Loss Control

Chapter 18

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LEARNING OBJECTIVES

- Explain the philosophy of loss control.
- Describe the ways preincident planning impacts loss control.
- Determine appropriate salvage procedures.
- Compare and contrast different types of salvage covers.
- Explain ways to fold, roll, spread, and improvise with salvage covers.
- Describe ways to cover openings during salvage operations.

LEARNING OBJECTIVES

Explain methods used to maintain fire safety during overhaul.

Describe factors that influence locating hidden fires.

Identify different overhaul procedures.

Indicate the ways a thermal imager can be used during overhaul.

Clean, inspect, and repair a salvage cover.

Roll a salvage cover for a one-firefighter spread.

Spread a rolled salvage cover — One-firefighter method.

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- Roll a salvage cover for a one-firefighter spread.
- Spread a rolled salvage cover — One-firefighter method.

LEARNING OBJECTIVES

Fold a salvage cover for a one-firefighter spread.

Spread a folded salvage cover — One-firefighter method.

Fold a salvage cover for a two-firefighter spread.

Spread a folded salvage cover — Two-firefighter balloon throw.

Construct a water chute without pike poles.

Construct a water chute with pike poles.

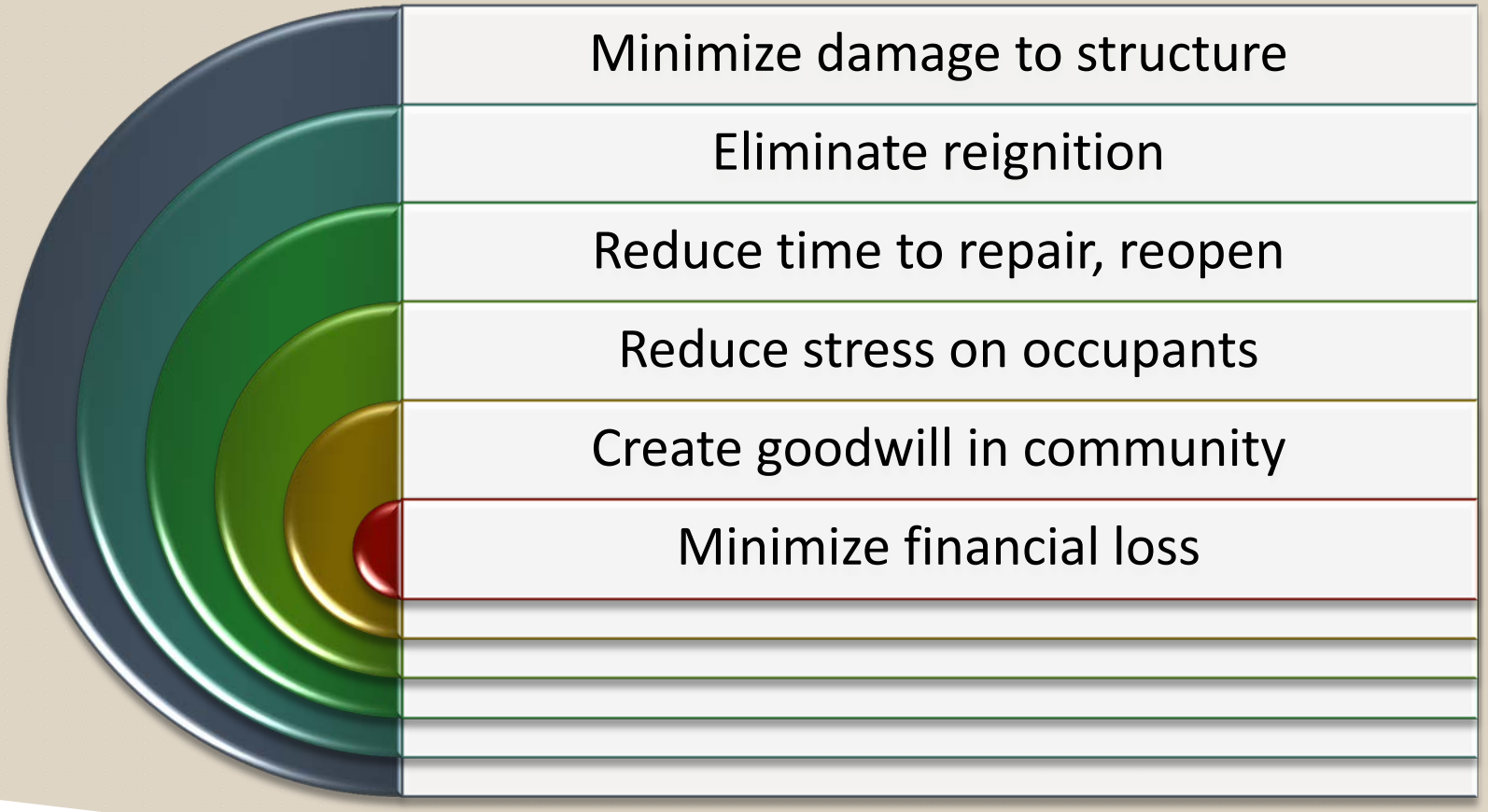
Construct a catchall.

