

## Group 13 Cooling System

**GENERAL:** This group contains information on the automotive engine cooling system from the engine water pump to the radiator and return. It also includes the transmission oil cooler lines and fittings, fan blade and fan drive belts.

**SPECIFICS:** As applicable

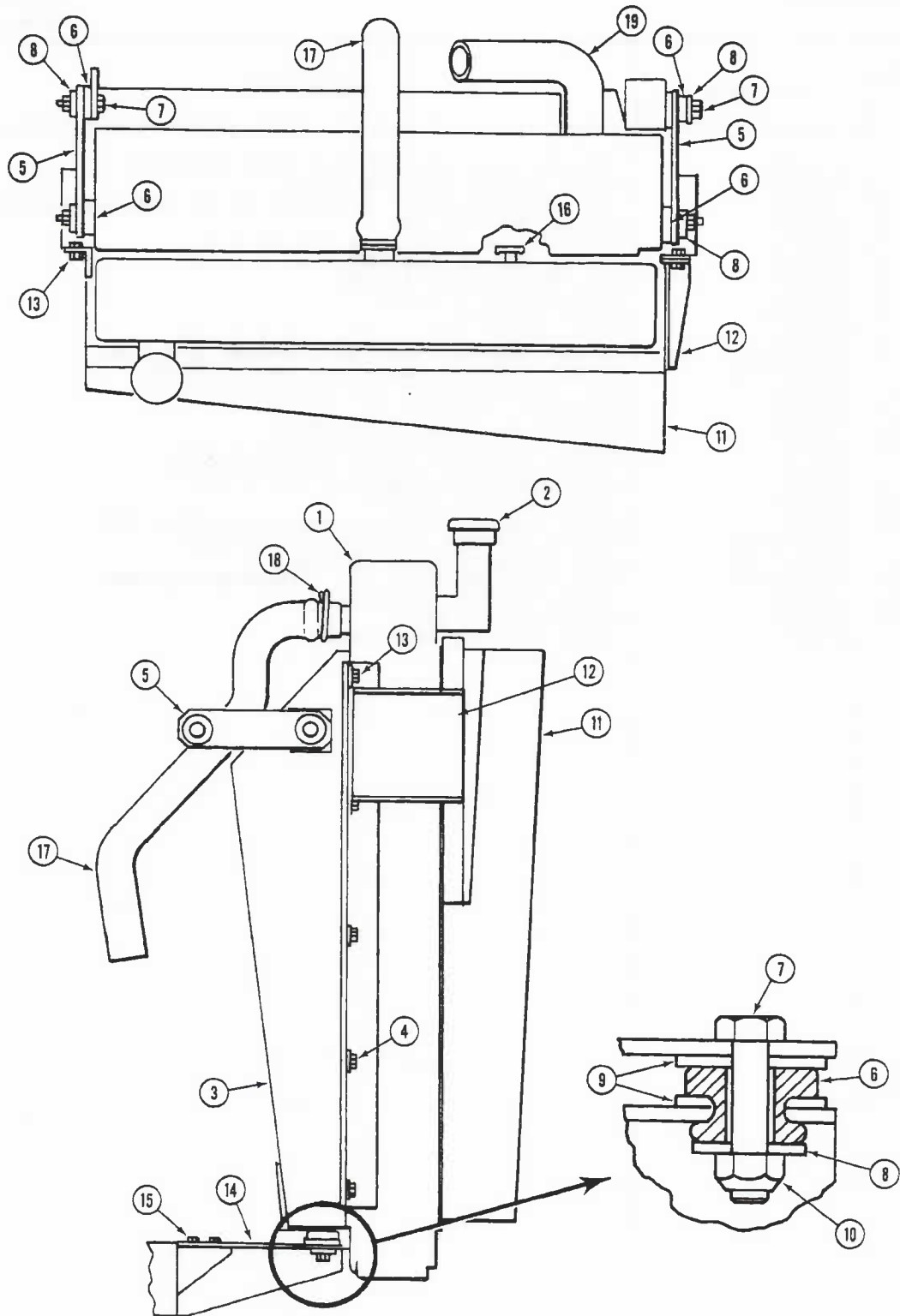
- ...Engine Water Pump
- ...Fan Drive Belts
- ...Radiator and Mounting
- ...Radiator Hoses
- ...Thermostat and Housing
- ...Transmission Oil Hoses and Fittings



