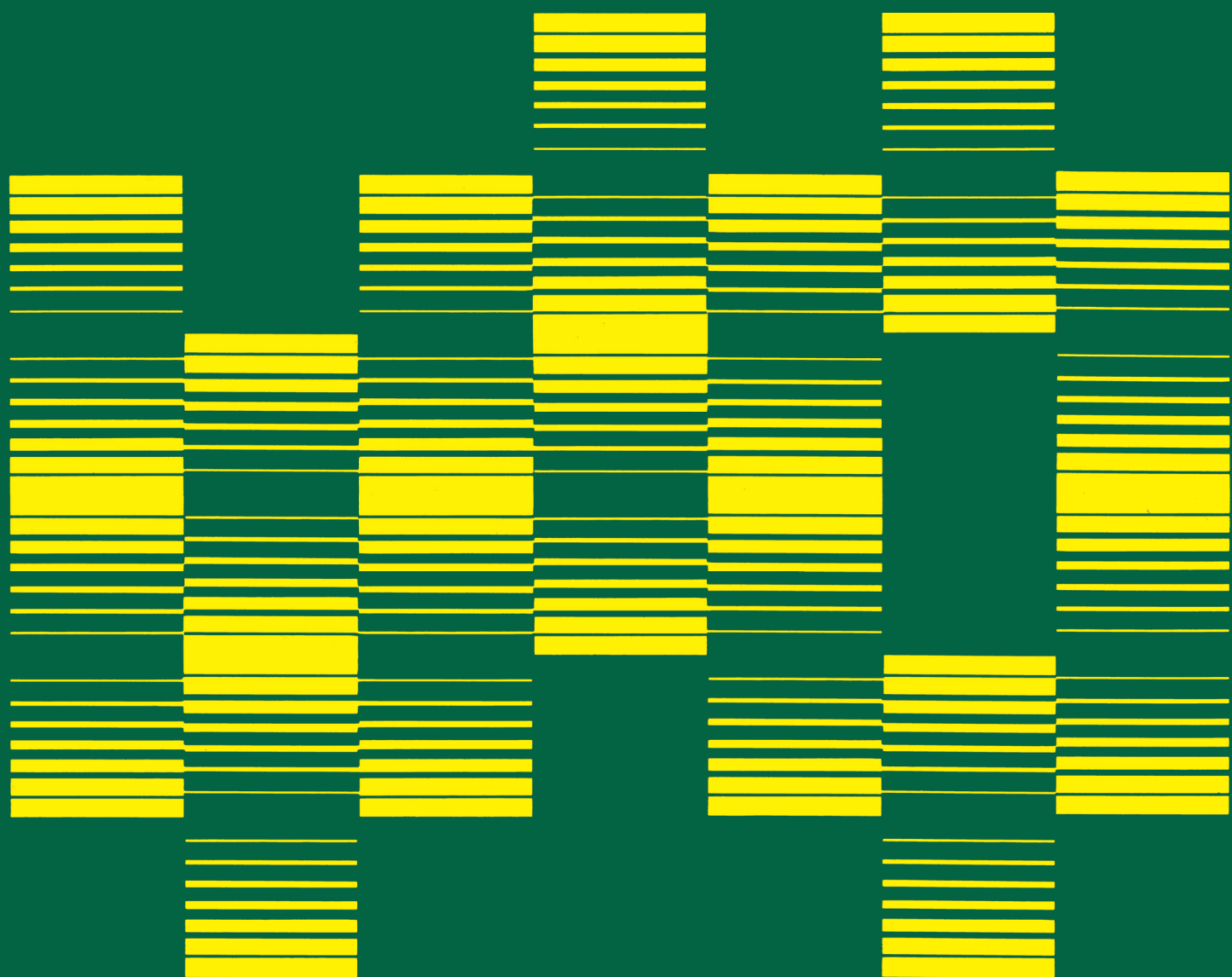


NDC

2017

ENGINE BEARING



We Sell Fine Bearings



NDC セット番号 (例)
Set number (Example)

MR - 1156 GP STD

寸法 Size

材質記号 Material symbol (F-770)

部品番号 Part number

メインベアリングペアセット Item symbol (main bearing pair set)

NDC エヌデーシー株式会社

本社
習志野工場
神崎工場

〒275-0002 千葉県習志野市実籾2-39-1

〒289-0212 千葉県香取郡神崎町武田20-5

TEL : 047-477-1123 FAX : 047-477-2479

TEL : 0478-72-3111 FAX : 0478-72-3114

NDC NDC CO., LTD.

2-39-1 MIMOMI, NARASHINO-SHI CHIBA-KEN, 275-0002, JAPAN

TEL : 047-477-1123 FAX : 047-477-2479

NDC エヌデーシー販売株式会社

本社 〒275-0002 千葉県習志野市実籾2-39-1

TEL : 047-477-1128 FAX : 047-477-1131

NDC NDC SALES CO., LTD.

Head Office 2-39-1, MIMOMI, NARASHINO-SHI CHIBA-KEN, 275-0002 JAPAN

TEL : 047-477-1128 FAX : 047-477-1131
<http://www.ndc-sales.co.jp/>

エンジンの機能を十分に発揮するためには、信頼の置ける軸受を装着する必要があります。
優れた品質と、素晴らしい販売実績を有する**NDC**ベアリングを是非、ご使用下さい。

The selection and use of dependable engine bearings is essential for efficient engine performance. We recommend to you our top-ranked NDC engine bearings which are widely sold and hold a fine international reputation.

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1. このカタログには、自動車又はエンジンのメーカー名をアルファベット順に各頁の上部隅に記載してあります。

The automobile or engine manufacturer is alphabetically listed at the top corner of each page, as shown in the example.

DAIHATSU

Group No.	Engine Model	Year	No. of Cyl.	Displacement	MAIN Bearing
1	G D	AB AD	4/76-7/84	2 547	*MS-2500A 11702-87701

この表にはエンジンの年式、シリンダー数、排気量及び適応するNDCベアリングのSET No. と純正番号（スタンダードサイズ）が記載してあります。

The following type of table lists group numbers in numerical order. Included are engine model year, number of cylinders, displacement, and the suitable NDC engine bearing set number and genuine part No.(for std. size).

DAIHATSU

Group No.	Engine Model	Year	No. of Cyl.	Displacement	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
1	G D	AB AD	4/76-7/84	2	CC 547	*MS-2500A 11702-87701	(TW-2500A) 11011-87701	CB-2500A 13202-87701	BB-2500A 11902-87701

G : Gasoline Engine
D : Diesel Engine

*MS-XXXX
(TW-XXXX)

: Unavailable now. Production will be made subject to order quantity.(新規販売予定)
: Available until inventory is depleted.(在庫のみ販売)

部品取扱に際して必要な諸データは、グループ番号順に列記した各エンジン毎の数表によってわかります。

The shop data for each engine listed in numerical sequence of group numbers, includes the information needed for the installation of the parts. Housing Bore : minimum size. Length : nominal size.

DAIHATSU

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
1	AB	*MS-2500A	Main	6					
2	AD	(TW-2500A)	1-3	6	41.990	46.000	1.994	19.50	
			T.W.	2	(I.D.)	(O.D.)			
			2	2	48.250	62.000	1.990		
		CB-2500A	C.R.	4					
			1-2	4	40.000	43.000	1.494	18.00	

*MS-XXXX
(TW-XXXX)

: Unavailable now. Production will be made subject to order quantity.(新規販売予定)
: Available until inventory is depleted.(在庫のみ販売)

記号の解説 Explanation of Symbols.

Main メインベアリング Main bearing.
T.W. スラストワッシャー Thrust washer.
C.R. コンロッドベアリング Connecting rod bearing.
Cam. カムシャフトベアリング Cam shaft bearing.
P.B. ピストンピンブッシュ Piston pin bushing.
B.B. バランサーブッシュ Balancer bushing.
D.B. ポンプドライブシャフトブッシュ Pump drive shaft bushing.
O.D. スラストワッシャーの外径 Outside diameter of thrust washer.
I.D. スラストワッシャーの内径 Inside diameter of thrust washer.

材質記号 Material Symbols

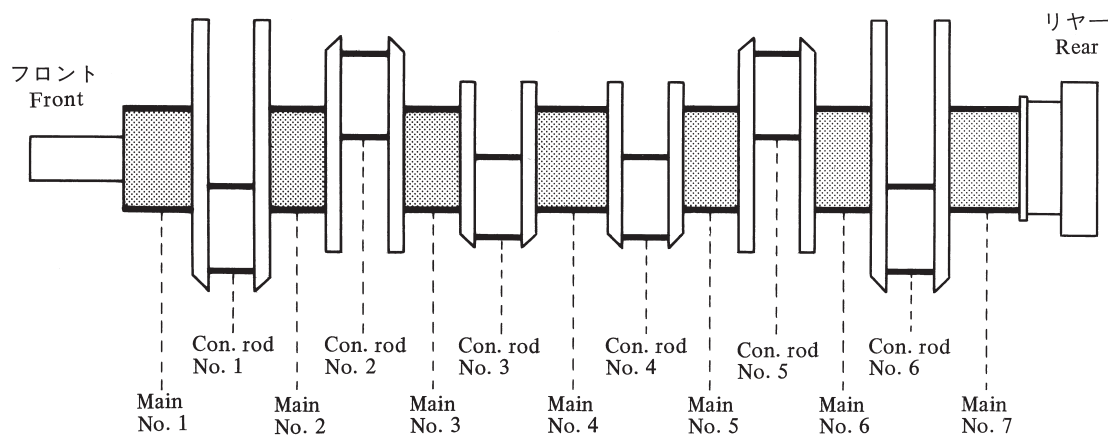
A アルミニウム合金 Aluminum-Alloys.
AS アルミニウム鋳物 Cast aluminum bearing.
B 錫または鉛ベースバビット Tin or lead base babbitt.
BC 鋳造鉛青銅 Cast leaded bronze.
GP 焼結銅・鉛と三元オーバーレイ
Sintered copper-lead and a trimetal overlay.
J 焼結銅鉛 Sintered leaded bronze.
K 焼結銅鉛 Sintered leaded bronze.

クランクシャフトと軸受の位置

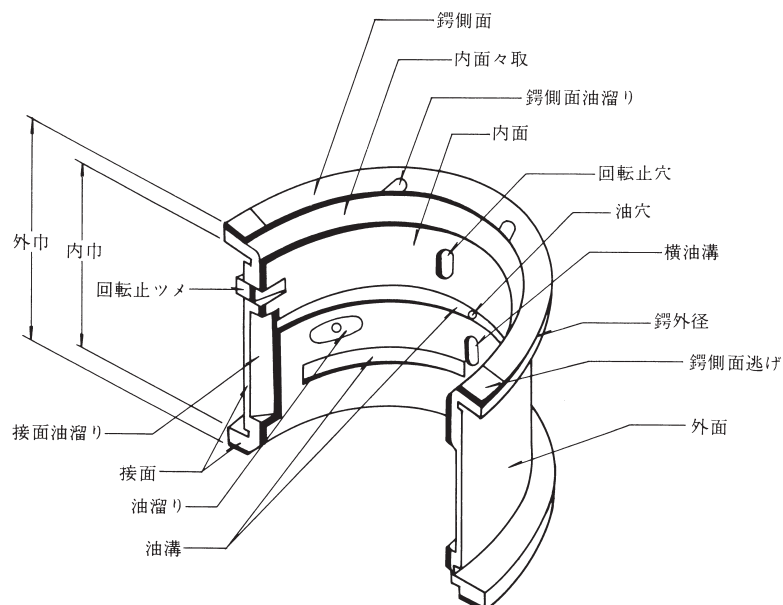
Crankshaft and Bearing Positions

軸受の位置はフロント側よりリヤー側に向って 1 番、2 番……とします。

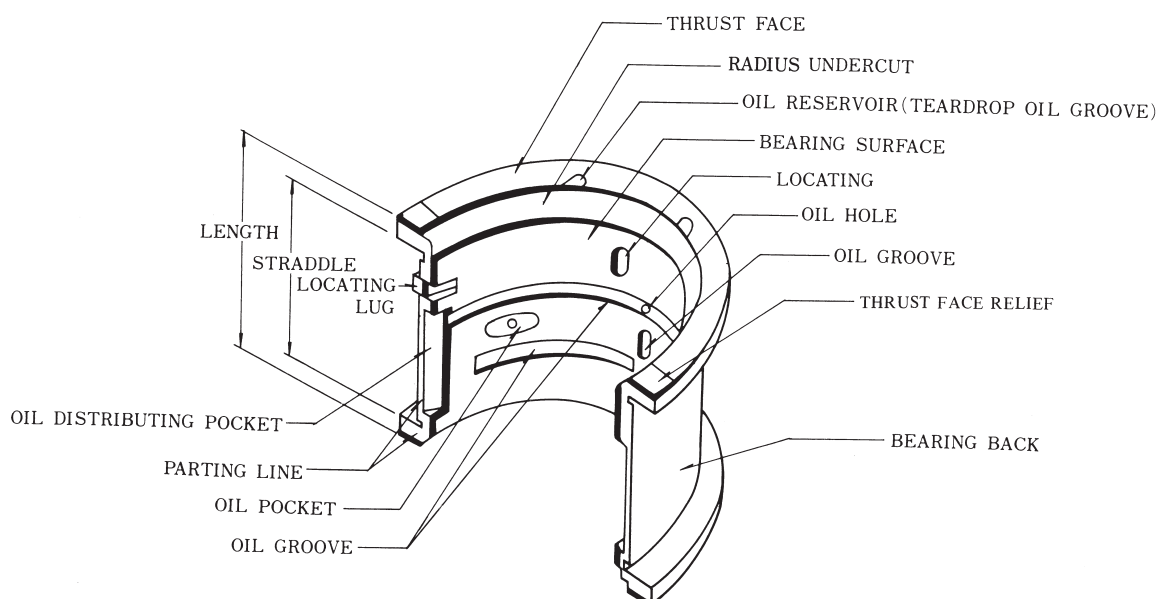
Bearing positions are numbered from front to rear.



軸受の各部名称



Bearing Nomenclature



NOTICE OF THE PARTS NUMBER CHANGE

* The parts number mentioned below have changed, and the old ones will disappers as the stocks sold out.

* Only the displayed numbers are changed and the products themselves stay the same.

MAKER	ENGINE MODEL	OLD PARTS NO. 旧品番	CHANGE TO	NEW PARTS NO. 新品番
MITSUBISHI (FUSO)	6DC, 8DC, 10DC	(C1-1073GP)	⇒	CR-1073GP
MITSUBISHI (FUSO)	4DR5, 6DR	(C1-1115GP)	⇒	CR-1115GP
ISUZU	4BA1, 4BB1, 6BB1	(C1-1129GP)	⇒	CR-1129GP
MITSUBISHI (FUSO)	6DC, 8DC, 10DC	(C1-1147GP)	⇒	CR-1147GP
ISUZU	8PA1, 10PA1, 12PA1	(C1-1156GP)	⇒	CR-1156GP
ISUZU	8PD1, 10PD1, 12PD1	(C1-1630GP)	⇒	CR-1630GP
MITSUBISHI (MHI)	S2E, S3E, S4E, S6E	(C1-1826GP)	⇒	CR-1826GP
MITSUBISHI (MHI)	S4K-T, S6K-T	(C1-1833GP)	⇒	CR-1833GP
MITSUBISHI (MHI)	S4S, S6S	(C1-1843A)	⇒	CR-1843A
HINO	J05C, J07C	(C1-2117GP)	⇒	CR-2117GP
HINO	J05C-TI, J08C-TI	(C1-2118GP)	⇒	CR-2118GP
MITSUBISHI (FUSO)	4DR5, 6DR	(M1-1115GP)	⇒	MR-1115GP
ISUZU	4BA1, 6BB1, D500	(M1-1129GP)	⇒	MR-1129GP
MITSUBISHI (FUSO)	6DC, 8DC, 10DC	(M1-1147GP)	⇒	MR-1147GP
ISUZU	8PA1, 10PA1, 12PA1	(M1-1156GP)	⇒	MR-1156GP
ISUZU	8PD1, 10PD1, 12PD1	(M1-1630GP)	⇒	MR-1630GP
MITSUBISHI (MHI)	S2E, S3E, S4E, S6E	(M1-1826GP)	⇒	MR-1826GP
MITSUBISHI (MHI)	S4K-T, S6K-T	(M1-1833GP)	⇒	MR-1833GP
MITSUBISHI (MHI)	S4S, S6S	(M1-1843A)	⇒	MR-1843A
HINO	J05C, 07C, 08C	(M1-2117GP)	⇒	MR-2117GP
MITSUBISHI (FUSO)	6.8DC	(P1-1147J)	⇒	PR-1147J
ISUZU	8PA1,PB1	(P1-1156J)	⇒	PR-1156J
ISUZU	8PD1	(P1-1630J)	⇒	PR-1630J
ISUZU	8,10,12PE1	(P1-1637J)	⇒	PR-1637J
MITSUBISHI (MHI)	S4K,S6K	(P1-1833J)	⇒	PR-1833J

NEW PARTS IN CATALOG 2017

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14	13	HONDA	D17A	MS-2201A	13321-P2E-003
				CB-2201GP	13211-PLM-A01
				TW-2201A	13331-PLM-003
15	29	HONDA	K20A	CB-2216GP	13211~7-PAH-T01 13022-PAH-T10
15	30	HONDA	K24A	CB-2218GP	13211-PPA-0030
15	29, 30	HONDA	K20A, K24A	TW-2216A	13331-PCX-003
15	31	HONDA	L13A, L15A	MS-2219A	13321/13341-PWA-003
				CB-2219A	13211-PWA-003
28	18	MITSUBISHI	4D56-T for 131kW	MS-1802GP	COPPER-LEAD (=MS-1845A)
28	18	MITSUBISHI	4D56-T for 105kW	CB-1845A	1115A117
28	18	MITSUBISHI	4D56-T for 131kW	CB-1802GP	1115A294
34	5	NISSAN	CR14DE	CB-1235A	12111-AX010
35	10	NISSAN	HR12DE, XH5	MS-1233A	12207-1HC0B
				CB-1233GP	12150-5H70A
35	14	NISSAN	K21, K25	MS-1220A	12247-50K00/12231-FY500
				CB-1220A	12111-FY500
36	23	NISSAN	MR16DDT, M5M	MS-1234A	12207-1KC0A
				CB-1234GP	12150-1KC0A
43	30	UD TRUCKS	ZD30DDTI	BB-2817A	12407-2W20B/2W21A
46	13	SUZUKI	K6A	MS-2410A	12340-75F00/12300-75820
				CB-2410A	12181-84H00/12181-54A50
47	4	TOYOTA	1AD-FTV, 2AD-FTV	MS-1473A	11701-26010-01/02
				TW-1473A	11791-26010
				CB-1473GP	13041-26020-01/02
55	88	TOYOTA	2UZ-FE	MS-1442A	11701-50032
				CB-1442A	13041-50030
56	97	TOYOTA	2Z	MS-1474A	11701-78C00-71
56	99	TOYOTA	13Z, 14Z, 15Z	MS-1475A	11701-78C00-71
56	100	TOYOTA	1ZR-FE, 2ZR-FE	MS-1471A	11701-37010/20
				CB-1471A	13041-37010
57	5	SHANGHAI GM	SAIL	MS-3890A	24102256/7
				CB-3890A	24102259
				TW-3890A	9002794
58	2	HYUNDAI	D4CB	TW-3887A	21030-4A900/20

注意事項 IMPORTANT NOTICE

- * このカタログは、出来るだけお客様の御要望に答えることを目的として作成致しました。
- * 記載されております内容については、十分注意を払って作成致しましたが、記載違い等による部品番号の互換性、寸法、その他仕様については、一切責任を負いかねますので御了承願います。
- * OEM（組付）メーカー、純正部品番号は、相当品として参考までに掲載いたしました。
- * 従来カタログの改訂版として御利用の程お願い申し上げます。
- * The purpose of this catalog is to furnish our customers with as a complete a listing of their parts requirements as possible.
- * All listing,application,and interchanges have been complied as carefully as possible with all available information ; We cannot assume any responsibility for possible errors in listings, applications, or interchange.
- * All references to original manufacture's trade names and part numbers are for identification only.
- * This catalog supersedes all previous catalogs and listings.

DAIHATSU

Group No.	Engine Model	Year	No. of Cyl.	Dis- placement	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
1	G G	AB AD Cuore Hijet Fronte	4/76-7/84 5/82-7/84	2 2	CC 547 617	MS-2500A 11702-87701	TW-2500A 11011-87701	CB-2500A 13202-87701	BB-2500A 11902-87701 11220-74000
2	G G	AB AD Fronte Mira Hijet	8/84-10/88 8/84-5/85	2 2	547 617	MS-2506A 11702-87711 11702-87709	TW-2500A 11011-87701	CB-2500A 13202-87701	BB-2500A 11902-87701 11220-74000
3	G	CB	10/77-8/84	3	993	MS-2501A	TW-2500A	CB-2501A	BB-2501A
	G	CD	5/82-8/84	3	843	11701-87703	11011-87701	13041-87705	11902-87702
	D	CL	1/83-8/84	3	993	11702-87704		13202-87705	
		Charade Hijet				11702-87703		13041-87703 13041-87702	
4	G	CB	8/1984-	3	993	MS-2505A	TW-2500A	CB-2501A	BB-2501A
	G	CB-T	8/84-11/90	3	993	11701-87706	11701-87701	-Same as	11902-87702
	G	CD	8/1984-	3	843	11701-87705		Group No.3-	
	D	CL	8/1984-	3	993	11702-87707			
		Charade Hijet				11702-87706 11702-87705			
5	G	CB-T Charade	5/1985-	3	993	MS-2503A 11701-87704 11702-87708	TW-2503A 11011-87702	CB-2509GP 13041-87701 13041-87707 13202-87707	BB-2501A 11902-87702
6	D	CL-T Charade	8/1984-	3	993	MS-2503A 11701-87704 11702-87708	TW-2503A 11011-87702	CB-2503A 13041-87704 13202-87706	BB-2501A 11902-87702
7	D	DG Delta	1977-81	4	2,530	(MS-1158A) 11702-87305		CB-1158A 13202-87303	PB-1158J 90043-84018
8	D	DG	1982-4/84	4	2,530	(MS-1158A)		CB-1158A	SH-1158A
	D	DL Delta Tafto Rocky Rugger	10/82-4/84	4	2,765	11702-87305		13202-87305 13202-87303	11802-87380 11802-87381
9	D	DL	4/84-8/87	4	2,765	(MS-1158A)		CB-1158A	SH-1158A
	D	DL-T Delta Tafto Rocky Rugger	4/84-8/87	4	2,765	11702-87305		13202-87305	11802-87380
10	D	DL	9/1987-	4	2,765	MS-2502A		CB-1158A	SH-2502A
	D	DL-T Delta Tafto Rocky Rugger	9/1987-	4	2,765	11702-87306		13202-87305	11802-87301
									PB-2502J 90043-84052 (4/84-7/87)
									PB-2511J 90043-84086 90043-84087 (7/87-8/87)

Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
11	G EB	8/85-7/90	3	547	CC MS-2507A	TW-2507A	CB-2507A		
	G EF Cuore Mira Hijet Atrai Opti Terios Kid MOVE	3/1990-	3	659	11702-87207 11702-87206 11701-87207 11701-87206 11701-87205 11701-87204 11701-87202 11701-87201	11011-87201	13041-87205 13041-87204 13041-87202 13041-87201 13202-87204 13202-87205		
12	G ED Hijet	1985-	3	846	MS-2510A 11702-87203	TW-2510A 11011-87202	CB-2510A 13202-87203		
13	G HC	1/1988-	4	1,295	MS-2511A	TW-2511A	CB-2511A		
	G HD Charade Rocky Applause Pyzar Terios	6/1989-	4	1,589	11701-87102 11701-87101	11011-87101	13041-87103 13041-87102 13041-87101		
14	G K3-VE	5/2000-	4	1,297	MS-1450A	TW-2510A	CB-2512A		
	G K3-VE2	5/2000-	4	1,297	(with a hole & lug)	11791-97401	13041-97401		
	G K3-VET Storia Sirion	1/2002-	4	1,297	-Same as Toyota 2SZ 11701-97401	11791-B1020			
15	G K3-VE		4	1,297	MS-2512A	TW-2510A	CB-2512A		
	G K3-VE2		4	1,297	(with 2 holes &	11791-97401	13041-97401		
	G K3-VET		4	1,297	no lug) 11701-B1020 11701-B1021	11791-B1020			
16	G KF-VE	12/2005-	3	658	MS-2513A	TW-2513A	CB-2513A		
	G KF-DET Mira Move Hijet		3	658	11701-B2011	11791-B2010	13041-B2010		
Refer to TOYOTA engine list on the following engine models: 3A, B, 3B, 13B, 14B, 1C, 2C, 3K, 4K, 5K, 5R, 12R, T, 2T, 12T, 13T, 1Y, 2Y, 3Y, 4Y									

HINO

Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
1	D DK10	4/66-6/77	6	10,178	(MS-1149GP)	(TW-1054BC)	(CB-2104GP)	(SH-1149B)	(PB-1116J)
	D DK10-T	4/66-6/77	6	10,178	11701-1110	11011-1050	13201-1271	(No.1) 11812-1010	13272-1150
	D DK20	9/66-6/77	6	10,178	11701-1070	(-6/77)	13201-1270	(No.2) 11822-1060	(-6/77)
	D DK20-T	12/67-6/77	6	10,178	11701-1490/1 11701-1290	4pcs	13201-1090 13201-1081/80	(No.3) 11832-1010 (No.4) 11842-1010	
	D ED100	1971-86	6	11,581	(F.R) 11701-1090	(TW-1149BC)	13201-1341	(No.5) 11852-1010	(PB-1149J)
	D ED100-T	1980-82	6	11,581	(C) 11701-1080 (I) 11701-1110	3pcs 11011-1200		(No.6) 11862-1030 (No.7) 11872-1040/10	13272-1190 13272-1080
	D ER100	1981-86	6	11,581		(7/77-)			(7/77-)
	D ER200	3/78-87	6	11,581	(MS-1054GP)				
2	D DM100	1963-86	6	4,313	MS-1059GP 11701-1170	TW-1059GP 11011-1080	(CB-1059GP) 13201-1140	(SH-1059B) (No.1) 11812-1040	PB-1059J 13272-1130
	D DQ100	6/72-8/83	6	4,507	11701-1180	11011-1090	13201-1150	(No.2) 11822-1040 (No.3) 11832-1040 (No.4) 11842-1040 (No.5) 11852-1030	
3	D DS50	1960-86	6	7,982	(MS-1038GP)	TW-1038K	(CB-1039GP)	(SH-1038B)	PB-1039J
	D DS60	1960-81	6	7,982	11701-1360	11011-1130	13201-1230	(No.1) 11812-1060	13272-1180
	D DS80	1962-68	6	7,982			13201-1240	(No.2) 11822-1070	13272-1070
	D DS70	1960-88	6	7,014	(F.R) 11701-1340 (C) 11701-1330 (I) 11701-1350			(No.3) 11832-1060 (No.4) 11842-1060 (No.5) 11852-1050	
4	D EB100	1967-86	6	9,036	MS-1079GP	(TW-1079BC)	CB-2100GP	(SH-1079B)	PB-1079J
	D EB200	1967-79	6	9,036	11701-1160 11701-1150 (F.R) 11701-1130 (C) 11701-1120 (I) 11701-1140	11011-1060 4pcs	13201-1111 13201-1110 13201-1120	(No.1) 11812-1020 (No.2) 11822-1020 (No.3) 11832-1020 (No.4) 11842-1020 (No.5) 11852-1020	13272-1230 13272-1090 13272-1040
5	D EB300	1971-77	6	9,838	MS-1079GP	(TW-1120BC)	CB-2100GP	(SH-1079B)	PB-1120J
	D EB400	7/77-88	6	9,838	11701-1161	11011-1171 11011-1170 11011-1060 (1977-) 3pcs	3201-1280 13201-1300	-Same as Group No.4-	13272-1100
6	D EC100	10/68-86	6	5,010	MS-1140GP 11701-1260 11701-1450 11701-1451 (F.R) 11701-1230 (C) 11701-1240 (I) 11701-1250	TW-1081GP 11011-1110	CB-1081GP 13201-1170 13201-1160 13201-1290	(SH-1081B) (No.1) 11812-1030 (No.2) 11822-1030 (No.3) 11832-1030 (No.4) 11842-1050	
7	D EF100	1971-10/82	V8	13,804	MS-1144GP	TW-1144K	(CB-1144GP)	SH-1144A	PB-1144J
	D EF100-T	1971-9/79	V8	13,804	11701-1431	11011-1030	13201-1021	(No.1) 11811-1020	13272-1050
	D EF300	1971-5/81	V8	14,232	11701-1430 11701-1280	(1971-7/75) TW-1148K	13201-1020 13201-1200	(No.2) 11821-1180 (No.3) 11821-1180	
	D EG100	1973-5/78	V8	14,886		11011-1150 (7/1975-10/82)		(No.4) 11821-1180 (No.5) 11811-1020	
8	D EF350	9/79-10/82	V8	14,779	MS-1148GP	TW-1148K	CB-1144GP	SH-1144A	PB-1144J
	D EF500	7/1975-	V8	15,459	11701-1023	11011-1150	-Same as Group No.7-	-Same as Group No.7-	-Same as Group No.7-
	D EF700	10/76-9/81	V8	15,920	11701-1022				
	D EF700-T	9/79-12/83	V8	15,920	11701-1021 11701-1020				

Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
9	D EF550	5/1981-	V8	16,260	MS-2107GP	TW-2107K	CB-2107GP	SH-2107A	PB-2107J
	D EF750	1/1981-	V8	16,745	11701-1580	11011-1210	13201-1380	(No.1) 11811-1170	13272-1240
	D EF750-T	6/1981-	V8	16,745	11701-1800 11701-1680	(5/81 -10/85) TW-2114K 11011-1260 (10/1985-) Export use		(No.2) 11821-1180 (No.3) 11821-1180 (No.4) 11821-1180 (No.5) 11811-1170	
10	D F17C	9/87-2/91	V8	17,238	MS-2107GP	TW-2107K	CB-2107GP	SH-2107A	PB-2107J
	D F17C-T	9/87-2/91	V8	17,238	11701-1580	11011-1210	13201-1380	(No.1) 11811-1170	13272-1240
	D F17D	12/1989-	V8	16,745				(No.2) 11821-1180	
	D F17D-T	8/1990-	V8	16,745				(No.3) 11821-1180	
	D F17E	12/1989-	V8	16,745				(No.4) 11821-1180	
	D F20C	12/1989-	V8	19,688				(No.5) 11811-1170	
11	D F21C		V8	20,781	MS-2120GP 11701-2370	*TW-2120K 11011-1300	CB-2107GP 13201-1380	SH-2107A -same as Group no.9	*PB- 13271-1510
12	D EH100	5/1972-86	6	5,871	MS-1140GP 11701-1271 11701-1270	TW-1081GP 11011-1110	CB-1165GP 13201-1180	(SH-1081B) (No.1) 11812-1030 (No.2) 11822-1030 (No.3) 11832-1030 (No.4) 11842-1050	PB-1139J 13271-1030
13	D EH300	6/74-12/80	6	6,211	MS-1140GP 11701-1271 11701-1270	TW-1081GP 11011-1110	(CB-1140GP) 13201-1190	(SH-1081B) (No.1) 11812-1030 (No.2) 11822-1030 (No.3) 11832-1030 (No.4) 11842-1050	PB-1140J 13272-1030
14	D EH500	2/80-10/83	6	6,211	MS-1140GP 11701-1271	TW-1081GP 11011-1110	CB-2101GP 13201-1261	SH-2101A (No.1) 11812-1051	PB-2108J 13272-1220
	D EH700	1/75-10/83	6	6,443	11701-1270 11701-1520		13201-1260 13201-1360	(No.2) 11822-1050 (No.3) 11832-1050 (No.4) 11842-1030 (No.5) 11852-1040 (No.6) 11862-1020 (No.7) 11872-1030	13272-1270
15	D EH500	10/1983-86	6	6,211	MS-1140GP 11701-1271	TW-1081GP 11011-1110	CB-2101GP 13201-1261	SH-2108A (No.1) 11812-1051	PB-2108J 13272-1220
	D EH700	10/1983-	6	6,443	11701-1270		13201-1260	(No.2) 11822-1110	13272-1270
	D EH700-T	10/1983-88	6	6,443	11701-1520		13201-1360	(No.3) 11832-1080 (No.4) 11842-1080 (No.5) 11852-1060 (No.6) 11862-1040 (No.7) 11872-1030	
16	D EK100	7/1975-	6	13,267	MS-2102GP	TW-2102K	CB-2102GP	SH-2102A	PB-2102J
	D EK100-T	10/1984-89	6	13,267	11701-1013	11011-1011	13201-1012	(No.1) 11812-1190	13272-1010
	D EK200	10/1980-90	6	13,267	11701-1012 11701-1011		13201-1011 13201-1010	(No.2) 11821-1200 (No.3) 11831-1140	
	D EK130-T	8/1986-	6	13,267	11701-1010 11701-1690	TW-2112K 11011-1250 For EK100 (Export use)		(No.4) 11841-1130 (No.5) 11851-1090 (No.6) 11861-1060 (No.7) 11871-1060	

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Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
17	D EK100	1986-12/89	6	13,267	MS-2102GP	TW-2102K	CB-2102GP		PB-2102J
	D EK200	1986-12/89	6	13,267	11701-1013	11011-1011	13201-1012		13272-1010
	D K13D	12/1989-	6	13,267	11701-1012		13201-1011		
	D K13U	6/1990-	6	13,267	11701-1011		13201-1010		
	D K130-T	12/89-91	6	13,267					
18	D K13C	1/87-3/92	6	12,882	MS-2102GP	TW-2102K	CB-2112GP	SH-2102A	PB-2104J
	D K13C-T	3/1986-			11701-1013	11011-1011 (1/87-3/92) TW-2112K 11011-1250 (4/1992-)	13201-1610	(No.1) 11812-1190 (No.2) 11821-1200 (No.3) 11831-1140 (No.4) 11841-1130 (No.5) 11851-1090 (No.6) 11861-1060 (No.7) 11871-1060	13272-1320
19	D K13D		6	13,267	MS-2102GP 11701-1013	*TW-2123K 11011-1360	CB-2102GP 13201-1012	SH-2102A -same as Group no.16	PB-2102J 13271-1010
20	D EL100	3/1978-91	6	7,862	MS-2103GP	*TW-2103GP	CB-2103GP	SH-2103A	PB-2103J
	D EL100-T	12/1981-91	6	7,862	11701-1460 11701-1470 11701-1851	11011-1180 (3/78 -6/80) TW-2105GP 11011-1220 (6/80 -6/91)	13201-1312 13201-1252	(No.1) 11811-1070 (No.2) 11821-1070 (No.3) 11831-1060 (No.4) 11841-1020 (No.5) 11851-1050 (No.6) 11861-1040 (No.7) 11871-1050	13272-1200
21	D EM100	6/1981-	6	9,419	MS-2103GP 11701-1460 11701-1470 11701-1851	TW-2105GP 11011-1220	CB-2106GP 13201-1400 13201-1510 (CB-2105GP)	SH-2103A -Same as Group No.20-	PB-2105J 13272-1250
22	D EP100	11/81-6/84	6	8,821	MS-2103GP	TW-2105GP	CB-2106GP	SH-2103A	PB-2113J
	D EP100-T	5/81-6/84	6	8,821	11701-1590 11701-1851	11011-1220	13201-1410 (5/81- 6/84)	-Same as Group No.20-	13272-1260
23	D EP100	7/1984-91	6	8,821	MS-2103GP	TW-2105GP	CB-2113GP	SH-2103A	PB-2113J
	D EP100-T	6/1984-	6	8,821	11701-1590 11701-1851	11011-1220	13201-1490	-Same as Group No.20-	13272-1260
	D P09B-T	6/1984-	6	8,501					
24	D EP100-T	1986-89	6	8,821	MS-2103GP	TW-2105GP	CB-2113GP	SH-2113A	PB-2113J
	M10U	8/1985-	6	9,880	11701-1590 11701-1851	11011-1220	13201-1490 13201-1670	(No.1) 11811-1070 (No.3) 11831-1060 (No.5) 11851-1050 (No.7) 11871-1050	13272-1260
25	D H06C	12/83-7/86	6	6,485	MS-2108GP	TW-2108K	CB-2108GP	SH-2108A	PB-2108J
	D H07C	1/83-7/86	6	6,728	11701-1790	11011-1270	13201-1460	(No.1) 11812-1051	13272-1270
	D H06B-T	1985-6/86	6	6,224	11701-1641		13201-1480	(No.2) 11822-1110	
	D H06C-T	12/82-6/86	6	6,485	11701-1661 11701-1602		13201-1421	(No.3) 11832-1080 (No.4) 11842-1080 (No.5) 11852-1060 (No.5) 11862-1040 (No.7) 11872-1030	

Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushings
26	D H06C	7/1986-	6	6,485	MS-2108GP	TW-2108K	CB-2111GP	SH-2108A	PB-2108J
	D H07C	7/1986-	6	6,728	-Same as	11011-1270	13201-1580	-Same as	13272-1270
	D H06B-T	7/1986-	6	6,224	Group No.25-	11011-1230	13201-1590	Group No.25-	
	D H06C-T	7-1986	6	6,485			13201-1600		
27	D H06B-T	7/1989-	6	6,224	MS-2108GP	TW-2108K	CB-2111GP	SH-2111A	PB-2108J
	D H06C-T	6/1986-	6	6,485	-Same as	11011-1270	13201-1580	(No.1) 11812-1051	13272-1270
	D H07C	6/1986-90	6	6,728	Group No.25-	11011-1230	13201-1590	(No.3) 11832-1080	
	D H07C-T	7/1989-	6	6,728			13201-1600	(No.5) 11852-1060 (No.7) 11872-1030	
28	D H06C-TI		6	6,485	MS-2111GP 11701-2290A S1170-12290		CB-2111GP 13201-1600	*SH-	PB-2108J 13272-1270
29	D H07D	7/1989-	6	7,421	MS-2108GP 11701-1661 11701-1602	TW-2108K 11011-1270 11011-1230	CB-2115GP 13201-1631 13201-1640		PB-2118J 13272-1300
30	D J05C		4	5,307	MR-2117GP 11701-2160	TW-2108K S1101-11230	CR-2117GP 13201-1780	SH-2117A 11901-1010	PB-2116J(for J05C) 13272-1300
	D J07C		5	6,634	11701-2170	S1101-11380	13201-1770		PB-2117J(for J07C) 13272-1300
31	D J05C-TI		4	5,307	MR-2117GP 11701-2160	TW-2108K S1101-11230 S1101-11380	CR-2118GP 13041-E0140~80 13041-E0240~80	SH-2117A 11901-1010	
32	D J08C		6	7,961	MS-2118GP 11701-2180	TW-2108K S1101-11230 S1101-11380	CB-2115GP 13201-1631	SH-2118A 11901-1020	PB-2118J 13272-1300
33	D J08C-TI		6	7,961	MS-2118GP 11701-2110	TW-2108K S1101-11230 S1101-11380	CR-2118GP 13041-E0140~80 13041-E0240~80	SH-2118A 11901-1020	
34	D J05E J07E J08E		4 5 6	5,123 6,403 7,684	*MR-	*TW-	*CR-		
35	D N04C		4	4,009	*MS-	*TW-	*CB-		
36	D P09C-T		6	8,821	*MS- 11701-1870	TW-2122K 11011-1330	CB-2113GP 13201-1670	SH-2103A -same as Group no.20	*PB- 13272-1350
37	D P11C		6	10,520	MS-2103GP 11701-1851	TW-2122K 11011-1330	CB-2122GP 13201-1880	SH-2103A -same as Group no.20	*PB- 13272-1350
38	D V21C	3/87-91	V10	20,932	MS-2114GP	TW-2114K	CB-2114GP	SH-2114A	PB-2114J
	D V22C	3/87-91	V10	21,548	11701-1780	11011-1260	13201-1620	(#1.6) 11811-1170	13272-1240
	D V25C	4/1991-	V10	24,610				(#2-5) 11821-1180	
39	D V25C		V10	24,160	MS-2114GP	*TW-2121K	CB-2114GP	SH-2114A	*PB-
	D V26C		V10	25,977					
	D V22D		V10	21,548	11701-2380	11011-1290	-same as Group no.36	-same as Group no.36	13271-1510

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Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
40	D W04C-T	2/1985-	4	CC 3,839	MS-2109GP 11701-1611 11701-1730	TW-2109GP 11011-1240	CB-2109GP 13201-1540	SH-2109K (No.1) 11811-1180 (No.2) 11821-1190 (No.3) 11831-1130	
41	D W04D W04D-T	4/1983- 5/1983-	4	4,009	MS-2109GP 11701-1611	TW-2109GP 11011-1240	CB-2109GP 13201-1430	SH-2109K -Same as Group No.29-	PB-2111J 13272-1280 13272-1281 (PB-2109J)
42	D W06D D W06D-T D W06E	3/1983- 5/1983- 4/1986-	6 6 6	5,759 5,759 6,014	MS-2110GP 11701-1630 11701-1750	TW-2109GP 11011-1280	CB-2110GP 13201-1450 13201-1550	SH-2110K (No.1) 11811-1180 (No.2) 11821-1190 (No.3) 11831-1130 (No.4) 11841-1120	PB-2112J 13272-1280 13272-1281 (PB-2110J)
Refer to TOYOTA engine list on the following engine models: B, 3B, 13B, 14B, DG									

Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
1	G G	A18A A20A Accord Vigor	6/85-9/89 4/1987-	4 4	CC 1,829 1,955	MS-2200GP 13321/7-PC6-003 -PD2-004	TW-1134A 13331-634-003/4	CB-2200GP 13211/7-PR4-A01/2 -PC6-003 -PD2-004	
	G	B16A Integra Civic	4/1989-	4	1,595	MS-2215GP (U)13321/7-PR3-003/4 (L)13341/7-PR3-003/4 13032/8-PR3-S10/20	TW-2215A 13331-PR3-003/4 -S10/20	CB-2215GP 13211/7-PR3-004 -PR3-S20	
3	G	B18A (U.S.A) B18B B20B Accura Integra		4 4 4	1,834 1,834 1,972	MS-2215GP -Same as Group No.2-	TW-2215A -Same as Group No.2	CB-2200GP -Same as Group No.1-	
	G G	B18A B20A Prelude Accord	5/1985- 5/1985-	4 4	1,834 1,958	MS-2208GP 13321/7-PG6-003/4 -PH6-003/4	TW-2215A 13331-PG6-003 (TW-2208CP)	CB-2200GP 13211/7-PR4-A01/2 -PC6-003 -PD2-004	
	G G	B20A B21A Prelude Accord	5/1985- 5/1991-	4 4	1,958 1,958	MS-2208GP -Same as Group No.4-	TW-2215A -Same as Group No.4- (TW-2208CP)	CB-2213GP 13211/7-PH3-003/4	
6	G G	C20A C20A-T Legend	10/85-10/90 10/88-10/90	V6 V6	1,996	MS-2211GP (U)13321/5-PH6-013 -004/023 (L)13341/5-PH6-013 -004/023	TW-1134A 13331-634-003/4	CB-2211GP 13211/7-PH6-013 -PH6-014	
	G G	C25A C27A Legend	11/85-9/88 10/85-10/90	V6 V6	2,493 2,675	MS-2210GP (U)13321/5-PH7-013/14 -PL2-003/4 -PL2-J01/2 (L)13341/5-PH7-013/14 -PL2-003/4 -PL2-J01/2	TW-2210GP 13331-PH7-003/4	CB-2210GP 13211/5-PH7-013 -PH7-014	
8	G G	D12A D13C Civic	10/1986- 8/1988-	4 4	1,237 1,296	MS-2214A 13321/7-PJ7-003/4	TW-1134A 13331-PD1-003/4	CB-2214GP 13211/7-PJ7-003/4	
	G G	D13A D13B Civic Logo	9/87-7/88 6/1987-	4 4	1,343 1,343	MS-2206GP 13321/7-PC0-004 -PC0-014 -PE0-661 -PE0-662 13032/8-PC0-S20 -PE0-660	TW-1134A 13331-PD1-003/4 13014-PD1-S10/20	CB-2204GP 13211/7-PE0-003/4 13022/8-PE0-S10/20	
10	G G G	D15A D15B D15Z Civic	8/87-7/88 6/1987- 9/1991-	4 4 4	1,493 1,493 1,493	MS-2206GP -Same as Group No.9-	TW-1134A -Same as Group No.9-	CB-2205GP 13211/7-PE1-003/4 13022/8-PE1-S10/20	
	G G	D15B D15Z Civic	9/1991- 9/1991-	4 4	1,493 1,493	MS-2206GP -Same as Group No.9-	TW-1134A -Same as Group No.9-	CB-2208GP 13022/8-PG6-S10/20	
	G G	D15B D15Z Civic	9/1991- 9/1991-	4 4	1,493 1,493	MS-2206GP -Same as Group No.9-	TW-1134A -Same as Group No.9-	CB-2208GP 13022/8-PG6-S10/20	

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Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
12	G D16A	10/86-	4	1,590	MS-2208GP	TW-2215A	CB-2208GP		
	G B18A Accura Domani HR-V Integra (U.S.A.)	1986-89	4	1,834	13321/7-PG6-003/4 -PM6-003/4	13331-PG6-003/4 (TW-2208CP)	13211/7-PG6-003/4		
13	G D17A		4	1,668	MS-2201A 13321-P2E003/4 13321-P2F-A01 13321-PK1-752	TW-2201A 13331-PLM03	CB-2201GP 13211-PLM-A01		
14	G E07A Acty Today	2/1990-	3	656	*MS-	*TW-	CB-2212GP 13211-PZ1-004		
15	G EC	11/74-10/79	4	1,488	MS-1134GP	TW-1134A	CB-1142GP		
	G ED	12/73-12/78	4	1,488	13321/7-634-003/4	13331-634-003/4	13211/7-PB2-003/4		
	G EF	4/76-10/86	4	1,599	-634-0031	-PD1-003/4	-PC1-003/4		
	G EK	9/78-6/83	4	1,750	-634-305/6		-642-003/4		
	G EM	6/79-10/83	4	1,488					
	G EP Civic	2/80-10/86	4	1,601					
16	G EE	8/75-6/79	4	1,238	MS-1134GP	TW-1134A	CB-1134GP		
	G EJ	5/78-10/83	4	1,335	13321/7-634-003/4	13331-634-003/4	13211/7-634-003/4		
	G EN Civic	10/79-10/83	4	1,335	-634-0031 -634-305/6	-PD1-003/4	-PA5-003/4 -PB9-003/4 -PD1-003		
17	G EH Acty	7/77-6/82	2	545	MS-1175A 13321/7-679-003	TW-1175A 13331-679-003	CB-1175GP 13211/7-679-003		
18	G EH Acty Today	6/82-5/88	2	545	MS-2202A 13321-679-013 -679-005	TW-1175A 13331-679-003	CB-1175GP 13211/7-679-003 -PD1-003/4		
19	G ER City	11/81-10/86	4	1,231	MS-2206GP 13321/7-PC0-003/4	TW-1134A 13331-PD1-003/4	CB-2206GP 13211/7-PC0-004		
20	G ES	11/82-10/86	4	1,829	MS-2200GP	TW-1134A	CB-2200GP		
	G ET Vigor	6/83-10/86	4	1,829	13321/7-PC6-003/4 -PD2-004	13331-634-003/4	13211/7-PR4-A01/2 -PK1-003 -PC6-003/4 -PD2-004		
21	G EV Civic	7/83-10/87	4	1,342	MS-1134GP 13321/7-634-003/4	TW-1134A 13331-PD1-003/4	CB-2204GP 13211/7-PE0-003/4		
22	G EV1 Civic	9/83-10/87	4	1,342	MS-2206GP 13321/7-PE0-004 -662	TW-1134A 13331-PD1-003/4	CB-2209GP 13211/7-PE0-661/2		
23	G EW Civic	8/80-5/89	4	1,488	MS-1134GP 13321/7-634-003/4	TW-1134A 13331-PD1-003/4	CB-2205GP 13211/7-PE1-003/4		
24	G EY Accord	6/83-10/86	4	1,598	MS-2200GP 13321/7-PC6-003/4	TW-1134A 13331-634-003/4	CB-2203GP 13211/7-PD4-003/4		
25	G F18B		4	1,849	MS-2213GP	TW-2213A	CB-2200GP		
	F20B Accord		4	1,997	13321-PT0-003	13331-PT0-003	13211-PC6-003		

Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
26	G F20A	1989-	4	1,997	MS-2213GP	TW-2213A	CB-2213GP		
	G F22A Accord Prelude	1989-	4	2,156	13321-PT0-003	13331-PT0-003	13211-PH3-003		
27	G H22A (VTEC) Prelude		4	2,156	MS-2213GP -Same as Group No.24	TW-2213A -Same as Group No.24	CB-2217GP 13211~7-P13-0141 13211~7-P13-0042		
28	G H23A Rover 623Sli Ascot	3/1992-	4	2,258	MS-2213GP 13321-PT0-003 13321-PCA-0031	TW-2213A 13331-PT0-003 13331-PT0-004	CB-2213GP 13211-PH3-003 13211-PH3-004		*PB- 13203-PAA-A013-Y1
29	G K20A Civic Acura CSX Ariel Atom	10/2000-	4	1,998	MS-2216GP (U) 13321-PNA-0032 (L) 13341-PNA-0032	TW-2216A 13331-PCX-003	CB-2216GP 13211~7 PAH-T01 13022-PAH-T10		*PB- 13203-PAA-A013-Y1
30	G K24A Accord Acura TSX Odyssey	10/2002-	4	2,354	MS-2216GP (U) 13321-PNA-0032 (L) 13341-PNA-0032	TW-2216A 13331-PCX-003	CB-2218GP 13211-PPA-0030		*PB- 13203-PAA-A013-Y1
31	G L13A	6/2001-	4	1,339	MS-2219A	TW-2215A	CB-2219A		
	G L15A	12/2001-	4	1,496	(U) 13321-PWA-0030	13331-PR3-0031	13211-PWA-0030		
	G LDA Fit Jazz Insight	9/2005-	4	1,339	(L) 13341-PWA-0030 (U) 13328-PWA-003/4 (L) 13348-PWA-003/4		13281-PWA-003/4		
32	G R16A		4	1,595	*MS-	*TW-	*CB-		
	R18A		4	1,799	13321-RNA-A02	13331-PNA-004	13211-RNA-A01		
	R20A		4	1,997	13341-RNA-A02 13321-PK1-752		13211-RNE-A01		
33	G ZC Integra Ballade	10/1984-	4 4	1,590 1,590	MS-2208GP 13321/7-PG6-003/4 -PM6-003/4 -PH3-003/4 -PH3-S10/20	TW-2215A 13014-PG6/S10/20 13331-PG6-003/4 (TW-2208CP)	CB-2208GP 13022/8-PG6-S10/20 13211/7-PG6-003/4		

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Group No.		Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
1	D	2AA1	1972-89	2	CC 975	MS-1157GP	TW-1070A	CB-1157A		
	D	2AB1	1970-91	2	1,184	5-11510-011	9-11581-057	5-12271-005		
2	D	3AA1	1972-90	3	1,463	MS-1601GP	TW-1070A	CB-1601A	SH-1605A	
	D	3AB1	1971-	3	1,777	5-11510-010	9-11581-057	5-12271-005	5-11610-002	
	D	3AD1	1977-90	3	1,498					
	D	3AD1-T	1978-79	3	1,498					
3	D	2AE1	1979-88	2	846	*MS- 5-11510-049	TW-1070A 9-11581-057	*CB- 8-94110-930 8-94156-084		
4	D	3AE1	1977-88	3	1,296	(MS-1602GP)	TW-1070A	CB-1602A		
		3AF1	1977-6/87	3	1,170	5-11510-033	9-11581-057	8-94110-930 5-12271-032		
5	D	2KA1	1983-89	2	538	MS-	TW-	CB-		
	D	2KB1	1983-89	2	584	5-11510-062	5-11599-002	5-12271-014		
	D	2KC1	1983-	2	653					
6	D	3KA1	1983-	3	808	MS-	TW-	CB-		
	D	3KB1	1983-	3	877	8-94411-291 5-11510-061	5-11599-002	5-12271-014		
7	D	3KC1	1983-	3	980	MS-	TW-	CB-		
	D	3KC2	9/1989-	3	980	8-94411-291 5-11510-061	5-11599-003	5-12271-014		
8	D	3KR1	10/1984-	3	1,422	MS- 5-11510-066	TW- 5-11599-003	CB- 8-94156-084		
9	D	4BA1	1971-5/88	4	2,775	MS-1628GP	TW-1129GP	CB-1603GP	SH-1100B	PB-1100J
	D	4BB1	1971-1989	4	3,595	5-11510-002	9-11585-601	9-12271-002	5-87810-017	9-12251-059
	D	4BC1	12/78-6/84	4	3,268	9-11510-608		9-12271-608	(No.1)9-11691-048	for 4BA1
	D	4BC2	2/1980-	4	3,268	(M1-1129GP X5)		8-97011-031	(No.2)9-11693-035	
	D	4BE1	1/1985-	4	3,636	(1971-12/78)		(C1-1129GP X2)	(No.3)9-11693-035	
	D	4BE2	6/1986-	4	3,636				(No.4)9-11693-035 (1971-1976)	
						MS-1163GP 5-11510-051 (12/78-9/81)	TW-1604A 8-97071-358			PB-1163J 1-12251-027 5-12251-006 9-12251-602 for 4BB1,4BC2
						MS- 5-11510-065 (9/81-10/85)			SH-1163B (No.1)9-11611-048 (No.2)9-11693-035 (No.3)9-11693-035	
						MS-1603GP 8-94114-564 8-97011-024 5-11510-060 (10/1985-)	TW-1155GP 8-94114-565 5-11685-001		(No.1)9-11691-048 (No.2)9-11693-035 (No.3)9-11693-035 (1976-)	PB-1129J 5-12251-010 5-12251-603 for 4BC1

Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
10	D 4BD1	12/1978-	4	3,856	MS-1606GP	TW-1155GP	CB-1603GP	SH-1163B	PB-1163J
	D 4BD1-T	12/1978-	4	3,856	5-11510-054	8-94114-565	8-97011-031	(No.1)9-11611-048	1-12251-027
	D 4BD2	1993-	4	3,856	5-11510-053	5-11685-001	9-12271-608	(No.2)9-11693-035	5-12251-006
	D 4BG1	6/1986-	4	4,329	(12/78-7/80) MS-1604GP 5-11510-064 8-94117-032 (4/1980-) MS- 8-94132-813 8-97025-446 (4/1986-)	TW-1604A 8-97071-358	1-12271-070	(No.3)9-11693-035 (No.1)9-11691-048 (No.2)9-11693-035 (No.3)9-11693-035	9-12251-602
11	D 6BB1	1972-4/80	6	5,393	MS-1629GP	TW-1129GP	CB-1612GP	SH-1129B	PB-1155J
	D 6BD1	7/1975-	6	5,785	9-11510-606	9-11585-601	9-12271-608	(No.1)9-11691-048	5-12251-006
	D 6BD1-T	1978-	6	5,785	(M1-1129GP X7)		5-12271-010	(No.2)9-11693-035	1-12251-027
	D 6BF1	10/79-1988	6	6,130	(1972-5/76)		(C1-1129GP X3)	(No.3)9-11693-035	9-12251-602
	D 6BF1-T	10/79-1988	6	6,130	MS-1611GP	TW-1155GP		(No.4)9-11693-035	
	D 6BG1	1/1984-	6	6,494	5-11510-048	1-11680-001		(No.5)9-11693-035	
	D 6BG1-T	5/1985-	6	6,494	5-11510-046 5-11510-013 (6/76-4/80) MS-1612GP 1-11510-074 1-11510-040 1-11510-084 (5/1980-)	1-11685-001 5-11685-001		(No.1)9-11611-048 (No.2)9-11613-035 (No.3)9-11613-035 (No.4)9-11613-035 (No.5)9-11613-035	
12	D 6BD1-T	10/79-4/80	6	5,785	MS-	TW-1155GP	CB-1612GP	SH-1129B	PB-1155J
	D 6BF1-T	10/79-4/80	6	6,130	1-11510-036 1-11510-032	1-11685-001 5-11685-001	9-12271-608 5-12271-010	(No.1)9-11691-048 (No.2)9-11693-035 (No.3)9-11693-035 (No.4)9-11693-035 (No.5)9-11693-035	5-12251-006 1-12251-027
13	D C190	1971-5/83	4	1,951	MS-1138GP	TW-1622A	CB-1070A	SH-1070A	PB-1070J
	Elf				5-11510-020 5-11510-006 9-11510-801	9-11581-048	5-12271-005 9-12271-168 8-94142-208	9-11610-602 9-11610-032 (1971-8/81) SH-1605A 5-11610-002 (F)5-11691-008 (C)5-11691-009 (R)5-11693-001 (8/81-5/83)	9-12271-062 (1971-8/81) PB-1605J 5-12251-005 (8/81-5/83)
14	D C190	6/83-5/88	4	1,951	MS-1605GP	TW-1622A	CB-1070A	SH-1605A	PB-1605J
	D C223	7/1979-	4	2,238	8-94118-830	9-11581-048	8-94462-943	5-11610-002	5-12251-005
	D C223-T	8/83-8/88	4	2,238	8-94139-682 8-94104-726 5-11510-036	8-94454-605 8-94125-752	8-94142-208 8-94120-242	(F)5-11691-008 (C)5-11691-009 (R)5-11693-001	 PB- 8-94118-825 (11/86-8/88)

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Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
15	D C221	1968-79	4	CC 2,207	MS-1610GP 5-11510-021 5-11510-005 9-11510-163	TW-1070A 9-11581-057	CB-1070A 5-12271-005 9-12271-152	SH-1070A 9-11610-602 9-11610-032	PB-1033J 9-12251-061
16	D C240 Elf	1969-	4	2,369	MS-1610GP 5-11510-021 5-11510-005 9-11510-149	TW-1070A 9-11581-057	CB-1070A 9-12271-168 5-12271-005 8-94142-208 8-94462-943 8-94120-242	SH-1070A 9-11610-602 9-11610-032 (1969-8/81) SH-1605A 5-11610-002 (F)5-11691-008 (C)5-11691-009 (R)5-11693-001 (8/1981-)	PB-1070J 9-12271-062 (1969-8/81) PB-1605J 5-12251-005 5-12251-007 (8/1981-)
17	D C330	1971-88	4	3,318	MS-1628GP 9-11510-167 5-11510-043 (1976-81) MS- 8-94153-512 5-11510-065 (1982-83)	TW-1100GP 9-11585-065 (1976-81) TW-1129GP 9-11685-601 (1982-83)	CB-1603GP 9-12271-157 9-12271-175 9-12271-178	SH-1100B (No.1)9-11691-048 (No.2)9-11693-035 (No.3)9-11693-035 (No.4)9-11693-035 (1971-75) SH-1163B (No.1)9-11691-048 (No.2)9-11693-035 (No.3)9-11693-035 (1976-88)	PB-1100J 9-12251-059 (1971-73) PB-1129J 5-12251-010 9-12251-603 (1973-88)
18	D C22NE 22LE		4	2,198	MS-1641GP 8-92061197-0		CB-1641GP 8-92028817-0 CB-1642GP		
19	D D500 D D500-T	1970-88 1971-77	6	4,978	MS-1629GP 5-11510-041 (1970-81) MS- 1-11510-041 (1982-88)	TW-1100GP 9-11585-065 (1970-81) TW-1129GP 9-11685-601 (1982-88)	CB-1612GP 9-12271-178 9-12271-157	SH-1129B (No.1)9-11691-048 (No.2)9-11693-035 (No.3)9-11693-035 (No.4)9-11693-035 (No.5)9-11693-035	PB-1629J 9-12251-059
20	D DA120 D GD150	1965-81 1965-74	6 6	6,126 5,654	(MS-1052GP) 9-11510-136 9-11510-127	TW-1052GP 9-11515-170	(CB-1023GP) 9-12271-121 9-12271-105		PB-1023J 9-12251-083
21	D DA220	1965-81	4	4,084	(MS-1064GP) 9-11510-138 1-11510-026	TW-1052GP 9-11515-170	(CB-1050GP) 9-12271-121 9-12271-105		PB-1050J 9-12251-083
22	D DA640	1965-8/88	6	6,373	(MS-1052GP) 9-11510-136 9-11510-127	TW-1052GP 9-11515-170	(CB-1052GP) 9-12271-146		PB-1052J 9-12251-084
23	D D920 D E110	1967-71 1967-72	6 6	9,203 11,044	(MS-1092GP) 9-11510-151	(TW-1071GP) 9-11515-198	(CB-1092GP) 9-12271-153		PB-1092J 9-12251-074
24	D DH100 D DH100-T	1967-11/82 1967-2/80	6 6	10,179 10,179	(MS-1092GP) 1-11510-012 9-11510-152	(TW-1071GP) 9-11515-198	(CB-1042GP) 9-12271-130 (1967-68) *CB- 9-12271-131 (1968-11/82)		PB-1042J 9-12251-070 9-12251-069

Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
25	D DH100	11/82-8/88	6	10,179 CC	MS-1609GP 1-11510-037 1-11510-034	(TW-1071GP) 9-11515-198	*CB- 1-12271-131		PB-1042J 9-12251-070
26	D E120 D E120-T	1970- 1970-3/84	6 6	12,023 12,023	MS-1154GP 1-11510-033 1-11510-031 1-11510-011 9-11510-178	TW-1102GP 9-11515-216	CB-1154GP 1-12271-009 1-12271-023 9-12271-177		PB-1154J 9-12251-088
27	D 4EC1 Gemini Opel Chevrolet	3/85-2/90	4	1,487	MS-1624GP 8-94151-600~3	TW-1625A 8-94314-292 8-94321-611 8-94124-100 8-94427-387 8-94114-106 (TW-1624GP)	CB-1624A 8-94314-253~5 8-94472-613~5 8-94151-604~6 8-94340-051~3		PB-1624J 8-94251-216
28	D 4EC1 D 4EC1-T Gemini	1/87-2/88 3/85-2/90	4 4	1,487 1,487	MS-1625GP 8-94154-014~7 8-94470-527~30	TW-1625A -Same as Group No.27-	CB-1624A -Same as Group No.27-		PB-1625J 8-94114-054
29	D 4EE1-T	2/1990-	4	1,686	MS-1625GP 8-94381-684~7	TW-1626A 8-94321-679	CB-1624A 8-94381-678~80		*PB-1636J 8-94369-904
30	D 4FA1 D 4FA1-T D 4FB1 D 4FB1-T D 4FC1 D 4FC1-T D 4FD1 D 4FE1 D 4FE1-T D 4FG1 Gemini,Fargo	1/1981-89 1/1981-89 1/1979- 1/82-5/86 1/80-6/90 8/1983-91 3/83-11/88 5/1985- 5/1985- 11/89-6/90	4 4 4 4 4 4 4 4 4 4	1,487 1,487 1,817 1,817 1,995 1,995 2,189 1,499 1,499 2,380	MS-1616GP 8-94110-927 8-94220-838 8-94250-262 (No.1.2.4.5.) 8-94420-010~12 (No.3) 8-94420-013~15	TW-1616A 8-94250-265	CB-1616GP 8-94110-930 8-94221-167 5-12271-032 8-94257-556 8-94329-497~9	SH-1166A 5-11611-010 5-11611-011	PB-1166J 5-12271-007 PB-1638J 8-94247-838 for 4FB1T,4FC1T 4FD1,4FG1
31	D 4HF1 D 4HG1 D 4HJ1 D 4HE1-T D 4HK1-T	5/1990-	4 4 4 4 4	4,334 4,570 4,985 4,751 5,193	MS-1631GP 8-97045-915-0 8-97045-916-0 8-97045-917-0 8-97219-4560-0 8-97372-076~078	TW-1631A 8-94396-980-0 (F) 8-94399-277 (R) 8-94399-283 (F) 8-97386-548 (R) 8-97386-549	CB-1631GP 8-97045-800-0 8-97045-801-0 CB-1640GP (for 4HE1-T, 4HK1-T) 8-94395-757-0 8-97131-186-0 8-97386-189-0 CB-1644GP 8-97616-358/9-0	SH-1631A 8-94363-380-0 8-94393-380-0 SH-1640A (for 4HG1, 4HK1-T) 8-97112-638-0 8-97386-189-0 *SH- (for 4HJ1)	PB-1631J 1-12251-036-0 PB-1644J (for 4HE1-T, 4HK1-T) 8-94394-613-0
32	D 6HE1 D 6HH1		6 6	7,127 8,226	MS-1632GP 8-94393-327 8-94394-449	TW-1631A -Same as Group No.31-	CB-1632GP 8-97045-800~1 8-94393-328	SH-1632A 8-94363-380-0	PB-1632J 1-12251-036-0
33	D 6HE1-T D 6HK1-T		6 6	7,127 7,790	MS-1632GP 8-94393-327-0 8-94391-514~6	TW-1631A -Same as Group No.31	CB-1639GP 8-94395-515-0 8-94395-757-0 8-97131-186-0 CB-1643GP 8-97616-358/9-0	SH-1643GP 8-94390-311-0 8-97602-699-0	PB-1643J 8-94394-613-0 8-94391-794-1

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Group No.		Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
34	G	G130	1966-70	4	1,325	MS-1103GP	TW-1030A	CB-1032GP	SH-1032B	PB-1032J
	G	G150	1966-75	4	1,471	8-94215-641	8-94210-750	8-94424-465	5-11611-002	9-12251-045
	G	G161	1969-5/86	4	1,584	9-11510-609	9-11581-021	9-12271-143	9-11611-020	(1966-10/79)
	G	G180	1969-7/87	4	1,817	9-11510-141		9-12271-100	(1966-75)	
	G	G200 Gemini Piazza Coupe	12/1978-88	4	1,949	8-94250-574		(1966-5/86) CB-1628GP 8-94424-246 8-94218-061 8-94115-354 (CB-1103GP) (5/86-4/88)	*SH- 9-11611-040 (1975-4/88) (SH-1103B) 9-11611-035	
35	G	G200 Coupe	4/1988-89	4	1,949	MS-1620GP 8-94251-263	TW-1616A 8-94210-265 8-94251-265	CB-1620GP 8-94251-266 9-94424-252	*SH- 9-11611-040	
36	D	4JA1	5/1984-	4	2,499	MS-1622A	TW-1622A	CB-1622A	SH-1622A	PB-1622J
	D	4JC1	1/1984-	4	2,238	8-94168-553	8-94168-555	8-94324-159	8-94427-196	8-94247-968
	D	4JD1	1987-	4	2,039	8-94340-693~5	8-94125-752	8-94125-747	8-94168-556	8-94419-455
	D	4JE1	1987-	4	1,862	8-97063-261~3	8-94454-604	8-94372-193	(F)8-94125-743	
	D	4JF1	1987-	4	1,496	8-94462-131	8-94454-605	8-97358-229	(C.R.)8-94125-741	*PB-
	D	D201	85-8/88		2,238	8-94314-314		8-97358-234	(F)8-94427-206	(for 4JA1-T)
	D	4JA1-T		4		8-94338-581			(C.R.)8-94427-201	8-97288-551 8-97352-889
37	D	4JB1	1/1984-	4	2,771	MS-1623A	TW-1070A	CB-1622A	SH-1622A	PB-1622J
	D	4JB1-T	10/1986-	4	2,771	8-94168-552	8-94453-520	8-94324-159	8-94427-196	8-94247-968
	D	4JG-2		4	3,059	8-94453-761	8-94168-554	8-94125-747	8-94168-556	8-94419-455
	D	4JG-2T (UBS)		4		(U)8-94481-026~8 (L)8-94481-029~31	8-94130-923	8-94372-193	(F)8-94125-743	
	D	4JX1 (UBS)		4		8-97063-258-0 8-97388-502-0	8-94453-762 8-97354-055 8-97383-740	8-97358-229 8-97358-234 8-97388-735	(C.R.)8-94125-741 (F)8-94427-206 (C.R.)8-94427-201	PB-1623J 8-94457-158 8-97311-438 8-97383-066
	D	4JH1		4						*PB-
	D	4JH1-T (D-Max)		4						(for 4JH1-T)
	D	4JB2		4						8-97288-551 8-97352-889
38	D	8PA1	1973-89	V8	9,971	MR-1156GP	TW-1156K	CR-1156GP		*PR-
	D	8PB1	4/1978-	V8	11,217	1-11510-003	1-11515-004	1-12271-008		1-12251-001
	D	8PB1-T	8/81-8/83	V8	11,217	1-11510-008~9		1-12271-007		(2Pcs/Box)
	D	8PC1	3/83-10/89	V8	12,011	1-11510-044~6		1-12271-030		8PA/B/C X 4boxes
	D	8PC1-T	7/83-8/89	V8	12,011	1-11510-051~2				10PA/B/C X 5
	D	10PA1	3/70-5/84	V10	12,464	1-11530-053				12PA/A/C X 6
	D	10PB1	10/1977-	V10	14,022	(1Pr/Box)		(1Pr/Box)		
	D	10PB1-T	10/82-1/91	V10	14,022	8PA/B/C X 5boxes		8PA/B/C X 8boxes		PR-1156J
	D	10PC1	4/83-8/89	V10	15,014	10PA/B/C X 6		10PA/B/C X 10		1-12251-011
	D	12PA1	2/76-8/83	V12	14,958	12PA/A/C X 7		12PA/A/C X 12		(2Pcs/Box)
	D	12PB1	12/1979-	V12	16,826					8PA/B/C X 4boxes
	D	12PB1-T	8/81-1/91	V12	16,826					10PA/B/C X 5
	D	12PC1	7/83-8/89	V12	18,017					12PA/A/C X 6

Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
39	D 8PD1	9/1989-	V8	13,741	MR-1630GP	TW-1630K	CR-1630GP		PR-1630J
	D 10PD1	7/1989-	V10	16,683	1-11510-068	1-11515-041	1-12271-043		1-12251-033
	D 12PD1	8/1989-	V12	20,019	1-11510-077~8	1-11510-098	1-12271-076		(2Pcs/Box)
					8PD X 5boxes		8PD X 8boxes		8PD X 4boxes
	D 8PE1			15,201	10PD X 6		10PD X 10		10PD X 5
	D 10PE1			19,001	12PD X 7		12PD X 12		12PD X 6
	D 12PE1			22,801	1-11510-098				PR-1637J
									1-12251-045-0
40	D 6QA1	2/80-4/86	6	11,044	MS-1609GP	TW-1071GP	CB-1609GP		PB-1092J
	D 6QA2	2/80-4/86	6	11,044	1-11510-037	9-11515-198	1-12271-026		9-12251-073
					1-11510-034		1-12271-024		9-12251-074
					1-11510-055				
41	D 6QA1	4/1986-	6	11,044	MS-1636GP	TW-1636K	CB-1636GP		PB-1092J
	D 6QA2	4/1986-91	6	11,044	1-11510-066	1-11510-038	1-12271-047		9-12251-073
	D 6QB2	4/1990-	6	11,781					9-12251-074
42	D 6RA1	8/1981-	6	12,023	MS-1613GP	TW-1613K	CB-1154GP		PB-1154J
	D 6RA1-T	8/1981-	6	12,023	1-11510-039	1-11515-040	1-12271-029		9-12251-088
					1-11510-073		(8/81-6/85) CB-1614GP 1-12271-055 (6/1985-)		
43	D 6RB1	8/1981-	6	13,741	MS-1613GP	TW-1613K	CB-1613GP		PB-1613J
	D 6RB1-T	10/1984-	6	13,741	1-11510-060	1-11515-040	1-12271-028		1-12251-025
	D 6RB2	11/1981-	6	13,741	1-11510-073		1-12271-048		
44	D 6SA1	1983-2/92	6	8,413	MS-1618GP	TW-1618K	CB-1618GP		PR-1156J
	D 6SA1-T	5/85-12/89	6	8,413	1-11510-067	1-11599-005	1-12271-050		1-12251-016
						1-11599-007	1-12261-050		
45	D 6SA1	10/1981-	6	8,413	MS-1634GP	*TW-1634K	CB-1634GP		PR-1156J
					1-11510-047	1-11515-019	1-12271-020		1-12251-016 (2Pcs/Box x 3)
46	D 6SD1	5/1985-	6	9,839	MS-1618GP	TW-1618K	CB-1635GP		PB-1635J
	D 6SD1-T	1/1986-	6	9,839	1-11510-067	1-11599-007	1-12271-060		1-12251-021
							1-12271-068		
47	D 6UZ1	10/2006-	6	9,839	*MS- 8-97609-768-0	TW-1618K 1-11599-005-0	*CB- 8-97605-484-0		*PB- 1-12251-051-0
48	G 6VD1		V6	3,165	MS-1645A	TW-1645A	CB-1645A		
	G 6VE1		V6	3,494	8-97179-296-3 8-97179-300-0	8-97014-208-0	8-97179-293-0		
49	D 6WA1-T		6	12,068	MS-1646GP	TW-1646A	CB-1646GP		PB-1646J
	D 6WF1-T		6	14,256	1-11510-093-1	1-11510-093	1-12271-072-1		1-12251-037
	D 6WG1-T		6	15,681	1-11518-059	1-11599-009-0	1-12271-096-0		8-98115-959-0
50	G 4XC1	3/85-2/90	4	1,471	MS-1621A	TW-1621A	CB-1621A		
	G 4XC1-T Gemini	4/86-2/90	4	1,471	8-94457-034~7 8-94151-528~30 8-94151-527	8-94257-903 8-94409-869	8-94151-531 8-94151-532~3 8-94311-012~14		
51	G 4XC1	2/1990-	4	1,471	MS-1626A	TW-1626A	CB-1621A		
	G 4XC1-T Gemini	2/1990-91	4	1,471	8-94360-465~8	8-94321-679	8-94151-531 8-94151-532~3 8-94311-012~14		

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Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
1	G B1	10/85-3/89	4	CC 1,138	MS-2008A	TW-2008A	CB-1168A		
	G B3	12/86-3/89	4	1,323	B6Y0-11-SG0	B6Y1-11-SJ0	B3Y0-11-SE0		
	G B5 Familia Demio	12/86-3/89	4	1,498		B6Y0-11-SJ0			
2	G B1	3/1989-	4	1,138	MS-2012A	TW-2008A	CB-1168A		
	G B3	3/1989-	4	1,323	B6Y2-11-SG0	B6Y1-11-SJ0	B3Y0-11-SE0		
	G B5	3/1989-	4	1,498	B6Y1-11-SG0	B6Y0-11-SJ0			
3	G B6 Familia Roadster	9/85-10/86	4	1,597	MS-2008A B6Y0-11-SG0	TW-2008A B6Y1-11-SJ0 B6Y0-11-SJ0	CB-2008A B6Y0-11-SE0		*PB- B660-11-213 Applicable to DOHC
4	G B6	10/1986-	4	1,597	MS-2012A	TW-2008A	CB-2008A		*PB- B660-11-213 Applicable to DOHC
	G BJ	10/1986-	4	1,290	B6Y2-11-SG0 B6Y1-11-SG0	B6Y1-11-SJ0 B6Y0-11-SJ0	B6Y1-11-SE0 B6Y0-11-SE0		
	BP Roadster	6/1989-	4	1,839	MS-2012A B6Y2-11-SG0 B6Y1-11-SG0	TW-2008A B6Y1-11-SJ0 B6Y2-11-SJ0	CB-2008A B6Y1-11-SE0 B6Y0-11-SE0		
5	G D5	10/1985-	4	1,490	MS-1168A	TW-1168A 8034-11-380	CB-1168A		
	G E1	5/80-11/86	4	1,071	B6Y0-11-SG0		B3Y0-11-SE0		
	G E3	5/1980-	4	1,296	E5B6-23-151		E5B6-23-105		
	G E5	5/1980-	4	1,490	E301-23-151		8034-23-105		
	G TC	1/77-12/85	4	1,272					
	G UC Familia	12/76-7/90	4	1,415					
6	G F6	9/82-3/87	4	1,587	MS-2004A		CB-2004A		
	G F8	9/82-3/87	4	1,789	FE30-23-151		F801-23-105		
	G FE Bongo Capella	10/82-1/87	4	1,998	F801-23-251				
7	G F2	5/1988-91	4	2,184	MS-2009A		CB-2004A		
	G F6	4/1987-	4	1,587	FE1H-11-SG0		F801-23-105		
	G F8	4/1987-	4	1,789					
	G FE Capella	4/1987-	4	1,998					
8	G F8	2/1990-	4	1,789	MS-2009A		CB-2009A		
	G FE Capella	4/1987-	4	1,998	FE1H-11-SG0		FEYA-11-SE0		
9	G FP		4	1,839	MS-2018A	TW-2018A	CB-2018A		
	FS Capella MPV		4	1,991	FSY1-11-SGOA	FSY1-11-SJO	FSY1-11-SE0		
10	G G6 Proceed		4	2,605	MS-2011A G601-11-SG0		CB-2009A FEYA-11-SE0		BB-2011A G601-10-701 G601-10-721 G601-10-731
11	D HA Titan	5/77-9/80	4	2,977	MS-1153A SL01-23-110 SE01-23-110 1363-23-110	TW-1153A SL01-23-115	CB-1153A SE45-11-SE0 1363-23-105		PB-1075J 0636-11-213

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Group No.		Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
12	D	HA Titan	10/80-3/89	4	CC 2,977	MS-1153A SE01-23-110	TW-1153A SL01-23-115	CB-1153A SE45-11-SE0		PB-2005J SE01-11-213
13	G	JE Luce V6 Sentia	7/1987-	V6	2,954	MS-2010GP JFY1-11-SG0 JEY8-11-SG0	TW-2010GP JFY1-11-SJ0	CB-2010A JEY1-11-SE0		
14	G	JF MPV	7/86-9/91	V6	1,997	MS-2010GP JFY1-11-SG0 JEY8-11-SG0	TW-2010GP JFY1-11-SJ0	*CB-2001A JFY1-11-SE0		
15	G	KJ KL Millenia Capella Wagon		V6 V6	2,254 2,496	MS-2017GP KJY1-11-SGOA	TW-2010GP -Same as Group No.15-	CB-2017GP KJY1-11-SE0		
16	G	L3 Atenza		4	2,260	*MS-2020A LFY1-11-SGO LFY1-11-SJO		*CB-2020A L3Y1-11-SE0		
17	G	LF Atenza Axcela		4	1,998	*MS-2020A LFY1-11-SGO LFY1-11-SJO		*CB- LFY1-11-SE0		
18	G	MA Luce Capella	3/77-4/89	4	1,970	MS-1114A 0305-23-151	TW-1061A 0305-23-201	CB-1086A 3975-23-105 0290-23-105	SH-1061A 0305-23-250 0221-23-150	PB-1114J 0107-11-212
19	G	NA Familia Bongo	5/70-11/83	4	1,586	MS-1114A 0305-23-151	TW-1061A 0305-23-201	CB-1141A 0222-23-105 (CB-1114GP)	SH-1061A 0305-23-250 0221-23-150	PB-1114J 0107-11-212
20	G	PB Familia Bongo	12/68-6/69	4	987	(MS-1082GP) 0249-23-110	TW- 0259-23-115	CB-1082A 0249-23-105		PB-1082J 0249-11-213
21	G G G	PB TA TB Familia Bongo	1967-7/90 3/1970-73 12/68-7/90	4 4 4	987 1,169 1,169	(MS-1082GP) 0268-23-110 0249-23-110	(TW-1082B) 0249-23-115	CB-1082A 0249-23-105		PB-1082J 0249-11-213
22	G G	PC TC Familia	1/70-2/78 3/70-2/78	4 4	985 1,272	MS-1113GP 0324-23-151	TW-1113K 0324-11-380	CB-1082A 0249-23-105		PB-1082J 0249-11-213
23	D	PN	6/1985-	4	1,720	MS-2013A PN11-11-SG0	TW-2013A PN11-11-SJ0	CB-2013A PN11-11-SE0		PB-2013J PN11-11-213
24	D D	RF R2 Bongo Capella	5/1983- 5/1983-	4 4	1,998 2,184	MS-2007A RFY0-11-SG0 RF01-23-135	TW-2007A RF01-23-115	CB-2004A RF01-23-105		PB-2007J RF01-11-213
25	D D	RF RF-T Bongo Capella	6/1986 12/1988-	4	1,998	MS-2007A RFY0-11-SG0	TW-2007A RF01-23-115	CB-2007A RFY0-11-SE0		PB-2004J RF71-11-213
26	D D	SL SL-T Titan	2-84-3/89 2/84-3/89	4	3,455	MS-1153A SL01-23-110	TW-1153A SL01-23-115	CB-1153A SL01-23-105		PB-2006J SL01-11-213

Group No.		Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushings
27	D	S2 Bongo Cosmo	9/79-4/90	4	CC 2,209	MS-1181GP 1456-23-110	TW-1181A 1456-23-115	CB-1181GP 1456-23-105		PB-1181J S213-11-213 0911-11-213
28	D	TF	4/1989-	4	4,021	MS-2014A	TW-2014A	CB-2014A		PB-2014J
	D	TM Titan	12/1991-	4	4,553	TF01-11-SG0	TF01-11-SJ0	TF01-11-SE0 TFY1-11-SE0		TF01-11-213
29	G	UB	5/70-7/73	4	1,490	MS-1114A	TW-1061A	CB-1141A	SH-1061A	PB-1114J
	G	VC Luce Bongo Cosmo	4/73-8/86	4	1,769	0305-23-151	0305-23-201	0222-23-105 (CB-1114GP)	0221-23-150 0305-23-250	0107-11-212
30	G	VA Titan	6/71-12/88	4	1,985	MS-1141A 0552-23-140		CB-1141A GE01-23-105 0552-23-105	(SH-1141B) 0552-23-710A	PB-1114J 0107-11-212
31	G	VB Luce Pick up	10/68-10/77	4	1,796	MS-1114A 0305-23-151	TW-1061A 0305-23-201	CB-1086A 3975-23-105 0290-23-105	SH-1061A 0211-23-150 0305-23-250	PB-1114J 0107-11-212
32	D	WL		4	2,499	MS-2016A	TW-2016A	CB-2016A		PB-2016J
	D	WL-T Bongo Bongo Friendee		4	2,499	WLY1-11-SGO	WLY1-11-SJO	WLY1-11-SEO WLYB-11-SEO		WL01-11-213
33	D	W9		4	2,892	MS-2016A	TW-2016A	CB-2021A		PB-2021J
	D	WE BT-50		4	2,953	WLY1-11-SGO WY-11-SGO	WLY1-11-SJO WLYB-11-SJO	W9Y2-11-SEO WEY2-11-SEO		WE01-11-213A
34	D	XA	1967-9/80	4	2,522	MS-2000GP	TW-1075A	CB-1075GP		PB-1075J
	D	XB	1971-8/77	4	2,701	S501-23-110 S527-23-110	0636-23-115	0527-23-105 0636-23-105		0636-11-213
	D	XA	9/80-4/89	4	2,522	S636-23-110		CB-2015GP (An oil hole)		PB-2000J S501-11-213
35	D	YA	10/69-9/75	6	3,783	MS-2002GP	TW-1075A	CB-1097GP		PB-1097J
	D	ZB Titan Boxer	3/72-10/80	6	4,052	V101-23-110 0727-23-110	0636-23-115	0784-23-105		0636-11-213
36	D	ZB Titan	10/80-5/87	6	4,052	MS-2002GP V101-23-110A 4867-23-110	TW-1075A 0636-23-115	CB-2002GP V101-23-105		PB-1097J 0636-11-213
37	G	ZY Axela		4	1,498	*MS-2019A ZJY1-11-SGO ZJY1-11-SHO ZJY1-11-SHX ZJY1-11-SJO ZJY1-11-SKO ZJY2-11-SGO ZJY2-11-SHO ZJY2-11-SHX	*TW-2019A ZJY1-11-SJO	*CB-2019A ZYY1-11-SEO ZYY1-11-SFX ZYY1-11-SFO ZYY2-11-SEO ZYY2-11-SFO ZYY2-11-SFX		

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Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
1	G	G23B	7/78-11/83	2	546	(MS-1800A)	(CB-1800A)		
	G	2G23	3/77-8/82	2	546	MD019871	MD019635		
	G	2G24 Minica	8/82-12/83	2	644	MD019526	MD079650		
2	G	G23B	12/83-5/87	2	546	MS-1820A	CB-1800A		
	G	2G25 Minica	1/84-11/88	2	783	MD079646	MD019635 MD079650		
3	G	3G81	1/1987-91	3	548	MS-1824A	CB-1824A		*BB- (F)MD141777 (R)MD141778
	G	3G82	1/87-11/88	3	796	MD114812	MD114816		
	G	3G83 Minica	1/1990-	3	657	MD1158908	MD1158909		
4	G	G11B	7/77-2/85	4	1,244	MS-1169A	CB-1169A		
	G	G12B	2/78-5/88	4	1,410	MD030573	MD030516		
	G	G13B	10/83-7/88	4	1,298				
	G	G15B	10/83-7/88	4	1,468				
	G	4G11	4/78-12/81	4	1,244				
	G	4G12	3/76-12/81	4	1,410				
	G	4G13	5/86-7/88	4	1,298				
	G	4G15 Lancer Mirage	9/87-7/88	4	1,468				
5	G	G13B	8/88-91	4	1,298	MS-1818A	CB-1825A		
	G	G15B	8/88-92	4	1,439	MD147999	MD143090		
	G	4G13	8/1988-	4	1,298	MD030126			
	G	4G15 Lancer Mirage	8/1988-	4	1,439				
6	G	G31B	4/86-6/88	4	1,499	MS-1164A	CB-1085A		BB-1085A (F)MD008888 (R.L)MD008889 (R.H)MD008889 for 4G32,G32B
	G	G32B	6/1977-	4	1,597	MS-1821A	MD071298		
	G	G33B	7/1977	4	1,439	MD091399	MD040704		
	G	G37B	6/1986-	4	1,755	MD071273	MD002843		
	G	4G30	11/69-73	4	1,289	MD040682	MD002813		
	G	4G31	11/69-74	4	1,499	MD002343			
	G	4G32	10/1970-	4	1,597				
	G	4G33	8/1971-	4	1,439				
	G	4G35	2/72-5/77	4	1,686				
	G	4G36	11/75-2/79	4	1,238				
	G	4G37	6/1986-	4	1,755				
		Lancer GaLant Mirage Delica							
7	G	4G41	10/71-5/79	4	1,378	MS-1024GP	TW-1024B	CB-1025GP	SH-1024B
	G	4G42 (KE43,44) (KE46) Lancer Delica	10/71-4/79	4	1,187	MD010780	(F)MD010350 (R)MD010351	MD010589 K432134	MD010340
8	G	G51B	11/77-2/78	4	1,855	MS-1131A	CB-1131A		BB-1131A MD008288 MD008289
	G	G52B	11/77-7/78	4	1,995	MD050360	MD026430		
	G	4G51	6/73-2/78	4	1,855	MD026445	MD024856		
	G	4G52	8/72-7/78	4	1,995	MD020381	MD050365		
	G	4G53	5/73-7/78	4	2,384				
	G	4G54 Galant	11/75-7/78	4	2,555				

Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
9	G G52B	8/78-9/87	4	1,995	MS-1819A		CB-1131A		
	G G54B	8/78-9/87	4	2,555	MD026815		MD026430		
	G 4G52	8/1978-	4	1,995	MD026440		MD024856		
	G 4G53	7/1978-83	4	2,384	(MS-1178A)		MD050365		
	G 4G54	8/1978-	4	2,555					
10	G G62B	5/79-2/88	4	1,795	MS-1821A		CB-1085A		BB-1164A
	G G63B	2/80-7/90	4	1,997	MD091399		MD071298		
	G G64B	10/86-8/89	4	2,350	MD071273		MD040704		
	G 4G62	1978-2/88	4	1,795	MD040682		MD002843		BB-1811A
	G 4G63	4/80-7/90	4	1,997	MD002343		MD002813		
	G 4G64	10/1986-	4	2,350			MD129423		
11	G 4G63	2/1992-	4	1,997	MS-1827A		CB-1827A		
	G 4G63		4	1,997	MD327494~7		MD327503~5		
	G 4G64	1997-	4	2,350	# 3MD327498~502		MD178648~50		
	G 4G69		4	2,378	MS-1834A MD326349	TW-1834A MD351820	MD195936~41		
12	G 6G71 Diamante Galant Debonair	7/1986-	V6	1,998	MS-1822A MD124496 MD105269	TW-1822A MD128659 MD116890	CB-1823A MD124592 MD116868		
13	G 6G72 Diamante Galant Debonair	7/86-7/92	V6	2,972	MS-1822A MD124496 MD105269	TW-1822A MD128659 MD116890	CB-1822A MD105277		
14	G 6G74 Pajero Debonair		V6	3,496	MS-1842GP MD197907~911	TW-1842A MD197988	CB-1842GP MD311928~932		
15	G 4G91	8/1991-	4	1,496	MS-1828A	TW-1828A	CB-1828A		
	G 4G93 Mirage Galant	5/1991-	4	1,834	MD174857	MD174862	MD174884		
16	G 4G92	8/1991-	4	1,755	MS-1828A	TW-1828A	CB-1829GP		
	G 4G93-T Mirage RVR X	8/1991-	4	1,834	MD174857	MD174862	MD177046		
17	G 4G92 Mirage	8/1991-	4	1,755	MS-1829GP MD194178	TW-1828A MD174862	CB-1829GP MD194201		

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Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
18	D	4D55 4D55-T 4D56 4D56-T	2/80-3/86 2/80-3/86 4/1986- 4/1986	4 4 4 4	CC 2,346 2,346 2,476 2,476	MS-1131A MD310665~69 MD310655~59(F) MD973121 MD050360 MD026445		CB-1131A MD026430 MD024856 1115A111 MD153622 MD050365	PB-1802J MD050009 BB-1131A MD008288 MD008289 MD021118
					MS-1845A 1052A448 1052A468~72 MD310665~69	TW-1845A MD374820 1052A483			
	D	4D56-T (105kW) Triton L200	2005-	4	2,476	MS-1845A 1052A448 1052A468~72 MD310665~69	TW-1845A MD374820 1052A483	CB-1845A 1115A117	
	D	4D56-T (131kW) Triton L200	2005-	4	2,476	MS-1802GP 1052A448 1052A468~72 MD310665~69		CB-1802GP 1115A294	
19	D	4D65	10/83-9/91	4	1,795	MS-1821A		CB-1085A	
	D	4D65-T Galant Mirage	3/83-9/91	4	1,795	MD091399 MD071273 (MS-1164A)		MD071298	
20	D	4D68		4	1,998	*MS-1844GP MD195926~30 MD195934~5 MD338888 MD343336		*CB-1844GP MD327315 MD338480	
21	D	4M40	1982-	4	2,835	MS-1832GP	TW-1832A	CB-1832GP	PB-1832J
	D	4M41				ME200022	ME200280	ME200046	ME201016
	D	4M42-T		4	2,977	ME200665 ME201562	ME200281 1052A499	ME200043 CB-1847GP (for 4M42-T) ME994003	
22	G	6A12 FTO Perdana Waja	10/1994-	V6	1,998	MS-1846A MD189832	TW-1846A MD189837	CB-1846GP MD312142	

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Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushings
1	D S2E	1977-91	2	1,310	MR-1826GP	TW-1826J	CR-1826GP	*SH-	PB-1078J
	D S3E	1978-91	3	1,960	34409-00100	34409-08100	34419-02100	(for S2E)	31619-00700
	D S4E	1976-	4	2,610	(1Pr/Box)		(2Prs/Box)	*SH-	(for S4E)
	D S6E (MITSUBISHI HEAVY INDUSTRIES)	1980-	6	3,910	S2E X 3 S3E X 4 S4E X 5 S6E X 7		S2E X 1 S3E X 1.5 S4E X 2 S6E X 3	(for S3E) *SH- (for S4E) *SH- (for S6E)	PB-1115J 31619-00700 (for S6E)
2	D S4K-T		4	4,250	MR-1833GP	TW-1833A	CR-1833GP	SH-1833K	PR-1833J
	D S6K-T (MITSUBISHI HEAVY INDUSTRIES)		6	6,380	34309-09050 (1Pr/Box) S4K X 5 S6K X 7	34309-00800	34219-00500 (1Pr/Box) S4K X 4 S6K X 6	(S6K-T) 34307-12700 34307-02801 34307-00600	34319-10500 (2Pcs/Box) S4K X 2 S6K X 3
3	D S4S		4	3,331	MR-1843A	TW-1843J	CR-1843A		
	D S6S (MITSUBISHI HEAVY INDUSTRIES)		6	4,996	32A09-00010 (S4S) 32B09-00010 (S6S) (1Pr/Box) S4S X 5 S6S X 7	32B09-08101	32A19-09010 (S4S) 32B19-09010 (S6S) (2Prs/Box) S4S X 2 S6S X 3		
4	D 4D30	11/78-8/82	4	3,298	(MS-1160GP) ME999089 ME011530	TW-1055K ME020328 ME013564	CB-1807GP ME012205 ME012210 ME999106 ME012227 (CB-1160GP)	SH-1160K (No.1)ME029225 (No.2)ME029027 (No.3)ME029028 /432	PB-1807J ME012203 (PB-1160J)
	D 4D30	9/1982-	4	3,298	MS-1807GP	TW-1055K	CB-1807GP	SH-1807K	PB-1807J
	D 4D31	10/82-8/91	4	3,298	ME999384	ME020328	ME999250	(No.1)ME029225	ME012257
	D 4D31-T	10/82-9/89	4	3,567		ME013564 (9/82-9/89)	ME999654 (9/1982-)	(No.2)ME011593 (No.3)ME011594	ME012249
	D 4D32	9/1989-	4	3,567		TW-1807K			PB-1809J
	D 4D33	9/1989-	4	4,214		ME013644 ME013560 (9/1989-)			ME012234 (11/1983-)
5	D 4D33		4	4,214	MS-1807GP	TW-1807K	CB-1836GP		PB-1807J
	D 4D35		4	4,561	ME999384	ME013560	ME995148~52		PB-1809J
	D 4D36		4	3,567					PB-1830J -Same as Group No.4,6
6	D 4D34	8/91-8/91	4	3,907	MS-1807GP	TW-1807K	CB-1830GP	SH-1830K	PB-1830J
	D 4D34-T	8/1991-	4	3,907	ME999384	ME013644 ME013560	ME997261	(No.1)ME013116 (No.2)ME011593 (No.3)ME011594	ME013075
7	D 4D34		4	3,907	MS-1807GP ME999384	TW-1807K ME013560	CB-1835GP ME995153~57	SH-1835K (No.1)ME013116 (No.2)ME017268 (No.3)ME011593 (No.4)ME017144 (No.5)ME011594	PB-1830J -Same as Group No.6

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Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
8	D 6D10	3/74-11/79	6	5,974	MS-1145GP	TW-1145K	CB-1820GP	(SH-1145B)	PB-1145J
	D 6D11	7/74-11/79	6	6,754	ME999199	ME031059	ME032518	(No.1) ME031042	ME033943
	D 6D14	2/1974-	6	6,557	ME999296		ME032417	(No.2) ME031043	ME032015
	D 6D14-T	4/1976-	6	6,557	ME031634		ME032332	(No.3) ME031044	ME032014
	D 6D15	9/79-10/88	6	6,919	ME031525		ME032016	(No.4) ME031096	
	D 6D16	6/1992-	6	7,545	ME031345		ME997732		
	D 6D16-T	5/1985-	6	7,545	ME031078	TW-1820K	ME997367	SH-1820K	PB-1814J
	D 6D17	5/1991-	6	8,201		ME071163 (10/1987-)	ME997362 ME999892 ME999891 ME999550 ME997737 (CB-1145GP)	(No.1) ME071141 (No.2) ME071142 (No.3) ME071143 (No.4) ME071862 (10/87-5/92)	ME072126 ME035381 ME035380 PB-1820J ME072128
9	D 6D16		6	7,545	MS-1838GP	TW-1838J	CB-1820GP	SH-1820K	PB-1820J
	D 6D16-T		6	7,545	ME995344~48	ME130226	-Same as	-Same as	ME072128
	D 6D17		6	8,201	ME993942	ME130230~2	Group No.8 CB-1838GP ME995564 ME993951	Group No.8	PB-1838J ME132712
10	D 6D20	1/75-1/82	6	10,308	MS-1162GP	TW-1072J	CB-1803GP	SH-1162K	PB-1162J
	D 6D20-T	10/76-1/80	6	10,308	ME052053	31109-07109	(CB-1162GP)	(No.1) ME051185	ME052159
	D 6D21	9/77-12/83	6	10,308	30909-00010		ME052488	(No.2) ME051186	ME052158
	D 6D22	8/1979-	6	11,149			ME052069	(No.3) ME051187	ME052660
	D 6D22-T	8/1979-	6	11,149			30919-02101	(No.4) ME051188	ME052603
	D 6D23	7/83-7/86	6	11,149			30919-02102	(No.5) ME051189 (No.6) ME051190 (No.7) ME051191	30319-00600 30319-00690
11	D 6D24		6	11,945	MS-1839GP ME350864~68	TW-1147J 31209-78101	CB-1839GP ME181337	SH-1839K ME051672/3/ 4/5/6/7/8	PB-1839J ME151450
12	D 6D31	10/85-	6	4,948	MS-1808GP	TW-1055K	CB-1808GP	SH-1808K	PB-1808J
	D 6D31-T				ME999711	ME020328 (10/85-1/90) ME013564	ME999726	(No.1) ME029225 (No.2) ME011593 (No.3) ME011594 (No.4) ME081526	ME012257 PB-1810J ME012234
13	D 6D34-T		6	5,861	MS-1808GP ME999711	TW-1807K ME013560 ME013644	CB-1837GP ME995175 ME996370	SH-1837K ME013116 ME011593 ME011594 ME081716	PB-1808J ME012257 PB-1837J ME013075
14	D 6D40		6	12,030	*MS- ME121080~4	TW-1804GP 31209-33100	CB-1803GP ME120101~5 ME121362~6	*SH- ME120007/9/11/13 ME120015/17/19	*PB- ME120556

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Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushings
15	D 6DB1	1965-85	6	8,550 CC	MS-1036GP 30009-39004 30009-39002 (F.C)30009-31002 (I) 30009-22002 (R)30009-26004	(TW-1036BC) 30009-18104 30009-18103	CB-1037GP 30019-12102 ME999056	(SH-1036B) (No.1)30007-33100 (No.2)30007-33200 (No.3)30007-33300 (No.4)30007-13403	PB-1037J 30019-20601
16	D 6DC2	1967-79	V6	9,955	MR-1147GP (1Pr/Box X 4) 31109-40020 31109-00000	TW-1072J 31109-07109 31109-07101	CR-1073GP (1Pr/Box X 6) 31119-51000 31119-50000	*SH- (No.1)31207-13100 (No.2)31207-43300 (No.3)31207-03400 (No.4)31207-13500	*PR- (2Pcs/Box X 6) 31219-05501 31219-05500 *PR- (2Pcs/Box X 3) 31219-02200 for connrod (31219-04011)
17	D 8DC2 D 8DC2-T D 8DC4 D 8DC6 D 8DC7 D 8DC8	1967-10/76 1969-10/76 1/74-10/76 1971-10/76 1/75-10/76 1973-10/76	V8 V8 V8 V8 V8 V8	13,273 13,273 13,273 14,886 13,804 14,886	MR-1147GP (1Pr/Box X 5) 31209-70020 31209-01001 31209-00000	TW-1072J 31109-07109 31109-07101	CR-1073GP (1Pr/Box X 8) 31219-51000 31219-50000 31219-00001	*SH- (No.1)31207-13100 (No.2)31207-13200 (No.3)31207-43300 (No.4)31207-03400 (No.5)31207-13500 (No.1)31207-13100 (No.2)31207-03200 (No.3)31207-03300 (No.4)31207-03400 (No.5)31207-13500	*PR- (2Pcs/Box X 8) 31219-05501 31219-05500 *PR- (2Pcs/Box X 4) 31219-02200 for connrod (31219-04011)
18	D 8DC2 D 8DC2-T D 8DC4 D 8DC6 D 8DC7	11/76-10/79 11/76-10/79 11/76-12/79 11/76-2/82 11/76-10/79	V8 V8 V8 V8 V8	13,273 13,273 13,273 14,886 13,804	MR-1147GP (1Pr/Box X 5) 31209-70020	TW-1147J 31209-78101 TW-1804GP 31209-33100 (8/1979-)	CR-1147GP (2Prs/Box X 4) 31219-71010	*SH- (No.1)31207-73100 (No.2)31207-13200 (No.3)31207-73300 (No.4)31207-73400 (No.5)31207-13500	PR-1147J (2Pcs/Box X 4) 31219-70600
19	D 8DC9 D 8DC9-T D 8DC10 D 8DC11	10/1979- 10/1979- 9/1984- 11/1984-	V8 V8 V8 V8	16,031 16,031 16,752 17,737	MR-1147GP (1Pr/Box X 5) 31209-70020 ME093879~85	TW-1804GP 31209-33100 (8/1979-)	CB-1804GP 31219-32010 ME093763~9	*SH- (No.1)ME061300 (No.2)31207-13200 (No.3)31207-73300 (No.4)31207-73400 (No.5)31207-13500 (10/79-10/90) SH-1840K ME092006 ME092007 ME092008 ME092009 ME160764	*PR- (2Pcs/Box X 4) ME062310

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Group No.	Engine Model	Year	No. of Cyl.	Dis- placement	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
20	D 10DC6	7/72-12/82	V10	18,608	MR-1147GP (1Pr/Box X 6) 31909-70020 31909-00000	TW-1072J 31109-07109 31109-07101 TW-1147J 31209-78101	CR-1073GP (1Pr/Box X 10) 31919-51000 31919-50000 CR-1147GP (2Prs/Box X 5) 31919-71010		*PR- (2Pcs/Box X 10) 31219-05501 31219-05500 *PR- (2Pcs/Box X 5) 31219-02200 for connrod (31219-04011) PR-1147J (2Pcs/Box X 5) 31219-70600
	D 10DC8	10/75-3/80	V10	18,608					
21	D 4DR5	7/70-8/91	4	2,659	MS-1812GP ME997202 ME999080 ME001041 30319-10010 (M1-1115GP X5)	TW-1115K 31309-08101	CB-1812GP ME002019 ME002001 31619-02100 (C1-1115GP X2) CB-1831GP ME999764	SH-1078K (F)31707-20700 (C)31707-13201 (R)31707-13301 (F)31607-03600 /13101 (C)31707-13201 (R)31707-13301	PB-1078J 31619-00700 31619-00792 PB- ME002153 for 4DR6-T PB- ME002187 (10/89-)
	D 4DR6-T	10/86-	4	2,659					
	D 4DR7	10/89-	4	2,835					
22	D 6DR5	7/70-6/86	6	3,988	MS-1813GP ME999081 31409-10010 (M1-1115GP X7)	TW-1115K 31309-08101 31309-08100	CB-1813GP ME002023 31619-02100 (C1-1115GP X3)	SH-1115K (No.1)31307-20700 (No.2)31307-13201 (No.3)31307-13301 (No.4)31407-13401 (No.1)31307-03600 /13101 (No.2)31307-13201 (No.3)31307-13301 (No.4)31407-13401	PB-1115J 31619-00700 31619-00792
23	D 6DS1	1964-7/72	6	4,678	MS-1808GP ME999088 ME029253 ME025265 ME020323 30809-02000 30809-01009 30809-01000 (MS-1170GP)	TW-1055K ME020328 30809-08201	CB-1808GP ME025292 ME020452 ME012210 30819-02100 (CB-1055GP)	SH-1055K (No.1)ME020278 (No.2)ME020280 (No.3)ME020282 (No.4)ME023432 SH- (No.1)ME029225 (No.2)ME029027 (No.3)ME029028 (No.4)ME023432	PB-1055J ME020448
	D 6DS3	7/72-77	6	5,103					
	D 6DS5	4/70-3/76	6	4,978					
	D 6DS7	10/72-7/78	6	5,430					
24	D 4M51		4	5,249	MS-1836GP ME995143~47	*TW-1836J ME242094 ME242095	CB-1836GP ME995148~52	*SH- ME240854	PB-1807J PB-1809J PB-1830J -Same as Group No.4,6

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Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
1	G A12	1/1970-	4	1,171	MS-1087GP 12207-H1000/1 12207-M7200/1 12207-M5600/1		CB-1045GP 12111-20900 12111-20910 12111-H1010/1 12111-H1001 12111-18000	SH-1019B 13002-H1020 13002-18000	
	G A12A	11/77-9/81	4	1,237					
	G A13	10/75-10/81	4	1,270					
	G A14	9/74-6/82	4	1,397					
	G A15 Sunny	6/1980-	4	1,487					
2	G CA16	10/79-9/91	4	1,598	MS-1217A (MS-1173GP) 12207-01E00 12207-D0200 (F.I.R) 12207-D4200 (C) 12261-D4200 (F.I.R) 12215-D4225 (C) 12247-D4225 (F.I.R) 12207-18V00 (C) 12261-18V00		CB-1173GP 12111-01E00 12111-D0200 12111-16A00 12111-03E00 12111-D0210 12111-D4200/2 *CB- 12111-V5500 12111-19V00/4 for CA18P,CA20P (1985-)		PB-1205J 12030-D4200 for CA16D,CA18D
	G CA18	6/1981-	4	1,809					
	G CA20	6/1981-	4	1,973					
	Bluebird Stanza Auster Preirie								
3	D CD17	10/1982-	4	1,680	MS-1217A (MS-1173GP) 12207-D0200 (10/82-7/83) MS-1217A (F.I.R) 12207-54A00 (C) 12261-54A00 (7/1983-)		CB-1173GP 12111-16A00 *CB- 12111-D2800 (1988-)		PB-1173J 12030-16A01 (1983-)
	Sunny Pulsar Langrey								
4	D CD20	5/1990-	4	1,973	MS-1217A (F.I.R) 12207-57J00 (C) 12261-54A00		CB-1217A 12111-22J00/2		PB-1217J 12030-57J00 for CD20
	D CD20-T	6/1991-	4	1,973					
5	G CG10DE		4	997	MS-1224A 12207-41B00 12207-41B10 12207-BC000	TW-1224A 12280-41B01 12280-BC000	CB-1224A 12111-41B00 CB-1235A 12111-AX010 (for CR14DE)		
	G CG13DE		4	1,274					
	G CR10DE		4	997					
	G CR12DE CR14DE		4 4	1,240 1,386					
6	G E10	3/81-5/88	4	988	MS-1174GP 12207-01M00 12207-17M00		CB-1174GP 12111-11M20/1 12111-11M00 12111-17M00		JB-1174B 13165/6-01M00 Jackshaft Bush
	G E13	10/81-2/91	4	1,270					
	G E15	3/81-2/91	4	1,487					
	G E15-T	9/82-9/87	4	1,487					
	G E16 Sunny,Pulsar	5/83-8/88	4	1,597					
7	G GA13	1/1990-	4	1,295	MS-1208A 12207-50Y00/4 12207-53Y00/4 12207-77A00/04 12207-77A10/14 12207-4M500 12207-4M50A	TW-1208A 12280-53Y00 12280-77A00	CB-1208A 12111-50Y00/2 12111-53Y00/2 12111-77A00/2 12111-4M500		PB-1208J 12030-53Y00 12030-77A00
	G GA14	9/1988-	4	1,392					
	G GA15	1/1990-	4	1,467					
	G GA16	1/1990-	4	1,596					
	G QG13DE	10/98-8/02	4	1,295					
	G QG15DE	10/1998-	4	1,497					
	G QG18DE	8/1998-	4	1,769					
8	G H20 Junior Cab-all Caravan Homy	7/67-8/82	4	1,982	MS-1042GP 12207-78400 12207-E0702 12207-78200		CB-1002GP 12111-P5100 12111-P5112 12111-P5110 12111-12210	SH-1003B 13002-71204 13002-71200 13002-32200	PB-1002J 12030-32200

