

# HVAC

(Heating Ventilation and Air Conditioning)

## SPARE PARTS MANUAL

### FALCON





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# **FALCON HVAC SPARE PART MANUAL**

Bus Heat Ventilation & Air Conditioning

**MODEL: ASTRO 543 HVAC (FH)**

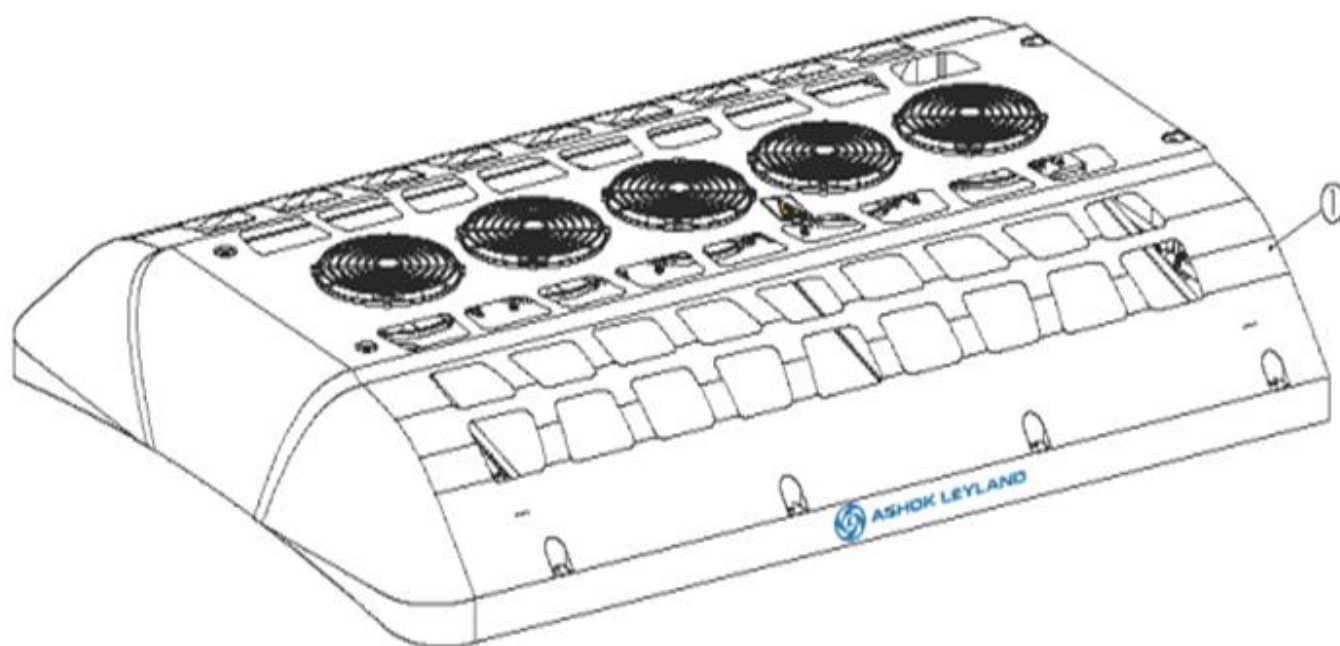
MANUAL NO: FAL/SPM/200825-01/R-0



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## 1.0 CONDENSER ASSEMBLY ASTRO-543 FALCON

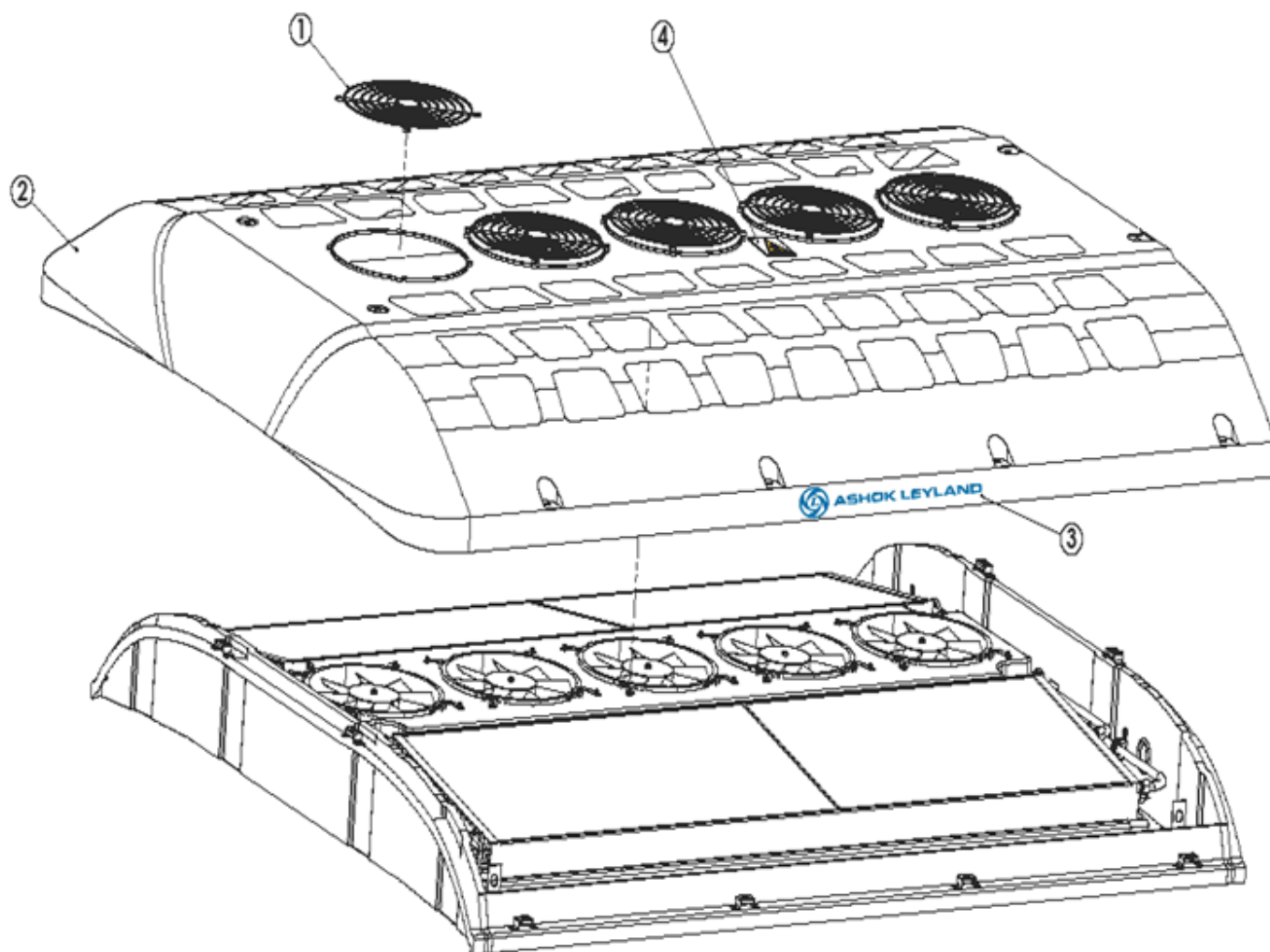
### CONDENSER ASSEMBLY FALCON



S.NO.	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-139	CONDENSOR ASSEMBLY ASTRO-543 (AL-FALCON)	Nos	1

## 1.1 CONDENSOR COVER & FAN GRILL

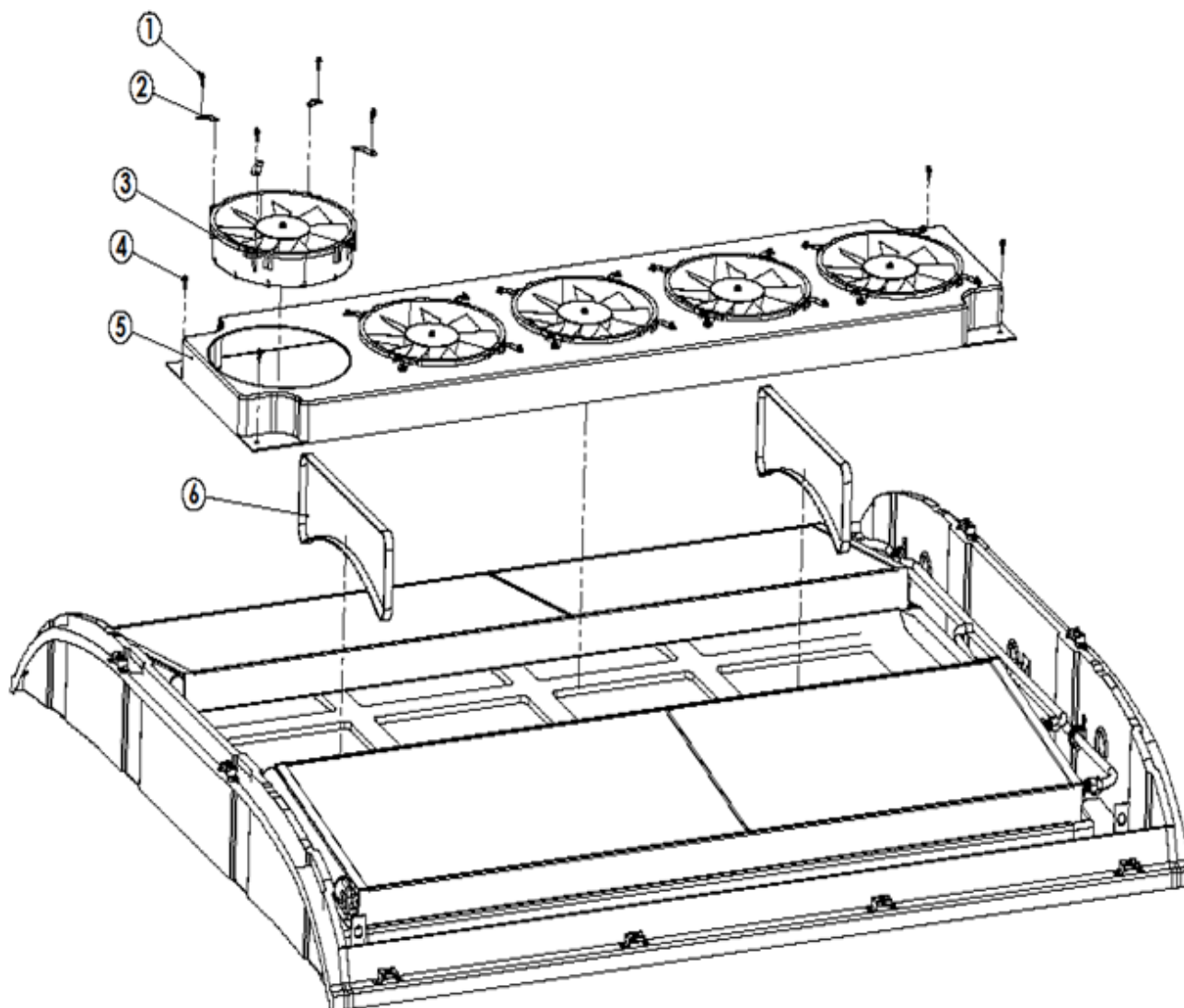
### CONDENSOR COVER & FAN GRILL



S.NO.	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-146	CONDENSER FAN GRILL(AL)	Nos	5
2	S90-712-141	CONDENSER COVER A-543	Nos	1
3	S90-712-351	LEYLAND BRAND STICKER 50 MM	Nos	1
4	S90-712-345	STICKER SAFETY (AL)	Nos	1

## 1.2 CONDENSER FAN SHROUD & FAN

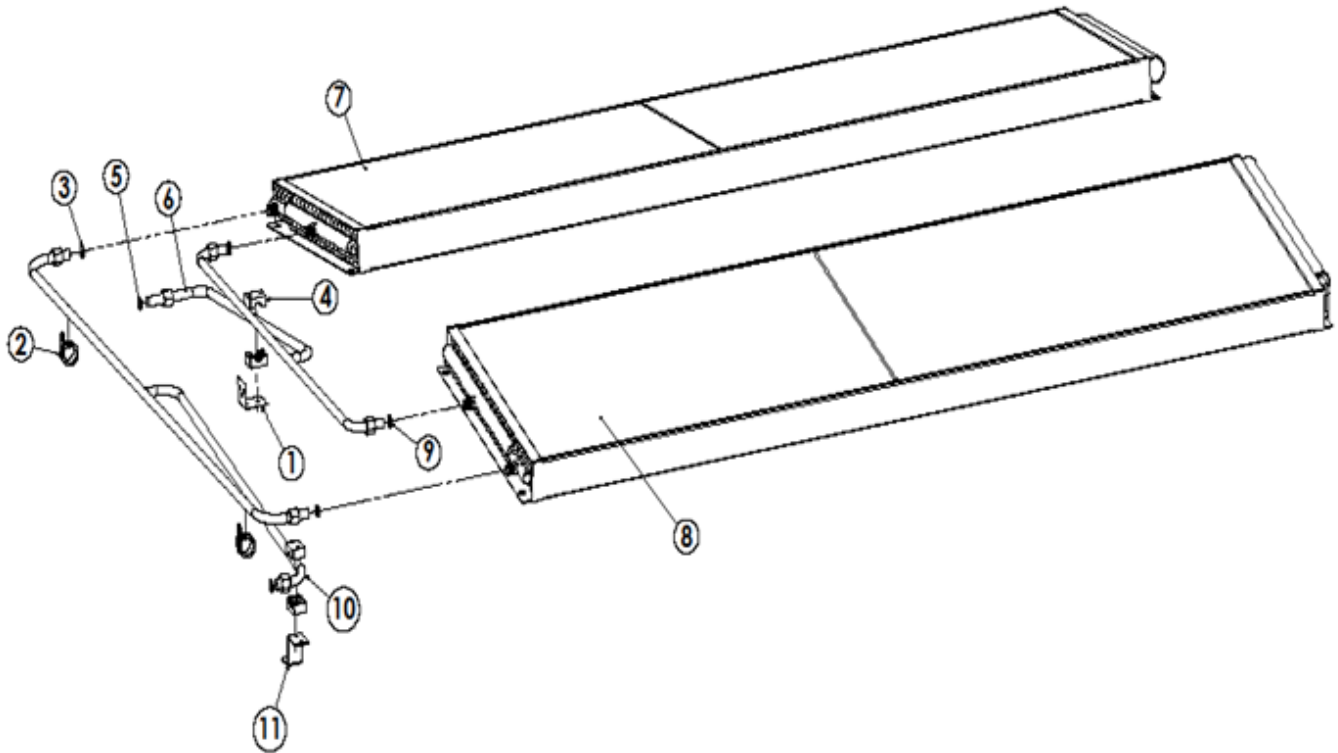
CONDENSER FAN SHROUD & FAN



S.NO.	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-346	SELF DRILLING SCREW WITH EPDM WASHER 5.5X25	Nos	20
2	S90-712-145	CONDENSOR FAN HOLDING CLAMP (S.S)	Nos	20
3	S90-712-177	CONDENSOR FAN 24V 30104043C- SPAL BP70/VLL-69A- 24 V	Nos	5
4	S90-712-347	SELF DRILLING SCREW WITH EPDM WASHER- 5.5X35	Nos	4
5	S90-712-142	CONDENSOR FAN SHROUD - ASTRO-543	Nos	1
6	S90-712-348	FAN SHROUD SUPPORT - ASTRO-543	Nos	2

### 1.3 CONDENSER COIL L.H.S & R.H.S

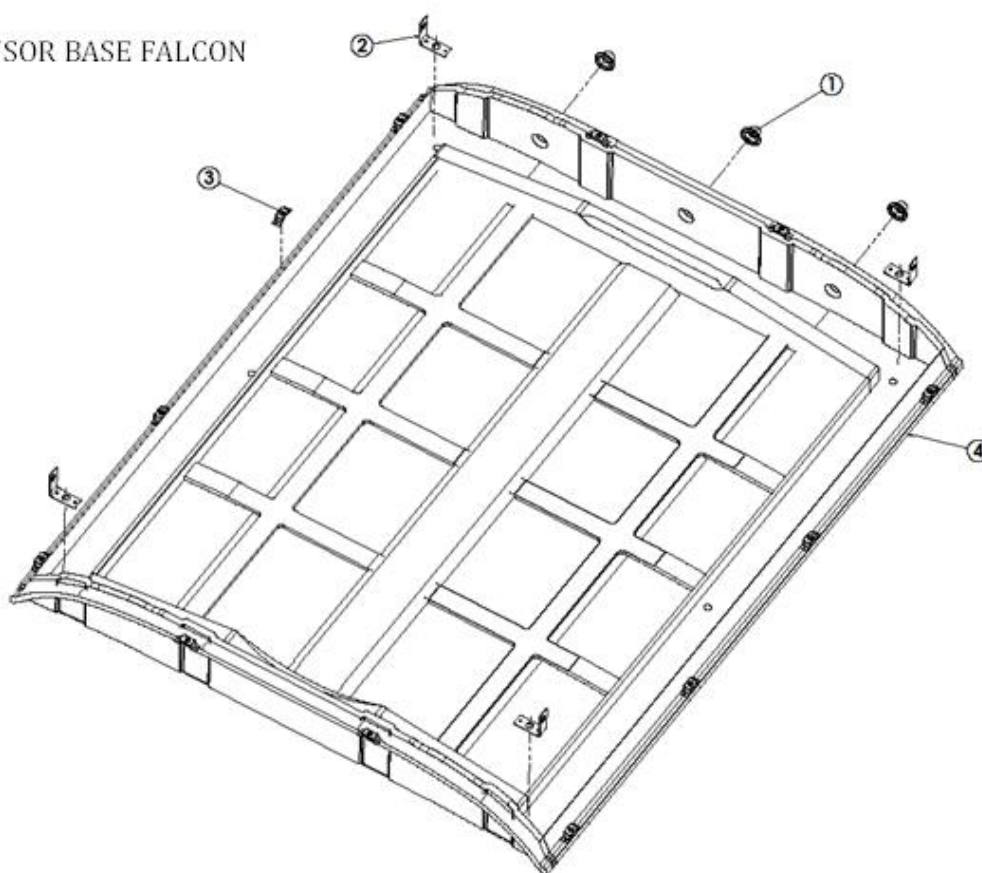
#### CONDENSER COIL L.H.S & R.H.S



S.NO.	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-129	DISCHARGE LINE HOLDING BRACKET[R-4]	Nos	1
2	S90-712-211	P-CLAMP - 1/2" ID	Nos	2
3	S90-712-162	O RING - 1/2 "	Nos	2
4	S90-712-130	PVC TUBE HOLDER - 5/8" [R-1]	Nos	2
5	S90-712-160	O RING - 3/4"	Nos	1
6	S90-712-144	MICST033 DISCHARGE LINE ASTRO-543 [R3]	Nos	1
7	S90-712-175	CONDENSOR COIL RHS ASTRO-543	Nos	1
8	S90-712-176	CONDENSOR COIL LHS ASTRO-543	Nos	1
9	S90-712-161	O RING - 5/8" (14.00 x1.78 H-NBR )	Nos	3
10	S90-712-143	MICST034 LIQUID LINE A-543	Nos	1
11	S90-712-128	LIQUID LINE HOLDING BRACKET - 5/8"	Nos	1

## 1.4 CONDENSER BASE ASTRO 543 (FALCON)

CONDENSOR BASE FALCON

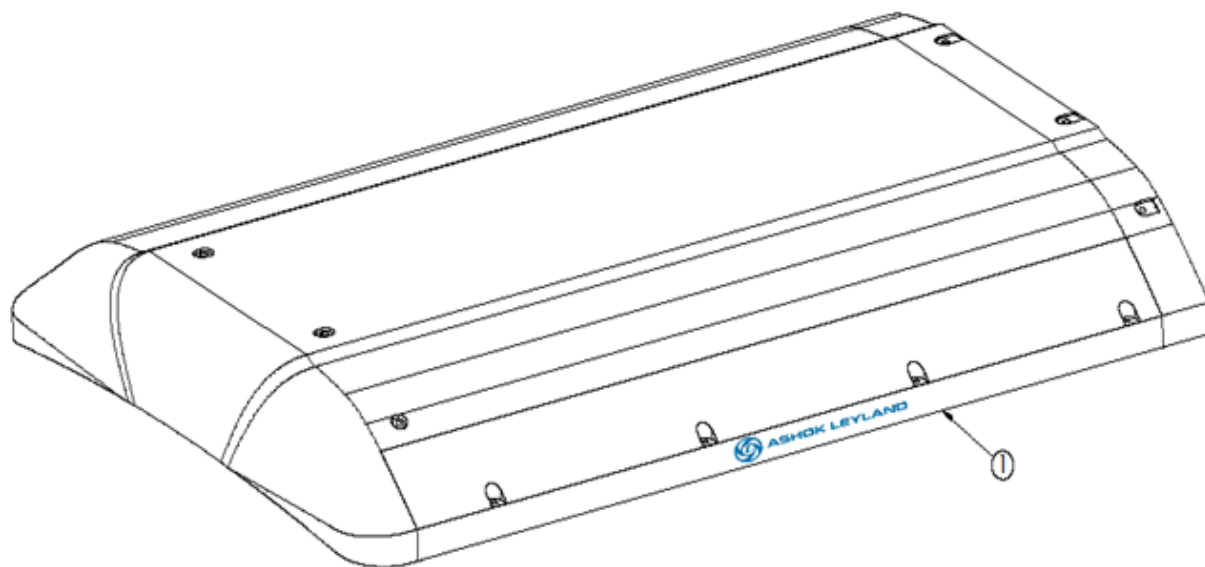


S.NO.	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-349	RUBBER GROMMET 48MM	Nos	3
2	S90-712-350	L-SHAPED LIFTING BRACKET	Nos	4
3	S90-712-352	ADJUSTABLE MOUNTING BRACKET FOR TOP COVER	Nos	12
4	S90-712-140	CONDENSER BASE ASTRO-543	Nos	1



## 2.0 EVAPORATOR ASSEMBLY ASTRO 543 (FALCON)

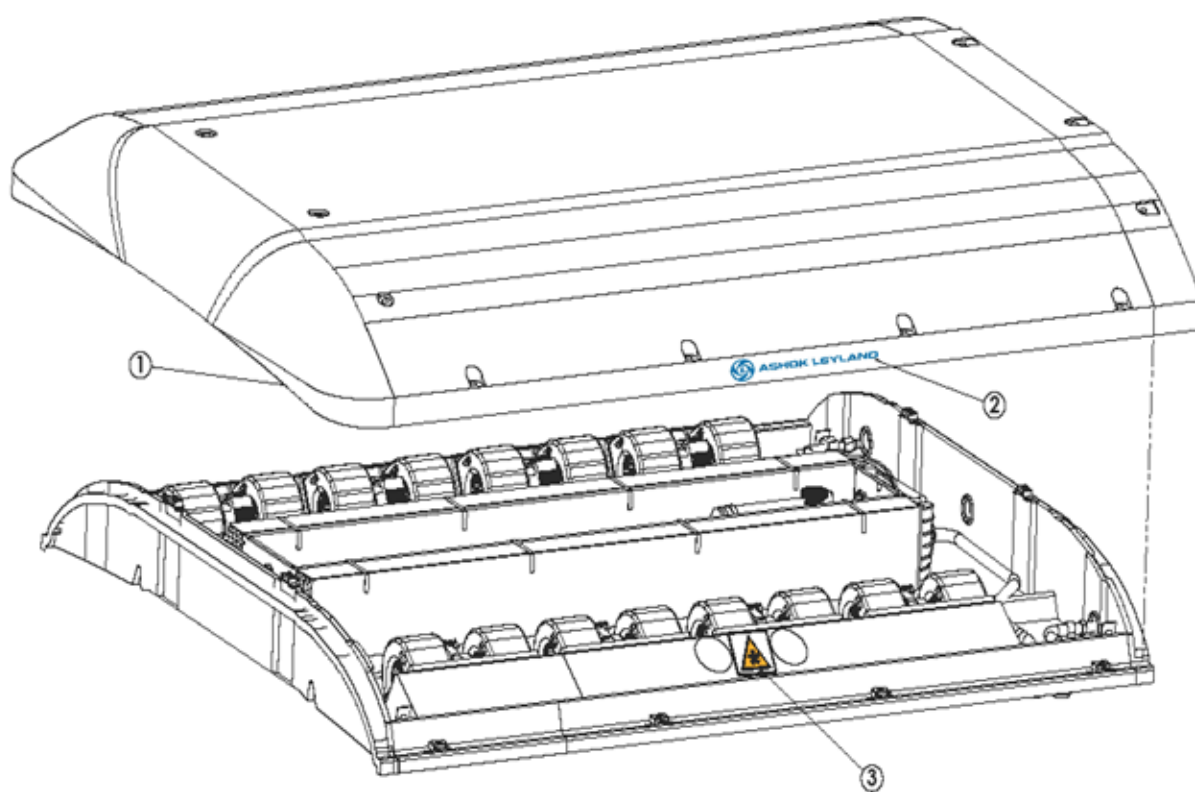
### EVAPORATOR ASSEMBLY FALCON



S.NO.	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-115	EVAPORATOR ASSEMBLY ASTRO-543 (AL-FALCON)	Nos	1

## 2.1 EVAPORATOR COVER & ASSEMBLY ASTRO 543 (FALCON)

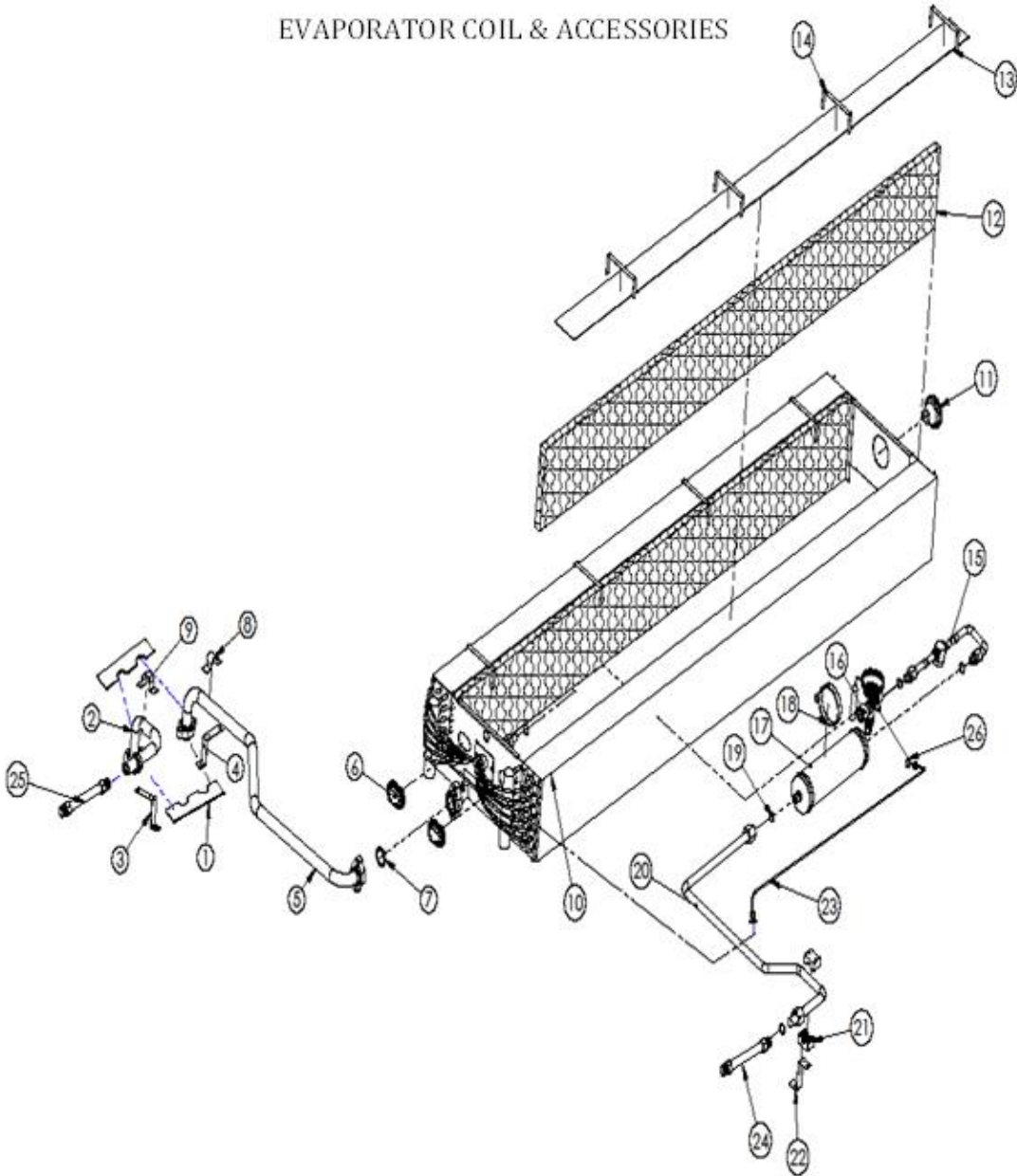
### EVAPORATOR COVER ASSEMBLY - FALCON



S.NO.	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-116	EVAPORATOR COVER ASSEMBLY A-543	Nos	1
2	S90-712-353	LEY BRAND STICKER 50mm	Nos	1
3	S90-712-354	STICKER SAFETY (AL)	Nos	2

