Signals in TSP Agreement	Signal Measurements, Reported to Server	Cummins Engine Measurement	6/16/2022 Data Sample Rate in VMS BLScaledv7-	Value sent from Bosch	Sample Value	Description of Data	Signal Information Notes
		Signal Name from Bosch BLv2r3	J_Enginev2				
VIN	10 Secs., every 2 mins			ASCII (Text)	5PVNA6JF062S50022	17 character vehicle identification Number	Signal is not included in Hino or Cummins measurement stream but should be sent to TSP to identify vehicle
Hi Resolution Vehicle Distance	10 Secs., every 2 mins	Hi_Res_Vehicle_Distance	10s	Decimal	Min 0 Max 42949667295	ECU Total Accumulated Mileage in km	Decimal Number sent from vehicle read in km
			10s	Decimal	Min 0 Max 42949667295	ECU Total Accumulated Mileage in km	Decimal Number sent from vehicle read in km
Total Fuel Used	10 Secs., every 2 mins	Total_Fuel_Used	30s 10s	Decimal Decimal	Min 0 Max 42949667295 Min 0 Max 42949667295	Lifetime Total amount of Fuel used as calculated by the Engine ECU in liters Lifetime Total amount of Fuel used as calculated by the Engine ECU in liters	Decimal Number sent from vehicle read in Liters Decimal Number sent from vehicle read in Liters
Tabel Facility I I I I I I I I I I I I I I I I I I I	10.5	T-t-1 5 U	10s 10s				
Total Engine Hours	10 Secs., every 2 mins	Total_Engine_Hours	10s 10s	Decimal Decimal	Min 0 Max 210554000 Min 0 Max 210554000	Lifetime accumulation of engine running hours Lifetime accumulation of engine running hours	Decimal Number sent from vehicle read in hours Decimal Number sent from vehicle read in hours
		Total_Idle_Fuel_Used	30s	Decimal	Min 0 Max 42949667295	Lifetime calculation of the total amount of fuel used at Idle in Liters	Decimal Number sent from vehicle read in Liters
Total Idle Fuel Used	10 Secs., every 2 mins	Total_tdie_i dei_osed	10s	Decimal	Min 0 Max 42949667295	Lifetime calculation of the total amount of fuel used at Idle in Liters	Decimal Number sent from vehicle read in Liters Decimal Number sent from vehicle read in Liters
Total Idle Hours	10 Secs., every 2 mins	Total Idle Hours	30s	Decimal	Min 0 Max 210554060.75	Lifetime Calculation of the total amount of hours engine is idled in hours	Decimal number sent from vehicle read in hours
			10s	Decimal	Min 0 Max 210554060.75	Lifetime Calculation of the total amount of hours engine is idled in hours	Decimal number sent from vehicle read in hours
Coolant Temp	10 Secs., every 2 mins	Engine_Coolant_Temp	10s	Decimal	Min -40 Max 250	Engine Coolant Temperature in Degrees Celcius	Decimal number sent from vehicle read in Celcius
	1 1		10s	Decimal	Min -40 Max 250	Engine Coolant Temperature in Degrees Celcius	Decimal number sent from vehicle read in Celcius
Engine RPM	10 Secs., every 2 mins	Engine_RPM	10s	Decimal	Min 0 Max 16383.75	Engine Speed in Revolutions per Minute	Decimal number send from vehicle in RPM
			10s	Decimal	Min 0 Max 16383.75	Engine Speed in Revolutions per Minute	Decimal number send from vehicle in RPM
Park Brake Switch	10 Secs., every 2 mins	Parking_Brake_Switch	10s	Decimal Decimal	1 On 0 Off 1 On 0 Off	Parking Brake Switch status On or Off Parking Brake Switch status On or Off	Decimal number sent from vehicle On/Off signal
Brake Switch	1 Con avenu 2 mine	Brake Switch	10s 1s	Decimal	1 On 0 Off		Decimal number sent from vehicle On/Off signal
DI AKE SWILLII	1 Sec., every 2 mins	DIAKE_SWILLII	15 1s	Decimal	1 On 0 Off	Service Brake Switch status On or Off Service Brake Switch status On or Off	Decimal number sent from vehicle On/Off signal Decimal number sent from vehicle On/Off signal
Cruise Set Switch	10 Secs., every 2 mins	Cruise Set Switch	10s	Decimal	1 On 0 Off	Cruise Control "set" switch status On or Off	Decimal number sent from vehicle On/Off signal
Grand det dwitter	20 Joes, every 2 mills	C.G.S.C.SeC.SWILLI	10s 10s	Decimal	1 On 0 Off	Cruise Control "set" switch status on or Off	Decimal number sent from vehicle On/Off signal
Cruise Resume Switch	10 Secs., every 2 mins	Cruise_Resume_Switch	10s	Decimal	1 On 0 Off	Cruise Control "Resume" switch status On or Off	Decimal number sent from vehicle On/Off signal
			10s	Decimal	1 On 0 Off	Cruise Control "Resume" switch status On or Off	Decimal number sent from vehicle On/Off signal
Wheel-based Vehicle Speed	1 Sec., every 2 mins	Vehicle_Speed	1s	Decimal	Min 0 Max 251	Wheel Based vehicle speed read in km/hr	Decimal number sent from vehicle km/hr
			1s	Decimal	Min 0 Max 251	Wheel Based vehicle speed read in km/hr	Decimal number sent from vehicle km/hr
PTO state	10 Secs., every 2 mins						
			10s	Decimal	1 On 0 Off	Power Take Off status On or Off	Decimal number sent from vehicle On/Off Signal
Intake Air Pressure	10 Secs., every 2 mins	No Signal	10s	Decimal	Min 0 Max 500	Intake Air Pressure measured in koa	Decimal value sent from vehicle read in kpa "Turbo Boost Pressure"
Common Rail Pressure	10 Secs., every 2 mins	No Signal	105	Decinial	PIII O PIEX 500	Intake All Fressure measured in kpa	Decinial value sent from venicle read in kpa Turbo boost Pressure
Common ran i resoure	To Seed, every 2 mins	no Signal	10s	Decimal	Min 0 Max 250	Fuel Pressure at the Common Rail measured in Mpa	Decimal value sent from vehicle Fuel pressure in Megapascals
Total Fuel with PTO	10 Secs., every 2 mins	Total_Fuel_with_PTO	30s	Decimal	Min 0 Max 42949667295	Lifetime calculation of the total amount of fuel used with PTO engaged in L	Decimal value sent from vehicle read in Liters
			10s	Decimal	Min 0 Max 42949667295	Lifetime calculation of the total amount of fuel used with PTO engaged in L	Decimal value sent from vehicle read in Liters
Total PTO time	10 Secs., every 2 mins	Total_PTO_Time	30s	Decimal	Min 0 Max 210554060.75	Lifetime calculation of total Power Take of engaged time in hours	Decimal value sent from vehicle in hours
