

Revisions to this document are noted  
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SIL 19-TR-08, Rev. D  
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**SUBJECT:** Calibration Maximum Gear Range Increase Policy

**MODELS AFFECTED:** 1000, 2000, 3000, and 4000 Product Families

### **Introduction:**

Allison Transmission, Inc. end users often request TCM calibration parameter changes in order to achieve a desired vehicle function or operation. The Service Technology Group at Allison Transmission, Inc. supports calibration changes including customer requests to modify their primary and secondary gear ranges. The intent of this SIL is to inform the Allison Service Channel about the policies and procedures for increasing the maximum gear range attained by the transmission for vehicles in service in the United States and Canada.

### **Maximum Gear Range Increases:**

The maximum gear range is defined as the greatest range attained by the transmission in primary or secondary mode. If a TCM recalibration request is for a maximum gear range increase, Allison Transmission, Inc. must receive documentation that the OEM approves this configuration before a new calibration will be released.

Increasing the maximum gear range increases the driveline speed potential, which is a significant factor that goes into designing the driveline system. As the vehicle integrator, the OEM is responsible for the driveline design; therefore, the approval for a maximum range increase must come from the OEM. Neither Allison Transmission, Inc., nor the vehicle owner can authorize this change.

Increasing the maximum gear range also increases the vehicle's road speed potential, which is a significant factor in tire selection. As the vehicle integrator, the OEM is responsible for determining the maximum speed rating requirements for the vehicle's tires. Some scenarios for increasing the maximum gear range may require that a road speed limit be set on the vehicle to keep the vehicle within the acceptable operating speed rating of the tires. It is the responsibility of the OEM to determine the new maximum gear limited vehicle speed based on the new maximum gear range and OEM supplied tire size and determine if a road speed limit must be set.

All 3000/4000 series transmissions have the ability to achieve 6 speeds; however, only 1000/2000 Series transmissions built after June 28, 2006 contain the necessary hardware to achieve 6 speeds. In addition to the appropriate hardware, specific N/V ratio requirements must be met prior to requesting 6<sup>th</sup> range for the 1000/2000 Series Transmission. For a full explanation of the N/V ratio and a detailed listing of these requirements, refer to an authorized Allison Service Outlet or to the 1000/2000 Product Family Transmission Ratings which can be found on the Allison Extranet under Engineering | Tech Data | Product Ratings and Data | Ratings & Transmission Data: On-Highway Models| 1000/2000 Product Family | Transmission Ratings-1000/2000 Product Family | RATINGS\_12K.pdf.

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*Please Note:* Allison Transmission Service Information Letters are intended for use by professional, trained technicians, not for the "do-it-yourselfer." They are written to inform those technicians of conditions that may occur on some transmission models (or serial numbers ranges) or to provide information that could assist in the proper servicing of a specific Allison transmission. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do a job properly and safely. If a condition is described, do not assume that the Service Information Letter applies to your transmission, or that your transmission has the condition described. Product evolution and information updates are inevitable. Please see your authorized Allison Transmission service dealer or distributor to understand if your particular transmission may benefit from the information contained within the Service Information Letter.



A small number of OEMs are limited to 5 speed 1000/2000 transmission releases. Allison will not be able to release 6 speed calibrations for service for vehicles manufactured by these OEMs.

**OEM Approval:**

For vehicles both in and out of warranty; the Allison Distributor/Dealer is responsible for forwarding a copy of the required documents to the Service Technology Group at the time of the TCM recalibration request. It is likely that the Allison Distributor/Dealer will have to work through an OEM Dealer and/or with the vehicle owner to obtain the appropriate documentation.

Approval must be one of the following items:

A. A Letter/Email

- From the OEM factory (not a Dealer);
- On the OEM's letterhead or clearly identifying the OEM as the email source;
- Stating approval of the change;
- Listing the required lowest maximum speed rating for the vehicle's tires;
- Identifying the name, position, and contact information of the OEM representative approving the change; and
- Containing the VINs and Transmission S/Ns that have been approved for the new gear range.

B. A Calibration Load Track Record of the vehicle's TCM/ECU as previously having a calibration containing the requested range. Calibration load track records are viewable by TCM/ECU Serial Number and are located at the bottom of the Allison Unit History section in the Allison Extranet.

**Potential Drivetrain/Road Noise Increase:**

Prior to TCM recalibration to a higher maximum gear range, the vehicle owner must be notified by the OEM or the requesting distributor/dealer of the potential for an increase in drivetrain/road noise due to the higher gear range.

