

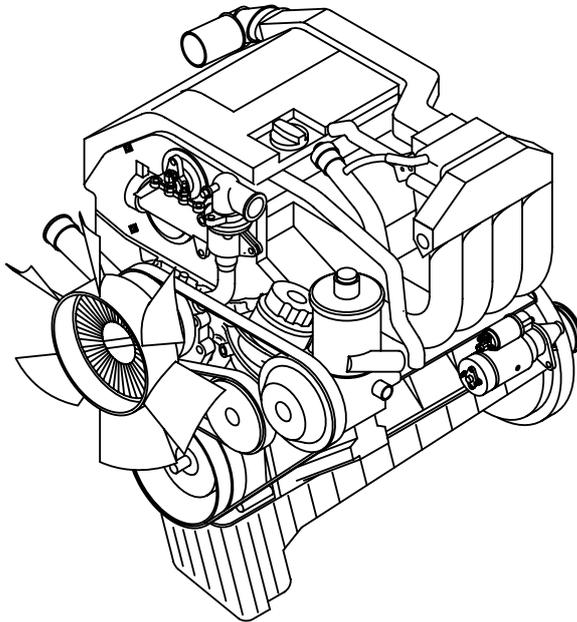
## SECTION 1C

# GASOLINE ENGINE

<b>1C. GASOLINE ENGINE MECHANICAL .....</b>	<b>1C - 1</b>
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113. Belt System .....	1C - 4
121. Engine Block.....	1C - 6
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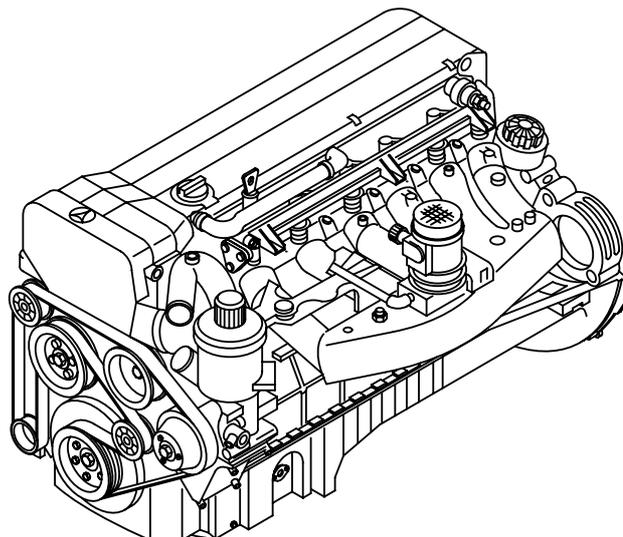
# **1C - GASOLINE ENGINE MECHANICAL**

E20,E23



1,2

E28,E32



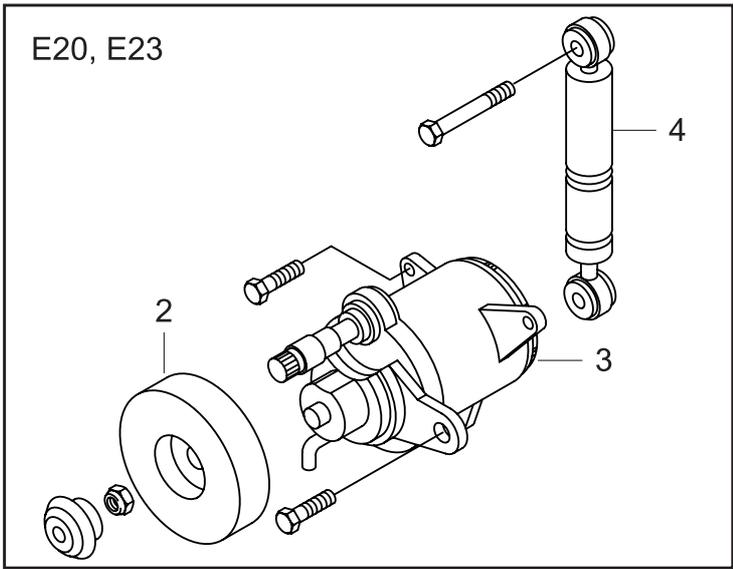
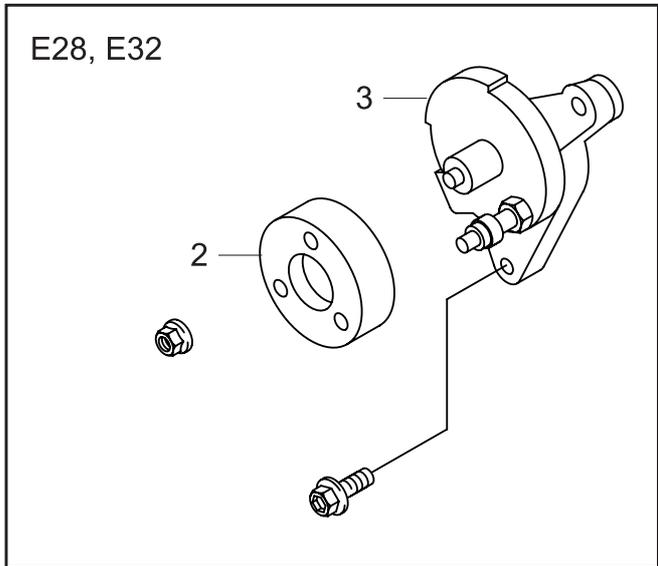
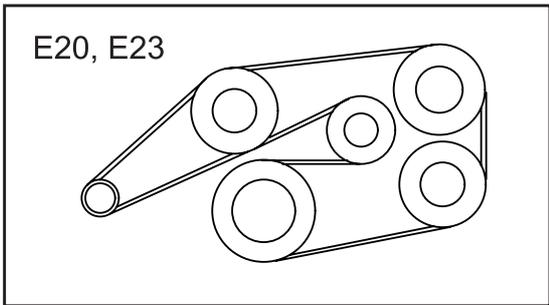
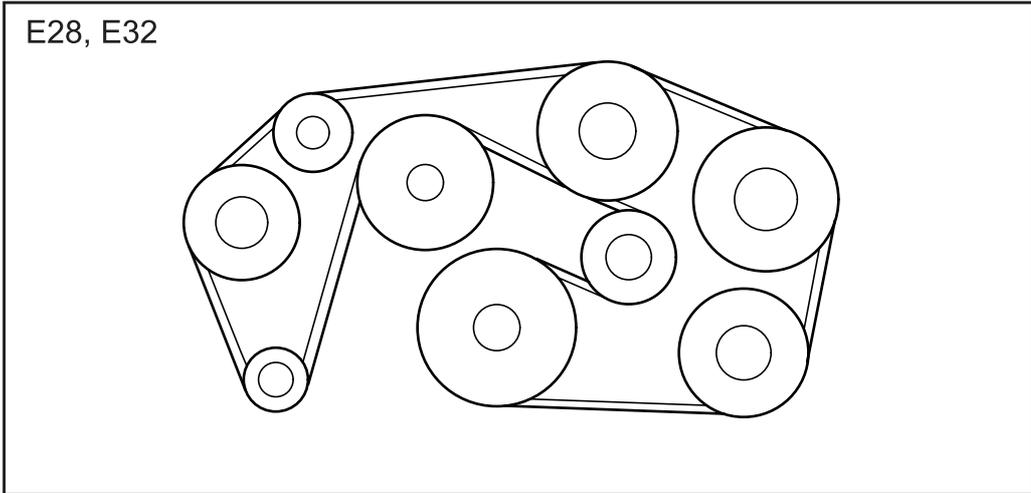
1,2

## GASOLINE ENGINE MECH. - ENGINE UNIT (111)

NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	ENGINE ASSEMBLY (M/T) - OVERHAUL	1110100	-	-	24.2	27.0	24.2	26.0
	ENGINE ASSEMBLY (A/T) - OVERHAUL	1110300	21.0	23.5	23.2	26.0	23.2	26.0
2	ENGINE ASSEMBLY (M/T) - REPLACE	1110800	-	-	7.7	7.9	7.7	8.0
	ENGINE ASSEMBLY (A/T) - REPLACE	1110900	7.0	7.8	9.0	10.0	9.0	10.0

CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON

113

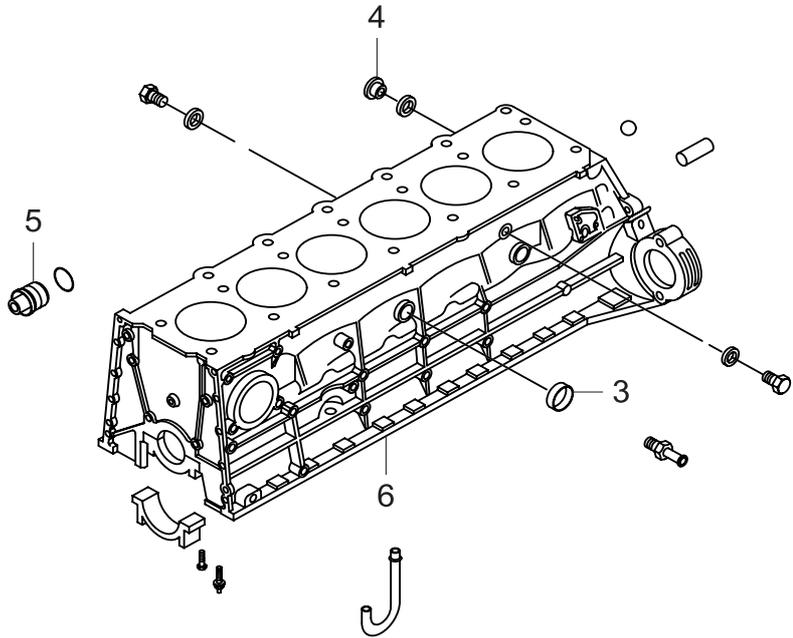
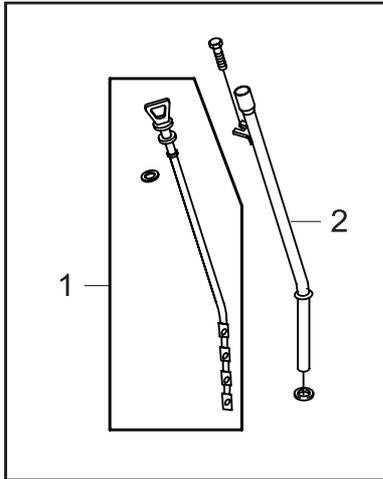


## GASOLINE ENGINE MECH. - BELT SYSTEM (113)

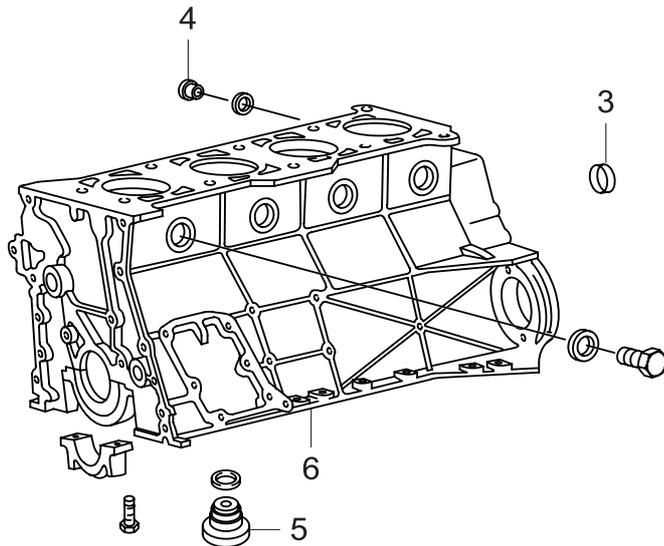
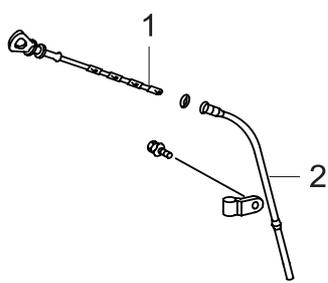
NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	POLY-BELT - REPLACE	1132210	0.2	0.2	0.5	0.5	0.5	0.5
2	PULLEY, AUTO TENSIONER - REPLACE	1132410	1.2	1.2	0.5	0.5	0.5	0.5
3	TIGHTENER ASSEMBLY, BELT - REPLACE	1132550	1.2	1.2	0.5	0.5	0.5	0.5
4	SHOCK ABSORBER, TENSIONER - REPLACE	1132560	0.5	-	0.5	-	0.5	-

CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON

E28, E32



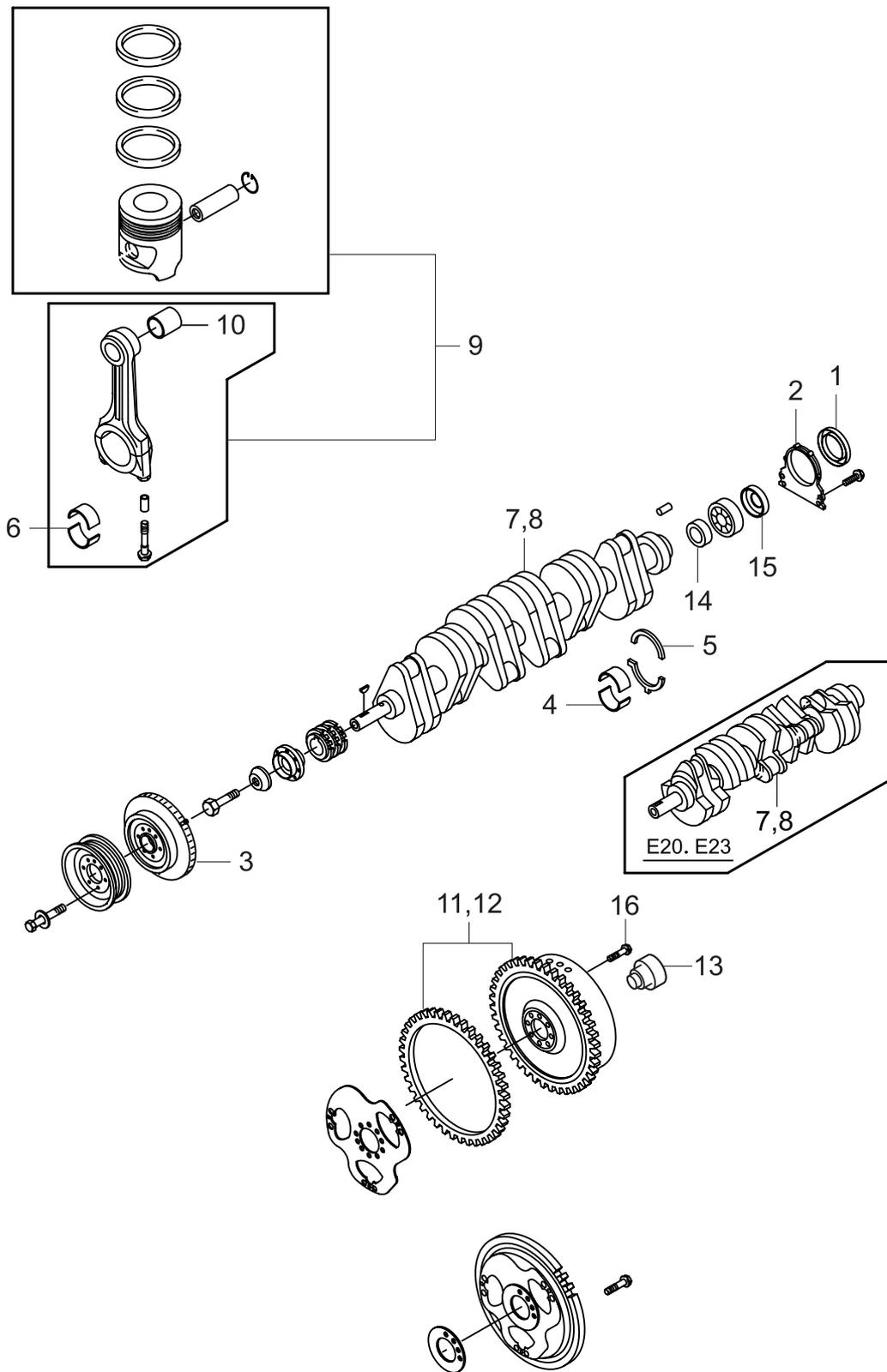
E20, E23



## GASOLINE ENGINE MECH. - ENGINE BLOCK (121)

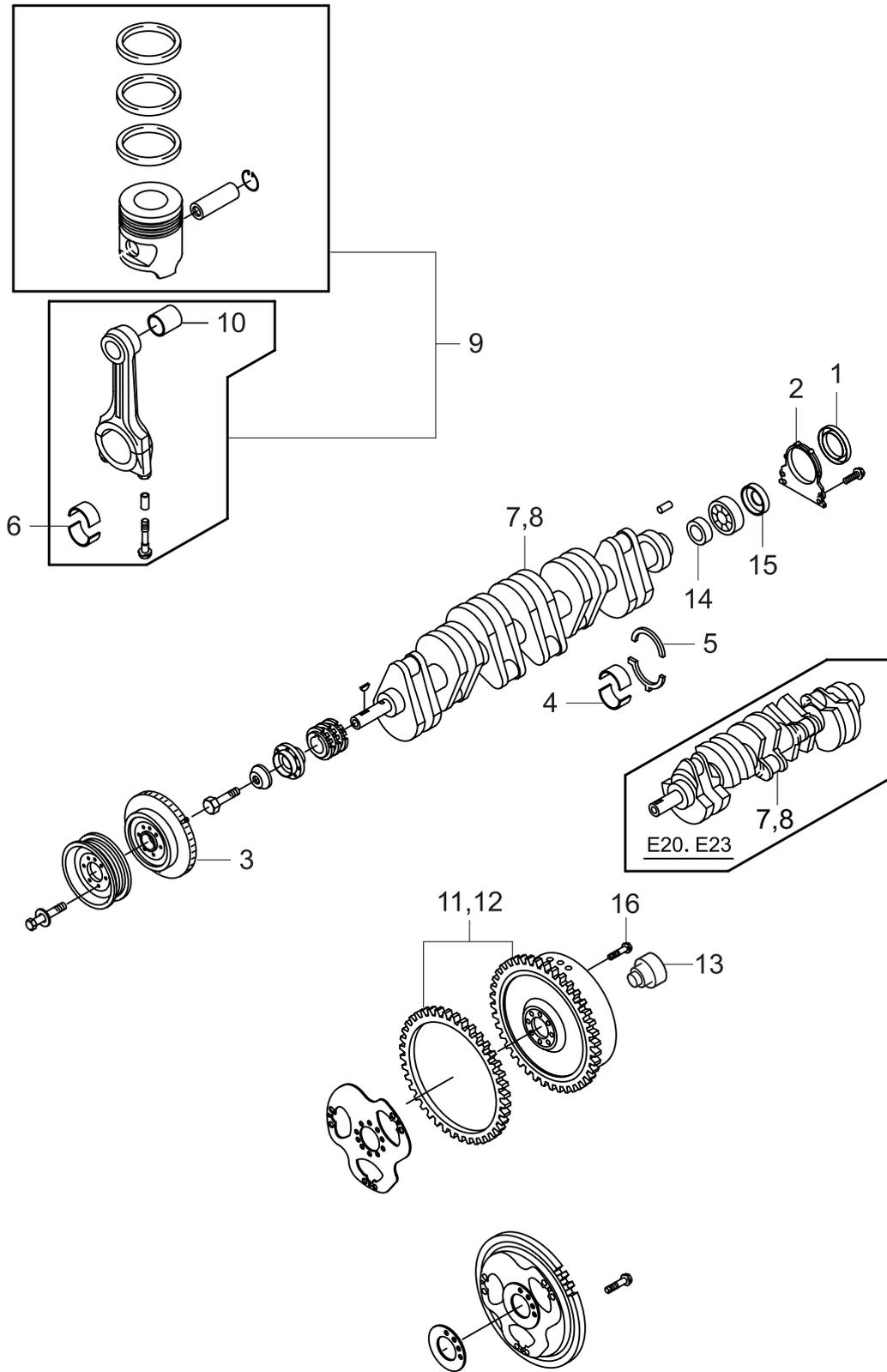
NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	OIL LEVEL INDICATOR AND/OR O-RING - REPLACE	1210200	0.2	0.2	0.2	0.2	0.2	0.2
2	TUBE, OIL LEVEL INDICATOR - REPLACE	1210300	0.3	0.3	0.3	0.3	0.3	0.3
3	PLUG, EXPANSION - REPLACE A - Replace each additional	1210700	7.6	7.6	4.1	4.4	4.1	4.4
		121070A	0.1	0.1	0.1	0.1	0.1	0.1
4	PLUG, CYLINDER BLOCK DRAIN - REPLACE	1210800	0.5	0.5	0.5	0.5	0.5	0.5
5	PLUG, OIL GALLERY - REPLACE	1210900	8.8	9.5	-	-	-	-
6	BLOCK, CYLINDER - REPLACE	1211100	21.5	23.5	23.2	26.0	23.2	26.0
7	SEMI BLOCK (SHORT BLOCK), CYLINDER - REPLACE	1211110	17.5	19.0	19.2	21.5	19.2	21.5

CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON



<b>GASOLINE ENGINE MECH. - CRANKSHAFT &amp; PISTON (122)</b>								
NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	SEAL (S), CRANKSHAFT REAR MAIN (A/T) - REPLACE	1220200	4.9	5.3	4.9	4.9	4.9	4.9
	SEAL (S), CRANKSHAFT REAR MAIN (M/T) - REPLACE	1220400	-	-	4.1	4.1	4.1	4.1
2	COVER, CRANKSHAFT SEALING (A/T) - REPLACE	1220410	5.3	5.7	5.3	5.3	5.3	5.3
	COVER, CRANKSHAFT SEALING (M/T) - REPLACE	1220420	-	-	4.5	4.5	4.5	4.5
3	DAMPER, CRANKSHAFT VIBRATION - REPLACE	1220500	2.8	2.8	2.8	2.8	2.8	2.8
4	BEARING, CRANKSHAFT MAIN (ONE) - REPLACE A - Replace each additional	1220600	9.7	10.7	9.7	9.7	9.7	9.7
		122060A	0.1	0.1	0.1	0.1	0.1	0.1
5	BEARING, CRANKSHAFT THRUST - REPLACE	1220610	10.3	11.3	10.3	10.3	10.3	10.3
6	BEARING, CONNECTING ROD (ONE) - REPLACE A - Replace each additional	1220800	10.8	10.8	10.8	10.8	10.8	10.8
		122080A	0.1	0.1	0.1	0.1	0.1	0.1
7	CRANKSHAFT (M/T) - REPLACE  D - Replace one piston ring E - Replace all piston rings F - Replace one connecting rod G - Replace all connecting rods	1221100	-	-	13.8	13.8	13.8	13.8
		122110D	-	-	0.4	0.4	0.4	0.4
		122110E	-	-	1.2	1.2	1.2	1.2
		122110F	-	-	0.5	0.5	0.5	0.5
		122110G	-	-	1.2	1.2	1.2	1.2
8	CRANKSHAFT (A/T) - REPLACE  D - Replace one piston ring E - Replace all piston rings F - Replace one connecting rod G - Replace all connecting rods	1221200	9.0	10.0	18.0	19.0	18.0	19.0
		122120D	0.4	0.4	0.4	0.4	0.4	0.4
		122120E	1.3	1.3	1.2	1.2	1.2	1.2
		122120F	0.5	0.6	0.5	0.6	0.5	0.6
		122120G	1.2	1.2	1.2	1.2	1.2	1.2
9	PISTON, ROD AND/OR RINGS (ONE) - REPLACE C - Replace each additional	1221500	13.7	16.0	19.5	19.5	19.5	19.5
		122150C	0.1	0.1	0.1	0.1	0.1	0.1
10	BUSHING, CONNECTING ROD - REPLACE A - Replace each additional	1221540	14.2	16.5	19.5	19.5	19.5	19.5
		122154A	0.1	0.1	0.1	0.1	0.1	0.1
11	FLYWHEEL (M/T) - REPLACE A - Flywheel ring gear	1221700	-	-	5.3	5.3	5.3	5.3
		122170A	-		0.8	0.8	0.8	0.8

CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON



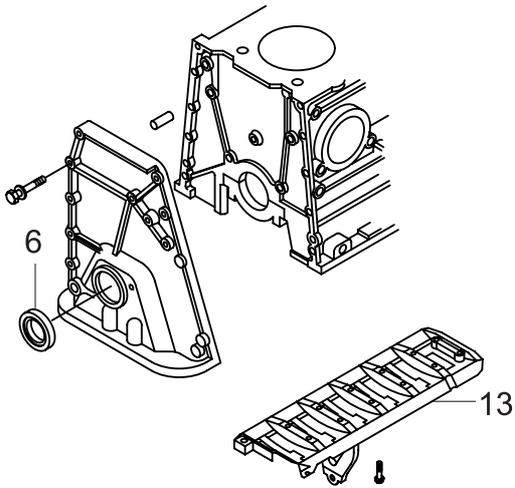
## GASOLINE ENGINE MECH. - CRANKSHAFT & PISTON (122)

NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
12	FLYWHEEL (A/T) - REPLACE A - Flywheel ring gear	1221900	4.8	5.2	6.3	6.3	6.3	6.3
		122190A	0.8	0.8	0.8	0.8	0.8	0.8
13	BEARING, PILOT - REPLACE	1222100	5.4	5.4	5.6	5.6	5.6	5.6

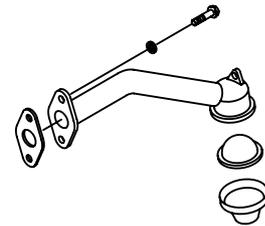
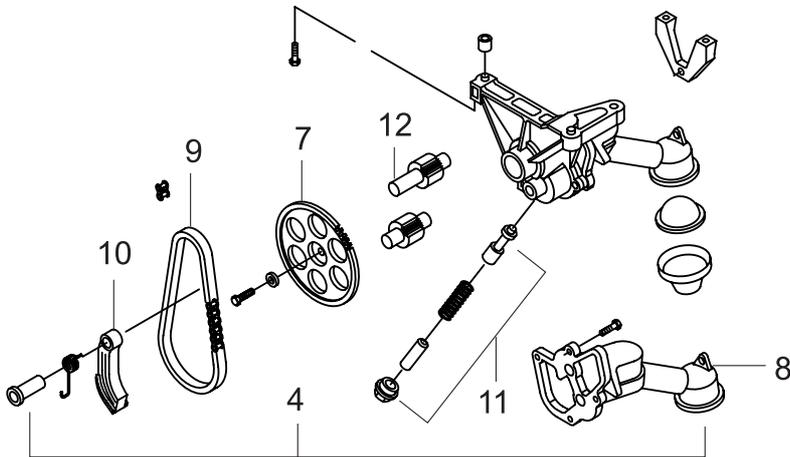
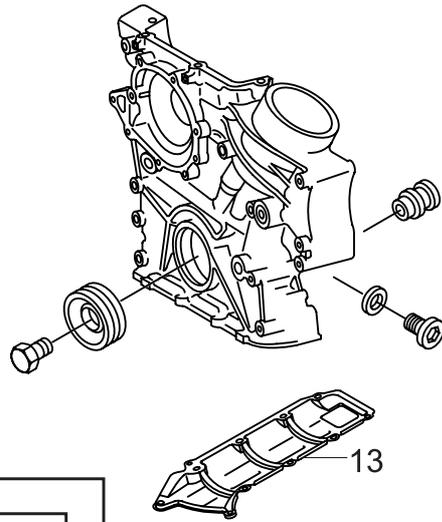
CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON

123

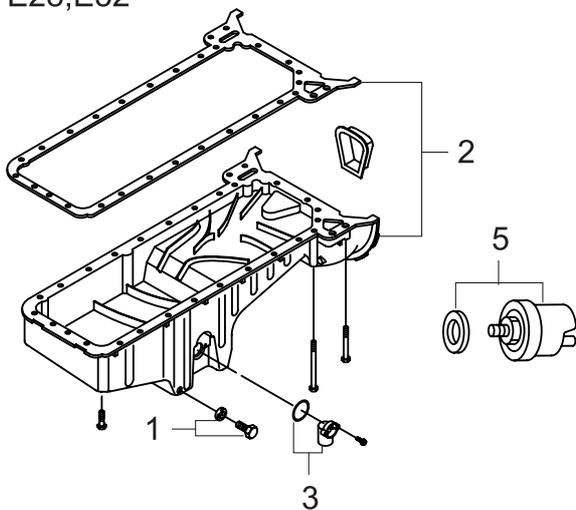
E28,E32



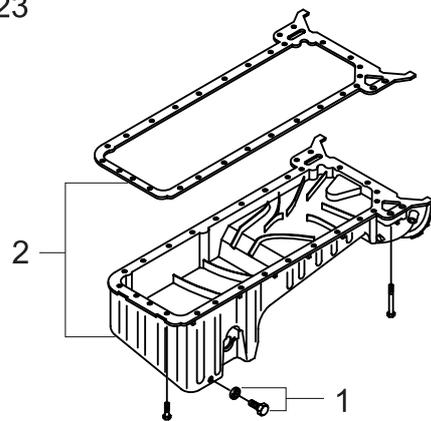
E20,E23



E28,E32



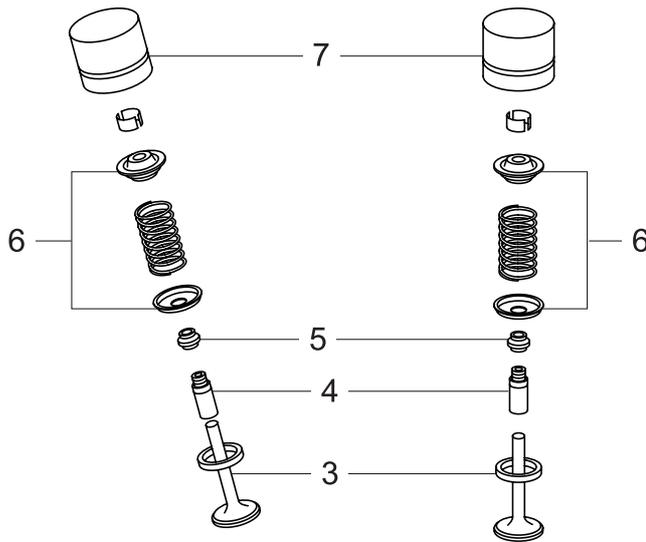
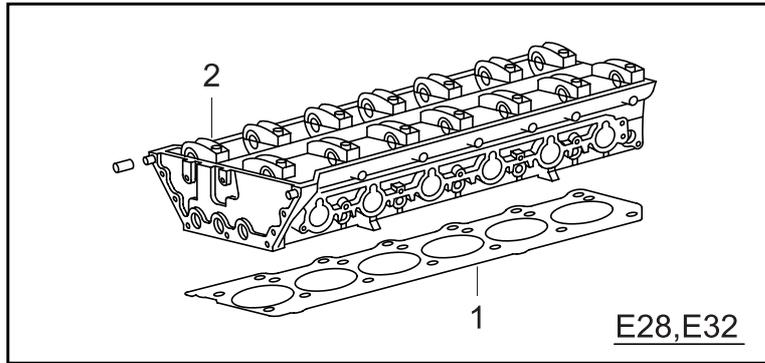
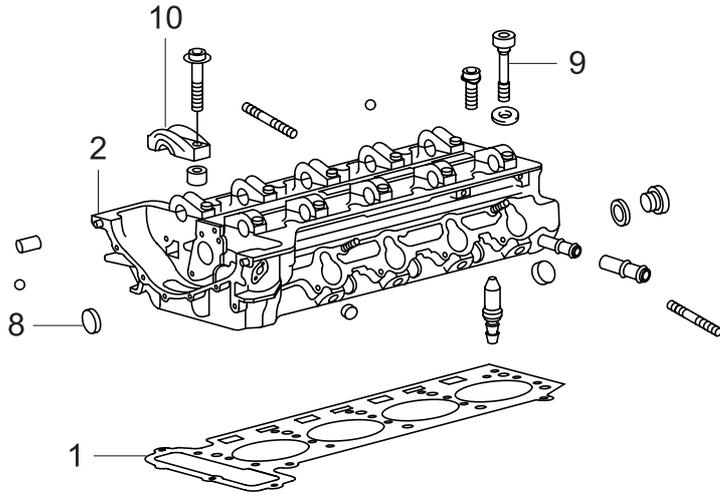
E20,E23



<b>GASOLINE ENGINE MECH. - OIL PAN &amp; PUMP (123)</b>								
NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	PLUG AND/OR GASKET, OIL PAN DRAIN - REPLACE	1231300	0.2	0.2	0.2	0.2	0.2	0.2
2	PAN AND/OR GASKET, OIL - REPLACE	1231500	9.1	9.8	5.0	5.0	5.0	5.0
	PAN AND/OR GASKET, OIL (AUTO) - REPLACE	1231510	7.9	8.6	5.0	5.0	5.0	5.0
3	SWITCH AND/OR GASKET, OIL LEVEL - REPLACE	1231600	0.3	0.3	0.3	0.3	0.3	0.3
4	PUMP, ENGINE OIL - REPLACE	1231700	9.0	9.0	4.0	4.0	4.0	4.0
	PUMP, ENGINE OIL - OVERHAUL	1231710	9.5	9.5	5.7	5.7	5.7	5.7
5	SWITCH, OIL PRESSURE GAUGE - REPLACE	1231900	0.7	0.7	0.4	0.4	0.4	0.4
6	OIL SEAL, CRANKSHAFT (FRONT) - REPLACE	1232300	7.7	9.2	3.7	3.9	3.7	3.9
7	SPROCKET, OIL PUMP - REPLACE	1232600	9.2	9.2	5.6	5.6	5.6	5.6
8	STRAINER ASSEMBLY, OIL - REPLACE	1232610	9.2	9.2	5.6	5.6	5.6	5.6
9	CHAIN, OIL PUMP ROLLER - REPLACE	1232670	9.2	9.2	5.6	5.6	5.6	5.6
10	TENSIONER, OIL PUMP ROLLER CHAIN - REPLACE	1232690	9.2	9.2	5.6	5.6	5.6	5.6
11	VALVE, OIL PRESSURE RELIEF - REPLACE	1232700	9.2	9.2	5.6	5.6	5.6	5.6
12	SHAFT, OIL PUMP DRIVE - REPLACE	1232800	9.2	9.2	5.6	5.6	5.6	5.6
13	PLATE, OIL BAFFLE - REPLACE	1234100	8.7	8.7	5.6	5.6	5.6	5.6

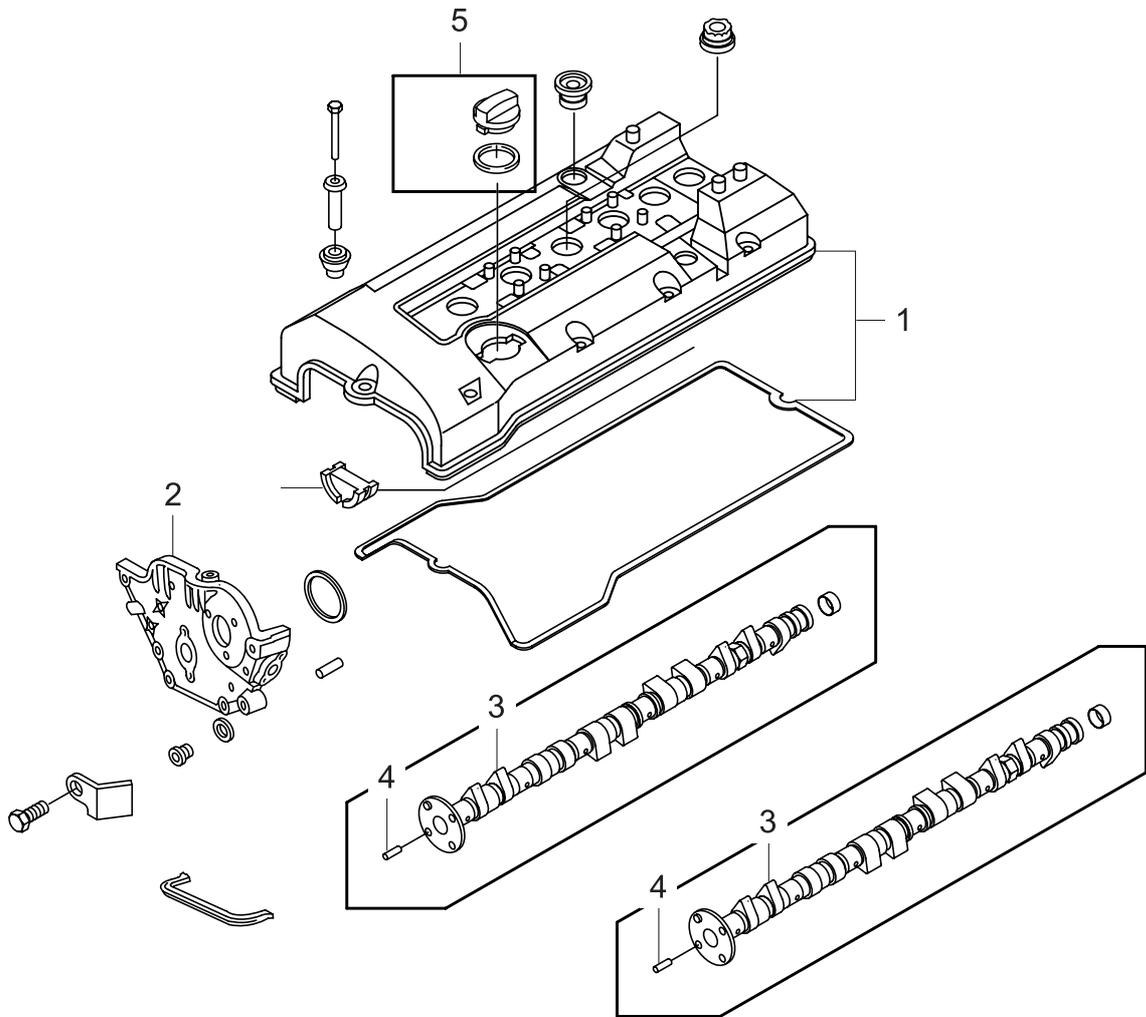
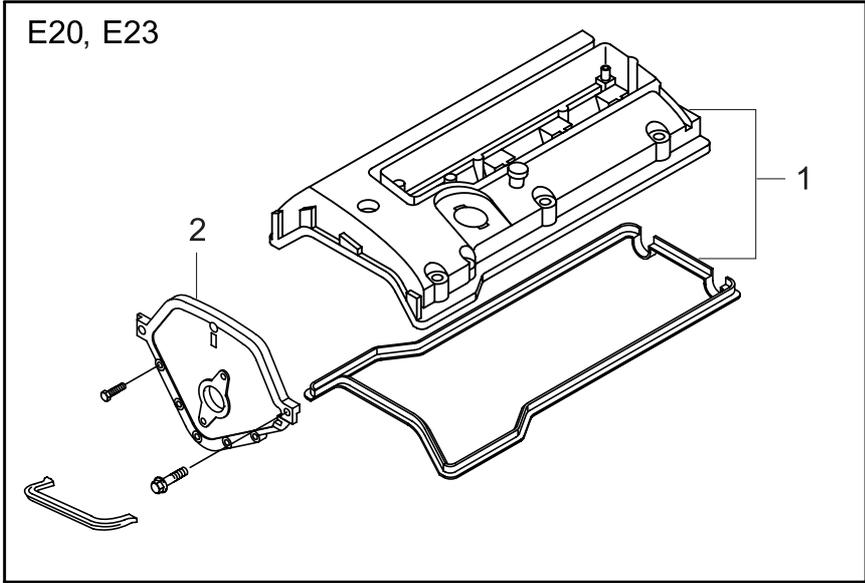
CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON

131



<b>GASOLINE ENGINE MECH. - CYLINDER HEAD (131)</b>								
NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	<b>GASKET, CYLINDER HEAD - REPLACE</b>	1312300	6.3	6.3	5.6	6.0	5.6	6.0
2	<b>HEAD, CYLINDER - REPLACE</b>	1312500	6.3	6.3	6.3	6.3	6.3	6.3
	<b>HEAD, CYLINDER - OVERHAUL</b>	1312600	8.4	8.6	8.4	8.6	8.4	8.6
3	<b>VALVE (ONE CYLINDER) - REPLACE</b>	1312700	6.8	7.0	8.4	8.6	8.4	8.6
	C - Valves (each additional)	131270C	0.1	0.1	0.1	0.1	0.1	0.1
4	<b>GUIDE, VALVE - REPLACE</b>	1312800	6.3	6.3	6.3	6.3	6.3	6.3
	C - Valves (each additional)	131280C	0.1	0.1	0.3	0.3	0.3	0.3
5	<b>SEAL, VALVE GUIDE - REPLACE</b>	1312810	2.2	2.2	6.6	6.6	6.6	6.6
	A - Replace each additional	131281A	0.1	0.1	0.1	0.1	0.1	0.1
6	<b>SPRING CAP AND/OR SEAL, VALVE - REPLACE</b>	1312900	6.8	7.0	6.6	6.6	6.6	6.6
7	<b>LIFTER, VALVE - REPLACE</b>	1313800	2.8	3.0	2.0	2.0	2.0	2.0
	C - Valves (each additional)	131380C	0.1	0.1	0.1	0.1	0.1	0.1
8	<b>PLUG, CYLINDER HEAD CORE HOLE - REPLACE</b>	1314700	1.5	1.5	0.9	1.4	0.9	1.4
	A - Replace each additional	131470A	0.1	0.1	0.1	0.1	0.1	0.1
9	<b>BOLT, CYLINDER HEAD (ONE) - REPLACE</b>	1314800	1.2	1.2	1.2	1.2	1.2	1.2
	A - Replace each additional	131480A	0.1	0.1	0.1	0.1	0.1	0.1
10	<b>CAP, CAMSHAFT BEARING - REPLACE</b>	1315600	0.9	0.9	1.2	1.2	1.2	1.2

CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON

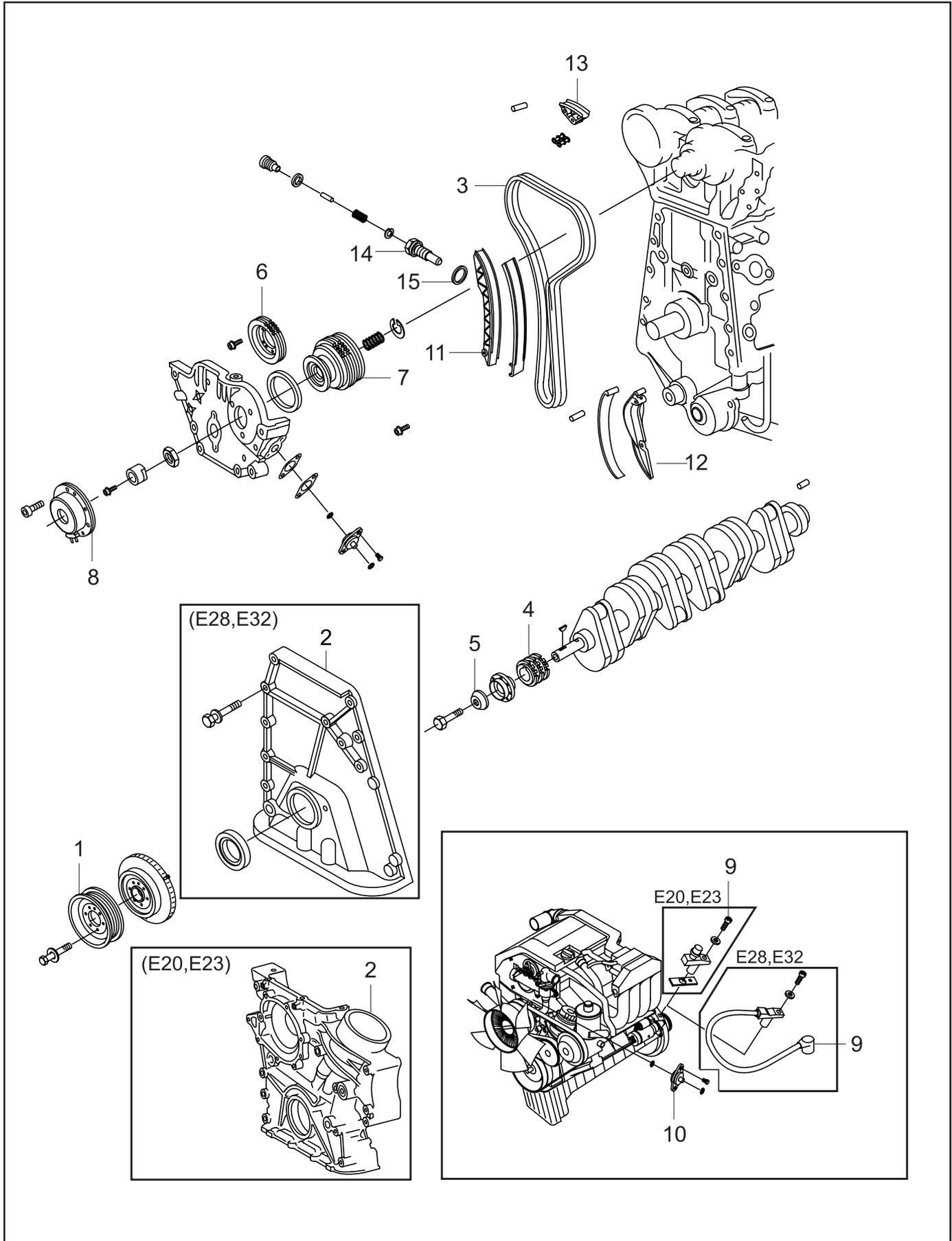


## GASOLINE ENGINE MECH. - CAM SUPPORT & SHAFT (132)

NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	COVER AND/OR GASKET, CYLINDER HEAD - REPLACE	1322110	0.5	0.5	0.5	0.5	0.5	0.5
2	COVER, CYLINDER HEAD FRONT - REPLACE	1322210	4.1	4.1	4.1	4.1	4.1	4.1
3	CAMSHAFT - REPLACE	1322300	2.2	2.2	2.2	2.2	2.2	2.2
4	PIN, CAMSHAFT - REPLACE	1322610	0.7	0.7	0.7	0.7	0.7	0.7
5	CAP OR SEAL, OIL FILLER - REPLACE	1322700	0.2	0.2	0.2	0.2	0.2	0.2

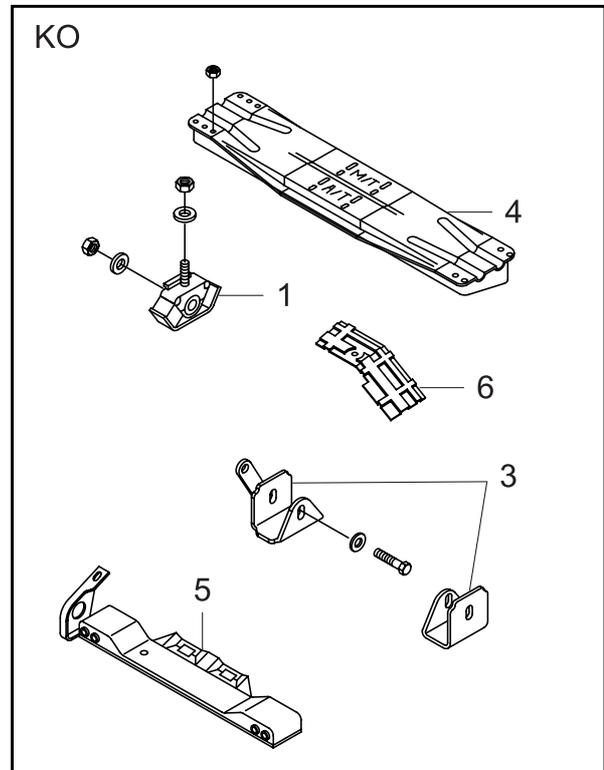
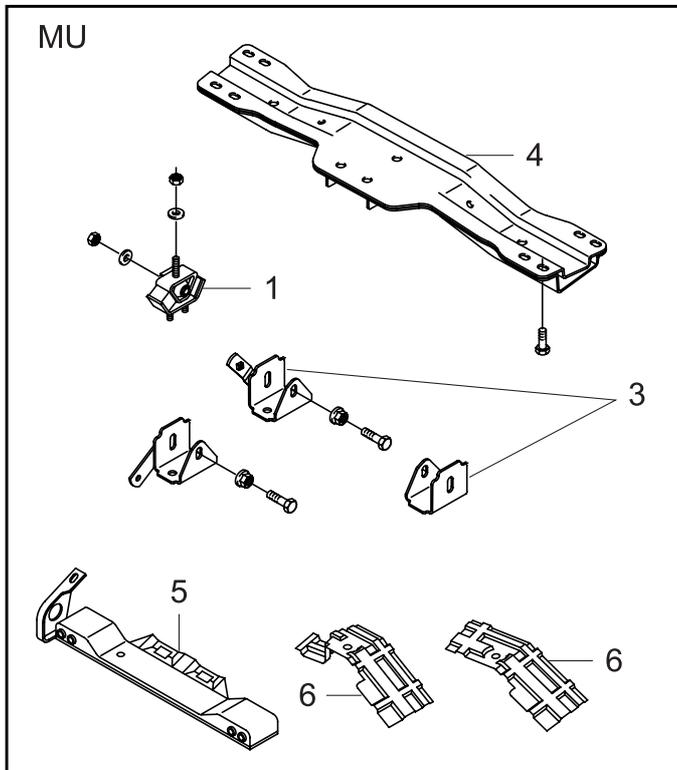
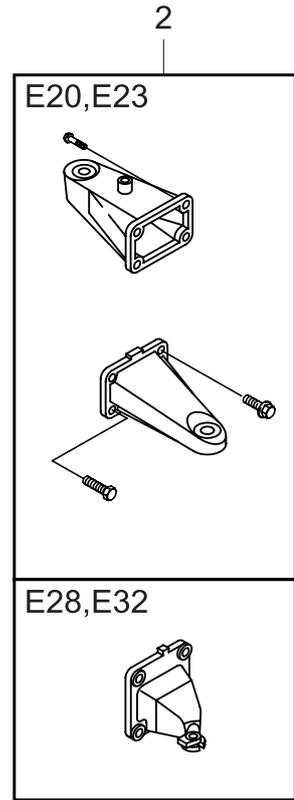
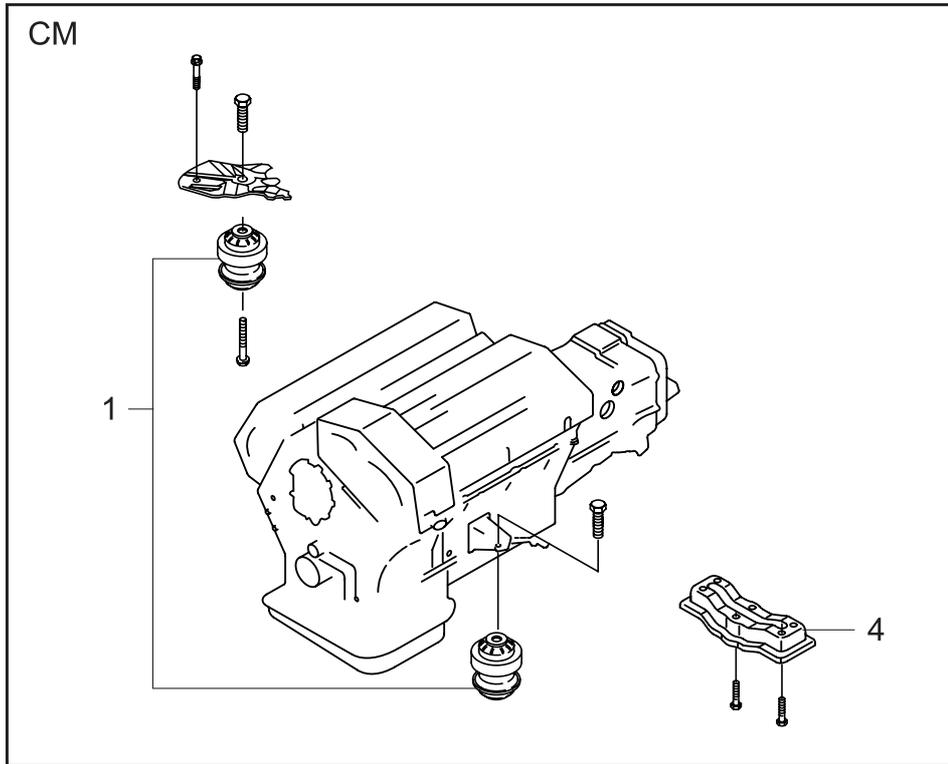
CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON

133



<b>GASOLINE ENGINE MECH. - TIMING COVER &amp; CHAINDRIVE (133)</b>								
NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	PULLEY, CRANKSHAFT - REPLACE	1332100	2.8	2.8	2.0	4.0	2.0	4.0
2	COVER AND/OR GASKET, TIMING - REPLACE	1332200	8.8	9.5	5.8	5.8	5.8	5.8
3	BELT OR CHAIN, TIMING - REPLACE	1332500	5.2	5.6	5.2	5.6	5.2	5.6
4	SPROCKET, CRANKSHAFT TIMING - REPLACE	1333100	8.8	9.5	14.0	16.0	14.0	16.0
5	HUB OR VIBRATION DAMPER - REPLACE	1333140	3.4	3.4	3.4	3.4	3.4	3.4
6	SPROCKET, CAMSHAFT TIMING - REPLACE	1333300	2.7	2.7	2.7	2.7	2.7	2.7
7	ADJUST ASSEMBLY - REPLACE	1333400	3.0	3.0	3.0	3.0	3.0	3.0
8	MAGNET, CAMSHAFT ADJUST - REPLACE	1333430	0.2	0.2	0.2	0.2	0.2	0.2
9	SENSOR, CRANKSHAFT POSITION - REPLACE	1333700	0.7	0.7	0.6	0.6	0.6	0.6
10	SENSOR, CAMSHAFT POSITION - REPLACE	1333800	0.4	0.4	0.4	0.4	0.4	0.4
11	RAIL, CLAMPING SLIDING - REPLACE	1336500	9.4	9.4	1.5	1.5	1.5	1.5
12	RAIL, SLIDING - REPLACE	1336700	9.4	9.4	5.2	5.6	5.2	5.6
13	RAIL, UPPER SLIDING - REPLACE	1336900	1.5	1.5	1.2	1.2	1.2	1.2
14	CHAIN TIGHTENER - REPLACE	1337300	0.5	0.5	0.5	0.5	0.5	0.5
15	WASHER, CHAIN TIGHTENER - REPLACE	1337500	0.5	0.5	0.5	0.5	0.5	0.5

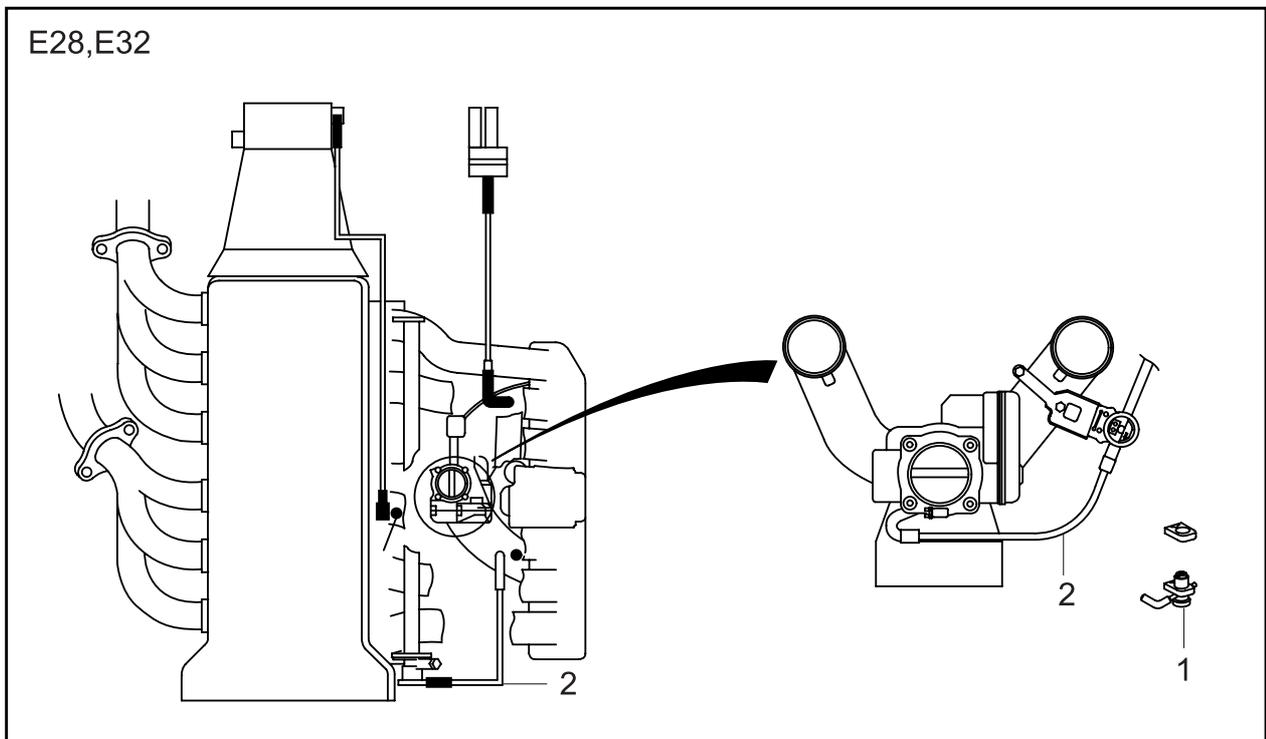
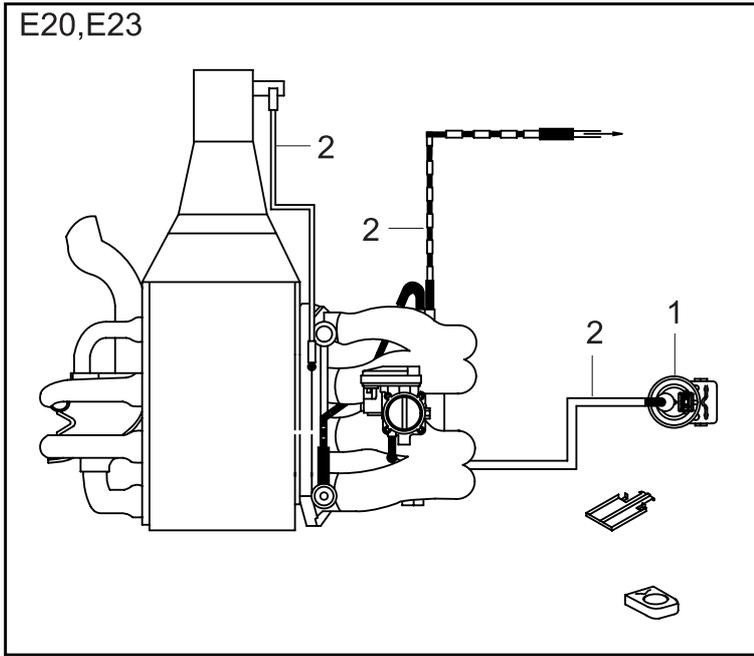
CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON



**GASOLINE ENGINE MECH. - ENGINE & TRANSAXLE MOUNT (138)**

NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	MOUNT, ENGINE (FRONT) - REPLACE Both	1380200	0.5	0.5	0.5	0.5	0.5	0.5
		1380210	0.8	0.8	0.8	1.0	0.8	1.0
2	BRACKET, ENGINE MOUNT (FRONT) - REPLACE Both	1380400	0.5	0.5	0.5	0.5	0.5	0.5
		1380410	0.8	0.8	0.8	0.8	0.8	0.8
3	STOPPER ENGINE MOUNTING - REPLACE	1380420	0.5	0.5	0.5	0.5	0.5	0.5
4	CROSS MEMBER, ENGINE MOUNTING REAR - REPLACE	1380440	0.6	0.6	0.6	0.6	0.6	0.6
5	CROSS MEMBER, FRONT AXLE MOUNTING - REPLACE	1380600	-	-	0.6	0.6	0.6	0.6
6	INSULATOR, HEAT SHIELD - REPLACE	1384500	0.3	0.3	0.3	0.3	0.3	0.3

CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON

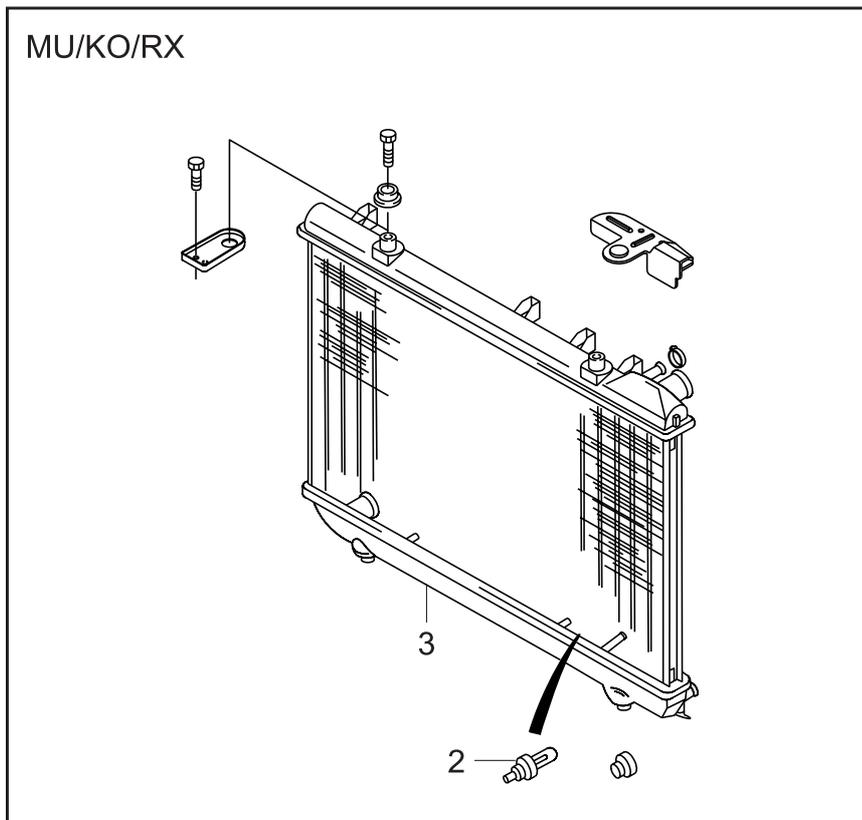
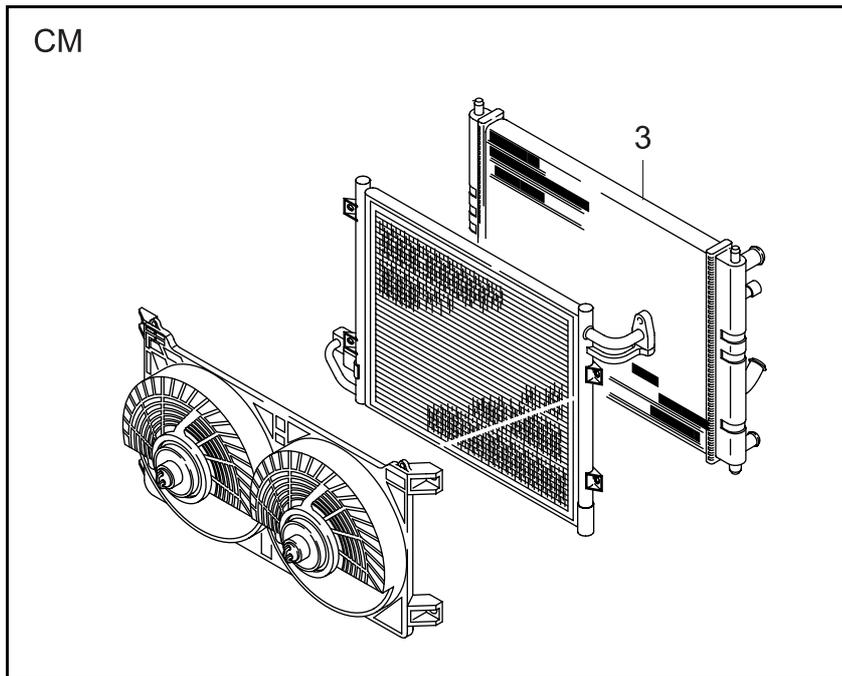