## 2.2 EVAPORATOR COIL & ACCESSORIES

EVAPORATOR COIL & ACCESSORIES



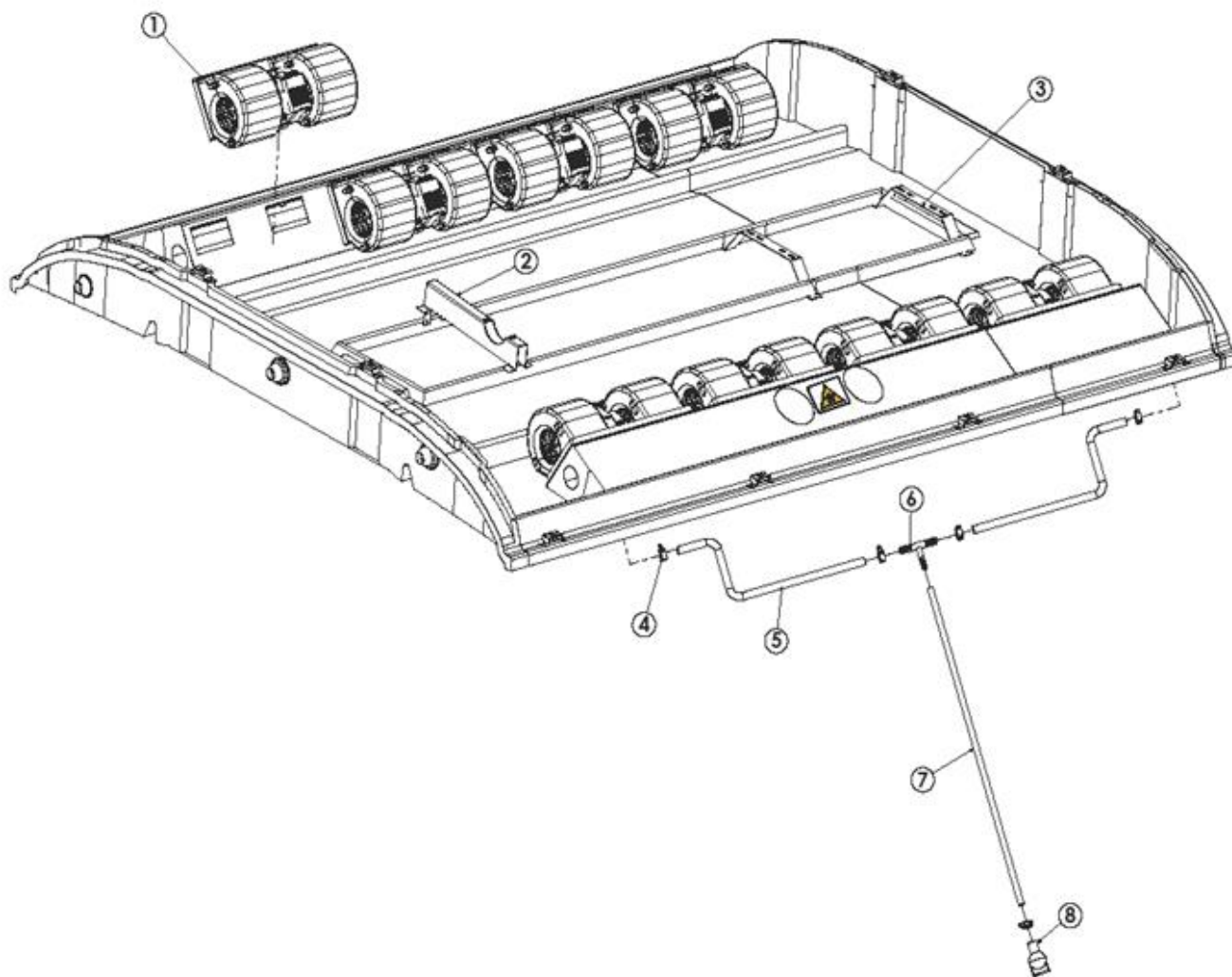


## 2.2 EVAPORATOR COIL & ACCESSORIES – Contd.,

S.NO.	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-137	SUCTION & DISCHARGE SEALING	Nos	2
2	S90-712-124	EVAP. DISCHARGE LINE 7/8" ASSEMBLY A-543	Nos	1
3	S90-712-132	7/8" MOUNTING BRACKET	Nos	1
4	S90-712-360	SUCTION HEADER HOLDING MOUNTING BRACKET [R-5]	Nos	1
5	S90-712-123	EVAP. SUCTION LINE 9/8" ASSEMBLY A-543	Nos	1
6	S90-712-362	RUBBER GROMMET 50MM SLOT SHAPE	Nos	2
7	S90-712-158	O-RING 9/8"	Nos	2
8	S90-712-134	HOLSING CLAMP 9/8 "	Nos	1
9	S90-712-133	HOLDING CLAMP 7/8	Nos	1
10	S90-712-118	EVAPORATOR COIL A-543	Nos	1
11	S90-712-367	RUBBER GROMMET 48 MM BLIND TYPE	Nos	2
12	S90-712-195	RETURN AIR GRILL FILTER MATT 20MM ASTRO 543	Nos	2
13	S90-712-369	SELF ADHESIVE FOAM 2MM FOR COIL ASTRO 543	Nos	2
14	S90-712-136	FILTER HOLDING CLAMP 145X10X40	Nos	8
15	S90-712-122	SIGHT GLASS ASSEMBLY A-543	Nos	1
16	S90-712-171	EXPANSION VALVE 8TR 067N7167	Nos	1
17	S90-712-194	FILTER DRIER DCH 305 ORN	Nos	1
18	S90-712-126	DRIER CLAMP SS-4	Nos	1
19	S90-712-161	O-RING 5/8" (14.00X1.78 H-NBR)	Nos	4
20	S90-712-120	EVAP. SIDE LINE A-543	Nos	1
21	S90-712-130	PVC TUBE HOLDER 5/8" [R-1]	Nos	1
22	S90-712-128	LIQUID LINE HOLDING BRACKET 5/8"	Nos	1
23	S90-712-119	EQUILZER LINE ASSEMBLY A-543	Nos	1
24	S90-712-121	CONNECTION LINE-1 A-543	Nos	1
25	S90-712-138	CONNECTION LINE-2 A-543	Nos	1
26	S90-712-163	O RING 1/4	Nos	2

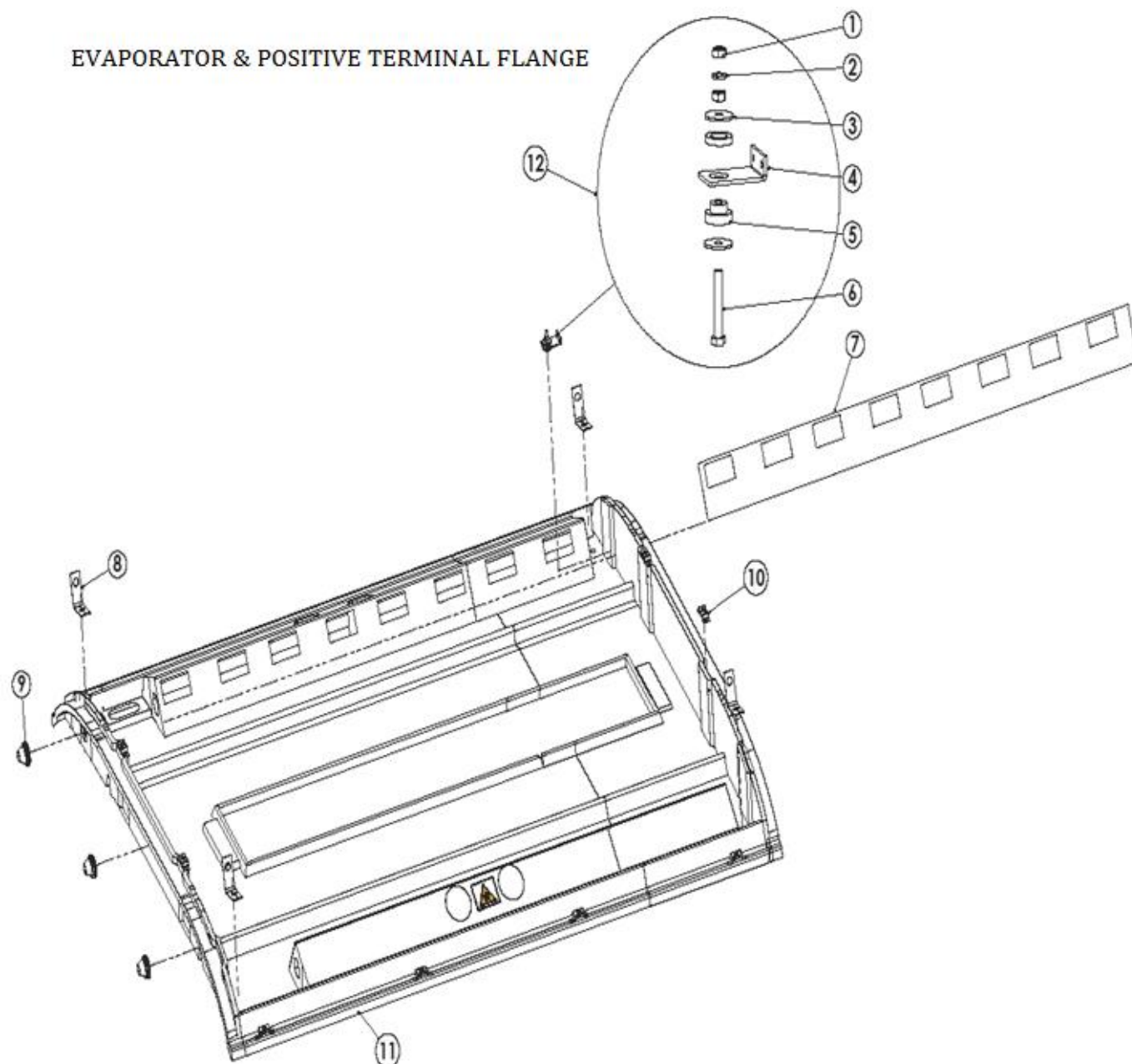
## 2.3 BLOWER MOTOR & PCB MOUNTING BRACKET

BLOWER MOTOR & PCB MOUNTING BRACKET



S.NO.	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-172	BLOWER MOTOR SPAL 24V (3000266A)VLL22 24V RA4VCV	Nos	8
2	S90-712-125	DRIER HOLDING BRACKET ASTRO 543	Nos	1
3	S90-712-127	PCB MOUNTING BRACKET ASTRO 543	Nos	2
4	S90-712-150	SS HOSE CLAMP - 25mm (100S)	Nos	10
5	S90-712-148	DRAIN HOSE 5/8"	Mtr	3.4
6	S90-712-151	DRAIN-T (5/8"X5/8"X1/2")	Nos	1
7	S90-712-149	DRAIN HOSE WITH WIRE - 1/2"	Mtr	8.2
8	S90-712-170	DRAIN KAZOO (DUCK VALVE)	Nos	2

## 2.4 EVAPORATOR & POSITIVE TERMINAL FLANGE



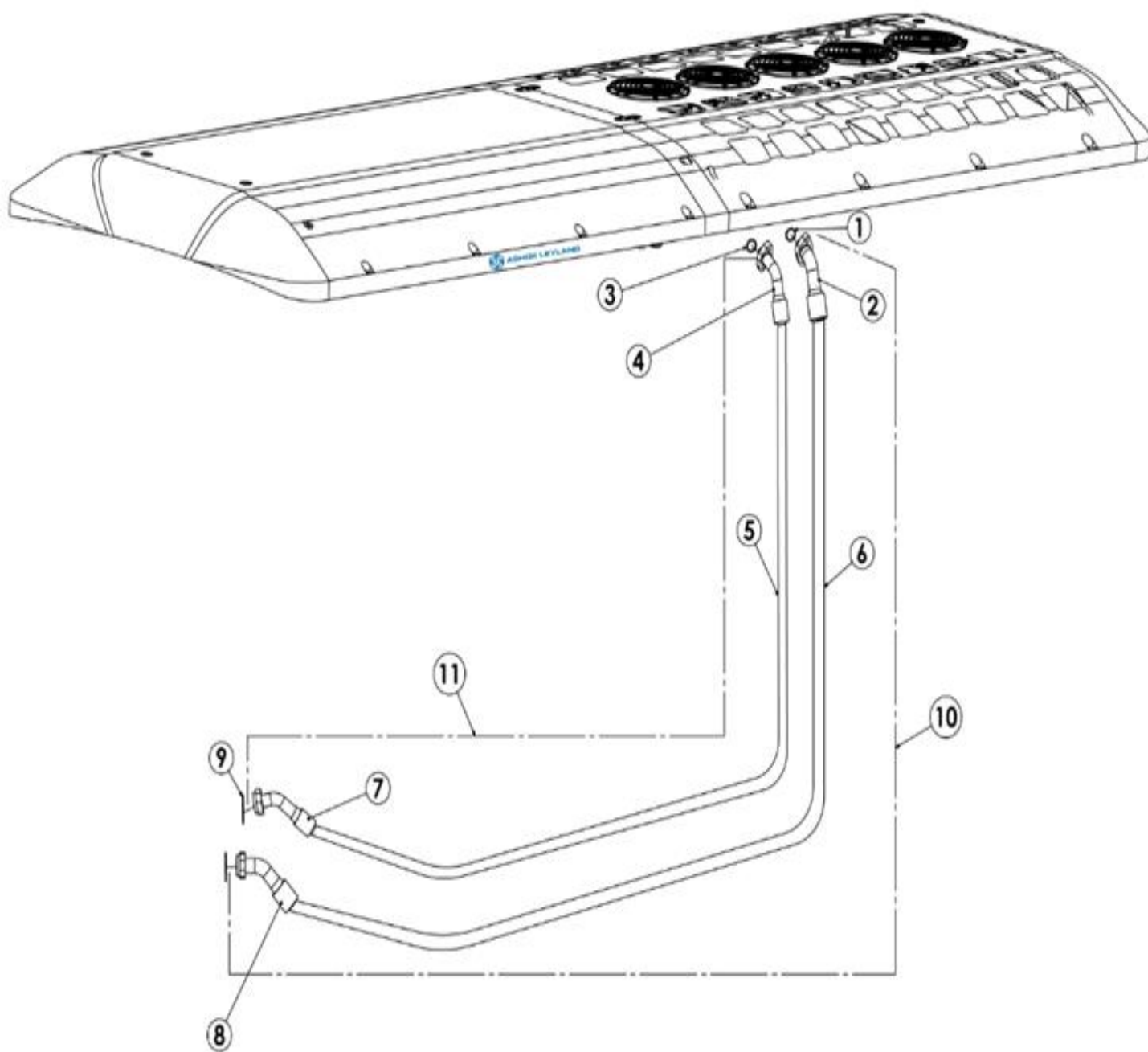
S.NO.	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-389	S.S HEX BOLT(8X30X1.25)	Nos	2
2	S90-712-390	S.S SPRING WASHER (8X14X2)	Nos	1
3	S90-712-391	S.S PLAIN WASHER 8.5X30X2	Nos	2
4	S90-712-392	MOUNTING FLANGE FOR POSTIVE SUPPLY	Nos	1
5	S90-712-393	BAKLITE BUSH A&B	Nos	1



## 2.4 EVAPORATOR & POSITIVE TERMINAL FLANGE –Contd.,

S.NO.	AL. PART NO	DESCRIPTION	UOM	QTY
6	S90-712-394	S.S HEX BOLT(8X50X1.25)	Nos	1
7	S90-712-395	SELF ADHESIVE FOAM 2MM BLOWER A-543	Nos	2
8	S90-712-396	L- SHAPED LIFTING BRACKET [R-2]	Nos	4
9	S90-712-397	RUBBER GROMMET 48MM	Nos	3
10	S90-712-173	ADJUSTABLE MOUNTING BRACKET [R-5]	Nos	16
11	S90-712-117	EVAPORATOR BASE A-543	Nos	1
12	S90-712-135	POSTIVE BOLD MOUNTIMG ASSEMBLY	Nos	1

### 3.0 HOSE FITTINGS



S.NO.	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-158	O RING - 9/8"	Nos	1
2	S90-712-402	HOSE FITTING - OFKY-L-135	Nos	1
3	S90-712-159	O RING - 7/8"	Nos	1
4	S90-712-404	HOSE FITTING OFKY-H-135	Nos	1
5	S90-712-405	REFRIGERANT HOSE 7/8" (22MM) Parker	Mtr	3.4

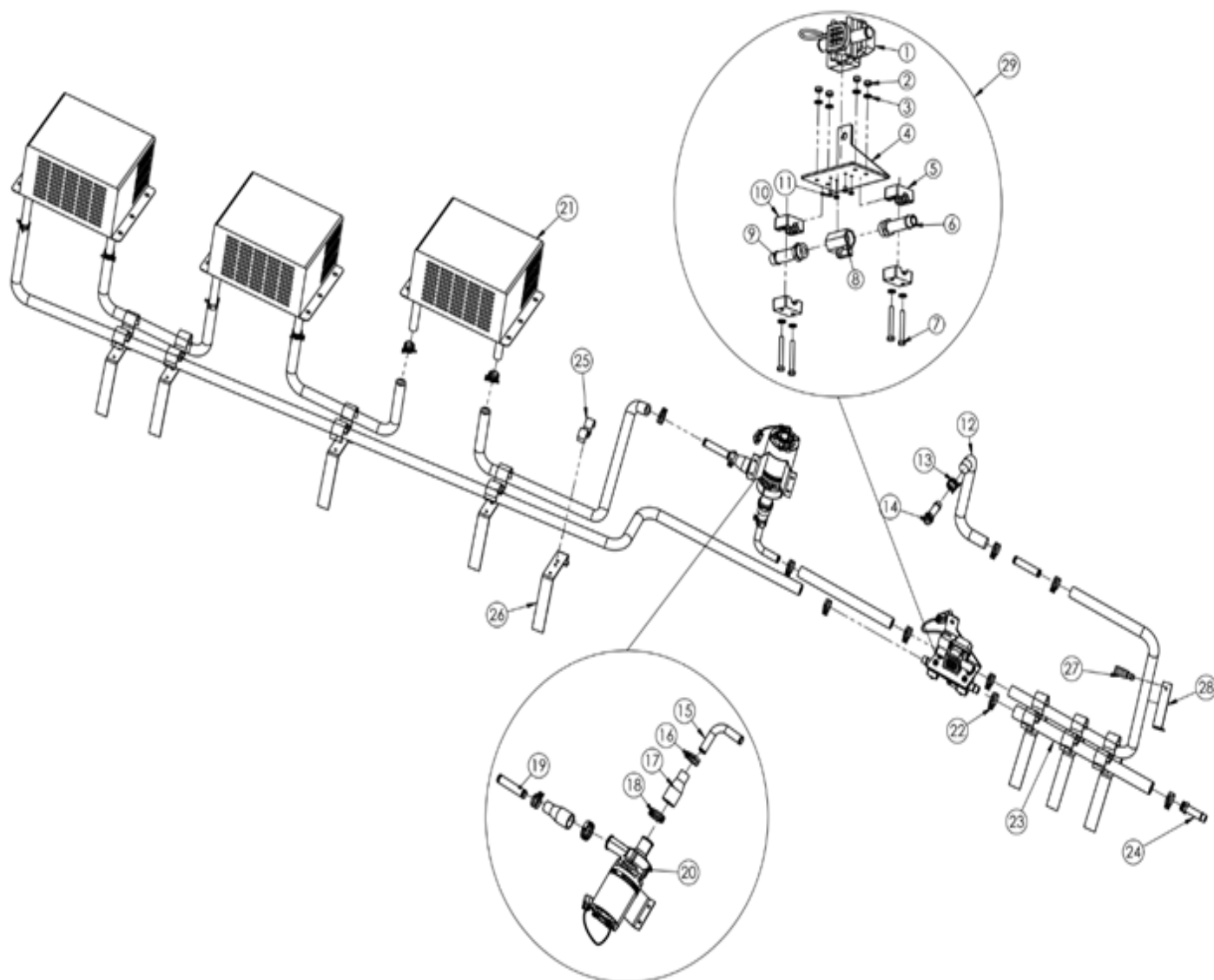




### 3.0 HOSE FITTINGS –Contd.,

S.NO.	AL. PART NO	DESCRIPTION	UOM	QTY
6	S90-712-406	REFRIGERANT HOSE 9/8 (28.5MM) PARKER	Mtr	3.5
7	S90-712-407	COMPRESSOR SIDE FITTING 7/8" 135 DEGREE	Nos	1
8	S90-712-408	COMPRESSOR SIDE FITTING 9/8" 135 DEGREE	Nos	1
9	S90-712-257	COMPRESSOR GASKET ROUND TYPE	Nos	2
10	S90-712-181	REFRIGERANT HOSE ASSEMBLY SUCTION	Nos	1
11	S90-712-180	REFRIGERANT HOSE ASSEMBLY DISCHARGE	Nos	1

## 4.0 SOLENOID VALVE & FLOOR HEATER



S.NO.	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-188	SOLENOID VALVE 3-WIRE - 24V ( NB201014-K )	Nos	1
2	S90-712-413	S.S LOCK NUT (M6X1)	Nos	4
3	S90-712-414	S.S PLAIN WASHER (6x12X1)	Nos	8
4	S90-712-193	SOLENOID MTG BRACKET -FALCON	Nos	1
5	S90-712-416	PVC TUBE HOLDER - 3/4" [R-1]	Nos	1
6	S90-712-417	M.S NIPPLE - 3/4"	Nos	1
7	S90-712-418	S.S HEX BOLT - (6X50X1)	Nos	4

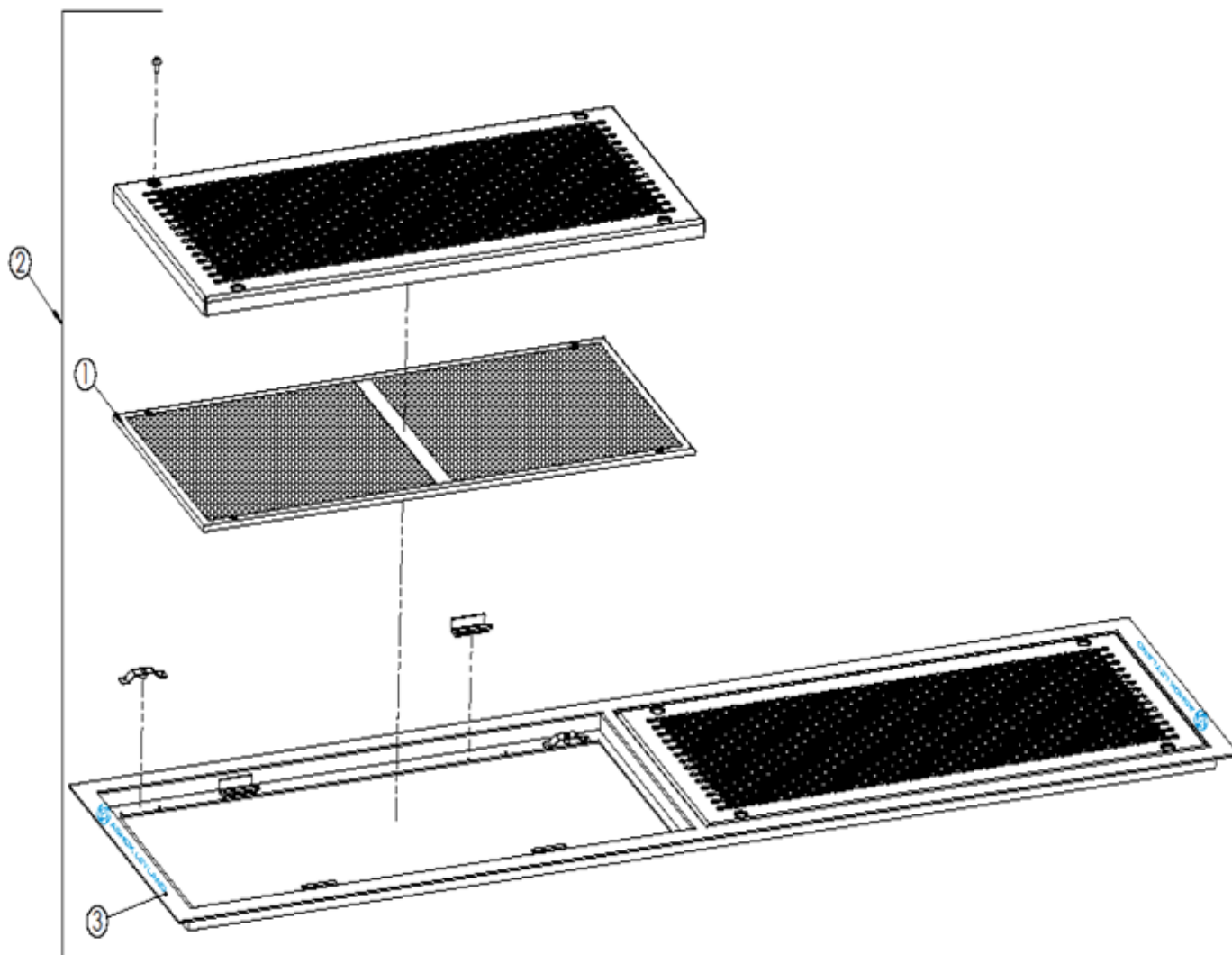


#### 4.0 SOLENOID VALVE & FLOOR HEATER -Contd.,

S.NO.	AL. PART NO	DESCRIPTION	UOM	QTY
8	S90-712-419	HEATING VALVE (MINI BALL VALVE) 5/8"	Nos	1
9	S90-712-420	M.S NIPPLE - 5/8"	Nos	1
10	S90-712-130	PVC TUBE HOLDER - 5/8 [R-1]	Nos	1
11	S90-712-422	FLAT HEAD SCREW- CSK (4x20) (No-8x25)	Nos	4
12	S90-712-189	HEATER HOSE Z TYPE	Nos	1
13	S90-712-190	CTC CLAMP FOR 5/8" hose (FBS-25/FBS-26)	Nos	14
14	S90-712-152	ENGINE NIPPLE 5/8 (AL)	Nos	1
15	S90-712-156	AL Nipple 5/8" - 90 DEG JOINT	Nos	1
16	S90-712-186	CTC CLAMP FOR BP REDUCER HOSE (FBS-35)	Nos	2
17	S90-712-204	REDUCER HOSE 7/8" to 5/8"	Nos	2
18	S90-712-191	CTC CLAMP FOR 3/4" HOSE (FBS-27)	Nos	2
19	S90-712-154	STARIGHT NIPPLE (AL)-5/8"	Nos	2
20	S90-712-185	WATER PUMP/ HEATING PUMP - 24V	Nos	1
21	S90-712-187	FLOOR HEATER - SS5 24V	Nos	3
22	S90-712-191	CTC CLAMP FOR 3/4" HOSE - (FBS-27)	Nos	2
23	S90-712-153	HEATING HOSE - 3/4"	Mtr	2
24	S90-712-435	ENGINE NIPPLE - 3/4" (AL)	Nos	1
25	S90-712-208	HRATING HOSE HOLDING CLAMP "W" SHAPE	Nos	26
26	S90-712-202	HEATING HOSE HOLDING BKT (J-TYPE)	Nos	30
27	S90-712-234	INSULATED P-CLAMP - 25mm ID	Nos	1
28	S90-712-205	L-BRACKET RADIATOR SIDE -2	Nos	1
29	S90-712-440	SOLENOID VALVE ASSEMBLY	Nos	1
30	S90-712-192	HAND SHUT OFF VALVE WITH NIPPLE	Nos	1
31	S90-712-199	HEATER HOSE 5/8"	Mtr	23.5

