



E-Cert Light Duty Vehicles Data Requirements

Version 1.5

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Introduction

This document provides the E-Cert Data Requirements for Light Duty Vehicles (LDV) including passenger cars, light-duty trucks and medium-duty vehicles. The information will enable manufacturers to electronically submit LDV certification data and have it processed by ARB staff. These requirements explain which Certification Summary Information (CSI) forms should be filled out based on an LDV test group's fuel category (e.g., dedicated, flexible, dual fuel, ZEV) and fuel type (e.g., gasoline, diesel), describe the file naming convention, and provide detailed information on each data element in each CSI. The data requirements provided in this document cover LEV II and LEV III certification requirements that also provide pertinent information used in various ARB programs (e.g., certification, testing, in-use compliance, DriveClean). This document should be used as a guide and reference for filling out LDV certification applications.

CSI Requirements

The Matrix below indicates which CSIs to fill out for a particular Vehicle Fuel Category and Operating Fuel Type.

Vehicle Fuel Category	Operating Fuel	CSI 1	CSI 2A	CSI 2B	CSI 3	CSI 4	CSI 5A	CSI 5B	CSI 6A	CSI 6B	CSI 6C	CSI 7	CSI 10A		CSI 10B
													HEV, PHEV	Others	
Dedicated Single Fuel Vehicle	Gasoline, LPG	R	R	R	R	R	R	R	R	R	R	R	R	N/A	N/A
	Diesel	R	R	N/A	R	R	R	R	N/A	N/A	N/A	R	R	N/A	N/A
	CNG	R	R	R	R	R	R	R	N/A	N/A	N/A	R	R	N/A	N/A
FFV	E85 + Gasoline	R	R	R	R	R	R	R	R	R	R	R	R	N/A	N/A
Dual-Fuel Vehicle	(CNG, LPG) + Gasoline	R	R	R	R	R	R	R	R	R	R	R	R	N/A	N/A
Bi-Fuel Vehicle	CNG + Diesel	R	R	R	R	R	R	R	N/A	N/A	N/A	R	R	N/A	N/A
ZEV (Battery Electric, H2 Fuel Cell)	N/A	R	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	R
R: Required, N/A: Not Applicable															

File Naming Convention

Please follow the naming convention for all XML file submissions to the California Air Resources Board through the E-Cert Application Loader website.

The naming convention for the XML files consists of three parts as shown: *CARB**MFR**CODE*_LDV_*TEST**GROUP*.xml

1 **CARB MFR Code**

This is the manufacturer code that was assigned to each manufacturer by the California Air Resources Board.

2 **_LDV_**

This will remain the same for each file.

3 **Test Group**

This is the name of the test group for the particular application.

The only portions of the file name that change are the ones identified by *red italics*. An example file name would be MFR_LDV_123.CRB.45AB.xml

Data Requirements

User Guide Legend		
Vehicle fuel category	Operating fuel	Index
Dedicated single fuel vehicle	Gasoline, LPG	A
	Diesel	B
	CNG	C
FFV	E85 + Gasoline	D
Dual-fuel vehicle	(CNG, LPG) + Gasoline	E
Bi-fuel vehicle	CNG + Diesel	F
ZEV (battery electric, H2 fuel cell)	NA	G: All ZEV including NEV, NEV+, Fuel Cell G-1: NEV+ only G-2: Fuel Cell only

CSI 1						
Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
DURABILITY_GROUP_NAME	NO	VARCHAR2	12	Enter the 12-digits durability group name that this test group belongs to (including ZEV). A manufacturer may come up with durability name for ZEV but the name should have model year at 1st digit and manufacturer code at 2nd~4th digits	LDV_APPLICATION	A B C D E F G
APPLICATION_TYPE_LDV	NO	VARCHAR2	3	Select the applicable application type: NEW: new application for a test group (complete data set must be submitted), R/C: running change that requires new EO, F/F: field fix that requires new EO, COR: revision / correction.	LDV_APPLICATION	A B C D E F G
MFR_REVISION_NUM	YES	VARCHAR2	100	Enter the running change reference number as assigned by the manufacturer.	LDV_APPLICATION	A B C D E F G if applicable
CARB_TG_CLASS	NO	VARCHAR2	5	Enter one from the list for the correct vehicle labels that are applicable for the entire test value: 50S: 50 STATES, CA: CALIFORNIA ONLY, AB965: AB 965 (CARB SALES OF 49 STATE CERTIFIED VEHICLE AND REQUIRES CARB CERTIFICATION).	LDV_APPLICATION	A B C D E F G
CARB_TG_INTERIM_INUSE_FTP_STD	NO	VARCHAR2	2	Select FTP interim or intermediate in-use compliance standard (LEV3 only). Applicable values: NN: NMOG+NOx, P: PM, NP: NMOG+NOx AND PM, NA: NOT APPLICABLE.	LDV_APPLICATION	A B C D E F G
CARB_TG_INTERIM_INUSE_SFTP_STD	NO	VARCHAR2	2	Select SFTP interim or intermediate in-use compliance standard (LEV3 only). Applicable values: NN: NMOG+NOx, P: PM, NP: NMOG+NOx AND PM, NA: NOT APPLICABLE.	LDV_APPLICATION	A B C D E F G
FED_CLEAN_VEHICLE	NO	CHARACTER	1	Select Y: YES, for this test group will comply with cleaner federal standards (BIN). Select N: No, for this test group will comply with CA low emission vehicle standards.	LDV_APPLICATION	A B C D E F G
CARB_FTP_STD	NO	VARCHAR2	20	Select CARB FTP exhaust emission standards. Applicable values: LEV2 LEV: LEV2 LEV, LEV2 LEV OPT1: LEV2 LEV OPTION 1, LEV2 ULEV: LEV2 ULEV, LEV2 SULEV: LEV2 SULEV, LEV2 LEV: LEV2 LEV OPTION CERTIFYING TO LEV3 LEV NMOG+NOx, LEV2 ULEVO: LEV2 ULEV OPTION CERTIFYING TO LEV3 ULEV NMOG+NOx, LEV2 SULEVO: LEV2 SULEV OPTION CERTIFYING TO LEV3 SULEV NMOG+NOx, LEV3 LEV160: LEV3 LEV160, LEV3 ULEV125: LEV3 ULEV125, LEV3 ULEV70: LEV3 ULEV70, LEV3 ULEV50: LEV3 ULEV50, LEV3 SULEV30: LEV3 SULEV30, LEV3 SULEV20: LEV3 SULEV20, LEV3 LEV395: LEV3 LEV395, LEV3 ULEV340: LEV3 ULEV340, LEV3 ULEV250: LEV3 ULEV250, LEV3 ULEV200: LEV3 ULEV200, LEV3 SULEV170: LEV3 SULEV170, LEV3 SULEV150: LEV3 SULEV150, LEV3 LEV630: LEV3 LEV630, LEV3 ULEV570: LEV3 ULEV570, LEV3 ULEV400: LEV3 ULEV400, LEV3 ULEV270: LEV3 ULEV270, LEV3 SULEV230: LEV3 SULEV230, LEV3 SULEV200: LEV3 SULEV200, ZEV: ZEV.	LDV_APPLICATION	A B C D E F G
EPA_FTP_STD	NO	VARCHAR2	10	Select EPA FTP exhaust emission standards. Applicable values: TIER3 BIN160: TIER3 BIN160, TIER3 BIN125: TIER3 BIN125, TIER3 BIN110: TIER3 TRANSITIONAL BIN110, TIER3 BIN85: TIER3 TRANSITIONAL BIN85, TIER3 L2SULEV30: TIER3 TRANSITIONAL LEV2 SULEV30 CARRYOVER, TIER3 BIN70: TIER3 BIN70, TIER3 BIN50: TIER3 BIN50, TIER3 BIN30: TIER3 BIN30, TIER3 BIN20: TIER3 BIN20, TIER3 BINO: TIER3 BINO, TIER3 BIN395: TIER3 TRANSITIONAL BIN395, TIER3 BIN340: TIER3 TRANSITIONAL BIN340, TIER3 BIN250: TIER3 BIN250, TIER3 BIN200: TIER3 BIN200, TIER3 BIN170: TIER3 BIN170, TIER3 BIN150: TIER3 BIN150, TIER3 BIN630: TIER3 TRANSITIONAL BIN630, TIER3 BIN570: TIER3 TRANSITIONAL BIN570, TIER3 BIN400: TIER3 BIN400, TIER3 BIN270: TIER3 BIN270, TIER3 BIN230: TIER3 BIN230, TIER2 BIN8: TIER2 BIN8, TIER2 BIN7: TIER2 BIN7, TIER2 BIN6: TIER2 BIN6, TIER2 BIN5: TIER2 BIN5, TIER2 BIN4: TIER2 BIN4, TIER2 BIN3: TIER2 BIN3, TIER2 BIN2: TIER2 BIN2, TIER2 BIN1: TIER2 BIN1, NA: NOT APPLICABLE.	LDV_APPLICATION	A B C D E F G
SFTP_STD	NO	VARCHAR2	24	Select SFTP exhaust emission standards. Applicable values: LEV3LEV SA: LEV 3 LEV STAND-ALONE, LEV3ULEV SA: LEV 3 ULEV STAND-ALONE, LEV3SULEV SAOA: LEV 3 SULEV STAND-ALONE (OPTION A), LEV3SULEV SA: LEV 3 SULEV STAND-ALONE, LEV3 COMP: LEV 3 COMPOSITE, LEV3ULEV-US06BAG2: LEV3 ULEV (US06 BAG2, SC03, FTP TEST CYCLE), LEV3SULEV-US06 BAG2: LEV3 SULEV(US06 BAG2, SC03, FTP TEST CYCLE), LEV3ULEV-FULLUS06: LEV3 ULEV (FULL US06, SC03, FTP TEST CYCLE), LEV3SULEV-FULLUS06: LEV3 SULEV (FULL US06, SC03, FTP TEST CYCLE), LEV3ULEV-UC: LEV3 ULEV (HOT1435 UC(LA92), SC03, FTP TEST CYCLE), LEV3SULEV-UC: LEV3 SULEV (HOT1435 UC(LA92), SC03, FTP TEST CYCLE), LEV2SFTP: LEV 2 SFTP STANDARD, EPAT2: EPA TIER2 SFTP STANDARD, NA: NOT APPLICABLE.	LDV_APPLICATION	A B C D E F G
TG_VEH_CLASS	NO	VARCHAR2	4	Select applicable certification category for this engine or vehicle model. Select MDPV if a vehicle is MDV less than 10000 GVWR but falls in the definition of MDPV. Applicable values: PC: PASSENGER CAR, LDT1: LIGHT-DUTY TRUCK (<= 6000 GVWR; 0-3750 LVW), LDT2: LIGHT-DUTY TRUCK (<= 6000 GVWR; 3751-5750 LVW), LDT3: LIGHT-DUTY TRUCK (6001-8500 GVWR; 3751-5750 ALVW), LDT4: LIGHT-DUTY TRUCK (6001-8500 GVWR; 5751-8500 ALVW), MDPV: MEDIUM-DUTY PASSENGER VEHICLE, MDV4: MEDIUM-DUTY VEHICLE (GVWR = 8501 ~ 10000, NON-MDPV), MDV5: MEDIUM-DUTY VEHICLE (GVWR = 10001 ~ 14000).	LDV_APPLICATION	A B C D E F G
TG_LEV_NOX_TRUCK	NO	CHARACTER	1	Applicable values: Y = Yes, this test group is subject to the optional NOx exhaust emission standards for work truck (If Yes then the FTP NOx exhaust emission standard is less stringent and only applicable to Light Duty Truck (LVW>3751 and GVWR < 8500). N = NO, this test group is not subject to the optional NOx exhaust emission standards for work truck.	LDV_APPLICATION	A B C D E F G
LD_ENGINE_SPCN	YES	CHARACTER	1	Y: Yes, this test group is light-duty SPCNS (Specially Constructed Vehicles), N: No, this test group is not SPCNS.	LDV_APPLICATION	A B C D E F G
WEIGHT_WORST_VEHICLE	YES	NUMBER	5	Enter weight of worst case vehicle (LBS) for SPCNS.	LDV_APPLICATION	A B C D E F G if applicable
NV_RATIO_WORST_VEHICLE	YES	NUMBER	4,1	Enter N/V ratio of worst case vehicle for SPCNS.	LDV_APPLICATION	A B C D E F G if applicable

CSI 1						
Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
TG_FUEL_CAT	NO	VARCHAR2	2	Select the vehicle fuel category. Applicable value: SF: DEDICATED SINGLE FUEL VEHICLE, FF: FLEX-FUEL VEHICLE (FFV), DF: DUAL-FUEL VEHICLE, BF: BI-FUEL VEHICLE, HV: HYBRID ELECTRIC VEHICLE, PH: PLUG-IN HYBRID ELECTRIC VEHICLE, EV: ZEV (BATTERY ELECTRIC), FC: ZEV (H2 FUEL CELL).	LDV_APPLICATION	A B C D E F G
OBD_APPROVAL_REF_NUM	YES	VARCHAR2	20	Enter CARB OBD approval reference number for test group that can be found in CARB OBD approval letter.	LDV_APPLICATION	
MFR_CSI1_NOTE	YES	VARCHAR2	1000	Enter comments or notes for general test group information.	LDV_APPLICATION	
MFR	NO	VARCHAR2	4	The manufacturer code assigned by CARB.	LDV_TEST_GROUP_APP	A B C D E F G
MODEL_YEAR	NO	NUMBER	4	This is the corresponding numeric model year for the test group name.	LDV_TEST_GROUP_APP	A B C D E F G
TEST_GROUP_NAME	NO	VARCHAR2	12	This field is used to identify the test group name subject to the certification protocol. ARB's Executive Order processing requires this field.	LDV_TEST_GROUP_APP	A B C D E F G

CSI 2A						
Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
CERT_TEST_FUEL	YES	VARCHAR2	25	Enter the certification test fuel. Applicable values: CNG-CARB: CNG - CARB CERT FUEL (CA EXTP II A 100.3.5), CNG-EPA: CNG - EPA CERT FUEL (40CFR86.113-94(e)(1)), CNG-OTH: CNG - OTHER, DIESEL-CARB: DIESEL - CARB CERT FUEL (CA EXTP II A 100.3.2), DIESEL-EPA: DIESEL - EPA CERT FUEL (40CFR86.113-07(b)(2)), DIESEL-OTH: DIESEL - OTHER, LEV2 E10-CARB: E10 - 10% ETHANOL + 90% CA PHASE 2 GAS (CA EXTP II A 100.3.4), E10-EPA: E10 - 10% ETHANOL + 90% TIER 2 UNLEADED GAS (EPA), E10-OTH: E10 - OTHER, E85-CARB: E85 - 85% ETHANOL + 15% CA PHASE 2 GAS (CA EXTP II A 100.3.4), E85-TIER3: E85 - ETHANOL + TIER3 E10 GAS, E85-EPA: E85 - 85% ETHANOL + 15% TIER 2 UNLEADED GAS (EPA), E85-OTH: E85 - OTHER, H2-OTH: HYDROGEN - OTHER, LPG-CARB: LPG - CARB CERT FUEL (CA EXTP II A 100.3.6), LPG-EPA: LPG - EPA CERT FUEL (40CFR86.113-94(f)(1)), LPG-OTH: LPG - OTHER, GASOLINE-LEV3 E10: CA LEV3 E10 CERT GASOLINE (CA EXTP II A 100.3.1.2), GASOLINE-LEV3 E10 PREM: CARB LEV3 E10 PREMIUM GASOLINE, GASOLINE-TIER3 E10: TIER3 E10 REGULAR GASOLINE, GASOLINE-TIER3 E10 PREM: TIER3 E10 PREMIUM GASOLINE, GASOLINE-CARB: GASOLINE - CA PHASE 2 (CA EXTP II A 100.3.1.1), GASOLINE-EPA: GASOLINE - TIER 2 UNLEADED (40CFR86.113-04(a)(1)), GASOLINE-COLD E10 REG: COLD CO E10 REGULAR GASOLINE (TIER3), GASOLINE-COLD E10 PREM: COLD CO E10 PREMIUM GASOLINE (TIER3), GASOLINE-LOW: GASOLINE - COLD CO LOW OCTANE (40CFR 86.213-04), GASOLINE-HIGH: GASOLINE - COLD CO HIGH OCTANE (40CFR 86.213-04), GASOLINE-OTH: GASOLINE - OTHER, OTH: OTHER.	LDV_FUEL_FIRE_HEATER_STD	A B C D E F if applicable
CERT_TEST_FUEL_OTHER	YES	VARCHAR2	50	Describe the reference for the test fuel specification or cert test fuel if it is not available from the list of predefined values.	LDV_FUEL_FIRE_HEATER_STD	A B C D E F if applicable
MODIFIED_FFH_TEST	YES	CHARACTER	1	Choose "Yes" if modified test procedure was used for FFH test, then describe modification and approval reference number in Manufacturer Note. Applicable values: Y: YES, N: NO	LDV_FUEL_FIRE_HEATER_STD	A B C D E F if applicable
FFH_XXHC_CL_50K	YES	NUMBER	5,4	Enter the official CARB certification level for NMOG exhaust emissions for the 50,000 mile FTP testing of the fuel fired heater for this test group. (g/mi)	LDV_FUEL_FIRE_HEATER_STD	A B C D E F if applicable
FFH_XXHC_STD_50K	YES	NUMBER	4,3	Enter the official CARB certification standard for NMOG exhaust emissions for the 50,000 mile FTP testing of the fuel fired heater for this test group. (g/mi)	LDV_FUEL_FIRE_HEATER_STD	A B C D E F if applicable
FFH_CO_CL_50K	YES	NUMBER	3,2	Enter the official CARB certification level for CO exhaust emissions for the 50,000 mile FTP testing of the fuel fired heater for this test group. (g/mi)	LDV_FUEL_FIRE_HEATER_STD	A B C D E F if applicable
FFH_CO_STD_50K	YES	NUMBER	2,1	Enter the official CARB certification standard for CO exhaust emissions for the 50,000 mile FTP testing of the fuel fired heater for this test group. (g/mi)	LDV_FUEL_FIRE_HEATER_STD	A B C D E F if applicable
FFH_NOX_CL_50K	YES	NUMBER	4,3	Enter the official CARB certification level for NOx exhaust emissions for the 50,000 mile FTP testing of the fuel fired heater for this test group. (g/mi)	LDV_FUEL_FIRE_HEATER_STD	A B C D E F if applicable
FFH_NOX_STD_50K	YES	NUMBER	3,2	Enter the official CARB certification standard for NOX exhaust emissions for the 50,000 mile FTP testing of the fuel fired heater for this test group. (g/mi)	LDV_FUEL_FIRE_HEATER_STD	A B C D E F if applicable
FFH_NMOG_NOX_CL_UL	YES	NUMBER	5,4	Enter the official CARB certification level for NMOG+NOX exhaust emissions for the useful-life mile FTP testing of the fuel fired heater for this test group. (g/mi)	LDV_FUEL_FIRE_HEATER_STD	A B C D E F if applicable
FFH_NMOG_NOX_STD_UL	YES	NUMBER	4,3	Enter the official CARB certification standard for NMOG+NOX exhaust emissions for the useful-life mile FTP testing of the fuel fired heater for this test group. (g/mi)	LDV_FUEL_FIRE_HEATER_STD	A B C D E F if applicable
FFH_HCHO_CL_50K	YES	NUMBER	3,1	Enter the official CARB certification level for HCHO exhaust emissions for the 50,000 mile FTP testing of the fuel fired heater for this test group. (mg/mi)	LDV_FUEL_FIRE_HEATER_STD	A B C D E F if applicable
FFH_HCHO_STD_50K	YES	NUMBER	2	Enter the official CARB certification standard for HCHO exhaust emissions for the 50,000 mile FTP testing of the fuel fired heater for this test group. (mg/mi)	LDV_FUEL_FIRE_HEATER_STD	A B C D E F if applicable
FFH_PM_CL_50K	YES	NUMBER	4,3	Enter the official CARB certification level for PM exhaust emissions for the 50,000 mile FTP testing of the fuel fired heater for this test group. (g/mi)	LDV_FUEL_FIRE_HEATER_STD	A B C D E F if applicable
FFH_PM_STD_50K	YES	NUMBER	3,2	Enter the official CARB certification standard for PM exhaust emissions for the 50,000 mile FTP testing of the fuel fired heater for this test group. (g/mi)	LDV_FUEL_FIRE_HEATER_STD	A B C D E F if applicable
FFH_XXHC_CL_UL	YES	NUMBER	5,4	Enter the official CARB certification level for NMOG exhaust emissions for the useful-life mile FTP testing of the fuel fired heater for this test group. (g/mi)	LDV_FUEL_FIRE_HEATER_STD	A B C D E F if applicable
FFH_XXHC_STD_UL	YES	NUMBER	4,3	Enter the official CARB certification standard for NMOG exhaust emissions for the useful-life mile FTP testing of the fuel fired heater for this test group. (g/mi)	LDV_FUEL_FIRE_HEATER_STD	A B C D E F if applicable
FFH_CO_CL_UL	YES	NUMBER	3,2	Enter the official CARB certification level for CO exhaust emissions for the useful-life mile FTP testing of the fuel fired heater for this test group. (g/mi)	LDV_FUEL_FIRE_HEATER_STD	A B C D E F if applicable
FFH_CO_STD_UL	YES	NUMBER	2,1	Enter the official CARB certification standard for CO exhaust emissions for the useful-life mile FTP testing of the fuel fired heater for this test group. (g/mi)	LDV_FUEL_FIRE_HEATER_STD	A B C D E F if applicable
FFH_NOX_CL_UL	YES	NUMBER	4,3	Enter the official CARB certification level for NOx exhaust emissions for the useful-life mile FTP testing of the fuel fired heater for this test group. (g/mi)	LDV_FUEL_FIRE_HEATER_STD	A B C D E F if applicable
FFH_NOX_STD_UL	YES	NUMBER	3,2	Enter the official CARB certification standard for NOx exhaust emissions for the useful-life mile FTP testing of the fuel fired heater for this test group. (g/mi)	LDV_FUEL_FIRE_HEATER_STD	A B C D E F if applicable
FFH_HCHO_CL_UL	YES	NUMBER	3,1	Enter the official CARB certification level for HCHO exhaust emissions for the useful-life mile FTP testing of the fuel fired heater for this test group. (mg/mi)	LDV_FUEL_FIRE_HEATER_STD	A B C D E F if applicable

CSI 2A						
Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
FFH_HCHO_STD_UL	YES	NUMBER	2	Enter the official CARB certification standard for HCHO exhaust emissions for the useful-life mile FTP testing of the fuel fired heater for this test group. (mg/mi)	LDV_FUEL_FIRE_HEATER_STD	A B C D E F if applicable
FFH_PM_CL_UL	YES	NUMBER	5,4	Enter the official CARB certification level for PM exhaust emissions for the useful-life mile FTP testing of the fuel fired heater for this test group. (g/mi)	LDV_FUEL_FIRE_HEATER_STD	A B C D E F if applicable
FFH_PM_STD_UL	YES	NUMBER	4,3	Enter the official CARB certification standard for PM exhaust emissions for the useful-life mile FTP testing of the fuel fired heater for this test group. (g/mi)	LDV_FUEL_FIRE_HEATER_STD	A B C D E F if applicable
MFR_FFH_NOTE	YES	VARCHAR2	1000	Enter any comments regarding the standards or certification levels of the FFH.	LDV_FUEL_FIRE_HEATER_STD	
CARB_FFH_NOTE	YES	VARCHAR2	1000	CARB only field. Staff notes or comments regarding the standards or certification levels of the FFH.	LDV_FUEL_FIRE_HEATER_STD	
CERT_TEST_FUEL	YES	VARCHAR2	25	Enter the certification test fuel. Applicable values: CNG-CARB: CNG - CARB CERT FUEL (CA ExTP II A 100.3.5), CNG-EPA: CNG - EPA CERT FUEL (40CFR86.113-94(e)(1)), CNG-OTH: CNG - OTHER, DIESEL-CARB: DIESEL - CARB CERT FUEL (CA ExTP II A 100.3.2), DIESEL-EPA: DIESEL - EPA CERT FUEL (40CFR86.113-07(b)(2)), DIESEL-OTH: DIESEL - OTHER, LEV2 E10-CARB: E10 - 10% ETHANOL + 90% CA PHASE 2 GAS (CA ExTP II A 100.3.4), E10-EPA: E10 - 10% ETHANOL + 90% TIER 2 UNLEADED GAS (EPA), E10-OTH: E10 - OTHER, E85-CARB: E85 - 85% ETHANOL + 15% CA PHASE 2 GAS (CA ExTP II A 100.3.4), E85-TIER3: E85 - ETHANOL + TIER3 E10 GAS, E85-EPA: E85 - 85% ETHANOL + 15% TIER 2 UNLEADED GAS (EPA), E85-OTH: E85 - OTHER, H2-OTH: HYDROGEN - OTHER, LPG-CARB: LPG - CARB CERT FUEL (CA ExTP II A 100.3.6), LPG-EPA: LPG - EPA CERT FUEL (40CFR86.113-94(f)(1)), LPG-OTH: LPG - OTHER, GASOLINE-LEV3 E10: CA LEV3 E10 CERT GASOLINE (CA ExTP II A 100.3.1.2), GASOLINE-LEV3 E10 PREM: CARB LEV3 E10 PREMIUM GASOLINE, GASOLINE-TIER3 E10: TIER3 E10 REGULAR GASOLINE, GASOLINE-TIER3 E10 PREM: TIER3 E10 PREMIUM GASOLINE, GASOLINE-CARB: GASOLINE - CA PHASE 2 (CA ExTP II A 100.3.1.1), GASOLINE-EPA: GASOLINE - TIER 2 UNLEADED (40CFR86.113-04(a)(1)), GASOLINE-COLD E10 REG: COLD CO E10 REGULAR GASOLINE (TIER3), GASOLINE-COLD E10 PREM: COLD CO E10 PREMIUM GASOLINE (TIER3), GASOLINE-LOW: GASOLINE - COLD CO LOW OCTANE (40CFR 86.213-04), GASOLINE-HIGH: GASOLINE - COLD CO HIGH OCTANE (40CFR 86.213-04), GASOLINE-OTH: GASOLINE - OTHER, OTH: OTHER.	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable
CERT_TEST_FUEL_OTHER	YES	VARCHAR2	50	Describe the reference for the test fuel specification or cert test fuel if it is not available from the list of predefined values.	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable
MODIFIED_SFTP_TEST	YES	CHARACTER	1	Choose "Yes" if modified test procedure was used for SFTP test, then describe modification and approval reference number in Manufacturer Note. Applicable values: Y: YES, N: NO.	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_SFTP_US06_XXHCNOX_CL_4K	YES	NUMBER	5,4	As applicable, enter the official CARB certification level for 4,000-miles SFTP US06 XXHC+NOx for this test group. (g/mi)	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_SFTP_US06_XXHCNOX_STD_4K	YES	NUMBER	4,3	As applicable, enter the 4,000-miles SFTP US06 XXHC+NOx exhaust emission standard. (g/mi)	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_SFTP_US06_XXHCNOX_CL_UL	YES	NUMBER	5,4	As applicable, enter the official CARB certification level for Useful-Life-miles SFTP US06 XXHC+NOx for this test group. (g/mi)	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_SFTP_US06_XXHCNOX_STD_UL	YES	NUMBER	4,3	As applicable, enter the Useful-Life-miles SFTP US06 XXHC+NOx exhaust emission standard. (g/mi)	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_SFTP_US06_CO_CL_4K	YES	NUMBER	4,2	As applicable, enter the official CARB certification level for 4,000-miles SFTP US06 CO for this test group. (g/mi)	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_SFTP_US06_CO_STD_4K	YES	NUMBER	3,1	As applicable, enter the 4,000-miles SFTP US06 CO exhaust emission standard. (g/mi)	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_SFTP_US06_CO_CL_UL	YES	NUMBER	4,2	As applicable, enter the official CARB certification level for useful-life-miles SFTP US06 CO for this test group. (g/mi)	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_SFTP_US06_CO_STD_UL	YES	NUMBER	3,1	As applicable, enter the useful-life-miles SFTP US06 CO exhaust emission standard. (g/mi)	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_SFTP_US06_PM_CL_UL	YES	NUMBER	3,1	As applicable, enter the official CARB certification level for useful-life-miles SFTP US06 PM for this test group in unit of mg/mi.	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_SFTP_US06_PM_STD_UL	YES	NUMBER	2	As applicable, enter the useful-life-miles SFTP US06 PM exhaust emission standard in unit of mg/mi.	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_SFTP_SC03_XXHCNOX_CL_4K	YES	NUMBER	5,4	As applicable, enter the official CARB certification level for 4,000-miles SFTP SC03 XXHC+NOx for this test group. (g/mi)	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_SFTP_SC03_XXHCNOX_STD_4K	YES	NUMBER	4,3	As applicable, enter the 4,000-miles SFTP SC03 XXHC+NOx exhaust emission standard. (g/mi)	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_SFTP_SC03_XXHCNOX_CL_UL	YES	NUMBER	5,4	As applicable, enter the official CARB certification level for useful-life-miles SFTP SC03 XXHC+NOx for this test group. (g/mi)	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_SFTP_SC03_XXHCNOX_STD_UL	YES	NUMBER	4,3	As applicable, enter the useful-life-miles SFTP SC03 XXHC+NOx exhaust emission standard. (g/mi)	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_SFTP_SC03_CO_CL_4K	YES	NUMBER	3,2	As applicable, enter the official CARB certification level for 4,000-miles SFTP SC03 CO for this test group. (g/mi)	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_SFTP_SC03_CO_STD_4K	YES	NUMBER	2,1	As applicable, enter the 4,000-miles SFTP SC03 CO exhaust emission standard. (g/mi)	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_SFTP_SC03_CO_CL_UL	YES	NUMBER	3,2	As applicable, enter the official CARB certification level for useful-life-miles SFTP SC03 CO for this test group. (g/mi)	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_SFTP_SC03_CO_STD_UL	YES	NUMBER	2,1	As applicable, enter the useful-life-miles SFTP SC03 CO exhaust emission standard. (g/mi)	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_SFTP_COMP_XXHCNOX_CL_UL	YES	NUMBER	5,4	As applicable, enter the official CARB certification level for useful-life-miles SFTP composite XXHC+NOx for this test group. (g/mi)	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable

CSI 2A						
Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
EXH_SFTP_COMP_XXHCNOX_STD_UL	YES	NUMBER	4,3	As applicable, enter the useful-life-miles SFTP composite XXHC+NOx exhaust emission standard. (g/mi)	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_SFTP_COMP_NMOGNOX_BIN_UL	YES	NUMBER	5,4	As applicable, enter the useful-life-miles SFTP composite NMOG+NOx exhaust emission BIN. (g/mi)	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_SFTP_COMP_CO_CL_UL	YES	NUMBER	4,2	As applicable, enter the official CARB certification level for useful-life-miles SFTP composite CO for this test group. (g/mi)	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_SFTP_COMP_CO_STD_UL	YES	NUMBER	3,1	As applicable, enter the useful-life-miles SFTP composite CO exhaust emission standard. (g/mi)	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_SFTP_COMP_PM_CL_UL	YES	NUMBER	3,1	As applicable, enter the official CARB certification level for useful-life-miles SFTP composite PM for this test group in unit of mg/mi.	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_SFTP_COMP_PM_STD_UL	YES	NUMBER	2	As applicable, enter the useful-life-miles SFTP composite PM exhaust emission standard in unit of mg/mi.	LDV_SFTP_EXH_STD_LEVELS	A B C D E F if applicable
MFR_SFTP_NOTE	YES	VARCHAR2	1000	Enter any applicable notes or comments regarding the CARB SFTP Exhaust Emission Standards and Certification Levels.	LDV_SFTP_EXH_STD_INFO	A B C D E F if applicable
CERT_TEST_FUEL	NO	VARCHAR2	25	Enter the certification test fuel. Applicable values: CNG-CARB: CNG - CARB CERT FUEL (CA ExTP II A 100.3.5), CNG-EPA: CNG - EPA CERT FUEL (40CFR86.113-94(e)(1)), CNG-OTH: CNG - OTHER, DIESEL-CARB: DIESEL - CARB CERT FUEL (CA ExTP II A 100.3.2), DIESEL-EPA: DIESEL - EPA CERT FUEL (40CFR86.113-07(b)(2)), DIESEL-OTH: DIESEL - OTHER, LEV2 E10-CARB: E10 - 10% ETHANOL + 90% CA PHASE 2 GAS (CA ExTP II A 100.3.4), E10-EPA: E10 - 10% ETHANOL + 90% TIER 2 UNLEADED GAS (EPA), E10-OTH: E10 - OTHER, E85-CARB: E85 - 85% ETHANOL + 15% CA PHASE 2 GAS (CA ExTP II A 100.3.4), E85-TIER3: E85 - ETHANOL + TIER3 E10 GAS, E85-EPA: E85 - 85% ETHANOL + 15% TIER 2 UNLEADED GAS (EPA), E85-OTH: E85 - OTHER, H2-OTH: HYDROGEN - OTHER, LPG-CARB: LPG - CARB CERT FUEL (CA ExTP II A 100.3.6), LPG-EPA: LPG - EPA CERT FUEL (40CFR86.113-94(f)(1)), LPG-OTH: LPG - OTHER, GASOLINE-LEV3 E10: CA LEV3 E10 CERT GASOLINE (CA ExTP II A 100.3.1.2), GASOLINE-LEV3 E10 PREM: CARB LEV3 E10 PREMIUM GASOLINE, GASOLINE-TIER3 E10: TIER3 E10 REGULAR GASOLINE, GASOLINE-TIER3 E10 PREM: TIER3 E10 PREMIUM GASOLINE, GASOLINE-CARB: GASOLINE - CA PHASE 2 (CA ExTP II A 100.3.1.1), GASOLINE-EPA: GASOLINE - TIER 2 UNLEADED (40CFR86.113-04(a)(1)), GASOLINE-COLD E10 REG: COLD CO E10 REGULAR GASOLINE (TIER3), GASOLINE-COLD E10 PREM: COLD CO E10 PREMIUM GASOLINE (TIER3), GASOLINE-LOW: GASOLINE - COLD CO LOW OCTANE (40CFR 86.213-04), GASOLINE-HIGH: GASOLINE - COLD CO HIGH OCTANE (40CFR 86.213-04), GASOLINE-OTH: GASOLINE - OTHER, OTH: OTHER.	LDV_FTP_EXH_STD_LEVELS	A B C D E F
CERT_TEST_FUEL_OTHER	YES	VARCHAR2	50	Describe the reference for the test fuel specification or cert test fuel if it is not available from the list of predefined values.	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_XXHC_TYPE	NO	VARCHAR2	4	Enter the Hydrocarbon type used to determine compliance with applicable standards. Applicable values: THC: TOTAL HYDROCARBONS, NMHC: NON-METHANE HYDROCARBONS, NMOG: NON-METHANE ORGANIC GAS, OT: USE XXHC TYPE OTHER TO DESCRIBE OTHER TYPE.	LDV_FTP_EXH_STD_LEVELS	A B C D E F
EXH_FTP_XXHC_TYPE_OTHER	YES	VARCHAR2	50	Describe the exhaust FTP xxHC type if it is not available from the list of predefine values.	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
MODIFIED_TEST_FOR_FTP	NO	CHARACTER	1	Choose "Yes" if modified test procedure was used for FTP test, then describe modification and approval reference number in Manufacturer Note. Applicable values: Y: YES, N: NO.	LDV_FTP_EXH_STD_LEVELS	A B C D E F
TG_USE_FFH	NO	CHARACTER	1	Choose "Yes" if test group has a Fuel-Fired Heater (FFH). Applicable values: Y: YES, N: NO.	LDV_FTP_EXH_STD_LEVELS	A B C D E F
FFH_OP_AT_40F	NO	VARCHAR2	2	Choose "Yes" if Fuel-Fired Heater (FFH) is operable at ambient temperatures above 40 F. Applicable values: Y: YES, N: NO, NA: NOT APPLICABLE.	LDV_FTP_EXH_STD_LEVELS	A B C D E F
FTP_CERT_INC_FFH_EXH	NO	VARCHAR2	2	Choose "Yes" if FTP Cert level includes exhaust from Fuel-Fired Heater (FFH). Applicable values: Y: YES, N: NO, NA: NOT APPLICABLE.	LDV_FTP_EXH_STD_LEVELS	A B C D E F
EXH_50F_XXHC_CL_4K	YES	NUMBER	5,4	Enter the official CARB certification level for hydrocarbon exhaust emissions for the 4,000 mile 50° F FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_50F_XXHC_STD_4K	YES	NUMBER	4,3	Enter the official CARB certification standard for hydrocarbon exhaust emissions for the 4,000 mile 50° F FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_XXHC_CL_50K	YES	NUMBER	5,4	Enter the official CARB certification level for hydrocarbon exhaust emissions for the 50,000 mile FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_XXHC_STD_50K	YES	NUMBER	4,3	Enter the official CARB certification standard for hydrocarbon exhaust emissions for the 50,00 mile FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_XXHC_CL_UL	YES	NUMBER	5,4	Enter the official CARB certification level for hydrocarbon exhaust emissions for the UL mile FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_XXHC_STD_UL	YES	NUMBER	4,3	Enter the official CARB certification standard for hydrocarbon exhaust emissions for the UL mile FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_50F_NOX_CL_4K	YES	NUMBER	4,3	Enter the official CARB certification level for NOx exhaust emissions for the 4,000 mile 50° F FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_50F_NOX_STD_4K	YES	NUMBER	3,2	Enter the official CARB certification standard for NOx exhaust emissions for the 4,000 mile 50° F FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable

CSI 2A						
Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
EXH_FTP_NOX_CL_50K	YES	NUMBER	4,3	Enter the official CARB certification level for NOx exhaust emissions for the 50000 mile FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_NOX_STD_50K	YES	NUMBER	3,2	Enter the official CARB certification standard for NOx exhaust emissions for the 50000 mile FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_NOX_CL_UL	YES	NUMBER	4,3	Enter the official CARB certification level for NOx exhaust emissions for the UL mile FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_NOX_STD_UL	YES	NUMBER	3,2	Enter the official CARB certification standard for NOx exhaust emissions for the UL mile FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_50F_NMOG_NOX_CL_4K	YES	NUMBER	5,4	Enter the official CARB certification level for NMOG+NOX exhaust emissions for the 4,000 mile 50° F FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_50F_NMOG_NOX_STD_4K	YES	NUMBER	4,3	Enter the official CARB certification standard for NMOG+NOX exhaust emissions for the 4,000 mile 50° F FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_NMOG_NOX_CL_UL	YES	NUMBER	5,4	Enter the official CARB certification level for NMOG+NOX exhaust emissions for the UL mile FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_NMOG_NOX_STD_UL	YES	NUMBER	4,3	Enter the official CARB certification standard for NMOG+NOX exhaust emissions for the UL mile FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_50F_CO_CL_4K	YES	NUMBER	3,2	Enter the official CARB certification level for CO exhaust emissions for the 4,000 mile 50° F FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_50F_CO_STD_4K	YES	NUMBER	2,1	Enter the official CARB certification standard for CO exhaust emissions for the 4,000 mile 50° F FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_CO_CL_50K	YES	NUMBER	3,2	Enter the official CARB certification level for CO exhaust emissions for the 50,000 mile FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_CO_STD_50K	YES	NUMBER	2,1	Enter the official CARB certification standard for CO exhaust emissions for the 50,000 mile FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_CO_CL_UL	YES	NUMBER	3,2	Enter the official CARB certification level for CO exhaust emissions for the UL mile FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_CO_STD_UL	YES	NUMBER	2,1	Enter the official CARB certification standard for CO exhaust emissions for the UL mile FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_50F_HCHO_CL_4K	YES	NUMBER	3,1	Enter the official CARB certification level for HCHO exhaust emissions (mg/mi) for the 4,000 mile 50° F FTP test for this test group.	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_50F_HCHO_STD_4K	YES	NUMBER	2	Enter the official CARB certification standard for HCHO exhaust emissions (mg/mi) for the 4,000 mile 50° F FTP test for this test group.	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_HCHO_CL_50K	YES	NUMBER	3,1	Enter the official CARB certification level for HCHO exhaust emissions (mg/mi) for the 50,000 mile FTP test for this test group.	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_HCHO_STD_50K	YES	NUMBER	2	Enter the official CARB certification standard for HCHO exhaust emissions (mg/mi) for the 50,000 mile FTP test for this test group.	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_HCHO_CL_UL	YES	NUMBER	3,1	Enter the official CARB certification level for HCHO exhaust emissions (mg/mi) for the UL mile FTP test for this test group.	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_HCHO_STD_UL	YES	NUMBER	2	Enter the official CARB certification standard for HCHO exhaust emissions (mg/mi) for the UL mile FTP test for this test group.	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_PM_CL_50K	YES	NUMBER	4,3	Enter the official CARB certification level for PM exhaust emissions for the 50,000 mile FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_PM_STD_50K	YES	NUMBER	3,2	Enter the official CARB certification standard for PM exhaust emissions for the 50,000 mile FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_PM_CL_UL	YES	NUMBER	5,4	Enter the official CARB certification level for PM exhaust emissions for the UL mile FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_PM_STD_UL	YES	NUMBER	4,3	Enter the official CARB certification standard for PM exhaust emissions for the UL mile FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_HWYNOX_CL_50K	YES	NUMBER	4,3	Enter the official CARB certification level for highway NOx exhaust emissions for the 50,000 mile FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_HWYNOX_STD_50K	YES	NUMBER	3,2	Enter the official CARB certification standard for highway NOx exhaust emissions for the 50,000 mile FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_HWYNOX_CL_UL	YES	NUMBER	4,3	Enter the official CARB certification level for highway NOx exhaust emissions for the UL mile FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_HWYNOX_STD_UL	YES	NUMBER	3,2	Enter the official CARB certification standard for highway NOx exhaust emissions for the UL mile FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_HWY_NMOG_NOX_CL_UL	YES	NUMBER	5,4	Enter the official CARB certification level for highway NMOG+NOx exhaust emissions for the UL mile FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_HWY_NMOG_NOX_STD_UL	YES	NUMBER	4,3	Enter the official CARB certification standard for highway NMOG+NOx exhaust emissions for the UL mile FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable

CSI 2A						
Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
EXH_FTP_COLD_CO_CL_50K	YES	NUMBER	4,2	Enter the official CARB certification level for cold - CO exhaust emissions for the 50,000 mile FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_FTP_COLD_CO_STD_50K	YES	NUMBER	3,1	Enter the official CARB certification standard for cold - CO exhaust emissions for the 50,000 mile FTP test for this test group. (g/mi)	LDV_FTP_EXH_STD_LEVELS	A B C D E F if applicable
EXH_UL_YR	NO	NUMBER	2	Enter the applicable CARB exhaust useful life duration in years.	LDV_FTP_EXH_STD_INFO	A B C D E F
EXH_UL_MI	NO	NUMBER	6	Enter the applicable CARB exhaust useful life duration in miles. Do not enter comma.	LDV_FTP_EXH_STD_INFO	A B C D E F
EXTD_WARRANTY_NMOGNOX_CDT	NO	CHARACTER	1	Does this LEV III test group meet extended warranty requirement to generate additional NMOG+NOx fleet average credit (13CCR1961.2(a)(9))? Y: YES, N: NO.	LDV_FTP_EXH_STD_INFO	A B C D E F
DOR_NMOG_TG	NO	CHARACTER	1	Is any model in the TG granted DOR? Y: YES, N: NO.	LDV_FTP_EXH_STD_INFO	A B C D E F
DOR_FTP_NMOG_CREDIT	YES	CHARACTER	1	Does NMOG Cert include DOR NMOG Credit? Y: YES, N: NO.	LDV_FTP_EXH_STD_INFO	A B C D E F if applicable
NON_PZEV_ZERO_EVAP_NMOG_TG	NO	CHARACTER	1	Is any model in the TG granted Non-PZEV Zero-Evap NMOG Credit (a model with non-PZEV zero evap is a vehicle that was certified to zero fuel evap standard but did not seek a PZEV credit)? Y: YES, N: NO.	LDV_FTP_EXH_STD_INFO	A B C D E F
NON_PZEV_ZERO_EVAP_NMOG_CDT	YES	CHARACTER	1	Does NMOG Cert include Non-PZEV Zero-Evap NMOG Credit (13CCR1961(a)(11) allows NMOG credit to be applied against measured NMOG emissions for vehicles that were certified to zero fuel evap standard but did not seek a PZEV credit)? Y: YES, N: NO.	LDV_FTP_EXH_STD_INFO	A B C D E F if applicable
MFR_FTP_NOTE	YES	VARCHAR2	1000	Enter any applicable notes or comments regarding the CARB FTP Exhaust Emission Standards and Certification Levels.	LDV_FTP_EXH_STD_INFO	
DIRECT_MEASURE_NMOG	NO	VARCHAR2	2	Direct Measurement of NMOG? Y: YES, N: NO, NA: NOT APPLICABLE	LDV_FTP_EXH_STD_INFO	A B C D E F
NMOG_NMHC_RATIO	NO	NUMBER	3,2	Enter FTP NMOG/NMHC adjustment factor. For dual fuel vehicles with CNG and gasoline, enter FTP NMOG/NMHC adjustment factor for CNG into this field and additional FTP NMOG/NMHC adjustment factor for gasoline into Manufacturer Note. For flex fuel vehicles with E85 and gasoline, enter FTP NMOG/NMHC adjustment factor for gasoline into this field and additional FTP NMOG/NMHC adjustment factor for E85 into Manufacturer Note. Enter NMOG/NMHC adjustment factors used in other test, if any, into Manufacturer Note (e.g., SFTP test, Highway test).	LDV_FTP_EXH_STD_INFO	A B C D E F
HCHO_NMHC_RATIO	YES	NUMBER	4,3	Enter HCHO/NMHC ratio.	LDV_FTP_EXH_STD_INFO	A B C D E F if applicable
RAF_NMOG	YES	NUMBER	3,2	Enter RAF (reactivity adjustment factor) for NMOG.	LDV_FTP_EXH_STD_INFO	A B C D E F if applicable
RAF_METHANE	YES	NUMBER	5,4	Enter RAF (reactivity adjustment factor) for Methane.	LDV_FTP_EXH_STD_INFO	A B C D E F if applicable

CSI 2B						
Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
EVAP_REFUEL_FAM	NO	VARCHAR2	12	Enter the 12-digits (all upper case) of the evaporative refueling family that you are certifying.	LDV_EVAP_REFUEL_STDS	A C D E F
EVAP_CERT_OPTION	NO	VARCHAR2	12	Enter the certification option for evaporative emissions. Applicable values: LEV3 OPT1: LEV 3 OPTION 1, LEV3 OPT2: LEV 3 OPTION 2, LEV3 OPT2FEL: LEV 3 OPTION 2 WITH FEL, LEV2: LEV 2, NA: NOT APPLICABLE.	LDV_EVAP_REFUEL_STDS	A C D E F
EVAP_VEH_CLASS	YES	VARCHAR2	4	Select only one vehicle type for evaporative emission standard (most stringent for multiple vehicle type). Applicable values: PC: PASSENGER CAR, LDT1: LIGHT DUTY TRUCK (<= 6000 GVWR; 0-3750 LVW), LDT2: LIGHT DUTY TRUCK (<= 6000 GVWR; 3751-5750 LVW), LDT3: LIGHT DUTY TRUCK (6001-8500 GVWR; 3751-5750 ALVW), LDT4: LIGHT DUTY TRUCK (6001-8500 GVWR; 5751-8500 ALVW), MDPV: MEDIUM-DUTY PASSENGER VEHICLE, MDV4: MEDIUM-DUTY VEHICLE (GVWR = 8501 ~ 10000), MDV5: MEDIUM-DUTY VEHICLE (GVWR = 10001 ~ 14000).	LDV_EVAP_REFUEL_STDS	A D E
CERT_TEST_FUEL	YES	VARCHAR2	25	Enter the certification test fuel. Applicable values: CNG-CARB: CNG - CARB CERT FUEL (CA ExTP II A 100.3.5), CNG-EPA: CNG - EPA CERT FUEL (40CFR86.113-94(e)(1)), CNG-OTH: CNG - OTHER, DIESEL-CARB: DIESEL - CARB CERT FUEL (CA ExTP II A 100.3.2), DIESEL-EPA: DIESEL - EPA CERT FUEL (40CFR86.113-07(b)(2)), DIESEL-OTH: DIESEL - OTHER, LEV2 E10-CARB: E10 - 10% ETHANOL + 90% CA PHASE 2 GAS (CA ExTP II A 100.3.4), E10-EPA: E10 - 10% ETHANOL + 90% TIER 2 UNLEADED GAS (EPA), E10-OTH: E10 - OTHER, E85-CARB: E85 - 85% ETHANOL + 15% CA PHASE 2 GAS (CA ExTP II A 100.3.4), E85-TIER3: E85 - ETHANOL + TIER3 E10 GAS, E85-EPA: E85 - 85% ETHANOL + 15% TIER 2 UNLEADED GAS (EPA), E85-OTH: E85 - OTHER, H2-OTH: HYDROGEN - OTHER, LPG-CARB: LPG - CARB CERT FUEL (CA ExTP II A 100.3.6), LPG-EPA: LPG - EPA CERT FUEL (40CFR86.113-94(f)(1)), LPG-OTH: LPG - OTHER, GASOLINE-LEV3 E10: CA LEV3 E10 CERT GASOLINE (CA ExTP II A 100.3.1.2), GASOLINE-LEV3 E10 PREM: CARB LEV3 E10 PREMIUM GASOLINE, GASOLINE-TIER3 E10: TIER3 E10 REGULAR GASOLINE, GASOLINE-TIER3 E10 PREM: TIER3 E10 PREMIUM GASOLINE, GASOLINE-CARB: GASOLINE - CA PHASE 2 (CA ExTP II A 100.3.1.1), GASOLINE-EPA: GASOLINE - TIER 2 UNLEADED (40CFR86.113-04(a)(1)), GASOLINE-COLD E10 REG: COLD CO E10 REGULAR GASOLINE (TIER3), GASOLINE-COLD E10 PREM: COLD CO E10 PREMIUM GASOLINE (TIER3), GASOLINE-LOW: GASOLINE - COLD CO LOW OCTANE (40CFR 86.213-04), GASOLINE-HIGH: GASOLINE - COLD CO HIGH OCTANE (40CFR 86.213-04), GASOLINE-OTH: GASOLINE - OTHER, OTH: OTHER.	LDV_EVAP_REFUEL_STDS	A D E
CERT_TEST_FUEL_OTHER	YES	VARCHAR2	50	Describe the reference for the test fuel specification or cert test fuel if it is not available from the list of predefined values.	LDV_EVAP_REFUEL_STDS	A D E if applicable
ORVR_CERT_TEST_FUEL	YES	VARCHAR2	25	Enter the certification test fuel. Applicable values: CNG-CARB: CNG - CARB CERT FUEL (CA ExTP II A 100.3.5), CNG-EPA: CNG - EPA CERT FUEL (40CFR86.113-94(e)(1)), CNG-OTH: CNG - OTHER, DIESEL-CARB: DIESEL - CARB CERT FUEL (CA ExTP II A 100.3.2), DIESEL-EPA: DIESEL - EPA CERT FUEL (40CFR86.113-07(b)(2)), DIESEL-OTH: DIESEL - OTHER, LEV2 E10-CARB: E10 - 10% ETHANOL + 90% CA PHASE 2 GAS (CA ExTP II A 100.3.4), E10-EPA: E10 - 10% ETHANOL + 90% TIER 2 UNLEADED GAS (EPA), E10-OTH: E10 - OTHER, E85-CARB: E85 - 85% ETHANOL + 15% CA PHASE 2 GAS (CA ExTP II A 100.3.4), E85-TIER3: E85 - ETHANOL + TIER3 E10 GAS, E85-EPA: E85 - 85% ETHANOL + 15% TIER 2 UNLEADED GAS (EPA), E85-OTH: E85 - OTHER, H2-OTH: HYDROGEN - OTHER, LPG-CARB: LPG - CARB CERT FUEL (CA ExTP II A 100.3.6), LPG-EPA: LPG - EPA CERT FUEL (40CFR86.113-94(f)(1)), LPG-OTH: LPG - OTHER, GASOLINE-LEV3 E10: CA LEV3 E10 CERT GASOLINE (CA ExTP II A 100.3.1.2), GASOLINE-LEV3 E10 PREM: CARB LEV3 E10 PREMIUM GASOLINE, GASOLINE-TIER3 E10: TIER3 E10 REGULAR GASOLINE, GASOLINE-TIER3 E10 PREM: TIER3 E10 PREMIUM GASOLINE, GASOLINE-CARB: GASOLINE - CA PHASE 2 (CA ExTP II A 100.3.1.1), GASOLINE-EPA: GASOLINE - TIER 2 UNLEADED (40CFR86.113-04(a)(1)), GASOLINE-COLD E10 REG: COLD CO E10 REGULAR GASOLINE (TIER3), GASOLINE-COLD E10 PREM: COLD CO E10 PREMIUM GASOLINE (TIER3), GASOLINE-LOW: GASOLINE - COLD CO LOW OCTANE (40CFR 86.213-04), GASOLINE-HIGH: GASOLINE - COLD CO HIGH OCTANE (40CFR 86.213-04), GASOLINE-OTH: GASOLINE - OTHER, OTH: OTHER.	LDV_EVAP_REFUEL_STDS	A D E
ORVR_CERT_TEST_FUEL_OTH	YES	VARCHAR2	50	Describe the reference for the test fuel specification or cert test fuel if it is not available from the list of predefined values.	LDV_EVAP_REFUEL_STDS	A D E if applicable
MODIFIED_EVAP_TEST	YES	CHARACTER	1	Choose "Yes" if modified test procedure was used for evap test, then describe modification and approval reference number in Manufacturer Note.	LDV_EVAP_REFUEL_STDS	A D E
EVAP_POLLUTANT_TYPE	YES	CHARACTER	1	Enter the applicable evaporative pollutant type. Applicable values: N: ORGANIC MATERIAL NON-METHANE HYDROCARBON EQUIVALENT (OMNMHCE), O: ORGANIC MATERIAL HYDROCARBON EQUIVALENT (OMHCE), T: TOTAL HYDROCARBONS (THC).	LDV_EVAP_REFUEL_STDS	A D E
EVAP_CL_3D_HS	YES	NUMBER	5,4	Enter the certification level for the 3-day diurnal plus hot soak test. (g/test)	LDV_EVAP_REFUEL_STDS	A D E if applicable
EVAP_STD_3D_HS	YES	NUMBER	4,3	Enter the standard level for the 3-day diurnal plus hot soak test. (g/test)	LDV_EVAP_REFUEL_STDS	A D E if applicable
EVAP_CL_2D_HS	YES	NUMBER	5,4	Enter the certification level for the 2-day diurnal plus hot soak test. (g/test)	LDV_EVAP_REFUEL_STDS	A D E if applicable
EVAP_STD_2D_HS	YES	NUMBER	4,3	Enter the standard level for the 2-day diurnal plus hot soak test. (g/test)	LDV_EVAP_REFUEL_STDS	A D E if applicable
EVAP_CL_RUN_LOSS	YES	NUMBER	4,3	Enter the certification level for the running loss test. (g/mi)	LDV_EVAP_REFUEL_STDS	A D E if applicable

CSI 2B						
Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
EVAP_STD_RUN_LOSS	YES	NUMBER	3,2	Enter the standard level for the running loss test. (g/mi)	LDV_EVAP_REFUEL_STDS	A D E if applicable
EVAP_CL_FUEL_ONLY_3D_HS	YES	NUMBER	3,2	Enter the applicable fuel only 3 day + hot soak certification level. (g/test)	LDV_EVAP_REFUEL_STDS	A D E if applicable
EVAP_STD_FUEL_ONLY_3D_HS	YES	NUMBER	2,1	Enter the applicable fuel only 3 day + hot soak certification standard. (g/test)	LDV_EVAP_REFUEL_STDS	A D E if applicable
EVAP_CL_FUEL_ONLY_2D_HS	YES	NUMBER	3,2	Enter the applicable fuel only 2 day + hot soak certification level. (g/test)	LDV_EVAP_REFUEL_STDS	A D E if applicable
EVAP_STD_FUEL_ONLY_2D_HS	YES	NUMBER	2,1	Enter the applicable fuel only 2 day + hot soak certification standard. (g/test)	LDV_EVAP_REFUEL_STDS	A D E if applicable
EVAP_CL_CANISTER_BLEED	YES	NUMBER	5,4	Enter the certification level (g/test) for the canister bleed test. (g/test)	LDV_EVAP_REFUEL_STDS	A D E if applicable
EVAP_STD_CANISTER_BLEED	YES	NUMBER	4,3	Enter the standard (g/test) for the canister bleed test. (g/test)	LDV_EVAP_REFUEL_STDS	A D E if applicable
EVAP_FEL_3D_HS	YES	NUMBER	4,3	Enter family emission limit (FEL) for the 3-day diurnal plus hot soak test. (g/test)	LDV_EVAP_REFUEL_STDS	A D E if applicable
EVAP_FEL_2D_HS	YES	NUMBER	4,3	Enter family emission limit (FEL) for the 2-day diurnal plus hot soak test. (g/test)	LDV_EVAP_REFUEL_STDS	A D E if applicable
EVAP_CL_ORVR	YES	NUMBER	4,3	Enter the applicable ORVR certification level for the test. (g/gal)	LDV_EVAP_REFUEL_STDS	A D E if applicable
EVAP_STD_ORVR	YES	NUMBER	3,2	Enter the applicable ORVR standard level for the test. (g/gal)	LDV_EVAP_REFUEL_STDS	A D E if applicable
LEAK_FAMILY_IDENTIFIER	YES	VARCHAR2	16	Enter a leak family identifier (16 characters: evaporative family-xxx). A leak family identifier is an evaporative family name differentiated by unique 3 character string to identify specific leak family within the evaporative family. Examples are JMFRR0300ABC-001, JMFRR0300ABC-LK1.	LDV_EVAP_REFUEL_STDS	A D E
LEAK_DIAMETER_CL	YES	NUMBER	5,4	Enter effective leak diameter certification level (inches).	LDV_EVAP_REFUEL_STDS	A D E
LEAK_DIAMETER_STD	YES	NUMBER	4,3	Enter effective leak diameter certification standard (inches).	LDV_EVAP_REFUEL_STDS	A D E
EVAP_UL_YR	YES	NUMBER	2	Enter the applicable useful life in years for the evaporative emission standards.	LDV_EVAP_REFUEL_STDS	A D E
ORVR_UL_YR	YES	NUMBER	2	Enter the applicable useful life in years for the ORVR emission standards.	LDV_EVAP_REFUEL_STDS	A D E
EVAP_UL_MI	YES	NUMBER	6	Enter the applicable useful life in miles for the evaporative emission standards.	LDV_EVAP_REFUEL_STDS	A D E
ORVR_UL_MI	YES	NUMBER	6	Enter the applicable useful life in miles for the ORVR emission standards.	LDV_EVAP_REFUEL_STDS	A D E
ZERO_EVAP_NMOG_CREDIT	YES	NUMBER	5,4	Enter NMOG credit (g/mi) used to reduce fuel evaporative emissions for zero evap cert if a manufacturer elects to use the option in 13CCR1976(b)(1)(E).	LDV_EVAP_REFUEL_STDS	A D E if applicable
EVAP_EMISS_OFFSET_BY_CREDIT	YES	NUMBER	3,2	Enter reduced fuel evaporative emissions (g/test) for zero evap test offset by NMOG credit if a manufacturer elects to use the option in 13CCR1976(b)(1)(E).	LDV_EVAP_REFUEL_STDS	A D E if applicable
MFR_CSI2B_NOTE	YES	VARCHAR2	1000	Enter comments or notes for the evaporative refueling emission standards and certification levels.	LDV_EVAP_REFUEL_STDS	

