

Pressure Control Switch Replacement Kit

309120 rev.G

Use with MAGNUM dx, XR, RPX 150, SR7 and ProX Model Sprayers

dx, XR, and 150 RPX, Series A Pressure Control Switch Replacement Kit: 244266

2800 psi (19 MPa, 193 bar)

XR5, Series B & C; XR7/XR9, Series A & B; SR7; ProX7 & ProX9, Series A Pressure Control Switch Replacement Kit: 244267

3000 psi (21 MPa, 207 bar)



Important Safety Instructions

Read all warnings and instructions in this manual. Save these instructions. For detailed sprayer information and warnings, see your Operation manual.



To reduce the risk of fluid injection or splashing in the eyes or on the skin, relieve all fluid pressure in system before you install, remove, or replace any parts. See the **Pressure Relief Procedure** provided in your Operating Instruction manual.

CAUTION

When repairing or cleaning the pump, never submerge the pump in water or allow fluid to enter the pressure control.

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dx and 150 RPX Airless Sprayers


- For more information, refer to assembly illustration on, page 3.

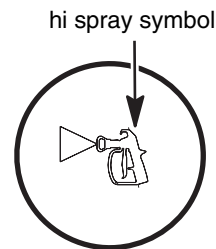
Disassembly

1. Unplug electrical cord, and **relieve pressure**.
2. Remove the three screws (A) securing the housing cover (B) to the motor enclosure (C) and remove the motor enclosure.
3. Unplug the pressure control switch wire connector (D) from the control board (E). Take note of the wire routing so wires for the new switch are routed the same way.
4. Remove screws (H) and remove the pump housing (J) from the housing cover (B).
5. Remove pressure control switch (F) and o-ring seal (G) from pump housing (J).

