

ATTENTION:

GENERAL MANAGER ☐
 PARTS MANAGER ☐
 CLAIMS PERSONNEL ☐
 SERVICE MANAGER ☐

IMPORTANT - All
 Service Personnel
 Should Read and
 Initial in the boxes
 provided, right.

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SUBARU

QUALITY DRIVEN® SERVICE

SERVICE BULLETIN

APPLICABILITY: 2018-25 Legacy 2.5L
 2018+ Outback 2.5L
 2017+ Impreza
 2018+ Crosstrek(Non-Hybrid)
 2019+ Forester(Non-Hybrid)

NUMBER: 16-158-26

DATE: 08/20/26

SUBJECT: TR580 Chain Slip Judder, Shudder,
 & Hesitation Concerns

INTRODUCTION:

This bulletin provides guidance when diagnosing chain slip, judder, shudder, and hesitation concerns on the TR580 model CVT transmissions used in the models listed above. The information below outlines the diagnostic flow in addition to the previously released related reference material. Always refer to the information within this bulletin prior to any other previously released material when addressing chain slip, judder, shudder, and hesitation concerns experienced by a customer.

SERVICE BULLETIN SUMMARY TABLE:

The following table below displays TR580 DTC related bulletins. Use this table as a reference, as you may be directed to one of these documents using the service procedure information in this bulletin.

Current Reprogramming File Improvement Description (Always refer to Applicable TSB for Details)	Applicable TSB
CVT Control Valve Body Design Change P2757, P2762, & P06EF	16-156-25
Reprogramming Files for DTC P0A12	16-153-25
TR580 Control Valve & Connector Cover / DTCs P2721, P2763, P0974, & P0977	16-149-25
Diagnostic Information for Alleged Chain Slip Condition on TR580 / TR690 Transmissions	16-132-20
TCM Reprogramming Files / Engine Speed Drop	16-147-24
Updated CVT Diagnostics for DTCs	16-131-20
DTC P0730, Erratic Upshifting Concerns TCM Reprogramming File Availability	16-130-20
DTCs P0730, P0746, P0747, P0841, P0846, P0867, P1867, P1894, and P2723 Service Manual Correction	18-241-26
DTC P0851 and P0852 / Diagnostic Procedure	16-159-26

**CAUTION: VEHICLE SERVICING PERFORMED BY UNTRAINED PERSONS COULD
 RESULT IN SERIOUS INJURY TO THOSE PERSONS OR TO OTHERS.**

Subaru Service Bulletins are intended for use by professional technicians ONLY. They are written to inform those technicians of conditions that may occur in some vehicles, or to provide information that could assist in the proper servicing of the vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do the job correctly and safely. If a condition is described, DO NOT assume that this Service Bulletin applies to your vehicle, or that your vehicle will have that condition.

