



resolute
Forest Products

MOBILE EQUIPMENT FIRES AND OVERHEATING

Procedure Number

SAF-1.24

Issue Date

November 16, 2010

SAFETY

Revision Date

October 31, 2022

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ISSUED BY:

Matt Chalk

Safety Manager
Coosa Pines Operations

10-31-22

Date

APPROVED BY:

P2 Hogg

General Manager
Coosa Pines Operations

10-31-22

DATE

INTERPRETATION AND PERIODIC
REVIEW OF THIS PROCEDURE IS
THE RESPONSIBILITY OF:

SAFETY MANAGER

DISTRIBUTION

ALL MANAGERS
ALL TEAM LEADERS



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I. PURPOSE

A. The purpose of this policy is to ensure mobile equipment fires and overheating incidents are addressed in a safe manner.

II. SCOPE

A. Our goal is to eliminate injuries due to mobile equipment fires and overheating incidents.

B. This policy applies to all work operations in our production, maintenance, and office areas.

III. DEFINITIONS

A. **Mobile Equipment Fire:** Fire, activation of fire suppression equipment, or a suspected fire from smoke identification, etc.

B. **Mobile Equipment Overheating Incident:** Blown hose, overheating of engine, etc.

C. **Mobile Equipment:** Powered Industrial Trucks (PIT), heavy equipment, trucks, cars, etc.

IV. PROCEDURE

A. Fire Incident

1. In the case of a fire incident, equipment operators will initiate incipient fire-fighting activities only. Under no circumstance should anyone approach exposed hoses or open an engine compartment unless properly trained and fully dressed out in special fire-fighting turnout gear until the fire has been put out and the equipment has had sufficient time to cool down.
2. In the case of the Coosa Pines Mill, only the Childersburg Fire Department has the training and equipment to safely approach exposed



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hoses or open an engine compartment before a minimum 30-minute waiting period has elapsed. The Fire Department and the Shift Team Leader may declare the event safe for further evaluation at that point.

3. Even after a 30-minute cooling period has elapsed (remember that this is a minimum, longer may well be needed), approaching the equipment requires at a minimum the PPE listed here; rain suit, rubber gloves, goggles and face shield. There must be at least two people present, one who is prepared to extinguish any flames that occur when the compartment is opened. In the case of LP powered engines when the equipment is approached after the 30-minute period it must be only to shut off the gas supply, then there must be an additional 15-minute waiting period for any leaking gas to dissipate. The listed PPE must be worn on both approaches. Remember: opening a closed compartment or taking any steps that cool down the air surrounding pressurized overheated hoses will cause the hoses to expand even more and be more likely to rupture.
4. Upon indication of a fire, or tripping of a fire suppression system, the Operator will shut the equipment down, make the proper notifications (Security for ERT response and Supervisor), and only respond to the fire according to the applicable incipient fire-fighting procedures.
5. After fire-fighting activities have extinguished the fire, the equipment must be allowed a sufficient amount of time to go through a proper cool down period before any motor compartment enclosures are opened. To allow the engine to cool down, DO NOT open any compartment or approach any exposed hoses for a minimum of 30 minutes. Check all temperature related gauges for indication the engine is cool and does not present a danger. The equipment cannot be operated or further inspections performed until the event is declared safe by the Shift Team Leader. Use extreme caution during the follow-up inspection.
6. In a case where the mobile equipment has hoses that are exposed due to the equipment housing design, a safe distance (15 foot minimum) must be maintained from the equipment during the incipient fire-fighting activities. When the fire is extinguished, the safe distance must still be maintained due to the lack of compartment enclosure doors.

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7. In a case where compressed gas cylinders are on board the mobile equipment, refer to Table 1 (attached) for safe distances for evacuation in case of fire.

