

SPECIFICATION
OF
MITSUBISHI DIESEL ENGINE
MODEL : S12R-PTAA2-C
FOR DIESEL GENERATOR SET

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								APPROVED BY	DRAWN BY
								T. Tsukamoto	K. Yoko
				DATE	2012.12.17				

1. GENERAL

Object and use	: Diesel generator
Color of painting	: Mansel No. 7.5BG6/1.5
Applicable conditions	
Ambient temperature	: 5°C ~ 40°C
Altitude	: 1500m above sea level
Max ,humidity	: 85%
Place of installation	: In door

Shop test

Diesel engine running tests shall be carried out by the following items.

Starting test

Load test	: 1/4, 2/4, 3/4 Load each
	: 4/4 Load

Governor test	: Governor test should be done along with respective governor controller
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Safety stop device test**Guarantee**

The guarantee shall be validated for the period of either 1year or 1000Hr (at Hr counter) after installation, whichever the shorter.

The guarantee shall cover against manufacturer defect, materials and workmanship only, and shall not be applicable to damage sustained through mishandling of the equipment.

Standard

All items, unless otherwise specified, are in accordance with JIS and manufacturer's standards.

2. PRINCIPAL PARTICULARS

Model	:	MITSUBISHI S12R-PTAA2 - C
Type	:	4cycle stroke, water cooled diesel engine
Combustion chamber	:	Direct injection type
Aspiration	:	Turbocharged with inter cooler
Number of cylinders	:	12-V
Bore × stroke	:	170mm × 180mm
Total displacement	:	49.03 liter
Compression ratio	:	13.5 : 1
firing order	:	1 - 12 - 5 - 8 - 3 - 10 - 6 - 7 - 2 - 11 - 4 - 9
Direction of rotation	:	Counter clockwise as viewed from flywheel side
Engine dimensions (Approx.)	:	Length Apx. 3418mm
with radiator	:	width Apx. 2192mm
	:	Height Apx. 2676mm
Dry weight (Approx.)	:	5520kg (without accessories)
Fuel oil	:	ASTM D975 No. 2 - D or BS 2869 class A
Lubricating oil	:	API service CF class
	:	SAE No. 15W-40
Output at ISO 3046 standard air conditions (25°C, 100kPa, 30% Humid)		
Stand-by rating	:	1404kW/1500min ⁻¹
Fuel consumption ratio at Stand-by rating	:	221g/kW-hr
(allowance +5%)	:	
Lub, oil consumption ratio at Stand-by rating	:	within 0.8g/kW-hr

3. STANDARD EQUIPMENTS**(1) power line system**

Flywheel	: DWG.NO.37796-21001 SAE J620d 21in, except screw size
Flywheel housing	: DWG.NO.37796-21001 SAE J617c No.00, except screw size
Engine mounting	: DWG.NO.37796-14001 4 points mounting, C = 250mm
Torsional vibration damper	: Viscous type × 2pcs

(2) Air intake system

Air cleaner	: DWG.NO.37796-30305 loose supply DWG.NO.S35-1032 Donaldson EGB20 × 2pcs Paper element type without inlet cap
Turbocharger	: MITSUBISHI TD and TF Type Model : TD13L-48QRC(47)
Charged air cooler	: Air cooled type
Air heater	: Not supply

(3) Exhaust system

Exhaust manifold	: Air cooled type with heat insulator
Muffler	: Not supply
Flexible pipe	: DWG.NO.S37-1021 (47910-81400) loose supply JIS 300A, L=370mm, weight 70kg
Companion flange	: Not supply
Breather	: DWG.NO.37796-43007 Down side direction type

(4) Lubricating system

Oil pump	:	Gear pump type
Capacity of oil pump	:	1500min ⁻¹ : 480 L/min.
Lub. oil pressure	:	0.5~0.65 Mpa
Quantity of oil (Approx.)	:	Oil pan full level : 150 liter
		low level : 110 liter
		Others (filter etc.) : 30 liter
		Total : 180 liter
Lub. oil filter (Full flow)	:	DWG.NO.37796-40001
		Paper element cartridge type × 4pcs
		filter mesh : 20 μ
		with by - pass alarm switch
Lub. oil filter (By - pass flow)	:	DWG.NO.37796-40001
		Paper element cartridge type × 1pc
		filter mesh : 2 μ
Lub. oil cooler	:	Water cooled corrugated type with by - pass valve

(5) Cooling system

Water pump	:	Gear drive centrifugal type
Capacity of water pump	:	1500min ⁻¹ : 1650 L/min.
Thermostat	:	Wax pellet type
		Open at 71°C ~ 85°C
Fan	:	Pusher type, Aluminum casting blade
		1524mm diameter
		Mounted on radiator frame
		Belt drive with tension pulley
		Fan speed ratio i = 0.706
Radiator & Inter cooler piping	:	DWG.NO.37796-47005 loose supply
Radiator & I/C Assy.	:	DWG.NO.S33-4551
		Plated fin type
Radiation area	:	Inter cooler side 168.9m ²
		Radiator side 463.1m ²
weight (DRY)	:	Approx. 1350kg

Capacity of coolant (Approx.)	:	Engine	:	125 liter
		Radiator	:	182 liter
		Pipings	:	10 liter
		Total capacity	:	317 liter
Jacket water heater				
Water heater piping	:	DWG.No.37796-46308		
		Install on common bed		
Water heater	:	DWG. No.S12-0014		
		2.0kW, 3 phase, 220 ~ 480V		
		1 Phase, 110 ~ 480V		
Operation	:	Convection type		
		Controlled by thermo switch		
Thermo switch	:	DWG.No.S11-0781		
		42°C - off, 35°C - on		
		Contactactor capacity		
		DC24V : 3A		
		AC100V : 1A, DC100V : 0.05A		
(6) Fuel system				
Fuel inlet pipings	:	DWG.NO.37796-62112 loose supply		
		flexible hose (Rc 3/4 joint)		
Fuel return pipings	:	DWG.NO.37796-61312 loose supply		
		flexible hose (Rc 3/4 joint)		
Fuel overflow of Inj. Pump and fuel leak - off of Nozzle have to return to fuel tank				
Injection pump	:	Bosch type "PS6A" without timer		
Feed pump	:	Piston type with priming pump		
Injection Nozzle	:	Hole type 0.31mm × 10 holes		
Fuel filter	:	DWG, No.37796-62002		
	:	Paper element cartridge type filter mesh : 5 μ		

(7) Control system

Governor	: DWG.NO.37796-63005 Electronic speed governor Speed droop : 0 ~ 5% adjustable
Actuator	: DWG.NO.S13-1761 Supply voltage : DC24V± 20% Current consumption At starting : 13A Normal operation : 0.5 ~ 2A Min. Supply voltage : DC16V50%ED
Controller	: DWG.NO.S13-1042 loose supply Model : XS-400B-03 (04410-33100) Supply voltage : DC24V± 20%
Potentiometer	: For low idling speed setting Not supply
Potentiometer	: For rated speed setting Not supply
Connector	: DWG.NO.S13-1022 loose supply From actuator to controller 5000mm length
Magnetic pick up	: DWG.NO.S13-2011 With connector
Cable	: DWG.NO.S13-2020 loose supply From magnetic pick up to controller 4300mm length

(8) Starting system

Starter switch	: with key, with heat position Not supply
Starting motor	: DWG.NO.37796-66001 DC24V, 7.5KW × 2pcs Reduction type with safety relay with 2 poles connector (DWG.NO.S14-0320)
Safety relay	: DWG.NO.S10-0150 loose supply For Parallel running of starting motor

Current of starter	: Rush 1250A Cranking 400A (Ambient temp : 5°C, Lub. oil : SAE No. 30)
Fuel limit solenoid	: DWG.NO.37796-87503 DWG.NO.S13-0282 Fuel limit at engine starting Energized to fuel control until rated speed
Alternator	: DWG.NO.S10-0540 DC24V, 30A, with voltage regulator with 2 poles connector (DWG.NO.S10-0550)
Recommended battery capacity	: DC24V, 400AH Not supply
Battery switch	: Not supply
(9) Stopping system	: DWG.NO.37796-87503
Automatic stop	Automatically shut - down by stop solenoid and electronic governor power off simultaneously
Stop solenoid	: DWG.NO.S13-0282 Energized to run type DC24V, 30.7A(pull), 0.58A(hold)
Manual stop	: By stop lever
(10) Safety device	
Alarm switches	: DWG.NO.37796-90206
Alarm and trip	
Low oil press. switch	: DWG.NO.S11-0796 (04442-45400) Diaphragm type : 0.15 MPa switch on
High water temp. switch	: DWG.NO.S11-0551 (04442-34500) Wax type : 98°C switch on
Alarm	
Oil filter alarm switch	: DWG.NO.S11-1370 Piston type : 0.15 MPa switch on
Oil filter alarm lamp	: Not supply
Air filter alarm indicator	: DWG.NO.S11-0920 loose supply Mechanical type : 635mmH ₂ O switch on

(11) Instrument

Meter and sensor	: DWG.NO.37796-90119
Tachometer	: Pulse type for engine speed With electrical hour meter Not supply
Magnetic pick up	: DWG.NO.S13-2011 For tachometer, pin-joint type
Cable	: For magnetic pick up, 4300mm length Not supply
Thermometer	: Electrical type for jacket water and lub. oil temp. Not supply
Pressure gage	: Electrical type for lub. oil press. Not supply With 2 poles connector (DWG.NO.S14-0330)
Thermometer	: For exhaust gas temp. Not supply

(12) Others

Turning device	: DWG.NO.37796-71001 Gear type, for maintenance
Service meter	: Not supply
Tools	: Not supply
Spare parts	: Not supply

4. ACCESSORIES (Loose supply parts)

NO.	PARTS NO.	PARTS NAME	Q' TY	DWG. NO.	
1	47220-47703	AIR CLEANER ASSY.	2	S35-1032	37796-30305
2	47220-47600	HOSE, ELBOW	2	S35-0701	
3	47510-77300	DUCT, AIR	2		
4	47220-47300	HOSE, RUBBER	2	S35-0711	
5	05317-52001	CLAMP	4		
6	05317-52801	CLAMP	4		
7	47910-81400	FLEXIBLE PIPE	1	S37-1021	
8	45955-20160	HOSE, VINYL	2		37796-43007
9	05317-50401	CLAMP	4		
10	04393-33820	HEATER, WATER	2	S12-0014	37896-46308
11	47521-62901	CASE, HEATER	2		
12	45961-13068	PIPE, FLEXBLE	1		
13	45961-13074	PIPE, FLEXBLE	1		
14	45961-13115	PIPE, FLEXBLE	1		
15	45961-13154	PIPE, FLEXBLE	1		
16	30007-65200	PIPE, VINYL	2		
17	33407-16100	COCK, DRAIN	2		
18	05946-02001	WASHER, SEALING	2		
19	47521-63100	SYAY	1		
20	F2882-25000	CLIP	3		
21	F4300-01600	CLAMP	2		
22	F4656-15000	ELBOW	6		
23	F5006-21000	PLUG, TAPER	2		
24	37747-11100	RADIATOR & I/C ASSY.	1	S33-4551	37796-47005
25	47510-61601	PIPE, WATER	2		
26	47510-60400	PIPE, WATER	2		
27	47511-60300	PIPE, WATER	1		
28	47520-68700	STAY, PIPE	4		
29	47523-60500	STAY, PIPE	2		
30	47523-61700	STAY, PIPE	1		
31	F3153-07500	O-RING	2		
32	F4010-76018	HOSE, RUBBER	4		
33	45960-19020	HOSE, RUBBER	2		

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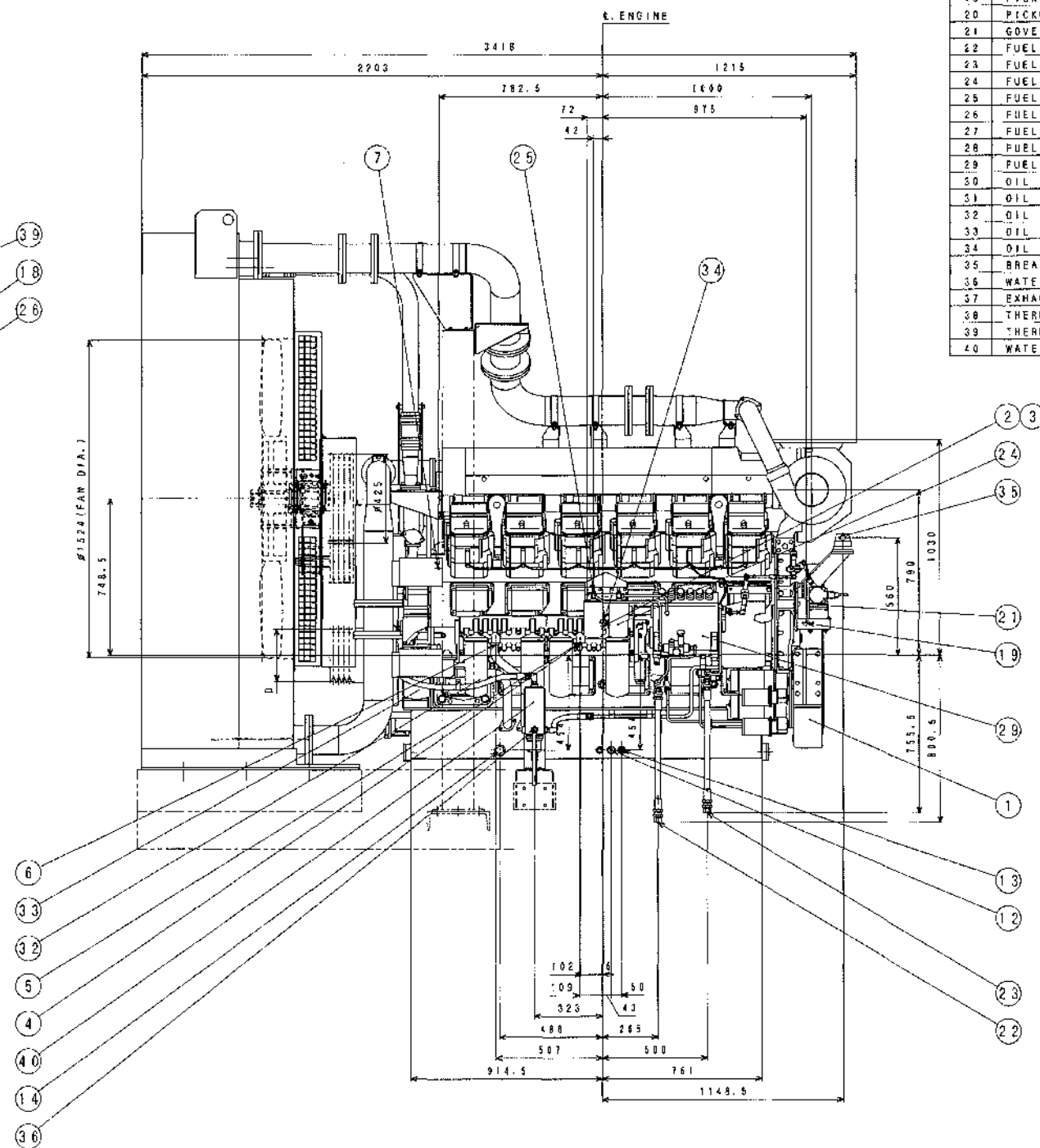
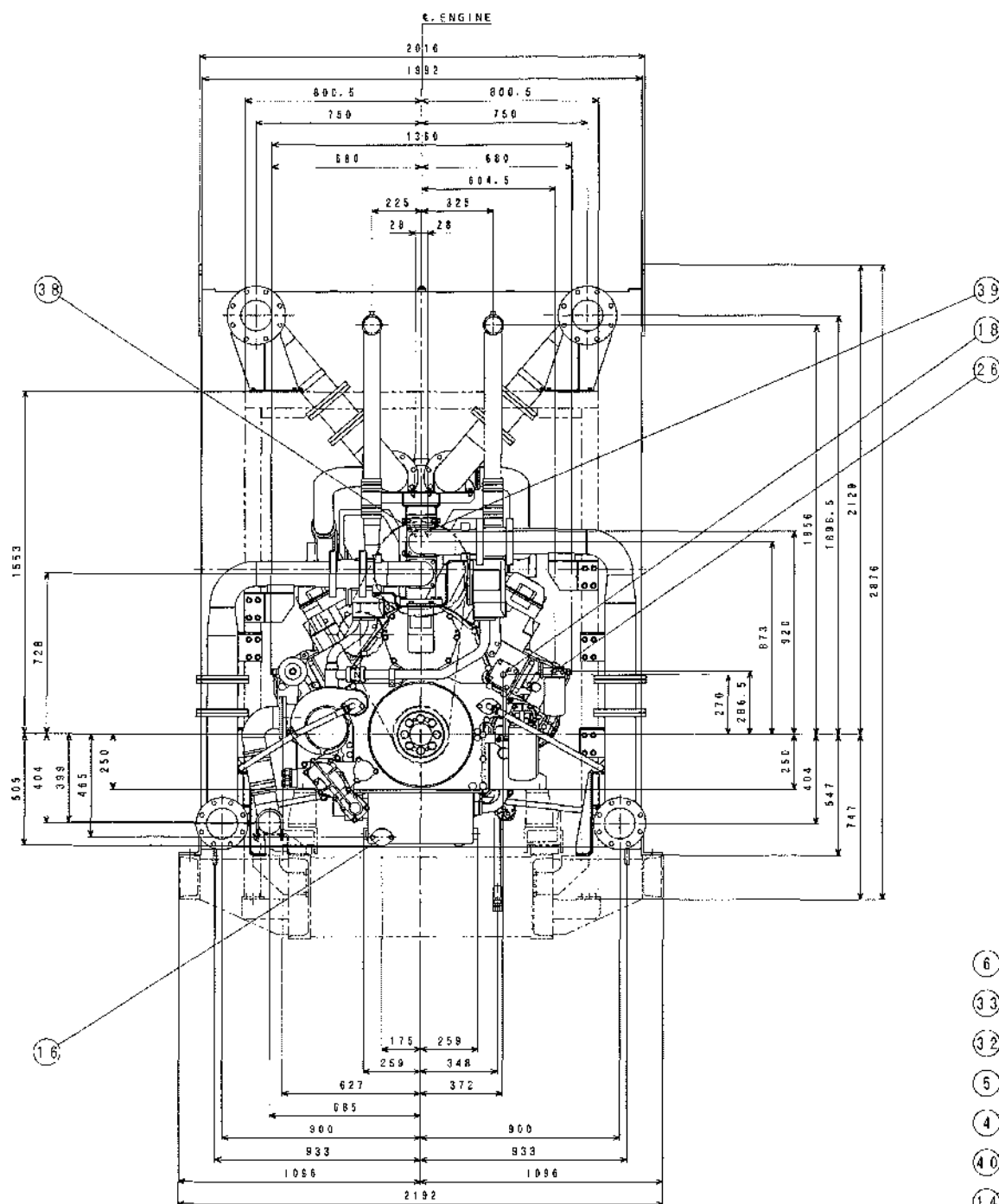
NO.	PARTS NO.	PARTS NAME	Q' TY	DWG. NO.	
34	05317-81000	CLAMP	16		
35	05137-81250	CLAMP	8		
36	45790-60900	U-BOLT	2		
-37	(47510-76601)	(STAND, AIR PIPE)	(1)	S35-0910	NOTE : No.37 is not supply from M.H.I. 37796-47005
38	47510-76330	STAY, AIR PIPE	1		
39	47510-76340	STAY, AIR PIPE	1		
40	47510-76410	STAY, AIR PIPE	2		
41	47510-76420	STAY, AIR PIPE	2		
42	47510-76210	STAY, AIR PIPE	1		
43	47510-76220	STAY, AIR PIPE	1		
44	37731-02400	CLAMP, AIR DUCT	6		
45	37731-00502	DUCT, AIR T/C-I/C	1		
46	37731-00602	DUCT, AIR T/C-I/C	1		
47	37731-00702	DUCT, AIR I/C	2		
48	47941-33050	GASKET	14		
49	47941-33060	GASKET	2		
50	37731-01901	STAY, AIR DUCT	1		
51	37731-02101	STAY, AIR DUCT	1		
52	37831-02502	DUCT, AIR I/C-A	2		
53	37731-10802	DUCT, AIR I/C-A	1		
54	37731-10902	DUCT, AIR I/C-A	1		
55	37731-01700	JOINT, FLEXBLE	6		
56	04410-33100	CONTROLLER	1	S13-1042	37796-63005
57	04410-32902	CONNECTOR, ACTUATOR	1	S13-1022	
58	04410-43500	CABLE, PICK UP	1	S13-2020	
59	04322-40100	RELAY, SAFETY	1	S10-0150	
60	F8665-02100	CONNECTOR	2	S14-0320	for starter
61	32B90-00300	CONNECTOR	1	S10-0550	for alternator
62	MH052231	CONNECTOR	1	S14-0330	37796-90119
63	47220-34401	INDICATOR	4	S11-0920	37796-90206

5. DRAWINGS

NO.	DWG. NO.	DWG. NAME	REV.
1	37796-00401	ENGINE OUTLINE	
2	37796-01001	JOINT DETAIL	
3	37796-04029	WIRING DIAGRAM	
4	37796-14001	MOUNTING DETAIL	
5	37796-21001	FLYWHEEL & HOUSING DETAIL	
6	37796-30305	AIR CLEANER	
7	37796-40001	OIL FILTER	
8	37796-43007	BREATHER	
9	37796-46308	WATER HEATER PIPING	
10	37796-47005	RADIATOR PIPING	
11	37796-61312	FUEL RETURN PIPING	
12	37796-62002	FUEL FILTER	
13	37796-62112	FUEL INLET PIPING	
14	37796-63005	GOVERNOR	
15	37796-66001	STARTING MOTOR	
16	37796-71001	TURNING GEAR	
17	37796-87503	STOP & FUEL LIMIT SOLENOID	
18	37796-90119	METER & SENSOR	
19	37796-90206	ALARM SWITCH	
20	S10-0150	SAFETY RELAY	
21	S10-0540	ALTERNATOR	
22	S10-0550	CONNECTOR	
23	S11-0551	THERMO SWITCH	
24	S11-0781	THERMO SWITCH	
25	S11-0796	PRESSURE SWITCH	
26	S11-0920	INDICATOR	
27	S11-1370	FILTER ALARM SWITCH	
28	S12-0014	WATER HEATER	
29	S13-0282	SOLENOID	
30	S13-1022	CONNECTOR	
31	S13-1042	CONTROLLER	
32	S13-1761	ACTUATOR	

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NO.	DWG. NO.	DWG. NAME	REV.
33	S13-2011	MAGNETIC PICK UP	
34	S13-2020	CABLE, PICK UP	
35	S14-0320	CONNECTOR	
36	S14-0330	CONNECTOR	
37	S33-4551	RAD. & I/C ASSY.	
38	S35-0701	HOSE, ELBOW	
39	S35-0711	HOSE, RUBBER	
40	S35-0910	STAND, AIR PIPE	
41	S35-1032	AIR CLEANER ASSY.	
42	S37-1021	FLEXIBLE PIPE	



NO.	PARTS NAME	SIZE	REFERENCE
1	FLYWHEEL & HOUSING		37794-01001
2	OIL PRESS. GAGE UNIT JOINT	Rc1/8	37794-01004
3	OIL PRESS. SWITCH JOINT	Rc1/8	
4	OIL PRESS. SWITCH JOINT	Rc1/2	
5	OIL PRESS. SWITCH JOINT	Rc1/2	
6	OIL PRESS. SWITCH JOINT	Rc1/2	
7	OIL PRESS. SWITCH JOINT	Rc3/8	
8	THERMOMETER UNIT JOINT	Rc1/2	
9	THERMOSWITCH JOINT	Rc1/2	
10	THERMOSWITCH JOINT	Rc1/2	
11	THERMOSWITCH JOINT	Rc1/2	
12	OIL PAN (A) JOINT	M16x1.5	
13	OIL PAN (B) JOINT	M20x1.5	
14	OIL PAN (C) JOINT	M20x1.5	
15	OIL PAN (C) JOINT	M20x1.5	
16	OIL PAN (D) JOINT		
17	OIL PAN (D) JOINT		37794-01004
18	TACHOMETER JOINT		
19	PICKUP JOINT	5/8-18UNF	
20	PICKUP JOINT	5/8-18UNF	
21	GOVERNOR		
22	FUEL INLET PIPE JOINT	Rc3/4	37794-01004
23	FUEL RETURN PIPE JOINT	Rc3/4	37794-01004
24	FUEL FILTER		
25	FUEL PRESS. SWITCH JOINT	M14x1.5	37794-01004
26	FUEL PRESS. SWITCH JOINT	Rc3/8	
27	FUEL PRESS. SWITCH JOINT	M14x1.5	
28	FUEL PRESS. SWITCH JOINT	Rc3/8	37794-01004
29	FUEL INJECTION PUMP		
30	OIL FILLER		
31	OIL LEVEL GAGE		
32	OIL FULL-FLOW FILTER		
33	OIL BY-PASS FILTER		
34	OIL BY-PASS ALARM SWITCH		37794-01004
35	BREATHING		
36	WATER DRAIN COCK		
37	EXHAUST FLANGE	300A	
38	THERMOMETER, EX. JOINT	Rc3/4	37794-01004
39	THERMOMETER, EX. JOINT	Rc3/4	37794-01004
40	WATER HEATER		

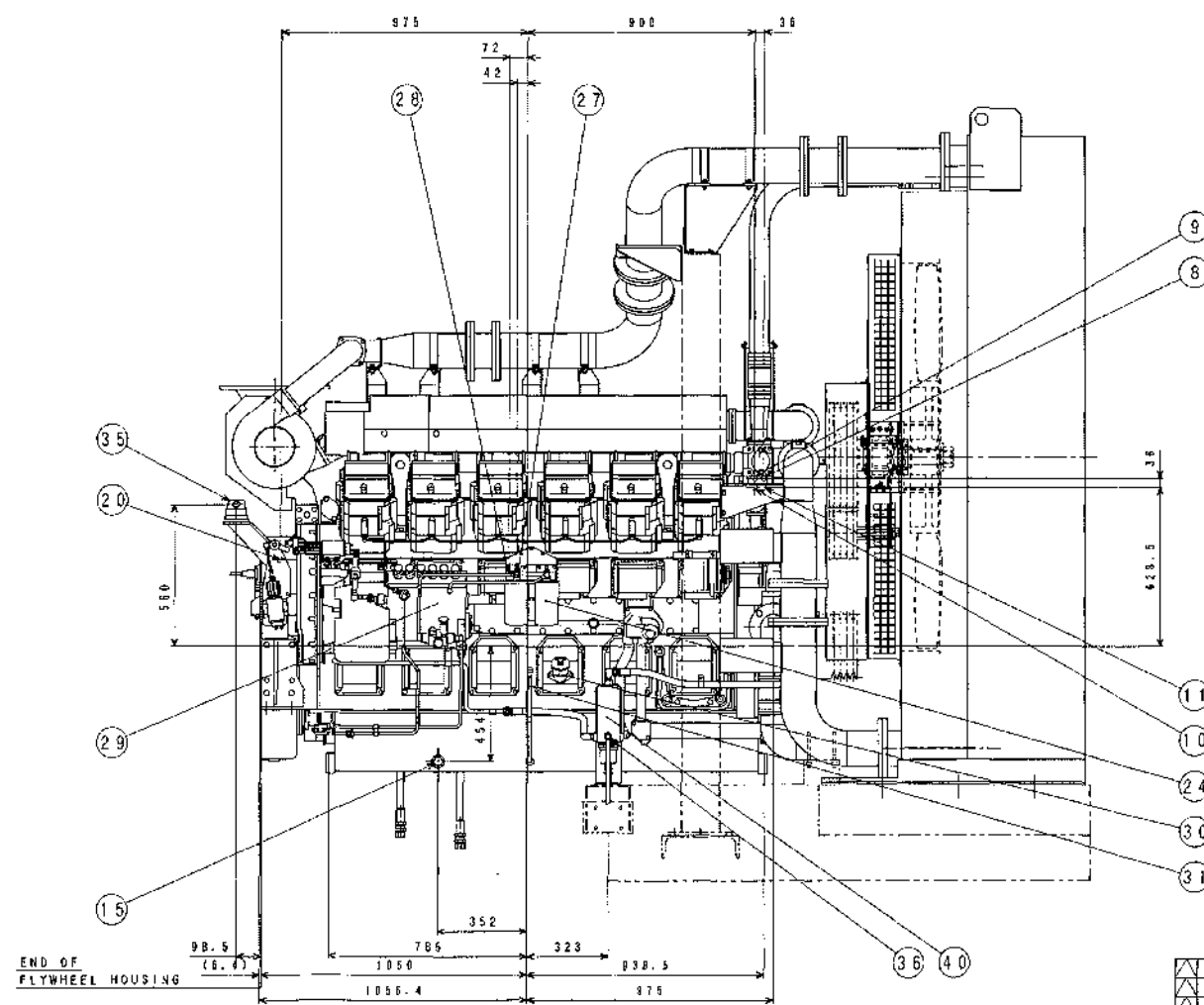
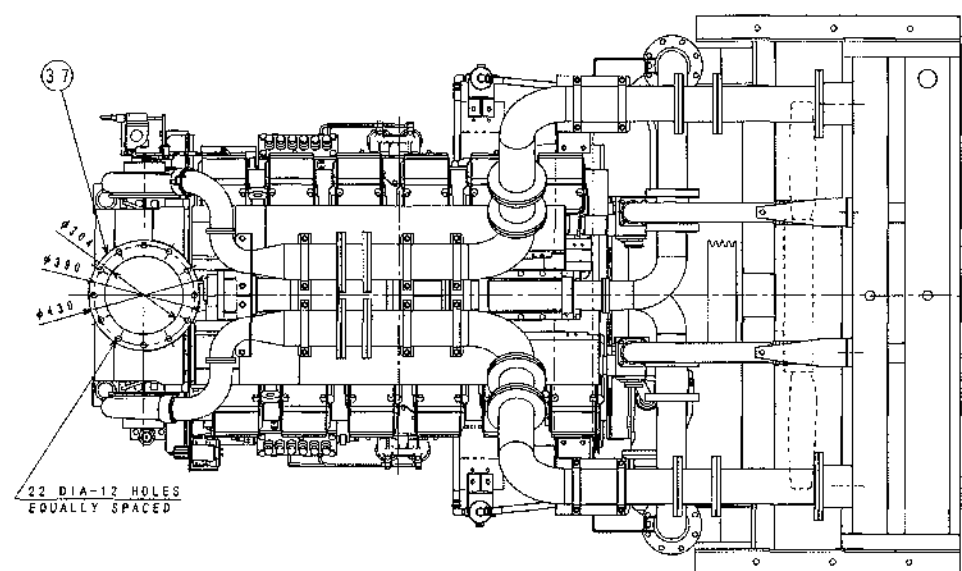
ENGINE SPEED	1500	1800
TURBO CHARGER	TD13L489RC47	TF15L679V49
ENG. TO COMP. INLET "A"	529	518.5
CRANK PULLEY P.C.D. "D"	300	250
FAN PULLEY P.C.D.	425	425

(3) THE GOVERNOR ON THIS DRAWING IS ELECTRIC GOVERNOR.
 (2) THE ENGINE NEEDS WATER HEATER.
 NOTES (1) THIS DRAWING SHOWS S12R-PTAA2 WITH FAN&AIR TO AIR COOLER.
 (3) 本図のガバナは電気ガバナである。
 (2) 本エンジンはウォーターヒーターを必要とする。
 注 (1) 本図はS12R-PTAA2、ファン&エアにエアクーラー用である。

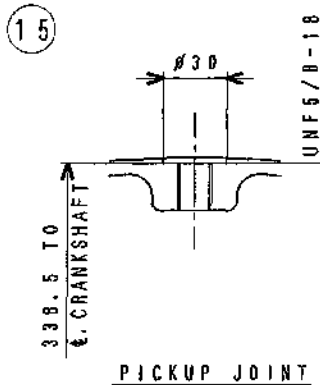
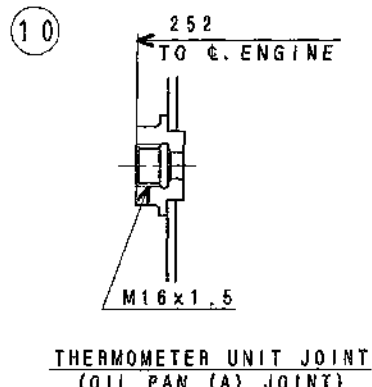
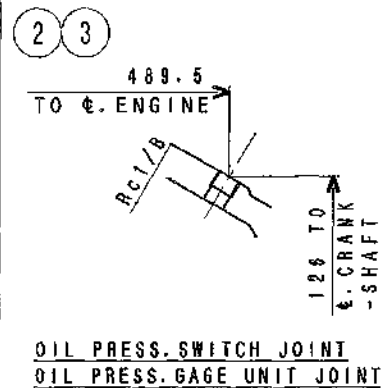
S12R-PTAA2 DIESEL ENGINE	
三菱重工業株式会社 技術部 製作所	
SAGINAWA TACHOMETER UNIT, EXHAUST ALARM SWITCH, THERMO. UNIT.	
図面番号	37796-00401
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出図
相模
1980
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FULL-CAD



4590-0944		00. 1.25	番	1 : 10	三崎重工業株式会社機械製作所 SAGURA MACHINERY WORKS, MATSUYAMA, JAPAN JAPANTEL 087-740111
LINE	IS-WS	DATE	重		
4590-0944	14.02	仁竹小	0823	重	国産番号 37796-00401 4111111
4590-0944	14.02	仁竹小	0823	重	



S12R

JOINT DETAIL

三菱重工業株式会社 汎用機・特専事業本部
MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINERY & SPECIAL PURPOSE HEADQUARTERS.

