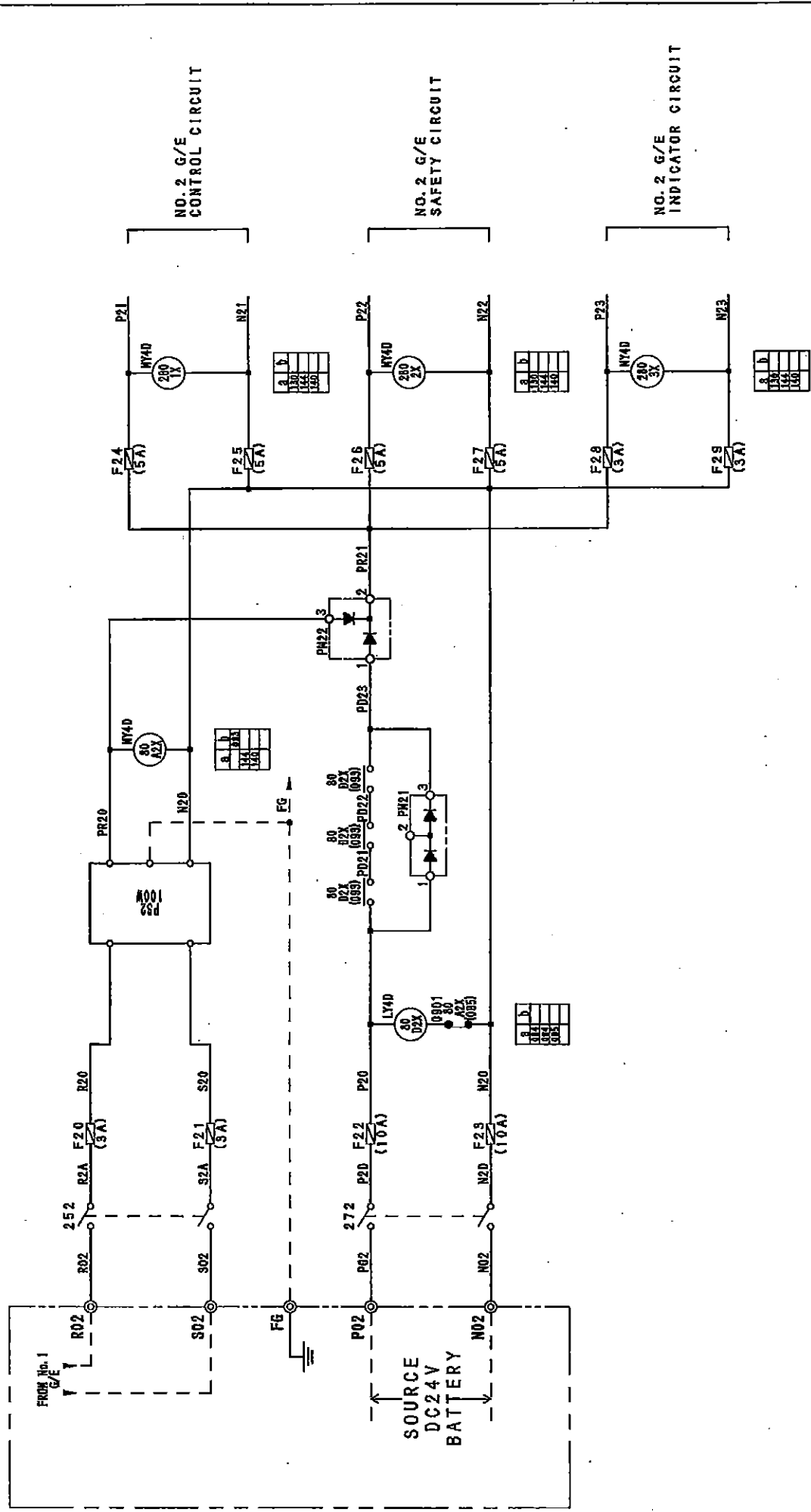
080 081 082 083 084 085 086 087 088 089



BEFORE REF.	SCALE	TYPE	ME
REF. W. KAWAUCHI	3rd. ANGLE	—	CIRCUIT DIAGRAM 08
DATE Feb. 7, 2007		⊕	NO. 1 TERMINAL
DAIHATSU DIESEL MFG. CO., LTD.			NO. 1 MAIN DIESEL GEN. ENG. AUTO. CONTROL PANEL

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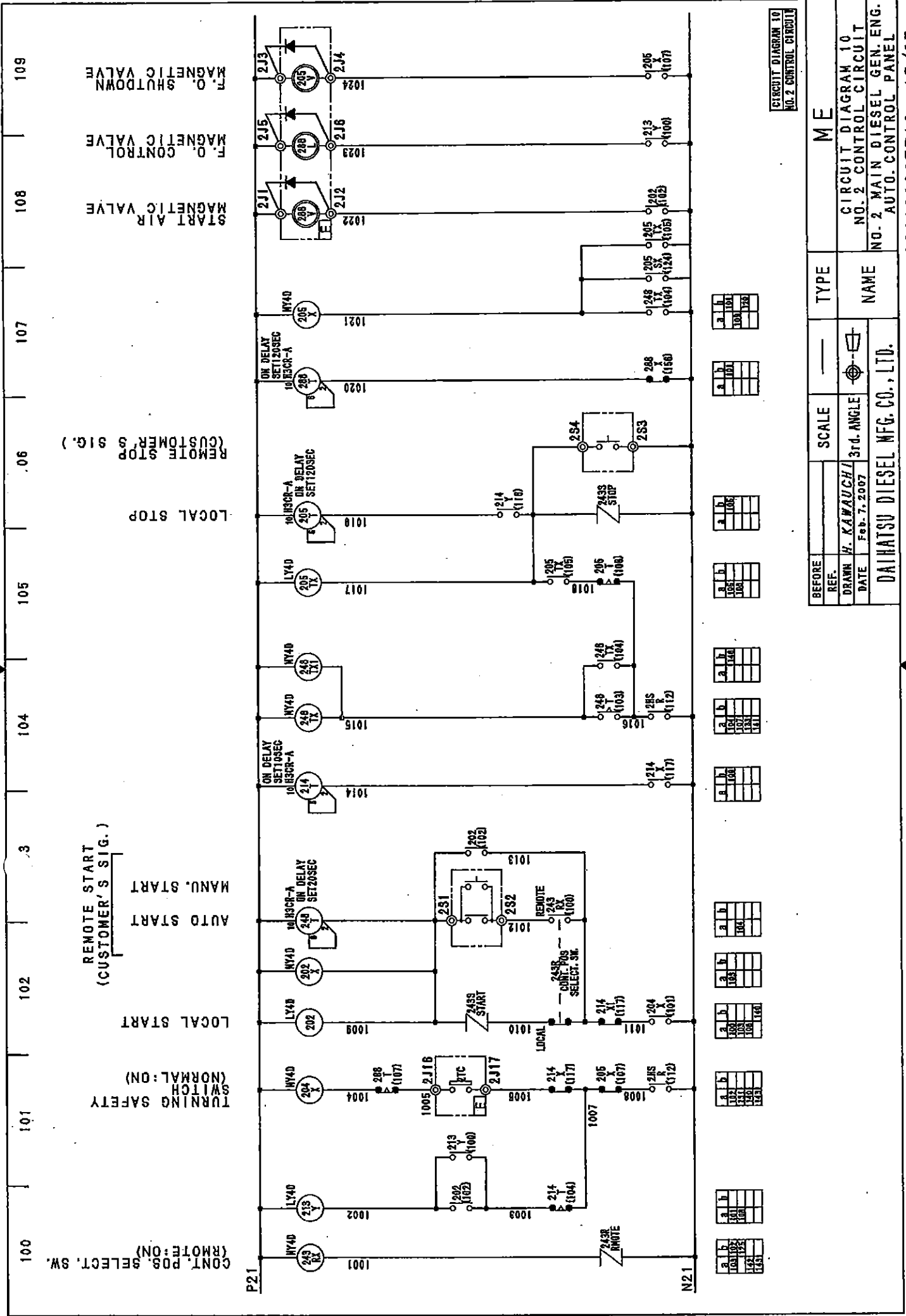
090 091 092 093 094 095 096 097 098 099



CIRCUIT DIAGRAM 02  
NO. 2 SOURCE CIRCUIT

BEFORE REF.	SCALE	TYPE	ME
DRAWN H. KAWAUCHI	3rd. ANGLE		
DATE Feb. 7, 2007			
DAIHATSU DIESEL MFG. CO., LTD.			
		CIRCUIT DIAGRAM 09 NO. 2 SOURCE CIRCUIT	
		NAME NO. 2 MAIN DIESEL GEN. ENG. AUTO. CONTROL PANEL	

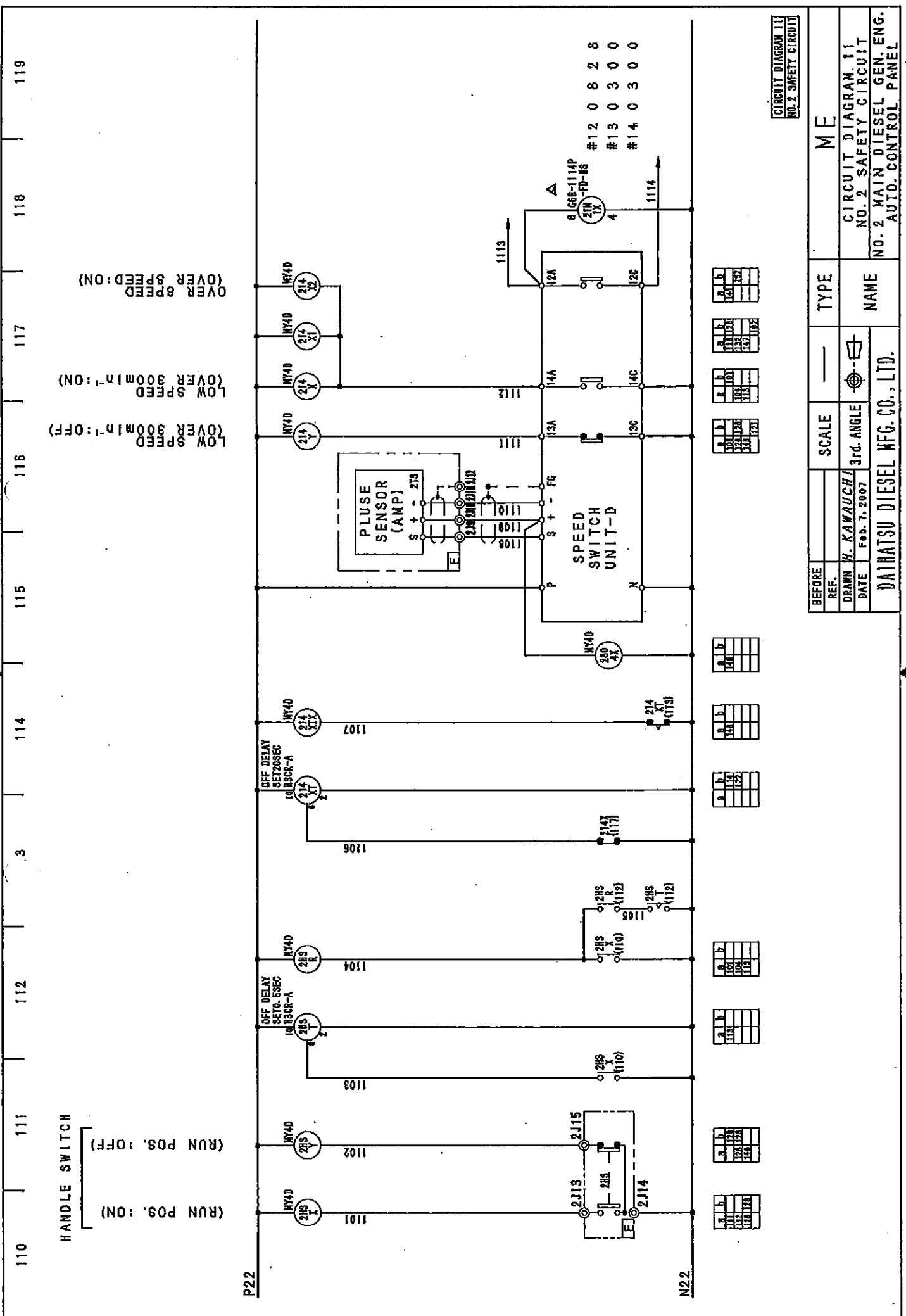
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CIRCUIT DIAGRAM 10  
NO. 2 CONTROL CIRCUIT

BEFORE REF.	SCALE	TYPE	ME
REF.			
DRAWN H. KAWAUCHI	3rd. ANGLE		CIRCUIT DIAGRAM 10 NO. 2 CONTROL CIRCUIT
DATE Feb. 7, 2007			NO. 2 MAIN DIESEL GEN. ENG. AUTO. CONTROL PANEL

DAIHATSU DIESEL MFG. CO., LTD.  
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CIRCUIT DIAGRAM 11  
NO. 2 SAFETY CIRCUIT

BEFORE REF.	SCALE	TYPE	ME
DRAWN H. KAWAUCHI	3rd. ANGLE		
DATE Feb. 7, 2007			
DAIHATSU DIESEL MFG. CO., LTD.		NAME	
		CIRCUIT DIAGRAM 11 NO. 2 SAFETY CIRCUIT	
		NO. 2 MAIN DIESEL GEN. ENG. AUTO. CONTROL PANEL	

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120 121 122 123 124 125 126 127 128 129

OVER SPEED (OVER SPEED: ON)

CF W. TEMP. STOP SWITCH (HIGH TEMP. STOP: ON)

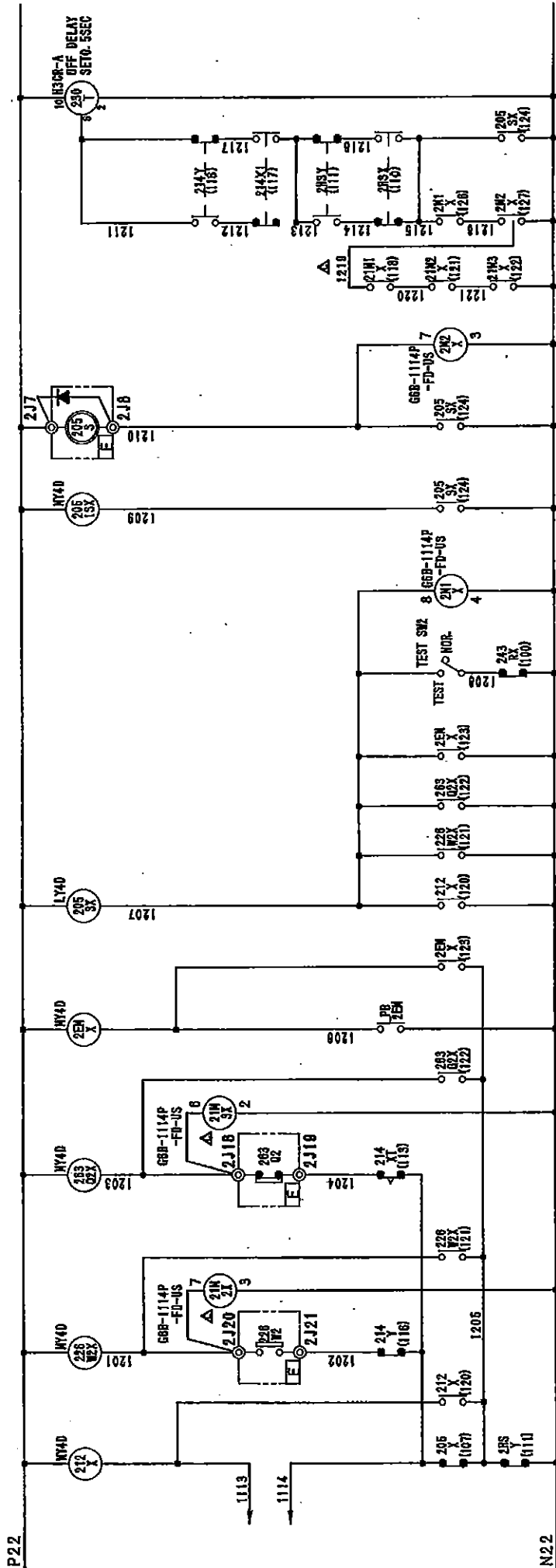
LO PRESS. STOP SWITCH (LOW PRESS. STOP: ON)

EMERGENCY STOP (STOP: ON)

TEST SWITCH FOR F. O. SHUTDOWN

F. O. SHUTDOWN MAGNETIC VALVE

SAFETY STOP CIRC. TROUBLE



2M1X-2M2Y			
COPPER BAND			
#1	0	128	0
#2	0	128	0
#3	0	128	0
#4	0	128	0

2M1X-2M2Y			
COPPER BAND			
#1	0	128	0
#2	0	128	0
#3	0	128	0
#4	0	128	0

2M1X-2M2Y			
COPPER BAND			
#1	0	128	0
#2	0	128	0
#3	0	128	0
#4	0	128	0

2M1X-2M2Y			
COPPER BAND			
#1	0	128	0
#2	0	128	0
#3	0	128	0
#4	0	128	0

2M1X-2M2Y			
COPPER BAND			
#1	0	128	0
#2	0	128	0
#3	0	128	0
#4	0	128	0

2M1X-2M2Y			
COPPER BAND			
#1	0	128	0
#2	0	128	0
#3	0	128	0
#4	0	128	0

2M1X-2M2Y			
COPPER BAND			
#1	0	128	0
#2	0	128	0
#3	0	128	0
#4	0	128	0

2M1X-2M2Y			
COPPER BAND			
#1	0	128	0
#2	0	128	0
#3	0	128	0
#4	0	128	0

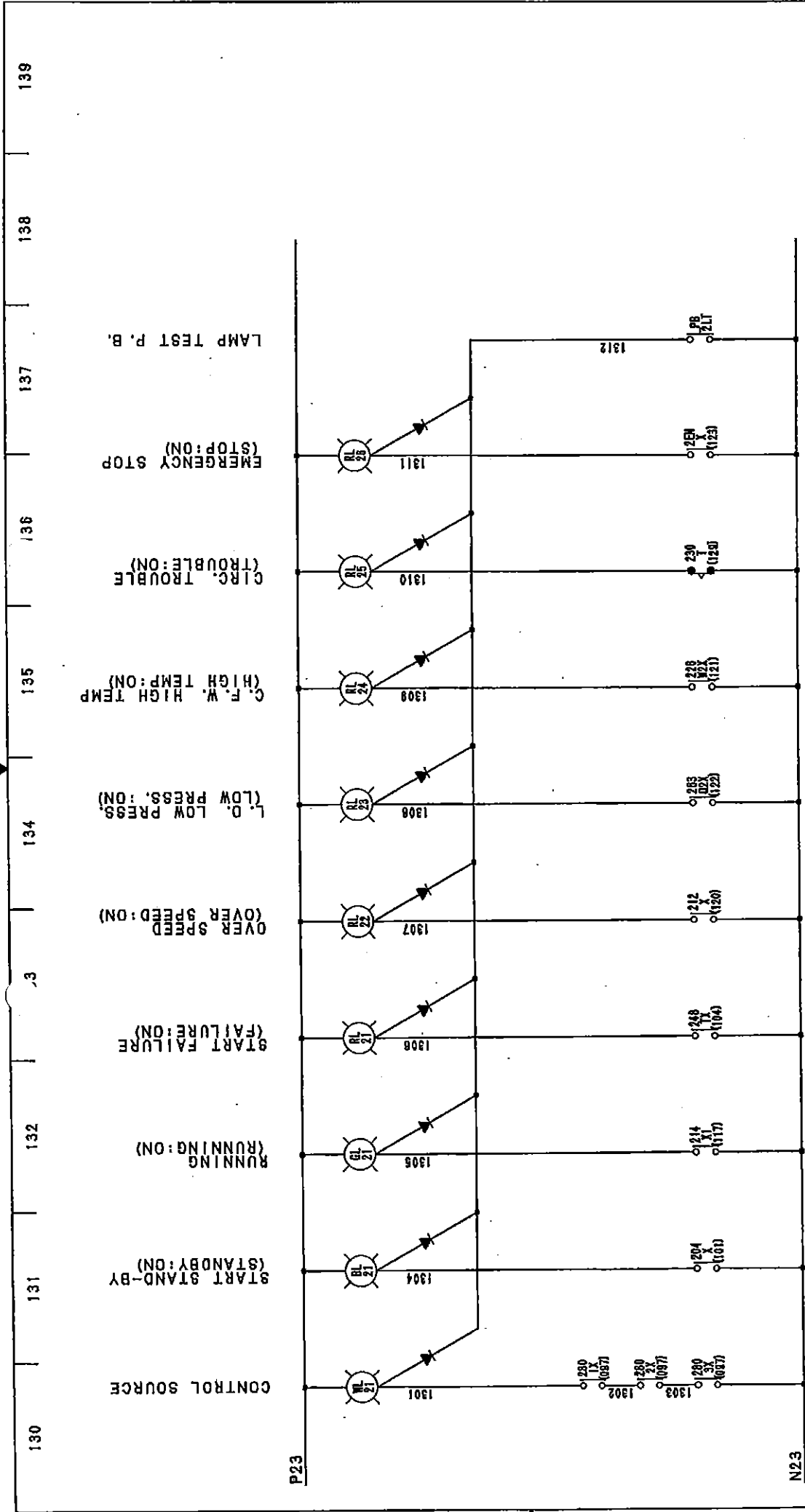
2M1X-2M2Y			
COPPER BAND			
#1	0	128	0
#2	0	128	0
#3	0	128	0
#4	0	128	0

2M1X-2M2Y			
COPPER BAND			
#1	0	128	0
#2	0	128	0
#3	0	128	0
#4	0	128	0

2M1X-2M2Y			
COPPER BAND			
#1	0	128	0
#2	0	128	0
#3	0	128	0
#4	0	128	0

BEFORE REF.	SCALE	TYPE	ME
DRAWN H. KAWAUCHI		CIRCUIT DIAGRAM 12	
DATE Feb. 7, 2007		NO. 2 SAFETY CIRCUIT	
DAIHATSU DIESEL MFG. CO., LTD.		NO. 2 MAIN DIESEL GEN. ENG. AUTO. CONTROL PANEL	

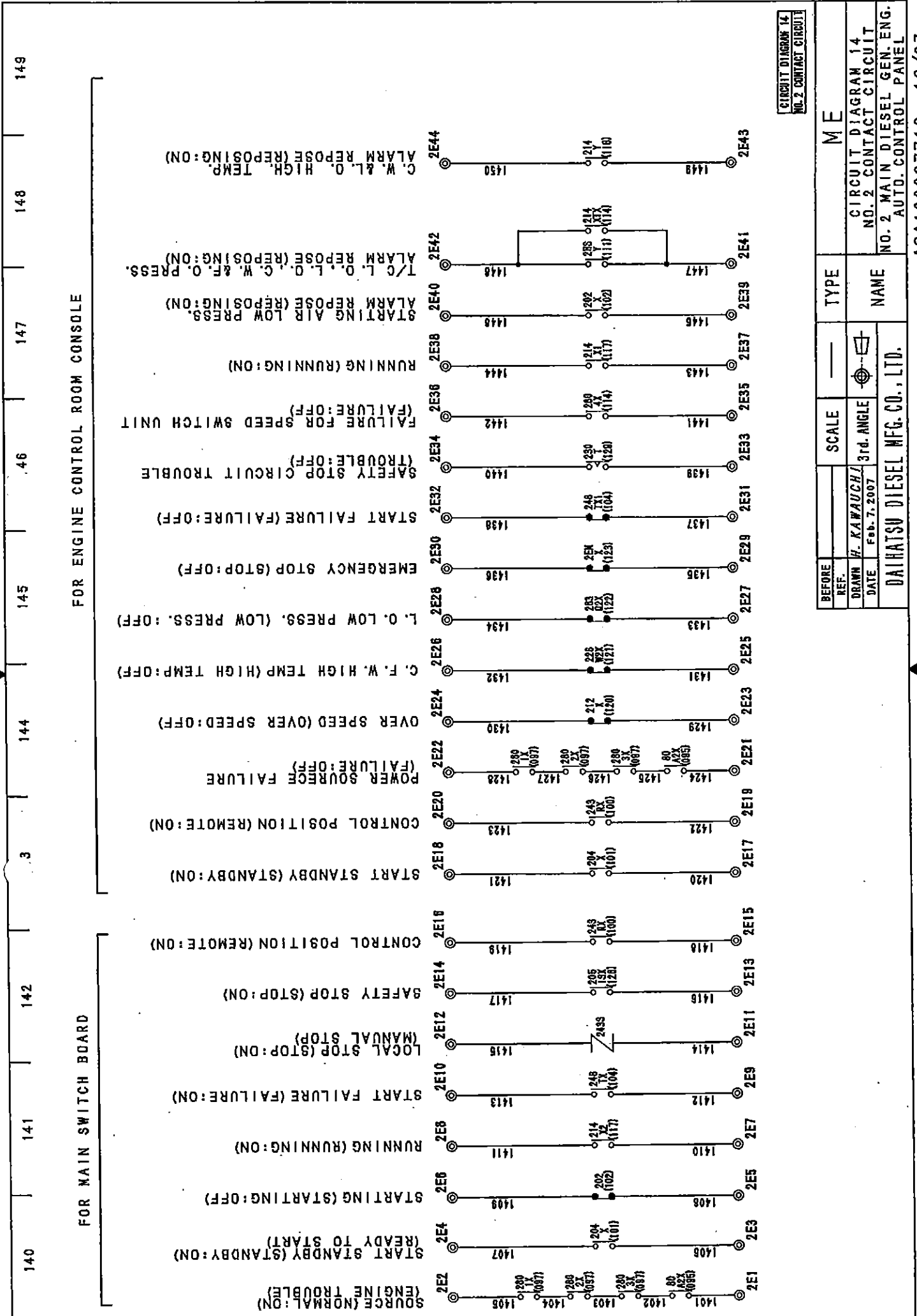
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CIRCUIT DIAGRAM 13  
NO. 2 INDICATOR CIRCUIT

