

ELECTRONIC PEDAL



Service Instructions

TABLE 1

Model Number	See Page	Description
20-910-013	2, 3	45° pedal angle with sensor on left side
20-910-014	2, 3	25° pedal angle with sensor on right side
20-910-015	2, 3	25° pedal angle with sensor on left side
20-910-016	2, 3	45° pedal angle with sensor on right side
06-466-109	4	63° pedal angle with sensor on left side
06-466-168	2, 3	45° pedal angle with sensor on right side
06-466-507	2, 3	45° pedal angle with sensor on right side
06-466-535	2, 3	45° pedal angle with sensor on right side
06-466-466	4	63° pedal angle with sensor on left side
07-910-002	2, 3	44° pedal angle with sensor on left side

NOTE: If your product number is not listed, contact ZF Off-Highway Solutions Minnesota Inc. for information.

Cover Installation Instructions

1. The cover is shipped unattached to the base. Carefully work the wire harness grommet into the slot on the base. Connect the wire harness to the sensor.
2. Install the cover and socket head cap screws. Torque socket head cap screws 1.1-2.8 N·m (10-25 lb·in).

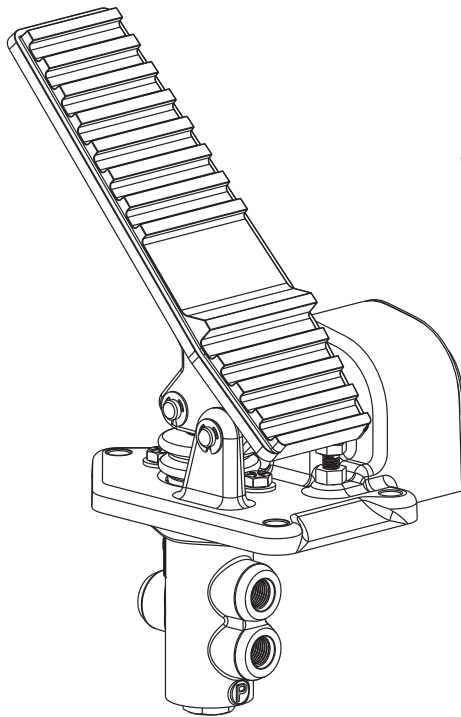


FIGURE 1
(06-466-168 shown)

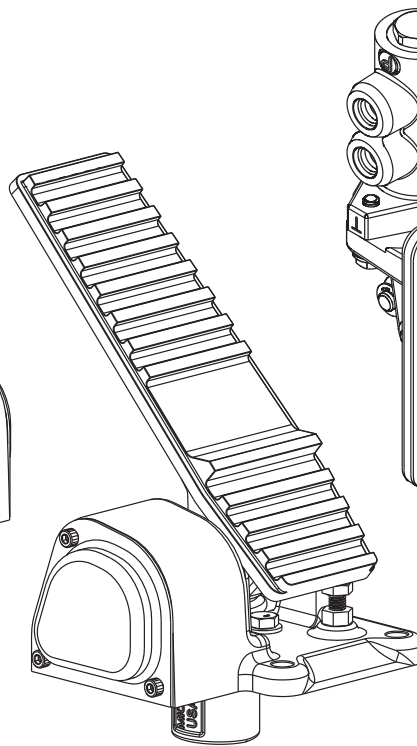


FIGURE 2
(20-910-013 shown)