図面番号 37796-01001 
DRAWING NO. 1/2

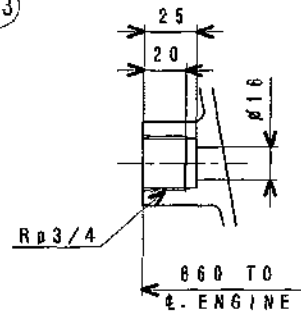
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2008
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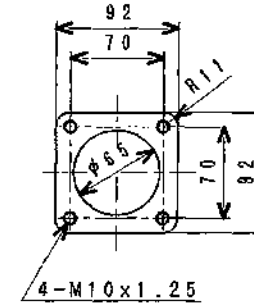
FULL-CAD

(33)



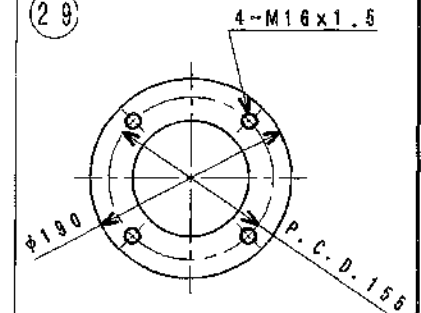
THERMOMETER, EX. JOINT

(30)



WATER OUTLET PIPE JOINT

(29)



WATER INLET PIPE JOINT

NOTES

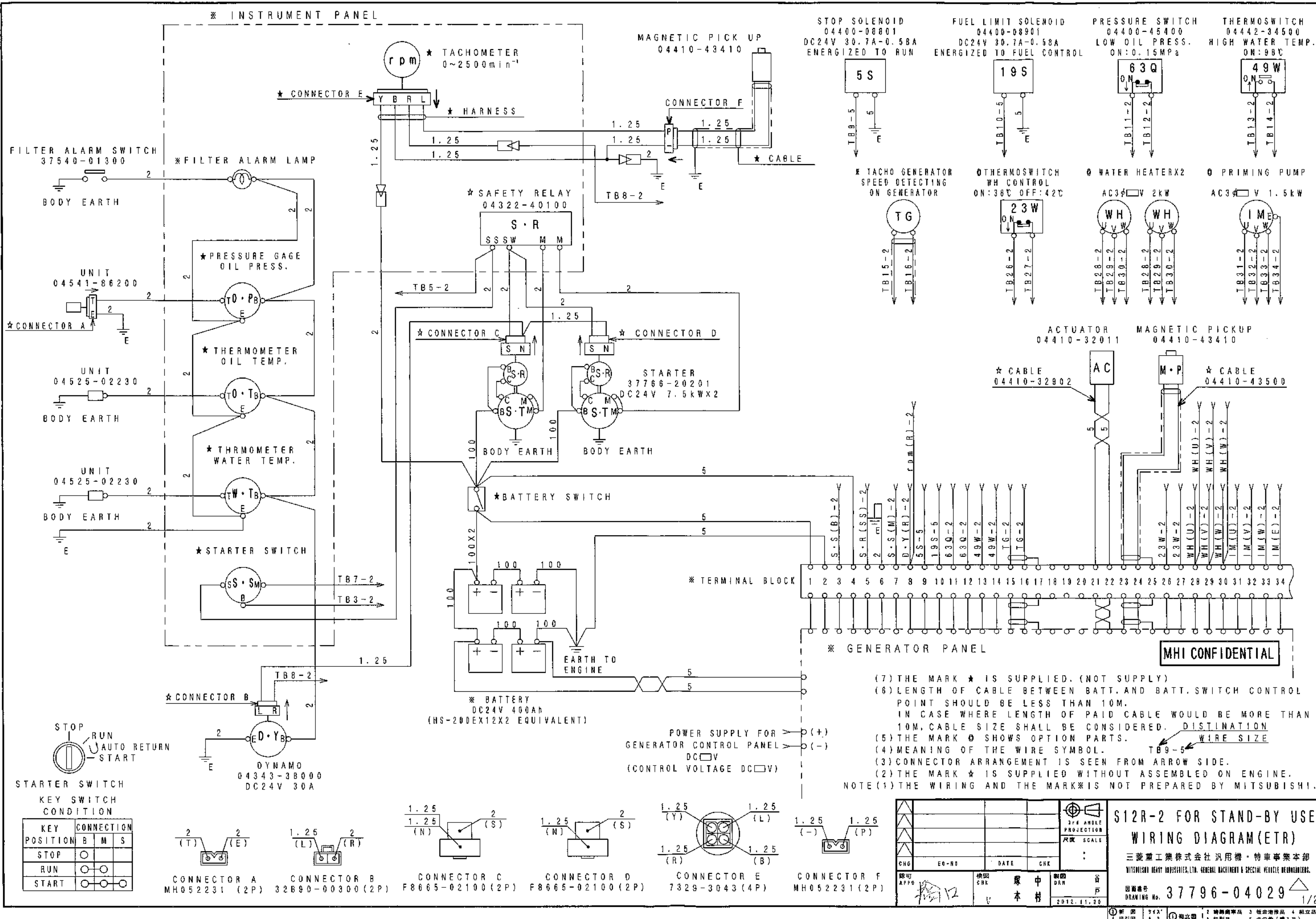
CONFIDENTIAL

2		4591-0364	'03.10.27	福田	 3RD ANGLE PROJECTION	S12R JOINT DETAIL 三菱重工業株式会社 汎用機・特車事業本部 MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS. 図面番号 DRAWING No. 37796-01001	2 2/2
1		4590-4993	'89. 2.25	福田			
CHG	EQ-NO	DATE		CHK			
認可 APPD	仁 尾		検図 CHK	竹 谷	福田	製図 D2B	谷 錫 戸 島
						1999. 8. 8	

3 新 図	ナイス	1 起立図	2 機器部品	3 板金部品	4 組立品
① 組立図	A 3	5 初創品	6 その他(購入品)		

旧引
汎特
2003
11.4

FULL-CAD



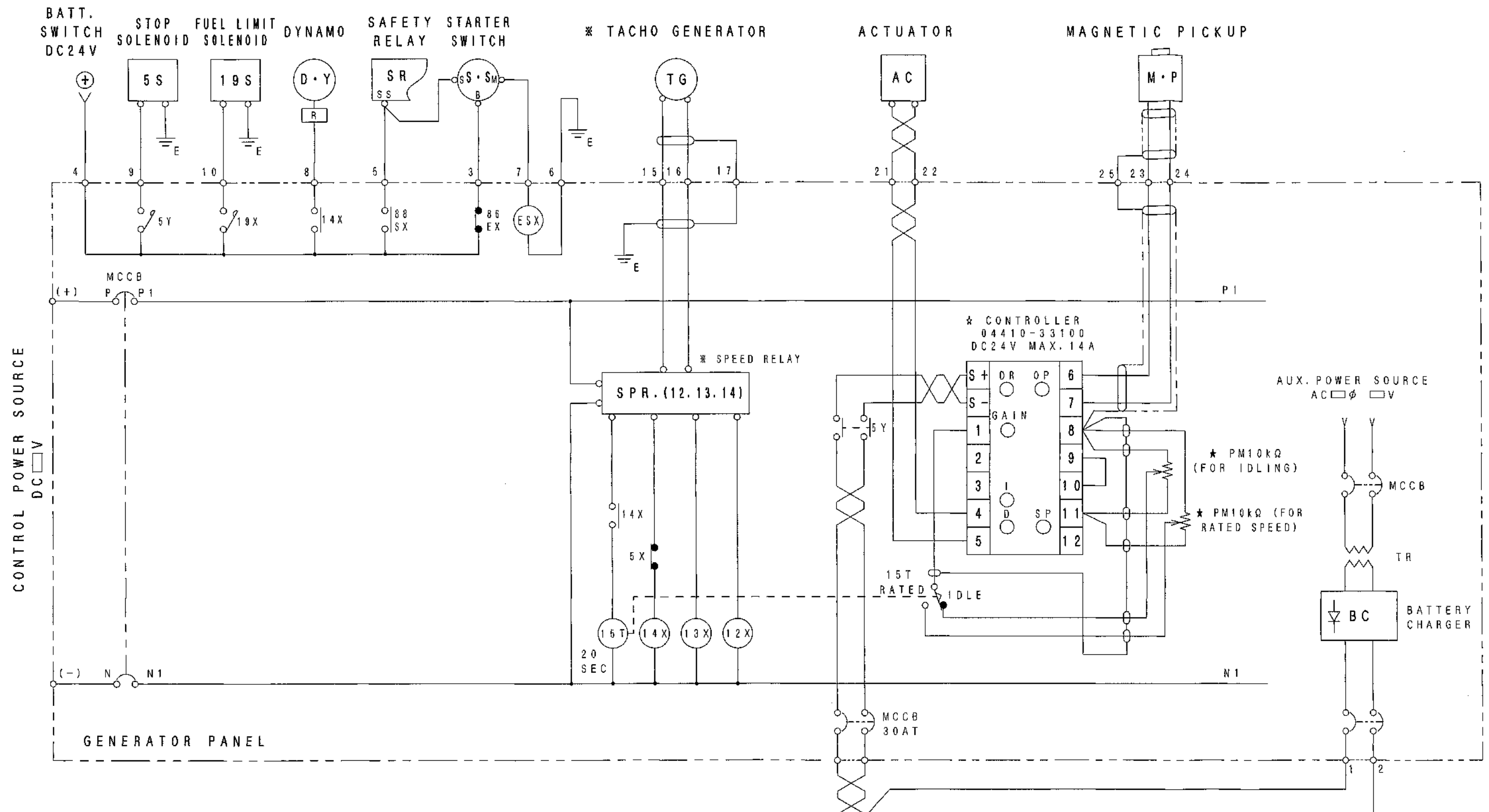
KEY SWITCH CONDITION	
KEY POSITION	CONNECTION
STOP	B M S
RUN	
START	

- CONNECTOR A
MH052231 (2P)
- CONNECTOR B
32890-00300 (2P)
- CONNECTOR C
F8665-02100 (2P)
- CONNECTOR D
F8665-02100 (2P)
- CONNECTOR E
7329-3043 (4P)
- CONNECTOR F
MH052231 (2P)

(7) THE MARK ★ IS SUPPLIED. (NOT SUPPLY)
(6) LENGTH OF CABLE BETWEEN BATT. AND BATT. SWITCH CONTROL POINT SHOULD BE LESS THAN 10M.
IN CASE WHERE LENGTH OF PAID CABLE WOULD BE MORE THAN 10M, CABLE SIZE SHALL BE CONSIDERED. DISTINATION
(5) THE MARK ⓪ SHOWS OPTION PARTS. WIRE SIZE
(4) MEANING OF THE WIRE SYMBOL. TB9-5
(3) CONNECTOR ARRANGEMENT IS SEEN FROM ARROW SIDE.
(2) THE MARK ★ IS SUPPLIED WITHOUT ASSEMBLED ON ENGINE.
NOTE (1) THE WIRING AND THE MARK★ IS NOT PREPARED BY MITSUBISHI.

S12R-2 FOR STAND-BY USE
WIRING DIAGRAM(ETR)
三菱重工業株式会社 汎用機・特車事業本部
MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINERY & SPECIAL VEHICLE DEPARTMENTS.
図面番号
DRAWING No. 37796-04029 1/2

新 旧 図 1 2 3 4 5
4 旧図 5 新図 6 改訂 7 追加 8 削除 9 変更 10 補正



(2) THIS DRAWING IS WIRING DIAGRAM BETWEEN MACHINE SIDE AND THE GENERATOR PANEL. FOR DETAILS, REFER SEQUENCE DIAGRAM (ETR) S25-0200

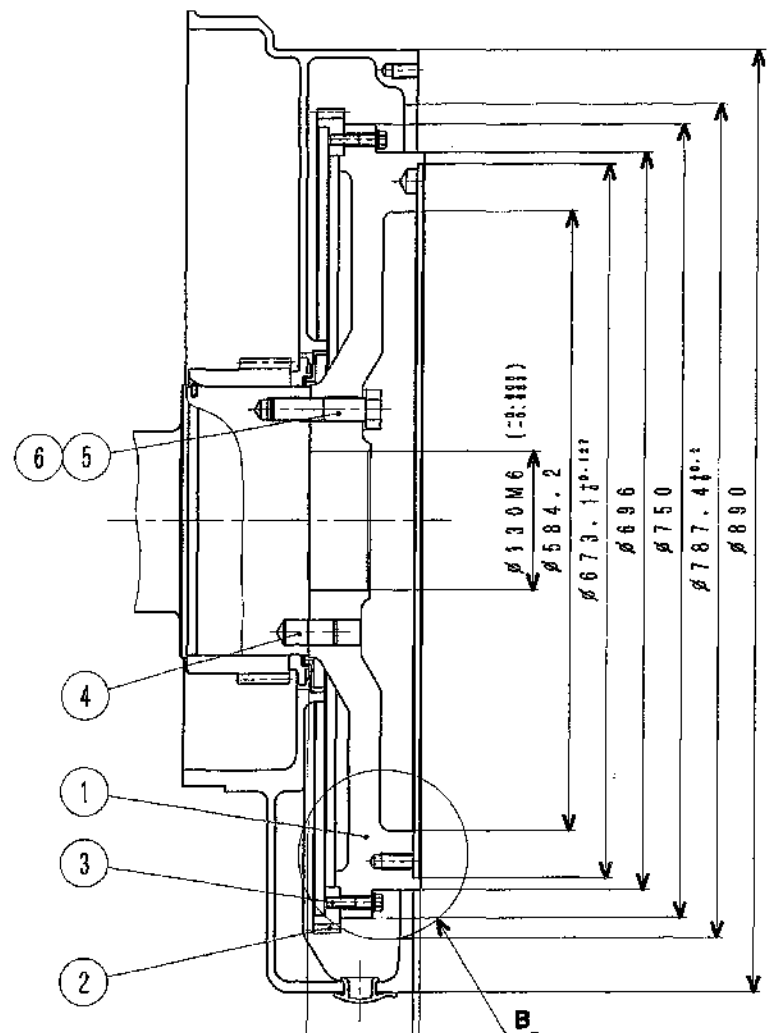
NOTE (1) SHALL BE MAKE MORE THAN 40 TURNS PER 1METRE AND LESS THAN 2 Ω OF RESISTANCE ON BATTERY LINE AND ACTUATOR LINE TWIST CABLE.

MHI CONFIDENTIAL

CHG	EQ-NO	DATE	CHK
APPD	CHK	家	中
12	本	村	谷
2012.11.30			

S12R-2 FOR STAND-BY USE
WIRING DIAGRAM (ETR)
三菱重工業株式会社 汎用機・特車事業本部
MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS.
図面番号 37796-04029 2/2
DRAWING No.

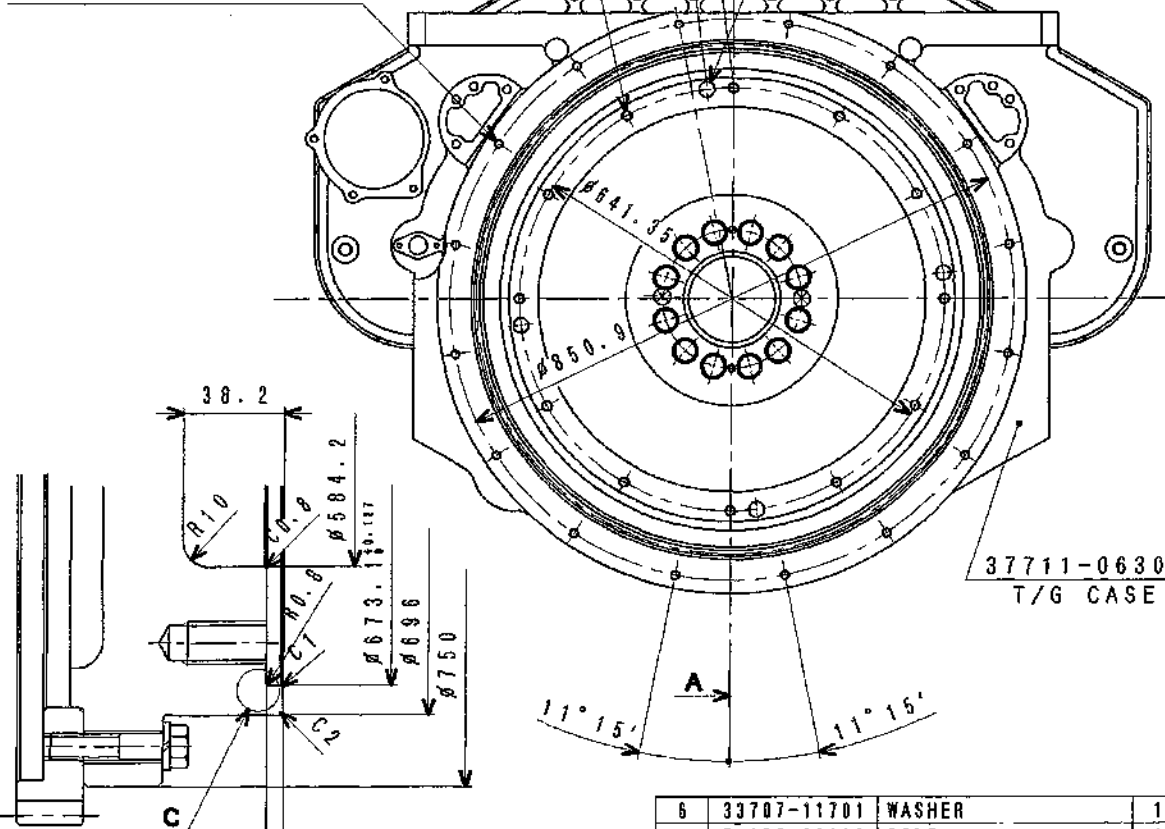
①新図 ②訂正 ③廃止 ④変更 ⑤追加 ⑥削除 ⑦修正 ⑧再入



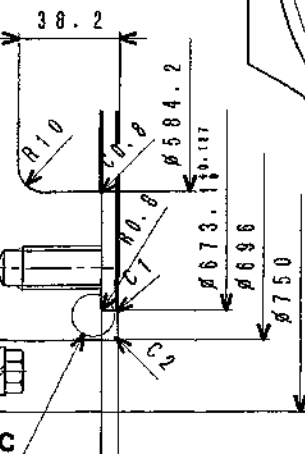
949.9 TO ϕ . ENGINE 106.5
 1050 TO ϕ . ENGINE 6.4
 1056.4 TO ϕ . ENGINE

SECTION A-A

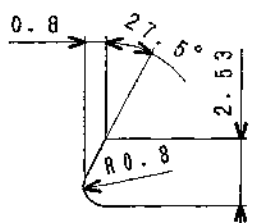
M16x1.5 TAPPED 12HOLES
 EQUALLY SPACED DEP. 30
 M14x1.5 TAPPED 16HOLES
 EQUALLY SPACED DEP. 24



37711-06303
 T/G CASE



DETAIL B



DETAIL C

No.	PARTS NO.	PARTS NAME	Q'TY
6	33707-11701	WASHER	12
5	F1035-22090	BOLT	12
4	33320-04701	PIN, DOWEL	2
3	F1805-10045	BOLT	12
2	37721-20201	GEAR, RING	1
1	37721-00601	FLYWHEEL	1

4	4590-D566	'87. 9. 4	青藤
3	4590-A708	'85. 3. 24	浅沼
2	4591-0260	'81. 9. 12	福田
1	4590-G643	'11. 3. 24	青藤
CHG	ED-ND	DATE	CNK
認可 APPD	橋	換図 CNK	竹 福 谷 田
		製図 DRN	谷 青 戸 藤
			1987. 9. 22

S12R
 FLYWHEEL & HOUSING
 三菱重工業株式会社 汎用機・特車事業本部
 MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINERY & SPECIAL PURPOSE HEADQUARTERS.
 図面番号 37796-21001
 DRAWING No.

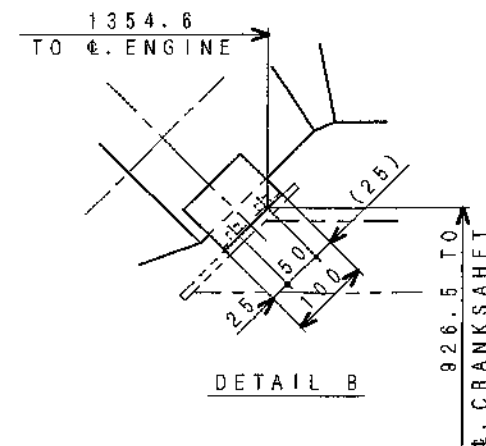
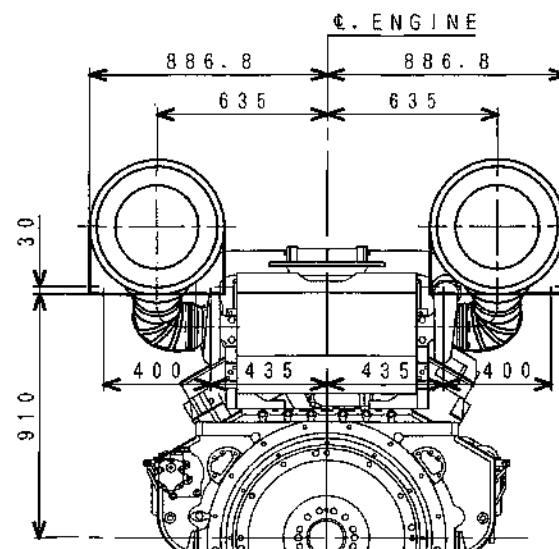
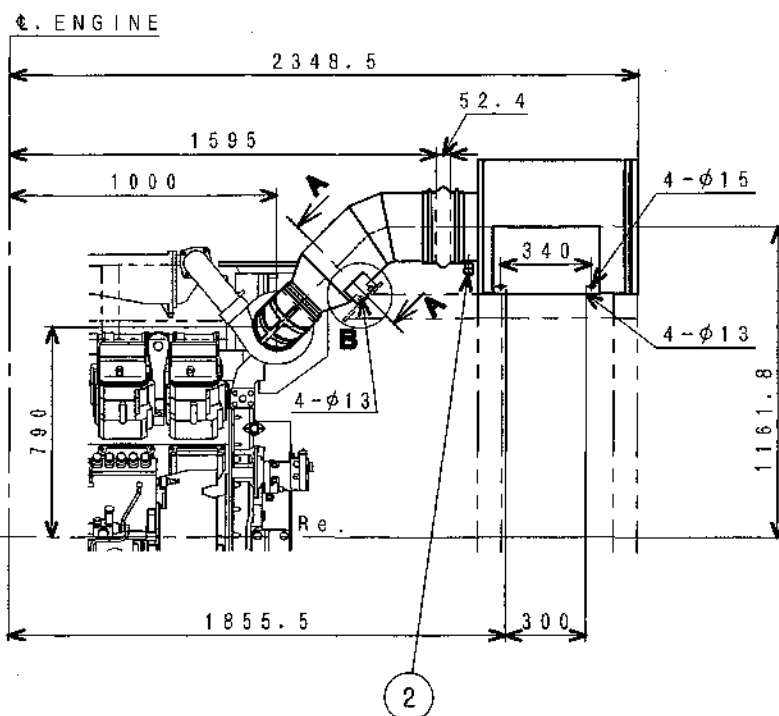
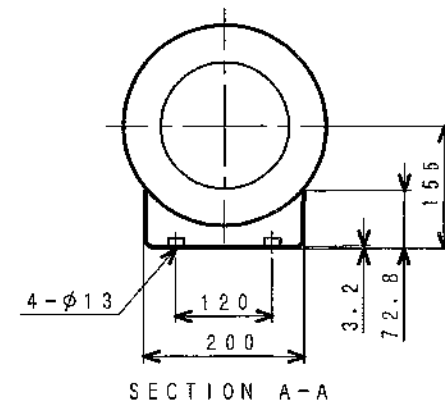
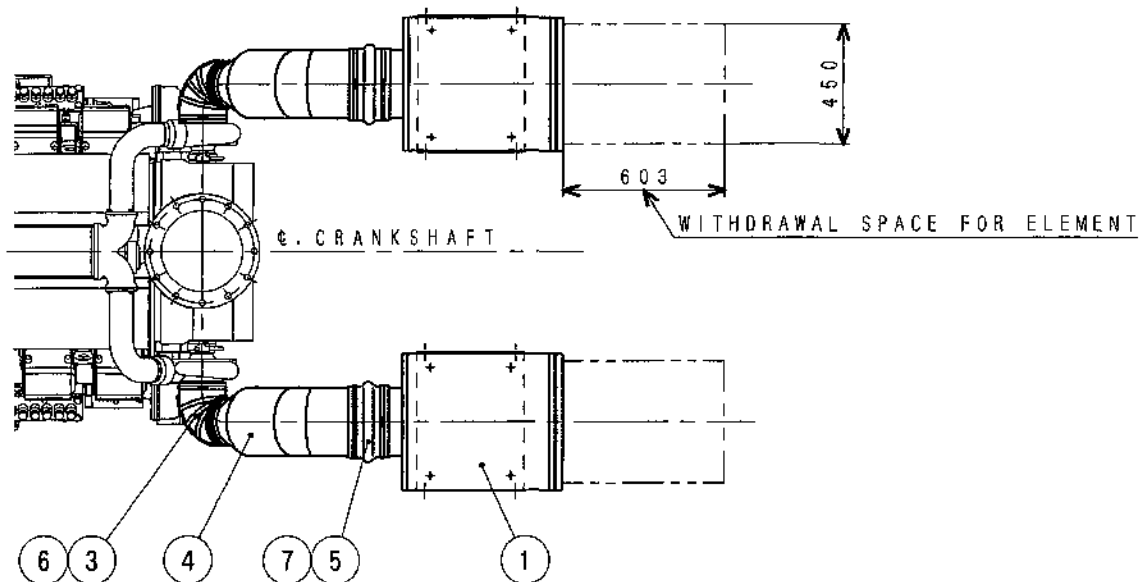
3 新 図 7/12/1 ① 組立図 2 諸設備部品 3 板金部品 4 組立品
 ② 旧引図 A 3 5 切削品 6 その他(購入品)

旧引
 汎特
 2011
 5. 23

FULL-CAD

NOT CONFIDENTIAL

注記 (2) 本図のフライホイールは、部番37721-00061 F/W ASSY. に含まれる。
 (1) 本図は、標準フライホイール&ハウジングであり、SAEJ620c21inフライホイール
 及びSAE617b NO. 00フライホイールハウジングに準拠する。



NOTE (1) THE ☆ MARKED PARTS ARE LOOSE SUPPLY.

