

Approved Commercial Cooking Systems and UL 300 Regulation

Garden Grove Fire Department
Fire Prevention Bureau

Objective

Provide information regarding the inspection of commercial cooking systems:

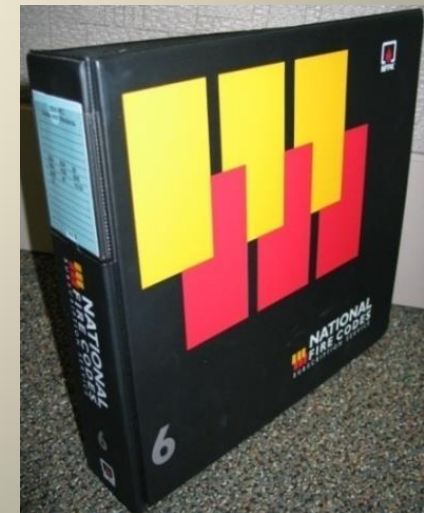
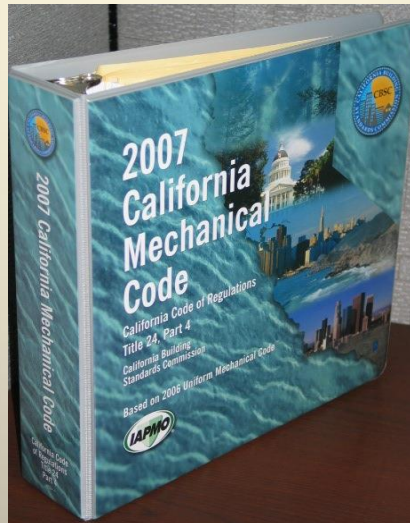
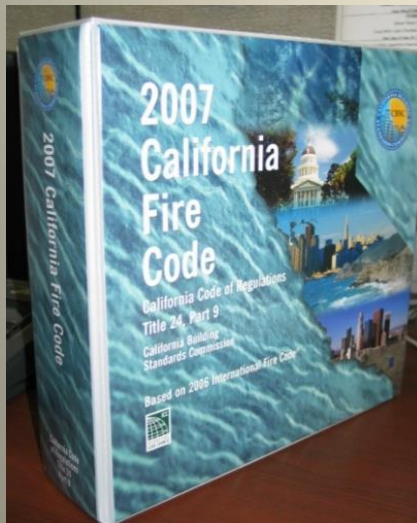
- Recognize whether the fire extinguishing system is one of the approved systems.
- Verify the fire extinguishing system received its six month service.
 - Nozzle coverage exists over appliances.
 - Baffle is provided for fryer if appliance is beside an open flame.

Introduction

- While animal fats were once commonly used, they have since been largely replaced with vegetable oils. Vegetable oils require a higher heat to cook the food and retain heat longer than animal fats.
- Dry chemical and UL 300 non-compliant wet chemical extinguishing agents are unable to keep the fire suppressed long enough for the equipment and oil to cool adequately. The agent dissipates and the result is a re-ignition of the fire.
- A UL 300 compliant system uses a wet chemical extinguishing agent that takes longer to dissipate and allows the equipment and oils to cool adequately, preventing re-ignition.

References

- California Fire Code
 - Chapter 9 Section 904.11
Commercial Cooking Systems
- California Mechanical Code
 - Chapter 5 Part II
Commercial Hoods and Kitchen Ventilation
- National Fire Code
 - NFPA 17A
Wet Chemical Extinguishing Systems
 - NFPA 96
Ventilation Control and Fire Protection of Commercial Cooking Operations



Fire Protection

- Commercial cooking equipment that produces grease laden vapors shall be provided with a Type I hood and an automatic fire-extinguishing system. [California Fire Code Section 904.11]
- Fire-extinguishing equipment shall include both automatic and manual methods of actuation. [NFPA 17A Section 5.2]



Fusible Link



Manual Pull Station

Fire Extinguishers

- A Class K portable fire extinguisher is required within 30 feet of all commercial cooking equipment.



Typically adjacent to the manual activation station for the fire extinguishing system, which is in the path of egress.