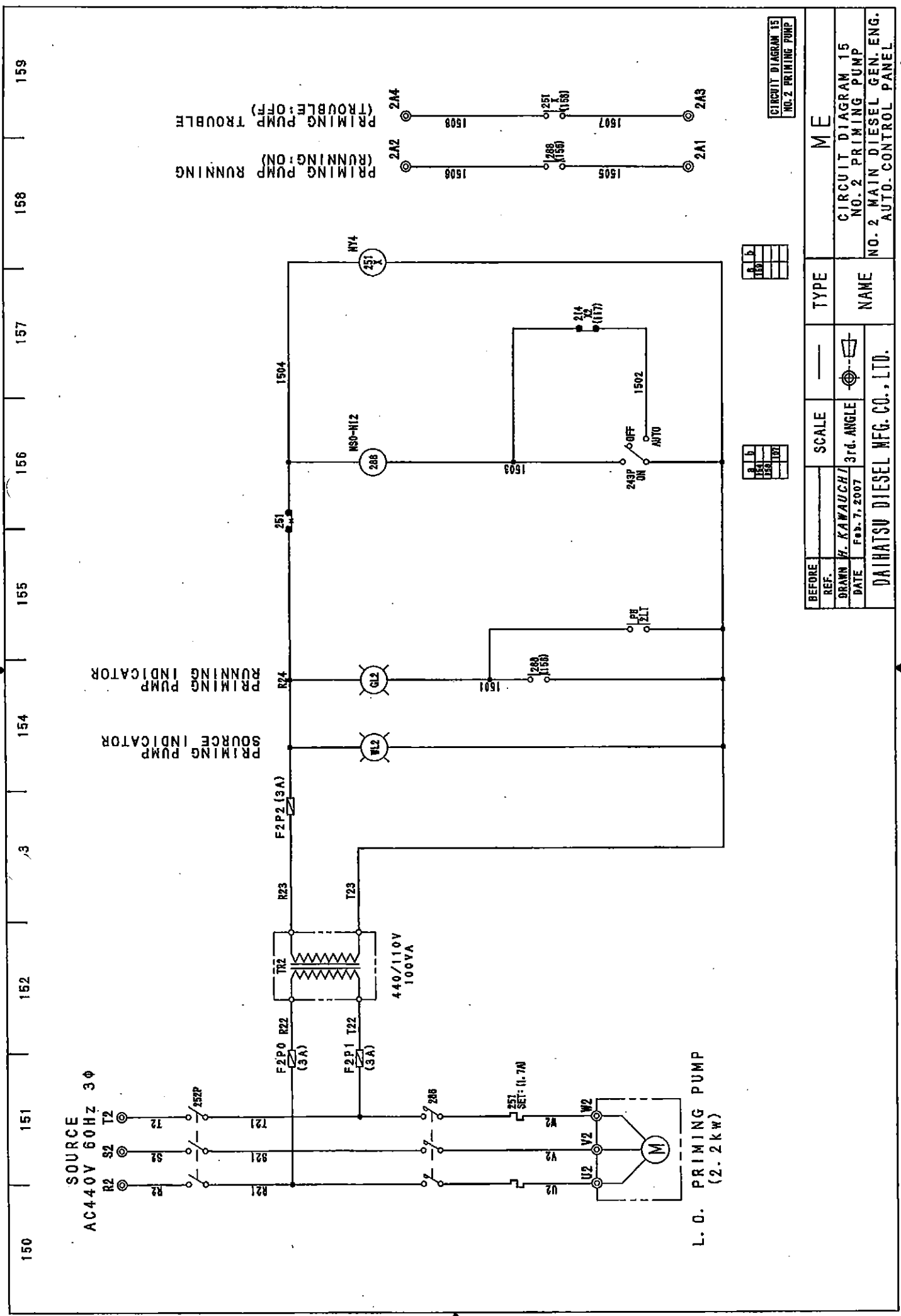
BEFORE REF.	SCALE	TYPE	ME
DRAWN H. KAWAUCHI	3rd. ANGLE		CIRCUIT DIAGRAM 13
DATE Feb. 7, 2007			NO. 2 INDICATOR CIRCUIT
DAIHATSU DIESEL MFG. CO., LTD.			NO. 2 MAIN DIESEL GEN. ENG. AUTO. CONTROL PANEL

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CIRCUIT DIAGRAM 14  
NO. 2 CONTACT CIRCUIT

BEFORE REF.	SCALE	TYPE	ME
	3rd. ANGLE		
DRAWN H. KAWAUCHI			
DATE Feb. 7. 2007			
DAIHATSU DIESEL MFG. CO., LTD.			
CIRCUIT DIAGRAM 14 NO. 2 CONTACT CIRCUIT			
NO. 2 MAIN DIESEL GEN. ENG. AUTO. CONTROL PANEL			



PRIMING PUMP RUNNING (RUNNING ON)  
 PRIMING PUMP TROUBLE (TROUBLE OFF)

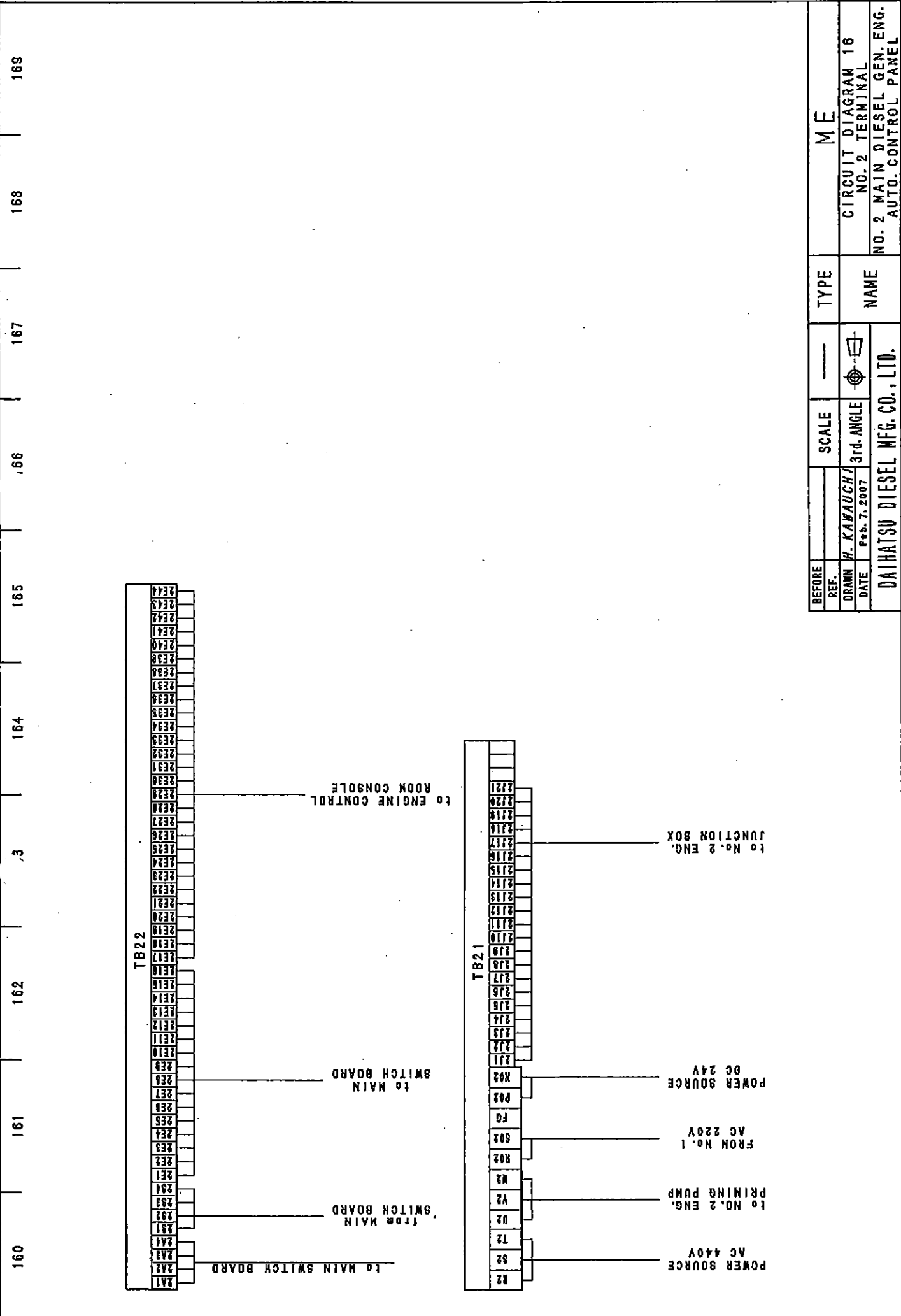
CIRCUIT DIAGRAM 15  
 NO. 2 PRIMING PUMP

a	b
100	100

a	b
100	100

BEFORE REF.	SCALE	TYPE	ME
DRAWN H. KAWAUCHI	3rd. ANGLE		
DATE Feb. 7, 2007			
DAIHATSU DIESEL MFG. CO., LTD.			
NAME			
CIRCUIT DIAGRAM 15			
NO. 2 PRIMING PUMP			
NO. 2 MAIN DIESEL GEN. ENG.			
AUTO. CONTROL PANEL			

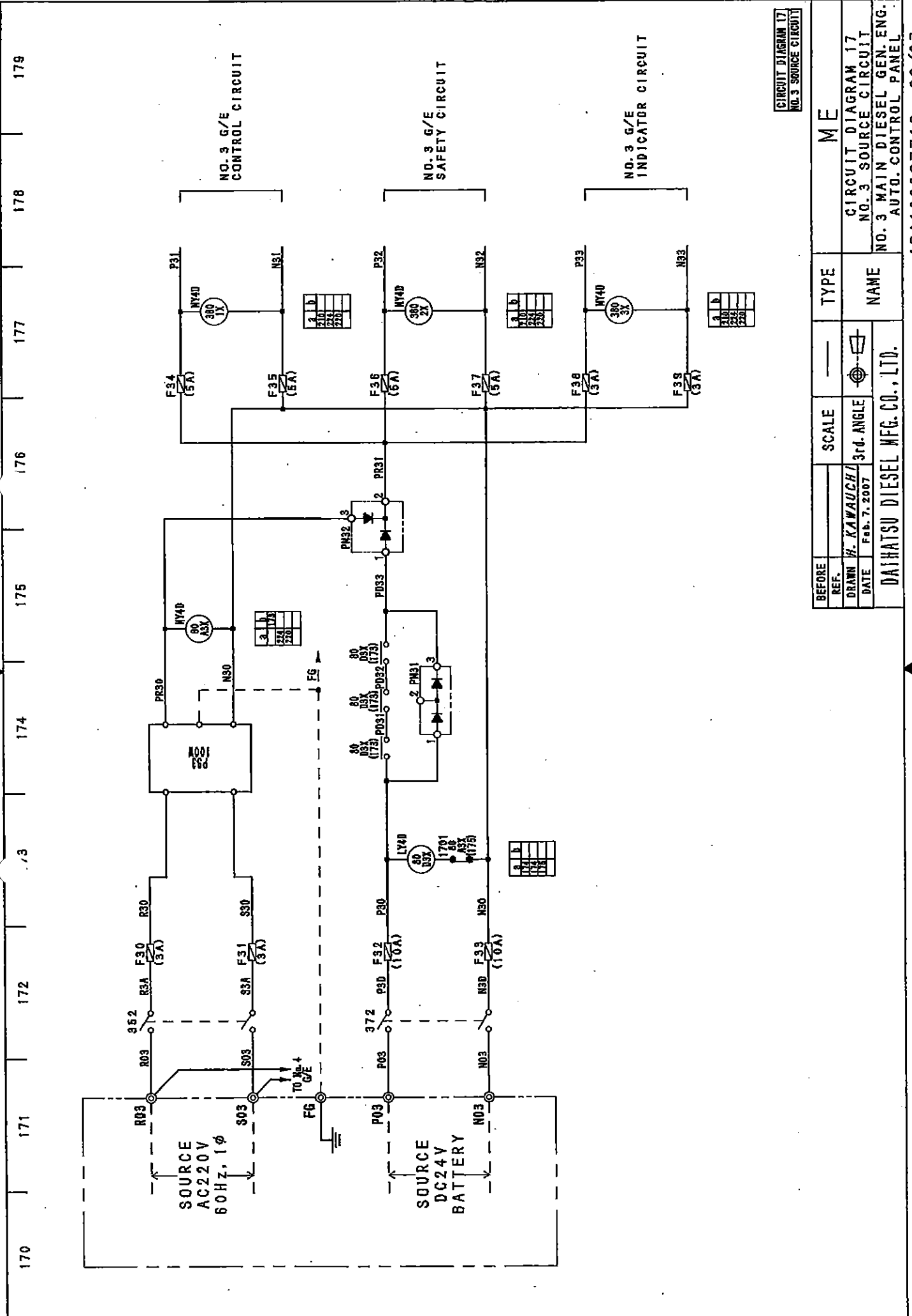
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160 161 162 163 164 165 166 167 168 169

BEFORE	SCALE	TYPE	ME
REF.	H. KAWAUCHI	3rd. ANGLE	CIRCUIT DIAGRAM 16
DATE	Feb. 7, 2007		NO. 2 TERMINAL
DAIHATSU DIESEL MFG. CO., LTD.		NO. 2 MAIN DIESEL GEN. ENG. AUTO. CONTROL PANEL	

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CIRCUIT DIAGRAM 17  
NO. 3 SOURCE CIRCUIT

BEFORE REF.	SCALE	TYPE	ME
REF. DRAWN	H. KAWAUCHI	3rd. ANGLE	CIRCUIT DIAGRAM 17
DATE	Feb. 7, 2007		NO. 3 SOURCE CIRCUIT
DAIHATSU DIESEL MFG. CO., LTD.			NO. 3 MAIN DIESEL GEN. ENG. AUTO. CONTROL PANEL

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200 201 202 203 204 205 206 207 208 209

OVER SPEED (STOP: ON)

C.F.W. TEMP. SWITCH FOR SAFETY STOP (HIGH TEMP.: ON)

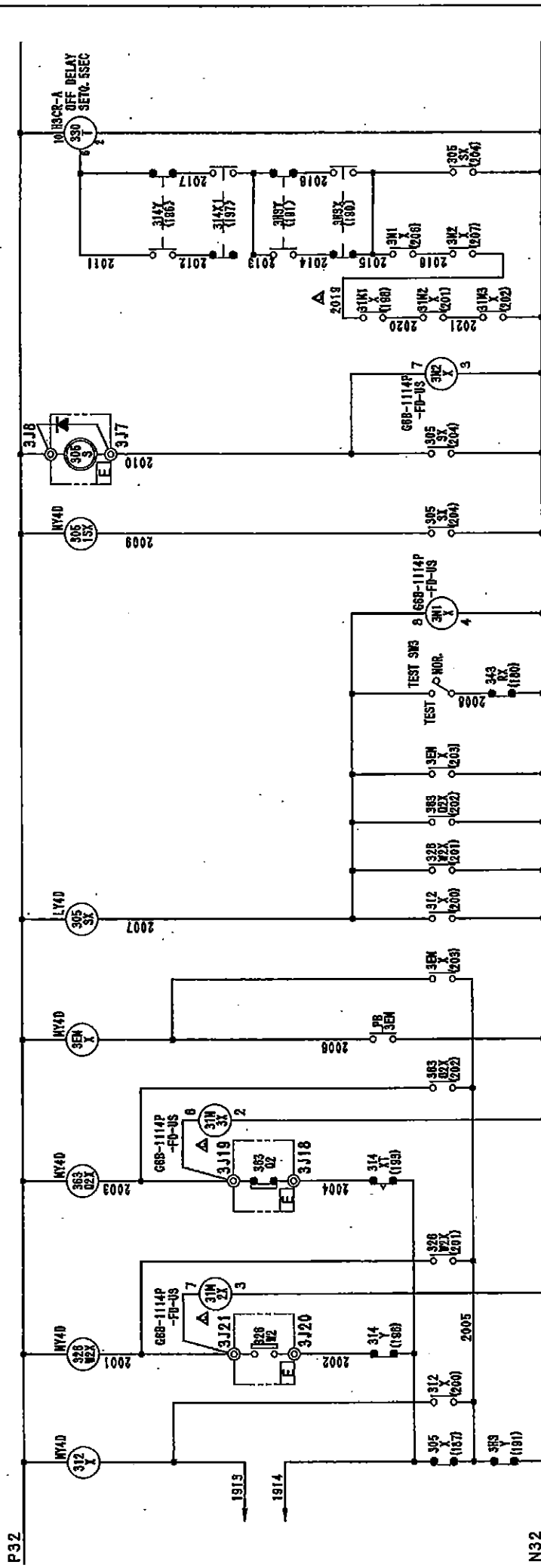
L.O. PRESSURE SWITCH FOR SAFETY STOP (LOW PRESS.: ON)

EMERGENCY STOP (STOP: ON)

TEST SWITCH FOR F.O. SHUTDOWN

F.O. SHUTDOWN MAGNETIC VALVE

SAFETY STOP CIRCUIT TROUBLE



BEFORE REF.	SCALE	TYPE	ME
311X, 312X G6B-1114P	3rd. ANGLE		
311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500			

BEFORE REF.	SCALE	TYPE	ME
311X, 312X G6B-1114P	3rd. ANGLE		
311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500			

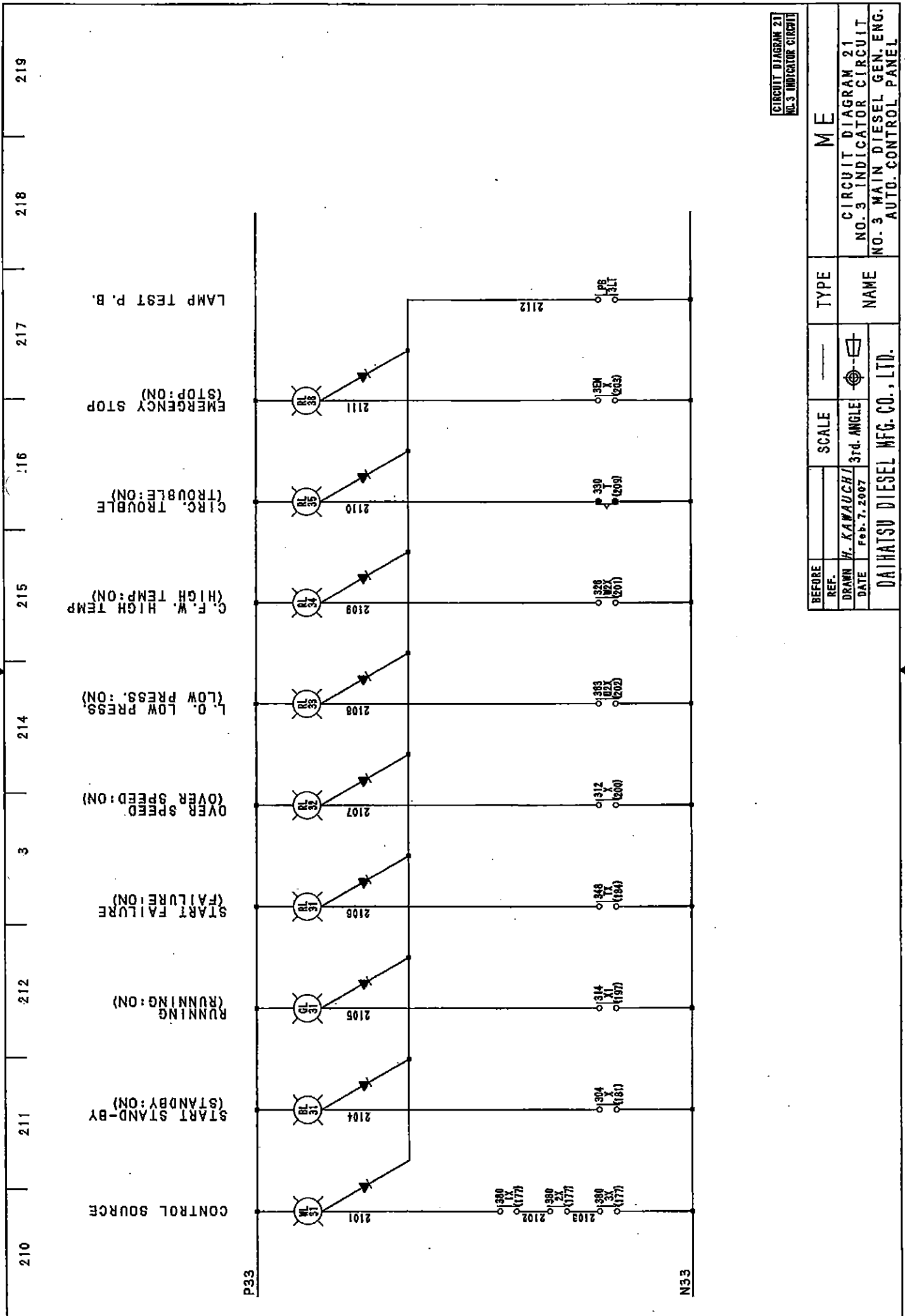
BEFORE REF.	SCALE	TYPE	ME
311X, 312X G6B-1114P	3rd. ANGLE		
311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500			

CIRCUIT DIAGRAM 20  
NO. 3 SAFETY CIRCUIT

CIRCUIT DIAGRAM 20  
NO. 3 SAFETY CIRCUIT  
NAME  
NO. 3 MAIN DIESEL GEN. ENG.  
AUTO. CONTROL PANEL

DAIHATSU DIESEL MFG. CO., LTD.

AQA10003771C 25/37

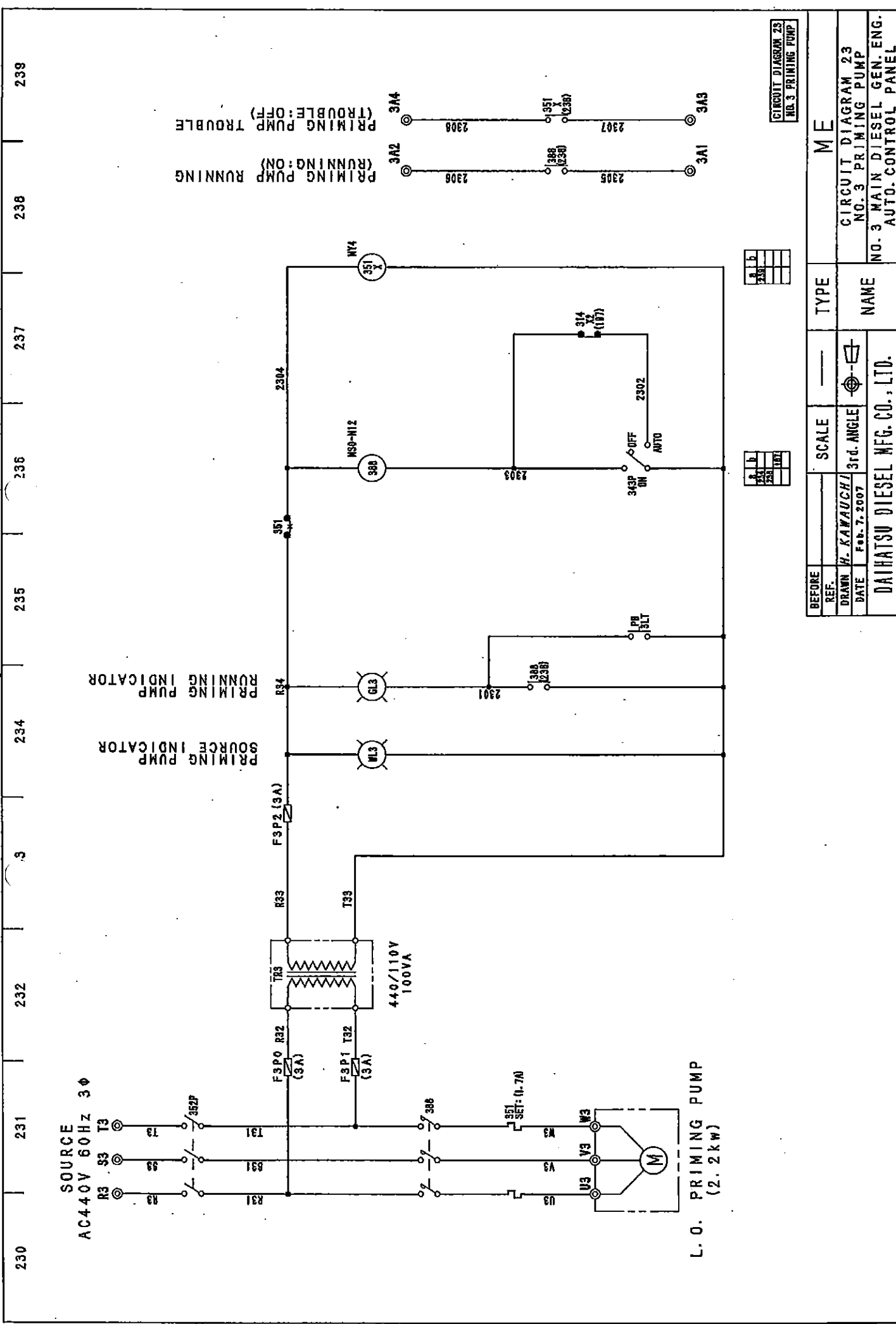


CIRCUIT DIAGRAM 21  
NO. 3 INDICATOR CIRCUIT

BEFORE REF.	SCALE	TYPE	ME
DRAWN H. KAWAUCHI	3rd. ANGLE		CIRCUIT DIAGRAM 21
DATE Feb. 7, 2007			NO. 3 INDICATOR CIRCUIT
DAIHATSU DIESEL MFG. CO., LTD.			NO. 3 MAIN DIESEL GEN. ENG. AUTO. CONTROL PANEL

