

March 9, 2006

U.S. Nuclear Regulatory Commission
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Ladies and Gentlemen:

ULNRC-05259



**DOCKET NUMBER 50-483
CALLAWAY PLANT
UNION ELECTRIC COMPANY
RESPONSE TO REQUESTS FOR ADDITIONAL INFORMATION
LICENSE AMENDMENT REQUEST (LAR) OL-1262
FOR REVISION OF TECHNICAL SPECIFICATION 3.7.2,
"MAIN STEAM ISOLATION VALVES (MSIVs)"**

Reference: ULNRC-05150, dated May 26, 2005

The referenced letter (ULNRC-05150) transmitted to the NRC AmerenUE's (Union Electric) requested amendment of the Facility Operating License for the Callaway Plant (License No. NPF-30) to revise Technical Specification (TS) 3.7.2, "Main Steam Isolation Valves (MSIVs)." The primary changes proposed per the amendment request would add requirements for the MSIV actuator trains to TS 3.7.2.

As requested by the NRC, the attachment to this letter provides excerpts from the maintenance manual (M-628-00049), drawings, and slides from Operator training materials. This information provides design and operational details of the MSIVs including their associated actuator trains and relevant components.

In providing this additional information, the determination pursuant to 10 CFR 50.92 that the proposed license amendment request does not involve a significant hazard consideration, including the basis for that determination, remains unchanged.

7A001

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Please contact us for any questions you may have regarding this transmittal of additional information.

I declare under penalty of perjury that the foregoing is true and correct.

Very truly yours,

Executed on: March 9, 2006



Keith D. Young
Manager, Regulatory Affairs

DJW/jdg

Attachment: Information Providing Details of the MSIVs With Both Actuator
Trains and Relevant Components

cc: U.S. Nuclear Regulatory Commission (Original and 1 copy)
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ULNRC-05259

(REGARDING LAR OL-1262)

ATTACHMENT

**INFORMATION PROVIDING DETAILS OF MSIVs WITH BOTH ACTUATOR
TRAINS AND RELEVANT COMPONENTS**

1. Excerpts from Maintenance Manual, M-628-00049 (3 pages)
2. Drawing M-628-00019 (1 page)
3. Photo of MSIV and equipment (1 page)
4. MSIV Overall Details (Slide from Operator Training Materials) (1 page)
5. MSIV Fast Close Details (Slide from Operator Training Materials) (1 page)

C. ACTUATOR DATA

1. Principles of Operation

The primary function of the A/DV hydraulic actuator is the rapid closure of the isolation valve. It accomplishes this action by releasing high pressure hydraulic fluid onto the top of a piston attached to the valve stem. The energy required to drive the valve closed is stored in a fixed volume of high pressure nitrogen contained within a hydraulic accumulator.

The volume and pressure of the nitrogen is established by the work required to drive the valve closed. The volume of the hydraulic fluid is established by the swept volume of the valve driving piston as it travels from full open to full closed. Together, these volumes form the basis for the sizing of the accumulator.

The air/oil pump is provided primarily to maintain hydraulic fluid pressure. It also serves to drive the valve stem for certain modes of operation. The pump is a balanced piston type. The air pressure acting over the large area of the air piston is normally balanced by the hydraulic pressure acting over the much smaller area of the pump piston. Should the hydraulic pressure decrease, the air piston forces the hydraulic pump piston to discharge into the system. Air control valves cause the pistons to reciprocate as long as the pump is out of balance.

A pressure switch on the accumulator warns of a possible loss of either nitrogen or hydraulic fluid which could render that redundant side inoperable. If a nitrogen leak develops, the accumulator piston will move in the direction of the piston

C. ACTUATOR DATA (continued)

1. Principles of Operation (continued)

stop. The air/oil pump will maintain hydraulic pressure. Eventually the piston could reach the stop and nitrogen pressure will decrease. If the pressure has fallen to a point at which the valve could not be closed in the required time with that side of the actuator, the pressure switch activates. Should a hydraulic leak develop that exceeds pump capacity or should the air/oil pump fail to operate, then the hydraulic pressure will decrease. As hydraulic pressure decreases, the accumulator piston moves in a direction opposite to the piston stop and the nitrogen expands. Eventually the piston will reach a point where either nitrogen pressure in that side of the actuator is too low to close the valve in the required time or insufficient hydraulic fluid is contained within the accumulator in that side of the actuator to drive the valve through its stroke. The pressure switch set point chosen is the highest pressure of the above failure modes.

