

C: INTERCOOLER SYSTEM

1. GENERAL

The intercooler system is designed to cool hot intake air compressed by the turbocharger to improve intake air charging efficiency, thereby preventing engine knock

and reducing fuel consumption. The intercooler itself is water-cooled and features high cooling efficiency and reduced resistance to airflow.

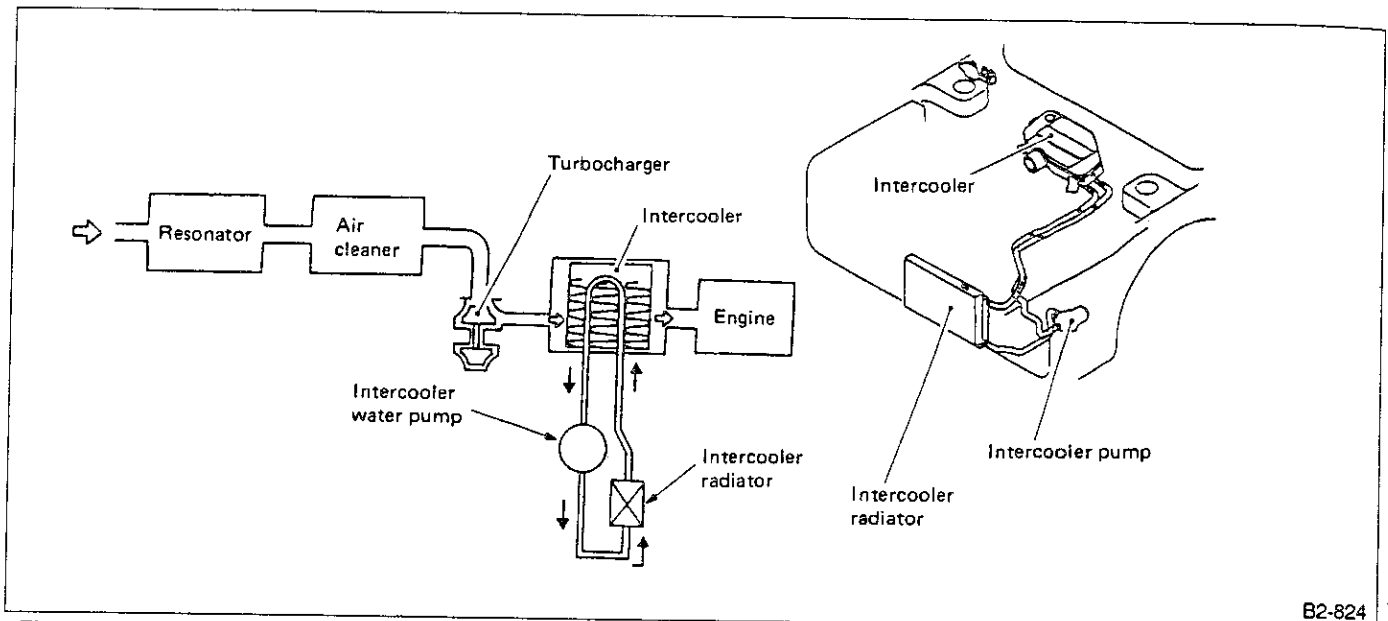


Fig. 40

B2-824

2. INTERCOOLER

The intercooler is composed of an aluminum alloy casing and a main body. It is used to efficiently cool down hot air resulting from compression in the turbocharger. Cooling water passes through the intercooler core which is formed by a stack of five core elements.

