

# Fenner

## Taper-Lock® Bushes

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Using Fenner Taper-Lock® Bushes, it is possible for unskilled labour to achieve 'shrink fit' of Pulleys, Couplings, etc. on to shafts only using a hexagon wrench.

The arrangement of half-threaded holes and longitudinally split tapered bushes ensure maximum grip and fast, easy fitting. Tightening of the screws into the threaded holes in the hub forces the bush into the taper bored components, thereby effectively contracting the bore of the Taper-Lock® Bush until the equivalent of a shrink fit is obtained. Taper-Lock® 'Bushes are suitable for metric shafts and can also be supplied with Imperial Bores and Keyways.

03-01





# Fenner Taper-Lock® Bushes

## Advantages :

- No re-boring and keywaying costs.
- Saves time and cost in fitting.
- Eliminates precision taper fitting keys.
- 239 bush size/bore combinations are available.
- Interchangeable between many products.
- Taper bored components can be transferred to other diameter shafts by fitting alternative bore bushes.
- Convenience in dismantling for maintenance and component replacement.
- Accommodates shaft limits of +0.051 mm /- 0.127mm.

The benefits of using Taper-Lock® Bushes can be extended to include components which have a parallel bore by incorporating Taper-Lock® Adaptors, Taper-Lock® Bolt-on-Hubs or Taper-Lock® Weld-on-Hubs.

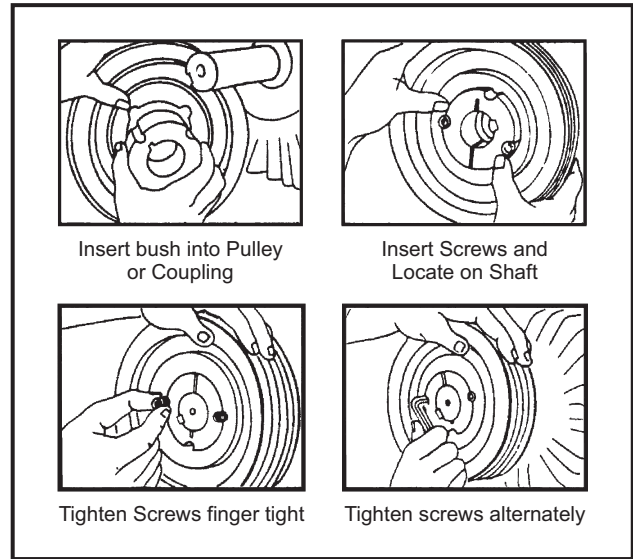
## Installation Instructions

### To Install

1. Remove the protective coating from the bore, outside of bush and bore of hub. After ensuring that the mating tapered surfaces are completely clean and free from oil and dirt, insert bush in hub, so that the holes line up.
2. Oil thread and point of grub screws, or thread and under-head of cap screws. Place screws loosely in holes threaded in hub, shown thus @ in diagram.
3. Clean shaft and fit hub and bush to shaft as one unit. Locate in position desired, remembering that the bush will grip the shaft first and then the hub will be slightly drawn on to the bush.
4. Using a hexagon wrench tighten screws gradually and alternately until they are fully secured. Use a piece of pipe on wrench to increase leverage.

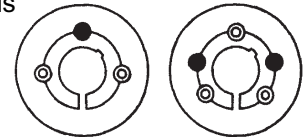
### To Remove

1. Slacken all screws by several turns. Remove one or two according to number of jacking-off holes, shown thus in diagram. Insert screws in jacking off holes after oiling thread and point of grub screws or thread and under-head of cap screws.



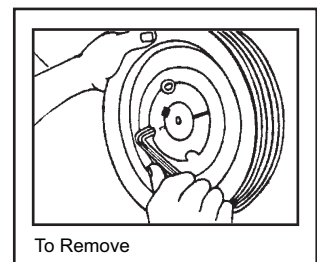
2. Tighten screws alternately until bush is loosened in the hub and assembly is free on the shaft.

3. Remove assembly from shaft.



4. For normal drives a key is not necessary. But when a key is not used hammer against large end of bush using a block or sleeve to prevent damage. (This will ensure that the bush is seated squarely in the bore). Screws will now turn a little more. Repeat this alternate hammering and screw tightening once or twice until correct tightening torque is obtained.

