Enhanced 3051 Upgrade Kit

Spare Parts Installation Guide

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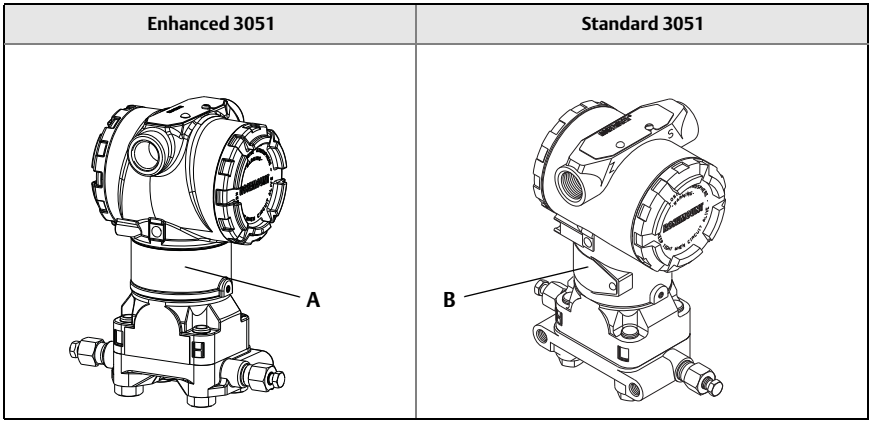
Step 1: Identify device

External button installation is dependant on what device is being upgraded in addition to the housing material (Aluminum or Stainless Steel). The two types of devices are the Enhanced Rosemount 3051 and Standard Rosemount 3051 pictured in Figure 1.

Figure 1. Enhanced and Standard 3051



A. Wrap around tag
B. Riveted tag

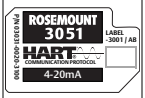
By referencing Figure 1, there is a distinct difference between the Enhanced and Standard 3051 in the neck label. The Enhanced Rosemount 3051 utilizes a wraparound (rivet less) neck label, standard Rosemount 3051 uses a riveted label that does not fully wrap around.

Note
For wrap around neck labels verify that option code "TR" is not specified on the transmitter model string (engraved on the neck label). Option code "TR" indicates a 3051 Rev5 Transmitter that is not compatible with the Enhanced 3051 Upgrade Kits.

Step 2: Gather necessary external configuration button assembly components

After the device has successfully been identified, the correct retainer button assembly components should be gathered. The retainer and buttons used in this installation are dependant on the current housing they are being installed on (Enhanced 3051 or Standard 3051). Please follow Table 1 below to gather the correct configuration button assembly parts.

Table 1. Spare parts kits

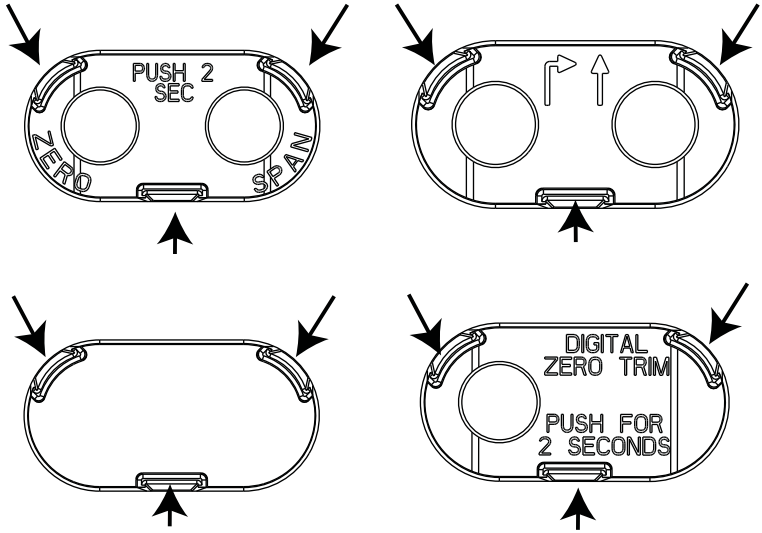
Kit Number	Electronics Board	Retainer (includes Rubber Gasket)		Standard 3051 (Buttons)		Enhanced 3051 (Buttons)		Springs
		Enhanced 3051	Standard 3051	AL Housing	SST Housing	AL Housing	SST Housing	
03031-0020-3100 *(no configuration Buttons)*		Blue		N/A	N/A	N/A	N/A	0
03031-0020-3110 *(Digital Zero Trim)*	DZ	Blue[1]	Blue[2]	1 – Blue	1 - Black	1 - Grey	1 - Black	1
03031-0020-3120 *(Analog Zero and Span)*	D4	Grey	Blue	2 - Blue	2 - Black	2 - Grey	2 - Green	2
03031-0020-3139 *(Local Operator Interface)*	M4	Green	Purple	2 - Blue	2 - Black	2 - Grey	2 - Green	2