NOTE: A loss of pressure in one of the accumulators does not affect the accumulator pressure in the redundant train.

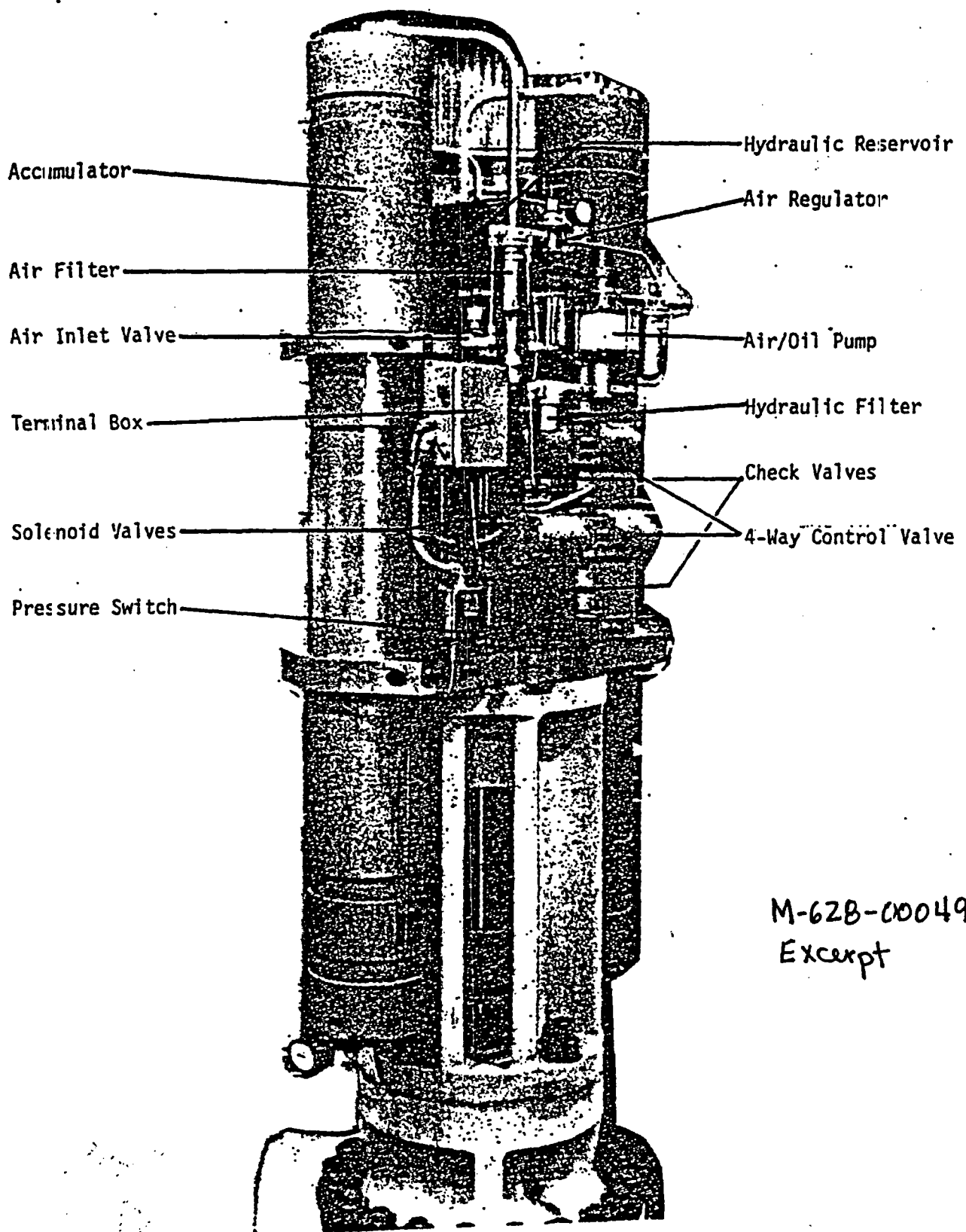
2. Startup Information

This section describes the preparation of the actuator for operation. The following should be initiated after the valve is installed in the line:

a. Electrical Connections

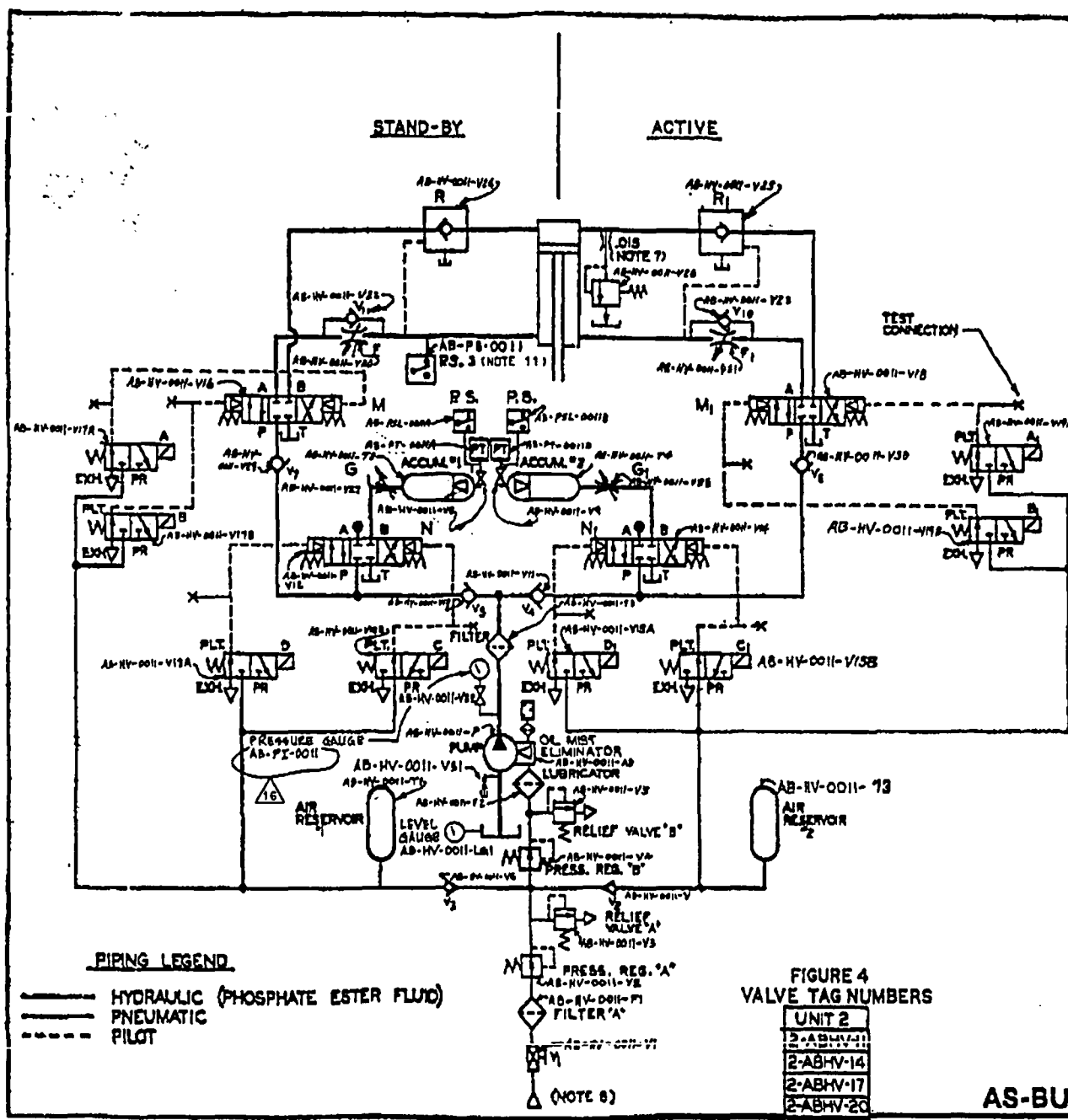
The electrical components of the hydraulic actuator; solenoid valves and pressure switches are wired to two (2)

10466-M-62 - 049-01



M-62B-00049
Excerpt

A/DV
Hydraulic Actuator
Typical



PIPING LEGEND

———— HYDRAULIC (PHOSPHATE ESTER FLUID)

