



Subject:	<b>RE-ISSUE OF TSB 33 – COST RECOVERY FROM ADAIR REFRIGERANT / CYLINDER SUPPLIER.</b>					TSB #:	<b>43 12-10</b>
						Date:	21/12/10
Initial Once Read:							

Smells from evaporators, HVAC and even in the vehicle cabin area have always been hard to remove, and once removed, they re-appear a short time later. We can use all sorts of cleaners and perfumed sprays to mask these odours but have you to remember that odours are actually bacteria and to completely remove the smell, you have to destroy the bacteria at the source.

We have been testing on vehicles a product that quite honestly we thought was “mumbo jumbo” but we now concede that it actually works. This product is an OZONE generator and what it does is destroy bacteria and neutralises smells. The product has been used for years in the USA especially by used car yards to de-smell used cars of odours including tobacco.

**This is how it works:**

An electrical charge is generated by the OZONE generator which then converts oxygen molecules in the vehicle to OZONE.

Ozone is a molecule composed of 3 atoms of oxygen and is very unstable. Two atoms of oxygen form the oxygen molecule which is the air we breathe. The third oxygen molecule can detach from the ozone molecule, and re-attach to molecules of other substances, thereby altering their chemical composition.

OZONE is one of the most powerful disinfectants in the world second only to fluorine. In fact, Ozone is three times more powerful than Chlorine in destroying germs, bacteria and viruses. Ozone is used to remove any contamination in bottled water. Ozone destroys mould spores and amoebae, viruses, bacteria, pathogenic and saprophytic germs.

A single oxygen atom from ozone proceeds to “oxidise” the bacterial particle or pollutant and as a result the particle or pollutant will be no longer toxic and be able to reproduce.

**WARNING-** The OZONE generator “MUST ONLY” be used in an unoccupied area or vehicle and the area or vehicle must be “aired” at the end of the treatment before being re-occupied. As OZONE destroys organic bacteria, it may also affect human beings, if exposed for very long periods.

**Instructions for using the OZONE generator in a vehicle;**

1. Empty and clean ashtrays and remove all trash from inside the vehicle.
2. Place the Ozone generator on the passenger side floor ensuring that the machine exhaust is not obstructed and 15-20cm away from upholstery.
3. Close the windows. Start the engine and engage the A/C.
4. Select the blower speed 2 or 3. Air inlet to recirculation.
5. Allot the vehicle to idle for approx 15 minutes.
6. After the 15mins turn off the engine and open the front window to air and remove any residual Ozone smell.

**WARNING-** Do not sit in the vehicle while the Ozone generator is operating.



If you induce the same pollutant or odour back into the vehicle after the treatment another new smell will occur and retreatment will be required. This would include smoking, transporting food or animals and the same airborne contaminants entering the vehicle through the fresh air intake.

As part of the treatment you should also;

- Replace the cabin filter
- Check the evaporator drain hose for blockage and condensate flow.
- Ensure the A/C evaporator is not “icing up”.
- No refrigerant leakage from the A/C evaporator
- Remove all leaves from the air intake area.
- Vacuum out leaves and foliage from the air intake housing, blower fan motor and HVAC case.



Fan Boosted Exhaust

Generator Inlet

The Fresh-Works OZONE generator is designed and manufactured in Canada and operates in 240Volts.