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L&T MINI KART CLUTCH
USERS MANUAL

Maintenance and Rebuilding the L&T Mini Dry Clutch

INTRODUCTION

The Mini Dry Clutch was designed especially for class racing with engines up to 11 horsepower. The clutch weighs less than one pound and is designed to allow the engine to rev more quickly.

The clutch is easy to disassemble and frequent inspection is recommended as an important part of the maintenance program. A complete rebuild as illustrated in Section 3 will not normally be required. However, if the clutch is overheated or the clutch disc is worn thinner than .126 of an inch, a rebuild will be necessary. The pictures in Section 3 illustrate the procedure required both for disassembly and assembly. One process is the reverse of the other.

l Disassembly

Steps 1.1 through 1.7 are recommended after a weekend or two of racing.

1.1 Remove the starter nut with a 5/16" allen wrench. Hold clutch in place with an 11/16 wrench or crescent wrench. Inspect the starter nut for cracks and replace if cracks are noted.

1.2 Remove the clutch and driver assembly from the crankshaft. This requires a clutch puller (L&T Part No. 200-10). Be careful not to lose the crankshaft key.

1.3 Place the service tool (L&T Part No. 200-22) on top of the clutch as shown in Section 3, #8 below. Insert the bolt through the hole in the center of the hub and thread it into the top half of the tool. Turn the clutch over and remove the weights keeping the groups together. Do not mix "n" match weights. Weights develop wear patterns and should be left together. There will always be some indication of wear. Any weights showing excessive wear should be replaced. Set weights aside.

1.4 Remove the lever pins also know as "dog bones" as shown in Section 3, #9 and #10. Press pins straight down to get them into the bottom of the keyhole slot. Using a pair of needle nose pliers, pull the pins out. Examine pins for excessive wear. It is normally best to replace the pins frequently (every six events or so).

1.5 Remove the service tool.

1.6 Turn the clutch over and if they haven't already fallen out, remove the lever straps as shown in Section 3, #7. Clean and inspect for wear. Lever straps will generally last several events. Frequent replacement is generally not necessary.

1.7 Turn the clutch back over and remove the pressure plate as shown in Section 3, #6. Check the pressure plate for wear and flatness. New pressure plates are .130 of an inch thick. The best way to check for flatness is to use a surface plate. Another method of checking the flatness is to use a dial caliper placed across the pressure plate. There should be no gaps visible. Clean with brake clean or some similar solvent and set aside.

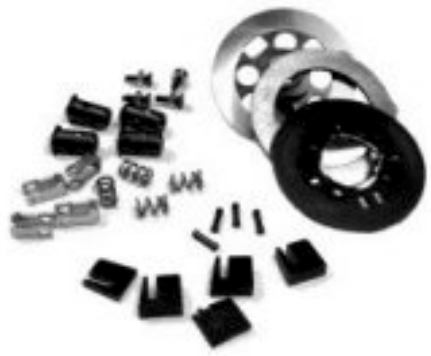
1.8 Remove the friction disc. Check thickness and replace if less than .115 of an inch.

1.9 Inspect the flywheel assembly. Check for cracks or unusual wear. Flywheels hold up very well. Usually a cleaning is all that is necessary. However, if flywheel is subjected to extreme heat, they will warp and will need to be replaced.

1.10 Periodically the spring cup and spring adjuster screw and nut should be removed and inspected for cracks. Using a spring tester, verify the tension of the spring. Note: The tension should be 40-42 psi.

2 Mini Dry Clutch Parts List

Spring	100-22-1	4
Spring Adjuster Nut	200-13	4
Spring Adjuster Screw	200-14	4
Lever Weight	600-12-1	12
Lever Strap Pin	600-13	4
Lever Strap	600-16-1	4
Friction Disc	600-17	1
Pressure Plate	600-25	1
Spring Cup	600-27-1	4
Flywheel/Hub Assy	600-28	1



3 Clutch Assembly

1. Place the flywheel/hub assembly on worktable in front of you, keyway side up, keyway at top.

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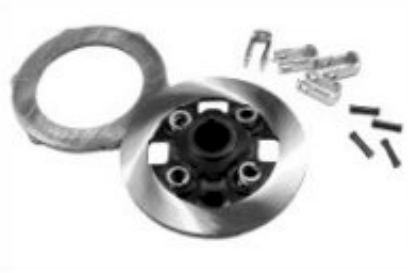
2. There should be one polished spring cup.	
3. Insert polished spring cup assembly (spring cup, spring, spring adjuster nut and screw) to the left of the keyway.	
4. Insert remaining three spring cup sets in flywheel hub assembly.	
5. Place a disc on flywheel hub assembly.	
6. Set pressure plate on top of disc.	

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7. Drop the four straps in place.	 
8. Place service tool on top of assembled parts so that it covers the bottom of the straps. Hold in palm of hand and turn assembly over. Insert bolt half of tool through hub center and screw to the top of the service tool.	 
9. Insert pins in straps. Then insert weights (4 per strap) under each strap. Be sure the pin is all the way up. Tap each set of weights lightly to ensure solid seating and square fit. Remove service tool.	 
10. Tap weights again, check to be sure the weights are all the way forward and inside the three ridges around the outside of the flywheel. Also tap the bottom of the straps to make sure there is no bind.	 
11. Adjust screw in spring cups. Begin with polished spring cup. Turn counterclockwise until the screw hits the bottom of the cup. Then turn one more half turn. Your clutch is ready to use. Add a drum and a cover and go racing!	

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4 Tips and Tricks

When installing the clutch, be certain the spacer is installed on the crankshaft the right way. The tapered side of the spacer should face towards the engine. There should be no spaces between spacer and bottom of crankshaft Spacers installed backwards (with the tapered side facing outward) can cause the clutch to lock-up.

	
Incorrect. Note space at bottom.	Correct. Note fit of spacer on shaft.

Check the fit of the drive unit into the drum to be sure the tips of the disc are inserted into the slots.

	
Incorrect. Note the tip of the disc is outside the slot.	Correct. Note the tip of the disc is properly seated in the slot.

At the track, lube the drum bushings between each race and check the air gap to be sure it is still at the setting you have determined is best for your race. The air gap when it leaves the factory is between .020 and .025 of an inch. The air gap can be decreased by using shims. (L&T part number 100-23 (.010) or 100-24 (.005))

Before each race, put a drop of Tri-Flow oil (L&T part number 500-41) on each side of the lever pins (dog bones) and a drop on top of the lever weights and rub the drop across the weights. A bottle of oil comes with each new mini dry clutch.

A light spray with WD40 or similar product before storing your mini clutch will help to prolong the life.

Use a brake cleaner for cleaning your parts, but it is not necessary to drown your parts in the cleaner.