

# CAMSO DTS 129

Dirt-to-snow  
bike conversion system

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## ADJUSTMENTS 2017



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**Formerly Camoplast Solideal, Camso is the best of Camoplast and Solideal. To keep moving forward while staying true to our history, we're now Camso, the Road Free Company.**

## INTRODUCTION

These guidelines are designed to provide you with the information necessary to perform the required adjustments to the System. The right adjustments have a direct impact on performance and life of the System's components. It is important to follow closely the instructions contained in this document in order to make the correct system adjustments and thereby reach optimum system performance.

Follow all the instructions contained in this document. To make sure that every step has been performed, a checklist is provided at the end of the instructions to verify that all the adjustments have been made.

### IMPORTANT

The warranty does not apply if the Conversion System was installed by someone other than a Camso dealer or authorized distributor.

### IMPORTANT

Verification of adjustments is mandatory after first use of a motorcycle equipped with a Conversion System; track tension, chain tension, suspension spring tension, and the suspension's angle of attack must be re-verified. Incorrect adjustments can decrease the performance of the System and result in premature wear or breakage of certain components.

## ADJUSTMENTS

**CAUTION:** A verification of the adjustment settings on the system is mandatory after the first use of the vehicle. The rubber track tension, the suspension's angle of attack and the tension in the drive chains must be re-checked. Incorrect adjustments can decrease the performance of the system and produce premature wear on certain components.

**NOTE:** To make the following adjustments, position the vehicle on a flat and level surface.

### ANGLE OF ATTACK - SUSPENSION

**Adjustment principle:** When laying down the suspension on a flat surface, contact between track and suspension rail must happen at the same time along the entire length of the rail. Figure 1.

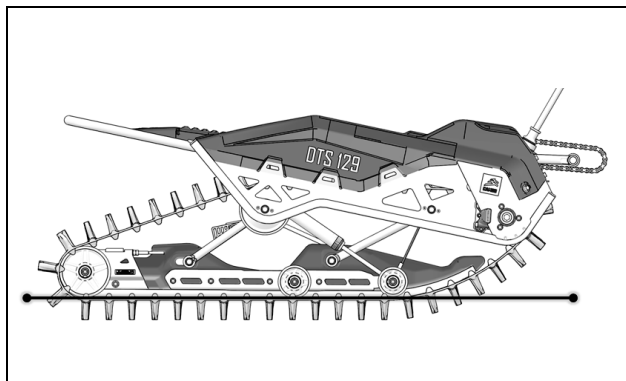


Figure 1

To set the suspension at the correct angle of attack, perform the following:

- The vehicle must be upright and stable, unable to tip over. There must not be any extra load on the vehicle.

**NOTE:** To check the suspension's angle of attack, lift the back of the motorcycle and lay it down slowly.

- Loosen the rod end's jam nut (1). Adjust the length of rod end by turning the anti-rotation arm (2) using a 30 mm wrench. See Figure 5.

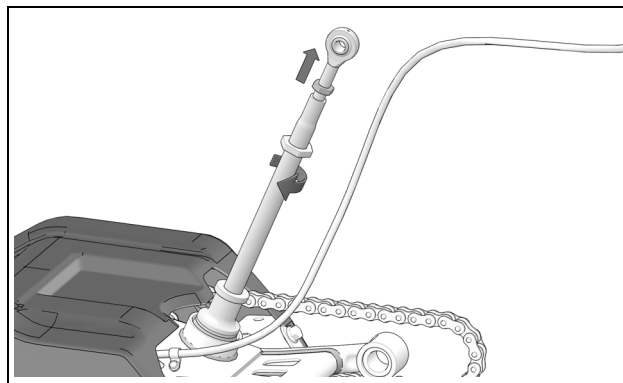


Figure 2

- Lift the back of motorcycle and lay it back down slowly. Check to see if suspension rail comes down at the same time along its entire length.
- Adjust rod end length until a perfect contact is obtained along the entire length of the suspension rail.

**NOTE:** Check pressure on the track's exterior treads. If the angle is correctly set, pressure will be evenly distributed at the front, center, and back of the rail. If setting is incorrect, a greater deformation of the front or back treads will be noticeable.

- Re-tighten the jam nut to 40 N-m [30 lb-ft] after the correct setting has been obtained.

