



SPECIFICATION
OF
MITSUBISHI DIESEL ENGINE
MODEL : S12R-PTAA2
(WITHOUT FAN)
FOR DIESEL GENERATOR SET
EMERGENCY APPLICATION

Used for 1500kVA generator

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MITSUBISHI HEAVY INDUSTRIES,LTD

							APPROVED BY	CHECKED BY	DRAWN BY
							橋口	井川	坂本
				△					
				DATE	2016/4/1				

1. DRAWINGS

NO.	DWG. NO.	DWG. NAME	REV.
1	38E96-00451	ENGINE OUTLINE	
2	37796-01010	JOINT DETAIL	
3	38E96-04051	WIRING DIAGRAM	
4	37796-14001	MOUNTING DETAIL	
5	37796-21001	FLYWHEEL & HOUSING DETAIL	
6	38E96-30352	AIR CLEANER	
7	37796-40001	OIL FILTER	
8	37796-43007	BREATHER	
9	38E96-46351	WATER HEATER PIPING	
10	37796-61312	FUEL RETURN PIPING	
11	37796-62002	FUEL FILTER	
12	37796-62112	FUEL INLET PIPING	
13	37796-63005	GOVERNOR	
14	38E96-66051	STARTING MOTOR	
15	38E96-68051	DYNAMO	
16	37796-71001	TURNING GEAR	
17	37796-87506	STOP & FUEL LIMIT SOLENOID	
18	38E96-90153	METER & SENSOR	
19	38E96-90251	ALARM SWITCH	
20	S35-5020	AIR CLEANER ASSY	
21	S11-0551	THERMO SWITCH	
22	S11-0796	PRESSURE SWITCH	
23	S11-1371	FILTER ALARM SWITCH	
24	S12-0014	WATER HEATER	
25	S13-0270	SOLENOID	
26	S13-0282	SOLENOID	
27	S13-1022	CONNECTOR	
28	S13-1042	CONTROLLER,SPEED	
29	S13-1761	ACTUATOR	
30	S13-2011	MAGNETIC PICK UP	
31	S13-2020	CABLE, PICK UP	
32	S14-0330	CONNECTOR	

NO.	DWG. NO.	DWG. NAME	REV.
33	S37-1021	FLEXIBLE PIPE	
34	S35-0701	HOSE,RUBBER	
35	S35-0711	HOSE,RUBBER	

2.TECHNICAL INFORMATION

NO.	ITEM. NO.	DWG. NAME	REV.
36	T0232-0003E	SPECIFICATION SHEETS	

3. GENERAL

Object and use	:	Diesel generator
Color of painting	:	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

Standard

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

4. PRINCIPAL PARTICULARS

Model	:	S12R-PTAA2
Type	:	4cycle stroke, water cooled diesel engine
Combustion chamber	:	Direct injection type
Aspiration	:	Turbocharged with after cooler
Number of cylinders	:	12-V
Bore × stroke	:	170mm × 180mm
Total displacement	:	49.03L
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. 2568 mm
	:	width Apx. 1435 mm
	:	Height Apx. 1592 mm
Dry weight (Approx.)	:	5350kg (without accessories)
Fuel oil	:	ASTM D975 No. 2 - D or BS 2869 class A1 ,A2
Lubricating oil	:	API service CF class or SAE15W-40

Output at ISO 3046 standard air conditions (25°C, 100kPa, 30% relative humidity)

Stand-by rating	:	1404kW/1500min ⁻¹
Prime rating	:	1277kW/1500min ⁻¹
Fuel consumption ratio at stand-by rating (allowance +5%)	:	TBD
Fuel consumption ratio at prime rating (allowance +5%)	:	TBD
Lub, oil consumption ratio at stand-by rating	:	Within 0.8g/kW-hr
Emission compliance	:	Not certified

5. 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 × 2pc

(2) Air intake system

Air cleaner	: DWG.NO.38E96-30352 , S35-5020 2pcs Paper element type with indicator (6.3kPa)
Turbocharger	: MITSUBISHI TD Type Model : TD13L
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 loose supply JIS 300A, L = 370mm, weight 70kg
Companion flange	: Not supply
Breather	: DWG.NO.37796-43007 Up side direction type For blow - off to outside of engine room

(4) Lubricating system

Oil pump	: Gear pump type
Capacity of oil pump	: 480L/min (at Engine Speed 1500min ⁻¹)
Lub. oil pressure	: 0.49~0.64 Mpa
Quantity of oil (Approx.)	: Oil pan full level : 150 L low level : 110 L Others (filter etc.) : 30 L Total : 180 L

- 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 : 1650 L/min (at Engine Speed 1500min⁻¹)
- Thermostat : Wax pellet type × 4pcs
Open at 71°C ~ 85°C
- Fan : Not supply(mounted on radiator)
Blet drive (Fan speed ratio i = 0.706)
- Jacket water heater
- Water heater piping : Install on common bed loose supply
DWG.NO.38E96-46351
- Water heater : 2.0kW, 3 phase, 220 ~ 480V
1 Phase, 110 ~ 480V
- Operation : Convection type, controlled by thermo switch
- Thermo switch : 42°C - off, 35°C - on
- Quantity of Coolant : Approx.125L (only Engine)
- Radiator : Not supply
- Radiator piping : Not supply
- (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 "PS6" without timer
- Feed pump : Piston type with priming pump
- Injection Nozzle : Hole type 0.325mm×10 holes
- Fuel filter : DWG, No.37796-62002
Paper element cartridge type filter mesh : 5 μ

(7) Control system

Governor	: DWG.NO.37796-63005 TOHO 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	: 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	: Not supply
Starting motor	: DWG.NO.38E96-66051 DC24V, 7.5KW × 2pcs Reduction type with relay to turn on electricity to solenoid coil The provided starting motor does not include the following function. Function to prevent energising of starting motor while engine is running
Auto magnetic engage relay	: Not supply

Current of starter	: Rush 1250A Cranking 400A (Ambient temp : 5°C, Lub. oil : SAE No. 30)
Fuel limit solenoid	: DWG.NO.37796-87506 DWG.NO.S13-0282 Fuel limit at engine starting Energized to fuel control until rated speed
Alternator	: DWG.NO.38E96-68051 DC28V, 55A, with voltage regulator
Connector for alternator	: Not supply
Recommended battery capacity	: DC24V, 400AH Not supply
Battery switch	: Not supply
(9) Stopping system	: DWG.NO.37796-87506
Automatic stop	Automatically shut - down by stop solenoid and electronic governor power off simultaneously
Stop solenoid	: DWG.NO.S13-0270 Energized to run type DC24V, 30.7A(pull), 0.58A(hold)
Manual stop	: By stop lever
(10) Safety device	
Alarm switches	: DWG.NO.38E96-90251
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.S11-1371 Piston type : 0.15 MPa switch on
Oil filter alarm lamp	: Not supply
Air filter alarm indicator	: Included in air cleaner assy Mechanical type : 6.2kPa switch on

(11) Meter and sensor

Meter and sensor	: DWG.NO.38E96-90153
Tachometer	: Not supply
Magnetic pick up	: DWG.NO.S13-2011 For tachometer, pin-joint type
Cable	: For magnetic pick up, Not supply
Thermometer	: For jacket water and lub. oil temp. Not supply
Pressure gage	: For lub. oil press. Not supply
Connector	: 2 poles for pressure gage loose supply DWG.NO.S14-0330
Thermometer	: For exhaust gas temp. Not supply

(12) Others

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

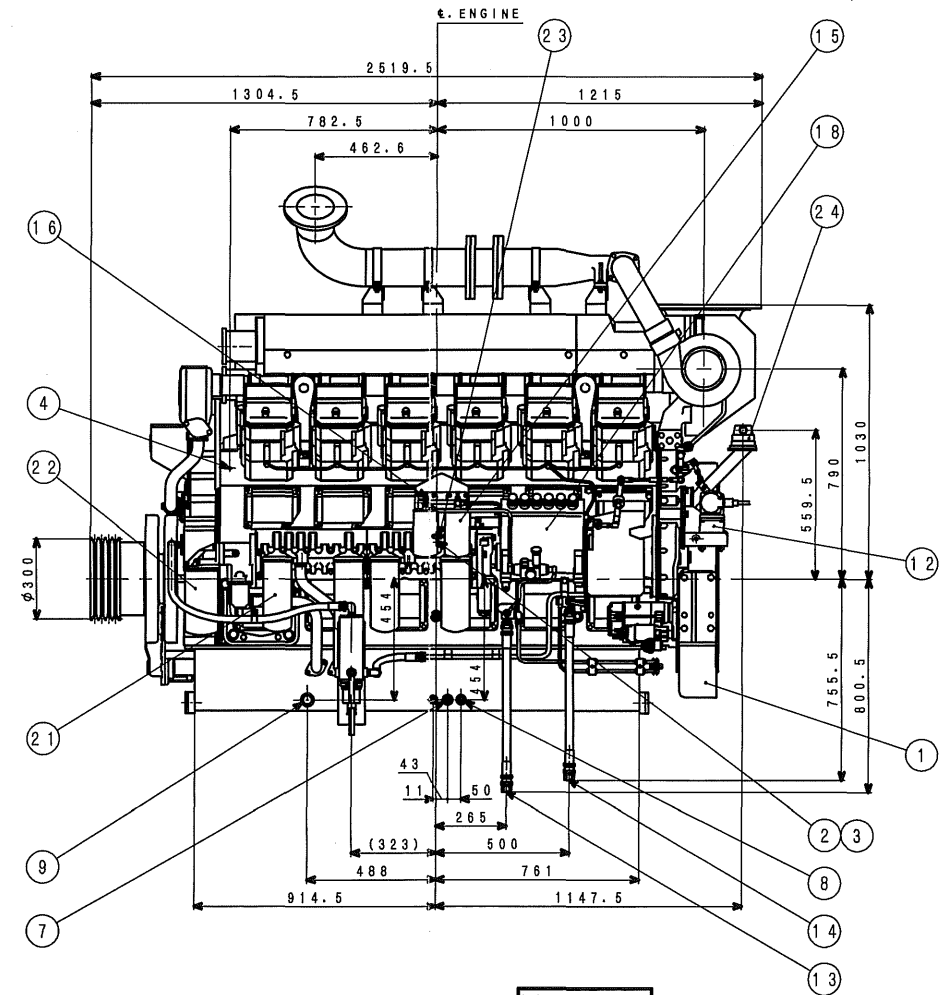
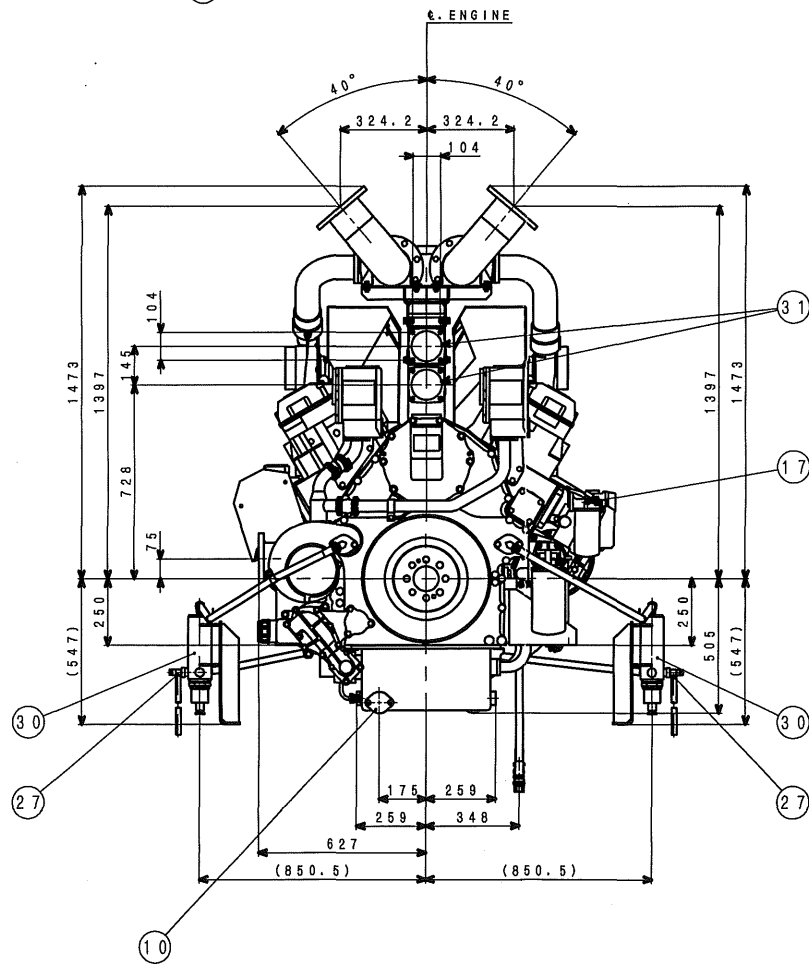
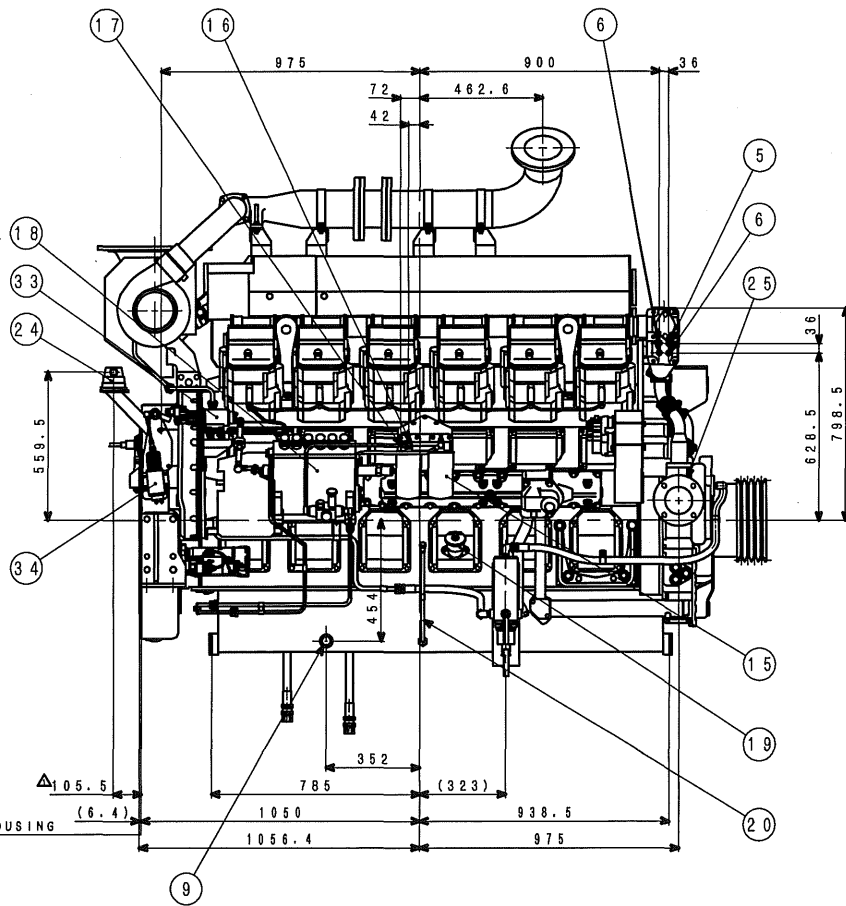
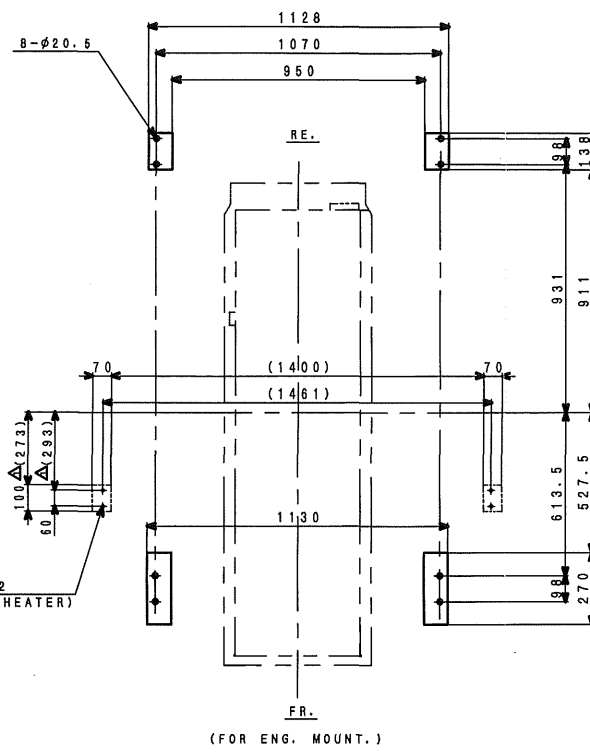
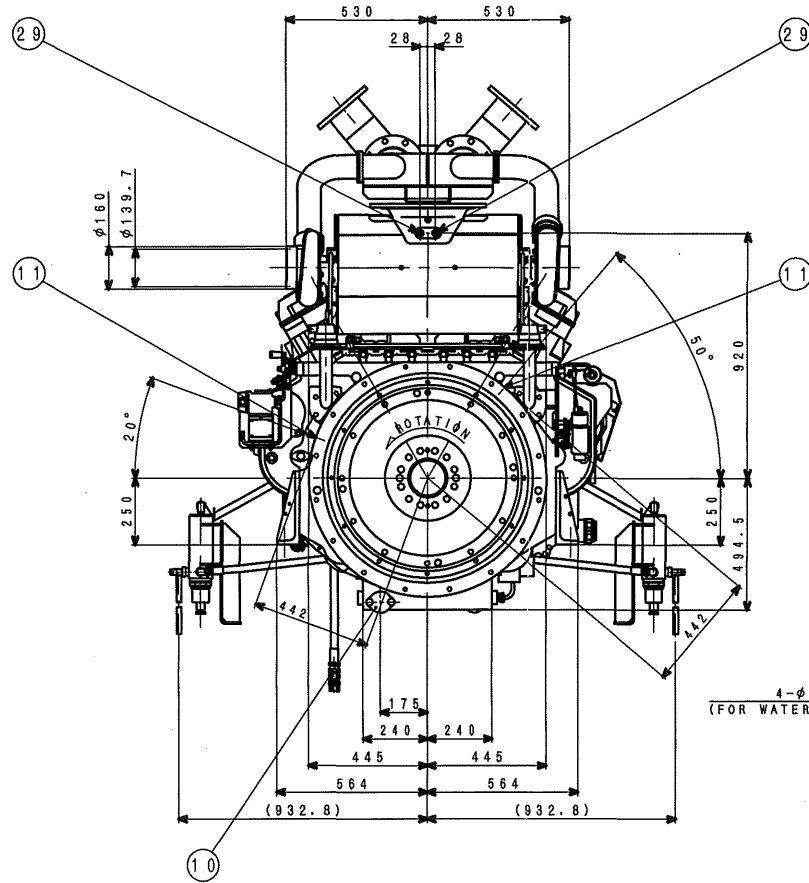
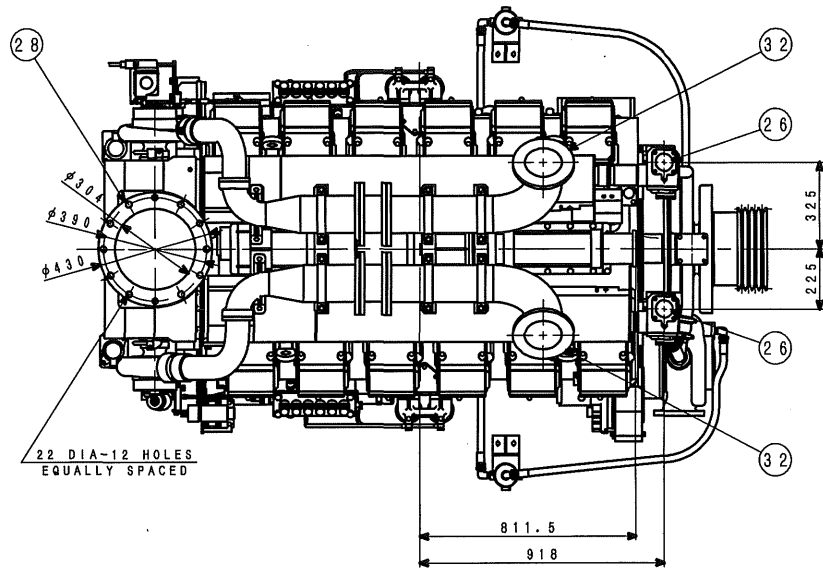
Declaration:

To maintain and optimize product performance and reliability, we will do some necessary change timely to product or parts in this specification without altering the basic parameters. If you need more information, please refer to our company's official website or consult us directly.

6. ACCESSORIES (Loose supply parts)

NO.	PARTS NO.	PATRS NAME	Q'TY	DWG.NO.	
1	38G30-07701	AIR CLEANER ASSY.	2	S35-5020	38E96-30352
2	47220-47600	HOSE,ELBOW	2	S35-0701	
3	47220-47300	HOSE,AIR	2	S35-0711	
4	47510-77300	PIPE, AIR	2		
5	05317-52001	CLAMP	4		
6	05317-52801	CLAMP	4		
7	38C32-06900	PIPE,FLEXIBLE	1	S37-1021	
8	45955-20160	HOSE	2		37796-43007
9	05317-50401	CLAMP	4		
10	04393-33820	HEATER, WATER	2	S12-0014	
11	47521-62901	CASE, HEATER	2		38E96-46351
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	STAY	1		
20	F2882-25000	CLIP	3		
21	F4300-01800	CLAMP	2		
22	F4656-15000	ELBOW	6		
23	F5006-21000	PLUG, TAPER	2		
24	45950-51700	PIPE,FLEXIBLE	1		
25	45950-11300	CONNECTOR	1		
26	45950-51700	PIPE,FLEXIBLE	1		37796-62112
27	45950-11300	CONNECTOR	1		
28	04410-33100	CONTROLLER	1	S13-1042	37796-63005
29	04410-32902	CONNECTOR, ACTUATOR	1	S13-1022	
30	04410-43500	CABLE, PICK UP	1	S13-2020	
31	MH052231	CONNECTOR	1	S14-0330	38E96-90153

NO.	PARTS NAME	SIZE	REFERENCE
1	FLYWHEEL & HOUSING		37796-01001
2	OIL PRESS. GAGE UNIT JOINT	Rc1/8	37796-01010
3	OIL PRESS. SWITCH JOINT	Rc1/8	
4	OIL PRESS. SWITCH JOINT	Rc3/8	
5	THERMOMETER UNIT JOINT	Rc1/2	
6	THERMOSWITCH JOINT	Rc1/2	
7	OIL PAN (A) JOINT	M16x1.5	
8	OIL PAN (B) JOINT	M20x1.5	
9	OIL PAN (C) JOINT	M36x1.5	
10	OIL PAN (D) JOINT		
11	PICKUP JOINT	5/8-18UNF	37796-01010
12	GOVERNOR		
13	FUEL INLET PIPE JOINT	Rc3/4	37796-01010
14	FUEL RETURN PIPE JOINT	Rc3/4	37796-01010
15	FUEL FILTER		
16	FUEL PRESS. SWITCH JOINT	M14x1.5	37796-01010
17	FUEL PRESS. SWITCH JOINT	Rc3/8	37796-01010
18	FUEL INJECTION PUMP		
19	OIL FILLER		
20	OIL LEVEL GAGE		
21	OIL FULL-FLOW FILTER		
22	OIL BY-PASS FILTER		
23	OIL BY-PASS ALARM SWITCH		37796-01010
24	BREATHER		
25	WATER INLET PIPE JOINT	90A	
26	WATER OUTLET PIPE JOINT		37796-01010
27	WATER DRAIN COCK		
28	EXHAUST FLANGE	300A	
29	THERMOMETER, EX. JOINT	G3/4	37796-01010
30	WATER HEATER	Rc1/2	
31	AIR INLET JOINT(FROM A/C)		37796-01010
32	AIR OUTLET JOINT(TO A/C)	125A	37796-01010
33	STOP SOLENOID		
34	RACK LIMIT SOLENOID		



ENGINE SPEED	1800
TURBO CHARGER	TD13L-48QRC-47

(4) THE GOVERNOR ON THIS DRAWING IS ELECTRIC GOVERNOR.
 (3) THIS ENGINE NEEDS WATER HEATER.
 (2) FAN & AIR TO AIR COOLER ARE OUT OF SUPPLY.
 THOSE SHOULD BE PREPARED BY D/G SET MANUFACTURER.
 NOTES (1) THIS DRAWING SHOWS S12R-PTAA2.

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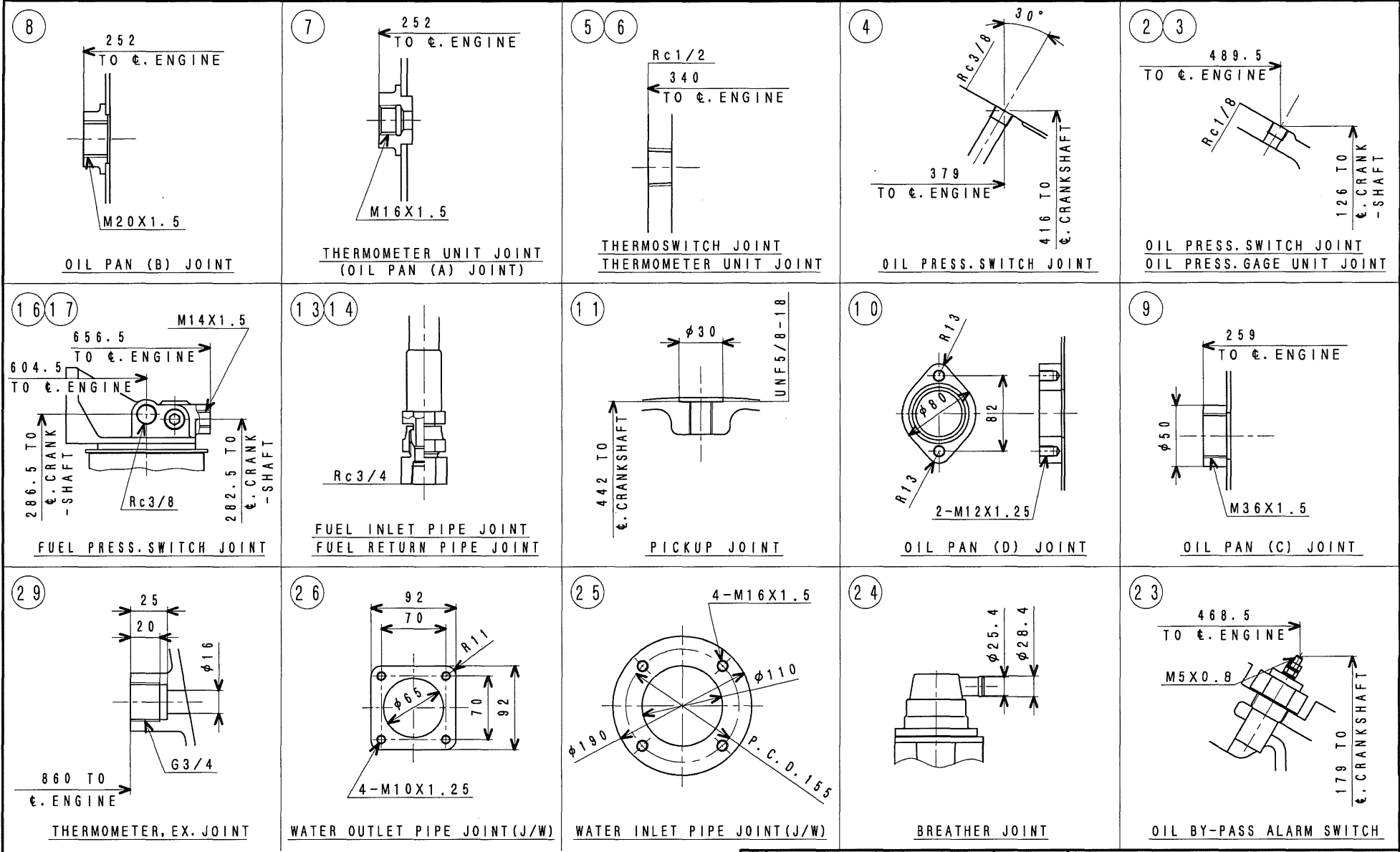
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S12R-PTAA2
 DIESEL ENGINE

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

図番 38E96-00451

W/C



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NOTE (1) ALL SYMBOLS ARE INDICATED IN S12R-PTAA2 DIESEL ENGINE 37796-00402.

