

SPECIFICATIONS

MITSUBISHI HIGH SPEED DIESEL ENGINE MODEL MITSUBISHI S3Q2-Y2T61DP

(For Power Unit)

**FOR REFERENCE
ONLY**



DATE Nov. 21. 2005

MITSUBISHI HEAVY INDUSTRIES, LTD.

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CHG	DATE	APPROVED	CHECKED	DRAWN
△	Jun.19.2006	<i>T. Yamada</i>	<i>K. Ajiro</i>	K.Ajiro
△	Feb. 9.2006			

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 S3Q2-T (Mitsubishi S3Q2-Y2T61DP, MHI No. 31C00-01030)	
Type	4 cycle water-cooled, vertical overhead valve, cylinder in line, swirl chamber type	
Number of cylinders	3	
Bore × Stroke	88mm × 103mm	
Piston displacement	1.879 liters	
Compression ratio	22 : 1	
Rotation	Anti-Clockwise rotation as viewed from flywheel side	
Firing order	1-3-2	
Engine weight(Dry)	Approx. 165kg	
△ Dimensions(Length)	Approx. 608mm	
(Width)	Approx. 540mm	
(Height)	Approx. 696mm	
Inclination(Continuous)	15°	
(Temporary)	30°	
Fuel	ASTM diesel fuel oil No.2-D (JIS K2204 gas oil specification No.2 or 3)	
Lubricating oil	API classification service CD,CF-4 class	
	Spec. rating	Rating at delivery
Output(Without fan)	30.2±1.5kW/2400rpm	29.0±1.4kW/2400rpm
Max.Torque	121±6Nm/2200rpm	116±6Nm/2200rpm
Fuel consumption	270±8% g/kWh	281±8% g/kWh
Low Idle	1200±30rpm	
High Idle	2600±25rpm	
Speed regulation	Steady state speed regulation at rated speed, within 10%	
Rating conditions	ISO 3046, without fan Total barometric pressure:0.1MPa Air temperature :25°C Relative humidity:30%	
Oil consumption	Within 2.7g/kW-h	
Fuel injection timing	16°BTDC	
Mean effective pressure	0.80MPa(8.2kgf/cm ²)	
Piston speed	8.2m/s at 2400rpm	

Fuel system

Fuel injection pump	In-Line type
Fuel injection nozzle	Throttle type
Governor	Mechanical centrifugal type
Fuel filter	Filtering paper type

Lubricating system

Lubricating system	Forced lubrication by trochoid gear pump
Lubricating oil filter	Filtering paper type, full flow
Oil pressure	0.10~0.39MPa (1~4kgf/cm ²) at duty run 0.05MPa (0.5kgf/cm ²) min. at low idling
Oil capacity	6.4 liters (Oil pan 5.7 liters, high level, Oil filter etc. 0.7 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. 3 liters
Cooling fan	Yes; 380mm diameter, suction
Water pump pulley	PCD 116mm
Pulley ratio	1.32 (Crankpulley : Water pump pulley = 153 : 116)
△ Fan spacer	35mm thickness
Water temp. switch	Yes
Thermo. Unit	No
Thermostat	Open at 76.5deg.C - full open at 90deg.C

Electrical system

Alternator	12V - 50A
Voltage regulator	IC type (Built in alternator)
Alternator pulley	PCD 70mm
Starting system	Electric starting,
Starter motor	12V-2kW
Glow plug	10.5V,9.7A X3
Engine shut off system	Electric solenoid (ETS)

Intake and Exhaust system

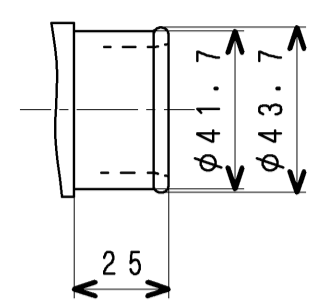
Air Intake	Engine front side of turbo charger
Exhaust	Engine rear side of turbo charger
Allowable Induction Resistance	Max 1.96kPa{0.2mH ₂ O}
Allowable Exhaust Back Pressure	Max 6.67kPa{0.68mH ₂ O}

