

*Larson Systems Inc.*



*SDC Manual*  
*Spring Data Collector*



## About This Manual

This manual could contain technical inaccuracies or typographical errors. Changes are periodically made to the information contained herein. These changes will be incorporated in new editions of the manual.

Copyright © 2017 Larson Systems Inc.

All rights reserved. No part of this manual may be reproduced by any means without written permission of the author, except portions necessary for internal use only by the purchaser of the LSI system.

# Table of contents

<b>1</b>	<b>INTRODUCTION .....</b>	<b>5</b>
<b>2</b>	<b>INSTALLATION .....</b>	<b>5</b>
<b>3</b>	<b>THE SDC PROGRAM .....</b>	<b>6</b>
<b>3.1</b>	<b>Test Specifications.....</b>	<b>6</b>
3.1.1	Force/Length Units.....	6
3.1.2	Number of Springs .....	6
3.1.3	Test Points.....	7
3.1.4	Test Data .....	7
3.1.5	Save Specs.....	7
<b>3.2</b>	<b>Tester Selection .....</b>	<b>7</b>
<b>3.3</b>	<b>Test Results.....</b>	<b>8</b>
3.3.1	Values.....	8
3.3.2	Graph .....	10
<b>4</b>	<b>REGISTERTRATION .....</b>	<b>10</b>

# 1 INTRODUCTION

The SDC is an easy-to-use software program designed for use with the Larson Systems Inc. DHT family of manually operated spring testers. Once a spring inspection test is set up, the software can collect the data from the tester, visually show good and bad parts, print a report, and save both the test setup (specifications) and results.

The software test springs in a Force At Length method. The Length is specified and the Force will have the conditional limits.

Only DHT style testers running software version 1.17 or greater are compatible with the SDC software.

# 2 INSTALLATION

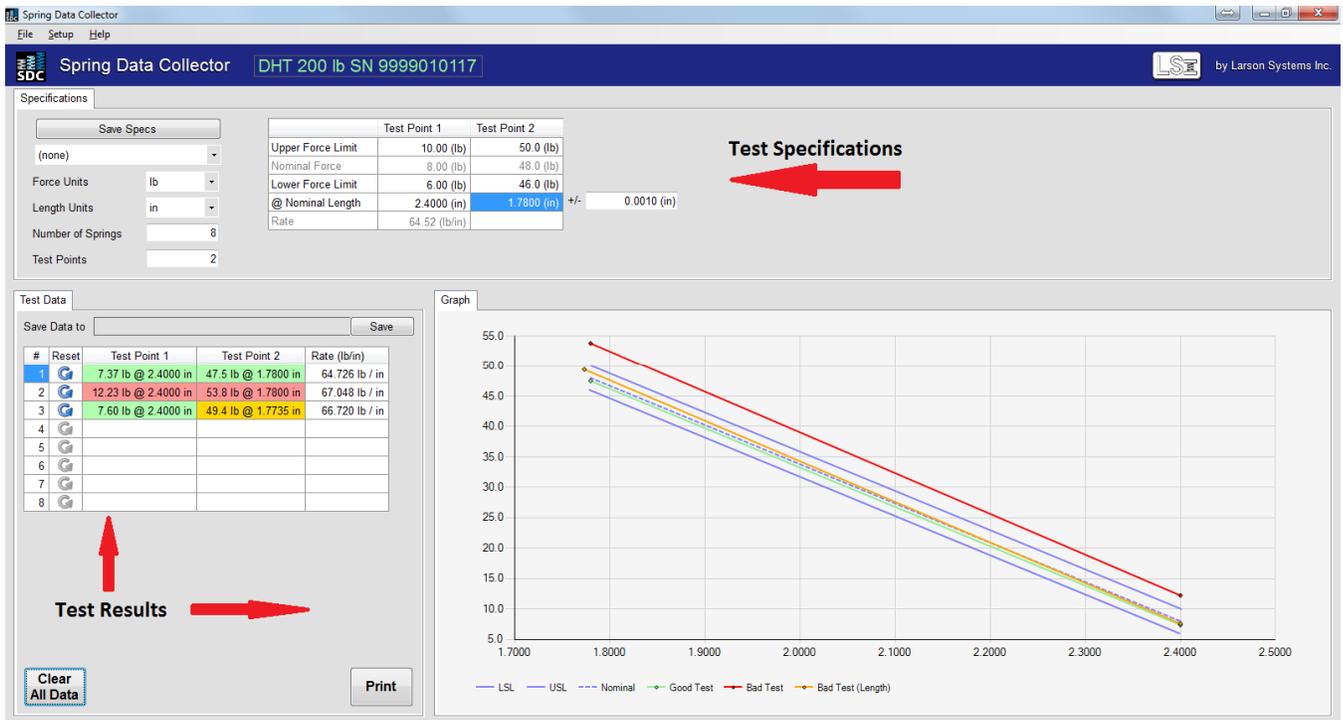
The SDC software can be installed from a CD-ROM or from a web download.

