Nordskog Performance Products

DP5301 '79-'86 MUSTANG DIGITAL DASH PANEL

Instrument Panel Mounting
1. Disconnect the negative battery cable from the battery.
2. Remove the screws securing the trim panel to the instrument cluster housing.
3. Remove the trim panel.
4. Remove four instrument cluster housing retaining screws.
5. Pull the instrument cluster housing part way out.
6. Reach behind it and disconnect the speedometer cable.
7. Pull the instrument panel the rest of the way out and disconnect the wiring connectors.
8. Remove all of the factory gauges. Remove all circuit boards and illumination light bulbs, but leave the bulbs in for the turn signals and warning lights.
9. Insert the new Digital instrument cluster circuit boards on the instrument cluster housing.
10. Make sure the plastic faceplate for the turn signal indicators is replaced after the new circuit board is installed.
11. Feed all of the wires from the new circuit boards through the back of the housing.
12. Remove the protective paper covering from the new smoked Plexiglas faceplate.
13. Place the new faceplate onto the front of the trim panel.
14. Replace the covering on top of the circuit boards and replace the screws while the circuit boards are "sandwiched" between the instrument cluster housing and the trim panel.

Instrument Panel Wiring
Note: To prevent electrical noise from causing the gauges to act abnormally, check to make sure that any signal wire between the senders to the gauges does not run next to the ignition system or spark plug wires. Resistor-type spark plugs and wires that are in good condition are also suggested. Your vehicle wire colors may vary from those noted below. Unless noted, the following panel wires are 18 gauge.
1. Connect the **BLACK** (GND) wires to a good chassis ground. The best location is on the engine block. The included sending units provide a resistance value to the gauges. If any additional resistance is seen (because of having the grounds of the sending units and gauges grounded at different locations) the readings on the gauges will be inaccurate.
2. Connect the **RED** (+12V) wires to the ignition switch circuit or an accessory fuse.
3. Connect the **PURPLE** (DIM) wires to the vehicle's headlights. This will cause the display brightness to be dimmed by 50% when it receives +12 volts.
4. Remove the factory equipped water temperature and oil pressure sending units and install the supplied Nordskog units. You will be using the factory fuel level sender.
5. When mounting the new water temperature-sending unit, be sure **not** to use Teflon tape on the threads because the sender must be grounded to operate properly.
6. Connect the **BLUE** (TEMP) wire to the water temperature sending unit wire.
7. Connect the **ORANGE** (OIL) wire to the oil pressure sending unit wire.
8. Connect the **GREEN** (TACH) wire to the correct wire from your car. **NOTE: If your car is equipped with an aftermarket capacitive discharge or other high-energy ignition system, the tach output of that system must be used. Damage will occur and the warranty voided if the**

panel is incorrectly wired. Please contact Customer Support at (805) 483-2411 if you have any questions.

9. Connect the **GRAY** (SPEED) wire to the green wire with the white stripe located on the cruise control speedometer-sending unit. Connect the orange wire with the white stripe on the transmission-sending unit to a good ground, preferably to the same location as the ground from the main digital panel s**.**

10. **If your car is not equipped with a cruise control you will need to purchase a Nordskog Performance Products speedometer sending unit part number S9013 or a Ford P/N E3AZ-9E731.**

11. A 10' shielded cable is included in case of electrical noise interfering with the speedometer signal. Connect the **GRAY** (SPEED) wire to the white wire of the twisted shielded cable included with this kit. Connect the other end of the twisted shielded cable to the speedometer-sending unit wire on the speedometer sensor. Ground the **BLACK** wire from the cable to the same ground location as the ground wire for the panel. Connect the other end of the black wire of the twisted shielded cable to the ground wire on the speedometer sensor. "Cut back" the bare twisted shield wire at the dash end of the cable making sure that it cannot make contact with any other wires. Ground the bare twisted shield wire of this cable only on the dash end of the cable. The other end will not be attached to anything.

12. Connect the **YELLOW** (FUEL) wire to your fuel level sending unit wire, which is a yellow wire with a white stripe. This gauge reads in 0 to 99% remaining, not gallons. NOTE: The fuel level gauge may be equipped with a slosh circuit board mounted in back of the instrument cluster housing next to the fuel level gauge. The circuit was designed for the factory fuel level gauge to prevent the needle from bouncing around when going around turns or over rough road. This board must be removed in order for the fuel level gauge on the panel to operate correctly. If the fuel level gauge is wired into the terminal that the factory fuel level gauge plugged into, another wire must be run from the back side of the housing of that terminal to the fuel level signal wire running back to the sender.

13. Install the entire assembly back into the dash by reversing the removal process.

14. To implement the Performance Speedometer function you will need to install a separate "momentary" normally open switch that may be purchased separately from any local Radio Shack or other electronic parts supplier. Connect the **two white wires on the speedometer side of the panel** to this switch. This will be used to activate the speedometer functions described below.

15. Optional. This panel also includes the ability to recall the highest RPM reading measured. Like the speedometer, a "momentary" normally open switch must be installed to use this function. Connect the **two white wires on the tachometer side of the panel** to this switch.