CSI 3						
Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
ENGINE_SET_NUM	NO	NUMBER	2	Enter an iterative engine number for each unique engine definition.	LDV_TEST_GROUP_DESC_FUEL	A B C D E F
TG_OPFUEL_TYPE	NO	VARCHAR2	3	Select the operating fuel type for the test group. Applicable values: GAS: GASOLINE, DSL: DIESEL, CNG: COMPRESSED NATURAL GAS, E85: 85% ETHANOL, H: HYDROGEN, LNG: LIQUEFIED NATURAL GAS, LPG: LIQUEFIED PETROLEUM GAS, OTH: OTHER.	LDV_TEST_GROUP_DESC_FUEL	A B C D E F
TG_FUEL_METERING	NO	VARCHAR2	4	Select fuel metering type for this test group. Applicable values: CARB: CARBURETOR, CMIX: CNG MIXER, DFI: DIRECT FUEL INJECTION, IFI: INDIRECT FUEL INJECTION, LMIX: LPG MIXER, MFI: MULTIPOINT FUEL INJECTION, SFI: SEQUENTIAL MULTIPOINT FUEL INJECTION, TBI: THROTTLE BODY INJECTION, OTH: OTHER. If multiple fuel metering types are used for single fuel, enter all fuel metering types information and indicate which one is primary fuel metering type in Manufacturer Note (example of test group with primary DFI and secondary SFI: add DFI first, and SFI by clicking "Insert Additional Fuel Information" and add note that DFI is primary in Manufacturer Note).	LDV_TEST_GROUP_DESC_FUEL	A B C D E F
TG_FUEL_METERING_OTHER	YES	VARCHAR2	20	Briefly describe the fuel metering type for this test group, if not listed in available fuel metering types.	LDV_TEST_GROUP_DESC_FUEL	A B C D E F if applicable
RATED_POWER	NO	NUMBER	5,1	Enter rated power (hp) of engine for the set of operating fuel and fuel metering (SAE standard).	LDV_TEST_GROUP_DESC_FUEL	A B C D E F
RATED_POWER_RPM	NO	NUMBER	5	Enter RPM @ the rated horsepower (SAE standard).	LDV_TEST_GROUP_DESC_FUEL	A B C D E F
PEAK_TORQUE	NO	NUMBER	4	Enter Peak Torque (foot-pounds) of engine for the set of operating fuel and fuel metering (SAE standard).	LDV_TEST_GROUP_DESC_FUEL	A B C D E F
PEAK_TORQUE_RPM	NO	NUMBER	4	Enter RPM at the peak torque of the engine (SAE standard).	LDV_TEST_GROUP_DESC_FUEL	A B C D E F
ENGINE_SET_NUM	NO	NUMBER	2	Enter an iterative engine number for each unique engine definition.	LDV_ENGINE_SPECIAL_FEATURES1	A B C D E F
ENGINE_SPECIAL_FEATURES1	NO	VARCHAR2	12	Select any engine special feature that the engine has. Applicable values: ESS: ENGINE STOP START, ESS-L: ENGINE STOP START WITH DISABLEMENT BUTTON/SWITCH (LATCHING), ESS-NL: ENGINE STOP START WITH DISABLEMENT BUTTON/SWITCH (NON-LATCHING), NA: NOT APPLICABLE.	LDV_ENGINE_SPECIAL_FEATURES1	A B C D E F
ENGINE_SET_NUM	NO	NUMBER	2	Enter an iterative engine number for each unique engine definition.	LDV_ENGINE_SPECIAL_FEATURES2	A B C D E F
ENGINE_SPECIAL_FEATURES2	NO	VARCHAR2	12	Select any engine special feature that the engine has. Applicable values: EVHOLD-F: EV HOLD BUTTON/SWITCH-FIXED SOC, EVHOLD-V: EV HOLD BUTTON/SWITCH-VARIABLE SOC, NA: NOT APPLICABLE.	LDV_ENGINE_SPECIAL_FEATURES2	A B C D E F
ENGINE_SET_NUM	NO	NUMBER	2	Enter an iterative engine number for each unique engine definition.	LDV_VALVE_TIMING_TYPE	A B C D E F
INTAKE_VALVE	NO	NUMBER	1	Enter the number of intake valves per cylinder. Enter 0 for rotary engine.	LDV_VALVE_TIMING_TYPE	A B C D E F
EXHAUST_VALVE	NO	NUMBER	1	Enter the number of exhaust valves per cylinder. Enter 0 for rotary engine.	LDV_VALVE_TIMING_TYPE	A B C D E F
ENGINE_SET_NUM	NO	NUMBER	2	Enter an iterative engine number for each unique engine definition.	LDV_TEST_GROUP_DESC	A B C D E F
INTAKE_VARIABLE_TIMING_TYPE	NO	VARCHAR2	2	Select Intake Variable Valve Timing (VVT). Applicable values: F1: FIXED 1 (ONLY ONE VALVE TIMING), F2: FIXED 2 (TWO SETTINGS OF VALVE TIMING), V: VARIABLE (MORE THAN TWO SETTINGS OF VALVE TIMING), NA: NOT APPLICABLE.	LDV_TEST_GROUP_DESC	A B C D E F
ENGINE_VALVETRAIN	NO	VARCHAR2	2	Select engine valvetrain. Applicable values: S: SINGLE OVERHEAD CAM, D: DUAL OVERHEAD CAM, P: PUSHROD, O: OTHER, NA: NOT APPLICABLE	LDV_TEST_GROUP_DESC	A B C D E F
ENGINE_VALVETRAIN_OTH	YES	VARCHAR2	50	Describe engine valvetrain if it is not available from the list of predefined values.	LDV_TEST_GROUP_DESC	A B C D E F if applicable
EXH_VARIABLE_TIMING_TYPE	NO	VARCHAR2	2	Select Exhaust Variable Valve Timing (VVT). Applicable values: F1: FIXED 1 (ONLY ONE VALVE TIMING), F2: FIXED 2 (TWO SETTINGS OF VALVE TIMING), V: VARIABLE (MORE THAN TWO SETTINGS OF VALVE TIMING), NA: NOT APPLICABLE.	LDV_TEST_GROUP_DESC	A B C D E F
INTAKE_VALVE_LIFT	NO	VARCHAR2	2	Select Intake Valve Lift. Applicable values: F1: FIXED 1 (ONLY ONE VALVE LIFT), F2: FIXED 2 (TWO SETTINGS OF VALVE LIFT), F3: FIXED 3 (MORE THAN TWO OR CONTINUOUS), NA: NOT APPLICABLE.	LDV_TEST_GROUP_DESC	A B C D E F
EXHAUST_VALVE_LIFT	NO	VARCHAR2	2	Select Exhaust Valve Lift. Applicable values: F1: FIXED 1 (ONLY ONE VALVE LIFT), F2: FIXED 2 (TWO SETTINGS OF VALVE LIFT), F3: FIXED 3 (MORE THAN TWO OR CONTINUOUS), NA: NOT APPLICABLE.	LDV_TEST_GROUP_DESC	A B C D E F
CYLINDER_DEACTIVATION	NO	CHARACTER	1	Select Yes if any cylinder in the engine can be deactivated. Applicable values: Y: YES, N: NO.	LDV_TEST_GROUP_DESC	A B C D E F
ENGINE_LOCATION	NO	CHARACTER	1	Select engine location in the vehicle. Applicable values: F: FRONT ENGINE, M: MID-ENGINE, R: REAR ENGINE.	LDV_TEST_GROUP_DESC	A B C D E F
TG_COMB_CYCLE	NO	VARCHAR2	4	Select combustion cycle for the test group. Applicable values: 4SI: 4-STROKE SPARK IGNITION, 2SI: 2-STROKE SPARK IGNITION, 4SCI: 4-STROKE COMPRESSION IGNITION, 2SCI: 2-STROKE COMPRESSION IGNITION, RT: ROTARY, GT: GAS TURBINE, RK: RANKINE, STER: STERLING, OT: OTHER.	LDV_TEST_GROUP_DESC	A B C D E F
TG_COMB_CYCLE_OTHER	YES	VARCHAR2	50	Describe the combustion cycle if it is not available from the list of predefined values.	LDV_TEST_GROUP_DESC	A B C D E F if applicable
CYL_ARRANGEMENT	NO	VARCHAR2	2	The correct cylinder arrangement is described from the provided list of acceptable values. If value is not on the list, please enter the correct description in "If Other" field and the value maybe updated for future listing. Applicable values: I: INLINE, V: V-SHAPED ENGINE, H: HORIZONTALLY OPPOSED, W: W-SHAPED ENGINE, RT: ROTARY, OT: OTHER.	LDV_TEST_GROUP_DESC	A B C D E F
CYL_ARRANGEMENT_OTHER	YES	VARCHAR2	20	Describe the cylinder arrangement if it is not available from the list of predefined values.	LDV_TEST_GROUP_DESC	A B C D E F if applicable
CYLINDER	NO	NUMBER	2	The total number of combustion cylinders/rotors for engines in this test vehicle. Only one value may be entered because the total number of combustion cylinders/rotors is a discriminator for separating into different test groups.	LDV_TEST_GROUP_DESC	A B C D E F

CSI 3						
Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
ENG_COOL_MEDIUM	NO	CHARACTER	1	This describes engine cooling method for engines in this test group. If the engine cooling method is not available from the list of predefined values, enter brief description of the engine cooling method in If Other field. Applicable values: L: LIQUID, A: AIR, O: OTHER.	LDV_TEST_GROUP_DESC	A B C D E F
ENG_COOL_MEDIUM_OTHER	YES	VARCHAR2	20	Describe the engine's cooling method if it is not available from the list of predefined values.	LDV_TEST_GROUP_DESC	A B C D E F if applicable
DISPLACEMENT_LDV	NO	NUMBER	5,3	Enter the displacement (liters). Only one value is entered in an engine number.	LDV_TEST_GROUP_DESC	A B C D E F
MFR_CSI3_NOTE	YES	VARCHAR2	1000	This is a comment field used as catch all for any shortfall for CSI3. May also be used as pointers or reminders.	LDV_TEST_GROUP_DESC	

CSI 4						
Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
ECS_SET_NUM	NO	NUMBER	2	Enter the iterative ECS set number (starting with #1 FOR THE FIRST ECS SYSTEM in the test group, then the next ECS for the test group shall be entered with #2 to fully describe the second ECS.)	LDV_EXHAUST_SENSOR_INFO	A B C D E F if applicable
EXH_SENSOR_TYPE	YES	VARCHAR2	7	Select the type of sensor used in the test group (ECS system). Applicable values: WR-HO2S: WIDE RANGE/LINEAR/AIR-FUEL RATIO HEATED OXYGEN SENSOR, HO2S: HEATED OXYGEN SENSOR, O2S: OXYGEN SENSOR.	LDV_EXHAUST_SENSOR_INFO	A B C D E F if applicable
ECS_SET_NUM	NO	NUMBER	2	Enter the iterative ECS set number (starting with #1 FOR THE FIRST ECS SYSTEM in the test group, then the next ECS for the test group shall be entered with #2 to fully describe the second ECS.)	LDV_SENSOR_INFO	A B C D E F if applicable
SENSOR_TYPE	YES	VARCHAR2	5	Select the type of sensor used in the test group (ECS system). Applicable values:FFS: FLEXIBLE FUEL SENSOR, NOXS: NOX SENSOR, RDQS: REDUCTANT QUALITY SENSOR, NH3S: AMMONIA SENSOR, PMS: PARTICULATE MATTER SENSOR, KS: KNOCK (DETONATION) SENSOR, OTH: OTHER.	LDV_SENSOR_INFO	A B C D E F if applicable
SENSOR_TYPE_OTH	YES	VARCHAR2	50	Specify a sensor if "Other" is chosen in Sensor Type field.	LDV_SENSOR_INFO	A B C D E F if applicable
SENSOR_NUMBER	YES	NUMBER	2	Enter number of sensors selected in Sensor Type field.	LDV_SENSOR_INFO	A B C D E F if applicable
ECS_SET_NUM	NO	NUMBER	2	Enter the iterative ECS set number (starting with #1 FOR THE FIRST ECS SYSTEM in the test group, then the next ECS for the test group shall be entered with #2 to fully describe the second ECS.)	LDV_ATD_BRICK_INFO	A B C D E F if applicable
ASSIGNED_ATD_NUMBER	NO	NUMBER	2	Enter the ATD iteration number.	LDV_ATD_BRICK_INFO	A B C D E F if applicable
SUBSTRATE_SIZE	YES	NUMBER	5,3	Enter volume of substrate (liters) (CBI). Required for EDV or DDV, but optional for other vehicles.	LDV_ATD_BRICK_INFO	A B C D E F if applicable
SUBSTRATE_PRECIOUS_METALS	YES	VARCHAR2	8	Select the type of precious metal/catalyst used in the ATD (CBI). Required for EDV or DDV, but optional for other vehicles. Applicable values: Pt: PLATINUM, Pd: PALLADIUM, Rh: RHODIUM, Pt/Pd: PLATINUM/PALLADIUM, Pt/Rh: PLATINUM/RHODIUM, Pd/Rh: PALLADIUM/RHODIUM, Pt/Pd/Rh: PLATINUM/PALLADIUM/RHODIUM, CU-Z: COPPER-ZEOLITE, O: OTHER.	LDV_ATD_BRICK_INFO	A B C D E F if applicable
SUBSTRATE_PRECIOUS_METALS_OTH	YES	VARCHAR2	50	Describe the substrate precious metals if it is not available from the list of predefined values. (CBI)	LDV_ATD_BRICK_INFO	A B C D E F if applicable
SUBSTRATE_MATERIAL	YES	CHARACTER	1	Select substrate's material (CBI). Required for EDV or DDV, but optional for other vehicles. Applicable values: C: CERAMIC, M: METAL, Z: ZEOLITE, O:OTHER.	LDV_ATD_BRICK_INFO	A B C D E F if applicable
SUBSTRATE_MATERIAL_OTHER	YES	VARCHAR2	50	Describe the substrate material if it is not available from the list of predefined values. (CBI)	LDV_ATD_BRICK_INFO	A B C D E F if applicable
SUBSTRATE_CONSTRUCTION	YES	CHARACTER	1	Select the substrate's method of construction. Required for EDV or DDV, but optional for other vehicles. Applicable values: M: MONOLITH, P: PELLET, O: OTHER. (CBI)	LDV_ATD_BRICK_INFO	A B C D E F if applicable
SUBSTRATE_CONSTRUCTION_OTHER	YES	VARCHAR2	50	Describe the substrate construction if it is not available from the list of predefined values. (CBI)	LDV_ATD_BRICK_INFO	A B C D E F if applicable
CELL_GEOMETRY	YES	VARCHAR2	5	Choose the substrate cell geometry. Required for EDV or DDV, but optional for other vehicles. (CBI) Applicable values: H: HONEYCOMB, S: SQUARE, T: TRIANGULAR, O: OTHER. If the correct choice is not available, choose	LDV_ATD_BRICK_INFO	A B C D E F if applicable
CELL_GEOMETRY_OTHER	YES	VARCHAR2	50	Describe the cell geometry if it is not available from the list of predefined values. (CBI)	LDV_ATD_BRICK_INFO	A B C D E F if applicable
SUBSTRATE_CELL_DENSITY	YES	NUMBER	4	Enter substrate cell density. (# of cells / in2 of substrate). Required for EDV or DDV, but optional for other vehicles. (CBI)	LDV_ATD_BRICK_INFO	A B C D E F if applicable
SUBSTRATE_ACTIVE_SURFACE_AREA	YES	NUMBER	7	Enter specific active surface area of substrate including pore surface area created by washcoat (m2/liter). Required for EDV or DDV, but optional for other vehicles. (CBI)	LDV_ATD_BRICK_INFO	A B C D E F if applicable
PRECIOUS_METAL_LOADING	YES	VARCHAR2	25	Enter the precious metal loading (g/liter). Required for EDV or DDV, but optional for other vehicles. (CBI)	LDV_ATD_BRICK_INFO	A B C D E F if applicable
PRECIOUS_METAL_COMPOSITION	YES	VARCHAR2	25	Enter the precious metal composition. Required for EDV or DDV, but optional for other vehicles. (CBI). For example, 1.4/0.9 is composition of Pt/Pd if Pt/Pd was selected in substrate precious metals.	LDV_ATD_BRICK_INFO	A B C D E F if applicable
PREC_METALS_UNIFORM_LOADED	YES	CHARACTER	1	Select "Yes" if precious metals are loaded uniformly on substrate. Required for EDV or DDV, but optional for other vehicles. (CBI) Applicable values: Y: YES, N: NO.	LDV_ATD_BRICK_INFO	A B C D E F if applicable
ECS_SET_NUM	NO	NUMBER	2	Enter the iterative ECS set number (starting with #1 FOR THE FIRST ECS SYSTEM in the test group, then the next ECS for the test group shall be entered with #2 to fully describe the second ECS.)	LDV_ATD_INFO	A B C D E F
ASSIGNED_ATD_NUMBER	NO	NUMBER	2	Enter the ATD iteration number.	LDV_ATD_INFO	A B C D E F
AFTER_TREATMENT_TYPE	NO	VARCHAR2	8	Select the correct type of after treatment for this iteration. Applicable values: ADSTWC: ADSORBING THREE-WAY CATALYST, CTXO: CONTINUOUS (PASSIVE) TRAP OXIDIZER (DIESEL ENGINE), DOR: DIRECT OZONE REDUCTION, DPFC: DIESEL PARTICULATE FILTER (ACTIVE), EHOC: ELECTRICALLY HEATED OXIDATION CATALYST, EHTWC: ELECTRICALLY HEATED THREE-WAY CATALYST, GPFC: PARTICULATE FILTER FOR SPARK-IGNITED ENGINE, HAC: HYDROCARBON ADSORBING CATALYST, NAC: NOX ADSORBER CATALYST, NH3OC: AMMONIA SLIP CATALYST, OC: OXIDATION CATALYST, SCRC: SELECTIVE CATALYTIC REDUCTION CATALYST (UREA-BASED), SCRC-NH3: SELECTIVE CATALYTIC REDUCTION CATALYST (AMMONIA-BASED), TWC: THREE-WAY CATALYST, TWC+OC: THREE-WAY CATALYST PLUS OXIDATION CATALYST, WU-TWC: WARM-UP THREE-WAY CATALYST, WU-OC: WARM-UP OXIDATION CATALYST, MULT-ATD: MORE THAN ONE ATD IN A CONTAINER (EXPLAIN ALL ATDS IN ATD NOTE).	LDV_ATD_INFO	A B C D E F
EXT_WARRANTY_200K_PART_FILTER	YES	VARCHAR2	2	Select "YES" if a particulate filter has extended warranty. Applicable values: Y: YES: PARTICULATE FILTER HAS 200K MI EXTENDED WARRANTY, N: NO: PARTICULATE FILTER DOES NOT HAVE 200K MI EXTENDED WARRANTY.	LDV_ATD_INFO	A B C D E F if applicable
PHYSICAL_SUBSTRATES_TOTAL	NO	NUMBER	2	Enter the total number of physical substrates in this physical can (CBI).	LDV_ATD_INFO	A B C D E F
ATD_NOTE	YES	VARCHAR2	1000	Enter any comments or notes in this field for ATD (CBI).	LDV_ATD_INFO	

CSI 4						
Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
ECS_SET_NUM	NO	NUMBER	2	Enter the iterative ECS set number (starting with #1 FOR THE FIRST ECS SYSTEM in the test group, then the next ECS for the test group shall be entered with #2 to fully describe the second ECS.)	LDV_EXH_EMIS_CON_INFO	A B C D E F
ELECTRONIC_CONTROLS	NO	CHARACTER	1	Select the type of electronic control for the test group's vehicles. Applicable values: P: PCM, E: ECM, O: OTHER.	LDV_EXH_EMIS_CON_INFO	A B C D E F
ELECTRONIC_CONTROLS_OTHER	YES	VARCHAR2	25	Describe the electronic control system if it is not available from the list of predefined values.	LDV_EXH_EMIS_CON_INFO	A B C D E F if applicable
ECS_CONFIGURATION_MFR	NO	VARCHAR2	100	Describe configuration and number of ECS. Please use acronyms in Section C.3.3 in CA Test Procedure (e.g., 2TWC, 2HAFS, 2HO2S(2), DFI, SC, EGR).	LDV_EXH_EMIS_CON_INFO	A B C D E F
EGR_VALVE	NO	CHARACTER	1	Select "YES" if the test group uses an EGR valve as part of the Emission Control System (ECS). Applicable values: Y: YES, N: NO.	LDV_EXH_EMIS_CON_INFO	A B C D E F
COOLED_EGR_VALVE	NO	VARCHAR2	2	Select the Cooled EGR Type. Applicable values: YS: YES-SINGLE LOOP, YM: YES-MULTI LOOP, NO: NO, NA: NOT APPLICABLE	LDV_EXH_EMIS_CON_INFO	A B C D E F
EGR_TYPE	NO	VARCHAR2	2	Select the EGR type. Applicable values: E: ELECTRONIC, V: VACUUM, O: OTHER, NA: NOT APPLICABLE.	LDV_EXH_EMIS_CON_INFO	A B C D E F
EGR_TYPE_OTHER	YES	VARCHAR2	25	Describe the EGR type if it is not available from the list of predefined values.	LDV_EXH_EMIS_CON_INFO	A B C D E F if applicable
AIR_ASPIRATION_METHOD	NO	CHARACTER	1	Select engine aspiration method. Applicable values: M: MULTI STAGE TURBO CHARGED, N: NATURALLY ASPIRATED, R: SINGLE STAGE TURBO CHARGED, S: SUPER CHARGED, O: OTHER.	LDV_EXH_EMIS_CON_INFO	A B C D E F
AIR_ASPIRATION_METHOD_OTHER	YES	VARCHAR2	25	Enter the aspiration which is not listed in Air Aspiration Method (as other, this value maybe added to future data value).	LDV_EXH_EMIS_CON_INFO	A B C D E F if applicable
AIR_ASPIRATION_NUM	YES	CHARACTER	1	Enter the number of air aspiration devices in the test group engine.	LDV_EXH_EMIS_CON_INFO	A B C D E F if applicable
AIR_ASPIRATION_CONFIG	NO	CHARACTER	1	Select the type of engine aspiration configuration. Applicable values: N: SINGLE, P: PARALLEL, S: SERIES, B: BOTH, A: NONE.	LDV_EXH_EMIS_CON_INFO	A B C D E F
CHARGE_AIR_COOLER_TYPE	NO	CHARACTER	1	Select charge air cooler type. Applicable values: A: AIR-TO-AIR, L: AIR-TO-LIQUID, N: NOT APPLICABLE.	LDV_EXH_EMIS_CON_INFO	A B C D E F
CHARGE_AIR_COOLER_NUM	YES	NUMBER	1	Enter the number of charge air coolers.	LDV_EXH_EMIS_CON_INFO	A B C D E F if applicable
CHARGE_AIR_COOLER_CONFIG	NO	CHARACTER	1	Select Charge Air Cooler Configuration. Applicable values: N: SINGLE, P: PARALLEL, S: SERIES, B: BOTH, A: NONE.	LDV_EXH_EMIS_CON_INFO	A B C D E F
AIR_INJECTION_TYPE	NO	CHARACTER	1	Select the type of air injection for this test group. Applicable values: M: SECONDARY AIR INJECTION-ELECTRIC MOTOR DRIVEN, E: SECONDARY AIR INJECTION-ENGINE DRIVEN, P: PULSED SECONDARY AIR INJECTION, O: OTHER, N: NOT APPLICABLE.	LDV_EXH_EMIS_CON_INFO	A B C D E F
AIR_INJECTION_TYPE_OTHER	YES	VARCHAR2	25	Describe the air injection type if it is not available from the list of predefined values.	LDV_EXH_EMIS_CON_INFO	A B C D E F if applicable
DOR_DEVICE	NO	CHARACTER	1	Select direct ozone reduction device in this field. Applicable values: Y: YES, N: NO.	LDV_EXH_EMIS_CON_INFO	A B C D E F
TOTAL_ATD_NUMBER	NO	NUMBER	2	Enter the total number of physical container(s) of ATD's for this ECS.	LDV_EXH_EMIS_CON_INFO	A B C D E F
USE_PROD_VEHICLE	NO	CHARACTER	1	Select "YES" if this ECS is used for production vehicle. Applicable values: Y: YES, N: NO.	LDV_EXH_EMIS_CON_INFO	A B C D E F
USE_EDV	NO	CHARACTER	1	Select "YES" if this ECS is used for EDV. Applicable values: Y: YES, N: NO.	LDV_EXH_EMIS_CON_INFO	A B C D E F
USE_DDV	NO	VARCHAR2	2	Select "YES" if this ECS is used for DDV. Applicable values: Y: YES, N: NO, NA: NOT APPLICABLE.	LDV_EXH_EMIS_CON_INFO	A B C D E F
MFR_CSI4_NOTE	YES	VARCHAR2	1000	Enter notes or comments for CSI4 in this field.	LDV_EXH_EMIS_CON_INFO	

CSI 5A						
Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
EDV_SET_NUM	NO	NUMBER	3	This is the outer most iterative set number used to separate different EDV data sets. This number starts at #1 for the first EDV and #2 for the next EDV etc.	LDV_EXHAUST_EDV_TEST_DATA	A B C D E F
TEST_TYPE	NO	CHARACTER	1	Enter the type of test. Applicable values: 1: FEDERAL TEST PROCEDURE (FTP), 2: SFTP-US06 (FULL), 3: SFTP-US06 (BAG2), 4: SFTP-SC03, 5: SFTP-HOT1435 UC (HOT1435 LA92), 6: 50F, 7: COLD-CO (20F), 8: HIGHWAY CYCLE (HWY).	LDV_EXHAUST_EDV_TEST_DATA	A B C D E F
TESTED_BY	NO	CHARACTER	1	Enter organization by which these set of emission test was conducted. Applicable values: C: CARB, E: EPA, M: Manufacturer.	LDV_EXHAUST_EDV_TEST_DATA	A B C D E F
TEST_ID	NO	VARCHAR2	25	Enter the manufacturers test ID number for this set of emission test.	LDV_EXHAUST_EDV_TEST_DATA	A B C D E F
EXHAUST_TEST_DATE	NO	DATE		Enter the date of the exhaust test.	LDV_EXHAUST_EDV_TEST_DATA	A B C D E F
CERT_TEST_FUEL	NO	VARCHAR2	25	Enter the certification test fuel. Applicable values: CNG-CARB: CNG - CARB CERT FUEL (CA ExTP II A 100.3.5), CNG-EPA: CNG - EPA CERT FUEL (40CFR86.113-94(e)(1)), CNG-OTH: CNG - OTHER, DIESEL-CARB: DIESEL - CARB CERT FUEL (CA ExTP II A 100.3.2), DIESEL-EPA: DIESEL - EPA CERT FUEL (40CFR86.113-07(b)(2)), DIESEL-OTH: DIESEL - OTHER, LEV2 E10-CARB: E10 - 10% ETHANOL + 90% CA PHASE 2 GAS (CA ExTP II A 100.3.4), E10-EPA: E10 - 10% ETHANOL + 90% TIER 2 UNLEADED GAS (EPA), E10-OTH: E10 - OTHER, E85-CARB: E85 - 85% ETHANOL + 15% CA PHASE 2 GAS (CA ExTP II A 100.3.4), E85-TIER3: E85 - ETHANOL + TIER3 E10 GAS, E85-EPA: E85 - 85% ETHANOL + 15% TIER 2 UNLEADED GAS (EPA), E85-OTH: E85 - OTHER, H2-OTH: HYDROGEN - OTHER, LPG-CARB: LPG - CARB CERT FUEL (CA ExTP II A 100.3.6), LPG-EPA: LPG - EPA CERT FUEL (40CFR86.113-94(f)(1)), LPG-OTH: LPG - OTHER, GASOLINE-LEV3 E10: CA LEV3 E10 CERT GASOLINE (CA ExTP II A 100.3.1.2), GASOLINE-LEV3 E10 PREM: CARB LEV3 E10 PREMIUM GASOLINE, GASOLINE-TIER3 E10: TIER3 E10 REGULAR GASOLINE, GASOLINE-TIER3 E10 PREM: TIER3 E10 PREMIUM GASOLINE, GASOLINE-CARB: GASOLINE - CA PHASE 2 (CA ExTP II A 100.3.1.1), GASOLINE-EPA: GASOLINE - TIER 2 UNLEADED (40CFR86.113-04(a)(1)), GASOLINE-COLD E10 REG: COLD CO E10 REGULAR GASOLINE (TIER3), GASOLINE-COLD E10 PREM: COLD CO E10 PREMIUM GASOLINE (TIER3), GASOLINE-LOW: GASOLINE - COLD CO LOW OCTANE (40CFR 86.213-04), GASOLINE-HIGH: GASOLINE - COLD CO HIGH OCTANE (40CFR 86.213-04), GASOLINE-OTH: GASOLINE - OTHER, OTH: OTHER.	LDV_EXHAUST_EDV_TEST_DATA	A B C D E F
CERT_TEST_FUEL_OTHER	YES	VARCHAR2	50	Describe the reference for the test fuel specification or cert test fuel if it is not available from the list of predefined values.	LDV_EXHAUST_EDV_TEST_DATA	A B C D E F if applicable
TESTED_FOR	NO	CHARACTER	1	Enter the value for which these data was tested. Applicable values: 1: CERTIFICATION, 2: RUNNING CHANGE, 3: CARB CONFIRMATORY TEST, 4: EPA CONFIRMATORY TEST.	LDV_EXHAUST_EDV_TEST_DATA	A B C D E F
TARGET_COEFFICIENT_A	NO	NUMBER	5,2	Enter the EDV's target coefficient A for FTP test (lbf).	LDV_EXHAUST_EDV_TEST_DATA	A B C D E F
TARGET_COEFFICIENT_B	NO	NUMBER	6,4	Enter the EDV's target coefficient B for FTP test (lbf/mph).	LDV_EXHAUST_EDV_TEST_DATA	A B C D E F
TARGET_COEFFICIENT_C	NO	NUMBER	6,5	Enter the EDV's target coefficient C for FTP test (lbf/mph2).	LDV_EXHAUST_EDV_TEST_DATA	A B C D E F
PHEV_OPT_MODE_OFFCL_EMIS_TEST	NO	VARCHAR2	2	Select PHEV operating mode for official emission test (PHEV only). Applicable values: CD: CHARGE DEPLETING, CS: CHARGE SUSTAINING, CI: CHARGE INCREASING, NA: NOT APPLICABLE.	LDV_EXHAUST_EDV_TEST_DATA	A B C D E F
OFFICIAL_CERT_TEST	NO	CHARACTER	1	Was this test used as the Official Cert Test? Applicable values: Y: YES, N: NO.	LDV_EXHAUST_EDV_TEST_DATA	A B C D E F
RAW_TEST_THC	YES	NUMBER	8,7	Enter THC test result (tailpipe measurement without DF, RAF and conversion factors). (g/mi)	LDV_EXHAUST_EDV_TEST_DATA	A B C D E F if applicable
RAW_TEST_NMHC	YES	NUMBER	8,7	Enter NMHC test result (tailpipe measurement without DF, RAF and conversion factors). (g/mi)	LDV_EXHAUST_EDV_TEST_DATA	A B C D E F if applicable
RAW_TEST_NMOG	YES	NUMBER	8,7	Enter NMOG test result (tailpipe measurement without DF, RAF and conversion factors). (g/mi)	LDV_EXHAUST_EDV_TEST_DATA	A B C D E F if applicable
RAW_TEST_NOX	YES	NUMBER	7,6	Enter NOx test result (humidity corrected tailpipe measurement without DF, RAF and conversion factors). (g/mi)	LDV_EXHAUST_EDV_TEST_DATA	A B C D E F if applicable
RAW_TEST_CO	YES	NUMBER	7,5	Enter CO test result (tailpipe measurement without DF, RAF and conversion factors). (g/mi)	LDV_EXHAUST_EDV_TEST_DATA	A B C D E F if applicable
RAW_TEST_HCHO	YES	NUMBER	6,4	Enter HCHO test result (mg/mi, tailpipe measurement without DF, RAF and conversion factors). (mg/mi)	LDV_EXHAUST_EDV_TEST_DATA	A B C D E F if applicable
RAW_TEST_PM	YES	NUMBER	7,6	Enter PM test result (tailpipe measurement without DF, RAF and conversion factors). (g/mi)	LDV_EXHAUST_EDV_TEST_DATA	A B C D E F if applicable
RAW_TEST_CO2	YES	NUMBER	8,4	Enter CO2 test result (tailpipe measurement without DF, RAF and conversion factors). (g/mi)	LDV_EXHAUST_EDV_TEST_DATA	A B C D E F if applicable
RAW_TEST_MPG	YES	NUMBER	4,1	Enter MPG test result.	LDV_EXHAUST_EDV_TEST_DATA	A B C D E F if applicable
RAW_TEST_CH4	YES	NUMBER	8,7	Enter CH4 test result (tailpipe measurement without DF, RAF and conversion factors). (g/mi)	LDV_EXHAUST_EDV_TEST_DATA	A B C D E F if applicable
RAW_TEST_N2O	YES	NUMBER	8,7	Enter N2O test result (tailpipe measurement without DF, RAF and conversion factors). (g/mi)	LDV_EXHAUST_EDV_TEST_DATA	A B C D E F if applicable
EDV_SET_NUM	NO	NUMBER	3	This is the outer most iterative set number used to separate different EDV data sets. This number starts at #1 for the first EDV and #2 for the next EDV etc.	LDV_EXHAUST_EDV	A B C D E F
TEST_GROUP_NAME	NO	VARCHAR2	12	This field is used to identify the test group name subject to the certification protocol. ARB's Executive Order processing requires this field.	LDV_EXHAUST_EDV	A B C D E F
EDV_DIVISION_NAME	NO	VARCHAR2	35	Enter the EDV's division name.	LDV_EXHAUST_EDV	A B C D E F
EDV_MODEL_NAME	NO	VARCHAR2	35	Enter the EDV's model name.	LDV_EXHAUST_EDV	A B C D E F
EDV_TEST_VEH_ID	NO	VARCHAR2	25	Enter the EDV's vehicle ID or VIN.	LDV_EXHAUST_EDV	A B C D E F
EDV_TEST_DATA_TYPE	NO	VARCHAR2	3	Enter the EDV's test data type. Applicable values: NEW = NEW TEST DATA, CO = CARRYOVER DATA, CA = CARRYACROSS DATA.	LDV_EXHAUST_EDV	A B C D E F
ORIG_CARRYOVER_TG	YES	VARCHAR2	12	Enter the original emission data carryover test group's name.	LDV_EXHAUST_EDV	A B C D E F if applicable
ORIG_CARRYOVER_EVAP_FAM	YES	VARCHAR2	12	Enter the original evaporative family name of the EDV.	LDV_EXHAUST_EDV	A B C D E F if applicable

