26.0475

math for formula

	Gd,to the 4th divided by 8ND, to the 3rd				
11250000	G =	constant			
0.142519685	d =	wire diameter in inches	WD		
3.2	N=	number active coils	AC		
0.672440945	D=	means dia in inches	OD-WD	book	26.9
8	8=	constant		Adnoh	21

	lbs @ 21 mm	math check	
Rate =	lbs per inch	596.279	
	117.55	478.7251875	596.279

math for formula

mm	in		
3.62	0.14252	wire dia	Adnoh
20.7	0.814961	spring OD	Adnoh
17.08	0.672441	wire **MEAN** dia	Adnoh
26.9	**26.0475** 1.02549213	(new) free length (height)	Adnoh
21	**21.04** 0.82834646	installed compressed length	Adnoh
	5.0075 0.19714567	mm compressed (travle)	MATH CHECK
	0.19715	1	0.80285 in

LB'S

20% 95.7450375

NEED	120	LBS @ 21 MM, NEW PILOT SPRING (BAZ,new)	
0.00%	**117.55**	Increase From rate @21mm via shim	
% over stock	-2%		lbs
Spring poundage			596.28
	mm	in	
COMPRESSED LENGTH	21.04	0.828	
SOLID LENGTH	18.9992	0.748	
REMANDER before SL	2.0408	0.080	47.91
poundes remaing for shimming			47.91
Base rate			117.55
0.00%	increase in rate		**117.55**
Rate at SL		0.748	165.46
Shim thickness	0	0.000	0.00
shim thickness remaing	2.0408	0.080	47.91
max % increase	40.75%		
% increase	0.00%		
shim for stock poundage		0.104	**0.004** 2.45

Spring Free Length

#1	26.12
#2	25.98
#3	26.06
#4	26.03
Average	26.0475

165.46 math check
0.828 math check
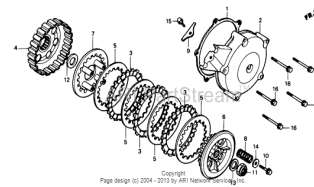
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SPECIFICATIONS

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 ← 120lbs at 21mm
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 MM
enter inch	0.00	

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

Disc	mm		
H=	2.64	Measured	New
Book=	**2.6**	Average	Book, Stock
Go Ody	2.35	Failure	used
Adnoh	2.6	Measured	used

		#1 Plate (5)	#2 Plate (5)	#3 Plate (5)	#4 Plate (5)	#1 Disc (3)	#2 Disc (3)	#3 Disc (3)	Total	
Stock part thickness										
Stock new	IN MM	1.39	1.39	1.39	1.39	**2.6**	**2.6**	**2.6**	13.36	Book, Stock, average
Stack part thickness		#1 Plate (5)	#2 Plate (5)	#3 Plate (5)	#4 Plate (5)	#1 Disc (3)	#2 Disc (3)	#3 Disc (3)		
Yours	IN MM	1.38	1.38	1.38	1.38	2.6	2.6	2.6	13.32	Adnoh, measured

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