LEARNING OBJECTIVES

Make a chute and attach it to a catchall.

Locate and extinguish hidden fires.

LOSS CONTROL ACTIVITIES MINIMIZE LOSS TO PROPERTY BEFORE, DURING, AND AFTER A FIRE.



THE ARE TWO TYPES OF DAMAGE IT IS IMPORTANT TO KNOW ABOUT.

Primary – Caused by fire, smoke

Secondary – Results from fire suppression

TWO TACTICS FIREFIGHTERS USE ARE INTENDED TO REDUCE PROPERTY DAMAGE.

Salvage

- Aid in reducing primary and secondary damage

Overhaul

- Searching for and extinguishing hidden or remaining fires after main body extinguished

PREINCIDENT PLANNING CAN HELP IDENTIFY SPECIAL LOSS CONTROL-RELATED CONCERNS.

- Most effective, least destructive means of access
- Most effective means of evacuating or protecting occupants
- Location, protection of vital business records
- When, how built-in suppression systems are supported, used
- How to protect building contents from smoke, water damage

PREINCIDENT PLANS VARY DEPENDING ON THE TYPE OF OCCUPANCY.

Residential occupancies

Commercial properties

SALVAGE BEGINS UPON ARRIVAL ON SCENE AND CONTINUES UNTIL THE LAST UNIT LEAVES.

May occur while suppression underway if

- On-scene resources sufficient
- Situation permits

THERE ARE VARIOUS WAYS TO PERFORM SALVAGE AND THE CHOICE OF PROCEDURE DEPENDS ON SEVERAL FACTORS.

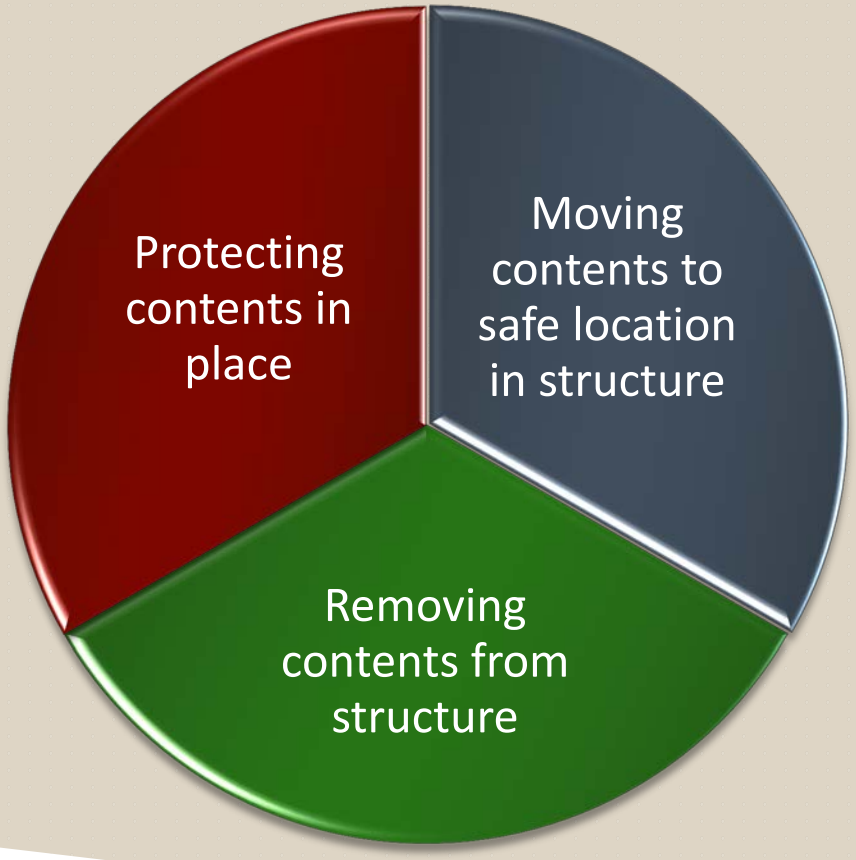
Ways to perform

- Cover contents with salvage covers during operations
- Delay suppression to remove vital contents

