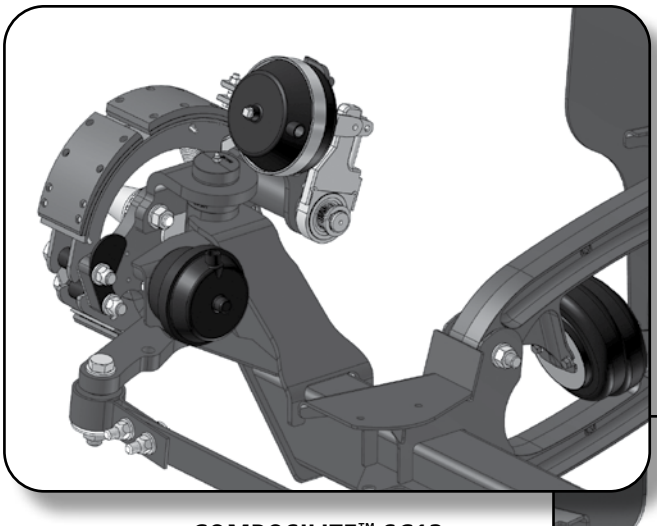
TECHNICAL PROCEDURE

COMPOSILITE™ SC LOCK STRAIGHT KIT

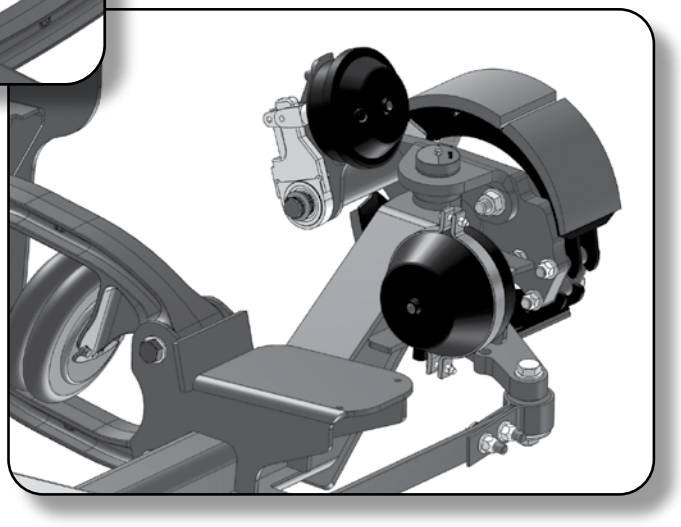
SUBJECT: Aftermarket Assembly & Installation Instructions

LIT NO: H747

DATE: April 2022



COMPOSILITE™ SC13



COMPOSILITE™ SC20

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INTRODUCTION

The lock straight kit described in this publication was designed for use on Hendrickson's COMPOSILITE™ SC steerable axle suspension models only. These instructions apply when installing aftermarket lock straight kit part numbers R-006293-SC13 and R-006293-SC20.

Read entire assembly/installation instructions thoroughly before proceeding with lock straight kit installation.

NOTE: Prior to installing the lock straight kit, contact Hendrickson's Warranty Department with suspension serial number for engineering approval. Failure to do so will result in voided axle warranty. The suspension warranty is still valid.

NOTE: When installing a lock straight kit, the axle and related components must be in good working order and meet the original Hendrickson specifications.

⚠ **WARNING: NEVER PERFORM MAINTENANCE ON A SUSPENSION WITHOUT FIRST RELEASING AIR PRESSURE FROM AIR SPRINGS. COMPONENT DAMAGE, INJURY OR DEATH CAN OTHERWISE RESULT.**

WELDING PROCEDURES

13,500 LB. CAPACITY

Lock Straight Kit Part Number: R-006293-SC13

1. Prepare the axle body for welding by removing all paint, dirt, etc. from the axle in the area where the lock straight brackets will be placed.
2. Position one lock straight bracket using dimensions located in Figure 1 and Table 1.
3. Tack-weld the bracket into position.
4. Recheck the location of the bracket on the axle. Make adjustments if necessary.
5. Place a 0.25" fillet weld per callouts in Figure 1.

NOTE: Minimum MIG welding requirements: 275-325 amps, 26-30 volts, ER70S-3 or ER70S-6 wire and 35-45 cfh gas flow. Minimum stick welding requirements: 170-300 amps and an E7018 3/16" rod.