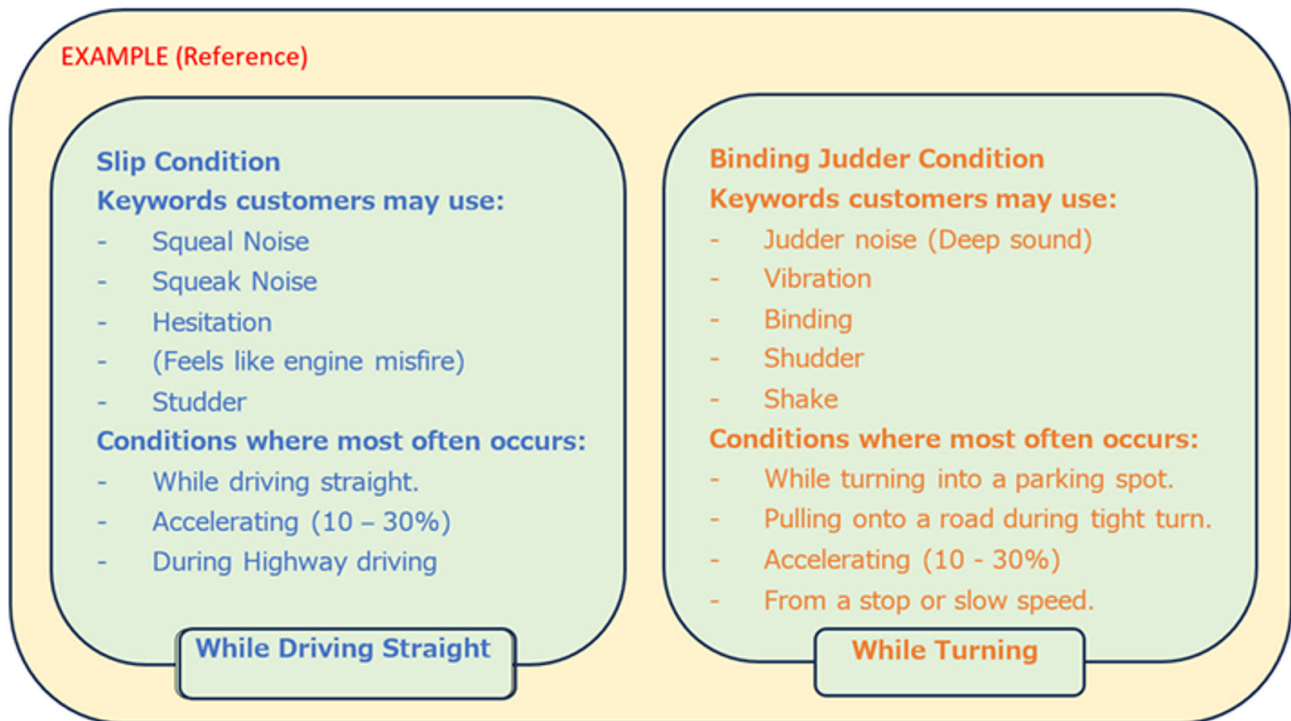
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ISO 14001 is the international standard for excellence in Environmental Management Systems. Please recycle or dispose of automotive products in a manner that is friendly to our environment and in accordance with all local, state and federal laws and regulations.

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CUSTOMER INTERVIEW INFORMATION:

The customer interview is a vital part of performing an accurate diagnosis. Listed below are examples of