

PREVOST

Instruction Sheet

IS-96014D

TACHOMETER OR SPEEDOMETER REPLACEMENT KITS

REVISION: D

MPH speedometer # 090215 discontinued. Replaced by MPH speedometer # 090001

Tachometer # 590290 discontinued. Replaced by tachometer # 590005

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MATERIAL

Kit # **IS96014-2** TACHOMETER REPLACEMENT includes the following parts:

Part No.	Description	Qty
590005	TACHOMETER - SINGLEVIU	1
561255	WIRE, 18 AWG, GXL, YELLOW (6 feet long)	1
561256	WIRE, 18 AWG, GXL, 125 DEG ORANGE (6 inches long)	1
561457	TERMINAL, SPADE 22-18, #6, INS	1
561626	TERMINAL, RECEPTACLE, ST,22-18,1/4, INS	1
561904	TERMINAL, TAB ST 22-18 ¼ INS	1
562935	BUTT SPLICE	7
IS-96014	INSTRUCTION SHEET	1
FI-96014	FEUILLE D'INSTRUCTION	1

Kit # **IS96014-1** SPEEDOMETER (MPH) REPLACEMENT includes the following parts:

Part No.	Description	Qty
090001	SPEEDOMETER (MPH) - SINGLEVIU	1
561255	WIRE, 18 AWG, GXL, YELLOW (6 feet long)	1
561256	WIRE, 18 AWG, GXL, 125 DEG ORANGE (6 inches long)	1
561457	TERMINAL, SPADE 22-18, #6, INS	1
561626	TERMINAL, RECEPTACLE, ST,22-18,1/4, INS	1
561904	TERMINAL, TAB ST 22-18 ¼ INS	1
562935	BUTT SPLICE	7
IS-96014	INSTRUCTION SHEET	1
FI-96014	FEUILLE D'INSTRUCTION	1

Kit # **090219** SPEEDOMETER (km/h) REPLACEMENT includes the following parts:

Part No.	Description	Qty
090216	SPEEDOMETER (KM/H)	1
064266	WIRING HARNESS	1
IS-96014	INSTRUCTION SHEET	1
FI-96014	FEUILLE D'INSTRUCTIONS	1

PREVOST

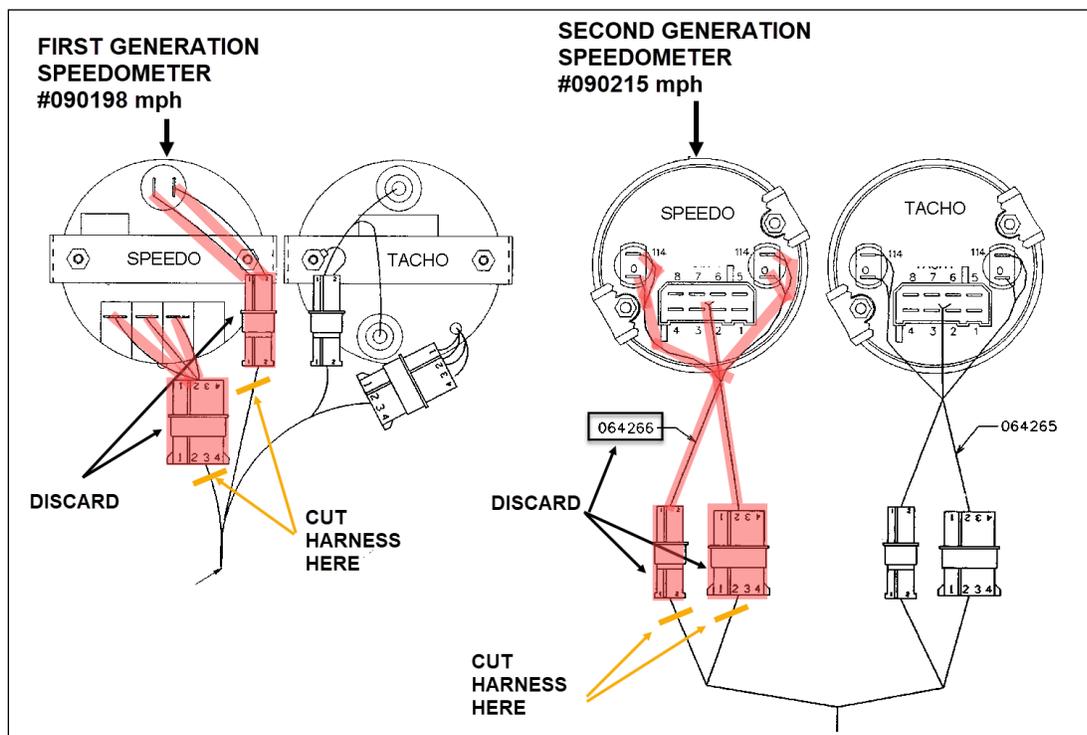
MPH SPEEDOMETER REPLACEMENT - PROCEDURE APPLICABLE TO KIT # IS96014-1

⚠ WARNING ⚠

Park vehicle safely, apply parking brake, stop the engine and set battery master switch(es) to the OFF position prior to working on the vehicle.

