

# PREVOST

## Instruction Sheet

## IS-96014C

### TACHOMETER AND SPEEDOMETER REPLACEMENT

REVISION : C

Tachometer 090214 replaced by 590290

#### MATERIAL

Kit #090217 TACHOMETER REPLACEMENT includes the following parts:

Part No.	Description	Qty
590290	Tachometer	1
064265	Wiring harness	1
IS-96014B	Instruction Sheet	1
FI-96014B	Feuille d'instructions	1

Kit #090218 SPEEDOMETER (MPH) REPLACEMENT includes the following parts:

Part No.	Description	Qty
090215	Speedometer ( MPH)	1
064266	Wiring harness	1
IS-96014B	Instruction Sheet	1
FI-96014B	Feuille d'instructions	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-96014B	Instruction Sheet	1
FI-96014B	Feuille d'instructions	1

## PROCEDURE



**WARNING**

**Park vehicle safely, apply parking brake, stop 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 dashboard panel.
4. Locate speedometer or tachometer.
5. Disconnect speedometer or tachometer harness.
6. Remove existing gauges and install new gauges (speedometer or tachometer).
7. Using harness #064266 & #064265, connect the instrument according to figure 1. If it is not possible to connect the harness to the vehicle connectors, use figure 2 & 3 to identify the type of connection required for your vehicle and connect according to these figures.
8. Inside main power compartment, set the battery master switch to the ON position.

