

Chapter 6

Engine Coolant & Cooling System

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Engine Coolant System

Specifications

Vehicle Type		Carburetor		SC Vehicle	
		Truck	Van	MT	ECTV
Coolant System Type		Water- Cooled + Electric Fan Assist			
W A T E R P U M P	Pump Type		Impeller Type		
	Water Output RPM 85°C	2000RPM	20 ℓ /min		
		5000RPM	50 ℓ /min		
		7000RPM	100 ℓ /min		
	Impeller Measurement		φ62		
	Blades		8		
	Pulley		1.05		
	Thermostat				
	Opening Temp *C		78		
	Full Open Temp*C		93		
	Valve Total Lift (mm)		8		
	Coolant		Subaru Coolant		
	Coolant Capacity		6.5 Liters		
	Electric Fan Watt (W)		70	80	← 110
	Outer Fan Demension+Blades		φ270×5		
R A D I A T O R	Radiator Type		Cross-Flow		
	(Kcal/H)		22500	21000	28000 29500
	Tank		Steel	Steel	← ←
	Core Material		Aluminum	Copper	← ←
	Core Dimensions		273×400×16	268×400×16	268×400×32 ←
	Fan		Corrugated		
	Cap Pressure (kg/cm²)		0.9+ -0.15 -0.05 Below		
	Oil Cooler		No	←	← Yes
	Size	Pipe Dia	φ22	←	φ28 ←
		Hoes Dia	φ21×φ28	←	φ27×φ35 ←

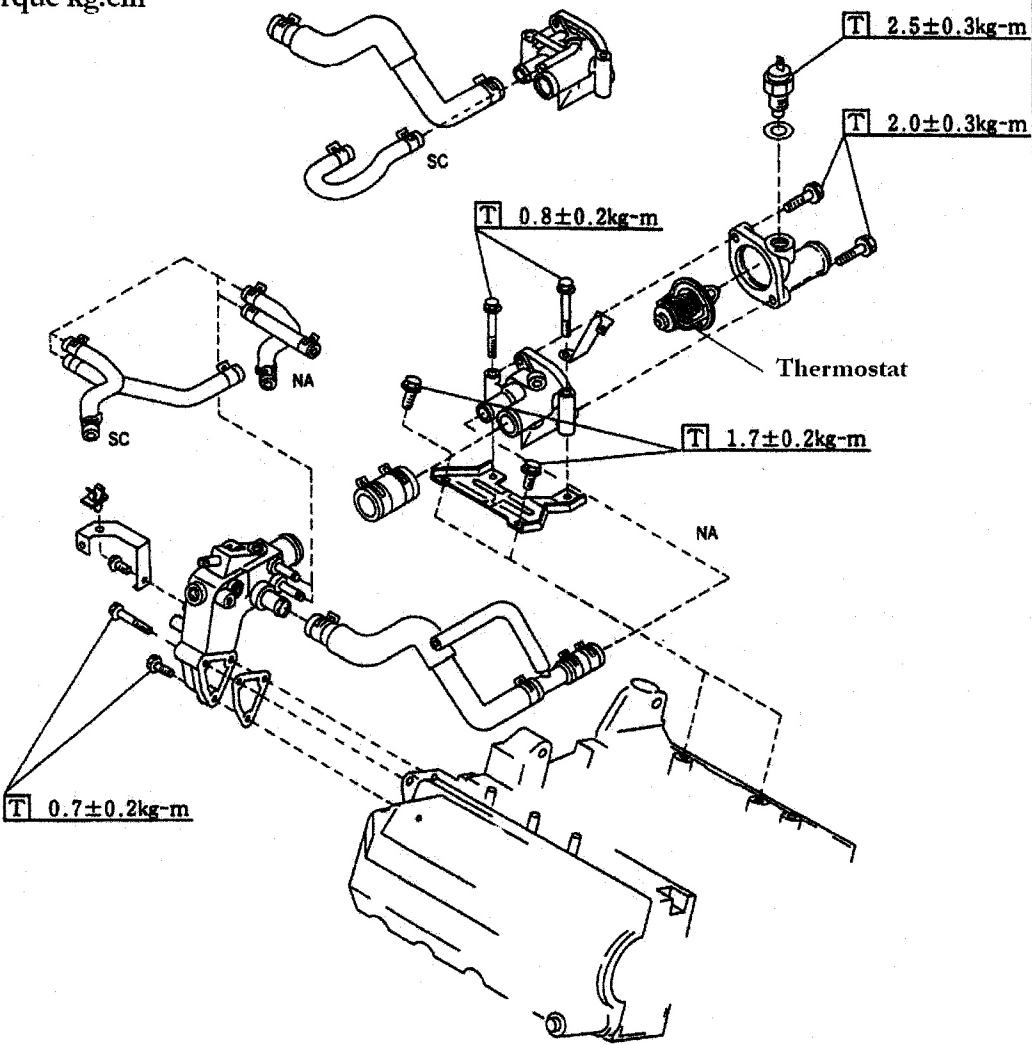
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Coolant System

