

TNV series

OPTION MENU

3TNV82A

3TNV84

3TNV84T

3TNV88

4TNV84

4TNV84T

4TNV88

P/N: 0ETNV2-G0000

YANMAR
®

**INDUSTRIAL
ENGINES**

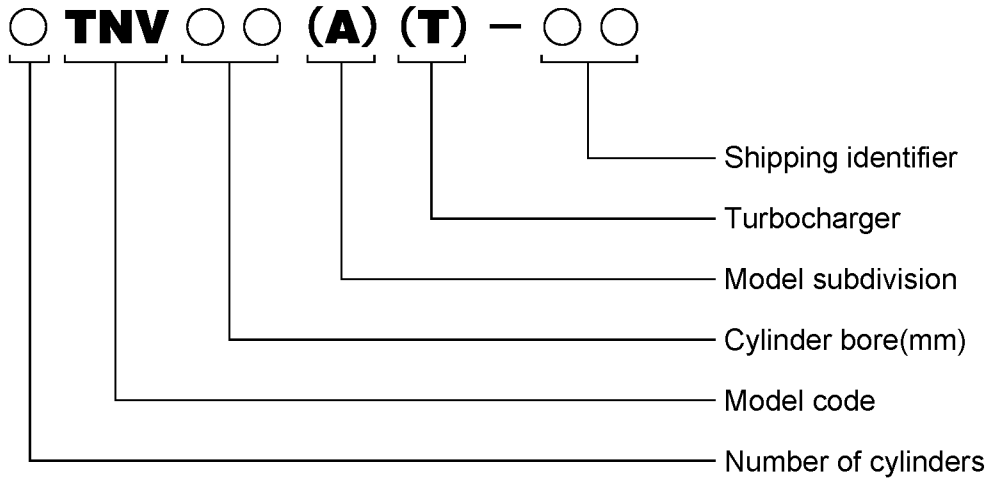
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Optional Parts

1.How to Read the Option Menu

(1-1) Engine model designation



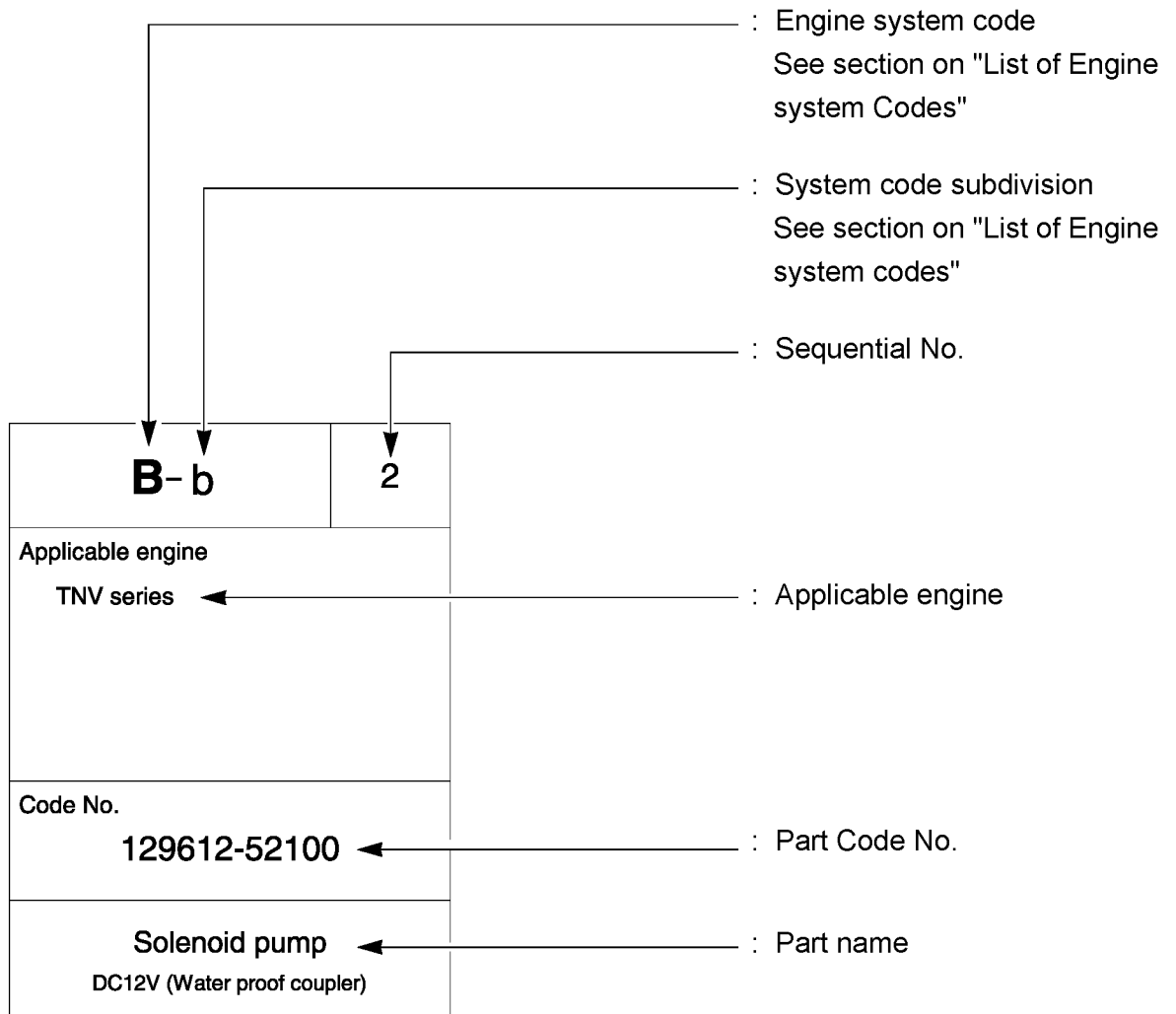
(1-2) Engine category

Engine model		Engine category		
		CL	VM1	VM2
1	3TNV82A	○	○	○
2	3TNV84	○	○	○
3	3TNV88	○	○	○
4	3TNV84T	○	○	○
5	4TNV84	○	○	○
6	4TNV88	○	○	○
7	4TNV84T	○	○	○

Engine category	Speed range	Applicable driven machines
CL : Constant,low speed	1500rpm or 1800rpm	Generators (4 poles) and water pumps
VM1 : Variable,medium speed	2000rpm-2700rpm	Tractors,loaders,vibrating rollers, combines,carriers,backhoes, forklifts and other general working machines
VM2 : Variable,medium speed	2800rpm-3000rpm	

(1-3) Option menu code

All parts in this Option Menu are coded according to engine systems as follows:



Remarks :

Engine system code, system code subdivision and sequential No. , e.g. B-b-2, are not allowed to be used in place of part code No. in order sheet. The sequential No. would be altered without notice.

Part code No. should be used in order sheet.

(1-4) Explanation of marks

The marks in the specification of engine category indicate the following:

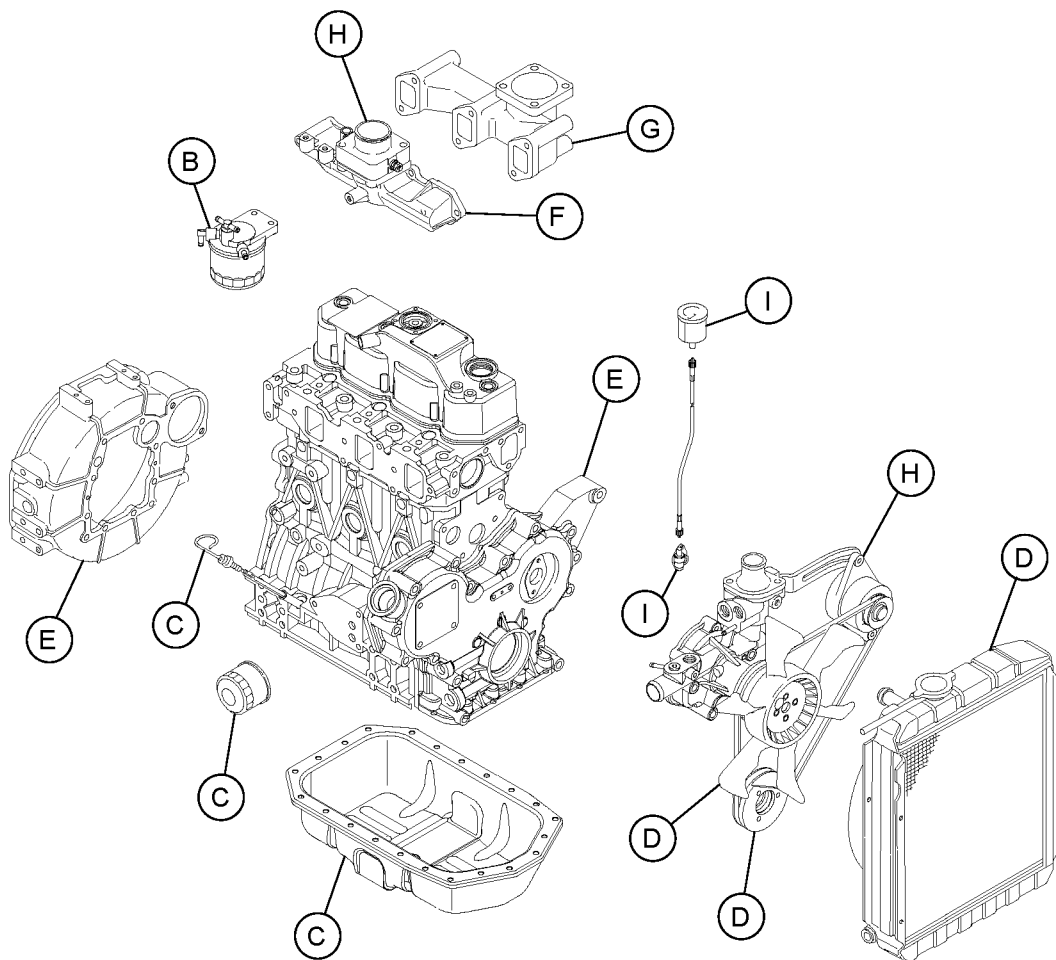
- ⊙ F-F engine standard part
- Recommended optional part
- △ Optional part
- × Prohibited part
- (Blank) Not applicable

E - a Flywheel

No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	171420-21590	⊙												⊙	△	△	⊙	△	△	⊙	△	△
2	129489-21590	×	⊙	⊙										×	⊙	⊙	×	⊙	⊙	×	⊙	⊙
3	129488-21590	△	△	△										×	△	△	×	△	△	×	△	△
4	171340-21590				⊙	△	△	⊙	△	△	⊙	△	△									

2.List of Engine System Codes

Eng. system	Part name	Code	Eng. system	Part name	Code	
B Fuel system	Fuel Feed Pump	B – b	F Intake system	Intake Manifold	F – a	
	Fuel Filter	B – c		Air Cleaner	F – b	
	Water Trap	B – d		Air Cleaner Support	F – c	
C Lube oil system	Oil Pan	C – a		G Exhaust system	Resonator	F – d
	Oil Dipstick	C – b	Exhaust Manifold		G – a	
	Oil Filter	C – c	Silencer		G – b	
	Oil Cooler	C – d	Silencer Gasket		G – c	
	Lube Oil Pressure Switch	C – e	Exhaust Bend		G – d	
	Lube Oil Pressure Sender	C – f	Exhaust pipe clamp		G – e	
	D Cooling water system	Oil Filler Extension Pipe	C – g	H Electric system	Starting Motor	H – a
Cooling Water Pump		D – a	Starting Aid		H – b	
Radiator		D – b	Air Intake Joint		H – c	
Cooling Fan Guard		D – c	Dynamo & Alternator		H – d	
Radiator Hose		D – d	Current Limiter		H – e	
Cooling Fan		D – e	Safety Relay		H – f	
Fan Pulley		D – f	Diode		H – g	
Crankshaft Pulley		D – g	Stop Solenoid		H – h	
Fan Spacer		D – i	Timer		H – k	
Water Temp.switch		D – j	Relay		H – l	
Thermosender		D – k	Connector & Terminal Cover		H – m	
Thermostat		D – l	Cooling Water Heater		H – n	
Thermostat Cover		D – m	I Gauges		Tachometer	I – a
Sub Tank & Accessory		D – n			Tachometer Gear Unit	I – b
Drain Joint & Cock		D – o		Tachometer Cable	I – c	
E PTO system	Flywheel	E – a		Thermometer	I – d	
	Flywheel Housing	E – b		Oil Pressure Gauge	I – e	
	Bearing Retainer	E – c		Pilot Lamp	I – f	
	Hydraulic Pump	E – d	Key Switch	I – g		
	Hydraulic Pump Drive Device	E – e	J Tools	Oil Filter Wrench	J – b	
	Gear Case	E – f		Fuel Filter Wrench	J – c	
		Water Trap Wrench		J – d		



Ⓐ	Base specifications	Ⓕ	Intake system
Ⓑ	Fuel system	Ⓖ	Exhaust system
Ⓒ	Lube oil system	Ⓖ	Electric system
Ⓓ	Cooling water system	Ⓖ	Gauges
Ⓔ	PTO system	Ⓖ	Tools

3. Specification Tables



(3-1) Rated Output Table (STANDARD NET)

Model		3TNV82A			
Combustion type		DI (Direct injection)			
Aspiration		N/A			
Number of cylinders – Bore × Stroke (mm × mm)		3 – 82 × 84			
Displacement (cc)		1331			
Revolution speed (min ⁻¹)		Output Net power kW (PS) [GROSS POWER kW]			
Industrial use	Rated Output	2000	14.6 (19.9) [15.0]		
		2200	16.0 (21.8) [16.5]		
		2400	17.5 (23.8) [18.1]		
		2500	18.2 (24.8) [18.9]		
		2600	19.0 (25.8) [19.7]		
		2800	20.4 (27.8) [21.3]		
		3000	21.9 (29.8) [23.0]		
		3200	–		
		3400	–		
		3600	–		
Generator use	Rated Output	1500	11.0 (14.9) [11.3]		
		1800	13.2 (17.9) [13.8]		
		3000	–		
		3600	–		
	Cont. Rating	1500	9.9 (13.5) [10.3]		
		1800	12.0 (16.3) [12.6]		
		3000	–		
		3600	–		

Model		3TNV84	3TNV84T	3TNV88	
Combustion type		DI (Direct injection)			
Aspiration		N/A	T/C	N/A	
Number of cylinders – Bore × Stroke (mm × mm)		3 – 84 × 90	3 – 84 × 90	3 – 88 × 90	
Displacement (cc)		1496	1496	1642	
Revolution speed (min ⁻¹)		Output Net power kW (PS) [GROSS POWER kW]			
Industrial use	Rated Output	2000	16.4 (22.3) [16.8]	–	18.0 (24.5) [18.4]
		2200	18.1 (24.6) [18.6]	–	19.9 (27.0) [20.3]
		2400	19.7 (26.8) [20.3]	25.0 (34.0) [25.7]	21.6 (29.4) [22.2]
		2500	20.5 (27.9) [21.2]	26.0 (35.3) [26.7]	22.6 (30.7) [23.2]
		2600	21.3 (29.0) [22.1]	26.8 (36.5) [27.7]	23.5 (31.9) [24.2]
		2800	23.0 (31.3) [23.9]	29.1 (39.5) [30.1]	25.2 (34.2) [26.0]
		3000	24.6 (33.5) [25.7]	30.9 (42.0) [32.2]	27.1 (36.8) [28.1]
		3200	–	–	–
		3400	–	–	–
Generator use	Rated Output	1500	12.4 (16.8) [12.7]	15.8 (21.5) [16.3]	13.5 (18.4) [13.9]
		1800	14.8 (20.1) [15.4]	18.8 (25.5) [19.5]	16.3 (22.1) [16.9]
		3000	–	–	–
		3600	–	–	–
	Cont. Rating	1500	11.3 (15.3) [11.6]	14.0 (19.0) [14.4]	12.3 (16.7) [12.7]
		1800	13.5 (18.3) [14.1]	16.5 (22.5) [17.3]	14.8 (20.1) [15.4]
		3000	–	–	–
		3600	–	–	–

Model		4TNV84	4TNV84T	4TNV88	
Combustion type		DI (Direct injection)			
Aspiration		N/A	T/C	N/A	
Number of cylinders – Bore × Stroke (mm × mm)		4 – 84 × 90	4 – 84 × 90	4 – 88 × 90	
Displacement (cc)		1995	1995	2190	
Revolution speed (min ⁻¹)		Output Net power kW (PS) [GROSS POWER kW]			
Industrial use	Rated Output	2000	21.9 (29.8) [22.4]	27.9 (38.0) [28.5]	24.1 (32.7) [24.6]
		2200	24.1 (32.8) [24.8]	30.5 (41.5) [31.2]	26.5 (36.0) [27.1]
		2400	26.3 (35.8) [27.2]	33.5 (45.5) [34.3]	28.8 (39.2) [29.7]
		2500	27.4 (37.3) [28.3]	34.5 (47.0) [35.5]	30.1 (40.9) [31.0]
		2600	28.5 (38.7) [29.5]	35.7 (48.5) [36.7]	31.3 (42.5) [32.3]
		2800	30.7 (41.7) [31.9]	38.6 (52.5) [39.9]	33.7 (45.8) [35.0]
		3000	32.9 (44.7) [34.4]	41.2 (56.0) [42.7]	35.4 (48.1) [36.9]
		3200	–	–	–
		3400	–	–	–
		3600	–	–	–
Generator use	Rated Output	1500	16.4 (22.3) [16.9]	21.3 (29.0) [21.8]	18.0 (24.5) [18.5]
		1800	19.5 (26.5) [20.3]	26.9 (36.5) [27.7]	21.6 (29.4) [22.5]
		3000	–	–	–
		3600	–	–	–
	Cont. Rating	1500	14.9 (20.3) [15.5]	19.1 (26.0) [19.6]	16.4 (22.3) [16.9]
		1800	17.7 (24.1) [18.6]	24.3 (33.0) [25.1]	19.6 (26.7) [20.5]
		3000	–	–	–
		3600	–	–	–

4.Engine Outlines

Outdrawing No.

Engine category Engine model	CL	VM1	VM2
3TNV82A	B3-19946-0010	B3-19802-0013	—
3TNV84	B3-29246-0010	B3-29004-0013	
3TNV88			
3TNV84T		B3-29006-0013	
4TNV84	B3-29646-0010	B3-29601-0013	
4TNV88			
4TNV84T		B3-29508-0012	B3-29508-0012

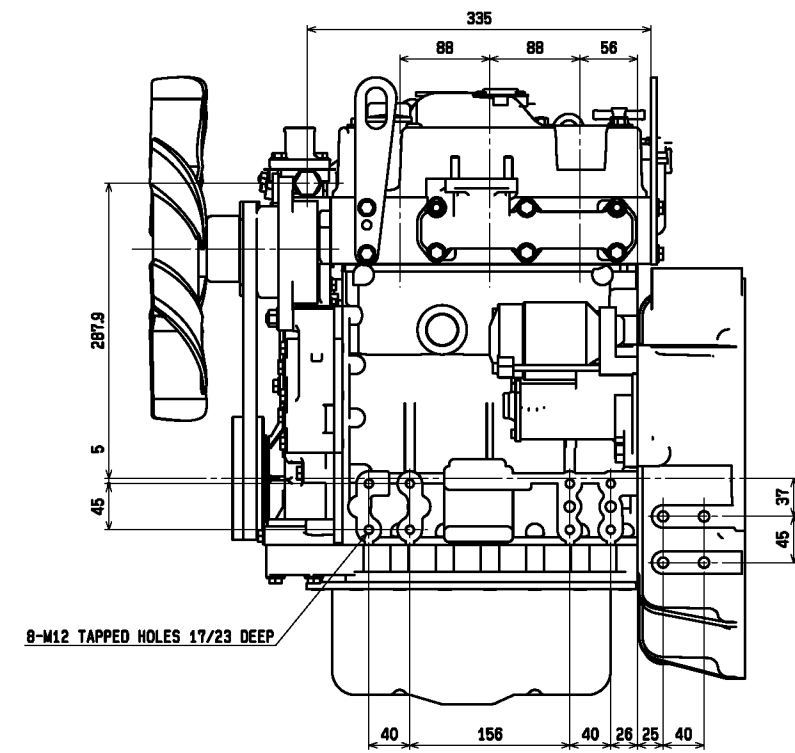
Remarks :

The parts in outline drawings are not always standard.

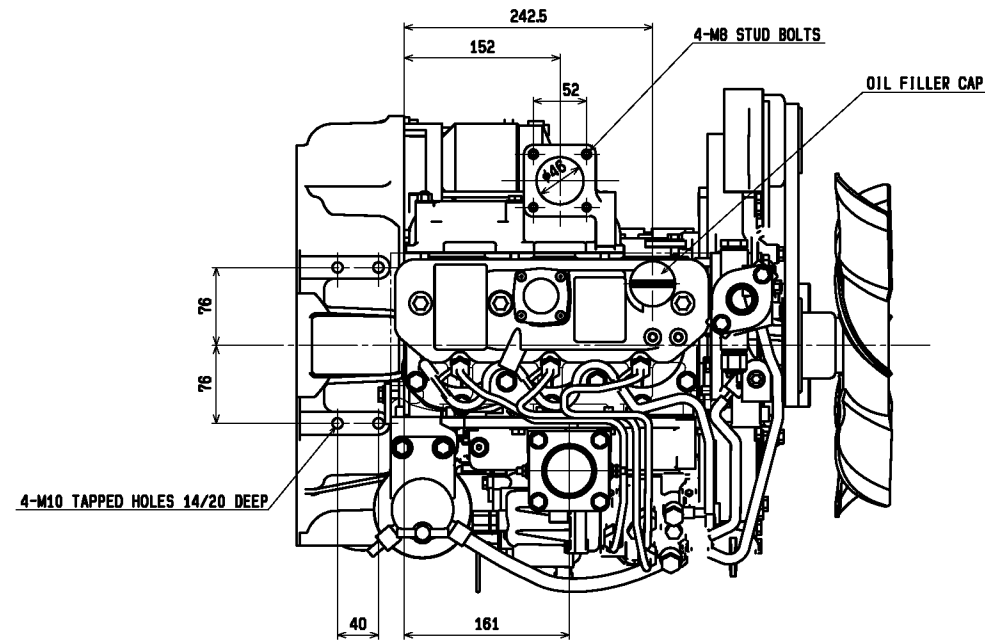
They should be confirmed in this manual if they are standard or not.

The outline drawings show a case of typical use of parts.

4.Engine Outlines

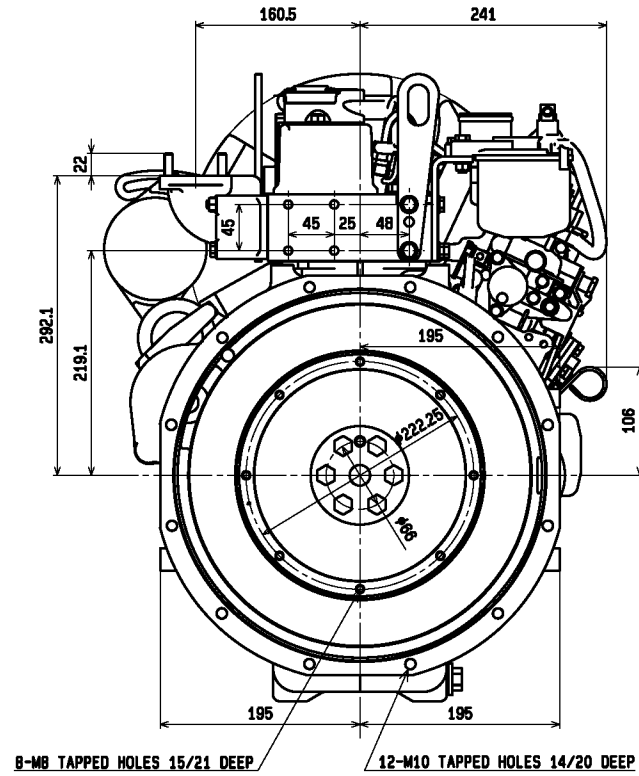


Starter side

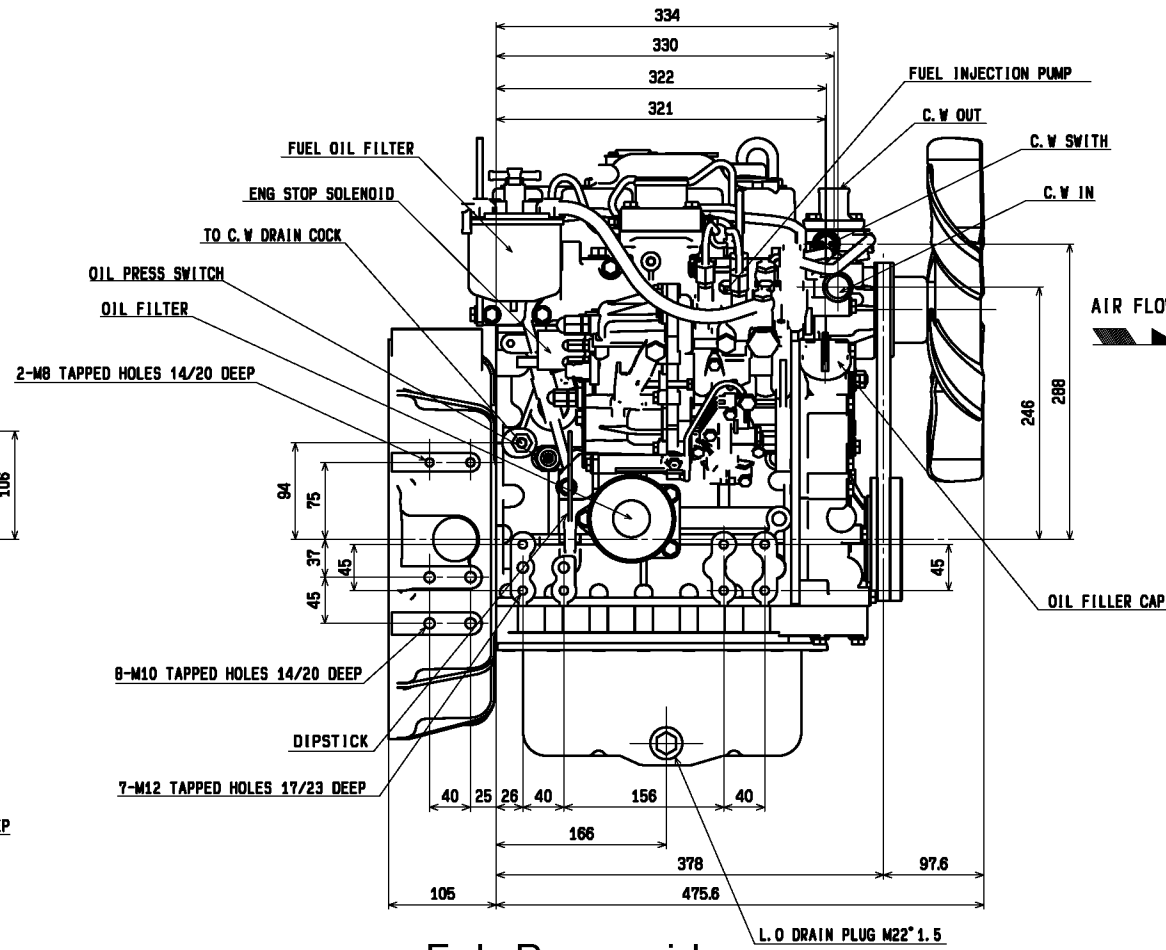


Top side

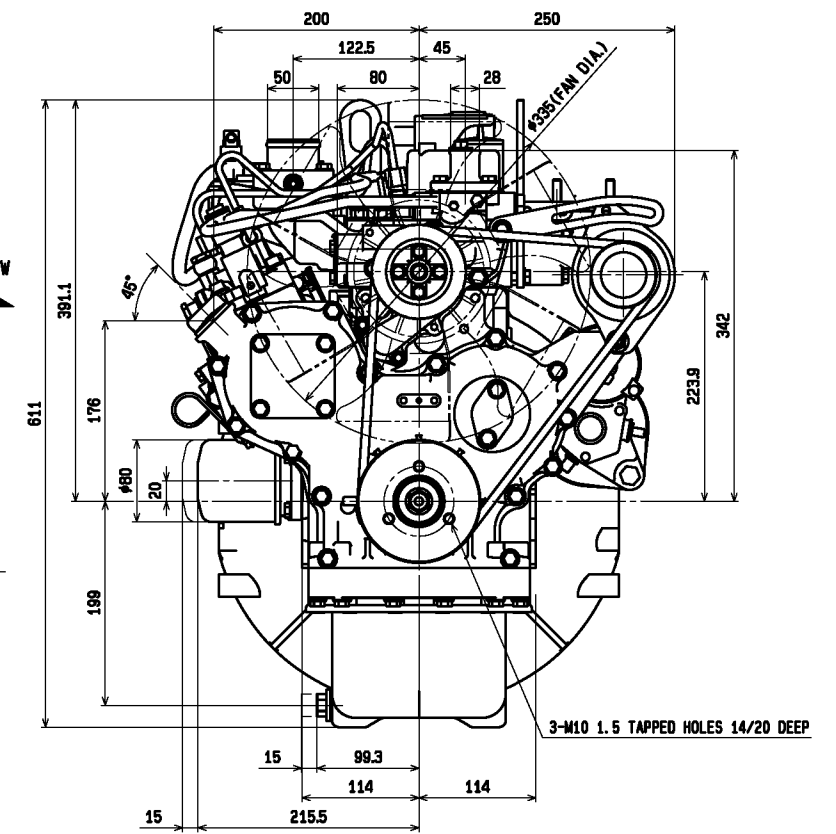
Engine model	3TNV82A
Engine category	CL
Out drawing No.	B3-19946-0010



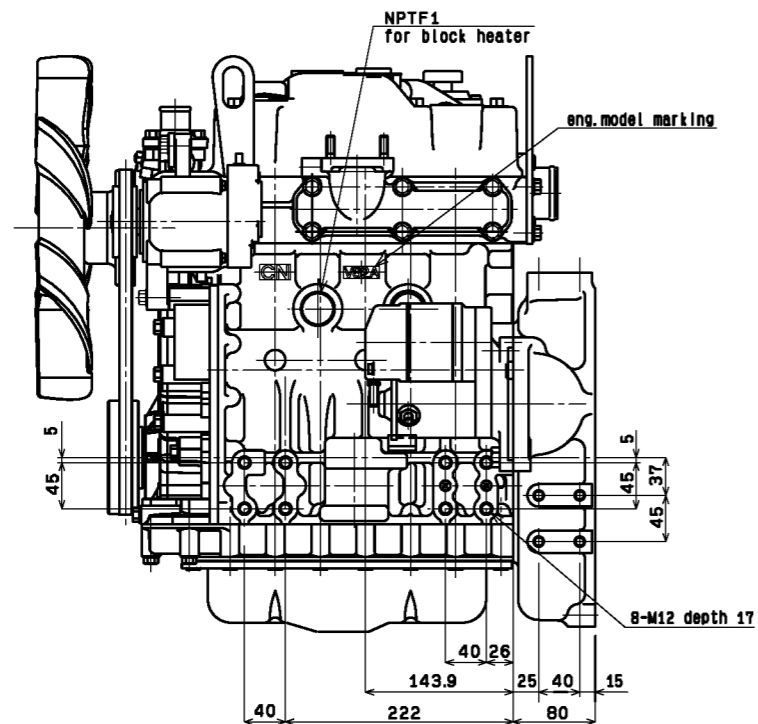
Flywheel side



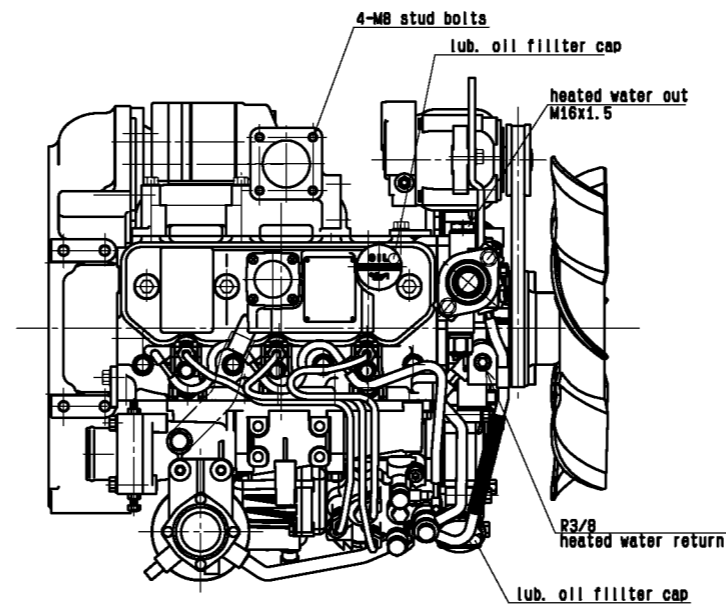
F. I. Pump side



Gear side

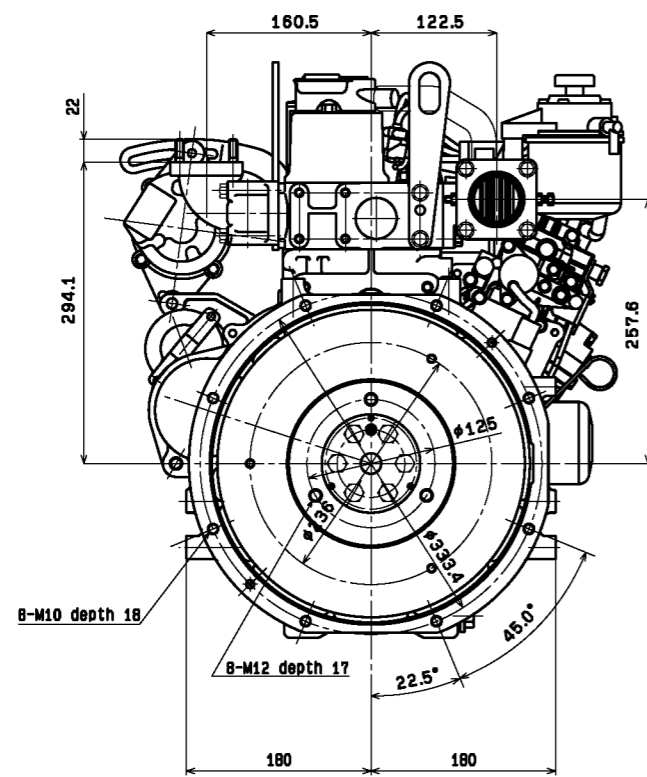


Starter side

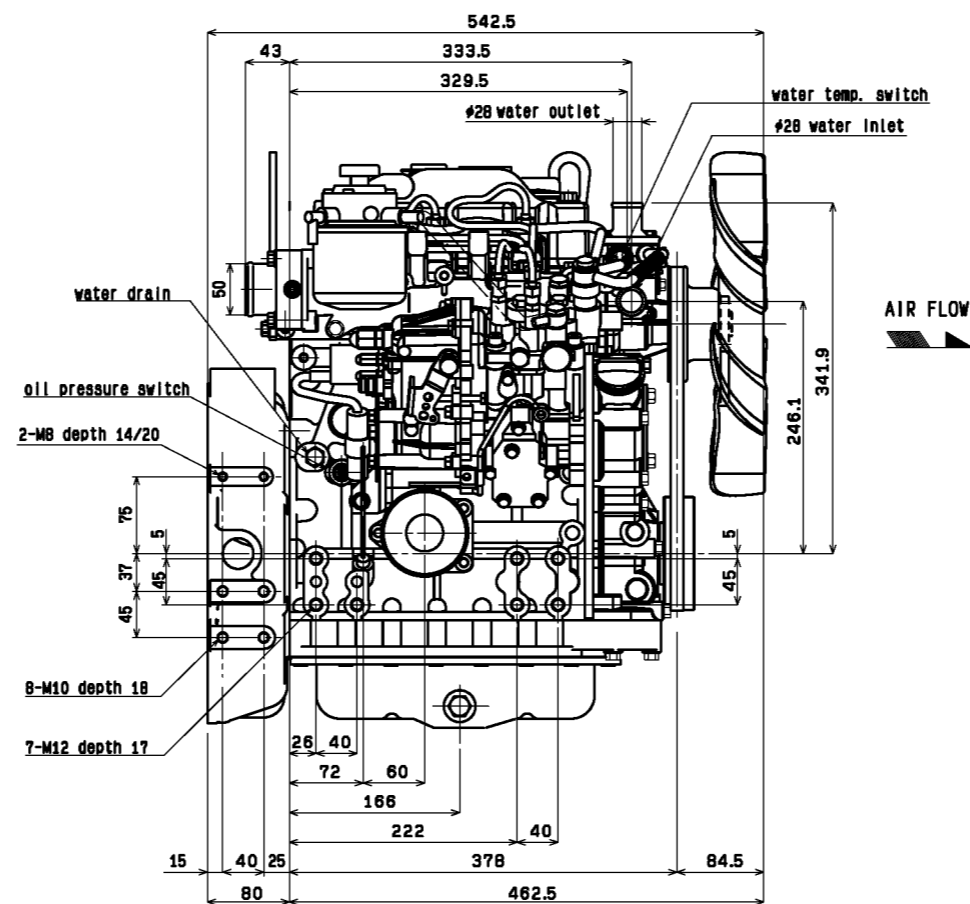


Top side

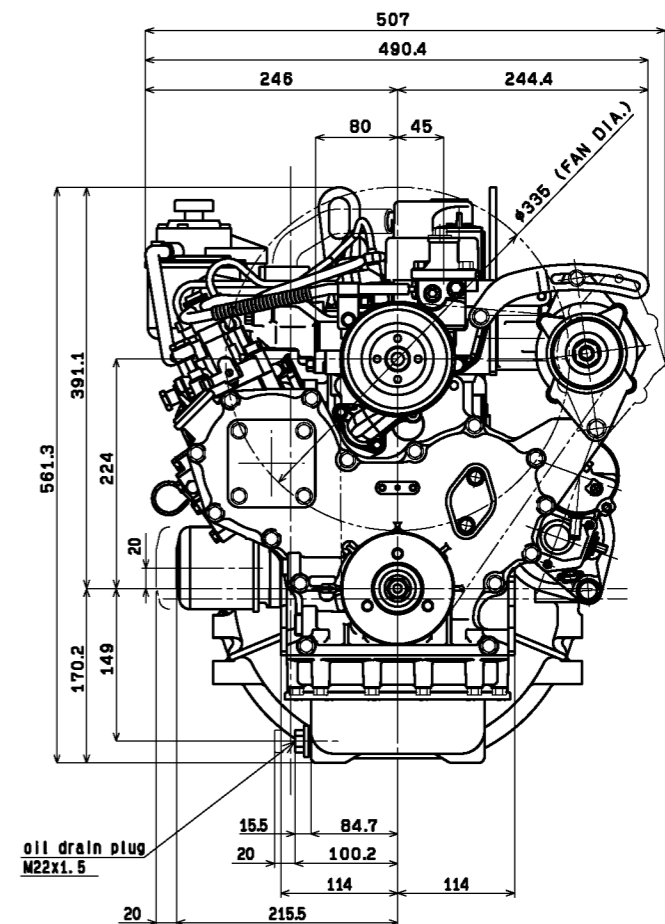
Engine model	3TNV82A
Engine category	VM1
Out drawing No.	B3-19802-0013



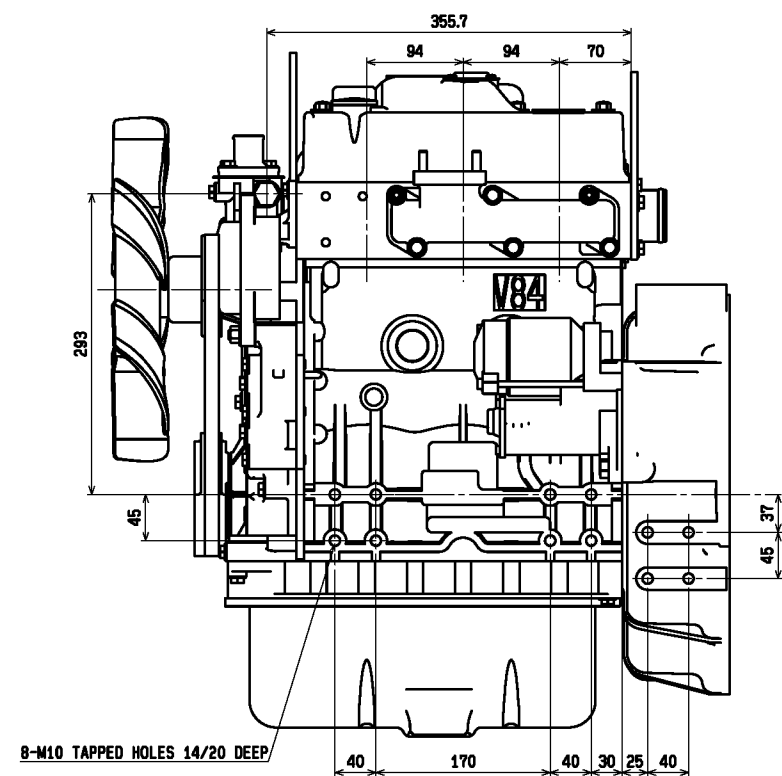
Flywheel side



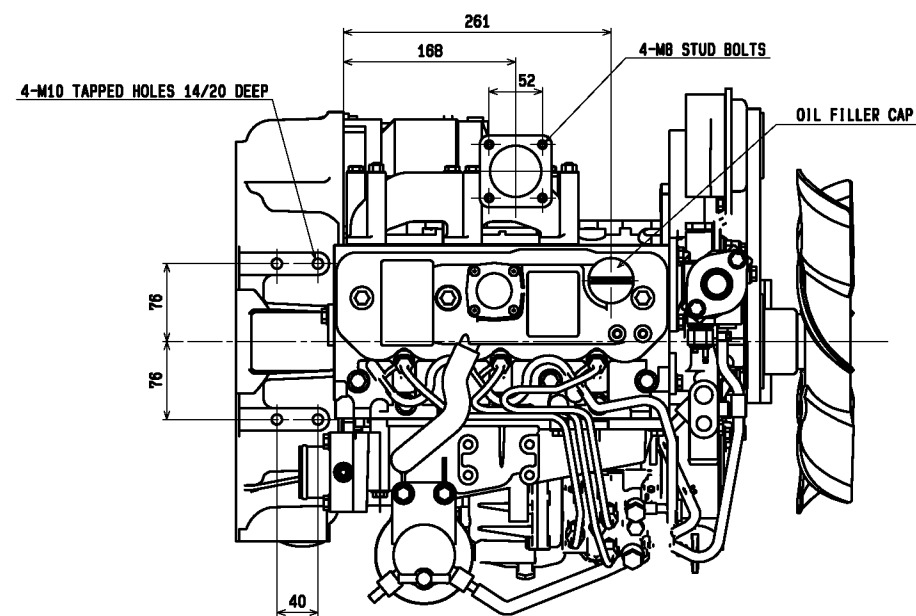
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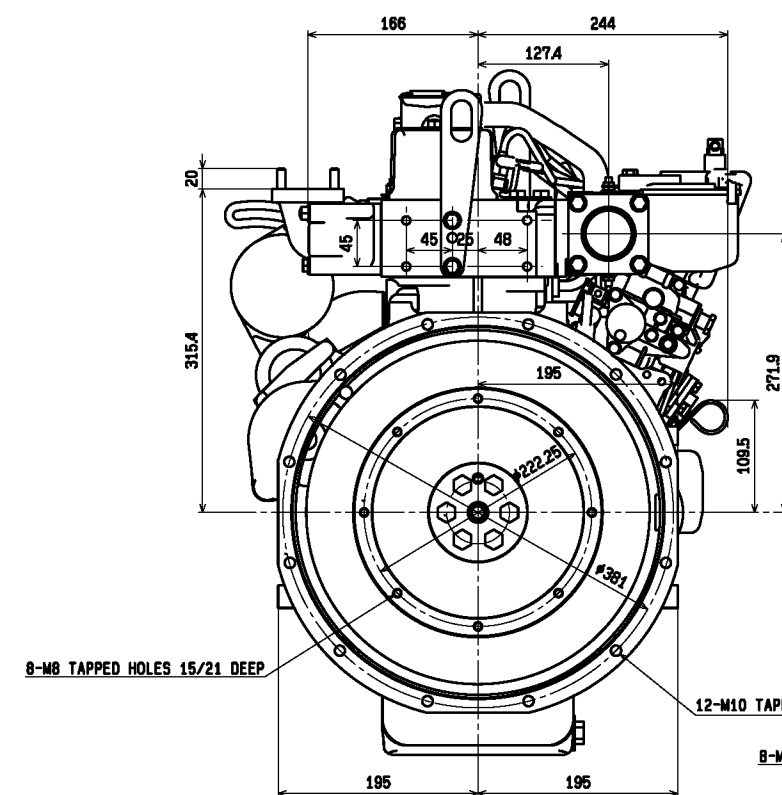
Gear side



