

ENGINEERED FOR 2024 50CC MODELS OR HIGHLY MODIFIED 2009-2023 ENGINES.

THE 4 DISK MODEL FITS INSIDE ALL 2024 OEM CLUTCH COVERS. FOR EXTRA OIL CAPACITY IRP COVER P/N 920475 FITS THE NEW 2024 BOLT CIRCLE.

AFTERMARKET CLUTCH COVER REQUIRED ON 2009-2023 MODELS FOR CLEARANCE TO WIDER 4 DISK CLUTCH.

OEM COVER AND CLUTCH



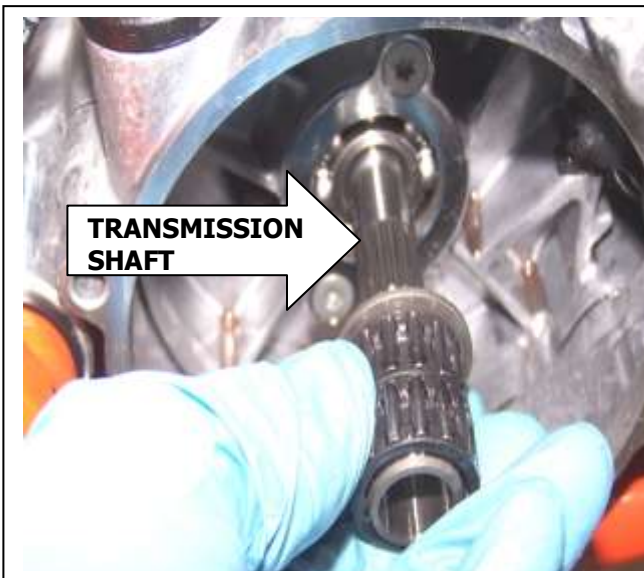