⚠ **WARNING: DO NOT WELD ON AXLE BEAM RADIUS. DOING SO MAY RESULT IN AXLE DAMAGE.**

6. Repeat steps 1 through 6 to position and weld the other bracket on the other end of the axle.

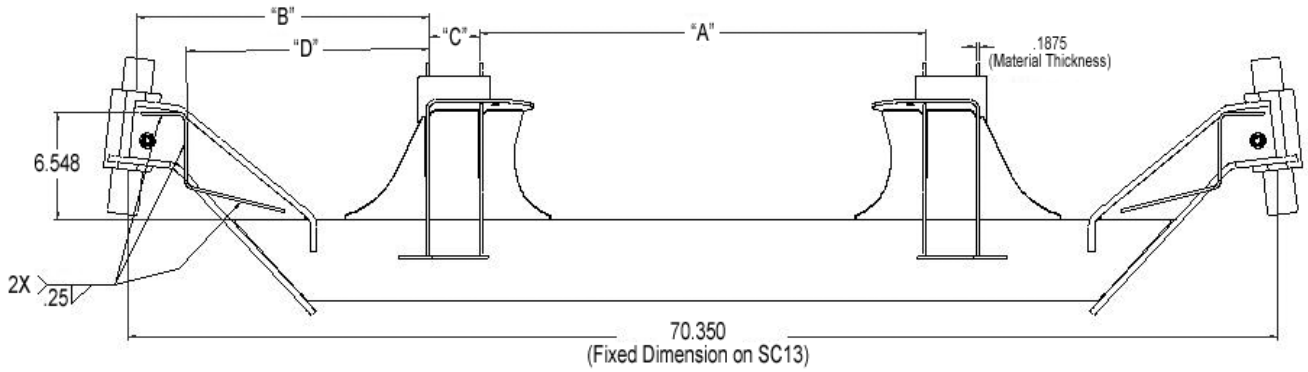

Figure 1: Lock Straight Kit Welding – Fabricated-End Axle as Viewed from the Rear of the Vehicle

WELDING PROCEDURES (continued)

SC13 CALCULATION						
	FRAME WIDTH	PART NUMBER	"A"	"B"	"C"	"D"
Truck (Application)	33.5"	XXXXXX-1	27.31	18.46	3.063	12.515
	34.0"	XXXXXX-2	27.81	18.21	3.063	12.265
	34.5"	XXXXXX-3	28.31	17.96	3.063	12.015
	35.0"	XXXXXX-4	28.81	17.71	3.063	11.765
Trailer (I-Beam Centers)	38.0"	XXXXXX-5	34.94	14.64	3.063	8.695
	34.0"	XXXXXX-6	30.94	16.64	3.063	10.695
	35.0"	XXXXXX-7	31.94	16.15	3.063	10.205
	41.0"	XXXXXX-8	37.94	13.14	3.063	7.195

Table 1

20,000 LB. CAPACITY

Lock Straight Kit Part Number: R-006293-SC20

1. Prepare the axle body for welding by removing all paint, dirt, etc. from the axle in the area where the lock straight brackets will be placed.
2. Position one lock straight bracket using dimensions located in Figure 2 and Table 2.
3. Tack-weld the bracket into position.
4. Recheck the location of the bracket on the axle. Make adjustments if necessary.
5. Place a 0.25" fillet weld per callouts in Figure 1.

NOTE: Minimum MIG welding requirements: 275-325 amps, 26-30 volts, ER70S-3 or ER70S-6 wire and 35-45 cfh gas flow. Minimum stick welding requirements: 170-300 amps and an E7018 3/16" rod.

⚠ **WARNING: DO NOT WELD ON AXLE BEAM RADIUS. DOING SO MAY RESULT IN AXLE DAMAGE.**

6. Repeat steps 1 through 6 to position and weld the other bracket on the other end of the axle.

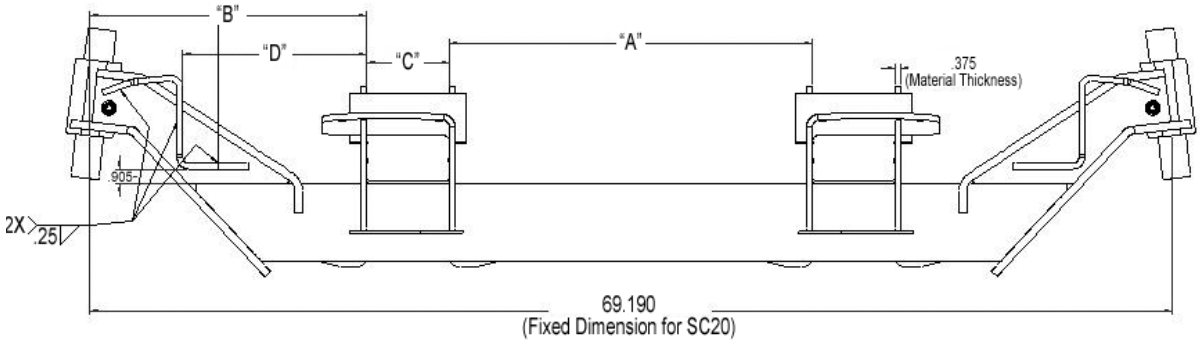

Figure 2: Lock Straight Kit Welding – Fabricated-End Axle as Viewed from the Rear of the Vehicle