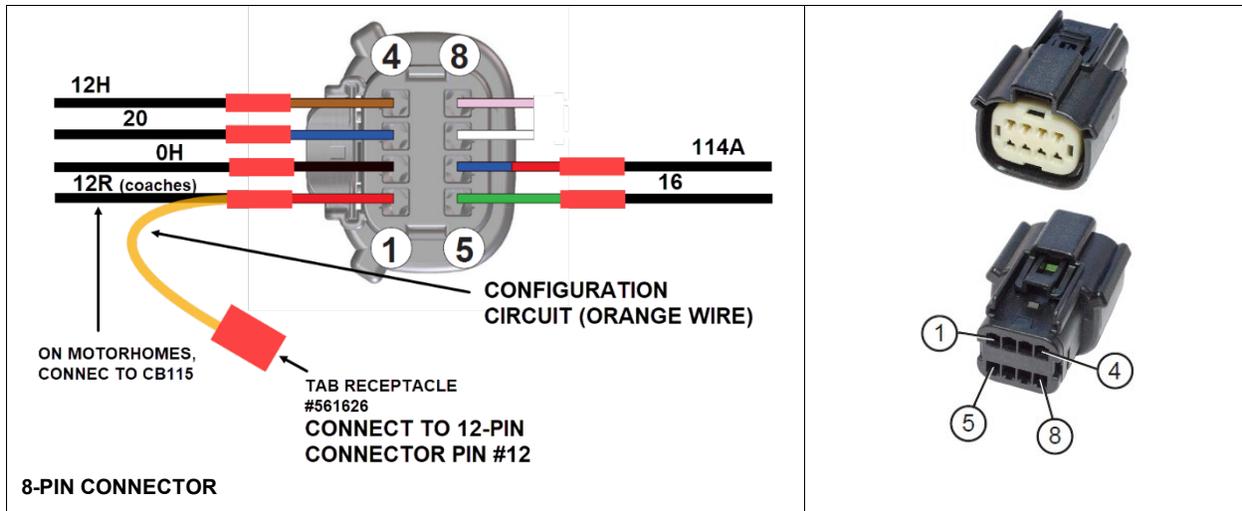
1. Set the ignition switch to the OFF position.
2. Remove dashboard panel retaining screws. For H3 series vehicles, remove caps and screws located on dashboard cover. Remove dashboard panel retaining screws.
3. For accessing purposes, pull out the dashboard panel.
4. Locate the speedometer.
5. Unplug the connectors at the back of the speedometer.
6. Cut the harness as shown in the image below and discard the existing harness.

Note: On the second-generation speedometer, interface harness 064266 is present only if this speedometer was used as a replacement for the first-generation speedometer.



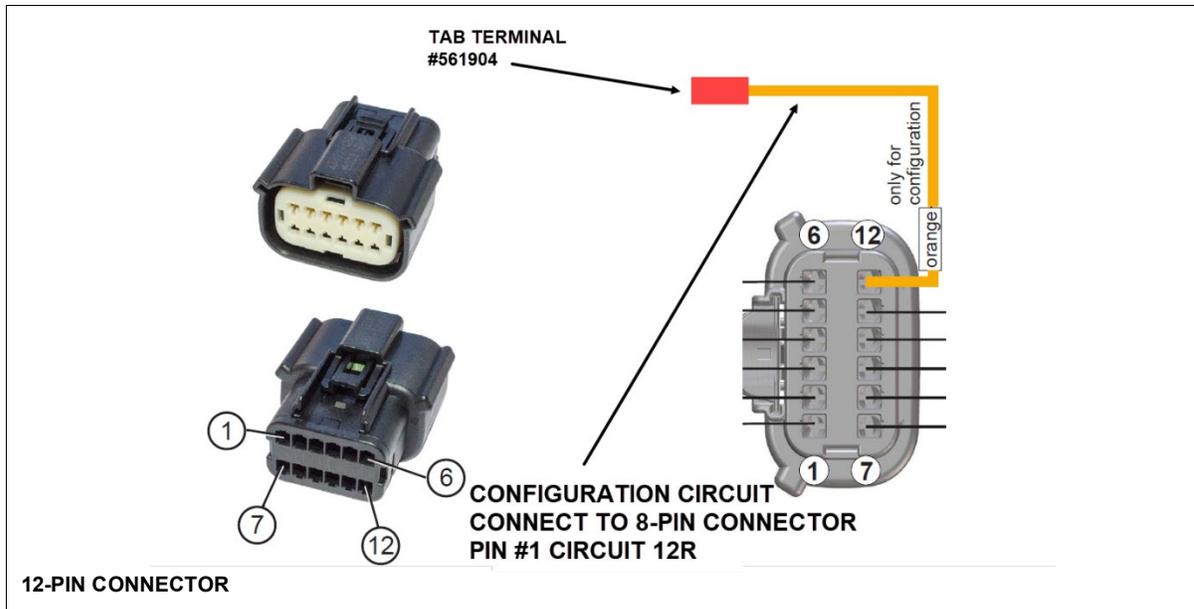
7. Remove existing gauge.
8. Using the included butt splices, connect the vehicle's circuits to the included 8-pin connector wires as follows:

NOTE: use orange wire #561626 to build the configuration circuit shown on the image below.

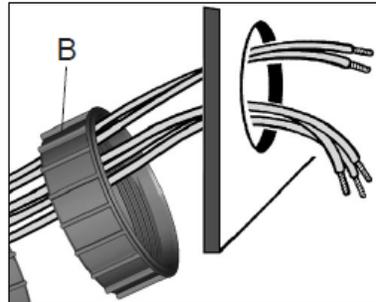
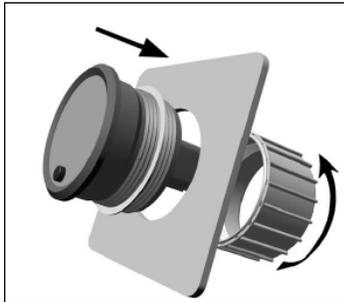


pin #	wire color	function	connect with circuit	instruction
1	red	12V battery (+)	12R + configuration circuit	Seated coach: splice with radio circuit 12R (12 V battery using 1 butt splice #562935) Motorhome: connect to circuit breaker CB115 in front junction box (use included 6 ft yellow wire and spade terminal #561457)
2	black	ground	0H	splice with ground wire #0H
3	blue	ground reference for sensor signal	20	splice with ground reference sensor signal wire #20
4	brown	ignition	12H	splice with ignition wire #12H
5	green	analog sensor signal	16	splice with analog sensor signal wire #16
6	blue/ red	gauge illumination	114A	splice with wire #114A
7	white	not used		
8	pink	not used		

9. Heat up the butt splices to seal the wire junctions as it has a hot-melt adhesive liner.
10. Install the included tab terminal #561904 to the configuration circuit (orange wire) pin #12 of the 12-pin connector as shown on the image below.



11. Put the gauge into the mounting hole and turn it into intended orientation. Make sure that the seal lie untwisted between the panel and the front ring.
12. Hand-tighten the spinlock nut. Use the spinlock nut in orientation B with centering lip ahead as shown.



13. Inside main power compartment set the battery master switch to the ON position.
14. Proceed to the calibration of the instrument. Refer to **MPH SPEEDOMETER CALIBRATION** below.
15. Once calibration is completed, unplug the configuration circuit.
16. Leave the 12-pin connector in place.
17. Reinstall dashboard panels and covers.

MPH SPEEDOMETER CALIBRATION

Calibration mode: PULSE

We will use the PULSE mode consisting in introducing the known pulse-per-mile or km/h for the vehicle and sensor being used with the speedometer.

- a) *Determine the speedometer calibration value, which represents the number of pulses, using the table below.*

CALIBRATION TABLE				
VEHICLE APPLICATION	TRANSMISSION	DIFFERENTIAL RATIO ¹	NUMBER OF PULSES	
			mph	Km/h
"H" SERIES	ATEC OR MA- NUAL TRANS- MISSION	3.21	25010	15540
		3.42	26650	16560
		3.56	27740	17240
		3.58	27900	17330
		3.73	29060	18060
	HYDRAULIC TRANSMISSION (30 PULSES)	3.21	21650	13450
		3.42	23060	14330
		3.58	24140	15000
		3.73	25150	15630
		"H" & "XL" SERIES	WORLD TRANS- MISSION	4.56
4.58	38030			23620
"XL" SERIES	FRONT WHEEL	N/A	58440	36820
"96" & "XL" SERIES	MANUAL TRANSMISSION	3.33	8110	5040
		3.73	9080	5540
		4.11	10010	6220
	ATEC OR HY- DRAULIC TRANSMISSION	3.33	11230	6990
		3.73	12580	7820
		4.11	13860	8620

- b) Plug the 12-pin connector at the back of the gauge.
- c) Connect the configuration circuit pin #12 of the 12-pin connector to circuit 12R pin #1 of the 8-pin connector.
- d) Set the ignition switch to the ON position.

