Title: 200/209 - FITTING OF '0' RING RETAINER TO SERIAL NUMBERS UP TO 631136

1. Introduction

Early versions of the above actuator were fitted with '0' ring shaft seals. Later versions are fitted with specially moulded double lip seals.

Some of the early actuators contained '0' rings with larger than normal gaps between the actuator case and vane shaft which increased the possibility of air leakage. While air leakage is not desirable, it does not indicate an imminent actuator failure because, unlike some other types of quarter turn actuator, this seal is not a primary pneumatic seal because the main sealing is produced by the seal on the vane. However, it is desirable for this '0' ring shaft seal to be effective in order to prevent the ingress of dirt and water.

This procedure explains how the problem can be cured at minimum cost and effort by the insertion of a special split ring. The kit for this purpose is Kinetrol part No. SP402. One kit is required for each end of the actuator.

2. Replacement of '0' ring and fitting retainer

NOTE: ENSURE AIR SUPPLY PRESSURE IS REMOVED FROM ACTUATOR BEFORE COMMENCING.

2.1 Clean the actuator case and shaft adjacent to the seal using a suitable non-solvent based cleaner to ensure no debris enters the actuator whilst the shaft seal is removed.

2.2 It is recommended that the shaft '0' ring is replaced, but if it looks in good condition, then this is not absolutely necessary. To remove the '0' ring, use a sharp pointed tool to pierce the '0' ring so that it can be withdrawn through the slot between the case and shaft. Ensure that the tool does not damage the case or shaft.

2.3 Again clean the groove as well as possible without debris entering the actuator.

2.4 Coat the new '0' ring with mineral oil or grease and push down into groove using a blunt tool.

2.5 Fit split ring over shaft with the small flange facing towards the actuator. Note the angled split in the ring which allows one end to be fitted into the groove first. Gradually feed the remainder of the ring and apply a small amount of outward force to ensure that the ring snaps into the groove. When the ring is fully engaged there should be a consistent small gap between the shaft and ring.

2.6 Apply air pressure to the actuator and check for any leaks.

2.7 If the other end of the actuator is accessible, then repeat the procedure to that end. If, however, it is not (e.g. it is attached to a valve) then it is acceptable to wait to fit the new seal and ring to this end during the next valve maintenance period or at any other time.