

# MAINTENANCE MANUAL

CLA-VAL 352GF HYDRANT PIT VALVE EMERGENCY AIR RELEASE PILOT



## Revision History

| Date of Change | Version |
|----------------|---------|
| 17-12-2014     | 1.0     |

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## 1.0 INTRODUCTION

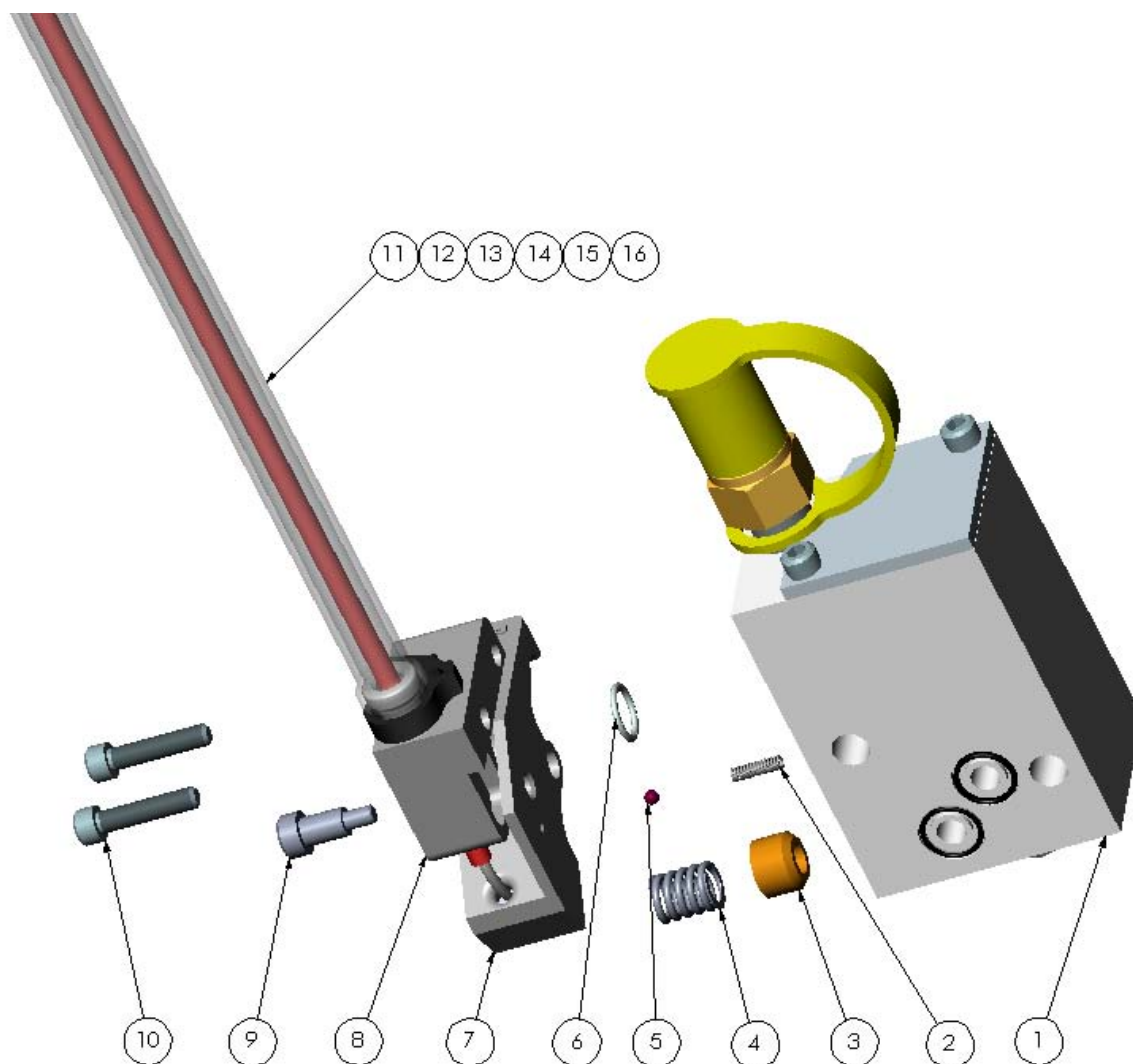
This Maintenance Manual covers the OPERATION, MAINTENANCE and REPAIR of a Cla-Val Emergency Air Release Pilot Assembly (Part No. DUK6000388) (and similar models) as used on 4 inch and 6 inch Model 352GF Hydrant Pit Valves, referred from here on as just **Air Release**. Only the Air Release Assembly is covered by this document. Other Pit Valve items, such as the Air Pilot, Excess Flow Controls, and the Basic Pit Valve Subassembly (to which this Pilot would be attached) are covered in other specific documents. This document assumes that the Pilot has already been removed from the side of the Pit Valve and is ready for servicing.

