TECHNICAL BULLETIN

Subject: Align-Trac Procedures

Lit No: LIT1004

Date: 05/30/2015 **Revision:** A

Watson & Chalin recently announced the addition of the new Align-Trac trailing arm-to-hanger pivot connection for trailer air suspensions. This Technical Bulletin outlines the procedure to align the axle and tighten the pivot connection.

The Align-Trac Pivot Connection uses two collars that insert into the slots at the sides of each suspension hanger. A standard connection only requires one eccentric collar at each hanger (eccentric collar contains the square hole) and one concentric collar.

Note: *On very rare occasions, specific customer applications may utilize eccentric collars on both sides of each hanger, and both sides of each hanger will contain the vertical alignment guides. For these types of applications, refer to the sequence for use with dual eccentric collars following the standard procedure.*

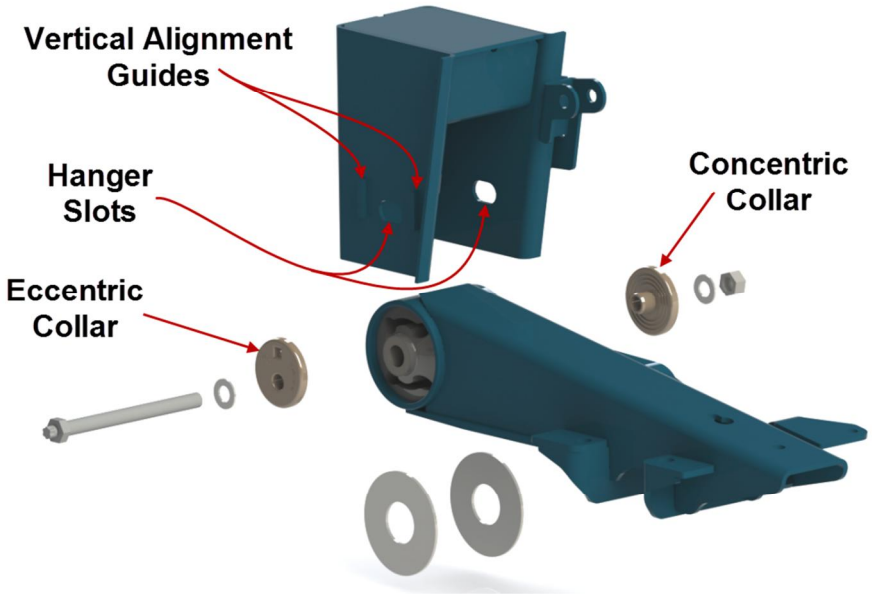

Figure 1

Tools required:

- 1” drive E-20 Torx socket
- 1 7/16” wrench
- ½” breaker bar
- Impact wrench capable of 600 ft-lbs

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CAUTION: DO NOT APPLY OR ALLOW any type of lubricant to contact the threads of the shear-type pivot bolts. Lubricant will reduce the friction between the threads of the bolts and the torque prevailing heavy hex nut. Failure of the shear-type pivot bolts may occur.

CAUTION: DO NOT APPLY undercoating to the suspension and frame bracket until after completing the alignment. Undercoating will affect clamp load of the pivot connection fastener.

IMPORTANT: The shear-type pivot bolt and torque-prevailing heavy hex nut may be used one time prior to the trailer being put into service. If future realignment becomes necessary, new pivot connection hardware must be used.

Sequence for alignment with Standard Align-Trac Collars:

1. Tires must be the same size, diameter, and inflation pressure.
2. The suspension must be at the correct ride height to align properly. This can be done by adjusting the landing gear or using jacks to support the trailer. If the trailer is upside down to mount suspension, the axles may be blocked to the proper ride height. Trailer and axles must be level. Ensure ride height is true and equal on both sides of the trailer.
3. Tighten the torque-prevailing heavy hex nut enough on each shear-type pivot bolt so the eccentric collar stays in place between the vertical alignment guides, but still loose enough to allow the hardened flat washers to rotate freely
4. Begin with the Adjustment-Squares vertically aligned with pivot on both hangers as shown in Figure 2.