SC20 CALCULATION					
PART NUMBER	FRAME WIDTH	"A"	"B"	"C"	"D"
XXXXXX-1	33.5" (APPLICATION)	22.72	17.955	5.28	14.2805
XXXXXX-2	34.0" (APPLICATION)	23.22	17.705	5.28	14.0305
XXXXXX-3	34.5" (APPLICATION)	23.72	17.455	5.28	13.7805
XXXXXX-4	35.0" (APPLICATION)	24.22	17.205	5.28	13.5305

Table 2

LOCK STRAIGHT KIT ASSEMBLY

1. Using the hex head bolts included in the kit, secure the lock straight target into place. (See items 4 and 6 of Figure 3)

NOTE: Brakes will need to be disassembled to complete this step.

2. Assemble the inner tube assembly onto the unpressurized brake chamber piston rod until it bottoms out against the brake chamber. (See items 1, 2 and 3 of Figure 3)
3. Assemble the plunger onto the rod. (See items 1 and 5, Figure 3)
4. Remove the two nuts from the brake chamber mounting studs. (See item 6, Figure 3)

5a. **For SC13:** Position the lock straight target (See item 4 in Figure 3) so that the plunger, when engaged, strikes the target.

5b. **For SC20:** Position chamber so plunger, when engaged, strikes inner rear side of knuckle. No targets required.

6. Orient the brake chamber port to desired location.
7. Install the tube assembly over the plunger and refasten the two nuts onto the brake chamber. (Refer to items 2 and 3, Figure 3) (Minimum of 150 ft. lbs. or torque.)
8. Supply air to the chambers to engage the plunger.

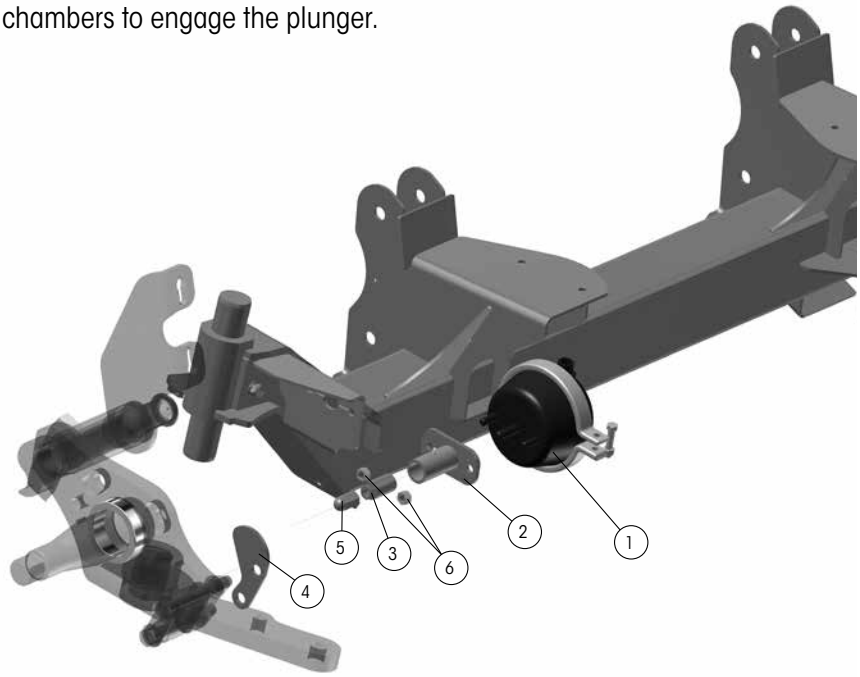

*Figure 3: Lock Straight Kit Assembly**

*NOTE: Assembly components exploded and shown offset from axle bracket for clarity.

Actual product performance may vary depending upon vehicle configuration, operation, service and other factors.
All applications must comply with applicable Hendrickson specifications and must be approved by the respective vehicle manufacturer with the vehicle in its original, as-built configuration.
Contact Hendrickson for additional details regarding specifications, applications, capacities, and operation, service and maintenance instructions.

*Call Hendrickson at **800.660.2829** or **800.668.5360** in Canada for additional information.*

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