AQA10003771C 26/37



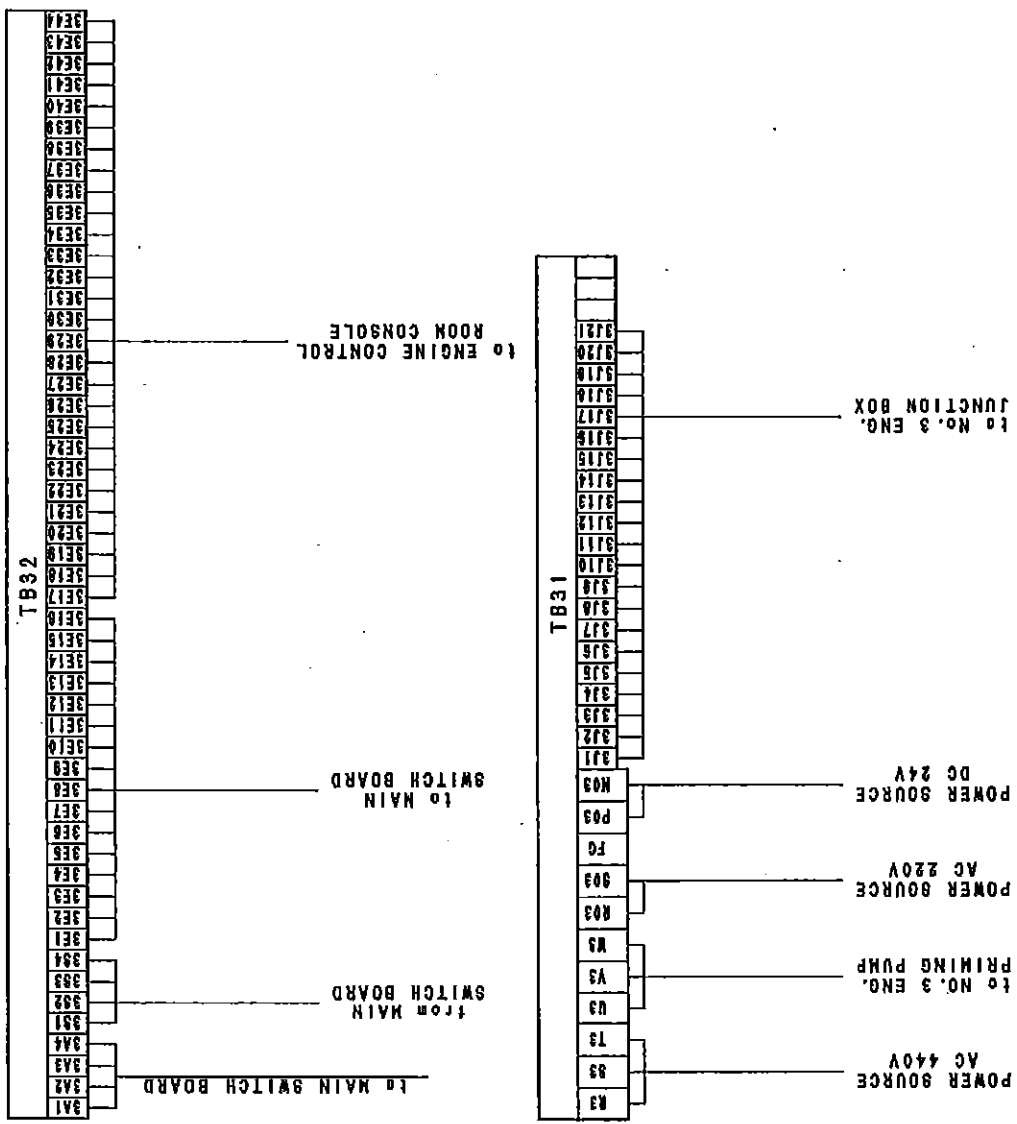


CIRCUIT DIAGRAM 23  
NO. 3 PRIMING PUMP

BEFORE REF.	SCALE	TYPE	ME
H. KAWAUCHI	3rd. ANGLE		
DATE Feb. 7, 2007			
DAIHATSU DIESEL MFG. CO., LTD.		NAME	
		CIRCUIT DIAGRAM 23 NO. 3 PRIMING PUMP	
		NO. 3 MAIN DIESEL GEN. ENG. AUTO. CONTROL PANEL	

AQA10003771C 28/37

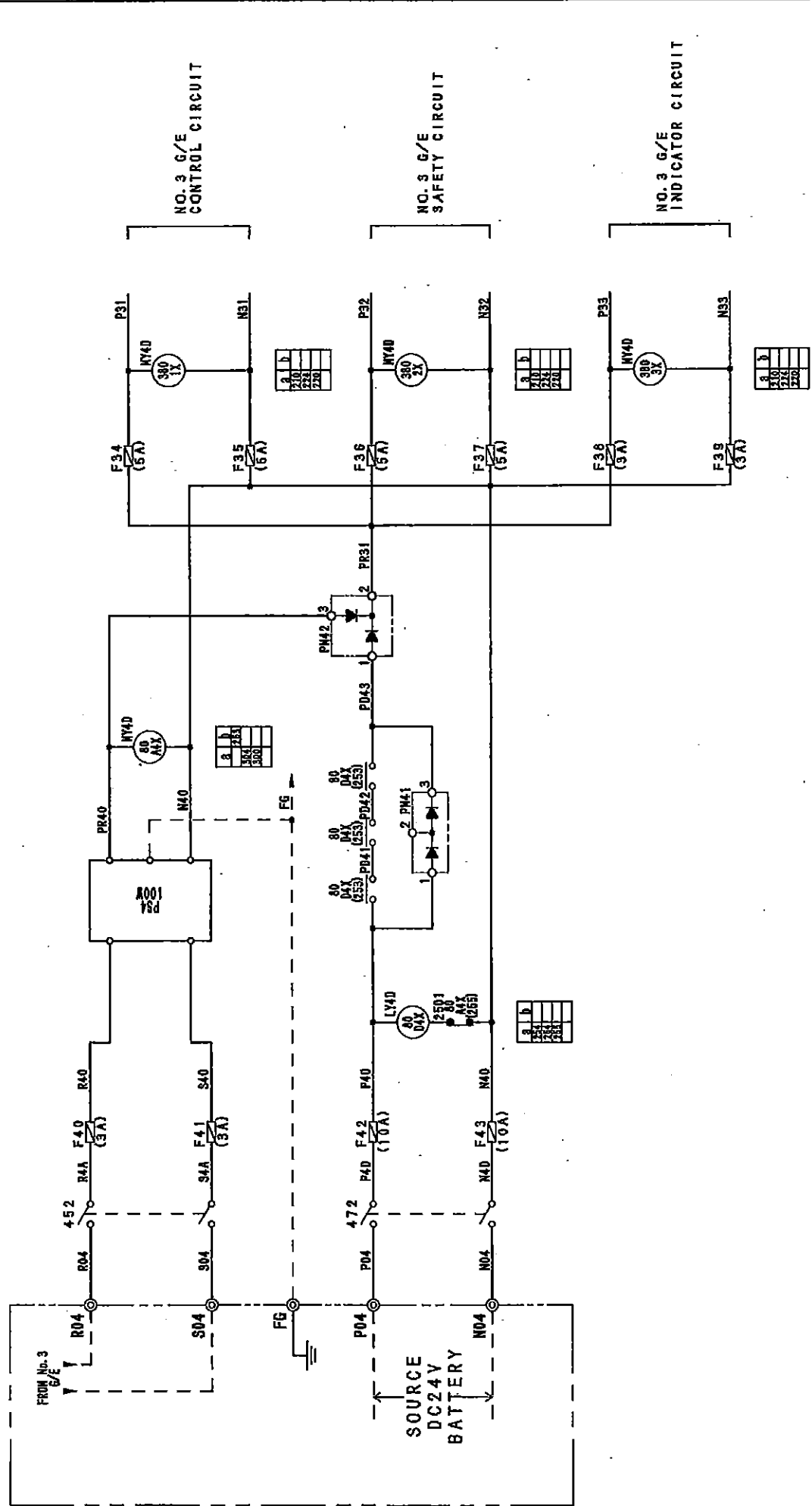
240 241 242 244 245 246 247 248 249



BEFORE REF.	SCALE	TYPE	ME
DATE	3rd. ANGLE	NAME	CIRCUIT DIAGRAM 24 NO. 3 TERMINAL
DATE	Feb. 7, 2007	NAME	NO. 3 MAIN DIESEL GEN. ENG. AUTO. CONTROL PANEL
DAIHATSU DIESEL MFG. CO., LTD.			

AQA10003771C 29/37

250 251 252 254 255 257 258 259



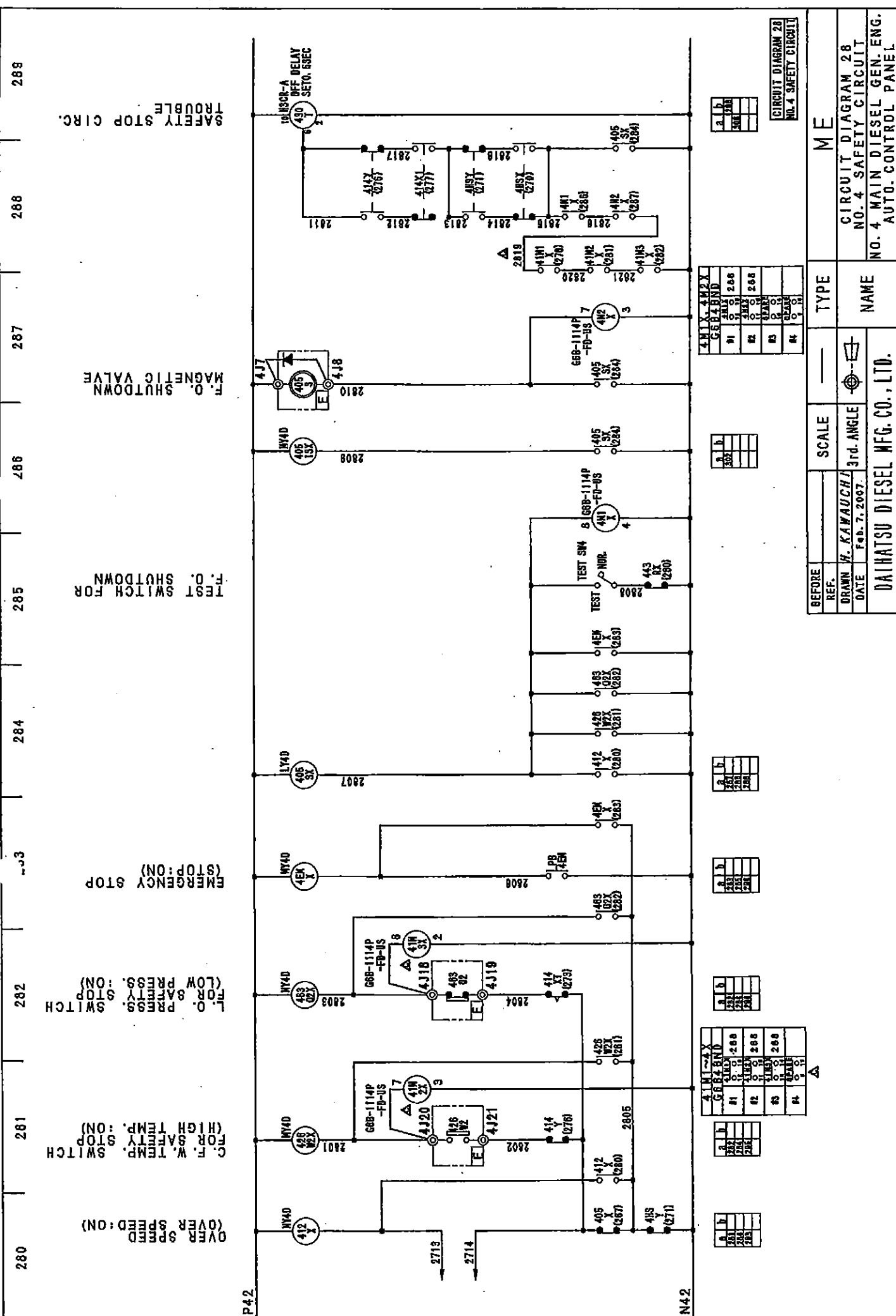
CIRCUIT DIAGRAM 25  
NO. 4 SOURCE CIRCUIT

BEFORE REF.	SCALE	TYPE	ME
DRAWN H. KAWAUCHI	3rd. ANGLE		CIRCUIT DIAGRAM 25 NO. 4 SOURCE CIRCUIT
DATE Feb. 7, 2007			NO. 4 MAIN DIESEL GEN. ENG. AUTO. CONTROL PANEL
DAIHATSU DIESEL MFG. CO., LTD.			

AQA10003771C 30/37







SAFETY STOP CIRC.

F.O. SHUTDOWN  
MAGNETIC VALVE

TEST SWITCH FOR  
F.O. SHUTDOWN

EMERGENCY STOP  
(STOP: ON)

L.O. PRESS. STOP SWITCH  
(LOW PRESS.: ON)

C.F.W. TEMP. STOP SWITCH  
(HIGH TEMP.: ON)

OVER SPRING  
(OVER SPRING: ON)

4YX	4YX	4YX	4YX	4YX
4Y40	4Y41	4Y42	4Y43	4Y44
4Y45	4Y46	4Y47	4Y48	4Y49

4YX	4YX	4YX	4YX
4Y40	4Y41	4Y42	4Y43
4Y44	4Y45	4Y46	4Y47

4YX	4YX	4YX	4YX
4Y40	4Y41	4Y42	4Y43
4Y44	4Y45	4Y46	4Y47

4YX	4YX	4YX	4YX
4Y40	4Y41	4Y42	4Y43
4Y44	4Y45	4Y46	4Y47

4YX	4YX	4YX	4YX
4Y40	4Y41	4Y42	4Y43
4Y44	4Y45	4Y46	4Y47

4YX	4YX	4YX	4YX
4Y40	4Y41	4Y42	4Y43
4Y44	4Y45	4Y46	4Y47

4YX	4YX	4YX	4YX
4Y40	4Y41	4Y42	4Y43
4Y44	4Y45	4Y46	4Y47

4YX	4YX	4YX	4YX
4Y40	4Y41	4Y42	4Y43
4Y44	4Y45	4Y46	4Y47

CIRCUIT DIAGRAM 28  
NO. 4 SAFETY CIRCUIT

BEFORE REF.	SCALE	TYPE	ME
	3rd. ANGLE		
DRAWN H. KAWAUCHI		CIRCUIT DIAGRAM 28	
DATE Feb. 7, 2007		NO. 4 SAFETY CIRCUIT	
DAIHATSU DIESEL MFG. CO., LTD.		NAME	
		NO. 4 MAIN DIESEL GEN. ENG. AUTO. CONTROL PANEL	

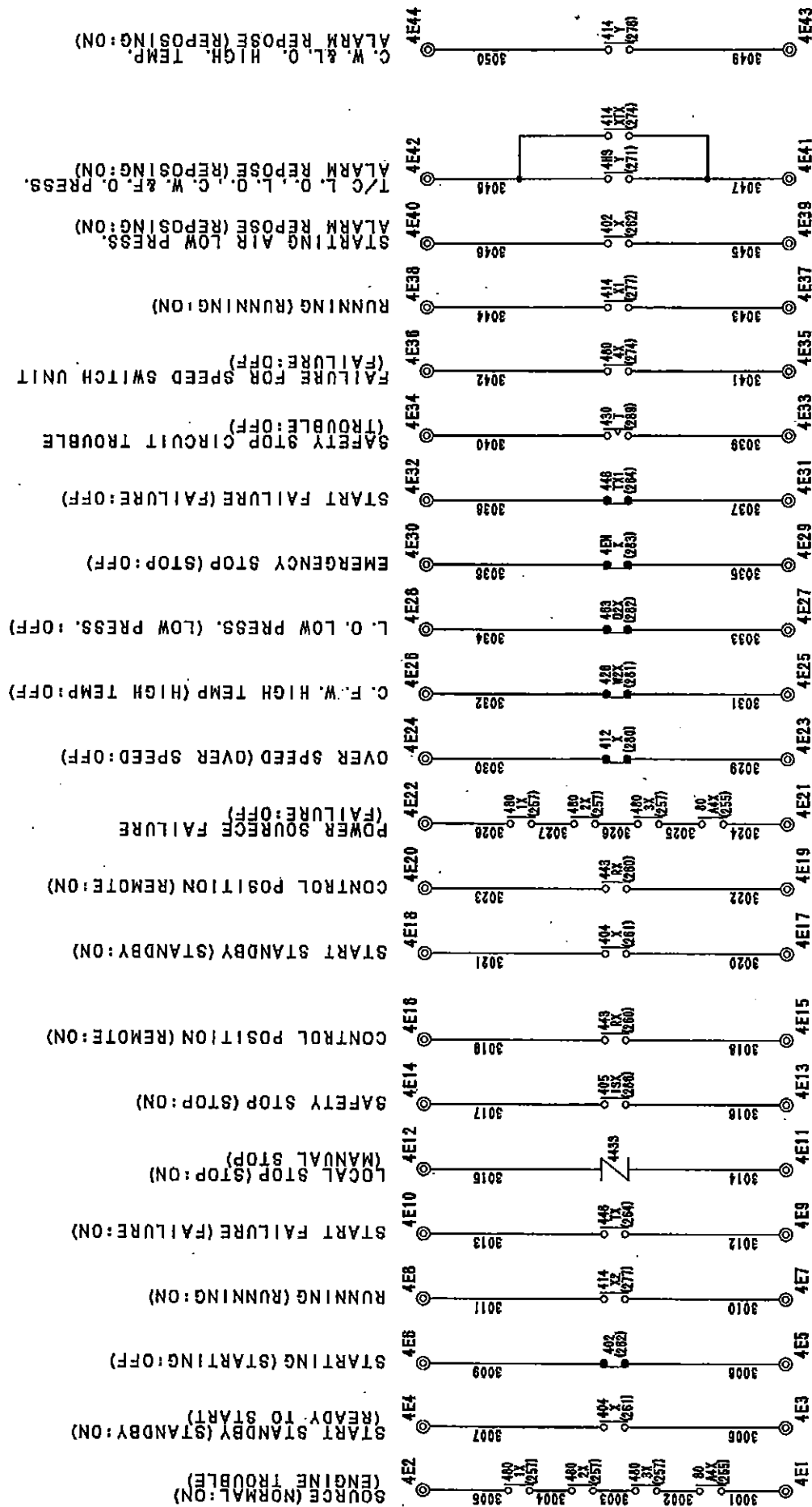
AQA10003771C 33/37



300 301 302 304 305 306 307 308 309

FOR MAIN SWITCH BOARD

FOR ENGINE CONTROL ROOM CONSOLE



CIRCUIT DIAGRAM 30  
NO. 4 CONTACT CIRCUIT

BEFORE REF.	SCALE	TYPE	ME
DRAWN H. KAWAUCHI	3rd. ANGLE		
DATE Feb. 7, 2007			
DAIHATSU DIESEL MFG. CO., LTD.		CIRCUIT DIAGRAM 30 NO. 4 CONTACT CIRCUIT	
		NAME NO. 4 MAIN DIESEL GEN. ENG. AUTO. CONTROL PANEL	

AQA10003771C 35/37

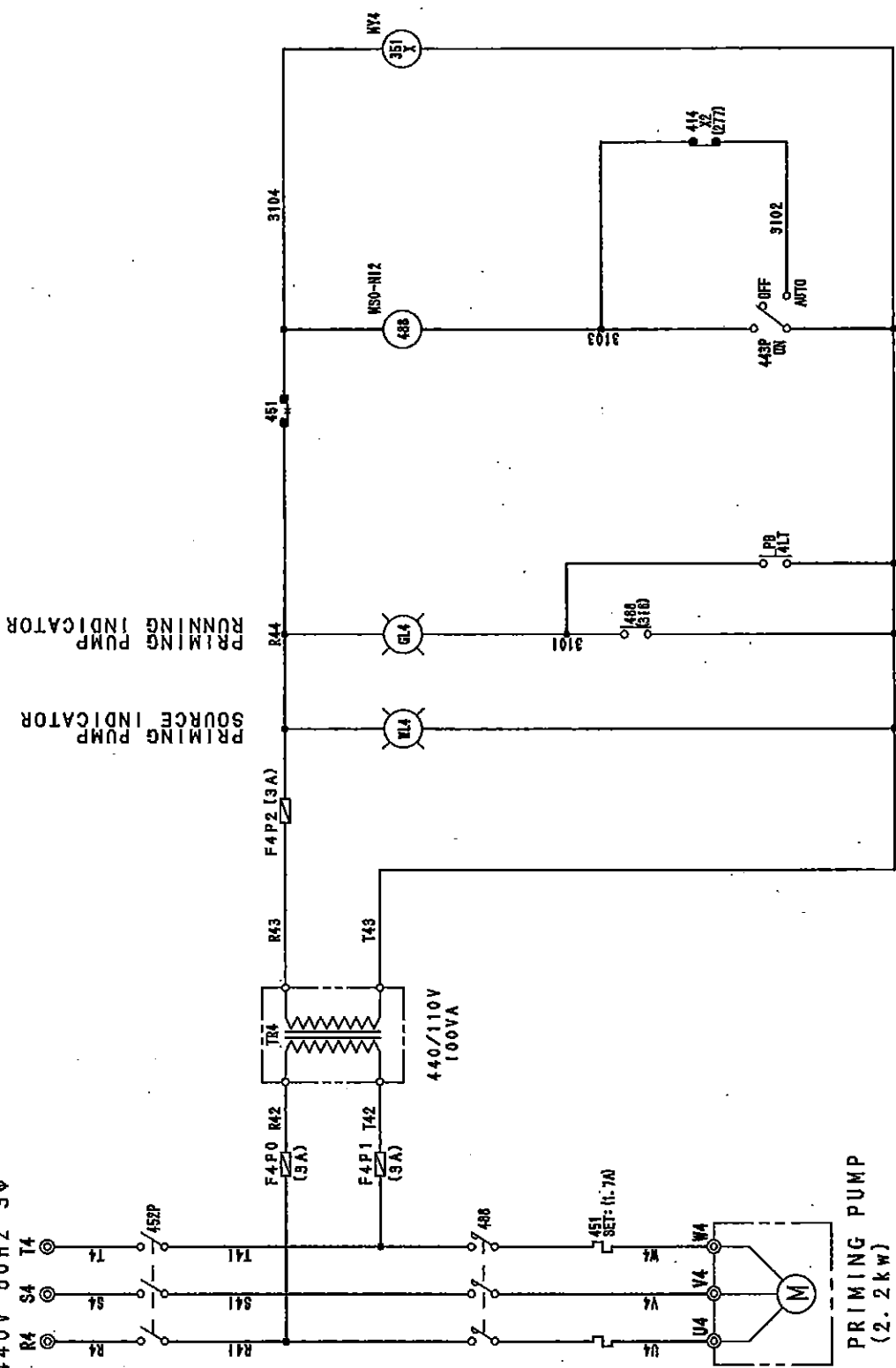
310 311 312 314 315 316 317 318 319

SOURCE  
AC440V 50HZ 3Φ

PRIMING PUMP RUNNING (RUNNING: ON)  
PRIMING PUMP TROUBLE (TROUBLE: OFF)

PRIMING PUMP SOURCE INDICATOR  
PRIMING PUMP RUNNING INDICATOR

L. O. PRIMING PUMP  
(2.2 kw)



a	b
310	

a	b
310	302

BEFORE REF.	SCALE	TYPE	ME
H. KAWAUCHI	3rd. ANGLE		
DATE Feb. 7, 2007			
DAIHATSU DIESEL MFG. CO., LTD.		CIRCUIT DIAGRAM 31 NO. 4 PRIMING PUMP	
		CIRCUIT DIAGRAM 31 NO. 4 PRIMING PUMP	
		NO. 4 MAIN DIESEL GEN. ENG. AUTO. CONTROL PANEL	

AQA10003771C 36/37



DIESEL GENERATOR ENGINE  
 L. O. PRIMING PUMP (11)  
 L. O. プライミングポンプ (11)  
 TYPE: ALG-40N  
 PUMP : 5.0 m<sup>3</sup>/h × 0.4 MPa (4 kgf/cm<sup>2</sup>)  
 MOTOR: AC440V, 3φ, 60Hz, 2.2kW, F

DAIHATSU DIESEL MFG. CO., LTD.  
 TECHNICAL DEPARTMENT  
 OSAKA, JAPAN

SHIP No.		DRAWN BY	<i>N. Katano</i>
TYPE		CHECKED BY	<i>J. Higashi</i>
LIST No.	NN00210004A/A	APPRVED BY	<i>A. Takami</i>
DATE	JUN. 16, 2003		
REVISION	LIST NUMBER CHANGE B106600110FA→NN00210004A/A		

# DRAWING FOR APPROVAL

MESSER : DAIHATSU DIESEL MFG. CO., LTD.

