

**BODY—PAINT—IRON PARTICLE REMOVAL—  
INDUSTRIAL FALLOUT—ACID RAIN  
NEUTRALIZATION**

**Article No.  
04-9-6**

**FORD:** 2004-2005 CROWN VICTORIA, ESCORT ZX2, FOCUS, MUSTANG, TAURUS, THUNDERBIRD  
2005 FIVE HUNDRED, FORD GT  
2004-2005 ECONOLINE, ESCAPE, EXCURSION, EXPEDITION,  
EXPLORER SPORT TRAC, EXPLORER, F SUPER DUTY, FREESTAR,  
RANGER, F SERIES, F-650, F-750

**LINCOLN:** 2004-2005 LS, TOWN CAR, AVIATOR, NAVIGATOR

**MERCURY:** 2004-2005 GRAND MARQUIS, SABLE  
2005 MONTEGO  
2004-2005 MONTEREY, MOUNTAINEER  
2005 MARINER

This article supersedes TSB **99-12-10** to update the vehicle lines, model years and service procedure.

**ISSUE**

Ford Motor Company has released a private labeled material to be used for iron particle/acid rain service repairs.

**ACTION**

To remove these particles/contaminates, use ONLY the following Motorcraft products and procedure. No polishing, compounding, color sanding, or repainting should be done before this procedure is performed. This procedure uses products that are acidic, alkaline, and neutral and must be properly mixed and used in their specific order. Refer to the following Service Procedure for details.

**SERVICE PROCEDURE**

**NOTE**

**ANY CHANGES TO THIS PROCEDURE WILL CAUSE AN INCOMPLETE OR UNSATISFACTORY REPAIR. THE USE OF ANY OTHER PRODUCT OR PROCEDURE MAY CAUSE DAMAGE TO ALUMINUM OR PAINTED SURFACES.**

**NOTE**

**THE PRODUCTS USED TO REMOVE SURFACE CONTAMINATION FROM PAINT ARE DESIGNED FOR VEHICLES, WHICH HAVE EXPERIENCED EXPOSURE FOR LESS THAN 120 DAYS. VEHICLES THAT EXCEED 120 DAYS OF EXPOSURE MAY REQUIRE THE PROCEDURE BE REPEATED TO RESOLVE THE CONCERN. ONCE THIS PROCEDURE IS COMPLETED, IT MAY BE NECESSARY TO PERFORM POLISHING OR REFINISHING PROCEDURES AFTER VEHICLE INSPECTION.**

**IDENTIFICATION**

Ferrous metal particles (hot iron dust) are generated by manufacturing facilities, rail shipments, etc. Moisture and heat combine with particles to create a chemical reaction. This reaction creates an acid, causing the iron to corrode and etch into the paint surface. Additionally, industrial fallout and acid rain generate corrosive compounds that fall on the vehicle's painted surfaces. When subjected to moisture and temperature, chemical compounds are created that etch the paint surface. To assist in identifying surface contamination, use a (Tandy-Radio Shack #63-851) 30x lighted magnifier.

**NOTE:** The information in Technical Service Bulletins is intended for use by trained, professional technicians with the knowledge, tools, and equipment to do the job properly and safely. It informs these technicians of conditions that may occur on some vehicles, or provides information that could assist in proper vehicle service. The procedures should not be performed by "do-it-yourselfers". Do not assume that a condition described affects your car or truck. Contact a Ford, Lincoln, or Mercury dealership to determine whether the Bulletin applies to your vehicle. Warranty Policy and Extended Service Plan documentation determine Warranty and/or Extended Service Plan coverage unless stated otherwise in the TSB article. The information in this Technical Service Bulletin (TSB) was current at the time of printing. Ford Motor Company reserves the right to supersede this information with updates. The most recent information is available through Ford Motor Company's on-line technical resources.

## Article No. 04-9-6 Cont'd.

### CONCERN DESCRIPTION

#### Ferrous Metal

- Light Colored Vehicles: Small orange stains the size of "mechanical pencil lead." The surface is rough to the touch.
- Dark Colored Vehicles: Small white or silver appearing dots with a rainbow ring around the dot. The surface is rough to the touch.

#### Industrial Fallout

- Water spots containing ferrous metal are present and the surface is rough to the touch.