Group No.		Engine Model	Year	No. of Cyl.	Dis- placement	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
9	G	HR15DE	9/2004-	4	1,498	MS-1227A 12215-BC20A	TW-1227A 12280-BC20A	CB-1227A 12150-BC20C 12110/1-BC20B		
	G	HR16DE		4	1,598					
	G	H4M Tiida Qashqai Renault Fluence SM3		4	1,598					
10	G	HR12DE		3	1,198	MS-1233A 12207-1HC0B (U) 12215-BC20A (L) 12223-1HC0B	TW-1227A 12280-BC20A	CB-1233GP 12150-5H70A (U) 12110-5H70A (L) 12111-BC20B 12150-3HD1B (U) 12110-3HD1A (L) 12111-BC22B 12110-8W90A		
	G	HR12DDR		3	1,198					
	G	XH5 RenaultPulse		3	1,198					
11	G	J	1965-69	4	1,299	(MS-1034GP)	TW-1000B 12280-B5225 12280/81-B3000 12280/81-B5200	CB-1007GP 12111-16700 12111-B3000 12111-09405 CB-1204GP 12111-B5225 For J18	SH-1006B 13002-B5000 13002-13200	
	G	J13	10/69-11/75	4	1,299	12231-13200				
	G	J15	3/70-8/79	4	1,483	(-1969)				
	G	J16	8/72-8/85	4	1,567	MS-1091GP 12231-01W00/10 12231-A3801 12231-B5000				
	G	J18 Bluebird Truck	1980-	4						
12	G	KA24 Presage Largo 240SX	1988-	4	2,388	MS-1209GP 12215/23-40F00 12247/55-40F00		CB-1209GP 12111-40F00 12111-53F00		PB-1209J 12030-40F00101
13	G	KH1S KH2S KH3S		4		MS-1220A 12207-50K00		CB-1221A 12111-85G00	SH-1003B -Same as Group No.8-	PB-1217J 12030-57J00
14	G	K21		4		MS-1220A 12207-50K00 12231-FY500 12247-50K00		CB-1220A 12111-FY500		
	G	K25 Forklift		4						
15	G	L13	1967-70	4	1,296	MS-1043GP 12207-W3400 12207-23000/1		CB-1044GP 12111-V0700 12111-V0705 12111-V0715 12111-73400 12111-F5100 12111-21000		
	G	L14	9/1970-4/77	4	1,428					
	G	L16	4/67-7/89	4	1,595					
	G	L18 Bluebird Violet Stanza	9/70-12/81	4	1,770					
16	G	L20B Truck	1974-4/80	4	1,952	MS-1183GP 12207-U6000/1		CB-1044GP 12111-73400 12111-V0700		
17	D	LD20 Skyline Bluebird Laurel Vanette	4/78-9/83	4	1,952	MS-1183GP 12207-U6000/1		CB-1044GP 12111-73400 12111-V0700		PB-1183J 12030-W3400 (4/78-9/82) PB-1189J 12030-V0700 (9/82-9/83)

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Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
18	D LD20 Skyline Bluebird Laurel Vanette	10/1983-	4	CC 1,952	MS-1218GP 12207-05E00 (10/83-8/85) (F.R) 12215-G5525 (I) 12231-G5525 (C) 12247-G5525 (8/1985-)		CB-1044GP 12111-73400 12111-V0700		PB-1189J 12030-V0700
19	G L20 G L24 G L26 G L28 Cedric	1966-5/87 10/71-5/87 1/71-6/78 6/1975-	6 6 6 6	1,998 2,393 2,565 2,753	MS-1047GP 12207-73400		CB-1048GP 12111-73400 12111-V0700 12111-F5100		
20	G L20A Cedric Laurel	6/81-5/87	6	1,998	MS-1047GP 12207-73400		CB-1177GP 12111-D0200		
21	D LD28 Skyline Cedric	10/79-10/86	6	2,792	MS-1047GP 12207-73400		CB-1048GP 12111-73400 12111-V0700 12111-F5100		PB-1047J 12030-V0700 PB-1048J 12030-W3400
22	G MA09 G MA10 March	8/88-1/92 9/1982-	4 4	930 987	MS-1202A 12215/23-21B00 12215/16-01B10	TW-1202A 12280-01B00/1	CB-1202A 12111-17B00 12111-01B00/11		
23	G MR16DDT Qashqai Tiida G MR190DDT G M5M RenaultLutecia ClioSport		4 4 4	1,618 1,618 1,618	MS-1234A 12207-1KC0A 12215/23-1KC0A	TW-1228A 12280-CK825 (12280-CK800)	CB-1234GP 12150-1KC0A 12110-1KC0A 12111-CK800		
24	G MR18DE G MR20DE Tiida G M4R Renault Megane Renault Raguna SM5		4 4 4	1,797 1,997 1,997	MS-1228A 12215-CK800	TW-1228A 12280-CK825	CB-1228A 12150-CK80A		
25	G NA20S NA20P NA16S	9/89-6/99 6/91- 9/89-8/95	4 4	1,998 1,627	MS-1221A (F.I.R) 12207-85G00 (C) 12261-85G00 MS-1225A (FOR NA16) 12261-84G00 12207-85G00		CB-1221A 12111-85G00		
26	G P40 G PF40 Patrol	9/79-10/87 6/80-12/88	6 6	3,956 3,956	MS-1172GP 12207-L6200/1 12207-L6000/2		CB-1001GP 12111-58010	SH-1002B 13002-C6005 13002-58000	
27	G QR20DE QR25DE		4 4	1,998 2,488	MS-1226A 12207-6N210	TW-1226A 12280/81-6N210	CB-1226GP 12111-6N210 12111-JA00A 12111-JA00C		PB-1226J 12030-6N200

Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushings
28	G RB20D Cefiro	8/1985-	6	CC 1,998	MS-1203GP (F.I.R) 12207-42L10 (C) 12261-42L00 (F.I.R) A2231-42L00 (C) 12261-42L00		CB-1215GP 12111-58S00/02		PB-1206J 12030-58S00
29	G RB20 G RB24 Cefiro Crew	10/1984- 5/89-8/91	6 6	1,998 2,429	MS-1203GP (F.I.R) 12207-42L10 (C) 12261-42L00 (F.I.R) 12207-AA100 (C) 12261-AA100		CB-1203GP 12111-42L00/02 12111-19V00/02		PB-1203J 12030-53Y00 12030-77A00
30	G RB25 Skyline Laurel Stagea	8/1991-	6	2,498	MS-1203GP (F.I.R) 12207-42L10 (C) 12261-42L00		CB-1216GP 12111-05U00/02		PB-1206J 12030-58S00
31	G RB26DETT Skyline	8/1989-	6	2,568	MS-1216GP (F.I.R) 12207-05U00 (C) 12261-12U00		CB-1216GP 12111-05U00/02		PB-1206J 12030-58S00
32	G RB30S Patrol	8/85-8/88	6	2,962	MS-1203GP (F.I.R) 12207-42L10 (C) 12261-42L00		CB-1206GP 12111-67S00/02		PB-1206J 12030-58S00
33	D RD28 RD28-T Laurel Safari	6/1983-	6	2,825	MS-1207A (F.I.R) 12207-V7200 (C) 12209-V7200 (F.I.R) 12207-V7200 (C) 12261-42L00 (C) 12261-42L08		CB-1207A 12111-V7200/02		PB-1207J 12030-V7200 PB-1221J (FOR RD28-T) 12030-22J01
34	G SR18 G SR20		4 4	1,838 1,998	MS-1213GP 12207-60J00	TW-1213GP 12280-60J00	CB-1213GP 12111-60J00 12111-1N500		PB-1213J 12030-60J02
35	G TB42E G TB45E G TB48DE	10/1987-	6 6 6	4,169 4,478 4,758	MS-1199A 12207-03J00/10 12207-VB000 MS-1230A (for TB48DE) 12207-VC210		CB-1199A 12111-03J00/10	SH-1199B 13002-03J00	PB-1199J 12030-03J00
36	G VG20 Cedric Gloria	6/83-10/86	V6	1,998	(MS-1200GP) (F) 12215-V5325 (I) 12231-V5325 (R) 12247/55-V5300		(CB-1200GP) 12111-F6300 12111-V5001		

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Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
37	G VG20 Cedric Gloria	10/86-	V6	CC 1,998	MS-1211GP (F) 12215-02P25 (I) 12231-02P25 (R) 12261-02P00 (F) 12214-40V00 (I) 12230-40V00 (R) 12261-40V00 (F) 12214-40V10 (I) 12230-40V10 (R) 12261-40V10 (MS-1201GP)		CB- 12111-10V03 CB-1200GP 12111-F6300		PB-1200J 12030-D4200
38	G VG20D Cedric Gloria	6/87-6/91	V6	1,998	MS-1211GP (F) 12207-F6500 (I) 12207-F6510 (R) 12263-F6500		CB- 12111-16V00/02		PB-1206J 12030-58S00
39	G VG30 Fairlady Z Cedric	6/83-4/87	V6	2,960	MS-1211GP (F) 12215-02P25 (I) 12231-02P25 (R) 12247/55-02P00 (MS-1201GP)		CB-1210A 12111-V5211 (CB-1201GP)		
40	G VG30 Fairlady Z Cedric	4/1987-	V6	2,960	MS-1211GP (F) 12214-02P00 (I) 12230-02P00 (R) 12261-02P00 (F) 12215-02P25 (I) 12231-02P25 (R) 12261-02P00 (F) 12214-40V00 (I) 12230-40V00 (R) 12261-40V00 (F) 12214-40V10 (I) 12230-40V10 (R) 12261-40V10 (MS-1201GP)		CB-1210A 12111-02P00 12111-40V10		PB-1210J 12030-21V00
41	G VG30D Fairlady Z Cedric	2/1986	V6	2,960	MS-1211GP (F) 12207-F6500 (I) 12207-F6510 (R) 12263-F6500 (F) 12207-30P00 (I) 12207-30P10/20 (R) 12263-30P00		CB-1211GP 12111-31P00/03		PB-1211J 12030-30P00 12230-F6510
42	G G VH41 VH45 Cima President InfinitiQ41-45	8/1991- 10/1989-	V8 V8	4,130 4,494	MS-1214GP (F.R) 12207-60U00 (I) 12207-60U10 (C) 12263-60U00 MS-1231GP 12215-60U00 12223-60U00	TW-1214A 12280/81-60U00	CB-1214GP 12111-60U00/02		PB-1214J 12030-60U00/1

Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
43	G VK45DD	2001-	V8	4,494	MS-1231GP 12207-AR010	TW-1214A 12280/81-7S000	CB-1231GP 12111-7S010		PB-1231J 12030-7S000
	G VK45DE	8/2003-	V8	4,494					
	G VK50VE	2008-	V8	5,026					
	G VK56DE		V8	5,552					
	Armada M45, M56 QX56 Titan								
44	G VQ20DE		V6	1,995	MS-1219GP 12207-31U00	TW-1219A 12280/1-31U00 12280/1-31U10	CB-1219GP 12111-31U10		PB-1219J 12030-31U01
	G VQ23DE		V6	2,349					
	G VQ25DD		V6	2,495					
	G VQ25DE		V6	2,495			CB-1222GP 12111-4P110		
	G VQ25DET		V6	2,495					
	G VQ30DD		V6	2,987					
	G VQ30DE		V6	2,987			CB-1223GP 12111-4W000 12111-JA10C		
	G VQ30DET		V6	2,987					
	G VQ35DE		V6	3,498					
45	G VQ40DE		V6	3,954	MS-1232GP 12207-EA200	TW-1232A 12280-EA20A 12280-EA200	CB-1232GP 12111-EA200		PB-1219J 12030-31U01
	Frontier Pathfinder Suzuki Equator								
46	D YD22	6/99-5/04	4	2,148	MS-1229A 12207-ES60A 12207-AD200	TW-1229A 12280-AD200 12280-AD201 12280-ES60A	CB-1229A 12111-ES60A		PB-1229J 12030-AD200
	D YD25	6/98-12/01	4	2,488					
47	G Z16	9/1977-	4	1,595	MS-1043GP 12207-W3400 12207-23001 12207-23000 12207-21000		CB-1044GP 12111-V0705 12111-V0715 12111-V0700 12111-73400 12111-F5100		
	G Z18	9/1977-	4	1,770					
48	G Z20	11/1975	4	1,952	MS-1183GP 12207-U6000/1		CB-1044GP 12111-V0700 12111-V0705 12111-V0715 12111-73400		
	G Z22	8/1982-	4	2,187					
	G Z24	8/1983-	4	2,389					
	Silvia Laurel Bluebird								

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Group No.		Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushings
1	D	BD30	5/89-10/91	4	CC 2,953	MS-2817A (MS-1190GP) 12207-54T10	TW-1028A 12280-37525/27	CB-1194A (U) 12111-54T10 (L) 12111-43G01	SH-1190A 13002-43G05 13002-54T00	PB-1194J 12030-31N00
						MS-1180GP 12207-J2000 (MS-1122GP)	TW-1122J 12280-J2025/27	CB-1122GP 12117-J2000	SH-1122A 13002-J2000	PB-1122J 12030-J2000
3	D	ED33	2/78-11/86	4	3,298	MS-1180GP 12207-J6500/10	TW-1122J 12280-J2025/27	CB-2801GP 12117-Z5500/10 12117-Z5000 (CB-1180GP)	SH-1122A 13002-J2000	PB-1180J 12030-Z5000
	D	ED33-T	12/81-11/86	4	3,298					
	D	FD33	1/83-11/86	4	3,298					
	D	FD33-T	6/84-11/86	4	3,298					
4	D	ED33	11/1986-	4	3,298	MS-1180GP 12207-J6500/10	TW-1122J 12280-J2025/27	CB-2801GP 12111-01T00/10 (CB-1180GP)	SH-1135A 13003-Z5025	PB-1180J 12030-Z5000
	D	ED35	6/1990	4	3,465					
	D	FD33	11/86-5/88	4	3,298					
	D	FD33-T	11/1986-	4	3,298					
	D	FD35	11/1986-	4	3,465					
	D	FD35-T	11/1986-	4	3,465					
5	D	ED6	9/74-4/83	6	5,654	MS-1135GP 12207-Z5325	TW-1122J 12280-J2025/27	CB-2802GP 12117-Z5510 12117-Z5500 12117-Z5000 (CB-1135GP)	SH-1135A 13003-Z5025 (#1.2) 13003/4-J2000 (#3.4) 13005/6-Z5000	PB-1135J 12030-Z5000
	D	FD6	5/1973-	6	5,654	12207-Z5225	12280-Z5025/27			
	D	FD6-T	5/1973-	6	5,654	12207-Z5125 12207-Z5025 12207-Z5510 12207-Z5500 12207-Z5000 12215-Z5025	12280-Z5025/27			
6	D	FE6 FE6-T		6	6,925	MS-2800GP 12213-Z5500 12213-Z5505 12213-Z5564~68	TW-2800J 12280-Z5225/27 12280-Z5125/27 TW-2809J 12280-Z5325	(CB-2800GP) 12117-Z5560/1 CB-2809GP 12117-Z5600 12117-Z5605	SH-1135A -Same as Group No.5- SH-2800K 13003-Z5028 (#1,2,3) 13003/4/5-Z5502 (#4) 13006-Z5503	PB-1083J 12030-95000
				6	6,925					
7	D	FD42		4	4,214	MS-2804GP 12207-0T003	TW-2800J -Same as Group No.6-	CB-2804GP 12110-0T003	SH-2804A 13005/8-0T000	PB-2804J 12030-0T001
		FD46		4	4,617					
		FD46-T		4	4,617					
		FD46-TA								
8	D	GE13T		6	13,074	MS-2814GP 12215-00Z00 12223-00Z00	TW-2814K 12280/90-00Z08 12280-97436	CB-2814GP 12117-00Z60	SH-2814K 13003/4/5/6-00Z01 13007/8/9-00Z01	PB-2814J 12030-00Z00
		Big Thumb Quon								
9	D	MD92		6	9,203	MS-2816GP 12215/21-Z6013	TW-2816K 12280-Z6128	CB-2816GP 12117-Z6013	*SH-2816K 13003-Z6001 13004~8-Z6002 13009-Z6001	PB-2816J 12030-Z6002
	D	MD92T		6	9,203					

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Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushings
10	D ND6	7/1970-	6	6,842	MS-1193GP	TW-1083K	CB-1083GP	SH-1083K	PB-1083J
	D ND6-T	10/71-4/86	6	6,842	12213-95025	12280-95025/27	12117-95007	13003-95026	12030-95000
	D NE6	12/1985-	6	7,412	12212-95000		12117-95001	13003-95025	
	D NE6-T	12/1985-	6	7,412	(F.I.R) 12213/27-95012 (C) 12214-95012 (F.I.R) 12213/27-95006 (C) 12214-95006 (F.I.R) 12213/27-95000 (C) 12214-95000 (F.I.R) 12215-95025/26 (C) 12222-95026 (MS-1083GP)			(No.1) 13003-95000/1 (No.2) 13004-95000/1 (No.3) 13005-95000/1 (No.4) 13006-95000/1 (No.5) 13007-95000/1 (No.6) 13008-95000/1 (No.3) 13009-95000/1	
11	D NF6-T		6	9,160	MS-2815GP 12213-95500 12214-95500 12227-95500	TW-2803K 12280/90-96015	CB-2815GP 12117-95501	SH-1083K 13003/9-95001 SH-2815K 13003/9-95501	PB-2815J 12030-95501
12	D PD6	1969-	6	10,308	MS-1084GP	TW-1084K	CB-1084GP	SH-1084K	PB-1084J
	D PD6-T	6/1971-	6	10,308	12212-96000	12280-96025/27	12117-96012	13003-96025/26	12030-96000
	D PE6	8/1970-	6	11,670		12280-96000/4	12117-96006	(No.1) 13003-96000	
	D PE6-T	10/1974-	6	11,670	(F.I.R) 12213/27-96000 (C) 12214-96000	12290-96000/4	12117-96000	(No.2) 13004-96000 (No.3) 13005-96000 (No.4) 13006-96000 (No.5) 13007-96000/1 (-12/82)	
	D PD6H	1/1983-	6	10,308	(F.I.R) 12213/27-96000 (C) 12222-96000 (F.I.R) 12215-95025/26 (C) 12214-96000 (F.I.R) 12215-96025/26 (C) 12222-96000 (F.I.R) 12215/23-96001 (F.I.) 12221-96000 (C) 12222-96000	TW-2803K 12280-96126/25 (TW-1188K)		*SH-2806B 13003-96226 (No.1) 13003-96017 (No.2) 13004-96018 (No.3) 13005-96017 (No.4) 13006-96018 (No.5) 13007-96017	
13	D PF6		6	12,503	MS-2803GP	TW-2803K	CB-2803GP	(SH-2803K)	PB-2803J
	PF6-T		6	12,503	12213-96526 12213-96025	-Same as Group No.9- TW-2807K 12280-97225 12280-96500 12290-96505	12117-96506 CB-2810GP 12117-96576	13003-96127 SH-2807K 13003-97325 (#1,3,5) 13003/5/7-96019 (#2,4) 13004/6-96060	12030-96002
14	D PG6 PG6H		6 6	13,337 13,337	MS-2803GP -Same as Group No.11-	TW-2807K -Same as Group No.11-	CB-2811GP 12117-96608	SH-2808K 13003-97326 (#1,2,3) 13003/5/7-96060 (#2,4) 13004/6-96061	
15	D QD32 QD32ETi	9/96-6/07 9/96-8/99	4 4	3,153 3,153	MS-2817A (MS-1190GP) 12207-43G10	TW-1028A 12280-37525/27	CB-2805A (CB-1190GP) 12111-43G01	SH-1190A 13002-43G00	PB-2805J 12030-2W200

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Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
16	D RD8 D RD8-T	8/71-7/83	V8	14,313 CC	MS-1118GP 12212-97185 12212-97525	TW-1118K 12280-97025/27	CB-1118GP 12117-97008 12117-97004 12117-97000	SH-1118K 13003-97128 13003-97025 13003-97029 (#1)13003-97000/2/3 (#2)13004-97000/2/3/5 (#3)13005-97000/2/3/5 (#4)13006-97000/2/3/5 (#5)13007-97000/2/3/5	PB-1118J 12030-97000/1
17	D RD8 D RD8-T D RE8	7/83-4/85 7/83-4/85 5/83-4/85	V8 V8 V8	14,313 15,115 15,115	MS-1186GP 12212-97228 12212-97725 12212-97529	TW-1118K 12280-97025/27	CB-1118GP 12117-97062 12117-97008	SH-1118K -Same as Group №.11-	PB-1118J 12030-97001/2
18	D RD8 D RD8-T D RE8 D RF8	4/1985- 4/1985- 4/1985- 4/1985-	V8 V8 V8 V8	14,313 14,313 15,115 16,991	MS-1197GP 12213-97025 12213-97104 12213-97069	TW-1118K 12280-97025/27	CB-1118GP 12117-97069 12117-97062 12117-97013 12117-97008	SH-1118K -Same as Group №.11-	PB-1118J 12030-97001/2
19	D RF8T D RG8 D RH8		V8 V8 V8		MS-2812GP 12213-97160 12215-97627	TW-2812K 12280/90-97005	CB-2812GP 12117-97075 12117-97101	SH-2812K 13003-97327 13003/4/5/6-97007 13008-97508	PB-2812J 12030-97003 PB-2817J (For RH8) 12030-97005
20	D RD10 D RD10-T	8/71-7/83 8/71-7/83	V10 V10	17,892 17,892	MS-1119GP 12212-97286 12212-97029 12212-97025	TW-1118K 12280-97025/27	CB-1119GP 12117-97008 12117-97004 12117-97000	SH-1119K 13003-97225 13003-97027 13003-97126 (№.1)13003-97000/2/3 (№.2)13004-97000/2/3/5 (№.3)13005-97000/2/3/5 (№.4)13006-97000/2/3/5 (№.5)13007-97000/2/3/5 (№.6)13007-97000/2/3/5	PB-1119J 12030-97000/1
21	D RD10 D RD10-T D RE10	7/83-1/86 7/83-1/86 7/1983-	V10 V10 V10	17,892 17,892 18,894	MS-1187GP 12212-97826 12212-97328 12212-97225 12212-97128	TW-1118K 12280-97025/27	CB-1119GP 12117-97062 12117-97008	SH-1119K -Same as Group №.14-	PB-1119J 12030-97001/2
22	D RD10 D RD10-T D RE10 D RF10	1/1986 1/1986 1/1986 1/1986	V10 V10 V10 V10	18,894 18,894 18,894 21,239	MS-1198GP 12213-97026 12213-97104 12213-97069	TW-1118K 12280-97025/27	CB-1119GP 12117-97067 12117-97062 12117-97013 12117-97008	SH-1119K -Same as Group №.14-	PB-1119J 12030-97001/2
23	D RH10		V10		MS-2813GP 12213-97160	TW-2812K 12280/90-97005	CB-2813GP 12117-97075	SH-2813K 13003-97328 13003/4/5-97007 13006/7/8-97007	PB-2813J 12030-97005

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Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
24	D SD20	1963-8/80	4	1,991	MS-1028GP	TW-1028A	CB-1029GP	SH-1003A	PB-1029J
	D SD22	1963-8/80	4	2,164	12207-37502/6	12280-37525/27 12281-37502/04 12280-37503/05	12117-Y5200/10 12117/37505/4 12117-37503/2	13002-37500/1	12030-37500
25	D SD20	8/80-6/83	4	1,991	MS-1182GP	TW-1028A	CB-1029GP	SH-1003A	PB-1182J
	D SD22	8/1980-	4	2,164	12207-V1700/1	12280-37525/27	12117-Y5200/10	13002-37500/1	12030-L2000
	D SD23	8/80-8/87	4	2,289	12215-V1700		12117-37505/4		
	D SD25	11/1981-	4	2,488					
	D SD25-T	6/85-9/88	4	2,488					
26	D SD33	1966-	6	3,246	MS-1058GP	TW-1028A	CB-1058GP	SH-1004B	PB-1058J
	D SD33-T				12207-61505/7	12280-37525/27	12117-Y5200/10 12117-37502~7	13002-61500 (79 -) SH-1191B 13002-90010 (79 -)	12030-37500
27	D TD23	6/1986-	4	2,289	(MS-1190GP) 12207-54T00/10 12207-43G00/10	TW-1028A 12280-37525/27	CB-1192GP 12111-02N00/1	SH-1190A 13002-43G05 13002-54T00	PB-1192J 12030-02N00
28	D TD25	8/1986-	4	2,494	(MS-1190GP)	TW-1028A	(CB-1190GP)	SH-1190A	PB-1190J
	D TD27	6/1986-	4	2,663	12207-54T00/10	12280-37525/27	12111-43G00/1	13002-43G05	12030-43G00
	D TD27-T	10/1988-	4	2,663	12207-43G00/10 MS-2817A		CB-2805A		PB-1194J 12030-31N00 for TD27
29	D TD42	10/1987-	6	4,169	(MS-1195GP) 12207-06J10/11 MS-2818A 12207-WJ10B	TW-1028A 12280-37525/27	(CB-1195GP) 12111-43G00/1 CB-2818A	SH-1195A 13002-06J00/1	PB-1195J 12030-43G00 PB-1196J 12030-31N00
30	D ZD30DD ZD30DDTi NV350 CARAVAN ATLAS		4 4	2,953 2,953	(MS-2805A) 12207-2W211 MS-2817A 12207-MA70A	TW-2805J 12280-2W210 12280-2W20A	CB-2805A 12111-2W200 12111-2W20A		PB-2805J 12030-2W200 *BB-2817A 12407-2W20B 12407-2W21A

SUBARU (FUJI HEAVY INDUS.)

Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
1	G E23	9/82-2/90	2	544	MS-1126GP		CB-2303GP		
	G E42	3/88-6/89	2	665	38265-2100		48291-5400		
	G EK21	2/73-5/76	2	358	48265-1000		38291-2100		
	G EK22	4/76-7/77	2	490					
	G EK23	4/77-3/90	2	544			(CB-1126GP)		
	G EK23-T	10/83-10/86	2	544					
	G EK42 Rex,Samber	9/82-6/89	2	665					
2	G EA63	10/71-9/78	4	1,361	(MS-1124GP)		CB-1124GP		PB-2300J
	G EA64	10/73-9/78	4	1,176	88265-8820		38291-4300		47336-7001
	G EA71 Leone	9/75-9/78	4	1,595	88265-8830		38291-6100 38291-7900		
3	G EA63	10/78-9/79	4	1,361	(MS-1184GP)		CB-1124GP		PB-2300J
	G EA64	10/78-9/79	4	1,176	88265-8840		38291-4300		47336-7001
	G EA65	10/79-10/89	4	1,298	(F.R)81115-8830		38291-7900		
	G EA71 Leone	10/1978-	4	1,595	(C) 48536-7010				
4	G EA81	6/79-10/84	4	1,781	MS-2300GP		CB-1124GP		PB-2300J
	G EA81-T	8/82-10/84	4	1,781	48543-7000		38291-7900		47336-7001
	G EA82 Leone	6/84-	4	1,781	(F.R) 12215-AA000 (C) 48536-7100		38291-4300 12108-AA040		
5	G EA82	6/1984-	4	1,781	MS-2300GP		CB-2300GP		PB-2300J
	G EA82-T Leone	6/84-8/91	4	1,781	48543-7000 (F.R) 12215-AA000 (C) 48536-7100		12108-AA000 12108-AA090		47336-7001
6	G EF10 Justy Domingo	11/1983-	3	997	MS-2301GP 48265-5500 48265-5600 48265-5400		CB-2301GP 48291-5600		
7	G EF12 Justy Domingo	10/1985-	3	1,189	MS-2301GP 48265-5500		CB-2302GP 12108-KA110 12111-KA001 12111-KA000		
8	G ER27 Arcyone	7/87-9/91	6	2,672	MS-2304GP 12211-AA000 (F.R) 12215-AA000 (I) 12212-AA000 (C) 48536-7100		CB-2304A 12108-AA130		PB-2304J 47336-7001
9	G EJ15		4	1,493	MS-2305A		CB-2305A		
	G EJ16		4	1,597	12209-AA040		12108-AA210 12111-AA330		
	G EJ18		4	1,820					
	G EJ20		4	1,994	MS-2306A				
	G EJ22		4	2,212	12209-AA200		CB-2306GP		
	G EJ25 Legacy Impreza		4	2,457			12108-AA530 12111-AA570		
10	G EN07 Vivio		4	658	MS-2307GP 12211-KA060 12215-KA110	TW-2307A 12252-KA000	CB-2307GP 12108-KA030 12111-KA190		

Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
1	G F5A Fronte Carry Cervo	5/79-2/90	3	CC 543	MS-2402A 12300-78810 12300-78811 12300-78812 12341-78101	TW-2402A 12300-78830 12351-78100	CB-2402A 12181-78130 12181-78110		PB-2401J 12165-73000
2	G F5A-T Fronte Carry	5/79-9/89	3	543	MS-2402A 12300-78810 12300-78811 12300-78812 12341-78101	TW-2402A 12300-78830 12351-78100	CB-2401A 12181-81050 12181-81051 12181-73000 12181-73001 6pcs/Set		PB-2401J 12165-73000
3	G F6A			657	MS-2406A 12341-60D00 12300-61800-0A0	TW-2403A 12340-82820	CB-2401A 12181-81501-0A0 CB-2406A 12181-81401		
4	G F8A G F10A Jimny Alto	12/79-9/88 8/82-7/91	4 4	797 970	MS-1179A 12300-73810 12300-73811 12300-73812	TW-1179A 12300-73830	CB-1179A 12181-81050 12181-81051 12181-73000 12181-73001 8pcs/Set		PB-1179J 12165-73000
5	G F8B (Y64) (SS80) Alto	12/79-7/91	3	796	MS-2401A 12300-78860	TW-1179A 12300-73830	CB-2401A 12181-78400 6pcs/Set		PB-2401J 12165-73000
6	G G10 G G10-T Fronte	10/83-7/91 5/1984-9/88	3 3	993 993	MS-2403A 12340-82000 12300-82810	TW-2403A 12340-82820	CB-2403A 12100-82810		
7	G G13A G G13B G G13BA Cultus	8/1984- 8/1984- 9/1988-	4 4 4	1,324 1,298 1,298	MS-2404A 12340-82000 12300-82810	TW-2403A 12300-82820	CB-2404A 12100-82810		
8	G G13B (DOHC) Cultus	8/1984-	4	1,298	MS-2404A 12340-82000 12300-82810	TW-2403A 12300-82820	CB-2404A 12100-86810		
9	G G15A G G16A G G16B Escude Cultus	7/1991- 5/1988- 8/1991-	4 4 4	1,493 1,590 1,590	MS-2405A 12340-60A10	TW-2405A 12300-60820	CB-2405A 12100-60820 12100-60821 12100-60830 12100-60831		
10	G H20A Escude Sidekick Vitara	1995-	V6	1,998	MS-2409A 12340-85FB3	TW-2407A 12300-85830	CB-2407A 12100-85823 12100-85824		
11	G H25A H27A Escude Vitara	1997- 2001-	V6 V6	2,493 2,736	MS-2407A 13240-86FA2	TW-2407A 12300-85830	CB-2407A 12100-85823 12100-85824		

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Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
12	G J18A J20A Escude Vitara	1995- 1997-	4 4	CC 1,839 1,995	MS-2408A 12340-85FB3	TW-2407A 12300-85830	CB-2408A 12100-85823 12100-85824		
13	G K6A	1994-	3	658	MS-2410A 12340-75F00	TW-2403A 12300-60840	CB-2401A 12181-54A50 CB-2410A 12181-84H00		
14	G K10B	2008-	3	996	*MS-	TW-2403A			
15	G K12B	2007-	4	1242	*MS-	TW-2403A			
16	G M13A		4	1328	*MS-2412A 12340-75FA0-0A0	TW-2405A	*CB-2412A 12100-70870-0A0 12100-70880-0A0		
17	G M15A M16A		4 4	1490	*MS-	TW-2405A	*CB-		
Refer to DAIHATSU engine list for the engine model ; AB									

Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN PUMP D.SHAFT Bushing
1	G 1A	8/78-5/79	4	1,452	MS-1400A	TW-1400A	CB-1400A		
	G 2A	5/82-1/83	4	1,295	11701-15010/11	11011-15010/20	13041-15010/11		
	G 3A	3/79-1/83	4	1,452		11011-01010/11			
	G 4A	82-83	4	1,587					
2	G 2A	1/83-7/83	4	1,295	MS-1410A	TW-1400A	CB-1400A		
	G 3A	1/83-7/83	4	1,452	11701-15030	11011-15010/20	13041-15011		
	G 4A	1/83-7/83	4	1,587		11011-01010/11			
	Tercel Carina								
3	G 2A	7/83-5/85	4	1,295	MS-1410A	TW-1400A	CB-1410GP		
	G 3A	10/83-9/90	4	1,452	11701-15030	11011-01010/20	13041-01010		
	G 4A	10/1983-	4	1,587	11701-15050	11011-15010/20	13041-15030/1		
	G 5A	5/1987-	4	1,498	11701-16010		13041-16010		
	G 4A-GZE	5/1987-	4	1,587			13041-16040/1		
	G 7A	6/1992-	4	1,762			CB-1425GP (for4A-GZE) 13041-16070/1 CB-1451A (for7A) 13041-16060 13041-16090		PB-1425J (for4A-GZE) 90999-73111
4	D 1AD-FTV		4	1,998	MS-1473A	TW-1473A	CB-1473GP		
	D 2AD-FTV		4	2,231	11701-0R010-01/2	11791-26010	13041-26020-01/2		
	D 2AD-FHV		4	2,231	11701-26010-01/2				
	Auris Corolla RAV4								
5	G 1AZ-FE	2001/8-	4	1,998	MS-1454A	TW-1454A	CB-1454A	*SH-	*PB-
	G 2AZ-FE	2002/4-	4	2,362	11711-28010 11711-28020/21	11791-28020	13281-28010/11 13281-0H030 13281-0H010	11811-28011 11821-28010	11911-28011
6	D B	2/72-9/84	4	2,977	MS-1121A		CB-1121A	SH-1401A	PB-1428J
	D 2B	1/77-10/82	4	3,168	11702-56010		13041-56010 13202-56010	11802-56010/11 (SH-1121B)	90999-73065 (PB-1121J)
7	D B	4/84-4/88	4	2,977	MS-1428A (MS-1417A) 11701-56010	TW-1417A 11011-56010/20	CB-1121A 13041-56010 13202-56010	SH-1401A 11802-56020 (4/84-6/86) *SH- 11802-56021 (6/86-4/88)	PB-1428J 90999-73065
	D B	4/88-3/89	4	2,977	MS-1428A 11701-56010 11701-56030	TW-1417A 11011-56010/20	CB-1428A 13041-56020/30	*SH- 11802-56021 (4/88-8/88) SH-1428A 11802-56030 (8/88-3/89)	PB-1428J 90999-73065
9	D B	3/1989-	4	2,977	MS-1428A 11701-56020	TW-1417A 11011-56010/20	CB-1428A 13041-56030	SH-1428A 11802-56030	
10	D 3B	8/80-9/84	4	3,431	MS-1121A 11702-56010		CB-1401A 13041-58010 13202-58010	SH-1401A 11802-56010/11	PB-1401J 90999-73088

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Group No.		Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
11	D	3B	8/84-8/88	4	CC 3,431	MS-1428A 11701-56010 (MS-1417A)	TW-1417A 11011-56010/20	CB-1401A 13041-58010/20	SH-1401A 11802-56011 SH-1417A 11802-56020 (8/84-6/86) *SH- 11802-56021 (6/86-4/88)	PB-1401J 90999-73088
12	D	3B	8/1988-	4	3,431	MS-1428A	TW-1417A	CB-1429A	SH-1428A	PB-1429J
	D	11B	8/1988-	4	2,977	11701-56020	11011-56010/20	13041-56040	11802-56030	90999-73116
	D	14B	8/1988-	4	3,660				SH-1429A	(8/88-3/89)
	D	15B	1/93-7/99	4	4,104				(for 15B-FTE) 11802-56031	90999-73124
13	D	11B	1/85-6/86	4	2,977	MS-1428A	TW-1417A	CB-1401A	SH-1417A	PB-1417J
	D	13B	9/84-6/86	4	3,431	11701-56010	11011-56010/20	13041-58010	11802-56020	90999-73099 90999-73122
14	D	11B	6/86-8/88	4	2,977	MS-1428A	TW-1417A	CB-1401A	*SH-	
	D	13B	6/86-8/88	4	3,431	11701-56010	11011-56010/20	13041-58010	11802-56021	
15	D	13B-T	9/84-3/89	4	3,431	MS-1428A 11701-56010 (MS-1429A) 11701-56040 (9/88-3/89)	TW-1417A 11011-56010/20	CB-1401A 13041-58010 (9/84-4/88) CB-1429A 13041-56040 (4/88-3/89)	SH-1417A 11802-56020 (9/84-6/86) *SH- 11802-56021 (6/86-8/88) SH-1428A 11802-56030 (8/88-3/89)	PB-1401J 90999-73088 *PB- 90999-73100
16	D	13B-T	3/89-1/90	4	3,431	MS-1428A	TW-1417A	CB-1429A	SH-1428A	
	D	14B-T	10/1989-	4	3,660	11701-56020	11011-56010/20	13041-56040	11802-56030	
17	D	1C	1/82-8/85	4	1,839	MS-1408A	TW-1408A	CB-1408A		PB-1408J
	D	1C-T	11/1982-	4	1,839	11701-64030	11011-64010	13041-64030/31		90999-73101
	D	2C		4	1,974	11701-64010		13041-64010		90999-73091
	D	2C-T		4	1,974					
18	D	1C	8/85-8/90	4	1,839	MS-1421A	TW-1408A	CB-1421A		PB-1421J
	D	2C	8/85-8/90	4	1,974	11701-64050	11011-64010	13041-64050 13041-76018		90999-73102 90999-73138
		Town Ace Lite Ace								
19	D	1C	8/90-9/91	4	1,839	MS-1448A	TW-1408A	CB-1448A		PB-1421J
	D	2C	8/1987-	4	1,974	11701-64070/71	11011-64010	13041-64070/71		90999-73102
	D	2C-T	8/85-10/91	4	1,974	11701-64040		13041-64041		90999-73138
	D	3C-T	5-1990-	4	2,184	11701-27011/12		CB-1453A 13041-64072		
20	D	1CD-FTV	8/2000-	4	1,995	MS-1448A 11701-27020/21		CB-1460A 13041-27010		
		Avensis Corolla (D-4D)								

Group No.		Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushings
21	D	D	1964-74	6	5,890	MS-1040GP	(TW-1040B)	CB-1041GP	*SH-	PB-1040J
	D	2D Truck	1964-	6	6,494	11702-77010 11701-76020 11702-76011	11011-76009 11011-76010	13202-77020 13202-77010 13202-76007	11802-77010 11802-76012 (For 2D'4/77-)	90999-70004/5 (1964-8/76) PB-1041J 90999-73080/81 (8/76-3/77)
22	D	1DZ Forklift	1990-	4	2,486	MS-1446A 11701-78200/1/2	TW-1436A 11011-17010	CB-1446A 13041-78200/1/2		
23	G	1E	10/1984-	4	999	MS-1415A	TW-1415A	CB-1415A		
	G	2E	10/1984-	4	1,295	11701-10010/1/2	11011-10010/11 11011-10020	13041-10020		
	G	Starlet Tercel 4E	1991-	4	1,331					
24	G	3E	5/1985-	4	1,456	MS-1424A 11701-11010	TW-1424A 11011-11020	CB-1424A 13041-11010/20		
		5E	1991-	4	1,496					
25	G	F Land cruiser	1954-9/73	6	3,878	(MS-1007GP) 11702-60010/12 11702-60020		CB-1123A 13202-60010/11	SH-1123A 11802-60010	
26	G	F	9/73-9/75	6	3,878	MS-1123A		CB-1123A	SH-1123A	
	G	2F Land cruiser	4/75-11/84	6	4,230	11702-60013 11702-76009		13202-60010/11 13202-76006	11802-61010/11 11802-76009	
27	G	3F Land cruiser	1984-	6	3,995	MS-1413A 11701-61010 11701-76001	TW-1413A 11011-61010 11011-76007	CB-1413A 13041-35020 13041-76006	SH-1123A 11802-61010/11 11802-76009	PB-1413J 90999-73072
28	G	1FZ-FE Land cruiser	1990-	6	4,476	MS-1438A 11701-66020/21	TW-1438A 11011-66020	CB-1438A 13041-66020		PB-1438J 90999-73135
29	G	1G	2/82-2/85	6	1,988	MS-1402A	TW-1402A	CB-1402GP		PB-1402J
		Cressida Crown Celica Soarer Mark II				11701-63021 11701-70012 11701-70011 11701-88360 11701-88300	11011-70010	13041-70010 13041-88300		90999-73070 90999-73060
30	G	1G-E	3/85-88	6	1,988	MS-1420A	TW-1402A	CB-1402GP		PB-1402J
	G	1G-FE	5/88-	6	1,988	(F)11071-70010/1/2 (I.R)11701-70020/21 (F)11071-88300 (I.R)11701-88300/60	11011-70010	13041-70010 13041-88300		90999-73060 90999-73070
								CB-1420GP 13041-88340 (10/85-7/88) CB-1433A 13041-88341 (8/88-)		*PB- 90999-73107 (10/85-7/88) PB-1433J 90999-73113 (8/1988-)
31	G	1GR-FE FJ Cruiser Fortuner Hilux Tacoma Tundra Sequoia		V6	3,955	MS-1458A 11701-31041 (No.1) 11071-31011 (No.2) 11701-31050 (No.1) 11071-31020 (No.2) 11701-0P040 (No.1) 11071-0P040 (No.2)	TW-1466A 11011-31040 *TW- 11011-0P020 11011-31070 11011-31071	CB-1458A 13041-31041/2 13041-31090 13041-0P030 13041-0P050 13041-0P070		PB-1458J 90999-73144

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Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
32	G 2GR-FE Avalon Camry ES350 RX350 Sienna Lotus Evora		V6	CC 3,456	MS-1468A 11701-31061 (No.1) 11071-31031 (No.2) 11701-0P030 (No.1) 11071-0P030 (No.2) 11701-0P050 (No.1) 11701-0P050 (No.2)	TW-1458A 11011-31060 11011-0P030	CB-1468A 13041-31070 13041-0P040 13041-0P080 13041-0P081		PB-1458J 90999-73144
33	G 2GR-FSE (D-4S) Crown CS350 IS350		V6	3,456	*MS-	TW-1458A 11011-31060 11011-0P030	*CB-		PB-1458J 90999-73144
34	G 3GR-FE GS300 IS300 G 3GR-FSE (D-4) GS300 G 4GR-FE Crown IS250 G 5GR-FE Crown (China) Reiz (China)		V6	2,994	*MS-	TW-1458A 11011-31060	*CB-		PB-1458J 90999-73144
35	D H D 2H Dyna Forklift Coaster	2/69-8/80 11/79-4/82	6	3,576	MS-1427A 11702-47011 11702-47010 11702-47012 11702-76005 (MS-1080GP)	TW-1063B 11011-46020 11011-68010 11011-76006	CB-1403A (CB-1080A) 13202-47011 13202-76004	(SH-1063B) 11802-46010 (SH-1080B) 11802-48010 (7/1972-)	PB-1080J 90999-70048 90999-73083 90999-73069
36	D 2H Dyna Coaster Land cruiser	4/82-10/85	6	3,980	MS-1427A (No.1) 11702-68020 (No.2) 11702-76010 (MS-1403A)	TW-1063B 11011-46020 11011-68010 11011-76006	(CB-1080A) 13202-47011 13202-76004 (4/82-11/84) CB-1403A 13041-68020 13041-76010 (11/84-10/85)	SH-1403A 11802-68010	PB-1403J 90999-73087
37	D 2H Dyna Coaster Land cruiser	10/85-9/91	6	3,980	MS-1427A (No.1) 11702-68020 (No.2) 11071-68020 (No.1) 11702-76011 (No.2) 11702-76006	TW-1427A 11011-68020 11011-76008	CB-1403A 13041-68040 13041-76012	SH-1403A 11802-68011	PB-1403J 90999-73087
38	D 12H-T Coaster Land cruiser	10/85-9/87	6	3,980	MS-1427A (No.1) 11702-68020 (No.2) 11071-68020	TW-1427A 11011-68020	CB-1403A 13041-68040 (10/85-9/87) B041-68040 CB-1427A 13041-68050 (10/1987-)	SH-1403A 11802-68011	PB-1427J 90999-73108

Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
39	D 1HZ	1/1990-	6	4,163	MS-1436A	TW-1436A	CB-1436A	SH-1436A	PB-1436J
	D 1HD-T Land cruiser	1-1990-	6	4,163	11701-17010/11	11011-17010	13041-17010/11	11801-17010	90999-73126 For 1HZ PB-1444J 90999-73127 90999-73137 For 1HD-T
40	D J	1965-6/69	4	2,336	(MS-1063GP)	TW-1063A	CB-1137A	(SH-1063B)	PB-1063J
	D 2J	2/69-11/75	4	2,481	11702-46010 11702-48010	11011-46010/20 11011-76006	(CB-1063A) 13202-46010 13202-48010 13202-76005	11802-46010 11802-76005	90999-70048 90999-73069 90999-73083
	G 5P Dyna Toyoace	7/72-11/75	4	2,771	11702-76006			(SH-1080B) 11802-48010 11802-76006 (7/72-11/75)	
41	D 2J	11/75-9/91	4	2,481	MS-1137A	TW-1063A	CB-1137A	(SH-1080B)	PB-1063J
	D 2J-T	5/1982-	4	2,481	11702-48011/12 11702-76007/8	11011-46010/20 11011-76006	(CB-1063A) 13202-48010 13202-76005	11802-48010 11802-76006	90999-73083 13266-21910
	G 5P	11/75-10/85	4	2,771					
42	G 1JZ-FSE		6	2,491	MS-1434A	TW-1434A	CB-1434GP		
	G 2JZ-FSE Crown, Soarer Progres		6	2,997	11701-46010/20 11071-46010/20	11011-46030	13041-46010/1/2/3 13281-46021		
43	G K	10/66-7/77	4	1,077	MS-1056GP	TW-1056A	CB-1056GP	SH-1056A	PB-1056J
	G 2K	4/69-8/82	4	993	11702-22020	11011-22010	13202-13010	11802-13020	90999-73070
	G 3K	8/69-8/82	4	1,166	11702-22010	11011-22011	13202-22010	11802-22010	90999-70063
	G 4K Corolla	2/78-8/82	4	1,290					
44	G 2K	8/82-9/86	4	993	MS-1416A	TW-1056A	CB-1416A	SH-1056A	PB-1056J
	G 3K	8/82-7/83	4	1,166	11701-13010	11011-22011	13041-13040	11802-22011	90999-73070
	G 4K	8/82-8/90	4	1,290	11701-13011	11011-76001	13041-76001	11802-13020	
	G 5K	9/1985-	4	1,486			CB-1447A	11802-76001	
	G 7K		4	1,781			13041-17011 13041-16090 For 7K		
45	D 1KD-FTV	7/2000-	4	2,982	MS-1452A	TW-1452A	CB-1452A		PB-1464J
	D 2KD-FTV (D-4D)	8/2004-	4	2,494	11701-30020	11011-30010	13041-30020		90999-73143/56
46	G 1KZ-TE	5/1993-	4	2,982	MS-1452A 11701-67020/1 11704-67020 11705-67020	TW-1452A 11011-67020 11012-67020 11013-67020	CB-1452A 13041-67030/1 13204-67030 13205-37030		PB-1452J 90999-73136
47	G 1KR-FE Passo/Boon Vits Aygo Peugeot 107	6/2004-	3	997	MS-1463A 11701-0Q010	TW-1463A 11791-0Q010 11791-40020	CB-1463A 13041-0Q010		

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Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushings
48	D L	10/77-2/82	4	1,762	MS-1161A	TW-1161A 11011-54010/20	CB-1161A	SH-1161A	PB-1063J
	L	2/82-4/83	4	2,188	11702-54010		13202-54010/11 (10/77-2/82)	11802-54010	90999-73069
	2L	2/82-8/83	4	2,446	11701-54040		CB-1406A 13041-54012 (2/82-8/83)		90999-73083
49	D 2L	8/82-8/83	4	2,446	MS-1161A	TW-1161A	CB-1411A	SH-1161A	PB-1411J
	D 2L-T	8/82-4/83	4	2,446	11701-54040	11011-54010	13041-54040	11802-54010	90999-73094
50	D L	4/82-8/88	4	2,188	MS-1406A	TW-1161A	CB-1406A	SH-1161A	PB-1063J
	D 2L	8/83-7/88	4	2,446	11701-54061 11701-54060	11011-54010	13041-54013 13041-54012	11802-54010	90999-73083
51	D L	8/1988-	4	2,188	MS-1406A	TW-1161A	CB-1406A	SH-1431A	PB-1406J
	D 2L	10/1990-	4	2,446	11701-54061 11701-54060	11011-54010	13041-54024	11802-54020	90999-13114
52	D 2L-T	8/83-8/88	4	2,446	MS-1406A 11701-54060	TW-1161A 11011-54010	CB-1411A 13041-54040 13041-54041	SH-1161A 11802-54010	PB-1411J 90999-73094 90999-73118
53	D 2L-T	8/1988-	4	2,446	MS-1406A	TW-1161A	CB-1411A	SH-1431A	PB-1431J
	D 3L	8/1988-	4	2,779	11701-54061	11011-54020	13041-54041	11802-54020	90999-73115
	D 5L		4	2,985					
54	G M	10/65-11/75	6	1,988	MS-1051GP	TW-1006A	CB-1171GP	SH-1068A	PB-1051J
	G 2M	9/69-2/73	6	2,253	11702-45010	11011-45010	13202-45010	11802-41010	90999-73066
	G 3M	5/67-2/71	6	1,998	11702-45011	11011-40010	13202-45011	For M,2M	90999-70057
	G 4M	2/71-11/75	6	2,563	11702-41010	11011-43010	13202-41010	& 4M(-11/75)	
	G 5M	4/78-7/84	6	2,759					DB-1171A 11022-41010
55	G 5M	7/84-8/84	6	2,759	MS-1051GP	TW-1006A	CB-1414GP		PB-1051J
	G 6M Soarer Celica	7/83-8/84	6	2,954	11702-45010 11702-45011 11702-41010	11011-45010 11011-40010 11011-43010	13041-42010		90999-73066 DB-1171A 11022-41010
56	G M	9/87-8/89	6	1,988	MS-1414GP (F) 11071-43010 (L.R) 11701-43010	TW-1006A 11011-43010	CB-1171GP 13202-45011		PB-1051J 90999-73066 DB-1171A 11022-41010
57	G 5M	8/84-8/90	6	2,759	MS-1414GP	TW-1006A	CB-1414GP		PB-1051J
	G 6M	8/84-8/87	6	2,954	(F) 11071-43010	11011-43010	13041-42010		90999-73066
	G 7M	1/1986-	6	2,954	(L.R) 11701-43010				
58	G 1MZ-FE	1994-	6	2,994	MS-1455A	TW-1455A	CB-1455A		PB-1455J
	2MZ-FE	1998-	6	2,496	11701-20020 11071-20020	11011-20020	13041-20010		90999-73119 PB-1458J 90999-73114
59	D 1N	12/1986-	4	1,453	MS-1449A	TW-1056A	CB-1449A		PB-1449J
	D 1N-T	5/1988-	4	1,453	11701-55020 11701-55010	11011-22011	13041-55020 13041-55010		90999-73109

Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushings
60	D 1ND-TV Auris IQ Yaris Mini(BMW)	11/2002-	4	CC 1,362	MS-1456A (with locating lug) 11701-21010 11701-21020 11701-21040	TW-1457A 11791-21010 11791-22020 11791-0T030	CB-1456A (with an oil hole) 13041-21020 13041-21021 13041-21030		
61	D 1ND-TV Auris IQ Yaris Mini(BMW)		4	1,362	MS-1461A (no locating lug) 11701-21031	TW-1457A 11791-33030	CB-1461A (no oil hole) 13041-33040 CB-1462A 13041-33041 (10/2003-)		
62	G 1NZ-FE 2NZ-FE Yaris Echo Verso	8/1999- 8/1999-	4 4	1,496 1,298	MS-1456A (with locating lug) 11701-21010 11701-21040	TW-1457A 11791-21010 11791-22020 11791-0T030	CB-1456A (with an oil hole) 13041-21020 13041-21021 13041-21030		
63	G 1NZ-FE 2NZ-FE Corolla Prius Yaris		4 4	1,496 1,298	MS-1461A (no locating lug) 11701-21031	TW-1457A 11791-33030	CB-1461A (no oil hole) 13041-33040		
64	D 1PZ Land cruiser	1/1990-	5	3,469	MS-1439A 11701-17010	TW-1436A 11011-17010	CB-1439A 13041-17010	SH-1436A 11801-17010	PB-1439J 90999-73126
65	G G 3P 4P Hiace Toyoace Forklift	5/67-8/81 9/71-8/88	4 4	1,345 1,493	MS-1062GP 11702-23011 11702-23010 11702-76001	TW-1005B 11011-23010 11011-20010 11011-76002	CB-1062GP 13202-23012 13202-23011 13202-23010 13202-76001	(SH-1062B) 11802-23010 11802-76002	(PB-1062J) 90999-73059 90999-70001
66	G 5R	2/67-10/70 10/70-8/78	4 4	1,994 1,994	(MS-1011GP) 11702-40020 MS-1107GP 11702-44020 11702-76002	TW-1006A 11011-45010	CB-1046A 13202-44010/1/2 13202-76002	SH-1107A 11802-40010 (SH-1013B)	PB-1046J 90999-73044 90999-73064
67	G 5R	8/1978-	4	1,994	MS-1159A 11702-44040 11702-44021 11702-76003/4	TW-1133A 11011-35011 11011-38010 11011-76004/5	CB-1046A 13202-44040 13202-44012 13202-76002/3	SH-1107A 11802-40011 11802-76003	PB-1046J 90999-73064
68	G G 2R 12R Corona Hilux Townace	10/68-11/75 10/68-9/88	4 4	1,490 1,587	MS-1060A 11702-31020 11702-31011	TW-1007A 11011-31030 11011-31020 11011-31011	CB-1035A 13202-31020 13202-31010	SH-1060A 11802-31010	PB-1035J 90999-73027
69	G G G G G 6R 7R 8R 16R 18R Corona Cressida	9/68-7/73 9/68-7/73 9/68-7/73 8/73-11/82 1/72-10/83	4 4 4 4 4	1,707 1,591 1,858 1,808 1,968	MS-1152GP 11702-33012 (MS-1094GP) 11702-33011 Flange type	TW-1133A 11011-35010 11011-38010 11011-33010	CB-1133GP 13202-33010/11	SH-1068A 11802-33010	PB-1068J 90999-73048 DB-1152A 11022-33010

