# Table of Contents

- Introduction ................................................................. 3
- Purpose of the Manual ...................................................... 3
- Glossary of Terms ............................................................ 4-8
- Rubber Track Construction ................................................. 9-11
- Key Points in a Track Suspension System ........................ 12
- Friction Drive vs. Positive Drive ....................................... 13-15
- Undercarriage Drive Components ..................................... 16-17
- Track Rotation ............................................................... 18
- Track Preconditioning ....................................................... 19-20
- Hard Surface Transporting ............................................... 21
- Rubber Track Maintenance ............................................... 22-24
- Track Storage ............................................................... 25-26
- Ag Warranty ................................................................. 27-28
- Scraper Warranty ........................................................... 29-30
- Warranty Key Points ........................................................ 31
- Warranty Review ............................................................ 32
- Eligibility ........................................................................ 33
- Filing Instructions ............................................................ 34
- Track Identification Numbers ............................................ 35
- Measuring Tread Wear ..................................................... 36
- Claim Conditions Review (tread) ...................................... 37-43
- Claims Conditions Review (carcass) ............................... 44-49
- Claims Conditions Review (guide/drive lugs) ................. 50-57
- Claims Conditions Review (other) ................................. 58-60
Introduction

Continental, a worldwide supplier of quality rubber products, is committed to providing new and improved products to meet the ever changing needs of its customers. This dedication to innovation, technological leadership and continuous quality improvement has led Continental to develop its line of Trackman® Rubber Track, a family of flexible, reinforced rubber tracks designed to serve as the primary tractive component for a wide variety of applications.

The Continental Trackman® line of rubber track combines advanced rubber compounding, tread design, and production technology to provide the user with an endless rubber track that will provide superior performance in the most demanding of applications. Trackman® Rubber Track is specifically designed to provide the durability, versatility and traction required to satisfy customer requirements in all types of services.

Purpose of this Manual

The purpose of this guide is to provide the user a better understanding of rubber track technology and how it relates to their equipment. This educational tool can be used with various equipment and applications and be a reference for years to come. The warranty manual section provides clear photographs of the various conditions and characteristics seen on rubber track, and how to assess these conditions. In addition to describing the appearance and probable cause of the condition observed, this manual will also provide actions to be taken for the track, the tractor, and the operation in which the track is used.
GLOSSARY
Continental Rubber Track Terminology

➢ **Alignment** - Term referring to the mutual parallelism of the elements of an undercarriage, especially the drive wheel, idlers, and bogies. Also, the mutual parallelism of paired undercarriages. Alignment is important because it affects the tracking of the track.

➢ **Bogie** - (Bogie Wheel) - A small, non-powered wheel which runs on the ground engaging length of the track, the purpose of which is to distribute the machine load over the track footprint. Typically, multiple bogie wheels comprise a bogie wheel system. Generally, the term “bogie wheel” is synonymous with the term “roller wheel”. However, in some contexts, the term “bogie wheel” indicates an independently suspended wheel, while “roller wheel” denotes a rigidly fixed wheel. An alternate term for bogie wheel is mid-roller or roller wheel.

➢ **Carcass** - The “belt” which forms the main body of a rubber track, and which contains the steel reinforcement package.

➢ **Chunking** - a vernacular term describing a condition of rubber in which macroscopic “chunks” of rubber are torn from the wear surface. Typically, as it relates to track, this condition is indicative of severe ground conditions, such as those containing scrap metal or flint.

➢ **Compaction** - The relative degree to which soil is compacted by the passage of vehicles across its surface. Primarily a function of machine ground pressure(s). In agriculture, high levels of compaction have been found to reduce germination rates and total crop yield.

➢ **Delamination** - A condition in which layers of rubber separate along the planes between cross-sectional laminae. Usually refers to separation within a carcass. May also refer to a tread lug condition (aka: onion peeling).

➢ **Drawbar** - Vernacular term for “Drawbar Pull,” the force which can be supplied at the drawbar of a draft vehicle. Typically quoted as a measure of tractive effort.

➢ **Drive Lug** - A rubber lug (usually, one of a series) located on the undercarriage-engaging surface of the track, the purpose of which is to drive the track by positively engaging the drive wheel.
GLOSSARY
Continental Rubber Track Terminology

➢ **Camber** - Term referring to the “roll” attitude of an undercarriage. Typically, camber is expressed as the angular departure from an “upright” or “flat” attitude, where the rotation occurs about a front to rear line running through the mounting location of the undercarriage. The purpose of providing camber is to ensure that the undercarriage runs “flat” to the ground surface when (elastically) deformed under the typical operating load of the machine.

- **Zero Camber**
  - Drive wheel
  - Idler wheel
  - Track guide lug
  - Bogie wheels

- **Negative Camber**

- **Positive Camber**

- **One Positive & One Negative**
GLOSSARY
Continental Rubber Track Terminology

➢ **Drive Wheel** - The direct driving component of a rubber track undercarriage and/or system. Drive wheels may effect power transmission to the track by friction, by some form of positive mechanical engagement, or by a combination of the two.

➢ **Durability** - Refers to the ability of a rubber track or component to survive time in service. Typically, durability is a measure of the rate at which the track is consumed or destroyed by use.

➢ **Elongation** - A synonym for “strain.” Informally, refers to deformation causing an increase in length (usually, within the elastic limit). For example, most rubber track exhibits a 3 percent elongation at ultimate loading.

➢ **Flotation** - Refers to the relative ability of a machine to stay “on top of” soft ground conditions, rather than penetrating or sinking in. Generally, “high” or “good” floatation is a consequence of low ground pressure, and thus, of a large effective footprint.

➢ **Guide Lug** - A rubber lug (usually, one of a series) located on the undercarriage-engaging surface of the track, the purpose of which is to “guide” the track within set boundary limits, and thus, to prevent de-tracking.

➢ **Guide/Drive Lug** - A rubber lug (usually, one of a series) located on the undercarriage-engaging surface of the track, the purpose of which is both to “guide” the track within set boundary limits, and to drive the track by positively engaging the drive wheel.

➢ **Idler** - A non-driven wheel which defines a bend radius in a track system. Idler wheels define the “shape” of the track system.

➢ **Inboard** - A relative term denoting the “side” or “edge” of a member (e.g., a track or a wheel) closest to the centerline of the machine on which it is running.

➢ **Life Cycle** - The period of time from a product’s initial use to its date of retirement.

➢ **Misalignment** - A condition in which the various elements of an undercarriage (especially the drive wheel, idlers, and bogies) are not “in line,” or are not mutually parallel. Misalignment can result in poor tracking.

➢ **Mis-engagement** - A condition in which a track (especially a positive drive track) does not interact correctly with its drive wheel. Typically, a condition in which positive drive lugs fail to properly engage the recesses in a positive drive wheel.
GLOSSARY
Continental Rubber Track Terminology

➢ **OEM** - Original Equipment Manufacturer. In the context of this manual, the designer and/or manufacturer of rubber track undercarriages and/or machines.

