

# SELECTION/DIMENSIONS



## TORQUE-TAMER

### SELECTION OF TORQUE-TAMER:

STEP 1: Determine torque at which clutch should limit or slip.

$$T = \frac{\text{HP X 63025}}{\text{RPM}} \times \text{Limit Factor}$$

Limit factor determines point at which TORQUE-TAMER should slip above nominal load.

STEP 2: Refer to Chart 1. Select the TORQUE-TAMER size that falls within the min./max torque range. Verify the max bore for the TORQUE-TAMER is within specification. This chart will also determine the number of springs required and the spline setting for the TORQUE-TAMER.

STEP 3: Refer to Chart 2 to verify the minimum number of sprocket teeth required for the TORQUE-TAMER sprocket. From Chart 2, also determine the bushing width required.

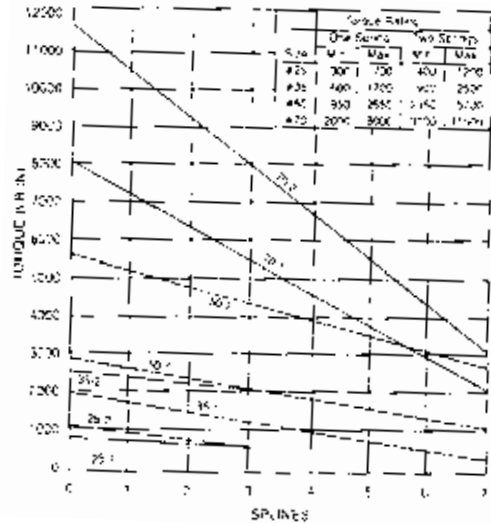
EXAMPLE: 3HP, RPM at TORQUE-TAMER 175, Needs TORQUE-TAMER to limit or slip at 150% of nominal torque.

1. Limit factor is 150%/100%=1.5.

$$T = \frac{3\text{HP X 63025}}{175\text{ RPM}} \times 1.5 = 1,620 \text{ lb-in}$$

2. Select size from Chart 1. Minimum size is #35 TORQUE-TAMER. One spring will be sufficient, however, a second spring can be added for increased torque capability (should parameters of application required additional torque).

Chart 1 -  
TORQUE-TAMER CLUTCH CLAIBRATION



#### Note

Graph indicates approximate rated torque vs. number of splines adjusting nut is backed off from finger tight. Numbers on calibration lines indicate TORQUE-TAMER model and quantity of compression springs. Example: 35-2 is a model 35 TORQUE-TAMER with 2 springs.

3. Check Chart 2 for maximum bore and minimum sprocket teeth and bushing requirements.

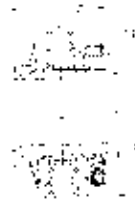
CHART 2 - Minimum Allowable Sprocket Teeth\* & Width of Bushing Required & Maximum Bore Capability

TORQUE-TAMER Size	Data:	Chain Size*										Max Bore	
		#35 Chain	#41 Chain	#40 Chain	#50 Chain	#60 Chain	#80 Chain	#100 Chain	#120 Chain	#140 Chain	#160 Chain	Std. KW†	Shallow KW†
25	Minimum # Teeth Bush.	25	19 ▲	19 ▲	16 ▲	.....	.....	.....	.....	.....	.....	7/8	1
	Width Req'd	1/8	1/8	1/4	1/4	.....	.....	.....	.....	.....	.....		
35	Minimum # Teeth Bush.	34	26	26	21	18	15	.....	.....	.....	.....	1-3/16	1-1/4
	Width Req'd	1/8	1/8	1/4	1/4	3/8	3/8	.....	.....	.....	.....		
50	Minimum # Teeth Bush.	48	35	35	30	25	19	17	.....	.....	.....	1-3/16	2
	Width Req'd	1/8	1/8	1/4	1/4	3/8	3/8	1/2***	.....	.....	.....		
70	Minimum # Teeth Bush.	.....	.....	48	40	34	26	21	18	16	14	2-3/4	3
	Width Req'd	.....	.....	1/4	1/4	3/8	3/8	1/2	3/4*	3/4*	1**		

- Minimum number of teeth on sprocket which will permit chain to clear friction disc
- ▲ 20 teeth minimum recommended. Minimal clearance of 19 teeth may shorten life

- \* Use two 3/8" wide bushings
- \*\* Use two 1/2" wide bushings
- † Keyway to be cut central with threaded spline
- \*\*\* Use two 1/4" wide bushings

## TORQUE-TAMER



TORQUE-TAMER Clutch Dimensions									
TORQUE-TAMER Size	Avg. Wt.	A	B	C		K +0.00 -0.02 Splines O D	L +0.03 -0.00 Spkt. Bore	Max. Bore	
				Min.	Max.			Std. Key*	Shallow Key*
25	1	2-1/2	1-3/4	1/8	11/32	1.368	1.628	7/8	1
35	2.5	3-1/2	2-7/16	1/8	5/8	1.675	2.003	1-3/16	1-1/4
50	6	5	2-7/8	1/8	5/8	2.625	3.005	1-3/4	2
70	18	7	3-7/8	1/4	1-1/4	3.811	4.194	2-3/4	3

\* Keyway to be cut central with threaded spline.