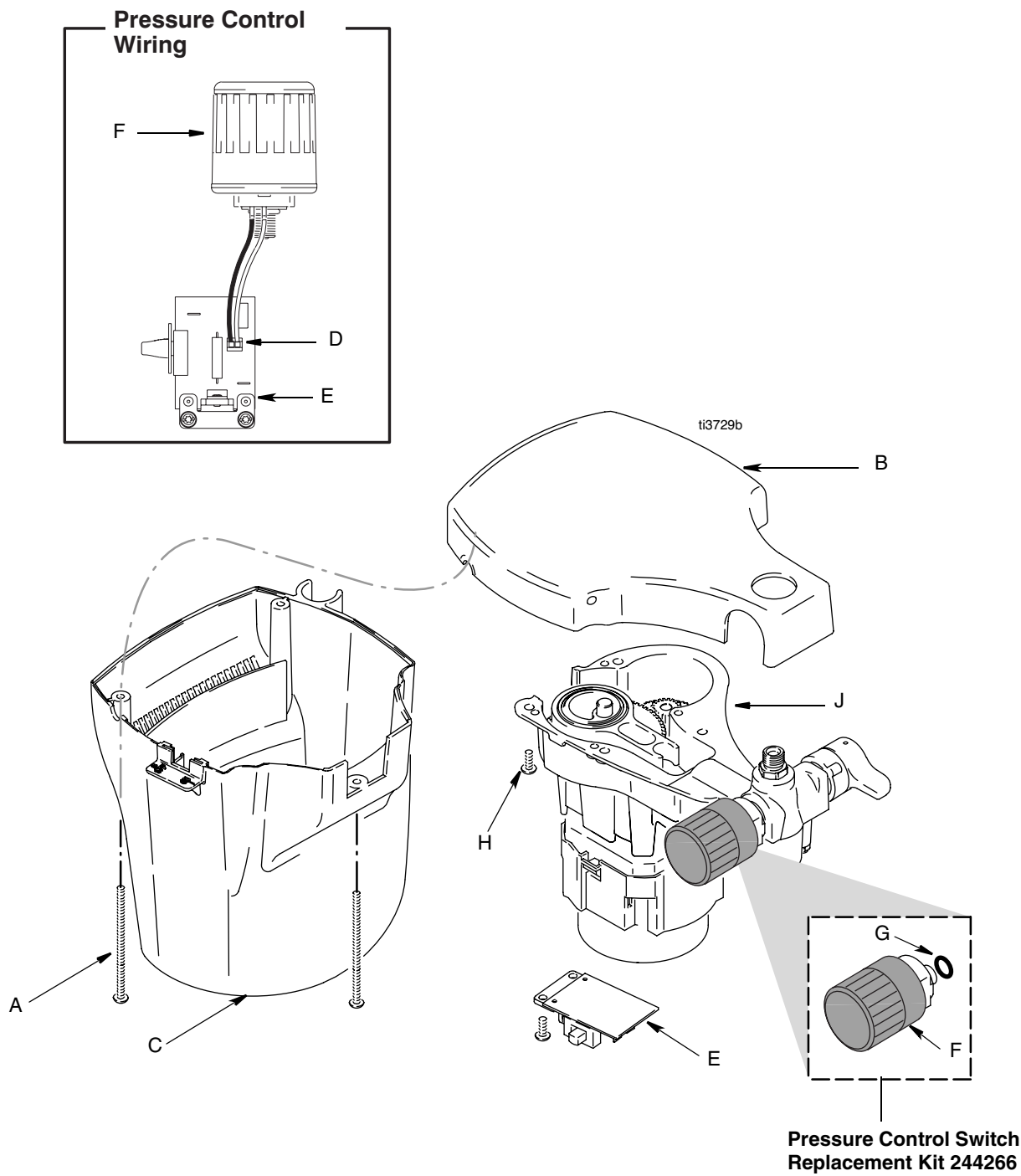
Installation

1. Examine new pressure control switch (F) to verify o-ring seal (G) is in place. If it is not installed on pressure control switch, install o-ring seal. Torque to 140-160 in.-lbs (16-18 N•m). **Do not over-tighten or damage could occur.**
2. Insert pump housing (J) in housing cover (B). Replace screws (H). Torque to 25-35 in.-lbs (2.8 to 4.0 N•m). **Do not over-tighten or damage could occur.**
3. Attach pressure control switch wire connector (D) to control board (E), making sure wires are routed correctly. (Disassembly, step 3).
4. Reassemble motor enclosure (C) to housing cover (B). Replace 3 screws (A). Tighten securely.
5. Turn pressure control switch knob (F) clockwise as far as it will go. Apply new pressure control label to knob. To position label correctly see note below.

 When properly positioned, the indicator and hi-spray position symbol on pressure control switch label are aligned.



dx and 150 RPX Airless Sprayers



XR Model Sprayers

Disassembly

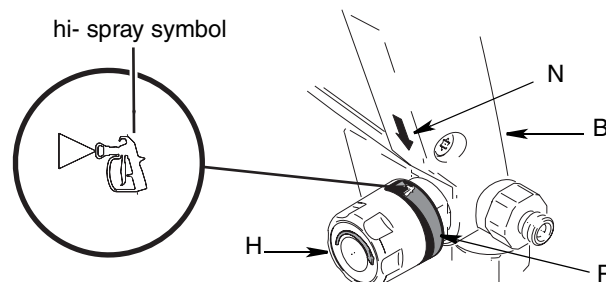
1. Unplug electrical cord, and **relieve pressure**.
2. Remove the cover screws (A) and front cover (B).
3. Remove yoke (C) and guide rods (D).
4. Disconnect pressure control wire harness (E) from control board connector at back of drive housing (F). **Using fingernail or tip of small, flat-blade screwdriver, press tab on right side of connector to release.**
5. Remove pump (G) from drive housing (F).
6. Place pump (G) on workbench or in vise.
7. Unscrew pressure control switch knob (H). Verify the o-ring seal (J) also is removed from pump (G).

Installation

- Before you begin reassembly, read all **Installation Notes** below. For more information, refer to assembly illustration on, page 5.
1. Examine new pressure control switch (H) to verify o-ring seal (J) is in place. If it is not installed on pressure control switch, install o-ring seal.
 2. Apply thread locker (included in kit) to threads of pressure control switch (H). Screw new pressure control switch into pump (G), and torque to 140 to 160 in-lb (16 to 18 N•m). **Do not overtighten, or damage could occur.**
 3. Route pressure control wiring harness (E) through retention clip (K), and connect to control board connector at back of drive housing (F).