➢ **Outboard** - A relative term denoting the “side” or “edge” of a member (e.g., a track or a wheel) furthest from the centerline of the machine on which it is running.

➢ **Outside Guide Lugs** - Guide lugs that are located at the “edges” of a track, rather than at is centerline. Used in pairs (“dual outside guide lugs”), these lugs encapsulate drive and idler wheels to prevent de-tracking.

➢ **Penetration** - The relative degree to which a tire or a track impresses itself into the ground under load. High gross vehicle weights, small footprints, and soft ground conditions all result in increased penetration. In general, track systems exhibit less penetration than tires.

➢ **Ridging** - A ground condition created by the tight turning of a vehicle, in which the soil is scraped into “ridges” by the sideward movement of the tires or track. Generally considered detrimental, ridging can be reduced through the use of tracks with beveled tread lugs. An alternate term for ridging is berming.

➢ **Skid Steer** - Refers to a method of turning a vehicle in which there is no articulation of the tires or track; instead, the tires or track on either side of the vehicle are driven at dissimilar speeds (or in dissimilar directions). The term “skid steer” is also sometimes used to denote skid-loader type pieces of equipment, such as the Bobcat or Case Uniloader machines.

➢ **Spreading Force** - The total force applied to a track by the tensioning system of an undercarriage. In the case of two-pulley type systems, the “spreading force” corresponds to the force with which the front and rear idler/drive wheels are “spread” apart, against the track. In this type of system, the track tension is equal to one-half the spreading force.

➢ **Track Tension** - The total tensile load supported by a given span of track.

➢ **Roller** - (Roller Wheel) - A small wheel designed to guide and distribute machine load to a track. Generally, the term “roller wheel” is synonymous with “bogie wheel.” However, in some contexts, the term “bogie wheel” indicates an independently suspended wheel, while “roller wheel” denotes a rigidly fixed wheel. An alternate term for roller wheel is mid-roller or bogie wheel.
GLOSSARY
Continental Rubber Track Terminology

➢ **Tracking** - A term referring to a track’s propensity to move laterally on its undercarriage. Typically, “good” or “proper” tracking is achieved when a track does not exhibit a propensity to move in either lateral direction. Conversely, “poor” tracking generally implies a condition in which the track does exhibit a propensity to move in a given lateral direction, and therefore “scrubs” its guide lugs against one side of the guide lug groove. Tracking is controlled through alignment, track tension and the internal construction of the track itself.

➢ **Tractive Effort** - Technically, the ratio of a vehicle’s maximum drawbar pull to its total weight. Informally, this term is sometimes used to refer to the maximum drawbar pull alone. In either case, it is a measure of a vehicle’s pulling ability.

➢ **Tread Lug** - A rubber lug (usually, one of a series) located on the ground-engaging surface of a track or tire, the purpose of which is to provide traction. An alternate term for tread lug is traction lug.

➢ **Undercarriage** - The supporting structure for a track operating on a vehicle. Typically, the undercarriage includes a frame, a drive wheel (and associated drive-line components), one or more idler wheels, and one or more bogie wheels.

➢ **Wheelbase** - The distance from the center of the foremost wheel in a track system (or on a vehicle) to the center of the rearmost wheel.

➢ **Tensile Strength** - The maximum load that can be supported by a member in tension, usually reported in PSI, and usually determined by the material yield point.

➢ **Toe** - (Toe-in, Toe-out) - Refers to deviations from parallelism between two members -- typically, between two paired undercarriages. Specially, toe is the difference in the transverse distance between the track planes, taken, respectively, at the extreme front and rear points of the track treads. When the distance at the rear is greater than the distance at the front, the tracks are said to be “toed-in,” and in the reverse condition, are said to be “toed-out.”

Toe In

Toe Out
Trackman® Rubber Track Construction

Continental Trackman® Rubber Track is produced on custom-designed manufacturing equipment that combines the latest advancements in rubber processing technology with sophisticated computer process controls. This manufacturing process results in a product which is unsurpassed in quality, uniformity, and performance.

In general, flexible rubber track is composed of three major components: the carcass, the tread lugs, and the guide and/or drive lugs. The carcass is the foundation of the track, and is composed of several different rubber compounds, each of which is designed to perform a particular function (such as to promote adhesion, or to resist wear, cutting, chunking, etc.). This flat belt also contains the main steel reinforcement package that gives the track its strength, stiffness, and handling characteristics. The steel reinforcement package within the carcass usually includes several layers of steel belting - similar to that which would be employed in radial steel belted truck tires - as well as longitudinal steel cable. The purpose of the steel belting is to provide lateral stiffness, tear resistance, and proper tracking characteristics, as well as to protect the primary cable layer from impingement and damage. The purpose of the cable is to provide longitudinal tensile strength, so that the track cannot stretch (significantly) under load, or elongate over its lifetime. The cable employed is a heavy-gauge, high-tensile variety, which exhibits an ultimate elongation of less than 2.9 percent. Furthermore, it is treated to resist corrosion and to maximize its adhesion to the rubber substrate.
Trackman® Rubber Track Construction

The tread lugs are molded to the ground-engaging side of the carcass. These lugs are designed to provide both exceptional traction and a smooth ride. The rubber compound used in these lugs is typically formulated for high wear resistance, as it is the tread surface of the track which will usually be subjected to the most wear and abrasion.

The guide and/or drive lugs are molded to the undercarriage-engaging side of the carcass. (That is, the opposite side from the tread lugs.) In friction-drive type track systems, where the track is driven solely by the friction between the drive wheel and the inside surface of the track, the purpose of these lugs is to retain the track (laterally) on the undercarriage, and to bear the applied side loads (such as when the machine is operating on a transverse incline). In positive-drive type track systems, where the track is driven via the mechanical engagement of the drive lugs by the drive wheel (much like a rack-and-pinion gear set), the purpose of these lugs is to retain the track on the undercarriage, to bear the applied side loads, and further, to offer a mechanical means for the transmission of the driving torque provided through the drive wheel. In virtually all cases, guide and/or drive lugs are formed from high modulus, abrasion resistant compounds.

