

Engine Power Reduction with CVT Fluid Temperature Surge

Affected Departments: Management, Service, Parts

This Technical Service Bulletin is to assist you in determining the corrective action needed when encountering a complaint of reduction in engine power output.


1. APPLICABLE MODELS

A6B424 (2010 - 2013 Kizashi)
RW420 (2010 - 2013 SX4)

2. CONDITION

The driver may identify a concern of reduced engine power due to the continuously variable transmission (CVT) temperature protection control system activating when CVT fluid temperatures exceed 270°F (133°C).

When the CVT temperature protection control system activates in the 2012 and earlier models, the driver will notice a reduction in engine power and the engine RPM will not increase, even with additional throttle application. The driver will also notice a reduction in acceleration compared with normal driving conditions.

In addition to the power reduction described above, on the 2013 model-year only the transaxle warning light will blink  on the instrument panel.

NOTE:

Activation of the CVT temperature protection control system will not result in a DTC being stored for diagnostic purposes. When above symptom occurs, engine power output will return to normal levels if the driver parks the car and stops the engine for approximately 30 minutes.

3. CAUSE

The following limited conditions can contribute to increased CVT fluid temperatures and activation of the CVT temperature protection control system.

Condition #1

In extreme driving conditions, the CVT fluid temperature may exceed 270°F (133°C): In summer (when ambient temperatures are high); when the vehicle is driven for extended periods of time (60 minutes or longer); at freeway speeds; in hilly or mountainous terrain with grades in excess of 5%; and with CVT fluid that has deteriorated due to mileage in excess of 30,000 miles.

Condition #2

CVT fluid temperature may exceed 270°F (133°C) regardless of seasonality (ambient temperature), operating the vehicle for extended periods of time (of approximately 30 minutes or longer) in normal city or highway driving conditions due to malfunction of the transmission control module (TCM).

4. FIELD CORRECTION

Based on the conditions described above, take the following action:

Condition #1

Replace the CVT fluid with Suzuki CVT Fluid Green1 (P/N 990B0-01002) or Shell Green-1V.

Condition #2

- Check the TCM for a DTC. If a DTC is not detected, replace the TCM with a new one.
- If a DTC is detected, diagnose the DTC by following the appropriate service manual instructions.

Model	TCM Part Number
A6B424 2WD 10MY	38880-57L61
A6B424 4WD 10MY	38880-57L71
A6B424 2WD 11MY	38880-57L91
A6B424 4WD 11MY	38880-57LA0
A6B424 2WD 12MY	38880-57LB1
A6B424 4WD 12MY	38880-57LC1
A6B424 2WD 13MY	38880-57LE0
A6B424 4WD 13MY	38880-57LF0
RW420 2WD 10MY	38880-54LG3
RW420 4WD 10MY	38880-54LH3
RW420 2WD 11MY	38880-54LJ1
RW420 4WD 11MY	38880-54LK0
RW420 2WD 12MY	38880-54LL1
RW420 4WD 12MY	38880-54LM1
RW420 2WD 13MY	38880-54LN0
RW420 4WD 13MY	38880-54LP0

5. REMARKS

Instructions for CVT fluid maintenance are contained in the Owner's Manual and the Service Manual.

Owner's Manual: If the customer drives the vehicle at high speed or at high engine RPM, inspect and replace the fluid as necessary.

Service Manual: Inspect and clean the CVT fluid every 15,625 miles and add, adjust or replace as necessary.

6. CVT FLUID CHANGE & CHECK PROCEDURE

- 1) Bring the CVT fluid to a normal operating temperature of 158 - 176°F (70 - 80°C). Use the SDT or SDT2 to confirm normal operating temperature.
- 2) Drain the CVT fluid by removing the CVT fluid pan drain plug.
- 3) Refill the CVT oil pan with three quarts of Suzuki CVT Fluid Green1 (P/N 990B0-01002) or Shell Green1-V.
- 4) Start the engine and apply the brake, then slowly move the select lever from **Park** to **Reverse** to **Neutral** to **Drive** to **M1**.
 - Reverse the order, moving the select lever from **M1** to **Drive** to **Neutral** to **Reverse** to **Park**.
 - Repeat this shifting pattern two additional times for a total of three shift cycles. When completed, turn the engine OFF.
- 5) Drain the CVT fluid by removing the CVT fluid pan drain plug.
- 6) Refill the CVT oil pan with three quarts of Suzuki CVT Fluid Green1 (P/N 990B0-01002) or Shell Green1-V.
- 7) Start the engine and apply the brake, then slowly move the select lever from **Park** to **Reverse** to **Neutral** to **Drive** to **M1**.
 - Reverse the order, moving the select lever from **M1** to **Drive** to **Neutral** to **Reverse** to **Park**.
 - Repeat this shifting pattern two additional times for a total of three shift cycles. When completed, turn the engine OFF.
- 8) Drain the CVT Fluid by removing the CVT fluid pan drain plug. Torque the CVT fluid drain plug to 34 N•m (25.0 lbf-ft).
- 9) Refill the CVT oil pan with three quarts of Suzuki CVT Fluid Green1 (P/N 990B0-01002) Shell Green1-V.
- 10) Start the engine and apply the brake, then slowly move the select lever from **Park** to **Reverse** to **Neutral** to **Drive** to **M1**.
 - Reverse the order moving the select lever from **M1** to **Drive** to **Neutral** to **Reverse** to **Park**.
 - Repeat this shifting pattern two additional times for a total of three shift cycles.
- 11) Be certain the vehicle is on a level surface and CVT Fluid is at normal operating temperature, 158 - 176°F (70 - 80°C). Then check and adjust the CVT fluid level using the oil level gauge. If necessary, adjust the fluid level as illustrated below.