注記 (1) 本図は、S12R-PTAA2 外觀図番号：37796-00402のジョイント詳細図である。

CHG	ED-NO	DATE	CHK
1	4590-H646	'13.12.27	谷戸
認可 APPD	橋	換図 CHK	谷戸
		製図 DRN	村田
			2012. 3. 1

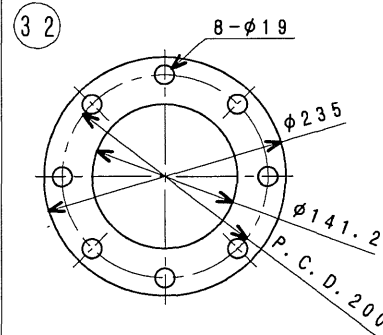
3rd ANGLE PROJECTION
尺度 SCALE

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 VEHICLES.
図面番号 DRAWING No. 37796-01010 1/2

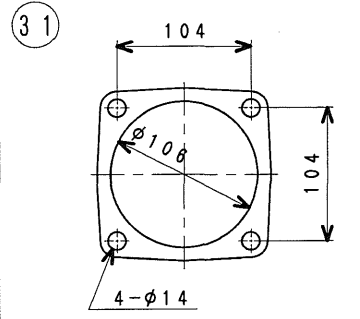
旧引
汎特
2014
1.17

M/C

3 新図 サイズ A 3
① 組立図
2 透視図
5 切削品
3 板金溶接品
4 組立品
6 その他(購入品)



32 AIR OUTLET JOINT (TO A/C)



31 AIR INLET JOINT (FROM A/C)

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CHG	EO-NO	DATE	CHK
1	4590-H646	13.12.27	谷戸
認可 APPD	橋	検図 CHK	谷戸
		製図 DRN	村田
2012. 3. 1			

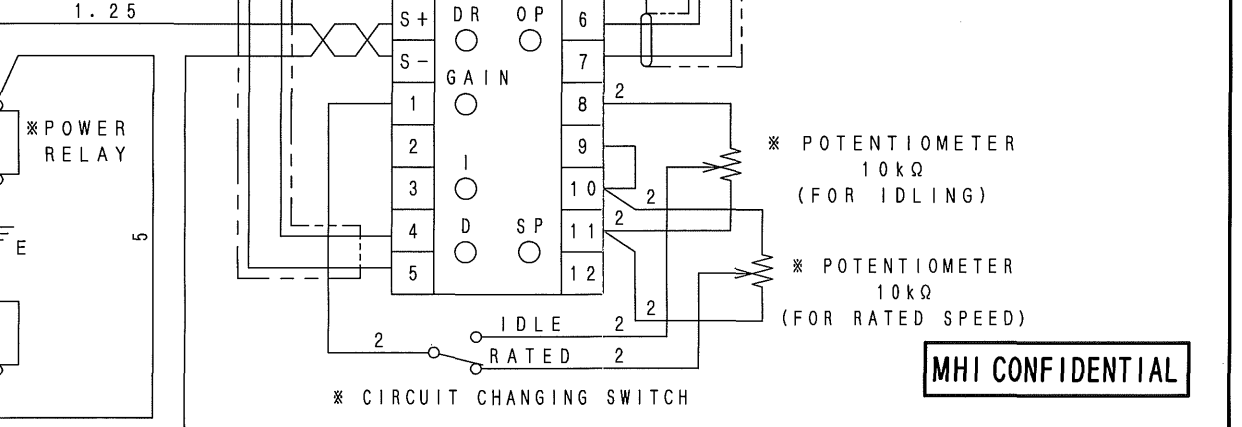
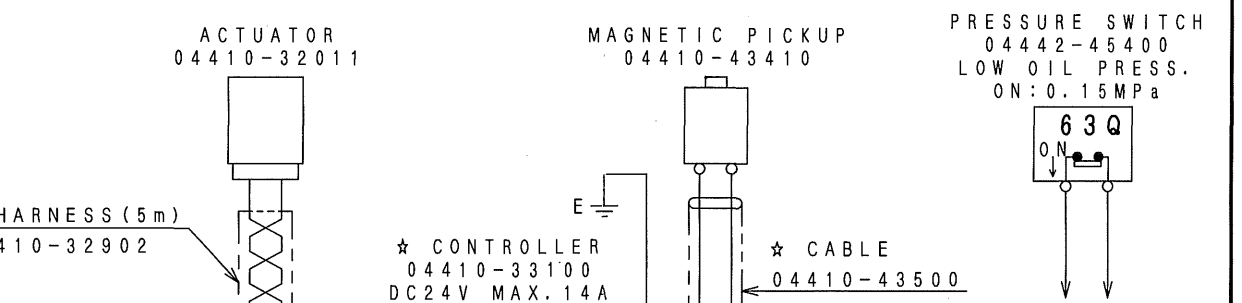
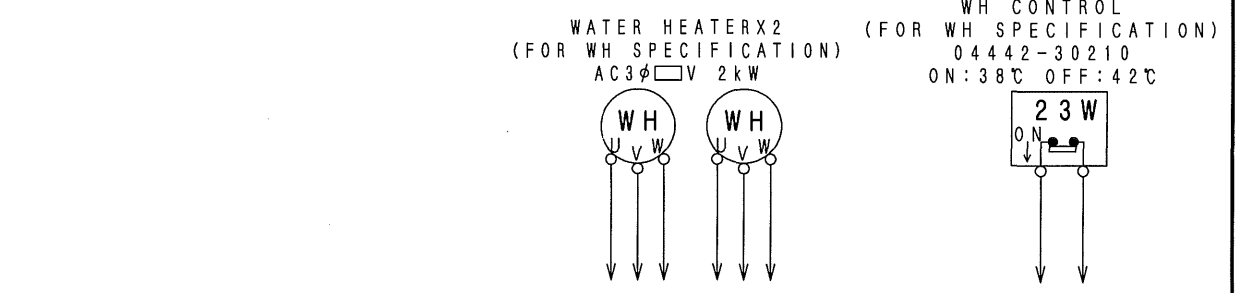
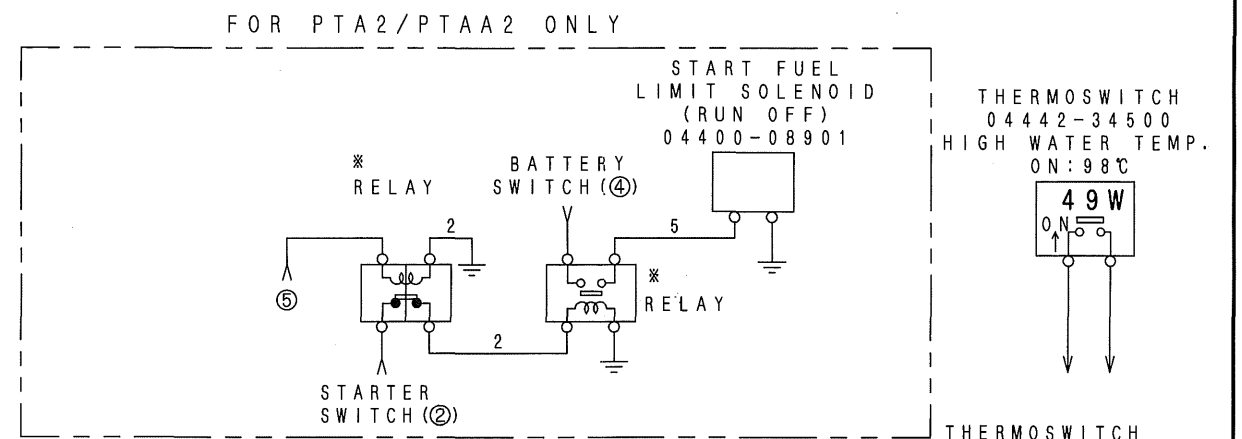
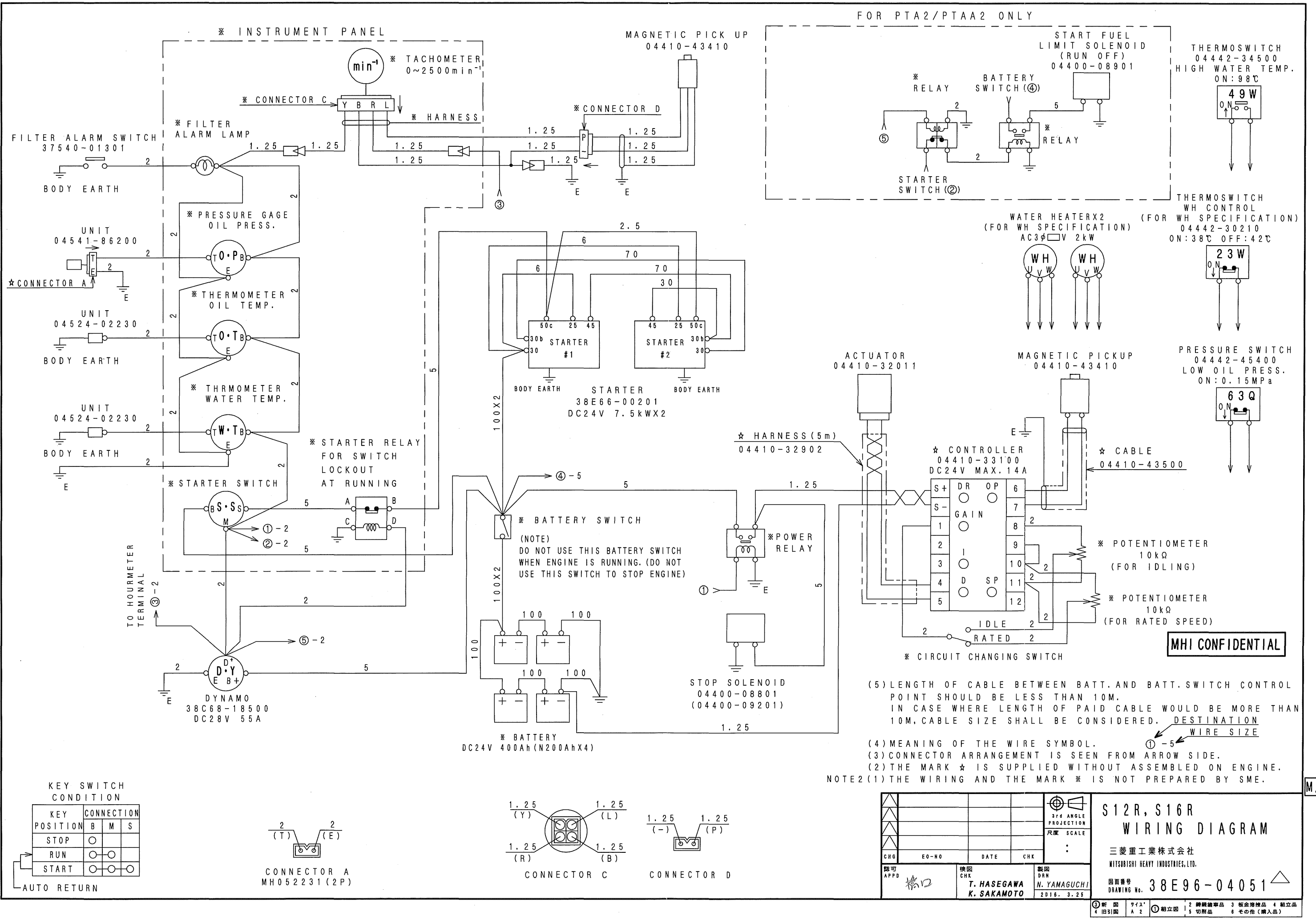
3rd ANGLE PROJECTION
尺度 SCALE

S12R
JOINT DETAIL
三菱重工業株式会社 汎用機・特車事業本部
WITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINERY & SPECIAL VEHICLES.
図面番号 DRAWING No. 37796-01010 2/2

旧引
汎特
2014
1.17

M/C

3 新図 サイズ A 3
④ 旧引図
2 鋳鋼部品
5 切削品
3 板金溶接品
6 その他(購入品)
4 組立品



(5) 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. DESTINATION WIRE SIZE

(4) MEANING OF THE WIRE SYMBOL. ①-5

(3) CONNECTOR ARRANGEMENT IS SEEN FROM ARROW SIDE.

(2) THE MARK * IS SUPPLIED WITHOUT ASSEMBLED ON ENGINE.

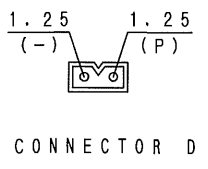
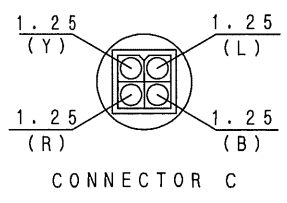
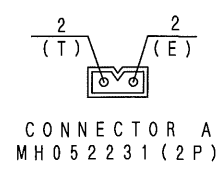
NOTE (1) THE WIRING AND THE MARK * IS NOT PREPARED BY SME.

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KEY SWITCH CONDITION

KEY POSITION	B	M	S
STOP	○		
RUN	○	○	
START	○	○	○

AUTO RETURN



CHG	EO-NO	DATE	CHK
図訂 APPD	換図 CHK	製図 DRH	製図 DRH
櫻口	T. HASEGAWA	N. YAMAGUCHI	2016. 3. 25
	K. SAKAMOTO		

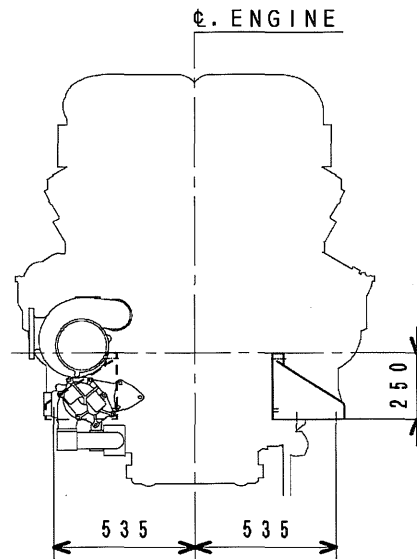
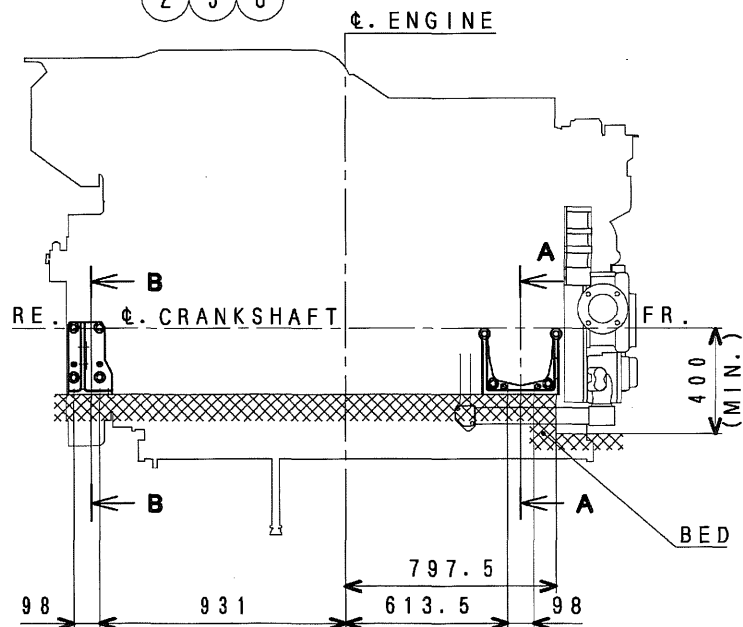
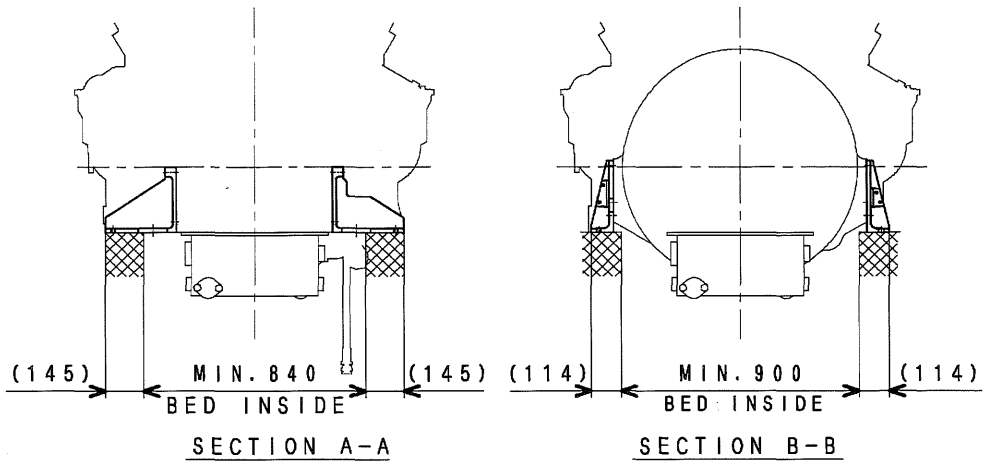
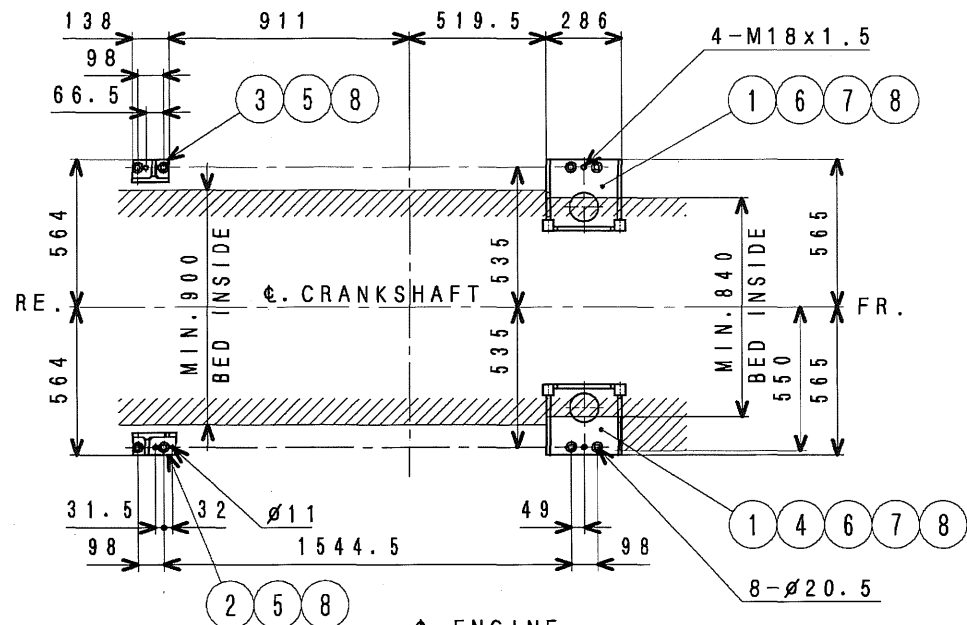
S12R, S16R
WIRING DIAGRAM

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

図面番号
DRAWING No. 38E96-04051

M/C

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



8	33401-02600	WASHER	16
7	F1035-20075	BOLT	4
6	F1035-20050	BOLT	3
5	F1035-20045	BOLT	8
4	F1035-20035	BOLT	1
3	37714-42100	BRACKET, MTG. L	1
2	37714-32200	BRACKET, MTG. R	1
1	37714-20100	BRACKET, MTG. FR	2
No.	PARTS NO.	PARTS NAME	Q' TY

注記 (1) 本図は、マウンティングセンターハイトC=250用である。

MHI CONFIDENTIAL

3	4590-H414	'12.11.16	谷戸
2	4590-E890	'08.10.3	齊藤
1	4590-5475	'99.8.6	福田
CHG	EO-NO	DATE	CHK
認可 APPD	橋	検回 CHK	竹 福 谷 田
		製図 DRN	谷 銅 戸 島
		1997. 9. 4	

S12R

MOUNTING

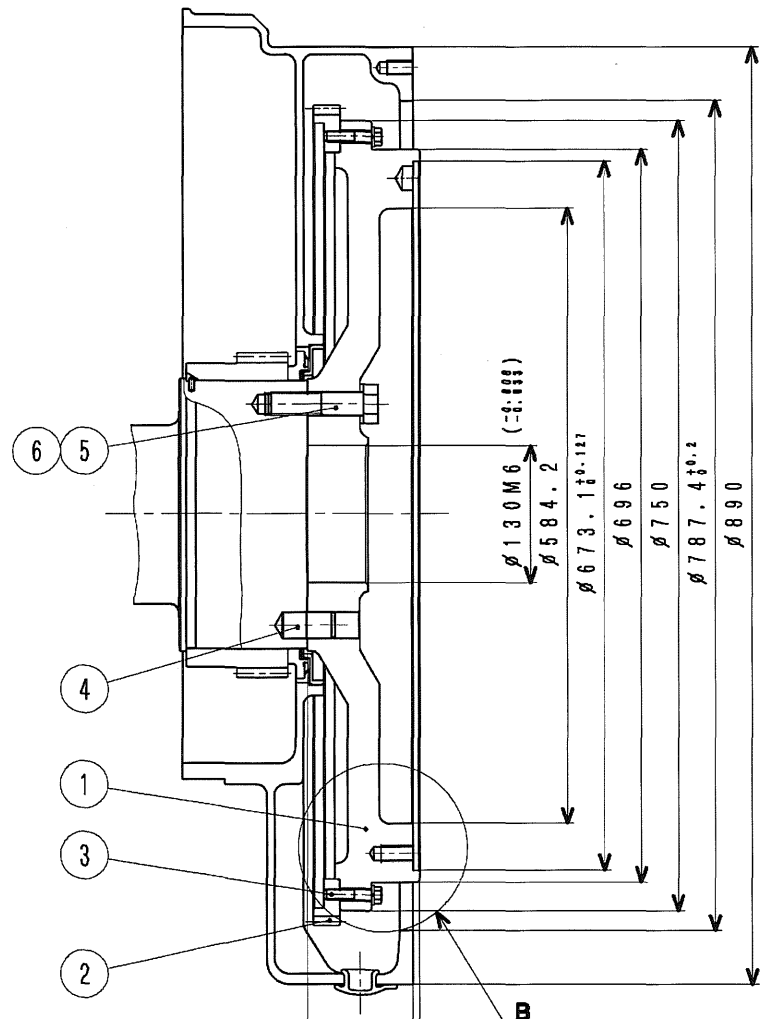
三菱重工業株式会社 汎用機・特車事業本部
MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS.

図面番号 37796-14001

3 新図 ① 旧引図 ② 組立図 ③ 切替品 ④ 相立品 ⑤ 切替品 ⑥ その他(購入品)

旧引
汎特
2013
2.8

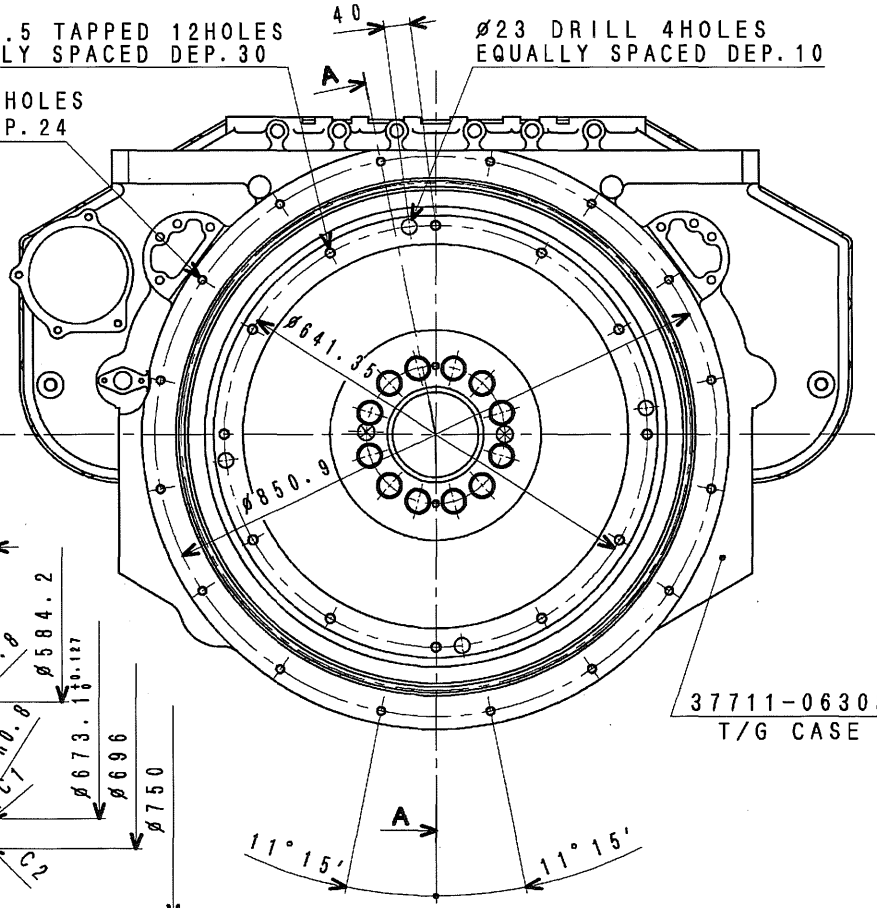
M/C



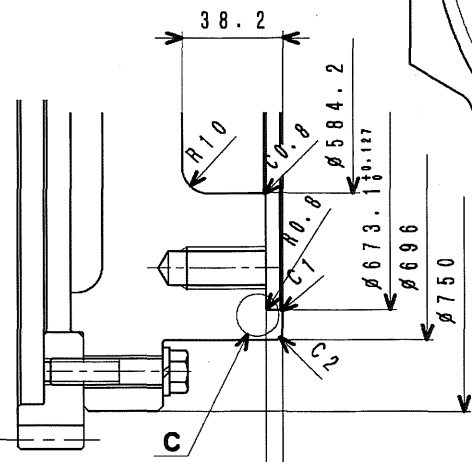
949.9 TO ϕ . ENGINE 106.5
 1050 TO ϕ . ENGINE 6.4
 1056.4 TO ϕ . ENGINE

SECTION A-A

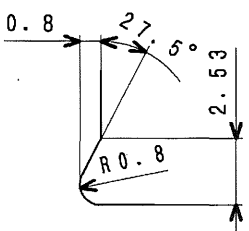
M16x1.5 TAPPED 12HOLES
 EQUALLY SPACED DEP. 30
 M14x1.5 TAPPED 16HOLES
 EQUALLY SPACED DEP. 24



37711-06303
 T/G CASE



DETAIL B



DETAIL C

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
No.	PARTS NO.	PARTS NAME	Q' TY

MHI CONFIDENTIAL

4	4590-D566	'07. 9. 4	斉藤
3	4590-A708	'05. 3. 24	浅沼
2	4591-0260	'03. 9. 12	福田
5	4590-G643	'11. 3. 24	斉藤
CHG	ED-NO	DATE	CHK
認可 APPD	橋	換図 CHK	竹 福 谷 田
		製図 DRN	谷 斉 戸 藤
		1997. 9. 22	

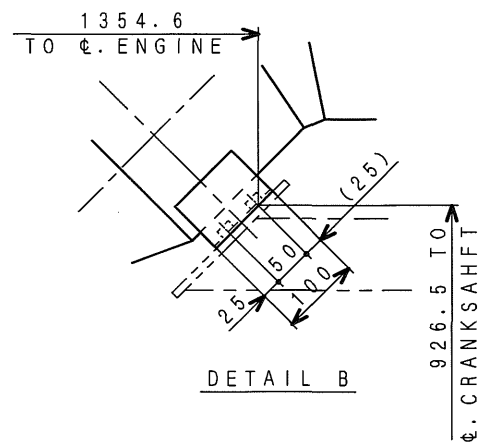
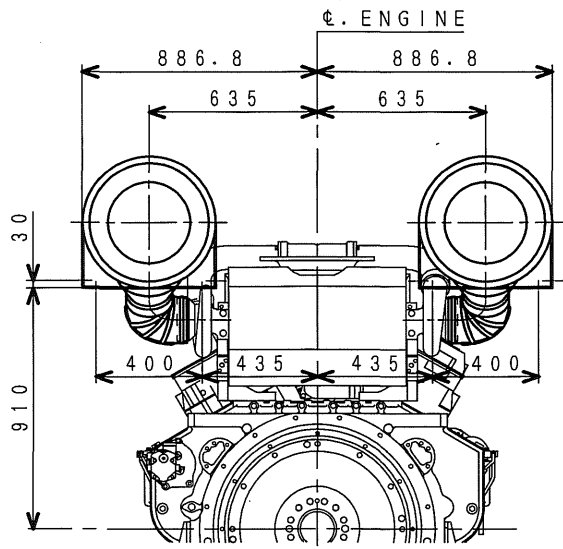
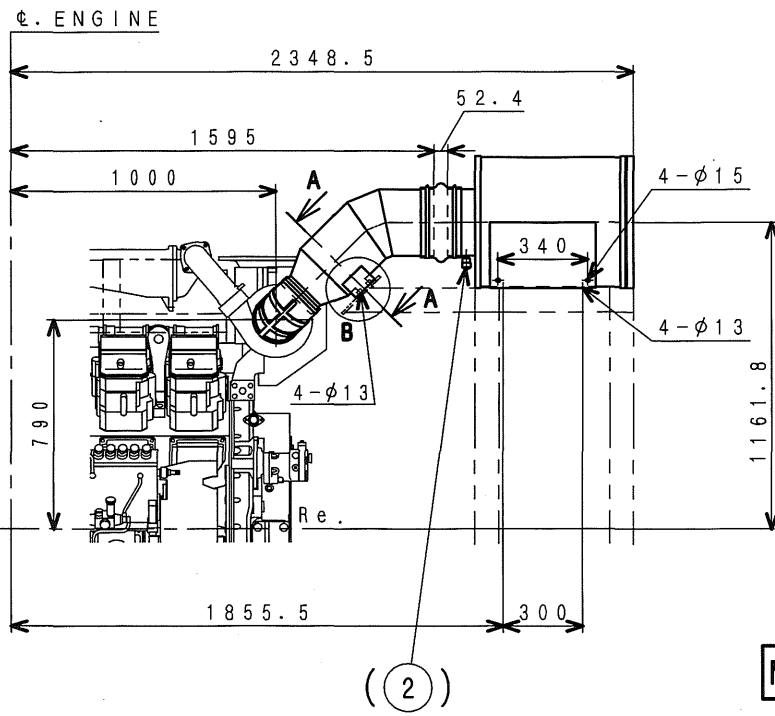
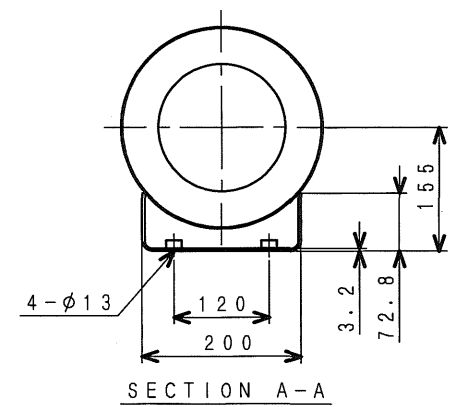
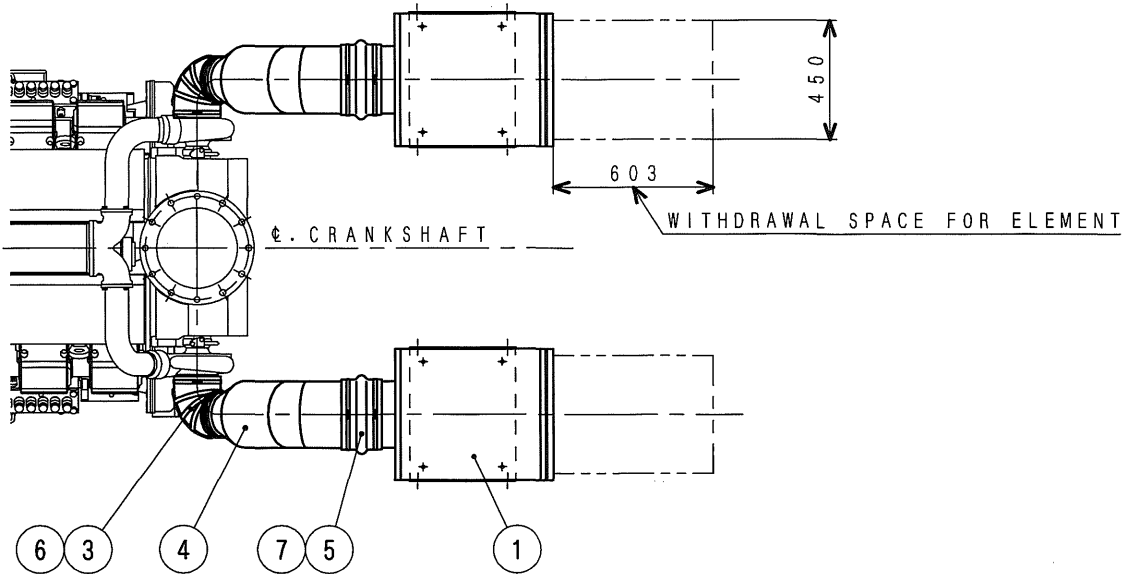
S12R
 FLYWHEEL & HOUSING
 三菱重工業株式会社 汎用機・特車事業本部
 MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS.
 図面番号 37796-21001

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、SAE J620c 21inフライホイール及びSAE 617b NO. 00フライホイールハウジングに準拠する。

旧引
 汎特
 2011
 5.23

FULL-CAD

3 新図 4 サイズ 1 組立図 2 諸般部品 3 板金溶接品 4 組立品
 ① 旧引図 A 3 5 初刷品 6 その他(購入品)



☆	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	(INCLUDED IN A/C)	INDICATOR	2
☆	1	38G30-07701	AIR CLEANER ASSY	2
	No.	PARTS NO.	PARTS NAME	Q'TY

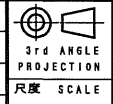
MHI CONFIDENTIAL

(2) THIS AIR CLEANER IS AH-495001 TYPE PRODUCED BY ADRINDO.