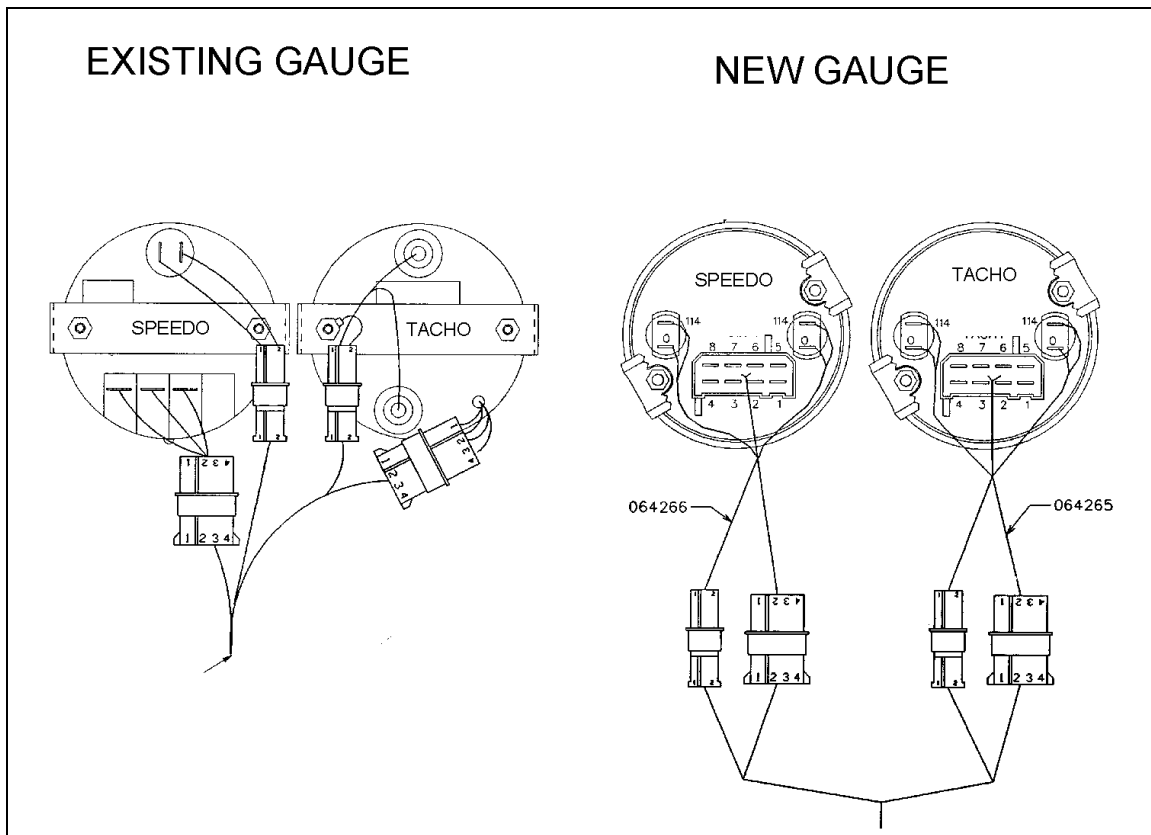


FIGURE 1

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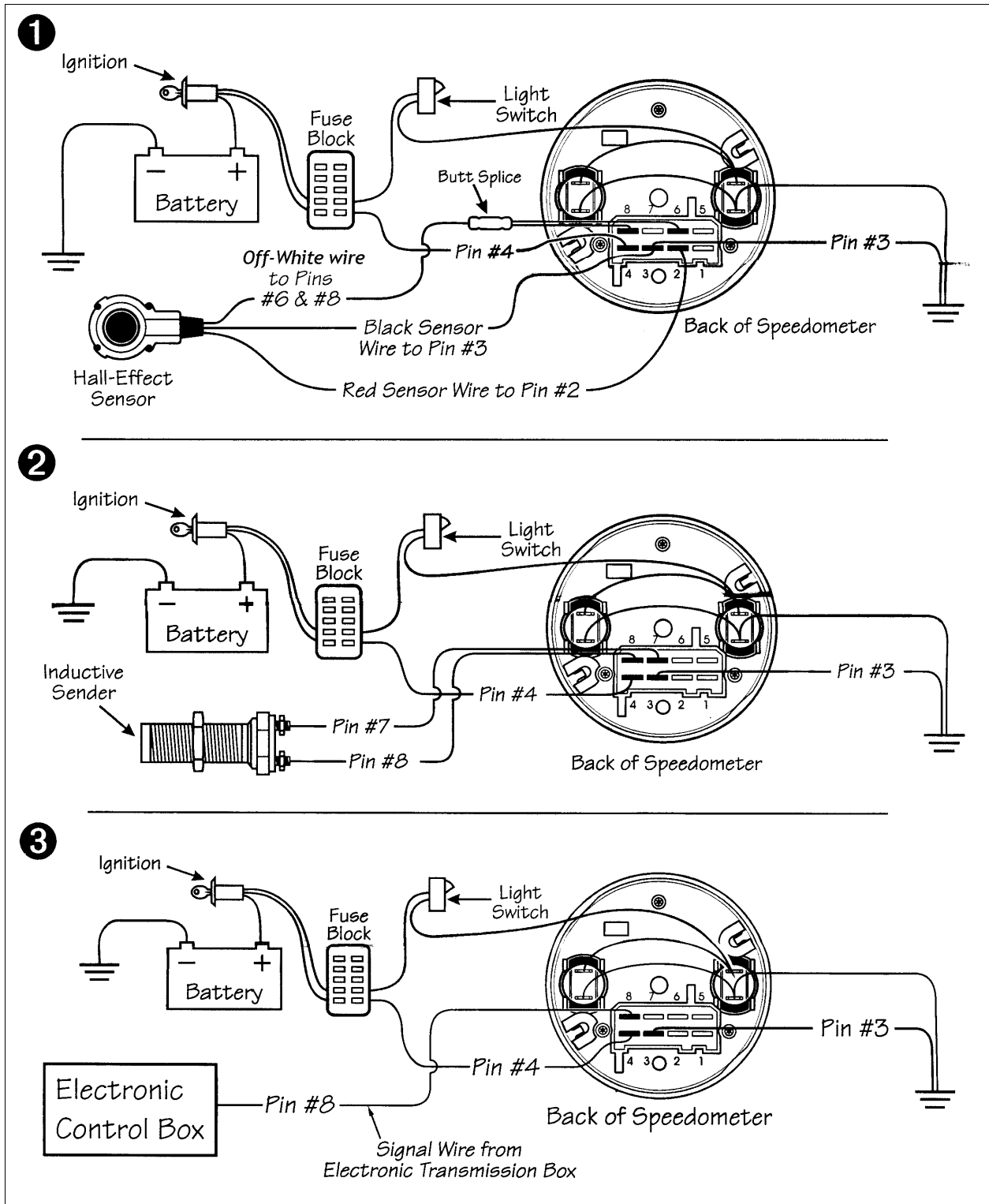