4. Secure wires in place by closing retention clip securely over wires.
5. Install pump (G) on mounting pin (L). **Make sure the plastic washers (M) are between the drive housing (F) and the pump (G) and that the pressure control wires (E) are not pinched between pump and drive housing.**
6. Install yoke (C) with rod cap in slot of yoke, as shown in **Rod/Yoke Detail** on page 4.
7. Check final assembly against **Drive Train Detail** on page 4.
8. Install front cover (B) and cover screws (A). Torque to 110-120 in.-lbs (12.4-13.6 N•m).
9. Apply arrow indicator label (N) to front cover (B) as shown below.
10. Turn pressure control switch knob (H) clockwise as far as it will go. Apply pressure control label (P) to switch knob. To position label correctly, see note below.

When properly positioned, the arrow indicator label (N) and hi-spray position symbol on pressure control label (P) are aligned.

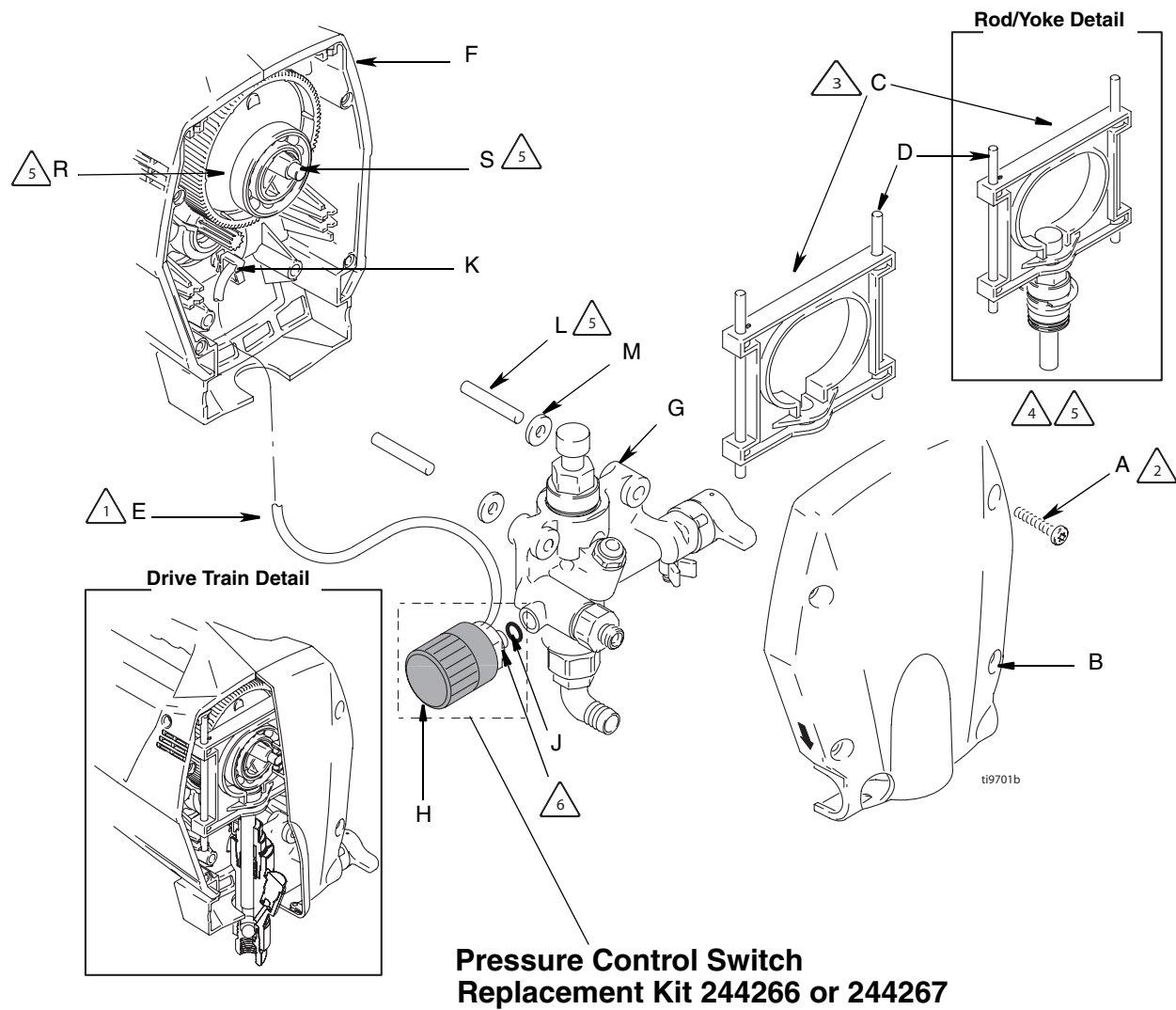


Installation Notes for page 5

To prevent misalignment, assemble with sprayer tipped onto back of enclosure.

1. Take care to not pinch wiring harness (E) between pump (G) and any part of drive housing (F) or between front cover (B) and drive housing. Use a needle-nose pliers to remove harness.
2. For best cover (B) alignment, tighten lower two cover screws (A) first, then top two. Torque screws to 110-120 in.-lbs (12.4-13.6 N•m).
3. For yoke (C) installation, bearing (R) on gear (S) must touch top of pump rod. Turn gear to move bearing to proper height.
4. If yoke guide rods (D) drop out of position during assembly, damage will occur when cover (B) is tightened. Always check position of guide rods before tightening cover.
5. Apply light coat of oil.
6. Apply one or two drops of thread locking adhesive (included in kit) to threads of pressure control switch (H). Torque to 140-160 in.-lbs (16-18 N•m).

XR Model Sprayers



SR7 Model Sprayers

Disassembly

1. Unplug electrical cord, and **relieve pressure**.
2. Remove AutoPrime™ cover (A).
3. Remove the four cover screws (B) and front cover (C).
4. Remove yoke (D) and guide rods (E).
