

SPECIFICATIONS

MITSUBISHI HIGH SPEED DIESEL ENGINE MODEL MITSUBISHI L3E-63SPH

For MEE
(POWER UNIT STANDARD)

For reference only



DATE May. 12. 2000

MITSUBISHI HEAVY INDUSTRIES, LTD.

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1	小E作
2	客先
	PDF
1	控
6	計

CHG	DATE	APPROVED	CHECKED	DRAWN
3	2005/7/27	T. Yamada	M. Yamaguchi	R. Touge
2	2002/12/27		R. Nagase	
1	2002/5/27			

1. Principal Particulars of Diesel Engine

General Specification

Standard	All items, unless otherwise specified, are in accordance with JIS and maker's standards	
Model	Mitsubishi L3E (Mitsubishi L3E-63SPH) (MHI No. 30L00-05180 1/2-chg3, 2/2-chg3)	
Regulations	No emission type	
Type	4 cycle water-cooled, vertical overhead valve, cylinder in line, swirl chamber type	
Number of cylinders	3	
Bore × Stroke	76mm × 70mm	
Piston displacement	0.952 liters	
Compression ratio	23 : 1	
Rotation	Anti-Clockwise rotation as viewed from flywheel side	
Firing order	1-3-2	
Engine weight(Dry)	Approx. 83kgf	
Dimensions(Length)	Approx. 505mm	
(Width)	Approx. 418mm	
(Height)	Approx. 500mm	
Inclination(Continuous)	25°	
(Temporary)	30°(Max 30 min.)	
Fuel	ASTM diesel fuel oil No.2-D(JIS K2204 gas oil specification No.2 or 3)	
Lubricating oil	API classification service CD class	
Engine performance	Rating	Rating at delivery
	Breaking in around 50hr	Breaking in around 0.25 hr
Rated Power ; without fan	15.8kW{21.5PS}/3000rpm	15.0kW{20.4PS}/3000rpm
with fan(for ref.)	14.7kW{20.0PS}/3000rpm	14.0kW{19.0PS}/3000rpm
Rating tolerance	±5% of nominal	±5% of nominal
Fuel consumption	280g/kW-h{206g/PS-h}	308g/kW-h{227g/PS-h}
Tolerance	±8%	±8%
Low Idle	900(+50,0)rpm	
High Idle	3200(+30,-10)rpm	
Rating conditions	ISO 3046, without fan	
	Total barometric pressure:0.1MPa	
	Air temperature :298K	
	Relative humidity:30%	
Oil consumption	Within 2.7g/kW-h{2.0g/PS-h}	
Fuel injection timing	17°BTDC	
Mean effective pressure	0.62MPa{6.3kgf/cm ² }	
Piston speed	7.0 m/s at 3000rpm	

Fuel system

Fuel injection pump	BOSCH type
Fuel injection nozzle	Throttle type
Governor	Mechanical centrifugal type
Fuel filter	Filtering paper type
Min. required fuel feeding head	100mm
Max.static head of leak pipe(return)	200mmHg

Lubricating system

Lubricating system	Forced circulation by gear pump
Lubricating oil filter	Filtering paper type, full flow
Oil pressure	0.29MPa~0.39MPa{3~4kgf/cm ² } at duty run 0.098MPa{1.0kgf/cm ² } min. at low idling
Oil capacity	3.6 liters (Oil pan 3.1 liters, high level,Oil filter etc. 0.5 liters)
Oil dipstick	Standard dipstick
Oil pressure switch	Yes

Cooling system

Cooling system	Forced circulation of fresh water by centrifugal pump with thermostat
Engine water capacity	Approx. 1.8 liters
Cooling fan	Yes; 320mm diameter, suction
Water pump pulley	PCD 87mm
Pulley ratio	1.26 (Crankpulley : Water pump pulley = 110 : 87)
Fan spacer	No
Water temp. switch	Yes
Thermo. Unit	No
Thermostat	Open at 76.5deg.C - full open at 90deg.C

Electrical system

Alternator	12V - 40A
Voltage regulator	IC type (Built in alternator)
Regulator set voltage	14.7 ±0.3 V
Alternator pulley	PCD 65mm
Starting system	Electric starting
Starter motor	12V-1.7kW
Glow plug	10.5V,9.7A
Engine shut off system	Electric solenoid (ETR)

Intake and Exhaust system

Intake manifold(cover)	Upper side way
Exhaust manifold	Side way
Induction Resistance	Max 1.96kPa{0.2mH ₂ O}
Exhaust Back Pressure	Max 6.57kPa{0.67mH ₂ O}

