

Dismantling the Triton TRA001 3¼HP Router



Some preparatory steps are required. For a parts diagram, please click [here](#) (opens in a new window).

Begin by removing both chip shields (85 & 93 in the parts diagram), if still fitted.

Next, remove the screw (75 in the parts diagram) holding the plunge lock lever (74).

Remove the lever, then unscrew the brass plunge lock bolt (71).

(Although this step is not strictly essential, it prevents problems on reassembly)

Now remove the screw (30) and the micro adjust knob (31).

This step can be achieved later, but it's easier to do it now.





The five screws visible in this picture can be safely left alone, as they hold the switch cover assembly to the upper motor body (for completeness, they're numbers 21 and 22 in the parts diagram).

Remove the motor brushes, **taking care to note their position and orientation.**

Remove the plunge spring cap (9) and the spring (88 - if fitted).

Retract the depth stop tube and lock it.

Optional step - access to the variable speed unit (if necessary) requires removal of the two screws (1) and the motor top cover (2).



This picture shows the circlip (snap ring - 87) which must be removed from the top of the right-hand plunge tube.

Also now visible is the (white plastic) worm shaft of the micro adjuster and the variable speed assembly, which is piggy-backed into the top cover screw locations.

This shows the front two (partly-removed) coarse-threaded screws which hold the top motor body to the motor housing (picture taken before disassembly from the base unit).



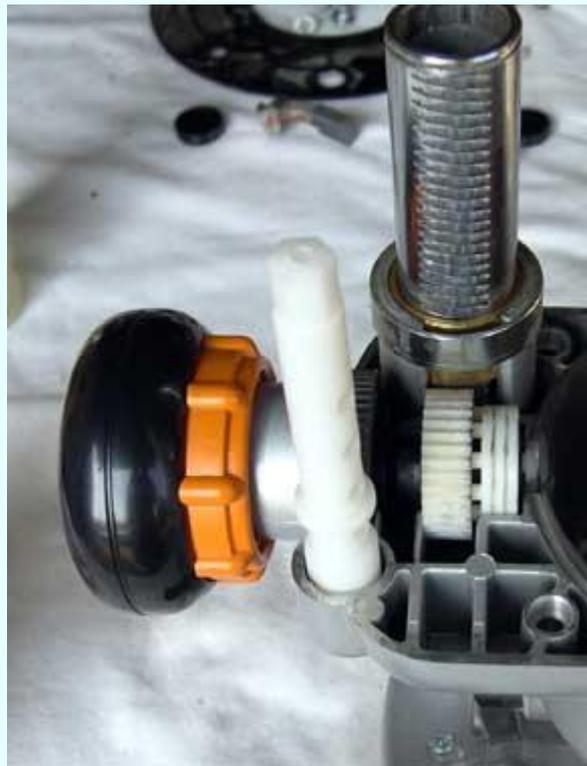


Wind the top motor body off the base unit, then separate the two halves by removing the four screws, which are now easily accessible.

N.B. This is *not* where they landed after an enormous "**boing!**" - there was no springing apart - it's just where I laid them out for photography.

After partial re-assembly - for clarity - this picture shows the winding mechanism with the clutch (45) disengaged (free plunge mode).

As the router is plunged against the spring, the white cog freewheels up and down the rack.