#### Acid Rain/Etching

- Surface will exhibit irregular discolored spotting.
- Dark colored vehicles may exhibit cloudy or graying spots where the acid has begun to etch the paint.
- Extreme cases of etching may be felt.

### DECONTAMINATION PROCEDURE

Use Motorcraft Acid Neutralizer, Alkaline Neutralizer, and Detail Wash to decontaminate and neutralize the paint surface. Perform the procedure only on vehicle when the paint surface temperature is cool. Follow the step-by-step procedure listed below to perform this service operation.

1. Rinse off dust, dirt, and debris with cold water. Flush liberally.
2. Prepare Motorcraft Acid Neutralizer by mixing eight (8) parts of water to one (1) part Acid Neutralizer in a bucket.
3. Wear gloves and use a clean wash mitt to apply mixture of Motorcraft Acid Neutralizer to the entire vehicle starting at the top of the vehicle working toward the side. Work fast and keep the vehicle wet with solution, lightly agitating and moving quickly around the vehicle repeatedly for five to seven (5-7) minutes. For vehicles with severe conditions, work the product for up to eight (8) minutes.

#### NOTE

**USE A SEPARATE MITT FOR EACH PRODUCT. DO NOT INTERMIX MITTS.**

4. Rinse the vehicle thoroughly with cold water to remove Motorcraft Acid Neutralizer.
5. Dry only the horizontal surfaces of the vehicle at this time. Do not dry glass.

#### NOTE

**MOTORCRAFT ALKALINE NEUTRALIZER IS READY TO USE. DO NOT MIX WITH WATER. DO NOT SPRAY MOTORCRAFT ALKALINE NEUTRALIZER ON THE PAINTED SURFACE.**

6. Pour the Alkaline Neutralizer into a dispenser (squirt bottle). Squirt the neutralizer directly onto a clean wash mitt. Apply the product to the vehicle, keeping the areas wet and lightly agitated for five to seven (5-7) minutes. For vehicles with severe conditions, work the product for up to eight (8) minutes.
7. Rinse the vehicle thoroughly with cold water.
8. Prepare Motorcraft Detail Wash by mixing 29.5 mL (1 ounce) of Detail Wash to 3.7 L (1 gallon) of water.
9. Shampoo the vehicle with Motorcraft Detail Wash using a clean wash mitt. Rinse the vehicle with cold water and dry the vehicle completely.

### SURFACE CORRECTION FOLLOWING DECONTAMINATION/NEUTRALIZATION

1. Visually inspect paint surface for evidence of removal of ferrous metal particles and water spots.

#### NOTE

**ACID RAIN DISCOLORING OR ETCHING WILL REQUIRE ADDITIONAL PROCEDURES DEPENDENT ON DEPTH OF DAMAGE; POLISHING, BUFFING, COLOR SANDING, OR IN EXTREME CASES, REFINISHING.**

2. DO NOT intermix buffing products. Use only one manufacturer's products.
3. Always follow the manufacturer's product usage sequence. Use the appropriate recommended pad at recommended buffing speeds as specified by the product manufacturer.

#### NOTE

**WHEN ATTEMPTING TO AFFECT A REPAIR BY BUFFING, POLISHING, OR COLOR SANDING, DO NOT REMOVE AN EXCESS OF 0.3 MIL OF PAINT FILM OR REFINISHING WILL BE REQUIRED. USE OF AN ELECTRONIC MIL GAUGE (ROTUNDA 164-R4025) IS HIGHLY RECOMMENDED TO INSURE CONTROL OF PAINT FILM REMOVAL.**

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- 4. Use a dual action sander with a Velcro backing plate and foam pad to fine polish and remove any swirls created by a rotary buffer or pad.
- 5. Use an alcohol and water mixture (1 to 1 ratio) to clean the buffed areas and to verify removal of scratches and swirls before application of the final polish.

**OTHER APPLICABLE ARTICLES:** NONE  
**WARRANTY STATUS:** Eligible Under Provisions Of  
New Vehicle Limited  
Warranty Coverage

PART NUMBER	PART NAME
ZC-1-A	Motorcraft Acid Neutralizer
ZC-2-A	Motorcraft Alkaline Neutralizer
ZC-3-A	Motorcraft Detail Wash