5. If a key is to be fitted, place it in the shaft keyway before fitting the bush. It is essential that only a side-fitting parallel key with TOP CLEARANCE be used.



6. After drive has been running under load for a short time stop and check tightness of screws.
7. Fill empty holes with grease to exclude dirt.

Bush		1008 1108	1310	1210 1215	1510 1615	2012	2517 2525	3020 3030	3525 3535	4040	4545	5050
Screw tightening torque	(Nm.)	56	20	20	20	31	48	90	113	170	192	271
Screw	Qty.	2	2	2	2	2	2	2	3	3	3	3
	Size (BSW)	1/4"	3/8"	3/8"	3/8"	7/16"	1/2"	5/8"	1/2"	5/8"	3/4"	7/8"

# Taper Lock® Dual Duty Pulleys

## IMPERIAL BORES AND KEY-WAYS

Dimensions In Inches

Bore Dia.	Keyway		Shallow Keyway Depth	1008	1108	1210	1215	1310	1610	1615	2012	2517	2525	3020	3030	3525	3535	4040	4545	5050
	Width	Depth																		
0.375	0.125	0.060		0375	0375															
0.500	0.125	0.060		0500	0500	0500	0500	0500	0500	0500										
0.625	0.188	0.088		0625	0625	0625	0625	0625	0625	0625										
0.750	0.188	0.088		0750	0750	0750	0750	0750	0750	0750	0750	0750								
0.875	0.250	0.115		0875	0875	0875	0875	0875	0875	0875	0875	0875	0875							
1.000	0.250	0.115	0.052	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000							
1.125	0.312	0.112	0.064		1125	1125	1125	1125	1125	1125	1125	1125	1125							
1.250	0.312	0.112				1250	1250	1250	1250	1250	1250	1250	1250	1250	1250					
1.375	0.375	0.108						1375	1375	1375	1375	1375	1375	1375	1375					
1.500	0.375	0.108						1500	1500	1500	1500	1500	1500	1500	1500	1500	1500			
1.625	0.438	0.135	0.103					1625*	1625*	1625	1625	1625	1625	1625	1625	1625	1625			
1.750	0.438	0.135								1750	1750	1750	1750	1750	1750	1750	1750	1750		
1.875	0.500	0.131								1875	1875	1875	1875	1875	1875	1875	1875	1875		
2.000	0.500	0.131								2000	2000	2000	2000	2000	2000	2000	2000	2000		
2.125	0.625	0.185									2125	2125	2125	2125	2125	2125	2125	2125		
2.250	0.625	0.185									2250	2250	2250	2250	2250	2250	2250	2250	2250	
2.375	0.625	0.185									2375	2375	2375	2375	2375	2375	2375	2375	2375	
2.500	0.625	0.185	0.153								2500	2500	2500	2500	2500	2500	2500	2500	2500	
2.625	0.750	0.209												2625	2625	2625	2625	2625	2625	
2.750	0.750	0.209												2750	2750	2750	2750	2750	2750	2750
2.875	0.750	0.209												2875	2875	2875	2875	2875	2875	2875
3.000	0.750	0.209												3000	3000	3000	3000	3000	3000	3000
3.125	0.875	0.264														3125	3125	3125	3125	3125
3.250	0.875	0.264														3250	3250	3250	3250	3250
3.375	0.875	0.264														3375	3375	3375	3375	3375
3.500	0.875	0.264														3500	3500	3500	3500	3500
3.750	1.000	0.318																3750	3750	3750
4.000	1.000	0.318																4000	4000	4000
4.250	1.250	0.366																	4250	4250
4.500	1.250	0.366																	4500	4500
4.750	1.250	0.366																		4750
5.000	1.250	0.366																		5000
Nominal dia at large end of Taper (in mm) Approx.				35.0	38.0	47.5	47.5	51.0	57.0	57.0	70.0	85.5	85.5	108.0	108.0	127.0	127.0	146.0	162.0	177.5
Mass of Bush (Kg)				0.1	0.1	0.2	0.3	0.3	0.3	0.5	0.7	1.5	1.9	2.7	3.6	3.8	5.0	7.7	10	14



Keyways are British Standard Imperial B.S. : 10 : Part 1:1972 and conform to I.S.O. recommendations except for the bore sizes marked\* which are shallower. Where a key is to be used it should be parallel and side fitting with top clearance. Depth of keyway is measured at CROWN. Note : Taper-Lock® Bushes with imperial bores can also be supplied as 'specials' subject to minimum quantity restrictions. Consult Fenner.



