

AC NO: 150/5380-3A

DATE: 10/27/70



# ADVISORY CIRCULAR

## DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

**SUBJECT:** REMOVAL OF CONTAMINANTS FROM PAVEMENT SURFACES

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1. **PURPOSE.** This circular provides information to the aviation industry relative to cleaning rubber deposits, oil, grease, and jet aircraft exhaust deposits from runway surfaces.
  2. **BACKGROUND.** Tests have shown that wet runway areas contaminated by heavy rubber deposits and/or oil and jet aircraft exhaust deposits provide approximately one-half the braking effectiveness of the same contaminated areas when dry, and as low as one-third the braking effectiveness of adjacent wet, clean pavement. These contaminated areas very likely have contributed to poor stopping ability on wet runways.
  3. **CANCELLATION.** AC 150/5380-3, Cleaning of Runway Contamination, dated 28 June 1968, is cancelled.
  4. **EXPLANATION OF REVISIONS.** In addition to minor changes in the text, the references to asphalt, concrete, and military specifications have been deleted, and manufacturer's addresses have been updated. Also, the paragraph on manufacturers' instructions has been changed.
  5. **RECOMMENDATION.**
    - a. Runways should be cleaned, as required, of rubber deposits and other contamination. Chemical solvents have been successfully used for removal of rubber deposits on both portland cement concrete and asphaltic concrete runways. Some of these chemicals have a base of cresylic acid (a derivative of creosote) and a blend of benzene, with a synthetic detergent for a wetting agent for removal of rubber on concrete runways. For removal of rubber on asphalt runways, alkaline chemicals are used. See paragraph 6 for source of supply.
      - (1) The volatile and toxic nature of the cleaning compound dictates that **EXTREME CARE** be taken during and after application. If the chemical is allowed to dwell for too long a time, the paint and
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possibly the pavement surface could be damaged. When washing the cleaning compound off the pavement surface, it must be so diluted that it will not contain enough chemical to harm the surrounding vegetation, drainage system, pollution of nearby streams, or wildlife.

- (2) A test patch will be required before full-scale application to insure that the suppliers directions are adhered to exactly and the proper results attained.
  - (3) IT IS VERY IMPORTANT THAT THE SPONSOR FOLLOW THE SUPPLIER'S DIRECTIONS EXACTLY AND THAT THE PROPER SAFETY PRECAUTIONS ARE TAKEN!
- b. Detergents made of metasilicate and resin soap can be effectively used to remove oil and grease from portland cement concrete runway surfaces. For asphaltic concrete pavements, an absorbent or blotting material, such as sawdust or sand combined with a rubber alkaline degreaser, may be used.
  - c. Mechanical surface grinding machines have also been successfully used to remove heavy rubber deposits from runways.
6. SOURCES. Three manufacturers' products which have come to our attention for removal of rubber deposits are:
- a. Magnus Aviation Division, Economics Laboratory, Inc., Osborn Building, St. Paul, Minnesota 55102.
  - b. DuBois Chemicals, Division of W. R. Grace and Company, Broadway at Seventh, Cincinnati, Ohio 45202.
  - c. National Research and Chemical Company, 12520 Cerise Avenue, Hawthorne, California 90250.
7. HOW TO OBTAIN THIS CIRCULAR. Additional copies of this circular, AC 150/5380-3A, Removal of Contaminants from Pavement Surfaces, may be obtained from the Department of Transportation, Distribution Unit, TAD-484.3, Washington, D.C. 20590.



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