

# SERVICE GUIDE

CPB-319

## AGRICULTURAL TRACK

John Deere 8RT Series  
John Deere 9030T/9RT Series



JOHN DEERE

REMOVAL  
INSTALLATION  
INSPECTION  
ALIGNMENT



ROAD  
FREE  
COMPANY

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## Introduction

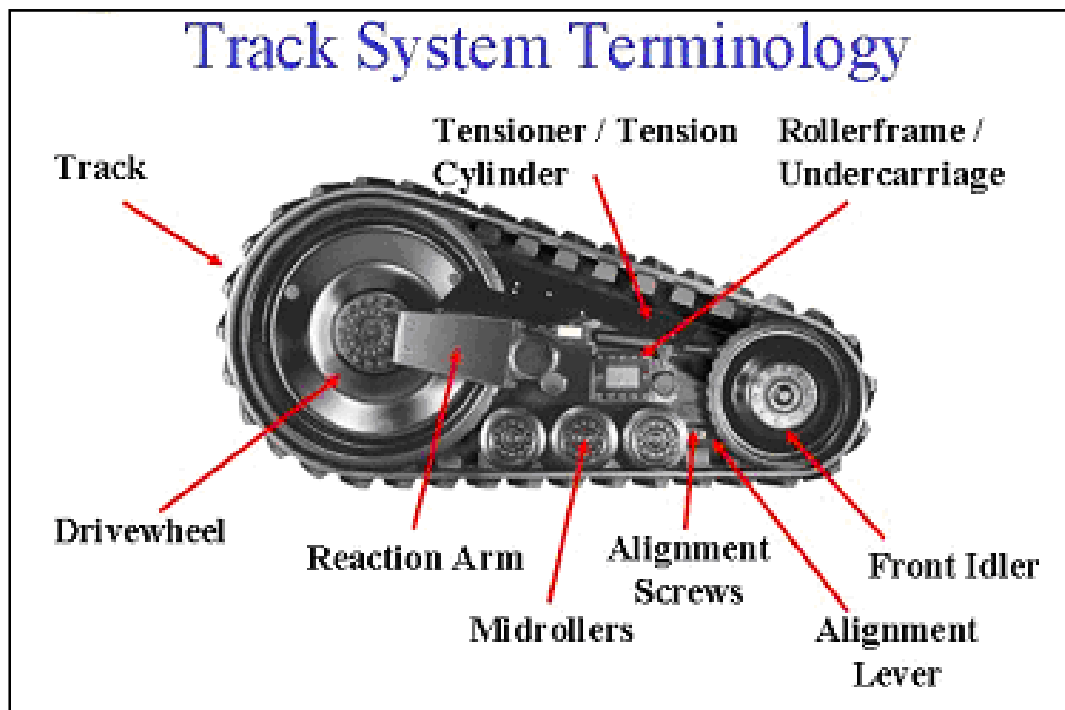
This service guide is intended for use for distributors and aftermarket dealers, and provides the basic information needed for basic track installation and service. Further details can be found in the JD operators guide and service manuals, available from John Deere.

### Notice

**When servicing track machines, review the operators manual included in every machine and follow all manufacturers recommended safety precautions. Failure to follow safe procedures can result in injury or death.**