1. *Retainer has thickness of 0.18 inches*
2. *Retainer has a thickness of 0.12 inches*

Step 3: Remove existing retainer button assemblies

1. Loosen top tag of transmitter to expose retainer slot.
2. Using a small screwdriver remove any existing button assemblies (retainer, gasket, buttons, and springs) and discard.
   A. Pry out retainer using the identified "pry-out" grooves seen in Figure 2.
3. When the retainer slot is empty proceed to Step 4.

Figure 2. Existing retainer "pry-out" grooves



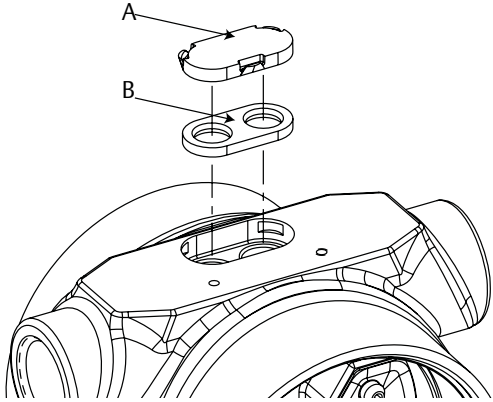
Step 4: Insert new retainer button assemblies

1. Install external button assembly in accordance to the following Figures (listed below). Retainers will snap into place.
   A. 03031-0020-3100: Enhanced 3051 upgrade Figure 3 on page 5
   B. 03031-0020-3110: Digital Zero Trim Figure 4 on page 5
      - Magnetic button must be in the left hole, relative to the transmitter Terminal Block.
   C. 03031-0020-3120: Analog Zero and Span Figure 5 on page 6
   D. 03031-0020-3139: Local Operator Interface Figure 6 on page 6

Note
If not already done, refer to Table 1 to gather correct components of retainer button assembly based on transmitter style (Enhanced or Standard 3051) and housing material (Aluminum or Stainless Steel).

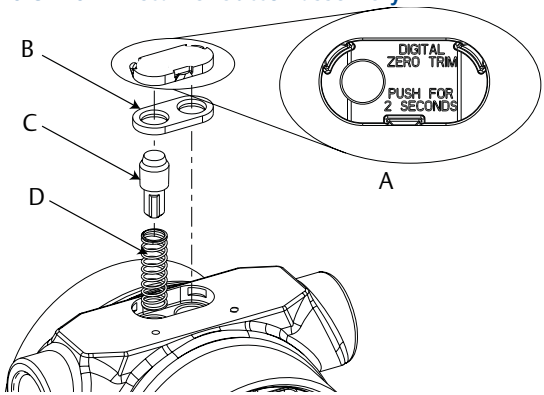
Step 4 continued...

Figure 3. 03031-0020-3100 button retainer assembly



A. Blue Retainer
B. Rubber Gasket

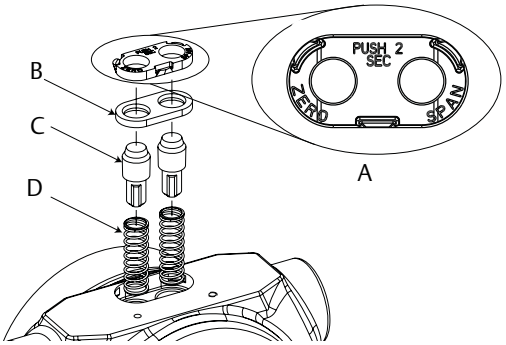
Figure 4. 03031-0020-3110 DZ retainer button assembly



A. Blue DZ Retainer
B. Rubber Gasket
C. Magnetic Buttons
D. Springs

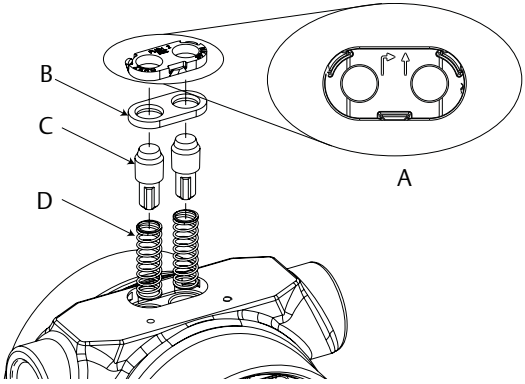
Step 4 continued...

