

## Description

See Figure 1. The helical flowmeter is suitable for operating pressures up to 5800 psi (400 bar).

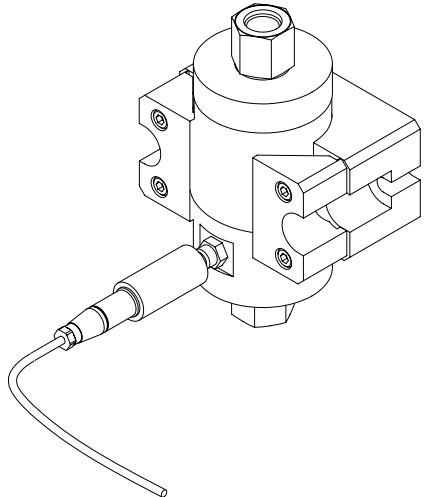


Figure 1 Helical Flowmeter

## Specifications

Item	Specification
Maximum Operating Pressure	5800 psi (400 bar)
Measuring Range (Viscosity Dependant)	0.105–10.5 gal/min (0.4–40 ltr/min)
K-Factor	13,249 pulses/gal (3500 pulses/ltr)

## Installation



- Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.
- High pressure fluids are extremely dangerous. Relieve all fluid and air pressure to the system before performing these procedures.
- Disconnect and lock out power to the system before performing installation procedures.

### NOTE

- The helical flowmeter is typically installed onto a flowmeter assembly that is configured either with or without a temperature conditioning plate.
- Each installation procedure includes steps for FTI to helical flowmeter conversions.

Refer to the applicable installation procedure:

Flowmeter Assembly	Refer To
With a temperature conditioning plate	<i>Installing onto a Temperature Conditioned Flowmeter Assembly</i>
Without a temperature conditioning plate	<i>Installing onto a Flowmeter Assembly</i>

### Install the Helical flowmeter onto a Temperature Conditioned Flowmeter Assembly

The Helical Flowmeter Conversion kit is required to install the helical flowmeter onto a temperature conditioning plate.

See Figure 2.

1. Relieve all fluid and air pressure to the system.
2. Perform this step for FTI flowmeter (9) conversions:
  - a. Disconnect the material lines from the fittings (10).
  - b. Disconnect the cable (13) from the FTI flowmeter.
3. Disconnect the water lines (7) from the fittings (8).
4. Remove the screws (19), washers (20), and insulator plates (4) securing the temperature conditioning plate (6) to the flowmeter assembly (3).
5. Perform this step for FTI flowmeter (9) conversions:
  - a. Remove the screws (5), washers (11), and nuts (12) securing the FTI flowmeter to the temperature conditioning plate (6).
  - b. Discard the screws (5).
6. Use the  $\frac{3}{8}$ -16 x 2 in. screws, M6 x 10 screws, and washers in this step:
  - a. Install the helical flowmeter (17) onto the temperature conditioning plate (6) using the  $\frac{3}{8}$ -16 x 2 in. screws (5), washers (11), and nuts (12). Tighten the nuts securely.
  - b. Install the washers (1) and M6 x 10 screws (1) into the back of the temperature conditioning plate (6). Tighten the screws securely.
7. Install the temperature conditioning plate (6) onto the flowmeter assembly (3) using the insulator plates (4), washers (20), and screws (19). Tighten the screws securely.
8. Screw the sensor (15) into the helical flowmeter (17) until it bottoms out, then loosen it a  $\frac{1}{4}$  turn. Tighten the jam nut (16) securely.
9. Connect the cable (14) to the sensor (15). Connect the other end of this cable to cable (13).
10. Connect the water lines (7) to the fittings (8).
11. Connect the material lines to the fittings (18) and tighten securely.