☆ 7	05317-52801	CLAMP	4
☆ 6	05317-52001	CLAMP	4
☆ 5	47220-47300	HOSE, AIR	2
☆ 4	47510-77300	PIPE, AIR	2
☆ 3	47220-47600	PIPE, AIR	2
☆ 2	47220-34401	INDICATOR 835mmH ₂ O	2
☆ 1	47220-47703	CLEANER, AIR	2
No.		PARTS NO.	PARTS NAME Q'TY

注記 (1) 本図のエアクリーナは、ドナルドソン製 EGB-20 型である。

MHI CONFIDENTIAL

2	4590-H434	12.11.30	谷戸
1	4590-5135	99.9.20	福田
CRG	ED-NO	DATE	CHK
APPD	CHK	仁	福田
谷戸	谷戸	谷戸	谷戸
1999.11.13			

S12R

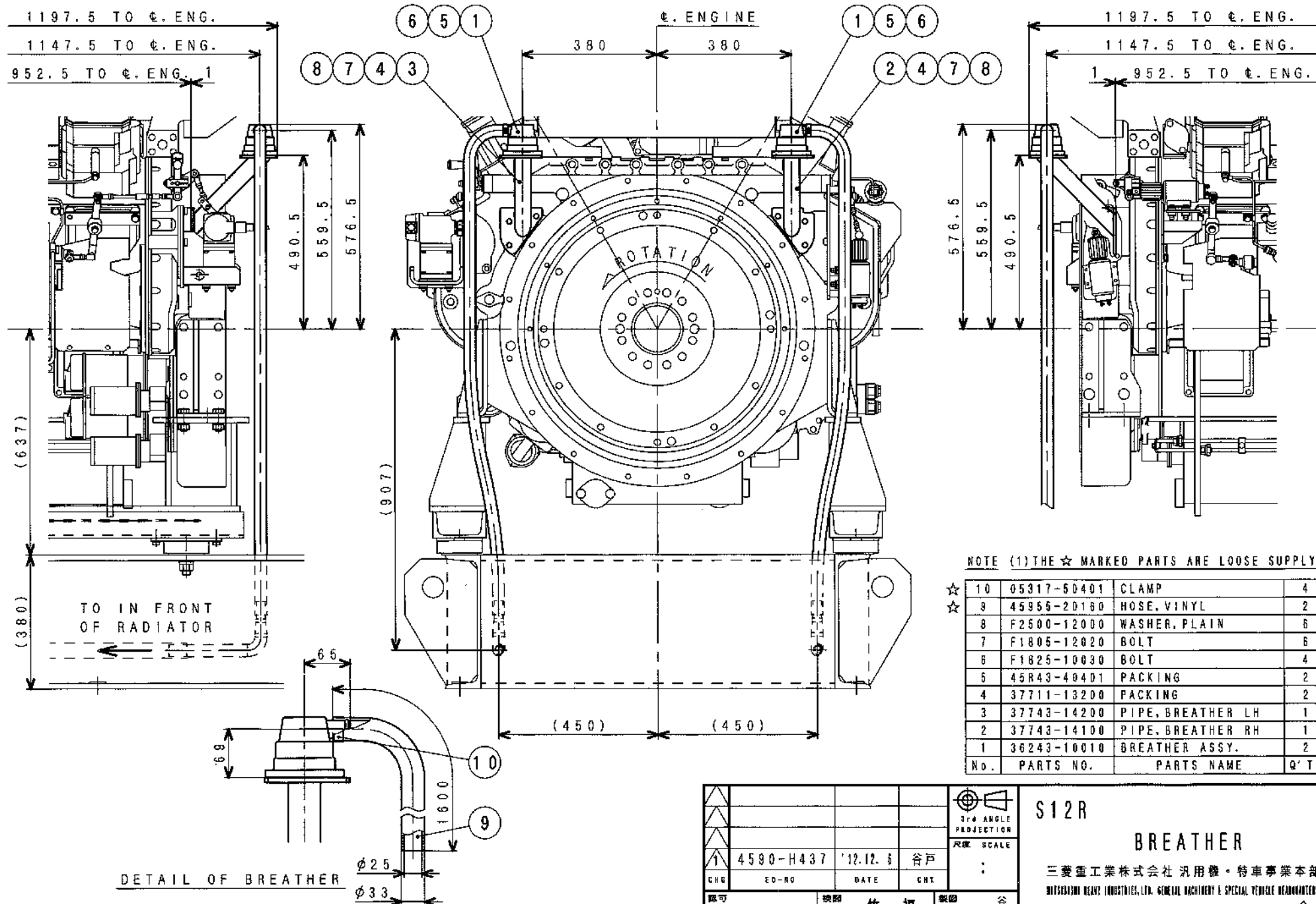
AIR CLEANER

三菱重工業株式会社 汎用機・特車事業本部
MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINERY & SPECIAL VEHICLE DEPARTMENTS.

図面番号 37796-30305
DRAWING No.

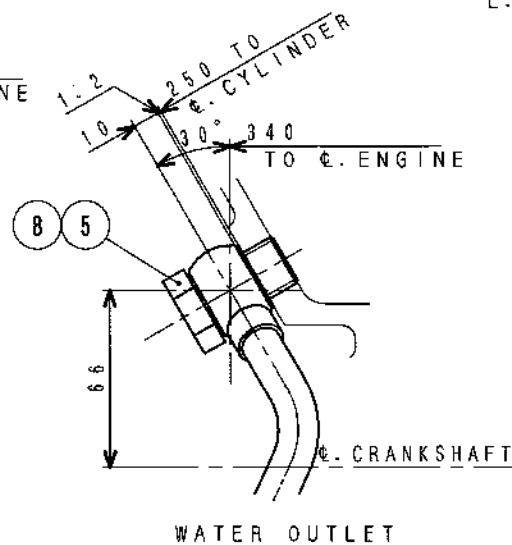
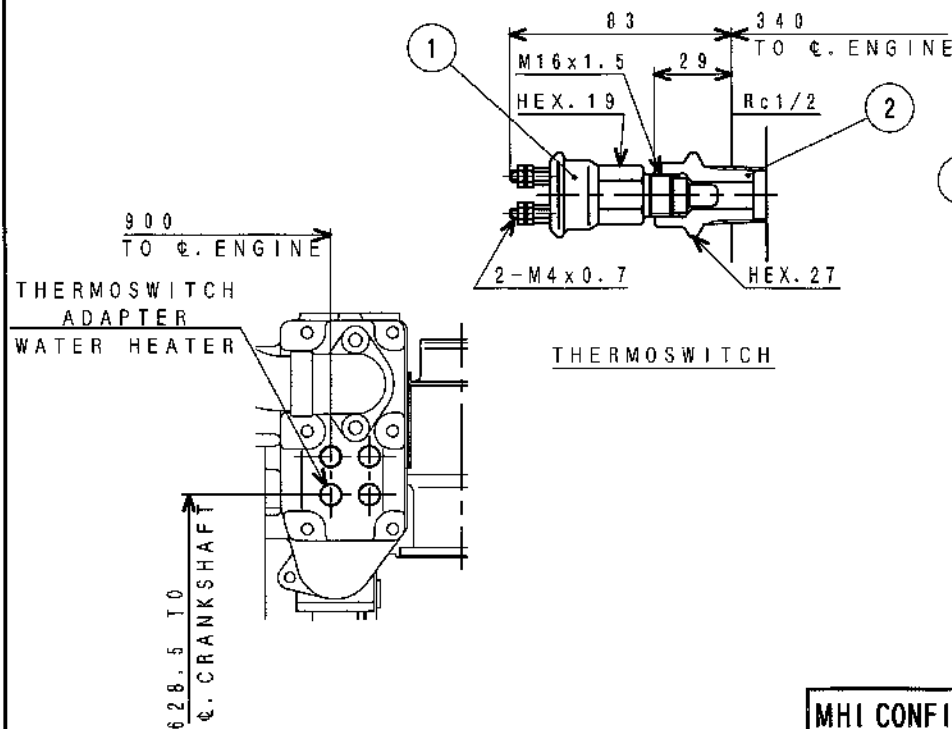
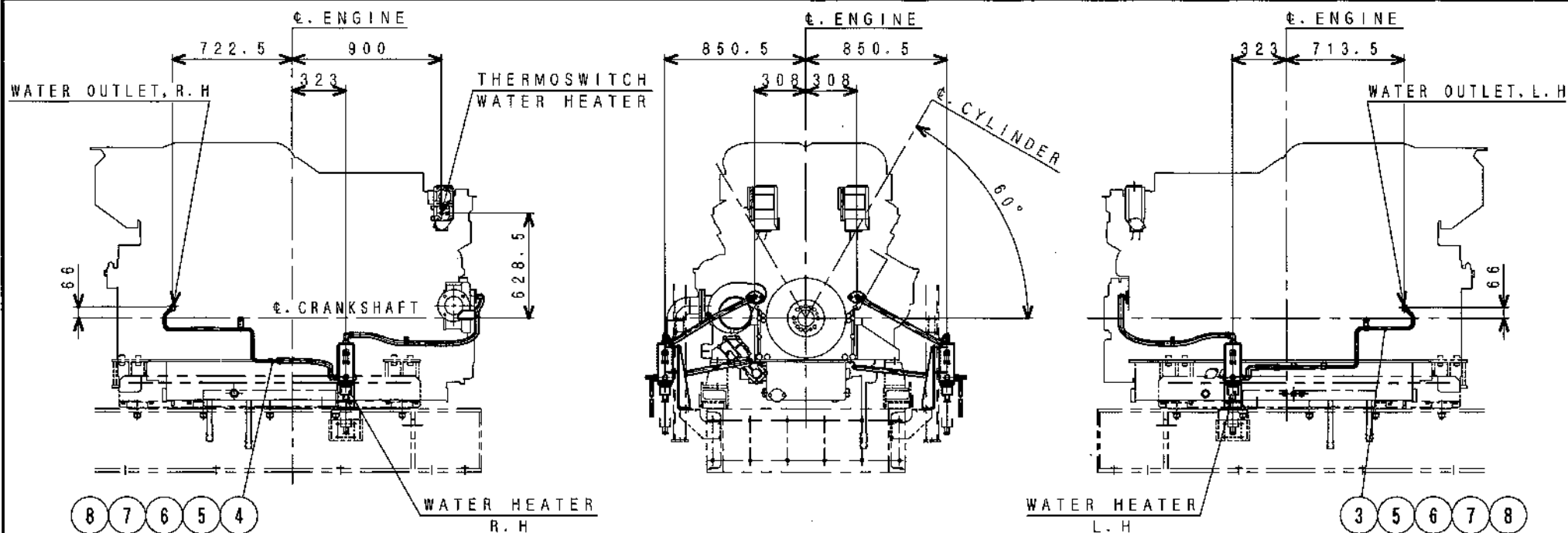
3 新図 9/13
① 旧図 4/3
① 組立図 1/5
2 部品図 3 部品図 4 部品図
5 部品図 6 その他(購入品)

M/C



注記 (1) プリーザホースは、ブローパイプをラジエータ前方に排出するよう配管接続する。

4590-H437		12.12.5	谷戸	3rd ANGLE PROJECTION
CHK	EO-NO	DATE	CHK	尺度 SCALE
認可 APPD	検閲 CHK	竹 福	谷 戸	1000, 6.22
S12R				BREATHER
三菱重工業株式会社 汎用機・特車事業本部				
MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINERY & SPECIAL VEHICLE DEPARTMENTS.				
図面番号 37796-43007				
DRAWING No.				
3 新 図	4 訂 正	5 組 立 図	6 部 品 図	7 組 立 品
8 組 立 品	9 組 立 品	10 組 立 品	11 組 立 品	12 組 立 品



8	F4610-20000	BOLT, EYE	2
7	F2515-12000	WASHER, SPRING	2
6	F1035-12060	BOLT	2
5	06946-02001	WASHER, SEALING	4
4	47510-61100	PIPE, WATER	1
3	47510-60800	PIPE, WATER	1
2	45600-42902	CONNECTOR	1
1	04442-30210	THERMOSWITCH 42COFF	1
No.	PARTS NO.	PARTS NAME	Q'TY

MHI CONFIDENTIAL

CHG	EO-NO	DATE	CHK
図可 APPD	検図 CHK	塚 本	谷 戸
2012.12.8			

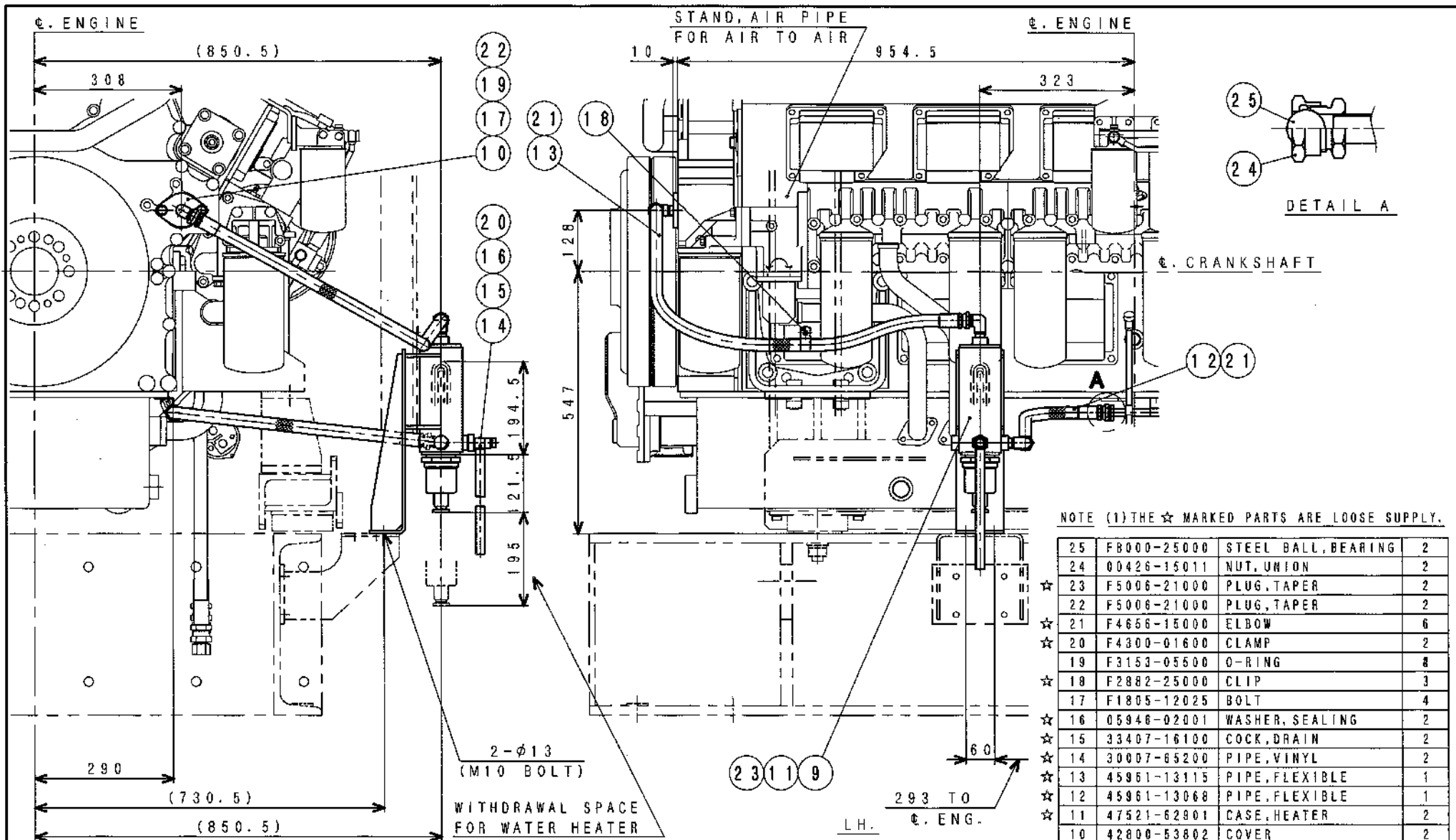
S12R

WATER HEATER PIPING

三菱重工業株式会社 汎用機・特車事業本部
MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINERY & SPECIAL VEHICLE DEPARTMENTS.

図番 No. 37796-46308 1/3

① 新 図 ② 訂 正 ③ 訂 正 ④ 訂 正 ⑤ 訂 正 ⑥ 訂 正 ⑦ 訂 正 ⑧ 訂 正 ⑨ 訂 正 ⑩ 訂 正



MHI CONFIDENTIAL

注記 (1) 本図の符合②, ②, ②は、W/H配管用言せんである。

CHG		EQ-NO	DATE	CHK	3RD ANGLE PROJECTION	
製可 APPD		検図 CHK		保 中 村	製図 谷 戸	
2012.12.6						

S12R

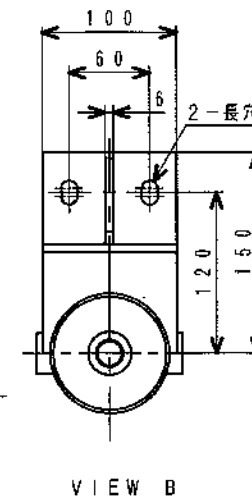
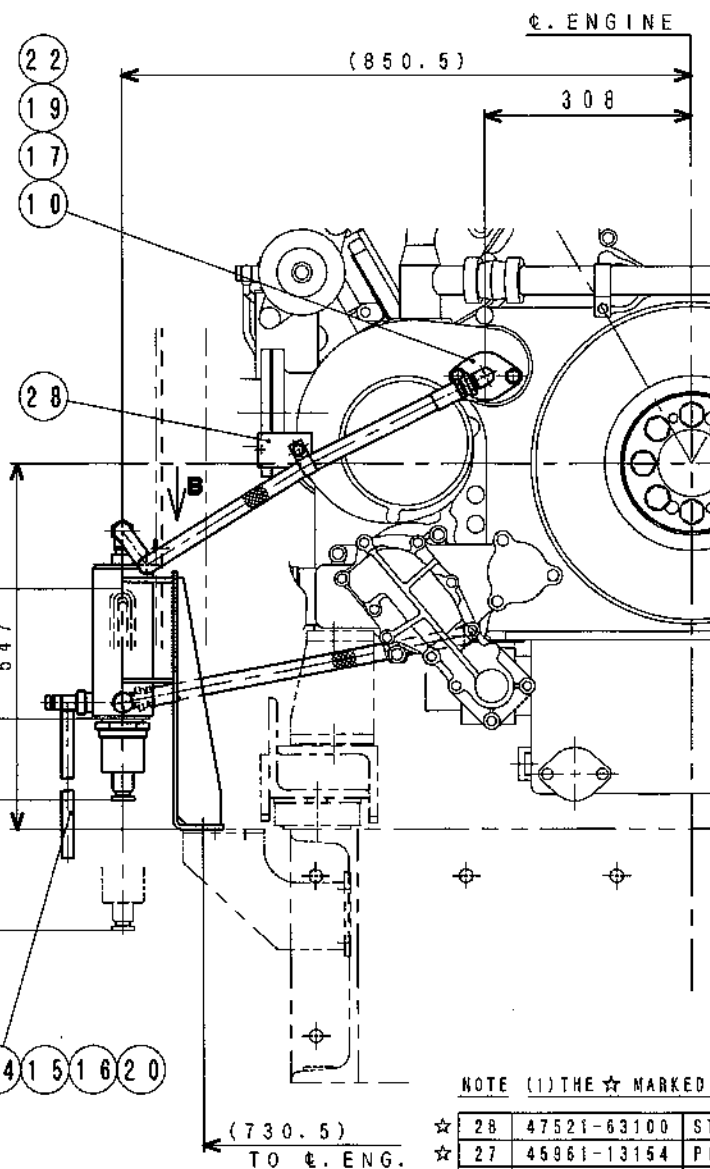
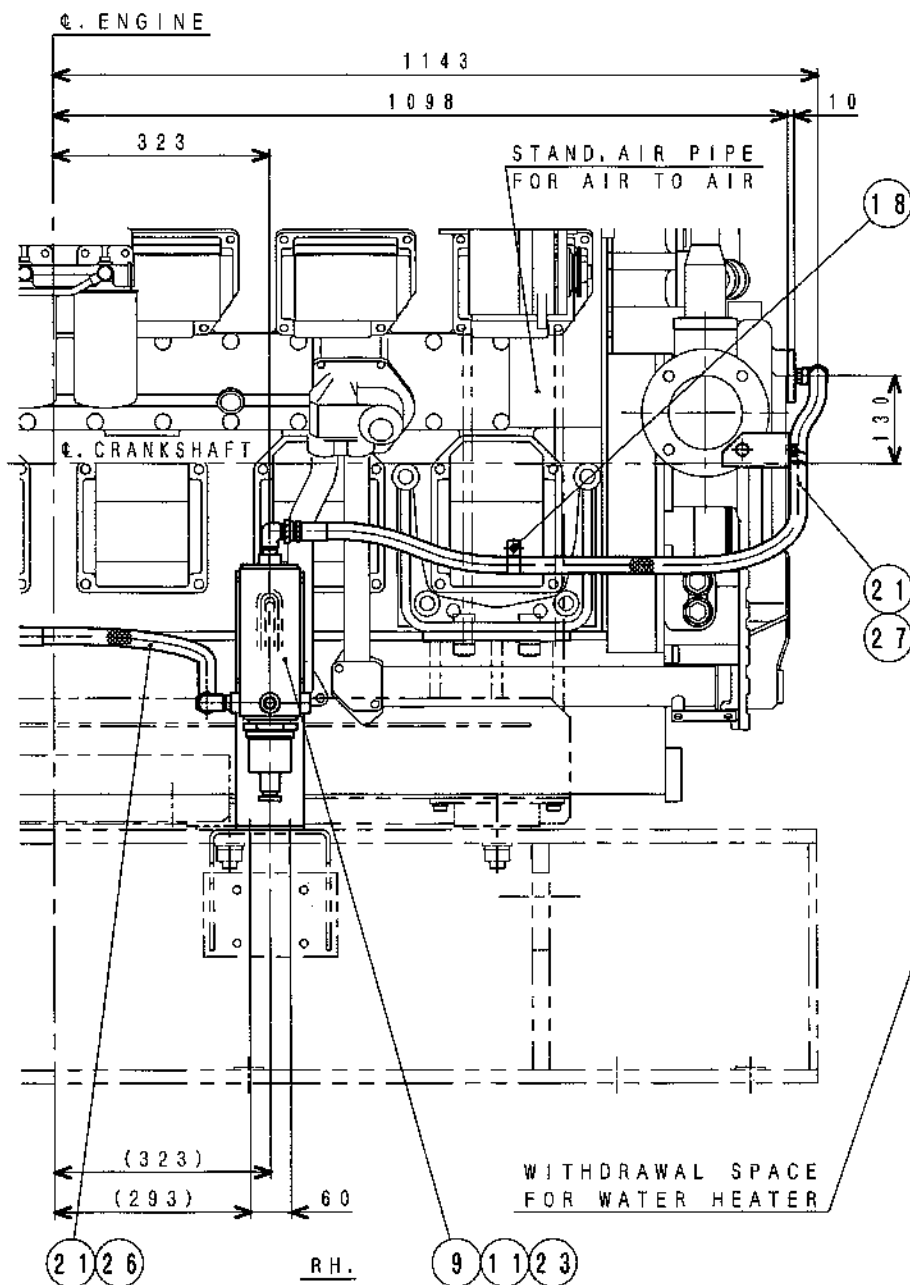
WATER HEATER PIPING

三菱重工業株式会社 汎用機・特車事業本部

MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINERY & SPECIAL VEHICLE DEPARTMENTS.

図面番号 37796-46308 2/3

① 新 図 ② 訂 正 ③ 組 立 図 ④ 検 査 図 ⑤ 発 行 図 ⑥ 他 用 図 ⑦ 他 用 図 ⑧ 他 用 図 ⑨ 他 用 図 ⑩ 他 用 図



NOTE (1) THE ☆ MARKED PARTS ARE LOOSE SUPPLY.

☆	28	47521-63100	STAY	1
☆	27	45961-13154	PIPE, FLEXIBLE	1
☆	28	45961-13074	PIPE, FLEXIBLE	1
No.	PARTS NO.		PARTS NAME	Q'TY

MHI CONFIDENTIAL

CHG	EQ-NO	DATE	CHK
図可 APPD	検図 CHK	塚 本 村	製図 DRW
2012.12.6		谷 戸	

S12R WATER HEATER PIPING

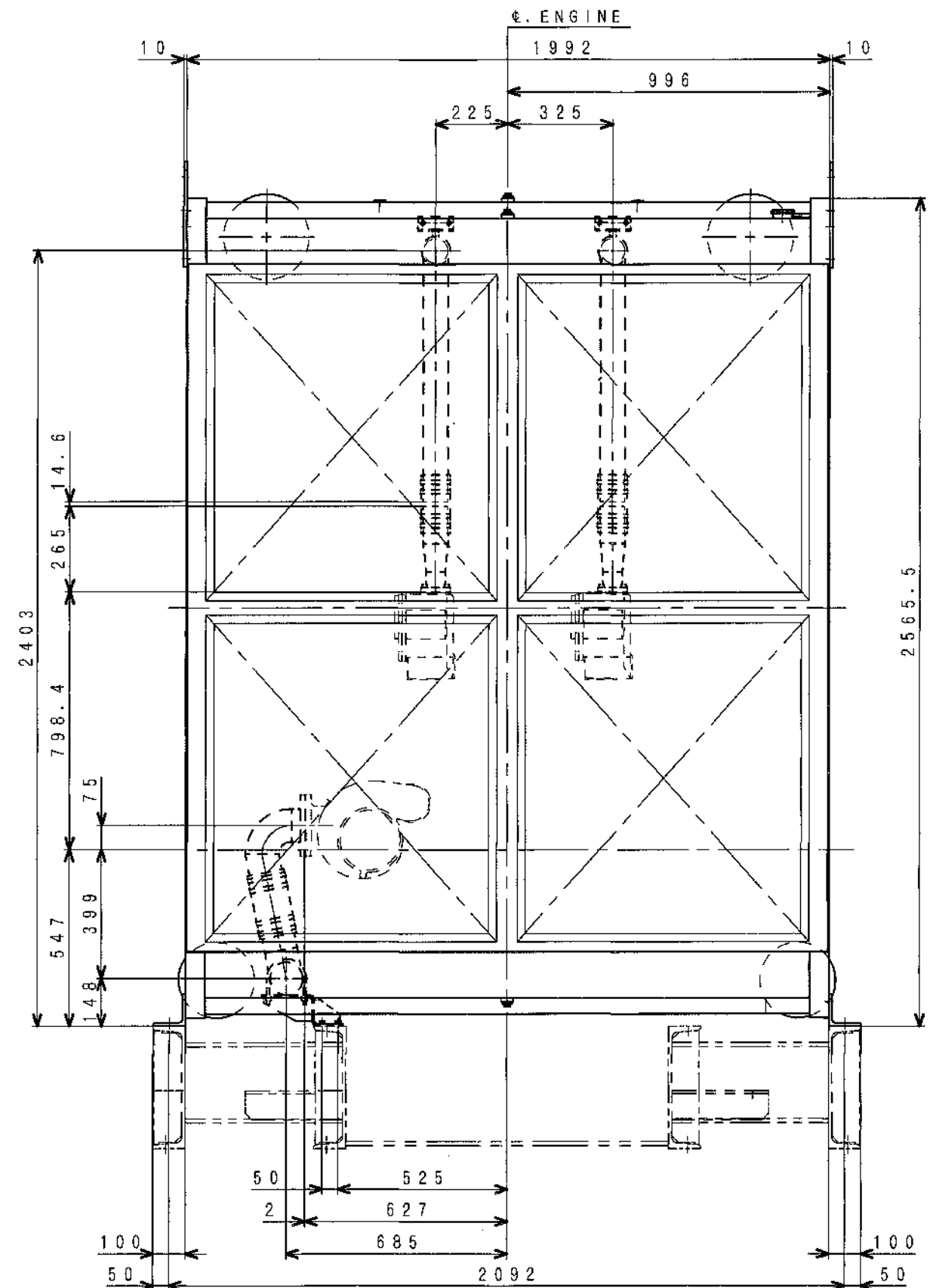
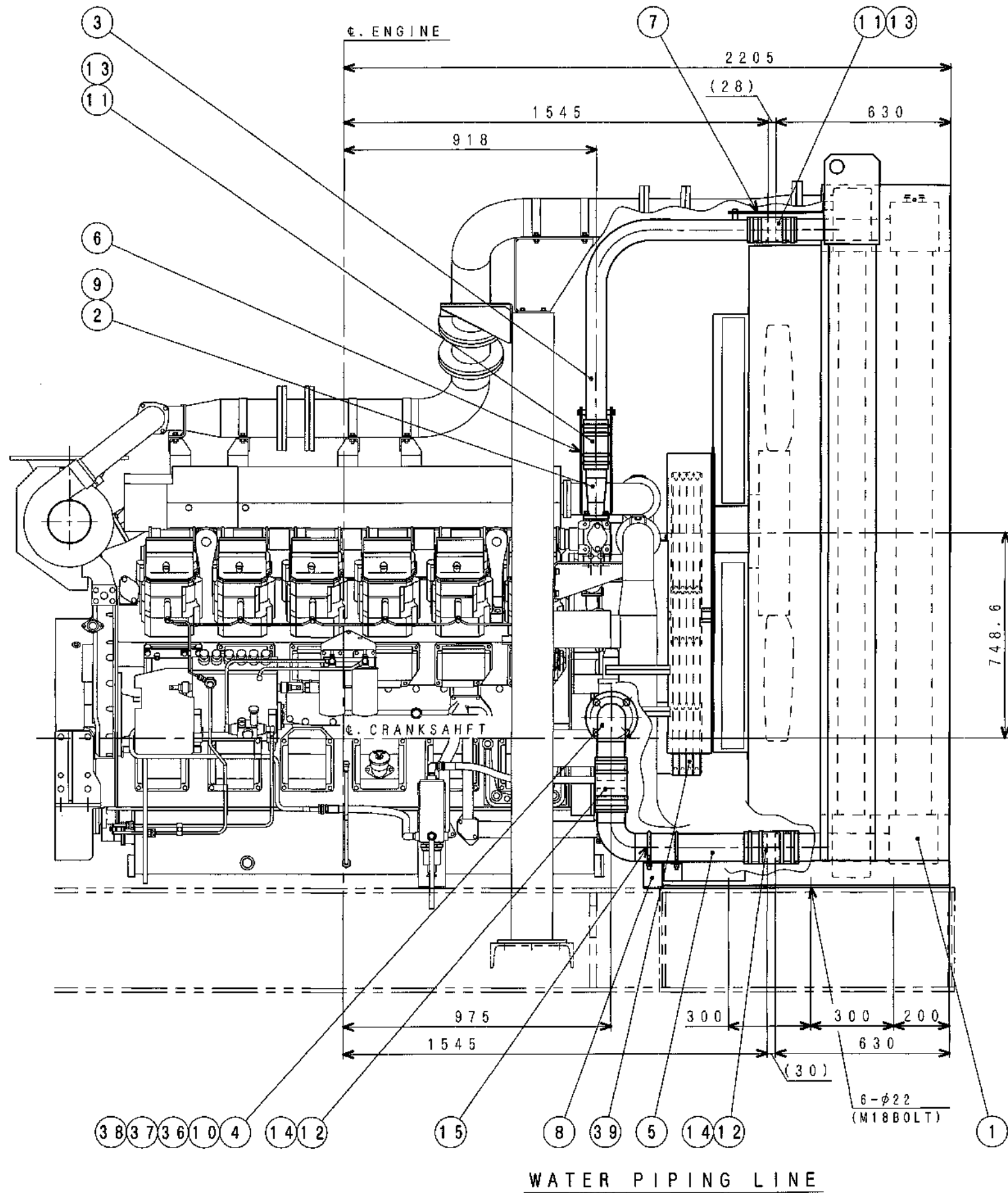
三菱重工業株式会社 汎用機・特車事業本部
MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINERY & SPECIAL VEHICLE DEPARTMENTS.