## 5.0 RETURN AIR GRILL & FILTER

### RETURN AIR GRILL WITH FILTER

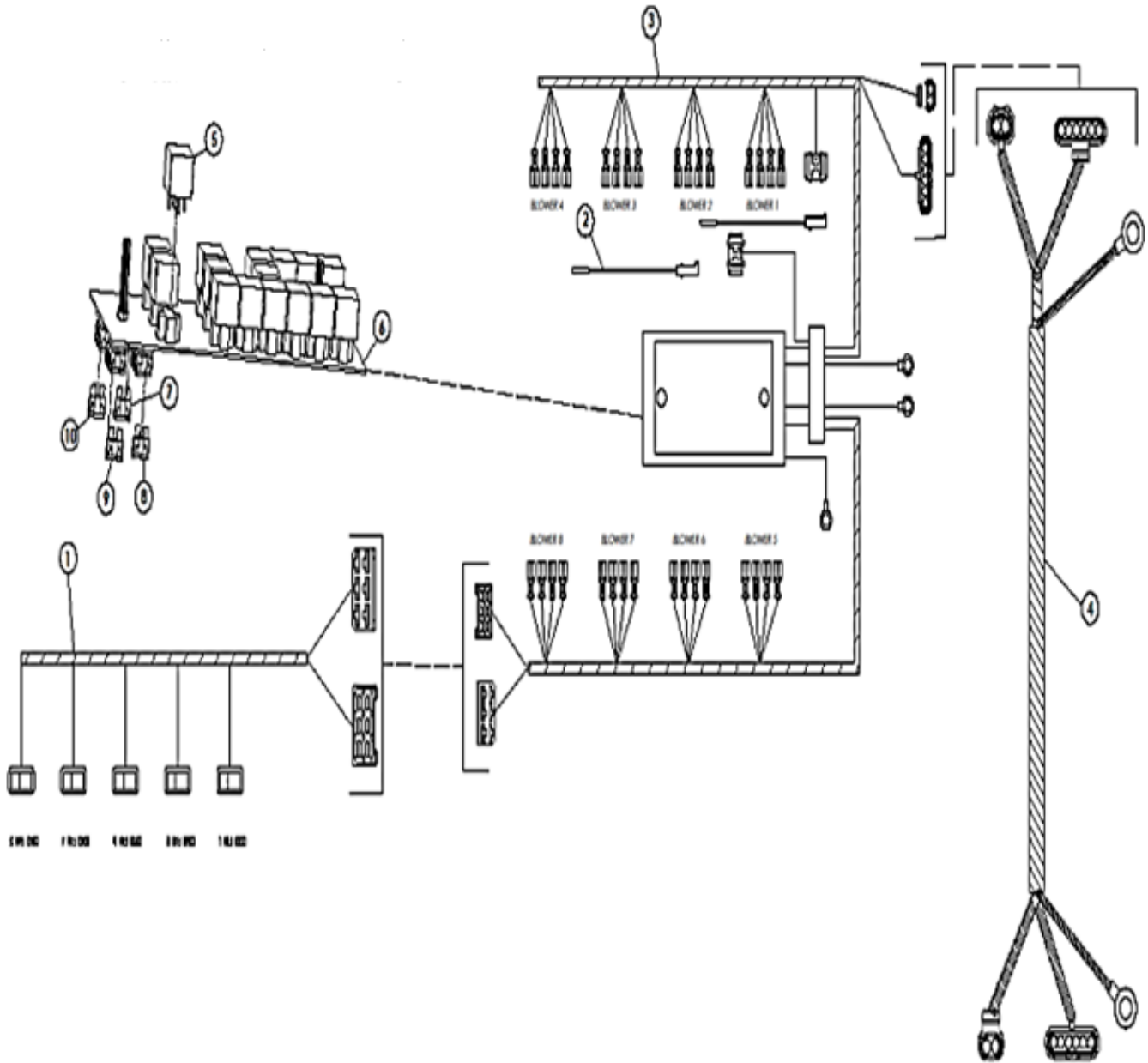


S.NO.	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-157	RETURN AIR GRILL FILTER ASTRO-543	Nos	2
2	S90-712-147	RETURN AIR GRILL ASSEMBLY	Nos	1
3	S90-712-445	LEY BRAND STICKER 50MM	Nos	2



## 6.0 CONDENSOR FAN & EVAPORATOR WIRE KIT

### CONDENSOR FAN WIRE & EVAPORATOR WIRE KIT

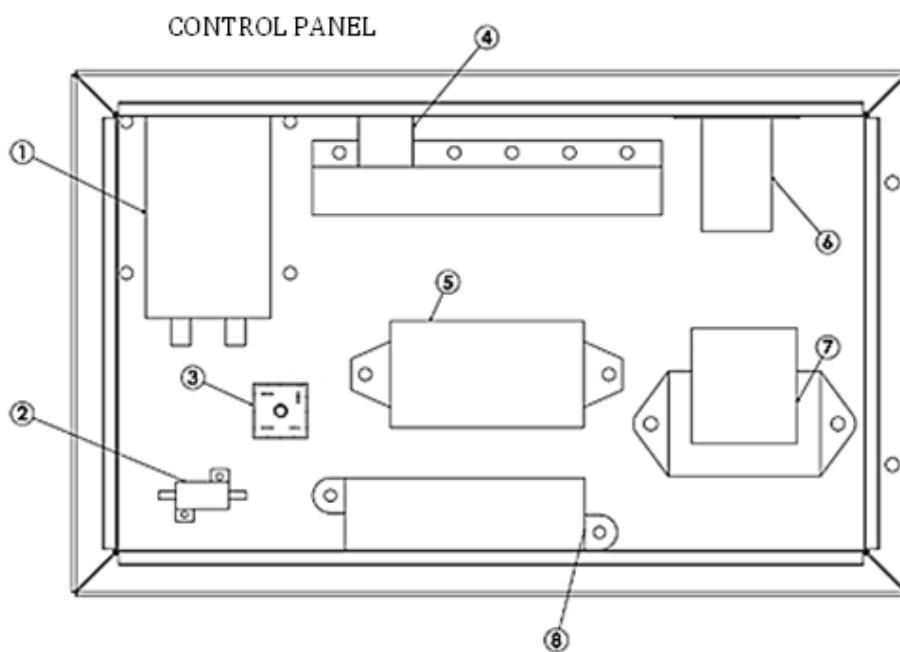
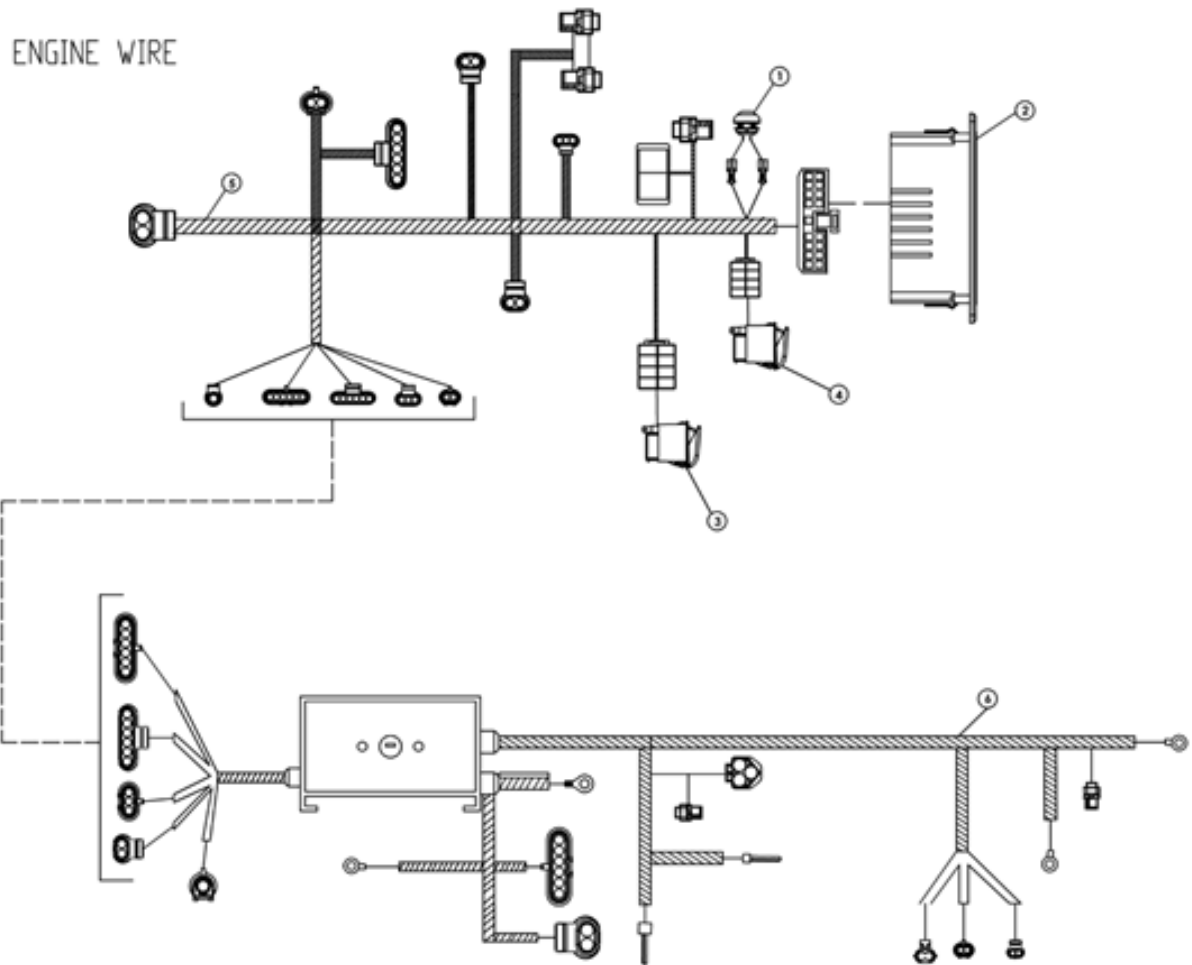




## 6.0 CONDENSOR FAN & EVAPORATOR WIRE KIT – Contd.,

S.NO.	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-178	CONDENSER FAN SINGLE CABLE	Nos	1
2	S90-712-447	SENSOR WITH COUPLER	Nos	2
3	S90-712-197	EVAPORATOR WIRE HARNESS ASTRO-543	Nos	1
4	S90-712-182	WIRING HARNESS #1 ASTRO-543	Nos	1
5	S90-712-174	RELAY 24V	Nos	18
6	S90-712-198	RELAY BOARD W/O RELAYS	Nos	1
7	S90-712-452	FUSE 5 AMPS	Nos	3
8	S90-712-166	FUSE 10 AMPS	Nos	8
9	S90-712-167	FUSE 20 AMPS	Nos	8
10	S90-712-165	FUSE 30 AMPS	Nos	5

## 6.1 ENGINE WIRE KIT & CONTROL PANEL

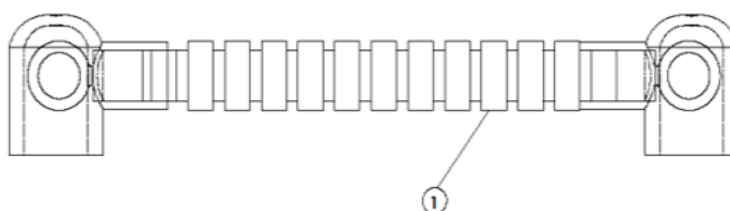


## 6.1 ENGINE WIRE KIT & CONTROL PANEL – Contd.,

S.NO.	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-456	ENGINE STARTER SWITCH	Nos	1
2	S90-712-184	CAB CONTROLLER 24V	Nos	1
3	S90-712-216	ROCKER SWITCH 22X44 DPDT FOR HEATER	Nos	1
4	S90-712-215	ROCKER SWITCH 22X44 DPDT FOR ENGINE	Nos	1
5	S90-712-183	WIRING HARNESS #2 ASTRO-543	Nos	1
6	S90-172-281	RELAY BOX ASSEMBLY WITH WIRING	Nos	1
7	S90-712-462	CAPACITOR	Nos	1
8	S90-712-463	RESISTOR 75Ω 2W	Nos	1
9	S90-712-464	BRIDGE RECTIFIER	Nos	1
10	S90-712-174	RELAY 24 V	Nos	6
11	S90-712-466	FUSE BOX	Nos	1
12	S90-712-467	RELAY GLOW	Nos	1
13	S90-712-468	STARTER SAFETY RELAY	Nos	1
14	S90-712-164	MAIN FUSE BOX	Nos	1
15	S90-712-470	HOUR MEATER,24V	Nos	1
16	S90-712-471	LED BULB (YELLOW 24V)	Nos	1
17	S90-712-472	LED BULB (RED 24V)	Nos	1

## 6.2 BATTERY CABLE KIT

BATTERY CABLE

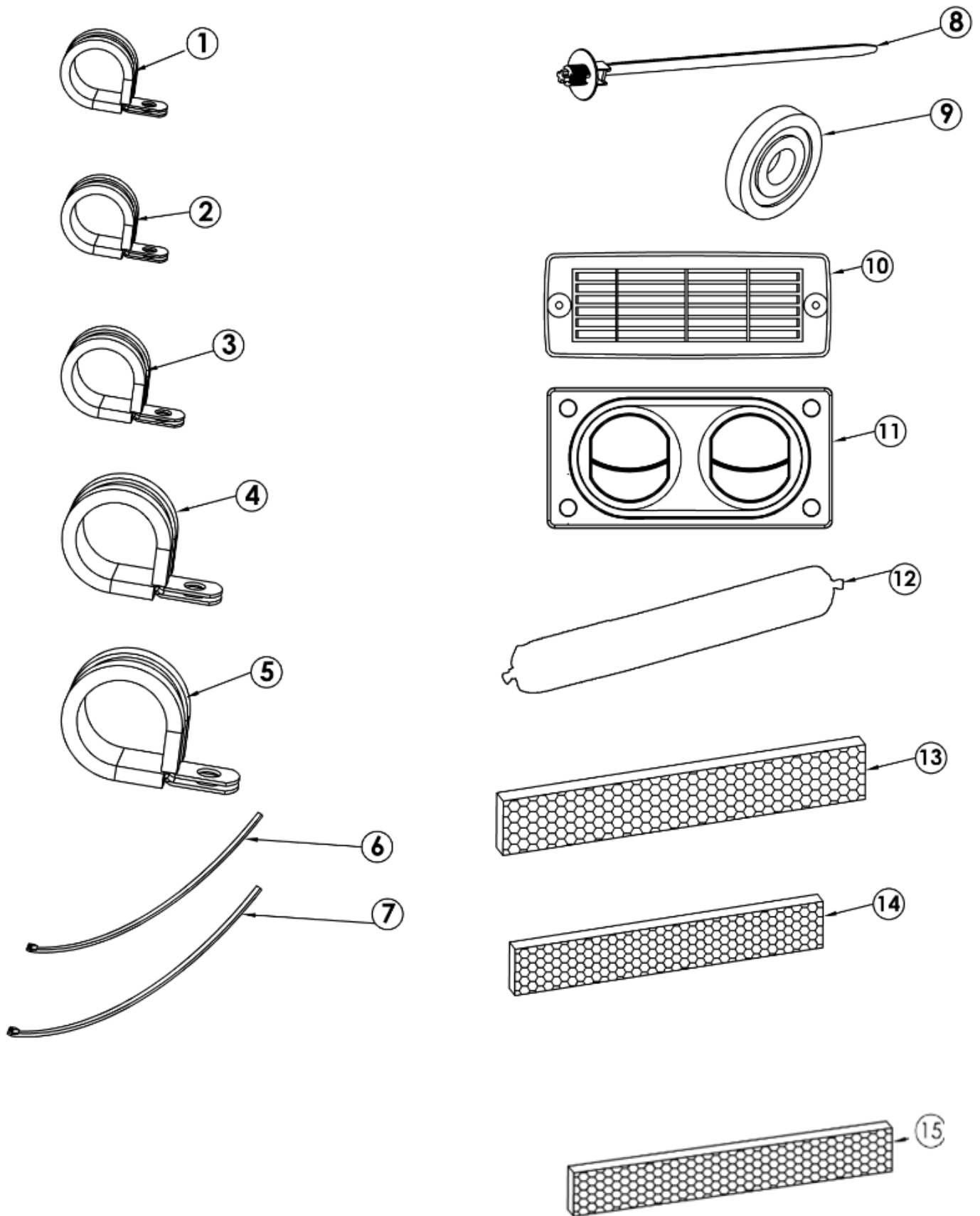


S.NO.	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-473	BATTERY CABLE MAIN	Nos	1





## 7.0 INSTALLATION KIT

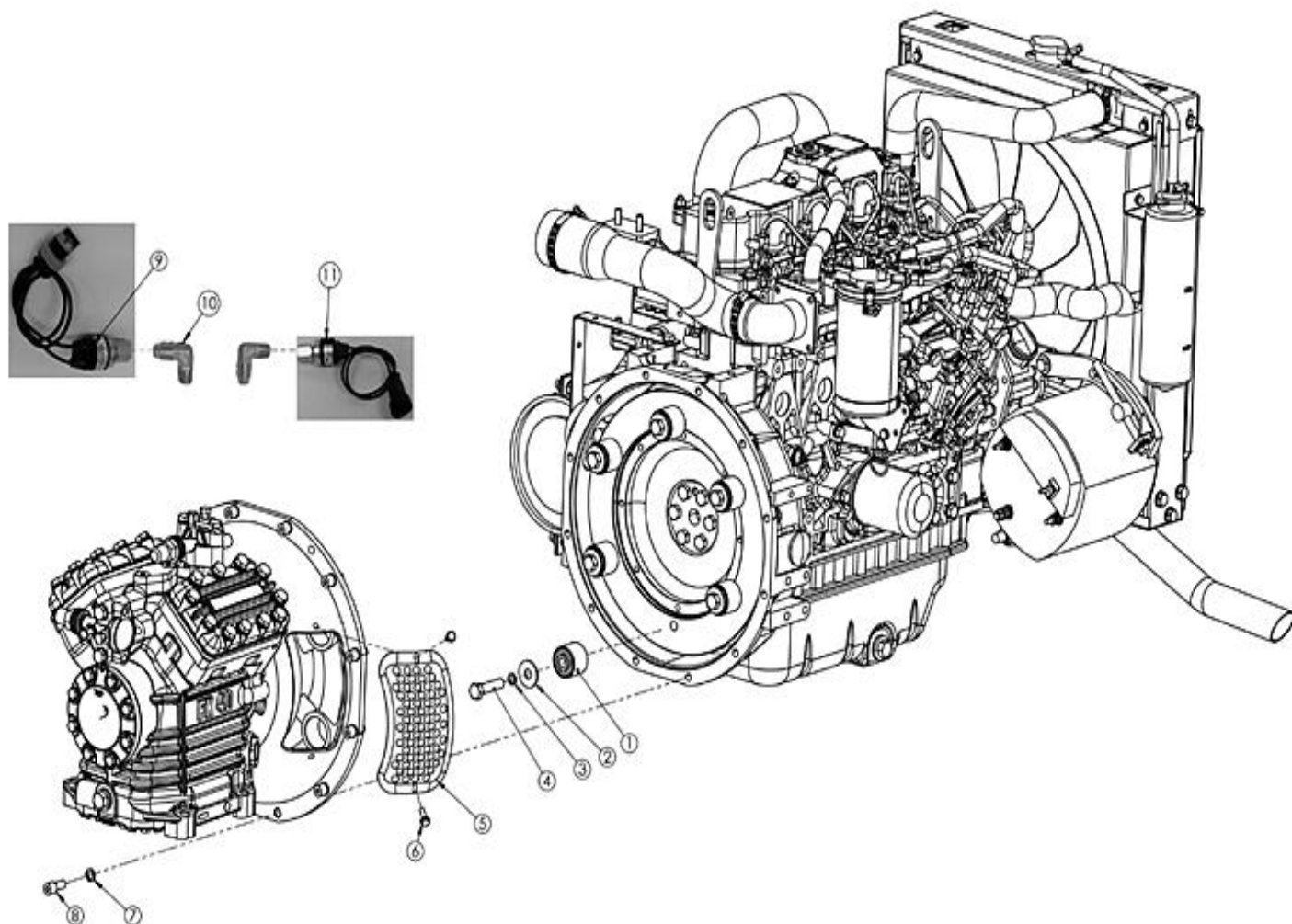




## 7.0 INSTALLATION KIT- Contd.,

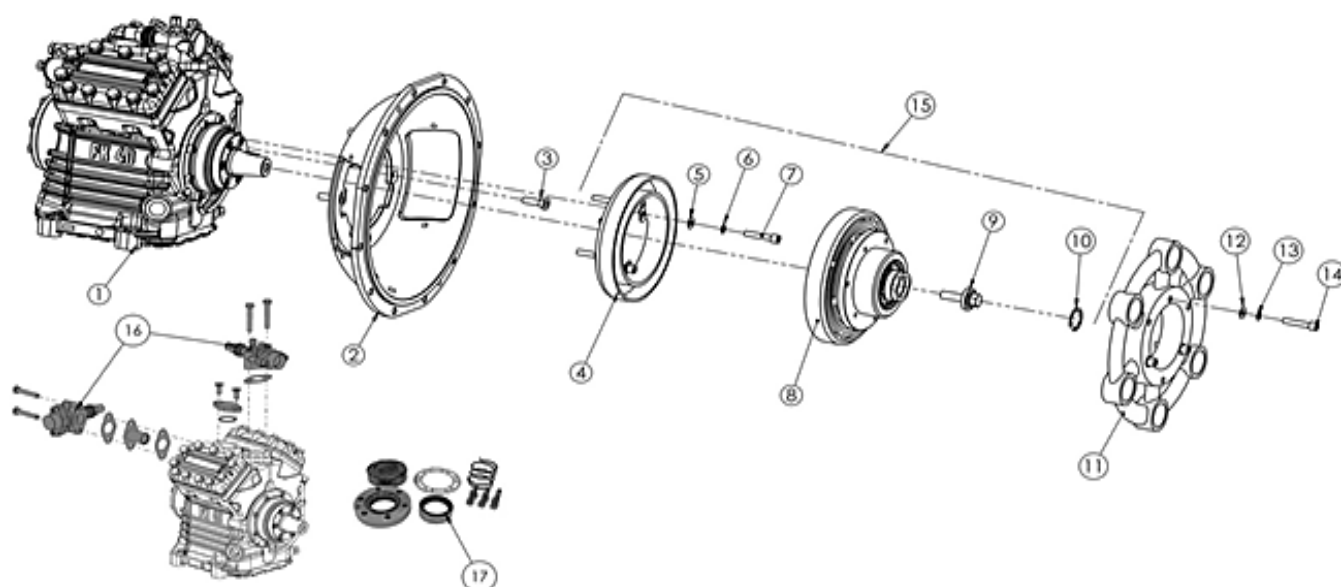
S.NO.	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-211	P-CLAMP -1/2" ID	Nos	9
2	S90-712-475	INSULATED P-CLAMP FOR DRAIN / WIRING ROUTING (5/8" Drain Hose)	Nos	2
3	S90-712-210	P-CLAMP - 18mm ID	Nos	4
4	S90-712-200	INSULATED P-CLAMP 21MM ID	Nos	6
5	S90-712-234	INSULATED P-CLAMP 25MM ID	Nos	9
6	S90-712-219	CABLE TIE 450MM (BLACK)	Nos	60
7	S90-712-275	CABLE TIE 250MM (BLACK)	Nos	70
8	S90-712-220	PUSH MOUNT DOME CABLE TIE -150mm	Nos	56
9	S90-712-214	UNIT MOUNTING RUBBER BUSH 20MM	Nos	44
10	S90-712-217	FREE FLOW AIR LOUVER (RAL-5347)	Nos	14
11	S90-712-218	AIR LOUVER (RAL-5347)	Nos	29
12	S90-712-169	PU SEALANT- 600ml white	Nos	10
13	S90-712-212	MOUNTING FOAM -1900x50x20	Nos	8
14	S90-712-213	9MM FOAM XLPE WITH GLUE	Mtr	10
15	S90-712-168	SELF-AD. INSULATION FOAM 3MM	Mtr	1