CSI 5A						
Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
EDV_ENGINE_CODE	NO	VARCHAR2	25	Enter the engine code.	LDV_EXHAUST_EDV	A B C D E F
DISPLACEMENT_LD	NO	NUMBER	5,3	Enter the displacement (liters).	LDV_EXHAUST_EDV	A B C D E F
CYL_ARRANGEMENT	NO	VARCHAR2	2	The correct cylinder arrangement is described from the provided list of acceptable values. If value is not on the list, please enter the correct description in Cylinder Arrangement Other and the value maybe updated for future listing. Applicable values: I: INLINE, V: V-SHAPED ENGINE, H: HORIZONTALLY OPPOSED, W: W-SHAPED ENGINE, RT: ROTARY, OT: OTHER.	LDV_EXHAUST_EDV	A B C D E F
CYL_ARRANGEMENT_OTHER	YES	VARCHAR2	30	Describe the cylinder arrangement if it is not available from the list of predefined values.	LDV_EXHAUST_EDV	A B C D E F if applicable
CYLINDER	NO	NUMBER	2	The total number of combustion cylinders/rotors for engines in this test vehicle. Only one value may be entered because the total number of combustion cylinders/rotors is a discriminator for separating into different test groups.	LDV_EXHAUST_EDV	A B C D E F
INTAKE_VALVE	NO	NUMBER	1	Enter the number of intake valves per cylinder. Enter 0 for rotary engine.	LDV_EXHAUST_EDV	A B C D E F
EXHAUST_VALVE	NO	NUMBER	1	Enter the number of exhaust valves per cylinder. Enter 0 for rotary engine.	LDV_EXHAUST_EDV	A B C D E F
DRIVE_SYSTEM	NO	CHARACTER	1	Enter the drive system description for this model. Applicable values: F: FRONT WHEEL DRIVE, R: REAR WHEEL DRIVE, P: PART TIME FOUR WHEEL DRIVE, A: ALL WHEEL DRIVE.	LDV_EXHAUST_EDV	A B C D E F
NV_RATIO_LD	NO	NUMBER	3,1	The N/V ratio of the EDV. The N/V is a ratio of engine speed over vehicle speed in the highest transmission gear.	LDV_EXHAUST_EDV	A B C D E F
EDV_CURB	NO	NUMBER	5	Enter the EDV's curb weight.	LDV_EXHAUST_EDV	A B C D E F
EDV_LVW	YES	NUMBER	5	Enter the EDV's loaded vehicle weight.	LDV_EXHAUST_EDV	
EDV_ALVW	YES	NUMBER	5	Enter the EDV's adjusted loaded vehicle weight.	LDV_EXHAUST_EDV	
EDV_ETW	NO	NUMBER	5	Enter the EDV's equivalent test weight.	LDV_EXHAUST_EDV	A B C D E F
EDV_GVWR	NO	NUMBER	5	Enter the EDV's gross vehicle weight rating.	LDV_EXHAUST_EDV	A B C D E F
ECS_SET_NUM	NO	NUMBER	2	Enter ECS set number for the EDV to reference full description of the emission control system that entered in CSI 4.	LDV_EXHAUST_EDV	A B C D E F
RATED_POWER	NO	NUMBER	5,1	Enter the Rated Horsepower for this EDV (SAE standard).	LDV_EXHAUST_EDV	A B C D E F
RATED_POWER_RPM	NO	NUMBER	5	Enter the RPM @ Rated Horsepower for this EDV (SAE standard).	LDV_EXHAUST_EDV	A B C D E F
TRANSMISSION_TYPE_LD	NO	VARCHAR2	3	Enter the transmission type. Applicable values: A: AUTOMATIC (WITH LOCKUP), M: MANUAL, SA: SEMI-AUTOMATIC, CV: CONTINUOUSLY VARIABLE, SCV: SELECTABLE CONTINUOUSLY VARIABLE, AM: AUTOMATED MANUAL, AMS: AUTOMATED MANUAL-SELECTABLE, OT: OTHER (SPECIFY TRANSMISSION TYPE IN MANUFACTURER NOTE), NA: NOT APPLICABLE.	LDV_EXHAUST_EDV	A B C D E F
TRANSMISSION_GEAR_NUM_LD	YES	NUMBER	2	Enter the correct number of gears for this EDV.	LDV_EXHAUST_EDV	A B C D E F if applicable
ALTERNATE_SHIFT	YES	CHARACTER	1	Choose "YES" if shift schedule is other than specified in CFR. Applicable values: Y: YES, N: NO.	LDV_EXHAUST_EDV	A B C D E F if applicable
SHIFT_INDICATOR_LAMP	YES	VARCHAR2	3	Choose "YES AND USED DURING THE TEST" if EDV has SIL and it is used during the test, choose "YES, BUT NOT USED DURING THE TEST" if EDV has SIL but it is not used during the test, choose "NO" if EDV does not have SIL. Applicable values: YAU: YES AND USED DURING THE TEST, YBN: YES BUT NOT USED DURING THE TEST, N: NO.	LDV_EXHAUST_EDV	A B C D E F if applicable
EXH_EMISS_TEST_TSM_SHFT_MODE	NO	VARCHAR2	5	Choose transmission shift mode used in exhaust emission test. Applicable values: FE: FUEL ECONOMY/ECO, N: NORMAL, PS: POWER/SPORT, O: OTHER. If correct choice is not available, choose "Other" and specify the transmission shift mode.	LDV_EXHAUST_EDV	A B C D E F
EXH_EMISS_TEST_TSM_OTHER	YES	VARCHAR2	50	Describe the transmission shift mode used in the exhaust emission test if it is not available from the list of predefined values.	LDV_EXHAUST_EDV	A B C D E F if applicable
ATD_GROUP_STAT	YES	NUMBER	4,2	Enter grouping statistic of the EDV (CBI).	LDV_EXHAUST_EDV	
TIRE_SIZE_FRONT	YES	VARCHAR2	12	Enter tire size for front set of tires if a vehicle has front wheel drive system or all wheel drive system.	LDV_EXHAUST_EDV	A B C D E F if applicable
TIRE_SIZE_REAR	YES	VARCHAR2	12	Enter tire size for rear set of tires if a vehicle has rear wheel drive system or all wheel drive system.	LDV_EXHAUST_EDV	A B C D E F if applicable
MFR_CSI5A_NOTE	YES	VARCHAR2	1000	Enter comments or notes for CSI 5A.	LDV_EXHAUST_EDV	

CSI 5B						
Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
DDV_SET_NUM	NO	NUMBER	2	Enter the iterative DDV reference set number. Start with 1 and increment to the total number of different DDV sets.	LDV_EXHAUST_DDV_TEST_DATA	A B C D E F if applicable
EXHAUST_TEST_DATE	YES	DATE		Enter the actual date of the test.	LDV_EXHAUST_DDV_TEST_DATA	A B C D E F if applicable
TEST_POINT_MILE	YES	NUMBER	6	Enter test point mileage.	LDV_EXHAUST_DDV_TEST_DATA	A B C D E F if applicable
MFR_TEST_ID_NUM	YES	VARCHAR2	25	Enter the manufacturer's test ID number.	LDV_EXHAUST_DDV_TEST_DATA	A B C D E F if applicable
CERT_TEST_FUEL	YES	VARCHAR2	25	Enter the durability test fuel. Applicable values: CNG-CARB: CNG - CARB CERT FUEL (CA ExTP II A 100.3.5), CNG-EPA: CNG - EPA CERT FUEL (40CFR86.113-94(e)(1)), CNG-OTH: CNG - OTHER, DIESEL-CARB: DIESEL - CARB CERT FUEL (CA ExTP II A 100.3.2), DIESEL-EPA: DIESEL - EPA CERT FUEL (40CFR86.113-07(b)(2)), DIESEL-OTH: DIESEL - OTHER, LEV2 E10-CARB: E10 - 10% ETHANOL + 90% CA PHASE 2 GAS (CA ExTP II A 100.3.4), E10-EPA: E10 - 10% ETHANOL + 90% TIER 2 UNLEADED GAS (EPA), E10-OTH: E10 - OTHER, E85-CARB: E85 - 85% ETHANOL + 15% CA PHASE 2 GAS (CA ExTP II A 100.3.4), E85-TIER3: E85 - ETHANOL + TIER3 E10 GAS, E85-EPA: E85 - 85% ETHANOL + 15% TIER 2 UNLEADED GAS (EPA), E85-OTH: E85 - OTHER, H2-OTH: HYDROGEN - OTHER, LPG-CARB: LPG - CARB CERT FUEL (CA ExTP II A 100.3.6), LPG-EPA: LPG - EPA CERT FUEL (40CFR86.113-94(f)(1)), LPG-OTH: LPG - OTHER, GASOLINE-LEV3 E10: CA LEV3 E10 CERT GASOLINE (CA ExTP II A 100.3.1.2), GASOLINE-LEV3 E10 PREM: CARB LEV3 E10 PREMIUM GASOLINE, GASOLINE-TIER3 E10: TIER3 E10 REGULAR GASOLINE, GASOLINE-TIER3 E10 PREM: TIER3 E10 PREMIUM GASOLINE, GASOLINE-CARB: GASOLINE - CA PHASE 2 (CA ExTP II A 100.3.1.1), GASOLINE-EPA: GASOLINE - TIER 2 UNLEADED (40CFR86.113-04(a)(1)), GASOLINE-COLD E10 REG: COLD CO E10	LDV_EXHAUST_DDV_TEST_DATA	A B C D E F if applicable
CERT_TEST_FUEL_OTHER	YES	VARCHAR2	50	Describe the reference for the test fuel specification or cert test fuel if it is not available from the list of predefined values.	LDV_EXHAUST_DDV_TEST_DATA	A B C D E F if applicable
DF_EMISSIONS_TEST_TYPE	YES	CHARACTER	1	Enter the DDV emissions test type for this test. Applicable values: 1: FEDERAL TEST PROCEDURE (FTP), 2: SFTP-US06 (FULL), 3: SFTP-US06 (BAG2), 4: SFTP-SC03, 5: SFTP-HOT1435 UC (HOT1435 LA92), 6: 50F, 7: COLD-CO (20F), 8: HIGHWAY CYCLE (HWY), 9: NOT APPLICABLE (ASSIGNED DF).	LDV_EXHAUST_DDV_TEST_DATA	A B C D E F if applicable
PHEV_OPT_MODE_OFFCL_DF_TEST	YES	VARCHAR2	2	Select PHEV operating mode for official emission test (PHEV only). Applicable values: CD: CHARGE DEPLETING, CS: CHARGE SUSTAINING, CI: CHARGE INCREASING, NA: NOT APPLICABLE.	LDV_EXHAUST_DDV_TEST_DATA	A B C D E F if applicable
RAW_THC	YES	NUMBER	8,7	Enter THC test result (tailpipe measurement without DF, RAF and conversion factors). (g/mi)	LDV_EXHAUST_DDV_TEST_DATA	A B C D E F if applicable
RAW_NMHC	YES	NUMBER	8,7	Enter NMHC test result (tailpipe measurement without DF, RAF and conversion factors). (g/mi)	LDV_EXHAUST_DDV_TEST_DATA	A B C D E F if applicable
RAW_NMOG	YES	NUMBER	8,7	Enter NMOG test result (tailpipe measurement without DF, RAF and conversion factors). (g/mi)	LDV_EXHAUST_DDV_TEST_DATA	A B C D E F if applicable
RAW_NOX	YES	NUMBER	7,6	Enter NOx test result (humidity corrected tailpipe measurement without DF, RAF and conversion factors). (g/mi)	LDV_EXHAUST_DDV_TEST_DATA	A B C D E F if applicable
RAW_CO	YES	NUMBER	7,5	Enter CO test result (tailpipe measurement without DF, RAF and conversion factors). (g/mi)	LDV_EXHAUST_DDV_TEST_DATA	A B C D E F if applicable
RAW_HCHO	YES	NUMBER	6,4	Enter HCHO test result (mg/mi, tailpipe measurement without DF, RAF and conversion factors). (mg/mi)	LDV_EXHAUST_DDV_TEST_DATA	A B C D E F if applicable
RAW_PM	YES	NUMBER	7,6	Enter PM test result (tailpipe measurement without DF, RAF and conversion factors). (g/mi)	LDV_EXHAUST_DDV_TEST_DATA	A B C D E F if applicable
RAW_CO2	YES	NUMBER	8,4	Enter CO2 test result (tailpipe measurement without DF, RAF and conversion factors). (g/mi)	LDV_EXHAUST_DDV_TEST_DATA	A B C D E F if applicable
RAW_CH4	YES	NUMBER	8,7	Enter CH4 test result (tailpipe measurement without DF, RAF and conversion factors). (g/mi)	LDV_EXHAUST_DDV_TEST_DATA	A B C D E F if applicable
RAW_N2O	YES	NUMBER	7,6	Enter N2O test result (tailpipe measurement without DF, RAF and conversion factors). (g/mi)	LDV_EXHAUST_DDV_TEST_DATA	A B C D E F if applicable
DDV_SET_NUM	NO	NUMBER	2	Enter the iterative DDV reference set number. Start with 1 and increment to the total number of different DDV sets.	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
REGENERATION_FREQ	YES	NUMBER	4,3	Enter frequency of regeneration (F) if a particulate filter is used (e.g., enter 0.15 if F = 15%).	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
NMHC_NMOG_EFH_AF	YES	NUMBER	6,5	Enter NMHC or NMOG emissions from test when regeneration occurs (EFH). (g/mi)	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
NOX_EFH_AF	YES	NUMBER	5,4	Enter NOX emissions from test when regeneration occurs (EFH). (g/mi)	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
HWYNOX_EFH_AF	YES	NUMBER	5,4	Enter Highway NOX emissions from test when regeneration occurs (EFH). (g/mi)	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
CO_EFH_AF	YES	NUMBER	4,3	Enter CO emissions from test when regeneration occurs (EFH). (g/mi)	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
COLD_CO_EFH_AF	YES	NUMBER	5,3	Enter Cold CO emissions from test when regeneration occurs (EFH). (g/mi)	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
HCHO_EFH_AF	YES	NUMBER	4,2	Enter HCHO emissions (mg/mi) from test when regeneration occurs (EFH). (mg/mi)	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
PM_EFH_AF	YES	NUMBER	6,5	Enter PM emissions from test when regeneration occurs (EFH). (g/mi)	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
NMHC_NMOG_EFL_AF	YES	NUMBER	6,5	Enter NMHC or NMOG emissions from test when regeneration does not occur (EFL). (g/mi)	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
NOX_EFL_AF	YES	NUMBER	5,4	Enter NOX emissions from test when regeneration does not occur (EFL). (g/mi)	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
HWYNOX_EFL_AF	YES	NUMBER	5,4	Enter Highway NOX emissions from test when regeneration does not occur (EFL). (g/mi)	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
CO_EFL_AF	YES	NUMBER	4,3	Enter CO emissions from test when regeneration does not occur (EFL). (g/mi)	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
COLD_CO_EFL_AF	YES	NUMBER	5,3	Enter Cold CO emissions from test when regeneration does not occur (EFL). (g/mi)	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
HCHO_EFL_AF	YES	NUMBER	4,2	Enter HCHO emissions (mg/mi) from test when regeneration does not occur (EFL). (mg/mi)	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
PM_EFL_AF	YES	NUMBER	6,5	Enter PM emissions from test when regeneration does not occur (EFL). (g/mi)	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
NMHC_NMOG_EFA_AF	YES	NUMBER	6,5	Enter average NMHC or NMOG emissions rate (EFA = F * EFH + (1-F)*EFL) where F is frequency of regeneration.	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
NOX_EFA_AF	YES	NUMBER	5,4	Enter average NOX emissions rate (EFA = F * EFH + (1-F)*EFL) where F is frequency of regeneration.	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
HWYNOX_EFA_AF	YES	NUMBER	5,4	Enter average Highway NOX emissions rate (EFA = F * EFH + (1-F)*EFL) where F is frequency of regeneration.	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
CO_EFA_AF	YES	NUMBER	4,3	Enter average CO emissions rate (EFA = F * EFH + (1-F)*EFL) where F is frequency of regeneration.	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
COLD_CO_EFA_AF	YES	NUMBER	5,3	Enter average Cold CO emissions rate (EFA = F * EFH + (1-F)*EFL) where F is frequency of regeneration.	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F

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Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
HCHO_EFA_AF	YES	NUMBER	4,2	Enter average HCHO emissions rate (EFA = F * EFH + (1-F)*EFL) where F is frequency of regeneration.	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
PM_EFA_AF	YES	NUMBER	6,5	Enter average PM emissions rate (EFA = F * EFH + (1-F)*EFL) where F is frequency of regeneration.	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
NMHC_NMOG_UAF_AF	YES	NUMBER	6,5	Enter upward adjustment factor for NMHC or NMOG (UAF = EFA - EFL).	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
NOX_UAF_AF	YES	NUMBER	5,4	Enter upward adjustment factor for NOX (UAF = EFA - EFL).	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
HWYNOX_UAF_AF	YES	NUMBER	5,4	Enter upward adjustment factor for Highway NOX (UAF = EFA - EFL).	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
CO_UAF_AF	YES	NUMBER	4,3	Enter upward adjustment factor for CO (UAF = EFA - EFL).	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
COLD_CO_UAF_AF	YES	NUMBER	5,3	Enter upward adjustment factor for Cold CO (UAF = EFA - EFL).	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
HCHO_UAF_AF	YES	NUMBER	4,2	Enter upward adjustment factor for HCHO (UAF = EFA - EFL).	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
PM_UAF_AF	YES	NUMBER	6,5	Enter upward adjustment factor for PM (UAF = EFA - EFL).	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
NMHC_NMOG_DAF_AF	YES	NUMBER	6,5	Enter downward adjustment factor for NMHC or NMOG (DAF = EFA - EFH).	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
NOX_DAF_AF	YES	NUMBER	5,4	Enter downward adjustment factor for NOX (DAF = EFA - EFH).	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
HWYNOX_DAF_AF	YES	NUMBER	5,4	Enter downward adjustment factor for Highway NOX (DAF = EFA - EFH).	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
CO_DAF_AF	YES	NUMBER	4,3	Enter downward adjustment factor for CO (DAF = EFA - EFH).	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
COLD_CO_DAF_AF	YES	NUMBER	5,3	Enter downward adjustment factor for Cold CO (DAF = EFA - EFH).	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
HCHO_DAF_AF	YES	NUMBER	4,2	Enter downward adjustment factor for HCHO (DAF = EFA - EFH).	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
PM_DAF_AF	YES	NUMBER	6,5	Enter downward adjustment factor for PM (DAF = EFA - EFH).	LDV_EXH_DDV_REGEN_ADJMNT_FCTRS	B F
DDV_SET_NUM	NO	NUMBER	2	Enter the iterative DDV reference set number. Start with 1 and increment to the total number of different DDV sets.	LDV_EXH_DDV_CERT_LEVELS	A B C D E F if applicable
DF_EMISSIONS_TEST_TYPE	YES	CHARACTER	1	Enter the DDV emissions test type for this test. Applicable values: 1: FEDERAL TEST PROCEDURE (FTP), 2: SFTP-US06 (FULL), 3: SFTP-US06 (BAG2), 4: SFTP-SC03, 5: SFTP-HOT1435 UC (HOT1435 LA92), 6: 50F, 7: COLD-CO (20F), 8: HIGHWAY CYCLE (HWY), 9: NOT APPLICABLE (ASSIGNED DF).	LDV_EXH_DDV_CERT_LEVELS	A B C D E F if applicable
DF_TYPE_LDV	YES	CHARACTER	1	Enter the type of DF used to derive the final certification values: A: ADDITIVE DF (NON-NEGATIVE), M: MULTIPLICATIVE DF (NO LESS THAN 1.00).	LDV_EXH_DDV_CERT_LEVELS	A B C D E F if applicable
NMHC_50K_DF	YES	NUMBER	6,5	Enter the 50,000-mile deterioration factor for NMHC. (g/mi for additive DF)	LDV_EXH_DDV_CERT_LEVELS	A B C D E F if applicable
NMOG_50K_DF	YES	NUMBER	6,5	Enter the 50,000-mile deterioration factor for NMOG. (g/mi for additive DF)	LDV_EXH_DDV_CERT_LEVELS	A B C D E F if applicable
NOX_50K_DF	YES	NUMBER	5,4	Enter the 50,000-mile deterioration factor for NOx. (g/mi for additive DF)	LDV_EXH_DDV_CERT_LEVELS	A B C D E F if applicable
HWYNOX_50K_DF	YES	NUMBER	5,4	Enter the 50,000-mile deterioration factor for HIGHWAY NOx. (g/mi for additive DF)	LDV_EXH_DDV_CERT_LEVELS	A B C D E F if applicable
CO_50K_DF	YES	NUMBER	4,3	Enter the 50,000-mile deterioration factor for CO. (g/mi for additive DF)	LDV_EXH_DDV_CERT_LEVELS	A B C D E F if applicable
HCHO_50K_DF	YES	NUMBER	4,2	Enter the 50,000-mile deterioration factor for HCHO. (mg/mi for additive DF)	LDV_EXH_DDV_CERT_LEVELS	A B C D E F if applicable
PM_50K_DF	YES	NUMBER	6,5	Enter the 50,000-mile deterioration factor for PM. (g/mi for additive DF)	LDV_EXH_DDV_CERT_LEVELS	A B C D E F if applicable
COLD_CO_50K_DF	YES	NUMBER	5,3	Enter the 50,000-mile deterioration factor for COLD-CO. (g/mi for additive DF)	LDV_EXH_DDV_CERT_LEVELS	A B C D E F if applicable
NMHC_UL_DF	YES	NUMBER	6,5	Enter the useful-life-mile deterioration factor for NMHC. (g/mi for additive DF)	LDV_EXH_DDV_CERT_LEVELS	A B C D E F if applicable
NMOG_UL_DF	YES	NUMBER	6,5	Enter the useful-life-mile deterioration factor for NMOG. (g/mi for additive DF)	LDV_EXH_DDV_CERT_LEVELS	A B C D E F if applicable
NOX_UL_DF	YES	NUMBER	5,4	Enter the useful-life-mile deterioration factor for NOx. (g/mi for additive DF)	LDV_EXH_DDV_CERT_LEVELS	A B C D E F if applicable
HWYNOX_UL_DF	YES	NUMBER	5,4	Enter the useful-life-mile deterioration factor for HIGHWAY NOx. (g/mi for additive DF)	LDV_EXH_DDV_CERT_LEVELS	A B C D E F if applicable
CO_UL_DF	YES	NUMBER	4,3	Enter the useful-life-mile deterioration factor for CO. (g/mi for additive DF)	LDV_EXH_DDV_CERT_LEVELS	A B C D E F if applicable
HCHO_UL_DF	YES	NUMBER	4,2	Enter the useful-life-mile deterioration factor for HCHO. (mg/mi for additive DF)	LDV_EXH_DDV_CERT_LEVELS	A B C D E F if applicable
PM_UL_DF	YES	NUMBER	6,5	Enter the useful-life-mile deterioration factor for PM. (g/mi for additive DF)	LDV_EXH_DDV_CERT_LEVELS	A B C D E F if applicable
COLD_CO_UL_DF	YES	NUMBER	5,3	Enter the useful-life-mile deterioration factor for COLD-CO. (g/mi for additive DF)	LDV_EXH_DDV_CERT_LEVELS	A B C D E F if applicable
DDV_SET_NUM	NO	NUMBER	2	Enter the iterative DDV reference set number. Start with 1 and increment to the total number of different DDV sets.	LDV_EXHAUST_DDV_FUEL	A B C D E F if applicable
TG_OPFUEL_TYPE	NO	VARCHAR2	3	Select the operating fuel type for the DDV. Applicable values: GAS: GASOLINE, DSL: DIESEL, CNG: COMPRESSED NATURAL GAS, E85: 85% ETHANOL, H: HYDROGEN, LNG: LIQUEFIED NATURAL GAS, LPG: LIQUEFIED PETROLEUM GAS, OTH: OTHER.	LDV_EXHAUST_DDV_FUEL	A B C D E F if applicable
TG_FUEL_METERING	NO	VARCHAR2	4	Select the fuel metering type for DDV. Applicable values: CARB: CARBURETOR, CMIX: CNG MIXER, DFI: DIRECT FUEL INJECTION, IFI: INDIRECT FUEL INJECTION, LMIX: LPG MIXER, MFI: MULTIPOINT FUEL INJECTION, SFI: SEQUENTIAL MULTIPOINT FUEL INJECTION, TBI: THROTTLE BODY INJECTION, OTH: OTHER.	LDV_EXHAUST_DDV_FUEL	A B C D E F if applicable
TG_FUEL_METERING_OTH	YES	VARCHAR2	25	Describe the fuel metering type if it is not available from the list of predefined values.	LDV_EXHAUST_DDV_FUEL	A B C D E F if applicable
DDV_SET_NUM	NO	NUMBER	2	Enter the iterative DDV reference set number. Start with 1 and increment to the total number of different DDV sets.	LDV_EXHAUST_DDV	A B C D E F
MFR_VEH_ID	YES	VARCHAR2	25	Enter the manufacturer vehicle identification number for the durability data vehicle.	LDV_EXHAUST_DDV	A B C D E F if applicable
DURABILITY_GROUP_METHOD	NO	CHARACTER	1	Select the durability group method. Applicable values: 1: DF, 2: ASSIGNED DF, 3: AGED PARTS.	LDV_EXHAUST_DDV	A B C D E F
DDV_ECS_SET_NUMBER	YES	NUMBER	2	Enter ECS set number used for the DDV. ECS information should be entered in CSI 4.	LDV_EXHAUST_DDV	A B C D E F if applicable
ATD_GROUP_STATS	YES	NUMBER	5,3	Enter the ATD grouping statistic for this set of ATDs used for the DDV (CBI).	LDV_EXHAUST_DDV	A B C D E F if applicable
MAX_ATD_GROUP_STATS	YES	NUMBER	5,3	Enter the maximum ATD grouping statistic for the durability group of the DDV (CBI).	LDV_EXHAUST_DDV	A B C D E F if applicable
MIN_ATD_GROUP_STATS	YES	NUMBER	5,3	Enter the minimum ATD grouping statistic for the durability group of the DDV (CBI).	LDV_EXHAUST_DDV	A B C D E F if applicable
DURABILITY_DATA_TYPE	YES	CHARACTER	3	Enter the durability data type. Applicable values: NEW: NEW TEST DATA, CO: CARRYOVER DATA, CA: CARRYACROSS DATA, NA: NOT APPLICABLE (ASSIGNED DF/AGED PARTS).	LDV_EXHAUST_DDV	A B C D E F if applicable
ORIG_DURABILITY_GROUP_NAME	YES	VARCHAR2	12	Enter original durability group name.	LDV_EXHAUST_DDV	A B C D E F if applicable