Continental Trackman Rubber Track combines these three components into a fully molded, high quality construction that delivers maximum performance in the environment for which it was designed. This fully molded construction allows each component to be designed for optimum performance, while simultaneously assuring outstanding product uniformity and integrity.
**Trackman® Rubber Track Components**

**Main Exterior**
- Tread Lugs - Ground Engaging, wearable surface
- Carcass - Foundation of track
- Guide/Drive Lugs - Primarily for retention of track

**Main Interior**
- Steel Cable - Single cable, helically-wound
- Steel Belting - typically 3 – 4 layers
Suspension Systems

➢ Better, smoother ride
➢ Maximize the distribution of load
➢ Minimize the degree of penetration and compaction.
➢ Prohibit excessive loading on a single (or a specific group of) bogie wheel(s)
➢ Reduce the abusive "loading" caused by the ingestion of debris.
Friction Drive vs. Positive Drive

➢ **Friction Drive**
  ➢ Track is driven solely by friction contact between track and drive wheel
  ➢ High track tension minimizes wheel-to-track slip
  ➢ Simplest undercarriage to manufacture

➢ **Positive drive**
  ➢ Track drive/guide lugs engage “cogged” drive wheel
  ➢ Wheel-to-Track Slip is completely prevented
  ➢ Drive wheel and track require precise manufacturing
Friction Drive Track
Positive Drive Track

Positive Drive Lugs

Positive Drive Wheel
Typical Friction Drive Components
Typical Positive Drive Components

- Drive Wheel
- Idler Wheels
- Roller Wheels
- Track
Track Rotation

➢ Depending upon specific working conditions track rotation may extend useful service life

➢ Side to Side Rotation: In applications (ie. sidehill, scraper work) where uneven lateral guide/drive lug wear may develop, and/or in cases where inboard/outboard tread lug wear is noticeably uneven

➢ Front/Rear Rotation: For positive drive systems, in conditions where drive lug engagement wear is noticeably different.

Four (4) track machine rotation example

FIRST ROTATION:
Interchange left front with right rear track.
Interchange right front with left rear track.

SECOND ROTATION (if needed):
Interchange left front with left rear track.
Interchange right front with right rear track.
Track Preconditioning

➢ New rubber tracks must be pre-conditioned before initial use.

➢ Operating tracks without pre-conditioning will cause scuffing and damage to rubber contacting surfaces such as the track wheel path, guide/drive lugs and rubberized undercarriage wheels.

➢ Best method is to operate for at least 15 minutes in field with loose soil

➢ If this is not possible, prior to in-field use:

➢ Spread layer of lubricating material over entire undercarriage wheels and inside of track. Use materials such as: Dirt, Oil Dry, Talc Powder, Graphite, or any non-caustic particulate material. Drive vehicle forward to allow material to cover all critical areas of track and undercarriage.

➢ When roading during this break-in time, throw lubricant / shovel-full of dirt in undercarriages before roading and every 30 minutes.

➢ Tracks will continue to condition for first 150 hours.

NOTE: Always refer to the vehicle manufactures Operation and Maintenance Owners Manual for specific track conditioning procedures.
Track Preconditioning

➢ Tracks must be pre-conditioned before initial use.
  ➢ Track and wheel rubber initially is “green” and tacky.
  ➢ Operating tracks without lubrication will cause track scuffing.
➢ Best method is to operate for 15 minutes in field with loose soil
➢ If this is not possible:
  ➢ Spread layer of lubricating material over entire undercarriage wheels and inside of track.
    ➢ Dirt
    ➢ Oil dry
    ➢ Talc powder
    ➢ Graphite
    ➢ Any non caustic particulate material.
  ➢ Drive slowly for 15 – 25 minutes.
➢ Tracks will continue to condition for first 150 hours.
  ➢ When roading during this time, throw shovel-full of dirt / lubricant in undercarriages before roading and every 30 minutes.
Hard Surface Road Transporting

➢ Under certain conditions internal track temperatures can rise and result in permanent damage. The main factors that affect track heating are: total weight supported per track, vehicle speed, travel duration, ground/road surface conditions, ground contour, and ambient temperature. Tracks are most susceptible to overheating during roading. There are 3 levels of temperature damage which are:

➢ • Stage 1: Non visible. Heat generation has been high enough to permanently degrade the physical properties of the track. Track is still serviceable; however, the prior heating event will lessen the track’s ability to resist general wear and tear in future.

➢ • Stage 2: Swelling. Visually or by feel, an observer can tell that the track shape has been distorted. The odor of overheated rubber may also be apparent. This indicates a loss of interior compound integrity. Track is non-serviceable and will need to be replaced.

➢ • Stage 3: Rupture. Very noticeable to the observer. Rupture occurs in swelled areas of track if vehicle continues excessive heat generating operation. Smoke billowing from track will normally accompany rupture. Track is non-serviceable and will need to be replaced.

➢ In order to avoid track damage due to overheating, Continental recommends that customer refers to and follows vehicle manufacture operator instructions, as well as, any service bulletins regarding same subject matter.
Rubber Track Maintenance

➢ Inspect and service the undercarriage components frequently to ensure that there is no obvious damage, that the track is being tensioned properly, and that the track exhibits no unusual wear patterns that would indicate improper camber or alignment.

➢ Condition track prior to initial usage by spreading dirt, Dries-All, or a similar material over the undercarriage engaging surface of the track and running the machine for a brief time.

➢ Avoid operating rubber track in grease, oil, gasoline, diesel fuel or other petrol chemicals. Take care to avoid spilling these materials on track when servicing the undercarriage and/or the machine.

➢ Rotate tracks from side to side in applications where uneven lateral wear is seen (and where the undercarriage adjustments necessary to correct these wear patterns do not exist).

➢ Avoid excess amount of sharp and high-speed turns.

➢ Protect undercarriage from contact with large foreign objects.

➢ Contact Continental Rubber Track Distributor for detailed information
Track Life

➢ Track life influences:
  ➢ Mechanical damage
  ➢ Roading %
  ➢ Hard surface turning
  ➢ Amount of slip
  ➢ Amount of side slope use
  ➢ Soil types
  ➢ Track alignment
  ➢ Crop residue
  ➢ Undercarriage maintenance

➢ Track life typically determined by wear of drive lugs and traction lugs.

➢ Using differential locks helps distribute the power equally to each side of the axle and will cause tracks to wear more evenly.

➢ Consider rotation of tracks every (750 – 1250) hours, depending on drive lug and traction lug wear
Track Replacement

➢ When replacing tracks on higher hour machines, inspect undercarriage components.

➢ Worn undercarriage components can lead to reduced track life

➢ Components to inspect include:
  ➢ Roller wheel wear
  ➢ Idler wheel wear
  ➢ Bushing wear ("slop" in front pivot and undercarriage arms).
  ➢ Suspension Blocks
  ➢ Hydraulic tension check valves
Long Term Rubber Track Storage

➢ Store tracks in "dark" area, away from direct sunlight. Store indoors, or cover with opaque tarpaulin.

➢ Store tracks in "cool" (40°F to 60°F, 4.4°C to 15.5°C) area. Avoid storing at temperatures greater than 85°F (29.4°C) for extended periods.

➢ Store tracks in "relaxed" physical configurations. Store on edge, with bend radii greater than 30 inches and no back-bending.

➢ Store tracks in draft-free area. Store indoors, protect with tarpaulin if necessary.

➢ Store tracks in dry area. Store indoors or cover with waterproof tarpaulin.

➢ Do not store tracks in closed areas with electric devices that generate ozone (such as motors).

➢ Do not store tracks in closed areas with petrol chemicals or petrol chemical vapors.

➢ Do not paint tracks in an attempt to protect them from ozone, moisture or other elements.

➢ Provide CO₂, fire extinguishers or halon fire suppression systems in rubber track storage areas.
Periodic Storage of Machine

➢ Avoid storing tracked machines in direct sunlight. Store indoors or cover tracks with opaque tarpaulin.