## METRIC BORES AND KEYWAYS

Dimensions In millimeters

Bore Dia.	Keyway		Shallow Keyway Depth	Catalogue Code Group 029 ...																
	Width	Depth		1008 AO	1108 BO	1210 CO	1215 DO	1310 EO	1610 GO	1615 HO	2012 KO	2517 MO	2525 NO	3020 PO	3030 QO	3525 JO	3535 RO	4040 SO	4545 TO	5050 UO
9	3	1.4	-	...009	009															
10	3	1.4	-	...010	010															
11	4	1.8	-	...011	011	011	011													
12	4	1.8	-	...012	012	012	012													
14	5	2.3	-	...014	014	014	014	014	014	014										
16	5	2.3	-	...016	016	016	016	016	016	016	016									
18	6	2.8	-	...018	018	018	018	018	018	018	018									
19	6	2.8	-	...019	019	019	019	019	019	019	019	019								
20	6	2.8	-	...020	020	020	020	020	020	020	020	020								
22	6	2.8	-	...022	022	022	022	022	022	022	022	022								
24	8	3.3	1.3	...024*	024	024	024	024	024	024	024	024								
25	8	3.3	1.3	...025*	025	025	025	025	025	025	025	025	025							
28	8	3.3	1.3		028*	028	028	028	028	028	028	028	028	028						
30	8	3.3	-			030	030	030	030	030	030	030	030	030						
32	10	3.3	1.3			032*	032*	032	032	032	032	032	032	032						
35	10	3.3	1.3					035*	035	035	035	035	035	035	035	035	035			
38	10	3.3	-						038	038	038	038	038	038	038	038	038			
40	12	3.3	1.3						040*	040*	040	040	040	040	040	040	040	040		
42	12	3.3	1.3						042*	042*	042	042	042	042	042	042	042	042		
45	14	3.8	-							045	045	045	045	045	045	045	045	045		
48	14	3.8	-							048	048	048	048	048	048	048	048	048		
50	14	3.8	2.8							050*	050*	050*	050	050	050	050	050	050		
55	16	4.3	-								055	055	055	055	055	055	055	055	055	
60	18	4.4	-								060	060	060	060	060	060	060	060	060	
65	18	4.4	-									065	065	065	065	065	065	065	065	
70	20	4.9	-										070	070	070	070	070	070	070	070
75	20	4.9	-											075	075	075	075	075	075	075
80	22	5.4	-												080	080	080	080	080	080
85	22	5.4	-												085	085	085	085	085	085
90	25	5.4	3.4												090*	090*	090	090	090	090
95	25	5.4	-														095	095	095	095
100	28	6.4	5.4														100*	100	100	100
105	28	6.4	-															105	105	105
110	28	6.4	-															110	110	110
115	32	7.4	-																	115
120	32	7.4	-																	120
125	32	7.4	-																	125
Nominal dia at large end of Taper (in mm) Approx.				35.0	38.0	47.5	47.5	51.0	57.0	57.0	70.0	85.5	85.5	108.0	108.0	127.0	127.0	146.0	162.0	177.5
Mass of Bush (Kg)				0.1	0.1	0.2	0.3	0.3	0.3	0.5	0.7	1.5	1.9	2.7	3.6	3.8	5.0	7.7	10	14



Keyways are British Standard Metric B.S. 4235: Part 1:1972 and conform to I.S.O. recommendations except for the bore sizes marked \* which are shallower. Where a key is to be used it should be parallel and side fitting with top clearance. Depth of keyway is measured at CENTRE.

**Note :** Taper-Lock® Bushes with imperial bores can also be supplied. Please consult Fenner.