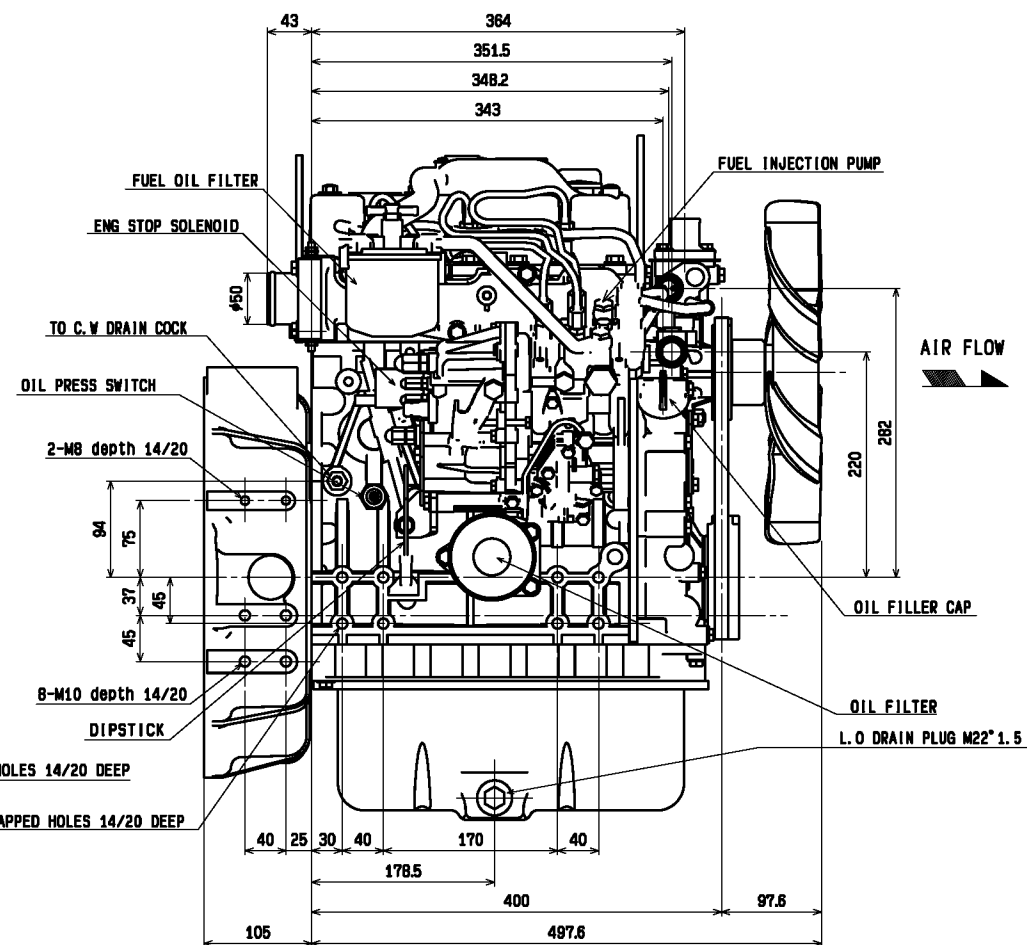
Starter side



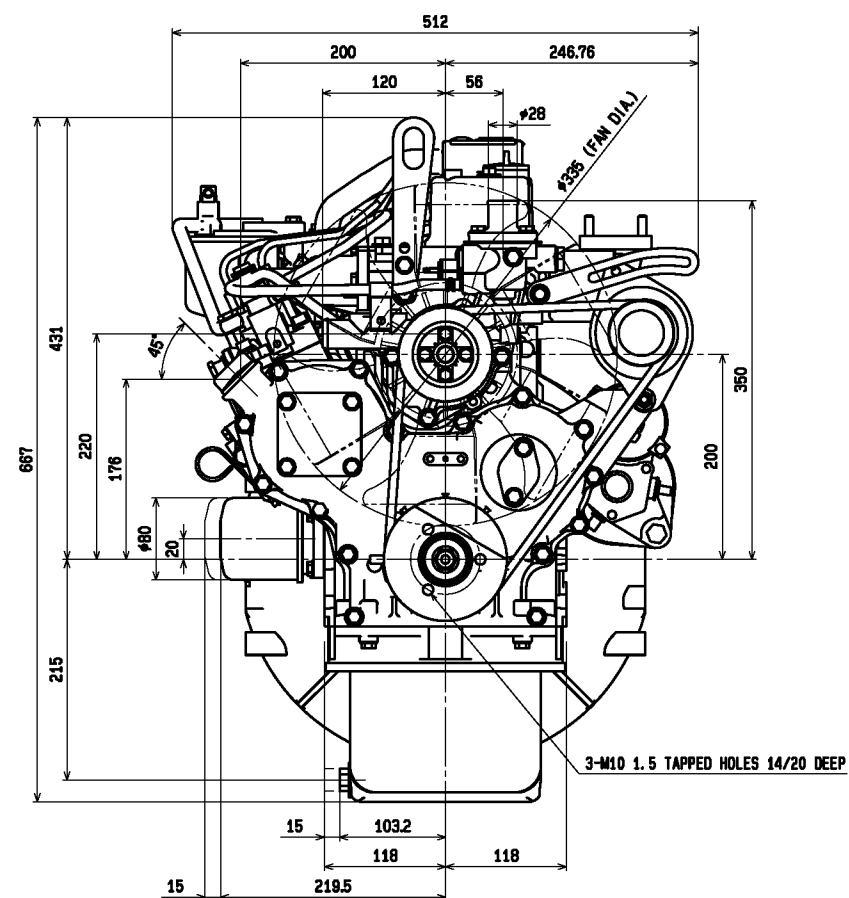
Top side



Flywheel side

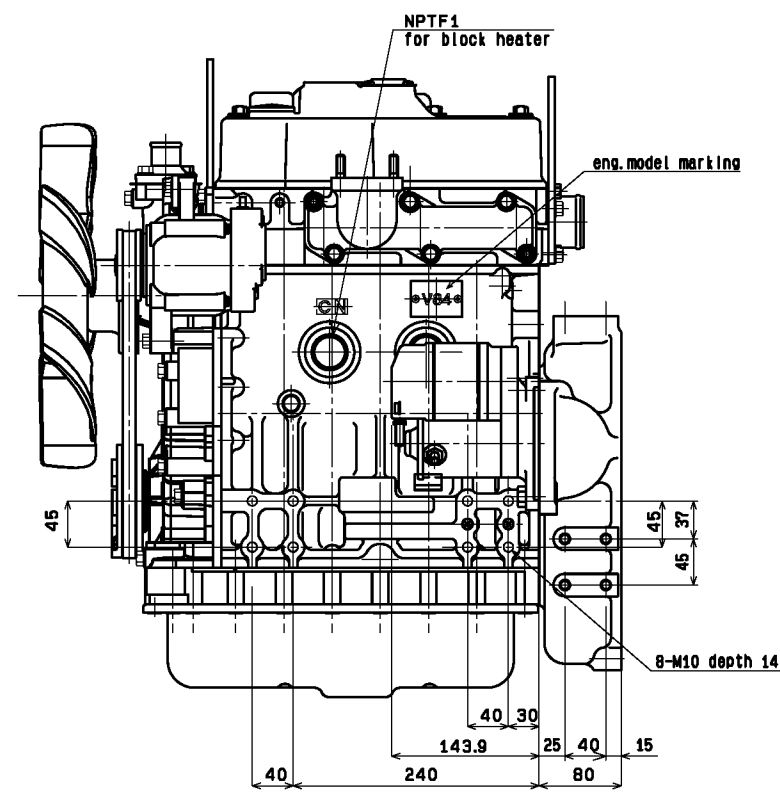


F. I. Pump side

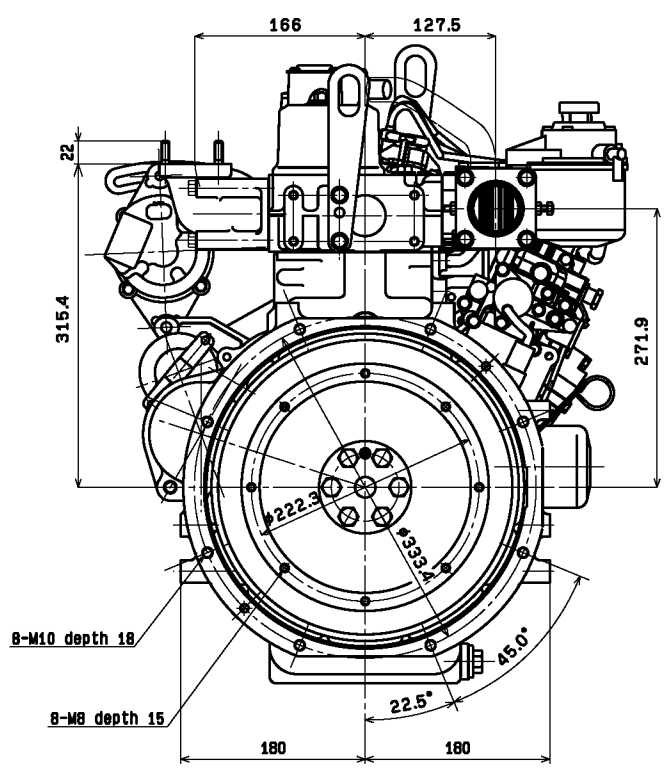


Gear side

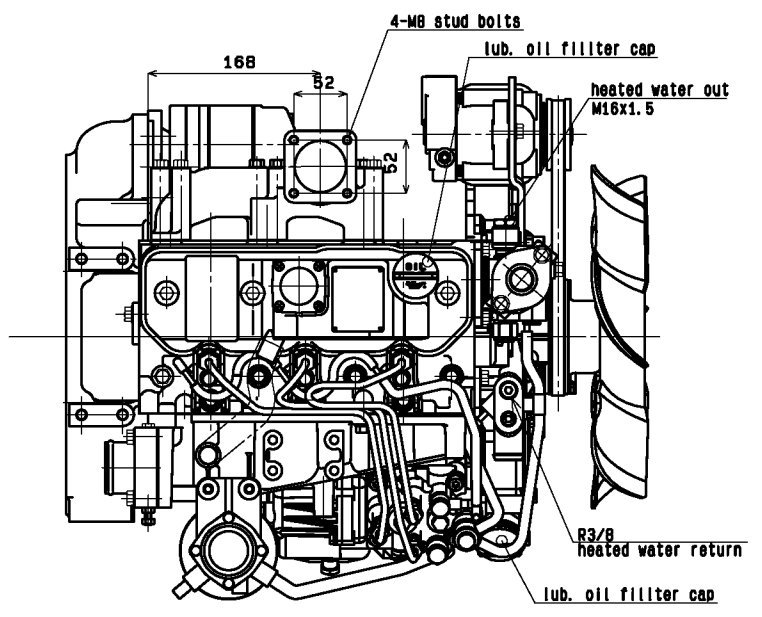
Engine model	3TNV84, 3TNV88
Engine category	CL
Out drawing No.	B3-29246-0010



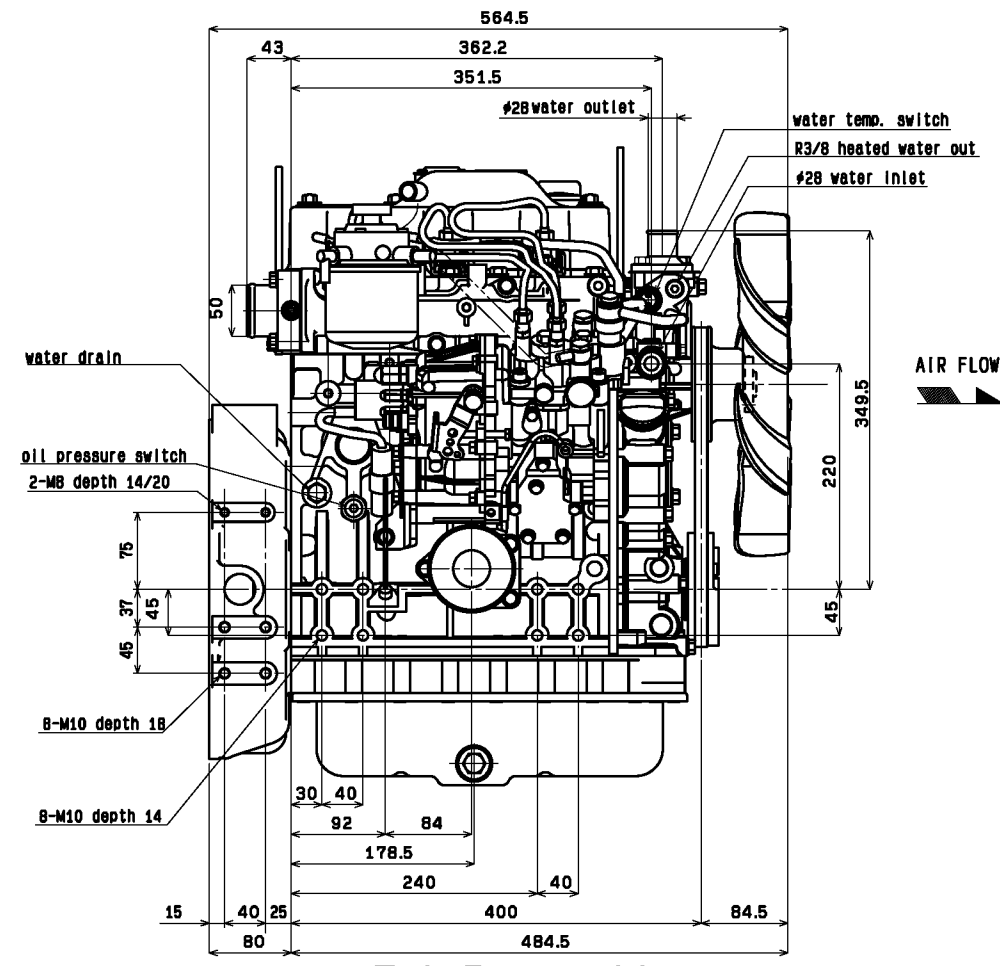
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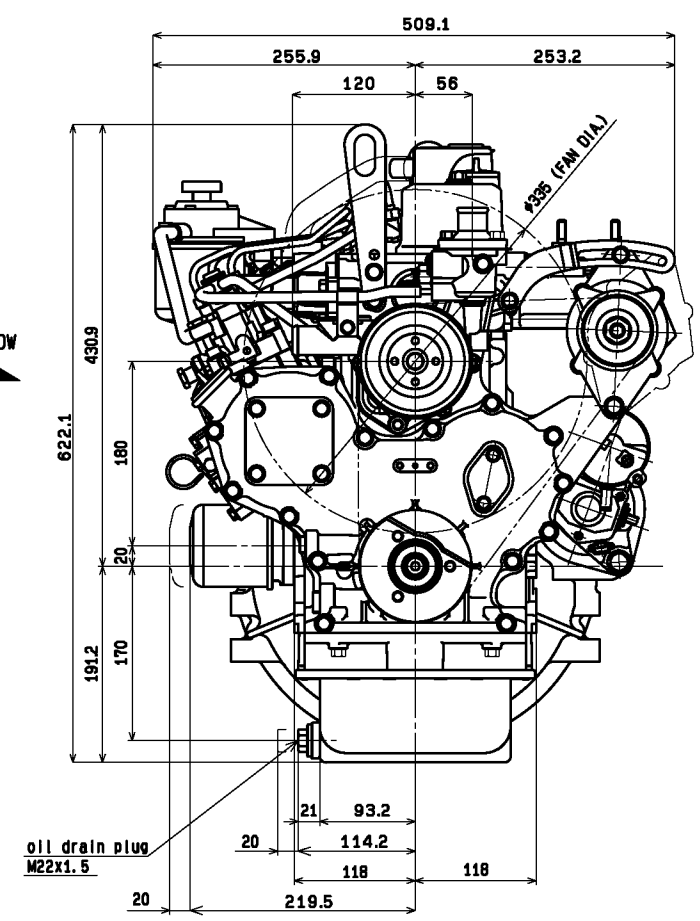
Flywheel side



Top side

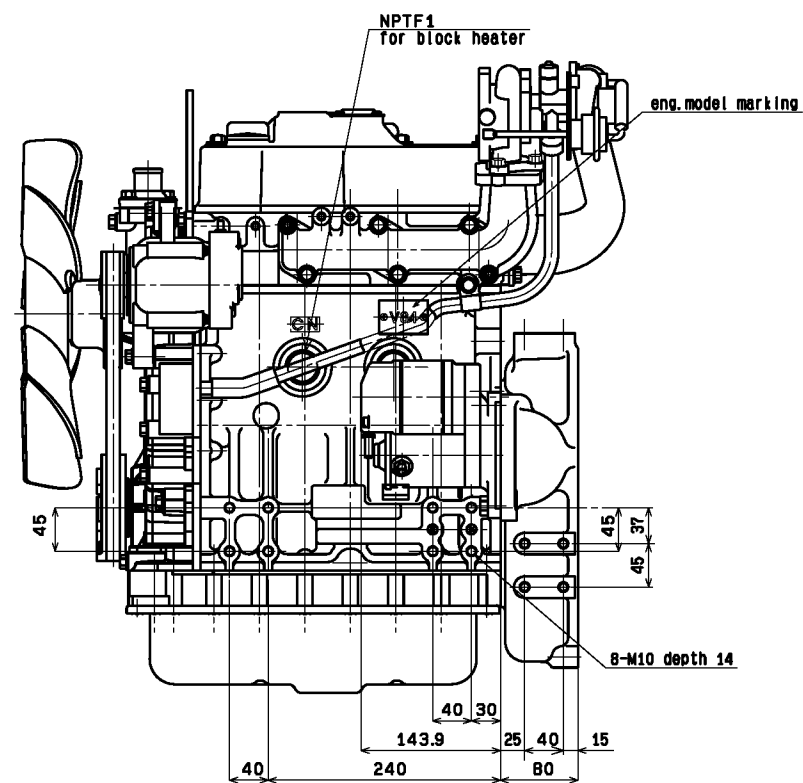


F. I. Pump side

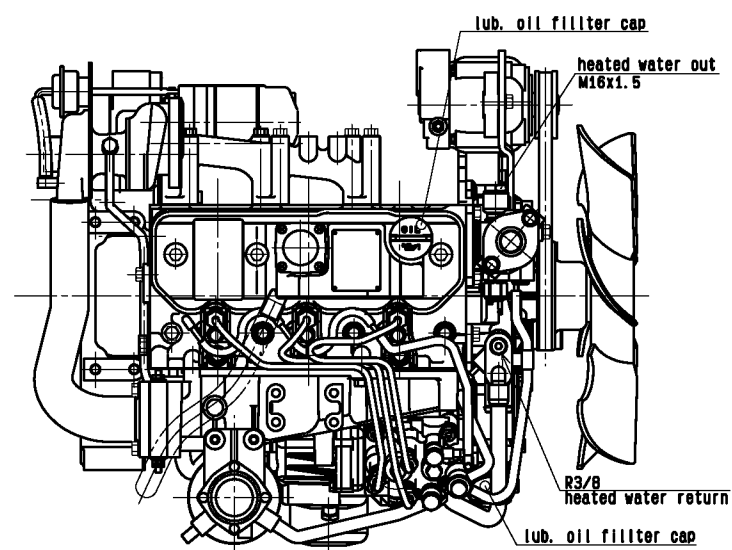


Gear side

Engine model	3TNV84, 3TNV88
Engine category	VM1
Out drawing No.	B3-29004-0013

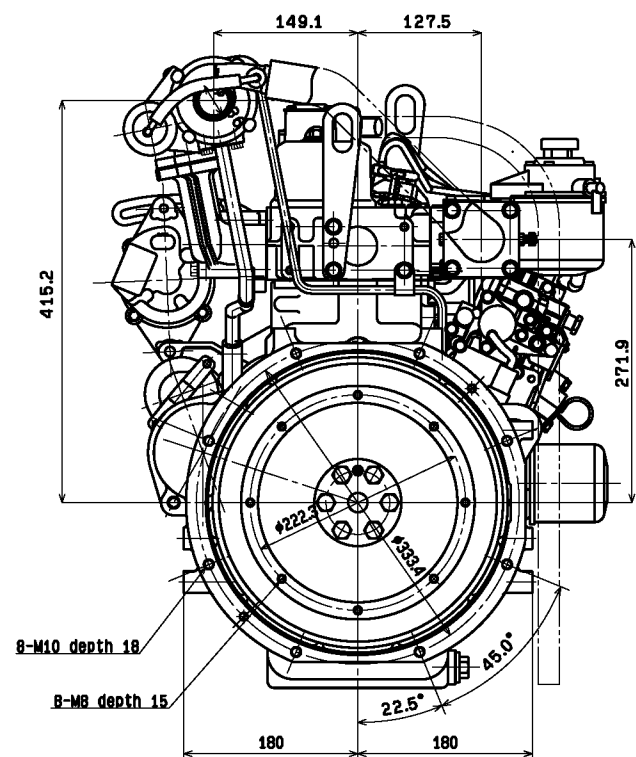


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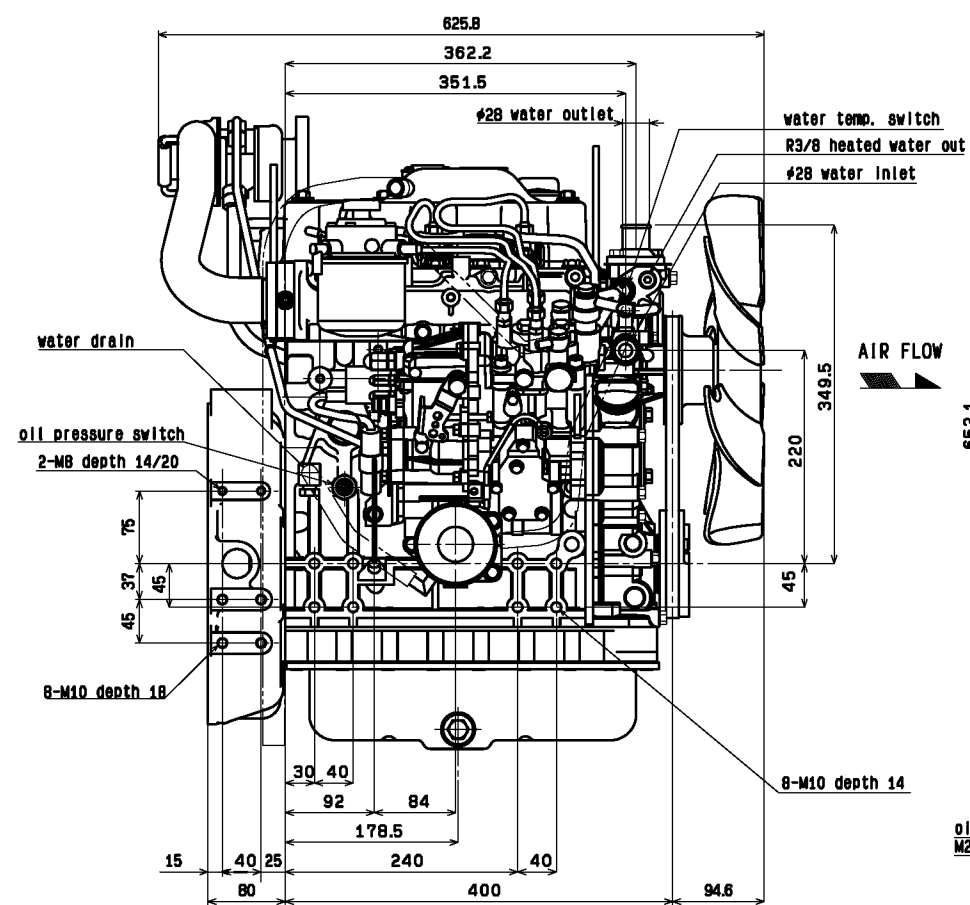


Top side

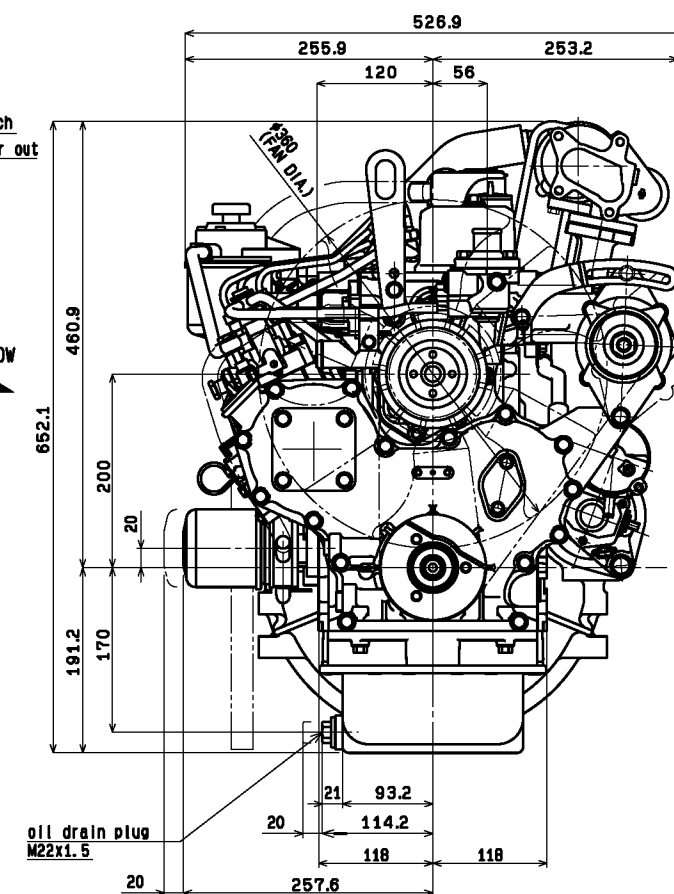
Engine model	3TNV84T
Engine category	VM1
Out drawing No.	B3-29006-0013



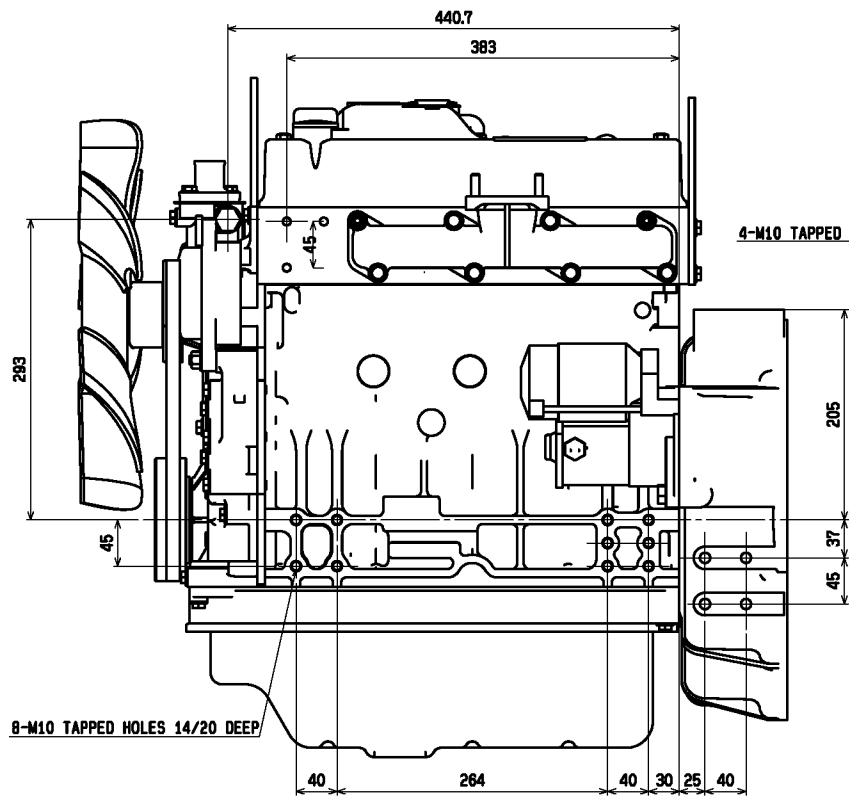
Flywheel side



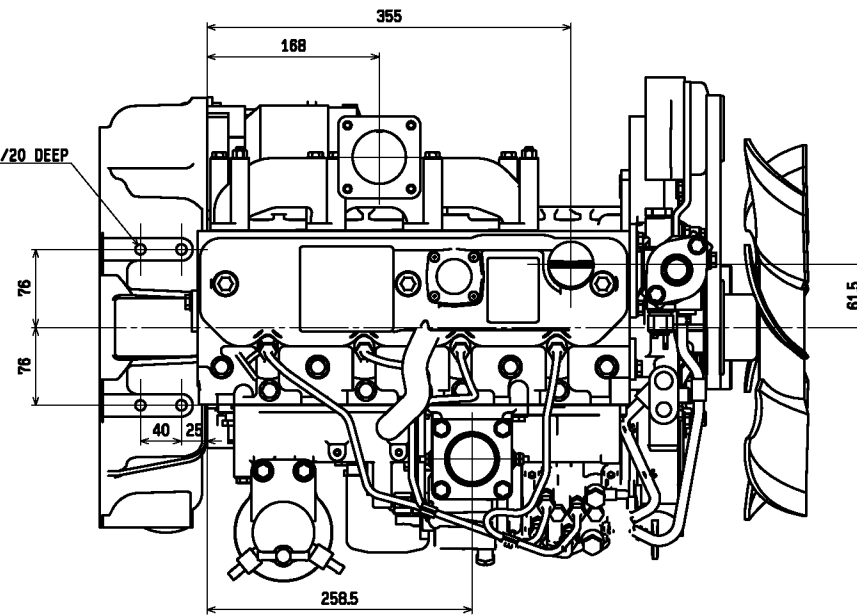
F. I. Pump side



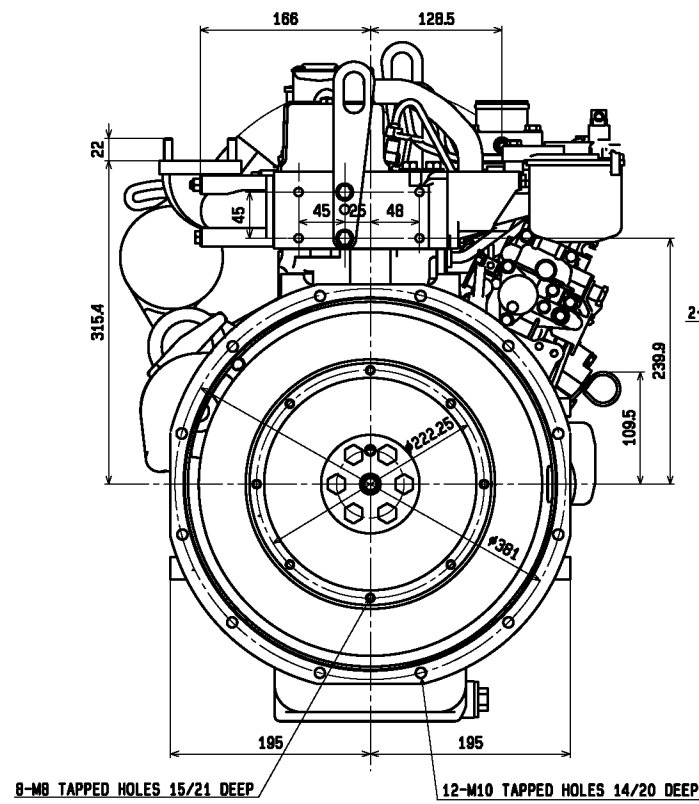
Gear side



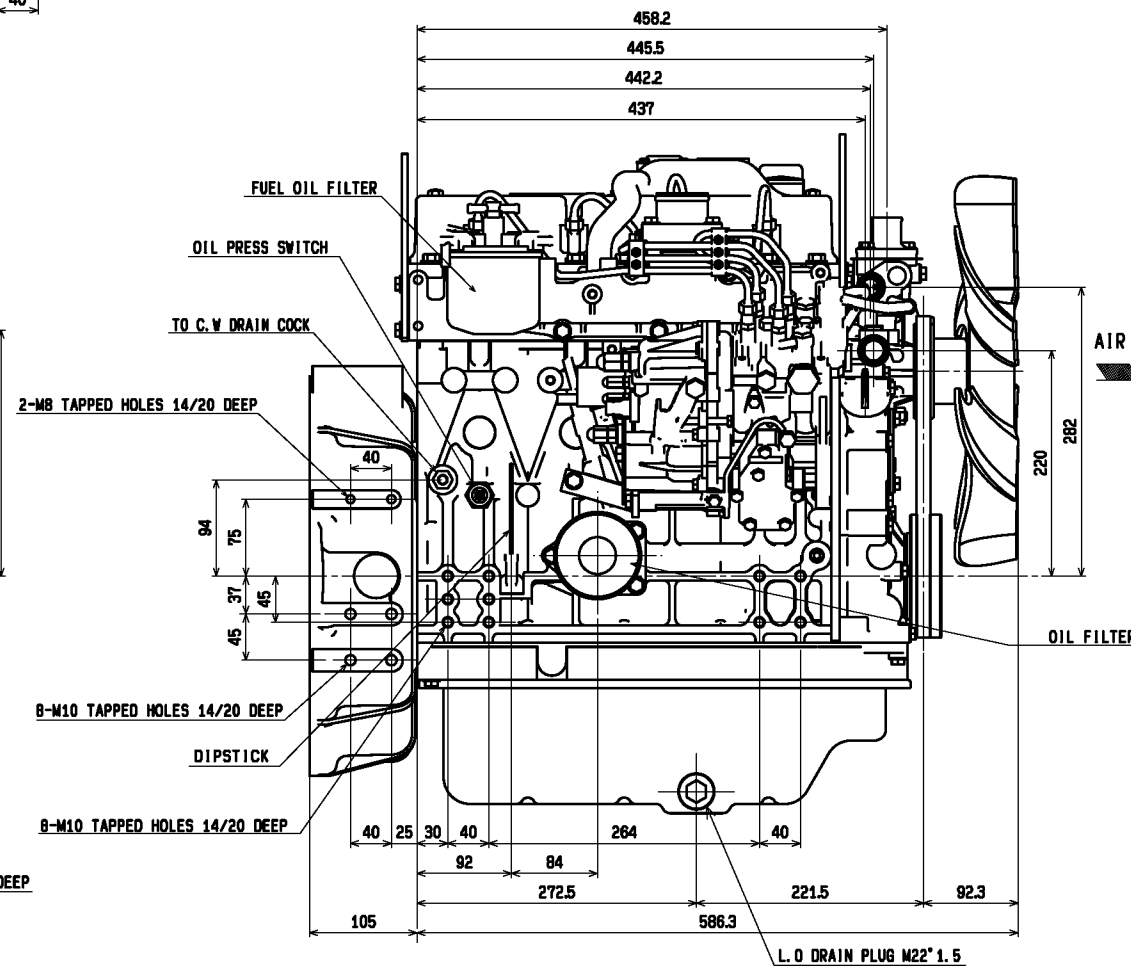
Starter side



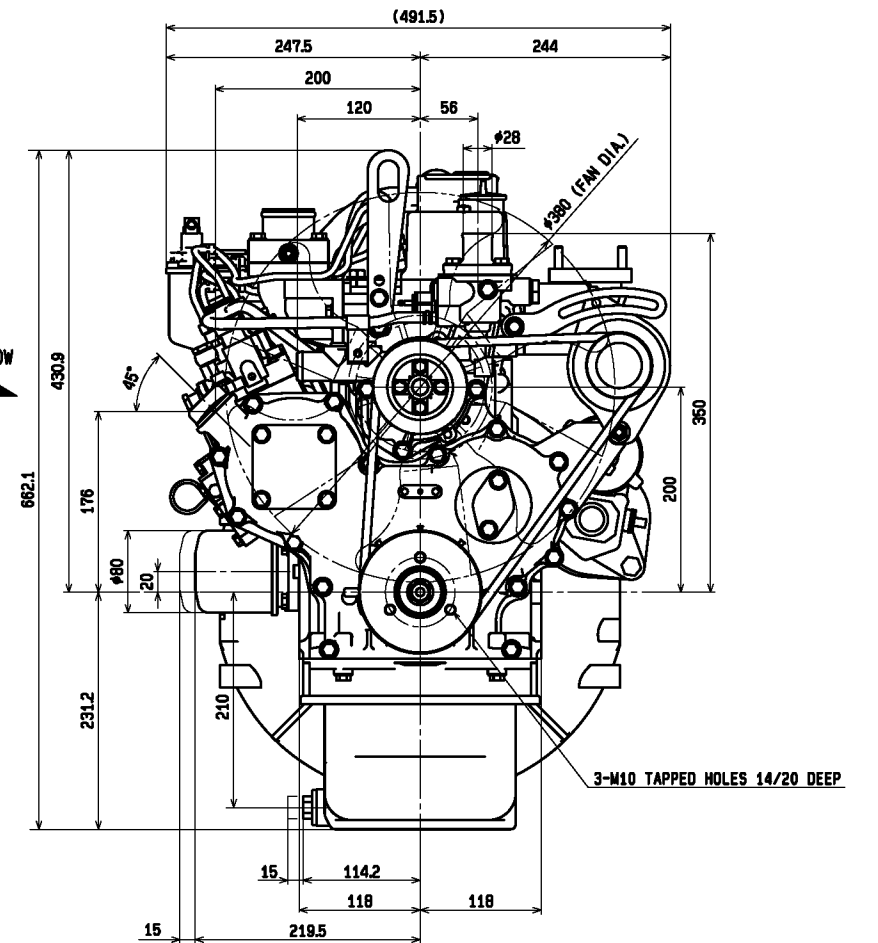
Top side



Flywheel side

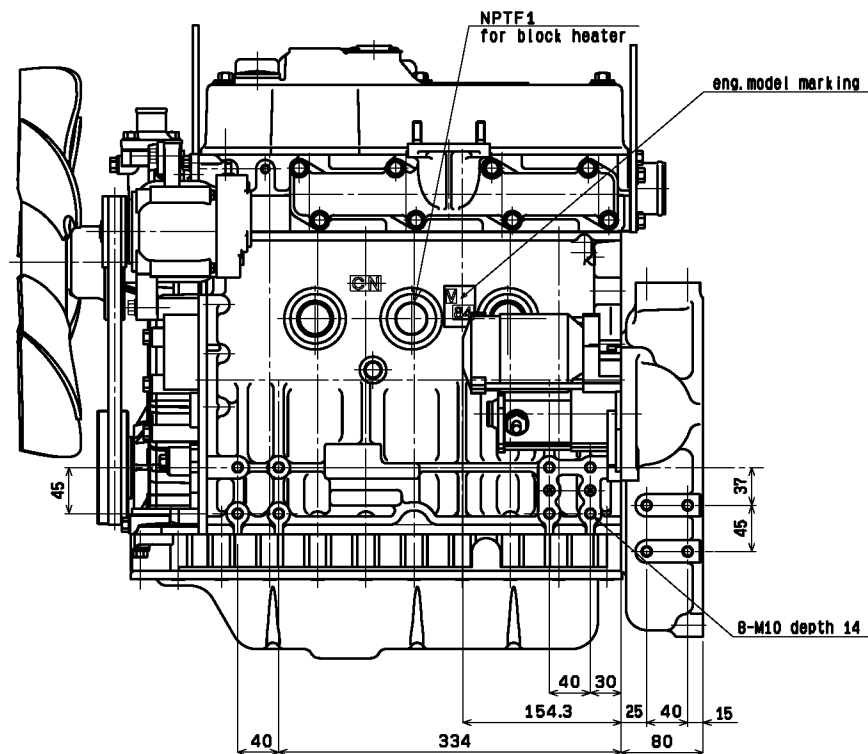


F. I. Pump side

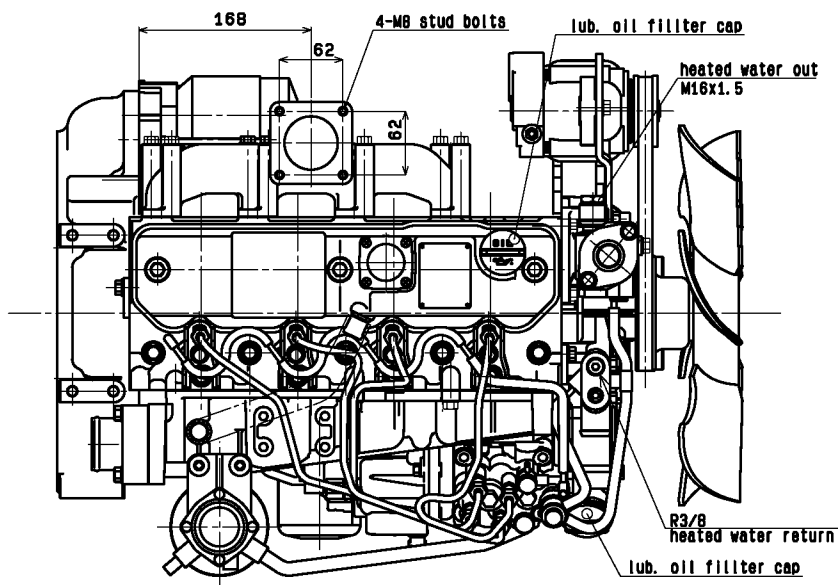


Gear side

Engine model	4TNV84, 4TNV88
Engine category	CL
Out drawing No.	B3-29646-0010

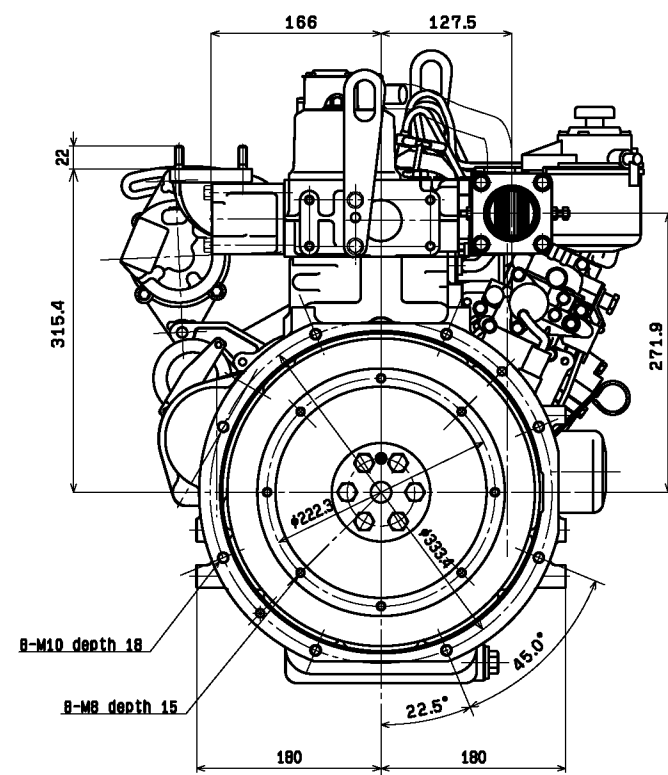


Starter side

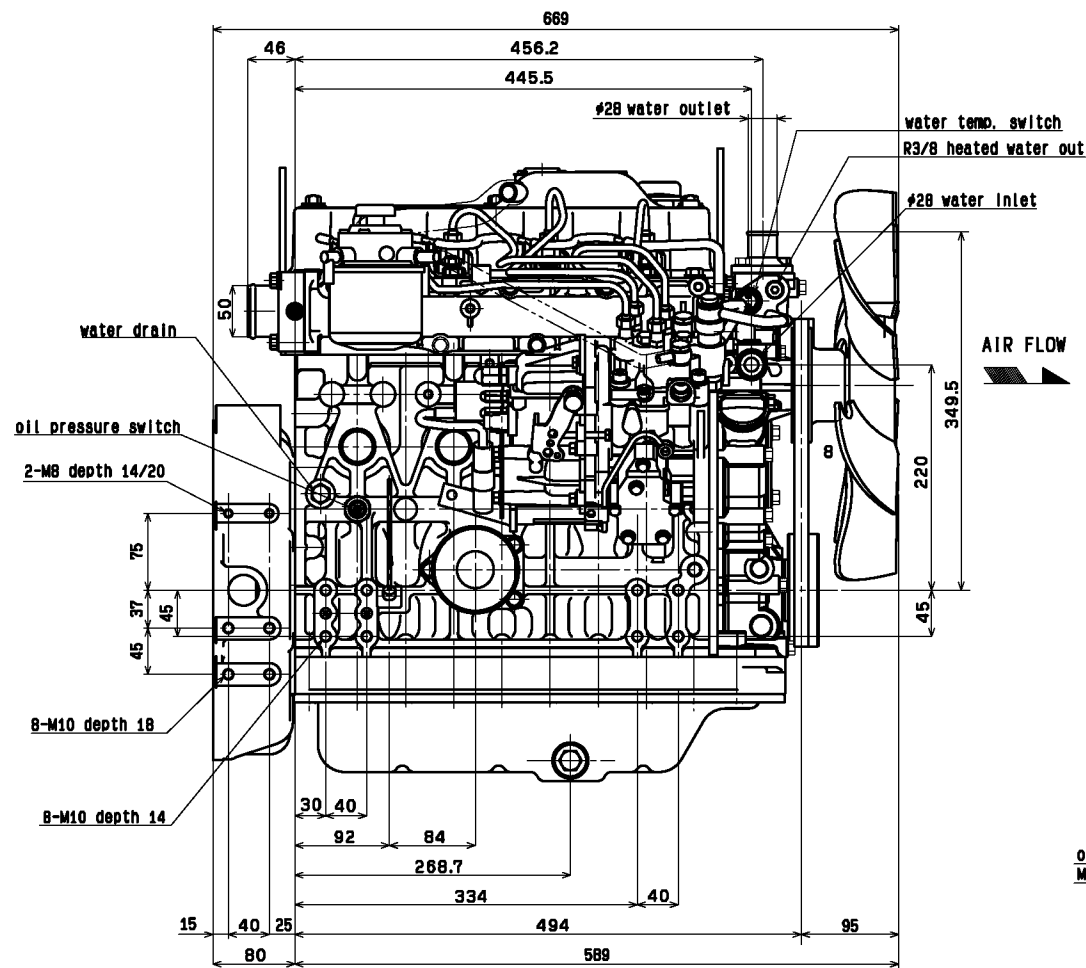


Top side

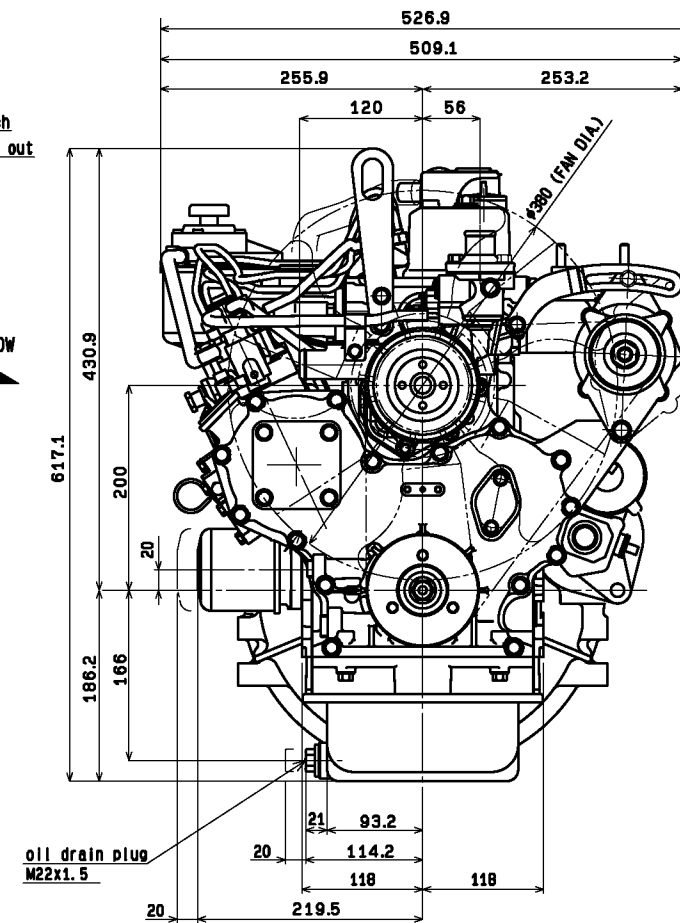
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Engine category	VM1
Out drawing No.	B3-29601-0013