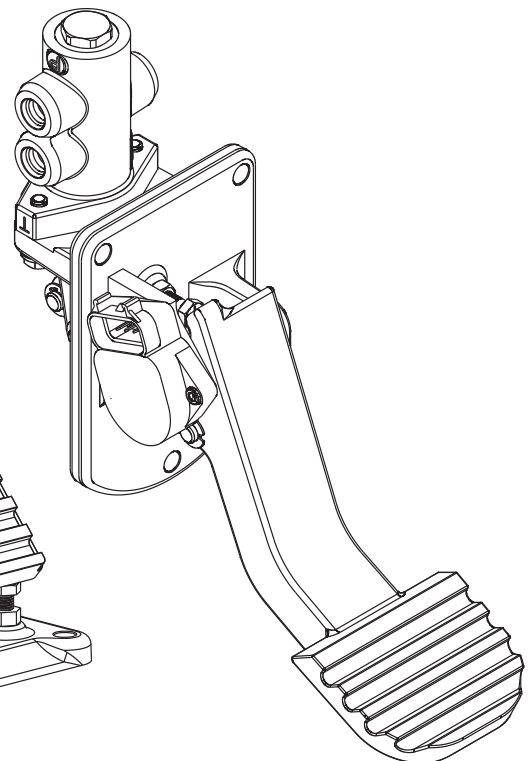


FIGURE 3
(06-466-109 shown)

NOTE

Before servicing the electronic pedal, remove it from the machine to prevent unintentional operation of machine. This literature services various electronic pedal models. The components in Figure 4 may appear different than what is found on your electronic pedal.

DISASSEMBLY

(Refer to Figures 1, 2, and 4)

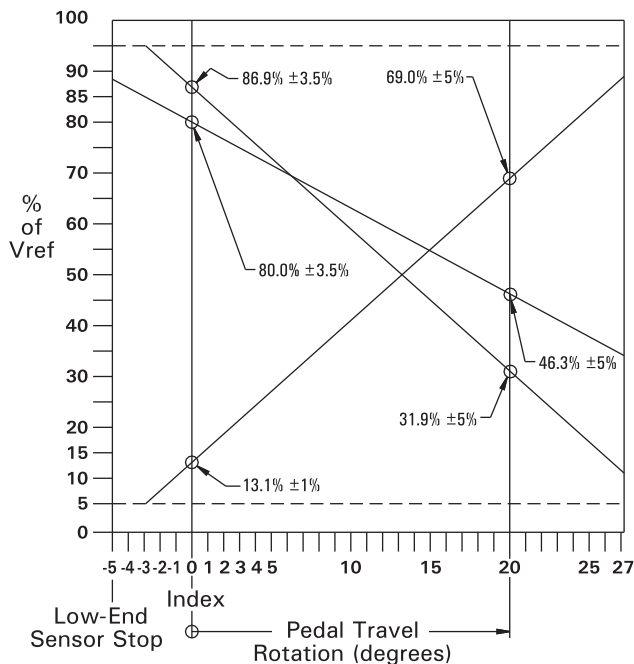
1. Loosen cap screw (10) and remove pin (12) from pedal and base (9). Bearing (11) may be tight fit into base (9), it is unnecessary to remove bearing (11).
2. Remove three socket head cap screws (1) from base (9) and remove cover (2).
3. Remove two socket head cap screws (3) from base (9). Remove sensor (4) and o-ring (5) from base (9). Disconnect the wire harness from sensor (4).
4. It is unnecessary to remove wire harness and grommet (8) from base (9) unless grommet (8) is damaged or requires replacement. If grommet (8) is being replaced, it may be necessary to cut it before it can be removed from the wire harness.
5. Remove bearing (6) and o-ring (7) from base (9). Bearing (6) may be tight fit into base (9) bore. Be careful not to damage base (9) bore.

ASSEMBLY

(Refer to Figures 1, 2, and 4)

