



ABOUT BONINFANTE

Boninfante Friction, Inc. is the world leader in friction clutch manufacturing for the motorsports market.

Boninfante creates custom clutches for an array of applications from street cars to full race clutches, from top fuel dragsters and nitro funny cars, to F1 and F1H2O boats.

Since beginning in the clutch manufacturing business in 1988, Boninfante has systematically produced parts of superior quality at competitive cost, thus setting a pace of sustained corporate growth and customer satisfaction.

Depend on Boninfante Friction Inc. to supply your company, team or you, the racer, the best parts in the world at the best value. Parts made the way you want them by a company that demands excellence of itself.



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#BornFromTopFuelTechnology

CLUTCH COUNTER-WEIGHTS

SIZE	DESCRIPTION	WEIGHT	MATERIAL
1/4" x 1/2"	Bolt	5.5g	Steel
1/4" x 3/4"	Bolt	6.5g	Steel
1/4" x 1"	Shoulder Bolt	8.5g	Steel
1/4" x 1 1/4"	Shoulder Bolt	9.5g	Steel
1/4"	Thin Washer	1.0g	Steel
1/4"	Fat Washer	2.2g	Steel
1/4"	Jam Nut	2.0g	Steel

DUAL SPRINGS INSTALLED

Clutch set at .702 & 0 turns = 600 lbs
1 turn of base = 30 lbs x each spring
1 turn of base = 780 lbs
2 turns of base = 980 lbs
3 turns of base = 1180 lbs

SINGLE SPRING INSTALLED

Clutch set at .702 & 0 turns = 430 lbs
1 turn of base = 20 lbs x each spring
1/4 turn of base = 18 lbs
1/2 turn of base = 36 lbs
1 turn of base = 575 lbs
2 turns of base = 670 lbs
3 turns of base = 780 lbs



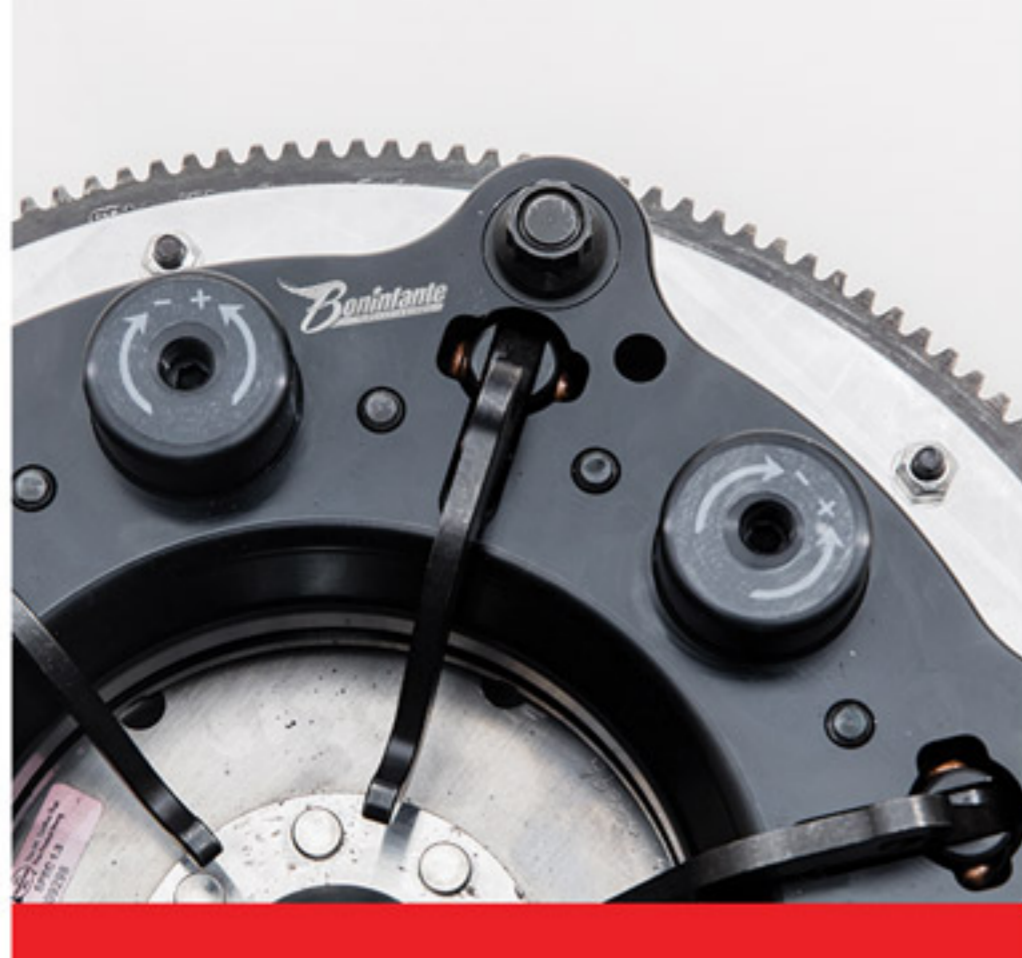
CLUTCH INSTALLATION INSTRUCTIONS

10.0" Small Stand Clutches
10.7" Big Stand Clutches

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BASIC INSTALLATION FOR BONINFANTE TYPE CLUTCH



Step 1: Install pilot bearing in flywheel (most applications).