CSI 5B						
Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
AGING_METHOD	YES	VARCHAR2	5	Select the aging method. Applicable values: BA: BENCH AGING, SRC: SRC - STANDARD ROAD CYCLE, MADP: MANUFACTURER ADP.	LDV_EXHAUST_DDV	A B C D E F if applicable
MFR_ADP_CARB_APP_REF_NUM	YES	VARCHAR2	20	Enter CARB approval reference number for Alternate Durability Process (ADP).	LDV_EXHAUST_DDV	A B C D E F if applicable
DURABILITY_GROUP_EQUIV_FACT	YES	NUMBER	2,1	Enter the durability group equivalency factor.	LDV_EXHAUST_DDV	A B C D E F if applicable
ADP_COMPONENTS	YES	VARCHAR2	256	Enter the list of ADP/bench-aged components.	LDV_EXHAUST_DDV	A B C D E F if applicable
MFR_CSI5B_NOTES	YES	VARCHAR2	1000	Enter the notes for this DDV and emission test data.	LDV_EXHAUST_DDV	

CSI 6A						
Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
EVAP_FAM_SET_NUM	NO	NUMBER	2	Enter the iterative evaporative family set number. Start with 1 and increment to the total number of evaporative family sets.	LDV_CANISTER_INFO	A D E
CANISTER_TYPE	NO	VARCHAR2	10	Enter the type of canister that is being reported. Applicable values: B: BLEED CANISTER, M: MAIN CANISTER, O: ORVR CANISTER, A: INTAKE HYDROCARBON TRAP.	LDV_CANISTER_INFO	A D E
NUMBER_CANISTER	NO	NUMBER	2	Enter the number of canisters that were selected in the canister type.	LDV_CANISTER_INFO	A D E
CANISTER_CONFIG	NO	CHARACTER	1	Select the configuration of canister that was selected in the canister type. Applicable values: 1: SINGLE, P: PARALLEL, S: SERIES, B: BOTH	LDV_CANISTER_INFO	A D E
BUTANE_WORKING_CAPACITY	NO	NUMBER	5,1	Enter the canister's total butane working capacity in grams.	LDV_CANISTER_INFO	A D E
BED_VOLUME	NO	NUMBER	4	Enter the canister's total bed volume in cubic centimeters.	LDV_CANISTER_INFO	A D E
STORAGE_MEDIUM	NO	CHARACTER	1	Select canister's storage medium. Applicable values: C: ACTIVATED CARBON, O: OTHER (SPECIFY CANISTER STORAGE MEDIUM IN CANISTER NOTES).	LDV_CANISTER_INFO	A D E
CANISTER_NOTES	YES	VARCHAR2	256	Enter the canister notes for this iterative set.	LDV_CANISTER_INFO	
EVAP_FAM_SET_NUM	NO	NUMBER	2	Enter the iterative evaporative family set number. Start with 1 and increment to the total number of evaporative family sets.	LDV_FUEL_TANK_INFO	A D E
FUEL_TANK_SET_NUM	NO	NUMBER	2	Enter the iterative fuel tank set number. Start with 1 and increment to the total number of different fuel tank set number.	LDV_FUEL_TANK_INFO	A D E
USE_PRODUCT_VEHICLE	NO	CHARACTER	1	Select YES if this fuel tank set is used for production vehicle in this TG. Applicable values: Y: YES, N: NO.	LDV_FUEL_TANK_INFO	A D E
USE_EVAP_EDV	NO	CHARACTER	1	Select YES if this fuel tank set is used for evap EDV in this evap family. Applicable values: Y: YES, N: NO.	LDV_FUEL_TANK_INFO	A D E
USE_EVAP_DDV	NO	VARCHAR2	2	Select YES if this fuel tank set is used for evap DDV in this evap family. Applicable values: Y: YES, N: NO, NA: NOT APPLICABLE.	LDV_FUEL_TANK_INFO	A D E
NUMBER_OF_FUEL_TANKS	YES	NUMBER	1	Enter number of fuel tanks described within the fuel tank set number.	LDV_FUEL_TANK_INFO	A D E
FUEL_TANK_CAPACITY_40	NO	NUMBER	3,1	Enter the amount of fuel to fill tank(s) (40%) in gallons. If there are multiple tanks in a fuel tank set, the 40% fill fuel tank capacity is sum of all tanks within the fuel tank set to fill 40% tank.	LDV_FUEL_TANK_INFO	A D E
FUEL_TANK_CAPACITY_100	NO	NUMBER	3,1	Enter the amount of fuel to fill tank(s) (100%) in gallons. If there are multiple tanks in a fuel tank set, the 100% fill fuel tank capacity is sum of all tanks within the fuel tank set to fill 100% tank.	LDV_FUEL_TANK_INFO	A D E
FUEL_TANK_TOTAL_VOL	NO	NUMBER	4,1	Enter total geometric volume of tank(s). Geometric volume is sum of fuel tank capacity and vapor space. Fuel tank total volume is sum of all tanks volumes within a fuel tank set number if the fuel tank set number has multiple tanks.	LDV_FUEL_TANK_INFO	A D E
FUEL_TANK_NOTES	YES	VARCHAR2	256	Enter any notes for fuel tank in this field.	LDV_FUEL_TANK_INFO	
EVAP_FAM_SET_NUM	NO	NUMBER	2	Enter the iterative evaporative family set number. Start with 1 and increment to the total number of evaporative family sets.	LDV_EVAP_REFUEL_DESC_FUEL	A D E
TG_OPFUEL_TYPE	NO	VARCHAR2	3	Select the operating fuel type for the evap family. Applicable values: GAS: GASOLINE, DSL: DIESEL: CNG: COMPRESSED NATURAL GAS, E85: 85% ETHANOL, H: HYDROGEN, LNG: LIQUEFIED NATURAL GAS, LPG: LIQUEFIED PETROLEUM GAS, OTH: OTHER.	LDV_EVAP_REFUEL_DESC_FUEL	A D E
TG_OPFUEL_TYPE_OTHER	YES	VARCHAR2	30	Describe the test group's operating fuel if it is not available from the list of predefined values.	LDV_EVAP_REFUEL_DESC_FUEL	A D E if applicable
EVAP_FAM_SET_NUM	NO	NUMBER	2	Enter the iterative evaporative family set number. Start with 1 and increment to the total number of evaporative family sets.	LDV_EVAP_REFUEL_FAMILY_DESC	A D E
EVAP_FAM	NO	VARCHAR2	12	Enter the 12-digits (all upper case) of the evaporative family that you are certifying.	LDV_EVAP_REFUEL_FAMILY_DESC	A D E
ORVR_TYPE	NO	VARCHAR2	5	Select the ORVR type. Applicable values: I: INTEGRATED, NI: NON-INTEGRATED, NIRCO: NON-INTEGRATED REFUELING CANISTER ONLY.	LDV_EVAP_REFUEL_FAMILY_DESC	A D E
FILL_PIPE_SEAL_MECHANISM	NO	CHARACTER	1	Enter the Fill Pipe Seal Mechanism. Applicable values: M: MECHANICAL, L: LIQUID TRAP, O: OTHER.	LDV_EVAP_REFUEL_FAMILY_DESC	A D E
FILL_PIPE_SEAL_MECHANISM_OTH	YES	VARCHAR2	50	Describe the fill pipe seal mechanism if it is not available from the list of predefined values.	LDV_EVAP_REFUEL_FAMILY_DESC	A D E if applicable
FILL_PIPE_COMPLIANT	NO	VARCHAR2	5	Select the fill pipe compliant with CARB specifications. Applicable values: Y: YES, YAV: YES WITH APPROVED VARIANCE, NA: NOT APPLICABLE.	LDV_EVAP_REFUEL_FAMILY_DESC	A D E
TANK_MATERIAL	NO	CHARACTER	1	Enter the fuel tank material. Applicable values: A: ALUMINUM, H: HDPE (HIGH-DENSITY POLYETHYLENE), S: STEEL, O: OTHER.	LDV_EVAP_REFUEL_FAMILY_DESC	A D E
TANK_MATERIAL_OTHER	YES	VARCHAR2	100	Describe the fuel tank material if it is not available from the list of predefined values.	LDV_EVAP_REFUEL_FAMILY_DESC	A D E if applicable
TANK_TEMP_PROF_DEV	YES	VARCHAR2	5	Select the tank temperature profile development. Applicable values: EC: ENVIRONMENTAL CHAMBER, TD: TRACK DRIVING.	LDV_EVAP_REFUEL_FAMILY_DESC	A D E
APPROVAL_NUM	YES	VARCHAR2	50	Enter CARB and EPA approval reference number if environmental chamber was selected in tank temperature profile development field.	LDV_EVAP_REFUEL_FAMILY_DESC	A D E if applicable
ZERO_EVAP_COMPL	NO	CHARACTER	1	Does this evaporative refueling family meet the zero fuel evaporative emission standard? Applicable values: Y: YES, N: NO.	LDV_EVAP_REFUEL_FAMILY_DESC	A D E
VEH_PZEV	YES	CHARACTER	1	Are the vehicles in this evaporative refueling family meeting the PZEV standards? Do not fill out this field for 2018 MY and later in which PZEV is not available. Applicable values: Y: YES, N: NO.	LDV_EVAP_REFUEL_FAMILY_DESC	A D E
HC_CAPTURE_METHOD	YES	CHARACTER	1	Select hydrocarbon capture method in canister bleed test procedure: A: Method A, B: Method B, C: Method C	LDV_EVAP_REFUEL_FAMILY_DESC	A D E if applicable
MFR_CSI6A_NOTE	YES	VARCHAR2	1000	Enter any notes or comments regarding the evaporative refueling family description.	LDV_EVAP_REFUEL_FAMILY_DESC	

CSI 6B						
Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
EVAP_EDV_SET_NUM	NO	NUMBER	2	Enter the iterative evaporative EDV reference set number. Start with 1 and increment to the total number of different evaporative EDV sets.	LDV_EVAP_EDV_LEAK_DIAMETER_TST	A D E
EVAP_TEST_TYPE_LDV	NO	VARCHAR2	6	Enter the type of test that reports the certification values. Applicable values: 2DHSW: 2-DAYS + HOT SOAK (WHOLE VEHICLE, G/TEST), 3DHSW: 3-DAYS + HOT SOAK (WHOLE VEHICLE, G/TEST), ORVR: ON-BOARD REFUELING VAPOR RECOVERY (G/GALLON), RL: RUNNING LOSS (G/MI), CANB: CANISTER BLEED (G/TEST), 2DHSFW: 2-DAYS + HOT SOAK (FUEL ONLY WET RIG, G/TEST), 3DHSFW: 3-DAYS + HOT SOAK (FUEL ONLY WET RIG, G/TEST), 2DHSFD: 2-DAYS + HOT SOAK (FUEL ONLY DRY RIG, G/TEST), 3DHSFD: 3-DAYS + HOT SOAK (FUEL ONLY DRY RIG, G/TEST).	LDV_EVAP_EDV_LEAK_DIAMETER_TST	A D E
EVAP_TEST_NUM	NO	NUMBER	2	Enter the iterative evaporative bench test set number. Start with 1 and increment to the total number of different evaporative bench test sets.	LDV_EVAP_EDV_LEAK_DIAMETER_TST	A D E
EVAP_TEST_DATE	YES	DATE		Enter the date of the evaporative refueling test.	LDV_EVAP_EDV_LEAK_DIAMETER_TST	A D E
EVAP_TEST_ID_NUM	NO	VARCHAR2	25	Enter the evaporative test ID number.	LDV_EVAP_EDV_LEAK_DIAMETER_TST	A D E
ALTERNATE_TEST	YES	CHARACTER	1	Alternative test procedure used for effective leak diameter test? If yes, please input approval number and describe the alternative test procedure including test parameters in Manufacturer Note. Y: YES, N: NO.	LDV_EVAP_EDV_LEAK_DIAMETER_TST	A D E
VOLUMETRIC_FLOW_GAS	YES	NUMBER	8,7	Enter volumetric flow of gas for effective leak diameter test (m3/s).	LDV_EVAP_EDV_LEAK_DIAMETER_TST	A D E
VOLUMETRIC_FLOW_GAS_C	YES	VARCHAR2	9	Enter volumetric flow of gas for effective leak diameter test (m3/s).	LDV_EVAP_EDV_LEAK_DIAMETER_TST	A D E
INLET_PRESSURE_ORIFICE	YES	NUMBER	4,1	Enter inlet pressure to orifice for effective leak diameter test (kPa).	LDV_EVAP_EDV_LEAK_DIAMETER_TST	A D E
INLET_PRESSURE_ORIFICE_C	YES	VARCHAR2	5	Enter inlet pressure to orifice for effective leak diameter test (kPa).	LDV_EVAP_EDV_LEAK_DIAMETER_TST	A D E
ATMOSPHERIC_PRESSURE	YES	NUMBER	5,2	Enter atmospheric pressure to orifice for effective leak diameter test (kPa).	LDV_EVAP_EDV_LEAK_DIAMETER_TST	A D E
ATMOSPHERIC_PRESSURE_C	YES	VARCHAR2	6	Enter atmospheric pressure to orifice for effective leak diameter test (kPa).	LDV_EVAP_EDV_LEAK_DIAMETER_TST	A D E
TEMPERATURE_FLOWING_MEDIUM	YES	NUMBER	4,1	Enter temperature of flowing medium for effective leak diameter test (K).	LDV_EVAP_EDV_LEAK_DIAMETER_TST	A D E
TEMPERATURE_FLOWING_MEDIUM_C	YES	VARCHAR2	5	Enter temperature of flowing medium for effective leak diameter test (K).	LDV_EVAP_EDV_LEAK_DIAMETER_TST	A D E
RAW_LEAK_DIAMETER	YES	NUMBER	6,5	Enter effective leak diameter test result (inches).	LDV_EVAP_EDV_LEAK_DIAMETER_TST	A D E
RAW_LEAK_DIAMETER_C	YES	VARCHAR2	7	Enter effective leak diameter test result (inches).	LDV_EVAP_EDV_LEAK_DIAMETER_TST	A D E
LAST_CHANGE_TS	NO	TIMESTAMP		The last date and time the record was changed.	LDV_EVAP_EDV_LEAK_DIAMETER_TST	A D E
LAST_CHANGE_USER	NO	VARCHAR2	8	The last user to change the record.	LDV_EVAP_EDV_LEAK_DIAMETER_TST	A D E
EVAP_EDV_SET_NUM	NO	NUMBER	2	Enter the iterative evaporative EDV reference set number. Start with 1 and increment to the total number of different evaporative EDV sets.	LDV_EVAP_REFUEL_EDV_TEST_DATA	A D E
EVAP_TEST_TYPE_LDV	NO	VARCHAR2	6	Enter the type of test that reports the certification values. Applicable values: 2DHSW: 2-DAYS + HOT SOAK (WHOLE VEHICLE, G/TEST), 3DHSW: 3-DAYS + HOT SOAK (WHOLE VEHICLE, G/TEST), ORVR: ON-BOARD REFUELING VAPOR RECOVERY (G/GALLON), RL: RUNNING LOSS (G/MI), CANB: CANISTER BLEED (G/TEST), 2DHSFW: 2-DAYS + HOT SOAK (FUEL ONLY WET RIG, G/TEST), 3DHSFW: 3-DAYS + HOT SOAK (FUEL ONLY WET RIG, G/TEST), 2DHSFD: 2-DAYS + HOT SOAK (FUEL ONLY DRY RIG, G/TEST), 3DHSFD: 3-DAYS + HOT SOAK (FUEL ONLY DRY RIG, G/TEST), LEAK: EFFECTIVE LEAK DIAMETER TEST (inches).	LDV_EVAP_REFUEL_EDV_TEST_DATA	A D E
EVAP_TEST_DATE	NO	DATE		Enter the date of the evaporative refueling test.	LDV_EVAP_REFUEL_EDV_TEST_DATA	A D E
EVAP_TEST_ID_NUM	NO	VARCHAR2	25	Enter the evaporative test ID number.	LDV_EVAP_REFUEL_EDV_TEST_DATA	A D E
TESTED_BY	NO	CHARACTER	1	Enter organization by which these set of emission test was tested. Applicable values: C: CARB, E: EPA, M: MANUFACTURER.	LDV_EVAP_REFUEL_EDV_TEST_DATA	A D E
CERT_TEST_FUEL	YES	VARCHAR2	25	Enter the certification test fuel. Applicable values: CNG-CARB: CNG - CARB CERT FUEL (CA ExTP II A 100.3.5), CNG-EPA: CNG - EPA CERT FUEL (40CFR86.113-94(e)(1)), CNG-OTH: CNG - OTHER, DIESEL-CARB: DIESEL - CARB CERT FUEL (CA ExTP II A 100.3.2), DIESEL-EPA: DIESEL - EPA CERT FUEL (40CFR86.113-07(b)(2)), DIESEL-OTH: DIESEL - OTHER, LEV2 E10-CARB: E10 - 10% ETHANOL + 90% CA PHASE 2 GAS (CA ExTP II A 100.3.4), E10-EPA: E10 - 10% ETHANOL + 90% TIER 2 UNLEADED GAS (EPA), E10-OTH: E10 - OTHER, E85-CARB: E85 - 85% ETHANOL + 15% CA PHASE 2 GAS (CA ExTP II A 100.3.4), E85-TIER3: E85 - ETHANOL + TIER3 E10 GAS, E85-EPA: E85 - 85% ETHANOL + 15% TIER 2 UNLEADED GAS (EPA), E85-OTH: E85 - OTHER, H2-OTH: HYDROGEN - OTHER, LPG-CARB: LPG - CARB CERT FUEL (CA ExTP II A 100.3.6), LPG-EPA: LPG - EPA CERT FUEL (40CFR86.113-94(f)(1)), LPG-OTH: LPG - OTHER, GASOLINE-LEV3 E10: CA LEV3 E10 CERT GASOLINE (CA ExTP II A 100.3.1.2), GASOLINE-LEV3 E10 PREM: CARB LEV3 E10 PREMIUM GASOLINE, GASOLINE-TIER3 E10: TIER3 E10 REGULAR GASOLINE, GASOLINE-TIER3 E10 PREM: TIER3 E10 PREMIUM GASOLINE, GASOLINE-CARB: GASOLINE - CA PHASE 2 (CA ExTP II A 100.3.1.1), GASOLINE-EPA: GASOLINE - TIER 2 UNLEADED (40CFR86.113-04(a)(1)), GASOLINE-COLD E10 REG: COLD CO E10 REGULAR GASOLINE (TIER3), GASOLINE-COLD E10 PREM: COLD CO E10 PREMIUM GASOLINE (TIER3), GASOLINE-LOW: GASOLINE - COLD CO LOW OCTANE (40CFR 86.213-04), GASOLINE-HIGH: GASOLINE - COLD CO HIGH OCTANE (40CFR 86.213-04), GASOLINE-OTH: GASOLINE - OTHER, OTH: OTHER.	LDV_EVAP_REFUEL_EDV_TEST_DATA	A D E
CERT_TEST_FUEL_OTHER	YES	VARCHAR2	50	Describe the reference for the test fuel specification or test fuel if it is not available from the list of predefined values.	LDV_EVAP_REFUEL_EDV_TEST_DATA	A D E if applicable

CSI 6B						
Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
OFFICIAL_CERT_TEST	NO	CHARACTER	1	Choose Yes if this is the official certification test for evaporative emissions. Applicable values: Y: YES, N: NO.	LDV_EVAP_REFUEL_EDV_TEST_DATA	A D E
TESTED_FOR	NO	CHARACTER	1	Enter the value for which these data was tested. Applicable values: 1: CERTIFICATION, 2: RUNNING CHANGE, 3: CARB CONFIRMATORY TEST, 4: EPA CONFIRMATORY TEST.	LDV_EVAP_REFUEL_EDV_TEST_DATA	A D E
RL_TEST	YES	CHARACTER	1	Enter the method of running loss test (only when running loss is selected in evap test type). Applicable values: S: SHED, P: POINT SOURCE.	LDV_EVAP_REFUEL_EDV_TEST_DATA	A D E
TEST_PROC_INDICATOR	NO	CHARACTER	1	Enter evap test procedure. Applicable values: C: CARB, E: EPA.	LDV_EVAP_REFUEL_EDV_TEST_DATA	A D E
EVAP_POLLUTANT_TYPE	NO	CHARACTER	5	Enter the applicable evaporative pollutant type. Applicable values: N: ORGANIC MATERIAL NON-METHANE HYDROCARBON EQUIVALENT (OMNMHCE), O: ORGANIC MATERIAL HYDROCARBON EQUIVALENT (OMHCE), T: TOTAL HYDROCARBONS (THC).	LDV_EVAP_REFUEL_EDV_TEST_DATA	A D E
RAW_EVAP_TEST_3D_DAY1	YES	NUMBER	5,4	Enter evaporative emission test result (before applying DF) of first day in 3-days evaporative test (g/test).	LDV_EVAP_REFUEL_EDV_TEST_DATA	A D E if applicable
RAW_EVAP_TEST_3D_DAY2	YES	NUMBER	5,4	Enter evaporative emission test result (before applying DF) of second day in 3-days evaporative test (g/test).	LDV_EVAP_REFUEL_EDV_TEST_DATA	A D E if applicable
RAW_EVAP_TEST_3D_DAY3	YES	NUMBER	5,4	Enter evaporative emission test result (before applying DF) of third day in 3-days evaporative test (g/test).	LDV_EVAP_REFUEL_EDV_TEST_DATA	A D E if applicable
RAW_EVAP_TEST_3D_HS	YES	NUMBER	5,4	Enter evaporative emission test result (before applying DF) of hot soak for 3-days evaporative test (g/test).	LDV_EVAP_REFUEL_EDV_TEST_DATA	A D E if applicable
RAW_EVAP_TEST_2D_DAY1	YES	NUMBER	5,4	Enter evaporative emission test result (before applying DF) of first day in 2-days evaporative test (g/test).	LDV_EVAP_REFUEL_EDV_TEST_DATA	A D E if applicable
RAW_EVAP_TEST_2D_DAY2	YES	NUMBER	5,4	Enter evaporative emission test result (before applying DF) of second day in 2-days evaporative test (g/test).	LDV_EVAP_REFUEL_EDV_TEST_DATA	A D E if applicable
RAW_EVAP_TEST_2D_HS	YES	NUMBER	5,4	Enter evaporative emission test result (before applying DF) of hot soak for 2-days evaporative test (g/test).	LDV_EVAP_REFUEL_EDV_TEST_DATA	A D E if applicable
RAW_EVAP_TEST_RL	YES	NUMBER	5,4	Enter evaporative emission test result (before applying DF) of running loss (g/mi).	LDV_EVAP_REFUEL_EDV_TEST_DATA	A D E
RAW_EVAP_TEST_ORVR	YES	NUMBER	5,4	Enter evaporative emission test result (before applying DF) of ORVR (g/gallon).	LDV_EVAP_REFUEL_EDV_TEST_DATA	A D E if applicable
RAW_EVAP_TEST_CANISTER_BLEED	YES	NUMBER	5,4	Enter canister bleed test result emission (g/test).	LDV_EVAP_REFUEL_EDV_TEST_DATA	A D E if applicable
EVAP_EDV_SET_NUM	NO	NUMBER	2	Enter the iterative evaporative EDV reference set number. Start with 1 and increment to the total number of different evaporative EDV sets.	LDV_EVAP_REFUEL_EDV	A D E
EVAP_FAM	NO	VARCHAR2	12	Enter the 12-digits (all upper case) of the evaporative family that you are certifying.	LDV_EVAP_REFUEL_EDV	A D E
EVAP_TEST_VEH_ID	NO	VARCHAR2	25	Enter the test vehicle ID for this evaporative refueling family.	LDV_EVAP_REFUEL_EDV	A D E
EVAP_TEST_VEH_MODEL	NO	VARCHAR2	25	Enter the model name of the test vehicle for this evaporative refueling family.	LDV_EVAP_REFUEL_EDV	A D E
EVAP_TYPE	NO	VARCHAR2	3	Select the applicable application type: NEW: NEW APPLICATION FOR A TEST GROUP (COMPLETE DATA SET MUST BE SUBMITTED), CO: CARRYOVER AN EXACT APPLICATION FROM A PREVIOUSLY CERTIFIED TEST GROUP (WHERE ALL INFORMATION ARE THE SAME, COMPLETE DATA SET MUST BE SUBMITTED), CA: CARRYACROSS DATA.	LDV_EVAP_REFUEL_EDV	A D E
EVAP_REFUEL_FAM_CARRYOVER	YES	VARCHAR2	12	Enter the 12-digits (all upper case) of the evaporative refueling family that you are carrying over or carrying across from.	LDV_EVAP_REFUEL_EDV	A D E if applicable
EVAP_EDV_TG	YES	VARCHAR2	12	Enter test group to which evap EDV belongs.	LDV_EVAP_REFUEL_EDV	A D E if applicable
EVAP_TEST_VEH_ENG_CODE	NO	VARCHAR2	25	Enter the engine code of the evaporative emission test vehicle.	LDV_EVAP_REFUEL_EDV	A D E
DISPLACEMENT_LDV	NO	NUMBER	5,3	Enter the displacement of the evaporative EDV emission test vehicle (liters).	LDV_EVAP_REFUEL_EDV	A D E
RATED_POWER	NO	NUMBER	5,1	Enter the rated power (HP) for the evaporative emission test vehicle (SAE standard).	LDV_EVAP_REFUEL_EDV	A D E
RATED_POWER_RPM	NO	NUMBER	5	Enter the RPM @ rated horsepower for this evap EDV (SAE standard).	LDV_EVAP_REFUEL_EDV	A D E
CYL_ARRANGEMENT	NO	VARCHAR2	2	The correct cylinder arrangement is described from the provided list of acceptable values. If value is not on the list, please enter the correct description in manufacturer note and the value maybe updated for future listing. Applicable values: I: INLINE, V: V-SHAPED ENGINE, H: HORIZONTALLY OPPOSED, W: W-SHAPED ENGINE, RT: ROTARY, OT: OTHER.	LDV_EVAP_REFUEL_EDV	A D E
CYL_ARRANGEMENT_OTHER	YES	VARCHAR2	30	Describe the cylinder arrangement if it is not available from the list of predefined values.	LDV_EVAP_REFUEL_EDV	A D E if applicable
CYLINDER	NO	NUMBER	2	The total number of combustion cylinders/rotors for engines in this test vehicle.	LDV_EVAP_REFUEL_EDV	A D E
TRANSMISSION_TYPE_LDV	NO	VARCHAR2	3	Enter the transmission type. Applicable values: A: AUTOMATIC (WITH LOCKUP), M: MANUAL, SA: SEMI-AUTOMATIC, CV: CONTINUOUSLY VARIABLE, SCV: SELECTABLE CONTINUOUSLY VARIABLE, AM: AUTOMATED MANUAL, AMS: AUTOMATED MANUAL-SELECTABLE, OT: OTHER (SPECIFY TRANSMISSION TYPE IN MANUFACTURER NOTE), NA: NOT APPLICABLE.	LDV_EVAP_REFUEL_EDV	A D E
TRANSMISSION_TYPE_LDV_OTH	YES	VARCHAR2	50	Describe the transmission type if it is not available from the list of predefined values.	LDV_EVAP_REFUEL_EDV	A D E if applicable
TRANSMISSION_GEAR_NUM_LDV	YES	NUMBER	2	Enter the number of forward gears in the test vehicle's transmission.	LDV_EVAP_REFUEL_EDV	A D E if applicable
TIRE_SIZE_FRONT	YES	VARCHAR2	12	Enter tire size for front set of tires if a vehicle has front wheel drive system or all wheel drive system.	LDV_EVAP_REFUEL_EDV	A D E if applicable
TIRE_SIZE_REAR	YES	VARCHAR2	12	Enter tire size for rear set of tires if a vehicle has rear wheel drive system or all wheel drive system.	LDV_EVAP_REFUEL_EDV	A D E if applicable
TARGET_COEFFICIENT_A	NO	NUMBER	5,2	Enter the EDV's target coefficient A (lbf) for evap test.	LDV_EVAP_REFUEL_EDV	A D E
TARGET_COEFFICIENT_B	NO	NUMBER	6,4	Enter the EDV's target coefficient B (lbf/mph) for evap test.	LDV_EVAP_REFUEL_EDV	A D E

CSI 6B						
Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
TARGET_COEFFICIENT_C	NO	NUMBER	6,5	Enter the EDV's target coefficient C (lbf/mph2) for evap test.	LDV_EVAP_REFUEL_EDV	A D E
CURB	NO	NUMBER	5	Enter curb weight (lb).	LDV_EVAP_REFUEL_EDV	A D E
LVW	YES	NUMBER	5	Enter loaded vehicle weight (lb).	LDV_EVAP_REFUEL_EDV	
ALVW	YES	NUMBER	5	Enter adjusted loaded vehicle weight (lb).	LDV_EVAP_REFUEL_EDV	
ETW	NO	NUMBER	5	Enter equivalent test weight (lb).	LDV_EVAP_REFUEL_EDV	A D E
GVWR	NO	NUMBER	5	Enter the gross vehicle weight rating (lb).	LDV_EVAP_REFUEL_EDV	A D E
FUEL_TANK_SET_NUMBER	NO	NUMBER	2	Enter fuel tank set number (entered in CSI 6A) used for this EDV.	LDV_EVAP_REFUEL_EDV	A D E
MFR_CSI6B_NOTE	YES	VARCHAR2	1000	Enter any notes or comments applicable to this CSI.	LDV_EVAP_REFUEL_EDV	

