



UM-TRACKS

October 6, 2014
ECR: 101408R

RAILZER

2000



TRACKS USER MANUAL

Serial Number: _____

Date of Purchase: _____

Purchased From: _____

Dealer's Address: _____

Dealer's Telephone: _____

INDEX

Company Statements	1
Accuracy Statement.	1
To the Purchaser	1
Warranty Manufacture.	1
Certificate of General Equipment Warranty	1
Liability for Delays.	2
Contact Information	2
Warranty Registration	3
Safety	5
Mandatory Shut Down Procedure.	6
Additional Safety Reminders	7
Personal Safety	7
Towing Safety	7
Operation Safety	7
Hydraulic System Safety	8
PTO Operation Safety.	9
Safety Signs and Decals	10
Technical Data	11
Specifications	12
Operation	13
Pre-Operation Checks	14
Track Break-in	14
Track Tension	14
Wheel Torque	15
Grease	15
Track Alignment.	15
Operational Techniques	16
Maximizing Tread Life.	16
Maintenance	17
Daily and Before Start of Season	18
Every 40 Hours of Operation	18
Track Maintenance	18
Periodic Storage	19
Long-Term Storage of Rubber Tracks.	19
Adjusting Track Tension	21
Adjusting Alignment	21

Accuracy

Balzer Incorporated is dedicated to providing the most reliable and durable agricultural related products available. We have made every attempt to provide the most accurate and readily understandable information on our equipment. Due to our continuing efforts to produce the best products available, updates and improvements to our equipment may precede updates to this and other manuals. Therefore, the contents of this manual are based on the information in effect at the time of publication and are subject to change without notice.

It is the policy of Balzer Incorporated to constantly improve its products whenever it is practical to do so. Therefore, Balzer Incorporated reserves the right to redesign or change its equipment or component parts thereof without incurring the obligation to install or furnish such changes on equipment manufactured prior to date of redesign or change.

To the Purchaser



This is the safety alert symbol. It is used to alert the operator to an instruction concerning the personal safety and risk factor of this equipment. Always observe and heed these very important instructions to promote a safe operation with good preventive maintenance habits.

This Balzer product is designed and manufactured to provide years of dependable service when used for the purpose for which it is intended, and when properly maintained.

NEVER OPERATE THIS EQUIPMENT AT SPEEDS OVER 20 MPH.

NEVER OPERATE THIS EQUIPMENT UNTIL USER FULLY UNDERSTANDS THE COMPLETE CONTENTS OF THIS MANUAL. FOR OWNERS WHO DO NOT OPERATE THIS EQUIPMENT, IT IS THE OWNER'S RESPONSIBILITY TO ENSURE ALL USERS ARE PROPERLY INSTRUCTED AND FULLY AWARE OF THIS MANUAL'S CONTENTS.

This is important in the safe handling of this equipment and promoting an efficient operation. If there are any questions about areas in this manual, it is important to contact your dealer for clarification.

This machine is warranted as stated below. Registration of this equipment is to be completed online as soon as possible. This will provide a ready reference to help you in securing warranty and in answering questions that you may have at some later date.

Operating instructions and parts manuals are shipped with this machine. If parts of these manuals are missing or become unreadable, contact your dealer for a replacement manual.

The serial number and identification tag is located to the front of the frame. Please refer to these numbers when parts or warranty communication is necessary.

Warranty Manufacture

The Dealer or Distributor understands and agrees the Manufacturer extends only the following Warranty to customers. In the event a Dealer or Distributor extends any additional warranty (such as by enlarging the scope or period of warranty or undertaking a warranty of merchantability or fitness for any particular purpose) or any other obligation whatsoever, the Dealer or Distributor shall: (1) be solely responsible therefore; (2) have no recourse against the Manufacturer thereof; and (3) defend, indemnify, and hold the Manufacturer harmless against any claim or cause of action whatsoever arising out of, or occasioned by, the Dealer's or Distributor's extension of said additional warranty or obligation.

Certificate of General Equipment Warranty

Balzer Inc. warrants new Products sold by it to be free from defects in material and/or workmanship for a period of one (1) year after the date of delivery to the first user and is subject to the following conditions:

1. Balzer Inc.'s obligation and liability under this Warranty is expressly limited to repairing or replacing at Balzer Inc.'s option any parts which, upon inspection by Balzer Inc., to have been defective in material or workmanship. Such parts shall be provided at no cost to the user and shall be delivered to the business establishment of the authorized Balzer Inc. dealer or distributor of the Product during that dealer's or distributor's regular working hours.
2. This Warranty shall NOT apply to component parts or accessories of Products not manufactured by Balzer Inc. and which carry the warranty of the manufacturer thereof, or to normal maintenance (such as tune-up) or normal maintenance parts (such as oil filters).
3. Replacement or repair parts installed in this Product covered by this Warranty are warranted only for the remainder of this Warranty if such parts replaced were original components of said Product.

Certificate of General Equipment Warranty (Continued)

BALZER INC. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, AND MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

Balzer Inc.'s obligation under this Warranty shall not include any transportation charges, cost of installation, duty taxes, or any other charges whatsoever, or any liability for direct, indirect, incidental, or consequential damage or delay. If requested by Balzer Inc., products or parts for which a warranty claim is made are to be returned transportation prepaid to Balzer Inc. This Warranty shall become void under, but not limited to, any of the following conditions: any improper use, including operation after discovery of defective or worn parts, operation beyond rated capacity, or operation for a use other than this Product's intended design; substitution of parts not approved by Balzer Inc.; or modifications or repairs by others that are done in a manner as determined by the judgment of Balzer Inc. to have adversely affected the material or workmanship of this Product.

NO EMPLOYEE OR REPRESENTATIVE IS AUTHORIZED TO CHANGE THIS WARRANTY IN ANY WAY OR GRANT ANY OTHER WARRANTY UNLESS SUCH CHANGE IS MADE IN WRITING AND SIGNED BY AN OFFICER OF BALZER INC. AT ITS HOME OFFICE.

Liability for Delays

No liability shall attach to Manufacturer direct or indirect for incidental or consequential damages or expenses due to loss, damage, detention of, or delay in delivery of Products resulting from acts or delays beyond its control.

Contact Information

Telephone Numbers

Toll-Free: (800) 795-8551
(800) 727-3133
Outside North America: (507) 427-3133
Fax: (507) 427-3640

Mailing/Shipping

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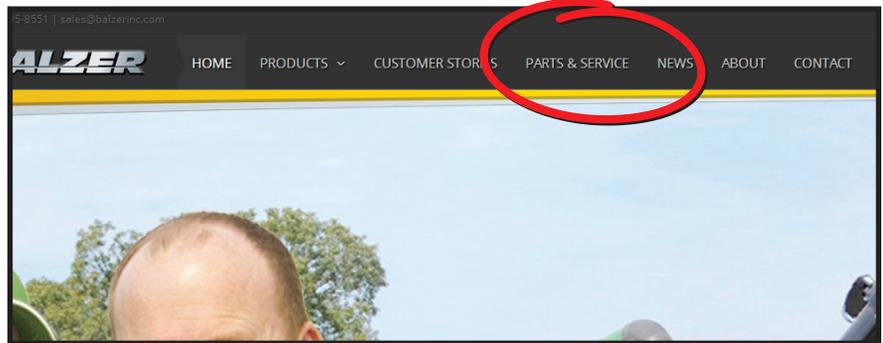
www.balzerinc.com

Warranty Registration

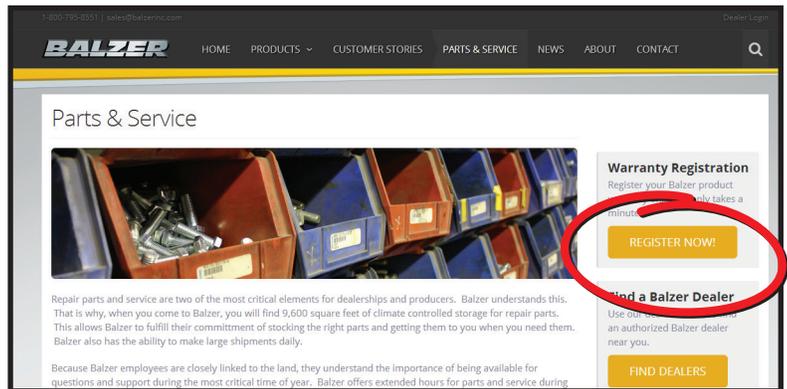
As of June 1, 2014, all warranty registration must be completed online to be valid. Registering online is fast and easy. If you are viewing this manual on a device connected to the Internet, click here:

REGISTER NOW!