Factors

- Number of personnel available
- Extent, location of fire
- Type, size, quantity of contents
- Current weather

SALVAGE PROCEDURES INCLUDE THREE MAIN METHODS OF PROTECTING CONTENTS.

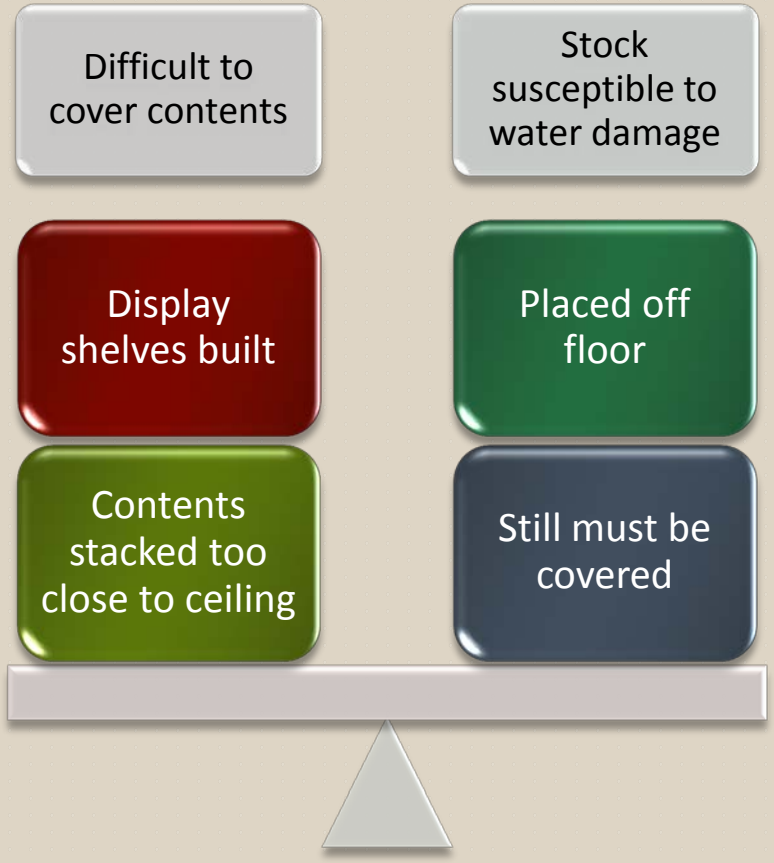


THERE ARE SEVERAL SALVAGE TECHNIQUES FIREFIGHTERS SHOULD UNDERSTAND.

High point in furniture group

Prevent furniture damage

COMMERCIAL OCCUPANCIES MAY PRESENT UNIQUE CHALLENGES.



WATER PRESENTS A NUMBER OF CHALLENGES DURING SALVAGE OPERATIONS.

- Use covers to route to floor
- Cautions with high-piled stock
- Remove large quantities
- May ruin finishes

SALVAGE OPERATION ASSIGNMENTS VARY DEPENDING ON THE DEPARTMENT.

- Ladder or specially designated companies
- All firefighters are trained
- Engine companies carry equipment

THERE ARE VARIOUS TYPES AND SIZES OF SALVAGE COVERS.

