



Komatsu Distributor



Undercarriage Inspection Tips

Field Fact: 50% of the cost of owning and operating a machine are related to its undercarriage

Roland Machinery has developed guidelines to help you get the most out of your undercarriage with the lowest cost possible. To help control costs, schedule regular maintenance inspections with Road Machinery's certified technicians. We will monitor wear with our ultrasonic measurement tool, which provides reliable estimates of remaining hours of life.

Early detection of wear, misalignment and damage is key in avoiding serious, costly repairs.

Sprockets

Carefully monitor sprocket wear, which is a sign of operating problems and can indicate the condition of the internal pin and bushing assembly. Sprocket replacement is usually necessary whenever the mating surface of the bushing is changed, when rotating or replacing bushings or replacing the chain assembly.

Bushings

Keep track of undercarriage wear by looking for bushing wear and premature link pitch elongation. Look for differences in component wear patterns (e.g., left versus right or front versus rear), which can indicate hidden problems like misalignment or poor operator habits.

Bushing Turn

Turning the bushing 180° to use the unworn area allows using not only the entire wear surface of the bushing but also more of the link. Timing is key, however. If the bushing has worn past the wear life limit, the chances of damage to the bushing increases during the processing of pressing in and out, because the thickness of the bushing wall may be dangerously thin.

Components

Watch for component damage, such as cracks, bends and breaks, which can lead to interference and malfunction.

Alignment

Misalignment causes unnecessary wear to all undercarriage components. The most common type is idler shift, which can be fixed by adjusting idler shims. The quickest way to detect an alignment problem is to look for anything shiny that should not normally be shiny. Indicators that the track frame alignment system needs adjusting are: inside of track links are scuffed and shiny, roller and front idler flanges show wear, and sides of sprockets are coming in contact with the inside of track links.

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Let our product support representative help you manage your greatest wear cost.

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Rollers

As the track roller tread area wears, the roller flanges grow closer to the link pin boss area. The pin boss area will be damaged if the flanges are allowed to come into contact with the pin boss. Damage in the pin boss area can eliminate the bushing turn option. Roller flanges contacting this area will wear away structural material and the pin end will be damaged. Cracking can occur when pressing the pin out or in, if the structure is weak. During the pressing process, damage and “flaring” to the pin end can cause damage to the internal pin boss area, and the pin boss cannot properly retain the pin after reassembly.

Repositioning rollers from higher wear positions, at both the front and rear of the machine, to less wear center positions can be helpful to alleviate wear. Check rollers for oil leakage, which would mean oil loss, resulting in possible component seizing, which causes quick, excessive wear and damage.

Nuts and Bolts

Check for loose nuts and bolts, which will interfere with moving parts and cause abnormal wear, bolt hole wallowing, bolt breakage, accelerated misalignment and component loss. If bolts are not tight enough, vibration will slowly loosen them. If they are too tight, they will fail prematurely because their structural integrity is weakened.