CSI 6C						
Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
EVAP_DDV_SET_NUM	NO	NUMBER	2	Enter the iterative evaporative DDV reference set number. Start with 1 and increment to the total number of different evaporative DDV sets.	LDV_EVAP_DUR_TEST_DATA	A D E if MDF is selected in EVAP_DF_TYPE
MFR_DUR_SET_NUM	NO	NUMBER	2	Enter the iterative durability set number for bench test (if bench information is selected in durability information type) or vehicle test (if vehicle information is selected in durability information type) or rig test (if rig test is selected in durability information type). Start with 1 and increment to the total number of different evaporative durability test.	LDV_EVAP_DUR_TEST_DATA	A D E if MDF is selected in EVAP_DF_TYPE
VEHICLE_TEST_ID	YES	VARCHAR2	25	Enter manufacturer test vehicle ID. Vehicle evap DF test only.	LDV_EVAP_DUR_TEST_DATA	A D E if applicable
EVAP_TEST_TYPE_LD	NO	VARCHAR2	6	Enter the type of test that reports test values. Applicable values: 2DHSW: 2-DAYS + HOT SOAK (WHOLE VEHICLE G/TEST), 3DHSW: 3-DAYS + HOT SOAK (WHOLE VEHICLE, G/TEST), ORVR: ON-BOARD REFUELING VAPOR RECOVERY (G/GALLON), RL: RUNNING LOSS (G/MI), CANB: CANISTER BLEED (G/TEST), 2DHSFW: 2-DAYS + HOT SOAK (FUEL ONLY WET RIG, G/TEST), 3DHSFW: 3-DAYS + HOT SOAK (FUEL ONLY WET RIG, G/TEST), 2DHSFD: 2-DAYS + HOT SOAK (FUEL ONLY DRY RIG, G/TEST), 3DHSFD: 3-DAYS + HOT SOAK (FUEL ONLY DRY RIG, G/TEST).	LDV_EVAP_DUR_TEST_DATA	A D E if MDF is selected in EVAP_DF_TYPE
EVAP_TEST_DATE	NO	DATE		Enter the date of the evaporative emissions and refueling emissions test.	LDV_EVAP_DUR_TEST_DATA	A D E if MDF is selected in EVAP_DF_TYPE
EVAP_TEST_ID_NUM	NO	VARCHAR2	25	Enter the evaporative test ID number.	LDV_EVAP_DUR_TEST_DATA	A D E if MDF is selected in EVAP_DF_TYPE
CERT_TEST_FUEL	NO	VARCHAR2	25	Enter the durability test fuel. Applicable values: CNG-CARB: CNG - CARB CERT FUEL (CA ExTP II A 100.3.5), CNG-EPA: CNG - EPA CERT FUEL (40CFR86.113-94(e)(1)), CNG-OTH: CNG - OTHER, DIESEL-CARB: DIESEL - CARB CERT FUEL (CA ExTP II A 100.3.2), DIESEL-EPA: DIESEL - EPA CERT FUEL (40CFR86.113-07(b)(2)), DIESEL-OTH: DIESEL - OTHER, LEV2 E10-CARB: E10 - 10% ETHANOL + 90% CA PHASE 2 GAS (CA ExTP II A 100.3.4), E10-EPA: E10 - 10% ETHANOL + 90% TIER 2 UNLEADED GAS (EPA), E10-OTH: E10 - OTHER, E85-CARB: E85 - 85% ETHANOL + 15% CA PHASE 2 GAS (CA ExTP II A 100.3.4), E85-TIER3: E85 - ETHANOL + TIER3 E10 GAS, E85-EPA: E85 - 85% ETHANOL + 15% TIER 2 UNLEADED GAS (EPA), E85-OTH: E85 - OTHER, H2-OTH: HYDROGEN - OTHER, LPG-CARB: LPG - CARB CERT FUEL (CA ExTP II A 100.3.6), LPG-EPA: LPG - EPA CERT FUEL (40CFR86.113-94(f)(1)), LPG-OTH: LPG - OTHER, GASOLINE-LEV3 E10: CA LEV3 E10 CERT GASOLINE (CA ExTP II A 100.3.1.2), GASOLINE-LEV3 E10 PREM: CARB LEV3 E10 PREMIUM GASOLINE, GASOLINE-TIER3 E10: TIER3 E10 REGULAR GASOLINE, GASOLINE-TIER3 E10 PREM: TIER3 E10 PREMIUM GASOLINE, GASOLINE-CARB: GASOLINE - CA PHASE 2 (CA ExTP II A 100.3.1.1), GASOLINE-EPA: GASOLINE - TIER 2 UNLEADED (40CFR86.113-04(a)(1)), GASOLINE-COLD E10 REG: COLD CO E10 REGULAR GASOLINE (TIER3), GASOLINE-COLD E10 PREM: COLD CO E10 PREMIUM GASOLINE (TIER3), GASOLINE-LOW: GASOLINE - COLD CO LOW OCTANE (40CFR 86.213-04), GASOLINE-HIGH: GASOLINE - COLD CO HIGH OCTANE (40CFR 86.213-04), GASOLINE-OTH: GASOLINE - OTHER, OTH: OTHER.	LDV_EVAP_DUR_TEST_DATA	A D E if MDF is selected in EVAP_DF_TYPE
CERT_TEST_FUEL_OTHER	YES	VARCHAR2	50	Describe the reference for the test fuel specification or cert test fuel if it is not available from the list of predefined values.	LDV_EVAP_DUR_TEST_DATA	A D E if applicable
TEST_POINT	YES	NUMBER	6	Enter the mileage of the evaporative durability test.	LDV_EVAP_DUR_TEST_DATA	A D E if MDF is selected in EVAP_DF_TYPE
RAW_EVAP_TEST_3D_DAY1	YES	NUMBER	5,4	Enter evaporative emission test result (before applying DF) of first day in 3-days evaporative test (g/test).	LDV_EVAP_DUR_TEST_DATA	A D E if MDF is selected in EVAP_DF_TYPE
RAW_EVAP_TEST_3D_DAY2	YES	NUMBER	5,4	Enter evaporative emission test result (before applying DF) of second day in 3-days evaporative test (g/test).	LDV_EVAP_DUR_TEST_DATA	A D E if MDF is selected in EVAP_DF_TYPE
RAW_EVAP_TEST_3D_DAY3	YES	NUMBER	5,4	Enter evaporative emission test result (before applying DF) of third day in 3-days evaporative test (g/test).	LDV_EVAP_DUR_TEST_DATA	A D E if MDF is selected in EVAP_DF_TYPE
RAW_EVAP_TEST_3D_HS	YES	NUMBER	5,4	Enter evaporative emission test result (before applying DF) of hot soak for 3-days evaporative test (g/test).	LDV_EVAP_DUR_TEST_DATA	A D E if MDF is selected in EVAP_DF_TYPE
RAW_EVAP_TEST_2D_DAY1	YES	NUMBER	5,4	Enter evaporative emission test result (before applying DF) of first day in 2-days evaporative test (g/test).	LDV_EVAP_DUR_TEST_DATA	A D E if MDF is selected in EVAP_DF_TYPE
RAW_EVAP_TEST_2D_DAY2	YES	NUMBER	5,4	Enter evaporative emission test result (before applying DF) of second day in 2-days evaporative test (g/test).	LDV_EVAP_DUR_TEST_DATA	A D E if MDF is selected in EVAP_DF_TYPE
RAW_EVAP_TEST_2D_HS	YES	NUMBER	5,4	Enter evaporative emission test result (before applying DF) of hot soak for 2-days evaporative test (g/test).	LDV_EVAP_DUR_TEST_DATA	A D E if MDF is selected in EVAP_DF_TYPE
RAW_EVAP_TEST_RL	YES	NUMBER	5,4	Enter evaporative emission test result (before applying DF) of running loss (g/mi).	LDV_EVAP_DUR_TEST_DATA	A D E if MDF is selected in EVAP_DF_TYPE
RAW_EVAP_TEST_ORVR	YES	NUMBER	5,4	Enter evaporative emission test result (before applying DF) of ORVR (g/gallon).	LDV_EVAP_DUR_TEST_DATA	A D E if MDF is selected in EVAP_DF_TYPE
USED_FOR_DF_CALC	NO	CHARACTER	1	Select YES if emission result is used for Deterioration Factor (DF) calculation. Applicable values: Y: YES, N: NO.	LDV_EVAP_DUR_TEST_DATA	A D E if MDF is selected in EVAP_DF_TYPE
EVAP_DDV_SET_NUM	NO	NUMBER	2	Enter the iterative evaporative DDV reference set number. Start with 1 and increment to the total number of different evaporative DDV sets.	LDV_EVAP_DUR_INFO	A D E if MDF is selected in EVAP_DF_TYPE
EVAP_DUR_INFO_NUM	NO	NUMBER	2	Enter the iterative durability info reference set number. Start with 1 and increment to the total number of different durability tests.	LDV_EVAP_DUR_INFO	A D E if MDF is selected in EVAP_DF_TYPE
DUR_INFO_TYPE	NO	CHARACTER	1	Enter durability information type. Applicable values: B: BENCH INFORMATION, V: VEHICLE INFORMATION, R: RIG TEST (ZERO-FUEL EVAP).	LDV_EVAP_DUR_INFO	A D E if MDF is selected in EVAP_DF_TYPE
EVAP_DDV_SET_NUM	NO	NUMBER	2	Enter the iterative evaporative DDV reference set number. Start with 1 and increment to the total number of different evaporative DDV sets.	LDV_EVAP_REFUEL_DDV	A D E
EVAP_FAM	NO	VARCHAR2	12	Enter the 12-digits (all upper case) of the evaporative family that you are certifying.	LDV_EVAP_REFUEL_DDV	A D E
EVAP_DF_TYPE	NO	VARCHAR2	3	Select the type of evaporative DF. Applicable values: MDF: MANUFACTURER DF, ADF: ASSIGNED DF, AP: UL AGED PARTS (NO DF).	LDV_EVAP_REFUEL_DDV	A D E

CSI 6C						
Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
DDV_EVAP_TYPE	NO	VARCHAR2	3	Select the applicable application type. Applicable value: NEW: NEW APPLICATION FOR A TEST GROUP (COMPLETE DATA SET MUST BE SUBMITTED), CO: CARRYOVER AN EXACT APPLICATION FROM A PREVIOUSLY CERTIFIED TEST GROUP (WHERE ALL INFORMATION ARE THE SAME, COMPLETE DATA SET MUST BE SUBMITTED), CA: CARRYACROSS DATA, AP: UL AGED PARTS (NO DF), NA: NOT APPLICABLE (ASSIGNED DF).	LDV_EVAP_REFUEL_DDV	A D E
EVAP_REFUEL_FAM_CARRYOVER	YES	VARCHAR2	12	Enter the 12-digits (all upper case) of the evaporative refueling family of the Evap DDV.	LDV_EVAP_REFUEL_DDV	A D E if applicable
EVAP_DDV_TG	YES	VARCHAR2	12	Enter test group to which evap DDV belongs.	LDV_EVAP_REFUEL_DDV	A D E if applicable
EVAP_TEST_VEH_MODEL	YES	VARCHAR2	25	Enter the model name of the test vehicle for this evaporative refueling family.	LDV_EVAP_REFUEL_DDV	A D E if MDF is selected in EVAP_DF_TYPE
DISPLACEMENT_LDV	YES	NUMBER	5,3	Enter the displacement of the evaporative DDV emission test vehicle (liters).	LDV_EVAP_REFUEL_DDV	A D E if MDF is selected in EVAP_DF_TYPE
FUEL_TANK_SET_NUMBER	YES	NUMBER	2	Enter fuel tank set number (entered in CSI 6A) used for this DDV.	LDV_EVAP_REFUEL_DDV	A D E if MDF is selected in EVAP_DF_TYPE
EVAP_DDV_NOTE	YES	VARCHAR2	65	Enter any Evaporative DDV comments or notes.	LDV_EVAP_REFUEL_DDV	
OVRALL_BENCH_EVAP_DF_ORVR	YES	NUMBER	6,5	Enter the overall bench ORVR DF for this evaporative refueling family. (g/gallon)	LDV_EVAP_REFUEL_DDV	A D E if MDF is selected in EVAP_DF_TYPE
OVRALL_BENCH_EVAP_DF_3D_HS	YES	NUMBER	6,5	Enter the overall bench 3-day diurnal plus hot soak DF for this evaporative refueling family. (g/test)	LDV_EVAP_REFUEL_DDV	A D E if MDF is selected in EVAP_DF_TYPE
OVRALL_BENCH_EVAP_DF_2D_HS	YES	NUMBER	6,5	Enter the overall bench 2-day diurnal plus hot soak DF for this evaporative refueling family. (g/test)	LDV_EVAP_REFUEL_DDV	A D E if MDF is selected in EVAP_DF_TYPE
OVRALL_BENCH_EVAP_DF_RUN_LOSS	YES	NUMBER	6,5	Enter the overall bench running loss DF for this evaporative refueling family. (g/mi)	LDV_EVAP_REFUEL_DDV	A D E if MDF is selected in EVAP_DF_TYPE
MFR_BENCH_DF_NOTES	YES	VARCHAR2	1000	Enter the bench DF testing notes.	LDV_EVAP_REFUEL_DDV	
VEH_EVAP_DF_ORVR	YES	NUMBER	6,5	Enter the Vehicle ORVR DF for this evaporative refueling family. (g/gallon)	LDV_EVAP_REFUEL_DDV	A D E if applicable
VEH_EVAP_DF_3D_HS	YES	NUMBER	6,5	Enter the vehicle 3-day diurnal plus hot soak DF for this evaporative refueling family. (g/test)	LDV_EVAP_REFUEL_DDV	A D E if applicable
VEH_EVAP_DF_2D_HS	YES	NUMBER	6,5	Enter the vehicle 2-day diurnal plus hot soak DF for this evaporative refueling family. (g/test)	LDV_EVAP_REFUEL_DDV	A D E if applicable
VEH_EVAP_DF_RUN_LOSS	YES	NUMBER	6,5	Enter the vehicle running loss DF for this evaporative refueling family. (g/mi)	LDV_EVAP_REFUEL_DDV	A D E if applicable
OVRALL_CERT_EVAP_DF_ORVR	YES	NUMBER	6,5	Enter the overall certification ORVR DF for this evaporative refueling family. (g/gallon)	LDV_EVAP_REFUEL_DDV	A D E if MDF or ADF is selected in EVAP_DF_TYPE
OVRALL_CERT_EVAP_DF_3D_HS	YES	NUMBER	6,5	Enter the overall certification 3-day diurnal plus hot soak DF for this evaporative refueling family. (g/test)	LDV_EVAP_REFUEL_DDV	A D E if MDF or ADF is selected in EVAP_DF_TYPE
OVRALL_CERT_EVAP_DF_2D_HS	YES	NUMBER	6,5	Enter the overall certification 2-day diurnal plus hot soak DF for this evaporative refueling family. (g/test)	LDV_EVAP_REFUEL_DDV	A D E if MDF or ADF is selected in EVAP_DF_TYPE
OVRALL_CERT_EVAP_DF_RUN_LOSS	YES	NUMBER	6,5	Enter the overall certification running loss DF for this evaporative refueling family. (g/mi)	LDV_EVAP_REFUEL_DDV	A D E if MDF or ADF is selected in EVAP_DF_TYPE
MFR_VEH_DF_NOTES	YES	VARCHAR2	1000	Enter the vehicle DF's testing notes.	LDV_EVAP_REFUEL_DDV	

CSI 7						
Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
MODEL_NUM	NO	NUMBER	3	Enter an iterative model number for each unique model definition.	LDV_MODEL_AXLE_RATIOS	A B C D E F
TRANSMISSION_NUM	NO	NUMBER	3	Enter an iterative transmission number for each unique transmission definition.	LDV_MODEL_AXLE_RATIOS	A B C D E F
AXLE_RATIO_LDV	NO	NUMBER	3,2	Enter the axle ratio.	LDV_MODEL_AXLE_RATIOS	A B C D E F
MODEL_NUM	NO	NUMBER	3	Enter an iterative model number for each unique model definition.	LDV_TRANSMISSION_INFO	A B C D E F
TRANSMISSION_NUM	NO	NUMBER	3	Enter an iterative transmission number for each unique transmission definition.	LDV_TRANSMISSION_INFO	A B C D E F
TRANSMISSION_TYPE_LDV	NO	VARCHAR2	3	Enter the transmission type. Applicable values: A: AUTOMATIC (WITH LOCKUP), M: MANUAL, SA: SEMI-AUTOMATIC, CV: CONTINUOUSLY VARIABLE, SCV: SELECTABLE CONTINUOUSLY VARIABLE, AM: AUTOMATED MANUAL, AMS: AUTOMATED MANUAL-SELECTABLE, OT: OTHER (SPECIFY TRANSMISSION TYPE IN MANUFACTURER NOTE), NA: NOT APPLICABLE.	LDV_TRANSMISSION_INFO	A B C D E F
TRANSMISSION_GEAR_NUM_LDV	YES	NUMBER	2	Enter the number of forward gears for this vehicle model.	LDV_TRANSMISSION_INFO	A B C D E F if applicable
TRANSMISSION_TYPE_LDV_OTH	YES	VARCHAR2	30	Describe the transmission type if it is not available from the list of predefined values.	LDV_TRANSMISSION_INFO	A B C D E F if applicable
MFR_MODEL_TYPE	YES	VARCHAR2	30	Enter manufacturer's model type or manufacturer's model type code as an unique combination of carline, basic engine and transmission class.	LDV_TRANSMISSION_INFO	A B C D E F
MODEL_NUM	NO	NUMBER	3	Enter an iterative model number for each unique model definition.	LDV_MODEL_FUEL	A D E
EVAP_FAM_SET_NUM	NO	NUMBER	2	Enter the Evaporative Family set number from CSI6A for the model. Do not use this data field to add more than one different evaporative family set number to this vehicle model. A vehicle model with more than one evaporative family should be entered separately as a new model. If entering multiple fuel tanks, use the same evaporative family set number.	LDV_MODEL_FUEL	A D E
FUEL_TANK_SET_NUM	NO	NUMBER	2	Enter the set number of fuel tank installed in the model. The fuel tank set number is defined in the evap family used for the model (CSI6A). If this vehicle model has multiple fuel tanks, use the same evaporative family set number for each fuel tank.	LDV_MODEL_FUEL	A D E
MODEL_NUM	NO	NUMBER	3	Enter an iterative model number for each unique model definition.	LDV_MODEL_DRIVE_MOTORS	A B C D E F if applicable (HEV or PHEV)
HEV_DRV MOTOR_SET_NUM	NO	NUMBER	2	Enter electric drive set number from CSI 10A if an electric drive is used.	LDV_MODEL_DRIVE_MOTORS	A B C D E F if applicable (HEV or PHEV)
MODEL_NUM	NO	NUMBER	3	Enter an iterative model number for each unique model definition.	LDV_MODELS	A B C D E F
VEH_MAKE	NO	VARCHAR2	65	Enter the advertised vehicle manufacturer's make name (for some mfrs this may be a division name).	LDV_MODELS	A B C D E F
CARLINE_NAME	NO	VARCHAR2	65	Enter the advertised vehicle model name based on the parameters in CSI-7. If the vehicle parameters have changed but the model name remains the same, then re-list the model with the correct / different vehicle parameters.	LDV_MODELS	A B C D E F
BADGE_NAME	NO	VARCHAR2	30	Enter the name that is located on the vehicle. Badge name will be listed on the Executive Order.	LDV_MODELS	A B C D E F
BODY_STYLE	NO	VARCHAR2	250	Enter all body styles of this vehicle model (i.e., Sedan, Coupe, Hatchback, Wagon, Convertible, Extended Cab, Crew Cab, etc.).	LDV_MODELS	A B C D E F
MFR_MODEL_CODE	YES	VARCHAR2	100	Enter all manufacturer model codes of this vehicle model.	LDV_MODELS	A B C D E F if applicable
TRIM_LEVEL	YES	VARCHAR2	250	Enter all advertised trim levels of this vehicle model (i.e. CE, LE, etc.).	LDV_MODELS	A B C D E F if applicable
TG_VEH_CLASS	NO	VARCHAR2	4	Select applicable certification category for this engine or vehicle model. Select MDPV if a vehicle is MDV less than 10000 GVWR but falls in the definition of MDPV. Applicable values: PC: PASSENGER CAR, LDT1: LIGHT-DUTY TRUCK (<= 6000 GVWR; 0-3750 LVW), LDT2: LIGHT-DUTY TRUCK (<= 6000 GVWR; 3751-5750 LVW), LDT3: LIGHT-DUTY TRUCK (6001-8500 GVWR; 3751-5750 ALVW), LDT4: LIGHT-DUTY TRUCK (6001-8500 GVWR; 5751-8500 ALVW), MDPV: MEDIUM-DUTY PASSENGER VEHICLE, MDV4: MEDIUM-DUTY VEHICLE (GVWR = 8501 ~ 10000, NON-MDPV), MDV5: MEDIUM-DUTY VEHICLE (GVWR = 10001 ~ 14000), HDV: HEAVY-DUTY VEHICLE (> 14000 GVWR)	LDV_MODELS	A B C D E F
ECS_SET_NUM	NO	NUMBER	2	Enter the ECS set number from CSI4 for the model.	LDV_MODELS	A B C D E F
ENGINE_CODE	NO	VARCHAR2	50	Enter all engine codes of this vehicle model.	LDV_MODELS	A B C D E F
ENGINE_SET_NUM	NO	NUMBER	2	Enter Engine Number from CSI 3 that used in the vehicle model.	LDV_MODELS	A B C D E F
HEV_TEST_VEH_ID	YES	VARCHAR2	25	Enter PHEV test vehicle ID from CSI 10A that corresponds to this vehicle model (PHEV vehicle model only)	LDV_MODELS	A B C D E F
EVAP_FAM	YES	VARCHAR2	12	Enter the 12-digits (all upper case) of the evaporative family that is used in the vehicle model.	LDV_MODELS	A C D E F
LEAK_FAMILY_IDENTIFIER	YES	VARCHAR2	16	Enter a leak family identifier that has been entered in CSI 2B. The leak family identifier has to be assigned to each model.	LDV_MODELS	A D E
MIN_CURB_WEIGHT	NO	NUMBER	5	Enter the minimum Curb Weight (lb) of this vehicle model.	LDV_MODELS	A B C D E F
MAX_CURB_WEIGHT	NO	NUMBER	5	Enter the maximum Curb Weight (lb) of this vehicle model.	LDV_MODELS	A B C D E F
MIN_ETW	NO	NUMBER	5	Enter the minimum Equivalent Test Weight (lb) of this vehicle model.	LDV_MODELS	A B C D E F
MAX_ETW	NO	NUMBER	5	Enter the maximum Equivalent Test Weight (lb) of this vehicle model.	LDV_MODELS	A B C D E F
MIN_GVWR	NO	NUMBER	5	Enter the minimum Gross Vehicle Weight Rating (lb) of this vehicle model.	LDV_MODELS	A B C D E F
MAX_GVWR	NO	NUMBER	5	Enter the maximum Gross Vehicle Weight Rating (lb) of this vehicle model.	LDV_MODELS	A B C D E F
DRIVE_SYSTEM	NO	CHARACTER	1	Enter the drive system description for this model. Applicable values: F: FRONT WHEEL DRIVE, R: REAR WHEEL DRIVE, P: PART TIME FOUR WHEEL DRIVE, A: ALL WHEEL DRIVE.	LDV_MODELS	A B C D E F
SHIFT_IND_LAMP	YES	CHARACTER	1	Select Yes if shift indication lamp is used. Applicable values: Y: YES, N: NO.	LDV_MODELS	A B C D E F if applicable
DRIVER_SELECTABLE_MODES	NO	CHARACTER	1	Select Yes if a vehicle model has driver selectable modes. Applicable values: Y: YES, N: NO.	LDV_MODELS	A B C D E F
DRIVER_SELECT_MODES_DESC	YES	VARCHAR2	100	Describe all driver selectable modes with brief explanation if Yes was selected in Driver Selectable Modes field (e.g., Fuel economy/Eco, Mountain, Power/Sport, Snow/Rain).	LDV_MODELS	A B C D E F if applicable
REGEN_BRAKE_SOURCE	NO	CHARACTER	1	Enter regenerative braking source. Applicable values: F: FRONT WHEELS, R: REAR WHEELS, B: BOTH, N: NOT APPLICABLE.	LDV_MODELS	A B C D E F
SHIFT_SCHEDULE	YES	VARCHAR2	125	Enter the shift schedule for this model vehicle.	LDV_MODELS	A B C D E F if applicable

CSI 7						
Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
MOD_TEST_PROC	NO	CHARACTER	1	Select YES if modified test procedure was used for this model. Describe the modification and reference number in CSI 7 Manufacturer Note. Applicable values: Y: YES, N: NO.	LDV_MODELS	A B C D E F
LABEL_TYPE	NO	VARCHAR2	5	Enter the proper label type for this model. Applicable values: 50S: 50 STATES, CA: CALIFORNIA ONLY, AB965: AB 965 (CARB SALES OF 49 STATE CERTIFIED VEHICLE AND REQUIRES CARB CERTIFICATION).	LDV_MODELS	A B C D E F
CA_PROJ_SALES_LDV	NO	NUMBER	5	Enter the California projected sales for this model (CBI).	LDV_MODELS	A B C D E F
SEC_177_PROJ_SALES_LDV	NO	NUMBER	5	Enter projected sales of Section 177 States (CBI).	LDV_MODELS	A B C D E F
NMOG_CREDIT_NON_PZEV_ZERO_EVAP	YES	NUMBER	5,4	Enter the g/mi NMOG credit applied to model if the model is non-PZEV certifying to the zero-fuel evaporative emission standard as stated in 13CCR1961(a)(11).	LDV_MODELS	A D E if applicable
NMOG_CREDIT_DOR_VEH	YES	NUMBER	5,4	Enter the g/mi NMOG credit applicable to model for use of approved DOR technology on this specific model.	LDV_MODELS	A B C D E F if applicable
BASE_PZEV_ALLOW	NO	NUMBER	3,2	Enter baseline PZEV allowance. Enter 0 if no baseline PZEV allowance was earned. Default value=0.	LDV_MODELS	A B C D E F
ZERO_EMIS_VMT_PZEV_ALLOW	NO	NUMBER	3,2	Enter zero emission VMT PZEV allowance. Enter 0 if no zero emission VMT PZEV allowance was earned. Describe all parameters used for the VMT PZEV calculation (e.g., equivalent all electric range, utility factor) in manufacturer note. Default value=0.	LDV_MODELS	A B C D E F
ADV_ZEV_COMP_PZEV_ALLOW_HG_H2	NO	NUMBER	3,2	Enter advanced ZEV componentry PZEV allowance for use of high pressure gaseous fuel or hydrogen storage system. Enter 0 if no advanced ZEV componentry PZEV allowance was earned. Default value=0.	LDV_MODELS	A B C D E F
ADV_ZEV_COMP_PZEV_ALLOW_HEV	NO	CHARACTER	1	Enter advanced ZEV componentry PZEV allowance for use of a qualifying HEV electric drive system. Applicable values: D: TYPE D, E: TYPE E, F: TYPE F, G: TYPE G, N: NOT APPLICABLE. Default value: N: NOT APPLICABLE.	LDV_MODELS	A B C D E F
ALLOW_QUALIFY_HEV_ELECTRIC_DRV	YES	NUMBER	3,2	Enter allowance for qualifying HEV electric drive system only if the model was selected as a type of advanced ZEV componentry PZEV allowance for use of a qualifying HEV electric drive system.	LDV_MODELS	A B C D E F if applicable
FUEL_CYCLE_EMIS_PZEV_ALLOW	NO	NUMBER	3,2	Enter fuel-cycle emissions PZEV allowance. Enter 0 if no fuel-cycle emissions PZEV allowance was earned. Default value=0.	LDV_MODELS	A B C D E F
CREDIT_H2_ICE	NO	NUMBER	4,3	Enter credit for hydrogen internal combustion engine vehicles. Enter 0 if no credit was earned. Default value=0	LDV_MODELS	A B C D E F
ALLOW_US06_CAPABILITY	NO	NUMBER	3,2	Enter allowance for US06 capability. Enter 0 if no allowance was earned. Default value=0.	LDV_MODELS	A B C D E F
MFR_CSI7_NOTE	YES	VARCHAR2	1000	Enter any notes regarding this specific model.	LDV_MODELS	

