• PAINT—IRON PARTICLE REMOVAL—INDUSTRIAL FALLOUT—ACID RAIN NEUTRALIZATION • PAINT—ROUGH TEXTURE/FERROUS METAL CONTAMINATION—ACID RAIN DISCOLORATION OR ETCHING	Article No. 99-12-10

FORD: 1996-1997 ASPIRE, PROBE, THUNDERBIRD
1996-1999 CONTOUR, CROWN VICTORIA, ESCORT, MUSTANG, TAURUS
1996 BRONCO
1996-1997 AEROSTAR, F SUPER DUTY, F-250 HD, F-350
1996-1999 ECONOLINE, EXPLORER, F-150, F-250 LD, RANGER, WINDSTAR
1997-1999 EXPEDITION
1999 SUPER DUTY F SERIES
1996-1997 CARGO SERIES
1996-1998 AEROMAX, F SERIES, LOUISVILLE

LINCOLN: 1996-1998 MARK VIII
1996-1999 CONTINENTAL, TOWN CAR
1998-1999 NAVIGATOR

MERCURY: 1996-1997 COUGAR
1996-1999 GRAND MARQUIS, MYSTIQUE, SABLE, TRACER
1999 COUGAR
1996-1999 VILLAGER
1997-1999 MOUNTAINEER

This TSB article is being republished in its entirety to add vehicles and model years, and to revise the procedure to use Ford brand service parts.

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 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. These particles mechanically bond to a vehicle's painted surfaces. Moisture and temperature combine with particles to create a chemical reaction. This reaction creates an acid, causing the iron to corrode and enter the paint surface. 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.

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 with 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 will be visible and may be felt.

Decontamination Procedure

Use Ford 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 Acid Neutralizer by mixing 8 parts of water to 1 part Acid Neutralizer in a bucket.
3. Use a clean wash mitt and apply mixture of Acid Neutralizer to the entire vehicle starting at the top of the vehicle working toward the side. Keep the vehicle wet with solution, lightly agitating for 5 to 7 minutes. For vehicles with severe conditions, work the product for up to 8 minutes.

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

4. Rinse the vehicle thoroughly with cold water to remove Acid Neutralizer.
5. Dry only the horizontal surfaces of the vehicle at this time. Do not dry glass.
6. Alkaline Neutralizer is ready to use. Do not mix with water. Pour the contents into a dispenser squirt bottle. Squirt Alkaline Neutralizer directly onto a clean wash mitt. Do not spray Alkaline Neutralizer on the painted surface. Apply the product to the vehicle, keeping the areas wet and lightly agitated for 5 to 7 minutes. For vehicles with severe conditions, work the product for up to 8 minutes.
7. Rinse the vehicle thoroughly with cold water.
8. Prepare 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 Detail Wash using a clean wash mitt. Rinse the vehicle with cold water and dry the vehicle completely.

NOTE
DETAIL WASH IS A HEAVY DUTY NEUTRAL SHAMPOO CONCENTRATE (pH 7) AND MAY BE USED FOR HAND CAR WASHING OR IN AUTOMATIC CAR WASH SYSTEMS.

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.

4. Use a dual action sander with a Velcro backing plate and a 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.

PART NUMBER	PART NAME
F8AZ-19520-JA	Acid Neutralizer (3.7 L/1 Gallon)
F8AZ-19520-FA	Acid Neutralizer (18.9 L/5 Gallon)
F8AZ-19520-DA	Alkaline Neutralizer (3.7 L/1 Gallon)
F8AZ-19520-GA	Alkaline Neutralizer (18.9 L/5 Gallon)
F8AZ-19520-EA	Detail Wash (3.7 L/1 Gallon)
F8AZ-19520-HA	Detail Wash (18.9 L/5 Gallon)

OTHER APPLICABLE ARTICLES: NONE
SUPERSEDES: 97-21-3
WARRANTY STATUS: Eligible Under The Provisions Of 12 Month/12,000 Mile Basic Warranty Coverage

OPERATION	DESCRIPTION	TIME
991210A	Decontaminate And Surface Correction (Aspire, F-450/550, And Cargo)	0.6 Hr.
991210B	Decontaminate And Surface Correction (Escort ZX2, Ranger Regular Cab, Probe, Bronco, And Aerostar)	0.7 Hr.
991210C	Decontaminate And Surface Correct (Escort/Tracer, Escort/Tracer Wagon, Contour/Mystique, Mustang Convertible/Convertible GT, Taurus/Sable Sedan Or Wagon, 1996-1998 Villager, And 1999 Cougar)	0.8 Hr.
991210D	Decontaminate And Surface Correction (F-Series And 1996-97 Thunderbird/Cougar)	0.8 Hr.
991210E	Decontaminate And Surface Correction (Ranger SuperCab/Splash, F-150/250 6Ft Bed - Regular Cab/Flare Side - Regular Cab, F-250/350 SD 6Ft Bed - Regular Cab, F-450/550 Crew Cab, And Louisville/AeroMax)	0.8 Hr.
991210F	Decontaminate And Surface Correction (Mustang Coupe/Coupe GT, Continental, Mark VIII, Ranger Splash SuperCab, Explorer 2-Door, And 1999 Villager)	0.9 Hr.
991210G	Decontaminate And Surface Correction (F-150/250 6Ft Bed - SuperCab/8Ft Bed - Regular Cab/Flare Side - SuperCab, And F-250/350 SD 6Ft Bed - SuperCab/8Ft Bed - Regular Cab)	0.9 Hr.
991210H	Decontaminate And Surface Correction (Crown Victoria/Grand Marquis, Town Car, Windstar, Explorer 4-Door, And Mountaineer)	1.0 Hr.
991210I	Decontaminate And Surface Correction (F-150/250 8Ft Bed - SuperCab, F-250/350 SD 6Ft Bed - Crew Cab/8Ft Bed - SuperCab/8Ft Bed - Crew Cab, And Expedition/Navigator)	1.0 Hr.

