NEW California Air Resources Board Fleet Regulations – What Fleets Need to Know

Advanced Clean Truck Regulation – Mandatory Fleet Data Report (Due by April 1st 2021)

Proposed Advanced Clean Fleet Regulation

February 24, 2021

Brought to You By a Collaboration of the Following Associations:

NAFA Fleet Management Association NorCal-Northern Nevada Chapter

NAFA® Fleet Management Association Pacific Southwest Chapter

MEMA Municipal Equipment Maintenance Association

EAST BAY CLEAN CITIES COALITION

Clean Cities Sacramento Clean Cities Coalition

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SAN DIEGO REGIONAL CLEAN CITIES COALITION

What is the Advanced Clean Truck (ACT) Regulation?

- The Advance Clean Trucks (ACT) regulation was approved by the CARB Board of Directors on 6/25/2020

- The regulation is one piece of a set of regulations to accelerate the transition of private and government fleets to zero-emission medium-and heavy-duty vehicles from Class 2b to Class 8 (8,501 to 33,000+ lbs. Gross Vehicle Weight Rating trucks) by 2040

- The regulation has two components:
    1. A manufacturer sales requirement
    2. A fleet data reporting requirement

Manufacturer Sales Requirement

- Manufacturers who certify Class 2b-8 chassis or complete vehicles with combustion engines are required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035

- By 2035, zero-emission truck/chassis sales would need to be 55% of Class 2b - 3 truck sales, 75% of Class 4 – 8 straight truck sales, and 40% of truck tractor sales

- Zero Emissions Vehicle technology is currently comprised of vehicles operating with an all-electric or hydrogen/electric fuel cell powertrain

- Near Zero Emission Vehicles (ZEVs) are referenced in the regulation and are defined as on-road plug-in electric hybrid vehicles (PHEVs) that achieve an all-electric range in operation with no defined minimum all electric mileage range at this time (example: Chevrolet Volt and Toyota Prius PHEVs)

Fleet Reporting Requirement – Who is to Report

- Private and Government Fleets that are defined as a "Large Entity" are required to submit fleet related data to CARB through the use of a Microsoft Excel spreadsheet by April 1st 2021.

- Large Entity organizations are defined as:
  - Private companies with revenues greater than $50 million in the U.S. for the 2019 tax year, including revenues from all subsidiaries, subdivisions, or branches, and had one or more vehicles under common ownership or control that were operated in California in 2019; or vehicles under common ownership or control that were operated in California in 2019;

  OR

  - Any fleet owner in the 2019 calendar year that had 50 or more vehicles under common ownership or control

  OR

Fleet Reporting Requirement – Who is to Report Cont.

- Any broker or entity that dispatched 50 or more vehicles into or throughout California, in the 2019 calendar year;

OR

- Any California government agency including all state and local municipalities that had **one or more** vehicles that were operated in California in 2019;

OR

- Any federal government agency that had one or more vehicles that were operated in California in 2019