DIGITAL PERFORMANCE SPEEDOMETER

Your digital panel is equipped with an electronic speedometer that has the capability to display your speed as well as your mileage traveled (odometer). It also has the ability to track your trip distance, record and display the highest speed you obtained as well as your 0-60 mph and ¼ mile elapsed times. Your speedometer will also allow you to adjust your readings (through electronic recalibration) to different tire or gear sizes.

Your speedometer comes with factory set defaults and must be recalibrated for your specific application. To accomplish this, you must locate a measured mile of highway where you can safely start and stop your vehicle. By running the vehicle over this measured distance, your speedometer will learn how many pulses your speedometer sensor is outputting in this measured distance. It will then use this acquired data to calibrate itself for accurate reading.

After installing your speedometer according to the installation instructions, with the ignition on or your car running, it should immediately exhibit the default display (figure 1): the first green light bar, the odometer display (small "0") and speedometer display (large "0"). If, for any reason, your instrument does not show this display, please thoroughly re-check all of your connections and try it again. If the problem persists, please contact us for assistance. The unit is equipped with wires that allow you to add an

external recall button, which can be mounted in a location that is easily reached during operation of the vehicle. This will be used to calibrate and read all of the data involved with your speedometer.

THE FOLLOWING INSTRUCTIONS WILL INFORM YOU ON HOW TO CALIBRATE YOUR SPEEDOMETER. TO INSURE THAT IT IS DONE CORRECTLY, IT IS IMPARITIVE THAT YOU READ THROUGH THE INSTRUCTIONS COMPLETELY BEFORE YOU ATTEMPT TO PROGRAM OR OPERATE YOUR SPEEDOMETER!

Calibration

1.) While stopped at the beginning of the measured mile with your vehicle running, press and hold down the pushbutton inside the face until the odometer displays "HI-SP" (figure 2). IMMEDIATELY release the button.
2.) On its own, the gauge will cycle through the performance data that it records in the following order "HI-SP," "0-60," "1/4," "CAL." (Figures 2-5).
3.) While "CAL" is being displayed quickly press and release the pushbutton one time. This will put the speedometer in the program mode and "PROG" will be displayed (figure 6) (**YOU MUST BE EXTREMELY CAREFUL TO DEPRESS THE PUSHBUTTON QUICKLY AND NOT HOLD IT DOWN.** If you miss stopping the display at "CAL", simply repeat the step). With "PROG" displayed, the speedometer is now waiting to record the data that will be accumulated over the measured mile.
4.) When you are ready to begin driving quickly press and release the pushbutton one time. The speedometer will display "CAL" and the odometer will show "0" (figure 5). Begin driving the vehicle at a safe speed (the level of speed is not important) through the measured mile. As you move, the odometer will begin showing the speedometer pulses as they are being calculated.
5.) At the end of the mile, bring the vehicle to a safe stop and quickly depress the pushbutton one time. The odometer will now display the number of speedometer pulses that were registered over the distance (**NOTE: If the number displayed is 12,800, either the speedometer received no signal from the sensor and you must recheck all connections or your stock speedometer sensor does not output the correct number of pulses per mile-between 2000 and 32,000- and must be replaced with our sensor #S9013. If the number displayed is 8000, the default setting, the speedometer was not put in the calibration mode and the pulses per mile were not recorded. You must repeat steps 2-4.**).
6.) The odometer will continue to display the pulse reading for a few seconds. Once it reverts to the default mode (figure 1), your speedometer has been calibrated and is ready for operation.

Trip Distance

A single tap of the recall button will show the trip distance mileage in the odometer display. A decimal point will appear to in the odometer to indicate that you are in the trip odometer mode. Holding down on the button for a few seconds in this mode will clear the trip distance. To return to the default odometer display, tap the recall button. The decimal point will disappear to indicate that you are in the default odometer display.

Recording and Viewing Performance Data

To begin recording Performance Data (High speed, 1/4 mile elapsed time and 0-60 mph elapsed time), execute the following:
1. Before each run your car must be at a complete stop at the starting position.
2. Press and hold the pushbutton until "HI-SP" is displayed (figure 2) and then **IMMEDIATELY** release the button. On its own, the gauge will cycle through the performance data that it records in the following order "0-60", "1/4"', "CAL" (figure 2-5).
3. At the end of your desired run, safely bring the vehicle to a complete stop.
4. Repeat step 2 to view the data gathered from this run. While stopped, you can view this data as many times as you wish. However, once it finishes scrolling one time, the memory is ready to record new data for the 1/4 mile and 0-60 mph elapsed times and will begin once the vehicle starts moving. The highest speed measured over multiple runs will be retained in memory. To gather new data, repeat steps 1 thru 4.

If you wish to clear out all of the performance data and gather new data before each run, press and hold the pushbutton. Continue to hold the pushbutton as it cycles through the performance data. At the end it will say "RESET" and all of the performance data will then be cleared from memory (This will not affect your stored calibration value or the odometer reading.). Turning off the gauge then turning it back on can also clear the performance data.

1	2	3	4	5	6
0	*0*	*.0*	*.0*	*CAL*	*0*
MPH	MPH	MPH	MPH	MPH	MPH
0	HI-SP	0-60	1/4	0	PROG