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

CHG	EO-NO	DATE	CHK

認可 APPD	検図 CHK T. HASEGAWA K. SAKAMOTO	製図 DRN N. YAMAGUCHI 2016. 3. 25
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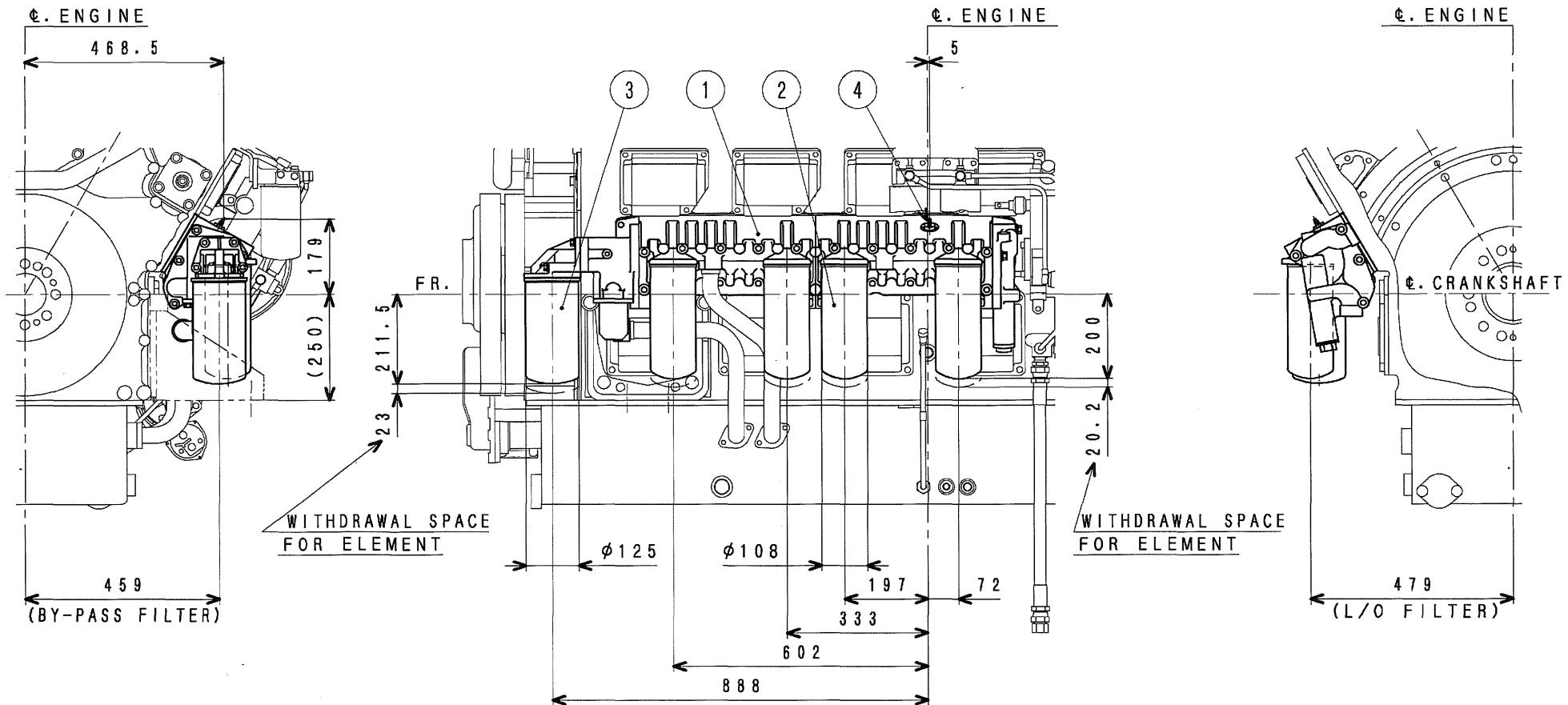
S12R-PTA2, -PTAA2
AIR CLEANER

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

図面番号
DRAWING No. 38E96-30352

M/C

③ 新図	サイズ	① 相立図	2 辦辦繪準品	3 板金溶接品	4 組立品
4 旧引図	A 3	5 切削品	6 その他(購入品)		



No.	PARTS NO.	PARTS NAME	Q'TY
4	37540-01301	ALARM, OIL FILTER	1
3	37540-02100	BY-PASS FILTER CARTRIDGE	1
2	37540-11100	ELEMENT, L/O, CTRG	4
1	37740-60010	OIL FILTER ASSY. L.H-P	1

MHI CONFIDENTIAL

CHG	EO-NO	DATE	CHK
4	4590-H415	'12.11.16	谷戸
3	4590-E892	'08.10.3	齊藤
2	4590-B016	'05.3.24	浅沼
5	4590-H522	'13.12.27	谷戸

認可 APPD	橋	検図 CHK	谷戸	製図 DRN	村田
					1991.12.13

S12R
LUB. OIL FILTER
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 VEHICLES.
図面番号 37796-40001

注記 (1) 本図は、標準4連オイルフィルタ装着図である。

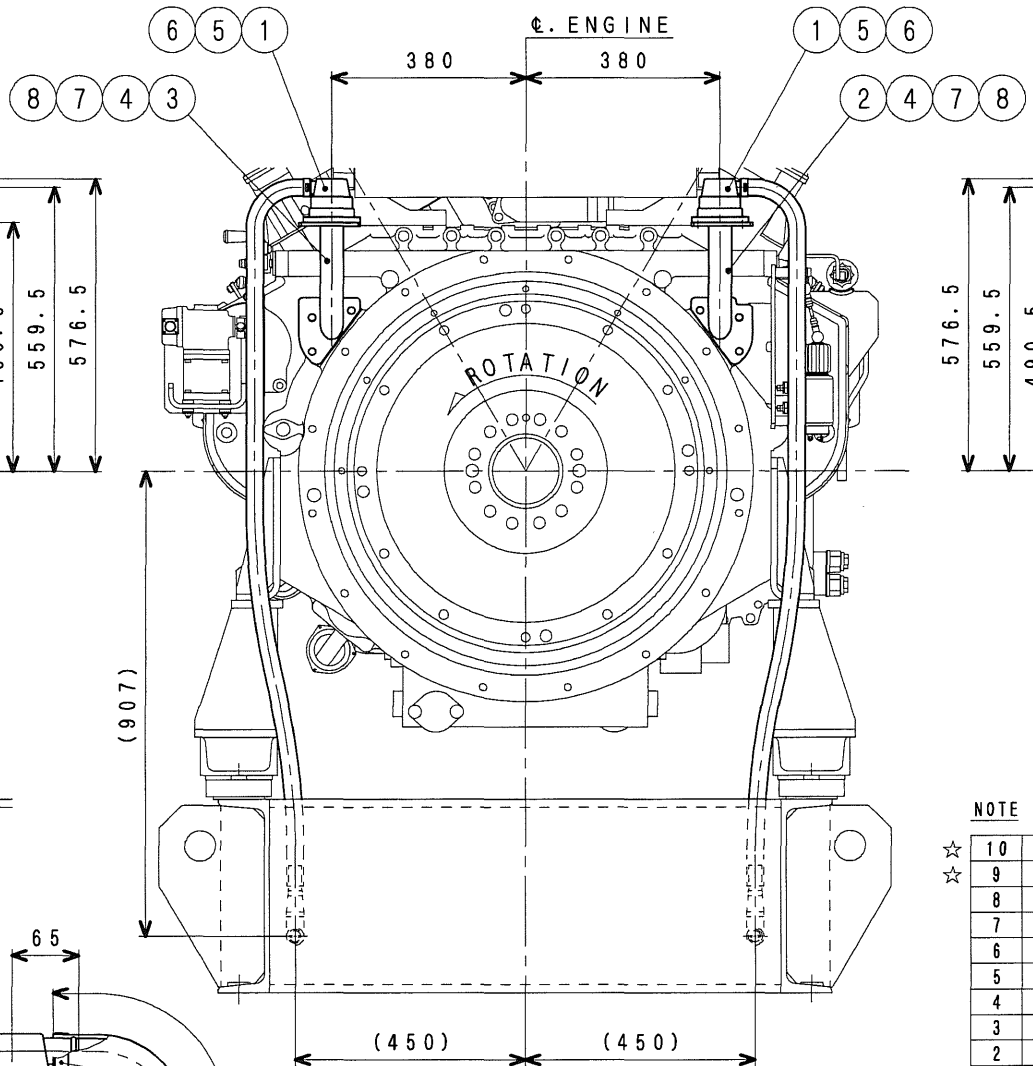
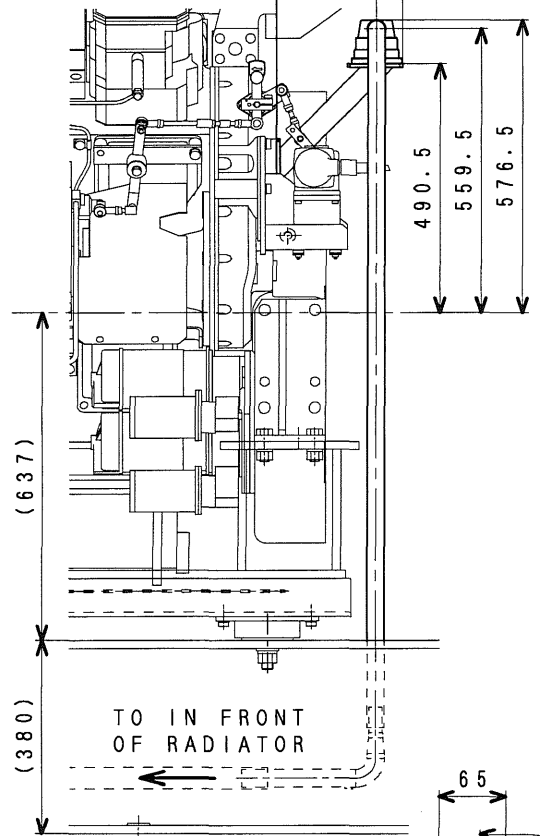
CHG	EO-NO	DATE	CHK
1	4590-5321	'99.6.10	福田

3 新図 サイズ A 3
4 旧引図
1 組立図
2 鋳造部品
3 板金溶接品
4 組立品
5 切削品
6 その他(購入品)

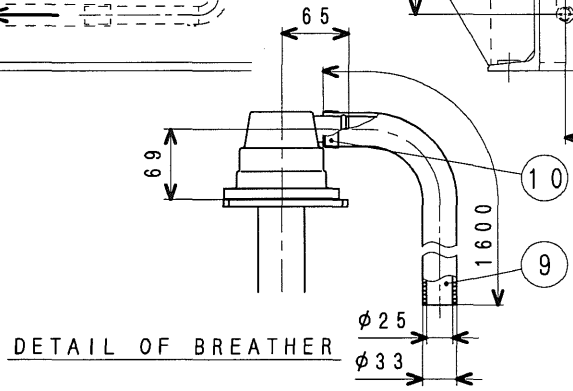
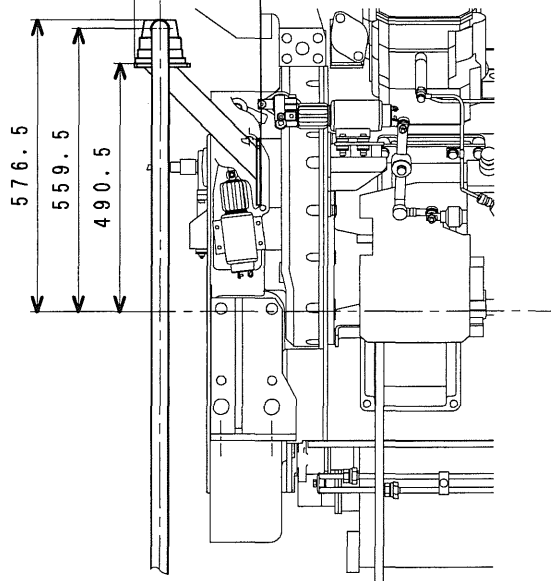
旧引
汎特
2014
1.17

M/C

1197.5 TO ϕ . ENG.
 1147.5 TO ϕ . ENG.
 952.5 TO ϕ . ENG. 1



1197.5 TO ϕ . ENG.
 1147.5 TO ϕ . ENG.
 952.5 TO ϕ . ENG. 1



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

☆	No.	PARTS NO.	PARTS NAME	Q'TY
☆	10	05317-50401	CLAMP	4
☆	9	45955-20160	HOSE, VINYL	2
☆	8	F2500-12000	WASHER, PLAIN	6
☆	7	F1805-12020	BOLT	6
☆	6	F1825-10030	BOLT	4
☆	5	45R43-40401	PACKING	2
☆	4	37711-13200	PACKING	2
☆	3	37743-14200	PIPE, BREATHER LH	1
☆	2	37743-14100	PIPE, BREATHER RH	1
☆	1	36243-10010	BREATHER ASSY.	2

MHI CONFIDENTIAL

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

CHG	ED-NO	DATE	CHK
橋	4590-H437	'12.12.6	谷戸
APPD	橋	CHK	竹
			福
			田
			谷
			戸
			1999. 6. 22

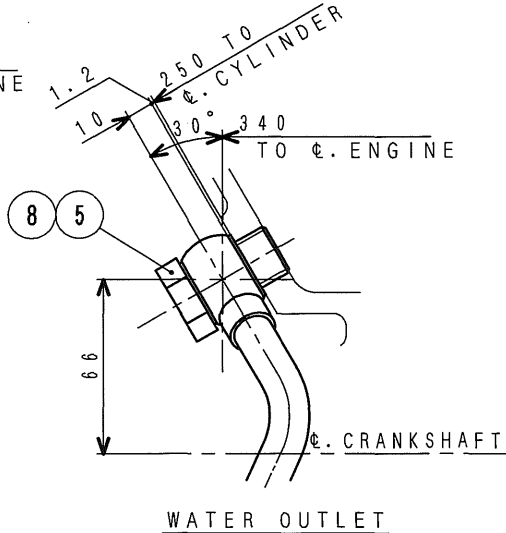
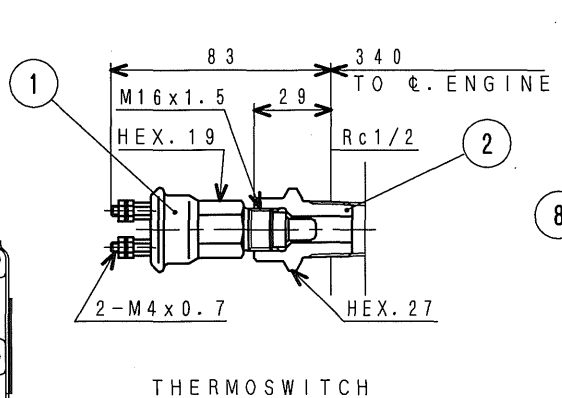
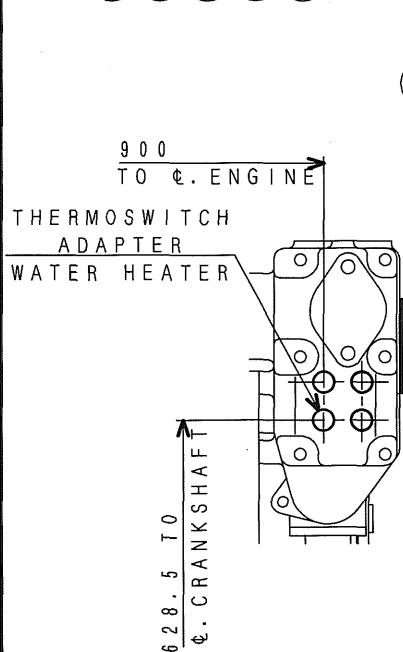
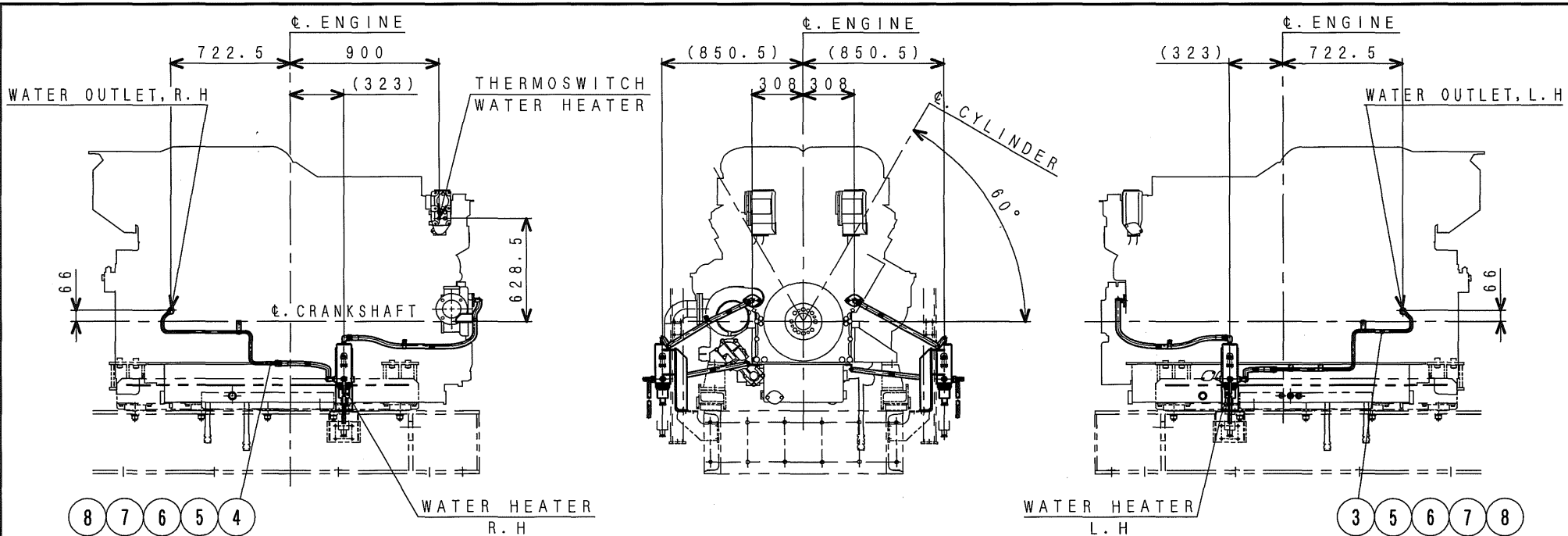
3rd ANGLE PROJECTION
 尺度 SCALE

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 HEADQUARTERS.
 図面番号 37796-43007

旧引
 汎特
 2013
 2.8

M/C

3 新図 4 組立図 5 切削品 6 その他(購入品)
 サイズ A 3



8	F4610-20000	BOLT, EYE	2
7	F2515-12000	WASHER, SPRING	2
6	F1035-12060	BOLT	2
5	05946-02001	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
認可 APPD	検図 CHK	製図 DRN	
	T. HASEGAWA K. SAKAMOTO	N. YAMAGUCHI	2016. 3. 25

3rd ANGLE PROJECTION
尺度 SCALE

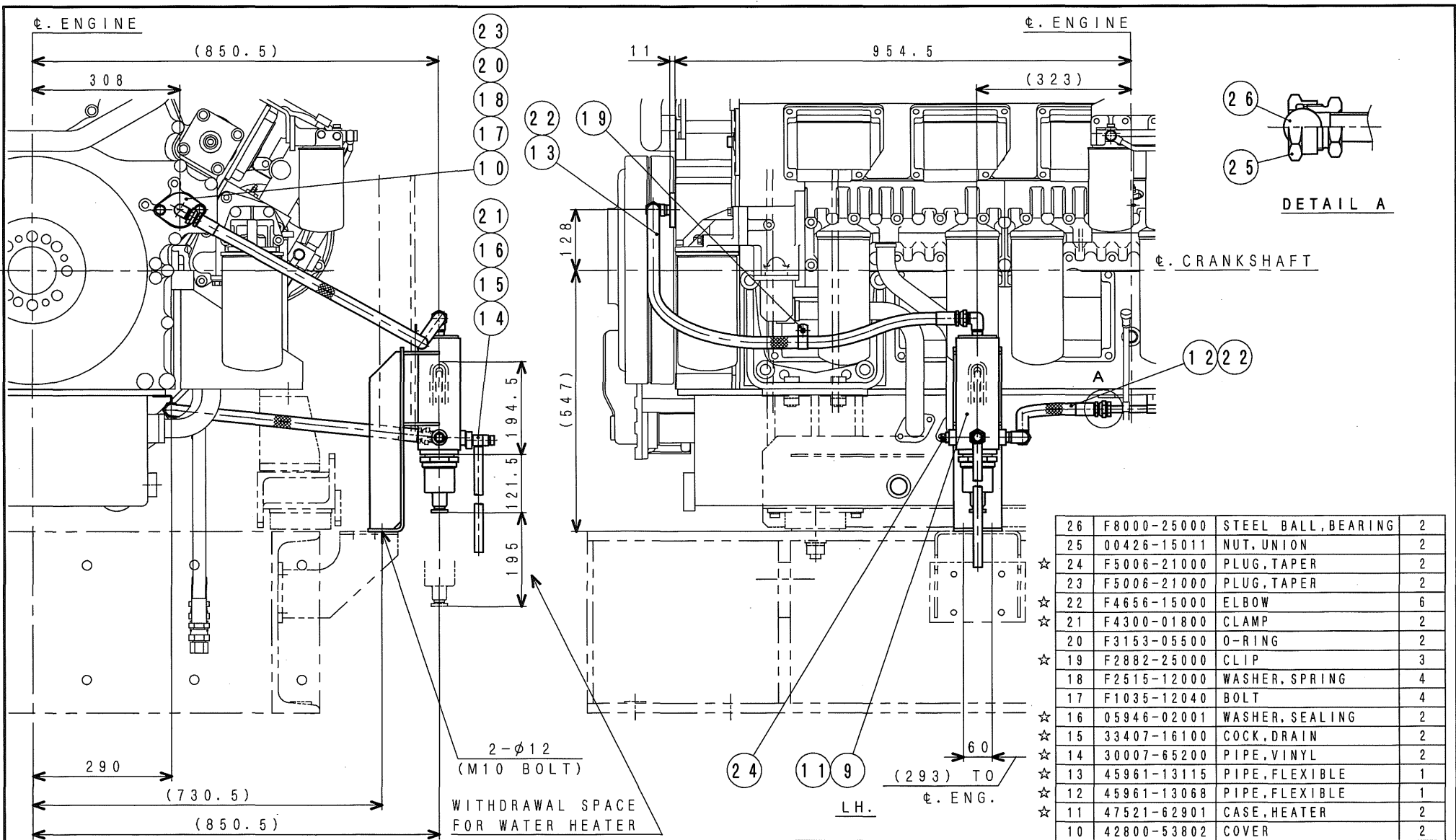
S12R-PTAA2
WATER HEATER PIPING

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

図面番号
DRAWING No. 38E96-46351 1/3

①新図 ②サイズ ③組立図 ④2階級標準品 ⑤板金溶接品 ⑥組立品 ⑦4階級品 ⑧5階級品 ⑨その他(購入品)

M/C



26	F8000-25000	STEEL BALL, BEARING	2
25	00426-15011	NUT, UNION	2
★ 24	F5006-21000	PLUG, TAPER	2
23	F5006-21000	PLUG, TAPER	2
★ 22	F4656-15000	ELBOW	6
★ 21	F4300-01800	CLAMP	2
20	F3153-05500	O-RING	2
★ 19	F2882-25000	CLIP	3
18	F2515-12000	WASHER, SPRING	4
17	F1035-12040	BOLT	4
★ 16	05946-02001	WASHER, SEALING	2
★ 15	33407-16100	COCK, DRAIN	2
★ 14	30007-65200	PIPE, VINYL	2
★ 13	45961-13115	PIPE, FLEXIBLE	1
★ 12	45961-13068	PIPE, FLEXIBLE	1
★ 11	47521-62901	CASE, HEATER	2
★ 10	42800-53802	COVER	2
★ 9	04393-XXXXX	HEATER, WATER	2
No.	PARTS NO.	PARTS NAME	Q'TY