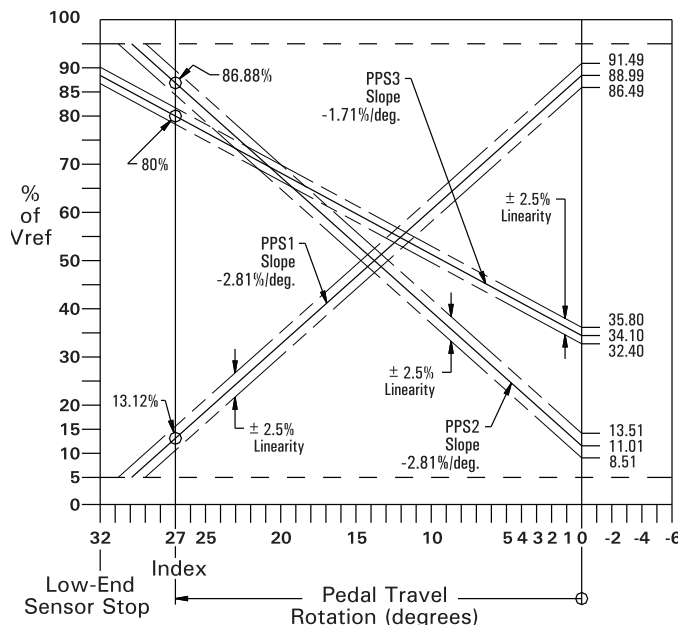
1. Lubricate new o-ring (7) with light oil and install in base (9).
2. Carefully install new bearing (6) in base (9).
3. Install new o-ring (5) on new sensor (4) and position new sensor (4) on base (9). Apply one drop of Loctite 242 to threads of new socket head cap screws (3). Install new socket cap screws (3) and torque 2.3-2.8 N·m (20-25 lb·in).
4. Clean and install bearing (11) if it was removed during disassembly.
5. Clean and fully lubricate pin (12) with a polymer base moly grease. Install pin (12) in pedal and base (9). Rotate pin (12) until it is properly positioned in the new sensor and the flat on pin (12) is aligned with cap screw (10). Torque cap screw (10) 7.0-7.7 N·m (62-68 lb·in). Be sure pedal assembly is equally spaced between ears of base (9) and moves freely.
6. To adjust the new sensor, apply a ref voltage (5 VDC recommended) to one of the pots used in the application. Loosen jam nut (13) and adjust cap screw (14) to position the pedal and achieve the desired voltage in the zero index. See curve charts on pages 2 and 3.
7. If new grommet (8) is being installed, cut a slit in the new grommet and install the wire harness in the grommet. Carefully work new grommet (8) into the slot on base (9). Connect the wire harness to new sensor (4).
8. Install cover (2) and socket head cap screws (1) and torque 1.1-2.8 N·m (10-25 lb·in).

Nominal Pedal Position Sensor (PPS) Index and Associated Electrical Output Curves for model number 06-466-168



