

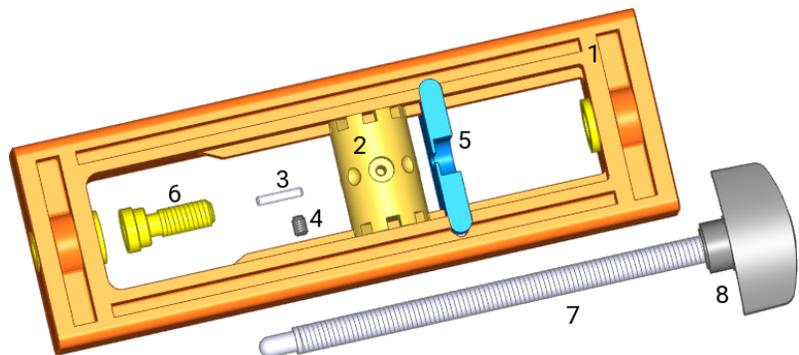


## The Slot.it pinion press/extractor tool

The SLOT.IT extractor/press is the perfect companion for the slot car enthusiast. It presses and removes pinions. Now in its 3rd release, it works for shaft of 1.5mm and 2mm diameter, pinions from 4.5 to 7mm, and when used together the SP30 spare part it allows pinion pressing, on Slot.it and most other maker's cars, either sidewinder or anglewinder cars, without removing the motor from the car.

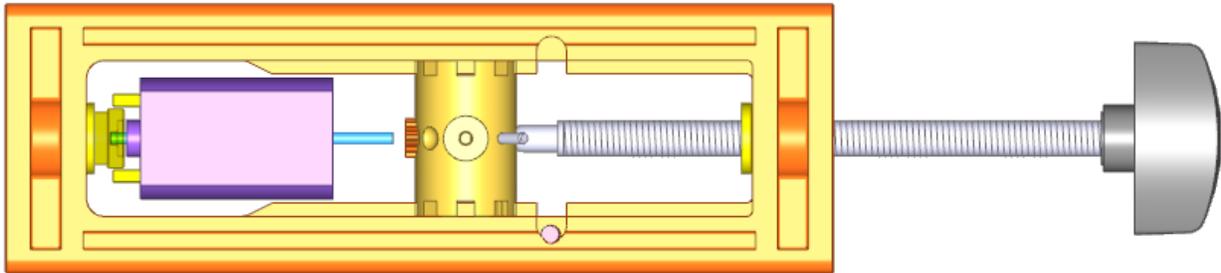
It consists of

1. Main frame: entirely made in fiberglass reinforced plastic. The main screw runs through two co-moulded brass threads to avoid wearout of the thread itself. The dimension of the plastic body has been designed to cater for most motors, from the most common short can to the less common, double long transmission shaft 4WD motors.
2. Multifunction brass tool : it can be used to extract or press pinions. It can be rotated around its axis so that the proper tool (pin, for extraction, or cavity, for pressing) is used. The cavities come in multiple dimensions to accommodate for a variety of pinions.
3. Extraction pin : comes in two diameters : 1.9mm for motors whose shaft is 2mm, and 1.4mm for motors whose shaft is 1.5mm. Please use the correct one.
4. Grub screw : M3 grub screw, used to keep the extraction pin in place
5. Extraction plate: in special steel, it works together with the pin to separate the pinion from the motor.
6. Counter bushing : this is where the endbell opposite to the pinion must rest during pinion insertion. It can be inserted in either way depending on your motor's endbell. Never attempt to press a pinion unless the end of the shaft (the one opposed to the pinion) rests safely in the middle of this part ! If your motor's shaft does not go through the endbell, make sure it rests safely on the bushing.
7. Advancement screw
8. Knob



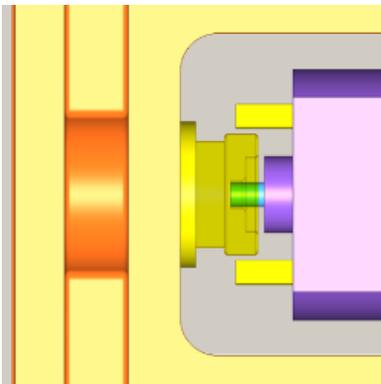
## How to press a pinion.