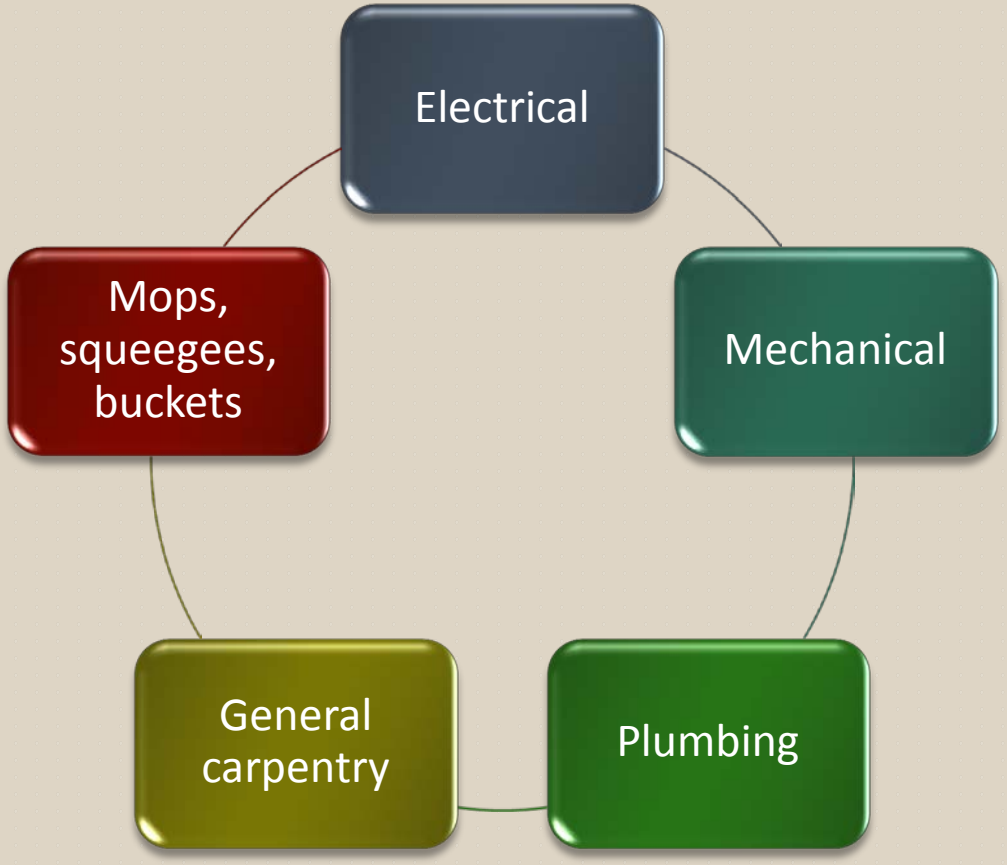
Canvas

Vinyl

Disposable heavy-duty plastic

PROPER MAINTENANCE CAN HELP INCREASE THE SERVICE LIFE OF A SALVAGE COVER.

SALVAGE REQUIRES A SPECIFIC COLLECTION OF TOOLS AND EQUIPMENT STORED IN A DESIGNATED TOOLBOX OR CONTAINER.



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Automatic Sprinkler Kit

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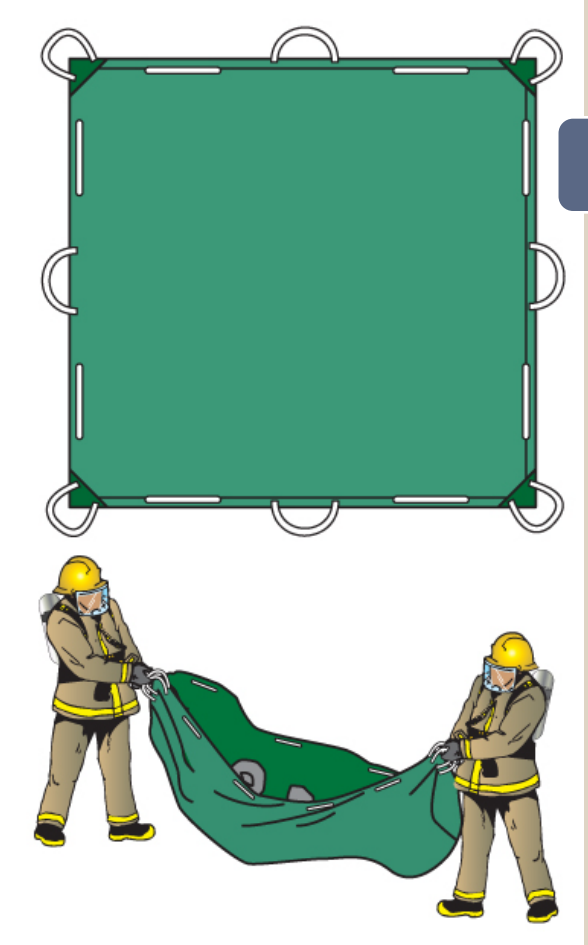


Carryall

Floor runners

SALVAGE REQUIRES A SPECIFIC COLLECTION OF TOOLS AND EQUIPMENT STORED IN A DESIGNATED TOOLBOX OR CONTAINER.