If installing from a CD-ROM, insert the CD into the computer. If AutoRun is enabled, the installation will begin automatically. First the USB driver will be installed, then the SDC software will be installed.

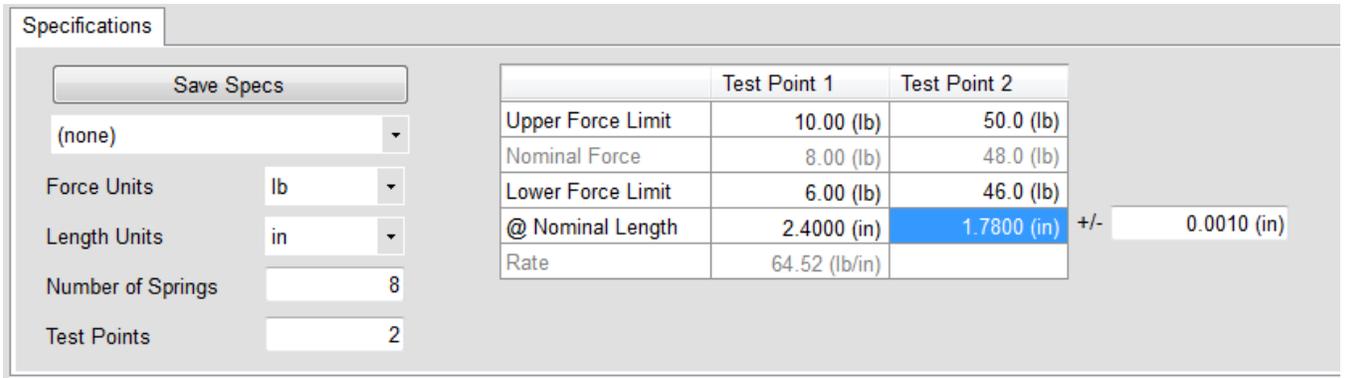
If installing from a web download, run the CDMxxx.exe program to install the USB driver software, then the SDC\_Installer.exe program to install the SDC software.

Please refer to instructions 060-1000-0111-00 for further information on the USB driver installation.

# 3 THE SDC PROGRAM



## 3.1 Test Specifications



The Specifications tab is where the spring inspections steps are created.

### 3.1.1 Force/Length Units

Use this drop down list to select the measurement units

### 3.1.2 Number of Springs

This is a reference number that represents the number of springs expected to be tested. The Results grid will be displayed with this number of rows. The number of results is not limited to this value. The Results grid will increase as necessary when more results are received.

### 3.1.3 Test Points

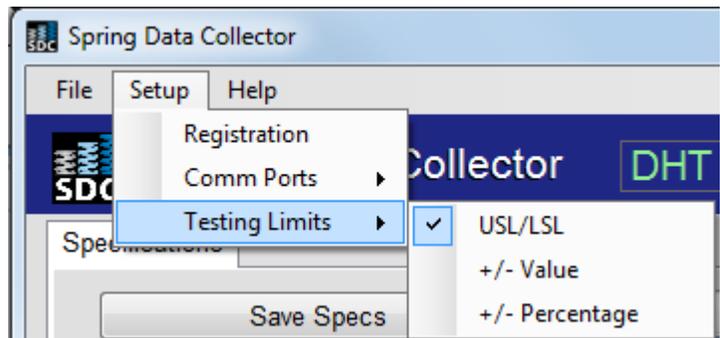
This value determines how many test points will be used. The Test Point grid will increase or decrease to reflect this value.