Engine Related Components

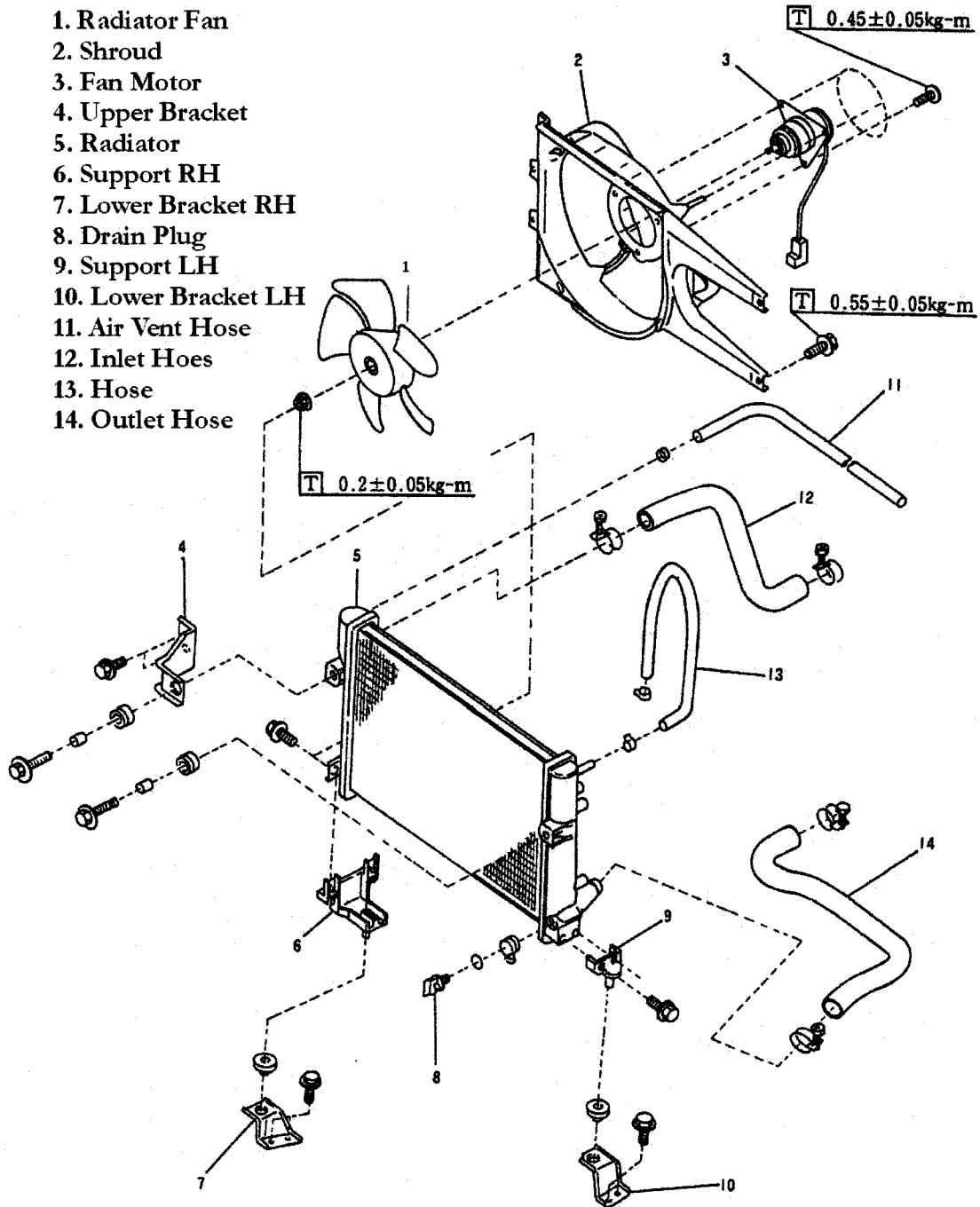
Expoled View

T=Torque kg.cm



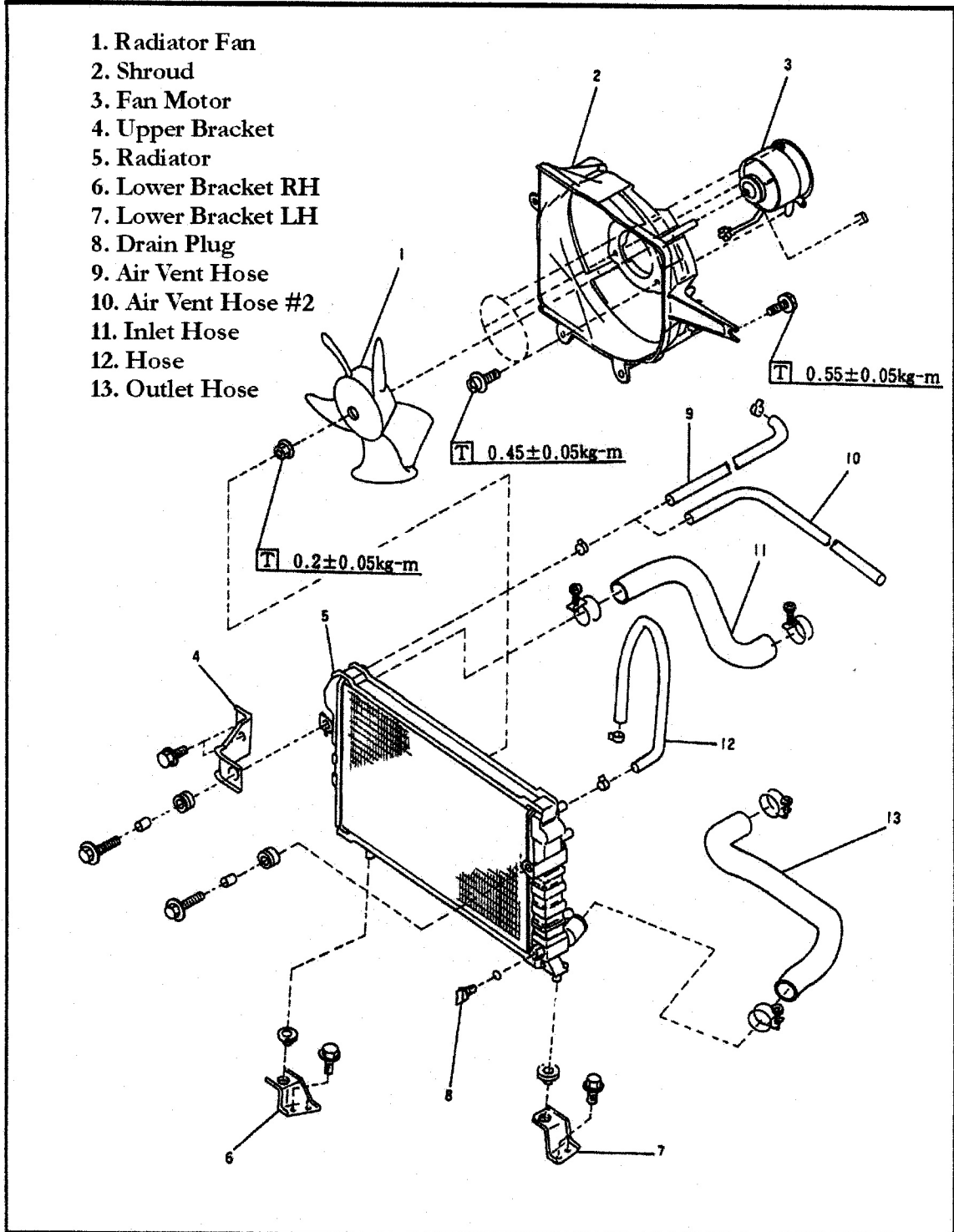
Coolant System

Truck Carbureted Vehicle



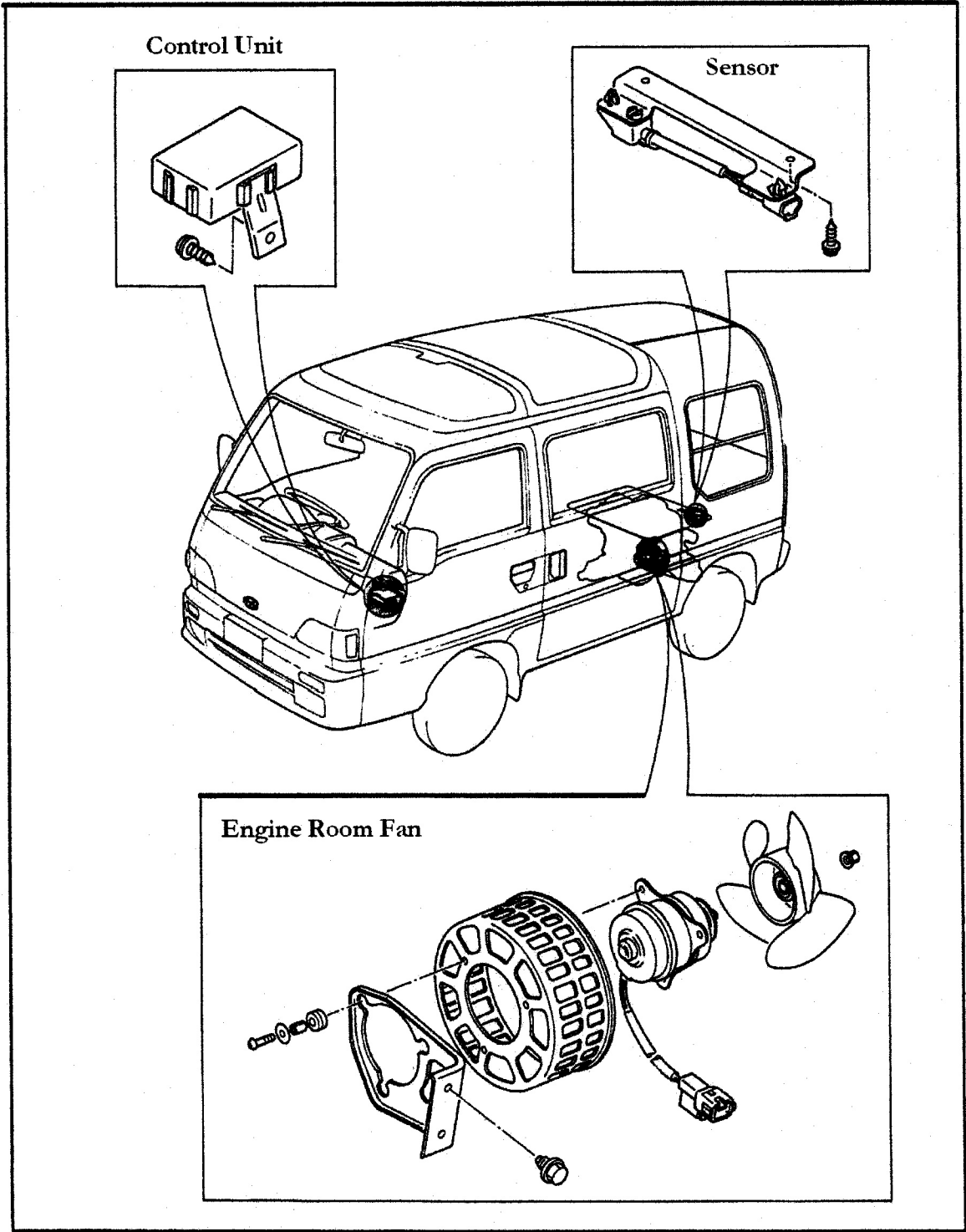
Coolant System

SC Vehicle



Coolant System