Dewatering device

Water vacuum

SALVAGE REQUIRES A SPECIFIC COLLECTION OF TOOLS AND EQUIPMENT STORED IN A DESIGNATED TOOLBOX OR CONTAINER.

J-hooks

S-hooks

THERE ARE SEVERAL DIFFERENT METHODS FOR FOLDING/ROLLING AND SPREADING COVERS.

One-firefighter, rolled cover

One-firefighter, folded cover

Two-firefighter, folded cover

IMPROVISED SALVAGE COVERS CATCH AND ROUTE WATER AWAY FROM A LOCATION.

Removing with chutes

Constructing a catchall

Splicing

Splicing chute to catchall

COVERING OPENINGS IS CRITICAL TO PREVENT FURTHER DAMAGE TO THE PROPERTY.

Doors or windows

Openings in roofs

Openings in upper story floors, basements, crawl spaces

OVERHAUL CONSISTS OF ACTIVITIES CONDUCTED ONCE THE MAIN BODY OF A FIRE IS EXTINGUISHED.

OVERHAUL BEGINS ONCE AUTHORIZATION IS GIVEN BY TWO PERSONNEL.

Incident Commander

Individual responsible for fire investigation

A VARIETY OF TOOLS AND EQUIPMENT ARE USED DURING OVERHAUL.

- Pike poles, hooks
- Axes
- Prying tools
- Power saws, drills, screwdrivers
- Carryalls, buckets, tubs
- Shovels, bale hooks, pitchforks
- Thermal imager

SPECIFIC PERSONNEL PERFORM DIFFERENT DUTIES DURING OVERHAUL.

Supervisor, officer

If not involved directly in overhaul – Visually direct overhaul operations

Fire investigator

If on scene – Be involved in planning, supervising overhaul

SAFETY IS THE FIRST CONSIDERATION THAT MUST BE ADDRESSED BEFORE OVERHAUL.

- Inspect premises
- Develop operational plan
- Provide needed tools
- Eliminate, mitigate hazards
- Monitor atmosphere before removing SCBA

TOXIC GASES PRODUCED FROM SMOLDERING FIRE ARE A SIGNIFICANT THREAT.

CAUTION

Wear proper protective clothing including self-contained breathing apparatus (SCBA) until the atmosphere has been proven safe.

MANY OTHER HAZARDS ARE PRESENT DURING OVERHAUL THAT YOU SHOULD BE AWARE OF.

- Fire-weakened floors
- Mark or barricade hazardous areas
- Broken glass, nails, sharp objects
- Cuts, punctures, thermal burns if not wearing gloves
- Eye injuries
- Prevent strains, sprains through conditioning, practice
- Fatigue – More susceptible to injury

CHARGED HOSELINES ARE REQUIRED DURING OVERHAUL DUE TO THREAT OF REIGNITION.

SITUATIONAL AWARENESS AND A FOCUS ON SAFETY ARE CRITICAL DURING OVERHAUL.

- Work in teams of 2 or more
- Maintain awareness of exit routes
- Maintain RIC/RIT
- Monitor personnel for rehab needs
- Beware of hidden gas or electrical utilities
- Continue using accountability system until incident terminated

THE STRUCTURAL CONDITION OF AN AREA MUST BE EVALUATED BEFORE SEARCHING FOR HIDDEN FIRES.