----- PNEUMATIC

----- PILOT

FIGURE 4
VALVE TAG NUMBERS

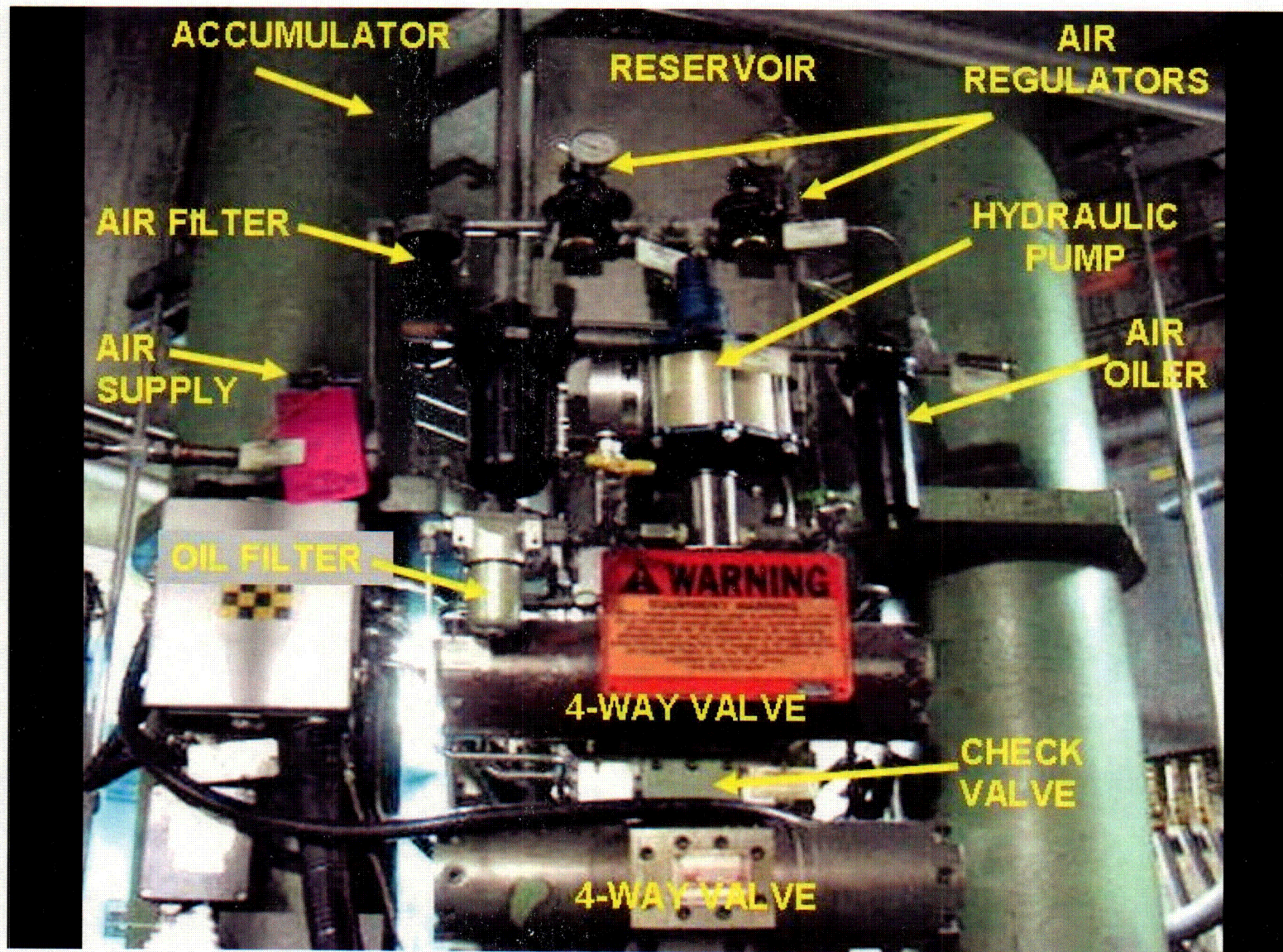
UNIT 2
2-ABHV-11
2-ABHV-14
2-ABHV-17
2-ABHV-20

