



# BALZER



## TRACKS USER MANUAL

Serial Number: \_\_\_\_\_

Date of Purchase: \_\_\_\_\_

Purchased From: \_\_\_\_\_

Dealer's Address: \_\_\_\_\_

Dealer's Telephone: \_\_\_\_\_

# INDEX

<b>Company Statements</b> . . . . .	<b>.1</b>
Accuracy . . . . .	1
To the Purchaser . . . . .	1
Warranty Manufacture. . . . .	1
Certificate of General Equipment Warranty . . . . .	1
Liability for Delays. . . . .	2
Contact Information . . . . .	2
<b>Technical Data</b> . . . . .	<b>.3</b>
Specifications . . . . .	4
<b>Operation</b> . . . . .	<b>.5</b>
Pre-Operation Checks . . . . .	6
Track Break-in . . . . .	6
Track Tension . . . . .	6
Wheel Torque . . . . .	7
Grease . . . . .	7
Track Alignment. . . . .	7
Operational Techniques . . . . .	8
Maximizing Tread Life. . . . .	8
<b>Maintenance</b> . . . . .	<b>.9</b>
Daily . . . . .	10
Every 40 Hours of Operation . . . . .	10
Track Maintenance . . . . .	10
Periodic Storage . . . . .	11
Long Term Storage . . . . .	11
Adjusting Track Tension . . . . .	12
Adjusting Alignment . . . . .	13
<b>Notes</b> . . . . .	<b>15</b>



## 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.

## 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.

**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

## Certificate of General Equipment Warranty (Continued)

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

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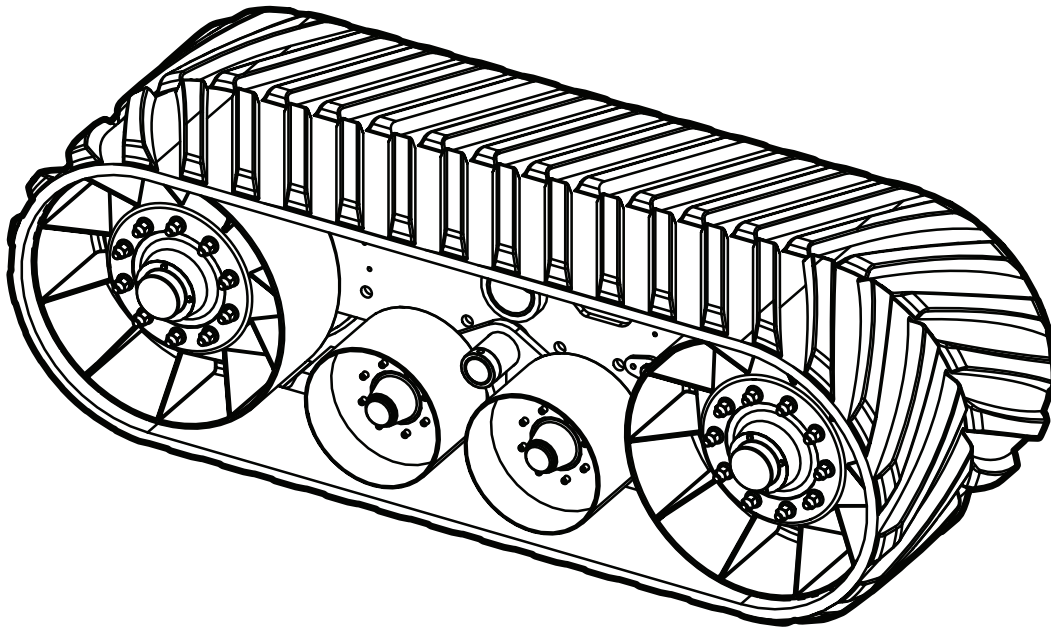


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# Technical Data

**Specifications**

Figure 1



## Dimensions

Track Size	234X36
Tread Depth	1 1/2"
Tread Pitch	5"

## Lug Nuts

Idler Wheels	Torque to 450 FT/LBS
Bogie Wheels	Torque to 320 FT/LBS



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# 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. This track is equipped with a nitrogen filled accumulator which should maintain a constant pressure of 1400 psi (9650 kPa) applied to the hydraulic tension cylinder (**Figure 2**). Should you notice any sagging of the track, attach a hydraulic pressure gauge to the test port (**Figure 3**) to check the pressure. Add hydraulic fluid to the system if necessary to bring to the correct operating pressure.