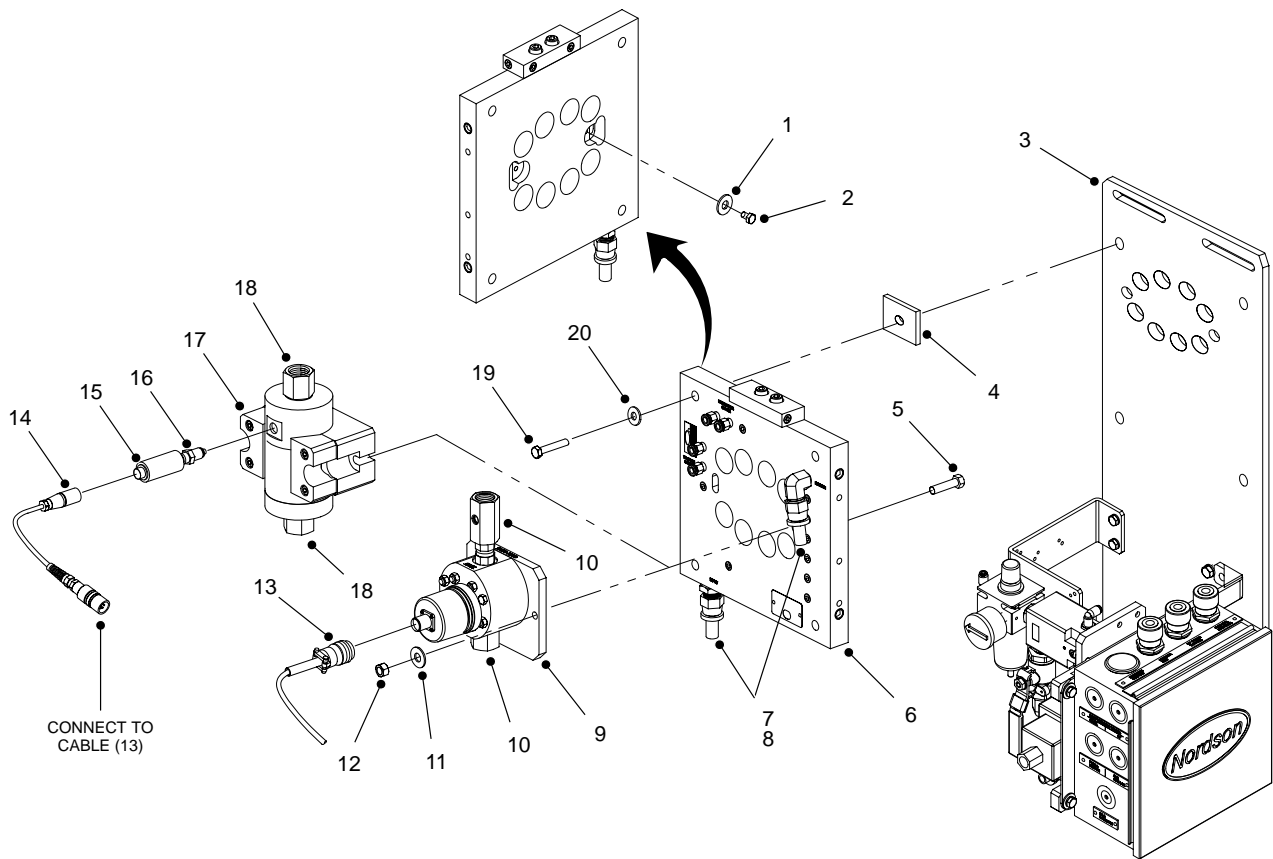


Figure 2 Typical Installation onto a Temperature Conditioned Flowmeter Assembly

## Install the Helical Flowmeter onto a Flowmeter Assembly

See Figure 3.

1. Relieve all fluid and air pressure to the system.
2. Perform the following for FTI flowmeter (4) conversions:
  - c. Disconnect the cable (7) from the FTI flowmeter.
  - d. Disconnect the material lines from the FTI flowmeter fittings (3).
  - e. Remove the screws (1), washers (5), and nuts (6) securing the FTI flowmeter to the flowmeter assembly (2).

### NOTE

Use the  $\frac{3}{8}$ -16 x 2 in. screws from the kit in step 3.

3. Install the helical flowmeter (11) to the flowmeter assembly (2) using the screws (1) from the kit, washers (5), and nuts (6). Tighten the nuts securely.
4. Screw the sensor (9) into the helical flowmeter (11) until it bottoms out, then loosen it a  $\frac{1}{4}$  turn. Tighten the jam nut (10) securely.
5. Connect the material lines to the fittings (12) and tighten securely.
6. Connect the cable (8) to the sensor (9). Connect the other end of this cable to cable (7).