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# REPAIR PARTS LIST

GROUP 13 Cooling  
 MODEL 2900R



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Figure 13-1. Radiator Mounting (coach 00001 to 00222)

# REPAIR PARTS LIST

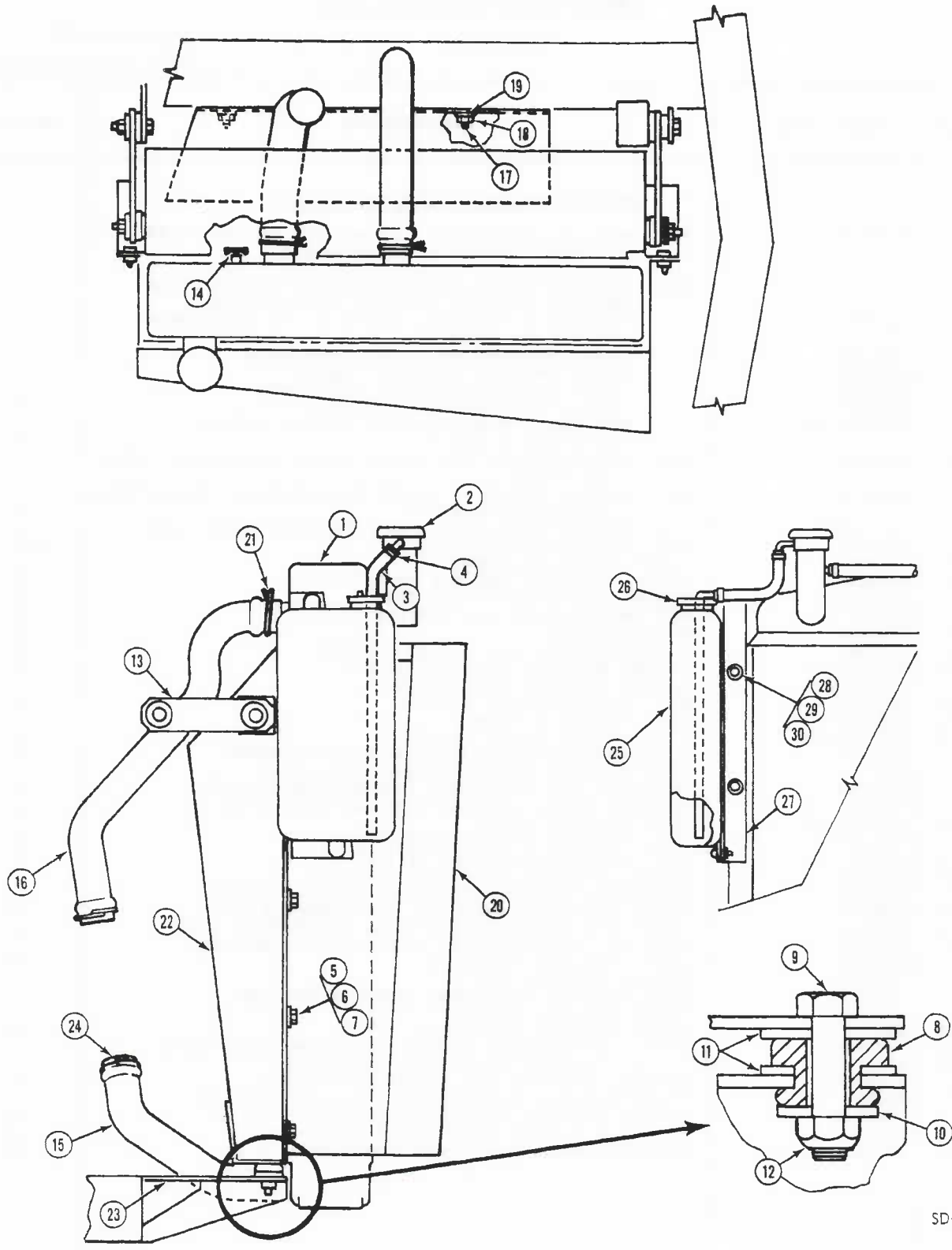
GROUP 13

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FIG NO.	ITEM NO.	PART NUMBER	ITEM DESCRIPTION	QTY PER UNIT	
13-1	1	5100010	RADIATOR ASSY, w/cap (coach 00001 to 00222)	1	
		M20016	TUBE, Radiator overflow (5/16)	4 ft	
	2	5101957	CAP, Radiator filler (AC-RC25) (13 lb) (sup 5100010-R001)	1	
	3	5100375	SHROUD, Radiator fan	1	
	4	M14216	BOLT, Shroud to radiator (3/8-24 x 1)	10	
	4	M17004	WASHER, Shroud bolt (3/8 flat)	10	
	4	M17017	NUT, Shroud bolt (3/8-24)	10	
	5	5101070	LINK, Shroud to frame	2	
	13-1	6	5100440	MOUNT, Radiator	6
		7	M18059	BOLT, Radiator mount (1/2 - 20 x 2-1/4)	6
