

Revisions to this document are noted by a stripe in the left-hand margin

TT8008EN, Rev. B
July, 2017
Page 1 of 6

SUBJECT: P2789 Code in School Buses Equipped with Cummins ISB Natural Gas (NG) Engines

MODELS AFFECTED: Thomas Built School Buses Equipped with Cummins ISB Natural Gas (NG) and 1000/2000 Series Product Family Pupil Transport Series (PTS) Transmissions

Description of Complaint:

The **Check Transmission** light can illuminate due to Diagnostic Trouble Code (DTC) P2789 Clutch Adaptive Learning at Limit in Thomas Built school buses equipped with a 1000 or 2000 Series PTS transmission and a Cummins ISB Natural Gas (NG) engine. The C3 and C4 clutches may be reported as “Not OK” in the “Trans Health Indicator” section of the “Prognostics” tab in Allison DOC® Premium.

Cause:

In some cases, the Cummins ISB Natural Gas (NG) engine is reporting engine torque inaccurately. As a result, the Transmission Control Module (TCM) is unable to accurately adapt the shift causing a shift flare during the 1-2 and 2-3 up-shifts.

Service Channel Procedure:

In buses where the **Check Transmission** light illuminates due to DTC P2789, determine if the VIN is included in [Table 1](#). If included, the authorized Allison outlet will then obtain a field action authorization number. Use [Table 1](#) to determine the appropriate TCM Assembly number to load into the TCM.



NOTE: Before loading the new TCM Assembly Number into the TCM, make note of the Input and Output function and Customer Modifiable Constant (CMC) settings.

Use Allison TCM Reflash™ to load the appropriate TCM Assembly Number into the TCM.

Table 1.

VIN	TCM Assembly Number to Load with Allison TCM Reflash™	Transmission Serial Number
4UZABRE70HCJB1965	61BR0BU7	6311463632
4UZABRE79HCJB1964	61BR0BU7	6311462758
4UZABRE74HCJB1967	61BR0BU7	6311463685
4UZABRE73HCJB1961	61BR0BU7	6311464029
4UZABRE75HCJB1962	61BR0BU7	6311464383

Table 1. (cont'd)

VIN	TCM Assembly Number to Load with Allison TCM Reflash™	Transmission Serial Number
4UZABRE76HCJB1968	61BR0BU7	6311462970
4UZABRE78HCJB1969	61BR0BU7	6311463303
4UZABRE74HCJB1970	61BR0BU7	6311463344
4UZABRE78HCJB1972	61BR0BU7	6311465517
4UZABRE7XHCJB1973	61BR0BU7	6311466574
4UZABRE71HCJB1974	61BR0BU7	6311467077
4UZABRE73HCJB1975	61BR0BU7	6311467139
4UZABRE75HCJB1976	61BR0BU7	6311467142
4UZABRE77HCJB1977	61BR0BU7	6311467151
4UZABRE79HCJB1978	61BR0BU7	6311467437
4UZABRE70HCJB1979	61BR0BU7	6311467439
4UZABRE77HCJB1963	61BR0BU7	6311463676
4UZABRE64HCJA5853	61BR0BU7	6311469012
4UZABRE72HCJB1966	61BR0BU7	6311463795
4UZABRE67HCJA5863	61BR0BU7	6311469798
4UZABRE76HCJB1971	61BR0BU7	6311465273
4UZABRE62HCJB8729	61BR0BU7	6311485081
4UZABRE6XJCJG6775	61BR0BU7	6311498467
4UZABRE69JCJB3775	61BR0BU7	6311488109
4UZABRE63JCJH9562	61BR0BV1	6311504072
4UZABRE6XJCJH9879	61BR0BV2	6311514424
4UZABRE66JCJH9880	61BR0BV2	6311516554
4UZABRE60JCJD1551	61BR0BV2	6311488234
4UZABRE64JCJD1553	61BR0BV2	6311488824
4UZABRE62JCJD1552	61BR0BV2	6311489108
4UZABRE69JCJH9873	61BR0BV2	6311511392
4UZABRE62JCJH9875	61BR0BV2	6311512395
4UZABRE64JCJH9876	61BR0BV2	6311511421
4UZABRE68JCJH9878	61BR0BV2	6311515019
4UZABRE67JCJH9886	61BR0BV2	6311517330
4UZABRE62JCJH9858	61BR0BV2	6311512957
4UZABRE64JCJH9859	61BR0BV2	6311513175
4UZABRE60JCJH9860	61BR0BV2	6311513192
4UZABRE62JCJH9861	61BR0BV2	6311512151