Rate calculation will be between test point 1 and the last test point.

### 3.1.4 Test Data

The Test Data grid is where each test point's specifications will be entered. The Force limits can be given in one of three methods : USL/LSL values, Nominal Force +/- specified value, or Nominal Value +/- Percentage.

To change the Force limits method entry can be changed from the menu item Setup . Testing Limits.



The Nominal Length will also be specified. A Limit will be applied to the Nominal Length. Because of the nature of manual testing it can be difficult to achieve a steady length reading on the tester. This limit can account for the inability to achieve a precise length reading.

### 3.1.5 Save Specs

Use this button to store the current specifications to a file. The operator will be prompted for a file name.

All specification files will be stored in a folder in the Common Documents location.

All file names will be loaded into the drop down list below the Save button for quick access.

## 3.2 Tester Selection

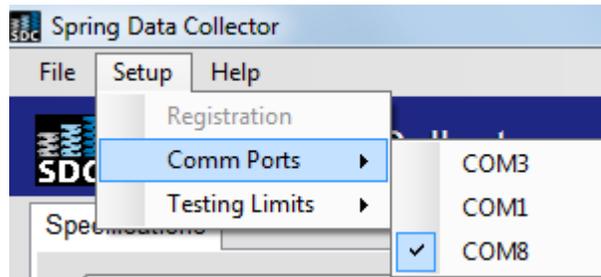
DHT style testers can be connected to the computer via an RS-232 port or a USB cable.

When connected via an RS-232 port the tester must have its baud rate set to 9600.

When connected via a USB cable, the tester show up as a COM port. To see which COM port the tester becomes use the computer's Device Manager and view the Ports (COM & LPT) device branch.

The DHT tester must have both its Console port AND its Printer port be set to the same setting : Serial for connection via an RS-232 port or USB for a USB cable. Refer to the DHT manual for more information on these ports.

To select a tester to receive data from, use the menu item Setup . Comm Ports to see the available ports and select one.



When a tester is connected correctly and its COM port is selected the devices model, capacity, and Serial Number are displayed in the Status bar.



### 3.3 Test Results

#### 3.3.1 Sending Data

With the correct COM port selected, parts can now be tested. Set up the tester as necessary, place the part in the tester and load to the first test point. When the first load is correctly applied, press the Send button on the tester. The data values should appear in the Test Data grid. Continue loading the part and hitting the Send button to test the rest of the test points.

#### 3.3.2 Values

The Results grid will show Green for good test points, Red for test points where the Force is out of specifications, and Orange when the Force is within the specified limits but the Length is out of its specified limits.

Use the blue arrow button to delete the entire row of results.

Empty rows between existing results will be filled in before new rows will be filled.

Use the Clear All Data button to clear the entire grid of data.

Use the Print button to print a report to the current Default Printer.

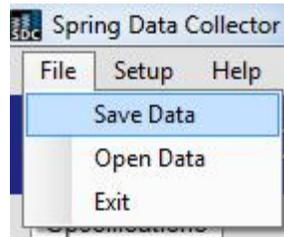
Test Data

Save Data to  Save

#	Reset	Test Point 1	Test Point 2	Rate (lb/in)
1		7.37 lb @ 2.4000 in	47.5 lb @ 1.7800 in	64.726 lb / in
2		12.23 lb @ 2.4000 in	53.8 lb @ 1.7800 in	67.048 lb / in
3		7.60 lb @ 2.4000 in	49.4 lb @ 1.7735 in	66.720 lb / in
4				
5				
6				
7				
8				