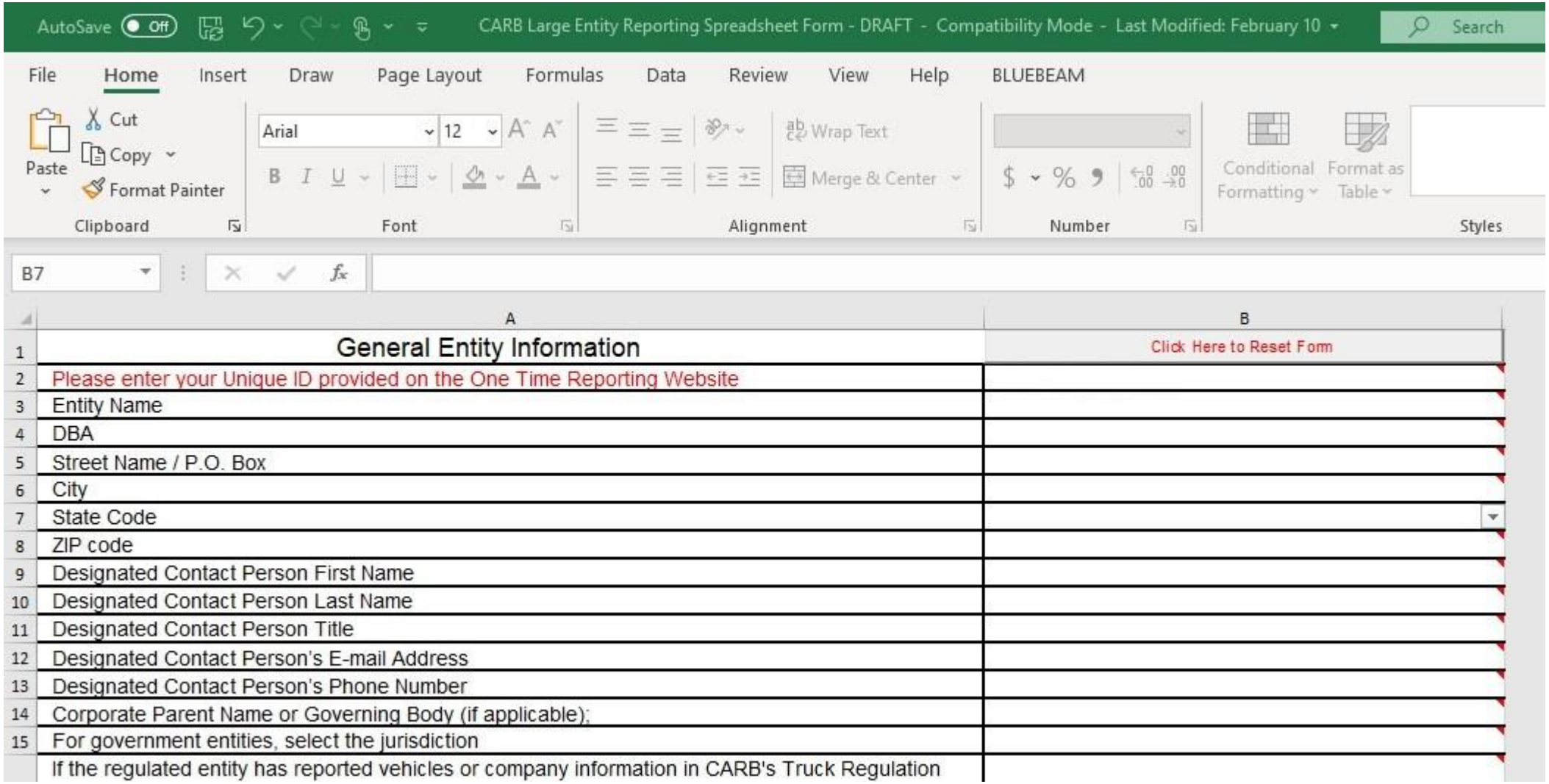
- K-12 school bus fleets, transit vehicles, military tactical vehicles, vehicles awaiting sale, nor emergency vehicles as defined in section 2012(c) **do not** have to report data

- Emergency vehicles are defined in the California Vehicle Code Section 165 (https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=VEH&sectionNum=165)

What Information and Data is to be Reported by April 1st

- Company or government agency name, contact information and regulatory information
  - CARB "TRUCRS ID" for private fleets
  - American Industry Classification System (NAICS) code https://www.naics.com/search/
  - Motor Carrier identification number
  - US Department of Transportation number
  - California Carrier identification number, if applicable
  - California Public Utilities Commission transportation charter permit number, if applicable
- Private Company 2019 Annual Revenues Total
- Sustainability Plan Information, if applicable
- Contracted Subhaulers and Their Vehicle Count, if applicable
- Facility Information for Each Facility that Vehicles Operate Out of
  - Name, address and contact person information
  - Facility type
  - Is the facility leased or owned
  - Is their fueling infrastructure onsite

CARB Large Entity Reporting Spreadsheet Page Example



	A	B
1	General Entity Information	Click Here to Reset Form
2	Please enter your Unique ID provided on the One Time Reporting Website	
3	Entity Name	
4	DBA	
5	Street Name / P.O. Box	
6	City	
7	State Code	
8	ZIP code	
9	Designated Contact Person First Name	
10	Designated Contact Person Last Name	
11	Designated Contact Person Title	
12	Designated Contact Person's E-mail Address	
13	Designated Contact Person's Phone Number	
14	Corporate Parent Name or Governing Body (if applicable);	
15	For government entities, select the jurisdiction	
	If the regulated entity has reported vehicles or company information in CARB's Truck Regulation	

What Information and Data is to be Reported Cont.

