

# INSTALLATION INSTRUCTIONS

## DRAG SPECIALTIES ELECTRONIC SPEEDOMETERS P/N 2210-0462/0463/0464/0465

**ATTENTION INSTALLER** (if other than owner): Please forward this Instruction Sheet to the purchaser of this product. These instructions contain valuable information necessary to the end user.

**INTRODUCTION:** These instructions describe the procedure for properly installing the replacement Drag Specialties speedometer on 2004 – 2013 Softail, Dyna Wide Glide and Road King models. Review these instructions carefully before beginning, as they contain important information. Please retain for future reference.

Particularly important information is distinguished in these instructions by the following notations:

**NOTE: A NOTE** provides key information to make procedures easier or clearer.

**CAUTION: A CAUTION** indicates special procedures that must be followed to avoid damage to the motorcycle and/or accessories.

**WARNING! A WARNING** indicates special procedures that must be followed to avoid injury to a motorcycle operator or person inspecting or repairing the motorcycle.

### PROCEDURE:

**NOTE:** Not all warning light functions are available on all models. The model must have the function programmed on the original speedometer in order to operate on the Drag Specialties speedometer.

### SPEEDOMETER REMOVAL AND INSTALLATION

#### SOFTAIL MODELS

#### REMOVAL

**NOTE:** Nut may come out with stud attached to it.

See Figure 1. Remove nut and washer (4) and lift console (5) from fuel tank.

Position clean shop rags on fuel tank and flip console over to expose underside.

Depress connector tab and disconnect 12-place harness connector (2) from speedometer under console.

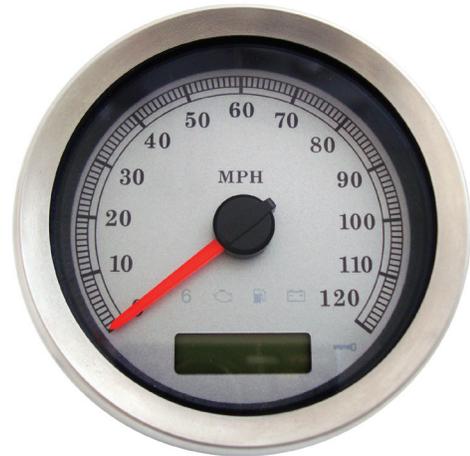
Unscrew the rubber boot from the odometer reset switch (6) on the left side of the console.

Remove the odometer reset switch from hole in console.

See Figure 2. Pry between three tabs and speedometer with a screwdriver to raise and release back clamp from speedometer. Remove back clamp from speedometer.

See Figure 1. Remove speedometer from console.

Remove gasket (3) from speedometer.