➢ Avoid storing tracked machines in standing water. Store indoors or cover tracks with waterproof tarpaulin.

➢ Machines stored resting on their tracks (rather than "blocked up") should be moved once a month.
Rubber Track
Agricultural Track Limited Warranty

Agricultural Track
Limited Warranty

Eligibility
You are eligible for the benefits of this limited warranty if you are the original owner or authorized agent of the original owner of new Continental ContiTech agricultural service rubber tracks. This Limited Warranty is from Continental ContiTech.

Coverage
Continental ContiTech agricultural service rubber tracks that become unserviceable due to a covered warranty condition within 48 months from their introduction into service are eligible for coverage under the Continental ContiTech agricultural rubber track limited warranty. Warranty consideration is applicable only to the track purchase price and does not include removal or installation charges, or any special, incidental, or consequential charges. This limited warranty covers only tracks that bear proper Continental ContiTech identification that have been used only on the equipment on which they were originally installed in accordance with the equipment manufacturer’s or Continental ContiTech’s recommendations and that were purchased on or after January 1, 2014.

Covered Conditions
- Guidedrive lug loss due to loss of adhesion
- Determination of tracks due to lack of adhesion resulting from the manufacturing process
- Smooth void area in the interior of the tread lug
- Tread lug separation within smooth interface between lug and carcass

Not Covered
- Continental ContiTech agricultural service rubber track purchased more than 48 months prior to presentation for adjustment
- Continental ContiTech rubber track designed for non-agricultural service
- Tracks marked “Prototype”
- Prolonged on road use: These tracks are not certified for such use by the United States Department of Transportation. Speeds must not exceed 25 mph (40 kph)
- There is no warranty on tracks used on gear tooth drive systems
- Irregular wear or damage due to cuts, scoring, snags, machine malfunction or damage, stress, collision, fire, chemical damage, overloading, misapplication, misuse, negligence, or mechanical condition of vehicle
- Chunked, ripped, or missing lugs caused by cuts from a sharp object or due to overloading
- Guidedrive lug wear caused by improper alignment of the tracks. For example, if a tractor is run on inclined the idler wheel will rub against the inside of the guide lug and friction will cause excessive temperature to build up. Excessive heat from the friction will cause rubber bonding to fail and chunking will occur

Guidedrive lug wear caused by running the track in extreme adverse conditions

Pro-rated Replacement
Continental ContiTech agricultural rubber tracks covered by this limited warranty that become unserviceable due to a covered warranty condition outside of the non-warranty replacement period (0-12 months, 13-24 months, and 25-48 months from introduction into service) will be replaced on a pro-rated basis. The warranty replacement price will be calculated by multiplying the manufacturer’s suggested retail price (MSRP) by the percentage date entered into the “Warranty Replacement Price Table” shown on the following chart.

Introduction Into Service Date
The purchase date will be used to establish the date that tracks are introduced into service, or absent proof of purchase, the date of manufacture. The months above represent the number of months from the purchase date.
Rubber Track Agricultural Track Limited Warranty

After 24 months since introduction into service either as an OEM factory installed component or as a replacement product, Example: The MRP is $6000. Track Age > 20 months. Based upon the table, the owner of the warranty track will pay $5900 - $6000 = $100 to receive a replacement warranty track.

Track Service Life
The service life of any specific track cannot be predicted in terms of hours of use since service conditions vary widely. The wear rate and serviceability of a track over time is a function of the service conditions (load, speed, maintenance, operating and soil conditions). ContiTech does not recommend the use of any one type of track in all operating conditions and tractor and track maintenance are identical. In different regions varying soils and ground surface will significantly affect track wear. Although little can be done to compensate for harsh soil conditions and their impact on track wear, proper servicing, proper alignment of track to underscore damage, regular inspections and regular maintenance are key to receiving the maximum benefit from your tracks.

Although traction may be reduced, the loss of one or several tread lugs because of cuts or shearing will not prevent your track from operating. If one or several lugs are only partially cut off and hanging occurs, we recommend that the loose portion of the lug be cut off as soon as possible to prevent tearing down further into the track. You may continue using your track normally as long as cuts or lugs do not extend down to the cable. Operations should check their track each day and note any major cuts or damage that may have occurred during previous operation. A common indication of a cut or foreign object damage to guideslave lugs or tread lugs is the appearance of several damaged lugs or tread in the same area, or a repeating pattern of damage.

Legal Rights
No representative or dealer has authority to make any representations, promise or agreement or modification to this warranty on behalf of Continental ContiTech except as stated herein. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION PRINTED ABOVE, AND CONTINENTAL CONTITECH DOES NOT IN ANY WAY WARRANT THE FITNESS OF THE TRACKS FOR ANY PARTICULAR PURPOSE. ALL WARRANTIES IMPLIED BY STATUTE, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSLY LIMITED TO THE DURATION OF THE LIMITED WARRANTIES SET FORTH ABOVE. Some states or provinces do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you. WITH THE EXCEPTION OF ANY WARRANTIES REQUIRED BY STATE LAW, AS HEREIN LIMITED, THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE, AND IN LIEU OF ALL OTHER WARRANTIES, GUARANTEES, AGREEMENTS AND SIMILAR OBLIGATIONS OF CONTINENTAL CONTITECH WITH RESPECT TO ANY TRACK, CONTINENTAL CONTITECH'S LIABILITY AND PURCHASER'S SOLE REMEDY WHETHER IN CONTRACT UNDER ANY WARRANTY, IN TORT (INCLUDING NEGLIGENCE), IN STRICT LIABILITY OR OTHERWISE, SHALL BE LIMITED TO THE REPLACEMENT OF THE TRACKS, UNLESS NO CIRCUMSTANCES SHALL CONTINENTAL CONTITECH BE LIABLE FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO, PERSONAL INJURY, PROPERTY DAMAGE, DAMAGES OR LOSS OF EQUIPMENT, LOSSES OR REVENUE, COSTS OF RENTING REPLACEMENTS AND OTHER ADDITIONAL EXPENSES. EVEN IF CONTINENTAL CONTITECH HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE OR LOSS. Some states or provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

CONTINENTAL CONTITECH WILL NOT BE LIABLE FOR ANY DAMAGES, LOSSES OR EXPENSES AS A RESULT OF THE END USER'S NEGLIGENCE, WHETHER DEEMED ACTIVE OR PASSIVE AND WETHER OR NOT SUCH NEGLIGENCE IS THE SOLE CAUSE OF ANY SUCH DAMAGE, LOSS OR EXPENSE.

Any track, no matter how well-constructed, may fail in service or otherwise become unserviceable due to conditions beyond the control of the manufacturer. This limited warranty is not a representation that track failure cannot occur. This limited warranty gives you specific legal rights, and you may also have other rights that vary from state to state or province to province.