- Vehicle Information
  - Vehicle Body Types
    - Box Dry Van
    - Dump
    - Flatbed
    - Garbage
    - Other
    - Pick Up Bed
    - Sweeper
    - Service Body
    - Tractor
  - Fuel Type
    - Gasoline
    - Diesel
    - Natural Gas
    - Hydrogen
    - Electric
    - Other
  - Weight Class BINs
    - Class 2b – 3 (8,501 – 14,000 lbs. GVWR)
    - Class 4 – 6 (14,001 – 26,000 lbs. GVWR)
    - Class 7 – 8 (Over 26,000 lbs. GVWR)
  - Vehicle Group Quantities
  - Percentage of Vehicle Group that operates up to and average of 100, 150, 200, 300 miles per day
  - Highest Approximate Average Percentage of a Vehicle Group that was dispatched at the same time over the last 3 years on behalf of local, state, or federal government to support and emergency operation

What Information and Data is to be Reported Cont.

- Vehicle Information (percentage choices are in 10% increments)
  - Percentage of Vehicles that have a predictable usage pattern
  - Percentage of Vehicles that have a primary means of fueling at Home Base Percentage of Vehicles that typically returns to the facility daily
  - Does the Vehicle Group stay within approximately 50 miles of the indicated facility?
  - Percentage of Vehicles that tow a trailer more than 100 miles per day
  - Percentage of Vehicles that commonly operates at its weight limit
  - Percentage of Vehicles not registered in California
  - Percentage of Vehicles that regularly parked at the facility more than 8 hours per day
  - Percentage of Vehicles equipped with GPS or mileage tracking system
  - Percentage of Vehicles equipped with all-wheel drive
  - Percentage of Vehicles that are not being operated or are used for back-up vehicles
  - Average Annual Mileage for a typical vehicle in the vehicle group
  - Approximately How Long vehicles are typically kept after acquisition in years
  - Identify if Vehicles in the Vehicle Group are dispatched under a brokerage authority

What Information and Data is to be Reported Cont.

- Vehicle Information Continued
  - The Analysis Start Date (the beginning of the date range you used for the data submitted)
  - The Analysis End Date (the end of the date range you used for the data submitted)
  - Comments

CARB Large Entity Reporting Spreadsheet Page Example

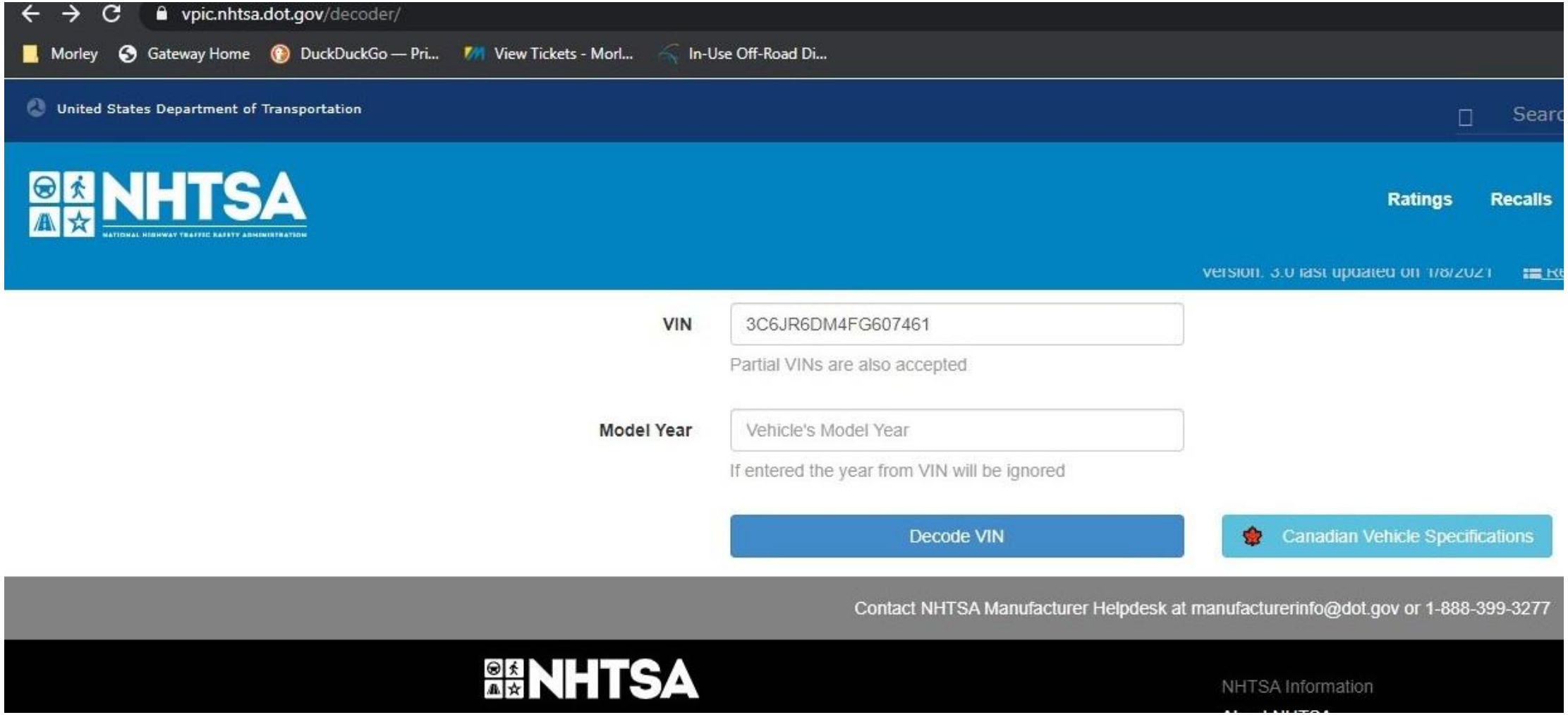
Please enter information about the various body types that are in your facilities. The facility names are based on the facility names you established in the "Facility" tab. Please click "Add Facilty Entry" to enter. To add more vehicle body type rows to your facility, please click the "Add Vehicle Body Type Entry".