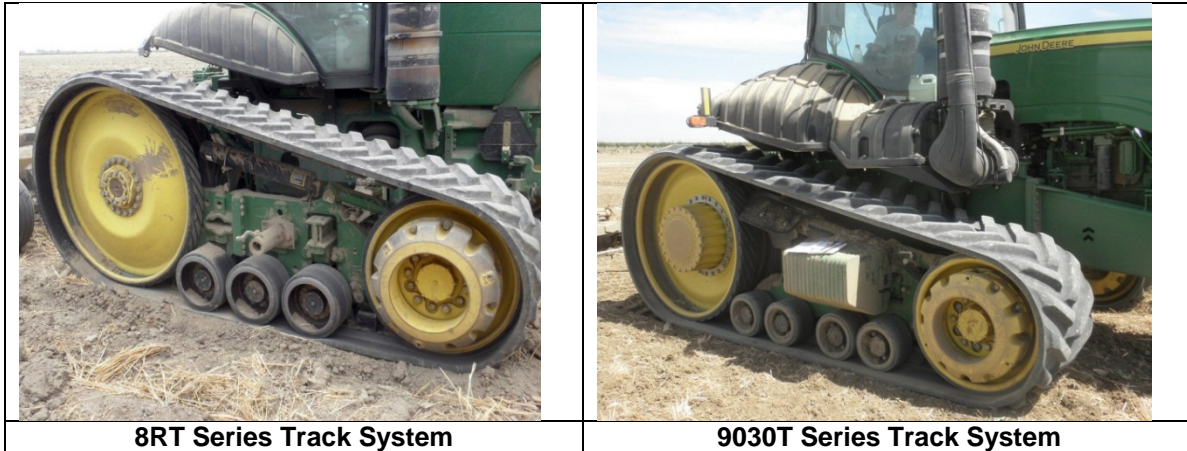
## Track Terminology

For reference with the rest of the following document, the terms used are referenced above. Familiarize yourself with the terms below before reading further instructions or working on any track machine.



## Machine Overview

The 8RT and 9030T series track systems are designed by Camso for John Deere. The two systems are very similar in appearance and have many common components. The tools used to remove and install tracks are similar between the machines. The 9030T has an extra set of midrollers, and is not gauge width adjustable. It uses a different accumulator system and runs at higher tension; however, the tensioning/detensioning procedure is the same as the 8RT.



## Time Estimates - Removal, Installation and Alignment

The time required to change a track depends to a great degree on the skill of the technician and the tools available. Table 2 lists estimated times for removal, installation, and alignment. This estimate is based on a service technician of average skills with the basic tools working on firm, level ground. Working in adverse conditions can take significantly longer. Experienced technicians will be able to work in a shorter time. 2 people working together may cut total man hours as well.

Note: If undercarriage inspection reveals other required repairs then time may be longer than indicated

Remove, Inspect & Install		Track Alignment		Total
Single Track (man hrs)	Machine (man hrs)	Single Track (man hrs)	Machine (man hrs)	Total Time (man hrs)
2	4	0 - 0.5	0-1	4-5

**Table 2. Estimated man hours required for average track replacement and alignment**

## Tools Required

Table 1 lists both standard and specialized tools required for track removal, installation and alignment. Refer to publication CPB-0330 [Agricultural Track Technical Literature and Tooling List](#) for list of specialized tools available from Camso.

<b>Safety Glasses &amp; Steel Toe Shoes</b> <b>Pilot Pins (for idler / idler weight installation)</b> <b>Ratcheting hoist / “Come Along”</b> <b>Selection of bars, nylon straps</b> <b>¼” Thick Shim</b> <b>Infrared Thermometer*</b> <b>Several large wood blocks</b> <b>(2) Lifting Eyes</b>	<b>1” Air Impact Wrench (with 450 ft-lb capacity)</b> <b>Air Impact Socket Set (up to 1 ½”)</b> <b>Torque Wrench (750 ft-lb capacity)</b> <b>Air / Hydraulic Jack (min 15 Ton Capacity / 12” stroke)</b> <b>Soap solution (Track installation)</b> <b>CST- 0300 Detensioning Kit*</b> <b>(4) [15 Ton Minimum] Support Stands</b>
<b>Table 1. Tooling List (* denotes special track tools available from Camso)</b>	

### *Detensioning Hose Kit*

Below is shown the CST-0100 Camso Detensioning Hose Kit. Hose (A) and Ball valve (C) are used for all John Deere machines. The other components are used with other series machines.