MHI CONFIDENTIAL

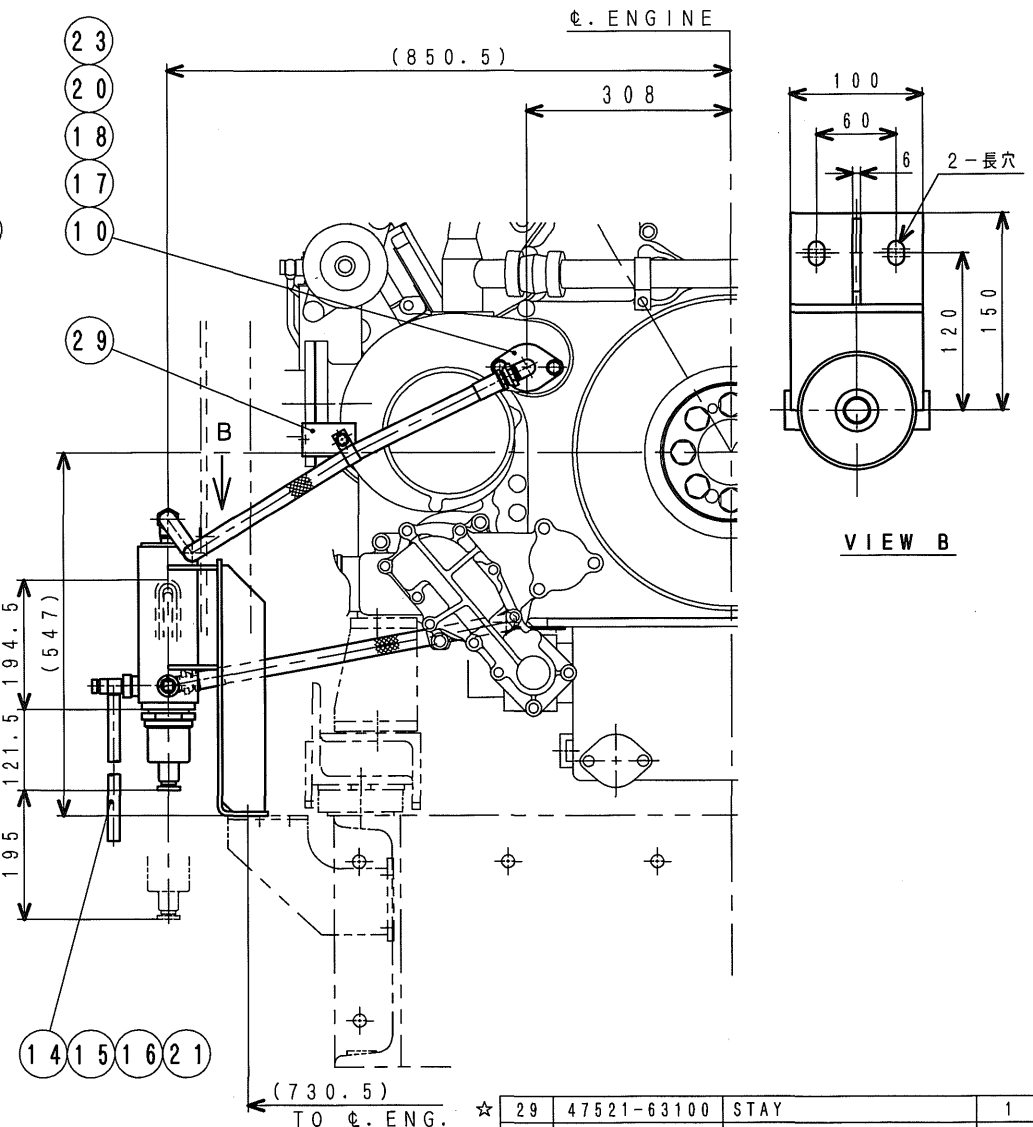
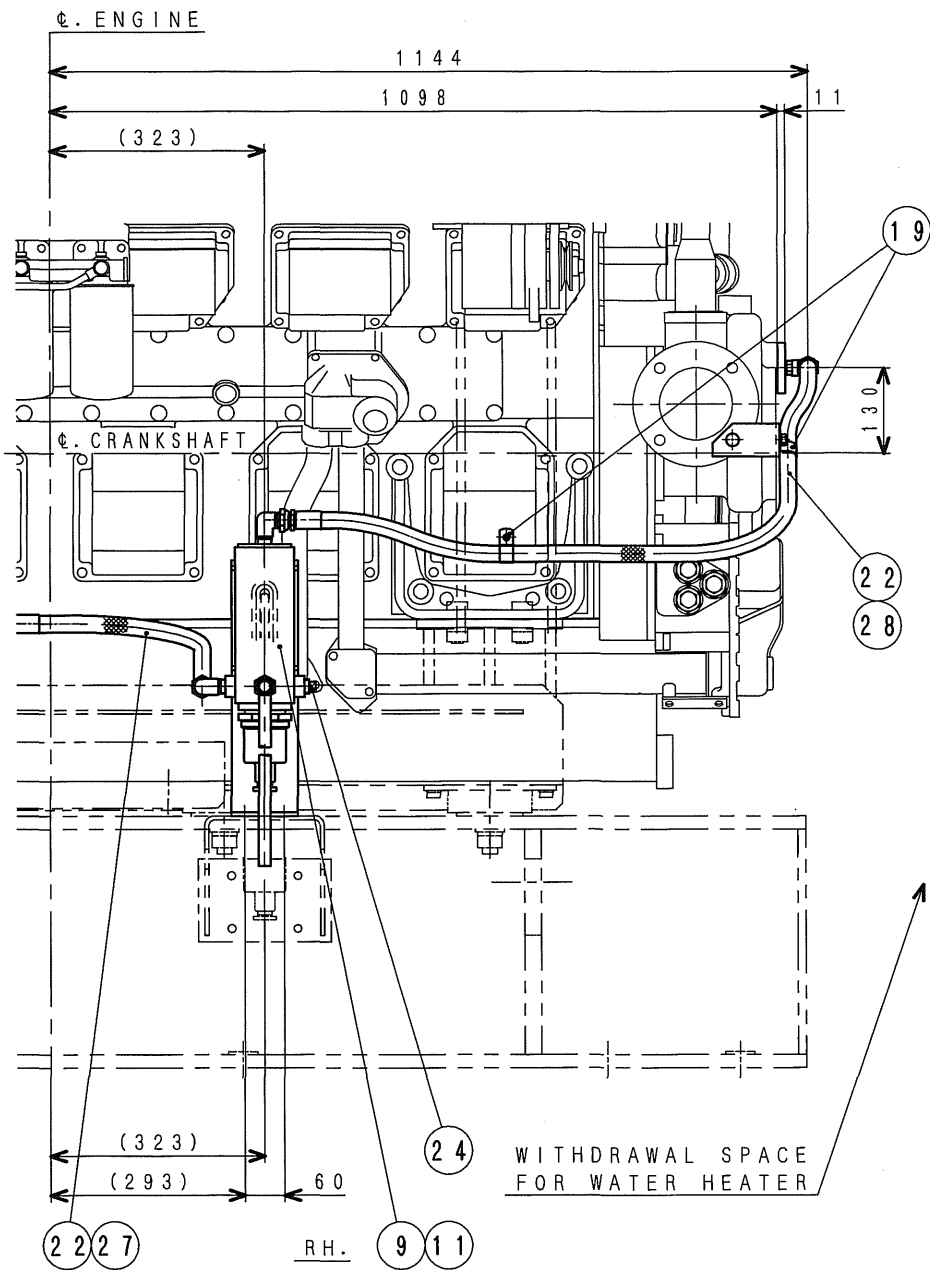
(2) THESE PARTS (23) AND (25), (26) ARE PLUGS FOR WATER HEATER PIPING.
 NOTES (1) THE ☆ MARKED PARTS ARE LOOSE SUPPLY.

CHG	EQ-NO	DATE	CHK
認可 APPD	検図 CHK	製図 DRN	
	T. HASEGAWA K. SAKAMOTO	N. YAMAGUCHI	2016. 3. 25

S12R-PTAA2
WATER HEATER PIPING
 三菱重工業株式会社
 MITSUBISHI HEAVY INDUSTRIES, LTD.
 図面番号 **38E96-46351**
 DRAWING No. **38E96-46351** 2/3

① 新図 ② サイズ ③ 相立図 ④ 2 辦辦單品 ⑤ 3 板金溶接品 ⑥ 4 相立品
 ⑦ 4 旧引図 ⑧ A 3 ⑨ 1 相立品 ⑩ 5 切削品 ⑪ 6 その他(購入品)

M/C



☆	29	47521-63100	STAY	1
☆	28	45961-13154	PIPE, FLEXIBLE	1
☆	27	45961-13074	PIPE, FLEXIBLE	1
No.	PARTS NO.		PARTS NAME	Q'TY

MHI CONFIDENTIAL

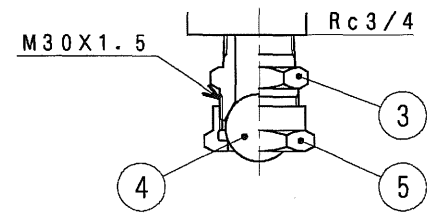
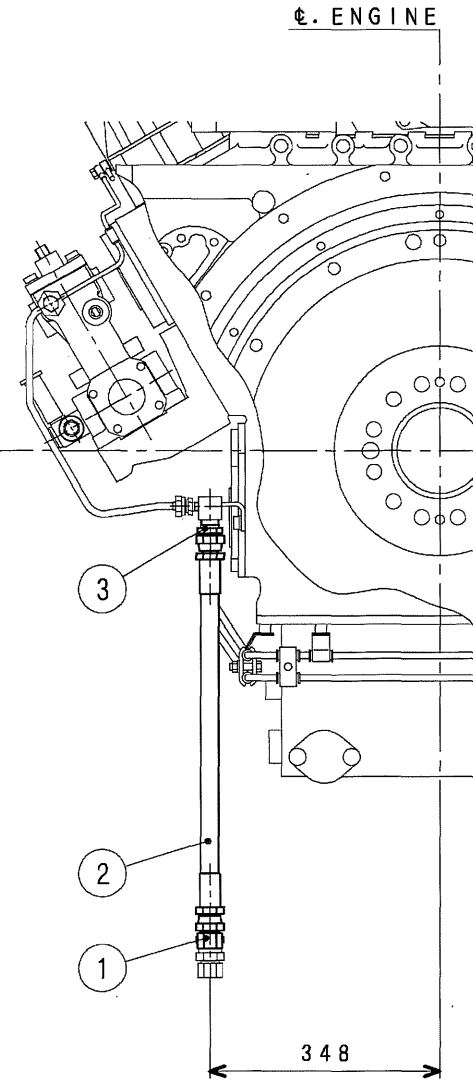
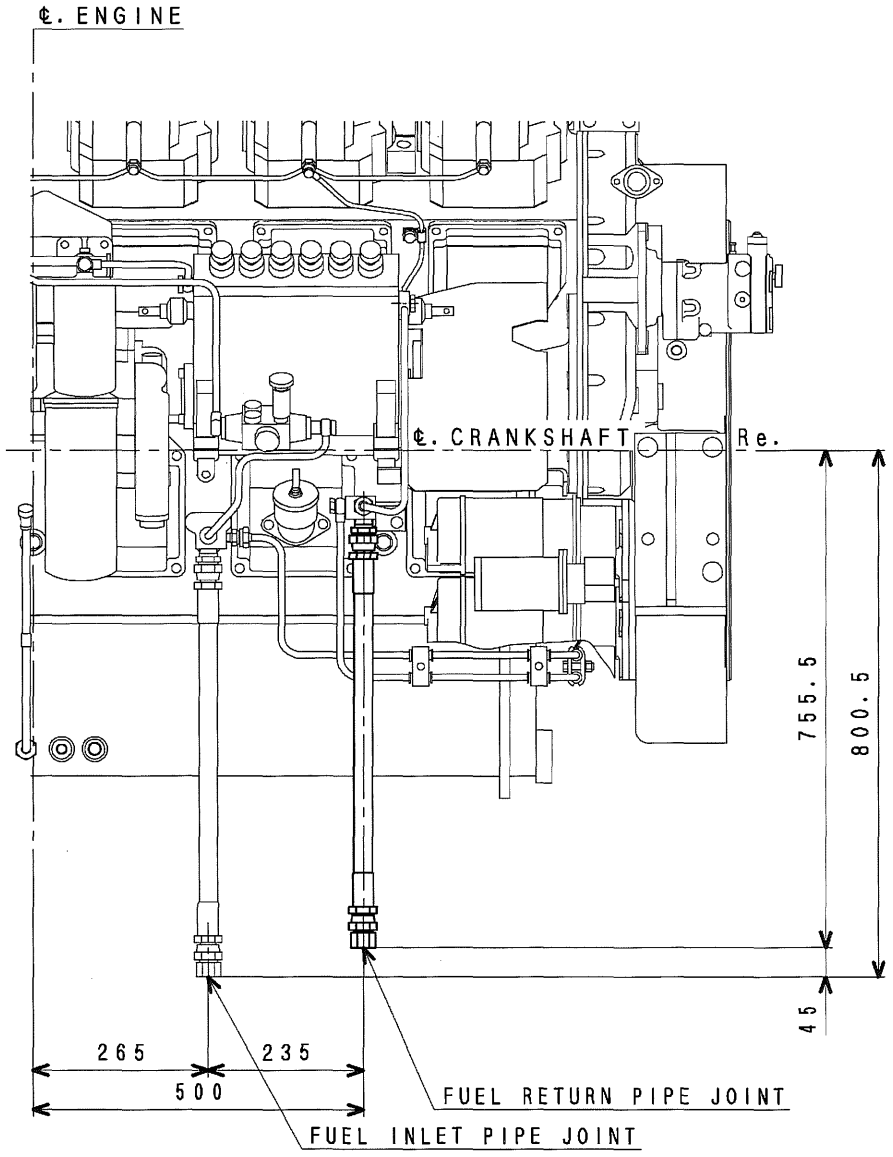
CHG	EO-NO	DATE	CHK
認可 APPD	検図 CHK	製図 DRN	
	T. HASEGAWA K. SAKAMOTO	N. YAMAGUCHI 2016. 3. 25	

S12R-PTAA2
 WATER HEATER PIPING
 三菱重工業株式会社
 MITSUBISHI HEAVY INDUSTRIES, LTD.
 図面番号
 DRAWING No. 38E96-46351

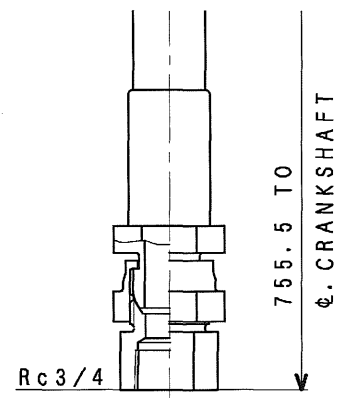
NOTE (1) THE ☆ MARKED PARTS ARE LOOSE SUPPLY.

① 新図	② 組立図	③ 2 鋳造部品	④ 3 板金溶接品	⑤ 4 組立品
② 旧引図	③ 組立図	④ 5 切削品	⑤ 6 その他(購入品)	

M/C



FUEL RETURN PIPE JOINT



FUEL RETURN PIPE JOINT

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

NO.	PARTS NO.	PARTS NAME	Q'TY
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

L.H.

MHI CONFIDENTIAL

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送品としたものである。
 (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)

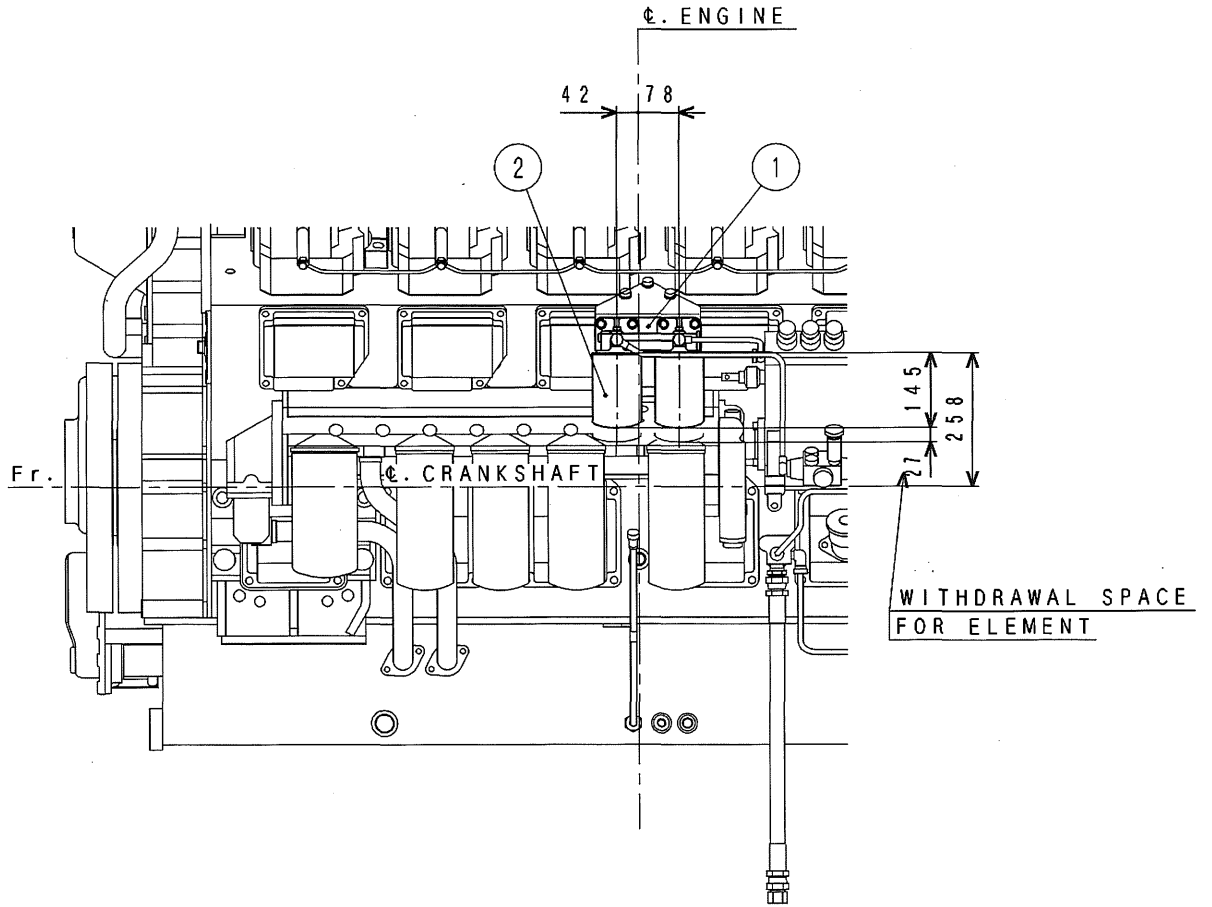
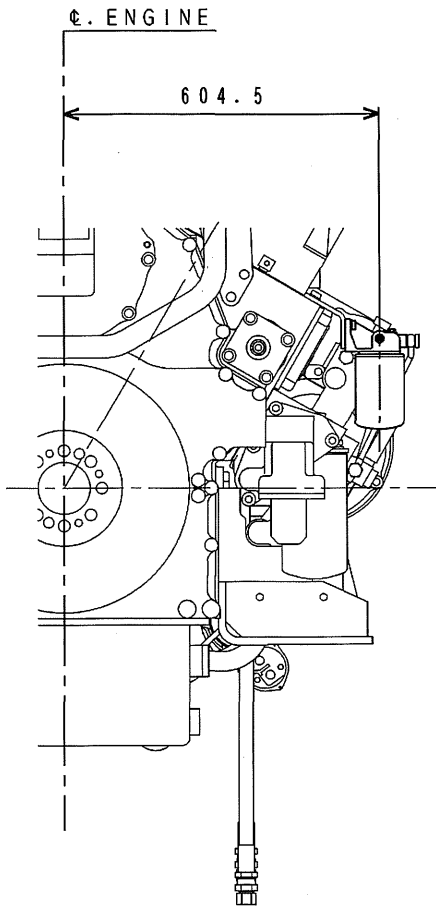
CHG	EO-NO	DATE	CHK	製図 DRN
認可 APPD	橋	検図 CHK	三 上 戸	浅 沼
				2008.12.9

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.

出図
 汎特
 2008
 12.10

FULL-CAD

① 新図 ② 訂正 ③ 組立図 ④ 2 種破線品 ⑤ 3 種破線品 ⑥ 4 種立品
 ⑦ 4 旧引図 ⑧ A 3 ⑨ 組立図 ⑩ 5 種破線品 ⑪ 6 種破線品 ⑫ 7 種破線品



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	福田	
CHG	EO-NO	DATE	CHK	
認可 APPD	清国	検図 CHK	竹谷 福田	製図 DRN
			谷 戸 島	1998. 2. 2

3/4 ANGLE
PROJECTION
尺度 SCALE

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

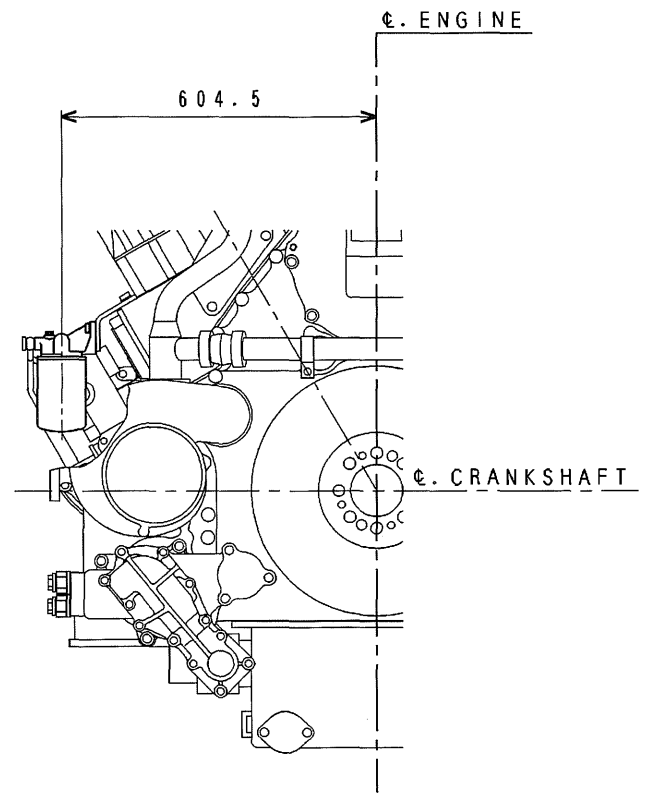
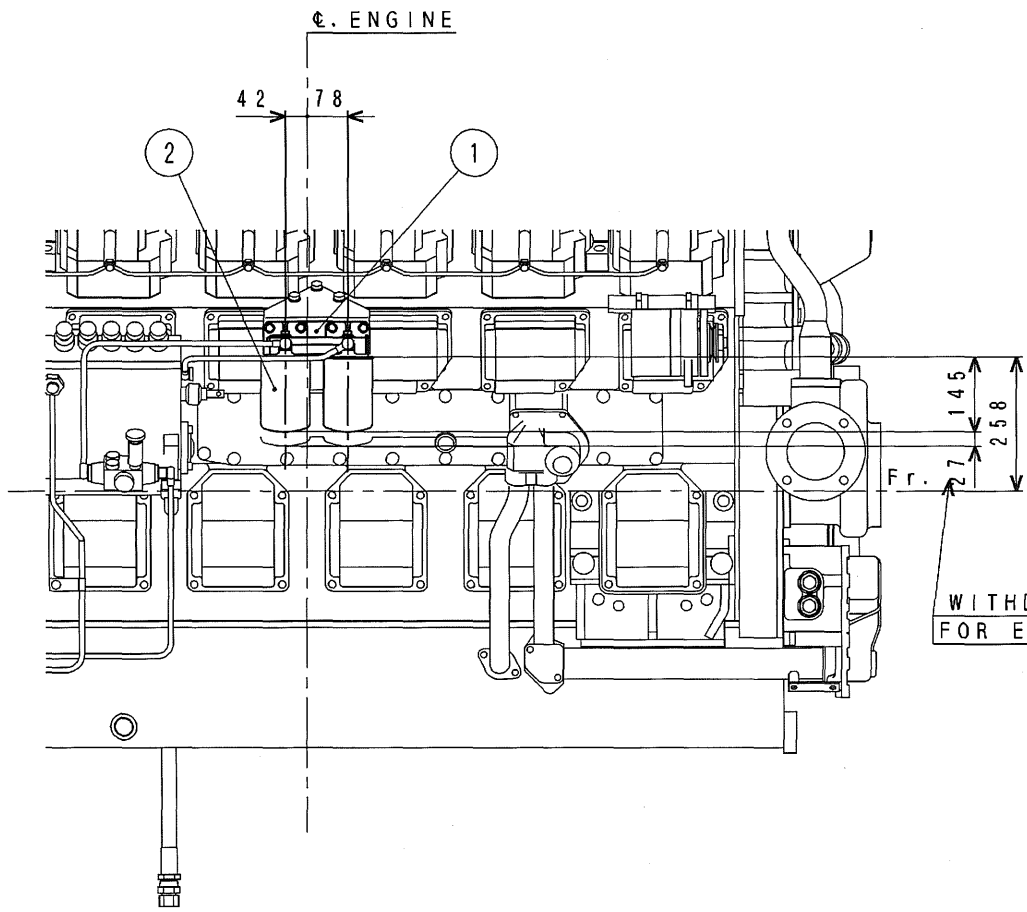
MHI CONFIDENTIAL

注記 (1) 本図のF. Oエレメントは、軽油用である。

3 新図 4 訂正
① 旧図 A 3 ② 組立図 5 姉妹部品 6 板金溶接品 4 組立品
③ 切削品 6 その他(購入品)

旧引
▲
汎特
2000
4.28

FULL-CAD



WITHDRAWAL SPACE
FOR ELEMENT

MHI CONFIDENTIAL

CHG	EO-NO	DATE	CHK
↑	4590-6300	'00. 4.12	福田
認可 APPD	清国	検図 CHK	竹 福 谷 田
		製図 DRN	谷 銅 戸 島
		1999. 2. 2	

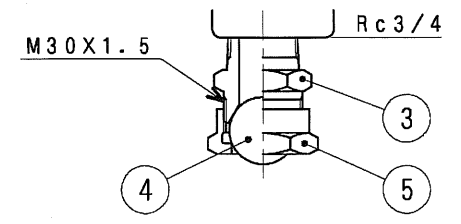
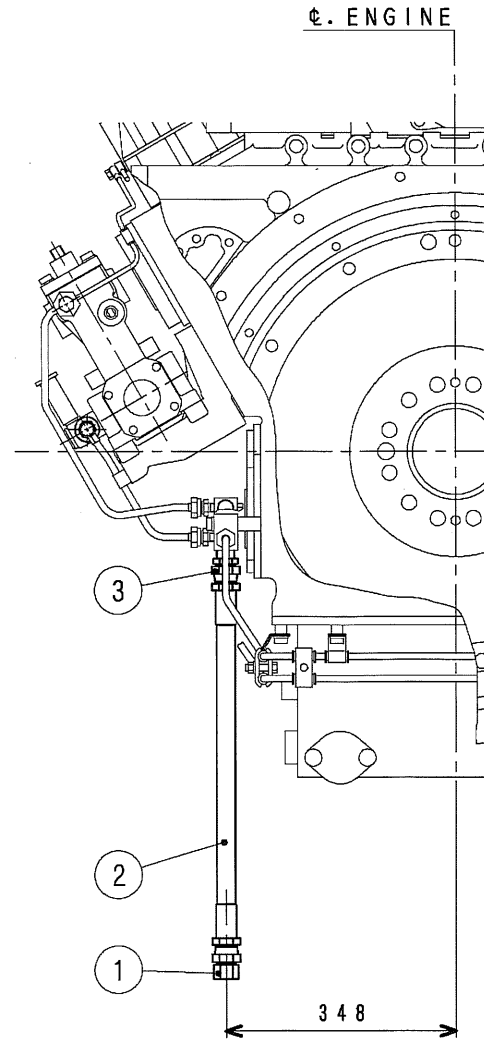
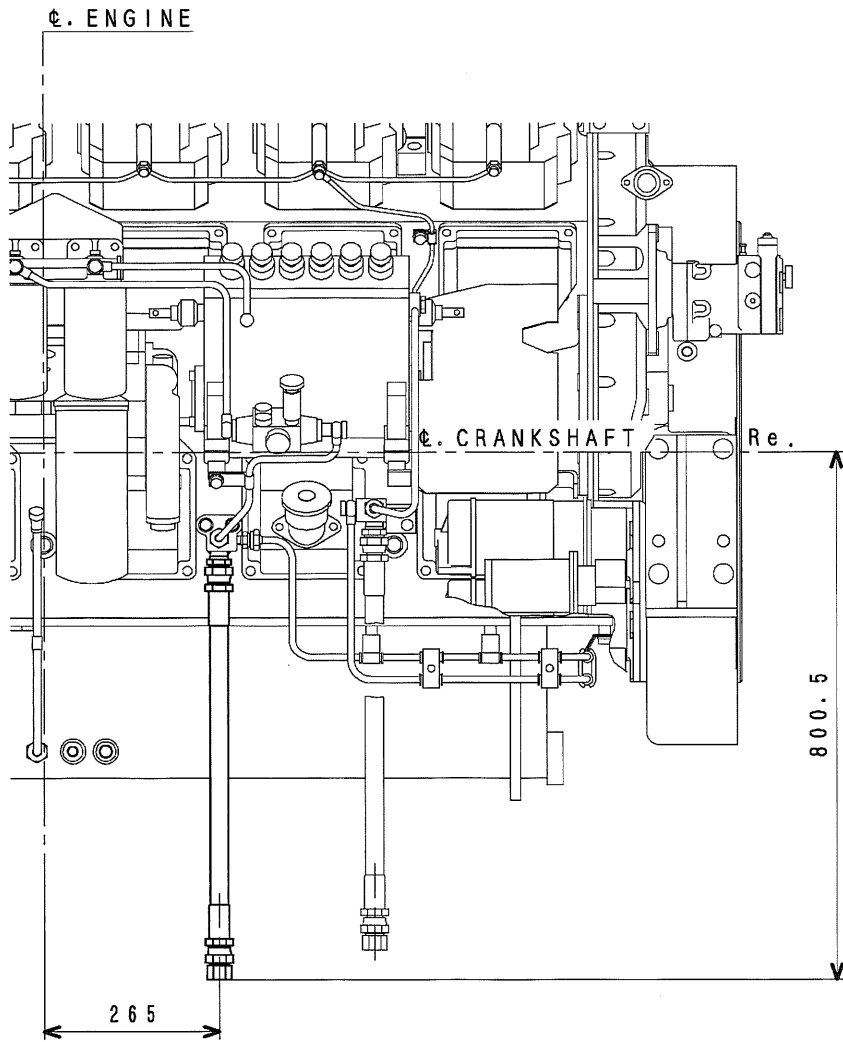
3/4 ANGLE
PROJECTION
尺度 SCALE