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Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
70	G 8R	9/68-12/71	4	1,858	MS-1152GP	TW-1133A	CB-1133GP		PB-1068J
	G 10R	2/70-12/71	4	1,858	11702-33012	11011-35010/11	13202-33010/11		90999-73072
	G 18R	1/72-10/82	4	1,968	11702-88270				90999-73048
	G 19R Corona Cressida	1/74-7/77	4	1,968	(MS-1094GP) 11702-33011 Flange type				DB-1152A 11022-33010
71	G 20R	1/74-3/82	4	2,189	MS-1133GP	TW-1133A	CB-1133GP		PB-1068J
	G 21R	8/78/3/82	4	1,972	11702-38010	11011-38010	13202-38010/11		90999-73072
	G 22R	8/77-3/82	4	2,366					90999-73048
72	G 20R	3/82-4/82	4	2,189	MS-1405GP	TW-1133A	CB-1133GP		PB-1068J
	G 21R	3/82-8/84	4	1,972	11702-38011	11011-35010/11	13202-38011		90999-73072
	G 22R	3/82-8/84	4	2,366		11011-38010			
73	G 21R	8/84-8/88	4	1,972	MS-1405GP	TW-1405A	CB-1133GP		PB-1068J
	G 22R	8/1984-	4	2,366	11701-35030	11011-35020	13041-35030		90999-73072
74	G 1RZ	5/1990-	4	1,988	MS-1435A	TW-1435A	CB-1435A		PB-1435J
	G 2RZ		4	2,438	11701-75010	11011-75010	13041-75010		90999-73129
	G 3RZ		4	2,693	11701-75020/1 11071-75021		13041-75020/1/2		
	Hiace Land cruiser Regius Hilux								
75	G 1S	3/82-8/88	4	1,832	MS-1404A	TW-1117A	CB-1404A		
	G 2S	8/82-8/86	4	1,995	(F.I.R) 11701-63021	11011-74020	13041-63020		
	G 3S	6/84-8/86	4	1,998	(C) 11701-60320 (F.I.R) 11701-70012 (C) 11701-63020	(TW-1441A) 11011-25010			
	Celica Camry Carina								
76	G 3S	12/87-7/90	4	1,998	MS-1404A	TW-1117A	CB-1404A		PB-1441J
	G 4S Ipsum	4/1987-	4	1,838	(F.I.R) 11701-63021 (C) 11701-60320	(TW-1441A)	13041-63020		90999-73112
77	G 3S Ipsum Townace Liteace Vista	8/1986-	4	1,998	MS-1404A (F.I.R) 11701-88342 (C) 11701-88360 (F.I.R) 11701-88360 (C) 11701-88360	TW-1117A 11011-74020 (TW-1441A) 11011-25010	CB-1419GP 13041-88360 13041-74010		PB-1441J 90999-73112 90999-73106
78	G 3S	1985-	4	1,998	MS-1404A	TW-1117A	CB-1441GP		PB-1441J
	G 5S Camry Rav 4	1985-	4	2,164	(F.I.R) 11701-88360 (C) 11701-88360	11011-74020 (TW-1441A) 11011-25010	13041-74030 13041-74040		90999-73112
79	G 1SZ-FE	1/1999-	4	997	MS-1450A (with a hole & lug) 11701-23020 11701-23021	TW-2510A -Same as Daihatsu ED, K3 11791-23020 11791-23030	CB-1450A 13041-23020 13041-23021		
	G 1SZ-FE	2002-	4	997	MS-2512A (with 2 holes & no lug) -Same as Daihatsu K3 11701-23050/1 11701-23060/1				

Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushings
80	G 2SZ-FE	12/2002-	4	1,296	MS-2512A	TW-2510A	CB-2512A		
	G 3SZ-FE	1/2006-	4	1,495	(with 2 holes & no lug) -Same as Daihatsu K3 11701-23050/1 11701-23060/1	-Same as Daihatsu ED, K3 11791-23020 11791-23030	-Same as Daihatsu K3 13041-23030 13041-23031		
81	G T	1970-71	4	1,407	MS-1104GP		CB-1117GP	SH-1104A	
	G 2T Carina Celica	1970-71	4	1,588	11702-25011/10 11702-25020		13202-25010	11802-25010	
82	G T	9/71-8/79	4	1,407	MS-1117GP	TW-1117A	CB-1117GP	SH-1104A	
	G 2T	9/71-10/82	4	1,588	11702-25012/3	11011-25010	13202-25010	11802-25010/1	
	G 3T	3/77-10/82	4	1,770		(TW-1441A)			
	G 12T	1/76-8/82	4	1,588					
	G 13T	11/77-8/82	4	1,770					
83	G 2T-G	9/71-8/85	4	1,588	MS-1117GP	TW-1117A	CB-1117GP		
	Carina Celica Corolla				11702-27012 11702-88260/1	11011-25010 (TW-1441A)	13202-25010 13202-88260/1 (9/71-9/82) CB-1422GP 13202-88281 (9/82-8/85)		
84	G 3T	10/82-10/83	4	1,770	MS-1117GP	TW-1117A	CB-1422GP	SH-1104A	
	G 12T	8/82-11/84	4	1,588	11702-25012/3	11011-25010	13041-18010	11802-25011	
	G 13T	8/82-11/84	4	1,770		(TW-1441A)	13041-18011		
85	G 3T-G	10/82-10/83	4	1,770	*MS-	TW-1117A	CB-1422GP		
	G 4T-G	8/82-11/84	4	1,770	11701-88280	11011-25010 (TW-1441A)	13041-88281		
86	G 1TR-FE	7/2003-	4	1,998	MS-1459A	TW-1459A	CB-1459A		PB-1459J
	G 2TR-FE	8/2004-	4	2,693	11701-75031 11701-0C010	11011-75020	13041-75050 13041-75030/40		90999-73144
87	G 1UZ Celsior LS400	8/1989-	V8	3,968	MS-1440GP 11701-50010 11071-50010	TW-1440A 11011-50010	CB-1440GP 13041-50020		PB-1440J 90999-73119
88	G 2UZ-FE	1998-	V8	4,663	*MS-1442A	TW-1440A	*CB-1442A		PB-1442J
	G 3UZ-FE		V8	4,292	11701-50032 11701-50021	11011-50010	13041-50030 13041-0F011		90999-73144
89	D 1VD-FTV Land Cruiser	3/2007-	V8	4,461	MS-1465GP 11701-51020 11071-51010	TW-1465A 11011-51010	CB-1465GP 13041-51020		
90	G 1VZ-FE Camry	1987-	V6	1,992	MS-1423GP 11701-62020	TW-1423A 11011-62010	CB-1423GP 13041-62010		
91	G 3VZ-E Camry	1987-	V6	2,959	MS-1437GP 11701-65010	TW-1423A 11011-62010	CB-1437GP 13041-65020		
92	G 3VZ-FE	1987-	V6	2,959	MS-1423GP	TW-1423A	CB-1445GP		PB-1445J
	G 4VZ-FE Hilux	1987-	V6	2,496	11701-62020	11011-62010	13041-62020		90999-73130 (for 3VZ-FE)

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Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
93	G 5VZ-FE	1994-	V6	CC 3,378	MS-1437GP 11071-65022 11071-65011	TW-1423A 11011-62010	CB-1445GP 13041-62030		PB-1445J 90999-73130
94	G 1Y G 2Y G 3Y G 4Y Liteace Townace Hilux	10/82-8/88 12/1982- 12/1982 8/1986-	4 4 4 4	1,626 1,812 1,998 2,237	MS-1407A 11701-71020 11701-76013	TW-1117A 11011-25010 11011-76003 (TW-1441A)	CB-1407A 13041-71011 13041-71021 13041-71020 13041-76014 13041-76021 13041-76016	SH-1407A 11802-71010 11802-76011 11802-73010	
95	D 1W	1983-	4	4,009	MS-2109GP 11701-78010	TW-2109GP 11011-78010	CB-2109GP 13041-78010	SH-2109K 11801-78010	PB-2109J 90999-73095 90999-73110
96	D 1Z	1990-	4	2,953	MS-1426A 11701-78300	TW-1426A 11011-78300	CB-1137A 13281-68020 13041-76012	11802-78300	90384-32951/50
97	D 2Z Forklift	1994-	4	3,469	MS-1474A 11701-78C00-71		CB-1137A 13041-68040 13041-76012		
98	D 11Z	1990-	6	4,429	MS-1443A 11701-78300 11701-78330	TW-1426A 11011-78300	CB-1403A 13041-76012/13/14	*SH- 11802-78330	*PB- 90384-32951/50
99	D 13Z Forklift	1996-	6	4,616	MS-1475A 11701-78C00-71		CB-1403A 13041-76012/3/4		
100	G 1ZR-FE G 2ZR-FE G 3ZR-FE		4 4 4	1,598 1,797 1,986	MS-1471A 11701-0T010-01	TW-1457A 11011-22020	CB-1471A 13041-0T010-01 13041-37010 13281-37010	11811-37010 11821-37010	
101	G 1ZZ-FE 2ZZ-FE		4 4	1,794	MS-1457A 11701-22010/11 11701-0D010	TW-1457A 11791-22020 11791-0T030 11011-22020	CB-1457A 13041-22020/1/2 13041-22023/24		PB-1457J 90999-73140
Refer to HINO engine list on the following engine models : DK10, DK10-T, DQ100 & EH100									

GM KOREA

Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
1	G G15MF LeMans Cielo Lanos		4	CC 1,498	MS-3021A 90093813 PNP1021 (Opel Kadett)		CB-3017A 90 323 617 (Opel Kadett)		
2	G F8C F8CL Damas Matiz		3 3	796 796	MS-3879A P12351A82011-000	TW-3879A P12300-82820-000	CB-3879A P1218A81051-0A0		
3	G C22SEL Leganja		4	2,198	MS-1641GP (MS-3020GP) 92017650/1,92062902 (Opel Ascot, Isuze C22NE)		CB-1641GP (CB-3020GP) 92028811 (Opel Ascot, Isuze C22NE)		
4	G S-TEC Daewoo Tico Chevrolet Spark Chevrolet Exclusive Chevrolet Joy Chevrolet Chronos GM Daewoo Matiz II FSO Matiz Pontiac Matiz Pontiac G2 Formosa Matiz		4 4	995 1,150	MS-3888A P12351A82011-000	TW-3879A P12300-82820-000	CB-3888A P1218A81051-0A0		
5	G SAIL (Shanghai GM)	2010-	4		MS-3890A 24102256 24102257	TW-3890A 9002794	CB-3890A 24102259		

HYUNDAI

Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
1	D D4BH D4BX H-100 Bakkie Dodge H-100 Shehzore	01/88-	4 4	CC 2,476 2,476	MS-1131A -Same as Mitsubishi 4D56 MD050360 21020-42907/8/9		CB-1131A -Same as Mitsubishi 4D56 23060-42001 23060-42911/2		
2	D D4CB Porter II Kia Sorento	2004-	4	2,497	MS-3887A 21020-4A900 21020-4A920	TW-3887A 21021-4A900 21030-4A900 21030-4A920 21231-4A400	CB-3887A 23060-4A900 23060-4A921/2/3/4 23060-4A930		
3	G G4AJ G4DJ Excel S Coupe	01/86-01/94 02/90-10/95	4 4	1,468 1,468	MS-1169A -Same as Mitsubishi G11 MD147999 21020-21124		CB-1169A -Same as Mitsubishi G11 MD030516 23060-21124		
4	G G6AT Sonata	01/90-08/99	V6	2,972	MS-1822A -Same as Mitsubishi 6G72 MD105269 MD197608	TW-1822A -Same as Mitsubishi 6G72 MD128659 MD116890	CB-1822A -Same as Mitsubishi 6G72 MD105277		
5	G G G G G4CN G4CP G4CS G4CR Sonata	01/91-08/95 01/93-03/00 01/89-01/92	4 4 4	1,836 1,997 2,350	MS-1821A 04156438 MD071273		CB-1085A 23060-33030 MD002843		BB-1811A MD040598 MD040597 MD103722
6	G G4FK G4EK Avante Dodge Attitude Dodge Brisa Dodge Verna	4/1994- 3/1995-	4 4	1,341 1,495	MS-3880A 21020-22541 21020-26040 21020-26640		CB-3880A 23060-22540 23060-26040		
7	G G4GM Avante Elantra	3/1995-	4 4	1,597 1,795	MS-3878A 21020-23140	TW-3878A 21030-23000	CB-3878A 23060-23140		
8	G G4HC Atos, Atoz Amica Dodge Atos Inokom Atos Kia Visto Santro	1997-	4 4	798 999	MS-3882A 21020-02540	TW-3882A 21030-02501	CB-3882A 23060-02500		
9	G G G G4KF G4KC G4KD (Theta) NF Sonata Tucson Santafe		4 4 4	1,998 2,359 2,359	MS-3889A 21020-25100/10/20 21020-2G000/10/20	TW-3889A 21020-25150	CB-3889A 23060-25100/10/20 23060-2G000/10/20 23060-2G100/10/20		

Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
1	D B3 B5 Pride Rio	2/1987- 11/96-04/98	4 4	CC 1,323 1,498	MS-3876A OK1Y0 11 SGO KK1Y1 11 SGO	TW-3876A OK1Y0 11 SJO KK1Y0 11 SJO	CB-3876A OK1Y0 11 SEO KK1Y0 11 SEO		
2	G BPD Mentor Timor Shuma Spectra	10/89-08/02	4	1,839	MS-2008A -Same as Mazda B6 B6Y0-11-SGO MS-2012A -Same as Mazda B6 B6Y1-11-SGO	TW-2008A -Same as Mazda B6 B6Y0-11-SJO	CB-2008A -Same as Mazda B6 B6Y0-11-SEO		
3	D D4BH D4BX Bongo III		4 4	2,476 2,607	MS-1131A -Same as Mitsubishi 4D56 MD050360 21020-42907/8/9		CB-1131A -Same as Mitsubishi 4D56 23060-42001 23060-42911/2		
4	D D4CB Sorento	2004-	4	2,497	MS-3887A 21020-4A900 21020-4A920	TW-3887A 21021-4A900 21030-4A900 21030-4A920 21231-4A400	CB-3887A 23060-4A900 23060-4A921/2/3/4 23060-4A930		
5	G FE-D Clarus Credos Sportage	01/94-05/01	4	1,998	MS-2004A -Same as Mazda FE F801-23-251 MS-2009A -Same as Mazda FE FE1H-11-SGO		CB-2009A -Same as Mazda FE FEYA-11-SEO		
6	D J2 JT Pregio Frontier	11/1995-	4	2,975	MS-3883A OK6Z2 11 SGO	*TW- OK6Z2 11 SJO (TW-1075J)	CB-3883A OVNY1 11 SEO		
7	D JS, S2 Bongo	5/81-7/87	4	2,209	MS-3885A OK6Z1 11 SGO	*TW- OK6Z1 11 SJO	CB-3885A OK6Z1 11 SEO		
8	D R2 Bongo	01/80-02/00	4	2,184	MS-2007A -Same as Mazda R2 RF01-23-135	TW-2007A -Same as Mazda R2 RF01-23-115	CB-2004A -Same as Mazda R2 F801-23-105		PB-2007J -Same as Mazda R2 RF01-11-213
9	D VN, RFA Hi-Besta	1/1995-	4	2,662	MS-3884A OVNY1 11 SGO	*TW- OVNY1 11 SJO	CB-3883A OVNY1 11 SEO		
10	G G4KF G4KC G4KD (Theta) Optima Sorento Sportage		4 4 4	1,998 2,359 2,359	MS-3889A 21020-25100/10/20 21020-2G000/10/20	TW-3889A 21020-25150	CB-3889A 23060-25100/10/20 23060-2G000/10/20 23060-2G100/10/20		

RENAULT

Group No.	Engine Model	Year	No. of Cyl.	Dis- place- ment	MAIN Bearing	THRUST Washer	CON.ROD Bearing	CAMSHAFT Bearing	PISTON PIN BALANCER Bushing
1	G H4M Fluence SM3		4	CC 1,598	MS-1227A 12215-BC20A	TW-1227A 12280-BC20A	CB-1227A 12150-BC20C 12110/1-BC20B		
2	G M4R Fluence Megane Raguna SM5		4	1,997	MS-1228A 12215-CK800	TW-1228A 12280-CK825	CB-1228A 12150-CK80A		
3	D M9R Laguna Megane Dualis Qashqai		4	1,995	*MS-	*TW-	*CB-		
4	G M5M Lutecia ClioSport		4	1618	MS-1234A 12207-IKCOA	TW-1228A 12280-CK825	CB-1234GP 12150-IKCOA		
5	G XH5		3	1198	MS-1233A 12207-IHCB	TW-1227A 12280-BC20A	CB-1233GP 12150-5H70A		

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
1	AB	MS-2500A	Main	6					
2	AD		1-3	6	41.990	46.000	1.994	19.50	
		MS-2506A	Main	6					
			1-3	3/3	41.990	46.000	1.994	19.50	
		TW-2500A	T.W.	2	(I.D.)	(O.D.)			
			2	2	48.250	62.000	1.990		
		CB-2500A	C.R.	4					
			1-2	4	40.000	43.000	1.494	18.00	
		BB-2500A	B.B.	4					
			1	2	44.960	48.000	1.508	17.00	
			2	2	33.960	37.000	1.508	20.00	
3	CB	MS-2501A	Main	8					
4	CB-T		1-4	8	41.990	46.000	1.994	19.50	M1-2500 X 8
5	CD	MS-2505A	Main	8					
	CL		1-4	4/4	41.990	46.000	1.994	19.50	
6	CL-T	MS-2503A	Main	8					
			1-4	4/4	47.990	52.004	1.994	17.10	
		TW-2500A	T.W.	2	(I.D.)	(O.D.)			
			No.3	2	48.250	62.000	1.990		
		TW-2503A	T.W.	2	(I.D.)	(O.D.)			
				2	54.250	68.000	1.990		
		CB-2501A	C.R.	6					
			1-3	6	40.000	43.000	1.494	18.00	C1-2500 X 6
		CB-2509GP	C.R.	6					
			1-3	6	43.000	46.000	1.497	20.00	
		CB-2503A	C.R.	6					
			1-3	6	45.000	48.000	1.494	20.10	
		BB-2501A	B.B.	2					
			1	1	44.960	48.000	1.508	17.00	B1-2500 X 1
			2	1	33.960	37.000	1.508	20.00	B2-2500 X 1
7	DG	(MS-1158A)	Main	10					
8	DL		1.3.5.	3/2	67.970	72.000	1.997	30.25	
9	DL-T		2.4.	2/2	67.970	72.000	1.997	24.25	
			△3(L)	/1	67.970	72.000	1.997	37.95	
		CB-1158A	C.R.	8					
			1-4	8	54.980	58.000	1.487	27.63	
		SH-1158A	Cam	3					
			1	1	45.970	50.005	2.002	23.00	
			2	1	45.670	50.005	2.152	25.00	
			3	1	45.370	50.005	2.302	23.00	
		PB-1158J	P.B.	4					
			1-4	4	26.000	29.000	1.530	30.00	
		PB-2502J	P.B.	4					
			1-4	4	26.000	29.000	1.530	30.00	

DAIHATSU

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
10	DL DL-T	MS-2502A	Main 1(U)	10 1	67.970	72.000	2.005	24.25	
			2,3,4,5	4	67.970	72.000	2.005	24.25	
			1,2,4,5	4	67.970	72.000	2.005	24.25	
			△3(L)	1	67.970	72.000	2.005	37.95	
		CB-1158A	C.R.	8					
			1-4	8	54.980	58.000	1.487	27.63	
		SH-2502A	Cam	5					
			1	1	46.575	50.605	2.000	22.00	
			2	1	46.275	50.325	2.000	18.00	
			3	1	45.975	50.025	2.000	18.00	
			4	1	45.675	49.705	2.000	18.00	
			5	1	45.375	50.005	2.300	22.00	
		PB-2511J	P.B.	4					
			1-4	4	28.000	31.000	1.900	30.00	
11	EB EF	MS-2507A	Main 1-4	8 4/4	41.990	46.000	1.994	16.00	
		TW-2507A	T.W.	2	(I.D.)	(O.D.)			
				2	48.250	59.000	1.990		
		CB-2507A	C.B.	6					
			1-3	6	37.000	40.000	1.494	15.00	
12	ED	MS-2510A	Main 1-4	8 4/4	46.000	50.000	1.994	16.00	
		TW-2510A	T.W.	2	(I.D.)	(O.D.)			
				2	52.250	63.000	1.990		
		CB-2510A	C.B.	6					
			1-3	6	40.000	43.000	1.994	16.00	
13	HC HD	MS-2511A	Main 1-5	10 10	50.000	54.000	1.999	18.10	
		TW-2511A	T.W.	2	(I.D.)	(O.D.)			
				2	57.200	76.400	2.490		
		CB-2511A	P.B.	4					
			1-4	4	45.000	48.000	1.490	18.00	
14 15	K3-VE K3-VE2 K3-VET	MS-2512A	Main 1-5	10 5/5	46.000	50.000	1.992	14.90	2 Holes & no Lug
		TW-2510A	T.W.	2	(I.D.)	(O.D.)			
				2	52.250	63.000	1.990		
		CB-2512A	C.R.	8					
	2SZ-FE 3SZ-FE	MS-1450A	1-4	8	40.000	43.000	1.492	13.20	A Hole & Lug
			Main 1-5	10 5/5	46.000	50.000	1.995	14.80	
16	KF-VE KF-DET	MS-2513A	Main 1-4	8 4/4	41.100	43.000	1.998	14.85	w/o Lug
		TW-2513A	T.W.	2	(I.D.)	(O.D.)			
				2	47.250	59.750	1.985		w/o Lug
		CB-2513A	C.R.	6					
			1-3	6	35.000	38.000	1.496	13.50	

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
1	DK10 DK10-T DK20 DK20-T ED100 ED100-T ER100 ER200	(MS-1054GP)	Main	14					
			1.7	4	99.960	106.020	2.997	47.50	
			2.3.5.6	4/4	99.960	106.020	2.997	37.00	
			4	1/1	99.960	106.020	2.997	65.00	
		MS-1149GP	Main	14					
			1.7	2/2	99.960	106.020	2.997	43.63	
			2.3.5.6	4/4	99.960	106.020	2.997	33.13	
			4	1/1	99.960	106.020	2.997	60.13	
		(TW-1054BC)	T.W.	4	(I.D.)	(O.D.)			
			4	4	106.600	139.750	4.970		
		(TW-1149BC)	T.W.	3	(I.D.)	(O.D.)			
			4	3	106.600	140.000	3.470		
		CB-2104GP	C.R.	12					
			1-6	6/6	79.970	85.000	2.497	40.13	
		(SH-1149B)	Cam	7					
			1	1	65.470	70.000	2.250	50.00	S1-1054
			2	1	65.170	70.000	2.400	34.00	S2-1149
			3	1	64.770	70.000	2.600	34.00	S3-1054
			4	1	64.470	70.000	2.750	46.00	S4-1054
			5	1	64.170	70.000	2.900	34.00	S5-1116
			6	1	63.770	70.000	3.100	34.00	S6-1149
			7	1	63.470	70.000	3.250	32.00	S7-1116
		(PB-1116J)	P.B	6					
			1-6	6	48.000	54.030	3.050	44.00	
		(PB-1149J)	P.B	6					
			1-6	6	48.000	54.000	3.030	44.20	
2	DM100 DQ100	MS-1059GP	Main	14					
			1.7	2/2	66.960	70.985	2.000	32.13	
			2.3.5.6	4/4	66.960	70.985	2.000	23.63	
			4	1/1	66.960	70.985	2.000	36.13	
		TW-1059GP	T.W.	4	(I.D.)	(O.D.)			
			4	4	74.250	91.750	2.500		
		CB-1059GP	C.R.	12					
			1-6	12	55.950	58.985	1.500	33.63	
		(SH-1059B)	Cam	5					
			1	1	54.970	58.000	1.500	35.00	
			2	1	53.970	57.000	1.500	32.00	
			3	1	53.470	56.500	1.500	21.50	
			4	1	52.970	56.000	1.500	32.00	
			5	1	45.970	49.000	1.500	29.00	
		PB-1059J	P.B.	6					
			1-6	6	29.000	32.000	1.540	33.90	
3	DS50 DS60 DS70 DS80	MS-1038GP	Main	14					
			1.7	2/2	89.970	96.020	3.007	43.20	
			2.3.5.6	4/4	89.970	96.020	3.007	31.20	
			4	1/1	89.970	96.020	3.007	64.20	
		TW-1038K	T.W.	4	(I.D.)	(O.D.)			
			4	4	98.250	122.000	4.000		
		CB-1039GP	C.R.	12					
			1-6	12	74.950	81.000	3.010	47.20	
		(SH-1038B)	Cam	5					
			1	1	56.970	61.000	2.000	38.00	
			2	1	55.970	60.000	2.000	40.00	
			3	1	54.970	59.000	2.000	35.00	
			4	1	53.970	58.000	2.000	40.00	
			5	1	47.975	52.000	2.000	42.00	
		PB-1039J	P.B.	6					
			1-6	6	40.000	45.000	2.530	36.20	

HINO

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
4	EB100 EB200	MS-1079GP	Main 1.7 2.3.5.6	14 2/2 4/4	94.960 94.960 94.960	101.000 101.000 101.000	3.000 3.000 3.000	44.13 34.13 64.13	T1-1079 X 3
5	EB300 EB400	(TW-1079BC)	4 T.W	1/1 4	(I.D.) 101.500	(O.D.) 129.750	3.000 4.970		
		(TW-1120BC)	4 T.W	4 3	(I.D.) 101.500	(O.D.) 129.750	4.970		
		CB-2100GP	4 C.R	3 12					
		(SH-1079B)	1-6 Cam	6/6 5	74.970	81.000	3.000	46.13	
			1	1	63.070	68.000	2.450	50.00	
			2	1	62.770	68.000	2.600	40.00	
			3	1	62.370	68.000	2.800	40.00	
			4	1	62.070	68.000	2.950	40.00	
			5	1	61.770	68.000	3.100	35.00	
		PB-1079J	P.B.	6					
			1-6	6	43.000	49.000	3.030	42.20	
		PB-1120J	P.B.	6					
			1-6	6	45.000	51.000	3.030	44.20	
6	EC100	MS-1140GP (MS-1081GP)	Main 1.7 2.3.5.6	14 4 8	73.960 73.960 73.960	78.985 78.985 78.985	2.487 2.487 2.487	32.13 28.13 35.13	
			4	2					
		TW-1081GP	T.W.	4	(I.D.)	(O.D.)			
			4	4	81.250	98.750	2.500		
		CB-1081GP	C.R.	12					
			1-6	12	59.960	63.985	2.000	33.63	
		(SH-1081B)	Cam	4					
			1	1	56.470	59.500	1.500	35.00	
			2	1	54.470	57.500	1.500	30.00	
			3	1	53.870	56.900	1.500	30.00	
			4	1	53.570	56.600	1.500	30.00	
		PB-1081J	P.B.	6					
			1-6	6	31.500	35.500	2.040	37.10	
7 8	EF100 EF100-T	MS-1144GP	Main 1-5	10 5/5	104.920	111.000	3.010	34.00	S1-1144 S2-2107
		MS-1148GP	Main 1-5	10 5/5	104.920	111.000	3.007	35.00	
	EF300 EF350	TW-1144K	T.W.	3	(I.D.)	(O.D.)			
			5	3	117.200	144.600	3.970		
	EF500	TW-1148K	T.W.	3	(I.D.)	(O.D.)			
			5	3	117.200	144.600	4.470		
	EF700 EF700-T	CB-1144GP	C.R	16					
			R1-4	8	83.965	89.015	2.497	32.70	
			L1-4	8	83.965	89.015	2.497	32.70	
	EG100	SH-1144A	Cam	5					
			1.5	2	62.970	68.000	2.495	47.00	
			2.3.4.	3	62.970	68.000	2.495	26.00	
		PB-1144J	P.B.	8					
			1-8	8	50.000	55.000	2.537	(U)40.20 (L)51.00	

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
9	EF550 EF750 EF750-T	MS-2107GP	Main	10					
			1-5	5/5	109.920	116.000	3.007	35.00	
		MS-2120GP	Main	10					
			1-5	5/5	109.920	116.000	3.007	35.00	
10	F17C	TW-2107K	T.W.	3	(I.D.)	(O.D.)			2 Locating Holes
	F17C-T		5	3	122.200	149.600	4.470		
	F17D	TW-2114K	T.W.	4	(I.D.)	(O.D.)			3 Locating Holes
	F17D-T		5	4	122.200	149.600	4.470		
	F17E	*TW-2120K	T.W.	3	(I.D.)	(O.D.)			
			5	3	122.200	150.000	4.470		
	F20C	CB-2107GP	C.R.	16					
			1-8	8/8	83.965	89.015	2.497	32.70	
11	F21C	SH-2107A	Cam	5					
			1.5	2	62.970	68.000	2.495	47.00	
			2.3.4	3	62.970	68.000	2.495	26.00	
		PB-2107J	P.B.	8					
			1-8	8	50.000	55.000	2.530	(U)40.20 (L)51.00	
		*PB-	P.B.	8	47.000	51.000	2.300	43.50	
			1-8	8					
12	EH100	MS-1140GP	Main	14					
			1.7	4	73.960	78.985	2.487	32.13	
13	EH300		2.3.5.6	8	73.960	78.985	2.487	28.13	
			4	2	73.960	78.985	2.487	35.13	
14	EH500	TW-1081GP	T.W.	4	(I.D.)	(O.D.)			
15			4	4	81.250	98.750	2.500		
	EH700	CB-1165GP	C.R.	12					
	EH700-T		1-6	6/6	62.960	66.985	2.000	33.63	
		(CB-1140GP)	C.R.	12					
			1-6	6/6	64.960	68.985	1.997	33.63	
		CB-2101GP	C.B.	12					
			1-6	6/6	64.960	68.985	2.000	33.63	
		SH-1081B	Cam	4					
			1	1	56.470	59.500	1.500	35.00	
			2	1	54.470	57.500	1.500	30.00	
			3	1	53.870	56.900	1.500	30.00	
			4	1	53.570	56.600	1.500	30.00	
		SH-2101A	Cam	7					
			1	1	61.470	64.500	1.495	35.00	S1-2108
			2	1	61.270	64.300	1.500	30.00	S2-2101
			3	1	61.070	64.100	1.500	30.00	S3-2101
			4	1	60.870	63.900	1.500	30.00	S4-2101
			5	1	60.670	63.700	1.500	30.00	S5-2101
			6	1	60.470	63.500	1.500	30.00	S6-2101
			7	1	58.270	61.300	1.500	30.00	S7-2108
		SH-2108A	Cam	7					
			1	1	61.470	64.500	1.495	35.00	
			2	1	61.270	64.300	1.500	26.00	
			3	1	61.070	64.100	1.500	26.00	
			4	1	60.870	63.900	1.500	26.00	
			5	1	60.670	63.700	1.500	26.00	
			6	1	60.470	63.530	1.500	26.00	
			7	1	58.270	61.300	1.500	30.00	
		PB-1139J	P.B.	6					
			1-6	6	34.000	38.000	2.040	40.10	
		PB-1140J	P.B.	6					
			1-6	6	35.000	39.000	2.040	40.10	
		PB-2108J	P.B.	6					
			1-6	6	39.000	43.000	2.040	(U)31.70 (L)40.00	

HINO

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
16	EK100	MS-2102GP	Main	14					
	EK100-T		1-7	7/7	89.930	96.000	3.000	40.00	
	EK130-T	TW-2102K	T.W.	3	(I.D)	(O.D.)			
	EK200		7	3	102.000	127.600	3.970		2 Locating Holes
17		TW-2112K	T.W.	4	(I.D)	(O.D.)			
	K13D		7	4	102.000	127.600	3.970		3 Locating Holes
	K13U	*TW-2123K	T.W.	3	(I.D)	(O.D.)			
	K130-T		7	3	104.200	128.000	3.970		
18		CB-2102GP	C.R	12					
	K13C		1-6	6/6	83.965	89.015	2.500	40.60	U : a Hole&Groove
	K13C-T	CB-2112GP	C.R	12					L : Oil Groove
			1-6	6/6	83.965	89.015	2.500	40.60	U : 1 Oil Hole
19	K13D	SH-2102A	Cam	7					L : 2 Oil Holes
			1	1	65.970	71.000	2.500	42.00	
			2	1	65.770	71.000	2.600	30.00	
			3	1	65.570	71.000	2.700	30.00	
			4	1	65.370	71.000	2.800	42.00	
			5	1	65.170	71.000	2.900	30.00	
			6	1	64.970	71.000	3.000	30.00	
			7	1	64.770	71.000	3.100	32.00	
		PB-2102J	P.B.	6					
			1-6	6	50.000	55.000	2.527	(U) 39.00 (L) 51.00	
		PB-2104J	P.B.	6					
			1-6	6	50.000	55.000	2.527	(U) 24.35 (L) 50.45	

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
20	EL100 EL100-T	MS-2103GP	Main 1-7	14 7/7	89.930	96.000	3.010	34.00	
21	EM100	*TW-2103GP	T.W 4	4	(I.D.)	(O.D.)			
		TW-2105GP	T.W 4	4	(I.D.)	(O.D.)	3.470		
		TW-2122K	T.W 4	4	(I.D.)	(O.D.)	2.970		
			T.W 4	4	102.300	125.000	2.970		
22	EP100								
23	EP100-T	CB-2103GP	C.R. 1-6	12 6/6	72.970	77.015	2.002	32.00	
24	P09B-T	CB-2106GP	C.R. 1-6	12	74.970	80.015	2.502	32.00	Oil Hole 1
		(CB-2105GP)							(Oil hole 0)
		CB-2122GP	C.R. 1-6	12 6/6	79.970	85.015	2.510	32.00	
	M10U	CB-2113GP	C.R. 1-6	12 6/6	74.970	80.015	2.502	32.00	U : 1 Oil Hole
		SH-2103A	Cam 1	7	64.970	69.000	2.000	34.00	L : 2 Oil Holes
36	P09C-T		2	1	64.570	68.600	2.000	20.00	
			3	1	64.170	68.200	2.000	20.00	
37	P11C		4	1	63.770	67.800	2.000	20.00	
			5	1	63.370	67.400	2.000	20.00	
			6	1	62.970	67.000	2.000	20.00	
			7	1	62.570	66.600	2.000	25.00	
		SH-2113A	Cam 1	4	64.970	69.000	2.000	34.00	S1-2103
			2	1	64.170	68.200	2.000	20.00	S3-2103
			3	1	63.370	67.400	2.000	20.00	S5-2103
			4	1	62.570	66.600	2.000	25.00	S7-2103
		PB-2103J	P.B. 1-6	6 6	40.000	44.000	2.015	(U)31.50 (L)40.30	
		PB-2105J	P.B. 1-6	6 6	42.000	46.000	2.015	(U)33.00 (L)42.80	
		PB-2113J	P.B. 1-6	6 6	47.000	51.000	2.030	(U)24.60 (L)42.80	

HINO

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
25	H06B	MS-2108GP	Main	14					
26	H06B-T		1.4.7	3/3	79.960	84.985	2.487	32.13	
27	H06C-T		2.3.5.6.	4/4	79.960	84.985	2.487	28.13	
		MS-2111GP	Main	14					
	H07C		1.4.7	3/3	79.960	85.000	2.487	32.13	
	H07C-T		2.3.5.6.	4/4	79.960	85.000	2.487	28.13	
		TW-2108K	T.W.	4	(I.D.)	(O.D.)			
28	H06C-TI		4	2/2	85.250	104.900	2.500		
		CB-2108GP	C.R.	12					
29	H07D		1-6	6/6	64.960	68.985	2.000	33.13	
		CB-2111GP	C.R.	12					
			1-6	6/6	64.960	68.985	2.000	33.13	C1-2111×6
		CB-2115GP	C.R.	12					C1-2108-L×6
			1-6	6/6	64.960	68.985	1.997	25.13	
		SH-2108A	Cam	7					
			1	1	61.470	64.500	1.495	35.00	
			2	1	61.270	64.300	1.500	26.00	
			3	1	61.070	64.100	1.500	26.00	
			4	1	60.870	63.900	1.500	26.00	
			5	1	60.670	63.700	1.500	26.00	
			6	1	60.470	63.500	1.500	26.00	
			7	1	58.270	61.300	1.500	30.00	
		SH-2111A	Cam	4					
			1	1	61.470	64.500	1.495	35.00	S1-2108
			3	1	61.070	64.100	1.500	26.00	S3-2108
			5	1	60.670	63.700	1.500	26.00	S5-2108
			7	1	58.270	61.300	1.500	30.00	S7-2108
		*SH-	Cam	7					
			1	1	61.470	64.500	1.750	35.25	
			2	1	61.270	64.300	1.750	26.25	
			3	1	61.070	64.100	1.750	26.25	
			4	1	60.870	63.900	1.750	26.25	
			5	1	60.670	63.700	1.750	26.25	
			6	1	60.470	63.500	1.750	26.25	
			7	1	58.270	61.300	1.750	30.25	
		PB-2108J	P.B.	6					
			1-6	6	39.000	43.000	2.040	(U)31.70 (L)40.00	
30	J05C J07C	M1-2117GP	Main						
		J05C, J05C-TI	1-5	5/5	79.960	85.000	2.487	28.13	2pcs/box×5
		J07C	1-6	6/6					2pcs/box×6
31	J05C-TI	J08C	1-7	7/7					2pcs/box×7
32	J08C	MS-2118GP	1-7	7/7	79.960	85.000	2.487	28.13	
33	J08C-TI	C1-2117GP	C.R.						
		J05C	1-4	4/4	64.960	68.985	1.997	25.13	2pcs/box×4
		J07C	1-5	5/5					2pcs/box×5
		C1-2118GP	C.R.						
		J05C-TI	1-4	8	64.960	68.985	1.997	27.70	2pcs/box×4
		J08C-TI	1-6	12					2pcs/box×6
		CB-2115GP	C.R.	12	64.960	68.985	1.997	25.13	
			1-6	6/6					
		SH-2117A	Cam	8					
			6	6	39.975	43.985	1.995	20.13	
			2	2	39.975	43.985	1.995	20.13	
		SH-2118A	Cam	10					
			8	8	39.975	43.985	1.995	20.13	S1-2117
			2	2	39.975	43.985	1.995	20.13	S2-2117
		PB-2116J	P.B.	4					
			1-4	4	37.000	41.000	1.995	35.50	
		PB-2117J	P.B.	5					
			1-5	5	37.000	41.000	1.995	35.50	
		PB-2118J	P.B.	6					
			1-6	6	37.000	41.000	1.995	35.50	

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
38	V21C V22C V25C	MS-2114GP	Main 1-6	12 6/6	109.920	116.000	3.007	35.00	
39	V25C V26C V22D	TW-2114K	T.W.	4	(I.D.)	(O.D.)			
				4	122.200	149.600	4.470		
		*TW-2121K	T.W.	4	(I.D.)	(O.D.)			
				4	122.200	150.000	4.470		
		CB-2114GP	C.R.	20					
			1-10	10/10	83.965	89.015	2.497	32.70	
		SH-2114A	Cam	6					
			1.6	2	62.970	68.000	2.495	47.00	S1-2107
			2.3.4.5.	4	62.970	68.000	2.495	26.00	S2-2107
		PB-2114J	P.B.	10					
			1-10	10	50.000	55.000	2.530	(U)40.20 (L)51.00	
40	W04C-T	MS-2109GP	Main 1-5	10 10	72.960	78.000	2.493	25.13	M1-2110 X 10
41	W04D W04D-T	TW-2109GP	T.W.	4	(I.D.)	(O.D.)			
			4	2/2	82.250	98.900	2.500		
		CB-2109GP	C.R.	8					
			1-4	8	61.960	65.985	1.997	28.13	C1-2110 X 8
		SH-2109B	Cam	3					
			1	1	56.970	60.000	1.500	27.00	
			2	1	56.770	59.800	1.500	27.00	
			3	1	56.570	59.600	1.500	27.00	
		PB-2111J (PB-2109J)	P.B.	4					
			1-4	4	35.000	39.000	2.040	(U)30.00 (L)38.00	
42	W06D W06D-T W06E W06E	MS-2110GP	Main 1-7	14 14	72.960	78.000	2.493	25.13	
		TW-2109GP	T.W.	4	(I.D.)	(O.D.)			
			4	2/2	82.250	98.900	2.500		
		CB-2110GP	C.R.	12					
			1-6	12	61.960	65.985	1.997	28.13	
		SH-2110B	Cam	4					
			1	1	56.970	60.000	1.500	27.00	S1-2109
			2	1	56.770	59.800	1.500	27.00	S2-2109
			3	1	56.570	59.600	1.500	27.00	S3-2109
			4	1	56.370	59.800	1.700	27.00	S4-2110
		PB-2112J (PB-2110J)	P.B.	6					
			1-6	6	35.000	39.000	2.040	(U)30.00 (L)38.00	P1-2111×6

HONDA

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
1	A18A A20A	MS-2200GP	Main 1-5	10					
		TW-1134A	T.W. 4	2	50.000 (I.D.)	54.000 (O.D.)	1.998	20.00	
		CB-2200GP	C.R. 1-4	8	56.250	78.000	2.500		
				8	45.000	48.000	1.498	19.50	
2	B16A	MS-2208GP	Main 1-5	10	55.000	59.000	1.998	20.00	U/L : 1 Oil Hole U : 2 Oil Holes L : no Oil Hole
3	B18A	MS-2215GP	Main 1-5	10					
4	B20A		T.W. 4	5/5	55.000 (I.D.)	59.000 (O.D.)	1.995	20.00	
5	B21A		T.W. 4	2	61.250 (I.D.)	82.000 (O.D.)	2.500		
		(TW-2208GP)	T.W. 4	2	61.250	82.000	2.500		
		CB-2200GP	C.R. 1-4	8	45.000	48.000	1.498	19.50	1 Oil Hole
		CB-2213GP	C.R. 1-4	8	48.000	51.000	1.498	19.40	
		CB-2215GP	C.R. 1-4	8	45.000	48.000	1.498	19.50	no Oil Hole
6	C20A C20A-T	MS-2211GP	Main 1-4	8					
		TW-1134A	T.W. 4	4/4	50.000 (I.D.)	54.000 (O.D.)	1.999	20.00	
		CB-2211GP	C.R. 1-6	2	56.250	78.000	2.500		
				12	45.000	48.000	1.498	17.50	
7	C25A C27A	MS-2210GP	Main 1-4	8					
		TW-2210GP	T.W. 4	4/4	64.000 (I.D.)	68.000 (O.D.)	1.998	20.00	
		CB-2210GP	C.R. 1-6	2	75.250	94.000	2.500		
				12	52.000	55.000	1.498	17.50	
8	D12A D13C	MS-2214A	Main 1-5	10					
		TW-1134A	T.W. 4	10	43.000 (I.D.)	47.000 (O.D.)	1.998	20.00	
		CB-2214GP	C.R. 1-4	2	56.250	78.000	2.500		
				8	39.000	42.000	1.498	18.50	
9 10 11	D13A2 D13B D15A D15B D15Z	MS-2206GP	Main 1-5	10					
		TW-1134A	T.W. 4	10	45.000 (I.D.)	49.000 (O.D.)	1.998	20.00	
		CB-2204GP	C.R. 1-4	2	56.250	78.000	2.500		
				8	40.000	43.000	1.498	18.50	
		CB-2205GP	C.R. 1-4	8	42.000	45.000	1.498	18.50	
		CB-2208GP	C.R. 1-4	8	45.000	48.000	1.498	18.50	
				8					
				8					
12 33	D16A B18A ZC	MS-2208GP	Main 1-5	10					
		TW-2215A	T.W. 4	10	55.000 (I.D.)	59.000 (O.D.)	1.998	20.00	
		(TW-2208GP)	C.R. 1-4	2	61.250	82.000	2.500		
		CB-2208GP	C.R. 1-4	8	45.000	48.000	1.998	18.50	

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
14	E07A	*MS- *TW- CB-2212GP	Main 1-4 T.W. 3 C.R. 1-3	8 8 2 2 6 6	(I.D.) 36.000	(O.D.) 39.000	1.490	17.50	
15 16	EC EE ED EF EK EM EP EJ EN	MS-1134GP MS-2206GP TW-1134A CB-1134GP CB-1142GP	Main 1-5 Main 1-5 T.W. 4 C.R. 1-4 C.R. 1-4	10 10 10 2 2 8 8 8	50.000 45.000 (I.D.) 56.250 40.000 42.000	54.000 49.000 (O.D.) 78.000 43.000 45.000	1.998 1.998 2.500 1.498 1.498	20.00 20.00 17.50 17.50	1 Oil Hole at 17°
21 22 23	EV EV1 EW	CB-2204GP CB-2205GP CB-2209GP	C.R. 1-4 C.R. 1-4 C.R. 1-4	8 8 8 8 8 8	40.000 42.000 38.000	43.000 45.000 41.000	1.498 1.498 1.498	18.50 18.50 18.50	1 Oil Hole at 15°
17 18	EH	MS-1175A MS-2202A TW-1175A CB-1175GP	Main 1-3 Main 1-3 T.W. 3 C.R. 1-2	6 6 6 2 2 4 4	42.000 38.000 (I.D.) 48.250 40.000	46.000 42.000 (O.D.) 66.000 43.000	1.998 1.998 2.500 1.498	20.00 20.00 17.50	
19	ER	MS-2206GP TW-1134GP CB-2206GP	Main 1-5 T.W. 4 C.R. 1-4	10 10 2 2 8 8	45.000 (I.D.) 56.250 37.000	49.000 (O.D.) 78.000 40.000	1.998 2.500 1.498	20.00 17.50	
20 24	ES ET EY	MS-2200GP TW-1134GP CB-2200GP CB-2203GP	Main 1-5 T.W. 4 C.R. 1-4 C.R. 1-4	10 10 2 2 8 8 8 8	50.000 (I.D.) 56.250 45.000 42.000	54.000 (O.D.) 78.000 48.000 45.000	1.998 2.500 1.498 1.498	20.00 19.50 17.50	
25 26 27 28	F18B F20B F20A F22A H22A H23A	MS-2213GP TW-2213A CB-2213GP CB-2200GP CB-2217GP	Main 1-5 T.W. 2 C.R. 1-4 C.R. 1-4 C.R. 1-4	10 10 2 2 8 8 8 8 8	50.000 (I.D.) 57.500 48.000 45.000 48.000	54.000 (O.D.) 78.000 51.000 48.000 51.000	1.998 2.490 1.498 1.498 1.496	20.00 19.50 19.50 19.43	An Oil Hole

HONDA

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
13	D17A	MS-2201A	Main 1-5	10					
		TW-2201A	T.W.	2	55.000 (I.D.)	59.000 (O.D.)	2.016	20.00	
				2	61.025	81.750	2.500		
		CB-2201GP	C.R. 1-4	8					
				8	45.000	48.000	1.493	15.50	An Oil Hole
29 30	K20A K24A	MS-2216GP	Main 1-5	10					
				5/5	55.000 (I.D.)	59.000 (O.D.)	2.012	20.00	
		TW-2216A	T.W.	2	62.750	82.000	2.500		
				2					
		CB-2216GP	C.R. 1-4	8	45.000	48.000	1.495	15.50	No Oil Hole
				8					
		CB-2218GP	C.R. 1-4	8	48.000	51.000	1.492	15.50	No Oil Hole
31	L13A L15A LDA	MS-2219A	Main 1-5	10	50.000	54.000	1.999	17.00	
				5/5					
		CB-2219A	C.R. 1-4	8	40.000	43.000	1.495	13.50	
32	R16A R18A R20A	*MS-	Main 1-5	10					
		*TW-	T.W.		(I.D.)	(O.D.)			
		*CB-	C.R. 1-4	8					

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note	
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.			
1	2AA 2AB1	MS-1157GP	Main	6						
			1.3	4	69.920	73.975	2.017	30.63		
			2	2	69.920	73.975	2.017	21.53		
2	3AA1 3AB1 3AD1 3AD1-T	MS-1601GP	Main	8						
			1.3	4	69.920	73.975	2.017	30.63		
			2.4	4	69.920	73.975	2.017	21.53		
		TW-1070A	T.W.	2	(I.D)	(O.D)				
			2	2	78.050	92.950	2.480			
			CB-1157A	C.R.	4					
		1-2		4	52.930	55.985	1.508	21.53		
		CB-1601A	C.R.	6						
			1-3	6	52.930	55.985	1.508	21.53		
		SH-1605A	Cam	3						
1-3	1	47.975	52.000	2.030	22.00					
3 4	2AE1 3AE1 3AF1	MS- (MS-1602GP)	Main	6						
			1.3	4	69.920	73.975	2.017	26.63		
			2	2	69.920	73.975	2.017	21.53		
			Main	8						
				1.3	4	69.920	73.975	2.017	26.63	
				2.4	4	69.920	73.975	2.017	21.53	
	TW-1070A	T.W.	2	(I.D)	(O.D)					
		2	2	78.050	92.950	2.480				
		CB-	C.R.	4						
	1-2		4	48.940	51.985	1.505	22.13			
	CB-1602A	C.R	6							
		1-3	6	48.940	51.985	1.505	22.13			
	5 6 7	2KA1 2KB1 2KC1	MS-	Main	6					
				1-3	6	51.935	55.980	2.008	15.13	
			MS-	Main	8					
3KA1 3KB1		TW-	1-4	8	51.935	55.980	2.008	15.13		
			T.W.	2	(I.D)	(O.D)				
		TW-	2	2	60.150	71.200	2.660			
T.W.			2	(I.D)	(O.D)					
3KC1 3KC2		CB-	2	2	68.250	79.000	2.650			
			C.R.	4						
		CB-	1-2	4	42.938	45.985	1.506	16.53		
			C.R.	6						
		1-3	6	42.938	45.985	1.506	16.53			
8	3KR1	MS-	Main	8						
			1-4	8	59.930	63.976	2.009	15.00		
		TW-	T.W.	2	(I.D)	(O.D)				
			2	2	68.250	79.000	2.650			
		CB-1602A	C.R.	6						
			1-3	6	48.940	51.985	1.505	22.13		

ISUZU

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
9	4BA1	MS-1628GP	Main	10					
	4BB1	(M1-1129GP)	1-5	10	75.920	81.000	2.525	27.93	6.00mm Wide Notch
	4BC1	MS-1163GP	Main	10					
	4BC2		1.2.4.5	8	75.920	81.000	2.525	27.93	6.00mm Wide Notch
	4BE1		3	1/1	75.920	81.000	2.525	27.93	“
	4BE2	MS-	Main	10					
			1-5	10	75.920	81.000	2.525	27.83	
		MS-1603GP	Main	10					
			1-5	9	75.920	81.000	2.525	27.83	4.5mm Narrow Notch
			3-L	1	75.920	81.000	2.525	27.83	“
		TW-1129GP	T.W	4	(I.D.)	(O.D.)			
			4	2/2	84.600	100.500	2.500		
		TW-1155GP	T.W	4	(I.D.)	(O.D.)			
			4	2/2	88.500	100.500	2.500		Full Circum Groove
		TW-1604A	T.W.	4	(I.D.)	(O.D.)			
			4	2/2	88.500	100.500	2.500		Teardrop Oil Groove
		CB-1603GP	C.R.	8					
			1-4	8	63.944	68.000	2.013	29.93	C1-1129 X 8
		SH-1100B	Cam	4					
			1	1	55.970	60.000	2.000	20.00	
			2.3.4	3	55.970	60.000	2.000	20.00	
		SH-1163B	Cam	3					
			1	1	55.970	60.000	2.000	20.00	S1-1100×1
			2.3	2	55.970	60.000	2.000	20.00	S2-1100×2
		PB-1100J	P.B	4					
			1-4	4	33.000	36.000	1.530	38.00	
		PB-1129J	P.B	4					
			1-4	4	33.000	38.000	2.530	38.00	
		PB-1163J	P.B	4					
			1-4	4	35.000	38.000	1.530	38.00	P1-1155×4
10	4BD1	MS-1606GP	Main	10					
	4BD1-T		1-5	9	79.930	85.000	2.525	27.83	
	4BD2		3-L	1	79.930	85.000	2.525	27.83	
		MS-1604GP	Main	10					
	4BG1		1-5	9	79.930	85.000	2.518	26.83	4.5mm Narrow Notch
			3-L	1	79.930	85.000	2.518	26.83	“
		MS-	Main	10					
			1.2.4.5	8	79.920	85.000	2.516	26.73	
			3	2	79.920	85.000	2.516	26.73	
		TW-1155GP	T.W.	4	(I.D.)	(O.D.)			Full Circum Groove
			4	2/2	88.250	101.000	2.500		
		TW-1604A	T.W.	4	(I.D.)	(O.D.)			
			4	2/2	88.500	100.500	2.500		Teardrop Oil Groove
		CB-1603GP	C.R.	8					
			1-4	8	63.944	68.000	2.013	29.93	
		SH-1163B	Cam	3					
			1	1	55.970	60.000	2.000	20.00	
			2.3.	2	55.970	60.000	2.000	20.00	
		PB-1163J	P.B	4					
			1-4	4	35.000	38.000	1.530	38.00	P1-1155×4