## GASOLINE ENGINE MECH. - VACUUM SYSTEM (139)

NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	VALVE, PURGE CONTROL - REPLACE	1391300	0.3	0.3	0.5	0.5	0.5	0.5
2	VACUUM HOSE AND/OR TUBE - REPLACE	1391310	0.6	0.6	0.5	0.5	0.5	0.5

CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON

# **1D - ENGINE COOLING**

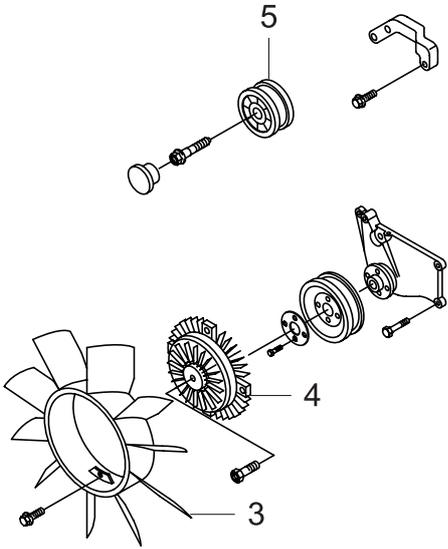


## ENGINE COOLING - RADIATOR (141)

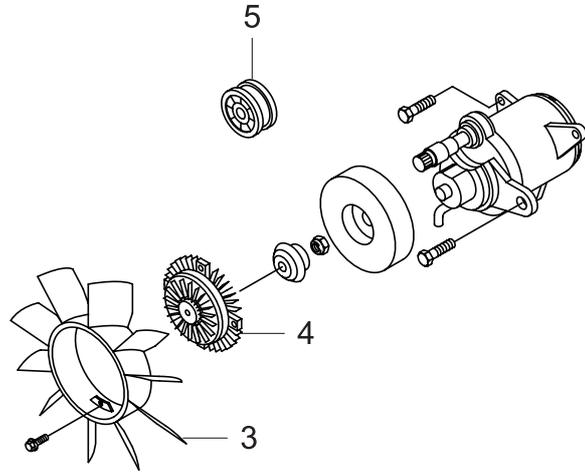
NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	COOLANT - REPLACE	1410100	0.5	0.5	0.5	0.5	0.5	0.5
2	COCK OR PLUG, RADIATOR DRAIN - REPLACE	1410300	0.2	0.2	1.0	1.0	1.0	1.0
3	RADIATOR ASSEMBLY - REPLACE	1410500	0.9	0.9	1.6	1.6	1.6	1.6
4	COOLING SYSTEM - FLUSH	1411700	0.2	0.2	0.6	0.6	0.6	0.6

CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON

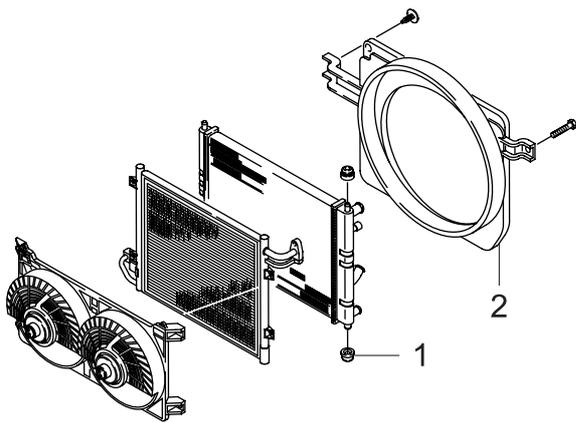
E28,E32



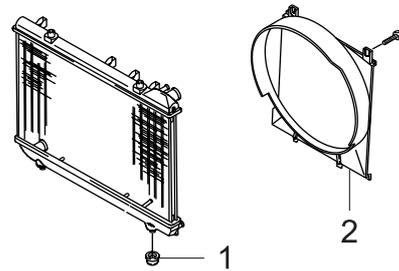
E20,E23



CM



MU/KO/RX

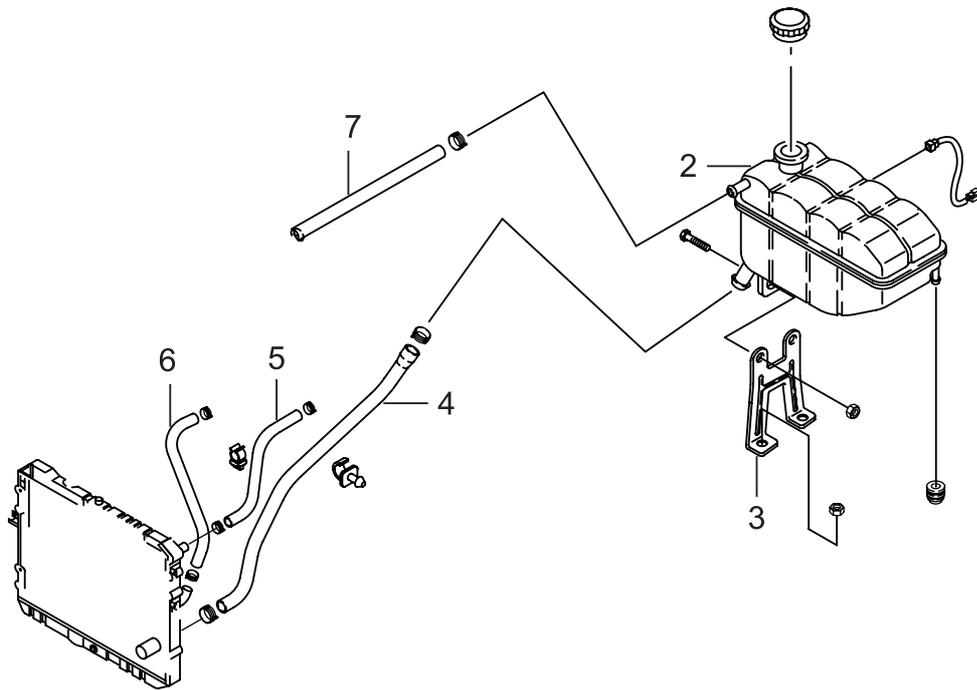


## ENGINE COOLING - COOLING FAN (143)

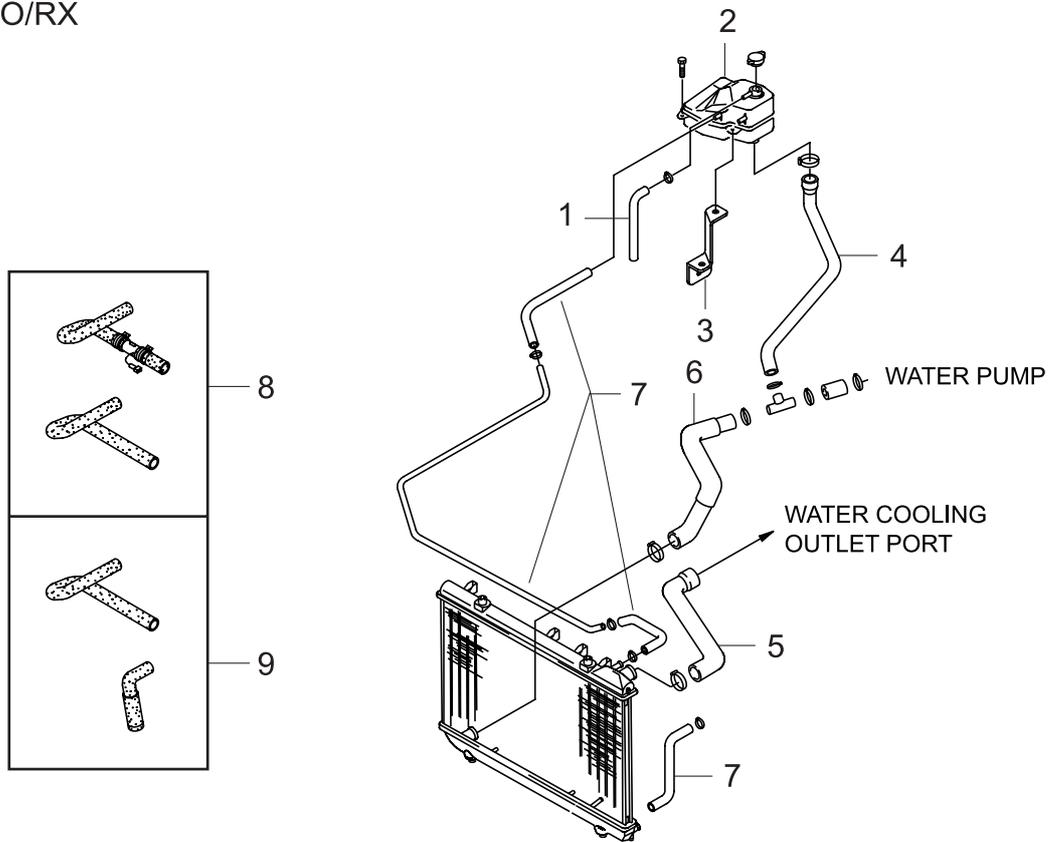
NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	DEFLECTOR AND/OR SEAL (LOWER) - REPLACE	1430500	0.3	0.3	0.8	0.8	0.8	0.8
2	SHROUD, RADIATOR FAN (ONE PIECE) - REPLACE	1430700	0.3	0.3	0.5	0.5	0.5	0.5
3	BLADE, FAN - REPLACE	1431600	0.3	0.3	0.7	0.7	0.7	0.7
4	CLUTCH, FAN - REPLACE	1431700	1.1	1.1	0.7	0.7	0.7	0.7
5	PULLEY, FAN BELT IDLE - REPLACE	1431900	0.5	0.5	0.5	0.5	0.5	0.5

CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON

CM



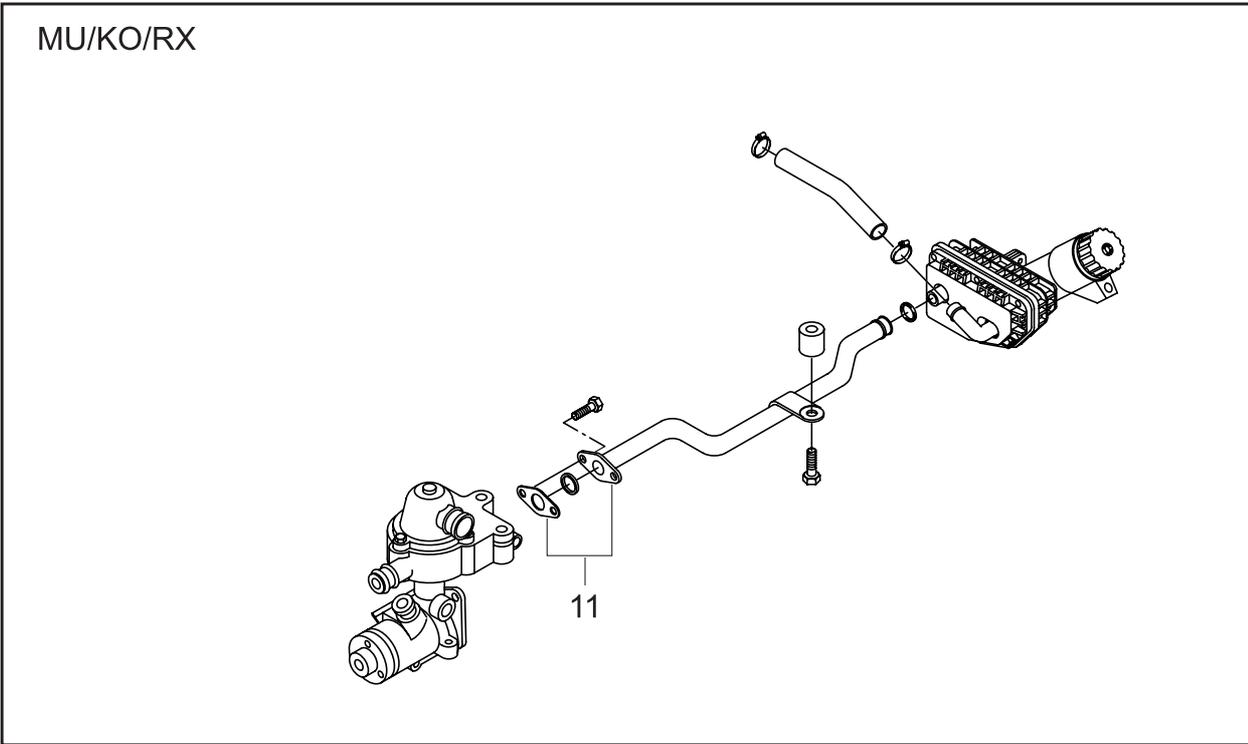
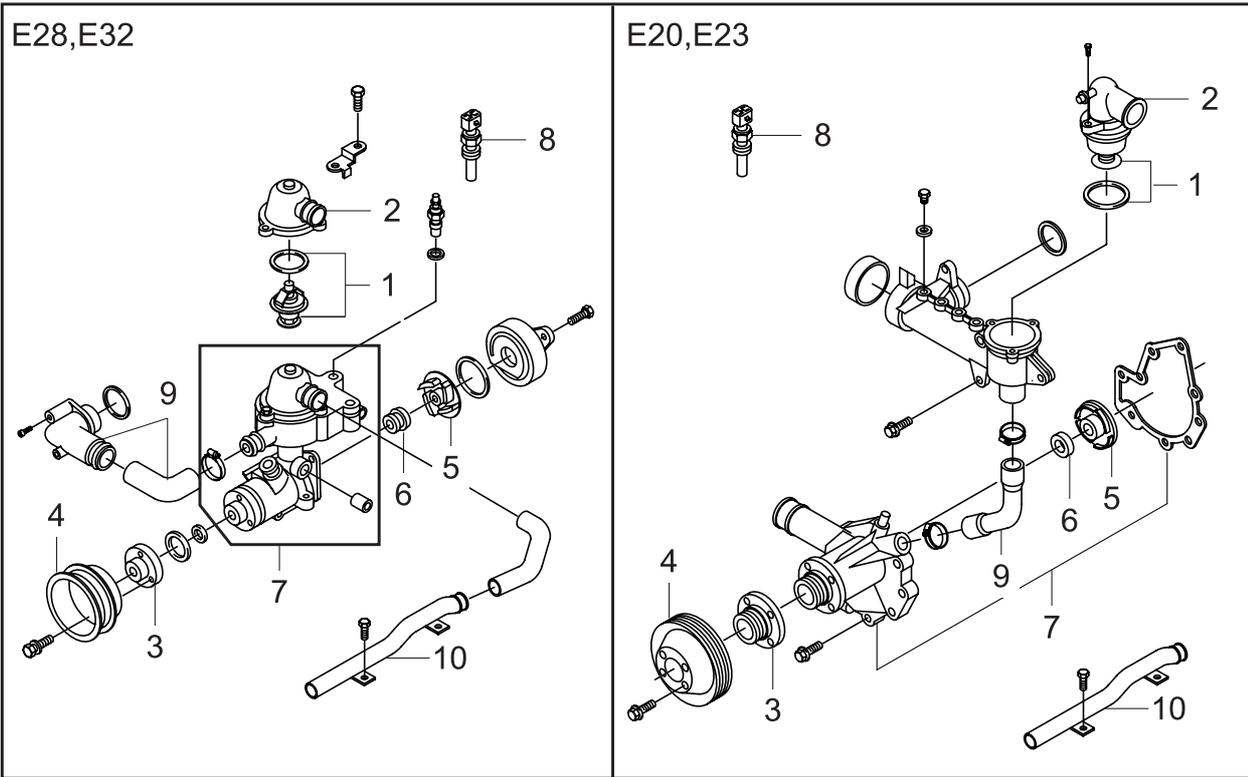
MU/KO/RX



## ENGINE COOLING - RADIATOR HOSE & PIPE (145)

NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	HOSE, OVERFLOW - REPLACE	1450300	0.3	0.3	0.3	0.3	0.3	0.3
2	RESERVOIR, RADIATOR COOLANT - REPLACE	1450400	0.4	0.4	0.4	0.4	0.4	0.4
3	BRACKET, RADIATOR COOLANT, RESERVOIR - REPLACE	1450410	-	-	0.5	0.5	0.5	0.5
4	HOSE, MAKE UP - REPLACE	1450600	0.6	0.6	0.6	0.6	0.6	0.6
5	HOSE, UPPER ENGINE COOLANT - REPLACE	1450700	0.4	0.4	0.4	0.4	0.4	0.4
6	HOSE, LOWER ENGINE COOLANT - REPLACE	1450800	0.6	0.6	0.6	0.6	0.6	0.6
7	CHOSE AND/OR TUBE, DEAERATION - REPLACE A - Replace each additional	1451400	0.3	0.3	0.3	0.3	0.3	0.3
		145140A	-	-	0.1	0.1	0.1	0.1
8	HOSE, INLET HEATER - REPLACE	1453100	1.0	1.0	1.0	1.0	1.0	1.0
9	HOSE, OUTLET HEATER - REPLACE	1453200	1.0	1.0	1.0	1.0	1.0	1.0

CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON

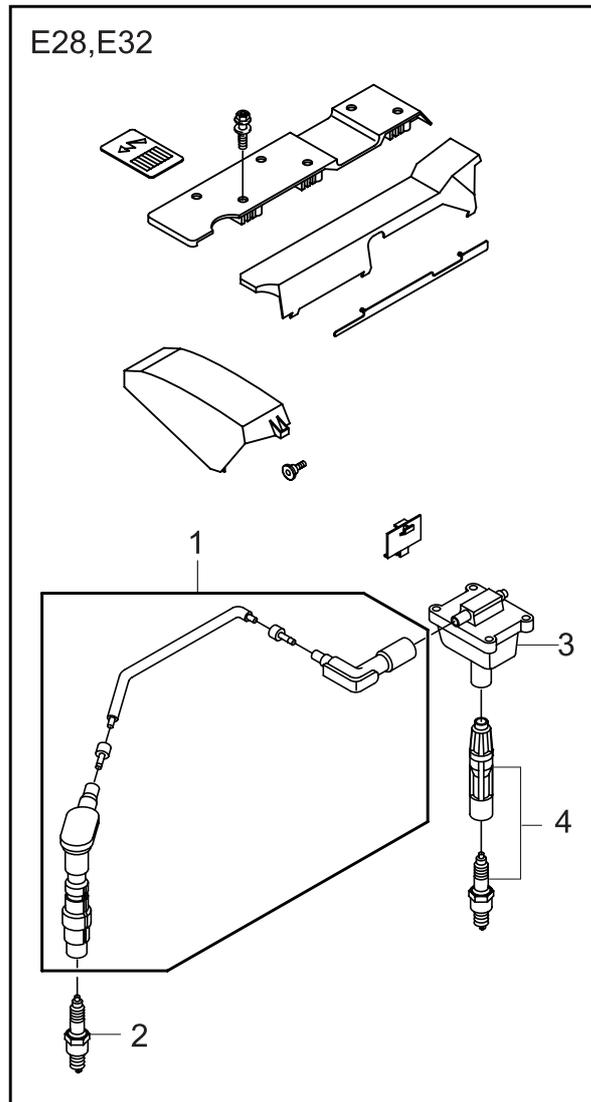
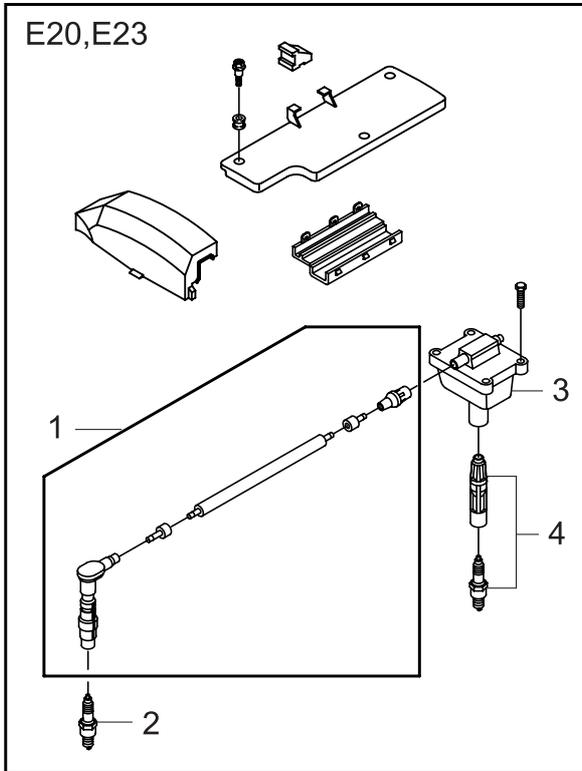