Appliance Protection

Appliances that require nozzle protection directly over the appliance:

- Salamander Broilers/Cheese Melters
- Griddles
- Char Broilers
- Woks
- Ranges
- Deep-Fat Fryers
- Tilting Skillets
- Braising Pans



Appliances that do not require nozzle protection directly over the appliance:

- Baking Ovens
- Steam Kettles
- Enclosed Pizza Ovens



ALL APPLIANCES SHALL BE UNDER A TYPE I HOOD WITH NOZZLES LOCATED IN THE DUCT AND PLENUM.

UL 300 Regulation

- The California State Fire Marshal's Office is requiring all non-compliant systems to be converted to the UL 300 Standard.
- All businesses must comply with the regulation no later than the second required servicing of the system after January 1, 2008.
- Therefore, beginning January 1, 2009, all kitchen suppression systems must be UL 300 compliant.

Fire-Extinguishing Systems

Approved Automatic Fire-Extinguishing Systems

(1) Wet Chemical Extinguishing
Systems Complying with UL 300



(2) Carbon Dioxide Extinguishing
Systems



Fire Extinguishing Systems

Approved Automatic Fire-Extinguishing Systems

(3) Automatic Fire Sprinkler System [NFPA 13]

- Existing sprinkler systems protecting commercial cooking equipment do not require replacement with a UL 300 compliant wet chemical system.

If this type of protection is found, email the business information to Fire Prevention for further review.

DO NOT ISSUE A VIOLATION NOTICE



Non-Compliant System

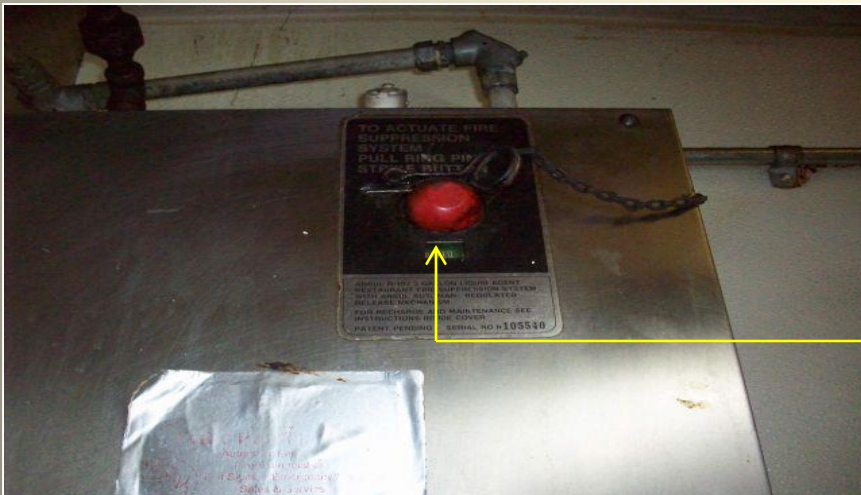


Notice the large size of the discharge nozzle, approx. 2" in diameter.

Non-Compliant System

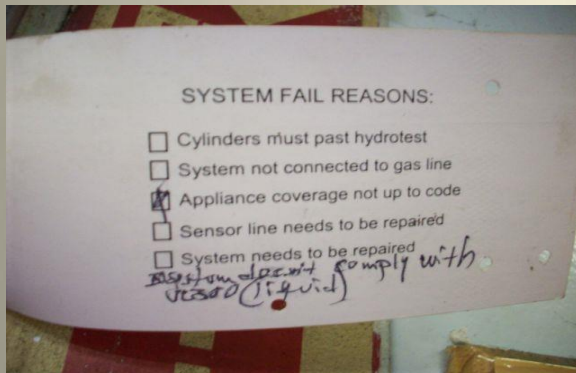
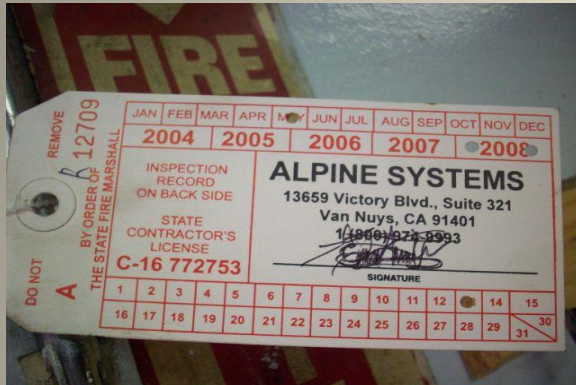


- Notice this is a wet chemical system that does not meet the UL-300 standard.
- The fire insurance will not recognize this system as compliant.