1. Speedometer
2. Connector
3. Gasket
4. Nut and washer
5. Console
6. Reset switch
7. Back clamp

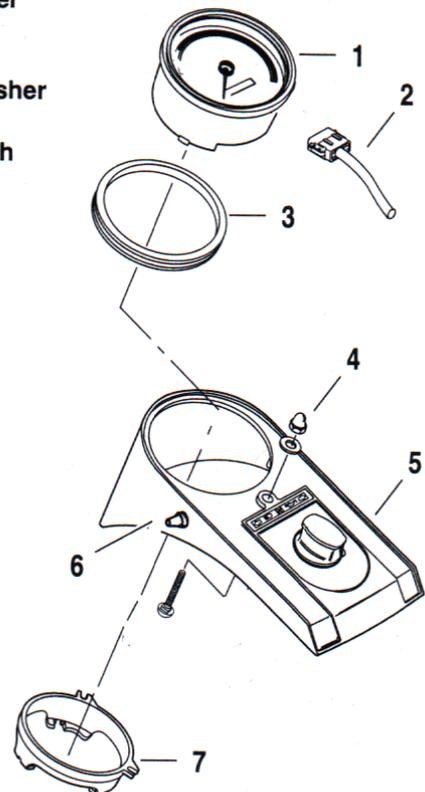
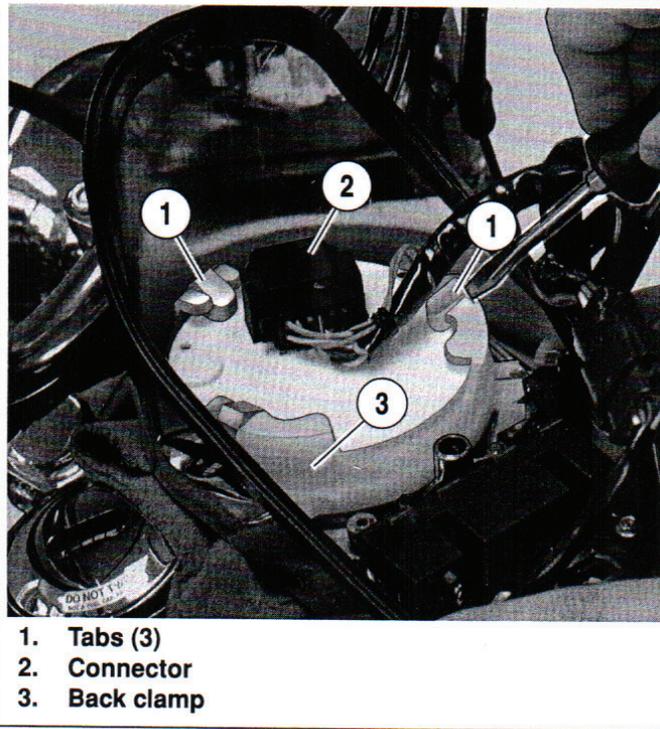


Figure 1



# INSTALLATION INSTRUCTIONS

## DRAG SPECIALTIES ELECTRONIC SPEEDOMETERS P/N 2210-0462/0463/0464/0465



1. Tabs (3)
2. Connector
3. Back clamp

Figure 2

### INSTALLATION

See Figure 1. Install gasket (3) to speedometer.

Position speedometer in console (5).

See Figure 2. Press on back clamp (3) until three tabs engage on back of speedometer.

See Figure 1. Insert odometer reset switch (6) through hole in console and install rubber boot.

Connect 12-place connector (2) to speedometer under console.

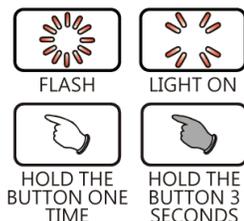
Remove shop rags. Attach console to fuel tank with nut and washer (4).

Tighten to 80-100 in-lbs.

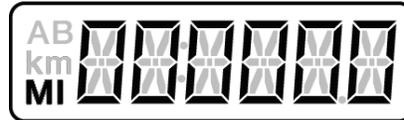
Test speedometer for proper operation.

### PROGRAMMING THE SPEEDOMETER

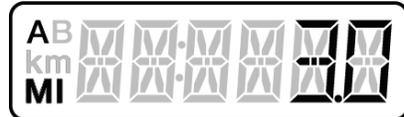
**NOTE:** All programming is done through the trip meter reset button, either with a short button push (1 second), or a longer 3 second button hold.



### MAIN MENU FUNCTIONS



1. Turn on power to the speedometer. In the main odometer view, press the **BUTTON ONCE** to switch to Trip meter "A" mileage.



2. To clear the Tripmeter "A" mileage hold the **BUTTON FOR 3 SECONDS**.



3. In the Tripmeter "A" view, press the **BUTTON ONCE** to switch to Tripmeter "B" mileage.



4. To clear the Tripmeter "B" mileage press and hold the **BUTTON FOR 3 SECONDS**.



5. In the Tripmeter "B" view, press the button once to switch to fuel mileage remaining view.



6. When the fuel remaining mileage is lower than 16 miles, it will display "LO RNG" to remind users to immediately refill their tank.