## Tractor Preparation

1. Perform the track change on a flat, firm surface, as the machine can be raised and stabilized much better than on soft ground. A hard surface also eases the process of sliding the track out from under the machine, and also allows use of a forklift if available.
2. Detach any implements. Never work on a tractor with an implement attached on either the drawbar or the 3 point hitch as this creates an unstable condition.
3. If possible, clean or power wash the undercarriage before working on it. Dirt and debris makes access to many of the bolts difficult.

## Remove Track

**CAUTION: Ensure that tractor is fully supported and stable using support stands of sufficient capacity before removing or installing tracks.**

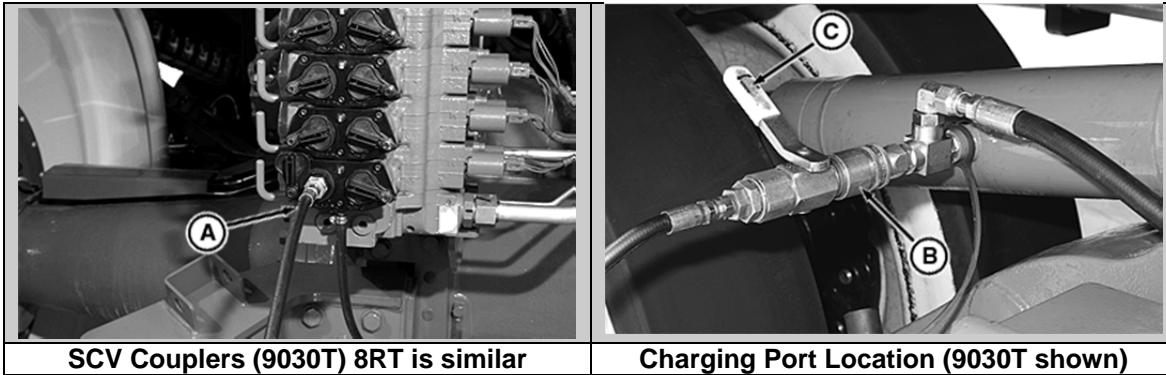
1. Jack up and place machine on support stands widely spaced apart for maximum stability but not in a location that could be in the way of track removal or installation.
2. Remove idler wheel weights, if installed, but only on the outer idler wheel (See below)



<b>Remove Idler Weights on outboard side only</b>	<b>Idler Cap Screws (B)</b> Some bolts may also hold idler starter weight if equipped
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3. **Loosen** but do not remove cap screws (B) on outer idler wheel.

#### 4. Detension Track.



- a. With the valve (C) closed, plug end of tension hose (A) into extend side of SCV I coupler.
- b. Remove cap from tension receptacle and attach ball valve end of hose (B).
- c. Start engine.
- d. Set SCV flow to 5.0 (D) and detent time to "continuous" (E) on number one SCV.
- e. **Push** SCV I lever forward to **retract** position.
- f. Exit tractor and open ball valve (C) on tension hose.
- g. Allow track to detension for five minutes.
- h. Stop engine.

5. Remove cap screws (B) and then starter weight (if equipped) and outer idler wheel.

6. Remove track. Removal of the track will require the use of either a forklift or a boom truck, as track weight is between 800 lbs (8RT narrow) to 2000 lbs (9030T wide).

**IMPORTANT:** Use caution when removing tracks, or death or serious injury could result.

Recommended procedure to remove track from undercarriage:

- a. Use a bar to work track off the inboard front idler. Do not damage the idler with the bar. Use care to not pull machine off jacks!
- b. Once track is off front idler, slide track back to disengage it from drivewheel.
- c. Slide track carefully out from under the midrollers.

