

## Installation Instructions for Mantic Clutch Kits

### “Direct fit” Clutch Kit Installation:

There are two types of installations for Direct fit Mantic Clutch kits:


Type 1: Flywheels that have non-tapped cover assembly to flywheel holes.

Type 2: Flywheels that have tapped cover assembly to flywheel holes.


Assembly is dependent on which flywheel is present in the kit received.

#### **Type 1: Flywheels with Non-tapped cover assembly to flywheel holes**


1. Unpack all of the Clutch Kit components and check that all parts are supplied.
2. Check clutch discs slide freely on the transmission input shaft.  
Remove all labels and clean the friction surfaces of the Flywheel, Pressure Plate and Intermediate Plates i.e. using a cleaning fluid such as paint thinners or acetone.
3. Insert the Cover Assembly mounting bolts through the flywheel from the engine side of the flywheel Pic 1. Ensure the heads of the bolts fit snugly into the groove on the engine side of the flywheel Pic 2.




Pic 1



Pic 2
4. Bolt the Flywheel to the engine crankshaft with the bolts supplied. Use a suitable Loctite (Loctite 272) on the threads and tighten to the manufacturer's specification.



Pic 3

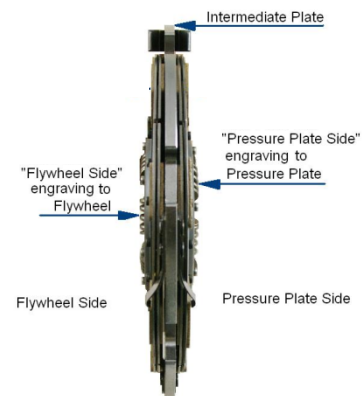


Pic 4
6. Mount the clutch disc with the side marked “Flywheel Side” against the flywheel and insert an alignment tool through the clutch disc spline Pic 5.

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Pic 5.



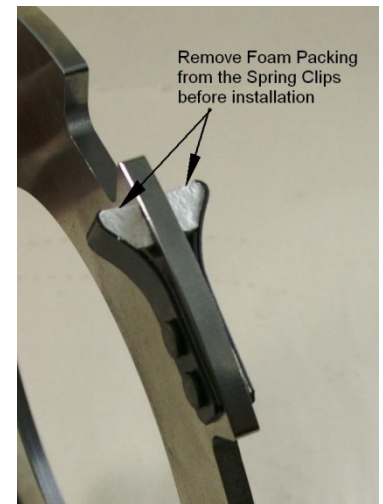
SIDE VIEW OF CLUTCH PLATES

Pic 6.

7. Assemble the intermediate plate onto the drive blocks as shown. Note: Care must be taken when handling the intermediate plate spring clips (9000 series only Pic 7) as they are factory set for release. If they are damaged in any way the clutch may not operate as designed. The Foam Packing must be removed just before installation Pic 8. Make sure the heads of the bolts are still in the groove on the back of the flywheel.



Pic 7



Pic 8

- 8 Mount the Clutch Disc with the side marked "Pressure Plate Side" against the Cover or Pressure Plate over the alignment tool and onto the intermediate plate. For overall clutch plate orientation refer to Pic 6a.
- 9 Assemble the pressure plate onto the drive blocks with the pivot point facing upwards.
- 10 Slide the Cover Assembly over the clutch mounting bolts (Pic 9a & Pic 9b) and make sure the Drive blocks are sitting on the correct mounting surface of the Flywheel (Pic 10) and Cover Assembly (Pic 11) and that all of the heads of the bolts are still in the groove on the back of the flywheel.

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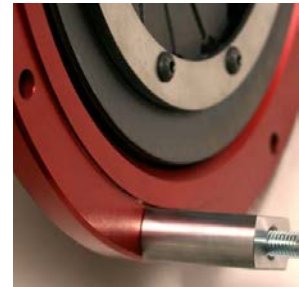
Pic 9a MOI

Cover Slid over bolts



Pic 10

Ensure Blocks do not ride up on the step on the Flywheel or Cover during assembly



Pic 11

### Type 2: Flywheels with tapped cover assembly to flywheel holes

1. Unpack all of the Clutch Kit components and check that all parts are supplied.
2. Check clutch discs slide freely on the transmission input shaft.  
Remove all labels and clean the friction surfaces of the Flywheel, Pressure Plate and Intermediate Plates i.e. using a cleaning fluid such as paint thinners or acetone.
3. Bolt the Flywheel to the engine crankshaft with the bolts supplied. Use a suitable Loctite (Loctite 272) on the threads and tighten to the manufacturer's specification.

4. On a flat workbench install all the cover bolts with lock washers through the cover assembly as shown (Pic 12). Ensure the **supplied lock washers** are used. (failure to use the supplied lock washers may result in the bolts working loose and the clutch failing).



Pic 12



Pic 13



Pic 14

5. Install the drive blocks (Pic 13) over the clutch mounting bolts and ensure the drive blocks are sitting on the correct mounting surface of the Cover Assembly (Pic 14). Ensure the drive blocks are not riding up onto the step.



Pic 15



Pic 16

6. Place the pressure plate on to the assembly. (Pic 15)



Pic 17



Pic 18

7. Place the clutch disc with the side plate marked "Pressure Plate" facing the Pressure Plate (Pic 16)

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- Assemble the intermediate plate onto the drive blocks as shown Pic 17. Note: Care must be taken when handling the intermediate plate spring clips (9000 series only) as they are factory set for release. If they are damaged in any way the clutch may not operate as designed. The Foam Packing must be removed just before installation Pic 8.
- Place the remaining Clutch Disc "Flywheel Side" onto the intermediate plate. Ensure the side marked "Flywheel Side" facing up Pic 18.
- The components can now be carefully rotated to vertical position ready for install onto the flywheel. Ensure the bolts do not fall out Pic 19. Insert the Clutch alignment tool into the already assembled components Pic 20.



Pic 19



Pic 20



Pic 21

- Lift the assembled components into place Pic 21 onto the flywheel and hand tighten the bolts into the flywheel until finger tight. Ensure the clutch aligning tool is engaged with the flywheel spigot. Ensure the drive blocks have seated correctly on the Flywheel and Cover Pic 10 & Pic 11 (i.e. not sitting up on the machined step that positions the drive blocks). Now tighten with torque wrench each bolt one half a turn at a time, always tightening the bolt diagonally opposite the previously tightened bolt. **The final torque for the bolts is 33Nm.** Then remove the Clutch Aligning tool. When the bolts are tightened the fingers of the diaphragm should now be even. (No variation of the heights of each diaphragm finger). If there is variation of over 1mm the cover has not been fitted correctly and should be loosened and checked as per the procedure above.
- Some applications using Concentric Slave Cylinder type throw-out mechanisms require a spacer to be fitted under the CSC. If a spacer is included in the packaging of the kit, it must be installed under the CSC.

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