Figure 2

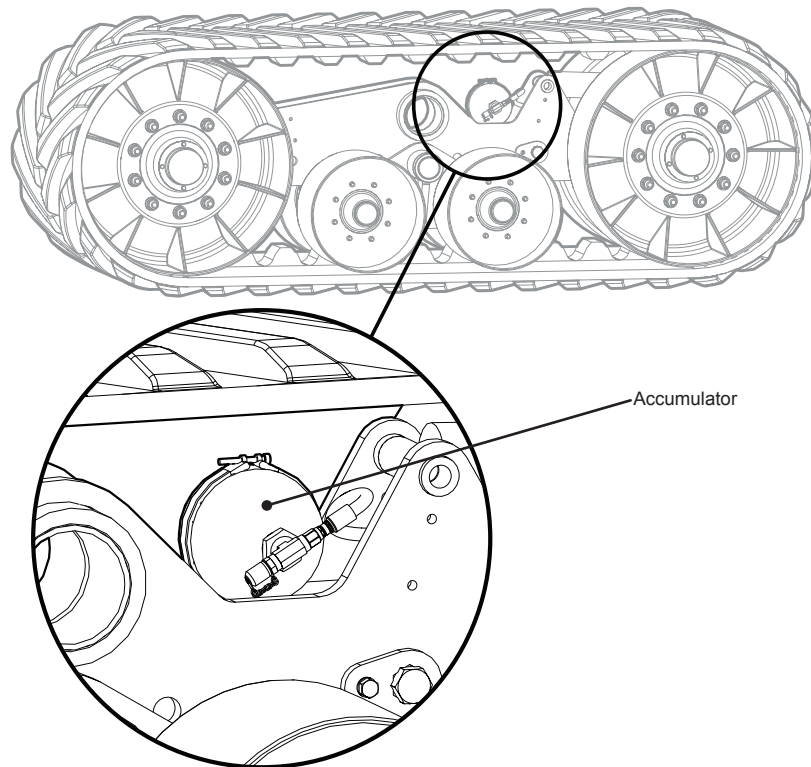
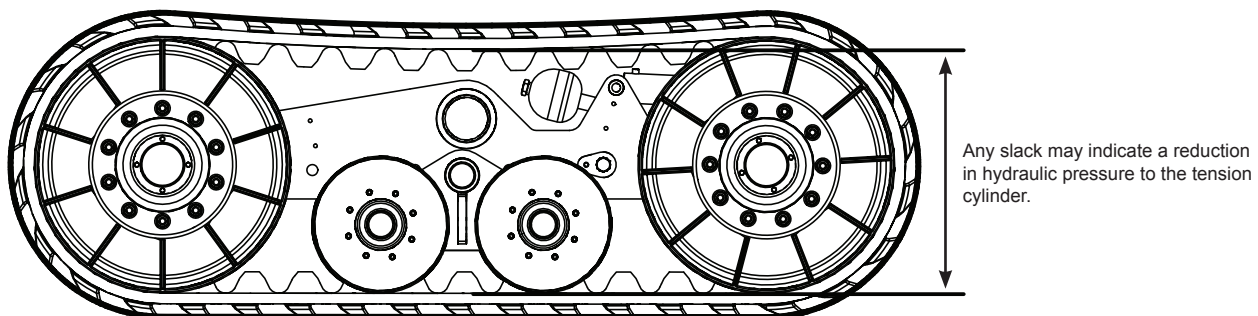


