



Hy-Security Gate Operators Technical Bulletin

Replacement of the AWOG Soft Start Manifold

Operator(s): All HySecurity operators with AWOG soft start manifold

(AWOG = Accumulator Without Gas)

SlideDriver 40F, 80, 200

StrongArm 36

HydrLift 10F, 20F

Effective Date(s): N/A

Tools Required:

Allen wrenches – 5/32”, 3/16”

Combination wrenches – 9/16”, 5/8”, 11/16”, 3/4”

Petroleum jelly or hydraulic oil

Effected Part / Kit:

- HMAAC 111 SSK (soft start manifold)

Function:

The AWOG manifold is used to gradually apply hydraulic pressure at the start of operation, which results in smooth gate acceleration. In normal operation, the gate must begin to move within the first three seconds of a command to operate. During installation the AWOG may need to be bled by the installer to release any air that is delaying gate motion. Under normal operation, this device NEVER requires re-bleeding, except when the oil or possibly when a cartridge valve is changed.

Symptoms of a faulty AWOG manifold:

- The gate operator is slow to respond to a command to operate, which is anything longer than three seconds delay. Note: excessive delay should cause the inherent sensor to trigger the operator into SAFE mode. If there is no inherent sensor (relay operators or StrongArm) air in the AWOG could cause a very long delay before the gate moves, which may cause ALE6 (Alert 6) to be displayed after ten seconds.
- Repeated AWOG manifold re-bleedings. This device should only need to be bled when fluid is changed or after replacing the relief valve.

Replacing the AWOG manifold:

1. Acquire a new AWOG manifold from a Hy-Security Distributor. Item number HMAAC 111 SSK
2. Turn off all electrical power.
3. With the new manifold in hand remove the pump pack from the operator chassis to ease in the changing of the parts.
4. Unplug the hydraulic hoses, remove the valve coils from the endhead valve stems and disconnect the IES sensor wires. Remove the breather cap and replace it with a 3/8” pipe plug to avoid spilling oil.
5. Separate the pump pack from the electric motor by removing the two 3/8 x 1” mounting bolts at the corners of the pump Endhead, below the electric motor. Drop the pump pack down and away from the electric motor. Do not remove the coupler from the electric motor shaft.
6. In a clean environment rotate the endhead so that you can work on the soft start manifold. Remove the manifold by loosening the two socket head screws with a 3/16” Allen wrench. Have some rags under the manifold block to catch the fluid that escapes.
7. Once the manifold has been separated from the endhead pull out the port adapter (the aluminum tube between the manifold and the endhead)

8. Clean out any debris in the port adapter openings. Lubricate the new porting plug before inserting it into the endhead then insert gently seating it in completely.
9. Lubricate the “O” ring seats to hold the “O” rings in place when the new manifold is mounted. Insert the ¼ - 20 socket head screws and tighten them down, but not too tightly. (remember they are inserted into aluminum, do not strip them out)
10. Wipe off any excess oil that may have spilled.
11. Replace the endhead to the electric motor, return the coils to the valve stems, the wires to the Inherent Sensor and replace the filler plug with a breather cap.
12. Bleed the AWOG according to the following procedure:

Bleeding the AWOG manifold:

1. Because of safety issues, this procedure must be done without the gate moving, therefore disconnect the hoses a slide or vertical lift operator. A barrier arm gate does not need to be disconnected., but should be left in the fully closed position.
2. Loosen the bleeder cap at the top of the AWOG by using a 5/8” wrench to hold the AWOG while loosening the cap with the 11/16” wrench.
3. Disconnect the two wires from the inherent sensor and jumper them electrically with a paperclip.
4. With your fingers, tighten the bleeder cap then loosen ½ turn.
5. Wrap a rag around the top of the AWOG, just below the loose bleeder cap.
6. Turn the power to the operator on.
7. With the 11/16” wrench in one hand ready to tighten, press open or close and let the motor run until oil starts to come out of the bleeder cap, then rapidly press stop and tighten the cap.
8. To test if all the air was bled out, watch the pressure gauge while pressing the open or close button. The pressure should start to climb after not more than a one second time delay. If the delay before the gauge moves is longer than one second, repeat the bleeding procedure.
9. Be certain to tighten the bleeder nut with the 11/16” wrench, but do not over-tighten as threads can be stripped.
10. Clean up any oil that may have dribbled out at the top of the AWOG and any other visible oil in the machine.
11. Reconnect the inherent sensor wires to the inherent sensor.
12. Test the gate operator for normal function.