## 8.0 COUPLER BUSH & COUPLER CASING COVER



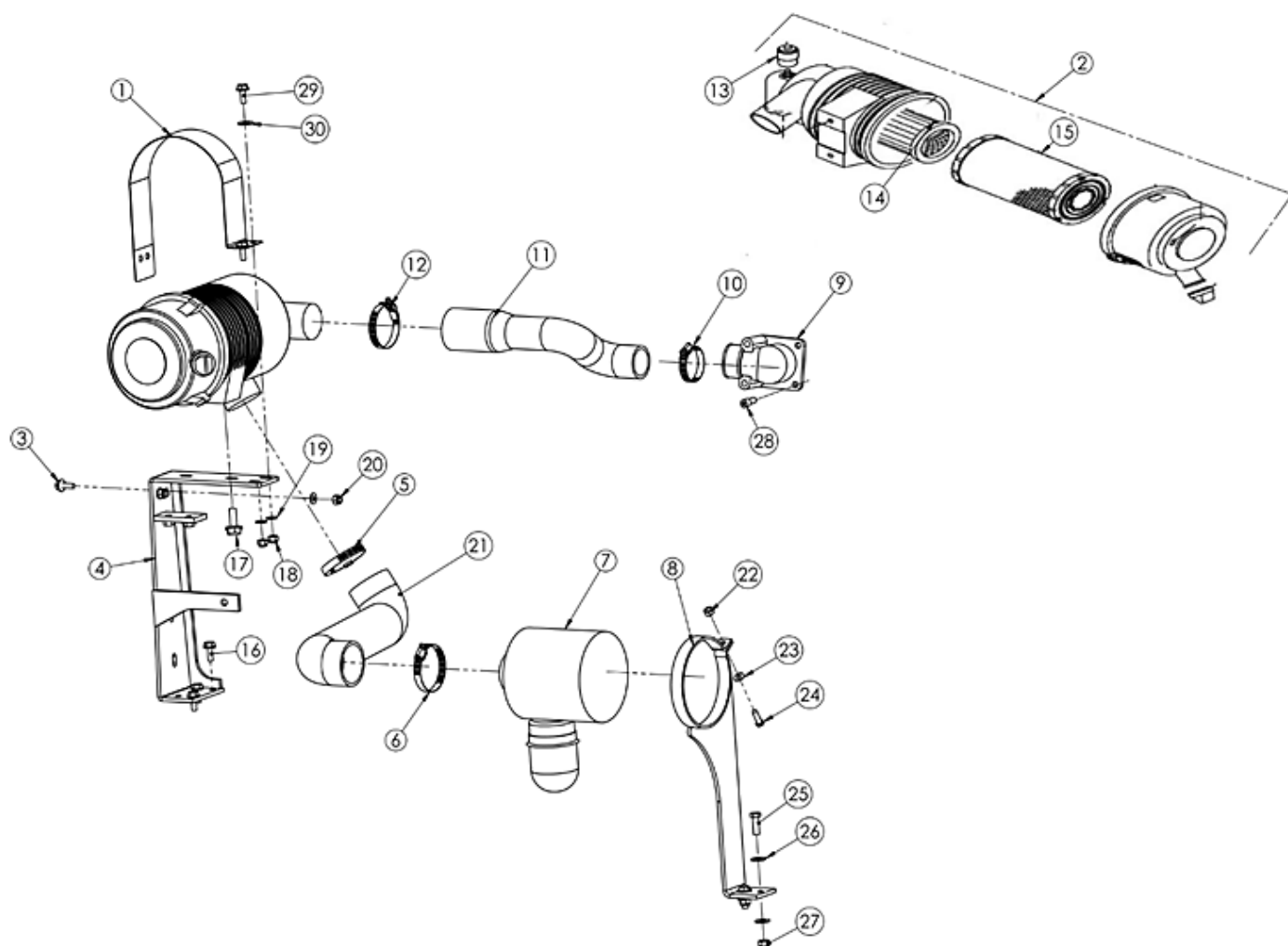
S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-264	RUBBER GROMMET COUPLING BUSH	Nos	6
2	S90-712-490	PLAIN WASHER M12	Nos	6
3	S90-712-491	SPRING WASHER M12	Nos	6
4	S90-712-492	HEX BOLT (M12X1.5X55)	Nos	6
5	S90-712-262	COMPRESSOR COUPLING HOUSING COVER	Nos	2
6	S90-712-494	FLANGE BOLT (M6X1.25X20)	Nos	4
7	S90-712-495	SPRING WASHER(M10)	Nos	12
8	S90-712-496	ALLEN BOLT (M10X1.5X25)	Nos	12
9	S90-712-245	LP SWITCH	Nos	1
10	S90-712-246	LP & HP ADOPTER	Nos	2
11	S90-712-179	HP SWITCH	Nos	1

## 8.1 COMPRESSOR & COUPLER- Contd.,



S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-255	COMPRESSOR FK40/655CC	Nos	1
2	S90-712-261	COMPRESSOR COUPLING HOUSING	Nos	1
3	S90-712-502	CSK BOLT (M10X1.5X25)	Nos	4
4	S90-712-260	MAGNETIC COIL	Nos	1
5	S90-712-504	M.S PLAIN WASHER M8	Nos	4
6	S90-712-505	M.S SPRING WASHER M8	Nos	4
7	S90-712-506	ALLEN BOLT (M8X1.25X30)	Nos	4
8	S90-712-259	CLUTCH HUB	Nos	1
9	S90-712-508	CLUTCH PULLEY BOLT	Nos	1
10	S90-712-509	CIRCLIP	Nos	1
11	S90-712-263	COUPLING	Nos	1
12	S90-712-511	M.S PLAIN WASHER M8	Nos	3
13	S90-712-512	M.S SPRING WASHER (M8)	Nos	3
14	S90-712-513	ALLEN BOLT (M8X1.25X45)	Nos	3
15	S90-712-514	CLUTCH ASSEMBLY	Nos	1
16	S90-712-344	SHUT-OFF VALVE (AL)	Nos	2
17	S90-712-516	SET-SHAFT SEAL FKX40+50 W. ESTER OIL CHARGE	Nos	1

## 9.0 AIR CLEANER ASSEMBLY



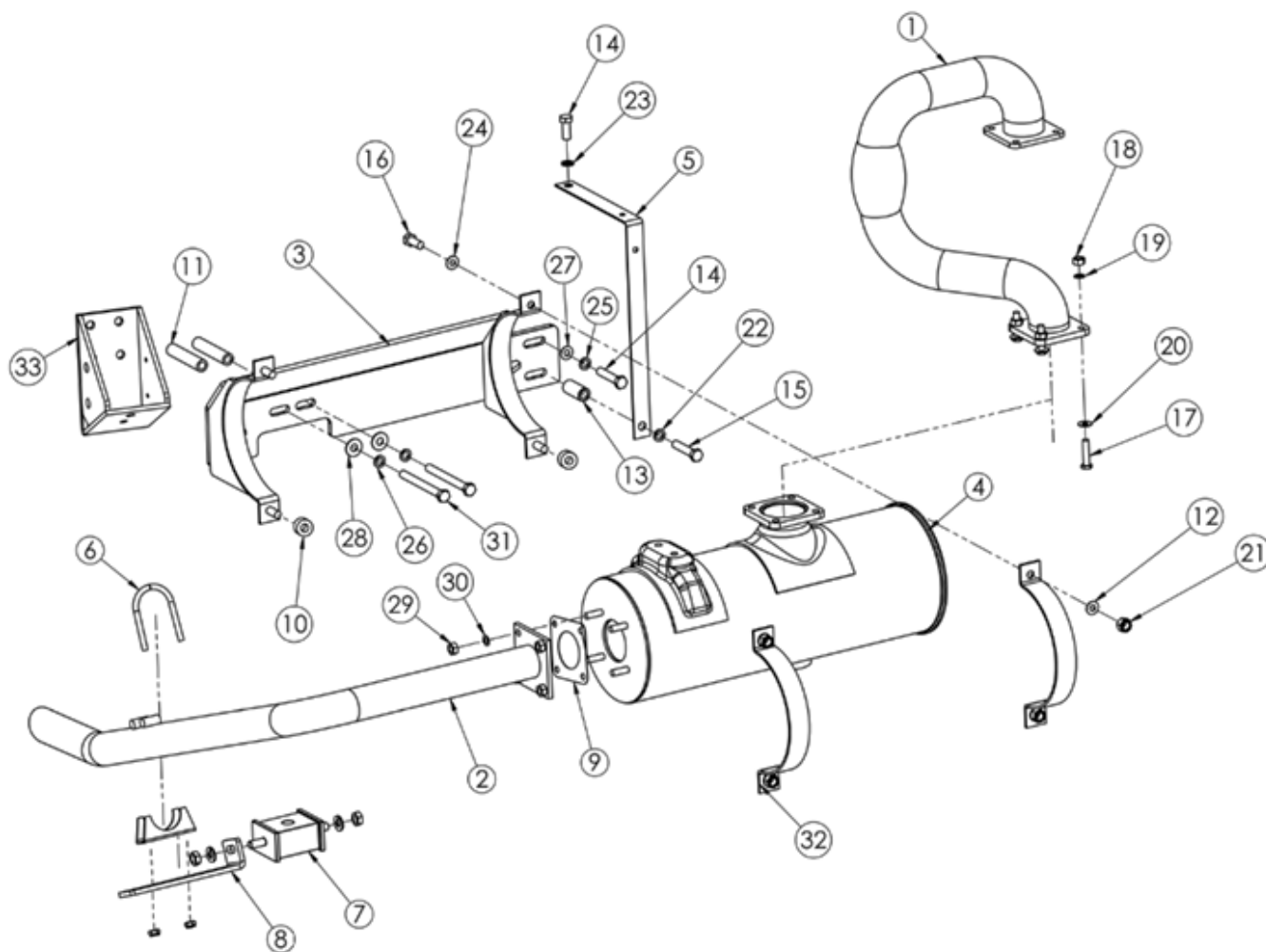
S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-517	AIR CLEANER HOLDING BRACKET	Nos	1
2	S90-712-304	AIR CLEANER ASSY	Nos	1
3	S90-712-519	M.S Flange Hex Bolt (8X25X1.25)	Nos	2
4	S90-712-271	AIR FILTER ASSY BRACKET	Nos	1
5	S90-712-235	S.S. HOSE CLAMP 3X	Nos	1
6	S90-712-235	S.S. HOSE CLAMP 3X	Nos	1
7	S90-712-267	PRE- AIR FILTER	Nos	1
8	S90-712-268	PRE- AIR FILTER BRACKET	Nos	1
9	S90-712-525	BEND, AIR HEATER	Nos	1
10	S90-712-526	CLAMP, 60	Nos	1



## 9.0 AIR CLEANER ASSEMBLY –Contd.,

S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
11	S90-712-249	HOSE AIR CLEANER TO ENGINE	Nos	1
12	S90-712-528	CLAMP, 80	Nos	1
13	S90-712-307	AIR FILTER SERVICE INDICATOR	Nos	1
14	S90-712-306	ELEMENT, AIR CLEANER INNER	Nos	1
15	S90-712-305	ELEMENT, AIR CLEANER	Nos	1
16	S90-712-532	CSK BOLT (M10X1.5X25)	Nos	4
17	S90-712-533	M.S FLANGE BOLT (M8x1.25x15)	Nos	2
18	S90-712-534	M.S LOCK NUT(M8X1.25)	Nos	2
19	S90-712-535	M.S PLAIN WASHER M8	Nos	2
20	S90-712-536	M.S LOCK NUT (M8X1.25)	Nos	2
21	S90-712-250	RUBBER HOSE PIPE (AIR CLEANER TO PRE AIR FILTER)	Nos	1
22	S90-712-538	M.S PLAIN NUT (M8X1.25)	Nos	1
23	S90-712-539	M.S PLAIN WASHER M8	Nos	1
24	S90-712-540	M.S HEX BOLT (M8x25x1.25)	Nos	1
25	S90-712-541	MS Hex Bolt (10X30X1.5)	Nos	2
26	S90-712-542	M.S PLAINWASHER M10	Nos	4
27	S90-712-543	M.S LOCK NUT (M10X1.5)	Nos	2
28	S90-712-544	M.S FLANGE HEX BOLT (8X25X1.25)	Nos	2
29	S90-712-545	M.S FLANGE HEX BOLT (8X25X1.25)	Nos	2
30	S90-712-546	M.S PLAIN WASHER M8	Nos	2

## 10.0 SILENCER ASSEMBLY



S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-229	SILENCER PIPE (PIPE)	Nos	1
2	S90-712-230	SILENCER PIPE (SECONDARY)	Nos	1
3	S90-712-228	SILENCER HOLDING BRACKET	Nos	1
4	S90-712-324	SILENCER MUFFLER	Nos	1
5	S90-712-551	WIRING SUPPORT BRACKET	Nos	1
6	S90-712-239	U CLAMP 1-1/2" WITH NUT	Nos	1
7	S90-712-231	SHOCKMOUNT PAD FOR TAIL PIPE	Nos	1
8	S90-712-554	HOLDING BRACKET TAIL PIPE	Nos	1
9	S90-712-238	SILENCER GASKET	Nos	1
10	S90-712-552	M.S BUSH (OD-22,ID-10,T-8)	Nos	1
11	S90-712-553	M.S BUSH (OD-22,L-73,ID-10.5 MM)	Nos	2

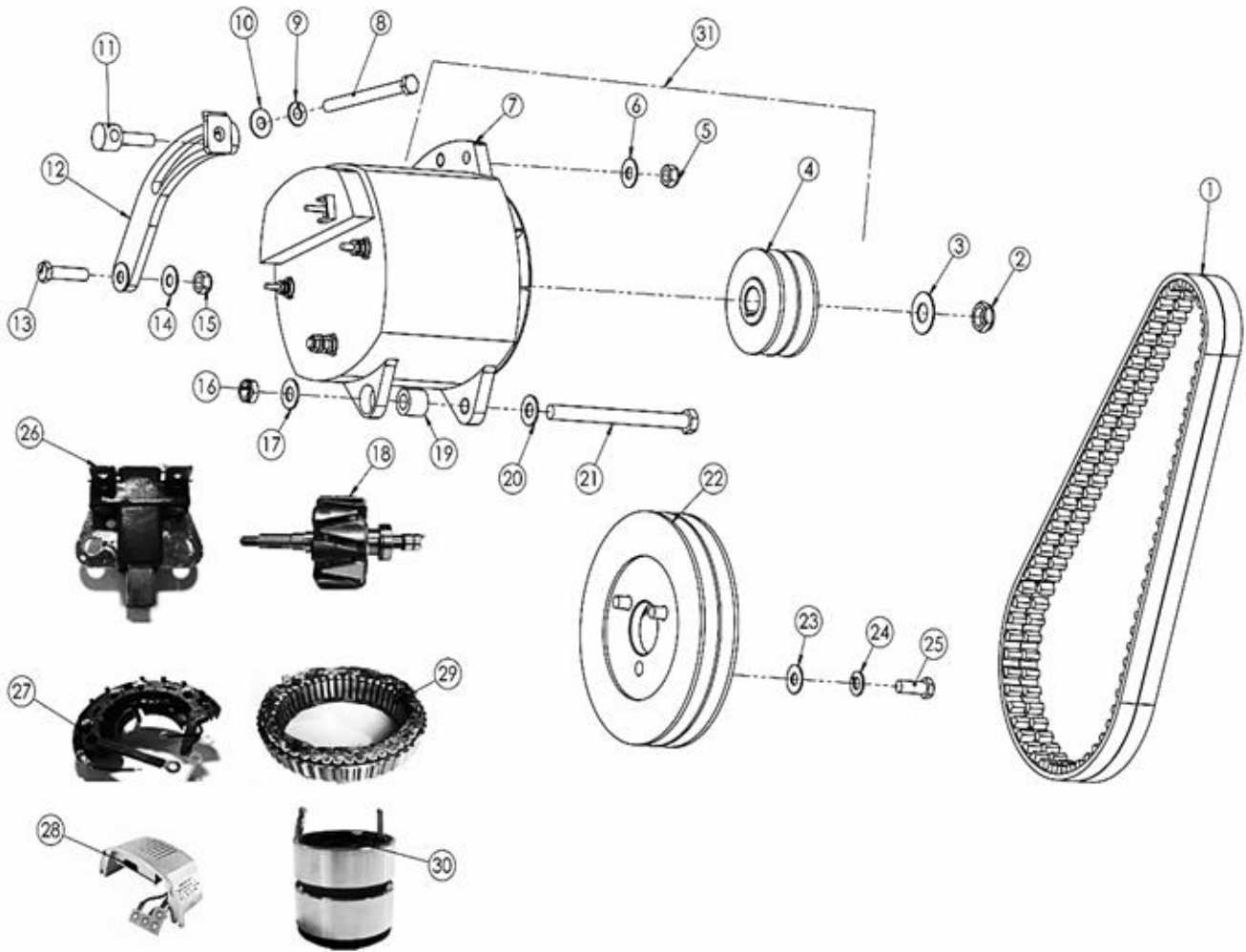


## 10.0 SILENCER ASSEMBLY –Contd.,

S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
12	S90-712-555	M.S PLAIN WASHER M8	Nos	2
13	S90-712-556	M.S PLAIN BUSH (OD-26,ID-10,L-26)	Nos	8
14	S90-712-557	M.S HEX BOLT (10X25X1.5)	Nos	1
15	S90-712-558	M.S HEX BOLT (10X50X1.5)	Nos	1
16	S90-712-559	M.S HEX BOLT (8x35x1.25)	Nos	1
17	S90-712-560	M.S HEX BOLT (M8x30x1.25)	Nos	4
18	S90-712-561	M.S PLAIN NUT (M8X1.25)	Nos	4
19	S90-712-562	M.S SPRING WASHER M8	Nos	4
20	S90-712-563	M.S PLAIN WASHER M8	Nos	4
21	S90-712-564	M.S NYLON LOCK NUT (M8X1.25)	Nos	4
22	S90-712-565	M.S SPRING WASHER M10	Nos	4
23	S90-712-566	M.S PLAIN WASHER M10	Nos	1
24	S90-712-563	M.S PLAIN WASHER M8	Nos	1
25	S90-712-565	M.S SPRING WASHER M10	Nos	8
26	S90-712-565	M.S SPRING WASHER M10	Nos	1
27	S90-712-566	M.S PLAIN WASHER M10	Nos	2
28	S90-712-566	M.S PLAIN WASHER M10	Nos	1
29	S90-712-561	M.S PLAIN NUT (M8X1.25)	Nos	2
30	S90-712-562	M.S SPRING WASHER M8	Nos	4
31	S90-712-567	M.S HEX BOLT (M10x100x1.5)	Nos	2
32	S90-712-227	SILENCER CLAMPING BRACKET	Nos	2
33	S90-712-269	ENGINE MOUNT BRACKET FROUNT (LH)	Nos	1

## 11.0 ALTERNATOR & CRANK PULLY ASSEMBLY





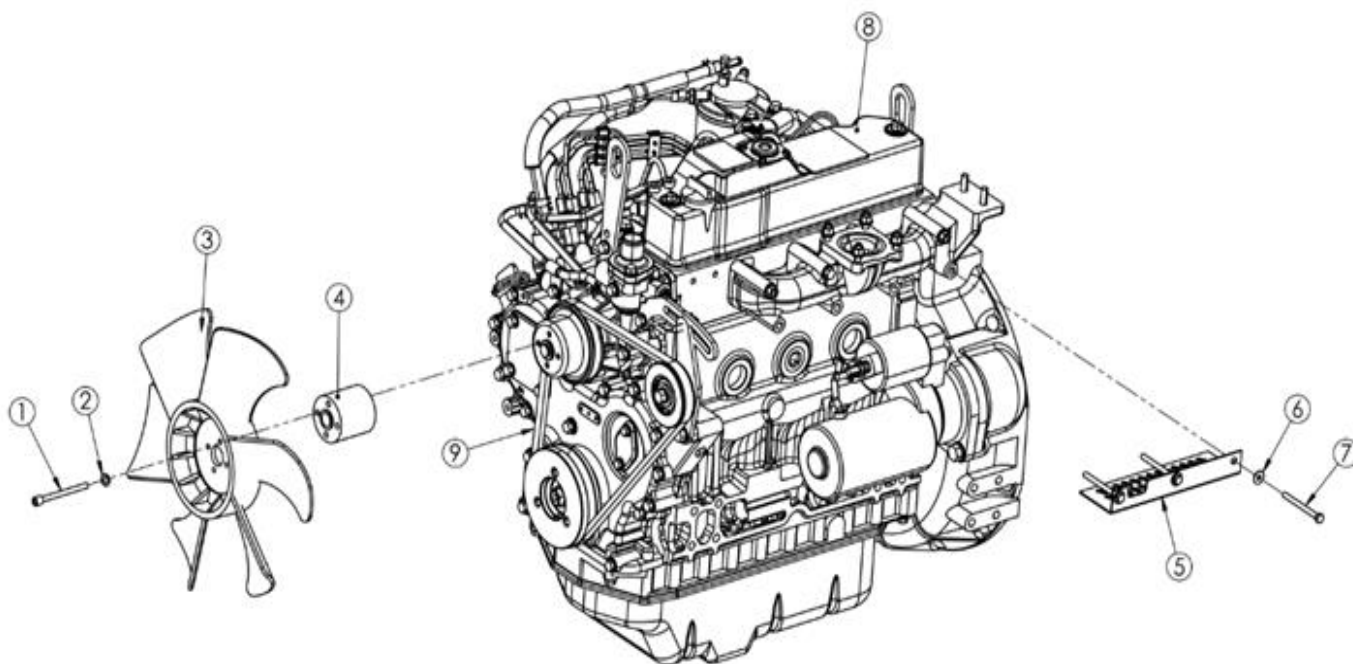
S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-273	BELT BX-39 FOR ALTERNATOR PULLEY	Nos	2
2	S90-712-582	LOCK NUT M16	Nos	1
3	S90-712-583	PLAIN WASHER 16mm	Nos	1
4	S90-712-258	PRESTOLITE PULLEY "2B"	Nos	1
5	S90-712-585	M.S LOCK NUT (M10X1.5)	Nos	1
6	S90-712-586	M.S PLAIN WASHER M10	Nos	1
7	S90-712-587	PRESTOLITE ALTERNATOR 24 VOLT- 150 AMP	Nos	1
8	S90-712-588	HEX BOLT (M10X1.5X130)	Nos	1
9	S90-712-589	SPRING WASHER (M10)	Nos	1
10	S90-712-590	PLAIN WASHER (M10)	Nos	1

### 11.0 ALTERNATOR & CRANK PULLEY ASSEMBLY – Contd.,



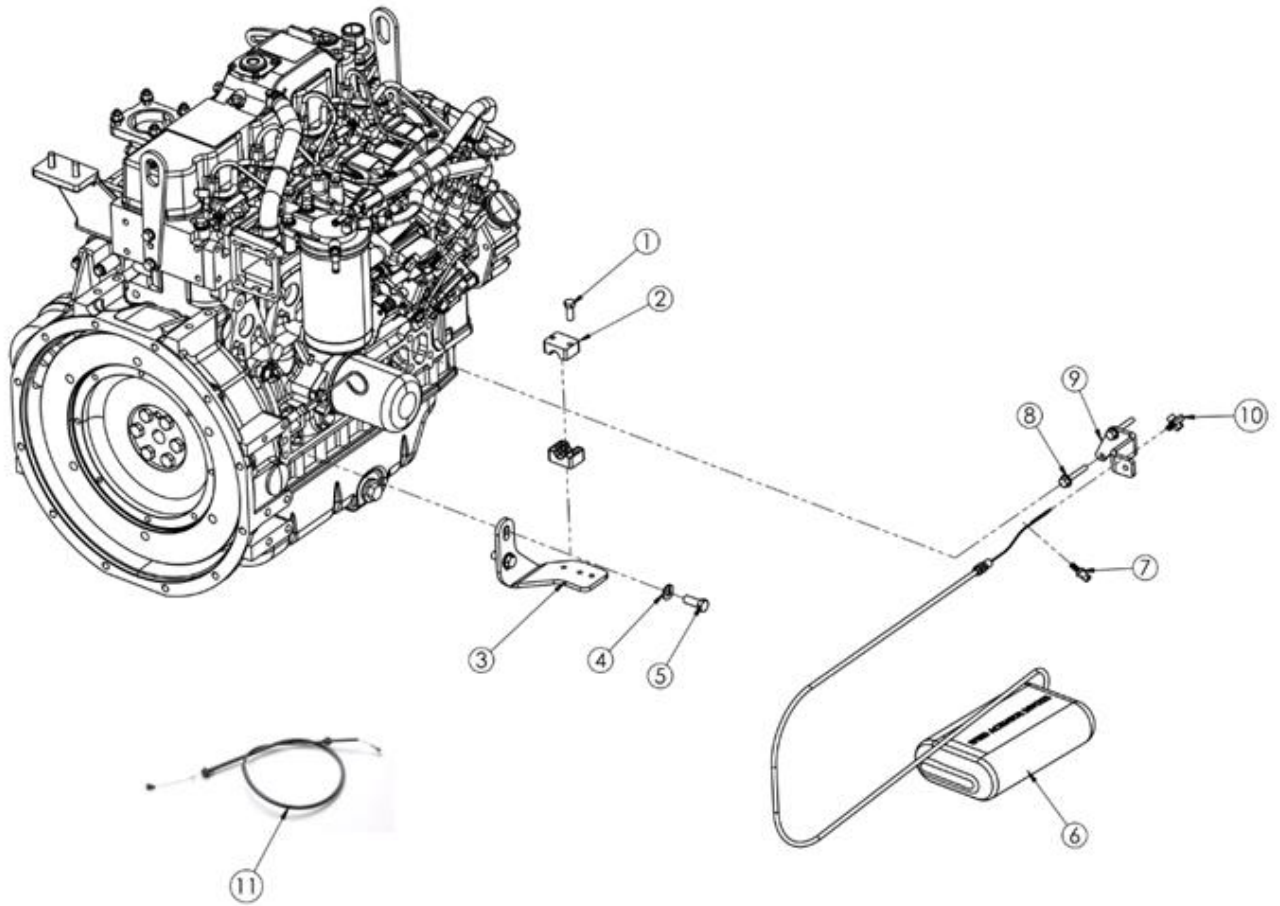
S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
11	S90-712-591	ALTERNATOR ADJUSTER BOLT (M35X10X50)	Nos	1
12	S90-712-266	ALTERNATOR TENSIONER BRACKET	Nos	1
13	S90-712-593	HEX BOLT (M10X1.5X45)	Nos	1
14	S90-712-594	PLAIN WASHER (M10)	Nos	1
15	S90-712-595	M.S LOCK NUT (M10X1.5)	Nos	1
16	S90-712-596	NUT ½" UNF	Nos	1
17	S90-712-597	PLAIN WASHER OD-23 ID-13 T-2	Nos	1
18	S90-712-284	ROTOR ASSEMBLY	Nos	1
19	S90-712-599	PLAIN BUSH (17MM)	Nos	1
20	S90-712-600	PLAIN WASHER O`D-23 ID-13 T-2	Nos	1
21	S90-712-601	HEX BOLT ½"X 6" UNF	Nos	1
22	S90-712-243	CRANK PULLEY 2B	Nos	1
23	S90-712-603	M.S PLAIN WASHER M10	Nos	3
24	S90-712-604	M.S SPRING WASHER M10	Nos	3
25	S90-712-605	MS HEX BOLT (10X30X1.5)	Nos	3
26	S90-712-283	CARBON BRUSHES	Nos	1
27	S90-712-288	RECTRIFIER ASSY, ALTERNATOR PRESTOLITE	Nos	1
28	S90-712-286	REGULATOR ASSEMBLY	Nos	1
29	S90-712-285	STATOR ASSEMBLY	Nos	1
30	S90-712-287	SLIP RING	Nos	1
31	S90-712-282	ALTERNATOR ASSEMBLY	Nos	1