		8	5100570-02	WASHER, Radiator mount bolt special (1-1/2 OD)	6
		9	5100570-03	WASHER, Radiator mount bolt special (2 OD)	4
		10	M17016	NUT, Radiator mount bolt (1/2 - 20)	6
		11	5100580	DEFLECTOR, Radiator air	1
	13-1	12	5100579	BRACKET, Radiator to deflector	3
		13	M18005	BOLT, Radiator bracket (1/4 x 20 x 3/4)	6
		13	M17045	WASHER, Radiator bracket bolt (1/4 flat)	6
		13	M17061	NUT, Radiator bracket bolt (1/2 x 20)	6
		14	5100917	GUARD, Radiator splash	2
	15	M18058	SCREW, Radiator splash guard (5/16 x 24 x 3/4)	4	
		5100620-01	BUMPER, Radiator splash guard (AI-1422)	1	
	16	5100573-04	COCK, Radiator drain (WD-145)	1	
	17	5101794-01	HOSE, Radiator upper (sup 5101069 and 5101658)	1	
13-1	18	M22040	CLAMP, Radiator upper hose	2	
	19	5100667	HOSE, Radiator lower	1	
		M22039	CLAMP, Radiator lower hose	2	

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Figure 13-2. Radiator Mounting (Coach 00223 and Up)

