

GI

SPECIFICATIONS	GI-2	TIGHTENING TORQUE OF	
Table of model and corresponding		STANDARD BOLT	GI-4
engine	GI-2		
ENGINE SERIAL NUMBER LOCATION ..	GI-3		

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SPECIFICATIONS

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Engine model		SD22	SD23	SD25	SD33
Cylinder arrangement		In-line			
Number of cylinders		4			6
Valve arrangement		O.H.V.			
Bore x Stroke	mm (in)	83 x 100 (3.27 x 3.94)	89 x 92 (3.50 x 3.62)	89 x 100 (3.50 x 3.94)	83 x 100 (3.27 x 3.94)
Displacement	cm ³ (cu in)	2,164 (132.05)	2,289 (139.67)	2,488 (151.82)	3,246 (198.07)
Firing order		1-3-4-2			1-4-2-6-3-5
Number of piston rings	Compression	3	2	3	
	Oil	2	1	2	
Number of main bearings		3	5	4	
Compression ratio		20.8	20.5	20.7	21.4 *1
Cetane number of diesel fuel		More than 45			

*1: Only for 720 model

TABLE OF MODEL AND CORRESPONDING ENGINE

Model	Engine	Injection pump type	Remarks
430	SD22	DIESEL KIKI-BOSCH in-line	*2
160	SD33 & T	DIESEL KIKI-BOSCH in-line	
H40	SD25	DIESEL KIKI-BOSCH in-line	
		DIESEL KIKI-BOSCH VE	
W40	SD25	DIESEL KIKI-BOSCH in-line	Only for Hong Kong
		DIESEL KIKI-BOSCH VE	
140	SD22	DIESEL KIKI-BOSCH in-line	*2
F22	SD22	C.A.V.-D.P.A.	Only for Taiwan
	SD25	DIESEL KIKI-BOSCH in-line	
		DIESEL KIKI-BOSCH VE	Only for Europe and Australia
E23	SD23	DIESEL KIKI-BOSCH in-line	
	SD22	DIESEL KIKI-BOSCH VE	*2
720	SD22	DIESEL KIKI-BOSCH in-line	*2
	SD23	DIESEL KIKI-BOSCH in-line	
		DIESEL KIKI-BOSCH VE	Only for Europe and Australia
	SD25	DIESEL KIKI-BOSCH in-line	
		DIESEL KIKI-BOSCH VE	Only for Europe and Australia

*2: There are a few different kinds of SD22 engines with respect to the number of piston rings and main bearings. When you are not sure of the number of piston rings or main bearings of a particular SD22 engine, refer to the table below.

ENGINE SERIAL NUMBER LOCATION

		Applied SD22 engine number		
430	Number of			
	Piston rings	5 rings	3 rings	SD22-743434 ~ (only for Hong Kong) SD22-754092 ~ (for other countries)
	Main bearings	3 bearings	5 bearings	SD22-618766 ~
140	Piston rings	5 rings		
	Main bearings	3 bearings		
E23	Piston rings	5 rings	SD22-557447 ~	3 rings
	Main bearings	3 bearings		
720	Piston rings	5 rings	SD22-703539 ~	3 rings
	Main bearing	3 bearings	5 bearings	

ENGINE SERIAL NUMBER LOCATION

The engine number is stamped on the right side of the cylinder block.

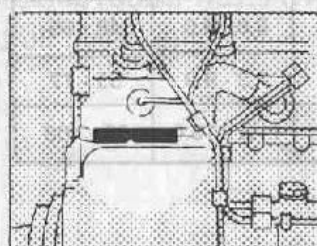
SDXX

XXXXXX

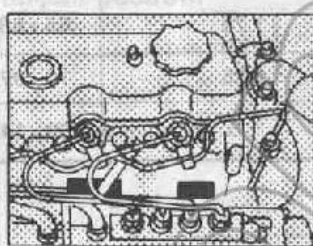
Serial No.

Engine model

SD 4-cylinder



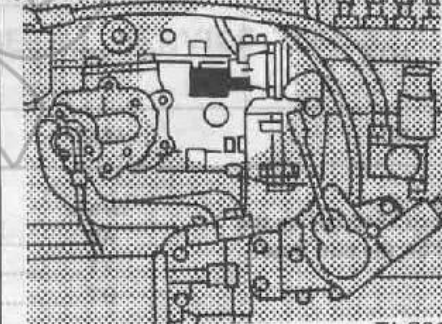
Up to
Apr., 1980



From
May, 1980

SG1016

SD33



TLC019

TIGHTENING TORQUE OF STANDARD BOLT

Grade	Nominal size	Diameter mm	Pitch mm	Tightening torque		
				N·m	kg·m	ft·lb
4T	M6	6.0	1.0	3 - 4	0.3 - 0.4	2.2 - 2.9
	M8	8.0	1.25	8 - 11	0.8 - 1.1	5.8 - 8.0
			1.0	8 - 11	0.8 - 1.1	5.8 - 8.0
	M10	10.0	1.5	16 - 22	1.6 - 2.2	12 - 16
			1.25	16 - 22	1.6 - 2.2	12 - 16
	M12	12.0	1.75	26 - 36	2.7 - 3.7	20 - 27
			1.25	30 - 40	3.1 - 4.1	22 - 30
M14	14.0	1.5	46 - 62	4.7 - 6.3	34 - 46	
7T	M6	6.0	1.0	6 - 7	0.6 - 0.7	4.3 - 5.1
	M8	8.0	1.25	14 - 18	1.4 - 1.8	10 - 13
			1.0	14 - 18	1.4 - 1.8	10 - 13
	M10	10.0	1.5	25 - 35	2.6 - 3.6	19 - 26
			1.25	26 - 36	2.7 - 3.7	20 - 27
	M12	12.0	1.75	45 - 61	4.6 - 6.2	33 - 45
			1.25	50 - 68	5.1 - 6.9	37 - 50
M14	14.0	1.5	76 - 103	7.7 - 10.5	56 - 76	
9T	M6	6.0	1.0	8 - 11	0.8 - 1.1	5.8 - 8.0
	M8	8.0	1.25	19 - 25	1.9 - 2.5	14 - 18
			1.0	20 - 27	2.0 - 2.8	14 - 20
	M10	10.0	1.5	36 - 50	3.7 - 5.1	27 - 37
			1.25	39 - 51	4.0 - 5.2	29 - 38
	M12	12.0	1.75	65 - 88	6.6 - 9.0	48 - 65
			1.25	72 - 97	7.3 - 9.9	53 - 72
M14	14.0	1.5	109 - 147	11.1 - 15.0	80 - 108	

1. Special parts are excluded.

2. This standard is applicable to bolts having the following marks embossed on the bolt head.

Grade	Mark
4T	4
7T	7
9T	9