COMMERCIAL FLEET INDUSTRIES

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Douglas Kerste Written Record Only

19-6-1

To: Air Resources Board on Zero Emission Power Train Certification Regulation

Hello and Good Day, My name is Douglas Lawrence Kerste and I am the Manager for the San Diego division of XPO Sales, DBA Commercial Fleet Industries (CFI). We are one of three locations owned by XPO Sales., (Los Angles, San Diego, and Phoenix). We are engaged in doing Commercial Fleet Vehicle Maintenance and Repair, primarily Airport Shuttle Buses based on the Ford E450 chassis, The Ford E350 Chassis, the Sprinter chassis, and the Transit chassis.

Currently we service several fleets of light duty shuttle service vans. such as Park-n-Fly, Super Shuttle, Wally Park, San Diego Airport Parking, and a few other hotels. We also service fleets of Heavy Duty Airport Shuttles for the Likes of The Sheraton Hotel and Marina, Holiday Inn Bayside, The Wyndham Hotel Bayside, Comfort Inn and Suites, and the Crowne Plaza. We have about 30 light duty vehicles and 27 heavy duty vehicles under our care. With each unit coming to us about 8 times per year we service at least 456 units during any given year.

Our focus the past 3 years here in San Diego is in serving the Alternative Fueled Vehicle Market, as in CNG, Propane, Clean Diesel, and now we are moving on to the Electric Vehicle Market.

As with all new and emerging technologies there is always a learning curve that goes along with it, both for myself the person that services the vehicles, and for the vehicle manufactures themselves. It has been show time and time again that the difference between what you can calculate in a simulation, spreadsheet, data field, or even a trusty old slide rule simply does not always work in a real world environment.

I have many, many examples demonstrating this premise from personal experience working with new and emerging technologies, some things just can't be foreseen until the vehicles are put into service and odd little problems crop up. Ask any Manufacture if they have a "T.S.B." department (Technical Service Bulletins) and they will either tell you "We have never ever tested a unit in the real world", or the answer will be "Yes, it's located at xxxxxx.xxx". It's just a fact of life that technical machines will need updates, repair, and in many cases re-programming in order to function in the real world reliably.

This brings us to the subject of my letter to you all, I am addressing this to the A.R.B. As well as the up and coming manufactures of basically Any Alternative Fueled Vehicle, even those "fueled" solely by electricity.

There will come a point in EVERY units life cycle that it Will Need Repair, Period. I am troubled by what I am seeing as new manufactures are coming online and putting units out into the service world, it's a trend that I have seen in the past and it was a disaster then, and it will become a disaster now if we don't address it right now.

Of the few new brands of fully Electric Vehicles I had had the pleasure of being involved with, so far Every One of them has had some type of special propitiatory two or three pin connector, occasionally with a secondary two or three pin connector and super secretive software that they carry around in a laptop in order to address the Electric Drive System. Access to the Electric Drive System is necessary to make adjustments to the drive ability, and operation of the unit in the real world, but it is Also Necessary to Be Able To Pull Diagnostic Trouble Codes.

Any Manufacture that tells you their units Will Never Break Down is simply lying, mechanical things can, will, and do break down period. What this trend reminds me of is the Pre-1995 era, where every single manufacture had a separate type of connector, separate cable, separate interface, separate trouble codes, and separate definitions of those trouble codes. In order to service vehicles of different makes I needed a whole cabinet Full of different Cables! It short it was a Mess.

Then along came the OBD port, this is the one single thing that has made my life less complicated. That simple little 16 pin port, where EVERY Car had The Same Port, ohhhh yes they still used different software, and different definitions, but at least Every Car Had The Same 16 pin Port. This of course is the same 16 pin port that evolved into what we call the OBD II port in use today, and today while there are currently three standards in use (SAE J1850, ISO9141, and ISO15765-4 CAN) we all at least agree on what the individual codes mean, and the definitions are standardized between all makes.

Please take a minute to review the pin out of the OBD II port I have included, you can see that there are currently 9 pins being used, and 7 pins not being used, the seven unused pins are referred to as "Vendor Option" pins. In short, the OBD II port still has the Capability to Grow along side the EV marketplace.

I have noticed that in every Electric Vehicle that I have serviced, and pulled codes with some myriad array of connectors, cables, and laptops each and every one of them Still Had a OBD II port, yet the QVM was not using it for communications with "Their Systems". This trend has to stop. I personally don't need to know all their secrets. I personally don't need to be able to make adjustments to the operating parameters of the units. WHAT I DO NEED IS THE ABILITY TO DIAGNOSE AND REPAIR THE UNIT WHEN IT FAILS IN THE REAL WORLD.