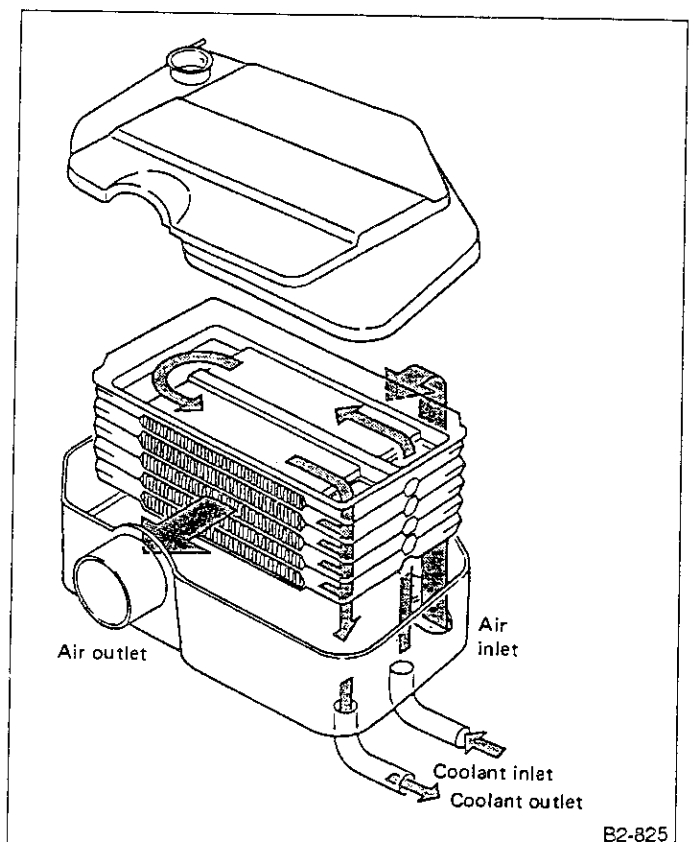


Fig. 41

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3. RADIATOR (FOR INTERCOOLER)

- The intercooler radiator uses an aluminum fin & tube type structure.
- The left-side tank is split into two sections so that cooling water can be returned for efficient heat dissipation.
- An air bleeder plug is provided to bleed off unwanted air and prevent water pump trouble.
- A drain plug is provided for draining the cooling water.

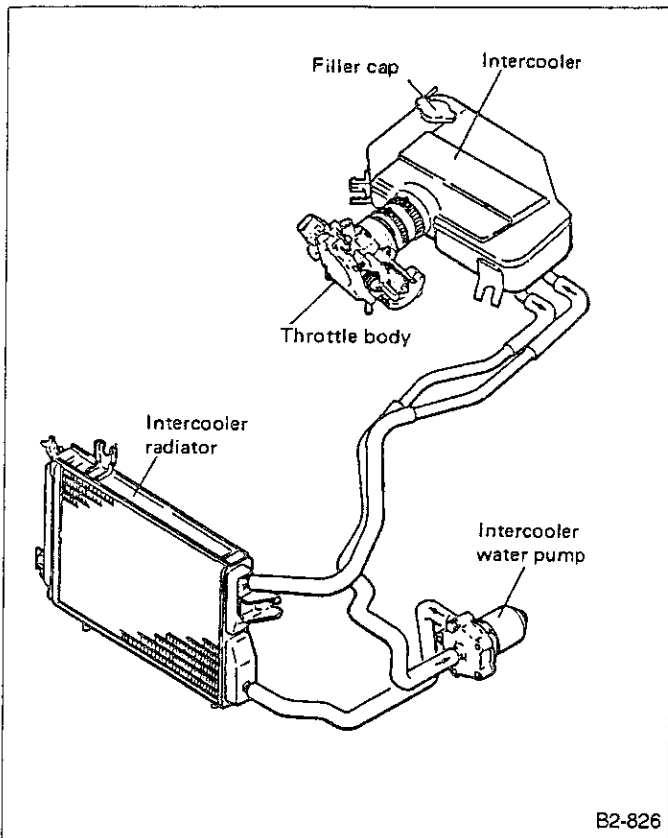


Fig. 42

4. WATER PUMP

- The water pump is driven by an electric motor and is composed of an impeller, armature, and other components.
- It operates on 28 watts of power. However, if the throttle opening exceeds 80% and pump demand is increased, power input to the pump is increased to 50 watts.

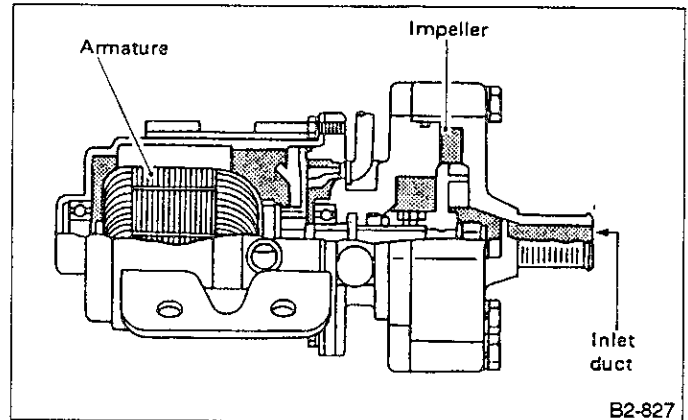


Fig. 43

5. WATER PUMP CONTROL

1) The water pump delivery is increased to a high level only when the throttle opening is greater than 80%. Normally, the pump terminal voltage is maintained at a low level to reduce power consumption and extend the pump service life.

