

Service Bulletin

Maintenance of Way Equipment

Date: 3.19.2020

RRP Service Bulletin No:

RRP SB342

Title: Adjustable Brake Arms

Rating:

ALERT
(Potential Problem)

INFORMATION
(Action Is Optional)

DIRECTIVE
(Action Is Required)

PRODUCT IMPROVEMENT
(Enhance Product)

Product Series:

915574 ATPI	931571 DCA	913569 DAS	913584 DAS	931568 DAA	931583 DAA
ATPI-011	DCA-158	DAS-257-17	DAS-275	DAA-345-17	DAA-355
ATPI-012	DCA-159	DAS-258-17	DAS-276	DAA-346-17	DAA-356
ATPI-013	DCA-160	DAS-261-17		DAA-347-17	DAA-357
ATPI-002-17		DAS-262-17		DAA-348-17	DAA-358
ATPI-003-17	931585 DCA	DAS-263-17		DAA-349-17	
ATPI-004-17	DCA-161	DAS-264-17		DAA-350-17	
ATPI-005-17	DCA-162	DAS-265-17		DAA-353	
ATPI-006-17	DCA-163	DAS-271		DAA-354	
ATPI-007-17	DCA-164	DAS-272			
		DAS-273			
		DAS-274			

Product Series: 915574 Advance Tie Plate Inserter (ATPI)

Summary: Replace static brakes with adjustable brakes for better brake control and operation.

Action: Replace existing ATPI brake arms with the **ATPI Brake Linkage Kit [RRP# 793045]** and the existing DASP brake arms with the **DASP Brake Linkage Kit [RRP# 793058]**.

See attached pages for instructions.

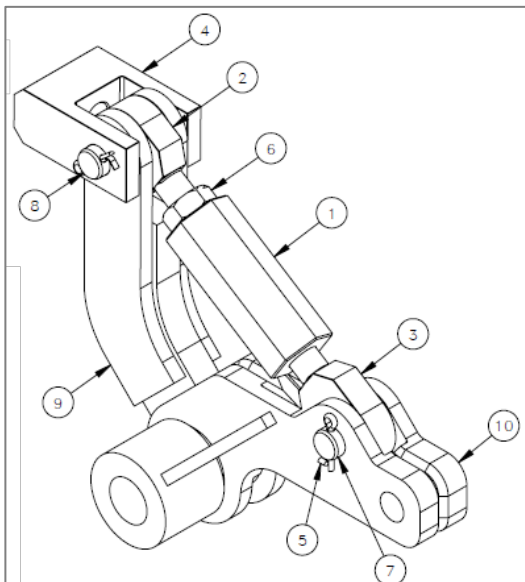
Completion: Continue with normal machine operation after completing this procedure.

ATPI Brake Linkage Kit Installation Instructions [RRP# 793045]

The intent is not to break the hydraulic motor connections and maneuver as best as possible around existing items.

Depending on the unit age and mode, it may require disconnecting the chain or loosening the motor plate adjustment yoke to allow clearance movement before and after for linkage placement.

Front Left Arm



NO.	QTY	DESCRIPTION	PART NO.
1	REF.	COUPLER	319123
2	REF.	STUD, RIGHT EYE	319129
3	REF.	STUD, LEFT EYE	319130
4	REF.	CLEVIS	319348
5	REF.	PIN, COTTER: .12 X 1	400900
6	REF.	NUT, HEX JAM: .62-11 HVY	401027
7	REF.	PIN, CLEVIS: .62 X 1.5	473922
8	REF.	PIN, CLEVIS: .62 X 2.25	491418
9	REF.	LINK	781494
10	REF.	ARM, LEFT	781524

Assembly

1. Install the right eye stud (2) into the jam nut (6) and run the nut to the end. Apply light lubricant to both coupler (1) ends and along eye stud (2 & 3) threads.
2. Insert the right eye stud (2) into the right coupler end and fully drive inward.
3. Do the same to the left eye stud (3) into the left coupler end.
4. Set the assembly aside.

Caging the Brake

1. At the brake chamber, install the T-Bolt and lock it into the chamber receiver.
2. Install the flat washer and hex nut onto the T-bolt thread and run the hex nut and flat washer to the chamber.
3. Use a wrench to drive the hex nut clockwise to fully retract the brake arm.