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 37796-62002
DRAWING No. 2/2

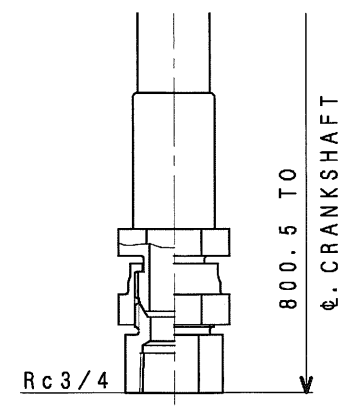
旧引
汎特
2000
4.28

FULL-CAD

3 新図 サイズ A 3
④ 旧引図
① 組立図
2 鋳造歯車品
5 切削品
3 板金溶接品
6 その他(購入品)
4 組立品



DETAIL OF INLET PIPE JOINT



DETAIL OF INLET PIPE JOINT

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

NO.	PARTS NO.	PARTS NAME	Q'TY
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

MHI CONFIDENTIAL

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。
 (2) 本図の符号(4)(5)は、燃料入口盲栓である。(エンジン出荷状態)

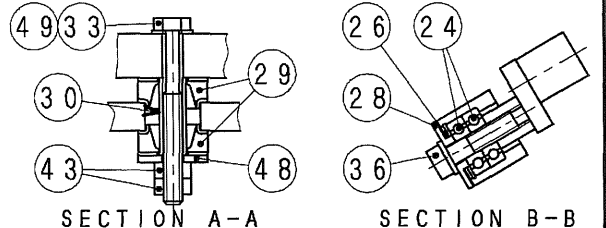
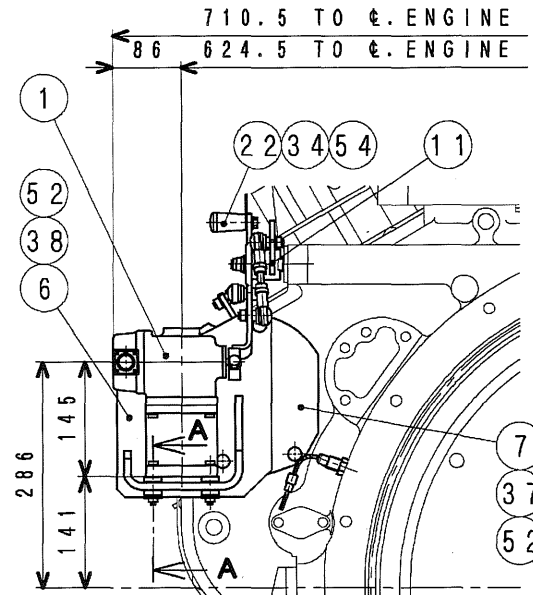
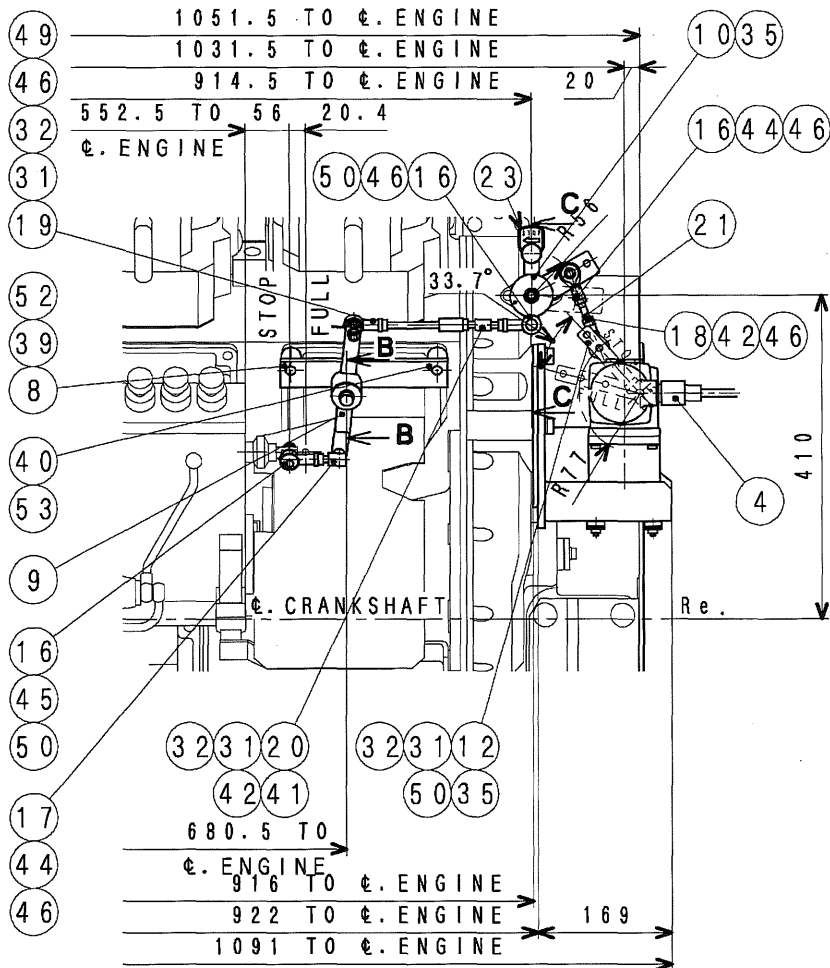
<p>3rd ANGLE PROJECTION 尺度 SCALE</p>				<p>S12R FUEL INLET PIPING</p> <p>三菱重工業株式会社 汎用機・特車事業本部 MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS.</p> <p>図面番号 DRAWING No. 37796-62112</p>	
CHG	EO-NO	DATE	CHK	製図 DRN	2008.12.9
認可 APPD	橋		検図 CHK	三谷 上戸	浅沼

出図

汎特
 2008
 12.10

FULL-CAD

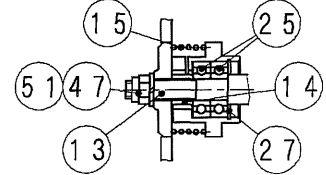
① 新図 ② 訂正 ③ 組立図 ④ 相立品
 ④ 旧引図 ⑤ 切替品 ⑥ その他(購入品)



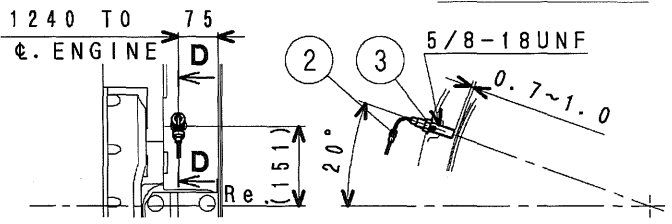
No.	PARTS NO.	PARTS NAME	Q'TY
35	F1115-08025	BOLT	2
34	F1805-08025	BOLT	1
33	F1035-06055	BOLT	4
32	48000-96600	SEAL	3
31	35A61-19900	WIRE, SEAL	3
30	47500-34200	SPACER	4
29	47500-34100	RUBBER	8
28	32561-18300	PLATE, END	1
27	F3202-03200	RING, SNAP	1
26	F3202-03000	RING, SNAP	1
25	F8007-06201	BEARING, BALL	2
24	F8007-06200	BEARING, BALL	2
23	45940-30101	PLATE, CAUTION	1
22	51776-03000	GRIP	1
21	05902-08095	ROD, CONNECTING	1
20	05903-00100	ROD	1
19	37761-28801	LINK, L. H.	1
18	35A61-38701	JOINT, BALL (M8-L)	1
17	37563-15401	JOINT, BALL	1
16	35A61-38601	JOINT, BALL (M8-R)	3
15	32561-48600	SPRING	1
14	37432-06801	SPACER	1
13	37761-27100	SHAFT, CONTROL	1
12	47520-31200	LEVER	1
11	37763-27300	LEVER, L. H., B	1
10	37761-67200	LEVER, L. H., A	1
9	37761-27800	LEVER, LINK, L. H	1
8	37761-27600	BRACKET, LEVER, L. H	1
7	47500-39901	COVER	1
6	47520-31102	BRACKET, ACTUATOR	1
☆ 5	04410-XXXXX	CONTROLLER	1
☆ 4	04410-32902	CONNECTOR	1
3	04410-43410	PICK UP	1
☆ 2	04410-43500	CONNECTOR	1
1	04410-32011	ACTUATOR	1

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

No.	PARTS NO.	PARTS NAME	Q'TY
54	F2500-08000	WASHER, PLAIN	1
53	F2515-14000	WASHER, SPRING	1
52	F2515-12000	WASHER, SPRING	6
51	F2515-10000	WASHER, SPRING	1
50	F2515-08000	WASHER, SPRING	2
49	F2515-06000	WASHER, SPRING	4
48	08302-06000	WASHER	4
47	F2445-10000	NUT, SELF LOCKING	1
46	F2445-08000	NUT, SELF LOCKING	5
45	F2320-08000	NUT, JAM	1
44	F2300-08000	NUT	2
43	F2300-06000	NUT	8
42	09413-00800	NUT, LOCK	2
41	37560-04800	NUT	1
40	37761-19301	BOLT, LEVER BRACKET	1
39	F1035-12065	BOLT	2
38	F1035-12035	BOLT	3
37	F1035-12030	BOLT	1
36	F1805-10040	BOLT	1



SECTION C-C



SECTION D-D

MHI CONFIDENTIAL

CHG	EO-NO	DATE	CHK
4	4590-E895	'08.10.3	齊藤
3	4590-B027	'05.3.25	浅沼
2	4591-0108	'03.7.30	福田
5	4590-H523	'13.12.27	谷戸

CHG	EO-NO	DATE	CHK
4	4590-E895	'08.10.3	齊藤
3	4590-B027	'05.3.25	浅沼
2	4591-0108	'03.7.30	福田
5	4590-H523	'13.12.27	谷戸

3rd ANGLE PROJECTION
尺度 SCALE

S12R
GOVERNOR

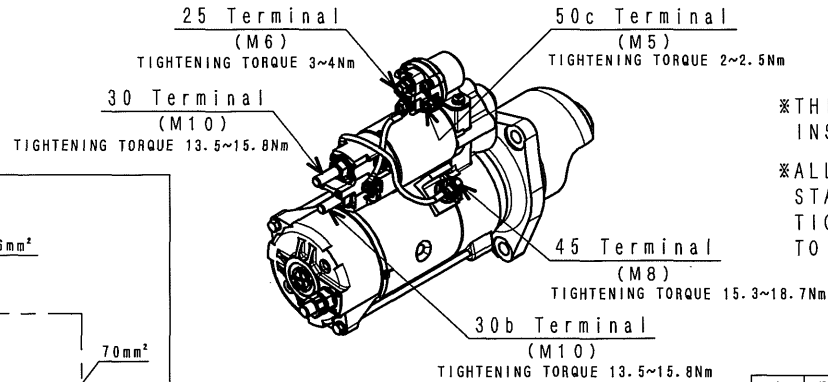
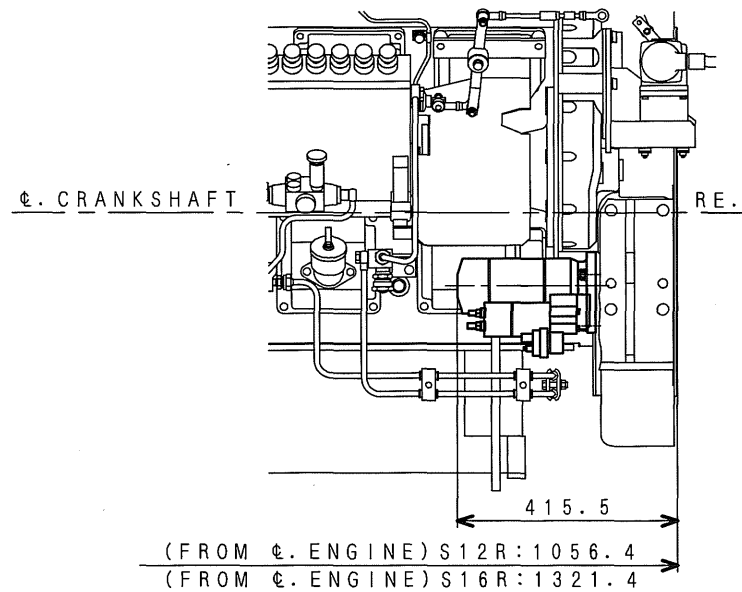
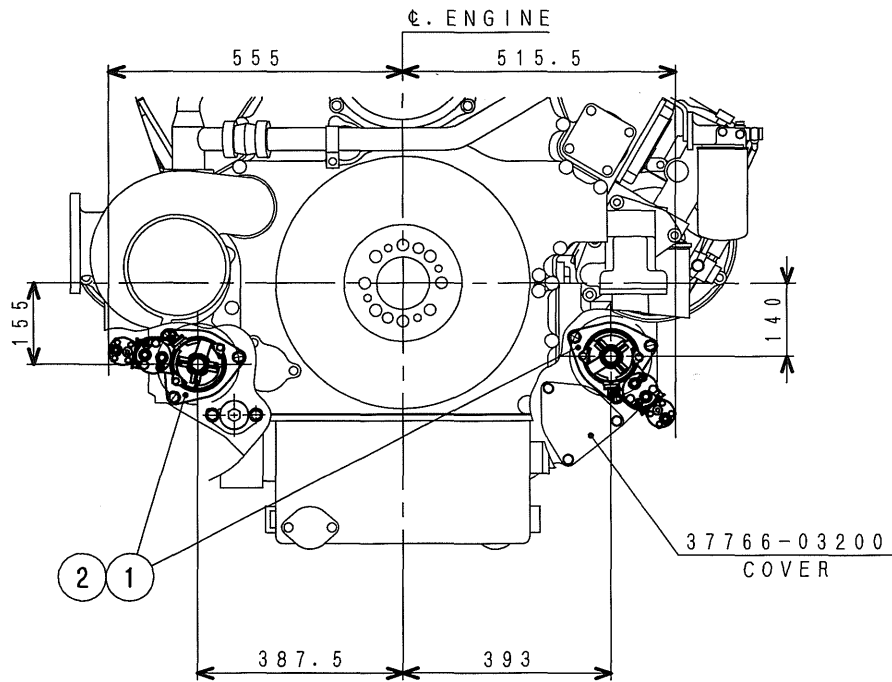
三菱重工業株式会社 汎用機・特車事業本部
MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINERY & SPECIAL VEHICLES.

図面番号 37796-63005
DRAWING No. 37796-63005

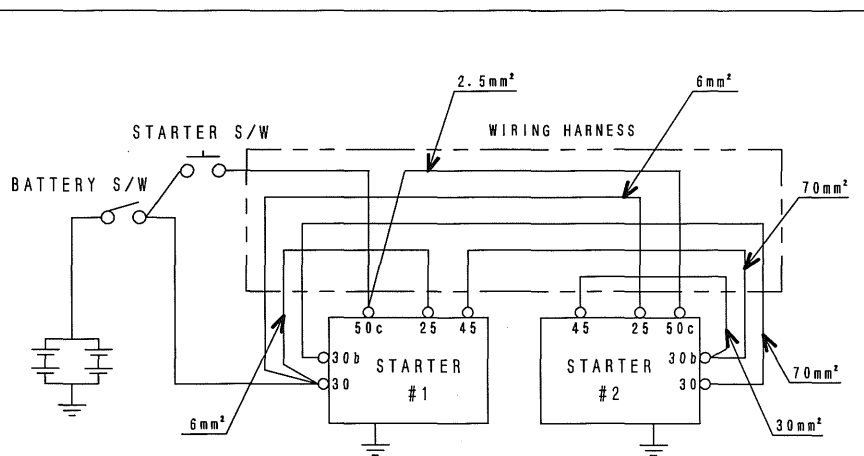
製図 DRN 村田
1998. 3. 2

旧引
汎特
2014
1.17

M/C



※THIS VIEW DOES NOT SHOW THE INSTALLATION ATTITUDE.
 ※ALL NUTS FOR WIRING BELONG TO STARTER (NO NEED TO PREPARE) TIGHTENING TORQUE SHALL CONFORM TO THE INDICATION ON THIS FIGURE.



MHI CONFIDENTIAL

2	F1805-12035	BOLT	6
1	38E66-00201	STARTER, 7.5kW, PARA	2
No.	PARTS NO.	PARTS NAME	Q'TY

CHG	EO-NO	DATE	CHK
認可 APPD	検図 CHK	製図 DRN	
	T. HASEGAWA K. SAKAMOTO	N. YAMAGUCHI	2016. 3. 25

3rd ANGLE
PROJECTION
尺実 SCALE

**S12R, S16R
STARTING MOTOR**

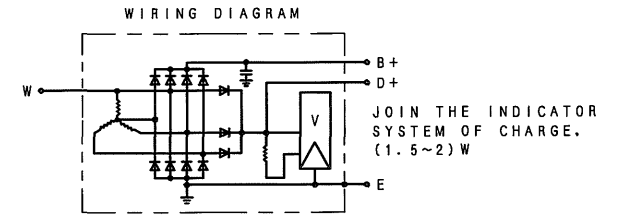
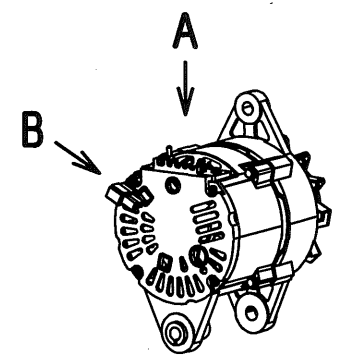
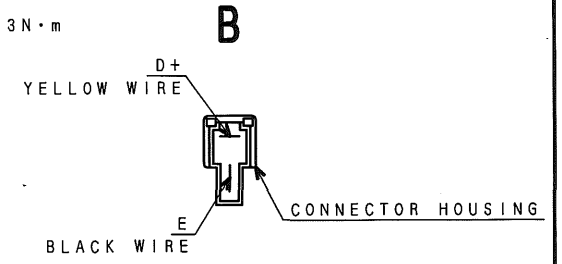
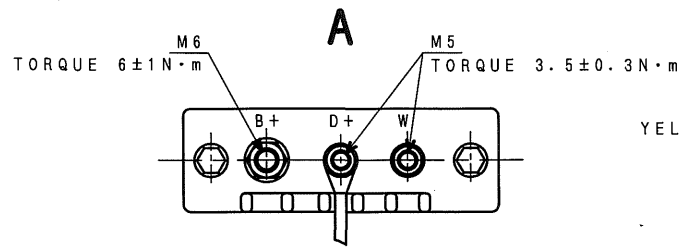
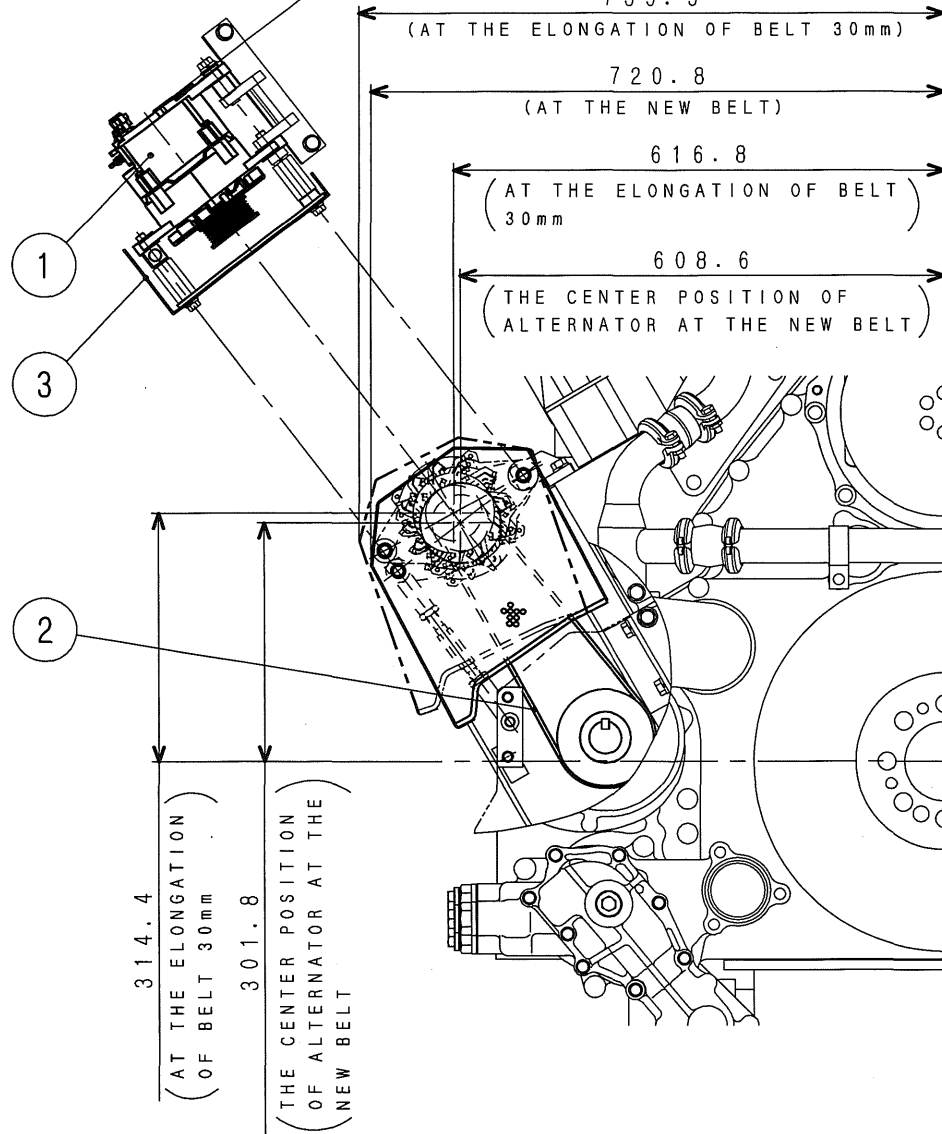
三菱重工業株式会社
MITSUBISHI HEAVY INDUSTRIES, LTD.

図面番号
DRAWING No. **38E96-66051**

③新図	サイズ A 3	①相立図	2 磨削部品	3 板金溶接品	4 組立品
4 旧引図			5 切削品	6 その他(購入品)	

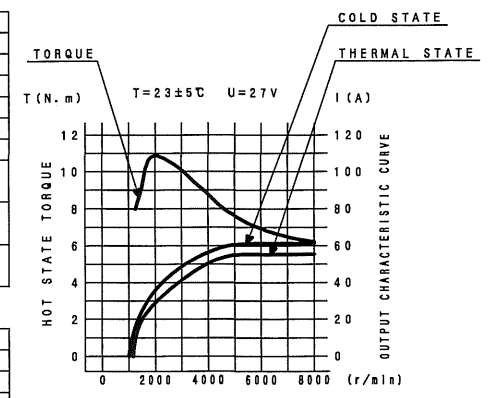
M/C

S12R: 616
S16R: 881
(FROM e. ENGINE)



SPECS	28V 55A
PAIRS OF CLAWS	6
WORKING TEMPERATURE	-40°C~105°C
RATED SPEED	6000r/min
MAXIMUM SPEED	12000r/min
STARTING GENERATE SPEED	≤1200r/min (COLD)
POLARITY	CONTINUOUS
VOLTAGE REGULATED VALUE	n=6000r/min I=27.5A U=28.5±0.3V
SPEED CHARACTERISTIC	n=2000~10000r/min I=5.5A ΔU ≤0.3V
LOAD CHARACTERISTIC	n=6000r/min I=5.5~49.5A ΔU ≤0.5V

VOLTAGE (V)	SPEED (rpm)	COLD STATE	HOT STATE
27	1500	I≥25A	I≥20A
27	2500	I≥40A	I≥35A
27	5000	I≥62A	I≥57A



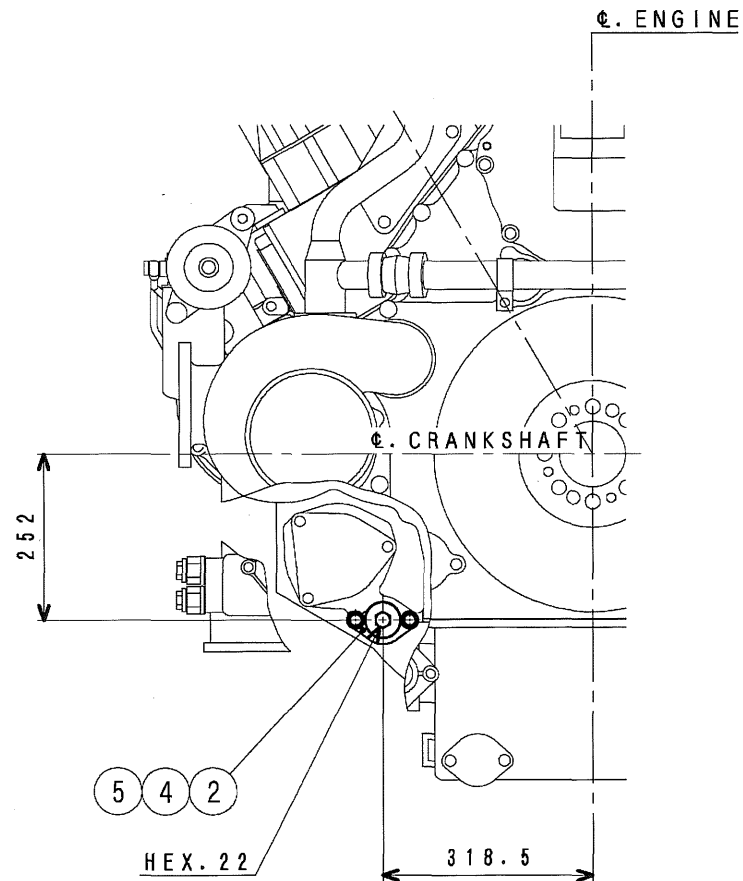
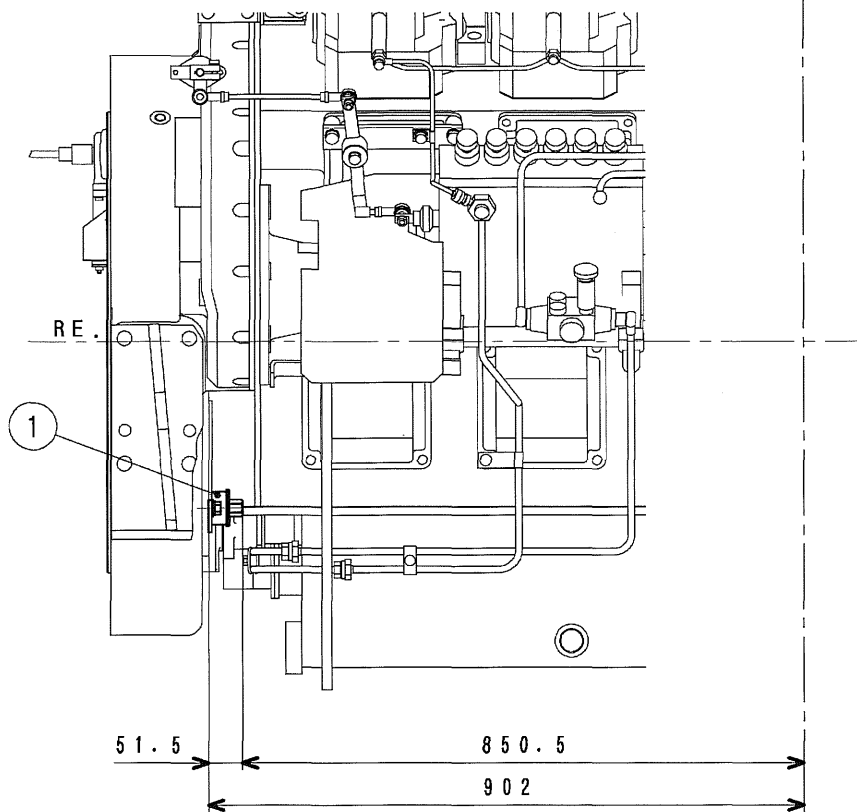
3	38E68-12500	COVER, ALT BELT, KD	1
2	38E68-04400	BELT, RIB 6PK-951	1
1	38C68-18500	DYNAMO, 28V-55A, 6PK	1
No.	PARTS NO.	PARTS NAME	Q' TY

MHI CONFIDENTIAL

CHG	EO-NO	DATE	CHK
認可 APPD	検回 CHK	製回 DRN	
	T. HASEGAWA K. SAKAMOTO	N. YAMAGUCHI	2016. 3. 25

S12R, S16R
DYNAMO
三菱重工業株式会社
MITSUBISHI HEAVY INDUSTRIES, LTD.
図面番号
DRAWING No. 38E96-68051

M/C



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

MHI CONFIDENTIAL

▲					3rd ANGLE PROJECTION 尺度 SCALE
▲					
▲	4590-G648	'11. 3.24	斉藤		
CHG	ED-NO	DATE	CHK		
認可 APPD	橋 口	換図 CHK	竹 谷 福 田	製図 DEN	谷 鷗 戸 島
					1998. 3. 11

S12R
TURNING DEVICE

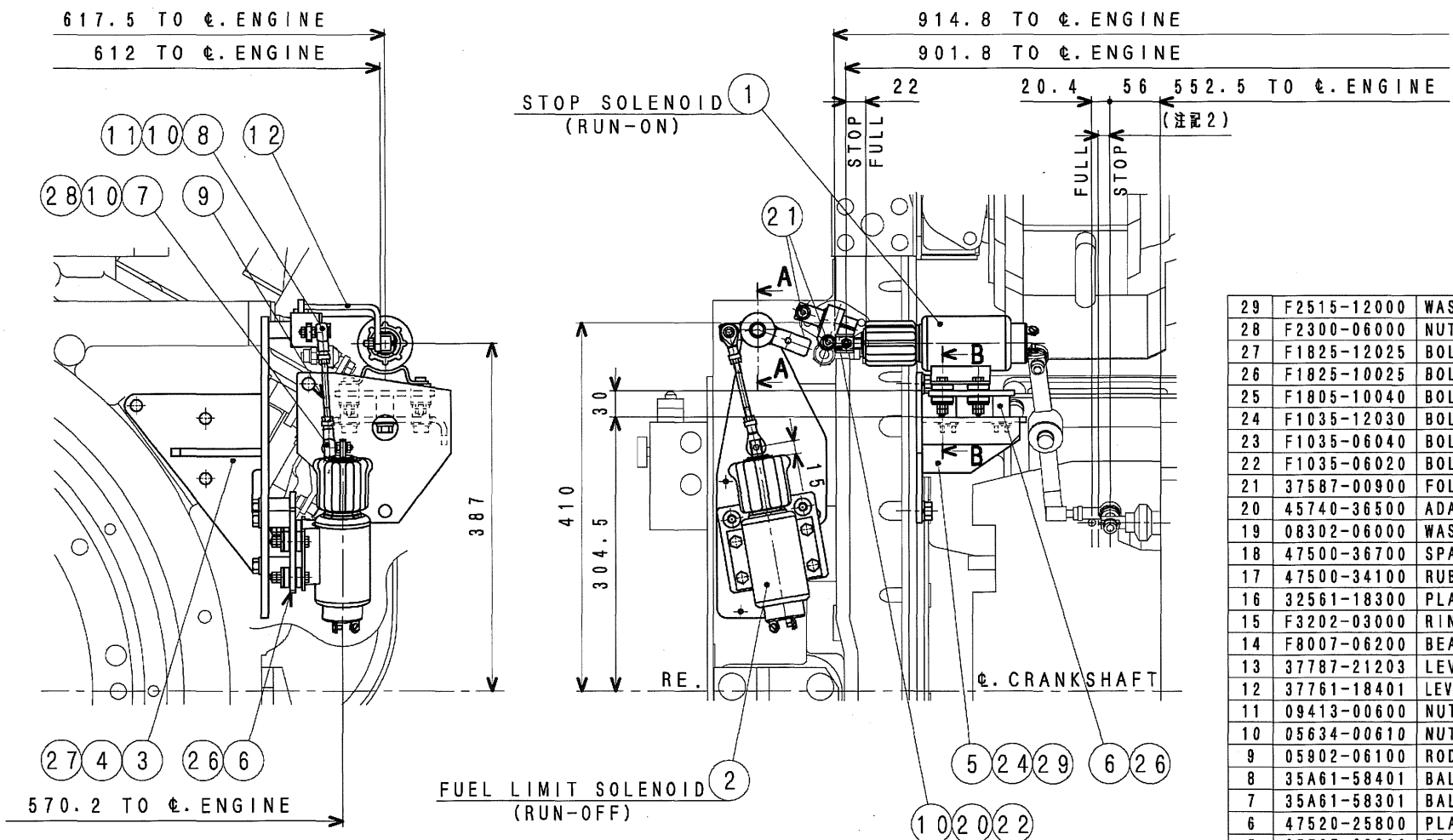
三菱重工業株式会社 汎用機・特車事業本部
MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS.