No.	SERVICE AS	TYPE	MODEL	BORE	QTY
	L. O. PRIMING PUMP	HORIZONTAL GEAR ROTARY	ALG-40N	65/50	1
	MOTOR OUTLINE DRAWING				

RULE : \_\_\_\_\_

PAINT : \_\_\_\_\_

SIGN		
T.	S.	K.
<i>T. Ueda</i>	<i>S. Ueda</i>	<i>K. Ueda</i>

## NANIWA PUMP MFG. CO., LTD.

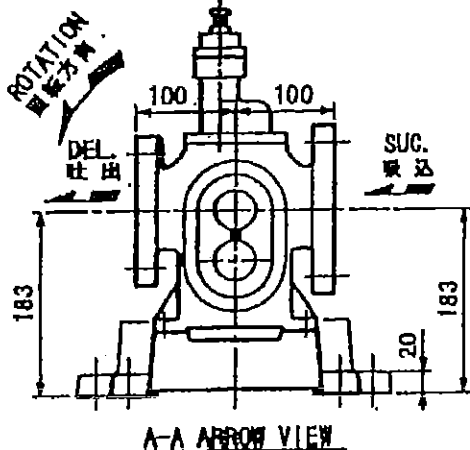
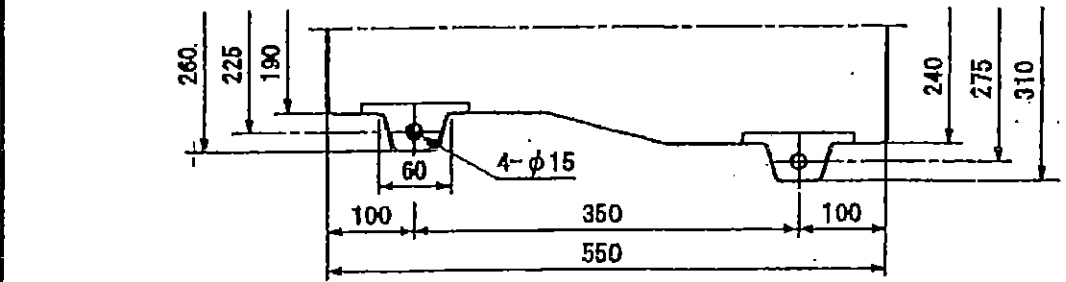
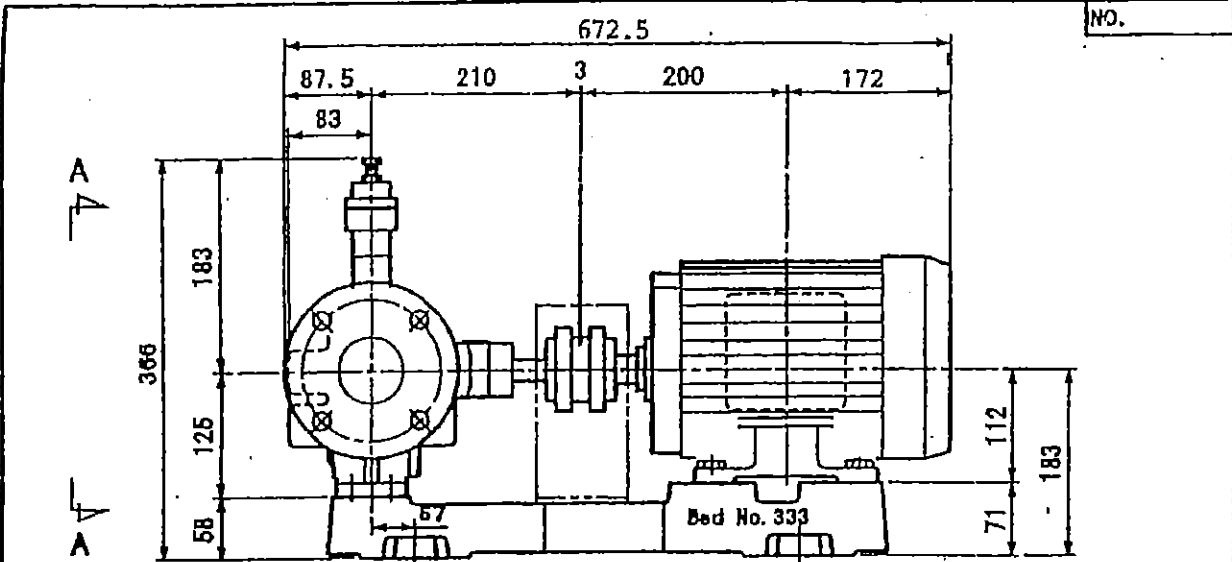
Head Office 11-5, Shinmachi 3-chome, Nishi-ku, Osaka, Japan  
TEL 06(6641)6131 FAX 06(6535)1884

Tokyo Office 4-5, Kayabacho 1-chome, Nihonbashi, Chuo-ku,  
Tokyo, Japan  
TEL 03(3669)0661 FAX 03(3669)0675

Mihara Factory 476-1, Tanjo, Mihara-cho, Minamikawachi-gun,  
Osaka, Japan  
TEL 0723(61)2946 FAX 0723(61)5407

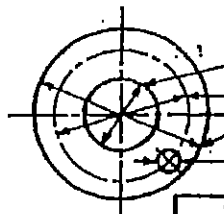
Fukui Factory 112, Ikegami, Mikuni-cho, Sakai-gun, Fukui, Japan  
TEL 0776(82)2670 FAX 0776(82)2689

NN00210004A/A (2/5)



SUC. & DEL. FLANGE  
吸込及吐出フランジ

JIS 10K SUC. 吸込	JIS 10K DEL. 吐出
φ 85	φ 50
φ 140	φ 120
φ 175	φ 155
4-φ 19	4-φ 19



MASS 質量	
PUMP ポンプ	30 kg
MOTOR 電動機	30 kg
TOTAL 全質量	60 kg

ACCESSORIES FOR EACH 1 PUMP 付属品 (ポンプ一台二付)		SPECIFICATION 仕様		PUMP NAME 機種名	
DESCRIPTION 記号	QTY 数量	SECTION BORE 吸入口径	65 mm	L.O. PRIMING PUMP	
COUPLING カップリング	1set	DELIVERY BORE 吐出口径	50 mm		
COUPLING COVER カップリングカバー	1	CAPACITY	5 m <sup>3</sup> /h	PUMP MODEL 型式	ALG-40N
COMMON BEEB 共通ベーン	1	TOTAL PRESSURE	0.4 MPa	QUANTITY 数量	1
SAFETY VALVE (SET PRESSURE 0.45-0.5MPa)	1set	SUCTION PRESSURE 吸入圧力	MPa	RULE 仕様	
AIR COCK エアロック	1	REVOLVING SPEED 回転速度	1150 min <sup>-1</sup>	ANGLE PROJ. 角度	3 rd
		HYD. TEST PRESS. 水圧試験圧力	0.8 MPa	SCALE 尺貫	FREE
		MOTOR OUTPUT 電動機出力	2.2kW, 6P	DRAWING NO. 図番	99D30523
		POWER SOURCE 電源	440V, 60Hz, 3ph	<b>NANIWA PUMP MFG. CO., LTD.</b> TECH. DEPARTMENT DESIGN SECTION 株式会社浪速ポンプ製作所	
		GUARANT. VIS. FOR POWER	1000 mm <sup>2</sup> /s		
		GUARANT. VIS. FOR CAPA.	26 mm <sup>2</sup> /s		
		OIL TEMP = NOR.	℃		



**NANWA PUMP**  
OSAKA JAPAN

**SECTIONAL DRAWING 構造断面図**

HORIZONTAL GEAR ROTARY PUMP 横型電動歯車式

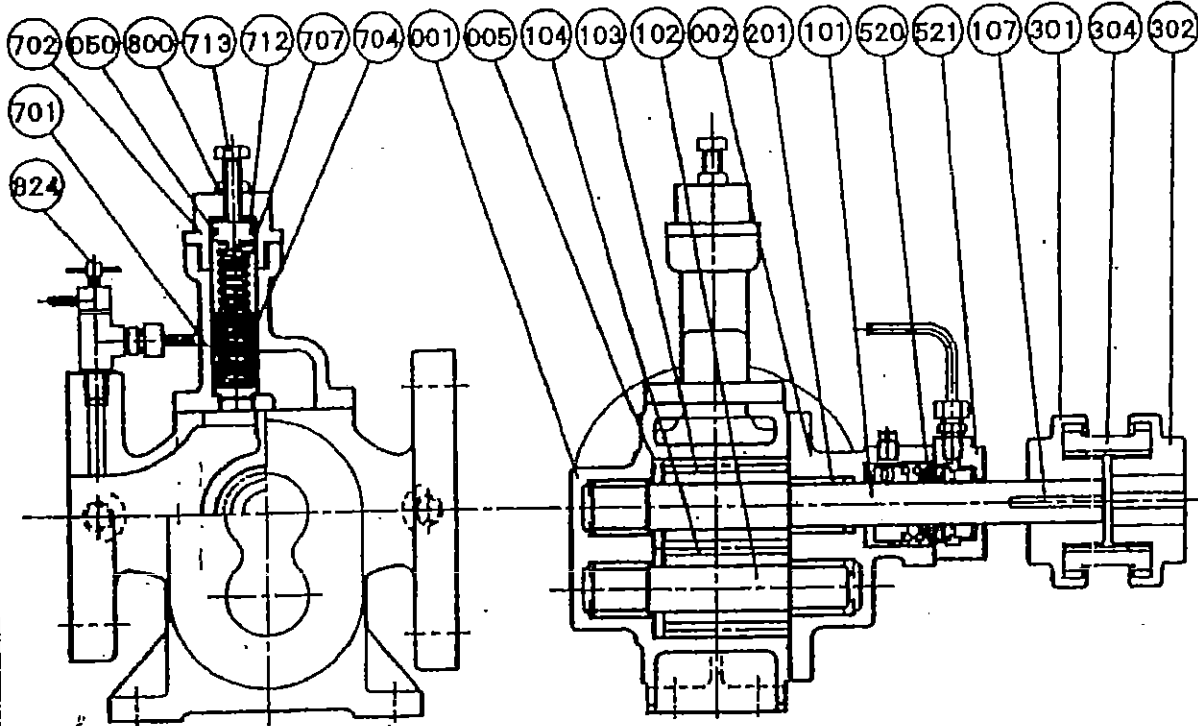
MODEL 型式 **ALG-N**

DRAWING NO.

99DS0305

DATE

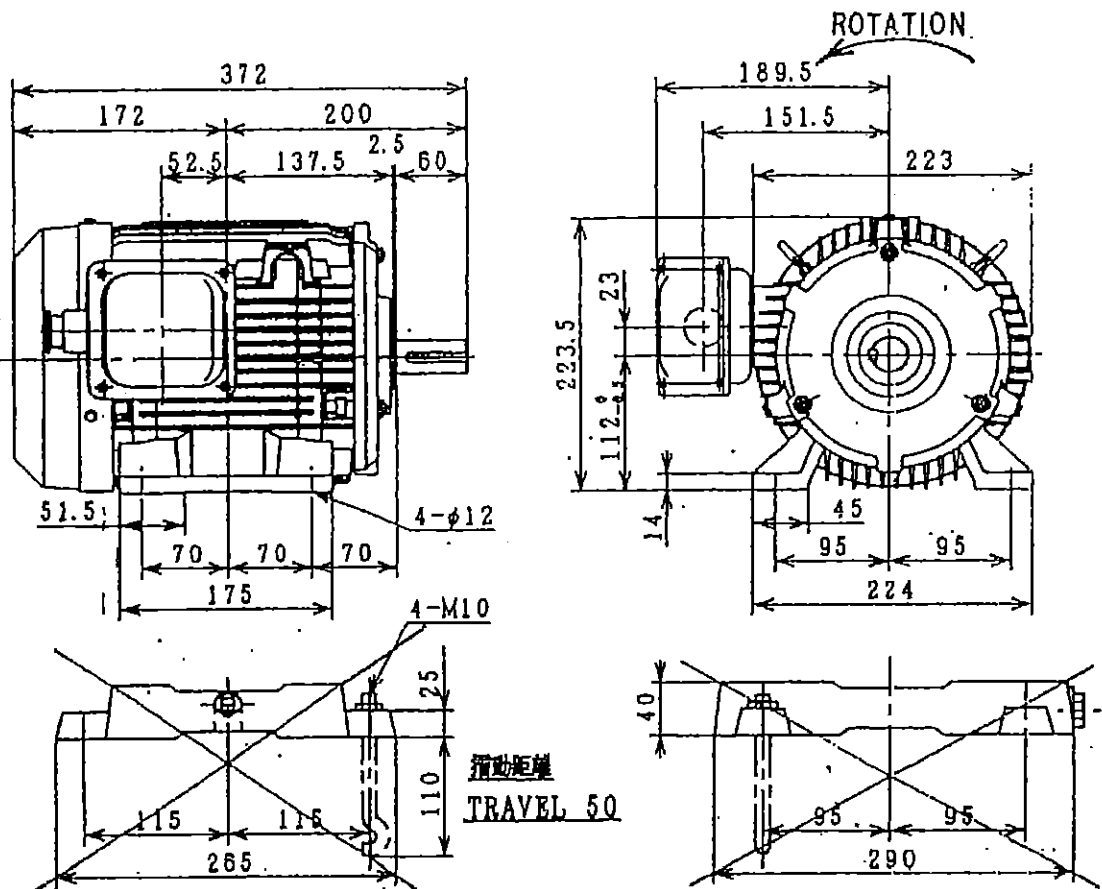
APR 28 1999



302	COUPLING 軸継手	CAST IRON 鑄鉄	FC200	1					
301	COUPLING 軸継手	CAST IRON 鑄鉄	FC200	1	824	AIR COCK 空気抜きコック	COPPER ALLOY ROD 銅合金棒	C3604	1
201	BEARING METAL 軸受	CAST BRONZE 青銅鋳物	CAC403	4	800	ADJUST NUT 調整ナット	MILD STEEL 一般鋼造用圧延鋼	SS400	1
107	COUPLING KEY 軸継手キー	CARBON STEEL 機械構造用炭素鋼	S45C	1	713	ADJUST SCREW 調整ボルト	MILD STEEL 一般鋼造用圧延鋼	SS400	1
104	DRIVEN GEAR 遊歯車	CARBON STEEL 機械構造用炭素鋼	S45C	1	712	SPRING CARRIER バネ座	MILD STEEL 一般鋼造用圧延鋼	SS400	1
103	DRIVE GEAR 主歯車	CARBON STEEL 機械構造用炭素鋼	S45C	1	707	VALVE SPRING 安全弁バネ	PIANO WIRE ピアノ線	SYP	1
102	DRIVEN SHAFT 遊軸	CARBON STEEL 機械構造用炭素鋼	S45C	1	704	SAFETY VALVE 安全弁	CARBON STEEL 機械構造用炭素鋼	S45C	1
101	DRIVE SHAFT 主軸	CARBON STEEL 機械構造用炭素鋼	S45C	1	702	VALVE COVER 安全弁カバー	CAST IRON 鑄鉄	FC200	1
050	O-RING Oリング	RUBBER 合成ゴム		1	701	SAFETY VALVE BOX 安全弁箱	CAST IRON 鑄鉄	FC200	1
005	SIDE PLATE サイドプレート	CAST IRON 鑄鉄	FC200	2	521	SEAL COVER シールカバー	CAST IRON 鑄鉄	FC200	1
002	SIDE COVER サイドカバー	CAST IRON 鑄鉄	FC200	1	520	MECHANICAL SEAL メカニカルシール			1 SET
001	CASING ケーシング	CAST IRON 鑄鉄	FC200	1	304	COUPLING SLEEVE 軸継手スリーブ	RUBBER 合成ゴム		1
PART NO.	NAME OF PART 部品名称	MATERIAL 材質		Q'TY 数量	PART NO.	NAME OF PART 部品名称	MATERIAL 材質		Q'TY 数量

三相誘導電動機  
THREE-PHASE INDUCTION MOTOR

出力 OUTPUT	形 TYPE	式 FORM	定 格 RATING	ボルト VOLTS	ヘルツ HERTZ	同期毎分回転 SYNG. SPEED rpm	極 数 POLES	絶 縁 級 INS. CLASS	質量kg WEIGHT
2.2 KW	TFO	K	CONT.	440	60	1200	6	F	30



Rated Current : 4.7A  
Starting Current : 29.2A

SHIELD BEARING	6306ZZ	6306ZZ
RULE		
CONNECTION	Y	
CABLE	---	
GLAND	20B	

ベース BASE	キソボルト FOUNDATION BOLTS	PROJECTION
不付 WITHOUT	不付 WITHOUT	

用 油 OIL 付属品 ACCESSORY

備 考 NOTICE 保護構造: IP44

ご注文主 CUSTOMER (067170)	股 数 QUANTITY 1	受注番号 ORDER NO. 22-1-1254-E151	作業番号 WORK NO. B453.62
------------------------	----------------	-------------------------------	-----------------------

DVN M. KABURAKI Jul. 28 '95	寸 法 図 DIMENSIONS
CHKD M. KAWAZONO	
APPD T. MATSUDA	
枠 番 FRAME SIZE MTFOD-112M	

Hitachi, Ltd.  
Tokyo Japan

HARASHINO DWG. NO.

324F 4R830904

NN00210004A/A (5/5)

訂 正 番 号  
REV

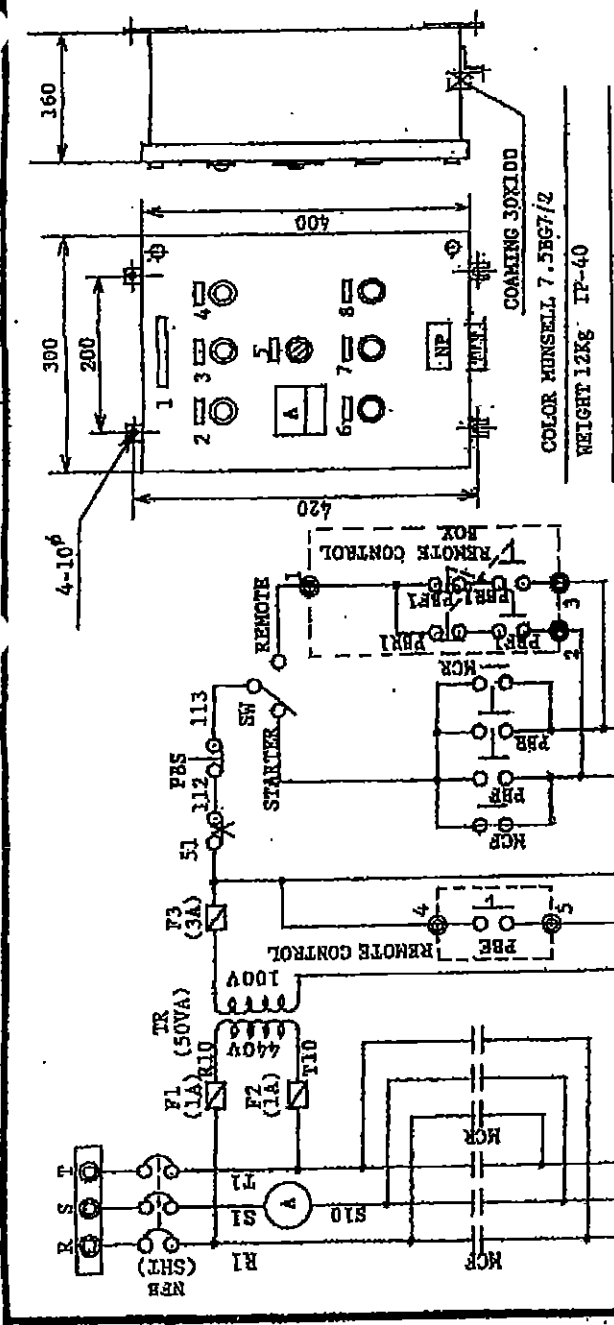
DIESEL GENERATOR ENGINE  
TURNING DEVICE STARTER PANEL

DAIHATSU DIESEL MFG. CO., LTD.  
TECHNICAL DEPARTMENT  
OSAKA, JAPAN

		DRAWN BY	<i>N. Satoh</i>
TYPE	ALL	CHECKED BY	<i>Y. Terachi</i>
LIST No.	AQA20004257B		
DATE	Nov.28,2007	APPROVED BY	<i>A.</i>
REVISION	B: Dec.05,2007 N.H		

ADK28-0741-4

MARKS	NAME OF PARTS	TYPE
MBE	NO FUSE BREAKER	XS30NB/3P/5A (SET)
MCF/MCR	MAGNETIC SWITCH	S-N12 4#1b AC100V
51	OVER LOAD RELAY	TR-N12 (1.3A)
TR	TRANSFORMER	440/100V 50VA
A	AMPER METER	QS80 AS 5N
WL	SOURCE INDICATOR	APS-116W
GLF/GLR	RUNNING INDICATOR	APS-116G
FBS	PUSH BUTTON SWITCH	ABS-101N
PBF/PBR	PUSH BUTTON SWITCH	ABS-110N
PBE	PUSH BUTTON SWITCH	AOS210N
PBF1/PBR1	PUSH BUTTON SWITCH	ABS211N
SW	SELECT SWITCH	ASS211N
F1,2/F3	FUSE	UC-1 1A/3A
TB	TERMINAL BLOCK	F-15/12P
	CONTROL BOX	BSN3Z
	CABLE	1CT 1.25 X 6C 20m



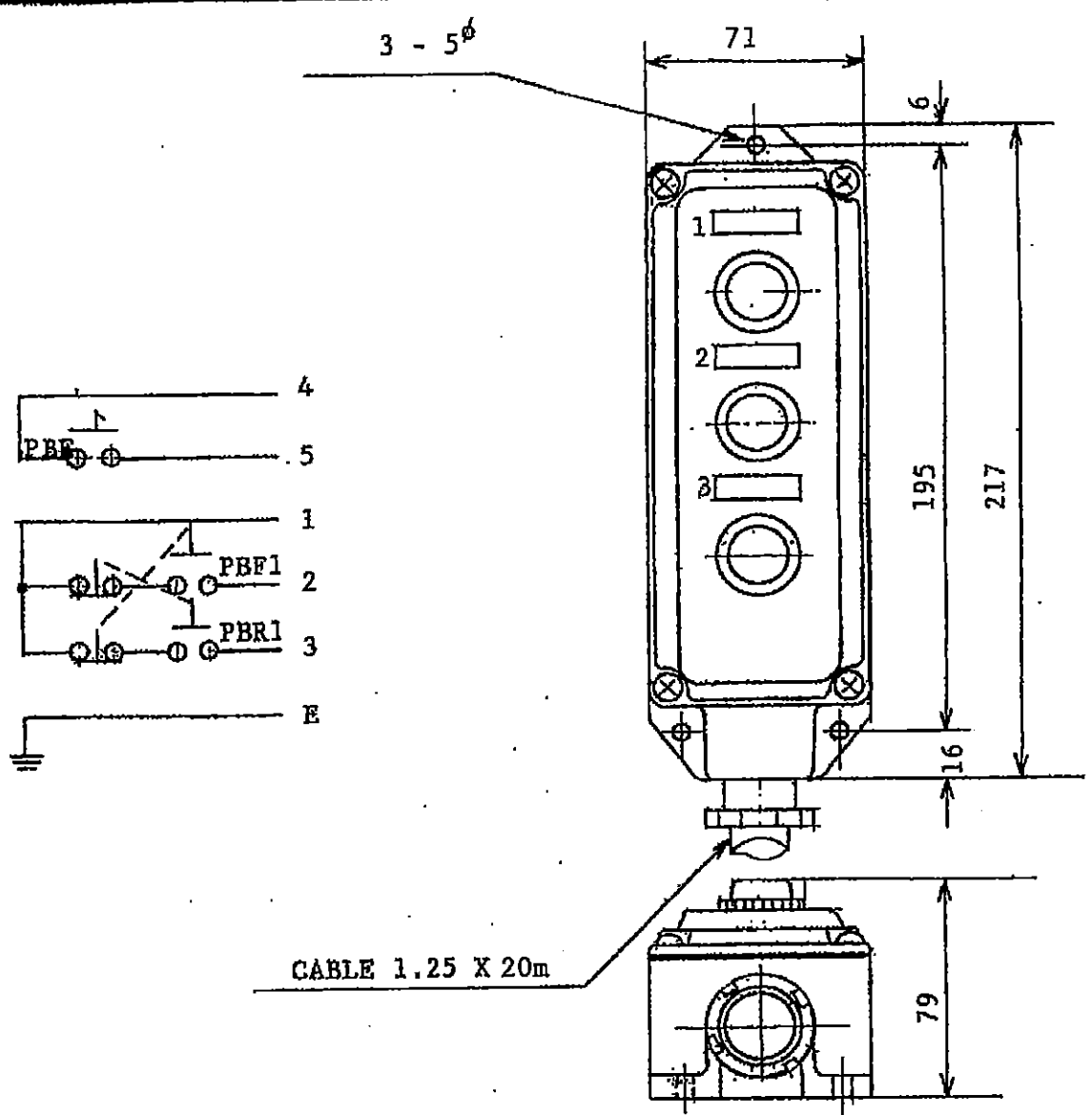
8	PUSH BUTTON SWITCH	GREEN	FORWARD
7	PUSH BUTTON SWITCH	RED	STOP
6	PUSH BUTTON SWITCH	GREEN	REVERSE
5	SELECT SWITCH		STA. RE.
4	RUNNING INDICATOR	GREEN	FORWARD
3	SOURCE INDICATOR	WHITE	SOURCE
2	RUNNING INDICATOR	GREEN	REVERSE
1			
NO	NAME OF PARTS	No.1,2,3,4 DIESEL GENERATOR ENGINE TURNING GEAR	
	COLOR OF LAMP OR SWITCH	DESCRIPTION ON NAME PLATE	

REVISION	TRACE	DRAW	CHECK	APPROV	3RD ANGLE PROJECTION	DRAWING NO.
B		K.M			第三角画法	K-0220535-1

STARTER FOR FLY WHEEL TURNING.  
 DEVICE 440V 60HZ 0.4KW

DATE OF ISSUE 15-APR-2002  
 出图日期

KITaura ELECTRIC MFG.  
 北浦電機製作所



PAINTING COLOR MUNSELL 7.5BG7/2

NO	NAME OF PARTS	COLOR OF SWITCH	DESCRIPTION ON NAME PLATE	
1	EMERGENCY STOP SWITCH	RED	EMERGENCY	AOS210N
2	FORWARD SWITCH	GREEN	FORWARD	ABS211N
3	REVERSE SWITCH	BLACK	REVERSE	ABS211N

