

INSTRUCTIONS FOR AIRFLEX® 36WCBEP/36WCSEP WEAR PLATE REPLACEMENT USING GASKET SEALING TAPE

Warning

The material included in this kit is to be used for WC styles of brakes that are designed or upgraded to the EP design only. Due to differences in material thicknesses, installing these components in standard (non EP) WC types of brakes (WC, WCB, WCB2, WCBD, WCS, WCSB) may result in improper operating clearances between friction material and wear surfaces. Excessive clearances may result in low torque or slow response in brakes and subsequent personal injury. Inadequate clearances may prevent the brake from fully releasing, resulting in overheating or equipment damage.

Contact your Airflex representative if you are unsure that this kit is appropriate for your brake.

1.0 WEAR PLATE REPLACEMENT

Note: If the brake requires pre-cut solid gasket seals under the wear plate, contact Airflex for further information.

Single disc units require one basic kit only. Multiple disc units require one basic kit and one reaction plate kit for each reaction plate in the tensioner.

Example: A 236WCBEP requires one basic kit (108132A) and one reaction plate kit (108132E).

- 1.1 Disassemble the WCBEP/WCSEP element per instructions in the appropriate Airflex manual.
- 1.2 Remove the screws and locknuts holding the wear plates and remove the wear plates. If the wear plates cannot be easily lifted off, gently tap the O.D. to break the gasket seal.

Caution

Do not attempt to break the gasket seal by prying between the wear plate and housing. Damage to the sealing surfaces may occur.

- 1.3 Inspect the water passages and, if necessary, use a wire brush to clean them. If re-painting is necessary, sand blast the water passages and paint the surfaces with PLASITE® Epoxy #9052 Polyamine coating. Dry film thickness should be 8 to 12 mils (0.2 to 0.3 mm). Be careful not to allow the paint to get into the seal grooves or onto the face of the support nubs.

Caution

Follow manufacture's instructions and proper safety precautions for application of epoxy coatings.

Caution

If nubs in the water cavity are severely corroded, wear plates may not be properly supported. Replace the pressure plate, reaction plate or mounting flange, if necessary.

1.4 Assembly with Gasket Tape

Note: The Pressure Plate (14), Reaction Plate (31) and Mounting Flange (2) will be referred to as IRON in the following paragraphs. Refer to **Figure 1** for item number references shown in parenthesis (#).



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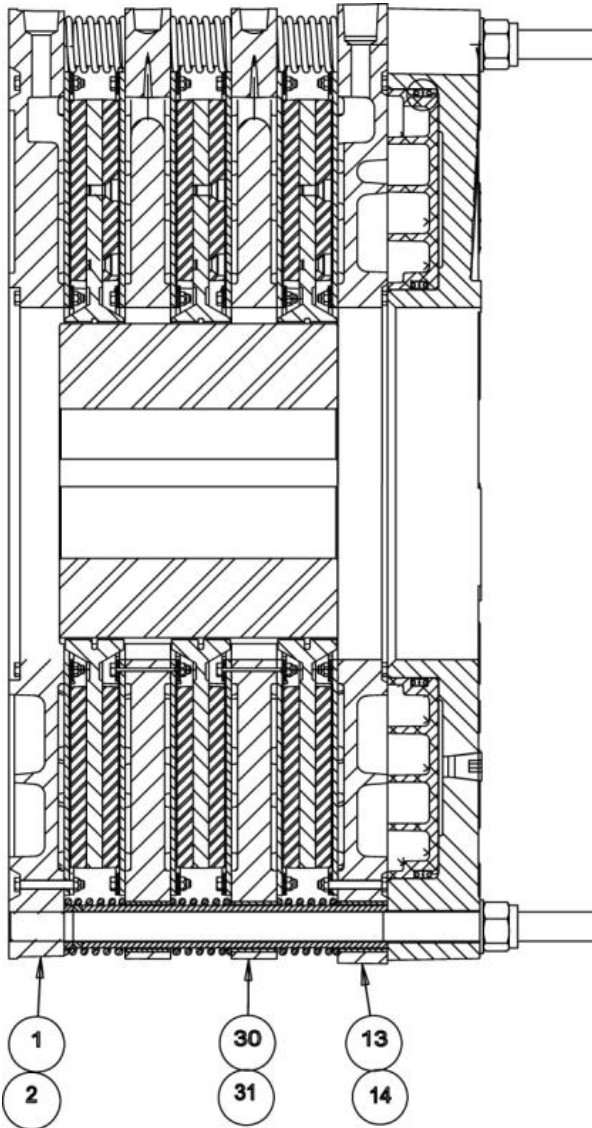


Figure 1

1.4.1 Preparation and cleaning the IRON:

Ensure that the IRON surface is smooth and free of scale, burrs and corrosion. Thoroughly clean both the inner and outer lands which will receive the Gasket. Use a solvent based cleaner such as acetone, mineral spirits, or a general-purpose wax/oil/grease remover, turning the wipe until it is free of new dark debris. Finish the cleaning process by blowing off lint on the sealing surface.