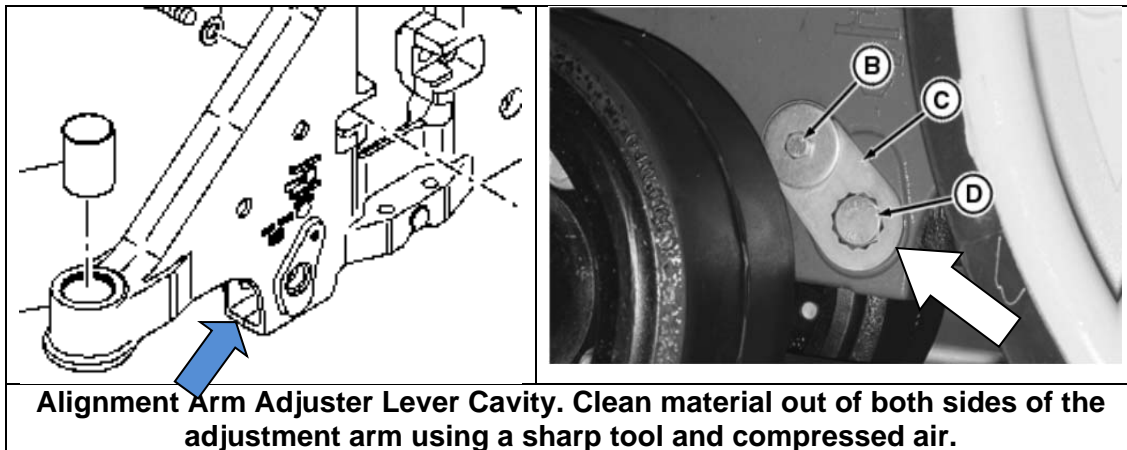


## Undercarriage Inspection

The 8RT and 9030T series undercarriage system has been designed for long life and maintenance free operation. Because of this, there is no need to check pins and bushings for wear or play. However, there are other checks that should be done to assure the track system is being properly maintained.

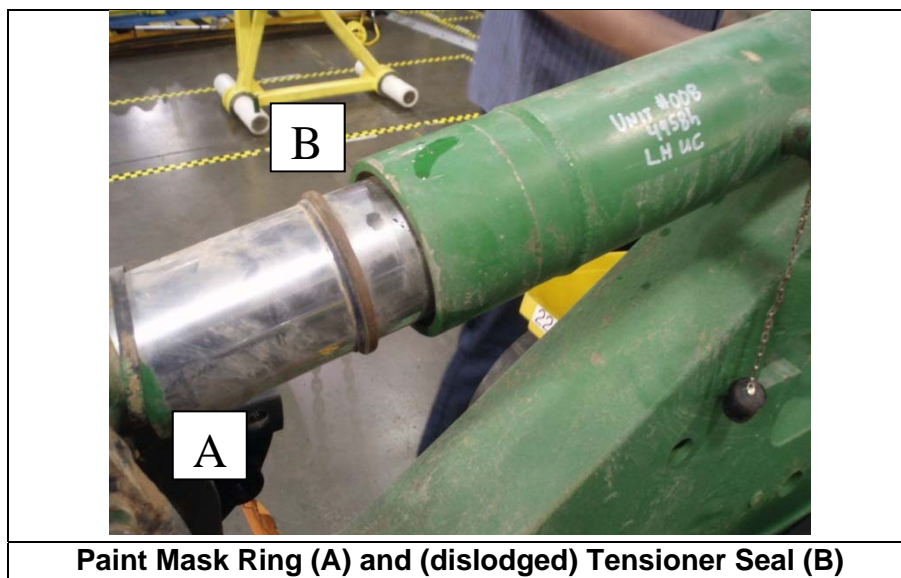
### **CLEAN OUT DIRT IN ALIGNMENT LEVER CAVITY**

Make sure to always clean all dirt and debris out of this area. Packed dirt will make alignment adjustment difficult or not possible unless this area is cleaned out.