図番番号 37796-46308
DRAWING No. 37796-46308

3/3

① 新図 ② 旧図 ③ 2/2 ④ 3/3 ⑤ 組立図 ⑥ 部品の図 ⑦ 板金加工品 ⑧ 鋳造品 ⑨ 鍛造品 ⑩ その他 (購入品)

M/C



(2) 本図のRAD. I/C ASSY. 詳細図は、図番S33-4551を参照のこと。

注記 (1) 本図は、S12R-PTAA2/AIR TO AIR ENG. のRADIATOR & AIR COOLERパイピング図である。

MHI CONFIDENTIAL

CHG	EO-NR	DATE	CHK
図可 APPO	検図 CHK	取付 DRN	谷 戸
橋口	塚本	中村	谷戸
2012.12.6			

S12R-PTAA2 RADIATOR PIPING

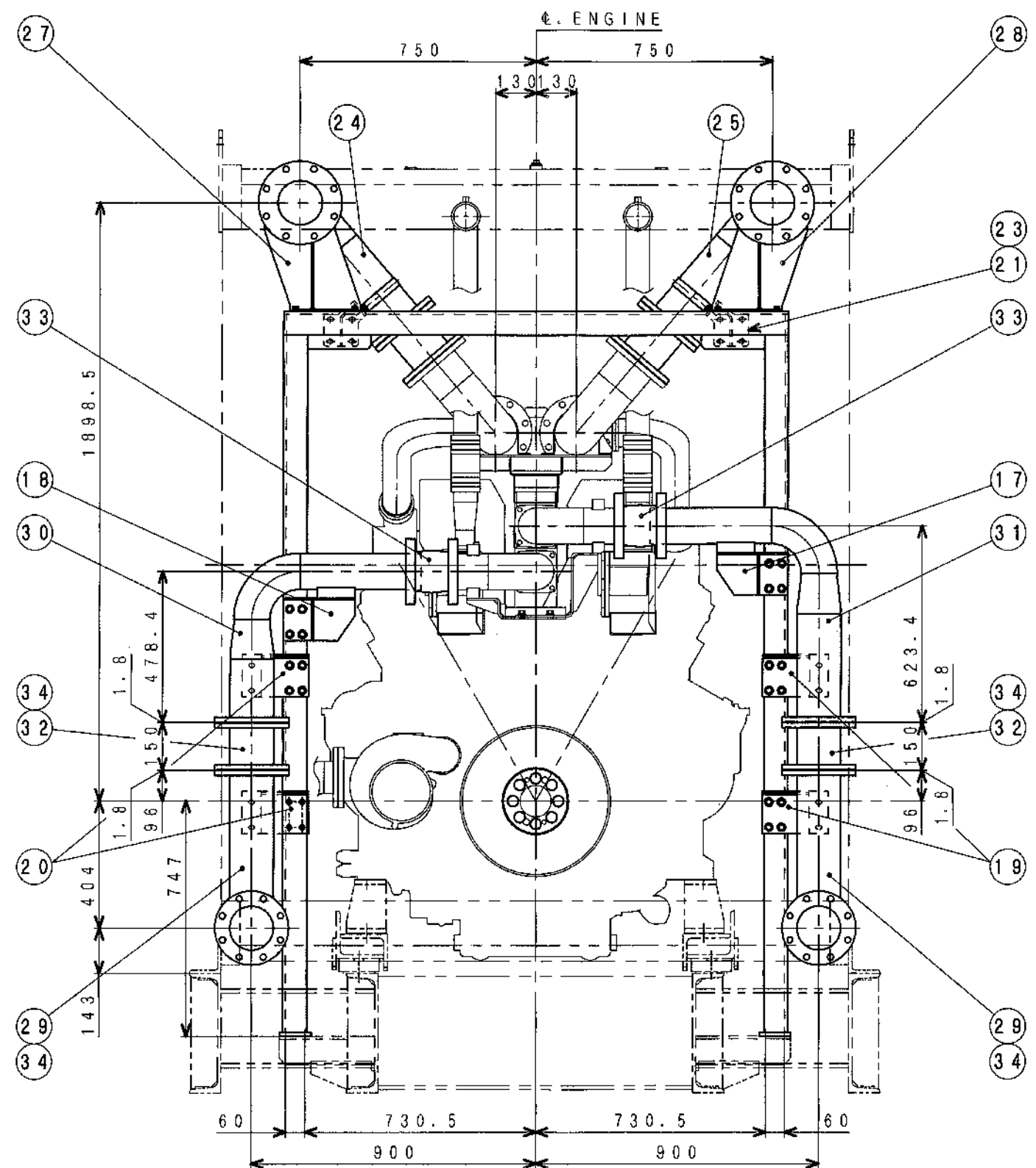
三菱重工業株式会社汎用機・特車事業本部
MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINERY & SPECIAL VEHICLE DEPARTMENTS.

図番 No. 37796-47005
DRAWING No.

1/3

① 新図 ② 訂正 ③ 組立図 ④ 部品図 ⑤ 材料表 ⑥ 部品表 ⑦ 部品図 ⑧ 部品表 ⑨ 部品図 ⑩ 部品表 ⑪ 部品図 ⑫ 部品表 ⑬ 部品図 ⑭ 部品表 ⑮ 部品図 ⑯ 部品表 ⑰ 部品図 ⑱ 部品表 ⑲ 部品図 ⑳ 部品表 ㉑ 部品図 ㉒ 部品表 ㉓ 部品図 ㉔ 部品表 ㉕ 部品図 ㉖ 部品表 ㉗ 部品図 ㉘ 部品表 ㉙ 部品図 ㉚ 部品表 ㉛ 部品図 ㉜ 部品表 ㉝ 部品図 ㉞ 部品表 ㉟ 部品図 ㊱ 部品表 ㊲ 部品図 ㊳ 部品表 ㊴ 部品図 ㊵ 部品表 ㊶ 部品図 ㊷ 部品表 ㊸ 部品図 ㊹ 部品表 ㊺ 部品図 ㊻ 部品表 ㊼ 部品図 ㊽ 部品表 ㊾ 部品図 ㊿ 部品表

AIR PIPING LINE



注 記 (4) 符号 ①⑥ は、図番 S 3 5 - 0 9 1 0 を参考にして製作のこと。

MHI CONFIDENTIAL

																																																																																																																																
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S12R-PTAA2
RADIATOR PIPING

三菱重工業株式会社 汎用機、特車事業本部
MITSUBISHI HEAVY INDUSTRIES, LTD. (GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS).

圖書編號 37796-47005
DRAWING No.

24

M / C

NOTE (1) THE ☆ MARKED PARTS ARE LOOSE SUPPLY.

☆	39	37748-18300	V-BELT	1
	38	F2515-16000	WASHER, SPRING	4
	37	F2500-16000	WASHER, PLANE	4
	36	F1035-16040	BOLT	4
☆	35	47941-33060	GASKET	2
☆	34	47941-33050	GASKET	14
☆	33	04826-40100	COUPLING	2
☆	32	37731-01700	JOINT, FLEX. 125A	6
☆	31	37731-10902	DUCT, AIR I/C-A	1
☆	30	37731-10802	DUCT, AIR I/C-A	1
☆	29	37731-02502	DUCT, AIR I/C-A	2
☆	28	37731-02101	STAY, AIR DUCT	1
☆	27	37731-01901	STAY, AIR DUCT	1
☆	26	37731-00702	DUCT, AIR I/C	2
☆	25	37731-00602	DUCT, AIR T/C-I/C	1
☆	24	37731-00502	DUCT, AIR T/C-I/C	1
☆	23	37731-02400	CLAMP, AIR DUCT	6
☆	22	47510-76220	STAY, AIR PIPE	1
☆	21	47510-76210	STAY, AIR PIPE	1
☆	20	47510-76420	STAY, AIR PIPE	2
☆	19	47510-76410	STAY, AIR PIPE	2
☆	18	47510-76340	STAY, AIR PIPE	1
☆	17	47510-76330	STAY, AIR PIPE	1
	16	47510-76601	STAND, AIR PIPE	1
☆	15	45790-60900	U-BOLT	2
☆	14	05317-82150	CLAMP	8
☆	13	05317-81000	CLAMP	16
☆	12	45960-19020	HOSE, RUBBER	2
☆	11	F4010-76018	HOSE, RUBBER	4
	10	04826-28090	GASKET	1
☆	9	F3153-07500	O-RING	2
☆	8	47523-61700	STAY, PIPE	1
☆	7	47523-60500	STAY, PIPE	2
☆	6	47520-68700	STAY, PIPE	4
☆	5	47511-60300	PIPE, WATER	1
	4	47511-60200	PIPE, WATER	1
☆	3	47511-60400	PIPE, WATER	2
☆	2	47510-61601	PIPE, WATER	2
☆	1	37747-11100	RADIATOR I/C ASSY.	1
	No.	PARTS NO.	PARTS NAME	Q'TY

MHI CONFIDENTIAL

 3rd ANGLE PROJECTION 尺度 SCALE :	CHG	EQ-NO	DATE	CHK
	認可 APPO	検図 CHK	塚 本	中 村
	谷 戸		2012.12.6	

S12R-PTAA2

RADIATOR PIPING

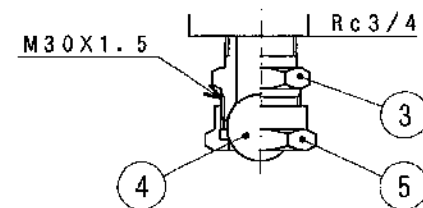
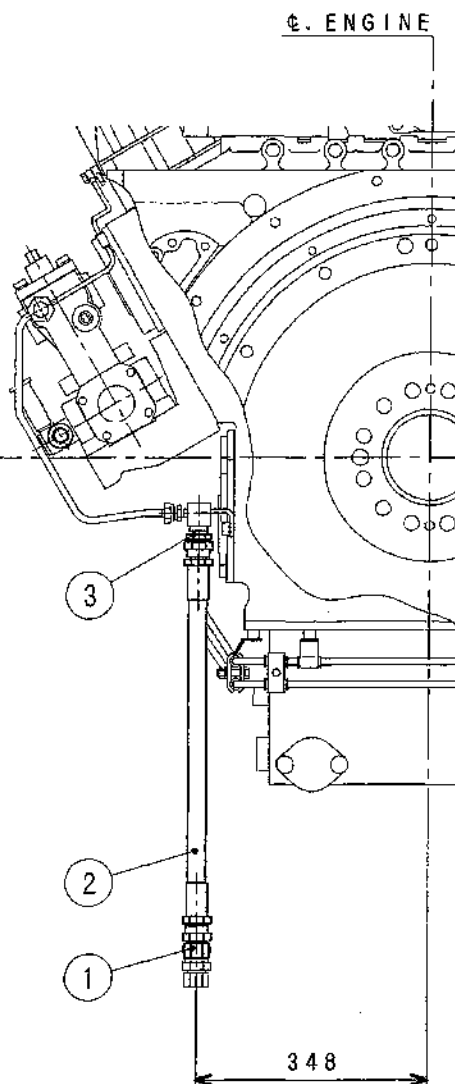
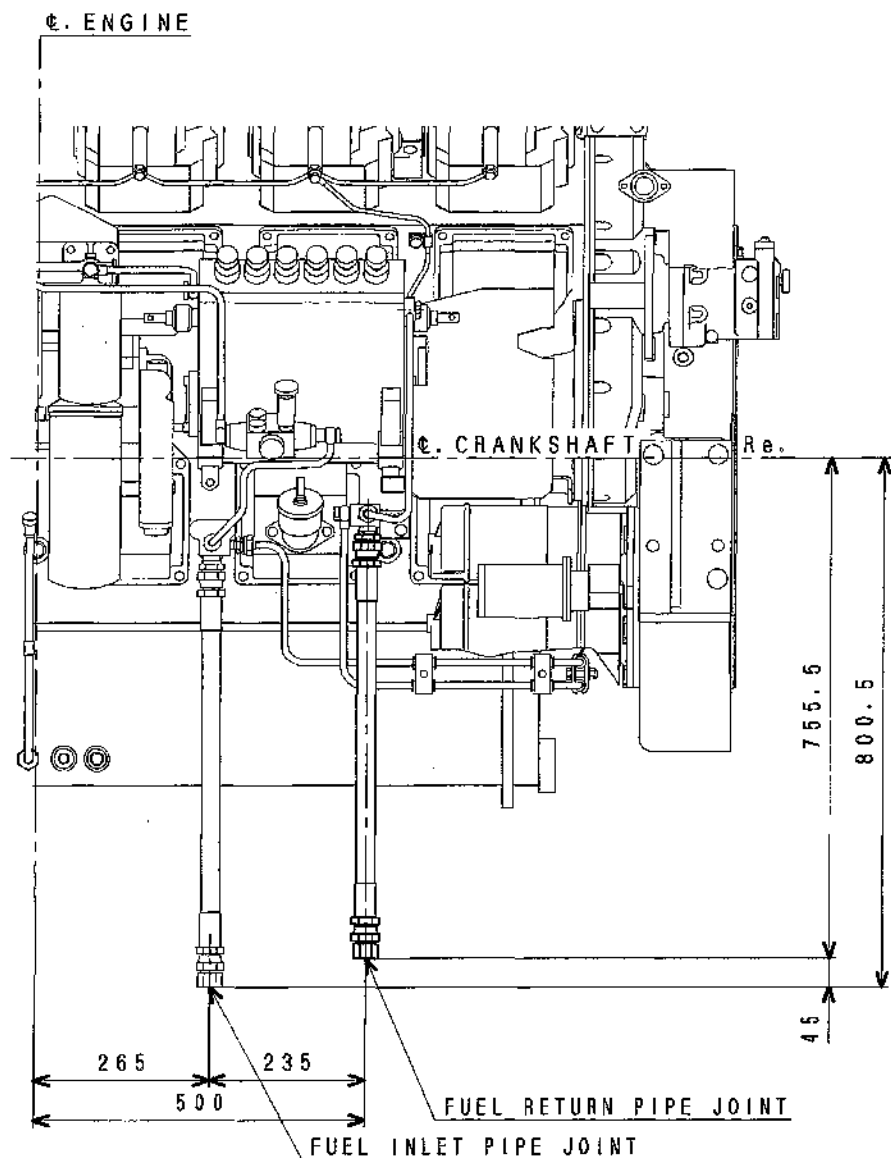
三菱重工業株式会社 汎用機・特車事業本部
MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINERY & SPECIAL VEHICLE DEPARTMENTS.

図面番号
DRAWING No. 37796-47005

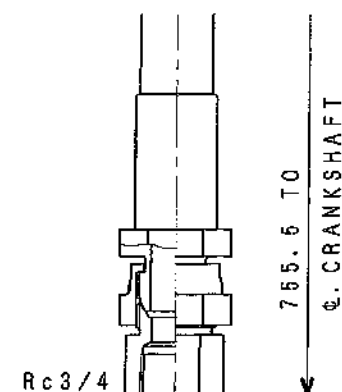
3/3

① 新図 ② 訂正 ③ 竣工図 ④ 廃止図 ⑤ 参考品 ⑥ 部品 ⑦ 材料 ⑧ 工具 ⑨ 消耗品 ⑩ 其他 (輸入品)

M/C



FUEL RETURN PIPE JOINT



FUEL RETURN PIPE JOINT

NOTE (1) THE ☆ MARKED PARTS ARE LOOSE SUPPLY.

5	F4521-20000	NUT, UNION	1
4	F8000-32000	STEEL BALL BEARING	1
3	F4540-20000	CONNECTOR	1
☆ 2	45950-51700	PIPE FLEXIBLE	1
☆ 1	45950-11300	CONNECTOR	1
NO.	PARTS NO.	PARTS NAME	Q'TY

CHG	ED-NO	DATE	CHK
認可 APPD	橋	三 上 戸	製 図 人 浅 沼
2008.12.9			

S12R

FUEL RETURN PIPING

三菱重工業株式会社 汎用機・特車事業本部
MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS.

図面番号 37796-61312
DRAWING No.

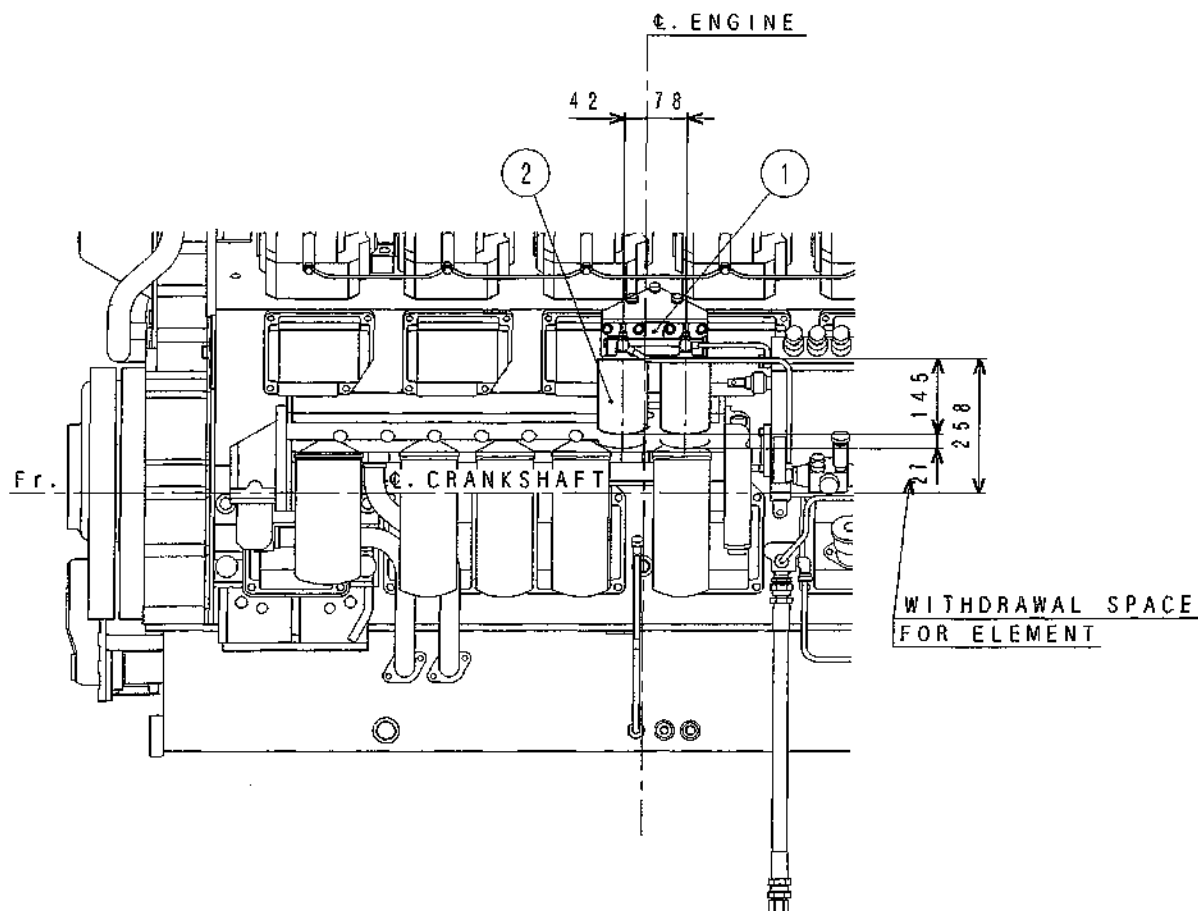
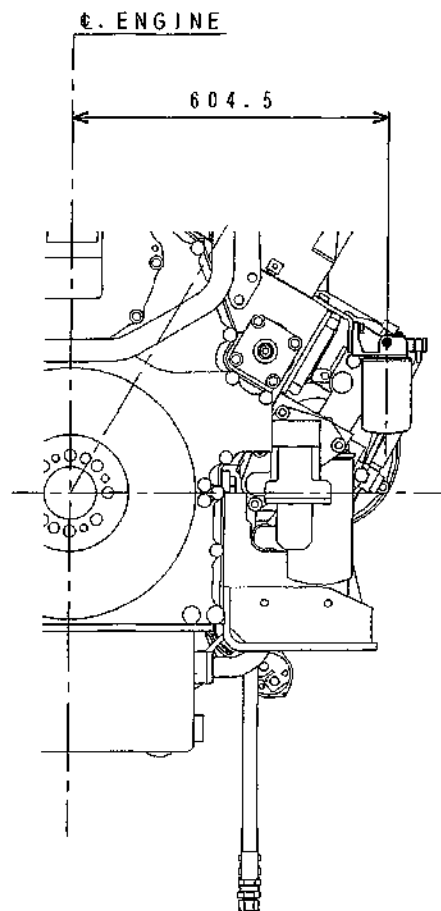
③ 新 図 ④ 1/2 ① 組立図 ② 鋼線鋼製品 ③ 鋼金鋼製品 ④ 鋼立品
⑤ 旧 図 ⑥ A 3 ⑦ 組立品 ⑧ 鋼線鋼製品 ⑨ 鋼金鋼製品 ⑩ 鋼立品

(2) 本図の符号 ④⑤ は、燃料戻り口盲栓である。(エンジン出荷状態)

注記 (1) 本図は、図番37796-61305に対しフレキホース及び先端コネクタを別添品としたものである。

出図
汎特
2008
12.10

FULL-CAD



NOT FOR REPRODUCTION

2	32562-60300	ELEMENT	(4)
1	37562-60100	F/F ASSY. CTR L.O	2
No.	PARTS NO.	PARTS NAME	Q'TY

4590-6300	00. 4.12	管田
CHG	EO-NO	DATE
認可 APPD	清 園	検図 CHK
	竹 谷	福 田
	谷 戸	島 田
	1998. 2. 2	

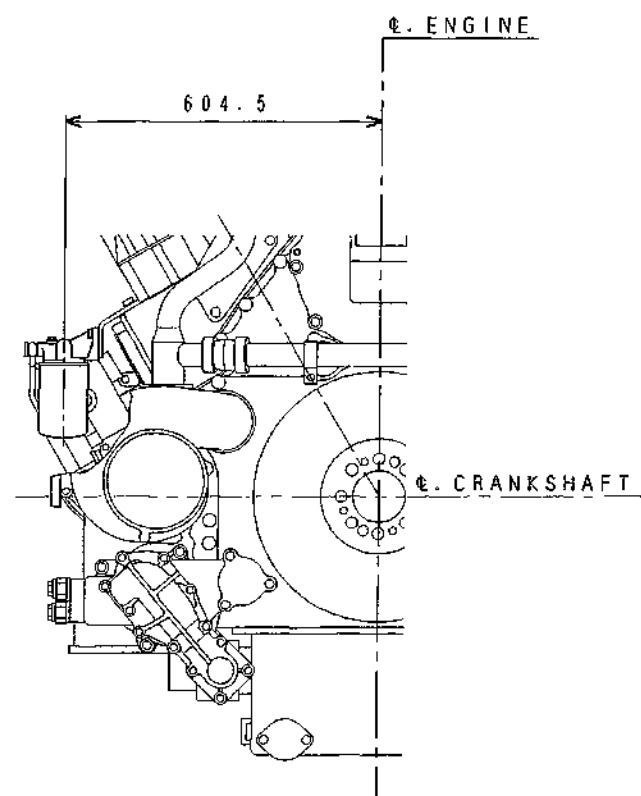
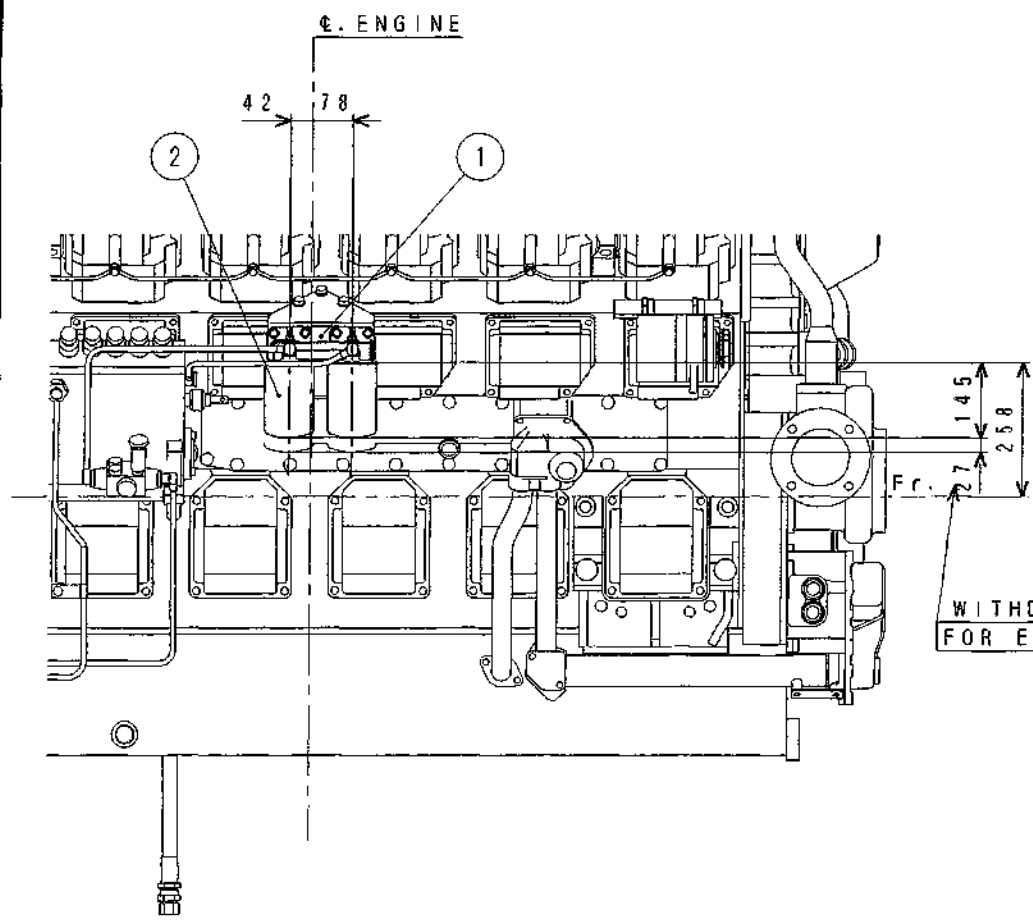
S12R
FUEL FILTER PIPING
三菱重工業株式会社相模原製作所
SAGAMIHARA MACHINERY WORKS, MITSUBISHI HEAVY INDUSTRIES, LTD.
図面番号
DRAWING No. 37796-62002 1/2

注記 (1) 本図のF. Oエレメントは、軽油用である。

旧引
汎特
2000
4.28

FULL-CAD

3 折 図 912
④ 旧引図 A 3 ① 組立図 1 5 切替品 2 勝越由幸品 3 板金溶接品 4 組立品 6 その他(購入品)



Copyright © 1988 by Saginara Machinery Works, Nishinomiya Heavy Industries, Ltd.