REMOVE OEM COVER



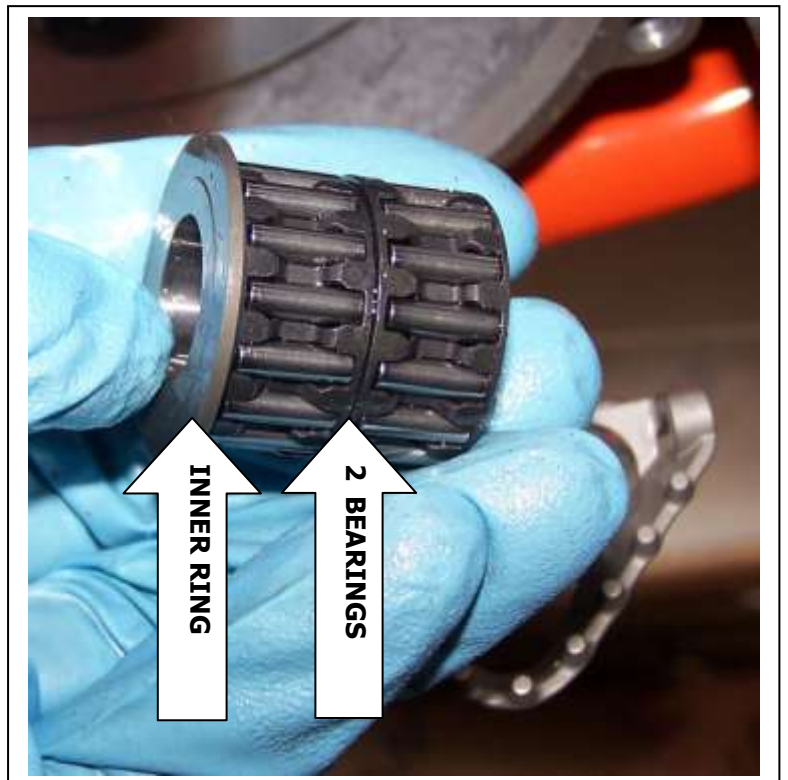
REMOVE OEM CLUTCH BASKET



REMOVE OEM STOP DISK AND CLUTCH

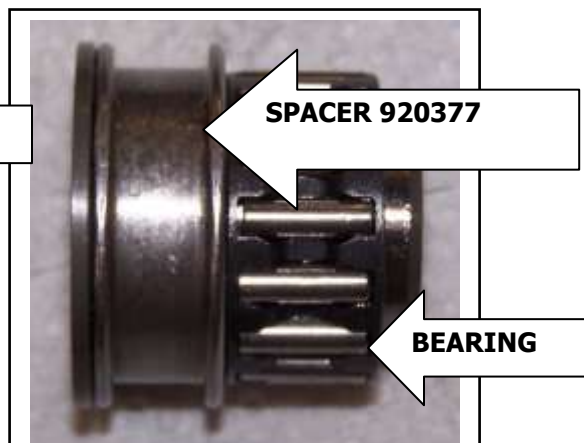
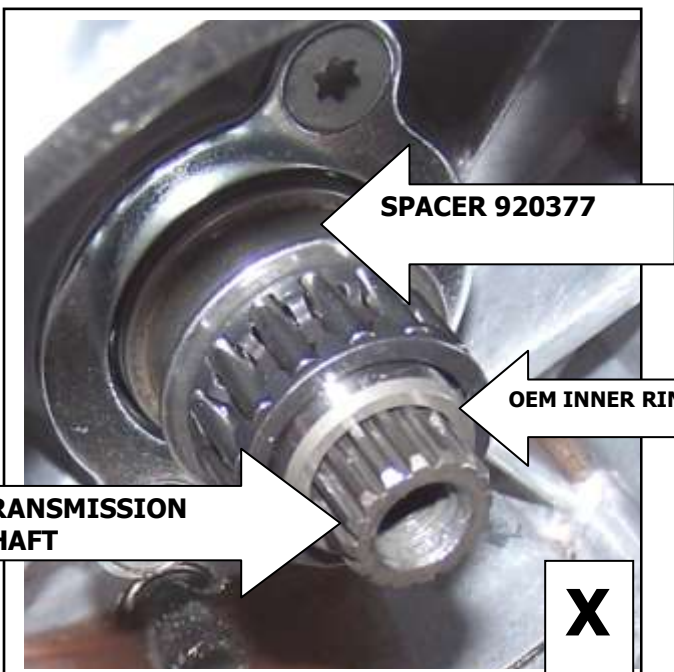


REMOVE INNER RING AND BOTH BEARINGS FROM TRANSMISSION SHAFT



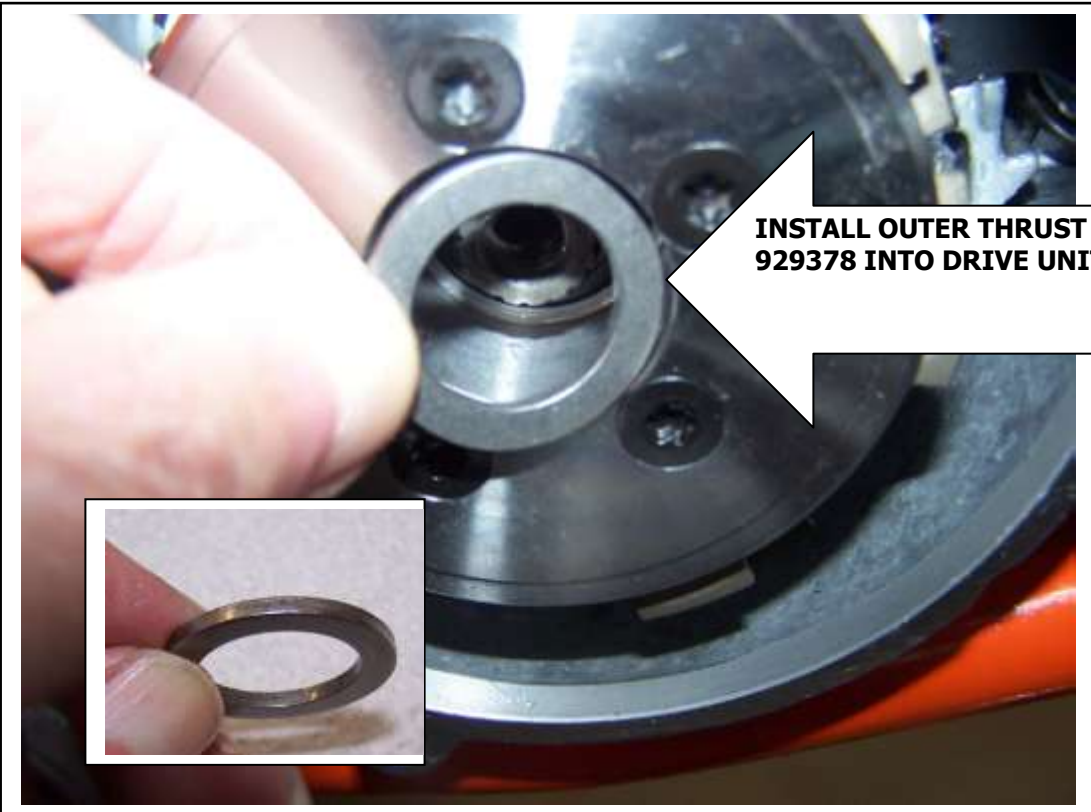
REMOVE BOTH BEARINGS FROM INNER RING SAVE BEARINGS