NOTE: Powering the tachometer while the Configuration Circuit (orange wire) is connected activates the Configuration Menu for a period of 30 seconds.

¹ If your vehicle differential ratio is not listed, contact your Prevost Car service representative.



CONFIGURATION MENU

NOTE: The Configuration Menu closes, and the gauge starts regular operation mode after 30 seconds unless the calibration process is undertaken.

REMARQUE: **Short button Press = SP (less than 2 sec)**
 Long button Press = LP (greater than 2 sec)

- e) SP repeatedly the front button to scroll down to "PULSES" menu.
- f) LP the front button to enter programming mode. First digit is blinking.
- g) SP repeatedly to adjust 1st digit.
- h) LP the front button until 2nd digit is blinks.
- i) SP the front button to adjust 2nd digit.
- j) Repeat for 3rd, 4th and 5th digits.
- k) Wait for 30 seconds without a button press. The Configuration Menu will close, and the gauge starts regular operation.

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TACHOMETER REPLACEMENT - PROCEDURE APPLICABLE TO KIT # IS96014-2

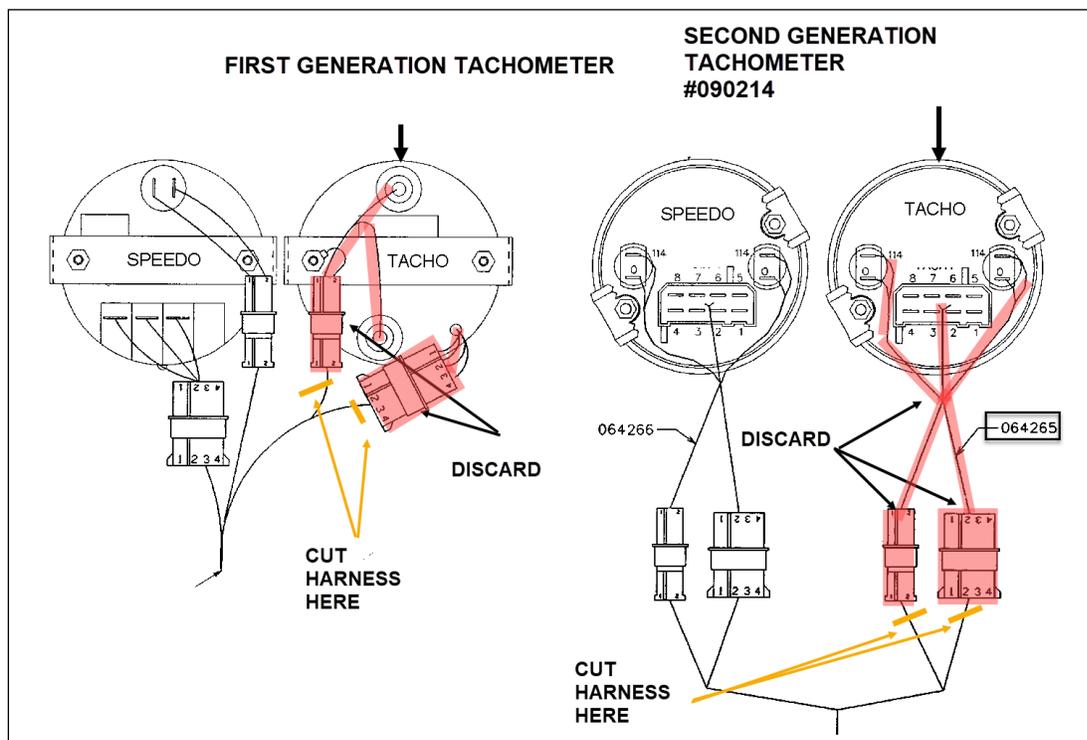


WARNING

Park vehicle safely, apply parking brake, stop the engine and set battery master switch(es) to the OFF position prior to working on the vehicle.

