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YAOUANC,J.P. Automatic Switch Co.
RECIP.NAME RECIPIENT AFFILIATION
Records Management Branch (Document Control Desk)

SUBJECT: Part 21 rept re potential mfg problem with certain pumps & amplifers used in ASCO general controls hydramotor actuators.Review of pin/clevis dimension showed that class of fit between two parts could be either slip-fit.

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Automatic Switch Co.

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DEPENDABLE CONTROL
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ASCO

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March 1, 1999

Documents Control Desk
United States Nuclear Regulatory Commission
Washington, DC 20555

SUBJECT: Potential Manufacturing Problem With Certain Pumps and Amplifiers Used in ASCO General Controls Hydramotor® Actuators.

Gentlemen:

We enclose information relating to certain pump and amplifier assemblies used in ASCO General Controls Hydramotor® actuators. As you will see from the enclosed materials, there is the possibility of a manufacturing deficiency with certain of these assemblies which may affect the operation of the Hydramotor® actuators. ASCO was alerted to this problem upon examination of a Hydramotor® actuator, recently returned to ASCO, which had reportedly failed during post installation tests at the Niagara Mohawk Nuclear Point, Unit 2 Power Plant. This condition may result in the failure of the actuator piston to retract when the Hydramotor® is powered, or the actuator piston returning to the spring extended position while the Hydramotor® is powered. A complete list of any potentially affected actuators, along with their purchasers, is being assembled and will be forwarded to you when complete.

ASCO does not have adequate knowledge of the actual installation and operating conditions of these actuators to determine whether their malfunction would create a "substantial safety hazard" as defined in 10CFR21.3. We are likewise unable to conduct the evaluation necessary to make such a determination. Nevertheless, we furnish this information to keep you apprised of our investigation.

Our investigation of this potential problem is continuing. However, we are in the process of identifying purchasers of affected pumps, amplifiers, and complete actuators in which these assemblies may be used. We will notify these purchasers as soon as possible.

Should you wish to discuss this further, or obtain any additional information, please let us know. Should any additional information become available we will forward it to you.

Very truly yours,
AUTOMATIC SWITCH COMPANY

Jean Pierre Yaouanc
President

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JPY/rd
Enclosure

pins to prevent their movement. We believe that this procedure, although not documented in any assembly procedure, was followed regularly by assembly personnel. We base this belief not only on a thorough review with assemblers of assembly methods, but on the fact that this failure occurred during post installation testing. This is the only incidence of this nature reported in almost 3 years of ASCO's production of this product, and inspection of ASCO's stock of finished pump assemblies showed all pins were staked.

The potential failure described above may result in the actuator not maintaining the piston in the retracted position although the pump is running. We believe that in most, if not all, cases the return of the piston to the extended position is considered the fail safe condition for the Hydramotor® actuator. As such, the described failure of the pin/clevis assembly would result in the unit moving to the fail safe condition. Depending on the nature of the application, the utility should determine what the fail safe mode of the Hydramotor® is.

4. THE CORRECTIVE ACTION WHICH IS BEING TAKEN

ASCO will notify all purchasers of affected product of the potential problem. If the affected product is not in service, ASCO will offer to rework it at our factory at no charge. If the product is in service ASCO will work out with the utility the appropriate inspection and corrective action, if necessary. ASCO has revised its written assembly procedure to specify that the pin holding the clevis and lever together be staked, and provided training to ensure proper and effective assembly of the clevis/lever assembly.

POTENTIAL MANUFACTURING PROBLEMS WITH CERTAIN PUMPS AND AMPLIFIERS USED IN ASCO GENERAL CONTROLS HYDRAMOTOR® ACTUATORS

1. NAME AND ADDRESS OF INDIVIDUAL INFORMING THE COMMISSION:

Mr. Jean Pierre Yaouanc
President
Automatic Switch Company
50-60 Hanover Road
Florham Park, NJ 07932

2. IDENTIFICATION OF THE ITEMS SUPPLIED:

A total of 206 ASCO General Controls pump assemblies and amplifier assemblies, sold separately or as part of Hydramotor® actuators.