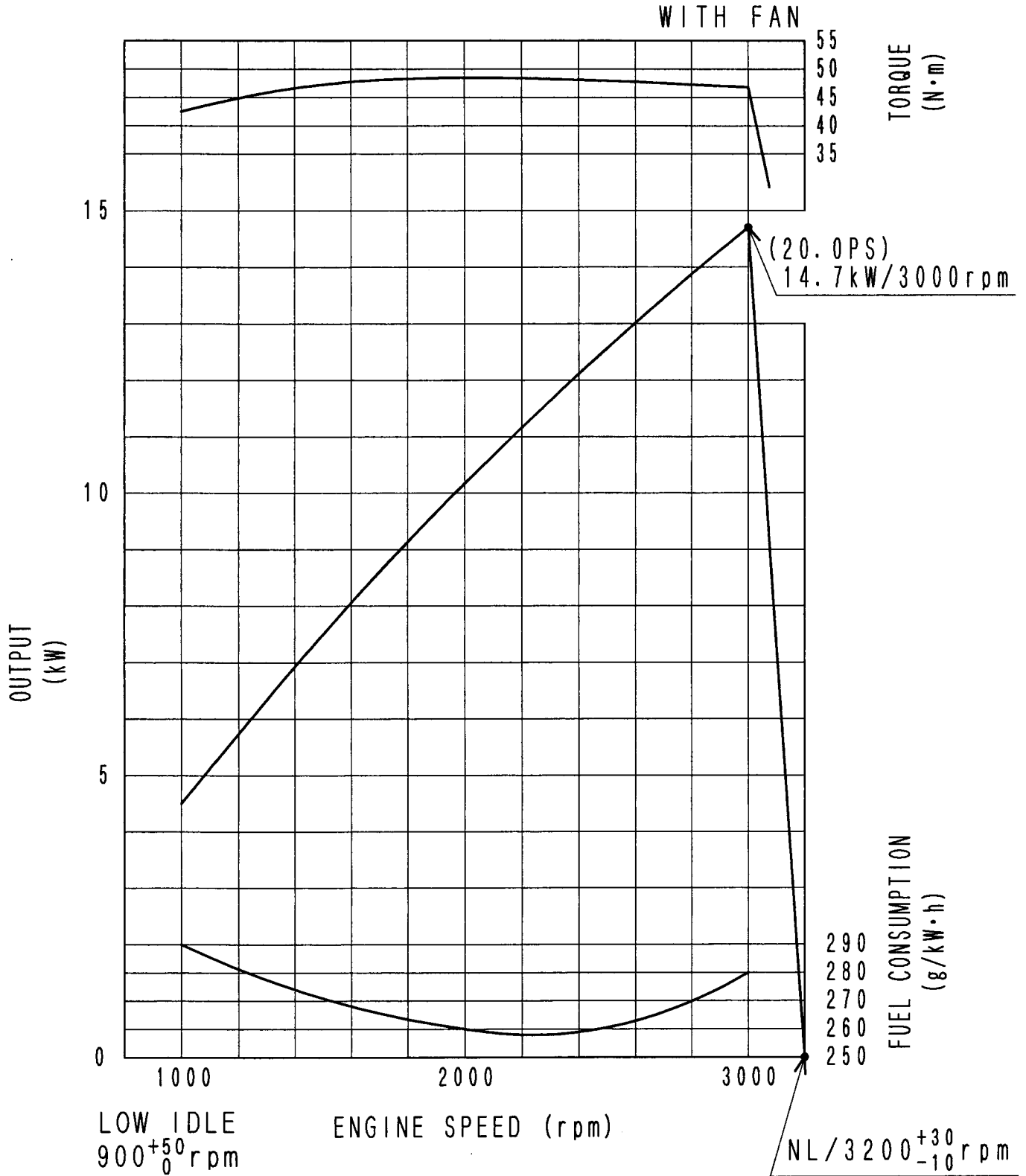
<Remarks>

Engine color	Black(MHI standard color)
Flywheel	SAE#6.5(thin type)
Flywheel housing	SAE#5 (thin type)
Side gear PTO	Allowable torque 15.6N-m{1.59kgf-m} total of front and rear, Clockwise rotation as viewed from flywheel side, Gear ratio 1:15

2. Accessories (Loose Supply)

CHG		Parts Name	Parts No.	Q'ty	Remarks	
3	1	SWITCH,OIL PRESSURE	31A90-00600	1	Attached To Engine	A4
	2	SWITCH, THERMO	MM432-104	1		A4
	3	SOLENOID ASSY	30A87-10042	1		A4

MITSUBISHI DIESEL ENGINE
 MODEL L3E-63SPH
 PERFORMANCE CURVE



ISO 3046

Total barometric pressure : 100kPa
 Air temperature : 298K
 Relative humidity : 30%

LABEL, MITSUBISHI

LABEL, ENG NO.

GLOW PLUG

3-M4X0.7
(TIGHTENING
TORQUE 1~1.5N·m)

THERMO SWITCH-E
(JIS D 5403 PA)

OIL FILLER CAP

ENGINE HANGER

ENGINE HANGER

FUEL OUTLET-H

FUEL INLET-G

SPEED CONTROL LEVER

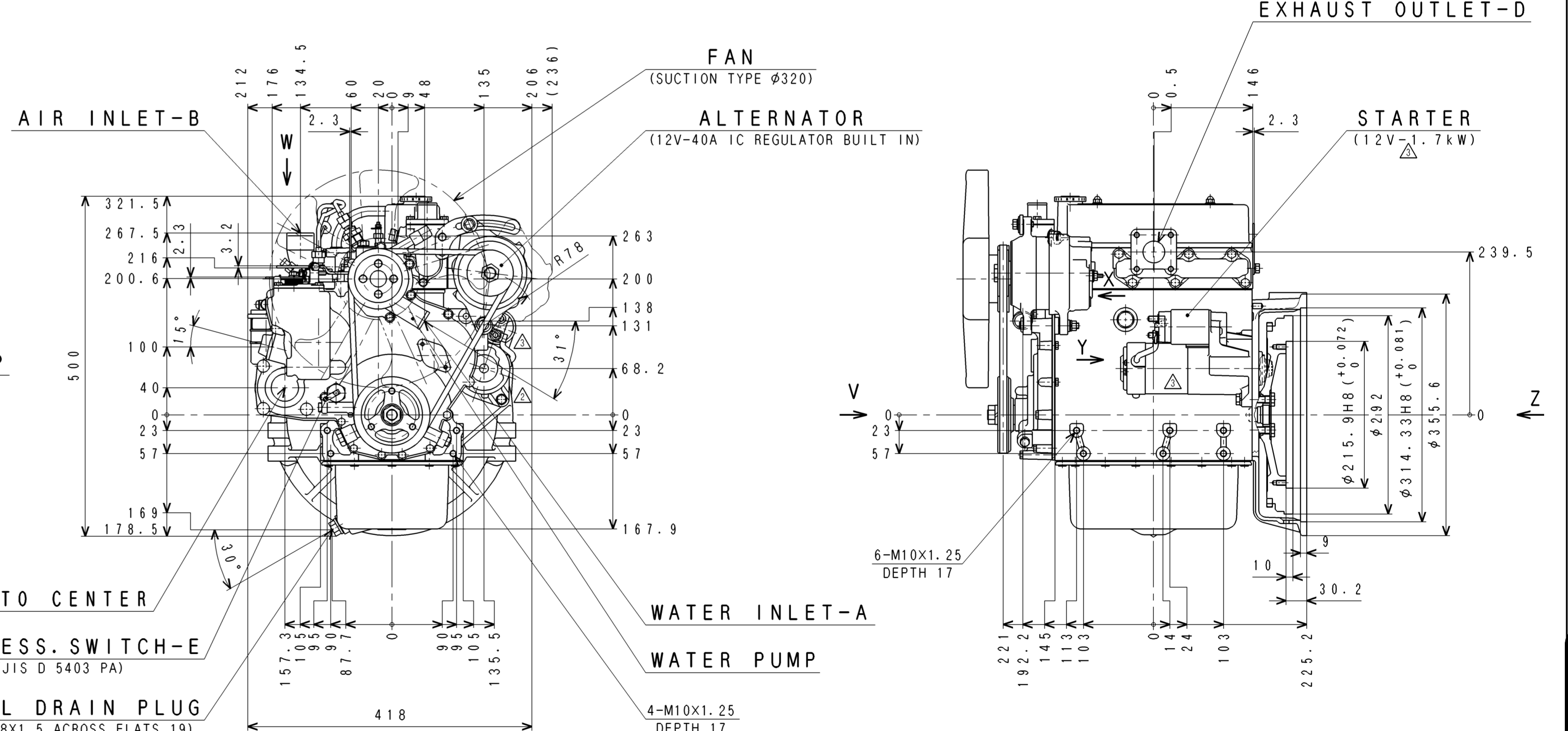
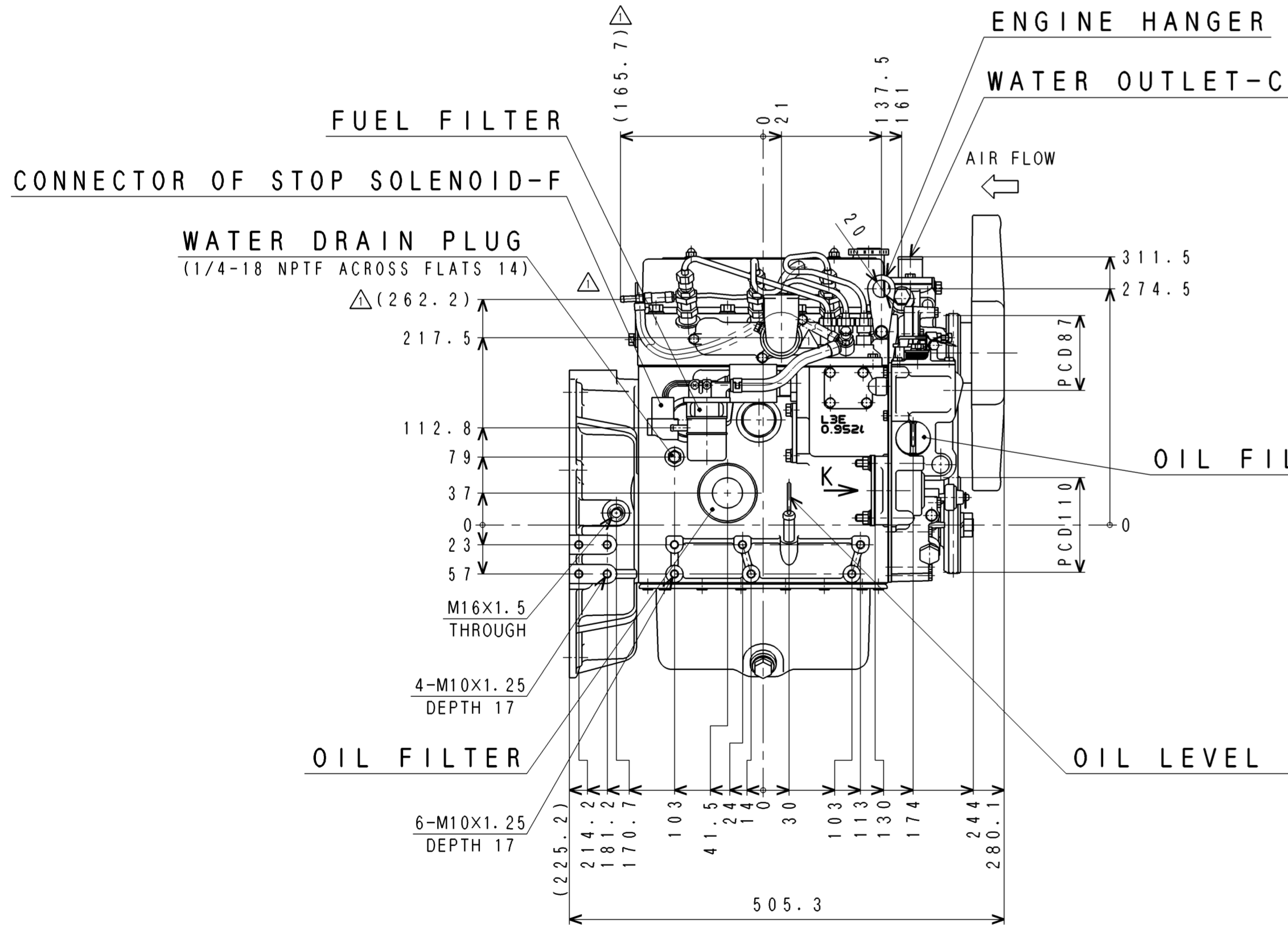
STOP LEVER

