

**EASTERN  
WHITE PINE  
BOARD GRADES**



## 6.0 EASTERN WHITE PINE

Eastern White Pine grade descriptions set forth the limiting characteristics that may occur in the lumber of each grade. Therefore, the rules describe the poorest pieces in a grade. All, or nearly all, of the permissible characteristics of the grade are never present in maximum size or number in any piece. Any piece with an unusual combination of characteristics which seriously affect normal serviceability is excluded from the grade.

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Compression wood in damaging form based on visual inspection (i.e., compression failure, warp, or other such damage) is excluded from the grades of Premium or Better. The common grades will permit burls and grain distortion without limit, provided the serviceability of the piece is not materially impaired. Flat grain is not limited. All knots are measured by average diameter on the grade face. A red knot must have at least 25% of its margin intergrown with the surrounding wood. The maximum knot sizes listed for the Common grades may be exceeded in pieces of otherwise exceptional quality. Knot sizes for odd widths shall be halfway between those specified for even widths. Branch and spike knots are treated as round knots (average diameter). Natural heart coloration and star checking of knots are not considered defects. Loose black knots are treated as knot holes. Wane may be increased in length if the width and thickness of the wane is less than maximum on an equivalent area basis. Thickness and width provisions may not be increased. Roller checks are measured and graded according to the seasoning check provisions.

### 6.1 SELECTS

There are two select grades: C Select and D Select which may be combined into a single marketing group, D & Btr. Select.

All selects are grades from the best face.

### 6.1.1 C Select (C Sel. — abbreviation)

This is the highest NELMA Pine grade. While some of the pieces are clear, most pieces have minor characteristics which do not affect their high appearance or quality. Material of this grade is best used for natural or stained finish, fine woodworking or interior trim.

The reverse face of C Select shall permit sound characteristics typical of D Select.

All thicknesses.

Widths — 3" and wider.

Lengths — 6' to 16'. Percentage of 6' to 9' lumber will be limited to 20% of a shipment with a maximum of 5% 6' based on board foot content.

#### Characteristics and Limiting Provisions:

Bite — 1/64" in 2% of the pieces.

Checks — Barely perceptible on face and back.

Knots — One sound, tight, pin knot (max. 1/2") per 4 surface feet. In an occasional piece, one small, sound, tight, red knot (maximum 3/4") is permitted.

Knife Marks — Slight.

Machine Burn — None.

Mismatch — Very light.

Offset — 1/64" in 2% of the pieces.

Pitch — Medium 1/3 the face in a clear board.

Pockets — Very small, well-scattered pockets permitted; maximum of one per four surface feet.

Raised Grain — Very Light.

Shake — Barely perceptible on face and back.

Skip — On reverse face or one edge, 1 light 2' skip per each 8' of length on not more than 10% of the pieces.

Stain — Medium (blue or coffee), not to exceed 1/3 the face surface area in a clear board, equivalent larger area of light stain; less if present in combination with other characteristics.

Torn Grain — None.

Wane — 1/2 the thickness, 1/8 the width, 1/4 the length on one edge on reverse face only.

Warp — Very light. See para. 752.0.

### 6.1.2 D Select (D Sel. — abbreviation)

The last of the select grades, D Select, takes its appearance from both the select and the common grades. Its characteristics are more pronounced than C Select, but are well spaced giving more clear material.

The reverse face of D Select shall permit sound characteristics typical of Standard.

All thicknesses.

Widths — 3" and wider.

Lengths — 6' to 16'. Percentage of 6' to 9' lumber will be limited to 20% of a shipment with a maximum of 5% 6' based on board foot content.

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#### Characteristics and Limiting Provisions:

Bite — 1/64" in 2% of the pieces.

Checks — Barely perceptible on face. Medium surface checks on back.

Knots — One sound, tight pin (maximum 1/2") knot per surface foot. In an occasional piece, one small (maximum 3/4"), sound, tight knot is permitted.

Knife Marks — Slight.

Machine Burn — One per board.

Mismatch — Very light.

Offset — 1/16" in 2% of the pieces.

Pitch — Medium 2/3 the face in a clear board. One small streak of heavy pitch.

Pockets — Very small, well-scattered pockets permitted; maximum of one per 2 surface feet.

Raised Grain — Very Light.

Shake — Barely perceptible on face, light surface shake not over 1/4 the length on back.

Skip — Hit and miss on reverse face or one edge, on not more than 20% of the pieces.

Splits — Very short (1/2 the width).