<Remarks>

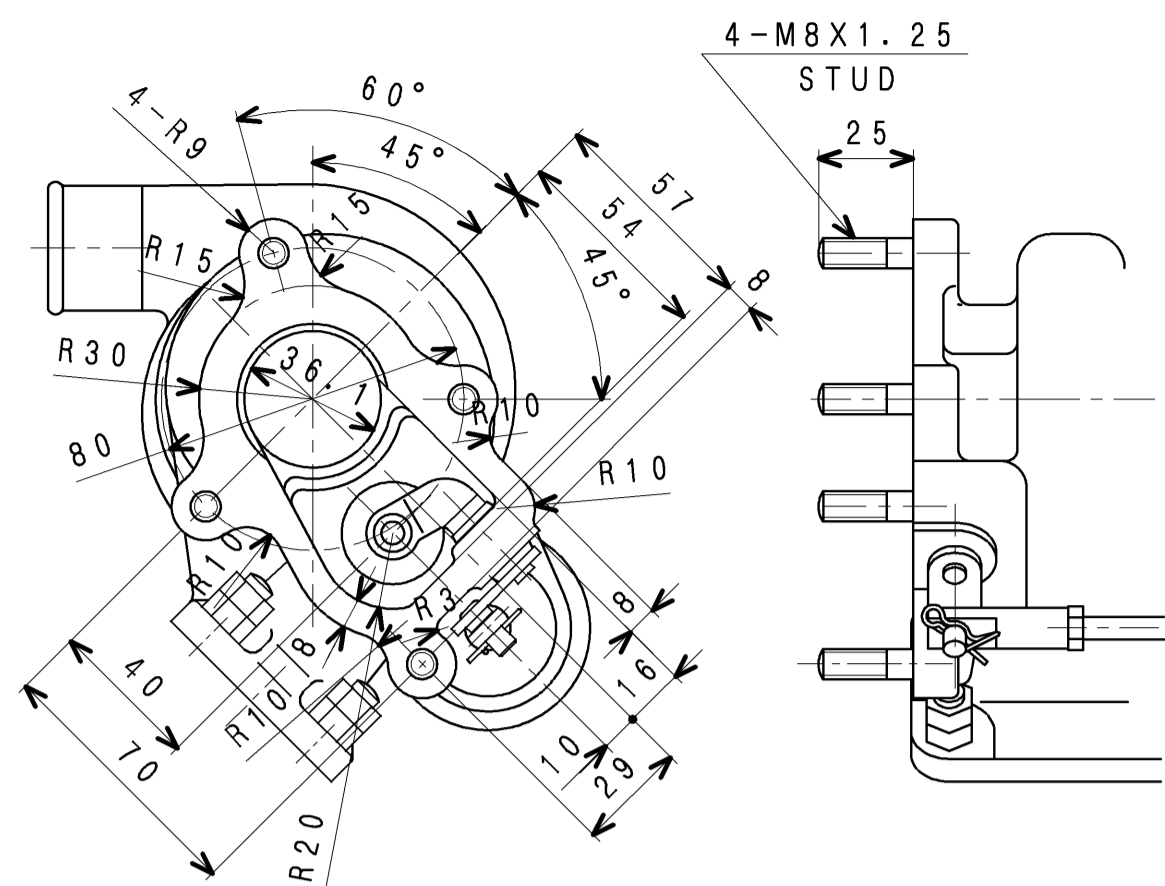
Engine color	Black(MHI standard color)
Flywheel	With (similar to SAE 7.5")
Flywheel housing	With (SAE #4)

2. Accessories (Loose Supply)

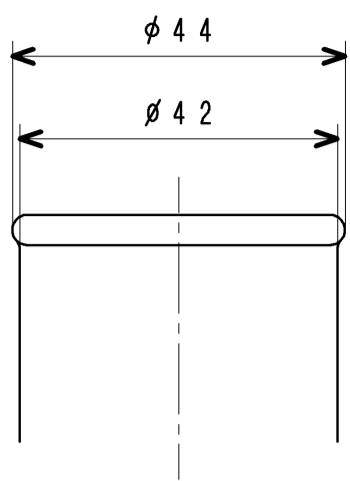
	Parts Name	Parts No.	Q'ty	Remarks
1	SWITCH,THERMO	MC880-900	1	Attached To Engine
2	SWITCH,OIL PRESSURE	31A90-00700	1	
3	STOP SOLENOID(ETS)	32A61-09010	1	



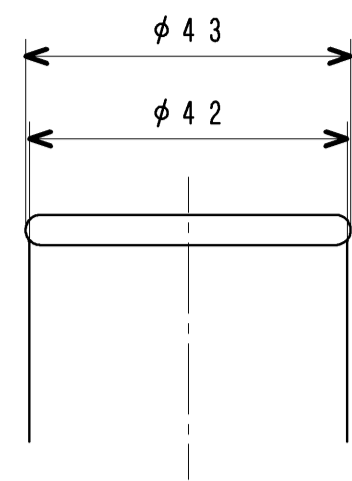
A-DETAIL (1:2)



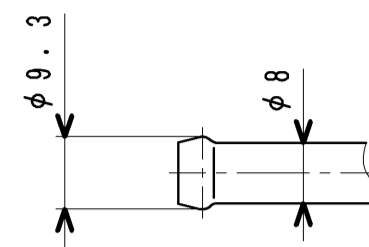
B-DETAIL (1:2)



