

# Actuators

## 1 Cylinder Inspection Items

The following describes the general contents of the cylinder inspection items. Actually, add inspection items suitable for the customer's specifications and perform the inspection work.

### ■ Inspection items

- 1) Check the cylinder mounting bolt or nut for looseness.
- 2) Check the cylinder mounting frame for looseness or unusual deflection.
- 3) Check the rod end bracket, tie-rod, or bolt for looseness or rattle.
- 4) Check the rod for dent or sliding scratch.
- 5) Check that the cylinder operates smoothly and that the minimum operating pressure does not increase.
- 6) Check that the piston speed or cycle time does not change.
- 7) Check that any shock does not occur at the operation end or that any unusual noise is not heard.
- 8) Check for eternal leak. In particular, carefully check the rod seal.
- 9) Check that the stroke is correct and that the cylinder operates the specified stroke.
- 10) Check that the auto switch operates correctly, that the switch joint is not loose, and that the switch position does not deviate.

### ■ Trouble judgment from cylinder status (Judgment from appearance)

- 1) **Only one side of the rod surface is contaminated blackly.**  
→ The seal is worn out unevenly by the eccentric load or lateral load.
- 2) **Thin sliding scratch is marked on the entire periphery of the rod in the operation direction.**  
→ The lubrication is faulty due to grease run-out.
- 3) **Sliding scratch is marked on only one side of the rod surface.**  
→ The rod is strongly in contact with the bushing by the eccentric load or lateral load, causing scratch.
- 4) **A part of the rod is scratched in a direction perpendicular to the cylinder operation.**  
→ A large lateral load is applied when the cylinder stops.
- 5) **Air leaks from the rod seal.**  
→ Scratch, dent, eccentric load, or external foreign object (solid or liquid) may be the cause.

### ■ Probable troubles (Reference)

Refer to the cylinder troubleshooting. (p. 5)