

DT12 trans/clutch relearn procedure...



[Brent Hazel](#) 10 posts since Sep 12, 2017

DT12 trans/clutch relearn procedure fails Jul 9, 2020 11:05 PM

for background info - we did a rear structure reseal, reused the original clutch, trans oil wasn't drained.
every time I try to do the DT12 trans relearn - relearn clutch and transmission, fails every time.
results from relearn say "determining type of range group failed"
there is nothing in tech lit or PSL for this learning process failure.
clutch calibration status is learned values available
trans learn status is last process ended with error
I've checked every inch and load tested every circuit in trans harness, as well as tried new range sensor,
replaced the range piston, updated software levels, tried a new TCM.
just checked all the PT CAN wiring from star point and CPC to cab inner fire wall, from outer firewall to MCM,
ACM, TCM - all PT can wires check out, all powers and grounds check out.
any one have a similar issue?
Tags: dt12 relearn



[Talbert Simonian](#) 1,802 posts since Nov 21, 2014

Re: DT12 trans/clutch relearn procedure fails Jul 10, 2020 12:58 AM

Does it pass the clutch application test?



[Jon Cecil](#) 881 posts since Nov 25, 2014

Re: DT12 trans/clutch relearn procedure fails Jul 10, 2020 1:44 AM

VIN?

Is the air system filled? Are you trying the clutch relearn only? Did the clutch caging tab move outwards when removing the clutch? Was the CPCA collapsed during trans install?



[Brent Hazel](#) 10 posts since Sep 12, 2017

Re: DT12 trans/clutch relearn procedure fails Jul 10, 2020 2:23 AM

vin - HP7259

air system is filled.

no, I've been doing the trans & clutch learn - clutch learn only is successful

learn trans & clutch fails - determining type of range group failed

CPCA was collapsed, yes

caging tab did not move outwards



[Jon Cecil](#) 881 posts since Nov 25, 2014

DT12 trans/clutch relearn procedure...

Re: DT12 trans/clutch relearn procedure fails Jul 10, 2020 4:03 AM

Does the unit go into gear? If trans was removed and installed without any repairs being done to the trans itself, only the clutch learn should be ran.



[Devon Wartluft](#) 170 posts since Jan 31, 2018

Re: DT12 trans/clutch relearn procedure fails Jul 10, 2020 5:01 PM

Ran into this once. Start by unhooking the batteries and let it sit for 10 to 15 min. hook them back up, charge the system with shop air and keep it hooked up to shop air during routine. If it doesnt pass that way, odds are the shift controller is causing the issue.

Either way go the through the proper channels, CSC to CYA on warranty.



[Brent Hazel](#) 10 posts since Sep 12, 2017

Re: DT12 trans/clutch relearn procedure fails Jul 10, 2020 2:15 AM

cannot start the clutch apply leak test, unit is not recognizing neutral - confirmed unit is in neutral, will run when attempting relearn procedure

vin - HP7259

air system is filled.

no, I've been doing the trans & clutch learn - clutch learn only is successful

learn trans & clutch fails - determining type of range group failed

CPCA was collapsed, yes

caging tab did not move outwards



[Chaz Trimble](#) 1,360 posts since Feb 2, 2015

Re: DT12 trans/clutch relearn procedure fails Jul 10, 2020 3:20 AM

Have you checked your countershaft speed? Have you tried releasing the brakes and rocking the truck back and forth?



[Brent Hazel](#) 10 posts since Sep 12, 2017

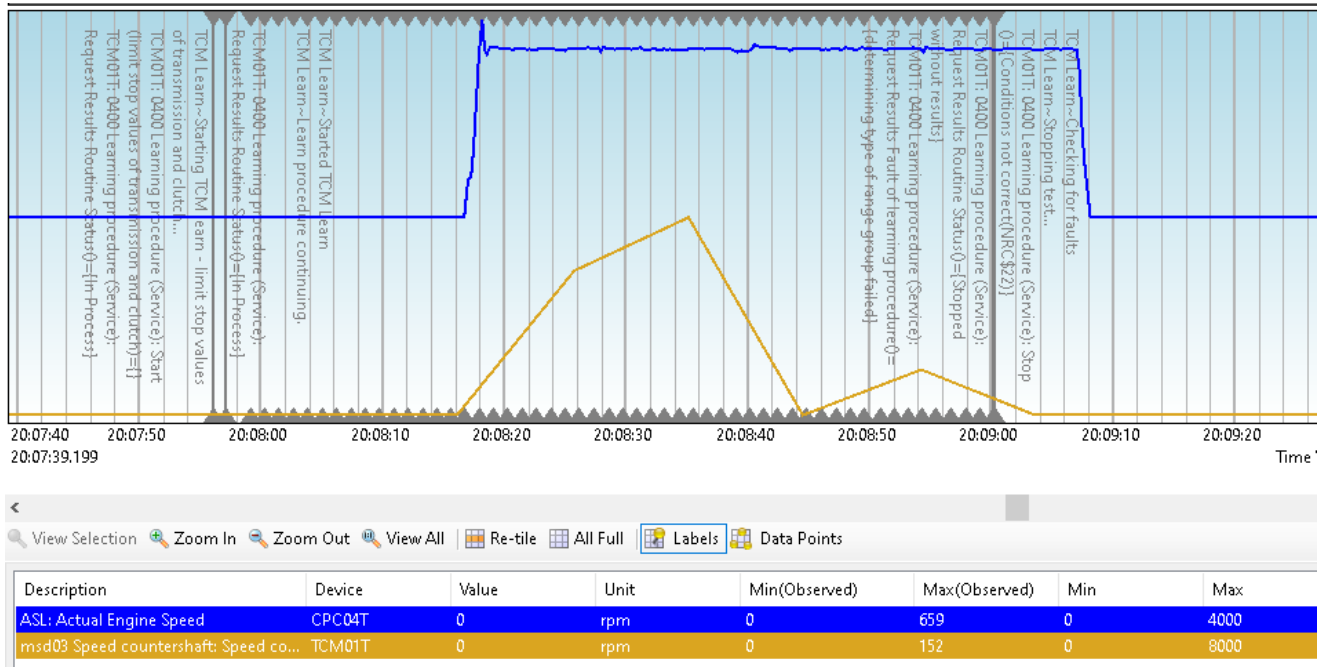
Re: DT12 trans/clutch relearn procedure fails Jul 10, 2020 3:47 AM