Go to the Balzer website at www.balzerinc.com and click on "Parts and Service".



Then, on the right side of the website, click on the "Register Now" button under "Warranty Registration".



Complete the online form and click "Submit".

Warranty Registration

Thank you for your recent purchase. Complete the following form to register your product warranty. *Warranty is not valid unless this form is completed.

Product:

Model Number: Serial Number:

Purchase Date: (MM/DD/YYYY)

Customer Name:

Customer Phone: (XXX-XXX-XXXX) Customer Email:

Customer Address:

Customer City: Customer State: (Select a State) Customer Zip:

Dealer Name:

Dealer Address:

Dealer City: Dealer State: (Select a State) Dealer Zip:

Balzer Inc. is committed to our customers and their privacy. Balzer Inc. will only use the information you give us to provide prompt warranty claims and services to you. Balzer Inc. uses appropriate safeguards which reasonably and appropriately protect the information that Balzer Inc. creates, receives, maintains, or transmits on behalf of our customers. Any personally identifiable information obtained will not be sold, rented, shared, or made available to third parties.

RAILZER

Safety

The following Safety Alert Symbols mean **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!** They stress an attitude of “**HEADS UP FOR SAFETY**” and can be found throughout this manual and on the equipment itself.

BEFORE YOU ATTEMPT TO OPERATE, MAINTAIN, OR SERVICE THIS EQUIPMENT, READ AND STUDY THE FOLLOWING SAFETY INFORMATION. IN ADDITION, MAKE SURE THAT EVERY INDIVIDUAL WHO OPERATES, WORKS WITH, OR OTHERWISE USES THIS EQUIPMENT IS FAMILIAR WITH THESE SAFETY PRECAUTIONS.

Our company **ALWAYS** takes operator safety into consideration when designing its machinery, guards, and exposed moving parts for operator protection. However, some areas can **NOT** be guarded or shielded in order to assure proper operation. In addition to this manual, decals on the machine warn of further danger and should be read and observed closely.

READ and **FOLLOW** the instructions on all decals.

REMEMBER it is the owner’s responsibility for communicating all information on the safe use and proper maintenance of this machine! This includes providing understandable interpretation of these instructions for operators who are not fluent in reading or understanding English.

	DANGER	DANGER indicates an imminently hazardous situation which if not avoided will result in serious injury or death or irreparable damage to the machine.
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	WARNING	WARNING indicates a potentially hazardous situation which if not avoided may result in serious injury or death or moderate to severe damage to the machine.
--	----------------	--

	CAUTION	CAUTION indicates a potentially hazardous situation which if not avoided may result in minor to moderate injury or minor to moderate damage to the machine.
--	----------------	--

Mandatory Safety Shutdown Procedure

BEFORE cleaning, adjusting, lubricating, or servicing this equipment:

1. Remove the ignition key from the power unit engine.
2. Make sure ALL movement throughout this equipment has ceased! **ONLY** when you have taken these precautions can you be sure it is safe to proceed. Failure to follow the above procedure may lead to serious injury or death.
3. Properly attach the jack to this equipment and raise up to transfer weight to the jack.
4. Keep the hitch pin attached to help prevent this equipment from moving.
5. Disconnect the PTO shaft from the power unit.

Additional Safety Reminders

USER/OPERATOR SAFETY PRACTICES are included in this manual and are intended to promote SAFE OPERATION of this equipment.

These guidelines do not preclude the use of good judgment, care, and common sense as may be indicated by the particular job site work conditions.

It is essential that all operators be physically and mentally free of any mind altering drugs and chemicals and thoroughly trained in the safe operation of this equipment. Such training should be presented completely to all new operators and **NOT** condensed for those claiming previous experience.

FOR ILLUSTRATION PURPOSES ONLY some photographs and images in this manual may show doors, guards, and shields open or removed. **BE SURE** all doors, guards, and shields are in their proper operating positions **BEFORE** operating this equipment. **NEVER** operate this equipment with any guards or shields damaged or not in place. **REPLACE** any damaged or missing guards and shields.

KEEP HANDS AND FEET AWAY FROM ALL MOVING PARTS!

The operator **MUST** know the capabilities and work applications for this equipment and operate it at speeds slow enough to ensure complete control at all times. When working on uneven ground or near the edge of roadbeds there is no substitute for good judgment and only operators with sufficient experience should attempt such work.

NEVER assume everyone is as safety conscious as you are.

Personal Safety

NEVER allow minors and/or any unqualified personnel to operate or be near this equipment unless properly supervised.

NEVER allow anyone to ride on this equipment at any time.

NEVER leave this equipment running unattended.

NEVER wear loose or torn clothing while working around moving parts.

NEVER step on the PTO drive shaft at any time.

ALWAYS wear appropriate personal safety equipment and gear as called for by the job or working conditions.

ALWAYS be aware of pinch point areas on this equipment.

ALWAYS keep hands, feet, hair, and clothing away from moving parts.

ALWAYS stop and disengage the PTO and shut off the tractor before doing any adjusting or servicing to this equipment.

Towing Safety

THE MAXIMUM SPEED FOR TOWING THIS EQUIPMENT IS 20 MPH.

Observe the recommended maximum road speed limit, local speed limit, or maximum recommended towing speed whichever is the lesser speed.

ALWAYS MOVE THIS EQUIPMENT WITH A FARM TRACTOR ONLY.

Always engage power steering (on equipment with steering capabilities) before turning with a load.

DO NOT DISENGAGE power steering (on equipment with steering capabilities) before the turning process is completed.

Tractor must be heavy and powerful enough and have adequate braking power for the towed load.

STOPPING DISTANCE increases with speed and weight of towed loads and on slopes. Towed loads, with or without brakes, which are too heavy for the tractor or are towed too fast can cause loss of control. Consider the total weight of all equipment and the load.

Use additional caution when towing loads under adverse surface conditions (ice, mud, loose gravel, etc.), turning, or slopes.

DO NOT ATTACH safety chain to any point higher than the drawbar.

Operation Safety

Before each tow check the electrical connection, tail lights, brake lights, and turn signals. Damaged lights or improper electrical

Operational Safety (Continued)

connection between the tractor and this equipment will result in inoperable lights and/or inoperable electric brakes.

Do not operate on public roads after dark without warning lights.

Be sure the rear of this equipment has a visible and clean "Slow Moving Vehicle" emblem properly displayed. If towing at speeds less than 20 MPH on any public roadway at night, proper warning and running lights are necessary as required by state law!

DO NOT pull this equipment without having safety chains (not supplied) securing this equipment to the tractor.

Refer to local transportation laws for regulation on safety chain use. **MAXIMUM TOWING SPEED IS 20 MPH.**

The tractor must be of sufficient size to maintain vehicle stability when this equipment is fully loaded.

ALWAYS use a hitch pin which has a safety clip pin!

If this equipment includes a braking system, check oil level and braking capacity with a full load before operating or moving this equipment.

Check the wheel lug bolts and lug nuts daily and tighten as needed.

Replace any parts showing signs of excessive wear, cracking, or likelihood of failure with original equipment service parts.