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FIG NO.	ITEM NO.	PART NUMBER	ITEM DESCRIPTION	QTY PER UNIT
			<u>RADIATOR ASSEMBLY (COACH 00223 &amp; UP)</u>	
		5109233	KIT, Radiator replacement (see service bulletin 2913-40004) (coaches 00223 to 00964)	1
13-2	1	5109230	NOTE: Coaches 00965 & up were equipped with 15 pound pressure radiator #5109230 at the factory. RADIATOR & CAP ASSY, Engine 15 psi (supersedes 5101611 and 5106042)	1
		5109067	PANEL, Radiator mounting (right hand)	1
		5109069	PANEL, Radiator mounting (upper)	1
		5109068	PANEL, Radiator mounting (left hand)	1
		M25046	RIVET, Mounting panel attaching	5
		5100573-01	ADAPTER, Transmission oil hose to radiator (WD C 3109 x 12 x 6)	2
13-2	2	5101957	CAP, Radiator filler (13 pound) (AC-RC25) (coaches 00223 to 00529)	1
	2	5106374	CAP, Radiator filler (7 pound) (all coaches with overflow tank 00530 to 00964)	1
	2	5107188-01	CAP, Radiator filler (15 pound) (coaches 00965 & up)	1
	3	M20016	HOSE, Filler neck to tank	2 ft
	4	M22041	CLAMP, Filler neck hose	3
13-2	5	M14216	SCREW, Shroud to radiator (3/8-24 x 1)	10
	6	M17004	WASHER, Shroud screw (3/8 flat)	10
	7	M17017	NUT, Shroud screw self locking	10
	8	5100440	MOUNT, Radiator	6
	9	M18059	BOLT, Radiator mount (1/2-20 x 2 1/4)	6
13-2	10	5100570-02	WASHER, Radiator mount (1 1/2 OD)	6
	11	5100570-03	WASHER, Radiator mount (2 OD)	6
	12	M17016	NUT, Radiator mount (1/2-20)	6
	13	5101070	LINK, Shroud to frame	2
	14	5100573-04	COCK, Radiator drain (WD-145)	1
13-2	15	5101610	HOSE, Radiator lower (coaches 00223 to 00645)	1
		NPN	HOSE, Radiator lower (coaches 00646 & up)	2
		5106211	TEE, Lower hose-for heater (coaches 00646 & up)	1
		M24497	ADAPTER, Heater tee hose (coaches 00646 & up)	1
	16	5101794-01	HOSE, Radiator upper	1
	17	M25159	STUD, Radiator guard (1/4-20 x 7/8)	2
	18	M17061	NUT, Radiator guard stud (1/4-20)	2
	19	M17045	WASHER, Radiator guard stud (1/4 ID)	2
	20	5101676	DEFLECTOR, Radiator air (coach 00223 to 00964)	1
13-2	20	5109067	PANEL, Air deflector upper (coach 00965 & up)	1
13-2	20	5109069	PANEL, Air deflector right hand (coach 00965 & up)	1
	20	5109068	PANEL, Air deflector left hand (coach 00965 & up)	1
	21	M22040	CLAMP, Radiator hose upper	2
	22	5100375	SHROUD, Radiator fan	1
		5107647	RING, Radiator fan shroud (coach 00744 & up)	1
	23	5101982	GUARD, Radiator splash	1
	24	M22039	CLAMP, Radiator hose lower	2
13-2	25	5102650	TANK & CAP ASSEMBLY, Radiator overflow (coach 00530 & up)	1
	26	5102650-02	CAP, Overflow tank (coach 00530 & up)	1
	27	5106020	BRACKET, Overflow tank (coach 00530 & up)	1
	28	M18033	SCREW, Overflow tank bracket (coach 00530 & up)	2
		5108508	SPACER, Overflow tank screw (coach 00530 & up)	4
	29	M17053	NUT, Tank bracket screw (coach 00530 & up)	2
13-2	30	M17005	WASHER, Tank bracket screw (coach 00530 & up)	4