**CAUTION:** Follow the recommended torque when tightening the jam nut. Overtightening the nut might damage the rod end.

**NOTE:** The rod end must not show more than 25 mm of threads following the setting of the suspension's angle of attack. If more than 25 mm of threads are visible, re-check the adjustment setting or consult the Installation Guidelines specific to your motorcycle model and check the assembly order of anti-rotation arm components on the motorcycle frame.

## ADJUSTMENTS

### DRIVE CHAIN TENSION

- To make the following setting adjustments, the skin cover must be removed from the rear part of the system.

**CAUTION:** Some bolts secured on the frame must be loosened temporarily to adjust the drive chain tensioner.

- Loosen assembly bolts (1), (2) and (3) on right side panel to allow the Chain Tensioner (4) to pivot on its axis. See Figure 3.

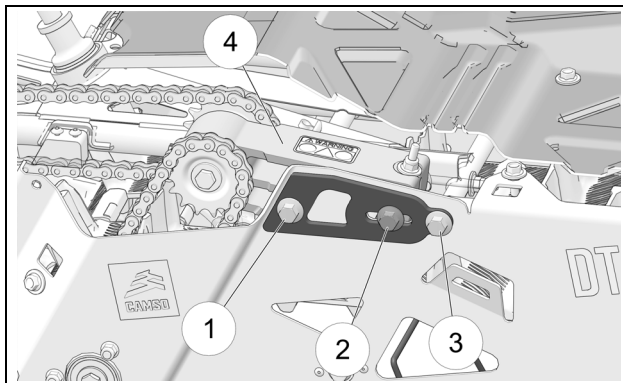


Figure 3

**NOTE:** it is important that the following steps be performed in the order prescribed to obtain the optimal tension setting in the drive chains.

- Adjust the primary drive chain tension (1) by turning adjustment nut (2) at the rear of the tensioner (3) to eliminate play in the primary chain. See Figure 4.

**NOTE:** Do not finalize the primary drive chain adjustment at this point. Eliminate play in the chain only.

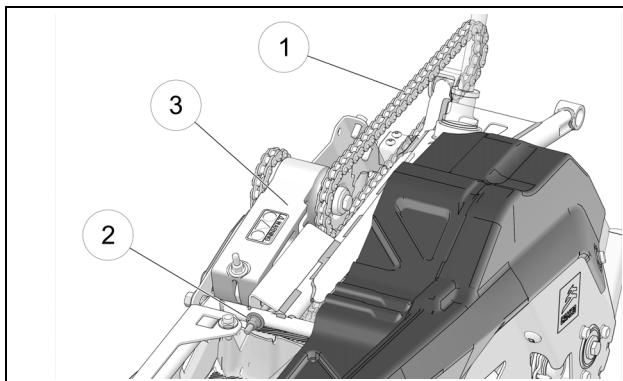


Figure 4

- Adjust next the tension in the secondary drive chain (1) by turning the vertical adjustment nut (2) on the chain tensioner. See Figure 5.

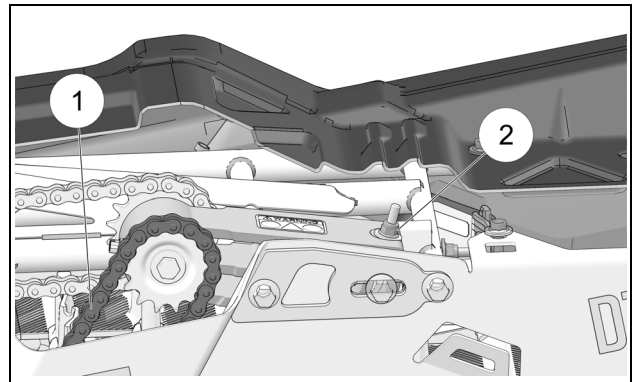


Figure 5

- Apply pressure at center of the two drive pignons. The chain should have 3-6 mm (1/8-1/4 in.) of play. Re-adjust until the right amount of play is obtained. See Figure 6.