INJECTION PUMP

ENGINE NO.

AIR VENT SCREW

Z-VIEW

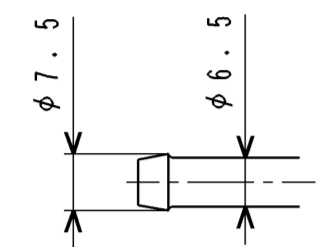


FOR MEE (63SPH)

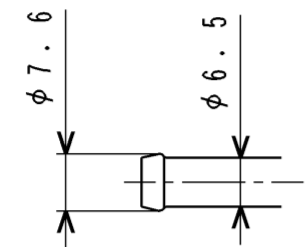
3 30G0-760202.12.27 R. TOUGE		3rd ANGLE PROJECTION	L3E ENGINE ASSY	
2 30G0-719002.5.27 R. TOUGE			三菱重工業株式会社 汎用機・特車事業本部 GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS: MITSUBISHI HEAVY INDUSTRIES, LTD.	
1 30G0-598600.2.18 R. TOUGE		尺規 SCALE 1:5	圖面番号 30L00-05180	
CHG	EO-NO		DATE	CHK
製図 (MSH) DRAWN R. TOUGE 1988. 9. 8		承認 (MSH) CHECKED T. YAMADA A. SAMATA		
3 新訂		1 2 續納品品	3 検査品	4 組立品
1 旧訂		1 5 切削品	6 その他(購入品)	



