

Honda K20 & K24 Electric Water Plate Kit – Belt Tension Guide

When installing your Electric Water Plate Kit, it is very important that the drive belt is correctly tensioned. The implications of having the belt too tight can cause the alternator casing to fracture or break, if it is too loose the belt can slip and cause unnecessary wear, noise, and heat.

Install the Electric Water Plate Kit according to the instructions and fit the belt. Please note that a different length belt may be required for certain combinations of pulleys. We recommend that you refer to the table in our description to identify the pulley that you currently have.

1. Identify the Crank Pulley and Alternator pulley you have installed (See Image 1 & Table 1).

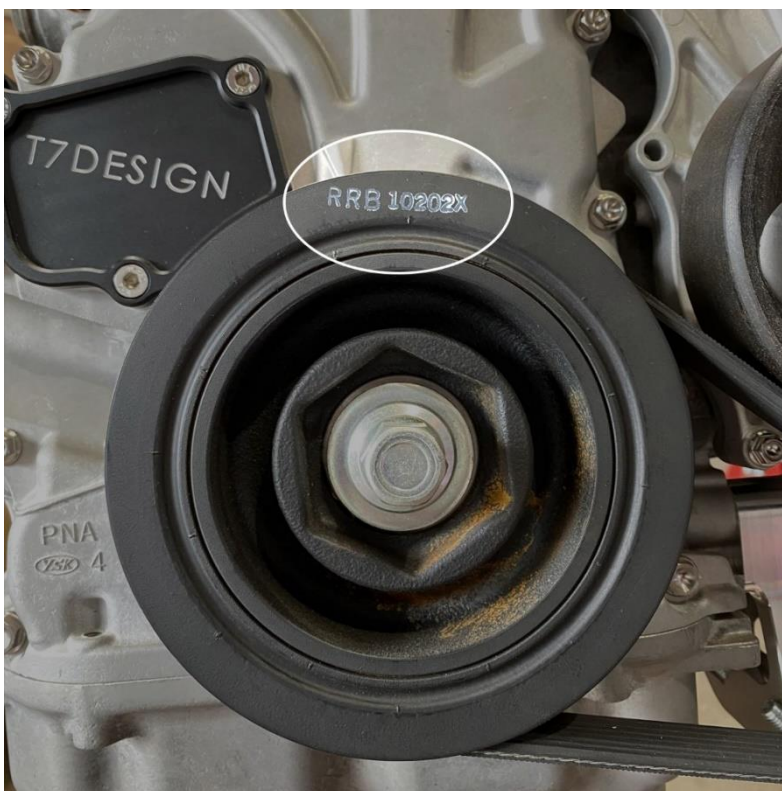


Image 1

Table 1 - Pulley Codes	
Part Number	Vehicle
13810-RRA-A02	2002-2006 Base RSX (k20a3)
	2002-2005 Civic Si (k20a3)
	2004-2008 TSX (k24a2)
	2002-2006 CR-V (k24a1)
	2003-2005 Accord (k24a4)
13810-PRB-A01	2002-2004 RSX Type-S (k20a2)
13810-RRC-003	2007-2011 Civic FD2R (k20a)

2. If you are using a protective case on your smartphone, you will need to remove this for the next steps to achieve accurate results from the microphone. You will need to identify the microphone's location; this is typically located at the base of the phone.
3. Download the "Easy Tension" App on your smartphone from either the Play Store or App Store.
4. Once the Easy Tension App has been downloaded, please open the App and select the Tension Meter function (shown below).

