

255216 Wrist Pin Replacement Kit

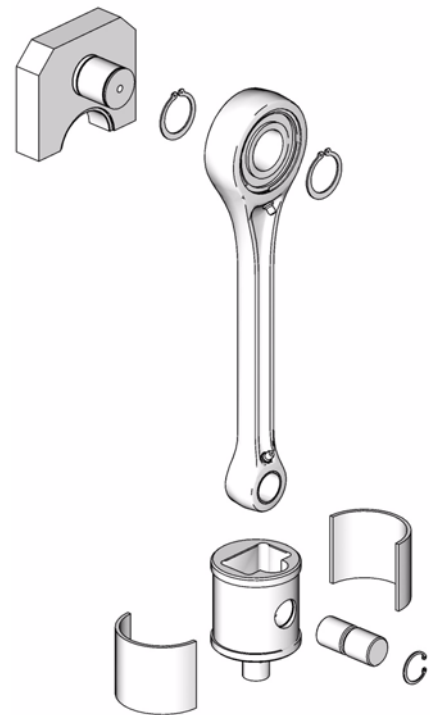
311609 rev.A

To replace both drive linkage wrist pin bearings on E-Flo™ Plus Electric Circulation Pumps.



Important Safety Instructions


Read all warnings and instructions in this manual and in E-Flo Plus Repair-Parts manual 311594. Save these instructions.





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Pressure Relief Procedure








System pressure can cause the pump to cycle unexpectedly, which could result in serious injury from splashing or moving parts.

1. Set START/STOP switch to STOP.
2. Push in SECURE DISABLE switch.
3. Open the back pressure regulator and all fluid drain valves in the system, having a waste container ready to catch drainage. Leave open until you are ready to pressurize system again.
4. Check that pressure gauges on fluid supply and return lines read zero. If gauges do not read zero, determine cause and carefully relieve pressure by VERY SLOWLY loosening a fitting. Clear obstruction before pressurizing system again.

Kit Parts


 Wrist Pin Replacement Kit 15H873 includes parts to replace the wrist pin bearings on both drive linkage assemblies. Parts included in the kit are marked with an asterisk, for example (5*). Use all the new parts in the kit.


| Ref. No. | Part No. | Description | Qty |
|----------|----------|---|-----|
| 5* | n/a | SCREW, cap, socket-head; 5/8-11 x 3 in. (76 mm) | 4 |
| 7a* | n/a | BEARING, wrist pin | 2 |
| 10* | n/a | PIN, lower con rod | 2 |
| 12* | 116719 | SCREW, 8-32 hex washer head | 4 |


Parts designated n/a are not available separately.

Kit Installation

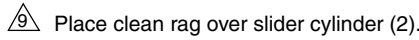
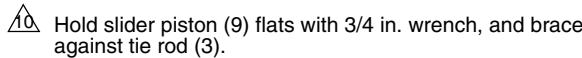
Disassembly







1. Jog the motor to bring the pump on the side being repaired to the bottom of its stroke. This provides access to the coupling nut (14).
2. Relieve pressure, page 2.
3. Shut off electrical power to the unit.
4. Remove two screws (12) and the cover. FIG. 1 shows the cover (32) on the stand side; the motor side cover is (21).
5. Place a clean rag over the top of the slider cylinder (2) to prevent debris from falling into the slider assembly during disassembly.

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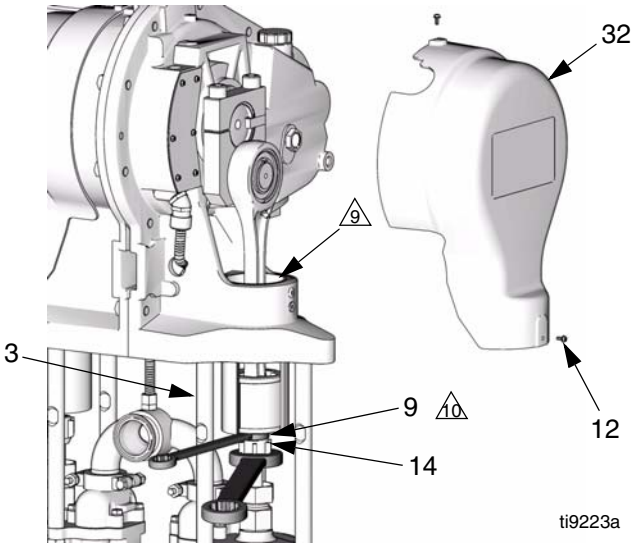




FIG. 1. Remove Coupling Nut

6. Place a 3/4 in. wrench on the slider piston (9) flats (just above the coupling nut), to keep the slider piston/connecting rod from turning when you are loosening the coupling nut (14). Orient the wrench so it is braced against one of the tie rods (3). Applying excessive force to the slider piston/connecting rod can shorten the life of the lower pin bearing.
7. Using a 1-5/8 in. open-end wrench, unscrew the coupling nut (14) from the slider piston (9) and let it slide down onto the pump piston rod. Be careful not to lose the collars (13).
8. See FIG. 2. Using a 1/2 in. hex driver, unscrew the two cap screws (5). Remove the crank arm cap (38) and key (39). If necessary, use a plastic hammer to break these parts loose.