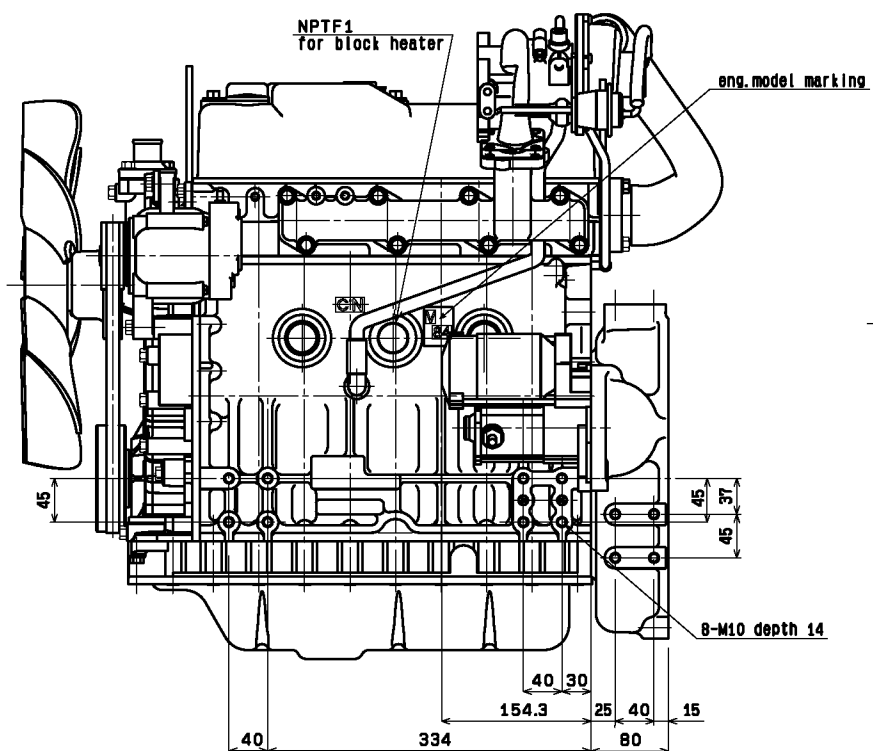
Flywheel side



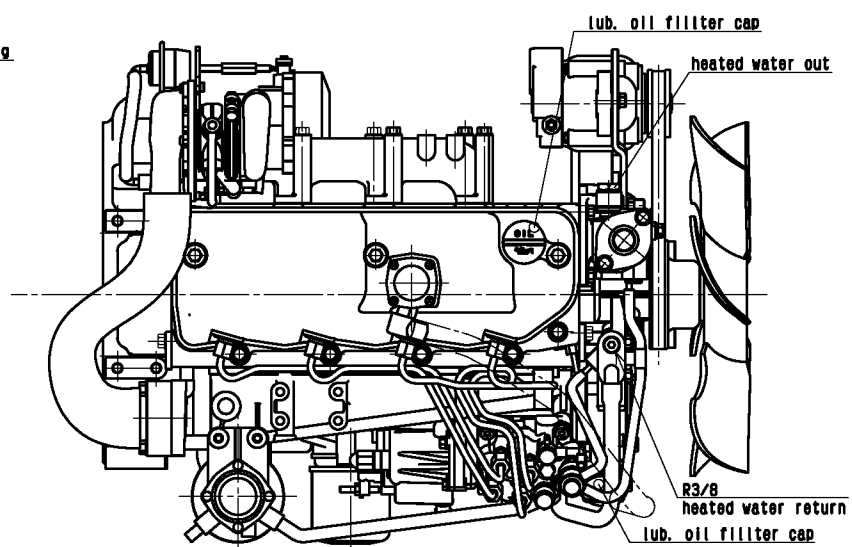
F. I. Pump side



Gear side

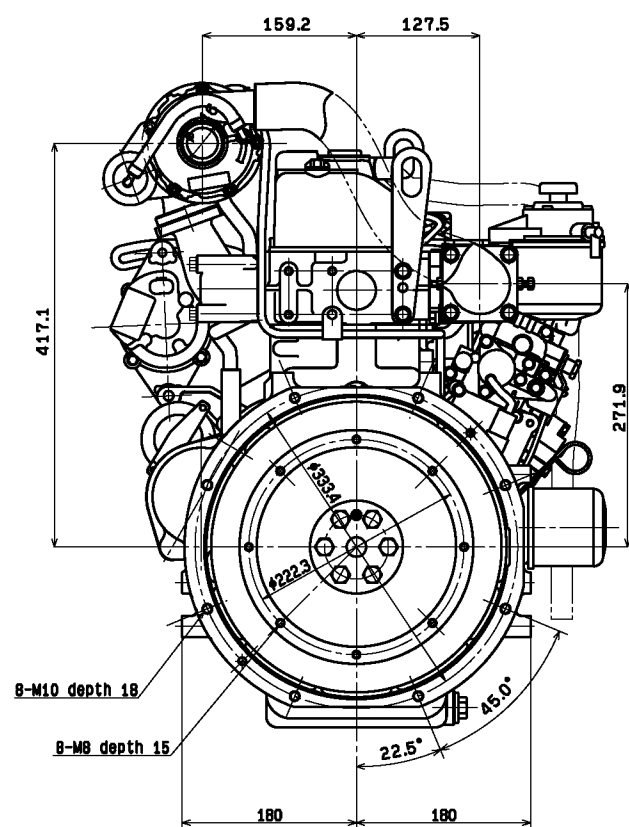


Starter side

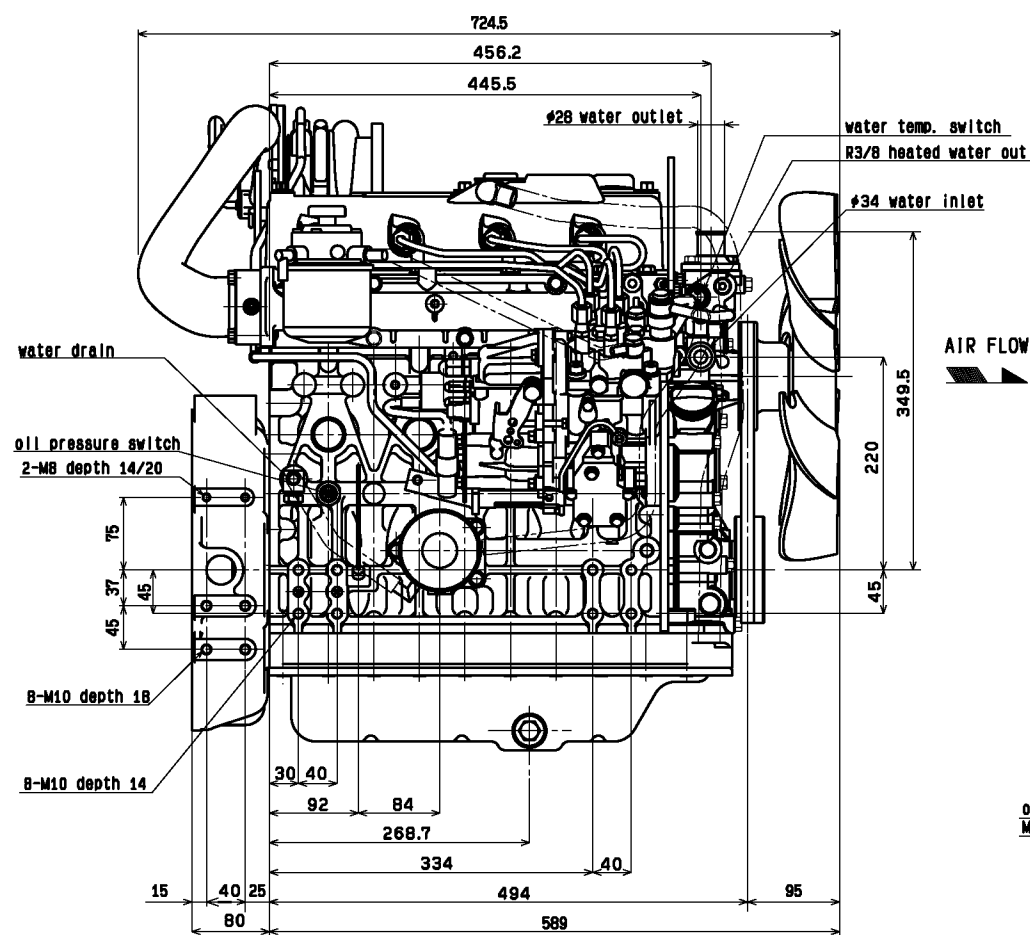


Top side

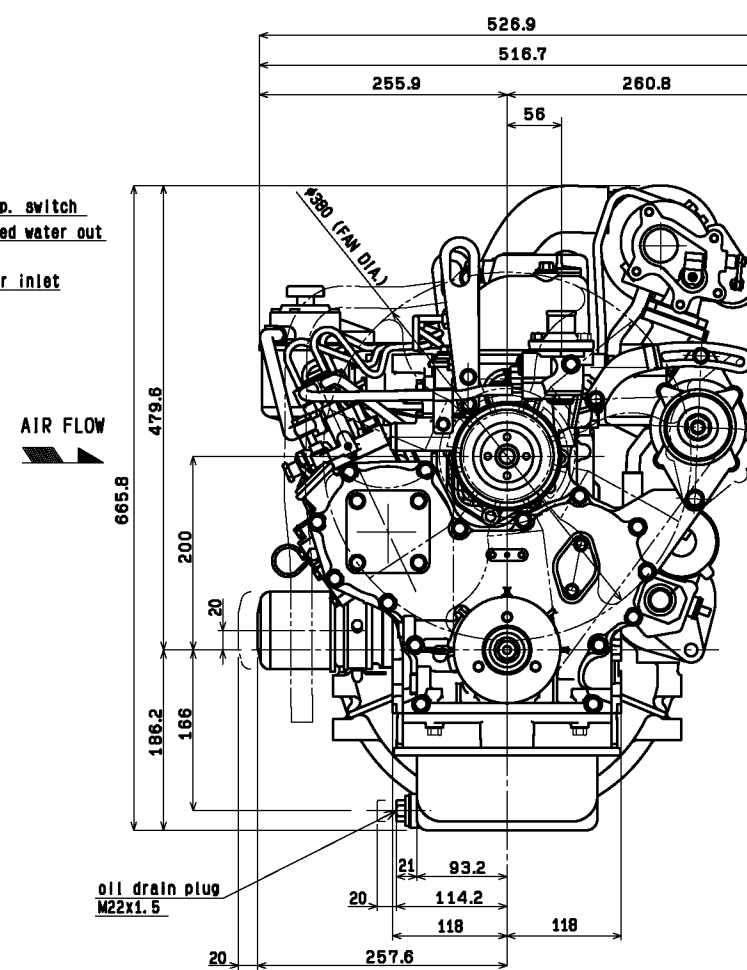
Engine model	4TNV84T
Engine category	VM1, VM2
Out drawing No.	B3-29508-0012



Flywheel side



F. I. Pump side



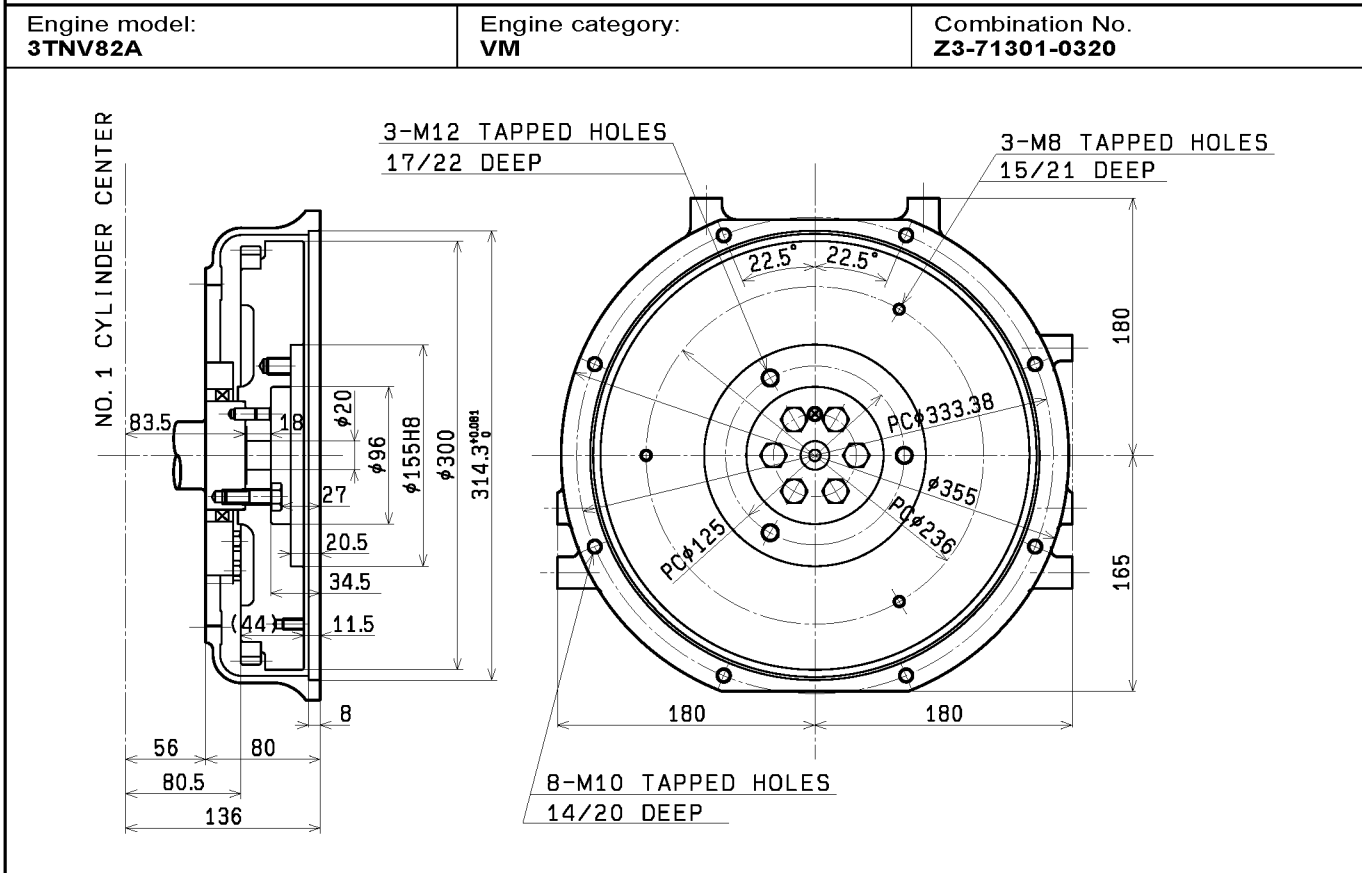
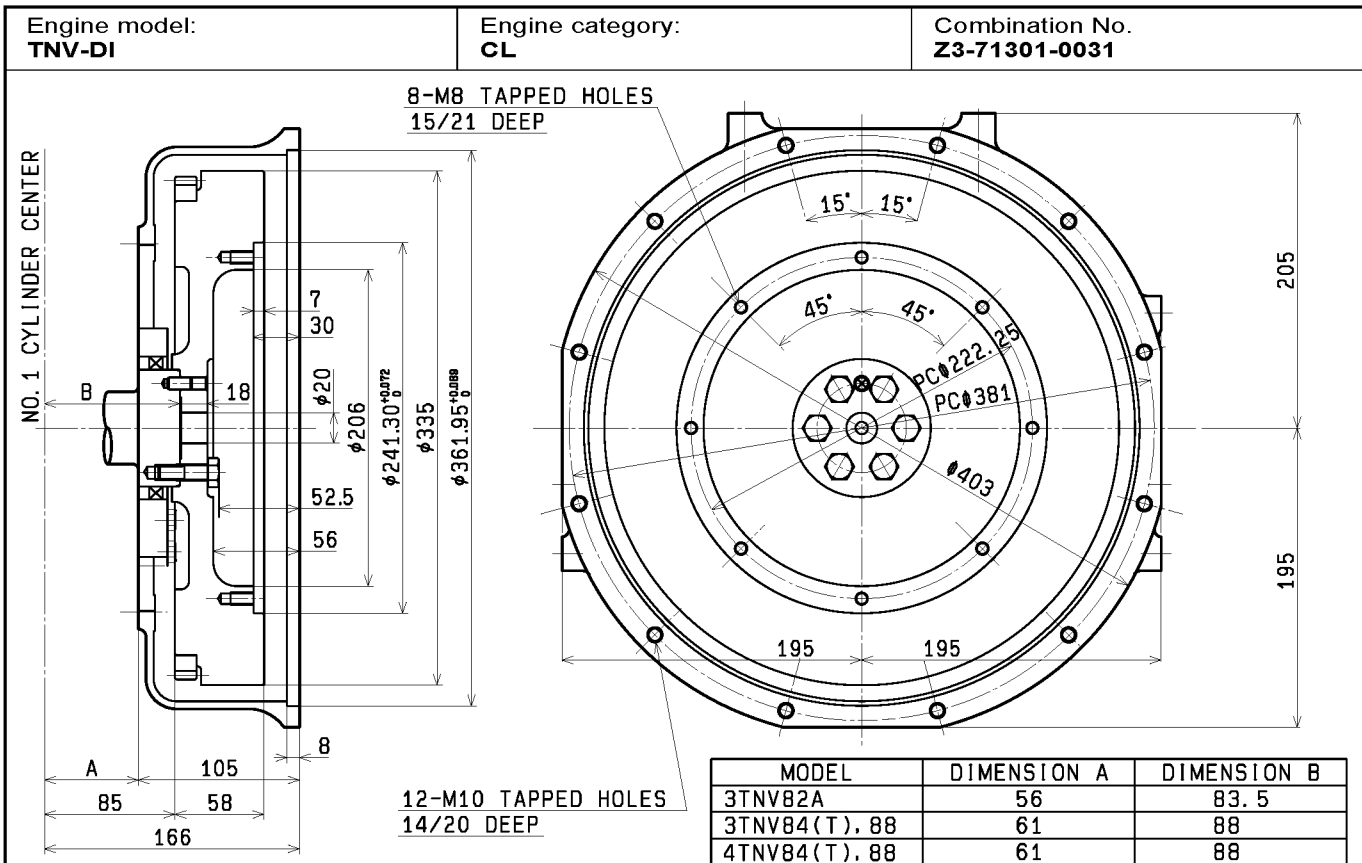
Gear side

5.List of PTO Systems

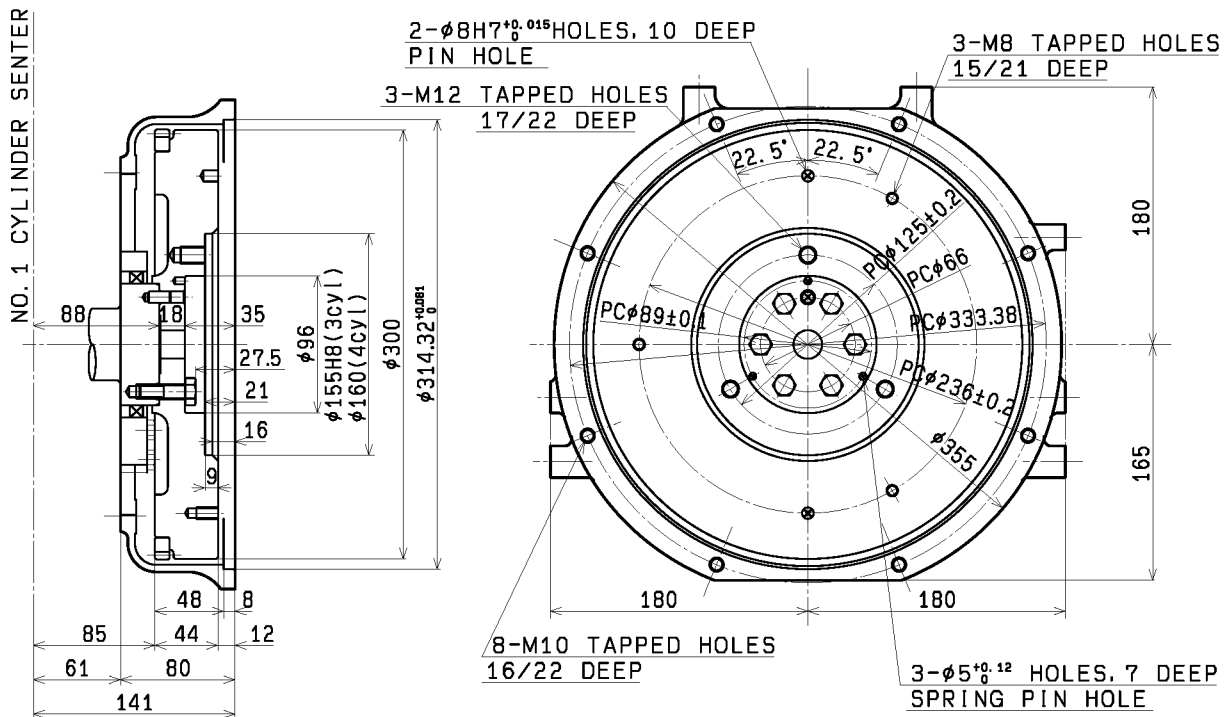


(5-1) Flywheel Housing and Flywheel Combination (See section E-a, E-b and E-c)

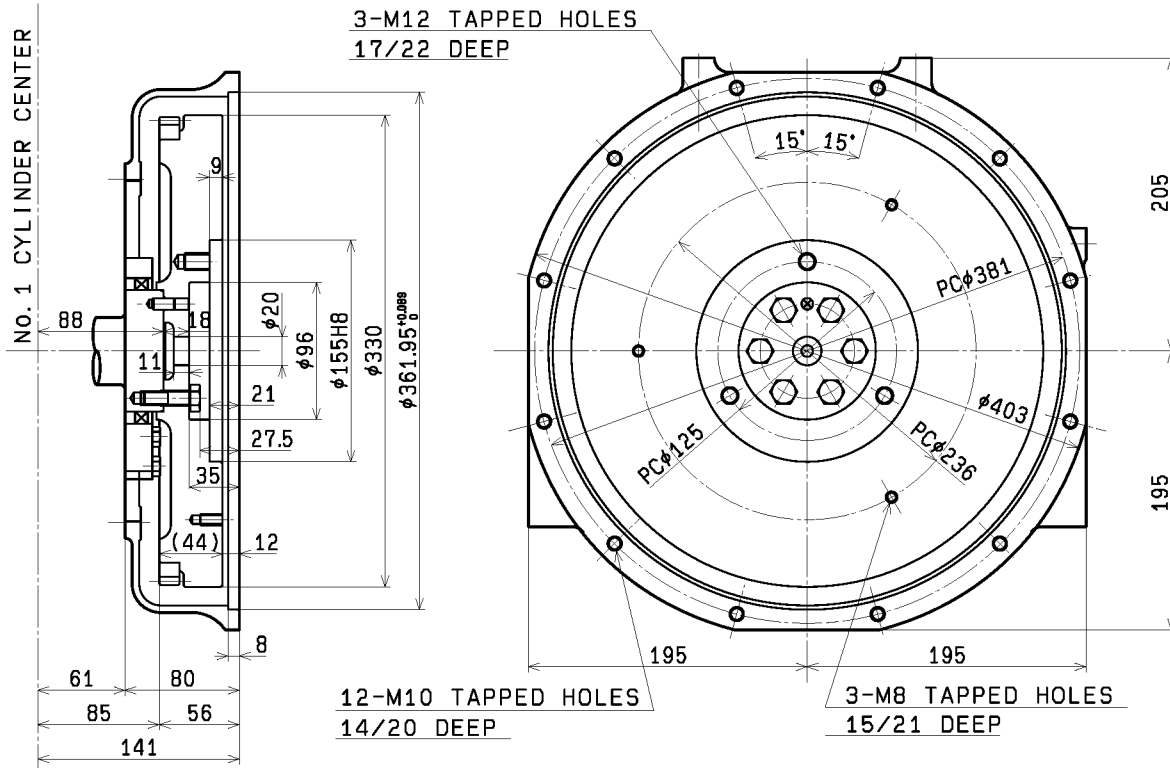
		3TNV84(T), 3TNV88	3TNV82A, 4TNV84(T), 4TNV88	
CL	Combination No.	Z3-71301-0031		
	Housing type	Semi SAE #4 Deep		
	F/W Housing	171420-01600		
	F/W CMP	171340-21590	171420-21590	
VM	Combination No.	Z3-71365-0420		
	Housing type	Semi SAE #5		
	F/W Housing	129612-01600		
	F/W CMP	129128-21590	129489-21590	
VM	Combination No.	Z3-71340-0330	Z3-71440-0480	
	Housing type	Semi SAE #4 Shallow		
	F/W Housing	171440-01600		
	F/W CMP	171350-21590	129403-21590	
VM	Combination No.	Z3-71301-0011		
	Housing type	Semi SAE #5		
	F/W Housing	129612-01600		
	F/W CMP	171340-21580	171420-21580	
SAE #5 for Gene.	Combination No.	Z3-19265-0100		
	Housing type	SAE #5 Generator		
	F/W Housing	119888-01601		
	F/W CMP	129188-21590	129488-21590	
SAE #5 for Clutch 7-1/2	Combination No.	Z3-19822-0450		
	Housing type	SAE Overcenter Clutch 7-1/2		
	F/W Housing	119888-01601		
	F/W CMP	129188-21590	129488-21590	
	Bearing Retainer	119888-21450		
	Bearing	24107-062054		
Back plate	1	Combination No.	Z3-19822-0060	
		Housing type	Back plate	
		Back plate	129129-01600	
		F/W CMP	171340-21580	171420-21580
	2	Combination No.	Z3-29489-0760	
		Housing type	Back plate	
		Back plate	129150-01600	
		F/W CMP	171340-21590	171420-21590
	3	Combination No.	Z3-19934-0010	
		Housing type	Back plate	
		Back plate	119820-01600	
		F/W CMP	171340-21580	171420-21580

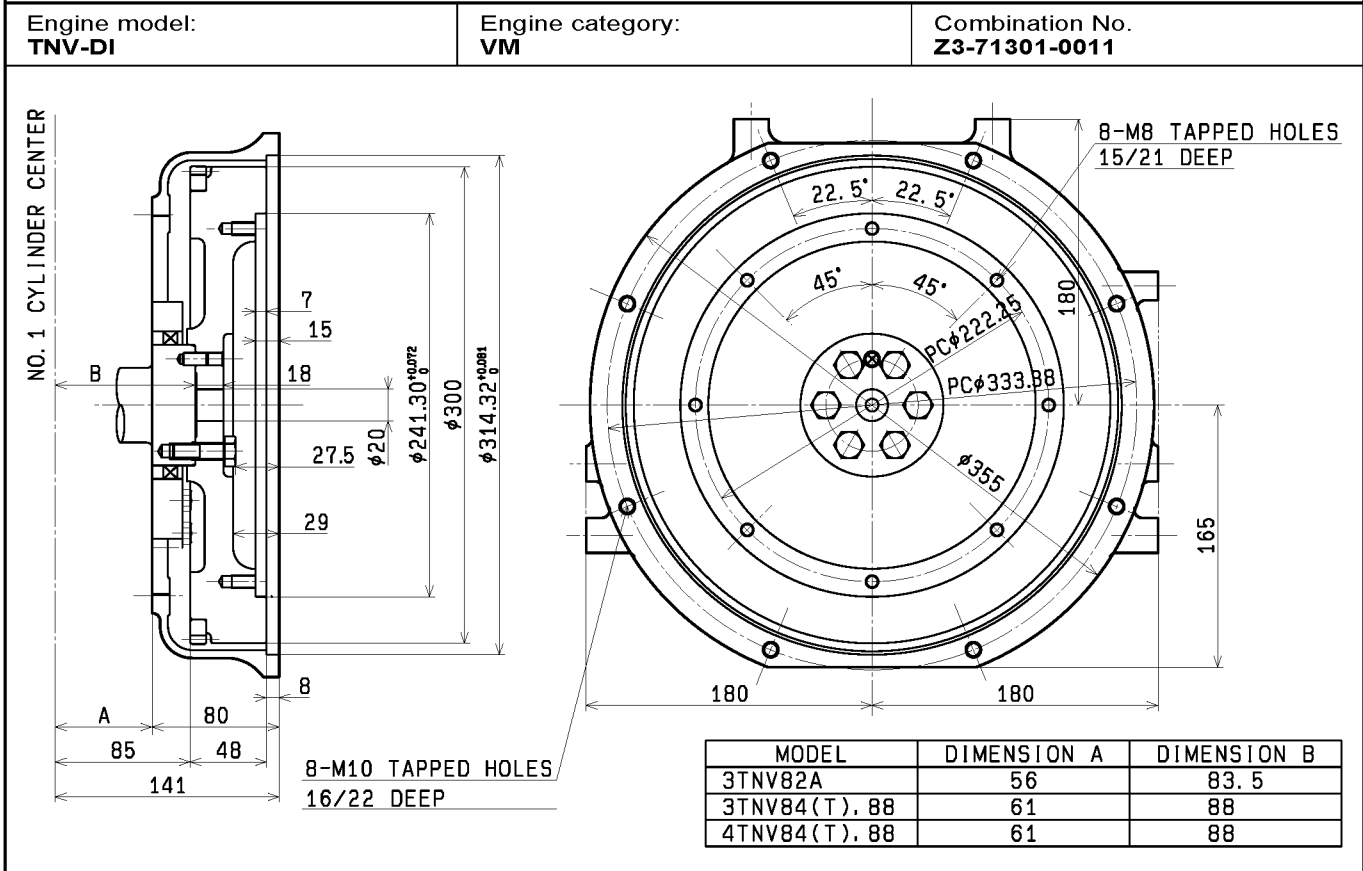
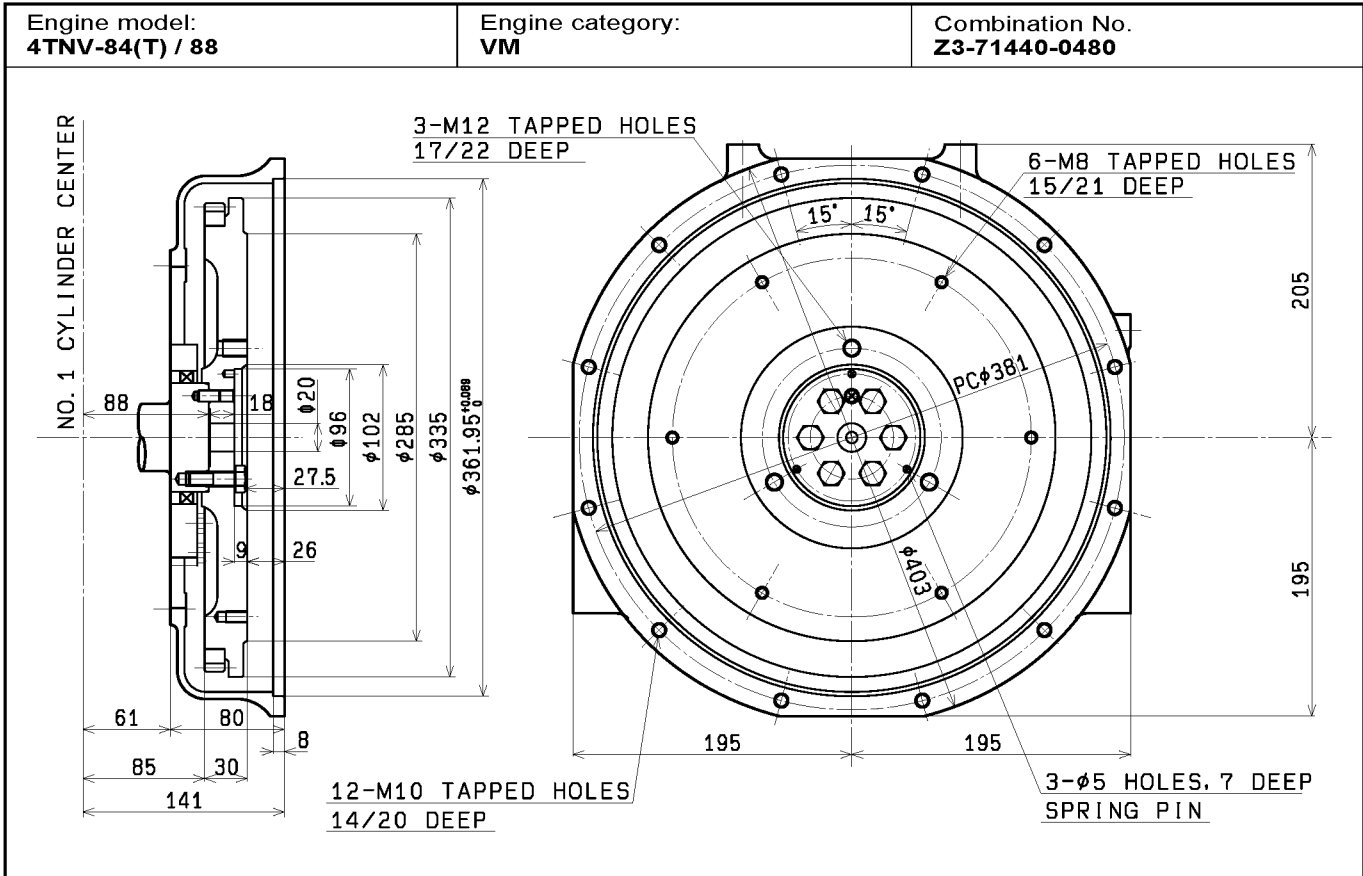


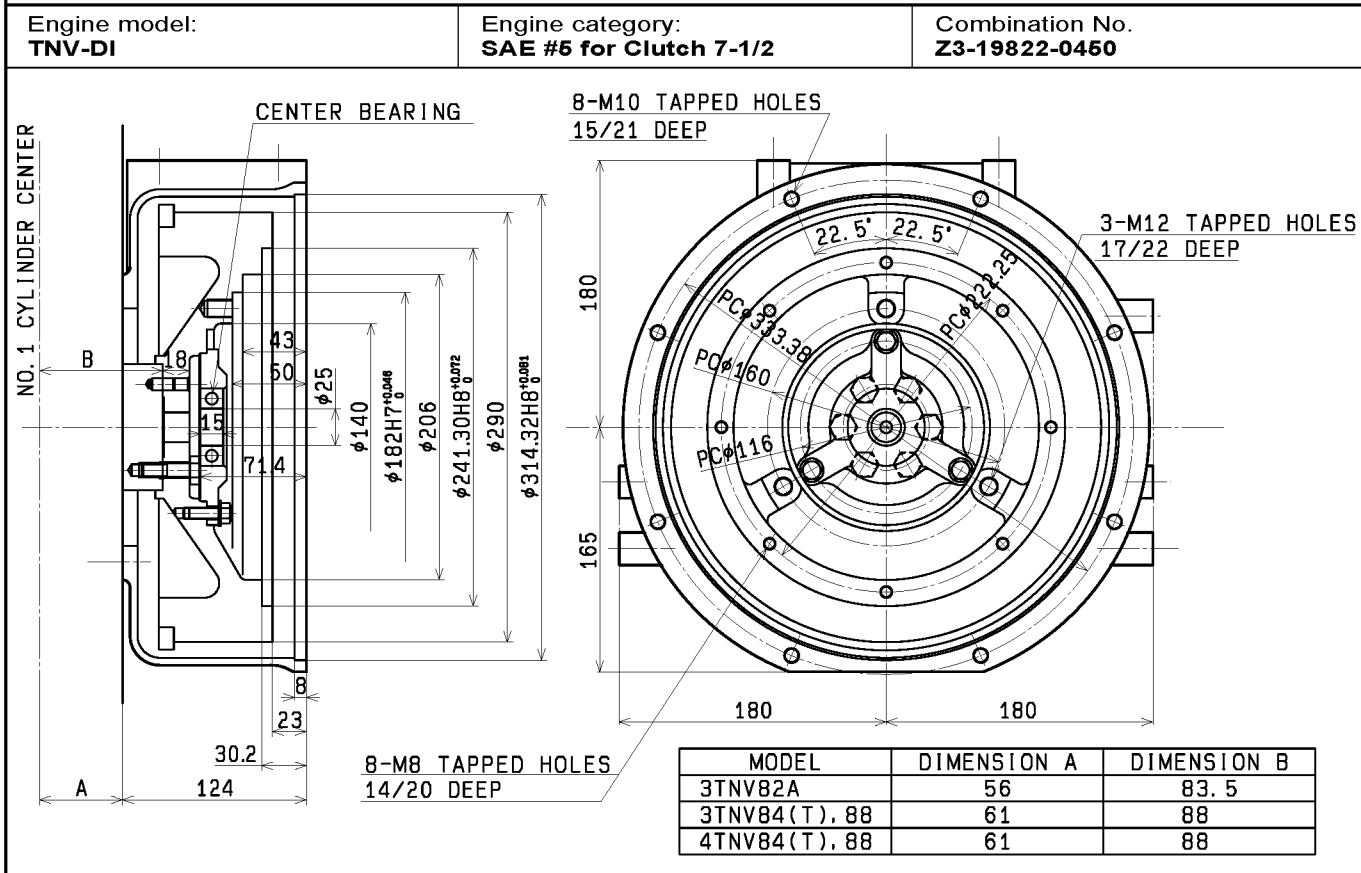
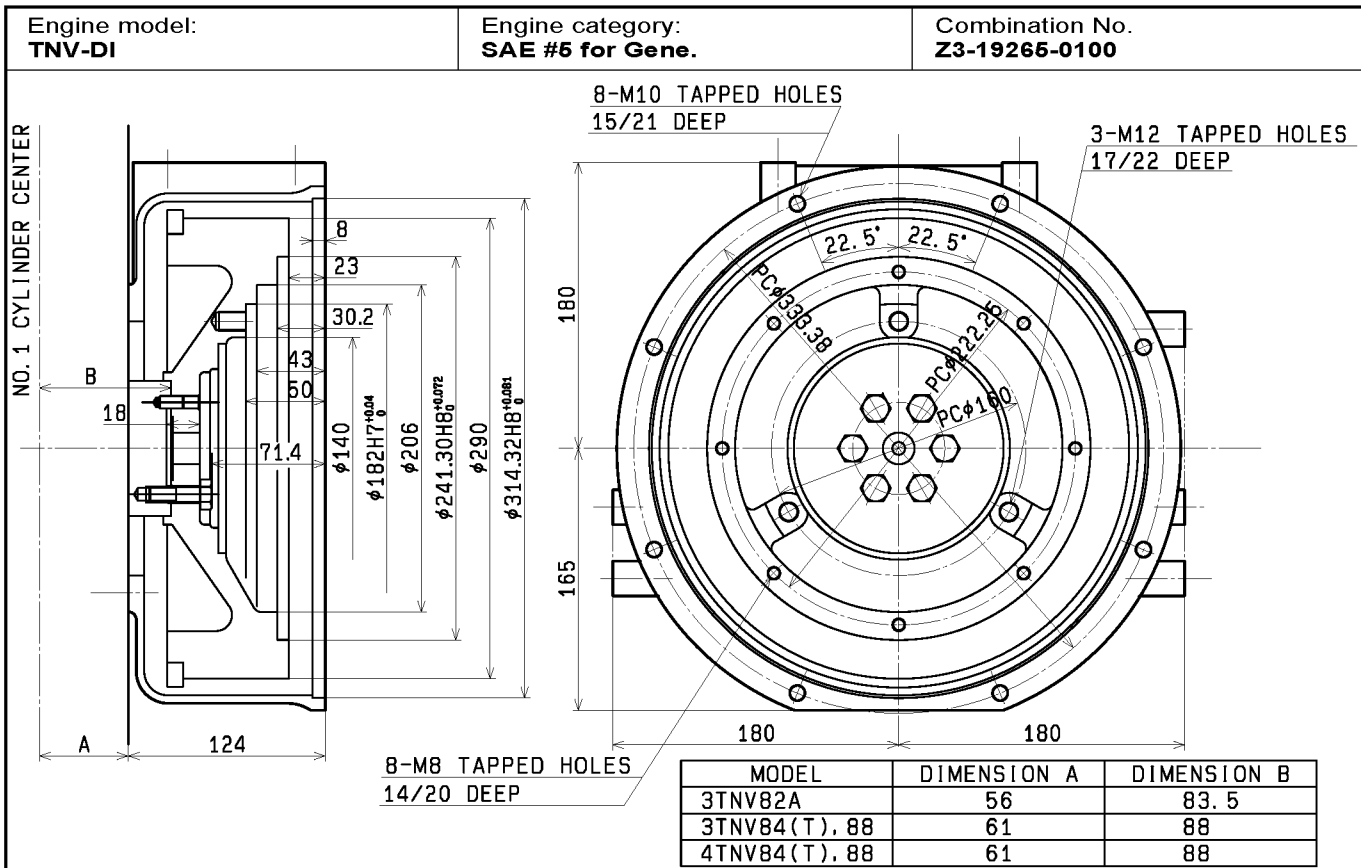
Engine model: TNV-DI	Engine category: VM	Combination No. Z3-71365-0420
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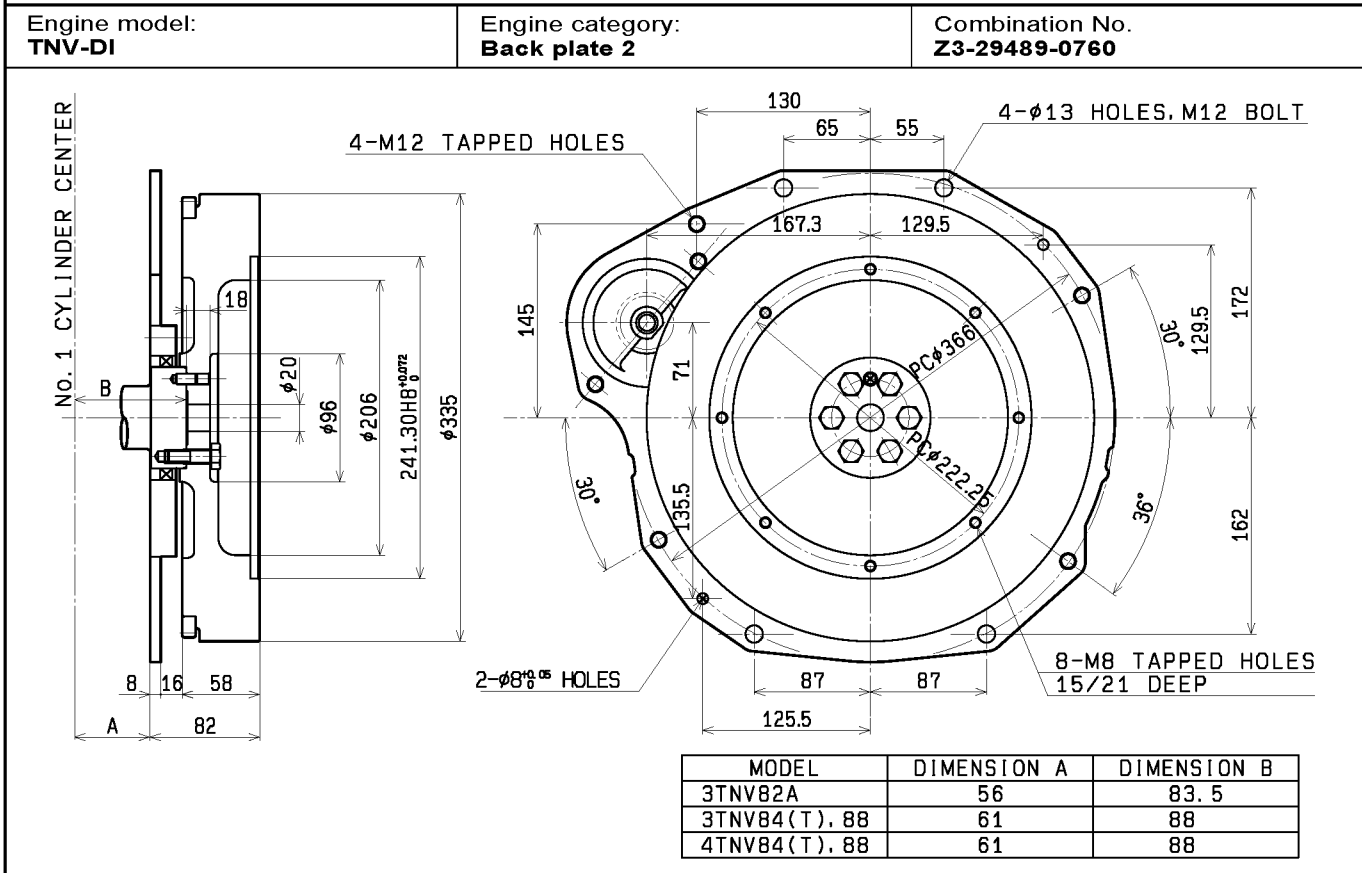
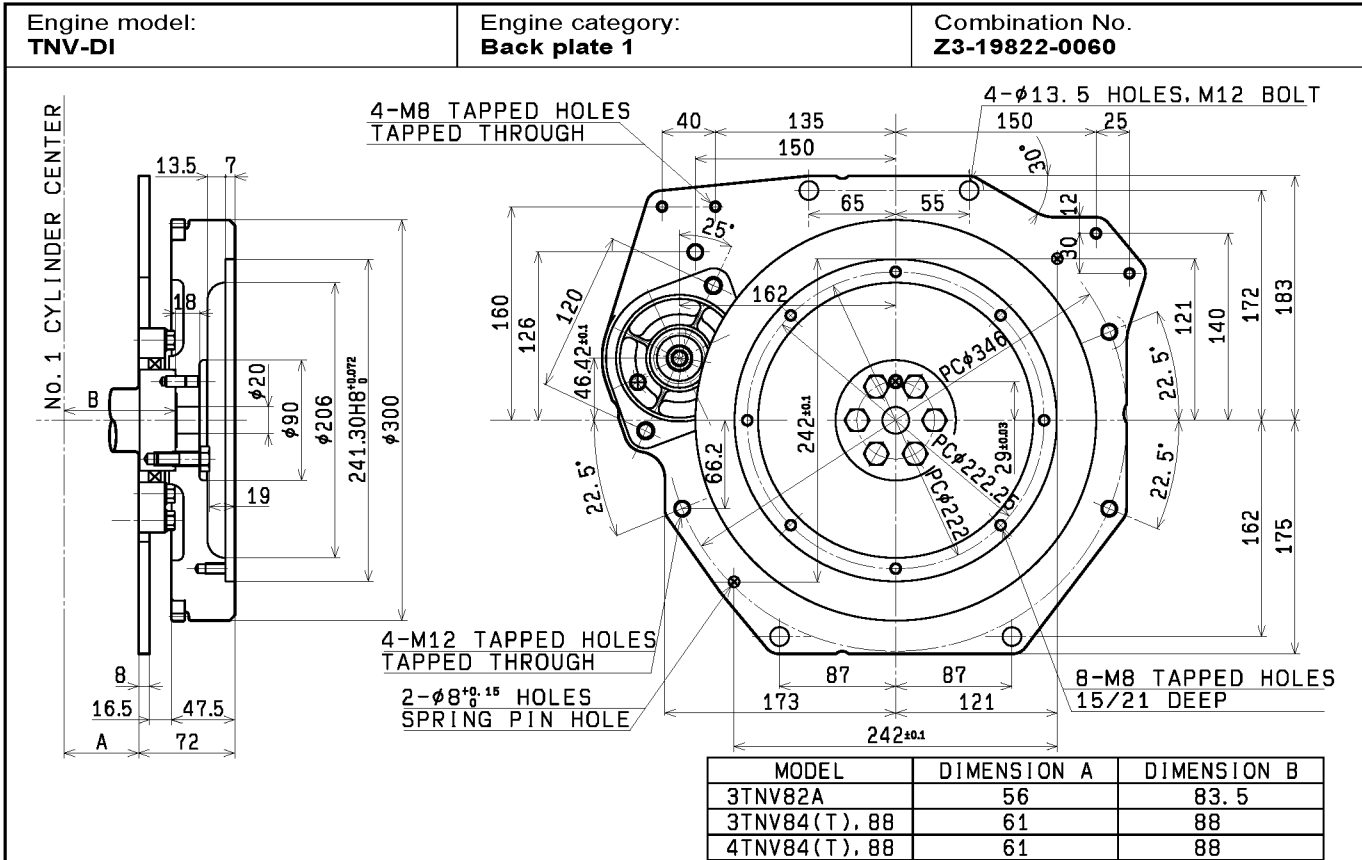


Engine model: 3TNV-84(T) / 88	Engine category: VM	Combination No. Z3-71340-0330
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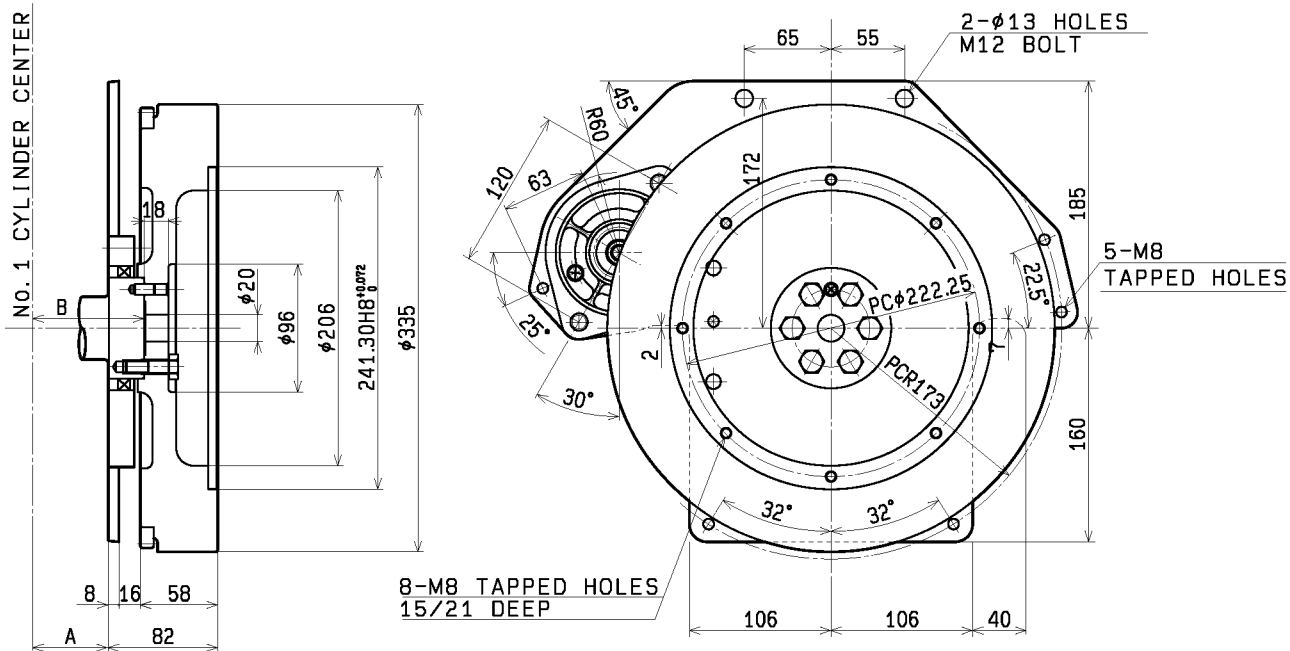