DATE OF ISSUE 出図年月日		15-APR-2002		REMOTE CONTROL BOX			REVISION B
TRACE 写図	DRAW. 製図	CHECK. 調査	APPROV. 承認	3RD ANGLE PROJECTION 第三角図法		DRAWING NO. 図番	K - 0220535-2
	K.M			UNIT. 単位	m/m 尺度	SCALE. not	KITAURA ELECTRIC MFG. 北浦電機製作所

AQA20004257B (3/3)

DIESEL GENERATOR ENGINE  
 PEHEATING UNIT  
 FOR  
 JACKET COOLING WATER

1 SET/SHIP

PURCHASE No. AQA20004258A

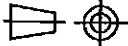

HULL No.	H2431/32/33	DRAWN BY	<i>N. Saito</i>
TYPE	6DK-28	CHECKED BY	<i>Y. Terachi</i>
LIST No.	AQA10005965A		
DATE	Nov.28,2007	APPROVED BY	<i>[Signature]</i>
REVISION			

ADK28-0741-4

(1/15)

D R A W I N G  
F O R  
A P P R O V A L

MESSRS : DAIHATSU DIESEL MFG.CO.,LTD.  
 SHIP or PJT NO. : JINGNAN SHIPYARD Hno.H2431/32/33  
 SPECIFICATION : AC440V 3P 60Hz 60kW  
 ENGINE MODEL : \_\_\_\_\_  
 PAINT COLOR : Munsell no.7.5 BG 7/2  
 REMARK : 1 SET / 1 SHIP

			APD	<i>YK</i>	SHEET NO. 01
1	2007.11.27	REVISED	CHK	<i>YK</i>	SCALE N / S
0	2007.11.22	FOR APPROVAL	DWN	Y. K. KIM	
REV	DATE	DESCRIPTION			
 <b>SinSueng Electric Co., Ltd.</b> TEL : +82-55-231-6707~8, FAX : -6709			TITLE ; H2431~33 <u>JACKET WATER PREHEATER UNIT</u>		

DRAWING NO. ; SSE001370

AQA10005965A (2/15)

2008/09/16 TECHNICAL DEPARTMENT

1                      2                      3                      4                      5

J.W.PREHEATER UNIT

A	SHIPYARD	JINGNAN SHIPYARD CO.,LTD		CLASS		
	MESSRS	DAIHATSU DIESEL MFG. CO., LTD.		SHIP NO.	H2431/32/33	
B	TYPE	DEAD FRONT SELF SUPPORTING		AMBIENT TEMP.	50°C	
	SIDE COVERS	SHEET STEEL				
	BOTTOM PLATES	SHEET STEEL				
	PAINT COLOR	MUNSELL NO. 7.5 BG 7/2				
	LETTER OF NAME PLATE	ENGLISH		MATERIAL	PHENOLIC	
	DRAWING & DOCUMENT	ENGLISH				
C	SOURCE CAPACITY	HEATER	AC 440 V 3 φ 60 HZ 30 KW		2 SET	
			AC	V φ HZ KW	SET	
		PUMP	AC 440 V 3 φ 60 HZ 1.1 KW 10 m <sup>3</sup> /h x 10m		1 SET	
		TRANSFORMER	AC 440/100 V 1 φ 60HZ 500 VA 24 V		1 SET	
		CONTROL CIRCUIT	AC 100 V 60 HZ / AC 24V			
		SOURCE	AC 440 V 3 φ 60 HZ			
D	COLOR OF VINYL CAP	POWER CIRCUIT R(U) : GREEN , P(+) : RED S(V) : YELLOW , N(-) : BLUE T(W) : BROWN		CONTROL CIRCUIT : NUMBERING EARTH : GREEN/YELLOW		
	INTERNAL WIRING	POWER CIRCUIT : 660V SCP BLACK CONTROL CIRCUIT : 660V SCP or 600V STYLE 1015 1.25mm <sup>2</sup> REMARK CIRCUIT :				
E	DRAWING COPIES	APPROVAL DWG 3 COPIES	WORKING DWG 3 COPIES	COMPLETION DWG 3 COPIES		
	REMARKS	MODEL	PART NO	WEIGHT		
		SSE60000	SSE001370	ABT 200kg		

			APD	<i>zh</i>	SHEET NO. 02
			CHK	<i>zh</i>	SCALE N / S
0	2007.11.22	FOR APPROVAL	DWN	Y. K. KIM	
REV	DATE	DESCRIPTION	TITLE ; H2431/32/33		
<b>SinSueng Electric Co., Ltd.</b> TEL : +82-55-231-8707~8, FAX : -8709			GENERAL SPECIFICATION		

DRAWING NO. ; SSE001370

AQA10005965A (3/15)

SYMBOL	NAME	SYMBOL	NAME
	MOLDED CASE CIRCUIT BREAKER W/CONTACT		FUSE
	MAGNETIC CONTACT SWITCH		NO FUSE BREAKER 3P
	OVER LOAD		NO FUSE BREAKER 2P
	HEATER		CONNECTION OF ELECTRIC WIRE
	AC MOTOR		TERMINAL OF PARTS
	COIL OF AUXILIARY RELAY		TERMINAL FOR OUT SIDE WIRE
	COIL OF MAGNETIC RELAY		"a" CONTACTOR OF PUSH BUTTON
	SIGNAL LAMP		"b" CONTACTOR OF PUSH BUTTON
	PUMP . MOTOR		TOGGLE SWITCH
	BALL VALVE		
	SAFETY VALVE		
	ALARM & BUZZER		
	TRANSFORMER		
	THERMAL RELAY		
	TEMPERATURE SWITCH		
	"a" CONTACT NORMALLY OPEN		
	"b" CONTACT NORMALLY CLOSED		
	TRANSFER SWITCH		
	TRANSFER SWITCH		

			APD		SHEET NO. 03
			CHK		SCALE N / S
0	2007.11.22	FOR APPROVAL	DWN	Y. K. KIM	
REV	DATE	DESCRIPTION			

**SinSueng Electric Co., Ltd.**  
 TEL : +82-55-231-8707~8, FAX : -8709

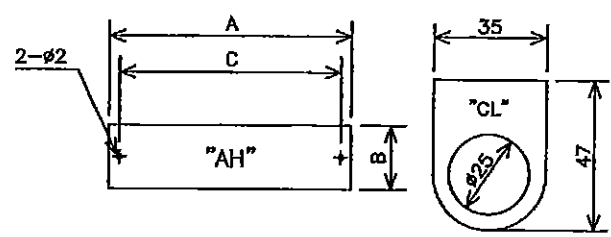
TITLE ; H2431/32/33  
 SYMBOL LIST

DRAWING NO. ; SSE001370

AQA10005965A (4/15)

2008/09/16 TECHNICAL DEPARTMENT

1                      2                      3                      4                      5



SUS

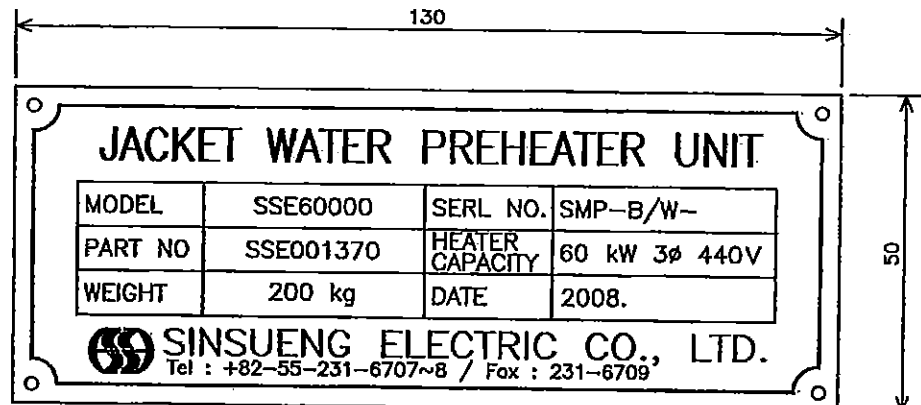
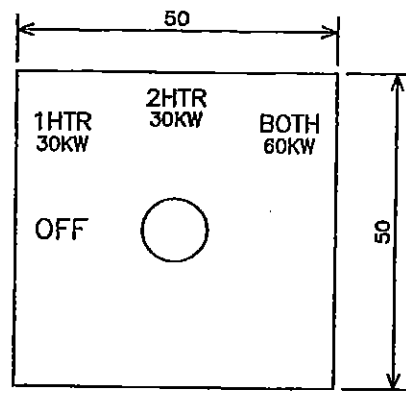
NO	N A M E	TYPE
NP	J.W PREHEATER UNIT	OAH
1	POWER SOURCE	CL
2	NO.1 HEATER ON	CL
3	NO.2 HEATER ON	CL
4	PUMP RUN	CL
5	NO.1 HEATER TRIP	CL
6	NO.2 HEATER TRIP	CL
7	PUMP TRIP	CL
8	ABNORMAL	CL
9	START	CL
10	STOP	CL
11	HIGH TEMP. RESET	CL
12	PRESS GAUGE (OUTLET)	2AH
13	COMPOUND GAUGE (INLET)	2AH

TYPE	A	B	C	T
0	200	30	190	2T
1	63	16	53	2T
2	52	18	45	2T

SUS304

Material : PHENOLIC PLATE

MATERIAL : PHENOLIC  
 GROUND : WHITE  
 LETTER : BLACK



Material : SUS304, 0.6t

			APD	<i>zh</i>	SHEET NO. 04
			CHK	<i>zh</i>	SCALE N / S
0	2007.11.22	FOR APPROVAL	DWN	Y. K. KIM	
REV	DATE	DESCRIPTION	TITLE : H2431/32/33		
<b>SinSueng Electric Co., Ltd.</b> TEL : +82-55-231-6707~8, FAX : -6709			NAME PLATE TABLE & LIST		

DRAWING NO. ; SSE001370

AQA10005965A (5/15)

1	2	3	4	5			
NO	SYMBOL	N A M E	TYPE	SPECIFICATION	REMARK	Q'TY	MAKER
1	NFB	NO FUSE BREAKER	ABS-103b	3P 100A		1	L . G
2	M1,M2	MAGNETIC CONTACTOR	GMC-65	AC100V 60HZ		2	L . G
3	M3	MAGNETIC CONTACTOR	GMC-22	AC100V 60HZ		1	L . G
4	Th1,Th2	OVER CURRENT RELAY	GTH-85		(34~50)A	2	L . G
5	Th3	OVER CURRENT RELAY	GTH-22		(1.6~2.5)A	1	L . G
6	R,RA,M3X 0L1,2,3,RS	CONTROL RELAY	HR705--4PL	AC100V 60HZ	WITH SOCKET	7	KACON
7	TR	TRANSFORMER		440/100,24V	500VA	1	SINSUENG
8	F1,F2,F5	FUSE	SB-C1	3A		3	SAMBOO
9	F3,F4	FUSE	SB-C1	5A		2	SAMBOO
10	WL	PILOT LAMP	YSPL2	24V, 25 $\phi$ E-12(24V1W)	WHITE	1	YONGSUNG
11	GL1	PILOT LAMP	YSPL2	24V, 25 $\phi$ E-12(24V1W)	GREEN	1	YONGSUNG
12	YL1,YL2	PILOT LAMP	YSPL2	24V, 25 $\phi$ E-12(24V1W)	YELLOW	2	YONGSUNG
13	RL1,2,3,4	PILOT LAMP	YSPL2	24V, 25 $\phi$ E-12(24V1W)	RED	4	YONGSUNG
14	START	PUSH BUTTON	YSPL2	AC250V, 25 $\phi$	GREEN	1	YONG SUNG
15	STOP	PUSH BUTTON	YSPL2	AC250V, 25 $\phi$	RED	1	YONG SUNG
16	RST	P/B WITH LAMP	YSPBL2	AC250V, 25 $\phi$	RED	1	YONG SUNG
17	S1	CAM SWITCH				1	HANYOUNG
18	TC1	TEM'P CONTROLLER	HY-8200S	PT100(ohm)	0~99°C	1	HANYOUNG
19	TC2	LIMIT THERMOSTAT		10~110°C		1	E.G.O
20	P	PRESS GAUGE	LIQUID FILLED TYPE	0~6bar	P2902M	1	WOOJIN/WISE
21	CP	COMPOUND GAUGE	LIQUID FILLED TYPE	76cmHg~6bar	P2902M	1	WOOJIN/WISE
22	T	THERMOMETER		0~100°C	L TYPE	1	WOOJIN
22	T1	TIMER	H3BA	"D" MODE	10 min	1	AUTONICS

			APD	<i>YK</i>	SHEET NO. 05
1	2007.11.27	REVISED	CHK	<i>YK</i>	SCALE N / S
0	2007.11.22	FOR APPROVAL	DWN	Y. K. KIM	
REV	DATE	DESCRIPTION			



SinSueng Electric Co., Ltd.

TEL : +82-55-231-8707~8, FAX : -8709

TITLE ; H2431/32/33

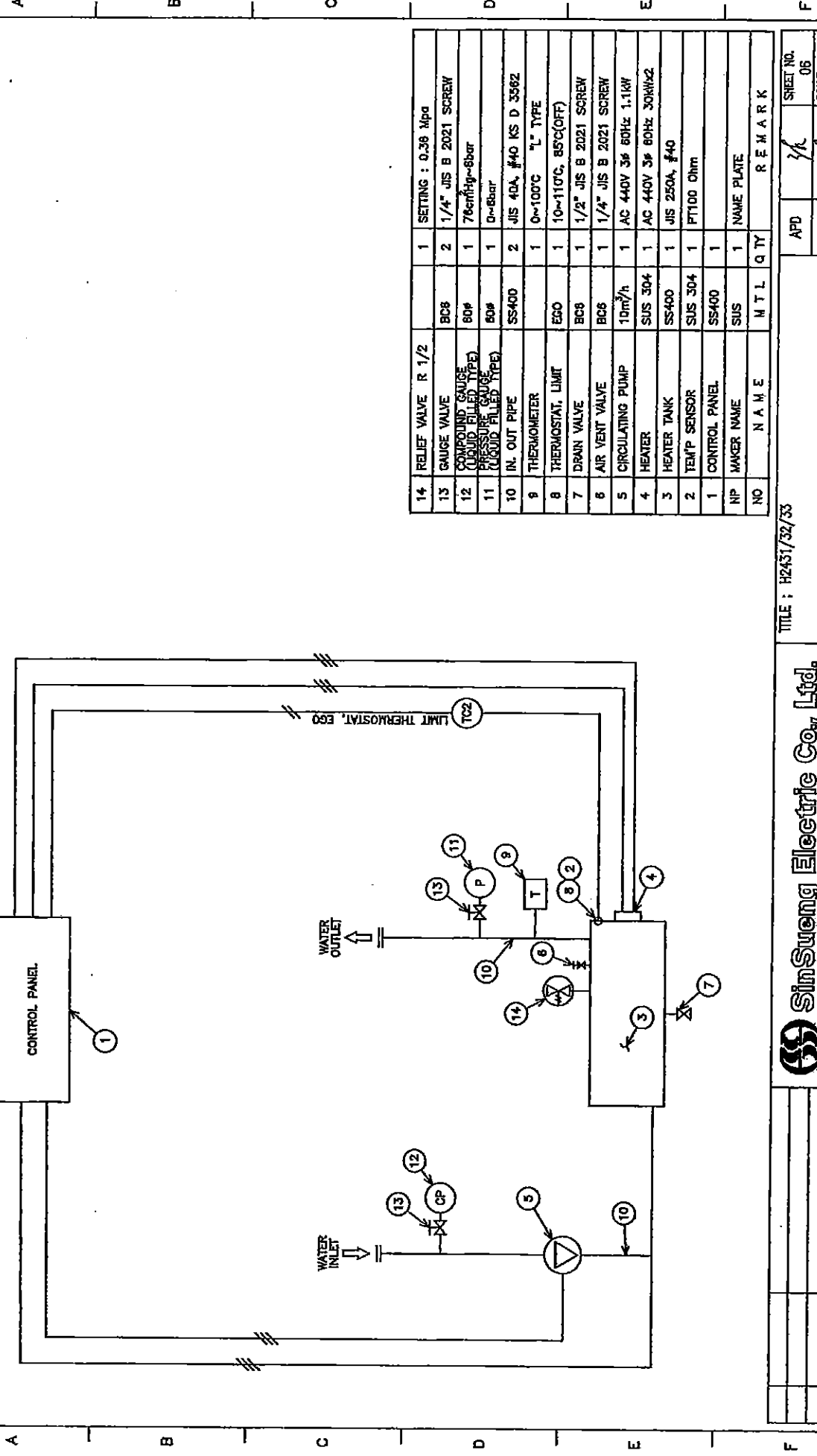
MATERIAL LIST

DRAWING NO. ; SSE001370

AQA10005965A (6/15)

2008/09/16 TECHNICAL DEPARTMENT

1 2 3 4 5 6 7 8



14	RELIEF VALVE	R 1/2	1	SETTING : 0.36 Mpa
13	GAUGE VALVE	BC8	2	1/4" JIS B 2021 SCREW
12	COMPOUND GAUGE (LIQUID FILLED TYPE)	80#	1	76cmHg-8bar
11	PRESSURE GAUGE (LIQUID FILLED TYPE)	80#	1	0~8bar
10	IN. OUT PIPE	SS400	2	JIS 40A, #40 KS D 3562
9	THERMOMETER		1	0~100°C L" TYPE
8	THERMOSTAT, LIMIT	EGO	1	10~110°C, 85°C(OFF)
7	DRAIN VALVE	BC8	1	1/2" JIS B 2021 SCREW
6	AIR VENT VALVE	BC6	1	1/4" JIS B 2021 SCREW
5	CIRCULATING PUMP	10m <sup>3</sup> /h	1	AC 440V 3# 60Hz 1.1kW
4	HEATER	SUS 304	1	AC 440V 3# 60Hz 30kWx2
3	HEATER TANK	SS400	1	JIS 250A, #40
2	TEMP SENSOR	SUS 304	1	FT100 Ohm
1	CONTROL PANEL	SS400	1	
NP	MAKER NAME	SUS	1	NAME PLATE
NO	N A M E	M T L	Q T Y	R E M A R K

TITLE : H2451/32/33

**SinSueng Electric Co., Ltd.**

TEL : +82-65-291-8707~8, FAX : -8709

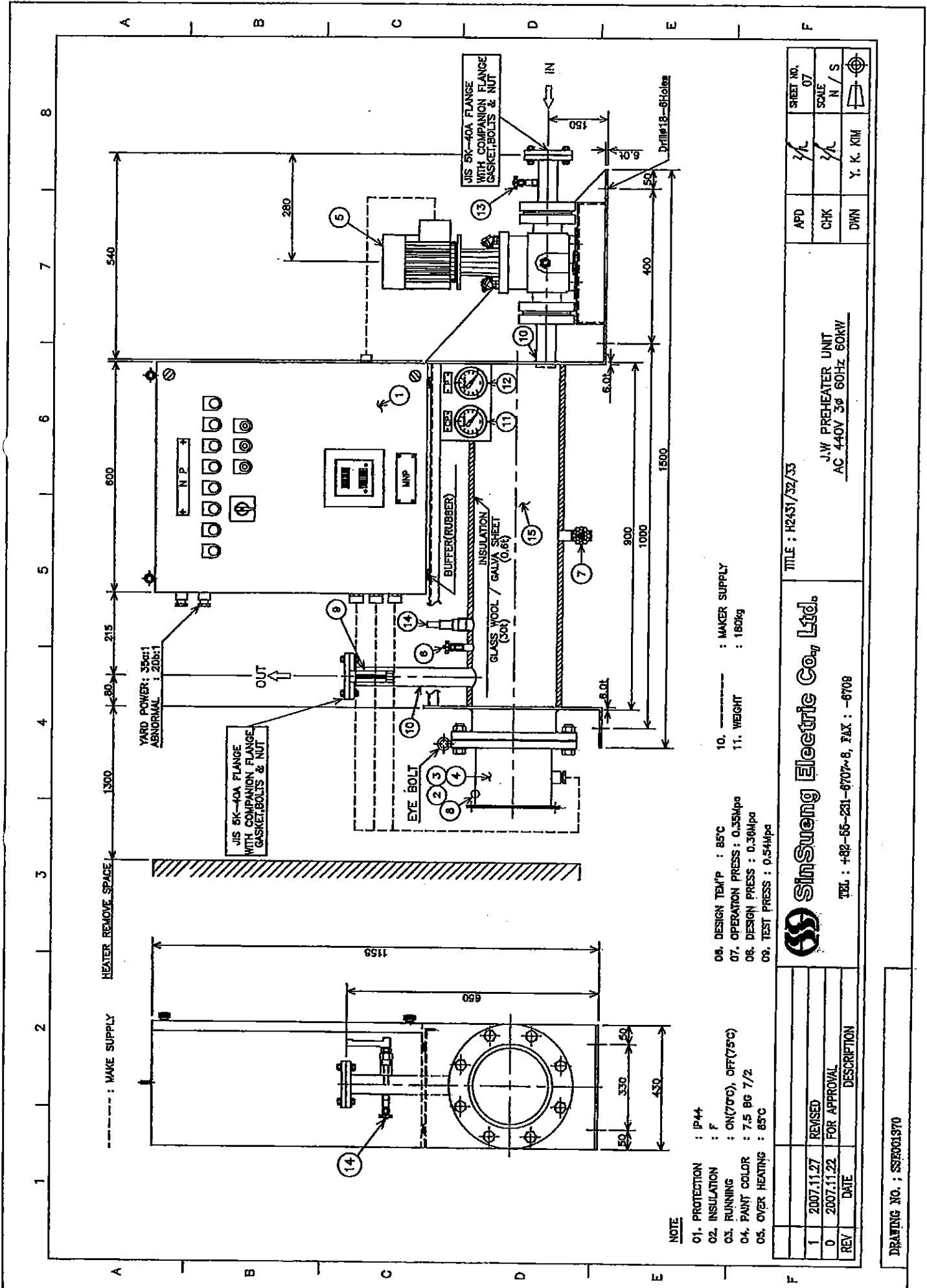
PIPE WORKING DIAGRAM  
AC 440V 3# 60Hz 60KW

REV	DATE	DESCRIPTION
0	2007.11.22	FOR APPROVAL

APD	CHK	DWN	Y. K. KIM
-----	-----	-----	-----------

SHEET NO. 06  
SCALE N/S

DRAWING NO. : SSB001570



YARD POWER: 354V1  
ABNORMAL : 205V1

JIS 5K-40A FLANGE  
WITH COMPANION FLANGE,  
GASKET, BOLTS & NUT

JIS 5K-40A FLANGE  
WITH COMPANION FLANGE,  
GASKET, BOLTS & NUT

**NOTE**

- 01. PROTECTION : IP44
- 02. INSULATION : F
- 03. RUNNING : ON(75°C), OFF(75°C)
- 04. PAINT COLOR : 7.5 BG 7/2
- 05. OVER HEATING : 85°C
- 06. DESIGN TEMP : 85°C
- 07. OPERATION PRESS : 0.35Mpa
- 08. DESIGN PRESS : 0.30Mpa
- 09. TEST PRESS : 0.54Mpa
- 10. : MAKER SUPPLY
- 11. WEIGHT : 180kg