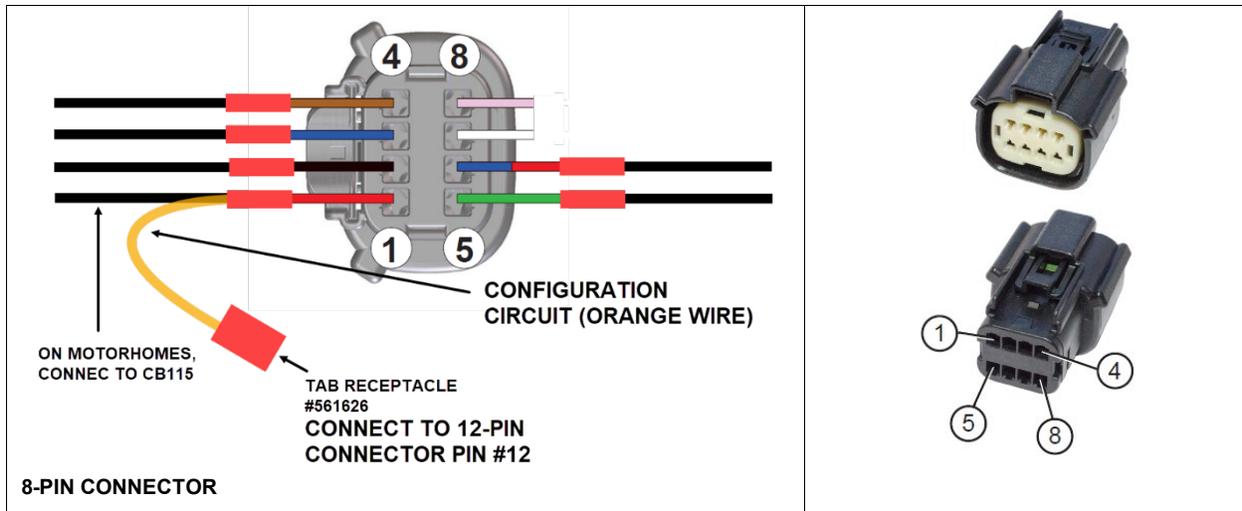
1. Set the ignition switch to the OFF position.
2. Remove dashboard panel retaining screws. For H3 series vehicles, remove caps and screws located on dashboard cover. Remove dashboard panel retaining screws.
3. For accessing purposes, pull out the dashboard panel.
4. Locate the tachometer.
5. Unplug the connectors at the back of the tachometer.
6. Cut the harness as shown in the image below and discard the existing harness.

Note: On the second-generation tachometer, interface harness 064265 is present only if this tachometer was used as a replacement for the first-generation tachometer.



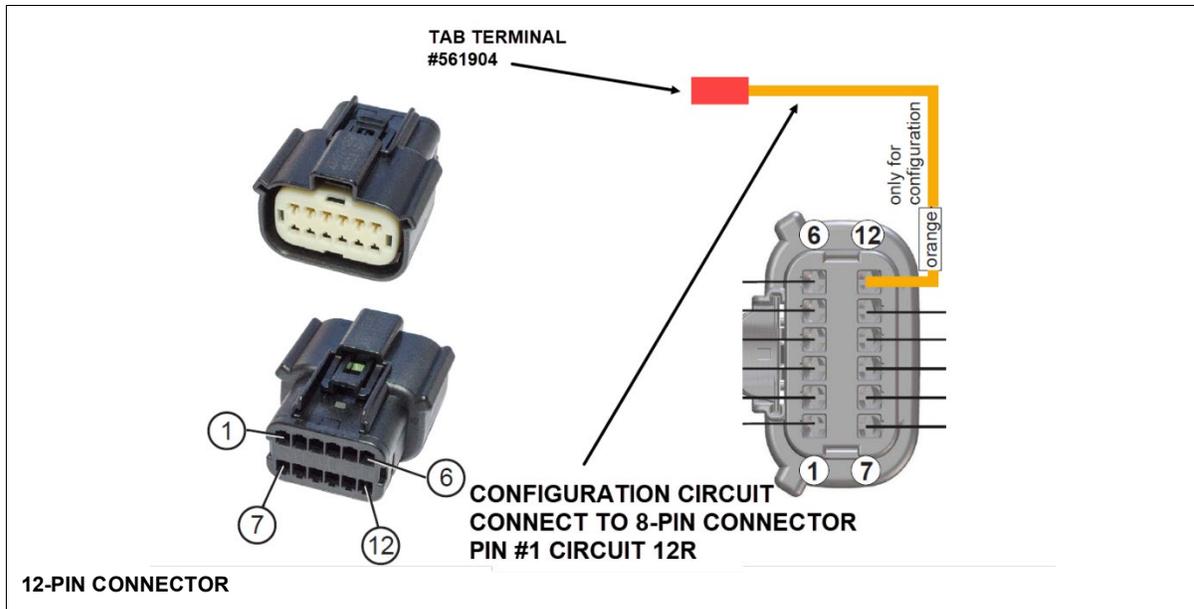
7. Remove existing gauge.
8. Using the included butt splices, connect the vehicle's circuits to the included 8-pin connector wires as follows:

NOTE: use orange wire #561626 to build the configuration circuit shown on the image below.

