

EHS 0228: GEM Vehicle Use – Driver Orientation

Although GEM vehicles have some similarities to other vehicle(s) you operate, such as cars, there are also many differences. The core skills transfer, but the driving characteristics are very different as are the features and controls. Because of this it is important for a new operator to understand the rules for operating a GEM and have adequate practice to operate the vehicle safely.

This course is for new GEM operators and is intended to be provided by an experienced GEM operator determined by the GEM owner within a division or group, which may be the GEM custodian.

There are three sections in this orientation:

1. An overview of traffic regulations and tips
2. An in-person orientation (provided by an experienced operator)
3. A driver test (On-the-job training) (provided by custodian or an experienced operator)

After completing these sections, the new operator receives credit using the link at the end of this document.

1: Traffic and Safety Regulations

- All California driving rules apply when operating a GEM vehicle; the driver must have a valid state-issued driver's license. (NOTE: You can find the California Vehicle Code using Google Search on your computer).
- Driver should familiarize themselves with the owner's manual.
- The driver and passenger must wear seatbelts whenever the vehicle is in motion.
- Never use a communication device such as a 2-way radio or cell phone while driving.
- Always use the parking brake whenever the vehicle is parked.
- Never smoke in any LBNL vehicle.
- GEM vehicles must remain onsite, within the main LBNL property; do not drive to UC Berkeley or any other offsite location.

1A: Startup Tips

- Unplug the electrical cord properly and store the cord where it will be dry and undamaged.
- Don't plug/unplug the cord if your hands are wet because of the potential shock hazard.
- Check the battery charge level on your gauges.
- Perform a 360-degree walk-around of the vehicle and look for obvious problems (low tire inflation, etc.)
- Check the headlights, wiper and heater (as needed) to ensure they work before you travel.

1B: Driving Tips

- Driving an electric vehicle is **not** like driving your personal vehicle; take time to familiarize yourself with the feel of manual steering, and electric power, which is not as gradual as a typical passenger vehicle.
- Use the LOW drive setting for normal driving and the HIGH drive setting when going uphill. Driving in HIGH will drain the battery faster.

- When parking, always engage the parking brake and curb the wheel. This is especially important when parking on a hill.
- Be sure to use the appropriate drive setting: do not ride brakes.

1C: Care & Maintenance

- Never force the door handle or windows: unlatch the door handle with a gentle pull; unlatch the window by gently depressing the center tab.
- Never overload a GEM: the maximum carrying weight limit is indicated on a sticker on the ceiling above the driver's seat.
- Plug the vehicle into the charger after each use. Make sure the plug is fully seated.
- Note: Facilities Fleet coordinates a 90-day maintenance schedule. Details are logged on a sticker above the driver's seat.

1D: Reporting Vehicle or Charging Station Problems

- Report any problems (maintenance, malfunction, damage) to the vehicle custodian immediately. This includes any problems at the charging station (frayed or damaged cord, missing outlet covers, etc.)
- Email fleet@lbl.gov with details..
- Inform coworkers that the GEM is temporarily out of order and post a sign to communicate.
- The vehicle must be inspected and cleared by Facilities Fleet before use.
- If your vehicle breaks down park the vehicle in a safe place (if possible).
- Never repair or modify a GEM vehicle; contact Facilities Fleet if additional accessories are required.

2: GEM Vehicle Orientation

GEM Custodian / Trainer reviews the following with the new driver. This includes reviewing the GEM operator manual specific to the vehicle. New driver is encouraged to ask questions.

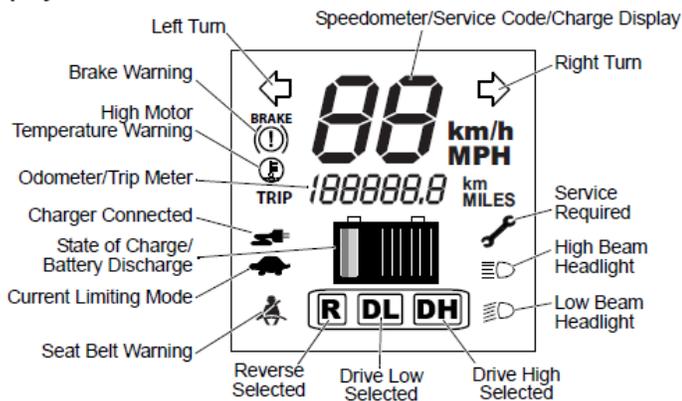
1. Explain proper use of the vehicle's key features (review operator manual):
(Details may differ depending on the GEM model. Adjust as appropriate for the particular model to be used.)
 - a. **Steering:** Of note: manual steering is more difficult than what you might be used to, and this vehicle has a wide turning circle
 - b. **Power switch:** WARNING! Never turn the key to the OFF position while the vehicle is in motion. This could lead to loss of speed control and loss of vehicle control, which could result in serious injury or death. Leaving the key in the ON position will discharge the batteries. Always turn the key to the OFF position when not operating.
 - c. **Driving modes:**
 - i. High: 0-25 mph
 - ii. Low: 0-15 mph
 - iii. Reverse: Warning alert will sound

- d. **Brakes:** The foot brake is the pedal on the left and functions similarly to a regular brake pedal. The hand – or parking – brake is located to the right of the driver’s seat. Always apply the hand brake whenever the vehicle is parked.
 - e. **Turn signal:** Must manually return to center position; alert will sound in 45 seconds.
 - f. **Parking brake:** Always use when parked
 - g. **Headlights and tail lights:** Single switch turns both on and off
 - h. **Windshield wiper:** Push level toward console to activate
 - i. **Fastening seat belts:** Make sure latch plate is pushed completely into buckle - click should be heard.
 - j. **Opening/closing windows:** Use care; close at night
 - k. **Charging the GEM:** Always maintain full charge
2. Explain safety limits related to operating vehicle:
- a. Normal driving rules apply (stop signs, speed limits, etc.)
 - b. How to park on inclines
 - i. To curb wheels when parking on hill
 - ii. To always use parking brake.
 - iii. Use wheel blocks if available on steep inclines.
 - c. GEMs introduce visibility concerns and blind spots (rearview and side mirrors) when driving and backing up.
 - d. Maximum weight limit
 - e. Handling and vehicle response characteristics (turning, accelerating, braking, and backing up).
 - f. Reading and responding to meters and indicator lights – see figure from manual

FEATURES AND CONTROLS

Console

LCD Display Indicators



3: GEM Driving OJT and skills evaluation

GEM Custodian / Trainer accompanies the new driver on a 5-to-10 minute drive to ensure new driver is comfortable at driving the vehicle.

Drive should include putting to practice all of the items explained in section 2 vehicle orientation to the extent possible.

EHS 0228: GEM Training Course Credit

Options for Getting Course Credit:

1. For CREDIT:
 - a. Participants who completed the training can use the following link to login for course credit.
<https://coursebuilder.lbl.gov/course/exam.aspx?cid=264&sid=3124>
 - b. Log in using LDAP and sign electronic acknowledgement

| Employee # | Signature | Date | Name of Trainer |
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