Brake Arm

1. Remove the brake shoe to attach later on the *new* brake arm.
2. Pry the retaining collar from the clevis to allow pin removal and disengage the brake arm from the clevis.
3. At the lower pivot pin, remove the cotter pin and retract the pivot pin enough to allow brake arm removal.
4. Discard the used brake arm.

Clevis

1. At the chamber clevis, use a wrench on the jam nut to rotate counter-clockwise so it rests close to the chamber, unlocking the clevis.
2. Remove the clevis from the thread and discard.
3. Measure 3.00" from the chamber face and mark the thread.
4. Cut off the excess thread and file the end burr.
5. Run the jam nut counter-clockwise to chase the thread and make it uniform.
6. Run the jam nut clockwise about 1 3/8" from the end and follow with installing the new clevis (4).
7. Stop the clevis when the threaded rod is flush with the inside face.

Left Arm

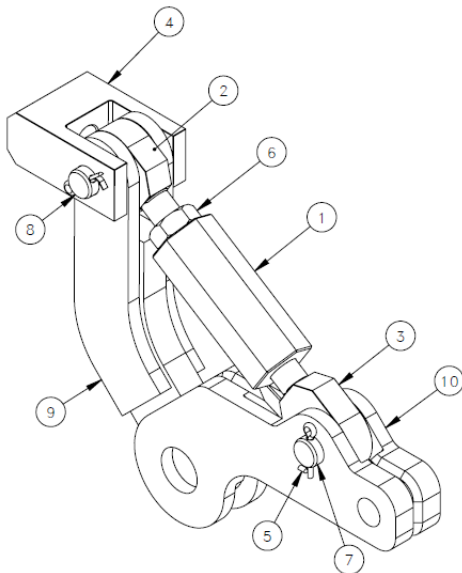
1. Select the left arm (10) and attach the shoe with its shoe pin. Insert the cotter pin and spread the ends.
2. Insert the left eye stud into the arm cavity and align the holes with the clevis pin (7). Insert the cotter pin and spread the ends.
3. Insert the link (9) single end into the arm bottom slot and move it to the wheel area.
4. Roll the assembly over to the wheel surface to lower the pivot pin and align.
5. Ease the pivot pin into the brake arm, link, and frame ear holes. Insert the cotter pin and spread the ends.
6. Move the eye stud with the jam nut between the link and clevis arms.
7. Align the holes and insert the clevis pin (8) through all the holes. Insert the cotter pin and spread the ends.
8. Check that all connections are secure and allow simple movement.
9. Tighten the jam nut against the clevis.

Adjustment

Tools Required:

- 15/16 Open end wrench
 - 1 1/4 Open end wrench
1. Start the adjustment with the 15/16 wrench on the jam nut (6) and the 1 1/4 wrench on the coupler (1).
 2. Loosen the jam nut a half-revolution and remove the wrenches.
 3. Rotate the coupler counter-clockwise by hand to move the shoe towards the wheel.
 - When the coupler is harder to turn, the shoe is contacting the wheel.
 4. Rotate the coupler clockwise a half-revolution for running clearance.
 5. Hold the coupler in position. With the other hand move the jam nut to meet the coupler.
 6. With the wrenches on the coupler and jam nut, lock the jam nut with 10-12 ft-lbs torque.
 7. Inspect that the assembly is operational.

Front Right Arm



NO.	QTY	DESCRIPTION	PART NO.
1	REF.	COUPLER	319123
2	REF.	STUD, RIGHT EYE	319129
3	REF.	STUD, LEFT EYE	319130
4	REF.	CLEVIS	319348
5	REF.	PIN, COTTER: .12 X 1	400900
6	REF.	NUT, HEX JAM: .62-11 HVY	401027
7	REF.	PIN, CLEVIS: .62 X 1.5	473922
8	REF.	PIN, CLEVIS: .62 X 2.25	491418
9	REF.	LINK	781494
10	REF.	ARM, RIGHT	781525

Assembly

1. Install the right eye stud (2) into the jam nut (6) and run the nut to the end. Apply light lubricant to both coupler (1) ends and along eye stud (2 & 3) threads.
2. Insert the right eye stud (2) into the right coupler end and fully drive inward.
3. Do the same to the left eye stud (3) into the left coupler end.
4. Set the assembly aside.