Table 1. (cont'd)

VIN	TCM Assembly Number to Load with Allison TCM Reflash™	Transmission Serial Number
4UZABRE64JCJH9862	61BR0BV2	6311513598
4UZABRE66JCJH9863	61BR0BV2	6311513437
4UZABRE68JCJH9864	61BR0BV2	6311513553
4UZABRE6XJCJH9865	61BR0BV2	6311513622
4UZABRE61JCJH9866	61BR0BV2	6311513617
4UZABRE63JCJH9867	61BR0BV2	6311513643
4UZABRE65JCJH9868	61BR0BV2	6311519226
4UZABRE67JCJH9869	61BR0BV2	6311512387
4UZABRE63JCJH9870	61BR0BV2	6311511093
4UZABRE65JCJH9871	61BR0BV2	6311514106
4UZABRE67JCJH9872	61BR0BV2	6311514097
4UZABRE60JCJH9874	61BR0BV2	6311512390
4UZABRE66JCJH9877	61BR0BV2	6311513998
4UZABRE61JCJH9883	61BR0BV2	6311517091
4UZABRE63JCJH9884	61BR0BV2	6311517622
4UZABRE65JCJH9885	61BR0BV2	6311518060
4UZABRE69JCJH9887	61BR0BV2	6311518811
4UZABRE6XJCJH9882	61BR0BV2	6311516947
4UZABRE68JCJH9881	61BR0BV2	6311515566
4UZABRE64JCJE1340	61BR0BV3	6311488230
4UZABRE66JCJE1341	61BR0BV3	6311488138
4UZABRE68JCJE1342	61BR0BV3	6311488694
4UZABRE6XJCJE1343	61BR0BV3	6311488457
4UZABRE62JCJE2857	61BR0BV3	6311492490
4UZABRE64JCJE2858	61BR0BV3	6311492942
4UZABRE64JCJJ4417	61BR0BV3	6311519217
4UZABRE61JCJD4846	61BR0BVV	6311489226
4UZABRE63JCJD4847	61BR0BVV	6311489225
4UZABRE65JCJD4848	61BR0BVV	6311489099
4UZABRE67JCJD4849	61BR0BVV	6311489827
4UZABRE63JCJD4850	61BR0BVV	6311489909
4UZABRE65JCJD4851	61BR0BVV	6311489816
4UZABRE67JCJD4852	61BR0BVV	6311476995
4UZABRE69JCJD4853	61BR0BVV	6311490080

Table 1. (cont'd)

VIN	TCM Assembly Number to Load with Allison TCM Reflash™	Transmission Serial Number
4UZABRE60JCJD4854	61BR0BVV	6311489652
4UZABRE62JCJD4855	61BR0BVV	6311490059
4UZABRE64JCJD4856	61BR0BVV	6311489626
4UZABRE66JCJD4857	61BR0BVV	6311489627
4UZABRE61JCJD4863	61BR0BVV	6311490614
4UZABRE66JCJD4860	61BR0BVV	6311490337
4UZABRE68JCJD4861	61BR0BVV	6311489629
4UZABRE6XJCJD4859	61BR0BVV	6311489618
4UZABRE6XJCJD4862	61BR0BVV	6311490616
4UZABRE63JCJD4864	61BR0BVV	6311491747
4UZABRE65JCJD4865	61BR0BVV	6311491364
4UZABRE60JCJD4868	61BR0BVV	6311491307
4UZABRE62JCJD4869	61BR0BVV	6311491368
4UZABRE67JCJD4866	61BR0BVV	6311490057
4UZABRE69JCJD4867	61BR0BVV	6311491300
4UZABRE69JCJD4870	61BR0BVV	6311491210
4UZABRE60JCJD4871	61BR0BVV	6311490036
4UZABRE62JCJD4872	61BR0BVV	6311490038
4UZABRE64JCJD4873	61BR0BVV	6311490933
4UZABRE66JCJD4874	61BR0BVV	6311489894
4UZABRE61JCJD4877	61BR0BVV	6311492069
4UZABRE68JCJD4875	61BR0BVV	6311490325
4UZABRE6XJCJD4876	61BR0BVV	6311492063
4UZABRE61JCJD4880	61BR0BVV	6311489322
4UZABRE63JCJD4878	61BR0BVV	6311492034
4UZABRE63JCJD4881	61BR0BVV	6311489312
4UZABRE65JCJD4879	61BR0BVV	6311492068
4UZABRE60JCJD4885	61BR0BVV	6311492630
4UZABRE62JCJD4886	61BR0BVV	6311492494
4UZABRE64JCJD4887	61BR0BVV	6311492497
4UZABRE65JCJD4882	61BR0BVV	6311489102
4UZABRE67JCJD4883	61BR0BVV	6311489094
4UZABRE69JCJD4884	61BR0BVV	6311492519
4UZABRE64JCJD4890	61BR0BVV	6311488803