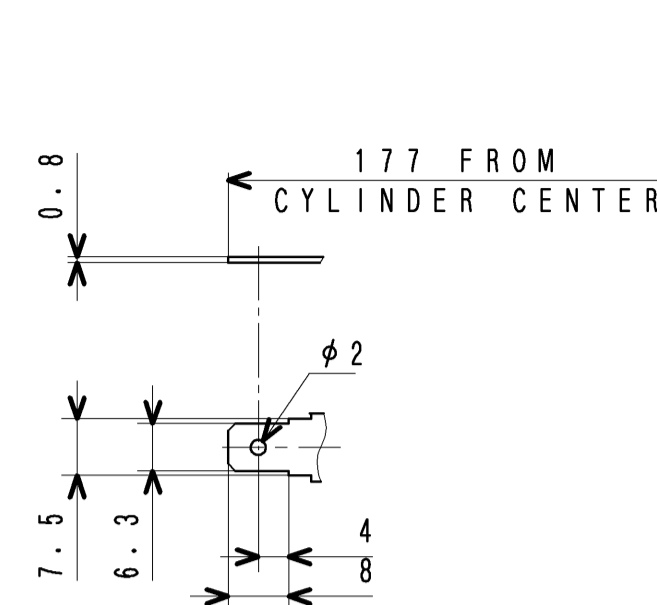
D-DETAIL



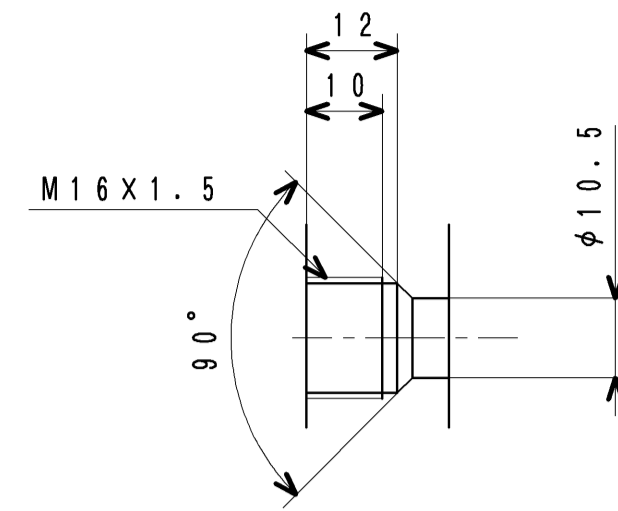
C-DETAIL



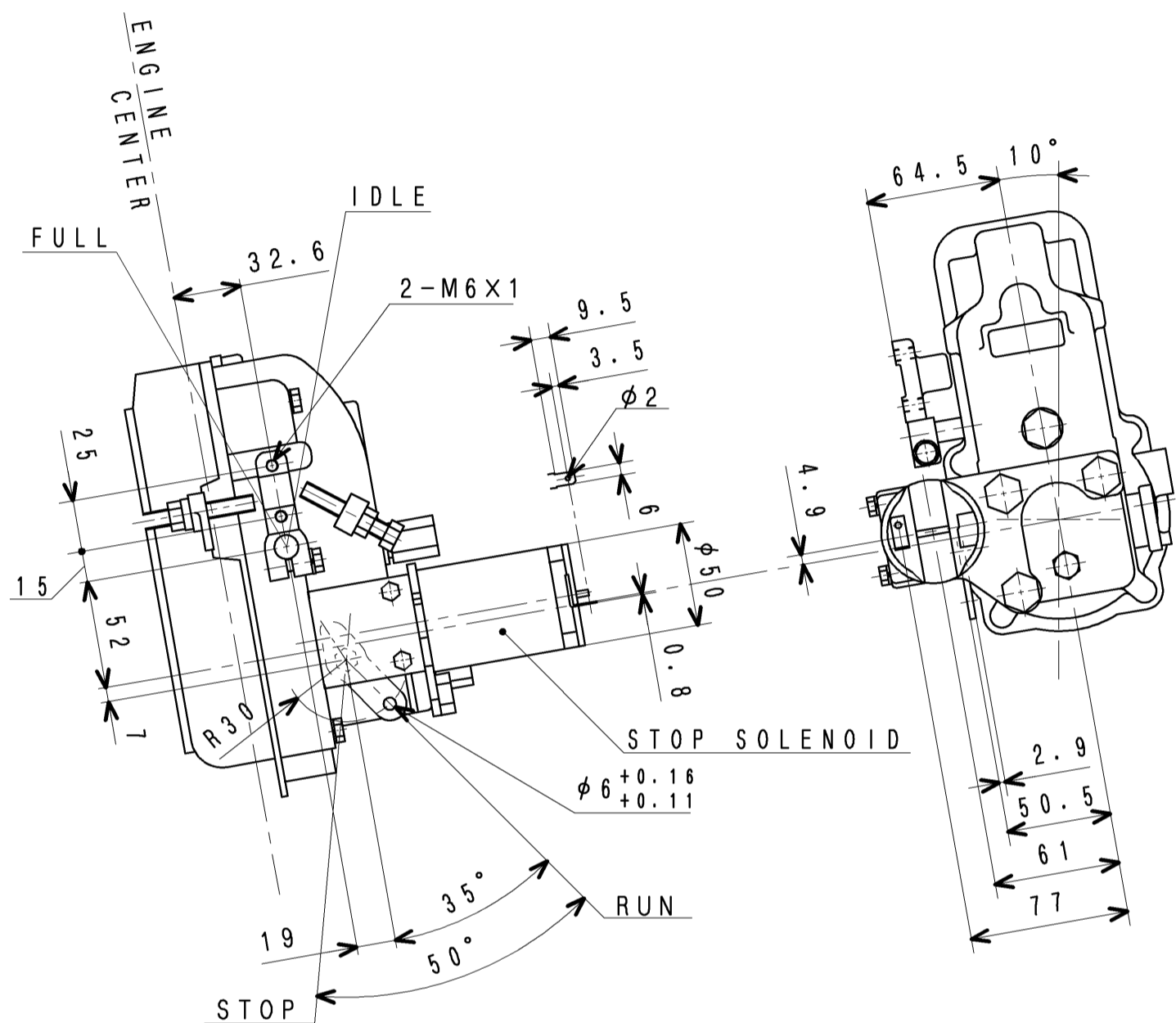
F-DETAIL