### 1.1 Product Description:

The Air Release is designed to close the pit valve in an emergency when the normal method of closing the valve has become inoperable or inaccessible. The Air Release valve is operated by pulling up on the cable (lanyard) extending up from the Air Release. When pulled, the Air Release opens and vents the air supply allowing the pilot to close. The Air Release is not designed to be used as an alternate method of closing the pit valve in day to day normal operation. To reset the air release pull up on the reset handle.

## 2.0 BASIC INFORMATION

### 2.1 Exploded View:



## 2.2 Parts List:

| Item | Qty. | Part No.   | Description                               | Material        |
|------|------|------------|---|-----------------|
| 1    | 1    | DUK6000131 | Air Pilot Assembly                        |                 |
| 2    | 1    | DUK6000127 | Spring, Detent                            | Stainless Steel |
| 3    | 1    | DUK6000124 | Pressure Pad                              | Delrin Af       |
| 4    | 1    | DUK6000123 | Spring, Pressure Pad                      | Stainless Steel |
| 5    | 1    | DUK6000126 | Ball, Detent                              | Stainless Steel |
| 6    | 1    | DUK6000380 | O-Ring (2-012)                            | Teflon          |
| 7    | 1    | DUK6000135 | Handle, Reset                             | Stainless Steel |
| 8    | 1    | DUK6000381 | Frame                                     | Stainless Steel |
| 9    | 1    | DUK6900112 | Screw, Socket Head .250<br>Shoulder 10-32 | Stainless Steel |
| 10   | 2    | DUK6900113 | Cap Screw, Socket Head 10-32              | Stainless Steel |
| 11   | 1    | DUK6000382 | Tubing                                    | Polyurethane    |
| 12   | 1    | DUK6000383 | Crimp, Cable                              | Copper          |
| 13   | 1    | DUK6000384 | Clamp, Hose                               | Nylon           |
| 14   | 1    | DUK6000385 | Sleeve, Stop                              | Copper          |
| 15   | 1    | DUK6000386 | Cable                                     | Stainless Steel |
| 16   | 1    | DUK6000387 | Set Screw 10-32                           | Stainless Steel |

## 2.3 Removal of Air Release:

**The only part of the air release that should be field serviced is replacing of the O-ring (Item 6)**

The following replacement seal kit is available for maintaining the valve as noted:-

| Part No.   | Description   |
|------------|---|
| DUK6000141 | This kit is for use in repairing/overhauling any 352GF Emergency Air Release Pilot and contains item 6. |