## ENGINE COOLING - THERMOSTAT & WATER PUMP (148)

NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	THERMOSTAT AND/OR GASKET - REPLACE	1480500	0.5	0.5	0.5	0.5	0.5	0.5
2	PORT AND/OR GASKET, COOLANT OUTLET - REPLACE	1480600	0.7	0.7	1.0	1.0	1.0	1.0
3	FLANGE, WATER PUMP - REPLACE	1481250	0.5	0.5	0.5	0.5	0.5	0.5
4	PULLEY, WATER PUMP - REPLACE	1481270	0.3	0.3	0.3	0.3	0.3	0.3
5	IMPELLER, WATER PUMP - REPLACE	1481280	2.0	2.0	4.2	4.2	4.2	4.2
6	SEAL, WATER PUMP MECHANICAL - REPLACE	1481700	1.2	1.2	3.2	3.2	3.2	3.2
7	WATER PUMP - REPLACE	1482100	2.0	2.0	4.2	4.2	4.2	4.2
8	SENSOR, WATER PUMP TEMPERATURE - REPLACE	1482200	0.2	0.2	0.2	0.2	0.2	0.2
9	PORT, COOLING WATER DUTLET - REPLACE	1482210	0.6	0.6	0.8	0.8	0.8	0.8
10	PIPE, HOT WATER INLET - REPLACE	1482220	0.5	0.5	0.9	0.9	0.9	0.9
11	PIPE, OIL COOLANT - REPLACE	1482230	0.8	0.8	1.0	1.0	1.0	1.0

CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON

# **1E - ENGINE ELECTRICAL**

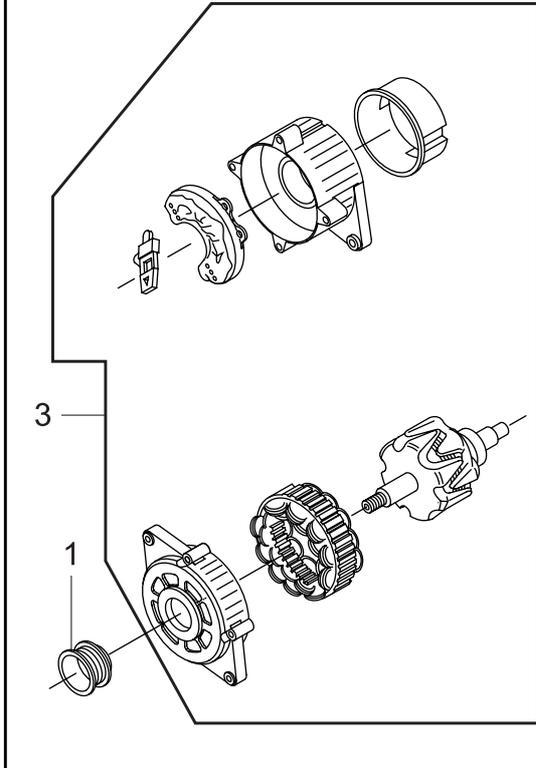


## ENGINE ELECTRICAL - IGNITION CABLE (151)

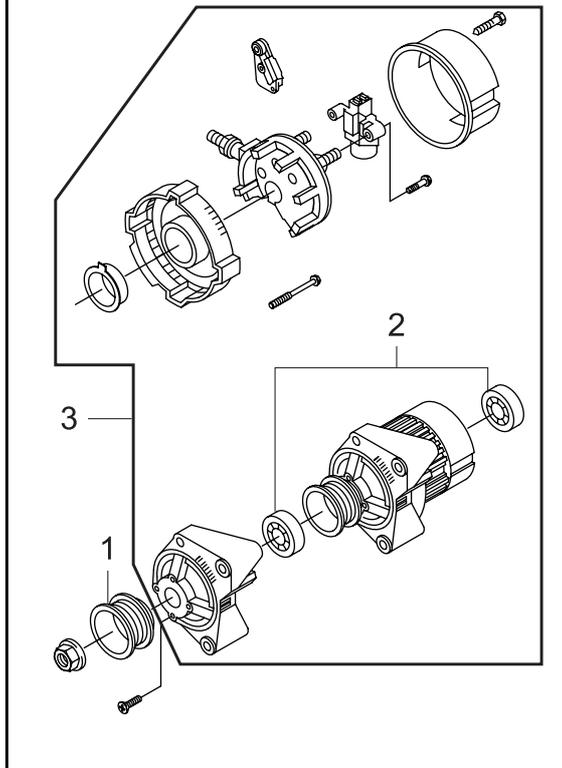
NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	WIRES, SPARK PLUG(ONE OR TWO) DOHC - REPLACE	1510200	0.2	0.2	0.2	0.2	0.2	0.2
	WIRES, SPARK PLUG(ALL) DOHC - REPLACE	1510500	0.3	0.3	0.3	0.3	0.3	0.3
2	PLUGS, SPARK(ONE OR TWO) DOHC - REPLACE	1510900	0.4	0.5	0.4	0.5	0.4	0.5
	PLUGS, SPARK(ALL) DOHC - REPLACE	1511200	0.5	0.7	0.5	0.7	0.5	0.7
3	COIL, IGNITION CONTROL DOHC - REPLACE	1511400	0.3	0.3	0.3	0.3	0.3	0.3
	A - Replace each additional	151140A	0.1	0.1	0.1	0.1	0.1	0.1
4	PLUG, COUPLING - REPLACE	1511600	0.3	0.3	0.3	0.3	0.3	0.3
	A - Replace each additional	151160A	0.1	0.1	0.1	0.1	0.1	0.1

CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON

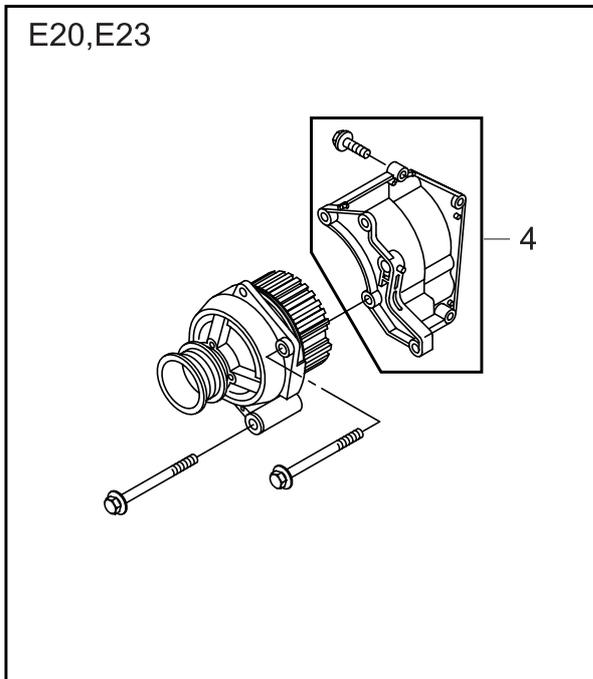
DAEWOO TYPE



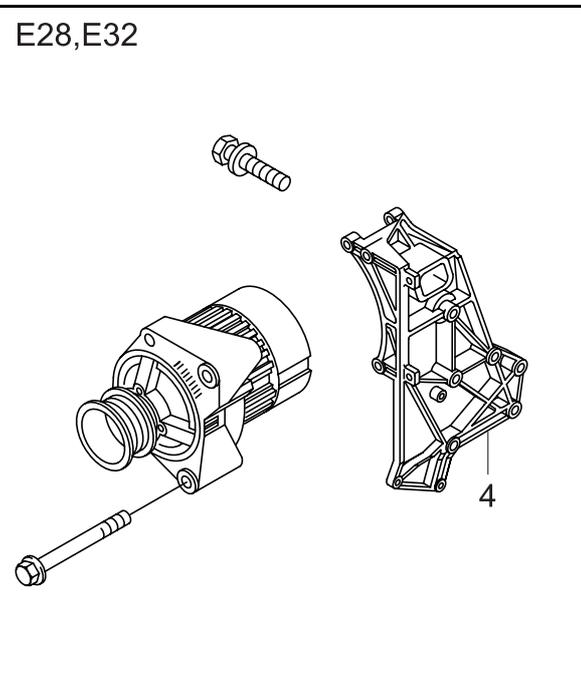
BOSCH TYPE



E20,E23



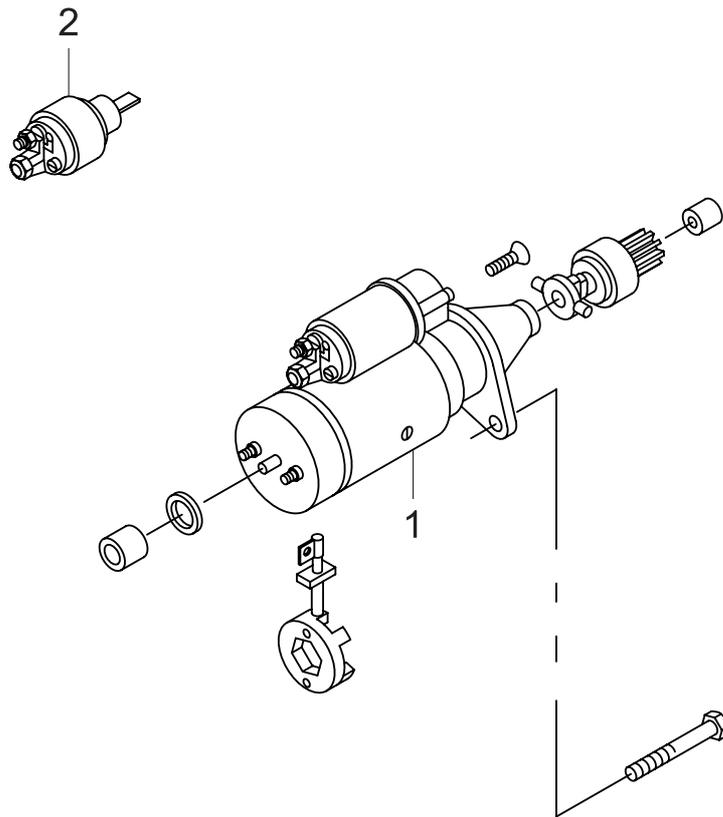
E28,E32



ENGINE ELECTRICAL - ALTERNATOR UNIT (154)									
NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX		
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	
1	PULLEY AND/OR FAN, ALTERNATOR - REPLACE	1540100	0.6	0.6	0.5	0.5	0.5	0.5	
2	BEARING, ALTERNATOR-REPLACE	Front	1540300	0.8	0.8	0.8	0.8	0.8	0.8
		Rear	1540500	0.8	0.8	0.8	0.8	0.8	0.8
3	ALTERNATOR ASSEMBLY - REPLACE	1541700	0.8	0.8	0.8	0.8	0.8	0.8	
	ALTERNATOR ASSEMBLY - OVERHAUL	1541900	1.4	1.4	1.5	1.5	1.5	1.5	
4	BRACKET, ALTERNATOR MOUNTING - REPLACE	1544100	1.2	1.2	1.2	1.2	1.2	1.2	

CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON

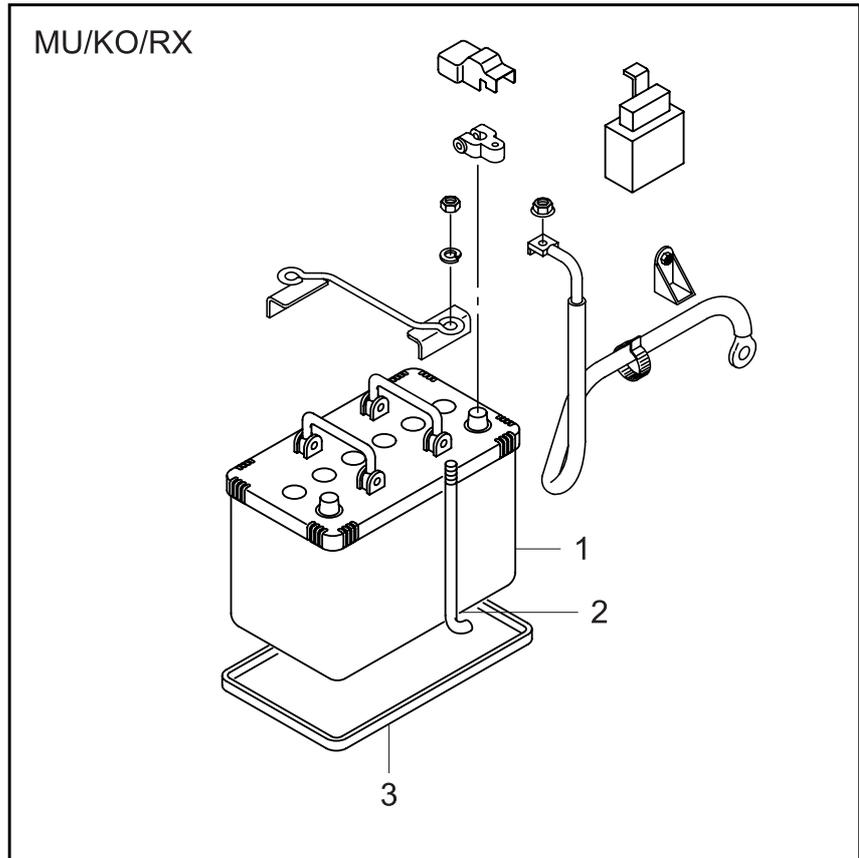
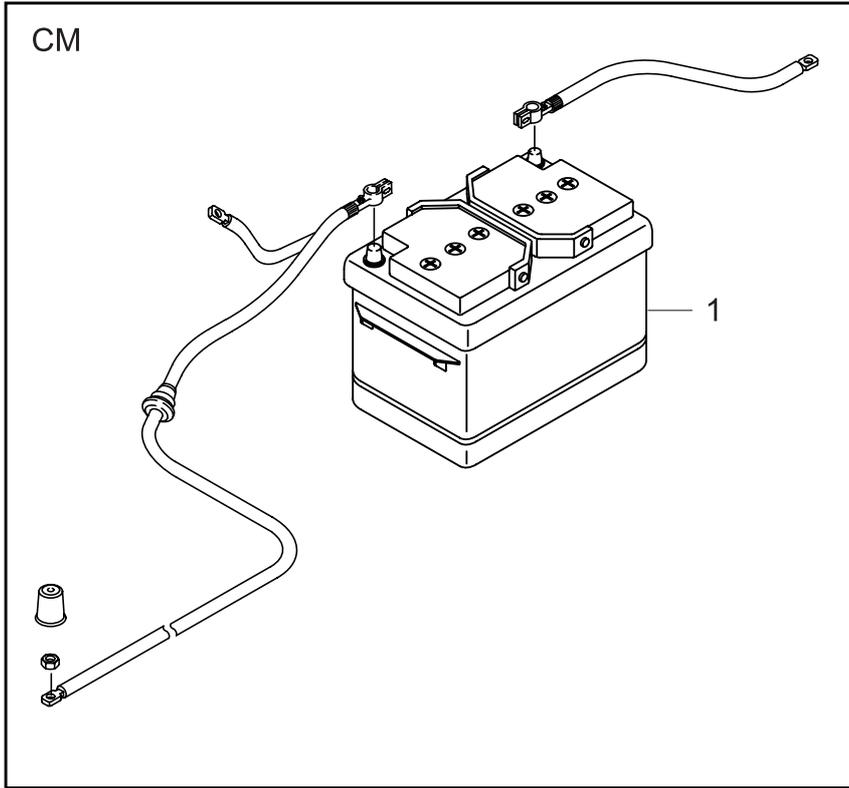
156



## ENGINE ELECTRICAL - STARTER (156)

NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	MOTOR ASSEMBLY, STARTER DOHC - REPLACE	1560900	1.2	1.2	1.0	1.0	1.0	1.0
2	SWITCH, STARTER MOTOR MAGNETIC - REPLACE	1562700	1.5	1.5	1.2	1.2	1.2	1.2

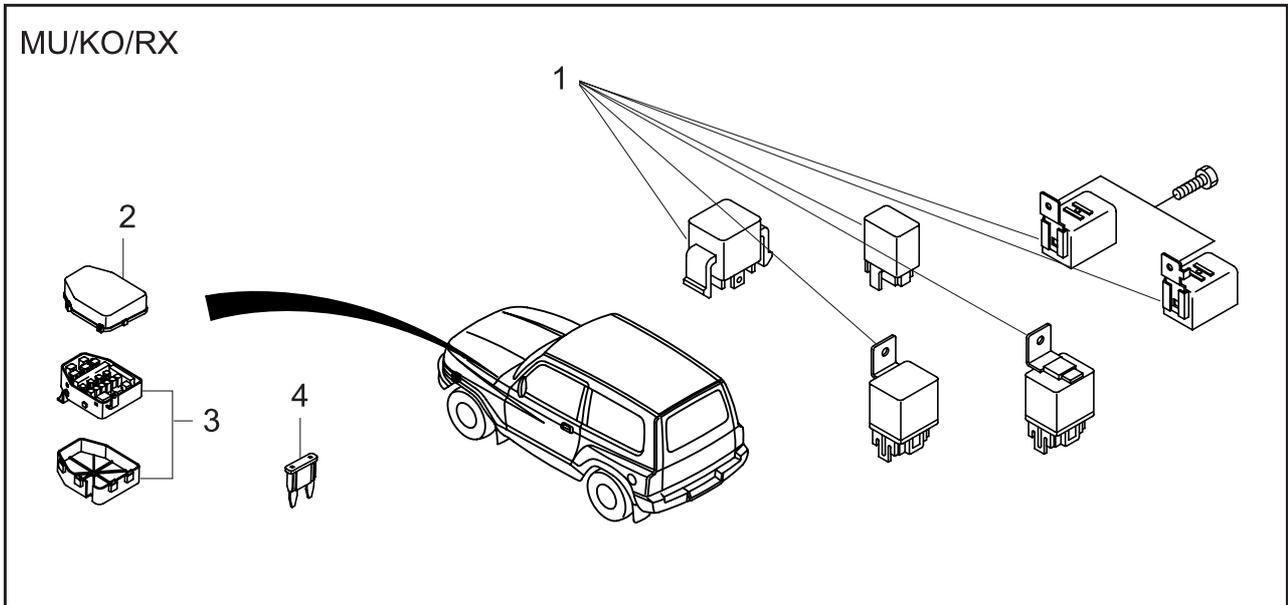
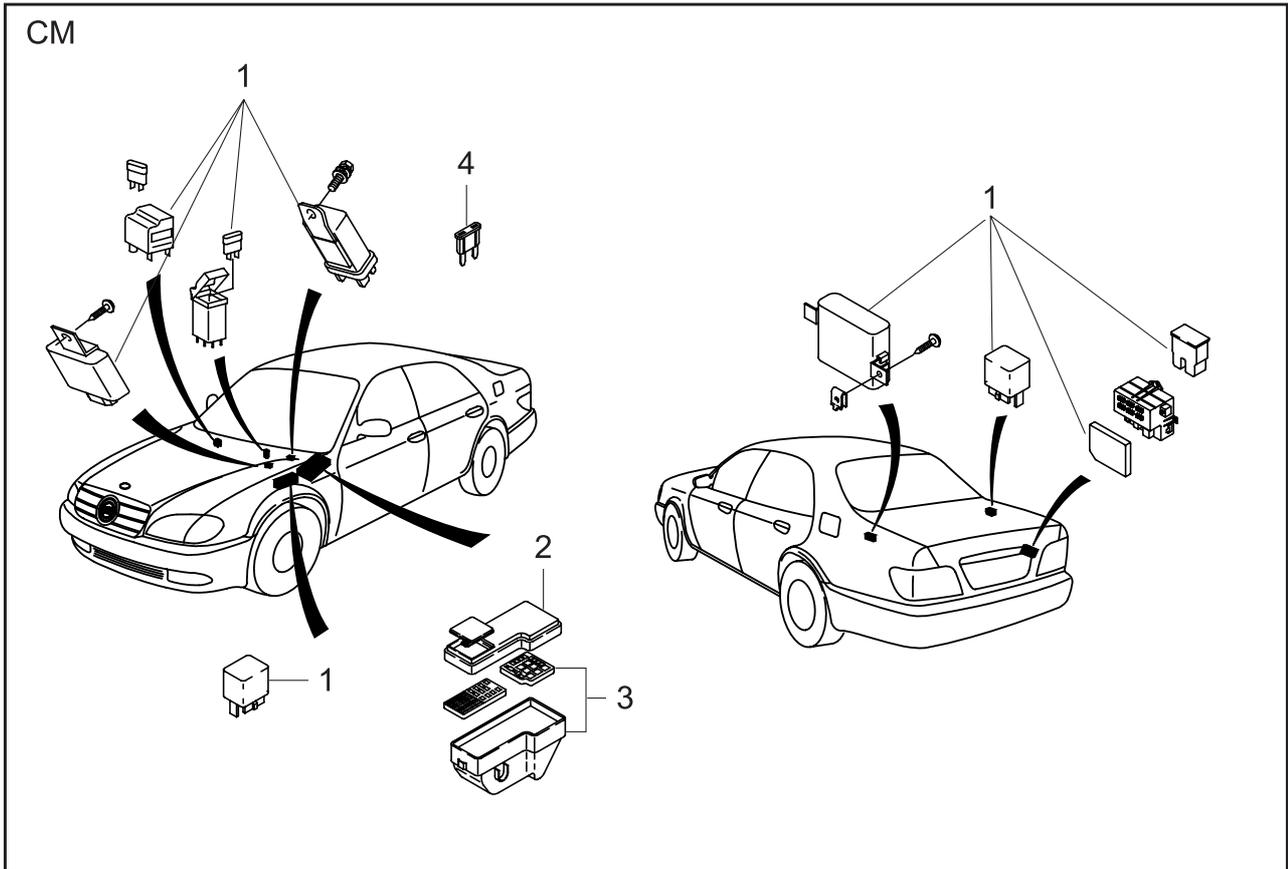
CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON



## ENGINE ELECTRICAL - BATTERY (157)

NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	BATTERY - REPLACE	1570300	0.2	0.2	0.2	0.2	0.2	0.2
2	RETAINER AND/OR BOLTS, BATTERY - REPLACE	1570500	0.1	0.1	0.2	0.2	0.2	0.2
3	CARRIER, BATTERY - REPLACE	1571100	-	-	0.3	0.3	0.3	0.3

CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON

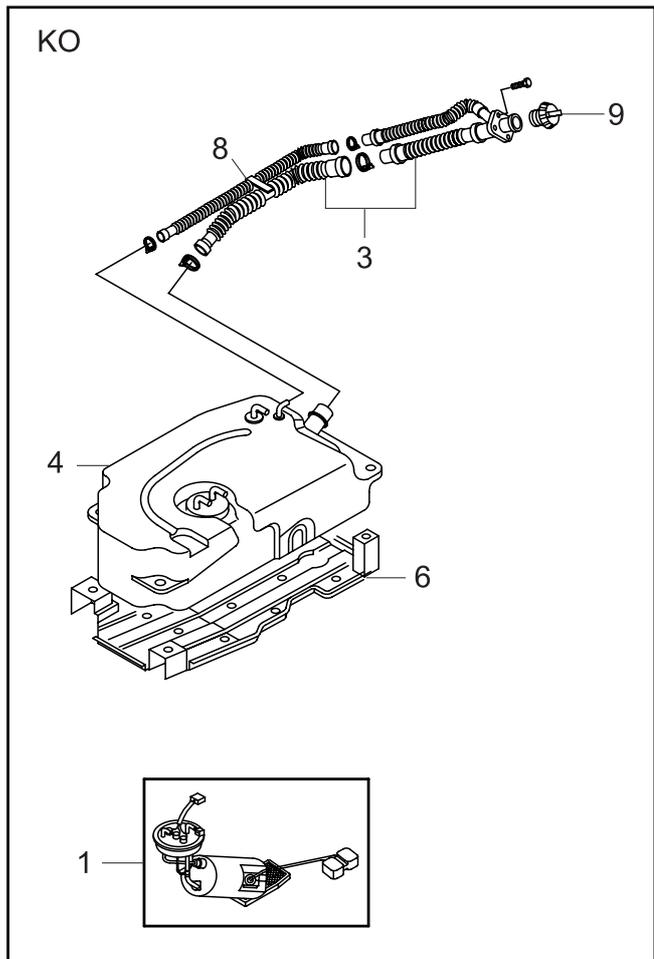
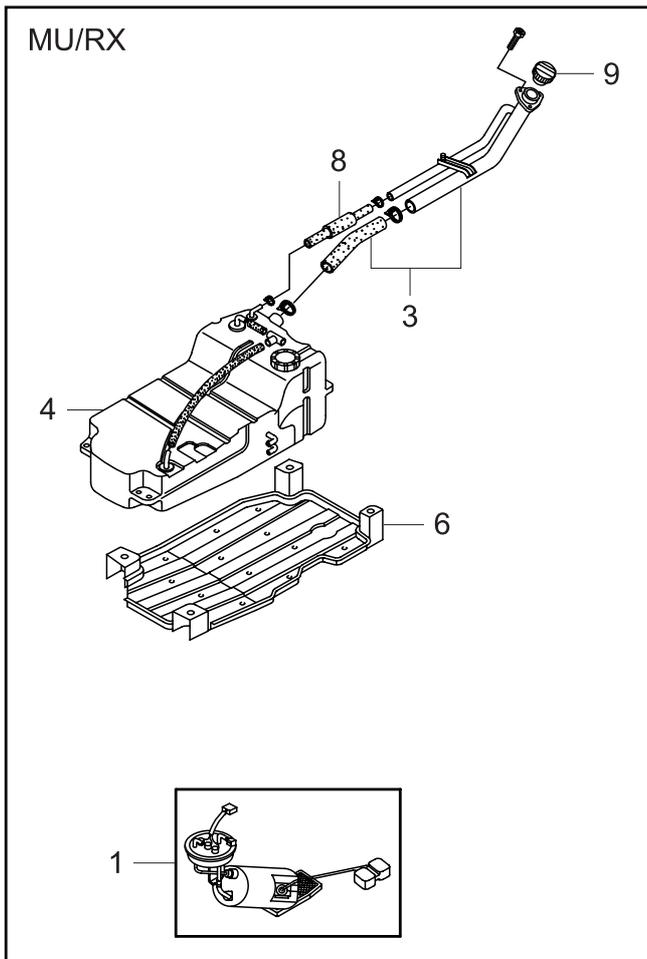
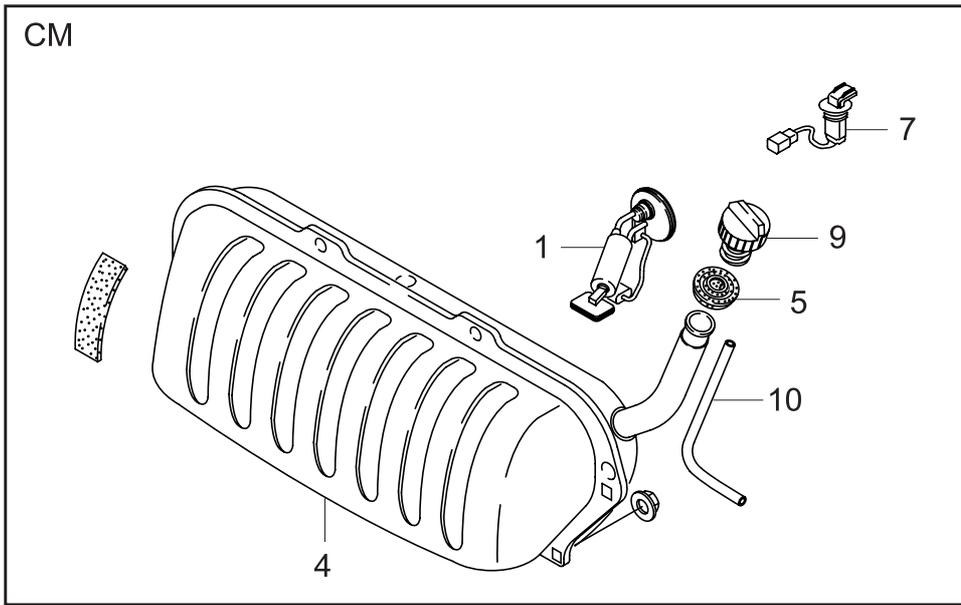


## ENGINE ELECTRICAL - FUSE & RELAY (158)

NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	<b>RELAY - REPLACE</b>							
	Fog Lamp	1580200	0.2	0.2	0.2	0.2	0.2	0.2
	Enable (ABS)	1580500	0.2	0.2	0.2	0.2	0.2	0.2
	Window Wiper Motor	1580900	0.2	0.2	0.2	0.2	0.2	0.2
	Head Lamp	1581100	0.2	0.2	0.2	0.2	0.2	0.2
	Other Relays	1581500	0.2	0.2	0.2	0.2	0.2	0.2
	Turn Signal	1582100	0.2	0.2	0.2	0.2	0.2	0.2
2	<b>COVER, FUSE BOX - REPLACE</b>	1582300	0.2	0.2	0.2	0.2	0.2	0.2
3	<b>BOX, RELAY &amp; FUSE - REPLACE</b>	1582700	0.7	0.7	0.6	0.6	0.6	0.6
4	<b>FUSE - REPLACE</b>	1583700	0.2	0.2	0.2	0.2	0.2	0.2

CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON

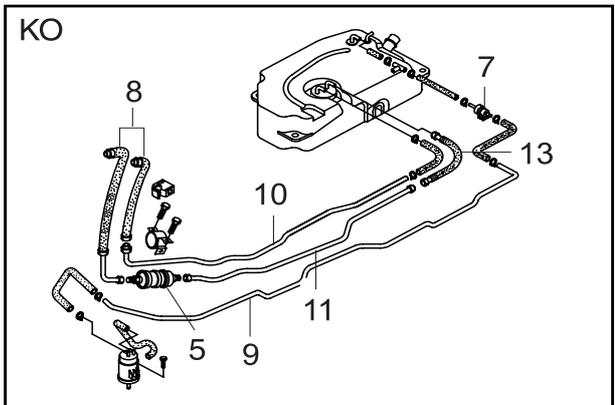
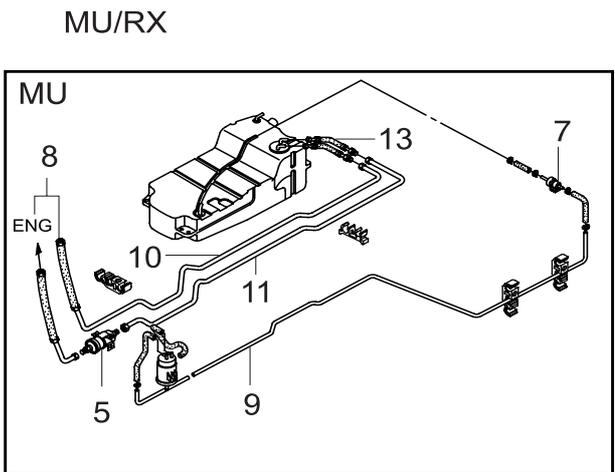
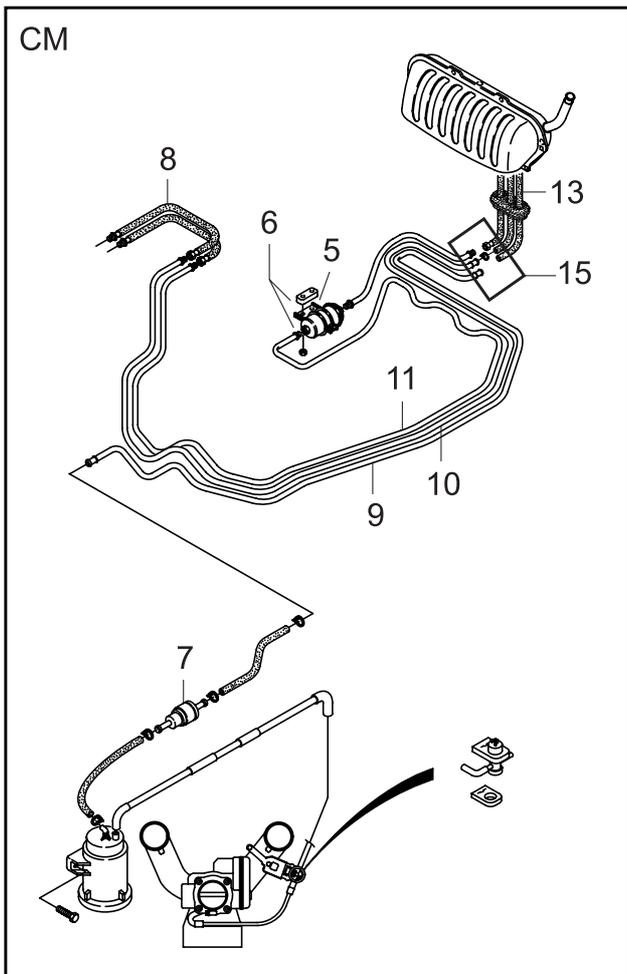
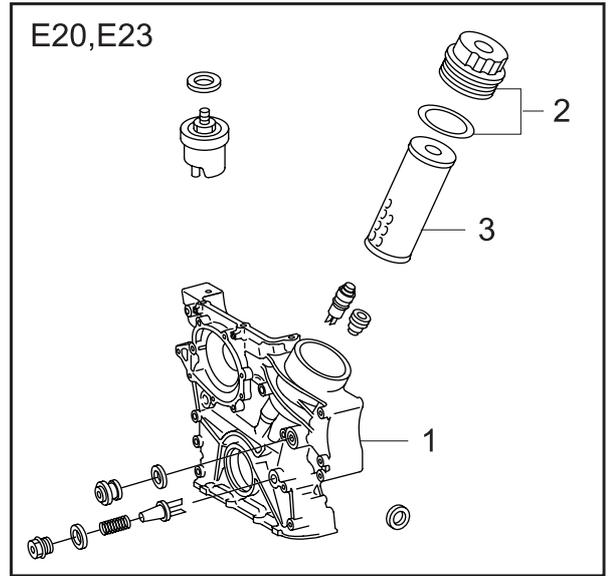
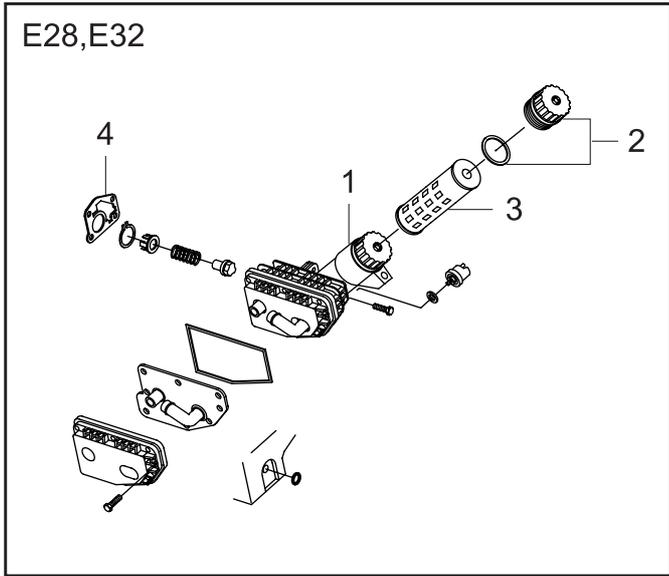
# **1F - ENGINE CONTROLS**



## ENGINE CONTROLS - FUEL TANK (171)

NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	PUMP, FUEL AND/OR GAUGE, ORING - REPLACE	1710300	0.7	0.7	0.7	0.7	0.7	0.7
2	AIR BLEEDING, FUEL	1710400	-	-	0.5	0.5	0.5	0.5
3	NECK, FUEL TANK FILLER - REPLACE	1710500	-	-	0.7	0.7	0.7	0.7
4	TANK, FUEL - REPLACE	1710900	1.1	1.1	1.3	1.3	1.3	1.3
5	GROMMET, FUEL FILLER - REPLACE	1711300	0.2	0.2	-	-	-	-
6	PROTECTOR, FUEL TANK - REPLACE	1712200	-	-	0.3	0.3	0.3	0.3
7	VALVE, ROLLOVER - REPLACE	1712410	0.3	0.3	-	-	-	-
8	HOSE, AIR VENT - REPLACE	1713500	-	-	0.7	0.7	0.7	0.7
9	CAP, FUEL TANK - REPLACE	1713600	0.2	0.2	0.2	0.2	0.2	0.2

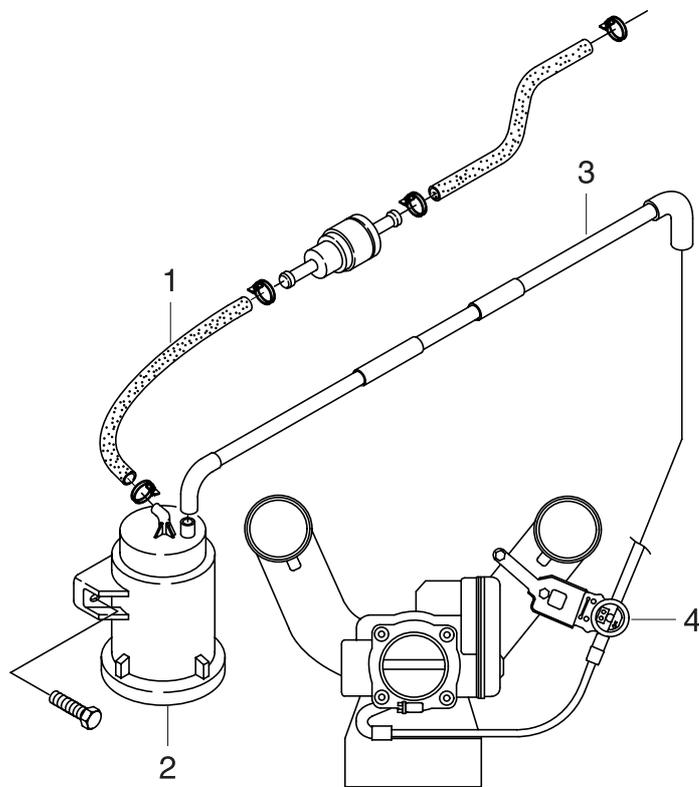
CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON



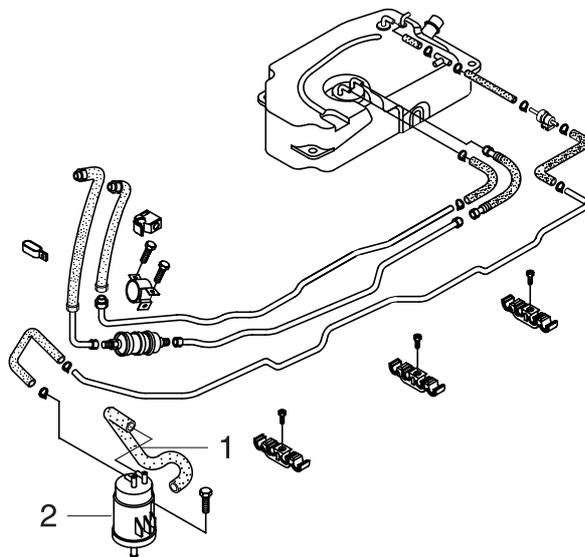
ENGINE CONTROLS - FUEL LINE (172)								
NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	HOUSING, OIL FILTER - REPLACE	1720200	2.7	2.7	2.7	2.7	2.7	2.7
2	COVER, OIL FILTER HOUSING - REPLACE	1720230	0.2	0.2	0.2	0.2	0.2	0.2
3	FILTER, OIL - REPLACE	1720240	0.5	0.5	0.5	0.5	0.5	0.5
4	GASKET, OIL FILTER - REPLACE	1720250	2.7	2.7	2.7	2.7	2.7	2.7
5	FILTER, FUEL ELEMENT - REPLACE	1720300	0.3	0.3	0.2	0.2	0.2	0.2
6	BRACKET, FUEL FILTER - REPLACE	1720310	0.4	0.4	-	-	-	-
7	VALVE, 2WAY CHECK - REPLACE	1720330	0.5	0.5	0.5	0.5	0.5	0.5
8	HOSE, FUEL RETURN OR SUPPLY - REPLACE	1720340	0.3	0.3	0.3	0.3	0.3	0.3
9	PIPE, FUEL VAPOR - REPLACE	1720600	1.0	1.0	1.0	1.0	1.0	1.0
10	PIPE, FUEL RETURN - REPLACE	1720700	1.0	1.0	0.7	0.7	0.7	0.7
11	PIPE, FUEL SUPPLY - REPLACE	1720760	1.0	1.0	0.7	0.7	0.7	0.7
12	ANOTHER HOSE, FUEL - REPLACE each	1720870	0.3	0.3	0.3	0.3	0.3	0.3
13	HOSE, FUEL(TANK TO PIPE) - REPLACE each	1721300	0.3	0.3	0.3	0.3	0.3	0.3
14	HOSE, 2WAY CHECK VALVE INLET - REPLACE	1723400	0.2	0.2	-	-	-	-

CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON

CM



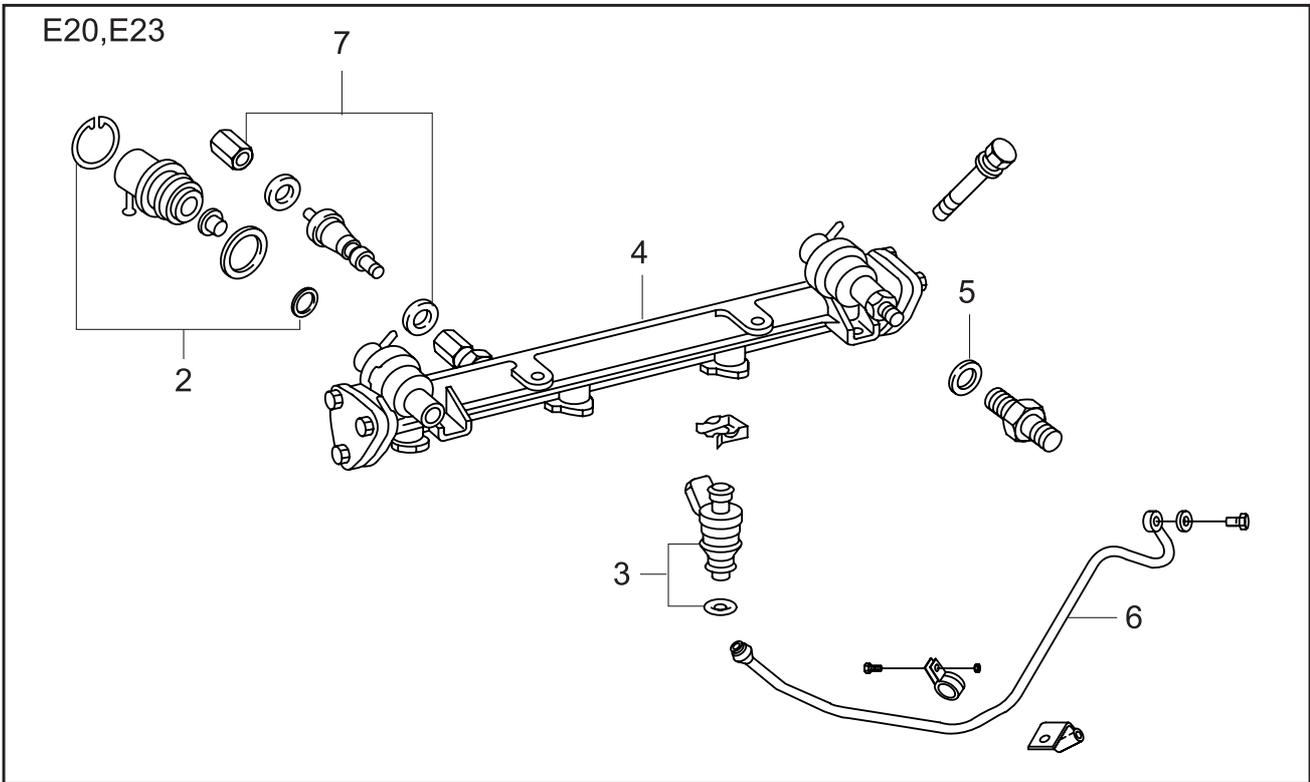
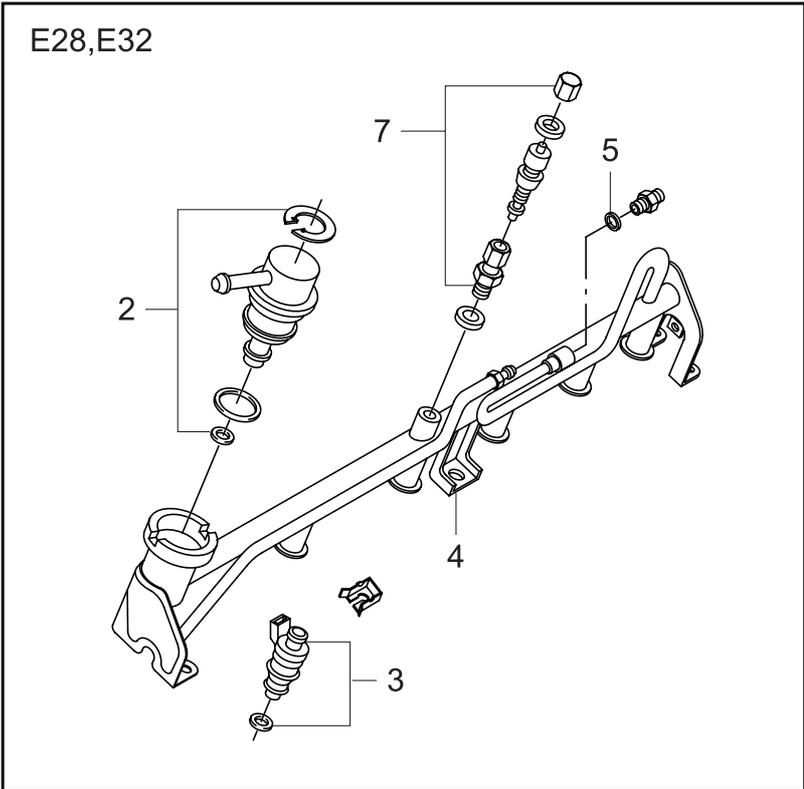
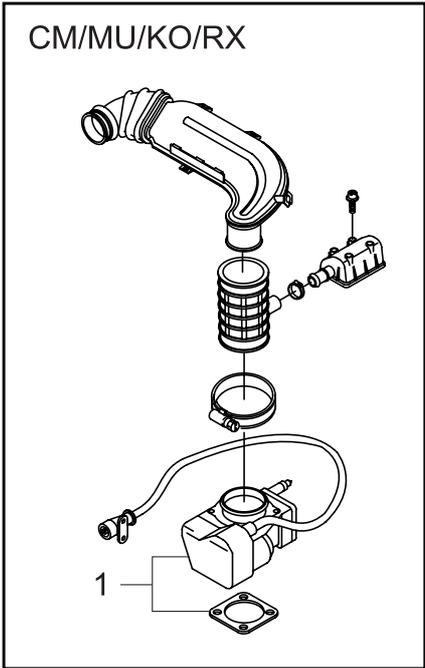
MU/KO/RX



## ENGINE CONTROLS - CANISTER & FUEL VACUUM (173)

NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	HOSE OR PIPE,2WAY CHECK VALVE TO CANISTER - REPLACE	1731410	0.2	0.2	0.3	0.3	0.3	0.3
2	CANISTER, FUEL VAPOR - REPLACE	1731500	0.3	0.3	0.4	0.4	0.4	0.4
3	PIPE,CANISTER TO PURGE CONTROL VALVE - REPLACE	1731910	0.3	0.3	0.3	0.3	0.3	0.3
4	SOLENOID,EVAP EMISSION PURGE - REPLACE	1732700	0.3	0.3	0.3	0.3	0.3	0.3

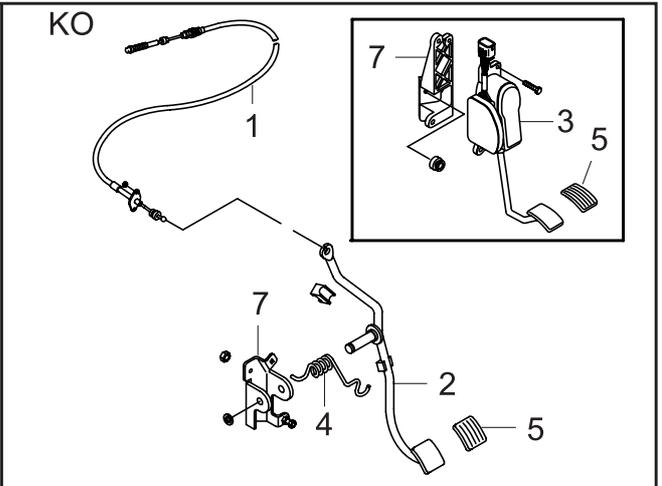
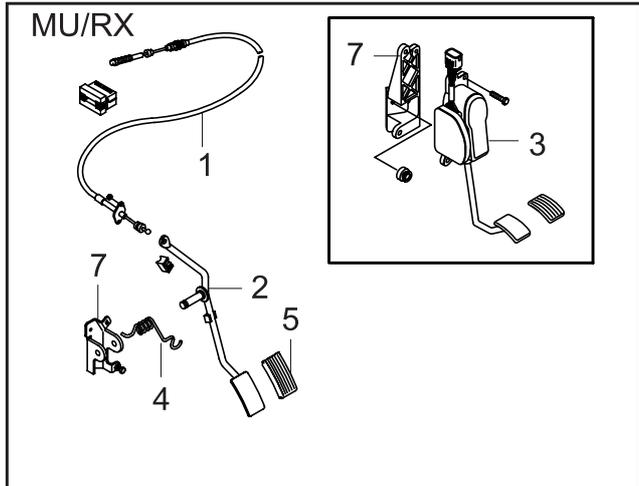
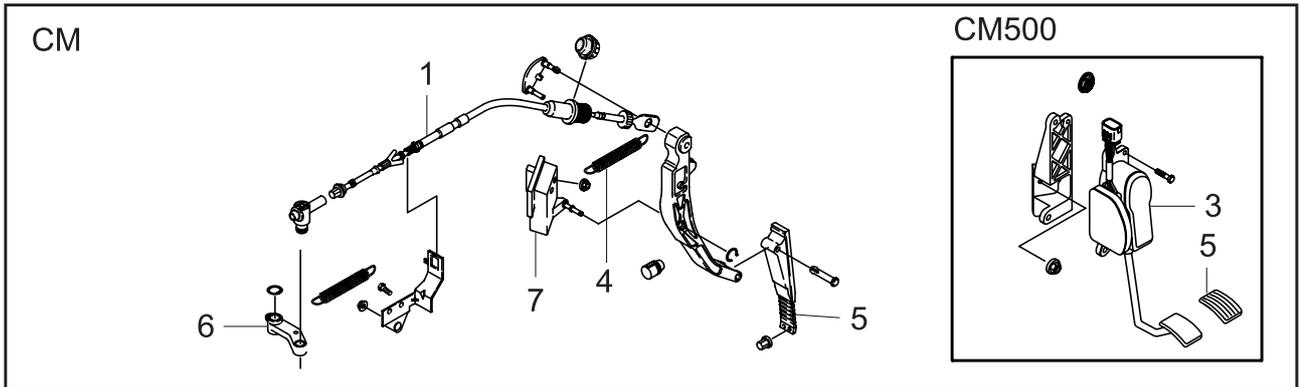
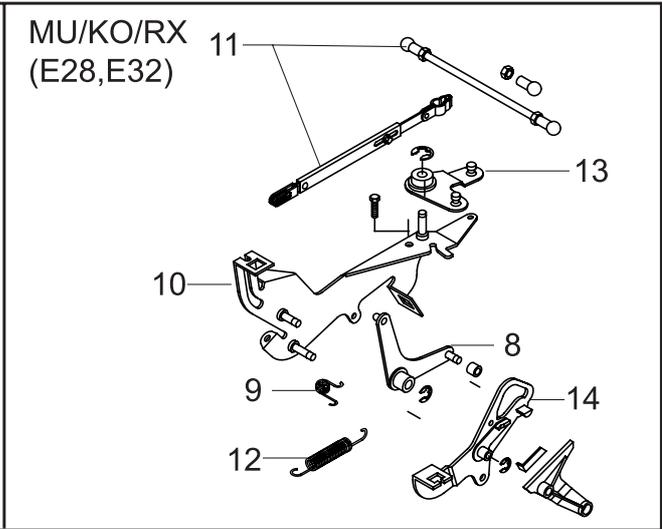
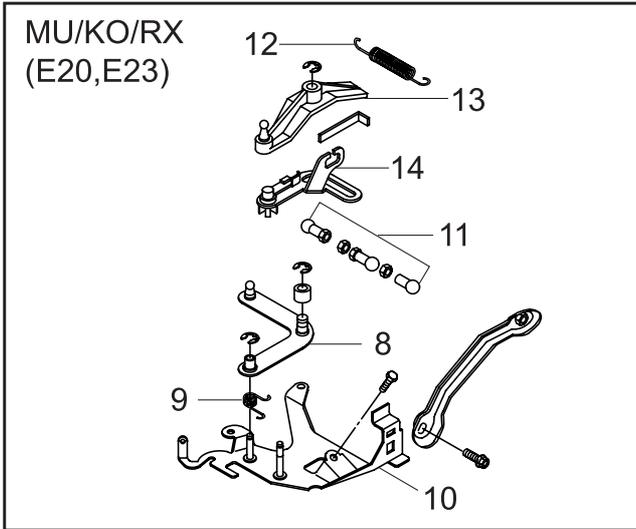
CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON



## ENGINE CONTROLS - FUEL INJECTION (181)

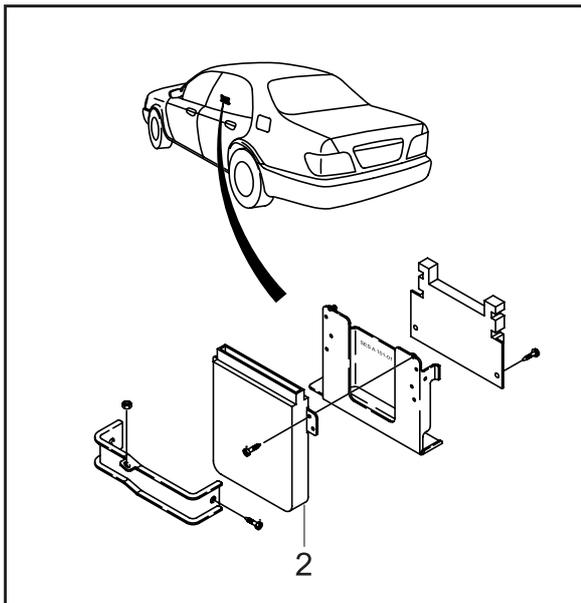
NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	BODY, THROTTLE DOHC - REPLACE	1810300	1.8	1.8	0.8	0.8	0.8	0.8
2	REGULATOR AND/OR GASKETS DOHC - REPLACE	1810900	0.3	0.3	0.3	0.3	0.3	0.3
3	INJECTOR, FUEL (ONE OR ALL) DOHC - REPLACE	1811200	1.1	1.1	1.1	1.1	1.1	1.1
4	RAIL, FUEL DOHC - REPLACE	1811400	1.1	1.1	1.0	1.0	1.0	1.0

CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON

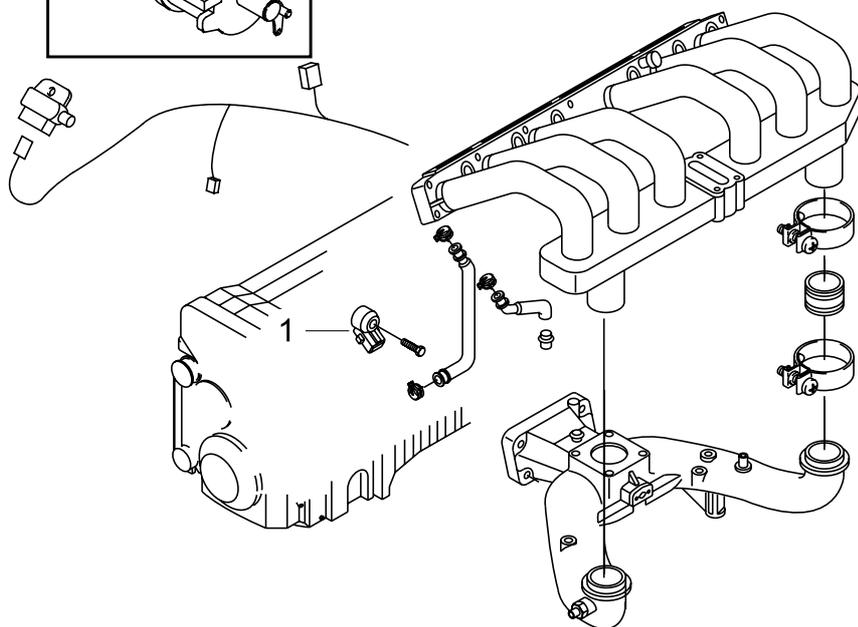
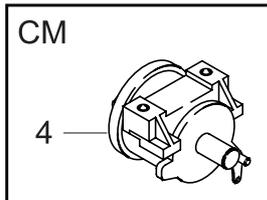
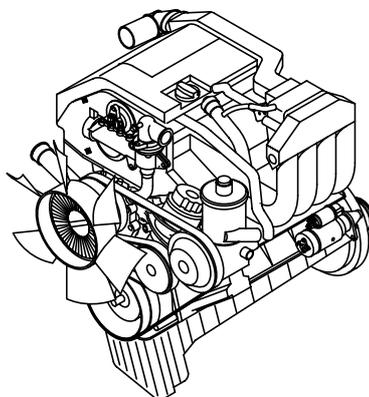


<b>ENGINE CONTROLS - ACCELERATOR CONTROL (182)</b>								
NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	CABLE, ACCELERATOR CONTROL - REPLACE	1820300	0.4	0.4	0.4	0.4	-	-
2	PEDAL, ACCELERATOR - REPLACE	1820500	0.2	0.2	0.4	0.4	-	-
3	MODULE, ACCELERATOR PEDAL - REPLACE	1820600	0.2	0.2	0.3	0.3	0.3	0.3
4	SPRING, THROTTLE RETURN - REPLACE	1820700	0.2	0.2	0.2	0.2	-	-
5	PAD, ACCELERATOR PEDAL - REPLACE	1821100	0.4	0.4	0.2	0.2	0.2	0.2
6	ARM AND GUIDE, ACCELERATOR CABLE - REPLACE	1821200	0.6	0.6	-	-	-	-
7	BRACKET, ACCELERATOR PEDAL MOUNT - REPLACE	1821230	0.5	0.5	0.4	0.4	-	-
8	LEVER, ACCELERATOR CONTROL - REPLACE	1822310	-	-	0.3	0.3	-	-
9	SPRING, ACCELERATOR CONTROL - REPLACE	1822330	-	-	0.2	0.2	-	-
10	BRACKET,ACCELERATORCONTROLLEVERBEARING-REPLACE	1822340	-	-	0.5	0.5	-	-
11	ROD, CONNECTING - REPLACE	1822350	-	-	0.3	0.3	-	-
12	LEVER, REVERSING - REPLACE	1822380	-	-	0.4	0.4	-	-
13	LEVER, SLOTTED GATE - REPLACE	1822400	-	-	0.4	0.4	-	-

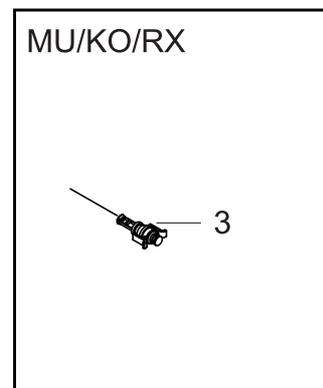
CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON



MU/KO/RX



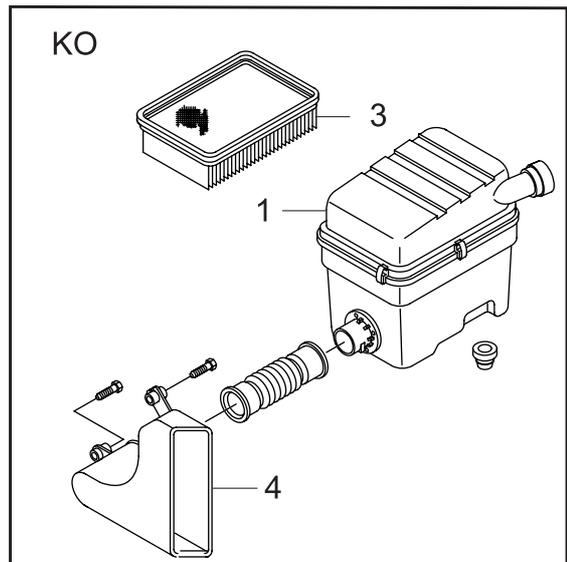
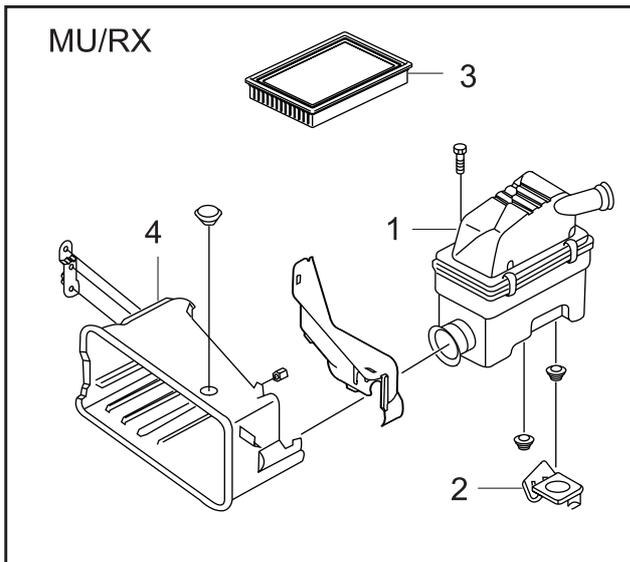
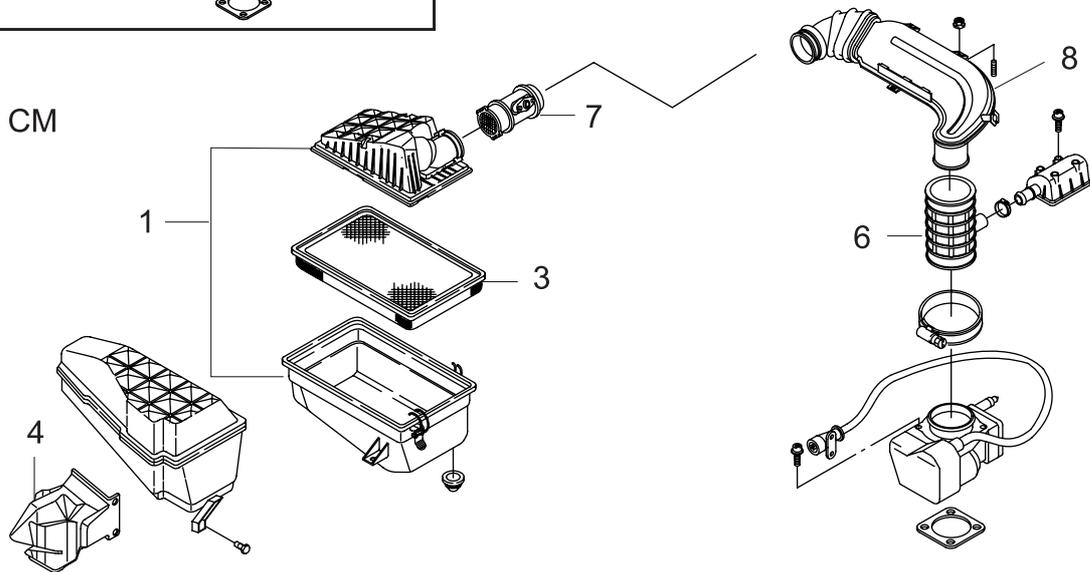
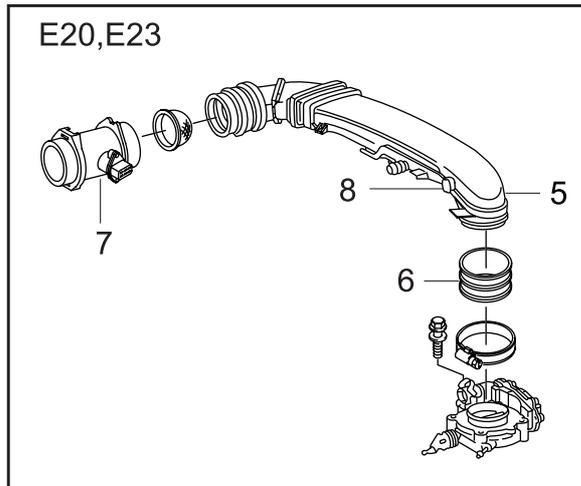
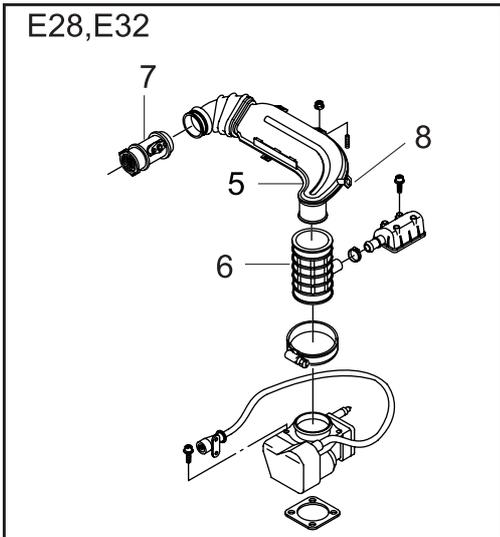
MU/KO/RX



