



# BELT TENSIONING GAUGE

MODEL NO: VSE110

Thank you for purchasing a Sealey product. Manufactured to a high standard, this product will, if used according to these instructions, and properly maintained, give you years of trouble free performance.

**IMPORTANT:** PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.



Refer to  
Instructions



Wear eye  
Protection

## 1. SAFETY

- WARNING!** Wear approved eye protection. Wear appropriate Personal Protective Equipment. A full range of Personal Protective Equipment is available from your Sealey dealer.
- WARNING!** Ensure that Health & Safety, Local Authority Regulations and general workshop practice Regulations are adhered to when using tools.
- × **DO NOT** use tools if damaged.
- ✓ Maintain tools to ensure that they are in an adequate condition for safe use and optimum performance.
- ✓ Ensure that a vehicle that has been raised by a jack is adequately supported. Use axle stands.
- ✓ Wear suitable clothing to avoid snagging. **DO NOT** wear jewellery. Tie back long hair.
- ✓ Account for all tools, parts and components being used. **DO NOT** leave these in or near the engine. Return tools to suitable storage after use.
- ▲ **IMPORTANT!** These Instructions are provided as a guide only. Always refer to the vehicle manufactures' service instructions or a proprietary manual to establish the correct procedure and data.
- WARNING!** The warnings, cautions and instructions in this manual cannot cover all possible conditions and situations. The Operator / user must apply caution and common sense (good practical sense).
- ✓ When timing an engine, always prevent the engine from being turned over. Use a notice and/or inhibit the engine.
- WARNING!** Incorrect or out of phase camshaft timing can result in contact between the valve head and the piston crown. This will cause damage to the engine.

## 2. INTRODUCTION

Ensures accurate measurement of belt tension. Clear increment and dual scale for ease of use. Tension chart guide is included. Suitable for belts of varying thickness.

## 3. INSTRUCTIONS

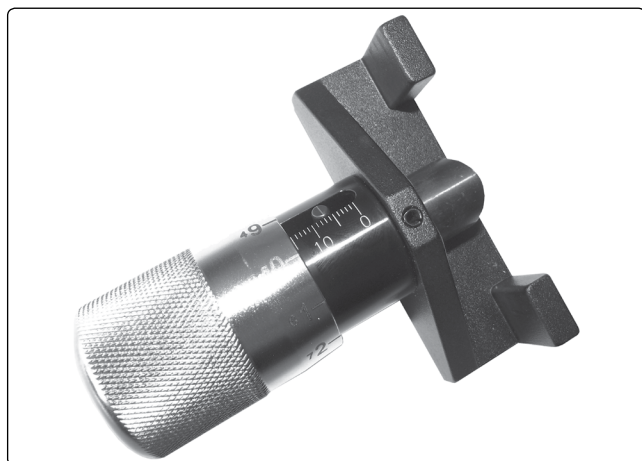
The Belt Tension Gauge is suitable for use on camshaft drive belts, and serpentine drive belts. It is designed for ease of use and can be used to check the tension on a variety of belts where the movement of the belt is measured by load. There is a clear increment and a dual scale for accurate measurement of the belt tension.

**NOTE:** Always follow the manufacturer's data for the belt tension requirements and the correct position of where the belt tension should be measured.

The Belt Tension Gauge is set for 5mm thick belts but can measure various belt thickness.

### 3.1. Checking the belt tension

- 3.1.1. Fit the Belt Tension Gauge on the belt at the correct location as detailed by the manufacturer for load testing.
- 3.1.2. Obtain the manufacturer's data for belt deflection (mm) and load. (daN)
- 3.1.3. Using the table supplied, find the correct tension setting.
- 3.1.4. Turn the knurled knob until the bevelled edge is on the required tension setting, the increments shown are for precise setting.
- 3.1.5. The belt tension can now be read from the internal slide. This reading can now be compared to the optimum tension readings on the table overleaf.
- 3.1.6. Adjust the belt to the correct tension as required.
- 3.1.7. If the belt to be tightened is thicker than 5mm, simply add the difference to the tension setting and to the optimum tension.  
For example; (Example shown in the shaded area on the table)  
Belt thickness = 6mm  
Belt load = 4.5 daN  
Belt deflection = 3.5mm  
The tension setting = 16mm + 1mm = 17mm  
Optimum Tension = 13mm + 1mm = 14mm



Values shown by vehicle manufacturer		Shown by vehicle manufacturer																				
Cam Belt Deflection (mm)		0.0	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	7.9					
0.0	Tension Setting	23.50																				
0.0	Optimum Tension	16.50																				
0.5	Tension Setting							19.90	19.50	19.00	18.6	18.10	17.70	17.20	16.80	16.40	16.00					
0.5	Optimum Tension							16.00	16.00	16.00	16.0	16.00	16.00	16.00	16.00	16	16.00					
1.0	Tension Setting							19.40	19.00	18.50	18.10	17.60	17.20	16.70	16.30	15.90	15.50					
1.0	Optimum Tension							15.50	15.50	15.50	15.50	15.50	15.50	15.50	15.50	15.50	15.50					
1.5	Tension Setting							19.80	18.90	18.50	18.00	17.60	17.10	16.70	16.20	15.80	15.40	15.00				
1.5	Optimum Tension							15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00					
2.0	Tension Setting							19.70	19.30	18.80	18.40	18.00	17.50	17.10	16.60	16.20	15.70	15.30	14.90	14.50		
2.0	Optimum Tension							14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50				
2.5	Tension Setting							19.70	19.20	18.80	18.30	17.90	17.50	17.00	16.60	16.10	15.70	15.20	14.80	14.40	14.00	
2.5	Optimum Tension							14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00			
3.0	Tension Setting							19.60	19.20	18.70	18.30	17.80	17.40	17.00	16.50	16.10	15.60	15.20	14.70	14.30	13.90	13.50
3.0	Optimum Tension							13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50		
3.5	Tension Setting							19.10	18.70	18.20	17.80	17.30	16.90	16.50	16.00	15.60	15.10	14.70	14.20	13.80	13.40	13.00
3.5	Optimum Tension							13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00		
4.0	Tension Setting							18.60	18.20	17.70	17.30	16.80	16.40	16.00	15.50	15.10	14.60	14.20	13.70	13.30	12.90	12.50
4.0	Optimum Tension							12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50		
4.5	Tension Setting							18.10	17.70	17.20	16.80	16.30	15.90	15.50	15.00	14.60	14.10	13.70	13.20	12.80	12.40	
4.5	Optimum Tension							12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00		
5.0	Tension Setting							17.60	17.20	16.70	16.30	15.80	15.40	15.00	14.50	14.10	13.60	13.20	12.70	12.30	11.90	11.50
5.0	Optimum Tension							11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50		
5.5	Tension Setting							17.10	16.70	16.20	15.80	15.30	14.90	14.50	14.00	13.60	13.10	12.70	12.20	11.80	11.40	11.00
5.5	Optimum Tension							11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00		
6.0	Tension Setting							16.60	16.20	15.70	15.30	14.80	14.40	14.00	13.50	13.10	12.60	12.20	11.70	11.30	10.90	10.50
6.0	Optimum Tension							10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50		
6.5	Tension Setting							16.10	15.70	15.20	14.80	14.30	13.90	13.50	13.00	12.60	12.10	11.70	11.20	10.80	10.40	10.00
6.5	Optimum Tension							10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00		



**ENVIRONMENT PROTECTION**

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.

**Note:** It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

**Important:** No Liability is accepted for incorrect use of this product.

**Warranty:** Guarantee is 12 months from purchase date, proof of which is required for any claim.

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