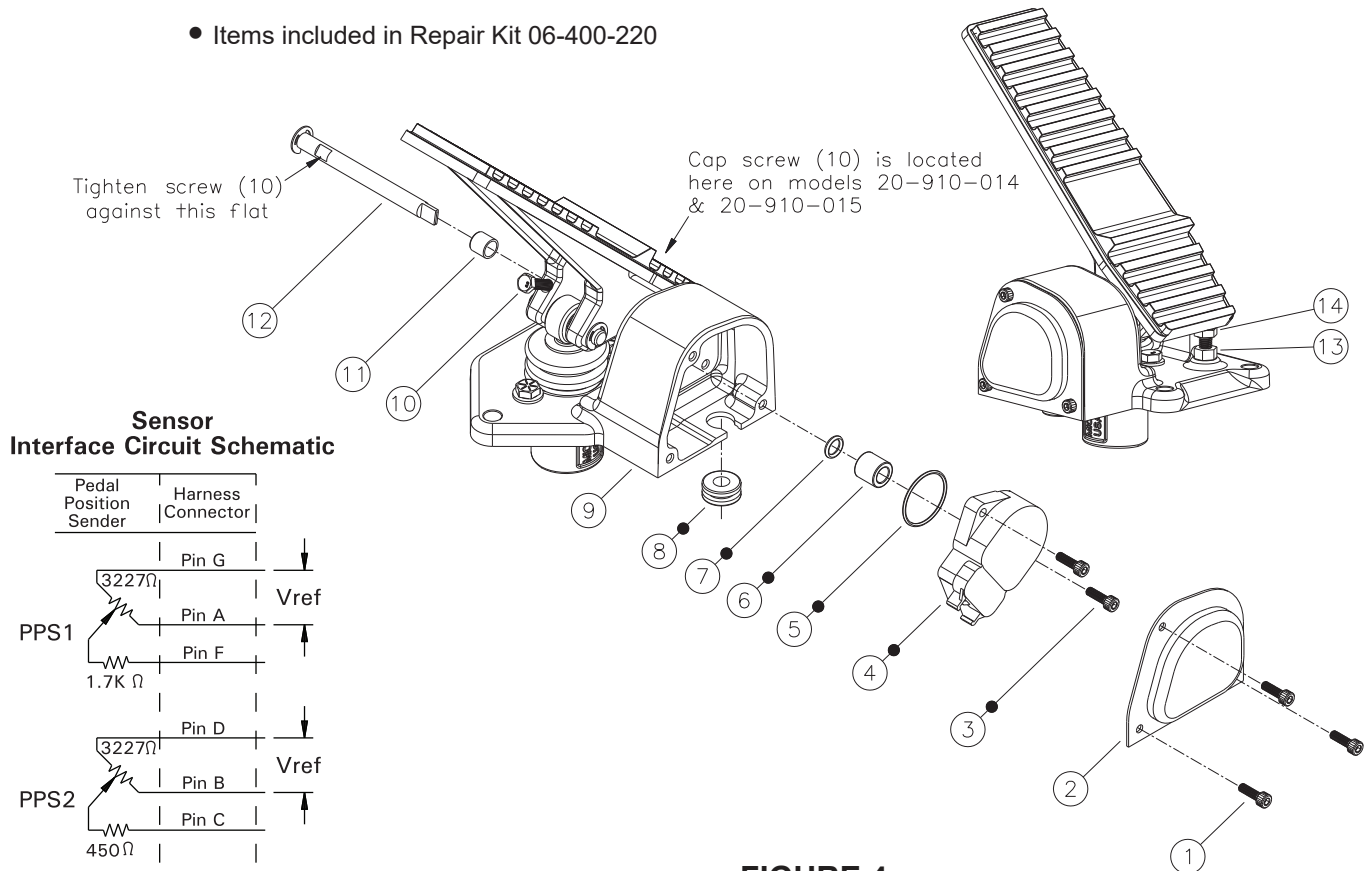
Curves shown for pin G, pin D, and pin E high. Reversing Vref reverses the curve for that pot.

Nominal Pedal Position Sensor (PPS) Index and Associated Electrical Output Curves for model numbers 20-910-013, 20-910-015 & 07-910-002



Curves shown for pin G, pin D, and pin E high. Reversing Vref reverses the curve for that pot.