## 12.0 FAN & FAN SPACER



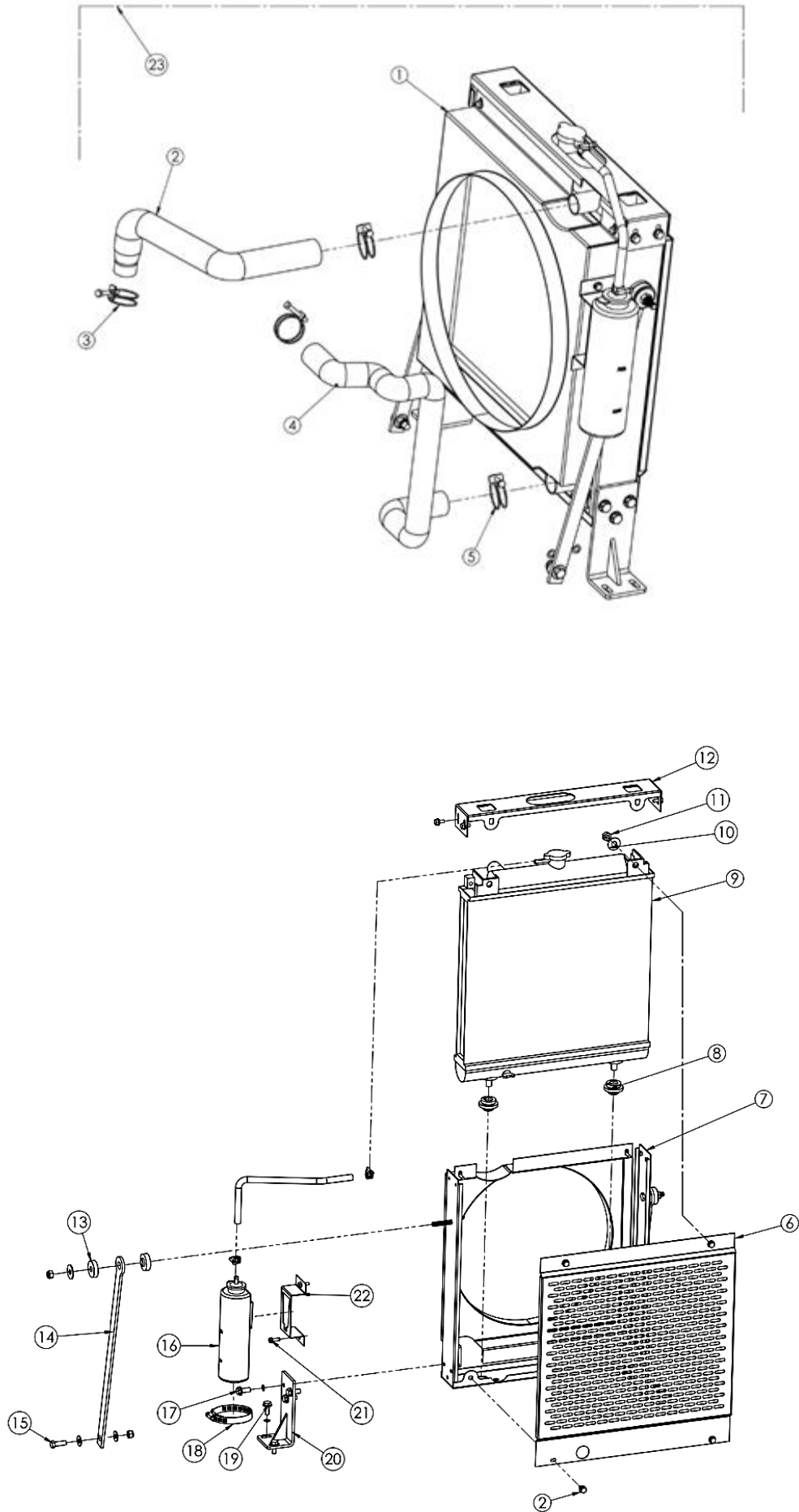
S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-612	M.S ALLEN BOLT (6x75x1 )	Nos	4
2	S90-712-613	M.S SPRING WASHER M6	Nos	4
3	S90-712-280	RADIATOR FAN PUSHER	Nos	1
4	S90-712-233	FAN SPACER	Nos	1
5	S90-712-616	EXHAUST MANIFOLD SHIELD	Nos	1
6	S90-712-617	M.S PLAIN WASHER M8	Nos	3
7	S90-712-618	M.S HEX BOLT (08x70x1.25)	Nos	3
8	S90-712-221	YANMAR DIESEL ENGINE 4TNV88-BWAD	Nos	1
9	S90-712-274	BELT 955LI FOR WATER PUMP PULLY	Nos	1

### 13.0 SPEED CONTROLLER ASSEMBLY



S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-621	S.S HEX BOLT (6X50X1)	Nos	2
2	S90-712-622	PVC TUBE HOLDER 5/8 [R-1]	Nos	1
3	S90-712-623	BATTERY CABLE HOLDING BRACKET	Nos	1
4	S90-712-624	M.S SPRING WASHER M10	Nos	2
5	S90-712-625	M.S HEX BOLT (10X25X1.5)	Nos	2
6	S90-712-240	SPEED CONTROLLER	Nos	1
7	S90-712-241	EYE BOLT WITH ADJUSTER	Nos	1
8	S90-712-628	M.S ALLEN BOLT (6x40x1 )	Nos	2
9	S90-712-242	SPEED CONTROLLER OUTER CABLE HOLDING BRACKET	Nos	1
10	S90-712-630	THROTTLE WIRE STOPPER	Nos	1
11	S90-712-343	ACCELERATOR CABLE	Nos	1

## 14.0 RADIATOR ASSEMBLY

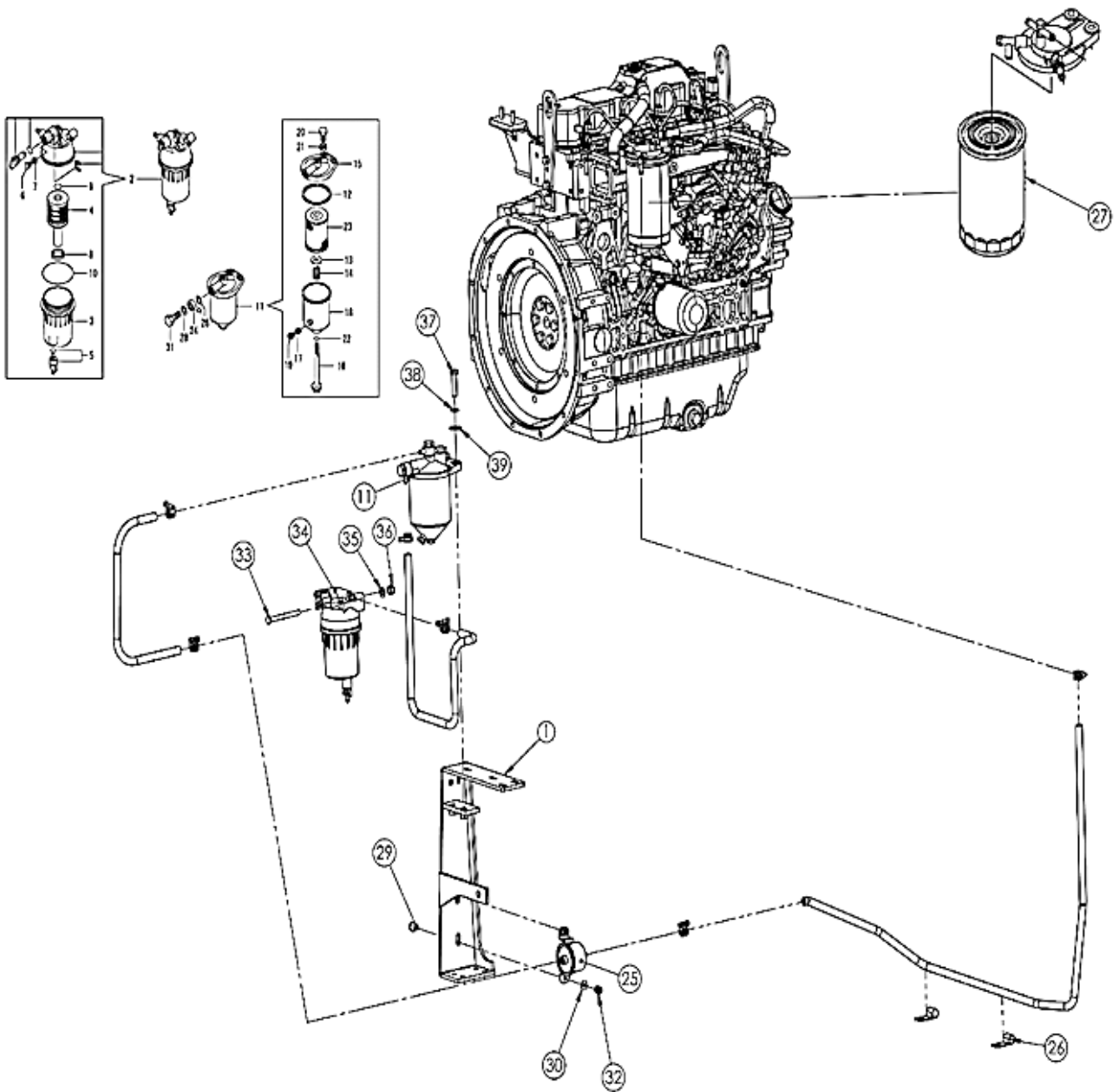


### 14.0 RADIATOR ASSEMBLY - Contd.,



S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-222	RADIATOR FAN SHROUD	Nos	1
2	S90-712-247	RUBBER HOSE ENGINE TO RADIATOR (UPPER)	Nos	1
3	S90-712-253	RADIATOR, HOSE CLAMP 38	Nos	2
4	S90-712-248	RUBBER HOSE ENGINE TO RADIATOR (LOWER)	Nos	1
5	S90-712-254	RADIATOR, HOSE CLAMP 44	Nos	2
6	S90-712-223	GRILL RADIATOR	Nos	1
7	S90-712-638	RADIATOR SIDE COVER	Nos	1
8	S90-712-639	ROUND RUBBER FOR RADIATOR BOTTOM	Nos	2
9	S90-712-226	RADIATOR ALUMINIUM	Nos	1
10	S90-712-641	M.S SPRING WASHER M8	Nos	1
11	S90-712-642	M.S PLAIN NUT (M8X1.25)	Nos	1
12	S90-712-224	RADIATOR TOP COVER	Nos	1
13	S90-712-644	RADIATOR SHOCK MOUNT ASSEMBLY	Nos	2
14	S90-712-645	SIDE SUPPORT STRIP YANMAR COUPLING ENGINE	Nos	2
15	S90-712-646	MS HEX BOLT (10X30X1.5)	Nos	2
16	S90-712-323	COOLANT BOTTLE	Nos	1
17	S90-712-648	M.S FLANGE HEX BOLT (M8x1.25x15)	Nos	6
18	S90-712-232	S.S. HOSE CLAMP 3X	Nos	1
19	S90-712-650	MS FLANGE HEX BOLT 10x1.5x25	Nos	4
20	S90-712-203	RADIATOR HOLDING BASE BRACKET	Nos	2
21	S90-712-652	M.S FLANGE HEX BOLT (6X20X1)	Nos	2
22	S90-712-653	COOLANT BOOTLE BRACKET	Nos	1
23	S90-712-654	RADIATOR ASSEMBLY	Nos	1

## 15.0 FUEL LINE & WATER SEPRATOR ASSEMBLY



### 15.0 FUEL LINE & WATER SEPRATOR ASSEMBLY – Contd.,



S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-655	M.S SPRING WASHER M10	Nos	1
2	S90-712-327	SEPARATOR ASSY,WATER	Nos	1
3	S90-712-657	CUP, SEPARATOR	Nos	1
4	S90-712-326	ELEMENT, WATER SEPERATOR	Nos	1
5	S90-712-659	PLUG, DRAIN	Nos	1
6	S90-712-660	VALVE, AIR VENT	Nos	1
7	S90-712-661	GASKET, PLUG	Nos	1
8	S90-712-662	FLOAT	Nos	1
9	S90-712-663	O-RING, 1AP16.0	Nos	1
10	S90-712-664	O-RING, 1AG75.0	Nos	1
11	S90-712-328	FUEL FILTER, PRIMARY	Nos	1
12	S90-712-666	GASKET, COVER	Nos	1
13	S90-712-667	SEAT, SPRING	Nos	1
14	S90-712-668	SPRING, FILTER	Nos	1
15	S90-712-669	BODY, STRAINER	Nos	1
16	S90-712-670	BOLT, CENTER	Nos	1
17	S90-712-671	GASKET	Nos	1
18	S90-712-672	CASE, SEPARATOR	Nos	1
19	S90-712-673	PLUG, DRAIN M8	Nos	1
20	S90-712-674	PLUG, M14	Nos	1
21	S90-712-675	GASKET, PLUG	Nos	1
22	S90-712-676	O-RING, 1AP12.0	Nos	1
23	S90-712-276	ELEMENT, FUEL	Nos	1
24	S90-712-278	JOINT, FUEL PIPE	Nos	2
25	S90-712-329	FUEL FEED PUMP	Nos	1
26	S90-712-201	INSULATED P-CLAMP 21MM ID	Nos	2

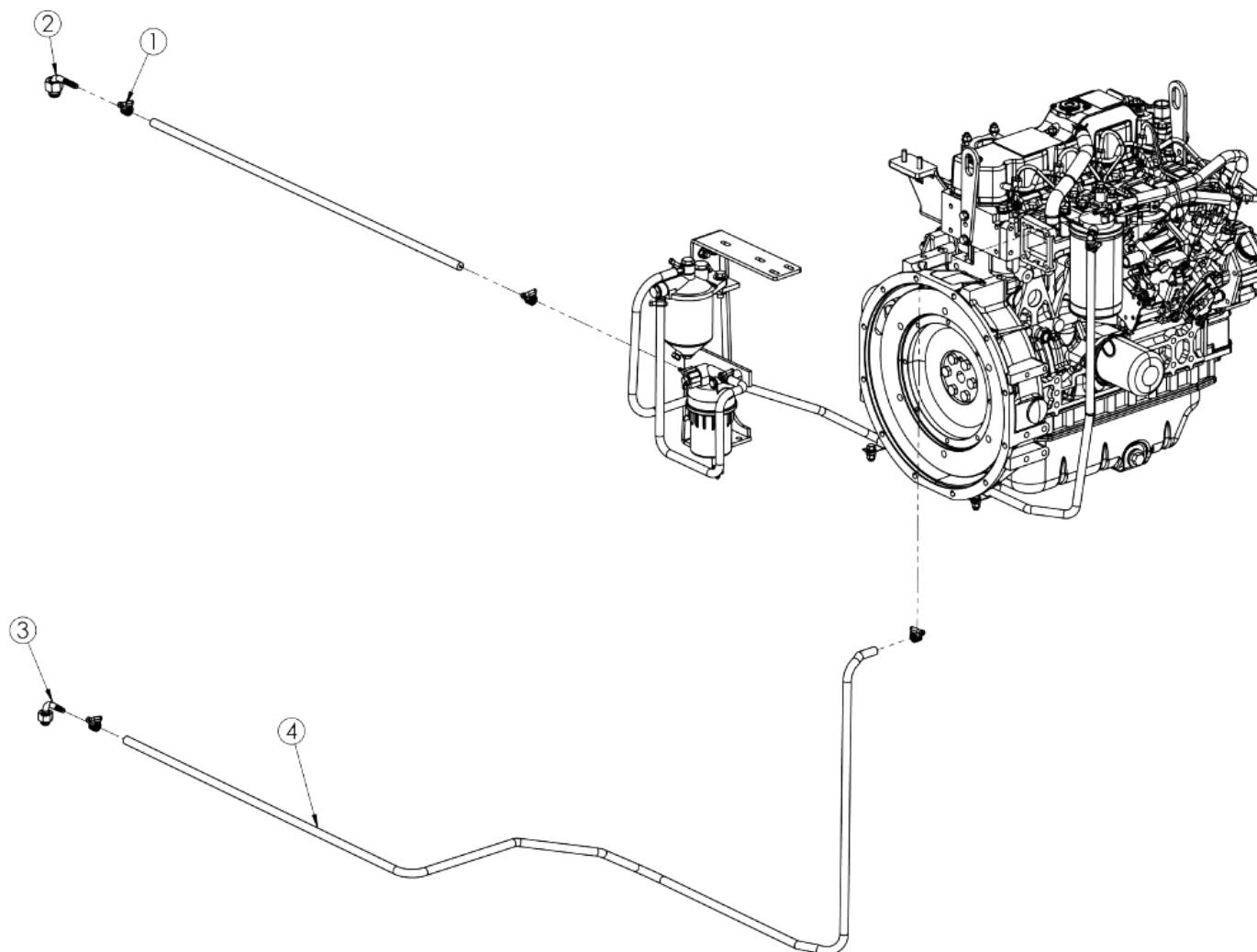
**15.0 FUEL LINE & WATER SEPRATOR ASSEMBLY – Contd.,**





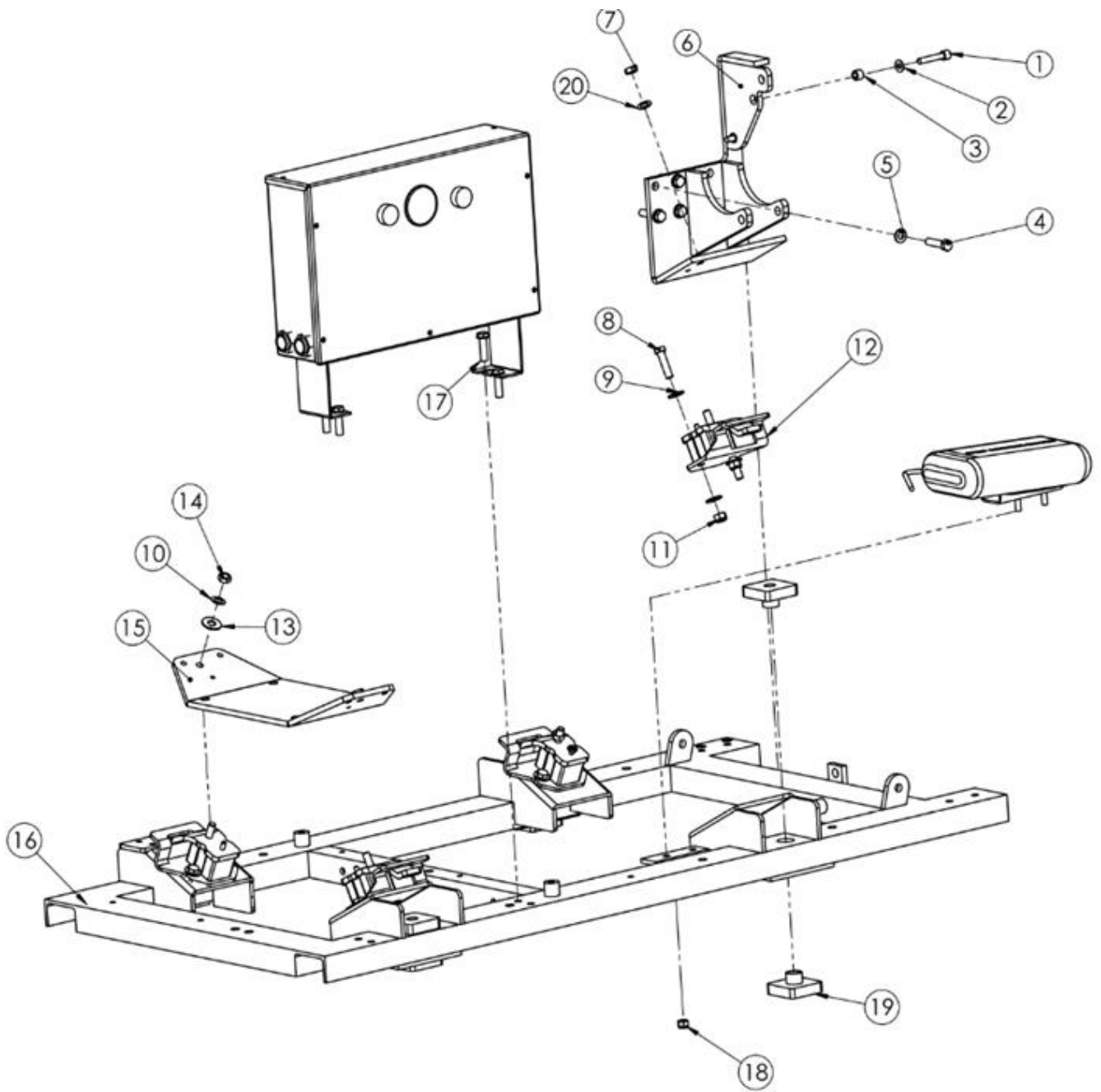
S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
27	S90-712-321	FUEL FILTER SECONDARY	Nos	1
28	S90-712-277	WASHER, SEAL 14	Nos	4
29	S90-712-683	M.S FLANGE HEX BOLT (M6x20x1)	Nos	2
30	S90-712-684	M.S PLAIN WASHER 6MM	Nos	2
31	S90-712-279	BOLT, JOINT 8	Nos	2
32	S90-712-686	M.S LOCK NUT (M6X1)	Nos	2
33	S90-712-687	M.S HEX BOLT (08x70x1.25)	Nos	1
34	S90-712-688	M.S HEX BOLT (10X40X1.5)	Nos	2
35	S90-712-689	M.S PLAIN WASHER 8MM	Nos	2
36	S90-712-690	M.S LOCK NUT (M8X1.25)	Nos	1
37	S90-712-691	M.S PLAIN WASHER 10MM	Nos	1

## 15.1 FUEL LINE & FULE FITTING



S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-692	S.S HOSE CLAMP	Nos	8
2	S90-712-693	FUEL LINE FITTING SMALL MAIN	Nos	1
3	S90-712-694	FUEL LINE FITTING BIG RETURN	Nos	1
4	S90-712-206	FUEL LINE	Mtr	15

### 16.0 BASE FRAME ASSEMBLY

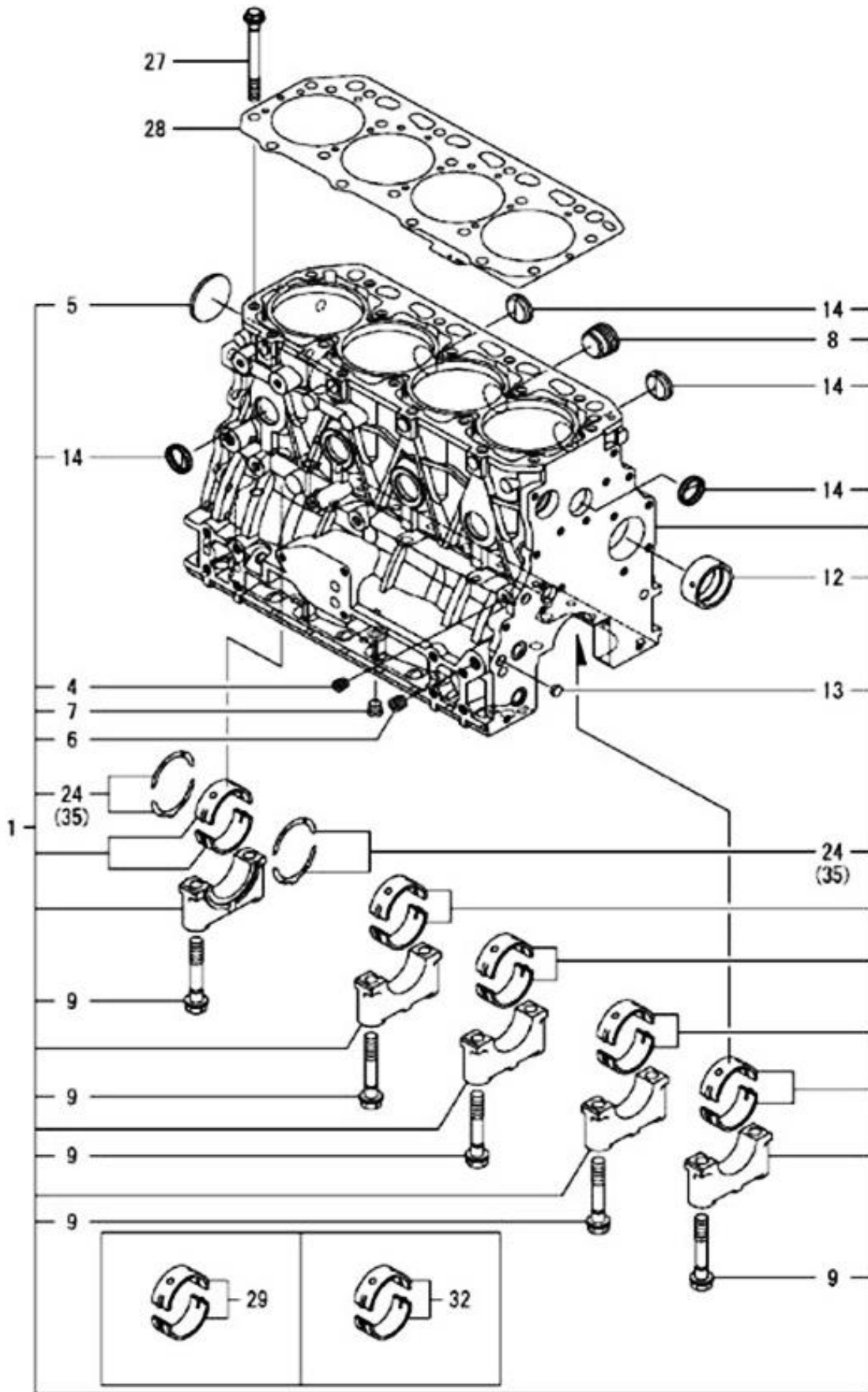


### 16.0 BASE FRAME ASSEMBLY - Contd.,



S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-696	M.S ALLEN BOLT (8x1.25x45)	Nos	1
2	S90-712-697	M.S SPRING WASHER (8X14X2)	Nos	1
3	S90-712-698	M.S BUSH (OD-14,ID-9,L-11)mm, ALTERNATOR BRACKET	Nos	1
4	S90-712-699	HEX BOLT (M10X1.5X35)	Nos	4
5	S90-712-700	M.S SPRING WASHER M10	Nos	4
6	S90-712-265	ALTERNATOR BRACKET CUM ENGINE MOUNT BRACKET FRONT (RH)	Nos	1
7	S90-712-702	M.S PLAIN NUT (10X1.5)	Nos	2
8	S90-712-703	HEX BOLT (M10X1.5X35)	Nos	8
9	S90-712-704	PLAIN WASHER (M10)	Nos	16
10	S90-712-705	SPRING WASHER (M10)	Nos	2
11	S90-712-706	NYLOCK NUT (M10)	Nos	16
12	S90-712-225	SHOCK MOUNT	Nos	4
13	S90-712-708	M.S PLAIN WASHER M10	Nos	2
14	S90-712-709	M.S PLAIN NUT (10X1.5)	Nos	2
15	S90-712-270	COMPRESSOR BASE BRACKET	Nos	1
16	S90-712-259	MAIN BASE	Nos	1
17	S90-712-712	M.S FLANGE BOLT (M8x1.25x25)	Nos	4
18	S90-712-713	M.S LOCK NUT (M8X1.25)	Nos	2
19	S90-712-714	ENGINE FRAME AVM	Nos	8
20	S90-712-715	M.S SPRING WASHER M10	Nos	2