Engine model: TNV-DI	Engine category: Back plate 3	Combination No. Z3-19934-0010
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8-M8 TAPPED HOLES
15/21 DEEP

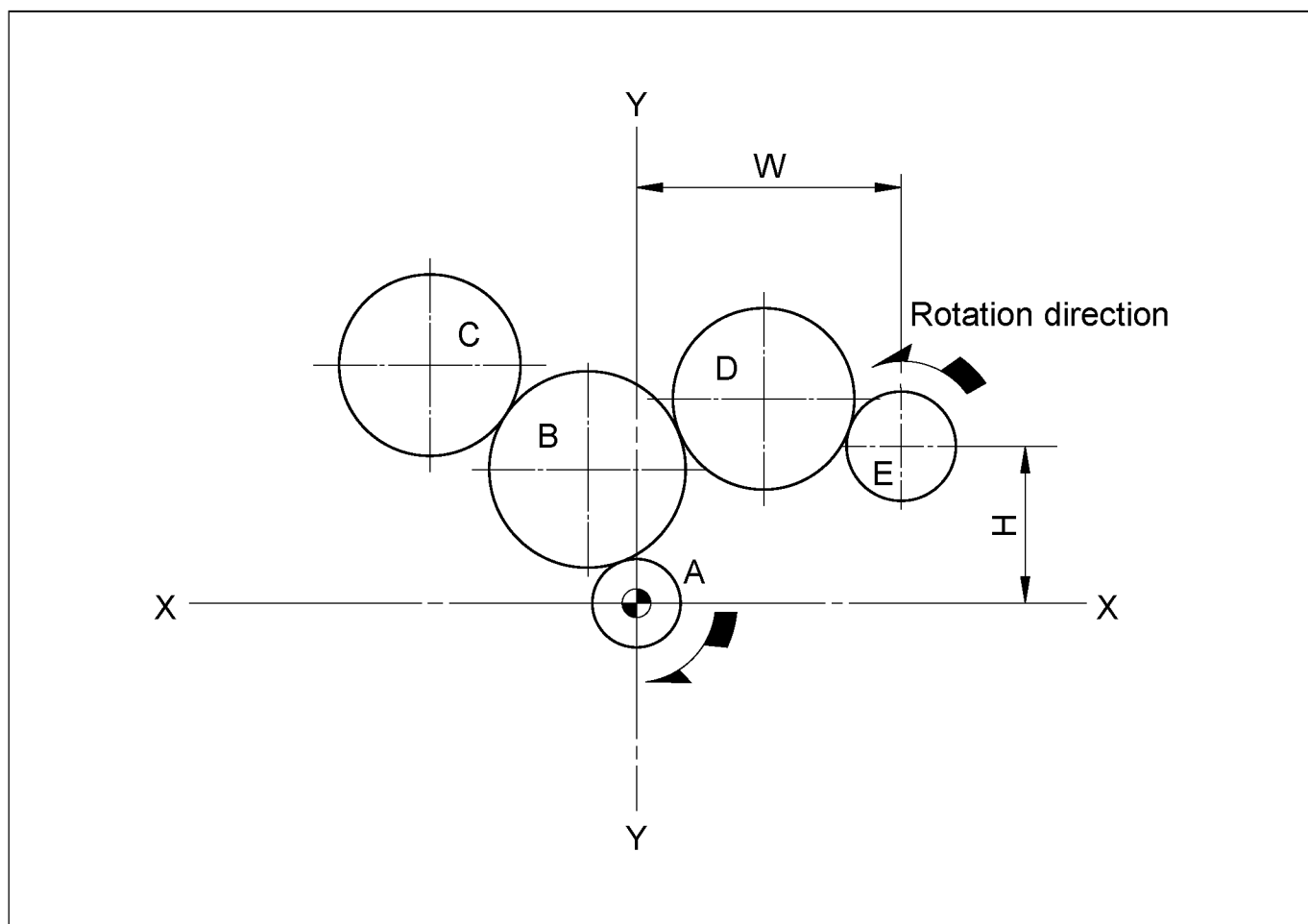
MODEL	DIMENSION A	DIMENSION B
3TNV82A	56	83.5
3TNV84(T), 88	61	88
4TNV84(T), 88	61	88

Engine model: TNV-DI	Engine category:	Combination No.
--------------------------------	------------------	-----------------

(5-2) Gear Train

Code	Name	No. of teeth	
		NV2 series	
A	Crank gear	28	⊙
B	Idle gear	43	⊙
C	Fuel pump drive gear	56	⊙
D	Cam gear	56	⊙
E	Hydraulic pump drive gear	31	△
Gear ratio :		A/E	0.903
Position of hydraulic pump :		W/H (mm)	162.3/65.979

- ⊙ : Standard
- △ : Special option (See section E-d, E-e and E-f)



Viewed from Gear Case side

6.Cooling Water Systems

DI

(6-1) DI Engine

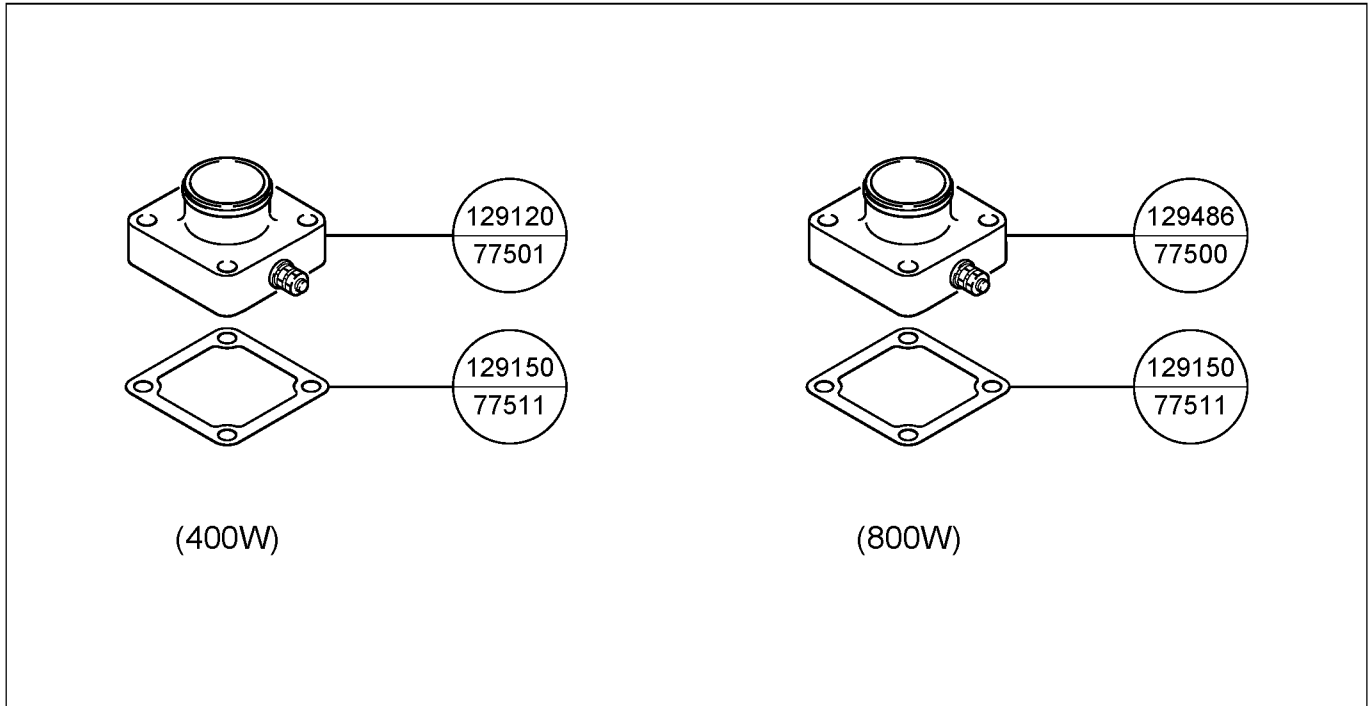
Engine Model			3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
Part	Spec.	Part No.	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
Fan	φ335x6 pusher	171340 -44740	○	○	○	○	○	○	○	○	○												
	φ360x6 pusher	129030 -44740										○	○	○									
	φ380x6 pusher	129612 -44700													○	○	○	○	○	○	○	○	○
	φ335x6 puller	119717- 44740		(○)	(○)		(○)	(○)		(○)	(○)												
	φ360x6 puller	121267- 44741											(○)	(○)									
	φ380x6 puller	129655- 44740														(○)	(○)		(○)	(○)		(○)	(○)
Fan pulley	φ 90	129155 -42350	○			○			○			○			○			○			○		
	φ110	129403 -42380		○	○		○	○		○	○		○	○		○	○		○	○		○	○
Crankshaft pulley	φ110	119802 -21650		○	○											○	○		○	○		○	○
	φ110	129004 -21650					○	○		○	○		○	○		○	○		○	○		○	○
	φ120	119802 -21660	○												○			○			○		
	φ120	129005 -21650					○			○			○									○	
Fan spacer	t=18	121267 -44760	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	t=25	171353 -44760										(○)	(○)	(○)	(○)	(○)	(○)	(○)	(○)	(○)	(○)	(○)	(○)
Radiator	20300 kcal	119802 -44500	○	○	○																		
	24600 kcal	129004 -44500				○	○	○	○	○	○												
	30700 kcal	129044 -44500										○	○	○									
	30700 kcal	129601 -44500													○			○					
	37500 kcal	129508 -44501														○	○		○	○	○	○	
	44500 kcal	129508 -44510																				○	○
	18900 kcal	119802 -44520		△	△																		
	23100 kcal	129004 -44520					△	△		△	△												
	26000 kcal	129044 -44520											△	△									
	296400 kcal	129602 -44500														△	△		△	△			
35300 kcal	129602 -44520																				△	△	
Fan guard		119802 -44560	○	○	○	○	○	○	○	○	○												
		119802 -44570		(○)	(○)		(○)	(○)		(○)	(○)												
		129601 -44560										○	○	○	○	○	○	○	○	○	○	○	○
		129601 -44570										(○)	(○)		(○)	(○)		(○)	(○)		(○)	(○)	
Radiator hose	Upper	129004 -49010	○	○	○	○	○	○	○	○	○												
		129601 -49010											○	○	○	○	○	○	○	○	○	○	○
		129004 -49020	○	○	○	○	○	○	○	○	○	○											
	Lower	129612 -49040											○	○	○	○	○	○					
		129508 -49020																				○	
		129508 -49070																					○

Remarks : Mark (○) should be applied for puller fan

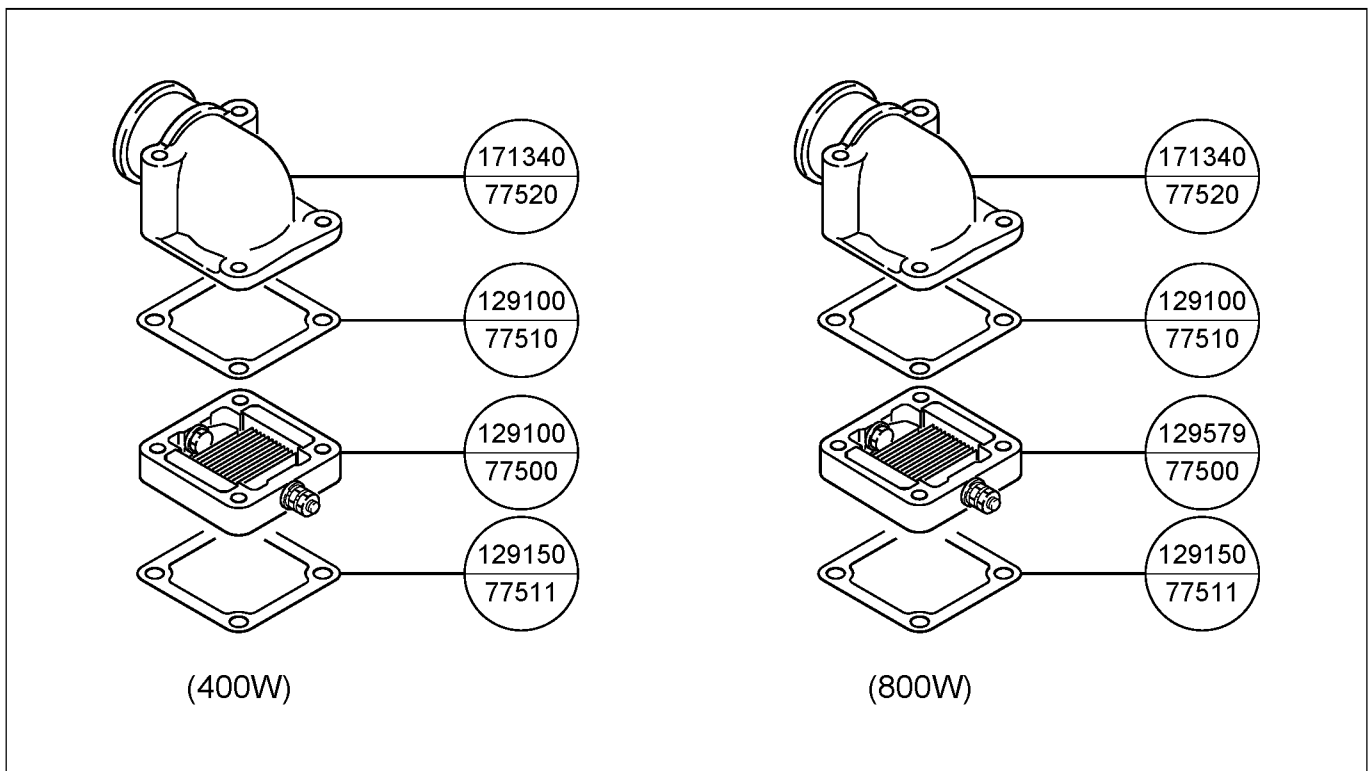
Remarks : Mark △ Option

(7-1) Air heater

(a) Upward (Air intake joint)



(b) Lateral (Air intake joint)



8. Generator Charge Current : A



(8-1) DI Engine (Applicable V belt : A type)

(a) 15A Dynamo : 171301-77201 (pulley dia. $\phi 65$)

Crankshaft pulley dia.	Engine speed (rpm)							
	800	1000	1500	1800	2200	2600	3000	3600
$\phi 110$	0	0.2	3.8	6.2	8.8	10.6	11.8	13.0
$\phi 120$	0	0.7	5.0	6.9	9.3	11.4	12.5	13.6

(b) 20A Dynamo : 119910-77200 (pulley dia. $\phi 65$)

Crankshaft pulley dia.	Engine speed (rpm)							
	800	1000	1500	1800	2200	2400	2600	2800
$\phi 110$	2.7	7.1	14.6	16.8	17.9	18.8	19.5	19.9
$\phi 120$	4.9	8.8	15.6	17.1	18.7	19.5	20.0	20.4

(c) 40A Alternator : 119620-77201, 129423-77200 (pulley dia. $\phi 65$)

Crankshaft pulley dia.	Engine speed (rpm)							
	800	1000	1500	1800	2200	2400	2600	2800
$\phi 110$	4.8	7.1	23.9	30.5	34.6	36.1	37.5	38.3
$\phi 120$	5.9	11.2	26.3	33.2	36.1	37.3	38.5	40.2

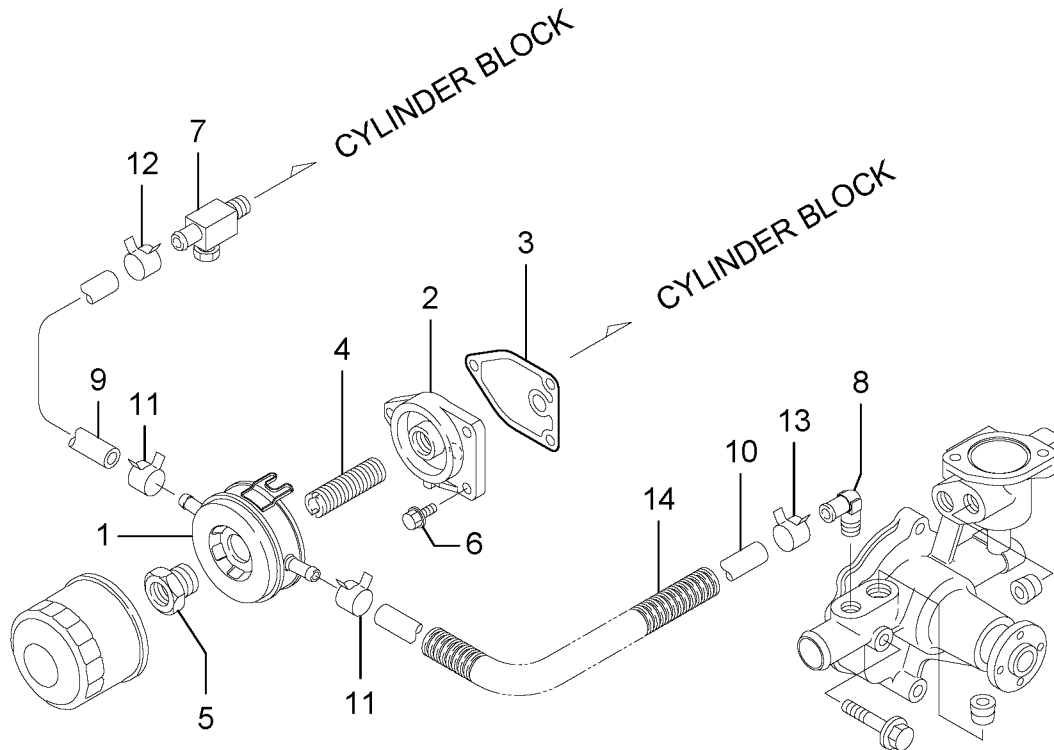
(d) 55A Alternator : 119626-77210, 129961-77200 (pulley dia. $\phi 65$)

Crankshaft pulley dia.	Engine speed (rpm)							
	800	1000	1500	1800	2200	2400	2600	2800
$\phi 110$	7.9	21.2	37.1	42.5	46.9	48.2	49.5	51.1
$\phi 120$	12.3	24.5	39.6	45.0	48.2	49.8	51.4	52.1

9.Oil Cooler System

DI

(9-1) DI series 4.0kw oil cooler system



* 3TNV82A : 119944-49300

	PART NUMBER	DESCRIPTION	Q'ty	
			3TNV82A, 4TNV84(T)/88	3TNV84(T)/88
1	129508-33010	OIL COOLER	1	1
2	119802-35110	BRACKET	1	1
3	129150-35111	PACKING	1	1
4	129417-35150	STUD	1	1
5	129417-33110	NUT	1	1
6	26106-080202	BOLT	3	3
7	129006-44480	JOINT R 1/4 with drain cock (CYLINDER BLOCK)	1	1
8	129103-49301	ELBOW R 1/4 (CW PUMP)	* 1	1
9	129508-49030	CW HOSE A CMP	1	1
10	129508-49050	CW HOSE (BLOCK - COOLER)	(1)	(1)
11	23080-015000	HOSE CLAMP	(1)	(1)
12	171008-03990	HOSE CLAMP	(1)	(1)
13	129508-49040	CW HOSE B CMP	1	—
14	129006-49040	CW HOSE B CMP	—	1
15	129508-49060	CW HOSE (COOLER - CW PUMP)	(1)	—
16	129006-49060	CW HOSE (COOLER - CW PUMP)	—	(1)
17	23080-015000	HOSE CLAMP	(1)	(1)
18	23080-018000	HOSE CLAMP	(1)	(1)
19	123951-03330	TUBE (FOR PROTECT)	(1)	(1)

10. Wiring Diagram

MARK	COLOR
B	Black
W	White
R	Red
L	Blue
G	Green
Y	Yellow
Br	Brown
Lg	Light Green
Sb	Sky blue
O	Orange
P	Pink
Gr	Gray
R/W	Red/White

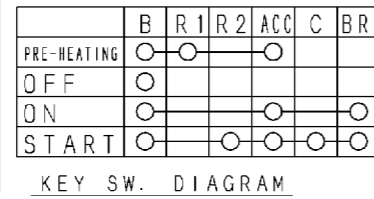


TABLE 1

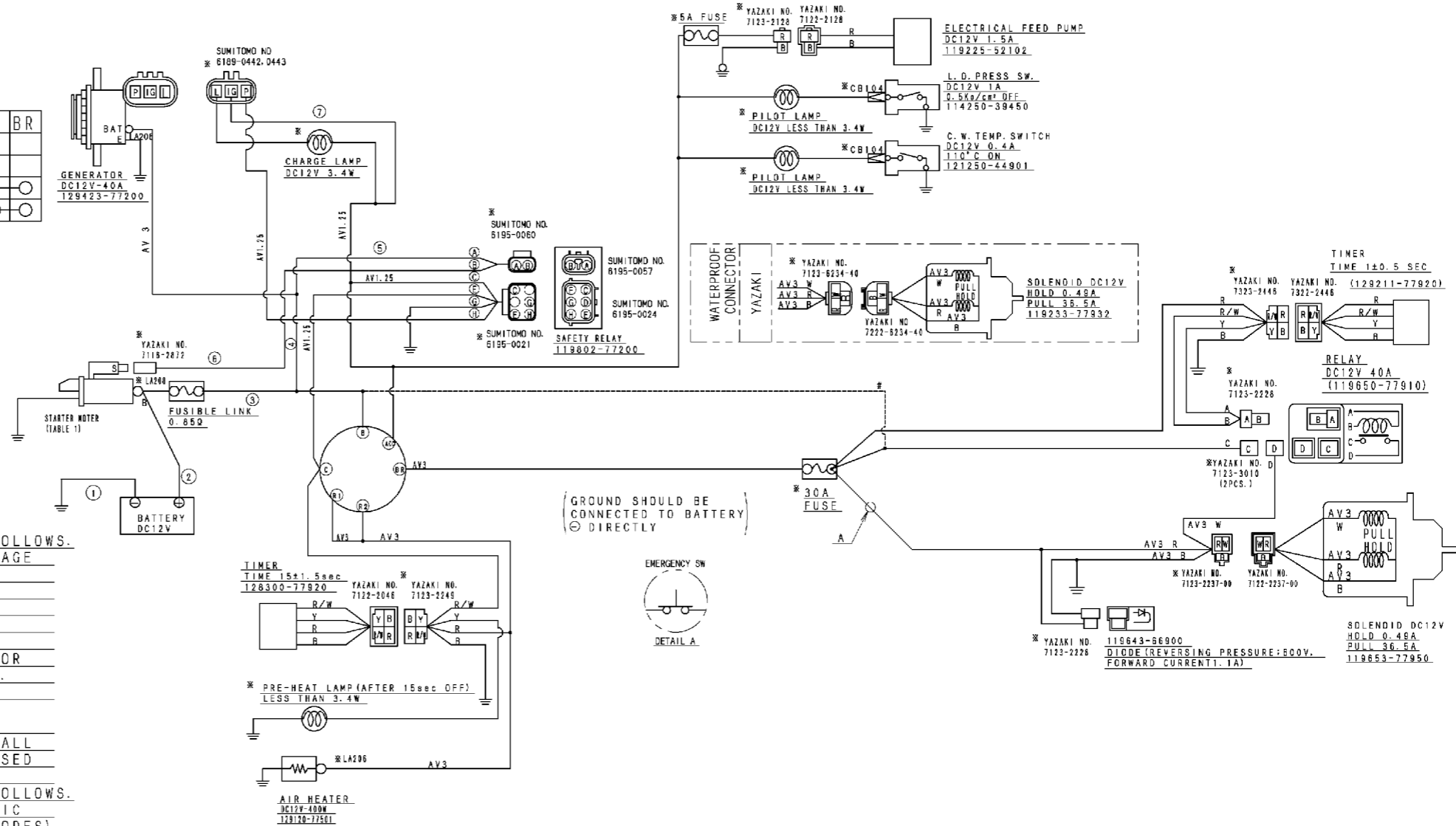
STARTER	STARTER S TERMINAL CONNECTOR
DC12V-1.2kW 129129-77010	YAZAKI 7116-3060 (TERMINAL)
DC12V-1.4kW 129407-77010	7123-3215-60 (TERMINAL HOUSING)
DC12V-1.7kW 129242-77010	YAZAKI 7116-2033 (TERMINAL) 7123-2010 (TERMINAL HOUSING) or AMP 170234 (TERMINAL) 171809-2 (TERMINAL HOUSING)
DC12V-2.3kW 129136-77011	LA204

NOTES

1. WIRING OF STARTER MUST BE OBSERVED AS FOLLOWS. OTHERWISE IT CAUSES MISS STARTING OR DAMAGE OF STARTERMOTOR.
 - 1-1. TOTAL ELECTRIC RESISTANCE OF BATTERY CABLE (①+②) SHOULD BE LESS THAN 2/1000Ω. REFERENCE: AV15: ≦1.4m, AV20: ≦2.2m, AV30: ≦3.8m, AV40: ≦4.6m
 - 1-2. TOTAL ELECTRIC RESISTANCE OF WIRING FOR STARTER (③~⑥) SHOULD BE LESS THAN 5/100Ω. REFERENCE OF TERMINAL RESISTANCE: 15/1000Ω PER COUPLER, 0Ω PER SCREW SETTING
 - 1-3. BATTERY EARTH CABLE (①) CONNECTION SHALL BE ENSURED. PAINTED SURFACE MAY NOT BE USED (FOR EARTHING) AVOIDING THE MISS CONTACT.
2. BATTERY TREATMENT MUST BE OBSERVED AS FOLLOWS. OTHERWISE IT MAY CAUSE BURNING OF ELECTRIC EQUIPMENTS OR COMPONENTS. ALTERNATOR (DIODES) BURNING CAUSED BY BATTERY CABLE CONNECTION REVERSELY IS NOT WARRANTED.
 - 2-1. BATTERY SHOULD BE FIXED BY FITTING. (NOT TO MOVE)
 - 2-2. BATTERY CABLE LENGTH SHOULD BE ADJUSTED PROPERLY AND CLAMPED NOT TO BE CONNECTED REVERSELY.
 - 2-3. NOT LOOSE THE BATTERY CABLE TERMINAL, NOR TURN THE BATTERY SWITCH OFF DURING THE ENGINE RUNNING.
3. ONLY THE SPECIFIED LOAD SHOULD BE APPLIED ON THE ALTERNATOR "L" AND "P" LINE. IT IS NOT ALLOWED TO CONNECT ANY LOAD UNSPECIFIED WITHOUT YANMAR APPROVAL.
4. CHECK ANY SURGE CURRENT OR VOLTAGE OCCURED UNDER NORMAL OPERATIONS AND EXPECTIVE ERRONEOUS OPERATIONS, AND CONFIRM THE CIRCUIT NO SURGE OCCURS. ESPECIALLY PROVIDE THE FLYWHEEL DIODE FOR "C-LOAD" AND DIODE FOR "L-LOAD".

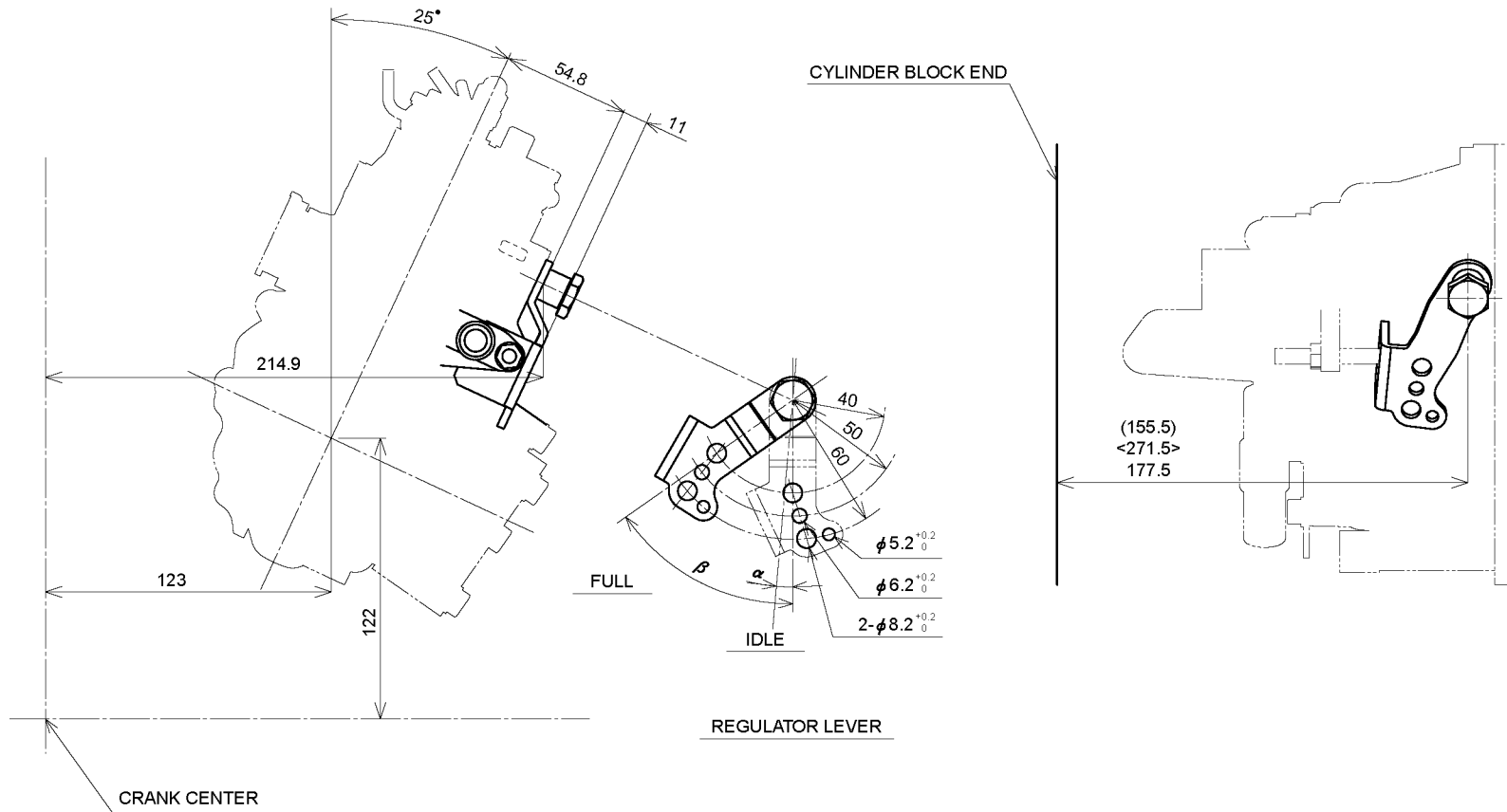
REMARKS

1. * MARKED PARTS ARE NOT PROVIDED BY YANMAR.



NOTES FOR ENGINE STOP SOLENOID

1. PERMISSIBLE RESISTANCE OF SOLENOID CIRCUIT SHOULD BE LESS THAN 0.07Ω TO GUARANTEE PERMISSIBLE LOWEST VOLTAGE 9V TO WORK SOLENOID (PULL COIL). (TERMINAL RESISTANCE: 15/1000Ω PER COUPLER, 0Ω PER SCREW SETTING. COUPLER RESISTANCE OF SOLENOID DOESN'T NEED TO BE COUNTED) REFERENCE: AV2 (0.0088Ω/m): ≦8.0m... WITHOUT TERMINAL RESISTANCE, AV3 (0.0056Ω/m): ≦12.5m... SAME AS ABOVE. WHEN YOU EXCEED PERMISSIBLE RESISTANCE, ADOPPT THE CIRCUIT IMPRESSED FROM THE POWER SUPPLY TO THE SOLENOID DIRECTLY USING A RELAY... REFER TO #
2. HIGH TEMPERATURE PARTS, SUCH AS AN EXHAUST PIPE, SHOULD NOT APPROACH FOR THE PULL POWER FALL OF SOLENOID, AND HEATING PREVENTION OF INNER COIL TEMPERATURE. (PERMISSIBLE AMBIENT TEMPERATURE: -30~100°C)
3. INSTALL FUSE TO PROTECT THE HARNESS AGAINST TROUBLES SUCH AS SHORT CIRCUIT OR CONTINUOUS DRIVE OF PULL-COIL.
4. THE POWER SUPPLY OF SOLENOID MAY NOT BE COMMON WITH THE LINE OF ALTERNATOR INITIAL EXCITATOR AS SHOWN IN THIS DRAWING. (OTHERWISE, SOLENOID MAY LOOSE STOP FUNCTION DUE TO THE POWER SUPPLY FROM ALTERNATOR "L" TERMINAL.)
5. IN CASE OF WATERPROOF CONNECT OR APPLICATION, CONNECTOR SHOULD BE FIXED BY FITTING TO PREVENT LEAD WIRE BREAK.
6. IN CASE OF EMERGENCY STOP OF MACHINE FOR SAFETY WILL BE APPLIED, SWITCH LOCATION SHOULD BE SHOWN AS A.
7. IN CASE OF THE SOLENOID CIRCUIT RESISTANCE WOULD BE LIMIT, # WIRING IS APPLICABLE.



REMARKS

1. () SHOWS 3TNV82A DIMENSION.
2. < > SHOWS 4TNV84(88) DIMENSION.

	Engine speed (min ⁻¹)	3TNV82A Angle (±5°)	3TNV84/88 Angle (±5°)	3TNV84T Angle (±5°)	4TNV84/88 Angle (±5°)
Idle (α)	800	3	6	1	1
	1000	5	8	3	3
	1200	7	10	4	5
Full (β)	2000	13	17	10	12
	2500	18	23	17	17
	3000	27	33	27	26

11. Control Lever Dimension



B**C****D****E****F****G****H****I****J**

Optional Parts

System Symbol Index

Eng. system	Part name	Code	Eng. system	Part name	Code	
B Fuel system	Fuel Feed Pump	B - b	F Intake system	Intake Manifold	F - a	
	Fuel Filter	B - c		Air Cleaner	F - b	
	Water Trap	B - d		Air Cleaner Support	F - c	
C Lube oil system	Oil Pan	C - a	G Exhaust system	Resonator	F - d	
	Oil Dipstick	C - b		Exhaust Manifold	G - a	
	Oil Filter	C - c		Silencer	G - b	
	Oil Cooler	C - d		Silencer Gasket	G - c	
	Lube Oil Pressure Switch	C - e		Exhaust Bend	G - d	
	Lube Oil Pressure Sender	C - f		Exhaust pipe clamp	G - e	
D Cooling water system	Oil Filler Extension Pipe	C - g	H Electric system	Starting Motor	H - a	
	Cooling Water Pump	D - a		Starting Aid	H - b	
	Radiator	D - b		Air Intake Joint	H - c	
	Cooling Fan Guard	D - c		Dynamo & Alternator	H - d	
	Radiator Hose	D - d		Current Limiter	H - e	
	Cooling Fan	D - e		Safety Relay	H - f	
	Fan Pulley	D - f		Diode	H - g	
	Crankshaft Pulley	D - g		Stop Solenoid	H - h	
	Fan Spacer	D - i		Timer	H - k	
	Water Temp.switch	D - j		Relay	H - l	
	Thermosender	D - k		Connector & Terminal Cover	H - m	
	Thermostat	D - l		Cooling Water Heater	H - n	
	Thermostat Cover	D - m		I Gauges	Tachometer	I - a
	Sub Tank & Accessory	D - n			Tachometer Gear Unit	I - b
Drain Joint & Cock	D - o	Tachometer Cable	I - c			
E PTO system	Flywheel	E - a	Thermometer		I - d	
	Flywheel Housing	E - b	Oil Pressure Gauge		I - e	
	Bearing Retainer	E - c	Pilot Lamp	I - f		
	Hydraulic Pump	E - d	Key Switch	I - g		
	Hydraulic Pump Drive Device	E - e	J Tools	Oil Filter Wrench	J - b	
Gear Case	E - f	Fuel Filter Wrench		J - c		
		Water Trap Wrench		J - d		

Base Engine Specifications

Engine type	3TNV82A-NBK	3TNV82A-XWL	3TNV82A-GGE	3TNV82A-DMW	3TNV82A-MU1	3TNV82A-DSA
Machine	Backhoe	Loader	Generator	Mower	Tractor II	General
Engine output (kW)	18.6	20.4	11/13.2	22.3	18.1	22.5
Engine speed (rpm)	2500	2800	1500/1800	3000	2600	3000

Engine type	3TNV84-NBK	3TNV84-XWL	3TNV84-GGE	3TNV84-DMW	3TNV84-NU1	3TNV84-MU2
Machine	Backhoe	Loader	Generator	Mower	Tractor I	Tractor II
Engine output (kW)	20.4	22.8	12.4/14.8	25	19.5	20.2
Engine speed (rpm)	2500	2800	1500/1800	3000	2500	2600

Engine type	3TNV84T-XWL	3TNV84T-GGE	3TNV84T-KMW	3TNV84T-LU2	3TNV84T-KSA
Machine	Loader	Generator	Mower	Tractor II	General
Engine output (kW)	26.9	15.8/18.8	29.2	27.1	29.1
Engine speed (rpm)	2600	1500/1800	2800	2700	2800

Engine type	3TNV88-NBK	3TNV88-XWL	3TNV88-GGE	3TNV88-KMW	3TNV88-NU1	3TNV88-MU2	3TNV88-DSA
Machine	Backhoe	Loader	Generator	Mower	Tractor I	Tractor II	General
Engine output (kW)	22.4	24.9	13.5/16.3	25.4	21.5	22.5	26.8
Engine speed (rpm)	2500	2800	1500/1800	2800	2500	2600	3000

Engine type	4TNV84-NBK	4TNV84-KWL	4TNV84-GGE	4TNV84-DMW	4TNV84-LU2
Machine	Backhoe	Loader	Generator	Mower	Tractor II
Engine output (kW)	27.4	30.6	16.4/19.5	32.7	28.1
Engine speed (rpm)	2500	2800	1500/1800	3000	2700

Engine type	4TNV88-NBK	4TNV88-XWL	4TNV88-GGE	4TNV88-DMW	4TNV88-LU2	4TNV88-DSA
Machine	Backhoe	Loader	Generator	Mower	Tractor II	General
Engine output (kW)	30	33.6	18/21.6	35.2	31	35.4
Engine speed (rpm)	2500	2800	1500/1800	3000	2700	3000

Engine type	4TNV84T-XWL	4TNV84T-DMW	4TNV84T-LU2	4TNV84T-DSA
Machine	Loader	Mower	Tractor II	General
Engine output (kW)	38.5	41	36.3	41.2
Engine speed (rpm)	2800	3000	2700	3000

3TNV82A Base Specifications

◎ --- Standard
 △ --- Option
 × --- Not available

Parts included in base engine specifications are marked ◎

Eng system	Part name	Code	No.	Part Code No.	Remarks	F - F	Backhoe -NBK	Loader -XWL	Generator -GGE	Mower -DMW	Tractor I -MU1	General -DSA
	Rated power (kW)					21.9	18.6	20.4	13.2	22.3	18.1	22.5
	Rated speed (rpm)					3000	2500	2800	1800	3000	2600	3000
B Fuel system	Fuel Feed Pump	B-b	1	119225-52102		◎	◎	◎	◎	◎	◎	◎
	Fuel Filter	B-c	1	119802-55800		◎	◎	◎	◎	◎	◎	◎
			2	129004-55610	Bracket, For solenoid pump	◎	◎	◎	◎	◎	◎	◎
			5	119802-55620	Support, fuel Filter (branch intake manifold)	—	×	◎	×	◎	×	◎
Water Trap	B-d	1	119802-55700		◎	◎	◎	◎	◎	◎	◎	
C Lube oil system	Oil Pan	C-a	1	119810-01770	Deep, side drain	◎	△	◎	◎	△	△	◎
			2	119823-01770	Deep, bottom drain	—	◎	△	△	△	△	—
			3	119843-01780	Shallow, side drain	—	△	△	△	◎	◎	—
	Oil Dipstick	C-b	1	119802-34802	For deep Oil pan	◎	◎	△	◎	△	△	◎
			2	119802-34821	Extension type, For deep Oil pan	—	△	◎	△	△	△	—
			3	119802-34812	For shallow Oil pan	—	△	△	△	◎	◎	—
	Oil Filter	C-c	1	129150-35152	φ80*80	◎	◎	◎	◎	◎	◎	◎
	Oil Cooler	C-d	1	129508-33010	4kw (3440kcal/h)	—	△	◎	△	◎	△	◎
Lube Oil Pressure Switch	C-e	1	114250-39450	Pin terminal	◎	◎	◎	◎	◎	◎	◎	
D Cooling water system	Cooling Water Pump	D-a	1	119802-42000		◎	◎	◎	◎	◎	◎	◎
	Cooling Fan	D-e	1	171340-44740	φ 335 pusher	◎	△	◎	◎	△	△	△
			4	119717-44740	φ 335 puller	—	◎	△	△	◎	△	◎
			5	121267-44741	φ 360 puller	—	△	×	×	△	◎	△
	Fan Pulley	D-f	1	129155-42350	φ 90	—	△	△	◎	△	△	△
			3	129403-42380	φ 110	◎	◎	◎	△	◎	△	◎
			4	129550-42350	φ 120	—	△	△	△	△	◎	△
	Crankshaft Pulley (Unbalance moment : 0gr-cm)	D-g	1	119802-21650	φ 110	◎	◎	◎	△	◎	△	◎
			4	119802-21660	φ 120	—	△	△	◎	△	△	△
			-	119852-21650	φ 120, Key	—	×	×	×	×	◎	×
	Fan Spacer	D-i	2	121267-44760	18mm	◎	△	◎	◎	△	△	◎
			3	171353-44760	25mm	—	◎	△	△	◎	△	△
			-	119256-44760	45mm	—	×	×	×	×	◎	×
	Water Temp. switch	D-j	1	121250-44901	On 110°C	◎	◎	◎	◎	◎	△	◎
-			129107-44901	For QHS, QG	△	△	△	△	△	◎	△	
Thermosender	D-k	1	124250-49351	One-wire type	—	△	△	△	△	◎	△	
Thermostat	D-l	1	129155-49801	71°C use	◎	◎	◎	◎	◎	◎	◎	
Thermostat Cover	D-m	1	129350-49530	Upward (standard)	◎	◎	◎	◎	◎	◎	◎	
Drain Joint & Cock	D-o	1	171056-49120	Plug, PT1/4	◎	◎	◎	△	◎	△	◎	
		2	121550-49111	Drain joint	—	△	△	◎	△	◎	△	
E PTO system	Flywheel (Unbalance moment :0gr-cm)	E-a	1	171420-21590	For CL (semi SAE #4)	—	△	△	◎	△	△	△
			2	129489-21590	For VM (semi SAE #5)	◎	◎	◎	×	△	△	△
			3	129488-21590	For SAE #5	—	△	△	△	△	△	◎
			9	171420-21580	For Semi SAE #5	—	△	△	×	◎	△	△
			-	119852-21590	For clutch (P.C. φ251/33)	—	×	×	×	×	◎	×
	Flywheel Housing	E-b	1	171420-01600	Semi SAE #4 (deep:105)	—	△	△	◎	△	△	△
			3	119888-01601	SAE #5 (124)	—	△	△	△	△	△	◎
			4	129612-01600	Semi SAE #5 (shallow:80)	◎	◎	◎	×	△	△	△
			7	119820-01600	Back plate	—	×	△	×	◎	△	△
			-	119852-01600	Back plate	—	×	×	×	×	◎	×
Hydraulic Pump	E-d	-	198072-41110	PW1-C-9C1	—	△	△	×	△	◎	△	
Hydraulic Pump Drive Device	E-e	1	129150-26000	For PW type pump	—	△	△	×	△	◎	△	
Gear Case	E-f	1	119802-01500	Without HOP flange	◎	◎	◎	◎	◎	△	◎	
		2	129004-01500	For PW type hyd. pump	—	△	△	×	△	◎	△	
F Intake system	Intake Manifold	F-a	1	119802-12100	Lateral, box type	◎	◎	×	◎	×	△	×
			2	119802-12120	Upward, box type	—	△	×	△	×	◎	×
			3	119802-12130	Lateral, branch type	—	△	△	△	△	△	◎
			4	119802-12140	Upward, branch type	—	△	◎	△	◎	△	△
G Exhaust system	Exhaust Manifold	G-a	1	119888-13101	Upward	◎	△	◎	◎	△	◎	◎
			4	119810-13100	Lateral	—	△	△	△	◎	△	△
			5	119802-13129	Lateral (flywheel side)	—	◎	△	△	△	△	△
Silencer Gasket	G-c	1	129004-13200	□52	◎	◎	◎	◎	◎	◎	◎	
H Electric system	Starting Motor	H-a	1	129129-77010	DC12V/1.2kw (RA1.2)	◎	×	×	◎	◎	△	×
			4	129242-77010	DC12V/1.7kw (CR1.7)	—	◎	◎	△	△	△	◎
			-	129052-77010	DC12V/1.2kw (CR1.2 special)	—	×	×	×	×	◎	×
	Starting Aid	H-b	1	129120-77501	DC12V/400W (with hose joint)	◎	△	◎	◎	◎	◎	◎
			2	129100-77500	DC12V/400W (without hose joint)	—	◎	△	△	△	△	△
	Air Intake Joint	H-c	1	171340-77520	Bend type	—	◎	△	△	△	△	△
	Dynamo & Alternator	H-d	1	119620-77201	DCV12V/40A	—	△	△	△	◎	△	△
			2	171301-77201	DCV12V/15A	—	△	△	△	△	△	△
			4	129423-77200	DCV12V/40A with P terminal	◎	◎	◎	◎	△	◎	◎
	Current Limiter	H-e	1	119225-77720	15A to 20A	—	△	△	△	△	△	△
	Diode	H-g	1	119643-66900	600V/1.1A	◎	◎	◎	△	◎	◎	△
Stop Solenoid	H-h	1	119653-77950	DC12V/integrated type	—	△	◎	◎	◎	◎	◎	
		2	119233-77932	DC12V/integrated type (water-proof type)	—	◎	△	△	△	△	△	
Timer (Air heater)	H-k	1	128300-77920	DCV12V/15sec	◎	◎	◎	△	◎	◎	△	
I: Gauges	Tachometer Gear Unit	I-b	1	121023-01550	Blind cover	◎	◎	◎	◎	◎	◎	◎

3TNV84 (T)/88 Base Specification

◎ --- Standard
 △ --- Option
 × --- Not available
 * --- Not available for 3TNV84

