

## Performance Requirements for Pressure Sensitive Markings (Decals)

### 1. SCOPE

1.1 This specification defines the performance requirements for all pressure sensitive markings described in standard 86613511 (FNHA-3-A-073.00). In the remainder of this standard, pressure sensitive markings will be referred to as markings. In many instances, pressure sensitive markings are referred to as decals and may be used interchangeably.

1.2 This specification was released originally for all markings used on New Holland agricultural, industrial tractor, and tractor related equipment.

1.3 This specification may involve hazardous materials, procedures, and apparatus. This specification does not address the health and safety problems associated with its application or use. It is the specification user's responsibility to follow appropriate health or safety practices and determine the application or regulatory limitation before use.

### 2. DESIGNATION

The Engineering drawing shall call out this performance standard following the procedure outlined in section 8 of standard 86511126 (FNHA-3-B-100.00).

### 3. RELATED SPECIFICATIONS

#### 3.1 REFERENCE STANDARDS

86613511(FNHA-3-A-073.00) - Pressure Sensitive Markings  
86511126(FNHA-3-B-100) - Referencing Standards on Drawings

86505483(FNHA-2-J-005.00) - Color Designation  
86507636(FNHA-2-J-001.01) - Panel Preparation  
86507637(FNHA-2-J-001.02) Color Measurement  
86507638(FNHA-2-J-001.03) - Gloss Measurement  
86507650(FNHA-2-J-001.15) - Chemical Resistance  
86507653(FNHA-2-J-001.18) - Florida Exposure  
86507663(FNHA-2-J-001.28) - Accelerated Weathering  
86507666(FNHA-2-J-001.31) - Freeze/Thaw  
86507670(FNHA-2-J-001.35) - Water Immersion  
86513260(FNHA-2-J-001.38) - Adhesion  
86513263(FNHA-2-J-001.39) - Accelerated Storage  
86513264(FNHA-2-J-001.40) - Flexibility  
86513265(FNHA-2-J-001.41) - Abrasion Resistance  
86513266(FNHA-2-J-001.42) - Opacity  
86513267(FNHA-2-J-001.43) - Shrinkage  
86513268(FNHA-2-J-001.44) - Accelerated Color Retention  
86514845(FNHA-2-J-001.45) - Premask Release Properties  
ENW.DS.008 - Decal - Development, Design, and Sourcing  
ASAE S276 - Slow-Moving Vehicle Identification Emblem  
ASAE S279 - Lighting and Marking of Agricultural Equipment on Highways  
SAE J594 - Reflex Reflectors

3.2 This specification replaces Section 2A and 2B of the New Holland Finishing Manual and Versatile Standard 2A015. Also replaces DM specification.

|            |         |     |         |         |                                                                                                        |                    |                                                                                                                                                                                   |             |      |
|------------|---------|-----|---------|---------|--------------------------------------------------------------------------------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------|
|            |         |     |         |         | NAME                                                                                                   | STD DECAL PERF REQ |                                                                                                                                                                                   |             |      |
|            |         |     |         |         |  <b>NEW HOLLAND</b> |                    | ENGINEERING SPECIFICATION                                                                                                                                                         |             |      |
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| ALL        | B       | RLF | 110244  | JUL 97  |                                                                                                        |                    |                                                                                                                                                                                   | PART NUMBER |      |
| ALL        | aA      | RE  | 106591  | 950616  |                                                                                                        |                    |                                                                                                                                                                                   |             |      |
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**4. PERFORMANCE REQUIREMENTS****4.1 COLOR**

4.1.1 Color identification is specified in standard 86505483 (FNHA-2-J-005.00). All color matches must be visually acceptable and have  $\Delta E$  of 2.0 or less where specified. Visual match takes precedence over  $\Delta E$  value.

4.1.2 All new lots of color impregnated films must be submitted to and approved by the Materials Engineering prior to use. No markings are to be made by the Supplier prior to approval.

**4.2 WORKMANSHIP AND APPEARANCE**

The design shall be as specified and the workmanship must be excellent throughout. All lines, print, and coloring shall be sharp and clear and in proper register. The markings shall be smooth and free of cracks, blisters, pinholes, and other surface blemishes.

**4.3 RELEASE PROPERTIES**

4.3.1 The paper backing must be scored to permit easy removal of the marking. The scoring must not cut into the marking.

4.3.2 On items with a special clear or overlay where scoring is not practical, a tab on the backing paper or an oversized backing paper is permitted to achieve removal of the marking.

4.3.3 There shall be no adhesive present on the backing paper after the marking has been removed.

**4.4 SHELF LIFE**

All markings shall be able to be used for a period of two years after being received by the plant provided they were not stored in excessive heat (120°F or above) or in the direct rays of the sun.

**4.5 TEST PERFORMANCE REQUIREMENTS**

4.5.1 Applicable tests for pressure sensitive markings are listed in Table 1.

4.5.2 Minimum performance requirements for each category of marking are listed in Table 2.

NOTE: For shrinkage acceptance criteria on S-780 adhesive, the following apply:

- (a) For cast film, less than 0.8%
- (b) For calendered film, less than 1.0% in each direction

**5. SUPPLIER RESPONSIBILITY**

All materials supplied to this specification shall be equivalent in all characteristics to the material upon which approval was originally granted. Prior to the making of any changes in the properties, composition, construction, color, dimension, processing, or labeling of the material originally approved under this specification, the Supplier shall notify Purchasing and the affected Materials Engineering activity of the proposed changes and obtain the written acknowledgment of the Materials Engineering activity. Test data, test samples, and a new identification code are to be submitted with the request.

**6. TESTING FOR SUPPLIER APPROVAL PROCESS**

NOTE: Supports Quality ENW.DS.008

6.1 Testing will be conducted as the need for additional approved vendors exists and will proceed only after New Holland Purchasing has received competitive cost quotations. Materials Engineering will conduct all testing. Any evaluation will begin only after the supplier has shown documented testing data and/or product performance results.

|                                                                                     |                           |        |         |      |             |  |
|-------------------------------------------------------------------------------------|---------------------------|--------|---------|------|-------------|--|
|  | NAME                      |        |         |      | PART NUMBER |  |
|                                                                                     | STD DECAL PERF REQ        |        |         |      | 86523144    |  |
|                                                                                     | ENGINEERING SPECIFICATION | REV. C | FRAME 2 | OF 4 |             |  |