



# Fire Suppression





# Learning Objectives:

By the end of this unit, the participant will be able to:

1. Identify the most common types of fires aboard boats.
2. Prioritize response to fires aboard a vessel underway.
3. Choose the fire extinguisher based on the class of fire appropriate .
4. Discuss various configurations of fixed fire suppression systems
5. Using PASS technique, extinguish a small Class B fire

# Fire

## Fire Suppression :

- Fuel and fuel vapors are the two leading ingredients in all boat fires and explosions
- If faced with fire on board, save lives first
- Fire fighting should be done to contain a small fire to enable safe exit of operator with and crew



# Fire Prevention

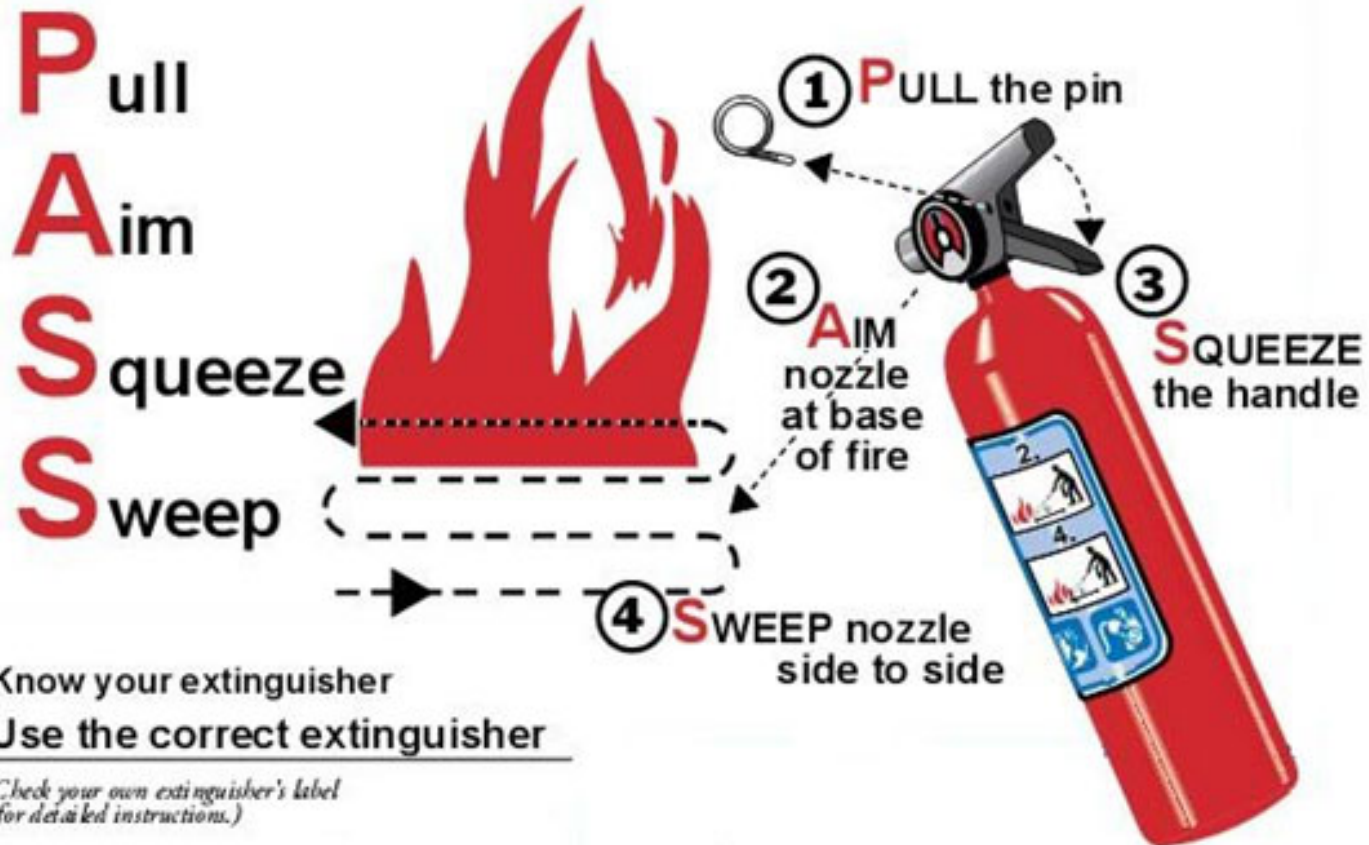


If you remove one element from the triangle, you have NO fire

# Fire Extinguishers

## The PASS technique :

To operate an extinguisher:



# Fire Extinguishers

## Fire Classes

- **Class A**  
combustible  
solids like  
wood



- **Class C**  
electrical



- **Class B**  
flammable  
liquids like  
gasoline



- **Class D**  
combustible  
metals like  
magnesium





# Firefighting Strategies:

Fire Type	Response
Gasoline, diesel, grease	Class B foam, CO2 or Dry Chemical
Engine Fire	Shut off engine, generators, fans. Use Class B, hand-held extinguisher to fight fire. More may be necessary if on a large vessel.
Electrical Fire	Turn off electrical source; use Class B-C or C
Galley Fire	Shut off fuel source to stove. Use Class A-B-C to fight fire. DO NOT use Class A on grease fires.
Below Deck Fire	Most are fueled by wood, paper, or fabric. Use a Class A and remove oxygen by closing off compartment after using extinguisher.





# Priority of Response

1. Stop or slow the boat and position the vessel and/or people in such a manner that the fire is downwind.
2. Ensure personnel are moved to a safe location with PFDs on.
3. Make a distress call or emergency notification call as soon as possible.
4. Attempt to isolate the fuel source, if burning material is not attached, throw overboard
5. Ready the appropriate fire extinguisher and attack the fire from a safe distance
6. Abandon ship if necessary



# Fixed Fire Suppression Systems

- **Custom engineered systems** - engineered for the specific vessel it is found in
- **Pre-engineered systems** - intended to be an "off the shelf" for "after market" installation
- **Alternative** - use of a portable or semi-portable fire extinguisher integrated into a "fixed" system aboard a small vessel





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## Summary

- Onboard Fires
- Fire Extinguishers
- Fire Classes
- PASS Techniques
- Fire Fighting Strategies
- Priority of Response
- Fixed Fire Suppression Systems



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## Practical Exercise