Eng system	Part name	Code	No.	Part Code No.	Remarks	3 T N V 8 4 / 8 8							3 T N V 8 4 T							
						F - F -SS1	Backhoe -NBK	Loader -XWL	Generator -GGE	Mower -D(K)MW	Tractor I -NU1	Tractor II -MU2	* General	F - F -SS1	Loader -XWL	Generator -GGE	Mower -DMW	Tractor II -LU2	General -KSA	
	Rated power (kW)					24.6 /27.1	20.4 /22.4	22.8 /24.9	14.8 /16.3	25 /25.4	19.5 /21.5	20.2 /22.5	26.8	29.1	26.9	18.8	29.2	27.1	29.1	
	Rated speed (rpm)					3000	2500	2800	1800	3000 /2800	2500	2600	3000	2800	2600	1800	2800	2700	2800	
B Fuel system	Fuel Feed Pump	B-b	1	119225-52102	Solenoid Pump:DC12V	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
	Fuel Filter	B-c	1	119802-55800	Bracket, For solenoid pump	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
			2	129004-55610		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
	Water Trap	B-d	1	119802-55700		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
C Lube oil system	Oil Pan	C-a	5	129100-01760	Deep, side drain	◎	△	◎	◎	△	△	△	◎	◎	◎	△	△	△	◎	
			6	129136-01780	Deep, bottom drain	◎	◎	△	△	△	△	△	△	◎	◎	◎	△	△	△	◎
			7	129175-01770	Shallow, side drain	◎	△	△	△	◎	◎	△	△	◎	◎	◎	◎	△	△	◎
			-	129052-01770	FC Oil Pan (Special part)	◎	×	×	×	×	×	◎	◎	×	◎	◎	×	×	×	◎
	Oil Dipstick	C-b	5	129004-34802	For deep Oil pan	◎	△	◎	◎	△	△	△	◎	◎	◎	◎	△	△	△	◎
			6	129601-34801	Extension type, For deep Oil pan	◎	△	◎	◎	△	△	△	◎	◎	◎	◎	△	△	△	◎
			7	129005-34802	For shallow Oil pan	◎	△	△	△	◎	◎	△	△	◎	◎	◎	◎	△	△	◎
		-	129263-34811	For FC Oil Pan (Special part)	◎	×	×	×	×	×	◎	×	◎	◎	×	×	×	◎		
	Oil Filter	C-c	1	129150-35152	φ80 *80	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
	Oil Cooler	C-d	1	129508-33010	4kw (3440kcal/h)	◎	△	△	◎	△	△	◎	◎	◎	◎	◎	◎	◎	◎	
	Lube Oil Pressure Switch	C-e	1	114250-39450	Pin terminal	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
D Cooling water system	Cooling Water Pump	D-a	2	129004-42000	Low position	◎	◎	◎	◎	◎	△	△	◎	◎	◎	◎	◎	◎	◎	
			4	129263-42000	High position	◎	△	△	△	△	△	◎	◎	◎	◎	◎	◎	◎	◎	
			-	129055-42000	Mid position	◎	×	×	×	×	◎	×	×	◎	◎	◎	×	×	×	
	Cooling Fan	D-e	1	171340-44740	φ 335 pusher	◎	△	△	△	△	△	△	△	◎	△	△	△	△	△	
			2	129030-44740	φ 360 pusher	◎	△	◎	◎	△	△	△	△	◎	◎	△	△	△	△	
			4	119717-44740	φ 335 puller	◎	△	△	△	◎	△	△	△	◎	◎	△	△	△	△	
			5	121267-44741	φ 360 puller	◎	△	△	△	◎	△	△	△	◎	◎	△	△	△	△	
			6	129655-44740	φ 380 puller	◎	△	△	△	◎	△	△	△	◎	◎	△	△	△	△	
					-	-	-	◎	△	△	△	△	△	◎	◎	△	△	△	△	
	Fan Pulley	D-f	1	129155-42350	φ 90	◎	△	△	◎	△	△	△	△	◎	△	△	△	△	△	
			3	129403-42380	φ 110	◎	△	△	◎	△	△	△	△	◎	△	△	△	△	△	
			4	129550-42350	φ 120	◎	△	△	◎	△	△	△	△	◎	△	△	△	△	△	
					-	-	◎	△	△	◎	△	△	△	◎	△	△	△	△	△	
	Crankshaft Pulley (Unbalance moment : 705gr-cm)	D-g	2	129004-21650	φ 110	◎	△	△	◎	△	△	△	◎	◎	△	△	△	△	△	
			3	129005-21650	φ 120	◎	△	△	◎	△	△	△	◎	◎	△	△	△	△	△	
			-	129055-21650	φ 120, Key	◎	×	×	×	×	◎	×	×	◎	×	×	×	◎	×	
	Fan Spacer	D-i	2	121267-44760	18mm	◎	△	◎	◎	△	△	△	◎	◎	◎	△	△	△	△	
			3	171353-44760	25mm	◎	△	△	△	◎	◎	△	△	◎	◎	△	△	△	△	
5			129030-44760	38.5mm	◎	△	△	△	◎	△	△	△	◎	◎	△	△	△	△		
Water Temp.switch	D-j	1	121250-44901	On 110°C	◎	△	◎	◎	◎	△	△	◎	◎	◎	◎	◎	△	△		
		-	129107-44901	For QHS, QG	◎	△	△	△	◎	△	△	◎	◎	◎	◎	△	△	△		
	Thermosender	D-k	1	124250-49351	One-wire type	◎	△	△	◎	◎	◎	◎	△	△	△	△	△	△		
	Thermostat	D-l	1	129155-49801	71°C use	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎		
	Thermostat Cover	D-m	1	129350-49530	Upward (standard)	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎		
Drain Joint & Cock	D-o	1	171056-49120	Plug PT1/4	◎	◎	◎	△	◎	△	△	◎	◎	◎	△	△	△	◎		
		2	121550-49111	Drain joint	◎	△	△	◎	△	△	△	◎	◎	◎	△	△	△	◎		
E PTO system	Flywheel (Unbalance moment : 705gr-cm)	E-a	4	171340-21590	For CL (semi SAE #4)	◎	△	△	◎	△	△	△	◎	◎	◎	△	△	△		
			5	129128-21590	For VM (semi SAE #5)	◎	△	△	◎	△	△	△	◎	◎	◎	△	△	△		
			7	129188-21590	For SAE #5, 7.5" Clutch	◎	△	△	△	◎	△	△	△	◎	◎	◎	△	△	△	
			10	171340-21580	For Semi SAE #5, 7.5 inch pilot	◎	△	△	△	◎	△	△	△	◎	◎	◎	△	△	△	
			-	129055-21590	For clutch (P.C.φ 264/33)	◎	×	×	×	×	◎	×	×	◎	◎	×	×	×	△	
			-	129054-21591	For clutch (P.C.φ 210/48.5)	◎	×	×	×	×	◎	×	×	◎	◎	×	×	×	◎	
	Flywheel Housing	E-b	1	171420-01600	Semi SAE #4 (deep:105)	◎	△	△	◎	△	△	△	◎	◎	◎	△	△	△		
			3	119888-01601	SAE #5 (124)	◎	△	△	◎	△	△	△	◎	◎	◎	△	△	△		
			4	129612-01600	Semi SAE #5 (shallow:80)	◎	△	△	△	△	△	△	◎	◎	◎	△	△	△		
			6	129150-01600	Back plate	◎	△	△	×	◎	△	△	◎	◎	◎	△	△	△		
			7	119820-01600	Back plate	◎	△	△	×	◎	△	△	◎	◎	△	△	△			
			-	119852-01600	Back plate	◎	△	△	×	◎	△	△	◎	◎	△	△	△			
	Hydraulic Pump	E-d	-	198072-41110	PW1-C-9C1	◎	△	△	×	△	◎	◎	△	△	×	△	△			
	Hydraulic Pump Drive Device	E-e	1	129150-26000	For PW type pump	◎	△	△	×	△	◎	◎	△	△	×	△	△			
Gear Case	E-f	1	119802-01500	Without HOP flange	◎	△	△	◎	◎	△	△	◎	◎	◎	△	△	△			
		2	129004-01500	For PW type hyd. pump	◎	△	△	×	△	◎	◎	◎	◎	◎	△	△	△			
F Intake system	Intake Manifold	F-a	5	129004-12100	Lateral,box type	△	◎	△	△	△	△	△	◎	×	×	×	×	×		
			6	129005-12100	Upward,box type	◎	△	△	◎	◎	◎	◎	◎	△	×	×	×	×		
			7	129006-12110	Upward,box type (for open breather)	×	×	×	×	×	×	×	×	△	△	△	△	△		
			8	129006-12100	Lateral,box type (for open breather)	×	×	×	×	×	×	×	×	◎	◎	◎	△	△		
G Exhaust system	Exhaust Manifold	G-a	6	171350-13100	Upward	◎	△	◎	◎	△	◎	◎	◎	×	×	×	×	×		
			9	129100-13110	Lateral	◎	△	△	◎	△	△	△	◎	◎	×	×	×	×		
			10	129004-13120	Lateral (flywheel side)	◎	△	△	△	△	△	△	◎	◎	×	×	×	×		
			11	129139-13100	Turbine RHB3	×	×	×	×	×	×	×	×	◎	◎	◎	△	△		
			-	129103-13100	Turbine RHB3	×	×	×	×	×	×	×	×	◎	◎	◎	△	△		
			-	129266-13100	Turbine RHB3	×	×	×	×	×	×	×	×	◎	◎	◎	△	△		
	Silencer	G-b	-	129033-13500	φ 150 (For RHB31, with cover)	×	×	×	×	×	×	×	◎	◎	◎	△	△			
Silencer Gasket	G-c	1	129004-13200	□52	◎	◎	◎	◎	◎	◎	◎	◎	◎	×	×	×	×			
		3	129043-18091	RHB31 T/C outlet	×	×	×	×	×	×	×	×	◎	◎	◎	◎	◎			
H Electric system	Starting Motor	H-a	1	129129-77010	DC12V/1.2kw (RA1.2)	◎	×	×	◎	◎	△	△	×	◎	×	◎	◎	△		
			4	129242-77010	DC12V/1.7kw (CR1.7)	◎	△	△	△	△	△	△	△	◎	◎	△	△	◎		
			6	129136-77011	DC12V/2.3kw (JR2.3)	◎	△	△	△	△	△	△	△	◎	◎	△	△	◎		
			-	129052-77010	DC12V/1.2kw (CR1.2 special)	◎	×	×	×	×	◎	◎	×	◎	◎	×	×	◎		
	Starting Aid	H-b	1	129120-77501	DC12V/400W (with hose joint)	◎	△	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎		
			2	129100-77500	DC12V/400W (without hose joint)	◎	◎	△	△	△	△	△	◎	◎	◎	◎	◎			
	Air Intake Joint	H-c	1	171340-77520	Bend type	◎	◎	△	△	△	△	△	△	◎	◎	◎	◎	◎		
			-	129165-77520	Straight type (□60 * φ 36)	×	×	×	×											

4TNV84(T) /88 Base Specification

◎ --- Standard
 △ --- Option
 x --- Not available
 * --- Not available for 4TNV84

Eng system	Part name	Code	No.	Part Code No.	Remarks	4 TN V 8 4 / 8 8								4 TN V 8 4 T				
						F-F -SS1	Backhoe -NBK	Loader -XWL(KWL)	Generator -GGE	Mower -DMW	Tractor I -LU2	* General -DSA	F-F -SS1	Loader -XWL	Generator -GGE	Mower -DMW	General -DSA	
	Rated power (kW)					32.9 /35.4	27.4 /30	30.6 /33.6	19.5 /21.6	32.7 /35.2	28.1 /31	35.4	41.2	38.5	26.8	41	41.2	
	Rated speed (rpm)					3000	2500	2800	1800	3000	2700	3000	3000	2800	1800	3000	3000	
B Fuel system	Fuel Feed Pump	B-b	1	119225-52102	Solenoid Pump:DC12V	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
	Fuel Filter	B-c	1	119802-55800		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
			2	129004-55610	Bracket, For solenoid pump	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
	Water Trap	B-d	1	119802-55700		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
C Lube oil system	Oil Pan	C-a	9	129400-01770	Deep, side drain	◎	△	△	△	△	x	◎	△	△	△	△	△	
			10	129436-01780	Deep, bottom drain	△	△	△	△	△	x	△	△	△	△	△	△	△
			12	729402-01540	Shallow, bottom drain	△	△	△	△	◎	x	△	△	△	△	△	△	△
			-	129550-01702	FC Oil Pan (Special part)	△	x	x	x	x	◎	x	△	x	x	x	x	x
	Oil Dipstick	C-b	5	129004-34802	For deep Oil pan	◎	◎	△	◎	△	x	◎	◎	△	◎	△	△	◎
			6	129601-34801	Extension type, For deep Oil pan	△	△	◎	△	△	x	△	△	△	△	△	△	△
			7	129005-34802	For shallow Oil pan	△	△	△	△	◎	x	△	△	△	△	△	◎	△
			-	129457-34801	For FC Oil Pan (Special part)	△	x	x	x	x	◎	x	△	x	x	x	x	x
Oil Filter	C-c	1	129150-35152	φ80*80	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
Oil Cooler	C-d	1	129508-33010	4kw (3440kcal/h)	△	△	△	△	△	△	△	△	△	△	△	△		
Lube Oil Pressure Switch	C-e	1	114250-39450	Pin terminal	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
D Cooling water system	Cooling Water Pump	D-a	2	129004-42000	Low position	◎	◎	◎	◎	◎	△	◎	x	x	x	x	x	
			3	129508-42000	Low position	x	x	x	x	x	x	x	x	◎	◎	◎	◎	
			4	129263-42000	High position	△	△	△	△	△	◎	△	△	△	△	△	△	
	Cooling Fan	D-e	3	129612-44740	φ380 pusher	◎	△	△	△	△	△	△	◎	◎	◎	◎	◎	
			6	129655-44740	φ380 puller	△	△	△	△	◎	◎	△	△	△	△	△		
	Fan Pulley	D-f	1	129155-42350	φ90	△	△	△	△	△	△	△	△	△	△	△	△	
			3	129403-42380	φ110	△	△	△	△	△	△	△	△	△	△	△		
			4	129550-42350	φ120	△	△	△	△	△	△	△	△	△	△	△		
	Crankshaft Pulley (Unbalance moment :0gr-cm)	D-g	1	119802-21650	φ110	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
			4	119802-21660	φ120	△	△	△	△	△	△	△	△	△	△	△		
			-	119852-21650	φ120, Key	△	x	x	x	x	◎	x	△	x	x	x		
	Fan Spacer	D-i	2	121267-44760	18mm	◎	△	◎	◎	△	△	◎	◎	◎	◎	△	◎	
			3	171353-44760	25mm	△	△	△	△	◎	△	△	△	△	△	△		
			5	129030-44760	38.5mm	△	△	△	△	◎	△	△	△	△	△	△		
	Water Temp. switch	D-j	1	121250-44901	On 110°C	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
-			129107-44901	For QHS, QG	△	△	△	△	△	△	△	△	△	△	△			
Thermosender	D-k	1	124250-49351	One-wire type	△	△	△	△	△	◎	△	△	△	△	△			
Thermostat Cover	D-m	1	129350-49530	Upward (standard)	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎		
Drain Joint & Cock	D-o	1	171056-49120	Plug, PT1/4	◎	◎	◎	◎	◎	△	◎	◎	◎	◎	◎	◎		
		2	121550-49111	Drain joint	△	△	△	△	△	◎	△	△	△	△	△			
E PTO system	Flywheel (Unbalance moment :0gr-cm)	E-a	1	171420-21590	For CL (semi SAE #4)	△	△	△	◎	△	△	△	△	△	△	△		
			2	129489-21590	For VM (semi SAE #5)	△	△	△	x	△	△	△	△	△	△			
			3	129488-21590	For SAE #5, 7.5" Clutch	△	△	△	x	△	△	△	△	△	△			
			9	171420-21580	For Semi SAE #5, 7.5 inch pilot	△	△	△	x	◎	△	△	△	△	△			
			-	129457-21570	For clutch (P.C. φ210/33)	△	x	x	x	x	◎	x	△	x	x			
	Flywheel Housing	E-b	1	171420-01600	Semi SAE #4 (deep:105)	△	△	△	◎	△	△	△	△	△	△			
			3	119888-01601	SAE #5 (124)	△	△	△	x	△	△	△	△	△				
			4	129612-01600	Semi SAE #5 (shallow:80)	◎	◎	◎	x	◎	△	△	△	△				
			6	129150-01600	Back plate	△	x	x	x	x	◎	x	△	x	x			
		-	198072-41110	PW1-C-9C1	△	x	x	x	x	◎	x	x	x					
Hydraulic Pump Drive Device	E-e	1	129150-26000	For PW type pump	△	△	△	x	△	◎	△	△	x	△				
Gear Case	E-f	1	119802-01500	Without HOP flange	◎	◎	◎	◎	◎	△	◎	◎	◎	◎				
		2	129004-01500	For PW type hyd. pump	△	△	△	x	△	◎	△	△	x	△				
F Intake system	Intake Manifold	F-a	9	129601-12100	Lateral, box type	△	◎	△	△	△	△	△	△	x	x	x		
			10	129602-12100	Upward, box type	◎	△	◎	◎	◎	◎	◎	△	x	x			
			11	129508-12100	Lateral, box type	△	x	x	x	x	x	x	◎	◎	◎			
			12	129508-12120	Upward, box type	△	x	x	x	x	x	x	△	△	△			
			-	129564-12100	Upward, box type (Special)	△	x	x	x	x	x	x	△	△	△			
G Exhaust system	Exhaust Manifold	G-a	13	129411-13100	Upward	◎	△	◎	◎	◎	◎	◎	x	x	x	x		
			17	129640-13100	Lateral (flywheel side)	△	◎	△	△	△	△	△	x	x	x			
			18	129403-13130	Turbine RHB3	x	x	x	x	x	x	x	x	◎	x			
			19	129403-13120	Turbine RHF4	x	x	x	x	x	x	x	◎	◎	◎			
			-	129564-13100	Turbine RHF4 (Special)	x	x	x	x	x	x	x	△	x	◎			
	Silencer	G-b	-	129657-13500	Oval shape:119*400-□62	△	△	△	△	△	◎	△	x	x	x	x		
			-	129533-13500	φ170(For RHF4)	x	x	x	x	x	x	x	△	△	◎			
Silencer Gasket	G-c	2	129930-13201	□62	◎	◎	◎	◎	◎	◎	◎	x	x	x	x			
		-	129107-13550	Oval shape:2-74	x	x	x	x	x	x	x	x	x	x				
		-	129508-18080	RHF4 T/C outlet	x	x	x	x	x	x	x	◎	◎	◎				
H Electric system	Starting Motor	H-a	4	129242-77010	DC12V/1.7kw (CR1.7)	◎	x	x	◎	◎	◎	x	◎	x	◎	x		
			6	129136-77011	DC12V/2.3kw (JR2.3)	△	◎	◎	△	△	△	◎	△	△	◎			
	Starting Aid	H-b	1	129120-77501	DC12V/400W (with hose joint)	△	△	◎	◎	◎	◎	△	◎	◎	◎			
			2	129100-77500	DC12V/400W (without hose joint)	◎	◎	△	△	△	△	△	△	△				
	Air Intake Joint	H-c	1	171340-77520	Bend type	◎	◎	△	△	△	△	◎	△	△				
	Dynamo & Alternator	H-d	1	119620-77201	DCV12V/40A	△	△	△	△	◎	◎	△	△	△	△			
			2	171301-77201	DCV12V/15A	△	△	△	△	△	△	△	△	△				
			4	129423-77200	DCV12V/40A with P terminal	◎	◎	◎	◎	△	△	◎	◎	◎				
-			129052-77220	DCV12V/55A	△	△	△	△	△	△	△	△	◎					
Current Limiter	H-e	1	119225-77720	15A to 20A	△	△	△	△	△	△	△	△	△					
Diode	H-g	1	119643-66900	600V/1.1A	◎	◎	◎	△	◎	◎	△	◎	△					
Stop Solenoid	H-h	1	119653-77950	DC12V/integrated type	△	△	◎	◎	◎	◎	◎	△	◎					
		2	119233-77932	DC12V/integrated type (water-proof type)	△	△	△	△	△	△	△	△	△					
Timer (Glow plug)	H-k	1	128300-77920	DCV12V/15sec	◎	◎	◎	◎	◎	◎	◎	◎	◎					
I: Gauges	Tachometer Gear Unit	I-b	1	121023-01550	Blind cover	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎		

B - b Fuel Feed Pump

DI

No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	119225-52102	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
2	129612-52100	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△

Remarks

- (1)Solenoid pump for rubber piping (119225-52102,129612-52100)
 - Service voltage range : DC8.5~16.5V
 - Discharge volume : Over 400cc/min(when opened) at 20°C,12V
 - No-discharge pump head : Below 37.3kPa(0.38kg/cm²)
 - Current : Below 1.5A(circuit contact capacity,over 4A)
 - Water resistance : Equivalent to JIS DO203 R2(water-proof type)
 - | | | |
|---|-----------------------|-----------------------------------|
| { | Suction head | : -4.0kPa(-392mmAq)/dry·condition |
| | Operating Temp. Range | : -30~70°C |

B - b Fuel Feed Pump

DI

B-b	1	<p>BB520010</p> <p>Rated current: 1.5A Maker model : 2000</p>
Applicable engine TNV series		
Code No. 119225-52102		
Solenoid pump DC12V		

B-b	2	<p>BB520090</p> <p>Rated current: 1.5A Maker model : 2006</p>
Applicable engine TNV series		
Code No. 129612-52100		
Solenoid pump DC12V (Water proof coupler)		

B - c Fuel Filter

DI

B - c	1	<p>BC550070</p> <p>Filtration area: 2000cm² Nominal filtration rating: 5μm</p>
<p>Applicable engine TNV series</p>		
<p>Code No. 119802-55800</p>		
<p>Fuel filter</p>		

B - c	2	<p>BC550080</p>
<p>Applicable engine TNV series</p>		
<p>Code No. 129004-55610</p>		
<p>Bracket, fuel filter For solenoid fuel pump</p>		

B - c	3	<p>BC550100</p>
<p>Applicable engine 3TNV82A</p>		
<p>Code No. 119802-55620</p>		
<p>Support, fuel Filter For branch type intake manifold</p>		

B-d Water Trap



No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	119802-55700	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
2	129906-55700	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ

Remarks

B-d Water Trap

DI

B-d	1	<p>BD550140</p>
Applicable engine TNV series		
Code No. 119802-55700		
Water trap		

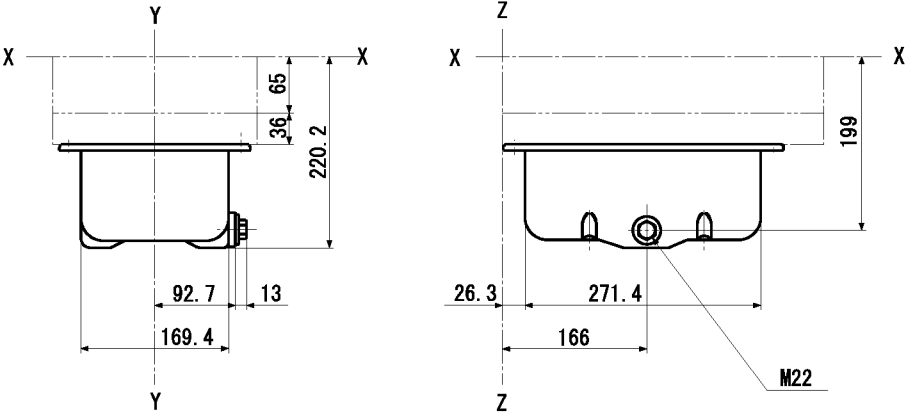
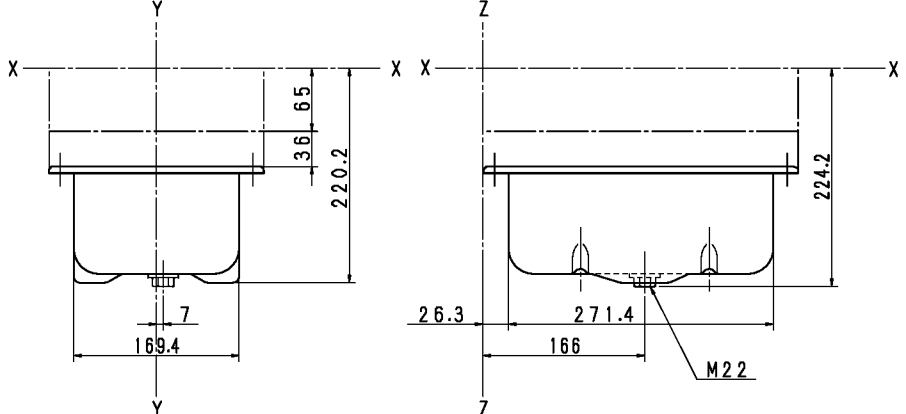
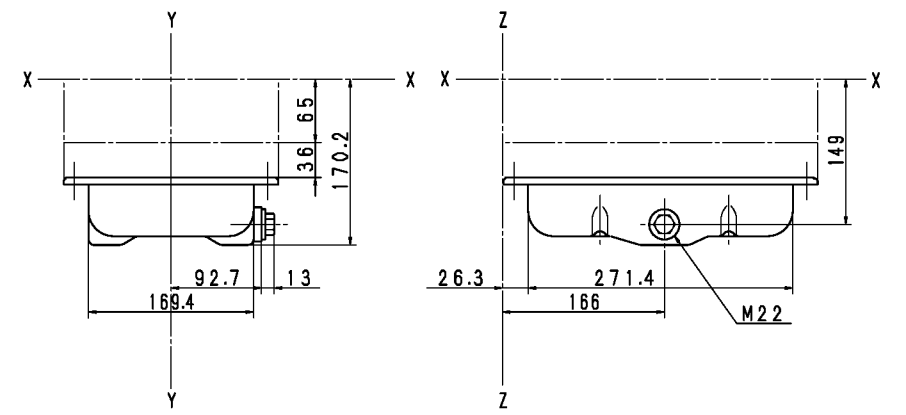
B-d	2	<p>BD550150</p>
Applicable engine TNV series		
Code No. 129906-55700		
Water trap		

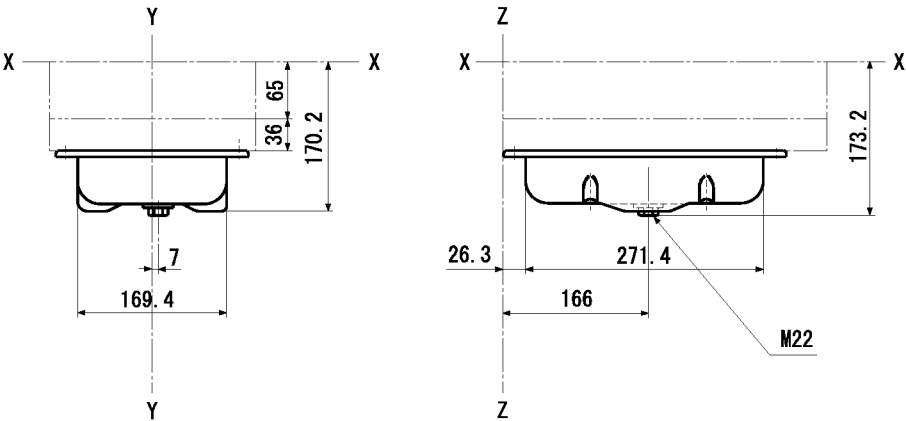
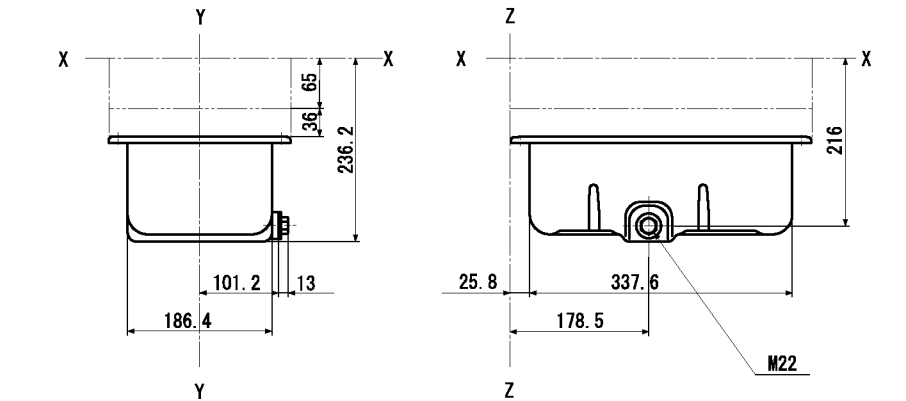
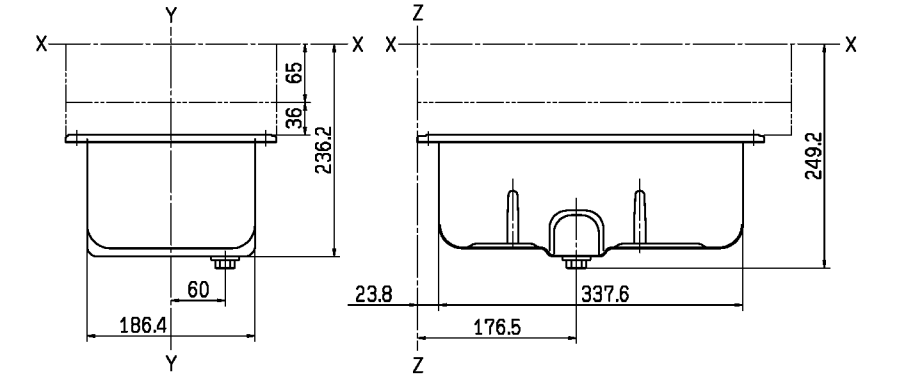
No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	119810-01770	◎	◎	◎																		
2	119823-01770	△	△	△																		
3	119843-01780	△	△	△																		
4	119810-01790	△	△	△																		
5	129100-01760				◎	◎	◎	◎	◎	◎	◎	◎	◎									
6	129136-01780				△	△	△	△	△	△	△	△	△									
7	129175-01770				△	△	△	△	△	△	△	△	△									
8	729102-01540				△	△	△	△	△	△	△	△	△									
9	129400-01770													◎	◎	◎	◎	◎	◎	◎	◎	◎
10	129436-01780													△	△	△	△	△	△	△	△	△
11	729577-01720													△	△	△	△	△	△	△	△	△
12	729402-01540													△	△	△	△	△	△	△	△	△

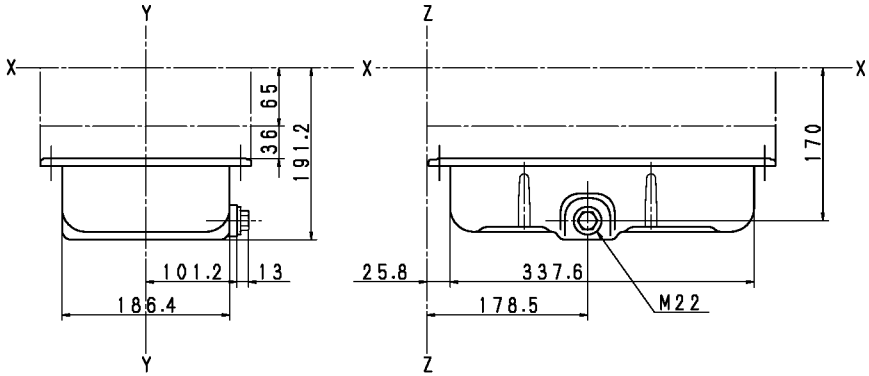
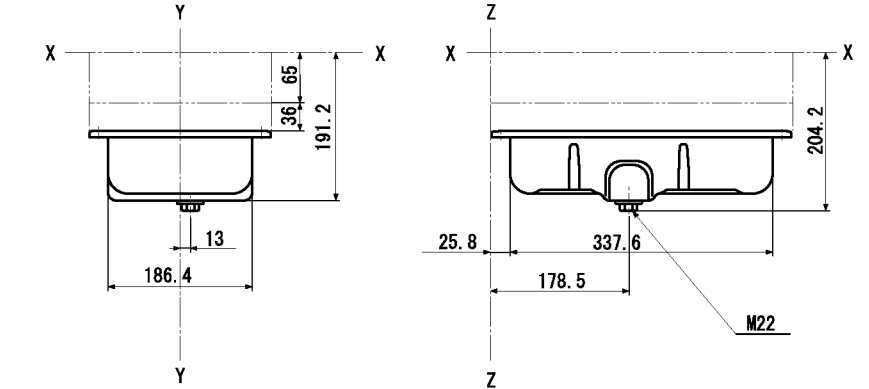
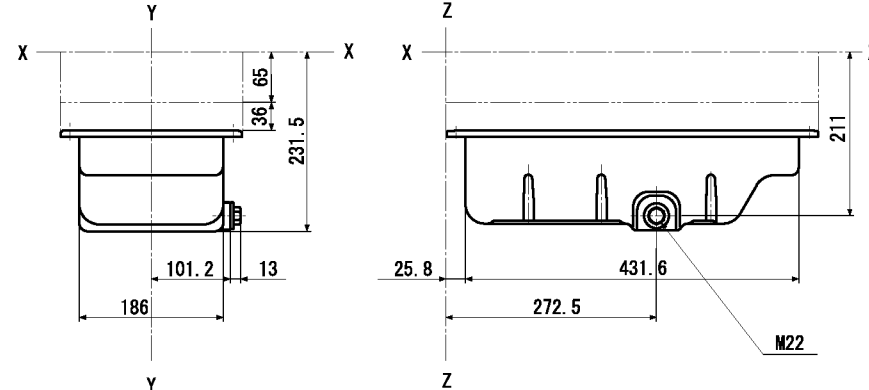
Remarks

In case of using "○ or △" part, lub.oil intake pipe CMP and dipstick should be used simultaneously.

Engine Model	Oil pan Type	Oil pan CMP.	Oil dipstick	Dipstick guide	Oil capacity (Full/Low):L	Lub oil intake pipe CMP.
3TNV82A	Shallow	119810-01790	119802-34811	121520-34810	3.6/2.4	119810-35401
		119843-01780	119802-34830	119260-34810 119802-34850		
	Deep	119810-01770	119802-34801	121520-34810	5.5/3.6	119810-35300
		119823-01770	119802-34820	119260-34810 119802-34850		
3TNV84(T) 88	Shallow	729102-01540	129005-34801	121520-34810	4.7/2.9	129135-35090
		129175-01770	129602-34800	119260-34810 119802-34850		
	Deep	129100-01760	129004-34801	121520-34810	6.7/3.9	129100-35301
		129136-01780	129601-34800	119260-34810 119802-34850		
4TNV84(T) 88	Shallow	729402-01540	129005-34801	121520-34810	5.8/3.5	129602-35090
		129489-01770	129602-34800	119260-34810 119802-34850		
	Deep	129400-01770	129004-34801	121520-34810	7.4/4.0	129436-35091
		129436-01780	129601-34800	119260-34810 119802-34850		

<p>C-a</p>	<p>1</p>	<p>CA010070</p>  <p>Max.oil capacity:5.5liter,low:3.6liter Effective capacity:1.9liter Oil pan code:119810-01700</p>
<p>Applicable engine 3TNV82A</p>		
<p>Code No. 119810-01770</p>		
<p>Oil pan CMP Deep, side drain</p>		
<p>C-a</p>	<p>2</p>	<p>CA010180</p>  <p>Max.oil capacity:5.5liter,low:3.6liter Effective capacity:1.9liter Oil pan code:119823-01700</p>
<p>Applicable engine 3TNV82A</p>		
<p>Code No. 119823-01770</p>		
<p>Oil pan CMP Deep, bottom drain</p>		
<p>C-a</p>	<p>3</p>	<p>CA010170</p>  <p>Max.oil capacity:3.6liter,low:2.4liter Effective capacity:1.2liter Oil pan code:119843-01720</p>
<p>Applicable engine 3TNV82A</p>		
<p>Code No. 119843-01780</p>		
<p>Oil pan CMP Shallow, side drain</p>		

<p>C-a</p>	<p>4</p>	<p>CA010080</p>  <p>Max.oil capacity:3.6liter,low:2.4liter Effective capacity:1.2liter Oil pan code:119810-01720</p>
<p>Applicable engine 3TNV82A</p>		
<p>Code No. 119810-01790</p>		
<p>Oil pan CMP Shallow, bottom drain</p>		
<p>C-a</p>	<p>5</p>	<p>CA010090</p>  <p>Max.oil capacity:6.7liter,low:3.9liter Effective capacity:2.8liter Oil pan code:129100-01700</p>
<p>Applicable engine 3TNV84 3TNV88 3TNV84T</p>		
<p>Code No. 129100-01760</p>		
<p>Oil pan CMP Deep, side drain</p>		
<p>C-a</p>	<p>6</p>	<p>CA010240</p>  <p>Max.oil capacity:6.7liter,low:3.9liter Effective capacity:2.8liter Oil pan code:129136-01710</p>
<p>Applicable engine 3TNV84 3TNV88 3TNV84T</p>		
<p>Code No. 129136-01780</p>		
<p>Oil pan CMP Deep, bottom drain</p>		

<p>C-a</p>	<p>7</p>	<p>CA010190</p>  <p>Max.oil capacity:4.7liter,low:2.9liter Effective capacity:1.8liter Oil pan code:129175-01720</p>
<p>Applicable engine</p> <p>3TNV84 3TNV88 3TNV84T</p>		
<p>Code No.</p> <p>129175-01770</p>		
<p>Oil pan CMP Shallow, side drain</p>		
<p>C-a</p>	<p>8</p>	<p>CA010100</p>  <p>Max.oil capacity:4.7liter,low:2.9liter Effective capacity:1.8liter Oil pan code:129100-01720</p>
<p>Applicable engine</p> <p>3TNV84 3TNV88 3TNV84T</p>		
<p>Code No.</p> <p>729102-01540</p>		
<p>Oil pan CMP Shallow, bottom drain</p>		
<p>C-a</p>	<p>9</p>	<p>CA010110</p>  <p>Max.oil capacity:7.4liter,low:4.0liter Effective capacity:3.4liter Oil pan code:129400-01700</p>
<p>Applicable engine</p> <p>4TNV84 4TNV88 4TNV84T</p>		
<p>Code No.</p> <p>129400-01770</p>		
<p>Oil pan CMP Deep, side drain</p>		

C-a	10	CA010220
Applicable engine 4TNV84 4TNV88 4TNV84T		<p>Max.oil capacity:7.4liter,low:4.0liter Effective capacity:3.4liter Oil pan code:129436-01710</p>
Code No. 129436-01780		
Oil pan CMP Deep, bottom drain		

C-a	11	CA010380
Applicable engine 4TNV84 4TNV88 4TNV84T		<p>Max.oil capacity:5.8liter,low:3.5liter Effective capacity:2.3liter Oil pan code:129577-01720</p>
Code No. 729577-01720		
Oil pan CMP Shallow, front side drain		

C-a	12	CA010120
Applicable engine 4TNV84 4TNV88 4TNV84T		<p>Max.oil capacity:5.8liter,low:3.5liter Effective capacity:2.3liter Oil pan code:129400-01720</p>
Code No. 729402-01540		
Oil pan CMP Shallow, bottom drain		

C - b Oil Dipstick

DI

No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	119802-34802	◎	◎	◎																		
2	119802-34821	△	△	△																		
3	119802-34812	△	△	△																		
4	119802-34831	△	△	△																		
5	129004-34802		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
6	129601-34801		△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
7	129005-34802		△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
8	129602-34801		△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△

Remarks

In case of using "○ or △" part, lub.oil intake pipe CMP and dipstick should be used simultaneously.

Engine Model	Oil pan Type	Oil pan CMP.	Oil dipstick	Dipstick guide	Oil capacity (Full/Low):L	Lub oil intake pipe CMP.
3TNV82A	Shallow	119810-01790	119802-34811	121520-34810	3.6/2.4	119810-35401
		119843-01780	119802-34830	119260-34810 119802-34850		
	Deep	119810-01770	119802-34801	121520-34810	5.5/3.6	119810-35300
		119823-01770	119802-34820	119260-34810 119802-34850		
3TNV84(T) 88	Shallow	729102-01540	129005-34801	121520-34810	4.7/2.9	129135-35090
		129175-01770	129602-34800	119260-34810 119802-34850		
	Deep	129100-01760	129004-34801	121520-34810	6.7/3.9	129100-35301
		129136-01780	129601-34800	119260-34810 119802-34850		
4TNV84(T) 88	Shallow	729402-01540	129005-34801	121520-34810	5.8/3.5	129602-35090
		129489-01770	129602-34800	119260-34810 119802-34850		
	Deep	129400-01770	129004-34801	121520-34810	7.4/4.0	129436-35091
		129436-01780	129601-34800	119260-34810 119802-34850		

C - b Oil Dipstick

DI

C-b	1	<p>CB340260</p>
Applicable engine 3TNV82A		
Code No. 119802-34802		
Oil dipstick for deep oil pan		

C-b	2	<p>CB340470</p>
Applicable engine 3TNV82A		
Code No. 119802-34821		
Oil dipstick(extension type) for deep oil pan		

C-b	3	<p>CB340310</p>
Applicable engine 3TNV82A		
Code No. 119802-34812		
Oil dipstick for shallow oil pan		

C - b Oil Dipstick

DI

<p>C-b</p>	<p>4</p>	<p>CB340480</p> <p>Non-applicable intake manifold: upward, box type</p>
<p>Applicable engine 3TNV82A</p>		
<p>Code No. 119802-34831</p>		
<p>Oil dipstick(extension type) for shallow oil pan</p>		
<p>C-b</p>	<p>5</p>	<p>CB340320</p>
<p>Applicable engine 3TNV84 3TNV88 3TNV84T 4TNV84 4TNV88 4TNV84T</p>		
<p>Code No. 129004-34802</p>		
<p>Oil dipstick for deep oil pan</p>		
<p>C-b</p>	<p>6</p>	<p>CB340490</p>
<p>Applicable engine 3TNV84 3TNV88 3TNV84T 4TNV84 4TNV88 4TNV84T</p>		
<p>Code No. 129601-34801</p>		
<p>Oil dipstick(extension type) for deep oil pan</p>		

C - b Oil Dipstick

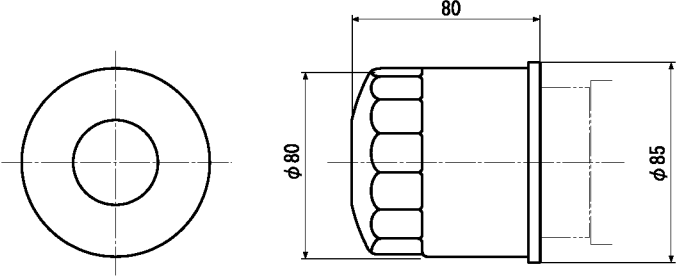
DI

C-b	7	<p>CB340330</p>						
<p>Applicable engine</p> <table border="0"> <tr> <td>3TNV84</td> <td>3TNV88</td> </tr> <tr> <td>3TNV84T</td> <td>4TNV84</td> </tr> <tr> <td>4TNV88</td> <td>4TNV84T</td> </tr> </table>			3TNV84	3TNV88	3TNV84T	4TNV84	4TNV88	4TNV84T
3TNV84	3TNV88							
3TNV84T	4TNV84							
4TNV88	4TNV84T							
<p>Code No.</p> <p style="text-align: center;">129005-34802</p>								
<p style="text-align: center;">Oil dipstick for shallow oil pan</p>								

C-b	8	<p>CB340500</p>						
<p>Applicable engine</p> <table border="0"> <tr> <td>3TNV84</td> <td>3TNV88</td> </tr> <tr> <td>3TNV84T</td> <td>4TNV84</td> </tr> <tr> <td>4TNV88</td> <td>4TNV84T</td> </tr> </table>			3TNV84	3TNV88	3TNV84T	4TNV84	4TNV88	4TNV84T
3TNV84	3TNV88							
3TNV84T	4TNV84							
4TNV88	4TNV84T							
<p>Code No.</p> <p style="text-align: center;">129602-34801</p>								
<p style="text-align: center;">Oil dipstick(extension type) for shallow oil pan</p>								

Non-applicable intake manifold: upward, box type

C**-c Oil Filter****DI**

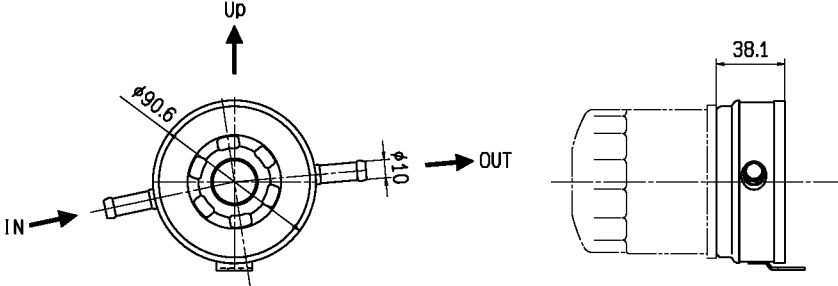
C-c	1	<p>CC350020</p>  <p>Filtration area:1200cm²</p>
Applicable engine TNV series		
Code No. 129150-35152		
Oil filter Ø80×80		

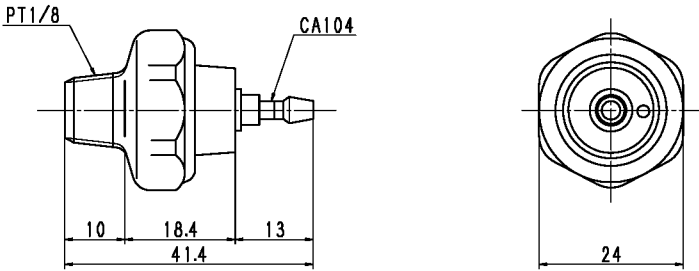
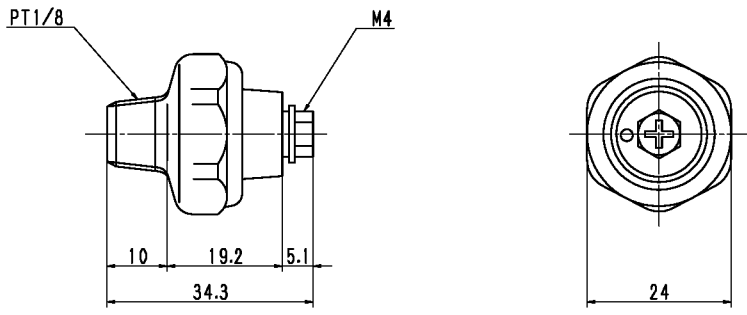
No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	129508-33010	△	△	◎	△	△	◎	△	△	◎	◎	◎	◎	△	△	◎	△	○	◎	◎	◎	◎

Remarks

Cooling system : Multi-plate type
 Heat transmission area : $1.7 \times 10^{-1} m^2$, 7stage
 Heat transmission : 4kw (3440kcal/h)
 Conditions : Oil flow volume 30ℓ/min
 Water flow volume 20ℓ/min
 Oil temp. 110°C
 Water temp. 80°C

Note) The length of the cooling water piping for the oil cooler differs for each engine model.