## 17.0 CYLINDER BLOCK

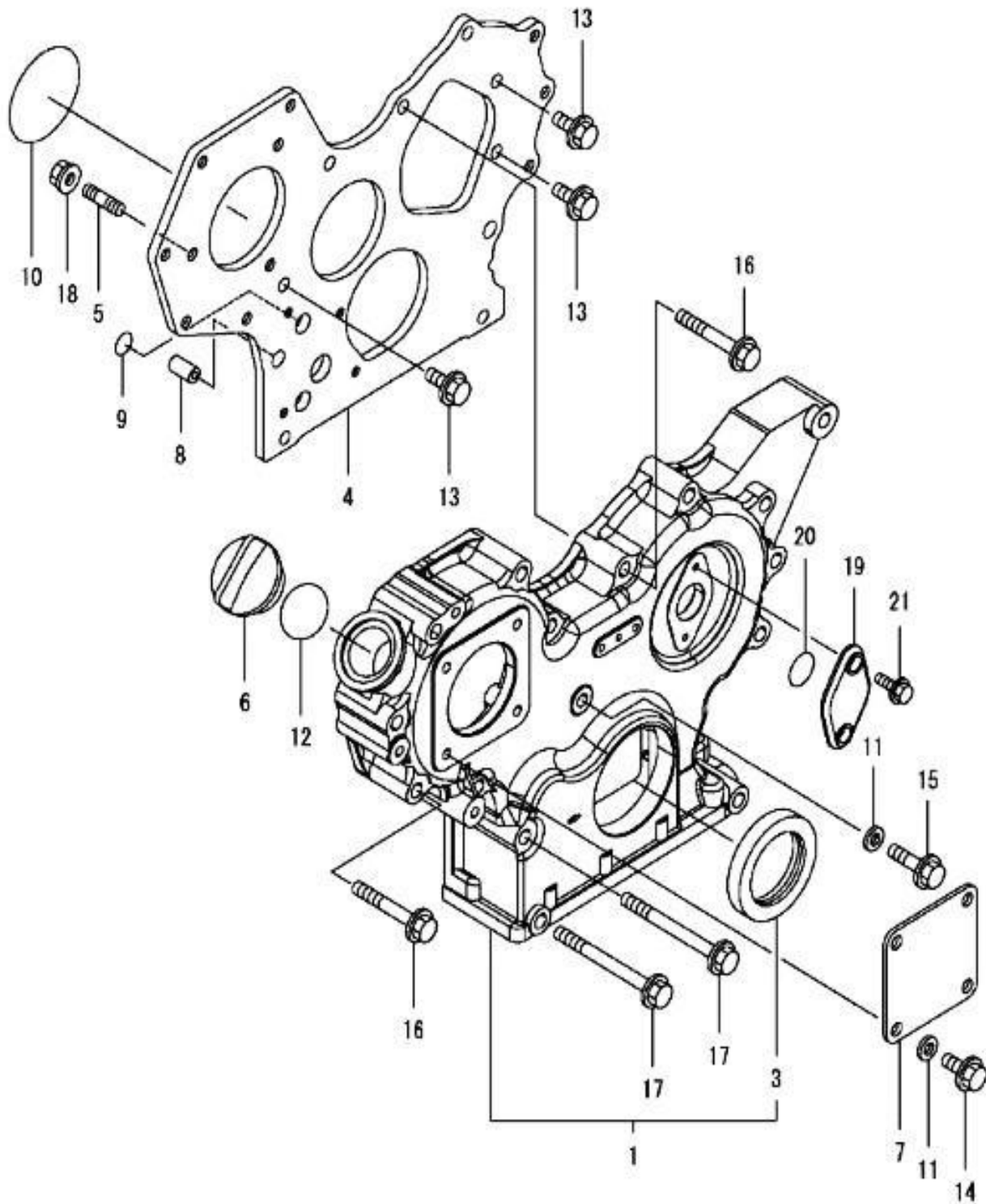


17.0 CYLINDER BLOCK – Contd.,



S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-717	BLOCK ASSY, CYLINDER	Nos	1
4	S90-712-718	PLUG, PT1/8	Nos	1
5	S90-712-719	PLUG, 50	Nos	1
6	S90-712-720	PLUG, PT1/4	Nos	2
7	S90-712-721	PLUG, PT1/4	Nos	1
8	S90-712-722	PLUG, NPTF1	Nos	1
9	S90-712-723	BOLT, METAL CAP	Nos	10
10	S90-712-724	BUSH, CAMSHAFT	Nos	1
13	S90-712-725	PLUG, 12	Nos	2
14	S90-712-726	PLUG 30	Nos	8
24	S90-712-292	METAL ASSY, THRUST	Nos	2
27	S90-712-728	BOLT, CYLINDER HEAD	Nos	18
28	S90-712-290	GASKET, HEAD	Nos	1
29	S90-712-730	METAL ASSY, MAIN	Nos	5
32	S90-712-731	METAL ASSY, MAIN .25	Nos	5
35	S90-712-732	METAL ASSY, 0.25 OS	Nos	1

## 18.0 GEAR HOUSING



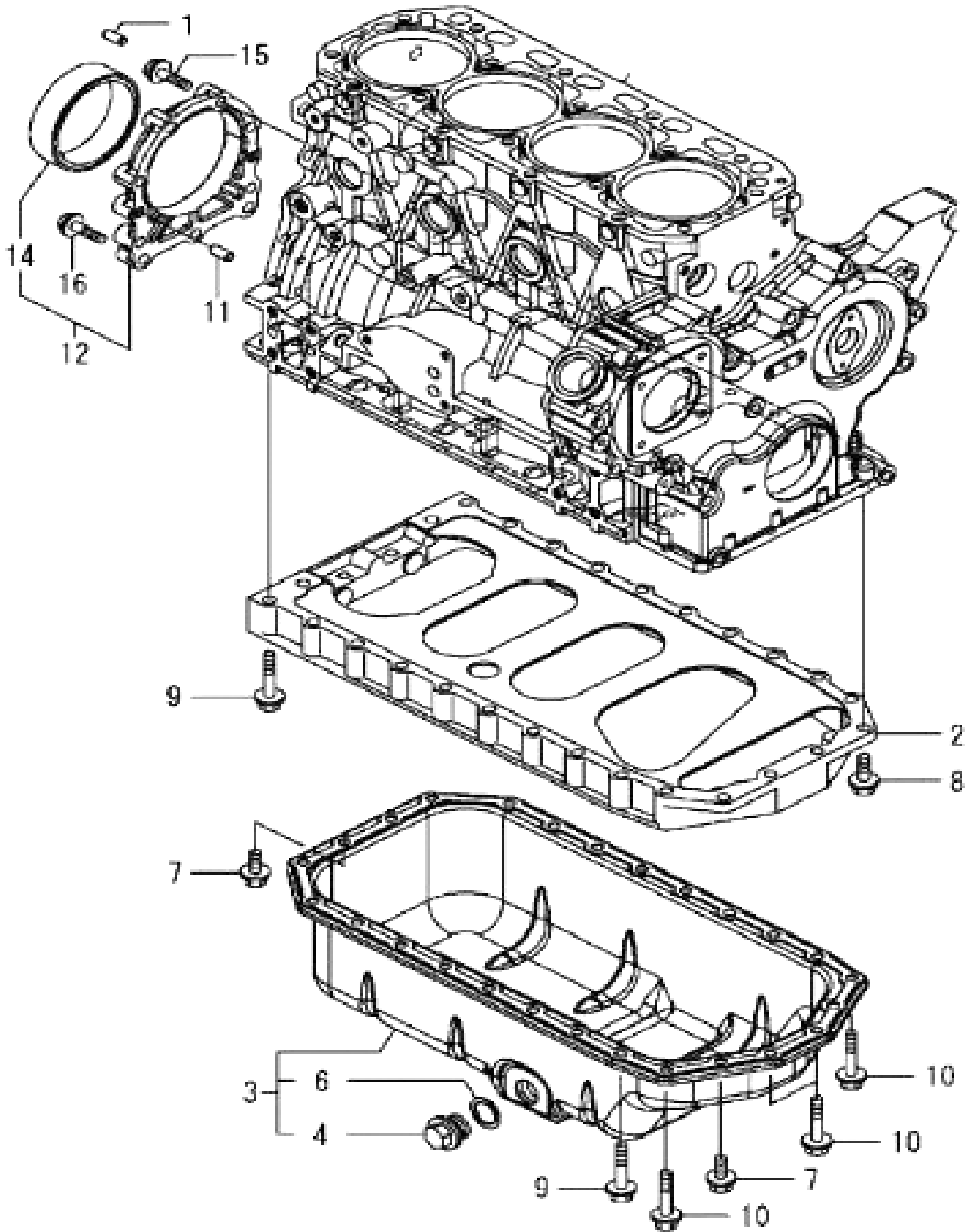
### 18.0 GEAR HOUSING – Contd.,



S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-733	CASE ASSY, GEAR	Nos	1
3	S90-712-293	SEAL, OIL	Nos	1
4	S90-712-735	FLANGE, GEAR CASE	Nos	1
5	S90-712-736	STUD, M8X25	Nos	3
6	S90-712-737	CAP, FILLER	Nos	1
7	S90-712-738	COVER, HYDRAULIC PUMP	Nos	1
8	S90-712-739	PIPE, KNOCK L=18	Nos	2
9	S90-712-740	O-RING, P16	Nos	2
10	S90-712-741	O-RING, FUEL PUMP	Nos	1
11	S90-712-742	WASHER, SEAL 8	Nos	5
12	S90-712-743	O-RING, 1AP32.0	Nos	1
13	S90-712-744	BOLT, M8X 16 PLATED	Nos	3
14	S90-712-745	BOLT, M8X 16 PLATED	Nos	4
15	S90-712-746	BOLT, M8X 30 PLATED	Nos	1
16	S90-712-747	BOLT, M8X 55 PLATED	Nos	12
17	S90-712-748	BOLT, M8X 85 PLATED	Nos	3
18	S90-712-749	NUT, M8	Nos	3
19	S90-712-750	COVER, TACHOMETER	Nos	1
20	S90-712-751	O-RING, 1AS24.0	Nos	1
21	S90-712-752	BOLT, M6X 16 PLATED	Nos	2

## 19.0 OIL SUMP

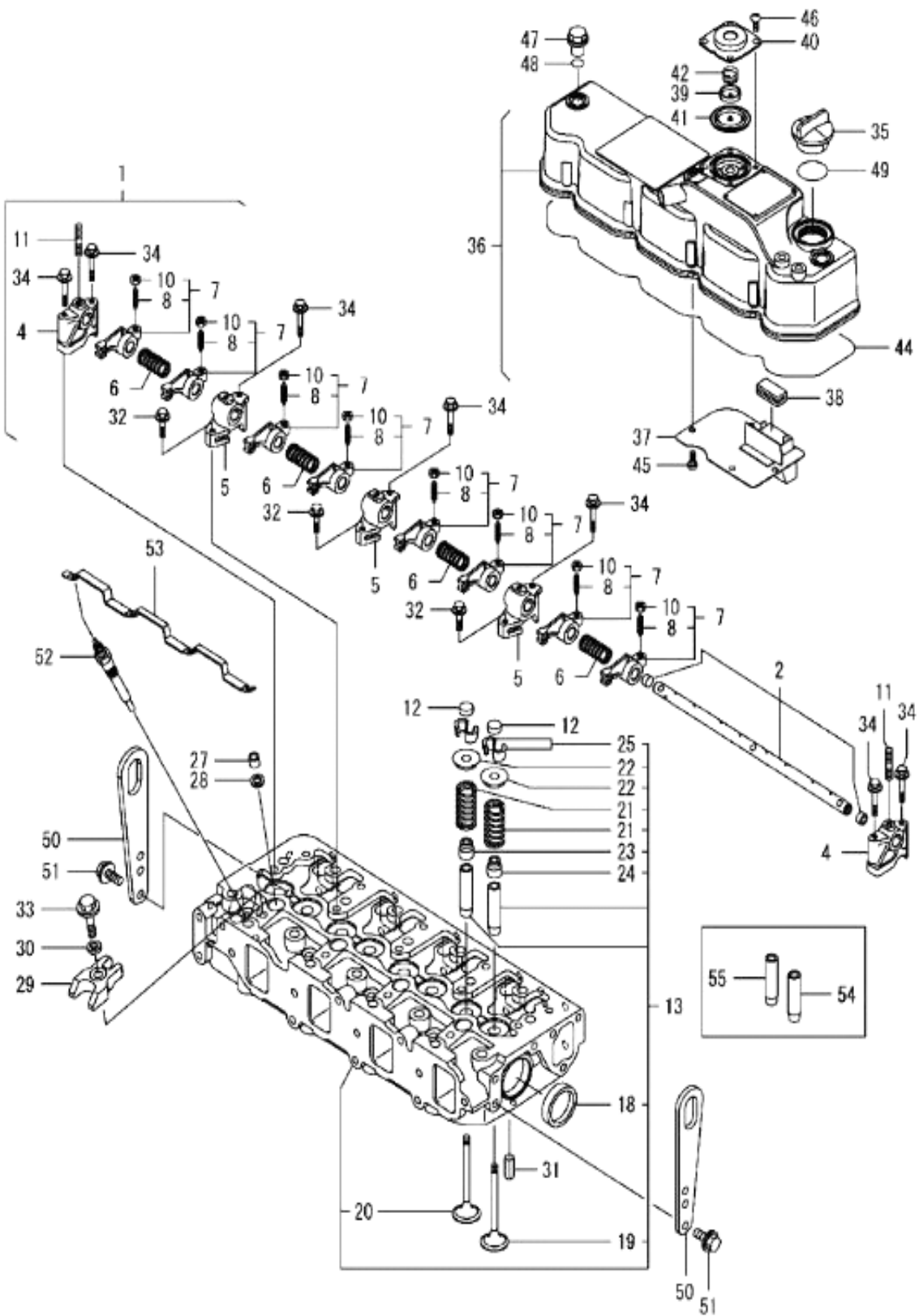




19.0 OIL SUMP - Contd.,



S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-753	PIN, PARALLEL 8X16	Nos	2
2	S90-712-754	SPACER, OIL PAN	Nos	1
3	S90-712-755	OIL PAN ASSY	Nos	1
4	S90-712-756	PLUG, DRAIN M22	Nos	1
6	S90-712-757	WASHER, SEAL 22	Nos	1
7	S90-712-758	BOLT, M8X 16 PLATED	Nos	4
8	S90-712-759	BOLT, M8X 25 PLATED	Nos	2
9	S90-712-760	BOLT, M8X 45 PLATED	Nos	20
10	S90-712-761	BOLT, M8X 50 PLATED	Nos	4
11	S90-712-762	PIN, PARALLEL 8X16	Nos	2
12	S90-712-763	CASE ASSY, OIL SEAL	Nos	1
14	S90-712-294	SEAL, OIL	Nos	1
15	S90-712-765	BOLT, M8X30	Nos	6
16	S90-712-766	BOLT, M8X 35 PLATED	Nos	3



20.0 CYLINDER HEAD & BONNET-Contd.,



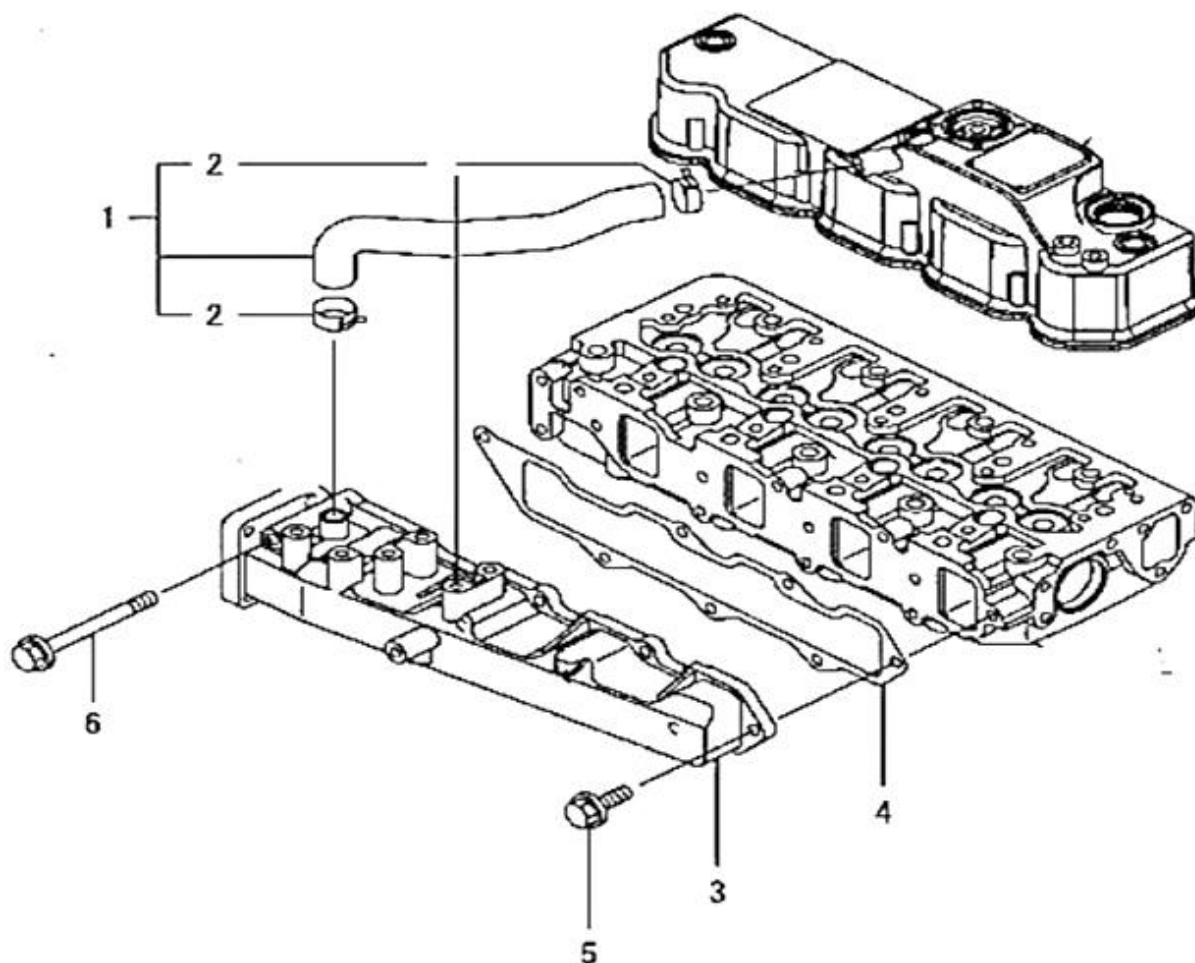
S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-767	SHAFT ASSY, ROCKER	Nos	1
2	S90-712-768	SHAFT, ROCKER ARM	Nos	1
4	S90-712-769	SUPPORT, ROCKER ARM	Nos	2
5	S90-712-770	SUPPORT, ROCKER ARM	Nos	3
6	S90-712-771	SPRING, SHAFT	Nos	4
7	S90-712-772	ARM ASSY, ROCKER	Nos	8
8	S90-712-773	SCREW, VALVE ADJUST	Nos	8
10	S90-712-774	NUT, M8XP1.0	Nos	8
11	S90-712-775	STUD, M8X 18	Nos	3
12	S90-712-776	CAP, VALVE	Nos	8
13	S90-712-777	HEAD ASSY, CYLINDER	Nos	1
18	S90-712-778	PLUG, 40	Nos	2
19	S90-712-295	VALVE, INTAKE	Nos	4
20	S90-712-296	VALVE, EXHAUST	Nos	4
21	S90-712-781	SPRING, VALVE	Nos	8
22	S90-712-782	RETAINER, SPRING	Nos	8
23	S90-712-297	SEAL, VALVE STEM	Nos	4
24	S90-712-298	SEAL, VALVE STEM	Nos	4
25	S90-712-785	COTTER, 8	Nos	8
27	S90-712-786	PROTECTOR, NOZZLE	Nos	4
28	S90-712-787	SEAT, NOZZLE	Nos	4
29	S90-712-788	RETAINER, NOZZLE	Nos	4
30	S90-712-789	WASHER, INJECTOR	Nos	4
31	S90-712-790	PIN, SPRING 6.0X12	Nos	2
32	S90-712-791	BOLT, M8X 25 PLATED	Nos	3
33	S90-712-792	BOLT, M8X 35 PLATED	Nos	4
34	S90-712-793	BOLT, M8X 50 PLATED	Nos	7

## 20.0 CYLINDER HEAD & BONNET-Contd.,



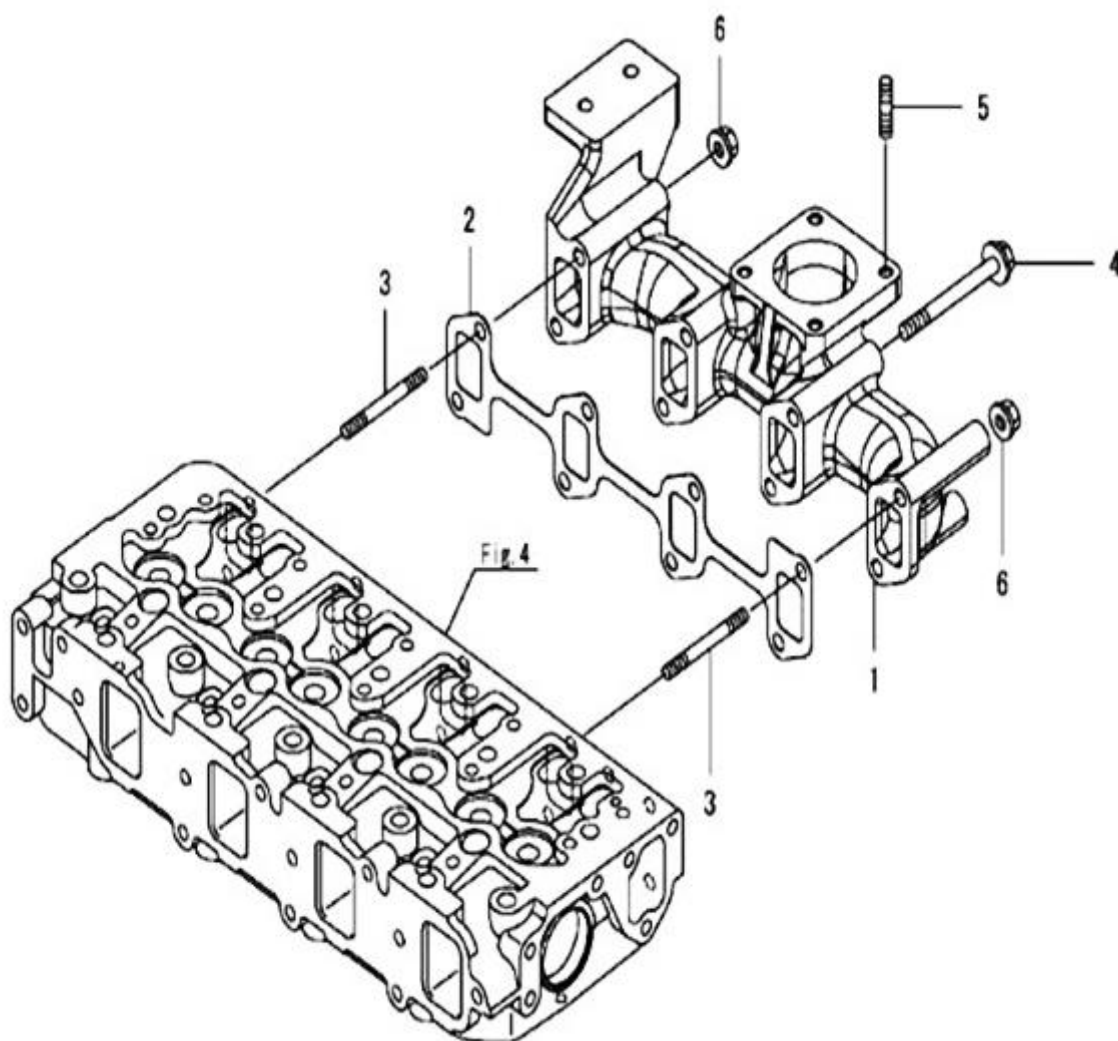
S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
35	S90-712-794	CAP, FILLER	Nos	1
36	S90-712-795	BONNET ASSY, HEAD	Nos	1
37	S90-712-796	PLATE, BAFFLE	Nos	1
38	S90-712-797	BAFFLE, BREATHER	Nos	1
39	S90-712-798	PLATE, DIAPHRAGM	Nos	1
40	S90-712-799	COVER, DIAPHRAGM	Nos	1
41	S90-712-800	DIAPHRAGM, BREATHER	Nos	1
42	S90-712-801	SPRING, DIAPHRAGM	Nos	1
44	S90-712-299	GASKET, BONNET	Nos	1
45	S90-712-803	SCREW, 5X10	Nos	4
46	S90-712-804	SCREW, 5X10	Nos	4
47	S90-712-805	KNOB, BONNET	Nos	3
48	S90-712-806	O-RING, 1AP12.0	Nos	3
49	S90-712-807	O-RING, 1AP32.0	Nos	1
50	S90-712-808	LIFTER, ENGINE	Nos	2
51	S90-712-809	BOLT, M8X 16 PLATED	Nos	4
52	S90-712-810	PLUG, GLOW	Nos	4
53	S90-712-811	CONNECTOR, GLOW PLUG	Nos	1
54	S90-712-300	GUIDE, VALVE	Nos	4
55	S90-712-301	GUIDE, VALVE	Nos	4