**Potential for Increased Road Speeds:**

Prior to TCM recalibration to a higher maximum gear range, the vehicle owner must be notified by the OEM or the requesting distributor/dealer of the potential for the vehicle to travel at increased road speeds. The increase in road speed can change the vehicle's performance. There are potential risks involved with increased road speeds including, but not limited to, exceeding the speed rating of the vehicle's tires, increased stopping time, and increased stopping distance. No vehicle should be allowed to operate at speeds in excess of the maximum tire speed rating and must either be gear limited, or road speed limited, to a speed below the tire speed rating.

After the TCM recalibration, the vehicle might not be gear limited to speeds at or below the maximum tire speed rating. It is the responsibility of the OEM and/or Allison Distributor/Dealer to inform the vehicle owner of the lowest tire maximum speed rating that can be safely used on the vehicle after a maximum gear range recalibration. The vehicle owner and any other operator is responsible for utilizing the vehicle at or below the maximum speed rating.

**Documentation Submission:**

Approval documentation should be e-mailed to [Calibration\\_Support@allisontransmission.com](mailto:Calibration_Support@allisontransmission.com). If a calibration request has been submitted on the CSS-Service Calibration Request Tool or Allison Calibration Configuration Tool (ACCT) on the Extranet, include the tracking number on the documentation.

**Note to Distributor/Dealer:**

For vehicles that have already been placed into service, the Vehicle Owner Acknowledgement and Release must be completed and returned to Allison Transmission, Inc. along with OEM approval documentation for a gear range increase. The Vehicle Owner Acknowledgement and Release is not required when calibration changes are made prior to delivery to the first end-user customer. In those cases, the OEM documentation is sufficient to satisfy the request.

**The Vehicle Owner Acknowledgement and Release form is attached to end of this Service Information Letter.**



# VEHICLE OWNER ACKNOWLEDGEMENT AND RELEASE

## Potential Drivetrain/Road Noise Increase

By increasing the maximum gear range of the vehicle's transmission, the vehicle has the potential to exhibit increased drivetrain/road noise.

## Potential for Increased Road Speeds

By increasing the maximum gear range of the vehicles' transmission, the vehicle has the potential to travel at increased road speeds. The increase in road speed can change the vehicle's performance. There are potential risks involved with increased road speeds including, but not limited to, exceeding the speed rating of the vehicle's tires, increased stopping time, and increased stopping distance. Vehicle speed should either be gear limited or road speed limited to a value below the tire speed rating. After the maximum gear range increase, the vehicle might not be gear limited to speeds at or below the maximum tire speed rating. The vehicle owner should assess the tire speed rating to determine if tire replacement is necessary.

I, \_\_\_\_\_, have read the above statements and understand that by increasing the maximum  
(Owner Printed Name)  
gear range of any Allison transmission, including the transmission in vehicle(s) \_\_\_\_\_,  
(VIN \*)  
I understand the vehicle(s) may experience increased drivetrain/road noise and increased road speeds. Additionally, I acknowledge that I have been informed that the vehicle tires must have a speed rating of \_\_\_\_\_ mph or greater, and certify that the tires currently installed meet, and any tires installed hereafter on the vehicle will meet, the aforementioned speed rating. Failure to use properly rated tires could lead to injury or death to myself and other persons, and/or to property damage. Recognizing and accepting these risks and in consideration of Allison Transmission, Inc. providing the requested TCM calibration parameter changes to enable the increased maximum gear range, I hereby **RELEASE AND FULLY DISCHARGE** Allison Transmission, Inc. and each of its direct and indirect affiliates, divisions, parent and subsidiary companies, officers, employees, shareholders, representatives, managers, members, directors, owners, agents, insurers, attorneys, predecessors, successors, and assigns thereof (collectively, the "Released Parties"), from and against all claims, damages, charges, injuries, losses, actions, suits, proceedings, product liability actions, wrongful death actions, warranty actions, breach of contract actions, loss of consortium claims, expenses, and attorney fees that I or anyone on my behalf (including but not limited to my heirs, representatives or next of kin) have or might have for any death, injury, or damage allegedly arising out of, involving or relating to: (1) any drivetrain/road noise; (2) increased road speeds; (3) tire failures occurring after the above requested TCM recalibration and increased maximum gear range; or (4) anything else caused by, resulting from or in any way related to the TCM recalibration or increased maximum gear range. This Release specifically includes, but is not limited to, any claim that the act or omission complained of was **caused in whole or in part by the strict liability or negligence in any form of the Released Parties.**

Owner Signature: \_\_\_\_\_

Date: \_\_\_\_\_

\* If the maximum gear range increase recalibration request includes multiple vehicles, use the lines below to list additional VINs.

_____	_____
_____	_____
_____	_____
_____	_____