REINSTALL INNER RING ONTO TRANSMISSION MAIN SHAFT AS SHOWN IN PICTURE X
SLIDE IRP INNER SPACER P/N 920377 ONTO INNER RING SLIDE ONLY 1 BEARING ONTO INNER RING.. SAVE EXTRA BEARING FOR SPARE

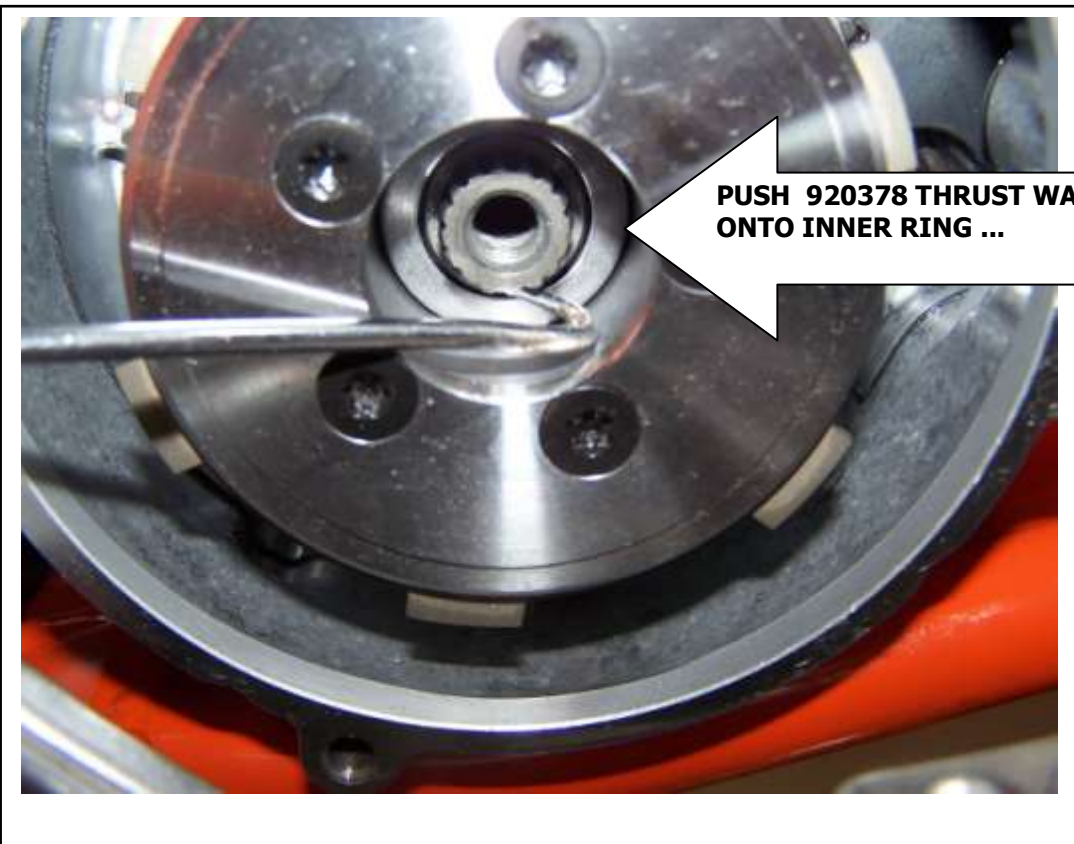




**INSTALL
DRIVE UNIT
ONTO
TRANSMISSION
SHAFT...
GEARS MUST
MESH**