図面番号 37796-71001
DRAWING No.

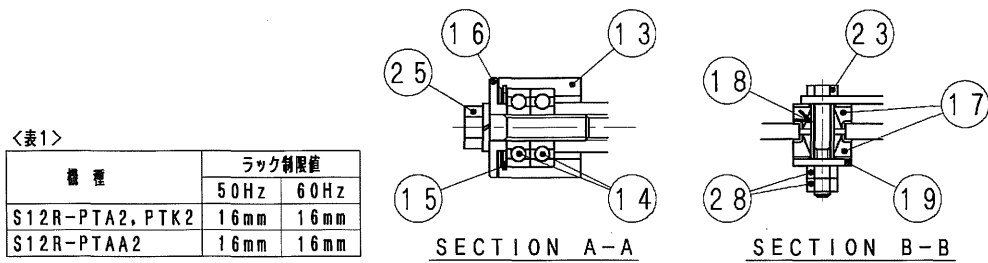
3 新回 サイズ
① 旧引回 A 3 ① 組立図 2 鋼鍛造部品 3 板金溶接品 4 組立品
5 切削品 6 その他(購入品)

旧引
汎特
2011
5.23

FULL-CAD



29	F2515-12000	WASHER, SPRING	2
28	F2300-06000	NUT	17
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	45740-36500	ADAPTER	1
19	08302-06000	WASHER	8
18	47500-36700	SPACER	8
17	47500-34100	RUBBER, CUSHION	16
16	32561-18300	PLATE, END	1
15	F3202-03000	RING, SNAP	1
14	F8007-06200	BEARING, BALL	2
13	37787-21203	LEVER, STOP RUN-OFF	1
12	37761-18401	LEVER, R. H., RACK CONT.	1
11	09413-00600	NUT, LOCK	1
10	05634-00610	NUT, SELF LOCKING	3
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	37787-21103	BRACKET, SOLENOID	1
2	04400-08901	SOLENOID (RUN-OFF)	1
1	04400-09201	SOLENOID (RUN-ON)	1
No.	PARTS NO.	PARTS NAME	Q'TY



<表1>

機種	ラック制限値	
	50Hz	60Hz
S12R-PTA2, PTK2	16mm	16mm
S12R-PTAA2	16mm	16mm

(2) 始動時、ラック制限値(表1参照方)は両ソレノイド電源ON状態である。
 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。

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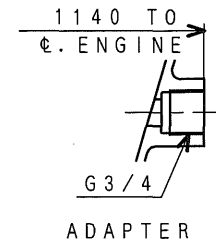
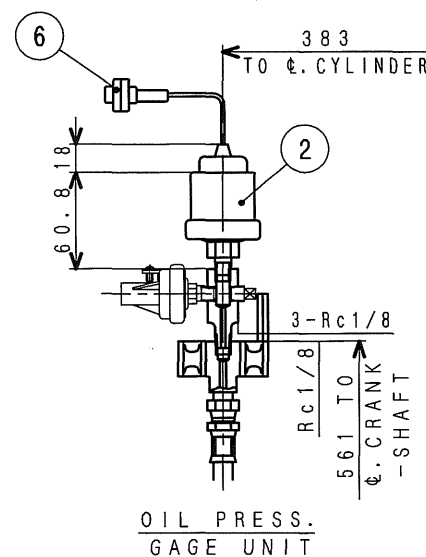
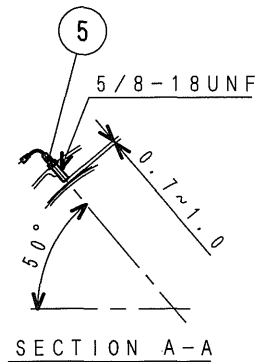
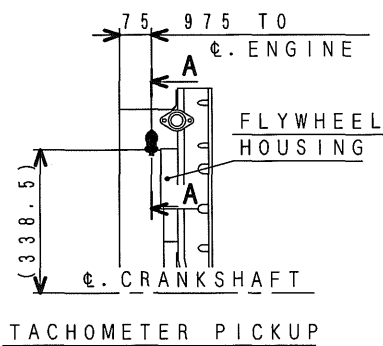
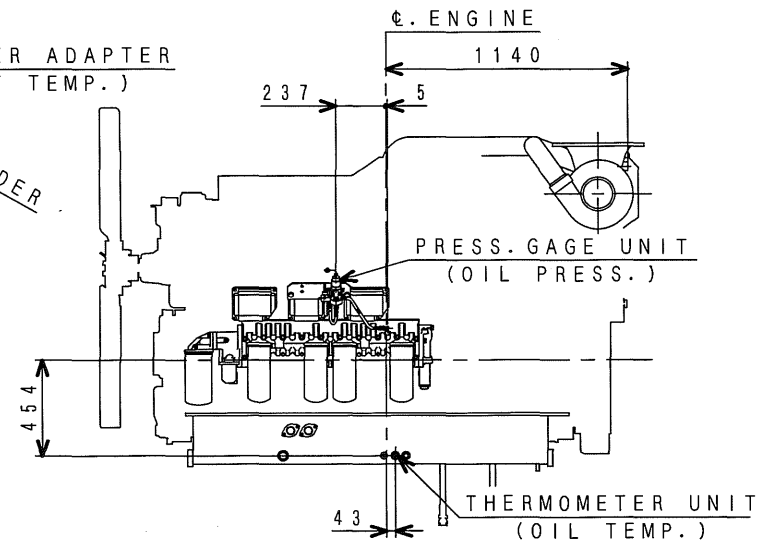
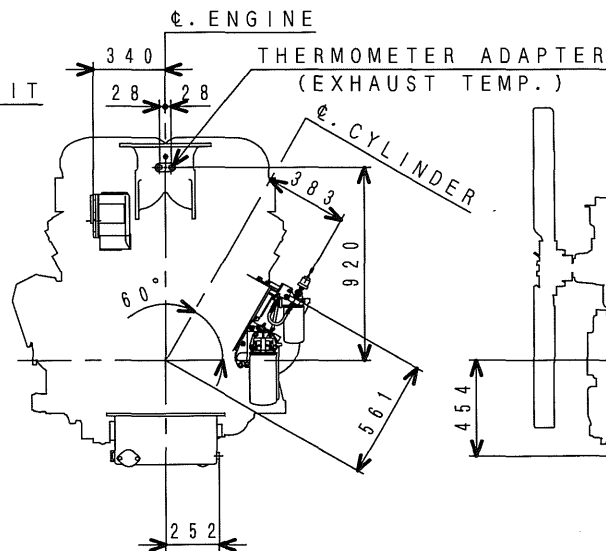
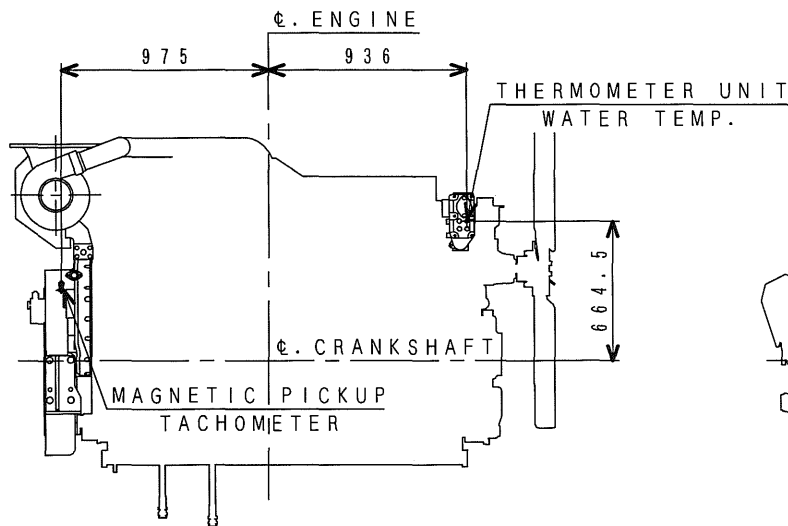
CHG	EO-NO	DATE	CHK
認可 APPD	橋	換図 CHK	小 中 谷 倉 村 戸
製図 DRW		村田	
2013. 8. 1			

S12R-2
 STOP & FUEL LIMIT SOLENOID
 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 VEHICLES.
 図面番号 37796-87506
 DRAWING NO.

出図
 汎特
 2013
 9.12

M/C

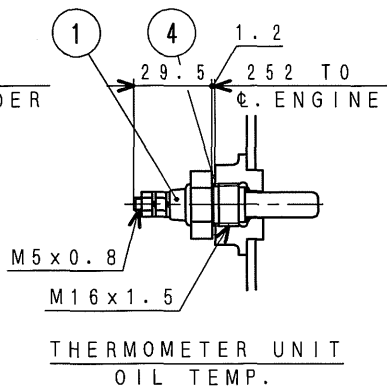
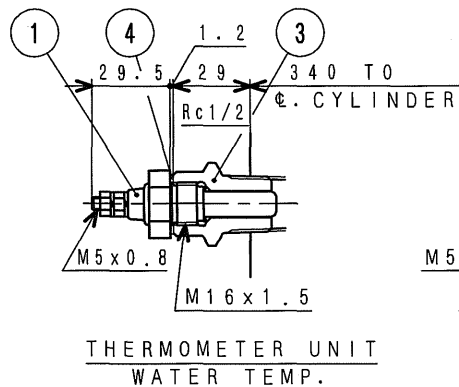
③ 新図 ④ 旧引図 ⑤ 粗立図 ⑥ 鋼鍛標準品 ⑦ 板金溶接品 ⑧ 粗立品 ⑨ 切削品 ⑩ その他(購入品)



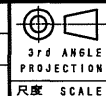
MHI CONFIDENTIAL

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

☆ No.	PARTS NO.	PARTS NAME	Q'TY
6	MH052-231	CONNECTOR	1
5	04410-43410	PICKUP, MAGNETIC	1
4	05946-01601	WASHER SEALING	2
3	45600-42902	CONNECTOR	1
2	04541-86200	UNIT, GAGE	1
1	04524-02230	UNIT, THERMO	2
No.	PARTS NO.	PARTS NAME	Q'TY



CHG	EO-NO	DATE	CHK
認可 APPD	検図 CHK	製図 DRN	
	T. HASEGAWA K. SAKAMOTO	N. YAMAGUCHI	2016. 3. 25

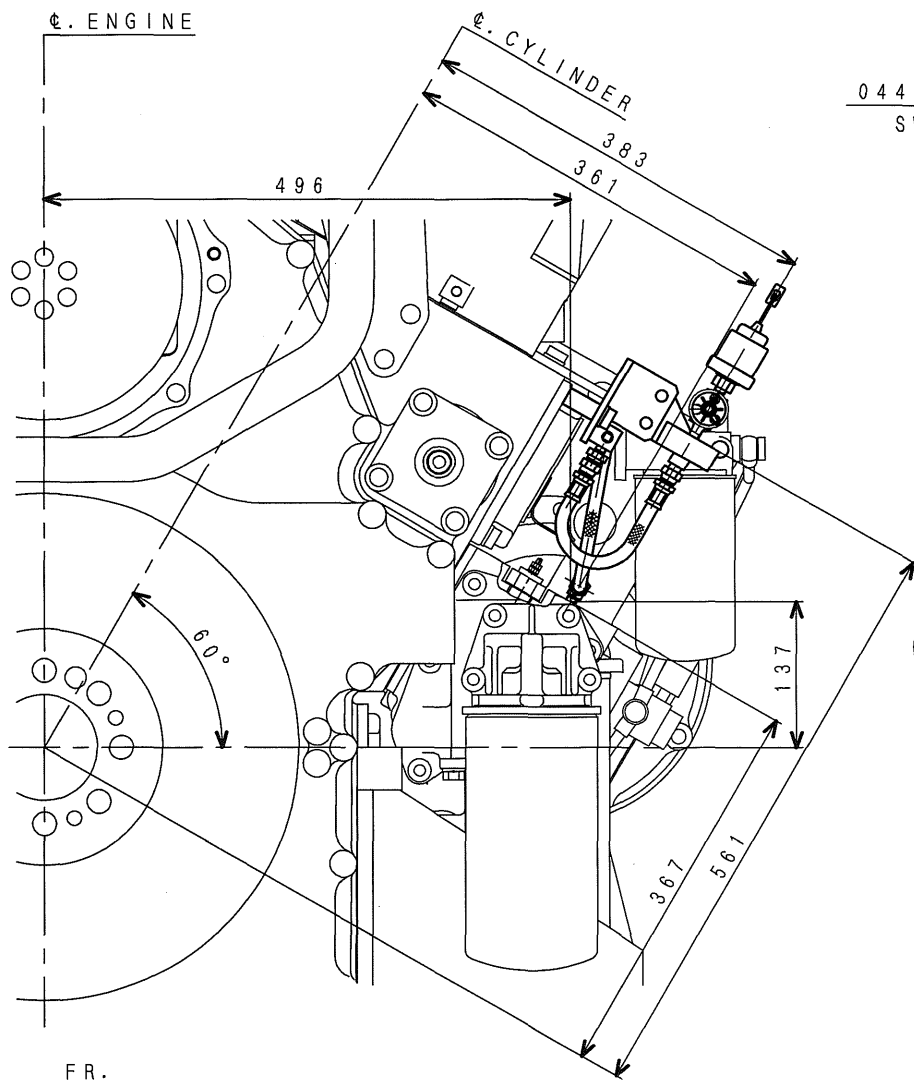


S12R-PTA2, -PTAA2
 METER & SENSOR
 三菱重工業株式会社
 MITSUBISHI HEAVY INDUSTRIES, LTD.

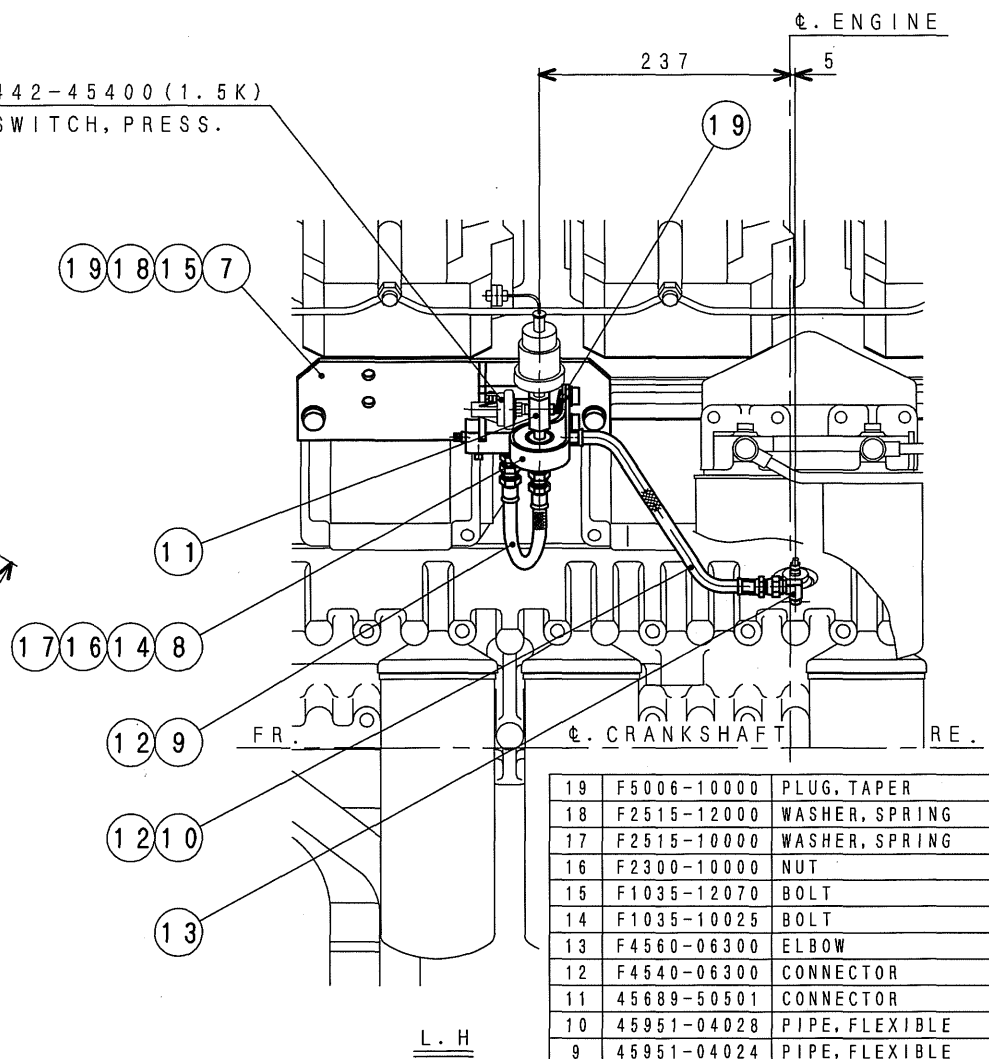
図面番号
 DRAWING No. 38E96-90153 1/2

③ 新図	サイズ A 3	① 組立図	2 鋳造部品	3 板金溶接品	4 組立品
4 旧引図		5 切削品	6 その他(購入品)		

M/C



04442-45400 (1.5K)
SWITCH, PRESS.



No.	PARTS NO.	PARTS NAME	Q'TY
19	F5006-10000	PLUG, TAPER	3
18	F2515-12000	WASHER, SPRING	2
17	F2515-10000	WASHER, SPRING	2
16	F2300-10000	NUT	2
15	F1035-12070	BOLT	2
14	F1035-10025	BOLT	2
13	F4560-06300	ELBOW	1
12	F4540-06300	CONNECTOR	2
11	45689-50501	CONNECTOR	1
10	45951-04028	PIPE, FLEXIBLE	1
9	45951-04024	PIPE, FLEXIBLE	1
8	45644-47900	MOUNT	1
7	47520-40702	BRACKET	1

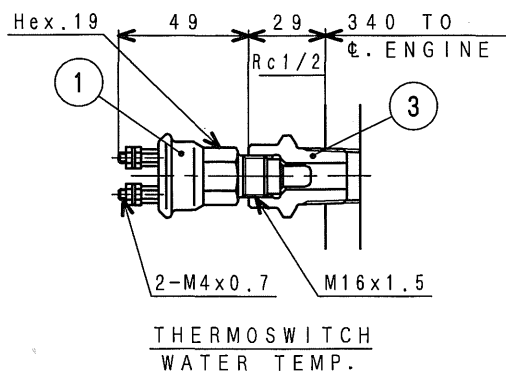
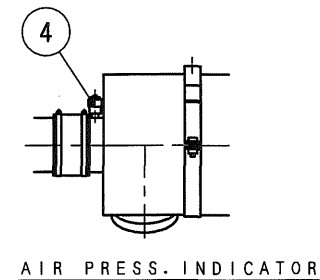
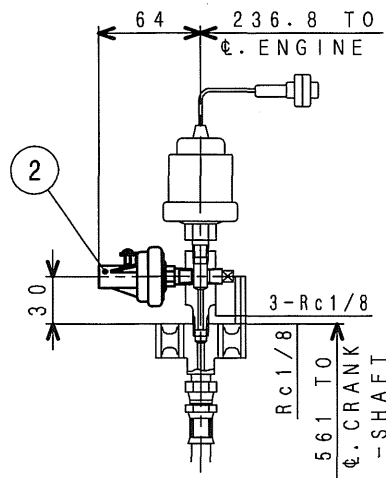
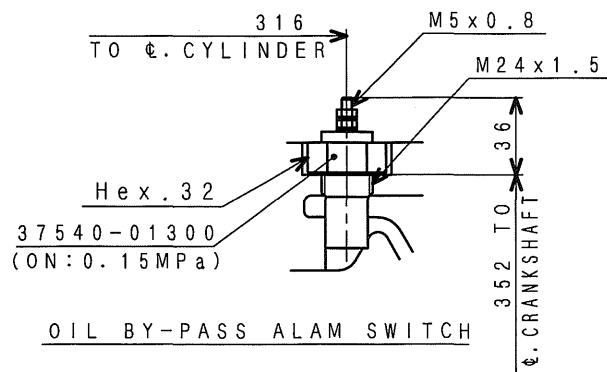
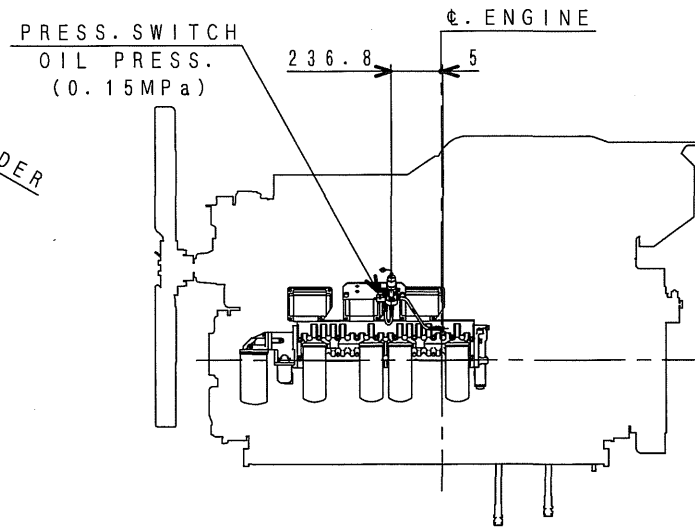
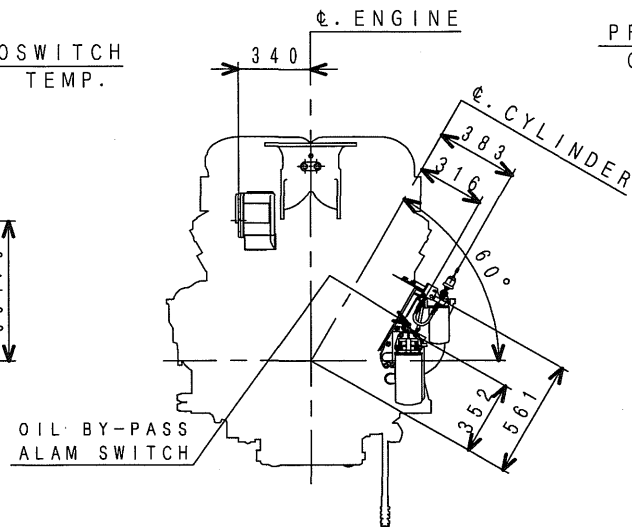
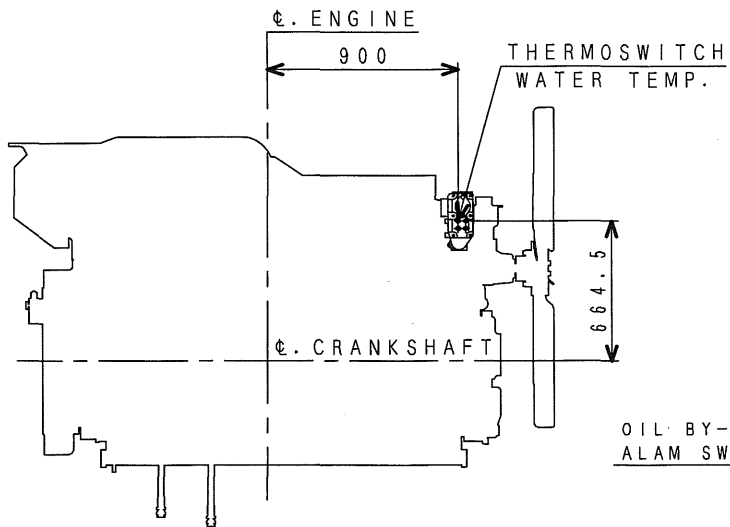
MHI CONFIDENTIAL

CHG	EO-NO	DATE	CHK
認可 APPD			
検図 CHK	T. HASEGAWA K. SAKAMOTO		製図 DRN N. YAMAGUCHI 2016. 3.25

S12R-PTA2, -PTAA2
METER & SENSOR
三菱重工業株式会社
MITSUBISHI HEAVY INDUSTRIES, LTD.
図面番号
DRAWING No. 38E96-90153 2/2

③ 新図	サイズ	① 組立図	2 購買標準品	3 板金用接品	4 組立品
4 旧引図	A 3	5 切削品	6 その他(購入品)		

M/C



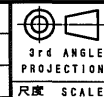
NOTE (1) THE ☆ MARKED PARTS ARE LOOSE SUPPLY.