Owner's Obligation
The track owner, or authorized agent of the track owner, must present the unserviceable track and proof of purchase to a participating dealership. The track owner or authorized agent must also completely fill out and sign a Continental ContiTech Rubber Track Claim Form. This claim form must be accompanied by a clear and visible photograph of the warranty condition that made the track unserviceable. These should be sent to Continental ContiTech's warranty administrator. The track owner or authorized agent must pay for taxes, installation or any other additional service ordered at the time of adjustment. Warranty track must be purchased within 90 days of Continental ContiTech's approval of the warranty claim.

Filing Instructions
All warranty claim forms must be accompanied by a valid Continental ContiTech Rubber Track Claim Form, which includes:
• TMR number of the track
• Date of track purchase
• Date track became unserviceable
• Picture of condition that rendered track unserviceable
• Picture of equipment on which track was operating

The track TMR number will be found on the rubber track either embossed on the inside wheel path of the track and/or molded on the top of several of the guide/slave lugs. The TMR number begins with the letters “TMR” followed by 6 numeric digits (example: TMR00017).

In order for claims to be processed, the dealer must submit the completed claim form and the photographs to:

Continental ContiTech
Attn: Warranty Department
1115 S. Wayne Street
St. Marys, OH 45885
Or via e-mail:
trackwarranty@conti.tech
Scrapers Track

Limited Warranty

Eligibility
You are eligible for the benefits of this limited warranty if you are the original owner, or authorized agent of the original owner, of new Continental ContiTech scraper service rubber tracks. This Limited Warranty is from Continental ContiTech.

Coverage
Continental ContiTech scraper service rubber tracks that become unuseable due to a covered warranty condition within 24 months from their introduction into service are eligible for coverage under the Continental ContiTech scraper rubber track limited warranty. Warranty consideration is applicable only to the track purchase price and does not include removal or installation charges, or any special, incidental, or consequential charges. This limited warranty covers only tracks that bear proper Continental ContiTech identification that have been used only on the equipment on which they were originally installed in accordance with the equipment manufacturer's or Continental ContiTech's recommendations and that were purchased on or after January 1, 2014.

Covered Conditions
- Guided drive lug loss due to lack of adhesion
- Deformation of tracks due to lack of adhesion resulting from the manufacturing process
- Smooth void areas in the interior of the tread lug
- Tread lug separation with smooth interface between lug and carcass

Not Covered
- Continental ContiTech scraper service rubber track purchased more than 24 months prior to presentation for adjustment
- Continental ContiTech rubber track designed for non-scraper service
- Tracks marked “Prototype”
- Prolonged on-road use. These tracks are not certified for such use by the United States Department of Transportation, Transportation Safety must not exceed 25 mph (40 kph)
- There is no warranty on tracks used on gear tooth drive systems
- Irregular wear or damage due to cuts, scuffing, snake, machine malfunction or damage, wind, collision, fire, chemical damage, overloading, misapplication, misuse, negligence, or mechanical condition of vehicle
- Chipping, nipped or missing lugs caused by cuts from a sharp object or due to overloading
- GUIDEDrive lug wear caused by improper alignment of the tracks. For example, if a track is run misaligned the idler wheel will rub against the inside of guide lug and friction will cause excessive temperature to build up. Excessive heat from the friction will cause rubber bonding to fail and chinking will occur
- GUIDEDrive lug wear caused by running the track in extreme hostile conditions
- Cables that is cut by a sharp object or implement

Excluded from Coverage:
- Exposed cables that are caused by
  - Improper maintenance of idler roller wheels
  - Interference from implements used in the application
  - Excessive slip between track and driven wheels
  - Cables failure caused by cuts to the rubber from rocks or implements that damage cables. The exposure of the cable to moisture, dirt, and the elements will eventually cause corrosion and will make the track unserviceable.
  - Conditions which impact the appearance of the rubber track but do not make the tracks unserviceable. Some examples include:
    - Exposed or frayed fabric
      This may appear in guidegroove lug path area or drive wheel area. It is normal for the contact between drive wheels, idler wheels and mid-roller wheels to wear the rubber covering fabric rimention, causing exposure of fabric and for that fabric to fray as the track wears.
    - Tread flex cracking
      Flex cracking occurs over time as a result of bending around drive, idler and mid-roller wheels. Small surface cracks will appear in most tracks after a few hundred hours of operation. Cracks usually appear on the track surface between tread lugs. This is normal wear.
    - Surface cracking at base of tread lugs occurs as a normal part of wear.
    - As tracks remain in operation, surface cracking will continue to spread.
    - Tracks with surface cracks can continue to be used.
    - Guide/Drive lug flex cracking
      Cracking along guided drive lugs is a normal part of wear and occurs over time as a result of bending around drive, idler and mid-roller wheels. This cracking will not affect operation of track.
    - When track is first broken in, you may observe small cracks along outside edge of guide lugs.
    - As tracks remain in operation, cracking around guide lugs will occur.
    - As track ages the cracks around guide lugs will continue to spread.
    - Tracks with guidedrive lug flex cracking can continue to be used.

Prorated Replacement
Continental ContiTech scraper rubber tracks covered by this limited warranty that become unserviceable due to a covered warranty condition outside of the no-recharge replacement period (0-12 months, use chart) and within 24 months from introduction into service will be replaced on a prorated basis. The warranty replacement price will be calculated by multiplying the manufacturer's suggested retail price (MSRP) by the percentage determined from the “Warranty Replacement Price Table” shown on the following chart.

Introduction Into Service Date
The purchase date will be used to establish the date that tracks are introduced into service, or absent proof of purchase, the earliest date when the tracks were placed into service.
Rubber Track Scraper Track Limited Warranty

date of manufacture. The “months” above represent the number of months since introduction into service letter as an ODM factory installed option or as a replacement product.

Example: The MSP = $8000. Track Age = 20 months. Based upon the table, the owner of the warranty track will pay 50% x $8000 = $4000 for a replacement warranty track.

Track Service Life

The service life of specific track cannot be predicted in terms of hours of use since service conditions vary widely. The wear rate and serviceability of a track over time is a function of the service condition (speed, maintenance, operating and soil conditions, etc.) to which a track is subjected. Even if operating conditions and tractor and track maintenance are identical, in different regions, varying soils and ground surfaces will significantly affect track wear. Although little can be done to compensate for harsh soil conditions and their impact on track wear, proper alignment of tracks to undercarriage, regular inspections and regular maintenance are key to receiving the maximum benefit from your tracks.

Although traction may be reduced, the loss of one or several tread lugs because of cuts or shearing will not prevent your track from operating.

If one or several lugs are only partially cut off and flapping occurs, we recommend that the loose portion of the lug be cut off as soon as possible to prevent losing the lug further into the track. You may continue using your track normally as long as cuts or nips do not extend down to the base.

Operators should check their tracks each day and note any major cuts or damage that may have occurred during previous operation. A common indication of a cut or foreign object damage to guided/lug or tread lugs is the appearance of several damaged lugs or tread in the same area, or a repeating pattern of damage.

