

OIL BURNER EMERGENCIES AND FIRES

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By Frank C. Montagna

FDNY recently responded to a report of smoke in a three-story apartment building. The cause of the smoke was a malfunctioning oil burner. Its water supply line had burst, and the burner had been dry firing for some time. The burner now was cherry red and the burner room quite hot. The burst pipe was flowing water down one side of the burner, cooling it. The other walls of the burner glowed with the heat.

We killed the electrical power to the burner by shutting the emergency shutoff switch located just inside the burner room door. We then shut the fuel at the fuel tank shutoff. There is usually another shutoff at the burner, just before the fuel filter. We shut that one off too, in case the first one was not working. The burner was shut down, but it was still very hot.

The burner room window had been boarded up, and the wood that covered the window was smoldering, having been ignited by the heat from the burner. We removed the wood from the window early on in the operation and extinguished the smoldering fire. My concern was that the heat from the burner might have ignited the floor joists above the burner. After shutting down the burner, we scanned the area with a thermal imaging camera, but the tin ceilings themselves were hot so we were unable to determine the condition of the joists underneath. To examine the joists, we had to pull the tin off of the ceiling in several locations and visually examine the joists. There was no extension. Before leaving, we issued an order to have the burner repaired. The burner and pipes were still hot but would cool down without causing any additional problems.

There were several hazards to firefighters and building occupants at this incident. One was the possibility of a firefighter incurring a burn from the hot burner and pipes. Caution, common sense, and protective gear should prevent such injuries. If water had been unexpectedly fed into the hot burner, it would have instantly flashed to steam and ruptured the burner, possibly explosively. Anyone in the vicinity could have been injured. Since the water feed pipe had burst and was spilling water onto the floor, it was unlikely that water would suddenly feed into the burner.

Fire could have extended to the floor joists above the burner or to some other wood near the burner. Here, if undiscovered, it could have smoldered, putting the occupants of the building in jeopardy. Before we took up, we made sure the fire had not extended. Finally, we checked the building for CO readings and had to vent one apartment that had elevated CO levels.

Once again, what appeared at first to be a routine response could have caused serious problems and injuries. Proper handling of the emergency resulted in the safe conclusion of still another routine response.

(For more information on oil burner emergencies and fires, see Chapter 2 of my book *Responding To 'Routine' Emergencies* (Fire Engineering, 1999)).

Frank C. Montagna, a 31-year veteran of the fire service, is a battalion chief with the Fire Department of New York. He has been an instructor at the FDNY Probationary Firefighters School, the officer in command of the FDNY Chauffeur Training School, and an adjunct lecturer at John Jay College in New York City. He is a member of the FDNY Chief's Association and is the author of Responding to Routine Emergencies (Fire Engineering, 1999). Montagna has a bachelor's degree in fire science and lectures on firefighting-related topics.