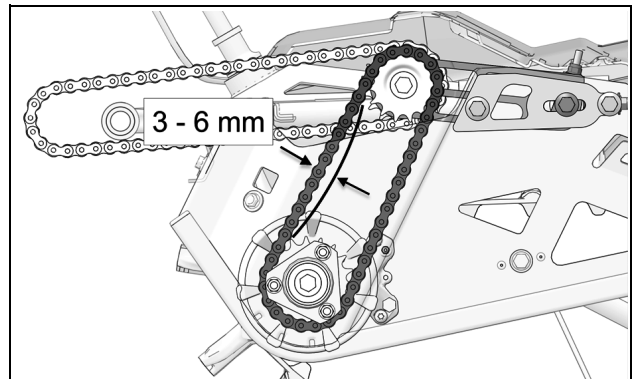


Figure 6

**NOTE:** Secondary drive chain tension must be set before finalizing primary drive chain tension adjustment.

- Once the secondary drive chain tension is set, finalize tension adjustment of primary drive chain. Apply pressure at center of the two drive pignons. The chain should have 3-6 mm (1/8 - 1/4 in.) of play. Re-adjust until the right amount of play is obtained. See Figure 7.

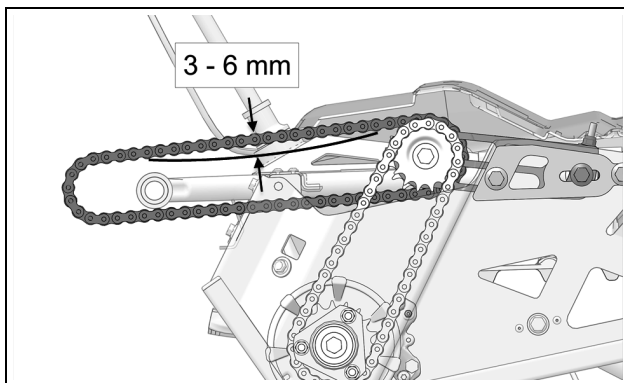


Figure 7

- Re-tighten chain tensioner mounting bolts (1), (2) and (3) to 90 N-m [67 lb-ft] of torque. See Figure 8.

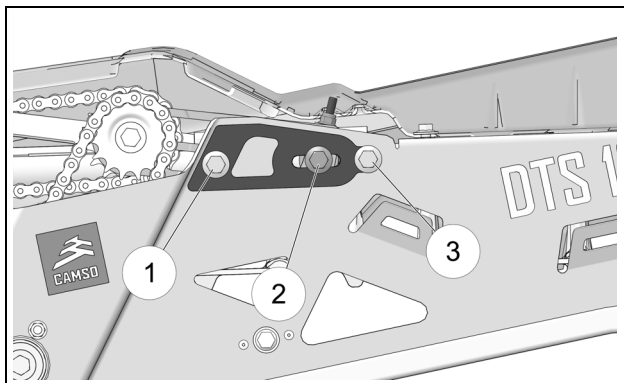


Figure 8

- Drive chain tension set too high can cause premature wear on drive pignons and on the chains themselves. Chains are less likely to come off and are also less likely to skip on the pignons.

**CAUTION:** A chain tension that is set too high will result in a loss of power and excessive mechanical stress put on drive system components. A chain tension set too high is not recommended.

- A lower tension in the drive chains increases the risk of chains coming off or skipping on the drive pignons.

*NOTE:* Once the chain tension adjustments are done, doublecheck to make sure that the tension settings are according to specification.

## SUSPENSION ADJUSTMENT

The suspension can be adjusted to fit the rider's weight, personal preferences or type of use made of the vehicle.

*NOTE:* Camso recommends that the suspension spring adjustment be made in a shop/garage before going out and using the vehicle.

- Loosen the wheel assembly bolt (1) located next to the grooved bushing where the long end of suspension spring sits and remove the wheel. See Figure 9.

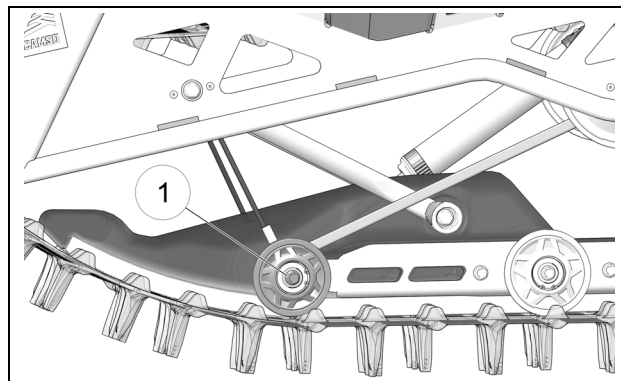


Figure 9

- Depress suspension to allow removal of limiter cable loop (1) from groove in spring support bushing. See Figure 10.