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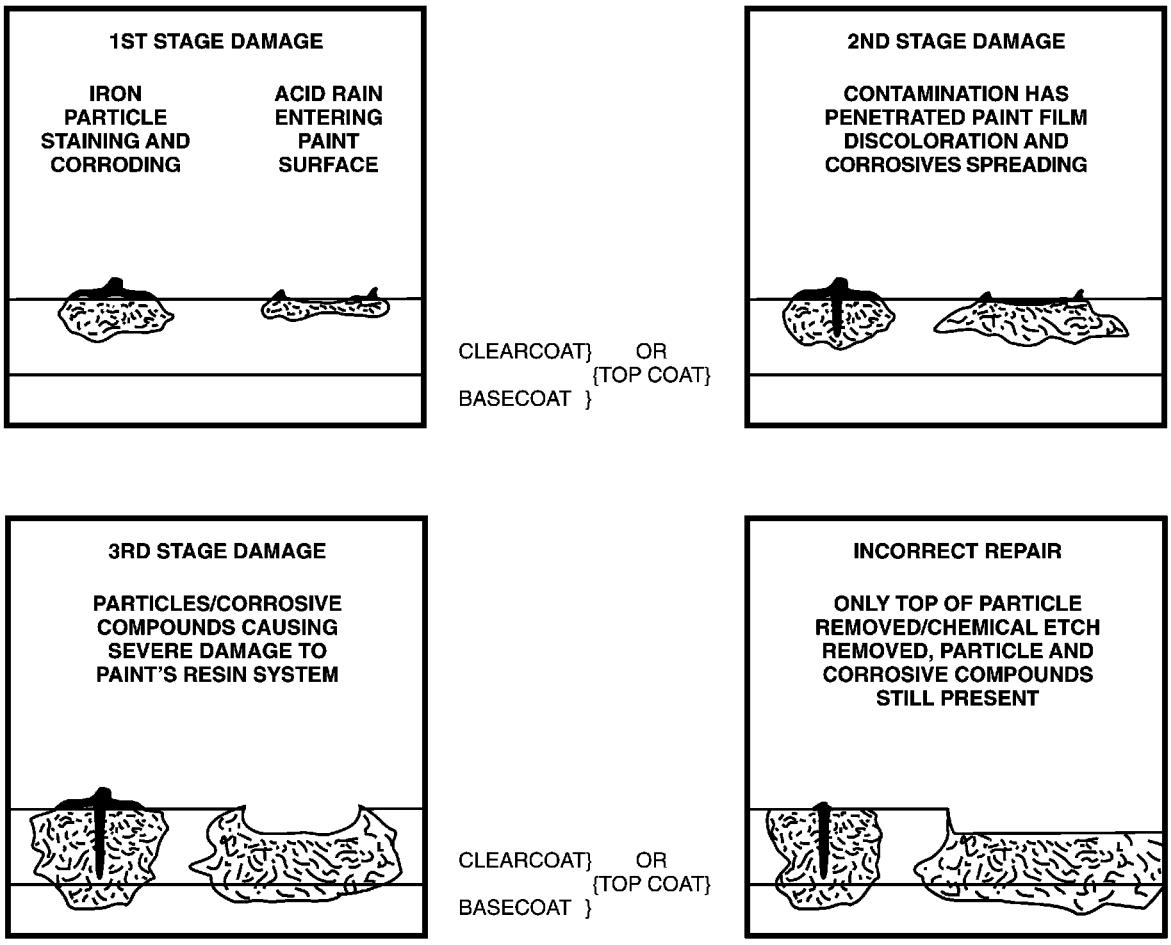
991210J	Decontaminate And Surface Correction (Econoline Wagon/Wagon Super-V)	1.2 Hrs.	**DEALER CODING** BASIC PART NO. ENTRE	CONDITION CODE C8
991210K	Decontaminate And Surface Correction (Econoline Cargo)	1.3 Hrs.	**OASIS CODES:** 106000, 190000	
991210L	Decontaminate And Surface Correction (Econoline Cargo Super-V)	1.4 Hrs.		

INDUSTRIAL FALLOUT (IFO) is a general term used to identify Rail Dust, Brake Dust, Ferrous Metal, Alkaline/Crystalline Deposits, Water Spots, Acid Rain, and other types of Environmental Contamination.



Studies conducted have shown the use of Oxalic Acid ferrous metal removers actually contribute to further damage of the paint's resin system, creating long term damage, which may not be evident for months. Additionally, Oxalic Acid products may damage soft exterior trim, aluminum trim and soften the paint.

The use of "clay" type products does not remove the entire ferrous particle or environmental contamination. Clay removes only the top of the particle and stain generated by the contamination, leaving the particle imbedded and the corrosive chemical compounds generated by the contamination in the paint system.

The particles and/or chemical compounds are still present and they continue to generate damage. Color sanding, buffing, or compounding the paint film to remove ferrous metal, industrial fallout, or acid rain damage may not remove the entire cause of the damage (they treat only the symptom and not the cause). The chemical compounds are still in the paint system and will continue to damage the paint. Color sanding and buffing may result in excessive removal of clearcoat film. Removal of OEM clearcoat in excess of 0.3 mil may contribute to premature clearcoat failure and is not recommended.

THE DECONTAMINATION PROCEDURE DIRECTED IN THIS BULLETIN MUST BE PERFORMED BEFORE ANY BUFFING, POLISHING, COLOR SANDING, OR REFINISHING IS ATTEMPTED.

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Figure 1 - Article 99-12-10