Be familiar with all valves, doors, gates, and hydraulic controls.

BEFORE USE make sure this equipment does **NOT** have any foreign objects or materials which can cause equipment damage or personal injury.

NEVER ENTER THIS EQUIPMENT UNLESS ABSOLUTELY NECESSARY! If entry is necessary, take proper safety precautions to include but not limited to:

- Additional person on site and on the outside near the point of entry
- Safety harness and ropes where appropriate or required by law
- Proper life support system where appropriate or required by law
- Mechanical and electrical power disconnected
- Contacting your Balzer dealer for more information before entering

Be alert and avoid loose, soft, or icy surface conditions which could cause tipping or loss of control.

When possible, travel straight up or down a slope. Avoid traveling along side of hills, ditches, or other sloped surfaces.

Slow down prior to going down any steep grade.

Always check the job site for hazardous terrain, obstructions, or bystanders.

Never take tractor out of gear when going up or down a hill.

Do not exceed the maximum weight carrying capacity of the equipment or the tractor manufacturer's maximum towing capacity, whichever is the lesser weight. If you have any questions, contact your Balzer dealer.

Never use a tractor that is not recommended for this equipment's application.

When agitating a pit, always make sure there is adequate ventilation in any confined area.

Do not stand in front, behind, or along side this equipment when it is in operation or in motion.

When parking this equipment, securely block the wheels before unhitching from the tractor.

Hydraulic System Safety

DO NOT smoke when working on hydraulic systems.

NEVER use your hand to search for hydraulic fluid leaks. Escaping fluid under pressure can be invisible and can penetrate the skin causing serious injury and other health hazards. Escaping fluid can also be extremely hot causing severe burns.

Use a scrap piece of cardboard to check for leaks.

IF ANY FLUID IS INJECTED INTO YOUR SKIN, SEEK MEDICAL ATTENTION IMMEDIATELY! Notify medical staff that there is an injection injury with hydraulic fluid. Injected fluid must be surgically removed by a doctor familiar with this type of injury or gangrene may result.

DO NOT attempt to loosen or disconnect any lines, hoses, or fittings without first relieving hydraulic circuit pressure. Be careful not to touch any hydraulic components recently in operation because they can be extremely hot.

SAFETY**Hydraulic System Safety (Continued)**

ALWAYS replace hydraulic components with manufacturer recommended replacement parts. Improperly rated components may result in system failure and/or injuries.

Contact your local Balzer dealer to order replacement parts.

PTO Operation Safety

Do not wear loose fitting clothing or have long, free-hanging hair when operating the PTO (Power Take Off) or near ANY rotating equipment.

Never exceed the recommended operating speed (PTO and drive) for the particular equipment in use.

When operating stationary PTO driven equipment, always apply the tractor's parking brake lock and block the rear wheels front and back.

To avoid injury, do not clean, adjust, unclog, or service PTO driven equipment when the tractor engine is running.

When finished with the operation of PTO driven equipment, shift the PTO control to neutral, shut off the engine, remove the key, and wait until the PTO stops before exiting the tractor.

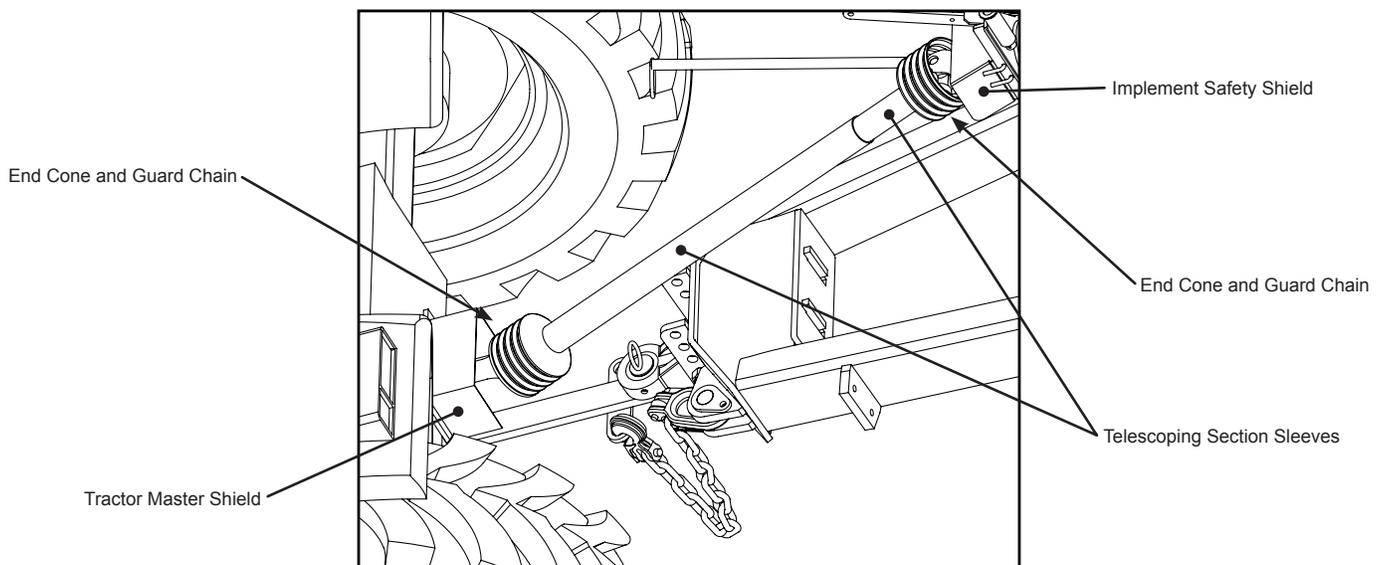
Implement input drivelines, clutches, and freewheels are designed for specific machine types and power requirements. They must not be replaced by any shaft other than that recommended by the implement manufacturer. Note the Operating Instructions from both the tractor manufacturer and the implement manufacturer. Ensure the implement driveline is securely connected at both ends.

Only use a completely guarded drive system (Figure 1). PTO drive systems with complete guarding include: the tractor master

	WARNING	<p>PTO mounted drive shafts must only be used for their intended purpose.</p>
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shield, the implement driveline guard (end cones, telescoping section sleeves, guard chain), and the implement safety shield.

Figure 1



	DANGER	<p>DO NOT operate PTO without all guards in place and in safe operating condition.</p>
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PTO Operation Safety (Continued)

These safety devices must be installed at all times.

If any component of the guarding system has been removed for any reason, it must be repaired or replaced prior to operation of the machine.

Safety Signs and Decals

Safety signs or decals provide very important information and instructions designed to alert you to dangers and hazards which can be present during operation of this equipment. These safety signs and decals **MUST** be read, understood, and followed to be effective.

Replacement of Safety Signs and Decals

Safety signs and decals must be kept clean and readable. If they become unreadable for any reason, they must be replaced with an identical replacement sign or decal. Safety signs and decals must also be replaced if damaged when repairing this equipment or if not included with the replacement part.

Application of Safety Decals

Surface preparation is very important for the safety decals to properly adhere. Grease, oil, and dirt must be removed and the surface must be smooth and dry. After wiping the surface clean, use an ammonia-free window cleaner to provide the best surface for decal adherence.

