

NAVISTAR, INC.		
TMS (TRUCK MATERIAL SPECIFICATION)		NUMBER: TMS-9503
TITLE: Exterior Plastic Film, Application Procedure	CURRENT REV No.: 0912	DATE: December 2009
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<i>This specification may involve hazardous materials, equipment, and procedures. This specification does not purport to address all of the safety issues associated with its use. The user is responsible to consult appropriate safety and health practices and to determine the applicability of regulatory limits prior to use.</i>		
Change Notice: Replaced "International Truck and Engine Corporation" with "Navistar, Inc." per corporate directive; added CEMS B-50 requirement; editorial changes.		
Reference: File 30-11B	Keywords: Exterior Plastic Film Application	

1.0 APPLICATION

This standard outlines the procedure for applying decorative pressure sensitive films to painted exterior body sections such as fenders, doors, quarter panels and tailgates. The material specification for the plastic film, TMS-7107 or CEMS G-7, types will be specified on the engineering drawing for the part or assembly. The application of these films shall be made after the body section has been completely painted, inspected and approved for delivery to the trim line. Application areas shall be specified on engineering drawings.

2.0 SCOPE

This specification covers the procedure for applying the film, including surface preparation, application method, inspection and process quality control.

2.1 Restricted Chemical Substances

Effective January 1, 2007, all product supplied to the requirements of this specification must comply with the requirements of the CEMS B-50 specification.

3.0 REFERENCE DOCUMENTS

Unless otherwise specified, the latest issue of all referenced standards shall apply. The following standards, specifications and regulations are referenced in this specification.

Quality System Standard ISO 9001 or TS-16949	NAVISTAR CEMS B-50
CFR Title 29, Section 1910	NAVISTAR CEMS G-7
NAVISTAR Manufacturing Std. MS-D-13	NAVISTAR TMS-7107
NAVISTAR Eng. Design Std. A-16	NAVISTAR TMS-9543

4.0 REQUIREMENTS

4.1 Surface Preparation

4.1.1 Sanding of Paint

Wet sand with #360 paper. All metal and/or paint nibs are removed during the sanding operation. Such defects will telescope through the vinyl film.

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4.1.2 Cleaning

The body surface to which the decorative film will be bonded must be free of grease, oil and other foreign material. Wipe with clean cloth soaked in isopropyl alcohol.

4.2 Application

4.2.1 Temperature

The film is most easily handled when air and application surface temperatures are between 21-32°C (70-90°F). For applications below 21°C (70°F), use heat lamps, a jet of steam, or a heat gun to warm the surfaces to which the film is to be applied as well as the film itself.

4.2.2 Wetting Solution

Thoroughly mix two to three level teaspoons of detergent (American Cyanamid Aerosol OT 75% AQ) per one gallon of clean, warm [32-35°C (90-95°F)] water. NEVER USE SOAP OR HARSH DETERGENTS. The mixing container should be stainless steel or plastic.

4.2.3 Wetting of the Body and Decorative Film Adhesive Surfaces

Thoroughly wet the application surfaces of the body and the adhesive surface of the decorative film with the wetting solution. This can be accomplished with a sponge saturated with wetting solution or any other suitable method of application (such as immersing the film without paper backing).

4.2.4 Removal of Backing

Bend a corner of the film toward the DECORATIVE FACE side to separate from the film. Lay the film on a clean, warm, flat surface BACKING SIDE UP. Hold the film firmly to the surface and remove the backing with a smooth 180° peeling motion. IT IS MANDATORY TO REMOVE THE BACKING FROM THE FILM -- NEVER THE FILM FROM THE BACKING, AS POSSIBLE FILM STRETCHING OR BREAKING MAY RESULT.

Note: Under hot, humid conditions, a slight jerking motion will aid in removing the backing.

4.2.5 Apply Wet Decorative Film to Body Surfaces

Immediately apply the wetted decorative film to the panel. Center the decorative film, smoothing out all ripples with the hand in the area to be covered. Apply the wetting solution to the outer surface of the film.

4.2.6 Pressurize and Level Off

4.2.6.1 Flat Surfaces

Using a plastic squeegee, pressurize all of the flat surfaces with firm, overlapping strokes to remove all air bubbles, water and wrinkles. On vertical surfaces pressurize and level off the entire top edge first with a 75 x 100 mm (3 x 4 in) squeegee and then work from top to bottom using a 20 cm (8 in) squeegee, with firm overlapping strokes. On horizontal surfaces, start at the center and work toward the edges, using a 75 x 100 mm (3 x 4 in) squeegee. DO NOT APPLY PRESSURE TO EDGES THAT WILL BE WRAPPED AROUND THE DOORS, FENDERS OR GAS CAP AREAS, OR TO COMPOUND CURVE AREAS. Pressurize the surface a second time and then dry the surface with a piece of clean cheesecloth.

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