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
11 12	6BB1	MS-1629GP	Main	14					
	6BD1	(M1-1129GP)	1-7	14	75.920	81.000	2.525	27.83	6.00mm Wide Notch
	6BD1-T	MS-1611GP	Main	14					
			1-7	13	79.920	85.000	2.525	27.83	6.00mm Wide Notch
	6BF1		4-L	1	79.920	85.000	2.525	27.83	“
	6BF1-T	MS-	Main	14					
			1-7	7	79.920	85.000	2.518	26.83	
	6BG1	MS-1612GP	Main	14					
	6BG1-T		1-7	7/7	79.920	85.000	2.518	26.83	4.5mm Narrow Notch
		TW-1129GP	T.W.	4	(I.D.)	(O.D.)			
			4	2/2	84.250	101.000	2.500		
		TW-1155GP	T.W.	4	(I.D.)	(O.D.)			
			4	2/2	88.250	101.000	2.500		
		TW-	T.W.	4	(I.D.)	(O.D.)			
			4	2/2	88.250	101.000	2.500		
		CB-1612GP	C.R.	12					
			1-6	12	63.944	68.000	2.013	29.93	C1-1129 X 12
		SH-1129B	Cam	6					
			1	1	55.970	60.000	2.000	20.00	S1-1100×1
			2-6	5	55.970	60.000	2.000	20.00	S2-1100×2
		PB-1155J	P.B.	6					
			1-6	6	35.000	38.000	1.530	38.00	
13 14	C190	MS-1138GP	Main	10					
			1.5	4	59.932	63.975	2.017	30.63	
	C223		2.4	2/2	59.932	63.975	2.017	23.13	
	C223-T		3	2	59.932	63.975	2.017	38.13	
		MS-1605GP	Main	10					
			1.5.	4	59.932	63.975	2.017	27.63	
			2.4.	4	59.932	63.975	2.017	23.13	
			3	2	59.932	63.975	2.017	28.83	
		TW-1622A	T.W.	2	(I.D.)	(O.D.)			
		(TW-1031B)	3	2	73.050	86.950	2.480		
		CB-1070A	C.R.	8					
			1-4	8	52.930	55.985	1.508	21.53	
		SH-1070A	Cam	3					
			1	1	47.975	52.000	2.030	25.00	
			2	1	47.975	52.000	2.030	25.00	
			3	1	47.975	52.000	2.030	25.00	
		SH-1605A	Cam	3					
			1	1	47.975	52.000	2.030	22.00	
			2	1	47.975	52.000	2.030	22.00	
			3	1	47.975	52.000	2.030	22.00	
		PB-1070J	P.B.	4					
			1-4	4	27.000	30.000	1.530	34.00	
		PB-1605J	P.B.	4					
			1-4	4	27.000	30.000	1.530	30.00	
		PB-	P.B.	4					
			1-4	4					

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
15	C221	MS-1610GP	Main	10					
16	C240		1.5	4	69.920	73.975	2.017	30.63	
			2.4	4	69.920	73.975	2.017	21.53	
			3	2	69.920	73.975	2.017	36.13	
		TW-1070A	T.W.	2	(I.D)	(O.D)			
		CB-1070A	3	2	78.050	92.950	2.480		
			C.R.	8					
		SH-1070A	1-4	8	52.930	55.985	1.508	21.53	
			Cam	3					
			1	1	47.975	52.000	2.030	25.00	
		SH-1605A	2	1	47.975	52.000	2.030	25.00	
			3	1	47.975	52.000	2.030	25.00	
			Cam	3					
			1	1	47.975	52.000	2.030	22.00	
			2	1	47.975	52.000	2.030	22.00	
			3	1	47.975	52.000	2.030	22.00	
		PB-1033J	P.B.	4					
		PB-1070J	1-4	4	25.000	27.995	1.503	34.00	
			P.B.	4					
		PB-1605J	1-4	4	27.000	30.000	1.530	34.00	
			P.B.	4					
			1-4	4	27.000	30.000	1.530	30.00	
17	C330	MS-1628GP	Main	10					M1-1129 X 10
		MS-	1-5	10	75.920	81.000	2.525	27.83	
			Main	10					
		TW-1100GP	1-5	10	75.920	81.000	2.525	27.83	
			T.W.	4	(I.D)	(O.D)			
		TW-1129GP	4	2/2	84.250	101.000	3.000		
			T.W.	4	(I.D)	(O.D)			C1-1129 X 8
		CB-1603GP	4	2/2	84.250	101.000	2.500		
			C.R.	8					
		SH-1100B	1-4	8	63.944	68.000	2.013	29.93	
			Cam	4					
			1	1	55.970	60.000	2.000	20.00	
		SH-1163B	2-4	3	55.970	60.000	2.000	20.00	
			Cam	3					
			1	1	55.970	60.000	2.000	20.00	
		PB-1100J	2.3	2	55.970	60.000	2.000	20.00	
			P.B	4					
		PB-1129J	1-4	4	33.000	36.000	1.530	38.00	
			P.B	4					
			1-4	4	33.000	38.000	2.530	38.00	
18	C22NE 22LE	MS-1641GP	Main	10					
		CB-1641GP	1.2.4.5	8	57.995	62.000	1.995	19.30	
			△3	2	57.995	62.000	1.995	25.62	
		CB-1642GP	C.R.	8					
			1-4	8	48.987	52.000	1.497	19.20	
			C.R.	8					
			1-4	8	48.987	52.000	1.497	19.20	

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
19	D500 D500-T	MS-1629GP	Main 1-7	14	75.920	81.000	2.525	27.83	M1-1129 X 14
		MS-	Main 1-7	14	75.920	81.000	2.525	27.83	
		TW-1100GP	T.W. 4	4	(I.D)	(O.D)			
				2/2	84.250	101.000	3.000		
		TW-1129GP	T.W. 4	4	(I.D)	(O.D)			C1-1129 X 12
				2/2	84.250	101.000	2.500		
		CB-1612GP	C.R. 1-6	12	63.944	68.000	2.013	29.93	
		SH-1129B	Cam 1	6	55.970	60.000	2.000	20.00	
			2-6	5	55.970	60.000	2.000	20.00	P1-1100 X 6
		PB-1629J	P.B. 1-6	6	33.000	36.000	1.530	38.00	
20	DA120	(MS-1052GP)	Main 1-6	14	74.950	82.000	3.510	28.20	
22	DA640 GD150	TW-1052GP	7	6/6	74.950	82.000	3.510	44.05	
			T.W. 1	1/1	(I.D)	(O.D)			
				2/2	82.250	99.900	3.480		
		(CB-1023GP)	C.R. 1-6	12	66.925	70.000	3.010	37.53	
		(CB-1052GP)	C.R. 1-6	12	66.925	71.980	2.513	37.53	
		PB-1023J	P.B. 1-6	6	34.000	40.000	3.030	37.13	
		PB-1052J	P.B. 1-6	6	36.000	41.000	2.540	38.13	
21	DA220	(MS-1064GP)	Main 1-4	10	74.950	82.000	3.510	28.20	C1-1023 X 8 P1-1023 X 4
			5	4/4	74.950	82.000	3.510	44.05	
		TW-1052GP	T.W. 1	1/1	(I.D)	(O.D)			
				2/2	82.250	99.900	3.480		
		(CB-1050GP)	C.R. 1-4	8	63.950	70.000	3.010	37.53	
		PB-1050J	P.B. 1-4	4	34.000	40.000	3.030	37.13	
23	D920 E110	(MS-1092GP)	Main 1-3.5.6	14	91.900	97.970	3.013	36.00	
			4	10	91.900	97.970	3.013	56.00	
			7	2	91.900	97.970	3.013	50.50	
		TW-1071GP	T.W. 1	1/1	(I.D)	(O.D)			
				2/2	102.250	119.900	3.480		
		(CB-1092GP)	C.R. 1-6	12	79.925	85.980	3.013	44.50	
			P.B. 1-6	6	45.990	52.000	3.030	46.00	
		PB-1092J		6					

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
24 25	DH100 DH100-T	(MS-1092GP)	Main	14					
			1-3.5.6	10	91.900	97.970	3.013	36.00	
			4	2	91.900	97.970	3.013	56.00	
			7	1/1	91.900	97.970	3.013	50.50	
		MS-1609GP	Main	14					
			1-3.5.6	10	91.900	97.970	3.013	34.00	
			4	2	91.900	97.970	3.013	51.00	
			7	1/1	91.900	97.970	3.013	49.50	
		TW-1071GP	T.W.	4	(I.D)	(O.D)			
			1	2/2	102.250	119.900	3.480		
		(CB-1042GP)	C.R.	12					
			1-6	6/6	77.920	82.980	2.513	46.50	
		*CB-	C.R.	12					
			1-6	12	77.920	82.980	2.513	46.50	C1-1042-L X 12
		(PB-1042J)	P.B.	6					
			1-6	6	45.000	51.000	3.050	40.00	
26	E120 E120-T	MS-1154GP	Main	14					
			1-3.5.6	5/5	99.905	105.970	3.010	34.00	
			4	1/1	99.905	105.970	3.010	55.00	
			7	1/1	99.905	105.970	3.010	49.50	
		TW-1102GP	T.W.	4	(I.D)	(O.D)			
			1	2/2	111.250	133.900	3.480		
		CB-1154GP	C.R.	12					
			1-6	12	87.925	93.980	3.011	42.50	
		PB-1154J	P.B.	6					
			1-6	6	50.000	56.000	3.050	(U)35.00 (L)44.50	
27 28	4EC1 4EC1-T	MS-1624GP	Main	10					
			1-5	5/5	47.938	51.976	2.006	15.53	
		MS-1625GP	Main	10					
			1-5	5/5	51.938	55.976	2.006	15.53	
29	4EE1-T	TW-1625A	T.W.	2	(I.D)	(O.D)			
		(TW-1624GP)	2	2	59.000	69.950	2.210		
		TW-1626A	T.W.	2					
			2	2	59.000	73.700	2.210		
		CB-1624A	C.R.	8					
			1-4	8	45.945	48.982	1.506	16.83	
		PB-1624J	P.B.	4					
			1-4	4	22.000	25.000	1.540	23.75	
		PB-1625J	P.B.	4					
			1-4	4	25.000	28.000	1.540	23.75	
		*PB-1636J	P.B.	4					
			1-4	4	27.000	30.000	1.540	23.75	
30	4FA1 4FA1-T 4FB1 4FB1-T 4FC1 4FC1-T 4FD1 4FE1 4FE1-T 4FG1	MS-1616GP	Main	10					
			1-5	5/5	55.932	59.980	2.008	21.86	
		TW-1616A	T.W.	2	(I.D)	(O.D)			
			3	2	64.000	80.200	2.360		
		CB-1616GP	C.R.	8					
			1-4	8	48.940	51.985	1.505	21.63	
		SH-1166A	Cam	10					
			1-5	10	27.975	31.000	1.500	16.13	
		PB-1166J	P.B.	4					
			1-4	4	25.000	28.000	1.530	26.75	
		PB-1638J	P.B.	4					
				4	27.000	30.000	1.540	26.75	

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
31	4HE1-T 4HF1 4HG1 4HJ1 4HK1-T	MS-1631GP	Main	10					
			1-5	5/5	81.915	87.000	2.518	27.33	
		TW-1631A	T.W.	3	(I.D.)	(O.D)			
				1/2	92.750	109.750	3.000		
		CB-1631GP	C.R.	8					
			1-4	8	65.922	69.985	2.013	30.43	
		CB-1640GP	C.R.	8					
			1-4	8	72.922	77.985	2.517	30.43	
		CB-1644GP	C.R.	8					
			1-4	4/4	72.922	77.985	2.517	30.43	
		SH-1631A	Cam	10					
			1-5	10	39.975	43.000	1.500	22.13	Shell with a hole
		SH-1640A	Cam	10					
			1-5	10	39.975	43.000	1.500	16.00	Shell with a hole
32 33	6HE1 6HH1 6HE1-T 6HK1-T	PB-1631J	P.B.	4					
			1-4	4	36.000	40.000	2.040	(U) 29.80 (L) 40.85	
		PB-1644J	P.B.	4					
			1-4	4	40.000	44.000	2.040	(U) 28.70 (L) 40.85	P1-1643 X 4
		MS-1632GP	Main	14					
			1-7	7/7	81.915	87.000	2.518	27.33	
		TW-1631A	T.W.	3	(I.D.)	(O.D)			
				1/2	92.750	109.750	3.000		
		CB-1632GP	C.R.	12					
			1-6	12	65.922	69.985	2.013	30.43	C1-1631 X 12
		CB-1639GP	C.R.	12					
			1-6	12	72.922	77.985	2.517	30.43	
		CB-1643CP	C.R.	12					
			1-6	6/6	72.922	77.985	2.517	30.43	
		SH-1632A	Cam	14					
34	G130 G150 G161 G180 G200		1-7	14	39.975	43.000	1.500	22.13	S1-1631 X 14
		SH-1643GP	Cam	8					
			1-4	8	39.975	43.000	1.500	26.13	Shell with a hole
		PB-1632J	P.B.	6					
			1-6	6	36.000	40.000	2.040	(U) 29.80 (L) 40.85	P1-1631 X 6
		PB-1643J	P.B.	6					
			1-6	6	40.000	44.000	2.040	(U) 28.70 (L) 40.85	
		MS-1103GP	Main	10					
			1.3.5	6	55.935	58.980	1.517	32.13	
			2.4	4	55.935	58.980	1.517	21.13	
		TW-1030A	T.W.	2	(I.D)	(O.D)			
			3	2	63.000	80.200	2.360		
		CB-1032GP	C.R.	8					
			1-4	8	48.940	51.985	1.513	22.13	φ 4 Hole at 40°
		(CB-1103GP)	C.R.	8					
			1-4	8	48.940	51.985	1.510	22.13	φ 3 Hole at 20°
34	G130 G150 G161 G180 G200	CB-1628GP	C.R.	8					
			1-4	8	48.940	51.985	1.513	22.13	20Holes at 20°&40°
		SH-1032B	Cam	3					
			1-3	3	44.975	48.000	1.500	25.00	
		*SH-	Cam	10					
			1-5	10	29.945	32.985	1.510	20.13	
		(SH-1103B)	Cam	5					
			1.2.3.5	4	49.975	48.000	1.500	22.00	
			4	1	49.975	48.000	1.500	18.00	
		PB-1032J	P.B.	4					
			1-4	4	22.000	25.400	1.720	26.00	

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
35	G200	MS-1620GP	Main 1-5	10					
		TW-1616A	T.W. 3	2	55.932 (I.D)	59.980 (O.D)	2.008	21.86	
		CB-1620GP	C.R. 1-4	8	64.000	80.200	2.360		
		*SH-	Cam 1-5	10	48.940	51.985	1.510	21.63	
				10	29.945	32.985	1.510	20.13	
36 37	4JA1	MS-1622A	Main 1-5	10					
	4JC1			5/5	59.932	64.000	2.004	23.03	
	4JD1	MS-1623A	Main 1-5	10					
	4JE1			5/5	69.932	74.000	2.006	23.03	
	4JF1	TW-1622A	T.W. 3	2	(I.D)	(O.D)			
				2	73.050	86.950	2.480		
	4JB1	TW-1070A	T.W. 3	2	(I.D)	(O.D)			
	4JB1-T			2	78.050	92.950	2.480		
	4JB1-T	CB-1622A	C.R. 1-4	8					
				8	52.930	56.000	1.513	25.83	
	D201	SH-1622A	Cam 1	3					
				1	49.975	54.000	2.003	25.00	
			2.3	2	49.975	54.000	2.003	22.00	
		PB-1622J	P.B. 1-4	4					
				4	31.000	34.000	1.530	33.00	
		PB-1623J	P.B. 1-4	4					
				4	34.000	37.025	1.530	33.00	
38	8PA1	MR-1156GP	Main 1-5	5/5					
	8PB1	8PA/B/C1	1-6	6/6	96.870	102.970	3.013	28.73	2Pcs/Box X 5
	8PB1-T	10PA/B/C1	1-7	7/7					2Pcs/Box X 6
	8PC1	12PA/B/C1	T.W. 5	4	(I.D)	(O.D)			2Pcs/Box X 7
	8PC-T	TW-1156K		2/2	106.250	130.900	3.420		
			C.R. L/R 1-4	8/8					
	10PA1	CR-1156GP	L/R 1-5	10/10	77.910	83.980	3.013	26.13	2Pcs/Box X 8
	10PB1	8PA/B/C1	L/R 1-6	12/12					2Pcs/Box X 10
	10PB1-T	10PA/B/C1	P.B. 1-4	8					2Pcs/Box X 12
	10PC1	PR-1156J	1-5	10					
			1-6	12	38.000	43.000	2.550	(U) 26.00 (L) 38.00	2Pcs/Box X 4
	12PA1	8PA/B/C1							2Pcs/Box X 5
	12PB1	10PA/B/C1							2Pcs/Box X 6
	12PB1-T	12PA/B/C1							
	12PC								
39	8PD1	MR-1630GP	Main 1-5	5/5					
		8PD1	1-6	6/6	104.870	109.970	2.513	27.73	2Pcs/Box X 5
	10PD1	10PD1	1-7	7/7					2Pcs/Box X 6
			T.W. 5	4	(I.D)	(O.D)			2Pcs/Box X 7
	12PD1	TW-1630A		4	116.250	134.650	4.480		
			C.R. L/R 1-4	8/8					
		CR-1630GP	L/R 1-5	10/10	81.910	86.980	2.513	25.63	2Pcs/Box X 8
			L/R 1-6	12/12					2Pcs/Box X 10
	8PE1	PR-1630J	P.B. 1-8	8					2Pcs/Box X 12
				8	43.000	47.000	2.040	(U) 25.53 (L) 38.38	2Pcs/Box X 4
	10PE1	8PD1	1-10	10					2Pcs/Box X 5
		10PD1	1-12	12					2Pcs/Box X 6
	12PE1								
		PR-1637J	P.B. 1-8	8	43.000	47.000	2.040	(U) 25.43 (L) 38.23	2Pcs/Box X 4
			1-10	10					2Pcs/Box X 5
			1-12	12					2Pcs/Box X 6

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
40 41	6QA1 6QA2 6QB2	MS-1609GP MS-1636GP TW-1071GP TW-1636K CB-1609GP CB-1636GP PB-1092J	Main 1-3,5-6 4 7 Main 1-3,5-6 4 7 T.W. 1 T.W. 1 C.R. 1-6 C.R. 1-6 P.B. 1-6	14 5/5 1/1 1/1 14 5/5 1/1 1/1 4 4 4 12 12 12 6 6	91.900 91.900 91.900 91.910 91.910 91.910 (I.D) 102.250 (I.D) 102.250 79.920 79.925 45.990	97.970 97.970 97.970 97.970 97.970 97.970 (O.D) 119.900 (O.D) 119.900 85.980 85.980 52.000	3.013 3.013 3.013 3.013 3.013 3.013 3.480 3.480 3.013 3.013 3.013 3.030	34.00 51.00 49.50 28.00 42.00 49.50 41.50 35.50 46.00	
42 43	6RA1 6RA1-T 6RB1 6RB1-T 6RB2	MS-1613GP TW-1613K CB-1154GP CB-1614GP CB-1613GP PB-1154J PB-1613J	Main 1-3,5,6 4 7 T.W. 1 C.R. 1-6 C.R. 1-6 C.R. 1-6 P.B. 1-6 P.B. 1-6	14 5/5 1/1 1/1 4 4 12 12 12 12 6/6 6 6 6	99.905 99.905 99.905 (I.D) 111.250 87.925 87.925 89.925 50.000 52.000	105.970 105.970 105.970 (O.D) 139.900 93.980 93.980 95.980 56.000 56.000	3.010 3.010 3.010 3.480 3.011 3.011 3.011 3.011 3.050 2.035	34.00 51.00 49.50 42.50 38.90 38.90 (U)35.00 (L)44.50 (U)35.00 (L)45.00	
44 45 46	6SA1 6SA1-T 6SD1 6SD1-T	MS-1618GP MS-1634GP TW-1618K *TW-1634K CB-1618GP CB-1634GP CB-1635GP PR-1156J PB-1635J	Main 1-7 Main 1-7 T.W. 7 T.W. 7 C.R. 1-6 C.R. 1-6 C.R. 1-6 P.B. 1-6 P.B. 1-6	14 7/7 14 7/7 4 4 4 12 12 12 12 6 6 6 6	89.929 89.929 101.250 99.250 77.914 77.914 79.914 38.000 43.000	96.000 96.000 124.000 124.000 83.980 82.980 84.980 43.000 47.000	3.013 3.013 3.500 3.500 3.013 2.513 2.513 2.540 2.040	27.63 29.23 27.63 29.33 32.63 (U)26.00 (L)38.00 (U)29.80 (L)43.00	2Pcs/Box X 3

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
48	6VD1 6VE1	MS-1645A	Main	8 4 2/2	63.920 63.920	69.000 69.000	2.521 2.521	18.53 16.53	
		TW-1645A	T.W.	2 2	(I.D) 71.000	(O.D) 97.650	1.960		
		CB-1645A	C.R. 1-6	12 12	53.940	57.000	1.508	17.13	
49	6WAI-T 6WFI-T 6WGI-T	MS-1646GP	Main 1-7	14 7/7	104.905	110.970	3.010	37.50	
		TW-1646A	T.W.	4 4	(I.D) 121.650	(I.D) 143.900	3.980		
		CB-1646GP	C.R. 1-6	12 6/6	91.925	97.980	3.011	44.50	
		PB-1646J	P.B.	6					
50 51 52 53 54	4XC1 4XC1-T 4XE1 4XE1-T	MS-1621A MS-1626A *MS-1633A TW-1621A TW-1626A CB-1621A CB-1626GP *CB-1633GP *PB-1626J	Main 1-5 Main 1-5 Main 1-5 T.W. 3 T.W. 2 C.R. 1-4 C.R. 1-4 C.R. 1-4 P.B. 1-4	10 5/5 10 5/5 10 5/5 2 2 2 8 8 8 8 8 8 8	47.938 51.938 (I.D) 55.250 (I.D) 59.000 39.945 39.945 39.945 39.945 20.000	51.976 55.976 (O.D) 69.950 (O.D) 73.700 42.982 42.982 42.982 23.000	2.009 2.009 2.210 2.210 1.505 1.504 1.504 1.540	17.13 17.13 17.13 17.13 17.13 23.75	
55	4ZA1 4ZB1 4ZB1-T 4ZC1 4ZC1-T 4ZD1	MS-1620GP	Main 1-5	10 10	55.932	59.980	2.008	21.86	
		TW-1616A	T.W. 3	2 2	(I.D) 64.000	(O.D) 80.200	2.360		
		CB-1620GP	C.R. 1-4	8 8	48.940	51.985	1.510	21.63	
56	4ZE1	MS-1627GP	Main 1-5	10 5/5	55.932	59.980	2.008	21.86	
		TW-1616A	T.W. 3	2 2	(I.D) 64.000	(O.D) 80.200	2.360		
		CB-1627A	C.R. 1-4	8 8	48.940	51.985	1.510	22.13	

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
1	B1	MS-2008A	Main	10					
2	B3		1-5	10	49.955	54.000	2.012	17.63	φ4 Hole at 27°34' Lug3.5 U: φ5 Hole at 28°45' Lug3.5 L: no Oil Hole Lug: 4.0mm
	B5	MS-2012A	Main	10					
			1-5	5/5	49.955	54.000	2.012	17.63	
3	B6	TW-2008A	T.W.	2	(I.D.)	(O.D.)			
4	BJ		4	2	57.250	69.000	2.550		
	BP	CB-1168A	C.R.	8					
			1-4	8	39.955	43.000	1.513	17.13	
		CB-2008A	C.R.	8					
			1-4	8	44.956	48.000	1.513	17.13	
		*PB-	P.B.	4					
			1-4	4	19.993	23.000	1.543	21.80	
5	D5	MS-1168A	Main	10					
	E1		1-5	10	49.955	54.000	2.012	17.03	
	E3	TW-1168A	T.W.	4	(I.D.)	(O.D.)			
	E5		5	4	57.250	69.000	2.000		
	TC	CB-1168A	C.R.	8					
	UC		1-4	8	39.956	43.000	1.508	17.13	
6	F2	MS-2004A	Main	10					
7	F6		1-5	9	59.955	64.000	2.013	19.13	M1-2004×9
8	F8		△3(U)	1	59.955	64.000	2.013	27.99	M2-2004×1
		MS-2009A	Main	10					
			1.2.4.5.	4	59.955	64.000	2.013	19.13	M1-2004×4
			1-5(L)	5	59.955	64.000	2.013	19.13	M1-2009×5No H&G
			△3(U)	1	59.955	64.000	2.013	27.99	M2-2004×1
		CB-2004A	C.R.	8					
			1-4	8	50.955	54.002	1.510	21.13	R/H Notch with Hole
		CB-2009A	C.R.	8					
			1-4	8	50.955	54.002	1.510	21.13	L/H Notch without H
9	FP	MS-2018A	Main	10					
	FS		1-5	5/5	55.955	60.000	2.010	17.63	
		TW-2018A	T.W.	2					
			3	2	62.250	82.000	2.550		
		CB-2018A	C.R.	8					
			1-4	8	47.956	51.000	1.514	17.13	
10	G6	MS-2011A	Main	10					
			1-4	5/4	59.940	60.000	2.013	20.00	
			5	/1	59.940	60.000	2.013	25.99	
		CB-2009A	C.R.	8					
			1-4	8	50.955	54.002	1.510	21.13	
		BB-2011A	B.B						
			1.2.	2	42.000	46.000	1.995	23.00	
			3.4.	2	40.000	44.000	1.980	26.00	
			5.6.	2	21.000	24.000	1.480	16.00	

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Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
11 12	HA	MS-1153A	Main	10					
			1-5	10	75.825	80.066	2.093	28.70	
		TW-1153A	T.W.	4	(I.D.)	(O.D.)			
			3	4	84.700	101.400	2.325		
		CB-1153A	C.R.	8					
			1-4	8	61.125	64.833	1.835	28.05	
		PB-1075J	P.B.	4					
			1-4	4	31.749	34.919	1.610	26.80	
		PB-2005J	P.B.	4					
			1-4	4	30.000	33.000	1.500	34.30	
13 14	JE JF	MS-2010GP	Main	8					
			1-4	4/4	61.955	66.000	2.012	18.13	
		TW-2010GP	T.W.	4	(I.D.)	(O.D.)			
				2/2	68.250	80.000	2.050		
		CB-2010A	C.R.	12					
			1-6	12	52.955	56.000	1.511	17.03	
		*CB-2001A	C.R.	12					
			1-6	12	47.955	51.000	1.511	17.03	
15	KJ KL	MS-2017GP	Main	8					
			1-3	3/3	61.955	67.000	2.506	18.13	
			4	1/1	61.955	67.000	2.506	22.03	
		TW-2010GP	T.W.	4	(I.D.)	(O.D.)			
				2/2	68.250	80.000	2.050		
		CB-2017GP	C.R.	12					
			1-6	12	52.955	56.000	1.511	17.03	
16 17	L3 LF	*MS-2020A *CB-2020A *CB-	Main C.R. C.R.	10 8 8					
18 19	MA NA	MS-1114A	Main	10					
			1.2.4	6	62.955	67.000	2.010	18.13	
			3	2	62.955	67.000	2.010	24.13	
			5	2	62.955	67.000	2.010	24.13	
		TW-1061GP	T.W.	4	(I.D.)	(O.D.)			
			5	2/2	71.750	86.400	2.050		
		CB-1086A	C.R.	8					
			1-4	8	52.950	56.002	1.511	22.13	
		CB-1141A	C.R.	8					
			1-4	8	52.955	56.002	1.510	20.93	
		(CB-1114GP)	C.R.	8					
			1-4	8	52.950	56.002	1.510	22.13	
		SH-1061A	Cam	6					
			1	2	44.960	49.009	2.015	24.13	Shell with a Hole
			2.3	4	44.960	49.009	2.015	18.13	Shell with a Hole
		PB-1114J	P.B.	4					
			1-4	4	21.990	25.000	1.530	27.90	

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
20 21	PB TA TB	(MS-1082GP) *TW- TW-1082B CB-1082A PB-1082J	Main	10					
			1.2.4.	6	55.955	60.000	2.013	20.13	
			3.5.	4	55.955	60.000	2.013	23.13	
			T.W.	4	(I.D.)	(O.D.)			
			5	4	62.250	78.000	2.000		
			T.W.	4	(I.D.)	(O.D.)			
			5	2/2	62.250	78.000	2.000		
			C.R.	8					
22	PC TC	MS-1113GP TW-1113K CB-1082A PB-1082J	Main	10					
			1.2.4	6	62.950	67.000	2.010	20.13	
			3.5	4	62.950	67.000	2.010	23.13	
			T.W.	4	(I.D.)	(O.D.)			
			5	2/2	70.250	80.000	2.000		
			C.R.	8					
			1-4	8	44.955	48.002	1.510	19.63	
			P.B.	4					
23	PN	MS-2013A TW-2013A CB-2013A PB-2013J	Main	10					
			1-5	10	55.955	60.000	2.010	17.63	
			T.W.	2	(I.D.)	(O.D.)			
				2	62.250	79.000	2.550		
			C.R.	8					
			1-4	8	48.955	52.000	1.511	18.13	
			P.B.	4					
			1-4	4	25.000	28.000	1.535	22.80	
24 25	R2 RF RF-T	MS-2007A TW-2007A CB-2004A CB-2007A PB-2007J PB-2004J	Main	10					
			1.2.4.5.	4/4	59.955	64.000	2.010	18.53	
			3	1/1	59.955	64.000	2.010	21.13	
			T.W.	4	(I.D.)	(O.D.)			
			3	2/2	69.250	84.400	2.050		
			C.R.	8					
			1-4	8	50.955	54.002	1.510	21.13	1 Oil Hole
			C.R.	8					
26	SL SL-T	MS-1153GP TW-1153A CB-1153GP PB-2006J	Main	10					
			1-5	10	75.825	80.066	2.093	28.70	
			T.W.	4	(I.D.)	(O.D.)			
			3	2/2	84.700	101.400	2.325		
			C.R.	8					
			1-4	8	61.125	64.833	1.835	28.05	
			P.B.	4					
			1-4	4	34.000	37.000	1.534	34.30	

MAZDA

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
27	S2	MS-1181GP	Main	10					
			1-5	5/5	65.000	69.000	1.983	28.70	Inch Size
		TW-1181A	T.W.	4	(I.D.)	(O.D.)			
			3	2/2	73.700	90.400	2.325		
		CB-1181GP	C.R.	8					Inch Size
			1-4	8	53.000	56.696	1.830	28.65	
		PB-1181J	P.B.	4					
			1-4	4	28.000	31.000	1.530	26.80	
28	TF	MS-2014A	Main	10					
			1-5	10	78.980	84.100	2.525	29.40	
		TW-2014A	T.W.	4	(I.D.)	(O.D.)			
				4	88.500	104.400	2.325		
		CB-2014A	C.R.	8					
			1-4	8	63.987	68.100	2.030	29.90	
		PB-2014J	P.B.	4					
			1-4	4	35.000	38.000	1.530	36.80	
29	UB	MS-1114A	Main	10					
			1.2.4	6	62.955	67.000	2.010	18.13	
			3	2	62.955	67.000	2.010	24.13	
			5	2	62.955	67.000	2.010	24.13	
		TW-1061A	T.W.	4	(I.D.)	(O.D.)			
31	VB		5	2/2	71.750	86.400	2.050		
		CB-1086A	C.R.	8					
			1-4	8	52.950	56.002	1.511	22.13	
		CB-1141A	C.R.	8					
			1-4	8	52.955	56.002	1.510	20.93	
		*(CB-1114GP)	C.R.	8					
			1-4	8	52.950	56.002	1.510	22.13	
		SH-1061A	Cam	6					
			1	2	44.960	49.009	2.015	24.13	
			2.3	4	44.960	49.009	2.015	18.13	
		PB-1114J	P.B.	4					
			1-4	4	21.990	25.000	1.530	27.90	
30	VA	MS-1141A	Main	6					
			1	2	62.950	67.005	2.007	24.63	
			△2	2	62.950	67.005	2.007	36.02	
			3	2	62.950	67.005	2.007	30.13	
		CB-1141A	C.R.	8					
			1-4	8	52.955	56.005	1.510	20.93	
		(SH-1141B)	Cam	3					
			1	1	49.990	53.000	1.505	25.10	
			2	1	48.990	52.000	1.505	28.10	
			3	1	44.990	48.000	1.505	25.10	
		PB-1114J	P.B.	4					
			1-4	4	21.990	25.000	1.530	27.90	

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
32	WL WL-T	MS-2016A	Main 1-5	10 5/5	66.955	71.000	2.006	22.60	
		TW-2016A	T.W. 3	4 2/2	(I.D.) 75.200	(O.D.) 91.800	2.505		
33	W9 WE	CB-2016A	C.R. 1-4	8 8	54.955	58.000	1.507	23.60	
		CB-2021A	C.R. 1-4	8 8	56.995	60.019	1.511	23.63	
		PB-2016J	P.B. 1-4	4 4	32.000	35.095	1.530	31.00	
		PB-2021J	P.B. 1-4	4 4	34.000	37.100	1.530	31.00	
34	XA XB	MS-2000GP	Main 1-5	10 5/5	69.825	74.066	2.093	28.70	
		TW-1075A	T.W. 3	4 2/2	(I.D.) 78.700	(O.D.) 95.400	2.325		
		CB-1075GP	C.R. 1-4	8 8	57.125	60.833	1.836	28.65	No Oil Hole
		CB-2015GP	C.R. 1-4	8 8	57.125	60.833	1.836	28.65	1 Oil Hole
		PB-1075J	P.B. 1-4	4 4	31.749	34.919	1.610	26.80	
		PB-2000J	P.B. 1-4	4 4	28.000	31.000	1.530	30.70	
35 36	YA ZB	MS-2002GP	Main 1-7	14 7/7	69.825	74.066	2.093	28.70	
		TW-1075A	T.W. 3	4 2/2	(I.D.) 78.700	(O.D.) 95.400	2.325		
		CB-1097GP	C.R. 1-6	12 12	57.125	60.833	1.836	28.65	C1-1075 X 12
		CB-2002GP	C.R. 1-6	12 12	57.125	60.833	1.836	28.65	1 Oil Hole
		PB-1097J	P.B. 1-6	6 6	31.749	34.919	1.601	26.80	P1-1075 X 6
37	ZY	*MS-2019A	Main 1-5	10 5/5					
		*TW-2019A	T.W. 3	2					
		*CB-2019A	C.R. 1-4	8 8					

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Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note	
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.			
1 2	G23B	(MS-1800A)	Main	6						
			1.2.	4	43.000	47.000	1.990	20.00	3.95 Wide Notch 2 Holes at 30°	
	2G23		△3	2	43.000	47.000	1.990	23.95		
	2G24	MS-1820A	Main	6						
	2G25		1-2	2/2	43.000	47.000	1.990	19.50	3.90 Narrow Notch 2 Holes at 56°	
			△3	1/1	43.000	47.000	1.990	23.95		
		(CB-1800A)	C.R.	4						
			1-2	4	39.992	43.004	1.495	17.13		
3	3G81	MS-1824A	Main	8						
	3G82		1-4	4/4	40.000	44.000	1.990	17.13		
	3G83	TW-1824A	T.W.	2	(I.D.)	(O.D.)				
					45.250	56.700	2.475			
		CB-1824A	C.R.	6						
			1-3	6	36.000	39.000	1.489	14.63		
		*BB-	B.B.	2						
			1	1	20.000	23.000	1.482	16.00		
			2	1	44.000	47.000	1.482	16.00		
4 5	G11B	MS-1169A	Main	10						
	G12B		1.2.4	8	48.000	52.000	1.990	19.13		
	G13B		△3	2	48.000	52.000	1.990	23.95	2 Holes at 27°	
		MS-1818A	Main	10						
			1.2.4	4/4	48.000	52.000	1.990	19.13	L : 2 Holes at 71° 2 Holes at 56°	
	4G11,12		△3	2	48.000	52.000	1.990	23.95		
	4G13,15		C.R.	8						
		CB-1169A	1-4	8	42.000	45.000	1.493	17.63		
		CB-1825A	C.R.	8						
		1-4	8	42.000	45.000	1.493	15.63			
6	G31B,32B	MS-1164A	Main	10						
	G33B,37B		1.2.4	4/4	57.000	61.000	1.990	23.13	2 Holes at 48° 31'	
			△3	2	57.000	61.000	1.990	28.95		
		MS-1821A	Main	10						
	4G30,31		1.2.4	4/4	57.000	61.000	1.990	23.13	2 Holes at 55° 30'	
	4G32,33		△3	2	57.000	61.000	1.990	28.95		
	4G35,36		C.R.	8						
	4G37	CB-1085A	1-4	8	45.000	48.000	1.493	23.63		
			B.B.	3						
	10	G62B,63B	BB-1085A	1	1	38.975	42.000	1.502	19.00	
G64B			2	2	35.975	39.000	1.491	16.00		
		BB-1164A	B.B.	3						
4G62,63			1	1	41.975	45.025	1.505	19.00		
19	4G64		2	2	40.967	44.025	1.495	21.00		
	4D65	BB-1811A	B.B.	3						
	4D65-T		1	1	41.975	45.025	1.505	19.00		
			2	1	40.967	44.025	1.495	21.00		
			3	1	40.967	44.025	1.495	21.00		
7	4G41	MS-1024GP	Main	6						
			1-3	3/3	63.993	68.000	1.993	25.13		
	4G42	TW-1024B	T.W.	2	(I.D.)	(O.D.)				
			1	2	34.300	41.350	3.575			
		CB-1025GP	C.R.	8						
			1-4	8	52.000	55.000	1.493	22.13		
		SH-1024B	Cam	4						
			1	1	44.975	48.000	1.492	19.50		
			2	1	43.975	47.000	1.492	13.00		
			3	1	42.975	46.000	1.492	13.00		
			4	1	41.975	45.000	1.492	19.50		
		PB-1024J	P.B.	4						
		1-4	4	19.000	21.000	1.025	26.75			

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
8	G51B	MS-1131A	Main	10					
9	G52B		1.2.4.5	4/4	66.000	70.000	1.990	25.13	
	G54B		△3	1/1	66.000	70.000	1.990	30.95	
		MS-1819A	Main	10					
	4G51		1.2.4.5	4/4	60.000	64.000	1.990	25.13	
	4G52		△3	1/1	60.000	64.000	1.990	30.95	
	4G53	CB-1131A	C.R.	8					
	4G54		1-4	8	53.000	56.007	1.493	25.13	
		BB-1131A	B.B.	3					
			1-2	2	43.000	46.000	1.480	20.00	
			3	1	23.000	26.000	1.510	18.00	
11	4G63	MS-1827A	Main	10					
			1.2.4.5	4/4	57.000	61.000	1.990	20.63	
			△3	1/1	57.000	61.000	1.990	25.45	
		MS-1834A	Main	10					
			1-5	5/5	57.000	61.000	1.990	20.63	
		TW-1834A	T.W	2					
			3	2	63.250	80.350	2.125		
		CB-1827A	C.R.	8					
			1-4	8	45.000	48.000	1.490	21.23	
12	6G71	MS-1822A	Main	8					
			1-4	4/4	60.000	64.000	1.990	18.13	
13	6G72	TW-1822A	T.W.	4	(I.D.)	(O.D.)			
				2/2	66.250	77.700	1.975		
		CB-1823A	C.B.	12					For 6G71
			1-6	12	45.000	48.000	1.493	15.50	
		CB-1822A	C.B.	12					For 6G72
			1-6	12	50.000	53.000	1.493	15.50	
14	6G74	MS-1842GP	Main	8					
			1-4	4/4	64.000	68.000	1.993	17.13	
		TW-1842A	T.W.	2	(I.D.)	(O.D.)			
				2	70.250	94.700	1.975		
		CB-1842GP	C.R.	12					
			1-6	12	55.000	58.000	1.493	15.50	
15	4G91	MS-1828A	Main	10					
16	4G92		1-5	5/5	50.000	54.000	1.990	19.13	2 Oil Holes
17	4G93	MS-1829GP	Main	10					
	4G93-T		1-5	5/5	50.000	54.000	1.990	19.13	3 Oil Holes
		TW-1828A	T.W.	2	(I.D.)	(O.D.)			
			1	2	56.250	75.400	1.975		
		CB-1828A	C.R.	8					
			1-4	4/4	45.000	48.000	1.490	16.80	
		CB-1829GP	C.R.	8					
			1-4	4/4	45.000	48.000	1.490	16.80	

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Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
18	4D55 4D55-T 4D56 4D56-T	MS-1131A	Main	10					
			1.2.4.5	8	66.000	70.000	1.990	25.13	
		CB-1131A	△3	2	66.000	70.000	1.990	30.95	
			C.R.	8					
		PB-1802J	1-4	8	53.000	56.007	1.493	25.13	
			P.B.	4					
		BB-1131A	1-4	4	29.000	32.000	1.850	31.70	SF Size
			B.B.	3					
		MS-1845A	1-2	2	43.000	46.000	1.480	20.00	
			3	1	23.000	26.000	1.510	18.00	
		TW-1845A	Main	10					
			1-5	10	66.000	70.000	1.990	25.13	
		MS-1802GP	T.W.	2	(I.D.)	(O.D.)			
			3	2			2.475		
		CB-1845A	Main	10					
			1-5	5/5	66.000	70.000	1.990	25.13	MI-U,L
20	4D68	*MS-1844GP	C.R.	8					
			1-4	8	57.000	61.000	2.003	20.63	
		*CB-1844GP	C.R.	8					
			1-4	4/4	45.000	48.000	1.499	21.23	
21	4M40 4M41	MS-1832GP	Main	10					
			1-5	5/5	68.000	72.000	2.000	22.00	
		TW-1832A	T.W.	4	(I.D.)	(O.D.)			
				2/2	76.250	94.700	2.450		
		CB-1832GP	C.R.	8					
			1-4	4/4	54.000	58.000	1.995	27.63	U : 23mm Oval Hole
		CB-1847GP	C.R.	8					
			1-4	4/4	54.000	58.000	1.995	27.63	U : φ6 Hole
22	6A12	PB-1832J	P.B.	4					
			1-4	4	29.98	33.03	1.50	(U) 20.50 (L) 36.60	
		MS-1846A	Main	8					
			1-4	4/4	53.000	57.000	1.993	17.000	
		TW-1846A	T.W.	2	(I.D.)	(O.D.)			
				2	59.000	79.700	1.975		
22	6A12	CB-1846A	C.R.	12					
			1-6	12	43.000	46.000	1.493	15.000	

MITSUBISHI (FUSO)

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
1	S2E S3E S4E S6E	MR-1826GP	Main						
		S2E	1-3	6	74.980	79.000	1.990	31.13	2pcs/Box X 3
		S3E	1-4	8					2pcs/Box X 4
		S4E	1-5	10					2pcs/Box X 5
		S6E	1-7	14					2pcs/Box X 6
		TW-1826J	T.W.	3	(I.D)	(O.D)			
				3	82.250	98.000	2.450		
		CR-1826GP	C.R.						
		S2E	1-2	4	57.980	62.000	2.000	34.13	4pcs/Box X 1
		S3E	1-3	6					4pcs/Box X 1.5
		S4E	1-4	8					4pcs/Box X 2
		S6E	1-6	12					4pcs/Box X 3
		PB-1078J	P.B.	4					
		S4E	1-4	4	28.000	31.000	1.530	36.000	
		PB-1115J	P.B.	6					
		S6E	1-6	6	28.000	31.000	1.530	36.000	
2	S4K-T S6K-T	MR-1833GP	Main						
		S4K-T	1-5	5/5	89.950	95.020	2.490	27.13	2pcs/Box X 5
		S6K-T	1-7	7/7					2pcs/Box X 7
		TW-1833A	T.W.	3	(I.D)	(O.D)			
				3	97.250	113.000	2.450		
		CR-1833GP	C.R.						
		S4K-T	1-4	8	59.950	64.020	2.000	29.63	2pcs/Box X 4
		S6K-T	1-6	12					2pcs/Box X 6
		PR-1833J	P.B.	6					
		S4K-T	1-4	4	33.995	37.025	1.500	35.00	2pcs/Box X 2
		S6K-T	1-6	6					2pcs/Box X 3
3	S4S S6S	MR-1843A	Main						
		S4S	1-5	5/5	77.950	82.000	1.990	25.13	2pcs/Box X 5
		S6S	1-7	7/7					2pcs/Box X 7
		TW-1843J	T.W.	3	(I.D)	(O.D)			
				3	86.250	105.750	2.450		
		CR-1843A	C.R.						
		S4S	1-4	8	57.970	61.000	1.500	27.13	4pcs/Box X 2
		S6S	1-6	12					4pcs/Box X 3

MITSUBISHI (FUSO)

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
4	4D30	(MS-1160CP)	Main	10					U : 36mm Hole in Notch side
	4D31		1-5	5/5	77.960	82.000	2.007	27.13	
5	4D31-T	MS-1807GP	Main	10					U : 45mm Hole in opp. Notch side
6	4D32		1-5	5/5	77.960	82.000	2.007	27.13	
7	4D33	TW-1055K	T.W.	3	(I.D)	(O.D)			
	4D34		No.5	3	83.250	104.000	2.450		
	4D34-T	TW-1807K	T.W.	3	(I.D)	(O.D)			
	4D35			3	83.250	110.000	2.450		
	4D36	(CB-1160GP)	C.R.	8					U : 23mm Oval Hole
		CB-1807GP	1-4	4/4	59.965	64.000	2.000	33.13	
		CB-1830GP	C.R.	8					U : 23mm Oval Hole
			1-4	4/4	64.960	69.000	2.000	33.13	
		CB-1835GP	C.R.	8					U : ϕ 6 Hole
			1-4	4/4	64.960	69.000	2.000	33.13	
		CB-1836GP	C.R.	8					U : ϕ 6 Hole
			1-4	4/4	59.965	64.000	2.000	33.13	
		SH-1160K	Cam	3					
			1	1	54.460	58.500	2.000	41.00	
			2	1	54.460	58.000	1.750	26.00	
			3	1	52.960	57.000	2.000	30.00	
		SH-1807K	Cam	3					
			1	1	54.460	58.500	2.000	41.00	
			2	1	54.460	58.000	1.750	21.00	
			3	1	52.960	57.000	2.000	21.00	
		SH-1830K	Cam	3					
			1	1	54.460	58.500	2.000	33.00	
			2	1	54.460	58.000	1.750	21.00	
			3	1	52.960	57.000	2.000	21.00	
		SH-1835K	Cam	5					
			1	1	54.460	58.500	2.000	33.00	
			2	1	54.460	58.250	1.875	21.00	S1-1830
			3	1	54.460	58.000	1.750	21.00	S2-1835
			4	1	54.460	57.750	1.625	21.00	S2-1807
			5	1	52.960	57.000	2.000	21.00	S4-1835
		PB-1807J	P.B.	4					S3-1807
		(PB-1160J)	1-4	4	34.000	37.000	1.540	38.80	
		PB-1809J	P.B.	4					
			1-4	4	34.000	37.000	1.540	(U) 25.00 (L) 38.40	
		PB-1830J	P.B.	4					
			1-4	4	36.000	40.000	2.000	(U) 26.35 (L) 38.40	

MITSUBISHI (FUSO)

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
8	6D10	MS-1145GP	Main	14					
9	6D11	MS-1838GP	Main	14	79.955	85.000	2.500	28.13	
			1-7	7/7	83.955	89.000	2.500	28.13	
	6D14	TW-1145K	T.W.	3	(I.D)	(O.D)			
	6D14-T		7	3	90.250	110.000	2.450		
	6D15	TW-1820K	T.W.	3	(I.D)	(O.D)			
	6D16			3	90.250	113.000	2.450		
		TW-1838J	T.W.	3	(I.D)	(O.D)			
				3	94.250	116.500	2.450		
	6D16-T	CB-1820GP	C.R.	12					
	6D17		1-6	6/6	64.940	69.000	2.000	34.13	
		CB-1838GP	C.R.	12					
			1-6	6/6	69.940	74.000	2.008	34.10	
		PB-1838J	P.B.	6					
			1-6	6	42.000	46.075	2.010	(U) 26.80 (L) 41.40	
		(SH-1145B)	Cam	4					
			1	1	57.720	64.000	3.100	28.00	
			2	1	57.970	64.000	2.975	28.00	
			3	1	58.220	64.000	2.850	28.00	
			4	1	58.470	64.000	2.725	32.50	
		SH-1820K	Cam	4					
			1	1	57.720	62.000	2.125	28.00	
			2	1	57.970	62.250	2.125	28.00	
26	6M61		3	1	58.220	62.500	2.125	28.00	
			4	1	58.470	62.750	2.125	32.50	
27	6M60-T	PB-1145J	P.B.	6					
			1-6	6	38.000	41.000	1.530	42.00	
		PB-1814J	P.B.	6					
			1-6	6	38.000	42.000	2.030	42.00	
		PB-1820J	P.B.	6					
			1-6	6	38.000	42.000	2.030	(U) 28.40 (L) 41.40	

MITSUBISHI (FUSO)

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
10 11	6D20 6D20-T	MS-1162GP	Main	14					
			1-7	7/7	99.920	106.000	3.000	31.13	
		MS-1839GP	Main	14					
			1-7	7/7	99.920	106.000	3.000	28.63	
	6D21	TW-1072J	T.W.	3	(I.D)	(O.D)			
	6D22		7	3	108.500	130.000	2.950		
	6D22-T	TW-1147J	T.W.	3	(I.D)	(O.D)			
	6D23		7	3	108.500	139.000	2.950		
	6D24	CB-1803GP (CB-1162GP)	C.R.	12					
			1-6	6/6	83.930	90.000	3.000	44.13	
		CB-1839GP	C.R.	12					
			1-6	6/6	83.930	90.000	3.000	41.13	
		SH-1162K	Cam	7					
			1	1	64.470	72.000	3.735	26.00	
			2	1	64.720	72.000	3.610	26.00	
			3	1	64.970	72.000	3.485	26.00	
			4	1	65.220	72.000	3.360	26.00	
			5	1	65.470	72.000	3.265	26.00	
			6	1	65.720	72.000	3.235	26.00	
			7	1	65.970	72.000	2.985	34.00	
		SH-1803K	Cam	7					
			1	1	64.970	72.000	3.485	26.00	
			2	1	65.220	72.000	3.360	26.00	
			3.4	2	65.470	72.000	3.265	26.00	
			5.6	2	65.720	72.000	3.235	26.00	
			7	1	65.970	72.000	2.985	34.00	
		SH-1839K	Cam	7					
			1	1	64.970	71.000	3.000	26.00	
			2	1	65.220	71.250	3.000	26.00	
			3	1	65.470	71.500	3.000	26.00	
			4	1	65.470	71.750	3.125	26.00	
			5	1	65.720	72.000	3.125	26.00	
			6	1	65.720	72.250	3.250	26.00	
			7	1	65.970	72.500	3.250	34.00	
		PB-1162J	P.B.	6					
			1-6	6	50.000	55.000	2.520	46.00	
		PB-1839J	P.B.	6					
			1-6	6	50.000	55.000	2.520	(U) 31.60 (L) 46.00	
12	6D31 6D31-T	MS-1808GP	Main	14					
			1-7	7/7	77.960	82.000	2.007	27.13	M1-1807U/L X 7
		TW-1055K	T.W.	3	(I.D)	(O.D)			
			5	3	83.250	104.000	2.450		
		CB-1808GP	C.R.	12					
			1-6	6/6	59.965	64.000	2.000	33.13	C1-1807 X 6 C1-1055 X 6
		SH-1808K	Cam	4					
			1	1	54.460	58.500	2.000	41.00	S1-1807
			2	1	54.460	58.000	1.750	21.00	S2-1807
			3	1	53.960	57.500	1.750	21.00	S3-1808
			4	1	52.960	57.000	2.000	21.00	S3-1807
		PB-1808J	P.B.	6					
			1-6	6	34.000	37.000	1.540	38.80	P1-1807 X 6
		PB-1810J	P.B.	6					
			1-6	6	34.000	37.000	1.540	(U) 25.00 (L) 38.40	P1-1809 X 6

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Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
13	6D34-T	MS-1808GP	Main	14					
			1-7	7/7	77.960	82.000	2.007	27.13	M1-1807U/L X 7
		TW-1807K	T.W.	3	(I.D.)	(O.D)			
				3	83.250	110.000	2.450		
		CB-1837GP	C.R.	12					C1-1835 X 6
			1-6	6/6	64.960	69.000	2.000	33.13	C1-1830 X 6
		SH-1837K	Cam	4					
			1	1	54.460	58.500	2.000	33.00	S1-1830
			2	1	54.460	58.000	1.750	21.00	S2-1807
			3	1	54.470	57.500	1.495	21.00	S3-1837
			4	1	52.960	57.000	2.000	21.00	S3-1807
		PB-1808J	P.B.	6					
			1-6	6	34.000	37.000	1.540	38.80	P1-1807 X 6
		PB-1837J	P.B.	6					
			1-6	6	36.000	40.000	2.000	(U) 26.35 (L) 38.40	P1-1830 X 6
14	6D40	*MS-	Main	14					
			1-3,5-7	6/6	99.920	106.000	3.000	31.13	
			4	1/1	99.920	106.000	3.000	41.13	
		TW-1804GP	T.W.	3	(I.D.)	(O.D)			
				3	111.500	138.500	2.950		
		CB-1803GP	C.R.	12					
			1-6	6/6	83.930	90.000	3.000	44.13	
		*SH-	Cam	7					
			1	1	65.980	71.000	2.490	26.00	
			2	1	66.230	71.250	2.490	26.00	
			3	1	66.480	71.500	2.490	26.00	
			4	1	66.480	71.750	2.615	26.00	
			5	1	66.730	72.000	2.615	26.00	
			6	1	66.730	72.250	2.740	26.00	
			7	1	66.980	72.500	2.740	34.00	
		*PB-	P.B.	6					
			1-6	6					
15	6DB1 6DB1-T	MS-1036GP	Main	14					
			1	1/1	89.960	96.000	3.000	49.20	
			2,3,5,6.	4/4	89.960	96.000	3.000	31.20	
			4	1/1	89.960	96.000	3.000	49.20	
			7	1/1	89.960	96.000	3.000	56.20	
		(TW-1036BC)	T.W.	4	(I.D)	(O.D)			
			4	4	91.125	123.125	4.950		
		CB-1037GP	C.R.	12					
			1-6	12	74.920	81.000	3.007	41.20	
		(SH-1036B)	Cam	4					
			1	1	58.720	65.010	3.125	45.00	
			2	1	58.450	65.010	3.250	26.00	
			3	1	58.200	65.010	3.375	26.00	
			4	1	57.970	65.010	3.500	40.00	
		PB-1037J	P.B.	6					
			1-6	6	40.000	44.000	2.030	46.00	

MITSUBISHI (FUSO)