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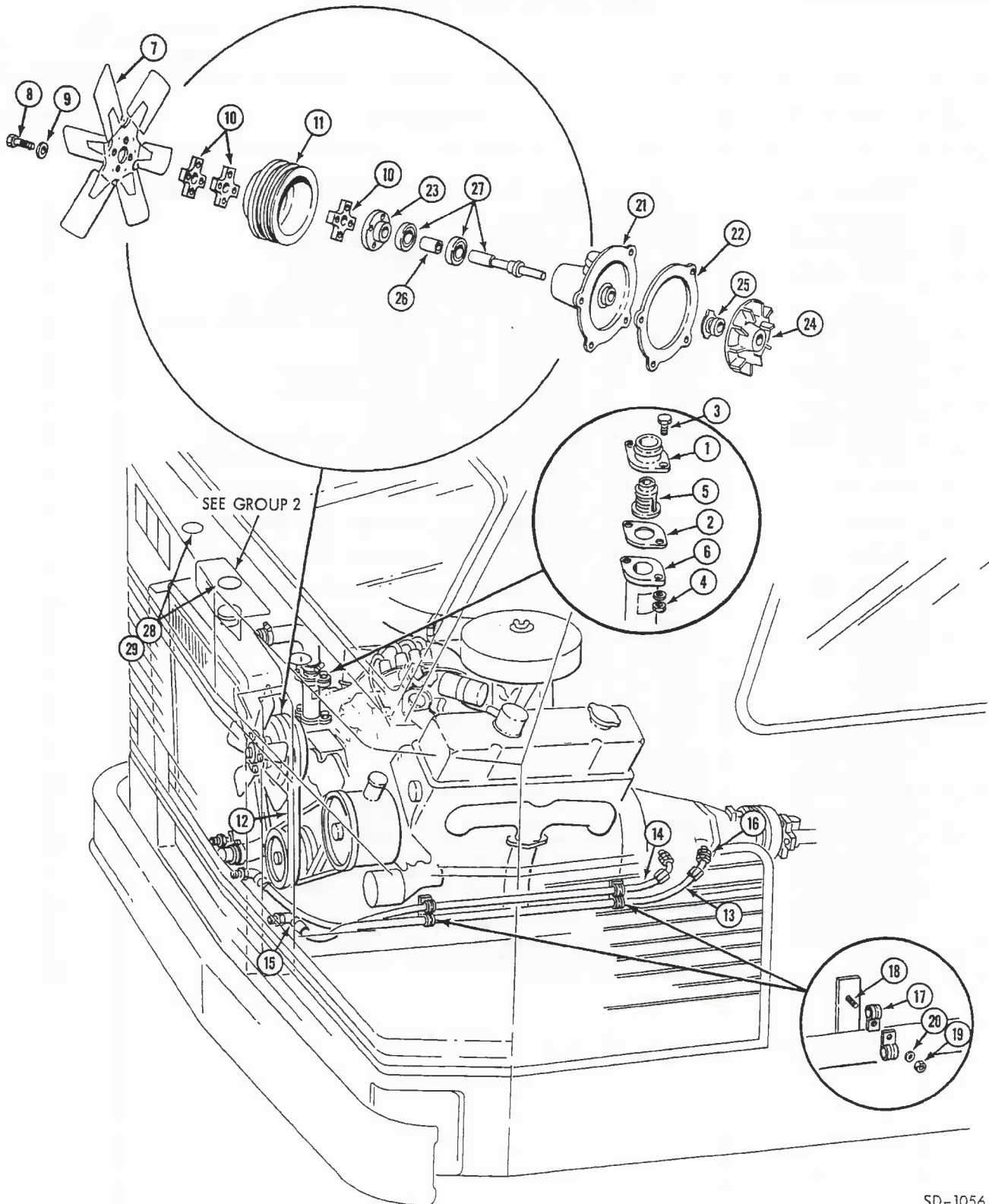