<p>C-d</p>	<p>1</p>	<p>CD330080</p>  <p>Cooling surface area:1170cm²</p>
<p>Applicable engine TNV series</p>		
<p>Code No. 129508-33010</p>		
<p>Oil cooler 4.0kW</p>		

<p>C-e</p>	<p>1</p>	<p>CE390050</p>  <p>Operating pressure, on: under 49.0±9.8kPa 0.5(±0.1)kg/cm² Contact capacity: DC12V/0.4A, DC24V/0.2A, one-wire type</p>
<p>Applicable engine TNV series</p>		
<p>Code No. 114250-39450</p>		
<p>Oil pressure switch Pin terminal</p>		
<p>C-e</p>	<p>2</p>	<p>CE390010</p>  <p>Operating pressure, on: under 49.0±9.8kPa (0.5±0.1kg/cm²) Contact capacity: DC12V/0.4A, DC24V/0.2A, one-wire type</p>
<p>Applicable engine TNV series</p>		
<p>Code No. 121252-39450</p>		
<p>Oil pressure switch Eyelet terminal</p>		

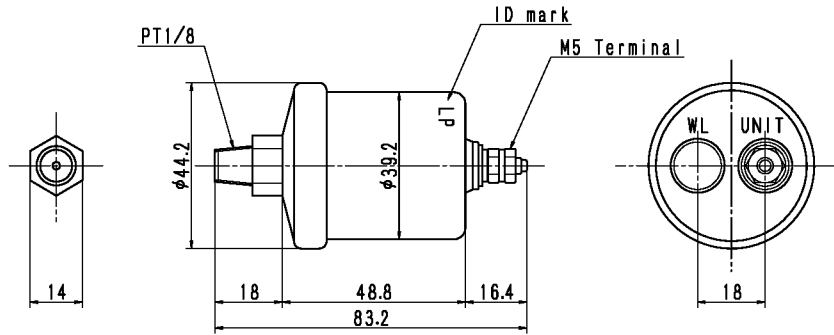
No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	119773-91501	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
2	171375-39601	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△

Remarks

Wire type	Oil Pressure sender	Damper	Oil pressure Gauge	Green zone kg/cm ²
	C - f		I - e	
One-Wire	119773-91501	171375-39601	171090-91011	_____

C-f	1
Applicable engine TNV series	
Code No. 119773-91501	
Oil pressure sender One-wire type	

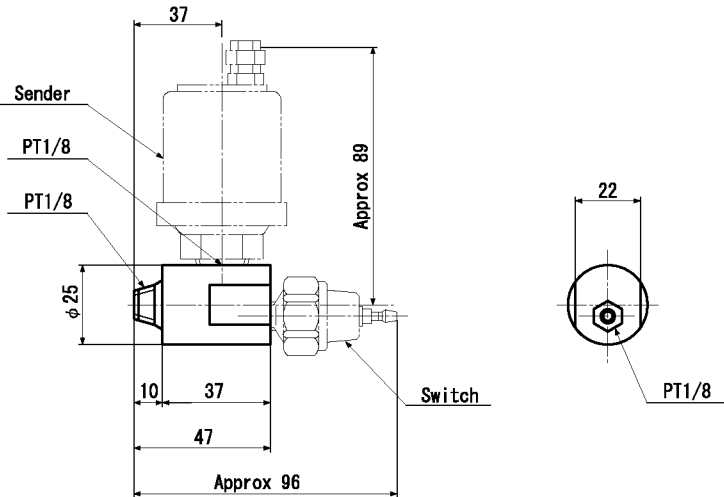
CF910080



Service voltage:DC12V/24V
Indispensable part,damper:171375-39601

C-f	2
Applicable engine TNV series	
Code No. 171375-39601	
Damper	

CF990020



C**-g Oil Filler Extension Pipe****DI**

No.	Code	E n g i n e																							
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T					
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2			
1	171031-11741	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
2	121027-11743	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△

Remarks

C**-g Oil Filler Extension Pipe****DI**

C-g	1	CG110010
Applicable engine TNV series		
Code No. 171031-11741		
Oil filler extension pipe L=77		
		O-ring:24311-000320

C-g	2	CG110020
Applicable engine TNV series		
Code No. 121027-11743		
Oil filler extension pipe L=117		
		O-ring:24311-000320

No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	119802-42000	◎	◎	◎																		
2	129004-42001				◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎			
3	129508-42001																			◎	◎	◎
4	129263-42000				△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△

Remarks

D-a Cooling Water Pump

DI

D-a	1	DA420110
Applicable engine 3TNV82A		
Code No. 119802-42000		
Cooling water pump		
Packing:129486-42050		

D-a	2	DA420120
Applicable engine 3TNV84 3TNV88 3TNV84T 4TNV84 4TNV88		
Code No. 129004-42001		
Cooling water pump Low position		
Packing:129486-42021		

D-a	3	DA420130
Applicable engine 4TNV84T		
Code No. 129508-42001		
Cooling water pump Low position		
Packing:129486-42021		

D-a	4	<p>DA420140</p>						
<p>Applicable engine</p> <table border="0"> <tr> <td>3TNV84</td> <td>3TNV88</td> </tr> <tr> <td>3TNV84T</td> <td>4TNV84</td> </tr> <tr> <td>4TNV88</td> <td>4TNV84T</td> </tr> </table>		3TNV84	3TNV88	3TNV84T	4TNV84	4TNV88	4TNV84T	
3TNV84	3TNV88							
3TNV84T	4TNV84							
4TNV88	4TNV84T							
<p>Code No.</p> <p style="text-align: center;">129263-42000</p>								
<p style="text-align: center;">Cooling water pump High position</p>		<p>Packing:129486-42050</p>						

D - b Radiator

DI

No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	119802-44500	○	○	○																		
2	129004-44500	△	△	△	○	○	○	○	○	○												
3	129044-44500				△	△	△	△	△	△	○	○	○									
4	129601-44500				△	△	△	△	△	△	△	△	△	○			○					
5	129508-44501													△	○	○	△	○	○	○		
6	129508-44520													△	△	△	△	△	△	△	○	○
7	119802-44520		△	△																		
8	129004-44520					△	△		△	△												
9	129044-44520											△	△									
10	129602-44500														△	△		△	△			
11	129602-44520																				△	△
12	119255-44660	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

Remarks

D - b Radiator

DI

D-b	1	DB440120
Applicable engine 3TNV82A		
Code No. 119802-44500		
Radiator 20,300kcal/h		Fin type:Louver Radiation area:3.79m ² Applicable fan guard:119802-44560, 119802-44570

D-b	2	DB440130
Applicable engine 3TNV82A 3TNV84 3TNV88		
Code No. 129004-44500		
Radiator 24,600kcal/h		Fin type:Louver Radiation area:5.67m ² Applicable fan guard:119802-44560, 119802-44570

D-b	3	DB440170
Applicable engine 3TNV84 3TNV88 3TNV84T		
Code No. 129044-44500		
Radiator 30,700kcal/h		Fin type:Louver Radiation area:7.37m ² Applicable fan guard:129601-44560, 129601-44570

D - b Radiator

DI

D-b	4	DB440140
Applicable engine 3TNV84 3TNV88 3TNV84T 4TNV84 4TNV88		
Code No. 129601-44500		Fin type:Louwer Radiation area:7.37m ² Applicable fan guard:129601-44560, 129601-44570
Radiator 30,700kcal/h		

D-b	5	DB440150
Applicable engine 4TNV84 4TNV88 4TNV84T		
Code No. 129508-44501		Fin type:Louwer Radiation area:9.85m ² Applicable fan guard:129601-44560, 129601-44570
Radiator 37,500kcal/h		

D-b	6	DB440160
Applicable engine 4TNV84 4TNV88 4TNV84T		
Code No. 129508-44520		Fin type:Louwer Radiation area:12.1m ² Applicable fan guard:129601-44560, 129601-44570
Radiator 44,500kcal/h		

D-b Radiator

DI

D-b	7	DB440130
Applicable engine 3TNV82A		
Code No. 119802-44520		
Radiator 18,900kcal/h		Fin type: wave Radiation area: 4.71m ² Applicable fan guard: 119802-44560, 119802-44570

D-b	8	DB440270
Applicable engine 3TNV84 3TNV88		
Code No. 129004-44520		
Radiator 23,100kcal/h		Fin type: wave Radiation area: 5.93m ²

D-b	9	DB440170
Applicable engine 3TNV84T		
Code No. 129044-44520		
Radiator 26,000kcal/h		Fin type: wave Radiation area: 6.82m ² Applicable fan guard: 129601-44560, 129601-44570

D - b Radiator

DI

D-b	10	<p>DB440150</p>
<p>Applicable engine 4TNV84 4TNV88</p>		
<p>Code No. 129602-44500</p>		<p>Fin type: wave Radiation area: 8.45m² Applicable fan guard: 129601-44560, 129601-44570</p>
<p>Radiator 29,400kcal/h</p>		

D-b	11	<p>DB440160</p>
<p>Applicable engine 4TNV84T</p>		
<p>Code No. 129602-44520</p>		<p>Fin type: wave Radiation area: 10.45m² Applicable fan guard: 129601-44560, 129601-44570</p>
<p>Radiator 35,300kcal/h</p>		

D-b	12	<p>DB440180</p>
<p>Applicable engine TNV series</p>		
<p>Code No. 119255-44660</p>		<p>Rubber (Radiator)</p>

D-c Cooling Fan Guard

DI

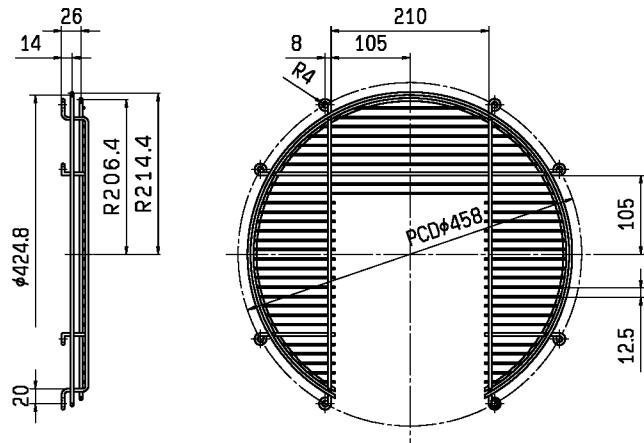
D-c	1	<p>DC440080</p>
<p>Applicable engine</p> <p>3TNV82A 3TNV84 3TNV88</p>		
<p>Code No.</p> <p style="text-align: center;">119802-44560</p>		
<p style="text-align: center;">Cooling fan guard for 310,335mm pusher fan</p>		<p>Applicable radiator: 119717-44500, 119802-44500, 129004-44500, 119802-44520, 129004-44520 Applicable fan: 119265-44740, 171340-44740 set nut: 119802-44600 x 8, bolt: 26106-060162x 8</p>

D-c	2	<p>DC440070</p>
<p>Applicable engine</p> <p>3TNV82A 3TNV84 3TNV88</p>		
<p>Code No.</p> <p style="text-align: center;">119802-44570</p>		
<p style="text-align: center;">Cooling fan guard for 300,335mm puller fan</p>		<p>Applicable radiator: 119717-44500, 119802-44500, 129004-44500, 119802-44520, 129004-44520 Applicable fan: 129335-44740, 124251-44740 set nut: 119802-44600 x 8, bolt: 26106-060162x 8</p>

D-c	3	<p>DC440080</p>
<p>Applicable engine</p> <p>3TNV84 3TNV88 3TNV84T 4TNV84 4TNV88 4TNV84T</p>		
<p>Code No.</p> <p style="text-align: center;">129601-44560</p>		
<p style="text-align: center;">Cooling fan guard for 360,380mm pusher fan, 380mm puller fan</p>		<p>Applicable radiator: 129601-44500, 129508-44501, 129508-44510, 129602-44500, 129602-44520 Applicable fan: 129030-44740, 129612-44700, 129655-44740 set nut: 119802-44600 x 8, bolt: 26106-060162x 8</p>

D-c	4
Applicable engine 3TNV84 3TNV88 3TNV84T 4TNV84 4TNV88 4TNV84T	
Code No. 129601-44570	
Cooling fan guard for 360mm puller fan	

DC440090



Applicable radiator: 129601-44500, 129508-44500, 129508-44510, 129602-44500, 129602-44520
 Applicable fan: 121267-44741
 set nut: 119802-44600 x 8, bolt: 26106-060162x 8

No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	119960-49010	○	○	○																		
2	129004-49010				○	○	○	○	○	○												
3	129004-49020	○	○	○	○	○	○	○	○	○												
4	129602-49010				△	△	△	△	△	△	○	○	○	○	○	○	○	○	○	○	○	○
5	129612-49040				△	△	△	△	△	△	○	○	○	○	○	○	○	○				
6	129508-49020																			○		
7	129508-49070																			△	○	○

Remarks

D - d Radiator Hose

DI

D-d	1	DD490270
Applicable engine 3TNV82A		
Code No. 119960-49010		
Radiator hose Upper		
Hose band:23010-038000 2pcs.		

D-d	2	DD490150
Applicable engine 3TNV84 3TNV88		
Code No. 129004-49010		
Radiator hose Upper		
Hose band:23010-038000 2pcs.		

D-d	3	DD490160
Applicable engine 3TNV82A 3TNV84 3TNV88		
Code No. 129004-49020		
Radiator hose Lower		
Hose band:23010-038000 2pcs.		

D-d Radiator Hose

DI

D-d	4	<p>DD490280</p> <p>Hose band:23010-038000 1pc, 23010-044000 1pc.</p>
<p>Applicable engine</p> <p>3TNV84 3TNV88 3TNV84T 4TNV84 4TNV88 4TNV84T</p>		
<p>Code No.</p> <p style="text-align: center;">129602-49010</p>		
<p style="text-align: center;">Radiator hose Upper</p>		

D-d	5	<p>DD490180</p> <p>Hose band:23010-038000 1pc, 23010-044000 1pc.</p>
<p>Applicable engine</p> <p>3TNV84 3TNV88 3TNV84T 4TNV84 4TNV88</p>		
<p>Code No.</p> <p style="text-align: center;">129612-49040</p>		
<p style="text-align: center;">Radiator hose Lower</p>		

D-d	6	<p>DD490220</p> <p>Hose band:23010-038000 1pc, 23010-044000 1pc.</p>
<p>Applicable engine</p> <p>4TNV84T</p>		
<p>Code No.</p> <p style="text-align: center;">129508-49020</p>		
<p style="text-align: center;">Radiator hose Lower</p>		

D**-d Radiator Hose****DI**

D-d	7	<p>DD490230</p> <p>Hose band:23010-044000 2pcs.</p>
Applicable engine 4TNV84T		
Code No. 129508-49070		
Radiator hose Lower		

D -e Cooling Fan

DI

No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	171340-44740	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙													
2	129030-44740				△	△	△	△	△	△	⊙	⊙	⊙									
3	129612-44700												⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
4	119717-44740	△	△	△	△	△	△	△	△	△												
5	121267-44741				△	△	△	△	△	△	△	△	△									
6	129655-44740												△	△	△	△	△	△	△	△	△	△
7	129436-44740												△	△	△	△	△	△	△	△	△	△
Remarks																						

D-e Cooling Fan

DI

D-e	1	DE440100
Applicable engine 3TNV82A 3TNV84 3TNV88		
Code No. 171340-44740		
Cooling fan Ø335 pusher		
See section on fan pulley(D-f)for installation position Including fan spacer: 121267-44760 (18mm)		

D-e	2	DE440230
Applicable engine 3TNV84 3TNV88 3TNV84T		
Code No. 129030-44740		
Cooling fan Ø360 pusher		
See section on fan pulley(D-f)for installation position Including fan spacer: 121267-44760 (18mm)		

D-e	3	DE440240
Applicable engine 4TNV84 4TNV88 4TNV84T		
Code No. 129612-44700		
Cooling fan Ø380 pusher		
See section on fan pulley(D-f)for installation position Including fan spacer: 121267-44760 (18mm)		

D-e Cooling Fan

DI

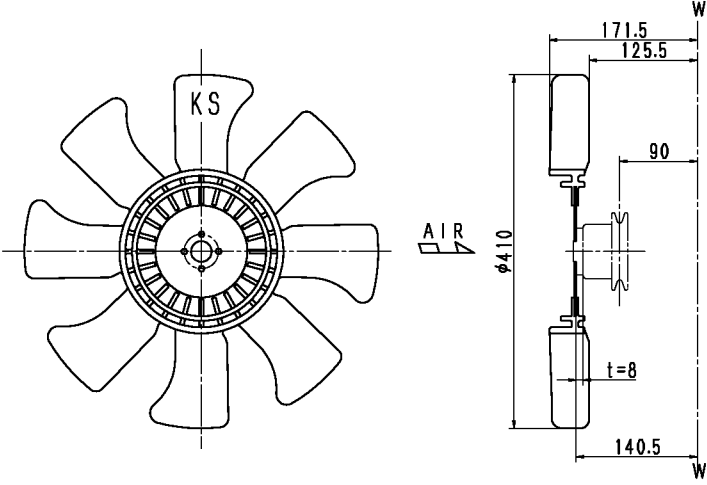
D-e	4	<p>DE440320</p>
<p>Applicable engine</p> <p>3TNV82A 3TNV84 3TNV88</p>		
<p>Code No.</p> <p style="text-align: center;">119717-44740</p>		
<p style="text-align: center;">Cooling fan Ø335 puller</p>		
<p>See section on fan pulley(D-f)for installation position Including fan spacer: 121267-44760 (18mm)</p>		

D-e	5	<p>DE440020</p>
<p>Applicable engine</p> <p>3TNV84 3TNV88 3TNV84T</p>		
<p>Code No.</p> <p style="text-align: center;">121267-44741</p>		
<p style="text-align: center;">Cooling fan Ø360 puller</p>		
<p>See section on fan pulley(D-f)for installation position Including fan spacer: 171353-44760 (25mm)</p>		

D-e	6	<p>DE440250</p>
<p>Applicable engine</p> <p>4TNV84 4TNV88 4TNV84T</p>		
<p>Code No.</p> <p style="text-align: center;">129655-44740</p>		
<p style="text-align: center;">Cooling fan Ø380 puller</p>		
<p>See section on fan pulley(D-f)for installation position Including fan spacer: 171353-44760 (25mm)</p>		

D-e Cooling Fan

DI

<p>D-e</p>	<p>7</p>	<p>DE440150</p>
<p>Applicable engine</p> <p>4TNV84 4TNV88 4TNV84T</p>		
<p>Code No.</p> <p>129436-44740</p>		
<p>Cooling fan Ø410 puller</p>		
<p>See section on fan pulley(D-f)for installation position Including fan spacer: 124574-44761 (8mm)</p>		

D-f Fan Pulley



No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	129155-42350	◎	△	△	◎	△	△	◎	△	△	◎	△	△	◎	△	△	◎	△	△	◎	△	△
2	129556-42350	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
3	129403-42380	△	◎	◎	△	◎	◎	△	◎	◎	△	◎	◎	△	◎	◎	△	◎	◎	△	◎	◎
4	129550-42350	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
5	129120-42350	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△

Remarks

Applicable V-belt : A type

D-f Fan Pulley

DI

D-f	1	DF420070
Applicable engine TNV series		
Code No. 129155-42350		
Fan pulley Ø90		
See section on cooling water pump (D-a) for installation position		

D-f	2	DF420100
Applicable engine TNV series		
Code No. 129556-42350		
Fan pulley Ø96		
See section on cooling water pump (D-a) for installation position		

D-f	3	DF420080
Applicable engine TNV series		
Code No. 129403-42380		
Fan pulley Ø110		
See section on cooling water pump (D-a) for installation position		

D-f Fan Pulley

DI

D-f	4	<p>DF420090</p>
<p>Applicable engine TNV series</p>		
<p>Code No. 129550-42350</p>		
<p>Fan pulley Ø120</p>		

See section on cooling water pump (D-a) for installation position

D-f	5	<p>DF420060</p>
<p>Applicable engine TNV series</p>		
<p>Code No. 129120-42350</p>		
<p>Fan pulley Ø130</p>		

See section on cooling water pump (D-a) for installation position

D-g Crankshaft Pulley

DI

No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	119802-21650	Δ	⊙	⊙									Δ	⊙	⊙	Δ	⊙	⊙	Δ	⊙	⊙	
2	129004-21650				Δ	⊙	⊙	Δ	⊙	⊙	Δ	⊙	⊙									
3	129005-21650				⊙	Δ	Δ	⊙	Δ	Δ	⊙	Δ	Δ									
4	119802-21660	⊙	Δ	Δ										⊙	Δ	Δ	⊙	Δ	Δ	⊙	Δ	Δ

Remarks

Applicable V-belt : A type

D-g Crankshaft Pulley

DI

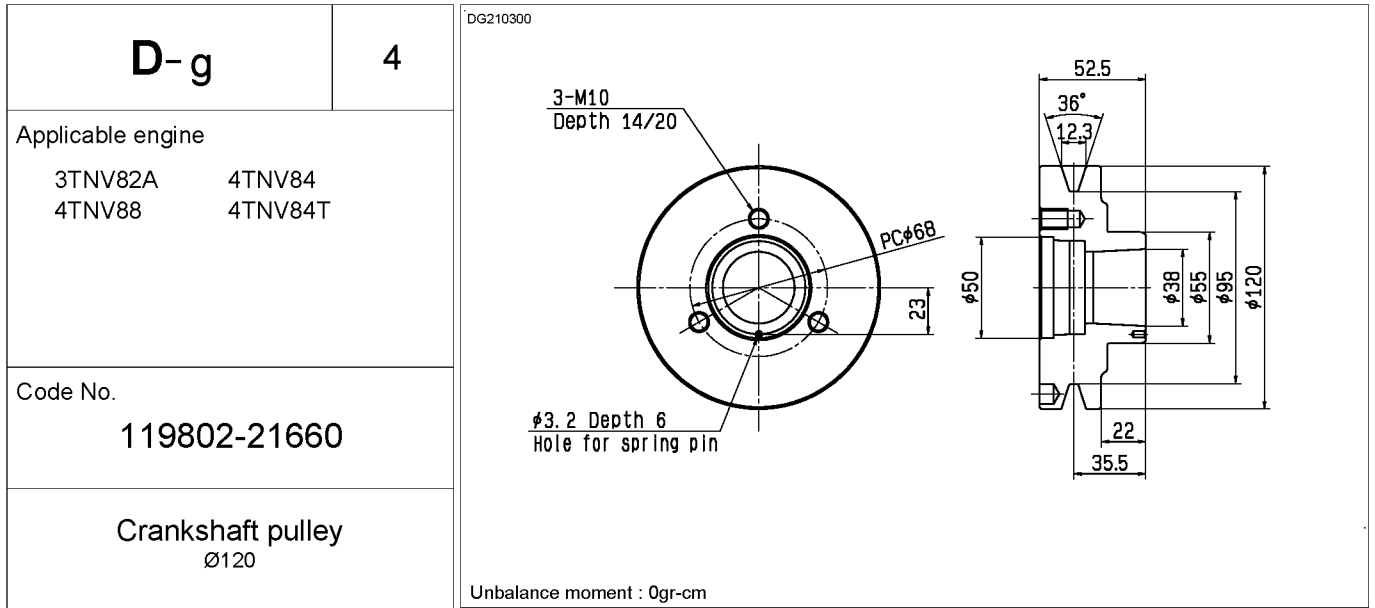
D-g	1	DG210270
Applicable engine 3TNV82A 4TNV84 4TNV88 4TNV84T		<p>Unbalance moment : 0gr-cm</p>
Code No. 119802-21650		
Crankshaft pulley Ø110		

D-g	2	DG210280
Applicable engine 3TNV84 3TNV88 3TNV84T		<p>Unbalance moment : 705gr-cm</p>
Code No. 129004-21650		
Crankshaft pulley Ø110		

D-g	3	DG210290
Applicable engine 3TNV84 3TNV88 3TNV84T		<p>Unbalance moment : 705gr-cm</p>
Code No. 129005-21650		
Crankshaft pulley Ø120		

D-g Crankshaft Pulley

DI



D-i Fan Spacer

DI

D-i	1	<p>DI440020</p>
Applicable engine TNV series		
Code No. 124574-44761		
Fan spacer 8mm		

D-i	2	<p>DI440010</p>
Applicable engine TNV series		
Code No. 121267-44760		
Fan spacer 18mm		

D-i	3	<p>DI440030</p>
Applicable engine TNV series		
Code No. 171353-44760		
Fan spacer 25mm		

D-i	4	<p>DI440150</p>
Applicable engine TNV series		
Code No. 129457-44760		
Fan spacer 30mm		

D-i	5	<p>DI440100</p>
Applicable engine TNV series		
Code No. 129030-44760		
Fan spacer 38.5mm		

No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	121250-44901	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	
2	121450-42450	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
3	119843-44900	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	

Remarks

D**-j Water Temp.switch****DI**

D-j	1	<p>DJ440010</p>
Applicable engine TNV series		
Code No. 121250-44901		
Water temp.switch On 110°C		
		<p>On: 110±3°C, off: under 100°C, ID color: grey Contact capacity: DC12V/1A, DC24V/0.5A, one-wire type Packing: 124465-44950</p>

D-j	2	<p>DJ420050</p>
Applicable engine TNV series		
Code No. 121450-42450		
Plug M16		
		<p>Packing: 124465-44950</p>

D-j	3	<p>DJ440050</p>
Applicable engine TNV series		
Code No. 119843-44900		
Water temp.switch Off 110°C		
		<p>Off: 110±3°C, on: under 100°C, ID color: blue Contact capacity: DC12V/1A, DC24V/0.5A, two-wire/reverse contact type Packing: 124465-44950</p>

D-k Thermosender

DI

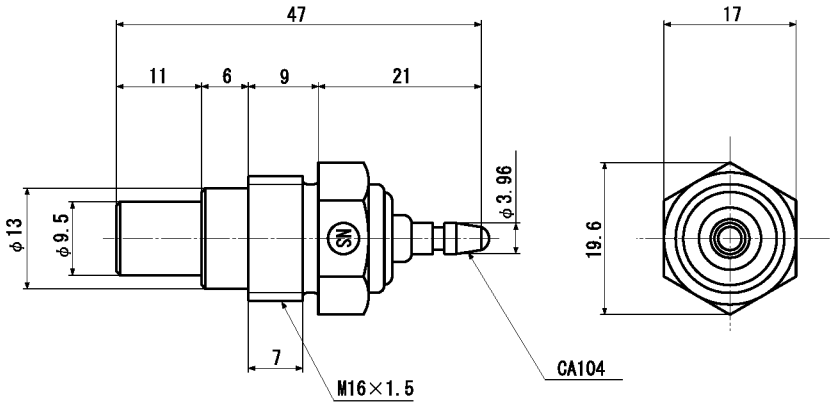
No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	124250-49351	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ

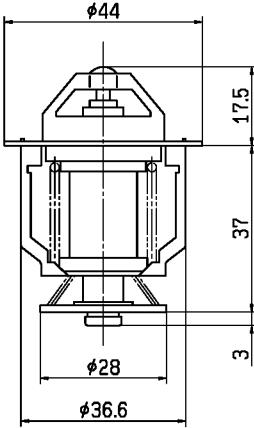
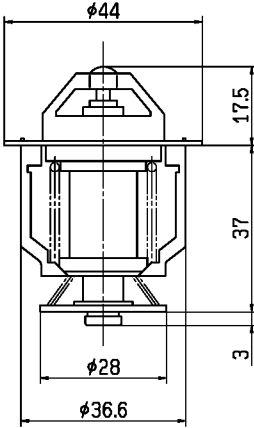
Remarks

Wire type	Thermosender	Packing	Thermometer
	D - k	—	I - d
One-Wire	124250-49351	129150-49360	171010-77850 for Cooling Water and Lubricating oil

D-k Thermosender

DI

D-k	1	<p>DK490020</p>  <p>Service voltage:DC12V/24V,one-wire type,ID color:black Packing:129150-49360</p>
Applicable engine TNV series		
Code No. 124250-49351		
Thermosender One-wire type		

<p style="text-align: center;">D-I</p>	1	<p>DL490050</p>  <p>Valve-opening temp: $71 \pm 1.5^\circ\text{C}$, ID color: none Full-open lift: over 8mm at 85°C, bottom by-pass type</p>
<p>Applicable engine TNV series</p>		
<p>Code No. 129155-49801</p>		
<p style="text-align: center;">Thermostat 71°C use</p>		
<p style="text-align: center;">D-I</p>	2	<p>DL490050</p>  <p>Valve-opening temp: $82 \pm 1.5^\circ\text{C}$, ID color: brown Full-open lift: over 8mm at 95°C, bottom by-pass type</p>
<p>Applicable engine TNV series</p>		
<p>Code No. 129457-49801</p>		
<p style="text-align: center;">Thermostat 82°C use</p>		

D -m Thermostat Cover

DI

No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	129350-49530	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
2	124101-49531	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
3	124101-49560	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△

Remarks

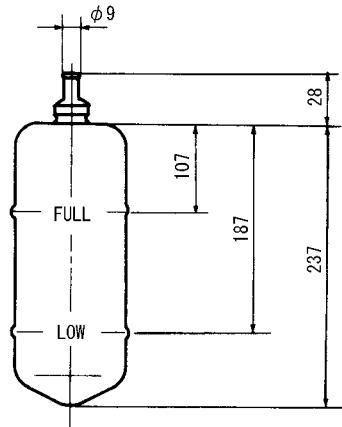
D-m Thermostat Cover

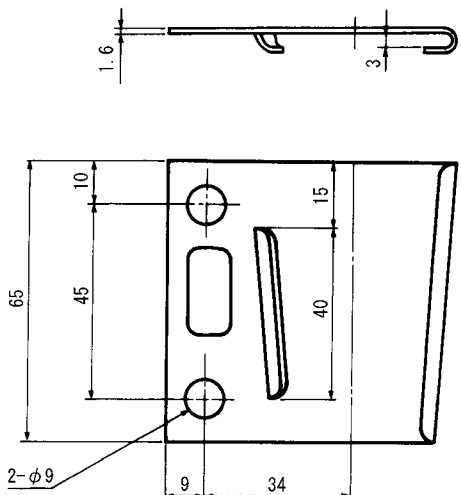
DI

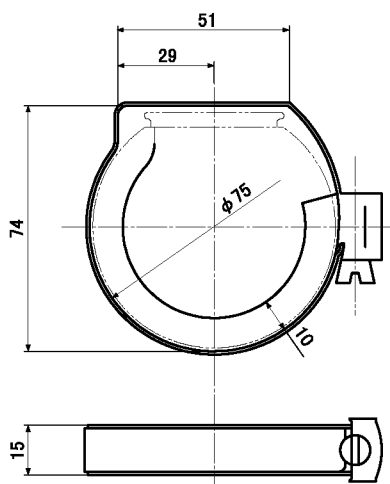
D-m	1	DM490030
Applicable engine TNV series		
Code No. 129350-49530		
Thermostat cover Upward (standard)		
Packing:129350-49540		

D-m	2	DM490020
Applicable engine TNV series		
Code No. 124101-49531		
Thermostat cover Lateral		
Packing:129350-49540		

D-m	3	DM490080
Applicable engine TNV series		
Code No. 124101-49560		
Thermostat cover Lateral		
Packing:129350-49540		

D-n	1	<p>DN440010</p>  <p>Total capacity:847cc Full:450cc,low:150cc,effective:300cc</p>
Applicable engine TNV series		
Code No. 124450-44510		
Sub tank		

D-n	2	<p>DN440020</p> 
Applicable engine TNV series		
Code No. 121256-44600		
Bracket		

D-n	3	<p>DN440030</p> 
Applicable engine TNV series		
Code No. 124450-44550		
Band		

D-n	4	DN440040
Applicable engine TNV series		
Code No. 120445-44530		
Sub tank		
		Total capacity:1250cc Full:800cc,low:200cc,effective:600cc

D-n	5	DN440050
Applicable engine TNV series		
Code No. 120445-44540		
Bracket		

D - o Drain Joint & Cock



No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	171056-49120	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	
2	121550-49111	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
3	119620-49290	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
4	129150-49100	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△

Remarks

D - o Drain Joint & Cock

DI

D - o	1	DO490060
Applicable engine TNV series		
Code No. 171056-49120		
Plug PT1/4		

D - o	2	DO490030
Applicable engine TNV series		
Code No. 121550-49111		
Drain joint		
		Installed on cylinder block

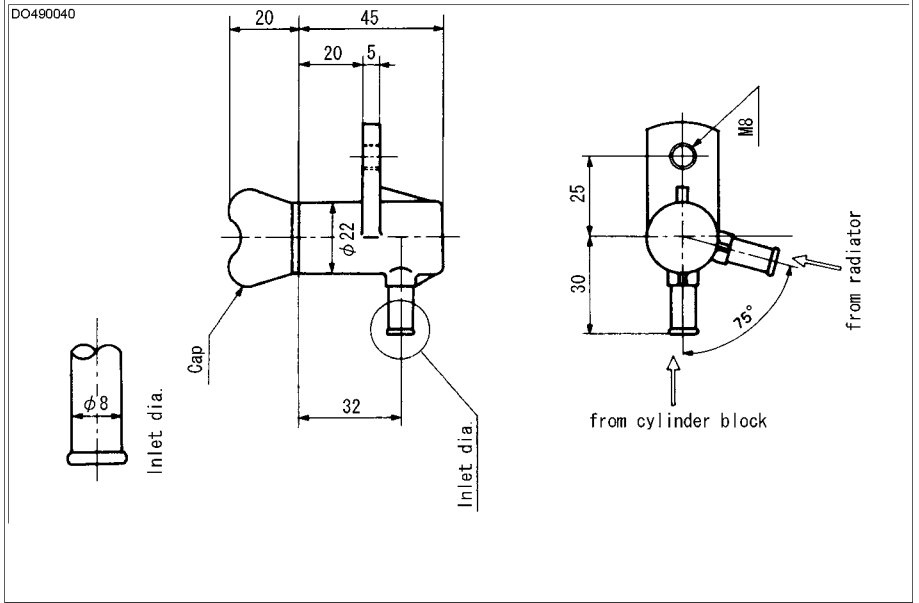
D - o	3	DO490010
Applicable engine TNV series		
Code No. 119620-49290		
Cock (Metal type)		
		Installed on cylinder block

D

-o Drain Joint & Cock

DI

D-o	4
Applicable engine TNV series	
Code No. 129150-49100	
Three-way cock (Plastic type)	



E -a Flywheel



No.	Code	E n g i n e																					
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T			
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	
1	171420-21590	⊙													⊙	Δ	Δ	⊙	Δ	Δ	⊙	Δ	Δ
2	129489-21590	×	⊙	⊙										×	⊙	⊙	×	⊙	⊙	×	⊙	⊙	
3	129488-21590	Δ	Δ	Δ										×	Δ	Δ	×	Δ	Δ	×	Δ	Δ	
4	171340-21590				⊙	Δ	Δ	⊙	Δ	Δ	⊙	Δ	Δ										
5	129128-21590				×	⊙	⊙	×	⊙	⊙	×	⊙	⊙										
6	171350-21590				×	Δ	Δ	×	Δ	Δ	×	Δ	Δ										
7	129188-21590				Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ										
8	129403-21590													×	Δ	Δ	×	Δ	Δ	×	Δ	Δ	
9	171420-21580	×	Δ	Δ										×	Δ	Δ	×	Δ	Δ	×	Δ	Δ	
10	171340-21580				×	Δ	Δ	×	Δ	Δ	×	Δ	Δ										

Remarks

E-a Flywheel

DI

E-a	1	EA210200
Applicable engine 3TNV82A 4TNV84 4TNV88 4TNV84T		<p>Assy' drawing: Z3-71301-0031, flywheel housing: 171420-01600, semi SAE #4 (deep) Flywheel: 171420-21400, ring gear: 124550-21600, Z=127 Weight: 25.9kg, GD2: 1.78kg-m², unbalance moment: 0gr-cm</p>
Code No. 171420-21590		
Flywheel CMP for CL (semi SAE #4)		

E-a	2	EA210210
Applicable engine 3TNV82A 4TNV84 4TNV88 4TNV84T		<p>Assy' drawing: Z3-71365-0420, flywheel housing: 171301-01600, semi SAE #5 Flywheel: 129489-21400, ring gear: 119865-21600, Z=116 Weight: 18.5kg, GD2: 0.94kg-m², unbalance moment: 0gr-cm</p>
Code No. 129489-21590		
Flywheel CMP for VM		

E-a	3	EA210110
Applicable engine 3TNV82A 4TNV84 4TNV88 4TNV84T		<p>Assy' drawing: Z3-19265-0100, flywheel housing: 119888-01600, SAE #5 Flywheel: 129488-21400, ring gear: 119865-21600, Z=116 Weight: 24.4kg, GD2: 1.31kg-m², unbalance moment: 0gr-cm</p>
Code No. 129488-21590		
Flywheel CMP for SAE #5 generator		

E-a Flywheel

DI

E-a	4	EA210170
Applicable engine 3TNV84 3TNV88 3TNV84T		<p>8-M8 Depth 15/21</p> <p>PC $\phi 222.25$</p> <p>$\phi 335$, $\phi 241.3$, $\phi 206$, $\phi 96$, $\phi 85$, $\phi 210$, $\phi 327.66$</p> <p>82, 49, 18, 27, 24, 7, 14, Z</p>
Code No. 171340-21590		
Flywheel CMP for CL(semi SAE #4)		
Assy' drawing:Z3-71301-0031,flywheel housing:171420-01600,semi SAE #4(deep) Flywheel:171340-21400,ring gear:124550-21600,Z=127 Weight:25.9kg,GD2:1.77kg-m ² ,unbalance moment:705gr-cm		

E-a	5	EA210100
Applicable engine 3TNV84 3TNV88 3TNV84T		<p>3-M12 Depth 17/22</p> <p>PC $\phi 125$</p> <p>$\phi 300$, $\phi 155$, $\phi 96$, $\phi 85$, $\phi 210$, $\phi 301$</p> <p>44, 24, 14, 9, 27, 46, Z</p>
Code No. 129128-21590		
Flywheel CMP for VM		
Assy' drawing:Z3-71365-0420,flywheel housing:171301-01600,semi SAE #5 Flywheel:129128-21400,ring gear:119865-21600,Z=116 Weight:18.5kg,GD2:0.95kg-m ² ,unbalance moment:705gr-cm		

E-a	6	EA210180
Applicable engine 3TNV84 3TNV88 3TNV84T		<p>3-M12 Depth 17/22</p> <p>PC $\phi 125$</p> <p>$\phi 330$, $\phi 155$, $\phi 96$, $\phi 85$, $\phi 263$, $\phi 327.66$</p> <p>44, 24, 9, 27, 14, Z</p>
Code No. 171350-21590		
Flywheel CMP for VM		
Assy' drawing:Z3-71340-0330,flywheel housing:171440-01600,semi SAE #4(shallow) Flywheel:171350-21400,ring gear:124550-21600,Z=127 Weight:22.1kg,GD2:1.32kg-m ² ,unbalance moment:705gr-cm		

E-a Flywheel

DI

E-a	7	EA210110
Applicable engine 3TNV84 3TNV88 3TNV84T		<p>Assy' drawing: Z3-19265-0100, flywheel housing: 119888-01600, SAE #5 Flywheel: 129188-21400, ring gear: 119865-21600, Z=116 Weight: 20.85kg, GD2: 1.16kg-m², unbalance moment: 705gr-cm</p>
Code No.		
129188-21590		
Flywheel CMP for SAE #5 generator		

E-a	8	EA210120
Applicable engine 4TNV84 4TNV88 4TNV84T		<p>Assy' drawing: Z3-71440-0480, flywheel housing: 171440-01600, semi SAE #4 (shallow) Flywheel: 129403-21400, ring gear: 124550-21600, Z=127 Weight: 16.0kg, GD2: 0.841kg-m², unbalance moment: 0gr-cm</p>
Code No.		
129403-21590		
Flywheel CMP for VM		

E-a	9	EA210190
Applicable engine 3TNV82A 4TNV84 4TNV88 4TNV84T		<p>Assy' drawing: Z3-71301-0011, flywheel housing: 171301-01600, semi SAE #5 Flywheel: 171420-21410, ring gear: 119865-21600, Z=116 Weight: 16.7kg, GD2: 0.92kg-m², unbalance moment: 0gr-cm</p>
Code No.		
171420-21580		
Flywheel CMP for VM		

<p>E-a</p>	<p>10</p>	<p>EA210180</p> <p>8-M8 Depth 15/21</p> <p>PC ϕ 222 25</p> <p>ϕ 300 ϕ 241.3 ϕ 206 ϕ 96 ϕ 85 ϕ 210 ϕ 301</p> <p>72 49 18 27 24 10</p> <p>Assy' drawing: Z3-71301-0011, flywheel housing: 171301-01600, semi SAE #5 Flywheel: 171340-21410, ring gear: 119865-21600, Z=116 Weight: 15.9kg, GD2: 0.91kg-m², unbalance moment: 705gr-cm</p>
<p>Applicable engine</p> <p>3TNV84 3TNV88 3TNV84T</p>		
<p>Code No.</p> <p>171340-21580</p>		
<p>Flywheel CMP for VM</p>		

E - b Flywheel Housing

DI

No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	171420-01600	☉	△	△	☉	△	△	☉	△	△	☉	△	△	☉	△	△	☉	△	△	☉	△	△
2	171440-01600		△	△		△	△		△	△		△	△		△	△		△	△		△	△
3	119888-01600	△	△	△	△	△	△	△	△	△	△	△	△	×	△	△	×	△	△	×	△	△
4	129612-01600	×	☉	☉	×	☉	☉	×	☉	☉	×	☉	☉	×	☉	☉	×	☉	☉	×	☉	☉
5	129129-01600	×	△	△	×	△	△	×	△	△	×	△	△	×	△	△	×	△	△	×	△	△
6	129150-01600	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
7	119820-01600	×	△	△	×	△	△	×	△	△	×	△	△	×	△	△	×	△	△	×	△	△

Remarks

E - b Flywheel Housing

DI

E - b	1	<p>EB010080</p> <p>Assy' drawing: Z3-71301-0031</p>
Applicable engine TNV series		
Code No. 171420-01600		
Flywheel housing Semi SAE #4 (deep:105)		

E - b	2	<p>EB010090</p> <p>Assy' drawing: Z3-71340-0330 Assy' drawing: Z3-71440-0480</p>
Applicable engine TNV series		
Code No. 171440-01600		
Flywheel housing Semi SAE #4 (shallow:80)		

E - b	3	<p>EB010290</p> <p>Assy' drawing: Z3-19265-0100</p>
Applicable engine TNV series		
Code No. 119888-01600		
Flywheel housing SAE #5(124)		

E - b Flywheel Housing

DI

E - b	4	<p>EB010170</p> <p>Assy' drawing:Z3-71301-0320 Assy' drawing:Z3-71301-0011 Assy' drawing:Z3-71365-0420</p>
Applicable engine TNV series		
Code No. 129612-01600		
Flywheel housing Semi SAE #5(80)		

E - b	5	<p>EB010100</p> <p>Assy' drawing:Z3-19822-0060</p>
Applicable engine TNV series		
Code No. 129129-01600		
Back plate		

E - b	6	<p>EB010180</p>
Applicable engine TNV series		
Code No. 129150-01600		
Back plate		

<p>E-b</p>	<p>7</p>	<p>EB010300</p>
<p>Applicable engine TNV series</p>		
<p>Code No. 119820-01600</p>		
<p>Back plate</p>		

E -c Bearing Retainer

DI

No.	Code	E n g i n e																							
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T					
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2			
1	119888-21450		Δ	Δ		Δ	Δ		Δ	Δ		Δ	Δ		Δ	Δ		Δ	Δ		Δ	Δ		Δ	Δ

Remarks

Apply to the flywheel CMP as follows.
 3TNV82A : 129488-21590
 3TNV84 (T) ·88 : 129188-21590
 4TNV84 (T) ·88 : 129488-21590

(See dimensions of coupling : Z3-19822-0450 as reference)

<p>E-c</p>	<p>1</p>	<p>EC210010</p> <p>Indispensable part, bearing: 24107-062054 Assy' drawing: Z3-19822-0450</p>
<p>Applicable engine TNV series</p>		
<p>Code No. 119888-21450</p>		
<p>Bearing retainer</p>		

No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	119462-26020	△	△		△	△		△	△		△	△		△	△		△	△		△	△	
2	119641-26010	△	△		△	△		△	△		△	△		△	△		△	△		△	△	
3	119807-26010	△	△		△	△		△	△		△	△		△	△		△	△		△	△	
4	178070-16000	△	△		△	△		△	△		△	△		△	△		△	△		△	△	
5	123962-26010	△	△		△	△		△	△		△	△		△	△		△	△		△	△	

Remarks

HOP Specifications

	unit	①	②	③	④	⑤
Type		PW1-C-3A	PW1-C-5A	PW1-C-7A	PW1-C-9A	PW2-D-11A
Theoretical discharge volume	cc/rev	3	5	7	9	11
Cont. rated Pressure	kg/cm ²	140	140	140	140	170
Max. set Pressure	kg/cm ²	160	160	160	160	210
Max. rpm (HOP)	rpm	3000	3000	3000	3000	3150
Installation position	—	Rear (Starter side)	Rear (Starter side)	Rear (Starter side)	Rear (Starter side)	Rear (Starter side)

Gear ratio of DI engine is 0.903. See section on (5-3) Gear train.