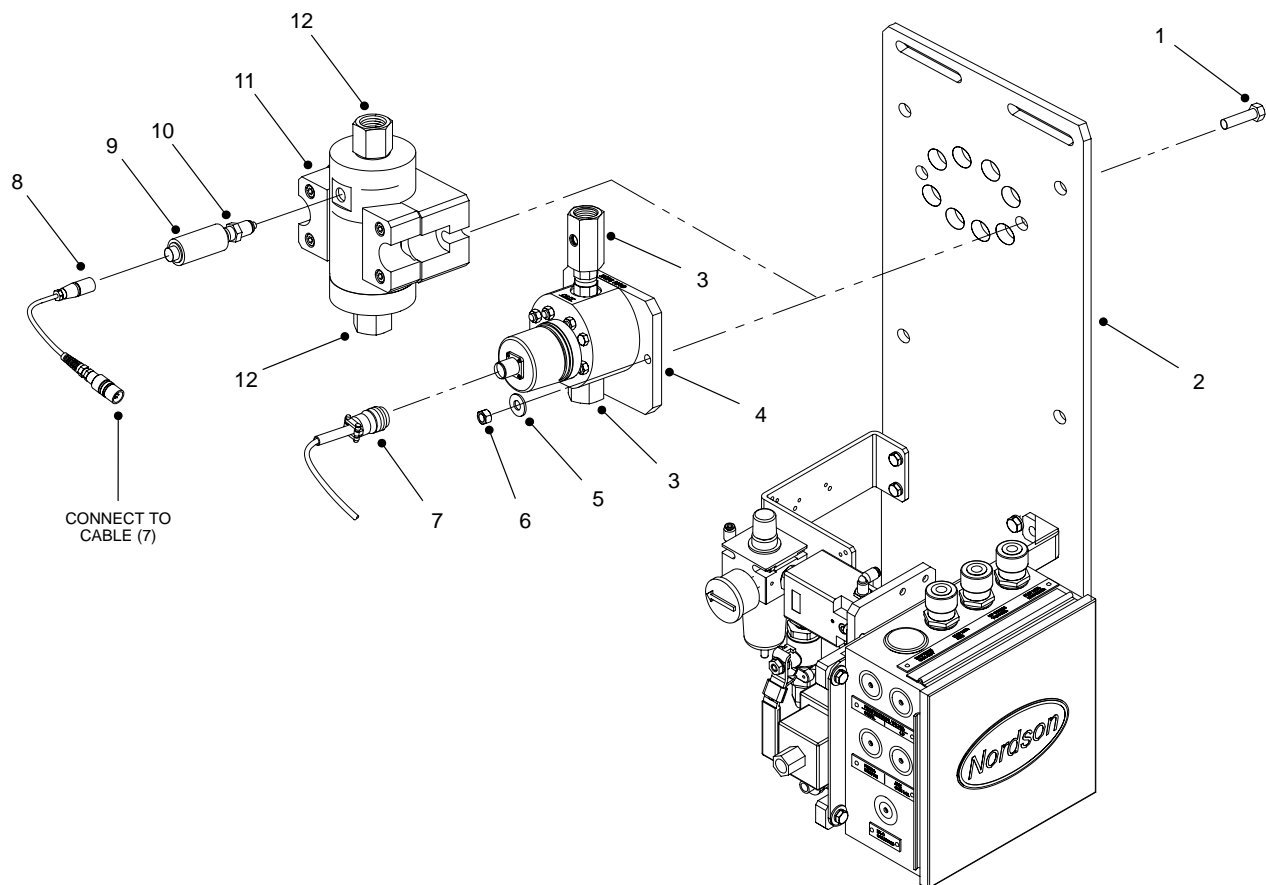


Figure 3 Typical Installation onto a Flowmeter Assembly

## Repair

Repair is limited to replacing the sensor and the helical flowmeter.



- Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.
- High pressure fluids are extremely dangerous. Relieve all fluid and air pressure to the system before performing these procedures.
- Disconnect and lock out power to the system before performing repairs.

### Replace the Helical Flowmeter

See Figure 4.

1. Disconnect the cable (6) from the sensor (7).
2. Disconnect the material lines from the fittings (1). Remove the fittings from the helical flowmeter.
3. Loosen the jam nut (8) and remove the sensor (7) from the helical flowmeter (5).
4. Remove the screws (4) securing the cradle grips (3) to the cradle (2).
5. Remove the helical flowmeter (5) from the cradle (2).
6. Remove the fittings (1) from the helical flowmeter (5) and install them into the new helical flowmeter (5). Tighten the fittings securely.
7. Apply Loctite 242 to the threads of the screws (4). Center the helical flowmeter (5) onto the cradle (2). Install the cradle grips (3) to the cradle using the screws. Tighten the screws to 31 ft-lb (42 N•m).
8. Screw the sensor (7) into the helical flowmeter (5) until it bottoms out, then loosen it a  $\frac{1}{4}$  turn. Tighten the jam nut (8) securely.
9. Connect the cable (6) to the sensor (7).
10. Connect the material lines to the fittings (1).