Caging the Brake

1. At the brake chamber, install the T-Bolt and lock it into the chamber receiver.
2. Install the flat washer and hex nut onto the T-bolt thread and run the hex nut and flat washer to the chamber.
3. Use a wrench to drive the hex nut clockwise to fully retract the brake arm.

Brake Arm

1. Remove the brake shoe to attach later on the *new* brake arm.
2. Pry the retaining collar from the clevis to allow pin removal and disengage the brake arm from the clevis.
3. At the lower pivot pin, remove the cotter pin and retract the pivot pin enough to allow brake arm removal.
4. Discard the used brake arm.

Clevis

1. At the chamber clevis, use a wrench on the jam nut to rotate counter-clockwise so it rests close to the chamber, unlocking the clevis.
2. Remove the clevis from the thread and discard.
3. Measure 3.00" from the chamber face and mark the thread.
4. Cut off the excess thread and file the end burr.
5. Run the jam nut counter-clockwise to chase the thread and make it uniform.
6. Run the jam nut clockwise about 1 3/8" from the end and follow with installing the new clevis (4).
7. Stop the clevis when the threaded rod is flush with the inside face.

Right Arm

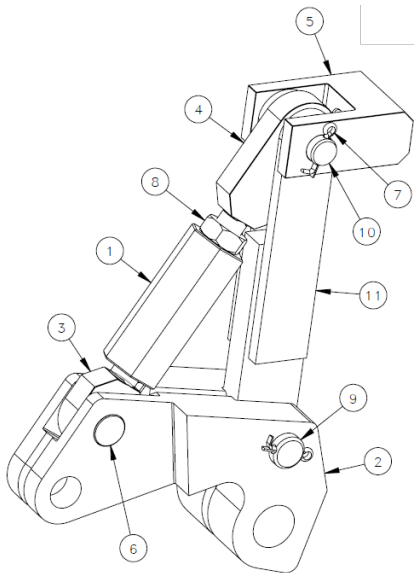
1. Select the right arm (10) and attach the shoe with its shoe pin. Insert the cotter pin and spread the ends.
2. Insert the left eye stud into the arm cavity and align the holes with the clevis pin (7). Insert the cotter pin and spread the ends.
3. Insert the link (9) single end into the arm bottom slot and move it to the wheel area.
4. Roll the assembly over to the wheel surface to lower the pivot pin and align.
5. Ease the pivot pin into the brake arm, link, and frame ear holes. Insert the cotter pin and spread the ends.
6. Move the eye stud with the jam nut between the link and clevis arms.
7. Align the holes and insert the clevis pin (8) through all the holes. Insert the cotter pin and spread the ends.
8. Check that all connections are secure and allow simple movement.
9. Tighten the jam nut against the clevis.

Adjustment

Tools Required:

- 15/16 Open end wrench
 - 1 1/4 Open end wrench
1. Start the adjustment with the 15/16 wrench on the jam nut (6) and the 1 1/4 wrench on the coupler (1).
 2. Loosen the jam nut a half-revolution and remove the wrenches.
 3. Rotate the coupler counter-clockwise by hand to move the shoe towards the wheel.
 - When the coupler is harder to turn, the shoe is contacting the wheel.
 4. Rotate the coupler clockwise a half-revolution for running clearance.
 5. Hold the coupler in position. With the other hand move the jam nut to meet the coupler.
 6. With the wrenches on the coupler and jam nut, lock the jam nut with 10-12 ft-lbs torque.
 7. Inspect that the assembly is operational.

Rear Axle



NO.	QTY	DESCRIPTION	PART NO.
1	REF.	COUPLER	319123
2	REF.	ARM	319294
3	RTF.	STUD, LEFT EYE	319295
4	REF.	STUD, RIGHT EYE	319296
5	REF.	CLEVIS	319348
6	REF.	LINK PIN	319370
7	REF.	PIN, COTTER: .12 X 1	400900
8	REF.	NUT, HEX JAM: .62-11 HVY	401027
9	REF.	PIN, CLEVIS: .75 X 2.75	466032
10	REF.	PIN, CLEVIS: .62 X 2.25	491418
11	REF.	LINK	781527

Assembly

1. Install the right eye stud (4) into the jam nut (8) and run the nut to the end. Apply light lubricant to both coupler (1) ends and along eye stud (3 & 4) threads.
2. Insert the right eye stud (4) into the right coupler end and fully drive inward.
3. Do the same to the left eye stud (3) into the left coupler end.
4. Set the assembly aside.