11. PRESSURE SWITCH P.S.3 IS NOT REQUIRED PER RFR-17054A. P.S.3 CAN BE REMOVED AND ITS MANIFOLD PORT PLUGGED BY A HOLLOW HEX PLUG P/N W35715 WITH O-RING P/N W19520.
 10. ALL NUMBERS FOR HYDRAULIC ACTUATOR SKID AB-HV-001 CORRESPOND TO I.D. NUMBERS FOR AB-HV-0014, AB-HV-0017 & AB-HV-0020.
 9. ROSEMOUNT RT. ALTERNATE COMPONENT - GOLD PLATE SER. DWG. NO. F-5175 FOR DETAILS.
 8. TEST CONNECTIONS ARE LOCATED IN CAPS OF 4-WAY VALVES + NPT.
 7. PRESSURE RELIEF ORIFICE FOR CAP END OF CYLINDER.
 6. AIRLINE CONNECTION! 1/2 NPT FEMALE THREADS
 5. PRECHARGE CONNECTION! 1/2-32 RIGHT HAND THREADS
 4. ACCUMULATOR VOLUME: 25 GALLONS PER ACCUMULATOR
HYDRAULIC FLUID VOLUME: 10.5 GAL.
NITROGEN VOLUME: 14.5 GAL.
 3. LOSS OF ELECTRIC POWER VALVE FAILS AS IS
 2. ALL SOLENOIDS ARE SHOWN DE-ENERGIZED.
 1. ALL HYDRAULIC SYMBOLS ARE IN ACCORDANCE WITH ANSI HYDRAULIC SYMBOLS.
- NOTES**

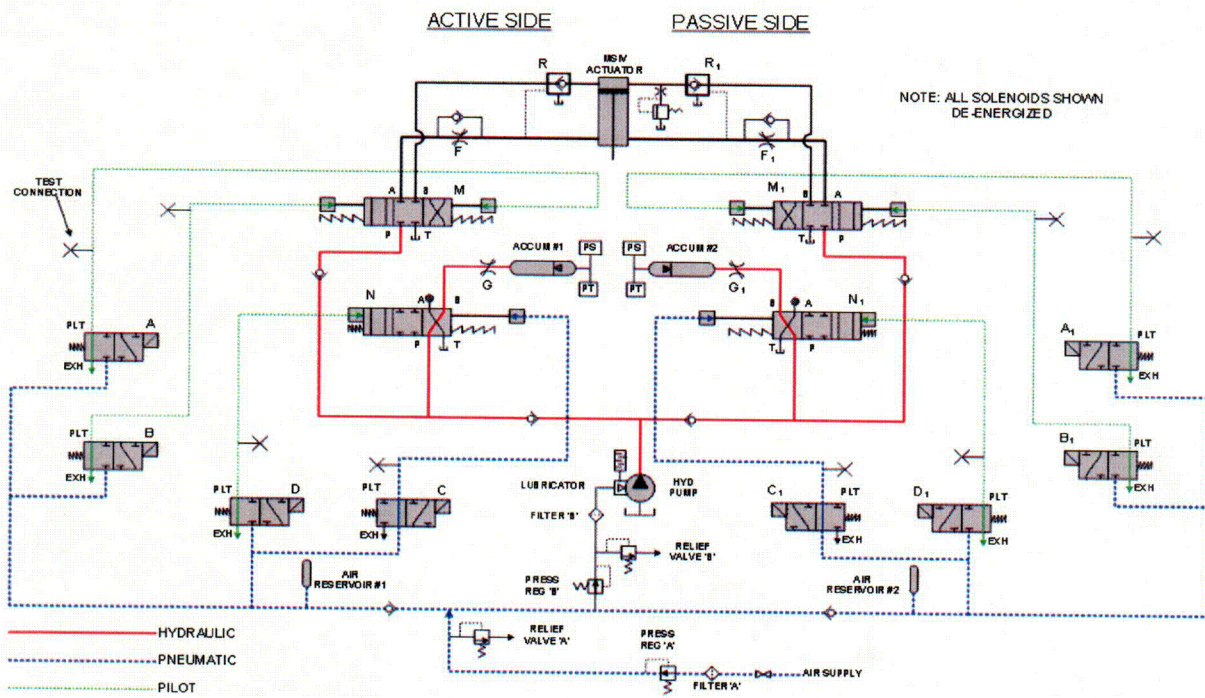
AS-BUILT

M-628-00019 16	
ANCHOR / DARLING VALVE COMPANY WILLIAMSPORT, PA. U. S. A. 17781	
SCHEMATIC FOR ANCHOR / DARLING SELF-CONTAINED HYDRAULIC ACTUATOR	
DATE: 8-19-77	DESIGN: 8-19-77
CHECKED: 8-19-77	APPROVED: 8-19-77
BY: 8-19-77	BY: 8-19-77