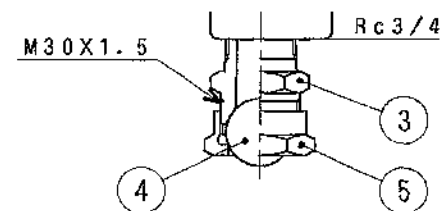
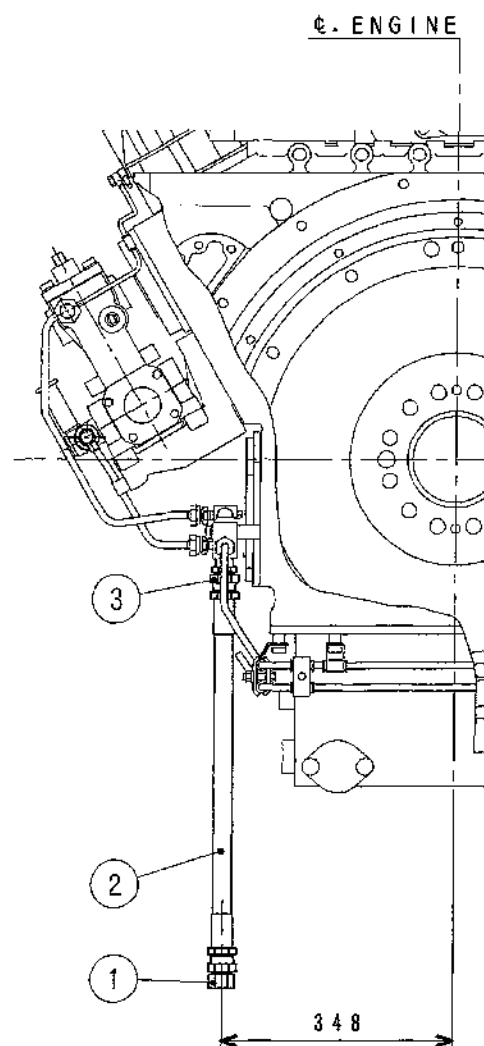
CHG	EG-NO	DATE	CHK
4590-6300	00. 4. 12	菅田	
認可 APPD	清 国	換 CHZ	竹 谷
		福 田	製 國
		谷	谷
		島	島
		1988. 2. 2	

S12R
 FUEL FILTER PIPING
 三菱重工業株式会社相模原製作所
 SAGINARA MACHINERY WORKS, NISHINOMIYA HEAVY INDUSTRIES, LTD.
 図面番号 37796-62002
 DRAWING NO. 2/2

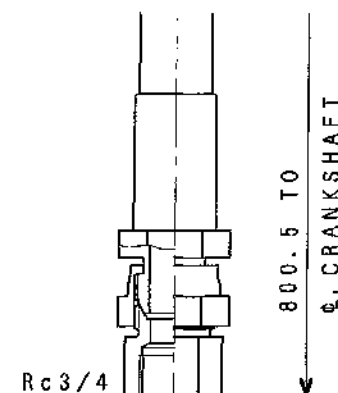
3 新 図 7/11
 ① 旧 図 A 3 ② 組 立 図 1 5 2 銅 鋳 造 車 品 3 板 金 溶 接 品 4 組 立 品
 5 初 期 品 6 その他 (購 入 品)

旧引
 汎特
 2000
 4. 28

FULL-CAD



DETAIL OF INLET PIPE JOINT

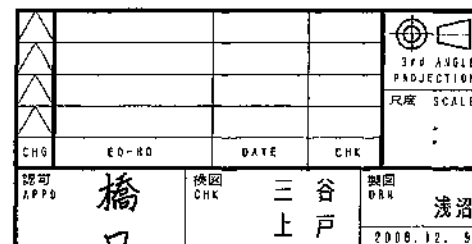


DETAIL OF INLET PIPE JOINT

NOTE (1) THE ☆ MARKED PARTS ARE LOOSE SUPPLY.

5	F4521-20000	NUT, UNION	1
4	F8000-32000	STEEL BALL, BEARING	1
3	F4540-20000	CONNECTOR	1
2	45950-51700	PIPE, FLEXIBLE	1
1	45950-11300	CONNECTOR	1
NO.	PARTS NO.	PARTS NAME	Q'TY

☆
☆



S 12 R

FUEL INLET PIPING

三菱重工業株式会社 汎用機・特車事業本部
MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINE & SPECIAL VEHICLE DEPARTMENTS.

圖紙號
DRAWING No. 37796-62112

③新図	サイズ	①粗立図	2 鋳造標準品	3 板金接合品	4 積立品
4 旧図	A 3		5 初製品	6 その他(輸入品)	

出图

汎特
 2008
 12.10

FULL-CAD

4. ENGINE

C. CRANKSHAFT

Re .

800.5

265

4. ENGINE

3

2

①

348

800.5 TO
Q. CRANKSHAFT

R c 3 / 4

DETAIL OF INLET PIPE JOINT

NOTE (1) THE ☆ MARKED PARTS ARE LOOSE SUPPLY.

5	F4521-20000	NUT, UNION	1
4	F8000-32000	STEEL BALL, BEARING	1
3	F4540-20000	CONNECTOR	1
2	45950-51700	PIPE, FLEXIBLE	1
1	45950-11300	CONNECTOR	1
NO.	PARTS NO.	PARTS NAME	Q'TY

☆
☆

S 12 R

FUEL INLET PIPING

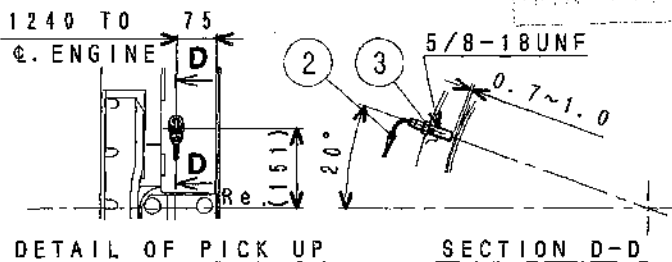
三菱重工業株式会社 汎用機・特車事業本部
MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINE & SPECIAL VEHICLE DEPARTMENTS.

图章号
DRAWING No. 37796-62112

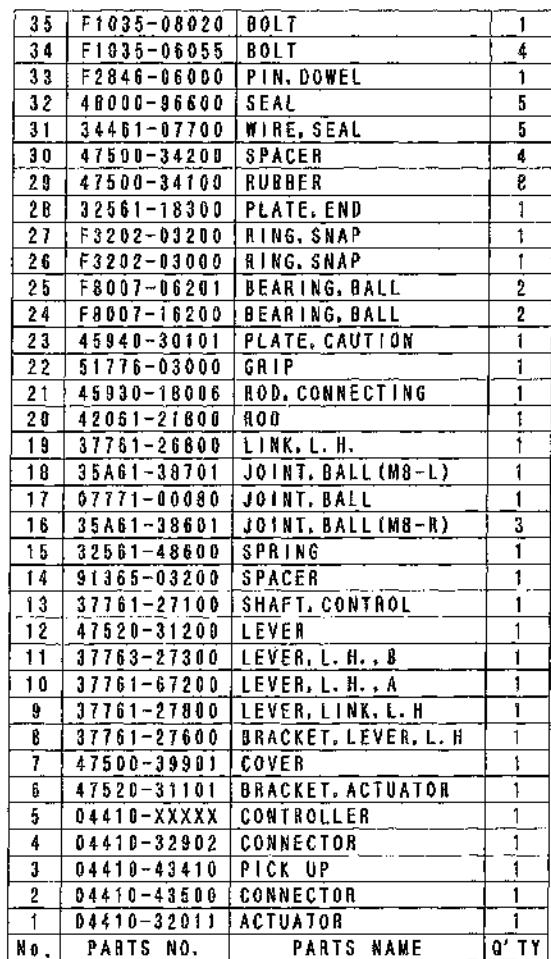
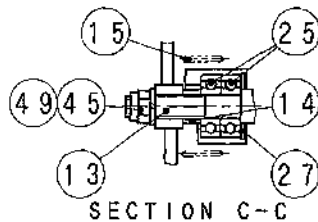
③新図	サイズ	①粗立図	2 鋳造標準品	3 板金接合品	4 積立品
4 旧図	A 3		5 初製品	6 その他 (輸入品)	

(2) 本図の符号 ④⑤ は、燃料入口盲栓である。(エンジン出荷状態)

注記 (1) 本図は、図番37796-62101に対しフレキホース及び先端コネクタを別送品としたものである。



50	F2515-12000	WASHER, SPRING	6
49	F2515-10000	WASHER, SPRING	2
48	F2515-08000	WASHER, SPRING	9
47	F2515-06000	WASHER, SPRING	4
46	08302-06000	WASHER	4
45	F2445-10000	NUT, SELF LOCKING	1
44	F2300-08000	NUT	6
43	F2300-06000	NUT	6
42	09413-08000	NUT, LOCK	2
41	33063-11400	NUT	3
40	F1035-12065	BOLT	2
39	F1035-12035	BOLT	3
38	F1035-12025	BOLT	1
37	F1035-10040	BOLT	1
36	F1115-08025	BOLT	2
No.	PARTS NO.	PARTS NAME	QTY



旧引
汎特
2008
12.8

FULL-CAD

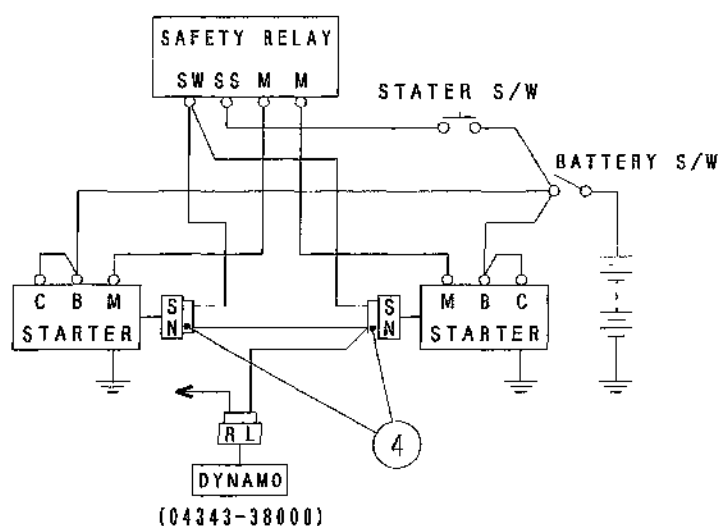
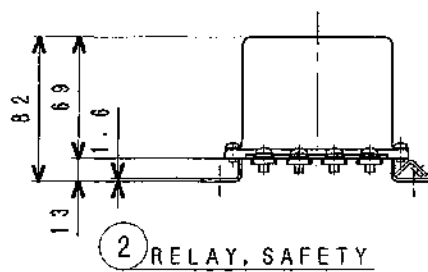
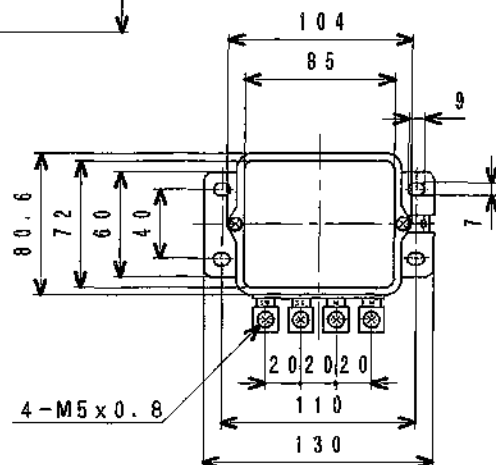
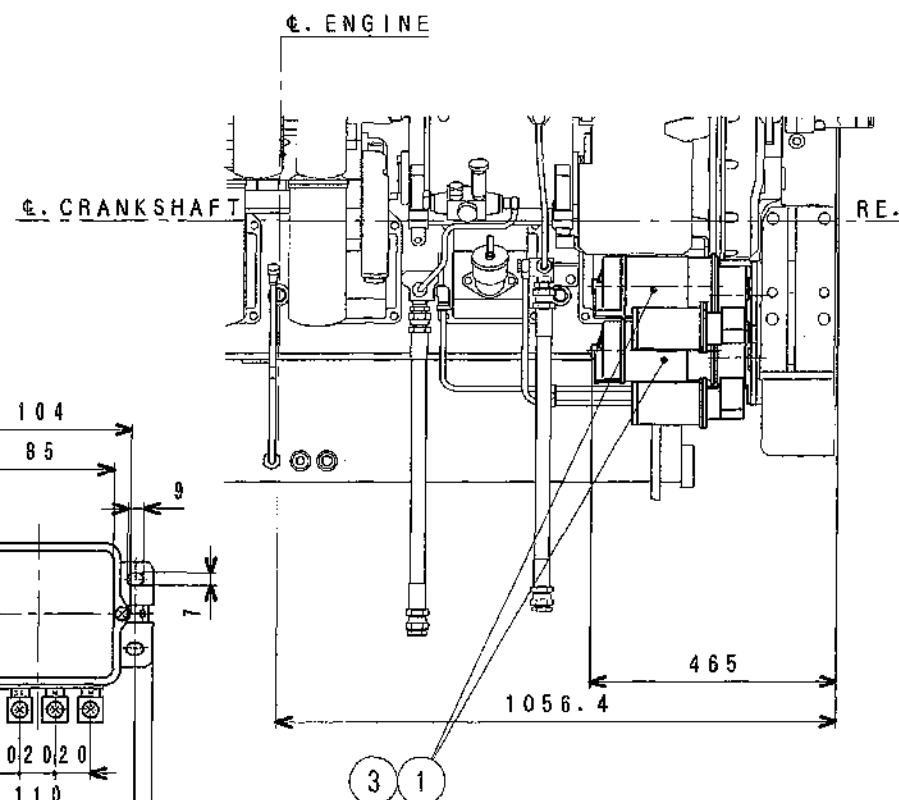
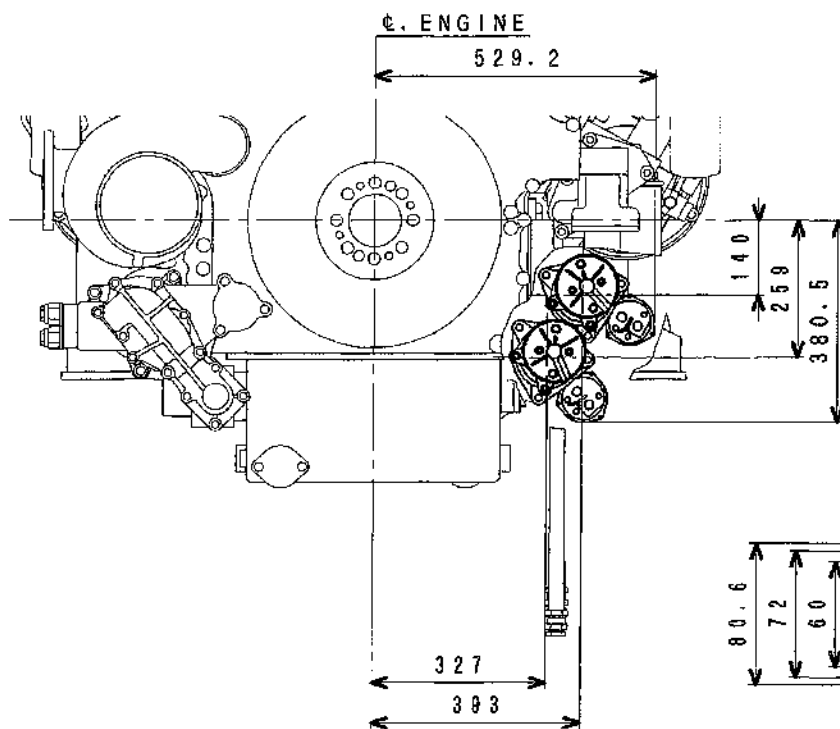
S 1 2 R

GOVERNOR

三菱重工業株式会社汎用機・特車事業本部
MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS.

37796-63005

3 新 図	カイス	2 鋼板鋼管品	3 鍍金接品	4 組立品
④ 旧引図	カ 3	① 組立図	5 切削品	6 その他（購入品）



NOTE (1) THE ☆ MARKED PARTS ARE LOOSE SUPPLY.

☆	4	F8665-02100	CONNECTOR	2
	3	F1805-12035	BOLT	6
☆	2	04322-40100	SAFETY RELAY	1
	1	37766-20201	STARTER 7.5kW	2
No.	PARTS NO.		PARTS NAME	Q'TY

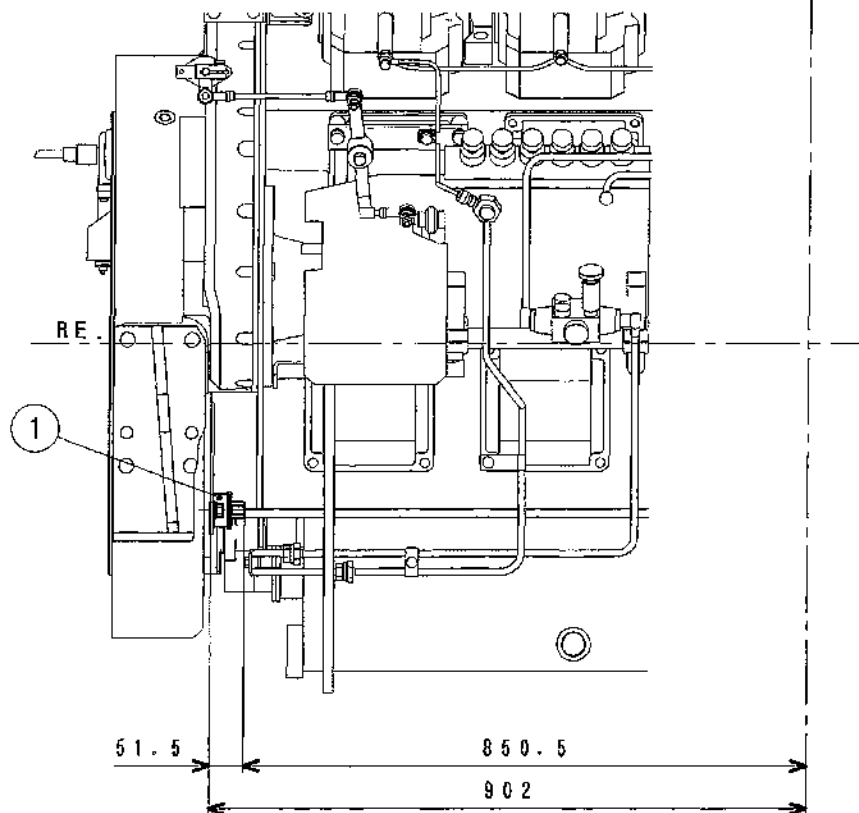
△	4590-6647	'11. 3.24	斉藤	3rd ANGLE PROJECTION
△	4590-6940	'00. 8.28	福田	尺度 SCALE
△	4590-5023	'99. 3. 9	谷戸	;
CHG	EO-NO	DATE	CHK	
認可 APPD	橋口	検図 CHK	竹谷	製図 DRW
			福田	谷戸
				1998. 3. 9

S12R
STARTING MOTOR
 三菱重工業株式会社 汎用機・特車事業本部
 MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINERY & SPECIAL VEHICLE DEPARTMENTS.
 図面番号 37796-66001
 DRAWING NO.

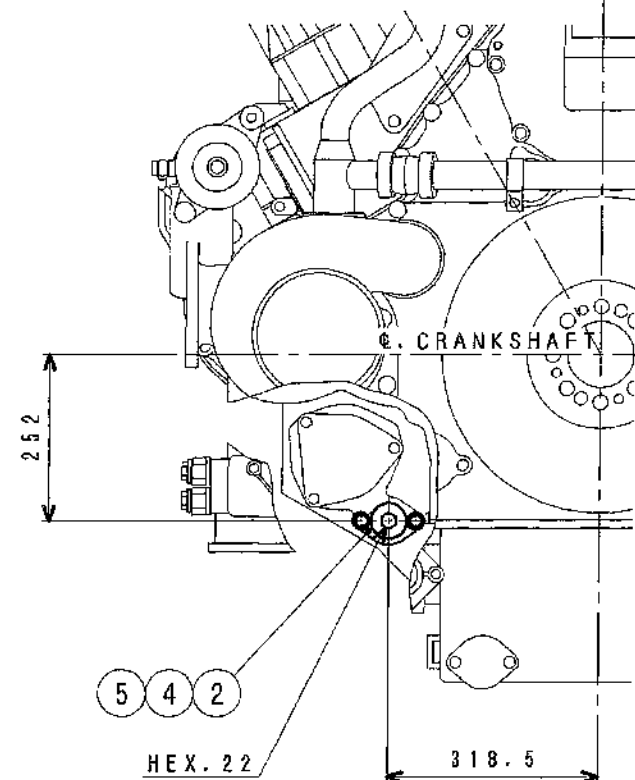
① 新回 ② 組立図 ③ 機軸部品 ④ 板金部品 ⑤ 切削品 ⑥ その他(輸入品)

IB引
 汎特
 2011
 5.23

FULL-CAD



ENGINE



ENGINE

5	F2500-12000	WASHER, PLAIN	2
4	F1805-12020	BOLT	2
3	37571-01500	PLATE, CAUTION	1
2	37571-10300	FLANGE	1
1	37771-00102	GEAR, TURNING	1
No.	PARTS NO.	PARTS NAME	Q' TY

4590-G648 11. 3.24 青藤

CHG	EO-NO	DATE	CHK
4590-G648		11. 3.24	青藤
製可 APPD	橋	校図 CHK	竹 福 谷 田
製同 BRN		谷 島	1998. 3. 11



S12R

TURNING DEVICE

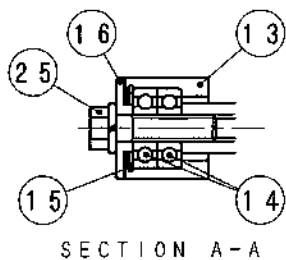
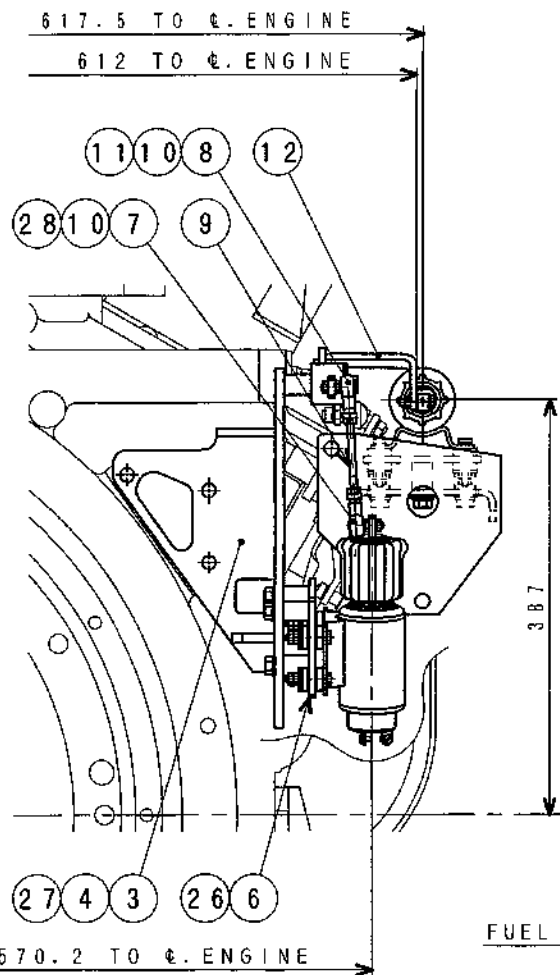
三菱重工業株式会社 汎用機・特車事業本部
MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS.

図面番
DRAWING No. 37796-71001

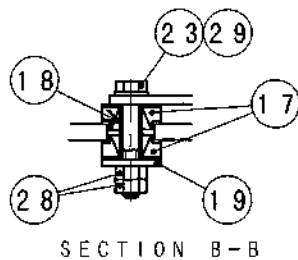
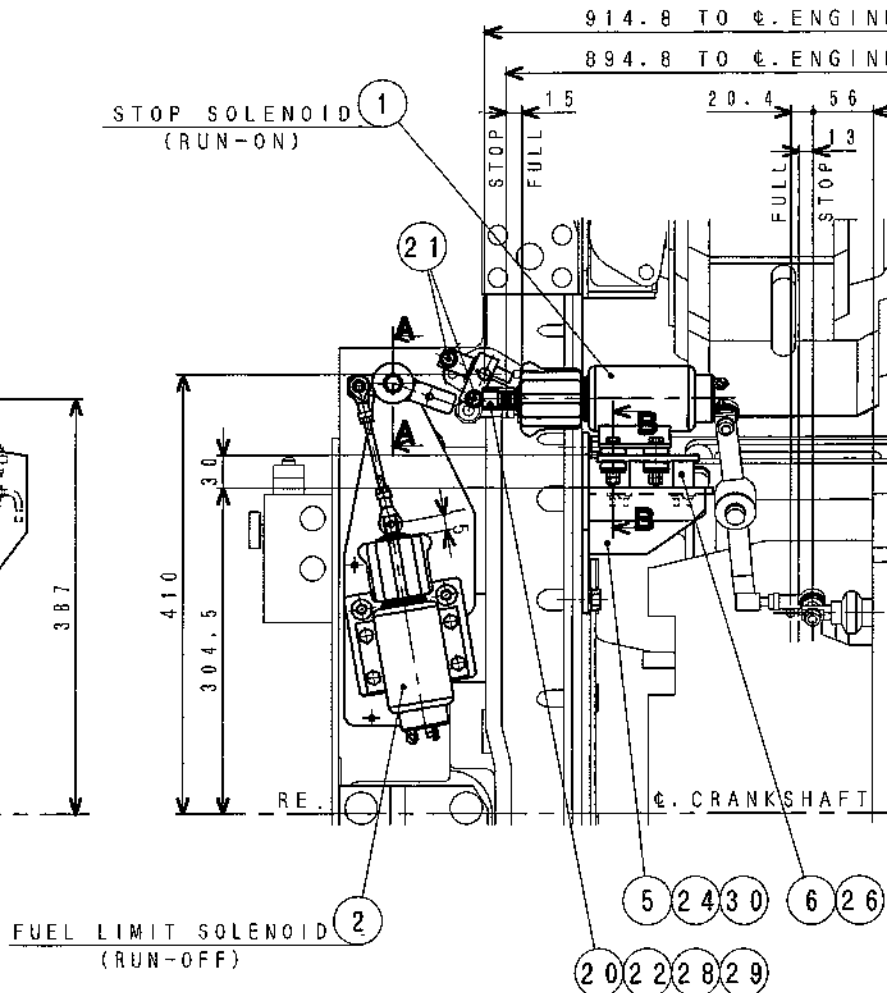
旧引
汎特
2011
5.23

FULL-CAD

1 新図 2 訂正 3 訂正 4 訂正 5 訂正 6 訂正 7 訂正 8 訂正 9 訂正 10 訂正



SECTION A-A



SECTION B-B

30	F2515-12000	WASHER, SPRING	2
29	F2515-06000	WASHER, SPRING	9
28	F2300-06000	NUT	18
27	F1825-12025	BOLT	3
26	F1825-10025	BOLT	6
25	F1805-10040	BOLT	1
24	F1035-12030	BOLT	2
23	F1035-06040	BOLT	8
22	F1035-06020	BOLT	1
21	37587-00900	FOLLOWER	2
20	37787-03200	ADAPTER	1
19	08302-06000	WASHER	8
18	47500-36700	SPACER	8
17	47500-34100	RUBBER, CUSHION	18
16	32561-18300	PLATE, END	1
15	F3202-03000	RING, SNAP	1
14	F8007-06200	BEARING, BALL	2
13	37787-21202	LEVER, STOP RUN-OFF	1
12	37761-08401	LEVER, R.H., RACK CONT.	1
11	09413-00600	NUT, LOCK	1
10	05634-00610	NUT, SELF LOCKING	2
9	05902-06100	ROD	1
8	35A61-58401	BALL JOINT (M6-L)	1
7	35A61-58301	BALL JOINT (M6-R)	1
6	47520-25800	PLATE, SOLENOID	2
5	37787-03300	BRACKET, SOLENOID	1
4	37711-13200	PACKING	1
3	37787-01501	BRACKET, SOLENOID	1
2	04400-08901	SOLENOID (RUN-OFF)	1
1	04400-08801	SOLENOID (RUN-ON)	1
No.	PARTS NO.	PARTS NAME	Q'TY

MHI CONFIDENTIAL

△	4590-H435	'12.11.30	谷戸	37° ANGLE PROJECTION
△	4590-F677	'09. 8.25	斉藤	尺度 SCALE
△	4590-5035	'90. 3.15	福田	
CHG	EO-NO	DATE	CHK	
監可 APPD	検図 CHK	竹 福	製図 谷 菊	
		谷 田	戸 島	
			1997.10.20	

S12R-2

STOP & FUEL LIMIT SOLENOID

三菱重工業株式会社 汎用機・特車事業本部
GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS, MITSUBISHI HEAVY INDUSTRIES, LTD.