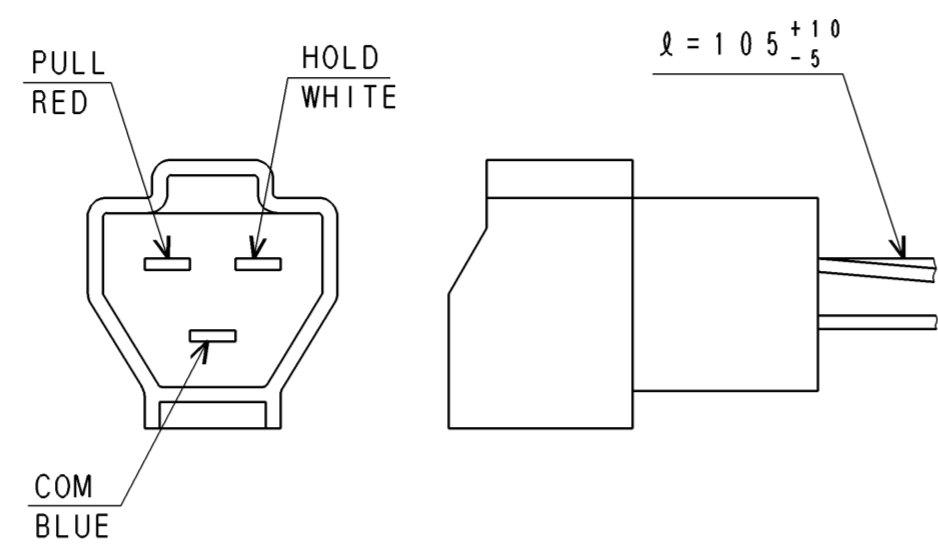
FULL-CAD



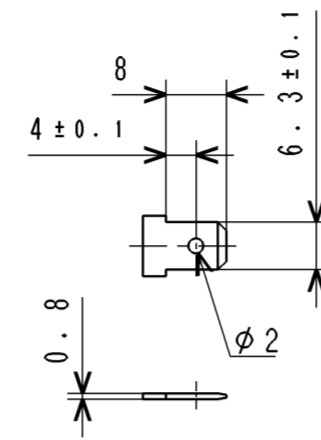
H-DETAIL



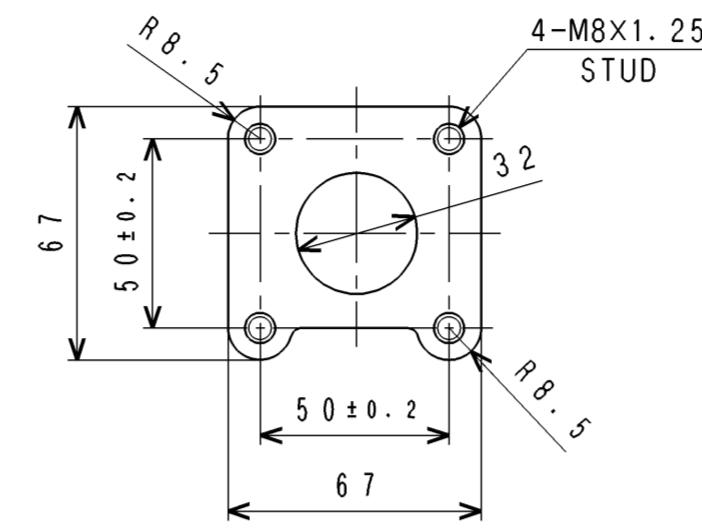
G-DETAIL



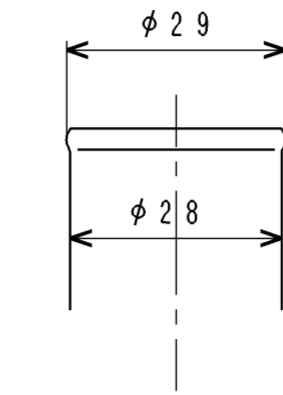
F-DETAIL
7222-6234-40 (YAZAKI)



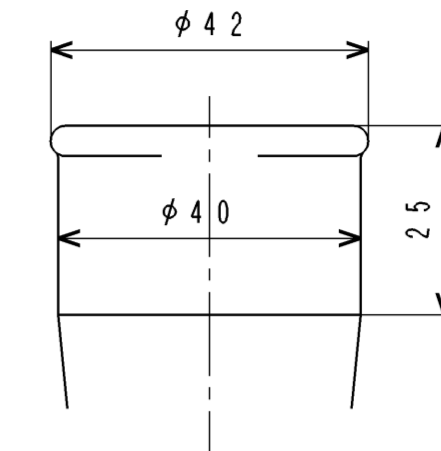
E-DETAIL
(JIS D 5403 PA)



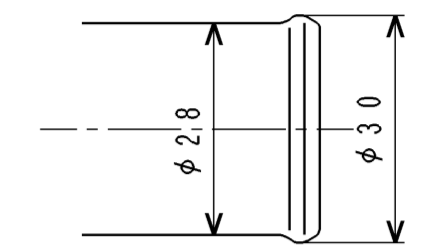
D-DETAIL (1:2)