yes, I have shop air connected to the unit to keep air pressures up.

air susp is up, rocked unit to release any tension on drive shaft.

countershaft speed is approx. 150 rpm

DT12 trans/clutch relearn procedure...



Chaz Trimble 1,360 posts since Feb 2, 2015

Re: DT12 trans/clutch relearn procedure fails Jul 10, 2020 4:04 AM

Trans type set correctly? Have you compared powertrain module parameters to original parameters before software update? Software versions all compatible? No sensors including CPCA damaged? CPCA "bleeding" off after compressed? Sounds like only things that would've been affected during repairs is clutch and CPCA.



Brent Hazel 10 posts since Sep 12, 2017

Re: DT12 trans/clutch relearn procedure fails Jul 10, 2020 4:24 AM

dash does not show going into any gears, does not show neutral either. that's what I thought, when my previous tech finished installing the trans and did the relearn, it failed. all programming and such was still original when it drop into the shop trans type is set to DT12-OA - correct as per the tag on the trans. S/N and P/N also match build sheet.

I agree, only things that could have been affected are the clutch or CPCA tech just told me that he also re-pinned the OEM connector to the TCM powers and grounds are in correct locations.

if the PT can wires were switched in the connector to the TCM, that should be causing more issues than just a failed relearn right?



Jon Cecil 881 posts since Nov 25, 2014

DT12 trans/clutch relearn procedure...

Re: DT12 trans/clutch relearn procedure fails Jul 10, 2020 4:42 AM

If the tab didn't move out on the clutch during removal, it wasn't caged and the clutch could have adjusted if mishandled.



[Brent Hazel](#) 10 posts since Sep 12, 2017

Re: DT12 trans/clutch relearn procedure fails Jul 10, 2020 4:56 AM

when I do the clutch relearn it completes with no issues at all.

its only when trying to do the trans relearn that it fails when trying to set the range group.



[Jon Cecil](#) 881 posts since Nov 25, 2014

Re: DT12 trans/clutch relearn procedure fails Jul 10, 2020 5:02 AM

Does the gear/split/range routine able to be run?



[Chaz Trimble](#) 1,360 posts since Feb 2, 2015

Re: DT12 trans/clutch relearn procedure fails Jul 10, 2020 11:16 AM

I would think if the connector was repinned incorrectly there would be another issue but it may be a good place to start as the learn procedure would prevent any other issues that are not directly circuit related from being able to be seen as there may not be a fault code and the learn procedure cannot complete. I would also make sure it was the OEM connector that was repinned.



[Jesse Gutierrez](#) 458 posts since Mar 5, 2017

Re: DT12 trans/clutch relearn procedure fails Jul 10, 2020 10:32 PM

You can Incorrectly install one of the grounds and it will not throw a code believe is it pin 16 switched to 17



[Brent Hazel](#) 10 posts since Sep 12, 2017

Re: DT12 trans/clutch relearn procedure fails Jul 10, 2020 5:06 AM

nope - notice at the bottom of the pop up window says "ensure unit is in neutral and park brake applied"



[Jon Cecil](#) 881 posts since Nov 25, 2014

Re: DT12 trans/clutch relearn procedure fails Jul 10, 2020 5:11 AM

TCM isn't running in boot mode on the identification screen? Tried TCM unlock through actions menu? Trying to think outside the box. Seems like a real puzzler going on.



[Jesse Gutierrez](#) 458 posts since Mar 5, 2017

Re: DT12 trans/clutch relearn procedure fails Jul 10, 2020 4:44 PM

DT12 trans/clutch relearn procedure...