7. When the fuel remaining mileage feature is activated, it will automatically switch to the fuel remaining view during startup when the fuel remaining mileage is less than the set point of fuel remaining feature.



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- When the fuel remaining feature is activated, it will automatically return to the fuel remaining mileage view if the remaining mileage is less than the set point of the fuel remaining mileage feature.
- Hold the **BUTTON FOR 3 SECONDS** to switch to the inform feature switch.



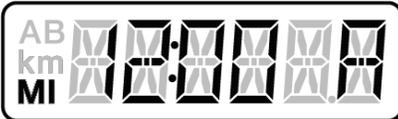
**NOTE:** The "A" in upper left corner will not display if it's not supported in the engine computer.

- The following situations will result in displaying either "r----" or a blank display.

- (A) Abnormal fuel sensor (short/open circuit)
- (B) The engine control module does not support this feature in this year/model.

- Fuel related settings will affect this value's precision.

- In the fuel miles remaining view, press the **BUTTON ONCE** to switch to the clock view.



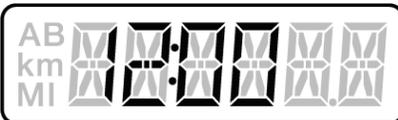
- In the Clock view, press the **BUTTON ONCE** to return to the main odometer view or go to step 1 in the clock settings to adjust the time.

**NOTE:** Clock display setting value: 24 H.

**NOTE:** Display can be switched off (please refer to clock settings)

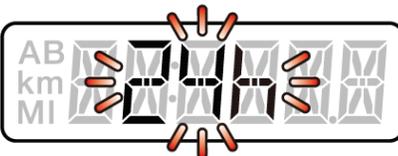
### CLOCK SETTINGS

- In the clock settings view, hold the **BUTTON FOR 3 SECONDS** to enter into the setting view.



- EXAMPLE:** You want to change the hours format to 12.

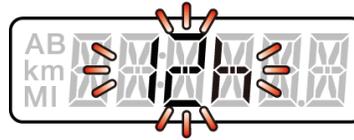
- Press the **BUTTON ONCE** to select desired setting value.



**NOTE:** Now the setting value will blink.

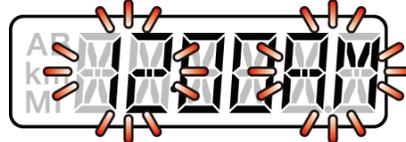
**NOTE:** Setting value: 24 H.

**NOTE:** Setting range: 12 / 24 hour format.



- EXAMPLE:** Set time settings from 24 hours format to 12 hours format.

- Hold the **BUTTON FOR 3 SECONDS** to enter time into the (hour) settings view.

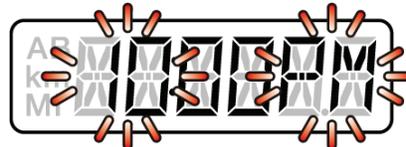


- EXAMPLE:** You want to change the hour to 10PM.

- Press the **BUTTON ONCE** to select desired setting value.

**NOTE:** Cursor moving order is: Hour > Digit in ten minutes > Digit in minutes

**NOTE:** Settings range: 1-12 (12H), 0-23 (24H).



- EXAMPLE:** Set time settings from 12AM to 10PM.

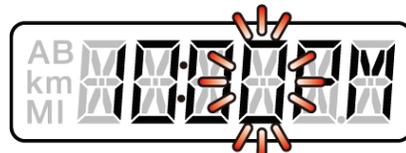
- Hold the **BUTTON FOR 3 SECONDS** to enter time into the (minutes) settings view.



- EXAMPLE:** You want to change the minutes to 5.

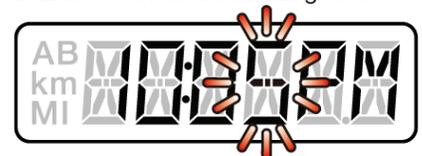
- Hold the **BUTTON FOR 3 SECONDS** to the digit you want to set. Now the setting value will blink.