**INSTALL OUTER THRUST WASHER
929378 INTO DRIVE UNIT ...**

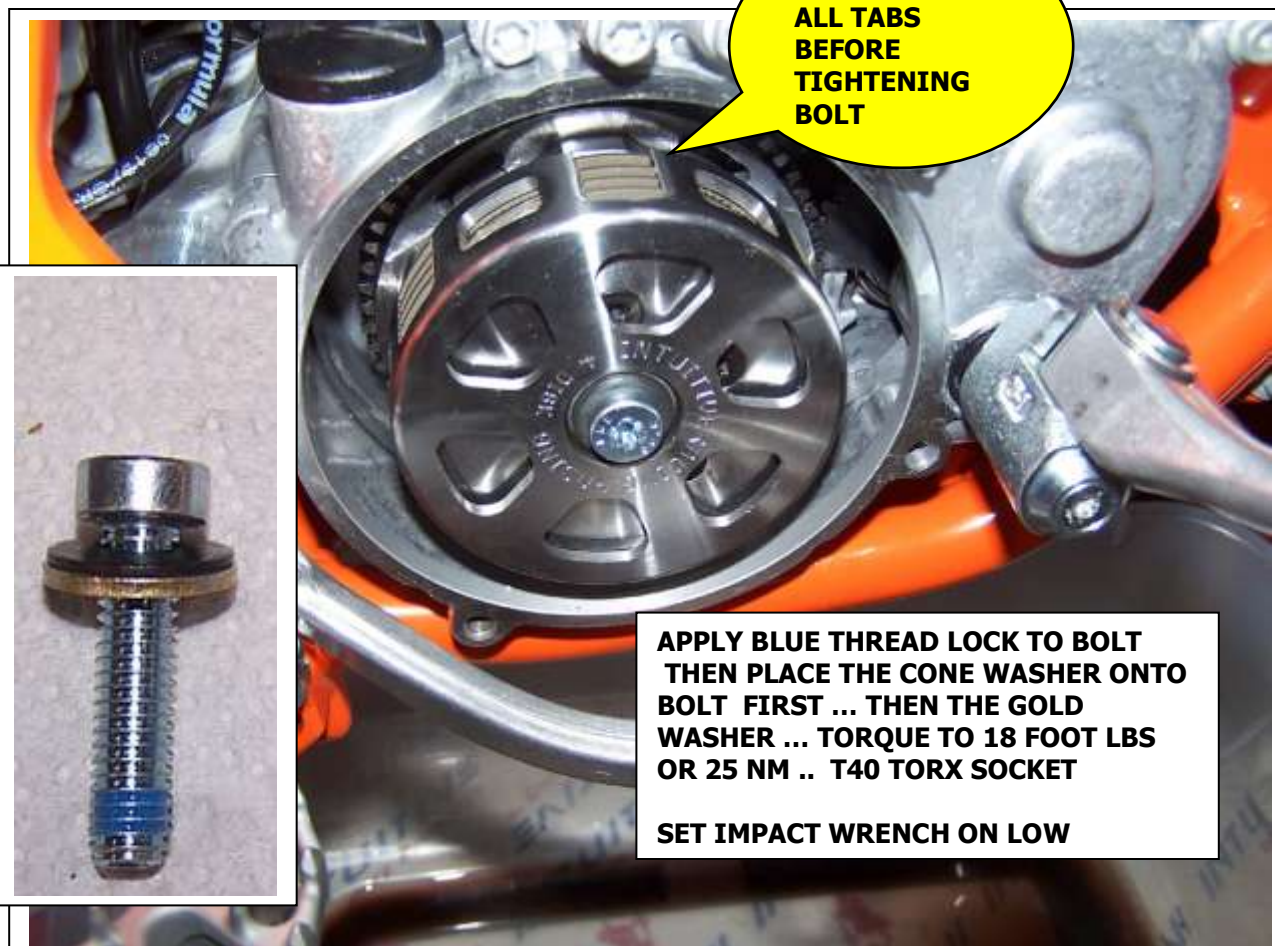


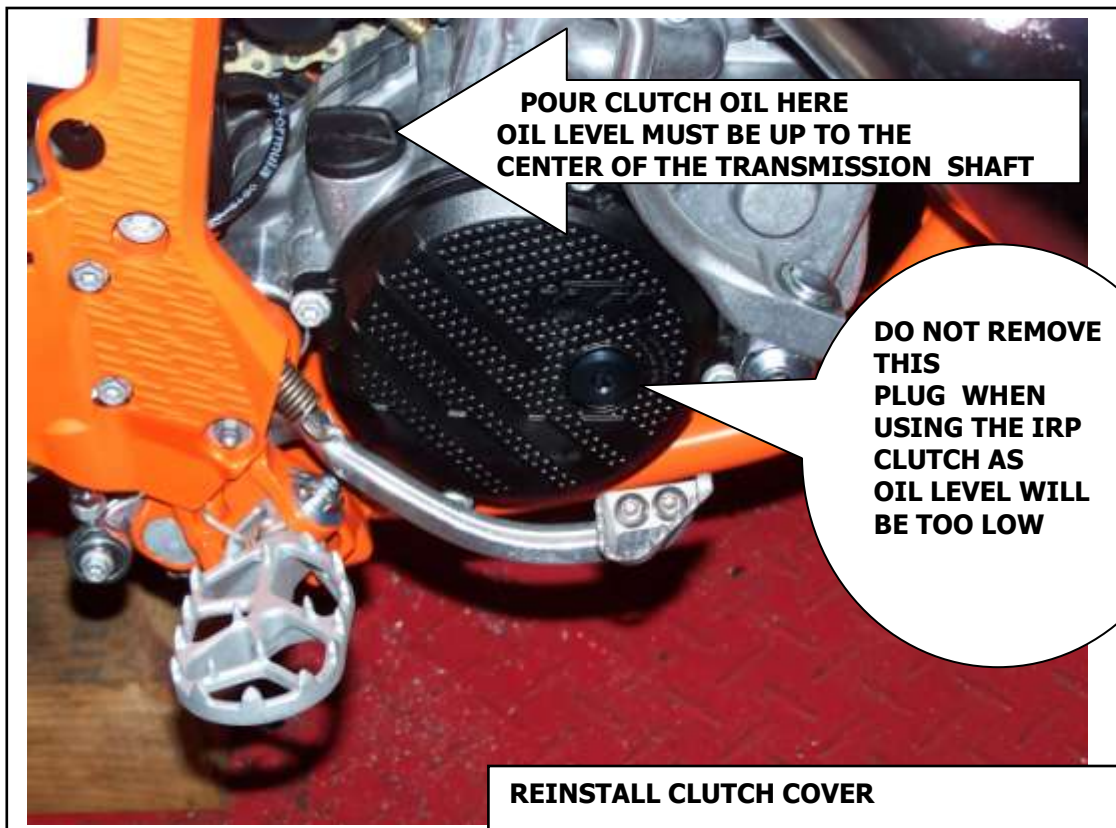
**PUSH 920378 THRUST WASHER
ONTO INNER RING ...**

INSTALL BASKET ONTO TRANSMISSION SHAFT... ALIGN TABS ON ALL FRICTION DISKS WITH SLOTS IN BASKET. WIGGLE BASKET BACK AND FORTH WHILE PUSHING INWARD WILL BE HELPFUL ..

WHEN ALL 4 DISKS ARE COMPLETELY INSERTED IT IS READY FOR FINISH BOLTING ON.

FAILURE TO HAVE ALL TABS INSERTED INTO SLOTS WILL CAUSE BASKET TO CRACK WHEN BOLT IS TIGHTENED.





REINSTALL CLUTCH COVER

THEN ADD 12 OUNCES ...350ML OIL

USE Two2Cool CTF-R Clutch Fluid...