Legal Rights

No representative or dealer has authority to make any representation, promise or agreement or modification to this warranty on behalf of Continental ContiTech except as stated herein.

THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION PRINTED ABOVE AND CONTINENTAL CONTITECH DOES NOT IN ANY WAY WARRANT THE FITNESS OF THE TRACKS FOR ANY PARTICULAR PURPOSE. ALL WARRANTIES IMPLIED BY STATE LAW INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSLY LIMITED TO THE DURATION OF THE LIMITED WARRANTY SET FORTH ABOVE. Some states or provinces do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. WITH THE EXCEPTION OF ANY WARRANTIES REQUIRED BY STATE LAW AS HEREBY LIMITED, THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, GUARANTEES, AGREEMENTS AND SIMILAR OBLIGATIONS OR CONTINENTAL CONTITECH WITH RESPECT TO ANY TRACK,

CONTINENTAL CONTITECH'S LIABILITY AND PURCHASER'S SOLE REMEDY, WHETHER IN CONTRACT, UNDER ANY WARRANTY, IN TORT (INCLUDING NEGLIGENCE) IN STRICT LIABILITY OR OTHERWISE, SHALL BE LIMITED TO THE REPLACEMENT OF THE TRACKS. UNDER NO CIRCUMSTANCES SHALL CONTINENTAL CONTITECH BE LIABLE FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES INCLUDING, BUT NOT LIMITED TO, PERSONAL INJURY, PROPERTY DAMAGE, DAMAGE OR LOSS OF EQUIPMENT, LOST PROFITS OR REVENUE, COSTS OF RENTING REPLACEMENTS AND OTHER ADDITIONAL EXPENSES. EVEN IF CONTINENTIAL CONTITECH HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE OR LOSS. Some states or provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

CONTINENTAL CONTITECH WILL NOT BE LIABLE FOR ANY DAMAGES, LOSSES OR EXPENSES AS A RESULT OF THE END USERS NEGLIGENCE. WHETHER DEEMED ACTIVE OR PASSIVE AND WHETHER OR NOT SUCH NEGLIGENCE IS THE SOLE CAUSE OF ANY SUCH DAMAGE, LOSS OR EXPENSE.

Any track, no matter how well constructed, may fail in service or otherwise become unserviceable due to conditions beyond the control of the manufacturer. This limited warranty is not a representation that a track failure cannot occur.

This limited warranty gives you specific legal rights, and you may have other rights that vary from state to state or province to province.

Owner's Obligation

The track owner, or authorized agent of the track owner, must present the unavailable track and proof of purchase to a participating dealership. The track owner or authorized agent must also completely fill out and sign a Continental ContiTech Rubber Track Claim Form. This claim form must be accompanied by a clear and visible photograph of the warranty condition that made the track unusable. These should be sent to Continental ContiTech warranty administration.

The track owner or authorized agent must pay for taxes, installation or any other additional service ordered at the time of adjustment. Warranty track must be purchased within 90 days of Continental ContiTech’s approval of the warranty claim.

Filing Instructions

All warranty claim forms must be accompanied by a valid Continental ContiTech Rubber Track Claim Form, which includes:

- TM number of the track
- Date of track purchase
- Date track became unusable
- Picture of condition that rendered track unusable
- Nature of equipment on which track was operating

The track TM number will be found on the rubber track either embossed on the inside wheel path of the track and/or molded in the top of several of the guide lugs. The TM number begins with the letters “TM” followed by 5 numeric digits (example: TM306167).

In order for claims to be processed, the dealer must submit the completed claim form and the photographs to:

Continental ContiTech
Attn: Warranty Department
1115 S. Wayne Street
St. Marys, OH 45885

Or via e-mail:
trackwarranty@contiTech.us
Continental Approved Agricultural Track Warranty

**COVERAGE:**

- Tracks that become unserviceable due to a covered warranty condition within 48 months (12 months for general applications 24 months for approved scraper tracks & 36 months for approved paver tracks) from their introduction into service

- Warranty consideration does not include removal or installation charges, or any special, incidental, or consequential charges.

- Only tracks that bear proper Continental Trackman identification and:
  - Have been used only on the vehicle on which they were originally installed in accordance with the vehicle manufacturer's or Continental Trackman recommendations
  - Were purchased on or after January 1, 2005.

**NO CHARGE (N/C) REPLACEMENT:**

- First twelve months of service

- Replaced with comparable new Continental Trackman rubber track without charge.

**PRORATED REPLACEMENT:**

- Outside of the no charge replacement period and within 48 months (12 months for general applications, 24 months for scraper tracks & 36 months for paver tracks) from introduction into service

- Customer charge will be calculated by multiplying the customer's current buying price, at the time of adjustment, by the percentage from the "Warranty Replacement Percentage Table."
**Warranty Review**

**INTRODUCTION INTO SERVICE DATE:**

➢ Proof of purchase date will be used to establish the service date
➢ Date of track manufacture will be used if proof of purchase is not available.

**NOT COVERED:**

➢ Track purchased more than 48 months (12 mos. general service, 24 mos. for scraper tracks & 36 mos. for paver tracks) prior to presentation for adjustment
➢ Track designed for non-agricultural, non-scraper, or non-paver service (as applicable)
➢ Track used in non-agricultural service including but not limited to land leveling, road construction, general construction and military service.
➢ Irregular wear or damage due to cuts, snags, machine damage, wreck, collision, fire, chemical damage, misapplication, misuse, negligence, or mechanical condition of vehicle.
➢ Conditions which impact the appearance of the rubber track but do not render the track unserviceable.
Eligibility

OWNER OR AUTHORIZED AGENT OF THE TRACK OWNER:

➢ Must present the unserviceable track & copy of the proof of purchase to an authorized track dealership who contacts the proper Continental authority

➢ Must completely fill out and sign a Continental Trackman Rubber Track Claim Form supplied by Continental Trackman to the authorized track dealer

➢ Accompanied by a clear and visible photograph of the warranty condition that rendered the track unserviceable

➢ Must pay for taxes, installation or any other additional services ordered at the time of adjustment

➢ Warranty track must be purchased within 90 days of Continental Trackman approval of the claim
Filing Instructions

All warranty claims must be accompanied by a completed Continental Trackman Rubber Track Claim Form:

➢ TM number of the track
  ➢ Found embossed on inside wheel path of track and/or molded to the top of several guide/drive lugs
➢ Tread depth measurement
  ➢ Measure at three points around track with straight edge across two tread lugs directly opposite the center of the roller wheel (average of 3 points)
  ➢ Measure from straight edge bottom to the track carcass 1/2 way between the two lugs
➢ Date of track purchase
➢ Date track became unserviceable
➢ Picture of condition that rendered track unserviceable and machine installed on

Mail or e-mail claim form & picture to:

ContiTech USA Inc.
Attn: Warranty Department
1115 S. Wayne Street
St. Marys, Ohio 45885
Phone: 800-233-9810
trackwarranty@contitech.us
Track Identification Numbers