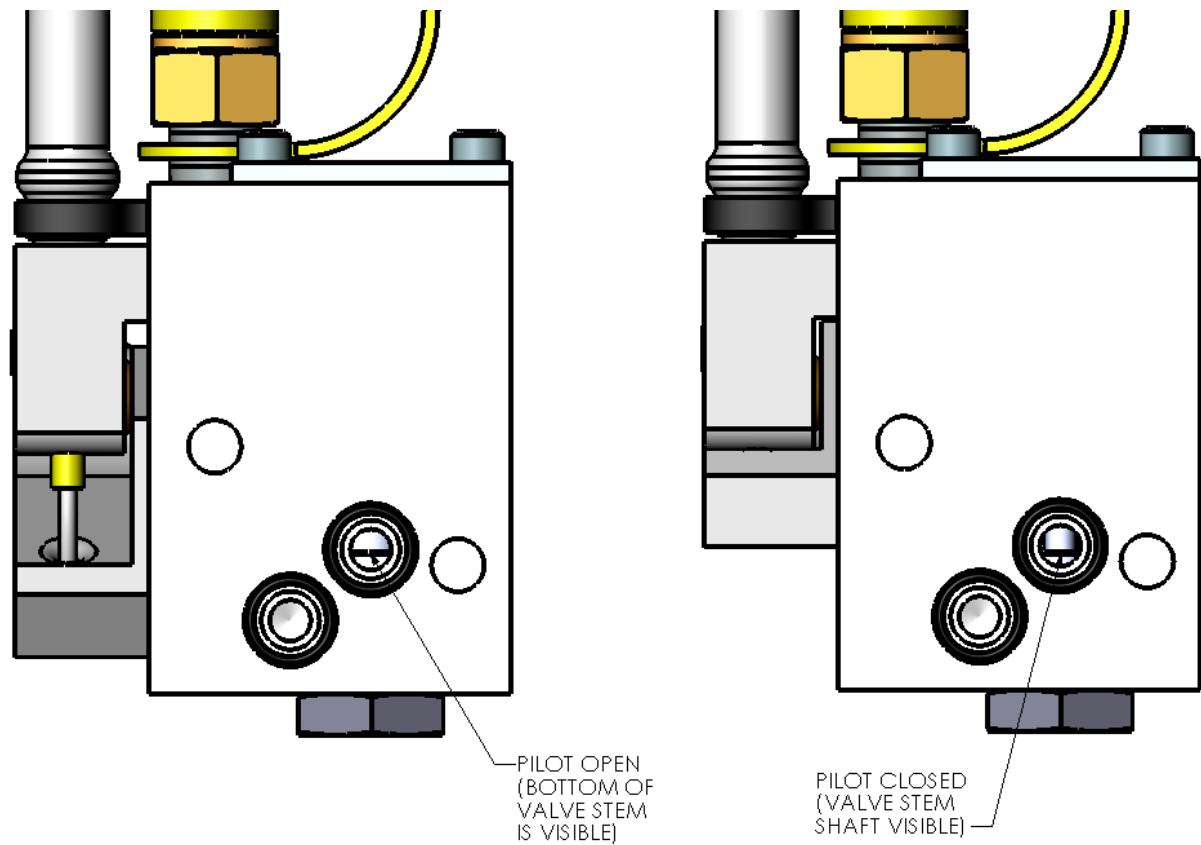
### Required Tools:

- 1/8 inch Hex Wrench
- 3/32 inch Hex Wrench

**WARNING: Spring loaded components, wear safety glasses**

- Remove Shoulder Screw (9) using a 1/8 hex wrench.
- The Fame (8) is spring loaded against the Reset Handle (7) as well as a Detent Ball (5) from the opposite side. Carefully remove two Cap Screws (10) with a 3/32 hex wrench while applying pressure against the Frame (8) taking care not to lose the Detent Ball (5) which will fall free when the Frame (8) becomes loose. The Detent Spring (2) can also fall free if the mounting face of the Air Pilot (1) faces downward.
- Remove the O-ring (6) from the face of the Air Pilot (1). When replacing the o-ring, care must be taken to assure that the o-ring is not damaged when reinserting it into the o-ring groove. **Any denting of the o-ring face will cause the o-ring to leak.**
- Reassemble Detent Ball (5) using some light grease to hold it in place. Insure that the Pressure Pad (3) and Spring (4) are in the frame. Holding both the Frame (8) and Reset Handle (7) together, reassemble the frame to the Air Pilot (1).
- Install Shoulder Screw (9).

- Insure that reset handle operates smoothly, and detent ball is functional.
- Test for proper operation by applying air source to the Air Pilot, and actuating the Air Release, and observing through the upper fuel port if the pilot stem moves up and down. (See Fig 1).
- Reinstall air pilot per CLA-VAL Maintenance Manual 202880 Pit Valve Air Pilot section 2.4.



**FIGURE 1**

### 3.0 TESTING, INSPECTION & TROUBLESHOOTING

On a scheduled basis the Emergency Air Release should be actuated to insure proper operation. Actuate Emergency Air Release by pulling on the cable (lanyard). Reset the Pilot by manually pulling the reset handle. The reset handle is labelled "PULL UP TO RESET".

If the 352GF Hydrant Pit Valve fails to close after the cable has been pulled, check the following items:

- Insure that the reset arm is moving when the cable is pulled. If the arm is moving to the open position, and Pit Valve does not close, check exit port for obstruction. If the arm does not move, check cable for kinking or sticking to the outer sheath. If cable is OK, manually actuate reset lever. If lever does not move, check area for foreign objects.
- If the Air Release is operating correctly, and there is no discharge of air through the exit port, then the port in the Air Pilot Body should be checked for foreign material blocking port.
- Periodically, The Air Release Cable should be inspected for wear.
- Check release cable for areas of wear or damage causing metal surface to become exposed. If release cable is found to be damaged, assembly should be replaced.
- Insure all screws are tight, and reset arm moves smoothly.