Series AD-31 Handgun Swivel Connector Replacement Kit P/N 238 808 and P/N 238 809

1. Description

This instruction sheet contains procedures for replacing the swivel connector on Series AD-31 extrusion handguns. The procedures in this instruction sheet apply to both Swivel Connector Replacement Kits (P/N 238 808 and P/N 238 809). After successful installation, the replacement swivel connector extends the life of the Series AD-31 handgun.

Please ensure the Swivel Connector Replacement Kit contains the following parts:

- Swivel Connector, 9/16-in. hose (P/N 179 764) or Swivel Connector, 1/2-in. hose (P/N 179 750)
- Seal (P/N 179 763)
- Spring (P/N 271 631)
- Two washers (P/N 983 111)
- Two screws (P/N 981 180)

2. Preparations

The following section contains important safety precautions and the necessary preparation procedures to successfully replace the swivel connector on the Series AD-31 extrusion handgun.

Safety

WARNING: Allow only qualified personnel to perform the following tasks. Observe and follow the safety instructions in this document and all other related documentation.

WARNING: System or material pressurized. Relieve pressure. Failure to observe may result in serious burns.

**Equipment Preparation**

Perform the following procedures to prepare the handgun for replacing the swivel connector:

1. Relieve hydraulic pressure according to the instructions in the applicator product manual.

2. Disconnect and lock out input to the applicator main circuit breaker.

3. Place the trigger in the locked position.

4. If the handgun has an electrical switch, unplug the switch plug assembly at the bottom of the trigger handle from the connector on the hose cordset.
3. **Swivel Connector Replacement**

Use the following procedure to replace the swivel connector on the Series AD-31 extrusion handgun.

Required items for this procedure include:

- 3 mm (1/8 in.) flat blade screwdriver
- 3 mm (1/8 in.) Phillips screwdriver
- 20 mm (3/4 in.) open-end wrench
- 18 mm (11/16 in.) open end wrench

1. Use a Phillips screwdriver and unscrew the screws holding the pivot sleeve shells together.

**NOTE:** Figure 3 shows a typical Series AD-31 handgun. Details may vary depending upon the gun model.

2. Determine the configuration of the handgun and follow the appropriate procedure to disconnect the electrical wires. To determine the handgun's configuration, refer to *Electrical Connections* in Section 3 of the handgun manual.

Fig. 3 Removing the Pivot Sleeve Shells (typical gun shown)
Configuration A (RTD Style, Series 5000)

If the handgun is configured with an RTD sensor for use with a Series 5000 applicator, disconnect the following as shown in Figure 4:

- ground wire
- wire I
- wire B
- wire H
- wire L
- wire J

Configuration B (All Other RTD-Style Configurations)

If the handgun is configured with an RTD sensor for use with any applicator except a Series 5000, disconnect the following as shown in Figure 5:

- ground wire
- wire 3
- wire 5
- wire 1
- wire 2
Configuration C (Thermostat Style)

If the handgun is configured with a thermostatic temperature sensor, disconnect the following as shown in Figure 6:

- wire 1
- wire 3
- ground wire

Fig. 6 Electrical Disconnection for Configuration C Handguns
3. **Swivel Connector Replacement (contd.)**

3. Rotate the wire retaining clip so that the clip’s opening aligns with one of the grooves on the pivot sleeve; dislodge the wires from the groove. If the handgun uses configurations A or B, repeat this step to dislodge the other set of electrical wires.

![Fig. 7 Rotating the Retaining Clip to Dislodge Electrical Wires](image1)

4. Remove the hose fitting from the gun using two wrenches. Place a 20-mm (3/4-in.) wrench on the wing of the swivel connector, and loosen the hose fitting using a 18-mm (11/16-in.) wrench.

**CAUTION:** Handle the handgun carefully to avoid undue strain to the internal wiring or hose cordset.

![Fig. 8 Removing the Hose from the Handgun](image2)
3. **Swivel Connector Replacement (contd.)**

5. Use a 3-mm (\(\frac{1}{8}\)-in.) flat-blade screwdriver, and remove the two screws and washers holding the swivel connector to the pivot sleeve.

6. Remove the swivel connector and conical spring from the pivot sleeve.

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**Fig. 9 Removing the Swivel Connector Screws and Washers**

**Fig. 10 Removing the Swivel Connector and Conical Spring**
3. **Swivel Connector Replacement (contd.)**

7. Install the new swivel connector into the pivot sleeve.

8. Rotate the pivot sleeve and allow the swivel connector to self-center.

9. Rotate the pivot-sleeve screws using a 3-mm (1/8-in.) flat-blade screwdriver. Check for free rotation. If binding occurs, loosen the screws and rotate the pivot sleeve. Tighten the screws and check for free rotation. Repeat this step until the pivot sleeve rotates easily.

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Fig. 11 Swivel Connector Installation

1. Pivot sleeve
2. Conical spring
3. O-ring
4. Back-up ring
5. Swivel connector
6. Washers
7. Screws
3. **Swivel Connector Replacement** *(contd.)*

**CAUTION:** Ensure that each set of electrical wires exiting the hose aligns with a groove on the pivot sleeve so that the wires do not twist around the base of the pivot sleeve. Improper alignment can damage the wires, resulting in a possible electrical short.

10. Align the pivot sleeve and the hose so that the grooves along the sides of the pivot sleeve line up with each set of wires exiting the hose. Make sure to route the set of wires containing the ground wire up the groove on the heater side of the pivot sleeve.

**NOTE:** Handguns with a thermostatic sensor use only one set of electrical wires.

Fig. 12 Proper Wire Alignment
3. **Swivel Connector Replacement (contd.)**

11. Attach the hose fitting to the swivel connector, and tighten using two wrenches. Place a 20-mm (3/4-in.) wrench on the wing of the swivel connector, and tighten the hose fitting using the 18-mm (11/16-in.) wrench.

**WARNING:** An electric short can occur if wires do not lie flat and side by side, not crossing each other within the groove.

12. Rotate the wire retaining clip around the pivot sleeve so that the clip’s opening aligns with one of the grooves on the pivot sleeve.

13. Place one set of wires into the groove and rotate the wire retaining clip so that it holds the wires securely in the groove. If the handgun uses configurations A or B, repeat steps 12 and 13 to secure the other set of wires. To determine the handgun’s configuration, refer to *Electrical Connections* in section 3 of the handgun manual.
4. Return to Normal Operation

Perform the following procedures to return the handgun to normal operation:

1. Follow the procedure appropriate to the handgun’s configuration to make electrical connections.

**Configuration A (RTD Style, Series 5000)**

If the handgun is configured with an RTD sensor for use with a Series 5000 applicator, make the following electrical connections as shown in Figure 15:

- ground wire
- wire I
- wire B
- wire H
- wire L
- wire J

**Configuration B (All Other RTD-Style Configurations)**

If the handgun is configured with an RTD sensor for use with any applicator except a Series 5000 applicator, make the following electrical connections as shown in Figure 16:

- ground wire
- wire 3
- wire 5
- wire 1
- wire 2
**Configuration C (Thermostat Style)**

If the handgun is configured with a thermostatic temperature sensor, make the following electrical connections as shown in Figure 17:

- wire 1
- wire 3
- ground wire

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2. If the handgun has an electrical switch, attach the switch’s plug at the bottom of the trigger handle to the connector on the hose.

3. Replace the pivot sleeve shells. Insert and tighten the screws holding the shells together.

4. Restore the system to normal operation by following the startup instructions in the handgun manual.