### Stock TORQUE-TAMER Clutches: Finished Bores & Reborable

Stock TORQUE-TAMER Clutches  
w/Finished Bore & Keyway

Reborable TORQUE-TAMER Clutches

TORQUE-TAMER Size	Finished Bore		Reborable			
	Bore	Part Number	Bore (No KW & 1 ▲)	Part Number	Max Bore	
					Standard KW*	Shallow KW*
25	1/2	096034	1/2	096033	7/8	1
	5/8	096035				
	3/4	096036				
	7/8	096037				
35	3/4	096008	3/4	096010	1-3/16	1-1/4
	7/8	096009				
	1	096011				
50	1	096014	1	096017	1-3/4	2
	1-1/8	096015				
	1-3/16	096018				
	1-1/4	096019				
	1-3/8	096020				
	1-7/16	096021				
	1-1/2	096022				
1-5/8	096023					
70	1-7/16	096028	1-3/8	096027	2-3/4	3
	1-1/2	096029				
	1-3/4	096030				
	1-15/16	096031				
	2	096032				
	2-3/16	096038				
2-7/16	096016					

▲ With standard Keyway and (1) Setscrew.

\* Keyway to be cut central with threaded spline

# SELECTION/DIMENSIONS



## TORQUE-TAMER

### TORQUE-TAMER Sprocket



Stock TORQUE-TAMER sprockets are bored to fit TORQUE-TAMER clutches. Sprocket faces are machined smooth and parallel to provide proper interface with friction discs.

Standard A-Plate sprockets can also be reworked for use with TORQUE-TAMER clutches. Refer to DODGE List price Book for modifications charges

### Stock TORQUE-TAMER Sprockets Bored and Micro Ground

#25 TORQUE-TAMER					#35 TORQUE-TAMER				
Chain Size	No. Teeth	Descrip.	Part No	Bushing Part No *	Chain Size	No. Teeth	Descrip.	Part No	Bushing Part No *
40	19	25TT419	096135	096051	40	26	35TT426	096150	096056
40	20	25TT420	096136	096051	50	21	35TT521	096151	096056
40	21	25TT421	096137	096051	50	22	35TT522	096152	096056
40	23	25TT423	096138	096051	50	23	35TT523	096153	096056
50	16	25TT516	096139	096051	50	25	35TT525	096154	096056
50	17	25TT517	096140	096051	60	18	35TT618	096155	096057
50	18	25TT518	096141	096051	60	19	35TT619	096156	096057
50	19	25TT519	096142	096051	60	20	35TT620	096157	096057
50	21	25TT521	096143	096051	60	21	35TT621	096158	096057
50	23	25TT523	096144	096051	60	23	35TT623	096159	096057
#50 TORQUE-TAMER					#70 TORQUE-TAMER				
Chain Size	No. Teeth	Descrip.	Part No	Bushing Part No *	Chain Size	No. Teeth	Descrip.	Part No	Bushing Part No *
50	30	50TT530	096165	096063	60	35	70TT635	096175	096071
60	25	50TT625	096166	096064	80	26	70TT826	096176	096071
60	26	50TT626	096167	096064	80	27	70TT827	096177	096071
80	19	50TT819	096168	096064	100	21	70TT1021	096178	096072
80	20	50TT820	096169	096064	100	22	70TT1022	096179	096072
80	21	50TT821	096170	096064					
80	23	50TT823	096171	096064					

\* BUSHING ORDERED SEPARATELY

### TORQUE-TAMER Clutch Extra Items

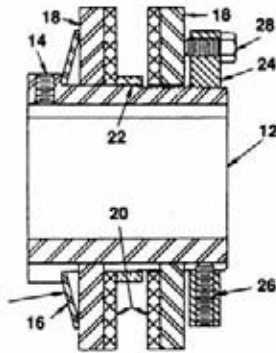
TORQUE-TAMER SIZE	Part Number for Bushing Width of:				Part Number for Extra Spring
	1/8"	1/4"	3/8"	1/2"	
25	096050	096051	.....	.....	096039
35	096055	096056	096057	.....	096041
50	096062	096063	096064	.....	096042
70	.....	096070	096071	096072	096043
Reference#	22				16

### TORQUE-TAMER Replacement Parts

Reference#	No. Req'd	Name of Part	Part Numbers			
			Size 25	Size 35	Size 50	Size 70
12	1	Hub Assembly	N/A	N/A	N/A	N/A
14	1	Hub Set Screw	N/A	N/A	N/A	N/A
18	2	Pressure Plate	391371	391375	391379	391383
20	1	• Friction Discs	096065	096066	096067	096068
24	1	Adjusting Nut Assembly	391372	391376	391380	391384
26	1	▲ Adjusting Nut Set Screws	.....	.....	.....	.....
28	3	▲ Tension Screw	391373	391377	391381	391385

• Sold in packs of 2 only

▲ Included in preceding assembly



WHEN 2 SPRINGS ARE TO BE USED, INSTALL BOTH HERE

FEATURES/BENEFITS PAGE PT5-2	SPECIFICATION/HOW TO ORDER PAGE PT5-3		
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