No.	PARTS NO.	PARTS NAME	Q'TY
☆ 4	(INCLUDED IN A/C)	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°C ON	1

W/C

MHI CONFIDENTIAL

CHG	ED-NO	DATE	CHK
認可 APPD	検出 CHK	製図 DRN	
	T. HASEGAWA K. SAKAMOTO	N. YAMAGUCHI	2016. 3. 25



S12R

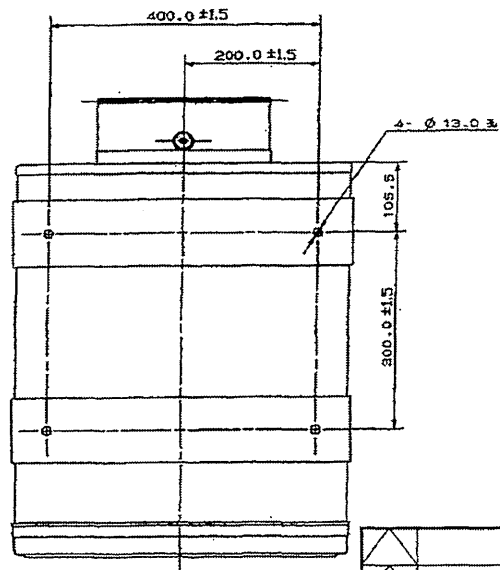
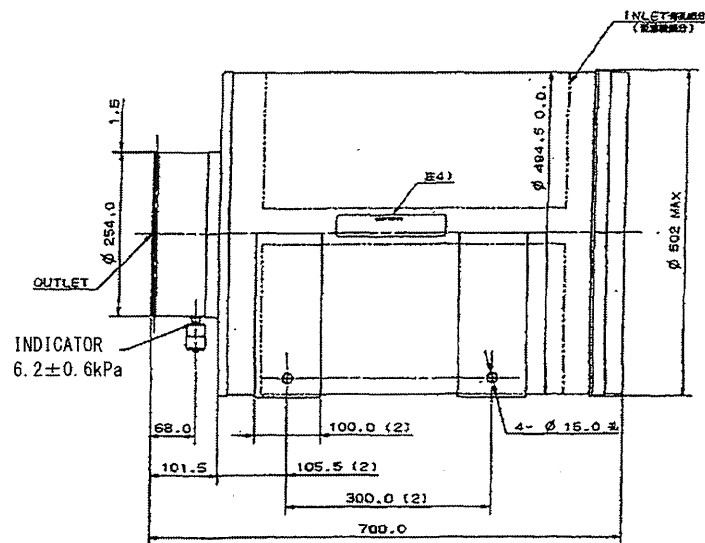
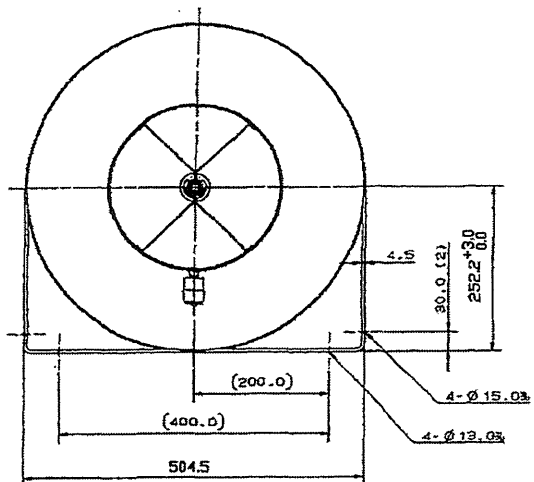
ALARM SWITCH

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

図面番号 38E96-90251
DRAWING No. 38E96-90251

①新図 ②サイズ ③相立図 ④脚線標準品 ⑤板金溶接品 ⑥組立品 ⑦旧引図 ⑧A ⑨3 ⑩5 ⑪8 ⑫その他(購入品)

CHECKED BY



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REV.	DATE

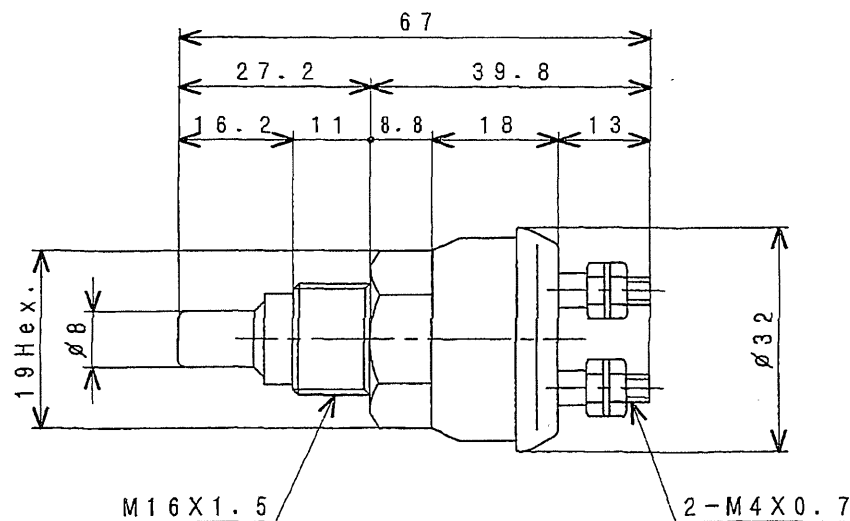
AIR CLEANER
PART NO. 38G30-07701

DWG. NO. S35-5020

MITSUBISHI HEAVY INDUSTRIES, LTD.

CHECKED BY

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	60g
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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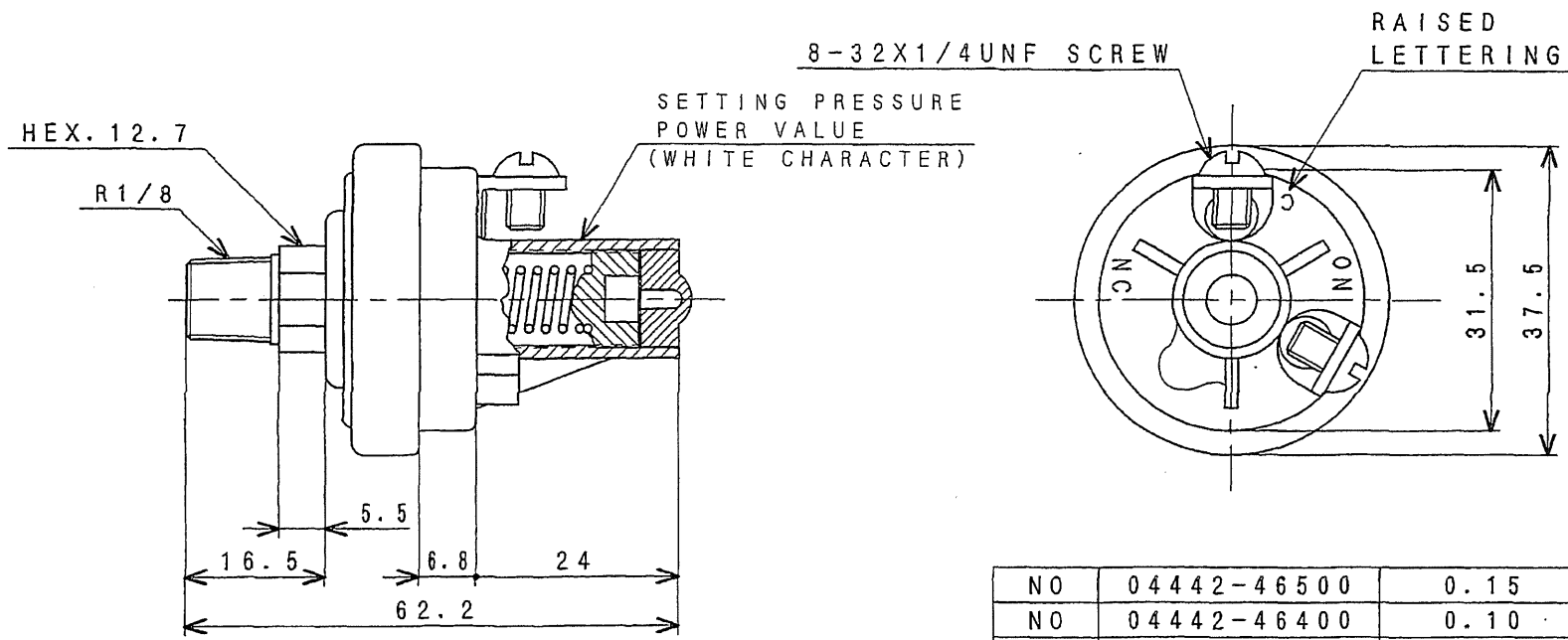
6	'00.4.26
8	'08.6.5
7	'06.3.17
REV.	DATE

THERMO SWITCH

DWG. NO. S11-0551

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

CHECKED BY
K. YATO



- 5. ON-OFF DIFFERRECE : WITHIN 5%
- 4. POINT OF CONTACT : (NO) (NC)
- 3. USE TEMP. : -40.0°C~+120.0°C
- 2. RARING : 12VDC-8AMP, 24VDC-4AMP,
120VAC-1AMP, 240VAC-0.5AMP

仕様 1. MAXIMUM PERMISSIBLE WORKING PRESSURE
: 1.05MPa (SETTING PRESS. : 0.007~0.17MPa)
: 1.75MPa (SETTING PRESS. : 0.18~1.05MPa)

NO	04442-46500	0.15	±0.0075
NO	04442-46400	0.10	±0.005
NO	04442-46300	0.05	±0.0025
NC	04442-46100	6.2KPa	±0.31KPa
NC	04442-45900	0.40	±0.02
NC	04442-45800	0.35	±0.0175
NC	04442-45700	0.30	±0.015
NC	04442-45600	0.25	±0.0125
NC	04442-45500	0.22	±0.011
NC	04442-45400	0.15	±0.0075
NC	04442-45300	0.10	±0.005
NC	04442-45200	0.05	±0.0025
NC	04442-45100	0.03	±0.0015
接点形式	PARTS NO.	ON	ALLOWANCE
		SET PRESS. MPa	

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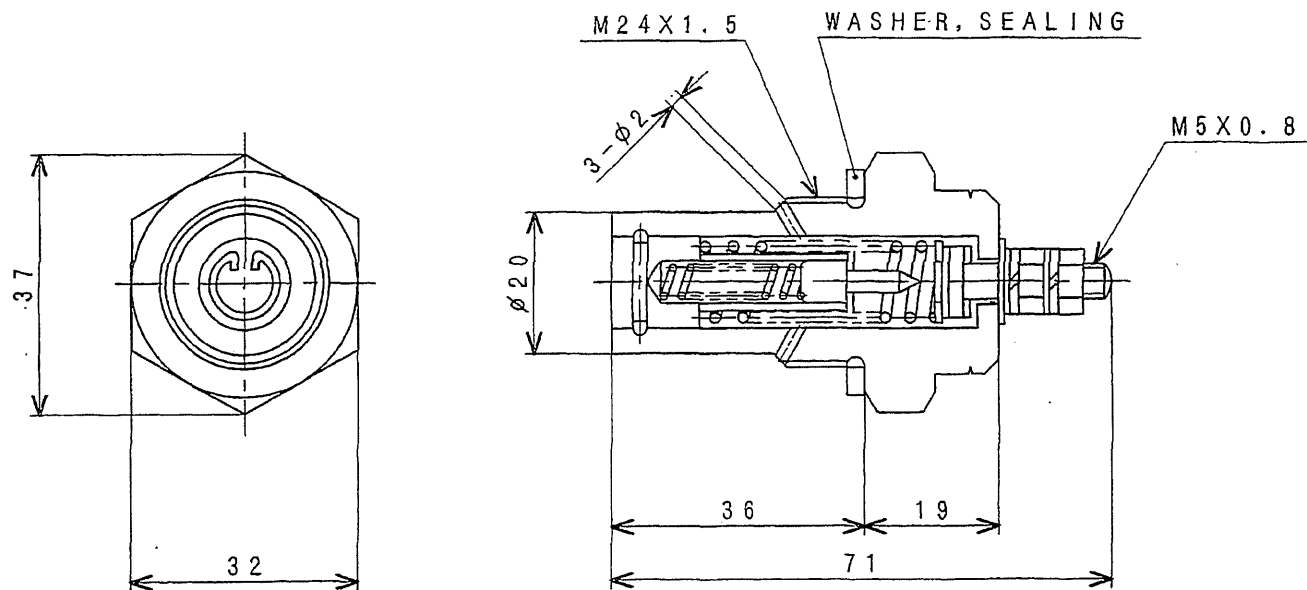
3	'11.10.28
2	'08.6.5
1	'06.3.17
REV.	DATE

SWITCH, PRESS

DWG. NO. S11-0796
 MITSUBISHI HEAVY INDUSTRIES, LTD.
 GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

CHECKED BY

中村



注記 (1) 本図は、部番37540-01300に対し表面処理を変更したもので。
3価クロメート処理 ← 6価クロメート処理

SET PRESS. 0.15MPa

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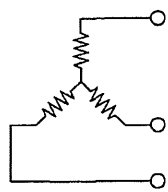
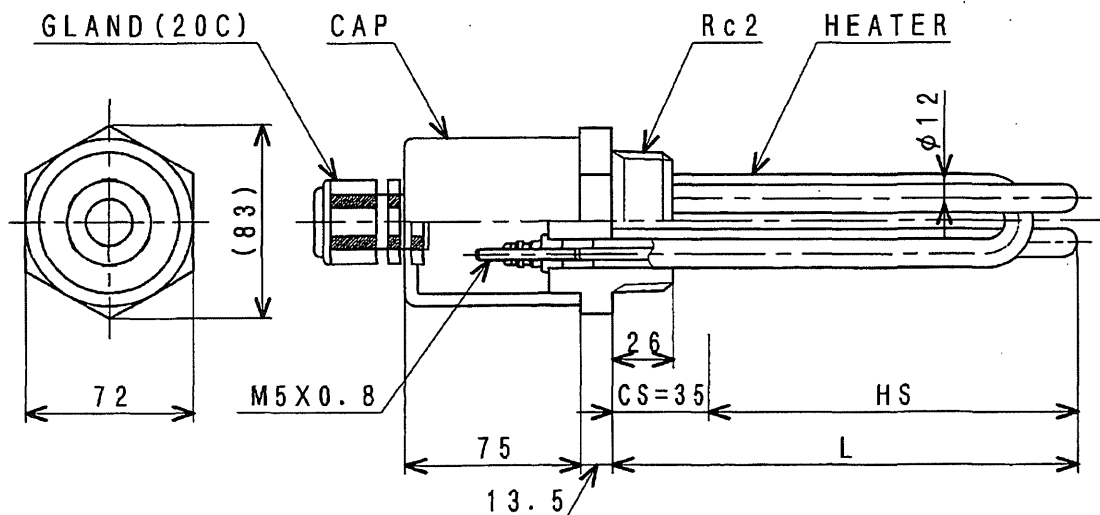
△	
△	
△	
REV.	DATE

ALARM, OIL FILTER
PART NO. 37540-01301

DWG. NO. S11-1371
MITSUBISHI HEAVY INDUSTRIES, LTD.
GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

CHECKED BY

Y. FUKUDA



3相



1相

CONNECTION

3. 使用温度 : 90℃連続

2. 加熱対象物 : 清水

仕様 1. 取付姿勢 : キャップを上側とした取付は不可

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

MHI CONFIDENTIAL

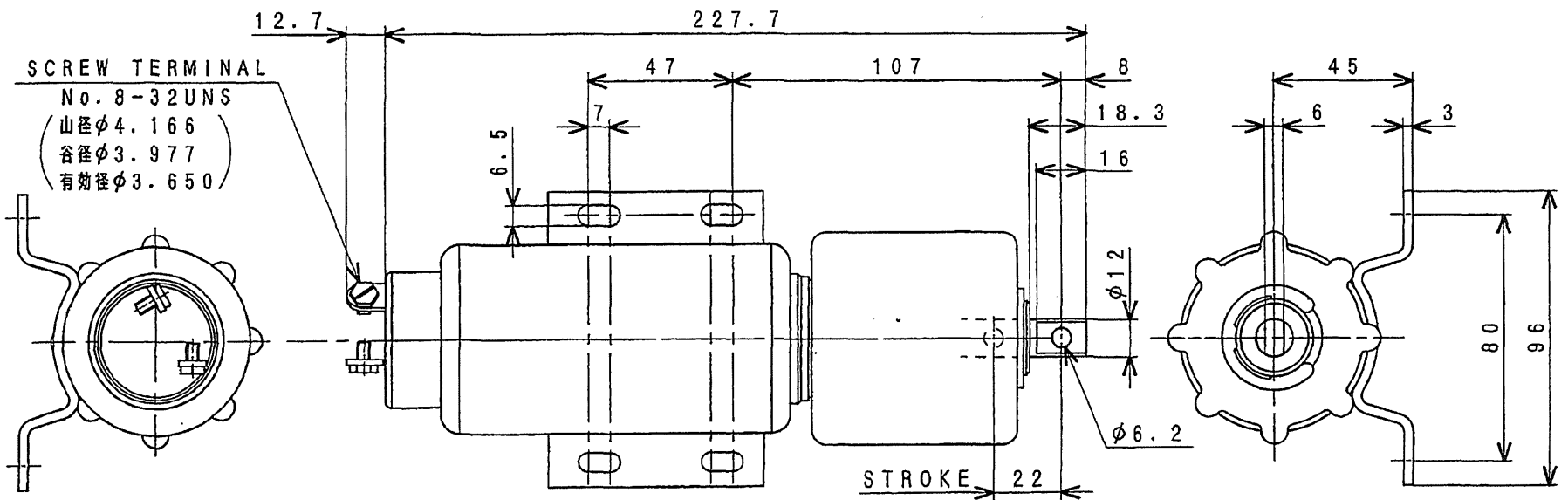
2	'09.12.8
1	'01.2.21
REV.	DATE

WATER HEATER

DWG. NO. S12-0014

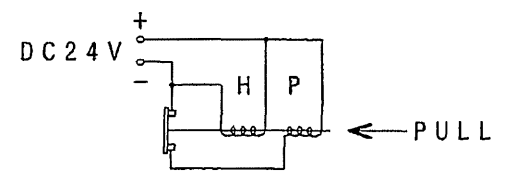
MITSUBISHI HEAVY INDUSTRIES, LTD.
GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

CHECKED BY
K. YATO



SCREW TERMINAL
No. 8-32UNS
(山径φ4.166
谷径φ3.977
有效径φ3.650)

STROKE 22



WIRING

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

04400-09201	1.05 MPa
PARTS NO.	RETURN SPRING PRESS.

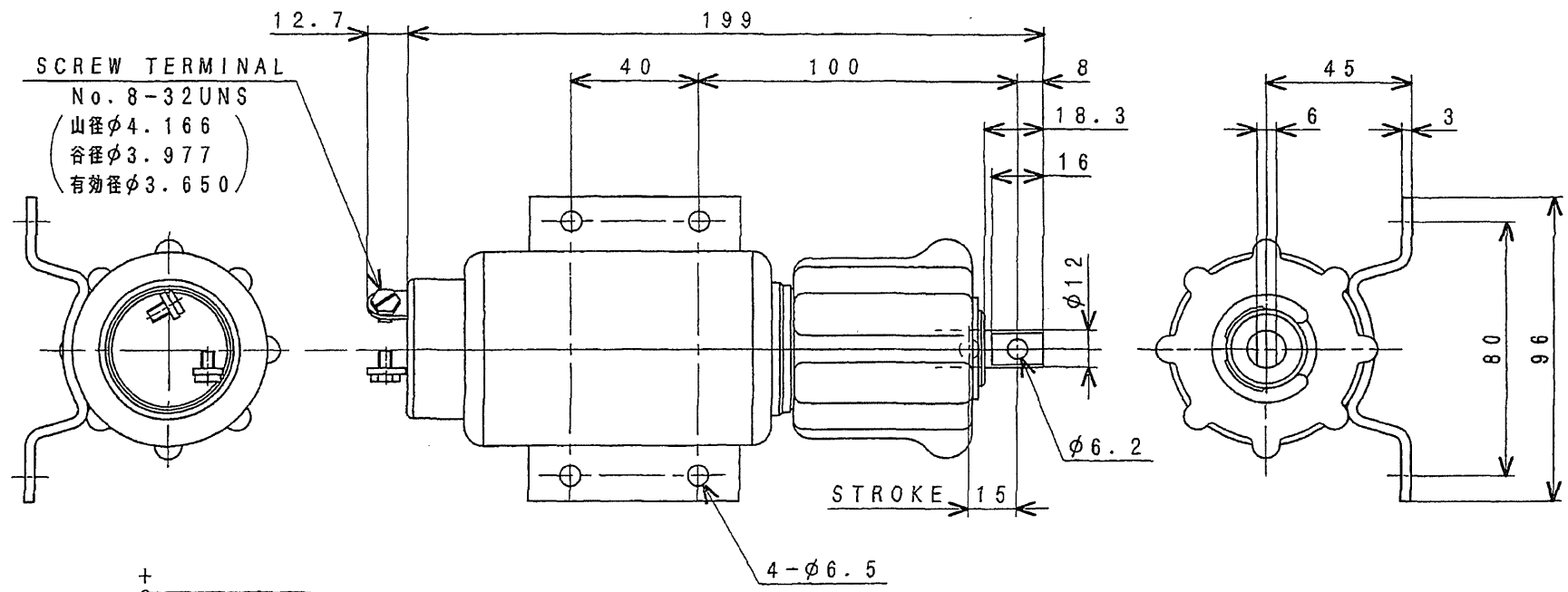
MHI CONFIDENTIAL

△	
△	
△	
REV.	DATE

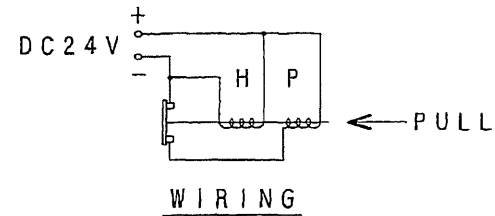
SOLENOID
PART NO. 04400-09201

DWG. NO. S13-0270
MITSUBISHI HEAVY INDUSTRIES, LTD.
GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

CHECKED BY
Y. FUKUDA



SCREW TERMINAL
No. 8-32UNS
(山径φ4.166
谷径φ3.977
有効径φ3.650)



NON CONFIDENTIAL

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

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。

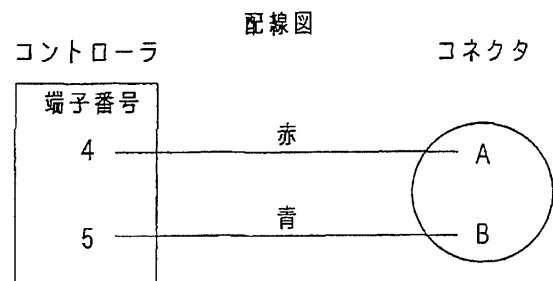
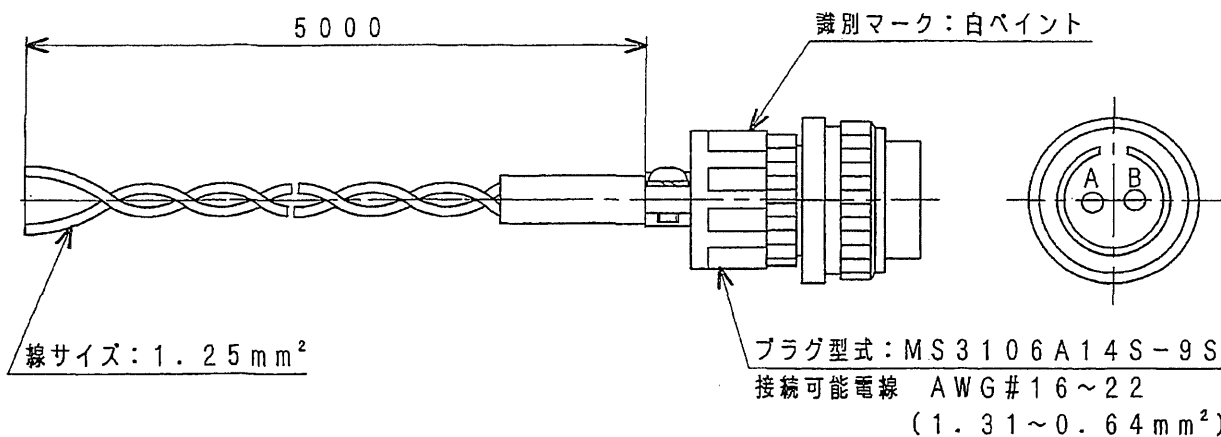
△	
△	
△	
REV.	DATE

SOLENOID

DWG. NO. S13-0282
MITSUBISHI HEAVY INDUSTRIES, LTD.
GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

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Y. FUKUDA



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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△	
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△	
REV.	DATE

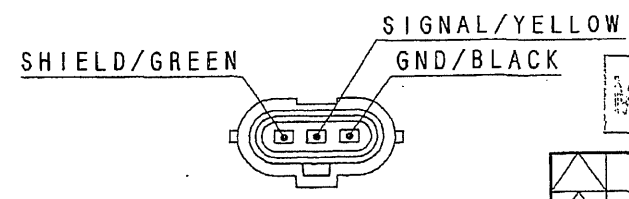
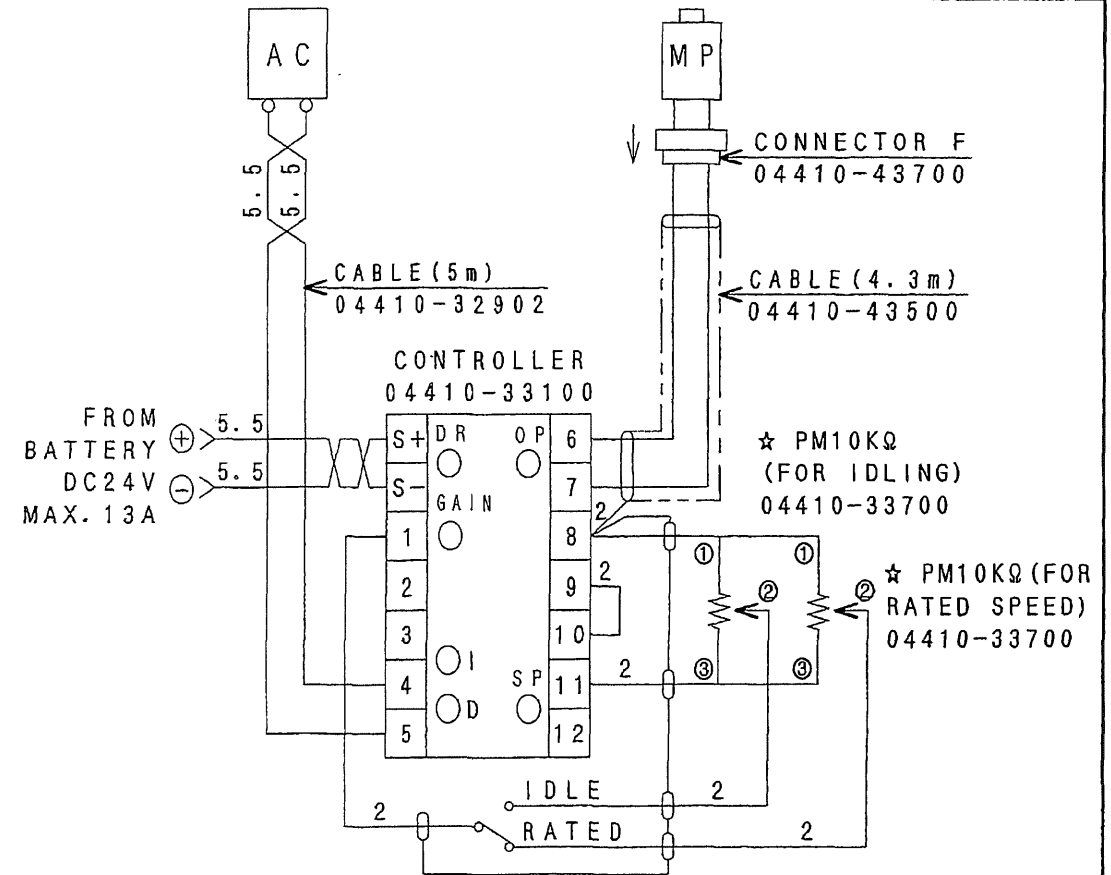
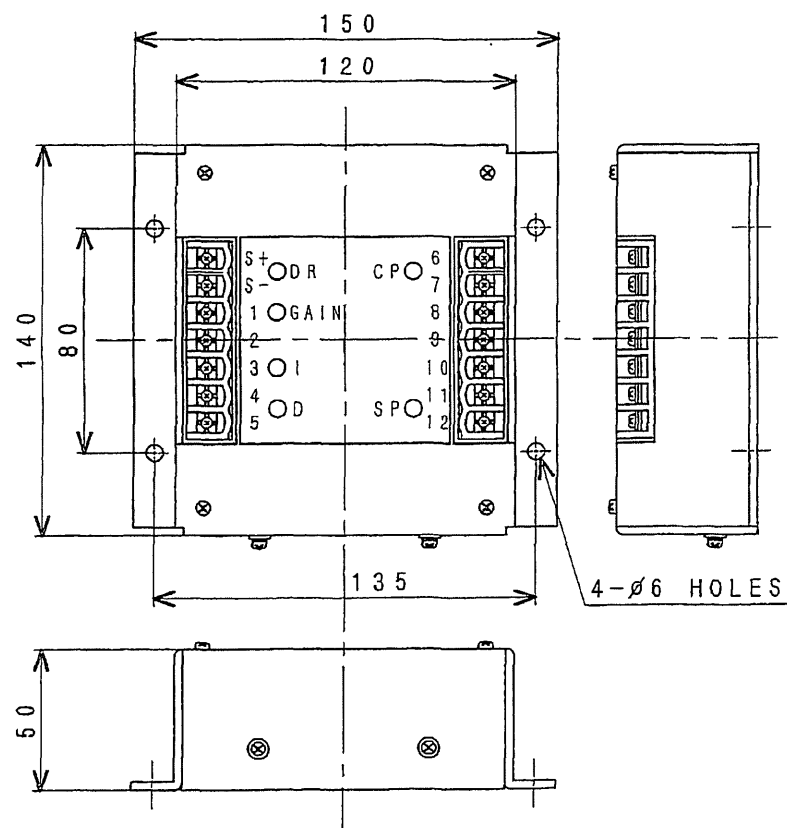
CONNECTOR
PART NO. 04410-32902

DWG. NO. S13-1022
MITSUBISHI HEAVY INDUSTRIES, LTD.
GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

CHECKED BY
Y. FUKUDA

ACTUATOR
04410-32011
04410-37081 (S12H)

