



Introduction

The DT-45SNL is Digatron's small, easy to use, digital engine monitoring system. This instrument was designed for the customer who wants to know how their engine is functioning without spending a lot of time and money. This instrument monitors tachometer (Tach), with backlight and limit to warn you of possible engine problems.

Installing Your Tach Sensor

The DT-45SNL will only operate if the sensor is connected and your engine is on. The sensor cable should always be routed as far away from the ignition system components as possible (plug wires, spark plugs, ignition coils, distributor or magneto). If the sensor cable is too close to these components it may pick up radiated electrical interference and cause erratic instrument readings and operation. A distance of at least 6" from these components is desirable in all installations. If your cable is too long to route back to your instrument fully extended, we recommend sending it back to Digatron to be cut to the appropriate length for your needs. You can also coil your sensor, but keep the coil away from the engine.

Your instrument receives its power and tach signal from the lighting coil. To install the power harness, splice the red lead of the harness directly into the lighting coil wire before the regulator using the wire connector provided. Connect the other lead of the harness directly to the engine block. Route the connector end of the power harness to the instrument and plug it into the pigtail with the **black** boot.

When routing the sensor cable through any panels, be sure to use a rubber grommet to keep the cables from being cut by a sharp edge. It is also good practice to protect the sensor with a short piece of fuel line at any point that the cable may rub against a hard surface.

The Two Modes of the DT-45SNL

This instrument has two basic modes of operation, Set Limits and Monitor.

- A. Set Limits mode is necessary before using your unit for the first time and if you use it on different engines. Limits help you prevent possible engine damage.
- B. Monitor mode is used while operating your snowmobile to watch your engine RPM for irregular activity.

A. Setting the Function Limits On Your DT-45SNL

Before using your DT-45SNL be sure to set the Tach operating limit and calibration number. These allow the instrument to give you a visual warning (the display flashes) if the input exceeds its limit. *The limit should be set at a level that allows you to react to the visual warning before engine damage occurs.*

Enter Set Limits mode by pressing the **SETL** button. The instrument is now in Set Limits mode, which is indicated by the flashing display.

- To change the number being displayed press the ← or the → button. Hold either of these buttons down and the number will change faster.
- When you are finished setting the tach limit, press the **Function** button to set the Tach calibration number.
- To save the Tach limit and calibration number and return to Monitor/Record mode, press the **Function** button.

The Tach limit is the maximum revolutions per minute (RPM) for safe engine operation. The Tach calibration number is used to display the correct RPM for different engine types. The instrument divides the Tach input signal by the Tach calibration number. This number can be between 1 and 16.

The most frequently used numbers are:

- 2 cylinders - set at 2 or 4
- 3 cylinders - set at 3 or 6
- 4 cylinders - set at 4 or 8

If you are unsure of the exact Tach calibration number for your engine, experiment. If your calibration number is currently set at 2 and the RPM displayed is double what it should be, set the calibration number to 4. Alternately, if the RPM displayed is half of the correct value, decrease the calibration number to half the current number.

How the Tachometer Reading is Displayed

The Tach displays RPM in thousands of RPM. For example, if your display shows 9.50, your RPM is 9500.]

B. Monitor Mode is Used While on the Track

When your instrument is powered on, it is in Monitor mode. This is the mode the unit will be in so you can observe your Tach function. During Monitor mode you can make quick tuning adjustments to your powertrain that allow you to run safe and fast. The instrument will visually warn you, by flashing the display, if your engine exceeds it's set limit. This limit allows you to avoid engine damage.

The backlight is used to illuminate your display for use at night. Press the **LIGHT** button to toggle the backlight on or off. The backlight can only be turned on or off while in Monitor mode. The engine must be running for the backlight to be on.

Electrical Interference

If the instrument encounters excessive electrical interference it will display ERR on the left side of the display. The ERR annunciator can indicate an incorrect instrument or sensor installation. Severe electrical interference can cause the Tach limit and calibration to reprogram themselves. If your instrument is doing strange things, put it in Set Limits mode and check to see that the limits and calibration number are still where you set them.

Electrical interference problems can normally be solved by installing a *resistance plug boot*. We recommend using an NGK boot, # LB05EMH.

To avoid erratic readings:

- Route the lead as far away from the ignition coil as possible.
- Running your lead through a section of fuel line will protect it from cuts and abrasions, but will not shield it from ignition generated interference.

Be sure that the sensor and the connector fit together snugly.

Troubleshooting

The following are explanations to some commonly asked questions.

What are those letters on the side of my display?

There are two annunciators that may be displayed on the left side of your display.

RPM stands for Revolutions per Minute, also called Tach.

ERR stands for Error and could mean that your instrument has encountered extreme electrical interference. This can possibly cause the instrument to reprogram it's limit and calibration number.

Why is the Display Flashing?

This signifies that you are either in Set Limits mode or that your engine exceeded it's limit.

Repairs

If you have any questions about the operation of your instrument, please call. One of our technicians will be happy to help you.

Your instrument is warranted to be free from factory defects and electronic failure for one year from the date of purchase. Physical damage during normal usage is not covered under the warranty. Be sure to fill out and return your warranty card for our records. If we do not have a card on file for your instrument, you will be charged for repairs unless you can provide us with proof of purchase date.

When returning an instrument for repair, please use the repair form found on our website or enclose a note indicating your return address, phone number and a detailed description of the problem. Send your instrument and sensors so that we can check the complete system.

Send repairs to:

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