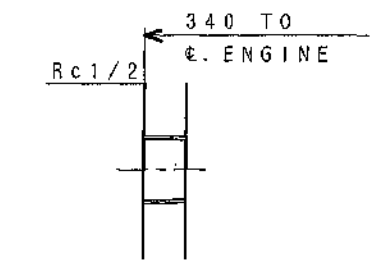
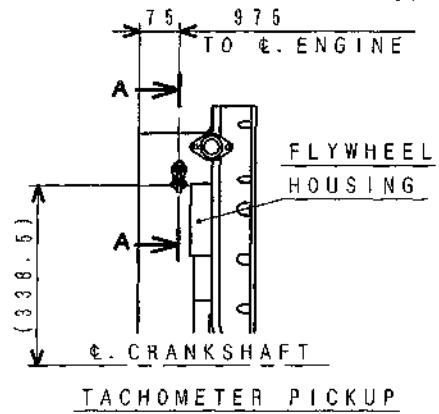
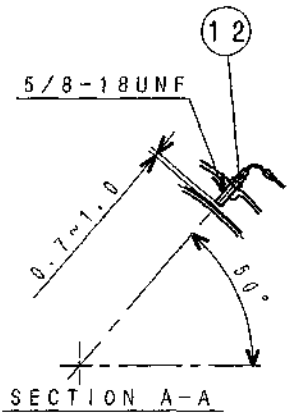
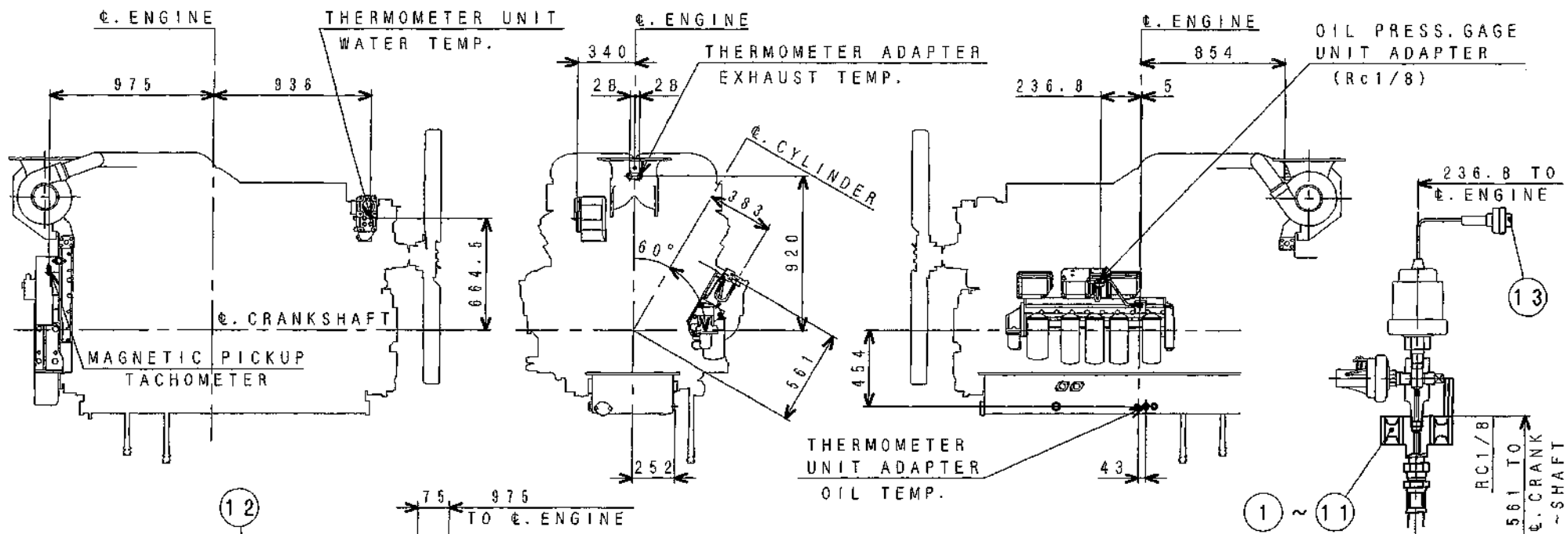
図番番号
DRAWING No. 37796-87503

3 新 図 サイズ
① 旧 図 A 3
① 組立図
2 標準部品
3 検査部品
4 組立品
5 切削品
6 その他(購入品)

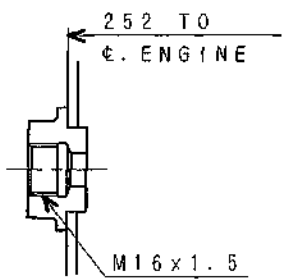
(2) 始動時、ラック制限値は両ソレノイド電源ON状態で、13mmである。

注記 (1) 本図は、ストップソレノイド(RUN-ON)及び、始動性容易化用ラックリミットソレノイド(RUN-OFF)装着図である。

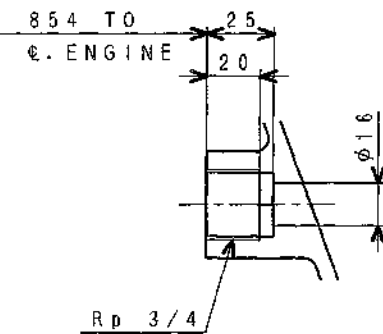
M/C



THERMOMETER UNIT ADAPTER WATER TEMP.



THERMOMETER UNIT ADAPTER OIL TEMP.



THERMOMETER ADAPTER EXHAUST TEMP.

NOTE (1) THE ☆ MARKED PARTS ARE LOOSE SUPPLY.

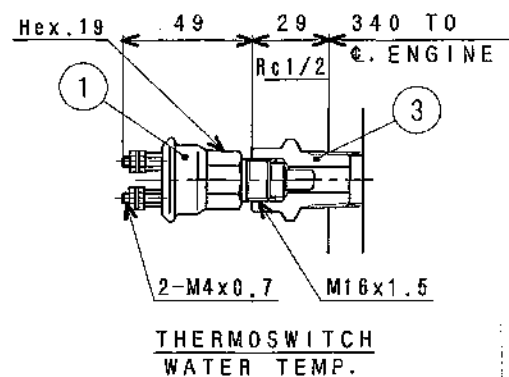
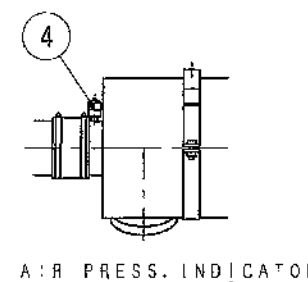
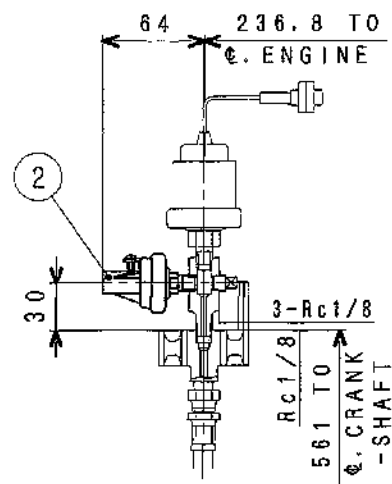
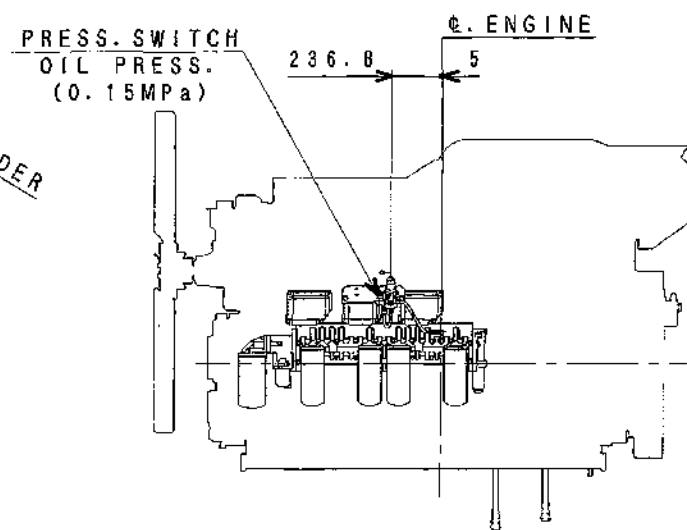
☆	13	MH052-231	CONNECTOR	1
	12	04410-43410	PICKUP, MAGNETIC	1
	11	F2515-12000	WASHER, SPRING	2
	10	F2515-10000	WASHER, SPRING	2
	9	F1035-12070	BOLT	2
	8	F1035-10025	BOLT	2
	7	F4560-06300	ELBOW	1
	6	F4540-06300	CONNECTOR	2
	5	F2300-10000	NUT	2
	4	45951-04028	PIPE, FLEXIBLE	1
	3	45951-04024	PIPE, FLEXIBLE	1
	2	45644-47900	MOUNT	1
	1	47520-40701	BRACKET	1
	No.	PARTS NO.	PARTS NAME	Q'TY

MHI CONFIDENTIAL

CHG	EO-NO	DATE	CHK
APPD	CHK	DATE	CHK
谷戸	中村	谷戸	中村
2012.11.28			

S12R
 METER & SENSOR
 三菱重工業株式会社 汎用機・特車事業本部
 MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINERY & SPECIAL VEHICLE DEPARTMENTS.
 図面番号
 DRAWING No. 37796-90119

① 新 ② 改 ③ 訂 ④ 補 ⑤ 訂 ⑥ 訂 ⑦ 訂 ⑧ 訂 ⑨ 訂 ⑩ 訂
 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1



NOTE (1) THE ☆ MARKED PARTS ARE LOOSE SUPPLY.

☆	4	47220-34401	INDICATOR	635mmH ₂ O ON	4
	3	45600-42902	CONNECTOR		1
	2	04442-45400	PRESS. SWITCH	0.15MPa ON	1
	1	04442-34500	THERMO SWITCH	98℃ ON	1
	No.	PARTS NO.	PARTS NAME		QTY

   				 2nd ANGLE PROJECTION 尺規 SCALE : : :	
	4590-G652	'11. 3. 24	齊藤		
CHG	FD-NO	DATE	CHK		
認可 APPD	橋	抜印 CHK	竹谷	福田	概圖 DW
	橋		谷	田	谷 島 戸 鷺
	口				1997. 10. 8

ALARM SWITCH

三菱重工業株式会社 汎用機・特車事業本部
MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS.

圖面番号
DRAWING No.

37796-90206

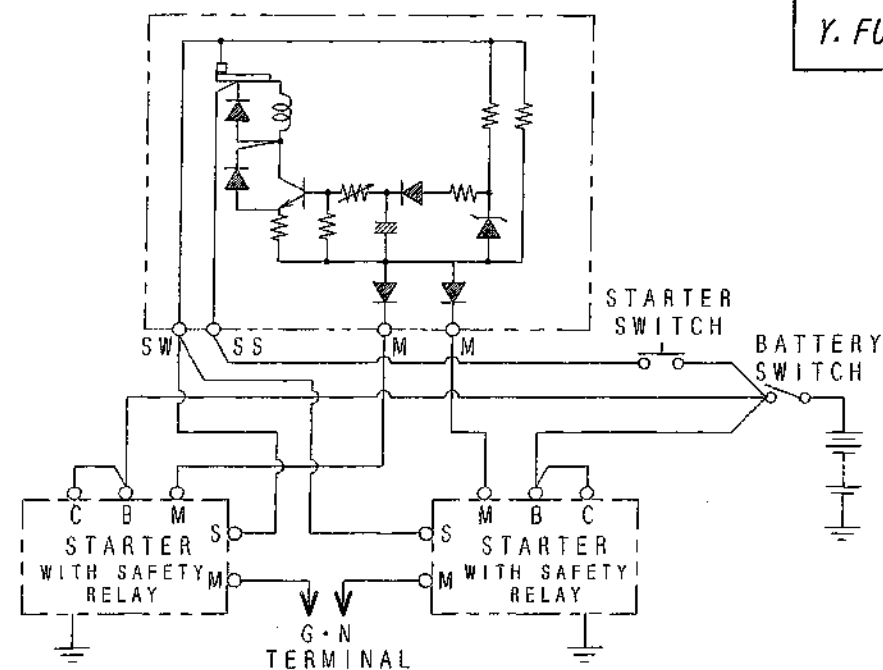
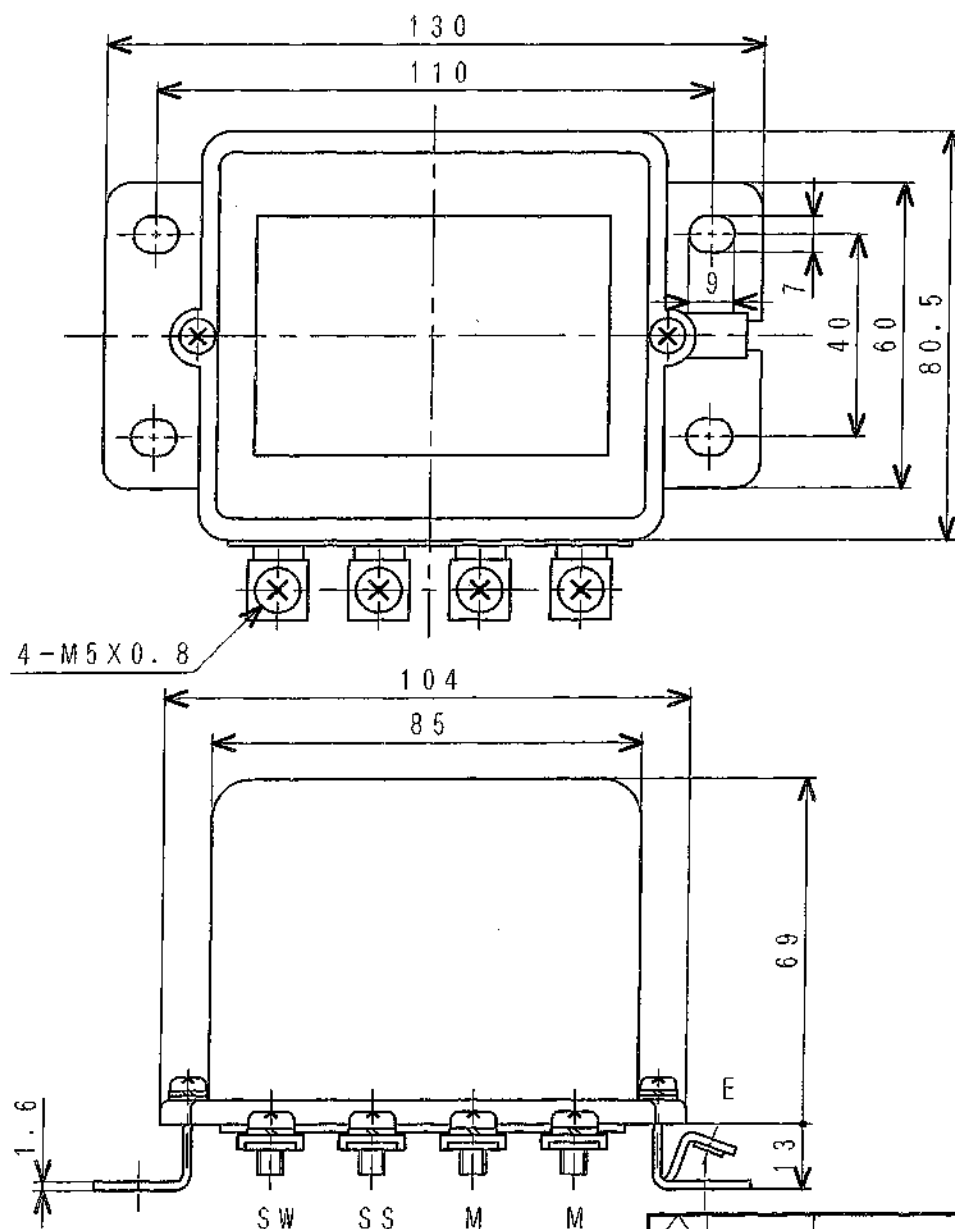
3 新肉	7 入	① 樹立図	7 飼料物事品	3 板合格披豆	4 楚立品
④ 旧引図	A 3		5 切削品	6 その他「要入品」	

旧引
汎特
2011
5.23

FVLE-CAD

CHECKED BY

Y. FUKUDA



WIRING

仕 様	
公 称 電 圧	24V
定 格	30秒
リレー動作仕様 (25℃時)	動作電圧 8V~24V
	作動同期 SS-SW間ON-OFF1サイクル (24V) 2.5~3.0 sec
接 点 要 量	6A
耐 振 性 能	JIS D 1601 3類B種ニヨル(6.8G)
使 用 温 度	-20 ~ +50℃
保 護 方 式	防滴形

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REV.	DATE
2	'00.11.27
1	'93. 2.16

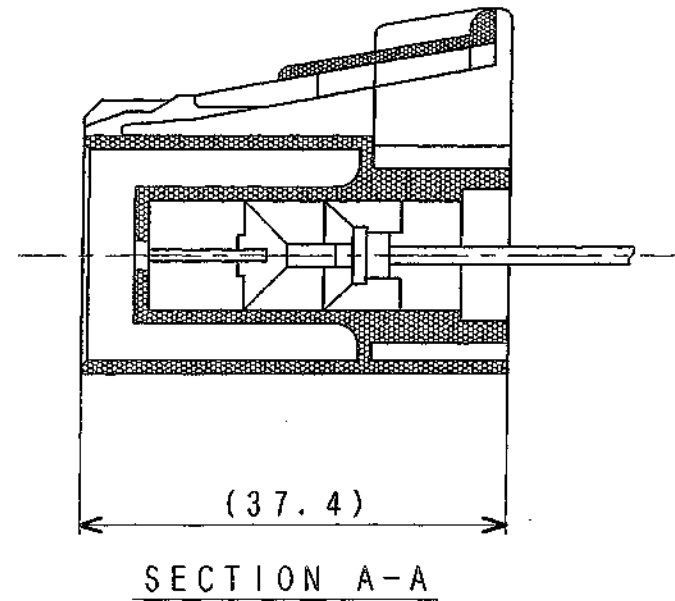
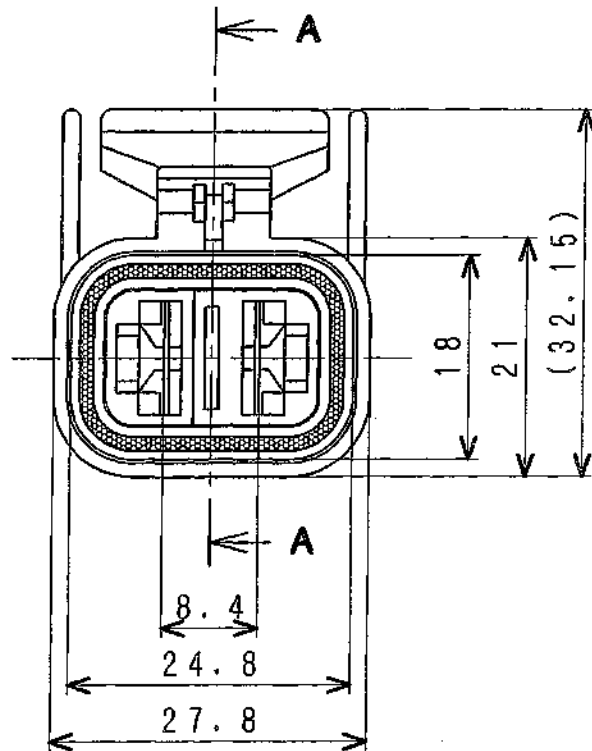
SAFETY RELAY
PART NO. 04322-40100

DWG. NO. S10-0150

MITSUBISHI HEAVY INDUSTRIES, LTD.
GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

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本部品は、矢崎品番7323-6228-30相当品である。

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REV.	DATE

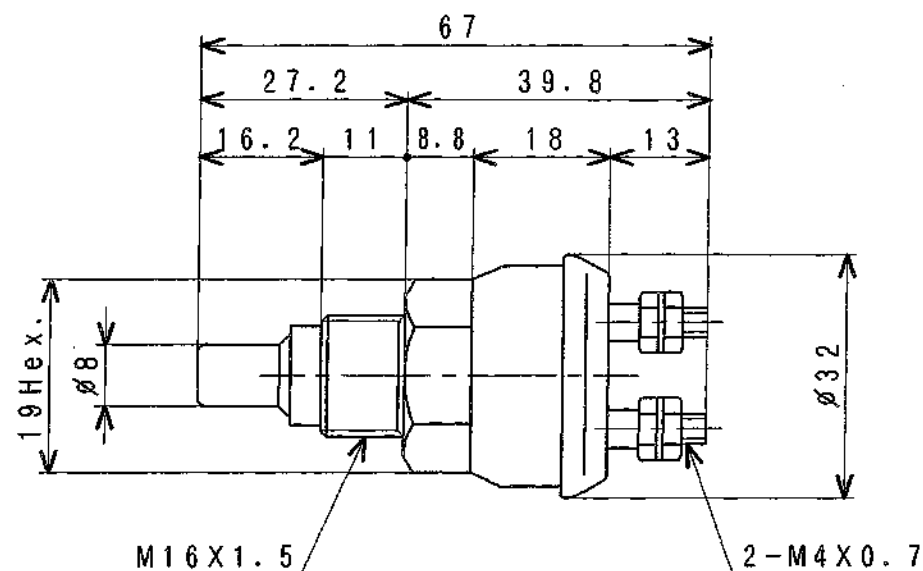
CONNECTOR
PART NO. 32B90-00300

DWG. NO. S10-0550

 MITSUBISHI HEAVY INDUSTRIES, LTD.
GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

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NAKAMURA



CONNECTING TYPE	PARTS NO.	SET TEMP. (°C)		CONTACTOR CAPACITY	WEIGHT
		ON	OFF		
NO (A-CONTACT)	04442-34300	92±2	85±2	DC24V 0.05A~3A DC100V 0.05A~0.4A AC100V 0.05A~1A	60 g
NO (A-CONTACT)	04442-34400	95±2	88±2		
NO (A-CONTACT)	04442-34500	98±2	91±2		
NO (A-CONTACT)	04442-34600	110±2	103±2		
NO (A-CONTACT)	04442-34700	105±2	98±2		
NO (A-CONTACT)	04442-34800	101±2	94±2		
NO (A-CONTACT)	04442-34900	88±2	81±2		
NO (A-CONTACT)	04442-38700	115±2	108±2		
NO (A-CONTACT)	37547-04100	101±2	94±2		

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6	'00.4.26
8	'08.6.5
7	'06.3.17
REV.	DATE

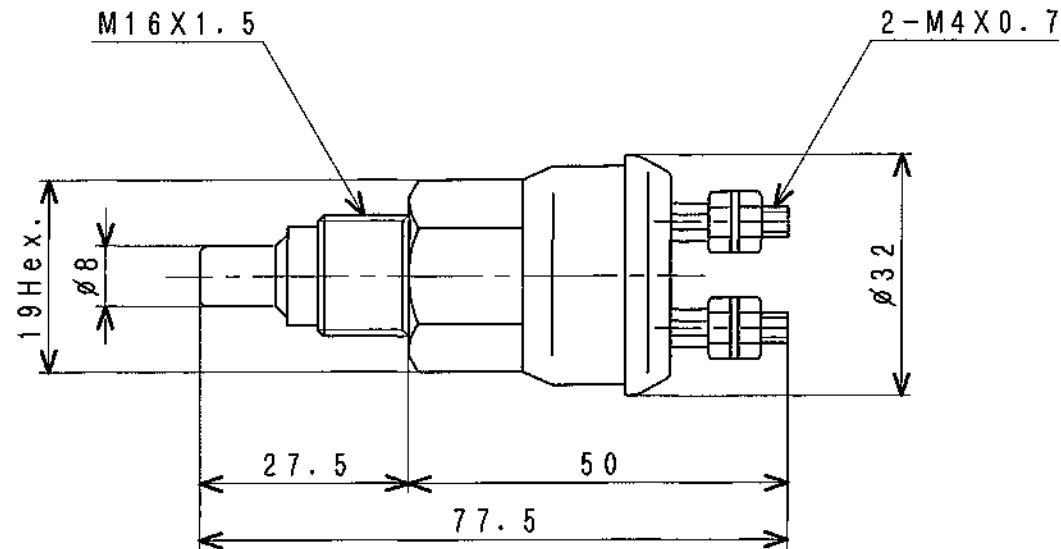
THERMO SWITCH

DWG. NO. S11-0551

MITSUBISHI HEAVY INDUSTRIES, LTD.
GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

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中 村



注記 本部品は、04442-30200 THERMO SWITCHに対して
サーモエレメント内のスリーブ材質変更 NBR→フッ素

SPECIFICATION				
CONNECTING TYPE	SET TEMP. (°C)		CONTACTOR CAPACITY	WEIGHT
	ON	OFF		
NC (B-CONTACT)	35±2	42±2	DC24V 3A, AC100V 1A DC100V 0.05A	60g

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REV.	DATE

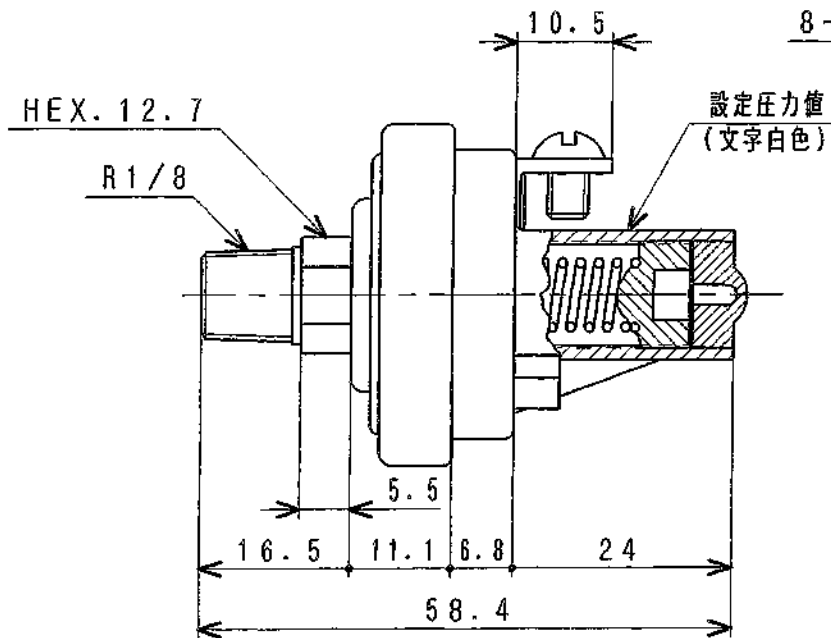
THERMOSWITCH
PART NO. 04442-30210

DWG. NO. S11-0781


MITSUBISHI HEAVY INDUSTRIES, LTD.
 GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

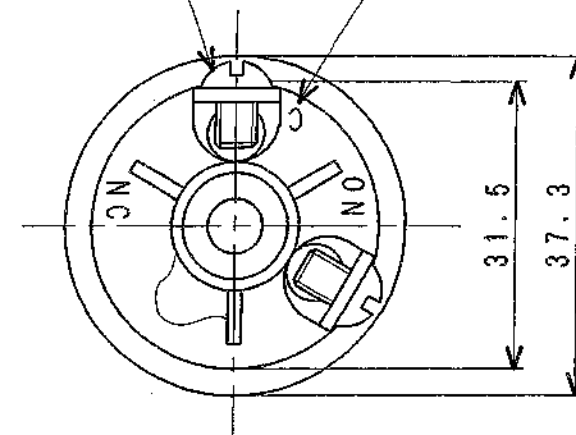
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8-32X1/4UNF SCREW

浮き出し文字



5. ON-OFF差 : 5%以内
 4. 接点形式 : (NO) (NC)
 3. 使用温度範囲 : $-40.0^{\circ}\text{C} \sim +120.0^{\circ}\text{C}$
 2. 定 格 : 6VDC-15AMP, 12VDC-8AMP, 24VDC-4AMP,
 120VAC-1AMP, 240VAC-0.5AMP
 最小電流値: 0.05A

仕 様 1. 最高許容圧力 : 1.05MPa (設定圧: 0.007~0.17MPa)
 1.75MPa (設定圧: 0.18~1.05MPa)

NO	04442-46500	0.15	± 0.015
NO	04442-46400	0.10	± 0.01
NO	04442-46300	0.05	± 0.005
NC	04442-46100	6.2KPa	$\pm 0.62\text{KPa}$
NC	04442-45900	0.40	± 0.04
NC	04442-45800	0.35	± 0.035
NC	04442-45700	0.30	± 0.03
NC	04442-45600	0.25	± 0.025
NC	04442-45500	0.22	± 0.022
NC	04442-45400	0.15	± 0.015
NC	04442-45300	0.10	± 0.01
NC	04442-45200	0.05	± 0.005
NC	04442-45100	0.03	± 0.003
接点形式	PARTS NO.	ON	ALLOWANCE
		SET PRESS. MPa	

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2	'08.6.5
1	'06.3.17
REV.	DATE

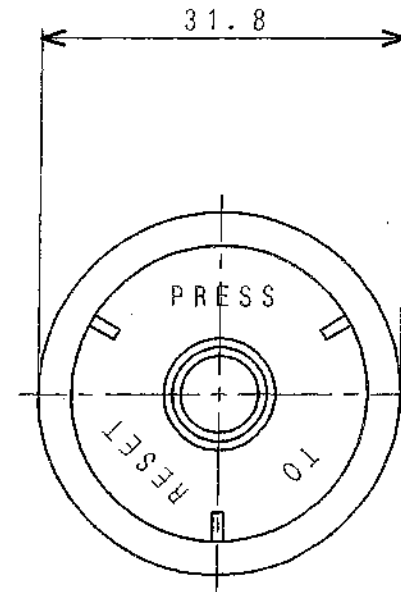
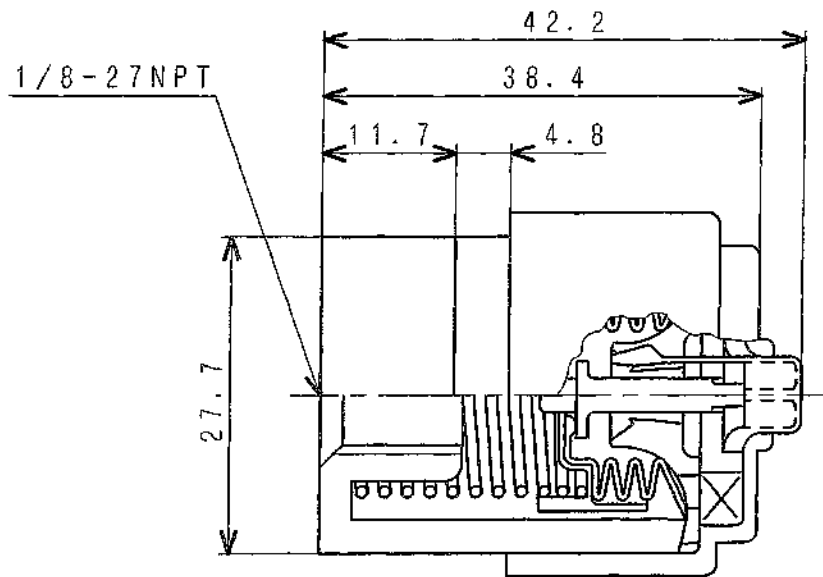
SWITCH, PRESS