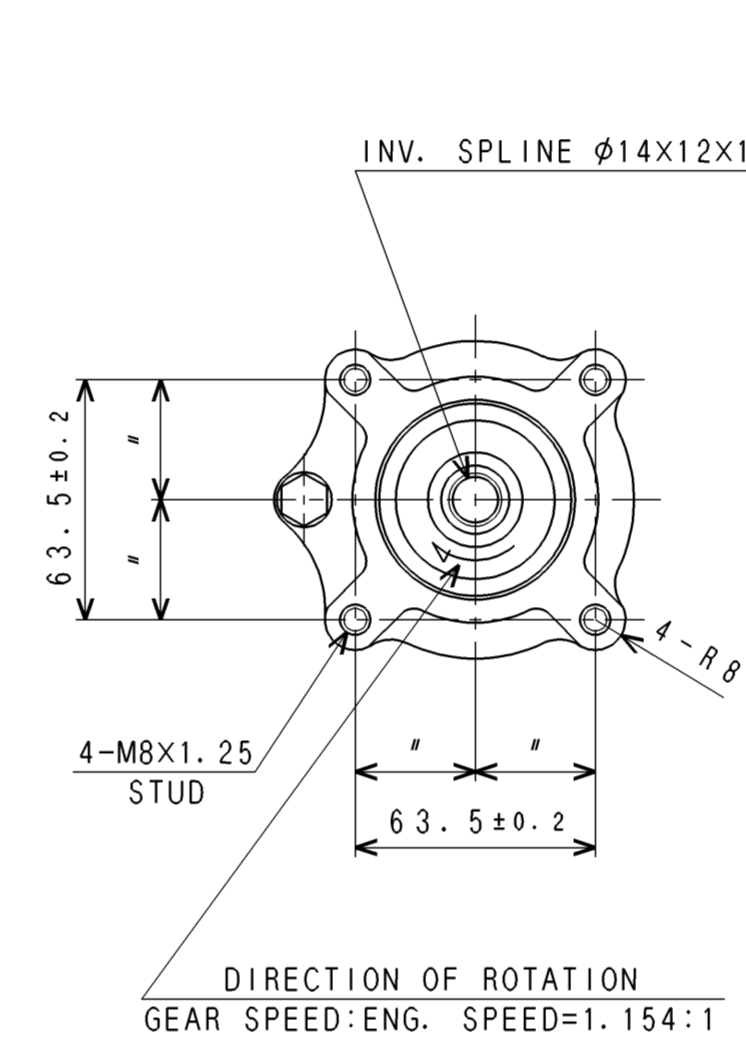
C-DETAIL



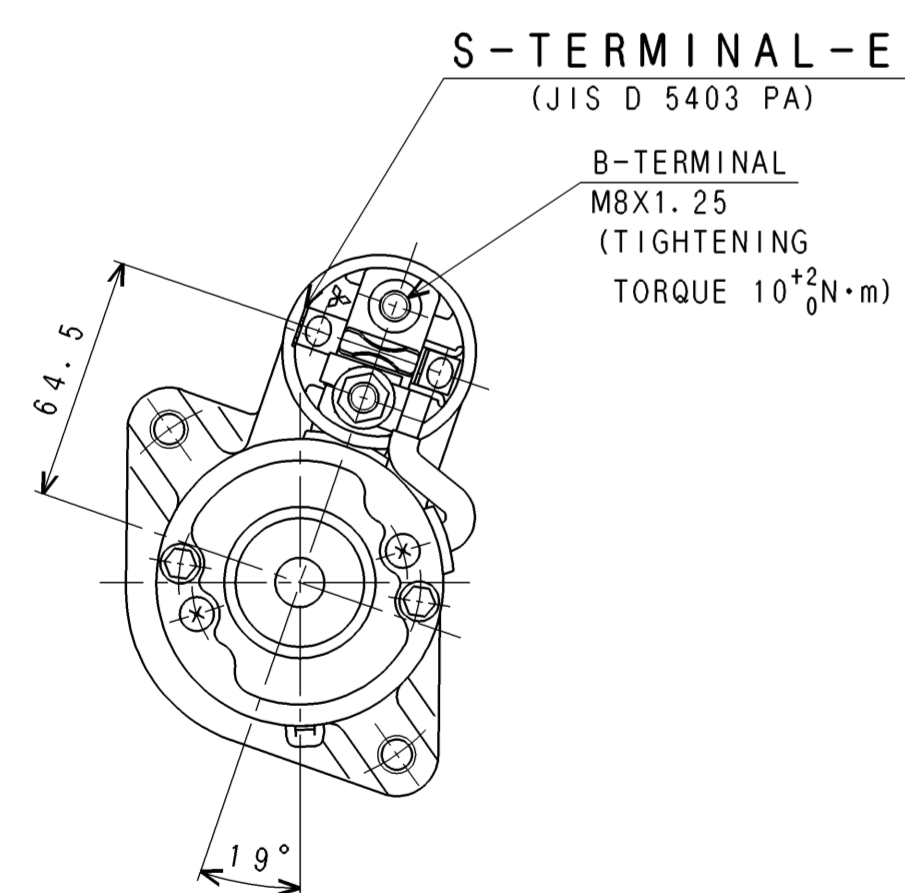
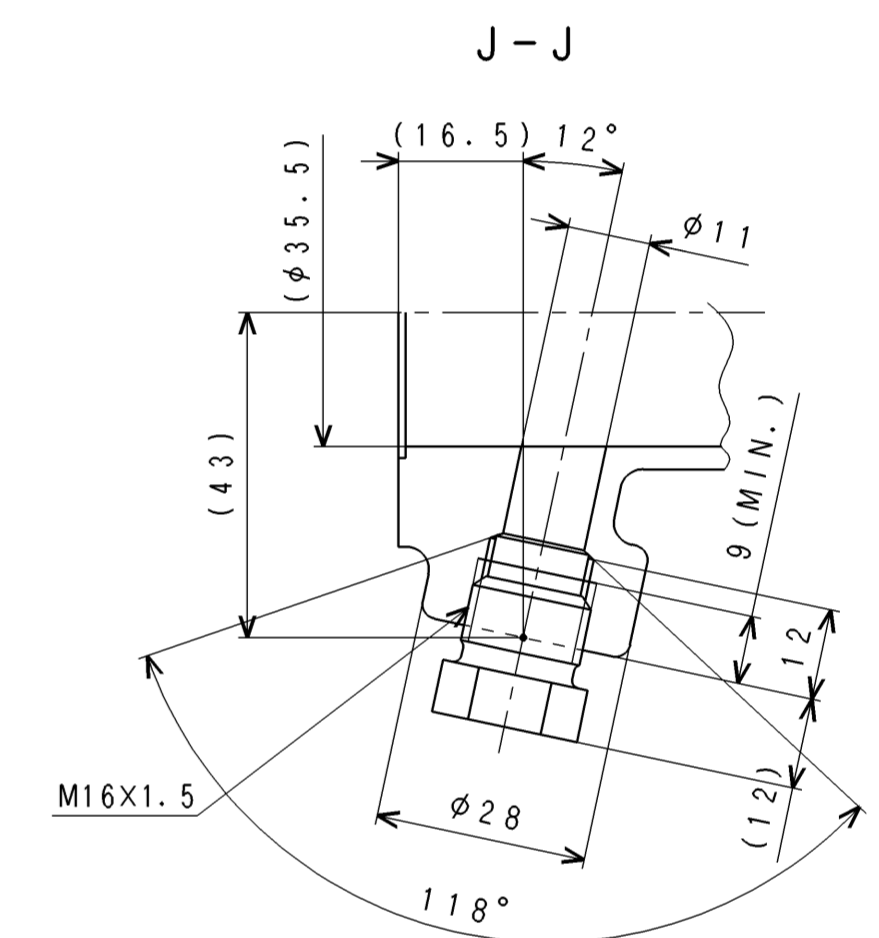
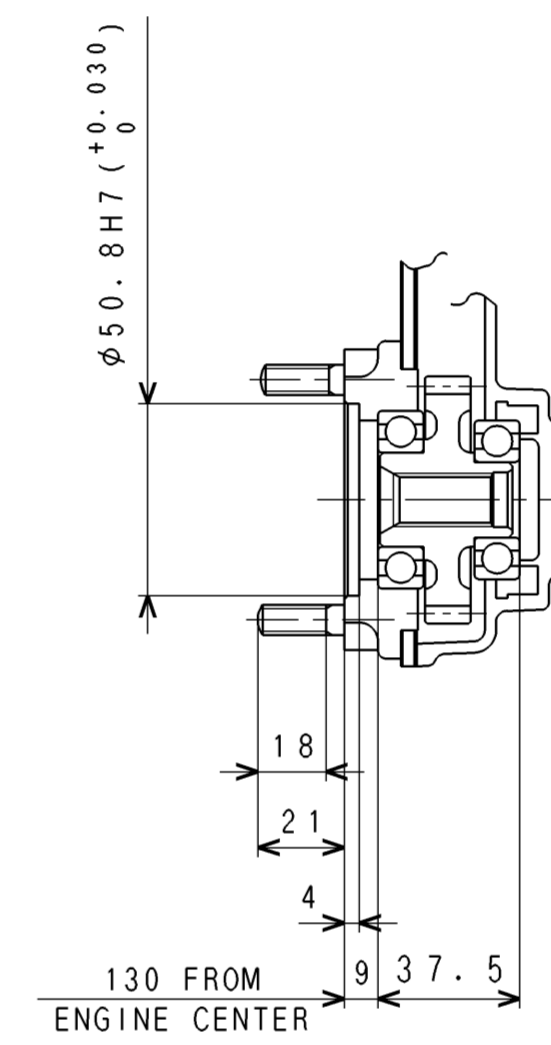
B-DETAIL