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
16	6DC2	MR-1147GP	Main	8					
			1-4	4/4	99.920	106.000	3.010	31.13	2pcs/Box X 4
		TW-1072J	T.W.	3	(I.D)	(O.D)			
			4	3	108.500	130.000	2.950		
		CR-1073GP	C.R.	12					
			1-6	12	83.930	90.000	3.000	37.63	4pcs/Box X 3
		SH-	Cam	4					
			1	1	65.220	72.000	3.360	22.00	
			2	1	65.470	72.000	3.235	22.00	
			3	1	65.720	72.000	3.110	22.00	
			4	1	65.970	72.000	2.985	34.00	
		P1-	P.B.	12					
		P1-	1-6	12	45.000	49.000	2.030	22.00	2pcs/Box X 6
			P.B.	6					
			1-6	6	45.000	51.000	3.030	48.00	2pcs/Box X 3
17 18 19	8DC2 8DC2-T 8DC4 8DC6 8DC7 8DC8 8DC9 8DC9-T 8DC10 8DC11 8DC11 8DC2-T 8DC9-T	MR-1147GP	Main	10					
			1-5	5/5	99.920	106.000	3.010	31.13	2pcs/Box X 5
		TW-1072J	T.W.	3	(I.D)	(O.D)			
			5	3	108.500	130.000	2.950		
		TW-1147J	T.W.	3	(I.D)	(O.D)			
			6	3	108.500	139.000	2.950		
		TW-1804GP	T.W.	3	(I.D)	(O.D)			
			5	3	111.500	138.500	2.950		
		CR-1073GP	C.R.	16					
			L1-4	8	83.930	90.000	3.010	37.63	2pcs/Box X 8
		CR-1147GP	R1-4	8	83.930	90.000	3.010	37.63	
			C.R.	16					
		CR-1147GP	L1-4	8	83.930	90.000	3.010	37.63	4pcs/Box X 4
			R1-4	8	83.930	90.000	3.010	37.63	
		CB-1804GP	C.R.	16					
			L1-4	8	89.930	95.000	2.510	37.63	
		SH-	R1-4	8	89.930	95.000	2.510	37.63	
			Cam	5					
		SH-	1	1	65.220	72.000	3.360	22.00	
			2	1	65.220	72.000	3.360	34.25	
			3	1	65.470	72.000	3.235	22.25	
			4	1	65.720	72.000	3.110	22.25	
			5	1	65.970	72.000	2.985	34.25	
		SH-	Cam	5					
			1	1	65.220	72.000	3.360	34.00	
			2	1	65.220	72.000	3.360	34.00	
			3	1	65.470	72.000	3.235	34.00	
			4	1	65.720	72.000	3.110	34.00	
		SH-	5	1	65.970	72.000	2.985	34.00	
			Cam	5					
			1	1	65.220	72.000	3.360	34.00	
			2	1	65.220	72.000	3.360	34.00	
			3	1	65.470	72.000	3.235	34.00	
		P1-	4	1	65.720	72.000	3.110	34.00	
			5	1	65.970	72.000	2.985	34.00	
			P.B.	16					
				16	45.000	49.000	2.030	22.00	2pcs/Box X 8
		P1-	P.B.	8					
				8	45.000	51.000	3.030	48.00	2pcs/Box X 4
		PR-1147J	P.B.	8					
				8	45.000	51.000	3.030	(U)42.00 (L)56.40	2pcs/Box X 4
		P1-	P.B.	8					
				8	50.000	56.000	3.030	(U)40.40 (L)56.35	2pcs/Box X 4

MITSUBISHI (FUSO)

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
20	10DC6 10DC8	MR-1147GP	Main	12					
			1-6	12	99.920	106.000	3.010	31.13	2pcs/Box X 6
		TW-1072J	T.W.	3	(I.D)	(O.D)			
			6	3	108.500	130.000	2.950		
		TW-1147J	T.W.	3	(I.D)	(O.D)			
			6	3	108.500	139.000	2.950		
		CR-1073GP	C.R.	20					
			1-10	10	83.930	90.000	3.010	37.63	2pcs/Box X 10
		CR-1147GP	C.R.	20					
			L1-10	10	83.930	90.000	3.010	37.63	4pcs/Box X 5
			R1-10	10	83.930	90.000	3.010	37.63	
		PR-	P.B.	20					
			1-5	20	45.000	49.000	2.030	22.00	2pcs/Box X 10
		PR-	P.B.	10					
			1-5	10	45.000	51.000	3.030	48.00	2pcs/Box X 5
		PR-1147J	P.B.	10					
			1-5	10	45.000	51.000	3.030	(U)42.00 (L)56.40	2pcs/Box X 5
21	4DR5 4DR7 4DR6-T	MS-1812GP	Main	10					
		(M1-1115GP)	1-5	10	69.955	74.000	2.000	28.13	
		TW-1115K	T.W.	3	(I.D)	(O.D)			
			5	3	77.250	95.000	2.450		
		CB-1831GP	C.R.	8					
			1-4	4/4	57.955	62.000	2.000	32.13	U : an Oil Hole
		CB-1812GP	C.R.	8					
		(C1-1115GP)	1-4	8	57.955	62.000	2.000	32.13	
		SH-1078K	Cam	3					
			1	1	54.460	57.000	1.250	36.00	
			2	1	54.460	57.000	1.250	26.00	
			3	1	53.960	57.000	1.500	26.00	
		PB-1078J	P.B.	4					
			1-4	4	28.000	31.000	1.530	36.00	
		PB-	P.B.	4					
			1-4	4	30.000	33.000	1.525	(U)22.70 (L)35.40	
		PB-	P.B.	4					
			1-4	4	28.000	32.984	2.520	35.80	
22	6DR5	MS-1813GP	Main	14					
		(M1-1115GP)	1-7	14	69.955	74.000	2.000	28.13	
		TW-1115K	T.W.	3	(I.D)	(O.D)			
			7	3	77.250	95.000	2.450		
		CB-1813GP	C.R.	12					
			1-6	12	57.955	62.000	2.000	32.13	C1-1115 X 12
		SH-1115K	Cam	4					
			1	1	54.450	57.000	1.250	36.00	
			2	1	54.450	57.000	1.250	26.00	
			3	1	53.450	57.000	1.500	26.00	
			4	1	52.450	57.000	2.000	26.00	
		PB-1115J	P.B.	6					
			1-6	6	28.000	31.000	1.530	36.00	

MITSUBISHI (FUSO)

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
23	6DS1 6DS3 6DS5 6DS7	MS-1808GP (MS-1170GP) TW-1055K	Main	14					
			1-7	7/7	77.960	82.000	2.007	27.13	
			T.W.	3	(I.D.)	(O.D.)			
		CB-1808GP (CB-1055GP) SH-1055B SH- PB-1055J	7	3	83.250	104.000	2.450		
			C.R.	12					
			1-6	12	59.965	64.000	2.000	33.13	
			Cam	4					
			1	1	54.460	57.000	1.250	41.00	
			2	1	54.460	57.000	1.250	26.00	
			3	1	53.960	57.000	1.500	26.00	
			4	1	52.960	57.000	2.000	30.00	
			Cam	4					
			1	1	54.460	58.500	2.000	41.00	
			2	1	54.460	58.000	1.750	26.00	
			3	1	53.960	57.500	1.750	26.00	
			4	1	52.960	57.000	2.000	30.00	
			P.B.	6					
			1-6	6	32.000	35.000	1.530	37.00	
24 25	4M51 4M50-T	MS-1836GP	Main	10					
			1-5	5/5	85.950	91.000	2.503	27.13	
		*TW-1836J	T.W.	4	(I.D.)	(O.D.)			
				2/2	97.250	117.700	2.450		
		CB-1835GP	C.R.	8					
			1-4	4/4	64.950	69.000	2.000	33.13	
		CB-1836GP	C.R.	8					
			1-4	4/4	59.965	64.000	2.125	33.13	
		*SH-	Cam	20					
				20	31.925	35.000	1.503	20.90	
		PB-1807J	P.B.	4					
			1-4	4	34.000	37.000	1.540	38.80	
		PB-1809J	P.B.	4					
			1-4	4	34.000	37.000	1.540	(U) 25.00 (L) 38.40	
29	8M20 8M21	MS-1840GP	Main	10					
			1-5	5/5	114.920	121.000	3.013	31.13	
		TW-1840GP	T.W.	3	(I.D.)	(O.D.)			
				3	126.500	154.000	2.950		
		CB-1804GP	C.R.	16					
			1-8	8/8	89.930	95.000	2.510	37.63	
		SH-1840K	Cam	5					
			1	1	65.220	71.500	3.107	34.25	
			2	1	65.220	71.750	3.232	34.25	
			3	1	65.470	72.000	3.232	34.25	
			4	1	65.720	72.250	3.232	34.25	
			5	1	65.970	72.500	3.232	34.25	
28	6M70T	MS-1839GP	Main	14					
			1-7	7/7	99.920	106.000	3.000	28.63	
		TW-1804GP	T.W.	3	(I.D.)	(O.D.)			
			5	3	111.500	138.500	2.950		
		CB-1839GP	C.R.	12					
			1-6	6/6	83.930	90.000	3.000	41.13	

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
1	A12 A12A A13 A14 A15	MS-1087GP	Main	10					
			1.5	2/2	49.964	53.654	1.835	22.10	
			2.4	4	49.964	53.654	1.835	18.10	
			△3	1/1	49.964	53.654	1.835	26.95	
		CB-1045GP	C.R.	8					
			1-4	8	44.974	48.000	1.498	19.60	
		SH-1019A	Cam	5					
			1	1	43.976	47.000	1.585	23.50	
			2	1	43.296	46.500	1.585	14.00	
			3	1	42.796	46.000	1.585	14.00	
			4	1	42.296	45.500	1.585	14.00	
			5	1	41.221	44.425	1.585	14.00	
2	CA16 CA18 CA20	(MS-1173GP)	Main	10					
			1.2.4.5	4/4	52.964	56.641	1.829	22.10	
			△3	1/1	52.964	56.641	1.829	27.95	
			Main	10					
		MS-1217A	1.2.4.5	4/4	52.964	56.654	1.828	20.10	
			△3	1/1	52.964	56.654	1.828	27.95	
		CB-1173GP	C.R.	8					
			1-4	8	44.974	48.000	1.508	18.60	
		CB-1217A	C.R.	8					
			1-4	8	49.974	53.000	1.498	20.10	
		PB-1205J	P.B.	4					
			1-4	4	20.001	22.987	1.535	20.80	
		PB-1173J	P.B.	4					
			1-4	4	24.000	28.000	2.025	24.20	
		PB-1217J	P.B.	4					
			1-4	4	25.000	28.000	1.530	24.70	
5	CG10DE CG13DE CR10DE CR12DE CR14DE	MS-1224A	Main	10					
		TW-1224A	1-5	5/5	44.970	49.000	2.010	16.00	
			T.W.	2	(I.D.)	(O.D.)			
		CB-1224A		2	51.250	60.000	1.970		
			C.R.	8					
		CB-1235A	1-4	8	39.974	43.000	1.508	15.00	
			C.R.	8					
			1-4	8	39.974	43.000	1.508	15.00	An Oil Hole
6	E10 E13 E15 E15-T E16	MS-1174GP	Main	10					
			1.5	4	49.964	53.641	1.827	22.10	
			2.4	4	49.964	53.641	1.827	18.10	
			△3	2	49.964	53.641	1.827	26.95	
		CB-1174GP	C.R.	8					
			1-4	8	39.974	43.000	1.500	17.13	
		JB-1174A	J.B.	2					
			1	1	32.000	35.000	1.495	21.50	
			2	1	28.600	31.600	1.495	16.00	

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Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
7	GA13	MS-1208A	Main	10					
	GA14		1-5	5/5	49.964	53.644	1.830	17.10	
	GA15	TW-1208A	T.W.	2	(I.D.)	(O.D.)			
	GA16			2	56.250	71.000	1.970		
	QG13DE	CB-1208A	C.R.	8					
	QG15DE		1-4	8	39.974	43.000	1.505	17.10	
	QG18DE	PB-1208J	P.B.	4					
			1-4	4	19.000	22.000	1.535	21.80	
8	H20	MS-1042GP	Main	10					
			1.5	4	62.955	66.645	1.832	28.10	
			2.4	4	62.955	66.645	1.832	22.10	
			△3	2	62.955	66.645	1.832	33.95	
		CB-1002GP	C.R.	8					
			1-4	8	51.970	55.000	1.503	24.10	
		SH-1003A	Cam	3					
			1	1	45.440	48.640	1.590	24.00	
			2	1	43.910	47.120	1.590	22.00	
			3	1	41.230	44.430	1.590	24.00	
		PB-1002J	P.B.	4					
			1-4	4	22.000	24.000	1.050	28.50	
9	HR15-DE	MS-1227A	Main	10					
			1-5	10	47.979	51.997	2.005	16.00	
	10	HR12-DE	T.W.	2	(I.D.)	(O.D.)			
		HR12-DDR		2	54.95	73.75	1.960		
		CB-1227A	C.R.	8					
			1-4	4/4	39.971	43.000	1.510	15.00	
		MS-1233A	Main	8					
10			1-4	4/4	47.979	51.997	1.998	16.13	
		CB-1233GP	C.R.	6					
			1-3	3/3	39.971	43.000	1.505	15.13	
11	J	(MS-1034GP)	Main	6					
	J13		1-3	6	50.825	54.521	1.835	31.00	
	J15	MS-1091GP	Main	6					
	J16		1-3	6	50.825	54.508	1.835	28.10	
	J18	TW-1000A	T.W.	4	(I.D.)	(O.D.)			
			2	2/2	56.550	69.700	2.286		
		CB-1007GP	C.R.	8					
			1-4	8	47.650	51.333	1.835	22.10	
		CB-1204GP	C.R.	8					
			1-4	8	47.635	50.673	1.500	20.00	
		SH-1006A	Cam	3					
			1	1	45.400	48.641	1.585	37.30	
			2	1	43.910	47.120	1.590	22.00	
			3	1	41.230	44.425	1.585	20.60	
12	KA24	MS-1209GP	Main	10					
			1.2.4	4/4	59.975	63.672	1.835	19.00	
			△3	1/1	59.975	63.672	1.835	26.95	
		CB-1209GP	C.R.	8					
			1-4	8	49.974	53.013	1.508	20.00	
		PB-1209J	P.B.	4					
			1-4	4	21.000	24.000	1.500	24.80	

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
13	KH1S	MS-1220A	Main	10					
	KH2S		1.2.4.5.	8	62.955	66.645	1.835	19.00	
	KH3S		3	2	62.955	66.645	1.835	34.00	
14	K21	MS-1221A	Main	10					
	K25		1.2.4.5	4/4	54.955	58.645	1.835	19.00	
			△3	1/1	54.955	58.645	1.835	27.00	
25	NA20S	MS-1225A	Main	10					
	NA16S		1.2.4.5	4/4	54.955	58.645	1.835	19.00	
			△3	1/1	54.955	58.645	1.835	32.00	
		CB-1220A	C.R.	8					
			1-4	8	45.000	48.000	1.496	18.60	
		CB-1221A	C.R.	8					
			1-4	8	50.000	53.000	1.502	22.00	
		SH-1003A	Cam	3					
			1	1	45.440	48.640	1.590	24.00	
			2	1	43.910	47.120	1.590	24.00	
			3	1	41.230	44.430	1.590	24.00	
		PB-1217J	P.B.	4					
			1-4	4	25.000	28.000	1.530	24.70	
15	L13	MS-1043GP	Main	10					
	L14		1	2	54.955	58.665	1.835	26.13	
	L16		2.4	4	54.955	58.665	1.835	24.13	
	L18		△3	2	54.955	58.660	1.835	31.95	
			5	2	54.955	58.660	1.835	26.13	
	Z16	CB-1044GP	C.R.	8					
47	Z18		1-4	8	49.970	53.000	1.506	22.10	
16	L20B	MS-1183GP	Main	10					
17	LD20		1	1/1	59.955	63.645	1.835	26.13	
18	LD20-T		2.4	2/2	59.955	63.645	1.835	24.13	
			△3	1/1	59.955	63.645	1.835	31.95	
45	Z20	MS-1218GP	5	1/1	59.955	63.645	1.835	26.13	
	Z22		Main	10					
	Z24		1.5	2/2	59.955	63.645	1.835	22.10	
			2.4	2/2	59.955	63.645	1.835	22.10	
		CB-1044GP	△3	1/1	59.955	63.645	1.835	31.95	
			C.R.	8					
			1-4	8	49.970	53.000	1.506	22.10	
		PB-1183J	P.B.	4					
			1-4	4	26.000	29.000	1.520	26.70	
		PB-1189J	P.B.	4					
			1-4	4	25.000	28.000	1.525	26.70	
19	L20	MS-1047GP	Main	14					
	L24		1	2/2	54.955	58.660	1.835	26.10	
	L26		2.3.5.6	4/4	54.955	58.660	1.835	24.10	
	L28		△4	1/1	54.955	58.660	1.835	31.95	
20	L20A	CB-1048GP	C.R.	12					
			1-6	12	49.970	53.000	1.506	22.10	C1-1044 X 12
21	LD28	CB-1177GP	C.R.	12					
			1-6	12	44.974	48.000	1.497	18.60	
		PB-1047J	P.B.	6					
			1-6	6	25.000	28.000	1.525	26.70	P1-1189J X 6
		PB-1048J	P.B.	6					
			1-6	6	26.000	29.000	1.520	26.70	P1-1183J X 6

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Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
22	MA09 MA10	MS-1202A	Main	10					
			1-5	5/5	44.971	49.000	2.004	17.10	
		TW-1202A	T.W.	2	(I.D.)	(O.D.)			
			4	2	51.250	60.000	1.970		
		CB-1202A	C.R.	8					
			1-4	8	39.974	43.000	1.500	15.13	
23	MR16-DDT	MS-1234A	Main	10					
			1-5	5/5	51.979	55.997	1.998	17.00	
		CB-1234GP	C.R.	8					
			1-4	4/4	43.971	47.000	1.496	16.00	
24	MR20-DE	MS-1228A	Main	10					
			1-5	10	51.979	55.997	2.005	17.00	
		TW-1228A	T.W.	2	(I.D.)	(O.D.)			
				2	58.95	76.75	2.210		
		CB-1228A	C.R.	8					
			1-4	4/4	43.971	47.000	1.506	16.00	
26	P40 PF40	MS-1172GP	Main	14					
			△1	1/1	69.300	73.000	1.835	40.50	
			2.3.5	4/4	69.300	73.000	1.835	26.13	
			4	1/1	69.300	73.000	1.835	41.13	
			7	1/1	69.300	73.000	1.835	49.13	
		CB-1001GP	C.R.	12					
			1-6	12	57.150	60.180	1.508	26.10	
		SH-1002A	Cam	4					
			1	1	49.149	52.451	1.645	29.55	
			2	1	48.945	52.248	1.645	19.20	
			3	1	48.641	51.943	1.645	19.20	
			4	1	48.336	51.639	1.645	31.90	
27	QR20 QR25	MS-1226A	Main	10					
			1.2.4.5	4	54.979	58.968	1.988	20.00	
			1-5	5	54.979	58.968	1.988	20.00	
			3U	1	54.979	58.968	1.988	23.45	
		TW-1226A	T.W.	2	(I.D.)	(O.D.)			
				1/1	59.27	83.25	2.45		
		CB-1226GP	C.R.	8					
			1-4	8	44.974	48.000	1.507	19.00	
		PB-1226J	P.B.	4					
			1-4	4	20.001	21.980	1.03	22.80	

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
28	RB20	MS-1203GP	Main	14					
29	RB20D		1.2.3	3/3	54.975	58.645	1.825	19.10	
	RB24		△4	1/1	54.975	58.645	1.825	26.95	
30	RB25		5.6.7	3/3	54.975	58.645	1.825	19.10	
		CB-1203GP	C.R.	12					
32	RB30S		1-6	12	41.974	45.000	1.506	16.10	
		CB-1206GP	C.R.	12					
			1-6	12	49.974	53.000	1.506	17.10	
		CB-1215GP	C.R.	12					
			1-6	12	44.974	48.013	1.508	17.10	
		CB-1216GP	C.R.	12					
			1-6	12	47.974	51.013	1.501	17.10	
		PB-1203J	P.B.	6					
			1-6	6	19.001	21.987	1.535	21.80	P1-1208X 6
		PB-1206J	P.B.	6					
			1-6	6	21.001	23.987	1.535	21.80	
31	RB26DETT	MS-1216GP	Main	14					
			1-3,5-7	6/6	54.975	58.658	1.825	20.00	
			△4	1/1	54.975	58.658	1.825	27.00	
		CB-1216GP	C.R.	12					
			1-6	12	51.013	47.974	1.501	17.00	
		PB-1206J	P.B.	6					
			1-6	6	21.001	23.987	1.535	21.80	
33	RD28	MS-1207A	Main	14					
	RD28-T		1-3,5-7	6/6	54.975	58.645	1.819	19.90	
			△4	1/1	54.975	58.645	1.819	26.95	
		CB-1207A	C.R.	12					
			1-6	12	49.974	53.000	1.498	20.10	
		PB-1207J	P.B.	6					
			1-6	6	24.994	28.000	1.525	24.47	
		PB-1221J	P.B.	6					
			1-6	6	27.000	30.063	1.530	24.70	
34	SR18	MS-1213GP	Main	10					
	SR20		1-5	5/5	54.980	58.968	1.990	19.00	
		TW-1213GP	T.W.	2	(I.D.)	(O.D.)			
				2	61.750	83.500			
		CB-1213GP	C.R.	8					
			1-4	8	47.974	51.013	1.510	17.00	
		PB-1213J	P.B.	4					
			1-4	4	22.001	24.998	1.53	22.80	
46	YD22	MS-1229A	Main	10					
	YD25		1-5	5/5	63.000	66.660	1.826	20.00	
		TW-1229A	T.W.	2	(I.D.)	(O.D.)			
			3	2	69.75	88.250	1.950		
		CB-1229A	C.R.	8					
			1-4	8	52.000	55.000	1.498	23.00	
		PB-1229J	P.B.	4					
			1-4	4	28.000	30.980	1.500	26.60	

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Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
35	TB42E TB45E	MS-1199A	Main	14					
			1-5.7 △6	6/6 1/1	70.920 70.920	74.975 74.975	2.007 2.007	26.00 31.95	U : φ7-2 Oil Holes U : φ7-2 Oil Holes
	TB48DE	MS-1230A	Main	14					
			1-5.7 △6	6/6 1/1	70.921 70.921	74.975 74.975	2.012 2.012	26.00 31.95	U : φ7&12 Oval Holes U : φ7&12 Oval Holes
		CB-1199A	C.R.	12					
			1-6	12	56.926	60.000	1.517	26.10	
		SH-1199A	Cam	7					
			1	1	50.740	53.800	1.520	20.00	
			2	1	50.540	53.600	1.520	20.00	
			3	1	50.340	53.400	1.520	20.00	
			4	1	50.140	53.200	1.520	20.00	
			5	1	49.940	53.000	1.520	20.00	
			6	1	49.740	52.800	1.520	20.00	
			7	1	49.540	52.600	1.520	20.00	
		PB-1199J	P.B.	6					
			1-6	6	22.995	25.987	1.530	25.80	
36	VG20	(MS-1200GP)	Main	8					
37	VG20D		1	1/1	52.975	56.645	1.821	22.60	
38			2.3 △4	2/2 1/1	52.975 52.975	56.645 56.645	1.821 1.821	19.10 28.85	
39	VG30	MS-1211GP	Main	8					
40	VG30D		1	1/1	62.975	66.645	1.830	22.60	U : 5 Oil Holes
41			2.3 △4	2/2 1/1	62.975 62.975	66.645 66.645	1.830 1.830	19.10 28.85	U : 5 Oil Holes U : 5 Oil Holes
		(MS-1201GP)	Main	8					
			1	1/1	62.975	66.658	1.830	22.60	U : An Oil Hole
			2.3 △4	2/2 1/1	62.975 62.975	66.658 66.658	1.830 1.830	19.10 28.85	U : An Oil Hole U : An Oil Hole
		(CB-1200GP)	C.R.	12					
			1-6	12	44.974	48.000	1.506	15.10	
		CB-	C.R.	12					
			1-6	12	44.974	48.000	1.506	17.10	
		CB-	C.R.	12					
			1-6	12	44.974	48.000	1.503	17.10	
		CB-1210A	C.R.	12					
		(CB-1201GP)	1-6	12	49.974	53.000	1.506	17.10	
		CB-1211GP	C.R.	12					
			1-6	12	49.974	53.000	1.506	17.10	
		PB-1200J	P.B.	6					
			1-6	6	20.001	22.987	1.535	20.80	
		PB-1206J	P.B.	6					
			1-6	6	21.001	23.987	1.535	21.80	
		PB-1210J	P.B.	6					
			1-6	6	21.001	23.987	1.535	20.80	
		PB-1211J	P.B.	6					
			1-6	6	22.001	24.980	1.535	21.80	

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
42	VH41 VH45	MS-1214GP	Main	10					
				2/2	63.964	68.968	2.496	20.00	
				2/2	63.964	68.968	2.496	22.30	
		TW-1214A		1/1	63.964	68.968	2.496	21.30	
			T.W.	4	(I.D.)	(O.D.)			
		CB-1214GP		2/2	70.750	85.000	1.950		
			C.R.	16					
			L1-4	8	51.974	55.013	1.509	18.20	
			R1-4	8	51.974	55.013	1.509	18.20	
		PB-1214J	P.B.	8					
			1-8	8	22.001	24.980	1.530	22.80	
43	VK45DD VD45DE VK50VE VK56DE	MS-1231GP	Main	10					
			1-5	5/5	63.964	68.944	2.510	20.10	
		TW-1214A	T.W.	4	(I.D.)	(O.D.)			
				2/2	70.750	85.000	1.950		
		CB-1231GP	C.R.	16					
			1-8	16	53.989	57.000	1.503	18.30	
		PB-1231J	P.B.	8					
			1-8	8	22.001	23.980	1.030	22.50	
44	VQ20DE VQ25DD VQ25DE VQ30DD VQ30DET	MS-1219GP	Main	8					
			1-4	4/4	59.975	63.993	2.009	20.10	
		TW-1219A	T.W.	4	(I.D.)	(O.D.)			
				2/2	66.500	79.500	1.950		
		CB-1219GP	C.R.	12					
			1-6	12	44.975	48.000	1.509	17.13	
		CB-1222GP	C.R.	12					
			1-6	12	49.974	53.000	1.505	17.10	
		CB-1223GP	C.R.	12					
			1-6	12	51.974	55.000	1.505	17.10	
		PB-1219J	P.B.	6					
			1-6	6	22.001	23.980	1.030	20.80	
45	VQ40DE	MS-1232GP	Main	8					
			1-4	4/4	69.975	74.993	2.506	20.10	
		TW-1232A	T.W.		(I.D.)	(O.D.)			
					76.750	92.750	1.950		
		CB-1232GP	C.R.	12					
			1-6	12	53.974	57.000	1.503	17.10	
		PB-1219J	P.B.	6					
			1-6	6	22.001	23.980	1.030	20.80	

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Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
1	BD30	(MS-1190GP)	Main 1-5	10 5/5	70.920	74.981	2.013	26.00	C1-1194-U×4
		TW-1028A	T.W. 2	4 2/2	(I.D.) 78.850	(O.D.) 93.800			
		CB-1194A	C.R. 1-4	8 4/4			2.325		
		SH-1190A	Cam 1	5 1	56.925	59.913	1.513	26.10	
			2	1	50.740	53.800	1.520	20.50	
			3	1	50.540	53.600	1.520	22.00	
			4	1	50.340	53.400	1.520	22.00	
			5	1	50.140	53.200	1.520	22.00	
		PB-1194J	P.B. 1-4	4 4	49.940	53.000	1.520	22.00	
					30.000	33.000	1.525	32.80	
2	ED30	MS-1180GP (MS-1122GP)	Main 1-5	10 5/5	75.940	79.980	1.955	28.00	
3	ED33								
4	ED33-T	TW-1122J	T.W. 4	4 2/2	(I.D.) 86.250	(O.D.) 101.800			
	ED35	CB-1122GP	C.R. 1-4	8 8			3.000		
	FD33				59.945	63.980	1.998	34.00	
	FD33-T	CB-2801GP (CB-1180GP)	C.R. 1-4	8 8					
	FD35	SH-1122A	Cam 1	3 1	61.945	65.980	1.998	32.00	
	FD35-T		2	1	57.355	60.400	1.515	28.00	
			3	1	57.155	60.200	1.515	26.00	
		PB-1122J	P.B. 1-4	4 4	56.955	60.000	1.515	26.00	
					32.000	35.985	2.020	35.15	
		PB-1180J	P.B. 1-4	4 4	34.000	37.985	2.030	35.00	
5	ED6 FD6 FD6-T	MS-1135GP	Main 1-7	14 7/7	75.940	79.980	1.995	26.00	C1-2801 X 8
		TW-1122J	T.W. 6	4 2/2	(I.D.) 86.250	(O.D.) 101.800			
		CB-2802GP (CB-1135GP)	C.R. 1-6	12 12			3.000		
		SH-1135A	Cam 1	4 1	61.945	65.980	1.998	32.00	
			2	1	57.355	60.400	1.515	28.00	
			3	1	57.155	60.200	1.515	26.00	
			4	1	56.955	60.000	1.515	26.00	
					56.755	59.800	1.515	26.00	
		PB-1135J	P.B. 1-6	6 6					
					34.000	37.985	2.030	35.00	

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Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
6	FE6 FE6-T	MS-2800GP	Main	14					
			1-7	7/7	77.950	82.980	2.500	26.00	
		TW-2800J	T.W.	4	(I.D.)	(O.D.)			
			4	2/2	89.250	103.800	2.950		
		TW-2809J	T.W.		(I.D.)	(O.D.)			
			4	2/2	87.025	108.800	2.975		
		(CB-2800GP)	C.R.	12					
			1-6	12	64.945	68.980	2.000	32.00	
		CB-2809GP	C.R.	12					
			1-6	12	64.945	68.980	2.000	32.00	
		SH-1135A	Cam	4					
			1	1	57.355	60.400	1.515	28.00	S1-1122
			2	1	57.155	60.200	1.515	26.00	S2-1122
			3	1	56.955	60.000	1.515	26.00	S3-1135
			4	1	56.755	59.800	1.515	26.00	S4-1135
		SH-2800K	Cam	4					
			1	1	57.355	60.400	1.510	28.00	
			2	1	57.155	60.200	1.510	26.00	
			3	1	56.955	60.000	1.510	26.00	
			4	1	56.755	59.800	1.510	26.00	
		PB-1083J	P.B.	6					
			1-6	6	36.000	39.985	2.015	39.10	
7	FD42 FE46 FD46-T FD46-TA	MS-2804GP	Main	10					
			1-5	5/5	77.940	82.980	2.501	27.00	
		TW-2800J	T.W.	4	(I.D.)	(O.D.)			
			4	2/2	89.250	103.800	2.950		
		CB-2804GP	C.R.	8					
			1-4	4/4	64.945	68.980	2.001	32.00	
		SH-2804A	Cam	4					
			1	1	57.555	60.600	1.515	28.00	
			2	1	57.355	60.400	1.515	26.00	
			3	1	57.155	60.200	1.515	26.00	
			4	1	56.955	60.000	1.515	26.00	
		PB-2804J	P.B.	4					
			1-4	4	36.000	39.985	2.030	38.00	
8	GE13T	MS-2814GP	Main	14					
			1-7	7/7	104.93	111.000	3.013	37.00	
		TW-2814K	T.W.	4	(I.D.)	(O.D.)			
			7	2/2	117,500	155,300	3,950		
		CB-2814GP	C.R.	12					
			1-6	12	91.935	96.980	2.500	43.00	
		SH-2814K	Cam	7					
			1	1					
			2	1					
			3	1					
			4	1					
			5	1					
			6	1					
			7	1					
		PB-2814J	P.B.	6					
			1-6	6					

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Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
10	ND6 ND6-T	MS-1193GP (MS-1083GP)	Main	14					
			1-3	3/3	89.894	95.970	3.018	28.00	
			5-7	3/3	89.894	95.970	3.018	28.00	
	NE6 NE6-T	TW-1083K	4	2	89.894	95.970	3.018	43.00	
			T.W.	4	(I.D.)	(O.D.)			
			7	2/2	102.380	117.800	3.000		
			C.R.	12					
			1-6	12	69.908	73.975	2.013	35.00	
			SH-1083K	7					
			1	1	57.960	62.000	2.010	31.00	
			2	1	57.760	61.800	2.010	28.00	
			3	1	57.560	61.600	2.010	28.00	
			4	1	57.360	61.400	2.010	43.00	
			5	1	57.160	61.200	2.010	28.00	
			6	1	56.960	61.000	2.010	28.00	
			7	1	56.760	60.800	2.010	25.50	
			P.B.	6					
			1-6	6	36.000	39.985	2.015	39.10	
11	NF6T	MS-2815GP	Main	14					
			1-3	3/3	94.000	99.970	3.018	28.00	
			5-7	3/3	94.000	99.970	3.018	28.00	
			4	2	94.000	99.970	3.018	43.00	
		CB-2815GP	C.R.	12					
			1-6	12	76.000	79.980	2.013	35.00	
		PB-2815J	P.B.	6					
			1-6	6	44.000	48.110	2.030	45.15	
		SH-2815K	Cam	7					
			1	1	62.94	67.000	2.015	31.00	
			2	1	62.74	66.800	2.015	28.00	
			3	1	62.54	66.600	2.015	28.00	
			4	1	62.34	66.400	2.015	43.00	
			5	1	62.14	66.200	2.015	28.00	
			6	1	61.94	66.000	2.015	28.00	
			7	1	61.74	65.800	2.015	25.50	
12	PD6 PD6-T	MS-1084GP	Main	14					
			1	1/1	99.894	105.970	3.018	35.00	
			2.3.5.7	5/5	99.894	105.970	3.018	35.00	
	PE6 PE6-T	TW-1084K	4	2	99.894	105.970	3.018	55.00	
			T.W.	4	(I.D.)	(O.D.)			
	PE6H PE6H-T	TW-2803K (TW-1188K)	7	2/2	112.380	127.800	3.000		(-'82)
			T.W.	4	(I.D.)	(O.D.)			
	PP6H	CB-1084GP	7	2/2	112.380	133.800	4.000		(-'83-)
			C.R.	12					
		SH-1084K	1-6	12	79.908	83.970	2.013	41.00	
			Cam	5					
		*SH-2806B PB-1084J	1	1	62.740	66.800	2.020	34.00	
			2	1	62.540	66.600	2.020	28.00	
			3	1	62.340	66.400	2.020	39.00	
			4	1	62.140	66.200	2.020	28.00	
			5	1	61.940	66.000	2.020	31.00	
			Cam	5					
			P.B.	6	46.000	49.850	2.015	44.13	
			1-6	6					

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Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
13	PF6	MS-2803GP	Main	14					
14	PF6-T		1-3,5-7U	6	99.894	105.970	3.018	35.00	M1-1084U
	PG6		1-3,5-7L	6	99.894	105.970	3.018	35.00	M1-2803L
	PG6H		4	2	99.894	105.970	3.018	55.00	M3-1084
		TW-2803K	T.W.	4	(I.D.)	(O.D.)			
			4	2/2	112.380	133.800	4.000		
		TW-2807K	T.W.	4	(I.D.)	(O.D.)			
			4	2/2	112.380	145.420	4.000		
		CB-2803GP	C.R.	12					
			1-6	12	84.908	88.970	2.013	41.00	
		CB-2810GP	C.R.	12					
			1-6	12	89.908	94.980	2.513	37.00	
		CB-2811GP	C.R.	12					
			1-6	12	84.908	88.980	2.013	37.00	
		(SH-2803K)	Cam	5					
			1	1	62.740	66.800	2.020	34.00	
			2	1	62.540	66.600	2.020	28.00	
			3	1	62.340	66.400	2.020	39.00	
			4	1	62.140	66.200	2.020	28.00	
			5	1	61.940	66.000	2.020	31.00	
		SH-2807K	Cam	5					
			1	1	62.740	66.800	2.020	34.00	
			2	1	62.540	66.600	2.020	28.00	
			3	1	62.340	66.400	2.020	39.00	
			4	1	62.140	66.200	2.020	28.00	
			5	1	61.940	66.000	2.020	31.00	
		SH-2808K	Cam	5					
			1	1	62.740	66.800	2.020	34.00	
			2	1	62.540	66.600	2.020	28.00	
			3	1	62.340	66.400	2.020	39.00	
			4	1	62.140	66.200	2.020	28.00	
			5	1	61.940	66.000	2.020	31.00	
		PB-2803J	P.B.	6					
			1-6	6	50.000	54.000	2.000	51.00	SF Size
15	QD32	(MS-1190GP)	Main	10					
	QD32-T		1-5	5/5	70.920	74.981	2.013	26.00	
		TW-1028A	T.W.	4	(I.D.)	(O.D.)			
27	TD23		4	2/2	78.850	93.800	2.325		
28	TD25	(CB-1190GP)	C.R.	8					
	TD27		1-4	8	56.926	59.987	1.513	26.10	
	TD27-T	CB-1192GP	C.R.	8					
			1-4	8	52.926	55.987	1.513	26.10	
		SH-1190A	Cam	5					
			1	1	50.740	53.800	1.520	20.50	
			2	1	50.540	53.600	1.520	22.00	
			3	1	50.340	53.400	1.520	22.00	
			4	1	50.140	53.200	1.520	22.00	
			5	1	49.940	53.000	1.520	22.00	
		PB-1190J	P.B.	4					
			1-4	4	28.000	31.000	1.525	32.50	
		PB-1192J	P.B.	4					
			1-4	4	26.000	29.000	1.525	33.00	
		PB-1194J	P.B.	4					
			1-4	4	30.000	33.000	1.525	32.80	
		PB-2805J	P.B.	4					
			1-4	4	33.000	36.000	1.530	33.00	

UD TRUCKS

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
16	RD8	MS-1118GP	Main	10					
17	RD8-T		1-4	4/4	109.894	115.970	3.018	29.00	
18			5	1/1	109.894	115.970	3.018	37.00	
	RE8	MS-1186GP	Main	10					
			1-4	4/4	109.894	115.970	3.018	31.00	
	RF8		5	1/1	109.894	115.970	3.018	37.00	
		MS-1197GP	Main	10					
			1-5	5/5	109.894	115.970	3.018	31.00	M1-1186U,L
		TW-1118K	T.W.	4	(I.D.)	(O.D.)			
			4	2/2	122.380	149.850	4.000		
		CB-1118GP	C.R.	16					
			1-8	16	84.904	88.975	2.013	39.20	
		SH-1118K	Cam	5					
			1	1	65.740	69.800	2.020	43.00	
			2	1	65.940	70.000	2.020	25.00	
			3	1	66.140	70.200	2.020	25.00	
			4	1	66.340	70.400	2.020	25.00	
			5	1	66.540	70.600	2.020	47.50	
		PB-1118J	P.B.	8					
			1-8	8	46.000	49.985	2.015	(U) 34.89 (L) 49.00	
19	RF8T	MS-2812GP	Main	10					
	RG8		1-5	5/5	109.894	115.97	3.018	35.50	
	RH8	TW-2812K	T.W.	4					
			4	2/2	122.500	160.80	4.010		
		CB-2812GP	C.R.	16					
			1-8	16	89.908	94.980	2.513	34.80	C1-2812×16
		SH-2812K	Cam	5					
			1	1	65.740	69.800	2.015	56.50	
			2	1	65.940	70.000	2.015	25.00	
			3	1	66.140	70.200	2.015	25.00	
			4	1	66.340	70.400	2.015	25.00	
			5	1	66.540	70.600	2.015	47.50	
		PB-2812J	P.B.	8					
			1-8	8	50.005	54.065	2.030	53.15	
		PB-2817J	P.B.	8					
			1-8	8	50.005	54.065	2.030	45.25	P1-2813 X 8

UD TRUCKS

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
20	RD10	MS-1119GP	Main	12					
21	RD10-T		1-5	5/5	109.894	115.970	3.018	29.00	
22			6	1/1	109.894	115.970	3.018	37.00	
	RE10	MS-1187GP	Main	12					
			1-5	5/5	109.894	115.970	3.018	31.00	M1-1186U,L
	RF10		6	1/1	109.894	115.970	3.018	37.00	M2-1186U,L
	RE10	MS-1198GP	Main	12					
			1-6	6/6	109.894	115.970	3.018	31.00	M1-1186U,L
		TW-1118K	T.W.	4	(I.D.)	(O.D.)			
			5	2/2	122.380	149.850	4.000		
		CB-1119GP	C.R.	20					
			1-10	20	84.904	88.975	2.013	39.20	C1-1118 X 20
		SH-1119K	Cam	6					
			1	1	65.740	69.800	2.020	43.00	S1-1118
			2	1	65.940	70.000	2.020	25.00	S2-1118
			3	1	66.140	70.200	2.020	25.00	S3-1118
			4	1	66.340	70.400	2.020	25.00	S4-1118
			5	1	66.540	70.600	2.020	25.00	S5-1119
			6	1	66.740	70.800	2.020	47.50	S6-1119
		PB-1119J	P.B.	10					
			1-10	10	46.000	49.985	2.015	(U) 34.89 (L) 49.00	
23	RH10	MS-2813GP	Main	12					
			1-6	6/6	109.894	115.970	3.018	35.50	
		TW-2812K	T.W.	4					
			5	2/2					
		CB-2813GP	C.R.	20					
			1-10	20	89.908	94.980	2.513	34.80	C1-2812×20
		SH-2813K	Cam	6					
			1	1	65.740	69.800	2.015	56.50	
			2	1	65.940	70.000	2.015	25.00	
			3	1	66.140	70.200	2.015	25.00	
			4	1	66.340	70.400	2.015	25.00	
			5	1	66.540	70.600	2.015	25.00	
			6	1	66.740	70.800	2.015	47.50	
		PB-2813J	P.B.	10					
			1-10	10	50.005	54.065	2.030	45.25	
24	SD20	MS-1028GP	Main	6					
25	SD22		1-3	3/3	70.920	74.981	2.013	32.13	
	SD23	MS-1182GP	Main	10					
	SD25		1-5	10	70.920	74.981	2.013	26.00	
	SD25-T	TW-1028A	T.W.	4	(I.D.)	(O.D.)			
			2	2/2	78.850	93.800	2.325		
		CB-1029GP	C.R.	8					
			1-4	8	52.926	55.987	1.513	26.13	
		SH-1003A	Cam	3					
			1	1	45.440	48.640	1.590	24.00	
			2	1	43.910	47.120	1.590	22.00	
			3	1	41.230	44.430	1.590	24.00	
		PB-1029J	P.B.	4					
			1-4	4	26.000	29.000	1.530	30.00	
		PB-1182J	P.B.	4					
			1-4	4	26.000	28.987	1.500	32.10	

UD TRUCKS

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
26	SD33 SD33-T	MS-1058GP	Main 1-4	8 4/4	70.920	74.981	2.013	32.13	M1-1028 X 8
		TW-1028A	T.W. 3	4 2/2	(I.D.) 78.850	(O.D.) 93.800	2.325		
		CB-1058GP	C.R. 1-6	12 12	52.926	55.987	1.513	26.13	C1-1029 X 12
		SH-1004B	Cam 1	4 1	45.440	48.640	1.590	24.00	(-'79)
			2.3	2	43.910	47.120	1.590	22.00	
			4	1	41.230	44.430	1.590	24.00	
		SH-1191B	Cam 1	4 1	51.400	54.400	1.490	24.00	(-'79-)
			2	1	51.200	54.200	1.490	22.00	
			3	1	51.000	54.000	1.490	22.00	
			4	1	50.800	53.800	1.490	24.00	
		PB-1058J	P.B. 1-6	6 6	26.000	29.000	1.530	30.00	
29	TD42	(MS-1195GP)	Main 1-7	14 7/7	70.920	74.981	2.013	26.00	
		MS-2818A	Main 1-7	14 7/7	70.920	74.981	2.014	25.00	
		TW-1028A	T.W. 3	4 2/2	(I.D.) 78.850	(O.D.) 93.800	2.325		
		(CB-1195GP)	C.R. 1-6	12 12	56.926	59.987	1.513	26.10	
		SH-1195A	Cam 1	7 1	50.740	53.800	1.520	20.50	S1-1190
			2	1	50.540	53.600	1.520	22.00	S2-1190
			3	1	50.340	53.400	1.520	22.00	S3-1190
			4	1	50.140	53.200	1.520	22.00	S4-1190
			5	1	49.940	53.000	1.520	22.00	S5-1195
			6	1	49.740	52.800	1.520	22.00	S6-1195
			7	1	49.540	52.600	1.520	22.00	S7-1195
		PB-1195J	P.B. 1-6	6 6	28.000	31.000	1.525	32.50	
30	ZD30DD ZD30DDTI	(MS-2805A)	Main 1-5	10 5/5	70.920	74.981	2.014	26.00	
		MS-2817A	Main 1-5	10 5/5	70.920	74.981	2.014	25.00	
		TW-2805J	T.W. 3	2 2	(I.D.) 78.600	(O.D.) 93.800	2.360		
		CB-2805A	C.R. 1-4	8 8	56.926	59.987	1.513	26.10	
		PB-2805J	P.B. 1-4	4 4	33.000	36.000	1.530	33.000	
		BB-2817A	B.B. 2	4 2	50,895	53,980	1,512	16,000	
				2	50,695	53,780	1,512	21,000	

SUBARU (FUJI HEAVY INDUS.)

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
1	E23,E42 EK21,EK22 EK23,EK23T EK42	MS-1126GP CB-2303GP (CB-1126GP)	Main	6					
			1.2	4	41.980	45.000	1.508	20.13	
			△3	2	41.980	45.000	1.508	24.96	
			C.R.	4					
			1-2	4	38.000	41.000	1.490	15.13	
2 3 4 5	EA63 EA64 EA65 EA71	(MS-1124GP)	Main	6					
			1.3	4	49.960	53.987	2.010	21.13	
			△2	2	49.960	53.987	2.010	25.96	
		(MS-1184GP)	Main	6					
			1.3	4	49.960	53.987	2.010	21.13	
			△2	2	49.960	53.987	2.010	25.96	
		CB-1124GP	C.R.	8					
			1-4	8	45.000	48.000	1.490	13.63	
	EA81 EA81-T EA82 EA82-T	MS-2300GP	Main	6					
			1.3	4	54.965	59.000	2.020	21.13	
			△2	2	54.965	59.000	2.020	25.96	
		CB-2300GP	C.R.	8					
			1-4	8	45.005	48.000	1.490	14.63	
		PB-2300J	P.B	4					
			1-4	4	21.000	23.000	1.040	19.40	
6 7	EF10 EF12	MS-2301GP	Main	8					
			1.3	6	41.980	45.000	1.508	20.13	
			△2	2	41.980	45.000	1.508	24.96	
		CB-2301GP	C.R.	6					For EF10
			1-3	6	42.000	45.000	1.490	15.13	
			C.R.	6					For EF12
		CB-2302GP	1-3	6	42.000	45.000	1.491	15.13	
8	ER27	MS-2304GP	Main	8					
			1.2.4.	6	54.965	59.000	2.019	21.13	
			△3	2	54.965	59.000	2.019	25.96	
		CB-2304A	C.R.	12					
			1-6	12	45.005	48.000	1.490	14.63	
		PB-2304J	P.B.	6					
			1-4	6	21.000	23.000	1.040	19.40	P1-2300 X 6
9	EJ15 EJ16 EJ18 EJ20 EJ22 EJ25	MS-2305A	Main	10					
			1.5.	4	60.000	64.000	2.003	19.00	
			2.4	4	60.000	64.000	2.003	15.00	
			△3	2	60.000	64.000	2.003	21.94	
		MS-2306A	Main	10					
			1.3.	4	60.000	64.000	2.003	19.00	
			2.4.	4	60.000	64.000	2.003	15.00	
			△5	2	60.000	64.000	2.003	22.94	
		CB-2305A	C.R.	8					
			1-4	8	52.000	55.000	1.498	16.63	
		CB-2306GP	C.R.	8					
			1-4	8	48.000	51.000	1.498	15.63	
10	EN07	MS-2307GP	Main	10					
		TW-2307A	1-5	10	41.974	45.024	1.512	14.10	
			T.W.	4	(I.D.)	(O.D.)			
		CB-2307GP		4	47.250	57.900	1.960		
			C.R.	8					
			1-4	8	30.989	34.018	1.498	13.50	

SUZUKI

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
1 2	F5A F5A-T	MS-2402A	Main	8					
			1-4	8	40.000	44.000	1.991	17.13	
		TW-2402A	T.W.	2	(I.D.)	(O.D.)			
			3	2	47.250	63.000	2.520		
		CB-2402A	C.R.	6					For F5A
			1-3	6	32.000	35.000	1.490	16.10	
		CB-2401A	C.R.	6					For F5A-T
			1-3	6	38.000	41.000	1.491	18.10	
		PB-2401J	P.B.	3					C1-1179 X 6
			1-3	3	15.995	18.021	1.030	22.00	
3	F6A	MS-2406A	Main	8					
			1-4	8	44.000	48.000	1.991	17.10	
		TW-2403A	T.W.	2	(I.D.)	(O.D.)			
			3	2	52.250	68.000	2.520		
		CB-2401A	C.R.	6					
			1-3	6	38.000	41.000	1.491	18.10	
		CB-2406A	C.R.	6					
			1-3	6	36.000	39.000	1.490	16.10	
4	F8A F10A	MS-1179A	Main	10					
			1-5	10	50.000	54.000	1.991	20.10	
		TW-1179A	T.W.	2	(I.D.)	(O.D.)			
			3	2	57.250	73.000	2.520		
		CB-1179A	C.R.	8					
			1-4	8	38.000	41.000	1.491	18.10	
		PB-1179J	P.B.	4					P1-2401 X 4
			1-4	4	15.995	18.021	1.030	22.00	
5	F8B (Y64) (SS80) Export only	MS-2401A	Main	8					
			1-4	8	50.000	54.000	1.991	17.10	
		TW-1179A	T.W.	2	(I.D.)	(O.D.)			
			3	2	57.250	73.000	2.520		
		CB-2401A	C.R.	6					
			1-3	6	38.000	41.000	1.491	18.10	
		PB-2401J	P.B.	3					
			1-3	3	15.995	18.021	1.030	22.00	
6	G10 G10-T	MS-2403A	Main	8					
			1-4	4/4	45.000	49.000	2.000	18.10	
		TW-2403A	T.W.	2	(I.D.)	(O.D.)			
			3	2	52.250	68.000	2.520		
		CB-2403A	C.R.	6					
			1-3	6	42.000	45.000	1.490	18.10	C1-2404 X 6
7 8	G13A G13B G13BA	MS-2404A	Main	10					
			1-5	5/5	45.000	49.000	2.000	18.10	
		TW-2403A	T.W.	2	(I.D.)	(O.D.)			
			4	2	52.250	68.000	2.520		
		CB-2404A	C.R.	8					
			1-4	8	42.000	45.000	1.490	18.10	
9	G15A G16A G16B	MS-2405GP	Main	10					
			1-5	5/5	52.000	56.000	2.012	18.10	
		TW-2405A	T.W.	2	(I.D.)	(O.D.)			
			4	2	59.250	75.000	2.520		
		CB-2405A	C.R.	8					
			1-4	8	44.000	47.000	1.490	18.10	

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
10	H20A	MS-2407A	Main 1-4	8 4/4	65.000	70.000	2.496	19.10	M1-2408U/L X 4 C1-2407 X 8
11	H25A H27A	MS-2408A	Main 1-5	10 5/5	58.000	62.000	1.988	19.10	
12	J18A J20A	MS-2409A	Main 1-4	8 4/4	58.000	62.000	1.988	19.10	
		TW-2407A	T.W. 3	2 2	(I.D.) 71.750	(O.D.) 84.750	1.988 2.470	19.10	
		CB-2407A	C.R. 1-6	12 12	50.000	53.000	1.485	16.10	
		CB-2408A	C.R. 1-4	8 8	50.000	53.000	1.485	16.10	
13	K6A	MS-2410A	Main 1-4	8 4/4	45.000	49.000	2.000	18.13	
		TW-2403A	T.W. 3	2 2	(I.D.) 52.250	(O.D.) 68.000	2.520		
		CB-2410A	C.R. 1-3	6 6	38.000	41.000	1.490	16.10	
14 15	K10B K12B	*MS- *MS- TW-2403A *CB- *CB-	Main 1-4 Main 1-5 T.W. 3 C.R. 1-3 C.R. 1-4	8 10 2 2 6 8	(I.D.) 52.250	(O.D.) 68.000	2.520		
16 17	M13A M15A M16A	MS-2412A TW-2405A *CB-2412A	Main 1-5 T.W. 4 C.R. 1-4	10 5/5 2 2 8 8	45.000 59.250	49.000 75.000	2.000 2.520	18.13	

TOYOTA

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
1	1A	MS-1400A	Main	10					
2	2A		1-5	10	48.000	52.020	2.004	19.90	φ 6 Hole in U/L
3	3A	MS-1410A	Main	10					
	4A		1-5	5/5	48.000	52.020	2.004	19.90	φ 6 Hole in U
	4A-GZE	TW-1400A	T.W.	4	(I.D.)	(O.D.)			
	5A		3	2/2	53.750	66.000	2.490		
	7A-FE	CB-1400A	C.R.	8					
			1-4	8	40.000	43.000	1.490	17.10	L/H notch
		CB-1410GP	C.R.	8					
			1-4	8	40.000	43.000	1.490	17.10	R/H notch
		CB-1425GP	C.R.	8					
			1-4	8	42.000	45.000	1.490	17.10	
		CB-1451A	C.R.	8					
			1-4	8	48.000	51.000	1.490	17.00	for 7A-FE
		PB-1425J	P.B.	4					
			1-4	4	20.000	22.000	1.030	22.00	
5	1AZ-FE	MS-1454A	Main	10					
	2AZ-FE		1-5	5/5	55.000	59.000	1.996	16.80	
		TW-1454A	T.W.	2					
			3	2	60.525	77.75	1.98		
		CB-1454A	C.R.	8					
			1-4	8	48.000	51.000	1.490	15.50	
4	1AD-FTV	MS-1473A	Main	10					
	2AD-FTV		1-5	5/5	59.000	63.000	1.995	19.10	
	2AD-FHV	TW-1473A	T.W.	2	(I.D.)	(O.D.)			
				2	65.500	81.000	1.975		
		CB-1473GP	C.R.	8					
			1-4	8	50.000	53.000	1.491	19.13	