Caging the Brake

1. At the brake chamber, install the T-Bolt and lock it into the chamber receiver.
2. Install the flat washer and hex nut onto the T-bolt thread and run the hex nut and flat washer to the chamber.
3. Use a wrench to drive the hex nut clockwise to fully retract the brake arm.

Brake Arm

1. Remove the brake shoe to attach later on the *new* brake arm.
2. Pry the retaining collar from the clevis to allow pin removal and disengage the brake arm from the clevis.
3. At the lower pivot pin, remove the cotter pin and retract the pivot pin enough to allow brake arm removal.
4. Discard the used brake arm.

Clevis

1. At the chamber clevis, use a wrench on the jam nut to rotate counter-clockwise so it rests close to the chamber, unlocking the clevis.
2. Remove the clevis from the thread and discard.
3. Measure 3.00" from the chamber face and mark the thread.
4. Cut off the excess thread and file the end burr.
5. Run the jam nut counter-clockwise to chase the thread and make it uniform.
6. Run the jam nut clockwise about 1 3/8" from the end and follow with installing the new clevis (5).
7. Stop the clevis when the threaded rod is flush with the inside face.

Arm

1. Select the arm (2) and insert the link (11) single end into the back cavity align the holes.
2. Inset the clevis pin (9) through the holes. Insert the cotter pin (7) and spread the ends.
3. Move both to the lower frame pivot pin area and ease the pivot pin into the arm, link, and frame ear holes. Insert the cotter pin (7) and spread the ends.
4. Move the link double ends between the clevis arms.

Coupler Assembly and Installation

1. Install the assembly left eye stud into the arm back cavity.
2. Install the link pin (6) through the arm and eye stud holes and center them in the arm.
3. Install the brake shoe bracket onto the arm, noting the sides trap link pin.
4. Install the pivot pin and insert the cotter pin (7) and spread the ends.
5. Move the right eye stud between the link and clevis arms.
6. Align the holes and insert the clevis pin (10). insert the cotter pin (7) and spread the ends.
7. Check that all connections are secure and allow simple movement.
8. Tighten the jam nut against the clevis.