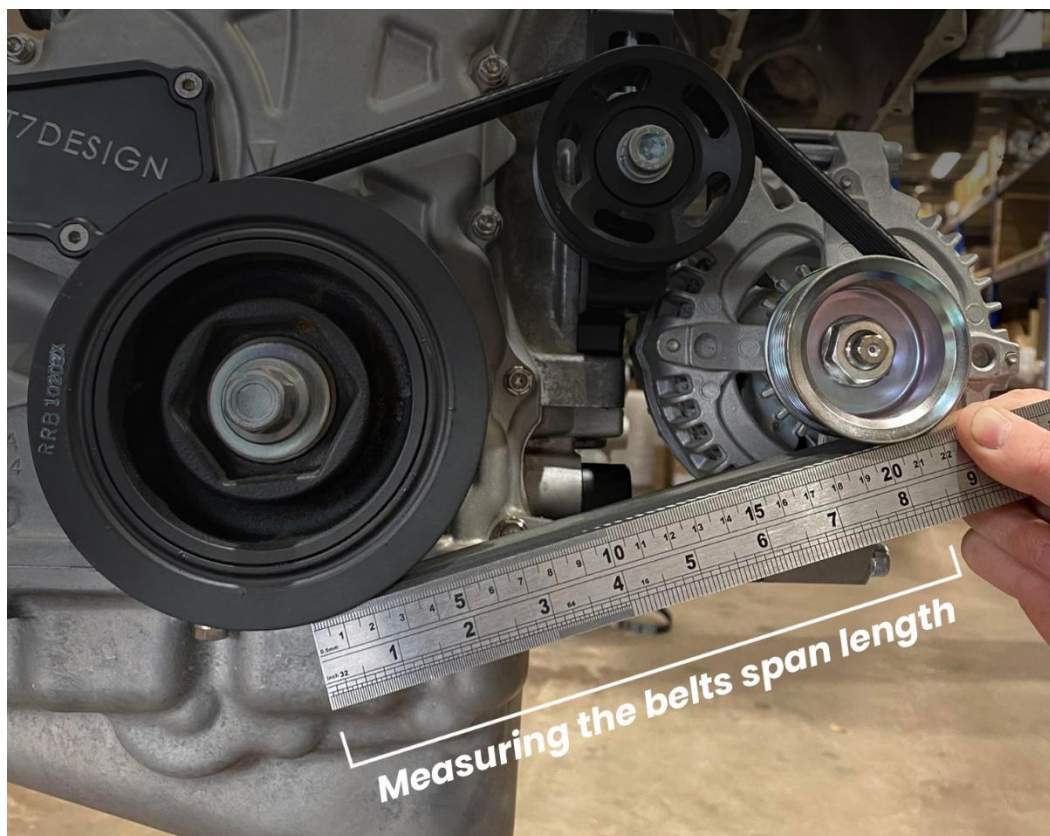
Image 2



Select 'Tension Meter'

5. You will need to input the following settings.
 - Belt Type – **Poly V**
 - Belt Profile – **PK**
 - Number of Ribs – **7**
 - Span Length – **Refer to Table 2** (below)