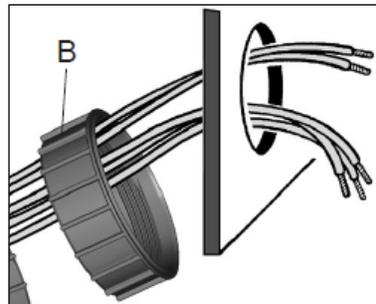
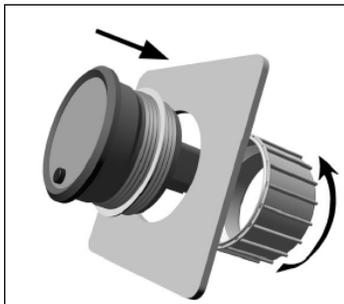


pin #	wire color	function	connect with circuit	instruction
1	red	12V battery (+)	12SC (H3) 12SB (XL) + configuration circuit	Seated coach: splice with radio circuit 12SC (H3) or 12SB (XL) (12 V battery using 1 butt splice #562935) Motorhome: connect to circuit breaker CB115 in front junction box (use included 6 ft yellow wire and spade terminal #561457)
2	black	ground	0H or 0F	splice with ground wire #0H or #0F
3	blue	ground reference for sensor signal	0H or 0F	splice with ground wire #0H or #0F
4	brown	ignition	12H or 114 or 121A	splice with ignition wire #12H or 114 or 121A
5	green	analog sensor signal	1 or 505	splice with analog sensor signal wire #1 or #505
6	blue/ red	gauge illumination	114A or 114	splice with wire #114A or #114
7	white	not used		
8	pink	not used		

- Heat up the butt splices to seal the wire junctions as it has a hot-melt adhesive liner.
- Install the included tab terminal #561904 to the configuration circuit (orange wire) pin #12 of the 12-pin connector as shown in the image below.



11. Put the gauge into the mounting hole and turn it into intended orientation. Make sure that the seal lie untwisted between the panel and the front ring.
12. Hand-tighten the spinlock nut. Use the spinlock nut in orientation B with centering lip ahead as shown.



13. Inside main power compartment set the battery master switch to the ON position.
14. Proceed to the calibration of the instrument. Refer to **TACHOMETER CALIBRATION** below.

TACHOMETER CALIBRATION

The PULSE mode, consisting in introducing the known pulse for normal idle speed is used.

Number of pulses:

- 118 prior DDEC
- 12 DDEC

- a) *Plug the 12-pin connector at the back of the gauge.*
- b) *Connect the configuration circuit pin #12 of the 12-pin connector to pin #1 of the 8-pin connector.*
- c) *Set the ignition switch to the ON position.*

NOTE: Powering the tachometer while the Configuration Circuit (orange wire) is connected activates the Configuration Menu for a period of 30 seconds.



CONFIGURATION MENU

NOTE: The Configuration Menu closes, and the gauge starts regular operation mode after 30 seconds unless the calibration process is undertaken.



PULSE VALUE: 118.0 (PRIOR DDEC)



PULSE VALUE: 012.0 (DDEC)

REMARQUE:

**Short button Press = SP (less than 2 sec)
Long button Press = LP (greater than 2 sec)**

Pulse value: 118.0 (prior DDEC)

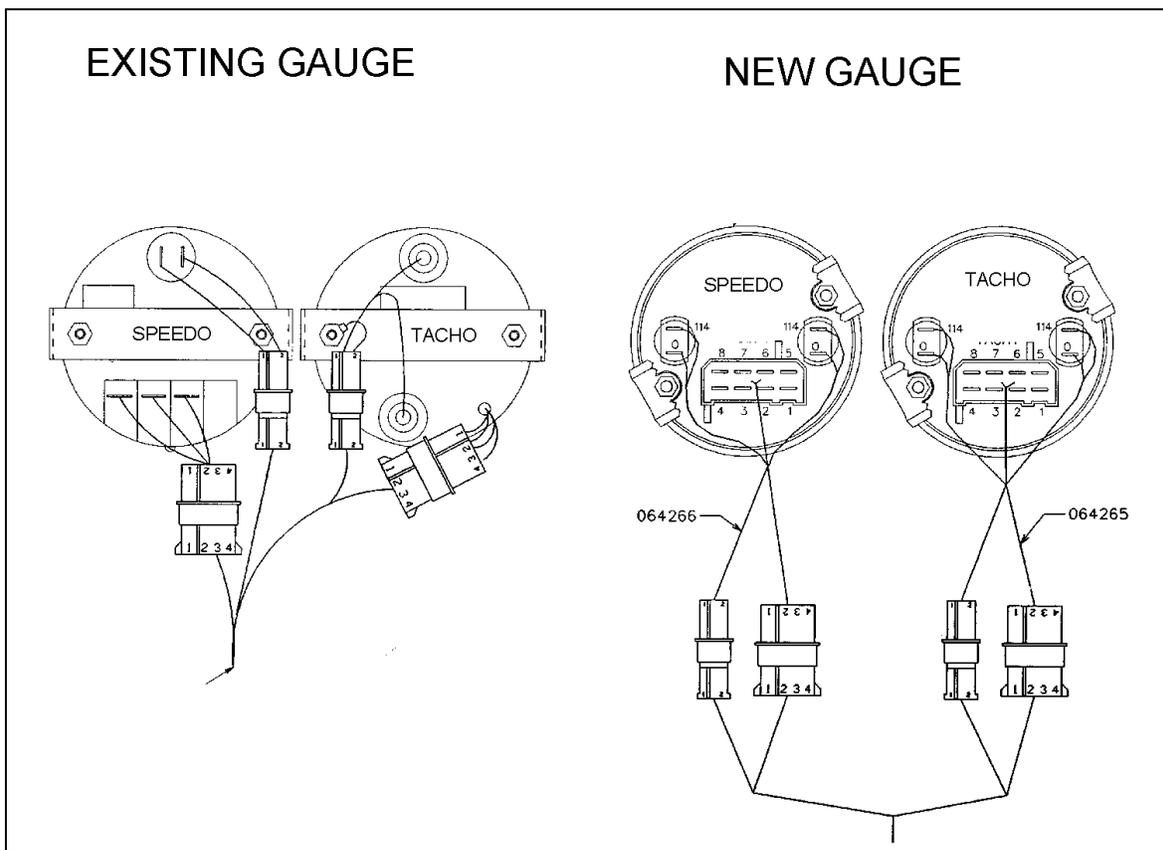
Pulse value: **012.0** (DDEC)