E-d Hydraulic Pump

DI

E-d	1	ED260010
Applicable engine TNV series		
Code No. 119462-26020		
PW1-C-3A Rear:starter side		
Packing(on gear case side):124240-01883		

E-d	2	ED260030
Applicable engine TNV series		
Code No. 119641-26010		
PW1-C-5A Rear:starter side		
Packing(on gear case side):124240-01883		

E-d	3	ED260010
Applicable engine TNV series		
Code No. 119807-26010		
PW1-C-7A Rear:starter side		
Packing(on gear case side):124240-01883		

E**-d Hydraulic Pump****DI**

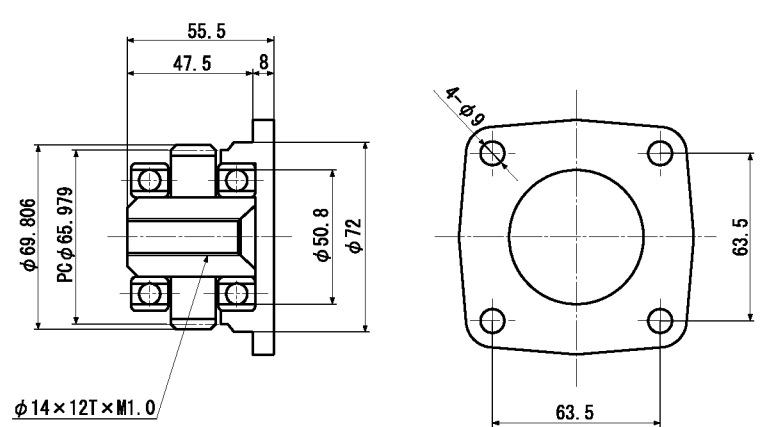
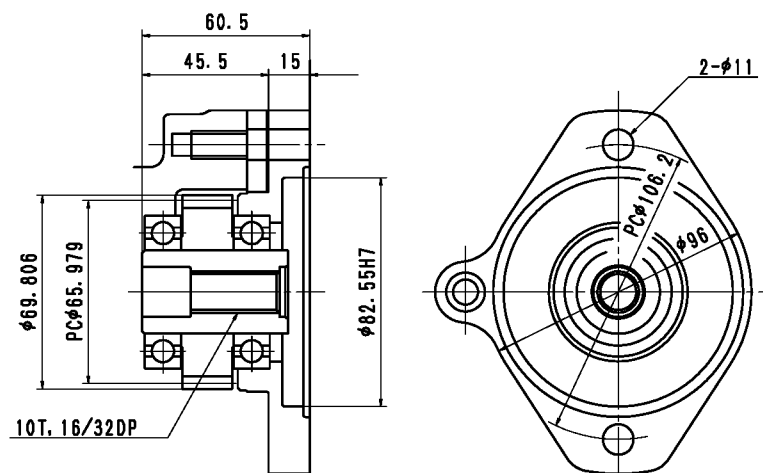
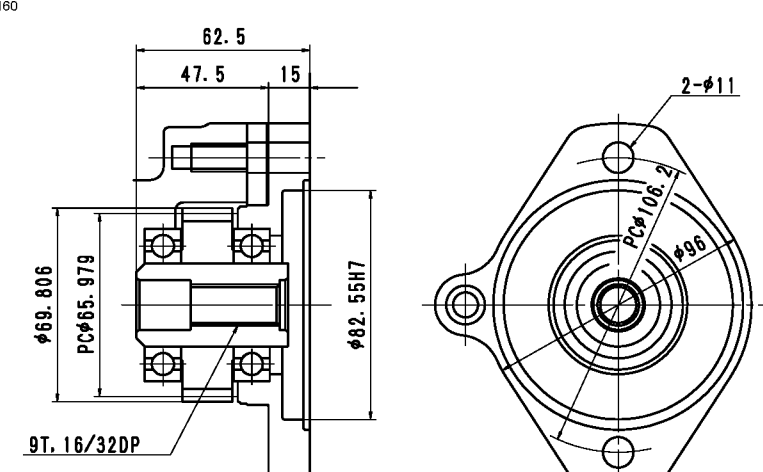
E-d	4	ED260010
Applicable engine TNV series		
Code No. 178070-16000		
PW1-C-9A Rear:starter side		
Packing(on gear case side):124240-01883		

E-d	5	ED260140
Applicable engine TNV series		
Code No. 123962-26010		
PW2-D-11A Rear:starter side		
Packing(on gear case side):124240-01883		

No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	129150-26000	△	△		△	△		△	△		△	△		△	△		△	△		△	△	
2	129136-26000	△	△		△	△		△	△		△	△		△	△		△	△		△	△	
3	129484-26200	△	△		△	△		△	△		△	△		△	△		△	△		△	△	

Remarks

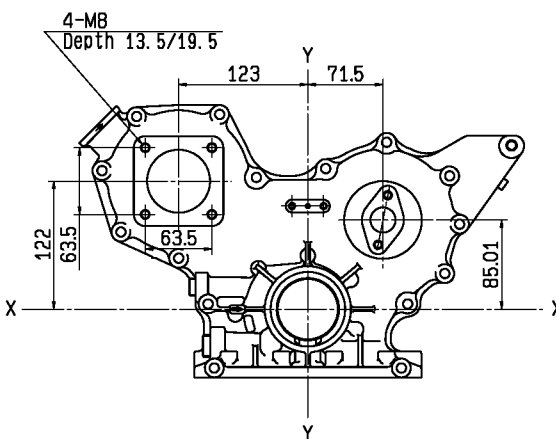
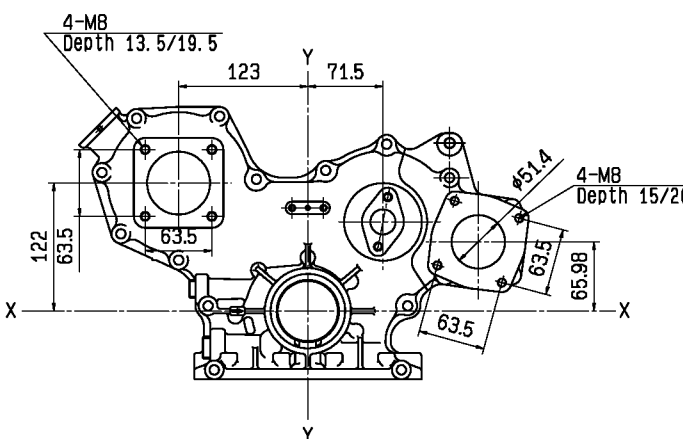
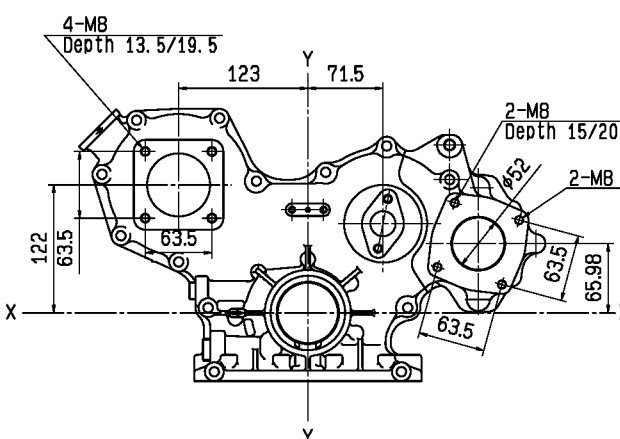
E**-e Hydraulic Pump Drive Device****DI**

<p>E-e</p>	<p>1</p>	<p>EE260030</p>  <p>Packing(on gear case side):124240-01883 Applicable cover:124240-01871 Applicable cover packing:124240-01883</p>
<p>Applicable engine TNV series</p>		
<p>Code No. 129150-26000</p>		
<p>Hyd.pump drive device for PW type pump</p>		
<p>E-e</p>	<p>2</p>	<p>EE260150</p>  <p>Packing(on gear case side):171353-26081 Cover:121023-26070 Cover packing:121023-26061</p>
<p>Applicable engine TNV series</p>		
<p>Code No. 129136-26000</p>		
<p>Hyd.pump drive device for SAE type pump (10T)</p>		
<p>E-e</p>	<p>3</p>	<p>EE260160</p>  <p>Packing(on gear case side):171353-26081 Cover:121023-26070 Cover packing:121023-26061</p>
<p>Applicable engine TNV series</p>		
<p>Code No. 129484-26200</p>		
<p>Hyd.pump drive device for SAE type pump (9T)</p>		

E-f	1	<p>EF010280</p>						
<p>Applicable engine</p> <table border="0"> <tr> <td>3TNV82A</td> <td>3TNV84</td> </tr> <tr> <td>3TNV88</td> <td>3TNV84T</td> </tr> <tr> <td>4TNV84</td> <td>4TNV88</td> </tr> </table>		3TNV82A	3TNV84	3TNV88	3TNV84T	4TNV84	4TNV88	
3TNV82A	3TNV84							
3TNV88	3TNV84T							
4TNV84	4TNV88							
<p>Code No.</p> <p style="text-align: center;">119802-01500</p>								
<p style="text-align: center;">Gear case Without HOP flange</p>		<p>Gear case flange:119802-01520 (3TNV84T:129006-01520) With boss for tachometer gear unit</p>						

E-f	2	<p>EF010270</p>						
<p>Applicable engine</p> <table border="0"> <tr> <td>3TNV82A</td> <td>3TNV84</td> </tr> <tr> <td>3TNV88</td> <td>3TNV84T</td> </tr> <tr> <td>4TNV84</td> <td>4TNV88</td> </tr> </table>		3TNV82A	3TNV84	3TNV88	3TNV84T	4TNV84	4TNV88	
3TNV82A	3TNV84							
3TNV88	3TNV84T							
4TNV84	4TNV88							
<p>Code No.</p> <p style="text-align: center;">129004-01500</p>								
<p style="text-align: center;">Gear case for PW type hyd.pump</p>		<p>Gear case flange:129004-01520 (3TNV84T:129006-01530) With boss for tachometer gear unit</p>						

E-f	3	<p>EF010280</p>						
<p>Applicable engine</p> <table border="0"> <tr> <td>3TNV82A</td> <td>3TNV84</td> </tr> <tr> <td>3TNV88</td> <td>3TNV84T</td> </tr> <tr> <td>4TNV84</td> <td>4TNV88</td> </tr> </table>		3TNV82A	3TNV84	3TNV88	3TNV84T	4TNV84	4TNV88	
3TNV82A	3TNV84							
3TNV88	3TNV84T							
4TNV84	4TNV88							
<p>Code No.</p> <p style="text-align: center;">129005-01500</p>								
<p style="text-align: center;">Gear case for SAE type hyd.pump</p>		<p>Gear case flange:129005-01520 (3TNV84T:129005-01540) With boss for tachometer gear unit</p>						

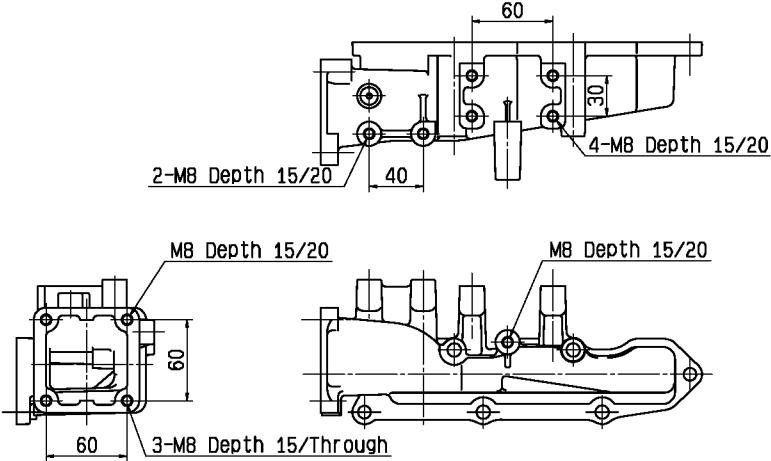
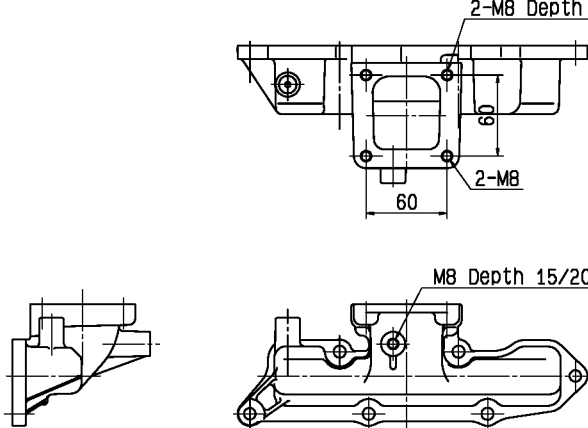
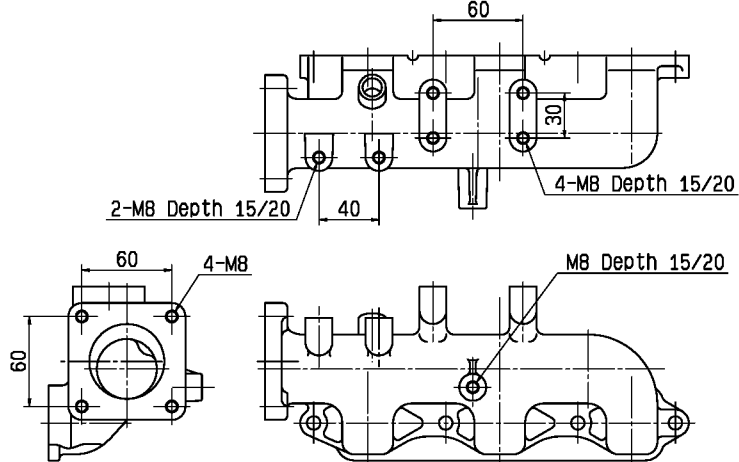
<p>E-f</p>	<p>4</p>	<p>EF010280</p>  <p>Gear case flange:119802-01520 With boss for tachometer gear unit</p>
<p>Applicable engine 4TNV84T</p>		
<p>Code No. 129508-01500</p>		
<p>Gear case Without HOP flange</p>		
<p>E-f</p>	<p>5</p>	<p>EF010270</p>  <p>Gear case flange:129004-01520 With boss for tachometer gear unit</p>
<p>Applicable engine 4TNV84T</p>		
<p>Code No. 129508-01510</p>		
<p>Gear case for PW type hyd.pump</p>		
<p>E-f</p>	<p>6</p>	<p>EF010280</p>  <p>Gear case flange:129005-01520 With boss for tachometer gear unit</p>
<p>Applicable engine 4TNV84T</p>		
<p>Code No. 129508-01520</p>		
<p>Gear case for SAE type hyd.pump</p>		

F -a Intake Manifold

DI

No.	Code	E n g i n e																							
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T					
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2			
1	119802-12100	⊙	⊙	×																					
2	119802-12120	△	△	×																					
3	119802-12130	△	△	⊙																					
4	119802-12140	△	△	△																					
5	129004-12100				⊙	⊙	⊙	⊙	⊙	⊙															
6	129005-12100				△	△	△	△	△	△															
7	129006-12100										⊙	⊙	⊙												
8	129006-12110										△	△	△												
9	129601-12100													⊙	⊙	⊙	⊙	⊙	⊙						
10	129602-12100													△	△	△	△	△	△						
11	129508-12100																			⊙	⊙	⊙			
12	129508-12120																			△	△	△			

Remarks

<p>F-a</p>	<p>1</p>	<p>FA120320</p>  <p>Packing:119813-12110</p>
<p>Applicable engine 3TNV82A</p>		
<p>Code No. 119802-12100</p>		
<p>Intake manifold Lateral,box type</p>		
<p>F-a</p>	<p>2</p>	<p>FA120310</p>  <p>Packing:119813-12110</p>
<p>Applicable engine 3TNV82A</p>		
<p>Code No. 119802-12120</p>		
<p>Intake manifold Upward,box type</p>		
<p>F-a</p>	<p>3</p>	<p>FA120340</p>  <p>Packing:119810-12111 Apply for 2700rpm and over</p>
<p>Applicable engine 3TNV82A</p>		
<p>Code No. 119802-12130</p>		
<p>Intake manifold Lateral,branch type</p>		

F-a	4	<p>FA120330</p>
<p>Applicable engine 3TNV82A</p>		<p>Packing:119810-12111 Apply for 2700rpm and over</p>
<p>Code No. 119802-12140</p>		
<p>Intake manifold Upward,branch type</p>		

F-a	5	<p>FA120360</p>
<p>Applicable engine 3TNV84 3TNV88</p>		<p>Packing:129001-12110</p>
<p>Code No. 129004-12100</p>		
<p>Intake manifold Lateral,box type</p>		

F-a	6	<p>FA120350</p>
<p>Applicable engine 3TNV84 3TNV88</p>		<p>Packing:129001-12110</p>
<p>Code No. 129005-12100</p>		
<p>Intake manifold Upward,box type</p>		

F

-a Intake Manifold

DI

F-a	7	<p>FA120380</p>
<p>Applicable engine 3TNV84T</p>		
<p>Code No. 129006-12100</p>		
<p>Intake manifold Lateral,box type</p>		<p>For open breather ventilation Packing:129001-12110</p>

F-a	8	<p>FA120350</p>
<p>Applicable engine 3TNV84T</p>		
<p>Code No. 129006-12110</p>		
<p>Intake manifold Upward,box type</p>		<p>For open breather ventilation Packing:129001-12110</p>

F-a	9	<p>FA120380</p>
<p>Applicable engine 4TNV84 4TNV88</p>		
<p>Code No. 129601-12100</p>		
<p>Intake manifold Lateral,box type</p>		<p>Packing:129407-12110</p>

F

-a Intake Manifold

DI

F-a	10	FA120370
Applicable engine 4TNV84 4TNV88		
Code No. 129602-12100		
Intake manifold Upward,box type		
Packing:129407-12110		

F-a	11	FA120390
Applicable engine 4TNV84T		
Code No. 129508-12100		
Intake manifold Lateral,box type		
For open breather ventilation Packing:129508-12110		

F-a	12	FA120400
Applicable engine 4TNV84T		
Code No. 129508-12120		
Intake manifold Upward,box type		
For open breather ventilation Packing:129508-12110		

F - b Air Cleaner

DI

No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	129211-12540	○	○	○	○	○	○	○	○	○												
2	119910-12601	△	△	△	△	△	△	△	△	△												
3	119910-12610	△	△	△	△	△	△	△	△	△												
4	119802-12500	△	△	△	△	△	△	△	△	△												
5	129209-12500	△	△	△	△	△	△	△	△	△												
6	119823-12510	△	△	△	△	△	△	△	△	△												
7	129601-12510													○	○	○	○	○	○	○	○	○
8	129601-12590													△	△	△	△	△	△	△	△	△
9	129601-12610													△	△	△	△	△	△	△	△	△
10	129601-12500													△	△	△	△	△	△	△	△	△
11	129601-12580													△	△	△	△	△	△	△	△	△
12	129915-12500										○	○	○							○	○	○

Remarks

F - b Air Cleaner

DI

F - b	1	<p>FB120380</p> <p>Filtration area: 0.90m² Element code: 119808-12520</p>
<p>Applicable engine</p> <p>3TNV82A 3TNV84 3TNV88</p>		
<p>Code No.</p> <p style="text-align: center;">129211-12540</p>		
<p style="text-align: center;">Air cleaner 5 inch (plastic type)</p>		

F - b	2	<p>FB120370</p> <p>W/visual indicator & double element Filtration area: (outer) 0.9m², (inner) 0.035m² Element code: (outer) 119808-12520, (inner) 129051-12530, Indicator code: 126650-12680</p>
<p>Applicable engine</p> <p>3TNV82A 3TNV84 3TNV88</p>		
<p>Code No.</p> <p style="text-align: center;">119910-12601</p>		
<p style="text-align: center;">Air cleaner 5 inch (plastic type)</p>		

F - b	3	<p>FB120380</p> <p>W/electric indicator & double element Filtration area: (outer) 0.9m², (inner) 0.035m² Element code: (outer) 119808-12520, (inner) 129051-12530, Indicator code: 119140-12680</p>
<p>Applicable engine</p> <p>3TNV82A 3TNV84 3TNV88</p>		
<p>Code No.</p> <p style="text-align: center;">119910-12610</p>		
<p style="text-align: center;">Air cleaner 5 inch (plastic type)</p>		

F - b Air Cleaner

DI

F - b	4	<p>FB120490</p>
<p>Applicable engine</p> <p>3TNV82A 3TNV84 3TNV88</p>		
<p>Code No.</p> <p style="text-align: center;">119802-12500</p>		
<p style="text-align: center;">Air cleaner 5 inch (plastic type)</p>		<p>Filtration area:0.90m² Element code:129004-12520</p>

F - b	5	<p>FB120500</p>
<p>Applicable engine</p> <p>3TNV82A 3TNV84 3TNV88</p>		
<p>Code No.</p> <p style="text-align: center;">129209-12500</p>		
<p style="text-align: center;">Air cleaner 5 inch (plastic type)</p>		<p>W/visual indicator & single element Filtration area:0.90m² Element code:119808-12520,Indicator code:126650-12680</p>

F - b	6	<p>FB120510</p>
<p>Applicable engine</p> <p>3TNV82A 3TNV84 3TNV88</p>		
<p>Code No.</p> <p style="text-align: center;">119823-12510</p>		
<p style="text-align: center;">Air cleaner 5 inch (plastic type)</p>		<p>W/electric indicator & single element Filtration area:0.90m² Element code:119808-12520,Indicator code:119140-12680</p>

F - b Air Cleaner

DI

F - b	7	<p>FB120390</p>
<p>Applicable engine</p> <p>4TNV84 4TNV88 4TNV84T</p>		
<p>Code No.</p> <p style="text-align: center;">129601-12510</p>		
<p style="text-align: center;">Air cleaner 6 inch (plastic type)</p>		<p>Filtration area: 1.4m² Element code: 129062-12560</p>

F - b	8	<p>FB120400</p>
<p>Applicable engine</p> <p>4TNV84 4TNV88 4TNV84T</p>		
<p>Code No.</p> <p style="text-align: center;">129601-12590</p>		
<p style="text-align: center;">Air cleaner 6 inch (plastic type)</p>		<p>W/visual indicator & double element Filtration area: (outer) 1.4m², (inner) 0.057m² Element code: (outer) 119005-12511, (inner) 119005-12571, Indicator code: 126650-12680</p>

F - b	9	<p>FB120410</p>
<p>Applicable engine</p> <p>4TNV84 4TNV88 4TNV84T</p>		
<p>Code No.</p> <p style="text-align: center;">129601-12610</p>		
<p style="text-align: center;">Air cleaner 6 inch (plastic type)</p>		<p>W/electric indicator & double element Filtration area: 0.90m² Element code: (outer) 119005-12511, (inner) 119005-12571, Indicator code: 119140-12680</p>

F - b Air Cleaner

DI

F - b	10	FB120520
Applicable engine 4TNV84 4TNV88 4TNV84T		<p>Filtration area: 1.4m² Element code: 129906-12520</p>
Code No.		
129601-12500		
Air cleaner 6 inch (plastic type)		

F - b	11	FB120530
Applicable engine 4TNV84 4TNV88 4TNV84T		<p>W/visual indicator & double element Filtration area: (outer) 1.4m², (inner) 0.057m² Element code F(outer) 129062-12560, (inner) 119005-12571, Indicator code: 126650-12680</p>
Code No.		
129601-12580		
Air cleaner 6 inch (plastic type)		

F - b	12	FB120420
Applicable engine 3TNV84T 4TNV84T		<p>Filtration area: (outer) 1.4m², (inner) 0.057m² Element code: (outer) 129062-12560, (inner) 119005-12571</p>
Code No.		
129915-12500		
Air cleaner 6 inch (plastic type)		

No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	119802-12560	○	○	○	○	○	○	○	○	○												
2	129508-12560										○	○	○	○	○	○	○	○	○	○	○	○

Remarks

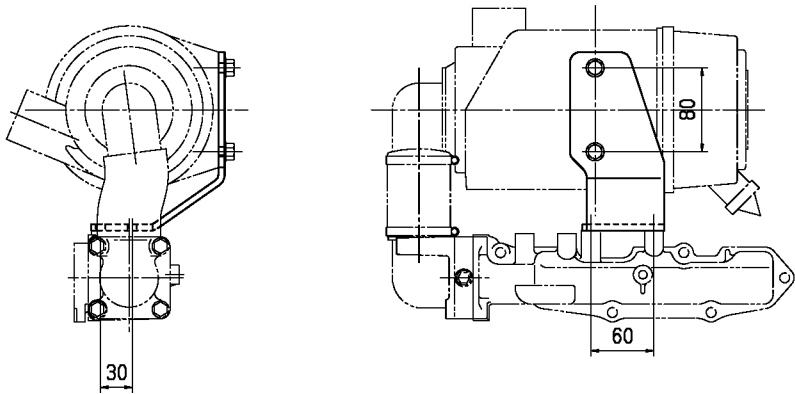
129508-12560 (air cleaner support) Indispensable parts

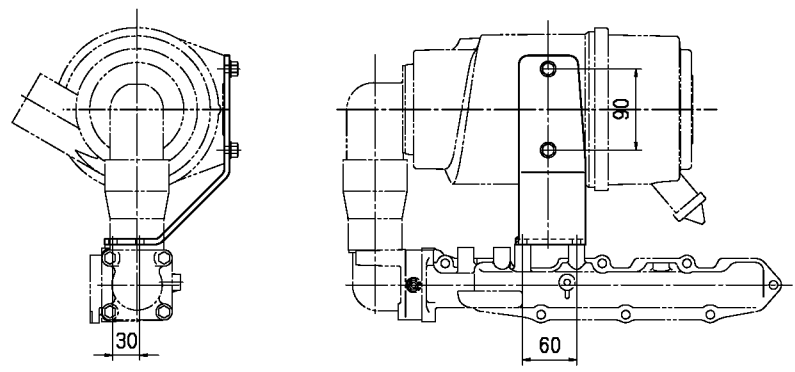
Engine model	Air Intake Hose	Clip	Air Cleaner
3TNV84T	129006-12060 129006-12080	23000-041000 × 1 23000-048000 × 2 23000-080000 × 1	129915-12500
4TNV84 4TNV88	129642-12550	23000-060000 × 1 23000-080000 × 1	129601-12510
4TNV84T	129508-12060 129508-12080	23000-060000 × 2 23000-070000 × 1 23000-080000 × 1	129915-12500

F

-c Air Cleaner Support

DI

F-c	1	<p>FC120140</p>  <p>Indispensable part,air intake hose:119910-12210,clip:23000-060000 2pcs. Air cleaner:129211-12540</p>
<p>Applicable engine</p> <p>3TNV82A 3TNV84 3TNV88</p>		
<p>Code No.</p> <p style="text-align: center;">119802-12560</p>		
<p style="text-align: center;">Air cleaner support for 5 inch plastic type</p>		

F-c	2	<p>FC120150</p>  <p>This illustration shows the parts for N/A engine. Refer to Remarks for indispensable parts on p. F-c-1.</p>
<p>Applicable engine</p> <p>3TNV84T 4TNV84 4TNV88 4TNV84T</p>		
<p>Code No.</p> <p style="text-align: center;">129508-12560</p>		
<p style="text-align: center;">Air cleaner support for 6 inch plastic type</p>		

F-d	1	FD120010
Applicable engine TNV series		<p style="text-align: center;">Air chamber diameter: $\varnothing 120$</p>
Code No. 121855-12060		
Resonator $\varnothing 50$ joint		

F-d	2	FD120020
Applicable engine TNV series		<p style="text-align: center;">Air chamber diameter: $\varnothing 120$</p>
Code No. 119005-12060		
Resonator $\varnothing 57$ joint		

F-d	3	FD120040
Applicable engine TNV series		<p style="text-align: center;">Air chamber diameter: $\varnothing 140$</p>
Code No. 119160-12060		
Resonator $\varnothing 64$ joint		

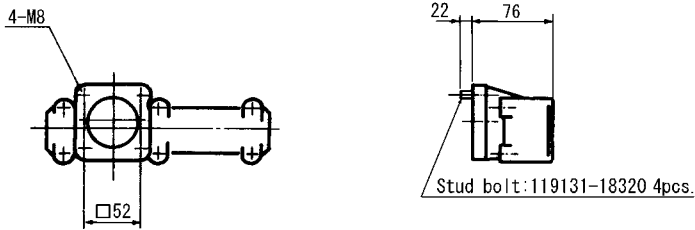
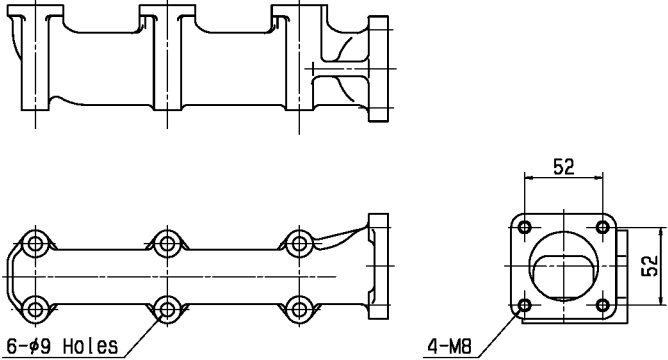
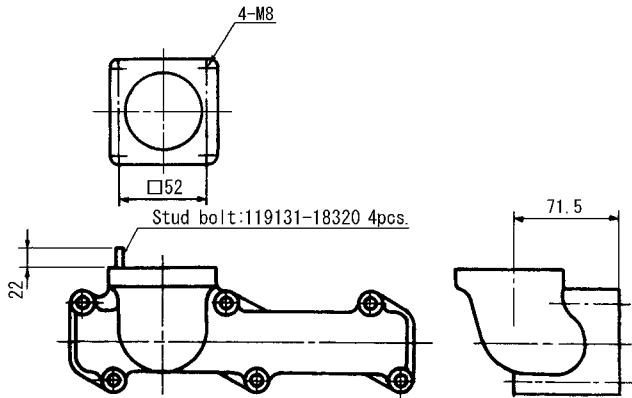
No.	Code	E n g i n e																							
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T					
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2			
1	119888-13101	⊙	⊙	⊙																					
2	119802-13109	△	△	△																					
3	119802-13110	△	△	△																					
4	119810-13100	○	○	○																					
5	119802-13129	△	△	△																					
6	171350-13100				⊙	⊙	⊙	⊙	⊙	⊙															
7	129004-13109				△	△	△	△	△	△															
8	129004-13110				△	△	△	△	△	△															
9	129100-13110				○	○	○	○	○	○															
10	129004-13129				△	△	△	△	△	△															
11	129139-13100										⊙	⊙													
12	129006-13110										×	×	⊙												
13	129411-13100													⊙	⊙	⊙	⊙	⊙	⊙						
14	129601-13109													△	△	△	△	△	△						
15	129601-13110													△	△	△	△	△	△						
16	129400-13101													○	○	○	○	○	○						
17	129640-13109													△	△	△	△	△	△						
18	129403-13130																			⊙	×	×			
19	129403-13120																			×	⊙	⊙			

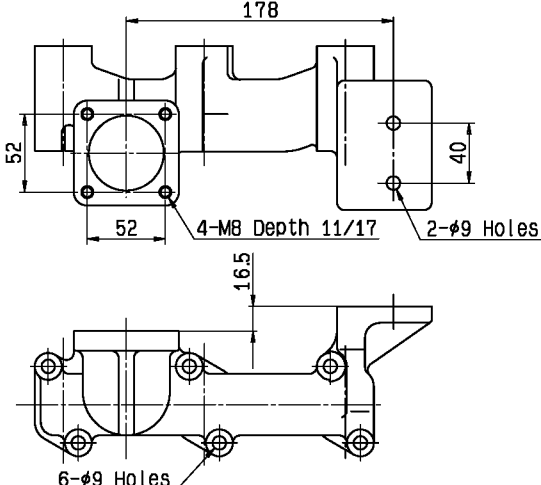
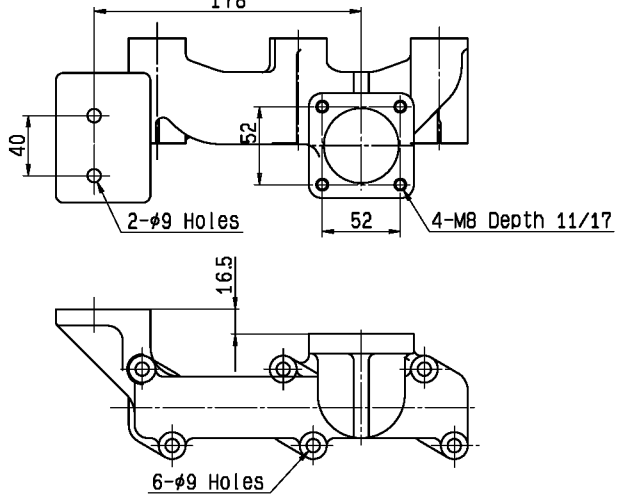
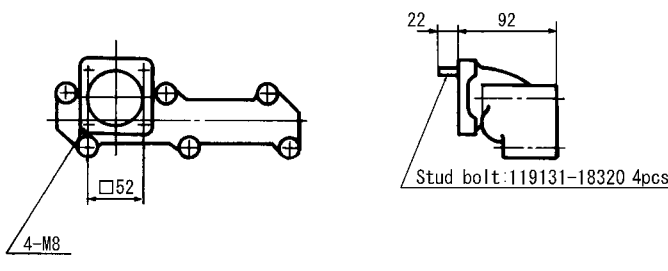
Remarks

G-a	1	GA130260
Applicable engine 3TNV82A		
Code No. 119888-13101		
Exhaust manifold Upward		
		Gasket(manifold):119810-13110 Applicable silencer gasket:129004-13200

G-a	2	GA130320
Applicable engine 3TNV82A		
Code No. 119802-13109		
Exhaust manifold Upward, with muffler support		
		Gasket(manifold):119810-13110 Applicable silencer gasket:129004-13200 Applicable silencer:129004-13500, 129004-13550

G-a	3	GA130330
Applicable engine 3TNV82A		
Code No. 119802-13110		
Exhaust manifold Upward, with muffler support		
		Gasket(manifold):119810-13110 Applicable silencer gasket:129004-13200 Applicable silencer:129004-13500, 129004-13550

<p>G- a</p>	<p>4</p>	<p>GA130070</p>  <p>Gasket(manifold):119810-13110 Applicable silencer gasket:129004-13200</p>
<p>Applicable engine 3TNV82A</p>		
<p>Code No. 119810-13100</p>		
<p>Exhaust manifold Lateral</p>		
<p>G- a</p>	<p>5</p>	<p>GA130340</p>  <p>Gasket(manifold):119810-13110 Applicable silencer gasket:129004-13200 Applicable silencer:129240-13500, 129240-13550</p>
<p>Applicable engine 3TNV82A</p>		
<p>Code No. 119802-13129</p>		
<p>Exhaust manifold Lateral (flywheel side)</p>		
<p>G- a</p>	<p>6</p>	<p>GA130210</p>  <p>Gasket(manifold):129150-13110 Applicable silencer gasket:129004-13200</p>
<p>Applicable engine 3TNV84 3TNV88</p>		
<p>Code No. 171350-13100</p>		
<p>Exhaust manifold Upward</p>		

<p>G- a</p>	<p>7</p>	<p>GA130350</p>  <p>Gasket(manifold):129150-13110 Applicable silencer gasket:129004-13200 Applicable silencer:129004-13500, 129004-13550</p>
<p>Applicable engine 3TNV84 3TNV88</p>		
<p>Code No. 129004-13109</p>		
<p>Exhaust manifold Upward, with muffler support</p>		
<p>G- a</p>	<p>8</p>	<p>GA130360</p>  <p>Gasket(manifold):129150-13110 Applicable silencer gasket:129004-13200 Applicable silencer:129004-13500, 129004-13550</p>
<p>Applicable engine 3TNV84 3TNV88</p>		
<p>Code No. 129004-13110</p>		
<p>Exhaust manifold Upward, with muffler support</p>		
<p>G- a</p>	<p>9</p>	<p>GA130130</p>  <p>Gasket(manifold):129150-13110 Applicable silencer gasket:129004-13200</p>
<p>Applicable engine 3TNV84 3TNV88</p>		
<p>Code No. 129100-13110</p>		
<p>Exhaust manifold Lateral</p>		

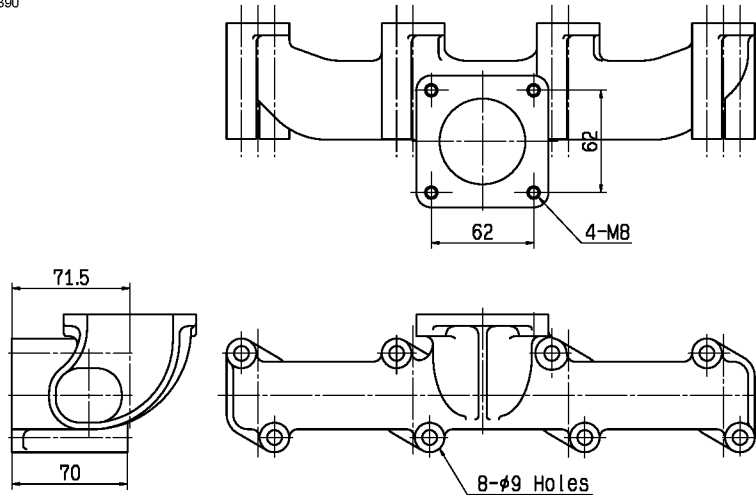
G- a	10	<p>GA130370</p>
Applicable engine 3TNV84 3TNV88		
Code No. 129004-13129		
Exhaust manifold Lateral (flywheel side)		
		Gasket(manifold):129150-13110 Applicable silencer gasket:129004-13200 Applicable silencer:129240-13500, 129240-13550

G- a	11	<p>GA130160</p>
Applicable engine 3TNV84T		
Code No. 129139-13100		
Exhaust manifold Turbine RHB3		
		Gasket(manifold):129150-13110 Gasket(turbocharger):129477-18101

G- a	12	<p>GA130380</p>
Applicable engine 3TNV84T		
Code No. 129006-13110		
Exhaust manifold Turbine RHF4		
		For 3000rpm, Gasket(manifold):129150-13110 Gasket(turbocharger):129403-18091

G- a	13
Applicable engine 4TNV84 4TNV88	
Code No. 129411-13100	
Exhaust manifold Upward	

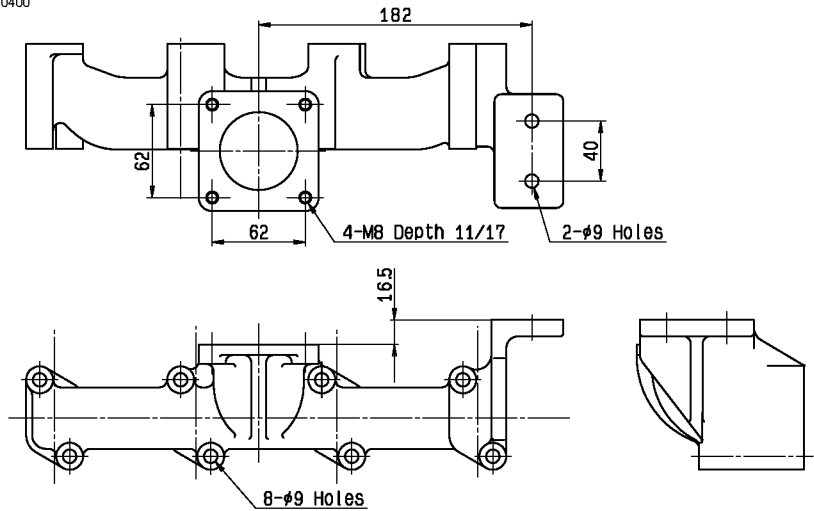
GA130390



Gasket(manifold):129550-13110
 Applicable silencer gasket:129930-13201

G- a	14
Applicable engine 4TNV84 4TNV88	
Code No. 129601-13109	
Exhaust manifold Upward, with muffler support	

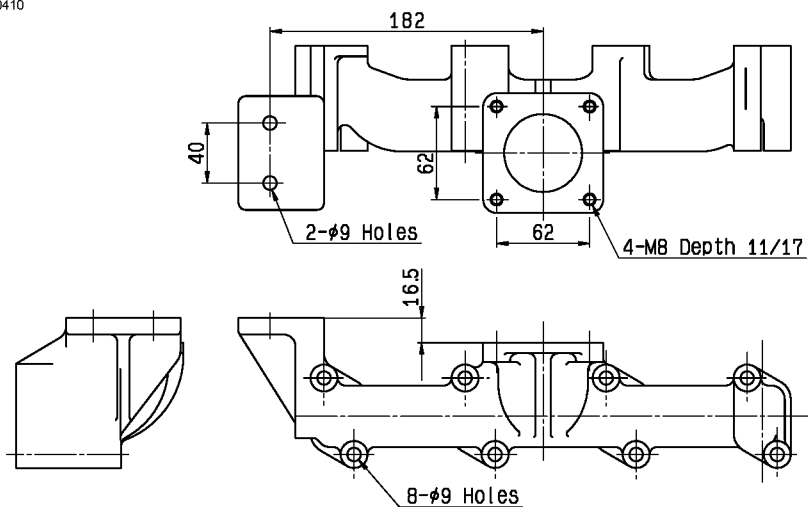
GA130400



Gasket(manifold):129550-13110
 Applicable silencer gasket:129930-13201
 Applicable silencer:129601-13500, 129601-13550

G- a	15
Applicable engine 4TNV84 4TNV88	
Code No. 129601-13110	
Exhaust manifold Upward, with muffler support	

GA130410



Gasket(manifold):129550-13110
 Applicable silencer gasket:129930-13201
 Applicable silencer:129601-13500, 129601-13550

G-a	16	<p>GA130220</p> <p>Stud bolt: 119131-18320 4pcs</p> <p>62</p> <p>4-M8 Depth 11/16</p> <p>62</p> <p>22</p> <p>70</p> <p>92</p> <p>Gasket(manifold): 129550-13110 Applicable silencer gasket: 129930-13201</p>
<p>Applicable engine</p> <p>4TNV84 4TNV88</p>		
<p>Code No.</p> <p>129400-13101</p>		
<p>Exhaust manifold</p> <p>Lateral</p>		

G-a	17	<p>GA130420</p> <p>4-M8 Depth 11/16</p> <p>6-φ9 HOLES</p> <p>62</p> <p>62</p> <p>4-M8</p> <p>Gasket(manifold): 129550-13110 Applicable silencer gasket: 129930-13201 Applicable silencer: 129640-13500, 129640-13550</p>
<p>Applicable engine</p> <p>4TNV84 4TNV88</p>		
<p>Code No.</p> <p>129640-13109</p>		
<p>Exhaust manifold</p> <p>Lateral (flywheel side)</p>		

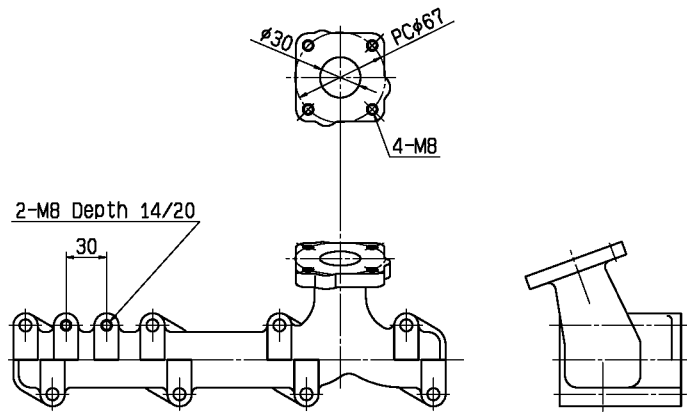
G-a	18	<p>GA130430</p> <p>φ25</p> <p>PCφ58</p> <p>3-M8</p> <p>2-M8 Depth 14/20</p> <p>30</p> <p>Gasket(manifold): 129550-13110 Gasket(turbocharger): 129477-18101</p>
<p>Applicable engine</p> <p>4TNV84T</p>		
<p>Code No.</p> <p>129403-13130</p>		
<p>Exhaust manifold</p> <p>Turbine RHB3</p>		

G-a Exhaust Manifold

DI

G-a	19
Applicable engine 4TNV84T	
Code No. 129403-13120	
Exhaust manifold Turbine RHF4	

GA130440



Gasket(manifold):129550-13100
Gasket(turbocharger):129403-18091

No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	129004-13550	○	○	×	○	○	×	○	○	×												
2	129004-13500	△	△	○	△	△	○	△	△	○												
3	129240-13550	△	△	×	△	△	×	△	△	×												
4	129240-13500	△	△	△	△	△	△	△	△	△												
5	129012-13510										△	△	△									
6	129080-13510										○	○	○									
7	129601-13550													○	○	×	○	○	×			
8	129601-13500													△	△	○	△	△	○			
9	129640-13550													△	△	×	△	△	×			
10	129640-13500													△	△	△	△	△	△			
11	129508-13520																			○	○	○
12	129533-13500																			△	△	△

Remarks

Silencer	Exh. Manifold	Silencer Gasket	Engine model	Silencer position
129004-13500 (2700 rpm~) 129004-13550 (~ 2600 rpm)	119802-13100	129004-13200	3TNV82A	Mount on Exh. Manifold Fw side out
	119802-13110	129004-13200	3TNV82A	Mount on Exh. Manifold Fan side out
	129004-13100	129004-13200	3TNV84/88	Mount on Exh. Manifold Fw side out
	129004-13110	129004-13200	3TNV84/88	Mount on Exh. Manifold Fan side out
129240-13500 (2700 rpm~) 129240-13550 (~ 2600 rpm)	119802-13120	129004-13200	3TNV82A	Mount on Fw Housing
	129004-13120	129004-13200	3TNV84/88	Mount on Fw Housing
129601-13500 (2600 rpm~) 129601-13550 (~ 2500 rpm)	129601-13100	129930-13200	4TNV84/88	Mount on Exh. Manifold Fw side out
	129601-13110	129930-13200	4TNV84/88	Mount on Exh. Manifold Fan side out
129640-13500 (2600 rpm~) 129640-13550 (~ 2500 rpm)	129640-13100	129930-13200	4TNV84/88	Mount on Fw Housing

G-b Silencer

DI

G-b	1	<p>GB130340</p> <p>(1): 3TNV82A (2): 3TNV84/88</p>
<p>Applicable engine</p> <p>3TNV82A 3TNV84 3TNV88</p>		<p>This drawing shows Fan side outlet. Gasket: 129004-13200</p>
<p>Code No.</p> <p style="font-size: 1.2em;">129004-13550</p>		
<p style="text-align: center;">Silencer Ø150 (~2600rpm)</p>		

G-b	2	<p>GB130290</p> <p>(1): 3TNV82A (2): 3TNV84/88</p>
<p>Applicable engine</p> <p>3TNV82A 3TNV84 3TNV88</p>		<p>This drawing shows Flywheel side outlet. Gasket: 129004-13200</p>
<p>Code No.</p> <p style="font-size: 1.2em;">129004-13500</p>		
<p style="text-align: center;">Silencer Ø150 (2700rpm~)</p>		

G-b	3	<p>GB130300</p> <p>(1): 3TNV82A (2): 3TNV84/88</p>
<p>Applicable engine</p> <p>3TNV82A 3TNV84 3TNV88</p>		<p>Gasket: 129004-13200</p>
<p>Code No.</p> <p style="font-size: 1.2em;">129240-13550</p>		
<p style="text-align: center;">Silencer Ø150 (~2600rpm)</p>		

G-b Silencer

DI

G-b	4	<p>GB130300</p> <p>(1): 3TNV82A (2): 3TNV84/88</p>
<p>Applicable engine</p> <p>3TNV82A 3TNV84 3TNV88</p>		
<p>Code No.</p> <p>129240-13500</p>		
<p>Silencer</p> <p>Ø150 (2700rpm~)</p>		<p>Gasket: 129004-13200</p>

G-b	5	<p>GB130130</p>
<p>Applicable engine</p> <p>3TNV84T</p>		
<p>Code No.</p> <p>129012-13510</p>		
<p>Silencer</p> <p>Ø150</p>		<p>Gasket: 129403-18091</p>

G-b	6	<p>GB130220</p>
<p>Applicable engine</p> <p>3TNV84T</p>		
<p>Code No.</p> <p>129080-13510</p>		
<p>Silencer</p> <p>Ø150</p>		<p>Gasket: 129403-18091</p>

G-b Silencer

DI

G-b	7	
Applicable engine 4TNV84 4TNV88		
Code No. 129601-13550		This drawing shows Fan side outlet. Gasket: 129930-13201
Silencer Ø170 (~2600rpm)		

G-b	8	
Applicable engine 4TNV84 4TNV88		
Code No. 129601-13500		This drawing shows Flywheel side outlet. Gasket: 129930-13201
Silencer Ø170 (2700rpm~)		

G-b	9	
Applicable engine 4TNV84 4TNV88		
Code No. 129640-13550		Gasket: 129930-13201
Silencer Ø170 (~2600rpm)		

G - b Silencer

DI

G-b	10	<p>GB130320</p>
Applicable engine 4TNV84 4TNV88		
Code No. 129640-13500		
Silencer Ø170 (2700rpm~)		
Gasket: 129930-13201		

G-b	11	<p>GB130180</p>
Applicable engine 4TNV84T		
Code No. 129508-13520		
Silencer Ø170		
Gasket: 129508-18090		

G-b	12	<p>GB130400</p>
Applicable engine 4TNV84T		
Code No. 129533-13500		
Silencer Ø170		
Gasket: 129508-18090		



G-c Silencer Gasket



No.	Code	Engine																							
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T					
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2			
1	129004-13200	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙															
2	129930-13201													⊙	⊙	⊙	⊙	⊙	⊙						
3	129403-18091										⊙	⊙													
4	129508-18090																			⊙	⊙	⊙			

Remarks

G-c	1	<p>GC130100</p>
<p>Applicable engine</p> <p>3TNV82A 3TNV84 3TNV88</p>		
<p>Code No.</p> <p style="text-align: center;">129004-13200</p>		
<p>Gasket sq 52</p>		

G-c	2	<p>GC130130</p>
<p>Applicable engine</p> <p>4TNV84 4TNV88</p>		
<p>Code No.</p> <p style="text-align: center;">129930-13201</p>		
<p>Gasket sq 62</p>		

G-c	3	<p>GC180060</p>
<p>Applicable engine</p> <p>3TNV84T</p>		
<p>Code No.</p> <p style="text-align: center;">129403-18091</p>		
<p>Gasket RHB31 T/C outlet</p>		

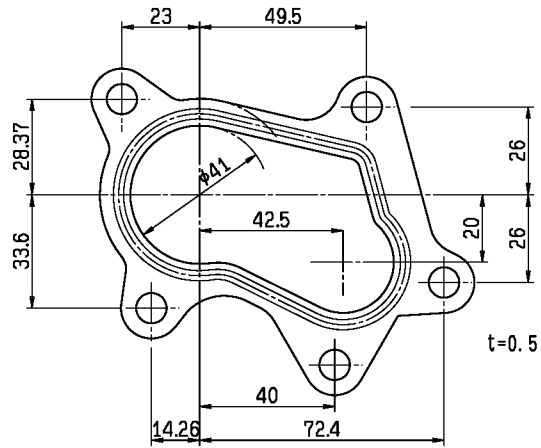
T=1.5 when installed.