Stain — Blue or Coffee: Medium, not to exceed 3/4 of the face surface area in a clear board, equivalent larger area of light stain, less if present in combination with other characteristics; OR, Heavy, up to 5% of the face surface area on an otherwise clear board, limited to 15% of a shipment based on board footage.

Torn Grain — 1/64" deep.

Wane — On reverse face; 1/2 the thickness, 1/4 the width, 1/4 the length, on one edge or equivalent on two edges.

Warp — Very light. See para. 752.0.

5% Cut for Defect — Defect must be located either within 5% of length on the end or in the middle portion of the piece leaving at least three feet usable lumber at each end. The 5% cut shall be a cross cut. Pieces 6' through 9' must be usable full length without making a cut for defect.

## 6.2 COMMONS

All boards are graded from the better face.

There are four Eastern White Pine Common grades: Finish, Premium, Standard and Industrial. The grades of Finish and Premium may be grouped together as Premium & Btr.

All thicknesses.

Widths — 3" and wider.

Lengths — 6' to 16'.

### 6.2.1 Finish (Fin. — abbreviation)

This is a fine appearance knotty grade calling for sound, tight knots. Material of this grade can be finished to take advantage of the natural highlights of the piece or to give a fine smooth painted surface. The reverse face of Finish shall permit sound characteristics typical of Standard.

Characteristics and Limiting Provisions:

Bite — 1/64" in 2% of the pieces.

Checks — Small.

Knots — Sound and tight, limited as follows:

Nominal Width	Red	Black
4"	1-1/4"	5/8"
6"	1-1/2"	3/4"
8"	2"	3/4"
10"	2-1/4"	7/8"
12" and wider	2-1/2"	7/8"

Pieces containing black knots must be in keeping with the general quality and appearance of the grade.

Knot Holes — Two sloughed out knots on reverse face not exceeding 1/2 the thickness or equivalent.

Knife Marks — Slight.

Machine Burn — None.

Mismatch — Very light.

Offset — 1/32" in 2% of the pieces.

Pitch — Medium.

Pith — 1/10 the length.

Pockets — Very small, well-scattered pockets permitted.

Raised Grain — Very Light.

Seams — Partially surrounding a knot are permitted up to a maximum size of one 1/8" x 1/2" per board limited to 10% of a shipment.

Shake — Surface, light; not to exceed 1/10 the length on the face, 1/4 the length on back.

Skip — Hit and miss on reverse face or light skip on one edge not exceeding 1/4 the length. Limited to 10% of the pieces.

Splits — Very short (1/2 of the width).

Stain — Medium (blue or coffee), not to exceed 1/2 the face surface area.

Torn Grain — 1/64" deep not over 5% of the face.

Wane — On reverse face; 1/2 the thickness, 1/4 the width, 1/4 the length, on one edge only.

Warp — Light. See para. 752.0.

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#### 6.2.2 Premium (Prem. — abbreviation)

This is a good appearance knotty grade. It is used in the same area as Finish where a slightly rougher natural appearance is desired.

The reverse face of Premium shall permit sound characteristics of Standard.

Characteristics and Limiting Provisions:

Bite — 1/64"; 2% of the pieces may have 1/32".

Checks — Medium.

Knots — Generally sound and tight, limited as follows:

Nominal Width	Red	Black
4"	2"	3/4"
6"	2-1/2"	1"
8"	3"	1-1/4"
10"	3-1/4"	1-1/2"
12" and wider	3-3/4"	1-1/2"

Black knots of maximum size are accepted in pieces of high quality and are limited to one in pieces 6' through 9' and two in 10' and longer or equivalent smaller.

Knot Holes — One 1" hole in 12" board or equivalent smaller; proportionately smaller for narrower widths.

Knife Marks — Slight.

Machine Burn — One per board.

Mismatch — Very light.

Offset — 1/64"; in 2% of the pieces may have 1/16".

Pith — Any amount if sound.

Pitch — Medium.

Pockets — Small, well-scattered pockets permitted.

Raised Grain — Light.

Shake — Surface light; not to exceed 1/4 the length on face and back. Through shake, barely perceptible.

Seams — Partially surrounding a knot are permitted up to a maximum size of one square inch (i.e., 1/4" x 4", 1/3" x 3", 1/2" x 2"). One maximum sized seam or equivalent is permitted per 8 surface feet.

Skip — Hit and miss on reverse face or one edge on not more than 20% of the pieces.

Splits — Short (not exceeding width).

Stain — Medium (blue or coffee).

Torn Grain — 1/16" deep, not over 10% of the face.

Unsound Wood — Incipient: 10% of the surface area

face or back.

Wane — On reverse face; 1/2 the thickness, 1/4 the width, 1/4 the length on one edge or equivalent on 2 edges.