Figure 3



# OPERATION

## Pre-Operation Checks (Continued)

### Wheel Torque

Before operating your Balzer tracked machine, make sure all lug nuts on both the inner and outer bogie wheels of each track are torqued to 320 ft/lbs and all lug nuts on both the inner and outer idler wheels of each track are torqued to 450 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

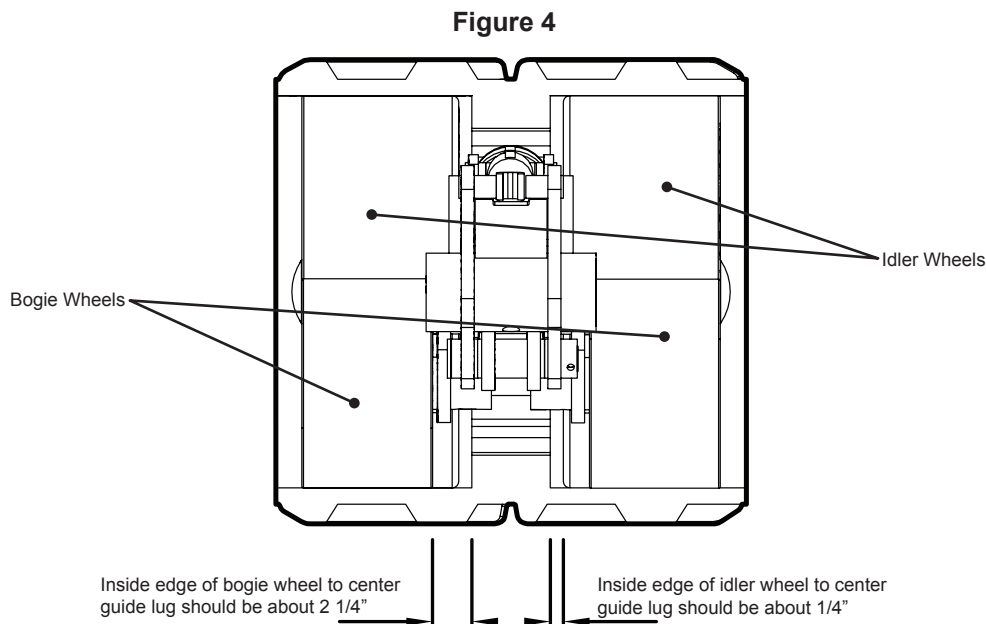
Your Balzer tracks use greaseless bushings.

### 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.**

A simple way to check alignment is to drive with steering locked 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 2 1/4" of clearance on each side of the center guide lugs to the inside edge of the bogie wheels and approximately 1/4" of clearance on each side of the center guide lugs to the inside edge of the idler wheel (**Figure 4**). If one side of the guide lugs has significantly more clearance than the other side, the track may be out of alignment (See Page 13 for Track Alignment procedure).



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

	WARNING	<p><b>Check track alignment before first use after purchase, before first use each season, and after replacing tracks.</b></p>
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## 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. Repair or replace as needed.
2. Check the hydraulic pressure of the track tension system. Repressurize to 1400 psi if necessary.
3. Torque bogie wheel lug nuts to 320 ft/lbs and idler wheel lug nuts to 450 ft/lbs.
4. Inspect all moving components for damage or excessive wear. Repair or replace as needed.
5. Grease and repack wheel bearings.
6. 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 visually inspect for proper track 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 main pivot connecting the track assembly to the axle if grease point is present. Use an EP2 grease or equivalent.

## Every 40 Hours of Operation

1. Check track for damage and visually inspect for proper track tension. Repair or replace as needed.
2. Grease wheel bearings.
3. Torque bogie wheel lug nuts to 320 ft/lbs and idler wheel lug nuts to 450 fl/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 visually inspect for proper track 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 11) 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 (O<sub>3</sub>) 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 CO<sub>2</sub> or Halon fire extinguisher. (Note: the Halon fire suppression chemical can be severely damaging to computers and other electronic devices.)