			10s	Decimal	Min 0 Max 210554060.75	Lifetime calculation of total Power Take of engaged time in hours	Decimal value sent from vehicle in hours
DEF Level Dash Display	10 Secs everv 2 mins	No Signal					
DEC Tools I work Wasseless	10.5	AA A A A A A A A A A A A A A A A A A A	10s	Decimal	Min 1 Max 9 1 On 0 Off	Dash Risplay of DEF level read in percentage, relates to # of "bars" on dash display	Decimal value sent from vehicle representing DEF level seen by driver on dashboard display
DEF Tank Level Warning	10 Secs., every 2 mins	Aftrtrtmnt1DEFTnkLwLvelIndicator	10s 10s	Decimal Decimal	1 On 0 Off 0.1.2.7	DEF Tank level low warning On or Off DEF tank level warning status Dash Message	Decimal value sent from vehicle indicating DEF low status On/Off signal Decimal value representing Dash DEF low level status messages, signal chart shows possible messages
SCR System Warning	10 Secs., every 2 mins	AftrtrtmntSCROprtrIndcmntSverity	10s	Decimal	0,1,2,3,4,5,6,7	Aftertreatment SCR fault Operation Inducement severity - torque reduction in levels	Decimal value representing basin but how lever status messages, signal chart shows possible messages Decimal value sent from vehicle showing SCR torque reduction indecement level, chart shows possible levels
SCK System Warning	10 Secs., every 2 mins	Artituminischoprumidumisventy	10s	Decimal	0,1,2,3,4,3,0,7	SCR system warning torque reduction mode On/Off	Decimal value sent from vehicle showing SCR torque reduction indecement level, chart shows possible levels
DEF Quality warning Flag	10 Secs., every 2 mins	DEF_Quality_Warning_Flag	10s	Decimal	1 On 0 Off	Diesel Exhaust Fluid Quality warning message on Dash 0 Off 1 On	Decimal number sent from vehicle On/Off Signal
			10s	Decimal	1 On 0 Off	Diesel Exhaust Fluid Quality warning message on Dash 0 Off 1 On	Decimal number sent from vehicle On/Off Signal
DPR PM Soot Level	10 Secs., every 2 mins	DslPrtclteFilter1SootLoadPercent	10s	Decimal	0-100	DPF percentage of soot load 0-100 %	Decimal number sent from vehicle equalling percentage of DPR particulate matter
			10s	Decimal	0-10	DPR Filter Particulate Matter level 0-100% matches 10 "bars" on DPF gage	Decimal number sent from vehicle equalling percentage of DPR particulate matter
Fuel Level	10 Secs everv 2 mins	FuelLevel1	10s	Decimal	0-100	Engine ECU reading of fuel level in percentage 0-100 Unbuffered signal	Decimal value from vehicle showing fuel level from 0-100% Signal is unbuffered and will fluctuate significantly
Instant Fuel Consumption	10 Cose many 2 min-	Instant Eval Consumption	10s 10s	Decimal Decimal	0-100 0-1966	Engine ECU reading of fuel level in percentage 0-100 Unbuffered signal	Decimal value from vehicle showing fuel level from 0-100% Signal is unbuffered and will fluctuate significantly Decimal value sent from vehicle calculated instant fuel use in cc/min
Instant Fuel Consumption	10 Secs., every 2 mins	Instant_Fuel_Consumption	10s 10s	Decimal	0-1966	Engine ECU calculated instant fuel consumption measured in cc/min Engine ECU calculated instant fuel consumption measured in cc/min	Decimal value sent from vehicle calculated instant fuel use in cc/min Decimal value sent from vehicle calculated instant fuel use in cc/min
Accelerator Pedal Position	10 Secs., every 2 mins	APP	1s	Decimal	0-100	Accelerator Position read in percentage 0-100%	Decimal value sent from vehicle calculated instant releases in commit
received read rosidon	20 Joes, every 2 mills	ľ.,	1s 1s	Decimal	0-100	Accelerator Position read in percentage 0-100% Accelerator Position read in percentage 0-100%	Decimal value sent from vehicle indicating Accelerator position Decimal value sent from vehicle indicating Accelerator position
Intake Air Temp (Airflow)	10 Secs., every 2 mins	No Signal	-				
			10s	Decimal	Min -40 Max 250	Engine Intake Air Temperature read in degrees C	Decimal value sent from vehicle indicating Intake Air temperature in Celcius
DEF Level Actual %	10 Secs., every 2 mins	Aftrtrtmnt1DslExhstFlidTankLevel	10s	Decimal	Min 0 Max 100	Engine ECU reading of DEF level in percentage 0-100 Unbuffered signal	Decimal value from vehicle showing DEF level from 0-100% Signal is unbuffered and will fluctuate significantly
			10s	Decimal	Min 0 Max 100	Engine ECU reading of DEF level in percentage 0-100 Unbuffered signal	Decimal value from vehicle showing DEF level from 0-100% Signal is unbuffered and will fluctuate significantly
MIL Status	10 Secs., every 2 mins	OBDMalfunctionIndicatorLampCmd	10s	Decimal	1 On 0 Off	OBD Malfunction Lamp 0 Off 1 On	Decimal Value from vehicle indicating OBD malfuntion lamp status 0 Off 1 On
CUC LINE	10.0		10s	Decimal	0 On 1 Off	Malfunction Indicator Lamp Status 0 On 1 Off	Decimal value from vehicle indicating MIL status 0 On 1 Off
SVS Light	10 Secs., every 2 mins	EngAmberWarningLampCmd	10s 10s	Decimal Decimal	1 On 0 Off 0 On 1 Off	Engine Amber Malfunction Lamp 0 Off 1 On Service Vehicle Soon Lamp status 0 On 1 Off	Decimal Value from vehicle indicating Engine Amber Malfunction lamp status 0 Off 1 On Decimal value from vehicle indicating SVS Lamp status 0 On 1 Off
WIF Light	10 Secs., every 2 mins	WaterInEuelIndicator	30s	Decimal	1 On 0 Off	Water in Fuel indicator lamp status 0 Off 1 On	Decimal Value from vehicle indicating SVS Lamp status 0 On 1 Orr Decimal Value from vehicle indicating Water in Fuel lamp status 0 Off 1 On
WIF LIGHT	10 Secs., every 2 mins	waterinrueinucator	30s 10s	Decimal	0 On 1 Off	Water in Fuel Indicator lamp status 0 Off 1 On Water in Fuel Indicator lamp status 1 Off 0 On	Decimal value from vehicle indicating Water in Fuel lamp status 0 Ort 1 Ort Decimal value from vehicle indicating Water in Fuel Lamp status 0 On 1 Off
DTC Engine Transmitted	Upon Event	TCD Mossage should be from DTC sha	rt in Edge portal	- constant	12 201 2 001	The second secon	

