

15H883 Crank Arm Rebuild Kit

311604D

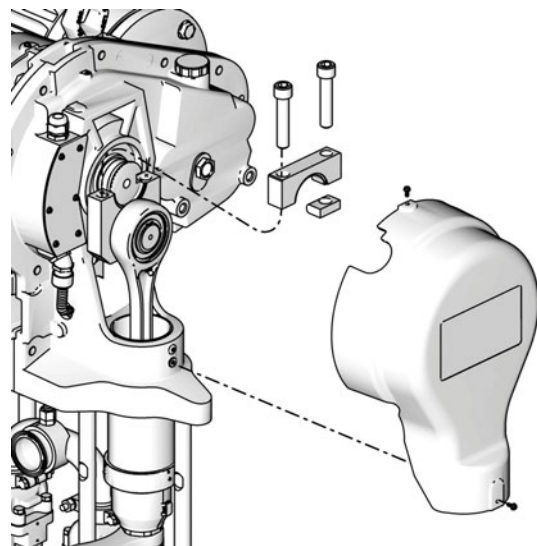
ENG

To replace crank arm on E-Flo[®] 4-Ball Piston Pumps. For professional use only.



Important Safety Instructions

Read all warnings and instructions in this manual and in E-Flo 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

NOTE: Crank Arm Rebuild Kit 15H883 includes parts to rebuild one crank arm assembly. Order two kits to rebuild both crank arm assemblies. Parts included in the kit are marked with an asterisk, for example (4*). Use all the new parts in the kit.

Ref. No.	Part No.	Description	Qty
4*	n/a	ARM, crank	1
5*	n/a	SCREW, cap, socket-head; 5/8-11 x 3 in. (76 mm)	2
6*	106082	RING, retaining	2
12*	116719	SCREW, 8-32 hex washer head	2
38*	n/a	CAP, crank arm	1
39*	n/a	KEY, crank arm	1

Parts designated n/a are not available separately.

Kit Installation

Disassembly

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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 side opposite from the motor; the motor side cover is (21).

- 9 Place clean rag over slider cylinder (2).
- 10 Hold slider piston (9) flats with 3/4 in. wrench, and brace against tie rod (3).

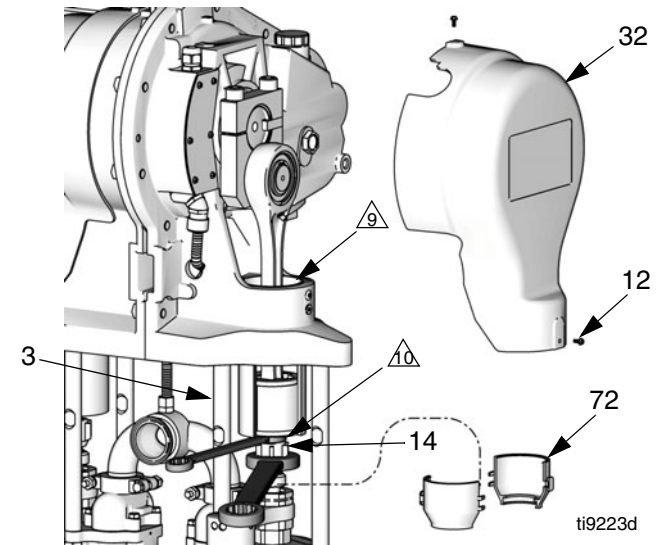




FIG. 1. Remove Coupling Nut

5. Remove the 2-piece shield (72) by inserting a screwdriver straight into the slot, and using it as a lever to release the tab. Repeat for all tabs. **Do not** use the screwdriver to pry the shields apart.
6. Place a clean rag over the top of the slider cylinder (2) to prevent debris from falling into the slider assembly during disassembly.
7. 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.
8. 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).
9. 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 (LPS®-04110 or equivalent) 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). Torque screws an additional 2-3 times each, or until they stop turning when torqued to 210-230 ft-lb (283-310 N•m).

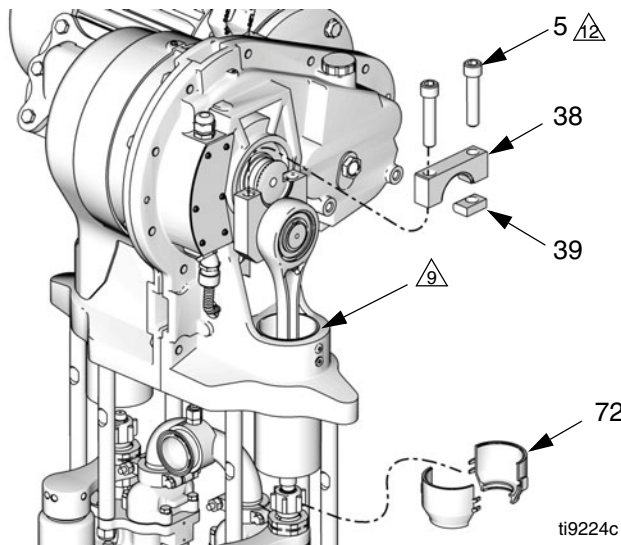
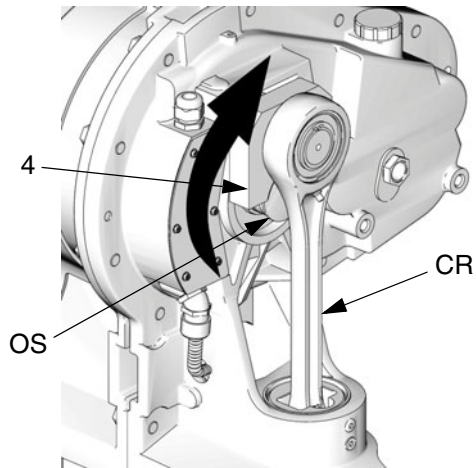