### **CHECK TENSIONER SEAL**

On earlier 8RT and 9030T models the tensioner seal could in certain conditions possibly become dislodge. If this is noted, advise customer to repair at the John Deere dealer. NOTE: Some earlier models also include a “paint mask ring” on the cylinder as well. Do not confuse this with a loose seal (see picture below)



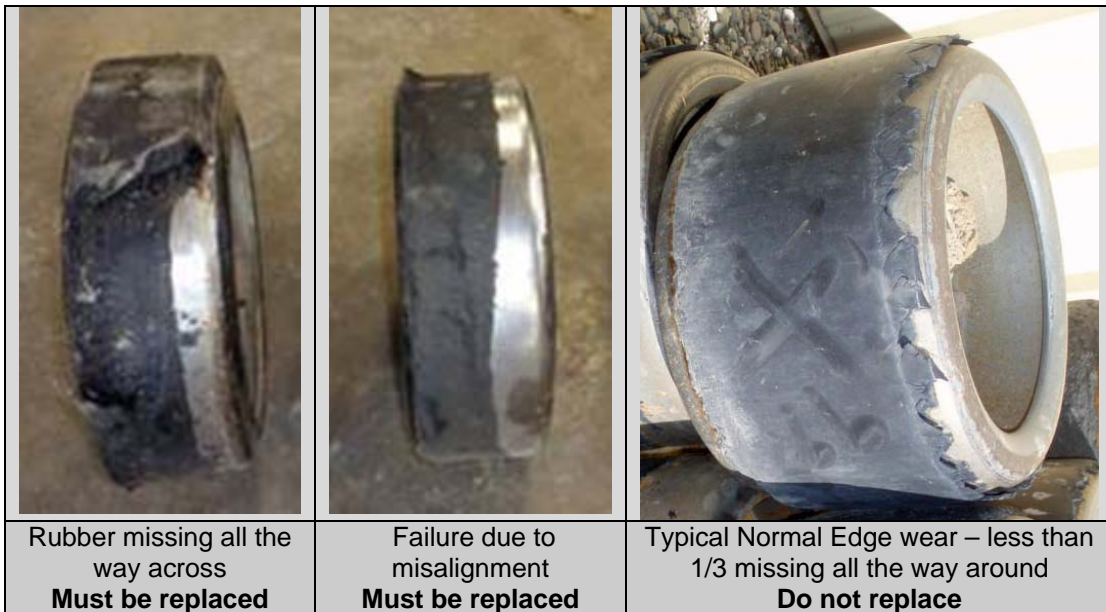


## CHECK MIDROLLER CONDITION

Worn or damaged midrollers can damage the track if not replaced as soon as they meet replacement criteria.

The replacement criteria for midrollers are as follows:

- More than 1/3 of the total rubber is missing around the entire midroller
- All the rubber is missing at any point all the way across the midroller
- Any flat spots are seen which may indicate midroller stopped turning



## CHECK DRIVEWHEEL CONDITION

The drivewheel should be inspected for damaged rubber and for any steel cracks. If rubber thickness wear has occurred, the swing link may be extended too far forward and cause rougher ride, and such wear usually causes groove leading edge to become rounded (as compared to the trailing edge). Wheels with significant chunking or missing rubber should be replaced.



**The drivewheel should be replaced in the following circumstances:**

- If the chevron tread pattern depth is less than 3/16"
- If any large sections of rubber are missing (RH picture)
- Any cracks are found in the steel
- Chevron grooved rounded off from slippage

### ***CHECK DRIVEWHEEL POSITION (8RT SERIES ONLY)***

On the 8RT series, the position of the Drivewheel has a **significant effect on the alignability of the track**. If the drivewheel is mis-positioned more than 1/8" off of its nominal dimension, alignment correction needed will be excessive or not possible. In addition, the alignment may show as correct on the front midroller, but may be scrubbing inside the Drivewheel, causing increased guide lug wear.

The Drivewheel position can be checked by measuring the distance between the **half moon cutout surface** on the locking collars and the end of the rear axle. See Illustrations below.