key wording/phrasing and conditions to help accurately pinpoint the appropriate diagnostic strategy. When interviewing the customer, referencing the diagram below will help both the customer and retailer grasp the type of condition to be considered for diagnosis.



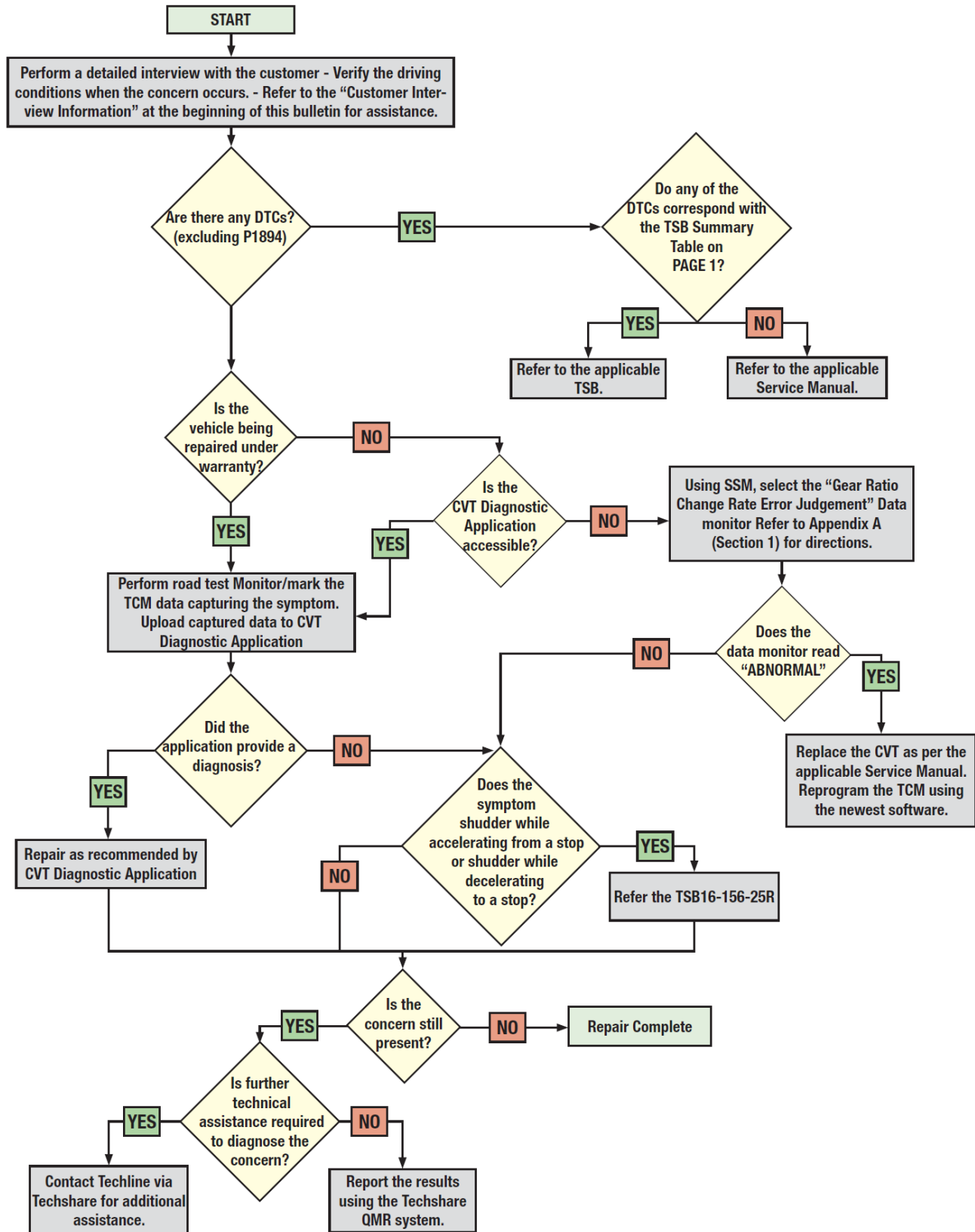
NOTE: This bulletin requires a test drive for concern replication. Technicians must follow instructions, refer to relevant appendices, and record data using the Select Monitor. This ensures accurate diagnosis and avoids repetitive test drives.