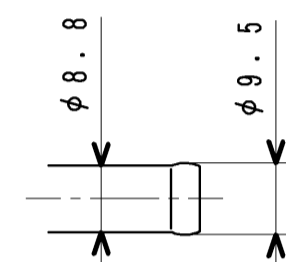
G-DETAIL



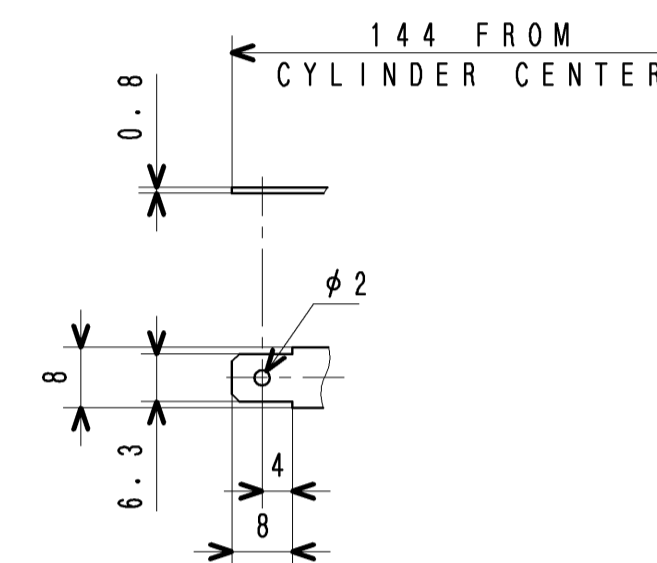
H-DETAIL



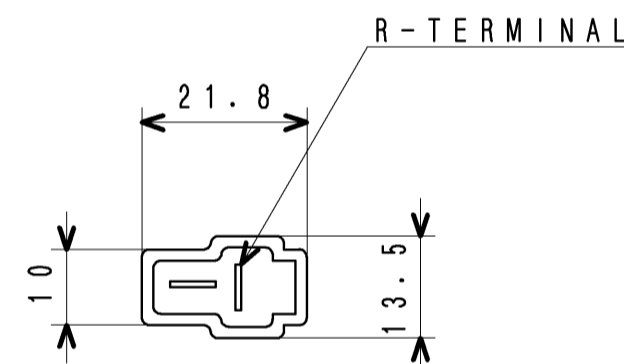
X-VIEW (1:3)
(CONTROL & STOP LEVER)