**Manufacturer Logo:**
Check the edge of the rubber track for the Continental Trackman logo.

**Track Manufacture Number:**
Every rubber track will have a unique TM# embossed onto the wheelpath, and on the tops of several guide/drive lugs.
Example: TM138604

**Track Serial Number:**
Every track will have a serial number or AU number embossed inside the track wheel path.
Example: AU611342914
Measuring Tread Wear

➢ We recommend the use of a straight edge to bridge between the tread lugs, as shown below.
➢ Tread depth should be measured from track carcass at the midpoint between the tread lugs to the bottom of the straight edge.
➢ Tread depth should be on the section of track directly opposite of the roller wheel path.
➢ Tread depth gauges are manufactured by Haltec or Eaton/Dill or any straight edge or measured rule calibrated in 32nds will suffice.
Uneven Tread Wear

➢ **Non Warrantable Condition**

➢ **Discussion**- Uneven or irregular tread wear is prominent in track systems which have higher weights per unit footprint, such as tracked row crop tractors/implements. Also, any undercarriage arrangement or road/ground condition which concentrates the loading unevenly onto a narrow section of a wider track can also cause uneven tread wear.

➢ **Action**- The following best practices are recommended to help reduce uneven/irregular tread wear:
- Minimize amount of roading
- Avoid roading with added vertical loads
- Avoid crowned roads
- Reduce roading speeds
- Use wide wheels and tracks whenever possible
Tread Lug Cracking

➢ Possible Warranty Condition

➢ Discussion - Tread lug cracking is normally aesthetic and will not hinder the performance of the track. The molded tread lug will likely remain intact and solidly attached to the carcass. Cracking may occur over time, and can occur due to rubber fatigue after extended usage. This fatigue is caused by repeated flexing and bending loads as the track rotates around the wheels. In addition, cracks may form due to tread bar stresses incurred during heavy traction and contact with rougher ground conditions. Cracks are usually shallow, and only at the base of the tread bar. In very few cases will tread lug cracking have an effect on track serviceability duration.

➢ Action - Monitor and report for further evaluation. Submit a claim especially if a tread lug separates from the carcass.
Tread Lug Chipping/Chunking

➢ Non Warranty Condition

➢ Discussion - Tread lug chipping/chunking is usually caused by dense soil clods and/or abrasive soil conditions with possible sand, gravel or rocky materials. Many times the driving surface can be hard and abrasive with possible sharp objects in the path. Rock-laden soils pose the greatest harm to track tread lugs. Crop stubble will cause tread lug chipping

➢ Action - Avoid running is damaging soil condition. Avoid high slippage drawbar applications. Use normal industry methods to avoid/reduce exposure to crop stubble (i.e. stalk stomper attachments)
Tread Lug Bulging/Blow Out

➢ **Non Warrantable Condition**

➢ **Discussion** - Tread lug bulging/blow-out is caused by roading at high speeds, for long durations, under heavy loads. Heating of the lugs can also be influenced by high ambient temperatures and uneven road surfaces. Internal lug rubber, once overheated, loses physical properties, and lessens the track’s ability to resist general wear and tear.

**Action** - The following best practices are recommended to help reduce tread heating damage:

- Minimize amount of roading
- Avoid roading with added vertical loads
- Avoid crowned roads
- Reduce roading speeds
- Use wide wheels and tracks whenever possible

In order to avoid track damage due to overheating, Continental recommends that customer follows vehicle manufacture operator instructions.
Possible Warrantable Condition

Discussion- This condition is associated with a peeling of thin layer/s of material from the parent tread lug material. The severity of the peeling can vary. Generally the condition will appear early and will subside, rather than grow worse, as track is used and tread wears normally. This is considered an aesthetic condition and would not be expected to effect the performance or the service life of the track.

Action- Submit a claim. The degree of wear and serviceability of the track will determine claim disposition. Minor delamination does not effect the tread lug life or performance as much as it being an aesthetic issue.
Accelerated Tread Wear

➢ **Non Warrantable Condition**

➢ **Discussion**- Rate of tread wear is influenced by many factors. Most notable influences are soil abrasiveness, soil condition (packed, loose, etc.), amount of slippage, and amount of roading. The roading wear rate can be 10 greater than the field wear rate. Fast tread wear is more common in the industry for row crop applications (i.e. heavily loaded narrow undercarriages).

➢ **Action**- The following best practices are recommended to help reduce the rate of tread wear:
- Minimize amount of roading
- Avoid roading with added vertical loads
- Avoid crowned roads
- Reduce roading speeds
- Use wide wheels and tracks whenever possible
Tread Lug Loss

➢ **Possible Warrantable Condition**

➢ **Discussion** - It is extremely rare that an outside tread leg would be separated on a Continental Trackman Track because of the fully molded construction. The first thing to look for is contact with the tractors implements or any field hazards. Even with a crack in the tread lug, the molded rubber integrated with the base carcass forms a bonded connection that does not separate.

➢ **Action** - Submit a claim for review.
Wild Wire

➢ Non Warrantable Condition

➢ Discussion - The rare occurrence of thin single strands of wire working their way out of the track surface. Self repair and removal of the exposed wire is recommended.

➢ Action - Snip the loose wire at the surface of the track. Note that some wires may continue to extrude; however condition should subside over time. It is highly unlikely that this will negatively effect the performance or longevity of the track.
Non Warrantable Condition

Discussion- Under certain conditions internal track temperatures can rise and result in permanent damage. The main factors that affect track heating are: total weight supported per track, vehicle speed, travel duration, ground/road surface conditions, ground contour, and ambient temperature. Tracks are most susceptible to overheating during roading. Severe overheating will cause visual separation. Intermediate overheating will cause permanent physical property degradation w/o visual separation.

Action- In order to avoid track damage due to overheating, Continental recommends that customer refer to vehicle manufactures operators instructions, as well as, any service bulletins regarding same subject matter.
Non Warrantable Condition

Discussion- Cables can be broken during de-tracking or while having debris packed in the undercarriage when the vehicle is partially buried and is attempting to free itself with assistance or under its own power. Also, gradual tears can be initiated when sharp rocks are driven into the track’s inner wheel paths. This leads to moisture ingress, corrosion, weakening of individual cable/s and eventual fatigue corrosion failure with occurrences of lateral zipper breaks.

The main tension cable in the track is a single strand of cable helically wound across the width of the track. Spacing between cables is minimized in order to maximize the amount of cable included. When debris causes retraction of undercarriage take-up, along with isolation of a smaller area of the track to carry the full tension load, the track cables can stretch beyond their limit (around 2%), and experience ductile overload breakage.

Action- Track will still be able to provide service with a few broken cables; however, over time, the effected area may grow in size and number of broken cables. The track may lose ability to maintain alignment and the likelihood of a sudden complete breakage failure of the track will increase.
Possible Warrantable Condition

Discussion- Condition where one or several whole cables are loose or are visible on the inner wheel path surface of the carcass. If the cable is outboard from the wheels, it is not a structural element.