5. Disconnect pressure control wiring harness (F) and AutoPrime (G) wiring harness from control board connector (H) at back of drive housing (J). **Using fingernail or tip of small, flat-blade screwdriver, press tab on right side of retention clips (K) to release harness wires.**
6. Remove pump (M) from drive housing (J).
7. Place pump (M) on workbench or in vise.
8. Unscrew pressure control switch knob (P). Verify the o-ring seal (R) is removed from pump (M).

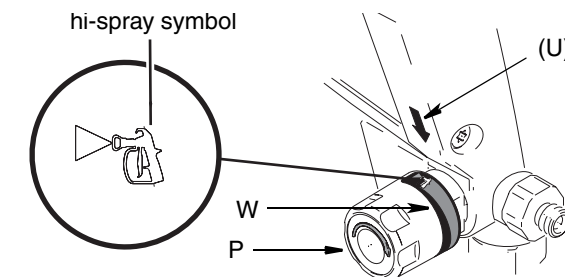
Installation

- Before you begin reassembly, read all **Installation Notes** below. For more information, refer to assembly illustrations on page 7.
1. Examine new pressure control switch (P) to verify o-ring seal (R) is in place. If it is not installed on pressure control switch, install o-ring seal.
 2. Apply thread locker (included in kit) to threads of pressure control switch (P). Screw new pressure control switch knob into pump (M). Torque to 140 to 160 in-lb (16 to 18 N•m). **Do not overtighten, or damage could occur.**
 3. Route AutoPrime wiring harness (G) through AutoPrime cover (A) and retention clip (K) and pressure control wiring harness (F) through retention clip (K) and connect

to control board connector (H) at back of drive housing (J) (as shown in wiring diagram, page 7).

4. Secure wires (F and G) in place by closing retention clips (K) securely over wires.
5. Install pump (M) on mounting pins (S). **Make sure the plastic washers (T) are between the drive housing (J) and the pump (M) and that the pressure control wires (F) and AutoPrime wires (G) are not pinched between pump and drive housing.**
6. Install yoke (D) with rod cap in slot of yoke, as shown in **Rod/Yoke Detail**.
7. Check final assembly against **Drive Train Detail**.
8. Install front cover (C) and cover screws (B). Torque to 110-120 in.-lbs (12.4-13.6 N•m).
9. Apply arrow indicator label (U) to front cover (C) as shown below.
10. Turn pressure control switch knob (P) clockwise as far as it will go. Apply pressure control label (W) to pressure control switch knob. To position label correctly, see note below.