### Replace the Sensor

See Figure 4.

1. See Figure 4. Disconnect the cable (6) from the sensor (7).
2. Loosen the jam nut (8) and remove the sensor (7) from the helical flowmeter (5).
3. Screw the new sensor (7) into the helical flowmeter (5) until it bottoms out, then loosen it a  $\frac{1}{4}$  turn. Tighten the jam nut (8) securely.
4. Connect the cable (6) to the sensor (7).

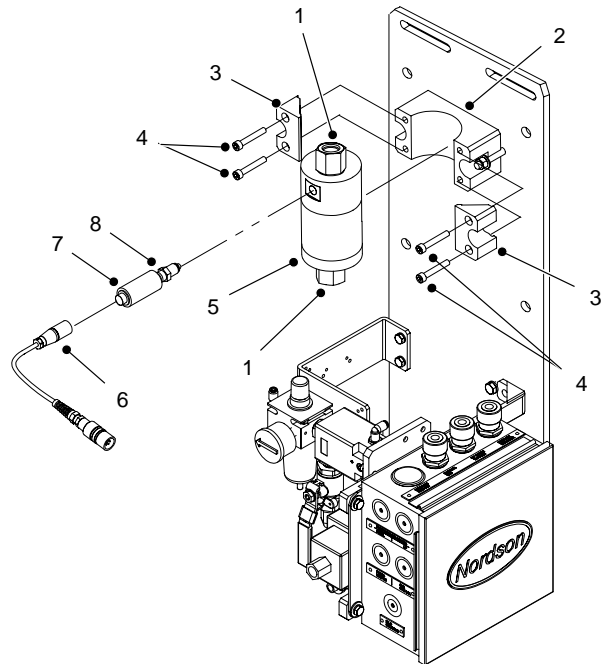


Figure 4 Typical Repairs

## Parts

See Figure 5 and refer to the following parts lists.

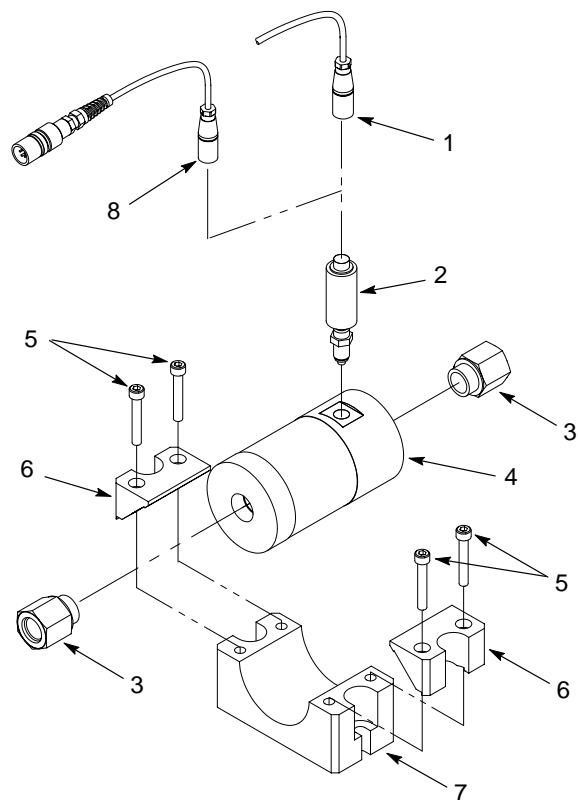


Figure 5 Parts

Item	Part	Description	Qty	Note
—	1035583	Flowmeter, helical	1	
1	1035545	• Cable, 3 conductor, 5 pin	1	
2	1033832	• Sensor	1	
3	1034080	• Fittings	1	
4	1034254	• Flowmeter	1	
5	-----	• Screw socket, M8 x 50	4	
6	-----	• Grip, cradle	2	
7	-----	• Cradle	1	
8	1033726	Cable, 3 conductor, 5 pin	1	A

NOTE A: Not included with this assembly—order this cable for retrofit helical flowmeters.

## FTI to Helical Flowmeter Conversion Kit

This kit contains the necessary hardware for replacing an FTI flowmeter with a helical flowmeter.

Part	Description
1033892	Kit, flowmeter, conversion FTI to AW SRZ-40 helical flowmeter

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