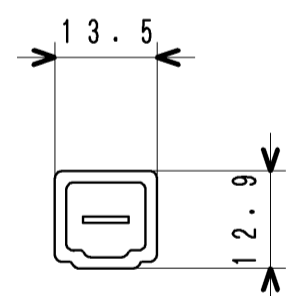
E-DETAIL



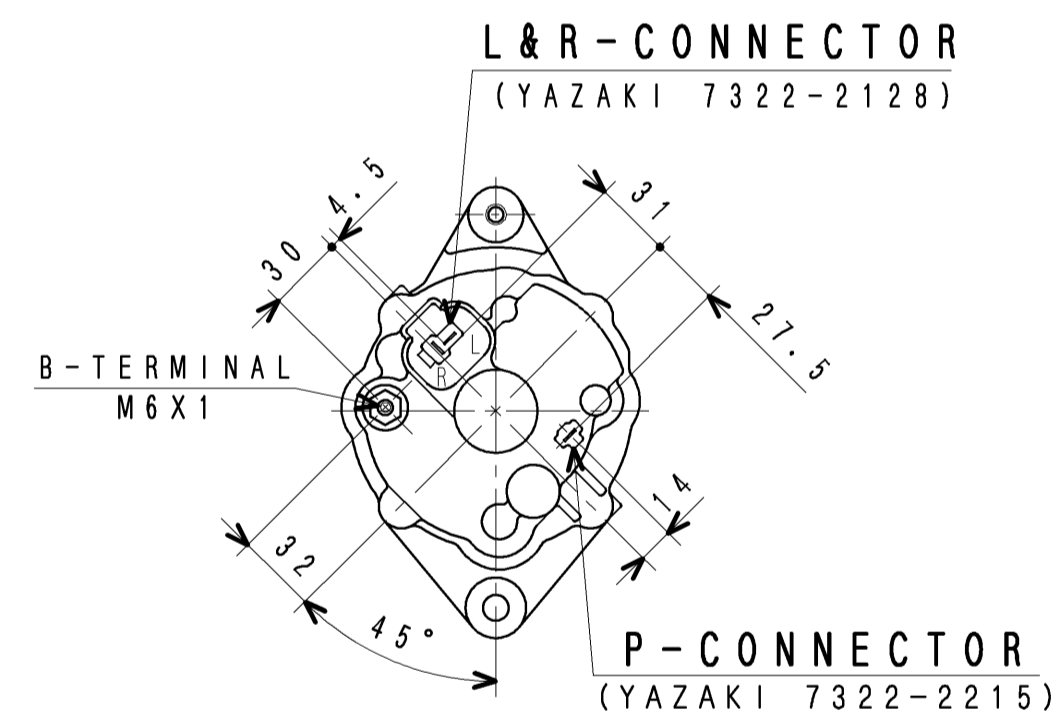
J-DETAIL



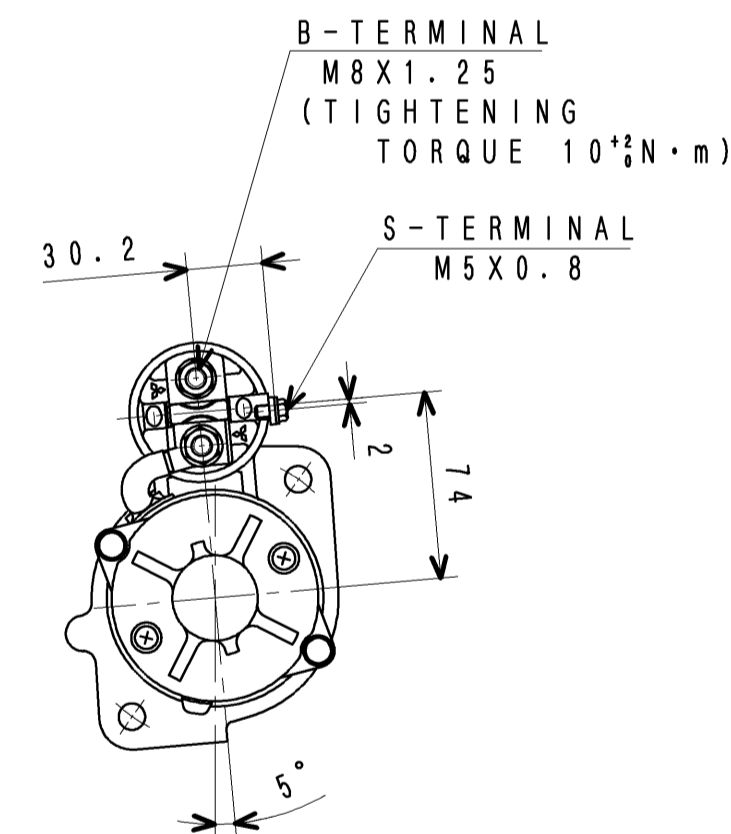
L&R-DETAIL



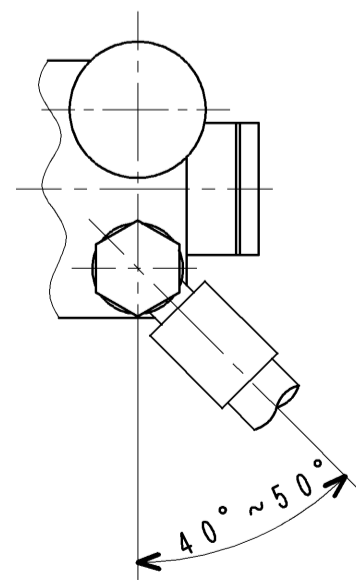
P-DETAIL



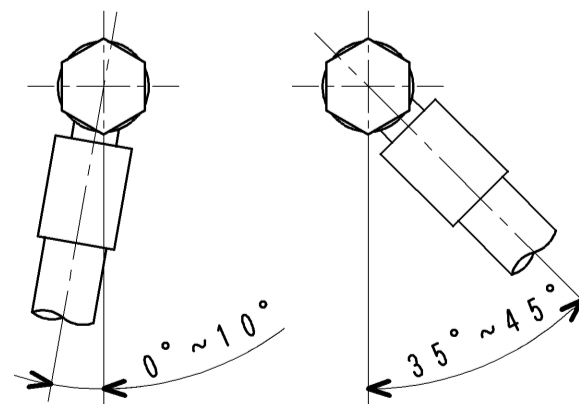
Y-VIEW (1:3)



W-VIEW (1:3)



U-VIEW (1:2)



V-VIEW (1:2)