Most decals have a split backing which is meant to be removed from the split outward. To apply decals, follow these steps:

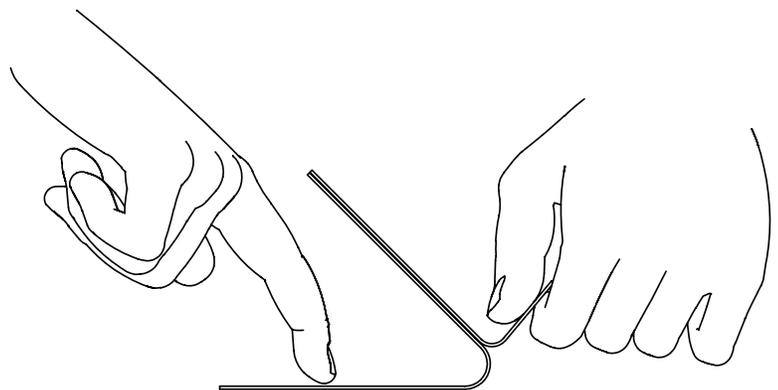
1. Position the decal in the proper location and hold firmly over the largest portion of the backing.
2. Use one hand to hold the decal in position. With the other hand, carefully roll the loose end over and peel the backing outward. When the backing is removed as shown in Figure 3 and with even and gradual pulling, the decal will roll onto the surface smooth and wrinkle free,
3. With the smallest portion of the decal attached, the repeat Step 2 for the other half of the decal.

When the decal has been attached in place, use a cloth or soft paper towel to burnish the decal onto the cleaned surface. Work gently from the middle outwards to avoid creating any wrinkles and to remove any air bubbles.

Figure 2

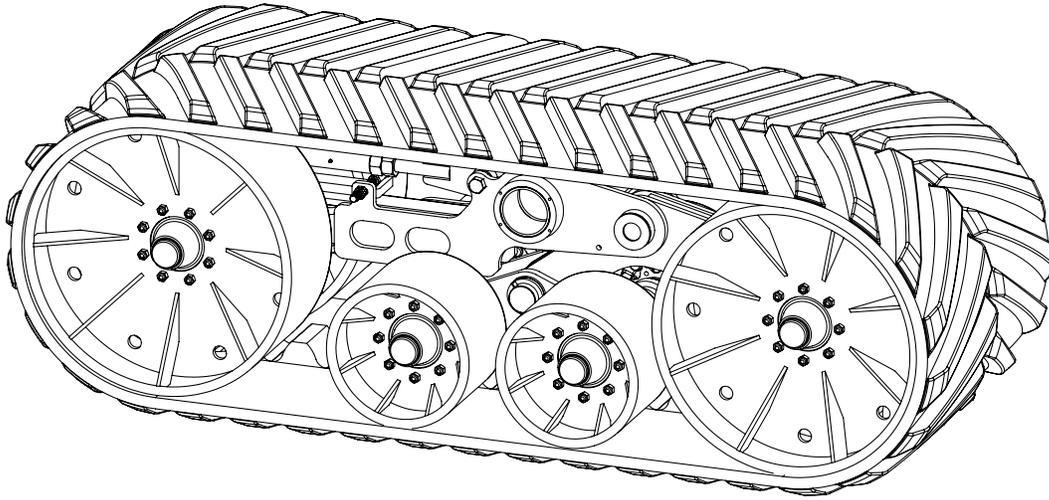


Figure 3



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Technical Data

Specifications**Figure 4**

Dimensions	
Track Size	234X36
Tread Depth	1 1/2"
Tread Pitch	5"
Lug Nuts	Torque to 320 FT/LBS

RAILZER

Operation

Pre-Operation Checks

Track Break-in

Guide lug life benefits from using correct break-in procedures. Correct break-in reduces initial guide lug wear. During the break-in period, rolling components undergo a polishing-in process to achieve a smooth steel-to-rubber interface with the guide lug.

Rubber surfaces use dust and dirt as a dry lubricant during break-in to minimize heat and reduce rubber stickiness with new tracks or tracks lacking a coating of dust should be exposed to dry and dusty soil conditions as soon as possible. Operation without dust or soil in the system, especially during high speed roading, generates excessive amounts of damaging heat. If roading must be done, a dry lubricant such as soil, talc, or floor dry should be applied to the guide lugs periodically during roading until the track is exposed to field conditions.

Track Tension

Track tension is critical for performance, longevity of the track, and safety. Make sure to have tension on tracks at all times during operation. The track is equipped with a turnbuckle to adjust the tension applied to the track (Figure 5). When tracks are new and /or upon delivery, adjust tension so both middle bogie wheels are approximately 1/2" from touching the track (See Page 21).

Figure 5

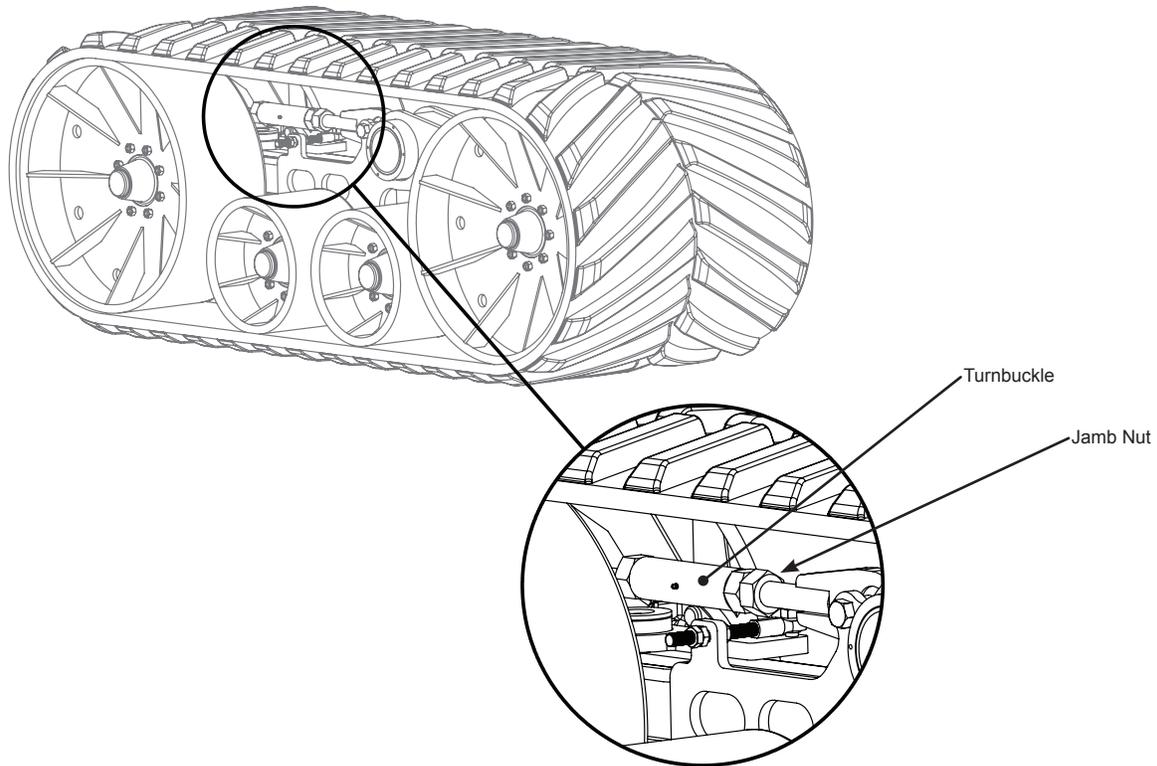
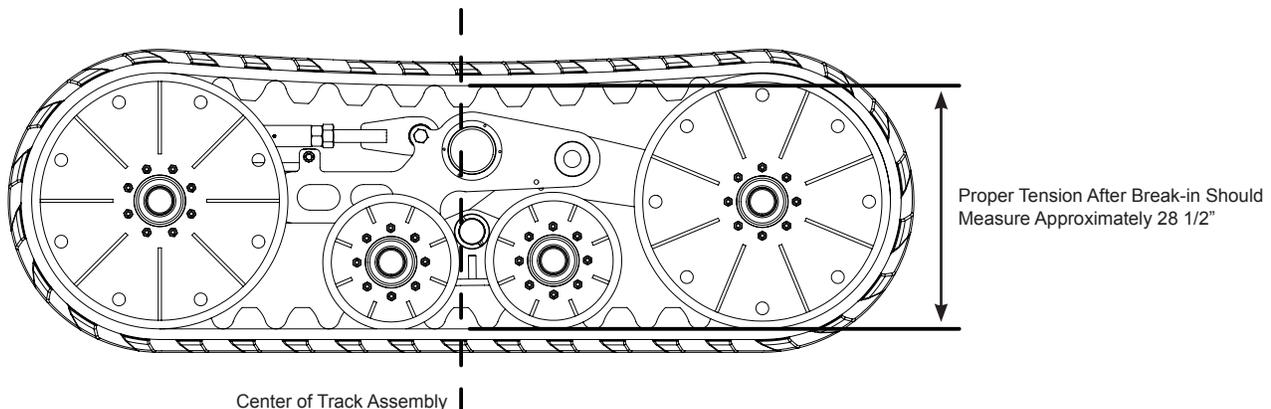