HEAVY GEAR OIL OR PURE SYNTHETIC ATF WILL CAUSE THE CLUTCH TO RUN HOT FROM OVERSLIPPING



STALL SPEED

Stall speed is the RPM that the clutch locks up solid. In racing stall speed is often referred to “slipping” the clutch. Adjusting the clutch for more slip is actually raising the stall speed. Or when adjusting for less slip the stall speed of the clutch is lowered. The trick is to adjust the stall speed at peak torque of the engine.

The power band of the 50cc 2-cycle engine is very narrow therefore proper clutch adjustment is necessary for maximum performance. A clutch that locks-up below the power band will cause the engine to bog and performance will be sluggish. A clutch that locks up too far above the power band is (over slipping). A clutch that is over slipping will cause power to be wasted in the form of heat. Excessive heat may also cause **PREMATURE WEAR** or warp clutch components or damage engine.

The Quad Grip Racing Clutch is engineered from the factory with the stall speed setting at about 9500 rpm that is very close to optimum with a stock pipe. INSTALL THE CLUTCH WITH THE FACTORY SETTING before making any changes. This will give you a baseline to work from and the clutch most of the time will not require adjustment for many hours. Highly modified engines may require a STALL SPEED above 10,000 and OPTIONAL high tension gold springs p/n 920245 will be required.

NOTE: THE CLUTCH WILL START TO ENGAGE AND MOVE THE BIKE AT ABOUT 5000 RPM IF THROTTLE IS ROLLED ON SLOWLY. . THIS IS NOT THE STALL SPEED.

ADJUSTMENT OF SPRINGS FACTORY STOCK ENGINE

| Retainer Height From top of screw | Spring Wire Dia. | APPROXIMATE STALL SPEED |
|-----------------------------------|------------------|-------------------------|
| .290"/7.36MM | .091" | 9,300 |
| .280"/7.11MM | .091" | 9,500 |
| .270"/6.85MM | .091" | 9,700 |

ADJUSTMENT OF SPRINGS 18+ HP MODIFIED

| Retainer Height From top of screw | GOLD Spring Wire Dia. OPTIONAL | APPROXIMATE STALL SPEED |
|-----------------------------------|--------------------------------|-------------------------|
| .300"/7.62MM | .099" | 10, 200 |
| .290"/7.36MM | .099" | 10,600 |
| .280"/7.11MM | .099" | 10,800 |

STALL SPEED ADJUSTMENT

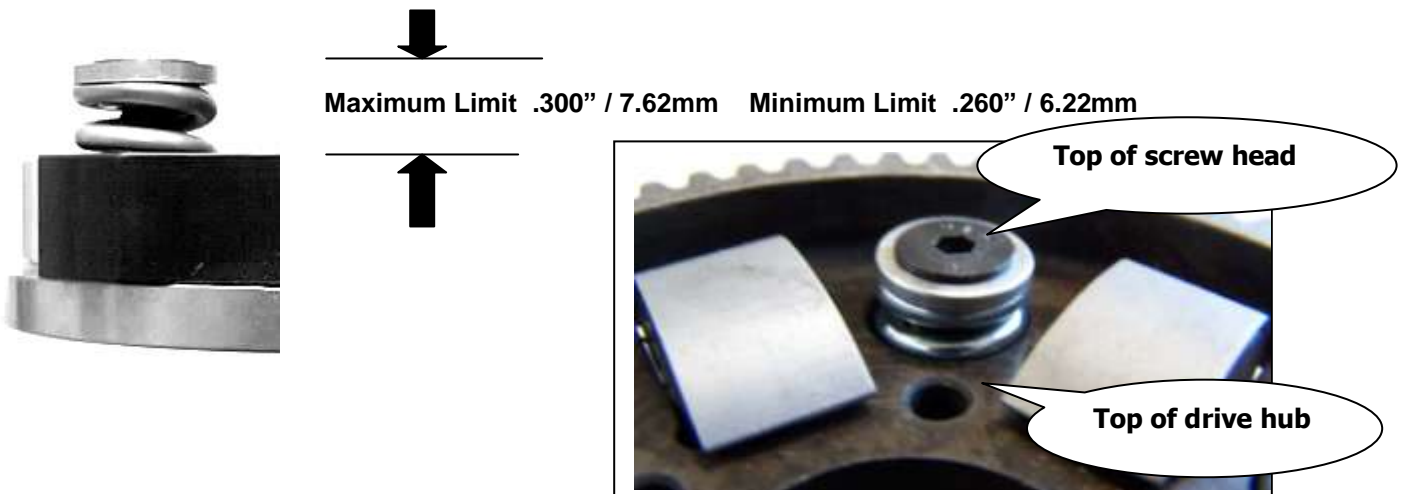
The clutch comes from the factory pre-adjusted at .280" for an approximate stall speed of 9,500 rpm. That follows the flat torque curve of engine. If you want to experiment with stall speed you can raise or lower stall speed of the clutch. Clutch must be removed from engine for adjustment