 Place clean rag over slider cylinder (2).

 Apply antiseize lubricant to screw (5) threads. Torque key-side screw to 210-230 ft-lb (283-310 N•m) first, then torque gap side screw to 210-230 ft-lb (283-310 N•m).

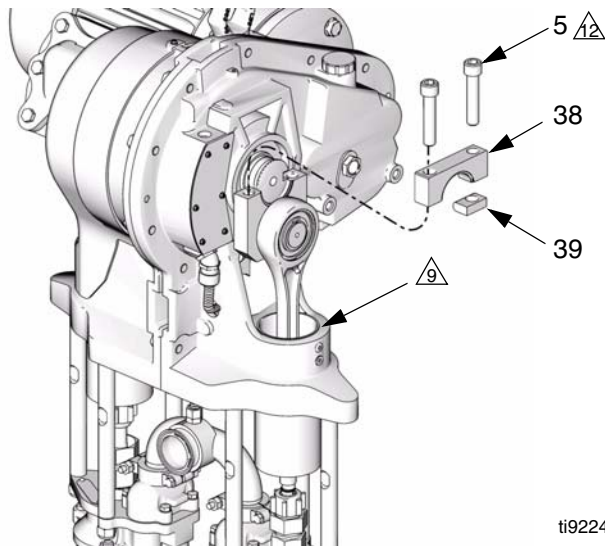


FIG. 2. Remove Crank Arm Cap

9. See FIG. 3. Rotate the crank arm (4) to allow it to be removed from the output shaft (OS).
10. Pull the crank arm/connecting rod/slider piston assembly (CR) up and out of the cylinder.

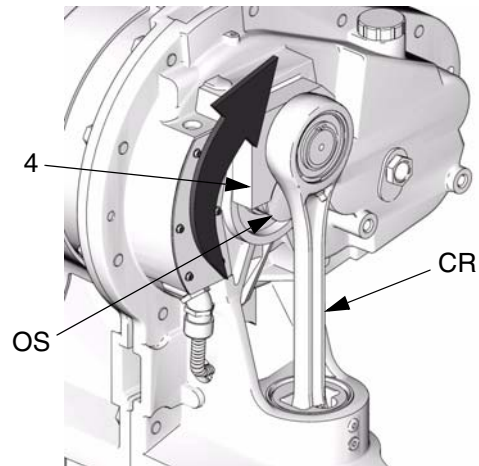


FIG. 3. Rotate Crank Arm

11. Remove the bearings (8), retaining ring (11), and pin (10). See FIG. 4.
12. Remove and discard the wrist pin bearing (7a) from the connecting rod (7).

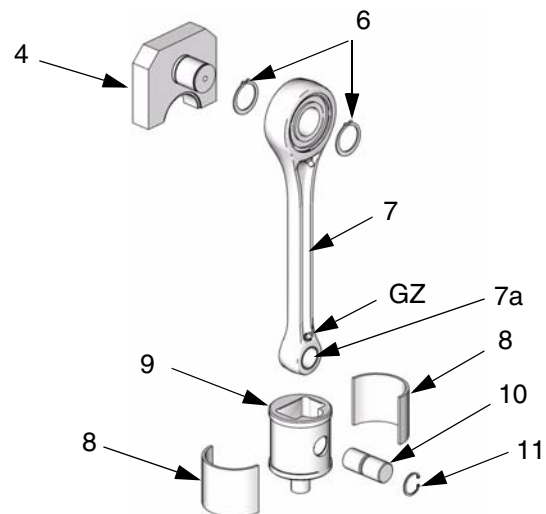


FIG. 4. Drive Linkage Assembly

Reassembly

1. See FIG. 5. Install the new wrist pin bearing (7a*) on the connecting rod (7). Align the hole in the bearing with the grease passage in the connecting rod (7).
2. Orient the new connecting rod (7) and slider piston (9) as shown. Assemble the pin (10*) and retaining ring (11).