Figure 6



OPERATION**Pre-Operation Checks (Continued)**

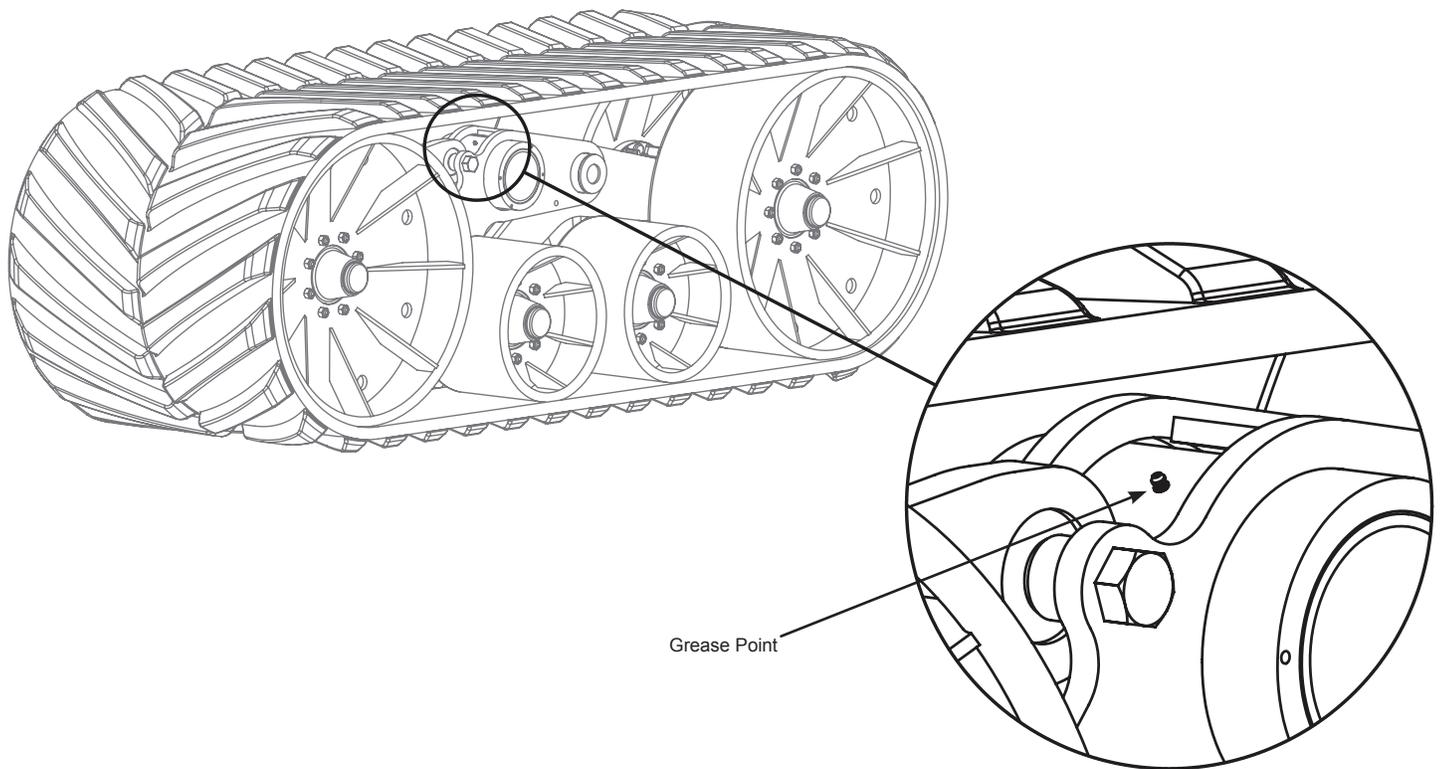
New tracks will take a few days of operation to break-in then the bogie wheels should settle down and be touching the track. During typical operation on a flat surface, the vertical distance from the inside-to-inside of track measured at the middle of the track should be approximately 28 1/2" (Figure 6).

Wheel Torque

Before operating your Balzer tracked machine, make sure all lug nuts on both the inner and outer wheels of each track are torqued to 320 ft/lbs. This should be checked before first use, periodically during use each day for the first five (5) days of operation, and before first use each season.

Grease

Your Balzer tracked machine has only one (1) required grease point for each track. This is located on the main pivot of the track wheel assembly and the axle (Figure 7). This should be greased daily with an approved grease.

Figure 7**Track Alignment**

Track alignment is the most important periodic check that can be made on a track system. Proper alignment of the tracks is key to making the tracks last. If the tracks are used without being properly aligned for an extended period of time, the center guide lugs will begin to show wear. Alignment can change due to component wear, track damage, or after track replacement.

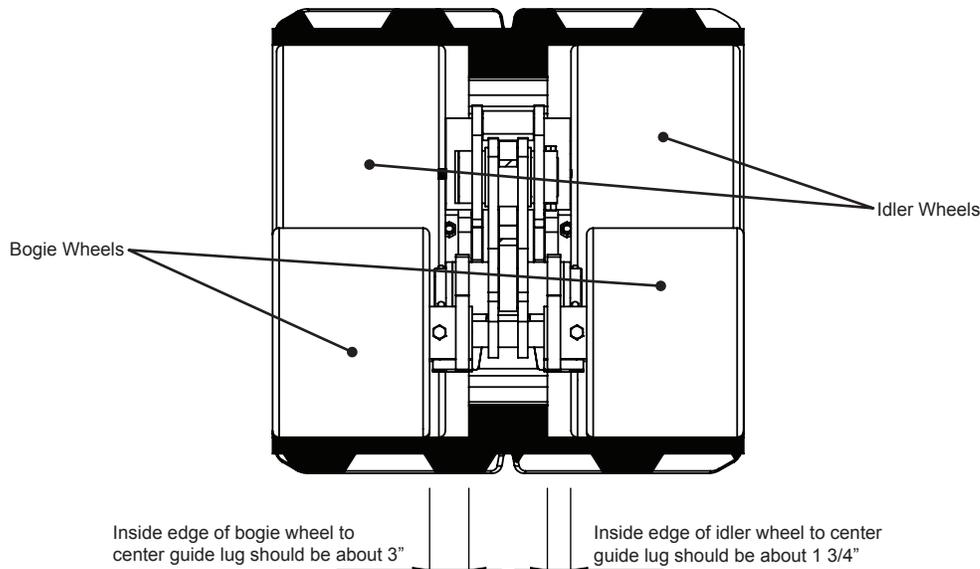
CHECK TRACK ALIGNMENT ON YOUR BALZER TRACKED MACHINE PRIOR TO FIRST USE AFTER PURCHASE, PRIOR TO FIRST USE EACH SEASON, AND AFTER REPLACING TRACKS.

**WARNING**

Check track alignment before first use after purchase, before first use each season, and after replacing tracks.

