

Spark Arrestor User's Guide

WTISO01 Issue H

APPLICATION

Western Tydens spark arrestors have been type tested in accordance with relevant standards for arresting incandescent carbon particles (sparks) from the exhaust gas discharge of diesel engines. (They are not suitable for any other type of spark suppression applications). The user must ensure that the spark arrestor is suitable for its intended application, and that it is correctly sized to the engine specification and power rating. If necessary, noise levels, back pressure and temperature requirements must be assessed. Reference should be made to product data sheets available through the company's web site or check with Western Tydens or their representative, and if necessary the engine manufacturer.

N.B. The operation of an engine in a hazardous environment may require additional safety precautions. A spark arrestor is a SAFETY DEVICE and should be treated accordingly.

INSTALLATION

1. Refer to product I.D. plate for type and see product data sheet to ensure suitability for engine size and power.
2. Ensure that the spark arrestor is installed with the gas flow in the direction of the flow arrow.
3. Fit the spark arrestor into the exhaust pipe at a convenient point, as close to the end of the system as practical, after any other devices such as cleaners or silencers. Attention should be paid to the safe positioning of the tail pipe. It may be possible to replace the silencer with the spark arrestor if adequate silencing is achieved, however emission products should be left in place, or check with the engine manufacturer.
4. Ensure the exhaust system is in good condition with no leaks and that the spark arrestor is adequately supported; extra brackets may be required, fit flexible joints as appropriate.
5. Ensure all the joints are gas tight (if necessary use a proprietary exhaust system sealant).
6. Where surface temperature may form a hazard, consideration must be given to suitable positioning and/or guarding.
7. Test run the engine in a safe, darkened environment, with varying load conditions and examine the exhaust discharge for any sparks, if any are observed **do not use**, but consult Western Tydens.

N.B. If running an engine in an enclosed space adequate precautions must be taken to avoid exhaust gas fumes / carbon monoxide poisoning.

MAINTENANCE

1. Western Tydens spark arrestors contain no serviceable parts, and require minimal maintenance.
2. Spark arrestors should be examined daily whilst in use for any signs of damage, to ensure that the outer case is intact with no cracks, holes, dents or evidence of corrosion. The condition of the rest of the exhaust system should also be checked.
3. In normal conditions, the spark arrestor is self-cleaning. However, after prolonged use, particularly if the engine spends a long-time idling, or is sooty, the unit may be cleaned, in a safe area, by bringing the engine to operating temperature, then whilst running at high revs, the spark arrestor case should be lightly tapped to loosen any accumulated carbon; this will then be blown out by the exhaust.
4. Normally the first sign of deterioration in the spark arrestor will be visible externally or audibly, however we recommend that approximately every 500 hours it is removed and examined for damage. Tap the casing lightly as above and shake out any loose soot deposits and check for loose or damaged internal baffles. The spark arrestor may be washed through with water or a mild detergent, but do not clean with a flammable degreaser. Reinstall and run a spark check as above. If large soot deposits have accumulated check the root causes before putting the equipment back into service.

N.B. The year of manufacture can be confirmed with Western Tydens by quoting the batch number. Age, condition and usage will determine product's longevity.

Any Defective, Damaged or Suspect Spark Arrestor must be removed from service and replaced.

If in doubt consult Western Tydens.

ATEX INSTALLATIONS

In order to fully comply with the directive, the Spark Arrestor must be suitable for its intended purpose and shall be included in the temperature assessment of the completed engine prior to commissioning, in accordance with the following clauses as appropriate to the particular application.

(Please check the standard, ref: EN1834-1:2000 clause 5.3
EN1834-2:2000 clause 5.2 EN1834-3:2000 clause 5.1)