To ensure all necessary data is collected during the road test, record ALL TCM PIDS.

A CVT Diagnostic Assistance Application was developed to support technicians diagnosing CVT-related concerns for potential repair under a Subaru warranty. Use of the application is required when performing work that will be claimed under warranty. If the tool is unavailable or if a technician prefers to review data manually for a non-warranty repair, then following the standard diagnostic flow remains an acceptable approach.

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TR580 DRIVABILITY CONCERN DIAGNOSTIC PROCEDURE:



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WARRANTY / CLAIM INFORMATION:

For vehicles within the Basic New Car Limited Warranty period or covered by an active Subaru Added Security Classic or Gold plan, this repair may be submitted using the following claim information:

A CVT Diagnostic Assistance Application was developed to support technicians diagnosing CVT-related concerns for potential repair under a Subaru warranty. Use of the application is required when performing work that will be claimed under warranty. If the tool is unavailable, or if a technician prefers to review data manually for a non-warranty repair, then following the standard diagnostic flow remains an acceptable approach.

NOTE: For warranty purposes, the CVT Application must be used during diagnosis. Additionally, the Diagnostic ID generated by the CVT Application must be recorded in the “Miscellaneous” section of the warranty claim.

NO	Diagnosed Symptoms	Details of symptoms
1	FORWARD CLUTCH Judder	A judder or engine RPM increase is felt during light acceleration from a stable speed. This is caused by a difference between Secondary Revolution Speed and Front Wheel Speed due to a FWD clutch speed variation.
2	LOCK-UP Judder	A juddering sensation during acceleration from low speeds to 50 mph, likely caused by wear in the torque converter lock-up clutch.
3	SHOCK AFTER LOCK-UP	A shock is felt after the torque converter lock-up clutch engages. (Lower speeds between 0-40 mph)

Warranty Type	Labor Description	Labor Operation #	Labor Time	Skill Level
WC / SAS	SOA TECHSHARE CVT DIAGNOSIS	C303707	0.6h	SG2 / SL4

(This can be found in Labor Time Guide as a C operation under the component repair)

The Skill Group and Skill Level listed in this bulletin define the qualifications recommended for this work. Repairs should be dispatched to a technician who is trained at the specified level. For more information on Labor Operation Skill Group/Level assignments, [click here to access the Gear Reduction](#). To request a Skill Group/Skill Level change, [fill out this form](#).

IMPORTANT REMINDERS:

- SOA strongly discourages the printing and/or local storage of service information as previously released information and electronic publications may be updated at any time.
- Always check for any open recalls or campaigns anytime a vehicle is in for servicing.
- Always refer to STIS for the latest service information before performing any repairs.