## ENGINE CONTROLS - EMISSION CONTROL (186)

NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	SENSOR, KNOCK - REPLACE	1861300	1.6	1.6	0.8	each 0.8	0.8	each 0.8
2	ECU (ENGINE) - REPLACE	1862110	0.5	0.5	0.8	0.8	0.8	0.8
3	SENSOR, AIR TEMPERATURE - REPLACE	1862120	-	-	0.8	0.8	-	-
4	SENSOR, ACCELERATOR - REPLACE	1862130	1.2	1.2	-	-	-	-

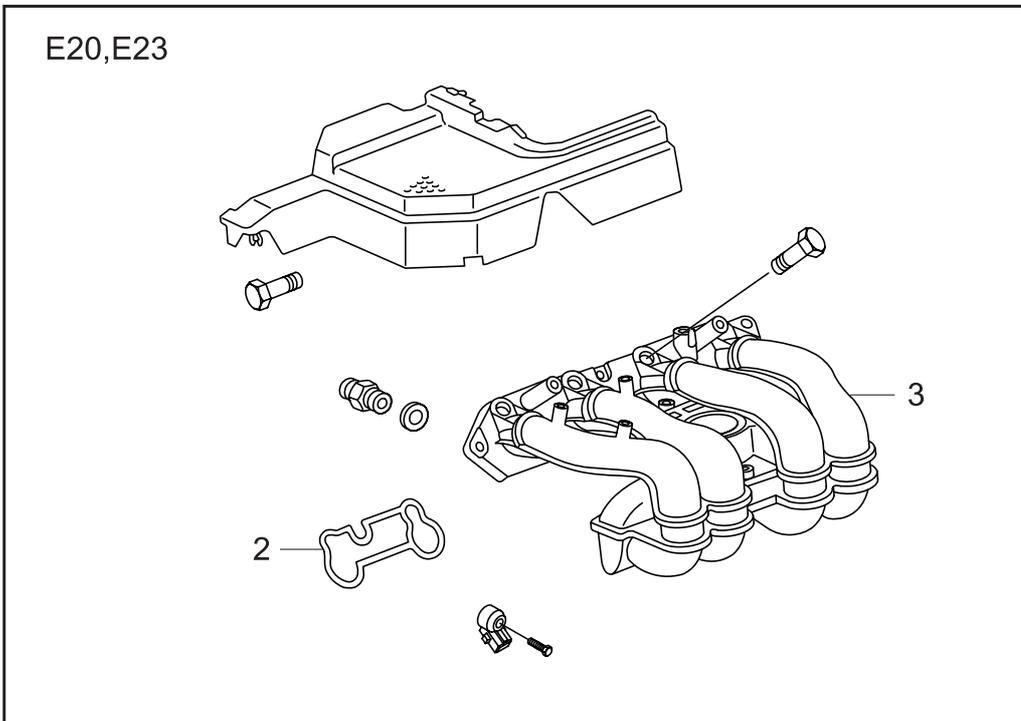
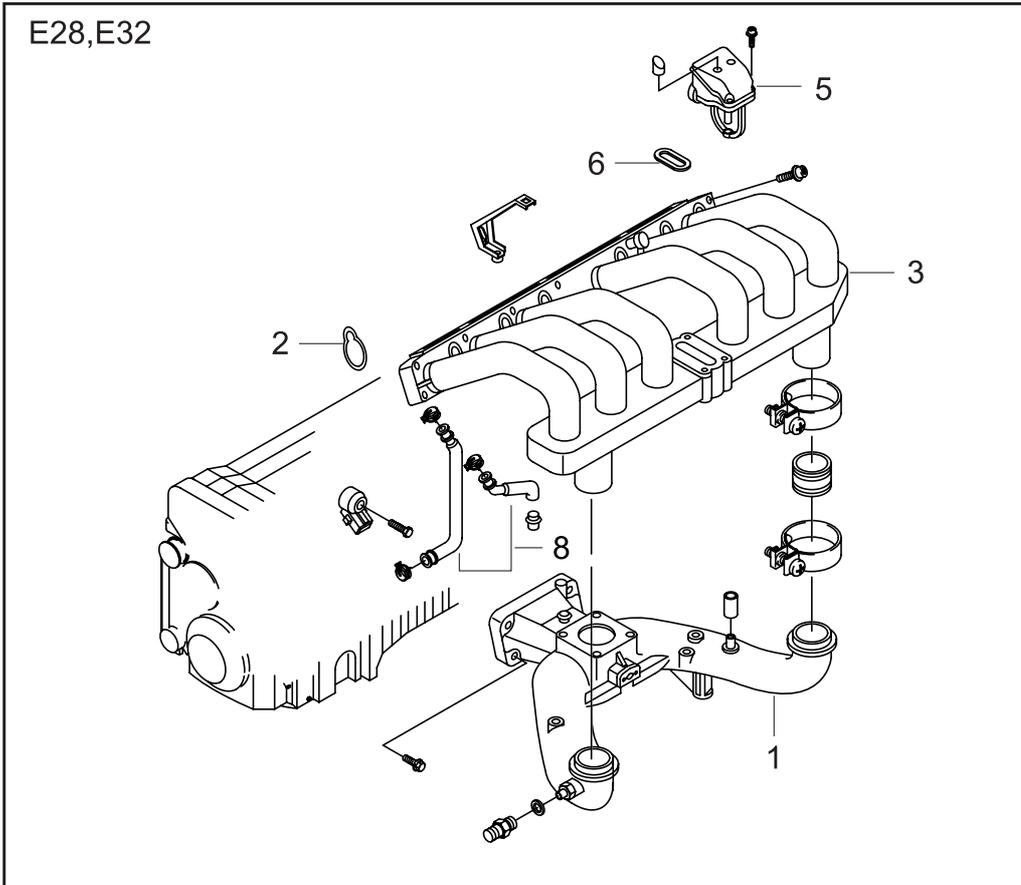
# **1G - ENGINE INTAKE & EXHAUST**



## ENGINE INTAKE & EXHAUST - AIR INTAKE SYSTEM (191)

NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	AIR CLEANER - REPLACE	1910300	0.6	0.6	0.5	0.5	0.5	0.5
2	BRACKET, AIR CLEANER HOUSING MOUNTING-REPLACE	1910350	-	-	0.7	0.7	0.7	0.7
3	FILTER, AIR CLEANER - REPLACE	1910500	0.4	0.4	0.2	0.2	0.2	0.2
4	DUCT AND/OR HOSE, OUTSIDE AIR - REPLACE	1910700	0.2	0.2	0.3	0.3	0.3	0.3
5	SENSOR, MAT - REPLACE	1910900	0.4	0.4	0.4	0.4	-	-
6	HOUSING, INLET AIR - REPLACE	1911310	0.7	0.7	-	-	0.5	0.5
7	METER, AIR MASS - REPLACE	1911320	0.2	0.2	0.2	0.2	0.2	0.2
8	DUCT INT AIR - REPLACE	1910800	0.3	0.3	0.3	0.3	0.3	0.3

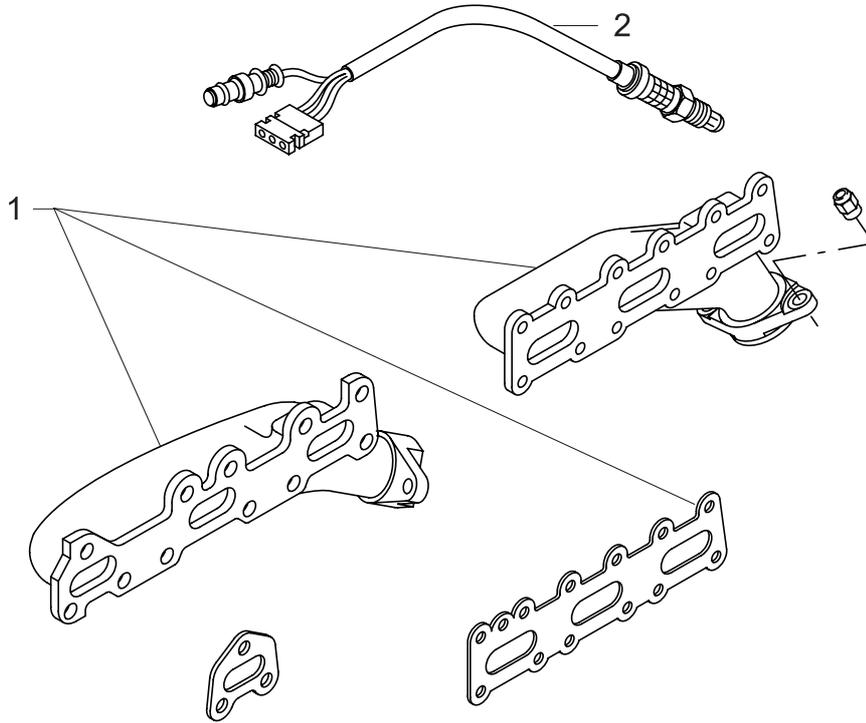
CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON



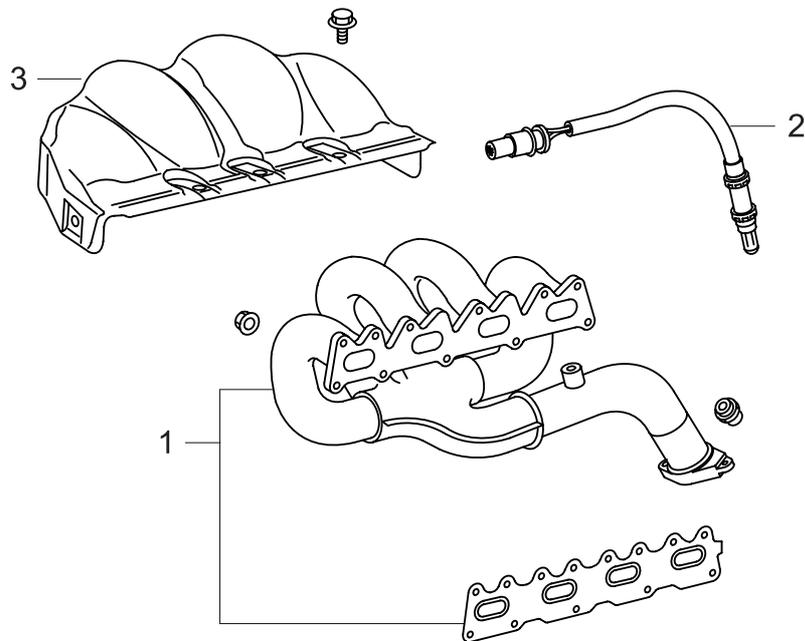
ENGINE INTAKE & EXHAUST - INTAKE MANIFOLD (193)								
NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	MANIFOLD, INTAKE LOWER - REPLACE	1930220	2.1	2.1	1.3	1.3	1.3	1.3
2	GASKET, UPPER INTAKE MANIFOLD - REPLACE	1930210	-	-	0.7	0.7	0.7	0.7
3	MANIFOLD, INTAKE UPPER - REPLACE	1930230	1.5	1.5	2.3	2.3	2.3	2.3
4	SENSOR, HFM - REPLACE A - Replace each additional	1930350	-	-	-	-	-	-
		1932120	-	-	-	-	-	-
5	FLAP, RESONANCE - REPLACE	1932200	-	1.6	-	1.6	-	1.6
6	PACKING - REPLACE	1932400	-	1.6	-	1.6	-	1.6

CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON

E28,E32



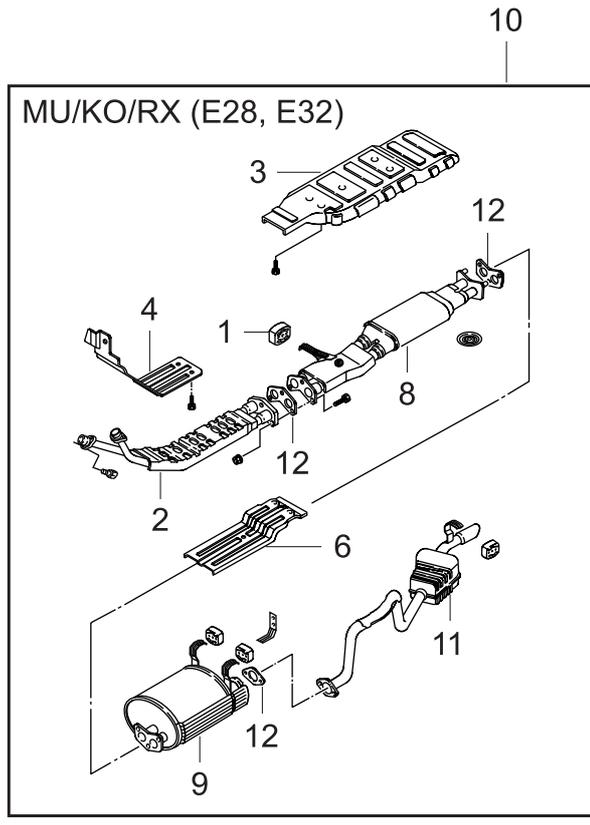
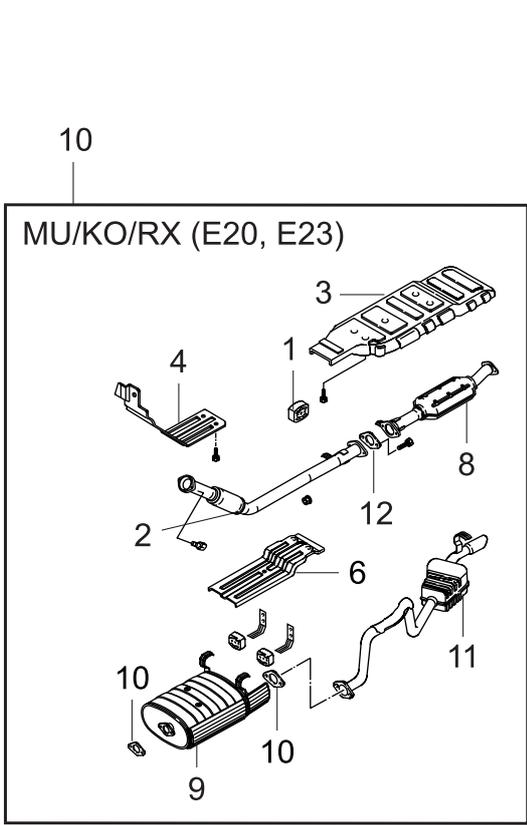
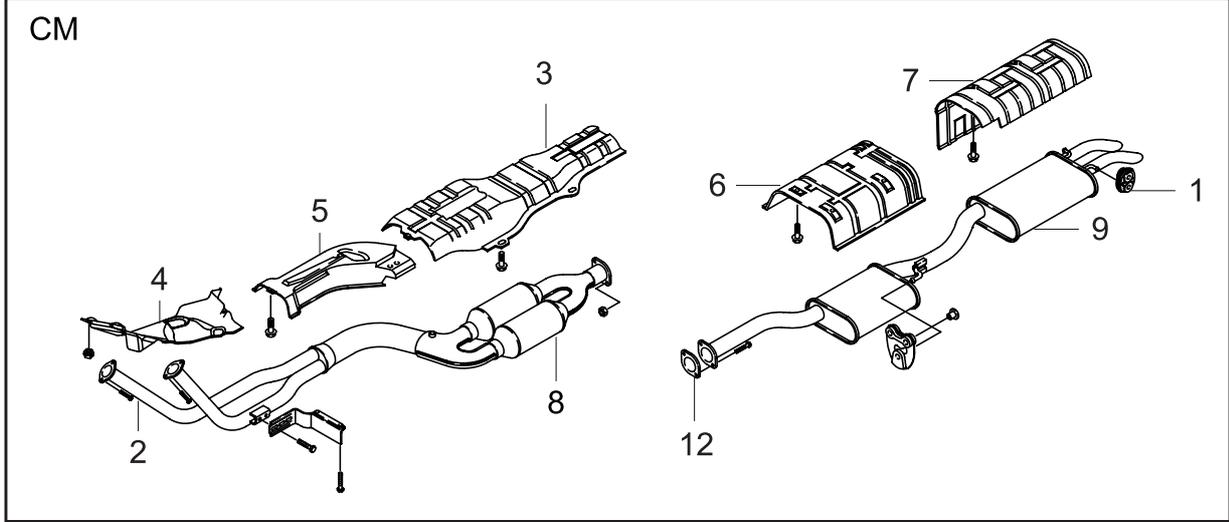
E20,E23



**ENGINE INTAKE & EXHAUST - EXHAUST MANIFOLD (194)**

NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	MANIFOLD AND/OR GASKET EXHAUST DOHC-REPLACE	1940300	0.8	0.8	0.8	0.8	0.8	0.8
2	SENSOR, OXYGEN DOHC - REPLACE	1940600	0.2	0.2	0.2	0.2	0.2	0.2
3	COVER, EXHAUST MANIFOLD UPPER - REPLACE	1940810	0.8	-	0.8	-	0.5	0.6
4	COVER, EXHAUST MANIFOLD LOWER - REPLACE	1940830	1.4	-	1.4	-	0.4	0.4

CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON



ENGINE INTAKE & EXHAUST - EXHAUST PIPE LINE (196)								
NO.	OPERATION DESCRIPTION	OPERATION CODE	CM		MU/KO		RX	
			2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2	2.0/ 2.3	2.8/ 3.2
1	HANGER AND/OR CLAMP, EXHAUST SYSTEM-REPLACE	1960300	0.2	0.2	0.2	0.2	0.2	0.2
2	PIPE, FRONT EXHAUST - REPLACE	1960900	0.6	0.6	0.6	0.6	0.6	0.6
3	SHIELD, CONVERTER - REPLACE	1961300	0.5	0.5	0.5	0.5	0.5	0.5
4	HEAT SHIELD, FRONT - REPLACE	1961400	0.5	0.5	0.5	0.5	0.5	0.5
5	HEAT SHIELD, CENTER - REPLACE	1961410	0.5	0.5	-	-	-	-
6	HEAT SHIELD, CENTER MUFFLER - REPLACE	1961420	0.5	0.5	0.5	0.5	0.5	0.5
7	HEAT SHIELD, REAR - REPLACE	1961430	0.5	0.5	-	-	-	-
8	CONVERTER - REPLACE	1961500	0.6	0.6	0.6	0.6	0.6	0.6
9	MUFFLER - REPLACE	1962100	0.5	0.5	0.5	0.5	0.5	0.5
10	EXHAUST SYSTEM (COMPLETE) - REPLACE	1962500	1.5	1.5	1.5	1.5	1.5	1.5
11	PIPE, TAIL - REPLACE	1962600	-	-	0.5	0.5	0.5	0.5
12	GASKET each	1962700	0.2	0.2	0.2	0.2	0.2	0.2

CM : CHAIRMAN, MU : MUSSO, KO : KORANDO, RX : REXTON