B. Overheating Incident

1. If the mobile equipment overheats or there is evidence of a failed hose or other cooling system-related component, the operator should immediately shut down the equipment, exit the equipment, and notify his/her Shift Team Leader. Do not open any compartment. In a case where the mobile equipment has hoses that are exposed due to the equipment housing design, a safe distance (15-foot minimum) must be maintained from the equipment for a minimum of 30 minutes to allow the engine to cool down. After the waiting period, check all temperature-related gauges for indication that the engine is cool and does not present a danger. The equipment cannot be operated or further inspections performed until the event is declared safe by the Shift Team Leader. Use extreme caution during the follow-up inspection.

- C. Differences in equipment, conditions, and intensity of fire or overheating incidents will affect response activities. If there is any question as to the safety of your actions, err on the safe side of safety.

V. RESPONSIBILITIES

- A. Shift Team Leaders and Facilitators shall be responsible for the day to day requirements of this policy.
- B. The Safety Manager is responsible for policy maintenance and periodic review.

VI. ATTACHMENTS

- A. Record of Revisions
- B. BLEVE (Boiling Liquid Expanding Vapour Explosion) Table of Preferred Distances.



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RECORD OF REVISIONS

Section	Revision Number	Effective Date	Description Of Changes
All	1	03/23/16	Updated to procedure format and assigned procedure number.
Title Page	2	07/08/16	New management signature.
All	3	09/10/19	Addition of compressed gas cylinder transport/safe distances for evacuation in case of fire (IV.1.7) and Attachment B: BLEVE Table of Preferred Distances (SA-2017-08)
All	4	10/31/22	General review and update of management signatures.

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ATTACHMENT B

BLEVE (USE WITH CAUTION)															
Capacity		Diameter		Length		Propane Mass	Minimum time to failure for severe torch	Approximate time to empty for engulfing fire	Fireball radius	Emergency response distance		Minimum evacuation distance	Preferred evacuation distance	Cooling water flow rate	
Litres (Gallons)	Meters (Feet)	Meters (Feet)	Meters (Feet)	Kilograms (Pounds)	Minutes	Minutes	Meters (Feet)	Meters (Feet)	Meters (Feet)	Meters (Feet)	Meters (Feet)	Meters (Feet)	Litres/min	USgal/min	
100 (26.4)	0.3 (1)	1.5 (4.9)	40 (88)	4	8	10 (33)	90 (295)	154 (505)	307 (1007)	94.6	25				
400 (106)	0.61 (2)	1.5 (4.9)	160 (353)	4	12	16 (53)	90 (295)	244 (801)	488 (1601)	189.3	50				
2000 (528)	0.96 (3.2)	3 (9.8)	800 (1764)	5	18	28 (92)	111 (364)	417 (1368)	834 (2736)	424	112				
4000 (1057)	1 (3.3)	4.9 (16.1)	1600 (3527)	5	20	35 (115)	140 (459)	525 (1722)	1050 (3445)	598	158				
8000 (2113)	1.25 (4.1)	6.5 (21.3)	3200 (7055)	6	22	44 (144)	176 (577)	661 (2169)	1323 (4341)	848	224				
22000 (5812)	2.1 (6.9)	6.7 (22)	8800 (19400)	7	28	62 (203)	247 (810)	926 (3038)	1852 (6076)	1404	371				
42000 (11095)	2.1 (6.9)	11.8 (38.7)	16800 (37037)	7	32	77 (253)	306 (1004)	1149 (3770)	2200 (7218)	1938	512				
82000 (21662)	2.75 (9)	13.7 (45)	32800 (72310)	8	40	96 (315)	383 (1257)	1435 (4708)	2200 (7218)	2710	716				
140000 (36984)	3.3 (10.8)	17.2 (56.4)	56000 (123457)	9	45	114 (374)	457 (1499)	1715 (5627)	2200 (7218)	3539	935				

BLEVE (Boiling Liquid Expanding Vapour Explosion) can be defined as a violent vapour explosion of a liquid that is significantly above its usual boiling point at atmospheric pressure after a tank has burst.

WARNING

The data given are approximate and should only be used with extreme caution. For example, where times are given for tank failure or tank emptying through the pressure relief valve - these times are typical but can vary from situation to situation. Also, LPG tanks have been known to BLEVE within minutes. Therefore, never risk life based on these times.