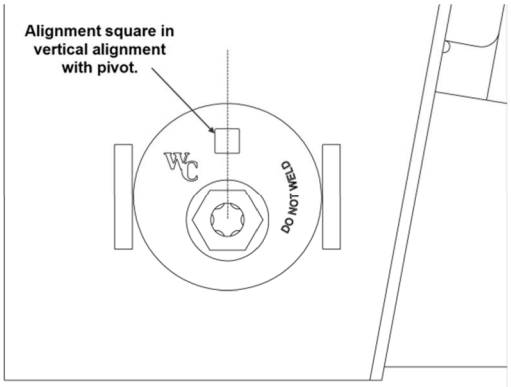

Figure 2

5. Tighten the connection on one hanger just enough so the collars cannot rotate.
6. On the opposite hanger, using a 1/2” breaker bar, rotate the eccentric collar so the suspension moves fore/aft until the distance from the trailer kingpin to the center of both axle ends are equal within 1/8”. If the flanged eccentric collar reaches 45 degrees in either direction without achieving alignment (see Figure 3), rotate the flanged eccentric collar on the suspension’s other hanger.

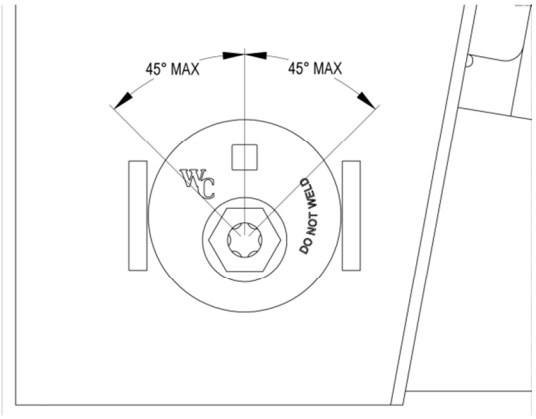

Figure 3

7. Ensure both collars remain flush to the sides of the hanger throughout the adjustment process, tapping the concentric collar with a rubber mallet if necessary to keep the collars from wedging against the sides of the hanger plate. Figure 4 below represents collars that are wedged and not flush against the sides of the hanger. Figure 5 depicts properly positioned collars.

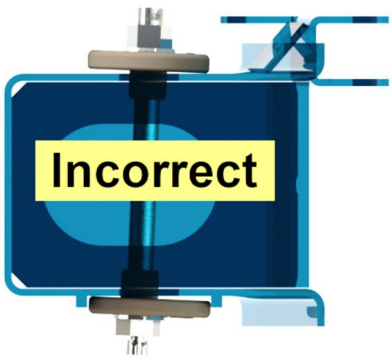

Figure 4

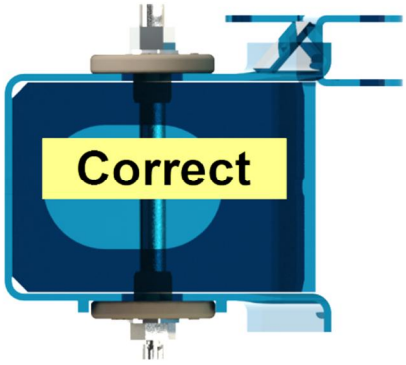

Figure 5

8. Snug up pivot bolt so the collars cannot move.
9. Re-Check alignment before proceeding
10. Tighten the shear-type pivot bolt to 550 ft-lbs. (+/- 45 ft-lbs) with the 1" drive socket until the Torx head shears off. Note: Weldment not required.
11. Additional suspensions should be aligned to the forward axle by following the previous steps until the axle ends are an equal distance to the axle in front of it with a maximum tolerance of 1/16".

Sequence for alignment with Dual Align-Trac Eccentric Collars:

1. Tires must be the same size, diameter, and inflation pressure.
2. The suspension must be at the correct ride height to align properly. This can be done by adjusting the landing gear or using jacks to support the trailer. If the trailer is upside down to mount suspension, the axles may be blocked to the proper ride height. Trailer and axles must be level. Ensure ride height is true and equal on both sides of the trailer.
3. Tighten the torque-prevailing heavy hex nut enough on each shear-type pivot bolt so the eccentric collar stays in place between the vertical alignment guides, but still loose enough to allow the hardened flat washers to rotate freely
4. Begin with the Adjustment-Squares vertically aligned with pivot on both hangers as shown in Figure 2.