FIGURE 2: SPEEDOMETER WIRING. 1: HALL-EFFET SENSOR; 2: INDUCTIVE SENDER; 3: TRANSMISSION ECU

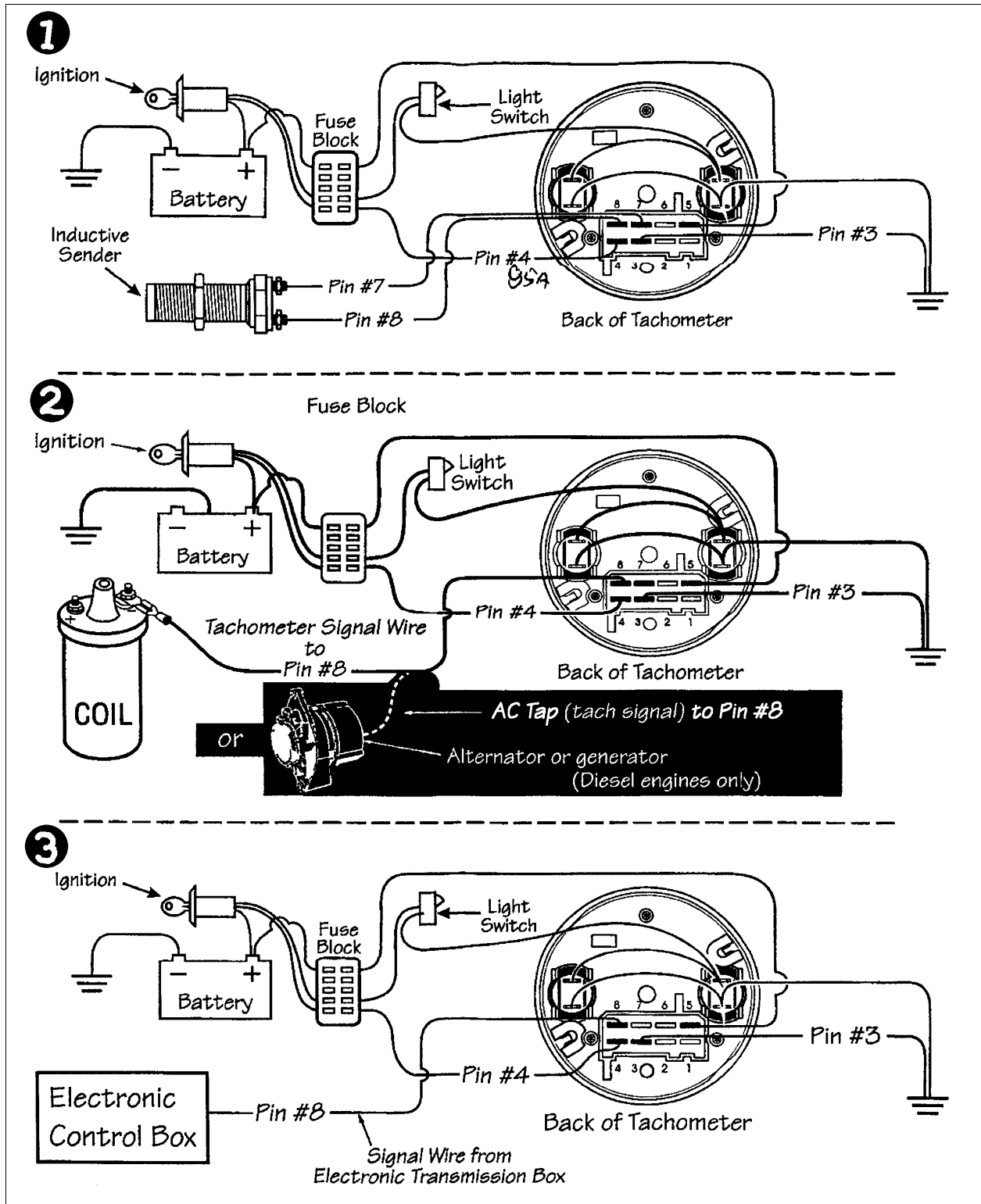
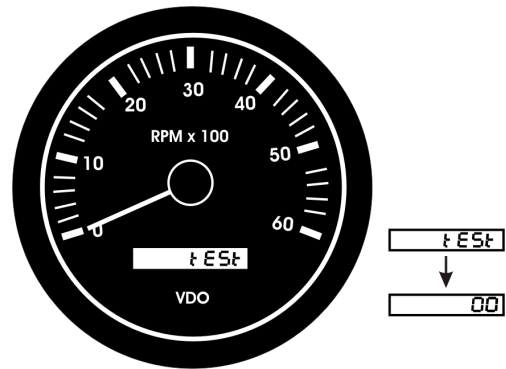
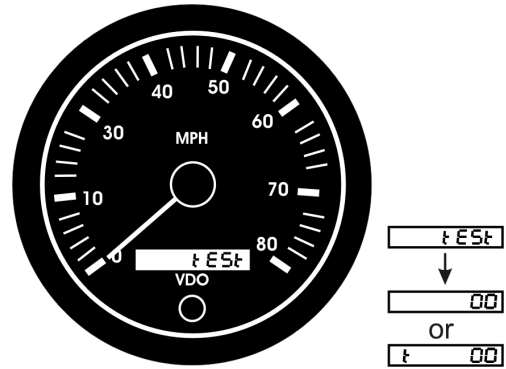