- d) *SP repeatedly the front button to scroll down to "PULSES" menu.*
 - e) *LP the front button to enter programming mode. First digit is blinking.*
 - f) *SP repeatedly to adjust 1st digit.*
 - g) *LP the front button until 2nd digit is blinks.*
 - h) *SP the front button to adjust 2nd digit.*
 - i) *LP the front button until 3rd digit is blinks.*
 - j) *SP the front button to adjust 3rd digit.*
 - k) *Proceed similarly for the 4th digit.*
 - l) *Wait for 30 seconds without a button press. The configuration menu will close, and the gauge starts regular operation.*
15. Once calibration is completed, unplug the configuration circuit.
16. Leave the 12-pin connector in place.
17. Reinstall dashboard panels and covers.

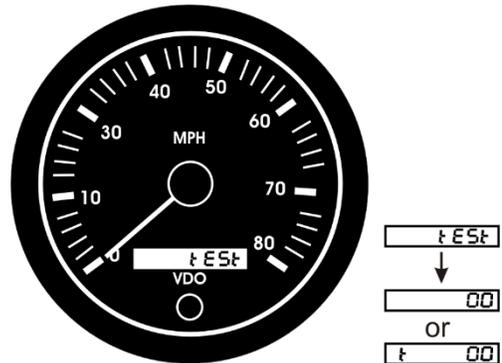
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KM/H SPEEDOMETER REPLACEMENT - PROCEDURE APPLICABLE TO KIT #090212

1. Set the ignition switch to the OFF position.
2. Remove dashboard panel retaining screws. For H3 series vehicles, remove caps and screws located on dashboard cover. Remove dashboard panel retaining screws.
3. For accessing purposes, pull out dashboard panel.
4. Locate speedometer.
5. Disconnect speedometer harness.
6. Remove existing gauges and install new gauges.
7. Using harness #064266, connect the instrument according to the figure below.
8. Inside main power compartment set the battery master switch to the ON position.



9. Set the ignition switch to the ON position. When you turn ON the ignition, the speedometer performs an automatic self-test. During this test, the pointer moves over the whole scale range and the LCD shows "TEST".
10. If everything is working properly, proceed to the calibrating of the instrument. Refer to **KM/H SPEEDOMETER CALIBRATION** below.
11. Once calibration is completed, reinstall dashboard panels and covers.



KM/H SPEEDOMETER CALIBRATION

Calibrating of the speedometer can be accomplished in 3 modes:

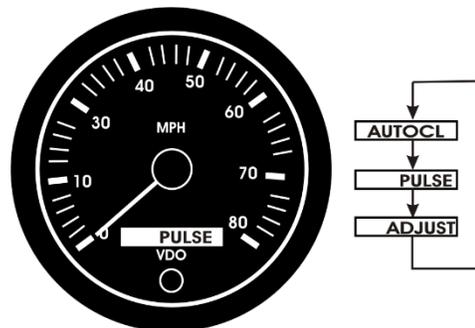
- *AUTOCL;*
- *PULSE;*
- *ADJUST.*

We will use the PULSE mode consisting in introducing the known pulse-per-kilometer for the vehicle and sensor being used with the speedometer.