3RD ANGLE PROJECTION				S3Q2-Y2T61DP ENG ASSY			
R/RE 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.				図面番号 31C00-01030			
製図 (MSH)	承認 (MSH)	検査 (MSH)	承認 (MSH)	製図 (MSH)	承認 (MSH)	検査 (MSH)	承認 (MSH)
CHG	ED-NO	DATE	CHK	CHG	ED-NO	DATE	CHK
T.Yamada				R. NAGASE K. AJIRO			
2005.10.11				2005.10.11			
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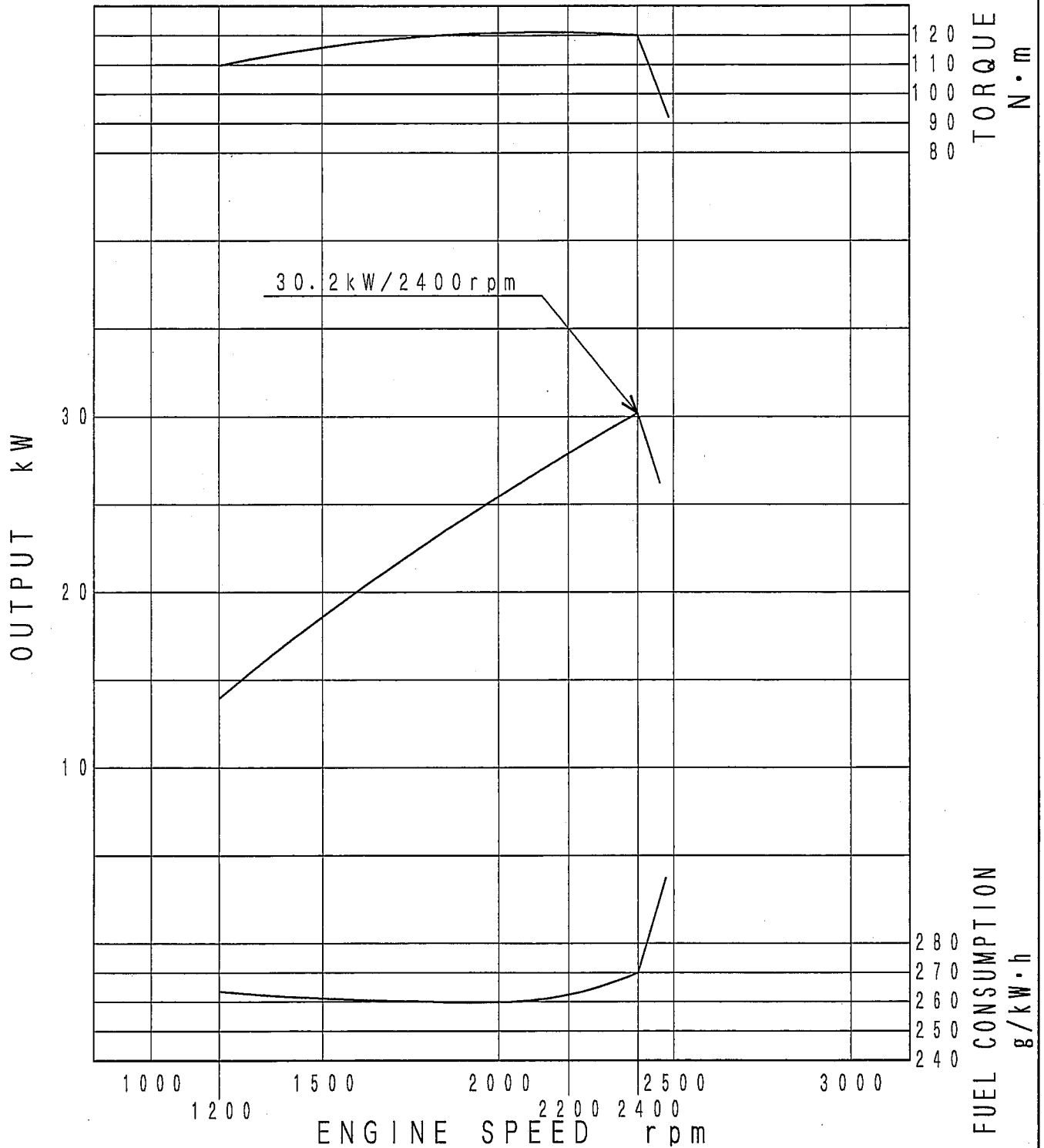
FULL-CAD