Click here to clear First Home Base Entry

		Vehicle Body Type	Fuel Type	Weight Class Bin (Gross Vehicle Weight Rating Range)	Number of Vehicles	Percentage of Vehicle Group (Total should be around 100% Cells will highlight red if the total is over)				
						Operate up to 100 average miles/day (%)	Operate up to 150 average mile/day (%)	Operate up to 200 average mile/day (%)	Operate up to 300 average miles/day (%)	Operate more than 300 average miles/day(%)
Home Base	Montebello Yard	Concrete Pump	Diesel	Class 7-8 (Over 26,000lbs)	5					
		Water	Diesel	Class 7-8 (Over 26,000lbs)	1					
		Van-Cargo	Diesel	Class 2B-3 (8,501 - 14,000lbs)	1					
		Service Body	Gasoline	Class 2B-3 (8,501 - 14,000lbs)	1					
		Flatbed Or Stake Bed	Diesel	Class 4-6 (14,001 - 26,000lbs)	2					
		Flatbed Or Stake Bed	Diesel	Class 2B-3 (8,501 - 14,000lbs)	1					
		Tractor Day Cab	Diesel	Class 7-8 (Over 26,000lbs)	1					
		Service Body	Diesel	Class 4-6 (14,001 - 26,000lbs)	1					
		Pickup Bed	Gasoline	Class 2B-3 (8,501 - 14,000lbs)	3					
		Flatbed Or Stake Bed	Diesel	Class 7-8 (Over 26,000lbs)	1					
		Flatbed Or Stake Bed	Gasoline	Class 4-6 (14,001 - 26,000lbs)	1					
		Pickup Bed	Diesel	Class 2B-3 (8,501 - 14,000lbs)	1					

Help In Determining Weight Class BIN

http://vpic.nhtsa.dot.gov/decoder/



Help In Determining Weight Class BIN Example

2015 RAM - TRUCK

Export to PDF

✔ **Error Text:** 0 - VIN decoded clean. Check Digit (9th position) is correct

Manufacturer: CHRYSLER DE MEXICO TOLUCA

DBAs:

Vehicle Type: TRUCK

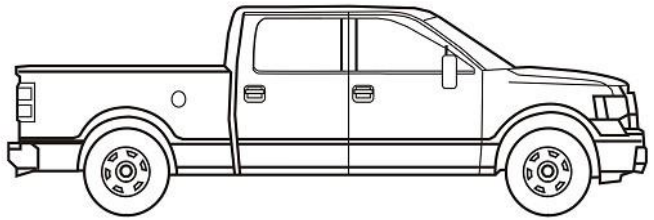
Model Year: 2015

Make: RAM

Model: 1500

Body Class: Pickup

Show All Vehicle Details



Other Information

Information provided below is based on the details provided by the manufacturer of this vehicle to NHTSA in the part 565 submittal

Series:

Gross Vehicle Weight Rating: Class 2E: 6,001 - 7,000 lb (2,722 - 3,175 kg)

Engine Displacement (L): 3.0

Drive Type: 4x2

Primary Fuel Type: Diesel

Secondary Fuel Type:

Engine Brake (HP):

Transmission Speed:

Trim: ST

Axles:

Axle Configuration:

Cylinders: 6

Engine Model:

Electrification Level:

Engine Manufacturer:

Transmission Style:

Help In Determining Weight Class BIN Example

VIN: 1GDJ6H1E21J513690

Partial VINs are also accepted

Model Year: Vehicle's Model Year

If entered the year from VIN will be ignored

Decode VIN | Canadian Vehicle Specifications | Check Digit Calculator

2001 GMC - INCOMPLETE VEHICLE

Export to PDF

✔ **Error Text:** 0 - VIN decoded clean. Check Digit (9th position) is correct

Manufacturer: GENERAL MOTORS LLC

DBAs:

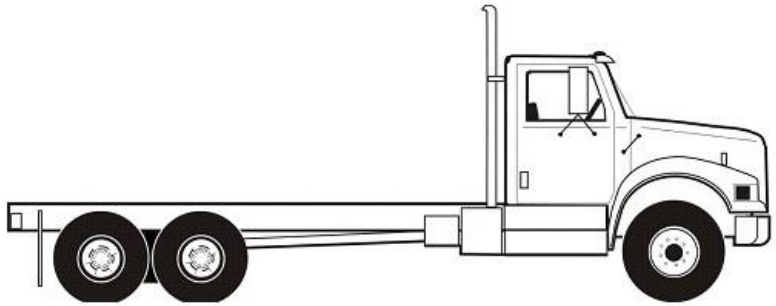
Vehicle Type: INCOMPLETE VEHICLE

Model Year: 2001

Make: GMC

Model: C6

Body Class: Incomplete - Chassis Cab (Number of Cab Unknown)