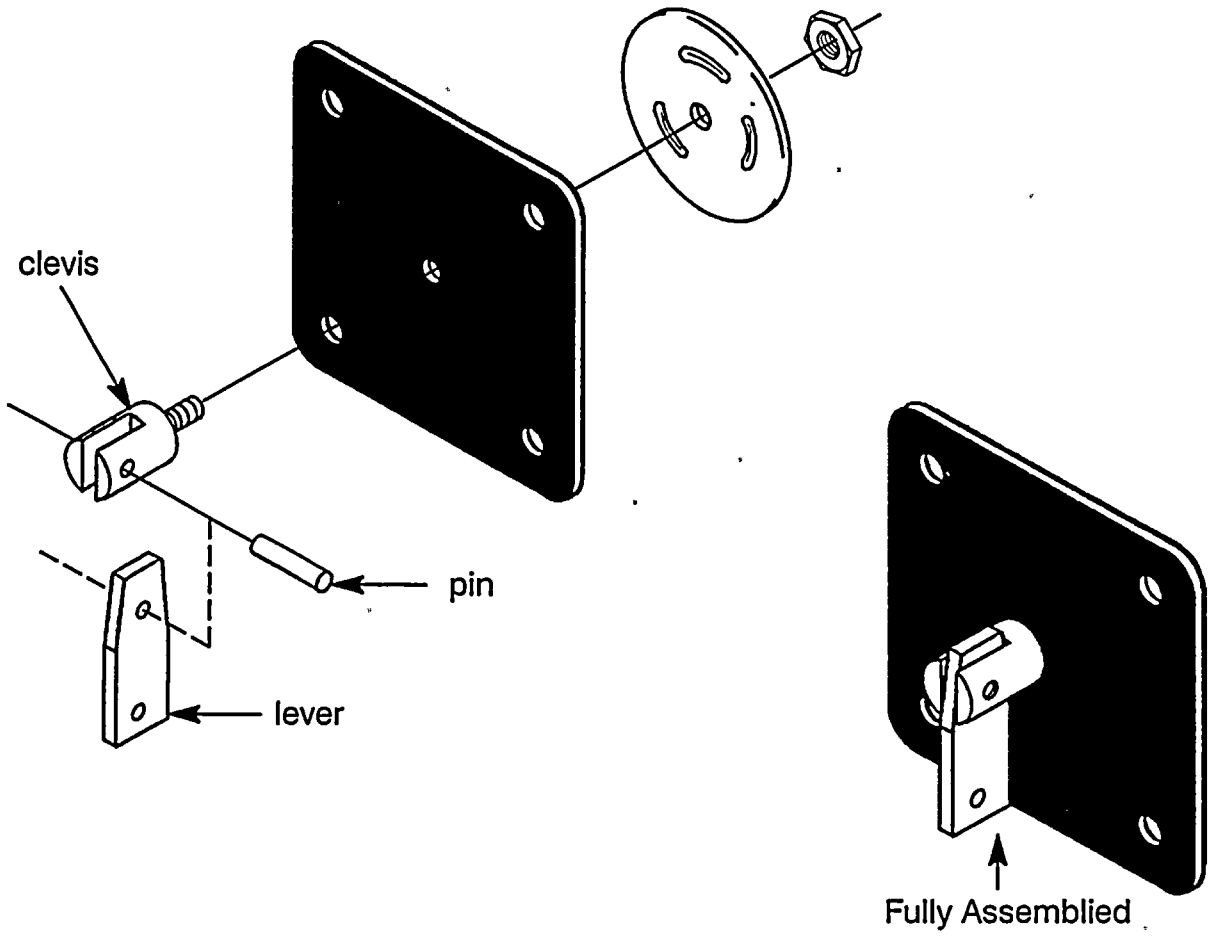
3. NATURE OF THE FAILURE AND POTENTIAL SAFETY HAZARD:

During post-installation testing of an ASCO General Controls Hydramotor® actuator assembly at Niagara Mohawk Nine Mile Point, Unit 2, Nuclear Power Plant, the Hydramotor® actuator failed to maintain the piston in its retracted position. The unit was removed from the system and returned to the ASCO facility in Aiken, South Carolina.