G - c Silencer Gasket

DI

G - c	4
Applicable engine 4TNV84T	
Code No. 129508-18090	
Gasket RHF4 T/C outlet	

GC180230



No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	171083-13300	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ													
2	129411-13300												Δ	Δ	Δ	Δ	Δ	Δ				

Remarks

G-d	1	<p>GD130030</p>
<p>Applicable engine</p> <p>3TNV82A 3TNV84 3TNV88</p>		
<p>Code No.</p> <p style="text-align: center;">171083-13300</p>		
<p style="text-align: center;">Exhaust bend JIS 5K-50A</p>		<p>Applicable gasket(silencer side):23217-050000</p>

G-d	2	<p>GD130040</p>
<p>Applicable engine</p> <p>4TNV84 4TNV88</p>		
<p>Code No.</p> <p style="text-align: center;">129411-13300</p>		
<p style="text-align: center;">Exhaust bend JIS 5K-50A</p>		<p>Applicable gasket(silencer side):23217-050000</p>

No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	119940-13590	○	○	○																		
2	121120-13590				○	○	○	○	○	○	○	○	○									
3	129640-13590													○	○	○	○	○	○	○	○	○

Remarks

G-e Exhaust pipe clamp

DI

G-e	1	<p>GE130500</p>
<p>Applicable engine</p> <p>3TNV82A</p>		
<p>Code No.</p> <p>119940-13590</p>		
<p>Exhaust pipe clamp CMP</p> <p>Ø42.5</p>		

G-e	2	<p>GE130070</p>
<p>Applicable engine</p> <p>3TNV84 3TNV88</p> <p>3TNV84T</p>		
<p>Code No.</p> <p>121120-13590</p>		
<p>Exhaust pipe clamp CMP</p> <p>Ø46</p>		

G-e	3	<p>GE130510</p>
<p>Applicable engine</p> <p>4TNV84 4TNV88</p> <p>4TNV84T</p>		
<p>Code No.</p> <p>129640-13590</p>		
<p>Exhaust pipe clamp CMP</p> <p>Ø62</p>		

No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	129129-77010	⊙	×	×	⊙	×	×	⊙	×	×	⊙	×	×	×	×	×	×	×	×	×	×	×
2	129407-77010	△	△	△	△	△	△	△	△	△	△	△	△	⊙	△	△	⊙	△	△	⊙	△	△
3	129608-77010	△	⊙	⊙	△	⊙	⊙	△	⊙	⊙	△	⊙	⊙	×	×	×	×	×	×	×	×	×
4	129242-77010	△	△	△	△	△	△	△	△	△	△	△	△	×	⊙	⊙	×	⊙	⊙	×	⊙	⊙
5	129136-77011	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△

Remarks

For selection of starter motor, see "TNV APPLICATION MANUAL, section 1.3 startability".

H-a Starting Motor

DI

H-a	1	<p>HA770050</p>
Applicable engine 3TNV82A 3TNV84 3TNV88 3TNV84T		
Code No. 129129-77010		
Starting motor DC12V/1.2kW		
<p>Mag.sw.current:rush 50A/steady-state 13.5A Model type:RA1.2,Z=13(w/eccentricity 2±0.1mm)</p>		

H-a	2	<p>HA770060</p>
Applicable engine TNV series		
Code No. 129407-77010		
Starting motor DC12V/1.4kW		
<p>Mag.sw.current:rush 50A/steady-state 13.5A Model type:RA1.4,Z=13(w/eccentricity 2±0.1mm)</p>		

H-a	3	<p>HA770200</p>
Applicable engine 3TNV82A 3TNV84 3TNV88 3TNV84T		
Code No. 129608-77010		
Starting motor DC12V/1.4kW		
<p>Mag.sw.current:rush 52A/steady-state 19A Model type:CR1.4,Z=11(w/eccentricity 4.8mm)</p>		

H-a	4	<p>HA770240</p>
Applicable engine TNV series		
Code No. 129242-77010		
Starting motor DC12V/1.7kW		Mag.sw.current:rush 52A,/steady-state 19A Model type:CR1.7,Z=11

H-a	5	<p>HA770210</p>
Applicable engine TNV series		
Code No. 129136-77011		
Starting motor DC12V/2.3kW		Mag.sw.current:rush 66A,/steady-state 20A Model type:JR2.3,Z=15

H - b Starting Aid

DI

No.	Code	E n g i n e																					
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T			
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	
1	129120-77501	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙				⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	
2	129100-77500	△	△	△	△	△	△	△	△	△				△	△	△	△	△	△	△	△	△	
3	129033-77500										⊙	⊙	⊙										
4	129579-77500	△	△	△	△	△	△	△	△	△				△	△	△	△	△	△	△	△	△	
5	129486-77500	△	△	△	△	△	△	△	△	△				△	△	△	△	△	△	△	△	△	

Remarks

For selection of air heater capacity, see "TNV APPLICATION MANUAL, section 1.3 startability".

Air heater capacity (W)	Air Inlet	Wire Type	Air heater	Intake joint	Packing	Timer	Relay	Pilot Lamp
			H-b	H-c	L-b	H-k	H-l	
400	Upward	One-Wire	129120-77501	—	129150-77511 (paper)	128300-77920	—	DC12V 3--3.4W
	Lateral	One-Wire	129100-77500	171340-77520	Upper 129100-77510 (copper) Lower 129150-77511 (paper)			
800	Upward	One-Wire	129486-77500	—	129150-77511 (paper)		129100-77910	
	Lateral	One-Wire	129579-77500	171340-77520	Upper 129100-77510 (copper) Lower 129150-77511 (paper)			

H - b Starting Aid

DI

H-b	1	<p>HB770020</p>						
<p>Applicable engine</p> <table border="0"> <tr> <td>3TNV82A</td> <td>3TNV84</td> </tr> <tr> <td>3TNV88</td> <td>4TNV84</td> </tr> <tr> <td>4TNV88</td> <td>4TNV84T</td> </tr> </table>			3TNV82A	3TNV84	3TNV88	4TNV84	4TNV88	4TNV84T
3TNV82A	3TNV84							
3TNV88	4TNV84							
4TNV88	4TNV84T							
<p>Code No.</p> <p style="text-align: center;">129120-77501</p>								
<p style="text-align: center;">Air heater DC12V/400W</p>		<p>Rating:DC11V/35.5A</p>						

H-b	2	<p>HB770010</p>						
<p>Applicable engine</p> <table border="0"> <tr> <td>3TNV82A</td> <td>3TNV84</td> </tr> <tr> <td>3TNV88</td> <td>4TNV84</td> </tr> <tr> <td>4TNV88</td> <td>4TNV84T</td> </tr> </table>			3TNV82A	3TNV84	3TNV88	4TNV84	4TNV88	4TNV84T
3TNV82A	3TNV84							
3TNV88	4TNV84							
4TNV88	4TNV84T							
<p>Code No.</p> <p style="text-align: center;">129100-77500</p>								
<p style="text-align: center;">Air heater DC12V/400W</p>		<p>Rating:DC11V/35.5A</p>						

H-b	3	<p>HB770180</p>
<p>Applicable engine</p> <p style="text-align: center;">3TNV84T</p>		
<p>Code No.</p> <p style="text-align: center;">129033-77500</p>		
<p style="text-align: center;">Air heater DC12V/400W</p>		<p>Rating:DC11V/35.5A</p>

H - b Starting Aid

DI

H-b	4	<p>HB770010</p> <p style="text-align: right;">M6 Terminal</p>						
<p>Applicable engine</p> <table border="0"> <tr> <td>3TNV82A</td> <td>3TNV84</td> </tr> <tr> <td>3TNV88</td> <td>4TNV84</td> </tr> <tr> <td>4TNV88</td> <td>4TNV84T</td> </tr> </table>			3TNV82A	3TNV84	3TNV88	4TNV84	4TNV88	4TNV84T
3TNV82A	3TNV84							
3TNV88	4TNV84							
4TNV88	4TNV84T							
<p>Code No.</p> <p style="text-align: center;">129579-77500</p>								
<p style="text-align: center;">Air heater DC12V/800W</p>								

Rating:DC11V/77A

H-b	5	<p>HB770150</p> <p style="text-align: right;">M6 Terminal</p>						
<p>Applicable engine</p> <table border="0"> <tr> <td>3TNV82A</td> <td>3TNV84</td> </tr> <tr> <td>3TNV88</td> <td>4TNV84</td> </tr> <tr> <td>4TNV88</td> <td>4TNV84T</td> </tr> </table>			3TNV82A	3TNV84	3TNV88	4TNV84	4TNV88	4TNV84T
3TNV82A	3TNV84							
3TNV88	4TNV84							
4TNV88	4TNV84T							
<p>Code No.</p> <p style="text-align: center;">129486-77500</p>								
<p style="text-align: center;">Air heater DC12V/800W</p>								

Rating:DC11V/77A

H-c	1	HC770010
Applicable engine TNV series		
Code No. 171340-77520		
Air intake joint Bend type		

H-c	2	HC120060
Applicable engine TNV series		
Code No. 129486-12581		
Air intake joint Straight type		

No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	119620-77201	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
2	171301-77201	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
3	119910-77200	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
4	129423-77200	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
5	129961-77200	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
6	119626-77210	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
7	129100-44300	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△

Remarks

Charging Generator & Safety Relay

Dynamo or Alternator		Safety Relay YES or NO	Current Limiter	Safety Relay	Diode
15A	171301-77201	YES	119233-77710	119247-77100	119643-66900
		NO	119225-77720	—	—
20A	119910-77200	YES	119653-77710	119247-77100	119643-66900
		NO	119225-77720	—	—
40A	129423-77200	YES	—	119802-77200	—
	119620-77201	NO	—	—	—
55A	119626-77210	YES	—	119802-77200	—
	129961-77200	NO	—	—	—

H-d	1	HD770190
Applicable engine TNV series		<p>Mating coupler BAT Terminal : M6 Eyelet terminal IG.L Terminal : YAZAKI No. 7323-2024</p>
Code No. 119620-77201		
Alternator DC12V/40A		Without P terminal

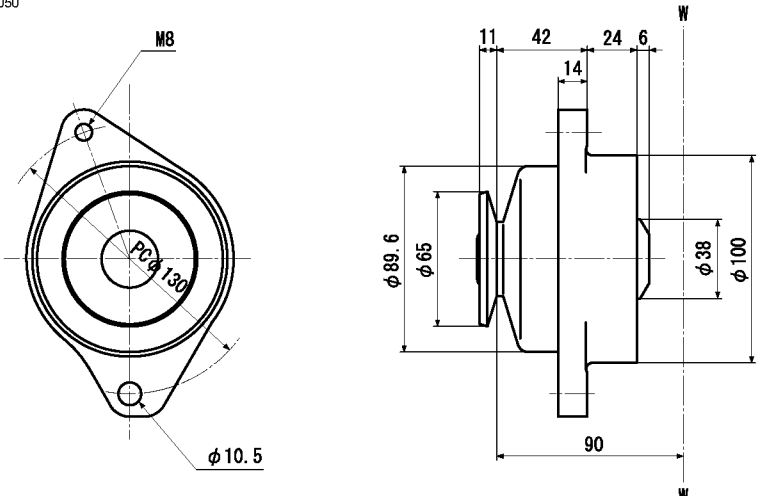
H-d	2	HD770030
Applicable engine TNV series		<p>White Yazaki No.7322-2228 (Mating coupler No.7323-2228)</p>
Code No. 171301-77201		
Dynamo DC12V/15A		Model type:GP8138

H-d	3	HD770200
Applicable engine TNV series		<p>Blue Yazaki No. 7122-2128 (Mating coupler NO. 7123-2128)</p>
Code No. 119910-77200		
Dynamo DC12V/20A		Model type:GP9165

H-d	4	HD770210
Applicable engine TNV series		<p>Mating coupler BAT Terminal : M6 Eyelet terminal IG. L. P Terminal : Sumitomo No. 6189-0443</p>
Code No. 129423-77200		
Alternator DC12V/40A with P terminal		
With P terminal		

H-d	5	HD770220
Applicable engine TNV series		<p>Mating coupler BAT Terminal : M6 Eyelet terminal IG. L Terminal : YAZAKI No. 7323-2024</p>
Code No. 129961-77200		
Alternator DC12V/55A		
Without P terminal		

H-d	6	HD770170
Applicable engine TNV series		<p>Mating coupler BAT Terminal : M6 Eyelet terminal IG. L. P Terminal : Sumitomo No. 6189-0443</p>
Code No. 119626-77210		
Alternator DC12V/55A with P terminal		
With P terminal		

<p>H-d</p>	<p>7</p>	<p>HD440050</p>  <p>M8</p> <p>φ 10.5</p> <p>φ 89.6</p> <p>φ 65</p> <p>φ 38</p> <p>φ 100</p> <p>11 42 24 6</p> <p>14</p> <p>90</p> <p>W</p> <p>P2 φ 130</p> <p>Pulley dia:Ø65, steel type V belt:A or HM type</p>
<p>Applicable engine TNV series</p>		
<p>Code No. 129100-44300</p>		
<p>Tension pulley CMP for General use</p>		

No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	119225-77720	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
2	119233-77710	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
3	119653-77710	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△

Remarks

Charging Generator & Safety Relay

Dynamo or Alternator		Safety Relay YES or NO	Current Limitter	Safety Relay	Diode
15A	171301-77201	YES	119233-77710	119247-77100	119643-66900
		NO	119225-77720	—	—
20A	119910-77200	YES	119653-77710	119247-77100	119643-66900
		NO	119225-77720	—	—

H-e Current Limiter

DI

H-e	1	HE770090
Applicable engine TNV series		
Code No. 119225-77720		
Current limiter 15A to 20A		
Model type:RS5160		

H-e	2	HE770100
Applicable engine TNV series		
Code No. 119233-77710		
Current limiter 15A(for safety relay)		
Model type:RS5194		

H-e	3	HE770110
Applicable engine TNV series		
Code No. 119653-77710		
Current limiter 20A(for safety relay)		
Model type:RS5159		

No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	119247-77100	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
2	119802-77200	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△

Remarks

Charging Generator & Safety Relay

Dynamo or Alternator		Safety Relay YES or NO	Current Limiter	Safety Relay	Diode
15A	171301-77201	YES	119233-77710	119247-77100	119643-66900
		NO	119225-77720	_____	_____
20A	119910-77200	YES	119653-77710	119247-77100	119643-66900
		NO	119225-77720	_____	_____
40A	129423-77200	YES	_____	119802-77200	_____
	119620-77201	NO	_____	_____	_____
55A	119626-77210	YES	_____	119802-77200	_____
	129961-77200	NO	_____	_____	_____

H-f	1	<p>HF770010</p> <p style="text-align: center;">(Mating coupler Sumitomo denso No.6020-6161)</p> <p>Indispensable part,dynamo:15A,20A Contact capacity:20A continuous Model type:SN2206</p>
Applicable engine TNV series		
Code No. 119247-77100		
Safety relay DC12V/20A		

H-f	2	<p>HF770050</p> <p>Operating speed : 1400rpm / Alternator Contact capacity:rush 100A/steady-state 50A(30sec.) Model type:R11EA</p>
Applicable engine TNV series		
Code No. 119802-77200		
Safety relay DC12V		

H-g Diode

DI

No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	119643-66900	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
2	160970-77350	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△

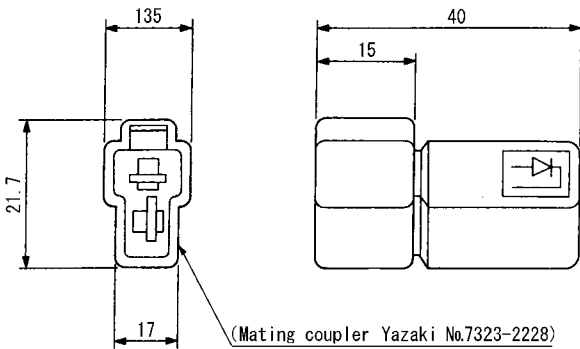
Remarks

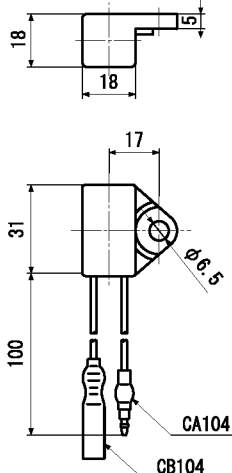
Charging Generator & Safety Relay

Dynamo or Alternator		Safety Relay YES or NO	Current Limiter	Safety Relay	Diode
15A	171301-77201	YES	119233-77710	119247-77100	119643-66900
		NO	119225-77720	—	—
20A	119910-77200	YES	119653-77710	119247-77100	119643-66900
		NO	119225-77720	—	—

H-g Diode

DI

H-g	1	<p>HG660010</p>  <p>Rated reverse voltage:600V Allowable forward current:1.1A Yazaki model No.:7321-9372-90</p>
<p>Applicable engine TNV series</p>		
<p>Code No. 119643-66900</p>		
<p style="text-align: center;">Diode 600V/1.1A</p>		

H-g	2	<p>HG770020</p>  <p>Rated reverse voltage:400V Allowable forward current:2A</p>
<p>Applicable engine TNV series</p>		
<p>Code No. 160970-77350</p>		
<p style="text-align: center;">Diode 400V/2A</p>		

H-h Stop Solenoid

DI

No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	119653-77950	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
2	119233-77932	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

Remarks

H-h Stop Solenoid

DI

H-h	1	HH770080
Applicable engine TNV series		
Code No. 119653-77950		Indispensable part, Diode:119643-66900, Relay:119650-77910, Timer:129211-77920 Rated current:pull coil 36.5A/hold coil 0.49A Model type : 1503ES/SK-1037-05
Stop solenoid		

H-h	2	HH770010
Applicable engine TNV series		
Code No. 119233-77932		Indispensable part, Diode:119643-66900, Relay:119650-77910, Timer:129211-77920 Rated current:pull coil 36.5A/hold coil 0.49A Model type : 1503ES/SK-1037-06
Stop solenoid		

No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	128300-77920	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	129211-77920	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Remarks

H-k	1	<p>HK770050</p> <p>Model type : HC0108 Applicable lamp:DC12V/3W</p>
Applicable engine TNV series		
Code No. 128300-77920		
Timer DC12V/15sec		

H-k	2	<p>HK770070</p> <p>Model type : HC0119 Applicable relay:exciting current max 1A</p>
Applicable engine TNV series		
Code No. 129211-77920		
Timer DC12V/1sec		

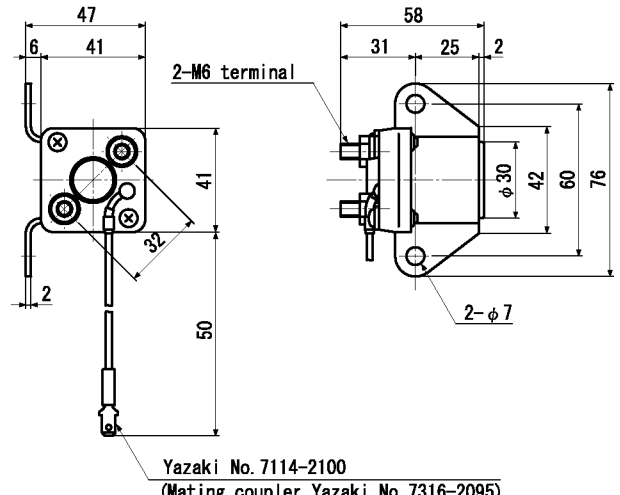
No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	119247-77100	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
2	119650-77910	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
3	119646-77900	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
4	129100-77910	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
5	124612-77910	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△

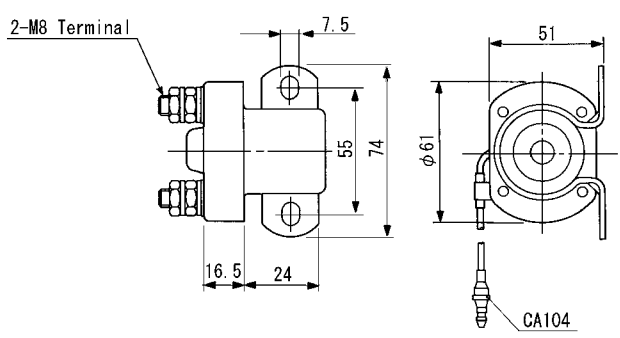
Remarks

H-I	1	<p>HF770010</p> <p style="text-align: center;">(Mating coupler Sumitomo denso No.6020-6161)</p> <p>Service voltage:DC12V/(exciting current 0.15A) Contact capacity:20A continuous,change-over contact(c-contact)</p>
Applicable engine TNV series		
Code No. 119247-77100		
Relay DC12V/20A		

H-I	2	<p>HL770020</p> <p style="text-align: center;">(Mating coupler Yazaki No. 7323-3010 × 2pcs.) (Mating coupler Yazaki No.7323-2228)</p> <p>Model type : G71SU Service voltage:DC12V/(exciting current 0.5A) Contact capacity:40A 10min.,make contact(a-contact)</p>
Applicable engine TNV series		
Code No. 119650-77910		
Relay DC12V/40A		

H-I	3	<p>HL770010</p> <p style="text-align: center;">(Mating coupler Yazaki No.7323-3010 × 2pcs.) (Mating coupler Yazaki No.7323-2228)</p> <p>Model type : MR82BL-081 Service voltage:DC12V/(exciting current 0.3A) Contact capacity:40A continuous,make contact(a-contact)</p>
Applicable engine TNV series		
Code No. 119646-77900		
Relay DC12V/40A		

H-I	4	<p>HL770040</p>  <p>Model type : MS2-1041-2 Service voltage:DC12V/(exciting current 4A) Contact capacity:80A continuous,make contact(a-contact)</p>
Applicable engine TNV series		
Code No. 129100-77910		
Relay DC12V/80A		

H-I	5	<p>HL770030</p>  <p>Model type:MS3-041 Service voltage:DC12V/(exciting current 4A) Contact capacity:150A 30sec.,make contact(a-contact)</p>
Applicable engine TNV series		
Code No. 124612-77910		
Relay DC12V/150A		

H-m Connector & Terminal Cover

DI

No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	119643-77900	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
2	119006-77900	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
3	124550-77020	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
4	119773-77030	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△

Remarks

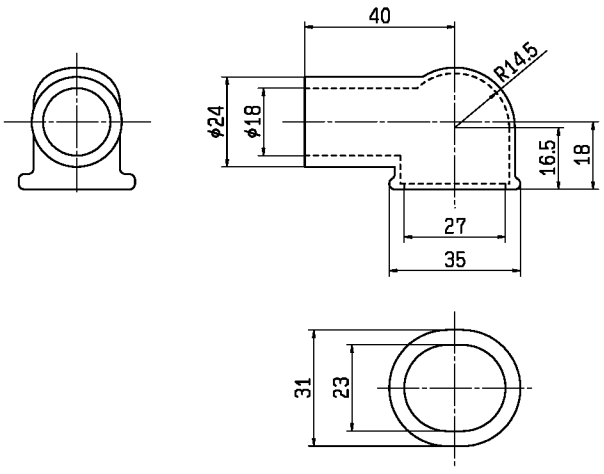
H-m	1	HM770060
Applicable engine TNV series		
Code No. 119643-77900		
Connector for Denso motor		Applicable split pin for lock :22411-200250 2pcs. For Nippon Denso starter

H-m	2	HM770070
Applicable engine TNV series		
Code No. 119006-77900		
Connector for Denso motor		Applicable split pin for lock :22411-200250 2pcs. For Nippon Denso starter

H-m	3	HM770080
Applicable engine TNV series		
Code No. 124550-77020		
Terminal cover for S terminal		

H-m Connector & Terminal Cover

DI

H-m	4	HM770130
Applicable engine TNV series		
Code No. 119773-77030		
Terminal cover for B terminal		

H-n Cooling Water Heater

DI

No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	171015-77900	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
2	171015-77910	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
3	124097-77900	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△

Remarks

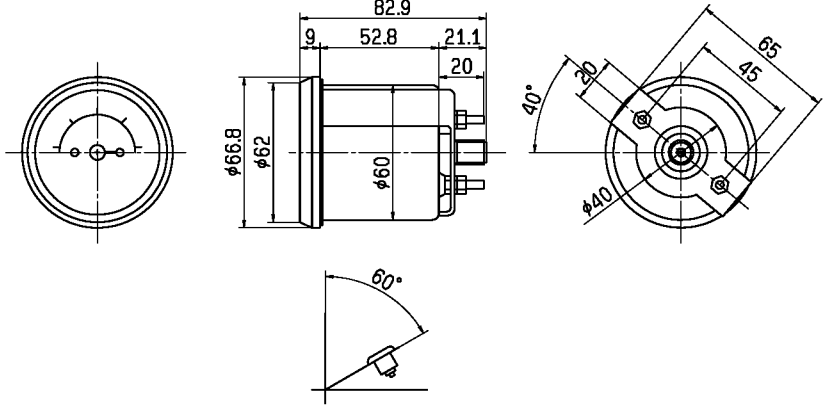
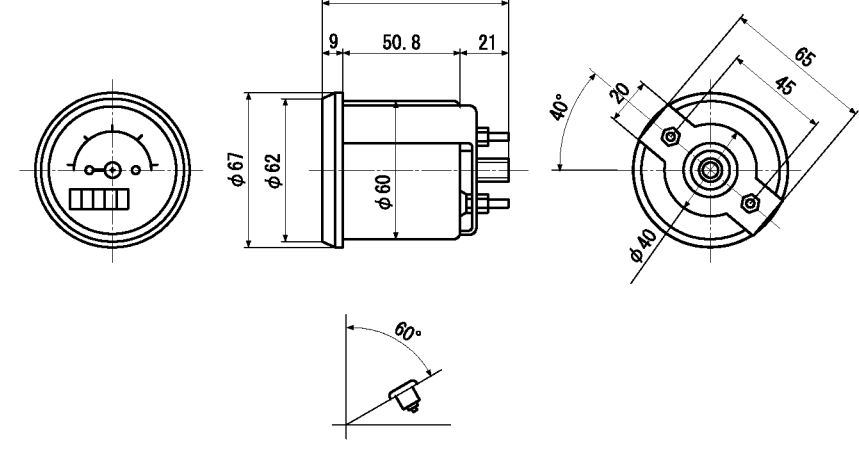
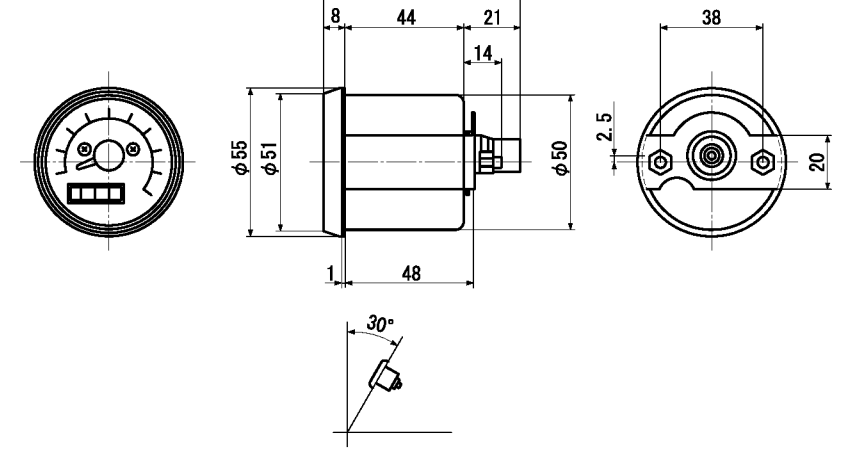
H-n	1	<p>HN770020</p>
<p>Applicable engine TNV series</p>		<p>Indispensable part,connection cord:171015-77910</p>
<p>Code No. 171015-77900</p>		
<p>Cooling water heater AC115V/400W</p>		

H-n	2	<p>HN770030</p>
<p>Applicable engine TNV series</p>		<p>Indispensable part,heater:171015-77900</p>
<p>Code No. 171015-77910</p>		
<p>Connection cord</p>		

H-n	3	<p>HN770060</p>
<p>Applicable engine TNV series</p>		
<p>Code No. 124097-77900</p>		
<p>Cooling water heater AC200V/200W</p>		

No.	Code	E n g i n e																					
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T			
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	
1	42130-502411	Δ			Δ				Δ				Δ				Δ				Δ		
2	171080-91101		Δ	Δ		Δ	Δ		Δ	Δ		Δ	Δ		Δ	Δ		Δ	Δ		Δ	Δ	
3	46150-513390	Δ			Δ				Δ				Δ				Δ				Δ		
4	171014-91102		Δ	Δ		Δ	Δ		Δ	Δ		Δ	Δ		Δ	Δ		Δ	Δ		Δ	Δ	

Remarks

<p>I - a</p>	<p>1</p>	<p>IA500010</p>  <p>Case dia.:\varnothing60 Hour meter: max. 10,000hr</p>
<p>Applicable engine TNV series</p>		
<p>Code No. 42130-502411</p>		
<p>Tachometer for 1500/1800 rpm</p>		
<p>I - a</p>	<p>2</p>	<p>IA910030</p>  <p>Case dia.:\varnothing60 Hour meter: max. 10,000hr</p>
<p>Applicable engine TNV series</p>		
<p>Code No. 171080-91101</p>		
<p>Tachometer for 3000/3600 rpm</p>		
<p>I - a</p>	<p>3</p>	<p>IA910020</p>  <p>Case dia.:\varnothing50 Hour meter: max. 1,000hr</p>
<p>Applicable engine TNV series</p>		
<p>Code No. 46150-513390</p>		
<p>Tachometer for 1500/1800 rpm</p>		

<p>I - a</p>	<p>4</p>	<p>IA910020</p> <p>Case dia.:\varnothing50 Hour meter: max. 1,000hr</p>
<p>Applicable engine TNV series</p>		
<p>Code No. 171014-91102</p>		
<p>Tachometer for 3000/3600 rpm</p>		

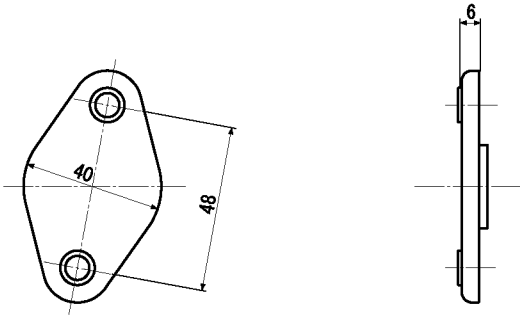


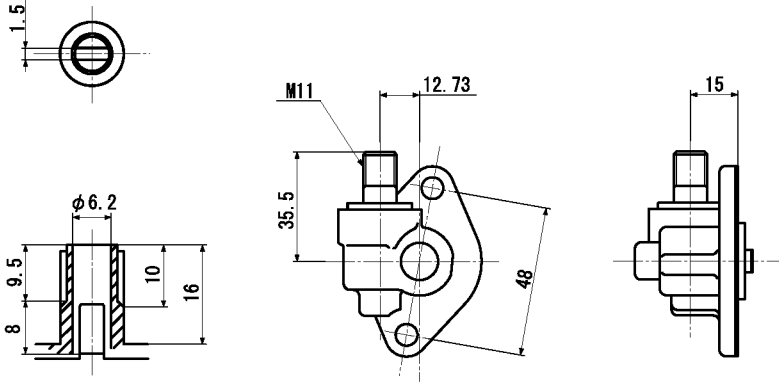
I - b Tachometer Gear Unit

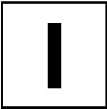


No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	121023-01550	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
2	129150-91400	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△

Remarks

I - b	1	<p>IB010010</p> 
<p>Applicable engine TNV series</p>		
<p>Code No. 121023-01550</p>		
<p style="text-align: center;">Blind cover</p>		<p>Applicable O-ring:24341-000240</p>

I - b	2	<p>IB910020</p> 
<p>Applicable engine TNV series</p>		
<p>Code No. 129150-91400</p>		
<p style="text-align: center;">Gear unit</p>		



I-c Tachometer Cable



No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	124701-91140	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
2	121400-91140	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
3	194145-56901	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
4	42130-502220	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
5	124737-91420	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△

Remarks

Permissible radius of bending : More than 150mm

I - c	1	IC910020
Applicable engine TNV series		
Code No. 124701-91140		
Tachometer cable L 985		

I - c	2	IC910010
Applicable engine TNV series		
Code No. 121400-91140		
Tachometer cable L 1100		

I - c	3	IC560040
Applicable engine TNV series		
Code No. 194145-56901		
Tachometer cable L 1400		

I - c	4	IC500050
Applicable engine TNV series		
Code No. 42130-502220		
Tachometer cable L 1700		

I - c	5	IC910030
Applicable engine TNV series		
Code No. 124737-91420		
Tachometer cable L 2200		

I - d Thermometer

DI

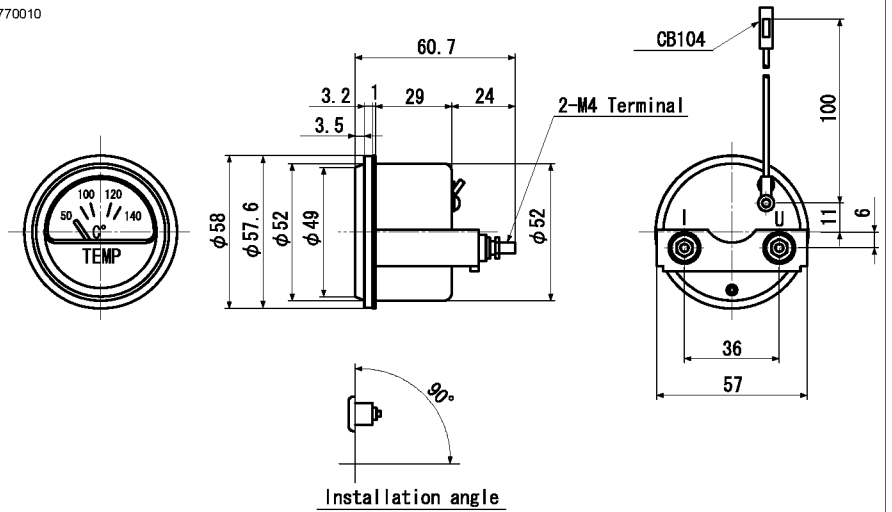
No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	171010-77850	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△

Remarks

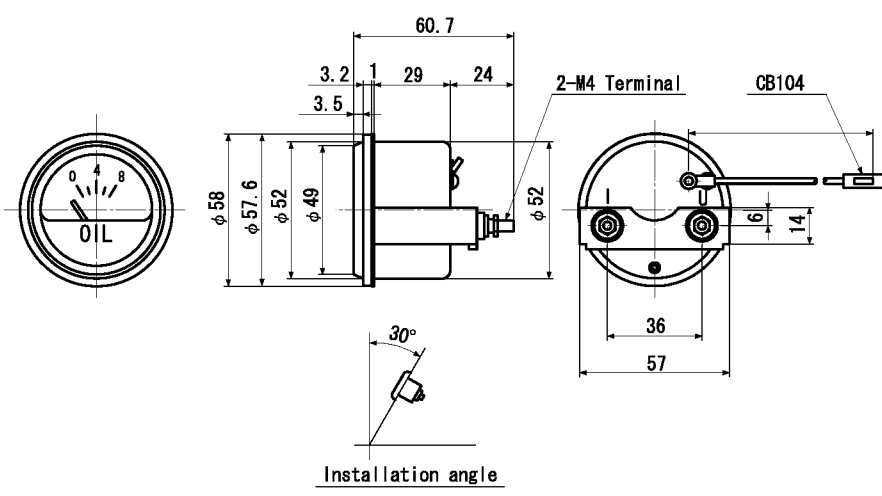
Wire type	Thermosender	Packing	Thermometer
	D - k	—	I - d
One-Wire	124250-49351	129150-49360	171010-77850 for Cooling Water and Lubricating oil

I - d	1
Applicable engine TNV series	
Code No. 171010-77850	
Thermometer DC12V for LO,CW	

ID770010



Service voltage:DC12V
Two-wire type (w/body earth)

<p style="text-align: center; font-size: 24pt;">I - e</p>	<p style="text-align: center; font-size: 24pt;">1</p>	<p>IE910010</p>  <p>The drawing includes the following details:</p> <ul style="list-style-type: none"> Front View: A circular gauge with a scale from 0 to 8 and the word "OIL" at the bottom. Side View: Shows the gauge's profile with dimensions: total length 60.7, mounting flange thickness 3.2, gauge body thickness 1, and a 30° installation angle. Rear View: Shows the back of the gauge with two terminals labeled "2-M4 Terminal" and a component labeled "CB104". Dimensions include a diameter of 52, a distance of 29 from the center to the terminal, and a distance of 24 from the center to the CB104 component. Dimensions: <ul style="list-style-type: none"> Outer diameter: $\phi 58$ Mounting flange diameter: $\phi 57.6$ Gauge body diameter: $\phi 52$ Internal diameter: $\phi 49$ Terminal diameter: 6 Terminal offset: 14 Terminal spacing: 36 Terminal to center distance: 57 <p>Service voltage: DC12V Two-wire type (w/body earth)</p>
<p>Applicable engine TNV series</p>		
<p>Code No. 171090-91011</p>		
<p>Oil pressure gauge DC12V</p>		



-f Pilot Lamp



No.	Code	E n g i n e																				
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T		
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2
1	124732-77720	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
2	124559-77971	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
3	170038-91310	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△

Remarks

I - f	1	<p>IF770010</p> <p>Service voltage:DC12V</p>
<p>Applicable engine TNV series</p>		
<p>Code No. 124732-77720</p>		
<p>Pilot lamp DC12V/3W (Red)</p>		

I - f	2	<p>IF770010</p> <p>Service voltage:DC12V</p>
<p>Applicable engine TNV series</p>		
<p>Code No. 124559-77971</p>		
<p>Pilot lamp DC12V/3W (Blue)</p>		

I - f	3	<p>IF910020</p> <p>Service voltage:DC12V</p>
<p>Applicable engine TNV series</p>		
<p>Code No. 170038-91310</p>		
<p>Lamp unit DC12V/3.4W (Red)</p>		



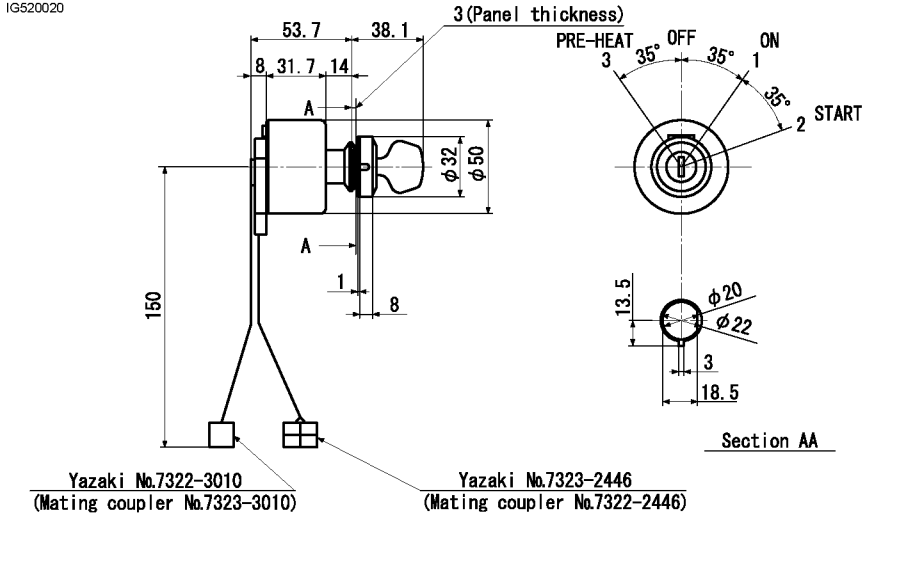
I-g Key Switch

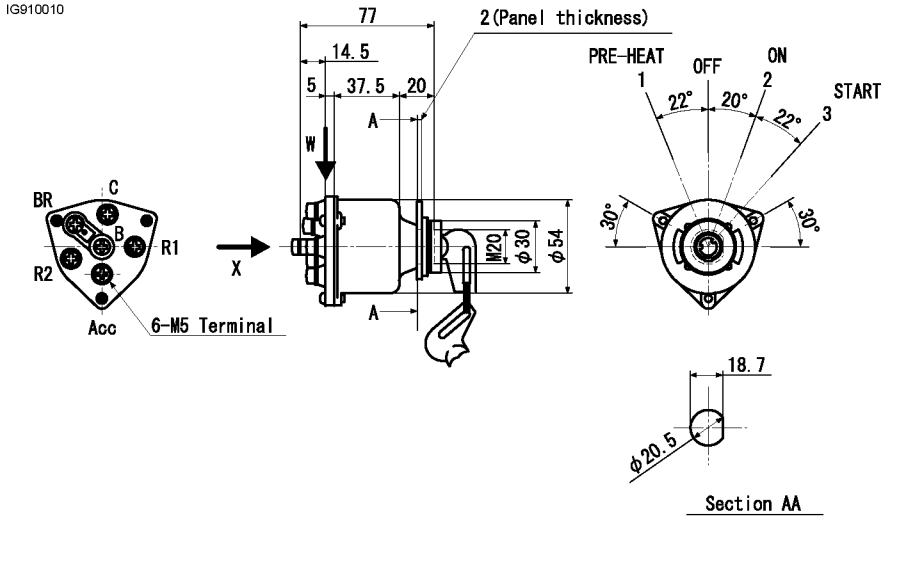


No.	Code	E n g i n e																							
		3TNV82A			3TNV84			3TNV88			3TNV84T			4TNV84			4TNV88			4TNV84T					
		CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2	CL	VM1	VM2			
1	194215-52110	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
2	129115-91250	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△

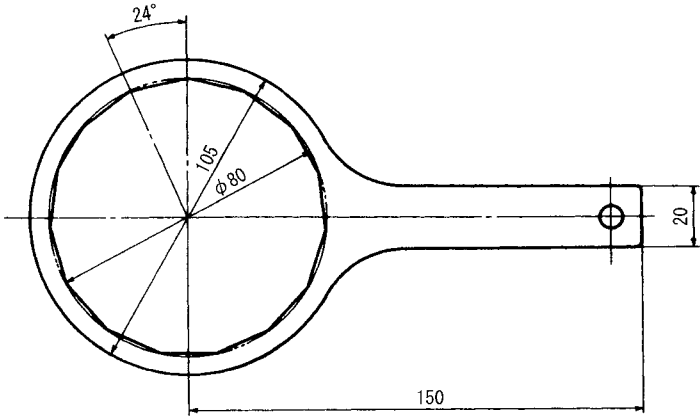
Remarks

CODE	key pattern	Contact capacity																																			
194215-52110	<table border="1"> <tr> <td></td> <td>B</td> <td>BR</td> <td>R1</td> <td>R2</td> <td>C</td> </tr> <tr> <td>PRE-HEAT</td> <td>○</td> <td>—</td> <td>○</td> <td></td> <td></td> </tr> <tr> <td>OFF</td> <td>○</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>ON</td> <td>○</td> <td>○</td> <td></td> <td></td> <td></td> </tr> <tr> <td>START</td> <td>○</td> <td>○</td> <td>—</td> <td>○</td> <td>○</td> </tr> </table>		B	BR	R1	R2	C	PRE-HEAT	○	—	○			OFF	○					ON	○	○				START	○	○	—	○	○	B-R1 : 40A Pre-heat B-R2 : 40A Pre-heat B-C : 50A Starter circuit B-BR : 30A					
	B	BR	R1	R2	C																																
PRE-HEAT	○	—	○																																		
OFF	○																																				
ON	○	○																																			
START	○	○	—	○	○																																
129115-91250	<table border="1"> <tr> <td></td> <td>B</td> <td>R1</td> <td>Acc</td> <td>R2</td> <td>C</td> <td>BR</td> </tr> <tr> <td>PRE-HEAT</td> <td>○</td> <td>○</td> <td>—</td> <td>—</td> <td>—</td> <td>○</td> </tr> <tr> <td>OFF</td> <td>○</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>ON</td> <td>○</td> <td>—</td> <td>○</td> <td>—</td> <td>○</td> <td>○</td> </tr> <tr> <td>START</td> <td>○</td> <td>—</td> <td>○</td> <td>○</td> <td>○</td> <td>○</td> </tr> </table>		B	R1	Acc	R2	C	BR	PRE-HEAT	○	○	—	—	—	○	OFF	○						ON	○	—	○	—	○	○	START	○	—	○	○	○	○	B-R1 : 50A Pre-heat B-R2 : 50A Pre-heat B-C : 20A Starter circuit B-ACC : 10A B-BR : 2.5A
	B	R1	Acc	R2	C	BR																															
PRE-HEAT	○	○	—	—	—	○																															
OFF	○																																				
ON	○	—	○	—	○	○																															
START	○	—	○	○	○	○																															

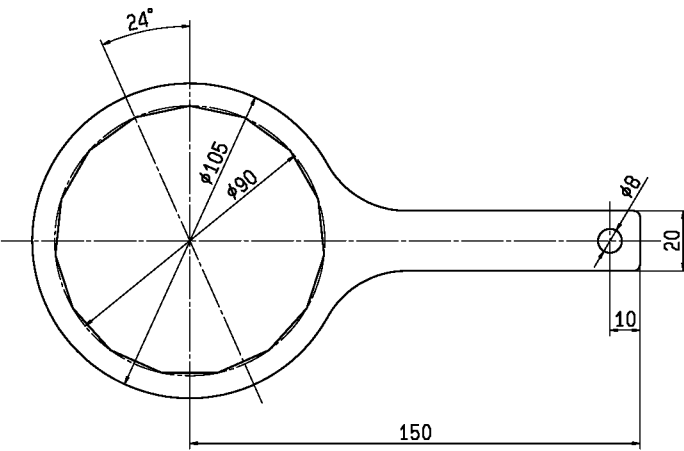
I-g	1	<p>IG520020</p> 
Applicable engine TNV series		
Code No. 194215-52110		
Key switch		

I-g	2	<p>IG910010</p> 
Applicable engine TNV series		
Code No. 129115-91250		
Key switch		

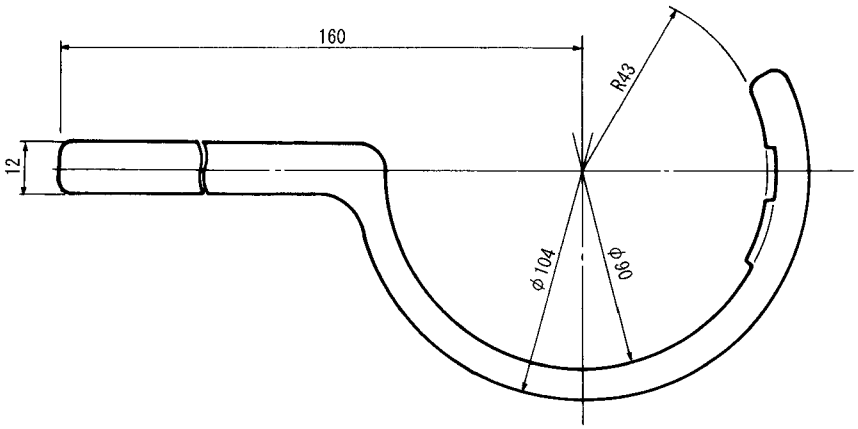
J**-b Oil Filter Wrench****DI**

J-b	1	<p>JB920020</p>  <p>Applicable filter: see section on lube oil filter (C-c)</p>
Applicable engine TNV series		
Code No. 119640-92750		
Oil filter wrench for Ø80		

J**-c Fuel Filter Wrench****DI**

J-c	1	<p>JC920040</p> 
Applicable engine TNV series		
Code No. 171301-92750		
Fuel filter wrench		

J**-d Water Trap Wrench****DI**

J-d	1	<p>JC920020</p>  <p>Applicable water trap: see section on water trap(B-d)</p>
Applicable engine TNV series		
Code No. 171340-92760		
Fuel filter wrench (Water trap wrench)		

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