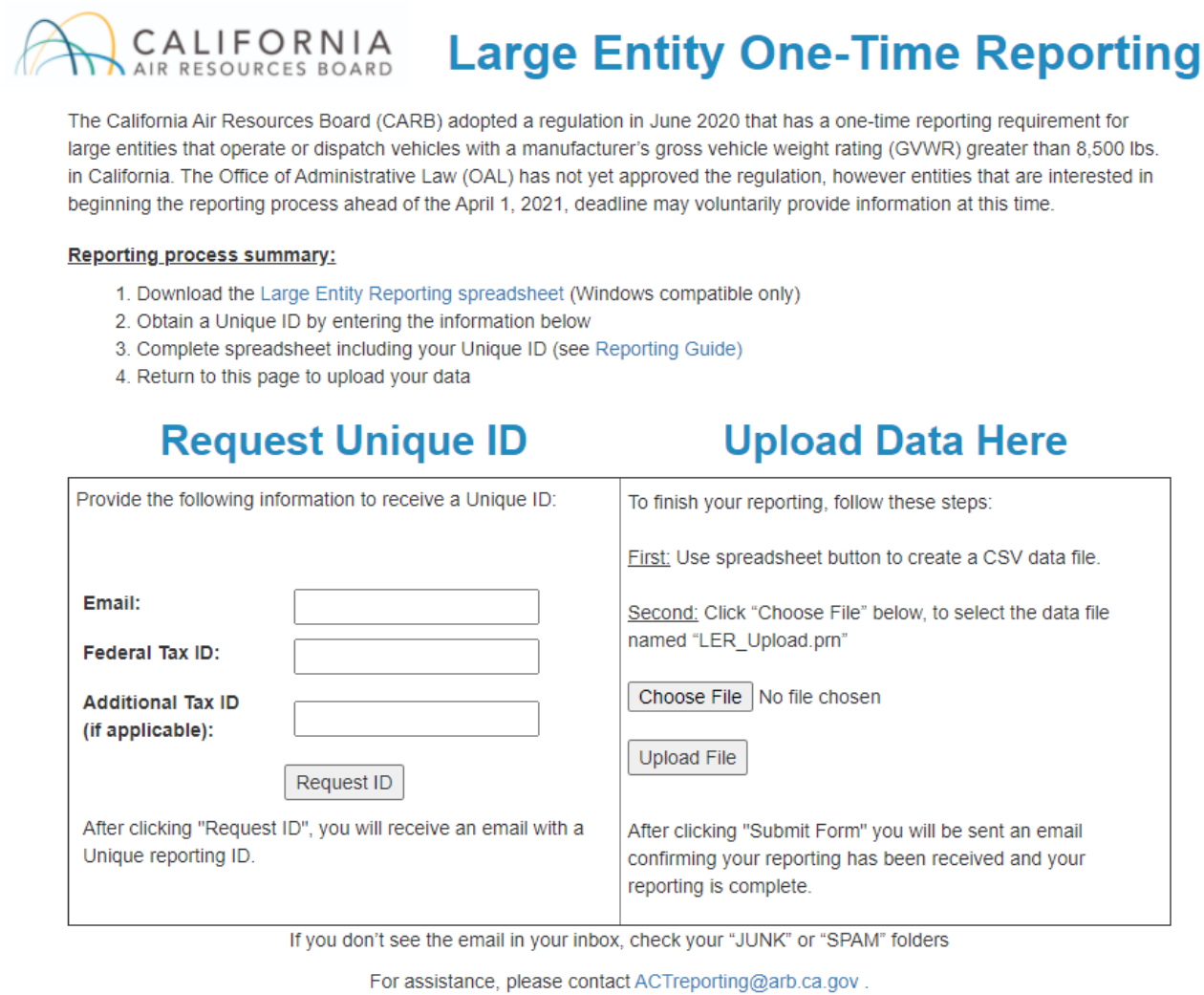
Show All Vehicle Details

Large Entity Reporting - CARB Website and Information

- Reporting Requirements Webpage
  - https://ww2.arb.ca.gov/our-work/programs/advanced-clean-trucks/large-entity-reporting
- Large Entity One-Time Reporting Guide
  - https://ww2.arb.ca.gov/sites/default/files/2021-01/LER-Guide.pdf
- Large Entity Reporting Fact Sheet
  - https://ww2.arb.ca.gov/sites/default/files/2021-01/LER-Fact-Sheet.pdf

Large Entity Reporting – Process to Request Unique ID

- Request Unique ID Webpage
  - https://ssl.arb.ca.gov/ler/LER_Upload.php



CALIFORNIA AIR RESOURCES BOARD

Large Entity One-Time Reporting

The California Air Resources Board (CARB) adopted a regulation in June 2020 that has a one-time reporting requirement for large entities that operate or dispatch vehicles with a manufacturer's gross vehicle weight rating (GVWR) greater than 8,500 lbs. in California. The Office of Administrative Law (OAL) has not yet approved the regulation, however entities that are interested in beginning the reporting process ahead of the April 1, 2021, deadline may voluntarily provide information at this time.

Reporting process summary:

1. Download the Large Entity Reporting spreadsheet (Windows compatible only)
2. Obtain a Unique ID by entering the information below
3. Complete spreadsheet including your Unique ID (see Reporting Guide)
4. Return to this page to upload your data

Request Unique ID

Provide the following information to receive a Unique ID:

Email:

Federal Tax ID:

Additional Tax ID (if applicable):

Request ID

After clicking "Request ID", you will receive an email with a Unique reporting ID.

Upload Data Here

To finish your reporting, follow these steps:

First: Use spreadsheet button to create a CSV data file.

Second: Click "Choose File" below, to select the data file named "LER_Upload.prn"

Choose File No file chosen

Upload File

After clicking "Submit Form" you will be sent an email confirming your reporting has been received and your reporting is complete.

If you don't see the email in your inbox, check your "JUNK" or "SPAM" folders

For assistance, please contact ACTreporting@arb.ca.gov .

Additional Large Entity Reporting Requirements

- Records used for the data submission **must be kept until 12/31/2024** and be available for CARB staff to review upon request. The records to be retained include:
  - Mileage records used in the data submission
  - Vehicle registration
  - Other records or information that was used to determine the submission responses
- Fleets **must respond** to request for clarification of reported information **within 14 days** of receiving a request from the CARB Executive Officer

Office of Administrative Law (OAL) Process

- The current CARB Large Entity One-Time Reporting Guide, Large Entity Reporting Fact Sheet and website information states that the "Office of Administrative Law (OAL) has not yet approved the regulation. As a result any information provided at this time is voluntary."

- The latest information about the approval process is available at the following website link:
  - https://ww2.arb.ca.gov/rulemaking/2019/advancedcleantrucks

What is the Advanced Clean Fleet (ACF) Regulation?

- The Advance Clean Fleet (ACF) proposal will be the second compliment regulation to support the ACT regulation by requiring private and government fleets to purchase ZEV trucks beginning as soon as 2024

- The Large Entity Reporting data submitted to CARB staff will be used to determine the fleet ZEV purchase requirements that will lead to "the goal of achieving a zero-emission truck and bus California fleet by 2045 everywhere feasible and significantly earlier for certain market segments such as last mile delivery and drayage applications."

