

Burn-over

The ACT Rural Fire Service Chief Officer has issued this standard operating procedure under Section 38(1) of the *Emergency Act 2004* – A Chief Officer may determine standards and protocols.

Purpose

This standard operating procedure (SOP) is to provide advice about the best practice techniques to ensure the safety of vehicle occupants during a burn-over event. A burn-over event is defined as a section of fire that overruns personnel and/or equipment.

Scope

This SOP is applicable to all personnel from the ACT Rural Fire Service (ACTRFS), as defined in the *Emergencies Act 2004*.

Background

As defined by AFAC, three basic principles underpin application of burn-over protection measures. These are:

1. **Escape** - Ensure that firefighting vehicles are designed to keep moving so that they do not become disabled or otherwise prevented from escaping to a safe zone.
2. **Operate** - Ensure that the operational functionality of firefighting vehicles is not compromised, and that safety support systems and other critical equipment continue to function if a vehicle is disabled or entrapped.
3. **Refuge** - To use a firefighting vehicle to provide a safe refuge area for the firefighters operating it.

Responsibilities

Members	Follow all instructions as described in this SOP. Train and practice burn-over procedures.
Crew Leader or Officer in charge of the vehicle.	Routinely check the operation of the vehicle safety spray systems before deploying the vehicle to a fire. Ensure safety equipment is available in cabin. Ensure all personnel are safe. Ensure all safety procedures are followed. Report status as required.

	Complete Riskman incident report as required.
Incident Controller (IC)	Ensure safety of crew.
ACTRFS Duty Officer (DO)	Follow up on any WHS incidents, including a welfare check for those who have been through a burn over incident.

Standard operating procedure

Fighting bushfires can be a dangerous undertaking and sometimes the safety of crews on the fireground may become compromised by fire behaviour.

All members must remain vigilant while on the fireground and watch for any changes in fire behaviour that may threaten the crew. Members should always move out of the area at risk if safe to do so. However, crews may become trapped by fire and need to implement emergency survival procedures.

Brigades **must** regularly train using this procedure to ensure that all members are familiar with the processes and able to recall them in high stress situations.

Maintaining situational awareness

Members must manage firefighting activities to minimise the risk of placing themselves or their crew in situations where burn-overs may occur.

1. On the fireground checklist:

- L – Lookouts** Know where the fire is and its direction.
- A – Awareness** Know the country or have someone with you who does.
Keep calm and make logical decisions.
A full set of Personal Protective Clothing / Equipment (PPC/PPE) is compulsory.
Accidents and ill-health can endanger all crew.
- C – Communications** Always stay in contact or tell someone where you are going.
Ensure that your instructions are clear.
- E – Escape routes** Plan an escape route
Build a fire-line from a safe anchor point.
- S – Safety zones** Park your vehicle in a safe spot.

2. Before entering a fireground, crew leaders should ensure that the First Aid Kit, portable extinguisher, fire blankets and at least one portable radio are located in the cabin.
3. At all times on the fireground, ensure the pump is running and turn on all warning lights (unless specifically requested not to by the Incident Controller).
4. Check for turn-around spots or reverse vehicle into the fireground so that it is facing the exit for quick escape.

5. Where appropriate, ensure the vehicle is parked 'in the black' or next to low fuel areas, and avoid parking under or close to trees if possible.
6. Keep the vehicle dashboard clear to prevent loose items interfering with the radiant heat blinds should they be deployed and the radios active and on the correct channels.
7. Monitor the water tank levels to ensure a minimum safe level is maintained.

Burn-over preparation

In the case of a potential burn-over, members should take the following actions:

1. Crews are instructed that 3 blasts on the horn or siren is the signal for a possible burn-over. If the crew leader assesses that the crew is unlikely to hear the horn or siren, they should also make a radio call to crew members.
2. On this signal, the pump operator, following confirmation from the hose line crews, should turn off and disconnect any lay flat hose from the vehicle.
3. The branch operator, on each hose line, should release the water pressure and if time permits, disconnect the branch and take it with them to the cabin.
4. Otherwise, the crew should turn off the hose and leave it behind.
5. Crew must return to the vehicle at the safest possible speed.
6. Crew should follow instructions from the crew leader and stay together.

Escape if possible

Crews should attempt to move the fire unit away from the danger area to a safe refuge, e.g., an area of low fuel, 'the black' or next to an embankment which shields the vehicle from radiant heat.

If the vehicle cannot be moved from the current location, the driver should position the cabin away from any direct impact from radiant heat if possible.

Before fire impact

If the escape route is compromised, or the crew cannot move from the current situation safely:

1. Ensure all crew wear all Personal Protective Clothing / Equipment (PPC/PPE) including flash hoods and cover as much exposed flesh as possible.
2. Radio an EMERGENCY message to the IC (not ComCen) with the current location, crew numbers and status.
3. Activate the emergency button on the vehicle Territory Radio Network (TRN) and Mobile Data Terminal (MDT) and await ComCen acknowledgement.
4. Where possible, ensure the fire extinguisher and first aid kit are in the cabin.
5. Ensure all windows are closed, air conditioner is on high and air-recirculation is on.
6. Where fitted, drop the window heat shields and secure in place ensuring all gaps are closed.

7. Ensure all lights and sirens are activated.
8. Cover all persons under woollen or fire blankets and lay below the level of the door windows
9. Ensure the portable radio is ready for use in the cab in case the external aerial is burnt off.
10. Activate emergency cabin sprays when it is estimated that the fire is in the immediate vicinity.
11. Remain calm, breath from the lowest possible point and support each other.


After fire impact

1. One person to check that it is safe to leave the vehicle by looking out the side that was not directly impacted initially.
2. Exit the vehicle carefully through the non-exposed side. Be aware of hazards like hot surfaces, weakened trees, aircraft overhead and other vehicles.
3. Check the crew for injuries, administer first aid if required.
4. Extinguish any tyres if alight and secondary fires on the vehicle.
5. Contact your IC by radio and report the status.
6. Check the vehicle is operable and, to the extent possible, extinguish any fires.
7. Report the incident and any injuries to the ACTRFS Duty Officer as an immediate notifiable incident, and in RiskMan.

Version history

Author	Version	Version Approval Date	Summary of Changes
Andrew Stark	1.0	13/02/2013	1 st Version
Rohan Scott	2.0	15/07/2020	Reviewed against AFAC Guidelines, updated and reformatted
Dave Pennock	3.0	22/06/2021	Administrative Review

Approved by

Name	Title/Role	Signature	Date
Rohan Scott	CO ACTRFS		23-07-24

Document Owner

Position	Section
Director	Operations

Next review due: 23/07/2022

Related documents

Document name
AFAC Guideline: Rural Firefighting Vehicles Burn-Over Protection
AFAC Guideline: Use of Lookouts, Awareness, Communications, Escape Route, Safety Zones (LACES) System for Wildfire Firefighters' Safety on the Fireground
Work Health and Safety Act 2011
Riskman Incident Reporting form

Signed documents will be scanned and filed in TRIM.