Intensity of fire

- Extent of structural member weakness

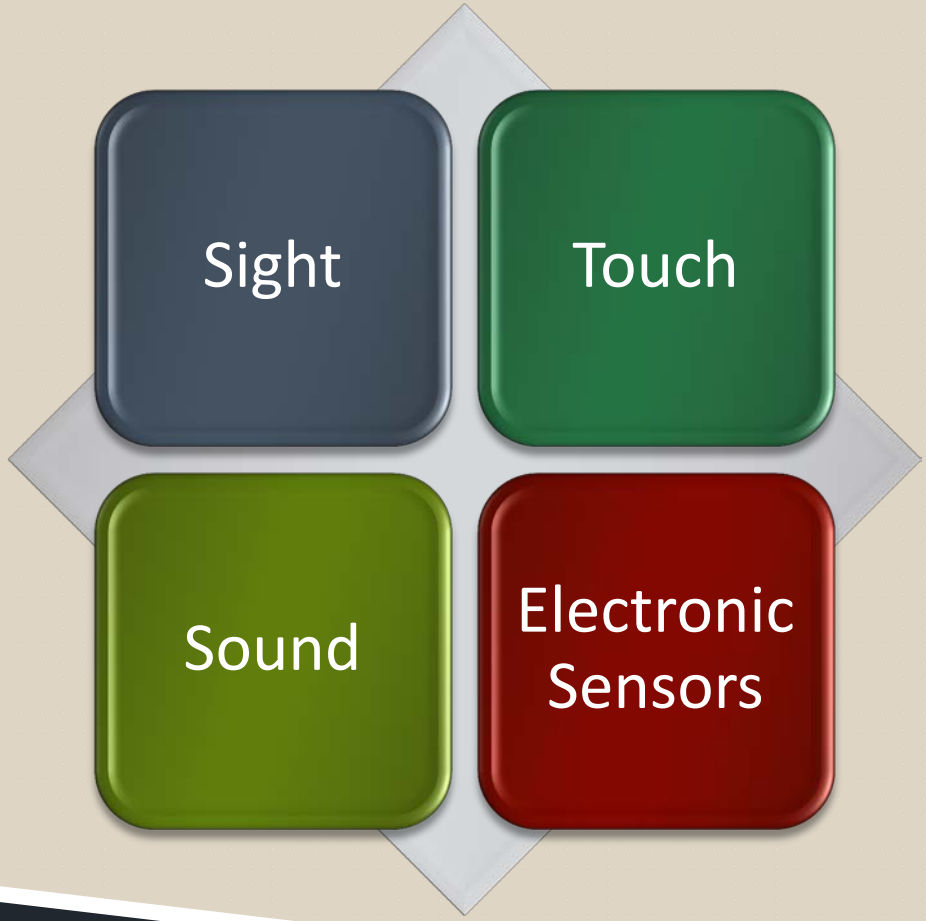
Amount of water used

- Additional weight placed on floors, walls

THERE ARE SEVERAL INDICATORS OF POSSIBLE LOSS OF STRUCTURAL INTEGRITY.

- Weakened floors
- Concrete that has spalled
- Weakened steel roof members
- Walls offset
- Weakened roof trusses
- Mortar in wall joints opened
- Wall ties holding veneer/curtain walls melted
- Heavy storage on mezzanines or upper floors
- Water pooled on upper floors
- Large quantities of wet insulation

THERE ARE FOUR METHODS TO USE WHEN LOCATING HIDDEN FIRES.



OVERHAUL PROCEDURES SHOULD BEGIN AS SOON AS POSSIBLE AFTER THE ORDER IS GIVEN.

- If extended to other areas, determine path
- If floor beams burned at party wall ends, flush voids
- Thoroughly check insulation materials
- Do not make random openings
- Understanding basic building construction can help

OVERHAUL PROCEDURES SHOULD BEGIN AS SOON AS POSSIBLE AFTER THE ORDER IS GIVEN.

- Search in concealed spaces
- Consider if concealed space indicates utilities
- Make openings in neat, planned manner
- Open ceilings from below
- Do not stand directly under when pulling ceiling

CAUTION

When pulling any ceiling, stand clear of any falling debris.

OVERHAUL PROCEDURES SHOULD BEGIN AS SOON AS POSSIBLE AFTER THE ORDER IS GIVEN.

- Small burning objects frequently uncovered
- Large smoldering items taken outside
- Do not disturb evidence
- Use of wetting agents valuable

USING THERMAL IMAGERS DURING OVERHAUL HAS BENEFITS AND DISADVANTAGES.

SUMMARY

Loss control is an important component of fire department service delivery with the philosophy of minimizing secondary damage to structures and their contents during and after fire control operations.

Salvage and overhaul operations are two of the most effective means of loss control.

SUMMARY

It is very important for fire personnel to identify and protect valuable contents in structures affected by fire as well as searching for hidden fires so rekindling does not occur.

SUMMARY

Taking a customer-service oriented approach to loss control ensures that citizens' property is adequately protected and that the reputation of the fire service is held in the highest regard.