MITSUBISHI DIESEL ENGINE MODEL S3Q2-Y2T61DP PERFORMANCE CURVE

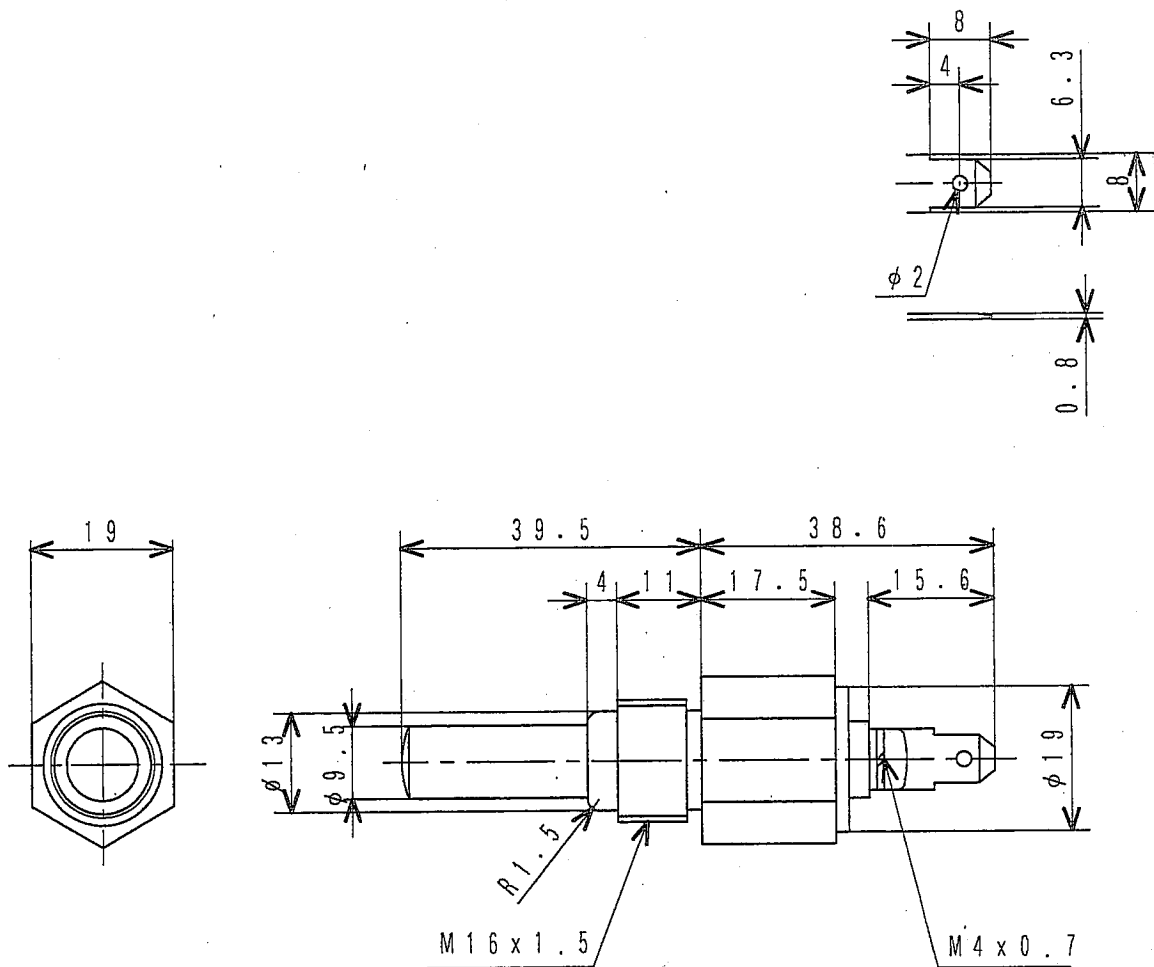
ISO 3046

WITHOUT FAN

After 30-50hrs breaking in



PFC-S3Q-014

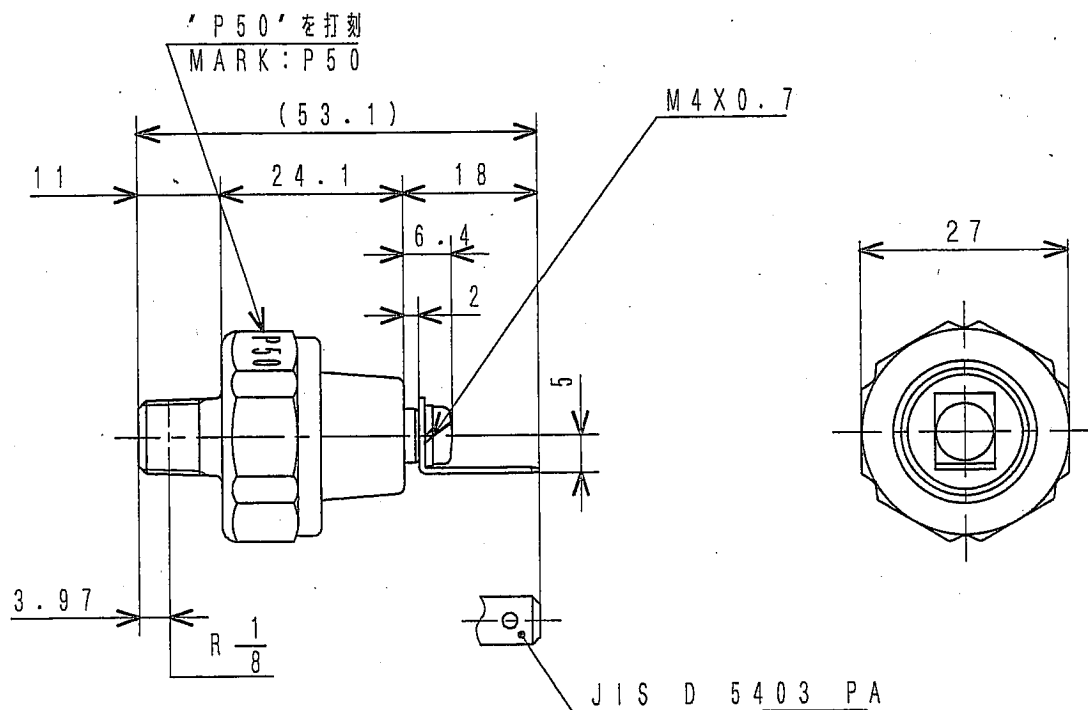


部品番号 PART No.	作動温度 OPERATING TEMP.		
MC880-900	温度下降時 DECREASE	≦ 100°C ± 4°C	で接点開 OPEN
	温度上昇時 RISE	≧ 100°C ± 2°C	で接点閉 CLOSE
MC880-901	温度下降時 DECREASE	≦ 105°C ± 4°C	で接点開 OPEN
	温度上昇時 RISE	≧ 105°C ± 2°C	で接点閉 CLOSE