REV.	DATE	BY	CHKD.	APPD.
01	11/16/77	JHK		
02	11/16/77	JHK		
03	11/16/77	JHK		
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20	11/16/77	JHK		



COI

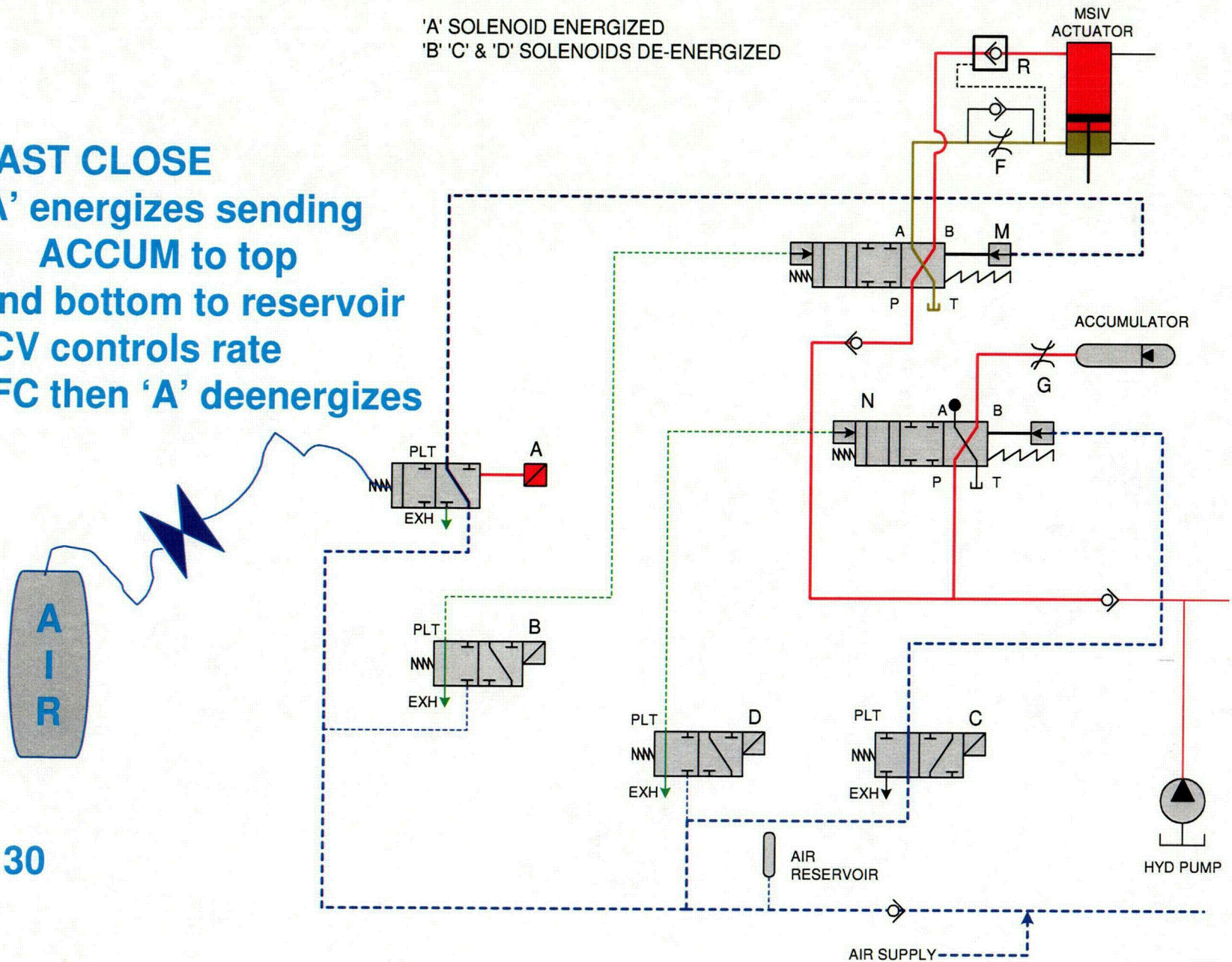


CO2

MSIV FAST CLOSE

'A' SOLENOID ENERGIZED
'B' 'C' & 'D' SOLENOIDS DE-ENERGIZED

1. FAST CLOSE
2. 'A' energizes sending
ACCUM to top
And bottom to reservoir
3. FCV controls rate
4. VFC then 'A' deenergizes



C03