APD	CHK	DWN	Y. K. KIM
SHEET NO. 07			SCALE N/S

J.W. PREHEATER UNIT  
AC 440V 3Ø 60Hz 60KW

**Sinsueng Electric Co., Ltd.**

TITLE : H2431/32/33

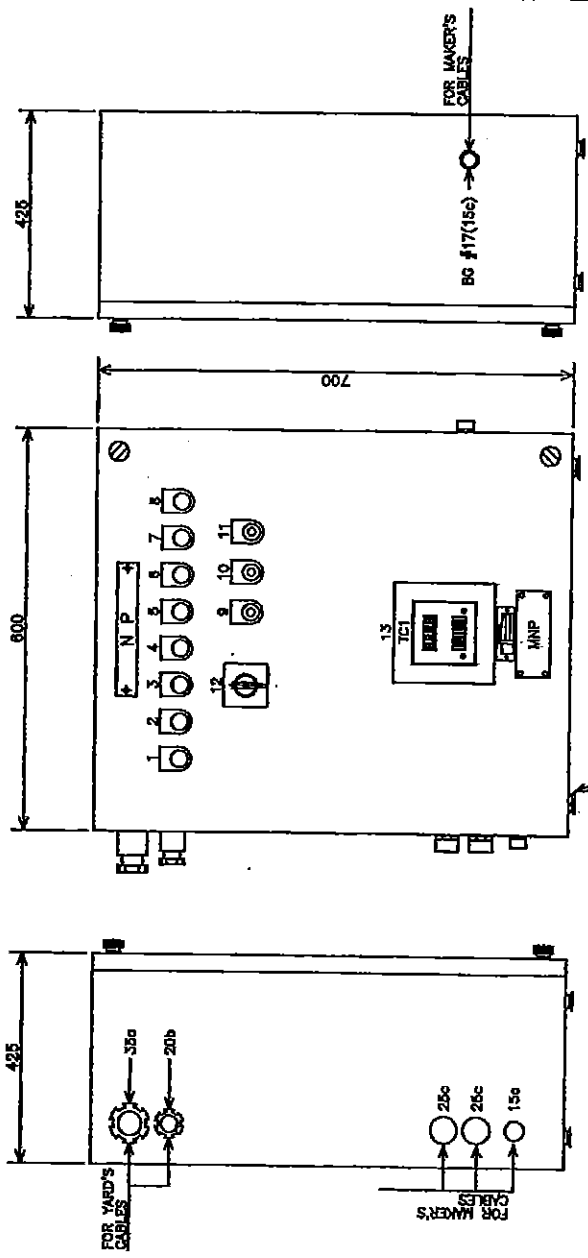
TEL : +82-55-231-6707~8, FAX : -6708

REV	DATE	DESCRIPTION
1	2007.11.27	REVISED
0	2007.11.22	FOR APPROVAL

DRAWING NO. : S5E001370

1 2 3 4 5 6 7 8

A B C D E F

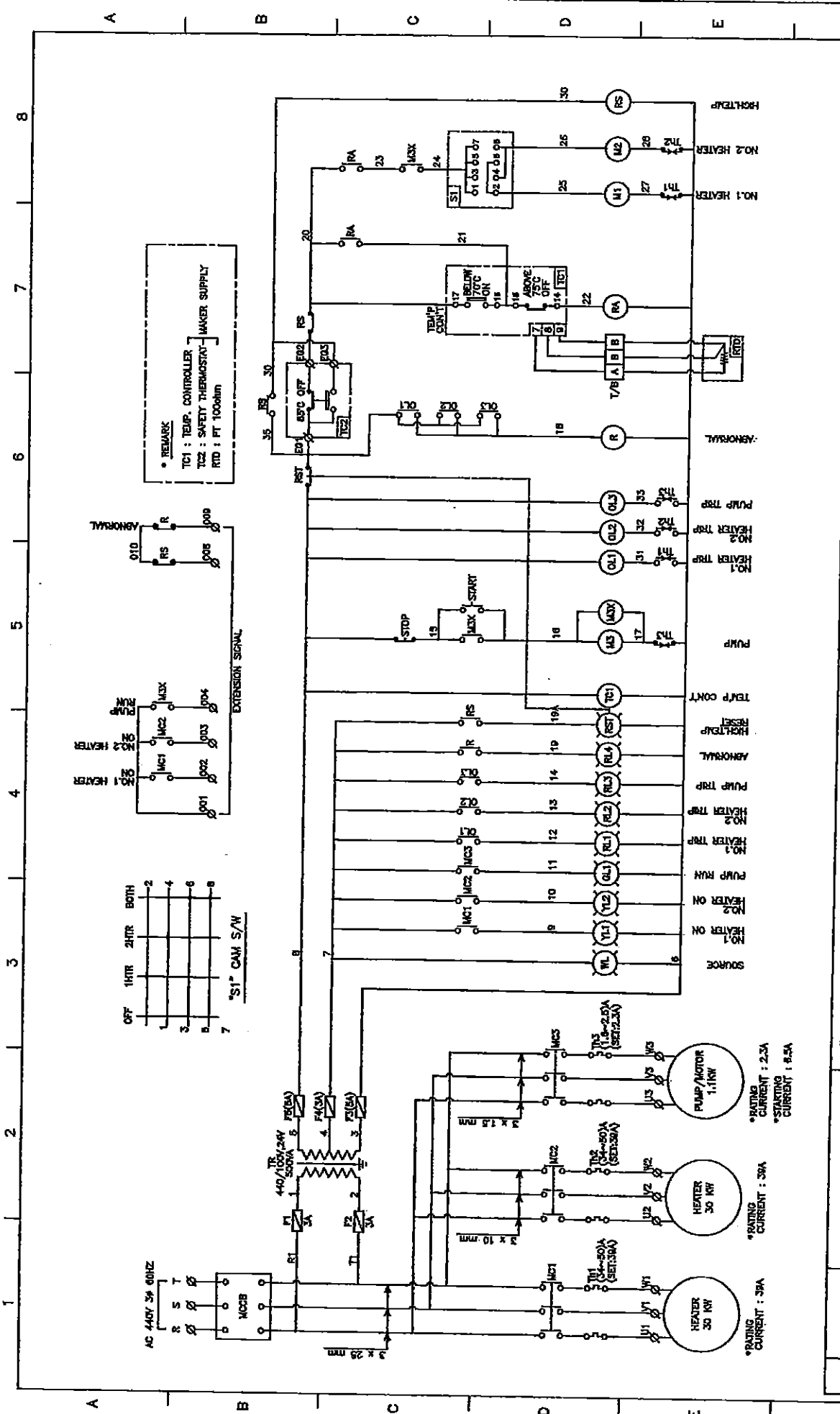


**NOTE**  
 1. PROTECTION : IP44  
 2. PAINT COLOR : 7.5 BG 7/2  
 3. MATERIAL : STEEL PLATE 2.3t

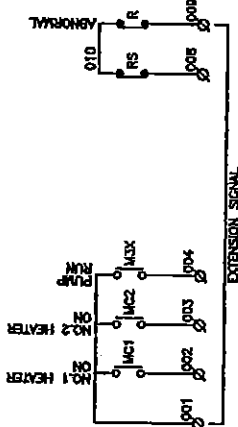
NO	NAME	MTL	QTY	REMARK
14	RUBBER MOUNT	RUBBER	4	
15	TEMP. CONTROLLER	MYZDOOS	1	ON-OFF, D=89°C, PT100(ohm)
12	HEATER MODE S/W		1	CAM SWITCH
11	HIGH TEMP. RESET	25 #	1	P/B WITH LAMP (RED)
10	STOP	25 #	1	PUSH BUTTON (RED)
9	START	25 #	1	PUSH BUTTON (GREEN)
8	ABNORMAL	25 #	1	PILOT LAMP (RED)
7	PUMP TRIP	25 #	1	PILOT LAMP (RED)
6	NO.2 HEATER TRIP	25 #	1	PILOT LAMP (RED)
5	NO.1 HEATER TRIP	25 #	1	PILOT LAMP (RED)
4	PUMP RUN	25 #	1	PILOT LAMP (GREEN)
3	NO.2 HEATER ON	25 #	1	PILOT LAMP (YELLOW)
2	NO.1 HEATER ON	25 #	1	PILOT LAMP (YELLOW)
1	POWER SOURCE	25 #	1	PILOT LAMP (WHITE)
NP	L/W PREHEATER UNIT	PHENOLIC	1	NAME PLATE
MNP	MAKER NAME	SUS	1	NAME PLATE

TITLE ; H2431/32/33		APD	SHEET NO. 08
CONTROL BOX ARR'G AC 440V 3ø 60HZ 60KW		CHK	SCALE N/S
TEL : +82-55-231-6707-8, FAX : -6709		DWN	Y. K. KIM
<b>SinSueng Electric Co., Ltd.</b>			
1	2007.11.27	REMSD	
0	2007.11.22	FOR APPROVAL	
REV	DATE	DESCRIPTION	

DRAWING NO. : SSB001870



REMARK  
 TC1 : TEMP. CONTROLLER  
 TC2 : SAFETY THERMOSTAT - MAKER SUPPLY  
 RTD : PT 100ohm



"S1" CMB S/W

OFF	1HTR	2HTR	BOTH
1	2	3	4
5	6	7	8

\*RATING CURRENT : 39A  
 \*STARTING CURRENT : 9.5A

\*RATING CURRENT : 39A  
 \*STARTING CURRENT : 9.5A

\*RATING CURRENT : 2.5A  
 \*STARTING CURRENT : 9.5A

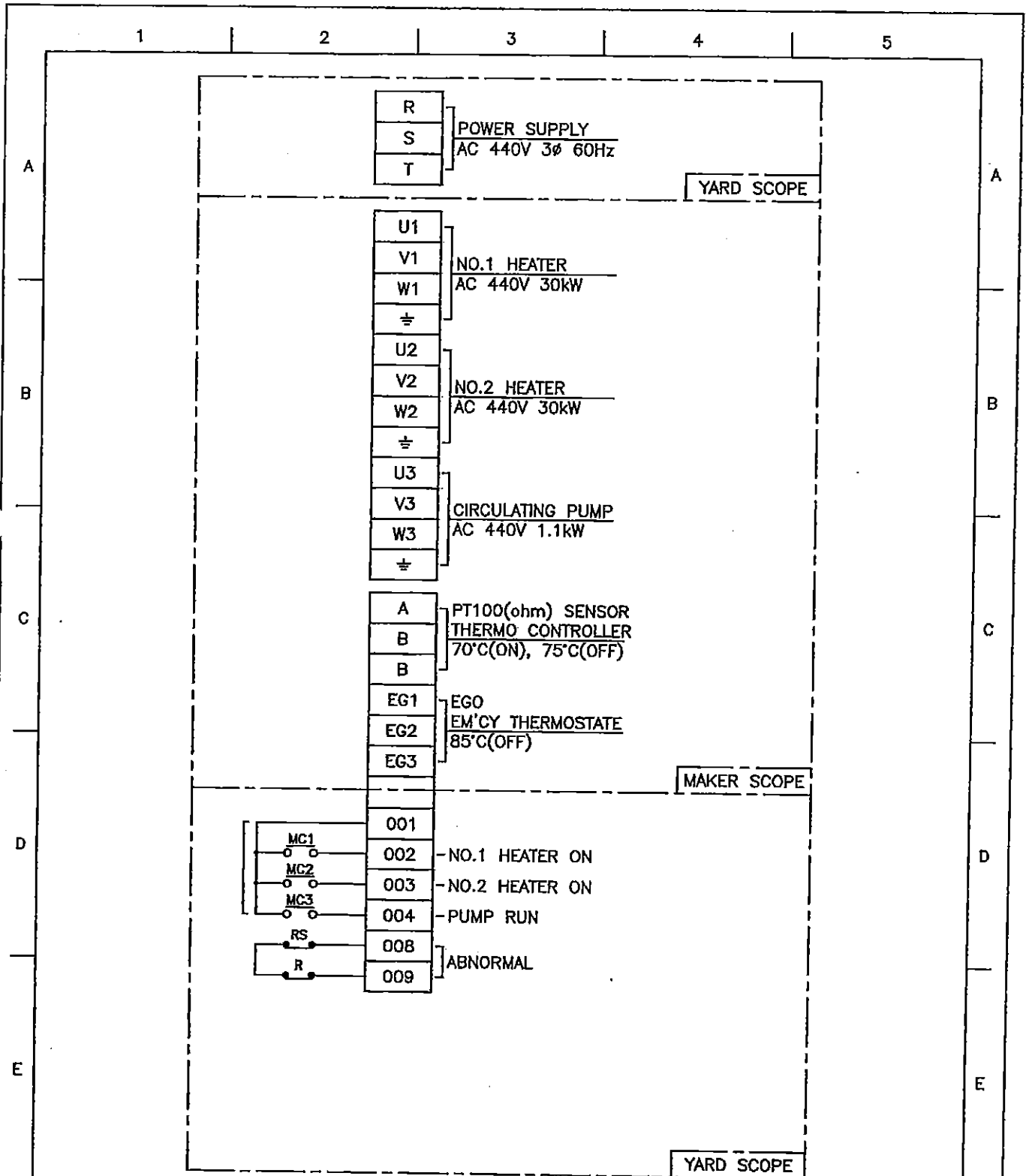
APD	CHK	DWN	Y. K. KIM
SHEET NO.	SCALE	N / S	
09			

TITLE ; H2431/32/33  
 J-W PREHEATER UNIT  
 AC 440V 3Φ 60Hz 60KW

**Sinsueng Electric Co., Ltd.**  
 TEL : +82-55-231-6707-8, FAX : -8709

REV	DATE	DESCRIPTION
1	2007.11.27	REVISED
0	2007.11.22	FOR APPROVAL

DRAWING NO. : SSE001970



			APD	<i>Yh</i>	SHEET NO. 10
1	2007.11.27	REVISED	CHK	<i>Yh</i>	SCALE N / S
0	2007.11.22	FOR APPROVAL	DWN	Y. K. KIM	
REV	DATE	DESCRIPTION			



**SinSueng Electric Co., Ltd.**

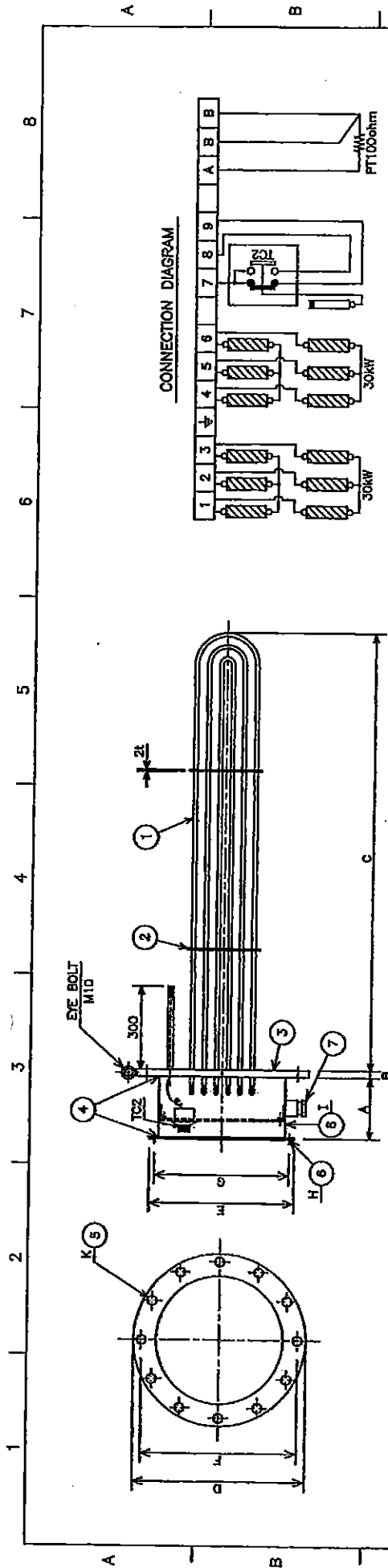
TEL : +82-55-231-6707~8, FAX : -6709

TITLE ; H2431/32/33

TERMINAL ARRANGEMENT

DRAWING NO. ; SSE001370

AQA10005965A (11/15)



NOTE  
1. WEIGHT : ABOUT 40kg

A	B	C	D	E	F	G	H	I	K	HEATER QTY	REMARK
150	22	800	385	300	345	284	7	250A	B-#23	30KWx2	5K 250A

NO	DESCRIPTION	MATERIAL	QTY	REMARK
8	HEATER BOX	SS400	1	2t
7	CABLE GLAND	BS, JIS	3	25c2, 10c-1
6	HEX BOLT/NUT	M6	8	
5	HEX BOLT/NUT		8	
4	GASKET	NON ASBESTOS	2	
3	FLANGE	SS-41	1	5K 250A
2	GUIDE RING	SUS 304	2	
1	HEATING TUBE	SUS 304	1	12.5φ

TITLE ; H2431/32/33

**Sinsueng Electric Co., Ltd.**

HEATER CONSTRUCTION  
AC 440V 3φ 50Hz 50KW

TEL : +82-65-231-8707~8, FAX : -8708

DRAWING NO. ; SSES001970

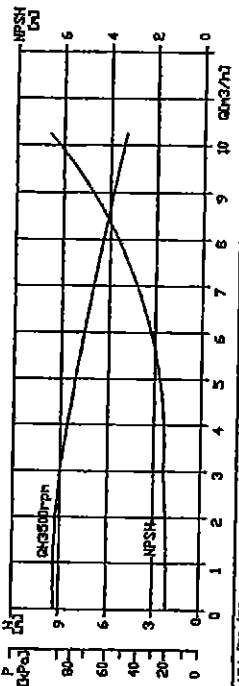
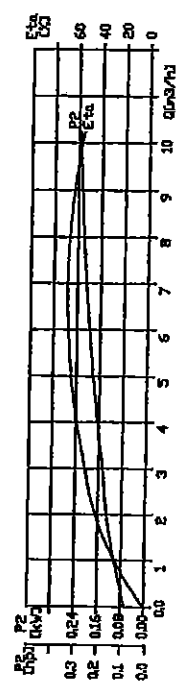
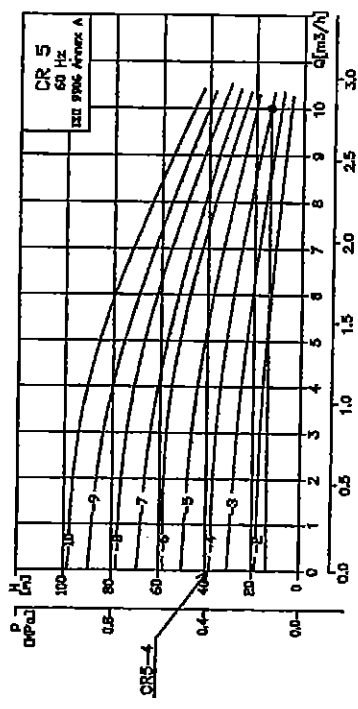
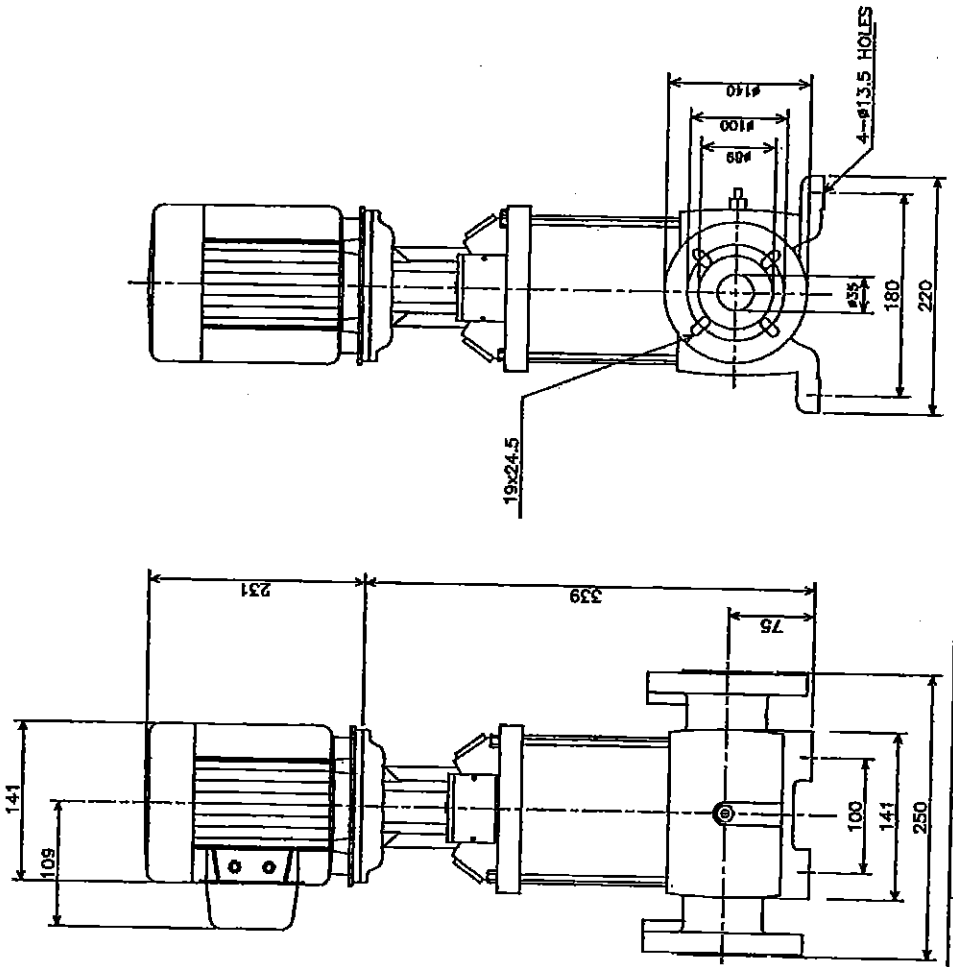
REV	DATE	DESCRIPTION
0	2007.11.22	FOR APPROVAL

APD	CHK	DWN	Y. K. KIM
SHEET NO.	SCALE	REMARK	
11	N / S		

**NOTE**

- D. MAKER : GRUNDFOS
- 1. PUMP TYPE : CR5-4
- 2. MOTOR TYPE : 80B
- 3. MOTOR FLANGE : FT100
- 4. FLANGE TYPE : DN32
- 5. NET WEIGHT : 20.9kg
- 6. GROSS WEIGHT : 29.4kg
- 7. SHIPPING VOLUME : 0.05m<sup>3</sup>
- B. INSULATION CLASS : F
- TEMP. RISE : B
- 9. ENCLOSURE : IP55

- 10. MOTOR RPM : 3500
- 11. RATING : CONTINUOUS
- 12. STARTING METHOD : D.O.L
- 13. POWER SOURCE : AC 440V 3 $\phi$  60HZ
- 14. CAPACITY : 1.1KW
- 15. RATING CURRENT : 2.5A
- 16. STARTING CURRENT : 6.5A
- 17. POWER FACTOR : 0.84
- 18. MOTOR EFFICIENCY : 85%
- 19. AMBIENT TEMP. : 50°C



TITLE : H2431/32/33

**Sinsueng Electric Co., Ltd.**

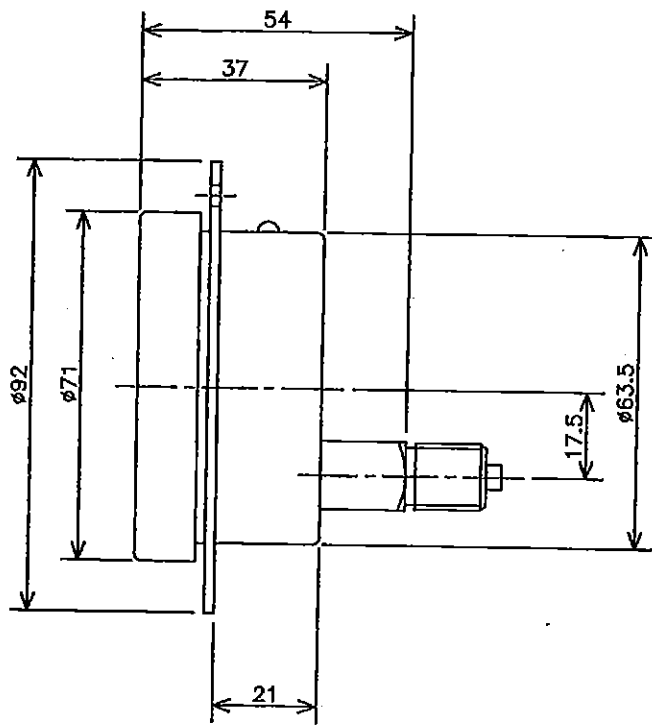
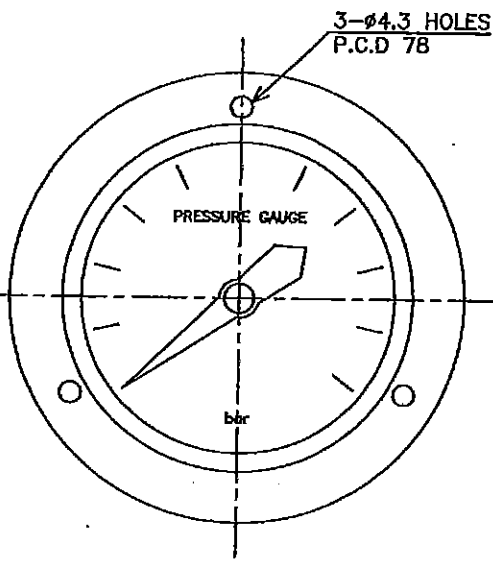
TEL : +82-55-251-8707-8, FAX : -8709

CIRCULATING PUMP  
CR5-4

REV	DATE	FOR APPROVAL	DESCRIPTION
0	2007.11.22		

APD	Y. K. KIM	SHEET NO.	12
CHK		SCALE	N / S
DWN			

DRAWING NO. : SSE001870



**NOTE**

1. MODEL : P2902M
2. ACCURACY : ±1.5% F.S
3. MATERIAL
  - a) CASE : BLACK FINISHED STEEL
  - b) COVER : BLACK FINISHED STEEL
  - c) WINDOW : GLASS
  - d) ELEMENT : BRASS
  - e) MOVEMENT : BRASS
4. RANGE : 0~6bar (PRESSURE GAUGE)  
RANGE : 76cmHg~6bar (COUMPOUND GAUGE)
5. TYPE : LIQUID FILLED

			APD	<i>yh</i>	SHEET NO. 13
			CHK	<i>yh</i>	SCALE N / S
0	2007.11.22	FOR APPROVAL	DWN	Y. K. KIM	
REV	DATE	DESCRIPTION	TITLE ; H2431/32/33		
<b>SinSueng Electric Co., Ltd.</b> TEL : +82-55-231-6707~8, FAX : -6709			<b>PRESS GAUGE DETAIL</b>		

DRAWING NO. ; SSE001370

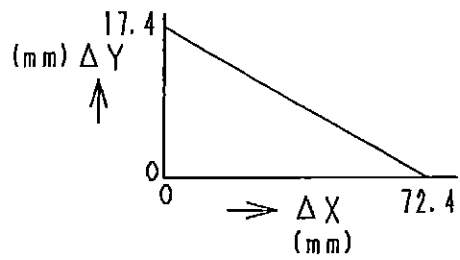
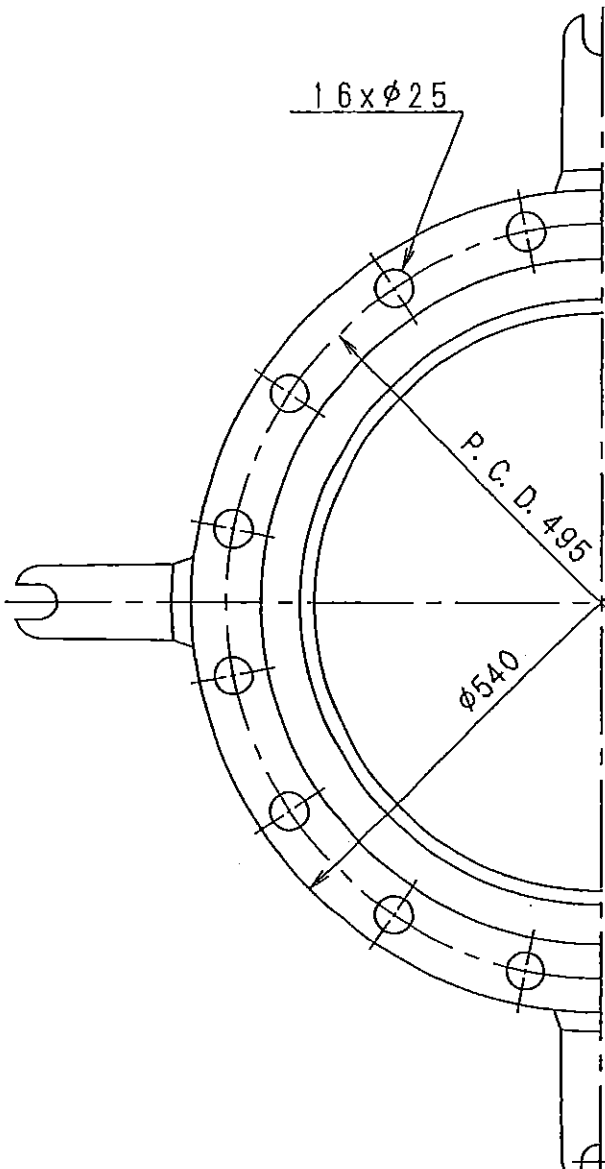
AQA10005965A (14/15)



1

6

7



許容変位線図  
(ALLOWABLE MOVE CURVE)

仕様 SPECIFICATIONS		
LATERAL MOVE ΔX (SET LENGTH BASE) 方向変位量 ΔX (取付寸法基準)	EXTENSION 伸び	CONTRACTION 縮み
	20 mm	60 mm
LATERAL MOVE ΔY 横変位量 ΔY	偏心 ECCENTRIC	
	10 mm	
WORKING P. 使用圧力	0.003	MPaG
WORKING T. 使用温度	MAX. 550	°C
SPRING RATE バネ定数	52.0	N/mm

用途 APPLICATIONS	機関・排気ガス ENGINE EXHAUST GAS
--------------------	-------------------------------

NO.	PART NAME	MATERIAL	QTY.	REMARK
0				
1				
2				
3				
4	HOLDER	SS400	各4	
5	SHIPPING BOLTS	SS400	4	
6	FLANGE	SS400	1	JIS5K 相当
7	WELD BAND	SUS304	1	10.8x20
8	LINER	SUS304	1	
9	BELLOWS	SUS321	1	
10	FLANGE	SS400	1	JIS5K
11	LEW			

LEW 番号	PART NAME 部品名	MATERIAL 材質	QTY. 数量	WEIGHT 重量	REMARK 備考
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MATERIAL	PCHS	GROUP	7	SCALE=	1:5
MASS.	65.1kg	QTY.	1/Eng.		A3
TYPE	ALL				27582

A	ADD. 6-B	O., LTD.	NAME	シンシユクセツシユ 400Ax500A
本図はダイハツディーゼル株式会社の所有物です。この図を無断で複製、転載及び第三者への開示を禁止します。			EXPANSION JOINT	400Ax500A
		PARTS NO.	B259900220	Z   A

DWG. NO. 816554

E

D

C

B

A

DIESEL GENERATOR ENGINE  
FO LINE RELIEF VALVE

each 1 set/ship

JIANGNAN SHIPYARD(GROUP) CO.,LTD.