This measurement should be between 0 and 24 inches, in even increments (0,2,4,6,etc.). If the measurement on either drivewheel position indicates anything outside of plus or minus 1/8" of this value, then drivewheel must be repositioned or else poor track alignment will result. Tool #10929, Track Adjustment tool, is required to hold and position these locking collars when being tightened down, and is available from a JD dealer.

## Track Installation

Installation of track is basically the reverse order of the removal.

1. Attach strap to the new rubber track and carefully maneuver it over the rear drive wheel. Make sure the track guide lugs drop into the drive wheel slot.
2. Using care to not damage the track, gently push the tracks under the midrollers and track undercarriage.
3. Re-attach the strap to the front of the track and raise the track. Slip the track over the front inside idler wheel using a hoist or a forklift.

*NOTE: Application of a soap solution to the front idler may make the installation easier.*

4. Reinstall outboard idler wheel. If idler weights were installed, also install the starter weight. Torque front idler bolts in a criss cross pattern, to a final torque of 1050 N-M (775 ft-lbs). Note that you will need to use a torque wrench with a torque multiplier. Correct Idler wheel torque is critical to avoid bolt loosening.
5. Remove support stands and lower tractor to the ground.
6. Install front idler weights, if equipped.
7. Tension track a second time, to ensure full track tension.

**NOTE : TRACKS MUST BE ALIGNED BEFORE JOB IS COMPLETED.  
AFTER ALIGNMENT ACTIVITY IS DONE, RETORQUE FRONT IDLER BOLTS**

## Track Alignment

On tractors with alignment adjustment, it is very important to check the alignment after a track is installed. Tracks must always be aligned in order to maximize track and wheel life and reduce overall rolling resistance.

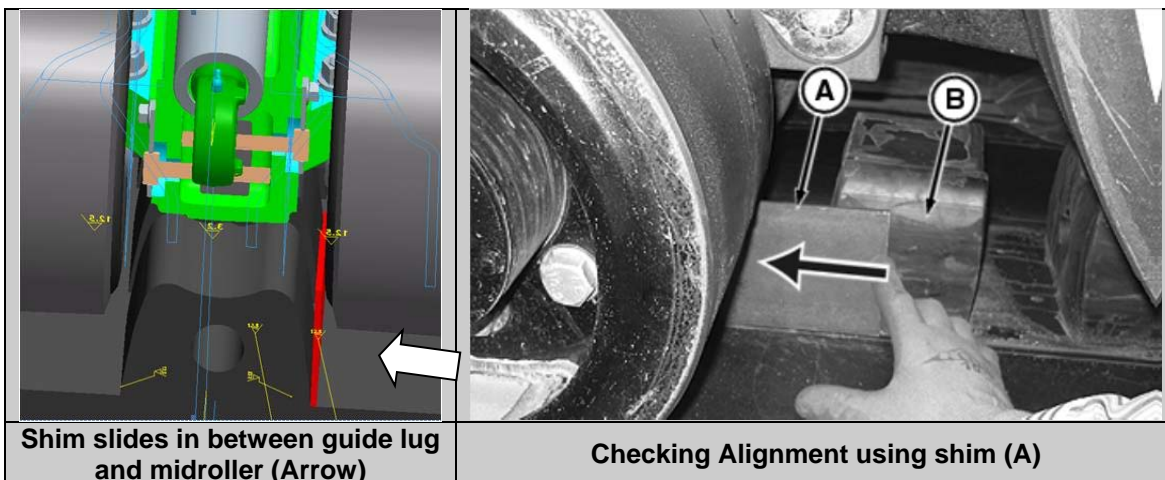
### **IMPORTANT**

**All tracks must be realigned after gauge width change, or after track installation. Failure to align the track may result in damage and or failure of the track guide lugs and midrollers in a short amount of time. Damage due to mis-alignment is not warrantable.**

