

26.0475

## math for formula

Gd,to the 4th divided by 8ND, to the 3rd				
11250000	G =	constant		
0.148	d =	wire diameter in inches	WD	
3.13	N=	number active coils	AC	
0.667	D=	means dia in inches	OD-WD	
8	8=	constant		
Rate =	lbs per inch	725.844	<b>lbs @ 21 mm</b>	<b>math check</b>
			<b>124.59</b>	<b>601.250717</b>
				<b>725.8445</b>
				725.83

## math for formula

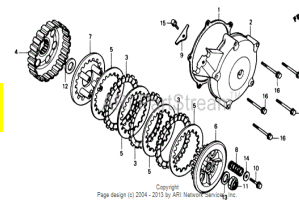
mm	in		
3.7592	0.148	wire dia	NEW
20.701	0.815	spring OD	NEW
16.9418	0.667	wire <b>MEAN</b> dia	NEW
<b>25.4</b>		1 (new) free length (height)	NEW
<b>21.04</b>		0.82834646 installed compressed length	NEW
4.36		0.17165354 mm compressed (travle)	<b>MATH CHECK</b>
		<b>0.17165</b>	<b>1</b>
			<b>0.82835 in</b>

LB'S

20% 120.250143

<b>NEED</b>	<b>120</b>	<b>LBS @ 21 MM, NEW PILOT SPRING ( BAZ,new )</b>	
0.00%	<b>124.59</b>	Increase From rate @21mm via shim	
% over stock	4%		lbs
Spring poundage			725.84
	mm	in	
COMPRESSED LENGTH	21.04	0.828	
SOLID LENGTH	19.558	0.770	
<b>REMAINDER before SL</b>	1.482	0.058	42.35
poundes remainig for shimming			42.35
Base rate			124.59
0.00%	increase in rate		<b>124.59</b>
Rate at SL		0.770	166.94
Shim thickness	0	0.000	0.00
shim thickness remainig	1.482	0.058	42.35
max % increase	33.99%		
% increase	0.00%		
<b>shim for stock poundage</b>	-0.161	<b>-0.006</b>	-4.59

Spring Free Length	
#1	26.12
#2	25.98
#3	26.06
#4	26.03
<b>Average</b>	<b>26.0475</b>

Copyright  
Page design (c) 2004 - 2013 by API Technical Services, Inc.

## SPECIFICATIONS

unit: mm (in)

ITEM	STANDARD	SERVICE LIMIT
Torque limiter Disc thickness	2.52 - 2.68 (0.099 - 0.106)	2.45 (0.096)
Plate warpage	—	0.2 (0.008)
Spring free length	26.9 (1.06)	26.0 (1.02)

Here's the spring test results,done at 1mm increments.

25mm-40lbs  
24mm-60lbs  
23mm-80lbs  
22mm-100lbs  
21mm-120lbs ← 120 lbs at 21 mm  
20mm-150lbs checked with verniers 3 times  
19mm-170lbs-nearly bound.

This is an old well used tester,rate seems to be around 20lb / 1mm compression.

## INCH to MM conversion

inch	mm
0.00	
enter inch	enter MM
	<b>0.00</b>

PLATE	mm
H=	1.39 New
Go Ody=	1 used
Adnoh	1.38 used

Disc	mm
H=	2.64 Measured New
Book=	<b>2.6 Average</b> Book, Stock
Go Ody	2.35 Failure used
Adnoh	2.6 Measured used

Stack part thickness	#1 Plate (5)	#2 Plate (5)	#3 Plate (5)	#4 Plate (5)	#1 Disc (3)	#2 Disc (3)	#3 Disc (3)	Total
Stock new	IN MM	1.39	1.39	1.39	1.39	<b>2.6</b>	<b>2.6</b>	<b>2.6</b>
Stack part thickness	#1 Plate (5)	#2 Plate (5)	#3 Plate (5)	#4 Plate (5)	#1 Disc (3)	#2 Disc (3)	#3 Disc (3)	
<b>Yours</b>	IN MM	1.38	1.38	1.38	1.38	2.6	2.6	2.6
								13.32 <b>Adnoh, measured</b>

Total Thickness **13.36** **MM STOCK**YOUR Thickness **13.32** **MM Yours****Difference** **0.04** **MM,This is used as an adjustment factor for the springs installed poundage. A positive number would indacate a shim adjustment**