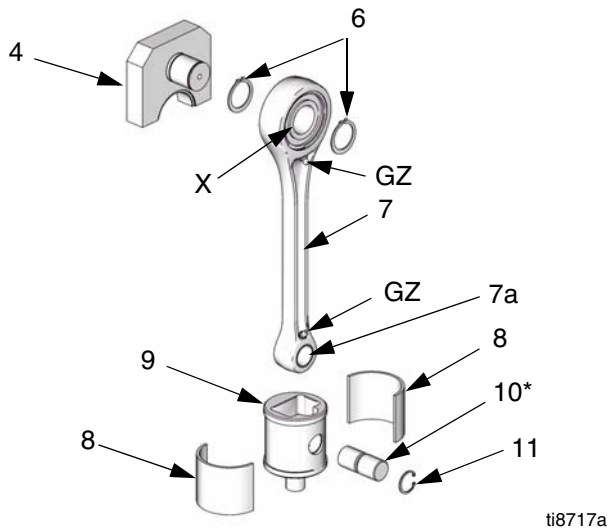



FIG. 5. Drive Linkage Assembly

3. Lubricate the crank pin bearing (X) and the wrist pin bearing (7a) with 1 shot (1 cc) of 107411 Grease or equivalent, using grease zerks (GZ).

 Lubricate the wrist pin bearings (7a) every 6 months and the crank pin bearings (X) annually. Replace the wrist pin bearings annually.

4. See FIG. 6. Install the two bearings (8) on the slider piston (9). The joints between the bearings must align with the pin hole (PH) in the slider piston.

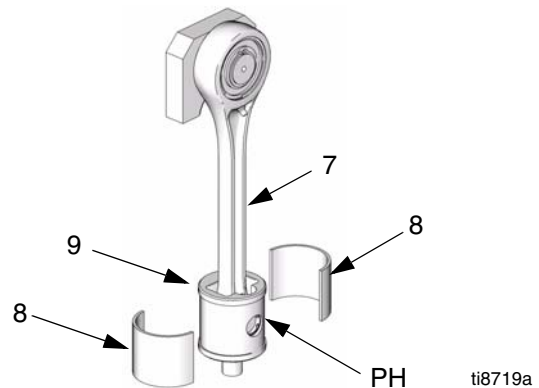


FIG. 6. Slider Bearings

5. Slide the piston (9) and connecting rod (7) into the cylinder (2).
6. Position the crank arm (4) to engage the output shaft (OS), and rotate it to the bottom of the output shaft.
7. Place a clean rag over the top of the slider cylinder (2) to prevent debris from falling into the slider assembly during reassembly.
8. See FIG. 7. Apply antiseize lubricant to the threads of the cap screws (5*). Install the key (39), crank arm cap (38), and cap screws (5*), oriented as shown. While the gap-side screw is still loose, torque the key-side screw to 210-230 ft-lb (283-310 N•m). Then torque the gap-side screw to 210-230 ft-lb (283-310 N•m).

- △₉ Place clean rag over slider cylinder (2).
- △₁₂ Apply antiseize lubricant to screw (5) threads. Torque key-side screw to 210-230 ft-lb (283-310 N•m) first, then torque gap side screw to 210-230 ft-lb (283-310 N•m).

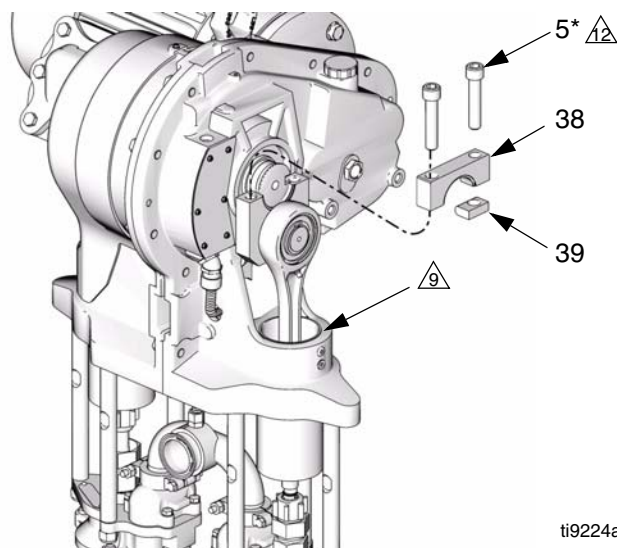


FIG. 7. Install Crank Arm Cap

9. Ensure that the collars (13) are in place in the coupling nut (14).
10. Place a 3/4 in. wrench on the flats of the slider piston (9*), to keep it from turning when you are tightening the coupling nut (14). Orient the wrench so it is braced against one of the tie rods (3) or the pump stand. Tighten the coupling nut (14) onto the slider piston (9*) and torque to 75-80 ft-lb (102-108 N•m).
11. Remove the rag. Reinstall the cover (32 or 21) and screws (12*).
12. Repeat for the other side.

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