A simple way to check alignment is to drive without steering or braking on a flat surface for at least 150 feet. After stopping, visually inspect the center guide lugs at the front bogie wheels and the front idler wheel. There should be approximately 3" of

Figure 8



clearance on each side of the center guide lugs to the inside edge of the bogie wheels and approximately 1 3/4" of clearance on each side of the center guide lugs to the inside edge of the idler wheel (Figure 8). If one side of the guide lugs has significantly more clearance than the other side, the track may be out of alignment (See Page 21 for Track Alignment procedure).

Recheck alignment whenever machine configuration changes are made or tracks are replaced.

Operational Techniques

Periodically check the track tension. Proper tension is critical to maintain the best track performance. Tension can change during service. Improper tension can result in slippage, misalignment, excessive wear, increased potential for untracking, and/or reduced life of bearings and rolling components.

Keep material out of the undercarriage. Track systems will allow some material to pass through them, but sharp non-compressible objects cause high localized loads to both the track and the wheels, which, if severe enough, can result in track and wheel damage. Inspect and clean material from the undercarriage before starting work.

During transitions from sloped to flat (or vice versa), the front and rear of the track may be in contact with the ground while the midsection is unsupported. If turning is attempted at this time, the risk is higher for untracking to occur.

Since tracks have much more contact with the ground surface than do tires, it is important to avoid sharp turning which could have the track sliding more sideways than moving in a straight direction. Sideways movement of the track will cause excessive wear on the tread especially on hard surfaces such as concrete or pavement. Sideways movement of the track can also cause the track to come out of proper alignment with the wheels leading to wear on the center guide lugs.

Maximizing Tread Life

Several operational factors influence tread wear:

- Amount of roading (roading increases wear)
- Field soil conditions (abrasive increases wear)
- Maintaining equal weight distribution
- Operational techniques

Tread life decreases with high amounts of roading. Tread wear rates can be minimized by staying off pavement, reducing transport weight and speed, and maintaining equal weight distribution. A tracked machine with the weight properly distributed for field operation usually doesn't have the weight properly distributed for roading. The greatest rate of tread wear occurs on a hot day with a poorly balanced, heavy machine. Always transport at reduced travel speeds and weight as this will lower temperatures of the treads, center guide lugs, and rolling components.

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Maintenance



CAUTION

Before performing any maintenance on this machine, turn off the tractor, remove the ignition key, and relieve hydraulic pressure from the hydraulic systems unless otherwise noted.

Before Start of Season

1. Check track for damage and proper tension. Repair or replace as needed.
2. Torque all lug nuts to 320 ft/lbs.
3. Inspect all moving components for damage or excessive wear. Repair or replace as needed.
4. Grease and repack wheel bearings.
5. For oil filled hubs, check oil level and use a Castrol Hyspin 46 hydraulic oil or equivalent to add as needed.

Daily

Before Starting Tractor

1. Check track for damage and proper tension. Repair or replace as needed.
2. Inspect all moving components for damage or excessive wear. Repair or replace as needed.
3. Check for solid, hard, or frozen substances on all moving parts. Remove substance to avoid damaging the machine.
4. Grease the main pivot connecting the track assembly to the axle. Use an EP2 grease or equivalent.

Every 40 Hours of Operation

1. Check track for damage and proper tension. Repair or replace as needed.
2. Grease wheel bearings.
3. Torque lug nuts to 320 ft/lbs.
4. For oil filled hubs, check oil level and use a Castrol Hyspin 46 hydraulic oil or equivalent to add as needed.

End of Season - Preparing for Storage

1. Check track for damage and proper tension. Repair or replace as needed.
2. Grease the center pivot grease point on each track wheel assembly.
3. Check for solid, hard, or frozen substances on all moving parts. Remove substance prior to storage.

Track Maintenance

The following guidelines will maximize both the service life and the performance of the track.

Inspect and Service the Undercarriage

Although the rubber track itself requires little day-to-day maintenance, the track undercarriage does require frequent inspection to make sure there is no obvious damage, that the track is properly tensioned, and that the track shows no unusual wear patterns on either the tread surface, the mating surface with the wheels, or on the center guide lugs.

Condition Track Prior to Initial Usage

A new rubber track tends to be slightly tacky. This is a standard consequence of the manufacturing process. Generally the track will perform better if this tackiness is removed. To do this, apply a thin layer of dirt, floor dry, or some other non-caustic particulate material to the undercarriage-engaging surface of the track and then driving the track machine for a brief period. This will serve to remove the tackiness of the rubber and will promote optimum track-undercarriage engagement. The conditioning of a track is only necessary once, when the track is first installed on its undercarriage.

Avoid Grease and Oil

Grease, oil, gasoline, diesel fuel, and other petroleum-based liquids degrade rubber and must be avoided. Care must be taken when lubricating the machine and undercarriage so that grease and oil are not spilled on the track. Check all hydraulic hoses for leaks as the hydraulic fluid, when under pressure, can spray onto the tracks without you knowing about it.

Track Maintenance (Continued)

Cleaning the Tracks

To clean the rubber tracks, use non-petrol based cleaning agents such as soap and water. Questions regarding the rubber track's compatibility with specific chemical agents should be directed to Goodyear.

Rotate Tracks

If uneven lateral wear is noticed, rotate the tracks from side to side. This is particularly true in situations where the track exhibits accelerated wear on either the extreme inboard or extreme outboard edges.

Periodic Storage

When a rubber tracked machine is to be stored, the following recommendations should be considered. If storing for longer than three (3) months, the guidelines presented in Long Term Track Storage (see Page 19) should also be considered.

Avoid Storing in Sunlight

Long-term exposure to the ultraviolet rays in sunlight can degrade rubber, causing it to become brittle and causing it to exhibit arrays of fine cracks (commonly perceived as the rubber "drying out" and sometimes called "weather checked"). It is best to store the tracked machine indoors whenever possible. If the tracked machine must be stored outdoors, the tracks should be covered. An opaque tarpaulin is usually satisfactory for this purpose.

Long Term Storage

When a tracked machine is to be stored for a prolonged period, three (3) months or more, the following guidelines should be observed.

Avoid Direct Sunlight

As mentioned in Periodic Storage, long-term exposure to the ultraviolet rays in sunlight can degrade rubber causing it to become brittle and causing it to exhibit arrays of fine cracks. It is best to store the tracked machine indoors whenever possible. If the tracked machine must be stored outdoors, the tracks should be covered. An opaque tarpaulin is usually satisfactory for this purpose.

Avoid High Temperatures

While rubber tracks can endure a significant range of temperatures (-50°F to 125°F [-45°C to 52°C]), prolonged storage at elevated temperatures can be damaging. Lower temperatures are not as objectionable for storage. In general, the tracked machine should not be stored at temperatures above 85°F (29°C) for extended periods of time. Ideally the machine should be stored in a cool environment with the temperature kept between 40°F and 60°F (4°C and 16°C).

Avoid Air in Motion

All rubber is susceptible to ozone (O₃) which is a standard element of common air. Like ultraviolet light, ozone causes rubber to become brittle and exhibit arrays of fine cracks. If the tracked machine is stored in a drafty location, a greater amount of ozone will come into contact with the exposed rubber surfaces than would still air resulting in accelerated degradation. If the tracked machine must be stored outdoors, use an opaque tarpaulin to protect the tracks from the wind.

Avoid Electric Devices

Most electric devices, especially electric motors, generate ozone. Specifically, ozone is generated by the arcing of electricity through the air; therefore, any electrical device which uses spark-gaps or brushes generates high levels of ozone. As ozone degrades rubber, the tracked machine should not be stored in closed areas with motors or other electric devices.

Do No Paint Tracks

It was once a common belief that painting rubber tires and tracks would protect them from ozone and ultraviolet light. In fact, the painting of rubber can be detrimental for two reasons:

- The chemical agents contained in many paints are themselves caustic to rubber
- The skin formed by the paint prevents the various emollients and waxes in the rubber from migrating to the surface and sublimating. These agents become trapped between the surface of the track and the paint and, with high concentration at those locations, causes the physical properties of the rubber to be altered.