Engine Room Fan System



Coolant System

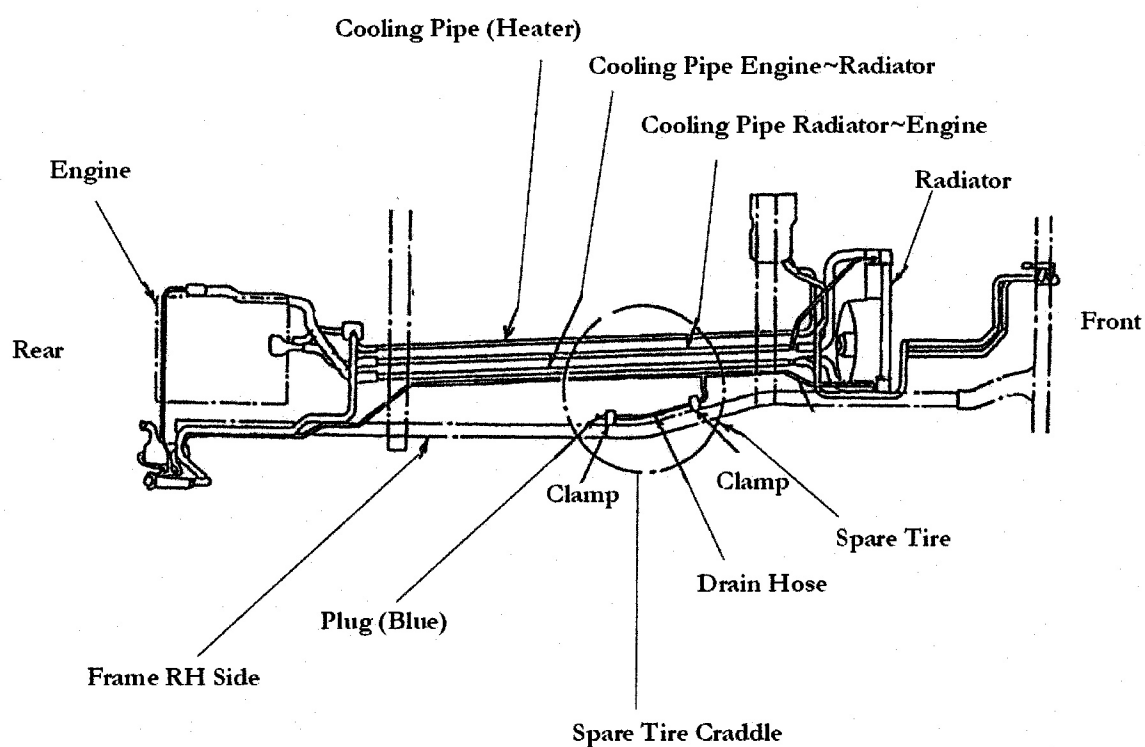
Troubleshooting

	Cause	Remedy
O V E R H E A T	Coolant Low Water Pump Pulley Water Pump Not Functioning Correctly Electric Fan	Add Coolant Check Belt Change Pump Check Relay-Check Fan
	Thermostat Coolant Leaking Radiator Leak (Do Not Use Stop Leak) Water Pump Will Fail Engine Oil Low Clutch Slippage Transmission Oil Low Water In Oil Brake Engaged (Side Brake)	Change Change Gasket Repair Radiator Add Oil Repair Clutch Add Oil Head Gasket Release
Too Cool	Thermostat Stuck Open or Missing	Replace Thermostat
O T H E R S	Inlet Hose Leaking Outlet Hose Leaking Water Pump Noise Intake Manifold Water Water From Tailpipe	Replace Hose & Clamp Replace Hose and Clamp Replace Pump Replace Gasket Replace Head Gasket