Step 2: Install flywheel on crankshaft. Fit should be easy slip or slightly snug.

Step 3: Install flywheel bolts and washers, making sure all threads are clean and free of oil and debris. Use red or green Loctite.

Step 4: Install stands (and spacers, if any) making sure flats are not overlapping facing plate.

Step 5: Install discs and floater plates in proper sequence and insert pilot shaft to line up and hold discs into position.

Step 6: Install pressure plate assembly line up S.F.I. or serial mbers inline, on top of one another.

Step 7: Install pressure plate sleeve washers and nuts (using small amount of anti-seize is recommended). Please refer to diagrams 1, 2, & 3 on the following page.

Step 8: In a rotation cross pattern, snug pressure plate nuts enough to draw pressure plate down within .010" of its final position. Use the dial indicator at each stand location (see fig. 1).

Step 9: Rotate stands up to meet pressure plate and torque.

VERIFY YOUR SIZE AND TORQUE ACCORDINGLY

(3/8 nuts to aluminum: 30-35 ft. lbs., 3/8 nuts to titanium: 40-45 ft. lbs., 7/16 nuts to aluminum: 50-55 ft. lbs., 7/16 nuts to titanium: 60-65 ft. lbs., 1/2 nuts to aluminum: 70-75 ft. lbs., 1/2 nuts to titanium: 80-85 ft. lbs., 9/16 nuts to aluminum: 100 ft. lbs., 9/16 nuts to titanium: 110 to 115 ft. lbs., and 5/8 nuts: 140-150 lbs.)

Step 10: To move pressure plate, loosen nut and rotate adjusting stand up or down to achieve proper height (see fig. 1). Note: The clutch stand shave numbers, each number represents 0.10 from the next. Once the clutch is finally adjusted, these numbers may vary slightly from stand to stand.

Step 11: Now that the pressure plate is close to its final setting, use the dial indicator again to obtain the exact pressure plate height. Slip the dial indicator into one of the six checking holes, the needle should go around one time, and back to zero.

BASIC INSTALLATION FOR BONINFANTE TYPE CLUTCH (con't.)



When checking ring height with gauge, needle should make ONE full revolution back to zero. At this point, the pressure plate should have ".702" from the top cover to the donut plate (see fig. 2). Then, measure the space between the cover and the pressure ring and insert that number here _____ for your reference.

NOTE: The dial indicator is used as a reference gauge and should be checked periodically to ensure accuracy. Check this by setting clutch as described in fig. 2, then calibrate the dial indicator by inserting it into the checking hole and resetting.



Figure 1:

Needle will be at zero when pressure plate is at the properly installed height. Needle will pass zero once and make one complete revolution back to zero.



Figure 2:

Check pressure plate height with calipers using the depth measuring blade. Correct height is 0.702. This measurement can be made through the inspection hole.

Step 12: SETTING CLUTCH RELEASE CLEARANCE.

Insert dial indicator into checking hole and hold into position. Have team member depress clutch pedal. Set pedal stop so that the clutch has between .050" and .070" release clearance. Always check 2 holes 180° apart, then average the number. Always use pedal stop, never allow the clutch levers to contact the cover.

RECOMMENDED BETWEEN ROUND PROCEDURES + MAINTENANCE



Step 1: Remove inspection covers

Step 2: Cool clutch with electric fan

Step 3: Check for wear with dial indicators

Step 4: Re-zero clutch if wear exceeds

Step 5: Check release clearance

Step 6: Reset clearance if it exceeds .005" of original setting

Step 7: Visually inspect clutch through inspection holes to ensure there is ample throw-out clearance, all stationary and counter weight nuts and bolts are tight, no excessive wear of levers, no immediate discoloration of discs, floaters, or anything else unusual.

Step 8: Always re-torque pressure plate nuts after each run regardless of whether or not readjustment is required.

Step 9: Make any clutch changes that may be required and install inspection covers.

NOTE: Remember, the clutch is a crucial part of a successful combination and is subject to the worst possible abuse. Therefore, it is imperative that it is maintained regularly and properly for maximum performance.

Step 1: Remove clutch from vehicle, making sure to keep all parts such as discs and floaters in the same order in which they were installed.

Step 2: Wipe clutch discs clean with a dry cloth.

Step 3: Clean floaters, flywheels, stands, and pressure plate assembly with cleaning fluid and dry thoroughly. Make sure not to mix up stands if you remove male from female.

Step 4: Check discs for chipping, warping, glazing, discoloring, and hardness if possible.

Step 5: Check floaters for cracks, warping, worn lugs, high spots, and discoloration.

Step 6: Check flywheel for warping. Check facing for wear, high spots, discoloration, and smearing. Check stand bolts for thread damage, pilot bearing condition, and general condition of flywheel.

Step 7: Check pressure plate assembly for warping, cracks, worn levers, discoloration, facing worn, smeared or wearing on partial surface.

Step 8: Check throw-out bearing and associated components for wear and freedom of movement.