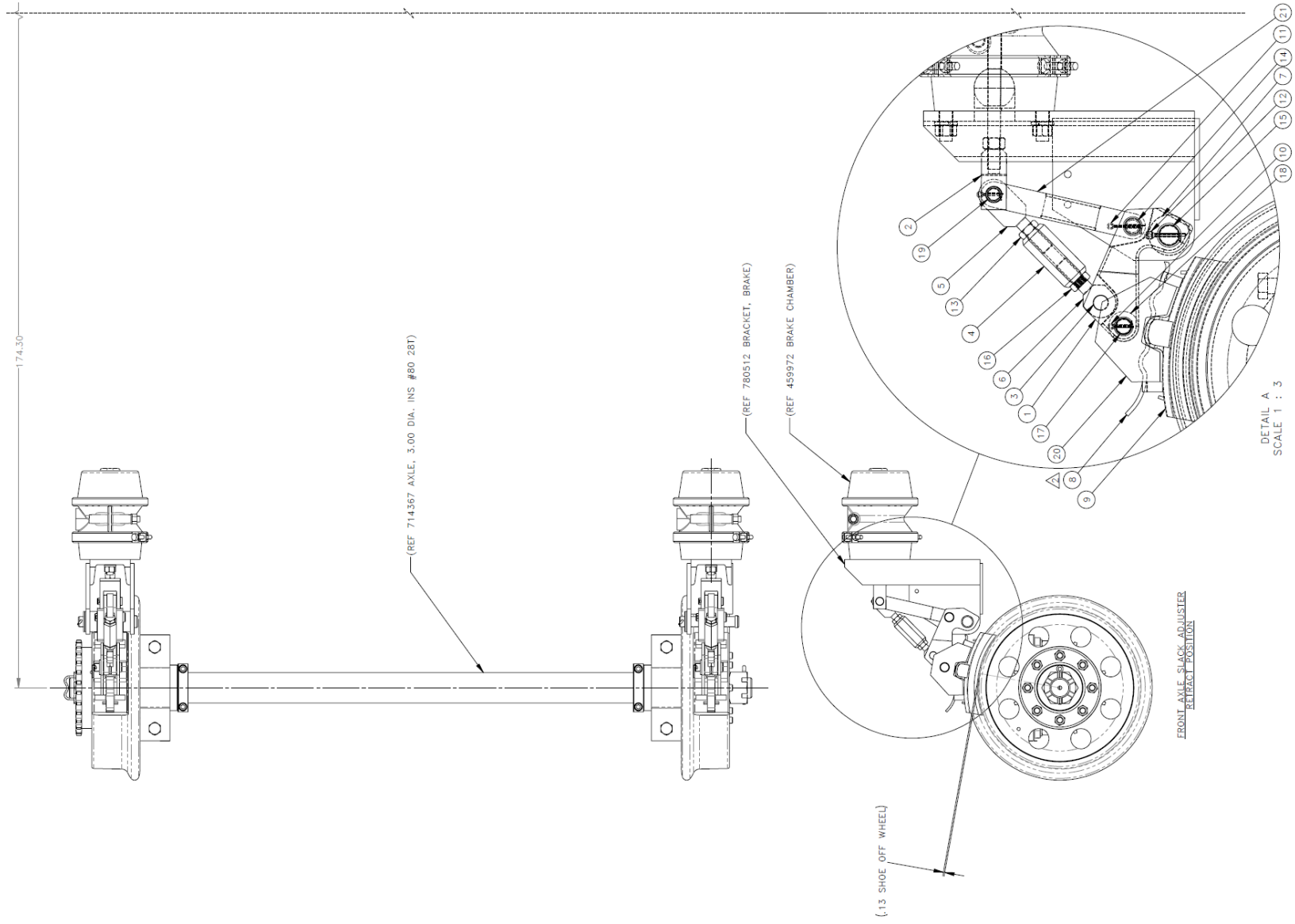
Adjustment

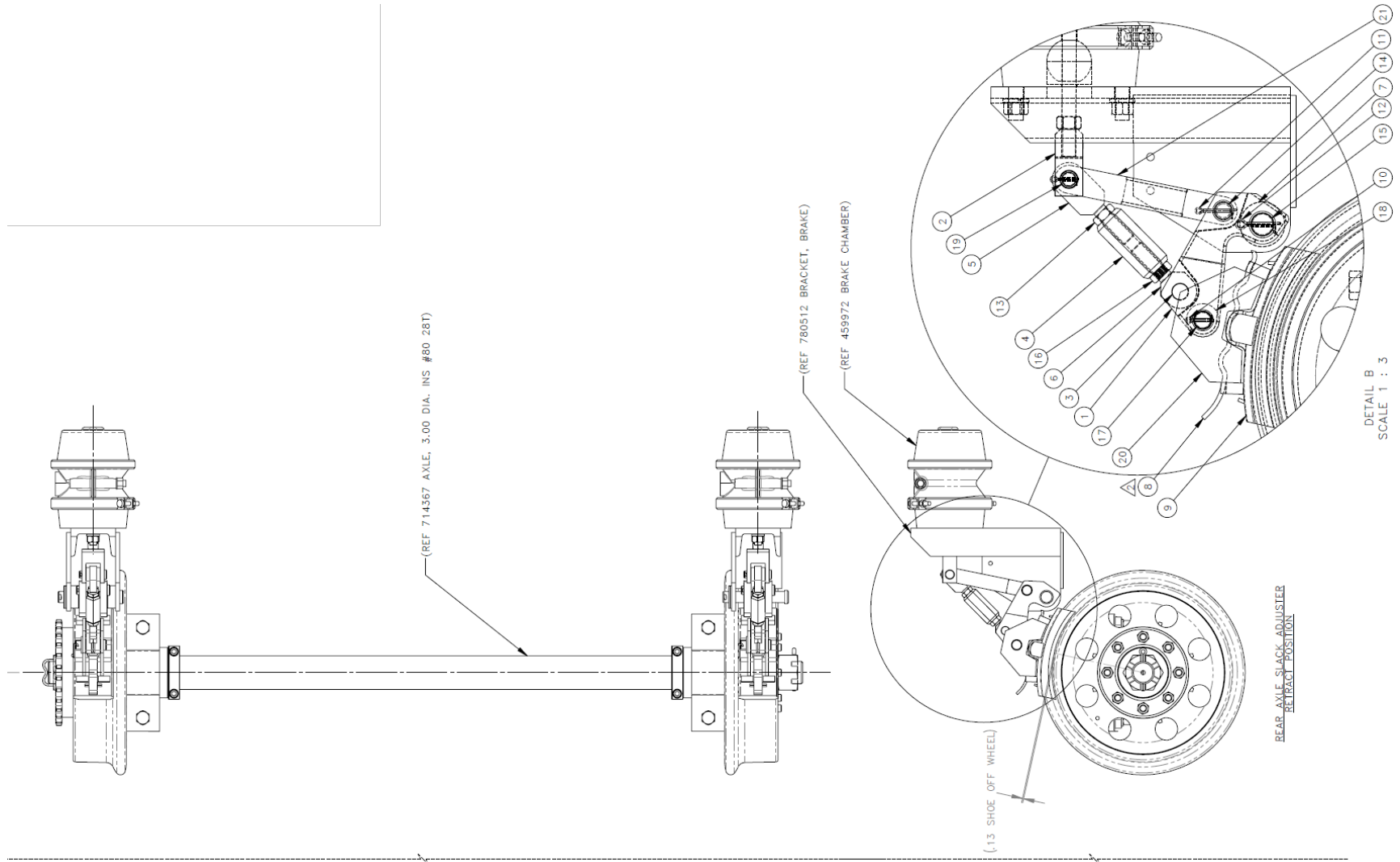
Tools Required:

- 15/16 Open end wrench
 - 1 1/4 Open end wrench
1. Start the adjustment with the 15/16 wrench on the jam nut (6) and the 1 1/4 wrench on the coupler (1).
 2. Loosen the jam nut a half-revolution and remove the wrenches.
 3. Rotate the coupler counter-clockwise by hand to move the shoe towards the wheel.
 - When the coupler is harder to turn, the shoe is contacting the wheel.
 4. Rotate the coupler clockwise a half-revolution for running clearance.
 5. Hold the coupler in position. With the other hand move the jam nut to meet the coupler.
 6. With the wrenches on the coupler and jam nut, lock the jam nut with 10-12 ft-lbs torque.
 7. Inspect that the assembly is operational.

DASP Brake Linkage Kit [RRP# 793058]

NO.	QTY.	DESCRIPTION	PART NO.
1	REF	ARM	319294
2	REF	CLEVIS	319348
3	REF	PIN, LINK	319370
4	REF	NUT, HEX COUPLING: .62-11 X 3.25	320538
5	REF	ROD END, .62-11 RH	320539
6	REF	ROD END, .62-11 LH	320540
7	REF	WASHER, FLT: 1	380025
8	REF	CLIP, BRAKE SHOE	321000
9	REF	SHOE, COBRA	387010
10	REF	PIN, COTTER: .12 X 1	400900
11	REF	PIN, COTTER: .12 X 1.5	400902
12	REF	PIN, COTTER: .19 X 1.5	400904
13	REF	NUT, HEX JAM: .62-11 HVY	401027
14	REF	PIN, CLEVIS: .75 X 2.75	466032
15	REF	PIN, CLEVIS: 1 X 5.5	468391
16	REF	NUT, HEX JAM: .62-11 LH	474758
17	REF	PIN, CLEVIS: .75 X 2.5	491277
18	REF	WASHER, FLT: .75	491344
19	REF	PIN, CLEVIS: .62 X 2.25	491418
20	REF	BRACKET, BRAKE SHOE	779181
21	REF	LINK	781782





Safety Terms



DANGER indicates a hazardous operating procedure, practice, or condition. If the hazardous situation is not avoided death or serious injury will occur.



WARNING indicates a hazardous operating procedure, practice, or condition. If the hazardous situation is not avoided death or serious injury could occur.



CAUTION indicates a potentially hazardous operating procedure, practice, or condition. If the hazardous situation is not moderate or minor injury could occur.

Note: Indicates an essential operating procedure, practice, or condition. No personal injury is possible.

Contact: If you have any questions or we can be of any service, please contact the Racine Railroad Products service department at (262)-637-9681 or custserv@racinerailroad.com.