- CARB staff will be submitting their recommend compliance strategy proposal that matches the manufacturer sales requirement for fleets to CARB Board for approval by the end of 2021. CARB staff industry workshops will be held before then to gather input from the fleet management industry on compliance strategies

Potential ACF Regulation Compliance Strategies

- Requiring a ZEV percentage of an overall fleet size that begins at 5% in 2024 or 2025 and increases over time until 100% is reached by 2035
- Requiring vehicle purchases to be a certain percentage such as 50% from 2024 to 2026 that increases to 100% at a future date such as 2027
- Allowing Plug-In Hybrid Electric Vehicles (PHEVs) to be purchased for specific applications where ZEVs are not operationally suitable

Upcoming ACF Public Workshops

- The California Air Resources Board (CARB) invites you to participate in a workshop for the proposed Advanced Clean Fleets regulation. This regulation is focused on developing strategies to ensure that the cleanest vehicles are deployed by government, business, and other entities in California to meet their transportation needs. This effort is part of a comprehensive strategy to achieve a zero-emission vehicle (ZEV) truck and bus fleet by 2045 everywhere feasible and significantly earlier for certain market segments such as last mile delivery, public fleets, and drayage applications.

- This workshop will be presented twice using two identical GoToWebinar sessions on March 2nd and the 4th. The identical sessions are being offered for stakeholders who are unable to attend either session. **You must newly register to attend the March 2, 2021 evening meeting.**

- To register go to https://ww2.arb.ca.gov/resources/documents/mailout-msc-21-2103

Additional ACF Information

- CARB Advance Clean Fleets website link:
  - https://ww2.arb.ca.gov/our-work/programs/advanced-clean-fleets/about
- Primary Point of Contact:
  - Advanced Clean Fleets
  - Email: zevfleet@arb.ca.gov
  - Phone: (866) 634-3735

Fleet Strategic Planning for Compliance

There are a number of proactive tasks a fleet can complete prior to ACF regulations taking effect in order to develop a set of alternate compliance strategies that will meet their organization's operational needs and goals

- Data and Information Collection:
  - An assessment of public EV charging station and hydrogen fueling infrastructure available within a fleet's operational area including the following information:
    - Reliability
    - Capacities
    - Daily availability for use
    - Cost of fuel
    - Sites nearest take home vehicle overnight locations

Fleet Strategic Planning for Compliance Cont.

- An assessment of facility electrical infrastructure capabilities to support EV charging stations including the following information:

  - Available amperage and voltage
  - Location of nearest electrical panels or vaults to vehicle parking locations
  - Available real estate space near parking spaces for the installation of Electrical Vehicle Supply Equipment (EVSE) to recharge vehicles
  - Will additional electrical service drops be necessary to meet the overall electricity needs
  - Limitations of electrical utility infrastructure to support a greater demand to recharge vehicles
  - The likelihood of facility electricity being affected by Public Safety Power Shut-Down (PSPS) events
  - The availability of backup generator power capacity to recharge vehicles
  - Real estate space available for the installation electrical storage systems to recharge vehicles in the event of grid failure or PSPS event
  - Utility billing demand charge thresholds

Fleet Strategic Planning for Compliance Cont.

- Gather information on electric utility plans to meet the demand for electricity as vehicle fuel
- Evaluate the acquisition cost delta between ZEVs currently on the market and that of purchasing gasoline or diesel powered equivalents
    - The data collected will help inform the conversation on grant funding needed to minimize the cost delta for fleets
- Creation of preliminary cost estimates for the acquisition of ZEVs, supporting refueling infrastructure, back-up power upgrades, electricity demand charges, the purchase of additional vehicles to maintain 24/7 emergency operations, maintenance facility upgrades or new facility needs, and training of fleet staff to maintain and repair ZEVs

Fleet ZEV Applications Analysis

- Currently vocational trucks are not the focus of truck manufacturers to meet the initial ACT regulation manufacturing and sales requirements beginning in 2024.

- Vocational trucks have varying duty cycles and often incorporate additional equipment and components that are powered by a hydraulic pump driven off an engine power take off (PTO) unit in specialized bodies mounted on the truck chassis. It is difficult for truck manufacturers to produce a standardized battery capacity and chassis layout to meet a wide variety of different fleet needs and operational characteristics.

- Manufacturers need specific duty cycle and load data such as vehicle miles traveled, PTO run times, vehicle payloads, engine idle time hours, and average operational down time for battery recharge rate calculations as a few examples. The data needed applies to all-electric, plug-in hybrid electric and hydrogen fuel cell vehicle powertrains. The installation of telematics or data logging devices is one solution to provide manufacturers with the necessary data to design a powertrain system that will meet the needs of a fleet.