Long Term Storage (Continued)

Avoid Storing Near Gasoline, Diesel Fuel, Oils, and Grease

As has already been discussed, petrol chemicals degrade rubber; however, direct contact is not the only manner in which these chemicals can be damaging: the rubber will absorb the vapors of these agents directly from the air. It is best to store the tracked machine in a separate closed area from petrol chemicals.

Avoid Excessive Moisture

Prolonged exposure to water can degrade the rubber track so storage of the tracked machine is best indoors in a dry location. If the tracked machine must be stored outdoors, do not store the machine in a low area or where water can pool around the tracks. Use a waterproof opaque tarpaulin to cover the tracks.

Fire Extinguishers

If you have a fire extinguisher in where you store the tracked machine, make sure it is either a CO₂ or Halon fire extinguisher. (Note: the Halon fire suppression chemical can be severely damaging to computers and other electronic devices.)

Figure 9

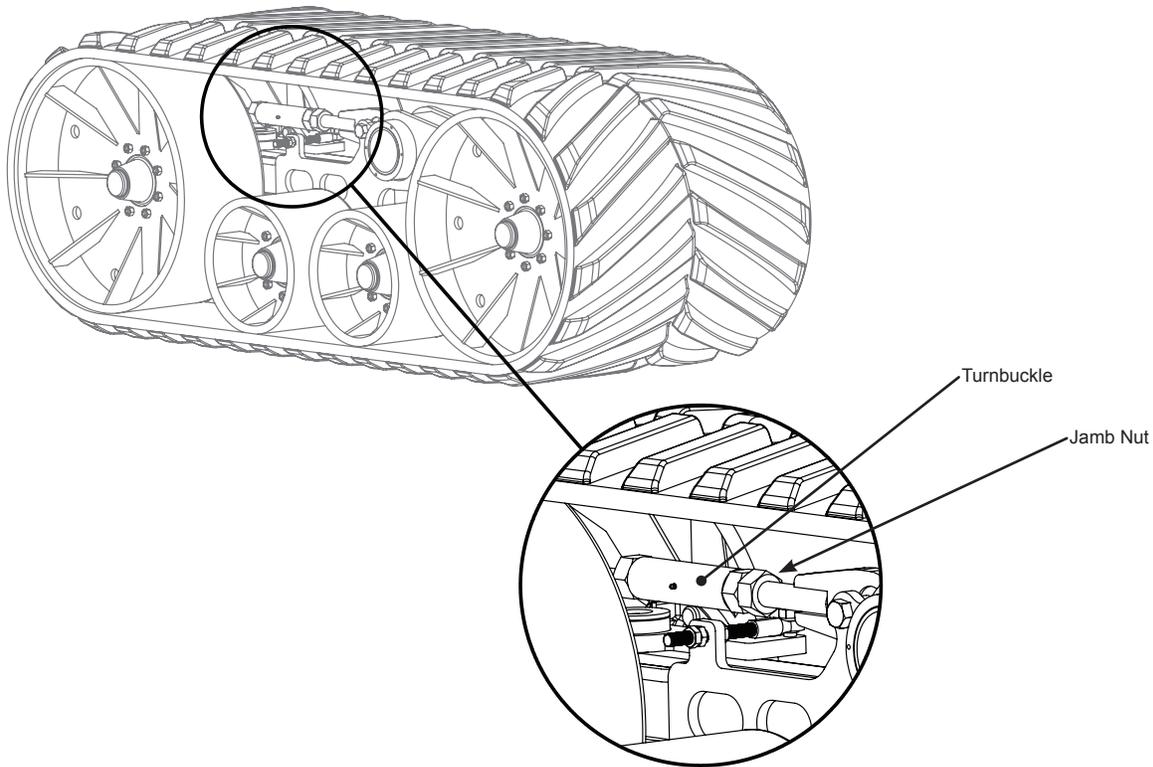
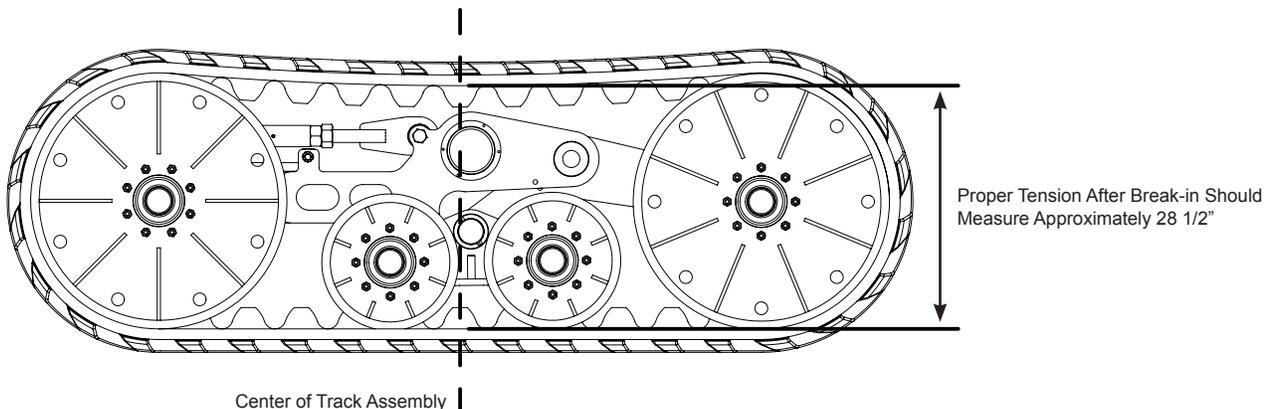


Figure 10



Adjusting Track Tension

To adjust the tension on the track:

1. Loosen the jamb nuts on the tensioner (Figure 9).
2. Rotate the turnbuckle in the direction needed to properly set the tension.
3. After the track has been in use for a few days, proper tension will provide for a measurement of 28 1/2" measured at the center of the track assembly when on a flat surface (Figure 10).
4. Tighten the jamb nuts on the tensioner.

Adjusting Alignment

Proper alignment of the tracks is key to making the tracks last. If the tracks are not properly aligned, wear will be noticed on the center guide lugs. Periodic checks for proper alignment are necessary to ensure safe operation and longer track life. The alignment is adjusted by changing the position of the nuts on the alignment bolt (Figure 11).

To adjust the alignment of the track:

1. Loosen both jamb nuts (Figure 12).
2. Loosen the adjustment nut opposite of the direction of alignment adjustment needed.
 - A. If there is more space on the outside of the center guide lugs, the Outward Alignment Nut will be loosened.
 - B. If there is more space on the inside of the center guide lugs, the Inward Alignment Nut will be loosened.
3. Tighten the adjustment nut for the necessary direction of alignment.
 - A. If the center guide lugs need to be moved inward, the Inward Alignment Nut will be tightened.
 - B. If the center guide lugs need to be moved outward, the Outward Alignment Nut will be tightened.
4. After the track alignment has been adjusted, tighten the adjustment nut opposite of the direction of alignment performed.
5. Tighten both jamb nuts.
6. Pull the tracked machine approximately 150' on a flat surface and recheck the alignment. Proper alignment will have approximately 3" from the edge of the bogie wheel to the center guide lugs and approximately 1 3/4" from the edge of the idler wheel to the center guide lugs (Figure 13).
7. If additional adjustments are needed, repeat these steps.