⚠ Caution

Follow manufacturer's instructions and proper safety precautions for the use of solvent based cleaners (acetone, mineral spirits, or general-purpose wax/oil/grease remover).

1.4.2 Preparation and cleaning the copper Wear Plate:

Ensure that the wear plate surface is smooth and free of burrs and corrosion. Thoroughly clean both the outer and inner areas which will be in contact with the gasket tape. Use a solvent based cleaner such as acetone, mineral spirits, or a general-purpose wax/oil/grease remover. Finish the cleaning process by blowing off lint on the sealing surface.

⚠ Caution

Follow manufacturer's instructions and proper safety precautions for the use of solvent based cleaners (acetone, mineral spirits, or general-purpose wax/oil/grease remover).

1.4.3 Applying the Gasket Tape to the IRON:

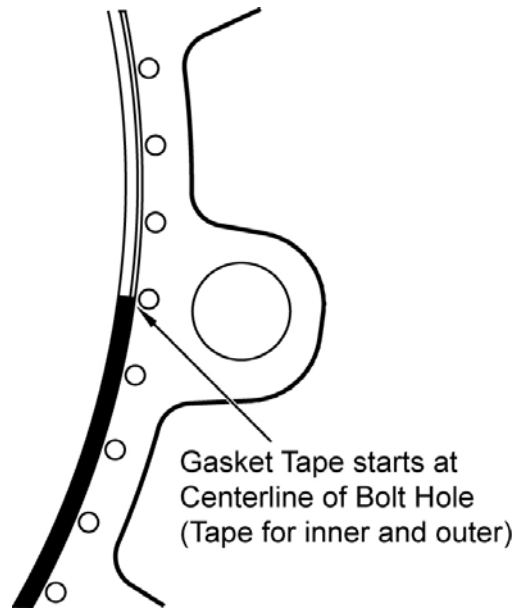


Figure 2 : Start location of gasket tape

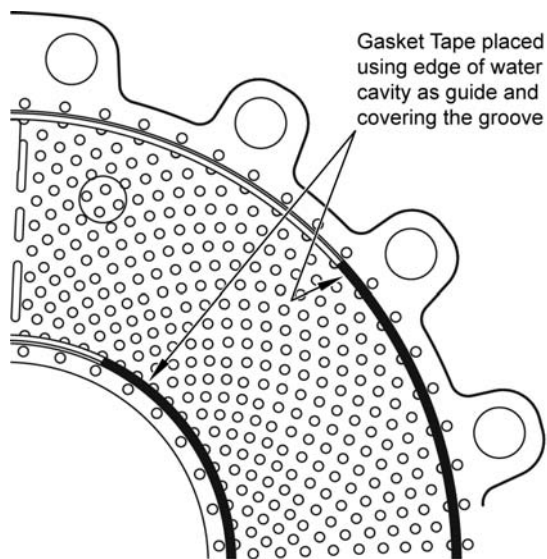


Figure 3 : Placement of gasket tape

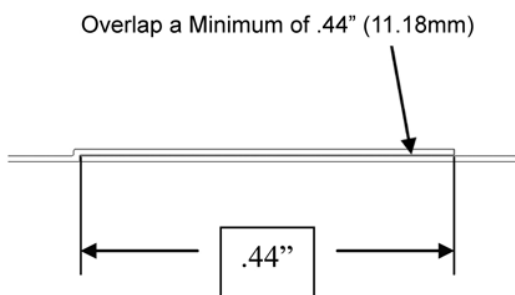


Figure 4 : Overlap of gasket tape

- (a) Start with the sealing area nearest to the inner diameter on the IRON. Remove the adhesive backing on the gasket tape a little at a time to prevent the adhesive from picking up dirt during installation. Start by positioning one end of the tape and at the centerline of a bolt hole as shown in **Figure 2**, using the edge of the water cavity as a guide, as shown in **Figure 3**. Proceed to apply the tape on the sealing surface following a smooth circular path, being sure to press the tape in place. Note that the tape will cover the machined groove that is located between the water cavity and bolt holes.
- (b) After the gasket tape has been placed around the entire circumference, overlap the starting end of the tape by a minimum of 0.44" (11.2 mm). See **Figure 4**.

- (c) Repeat steps (a) and (b) for the outer sealing area nearest to the outer diameter of the IRON, again using the edge of the water cavity as a guide.

⚠ Caution

Before the gasket tape is covered with the wear plate, the sealing surface should be protected to prevent contamination from dust, dirt or oils. No additional cleaning or liquid should be applied to the surface of the IRON or gasket tape.

- 1.5 Inspect the new wear plates and remove any scratches or raised edges with very fine sandpaper or steel wool. Position the smoothest side of the wear plate on the sealing surface, being careful to align the holes with those in the IRON.
- 1.6 Position the clamp rings over the holes in the wear plates and install the new hex head screws and locknuts provided, securing them finger tight.