FIG. 2. Remove Crank Arm Cap

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



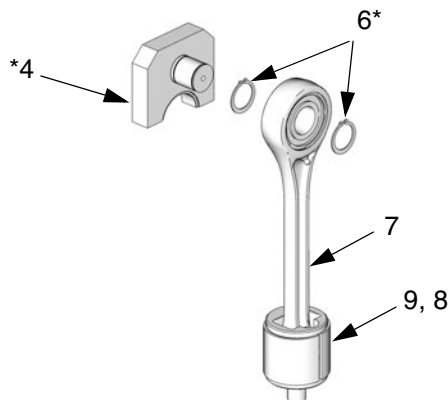
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FIG. 3. Rotate Crank Arm

12. See FIG. 4. Remove the outer retaining ring (6) securing the crank arm (4) to the connecting rod (7). Slide the crank arm shaft out of the connecting rod.

Reassembly

1. Assemble the crank arm (4*) to the connecting rod (7) with two retaining rings (6*), oriented as shown.



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FIG. 4. Crank Arm and Connecting Rod

- See FIG. 5. Ensure that the joints between the bearings (8) align with the pin hole (PH) in the slider piston.

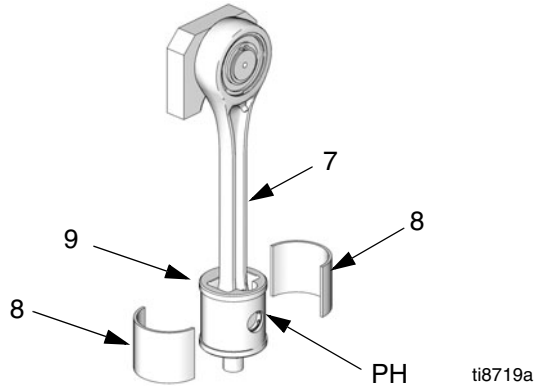


FIG. 5. Slider Bearings

- Slide the piston (9) and connecting rod (7) into the cylinder (2).
- Position the crank arm (4*) to engage the output shaft (OS), and rotate it to the bottom of the output shaft.
- See FIG. 6. Place a clean rag over the top of the slider cylinder (2) to prevent debris from falling into the slider assembly during reassembly.
- Apply antiseize lubricant (LPS[®]-04110 or equivalent) 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). Torque screws an additional 2-3 times each, or until they stop turning when torqued to 210-230 ft-lb (283-310 N•m).

- Place clean rag over slider cylinder (2).
- Apply antiseize lubricant (LPS[®]-04110 or equivalent) 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). Torque screws an additional 2-3 times each, or until they stop turning when torqued to 210-230 ft-lb (283-310 N•m).

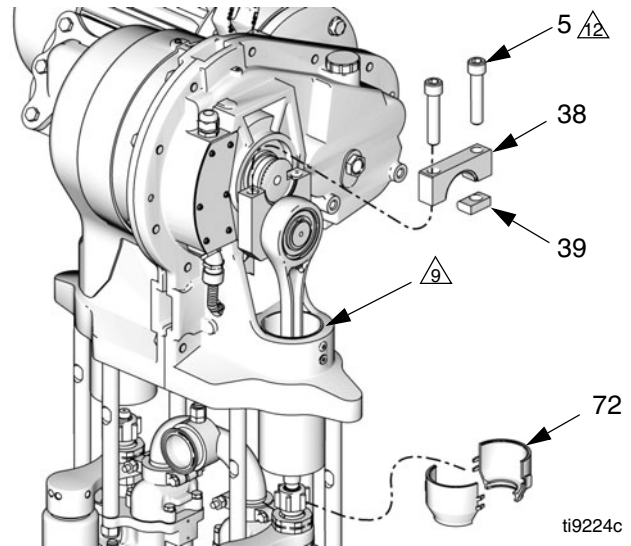


FIG. 6. Install Crank Arm Cap

- Ensure that the collars (13) are in place in the coupling nut (14).
- 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).
- Install the shields (72) by engaging the bottom lips with the groove in the wet-cup cap. Snap the two shields together.
- Remove the rag. Reinstall the cover (32 or 21) and screws (12*).
- Repeat for the other side.

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