DWG. NO. S11-0796

MITSUBISHI HEAVY INDUSTRIES, LTD.
 GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

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PARTS NO.	RESTRICTION (mmH ₂ O)
47220-30701	762±58
47220-34301	508±48
47220-34401	635±58

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↑	'93 2/18
REV.	DATE

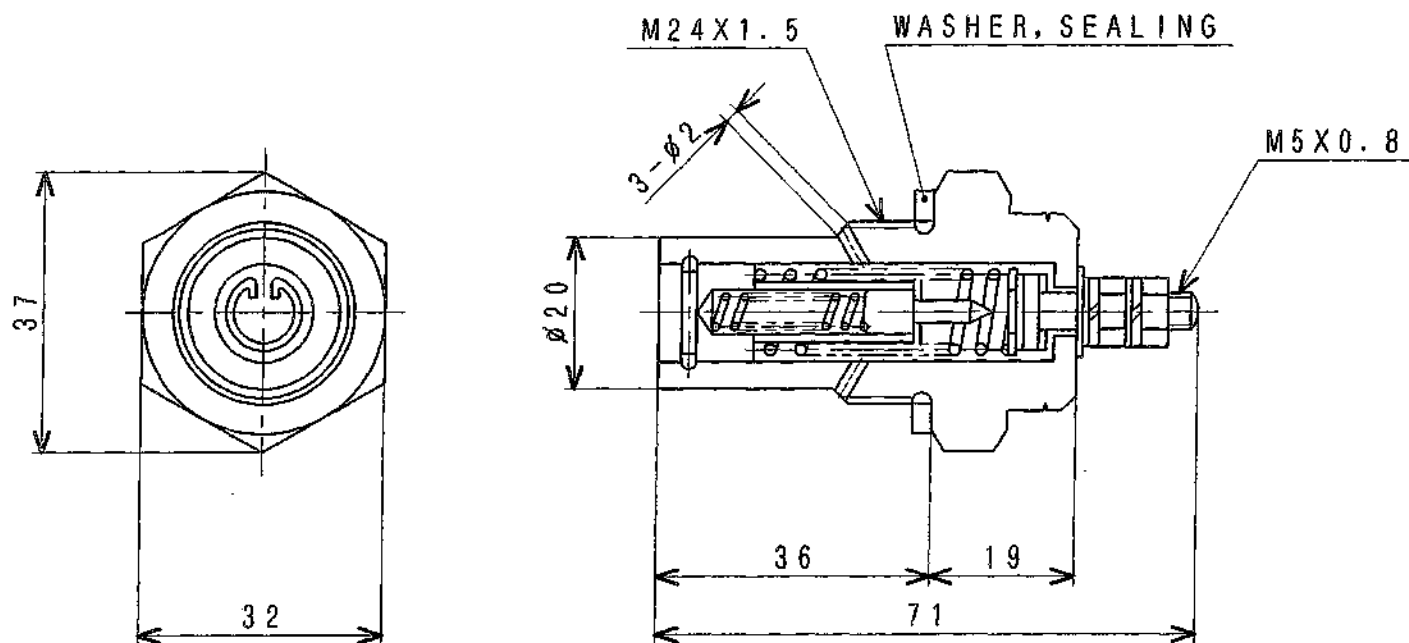
INDICATOR

DWG. NO. S11-0920

 MITSUBISHI HEAVY INDUSTRIES, LTD.
GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

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SET PRESS. 0.15MPa

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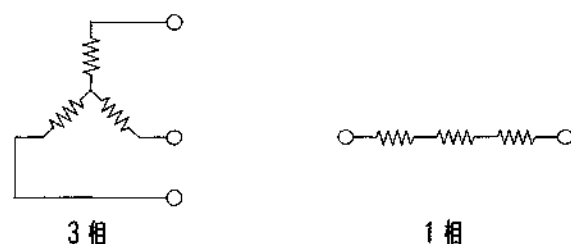
△	
△	
△	08.6.6
REV.	DATE

ALARM, OIL FILTER
PART NO. 37540-01300

DWG. NO. S11-1370

△ MITSUBISHI HEAVY INDUSTRIES, LTD.
GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

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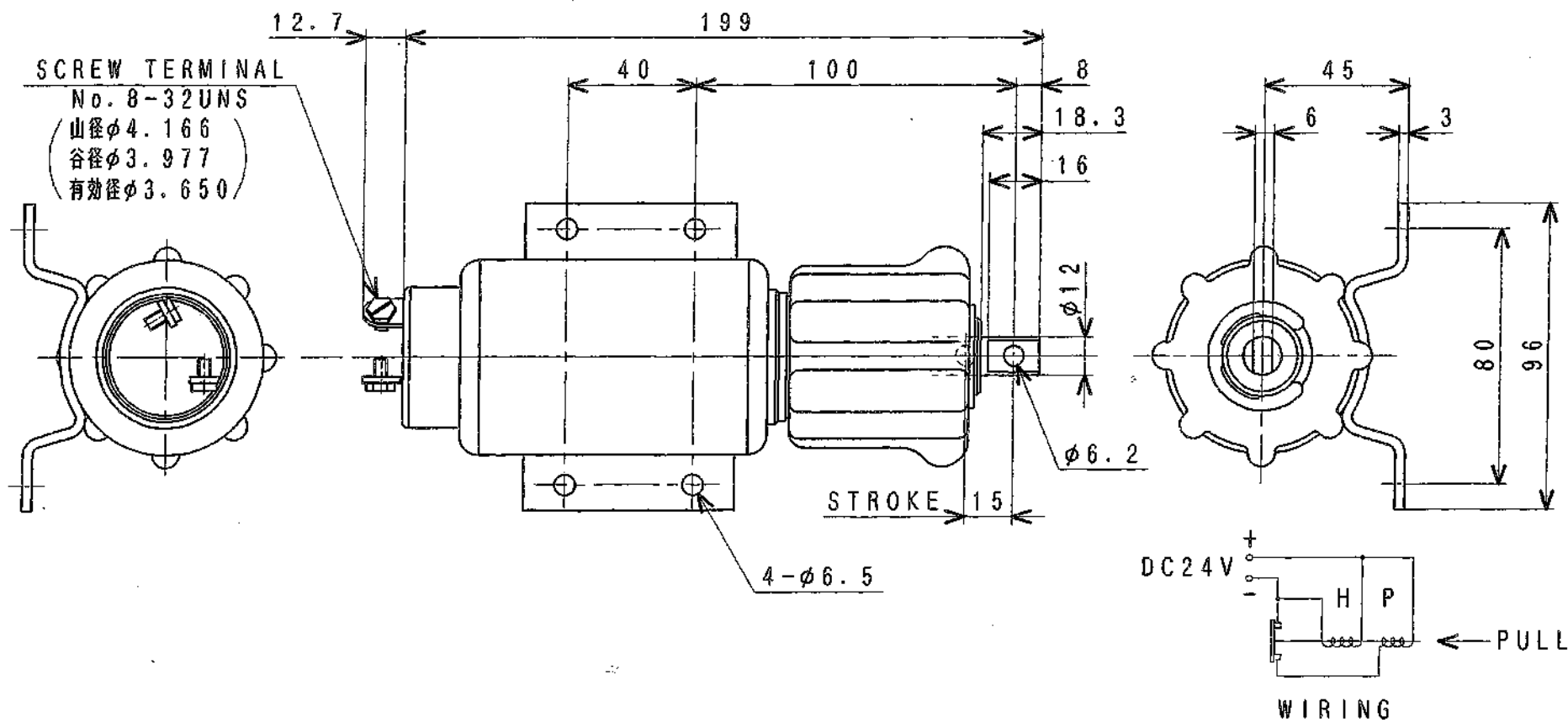


仕様 1. 取付姿勢 : キャップを上側とした取付は不可

04393-34820	3 ϕ 480V	2 kW	200	165
04393-34420	3 ϕ 440V			
04393-33820	3 ϕ 380V			
04393-32220	3 ϕ 220V			
04393-34810	3 ϕ 480V	1 kW	125	90
04393-34410	3 ϕ 440V			
04393-33810	3 ϕ 380V			
04393-32210	3 ϕ 220V			
04393-14820	1 ϕ 480V	2 kW	200	165
04393-14420	1 ϕ 440V			
04393-13820	1 ϕ 380V			
04393-12420	1 ϕ 240V			
04393-12220	1 ϕ 220V			
04393-11220	1 ϕ 120V			
04393-11120	1 ϕ 110V			
04393-14810	1 ϕ 480V			
04393-14410	1 ϕ 440V	1 kW	125	90
04393-13810	1 ϕ 380V			
04393-12410	1 ϕ 240V			
04393-12210	1 ϕ 220V			
04393-11210	1 ϕ 120V			
04393-11110	1 ϕ 110V			
PARTS NO.	VOLTAGE	CAPASITY	L	HS
			LENGTH	

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注記 本部品は04400-08800及び04400-08900
に対し下記が異なる。

1. 保持コイルリードワイヤー取出部に太いサイズの皮膜付
リードワイヤーを溶接接続したものである。
2. 吸引、保持コイル切換えスイッチの固定コンタクトの
曲げを平に変更したものである。

04400-08901	0.2 MPa
04400-08801	1.0 MPa
PARTS NO.	RETURN SPRING PRESS.

SPECIFICATION	
VOLTAGE	DC24V
CURRENT	PULL 30.7A, HOLD 0.58A
RATED TIME	CONTINUOUS

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REV.	DATE

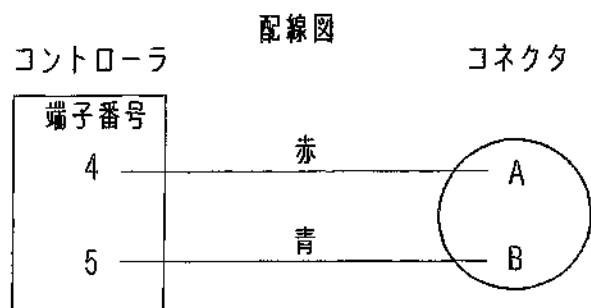
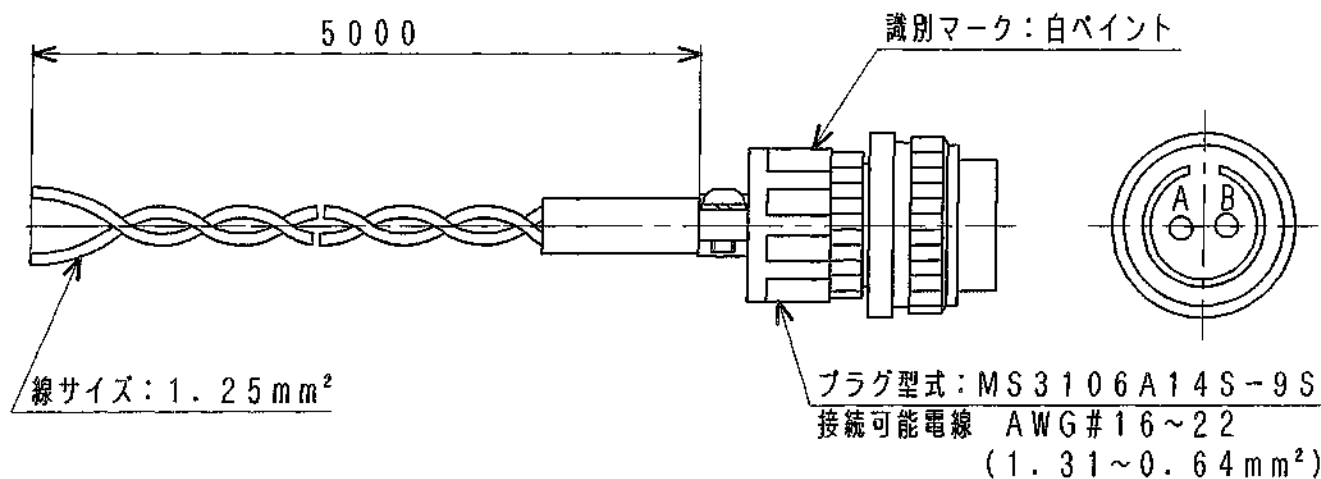
SOLENOID

DWG. NO. S13-0282

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 GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

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備考 使用先：コントローラ～アクチュエータ間の配線用部品として
使用するツイストペアケーブルである。

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REV.	DATE

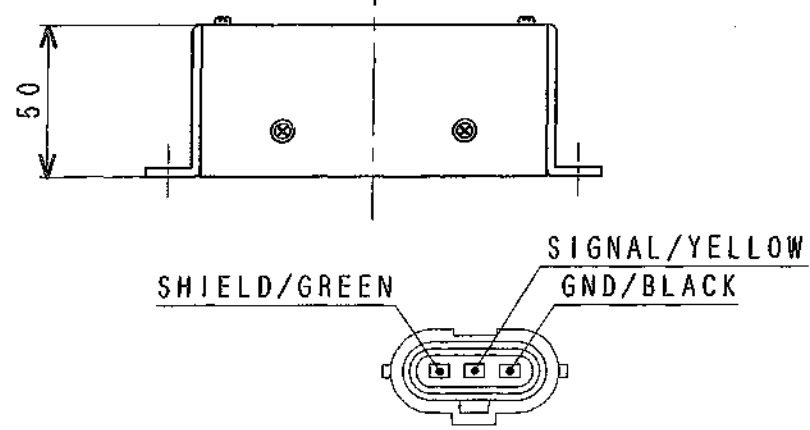
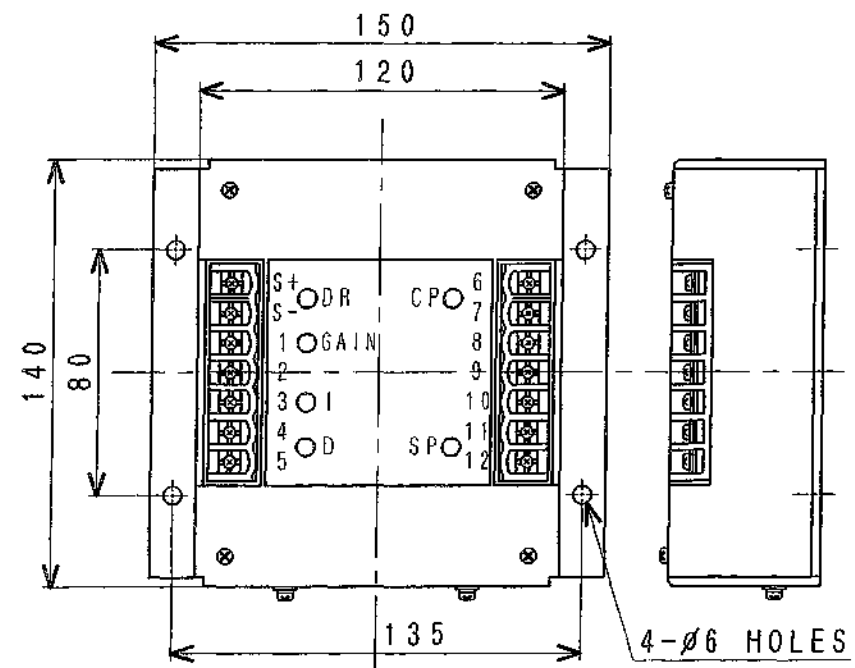
CONNECTOR

PART NO. 04410-32902

DWG. NO. S13-1022

MITSUBISHI HEAVY INDUSTRIES, LTD.
GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

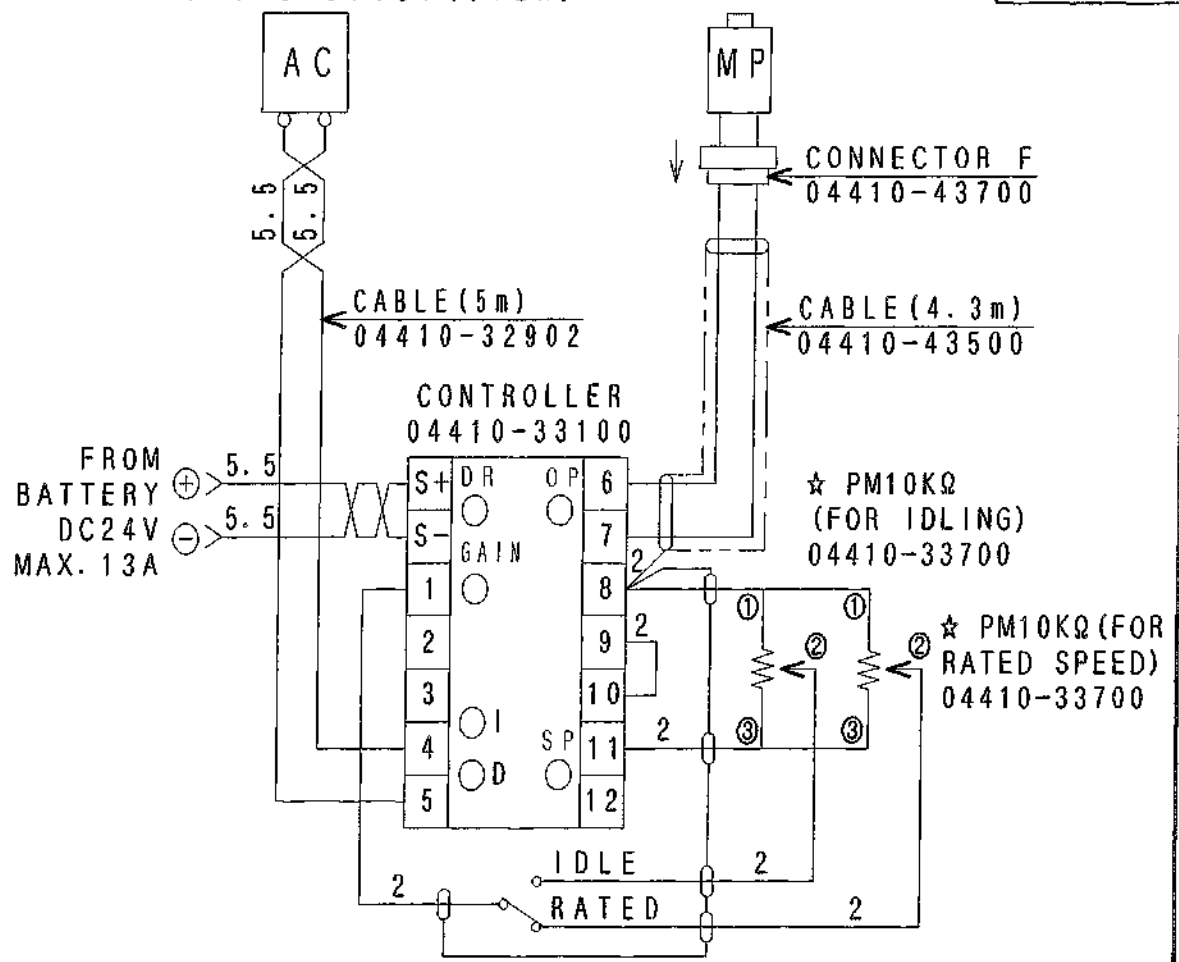
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CONNECTOR F
04410-43700

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ACTUATOR
04410-32011
04410-37081 (S12H)
MAGNETIC PICKUP
04410-43410



★ MODE CHANGEOVER CONTACTOR
(SHALL BE USE GOLD PLATING CONTACTOR)

WIRING

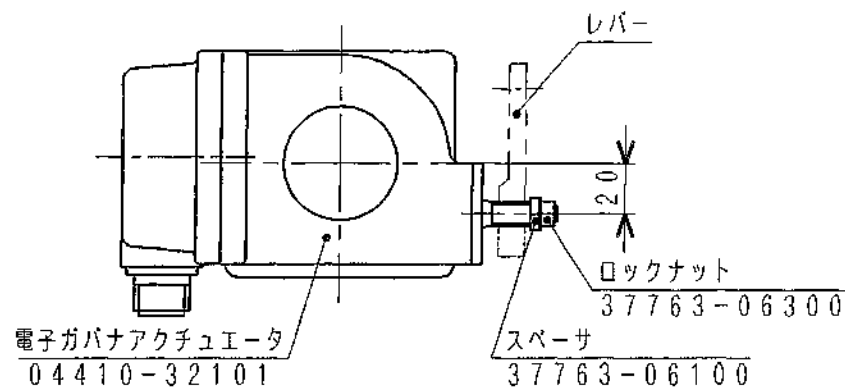
2	'11.4.20
1	'01.6.29
REV.	DATE

CONTROLLER SPEED
PART NO. 04410-33100

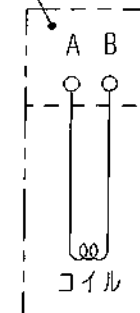
DWG. NO. S13-1042
MITSUBISHI HEAVY INDUSTRIES, LTD.
GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

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コネクタ用レセプタクル
(キャノンプラグ)



仕様

回転角度 : MAX 40°

トルク : 0.17 kgf・m 起動時
起動時常温 8 A にて

電源 : DC 24 V パルス

起動最低電圧 : DC 16 V 50% ed 以下

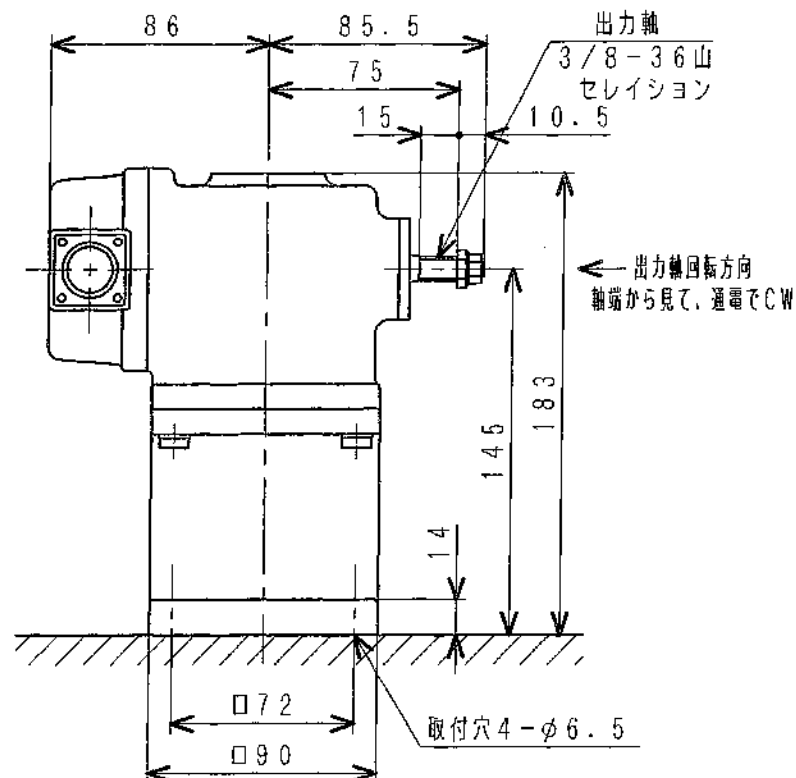
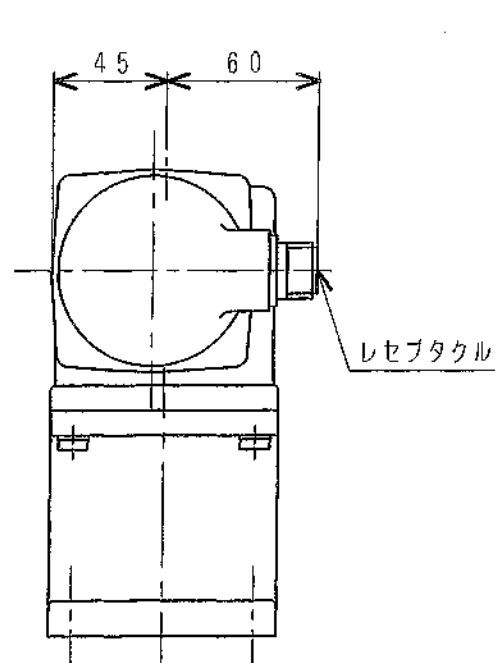
電流 : MAX 13 A

常用電流 : 軽負荷制御時 0.5 A ~ 2 A

周囲温度 : -30℃ ~ 100℃

耐震 : 25 G JIS D 1601

重量 : 4.7 kgf



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(2) 本部品は、部番 04410-32010 に対し出力軸の材料を
変更したものである。

注記 (1) 本部品は、2 線式アクチュエータである。

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REV.	DATE

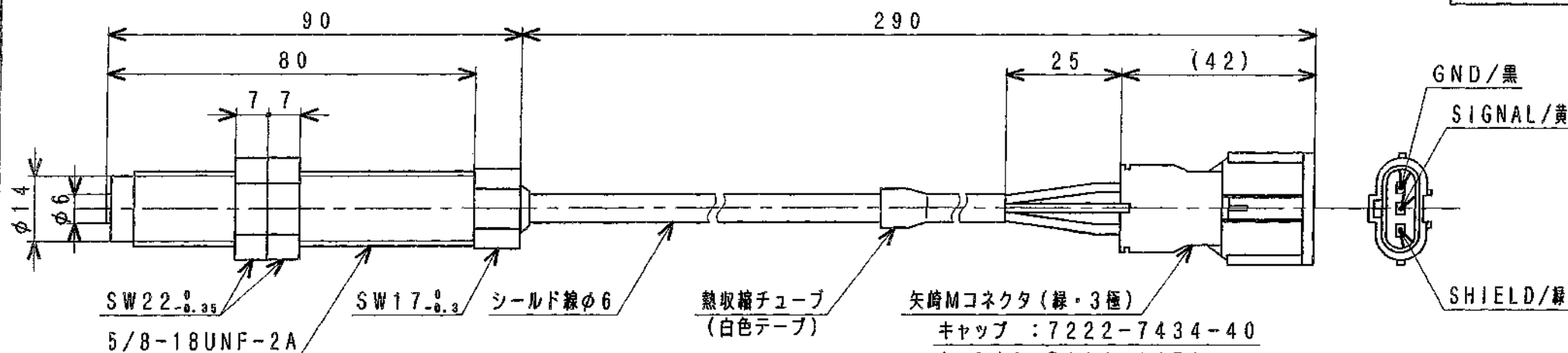
ACTUATOR/SG4017BR
PART NO. 04410-32011

DWG. NO. S13-1761

MITSUBISHI HEAVY INDUSTRIES, LTD.
GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

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仕様

1. 電機的特性

出力電圧 : 図1. 測定条件にて4.0Vp-p以上(at 700Hz)
7.0Vp-p以上(at 6700Hz)

直流抵抗 : 1.3kΩ~1.6kΩ(at +25℃)

絶縁抵抗 : 1MΩ以上 at DC 500V (コネクタ端子-ハウジング間)

耐電圧 : 50/60Hz AC 500V 1分間 (コネクタ端子-ハウジング間)

2. 機械的特性

コネクタ引き抜け力 : 5N以上

締付け破壊トルク : 5J以上

3. 使用温度範囲

-40℃~+120℃

注記

1. 本部品は日本エアボックス(株)殿製である。

2. 本部品は04410-43400に対し、コイル保護ラバー(シリコン)を厚塗り品としたものである。

また、識別用として熱収縮チューブに白色テープを追加し、Mコネクタの色を緑←灰にしたものである。

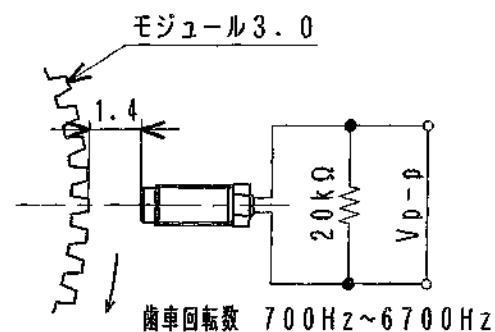


図1. 出力条件

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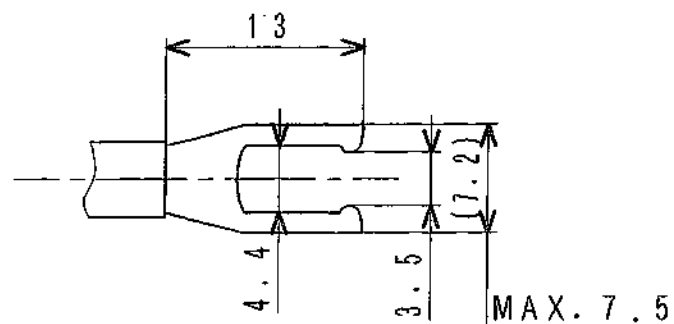
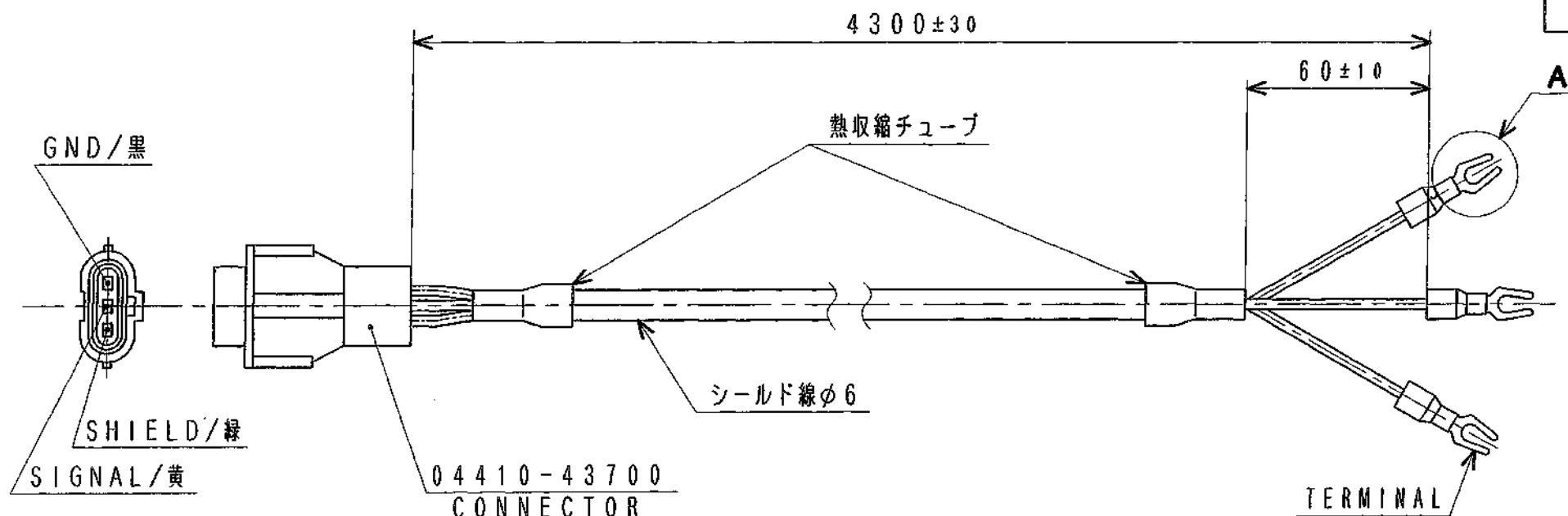
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REV.	DATE