MAGNETIC PICKUP
04410-43410



CONNECTOR F
04410-43700

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

WIRING

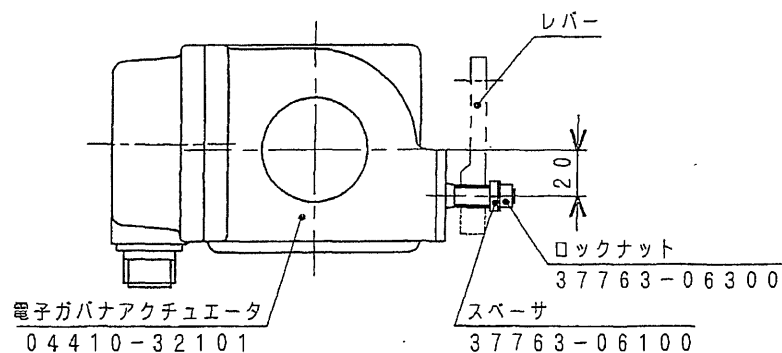
△	
2	'11.4.20
1	'01.6.29
REV.	DATE

CONTROLLER SPEED
PART NO. 04410-33100

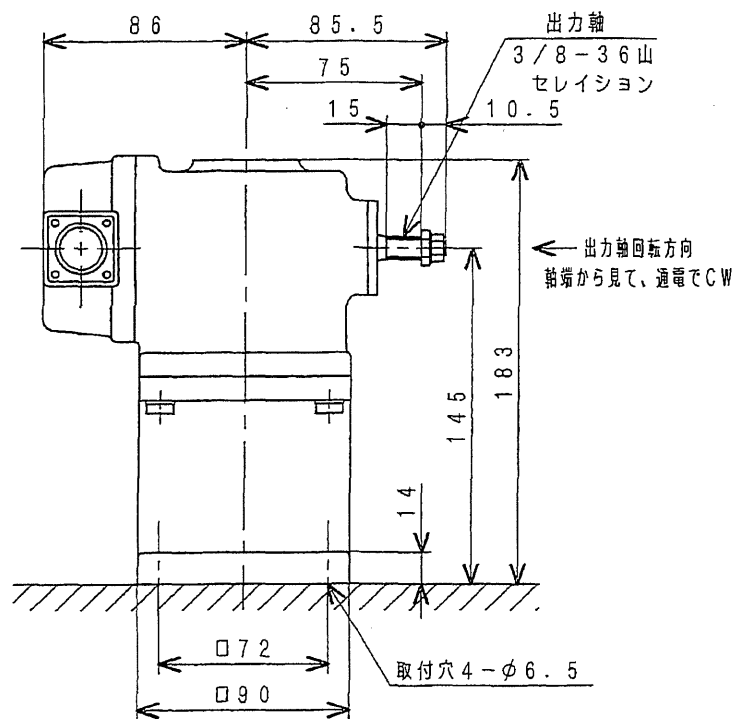
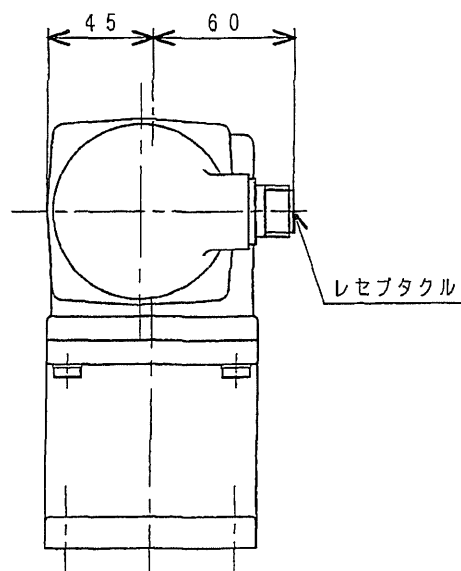
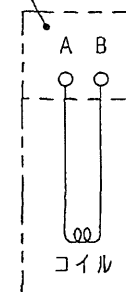
DWG. NO. S13-1042
MITSUBISHI HEAVY INDUSTRIES, LTD.
GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

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Y. FUKUDA



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°C ~ 100°C
- 耐震 : 2.5 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。

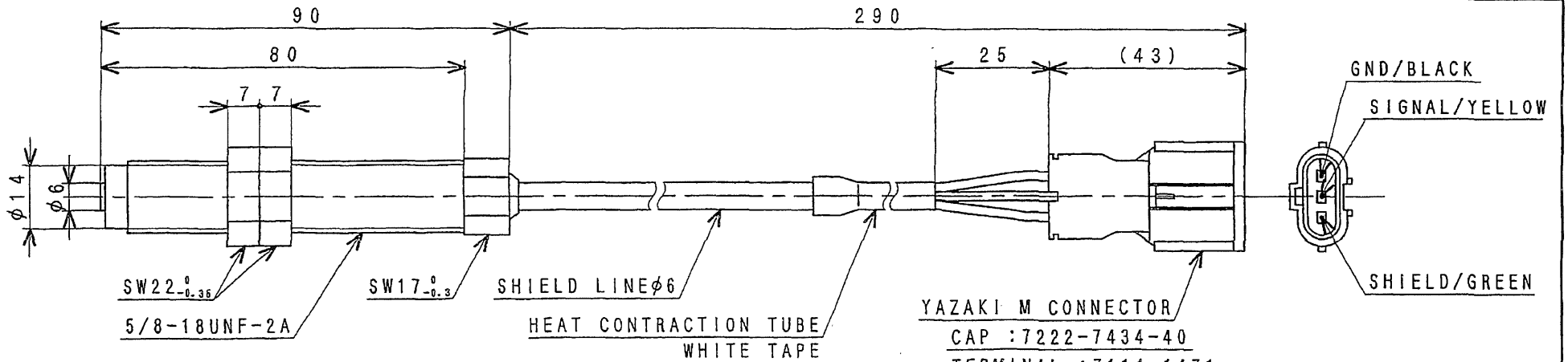
REV.	DATE
1	'09.12.8

ACTUATOR/SG4017BR
 PART NO. 04410-32011

DWG. NO. S13-1761

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

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T. HASHIGUCHI



SPECIFICATION

1. ELECTRIC MACHINE CHARACTERISTIC

OUTPUT VOLTAGE : FIGURE 1. MEASUREMENT CONDITION

4. 0V_{p-p} MORE (at 700Hz)

7. 0V_{p-p} MORE (at 6700Hz)

DIRECT CURRENT RESISTANCE : 1.3kΩ~1.6kΩ (at +25°C)

INSULATION RESISTANCE : 1MΩ以上 at DC 500V
(CONNECTOR TERMINAL-HOUSING)

ELECTRIC STRENGTH : 50/60Hz AC 500V 1MINUTE
(CONNECTOR TERMINAL-HOUSING)

2. MECHANICAL CHARACTERISTIC

CONNECTOR PULL OMISSION POWER : 49N MORE

TIGHTENING DESTRUCTION TORQUE : 49N·m MORE

3. OPERATING TEMPERATURE LIMIT

-40°C~+120°C

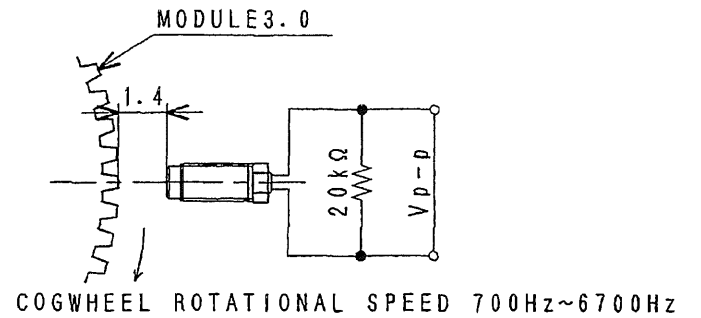


FIGURE 1. OUTPUT CONDITION

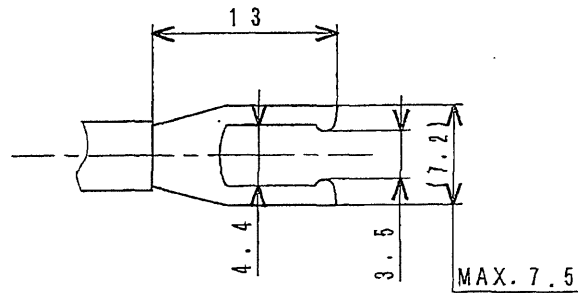
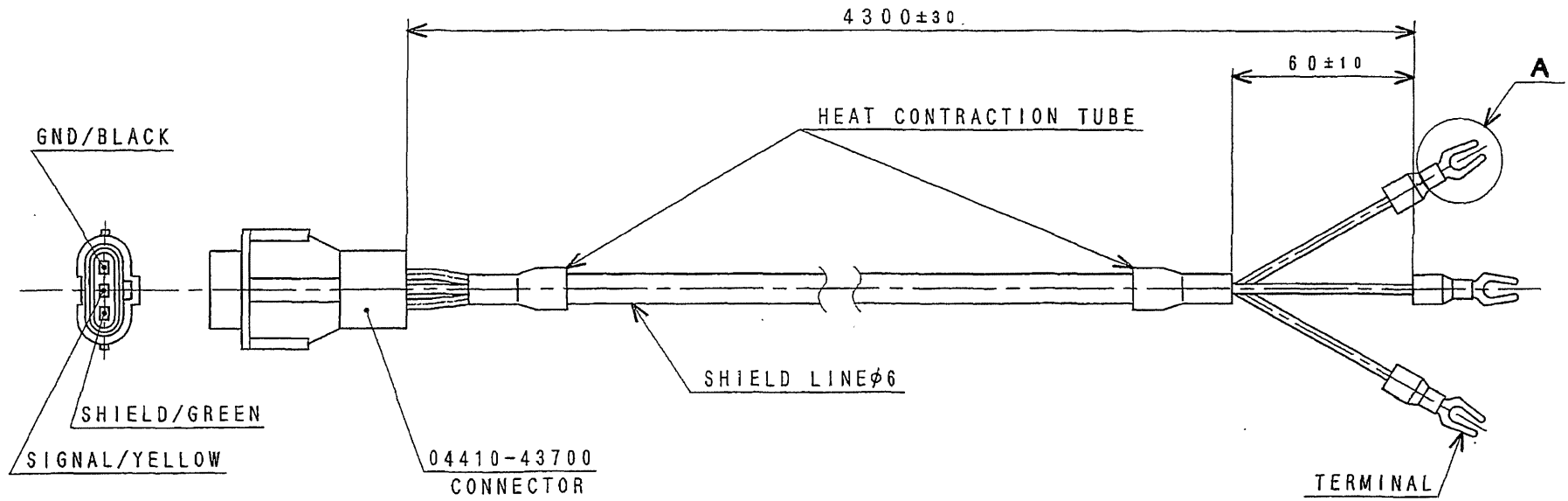
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2	'11.10.28
1	'06.6.9
REV.	DATE

PICKUP, MAGNETIC
PART NO. 04410-43410

DWG. NO. S13-2011
MITSUBISHI HEAVY INDUSTRIES, LTD.
GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

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T. HASHIGUCHI




DETAIL A

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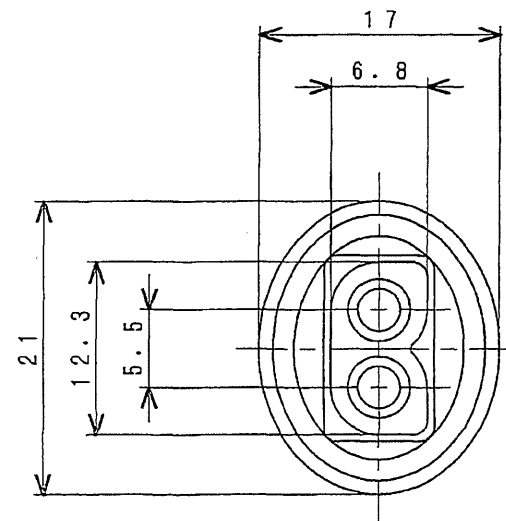
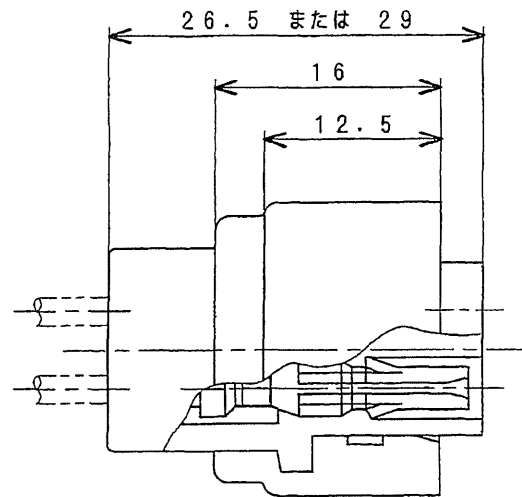
△	
△	
1	09.12.6
REV.	DATE

CABLE, PICKUP
PART NO. 04410-43500

DWG. NO. S13-2020
 MITSUBISHI HEAVY INDUSTRIES, LTD.
 GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS

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Y. FUKUDA

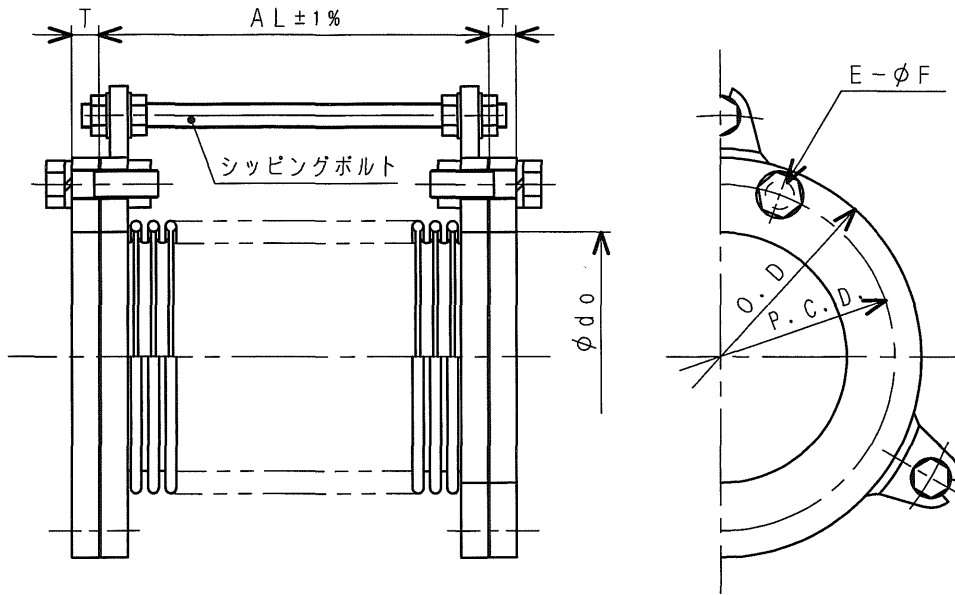


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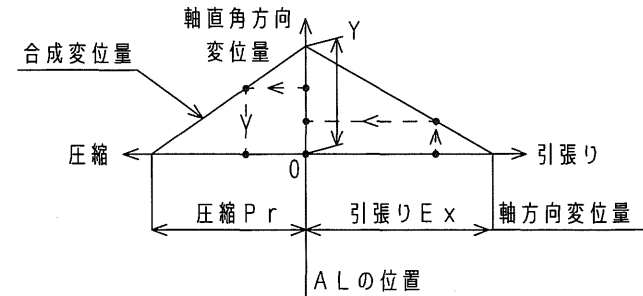
2	'04.3.12
1	'93.8.4
REV.	DATE

CONNECTOR
PART NO. MH052231

DWG. NO. S14-0330
MITSUBISHI HEAVY INDUSTRIES, LTD.
GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS



- 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。



Same with →
38C32-06900

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

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仕 様	
設計圧力	0.05MPa
設計温度	MAX. 600℃
用途	排気ガス

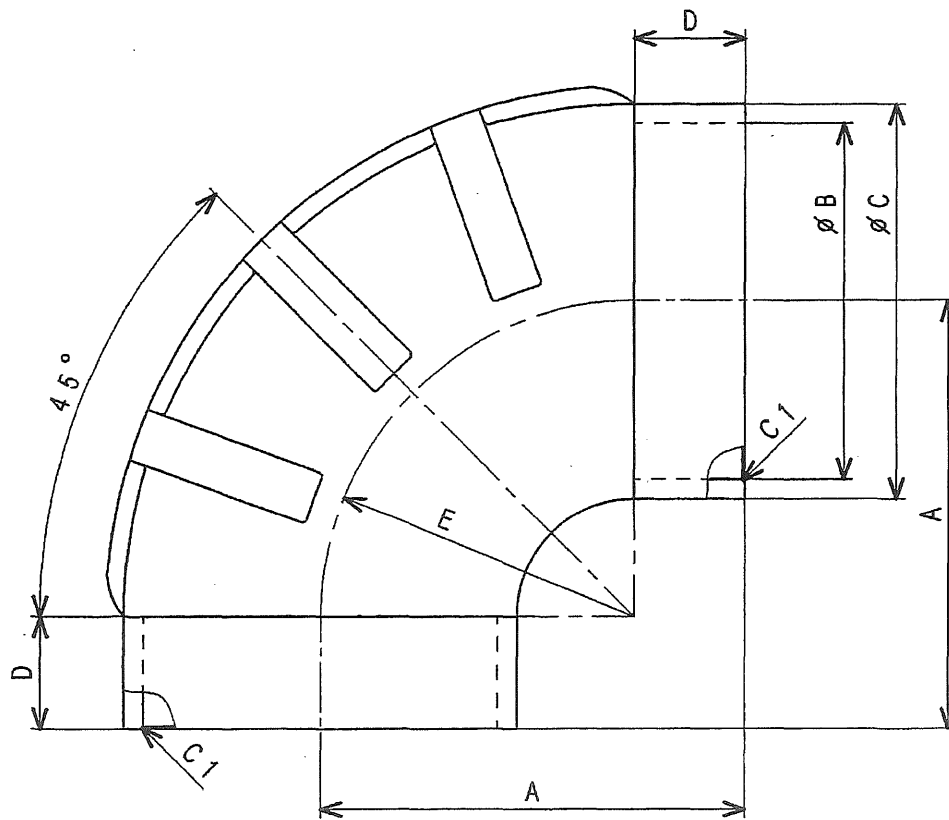
△	
△	
△	
REV.	DATE

FLEXIBLE PIPE

DWG. NO. S37-1021
 MITSUBISHI HEAVY INDUSTRIES, LTD.

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T. HASHIGUCHI



47220-47600	∅160	145	160	176	40	100
47220-32600	7" (∅177.8)	184.2	177.8	194.6	50.8	133.4
47220-30400	6" (∅152.4)	177.8	152.4	166.4	50.8	127
47220-12100	5" (∅127.0)	152.4	127	141	40	112.4
PARTS NO.	TYPE	A	B	C	D	E
	MEASURE					

MHI CONFIDENTIAL

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REV.	DATE

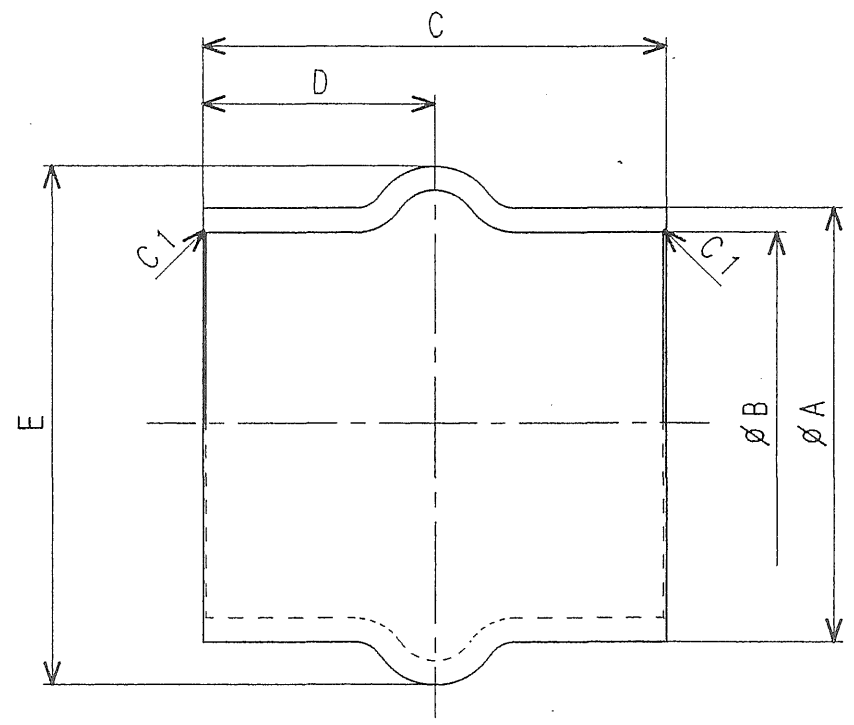
HOSE, RUBBER

DWG. NO. S35-0701

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

CHECKED BY

M. Fukuda



47220-47300	10' (∅254.0)	266.7	254	152.4	76.2	300
47220-31600	7' (∅177.8)	194	178	178	89	222
47220-30500	6' (∅152.4)	168.4	152.4	178	89	196.4
47220-13200	5' (∅127.0)	143	127	152.4	76.2	171
PARTS NO.	TYPE MEASURE	A	B	C	D	E

MHI CONFIDENTIAL

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REV.	DATE

HOSE, RUBBER

DWG. NO. S35-0711
 MITSUBISHI HEAVY INDUSTRIES, LTD.
 SAGAMIHARA MACHINERY WORKS

MITSUBISHI DIESEL ENGINE TECHNICAL INFORMATION	ITEM NO.	T0232-0003E (1/4)
	DATE	April, 2016

Specification Sheets of S12R-PTAA2 Engine

Specification Sheets of S12R-PTAA2 Engine are enclosed herein.

Revision	First Edition : September, 2007 (T13-0352-E Jul.'04)	Engine Engineering Department High Speed Engine Designing Section		
		Approved by	Checked by	Drawn by
		T.HASHIGUCHI	T.HASEGAWA K.SAKAMOTO	N.Y.

GENERAL ENGINE DATA

Type	4-Cycle, Water Cooled	
Aspiration	Turbo-Charged, Air to Air Cooler	
Cylinder Arrangement	60°V	
No. of Cylinders	12	
Bore mm(in.)	170	(6.69)
Stroke mm(in.)	180	(7.09)
Displacement liter(in ³)	49.03	(2992)
Compression Ratio	13.5:1	
Dry Weight - Engine only - kg(lb)	5520	(12172)
- Radiator & Piping - kg(lb)	1562	(3444)
Wet Weight - Engine only - kg(lb)	5830	(12855)
- Radiator & Piping - kg(lb)	1764	(3890)

PERFORMANCE DATA

Steady State Speed Stability Band at any Constant Load

Hydraulic (std.) or Electric Governor - %	±0.25 or better	
Maximum Overspeed Capacity - rpm	2100	
Moment of inertia of Rotating Components - kgf·m ² (lbf·ft ²)	75.3	(1787)
(Includes Std. Flywheel)		
Cyclic Speed Variation with Flywheel at 1800rpm	1/507	
1500rpm	1/294	

ENGINE MOUNTING

Maximum Bending Moment at Rear Face of Flywheel Housing - kgf·m(lbf·ft)	450	(3256)
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AIR INLET SYSTEM

Maximum Intake Air Restriction (Includes piping)

With Clean Filter Element - mm H ₂ O (in.H ₂ O)	400	(15.7)
With Dirty Filter Element - mm H ₂ O (in.H ₂ O)	635	(25.0)

EXHAUST SYSTEM

Maximum Allowable Back Pressure - mm H ₂ O (in.H ₂ O)	600	(23.6)
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LUBRICATION SYSTEM

Oil Pressure at Idle - kgf/cm ² (psi)	2~3	(29~43)
at Rate Speed - kgf/cm ² (psi)	5~6.5	(71~93)
Maximum Oil Temperature - °C(°F)	110	(230)
Oil Capacity of Standard Pan High - liter (U.S.gal)	150	(39.6)
Low - liter (U.S.gal)	110	(29.1)
Total System Capacity (Includes Oil Filter) - liter (U.S.gal)	180	(47.6)
Maximum Angle of Installation (Std. Pan) Front Down	6.5°	
(Engine Only) Front Up	6.5°	
Side to Side	22.5°	

COOLING SYSTEM

Coolant Capacity - Engine - liter (U.S.gal)	125	(33.0)
- Radiator & Piping - liter (U.S.gal)	202	(53.4)
Maximum External Friction Head at Engine Outlet - kgf/cm ² (psi)	0.35	(5.0)
Maximum Static Head of Coolant above Crankshaft Center - m(ft)	10	(32.8)
Maximum Outlet Pressure of Engine Water Pump - kgf/cm ² (psi)	2	(28.6)
Standard Thermostat (modulating) Range-°C(°F)	71~85	(160~185)
Maximum Coolant Temperature at Engine Outlet-°C(°F)	98	(208)
Minimum Coolant Expansion Space - % of System Capacity	10	
Maximum Cooling Air Temperature at Air to Air Cooler Inlet, TAA type-°C(°F)	40	(104)
Maximum Air Restriction on Discharge Side of Radiator and Fan-mm H ₂ O(in.H ₂ O)	40	(1.6)

APPLICATION : GENERATOR

FUEL SYSTEM

Fuel Injector	Mitsubishi PS6 Type × 2
Maximum Suction Head of Feed Pump - mm Hg (in. Hg)	75 (3.0)
Maximum Static Head of Return & Leak Pipe - mm Hg (in.Hg)	150 (5.9)

STARTING SYSTEM

Battery Charging Alternator - V-Ah	24-30
Starting Motor Capacity - V -kW	24-7.5×2
Maximum Allowable Resistance of Cranking Circuit - m Ω	1.5
Recommended Minimum Battery Capacity	
At 5°C(41°F) and above - Ah	300
Below 5°C(41°F) through - 5°C(23°F)	600

The specifications are subject to change without notice.

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S12R-PTAA2

SPECIFICATION SHEET

MITSUBISHI
DIESEL ENGINES

ENGINE RATING

All data represent net performance with standard accessories such as air cleaner, inlet /exhaust manifolds, fuel oil system, L.O. pump, etc. under the condition of 100kPa(29.6inHg) barometric pressure, 77°F(25°C) ambient temperature and 30% relative humidity.

ITEM	UNIT	STAND-BY POWER			PRIME POWER		
		60Hz	50Hz		60Hz	50Hz	
Engine Speed	rpm	1800	1500		1800	1500	
No. of Cylinders		12					
Bore	mm (in.)	170 (6.69)					
Stroke	mm (in.)	180 (7.09)					
Displacement	liter (in. ³)	49.03 (2992)					
Brake Horse power without Fan	HP (kW)	2189 (1633)	1932 (1441)		1989 (1484)	1761 (1314)	
Brake Mean Effective Pressure with Fan	kgf/cm ² (MPa) (psi)	22.6 (2.22) (321)	24.0 (2.35) (341)		20.6 (2.02) (293)	21.9 (2.15) (311)	
Mean Piston Speed	m/s (ft/min)	10.8 (2126)	9.0 (1772)		10.8 (2126)	9.0 (1772)	
Maximum Regenerative Power Absorption Capacity without Fan	HP (kW)	193 (144)	141 (105)		193 (144)	141 (105)	
Intake Air flow	m ³ /min (CFM)	148 (5226)	129 (4555)		134 (4732)	118 (4167)	
Maximum Air Temperature at Charge Air Cooler Inlet, TAA type	°C	230	220		230	220	
Maximum Air Temperature at Charge Air Cooler Outlet, TAA type	°C	70	70		70	70	
Allowable Pressure Drop at Charge Air Cooler	kgf/cm ² (kPa) (psi)	0.27 (26) (4)	0.16 (16) (2)		0.27 (26) (4)	0.16 (16) (2)	
Charge Air Cooler Working Pressure	kgf/cm ² (MPa) (psi)	3.5 (0.345) (50)	3.5 (0.345) (50)		3.5 (0.345) (50)	3.5 (0.345) (50)	
Exhaust Gas Flow	m ³ /min (CFM)	391 (13806)	343 (12111)		355 (12535)	312 (11017)	
Coolant Flow	liter/min (U.S. GPM)	1850 (489)	1650 (436)		1850 (489)	1650 (436)	
Cooling Air Flow	m ³ /min (CFM)	1800 (63558)	1800 (63558)		1800 (63558)	1800 (63558)	
Allowable Fan Loss Horse Power	HP (kW)	50 (37)	50 (37)		50 (37)	50 (37)	
Radiated Heat to Ambient	kcal/hr (BTU/min)	111193 (7354)	97528 (6450)		101047 (6683)	88933 (5882)	
Heat Rejection to Coolant	kcal/hr (BTU/min)	518900 (34319)	455132 (30102)		471554 (31188)	415020 (27449)	
Heat Rejection to Air to Air Cooler	kcal/hr (BTU/min)	481836 (31868)	422623 (27952)		437872 (28960)	385375 (25488)	
Heat Rejection to Exhaust	kcal/hr (BTU/min)	1190396 (78731)	1036643 (68562)		1081781 (71548)	945281 (62520)	
Noise Level (1 m height & distance) (excludes, Intake, Exhaust & Fan)	dB(A)	TBD	TBD		TBD	TBD	

The specifications are subject to change without notice.

APPLICATION : GENERATOR

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