INSTALLER AND INSPECTOR QUICK-REFERENCE: 2025-NRCA-PRC-03-F

Parking Garage Ventilation Systems

Purpose and Scope of the Test

Verify that mechanical ventilation systems function properly and CO levels are maintained in a healthy range.

Test trigger

Newly Constructed and Additions/Alterations: All newly installed parking garage ventilation systems of 10,000 cubic feet per minute (cfm) with carbon monoxide control must be tested.

Exceptions: Garages, or portions of a garage, where more than 20% of the vehicles expected to be stored have non-gasoline combustion engines, and additions or alterations to existing garages where less than 10,000 cfm of new exhaust capacity are being added are not required to be tested.

Relevant Energy Code References and Required Compliance Documents

Title 24, Part 6 of the California Building Code, Building Energy Efficiency Standards (Energy Code) sections 120.6(c), 160.2(d); and NA7.12; NRCC-PRC-E Table H; NRCI-PRC-E, Enclosed Parking Garage Exhaust Controls Table.

Who Can Perform the Test

There are no restrictions.

Note that the contractor can complete the test, and ATTCP certification is not required for this test at this time.

Required Tools

The instrumentation needed to perform the test may include, but is not limited to:

- Space differential pressure sensor.
- CO span gas with a concentration of 30 ppm (+/- 2 percent).

Estimated Time to Complete Test

- Construction inspection: 1 hour.
- Functional testing: 2 hours.

Potential Issues and Cautions

Coordinate test procedures with the facility supervisor since they may be needed to assist with the manipulation of the control system.

INSTALLER AND INSPECTOR QUICK-REFERENCE: 2025-NRCA-PRC-03-F

Parking Garage Ventilation Systems

Inspection Enforcement

- Verify that the carbon monoxide control sensor is factory-calibrated per §120.6(c).
- Verify that the sensor is located in the highest expected concentration location in its zone per §120.6(c).
- Verify that the control setpoint is at or below the CO concentration permitted by §120.6(c).

Acceptance Criteria

During a time with CO concentration well below setpoint:

- Verify that all sensors are active and reading a setpoint of < 25 ppm.
- Verify that exhaust fans are running at minimum speed.
- Verify that exhaust fans are drawing 30% or less of design wattage.

Applied required CO span gas testing:

- Verify that all sensors active and reading a setpoint of between 25 and 35 ppm.
- Verify that exhaust fans are running at maximum speed while gas is applied.
- Verify that the exhaust fans go back to minimum speed when span gas is removed.

Override testing:

- Temporarily override the programmed sensor calibration/replacement; verify that fans ramp to full speed and an alarm is received by the facility operators.
- Temporarily place system in unoccupied mode and simulate occupancy by altering occupancy sensor settings; verify that fans ramp to full speed and an alarm is received by the facility operators.
- Temporarily override the programmed occupied sensor proximity zone alarm differential; verify that fans ramp to full speed and an alarm is received by the facility operators.