Fleet ZEV Applications Analysis Cont.

- Beyond vehicle operational duty cycle data, the following information will also need to be collected to develop long term compliance strategies and implementation plans for the use of one or more of the currently available ZEV powertrain technologies once the ZEV Fleet Rule purchase requirements are known.

- Vehicle information and data
  - Average number of trips taken
  - Average number of miles drive per trip
  - Average number of miles driven per trip
  - Average fuel consumption per day
  - Percentage of time idling
  - Average speeds traveled
  - Average take home vehicle commute miles driven to and from job sites/facilities and employees' homes

Fleet ZEV Applications Analysis Cont.

- Average distances vehicles travel between refueling stops
- Average distances vehicles travel between fueling stations and operational areas
- The least and most used travel routes taken by applicable vehicles
- Measurements of the minimum space needed on a vehicle chassis for current equipment and auxiliary systems
- Verifying if a higher GVWR chassis and/or longer wheelbase truck designs presents an operational challenge for specific operational applications
- Identifying what is the maximum daily amount of out-of-service time allowed to support recharging all-electric and plug-in hybrid electric vehicles

Fleet ZEV Applications Analysis Cont.

- Trailer related information and data
  - Number of trips taken by vehicles towing an empty or unloaded trailer
  - Number of trips taken by vehicles towing a loaded trailer
  - Vehicle engine hours spent towing and empty or unloaded trailer
  - Vehicle engine hours while towing a loaded trailer
  - Average weight loaded onto a trailer and towed
  - Average distances traveled when towing an unloaded trailer
  - Average distances traveled when towing a loaded trailer

Fleet ZEV Applications Analysis Cont.

- Fueling infrastructure information and data
  - The classes and quantities of vehicles refueling at individual fuel station sites
  - The facilities that could support the installation of hydrogen fueling
    - Could the facility support a fueling station that compresses hydrogen to 70 MPa (~10,000 psi)
    - Would local permitting and fire agencies support a hydrogen fuel station installation
  - The facilities (including fleet maintenance) that could support the installation of an array of A/C and DC EV charging stations
    - The number of stations that could be installed
    - Would the facility support the installation of DC Fast Charging stations to recharge vehicles that cannot gain enough range of operation from a 6 to 8 hour charge time overnight
  - Location and number of public or privately accessible existing hydrogen fueling stations that vehicles could refuel at

Fleet ZEV Applications Analysis Cont.

- General areas that a public or private hydrogen fueling station would need to be located at to support fleet vehicle refueling
- Availability of mobile hydrogen fueling infrastructure
  - How many vehicles can a single tanker truck refuel
  - What MPa can a tanker truck refuel a vehicle at
  - What jurisdictions will not allow a hydrogen tanker truck to enter its roadways

- Fleet maintenance facility information and data
  - Can the facility be remodeled to support maintenance and repair work on hydrogen fuel cell powered vehicles
  - Would another facility be necessary to support maintenance and repair work on hydrogen fuel cell powered vehicles
  - Would local permitting and fire agencies support hydrogen fuel cell powered vehicles to be located in or around a fleet maintenance facility.

Fleet ZEV Applications Analysis Cont.

- Fleet staff training information
  - What training programs are currently available to train staff in the maintenance and repair procedures for medium and heavy duty all-electric, plug-in hybrid electric and hydrogen fuel cell vehicles
  - How long would the training program be to achieve a minimum level of expertise to work on these vehicles
  - Is the training available locally or is there long distance travel required
  - What is the lead time needed in updating or developing new job classifications
  - Do local emergency response personnel need to be trained to respond to vehicle or facility fuel related emergencies

Fleet ZEV Applications Analysis Cont.

- Vehicle information that would need to be collected
  - Measurement of the minimum space needed on a vehicle chassis for current equipment and auxiliary systems
  - Identifying work areas that only support short wheelbase vehicles
  - Identifying work areas that have a maximum weight capacity that may limit a heavier all-electric truck from driving through
  - Identifying minimum powertrain torque ratings to support operations
  - Identifying what is the maximum daily amount of out-of-service time to support recharging EV batteries

Questions?

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This presentation was brought to you by a collaboration of the following associations:

NAFA Fleet Management Association NorCal-Northern Nevada Chapter

NAFA® Fleet Management Association Pacific Southwest Chapter

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EAST BAY CLEAN CITIES COALITION

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