Figure 13-3. Cooling System

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# REPAIR PARTS LIST

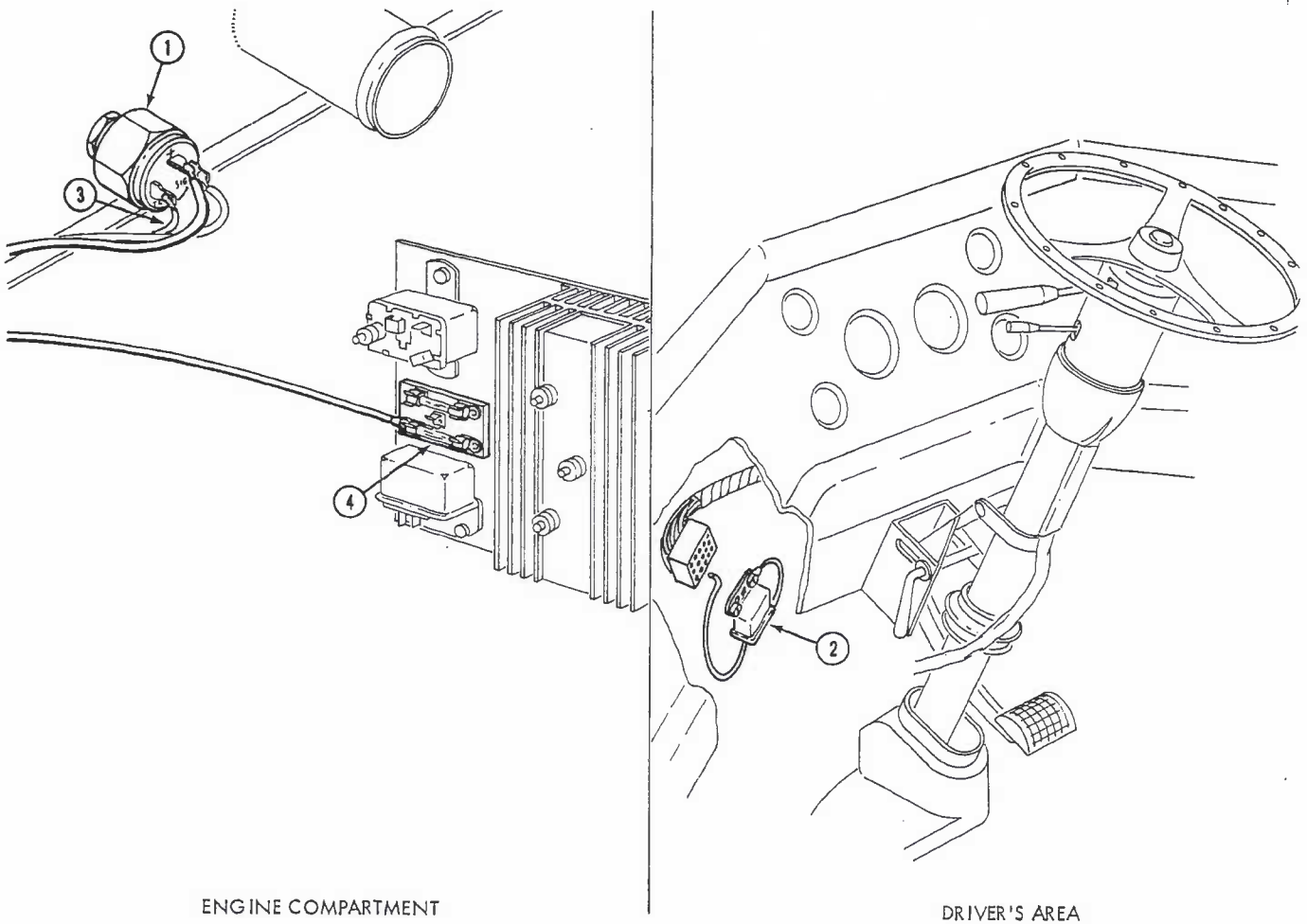
GROUP 13  
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FIG NO.	ITEM NO.	PART NUMBER	ITEM DESCRIPTION	QTY PER UNIT
13-3	1	5100011-R228	CONNECTOR, Engine water outlet (CCMI-3751958) (supersedes 5100011-R012)	1
	2	5100011-R013	GASKET, Water outlet (CCMI-50082)	1
	3	5100011-R014	SCREW, Water outlet connector (CCMI-180122)	2
	4	M17010	NUT, Outlet connector to extension (3/8-16)	2
13-3	5	5100011-R229	THERMOSTAT, Engine (185 F) (CCMI-3514774) (supersedes 5100011-R015 & 5100011-R192)	1
	6	5106256	EXTENSION, Engine thermostat (coach 00532 & up)	1
	7	5100011-R016	FAN, Engine (6 blade 20 inch diameter ) (CCMI-1074949)	1
	8	5100011-R017	SCREW, Fan to pulley (CCMI-181088)	4
	8	5108691-03	SCREW, Fan to pulley (CCMI-181092)	4
	9	5100011-R018	WASHER, Fan to pulley screw (CCMI-6022185)	4
	9	5108691-05	WASHER, Fan to pulley screw (CCMI-6027185)	4
13-3	10	5100011-R227	SPACER, Fan pulley (CCMI-3675419)	3
	11	5100011-R119	PULLEY, Fan driven (CCMI-3675423)	1
	12	5100011-R002	BELT ASSY, Fan drive (matched set) (CCMI-3675433)	1
	13	5100521	HOSE ASSY, Transmission to radiator (50 inch length) (coaches 00001 to 00223)	1
	13	5101636	HOSE ASSY, Transmission to radiator (57 inch length) (coaches 00224 & up)	1
	14	5100524	HOSE ASSY, Transmission to radiator (75 inch length ) (coaches 00001 to 00223)	1
	14	5101635	HOSE ASSY, Transmission to radiator (57 inch length) (coaches 00224 & up)	1
13-3	15	5100573-01	BUSHING Hose at radiator (coaches 00224 to 00964) (WD-C3109X12X6)	2
	15	5100573-03	CONNECTOR, Hose at radiator (WD-48X6X6)	2