## Check Track Alignment

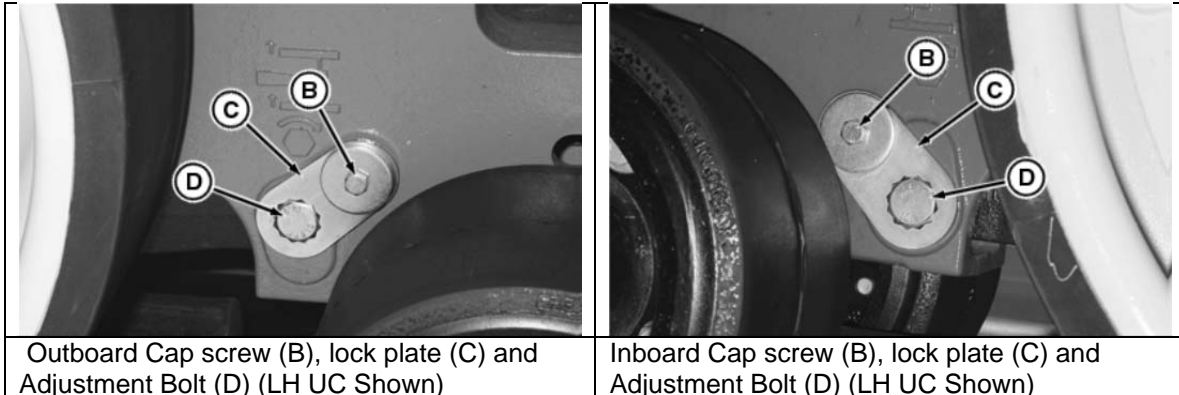
**IMPORTANT:** Tractor must be on the ground during alignment procedure. Any adjustment made while tractor is on stands will only be a rough approximation and not incorrect.

1. Ensure tracks are properly tensioned, suspension air springs are properly inflated, mounting bolts securing walking beam to chassis, and locking collar mounting bolts on rear axle are properly torqued.
2. On a flat concrete surface drive forward at least 200 feet. Avoid steering if possible during this time. Then coast to a rolling stop, without steering or braking inputs.
3. Place transmission control in park position and stop engine.
4. Fabricate or retrieve for use a 102 mm (4 in.) x 204 mm (8 in.) x 6.35 mm (1/4 in.) shim
5. Insert shim between the guide lug and the first midroller. If the track is properly aligned the shim will slip between the midroller and the guide lug on both the inboard and outboard sides of the guide lug. If shim will not slide in one of the sides between midroller and guide lug then track adjustment is required.

