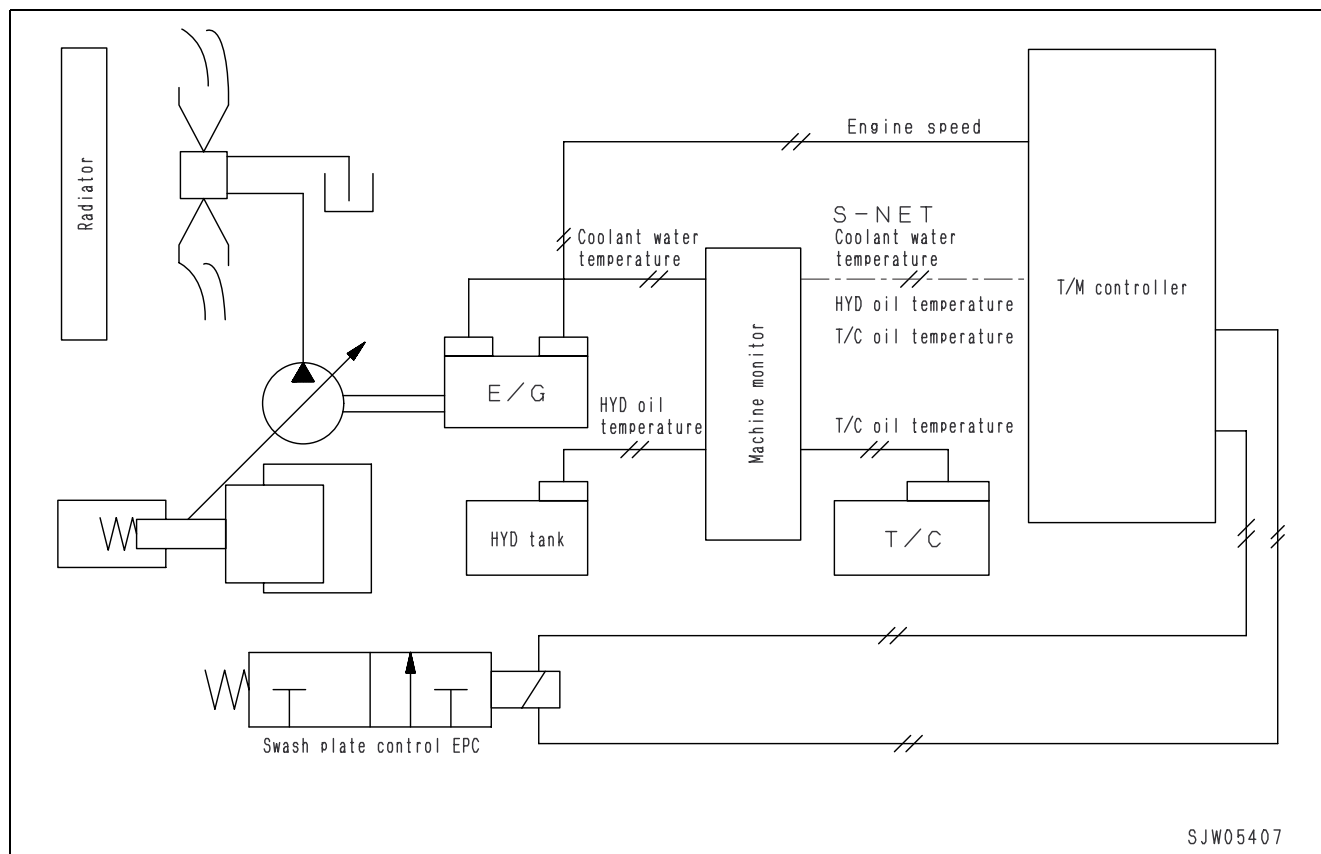


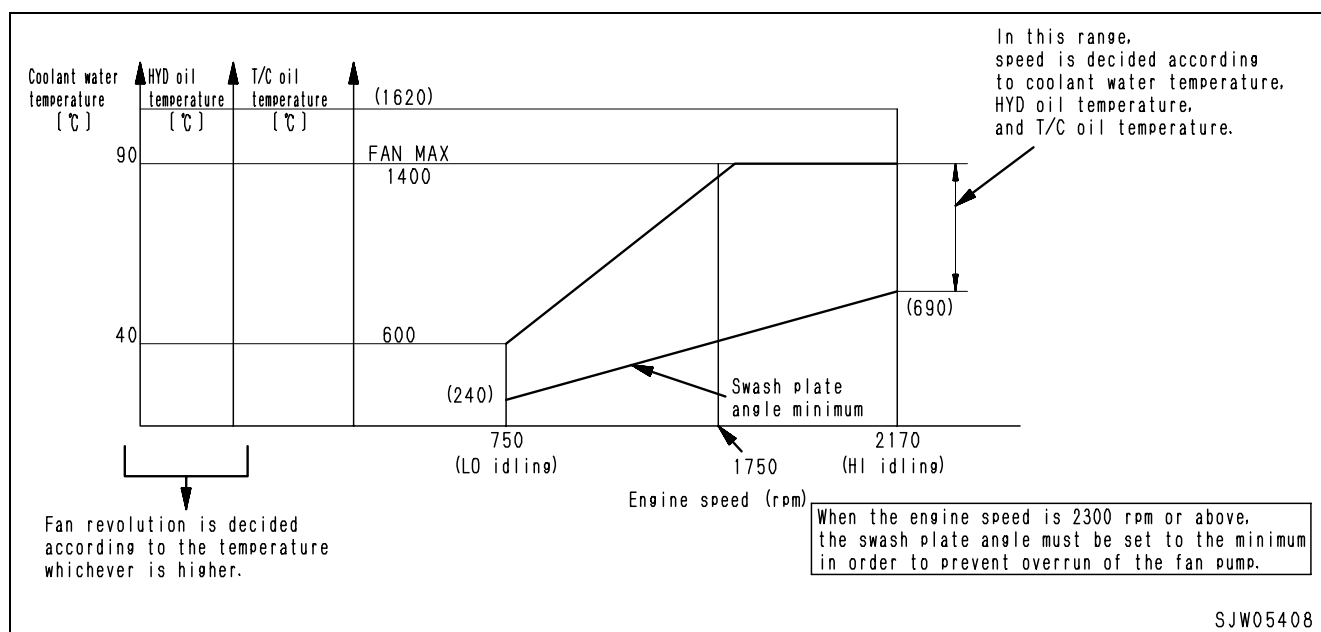
## 8. Cooling Fan Control Function

### 1) Fan control

This system reduces loss of horsepower and noise at low temperature by employing the hydraulic drive for the cooling fan and controlling the swash plate of the hydraulic pump swash.



Engine water temperature, operating oil temperature and oil temperature of the torque converter detected by the machine monitor are sent to the transmission controller via the network. Upon receiving above information, the transmission controller turns on a fan revolution suitable to the temperature and engine speed by controlling the swash plate of the hydraulic pump by use of electric current.



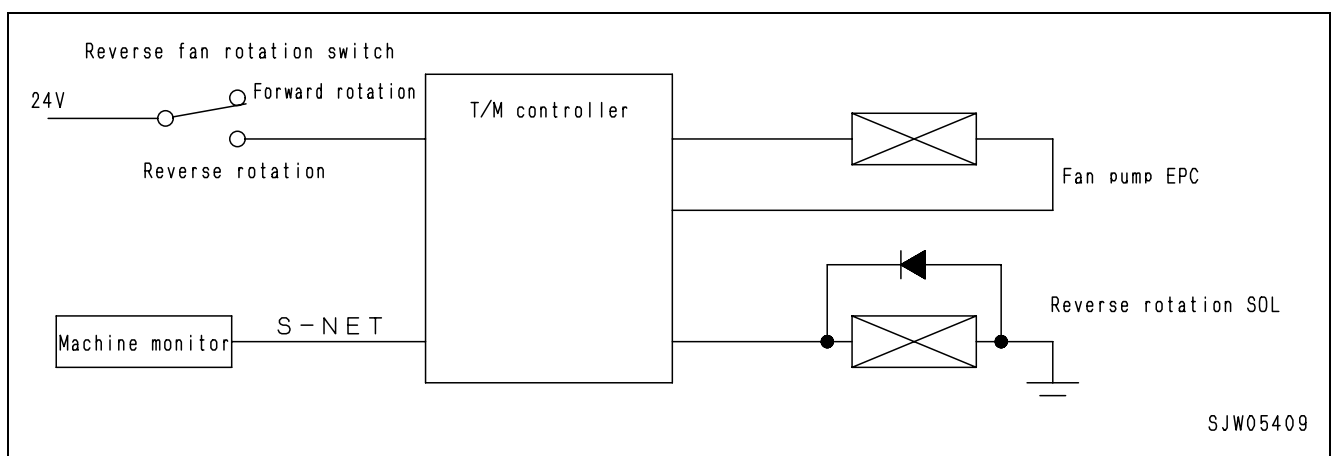
## 2) Control of reverse fan rotation

You can reverse rotate the fan from the reverse fan rotation switch by activating the reverse rotation solenoid for the hydraulically driven fan.

When the engine speed is 1,500 rpm or greater, this system increases the radiator cleaning capability of the reverse rotated fan by setting both the fan pump swash plate and the fan revolution to the maximum. When the engine