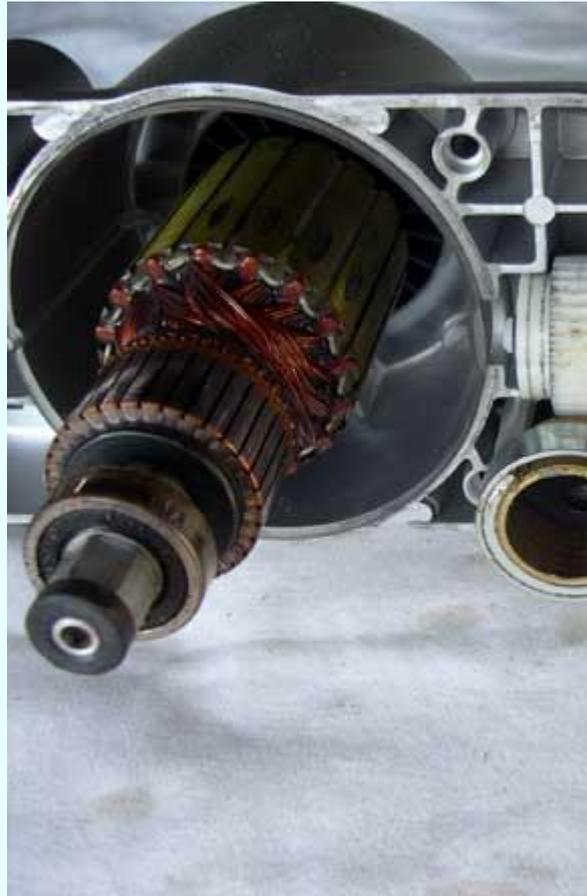
This picture shows the clutch engaged (rack-and-pinion winding mode).

This shows the metal worm wheel (47) and the plastic worm shaft (34) separated - the shaft rides in a cup formed in the main motor housing.

You may be able to see traces of wear on the worm shaft.

Replacing it (part number TRA036) completely refurbished the micro adjusting mechanism.

One of the two bushes can clearly be seen - * **see below**.



Now is the time for a good clean, blow out with an airline, light lubrication, etc.

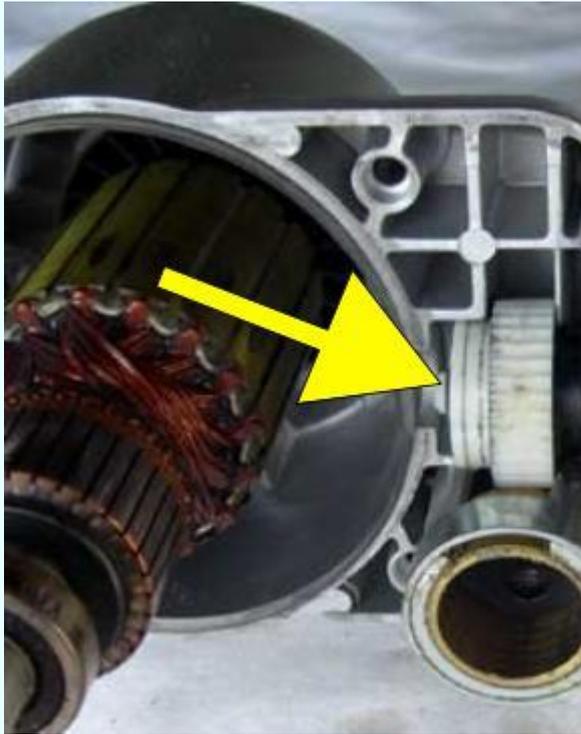
* Pay attention to the inside of the bushes through which the plunge posts run (76) - they can get caked with a very thin but very hard layer of dust build-up (particularly MDF dust).

I highly recommend that you replace the plastic worm gear shaft with an **alloy** replacement (TRA036) available [here](#).

Further dismantling stages for reference:(N.B. refer to re-assembly tips below if just cleaning or replacing worm shaft)

We'll now look at dismantling the Plunge Handle Assembly, in the event that any replacement parts are required.

This section covers the earlier "push and twist" plunge selector mechanism. For push-button selectors, see the process for the MOF001, halfway down the page [here](#).



Begin by removing the E-ring (44) and metal washer on the inner end of the assembly (arrowed).

The handle assembly can now be carefully slid outwards. This will leave behind the white plastic clutch plate (45), white plastic pinion (46) and the black metal worm wheel (47). These can be removed for cleaning. Note their orientation.