Coolant System

Engine Coolant System Diagram

Hose & Pipe Routing

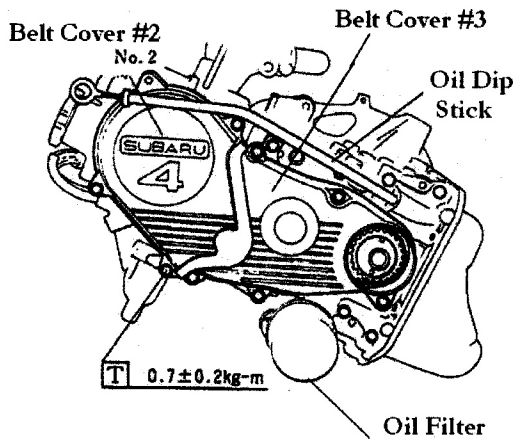


Coolant System

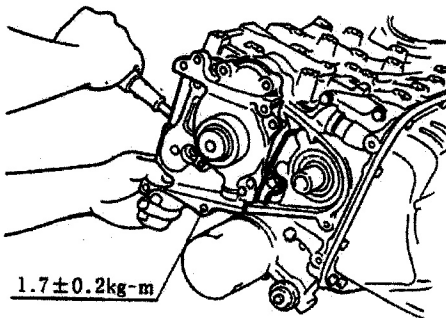
Water Pump

Removal & Replace

1. Remove Engine From Vehicle
2. Remove Alternator Belt, Tensioner, if Equipped Super Charger Belt, Crank Pulley
3. Remove Dip Stick Tube
4. Remove Timing Belt Cover #2 & #3



5. Loosen Tensioner and Remove Timing Belt
6. Remove the (6) Water Pump Retaining Bolts



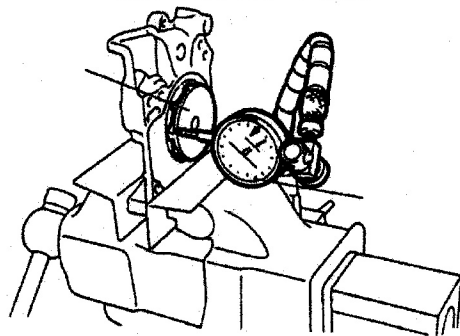
7. Remove Water Pump
8. Clean All Surfaces and Install New Water Pump

Inspection

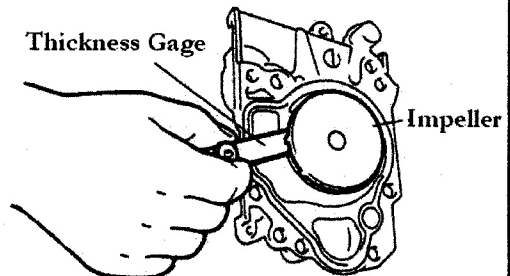
Note: This Section is For Inspection Purposes
It is Highly Recommended to Simply Replace the Pump