**NOTE:** Setting range: 00 – 59 minutes.

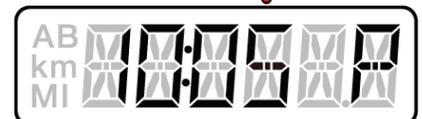


- Press the **BUTTON ONCE** to select desired setting value.

- EXAMPLE:** Set time settings from 0 to 5. Hold the **BUTTON FOR 3 SECONDS** to go back to the clock view.



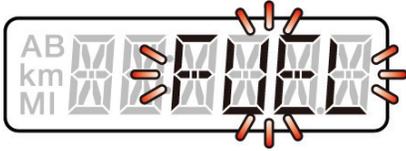
- Clock view.



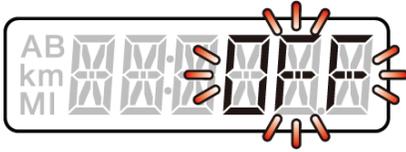
# INSTALLATION INSTRUCTIONS

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### FUEL SETTINGS



1. In the fuel settings main view, hold the **BUTTON FOR 3 SECONDS** to enter into the sub settings view.



2. **EXAMPLE:** To set the fuel type to CUS<sub>t</sub> (user defined).
3. Press the **BUTTON ONCE** to select desired setting value.

**NOTE:** Now the setting value will blink.

**NOTE:** Setting value: OFF.

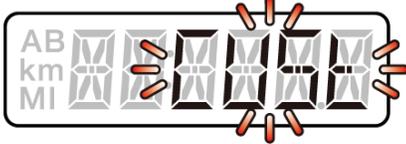
**NOTE:** Setting range:

**FUEL 1:** 04-07 Softail, Dyna, Road King (CARB)

**FUEL 2:** 08-13 Softail, Dyna, Road King (EFI)

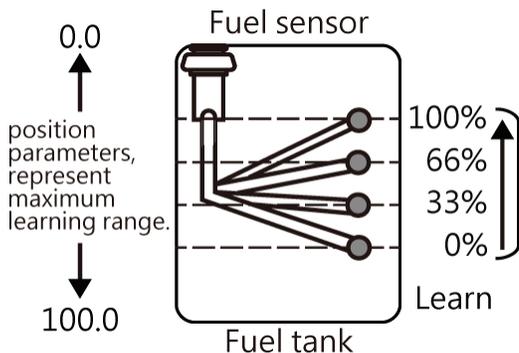
**CUS<sub>t</sub>** (User Defined Custom Setting)

**NOTE:** If you select options 1 or 2, you do not need to program option 3, Cus<sub>t</sub>, the User Defined. Option 3 is for fuel tanks that do not have stated OEM tank capacities such as a custom tank with fuel level sensing unit.

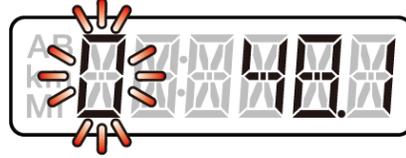


4. **EXAMPLE:** To set fuel type from OFF to CUS<sub>t</sub>.
  5. Hold the **BUTTON FOR 3 SECONDS** to enter into the user defined mode.
- NOTE:** Now the setting value will blink.

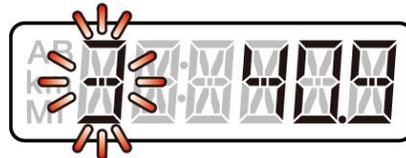
**NOTE:** When selecting other settings, it will enter the fuel position indicator mode.



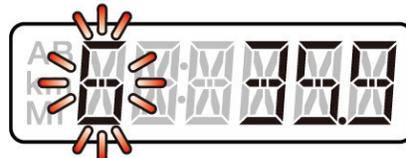
6. User defined mode. It needs to learn the position of 0%, 33%, 66% and 100% (F) fuel volume.



