



# INSTRUCTIONS

## Stellar 2 Manual Clutch

Thank you for choosing Tomar™ products; we are proud to be your manufacturer of choice. Please read this instruction sheet carefully before beginning installation, and also take a moment to review the included limited warranty information. Contact us toll free at 1.888.258.8241 or at [www.tomarengineering.com](http://www.tomarengineering.com) under Tech Support with any questions.

Your Stellar 2 clutch is designed to provide you with a clutch that is race ready right out of the box. There are several new features on the clutch which are different than what you have had in other clutches, therefore please read the following.

### CLUTCH INSTALLATION

The clutch should be lapped to the tapered portion of the crankshaft. Lapping of the tapers will produce a precision fit to your taper. Place a small amount of fine lapping compound onto the tapered portion of the crankshaft. Slide the clutch onto the crankshaft and rotate the clutch back and forth while forcing the clutch onto the taper. After the clutch has been lapped onto the crankshaft remove all lapping compound from the clutch and crankshaft.



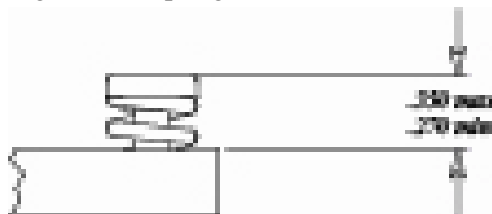
### CLUTCH STALL SPEED

The Stellar 2 6-spring and 3-spring both come in two different stall speed ranges for your convenience. All Tomar clutches come equipped with equally matched springs.

Clutch		Stall Speed Range	Springs
Stellar 2	6-Spring	6800-7800	0.075
		7800-8800	0.085
	3-Spring	6800-7800	0.085
		6000 Max	0.075

### STALL SPEED OPERATING RANGE

If you wish to operate the clutch outside of the range shown in the illustration, you will need to add or remove weight or change the strength of the spring.



## CHANGING STALL SPEED

- **To increase the stall speed, rotate the adjusting screws clockwise.** If you reach the lower limits of the operating range and cannot get the stall speed high enough then you will have to change the springs to the next stronger springs.
- **To decrease the stall speed, rotate the adjusting screws counter clockwise.** If you reach the upper limits of the adjusting screws and cannot achieve the stall speed required then you will have to change the springs to the next weaker springs

## CHANGING STALL SPEED RANGE

Springs	Diameter	Strength
313000	0.091	Strongest to Weakest
328200	0.085	
514200	0.075	
513400	0.065	

## AIR GAP

The air gap is the internal clearance that the friction discs and floater can be moved before touching the pressure plate or fixed plate. The easiest way to measure is to use a feeler gage. Slide it between the friction disc and the pressure plate. The optimum air gap is .035" - .040". The maximum allowed is .050". Air gap can be changed by adding or subtracting the shim. The shims are .005" thick.

## DRUM END PLAY

When the clutch is installed, the drum should have .005" - .015" end play. Spacers are available of different thicknesses to obtain optimum end play. All spacers are the same diameter so that you do not have to worry about what tooth sprocket you have.

## MAINTENANCE / CLEANING

The clutch should be removed from the engine after every race day. It should be blown out with compressed air. This will remove all dirt, dust and debris. The clutch does not need to be disassembled. Contact cleaner or brake cleaner can be used. Caution must be taken if you use brake cleaner. Brake cleaner will remove paint. Read the brake cleaner label before using it. Do not use soap, water, gasoline or any other solvents to clean the clutch. The bronze bushing should be lubricated with a quality oil, such as Chain Lube or Tri-Flow, after every days practice or race. Friction disc replacement is required if the discs are below .120" or if the drive lugs are worn down. Tomar's friction discs last longer than most other brands. The drive lugs will usually wear down before the friction disc needs to be replaced.

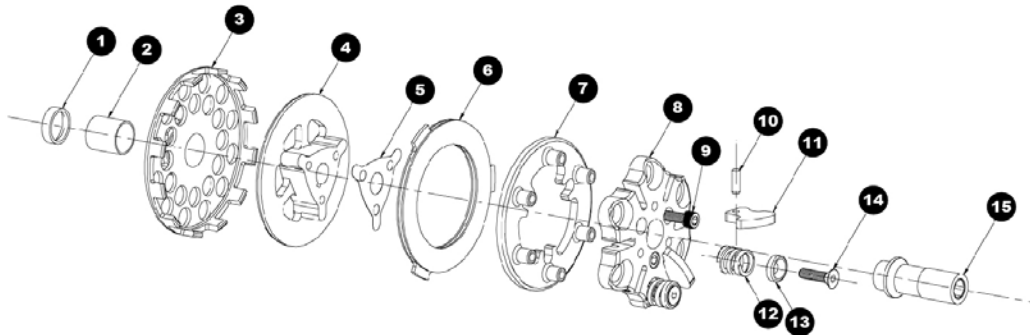


Figure #	Part #	Description	Figure #	Part #	Description	
1	330119	Spacer .180	9	334800	Screw, Adjusting	
	330118	Spacer .170		10	330027	Dowel Pin
	330117	Spacer .190		11	361005	Lever
2	330120	Bushing (Fits 10T, 11T, 12T)	12	328200	Spring .085	
		330121		Drum 10T	514200	Spring .075
		330123		Drum 11T	313000	Spring .091
	330125	Drum 12T	13	334700	Retainer	
4	361000	Drive Hub		14	900413	Screw, Weight Support
5	361006	Shim, .005		15	361007	Starter Nut
6	300002	Friction Disk	Accessories	329700	Adjusting Tool	
				329800	Wrench, Clutch Stellar 2	
				329900	Puller, Clutch Stellar 2	
7	361002	Pressure Plate, 6 Spring	8	361004	Weight Support, 6 Spring	
	361001	Pressure Plate, 3 Spring		361003	Weight Support, 3 Spring	

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