I implore you with all my heart, Don't let us return to the era where I have a Cabinet Full of Cables, Connectors, Adapters, Etc. Please Require All New EV units that enter the market place to USE THE 16 PIN OBD II Connector for communication with the Electric Drive System, At the Very Least for the Purpose for Diagnostics And Repair! I for one will not be purchasing 25 different scanners to work on EV's. There is no need for that. Use the 16 Pin OBD II connector so my scanner can hook to it, sure develop new protocols, sell me updates, evolve the system. But lets continue with the OBD II port until such time as All The Pins Are Used!

Thank You, Douglas Lawrence Kerste, Manager C.F.I. San Diego.
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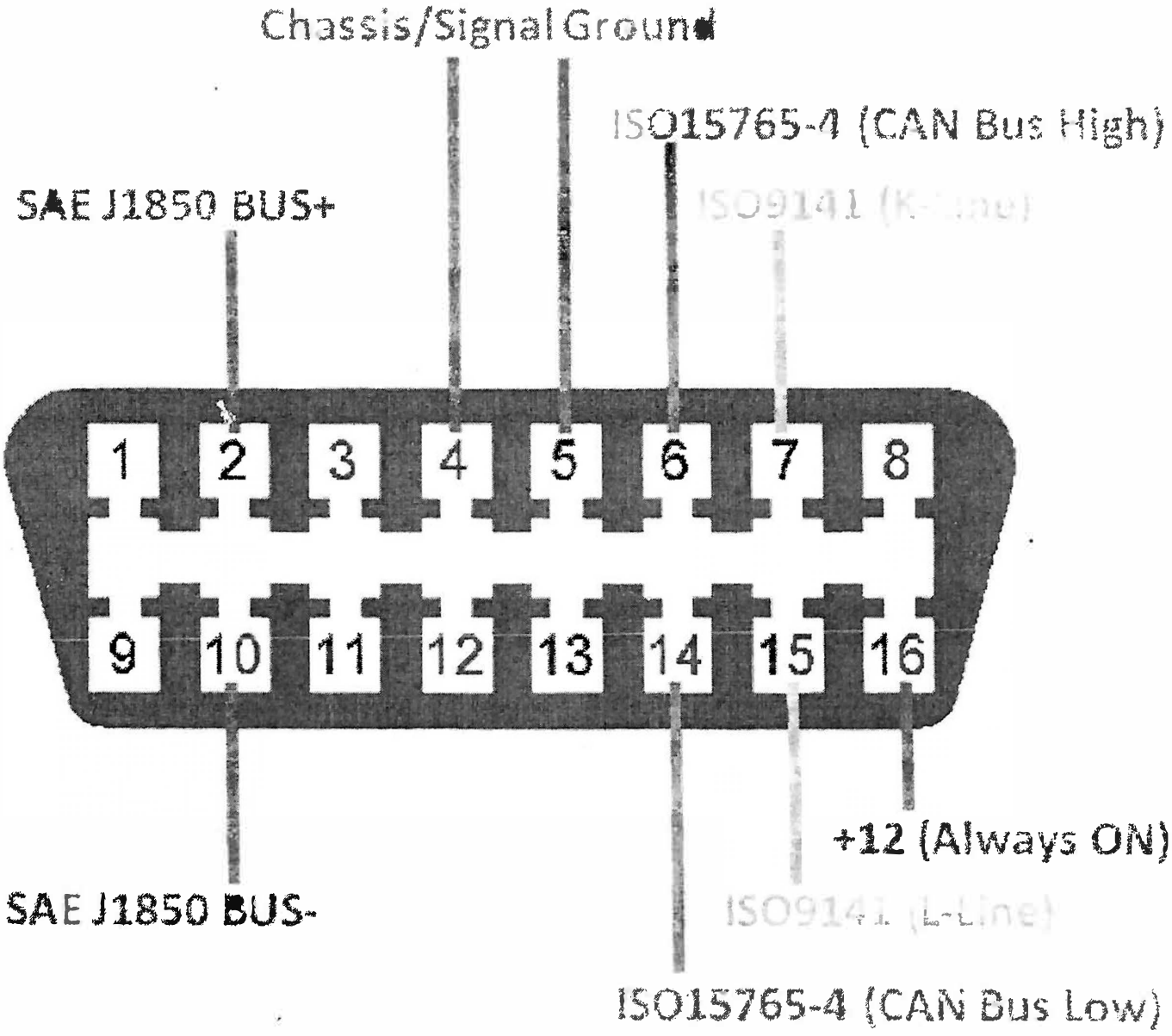
Douglas Kerste 06/26/19


Chassis/Signal Ground
ISO15765-4 (CAN Bus High)
SAE J1850 BUS+
ISO9141 (K-Line)
1
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15
16
+12 (Always ON)
SAE J1850 BUS-
ISO9141 (L-Line)
ISO15765-4 (CAN Bus Low)