FIGURE 3: TACHOMETER WIRING. 1: INDUCTIVE SENDER; 2: IGNITION COIL; 3: TRANSMISSION ECU

9. Set the ignition switch to the ON position. When you turn ON the ignition, the speedometer or the tachometer performs an automatic self-test. During this test, the pointer moves over the whole scale range and the LCD shows "TEST". After the test is completed, the speedometer display will show either the trip distance or the total distance. The tachometer display will show the current working hour on the hourmeter.
10. Since this is the first time power has been applied to the instrument, the reading will be 00.
11. If everything is working properly, proceed to the calibrating of the instrument. If not, check the wiring.
12. Once calibration is completed, reinstall dashboard panels and covers.



**Note:** If after completing connections, tachometer or speedometer do not function properly, refer to :

- Connections table (this table indicate wire numbers and function corresponding to each connector);
- Connections diagram included in supplier's instructions;
- Vehicle wiring diagram.

H3 VEHICLES	
Tachometer and speedometer connections	
CONNECTOR	CIRCUIT
C301 (TACHO)	12H. ....12 VOLTS IGNITION 0H.....GROUND 505.....TACHOMETER DRIVE
C257 (SPEEDOMETER)	12H.....12 VOLTS IGNITION 16.....SPEEDOMETER POSITIVE SIGNAL 20 .....SPEEDOMETER NEGATIVE SIGNAL

**Note:** For tachometer and speedometer internal lighting use circuit 114 and OF.

# SPEEDOMETER CALIBRATION

Calibrating of the speedometer can be accomplished in 3 modes:

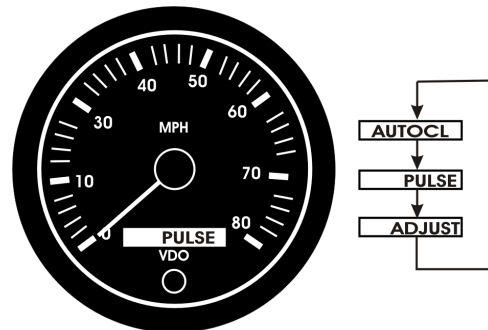
- AUTOCL;
- PULSE;
- ADJUST.

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

1. Determine the speedometer calibration value, which represents the number of pulse, using the table below.

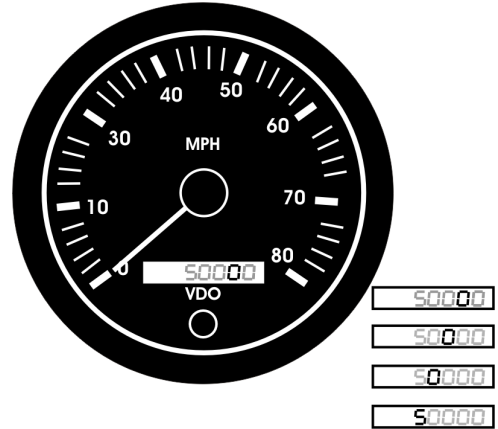
CALIBRATION TABLE				
VEHICLE APPLICATION	TRANSMISSION	DIFFERENTIAL RATION <sup>1</sup>	NUMBER OF PULSES	
			mph	Km/h
"H" SERIES	ATEC OR MANUAL TRANSMISSION	3.21	25010	15540
		3.42	26650	16560
		3.56	27740	17240
		3.58	27900	17330
		3.73	29060	18060
	HYDRAULIC TRANSMISSION (30 PULSA-TIONS)	3.21	21650	13450
		3.42	23060	14330
		3.58	24140	15000
		3.73	25150	15630
		"H" & "XL" SERIES	WORLD TRANSMISSION	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 HYDRAULIC TRANSMISSION	3.33	11230	6990
		3.73	12580	7820
		4.11	13860	8620

2. 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.