When properly positioned, the arrow indicator label (U) and hi-spray symbol on pressure control label (W) are aligned.



Installation Notes for page 7

To prevent misalignment, assemble with sprayer tipped onto back of enclosure.



Take care to not pinch wiring harnesses (F and G) between pump (M) and any part of drive housing (J) or between front cover (C) and drive housing. Use a needle-nose pliers to remove harness.



For best cover (C) alignment, tighten lower two cover screws (B) first, then top two. Torque screws to 110-120 in.-lbs (12.4-13.6 N•m).



For yoke (D) installation, bearing (X) on gear (Y) must touch top of pump rod. Turn gear to move eccentric bearing to proper height.



If yoke guide rods (E) drop out of position during assembly, damage will occur when cover is tightened. Always check position of guide rods before tightening cover.

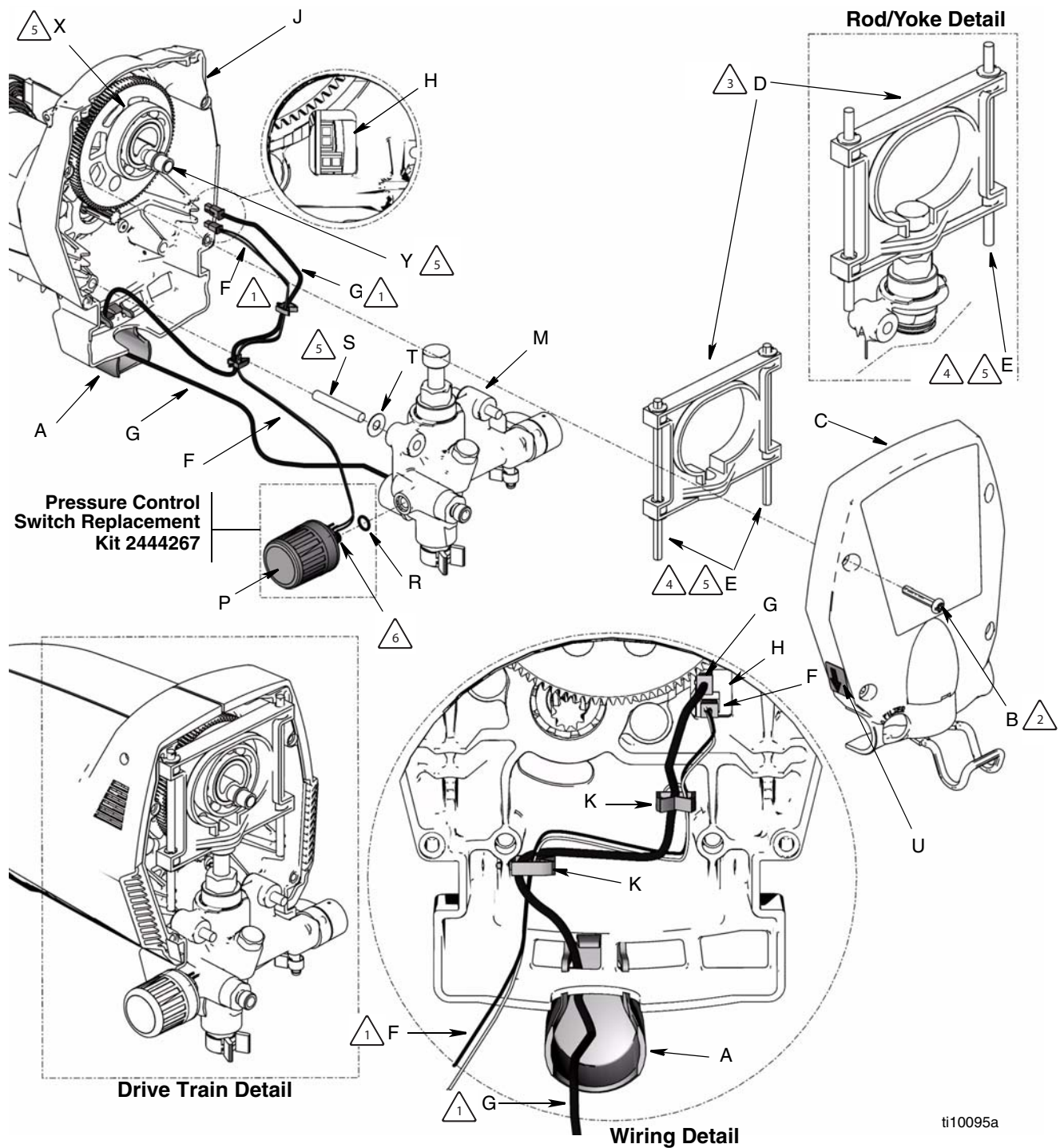


Apply light coat of oil.