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
6	B	MS-1121A	Main	10					
7	2B		1-2.4	8	70.000	75.000	2.485	26.90	
8	3B		△No.3	1/1	70.000	75.000	2.485	33.93	
9	11B	MS-1428A	Main	10					
10	13B	(MS-1429A)	1-5	5/5	70.000	75.000	2.485	26.90	
11	13B-T	TW-1417A	T.W.	4	(I.D.)	(O.D.)			
12	14B		3	2/2	76.250	90.700	2.480		
13	14B-T	CB-1121A	C.R.	8					
14	15B		1-4	8	59.000	62.000	1.485	30.00	φ4 Hole at 10°
15		CB-1401A	C.R.	8					
16			1-4	8	61.000	64.000	1.485	30.00	φ4 Hole at 11°
		CB-1428A	C.R.	8					
			1-4	8	59.000	62.000	1.485	30.00	φ4 Hole at 25°
		CB-1429A	C.R.	8					
			1-4	8	61.000	64.000	1.485	30.00	Oval Hole at 37°
		SH-1401B (SH-1121B)	Cam	3					
			1	1	47.175	51.030	1.915	24.00	S1-1401
			2	1	46.975	51.030	2.015	20.00	S2-1121
			3	1	46.775	51.030	2.115	24.00	S3-1121
		*SH-	Cam	5					
			1	1	53.475	57.500	2.010	20.00	
			2	1	53.225	57.250	2.010	20.00	
			3	1	52.975	56.000	1.510	20.00	
			4	1	52.725	56.000	1.635	20.00	
			5	1	52.475	56.250	1.885	20.00	
		SH-1417A	Cam	5					
			1	1	53.475	56.500	1.510	20.00	
			2	1	53.225	56.250	1.510	20.00	
			3	1	52.975	56.000	1.510	20.00	
			4	1	52.725	56.000	1.635	20.00	
			5	1	52.475	56.250	1.885	20.00	
		SH-1428A	Cam	5					
			1	1	53.475	57.500	2.010	20.00	
			2	1	53.225	57.250	2.010	20.00	
			3	1	52.975	57.000	2.010	20.00	
			4	1	52.725	57.000	2.135	20.00	
			5	1	52.475	57.250	2.385	20.00	
		PB-1428J (PB-1121J)	P.B.	4					
			1-4	4	29.010	33.000	2.030	32.00	
		PB-1401J	P.B.	4					
			1-4	4	32.010	36.000	2.030	32.00	
		PB-1417J	P.B.	4					
			1-4	4	34.010	38.000	2.040	36.00	
		PB-1429J	P.B.	4					
			1-4	4	32.010	36.000	2.030	(U) 25.00 (L) 33.00	
		PB-	P.B.	4					
			1-4	4	34.010	38.000	2.040	(U) 26.75 (L) 36.00	
20	1CD-FTV	MS-1448A	Main 1-5	10 5/5	57.000	61.000	1.990	22.00	
		CB-1460A	C.R. 1-4	8 8	50.500	53.500	1.480	21.10	No Oil Hole L/H Notch

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Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
17	1C	MS-1408A	Main	10					
18	2C		1-5	5/5	57.000	61.000	1.990	22.00	φ 6 Hole in U
19	2C-T	MS-1421A	Main	10					
	3C-T		1-5	5/5	57.000	61.000	1.990	20.00	
		MS-1448A	Main	10					
			1-5	5/5	57.000	61.000	1.990	22.00	15mm Oval Hole
		TW-1408A	T.W.	4	(I.D.)	(O.D.)			
			3	2/2	62.250	76.800	2.730		
		CB-1408A	C.R.	8					
			1-4	8	50.500	53.500	1.482	23.70	L/H Notch
		CB-1421A	C.R.	8					
			1-4	8	50.500	53.500	1.482	18.90	L/H Notch
		CB-1448A	C.R.	8					
			1-4	8	50.500	53.500	1.482	23.10	L/H Notch
		CB-1453A	C.R.	8					
			1-4	8	50.500	53.500	1.482	23.10	R/H Notch
		PB-1408J	P.B.	4					
			1-4	4	27.000	30.000	1.540	27.50	
		PB-1421J	P.B.	4					
			1-4	4	27.000	30.000	1.540	(U) 20.00 (L) 27.50	
21	D 2D	MS-1040GP	Main	14					
			1.3.5.7	12	74.980	81.030	3.005	34.00	
			4	2	74.980	81.030	3.005	49.13	
		(TW-1040B)	T.W.	4	(I.D.)	(O.D.)			
			4	2/2	83.250	100.000	2.980		
		CB-1041GP	C.R.	12					
			1-6	12	61.980	66.030	2.005	31.00	
		SH-	Cam	4					
			1	1	55.195	60.000	2.390	30.70	
			2	1	54.975	60.000	2.500	25.70	
			3	1	54.975	60.000	2.500	25.70	
			4	1	54.475	60.000	2.600	26.80	
		PB-1040J	P.B.	6					
			1-6	6	34.030	40.000	3.030	37.00	(-'76)
		PB-1041J	P.B.	6					
			1-6	6	34.030	38.000	2.030	37.00	(-'76-)
22	1DZ	MS-1446A	Main	10					
			1-5	5/5	65.000	69.000	1.983	16.30	
		TW-1436A	T.W.	4	(I.D.)	(O.D.)			
			4	2/2	74.250	85.750	2.980		
		CB-1446A	C.R.	8					
			1-4	4/4	50.500	53.500	1.478	20.40	
23	1E 2E 4E	MS-1415A	Main	10					
			1-5	5/5	47.000	51.022	2.000	16.00	
		TW-1415A	T.W.	4	(I.D.)	(O.D.)			
			3	2/2	52.750	64.500	2.490		
		CB-1415A	C.B.	8					
			1-4	4/4	40.000	43.000	1.491	15.10	

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
24	3E 5E	MS-1424A	Main	10					
			1-5	5/5	50.000	54.018	2.000	16.00	
		TW-1424A	T.W.	4	(I.D.)	(O.D.)			
			3	2/2	55.250	68.000	2.480		
		CB-1424A	C.B.	8					
			1-4	8	43.000	46.000	1.492	15.10	
25 26	F 2F	(MS-1007GP)	Main	8					
			1	1/1	67.000	72.000	2.500	32.15	
			2	1/1	68.500	73.500	2.500	30.15	
			△3	1/1	70.000	75.000	2.500	35.94	
			4	1/1	71.500	76.500	2.500	40.15	
		MS-1123A	Main	8					
			1	1/1	66.990	72.010	2.501	32.15	
			2	2	68.490	73.510	2.501	30.15	
			△3	2	69.990	75.010	2.501	35.94	
			4	1/1	71.490	76.510	2.497	40.15	
		CB-1123A	C.R.	12					
			1-6	12	54.000	56.800	1.390	31.85	
		SH-1123A	Cam	4					
			1	1	47.975	52.000	2.000	29.00	
			2	1	46.475	50.500	2.000	24.00	
			3	1	44.975	49.000	2.000	24.00	
			4	1	43.475	47.500	2.000	25.00	
27	3F	MS-1413A	Main	8					
			1	2	67.000	72.010	2.497	32.15	
			2	2	68.500	73.510	2.497	30.15	
			3	2	67.000	75.100	2.497	28.15	
			4	2	71.500	76.510	2.497	40.15	
		TW-1413A	T.W.	4	(I.D.)	(O.D.)			
			3	2/2	78.250	91.000	2.480		
		CB-1413A	C.R.	12					
			1-6	12	53.000	56.000	1.488	22.00	
		SH-1123A	Cam	4					
			1	1	47.975	52.000	2.000	29.00	
			2	1	46.475	50.500	2.000	24.00	
			3	1	44.975	49.000	2.000	24.00	
			4	1	43.475	47.500	2.000	25.00	
		PB-1413J	P.B.	6					
			1-6	6	22.019	24.000	1.030	27.80	
28	1FZ	MS-1438A	Main	14					
			1-7	7/7	68.980	74.040	2.492	23.40	
		TW-1438A	T.W.	4	(I.D.)	(O.D.)			
			5	2/2			2.475		
		CB-1438A	C.R.	12					
			1-6	12	56.980	60.540	1.745	21.40	
		PB-1438J	P.B.	6					
			1-6	6	26.000	28.030	1.035	28.00	
31	1GR-FE	MS-1458A	Main	8					
			1,4	2/2	72.000	77.000	2.497	22.20	
			2,3	2/2	72.000	77.000	2.497	18.80	
		TW-1466A	T.W.	4	(I.D.)	(O.D.)			
				2/2	80.05	96.75	1.975		
		CB-1458A	C.R.	12					
			1-6	12	56.000	59.000	1.492	16.00	

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Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
29 30	1G	MS-1402A	Main	14					
			1-7	7/7	55.000	59.020	2.000	19.20	
	1G-GTE	MS-1420A	Main	14					
			1	2	55.000	59.020	2.000	22.20	
			2-7	6/6	55.000	59.020	2.000	19.20	
		TW-1402A	T.W.	4	(I.D.)	(O.D.)			
			No.4	2/2	60.750	73.000	1.990		
		CB-1402GP	C.R.	12					
			1-6	12	42.000	45.000	1.498	17.93	
		CB-1420GP	C.R.	12					
			1-6	12	42.000	45.000	1.492	18.18	
		CB-1433A	C.R.	12					
			1-6	12	44.000	47.000	1.492	17.18	
		PB-1402J	P.B.	6					
			1-6	6	18.011	20.000	1.030	25.00	
		*PB-	P.B.	6					
			1-6	6	22.000	24.000	1.030	20.30	
		PB-1433J	P.B.	6					
			1-6	6	20.000	22.000	1.030	23.30	
35 36 37 38	H	MS-1427A	Main	14					
	2H	(MS-1080A)	1-3,5-7	12	70.000	74.002	1.986	22.60	
		(MS-1403A)	No.4	2	70.000	74.002	1.986	29.60	
	12H-T	TW-1063A	T.W.	4	(I.D.)	(O.D.)			
			4	2/2	76.250	90.000	2.980		
		TW-1427A	T.W.	4	(I.D.)	(O.D.)			
			4	2/2	76.250	90.000	2.980		
		(CB-1080A)	C.R.	12					
			1-6	12	55.000	58.000	1.485	27.60	C1-1063 X 12
		CB-1403A	C.R.	12					L/H Notch
			1-6	12	55.000	58.000	1.485	25.60	C1-1403 X 12
		CB-1427A	C.R.	12					
			1-6	12	55.000	58.000	1.485	25.60	R/H Notch
		(SH-1063B)	Cam	4					(-'75)
			1	1	47.175	51.000	1.900	24.00	
			2	1	46.975	51.000	2.000	20.00	
			3	1	46.775	51.000	2.100	20.00	
			4	1	46.575	51.000	2.200	24.00	
		(SH-1080B)	Cam	4					(-'76-)
			1	1	47.175	51.000	1.900	24.00	
			2	1	46.975	51.000	2.000	20.00	
			3	1	46.775	51.000	2.100	20.00	
			4	1	46.575	51.000	2.200	24.00	
		SH-1403A	Cam	4					
			1	1	51.170	55.000	1.900	24.00	
			2	1	50.970	55.000	2.000	20.00	
			3	1	50.770	55.000	2.100	20.00	
			4	1	50.570	55.000	2.200	24.00	
		PB-1080J	P.B.	6					
			1-6	6	27.000	30.000	1.530	30.50	P1-1063 X 6
		PB-1403J	P.B.	6					
			1-6	6	29.000	33.000	2.035	31.00	
		PB-1427J	P.B.	6					
			1-6	6	32.000	36.000	2.040	31.00	

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
39	1HZ 1HZ-T 1HD-T	MS-1436A	Main	14					
			1-7	7/7	66.990	71.000	1.982	22.10	
		TW-1436A	T.W.	4	(I.D.)	(O.D.)			
			4	2/2	74.250	85.750	2.980		
		CB-1436A	C.R.	12					
			1-6	6/6	59.000	62.014	1.489	23.60	
		SH-1436A	Cam	2					
40 41	J 2J 5P	(MS-1063GP)	Main	10					
			1.2.4.5	8	70.000	74.000	1.990	22.60	
			3	2	70.000	74.000	1.990	33.60	
		MS-1137GP	Main	10					
			1.2.4.5	8	70.000	74.000	1.990	24.60	
			3	2	70.000	74.000	1.990	31.60	
		TW-1063B	T.W.	4	(I.D.)	(O.D.)			
42	1JZ-FSE 2JZ-FSE		3	2/2	76.250	90.000	2.980		
		CB-1137A	C.R.	8					
		(CB-1063A)	1-4	8	55.000	58.000	1.485	27.60	C1-1403 X 8
		(SH-1063B)	Cam	4					(-'75)
			1	1	47.175	51.000	1.900	24.00	
			2	1	46.975	51.000	2.000	20.00	
			3	1	46.775	51.000	2.100	20.00	
			4	1	46.575	51.000	2.200	24.00	
		(SH-1080B)	Cam	4					(-'76-)
			1	1	47.175	51.000	1.900	24.00	
			2	1	46.975	51.000	2.000	20.00	
			3	1	46.775	51.000	2.100	20.00	
			4	1	46.575	51.000	2.200	24.00	
		PB-1063J	P.B.	4					
			1-4	4	27.000	30.000	1.530	30.50	
42	1JZ-FSE 2JZ-FSE	MS-1434A	Main	14					
			1	1/1	62.000	66.000	2.010	23.00	
			2-7	6/6	62.000	66.000	2.010	20.00	
		TW-1434A	T.W.	4	(I.D.)	(O.D.)			
				2/2			1.970		
42	1JZ-FSE 2JZ-FSE	CB-1434GP	C.R.	12					
			1-6	12	52.000	55.000	1.510	19.30	

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Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
43	K	MS-1056GP	Main	10					
44	2K		1-5	10	50.000	54.004	1.994	20.90	
	3K	MS-1416A	Main	10					
	4K		1-5	5/5	50.000	54.004	1.994	20.90	L : R/H Notch
	5K	TW-1056A	T.W.	4	(I.D.)	(O.D.)			
	7K		3	2/2	55.250	68.000	2.480		
		CB-1056GP	C.R.	8					
			1-4	8	42.000	45.000	1.492	18.90	a Hole at 30° 30'
		CB-1416A	C.R.	8					
			1-4	8	42.000	45.000	1.492	18.90	a Hole at 28° 30'
		CB-1447A	C.R.	8					
			1-4	8	48.000	51.000	1.490	17.10	
		SH-1056A	Cam	4					
			1	1	43.225	48.000	2.375	17.90	
			2	1	42.975	47.500	2.250	17.90	
			3	1	42.725	47.000	2.125	17.90	
			4	1	42.475	46.500	2.000	17.90	
		PB-1056J	P.B.	4					
			1-4	4	18.011	20.000	1.030	25.00	
45	1KZ-TE	MS-1452A	Main	10					
46	1KD-FTV		1-5	5/5	70.000	75.000	2.485	23.80	
	2KD-FTV	TW-1452A	T.W.	4					
			3	2/2	76.250	90.920	2.480		
		CB-1452A	C.R.	8					
			1-4	8	59.000	62.014	1.489	24.60	
		PB-1452J	P.B.	4					
			1-4	4	34.000	37.000	1.530	(U)22.5 (L)31.5	2 Oil Holes
		PB-1464J	P.B.	4					
			1-4	4	34.000	37.000	1.530	(U)22.5 (L)31.5	1 Oil Hole
47	1KR-FE	MS-1463A	Main	8					
			1-4	4/4	44.000	48.000	1.995	14.90	
		TW-1463A	T.W.	2	(I.D.)	(O.D.)			
				2	52.250	62.750	1.990		
		CB-1463A	C.R.	6					
			1-3	6	40.000	43.000	1.500	13.60	

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
48	L	MS-1161A	Main	10					
49	2L		1-5	10	62.000	66.000	1.987	27.60	
50	2L-T	MS-1406A	Main	10					
51	3L		1-5	5/5	62.000	66.000	1.987	27.60	L : Center Notch
52	5L	TW-1161A	T.W.	4	(I.D.)	(O.D.)			
53			3	2/2	70.250	81.800	2.480		
		CB-1161A	C.R.	8					
			1-4	8	53.000	56.000	1.486	26.00	an Oil Hole
		CB-1406A	C.R.	8					
			1-4	8	53.000	56.000	1.486	26.00	No Oil Hole
		CB-1411A	C.R.	8					
			1-4	8	55.000	58.000	1.486	26.00	
		SH-1161A	Cam	6					
			△1	1/1	34.985	38.015	1.500	28.04	Shell with a Hole
			2.3	4	34.985	38.015	1.500	20.03	Shell with a Hole
		SH-1431A	Cam	10					
			△No.1	2	34.975	38.015	1.504	32.62	Shell with a Hole
			2-5	8	27.975	31.015	1.504	17.43	Shell with a Hole
		PB-1063J	P.B.	4					
			1-4	4	27.000	30.000	1.530	30.50	
		PB-1411J	P.B.	4					
			1-4	4	29.000	32.000	1.530	30.50	
		PB-1406J	P.B.	4					
			1-4	4	27.000	30.000	1.530	(U) 23.00 (L) 31.00	
		PB-1431J	P.B.	4					
			1-4	4	29.000	32.000	1.530	(U) 23.00 (L) 31.00	
54	M	MS-1051GP	Main	14					
55	2M		1-7	7/7	60.000	64.022	1.998	22.13	
56	3M	MS-1414GP	Main	14					
57	4M		1	1/1	60.000	64.022	1.998	25.13	
	5M		2-7	12	60.000	64.022	1.998	22.13	
	6M	TW-1006A	T.W.	4	(I.D.)	(O.D.)			
	7M		No.4	2/2	66.250	80.000	2.975		
		CB-1171GP	C.R.	12					
			1-6	12	52.000	55.015	1.499	20.00	R/H Notch w 2 Holes
		CB-1414GP	C.R.	12					
			1-6	12	52.000	55.015	1.497	20.00	L/H Notch w 1 Hole
		SH-1068A	Cam	8					
			△1/L	1	34.990	38.014	1.509	28.04	
			No.1-4	7	34.990	38.014	1.509	20.13	
		PB-1051J	P.B.	6					
			1-6	6	22.009	24.000	1.030	24.80	
		DB-1171A	D.B.	2					
			1	1	40.970	44.975	2.020	16.20	
			2	1	32.970	36.975	2.020	16.20	

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Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
58	1MZ-FE 2MZ-FE	MS-1455A	Main	8					
			1, 4	2/2	61.000	66.000	2.489	22.20	
		TW-1455A	2, 3	2/2	61.000	66.000	2.489	18.80	
			T.W.	4	(I.D.)	(O.D.)			
		CB-1455A		2/2	68.450	83.550	1.98	—	
			C.R.	12					
59	1N IN-T	MS-1449A	1-6	12	53.000	56.000	1.499	16.00	
			P.B.	6					
		PB-1455J	1-6	6	22.000	24.000	1.000	20.50	
		MS-1449A	Main	10					
			1-5	5/5	50.000	54.036	2.008	18.00	
60 61	1ND-TV	TW-1056A	T.W.	4	(I.D.)	(O.D.)			
			3	2/2	55.250	68.000	2.480		
		CB-1449A	C.R.	8					
			1-4	8	44.000	47.014	1.492	17.90	
		PB-1449J	P.B.	4					
			1-4	4	23.500	26.500	1.540	23.50	
62 63	1ND-TV	MS-1461A	Main	10					
			1-5	5/5	46.000	50.000	1.995	16.10	without Notch
		TW-1457A	T.W.	2	(I.D.)	(O.D.)			
				2	54.250	69.750	2.475		
		CB-1461A	C.R.	8					
			1-4	8	40.000	43.000	1.495	13.63	No Oil Hole
62 63	1NZ 2NZ	CB-1462A	C.R.	8					
			1-4	8	44.000	47.000	1.495	15.60	
		MS-1456A	Main	10					
			1-5	5/5	46.000	50.000	1.995	16.00	with Notch
		CB-1456A	C.R.	8					
			1-4	8	40.000	43.000	1.494	13.63	with an Oil Hole
64	1PZ	MS-1439A	Main	12					
			1-6	6/6	67.000	71.000	1.982	22.10	
		TW-1436A	T.W.	4	(I.D.)	(O.D.)			
			4	2/2	74.250	85.750	2.980		
		CB-1439A	C.R.	10					
			1-5	10	59.000	62.014	1.490	23.60	
64	1PZ	SH-1436A	Cam	2					
				2	35.000	38.020	1.530	29.00	Shell Bearing
		PB-1439J	P.B.	5					
			1-5	5	29.000	32.000	1.530	27.00	
		MS-1439A	Main	12					
			1-6	6/6	67.000	71.000	1.982	22.10	
64	1PZ	TW-1436A	T.W.	4	(I.D.)	(O.D.)			
			4	2/2	74.250	85.750	2.980		
		CB-1439A	C.R.	10					
			1-5	10	59.000	62.014	1.490	23.60	
		SH-1436A	Cam	2					
				2	35.000	38.020	1.530	29.00	Shell Bearing
64	1PZ	PB-1439J	P.B.	5					
			1-5	5	29.000	32.000	1.530	27.00	
		MS-1439A	Main	12					
			1-6	6/6	67.000	71.000	1.982	22.10	
		TW-1436A	T.W.	4	(I.D.)	(O.D.)			
			4	2/2	74.250	85.750	2.980		
64	1PZ	CB-1439A	C.R.	10					
			1-5	10	59.000	62.014	1.490	23.60	
		SH-1436A	Cam	2					
				2	35.000	38.020	1.530	29.00	Shell Bearing
		PB-1439J	P.B.	5					
			1-5	5	29.000	32.000	1.530	27.00	

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
65	3P 4P	MS-1062GP	Main	6					
			1-3	6	52.000	56.023	2.004	29.00	
		TW-1005B	T.W.	4	(I.D.)	(O.D.)			
			2	2/2	57.000	69.500	2.480		
		CB-1062GP	C.R.	8					
			1-4	8	47.000	50.025	1.504	23.00	
		(SH-1062B)	Cam	3					
			1	1	46.975	51.000	2.000	24.00	
			2	1	46.775	51.000	2.100	20.00	
			3	1	46.575	51.000	2.200	24.00	
		(PB-1062J)	P.B.	4					
			1-4	4	20.000	22.000	1.030	24.00	
66 67	5R	(MS-1011GP)	Main	6					
			1	1/1	60.000	65.010	2.500	28.00	
			2	1/1	60.000	65.010	2.500	36.00	
			3	1/1	60.000	65.010	2.500	40.00	
		MS-1107GP	Main	6					
			1	2	60.000	64.000	1.990	28.00	
			△.2	2	60.000	64.000	1.990	41.98	
			3	2	60.000	64.000	1.990	36.00	
		MS-1159A	Main	6					
			1	2	60.000	64.000	1.992	27.70	
			2.3	4	60.000	64.000	1.992	35.40	
		TW-1006A	T.W.	4	(I.D.)	(O.D.)			
			2	2/2	66.250	80.000	2.975		
		TW-1133A	T.W.	4	(I.D.)	(O.D.)			
			2	2/2	66.250	80.000	1.990		
		CB-1046A	C.R.	8					
			1-4	8	55.000	58.025	1.500	26.00	
		SH-1107A	Cam	5					
		(SH-1013B)	1	1	46.475	50.000	1.750	29.00	
			2	1	46.225	50.000	1.875	20.00	
			3	1	45.975	50.000	2.000	46.00	
			4	1	45.725	50.000	2.125	19.00	
			5	1	45.475	50.000	2.250	28.00	
		PB-1046J	P.B.	4					
			1-4	4	22.009	24.000	1.030	31.60	
68	2R 12R	MS-1060A	Main	6					
			1	2	58.000	61.600	1.790	30.00	
			2	2	58.000	61.600	1.790	34.00	
			3	2	58.000	61.600	1.790	40.00	
		TW-1007A	T.W.	4	(I.D.)	(O.D.)			
			2	2/2	64.050	76.000	3.000		
		CB-1035A	C.R.	8					
			1-4	8	50.000	53.000	1.500	27.00	
		SH-1060A	Cam	3					
			1	1	46.470	50.000	1.760	28.00	
			2	1	46.220	50.000	1.885	42.00	
			3	1	45.970	50.000	2.010	25.00	
		PB-1035J	P.B.	4					
			1-4	4	20.016	22.000	1.030	27.00	

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Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
69	6R	(MS-1094GP)	Main	10					
70	7R		1.2.4.5	8	59.980	64.000	2.000	22.00	
	8R		△ 3	2	59.980	64.000	2.000	35.80	
	10R	MS-1152GP	Main	10					
	16R		1.2.4.5	8	59.980	64.000	2.000	22.00	
	18R		3	2	59.980	64.000	2.000	28.00	
	19R	TW-1133A	T.W.	4	(I.D.)	(O.D.)			
			3	2/2	66.250	80.000	1.990		
		CB-1133GP	C.R.	8					
			1-4	8	52.990	56.000	1.500	22.00	
		SH-1068A	Cam	8					
			△1/L	1	34.990	38.014	1.509	28.04	Shell with a Hole
			1.2.4.5	7	34.990	38.014	1.509	20.13	Shell with a Hole
		PB-1068J	P.B.	4					
			1-4	4	22.000	24.000	1.030	27.80	
		DB-1152A	D.B.	2					
			1	1	45.980	49.975	2.000	25.00	
			2	1	45.980	44.975	2.000	20.00	
71	20R	MS-1133GP	Main	10					
72	21R		1.2.4.5	8	59.980	64.004	2.000	22.00	
73	22R		3	2	59.980	64.004	2.000	24.00	
		MS-1405GP	Main	10					
			1-5	5/5	59.980	64.004	2.000	22.00	
		TW-1133A	T.W.	4	(I.D.)	(O.D.)			
			3	2/2	66.250	80.000	1.990		
		TW-1405A	T.W.	4	(I.D.)	(O.D.)			
			4	2/2	66.250	80.000	2.740		
		CB-1133GP	C.R.	8					
			1-4	8	52.990	56.000	1.500	22.00	
		PB-1068J	P.B.	4					
			1-4	4	22.000	24.000	1.030	27.80	
74	1RZ	MS-1435A	Main	10					
	2RZ		1.5	2/2	59.995	64.000	1.990	25.00	
	3RZ		2.3.4	3/3	59.995	64.000	1.990	23.00	
		TW-1435A	T.W.	4	(I.D.)	(O.D.)			
			2/2		65.250	89.700	2.490		
		CB-1435A	C.R.	8					
			1-4	8	53.000	56.000	1.485	19.70	
		PB-1435J	P.B.	4					
			1-4	4	24.000	27.000	1.535	26.00	

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
75	1S	MS-1404A	Main	10					
76	2S		1.2.4.5	4/4	55.000	59.020	2.000	19.20	
77	3S		No.3	1/1	55.000	59.020	2.000	23.00	
78	4S	TW-1117A	T.W.	4	(I.D.)	(O.D.)			
	5S		No.3	2/2	64.300	76.000	2.490		
		(TW-1441A)	T.W.	4	(I.D.)	(O.D.)			
			No.3	2/2	64.250	76.000	2.490		
		CB-1404A	C.R.	8					
			1-4	8	48.000	51.000	1.488	20.50	
		CB-1419GP	C.R.	8					
			1-4	8	48.000	51.000	1.488	21.30	
		CB-1441GP	C.R.	8					
			1-4	8	52.000	55.000	1.497	20.30	
		PB-1441J	P.B.	4					
			1-4	4	22.000	24.000	1.035	26.50	
79	1SZ-FE	MS-1450A	Main	10					
80	2SZ-FE		1-5	5/5	46.000	50.000	1.995	14.80	With a Hole & Lug
	3SZ-FE	MS-2512A	Main	10					
			1-5	5/5	46.000	50.000	1.992	14.90	With 2 Holes & no Lug
		TW-2510A	T.W.	2	(I.D.)	(O.D.)			
			3	2	52.250	63.000	1.990		
		CB-1450A	C.R.	8					
			1-4	8	35.000	38.000	1.494	13.00	
		CB-2512A	C.R.	8					
			1-4	8	40.000	43.000	1.492	13.20	
81	T	MS-1104GP	Main	10					
82	2T		1.2.4.5	8	58.000	62.000	1.992	20.93	
83	2T-G		△No.3	2	58.000	62.000	1.992	30.93	
84	3T	MS-1117GP	Main	10					
85	3T-G		1-5	10	58.000	62.000	1.992	20.93	
	4T-G	*MS-	Main	10					
	12T		1-5	5/5	58.000	62.000	1.992	20.93	
	13T	TW-1117A	T.W.	4	(I.D.)	(O.D.)			
		(TW-1441A)	No.3	2/2	64.300	76.000	2.490		
		CB-1117GP	C.R.	8					
			1-4	8	48.000	51.000	1.494	19.90	φ3 Hole at 39°
		CB-1422GP	C.R.	8					
			1-4	8	48.000	51.000	1.494	18.90	φ3 Hole at 28°
		SH-1104B	Cam	5					
			No.1	1	46.475	50.000	1.745	18.00	
			No.2	1	46.225	49.750	1.745	15.90	
			No.3	1	45.975	49.000	1.495	17.90	
			No.4	1	45.725	49.250	1.745	16.00	
			No.5	1	45.475	49.500	1.995	17.90	
86	1TR-FE	MS-1459A	Main	10					
	2TR-FE		1-5	5/5	60.000	64.000	1.996	21.00	
		TW-1459A	T.W.	4	(I.D.)	(O.D.)			
				2/2	65.750	80.750	2.475		
		CB-1459A	C.R.	8					
			1-4	8	53.000	56.000	1.493	15.60	

TOYOTA

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
87 88	1UZ-FE 2UZ-FE	MS-1440GP	Main	10					
			1-2	2/2	66.770	72.020	2.500	22.50	
			3.4.5	3/3	66.770	72.020	2.500	19.50	
		TW-1440A	T.W.	4	(I.D.)	(O.D.)			
				2/2	73.850	89.300	2.500		
		CB-1440GP	C.R.	16					
			1-8	16	52.000	55.000	1.497	19.50	
		MS-1442A	Main	10					
				2/2	67.000	72.000	2.490	22.40	
				3/3	67.000	72.000	2.490	19.40	
		CB-1442A	C.R.	16					
			1-8	16	52.030	55.000	1.490	19.50	
89	1VD-FTV	MS-1465GP	Main	10					
			1,5	2/2	75.000	79.000	1.988	22.50	L/H Notch
			2-4	3/3	75.000	79.000	1.988	20.50	R/H Notch
		TW-1465A	T.W.	2	(I.D.)	(O.D.)			
				2	82.380	105.500	2.485		
		CB-1465GP	C.R.	16					
			1-6	16	55.000	58.000	1.490	17.50	
90 91 92 93	1VZ-FE 3VZ 4VZ-FE 5VZ-FE	MS-1423GP	Main	8					
			1	1/1	64.000	68.028	1.992	22.00	
			2.3.4	3/3	64.000	68.028	1.992	20.00	
		MS-1437GP	Main	8					
			1	1/1	64.000	68.028	1.992	22.00	
			2-4	3/3	64.000	68.028	1.992	20.00	
		TW-1423A	T.W.	4	(I.D.)	(O.D.)			
				2/2	71.250	86.500	2.480		
		CB-1423GP	C.R.	12					
			1-6	12	48.000	51.024	1.488	17.00	
		CB-1437GP	C.R.	12					
			1-6	12	55.000	58.000	1.490	16.80	
		CB-1445GP	C.R.	12					
			1-6	12	55.000	58.000	1.490	16.80	
		PB-1445J	P.B.	6					
			1-6	6	22.000	24.030	1.050	23.00	
94	1Y 2Y 3Y 4Y	MS-1407A	Main	10					
			1-5	5/5	58.000	62.000	1.990	20.93	
		TW-1117A	T.W.	4	(I.D.)	(O.D.)			
		(TW-1441A)	3	2/2	64.300	76.000	2.490		
		CB-1407A	C.R.	8					
			1-4	8	48.000	51.000	1.490	19.90	
		SH-1407A	Cam	5					
			1	1	46.475	50.000	1.750	17.90	
			2	1	46.225	49.750	1.750	15.90	
			3	1	45.975	49.000	1.500	17.90	
			4	1	45.725	49.250	1.750	15.90	
			5	1	45.475	49.500	2.000	17.90	

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
95	1W	MS-2109GP	Main 1-5	10					
				10	72.960	78.000	2.493	25.13	
		TW-2109GP	T.W. 4	4	(I.D.)	(O.D.)			
				2/2	82.250	98.900	2.500		
		CB-2109GP	C.R. 1-4	8	61.960	65.985	1.997	28.13	
		SH-2109K	Cam No.1	3	56.970	60.000	1.500	27.00	
			No.2	1	56.770	59.800	1.500	27.00	
			No.3	1	56.570	59.600	1.500	27.00	
		PB-2109J	P.B. 1-4	4	35.000	39.000	2.040	(U) 30.00 (L) 38.00	
				4					
96	1Z	MS-1426A	Main 1-5	10	74.000	78.000	1.985	25.60	
		MS-1474A	Main 1-5	10	74.000	78.000	1.985	22.40	
				5/5					
				5/5					
97	2Z	TW-1426A	T.W. 4	4	(I.D.)	(O.D.)			
					82.250	95.750	2.480		
		CB-1137A	C.R. 1-4	8	55.000	58.000	1.485	25.60	
				8					
98	11Z	MS-1443A	Main 1-7	14	74.000	78.000	1.985	25.60	
				7/7					
				7/7					
				7/7					
99	13Z	MS-1475A	Main 1-7	14	74.000	78.000	1.985	22.40	
				7/7					
		TW-1426A	T.W. 2/2	4	(I.D.)	(O.D.)			
				2/2	82.250	95.750	2.480		
		CB-1403A	C.R. 1-4	12	55.000	58.000	1.485	25.60	
				12					
100	1ZR-FE 2ZR-FE 3ZR-FE	MS-1471A	Main 1-5	10	48.000	52.000	1.997	17.10	
				5/5					
		TW-1457A	T.W. 2	2	(I.D.)	(O.D.)			
				2	54.25	69.75	2.475		
		CB-1471A	C.R. 1-4	8	44.000	47.000	1.493	14.40	
				8					
101	1ZZ 2ZZ	MS-1457A		10	48.000	52.000	1.996	16.80	
				5/5					
		TW-1457A		2	(I.D.)	(O.D.)			
				2	54.25	69.75	2.475		
		CB-1457A		8	44.000	47.000	1.490	15.50	
				8					
		PB-1457J		4	20.000	22.000	1.000	20.00	
				4					

GM KOREA

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
1	G15MF	MS-3021A	Main	10					
			1.2.4.5	8	54.985	59.000	2.001	19.43	M1-3017
		CB-3017A	△3	2	54.985	59.000	2.001	25.90	
			C.R.	8					
			1-4	8	42.987	46.000	1.497	16.63	
2	F8C F8L	MS-3879A	Main	8					
			1-4	8	44.000	48.000	1.991	17.10	
		TW-3879A	T.W.	2	(I.D.)	(O.D.)			
			3	2	52.250	68.000	2.520		
		CB-3879A	C.R.	6					
			1-3	6	38.000	41.000	1.491	18.10	
3	C22SEL	MS-1641GP (MS-3020GP)	Main	10					
			1.2.4.5	8	57.995	62.000	1.995	19.43	
			△3	2	57.995	62.000	1.995	25.92	
		CB-1641GP	C.R.	8					
			1-4	8	48.987	52.000	1.497	19.33	An Oil Hole at 13°
		CB-1642GP	C.R.	8					
			1-4	8	48.987	52.000	1.497	19.33	2 Oil Holes
		(CB-3020GP)	C.R.	8					U : 2 Oil Holes
			1-4	4/4	48.987	52.000	1.497	19.33	L : No Oil Holes
4	S-TEC	MS-3888A	Main	10					
			1-5	10	44.000	48.000	1.991	17.10	
		TW-3879A	T.W.	2					
			3	2	52.250	68.000	2.520		
		CB-3888A	C.R.	8					
			1-4	8	38.000	41.000	1.491	18.10	
5	SAIL	MS-3890A	Main	10					
			1-5	5/5	49.000	53.000	1.996	17.10	
		TW-3890A	T.W.	2	(I.D.)	(O.D.)			
				2	57.300	72.700	2.520		
		CB-3890A	C.R.	8					
			1-4	8	40.000	43.000	1.492	18.00	An Oil Hole at 31.5°

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
2	D4CB	MS-3887A	Main 1-5	10 5/5	67.000	71.000	1.990	24.10	
		TW-3887A	T.W.	4	(I.D.)	(O.D.)			
				4	73.250	87.000	1.975		
		CB-3887A	C.R. 1-4	8 8	57.000	60.000	1.502	27.13	
6	G4FK	MS-3880A	Main 1.2.4.5	10 4/4	49.992	54.000	1.994	18.00	
			△3	1/1	49.992	54.000	1.994	23.00	
		CB-3880A	C.R.	8					
			1-4	8	44.990	48.000	1.495	19.00	
7	G4GM	MS-3878A	Main 1.2.4.5	10 4/4	56.992	61.000	1.994	21.00	
			3	2	56.992	61.000	1.994	21.00	
		TW-3878A	T.W.	2	(I.D.)	(O.D.)			
			3	2	63.250	84.725	2.470		
8	G4HC	MS-3882A	Main 1-5	10 5/5	42.000	46.000	2.000	16.10	
		TW-3882A	T.W.	2	(I.D.)	(O.D.)			
				2	47.750	58.250	2.475		
		CB-3882A	C.R. 1-4	8 8	38.000	41.000	1.500	14.05	
9	G4KC G4KD G4KF	MS-3889A	Main 1-5	10 5/5					
		TW-3889A	T.W.	2	(I.D.)	(O.D.)			
				2	58.250	76.250	1.965		
		CB-3889A	C.R. 1-4	8 8			1.507	17.10	

KIA

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
1	B3	MS-3876A	Main 1-5	10 5/5	49.956	54.000	2.013	17.50	
		TW-3876A	T.W.	2	(I.D.)	(O.D.)			
				2	57.250	69.000	2.550		
		CB-3876A	C.R. 1-4	8 8	39.955	43.000	1.513	17.00	
6	J2 JT	MS-3883A	Main 1-5	10 6/4	70.000	74.090	2.004	27.13	
		*TW-	T.W.						
				8					
		CB-3883A	C.R. 1-4	8 8	57.000	60.846	1.838	26.73	
7	JS S2	MS-3885A	Main 1-5	10 9	65.000	69.026	2.004	27.13	
			3L	1	65.000	69.026	2.004	27.13	
		*TW-	T.W.						
		CB-3885A	C.R. 1-4	8 8	57.000	60.846	1.838	27.73	
9	VN RFA	MS-3884A	Main 1-5	10 5/5	75.000	80.090	2.504	27.33	
		*TW-	T.W.						
				8					
		CB-3883A	C.R. 1-4	8 8	57.000	60.846	1.838	26.73	
10	G4KC G4KD G4KF	MS-3889A	Main 1-5	10 5/5					
		TW-3889A	T.W.	2	(I.D.)	(O.D.)			
				2	58.250	76.750	1.965		
		CB-3889A	C.R. 1-4	8 8			1.507	17.10	

RENAULT

Group No.	Engine Model	N D C Set No.	Position	Pcs /Eng	Dimension (mm) STD Size			Length mm Max.	Note
					Shaft Dia Max.	Housing Bore Min.	Wall Thickness Max.		
1	H4M	MS-1227A	Main	10					
			1-5	10	47.979	51.997	2.005	16.00	
		TW-1227A	T.W.	2	(I.D.)	(O.D.)			
				2	54.950	73.750	1.960		
		CB-1227A	C.R.	8					
			1-4	4/4	39.971	43.000	1.510	15.00	
2	M4R	MS-1228A	Main	10					
			1-5	10	51.979	55.997	2.005	17.00	
		TW-1228A	T.W.	2	(I.D.)	(O.D.)			
				2	58.950	76.750	2.210		
		CB-1228A	C.R.	8					
			1-4	4/4	43.971	47.000	1.506	16.00	
3	M9R	*MS-	Main						
		*TW-	T.W.						
		*CB-	C.R.						
4	M5M	MS-1234A	Main	10					
			1-5	5/5	51.979	55.997	1.998	17.00	
		TW-1228A	T.W.	2	(I.D.)	(O.D.)			
				2	58.950	76.750	2.210		
		CB-1234GP	C.R.	8					
			1-4	4/4	43.971	47.000	1.496	16.00	
5	XH5	MS-1233A	Main	8					
			1-4	4/4	47.979	51.997	1.998	16.00	
		TW-1227A	T.W.	2	(I.D.)	(O.D.)			
				2	54.950	73.750	1.960		
		CB-1233GP	C.R.	6					
			1-3	3/3	39.971	43.000	1.505	15.00	

Numerical Listing

MK	ENGINE MODEL	NDC NO.	Revised No.	MK	ENGINE MODEL	NDC NO.	Revised No.
MI	G31, G32	BB-1085A		UD	ND6	CB-1083GP	
MI	G51B	BB-1131A		UD	PD6	CB-1084GP	
MI	G31, G32	BB-1164A		MI	G31, 4G32, 4D65	CB-1085A	
MI	4G63	BB-1811A		MZ	MA	CB-1086A	
MZ	G6	BB-2011A		IZ	D920, E110	(CB-1092GP)	
DH	AB, AD, AB31	BB-2500A		MZ	YA, ZB	CB-1097GP	
DH	CB, CD, CL	BB-2501A		IZ	G180	(CB-1103GP)	CB-1628GP
UD	ZD30DD, ZD30DDTI	BB-2817A		TY	T, 2T	CB-1117GP	
				UD	RD8	CB-1118GP	
MF	6DC, 8DC, 10DC	(C1-1073GP)	CR-1073GP	UD	RD10	CB-1119GP	
MF	6DC, 8DC, 10DC	CR-1073GP		TY	B, 3B	CB-1121A	
MF	4DR5, 6DR	(C1-1115GP)	CR-1115GP	UD	ED30	CB-1122GP	
MF	4DR5, 6DR	CR-1115GP		TY	F	CB-1123A	
IZ	4BA1, 4BB1, 6BB1	(C1-1129GP)	CR-1129GP	SB	EA62, 63, 64, 81	CB-1124GP	
IZ	4BA1, 4BB1, 6BB1	CR-1129GP		MI	G51, G52B, 4D55	CB-1131A	
MF	6DC, 8DC, 10DC	(C1-1147GP)	CR-1147GP	TY	18R, 20R, 22R	CB-1133GP	
MF	6DC, 8DC, 10DC	CR-1147GP		HD	EB1, EE, ER-T	CB-1134GP	
IZ	8PA1, 10PA1, 12PA1	(C1-1156GP)	CR-1156GP	IZ	DA640T	(CB-1136GP)	
IZ	8PA1, 10PA1, 12PA1	CR-1156GP		TY	J, 2J	CB-1137A	
IZ	8PD1, 10PD1, 12PD1	(C1-1630GP)	CR-1630GP	HN	EH300	(CB-1140GP)	
IZ	8PD1, 10PD1, 12PD1	CR-1630GP		MZ	NA, VA	CB-1141A	
MH	S2E, S3E, S4E, S6E	(C1-1826GP)	CR-1826GP	HD	EC, ED	CB-1142GP	
MH	S2E, S3E, S4E, S6E	CR-1826GP		HN	EF100, 350, 700	(CB-1144GP)	
MH	S4K-T, S6K-T	(C1-1833GP)	CR-1833GP	MZ	HA, SL	CB-1153A	
MH	S4K-T, S6K-T	CR-1833GP		IZ	E120, 6RA1	CB-1154GP	
MH	S4S, S6S	(C1-1843A)	CR-1843A	IZ	2AA, 2AB	CB-1157A	
MH	S4S, S6S	CR-1843A		IZ	2AA, 2AB	(CB-1157GP)	CB-1157A
HN	J05C, J07C	(C1-2117GP)	CR-2117GP	DH	DG, DL	CB-1158A	
HN	J05C, J07C	CR-2117GP		MF	4D30	(CB-1160GP)	CB-1807GP
HN	J05C-TI, J08C-TI	(C1-2118GP)	CR-2118GP	TY	L	CB-1161A	
HN	J05C-TI, J08C-TI	CR-2118GP		HN	EH100	CB-1165GP	
				MZ	E3, E5, B5	CB-1168A	
NS	P40	CB-1001GP		MI	G11, G12	CB-1169A	
NS	H20	CB-1002GP		TY	M, 5M	CB-1171GP	
NS	J13, J15, J16	CB-1007GP		NS	CA16, CD17	CB-1173GP	
IZ	DA120	(CB-1023GP)		NS	E13, E15	CB-1174GP	
MI	4G41, 4G42	CB-1025GP		HD	EH	CB-1175GP	
UD	SD22	CB-1029GP		NS	L20, LD28	CB-1177GP	
IZ	G130, G161	CB-1032GP		SZ	F8A, F10A	CB-1179A	
TY	12R	CB-1035A		MZ	S2	CB-1181GP	
MF	6DB1	CB-1037GP		UD	TD27	CB-1190GP	CB-2805A
HN	DS50	(CB-1039GP)		UD	TD23	CB-1192GP	
TY	D, 2D	CB-1041GP		UD	BD30	CB-1194GP	
IZ	DH100	(CB-1042GP)		UD	TD42	CB-1195GP	
NS	L13, L18, Z24	CB-1044GP		NS	TB42	CB-1199A	
NS	A10, A12, A15	CB-1045GP		NS	VG20E	(CB-1200GP)	
TY	5R	CB-1046A		NS	VG30	(CB-1201GP)	CB-1210A
NS	L20, LD28	CB-1048GP		NS	MA10	CB-1202A	
IZ	DA220	(CB-1050GP)		NS	RB20E	CB-1203GP	
IZ	DA640	(CB-1052GP)		NS	J18	CB-1204GP	
MF	6DS	(CB-1055GP)	CB-1808GP	NS	RB30	CB-1206GP	
TY	2K, 3K, 4K	CB-1056GP		NS	RD28	CB-1207A	
UD	SD33	CB-1058GP		NS	GA15E	CB-1208A	
HN	DM100	(CB-1059GP)		NS	KA24	CB-1209GP	
TY	3P, 4P	CB-1062GP		NS	VG30	CB-1210A	
TY	J, 2J, 5P	(CB-1063A)	CB-1137A	NS	VG30D	CB-1211GP	
IZ	C190, C223, C240	CB-1070A		NS	SR18, SR20	CB-1213GP	
IZ	C190, C223, C240	(CB-1070GP)	CB-1070A	NS	VH41, VH45	CB-1214GP	
MZ	XA	CB-1075GP		NS	RB24	CB-1215GP	
TY	H, 2H	(CB-1080A)	CB-1403A	NS	RB25, RB26DETT	CB-1216GP	
HN	EC100	CB-1081GP		NS	CD20	CB-1217A	
MZ	PB, PC	CB-1082A		NS	VQ20, 25, 30, 35	CB-1219GP	

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MK	ENGINE MODEL	NDC NO.	Revised No.	MK	ENGINE MODEL	NDC NO.	Revised No.
NS	K21, K25	CB-1220A		TY	1TR-FE, 2TR-FE	CB-1459A	
NS	KH1S, 2S, 3S, NA20S	CB-1221A		TY	1CD-FTV	CB-1460A	
NS	VQ20, 25, 30, 35	CB-1222GP		TY	1ND-TV	CB-1461A	
NS	VQ20, 25, 30, 35	CB-1223GP		TY	1ND-TV	CB-1462A	
NS	CG10DE, 13E	CB-1224A		TY	1KR-FE	CB-1463A	
NS	QR20DE, 25DE	CB-1226GP		TY	1VD-FTV	CB-1465A	
NS	HR15DE, 16DE, H4M	CB-1227A		TY	2GR-FE	* CB-1468A	
NS	MR18DE, 20DE, M4R	CB-1228A		TY	1ZR-FE, 2ZR-FE	CB-1471A	
NS	YD22, YD25	CB-1229A		TY	1AD-FTV, 2AD-FTV	CB-1473GP	
NS	VK45DE, VK56DE	CB-1231GP		IZ	3AA1, 3AD1	CB-1601A	
NS	VQ40DE	CB-1232GP		IZ	3AA1, 3AD1	(CB-1601GP)	CB-1601A
NS	HR12DE, XH2	CB-1233GP		IZ	3AE1, 3AF1, 3KR1	CB-1602A	
NS	MR16DDT, M5M	CB-1234GP		IZ	4BC2, 4BE1	CB-1603GP	
NS	CR14DE	CB-1235A		IZ	6QA1	CB-1609GP	
TY	1A, 2A, 3A, 5A	CB-1400A		IZ	6BB1	CB-1612GP	
TY	B, 3B, 11B	CB-1401A		IZ	6RB1	CB-1613GP	
TY	1G	CB-1402GP		IZ	6RA1, 6RA1-T	CB-1614GP	
TY	12H-T	CB-1403A		IZ	4FA1, 4FC1-T	CB-1616GP	
TY	1S, 3S	CB-1404A		IZ	6SA1	CB-1618GP	
TY	L, 2L	CB-1406A		IZ	4ZA1, G200W	CB-1620GP	
TY	1Y, 2Y, 3Y	CB-1407A		IZ	4XC1	CB-1621A	
TY	1C, 2C	CB-1408A		IZ	4JA1, 4JB1	CB-1622A	
TY	2A, 3A, 5A	CB-1410GP		IZ	4JA1, 4JB1	(CB-1622GP)	CB-1622A
TY	2L-T	CB-1411A		IZ	4EC1	CB-1624A	
TY	3F	CB-1413A		IZ	4XE1	CB-1626GP	
TY	5M, 7M	CB-1414GP		IZ	4ZE1	CB-1627A	
TY	1E, 2E, 4E	CB-1415A		IZ	G180, G200	CB-1628GP	
TY	5K	CB-1416A		IZ	4HF1, 4HG1, 4HJ1	CB-1631GP	
TY	3S, 4S	CB-1419GP		IZ	6HE1, 6HH1	CB-1632GP	
TY	1G	CB-1420GP		IZ	4XE1-T	* CB-1633GP	
TY	1C, 2C	CB-1421A		IZ	6SA1	CB-1634GP	
TY	2T-G, 3T, 12T, 13T	CB-1422GP		IZ	6SD1	CB-1635GP	
TY	1VZ-FE	CB-1423GP		IZ	6QA1, 6QA2, 6QB2	CB-1636GP	
TY	3E, 5E	CB-1424A		IZ	6HE1-T, 6HK1-T	CB-1639GP	
TY	4A-GZE	CB-1425GP		IZ	4HE1-T, 4HK1-T	CB-1640GP	
TY	12J	CB-1427A		IZ	C22NE, 22LE, C22SEL	CB-1641GP	
TY	B	CB-1428A		IZ	C22NE, 22LE	CB-1642GP	
TY	13B-T, 14B, 15B	CB-1429A		IZ	6HK1-T	CB-1643GP	
TY	1G	CB-1433A		IZ	4HK1-T	CB-1644GP	
TY	1JZ-FSE, 2JZ-FSE	CB-1434GP		IZ	6VD1, 6VE1	CB-1645A	
TY	1RZ, 2RZ, 3RZ	CB-1435A		IZ	6WA1-T, 6WF1-T	CB-1646GP	
TY	1HZ, 1HD	CB-1436A		MI	G23	(CB-1800A)	
TY	3VZ-E	CB-1437GP		MI	4D56-T (131kW)	CB-1802GP	
TY	1FZ	CB-1438A		MF	6D22, 6D23	CB-1803GP	
TY	1PZ	CB-1439A		MF	8DC9	CB-1804GP	
TY	1UZ	CB-1440GP		MF	4D30, 4D32	CB-1807GP	
TY	5S	CB-1441GP		MF	6D31	CB-1808GP	
TY	2UZ-FE	CB-1442A		MF	4DR5	CB-1812GP	
TY	3VZ-FE, 4VZ-FE, 5VZ-FE	CB-1445GP		MF	6DR5	CB-1813GP	
TY	1DZ	CB-1446A		MF	6D16	CB-1820GP	
TY	7K	CB-1447A		MI	6G72	CB-1822A	
TY	2C-T, 3C-T	CB-1448A		MI	6G71	CB-1823A	
TY	1N, 1N-T	CB-1449A		MI	3G81, 3G82	CB-1824A	
TY	1SZ-FE	CB-1450A		MI	G15B, 4G15	CB-1825A	
TY	7A	CB-1451A		MI	4G63	CB-1827A	
TY	1KZ-TE, 1KD-FTV	CB-1452A		MI	4G91, 4G93	CB-1828A	
TY	2C-T, 3C-T	CB-1453A		MI	4G92	CB-1829GP	
TY	1AZ-FE, 2AZ-FE	CB-1454A		MF	4D34	CB-1830GP	
TY	1MZ-FE, 2MZ-FE	CB-1455A		MF	4DR5	CB-1831GP	
TY	1NZ-FE, 2NZ-FE	CB-1456A		MI	4M40, 4M41	CB-1832GP	
TY	1ZZ-FE, 2ZZ-FE	CB-1457A		MF	4D34, 4M50-T	CB-1835GP	
TY	1GR-FE, 2GR-FE	CB-1458A		MF	4D33, 35, 36, 4M51	CB-1836GP	