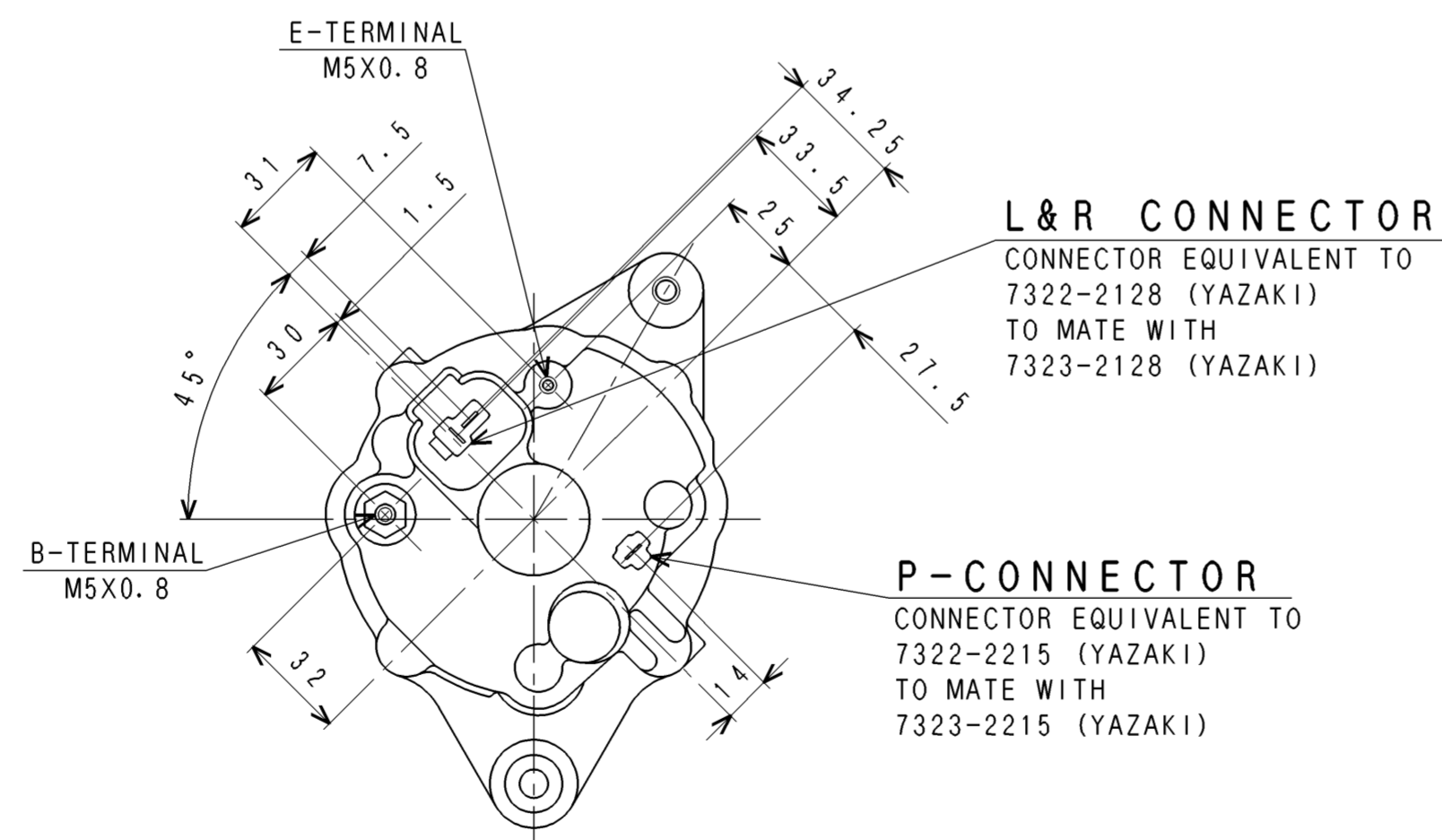
A-DETAIL



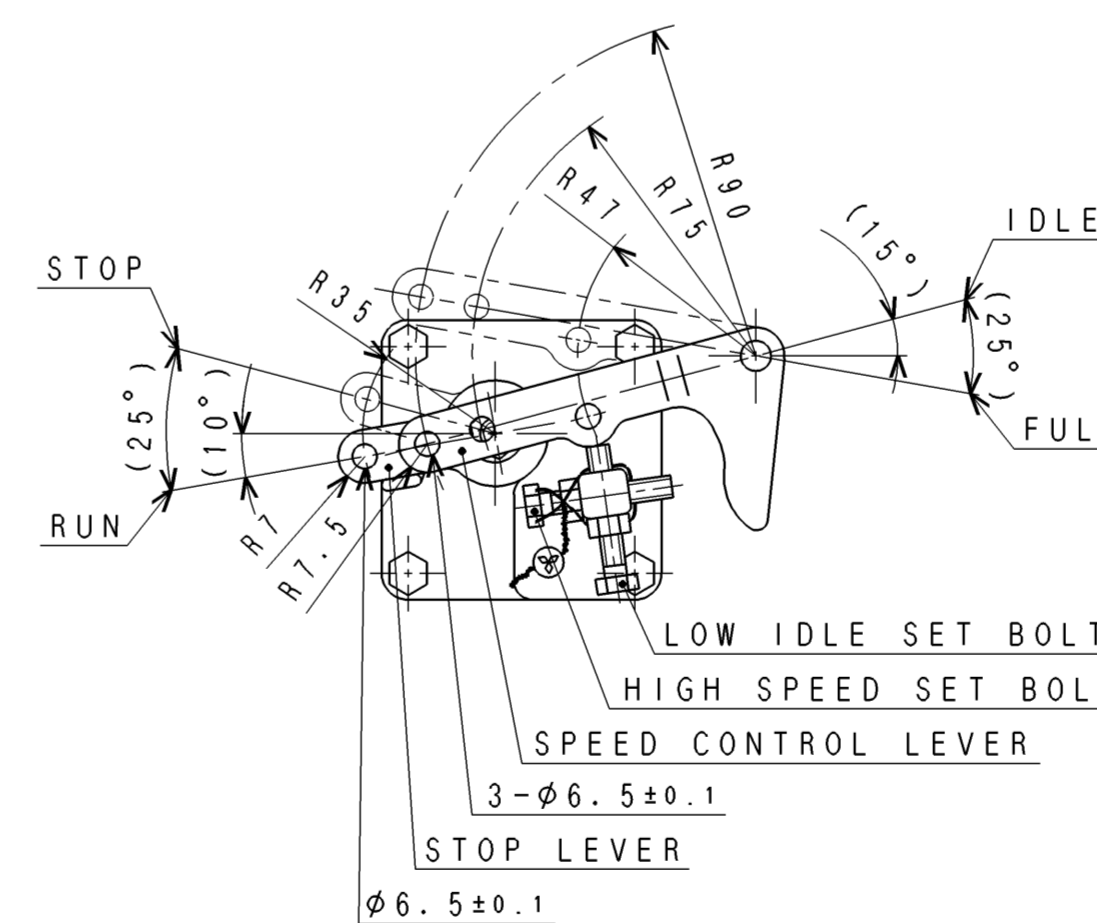
K-VIEW (1:2)