DTC Enaine Transmitted
Ubon Event
10 Secs., every 2 mins
Harsh Raking events
Harsh Raking events
10 Secs., every 2 mins
110 Secs., every 2 mins
10 Secs., every 2 mins
GPS Location
SMPH Alert after Stopped at 0 for 3+
seconds
Upon Event

10 Secs., every 2 mins
10 Secs., every

DEF_Level_Dash			
Decima	al Value	Description	
1		0%	
2		5%	
3		10%	
4		25%	
5		40%	
6		55%	
7		70%	
8		85%	
9		100%	

Aftrtrtmnt1DEFTnkLwLvelIndicator			
Decimal Va	alue	Description	
1		On	
0		Off	

SCR_System_Warning			
Decimal Value		Description	
0		Off	
1		On	
2		Off	
3		Off	

DEF_Tank_LevelWarning			
Decimal Va	ılue	Description	
0		Off	
1		Flashing	
2		Low DEF	
7		Off	

AftrtrtmntSCROprtrIndcmntSverity			
Decimal Value		Description	
0		Off	
1		Inducement Level 1	
2		Inducement Level 2	
3		Inducement Level 3	
4		Inducement Level 4	
5		Inducement Level 5	
6		reserved	
7	•	N/A	

DPR_PM			
Decimal Value	Description		
0	0%		
1	10%		
2	20%		
3	30%		
4	40%		
5	50%		
6	60%		
7	70%		
8	80%		
9	90%		
10	100%		