- a) *Determine the speedometer calibration value, which represents the number of pulse, using the table below.*

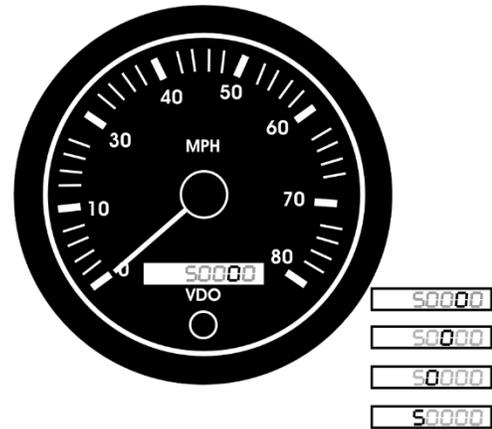
CALIBRATION TABLE				
VEHICLE APPLICATION	TRANSMISSION	DIFFERENTIAL RATION ²	NUMBER OF PULSES	
			mph	Km/h
"H" SERIES	ATEC OR MA- NUAL TRANS- MISSION	3.21	25010	15540
		3.42	26650	16560
		3.56	27740	17240
		3.58	27900	17330
		3.73	29060	18060
	HYDRAULIC TRANSMISSION (30 PULSES)	3.21	21650	13450
		3.42	23060	14330
		3.58	24140	15000
		3.73	25150	15630
		"H" & "XL" SERIES	WORLD TRANS- MISSION	4.56
		4.58	38030	23620
"XL" SERIES	FRONT WHEEL	N/A	58440	36320
"96" & "XL" SERIES	MANUAL TRANSMISSION	3.33	8110	5040
		3.73	9080	5640
		4.11	10010	6220
	ATEC OR HY- DRAULIC TRANSMISSION	3.33	11230	6990
		3.73	12580	7820
		4.11	13860	8620

b) Gain access to the calibration function by pressing the button on the front of the speedometer and hold it in while you turn on the ignition. As you continue to hold in the button, the display will change...scrolling through the 3 calibration modes and stopping on each one for about 2 seconds. When PULSE is displayed, release the button and that particular mode will be enabled.

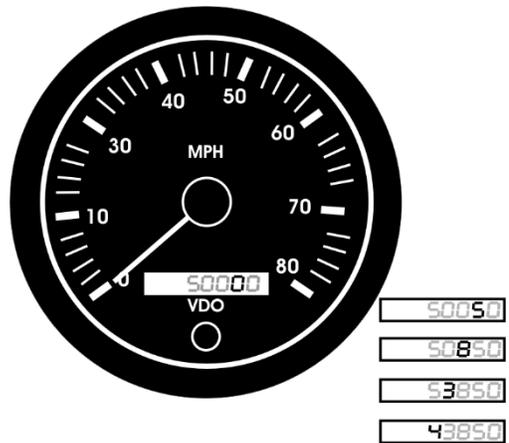


² If your vehicle differential ratio is not listed, contact your Prevost Car service representative.

- c) After a few seconds, the display will start flashing a series of numbers (factory default calibration value setting) that will have to be changed for the correct calibration value for your vehicle.
- d) For example, a number like 50000 will show on the display, with each digit flashing in turn, except for the last digit on the right, which is fixed. First, the second 0 from the right; then the third 0 from the right; then, the next 0; and finally the 5.
- e) As each number flashes, press the button to change it until the correct digit appears (that is, the number you wish to input).



- f) For example, let's say the number that represents the correct calibration value for your vehicle and sensor is "43850". When you begin the calibration process, the LCD displays the default value. Each digit, except the last on the right, will flash, in turn, from right to left. Wait until the second digit from the right starts to flash again. When it does, press the button to start cycling through the numbers available for this digit. When the number 5 appears, release the button. At this point, the number 5 is set, and the digit to its immediate left begins to flash (the middle digit). Press the button again and hold it until the number 8 appears. Release the button. Now, the second digit from the left begins to flash. Again, hold in the button until the number 3 appears. When it does, all but the first digit on left are set. Repeat the process to set the 4 and the value in our example is set. The value "43850" should be displayed on the LCD readout.



Note: If the calibration value would have been "43852" for example, the value "43850" would have been displayed on the LCD readout because the last digit on the right cannot be adjusted and consequently is not considered.

- g) After that, if the value displayed on the LCD readout is the correct calibration value, take your finger off the button and wait. After a few seconds, the value you have entered will be downloaded into the speedometer's microprocessor, and the speedometer will revert to normal operating mode. At this point, the manual calibration process is complete. If you have made a mistake, repeat the process, beginning with step 2.

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