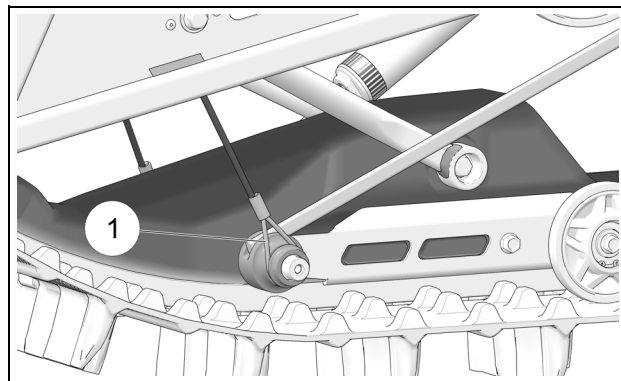


Figure 10

## ADJUSTMENTS

**CAUTION:** Suspension spring tension is very high. Handle with care and use appropriate tools to avoid any risk of injury during spring calibration.

- Using an appropriate tool, lift the long end of the spring (1) out of its groove to release the tension. See Figure 11.

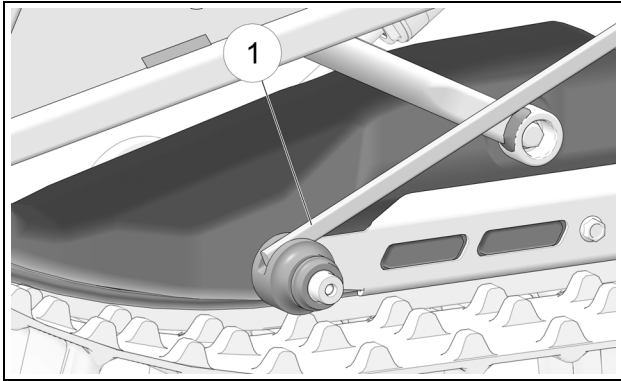


Figure 11

### Torsion Spring tension cam positions

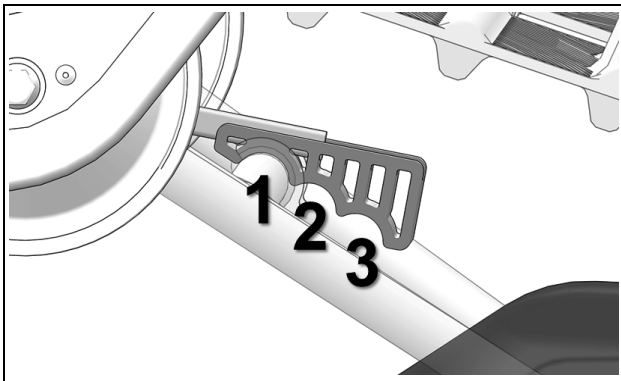


Figure 12

CAM POSITION	SPRING PRELOAD
1	Minimum
2	Medium
3	Maximum

- Position Tension Cam in its seat on the suspension arm. Move cam forward or backward depending on the level of stiffness desired in the suspension. See Figure 13.

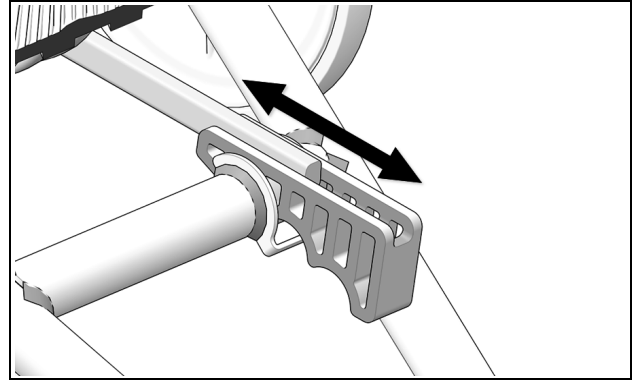


Figure 13

- Using an appropriate tool, re-install the long end of the spring in its groove in the spring support bushing. See Figure 18.
- Depress the suspension and re-insert limiter cable loop in its groove in the spring support bushing.
- Re-install wheel on its shaft. Tighten bolt to 27 N-m (20 lb-ft) of torque.

