



Light Tankers built from 2009 onwards, Medium and Heavy Tankers (excluding the 4.4Rs) built from 2012 onwards and some specialist support vehicles* can potentially cause fires in fine dry fuels when performing a Diesel particulate burn whilst stationary

Scope	This Operations Bulletin applies to all operational personnel.
Purpose	<p>To advise members that when they operate appliances fitted with a Diesel Particulate Diffuser (DPD) or Diesel Particulate Removal (DPR) they can potentially and unknowingly cause fires during or after a DPD or DPR particulate burn when stationary and located in dry grass or other types of flammable fuels such as dry coal or peat (fine type fuels).</p> <p>This is due to the elevated exhaust gas temperatures generated during the particulate burn cycle.</p>
Background	<p>These appliances all have DPDs or DPRs fitted to reduce the emission of diesel particulate matter. This feature is required to meet Australian emissions laws and to better protect the environment and air we breathe.</p> <p>Various manufacturer operating manuals and CFA training doctrine all identify that a risk of fire exists when stationary particulate matter burns are occurring, however recent evidence suggests in certain circumstances it is difficult for operators of these appliances to manage or be aware of when this process is about to occur or is occurring. This is especially more pronounced in the Medium and Heavy Tankers fitted with DPRs.</p>
Details	<p>Light tankers, DMO Service Vans, and Tower Overseer appliances fitted with DPDs incorporated into their exhausts have a gauge permanently visible to the driver in the cabin indicating how urgent the need is for the appliance to do a particulate burn. The driver monitoring this gauge can override the automatic activation of the DPD to do a particulate burn if necessary. However, the delaying can only occur so many times until the engine will place itself in limp mode, reducing available power and requiring the manufacturer's service provider to service the DPD. The operator also has the option to initiate a manual particulate matter burn if the engine management system determines a burn can occur. This can enable an operator to activate particulate burns when timing is suitable. In the Light Tankers, DMO Service Vans, and Tower Overseer appliances, the exhaust also faces outwards, reducing the chance of starting a fire but dependent on the circumstances it may still be possible (long grass, wall of a coal batter etc.).</p> <p>On the Medium and Heavy Tankers with a DPR fitted, there is a multi-function display located in the dash with the DPR gauge option not being the start-up default display (i.e. it needs to be manually selected). For this reason, it is not always obvious when the appliance is about to automatically commence a DPR burn. (Note the engine idle will always pick up when a DPR (or DPD) burn has commenced and in a stationary situation, however this may not be obvious to appliance operators due to the practice of always increasing the engine idle when parked to keep batteries adequately</p>



charged).

The exhaust on these Medium and Heavy Tankers is also pointed downwards, where low dry grass or fine fuels can catch fire. Therefore, management of automatic particulate burns on these appliances is more challenging than the Light Tankers.

In the past, modification to the DPD and DPR systems was not considered practical but operational experience and recent improvements with the engine management systems now open up new opportunities.

Therefore, CFA is working with the appliance manufacturers to identify viable options that still comply with relevant Australian Design Rules (ADRs) to reduce the likelihood of a DPD or a DPR particulate burn causing a fire when operating in a stationary position in the future.

However, this may take time to implement. In the interim please refer to the actions below.

Actions

Until an engineered solution is identified and implemented by CFA and the cab chassis manufacturers, operators of these appliances are advised the following:

- Follow the instructions provided for DPD and DPR management as provided in the appliance operating manuals and CFA appliance specific training.
- For DPR equipped Medium and Heavy Tankers, ensure the DPR display is selected whenever the appliance is being used in an environment containing dry grass or other fine flammable material. The operator then needs to regularly monitor the progress of the increasing bars on the display towards the triggering of a DPR particulate burn (3 bars and onwards).
- The operators of Light Tankers, DMO Service Vans and Tower Overseer Appliances equipped with a DPD have the option of delaying a particulate matter burn. Operators of Medium and Heavy Tankers with a DPR do not have this option, aside from turning the appliance off, which is not recommended by the appliance manufacturer once a burn has commenced. When an automatic burn is activated, the appliance operator will need to ensure if the appliance is subsequently placed in a stationary position, that the exhaust is not positioned over any dried grass or other flammable material. If an appliance is in a stationary position, the DPR and DPD display needs to be monitored by the operator, and if a DPR particulate burn is imminent, the appliance is shifted to another location if the burn process is likely to start a fire near the exhaust, or in emergencies where the appliance cannot be shifted, the ground underneath the exhaust is wetted down or the fine fuel scrapped away.
- As per training, to help mitigate the need to do automatic particulate matter burns on the fire ground, it is recommended after each shift at the staging area and with the engine at normal operating temperature, the driver shall try to perform a manual particulate burn.

The DPD and DPR particulate burns are likely to take about 15 to 20 minutes to complete.



Further Information	Appliance Operating Manuals and CFA Training Material
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Approval	Chief Officer Euan Ferguson
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* DMO Service Vans, Tower Overseer Appliances