## Adjusting Track Tension

Wear proper safety equipment when adjusting track tension. The tension system uses hydraulic fluid under pressure which can cause serious injury if a hose line failure occurs.



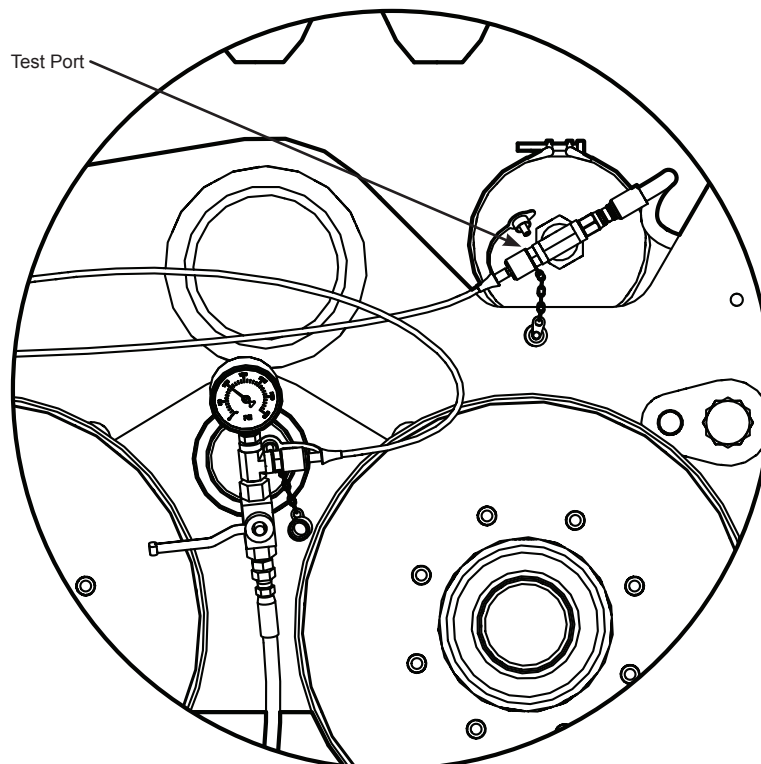
# WARNING

**Hydraulic lines are under high pressure. Hydraulic fluids can become hot enough to cause serious burns. Use proper safety equipment when adjusting track tension.**

To adjust the tension on the track:

1. Unscrew the cap of the Test Port on the Accumulator and attach the high pressure hose of the Tension Pressurization Kit to the Test Port (**Figure 5**). The line will pressurize and the pressure will show on the pressure gauge (**Figure 6**).

Figure 5



## Adjusting Track Tension (Continued)

Figure 6

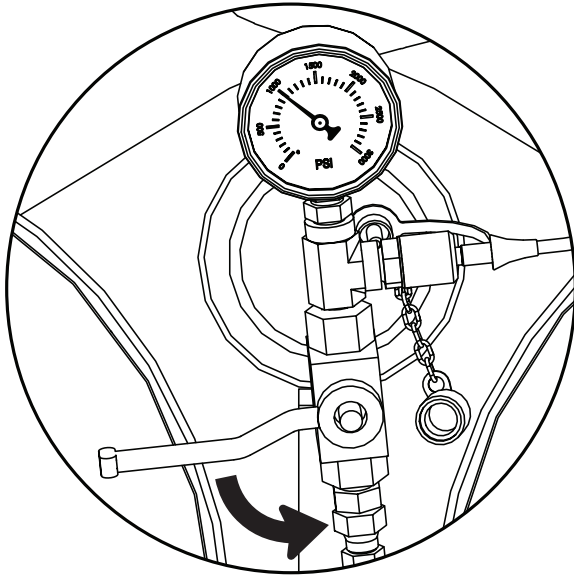
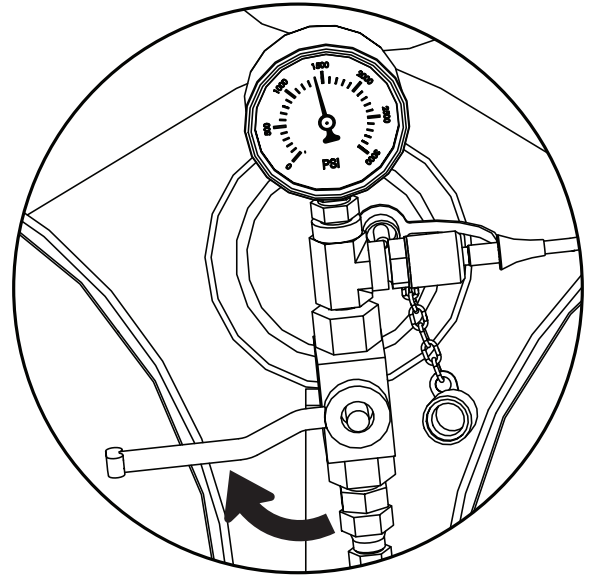