Real quick check and I have seen similar issues like this in the shop someone connected the black 21 pin tcm connector . it's not fully seated since the lock broke or some other reason and you will start getting crazy things to happen . I had one last week passed learn procedure but tilt sensor fault would return every key on and it would intermittently not shift , found my 21 pin connector not fully seated and the lock broken . Repaired and corrected my problem just a quick dirty check



[Brent Hazel](#) 10 posts since Sep 12, 2017

Re: DT12 trans/clutch relearn procedure fails Jul 10, 2020 11:04 PM

Yea it's been a head scratcher for sure. Think we finally got it figured out.

Removed battery powers and ground for 10 mins, reconnect. Programmed. Removed for another 10 mins. Then it passed the relearn.

For whatever reason it seems the powers and grounds was an issue. Also used a different computer terminal to program it, not the same one we've been using the last couple days.

Because this truck didn't like the one computer I guess?



[Devon Wartluft](#) 170 posts since Jan 31, 2018

Re: DT12 trans/clutch relearn procedure fails Jul 10, 2020 11:09 PM

Hard say, ive noticed with more electronics they have been adding the odder the issues, but sometimes a hard reset like that is needed.



[Kyle Siebert](#) 4,084 posts since Nov 14, 2014

Re: DT12 trans/clutch relearn procedure fails Jul 16, 2020 6:31 AM

I have twice seen it fail a trans relearn procedure because of a [Y harness on 9 pin DLC For Aftermarket ECU](#). Usually a electronic log book, people's net, GPS device ect...



[Kyle Siebert](#) 4,084 posts since Nov 14, 2014

Re: DT12 trans/clutch relearn procedure fails Jul 16, 2020 6:32 AM

Unplugged the y-harness and routine passed, like nothing was wrong.



[Kyle Siebert](#) 4,084 posts since Nov 14, 2014

Re: DT12 trans/clutch relearn procedure fails Aug 18, 2020 6:01 PM

[Juan Becerra](#) Did you ever get your issue resolved? Have you seen this post?

Was having some issues getting trans/clutch relearn to go thru on a P3 Cascadia HP1824. Burnt clutch and clutch actuator both replaced. Unit says no learned values available after learn procedure.

DT12 trans/clutch relearn procedure...

Edit: attached log file of failed learn procedure. Haven't had a chance to look at it. Also, just looked up vin, has no history of onebox harness replacement, has soot sensor, built before 8/17. I would highly suggest inspecting that ACM harness as you may have 60 ohms but could have a rub thru making poor connection (thru corrosion) with engine running. Simple checking of 120 pin and 21 pin connectors. But if those look fine, might want to remove some of the convoluted tubing and inspect for rub thru damage, also see if it has been updated yet. I'm thinking this may be your issue. ghg17 ACM one box harness rub thru from lack of friction tape Intermittent 625/9 and 1231/9

- [\(1FUBGADV0HLHP1824\) 8-17-2020 1050.45.DrumrollLog](#) 143.2 KB



[Juan Becerra](#) 4 posts since Oct 25, 2016

Re: DT12 trans/clutch relearn procedure fails Aug 18, 2020 6:10 PM

I'll make sure to check the acm harness, and see what I can find. The issue is still going on though, and still no reply from Detroit.



[Sam Adams](#) 12 posts since Jun 19, 2018

Re: DT12 trans/clutch relearn procedure fails Aug 20, 2020 2:28 PM

I had one a few weeks ago in the shop that wouldn't learn the trans but would learn the clutch every time. Inspection of log file showed tcm dropping out intermittently whenever the truck was cranked. Also hesitated to crank intermittently. Tech found tcm ign power wire rubbed at air compressor bracket.



[Chris Draft](#) 3 posts since Sep 13, 2020

Re: DT12 trans/clutch relearn procedure fails Nov 5, 2020 12:46 AM

I just had this very issue and tried all of these suggestions with no luck. What happened is I updated the tcm software before doing a trans learn, after changing the shift controller. On early 2016s (not sure exact dates), the new software was not allowing the trans to learn. Detroit had to upload the old software to the servers. Just wanted to add to this thread, as I read through it myself when troubleshooting.



[Devon Wartluft](#) 170 posts since Jan 31, 2018

Re: DT12 trans/clutch relearn procedure fails Nov 5, 2020 1:23 AM

either way good info



[Brent Hazel](#) 10 posts since Sep 12, 2017

Re: DT12 trans/clutch relearn procedure fails Nov 5, 2020 1:39 AM

This issue has been burning in my brain for months.

So when I had this back in July, my tech who did the original rear structure repair came clean and said that he updated TCM software before he did the clutch relearn.

DT12 trans/clutch relearn procedure...

What happened is that because the new software was added before there were any learned values in the trans, the trans was not able to complete and retain new values with the new software.

We had to get CSC to upload the factory settings to the server and reprogram back to factory base in all power train modules (CPC, TCM, etc)

Once programmed back to factory, all relearns completed.

Then we re-updated all modules to latest and greatest.

Unit hasn't come back yet, fingers crossed.