CSI 10A						
Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
HEV_SET_NUM	NO	NUMBER	3	Enter the iterative HEV set number. Start with 1 and increment to the total number of different HEV sets.	LDV_HEV_DRIVE_MOTOR	A B C D E F (HEV or PHEV)
HEV_DRVMOTOR_SET_NUM	NO	NUMBER	2	An iterative number for more than one drive motor.	LDV_HEV_DRIVE_MOTOR	A B C D E F (HEV or PHEV)
HZEV_DRVMOTOR_TYPE	NO	VARCHAR2	4	Enter the type of drive motor used in the hybrid vehicle. Applicable values: BDC: BRUSHED DC, ACI: AC INDUCTION, BPM: BRUSHLESS PERMANENT MAGNET, SR: SWITCHED RELUCTANCE, OT: OTHER.	LDV_HEV_DRIVE_MOTOR	A B C D E F (HEV or PHEV)
HZEV_DRVMOTOR_OTHER	YES	VARCHAR2	35	Enter the type of drive motor used in the Hybrid vehicle if it is not available from the list of predefined values.	LDV_HEV_DRIVE_MOTOR	A B C D E F (HEV or PHEV) if applicable
HZEV_DRVMOTOR_RATED_PWR	NO	NUMBER	4,1	Hybrid drive motor mechanical power (kW).	LDV_HEV_DRIVE_MOTOR	A B C D E F (HEV or PHEV)
HZEV_DRVMOTOR_RATED_RPM	NO	NUMBER	5	Hybrid drive motor rated power's rated RPM.	LDV_HEV_DRIVE_MOTOR	A B C D E F (HEV or PHEV)
HZEV_DRVMOTOR_PEAK_TORQ	NO	NUMBER	4,1	Enter drive motor peak torque (Nm).	LDV_HEV_DRIVE_MOTOR	A B C D E F (HEV or PHEV)
HEV_SET_NUM	NO	NUMBER	3	Enter the iterative HEV set number. Start with 1 and increment to the total number of different HEV sets.	LDV_HEV_BATTERY	A B C D E F (HEV or PHEV)
HZEV_BATT_TYPE	NO	VARCHAR2	4	Enter the battery type for the HEV. Applicable values: LA: PB-A (LEAD ACID), NIMH: NIMH (NICKEL-METAL HYDRIDE), LI: LI+ (LITHIUM ION), O: OTHER.	LDV_HEV_BATTERY	A B C D E F (HEV or PHEV)
HZEV_BATT_OTHER	YES	VARCHAR2	35	Describe the battery type for the HEV if it is not available from the list of predefined values.	LDV_HEV_BATTERY	A B C D E F (HEV or PHEV) if applicable
HZEV_BATT_NUM	NO	NUMBER	5	Enter the number of battery cells per vehicle.	LDV_HEV_BATTERY	A B C D E F (HEV or PHEV)
HZEV_BATT_TOT_WT	NO	NUMBER	5,1	Enter the total weight of overall battery system (kg).	LDV_HEV_BATTERY	A B C D E F (HEV or PHEV)
HZEV_BATT_TOT_VOLT	NO	NUMBER	5,1	Enter nominal voltage of total battery system (volts).	LDV_HEV_BATTERY	A B C D E F (HEV or PHEV)
HZEV_BATT_WHR	NO	NUMBER	6,1	Enter the total battery system energy density (unit in Whr/kg).	LDV_HEV_BATTERY	A B C D E F (HEV or PHEV)
BATT_THERM_MANAGE	NO	CHARACTER	1	Enter battery thermal management. Applicable values: L: ACTIVE-LIQUID COOLED, A: ACTIVE-AIR COOLED, P: PASSIVE (NO FORCED CIRCULATION OF COOLANT), O: OTHER OR COMBINATION OF THE ABOVE.	LDV_HEV_BATTERY	A B C D E F (HEV or PHEV)
BATT_THERM_MANAGE_OTH	YES	VARCHAR2	50	Describe battery thermal management if other was selected in Battery Thermal Management.	LDV_HEV_BATTERY	A B C D E F (HEV or PHEV) if applicable
HEV_SET_NUM	NO	NUMBER	3	Enter the iterative HEV set number. Start with 1 and increment to the total number of different HEV sets.	LDV_HEV_CAPACITOR	A B C D E F (HEV or PHEV) if applicable
HZEV_CAPC_RATING	NO	NUMBER	6,3	Enter individual capacitor's rating (unit in Farad). If zero, individual capacitor rating field is not required; otherwise repeat the rating field enter every capacitor rating for this model.	LDV_HEV_CAPACITOR	A B C D E F (HEV or PHEV) if applicable
HEV_SET_NUM	NO	NUMBER	3	Enter the iterative HEV set number. Start with 1 and increment to the total number of different HEV sets.	LDV_HEV_CHARGE_CAPABLE	A B C D E F (HEV or PHEV)
URBN_MFR_TEST_NUM	YES	NUMBER	2	Enter manufacturer's internal test number for the urban test.	LDV_HEV_CHARGE_CAPABLE	A B C D E F (HEV or PHEV) if applicable
URBN_CHRG_DEP_CYC_RNG	YES	NUMBER	6,3	Enter the distance traveled on the Urban Charge Depleting Procedure up to the test cycle prior to where the state-of-charge is above the lower bound state-of-charge tolerance for one test cycle. This range will appear as the sum of a discrete number of test cycle distances.	LDV_HEV_CHARGE_CAPABLE	A B C D E F (HEV or PHEV) if applicable
URBN_CHRG_DEP_ACT_RNG	YES	NUMBER	6,3	Enter the distance traveled on the Urban Charge Depleting Procedure up to the test cycle prior to where the state-of-charge is first equal to the average state-of-charge of the two consecutive UDDS used to end the Urban Charge Depleting Test Procedure.	LDV_HEV_CHARGE_CAPABLE	A B C D E F (HEV or PHEV) if applicable
URBN_CHRG_D_CHRG_S_RNG_CDSCS	YES	NUMBER	6,3	Enter the distance driven in miles from the start of the Urban Charge Depleting Test through the UDDS preceding the one or two UDDSs used to end the Urban Charge Depleting Test.	LDV_HEV_CHARGE_CAPABLE	A B C D E F (HEV or PHEV) if applicable
URBN_ALL_ELEC_RNG	YES	NUMBER	6,3	Enter the total miles driven on the urban cycle (with the engine off) before the engine turns on for the first time, after the battery has been fully charged.	LDV_HEV_CHARGE_CAPABLE	A B C D E F (HEV or PHEV) if applicable
URBN_EQUIV_ALL_ELEC_RNG	YES	NUMBER	6,3	Enter the portion of the total charge depleting range attributable to the use of electricity from the battery over the charge depleting urban range test.	LDV_HEV_CHARGE_CAPABLE	A B C D E F (HEV or PHEV) if applicable
URBN_EQUIV_ELEC_FRAC_RNG	YES	NUMBER	4,1	Enter the ratio of Equivalent All Electric Range (EAERu) to the charge depleting actual range (RcdA) as a percentage.	LDV_HEV_CHARGE_CAPABLE	A B C D E F (HEV or PHEV) if applicable
URBN_EQUIV_ALL_ELEC_RNG_EC	YES	NUMBER	5,3	Enter the ratio of total electrical energy used to fully charge the vehicle battery from an external power source after the charge depleting test has been completed (kWh) to EAERu (miles).	LDV_HEV_CHARGE_CAPABLE	A B C D E F (HEV or PHEV) if applicable
HWY_MFR_TEST_NUM	YES	NUMBER	2	Enter manufacturer's internal test number for the highway test.	LDV_HEV_CHARGE_CAPABLE	A B C D E F (HEV or PHEV) if applicable
HWY_CHRG_DEP_CYC_RNG	YES	NUMBER	6,3	Enter the distance traveled on the Highway Charge Depleting Procedure up to the test cycle prior to where the state-of-charge is above the lower bound state-of-charge tolerance for one test cycle. This range will appear as the sum of a discrete number of test cycle distances.	LDV_HEV_CHARGE_CAPABLE	A B C D E F (HEV or PHEV) if applicable
HWY_CHRG_DEP_ACT_RNG	YES	NUMBER	6,3	Enter the distance traveled on the Highway Charge Depleting Procedure up to the test cycle prior to where the state-of-charge is first equal to the average state-of-charge of the HFEDS used to end the Highway Charge Depleting Test Procedure.	LDV_HEV_CHARGE_CAPABLE	A B C D E F (HEV or PHEV) if applicable
HWY_CHRG_DEP_CHRG_SUS_RNG_CDSCS	YES	NUMBER	6,3	Enter the distance driven in miles from the start of the Highway Charge Depleting Test through the HFEDS preceding the final HFEDS.	LDV_HEV_CHARGE_CAPABLE	A B C D E F (HEV or PHEV) if applicable
HWY_ALL_ELEC_RNG	YES	NUMBER	6,3	Enter the total miles driven on the highway cycle (with the engine off) before the engine turns on for the first time, after the battery has been fully charged.	LDV_HEV_CHARGE_CAPABLE	A B C D E F (HEV or PHEV) if applicable
HWY_EQUIV_ALL_ELEC_RNG	YES	NUMBER	6,3	Enter the portion of the total charge depleting range attributable to the use of electricity from the battery over the charge depleting highway range test.	LDV_HEV_CHARGE_CAPABLE	A B C D E F (PHEV) if applicable
HWY_EQUIV_ELEC_FRAC_RNG	YES	NUMBER	4,1	Enter the ratio of Equivalent All Electric Range (EAERh) to the charge depleting actual range (RcdAh) as a percentage.	LDV_HEV_CHARGE_CAPABLE	A B C D E F (PHEV) if applicable
HWY_EQUIV_ALL_ELEC_RNG_EC	YES	NUMBER	5,3	Enter the ratio of total electrical energy used to fully charge the vehicle battery from an external power source after the charge depleting test has been completed (Ecd, kWh) to EAERh (miles).	LDV_HEV_CHARGE_CAPABLE	A B C D E F (PHEV) if applicable
US06_ALL_ELEC_RNG	YES	NUMBER	6,3	Enter all electric range (miles) on US06 test cycle	LDV_HEV_CHARGE_CAPABLE	A B C D E F (PHEV) if applicable

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Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
HEV_SET_NUM	NO	NUMBER	3	Enter the iterative HEV set number. Start with 1 and increment to the total number of different HEV sets.	LDV_HEV_INFO	A B C D E F (HEV or PHEV)
HZEV_ENERGY_CAT	NO	VARCHAR2	2	Enter the vehicle model's energy storage device. Applicable values: B: BATTERY, C: CAPACITOR, BC: BATTERY AND CAPACITOR, H: HYDRAULIC, O: OTHER.	LDV_HEV_INFO	A B C D E F (HEV or PHEV)
HZEV_ENERGY_OTHER	YES	VARCHAR2	35	Describe the storage type if it is not available from the list of predefined values.	LDV_HEV_INFO	A B C D E F (HEV or PHEV) if applicable
BEVX	NO	CHARACTER	1	Select Y (YES) if the TG is BEVx (range extended battery electric vehicle). Applicable values: Y: YES, N: NO.	LDV_HEV_INFO	A B C D E F (PHEV)
BEVX_TYPE	YES	VARCHAR2	4	Select type of BEVx (range extended battery electric vehicle). Applicable values: 1.SX: TYPE 1.SX, IIX: TYPE IIX.	LDV_HEV_INFO	A B C D E F (PHEV) if applicable
HZEV_CHARGE_L1	NO	VARCHAR2	2	Y: Yes, this model complies with Section 1962.3 'Electric Vehicle Charging Requirements', N: No, this model does not comply with Section 1962.3 'Electric Vehicle Charging Requirements', NA: NOT APPLICABLE.	LDV_HEV_INFO	A B C D E F (HEV or PHEV)
HZEV_CAPC_TOT_NUM	YES	NUMBER	2	Enter the total number of capacitors.	LDV_HEV_INFO	A B C D E F (HEV or PHEV) if applicable
HZEV_DRVMOTOR_NUM	NO	NUMBER	1	Enter the total number of vehicle drive motor(s) for this vehicle.	LDV_HEV_INFO	A B C D E F (HEV or PHEV)
HEV_TEST_VEH_ID	YES	VARCHAR2	25	Enter the HEV test vehicle ID (up to 18 characters).	LDV_HEV_INFO	A B C D E F (HEV or PHEV)
HEV_DRIVESYS_PWR	YES	NUMBER	4,1	Enter the HEV drive system's peak electric power output (unit in kW).	LDV_HEV_INFO	A B C D E F (HEV or PHEV)
HEV_TRACSYS_VOLT	YES	NUMBER	4,1	Enter the HEV traction drive system's total voltage (unit in volts).	LDV_HEV_INFO	A B C D E F (HEV or PHEV)
HEV_TRACDRV_BOOST	YES	CHARACTER	1	Y: YES, HEV HAS TRACTION DRIVE BOOST SYSTEM. N: NO, NO TRACTION DRIVE BOOST.	LDV_HEV_INFO	A B C D E F (HEV or PHEV)
HZEV_REG_BRAK	YES	VARCHAR2	3	Select the regenerative braking system. Applicable values: ERE: ELECTRICAL REGENERATIVE BRAKING, HRE: HYDRAULIC BRAKE, NA: NOT APPLICABLE, OT: OTHER.	LDV_HEV_INFO	A B C D E F (HEV or PHEV)
HZEV_REG_BRAK_OTHER	YES	VARCHAR2	1000	Describe the regenerative braking system if it is not available from the list of predefined values.	LDV_HEV_INFO	A B C D E F (HEV or PHEV) if applicable
CHRG_DEP_NET_EC_CD	YES	NUMBER	5,3	Enter the net electrical energy, measured in kilo watt-hours consumed by vehicle over the charge depleting cycle range, Rcdc. Ecd can be expressed as AC or DC kilowatt hours, where appropriate. Urban test data only.	LDV_HEV_INFO	A B C D E F (PHEV) if applicable
NET_DC_ENERGY_BATT_EXP_TST	YES	NUMBER	5,3	Enter the net DC energy from the battery that was expended during the test (may be reported as the total DC battery energy output and the total DC battery energy input). Urban test data only.	LDV_HEV_INFO	A B C D E F (PHEV) if applicable
AC_ENERGY_REQ_FULL_BAT_TST	YES	NUMBER	5,3	Enter the AC energy required to fully charge the battery after a charge sustaining or charge depleting test from the point where electricity is introduced from the electric outlet to the battery charger. Urban test data only.	LDV_HEV_INFO	A B C D E F (PHEV) if applicable
CHRG_DEP_NET_EC_CD_HWY	YES	NUMBER	5,3	Enter the net electrical energy, measured in kilo watt-hours consumed by vehicle over the charge depleting cycle range, Rcdc. Ecd can be expressed as AC or DC kilowatt hours, where appropriate. Highway test data only.	LDV_HEV_INFO	A B C D E F (PHEV) if applicable
NET_DC_ENERGY_BATT_EXP_TST_HWY	YES	NUMBER	5,3	Enter the net DC energy from the battery that was expended during the test (may be reported as the total DC battery energy output and the total DC battery energy input). Highway test data only.	LDV_HEV_INFO	A B C D E F (PHEV) if applicable
AC_ENERGY_REQ_FULL_BAT_TST_HWY	YES	NUMBER	5,3	Enter the AC energy required to fully charge the battery after a charge sustaining or charge depleting test from the point where electricity is introduced from the electric outlet to the battery charger. Highway test data only.	LDV_HEV_INFO	A B C D E F (PHEV) if applicable
MFR_CSI10A_NOTE	YES	VARCHAR2	1000	Enter notes specific to HEV.	LDV_HEV_INFO	

CSI 10B						
Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
ZEV_SET_NUM	NO	NUMBER	3	Enter the iterative ZEV set number. Start with 1 and increment to the total number of different ZEV sets.	LDV_ZEV_BATTERY	G
ZEV_BATT_NUM	NO	NUMBER	2	Enter an iterative number for each battery type.	LDV_ZEV_BATTERY	G
HZEV_BATT_TYPE	NO	VARCHAR2	4	Enter the battery type for the ZEV. Applicable values: LA: PB-A (LEAD ACID), NIMH: NIMH (NICKEL-METAL HYDRIDE), LI: LI+ (LITHIUM ION), O: OTHER.	LDV_ZEV_BATTERY	G
HZEV_BATT_OTHER	YES	VARCHAR2	35	Describe the battery type for the ZEV if it is not available from the list of predefined values.	LDV_ZEV_BATTERY	G if applicable
HZEV_BATT_NUM	NO	NUMBER	5	Enter the number of battery cells per vehicle.	LDV_ZEV_BATTERY	G
HZEV_BATT_TOT_WT	NO	NUMBER	5,1	Enter the total weight of overall battery system (kg).	LDV_ZEV_BATTERY	G
HZEV_BATT_TOT_VOLT	NO	NUMBER	5,1	Enter nominal voltage of total battery system (volts).	LDV_ZEV_BATTERY	G
MIN_BATT_SOC_VOLT	NO	VARCHAR2	50	Enter minimum voltage of battery for safe operation of vehicle.	LDV_ZEV_BATTERY	G
HZEV_BATT_AH	NO	NUMBER	6,1	Enter the total battery system energy capacity as rated by battery manufacturer (unit in ampere-hour).	LDV_ZEV_BATTERY	G
HZEV_BATT_WHR	NO	NUMBER	6,1	Enter the total battery system energy density (unit in Whr/kg).	LDV_ZEV_BATTERY	G
BATT_THERM_MANAGE	NO	CHARACTER	1	Enter battery thermal management. Applicable values: L: ACTIVE-LIQUID COOLED, A: ACTIVE-AIR COOLED, P: PASSIVE (NO FORCED CIRCULATION OF COOLANT), O: OTHER OR COMBINATION OF THE ABOVE.	LDV_ZEV_BATTERY	G
BATT_THERM_MANAGE_OTH	YES	VARCHAR2	50	Describe the battery thermal management.	LDV_ZEV_BATTERY	G if applicable
HZEV_BATT_CHARGE_TYPE	YES	VARCHAR2	3	Enter the type of battery charger for this model. Applicable values: OC: ON-BOARD CONDUCTIVE, OW: ON-BOARD WIRELESS, O: OTHER.	LDV_ZEV_BATTERY	G
HZEV_BATT_CHARGE_OTHER	YES	VARCHAR2	35	Describe the type of battery charger for this model if it is not available from the list of predefined values.	LDV_ZEV_BATTERY	G if applicable
ZEV_SET_NUM	NO	NUMBER	3	Enter the iterative ZEV set number. Start with 1 and increment to the total number of different ZEV sets.	LDV_ZEV_CAPACITOR	G if applicable
HZEV_CAPC_RATING	NO	NUMBER	6,3	Enter individual capacitor's rating (unit in Farad). If zero, individual capacitor rating field is not required; otherwise repeat the rating field enter every capacitor rating for this model.	LDV_ZEV_CAPACITOR	G if applicable
ZEV_SET_NUM	NO	NUMBER	3	Enter the iterative ZEV set number. Start with 1 and increment to the total number of different ZEV sets.	LDV_ZEV_DRIVE_MOTOR	G
ZEV_DRVMOTOR_SET_NUM	NO	NUMBER	2	Enter electric drive motor set number.	LDV_ZEV_DRIVE_MOTOR	G
HZEV_DRVMOTOR_TYPE	NO	VARCHAR2	4	Enter the type of drive motor used in the ZEV. Applicable values: BDC: BRUSHED DC, ACI: AC INDUCTION, BPM: BRUSHLESS PERMANENT MAGNET, SR: SWITCHED RELUCTANCE, OT: OTHER.	LDV_ZEV_DRIVE_MOTOR	G
HZEV_DRVMOTOR_OTHER	YES	VARCHAR2	35	Enter the type of drive motor used in the ZEV if it is not available from the list of predefined values.	LDV_ZEV_DRIVE_MOTOR	G if applicable
HZEV_DRVMOTOR_RATED_PWR	NO	NUMBER	4,1	Drive motor mechanical power (kW).	LDV_ZEV_DRIVE_MOTOR	G
HZEV_DRVMOTOR_RATED_RPM	NO	NUMBER	5	Drive motor rated power's rated RPM.	LDV_ZEV_DRIVE_MOTOR	G
HZEV_DRVMOTOR_PEAK_TORQ	NO	NUMBER	4,1	Enter drive motor peak torque (Nm).	LDV_ZEV_DRIVE_MOTOR	G
ZEV_SET_NUM	NO	NUMBER	3	Enter the iterative ZEV set number. Start with 1 and increment to the total number of different ZEV sets.	LDV_ZEV_MODELS_DRIVE_MOTOR	G
ZEV_MODEL_NUM	NO	NUMBER	3	Enter an iterative number for each model.	LDV_ZEV_MODELS_DRIVE_MOTOR	G
ZEV_DRVMOTOR_SET_NUM	NO	NUMBER	2	Enter electric drive set number from drive motor section for this model.	LDV_ZEV_MODELS_DRIVE_MOTOR	G
ZEV_SET_NUM	NO	NUMBER	3	Enter the iterative ZEV set number. Start with 1 and increment to the total number of different ZEV sets.	LDV_ZEV_MODELS_BATTERIES	G
ZEV_MODEL_NUM	NO	NUMBER	3	Enter an iterative number for each model.	LDV_ZEV_MODELS_BATTERIES	G
ZEV_BATT_NUM	NO	NUMBER	2	Enter the ZEV battery number from battery section for this vehicle model.	LDV_ZEV_MODELS_BATTERIES	G
ZEV_SET_NUM	NO	NUMBER	3	Enter the iterative ZEV set number. Start with 1 and increment to the total number of different ZEV sets.	LDV_ZEV_MODELS	G
ZEV_MODEL_NUM	NO	NUMBER	3	Enter an iterative number for each model.	LDV_ZEV_MODELS	G
ZEV_TIER	NO	VARCHAR2	8	Select the ZEV Tier. Applicable values: NEV: NEV, NEV+: NEV+, ZEV:ZEV, TYPE 0: TYPE 0, TYPE I: TYPE I, TYPE I.5: TYPE I.5, TYPE II: TYPE II, TYPE III: TYPE III, TYPE IV: TYPE IV, TYPE V: TYPE V, NA: NOT APPLICABLE.	LDV_ZEV_MODELS	G
FAST_REFUELING_TIME	YES	NUMBER	3,1	Enter time required to replace xxx miles of UDDS ZEV range.	LDV_ZEV_MODELS	G if applicable
FAST_REFUELING_UDDS_RANGE	YES	VARCHAR2	3	Select fast refueling UDDS ZEV range mileage. Applicable values: 95: 95 MILES, 190: 190 MILES, 285: 285 MILES, N: NOT APPLICABLE.	LDV_ZEV_MODELS	G
CARB_ZEV_MULT	YES	NUMBER	4,2	Enter the projected ZEV multiplier.	LDV_ZEV_MODELS	G if applicable
CARB_ZEV_CREDIT_WO_MULT	NO	NUMBER	4,2	Enter the ZEV Credits earned by the model (do not include the multiplier). If no credit is earned, enter 0.	LDV_ZEV_MODELS	G
ZEV_VEH_MAKE	NO	VARCHAR2	100	Enter the make of the vehicle model.	LDV_ZEV_MODELS	G
ZEV_MODEL	NO	VARCHAR2	50	Enter model name.	LDV_ZEV_MODELS	G

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Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
ZEV_CAT	NO	CHARACTER	1	Enter the ZEV category from the list (Selection should be based on ZEV energy source). Applicable values: B: BATTERY, F: FUEL CELL, O: OTHER.	LDV_ZEV_MODELS	G
ZEV_CAT_OTHER	YES	VARCHAR2	25	Describe ZEV energy source if it is not available in the predefined list.	LDV_ZEV_MODELS	G if applicable
ZEV_FUEL_TYPE	NO	VARCHAR2	5	Select the ZEV Fuel Type (battery type or fuel cell). Applicable values: PB-A: LEAD-ACID BATTERY, NICD: NICKEL-CADMIUM BATTERY, NIMH: NICKEL-METAL HYDRIDE BATTERY, LI+: LITHIUM ION BATTERY, FCH2: FUEL CELL CONSUMING ON-BOARD STORED HYDROGEN.	LDV_ZEV_MODELS	G
MODEL_VEH_CLASS	NO	VARCHAR2	12	Select the vehicle class from the pre-defined list. Applicable values: PC: PASSENGER CAR, LDT1: LIGHT-DUTY TRUCK (<= 6000 GVWR; 0-3750 LVW), LDT2: LIGHT-DUTY TRUCK (<= 6000 GVWR; 3751-5750 LVW), LDT3: LIGHT-DUTY TRUCK (6001-8500 GVWR; 3751-5750 ALVW), LDT4: LIGHT-DUTY TRUCK (6001-8500 GVWR; 5751-8500 ALVW), MDPV: MEDIUM-DUTY PASSENGER VEHICLE, MDV4: MEDIUM-DUTY VEHICLE (GVWR = 8501 ~ 10000, NON-MDPV), MDV5: MEDIUM-DUTY VEHICLE (GVWR = 10001 ~ 14000) , HDV: HEAVY-DUTY VEHICLE (> 14000 GVWR).	LDV_ZEV_MODELS	G
LABEL_TYPE	NO	VARCHAR2	5	Enter the proper label type for this model. Applicable values: 50S: 50 STATES, CA: CALIFORNIA ONLY, AB965: AB 965 (CARB SALES OF 49 STATE CERTIFIED VEHICLE AND REQUIRES CARB CERTIFICATION).	LDV_ZEV_MODELS	G
ZEV_PSALES_CA	NO	NUMBER	6	Enter projected California sales per model (CBI).	LDV_ZEV_MODELS	G
ZEV_PSALES_SEC_177	NO	NUMBER	5	Enter projected sales of Section 177 States (CBI).	LDV_ZEV_MODELS	G
ZEV_SET_NUM	NO	NUMBER	3	Enter the iterative ZEV set number. Start with 1 and increment to the total number of different ZEV sets.	LDV_ZEV_NEV_INFO	G-1
ZEV_MODEL_NUM	NO	NUMBER	3	Enter an iterative number for each model.	LDV_ZEV_NEV_INFO	G-1
TIME_TO_ACCEL_20_MPH	YES	NUMBER	3,1	Enter time (seconds) to accelerate from 0-20 mph when operating with a payload of 332 pounds and starting with the battery at a 50% state of charge.(Only required for NEVs seeking ZEV Credits).	LDV_ZEV_NEV_INFO	G-1
TOP_SPEED	YES	NUMBER	3,1	Enter the vehicles top speed (mph) when operating with a payload of 332 pounds and starting with the battery at a 50% state of charge. (Only required for NEVs seeking ZEV credits).	LDV_ZEV_NEV_INFO	G-1
MAINTENANCE_FREE_BATT	YES	CHARACTER	1	Enter Yes or No (Only required for NEVs seeking ZEV Credits). Applicable values: Y: YES, N: NO.	LDV_ZEV_NEV_INFO	G-1
MEETS_WARRANTY_REQ	YES	CHARACTER	1	Do the vehicles meet the warranty requirement per the ZEV/Hybrid Test Procedure? Enter yes or no (Only required for NEVs seeking ZEV Credits). Applicable values: Y: YES, N: NO.	LDV_ZEV_NEV_INFO	G-1
CONSTANT_SPEED_RANGE	YES	NUMBER	4,1	Enter the vehicles constant speed range (miles) when operating with a constant top speed and with a payload of 332 pounds starting with the battery at 100% charge (only required for NEVs seeking ZEV credit).	LDV_ZEV_NEV_INFO	G-1
MFR_TEST_NUM	YES	NUMBER	2	Enter manufacturer's internal test number.	LDV_ZEV_TEST_INFO	G if applicable
ZEV_UBRANGE_DIST	YES	NUMBER	6,3	Enter the model's all Urban electric range distance, in miles.	LDV_ZEV_TEST_INFO	G if applicable
ZEV_UBRANGE_DC	YES	NUMBER	4,3	Enter the batteries' net DC energy during the Urban all electric range test, unit in kWh/mi.	LDV_ZEV_TEST_INFO	G if applicable
ZEV_UBRANGE_AC_FULL	YES	NUMBER	4,3	Enter the total AC energy input to fully (100%) charge the battery after an Urban all electric range test, unit in kWh/mi.	LDV_ZEV_TEST_INFO	G if applicable
ZEV_UBRANGE_DC_FULL	YES	NUMBER	4,3	Enter the total DC energy input to fully (100%) charge the battery after an Urban all electric range test, unit in kWh/mi.	LDV_ZEV_TEST_INFO	G if applicable
ZEV_HWYRANGE_DIST	YES	NUMBER	6,3	Enter the model's all highway electric range distance, unit in miles.	LDV_ZEV_TEST_INFO	G if applicable
ZEV_HWYRANGE_DC	YES	NUMBER	4,3	Enter the batteries' net DC energy during the highway all electric range test, unit in kWh/mi.	LDV_ZEV_TEST_INFO	G if applicable
ZEV_HWYRANGE_AC_FULL	YES	NUMBER	4,3	Enter the total AC energy input to fully (100%) charge the battery after an highway all electric range test, unit in kWh/mi.	LDV_ZEV_TEST_INFO	G if applicable
ZEV_HWYRANGE_DC_FULL	YES	NUMBER	4,3	Enter the total DC energy input to fully (100%) charge the battery after a highway all electric range test, unit in kWh/mi.	LDV_ZEV_TEST_INFO	G if applicable
ZEV_COLDSCO_RANGE_DIST	YES	NUMBER	6,3	Enter the model's all cold CO electric range distance, unit in miles.	LDV_ZEV_TEST_INFO	G if applicable
ZEV_COLDSCO_RANGE_DC	YES	NUMBER	4,3	Enter the batteries' net DC energy during the cold CO all electric range test, unit in kWh/mi.	LDV_ZEV_TEST_INFO	G if applicable
ZEV_COLDSCO_RANGE_AC_FULL	YES	NUMBER	4,3	Enter the total AC energy input to fully (100%) charge the battery after an cold CO all electric range test, unit in kWh/mi.	LDV_ZEV_TEST_INFO	G if applicable
ZEV_COLDSCO_RANGE_DC_FULL	YES	NUMBER	4,3	Enter the total DC energy input to fully (100%) charge the battery after a cold CO all electric range test, unit in kWh/mi.	LDV_ZEV_TEST_INFO	G if applicable
ZEV_SC03_RANGE_DIST	YES	NUMBER	6,3	Enter the model's all SC03 electric range distance, unit in miles.	LDV_ZEV_TEST_INFO	G if applicable
ZEV_SC03_RANGE_DC	YES	NUMBER	4,3	Enter the batteries' net DC energy during the SC03 all electric range test, unit in kWh/mi.	LDV_ZEV_TEST_INFO	G if applicable
ZEV_SC03_RANGE_AC_FULL	YES	NUMBER	4,3	Enter the total AC energy input to fully (100%) charge the battery after an SC03 all electric range test, unit in kWh/mi.	LDV_ZEV_TEST_INFO	G if applicable
ZEV_SC03_RANGE_DC_FULL	YES	NUMBER	4,3	Enter the total DC energy input to fully (100%) charge the battery after a SC03 all electric range test, unit in kWh/mi.	LDV_ZEV_TEST_INFO	G if applicable
ZEV_US06_RANGE_DIST	YES	NUMBER	6,3	Enter the model's all US06 electric range distance, unit in miles.	LDV_ZEV_TEST_INFO	G if applicable
ZEV_US06_RANGE_DC	YES	NUMBER	4,3	Enter the batteries' net DC energy during the US06 all electric range test, unit in kWh/mi.	LDV_ZEV_TEST_INFO	G if applicable