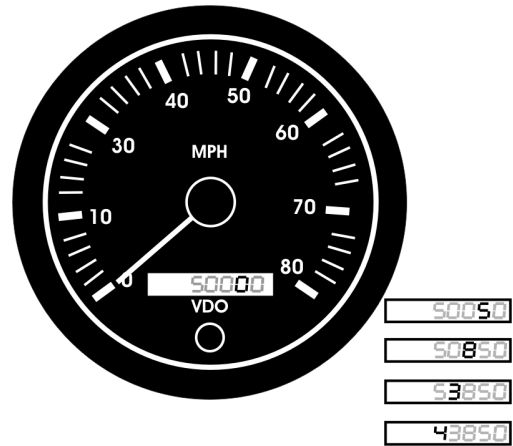


<sup>1</sup> If your vehicle differential ratio is not listed, contact your Prevost Car service representative.

3. 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.
4. 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.
5. As each number flashes, press the button to change it until the correct digit appears (that is, the number you wish to input).



6. 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.*

7. 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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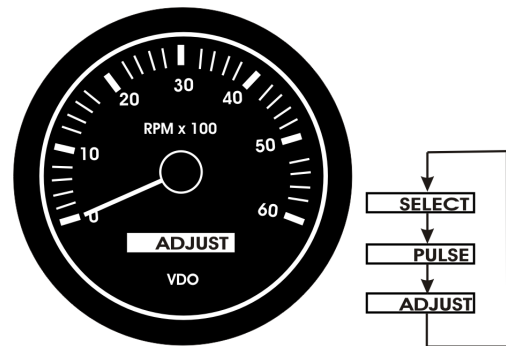
## TACHOMETER CALIBRATION

Calibrating of the speedometer can be accomplished in 3 modes:

- SELECT;
- PULSE;
- ADJUST.

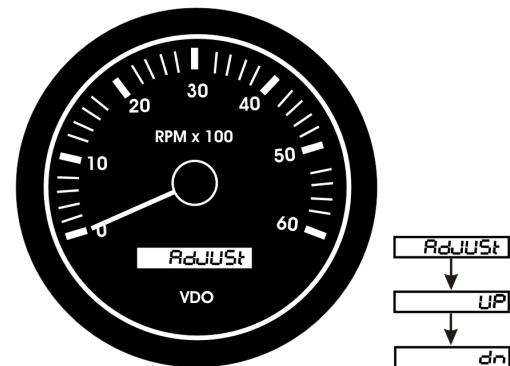
We will use the ADJUST mode which consists in adjusting the pointer to 600 rpm when the engine is running at that specific speed. When the engine is at normal operation temperature, the idling speed is 600 rpm.

1. Make sure that the engine is at normal temperature because the idling speed will be different if the engine is cold.
2. Run the engine at normal idle (not fast idle).
3. Gain access to the calibration function by pressing the button on the back of the tachometer 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 ADJUST is displayed, release the button and that particular mode will be enabled.



4. Press the button once, and the word "UP" will be displayed on the LCD readout. Press it twice rapidly then release it for a second, and the word "DN" will be displayed.
5. When either "UP" or "DN" is showing, press the button again, and hold it in. If you hold the button in for just a short time, the pointer will move slowly either upwards or downwards, depending on which mode you selected. This allows for a very accurate adjustment of the pointer. Holding the button in for a longer period of time makes the pointer move faster.

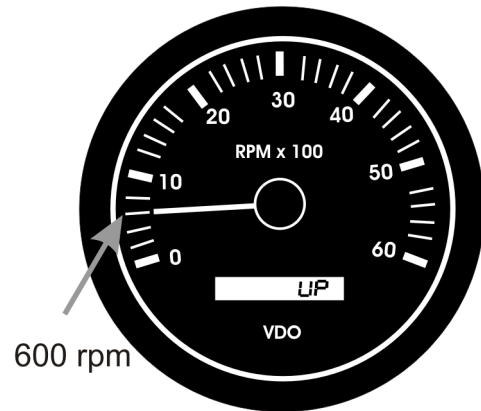
When you see "ADJUST", push once and "UP" is displayed. Rapidly push twice to see "DN" (for DOWN).



Adjust pointer by pushing and holding in the button on the back of the tachometer.



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6. Move the pointer to 600 rpm, release the button and then wait.
  7. If no further adjustments are made within one minute, the tachometer will revert back to the normal operating mode.



With engine at normal operating temperature and at normal idle, position the pointer to 600 rpm.