7. Fuel volume 0% position learning view.
8. Confirm that there is low fuel before learning.
9. Allow the vehicle to be still for 10-15 seconds in order to settle the fuel surface.
10. Press the **BUTTON ONCE** to learn the current fuel position.
11. Hold the **BUTTON FOR 3 SECONDS** to enter into the next fuel volume position learning view.



12. Fuel volume 33% position learning view.
13. Confirm that there is  $\frac{1}{3}$  fuel volume in fuel tank before learning.
14. Allow the vehicle to be still for 10 - 15 seconds in order to steady the liquid surface.
15. Press the **BUTTON ONCE** to learn current fuel position.
16. Hold the **BUTTON FOR 3 SECONDS** to enter into the next fuel volume position learning view.



17. Fuel volume 66% position learning view.
18. Confirm that there is  $\frac{2}{3}$  fuel volume in fuel tank before learning.
19. Allow the vehicle to be still for 10 - 15 seconds in order to steady the liquid surface.
20. Press the **BUTTON ONCE** to learn the current fuel position.
21. Hold the **BUTTON FOR 3 SECONDS** to enter into the next fuel volume position learning view.

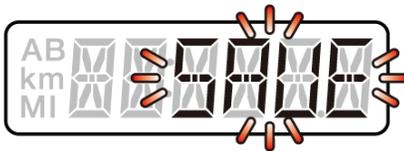


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## DRAG SPECIALTIES ELECTRONIC SPEEDOMETERS P/N 2210-0462/0463/0464/0465



22. Fuel volume 100% position learning view.
23. Confirm that there is full volume in fuel tank before learning.
24. Allow the vehicle to be still for 10-15 seconds in order to steady the liquid surface.
25. Press the **BUTTON ONCE** to learn the current fuel position.
26. Hold the **BUTTON FOR 3 SECONDS** to enter into the next fuel volume position learning view.



27. Learning conformation view.
28. Press the **BUTTON ONCE** to save the current learning results, and then automatically return to fuel type settings view.



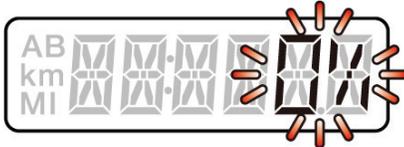
29. If an error occurs in the learning process, it will display "error" when saving. Then abandon the learning process and return to fuel type view.



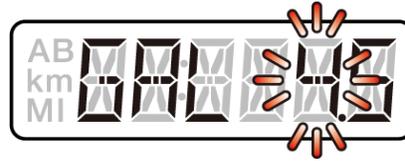
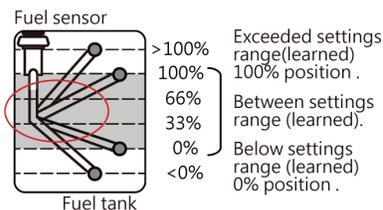
30. Hold the **BUTTON FOR 3 SECONDS** to renounce current learning result and return to the sub settings view.



### FUEL POSITION INDICATOR



1. Fuel position indicator.
2. This view will display the current liquid surface position, if it exceeds the range, it is recommended to reset the fuel volume parameters to acquire more precise fuel volume and range information.