HFO BYPASS-LINE (1st Press. 0.7MPa, 2nd Press. 0.4MPa)  
TYPE : S-K411D-BV1M (32A)  
MDO RETURN-LINE (1st Press. 0.4MPa, 2nd Press. static)  
TYPE : S-K411D-BF1M (40A)

PURCHASE No.AQA20004222A(HFO BYPASS)  
AQA20004221A(MDO RETURN)

HULL No.	2431/32/33	DRAWN BY	<i>N. J. Canton</i>
TYPE	6DK-28	CHECKED BY	<i>J. Terachi</i>
LIST No.	AQA10005966A		
DATE	Nov.29,2007	APPROVED BY	<i>A</i>
REVISION			

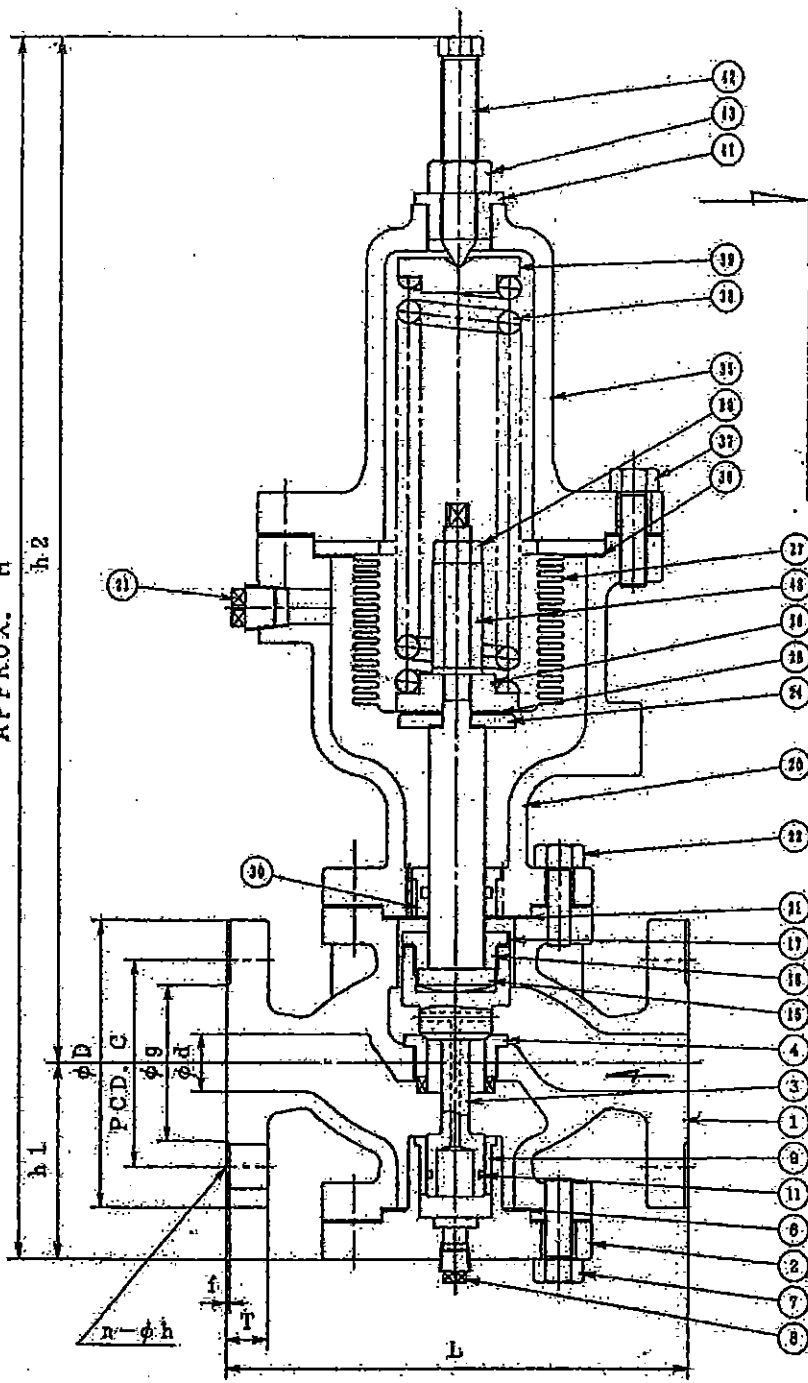
ADK28-0741-4

(1/3)

2008/09/16 TECHNICAL DEPARTMENT

SK

APPROX. H



NAME (JIS)	PLANGE JIS 16 Kgf/Cm <sup>2</sup>							L
	d	D	C	n-h	g	f	t	
2.0	20	95	70	4-15	—	—	1.2	188
2.0	30	100	75	4-15	—	—	1.4	190
2.6	25	125	80	4-18	—	—	1.4	190
3.2	40	135	100	4-18	—	—	1.6	210
4.0	40	140	105	4-18	—	—	1.6	210
5.0	50	155	120	8-18	—	—	1.6	240

NAME (JIS)	PLANGE JIS 20 Kgf/Cm <sup>2</sup>							L
	d	D	C	n-h	g	f	t	
1.5	20	95	70	4-15	5.1	1	1.4	190
2.0	20	100	75	4-15	5.8	1	1.6	192
2.5	25	125	80	4-18	6.7	1	1.6	195
3.2	40	135	100	4-18	7.8	2	1.8	215
4.0	40	140	105	4-18	8.1	2	1.8	215
5.0	50	155	120	8-18	9.6	2	1.8	245

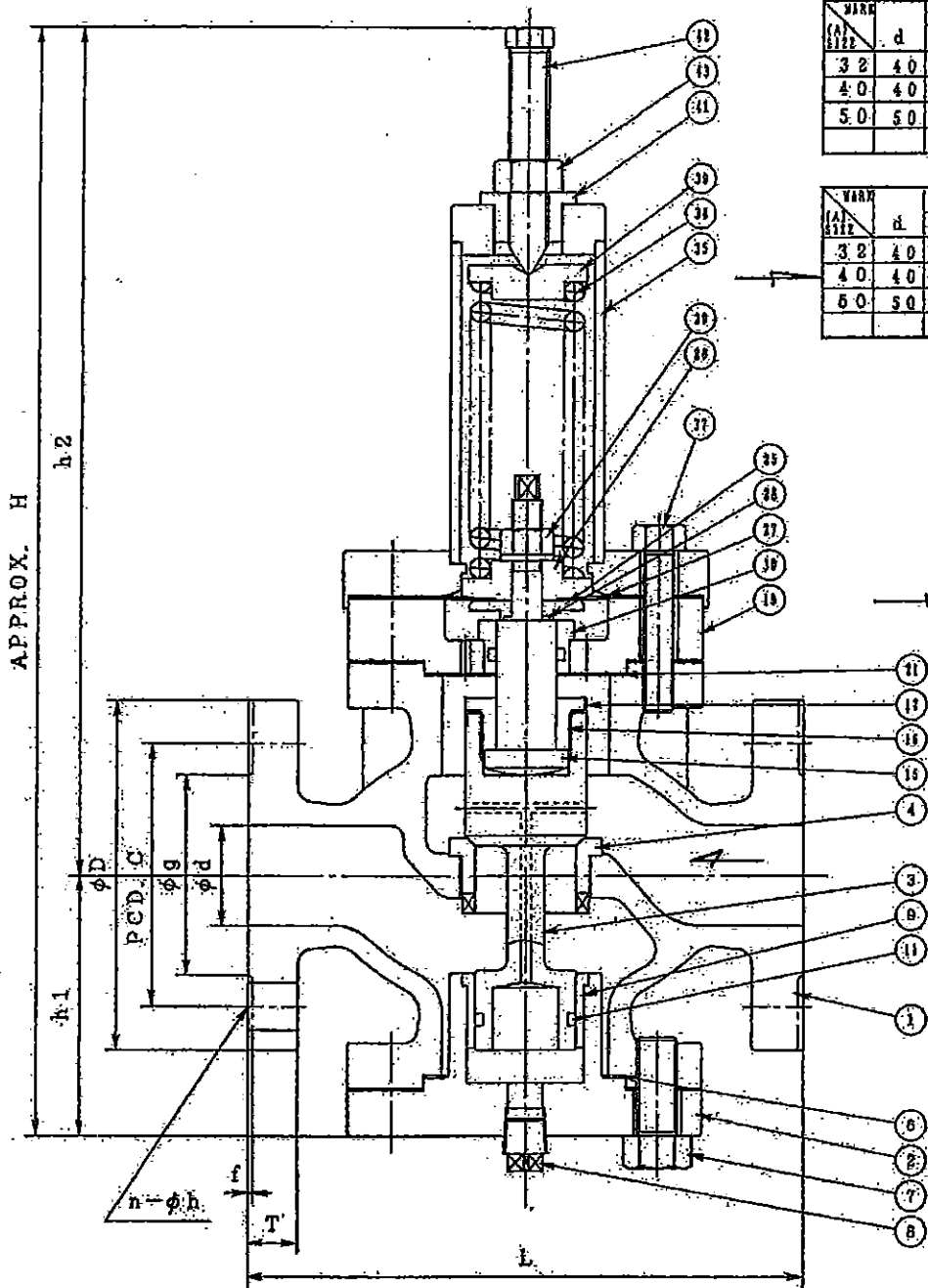
NAME (JIS)	PLANGE JIS 20 Kgf/Cm <sup>2</sup>		
	b1	b2	H
1.5-2.0	75	440	515
2.5	85	450	535
3.2	105	470	575
4.0	105	470	575
5.0	115	480	595

10	LOCK NUT	ロックナット	1	BRASS	C3604	21	BELLOWSHOLDER	ベルロウホルダ	1	BRASS	C3604
11	ADJUST. SCREW	調整ネジ	1	BRASS	C3604	22	PLUG	プラグ	1	STAINLESS	SUS304
12	BUSH	ブッシュ	1	BRASS	C3604	23	BOLTS	ボルト	4	STEEL	S3400
13	SPRING (A)	スプリング(A)	1	BRASS	C3604	24	GASKET	ガスケット	1		
14	SPRING (A)	スプリング(A)	1	SPRING ST.	SW08M	25	BELLOWSCASE	ベルロウケース	1	DUCTILE	FC0400
15	BOLTS	ボルト	8	STEEL	S3400	26	STOPPER	ストップ	1	STAINLESS	SUS304
16	GASKET	ガスケット	1			27	VALVE HANGER	バルブハンガ	1	STAINLESS	SUS304
17	SPRING CASE	スプリングケース	1	CAST IRON	FC200	28	STEM	ステム	1	STAINLESS	SUS304
18	STEM GUIDE	ステムガイド	1	STAINLESS	FC0400	29					
19	LOCK NUT	ロックナット	1	BRASS	C3604	30	VALVE GUIDE	バルブガイド	1	STAINLESS	SUS304
20	GASKET	ガスケット	1			31	PLUG	プラグ	1	STAINLESS	SUS304
21	BELLOWS	ベルロウ	1	STAINLESS	SUS304	32	BOLTS	ボルト	4	STEEL	S3400
22	SPRING SEAT (B)	スプリングシート(B)	1	BRASS	C3604	33	GASKET	ガスケット	1		
23	ARTICLE NAME			MATERIAL		34	VALVE SEAT	バルブシート	1	STAINLESS	SUS304
24						35	VALVE	バルブ	1	STAINLESS	SUS304
25						36	BOTTOMCOVER	ボトムカバー	1	CARBON ST	S25C
26						37	BODY	ボディ	1	DUCTILE	FC0400

CARRIER		
SANKYO SEISAKUSHO CO., LTD.		
SIZE NAME	1.5A-5.0A PRIM. PRESS. REG. VALVE	
TYPE	S-K 4.1-1 D-B'V 1 M	
APPROVED	CHECKED	DESIGN
DATE	OCT. 21 1991	SCALE
SHEET NUMBER	PB1V-DF09-J16~20	

AQA10005966A (2/3)

2008/09/16 TECHNICAL DEPARTMENT



VIAZ (A1) ST12	FLANGE JIS 5 Kg/cm <sup>2</sup>							
	d	D	C	n-h	g	f	t	L
32	40	115	90	4-15	—	—	1.2	205
40	40	120	95	4-15	—	—	1.2	205
50	50	130	105	4-15	—	—	1.4	235

VIAZ (A1) ST12	FLANGE JIS 10 Kg/cm <sup>2</sup>							
	d	D	C	n-h	g	f	t	L
32	40	135	100	4-15	—	—	1.6	210
40	40	140	105	4-15	—	—	1.6	210
50	50	155	120	4-15	—	—	1.6	240

VIAZ (A1) ST12	H (D <sub>s</sub> )			
	b1	b2	H	(D <sub>s</sub> )
32-40	105	362	467	52
50	115	372	467	52

5				25	DIAPHRAGM SEAT	ダイヤフラムシート	1	BRASS	Q1904
6				26					
7				27					
8				28					
9				29	GASKET	ガスケット	1		
10				30					
11				31	BONNET	ボンネット	1	CARBON ST.	S26-C
12				32					
13				33	LOCK NUT	ロックナット	1	BRASS	C3604
14				34	ADJUST SCREW	調整ネジ	1	BRASS	C3604
15				35	BUSH	ブッシュ	1	BRASS	C3604
16				36					
17				37	SPRING SEAT (A)	スプリングシート(A)	1	BRASS	G3804
18				38	SPRING (A)	スプリング(A)	1	SPRING ST.	SW08W
19				39	BOLTS	ボルト	6	STEEL	SS400
20				40					
21				41	SPRING CASE	スプリングケース	1	STEEL	STPG
22				42					
23				43	STEM GUIDE	ステムガイド	1	STAINLESS	SUS304
24				44	LOCK NUT	ロックナット	1	BRASS	G3604
25				45	O'RING	O'リング	1		
26				46	DIAPHRAGM	ダイヤフラム	1		
27				47	SPRING SEAT (B)	スプリングシート(B)	1	BRASS	G3604
28				48					
29				49	VALVE SEAT	バルブシート	1	STAINLESS	SUS304
30				50	PLUG	プラグ	1	STAINLESS	SUS304
31				51	BOLTS	ボルト	4	STEEL	SS400
32				52	GASKET	ガスケット	1		
33				53					
34				54	VALVE	バルブ	1	STAINLESS	SUS304
35				55	BOTTOM COVER	ボトムカバー	1	CARBON ST.	S26-C
36				56	BODY	本体	1	DUCTILE	FCB400

CAREER		
SANKYO SEISAKUSHO CO., LTD.		
SIZE NAME	32A-50A	PRIM.
	PRESS. REG. VALVE	
TYPE	S-K 4 1 1 D-BF 1 M	
APPROVED	CHECKED	DESIGN
<i>H. Matsuo</i> <i>K. Abe</i> <i>K. Ogasawara</i>		
DATE	OCT. 8. 1991	SCALE
FREE		
SHEET NUMBER		
PB1F-DF23-J05~10		

DIESEL GENERATOR ENGINE

FLEXIBLE HOSE LIST

for D/G set installation

RULE: GL

JIANGNAN SHIPYARD (GROUP) CO.,LTD.

付図(SEE)

1. AQA10007412A
2. AQA10006961A
3. AQA10006957A
4. AQA10007090A
5. AQA10006962A
6. AQA20005012A
7. AQA20003009A
8. AQA20003008A
9. AQA10007317A
10. AQA20003001A
11. AQA20004947A

DAIHATSU DIESEL MFG. CO., LTD.  
TECHNICAL DEPARTMENT  
OSAKA, JAPAN

HULL No.	H2431/32/33	DRAWN BY	<i>H. Kawachi</i>
TYPE	6DK-28	CHECKED BY	<i>K. Shimokawa</i>
LIST No.	AQA10007291A		<i>Y. Teuchi</i>
DATE	2008/8/5	APPROVED BY	<i>H. Shimokawa</i>
REVISION			
ADK28-0741-4			

## FLEXIBLE HOSE LIST

No.	Flange Size	Set Length (mm)	Fluid	Location	Q'ty/Eng.	Q'ty/Ship	Dr. No. (Purchase No.)	NOTE
1	JIS5K-15A	400	LO	LO DRAIN	1	12	AQA10006961A (AQA20004928A)	
			FW	AIR VENT (TO EXPANSION TANK)	2			
2	JIS5K-20A	400	HFO/MDO	FO DRAIN	2	8	AQA10006957A (AQA20004963A)	
3	JIS5K-25A	400	FW	WARMING INLET (FROM PREHEATER)	1	8	AQA10007090A (AQA20004927A)	
				WARMING OUTLET (TO PREHEATER)	1			
4	JIS5K-40A	500	LO	LO CHARGE/DISCHARGE PORT	2	24	AQA10006962A (AQA20004926A)	
				T/C MIST GAS OUTLET	1			
			FW	HTFW ENGINE INLET	3			
5	JIS5K-65A	600	LO	LO OVERFLOW PORT	1	4	AQA20005012A (AQA20005012A)	
6	JIS5K-80A	700	MIST GAS	CRANK CASE MIST GAS OUTLET	1	4	AQA20003009A (AQA20003009A)	
7	JIS5K-100A	700	FW	LTFW ENGINE IN/OUTLET	2	8	AQA20003008A (AQA20003008A)	
8	JIS10K-25A	500	HFO/MDO	FO ENGINE IN/OUTLET	2	8	AQA10007317A (AQA20004962A)	
9	JIS30K-40A	500	SA	SA ENGINE INLET	1	4	AQA20003001A (AQA20003001A)	
10	φ 10	abt.425	CA	CA ENGINE INLET	1	4	AQA20004947A (AQA20004947A)	

## FLEXIBLE HOSE LIST (SPAER PARTS)

No.	Flange Size	Set Length (mm)	Fluid	Location	Working/Eng.	Spaer/Ship	Drg. No. (Purchase No.)	NOTE
1	JIS5K-15A	400	LO FW		12	3	AQA10006961A (AQA20004928A)	
2	JIS5K-20A	400	HFO/MDO		8	2	AQA10006957A (AQA20004963A)	
3	JIS5K-25A	400	FW		8	2	AQA10007090A (AQA20004927A)	
4	JIS5K-40A	500	LO FW		24	6	AQA10006962A (AQA20004926A)	
5	JIS5K-65A	600	LO		4	1	AQA20005012A (AQA20005012A)	
6	JIS5K-80A	700	MIST GAS		4	1	AQA20003009A (AQA20003009A)	
7	JIS5K-100A	700	FW		8	2	AQA20003008A (AQA20003008A)	
8	JIS10K-25A	500	HFO/MDO		8	2	AQA10007317A (AQA20004962A)	
9	JIS30K-40A	500	SA		4	1	AQA20003001A (AQA20003001A)	
10	φ 10	abt.425	CA		4	1	AQA20004947A (AQA20004947A)	



Mounting procedure for flexible hose

- (1) The distance between the flanges shall be adjusted to the set length mentioned in our flexible hose list.  
Take care to avoid the mounting causing initial excessive stress, such as shrink, extension, excessive offset, bend, twist, and so on.
- (2) Vibration direction shall be match to flexible hose lateral direction, not the axial direction in order to avoid movement of extension and shrink.
- (3) To be mounted where pulsation and/or impact pressure are less.
- (4) To be mounted at the lower part and close to the engine except to connect upward.
- (5) Bracket shall be mounted at the point close to the flexible hose to avoid the excessive vibration to the flexible hose.
- (6) Actual measurement between the flanges is required when the flexible hose is ordered for replacement because the length of flexible hose has tolerance.

▲ FIRST DRAWING		2008/8/27 W. 0	
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APPROVED	MIYAMOTO ICHIRO	LIST NO.	MATERIAL APRV GROUP 0 SCALE:
CHECKED	TERAUCHI YOICHI	BEFORE	MASS. A QTY. (A) A4
	SHIMOKAWA KEISUKE	REF.	TYPE ALL
DRAWN	OCHI MASARU	DAIHATSU DIESEL MFG. CO., LTD. OSAKA JAPAN	NAME セツメイシヨ:フレキホース:トリツケ
DATE	2008/08/26		INSTRUCTION:FLEXIBLE HOSE:INSTALLATION
		PARTS NO.	AQA10007412 A *

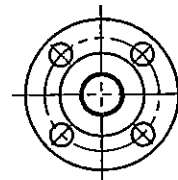
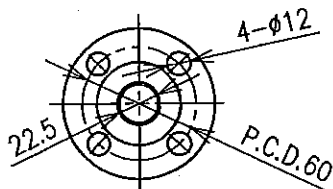
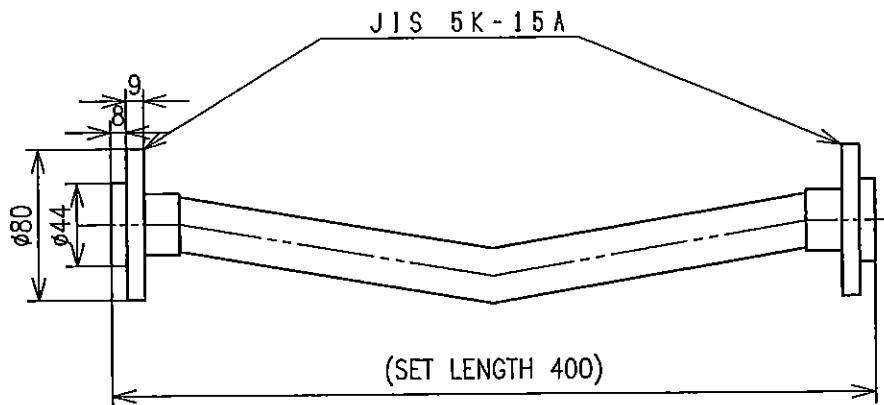
1

2

3

SPECIFICATIONS	
FLUID	FO, LO, MISTGAS, FW, SW, AIR
OPERATING PRESSURE	MAX 0.5MPa
OPERATING TEMPERATURE RANGE	MAX 150C
SET LENGTH (HOSE LENGTH)	abt. 400 (420) mm
MAKER TYPE	HFH

## Hose routing and installation



Under pressure a hose may change in length. Always provide some slack in the hose to allow for this shortening or elongation. However, excessive slack in hose lines may cause poor appearance.