The handle can now be further dismantled if necessary. This picture shows all the components laid out. From the bottom corner, diagonally, these are:

The plunge handle inner section (52)
 The plunge handle shaft (51)
 The plunge selector spring (48)
 The plunge selector rear (49.3)
 The plunge selector inner spring (49.2)
 The plunge selector (49.1) and the
 plunge handle outer section (50).
 The E-ring and washer can be seen
 above the plunge selector.

In the back row, from the left are the
 clutch plate, pinion, worm wheel and the
 release ring (55) with its four springs
 (54).





One of the fiddly parts of this process is to re-assemble the plunge selector rear section (white), complete with its spring, back onto the orange plunge selector.

This is what it should look like when correctly re-assembled.

Next, the plunge selector spring (48) is slid onto the selector.





This picture is taken looking down on the re-assembled handle assembly. The shaft is towards the viewer and deliberately out of focus.

This is to show the orientation of the plunge handle inner section, relative to the underside of the orange selector.

The four indentations are to seat the four release ring springs.

Here are the clutch plate and pinion, separated for cleaning.





Here is the clutch and pinion assembly, prior to re-installation. They need to be re-fitted to the motor body, together with the black metal worm wheel before the handle assembly is slid through them.

Re-fit the E-ring and washer and the job is complete.

Re-assembly is fairly straightforward, with one or two things to look out for:

- The spring for the depth stop tube needs to be located on its plastic shaft in the orange body, then located inside the tube as the top assembly is offered over the base and plunge tube assembly. Once the rack and pinion engages, it's simply a matter of winding down, re-fitting the snap ring (circlip), then replacing the screws in the reverse order of dismantling.
- Pay **particular attention** to putting the brushes back correctly. They'll only fit vertically, and the contacts also fit into the "turn-key" shaped housing. The trick is to place the router on its side, hold the contact down and slide the black cover downwards and inwards at an angle, until it clicks into position within its thread. **Gently** screw it in, being careful **not** to cross-thread, as the threads are **very** fine.
- After first use, I'd recommend a double-check of the four main body screws, the plunge lock screw and the top motor cover screws (if removed).

I hope that this was of *some* assistance in understanding how this rack-and-pinion mechanism and related components work.

Chuck Assembly Removal and Replacement

The procedure is the same, no matter what style or type of chuck assembly is fitted. It is carried out with the router removed from the table.

1. Disconnect power cord completely
2. Remove both carbon brushes, noting their position and orientation for later replacement
3. Note the direction of rotation shown by the arrow cast into the router base - you need to spin the router shaft **counter** to this arrow (i.e., anti-clockwise when viewed from above)
4. If you have an airline, or access to one, the backward spin can be achieved by pointing a jet of air at the cooling vanes - seen through the slots at the lower end of the bottom motor housing
5. If you **do not** have an airline, cut a length of string or fairly stout cord around 500mm (20"). Wrap this around the collet in such a way that you will be able to pull it and generate a backwards spin in the same way that you power a gyroscope. To achieve this you may need to remove the clear plastic dust shroud(s)
6. Whatever method you use to obtain the backward rotation, once the router shaft is spinning, you need to operate the spring-loaded shaft lock, with your thumb, to engage it into the spinning collet and shock it off the router shaft threads. For this to happen, the router needs to be spinning **fast enough** to achieve the shock, but **not too fast** to cause damage to the shaft lock pin. Try engaging the pin at a low speed first, increasing speed gradually until the collet spins off
7. Replacement is a reversal of the process, this time spinning the router in its operating direction (clockwise, when viewed from above). Replace the carbon brushes and dust shroud(s)
8. Once the new collet is in place, **DO NOT** attempt to tighten it when empty onto the router shaft with the wrench, as this will result in a locked collet. Mount a straight cutter into the new collet, then plunge it fairly rapidly into a scrap piece of hardwood to fully tighten the collet assembly.

The information in this page is offered without warranty or guarantee. The author cannot accept liability for any form of injury caused from following any steps described herein. Woodworking is an inherently dangerous activity and all safety precautions must be taken, as advised by the tool manufacturer and others.