Apply one or two drops of thread locking adhesive (included in kit) to threads of pressure control switch (P). Torque to 140-160 in.-lbs (16-18 N•m).

SR7 Model Sprayers



ProX7 and ProX9 Model Sprayers

Disassembly

1. Unplug electrical cord, and **relieve pressure**.
2. Remove the four cover screws (B) and front cover (C).
3. Remove yoke (D) and guide rods (E).
4. Disconnect pressure control wiring harness (F) and AutoPrime™ wiring harness (G) from control board connector (H) at back of drive housing (J). **Using fingernail or tip of small, flat-blade screwdriver, press tab on right side of connector to release.**
5. Remove pump (M) from drive housing (J).
6. Place pump (M) on workbench or in vise.
7. Remove AutoPrime cover (A).
8. Unscrew pressure control switch knob (P). Verify the o-ring seal (R) also is removed from pump (M).

Installation

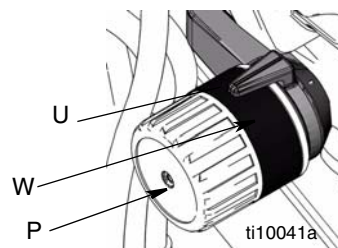
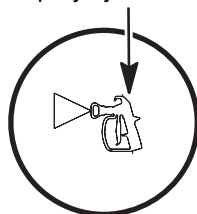
- Before you begin reassembly, read all **Installation Notes** below. For more information, refer to assembly illustrations on page 9.
1. Examine new pressure control switch (P) to verify o-ring seal (R) is in place. If it is not installed on pressure control switch, install o-ring seal.
 2. Apply thread locker (included in kit) to threads of pressure control switch. Screw new pressure control switch knob (P) into pump (M), and torque to 140 to 160 in-lb (16 to 18 N•m). **Do not overtighten, or damage could occur.**
 3. Route pressure control wiring harness (F) and AutoPrime wiring harness (G) through AutoPrime cover (A) and

retention clips (K) and connect to control board connector (H) at back of drive housing (J) as shown in wiring diagram, page 9.

4. Secure wires (F and G) in place by closing retention clips (K) securely over wires.
5. Install pump (M) on mounting pins (S). **Make sure the plastic washers (T) are between the drive housing (J) and the pump and that the pressure control wires (F) and AutoPrime wires (G) are not pinched between pump and drive housing.**
6. Install yoke (D) with rod cap in slot of yoke, as shown in **Rod/Yoke Detail**.
7. Check final assembly against **Drive Train Detail**.
8. Install front cover (C) and cover screws (B). Torque to 110-120 in.-lbs (12.4-13.6 N•m).
9. Turn pressure control switch knob (P) clockwise as far as it will go. Apply pressure control label (W) to knob. To position label correctly, see note below.

When properly positioned, the function indicator (U) and hi-spray position symbol on pressure control label (W) are aligned.

hi-spray symbol



Installation Notes for page 9

To prevent misalignment, assemble with sprayer tipped onto back of enclosure.



Take care to not pinch wiring harnesses (F and G) between pump (M) and any part of drive housing (J) or between front cover (C) and drive housing. Use a needle-nose pliers to remove harness.



For best cover (C) alignment, tighten lower two cover screws (B) first, then top two. Torque screws to 110-120 in.-lbs (12.4-13.6 N•m).



For yoke (D) installation, bearing (X) on gear (Y) must touch top of pump rod. Turn gear to move bearing to proper height.



If yoke guide rods (E) drop out of position during assembly, damage will occur when cover is tightened. Always check position of guide rods before tightening cover.