3. Hold the **BUTTON FOR 3 SECONDS** to enter the fuel volume settings.



4. Hold the **BUTTON FOR 3 SECONDS** to the digit you want to set.

**NOTE:** Now the setting value will blink.

5. Press the **BUTTON ONCE** to select desired setting value.



**NOTE:** Setting range: 1.0-9.9 gallons.

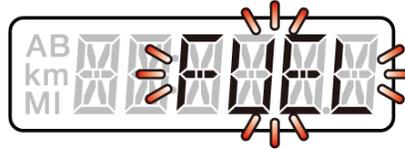
**NOTE:** To use the volume calculation method, check for the total volume of the fuel tank and low fuel indicating volume in the user manual of vehicle and then substitute it into the following equation below:

$$\bullet \text{Total vol.} - (\text{low fuel vol.} / 2) = \text{setting value.}$$



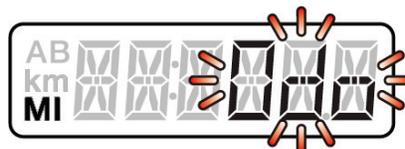
6. **EXAMPLE:** To set fuel volume value from 4.5 to 4.8.

7. Hold the **BUTTON FOR 3 SECONDS** to go back to the fuel volume settings view.



8. Fuel view.

### TOTAL INTERNAL AND EXTERNAL MILEAGE SETTINGS



1. In the total mileage settings main view, hold the **BUTTON FOR 3 SECONDS** to enter into the sub settings view.

**NOTE:** Internal mileage is not programmable, external mileage can be reset at any time to any number within the setting range. This external mileage is the mileage that is normally shown during vehicle operation.



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## DRAG SPECIALTIES ELECTRONIC SPEEDOMETERS P/N 2210-0462/0463/0464/0465

### CURRENT TOTAL INTERNAL MILEAGE



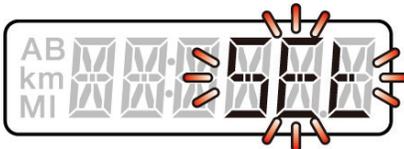
2. **EXAMPLE:** Current total internal mileage display is 5 miles.

3. Press the **BUTTON ONCE** to enter into the total external mileage settings view.

**NOTE:** User is unable to adjust or remove total internal mileage.

**NOTE:** Now the setting value will blink.  
Setting Range: 0-999,999 miles.

### TOTAL EXTERNAL MILEAGE



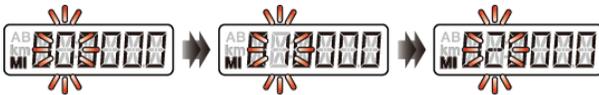
4. In the total external mileage settings main view, hold **BUTTON FOR 3 SECONDS** to enter into the settings view.



5. Hold the **BUTTON FOR 3 SECONDS** to move the cursor to the desired settings level.



**NOTE:** Now the setting value will blink. Press the **BUTTON ONCE** to select the desired setting value. Keep pressing the button once for each increase in the number from 0 through 9. Once the correct number is entered, hold the **BUTTON FOR 3 SECONDS** to go to the next number. Do this for each number until you have entered the correct mileage you wish to be displayed.

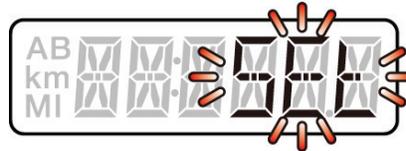


**NOTE:** Setting range: 0 - 999,999 miles.

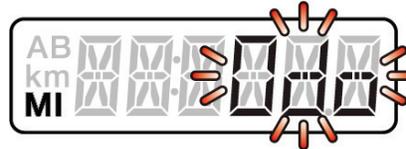


6. **EXAMPLE:** To set the total external mileage from 0 to 50,000 miles.

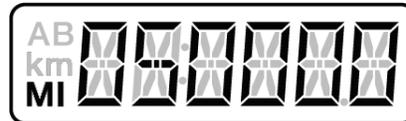
7. Hold the **BUTTON FOR 3 SECONDS** to go back the total external mileage view.



8. Total external mileage view, press the **BUTTON ONCE** to return to total mileage settings main view.



9. Mileage settings main view, press the **BUTTON ONCE** to return to total mileage main view.



10. Total mileage main view.

11. This completes the programming of your new speedometer.

**WARNING!:** Before operating motorcycle, be sure all hardware is tight.

