

Idaho Transportation Department

Sealcoat Warranty Guide



US-95, Milepost 232. Looking north from Whitebird Hill
A desirable Sealcoat

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1. Introduction. The Idaho Transportation Department (the Department) uses sealcoats for two purposes: pavement preservation and skid resistance. Sealcoating a pavement protects it from sun, oxidation, weather, water, oil and gas, and improves friction for drivers.

The intent of a sealcoat warranty is for the Contractor to warranty workmanship and materials against Contractor Obligation Defects (CODs) for the warranty period as outlined in this guide and in the contract.

2. Definitions.

a. Defect. Defects are the loss of asphalt or chips, or action simulating the loss of asphalt or chips, to diminish the effectiveness of the sealcoat for pavement preservation or skid resistance outside reasonable expectations of ITD and standard sealcoating practice within Idaho.

b. Contractor Obligation Defects (CODs): These defects may be obvious or latent, immediate or time and weather related, and include construction deficiencies, damage incurred during construction and defects not defined under Non-Contractor-Obligation Defects (NCODs). The photos within this guide will assist to further define CODs. This guide should not be considered all-comprehensive and may not include examples of all situations.

c. Non Contractor Obligation Defects (NCODs): Damage to the sealcoat beyond the control of the Contractor will not be covered by the warranty as described in 107.11-Contractors Responsibility for Work. These defects may be caused from existing maintenance patches, plow damage, acts of God, or for other reasons. **Before sealcoating, these existing areas must be identified by both the Engineer and the Contractor by visual inspection and documented in writing and approved to be excluded from the CODs (by both parties). After sealcoating, they may be determined to be NCODs by the Engineer at the time of the final review.**

d. Project Segment: The linear mileage of a defined section of roadway multiplied by the number of lanes, as agreed upon by the Engineer and the contractor.

3. Assessment Guidelines. As specified in the contract, the Engineer and the Contractor will meet at the project location and conduct a field review of the sealcoat after it is complete. Together, the two parties will review and identify all CODs. The photographs from this guide may be used to determine CODs and the area of their extent. Small defects that are commonly expected, as defined in the pictures in this guide, in sealcoating construction will be considered inconsequential by the Engineer. In the event of a dispute between the contractor and the Engineer as to which defects should be considered normal, a subject matter expert from ITD's headquarters Construction/Materials will serve as a statewide opinion. This will create conformity between areas of the state.

Localized repair work or reconstruction of the entire sealcoat will be dependent on the

severity and will depend on the type and extent of the CODs found.

The Engineer will consider small defects that are defined as normal or acceptable by the pictures in this guide in sealcoating construction to be inconsequential.

The most serious defects in sealcoat work are:

- Loss of aggregate
- Streaking (grooves or ridges are visible in the sealcoat surface)
- Flushing/Bleeding (excess asphalt is visible in the wheelpaths)
- Poor adhesion/bond to road surface

An acceptable sealcoat will have the large majority of the aggregate particles embedded in the asphalt layer after completion.

Snowplow Damage

Sealcoat failures generally appear prior to the onset of winter weather only to accelerate when winter arrives. Snow plows will exacerbate the failure and the defects may take on the appearance of snow plow damage, thus timely monitoring is imperative to establish whether defects are CODs or NCODs.

If the contractor or the engineer inspects the project segment during the winter and identifies any defect, they will inform the other party immediately.

Warranty repair work will be required if one or more of the following guidelines is met after the project is complete:

- a. If the total combined CODs area is larger than the percentage of the entire project segment identified in the contract. Typically this percentage is set between 1% and 5% (see below.)
 - e.g., If the project segment is in a shaded, mountainous, river valley having been constructed on deficient, raveling and rough pavement, the allowable CODs area may be relaxed allowing for a higher area percentage.
 - e.g., If the segment was constructed where there is generally warm weather with sunlight and on reasonably good and smooth pavement, the CODs area should be held to a higher standard allowing for a lower area percentage.
- b. If separate CODs areas total approximately 50 SY in a 0.1 mile section, and there are other CODs under consideration
- c. If an individual CODs area is greater than 100 SY in total area, and there are other CODs under consideration
- d. If there are regularly occurring individual CODs, and there are other CODs under consideration

- e. If a CODs is linear in nature, regardless of width (approximately 300 ft. or more), and there are other CODs under consideration

4. Best Practices for Sealcoating

This section contains recommendations of practice to produce a quality sealcoat. These are not requirements of the contractor, but are reference for use by the contractor.

Sealcoating protects the pavement from UV rays, oxidation, and water damage. It also provides a wearing surface and provides skid resistance as a finished surface. This section details best practices that should be followed by the contractor during a sealcoat project.

1. **Test Section.** Before starting full production, ITD recommends that the contractor complete a test section that is a minimum of 1,000 feet long and a maximum of one distributor load, in the presence of the Engineer, to verify the following:
 1. Optimum asphalt and cover coat application rates
 2. Roller type, number of passes and pattern of rolling operations

ITD recommends that the contractor complete one test section for each sealcoat location.

2. Ensure there are no bad joints, and ensure that there is no leakage from the distributor.
3. Park the distributor, when not spreading, so the spray bar or mechanism will not drip on the surface.
4. Conduct brooming without displacing embedded material.
5. Provide blotter material as necessary.

Per historical data and experience, ITD recommends that a sealcoat be performed between June 15th and August 31st of the calendar year. This is the optimal season and weather window.

ENVIRONMENTAL

6. Be aware that sealcoating in bad weather can cause chips to come up from the surface, or oil, which can damage vehicles.

