

## FIX-N-FAX #118

### CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION

No. 118

Date: December 1992

#### **Spark Arrestor - Bulldozer Air Conditioner**

Region III has reported two incidents in which medium bulldozers, equipped with cab enclosures, have pulled hot embers into the fresh air intake for the air conditioner system, thus igniting the paper filter and the secondary polyester/activated carbon media filter elements. Both reported incidents resulted in damage to the A/C unit and forced the operators to shut the machines down.

#### RECOMMENDATION:

##### A/C Operation

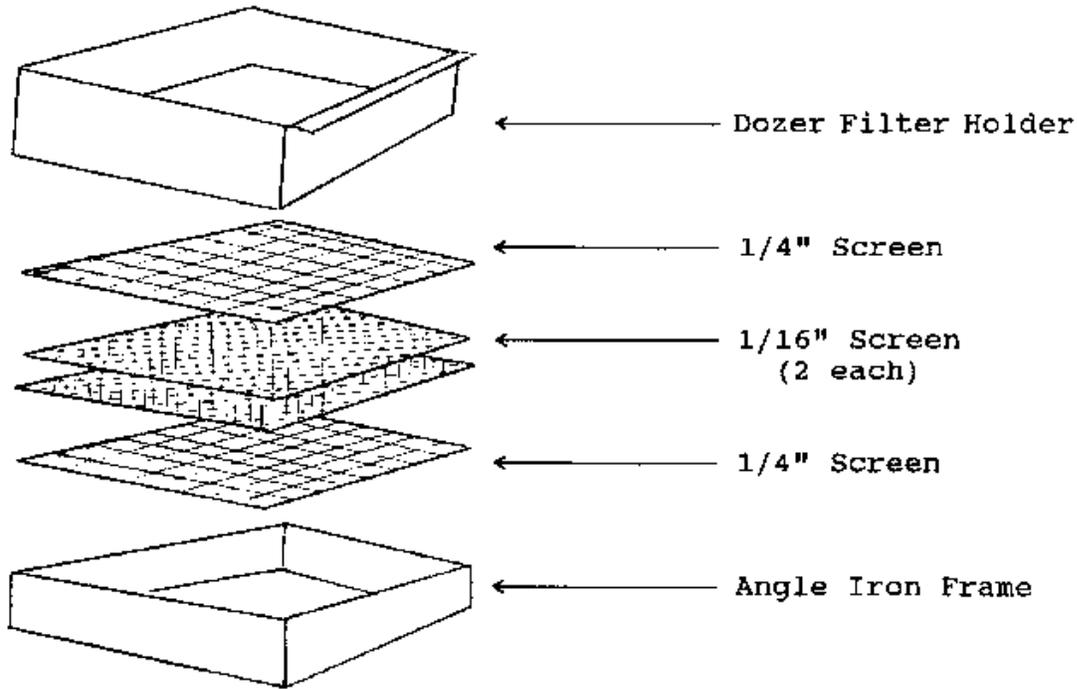
It is recommended that the vents on the back of the A/C be opened when the tractor is working in close proximity to fire and when a lot of material is being stirred up. The operator should also make sure that the A/C unit is in a re-circulating mode and is not drawing a large vacuum against the filter.

##### Spark Arrestor/Pre-Screen

San Luis Obispo Unit has fabricated and tested a filter pre-screen to act as a spark arrestor.

The fabricated pre-screen uses 1 1/2" X 1 1/2" X 1/8" angle iron placed around the perimeter of the air inlet of the filter assembly. The pre-screen pack consists of four layers, two metal window screens sandwiched between two layers of heavy mesh screen, and the window screen is 1/16". Thus, any material that is pulled up against the screens would be held away from the paper filter.

DOZER AIR CONDITIONER  
SPARK ARRESTOR



Materials List

Angle Iron - 1 ½ X 1 ½ X 1/8"  
Metal Screen - 1/16" square  
Metal Screen - ¼ square

Fabrication

Remove the filter holder from the dozer. Cut the angle iron on a 45 degree angle to form a square around the edge of the holder., weld the frame, place the two screens inside the angle iron frame, ¼ on the bottom as per diagram, weld the frame to the inlet side of the filter holder.

NOTE: Be sure there is enough clearance for the hand knob to pass by the frame assembly.

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