Figure 7

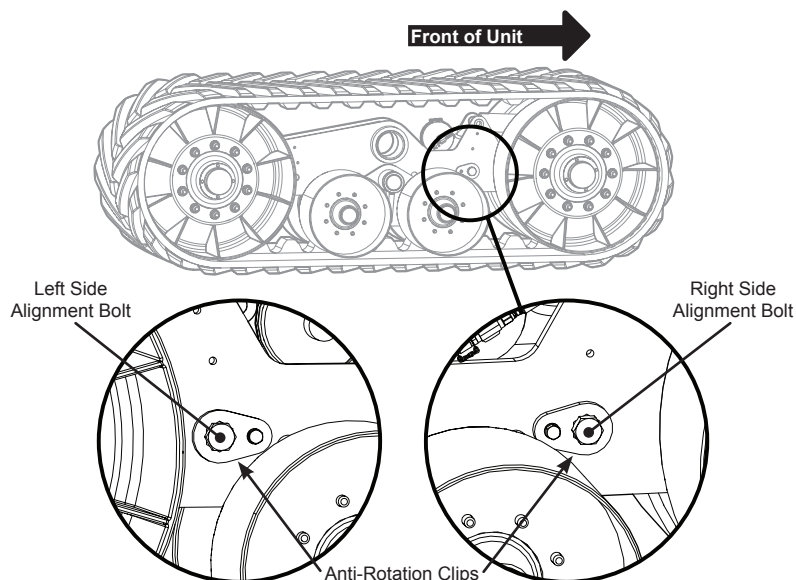


2. If the pressure is low, attach the quick connect couplings of the kit to the tractor's hydraulic system and pressurize the system. The pressure control block is fitted with a pressure reducer, which is factory set, to maintain a pressure of 1400 psi.
3. Slowly rotate the handle of the ball valve to be inline with the source hose (**Figure 6**). The pressure should rise to the required 1400 psi (**Figure 7**) and the slack in the track should lift out.
4. Close the ball valve.
5. Disconnect the source hydraulic lines from the tractor and the high pressure line from the accumulator.
6. Replace the cap on the accumulator.

## 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. Adjust the left side and right side alignment bolts to correct alignment (**Figure 8**). A 1 1/2" wrench will be needed to adjust the alignment bolts.

Figure 8



## Adjusting Alignment (Continued)

To adjust the alignment of the track:

1. Remove the Anti-Rotation Clip on both the inside and outside alignment bolts.
2. To adjust the track
  - A. **RIGHTWARD:** use the wrench to first loosen the left side alignment bolt enough for it to fit back into the anti-rotation clip (a 30° turn) (**Figure 9**). Then use the wrench to tighten the right side alignment bolt the same amount. Both bolts will be rotated toward the front of the unit.
  - B. **LEFTWARD:** use the wrench to first loosen the right side alignment bolt enough for it to fit back into the anti-rotation clip (a 30° turn) (**Figure 9**). Then use the wrench to tighten the left side alignment bolt the same amount. Both bolts will be rotated away from the front of the unit.
3. Replace the anti-rotation clips over the alignment bolts and secure to the track frame.
4. Pull the unit on a flat surface in a straight line for about 150' and check for alignment improvement (**Figure 10**).
5. If the track position
  - A. did not change, repeat Steps 1 through 4.
  - B. did change, even a small amount, continue pulling the unit on a flat surface and in a straight line for another 150' and check for the amount of improvement. Continue pulling forward and rechecking every 150' until proper positioning of the track is achieved (**Figure 10**).
6. Replace the anti-rotation clips and secure to the track frame.