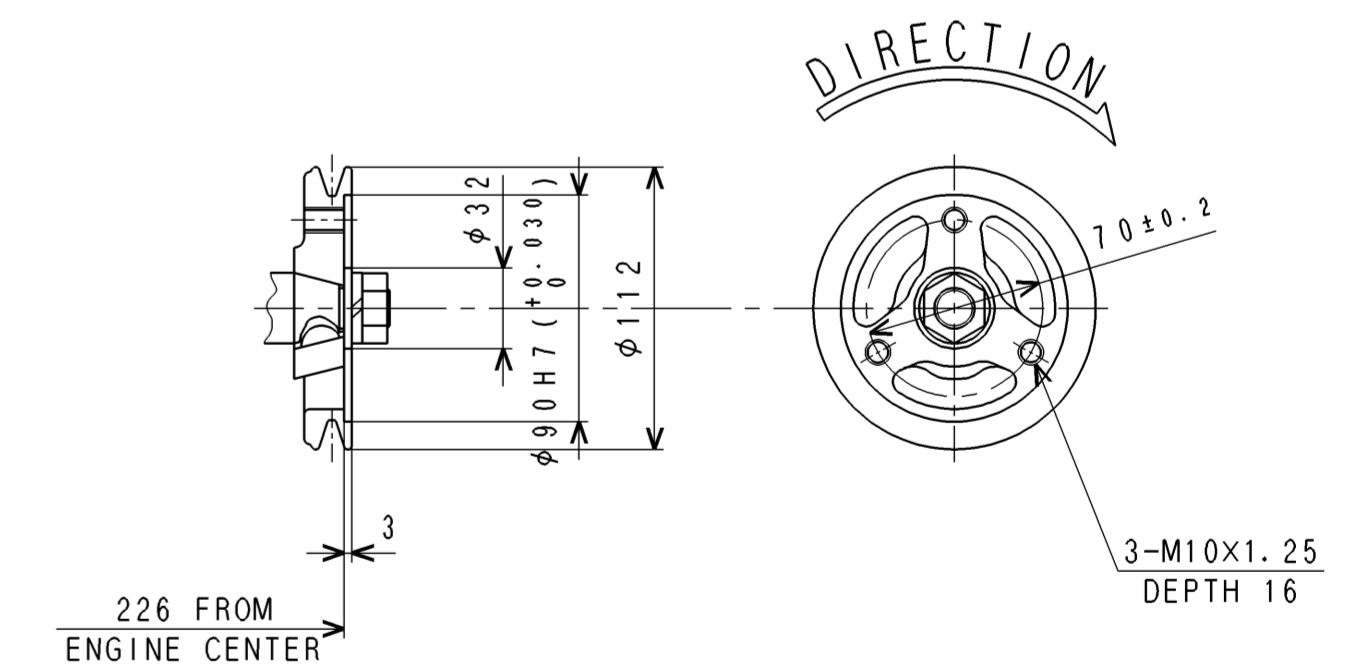
Y-VIEW (1:2)



X-VIEW (1:2)



W-VIEW (1:2)



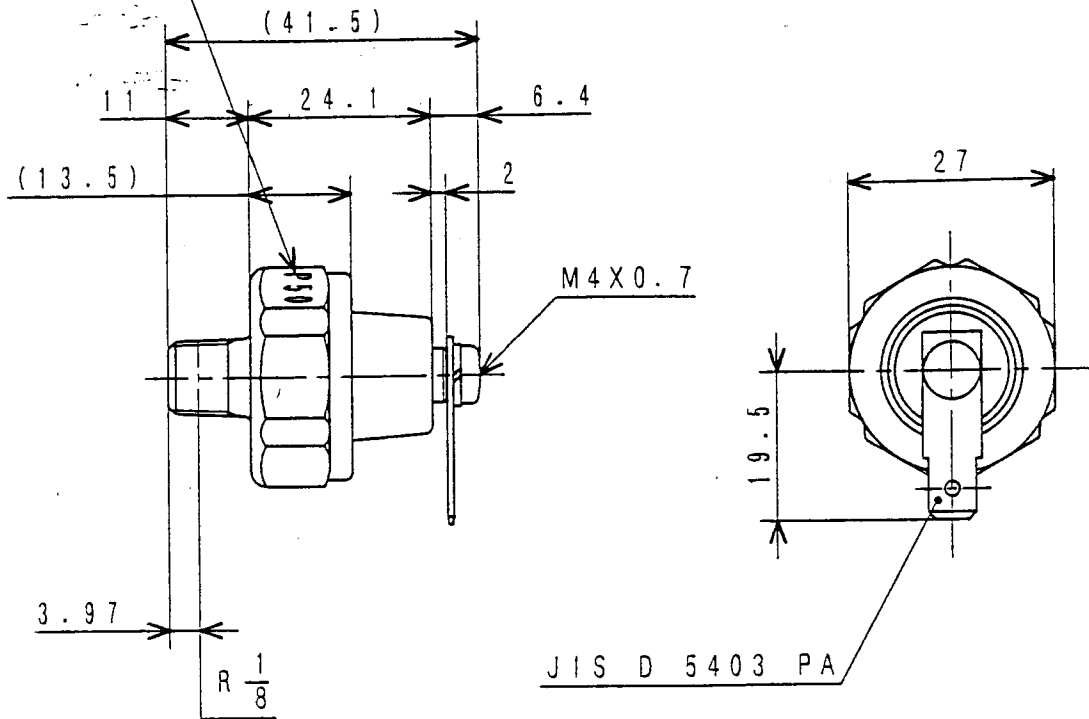
V-VIEW (1:3)

FOR MEE (63SPH)

3	3060-7602	02.12.27	R. TOUGE	3rd ANGLE PROJECTION	L3E ENGINE ASSY
2	3060-7190	02. 5. 27	R. TOUGE		
1	3060-5986	00. 2. 1	R. TOUGE		
CHG	EO-NO	DATE	CHK	尺取 SCALE 1:1	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.
認可 APPRO	検出 CHK	検出 CHK	製図 DRAW	製図 DRAW	図面番号 DRAWING NO.
			T. YAMADA A. SAMATA	R. TOUGE K. TAGAMI	30L00-05180
			1988. 9. 8	1988. 9. 8	2 2

3 新図 4 1 2 3 4 5 6 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 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