メーカー名: Alfons Markert+Co. GmbH  
本図は承認図面であり、手配はAQA20004928にて行う。

FIRST DRAWING		2008.6.8		F.S	
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APPROVED	MIYAMOTO ICHIRO	LIST NO.	MATERIAL	APRV	GROUP 0
		BEFORE	MASS.	QTY.	SCALE=1:4
CHECKED	TERAUCHI YOICHI	REF. MAKER DWG. No. 1705	TYPE	ALL	A4
	KAWAUCHI HIROSHI		NAME	ショウニンス:フレキホース:JIS 5K-15A L400	
DRAWN	OCHI MASARU		APPROVAL:	FLEXIBLE HOSE:JIS 5K-15A L400	
DATE	2008/05/28		PARTS NO.	AQA10006961	A *
		DAIHATSU DIESEL MFG. CO., LTD.			
		OSAKA JAPAN			



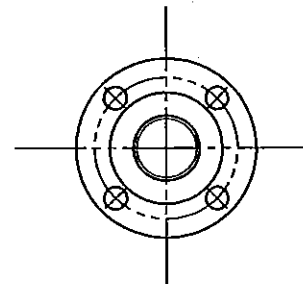
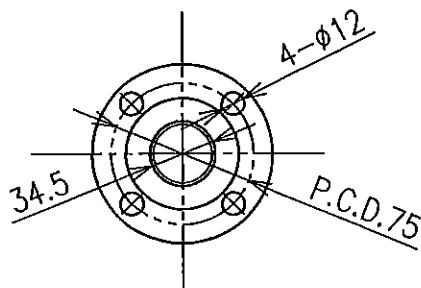
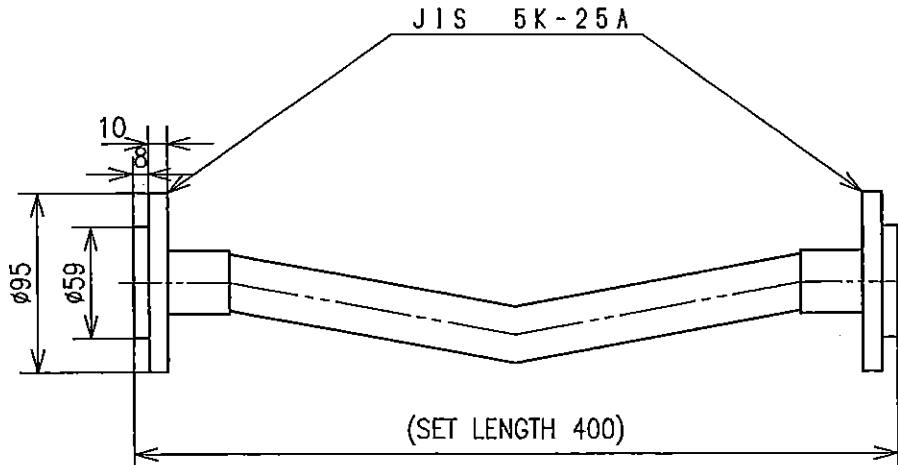
1

2

3

SPECIFICATIONS	
FLUID	FO, LO, MISTGAS, FW, SW, AIR
OPERATING PRESSURE	MAX 0.5MPa
OPERATING TEMPERATURE RANGE	MAX 150°C
SET LENGTH (HOSE LENGTH)	400 (420) mm
MAKER TYPE	HFH

## Hose routing and installation



Under pressure a hose may change in length. Always provide some slack in the hose to allow for this shortening or elongation. However, excessive slack in hose lines may cause poor appearance.

メーカー名: Alfons Markert+Co. GmbH  
本図は承認図面であり、手配はAQA20004927にて行う。

FIRST DRAWING		2008. 6. 25		F. S	
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APPROVED	MIYAMOTO ICHIRO	LIST NO.	MATERIAL	APRV	GROUP 0
		BEFORE	WASS.	A	QTY.
CHECKED	TERAUCHI YOICHI	REF. MAKER DWG. No. 1712	TYPE	ALL	SCALE=1:4
	KAWAUCHI HIROSHI		NAME	ショウニズ:フレキホース:JIS 5K-25A L400	
DRAWN	OCHI MASARU	DAIHATSU DIESEL MFG. CO., LTD.	APPROVAL:	FLEXIBLE HOSE: JIS5K-25A L400	
DATE	2008/06/25	OSAKA JAPAN	PARTS NO.	AQA10007090	A *

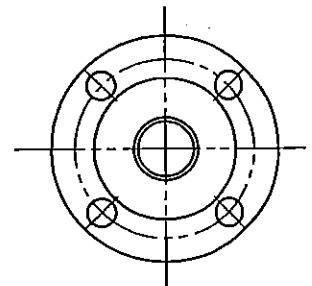
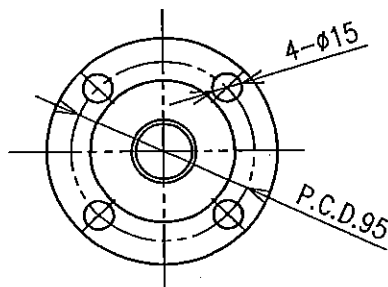
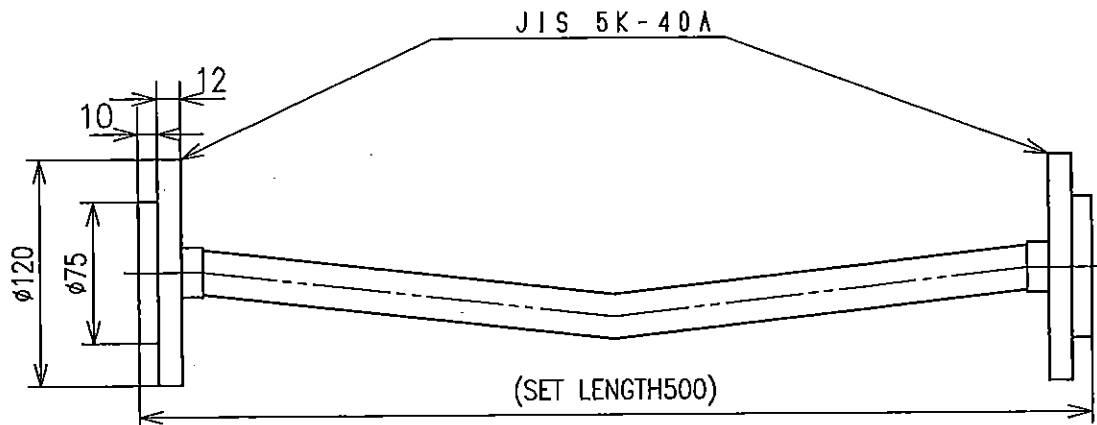
1

2

3

SPECIFICATIONS	
FLUID	FO, LO, MISTGAS, FW, SW, AIR
OPERATING PRESSURE	MAX 0.5MPa
OPERATING TEMPERATURE RANGE	MAX 150C
SET LENGTH (HOSE LENGTH)	500 (520) mm
MAKER TYPE	MDO

## Hose routing and installation



Under pressure a hose may change in length. Always provide some slack in the hose to allow for this shortening or elongation. However, excessive slack in hose lines may cause poor appearance.

メーカー名: Alfons Markert+Co. GmbH  
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△ FIRST DRAWING		2008.6.8		F. S				
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APPROVED	MIYAMOTO ICHIRO	LIST NO.	BEFORE	MATERIAL	APRV	GROUP	0	SCALE=1:4
CHECKED	TERAUCHI YOICHI	REF.	MAKER DWG. No. 1704	MASS.	A	QTY.	3	A4
DRAWN	OCHI MASARU	DAIHATSU DIESEL MFG. CO., LTD.		NAME		ショウニズ:フレキホース:JIS 5K-40A L500		
DATE	2008/05/28	OSAKA JAPAN		APPROVAL:FLEXIBLE HOSE:JIS 5K-40A L500		PARTS NO. AQA10006962		
								A *







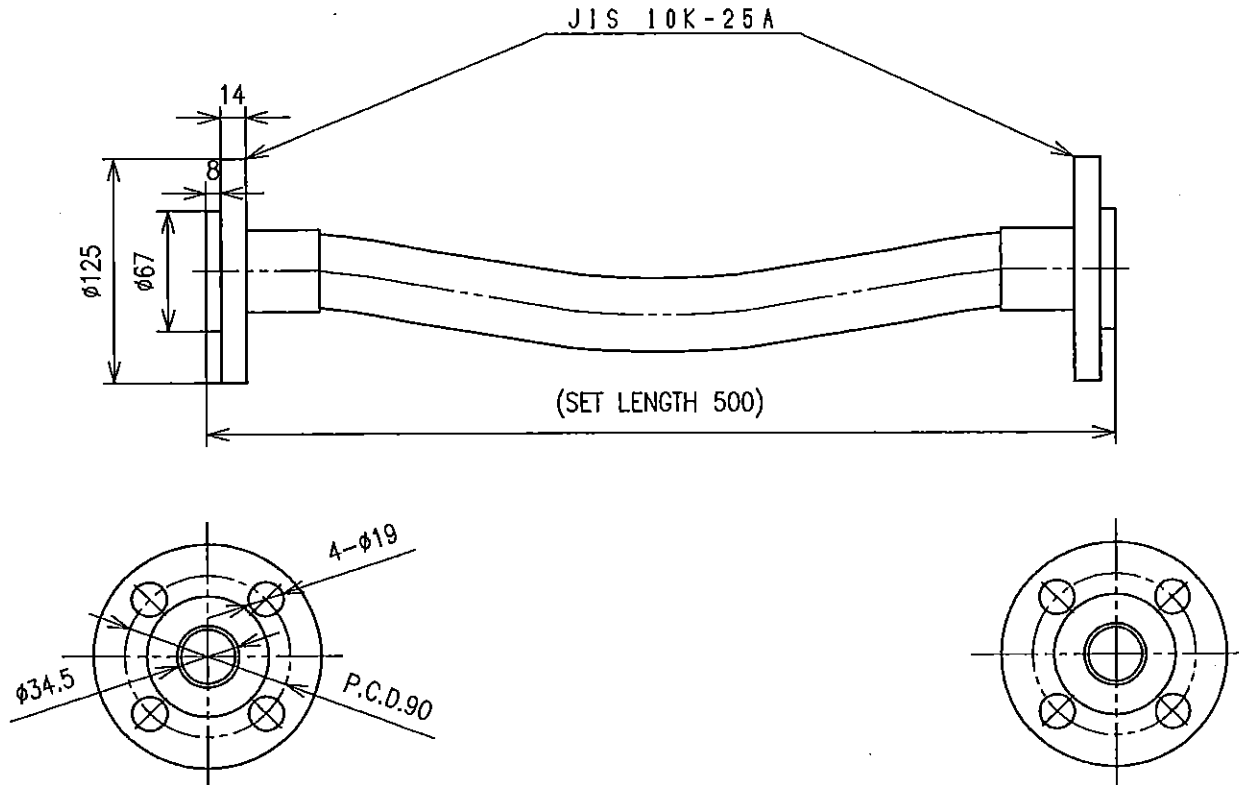
1

2

3

SPECIFICATIONS	
FLUID	FO, LO, MISTGAS, FW, SW, AIR
OPERATING PRESSURE	MAX 1.0MPa
OPERATING TEMPERATURE RANGE	MAX 150°C
SET LENGTH (HOSE LENGTH)	500 (520) mm
MAKER TYPE	HFH

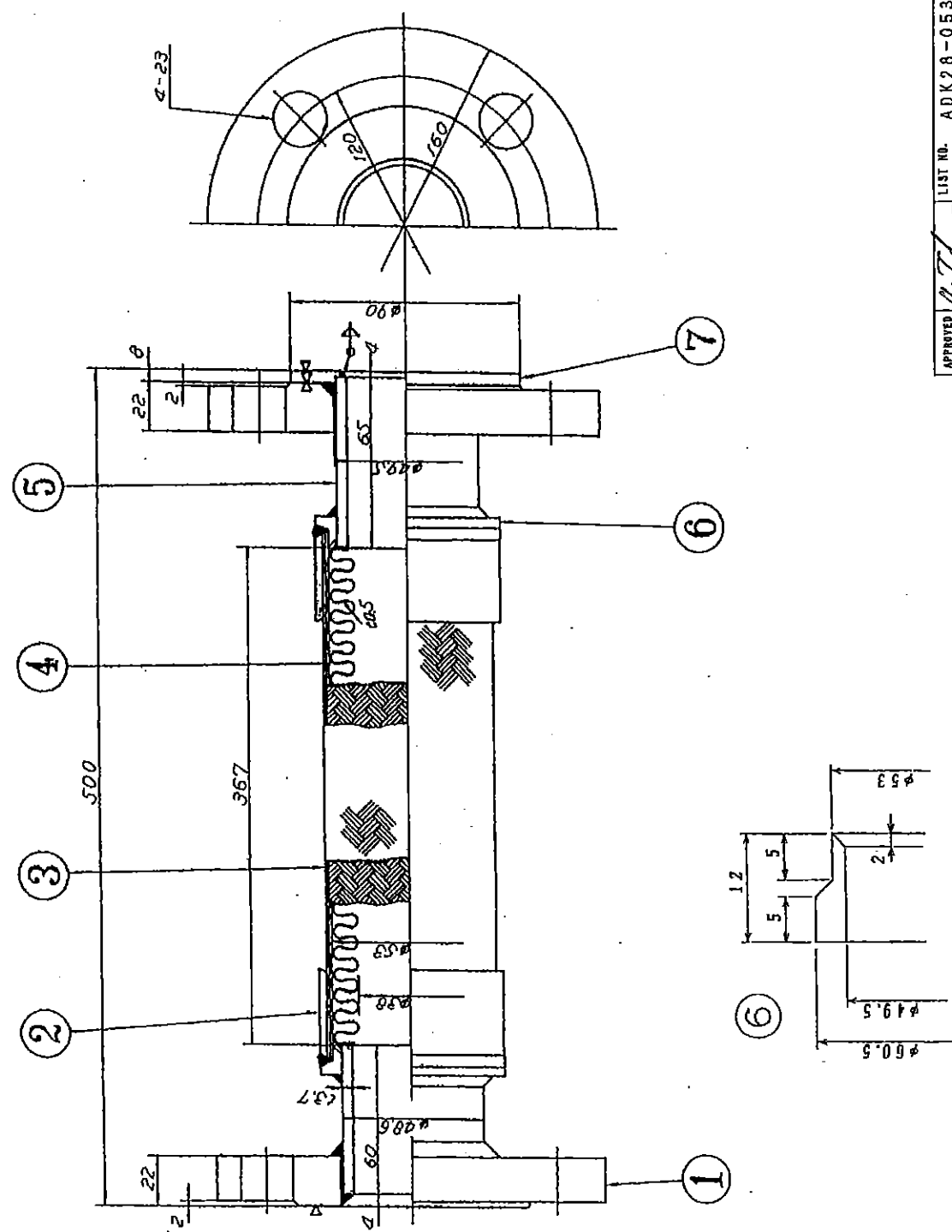
Hose routing and installation



Under pressure a hose may change in length. Always provide some slack in the hose to allow for this shortening or elongation. However, excessive slack in hose lines may cause poor appearance.

メーカー名: Alfons Markert+Co. GmbH  
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APPROVED	MIYAMOTO ICHIRO	LIST NO.	SCALE: 1:4
		BEFORE	MATERIAL APRV GROUP 0
CHECKED	TERAUCHI YOICHI	REF. MAKER DWG. No. 1722	MASS. A QTY. A4
	SHIMOKAWA KEISUKE		TYPE ALL
DRAWN	OCHI MASARU	<b>DAIHATSU DIESEL MFG. CO., LTD.</b> <b>OSAKA JAPAN</b>	NAME ショウニンズ:フレキシホース:JIS 10K-25A L500
DATE	2008/08/04		APPROVAL: FLEXIBLE HOSE: JIS 10K-25A L500
		PARTS NO. AQA10007317	A *



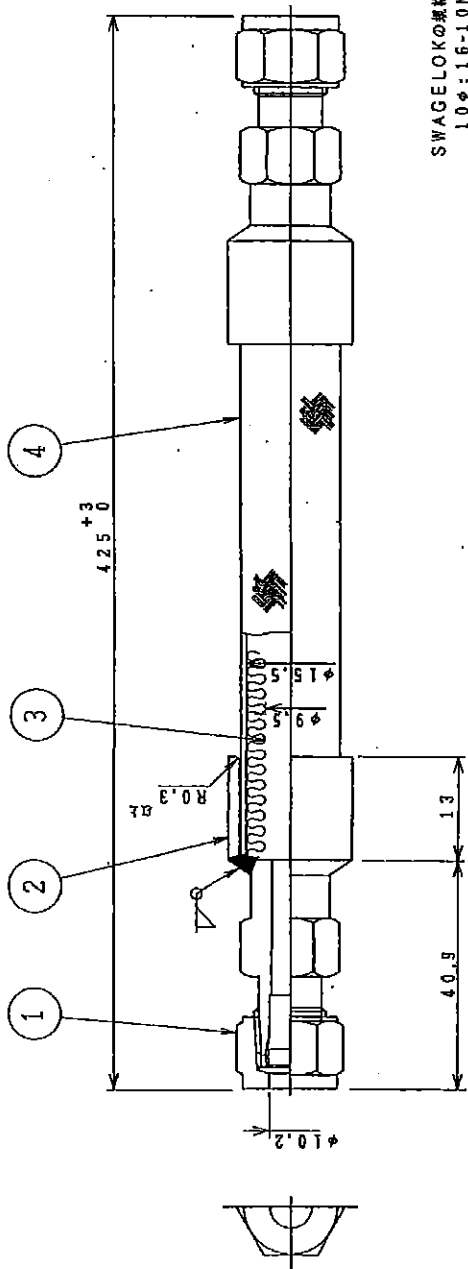
10									
9									
8									
7	LAP JOINT	SS400	1						
6	BRAID RING	SS400	2						
5	END PIPE	STPG370	1						3/60
4	METAL HOSE	SUS316	1						0.457*66 2.5
3	BRAID	SUS304	1						
2	WRAPPER	SUS304	2						
1	FLANGE	S30C	2						JIS-304
ITEM NAME		MATERIAL	QTY	REMARK					
MANUFACTURE		SET LENGTH	LENGTH	NO. OF PAGES	NO. OF PAGES				
500									
PRINTING									
WEIGHT									
SPRING FORCE									
PRESSURE									
R.T. INSPECT									
X-RAY INS.									
LEAK T.									
LATERAL MOVE.									
WORKING PRESS.									
DESIGN TEMP.									
STARTING AIR									
FLUID									
SUPERLAND NO.									
DRAWING NO.									
JIS NO.									
CUSTOMER									
TYPE									
40A									
FLEXIBL METAL HOSE									
NIPPON METAL HOSE CO., LTD.									
CHECKED									
DATE									
9.1.21									
REV.									
M-97042									
SCALE									
GROUP									
7									

APPROVED	LIST NO.	ADK28-0539
CHECKED	BEFORE	Q390339540BZ
DRAWN	REF.	DESIGN NO. N-97042
DATE	DAIHATSU DIESEL MFG. CO., LTD.	
	OSAKA JAPAN	
	2007/02/16	

FIRST DRAWING  
 2007/02/16 N.H  
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図面承認：  
 改正-1 (H18.07.20) 型式を承認する。  
 フランジ型をユニオン型に変更する。  
 改正-2 (H18.07.25) 型式を承認する。  
 ユニオン型をクイロニユニオン型に変更する。

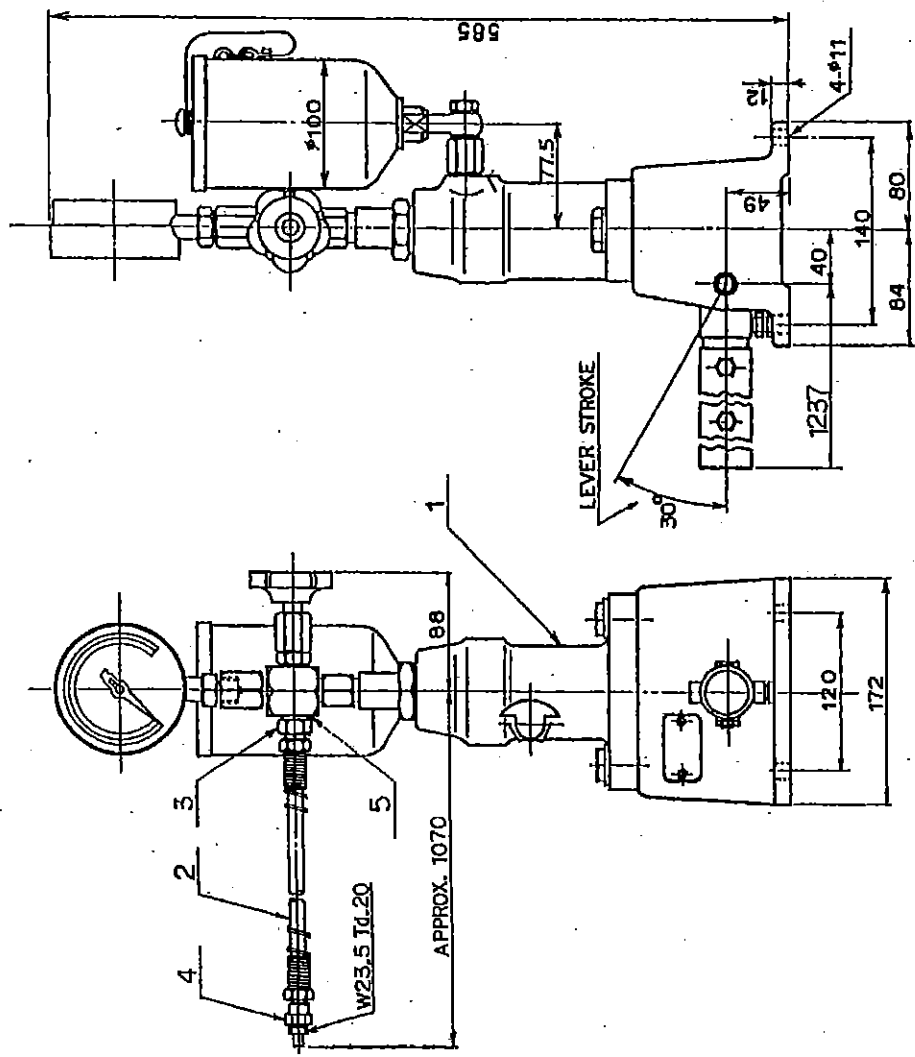
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6									
5									
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3	BELLOWS	SUS304	1						
2	WRAPPER	SUS304	2	0.01					
1	SWAGELOK	SUS316	2	1.03	編組仕様				
ITEM	PART NAME	MATERIAL	QTY	WEIGHT	REMARK				
MANUFACTURE 製作方法		NET LENGTH 実寸長	NO. OF PIS 原張						
4.25 +3		425							
PAINTING 塗装		HEIGHT 高さ	SPRING FORCE A1 ばね力		1.3				
NON									
部品番号 ADA20004947A									
B:0390345050BZ									
P.T. INSPECTI	Y-RAT TEST	YES	NO						
カラーチェック	Y-RAT TEST	YES	NO						
PRESS. TEST	LEAK TEST	1.5							
耐圧試験	漏れ試験	1.5							
INITIAL HOSE	LATE HOSE	±3							
初期仕度	後期仕度	±3							
DESIGN T.	WORKING T.	1.0							
設計圧力	作業圧力	1.0							
DESIGN T.	WORKING T.	100							
設計温度	作業温度	100							
FLUID	C-A								
流体	C-A								
LAND No.	図面番号	ADA20004947A							
ORDER No.	発注番号								
USES	用途								
CUSTOMER	DAIHATSU DIESEL MFG. CO., LTD.								
型式	10φ								
FLEXIBLE METAL HOSE									
NIPPON METAL HOSE CO., LTD.									
CHIEF	DESKED	TM							
部長	課長	TM							
DRAWN	DATE 作成	Y. Sakurai	JUL. 12 '06						
図面	日付	Y. Sakurai	JUL. 12 '06						
DRG. No.	図面番号	M-18467	REV. 改訂						



SWAGELOKの規格  
 10φ:16-10MO-1-4W

APPROVED	KIYAMOTO ICHIRO	LIST NO.	ADK32-0345-8	MATERIAL	PCHS	GROUP	7	SCALE	-
CHECKED		BEFORE	0390345050BZ	MASS.	QTY.				A3
		REP.	M-18467	TYPE	ALL				
DRAWN	TERUICHI YUICHI	DAIHATSU DIESEL MFG. CO., LTD.							
DATE	OCHI MASARU	OSAKA JAPAN							
	2008/05/27	フレキシブルホース: 10マル ニホンメタルホース							
		FLEXIBLE HOSE: 10mm: NIPPON METAL HOSE							
		PARTS NO. ADA20004947 A							

△ FIRST DRAWING 2008.05.27 E.S.  
 本図はDAIHATSUの財産であり、この図面はDaihatsu Diesel Mfg. Co., Ltd. からの許可なく複製、複製、または第三者への開示を禁じます。複製、複製、または第三者への開示を禁じます。複製、複製、または第三者への開示を禁じます。複製、複製、または第三者への開示を禁じます。



SPECIFICATION	
PLUNGER DIA.	φ20
CAPACITY	4000mm <sup>3</sup> /st
TANK CAPACITY	1000 mL
PRESS. GAUGE	W23.5 J4.20 x 50 MPa

NO.	NAME OF PARTS	PARTS NO.	MATERIAL	WEIGHT g	QTY.
5	GASKET 18	AE02199056AA	C1100P-O		1
4	PLUG COUPLING	AE01199027AA	PCHS		1
3	JOINT PT3/8 x M18	AE02199054AA	S43C		1
2	HIGH PRESS. HOSE 1000	AE02199055BA	SPEC		1
1	NOZZLE TEST PUMP (K)	AE02199053AA	SPEC		1
	NOZZLE TEST PUMP ASSY (K)	AE02199015CA			1
					510

NO.	NAME OF PARTS	PARTS NO.	MATERIAL	WEIGHT g	QTY.
					510

APPV.	DESIGNER	DATE	SCALE	TYPE	NAME
			1:4	DL, DK	

DATE	NOZZLE TEST PUMP ASSY.
MAR.10, 1988	AGA10003162

DATE	DRG. NO.
MAR.10, 1988	AGA10003162

DAIHATSU DIESEL MFG. CO., LTD.  
OSAKA JAPAN