PICKUP, MAGNETIC
PART NO. 04410-43410

DWG. NO. S13-2011

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GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

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DETAIL A

(3) ターミナル形状は、A図と同等 (M3 ネジ用) である。

(2) 配線色は、黒 X 1, 黄 X 1 (各々メスピンの接続), 緑 X 1 (シールドに接続) である。

注記 (1) リード線は、シールド線 (φ6) を使用。

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REV.	DATE

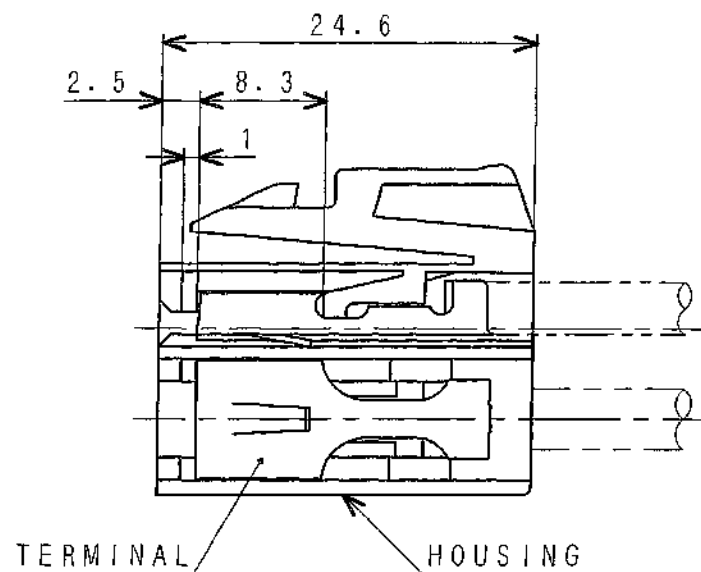
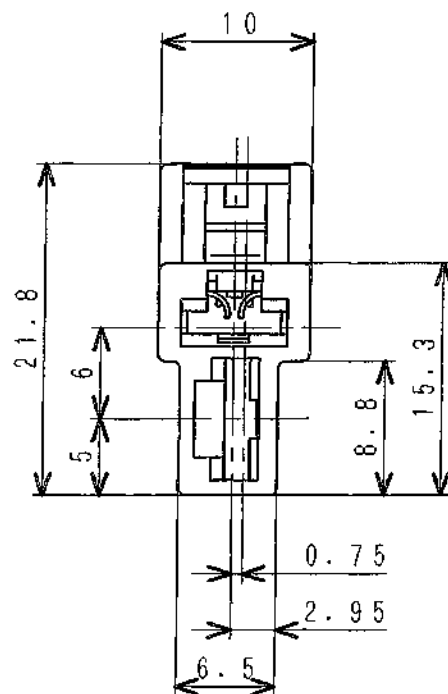
CABLE, PICKUP
PART NO. 04410-43500

DWG. NO. S13-2020

MITSUBISHI HEAVY INDUSTRIES, LTD.
 GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

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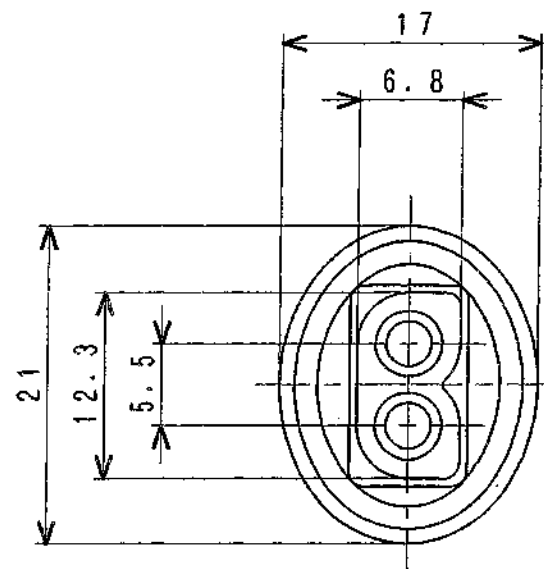
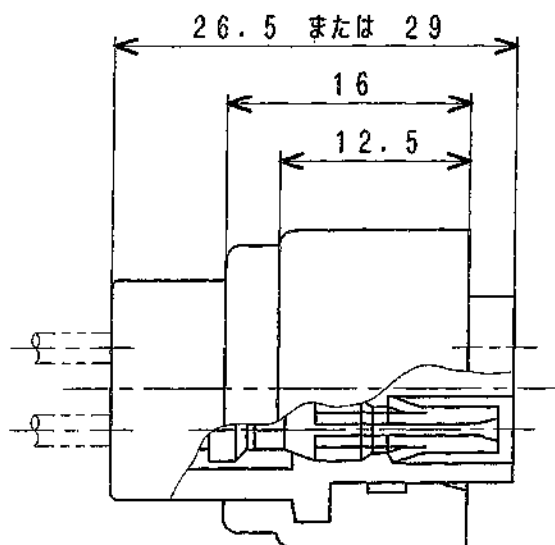
1	93	9/10
REV.	DATE	

CONNECTOR, 2 POLES
PART NO. F8665-02100

DWG. NO. S14-0320
MITSUBISHI HEAVY INDUSTRIES, LTD.
GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

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2	'04.3.12
1	'93.8.4
REV.	DATE

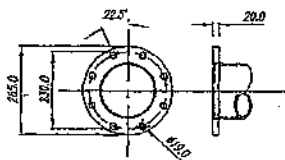
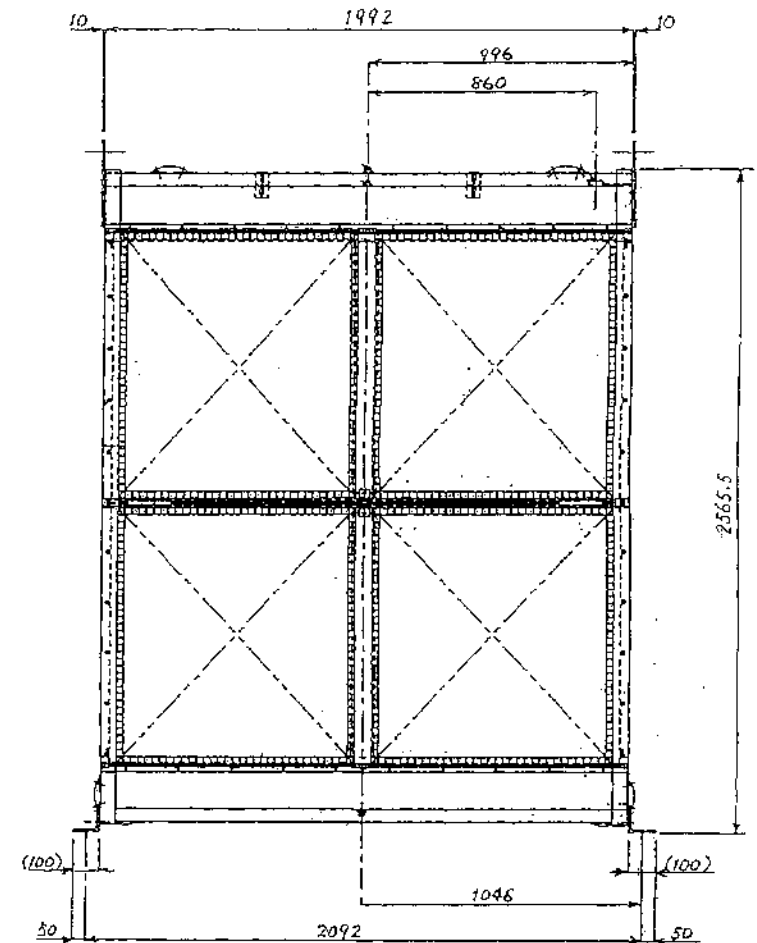
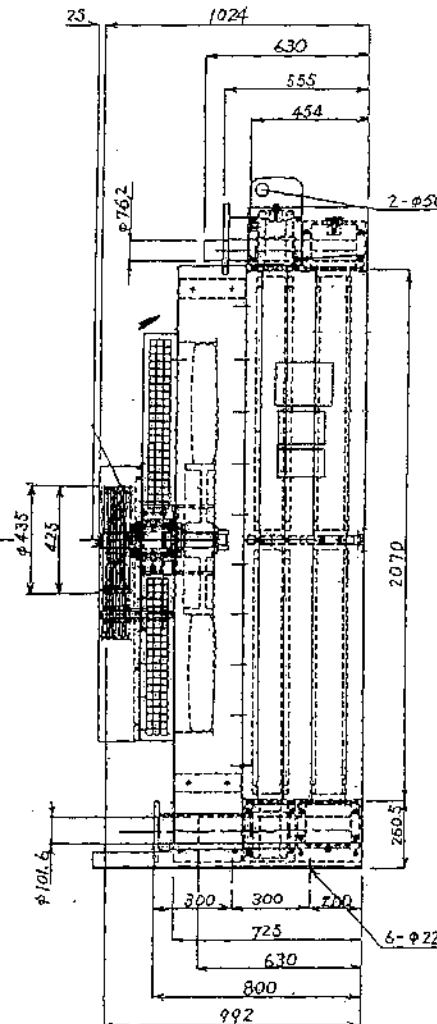
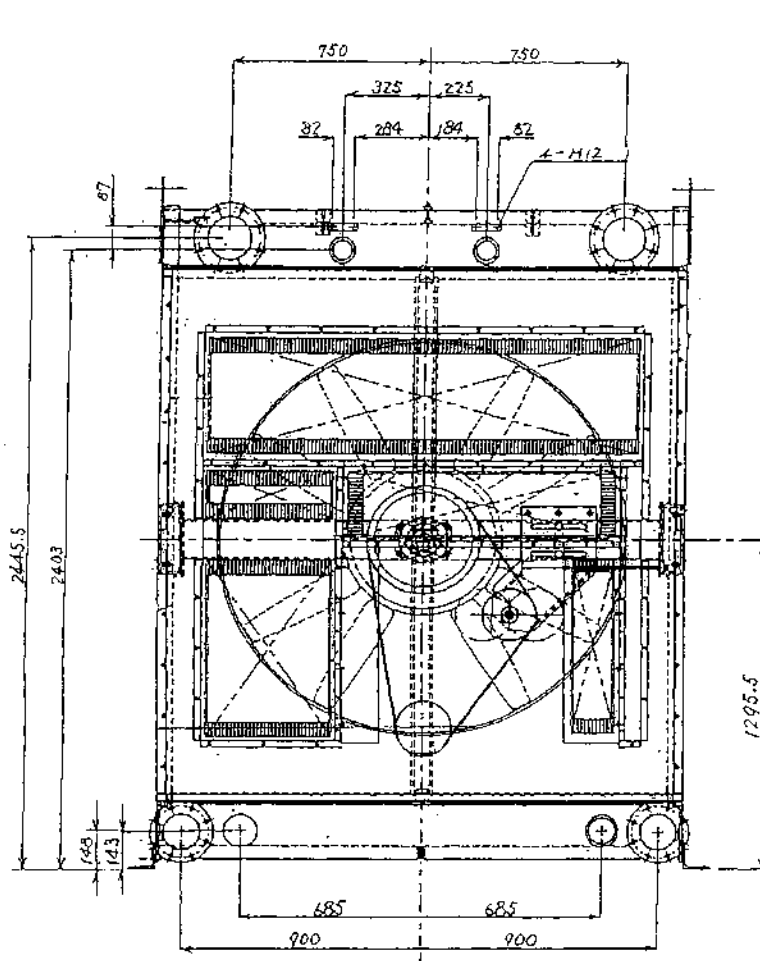
CONNECTOR
PART NO. MH052231

DWG. NO. S14-0330

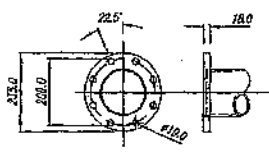

MITSUBISHI HEAVY INDUSTRIES, LTD.
 GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

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K. YATO



CHARGE AIR INLET FLANGE
150.0 HB (20)



CHARGE AIR OUTLET FLANGE
125.0 HB (20)

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△	
REV.	DATE

RAD. I/C ASSY W/F 12R
PART NO. 37747-11100

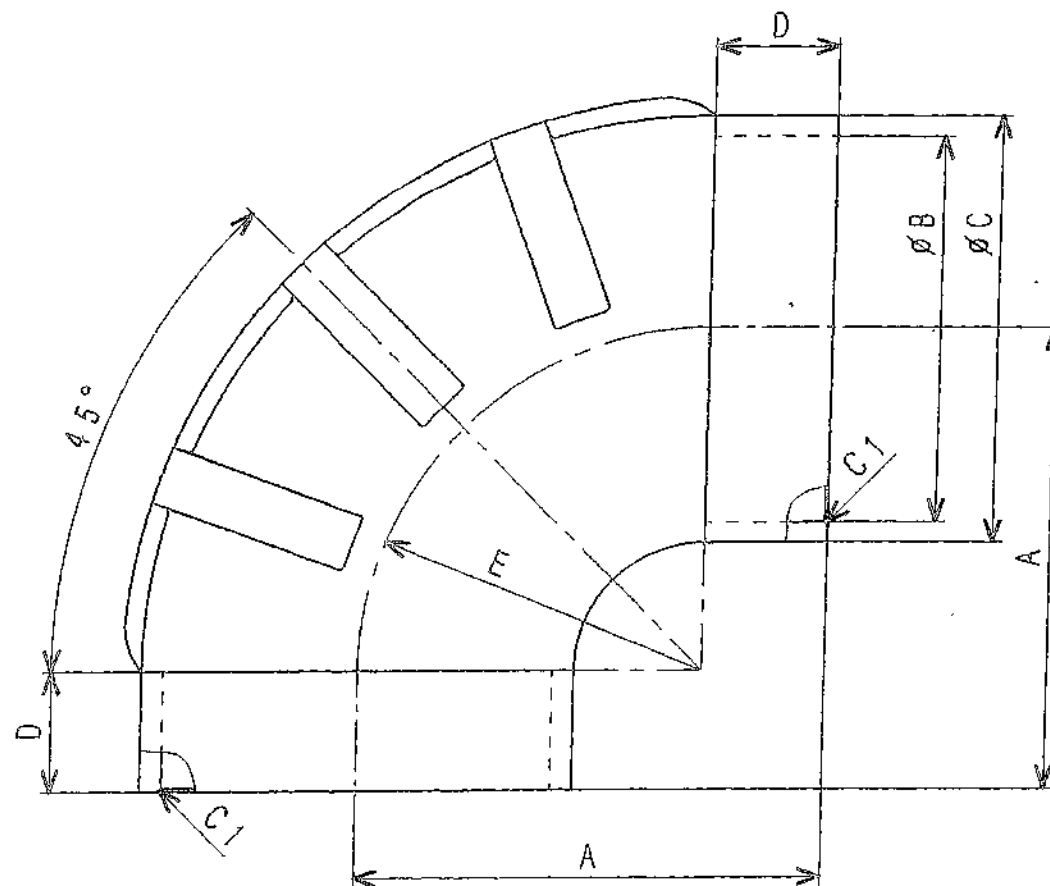
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DWG. NO. S33-4551

MITSUBISHI HEAVY INDUSTRIES, LTD.
GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

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J. Furukawa



47220-47600	Ø160	145	160	176	40	100
47220-32600	7" (Ø177.8)	184.2	177.8	194.6	50.8	133.4
47220-30400	6" (Ø152.4)	177.8	152.4	166.4	50.8	127
47220-12100	5" (Ø127.0)	162.4	127	141	40	112.4
PARTS NO.	TYPE MEASURE	A	B	C	D	E

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REV.	DATE

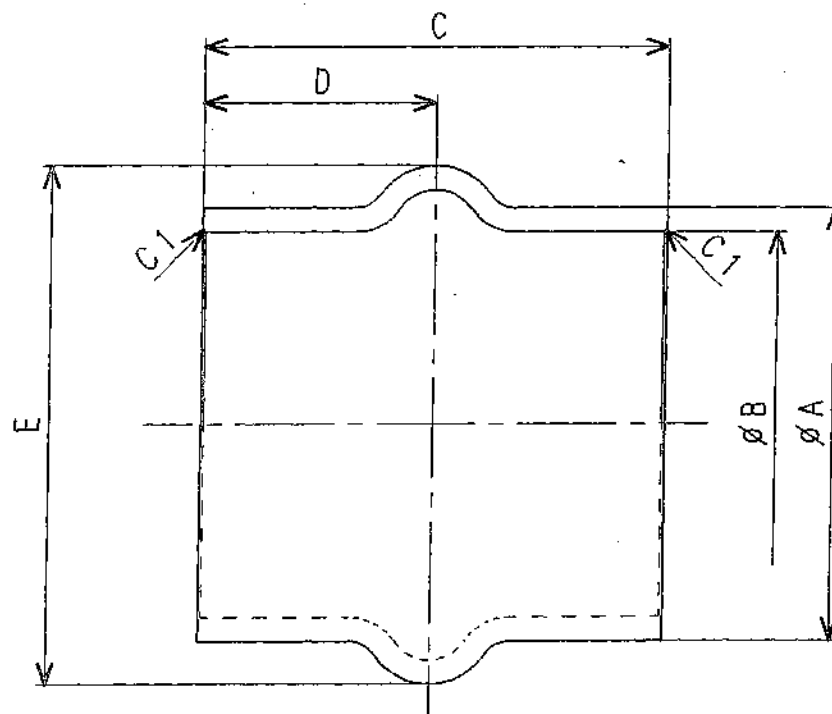
HOSE, RUBBER

DWG. NO. S35-0701


 MITSUBISHI HEAVY INDUSTRIES, LTD.
 GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

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Y. Fukuda



47220-47300	10" (Ø254.0)	266.7	254	152.4	76.2	300
47220-31600	7" (Ø177.8)	194	178	178	89	222
47220-30500	6" (Ø152.4)	168.4	152.4	178	89	196.4
47220-13200	5" (Ø127.0)	143	127	152.4	76.2	171
PARTS NO.	TYPE MEASURE	A	B	C	D	E

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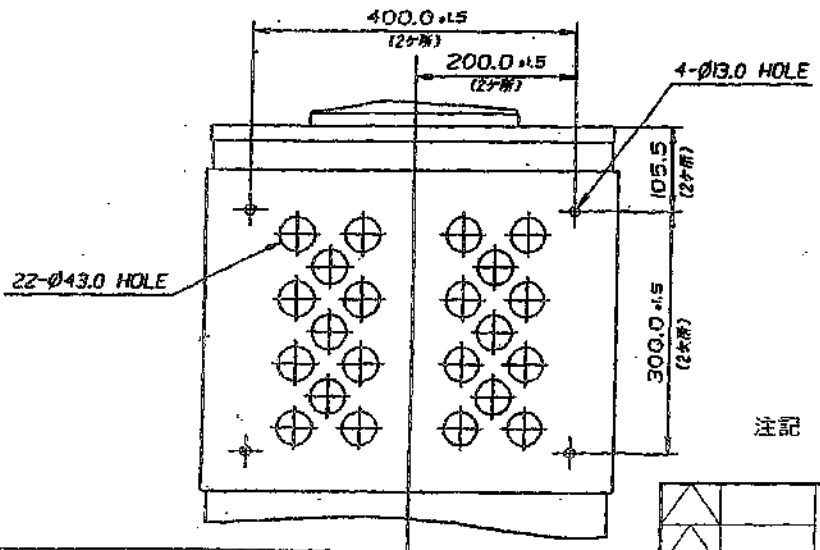
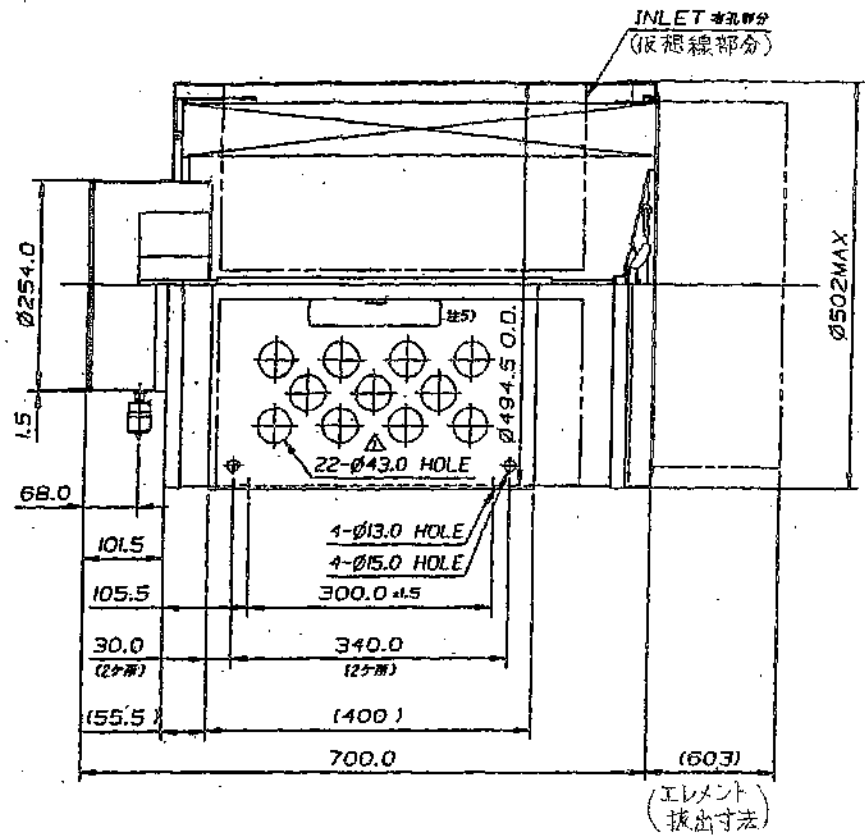
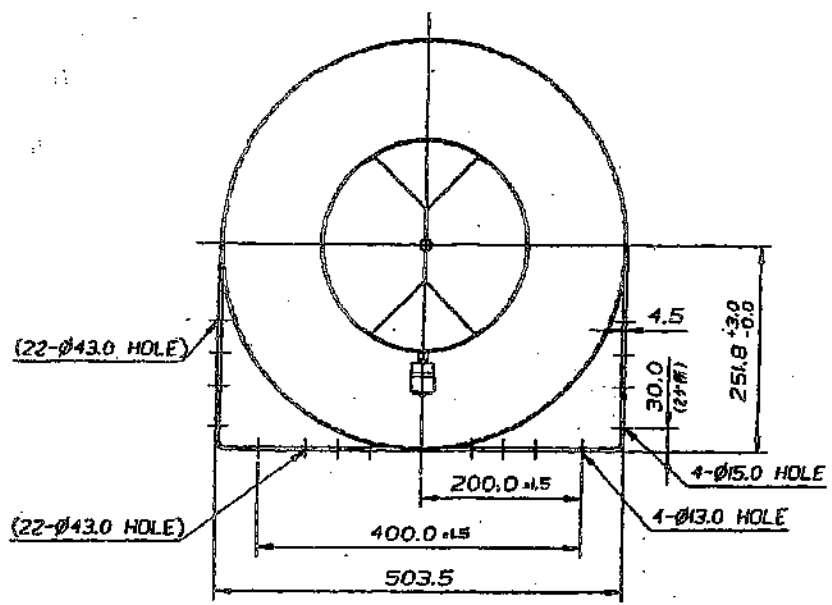
△	
△	
△	
REV.	DATE

HOSE, RUBBER

DWG. NO. S35-0711


 MITSUBISHI HEAVY INDUSTRIES, LTD.
 GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

CHECKED BY
Y. FUKUDA



注記 (1) 部番: 47220-47702 に対し、塗装を黒色にしたものである。

型式: EGB20
重量: 約 37.5 kg

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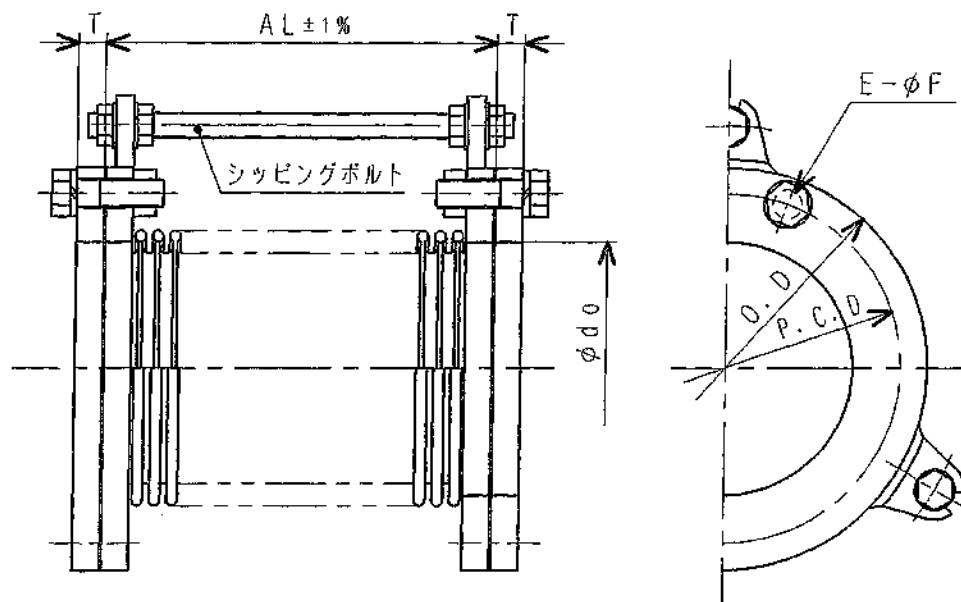
△	
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REV.	DATE

AIR CLEANER
PART NO. 47220-47702

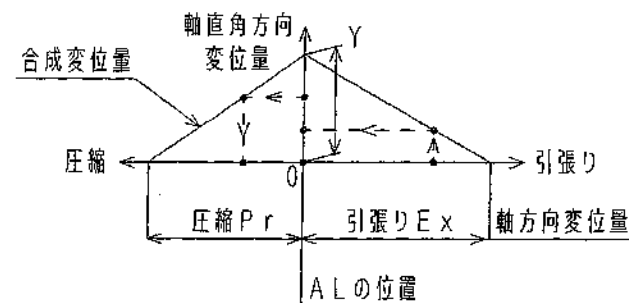
DWG. NO. S35-1032
MITSUBISHI HEAVY INDUSTRIES, LTD.
GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

CHECKED BY

Y. FUKUDA



- 注記 (1) 許容変位量はAL寸法からの最大圧縮、引張り、及び軸直角変位量を示す。
 (2) 各方向の変位が同時に作用する場合の許容変位量は、下図の合成変位量線を作図して求めた値とします。
 (3) 配管後シッピングボルト、ナットは取外すこと。
 (4) 取付寸法は、AL寸法とすること。



部 品 番 号	サイズ		主 要 寸 法						許容変位量 (mm)			ばね定数 (kgf/mm)		重量 (kg)
	(A)	(B)	φdo	T	O. D	P. C. D	E-φF	AL	Pr	Ex	Y	軸方向	軸直角方向	
47910-81100	150	6	166.6	18	265	230	8-19	210	29	22	16	6.4	10.3	32
47910-81200	200	8	218.0	20	320	280	8-23	230	33	20	14	6.9	14.5	46
47910-81300	250	10	269.5	22	385	345	12-23	280	42	13	15	9.0	18.5	63
47910-81400	300	12	321.0	22	430	390	12-23	370	55	17	23	11.3	17.6	70
47910-97100	350	14	358.1	24	480	435	12-25	335	60	22	16	18.6	27.0	87
47910-97200	400	16	409	24	540	495	16-25	335	60	22	14	21.0	39.0	105
47910-97300	450	18	460	24	605	555	16-25	335	60	22	12	23.5	54.9	125
47910-97400	500	20	511	24	655	605	20-25	335	60	44	14	17.9	154.2	143
47910-97500	550	22	562	26	720	655	20-27	335	60	44	13	19.6	202.3	182
47910-97600	600	24	613	26	770	715	20-27	335	60	44	12	21.3	259.4	193
47910-97700	650	26	664	26	825	770	24-27	430	105	19	16	15.3	143.7	217
47910-97800	700	28	715	26	875	820	24-27	430	105	19	15	16.4	177.8	228

仕 様

設計圧力	0.05MPa
設計温度	MAX. 600℃
用 途	排気ガス

REV.	DATE

FLEXIBLE PIPE

DWG. NO. S37-1021

MITSUBISHI HEAVY INDUSTRIES, LTD.
 GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

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