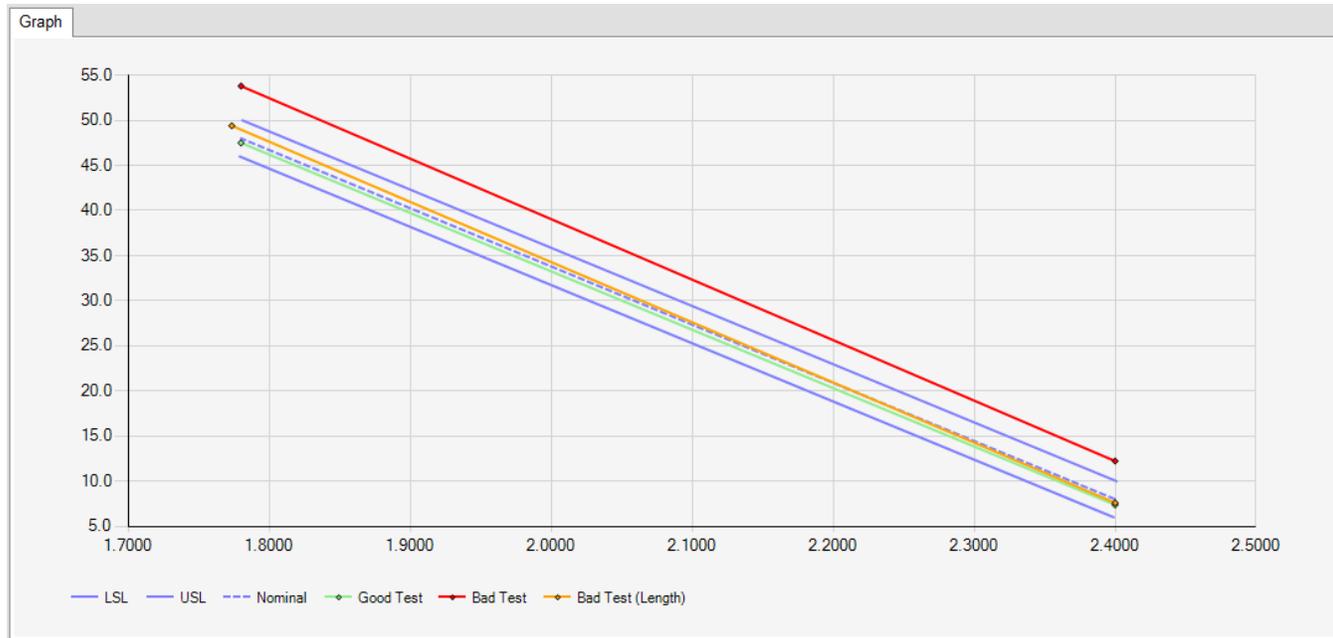
Clear All Data Print

Use the Save button to save the results to a file. By default, files have the extension .lsi. You can optionally save the file with the .csv extension so the result files can be opened into a spreadsheet program like Microsoft Excel.



You can also save and retrieve data from the menu items File . Save Data and File . Open Data

### 3.3.3 Graph



The Graph will show all of the results in a F vs L graph. It includes the Upper and Lower specification limits and a Nominal line.

Green lines are good tests.

Red lines are test out of Force limits.

Orange lines are out of the Length Limits but in the Force limits.

The graph is also shown on the report printout.

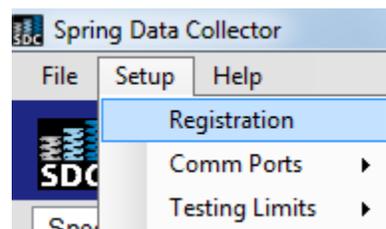
## 4 REGISTRATION

When the SDC software is first installed it is locked. When the software is locked it will not save results and it will not print a report.

To unlock the software, either contact LSI or go to [www.LarsonSystems.com/SDC](http://www.LarsonSystems.com/SDC) and fill out the form. You will need to supply the serial number of the tester that will be connected to the software.

Larson Systems Inc. will supply an Activation code.

Use the menu item Setup . Registration to open the Registration screen.



In the Registration screen click on the Activation Code cell for the tester being unlocked. Enter the supplied code and click Unlock.

Click the Remind Me Later button to close the window.



**SDC**  
SPRING DATA  
COLLECTOR

Please enter the following information to unlock this copy of Spring Data Collector.

	Tester Serial Number	Activation Code
1	0123456789	4DB058EFB7
2	0987654321	7740264478
3	9999010117	

If you do not have a license code please contact Larson Systems Inc.



**Larson Systems Inc.**  
Ham Lake, MN  
763-780-2131  
larsonsystems.com