SURFACE PREPARATION

7. For the proper bonding of the sealcoating, it is essential that the surface be cleaned as thoroughly as possible to remove dirt and debris. The adage that “a coating is as good as the surface that it is applied on” holds true for all coatings. If the surface is not clean the coating will not bond and with time and usage it will flake or peel off. The extent of cleaning of the pavement will depend upon its condition, simple air blowing or more involved scraping, wire brushing, blowing or pressure washing.
8. Repair cracks, repair surface alligating, patch holes and treat oil spots before sealcoating. Fix any drainage issues. Make sure drains are clear and that the pavement directs runoff to them.

Follow the Erosion and Sediment Control Plan (ESCP).

5. Illustration List of Acceptable Sealcoats, Typical Defects, Typical Damages and Inspector Guide

This section presents photographs to pictorially describe situations that are expected and are unacceptable (may be NCODs), and situations that may require warranty repair work (at the discretion of the Engineer).

Table of Illustrations

Longitudinal joints/Meet Line: Chip Loss.....	6
Transverse Joint: Chip loss at the end of the spread	8
Plugged Distributor Nozzle (snivie): Chip Loss.....	10
Over Wetting of Chips during Application: Chip Loss.....	12
Chip Loss after Brooming.....	13
Bleeding/Flushed Surface	14
Tracking by Traffic.....	16
Traffic: Various Conditions (CODs and NCODs)	20
Chip Loss from Snowplows	26
Sealcoat Design: Aggregate Sources and Roadway Conditions	29
Weather Conditions.....	31
Location/Conditions of Sealcoat.....	33
Maintenance Blade Patch Failures.....	34
DESIRED APPEARANCE AT THE END OF THE WARRANTY PERIOD	35

Longitudinal joints/Meet Line: Chip Loss

Longitudinal Joint: Unacceptable chip loss (CODs)



Longitudinal Joint: Unacceptable chip loss (CODs)



Longitudinal Joint: Unacceptable chip loss (CODs)



Longitudinal Joint: Acceptable chip loss



Transverse Joint: Chip loss at the end of the spread

Transverse joint: Unacceptable chip loss (CODS)



Transverse joint: Unacceptable chip loss (CODS)



Transverse Joint: Acceptable chip loss



Plugged Distributor Nozzle (snivie): Chip Loss

Plugged nozzle: Unacceptable chip loss (CODs)



Plugged nozzle: Unacceptable chip loss (CODs)



Plugged nozzle: Acceptable chip loss



Plugged nozzle: Acceptable repair



Over Wetting of Chips during Application: Chip Loss

Over wetting of chips: Unacceptable chip loss (CODs)



Over wetting of chips: Acceptable appearance



Chip Loss after Brooming

Brooming: Unacceptable chip loss (CODs)



Brooming: Unacceptable chip loss (CODs)



Bleeding/Flushed Surface

Bleeding/Flushing: Unacceptable surface (CODs)



Bleeding/Flushing: Unacceptable surface (CODs)



Bleeding/flushing: Acceptable repair



Tracking by Traffic

Tracking: Expected to minimize with time



Tracking: Acceptable appearance at the end of the warranty period



Tracking: Expected to minimize with time



Tracking: Acceptable appearance at the end of the warranty period



Tracking: Acceptable appearance at the end of the warranty period



Tracking: Acceptable appearance at the end of the warranty period



Tracking: Acceptable appearance at the end of the warranty period



Traffic: Various Conditions (CODs and NCODs)

Traffic: Chip rolling: Unacceptable surface (CODs)



Traffic: chip loss from turning movements (CODs)



Traffic: Chip loss from turning movements (CODS)



Traffic: Chip loss from turning movements (CODS)



Traffic: Chip loss from turning movements (CODS)



Traffic: Skid marks (NCODs)



Traffic: Skid marks (NCODs)



Traffic: Skid marks (NCODs)



Traffic: Fuel spill or fire (NCODs)



Traffic: Tire chain damage (NCODs)



Traffic: Tire chain damage (NCODs)



Chip Loss from Snowplows

Snowplow:



**Snowplow:
NCODs**



Snowplow: CODs Exacerbated by Snowplows - Unacceptable



Snowplow: CODs Exacerbated by Snowplows - Unacceptable



Snowplow: CODs Exacerbated by Snowplows - Unacceptable



Sealcoat Design: Aggregate Sources and Roadway Conditions

Design: Unacceptable chip loss (CODs)



Design: Unacceptable chip loss (CODs)



Design: Unacceptable chip loss (CODs)



Design: Sealcoating on newly paved asphalt pavement: Unacceptable chip loss (CODs)



Weather Conditions

Weather: Constructed late in the season: Unacceptable chip loss (CODs)



Weather: Constructed late in the season: Unacceptable chip loss (CODs)



Weather: Constructed late in the season: Unacceptable chip loss (CODs)



Weather: Rain and cool weather following construction: Unacceptable chip loss (CODs)



Location/Conditions of Sealcoat

Location: Shady/ high humidity areas: Unacceptable chip loss (CODs)



Location: Shady/ high humidity areas: Unacceptable chip loss (CODs)



Maintenance Blade Patch Failures

Maintenance Patches: Must be documented and approved to be exempt (NCODs)



Maintenance Patches: Must be documented and approved to be exempt (NCODs)



DESIRED APPEARANCE AT THE END OF THE WARRANTY PERIOD

Desired appearance at the end of the warranty period



Desired appearance at the end of the warranty period



Desired appearance at the end of the warranty period



Desired appearance at the end of the warranty period

