



SUMP/RETARDER TEMPERATURE INDICATOR OUTPUT B

ALLISON 6TH GENERATION CONTROLS

Sump/Retarder Temperature Indicator is used to alert the operator when the transmission temperatures have exceeded specified limits.

The table below lists the wiring schematics for Output B: Sump/Retarder Temperature Indicator:

TYPE OF ACTIVATION	PRODUCT FAMILY	OUTPUT	
		ID	WIRE
Sump Temperature	1000/2000	B	164
Sump/Retarder Temperature	3000, 4000	B	164

SUMP/RETARDER TEMPERATURE INDICATOR

OUTPUT B: WIRE 164

APPLICABLE TRANSMISSIONS: 1000/2000 Product Family

DESCRIPTION: This output function is activated by the TCM switching wire 164 from open to ground when the TCM detects one of the following over-temperature conditions in the sump:

- 121° C (250° F) for 15 minutes
- 128° C (262° F) for 1 minute
- 132° C (270° F) for 3 seconds

Upshifts beyond 4th range are inhibited when the sump temperature exceeds 128° C (262° F).

When the over-temperature condition is no longer present, the TCM deactivates the indicator by switching wire 164 from ground to open. A diagnostic code will also be registered in memory each time the function is activated by sump over-temperature.

The Converter Over-Temperature Warning Protection feature will activate Output B when the transmission controls detect a high temperature condition in the converter. The warning is deactivated when the potentially damaging condition no longer exists. This implementation does not register a diagnostic code in memory.

An SAE J1939 message is available as an alternative means to actuate this indicator. Refer to [Datalink Communications](#) for details.

USES: Turn on dash indicator or alarm when transmission temperature has exceeded specified limits. Use of the function, either by wire 164 or by J1939 interface, is recommended for all transmission installations.

CUSTOMER MODIFIABLE CONSTANTS:

- Enable GPO Bulb Check Logic

Default Value

No

Allowable Range

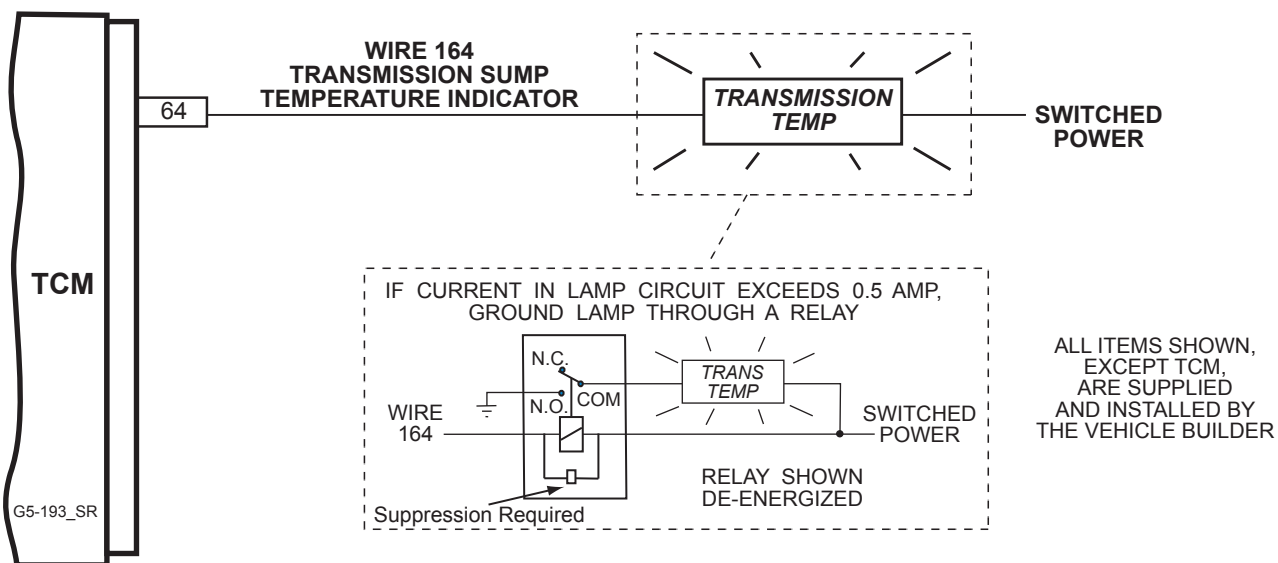
Yes, No

VOCATIONS: Various

FUNCTION RESPONSE TO TCM POWER INTERRUPTION (power-off, followed by power restored):

Power off: Indicator (wire 164) deactivated

Power restored: Indicator (wire 164) re-activated if conditions warrant



WARNING! This schematic shows the intended use of the specified controls feature which has been validated in the configuration shown. Any miswiring or use of this feature which differs from that shown could result in damage to equipment or property, serious personal injury, or death. **Allison Transmission is not liable for consequences associated with miswiring or unintended use of this feature.**