2) The pump output is normally low (28 watts) when the ignition switch is ON, and changed to high (50 watts) when the throttle opening exceeds 80% as shown below.

Ignition switch	Throttle opening ratio is more than 80%	Water pump
OFF	X	OFF
ON	X	Low (28 w)
ON	○	Hi (50 w)

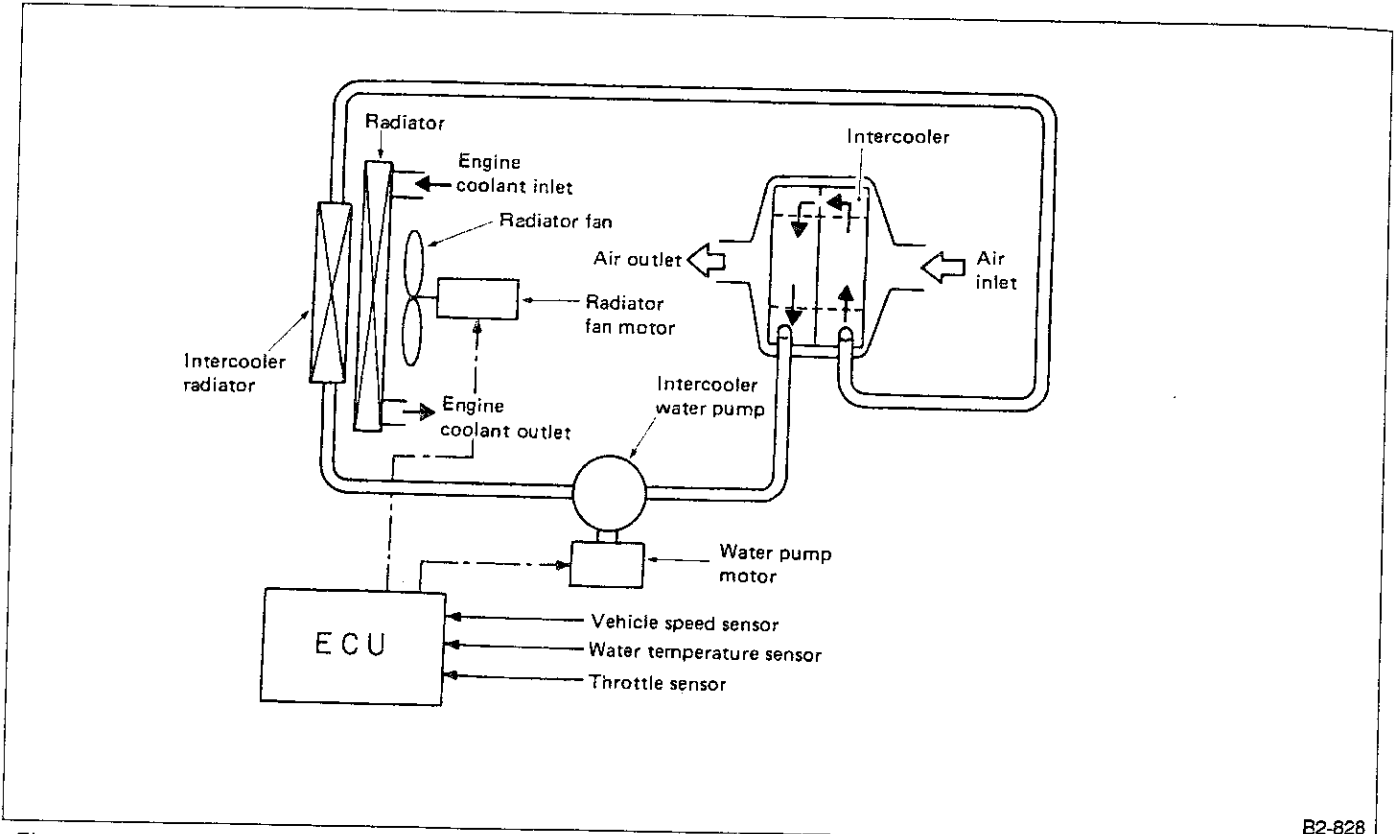


Fig. 44

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S SPECIFICATION AND SERVICE DATA