⚠ Caution

To prevent excessive warpage and to ensure a good seal, the following hardware tightening procedure must be followed.

- 1.7 For each wear plate being replaced, follow the tightening sequence shown in **Figure 5** for the first 16 screws. The remaining screws may be tightened in any reasonable crosswise pattern. See Table 1 for tightening torque values.

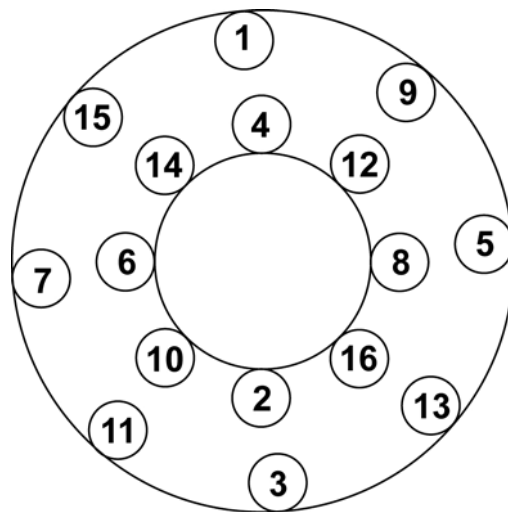


Figure 5 : Wear Plate bolt tightening sequence

TABLE 1 Wear Plate Fastener Torque: ft-lb. (Nm)		
Model	Size	Torque
36WCBEP/ 36WCSEP	3/8-16NC2	40 (54)

- 1.8 After completion of the assembly, each water cavity should be checked for leaks.
- 1.8.1 Using lifting straps, suspend each assembly with the water outlet port at the 12 o'clock position. Connect a water supply line to the inlet port (at 6 o'clock position). In reaction plates, plug the remaining inlet port. See Table 2 for water port sizes.

TABLE 2 Inlet and Outlet Port Sizes	
Model	Size
36WCBEP/ 36WCSEP	1-1/4-11.5 NPT

- 1.8.2 Slowly fill with water to purge all air from water cavities.
- 1.8.3 Install pipe plug(s) in the outlet port(s) and apply appropriate water pressure (60 psig) (4.1 bar) for size 36WCBEP / 36WCSEP. Maintain this pressure for a minimum of 30 minutes.
- 1.8.4 Check for leakage at O.D. and I.D. seal areas. **NO** leakage is allowed.
- 1.8.5 If the assembly leaks, check the torque on each screw and re-test. If leaks still occur, the wear plate(s) or the sealing surface may be damaged. Repeat procedure from 1.1, using new gasket tape.
- 1.8.6 Refer to the appropriate Airflex manuals for the instructions on reassembly and installation for each specific type of brake.

 **Caution**

After replacement of wear plates, a minimum wear-in period of four hours at 50% of the rated horsepower is recommended for the friction couple to achieve rated torque.

2.0 ORDERING INFORMATION/ TECHNICAL ASSISTANCE

2.1 Equipment Reference

- 2.1.1 In any correspondence regarding Airflex equipment, refer to the information on the product name plate and call or write:

Eaton Corporation
Airflex Division
9919 Clinton Road
Cleveland, Ohio 44144

Tel: (216) 281-2211
FAX: (216) 281-3890
Internet: www.eaton.com/airflex

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3.0 WEAR PLATE REPLACEMENT KITS

3.1 Wear Plate Kits for Mounting Flange and Pressure Plate

Parts Included in Kit		Screw (4)		Lock Nut (5)		Wear Plate (3)		Inner Support Ring (50)		Outer Support Ring (51)		PTFE Gasket O.D.		PTFE Gasket I.D.		Instruction Sheet	
Model	Kit P/N	Part No.	QTY	Part No.	QTY	Part No.	QTY	Part No.	QTY	Part No.	QTY	Part No.	QTY	Part No.	QTY	Part No.	QTY
36EP	108132A	000153 x 0842	216	000153 x 0844	216	417335	2	414032-01	12	414033-01	18	308581-01	2	308581-02	2	204209	1

3.2 Wear Plate Kits for Reaction Plate

Parts Included in Kit		Screw (49)		Lock Nut (5)		Wear Plate (3)		Inner Support Ring (50)		Outer Support Ring (51)		PTFE Gasket O.D.		PTFE Gasket I.D.		Instruction Sheet	
Model	Kit P/N	Part No.	QTY	Part No.	QTY	Part No.	QTY	Part No.	QTY	Part No.	QTY	Part No.	QTY	Part No.	QTY	Part No.	QTY
36EP	108132E	000153 x 0843	108	000153 x 0844	108	417335	2	414032-01	12	414033-01	18	308581-01	2	308581-02	2	204209	1



Caution

The replacement kits in this manual are for the enhanced 36WCBEP/WCSEP ONLY. For part reference and replacement kits for the prior model 36WCB/WCS, refer to manual WCB 11070.