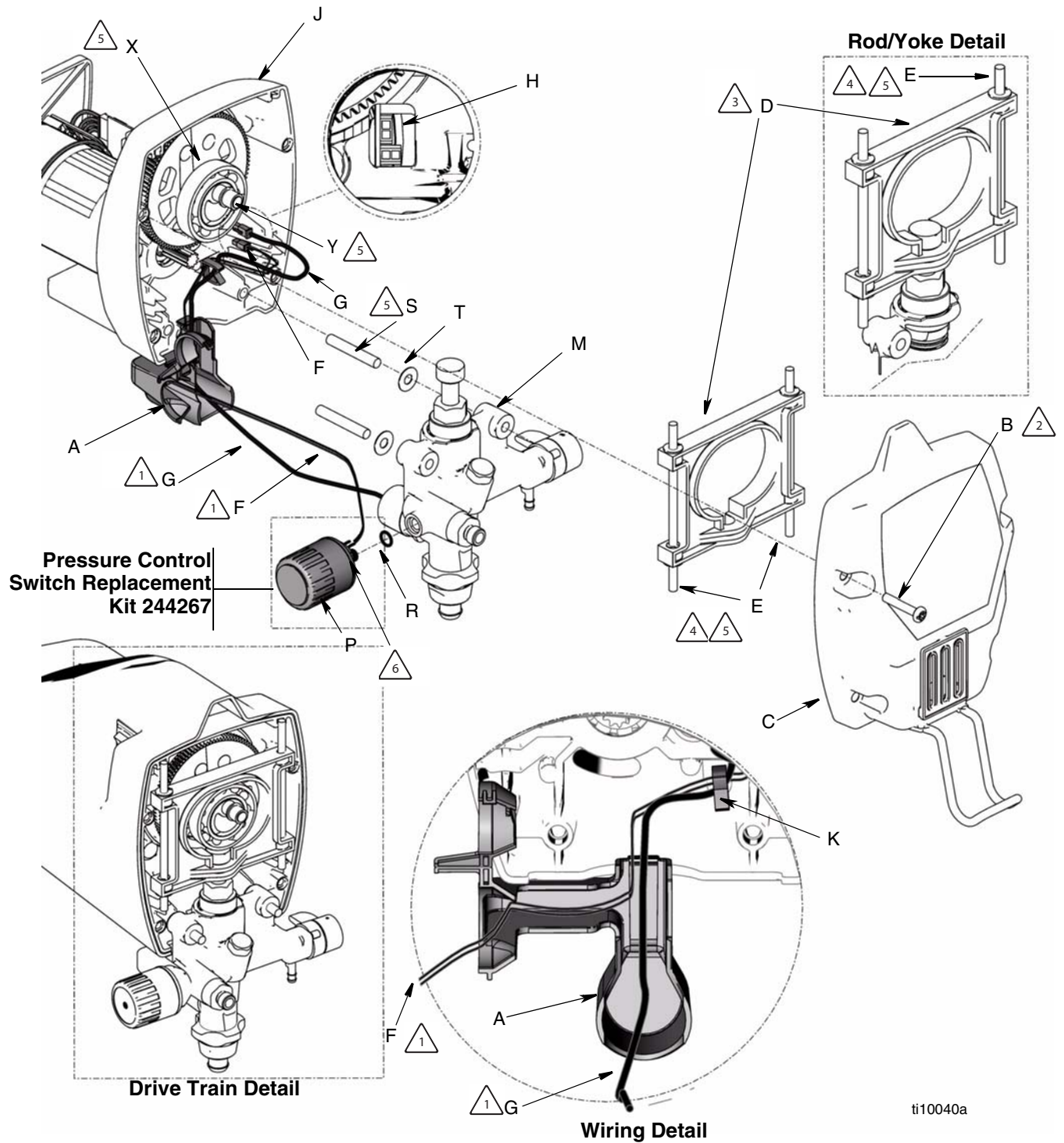


Apply light coat of oil.



Apply one or two drops of thread locking adhesive (included in kit) to threads of pressure control switch (P). Torque to 140-160 in.-lbs (16-18 N•m).

ProX7 and ProX9 Model Sprayers



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All written and visual data contained in this document reflects the latest product information available at the time of publication.
Graco reserves the right to make changes at any time without notice.

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