Warp — Medium. See para. 752.0.

Worm Holes — One medium worm hole permitted for each 6 linear feet. Pin worm holes permitted up to 10% of the surface area.

### 6.2.3 Standard (Stand. — abbreviation)

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For Appearance grade and Construction grade see para 6.3 and 6.3.1.

This is a highly serviceable grade used chiefly for construction. It may be used where a coarser rustic decorative appearance is desired.

#### Characteristics and Limiting Provisions:

Bite — 1/64"; 2% of the pieces may have 1/16".

Checks — Surface and through, 1/4 length to maximum of 3'.

Fixed Knots — Fixed knots are allowed up to the size of the maximum hole allowed or equivalent smaller, limited to one per piece.

Knots (Red knot formula: 2/3 the width to a maximum of 6" / Black knots: 1/2 the width to a maximum of 4"). Any quality limited as follows:

Nominal Width	Red	Black
4"	2-3/8"	1-3/4"
6"	3-3/4"	2-3/4"
8"	4-7/8"	3-5/8"
10"	6"	4"
12" and wider	6"	4"

Knot Holes — One quarter the width to a maximum of 2". One maximum size hole or equivalent smaller per 8 linear feet between maximum sized holes.

Machine Burn — No limit.

Mismatch — Very light.

Offset — 1/64"; 2% of the pieces may have 1/8".

Pitch — Heavy.  
Pith — Any amount.  
Pockets — Large.  
Raised Grain — Light.  
Shake — Through, not to exceed 1/3 the length.  
Seams — Any not seriously weakening the pieces, limited to 1/6 the length.  
Skip — Hit and miss on reverse faces; one edge may be 1/16" scant full length or 1/8" scant for half the length on not more than 20% of the pieces.  
Splits — Medium (twice width, not to exceed 1/6 the length). Edge cracks or breaks due to handling or drying permitted up to 1/3 the width.  
Stain — Heavy.  
Torn Grain — 1/16" deep.  
Unsound Wood — Either incipient 33-1/3% of surface area; or advance 10% of surface area (or equivalent combination thereof) with only 10% being allowed on the grade face, and must not destroy the nailing edge.  
Wane — On reverse face; 2/3 the thickness, 1/4 the width, 1/2 the length on one edge, or equivalent on two edges.  
Warp — Heavy. See para. 752.0.  
Wavy Dressing — Light.  
Worm Holes — One medium permitted for each 2 linear feet. Pin worm holes permitted up to 50% of the surface area.

#### 6.2.4 Industrial (Ind. — abbreviation)

This is the lowest common board grade. It admits large characteristics in any combination as long as the piece is usable full length. This material is generally used in rough construction where strength and appearance are not of primary importance.

##### Characteristics and Limiting Provisions:

Characteristics admitted without limits: Sound and unsound knots, shake, checks, pitch, pitch pockets, hit and miss dressing, pith, stain, warp, knot holes, bark and pitch, seams, and worm holes. Any characteristics which, by themselves

or in combination, seriously weaken the piece for reasonable handling will not be permitted.

Skip — Hit or miss or a heavy skip not exceeding 1/4 the length.

Splits — Not to exceed 1/4 the length.

Unsound Wood — Advanced: not to exceed 1/2 the surface area. Must not destroy the nailing edges.

Wane — 3/4 the thickness, 1/2 the width, 1/2 the length. Full width or thickness wane up to 1/2" scant is permitted for 1/4 the length.

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#### 6.3 APPEARANCE GRADE

Appearance grade will be taken from the high end of Standard Grade (see para. 6.2.3) and it will have a sound Standard back. The following are the limitations:

Fixed knots — Not allowed — Treated as hole.

Checks — Light, up to 2' in length, if tight.

Knot holes — One 1" in a 12" board or equivalent smaller. Proportionately smaller for narrower widths.

Pockets — Maximum 2 square inches, none loose or open.

Shake — Light, up to 2' in length, if tight.

Seams — Maximum 2 square inches, none loose or open.

Splits — Short, no greater than width of board.

Edge breaks — Maximum 1/6 width.

Stain — Medium, blue or brown.

Unsound wood — Incipient only allowed up to 10% of surface area.

Worm holes — Grade as knot holes, count toward knot hole limit.

Reverse face — Sound Standard.

Any characteristics permitted in NELMA Standard Grade which are not addressed above are to be graded as in NELMA Standard Grade.

### 6.3.1 CONSTRUCTION

The Portion of the grade of Standard (Para 6.2.3) that does not make Appearance Grade. All pieces must make Standard Grade.

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