Table 1. (cont'd)

VIN	TCM Assembly Number to Load with Allison TCM Reflash™	Transmission Serial Number
4UZABRE66JCJD4888	61BR0BVV	6311491181
4UZABRE68JCJD4889	61BR0BVV	6311491178
4UZABRE61JCJD4894	61BR0BVV	6311491741
4UZABRE63JCJD4895	61BR0BVV	6311493175
4UZABRE65JCJD4896	61BR0BVV	6311493165
4UZABRE66JCJD4891	61BR0BVV	6311491752
4UZABRE68JCJD4892	61BR0BVV	6311492938
4UZABRE6XJCJD4893	61BR0BVV	6311493475
4UZABRE60JCJD4899	61BR0BVV	6311491507
4UZABRE67JCJD4897	61BR0BVV	6311493177
4UZABRE69JCJD4898	61BR0BVV	6311492634
4UZABRE63JCJD4900	61BR0BVV	6311491488
4UZABRE65JCJD4901	61BR0BVV	6311493568
4UZABRE60JCJD4904	61BR0BVV	6311494442
4UZABRE62JCJD4905	61BR0BVV	6311494451
4UZABRE67JCJD4902	61BR0BVV	6311491481
4UZABRE69JCJD4903	61BR0BVV	6311494379
4UZABRE64JCJD4906	61BR0BVV	6311494531
4UZABRE66JCJD4907	61BR0BVV	6311494555
4UZABRE68JCJD4908	61BR0BVV	6311495073
4UZABRE61JCJD4913	61BR0BVV	6311495074
4UZABRE63JCJD4914	61BR0BVV	6311495068
4UZABRE65JCJD4915	61BR0BVV	6311495063
4UZABRE66JCJD4910	61BR0BVV	6311492728
4UZABRE68JCJD4911	61BR0BVV	6311495157
4UZABRE6XJCJD4909	61BR0BVV	6311494743
4UZABRE6XJCJD4912	61BR0BVV	6311495163
4UZABRE67JCJD4916	61BR0BVV	6311494121
4UZABRE68JCJD4858	61BR0BWA	6311490047
4UZABRE66GCHA0009	61BR0BWF	6311366743
4UZABRE70GCGR4656	61BR0BWG	6311310241

After loading the new TCM Assembly Number, confirm that the Input and Output function and CMC settings match the original configuration. If not, make changes accordingly.

Procedure to Obtain an Authorization Number:

Log on to the Allison Transmission Extranet. Under the “Service” heading, click on “Field Action Authorization” and enter the transmission serial number. If the requested serial number does not return an authorization number on the Allison Transmission Extranet, this indicates that the recalibration has already been performed or the serial number is not included in the affected VIN list in [Table 1](#). If an authorization number is returned, record the authorization number and include it in the claim narrative in Allison Warranty Administration and Analysis Reporting Environment (AWAARE) for reimbursement.

Warranty Information:

Allison Service Outlets shall submit an AWAARE claim type 83 for each vehicle completed under this Tech Tip TT8008. Any additional work shall be claimed separately even if performed simultaneously with another transmission repair; i.e., overhaul, solenoid replacement, etc.

AWAARE Claim Variable Values	
Claim Type	83
Authorization Number	XXXXX
Special Activity Indicator	TT8008
Primary Failed Part	70
Complaint Code	AT05
Failure Code	CC03

AWAARE Claim Labor Variable Values		
Labor Operation Code	Labor Hours	Labor Operation Description
096501	1.0	TCM Recalibration
096400	0.5	Final Test Drive



NOTE: Labor is not to exceed 1.5 hours. The maximum labor time allowed to reprogram the TCM is 1 hour. Another 0.5 hour will be permitted to test drive the vehicle after the recalibration is completed. Additional customer change requests will not be covered by this program and will be at the customer's expense.



NOTE: The issue outlined in this document is not an Allison Transmission, Inc. defect in material or workmanship.