Figure 11

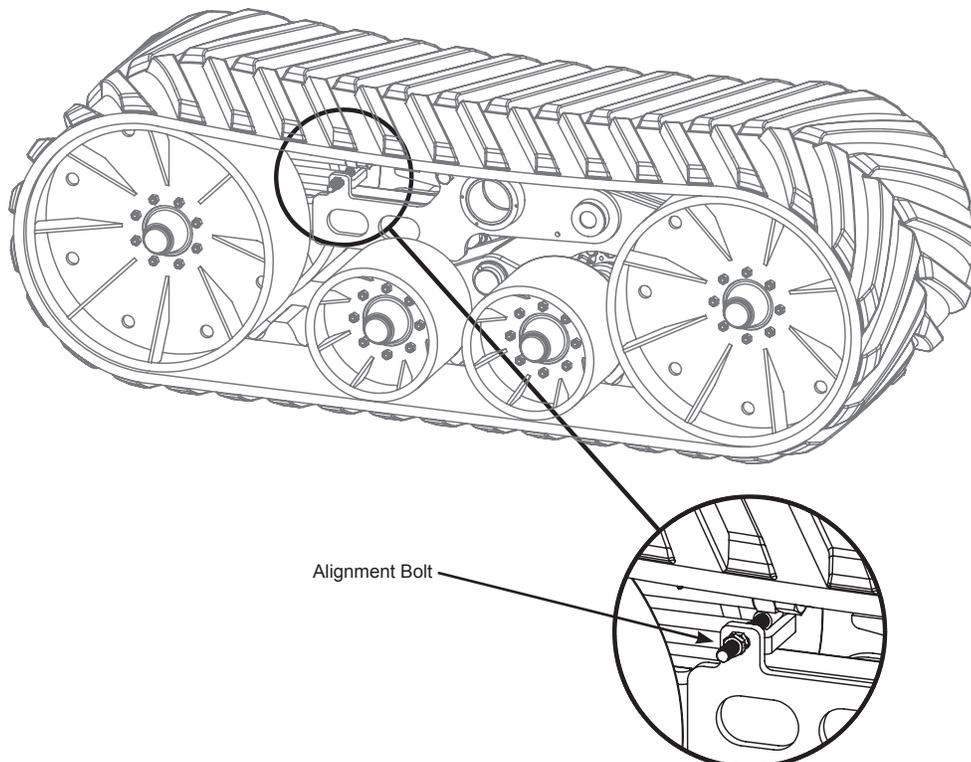


Figure 12

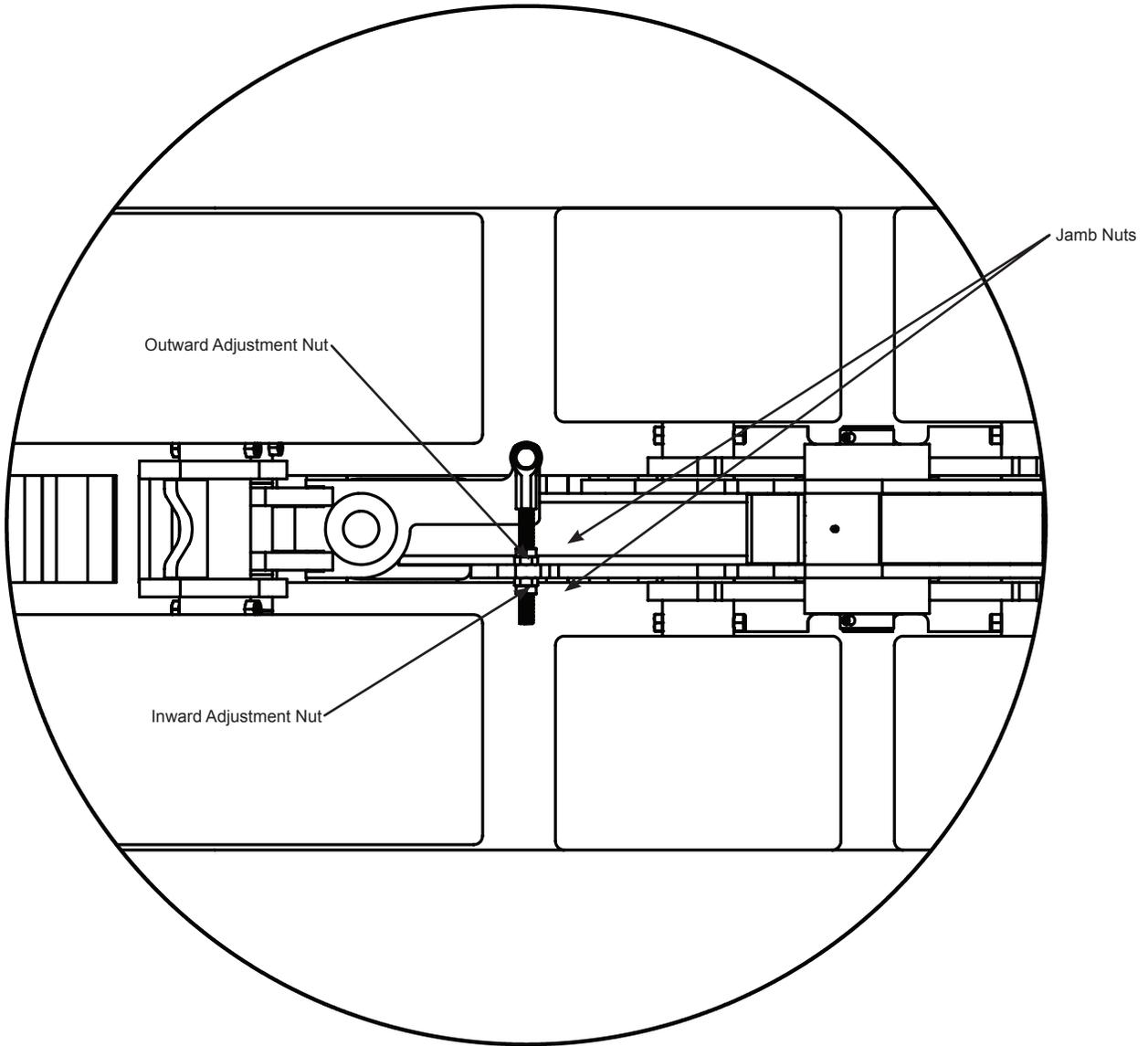
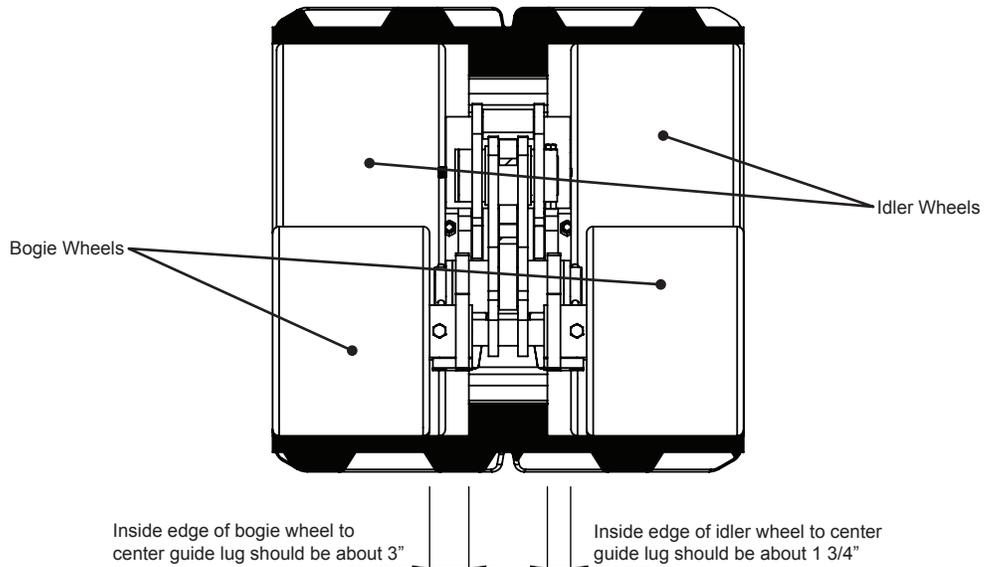


Figure 13



Date

Notes

Date

Notes

Date

Notes

Date

Notes



Tracks
User Manual
UM-TRACKS



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