## 21.0 SUCTION MANIFOLD



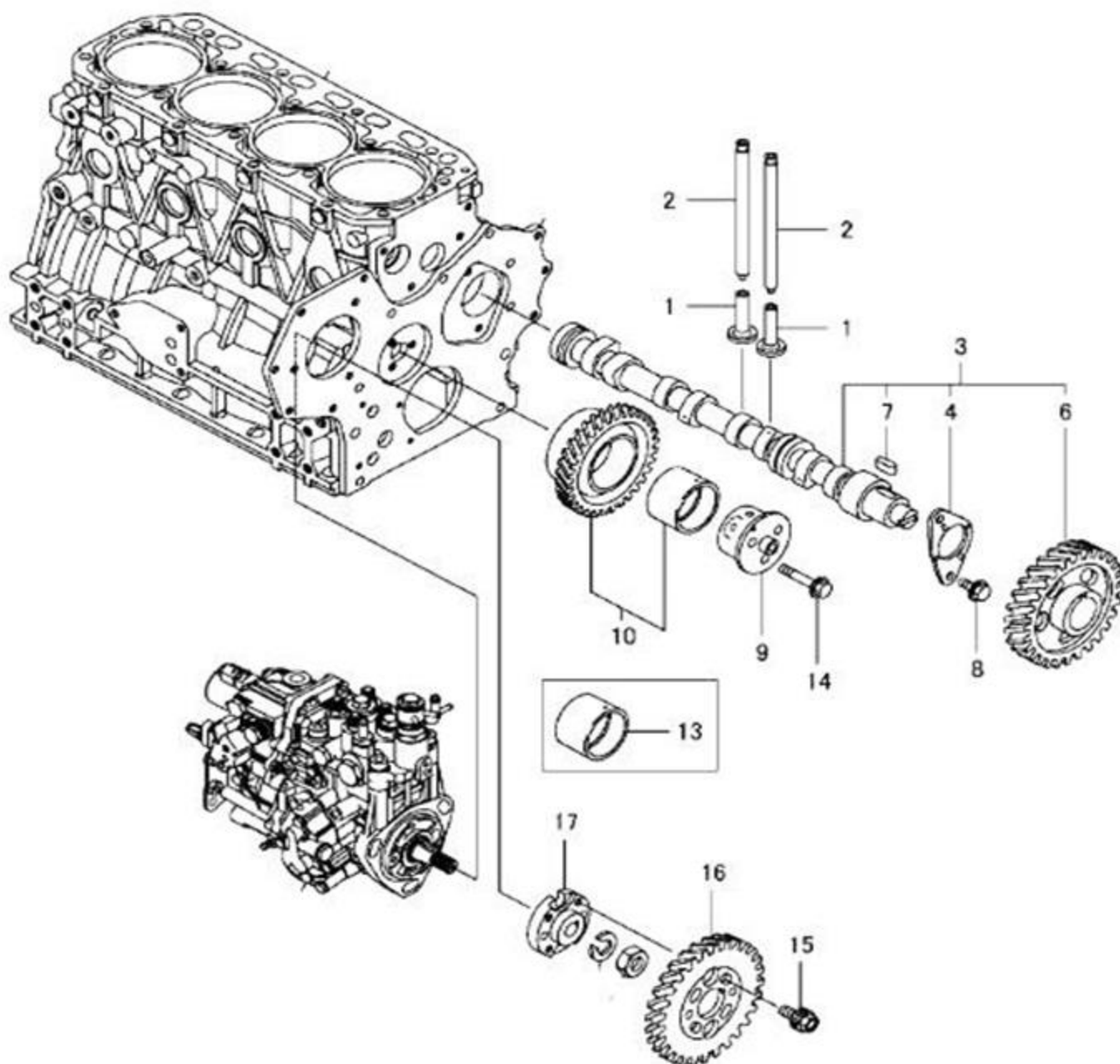
S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-302	HOSE ASSY, BREATHER	Nos	1
2	S90-712-815	CLAMP, HOSE 21.5	Nos	2
3	S90-712-816	MANIFOLD, INTAKE	Nos	1
4	S90-712-303	GASKET, MANIFOLD	Nos	1
5	S90-712-818	BOLT, M8X 20 PLATED	Nos	6
6	S90-712-819	BOLT, M8X 80 PLATED	Nos	1

## 22.0 EXHAUST MANIFOLD



S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-308	MANIFOLD, EXHAUST	Nos	1
2	S90-712-821	GASKET, MANIFOLD	Nos	1
3	S90-712-822	STUD, M8X80	Nos	2
4	S90-712-823	BOLT, M8X80 10.9T	Nos	6
5	S90-712-824	STUD, M8X22	Nos	4
6	S90-712-825	NUT, M8	Nos	2

## 23.0 CAMSHAFT & DRIVING GEAR



S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-826	TAPPET	Nos	8
2	S90-712-827	ROD, PUSH L=178	Nos	8
3	S90-712-828	CAMSHAFT ASSY	Nos	1
4	S90-712-829	METAL, THRUST	Nos	1
6	S90-712-830	GEAR, CAMSHAFT	Nos	1

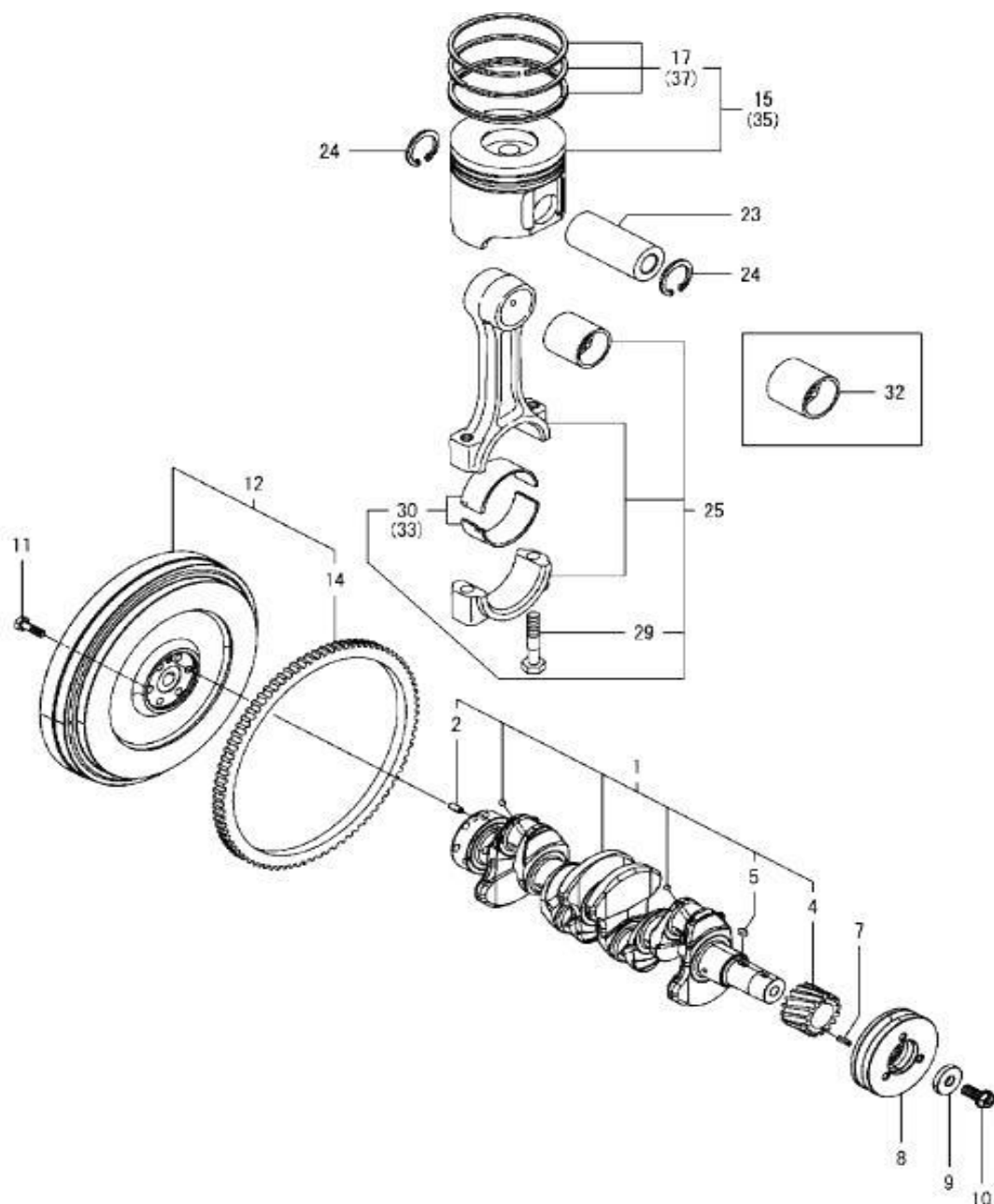
### 23.0 CAMSHAFT & DRIVING GEAR – Contd.,





S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
7	S90-712-831	KEY, 7X 14	Nos	1
8	S90-712-832	BOLT, M8X 14 PLATED	Nos	2
9	S90-712-833	SHAFT, IDLE GEAR	Nos	1
10	S90-712-834	GEAR ASSY, IDLE	Nos	1
13	S90-712-835	BUSH, IDLE GEAR	Nos	1
14	S90-712-836	BOLT, M8X 40 PLATED	Nos	3
15	S90-712-837	BOLT, INJECTION PUMP	Nos	4
16	S90-712-838	GEAR, PUMP	Nos	1
17	S90-712-839	FLANGE, CAMSHAFT	Nos	1

## 24.0 CRANKSHAFT & PISTON



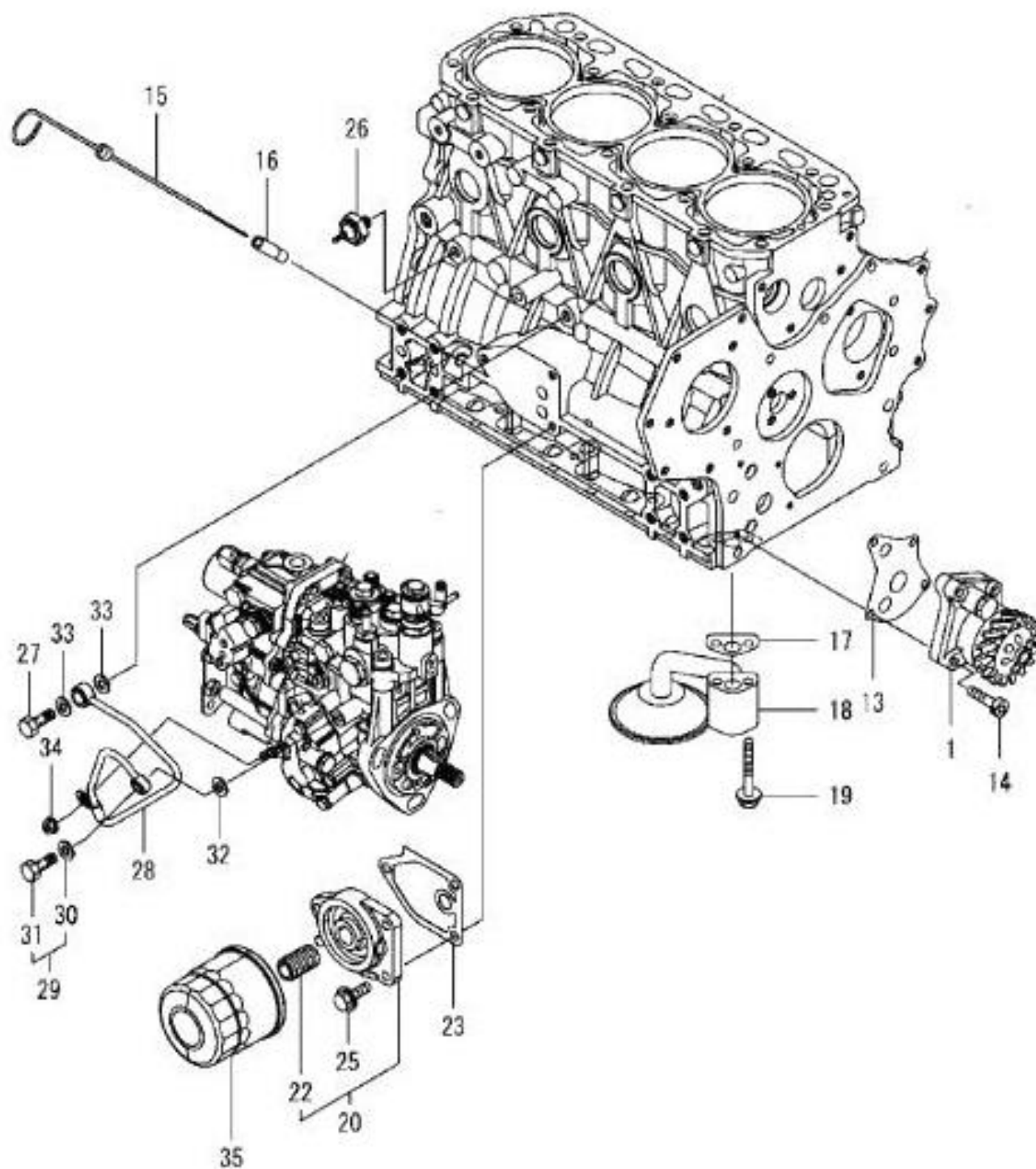
S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-840	CRANKSHAFT ASSY	Nos	1
2	S90-712-841	PIN, PARALLEL 8X16	Nos	1
4	S90-712-842	GEAR, CRANKSHAFT	Nos	1
5	S90-712-843	KEY, 7X 14	Nos	1
7	S90-712-844	PIN, SPRING 3.0X10	Nos	1



## 24.0 CRANKSHAFT & PISTION – Contd.,

S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
8	S90-712-845	V-PULLEY, CRANKSHAFT	Nos	1
9	S90-712-846	WASHER, 14	Nos	1
10	S90-712-847	BOLT, V-PULLEY	Nos	1
11	S90-712-848	BOLT, FLYWHEEL	Nos	6
12	S90-712-849	FLYWHEEL ASSY	Nos	1
14	S90-712-850	GEAR, RING Z=127	Nos	1
15	S90-712-851	PISTON ASSY	Nos	4
17	S90-712-852	RING SET, PISTON	Nos	4
23	S90-712-311	PIN, PISTON D26 L70	Nos	4
24	S90-712-312	RING, 26	Nos	8
25	S90-712-313	ROD ASSY, CONNECTING	Nos	4
29	S90-712-856	BOLT, CONNECTING ROD	Nos	8
30	S90-712-342	METAL ASSY,CRANK PIN	Nos	4
32	S90-712-341	METAL, PISTON PIN	Nos	4
33	S90-712-291	METAL, CRANK PIN .25	Nos	4
35	S90-712-310	PISTON ASSY, 0.25 OS	Nos	4
37	S90-712-309	RING SET, PISTON .25	Nos	4

## 25.0 LUB OIL SYSTEM



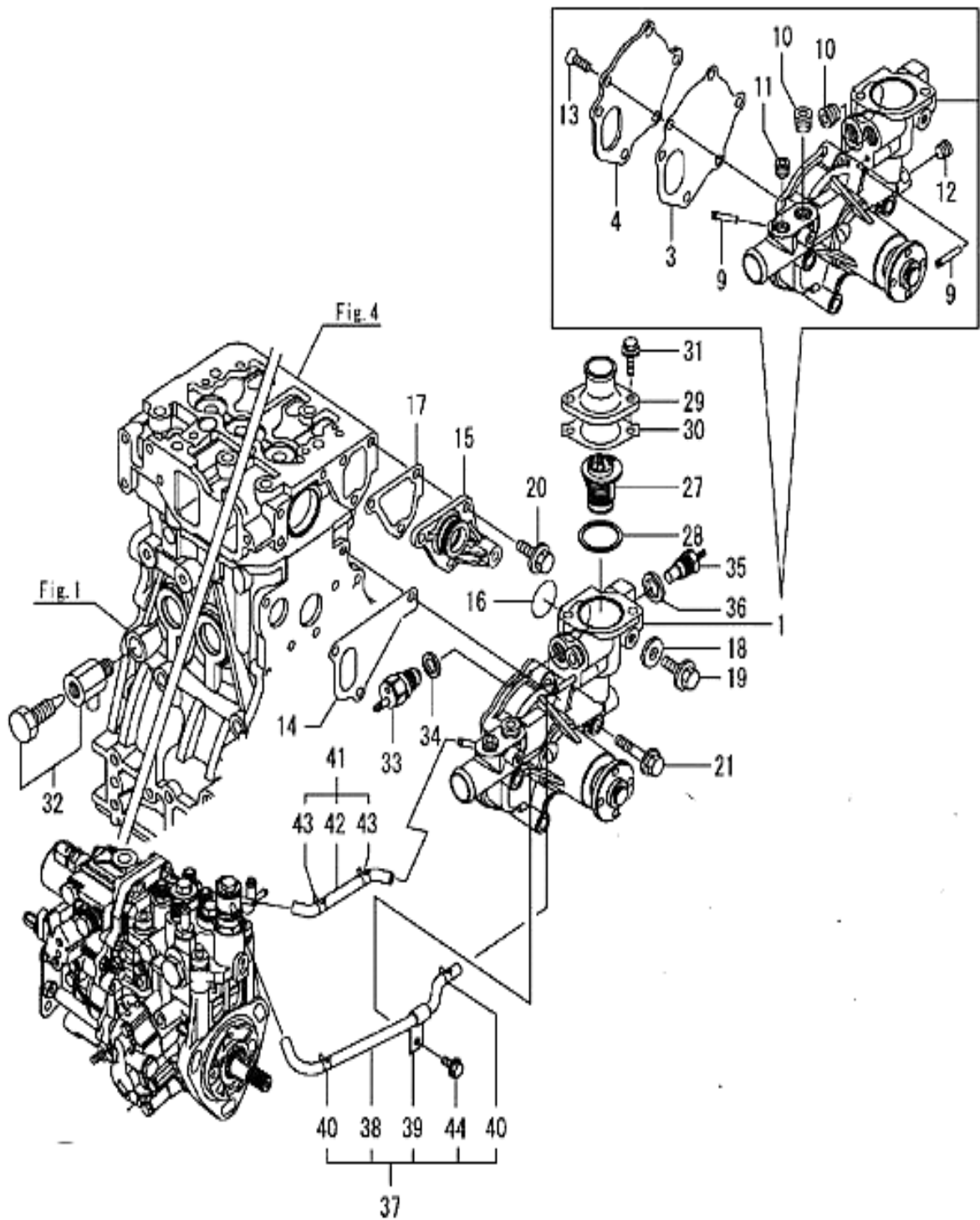
25.0 LUB OIL SYSTEM – Contd.,



S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-862	PUMP ASSY, OIL	Nos	1
13	S90-712-863	GASKET, PUMP	Nos	1
14	S90-712-864	BOLT, M6X 25	Nos	4
15	S90-712-865	DIPSTICK, OIL	Nos	1
16	S90-712-866	GUIDE, DIPSTICK	Nos	1
17	S90-712-867	GASKET, INLET PIPE	Nos	1
18	S90-712-868	PIPE ASSY, OIL INLET	Nos	1
19	S90-712-869	BOLT, M8X 55 PLATED	Nos	2
20	S90-712-870	BRACKET ASSY, FILTER	Nos	1
22	S90-712-871	STUD	Nos	1
23	S90-712-872	GASKET, BRACKET	Nos	1
25	S90-712-873	BOLT, M8X 20 PLATED	Nos	3
26	S90-712-315	SWITCH, HYDRAULIC	Nos	1
27	S90-712-875	BOLT, PIPE JOINT M10	Nos	1
28	S90-712-876	PIPE ASSY, OIL	Nos	1
29	S90-712-877	BOLT ASSY, JOINT M8	Nos	1
30	S90-712-878	WASHER, SEAL 8	Nos	1
31	S90-712-879	BOLT, JOINT 3	Nos	1
32	S90-712-880	WASHER, SEAL 8	Nos	1
33	S90-712-881	WASHER, SEAL 10	Nos	2
34	S90-712-882	NUT, M6	Nos	1
35	S90-712-314	FILTER, OIL D80X100	Nos	1



## 26.0 COOLING WATER SYSTEM





## 26.0 COOLING WATER SYSTEM – Contd.,

S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-316	PUMP ASSY, WATER	Nos	1
3	S90-712-319	GASKET, WATER PUMP	Nos	1
4	S90-712-886	PLATE, PUMP	Nos	1
9	S90-712-887	JOINT, PIPE	Nos	2
10	S90-712-888	PLUG, R3/8	Nos	2
11	S90-712-889	PLUG, R02	Nos	1
12	S90-712-890	PLUG, R01	Nos	1
13	S90-712-891	SCREW M 6X 14	Nos	3
14	S90-712-892	GASKET, WATER PUMP	Nos	1
15	S90-712-893	JOINT, WATER PIPE	Nos	1
16	S90-712-894	O-RING, G30	Nos	1
17	S90-712-895	GASKET, THERMOSTAT	Nos	1
18	S90-712-896	GASKET, 8X1.0	Nos	1
19	S90-712-897	BOLT, M8X 12 PLATED	Nos	1
20	S90-712-898	BOLT, M8X 16 PLATED	Nos	3
21	S90-712-899	BOLT, M8X 60 PLATED	Nos	3
27	S90-712-900	THERMOSTAT, 71C	Nos	1
28	S90-712-901	GASKET, THERMOSTAT	Nos	1
29	S90-712-902	COVER, THERMOSTAT	Nos	1
30	S90-712-903	GASKET, COVER	Nos	1
31	S90-712-904	BOLT, M8X 22 PLATED	Nos	4
32	S90-712-905	PLUG, DRAIN R1/4	Nos	1
33	S90-712-317	SWITCH, TEMPERATURE	Nos	1
34	S90-712-318	GASKET, 16	Nos	1
35	S90-712-908	SENSOR, WATER TEMP.	Nos	1



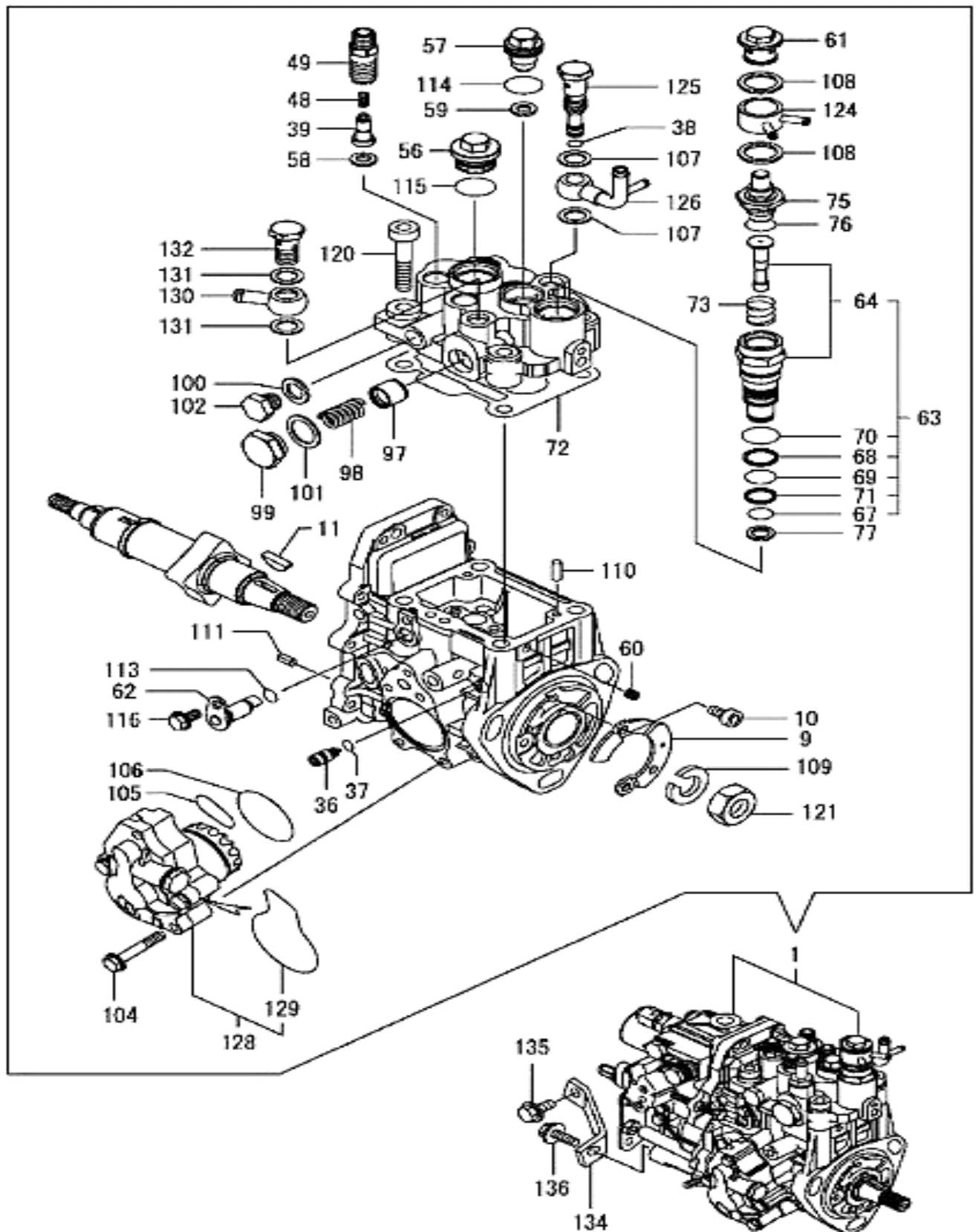
## 26.0 COOLING WATER SYSTEM – Contd.,

S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
36	S90-712-909	GASKET, 10	Nos	2
37	S90-712-910	HOSE ASSY, WATER A	Nos	1
38	S90-712-911	HOSE, WATER A	Nos	1
39	S90-712-912	RETAINER, PIPE	Nos	1
40	S90-712-913	CLAMP, HOSE 9	Nos	1
41	S90-712-914	HOSE ASSY, WATER B	Nos	1
42	S90-712-915	HOSE, WATER B	Nos	1
43	S90-712-916	CLAMP, HOSE 9	Nos	1
44	S90-712-917	BOLT, M6X 12 PLATED	Nos	1





## 27.0 FUEL INJECTION PUMP





## 27.0 FUEL INJECTION PUMP- Contd.,

S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-918	PUMP ASSY, INJECTION	Nos	1
9	S90-712-919	COVER, PUMP	Nos	1
10	S90-712-920	BOLT, M6X10	Nos	1
11	S90-712-921	KEY, FEATHER 4X16	Nos	1
36	S90-712-922	STOPPER, TAPPET	Nos	1
37	S90-712-923	O-RING, 4D S6	Nos	1
38	S90-712-924	O-RING, 4D S6	Nos	1
39	S90-712-925	VALVE ASSY, DELIVERY	Nos	1
48	S90-712-926	SPRING, DELIVERY	Nos	4
49	S90-712-927	HOLDER, DELIVERY	Nos	4
56	S90-712-928	PLUG, M22	Nos	1
57	S90-712-929	PLUG, BARREL M14	Nos	1
58	S90-712-930	GASKET, BARREL PLUG	Nos	4
59	S90-712-931	GASKET, BARREL PLUG	Nos	1
60	S90-712-932	PLUG, RACK	Nos	1
61	S90-712-933	PLUG	Nos	1
62	S90-712-934	LIFTER, LINK	Nos	1
63	S90-712-935	TIMER ASSY	Nos	1
64	S90-712-936	TIMER ASSY	Nos	1
67	S90-712-937	O-RING, PUMP TIMER	Nos	1
68	S90-712-938	RING, BACKUP	Nos	1
69	S90-712-939	O-RING, 1016	Nos	1
70	S90-712-940	O-RING, 4D19020	Nos	1
71	S90-712-941	RING, BACK UP T2P15	Nos	1
72	S90-712-942	GASKET, HEAD	Nos	1
73	S90-712-943	SPRING, TIMER	Nos	1
75	S90-712-944	ELEMENT, THERMOSTAT	Nos	1



