

Anyone ever chase a delay crank on P4?



[Mark Monroe](#) 16 posts since Dec 14, 2014

Anyone ever chase a delay crank on P4? Feb 5, 2021 4:48 PM

KJ5019 - Driver stated extended crank- note: the ssam failed replaced was a 10sec delay at first. New ssam installed. I now have a 3 second delay. after gauges sweep etc. using template takes the 3 sec for it to acknowledge the crank as well. Signal is good from switch to ssam on x5/11. This is where it throws me off I can't find the output to the starter in schematics. I checked the start relay ssam x9/17 & even x9/23 both empty cavities checked for signal at mcm 21pin which shows pin 20 is the crank input empty cavity. Par is set MCM start. Main question is where does the crank input come from to the mcm? Thanks!

- [kj5019 G66-00671_____B_.001.pdf](#) 64.2 KB Preview
- [kj5019 G66-00660_____B_.001.pdf](#) 83.9 KB Preview
- [kj5019 G66-00596_____D_.002.pdf](#) 69.0 KB Preview
- [kj5019 A66-00656_____-.001.pdf](#) 112.9 KB Preview

Tags: crank delay, p4 starting circuit



[Robert Cadell Jr](#) 2,837 posts since Nov 9, 2014

Re: Anyone ever chase a delay crank on P4? Feb 5, 2021 4:54 PM

module 156 in parts pro ?

- [p4 starter.pdf](#) 63.3 KB Preview



[Mark Monroe](#) 16 posts since Dec 14, 2014

Re: Anyone ever chase a delay crank on P4? Feb 5, 2021 4:59 PM

I've been through that one and did not see it. Maybe i'm missing something only seeing the safety loop in there not the output for the crank



[Robert Cadell Jr](#) 2,837 posts since Nov 9, 2014

Re: Anyone ever chase a delay crank on P4? Feb 5, 2021 5:01 PM

G66-00660_____B_.001.pdf go back to this drawing your output for starter is pin 21 of the MCM



[Robert Cadell Jr](#) 2,837 posts since Nov 9, 2014

Re: Anyone ever chase a delay crank on P4? Feb 5, 2021 4:58 PM

Output is pin 21, IF you have a Overcrank (temp) sensor in the starter I'd make sure thats ok and not shorted. Has the starter been changed? is it a Delco ?

Check the MCM 21 pin for water intrusion

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Re: Anyone ever chase a delay crank on P4? Feb 5, 2021 5:01 PM

I can't find the input to the MCM from the ssam or cpc whichever commands the crank signal from the truck.



[Robert Cadell Jr](#) 2,837 posts since Nov 9, 2014

Re: Anyone ever chase a delay crank on P4? Feb 5, 2021 5:00 PM

If memory serves the signal in question should come from mcm to activate pin 21, you have a DT 12 so it will have to tell everyone, I'm in neutral and everything's cool. From the look of it with the hood tilt switch you have opti idle?



[Robert Cadell Jr](#) 2,837 posts since Nov 9, 2014

Re: Anyone ever chase a delay crank on P4? Feb 5, 2021 5:02 PM

Make sure all your grounds are good also



[Mark Monroe](#) 16 posts since Dec 14, 2014

Re: Anyone ever chase a delay crank on P4? Feb 5, 2021 5:09 PM

Pin 21 is from the MCM to starter. What I'm trying to figure out is if the delay is truck side or the MCM itself. I get the delay on the 21pin at the starter so the signal itself is delayed. But I can not locate my crank signal input from the truck to the MCM. The 21 pin pin out chart shows it should be pin 20 for the input that cavity is empty. Is it a direct power signal to the MCM or is it done via datalink. That's what I am unable to find.



[Robert Cadell Jr](#) 2,837 posts since Nov 9, 2014

Re: Anyone ever chase a delay crank on P4? Feb 5, 2021 5:22 PM

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was my previous comment, I misworded it. the "signal" should come over the databus. DT 12 says neutral, CPC reaches out to verify safety interlocks and neutral then the mcm will start the unit.



[Jesse Gutierrez](#) 496 posts since Mar 5, 2017

Re: Anyone ever chase a delay crank on P4? Feb 6, 2021 1:30 AM

Yup signal from TCM is shot over PT can network to cpc saying hey I'm in neutral and then down to mcm and unit is ready to start



[Robert Cadell Jr](#) 2,837 posts since Nov 9, 2014

Re: Anyone ever chase a delay crank on P4? Feb 5, 2021 5:22 PM

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You should be able to monitor crank/starter status in diagnostic link and see the path and chain of events.



Talbert Simonian 1,881 posts since Nov 21, 2014

Re: Anyone ever chase a delay crank on P4? Feb 5, 2021 6:17 PM

Mark your disruption reminds me a software update that created this issue. When you open D/L go to Parameters. Go to MCM and click on parameters PGR004 EngineConfig_1. You will see Starter Type Control it sounds like it is set to Starter activated via MCM. The P4 is Starter activated Via MCM with modified diagnostic.



Robert Cadell Jr 2,837 posts since Nov 9, 2014

Re: Anyone ever chase a delay crank on P4? Feb 5, 2021 6:22 PM

Thanks for jumping in Talbert

Rob "Doc" Cadell
DTNA Master Tech/Elgin Lead Technician
Trans Chicago Freightliner BFWD
Shorewood,IL
(803)-917-5397
Good Hunting – You'll find your problem



Robert Cadell Jr 2,837 posts since Nov 9, 2014

Re: Anyone ever chase a delay crank on P4? Feb 5, 2021 6:32 PM

Talbert, may I ask how long you stared at the wall or screen to remember that? LOL Good memory bud.

Rob "Doc" Cadell
DTNA Master Tech/Elgin Lead Technician
Trans Chicago Freightliner BFWD
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(803)-917-5397
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Talbert Simonian 1,881 posts since Nov 21, 2014

Re: Anyone ever chase a delay crank on P4? Feb 5, 2021 6:40 PM

Doc, not too long. I remembered this issue when I found it about three years ago. No one could figure it out. It took some time before I started comparing Parameters between the P4 and the P3. Somethings you just never forget.



Robert Cadell Jr 2,837 posts since Nov 9, 2014

Re: Anyone ever chase a delay crank on P4? Feb 5, 2021 6:44 PM

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Sorry, had to mess with ya. To be honest its taken me a few mins to think of things while staring out in "space".

Rob "Doc" Cadell
DTNA Master Tech/Elgin Lead Technician
Trans Chicago Freightliner BFWD
Shorewood,IL
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Re: Anyone ever chase a delay crank on P4? Feb 5, 2021 7:01 PM

That was it. I would have never guess that one. I even tried comparing par files didn't pop up. I appreciate it. Last time I ever changed that settings was when we switched from hardwired to MCM controlled years ago. Thanks again.