Notice the red button. This is an Pre UL-300 system made by ANSUL.

Non-Compliant System



- If the restaurant is non-compliant to the UL-300 system, the servicing company shall **red tag** the fire suppression system.
- These are examples of how a system should be **red tagged**.

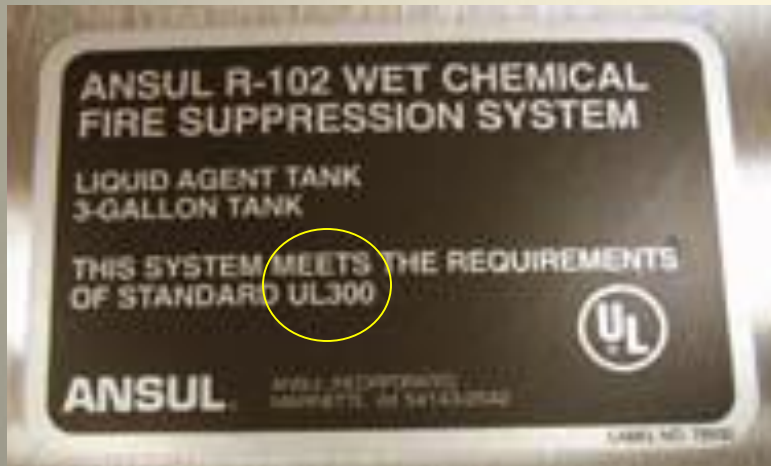
Compliant UL 300 System



Notice the small size of the discharge nozzle, approx. 3/4" – 1" in diameter.

Compliant UL 300 Label

- Check agent cabinet or agent tank for label.



Sample Labels

Non-Compliant Procedure

Any business found to be non-compliant with the UL 300 Standard:

- **Issue a Violation Notice just for non-compliance with the UL 300 Standard and send to Fire Prevention.**

[California Fire Code Section 904.11]

- **DO NOT enter the violation into the Fire Inspection Program.**

Continue to inspect the business and follow-up on any other violations.

Additional Inspection Information

Fryers

- During an inspection, ensure the following is present:
 - Minimum of 16" between fryer and surface flames of adjacent appliances is required
 - (NFPA 96 Section 12.1.2.4)

OR

- A steel or tempered glass baffle plate shall be installed at a minimum of 8" in height between the fryer and surface flames of the adjacent appliance.
 - (NFPA 96 Section 12.1.2.5)



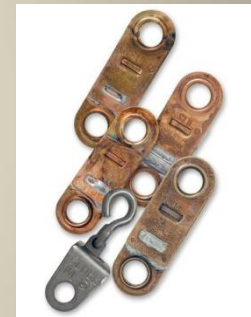
Additional Inspection Information

Maintenance

- Extinguishing systems shall be serviced every six months and immediately after system activation. {Licensed C-16 Fire Protection Contractor}

- ✓ All actuation components must be inspected.
- ✓ Fusible links must be replaced annually.
- ✓ Nozzles must have protective caps to prevent grease from accumulating in the nozzles.

Six month service tag



Additional Inspection *Maintenance*

- Note: Maintenance to the duct shall be serviced as needed.
- Ask for the duct cleaning receipt, or have them remove a filter to check the cleanliness.



Additional Inspection *Maintenance*

- Note: Maintenance to the filters is a **separate** cleaning service to the duct cleaning.
- Notice if there are any holes in the Type 1 hood system. If so, any holes shall be plugged with an approved UL listed plug.



Summary

- Verify the fire extinguishing system is one of the three approved.
 - Issue a Violation Notice if non-compliant with UL 300 Standard, *or*
 - Verify compliant system has been serviced within six months.
- Verify discharge nozzle coverage is present for appliances requiring protection and that all appliances are under a Type I hood.
- If fryer is beside an open flame appliance, ensure proper spacing or baffle is provided.

QUESTIONS?

Contact Fire Prevention Bureau:

Randy Garcia 5628

Don Nguyen 5624

Sabrina Soltis 5630