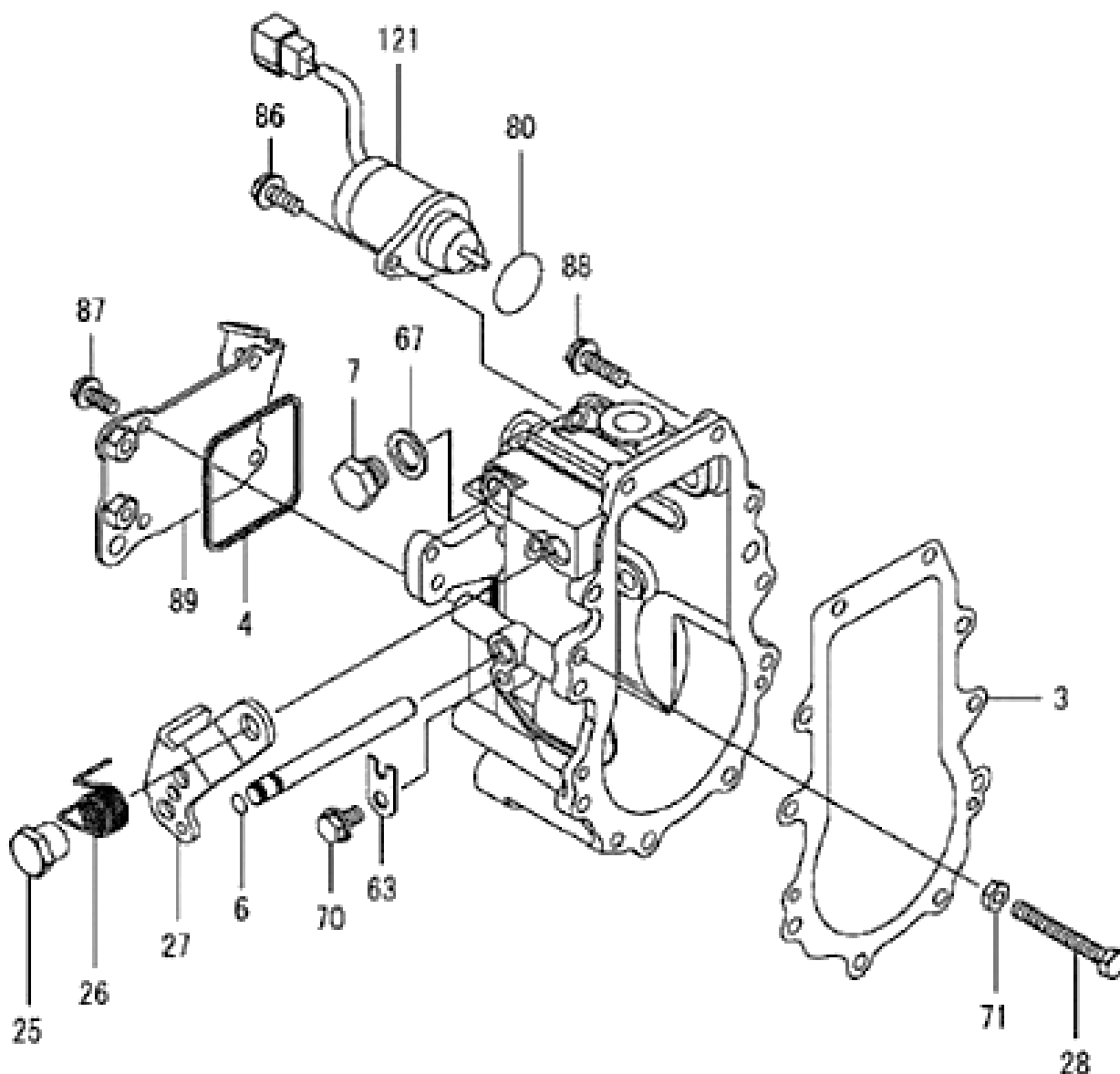
## 27.0 FUEL INJECTION PUMP- Contd.,

S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
76	S90-712-945	O-RING, P14	Nos	1
77	S90-712-946	GASKET, TIMER	Nos	1
97	S90-712-947	PISTON, ACCUMLATOR	Nos	1
98	S90-712-948	SPRING, ACCUMULATOR	Nos	1
99	S90-712-949	PLUG, ACCUMULATOR	Nos	1
100	S90-712-950	WASHER, SEAL 12	Nos	1
101	S90-712-951	WASHER, SEAL 18	Nos	1
102	S90-712-952	PLUG, M12	Nos	1
104	S90-712-953	BOLT	Nos	4
105	S90-712-954	O-RING, FEED PUMP	Nos	1
106	S90-712-955	O-RING, 4E S42	Nos	1
107	S90-712-956	WASHER, SEAL 12	Nos	2
108	S90-712-957	WASHER, SEAL 18	Nos	2
109	S90-712-958	WASHER, SPRING 14	Nos	1
110	S90-712-959	PIN, PARALLEL 5X14	Nos	2
111	S90-712-960	PIN, SPRING 5.0X10	Nos	2
113	S90-712-961	O-RING, 1AP7.0	Nos	1
114	S90-712-962	O-RING, 4D19018	Nos	1
115	S90-712-963	O-RING, 4D19020	Nos	1
116	S90-712-964	BOLT, M6X 10 PLATED	Nos	1
120	S90-712-965	BOLT, M8X 45	Nos	4
121	S90-712-966	NUT, LOCK M14	Nos	1
124	S90-712-967	JOINT, COOLING WATER	Nos	1
125	S90-712-968	JOINT, OVERFLOW	Nos	1
126	S90-712-969	JOINT, OVERFLOW	Nos	1
128	S90-712-970	PUMP ASSY, FUEL FEED	Nos	1
129	S90-712-971	O-RING, PUMP INNER	Nos	1

## 27.0 FUEL INJECTION PUMP - Contd.,

S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
130	S90-712-972	JOINT, PIPE 12	Nos	1
131	S90-712-973	WASHER, SEAL 12	Nos	2
132	S90-712-974	BOLT, JOINT 6	Nos	1
134	S90-712-975	RETAINER, FUEL PUMP	Nos	1
135	S90-712-976	BOLT, M8X 16 PLATED	Nos	1
136	S90-712-977	BOLT, M8X 20 PLATED	Nos	1

## 27.1 GOVERNOR

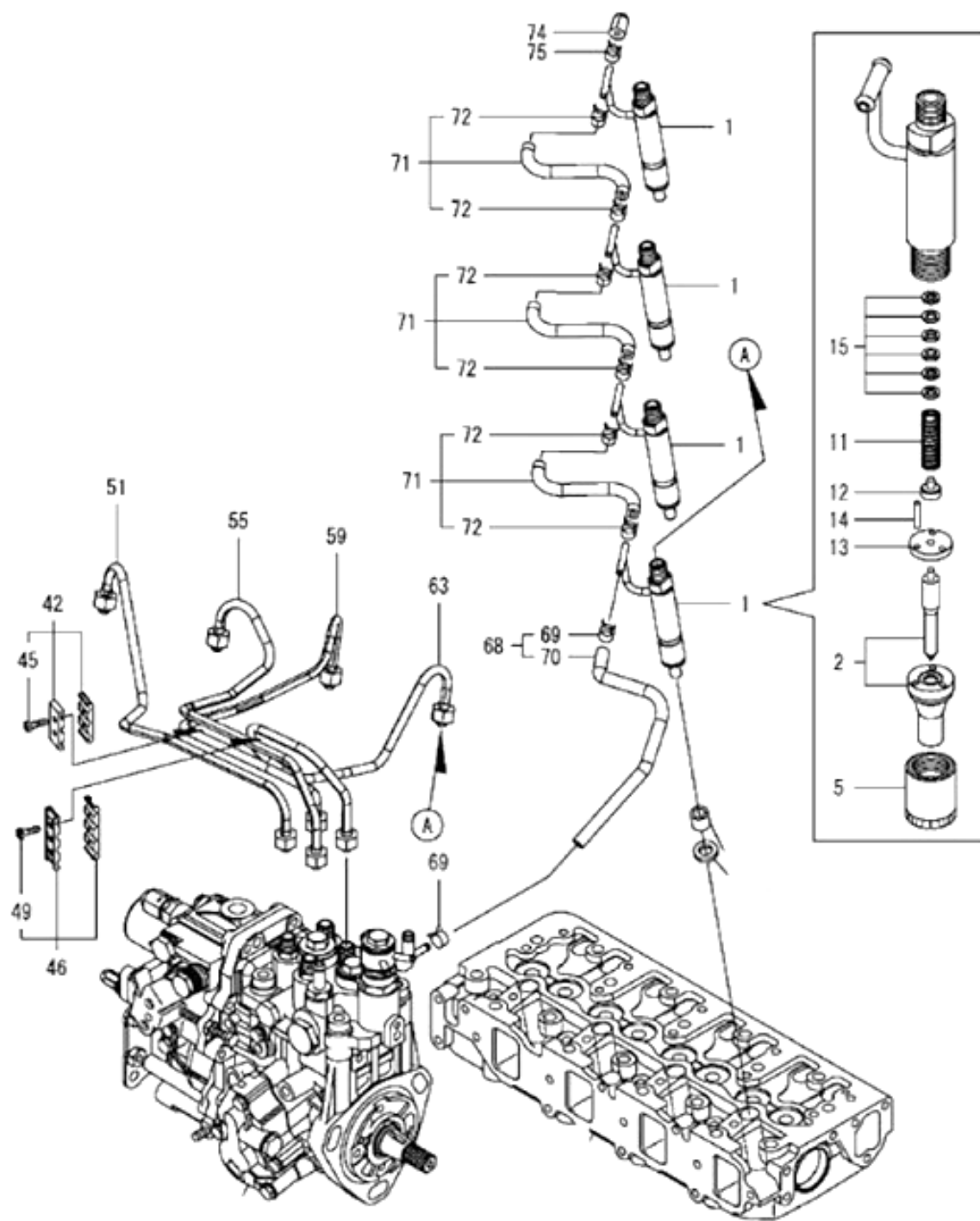




## 27.1 GOVERNOR –Contd.,

S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
3	S90-712-978	GASKET, CASE	Nos	1
4	S90-712-979	GASKET, CASE	Nos	1
6	S90-712-980	O-RING, S6	Nos	1
7	S90-712-981	PLUG, M12	Nos	1
25	S90-712-982	NUT, CONTROL LEVER	Nos	1
26	S90-712-983	SPRING, RETURN	Nos	1
27	S90-712-984	LEVER, REGULATOR	Nos	1
28	S90-712-985	BOLT, IDLE LIMIT	Nos	1
63	S90-712-986	STOPPER, SHAFT	Nos	1
67	S90-712-987	WASHER, SEAL 12	Nos	1
70	S90-712-988	BOLT, M6X 10 PLATED	Nos	1
71	S90-712-989	NUT	Nos	1
80	S90-712-990	O-RING	Nos	1
86	S90-712-991	BOLT, M6X 14 PLATED	Nos	2
87	S90-712-992	BOLT, M6X 14 PLATED	Nos	4
88	S90-712-993	BOLT, M6X 20 PLATED	Nos	10
89	S90-712-994	COVER, GOVERNOR CASE	Nos	1
121	S90-712-320	SOLENOID, STOP	Nos	1

## 27.2 FUEL INJECTION VALVE

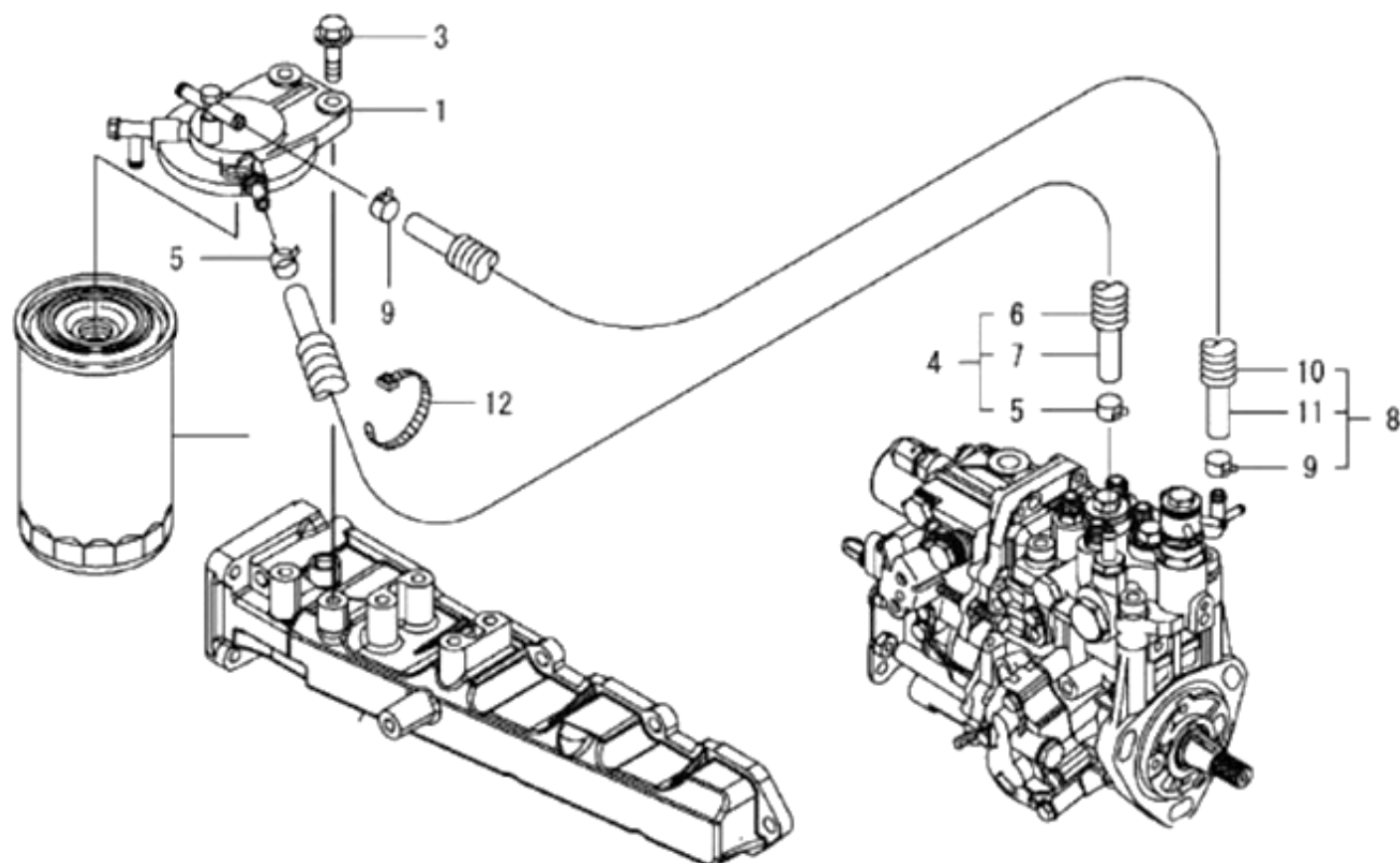




## 27.2 FULE INJECTION VALVE- Contd.,

S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-996	VALVE ASSY,INJECTION	Nos	4
2	S90-712-333	VALVE ASSY,INJECTION	Nos	4
5	S90-712-998	NUT, NOZZLE	Nos	4
11	S90-712-999	SPRING, NOZZLE	Nos	4
12	S90-713-001	SEAT, SPRING	Nos	4
13	S90-713-002	SPACER, VALVE STOP	Nos	4
14	S90-713-003	PIN, POSITIONING	Nos	8
15	S90-713-004	SHIM SET	Nos	4
42	S90-713-005	RETAINER, PIPE	Nos	1
45	S90-713-006	BOLT, M4X14	Nos	2
46	S90-713-007	RETAINER, PIPE	Nos	1
49	S90-713-008	BOLT, M4X14	Nos	2
51	S90-713-009	PIPE ASSY, INJECTION	Nos	1
55	S90-713-010	PIPE ASSY, INJECTION	Nos	1
59	S90-713-011	PIPE ASSY, INJECTION	Nos	1
63	S90-713-012	PIPE ASSY, INJECTION	Nos	1
68	S90-713-013	HOSE ASSY, RETURN	Nos	1
69	S90-713-014	CLAMP, HOSE 9	Nos	2
70	S90-713-015	HOSE, FUEL RETURN	Nos	1
71	S90-713-016	HOSE ASSY, RETURN	Nos	3
72	S90-713-017	CLAMP, HOSE 9	Nos	6
74	S90-713-018	CAP, RETURN PIPE	Nos	1
75	S90-713-019	CLAMP, HOSE 10	Nos	1

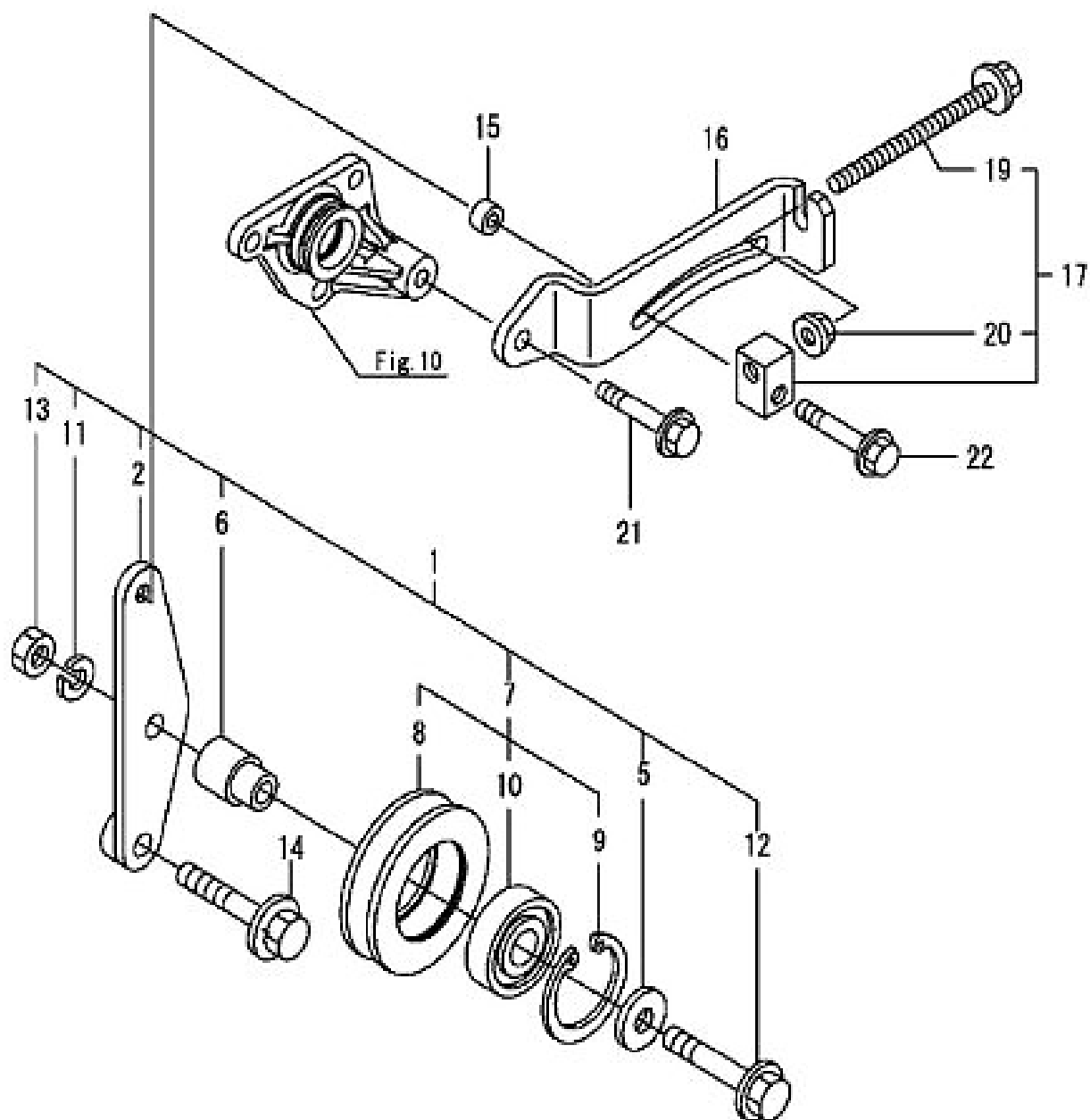
## 27.3 FULE PIPE



S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-713-020	BRACKET, FILTER	Nos	1
3	S90-713-021	BOLT, M8X 30 PLATED	Nos	2
4	S90-713-022	HOSE ASSY, FUEL	Nos	1
5	S90-713-023	CLAMP, HOSE 11.5	Nos	2
6	S90-713-024	TUBE, CORRUGATED 15	Nos	1
7	S90-713-025	HOSE, FUEL	Nos	1
8	S90-713-026	HOSE ASSY, FUEL	Nos	1
9	S90-713-027	CLAMP, HOSE 11.5	Nos	2
10	S90-713-028	TUBE, CORRUGATED 15	Nos	1
11	S90-713-029	HOSE, FUEL	Nos	1
12	S90-713-030	BAND, NYLON	Nos	1



## 28.0 TENSIONER PULLEY



S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-713-031	TENSION DEVICE ASSY	Nos	1
2	S90-713-032	LEVER ASSY, TENSION	Nos	1
5	S90-713-033	WASHER, PLAIN 10	Nos	1
6	S90-713-034	SPACER	Nos	1

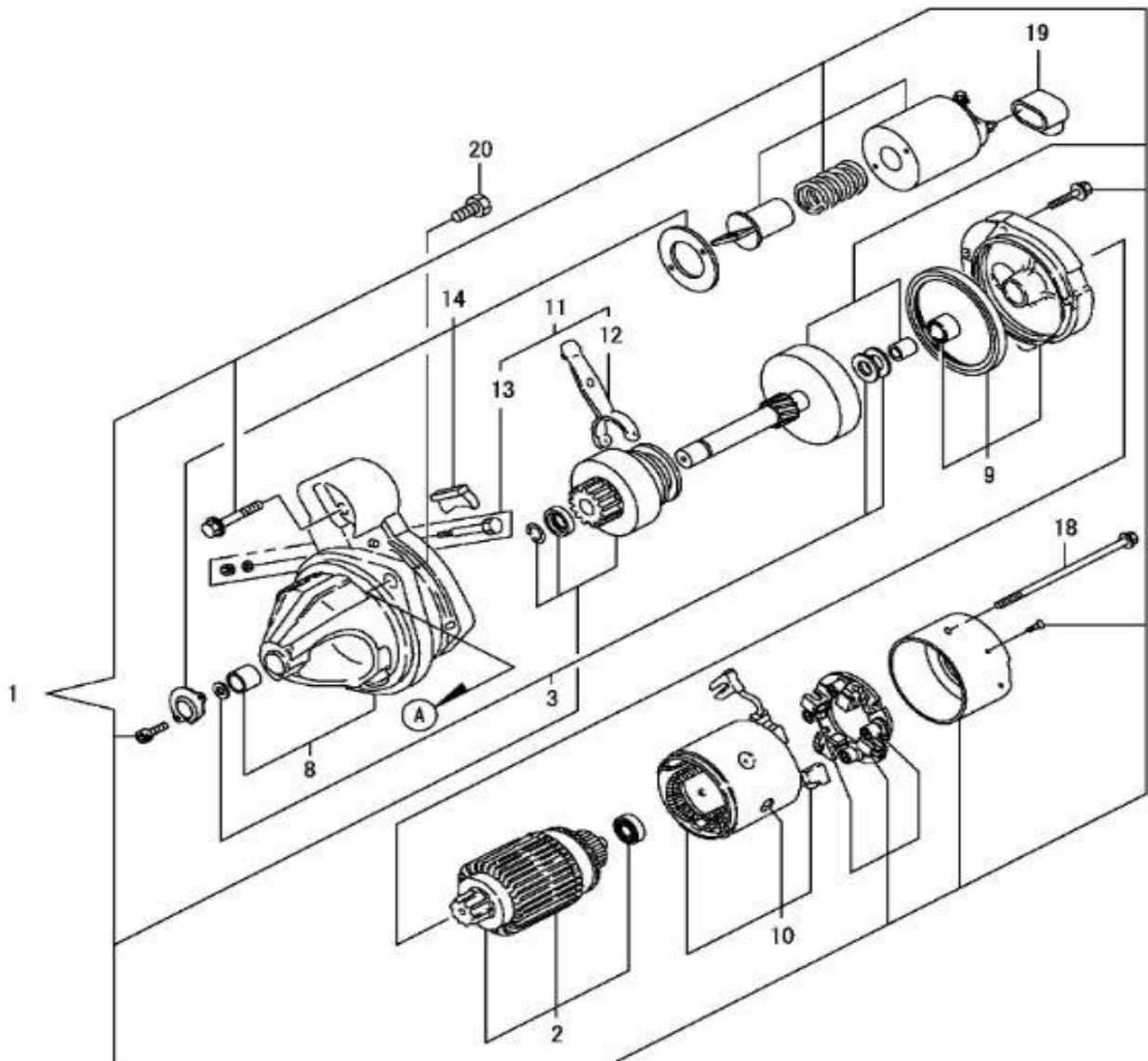


## 28.0 TENSIONER PULLEY – Contd.,

S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
7	S90-712-322	PULLEY ASSY, TENSION	Nos	1
8	S90-713-036	PULLEY, TENSION	Nos	1
9	S90-713-037	RING, 47	Nos	1
10	S90-713-038	BEARING, BALL 6303UU	Nos	1
11	S90-713-039	WASHER, SPRING 10	Nos	1
12	S90-713-040	BOLT, M10X 55 PLATED	Nos	1
13	S90-713-041	NUT, M10	Nos	1
14	S90-713-042	BOLT, M10X 35 PLATED	Nos	1
15	S90-713-043	COLLAR, PULLEY	Nos	1
16	S90-713-044	ADJUSTER, BELT	Nos	1
17	S90-713-045	BLOCK ASSY, ADJUSTER	Nos	1
19	S90-713-046	BOLT, M8X100 PLATED	Nos	1
20	S90-713-047	NUT, M8	Nos	1
21	S90-713-048	BOLT, M8X 45 PLATED	Nos	1
22	S90-713-049	BOLT, M8X 45 PLATED	Nos	1



## 29.0 ACCESSORES - STARTOR MOTOR



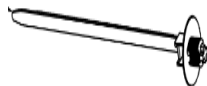
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## ACCESSORY

S.NO	AL. PART NO	DESCRIPTION	UOM	QTY
1	S90-712-251	STARTER, 24V	Nos	1
2	S90-712-331	ARMATURE ASSY	Nos	1
3	S90-713-052	WASHER KIT, THRUST	Nos	1
8	S90-713-053	CASE ASSY, GEAR	Nos	1
9	S90-713-054	BEARING ASSY, CENTER	Nos	1
10	S90-712-332	COIL ASSY, FIELD	Nos	1
11	S90-713-056	LEVER ASSY, SHIFT	Nos	1
12	S90-713-057	LEVER, SHIFT	Nos	1
13	S90-713-058	PIN	Nos	1
14	S90-713-059	COVER SET, DUST	Nos	1
18	S90-713-060	BOLT, THROUGH	Nos	2
19	S90-713-061	COVER, TERMINAL M	Nos	1
20	S90-713-062	BOLT, M12X 25 PLATED	Nos	2
21	S90-713-063	TIMER, 1S-24V	Nos	1
22	S90-712-330	DIODE	Nos	1
23	S90-712-236	CABLE TIE 150 MM BLACK	Nos	15
24	S90-712-209	W-CLAMP FOR FULE LINE	Nos	6