End Play

Limit	0.5mm
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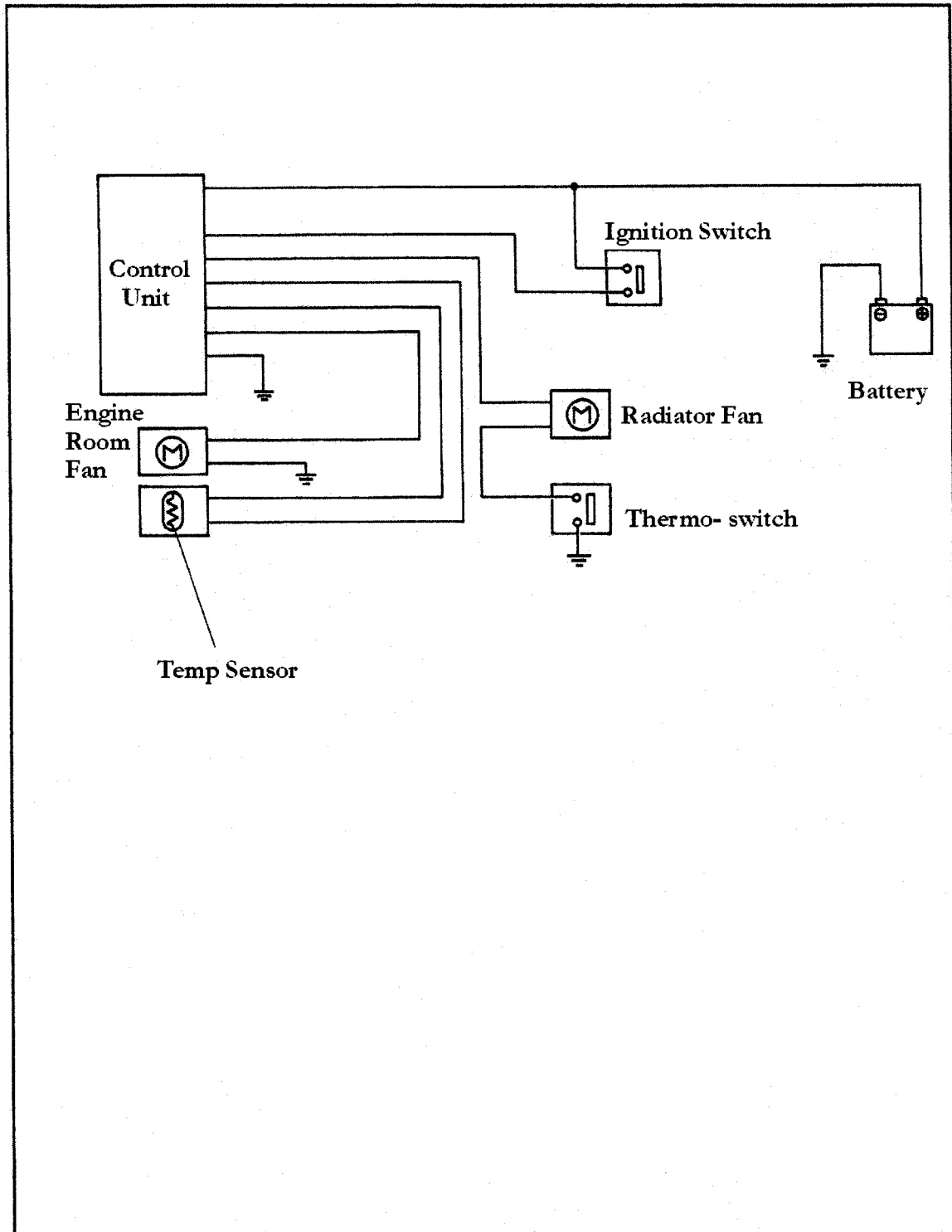


Clearence (mm)	Limit	0.3~0.9
	Replace	1.1



Cooling System

Engine Room Fan Circuit

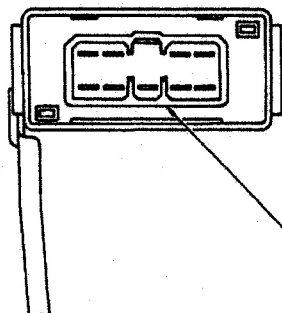


Cooling System

Control Unit Circuit

Note: See Electrical Diagram Section For More Information and Details

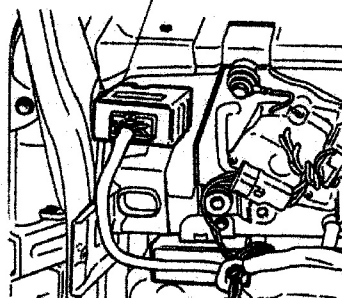
Connector



Pins

4	3	2	1
8	7	6	5

Cooling Fan Unit



Control Unit Circuit