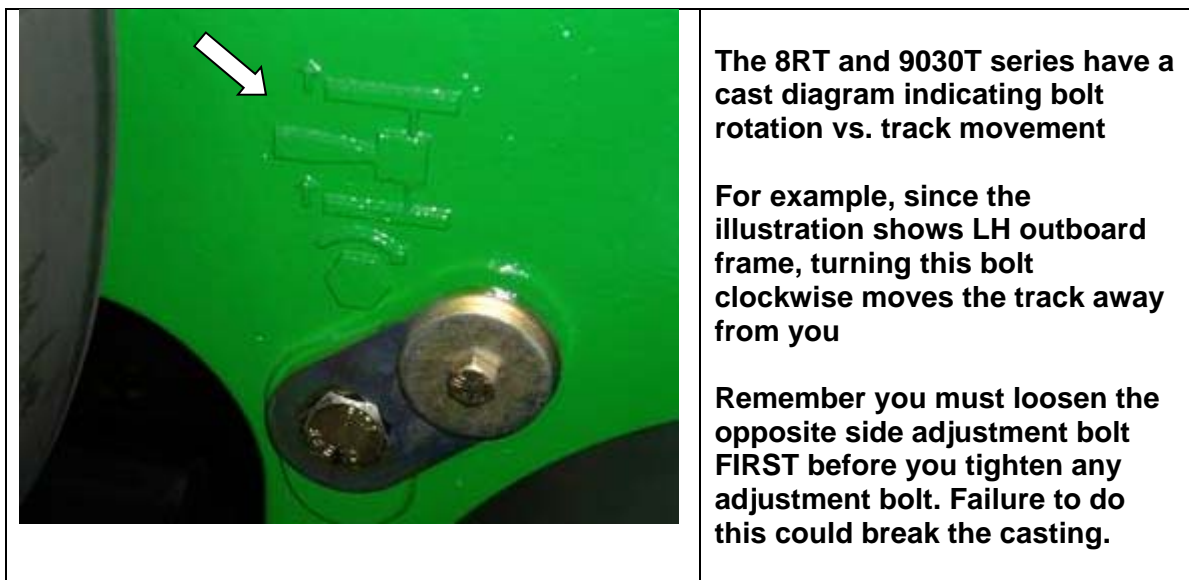


## Track Alignment Adjustment

1. Remove retainer lock plate cap screws (B) and lock plates (C) from inboard and outboard sides of track to be adjusted (See Figures below)



2. Loosen Adjustment Bolt (D) one turn on the side you want the track to move toward.



NOTE: One full turn is the recommended turn increment for course adjustment, and 1/4 to 1/2 turn may be used as fine or final adjustment.

3. Tighten the adjustment bolt (D) on the opposite side of the casting to 300 N-m (220 ft-lbs).
4. Tighten the adjustment bolt on the side you originally loosened (D) to same torque.
5. Recheck track alignment from “Check Track Alignment” section
6. Adjust again as needed until alignment is acceptable using the “shim” test.
7. After alignment is complete, reinstall locking plates.

NOTE: Locking plates are reversible to get twice as many double index increments. It may be necessary to slightly further torque alignment adjustment bolt to advance it to a position in which a locking plate can be installed.

8. Install and tighten lock plate cap screws to 130 N-m (95 ft-lbs)

### ***Final Alignment Check – Temperature Differential Method***

Once track alignment is completed using the “shim” method, a final temperature check should be done. This is **ESPECIALLY IMPORTANT** if customer may be doing a lot of transport roading or if equipped with narrow rolling stock.

1. Drive the machine at transport speed approximately ½ mile down. Then reverse direction and return to starting point.
2. Stop machine and immediately check temperatures of the inner and outer face of the guide lug using a heat gun on the side next to the midrollers, usually the warmest area is at the base of the guide lug.
3. If temperatures are noted by the heat gun to be below 130F, then carefully feel each face of the guide lug. There will always be a warmer side, but there should be very little temperature difference (<10F) if track alignment is acceptable.
4. If slight alignment adjustment is needed, then follow steps in section “Track Alignment Adjustment” , using the fine increment settings of a maximum of ¼ to ½ turn increments.

## **Warranty Information**

After alignment and installation is completed, make sure to provide end user the following Camso provided documents:

- Appropriate Warranty Certificate
- Track Operational Guidelines brochure
- Product Registration Card

It is highly recommended to take a few minutes to review the information in the brochure and the warranty certificate. Make sure to record track serial number(s) on the warranty certificate and on your work order and sales receipt for future reference.

## Summary

Installation and adjustment of tracks on 8RT and 9030T series is not complicated once you know the proper procedures. As you gain experience, you will find no doubt more efficient ways to accomplish the work in a shorter period of time.

For additional information on the maintenance of the undercarriage, and on the procedures for servicing and rebuilding components in the track system, refer to the proper John Deere service or owner's manual.

**Email any suggestions for improvements, clarifications, or errors, to [ag.productsupport@camso.co](mailto:ag.productsupport@camso.co).**

**For questions or technical support, please contact the Camso Customer Service desk through email, [ag.productsupport@camso.co](mailto:ag.productsupport@camso.co) or by calling toll free 1-844-226-7624 or 317-671-7327.**