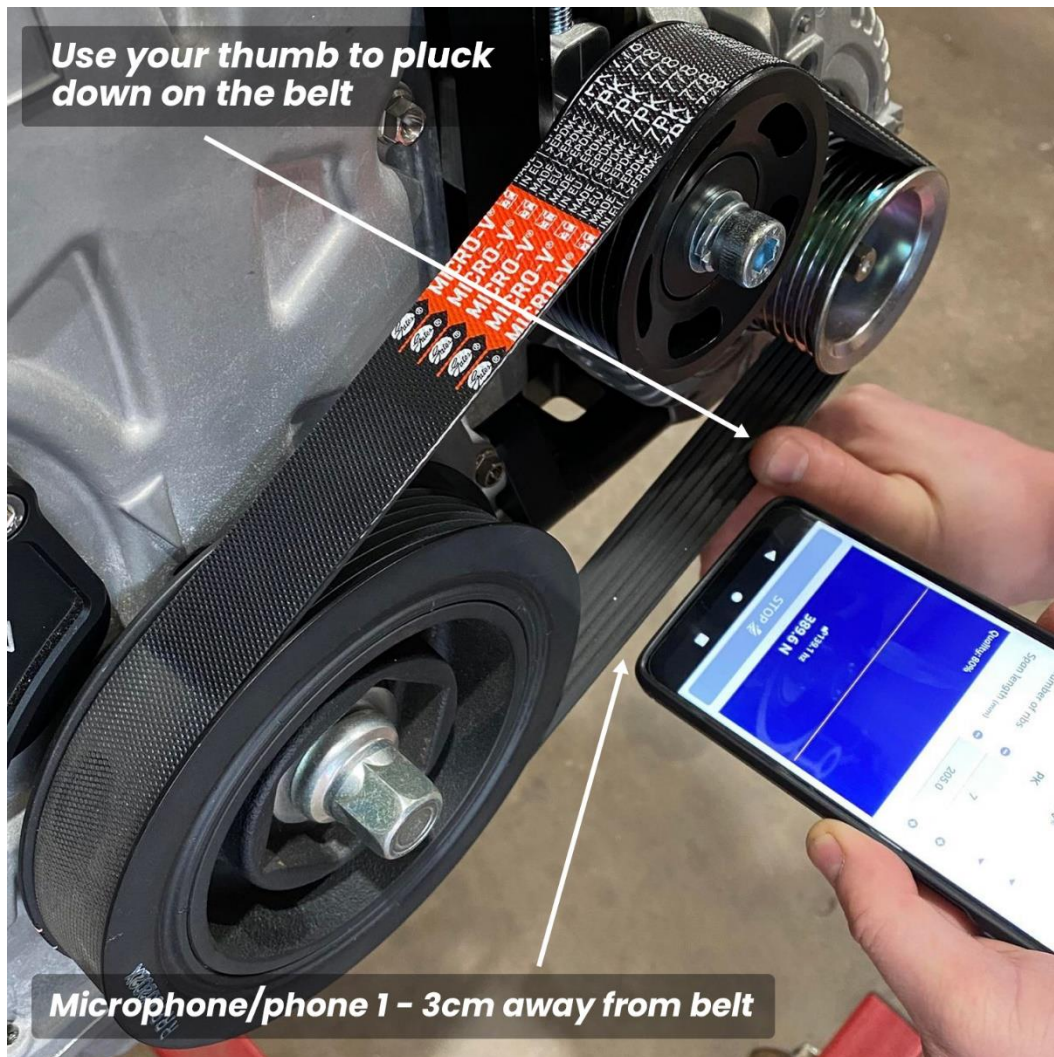
Image 3



To find your belt span length value, you will need to use a rule or tape measure to measure the span length of the belt in between the points the belt does not have contact with both the crank pulley and alternator pulley. The table below (Table 2) shows the span length for different crank pulleys and different Alternator pulleys if you are using one of our underdrive pulleys (10% or 20%).

Table 2 – Alternator Pulley VS Span Length			
Crank Pulley	Alternator Pulley	Span Length (mm)	Span Length (Inches)
K20A Crank Pulley 13810-RRC-003	Standard	205.6	8.09
	10% Reduced	206.1	8.11
	20% Reduced	206.7	8.14
K20A2 Crank Pulley 13810-PRB-A01	Standard	204.7	8.06
	10% Reduced	205.3	8.08
	20% Reduced	205.9	8.11
K24 Crank Pulley 13810-RRA-A02	Standard	203.9	8.03
	10% Reduced	204.6	8.06
	20% Reduced	205.4	8.09

6. Using the Belt span from the Crank Pulley to Alternator, hold the microphone approximately 1-3cm away from the belt. **Do not let the microphone touch the belt.** Please note, typically, this is accessible from the right-side inner wheel arch and will require the removal of the wheel and inner arch liner. Please see example below (Image 4).
7. Press 'Measurement Button'.
8. Use your thumb to pluck the belt in a downwards motion.



9. Ensure the quality reading is above 80% If it is below than this make sure there is no background noise and retry.

Image 5



10. Adjust the Belt tension accordingly to be within the Gates recommended range (Figure 3)

Table 3 – Recommended Tension Ranges (Gates)		
Units	lbs	N
Tension Range Lower	105	467
Tension Range Higher	145	645

11. For Reference the OE Honda Automatic Belt tensioner is set at 550N.

Ensuring A Reliable and Accurate Reading

When tensioning the belt, please ensure that the centre bolt is tight as this can affect the belt tension significantly.

When increasing or decreasing the belt tension, adjust the tensioning bolt by **no more than a quarter of a turn at a time**, this adjustment will have a large affect of the belt tension.

Once the belt tension is set, it is recommended to run the engine for **30 seconds** before switching the engine off and rechecking the belt tension.

Please take multiple readings to ensure a good accuracy.

Do not let the microphone on the phone touch the belt. The microphone must be held 1 – 3 cm away from the belt, parallel to the belt (as shown in Image 4).

Do not measure the belt tension without tightening the centre bolt on the tensioner assembly.