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APPENDIX A

Function of “Gear Ratio Change Rate Error Judgement”

Description: When feeling shocks or vehicle body vibrations during acceleration, this function will support the diagnostic process to determine whether a chain slip occurs in the CVT or not.

Precautions for road testing:

- • Use a USB cable to connect the DST-i or DST-010 to a PC. Wireless communication may lead to a wrong determination
- • When driving on public roads, pay attention to the surrounding traffic conditions and drive safely in compliance with the law.
- • To ensure accurate detection of abnormal gear ratio changes, please refrain from the following actions during the test drive:
 - Sudden deceleration or acceleration
 - Driving on rough roads
 - Driving the vehicle with the four wheels not stably contacting the ground, such as driving over bumps and/or putting the vehicle on lift before completing the detection process.

SSM Workflow

1. On the [Start] screen, select [Diagnosis].
2. On the [Select Vehicle] screen, enter the vehicle information and select [Confirm].
3. On the [Main Menu] screen, select [Each System].
4. On the [Select System] screen, select [Transmission].
5. On the [Select Function] screen, select [Work Support].
6. On the [Work Support] screen, select [Gear Ratio Change Rate Error Judgement].
7. Follow the instructions displayed on the screen and perform a road test.
8. Once the concern is replicated, end the testing and the results will automatically populate. When the message “Gear Ratio Change Rate Error Judgment is Complete” is displayed, the detection process has finished. Testing automatically ends after a time period of approximately 50 minutes. If an additional measurement is desired, restart the Subaru Select Monitor after saving the data.

No.	Accelerator Opening Degree	Vehicle Speed	Number Of Times Implemented	Note
1	30%	0 to 30mph	Each 1 time	If the customers' suggestions are specific, such as vehicle speed and accel pedal opening, implement that driving pattern.
2	50%	0 to 30mph		
3	100%	0 to 30mph		
4	After maintaining a constant vehicle speed for 20 seconds at the speed shown on the right, increase accelerator pedal position by an additional 10%.	30(constant speed) to 40mph		
5		30(constant speed) to 40mph		
6		30(constant speed) to 40mph		

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APPENDIX B

CVT Chain Slip Diagnosis Procedure:

There are three main forms of CVT chain slip.

1. Continuous Micro-Slip
2. Short-Time Slip
3. Long-Time Slip

Using Subaru Select Monitor (SSM), check and record data monitors and compare them to the three examples listed below. If the recorded data from the vehicle matches the examples below, the CVT will require replacement. The SSM data will be required for claim submission. A QMR containing the same information will also be required.

1. Continuous Micro-Slip

Judgement Criteria

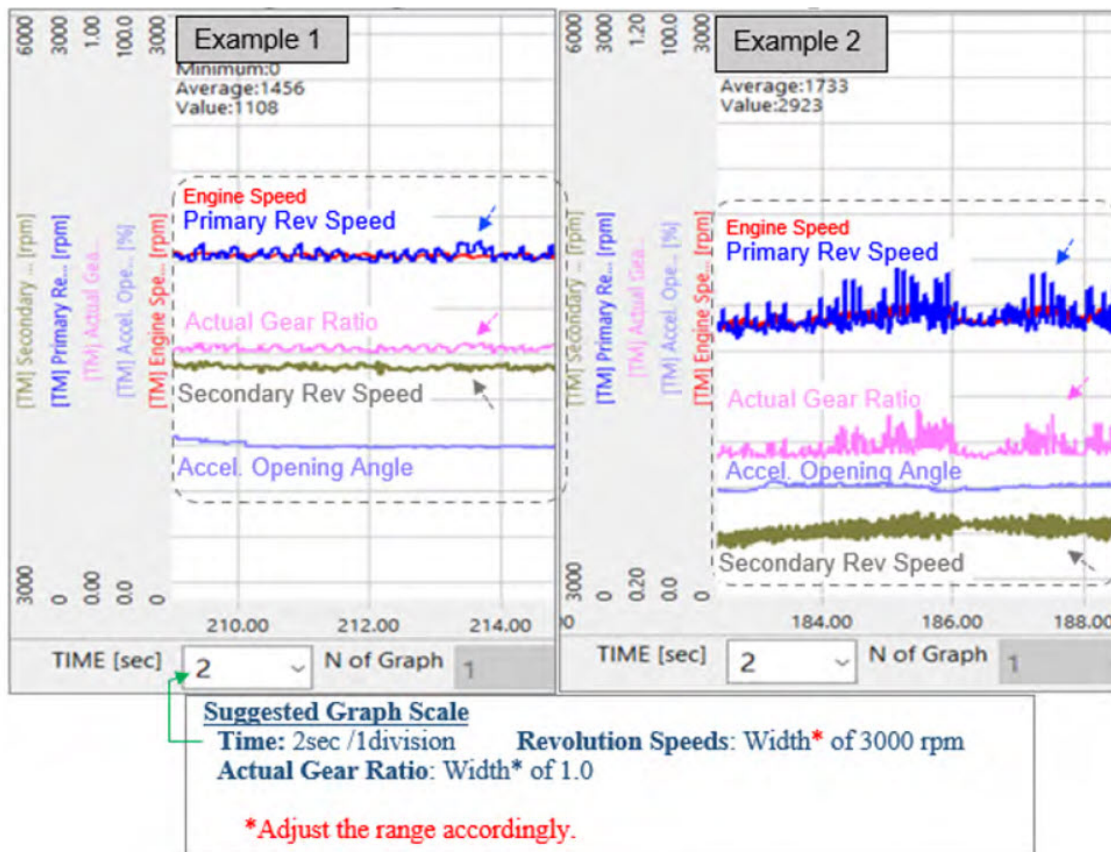
During a continuous micro-slip, while the Accelerator Opening Angle monitor displays a stable value for more than one second, there are fluctuations in the Actual Gear Ratio monitor:

Peak to Peak > 0.02 Frequency > 2 cycles per 1 second

There are fluctuations in the Primary Rev Speed and/or Secondary Rev Speed monitor:

Peak to Peak > 50 rpm Frequency > 3 cycles per 1 second

Examples of the data monitoring during Continuous Micro-Slip:

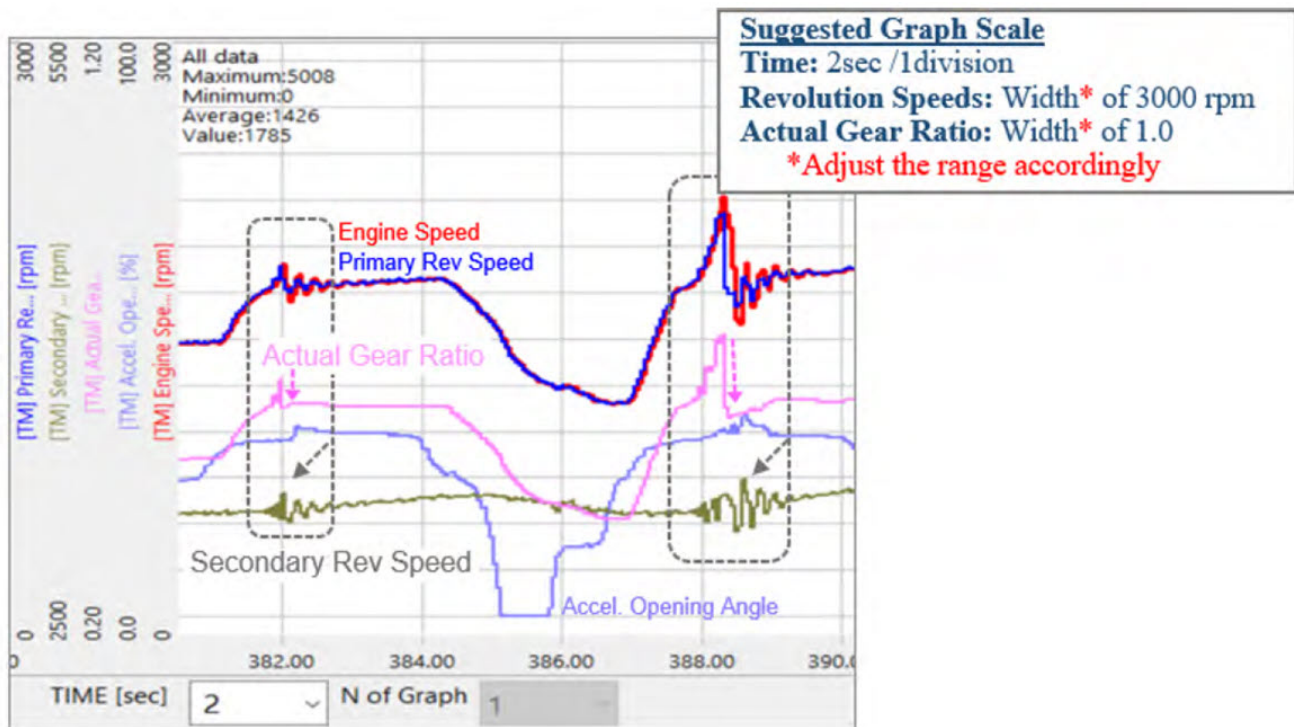


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2. Short-Time Slip

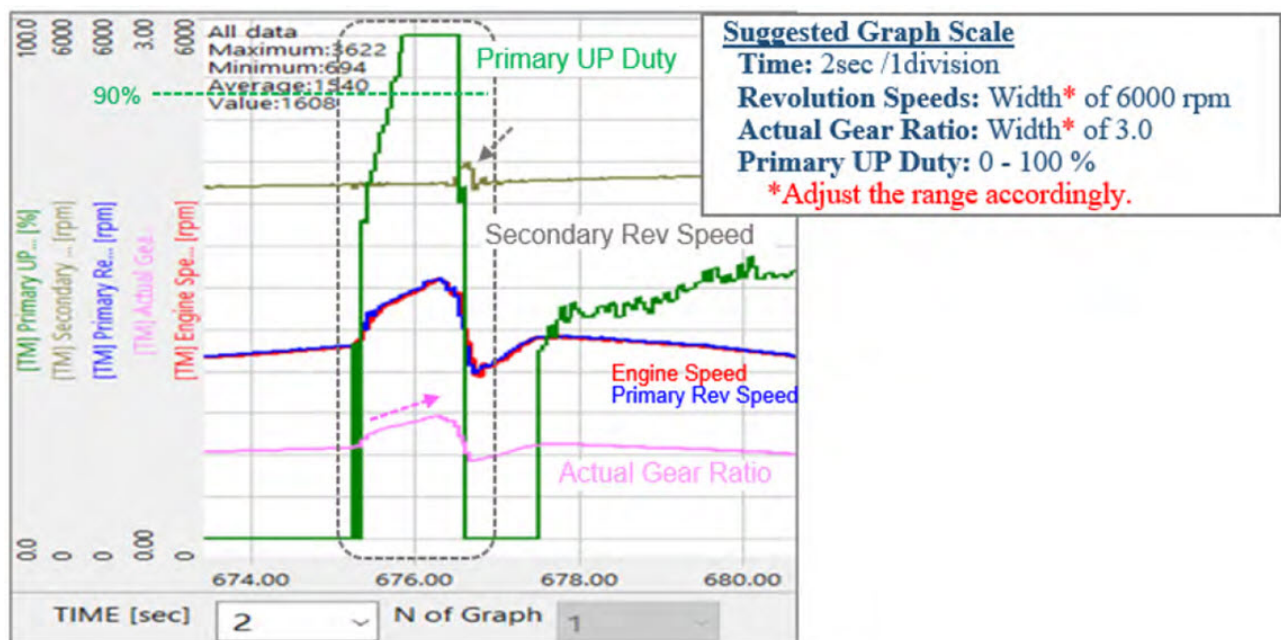
When a short-time slip occurs, the changes in the Actual Gear Ratio monitor will be larger than 0.1 per 0.1 second. After the Actual Gear Ratio monitor resumes to stable conditions, distinct fluctuations in revolution speed continue.

Example Graph of Short Time Slip:



3. Long-Time Slip

When a long-time slip occurs, the Primary UP Duty monitor will be larger than 90% and the Actual Pulley Ratio monitor lowers for a duration of 0.5 seconds or more. Even after the Actual Gear Ratio monitor resumes to stable conditions, distinct fluctuations in revolution speed continues.