	16	5100573-02	CONNECTOR, Hose at transmission (WD-48X6X2)	2
	17	M24096	FITTING, Hose at transmission	2
	17	M22036	CLAMP, Hose to frame loop	8
	18	M18057	BOLT, Hose clamp (1/4-20 x 3/8)	8
	19	M17040	NUT, Hose clamp bolt (1/4-20)	8
13-3	20	M17044	LOCKWASHER, Hose clamp bolt (1/4)	8
	21	5100011-R023	PUMP ASSY, Engine water (CCMI-3514162)	1
	22	5100011-R024	GASKET, Pump body (CCMI-1737705)	1
	23	5100011-R160	HUB, Fan pulley (CCMI-1679147)	1
	24	5100011-R156	IMPELLER, Water pump (CCMI-2843635)	1
13-3	25	5100011-R157	SEAL, Water pump body (CCMI-2532493)	1
	26	5100011-R158	SPACER, Water pump shaft (CCMI-1679143)	1
	27	5100011-R159	SHAFT W/BEARINGS, Pump (CCMI-6620528)	1
		5100011-R154	PLUG, Water pump housing (CCMI-444668)	2
		5100011-R155	PLUG, Water pump housing (CCMI-1859127)	1
		5100011-R231	HOUSING, Water pump body to B lock (CCMI-3751217)	1
		5100011-R161	SCREW, Pump housing attaching (CCMI-180137)	5
		5100011-R162	SCREW, Pump housing attaching (CCMI-186282)	1
		5100011-R026	GASKET, Pump housing to B lock (CCMI-1737761)	2
13-3	28	5107012	VENT, Radiator cooling (coaches 00646 & up)	3
	29	M25034	RIVET, Vent to cowl	12

Fan bolts - Napa # 25-7370

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Figure 13-4. Low Water Level Detector Parts

FIG NO.	ITEM NO.	PART NUMBER	ITEM DESCRIPTION	QTY PER UNIT
13-4	1	5106886	<u>RADIATOR LOW WATER LEVEL</u> <u>DETECTOR PARTS (COACH 00646 AND UP)</u> SENDING UNIT, Low water level (in radiator) (RBS-613NLG)	1
	2	5106735	BUZZER, Low water level (CH-4099)	1
	3	M15310	CAPACITOR, Low water level circuit (25WVDC) (SPR-1960-685-902SSAI)	1
13-4	4	M15033	FUSE, Low water level circuit (10 AMP)	1