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Name	Optional	SQL Data Type	SQL Type Qualifiers	Database Comment	Table Name	Required by CSI
ZEV_US06_RANGE_AC_FULL	YES	NUMBER	4,3	Enter the total AC energy input to fully (100%) charge the battery after an US06 all electric range test, unit in kWh/mi.	LDV_ZEV_TEST_INFO	G if applicable
ZEV_US06_RANGE_DC_FULL	YES	NUMBER	4,3	Enter the total DC energy input to fully (100%) charge the battery after a US06 all electric range test, unit in kWh/mi.	LDV_ZEV_TEST_INFO	G if applicable
ZEV_SET_NUM	NO	NUMBER	3	Enter the iterative ZEV set number. Start with 1 and increment to the total number of different ZEV sets.	LDV_ZEV_INFO	G
HZEV_ENERGY_CAT	YES	VARCHAR2	2	Enter the vehicle model's energy storage device. Applicable values: B: BATTERY, C: CAPACITOR, BC: BATTERY AND CAPACITOR, H: HYDRAULIC, O: OTHER.	LDV_ZEV_INFO	G
HZEV_ENERGY_OTHER	YES	VARCHAR2	35	Describe the energy storage device if it is not available from the list of predefined values.	LDV_ZEV_INFO	G if applicable
HZEV_CHARGE_L1	NO	CHARACTER	1	Y: Yes, this model complies with Section 1962.3 'Electric Vehicle Charging Requirements', N: No, this model does not comply with Section 1962.3 'Electric Vehicle Charging Requirements', NA: NOT APPLICABLE.	LDV_ZEV_INFO	G
HZEV_CAPC_TOT_NUM	YES	NUMBER	2	Enter the total number of capacitors.	LDV_ZEV_INFO	G if applicable
HZEV_DRVMOTOR_NUM	NO	NUMBER	1	Enter the total number of vehicle drive motor(s) for this vehicle.	LDV_ZEV_INFO	G
FC_STACK_TECH	YES	VARCHAR2	1000	Enter type of fuel cell, for example Proton Exchange Membrane (PEM).	LDV_ZEV_INFO	G-2
FC_ONBOARD_H2_STORAGE_MTH	YES	VARCHAR2	5	Select the Fuel Cell On-Board H2 Storage Method. Applicable Values: C: COMPRESSED, L: LIQUIFIED, M: METAL HYDRIDE, O: OTHER.	LDV_ZEV_INFO	G-2
FC_ONBOARD_H2_STORAGE_DESC	YES	VARCHAR2	50	Describe H2 storage method if H2 storage method is other than compressed, liquefied and metal hydride methods predescribed.	LDV_ZEV_INFO	G-2 if applicable
FC_H2_CAP	YES	NUMBER	4,1	Enter the H2 storage capacity (kg) if applicable.	LDV_ZEV_INFO	G-2
PRCNT_USABLE_H2_OF_MAX_CAP	YES	NUMBER	4,1	Enter percentage of H2 that is usable.	LDV_ZEV_INFO	G-2
RANGE_TEST_PROC	YES	VARCHAR2	5	Select the Range Test Procedure. Applicable Values: 1: ARB, 2: SAE J2572 (OCT 2008).	LDV_ZEV_INFO	G-2
HYBRID_FC_VEH	YES	CHARACTER	1	Is the vehicle a hybrid fuel cell vehicle? (A hybrid fuel cell vehicle receives propulsion energy from both an onboard fuel cell power system and a either a battery or capacitor.).	LDV_ZEV_INFO	G-2
FUEL_ECONOMY_CITY	YES	NUMBER	4,1	Enter fuel Economy on FTP Cycle (miles per kg H2).	LDV_ZEV_INFO	G-2
FUEL_ECONOMY_HWY	YES	NUMBER	4,1	Enter fuel economy on HWFE Cycle (miles per kg H2).	LDV_ZEV_INFO	G-2
TOTAL_NUM_CELL	YES	NUMBER	4	Enter the total number of cells.	LDV_ZEV_INFO	G-2
FC_ARRANGEMENT	YES	VARCHAR2	50	Describe how fuel cells are arranged in the vehicle.	LDV_ZEV_INFO	G-2
ZEV_TEST_VEH_ID	YES	VARCHAR2	25	Enter the zev ZEV test vehicle ID.	LDV_ZEV_INFO	G
HZEV_REG_BRAK	YES	VARCHAR2	3	Select the regenerative braking system. Applicable values: ERE: ELECTRICAL REGENERATIVE BRAKING, HRE: HYDRAULIC BRAKE, NA: NOT APPLICABLE, OT: OTHER.	LDV_ZEV_INFO	G
HZEV_REG_BRAK_OTHER	YES	VARCHAR2	1000	Describe the regenerative braking system if it is not available from the list of predefined values.	LDV_ZEV_INFO	G if applicable
HZEV_REG_BRAK_SOURCE	YES	CHARACTER	1	Enter the source of the regenerative braking on this model. Applicable values: F: FRONT WHEELS, R: REAR WHEELS, B: BOTH, N: NOT APPLICABLE.	LDV_ZEV_INFO	G
HZEV_REG_BRAK_CONTROL	YES	VARCHAR2	2	Driver controlled regenerative braking? Y: Yes, driver may turn-on or shut-off the regenerative braking system, N: No, driver does not have control of the regenerative braking system, NA: NOT APPLICABLE.	LDV_ZEV_INFO	G
ZEV_VEH_CONFIG	YES	VARCHAR2	35	Describe the specific vehicle configuration of the test vehicle.	LDV_ZEV_INFO	G if applicable
TIRE_SIZE_FRONT	YES	VARCHAR2	10	Enter tire size for front set of tires if a vehicle has front wheel drive system or all wheel drive system.	LDV_ZEV_INFO	G if applicable
TIRE_SIZE_REAR	YES	VARCHAR2	10	Enter tire size for rear set of tires if a vehicle has rear wheel drive system or all wheel drive system.	LDV_ZEV_INFO	G if applicable
ZEV_CURB_WT	YES	NUMBER	5	Enter the curb weight for this model.	LDV_ZEV_INFO	G
ZEV_LVW	YES	NUMBER	5	Enter the Loaded Vehicle Weight (LVW) units in pounds. This is required for PC/LDT.	LDV_ZEV_INFO	
ZEV_ALVW	YES	NUMBER	5	Enter the model's Adjusted Loaded Vehicle Weight (ALVW) unit in pounds. This is required for MDV.	LDV_ZEV_INFO	
ZEV_ETW	YES	NUMBER	5	Enter the model's equivalent test weight (ETW) units in pounds.	LDV_ZEV_INFO	G
ZEV_GVWR	YES	NUMBER	5	Enter the model's gross vehicle weight rating (GVWR) units in pounds.	LDV_ZEV_INFO	G
ZEV_TCOEFF_A	YES	NUMBER	5,2	Enter the model's the dynamometer A target coefficient (lbf).	LDV_ZEV_INFO	G
ZEV_TCOEFF_B	YES	NUMBER	6,4	Enter the model's the dynamometer B target coefficient (lbf/mph).	LDV_ZEV_INFO	G
ZEV_TCOEFF_C	YES	NUMBER	6,5	Enter the model's the dynamometer C target coefficient (lbf/mph2).	LDV_ZEV_INFO	G
ROAD_LOAD_HORSEPOWER	YES	VARCHAR2	10	Enter the roadload HP.	LDV_ZEV_INFO	G
TRANSMISSION_TYPE_LDV	YES	VARCHAR3	3	Enter the transmission type. Applicable values: A: AUTOMATIC (WITH LOCKUP), M: MANUAL, SA: SEMI-AUTOMATIC, CV: CONTINUOUSLY VARIABLE, SCV: SELECTABLE CONTINUOUSLY VARIABLE, AM: AUTOMATED MANUAL, AMS: AUTOMATED MANUAL-SELECTABLE, OT: OTHER (SPECIFY TRANSMISSION TYPE IN MANUFACTURER NOTE), NA: NOT APPLICABLE.	LDV_ZEV_INFO	G
TRANSMISSION_TYPE_LDV_OTH	YES	VARCHAR2	30	Describe the transmission type if it is not available from the list of predefined values.	LDV_ZEV_INFO	G if applicable
TRANSMISSION_GEAR_NUM_LDV	YES	NUMBER	2	Enter the number of forward gears for this vehicle model.	LDV_ZEV_INFO	G if applicable
MFR_CSI10B_NOTE	YES	VARCHAR2	1000	Enter notes specific to ZEV.	LDV_ZEV_INFO	

CSI 2A Field Requirements: PC, LDT, MDPV					
Field Name	LEV II	LEV III with SFTP stand alone	LEV III with SFTP composite	EPA Tier II BIN 2-4	EPA Tier II BIN 5-8
Indices (A~F) are defined on page 7.					
CERT_TEST_FUEL	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸
CERT_TEST_FUEL_OTHER	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸
MODIFIED_FFH_TEST	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸
FFH_XXHC_CL_50K	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸
FFH_XXHC_STD_50K	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸
FFH_CO_CL_50K	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸
FFH_CO_STD_50K	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸
FFH_NOX_CL_50K	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸
FFH_NOX_STD_50K	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸
FFH_NMOG_NOX_CL_UL	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸
FFH_NMOG_NOX_STD_UL	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸
FFH_HCHO_CL_50K	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸
FFH_HCHO_STD_50K	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸
FFH_PM_CL_50K	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸
FFH_PM_STD_50K	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸
FFH_XXHC_CL_UL	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸
FFH_XXHC_STD_UL	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸
FFH_CO_CL_UL	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸
FFH_CO_STD_UL	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸
FFH_NOX_CL_UL	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸
FFH_NOX_STD_UL	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸
FFH_HCHO_CL_UL	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸
FFH_HCHO_STD_UL	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸
FFH_PM_CL_UL	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸
FFH_PM_STD_UL	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸	(A B C D E F) ⁸
CERT_TEST_FUEL	(A B D E F) ^{3,5}	A B C D E F	A B C D E F	(A B D E F) ^{3,5}	(A B D E F) ^{3,5}
CERT_TEST_FUEL_OTHER	**	**	**	**	**
MODIFIED_SFTP_TEST	**	**	**	**	**
EXH_SFTP_US06_XXHCNOX_CL_4K	(A B D E F) ^{3,5}	*	*	(A B D E F) ^{3,5}	(A B D E F) ^{3,5}
EXH_SFTP_US06_XXHCNOX_STD_4K	(A B D E F) ^{3,5}	*	*	(A B D E F) ^{3,5}	(A B D E F) ^{3,5}
EXH_SFTP_US06_XXHCNOX_CL_UL	*	A B C D E F	*	*	*
EXH_SFTP_US06_XXHCNOX_STD_UL	*	A B C D E F	*	*	*
EXH_SFTP_US06_CO_CL_4K	(A B D E F) ^{3,5}	*	*	(A B D E F) ^{3,5}	(A B D E F) ^{3,5}

Legend

- ¹ LPG vehicle certifying to LEV, ULEV only
- ² CNG vehicle certifying to LEV, ULEV only
- ³ PC, LDT only
- ⁴ Starting MY 2017
- ⁵ Gasoline, diesel only
- ⁶ Primary (non-gasoline) fuel only
- ⁷ Selected for 50F test
- ⁸ Fields for vehicle equipped with fuel fired heater (FFH)
- ⁹ Based on phase-in schedule
- ¹⁰ LEV II vehicle certifying to NMOG+Nox
- standards
- * Not applicable
- ** If applicable

CSI 2A Field Requirements: PC, LDT, MDPV						Legend
Field Name	LEV II	LEV III with SFTP stand alone	LEV III with SFTP composite	EPA Tier II BIN 2-4	EPA Tier II BIN 5-8	
EXH_SFTP_US06_CO_STD_4K	(A B D E F) ^{3,5}	*	*	(A B D E F) ^{3,5}	(A B D E F) ^{3,5}	¹ LPG vehicle certifying to LEV, ULEV only ² CNG vehicle certifying to LEV, ULEV only ³ PC, LDT only ⁴ Starting MY 2017 ⁵ Gasoline, diesel only ⁶ Primary (non-gasoline) fuel only ⁷ Selected for 50F test ⁸ Fields for vehicle equipped with fuel fired heater (FFH) ⁹ Based on phase-in schedule ¹⁰ LEV II vehicle certifying to NMOG+Nox standards * Not applicable ** If applicable
EXH_SFTP_US06_CO_CL_UL	*	A B C D E F	*	(A B D E F) ^{3,5}	(A B D E F) ^{3,5}	
EXH_SFTP_US06_CO_STD_UL	*	A B C D E F	*	(A B D E F) ^{3,5}	(A B D E F) ^{3,5}	
EXH_SFTP_US06_PM_CL_UL	*	(A B C D E F) ⁴	(A B C D E F) ⁴	*	*	
EXH_SFTP_US06_PM_STD_UL	*	(A B C D E F) ⁴	(A B C D E F) ⁴	*	*	
EXH_SFTP_SC03_XXHCNOX_CL_4K	(A B D E F) ^{3,5}	*	*	(A B D E F) ^{3,5}	(A B D E F) ^{3,5}	
EXH_SFTP_SC03_XXHCNOX_STD_4K	(A B D E F) ^{3,5}	*	*	(A B D E F) ^{3,5}	(A B D E F) ^{3,5}	
EXH_SFTP_SC03_XXHCNOX_CL_UL	*	A B C D E F	*	*	*	
EXH_SFTP_SC03_XXHCNOX_STD_UL	*	A B C D E F	*	*	*	
EXH_SFTP_SC03_CO_CL_4K	(A B D E F) ^{3,5}	*	*	(A B D E F) ^{3,5}	(A B D E F) ^{3,5}	
EXH_SFTP_SC03_CO_STD_4K	(A B D E F) ^{3,5}	*	*	(A B D E F) ^{3,5}	(A B D E F) ^{3,5}	
EXH_SFTP_SC03_CO_CL_UL	*	A B C D E F	*	(A B D E F) ^{3,5}	(A B D E F) ^{3,5}	
EXH_SFTP_SC03_CO_STD_UL	*	A B C D E F	*	(A B D E F) ^{3,5}	(A B D E F) ^{3,5}	
EXH_SFTP_COMP_XXHCNOX_CL_UL	*	*	A B C D E F	(A B D E F) ^{3,5}	(A B D E F) ^{3,5}	
EXH_SFTP_COMP_XXHCNOX_STD_UL	*	*	A B C D E F	(A B D E F) ^{3,5}	(A B D E F) ^{3,5}	
EXH_SFTP_COMP_NMOGNOX_BIN_UL	*	*	A B C D E F	*	*	
EXH_SFTP_COMP_CO_CL_UL	*	*	A B C D E F	*	*	
EXH_SFTP_COMP_CO_STD_UL	*	*	A B C D E F	*	*	
EXH_SFTP_COMP_PM_CL_UL	*	*	*	*	*	
EXH_SFTP_COMP_PM_STD_UL	*	*	*	*	*	
MFR_SFTP_NOTE	**	**	**	**	**	
CERT_TEST_FUEL_OTHER	**	**	**	**	**	
EXH_FTP_XXHC_TYPE_OTHER	**	**	**	**	**	
EXH_50F_XXHC_CL_4K	(A D E) ⁷	*	*	(A D E) ⁷	(A D E) ⁷	
EXH_50F_XXHC_STD_4K	(A D E) ⁷	*	*	(A D E) ⁷	(A D E) ⁷	
EXH_FTP_XXHC_CL_50K	(A B C D E F) ³	*	*	*	A B C D E F	
EXH_FTP_XXHC_STD_50K	(A B C D E F) ³	*	*	*	A B C D E F	
EXH_FTP_XXHC_CL_UL	A B C D E F	*	*	A B C D E F	A B C D E F	
EXH_FTP_XXHC_STD_UL	A B C D E F	*	*	A B C D E F	A B C D E F	
EXH_50F_NOX_CL_4K	(A D E) ⁷	*	*	(A D E) ⁷	(A D E) ⁷	
EXH_50F_NOX_STD_4K	(A D E) ⁷	*	*	(A D E) ⁷	(A D E) ⁷	
EXH_FTP_NOX_CL_50K	(A B C D E F) ³	*	*	*	A B C D E F	
EXH_FTP_NOX_STD_50K	(A B C D E F) ³	*	*	*	A B C D E F	
EXH_FTP_NOX_CL_UL	A B C D E F	*	*	A B C D E F	A B C D E F	
EXH_FTP_NOX_STD_UL	A B C D E F	*	*	A B C D E F	A B C D E F	

CSI 2A Field Requirements: PC, LDT, MDPV						Legend
Field Name	LEV II	LEV III with SFTP stand alone	LEV III with SFTP composite	EPA Tier II BIN 2-4	EPA Tier II BIN 5-8	
EXH_50F_NMOG_NOX_CL_4K	(A B C D E F) ¹⁰	(A D E) ⁷	(A D E) ⁷	(A D E) ⁷	(A D E) ⁷	¹ LPG vehicle certifying to LEV, ULEV only ² CNG vehicle certifying to LEV, ULEV only ³ PC, LDT only ⁴ Starting MY 2017 ⁵ Gasoline, diesel only ⁶ Primary (non-gasoline) fuel only ⁷ Selected for 50F test ⁸ Fields for vehicle equipped with fuel fired heater (FFH) ⁹ Based on phase-in schedule ¹⁰ LEV II vehicle certifying to NMOG+Nox
EXH_50F_NMOG_NOX_STD_4K	(A B C D E F) ¹⁰	(A D E) ⁷	(A D E) ⁷	(A D E) ⁷	(A D E) ⁷	
EXH_FTP_NMOG_NOX_CL_UL	(A B C D E F) ¹⁰	A B C D E F	A B C D E F	*	*	
EXH_FTP_NMOG_NOX_STD_UL	(A B C D E F) ¹⁰	A B C D E F	A B C D E F	*	*	
EXH_50F_CO_CL_4K	(A D E) ⁷	(A D E) ⁷	(A D E) ⁷	(A D E) ⁷	(A D E) ⁷	
EXH_50F_CO_STD_4K	(A D E) ⁷	(A D E) ⁷	(A D E) ⁷	(A D E) ⁷	(A D E) ⁷	
EXH_FTP_CO_CL_50K	(A B C D E F) ³	*	*	*	A B C D E F	
EXH_FTP_CO_STD_50K	(A B C D E F) ³	*	*	*	A B C D E F	
EXH_FTP_CO_CL_UL	A B C D E F	A B C D E F	A B C D E F	A B C D E F	A B C D E F	
EXH_FTP_CO_STD_UL	A B C D E F	A B C D E F	A B C D E F	A B C D E F	A B C D E F	
EXH_50F_HCHO_CL_4K	(A D E) ⁷	(A D E) ⁷	(A D E) ⁷	(A D E) ⁷	(A D E) ⁷	
EXH_50F_HCHO_STD_4K	(A D E) ⁷	(A D E) ⁷	(A D E) ⁷	(A D E) ⁷	(A D E) ⁷	
EXH_FTP_HCHO_CL_50K	D ^{3,6}	*	*	*	D ⁶	
EXH_FTP_HCHO_STD_50K	(A B C D E F) ³	*	*	*	A B C D E F	
EXH_FTP_HCHO_CL_UL	D ⁶	D ⁶	D ⁶	D ⁶	D ⁶	
EXH_FTP_HCHO_STD_UL	A B C D E F	A B C D E F	A B C D E F	A B C D E F	A B C D E F	
EXH_FTP_PM_CL_50K	(B F) ³	*	*	*	B F	
EXH_FTP_PM_STD_50K	(A B C D E F) ³	*	*	*	A B C D E F	
EXH_FTP_PM_CL_UL	B F	B F (A C D E) ^{4,9}	B F (A C D E) ^{4,9}	B F	B F	
EXH_FTP_PM_STD_UL	A B C D E F	A B C D E F	A B C D E F	A B C D E F	A B C D E F	
EXH_FTP_HWYNOX_CL_50K	(A B C D E F) ³	*	*	*	(A B C D E F) ³	standards * Not applicable ** If applicable
EXH_FTP_HWYNOX_STD_50K	(A B C D E F) ³	*	*	*	(A B C D E F) ³	
EXH_FTP_HWYNOX_CL_UL	A B C D E F	*	*	(A B C D E F) ³	(A B C D E F) ³	
EXH_FTP_HWYNOX_STD_UL	A B C D E F	*	*	(A B C D E F) ³	(A B C D E F) ³	
EXH_FTP_HWY_NMOG_NOX_CL_UL	(A B C D E F) ¹⁰	A B C D E F	A B C D E F	*	*	
EXH_FTP_HWY_NMOG_NOX_STD_UL	(A B C D E F) ¹⁰	A B C D E F	A B C D E F	*	*	
EXH_FTP_COLD_CO_CL_50K	(A D E) ³	A D E	A D E	A D E	A D E	
EXH_FTP_COLD_CO_STD_50K	(A D E) ³	A D E	A D E	A D E	A D E	
DOR_FTP_NMOG_CREDIT	**	**	**	**	**	
NON_PZEV_ZERO_EVAP_NMOG_CDT	**	**	**	**	**	
HCHO_NMHC_RATIO	**	**	**	**	**	
RAF_NMOG	A ¹ C ² E ^{1,2} F ²	**	**	**	**	
RAF_METHANE	C ² E ² F ²	**	**	**	**	
EXTD_WARRANTY_NMOGNOX_CDT	*	**	**	*	*	

CSI 2A Field Requirements: MDV					Legend
Field Name	LEV II	LEV III	EPA BIN 2-4	EPA BIN 5-8	
Indices (A~F) are defined on page 7.					
CERT_TEST_FUEL	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	1 LPG vehicle certifying to LEV, ULEV only
CERT_TEST_FUEL_OTHER	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	
MODIFIED_FFHC_TEST	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	2 CNG vehicle certifying to LEV, ULEV only
FFH_XXHC_CL_50K	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	
FFH_XXHC_STD_50K	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	3 Starting MY 2017
FFH_CO_CL_50K	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	
FFH_CO_STD_50K	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	4 Primary (non-gasoline) fuel only
FFH_NOX_CL_50K	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	
FFH_NOX_STD_50K	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	5 Selected for 50F test
FFH_NMOG_NOX_CL_UL	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	
FFH_NMOG_NOX_STD_UL	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	6 Fields for vehicle equipped with fuel
FFH_HCHO_CL_50K	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	
FFH_HCHO_STD_50K	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	7 LEV II vehicle certifying to NMOG+NOx
FFH_PM_CL_50K	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	
FFH_PM_STD_50K	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	fired heater (FFH)
FFH_XXHC_CL_UL	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	
FFH_XXHC_STD_UL	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	standards
FFH_CO_CL_UL	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	
FFH_CO_STD_UL	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	* Not applicable
FFH_NOX_CL_UL	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	
FFH_NOX_STD_UL	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	** If applicable
FFH_HCHO_CL_UL	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	
FFH_HCHO_STD_UL	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	
FFH_PM_CL_UL	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	
FFH_PM_STD_UL	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	(A B C D E F) ⁶	
CERT_TEST_FUEL	*	A B C D E F	*	*	
CERT_TEST_FUEL_OTHER	**	**	**	**	

CSI 2A Field Requirements: MDV					Legend
Field Name	LEV II	LEV III	EPA BIN 2-4	EPA BIN 5-8	
MODIFIED_SFTP_TEST	**	**	**	**	¹ LPG vehicle certifying to LEV, ULEV only ² CNG vehicle certifying to LEV, ULEV only ³ Starting MY 2017 ⁴ Primary (non-gasoline) fuel only ⁵ Selected for 50F test ⁶ Fields for vehicle equipped with fuel fired heater (FFH) ⁷ LEV II vehicle certifying to NMOG+NOx standards * Not applicable ** If applicable
EXH_SFTP_US06_XXHCNOX_CL_4K	*	*	*	*	
EXH_SFTP_US06_XXHCNOX_STD_4K	*	*	*	*	
EXH_SFTP_US06_XXHCNOX_CL_UL	*	*	*	*	
EXH_SFTP_US06_XXHCNOX_STD_UL	*	*	*	*	
EXH_SFTP_US06_CO_CL_4K	*	*	*	*	
EXH_SFTP_US06_CO_STD_4K	*	*	*	*	
EXH_SFTP_US06_CO_CL_UL	*	*	*	*	
EXH_SFTP_US06_CO_STD_UL	*	*	*	*	
EXH_SFTP_US06_PM_CL_UL	*	(A B C D E F) ³	*	*	
EXH_SFTP_US06_PM_STD_UL	*	(A B C D E F) ³	*	*	
EXH_SFTP_SC03_XXHCNOX_CL_4K	*	*	*	*	
EXH_SFTP_SC03_XXHCNOX_STD_4K	*	*	*	*	
EXH_SFTP_SC03_XXHCNOX_CL_UL	*	*	*	*	
EXH_SFTP_SC03_XXHCNOX_STD_UL	*	*	*	*	
EXH_SFTP_SC03_CO_CL_4K	*	*	*	*	
EXH_SFTP_SC03_CO_STD_4K	*	*	*	*	
EXH_SFTP_SC03_CO_CL_UL	*	*	*	*	
EXH_SFTP_SC03_CO_STD_UL	*	*	*	*	
EXH_SFTP_COMP_XXHCNOX_CL_UL	*	A B C D E F	*	*	
EXH_SFTP_COMP_XXHCNOX_STD_UL	*	A B C D E F	*	*	
EXH_SFTP_COMP_NMOGNOX_BIN_UL	*	*	*	*	
EXH_SFTP_COMP_CO_CL_UL	*	A B C D E F	*	*	
EXH_SFTP_COMP_CO_STD_UL	*	A B C D E F	*	*	
EXH_SFTP_COMP_PM_CL_UL	*	(A B C D E F) ³	*	*	
EXH_SFTP_COMP_PM_STD_UL	*	(A B C D E F) ³	*	*	
MFR_SFTP_NOTE	**	**	**	**	
CERT_TEST_FUEL_OTHER	**	**	**	**	
EXH_FTP_XXHC_TYPE_OTHER	**	**	**	**	
EXH_50F_XXHC_CL_4K	(A D E) ⁵	*	(A D E) ⁵	(A D E) ⁵	
EXH_50F_XXHC_STD_4K	(A D E) ⁵	*	(A D E) ⁵	(A D E) ⁵	

CSI 2A Field Requirements: MDV					Legend
Field Name	LEV II	LEV III	EPA BIN 2-4	EPA BIN 5-8	
EXH_FTP_XXHC_CL_50K	*	*	*	A B C D E F	¹ LPG vehicle certifying to LEV, ULEV only ² CNG vehicle certifying to LEV, ULEV only ³ Starting MY 2017 ⁴ Primary (non-gasoline) fuel only ⁵ Selected for 50F test ⁶ Fields for vehicle equipped with fuel fired heater (FFH) ⁷ LEV II vehicle certifying to NMOG+NOx standards * Not applicable ** If applicable
EXH_FTP_XXHC_STD_50K	*	*	*	A B C D E F	
EXH_FTP_XXHC_CL_UL	A B C D E F	*	A B C D E F	A B C D E F	
EXH_FTP_XXHC_STD_UL	A B C D E F	*	A B C D E F	A B C D E F	
EXH_50F_NOX_CL_4K	(A D E) ⁵	*	(A D E) ⁵	(A D E) ⁵	
EXH_50F_NOX_STD_4K	(A D E) ⁵	*	(A D E) ⁵	(A D E) ⁵	
EXH_FTP_NOX_CL_50K	*	*	*	A B C D E F	
EXH_FTP_NOX_STD_50K	*	*	*	A B C D E F	
EXH_FTP_NOX_CL_UL	A B C D E F	*	A B C D E F	A B C D E F	
EXH_FTP_NOX_STD_UL	A B C D E F	*	A B C D E F	A B C D E F	
EXH_50F_NMOG_NOX_CL_4K	(A B C D E F) ⁷	(A D E) ⁵	*	*	
EXH_50F_NMOG_NOX_STD_4K	(A B C D E F) ⁷	(A D E) ⁵	*	*	
EXH_FTP_NMOG_NOX_CL_UL	(A B C D E F) ⁷	A B C D E F	*	*	
EXH_FTP_NMOG_NOX_STD_UL	(A B C D E F) ⁷	A B C D E F	*	*	
EXH_50F_CO_CL_4K	(A D E) ⁵	(A D E) ⁵	(A D E) ⁵	(A D E) ⁵	
EXH_50F_CO_STD_4K	(A D E) ⁵	(A D E) ⁵	(A D E) ⁵	(A D E) ⁵	
EXH_FTP_CO_CL_50K	*	*	*	A B C D E F	
EXH_FTP_CO_STD_50K	*	*	*	A B C D E F	
EXH_FTP_CO_CL_UL	A B C D E F	A B C D E F	A B C D E F	A B C D E F	
EXH_FTP_CO_STD_UL	A B C D E F	A B C D E F	A B C D E F	A B C D E F	
EXH_50F_HCHO_CL_4K	(A D E) ⁵	(A D E) ⁵	(A D E) ⁵	(A D E) ⁵	
EXH_50F_HCHO_STD_4K	(A D E) ⁵	(A D E) ⁵	(A D E) ⁵	(A D E) ⁵	
EXH_FTP_HCHO_CL_50K	*	*	*	D ⁴	
EXH_FTP_HCHO_STD_50K	*	*	*	A B C D E F	
EXH_FTP_HCHO_CL_UL	D ⁴	D ⁴	D ⁴	D ⁴	
EXH_FTP_HCHO_STD_UL	A B C D E F	A B C D E F	A B C D E F	A B C D E F	
EXH_FTP_PM_CL_50K	*	*	*	B F	
EXH_FTP_PM_STD_50K	*	*	*	A B C D E F	
EXH_FTP_PM_CL_UL	B F	B F	B F	B F	
EXH_FTP_PM_STD_UL	A B C D E F	A B C D E F	A B C D E F	A B C D E F	

CSI 2A Field Requirements: MDV					Legend
Field Name	LEV II	LEV III	EPA BIN 2-4	EPA BIN 5-8	
EXH_FTP_HWYNOX_CL_50K	*	*	*	*	¹ LPG vehicle certifying to LEV, ULEV only ² CNG vehicle certifying to LEV, ULEV only ³ Starting MY 2017 ⁴ Primary (non-gasoline) fuel only ⁵ Selected for 50F test ⁶ Fields for vehicle equipped with fuel fired heater (FFH) ⁷ LEV II vehicle certifying to NMOG+NOx standards * Not applicable ** If applicable
EXH_FTP_HWYNOX_STD_50K	*	*	*	*	
EXH_FTP_HWYNOX_CL_UL	A B C D E F	*	*	*	
EXH_FTP_HWYNOX_STD_UL	A B C D E F	*	*	*	
EXH_FTP_HWY_NMOG_NOX_CL_UL	(A B C D E F) ⁷	A B C D E F	*	*	
EXH_FTP_HWY_NMOG_NOX_STD_UL	(A B C D E F) ⁷	A B C D E F	*	*	
EXH_FTP_COLD_CO_CL_50K	*	*	*	*	
EXH_FTP_COLD_CO_STD_50K	*	*	*	*	
DOR_FTP_NMOG_CREDIT	**	**	**	**	
NON_PZEV_ZERO_EVAP_NMOG_CDT	**	**	**	**	
HCHO_NMHC_RATIO	**	**	**	**	
RAF_NMOG	A ¹ C ² E ^{1,2} F ²	**	**	**	
RAF_METHANE	C ² E ² F ²	**	**	**	
EXTD_WARRANTY_NMOGNOX_CDT	*	**	*	*	