**CAUTION:** Each time the rear suspension is adjusted, check rubber track tension and adjust it if necessary.

## RUBBER TRACK TENSION

**CAUTION:** Track Tensioner assembly bolt (A) and jam nut (B) must be loosened before adjusting track tension.

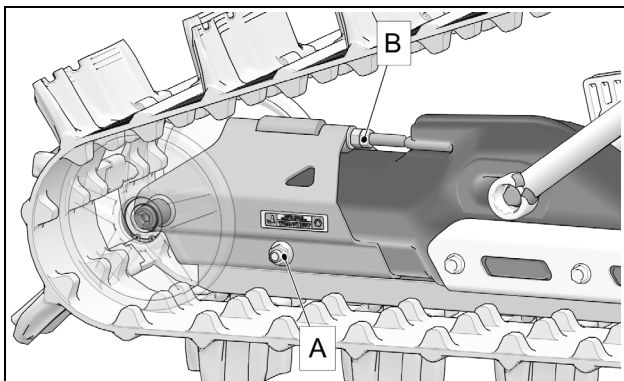


Figure 14

To adjust track tension, turn tension adjustment nut (C) clockwise or counterclockwise to obtain the recommended track tension. See Figure 15.

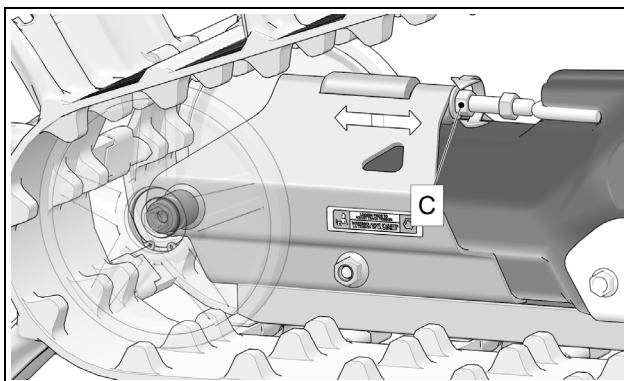


Figure 15

**CAUTION:** Make sure to re-tighten Track Tensioner assembly bolt (A) and jam nut (B) after completing track tension adjustment.

The table below shows the force applied and the deflection which must occur when track tension is correctly set. Refer also to Figure 16.

FORCE	DEFLECTION
6.8 kg [15 lbs]	19 mm [ $\frac{3}{4}$ in.]

## BASIC TUNING

- A higher rubber track tension reduces drive “ratcheting”.

*NOTE:* Track tension set too high could cause premature wear on system components and is therefore not recommended.

- A lower rubber track tension provides better traction, a smoother ride and better fuel economy.

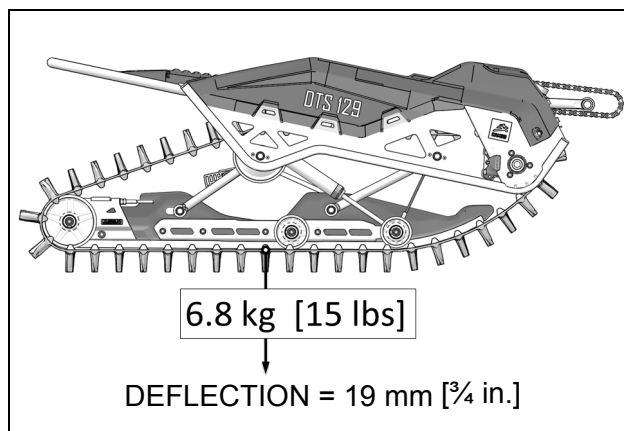


Figure 16

*NOTE:* The track tension testing tool shown below in Figure 17 can be purchased through an authorized Camso dealer. The part number is 2000-00-3125.



Figure 17

## Final Check

Ride at slow speed on a distance of about 1.5 km [1 mile]. Re-adjust as required.