定格負荷 RATED LOADED	1A以上 MIN.	0.5A以上 MIN.
定格電圧 RATED VOLT.	12V	24V

サーモスイッチ
SWITCH, THERMO

MC880-900



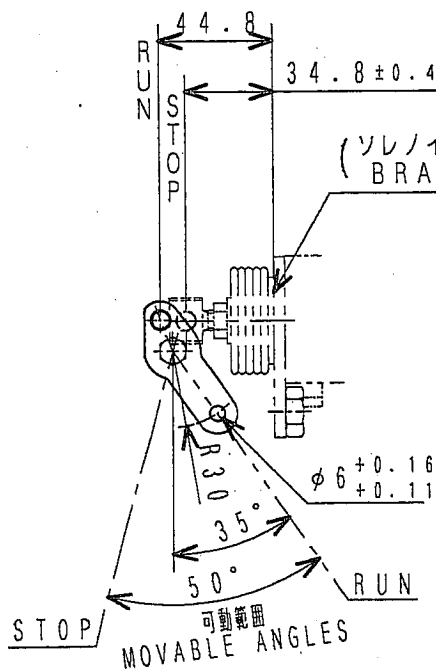
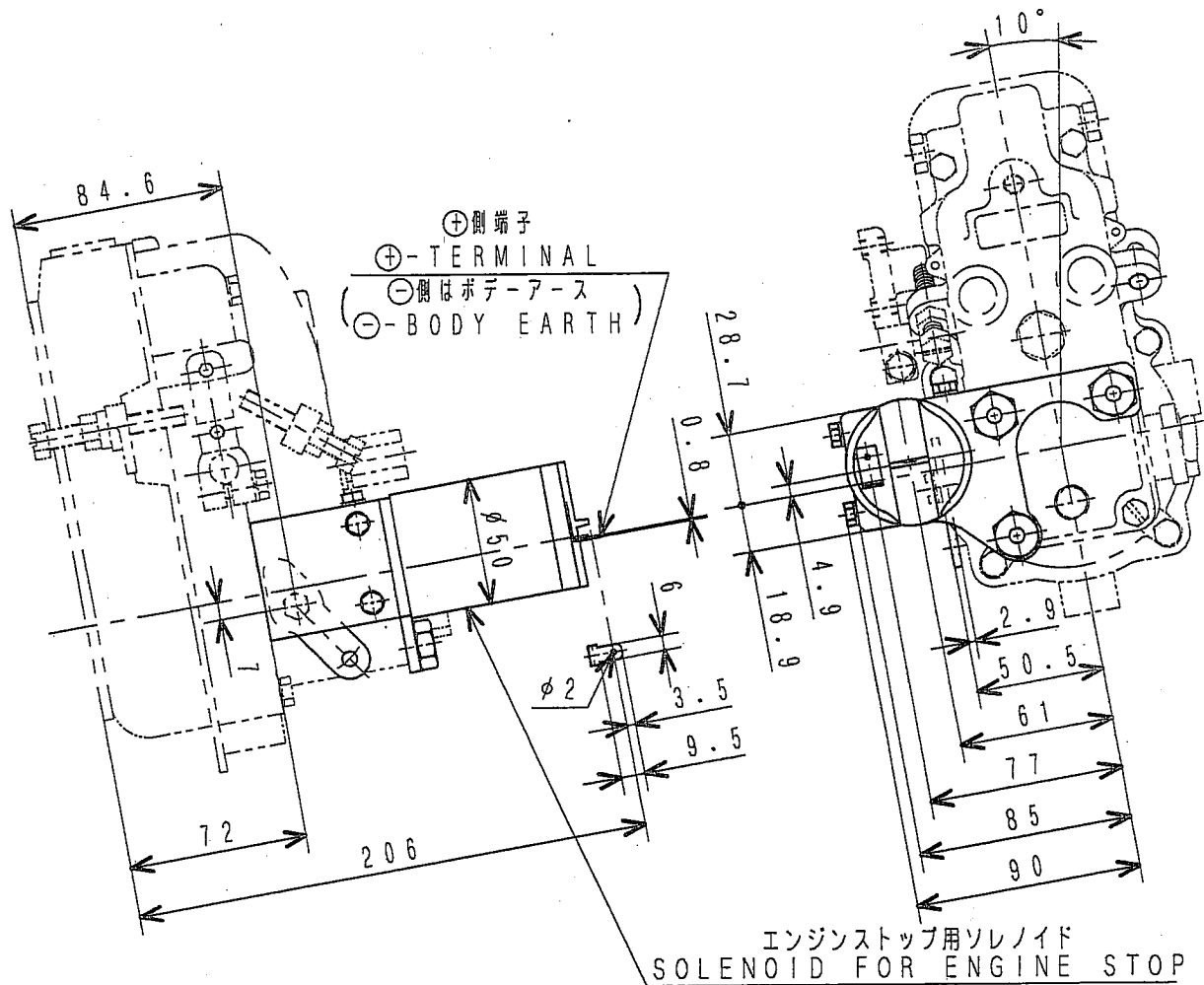
仕様
SPECIFICATIONS

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

油圧スイッチ

SWITCH, OIL PRESSURE

31A90-00700



仕様 SPECIFICATIONS

部品番号 PART No.	32A61-09010	32A61-09020
定格電圧 RATED VOLTAGE	12V	24V
作動電圧 OPERATING VOLTAGE	8~14V	16~27V
作動温度 OPERATING TEMPERATURE	-30~90℃	
定格時間 RATED TIME	10sec	
定格電流 RATED CURRENT	22.6A MAX	11.7A MAX

このソレノイドは
 ・RUN-OFFタイプである。
 ・噴射ポンプASSY(ストップソレノイド付)で供給する。(補用品を除く)

THIS SOLENOID
 ・IS A RUN-OFF TYPE
 ・IS SUPPLIED WITH AN INJ. PUMP
 ASSY (EXCEPT SERVICE PARTS)

ストップ ソレノイド

STOP SOLENOID OUTLINE

32A61-09010