A: SPECIFICATIONS

Intercooler system		Water cooled type	
Intercooler ASSY	Type	Drain cup type	
	Core dimensions	270 x 128 x 70 mm (10.63 x 5.04 x 2.76 in)	
	Cooling capacity	3.954 kW (3,400 kcal/h, 13,491 BTU/h)	
Radiator	Type	Fin and tube type	
	Core dimensions	400 x 247.5 x 32 mm (15.75 x 9.74 x 1.26 in)	
	Cooling capacity	5.408 kW (4,650 kcal/h, 18,451 BTU/h)	
Water pump	Discharge performance (12 V)	Discharge	15 ℓ (4.0 US gal, 3.3 Imp gal)/min.
		Total water head	2.0 mAq (6.6 ftAq)
	Motor	50W (Hi), 20W (Lo)	
Relay	Standards	12 V, Normal open	
	Dropping resistor	15 W, 1 Ω	
Coolant capacity		1.9 ℓ (2.0 US qt, 1.7 Imp qt)	

2. Intercooler

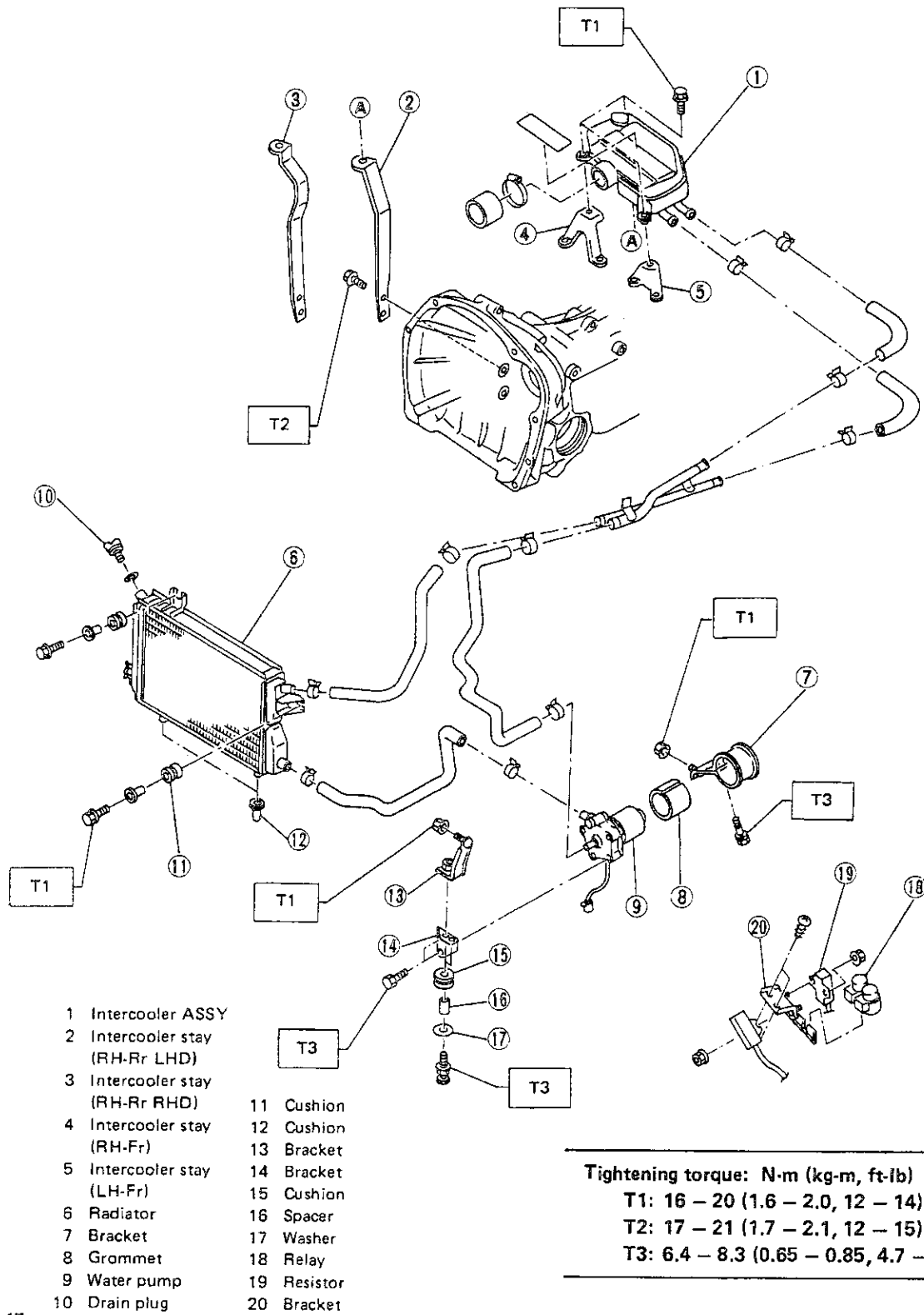


Fig. 47