SUMP/RETARDER TEMPERATURE INDICATOR

OUTPUT B: WIRE 164

APPLICABLE TRANSMISSIONS: 3000 Product Family, 4000 Product Family

DESCRIPTION: This output function is activated by the TCM switching wire 164 from open to ground when the TCM detects one of the following over-temperature conditions in the sump:

- 121° C (250° F) for 15 minutes
- 128° C (262° F) for 1 minute
- 132° C (270° F) for 3 seconds

Additionally, for retarder-equipped transmissions:

- 166° C (330° F) retarder out, instantaneously

When the over-temperature condition is no longer present, the TCM deactivates the indicator by switching wire 164 from ground to open. A diagnostic code will also be registered in memory each time the function is activated.

An SAE J1939 message is available as an alternative means to actuate this indicator. Refer to [Datalink Communications](#) for details.

USES: To turn on dash indicator or alarm when transmission temperature has exceeded specified limits. Use of the function, either by wire 164 or by J1939 interface, is as follows:

- Required for all retarder-equipped transmissions, except those used in transit bus duty
- Required for all 7-speed models in the 3000 Product Family
- Recommended for all other applications, including retarder-equipped models in transit buses

CUSTOMER MODIFIABLE CONSTANTS:

- Enable GPO Bulb Check Logic

Default Value

No

Allowable Range

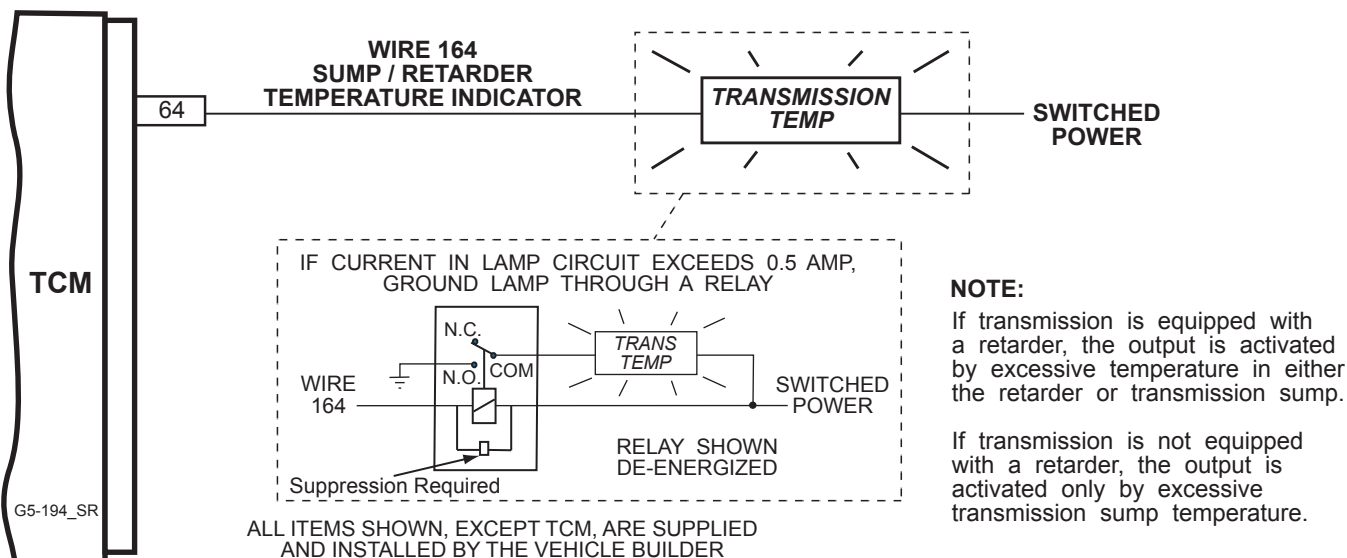
Yes, No

VOCATIONS: Various

FUNCTION RESPONSE TO TCM POWER INTERRUPTION (power-off, followed by power restored):

Power off: Indicator (wire 164) deactivated

Power restored: Indicator (wire 164) re-activated if conditions warrant



WARNING! This schematic shows the intended use of the specified controls feature which has been validated in the configuration shown. Any miswiring or use of this feature which differs from that shown could result in damage to equipment or property, serious personal injury, or death. **Allison Transmission is not liable for consequences associated with miswiring or unintended use of this feature.**

REFERENCED DOCUMENTS

- [Datalink Communications](#)
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REVISION HISTORY

Output B: Sump/Retarder Temperature Indicator

April 20, 2022

- Changed the over-temperature conditions for 128° C, to “1 minute” was “1.5 minutes”.

May 13, 2021

- Created new document for Allison 6th Generation Controls Output B: Sump/Retarder Temperature Indicator.