

## Division 7 Innovation Improves CNG Fueling Safety

By ERIC RAPP

(May 8, 2002) Service attendants, mechanics, and management at West Hollywood Division 7 had a problem – a potentially dangerous problem.

With a bit of clever thinking, they solved the problem, and now bus fueling at Division 7 is safer than ever.

### The problem

Buses that use CNG fuel are equipped with a magnetic switch that should prevent the engine from being started when the fuel door is opened.

Unfortunately, says Ron Whitney, Maintenance Manager at the division, "It doesn't always work. The engine shouldn't start, but sometimes it does."

If the disabling switch malfunctions, the bus will start even with the fuel door open. A service attendant, thinking the fuel door was closed, might pull away from the fueling station with the hose still attached.

Unlike gasoline and diesel fueling hoses, CNG hoses use a nozzle that locks securely onto the fueling tube and is not designed to break away under pressure.

Accidents have happened. Buses have pulled away while still hooked up to the fueling hose, causing severe equipment damage and posing a safety threat.

### The solution

Whitney and Facilities Systems Technician Don Williams came up with an innovative solution to this problem.

"I have to give most of the credit to Don," says Whitney. "He was the one who designed the system."

The idea is simple but ingenious. Every CNG fuel station has a holster that the nozzle slips into when not in use. At the bottom of each holster, Williams and Whitney installed a pressure switch.

The switch is linked to a two-light traffic signal at the front of the fueling lane. When the nozzle is not in the holster,



▲ Division 7 Maintenance Manager Ron Whitney sets a CNG fueling nozzle into a holster fitted with a pressure switch. Removing the nozzle triggers a red stoplight; replacing it activates a green go-light.



▲ Service Attendant Victor Guerrero fuels a CNG bus – a safer procedure with the new fueling alert system developed by the Division 7 maintenance staff.



▲ The red stoplight, activated when the CNG nozzle was lifted off the pressure switch, indicates fueling is in process and the bus must not be moved.

the light is red. Only when the hose and nozzle are disconnected from the bus and replaced securely in the holster will the light turn green.

The system is "one more safety feature," says Whitney. A red light lets the service attendant know that something is wrong, even if the bus does start.

The system has been online for three months and is working well. According to Whitney, there have been no accidents since the system was installed.

"I was just concerned about the people I work with," says Williams.

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