For higher stall speed turn all 5 flat head screws CW "clockwise" 1/4 turn per test session.

For lower stall speed turn all 5 flat head screws CCW "counter-clockwise" 1/4 turn per test session.

Do not exceed adjustment limits below. Note: 1/4 turn of the screw is .008" / .21MM

Measure from top of the screw head to the top of the drive hub as shown below.



Warning! Do not adjust the springs below the minimum adjustment limit as coil binding of spring will occur. Springs that coil bind will not allow the levers to pivot and apply force to the pressure plate. Then the bike will not accelerate properly and the clutch will overheat.

AIR GAP BETWEEN THE DISKS AND FLOATERS IS 0.030" +/- .005". THE AIR GAP IS NECESSARY TO ALLOW STARTING THE BIKE AND THE IDLE PHASE OF THE ENGINE. THE CLUTCH COMES FROM FACTORY WITH AIR GAP WITHIN TOLERANCE.

Maintenance

Racing causes extreme wear and tear on the clutch therefore it is important to inspect clutch for wear after 25 hours. Frictions normally last between 25 and 50 hours and up to 100 hours .

Check all parts for cracks or excessive wear and replace if necessary. Check floaters for warp. Replace if warped or worn below .045" / 1.166mm replace. Color brown or blue OK

Check each friction disk for wear. Replace when worn below .095" / 2.41mm thick or glazed. (Very important) AIR GAP MAXIMUM .060" For best performance new friction discs always out perform worn or glazed disks.

| ITEM # | PART # | DESCRIPTION | UNITS REQUIRED |
|--------|--------|---|----------------|
| | 920370 | Quad Grip Racing Clutch | |
| 1 | 920372 | BOLT, M8 X 1.25 30MM LOW HEAD | 1 |
| 2 | 920202 | CONE WASHER, 705" OD X .040" THICK | 1 |
| 3 | 920474 | FLAT WASHER, .735" OD X .065" THICK | 1 |
| 4 | 920470 | BASKET, 4 DISK | 1 |
| 5 | 920378 | THRUST WASHER, OUTER 1.035" OD | 1 |
| 6 | 920206 | SCREW, FLAT HEAD 10-32X 1/2" T 25 TORX,EACH | 5 |
| 7 | 920207 | FIXED PLATE | 1 |
| 8 | 920383 | FRICTION DISK, CARBON FIBER, EACH | 4 |
| 9 | 920209 | FLOATER,EACH | 3 |
| 10 | 920210 | PRESSURE PLATE | 1 |
| 11 | 920471 | DRIVEHUB, 4 DISK STYLE | 1 |
| 12 | 920384 | LEVER,EACH | 5 |
| 13 | 920213 | DOWEL PIN, EACH | 5 |
| 14 | 920233 | SRING, EACH .091" WIRE COMES STANDARD | 5 |
| | 920245 | GOLD SRING, EACH .099" WIRE OPTIONAL FOR 10,000 RPM STALL | 5 |
| 15 | 920215 | RETAINER, EACH | 5 |
| 16 | 920216 | SCREW ADJUSTING, 10-32X 5/8" FLAT HEAD,EACH | 5 |
| 17 | 920377 | INNER SPACER, EACH 1.035 OD X .720" OD X .084" THICK | 1 |
| | 920475 | REBUILD KIT, 4 FRICTIONS, 3 FLOATERS, 5 .091" SPRINGS | OPTIONAL |
| | 920476 | BILLET CLUTCH COVER FITS 2024 MODELS | OPTIONAL |
| | 920898 | NYTRO CLUTCH OIL 1 QT | OPTIONAL |