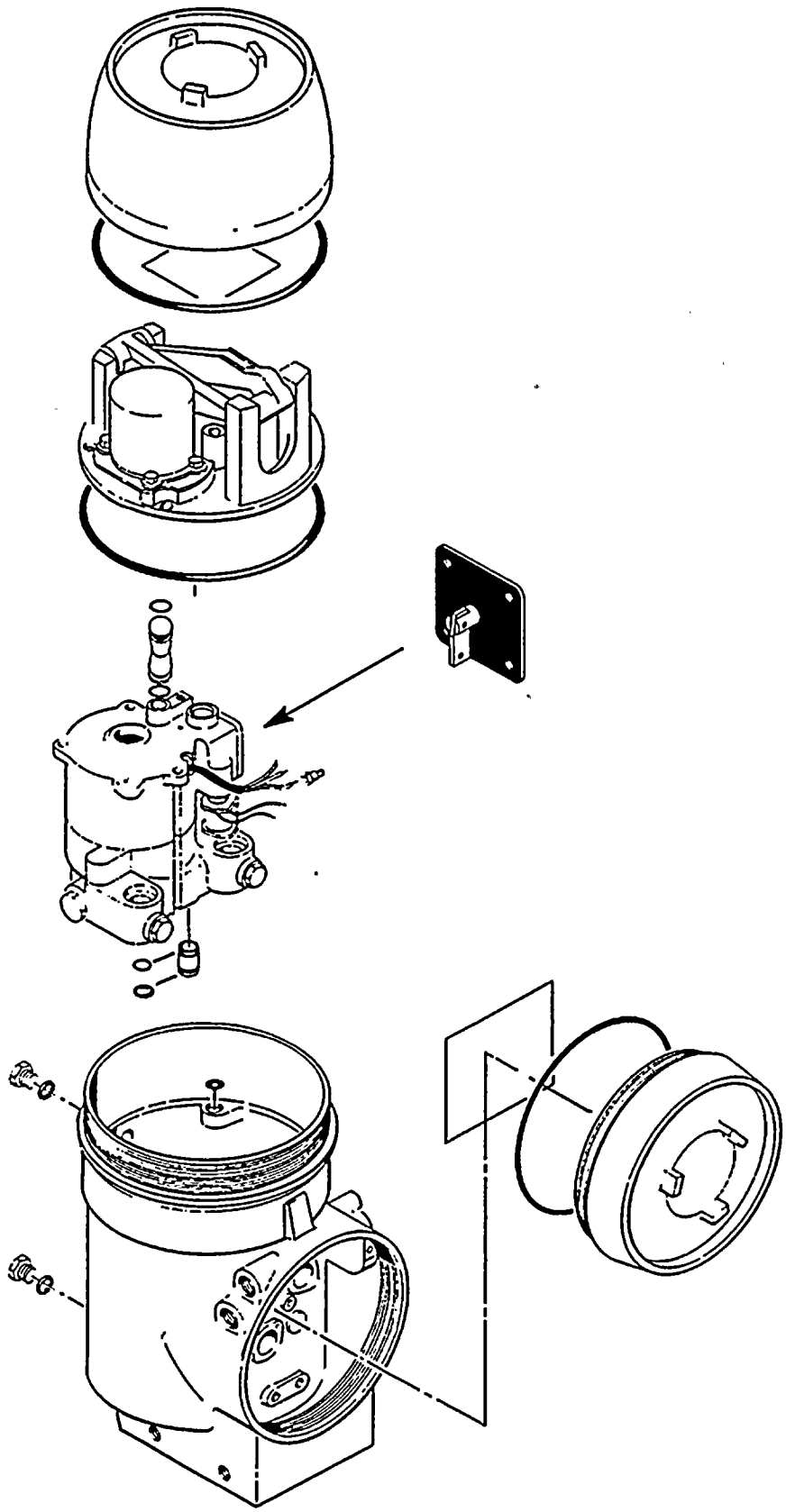
Analysis of the returned unit confirmed that the actuator was not maintaining the piston in the retracted position although the pump was running. Further analysis revealed that the diaphragm assembly located in the amplifier of the pump unit had disengaged from the lever. The diaphragm was no longer acting on the lever, allowing pressure to build up inside the amplifier assembly and ultimately ruptured the diaphragm. Inspection of the clevis/lever assembly revealed that the pin holding the clevis and lever together had become dislodged. Refer to enclosed illustration.

A review of the pin/clevis dimension showed that the class of fit between the two parts could be either a slip-fit or press-fit, depending on the tolerance of the parts.

Interviews with assembly people involved with assembling the pump units revealed that the pins typically slip into place. In order to secure the pins, they have been instructed to stake the pins by use of a center punch, thus deforming the end of the



Diaphragm Assembly



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Subject:
Special Report: on 1/7/00, the diesel generator tripped on reverse power. Caused by the operator adjusting the diesel generator load in close proximity to the setpoint of the rev erse power relay. Work Order 00-00129-00 was performed.

IA1

Body:

Docket: 05000410, Notes: N/A