- Items included in Repair Kit 06-400-220



Sensor Interface Circuit Schematic

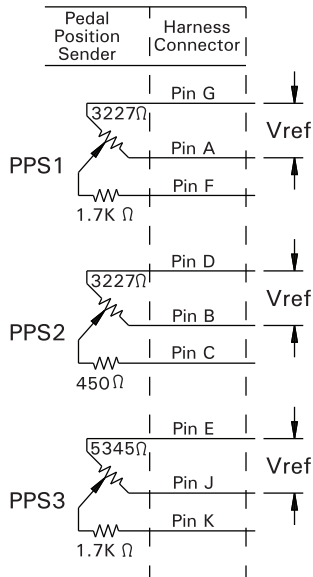
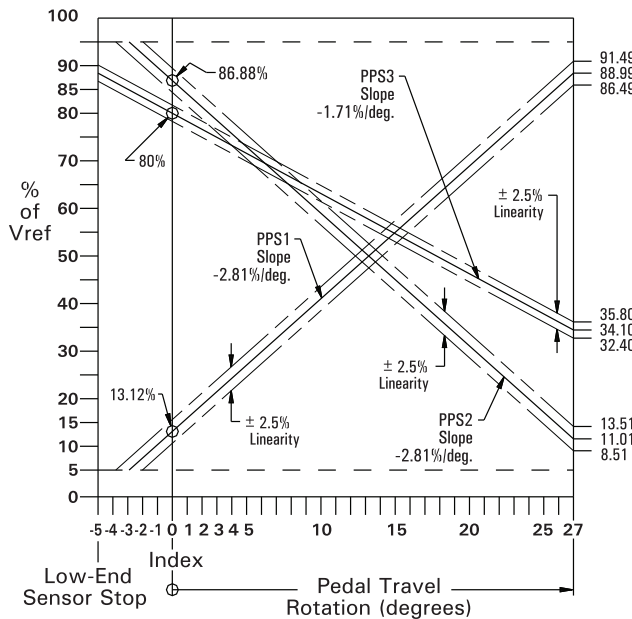
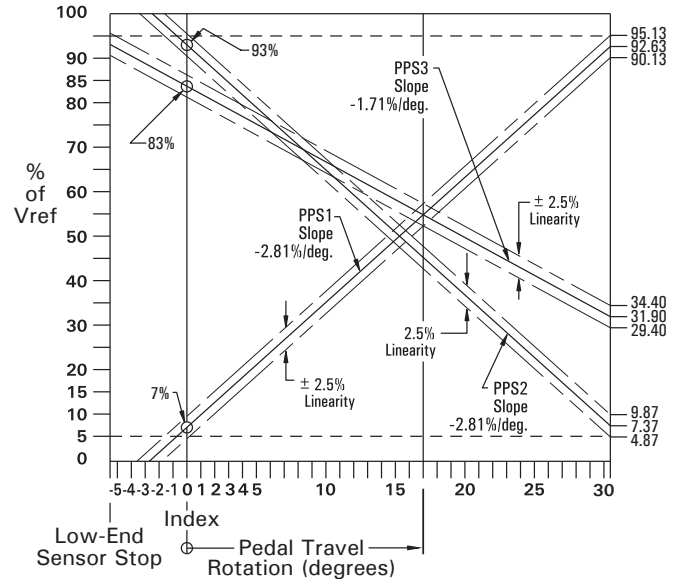


FIGURE 4

Nominal Pedal Position Sensor (PPS) Index and Associated Electrical Output Curves for model numbers 20-190-014 & 20-910-016



Nominal Pedal Position Sensor (PPS) Index and Associated Electrical Output Curves for model numbers 06-466-507 & 06-466-535



Curves shown for pin G, pin D, and pin E high. Reversing Vref reverses the curve for that pot.

Curves shown for pin G, pin D, and pin E high. Reversing Vref reverses the curve for that pot.

NOTE

Before servicing the electronic pedal, remove it from vehicle to prevent unintentional operation of vehicle. This literature services various electronic pedal models. The components in Figure 5 may appear different than what is found on your electronic pedal.

- Items included in Repair Kit 06-400-220

DISASSEMBLY

(Refer to Figures 3 and 5)

1. Remove two socket head cap screws (1) and sensor (2) from base (5).

ASSEMBLY

(Refer to Figures 3 and 5)

1. Position new sensor (2) on base (5) and reinstall socket head cap screws (1). Torque cap screws (1) 2.3-2.8 N·m (20-25 lb-in).
2. To adjust the new sensor, apply a ref voltage (5 VDC recommended) to one of the pots used in the application. Loosen jam nut (3) and adjust cap screw (4) to position the pedal and achieve the desired voltage in the zero index. See curve charts below.

