
WATER PUMP [FULL-AUTO AIR CONDITIONER]

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Purpose

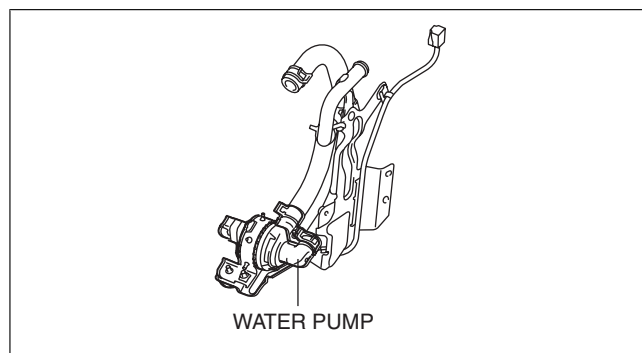
- While the engine is stopped by the i-stop control in a cold environment, the water pump maintains the heating performance for a certain period.
- By ensuring the heating performance using the water pump, the engine-stop period by the i-stop control is extended (**approx. 120 s**).

Function

- The water pump circulates hot engine coolant and sends it to the heater core in the A/C unit.
- When all of the following conditions are met, the climate control unit drives the water pump.
 - Engine currently stopped by i-stop control
 - Airflow mode is in either BI-LEVEL, HEAT, DEF/HEAT, or DEFROSTER mode
 - Ambient temperature is lower than the estimated driver-side airflow temperature (when air intake mode is at FRESH)
 - Cabin temperature is lower than the estimated driver-side airflow temperature (when air intake mode is at REC)
- The climate control unit calculates the estimated driver-side airflow temperature based on the following signals:
 - Evaporator temperature signal

Construction

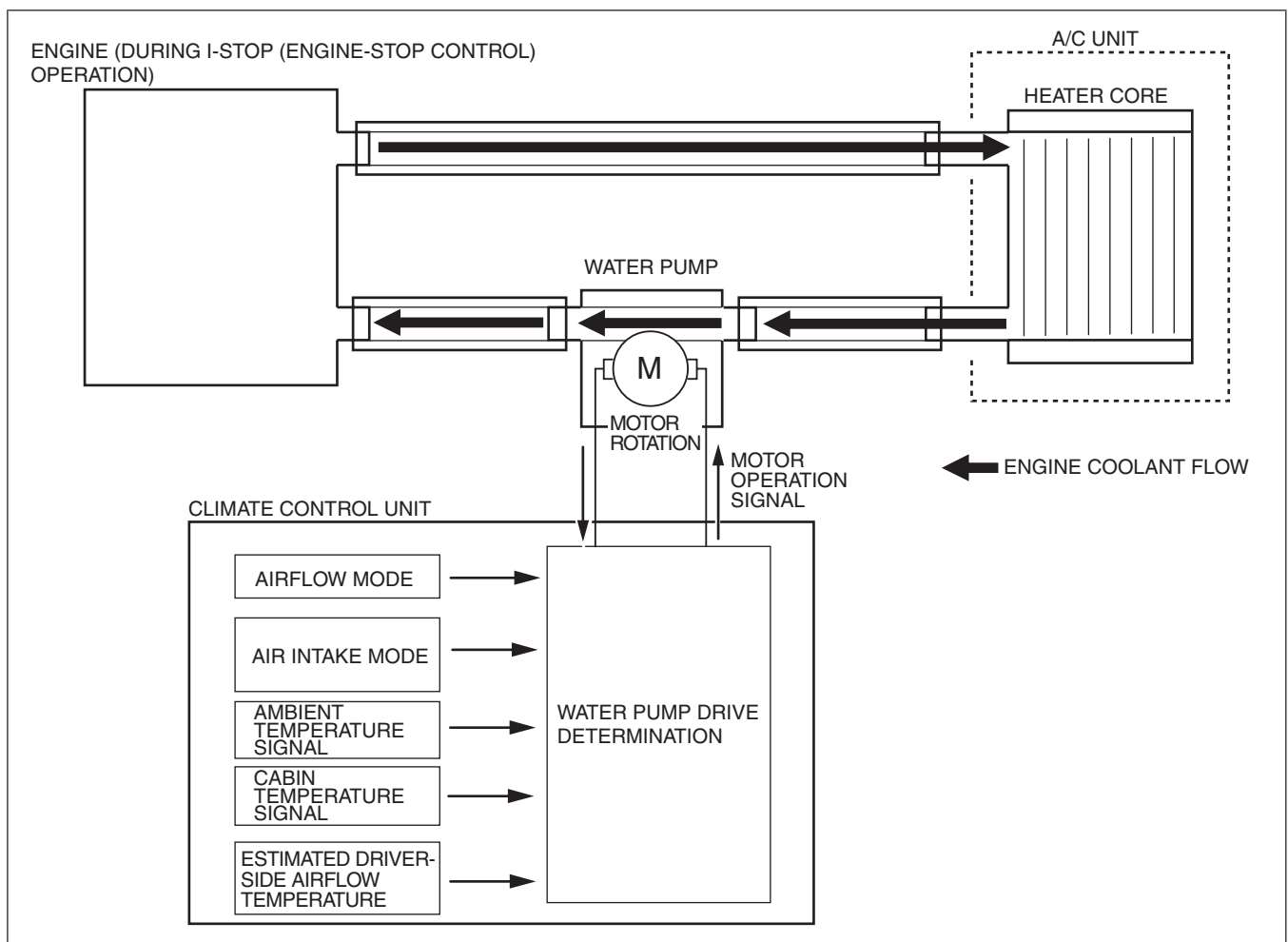
- The water pump is installed in the engine compartment and located between the engine and the A/C unit.



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Operation

1. The water pump rotates the motor according to the operation signal from the climate control unit.
2. When the motor rotates, the engine coolant warmed by the engine heat is sent to the heater core.
3. By sending engine coolant to the heater core using the motor even though the engine is stopped, the heating performance is maintained temporarily.



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Fail-safe

- Function not equipped.