Figure 9

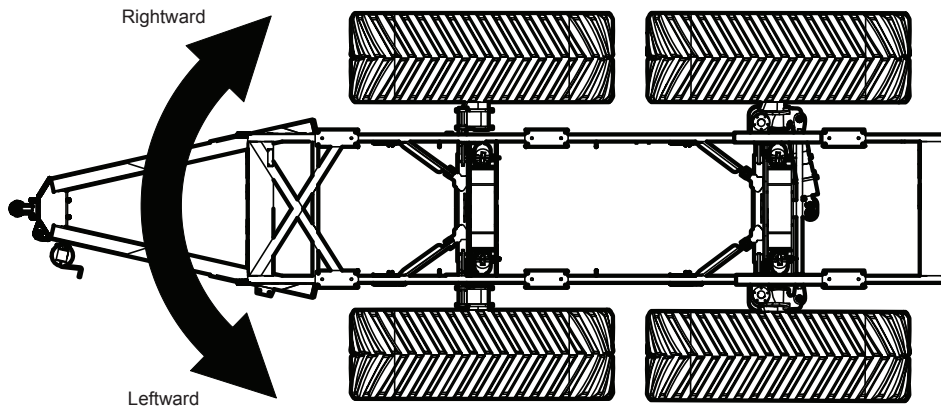
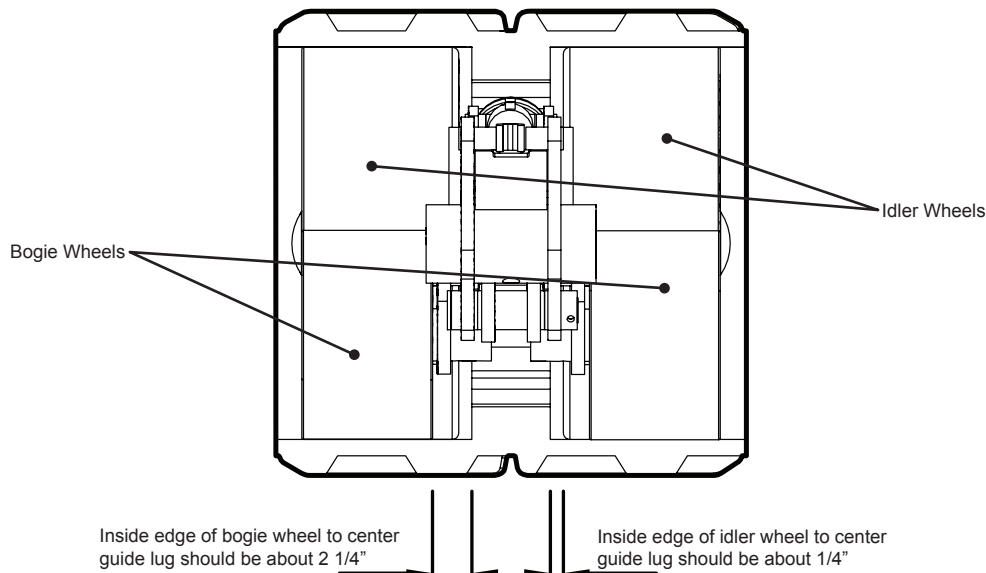


Figure 10



**BALZER**

# Notes

Date

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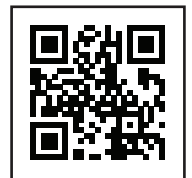
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**Tracks**  
User Manual  
UM-TRACKS



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