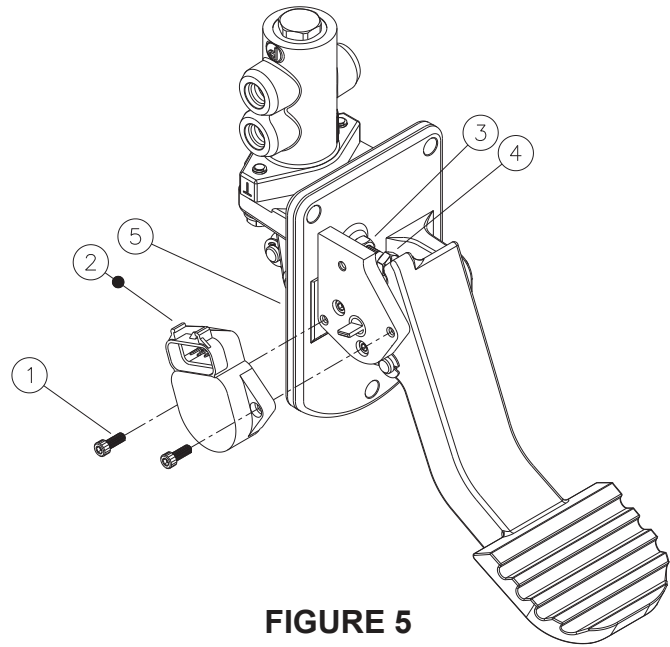
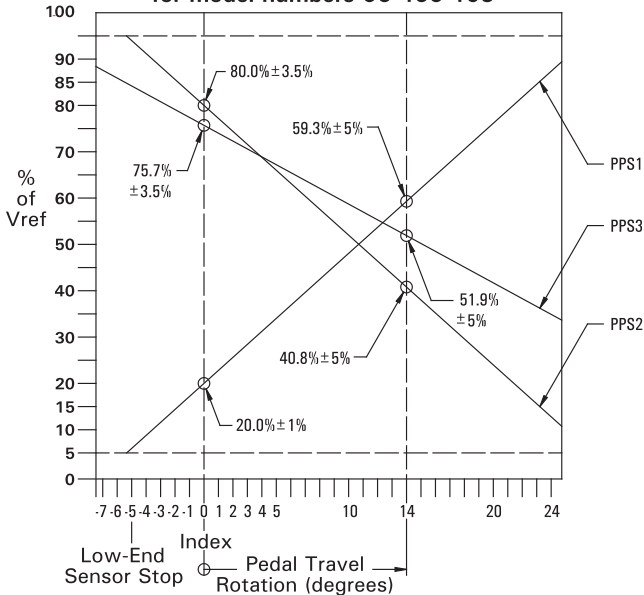


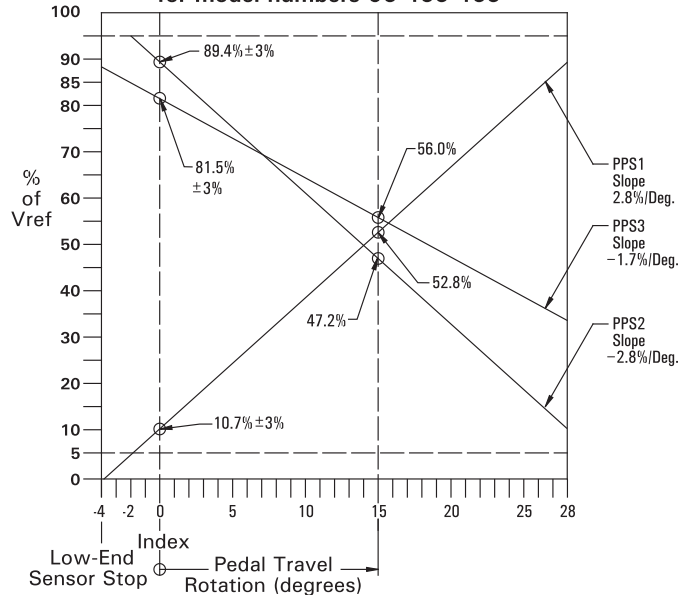
FIGURE 5

Nominal Pedal Position Sensor (PPS) Index and Associated Electrical Output Curves for model numbers 06-466-109



Curves shown for pin G, pin D, and pin E high. Reversing Vref reverses the curve for that pot.

Nominal Pedal Position Sensor (PPS) Index and Associated Electrical Output Curves for model numbers 06-466-466



Curves shown for pin G, pin D, and pin E high. Reversing Vref reverses the curve for that pot.

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