Numerical Listing

MK	ENGINE MODEL	NDC NO.	Revised No.	MK	ENGINE MODEL	NDC NO.	Revised No.
MF	6D34-T	CB-1837GP		SB	EJ18, EJ20, EJ22	CB-2305A	
MF	6D16-T, 6D17, 6M60-T	CB-1838GP		SB	EJ25	CB-2306GP	
MF	6D24, 6M70T	CB-1839GP		SB	EN07	CB-2307GP	
MI	6G74	CB-1842GP		SZ	Y64(SS80), F6A	CB-2401A	
MI	4D68	*CB-1844GP		SZ	F5A	CB-2402A	
MI	4D56-T (105kW)	CB-1845A		SZ	G10	CB-2403A	
MI	6A12	CB-1846GP		SZ	G13	CB-2404A	
MI	4M42-T	CB-1847GP		SZ	G16	CB-2405A	
MZ	JF	*CB-2001A		SZ	F6A	CB-2406A	
MZ	YA	CB-2002GP		SZ	H20A, H25A, H27A	CB-2407A	
MZ	F8, FE, RF	CB-2004A		SZ	J18A, J20A	CB-2408A	
MZ	RF, RF-T	CB-2007A		SZ	K6A	CB-2410A	
MZ	B6	CB-2008A		DH	AB, AD	CB-2500A	
MZ	F8, FE	CB-2009A		DH	CB, CD, CL	CB-2501A	
MZ	JE	CB-2010A		DH	CL-T	CB-2503A	
MZ	PN	CB-2013A		DH	EB, EF	CB-2507A	
MZ	TF, TM	CB-2014A		DH	CB-T	CB-2509GP	
MZ	XA	CB-2015GP		DH	ED	CB-2510A	
MZ	WL, WL-T	CB-2016A		DH	HC, HD	CB-2511A	
MZ	KJ, KL	CB-2017GP		DH	K3-VE, K3-VET	CB-2512A	
MZ	FP, FS	CB-2018A		DH	KF-VE, KF-DET	CB-2513A	
MZ	ZY	*CB-2019A		UD	FE6	CB-2800GP	
MZ	W9, WE	CB-2021A		UD	ED33, FD33	CB-2801GP	
HN	EB400	CB-2100GP		UD	ED6, FD6	CB-2802GP	
HN	EH500	CB-2101GP		UD	PF6-T	CB-2803GP	
HN	EK100, EK130	CB-2102GP		UD	FD42, FD46, FD46-T	CB-2804GP	
HN	EL100	CB-2103GP		UD	ZD30DD, ZD30DDTI	CB-2805A	
HN	DK10, ER100	CB-2104GP		UD	FE6-T	CB-2809GP	
HN	EP100	CB-2106GP		UD	PF6, PF6-T	CB-2810GP	
HN	EF550, EF750	CB-2107GP		UD	PG6, PG6H	CB-2811GP	
HN	H06C, H07C	CB-2108GP		UD	RF8T, RG8, RH8	CB-2812GP	
HN	W04D	CB-2109GP		UD	RH10	CB-2813GP	
HN	W06D	CB-2110GP		UD	GE13T	CB-2814GP	
HN	H06C, H07C	CB-2111GP		UD	NF6T	CB-2815GP	
HN	K13C, K13C-T	CB-2112GP		UD	MD92, MD92-T	CB-2816GP	
HN	EP100, M10U, P09B-T	CB-2113GP		DW	G15MF, OPEL KADETT	CB-3017A	
HN	V21C, V22C, V25C	CB-2114GP		KI	B3	CB-3876A	
HN	H07D	CB-2115GP		HY	G4GM	CB-3878A	
HN	P11C	CB-2122GP		DW	F8C, F8CL	CB-3879A	
HD	A18A, B20A, ES	CB-2200GP		HY	G4FK	CB-3880A	
HD	D17A	CB-2201GP		HY	G4HA, G4HC	CB-3882A	
HD	EY	CB-2203GP		KI	J2, JT, VN, RFA	CB-3883A	
HD	EV, D13	CB-2204GP		KI	JS, S2	CB-3885A	
HD	EW, D15	CB-2205GP		HY	D4CB	CB-3887A	
HD	ER	CB-2206GP		KI	S-TEC 1.0L	CB-3888A	
HD	D16, ZC	CB-2208GP		HY	G4KC, G4KD, G4KF	CB-3889A	
HD	EV1	CB-2209GP		DW	SAIL (SHANGHAI GM)	CB-3890A	
HD	C25A, C27A	CB-2210GP					
HD	C20A	CB-2211GP		TY	16R, 18R	DB-1152A	
HD	E07A	CB-2212GP		TY	16R, 18R	(DB-1152B)	DB-1152A
HD	F20A, F22A, H23A	CB-2213GP		TY	5M, 7M	DB-1171A	
HD	D12, D13C	CB-2214GP		TY	5M, 7M	(DB-1171B)	DB-1171A
HD	B16A	CB-2215GP		NS	E13, E15	JB-1174A	
HD	K20A	CB-2216GP		NS	E13, E15	(JB-1174B)	JB-1174A
HD	H22A	CB-2217GP					
HD	K24A	CB-2218GP		MF	4DR5, 6DR5	(M1-1115GP)	MR-1115GP
HD	L13A, L15A	CB-2219A		MF	4DR5, 6DR5	MR-1115GP	
SB	EA82	CB-2300GP		IZ	4BA, 6BB1, D500	(M1-1129GP)	MR-1129GP
SB	EF10	CB-2301GP		IZ	4BA, 6BB1, D500	MR-1129GP	
SB	EF12	CB-2302GP		MF	6DC, 8DC, 10DC	(M1-1147GP)	MR-1147GP
SB	EK21, EK22	CB-2303GP		MF	6DC, 8DC, 10DC	MR-1147GP	
SB	ER27	CB-2304A		IZ	8PA1, 10PA1, 12PA1	(M1-1156GP)	MR-1156GP

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MK	ENGINE MODEL	NDC NO.	Revised No.	MK	ENGINE MODEL	NDC NO.	Revised No.
IZ	8PA1, 10PA1, 12PA1	MR-1156GP	MR-1630GP	HN	DK10, ER100	(MS-1149GP)	MS-1153A
IZ	8PD1, 10PD1, 12PD1	(M1-1630GP)		TY	18R-G	MS-1152GP	
IZ	8PD1, 10PD1, 12PD1	MR-1630GP		MZ	HA, SL	MS-1153A	
MH	S2E, S3E, S4E, S6E	(M1-1826GP)		MZ	HA, SL	(MS-1153GP)	
MH	S2E, S3E, S4E, S6E	MR-1826GP		IZ	E120	MS-1154GP	
MH	S4K-T, S6K-T	(M1-1833GP)		IZ	2AA, 2AB	MS-1157GP	
MH	S4K-T, S6K-T	MR-1833GP		DH	DG, DL	(MS-1158A)	
MH	S4S, S6S	(M1-1843A)		TY	5R	MS-1159A	
MH	S4S, S6S	MR-1843A		MF	4D30	(MS-1160GP)	
HN	J05C, J07C, J08C	(M1-2117GP)		TY	L	MS-1161A	
HN	J05C, J07C, J08C	MR-2117GP	MR-2117GP	MF	6D22, 6D23	MS-1162GP	MS-1211GP
TY	F	(MS-1007GP)		IZ	4BA1, 4BC1	MS-1163GP	
MI	4G41, 4G42	MS-1024GP		MI	G31, G32, 4D65	MS-1164A	
UD	SD22	MS-1028GP		MZ	E3, E5, B6, D5, TC	MS-1168A	
NS	J	(MS-1034GP)		MI	G11, G12	MS-1169A	
MF	6DB1	MS-1036GP		NS	P40	MS-1172GP	
HN	DS30, DS50, DS70	(MS-1038GP)		NS	CA16, CD17	MS-1173GP	
TY	D, 2D	MS-1040GP		NS	E13, E15	MS-1174GP	
NS	H20	MS-1042GP		HD	EH	MS-1175A	
NS	L13, L16, L18	MS-1043GP		SZ	F8A, F10A	MS-1179A	
NS	L20, LD28	MS-1047GP	MS-1051GP	UD	FD33	MS-1180GP	MS-2817A
TY	M, 5M	MS-1051GP		MZ	S2	MS-1181GP	
IZ	DA120, DA640	(MS-1052GP)		UD	SD23	MS-1182GP	
HN	DK10, ER100	MS-1054GP		NS	LD20II, Z24	MS-1183GP	
TY	2K, 3K, 4K	MS-1056GP		SB	EA63, EA64	(MS-1184GP)	
UD	SD33	MS-1058GP		UD	RE8	MS-1186GP	
HN	DM100	MS-1059GP		UD	RE10	MS-1187GP	
TY	4R, 12R	MS-1060A		UD	TD23, TD27	(MS-1190GP)	
TY	3P, 4P	MS-1062GP		UD	NE6	MS-1193GP	
IZ	DA220	(MS-1064GP)		UD	TD42	(MS-1195GP)	
HN	EB100, 300, 400	MS-1079GP	MS-1087GP	UD	RE8	MS-1197GP	MS-2818A
MZ	PB	(MS-1082GP)		UD	RE10	MS-1198GP	
UD	PD6	MS-1084GP		NS	TB42	MS-1199A	
NS	A12, A15	MS-1087GP		NS	VG20E	MS-1200GP	
NS	J13, J15, J16	MS-1091GP		NS	VG20, VG30	(MS-1201GP)	
IZ	DH100, D920	(MS-1092GP)		NS	MA10	MS-1202A	
TY	16R, 18R	(MS-1094GP)		NS	RB20, RB30	MS-1203GP	
IZ	G130, G161, G180	MS-1103GP		NS	RD28	MS-1207A	
TY	T, 2T	(MS-1104GP)		NS	GA15E	MS-1208A	
TY	5R	MS-1107GP		NS	KA24	MS-1209GP	
MZ	PC	MS-1113GP	MS-1117GP	NS	VG20, VG30	MS-1211GP	MS-1211GP
MZ	MA, NA	MS-1114A		NS	SR18, SR20	MS-1213GP	
TY	T, 2T	MS-1117GP		NS	VH41, VH45	MS-1214GP	
UD	RD8	MS-1118GP		NS	RB26DE	MS-1216GP	
UD	RD10	MS-1119GP		NS	CD20	MS-1217A	
TY	B, 3B	MS-1121A		NS	LD20	MS-1218GP	
TY	F, 2F	MS-1123A		NS	VQ20,VQ25,VQ30,VQ35	MS-1219GP	
SB	EA62, 63	(MS-1124GP)		NS	KH1S, 2S, 3S, K21, K25	MS-1220A	
SB	EK21, EK22	MS-1126GP		NS	NA20	MS-1221A	
MI	G51, G52B, 4D55	MS-1131A		NS	CG10DE, CG13DE	MS-1224A	
TY	20R, 21R	MS-1133GP	MS-1137A	NS	NA16	MS-1225A	
HD	EC, ED, EE, EV, EW	MS-1134GP		NS	QR20DE, QR25DE	MS-1226A	
UD	ED6	MS-1135GP		NS	HR15DE, HR16DE, H4M	MS-1227A	
TY	J, 2J	MS-1137A		NS	MR18DE, MR20DE, M4R	MS-1228A	
TY	J, 2J	(MS-1137GP)		NS	YD22, YD25	MS-1229A	
IZ	C190	MS-1138GP		NS	TB48DE	MS-1230A	
HN	EC100, EH500	MS-1140GP		NS	VK45DE, VK56DE	MS-1231GP	
MZ	VA	MS-1141A		NS	VQ40DE	MS-1232GP	
HN	EF100, EF300	MS-1144GP		NS	HR12DE, XH2	MS-1233A	
MF	6D10, 6D15	MS-1145GP		NS	MR16DDT, M5M	MS-1234A	
HN	EF350, EF700	MS-1148GP	MS-1400A	TY	1A, 2A, 3A	MS-1400A	
				TY	1G	MS-1402A	

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MK	ENGINE MODEL	NDC NO.	Revised No.	MK	ENGINE MODEL	NDC NO.	Revised No.
TY	1S, 3S, 4S, 5S	MS-1404A	MS-1428A	IZ	4JA1, 4JD1, 4JF1	MS-1622A	MS-1622A
TY	20R, 21R, 22R	MS-1405GP		IZ	4JA1, 4JD1, 4JF1	(MS-1622GP)	
TY	L, 2L, 2L-T	MS-1406A		IZ	4JB1, 4JG-2, 4JH1	MS-1623A	MS-1623A
TY	1Y, 2Y, 3Y	MS-1407A		IZ	4JB1, 4JG-2, 4JH1	(MS-1623GP)	
TY	1C, 2C	MS-1408A		IZ	4EC1	MS-1624GP	
TY	2A, 3A, 5A	MS-1410A		IZ	4EE1-T	MS-1625GP	
TY	3F	MS-1413A		IZ	4XC1, 4XE1	MS-1626A	
TY	5M, 7M	MS-1414GP		IZ	4ZE1	MS-1627GP	
TY	1E, 2E, 4E	MS-1415A		IZ	4BB1	MS-1628GP	
TY	5K	MS-1416A		IZ	6BB1	MS-1629GP	
TY	3B, 11B	(MS-1417A)		IZ	4HF1, 4HJ1, 4HK1-T	MS-1631GP	
TY	1G	MS-1420A		IZ	6HE1, 6HH1, 6HE1-T	MS-1632GP	
TY	1C, 2C	MS-1421A		IZ	4XE1-T	* MS-1633A	
TY	1VZ, 3VZ, 4VZ	MS-1423GP		IZ	6SA1	MS-1634GP	
TY	3E, 5E	MS-1424A		IZ	6QA1, 6QA2, 6QB2	MS-1636GP	
TY	1Z	MS-1426A		IZ	C22NE, 22LE, C22SEL	MS-1641GP	
TY	2H,	MS-1427A		IZ	6VD1, 6VE1	MS-1645A	
TY	B, 3B, 13B-T, 14B, 15B	MS-1428A		IZ	6WA1-T, 6WF1-T	MS-1646GP	
TY	13B-T	(MS-1429A)	MS-1428A	MI	G23	MS-1800A	
TY	1JZ-FE, 2JZ-FE	MS-1434A		MI	4D56-T (131kW)	MS-1802GP	
TY	1RZ, 2RZ	MS-1435A		MF	4D30, 4D32	MS-1807GP	
TY	1HD, 1HZ	MS-1436A		MF	6D31	MS-1808GP	
TY	3VZ-FE, 5VZ-FE	MS-1437GP		MF	4DR5	MS-1812GP	
TY	1FZ	MS-1438A		MF	6DR5	MS-1813GP	
TY	1PZ	MS-1439A		MI	G11, G12	MS-1818A	
TY	1UZ	MS-1440GP		MI	G51, G52B	MS-1819A	
TY	2UZ-FE	MS-1442A		MI	G23	MS-1820A	
TY	11Z	MS-1443A		MI	4D65, G31, G32	MS-1821A	
TY	1DZ	MS-1446A		MI	6G71, 6G72	MS-1822A	
TY	1C-T, 2C-T	MS-1448A		MI	3G81	MS-1824A	
TY	1N, 1N-T	MS-1449A		MI	4G63	MS-1827A	
TY	1SZ-FE	MS-1450A		MI	4G91, 4G92, 4G93	MS-1828A	
TY	1KZ-TE, 1KD-FTV	MS-1452A		MI	4G92	MS-1829GP	
TY	1AZ-FE, 2AZ-FE	MS-1454A		MI	4M40, 4M41	MS-1832GP	
TY	1MZ-FE, 2MZ-FE	MS-1455A		MI	4G63	MS-1834A	
TY	1NZ-FE, 2NZ-FE	MS-1456A		MF	4M51, 4M50-T	MS-1836GP	
TY	1ZZ-FE, 2ZZ-FE	MS-1457A		MF	6D16, 6M61	MS-1838GP	
TY	1GR-FE, 2GR-FE	MS-1458A		MF	6D24, 6M70T	MS-1839GP	
TY	1TR-FE, 2TR-FE	MS-1459A		MF	8M20, 8M21	MS-1840GP	
TY	1ND-TV	MS-1461A		MI	6G74	MS-1842GP	
TY	1KR-FE	MS-1463A		MI	4D55, 4D56	MS-1845A	
TY	1VD-FTV	MS-1465GP		MI	6A12	MS-1846A	
TY	2GR-FE	* MS-1468A		MZ	XA	MS-2000GP	
TY	1ZR-FE, 2ZR-FE	MS-1471A		MZ	YA	MS-2002GP	
TY	1AD-FTV, 2AD-FTV	MS-1473A		MZ	FE, F8	MS-2004A	
TY	2Z	MS-1474A		MZ	RF	MS-2007A	
TY	13Z	MS-1475A		MZ	B3, B5, B6	MS-2008A	
IZ	3AA1, 3AD1	MS-1601GP		MZ	FE, F8	MS-2009A	
IZ	3AE1, 3AF1	(MS-1602GP)		MZ	FE, JE	MS-2010GP	
IZ	4BA1, 4BC1, 4BE1	MS-1603GP		MZ	G6	MS-2011A	
IZ	4BD1	MS-1604GP		MZ	B3, B5, B6	MS-2012A	
IZ	C190, C223	MS-1605GP		MZ	PN	MS-2013A	
IZ	4BD1	MS-1606GP		MZ	TF, TM	MS-2014A	
IZ	DH100, 6QA1	MS-1609GP		MZ	WL, WL-T	MS-2016A	
IZ	C221, C240	MS-1610GP		MZ	KJ, KL	MS-2017GP	
IZ	6BB1, 6BD1	MS-1611GP		MZ	FP, FS	MS-2018A	
IZ	6BF1, 6BG1	MS-1612GP		MZ	ZY	* MS-2019A	
IZ	6RA1, 6RB1	MS-1613GP		MZ	LF, L3	* MS-2020A	
IZ	4FA1, 4FC1-T	MS-1616GP		HN	EK100, EK130-T	MS-2102GP	
IZ	6SA1	MS-1618GP		HN	EL100, EM100, EP100	MS-2103GP	
IZ	4ZA1, G200W	MS-1620GP		HN	EF550, EF750	MS-2107GP	
IZ	4XC1, 4XE1	MS-1621A		HN	H06C, H07C	MS-2108GP	

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MK	ENGINE MODEL	NDC NO.	Revised No.	MK	ENGINE MODEL	NDC NO.	Revised No.
HN	W04D	MS-2109GP		UD	FD42, FD46, FD46-T	MS-2804GP	
HN	W06D	MS-2110GP		UD	ZD30DD, ZD30DDTI	(MS-2805A)	MS-2817A
HN	H06C-TI	MS-2111GP		UD	RF8T, RG8, RH8	MS-2812GP	
HN	V21C, V22C, V25C	MS-2114GP		UD	RH10	MS-2813GP	
HN	J08C-TI	MS-2118GP		UD	GE13T	MS-2814GP	
HN	F21C	MS-2120GP		UD	NF6T	MS-2815GP	
HD	A18A, ES, ET, EY	MS-2200GP		UD	MD92, MD92T	MS-2816GP	
HD	D17A	MS-2201A		UD	ZD30DDTI	MS-2817A	
HD	EH	MS-2202A		UD	TD42	MS-2818A	
HD	D13, EH, EV1	MS-2206GP		DW	G15MF, OPEL KADETT	MS-3021A	
HD	B18A, B20A	MS-2208GP		KI	B3	MS-3876A	
HD	C25A, C27A	MS-2210GP		HY	G4GM	MS-3878A	
HD	C20A	MS-2211GP		DW	F8C, F8CL	MS-3879A	
HD	F20A	MS-2213GP		HY	G4FK	MS-3880A	
HD	D12, D13C	MS-2214A		HY	G4HA, G4HC	MS-3882A	
HD	B16A, B18A, B20B	MS-2215GP		KI	J2, JT	MS-3883A	
HD	K20A, K24A	MS-2216GP		KI	VN, RFA	MS-3884A	
HD	L13A, L15A	MS-2219A		KI	JS, S2	MS-3885A	
SB	EA81, EA82	MS-2300GP		HY	D4CB	MS-3887A	
SB	EF10, EF12	MS-2301GP		DW	S-TEC 1.0L	MS-3888A	
SB	ER27	MS-2304GP		HY	G4KC, G4KD, G4KF	MS-3889A	
SB	EJ18, EJ20, EJ22	MS-2305A		DW	SAIL (SHANGHAI GM)	MS-3890A	
SB	EJ25	MS-2306A					
SB	EN07	MS-2307GP		MF	6DC, 8DC, 10DC	(P1-1147J)	PR-1147J
SZ	Y64 (SS80)	MS-2401A		MF	6DC, 8DC, 10DC	PR-1147J	
SZ	F5A, F5B	MS-2402A		IZ	8PA1, 10PA1, 12PA1	(P1-1156J)	PR-1156J
SZ	G10	MS-2403A		IZ	8PA1, 10PA1, 12PA1	PR-1156J	
SZ	G13	MS-2404A		IZ	8PD1, 10PD1, 12PD1	(P1-1630J)	PR-1630J
SZ	G16	MS-2405GP		IZ	8PD1, 10PD1, 12PD1	PR-1630J	
SZ	F6A	MS-2406A		IZ	8PE1, 10PE1, 12PE1	(P1-1637J)	PR-1637J
SZ	H25A, H27A	MS-2407A		IZ	8PE1, 10PE1, 12PE1	PR-1637J	
SZ	J18A, J20A	MS-2408A		MH	S4K-T, S6K-T	(P1-1833J)	PR-1833J
SZ	H20A	MS-2409A		MH	S4K-T, S6K-T	PR-1833J	
SZ	K6A	MS-2410A					
SB	EA81, EA82	MS-2300GP		NS	H20	PB-1002J	
SB	EF10, EF12	MS-2301GP		IZ	DA120	PB-1023J	
SB	ER27	MS-2304GP		MI	4G41, 4G42	PB-1024J	
SB	EJ18, EJ20, EJ22	MS-2305A		UD	SD22	PB-1029J	
SB	EJ25	MS-2306A		IZ	G130, G161	PB-1032J	
SB	EN07	MS-2307GP		IZ	C220, DL201	PB-1033J	
SZ	Y64 (SS80)	MS-2401A		TY	12R	PB-1035J	
SZ	F5A, F5B	MS-2402A		MF	6DB1	PB-1037J	
SZ	G10	MS-2403A		HN	DS50	PB-1039J	
SZ	G13	MS-2404A		TY	D, 2D	PB-1040J	
SZ	G16	MS-2405GP		TY	D, 2D	PB-1041J	
SZ	F6A	MS-2406A		IZ	DH100	PB-1042J	
SZ	H25A, H27A	MS-2407A		TY	5R	PB-1046J	
SZ	J18A, J20A	MS-2408A		NS	LD28	PB-1047J	
SZ	H20A	MS-2409A		NS	LD28	PB-1048J	
DH	AB, AD	MS-2500A		IZ	DA220	PB-1050J	
DH	CB, CD, CL	MS-2501A		TY	M, 5M, 7M	PB-1051J	
DH	DL, DL-T	MS-2502A		IZ	DA640	PB-1052J	
DH	CB-T, CL-T	MS-2503A		MF	6DS	PB-1055J	
DH	CB, CD, CL	MS-2505A		TY	2K, 3K, 4K, 5K	PB-1056J	
DH	AB, AD	MS-2506A		UD	SD33	PB-1058J	
DH	EB, EF	MS-2507A		HN	DM100	PB-1059J	
DH	ED	MS-2510A		TY	J, L, 2L	PB-1063J	
DH	HC-E, HD	MS-2511A		TY	20R, 21R, 22R	PB-1068J	
DH	K3-VE, K3-VET	MS-2512A		IZ	C190, C240	PB-1070J	
DH	KF-VE, KF-DET	MS-2513A		MZ	HA, XA	PB-1075J	
UD	FE6	MS-2800GP		MF	4DR5, S4E	PB-1078J	
UD	PF6-T	MS-2803GP		HN	EB100	PB-1079J	

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TY	H, 2H	PB-1080J	PB-1428J	TY	L, 2L	PB-1406J	
MZ	PB, PC	PB-1082J		TY	1C, 2C	PB-1408J	
UD	ND6, FE6	PB-1083J		TY	2L-T	PB-1411J	
UD	PD6	PB-1084J		TY	3F	PB-1413J	
IZ	D920, E110, 6QA1	PB-1092J		TY	3B, 11B, 13B	PB-1417J	
MZ	YA	PB-1097J		TY	1C, 2C	PB-1421J	
IZ	4BA1, 4BC1, C330	PB-1100J		TY	4A-GZE	PB-1425J	
MZ	MA, NA, VA	PB-1114J		TY	12H	PB-1427J	
MF	6DR5, S6E	PB-1115J		TY	B, 2B, 3B	PB-1428J	
HN	DK10, ER100	(PB-1116J)		TY	3B, 11B, 13B, 14B, 15B	PB-1429J	
UD	RD8	PB-1118J		TY	2L-T, 3L	PB-1431J	
UD	RD10	PB-1119J		TY	1G-E, 1G-FE	PB-1433J	
HN	EB300, EB400	PB-1120J		TY	1RZ, 2RZ, 3RZ	PB-1435J	
TY	B, 3B	(PB-1121J)		TY	1HD, 1HZ	PB-1436J	
UD	ED30	PB-1122J		TY	1FZ	PB-1438J	
IZ	4BA1, 4BB1, C330	PB-1129J		TY	1PZ	PB-1439J	
UD	ED6	PB-1135J		TY	1UZ-FE	PB-1440J	
HN	EH100	PB-1139J		TY	5S	PB-1441J	
HN	EH300	PB-1140J		TY	2UZ-FE	PB-1442J	
HN	EF100, EF300, EF700	PB-1144J		TY	1HD-T	PB-1444J	
MF	6D10, 6D15	PB-1145J		TY	3VZ-FE, 5VZ-FE	PB-1445J	
HN	DK10, ER100	PB-1149J		TY	1N, 1N-T	PB-1449J	
IZ	6RA1, 6RB1, E120	PB-1154J		TY	1KZ-TE	PB-1452J	
IZ	6BB1, 6BD1	PB-1155J		TY	1MZ-FE, 2MZ-FE	PB-1455J	
DH	DG, DL	PB-1158J		TY	1ZZ-FE, 2ZZ-FE	PB-1457J	
MF	4D30	PB-1160J		TY	1GR-FE	PB-1458J	
MF	6D20, 21, 22, 23	PB-1162J		TY	1T-FE, 2TR-FE	PB-1459J	
IZ	4BA1, 4BC2, 4BE1	PB-1163J		TY	1KD-FTV, 2KD-FTV	PB-1464J	
IZ	4FA1	PB-1166J		IZ	C190, C223, C240	PB-1605J	
UD	CD17	PB-1173J		IZ	6RB1	PB-1613J	
SZ	F8A, F10A	PB-1179J		IZ	4JA1, 4JB1, 4JC1, 4JD1	PB-1622J	
UD	FD33	PB-1180J		IZ	4JB1, 4JG1, 4JH1	PB-1623J	
MZ	S2	PB-1181J		IZ	4EC1	PB-1624J	
UD	SD23	PB-1182J		IZ	4EC1, 4EC1-T	PB-1625J	
NS	LD20II	PB-1183J		IZ	4XE1, 4XE1-T	* PB-1626J	
NS	LD20II	PB-1189J		IZ	D500	PB-1629J	
UD	TD27	PB-1190J		IZ	4HF1, 4HG1, 4HJ1	PB-1631J	
UD	TD23	PB-1192J		IZ	6HE1, 6HH1	PB-1632J	
UD	BD2	PB-1194J		IZ	6SD1	PB-1635J	
UD	TD42	PB-1195J		IZ	4EE1-T	* PB-1636J	
UD	TD42	PB-1196J		IZ	4FA1, 4FB1	PB-1638J	
NS	TB42	PB-1199J		IZ	6HE1-T, 6HK1	PB-1643J	
NS	VG20	PB-1200J		IZ	4HE1-T, 4HK1	PB-1644J	
NS	RB20, RB24	PB-1203J		IZ	6WA1-T, 6WG1-T	PB-1646J	
NS	CD17	PB-1205J		MI	4D55, 4D56	PB-1802J	
NS	RB20D, RB30, VG20D	PB-1206J		MF	4D30, 4D32	PB-1807J	
NS	RD28	PB-1207J		MF	6D31	PB-1808J	
NS	GA15E	PB-1208J		MF	4D31-T	PB-1809J	
NS	KA24	PB-1209J		MF	6D31-T	PB-1810J	
NS	VG30	PB-1210J		MF	6D16, 6D16-T, 6D17	PB-1814J	
NS	VG30D	PB-1211J		MF	6D16, 6D16-T, 6D17	PB-1820J	
NS	SR18, SR20	PB-1213J		MF	4D34, 4D34-T	PB-1830J	
NS	VH44, VH45	PB-1214J		MI	4M40	PB-1832J	
NS	CD20	PB-1217J		MF	6D34-T	PB-1837J	
NS	VQ20, VQ25, VQ30, VQ35	PB-1219J		MF	6D16, 6D16-T, 6D17	PB-1838J	
NS	RD28-T	PB-1221J		MF	6D24	PB-1839J	
NS	QR20DE, QR25DE	PB-1226J		MZ	XA, XB	PB-2000J	
NS	YD22, YD25	PB-1229J		MZ	RF, RF-T	PB-2004J	
NS	VK45DD, VK45DE	PB-1231J		MZ	HA	PB-2005J	
TY	B, 3B, 11B	PB-1401J		MZ	SL	PB-2006J	
TY	1G	PB-1402J		MZ	RF	PB-2007J	
TY	H, 2H	PB-1403J		MZ	PN	PB-2013J	

Numerical Listing

MK	ENGINE MODEL	NDC NO.	Revised No.	MK	ENGINE MODEL	NDC NO.	Revised No.
MZ	TF, TM	PB-2014J		UD	ND6	SH-1083K	
MZ	WL, WL-T	PB-2016J		UD	PD6	(SH-1084B)	SH-1084K
MZ	W9, WE	PB-2021J		UD	PD6	SH-1084K	
HN	EK100, EK200, K13	PB-2102J		IZ	4BA1, 4BB1, C330	(SH-1100B)	
HN	EL100	PB-2103J		TY	T,2T	(SH-1104B)	
HN	K13C-T	PB-2104J		TY	5R	SH-1107A	
HN	EM100	PB-2105J		TY	5R	(SH-1107B)	SH-1107A
HN	EF550, EF750, F17C	PB-2107J		MF	6DR5	(SH-1115B)	
HN	H06C, H07C	PB-2108J		UD	RD8, RE8, RF8	(SH-1118B)	SH-1118K
HN	W04D	(PB-2109J)	PB-2111J	UD	RD8, RE8, RF8	SH-1118K	
HN	W06D	(PB-2110J)	PB-2112J	UD	RD10, RE10, RF10	(SH-1119B)	SH-1119K
HN	W04D	PB-2111J		UD	RD10, RE10, RF10	SH-1119K	
HN	W06D	PB-2112J		UD	ED30, ED33, FD33	SH-1122A	
HN	EP100, P09B-T, M10U	PB-2113J		UD	ED30, ED33, FD33	(SH-1122B)	SH-1122A
HN	V21C, V22C, V25C	PB-2114J		TY	F, 3F	SH-1123A	
HN	J05C	PB-2116J		TY	F, 3F	(SH-1123B)	SH-1123A
HN	J07C	PB-2117J		IZ	D500, 6BB1	(SH-1129B)	
HN	J08C	PB-2118J		UD	ED33, ED6, FD6, FE6	SH-1135A	
SB	EA62, EA71, EA82	PB-2300J		UD	ED33, ED6, FD6, FE6	(SH-1135B)	SH-1135A
SB	ER27	PB-2304J		MZ	VA	(SH-1141B)	
SZ	Y64 (SS80)	PB-2401J		HN	EF350, EF500, EF700	SH-1144A	
DH	DG, DL	PB-2502J		HN	DK10, ER100	(SH-1149B)	
DH	DL-T	PB-2511J		DH	DG, DL	SH-1158A	
UD	PF6, PF6-T	PB-2803J		MF	4D30	(SH-1160B)	SH-1160K
UD	FD42, FD46	PB-2804J		MF	4D30	SH-1160K	
UD	QD32,ZD30DD,ZD30DDTI	PB-2805J		TY	L, 2L	SH-1161A	
UD	PF6-T	* PB-2810J		MF	6D20	(SH-1162B)	SH-1162K
UD	PG6, PG6H	* PB-2811J		MF	6D20	SH-1162K	
UD	RF8T, RG8	PB-2812J		IZ	4BA1, 4BC1	(SH-1163B)	
UD	RH10	PB-2813J		IZ	4FA1, 4FC1, 4FE1	SH-1166A	
UD	GE13T	PB-2814J		IZ	4FA1, 4FC1, 4FE1	(SH-1166B)	SH-1166A
UD	NF6-T	PB-2815J		UD	TD23, TD27	SH-1190A	
UD	MD92, MD92T	PB-2816J		UD	TD23, TD27	(SH-1190B)	SH-1190A
UD	RH8	PB-2817J		UD	SD33	(SH-1191B)	
				UD	TD42	SH-1195A	
NS	P, P40	(SH-1002B)		NS	TD42	(SH-1195B)	SH-1195A
NS	H20, SD22	SH-1003A		NS	TB42	SH-1199A	
NS	H20, SD22	(SH-1003B)	SH-1003A	NS	TB42	(SH-1199B)	SH-1199A
NS	J13, J16	SH-1006A		TY	B, 3B	SH-1401A	
NS	J13, J16	(SH-1006B)	SH-1006A	TY	B, 3B	(SH-1401B)	SH-1401A
NS	A10, A12, A15	SH-1019A		TY	H, 2H	SH-1403A	
NS	A10, A12, A15	(SH-1019B)	SH-1019A	TY	H, 2H	(SH-1403B)	SH-1403A
MI	4G41, 4G42	(SH-1024B)		TY	1Y, 2Y,3Y	SH-1407A	
IZ	G130, G161	(SH-1032B)		TY	1Y, 2Y,3Y	(SH-1407B)	SH-1407A
HN	DS50, DS70, DS80	(SH-1038B)		TY	3B, 11B	SH-1417A	
MF	6DS3, 5, 7	SH-1055B		TY	3B, 11B	(SH-1417B)	SH-1417A
TY	2K, 3K, 4K, 5K	SH-1056A		TY	3B, 11B, 14B	SH-1428A	
TY	2K, 3K, 4K, 5K	(SH-1056B)	SH-1056A	TY	3B, 11B, 14B	(SH-1428B)	SH-1428A
HN	DM100	(SH-1059B)		TY	15B-FTE	SH-1429A	
TY	12R	SH-1060A		TY	15B-FTE	(SH-1429B)	SH-1429A
TY	12R	(SH-1060B)	SH-1060A	TY	L, 2L, 2L-T, 3L	SH-1431A	
MZ	MA, NA	SH-1061A		TY	1PZ	SH-1436A	
MZ	MA, NA	(SH-1061B)		IZ	C190, C240, 3AA1	SH-1605A	
TY	H, 2H	(SH-1063B)		IZ	C190, C240, 3AA1	(SH-1605B)	SH-1605A
TY	16R, 18R, M, 5M	SH-1068A		IZ	4JA1,4JB1,4JF1,4JH1	SH-1622A	
IZ	C190, C240	SH-1070A		IZ	4JA1,4JB1,4JF1,4JH1	(SH-1622B)	SH-1622A
IZ	C190, C240	(SH-1070B)	SH-1070A	IZ	4HF1, 4HE1-T, 4HK1-T	SH-1631A	
MF	4DR5	(SH-1078B)	SH-1078K	IZ	6HE1, 6HH1	SH-1632A	
HN	EB100, 300, 400	(SH-1079B)		IZ	4HG1, 4HK1	SH-1640A	
TY	J, H, 2H, 12H	(SH-1080B)		IZ	6HE11-T, 6HK1	SH-1643GP	
HN	EC100, EH100, EH300	(SH-1081B)		MF	6D22	(SH-1803B)	SH-1803K
UD	ND6	(SH-1083B)	SH-1083K	MF	6D22	SH-1803K	

Numerical Listing

MK	ENGINE MODEL	NDC NO.	Revised No.	MK	ENGINE MODEL	NDC NO.	Revised No.
MF	4D30	(SH-1807B)	SH-1807K	TY	2K, 3K, 4K, 5K, 1N, 1N-T	(TW-1056B)	TW-1056A
MF	4D30	SH-1807K		HN	DM100	TW-1059GP	
MF	6D31	(SH-1808B)	SH-1808K	MZ	MA, NA	TW-1061A	
MF	6D31	SH-1808K		MZ	MA, NA	(TW-1061GP)	TW-1061A
MF	6D16, 6D16-T, 6D17	(SH-1820B)	SH-1820K	TY	J, H, 2H	TW-1063B	
MF	6D16, 6D16-T, 6D17	SH-1820K		IZ	C240, 3AA, 2AE, 4JB1	TW-1070A	
MF	4D34, 4D34-T	(SH-1830B)	SH-1830K	IZ	C240, 3AA, 2AE, 4JB1	(TW-1070GP)	TW-1070A
MF	4D34, 4D34-T	SH-1830K		IZ	DH100, D920, 6QA1	TW-1071GP	
MF	S6K-T	(SH-1833B)	SH-1833K	MF	6DC, 8DC, 10DC	TW-1072J	
MF	S6K-T	SH-1833K		MZ	XA, YA	TW-1075A	
MF	4D34	(SH-1835B)	SH-1835K	MZ	XA, YA	(TW-1075J)	TW-1075A
MF	4D34	SH-1835K		HN	EB100, EB300	(TW-1079BC)	
MF	6D34-T	(SH-1837B)	SH-1837K	HN	EC100, EH500	TW-1081GP	
MF	6D34-T	SH-1837K		MZ	PB	TW-1082B	
MF	6D24	SH-1839K		UD	ND6	TW-1083K	
MF	8M20, 8M21	SH-1840K		UD	PD6	TW-1084K	
HN	EH500, EH700	SH-2101A		IZ	C330, D500	TW-1100GP	
HN	EK100	SH-2102A		IZ	E120, 6RA1	TW-1102GP	
HN	EL100	SH-2103A		MZ	PC	TW-1113K	
HN	F17C, F20C	SH-2107A		MF	4DR5, 6DR5	TW-1115K	
HN	H06C, H07C	SH-2108A		TY	3S, 2T, 3Y	TW-1117A	
HN	W04D, 1W	(SH-2109B)	SH-2109K	TY	3S, 2T, 3Y	(TW-1117K)	TW-1117A
HN	W04D, 1W	SH-2109K		UD	RD8, RD10	TW-1118K	
HN	W06D	(SH-2110B)	SH-2110K	HN	EB300, EB400	(TW-1120BC)	
HN	W06D	SH-2110K		UD	ED6, FD33	TW-1122J	
HN	H07C	SH-2111A		IZ	4BA1, 6BB1	TW-1129GP	
HN	EP100-T, M10U	SH-2113A		TY	5R, 18R, 21R, 22R	TW-1133A	
HN	V21C, V22C, V25C	SH-2114A		TY	5R, 18R, 21R, 22R	(TW-1133K)	TW-1133A
HN	J05C, J07C	SH-2117A		HD	A18A, D15, EC, ED, EE	TW-1134A	
HN	J08C	SH-2118A		HD	A18A, D15, EC, ED, EE	(TW-1134GP)	TW-1134A
DH	DL, DL-T	SH-2502A		HN	EF100, EF300	TW-1144K	
UD	FE6, FE6-T	SH-2800K		MF	6D10, 6D15	TW-1145K	
UD	PF6, PF6-T	(SH-2803K)	SH-2807K	MF	6DC, 8DC, 10DC, 6D23	TW-1147J	
UD	FD42, FD46, FD46-T	SH-2804A		HN	EF350, EF700	TW-1148K	
UD	PE6H, PP6H	* SH-2806B		HN	DK10, ER100	(TW-1149BC)	
UD	PF6, PF6-T	SH-2807K		MZ	HA, SL	TW-1153A	
UD	PG6, PG6H	SH-2808K		IZ	4BA1, 6BB1, 6BD1	TW-1155GP	
UD	RF8T, RG8, RH8	SH-2812K		IZ	8PA1, 10PA1, 12PA1	TW-1156K	
UD	RH10	SH-2813K		TY	L, 2L	TW-1161A	
UD	GE13T	* SH-2814K		MZ	E1, E3, E5	TW-1168A	
UD	NF6-T	(SH-2815B)	SH-2815K	HD	EH	TW-1175A	
UD	NF6-T	SH-2815K		SZ	Y64 (SS80), FA10	TW-1179A	
UD	MD92, MD92T	* SH-2816K		MZ	S2	TW-1181A	
				UD	PF6, PF6-T	(TW-1188K)	TW-2803K
NS	J13, J16, D11	TW-1000A		NS	MA10	TW-1202A	
NS	J13, J16, D11	(TW-1000B)	TW-1000A	NS	GA15E	TW-1208A	
TY	3P, 4P	TW-1005B		NS	SR18, SR20	TW-1213GP	
TY	3R, 5R, M, 7M	TW-1006A		NS	VH41, VH45	TW-1214A	
TY	3R, 5R, M, 7M	(TW-1006B)	TW-1006A	NS	VQ20, VQ25, VQ30, VQ35	TW-1219A	
TY	12R	TW-1007A		NS	CG10, CG13, CR10, CR12	TW-1224A	
MI	4G41, 4G42	(TW-1024B)		NS	QR20DE, QR25DE	TW-1226A	
UD	SD22, TD23, TD27	TW-1028A		NS	HR15DE, HR16DE, H4M	TW-1227A	
UD	SD22, TD23, TD27	(TW-1028GP)	TW-1028A	NS	MR18DE, MR20DE, M4R	TW-1228A	
IZ	G130, G161, 4FA1	TW-1030A		NS	YD22, YD25	TW-1229A	
IZ	G130, G161, 4FA1	(TW-1030GP)	TW-1030A	NS	VQ40	TW-1232A	
MF	6DB1	(TW-1036BC)		TY	1A, 2A, 3A, 5A	TW-1400A	
HN	DS50	TW-1038K		TY	1G	TW-1402A	
TY	D, 2D	TW-1040B		TY	21R, 22R	TW-1405A	
IZ	DA120, 220, 640	TW-1052GP		TY	1C, 2C, 2C-T, 3C-T	TW-1408A	
HN	DK10, ER100	(TW-1054BC)		TY	3F	TW-1413A	
MF	6DS, 4D30	TW-1055K		TY	1E, 2E, 4E	TW-1415A	
TY	2K, 3K, 4K, 5K, 1N, 1N-T	TW-1056A		TY	B, 3B, 11B, 13B-T, 14B	TW-1417A	

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MK	ENGINE MODEL	NDC NO.	Revised No.	MK	ENGINE MODEL	NDC NO.	Revised No.
TY	1VZ-FE, 3VZ-FE, 5VZ-FE	TW-1423A	TW-1423A	MZ	ZY	* TW-2019A	TW-2215A
TY	1VZ-FE, 3VZ-FE, 5VZ-FE	(TW-1423K)		HN	EK100, K13C	TW-2102K	
TY	3E, 5E	TW-1424A		HN	EL100, EL100-T	* TW-2103GP	
TY	1Z, 11Z	TW-1426A		HN	EL100, EM100, M10U	TW-2105GP	
TY	12H-T	TW-1427A		HN	EF550, EF750	TW-2107K	
TY	1JZ-FSE, 2JZ-FSE	TW-1434A		HN	H06C, H07C	TW-2108K	
TY	1RZ, 2RZ, 3RZ	TW-1435A		HN	W04D, W06D, 1W	TW-2109GP	
TY	1DZ, 1HD, 1HZ, 1PZ	TW-1436A		HN	EK100, EK200, K13C	TW-2112K	
TY	1FZ-FE	TW-1438A		HN	V21C, V22C, V25C	TW-2114K	
TY	1UZ	TW-1440A		HN	F21C	* TW-2120K	
TY	1S, 3S, 5S, T, 3T, 1Y, 4Y	(TW-1441A)	TW-1117A	HN	V25C, V26C, V22D	* TW-2121K	TW-2405A
TY	1KD-FTV, 1KZ-TE	TW-1452A		HN	P09C-T, P11C	TW-2122K	
TY	1AZ-FE, 2AZ-FE	TW-1454A		HN	K13D	* TW-2123K	
TY	1MZ-FE, 2MZ-FE	TW-1455A		HD	D17A	TW-2201A	
TY	1NZ-FE, 2ZZ-FE	TW-1457A		HD	B16A, B18A, D16A, ZC	(TW-2208GP)	
TY	1GR-FE, 2GR-FE	TW-1458A		HD	C25A, C27A	TW-2210GP	
TY	1TR-FE, 2TR-FE	TW-1459A		HD	F20A, F22A	TW-2213A	
TY	1KR-FE	TW-1463A		HD	B16A, B18A, D16A, ZC	TW-2215A	
TY	1VD-FTV	TW-1465A		SB	EN07	TW-2307A	
TY	1GR-FE	TW-1466A		SZ	F5B	TW-2402A	
TY	1AD-FTV, 2AD-FTV	TW-1473A	TW-1622A	SZ	G10, G13, F6A	TW-2403A	
IZ	4BD1, 6BG1	TW-1604A		SZ	G15A, G16A, G16B	TW-2405A	
IZ	6RA1, 6RB1	TW-1613K		SZ	G15A, G16A, G16B	(TW-2405GP)	
IZ	4FA1, 4ZA1	TW-1616A		SZ	H20A, H25A, J18A, J20A	TW-2407A	
IZ	6RB1, 6SA1	TW-1618K		DH	AB, CB, CD, CL	TW-2500A	
IZ	4XC1, 4XE1	TW-1621A		DH	CB-T, CL-T	TW-2503A	
IZ	C190, C223, 4JA1, 4JB1	TW-1622A		DH	EB, EF	TW-2507A	
IZ	C190, C223, 4JA1, 4JB1	(TW-1622GP)		DH	ED, 1SZ, 3SZ	TW-2510A	
IZ	4EC1, 4EC1-T	(TW-1624GP)		DH	HC-E, HD	TW-2511A	
IZ	4EC1, 4EC1-T	TW-1625A		DH	KF-VE, KF-DET	TW-2513A	
IZ	4EE1-T, 4XC1, 4XE1	TW-1626A	TW-1625A	UD	FE6	TW-2800J	TW-1822A
IZ	8PD1, 10PD1, 12PD1	TW-1630K		UD	PF-6	TW-2803K	
IZ	4HF1, 6HE1, 6HK1-T	TW-1631A		UD	ZD30DD, ZD30DDTI	TW-2805J	
IZ	6SA1	* TW-1634K		UD	PF6-T, PG6, PG6H	TW-2807K	
IZ	6QA1, 6QA2, 6QB2	TW-1636K		UD	FE6, FE6-T	TW-2809J	
IZ	6VD1, 6VE1	TW-1645A		UD	RF8T, RG8, RH8, RH10	TW-2812K	
IZ	6WA1-T, 6WF1-T	TW-1646A		UD	GE13T	TW-2814K	
MF	8DC9, 6D40, 6M70T	TW-1804GP		UD	MD92, MD92T	TW-2816K	
MF	4D30, 4D35, 6D34-T	TW-1807K		KI	B3	TW-3876A	
MF	6D15, 6D16-T, 6D17	TW-1820K		HY	G4GM	TW-3878A	
MI	6G71, 6G72	TW-1822A	TW-1822A	DW	F8C, F8CL	TW-3879A	TW-3882A
MI	6G71, 6G72	(TW-1822GP)		HY	G4HA, G4HC	TW-3882A	
MI	3G81, 3G82	TW-1824A		HY	D4CB	TW-3887A	
MF	S2E, S3E, S4E, S6E	TW-1826J		DW	SAIL (SHANGHAI GM)	TW-3890A	
MI	4G91, 4G92, 4G93	TW-1828A					
MI	4M40, 4M41	TW-1832A					
MH	S4K-T, S6K-T	TW-1833A					
MI	4G63	TW-1834A					
MF	4M50-T, 4M51	* TW-1836J					
MF	6D16, 6M60-T, 6M61	TW-1838J					
MF	8M20, 8M21	TW-1840GP	TW-1836J				TW-1840GP
MI	6G74	TW-1842A					
MH	S4S, S6S	TW-1843J					
MI	4D55, 4D56	TW-1845A					
MI	6A12	TW-1846A					
MZ	RF	TW-2007A					
MZ	B1, B3, B5	TW-2008A					
MZ	JE, JF	TW-2010GP					
MZ	PN	TW-2013A					
MZ	TF, TM	TW-2014A					
MZ	WL, WL-T	TW-2016A	TW-2016A				TW-2016A
MZ	FP, FS	TW-2018A					

* : Unavailable now. Production will be made subject to order quantity.
 () : Available only from present inventory.

DH : DAIHATSU NS : NISSAN
 HN : HINO UD : UD TRUCKS
 HD : HONDA SB : SUBARU(FUJI HEAVY IND.)
 IZ : ISUZU SZ : SUZUKI
 MZ : MAZDA TY : TOYOTA
 MI : MITSUBISHI DW : GM KOREA
 MF : MITSUBISHI FUSO HY : HYUNDAI
 MH : MITSUBISHI HEAVY IND. KI : KIA

INCHES TO MILLIMETERS CONVERSION TABLE

Decimal Inches	Millimeters	Decimal Inches	Millimeters	Decimal Inches	Millimeters	Decimal Inches	Millimeters
.000100	0,0025	.003400	0,0864	.021000	0,5334	.196850	5,0000
.000200	0,0051	.003500	0,0889	.022000	0,5588	.200000	5,0800
.000300	0,0076	.003543	0,0900	.023000	0,5842	.236220	6,0000
.000394	0,0100	.003600	0,0914	.023622	0,6000	.250000	6,3500
.000400	0,0102	.003700	0,0940	.024000	0,6096	.275591	7,0000
.000500	0,0127	.003800	0,0965	.025000	0,6350	.300000	7,6200
.000600	0,0152	.003900	0,0991	.026000	0,6604	.314961	8,0000
.000700	0,0178	.003937	0,1000	.027000	0,6858	.350000	8,8900
.000787	0,0200	.004000	0,1016	.027559	0,7000	.354331	9,0000
.000800	0,0203	.004100	0,1041	.028000	0,7112	.393701	10,0000
.000900	0,0229	.004200	0,1067	.029000	0,7366	.400000	10,1600
.001000	0,0254	.004300	0,1092	.029528	0,7500	.433071	11,0000
.001100	0,0279	.004331	0,1100	.030000	0,7620	.450000	11,4300
.001181	0,0300	.004400	0,1118	.031000	0,7874	.472441	12,0000
.001200	0,0305	.004500	0,1143	.031496	0,8000	.500000	12,7000
.001300	0,0330	.004600	0,1168	.032000	0,8128	.511811	13,0000
.001400	0,0356	.004700	0,1194	.033000	0,8382	.550000	13,9700
.001500	0,0381	.004724	0,1200	.034000	0,8636	.551181	14,0000
.001575	0,0400	.004800	0,1219	.035000	0,8890	.590551	15,0000
.001600	0,0406	.004900	0,1245	.035433	0,9000	.600000	15,2400
.001700	0,0432	.005000	0,1270	.036000	0,9144	.629921	16,0000
.001800	0,0457	.006000	0,1524	.037000	0,9398	.650000	16,5100
.001900	0,0483	.007000	0,1779	.038000	0,9652	.669291	17,0000
.001969	0,0500	.007874	0,2000	.039000	0,9906	.700000	17,7800
.002000	0,0508	.008000	0,2032	.039370	1,0000	.708661	18,0000
.002100	0,0533	.009000	0,2286	.040000	1,0160	.748031	19,0000
.002200	0,0559	.009843	0,2500	.045000	1,1430	.750000	19,0500
.002300	0,0584	.010000	0,2540	.049213	1,2500	.787402	20,0000
.002362	0,0600	.011000	0,2794	.050000	1,2700	.800000	20,3200
.002400	0,0610	.011811	0,3000	.055000	1,3970	.826772	21,0000
.002500	0,0635	.012000	0,3048	.059055	1,5000	.850000	21,5900
.002600	0,0660	.013000	0,3302	.060000	1,5240	.866142	22,0000
.002700	0,0686	.014000	0,3556	.065000	1,6510	.900000	22,8600
.002756	0,0700	.015000	0,3810	.070000	1,7780	.905512	23,0000
.002800	0,0711	.015748	0,4000	.078740	2,0000	.944882	24,0000
.002900	0,0737	.016000	0,4064	.080000	2,0320	.950000	24,3840
.003000	0,0762	.017000	0,4318	.090000	2,2860	.984252	25,0000
.003100	0,0787	.018000	0,4572	.100000	2,5400	1.000000	25,4000
.003150	0,0800	.019000	0,4826	.118110	3,0000		
.003200	0,0813	.019685	0,5000	.150000	3,8100		
.003300	0,0838	.020000	0,5080	.157480	4,0000		

FRACTIONAL INCHES TO DECIMAL INCHES AND MILLIMETERS

Fraction	Decimal Inches	Milli-meters	Fraction	Decimal Inches	Milli-meters	Fraction	Decimal Inches	Milli-meters	Fraction	Decimal Inches	Milli-meters
1/64	.015625	0,3969	17/64	.265625	6,7469	33/64	.515625	13,0969	49/64	.765625	19,4469
1/32	.03125	0,7938	9/32	.28125	7,1438	17/32	.53125	13,4938	25/32	.78125	19,8438
3/64	.046875	1,1906	19/64	.296875	7,5406	35/64	.546875	13,8906	51/64	.796875	20,2406
1/16	.0625	1,5875	5/16	.3125	7,9375	9/16	.5625	14,2875	13/16	.8125	20,6375
5/64	.078125	1,9844	21/64	.328125	8,3344	37/64	.578125	14,6844	53/64	.828125	21,0344
3/32	.09375	2,3813	11/32	.34375	8,7313	19/32	.59375	15,0813	27/32	.84375	21,4313
7/64	.109375	2,7781	23/64	.359375	9,1281	39/64	.609375	15,4781	55/64	.859375	21,8281
1/8	.125	3,1750	3/8	.375	9,5250	5/8	.625	15,8750	7/8	.875	22,2250
9/64	.140625	3,5719	25/64	.390625	9,9219	41/64	.640625	16,2719	57/64	.890625	22,6219
5/32	.15625	3,9688	13/32	.40625	10,3188	21/32	.65625	16,6688	29/32	.90625	23,0188
11/64	.171875	4,3656	27/64	.421875	10,7156	43/64	.671875	17,0656	59/64	.921875	23,4156
3/16	.1875	4,7625	7/16	.4375	11,1125	11/16	.6875	17,4625	15/16	.9375	23,8125
13/64	.203125	5,1594	29/64	.453125	11,5094	45/64	.703125	17,8594	61/64	.953125	24,2094
7/32	.21875	5,5563	15/32	.46875	11,9063	23/32	.71875	18,2563	31/32	.96875	24,6063
15/64	.234375	5,9531	31/64	.484375	12,3031	47/64	.734375	18,6531	63/64	.984375	25,0031
1/4	.250	6,3500	1/2	.500	12,7000	3/4	.750	19,0500	1	1.000	25,4000

CONVERSION FORMULAS

Multiply	By	To Obtain	Multiply	By	To Obtain
Inches	25.4	Millimeters	Cubic Inches	16.38716	Cubic Centimeters
Millimeters	.03937	Inches	Litres	61.023	Cubic Inches

COMMON BEARING INCH UNDERSIZES CONVERTED TO MILLIMETERS				COMMON BEARING MILLIMETER UNDERSIZES CONVERTED TO INCHES			
Decimal Inches	Millimeters	Decimal Inches	Millimeters	Millimeters	Decimal Inches	Millimeters	Decimal Inches
.001"	0,0254	.020"	0,5080	0,025	.0010"	0,80	.0315"
.002"	0,0508	.030"	0,7620	0,05	.0020"	1,00	.0394"
.003"	0,0762	.040"	1,0160	0,25	.0098"	1,25	.0492"
.005"	0,1270	.050"	1,2700	0,30	.0118"	1,50	.0591"
.010"	0,2540	.060"	1,5240	0,50	.0197"	2,00	.0787"
				0,75	.0295"		

NDC



ENGINE BEARING



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