'P50'を打刻
MARK: P50

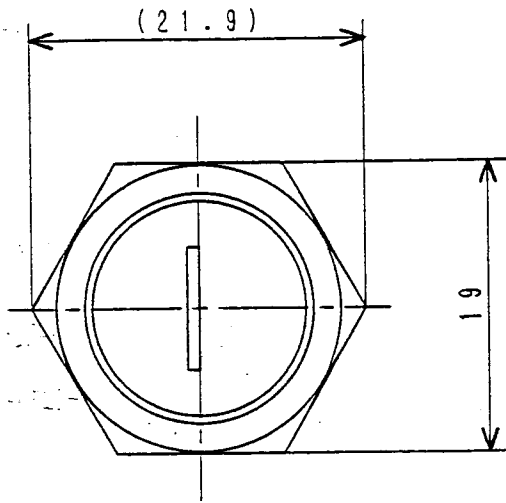


仕様
SPECIFICATIONS

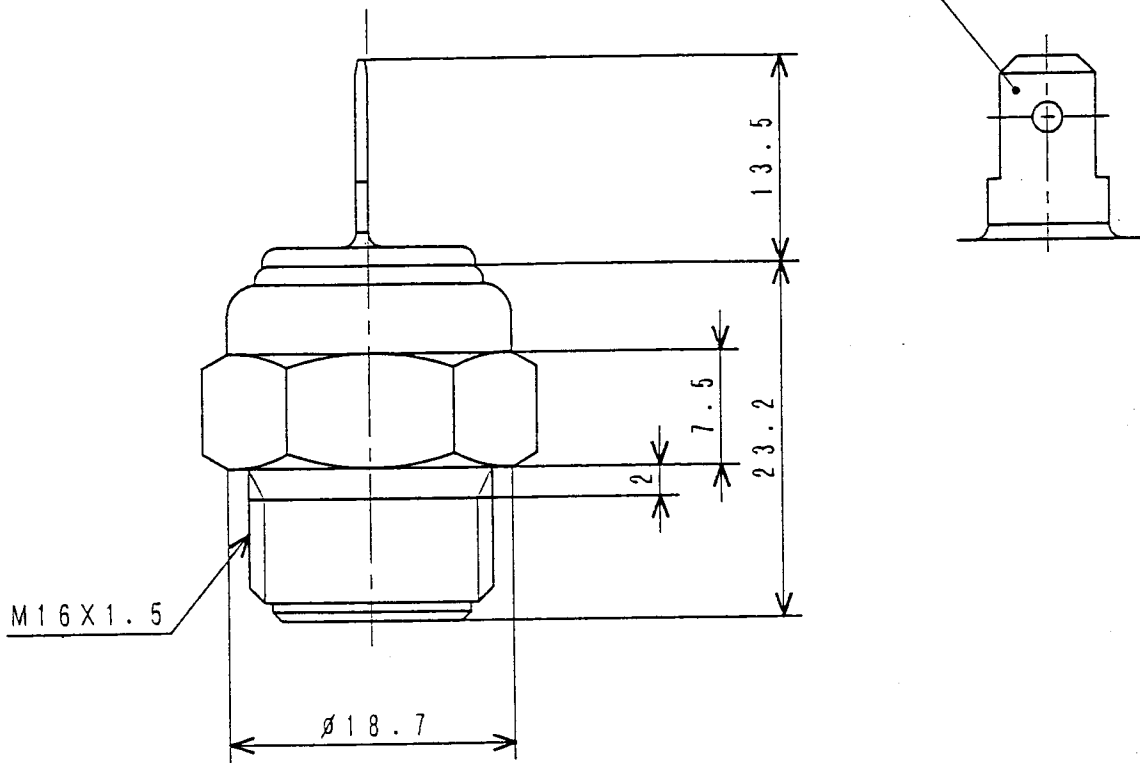
作動圧力 OPERATING PRESS.	49 kPa (0.5 kgf/cm ²)
作動電圧 OPERATING VOLT.	12V-5W 24V-3W
回路様式 CONNECTION	b (—○—○—)

油圧スイッチ
SWITCH, OIL PRESSURE

31A90-00600



JIS D5403 PA

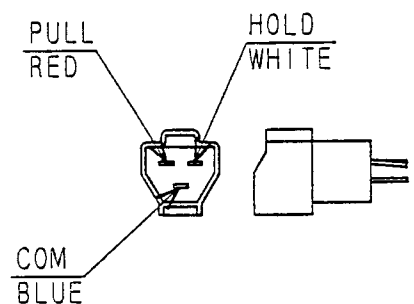
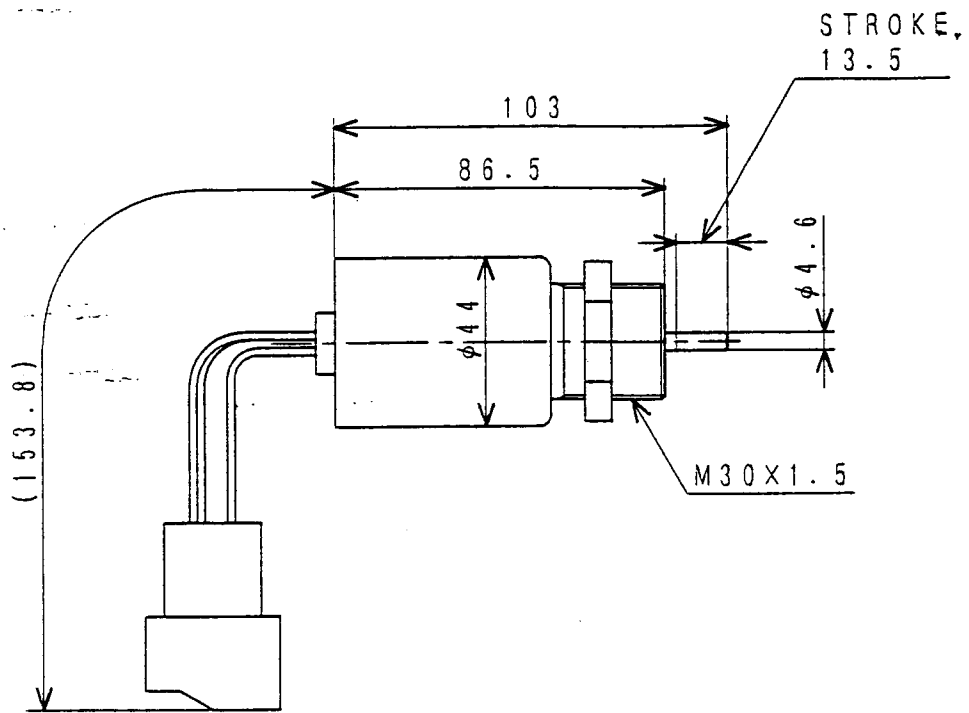


仕様
SPECIFICATIONS

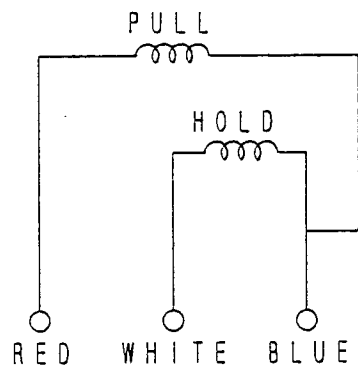
作動温度 OPERATING TEMP	111±3℃
接点容量 CURRENT CAPACITY	0.25A, MAX.
結線様式 CONNECTION	a (—○—○—)
	ON-OFF差 8±3.5℃ ON-OFF DIFFERENCE 8±3.5℃

サーモスイッチ
SWITCH, THERMO

MM432-104



DETAIL OF CONNECTOR
 CONNECTOR EQUIVALENT TO
 7222-6234-40 (YAZAKI)
 TO MATE WITH
 30A87-00600 (MHI)
 7123-6234-40 (YAZAKI)



配線図
 WIRING DIAGRAM

仕様
 SPECIFICATIONS

定格電圧 RATED VOLTAGE	DC12V
ストローク EFFECTIVE STROKE	13.5±0.5mm
定格電流 RATED CURRENT	PULL : 50A HOLD : 1A
使用雰囲気温度 ALLOWABLE AMBIENT TEMP	-40℃~+120℃

ソレノイドアッシー
 SOLENOID ASSY

30A87-10042