Figure 5. 03031-0020-3120 D4 retainer button assembly



A. D4 Retainer
B. Rubber Gasket
C. Magnetic Buttons
D. Springs

Figure 6. 03031-0020-3139 M4 retainer button assembly



A. M4 Retainer
B. Rubber Gasket
C. Magnetic Buttons
D. Springs

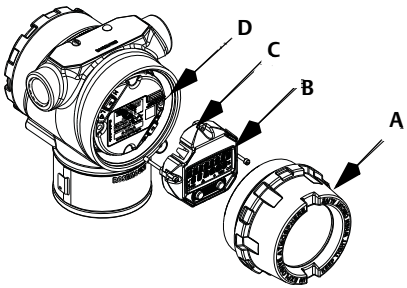
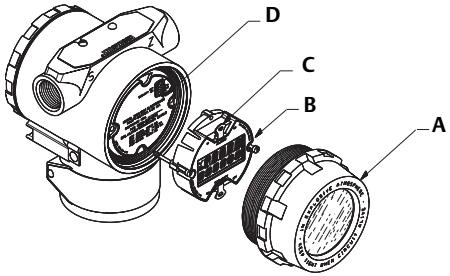
Step 5: Replace electronics board

1. Remove transmitter electronics housing cover (A in Figure 7)
   A. If LCD is present, it must be removed in conjunction with the electronics board.
   B. The LCD and electronics board are held together by two screws (B from Figure 7) and an interconnecting pin (D from Figure 7)
2. Loosen the screws and gently remove the LCD and electronics board to avoid damage to the ribbon cable
3. Detach the ribbon cable that connects the sensor module to the electronics board.
4. If LCD or LOI Spare kit was ordered, ensure the interconnecting pin is properly positioned to connect the electronics board and the LCD or LOI Display.
5. Install the Enhanced electronics by first connecting the ribbon cable to the electronics board with the two screws (included)
6. Reattach transmitter housing cover; cover must be fully engaged to comply with explosion proof requirements.

Note

- Installation procedures are consistent for Analog Zero and Span, Digital Zero, and Local Operator Interface electronics boards.
- The button function is programmed into the electronics board, the board label indicates what function the buttons will have

Figure 7. Enhanced and Standard Rosemount 3051 Electronics Assemblies

Enhanced Rosemount 3051	Standard Rosemount 3051
	

A. Housing cover
B. Screws
C. LCD/LOI Board
D. Electronics Board

Step 6: Upload new device driver (DD/DTM)

To take full advantage of the new features and capabilities of the Enhanced 3051 Electronics board, an updated DD must be installed on your HART Configuration Tool.

1. Download latest DD at www.rosemount.com (download device drivers) or www.hartcomm.org
2. In the HART Communication's Website (hartcomm.org) locate the Browse by Member dropdown menu and select Rosemount Business Unit of Emerson Process Management.
3. Select device revision based on HART Revision Configuration listed in Table 2 on page 8

Table 2. Enhanced 3051 Device Revision

Find Device Driver Files		Review Instructions
HART Universal Revision	**Device Revision**	**Manual Document Number**
7	10	AA
5	9	

Enhanced 3051 Upgrade Kit
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Rosemount Inc.
8200 Market Boulevard
Chanhassen, MN USA 55317
T (US) (800) 999-9307
T (Intnl) (952) 906-8888
F (952) 906-8889

Emerson Process Management Asia Pacific Private Limited
1 Pandan Crescent
Singapore 128461
T (65) 6777 8211
F (65) 6777 0947/65 6777 0743

Emerson Process Management GmbH & Co. OHG
Argelsrieder Feld 3
82234 Wessling Germany
T 49 (8153) 9390, F49 (8153) 939172

Beijing Rosemount Far East Instrument Co., Limited
No. 6 North Street, Hepingli,
Dong Cheng District
Beijing 100013, China
T (86) (10) 6428 2233
F (86) (10) 6422 8586

Emerson Process Management (India) Private Ltd.
Delphi Building, B Wing, 6th Floor
Hiranandani Gardens, Powai
Mumbai 400076, India
T (91) 22 6662-0566
F (91) 22 6662-0500

Emerson Process Management, Brazil
Av. Hollingsworth, 325 - Iporanga
Sorocaba, SP – 18087-000, Brazil
T (55) 15 3238-3788
F (55) 15 3228-3300

Emerson Process Management, Russia
29 Komsomolsky prospekt
Chelyabinsk, 454138
Russia
T (7) 351 798 8510
F (7) 351 741 8432

Emerson Process Management, Dubai
Emerson FZE
P.O. Box 17033,
Jebel Ali Free Zone - South 2
Dubai, U.A.E.
T (971) 4 8118100
F (971) 4 8865465

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