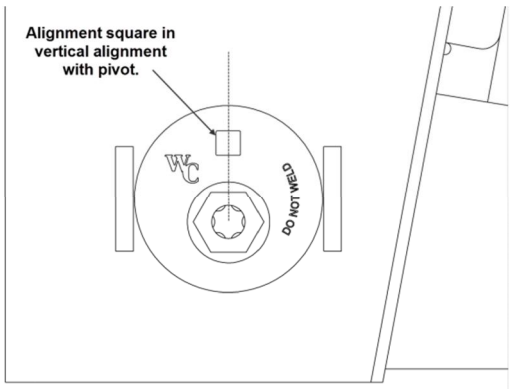

Figure 2

5. Tighten the connection on one hanger just enough so the collars cannot rotate.

6. On the opposite hanger, using two 1/2” breaker bars, rotate ***both*** eccentric collars on that hanger in unison so the suspension moves fore/aft until the distance from the trailer kingpin to the center of both axle ends are equal within 1/8”. If the eccentric collars reach 45 degrees in either direction without achieving alignment (see Figure 3), rotate the eccentric collars on the suspension’s other hanger.

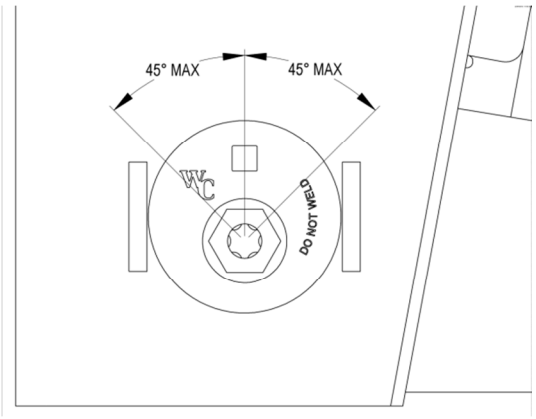

Figure 3

7. Ensure both collars on the same hanger are oriented in the same direction and remain flush to the sides of the hanger throughout the adjustment process. Figure 6 below represents collars that are correctly and incorrectly aligned.

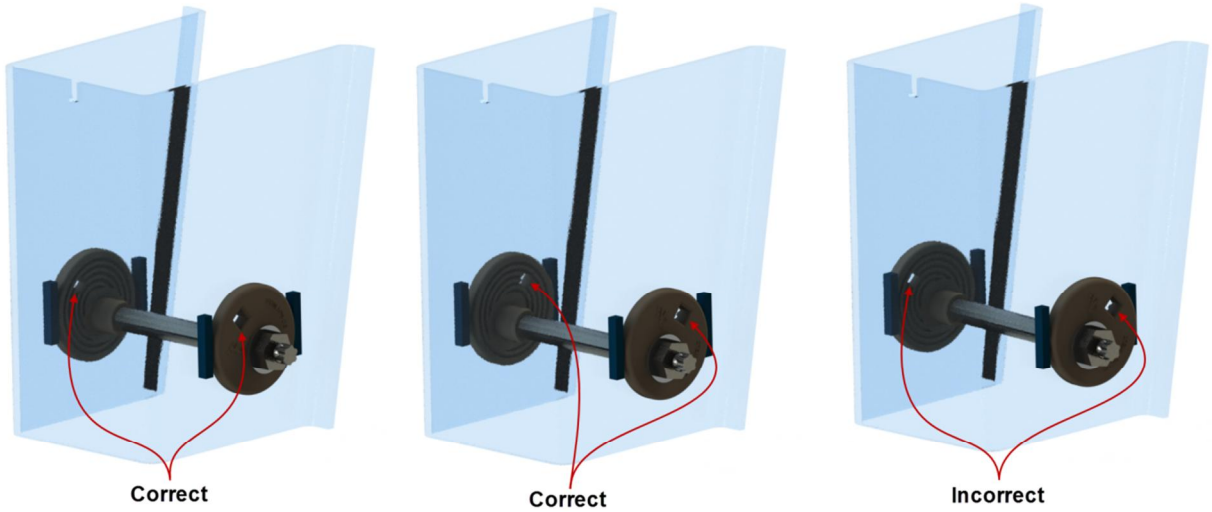

Figure 6

8. Snug up pivot bolt so the collars cannot move.
9. Re-Check alignment before proceeding
10. Tighten the shear-type pivot bolt to 550 ft-lbs. (+/- 45 ft-lbs) with the 1” drive socket until the Torx head shears off. Note: Weldment not required.
11. Additional suspensions should be aligned to the forward axle by following the previous steps until the axle ends are an equal distance to the axle in front of it with a maximum tolerance of 1/16”.