Action- Continue to monitor the condition or submit a claim for warranty consideration. Track may still be serviceable with minor exposure in some cases. In such cases the recommended action may be to snip individual exposed cable/s and continue running.
Wheel Path Damage

➢ **Non Warrantable Condition**

➢ **Discussion**- Patches of rubber removed in wheel path. Cuts in wheel path. Rock laden soil ingestion. Build up of material on drive, idler bogie wheels. Excessive vertical loading-weight transfer.

➢ **Action**- Continually monitor undercarriage for worn or damaged components. Clean rolling elements of undercarriage.
Drive Wheel Path Wear

➢ **Non Warrantable Condition**

➢ **Discussion**: Condition where the inner wheel path surface of the carcass has experienced some level of smooth uniform wear around the length of the track. The edges of the wear corresponds to the width of the drive wheel. In other cases wear is due to lockup of roller/idler wheels inside the track.

➢ **APPEARANCE**: the wear damage appears in the inside surface of the track by thinning the rubber surface looking like it is grooved or planed off, as opposed to sheet separation. The surface rubber is worn off rather than broke off the inside of the track. The wear is uniform around the track. An idler or roller wheel may also show a flat/worn section or may not be freely turning.

➢ **Action**: Monitor roller wheels for signs of lockup. Always maintain correct track tension. If wheel slippage inside the track occurs, operate in a manner to avoid continuous spinning inside track for an extended time in order to minimize damage. For positive drive systems install drive wheel scrapers to minimize build-up of abrasive material rims of the drive wheel.
Guide/Drive Lug Chunking/Chipping

➢ Non Warrantable Condition

➢ Discussion- Damaged Guide lugs show no signs of workmanship/materials defects. Rather, lugs possibly effected by mechanical damage. Undercarriage components may become unsecured and interfere with the lugs. Pulling heavy loads while turning can wear and weaken the sides of the inner lugs. This can make lugs susceptible to further damage and tear-off. Other possible causes of damage on positive drive lugs may be due to ratcheting or mis-engagement of the track and drive wheel.

➢ Action-

➢ Consult vehicle manufacturer’s operation recommendations, especially for Scraper applications

➢ Maintain proper track alignment

➢ Inspect and replace worn or damaged undercarriage components
Possible Warrantable Condition

Discussion- Condition presents itself as a band/ribbon of consecutive guide/drive lugs separating from the base track (as shown in the accompanying photo). Normally, the ribbon separation occurs as the result of a considerable lateral cable break. This may be considered a warrantable condition if the separation has occurred in the absence of a lateral break.

Action- Submit a claim for warranty consideration.
Baseline Guide/Drive Lug Cracking

➢ Non Warrantable Condition

➢ Discussion - Cracking at base of guide/drive lugs. Will vary in severity. May only be cosmetic and not effect track life or performance. Alternatively, may lead to drive lug debond (a warrantable condition).

➢ Action - Monitor condition. If lug loss appears imminent, or has occurred, exposing a smooth interface surface, proceed to submitting a warranty claim.
Guide/Drive Lug Debond

➢ Possible Warrantable Condition

➢ Discussion- Guide/drive lug separation, exposing a smooth interface between lug and carcass. The key element is “smooth” separation. A smooth separation can be the result of a defect in workmanship or materials.

➢ Action- Submit a claim for review.
Side Guide/Drive Lug Wear/Abrasión

➢ Non Warrantable Condition

➢ Discussion- Abnormal guide/drive lugs worn/abraded on side/s of lug. Smooth or chunky appearance. Turning under heavy load. Wheels with sharp edges or worn rubber may promote wear. Continuous hillside work will increase side wear

➢ Action- Rotate tracks side to side as appropriate. Inspect drive, idler and bogie wheels for worn rubber or sharp edges. Replace if necessary. Minimize turns under heavy drawbar loads. Maintain proper track alignment using inboard to outboard temperature comparisons per vehicle manufacturer’s operators manual instructions.
Non Warrantable Condition

Discussion- ARMORLUG® material has wear resistance greater than rubber however the frictive forces applied continuously against ARMORLUG will cause wear and fraying. This can generate a less than attractive appearance until the frayed ends are worn away and the contacting surfaces become parent rubber substrate. Fortunately, the reinforcement is sacrificial in the common wear areas (upper guiding surfaces and driving/reversing surfaces). In the important high stress areas, where the sides of the lugs meet the wheel path, ARMORLUG works to prevent cracking and eventual tear off. Because the ARMORLUG wear is only temporarily cosmetically unappealing, and is not reduced in its purpose/effectiveness there is no expectation of reduced performance or track life.

Action- Customer should take care to make sure tracks are pre-conditioned per vehicle manufacturer's instructions. Also proper alignment will limit Armorlug wear.
Drive Lug Engagement Wear/Abrasion

- **Non Warrantable Condition**

- **Discussion**- Abnormal wear on front or rear surface of drive lug. Foreign material build up on positive drive wheel. Incorrect or excessively worn drive wheel diameter. Drive wheel pocket mud packing or other obstruction.

- **Action**- Investigate possible foreign material build up on drive wheel, drive wheel pockets, bars or flanges and/or undercarriage components. Install drive wheel scrapers to prevent drive wheel build-up.
Drive Lug Jumping

➢ **Possible Warrantable Condition**

➢ **Discussion** - A condition where track and drive wheel become uncoupled repetitively during heavy pull conditions. The track can be seen climbing above the wheel and then slamming back into engagement. This may happen occasionally or repetitively. The action is accompanied by a loud slapping sound. Drive lugs can be permanently damaged in short period of time, further reducing their pulling capability. May begin as a consequence of lugs being separated earlier due to cracking loss, debond or damage.

➢ **Action** - Check for drive wheel build-up. Confirm proper track pre-tension and check to see that take-up device is in proper working order. Submit a claim for warranty consideration.
Non Warrantable Condition

Discussion - Condition of having high concentration of small surface cracks. Normally this occurs in the valley between consecutive guide/drive lugs. Condition is normally aesthetic and will not effect track performance or life. Tracks are serviceable.

Action - Submit warranty claim if it appears that this condition has rendered the track unserviceable. Refer to Periodic storage of tracks recommendations found earlier in this manual.
Implement/Field Damage

➢ Non Warrantable Condition

➢ Discussion- Sharp, straight line cuts across multiple surfaces indicate an outside object may have damaged the surface. Additionally, jagged cuts, chunks that look torn are also key indicators that an object damaged the rubber surface upon impact. Likely sources are rocks, stumps, tractor implements, fence posts etc.

➢ Action- Assess track for serviceability and potential damage to other components especially on the undercarriage. Check the roller, idler and drive wheels for potential damage as well.
Possible Warrantable Condition

Discussion- this “catch all” category is for an uncommon issue which occurs in rare instances or may be a new damage that has not been seen before?

Action- Submit a claim review. If there is any confusion from the end user, always take plenty of pictures from different angles and fill out the warranty claim form to find a suitable solution.