

ASPHALT PAVING

TROUBLESHOOTING

Use the following troubleshooting guide to help determine the cause(s) of common defects in the bituminous layer. There may be more than one factor contributing to a defect. When troubleshooting any problem, be methodical and change one condition at a time.

SURFACE TEXTURE

Problem	Remedy
1. Open texture behind extension	<ul style="list-style-type: none">- Increase extension angle of attack- Increase heat; check screed heat system for malfunction- Increase depth to prevent dragging
2. Shiny texture behind extension	<ul style="list-style-type: none">- Decrease extension angle of attack
3. Texture stripes, continuous	<ul style="list-style-type: none">- Flatten trailing edge of screed- Increase heat; check screed heat- Inspect screed for damage or wear
4. Texture Stripes, intermittent	<ul style="list-style-type: none">- Check for high spots in grade; correct grade defects; clean up spills- Increase depth
5. Open texture full width	<ul style="list-style-type: none">- Raise tow-point to correct line of pull- Increase angle of attack at take-off- Reduce head of material to prevent overreaction by grade control system- Increase plant output temperature- Activate vibratory system- Increase vibratory frequency- Reduce paving speed- Increase screed heat temperature- Increase layer thickness
6. Shiny texture full width	<ul style="list-style-type: none">- Lower tow-point to correct line of pull- Decrease angle of attack at take-off- Decrease vibratory frequency
7. Open texture either side of center	<ul style="list-style-type: none">- Increase auger height- Decrease lead crown
8. Open texture in center	<ul style="list-style-type: none">- Increase lead crown- Check condition of reversing augers- Clean deflector plates

SEGREGATION

Problem	Remedy
1. Segregation one side of layer	<ul style="list-style-type: none"> - Look for segregation in storage silo - Check opening of clam gates in silo - Inspect loads in haul unit bodies - Load haul units from opposite direction
2. Stripe at longitudinal joint	<ul style="list-style-type: none"> - Reduce overlap onto cold side - Adjust end gate height - Adjust notch height if using notched wedge joint
3. Continuous stripes	<ul style="list-style-type: none"> - Adjust auger speed to 20-40 rpm - Check for high spots in the grade - Check for worn or damaged augers - Check for trapped material - Add auger / mainframe extensions
4. Intermittent stripes	<ul style="list-style-type: none"> - Check for erratic auger speed - Adjust auger speed to 20-40 rpm - Clean up spills in front of paver - Check for high spots in the grade
5. Stripe in the center	<ul style="list-style-type: none"> - Clean deflector plates - Check reversing augers / paddles - Add lead crown
6. Repetitive patches	<ul style="list-style-type: none"> - Check haul unit loading at plant - Inspect for segregation in truck bodies - Keep hopper at least half full - Stop folding hopper wings - Fold hopper wings over full conveyors - Increase windrow overlap
7. Random patches	<ul style="list-style-type: none"> - Inspect material coming out of silos - Check for on / off auger operation - Adjust auger speed to 20-40 rpm - Stop paving before emptying hopper Insert - Stop paving before emptying transfer vehicle

ROUGHNESS

Problem	Remedy
1. Ripples	<ul style="list-style-type: none"> - Adjust feeder controls to get consistent head of material - Reduce head of material - Check for excessive auger wear - Check for worn screed plates - Adjust paving speed to be consistent - Reduce haul unit brake pressure - Check for variable material temperature; correct at asphalt plant - Check for excessive play at screed pivot point - Check for excessive play at thickness screws - Increase tamper bar frequency or reduce paving speed to achieve correct tamper overlap - Adjust tow-point height to get parallel line of pull - Adjust angle of attack to get correct 3 mm (0.125") nose-up attitude
2. Wavy surface (short)	<ul style="list-style-type: none"> - Avoid over-correction with manual depth screws - Calibrate grade control system - Adjust feeder controls to deliver consistent head of material - Adjust auger speed to 20-40 rpm - Reduce head of material - Position grade sensor closer to tow-point
3. Wavy surface (long)	<ul style="list-style-type: none"> - Check grade reference for long depressions or high spots - Reduce time stopped waiting for trucks; reduce paving speed - Activate screed counterbalance system - Increase pressure in screed counterbalance system - Activate screed hold system, if equipped - Stop paving with conveyors full - Stop folding hopper wings if segregation is occurring
4. Intermittent roughness	<ul style="list-style-type: none"> - Calibrate grade control system - Inspect grade sensor(s) - Monitor averaging ski operation while paving super elevations - Clean spills in front of paver - Clean spills in front of grade sensor(s) - Correct high spots in grade prior to paving - Monitor feeder system operation - Discontinue automatic slope control; control slope manually - Install averaging ski in place of single grade sensor

BLEMISHES

Problem	Remedy
1. Drag marks	<ul style="list-style-type: none"> - Clean spills in front of paver - Correct high spots prior to paving - Increase layer thickness - Check slope of grade prior to using automatic slope control - Monitor head of material; do not run low - Increase screed heat
2. Oversized material	<ul style="list-style-type: none"> - Check gradation screens at plant - Check scalping screens at recycle stockpile - Clean truck bodies - Lower flow gates, if equipped
3. Screed marks	<ul style="list-style-type: none"> - Trucks stop short of push rollers - Reduce time stopped waiting for trucks; reduce paving speed - Activate screed counterbalance system - Increase pressure in screed counterbalance system - Activate screed hold system, if equipped
4. Rich spots / bleeding	<ul style="list-style-type: none"> - Correct moisture in mixture - Reduce asphalt cement content - Reduce vibratory frequency - Switch to static compaction - Plant maintenance to eliminate dust balls
5. Separation marks	<ul style="list-style-type: none"> - Adjust screed extension height - Adjust screed extension slope - Adjust slope stop to flatten screed extension