revolution is less than 1,500 rpm, the fan pump swash plate is set to the minimum in order to suppress generation of surge oil pressure due to reversing of the circuit at engine stop.

Note that switching between the forward and reverse rotation is available only when the engine is stopped.

Even if you may try to cause switching between the forward and reverse rotation while the engine is in operation (when the engine speed is 500 rpm or above), operation signal is not output from the reverse rotation solenoid



Output from reverse rotation SOL (before switch operation)	Reverse fan rotation switch	Engine speed	Output from reverse rotation SOL	Output from fan pump EPC	Monitor indicator
OFF	OFF→ON	Stopped (less than 500 rpm)	ON	MIN rotation	OFF→ON
OFF	ON→OFF		OFF	Normal	Blinking→OFF
ON	OFF→ON		ON	MIN rotation	Blinking→ON
ON	ON→OFF		OFF	Normal	ON→OFF
OFF	OFF→ON	Started (500 rpm or above)	OFF	Normal	OFF→Blinking
OFF	ON→OFF		OFF	Normal	Blinking→OFF
ON	OFF→ON		ON	※	Blinking→ON
ON	ON→OFF		ON	※	ON→Blinking

※: Output from the fan pump EPC while the fan is in reverse rotation

Engine speed	Less than 1,500 rpm	1,500 rpm or above
EPC control	MIN rotation	MAX rotation