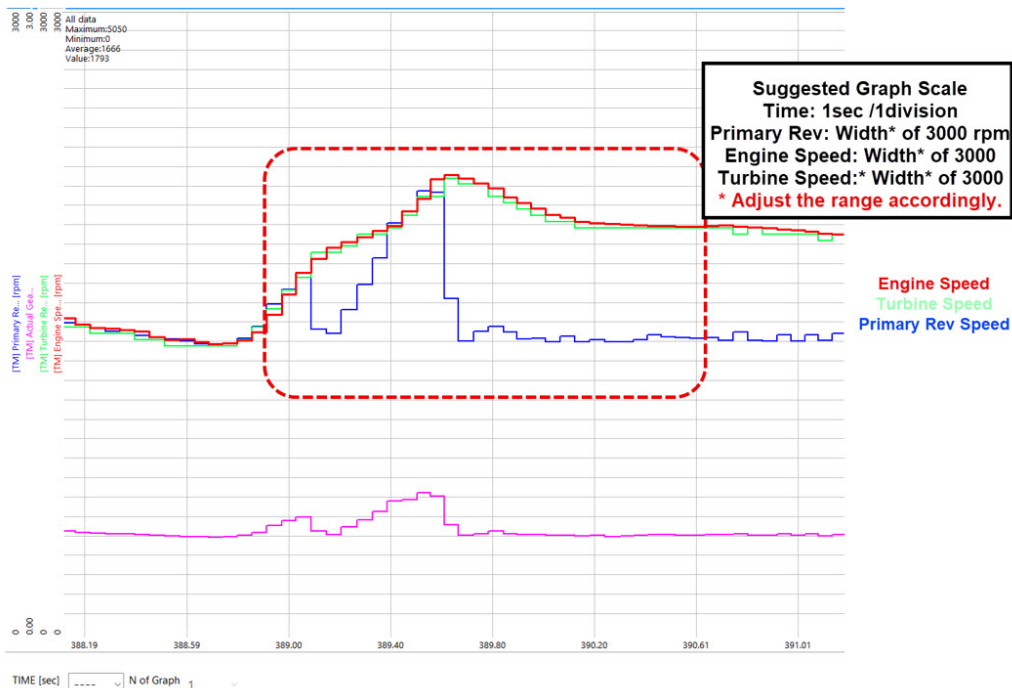
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REFERENCE MATERIAL:

Symptoms Similar to CVT Chain Slip:

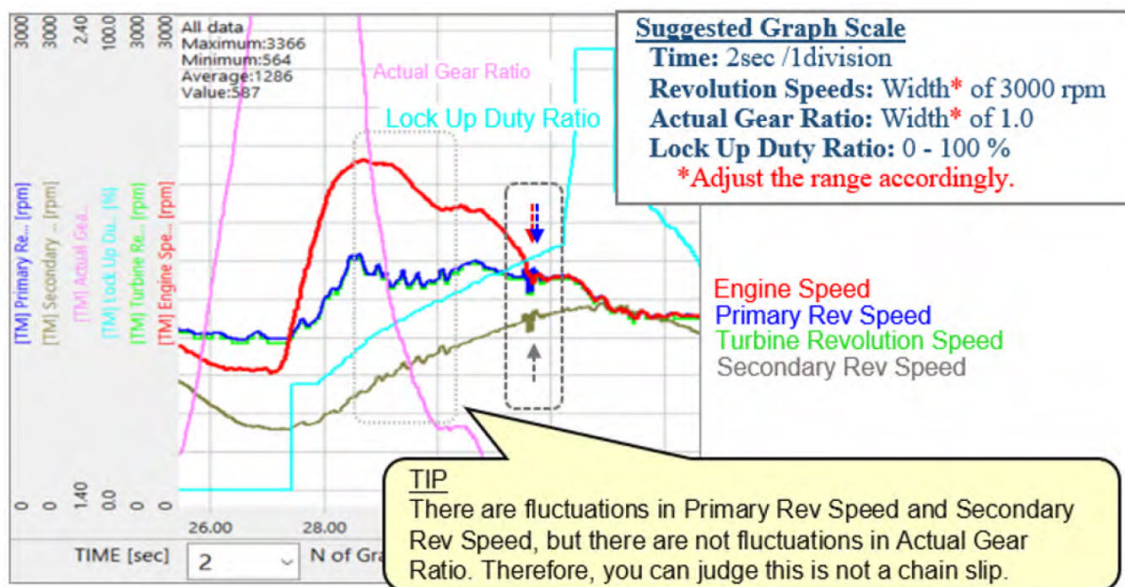
1. Forward Clutch Slip Shock

The rotation speeds for the upstream and downstream sides of the forward clutch do not synchronize when driving.



2. Lock Up Clutch Engagement Shock:

This shock can occur when the lock up engages rapidly. If this situation is reported, reprogram the TCM with the newest software available.



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3. Shift Up Shock:

This shock can occur when the CVT upshifts. If this situation is reported, reprogram the TCM with new software if it is available. If there is no new software available or the reprogramming does not remedy the issue, report the situation to Techline.