- Remove the steel extraction plate from the main body.
- Unscrew the knob screw (7,8).
- Slide the tool along the main body rails, the proper pinion housing facing downwards.
- Place the motor so that the end of the shaft opposite to the pinion is in contact with the counter bushing (6). Make sure that it's the shaft, and not the endbell case, that bears the load during

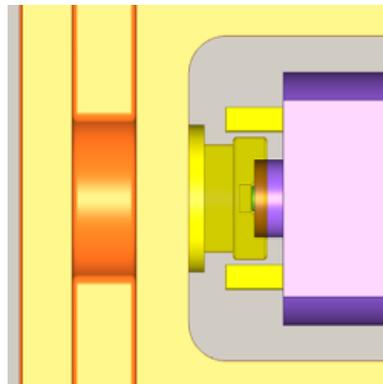


pinion insertion, to avoid damage to the motor. If your motor has no shaft protruding on the endbell side, or has only a very short shaft, reverse the counter bushing direction as in figure C below.

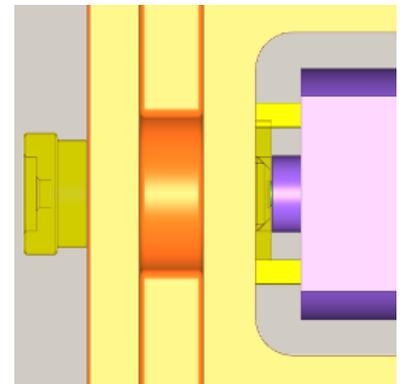
- Position the pinion in its housing on the tool and place the assembly next to the motor axle
- Screw the knob screw (7,8) forward until the tool and the pinion make contact..
- Start (by means of the handle screw) to insert the pinion in the motor axle.
- Once the operation is completed, loosen the handle screw and extract the motor.



*OK: Shaft in contact*



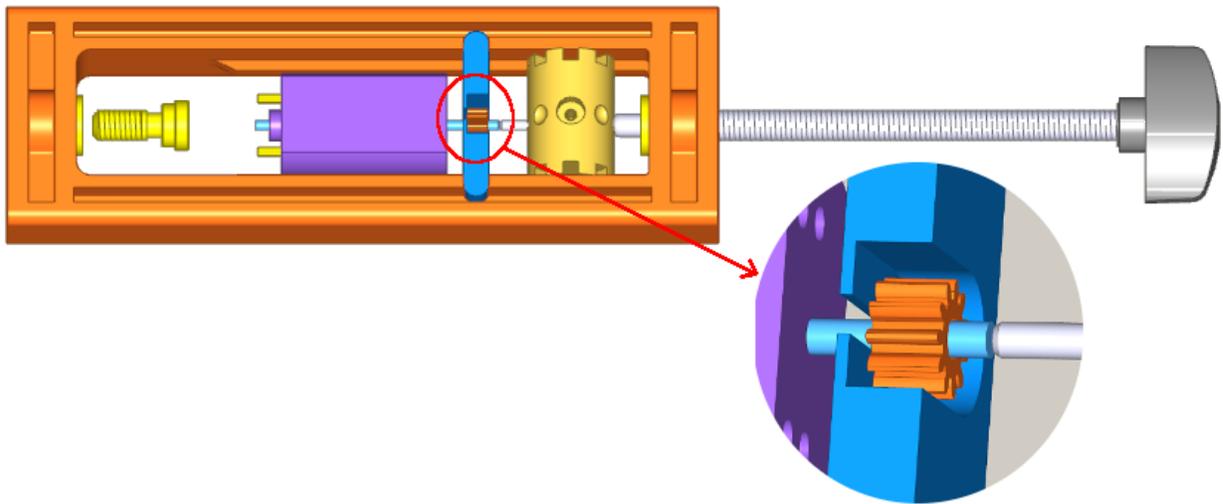
*NOT OK: Shaft not in contact. Endbell is bearing all the load, commutator may be damaged as shaft tends to slide against the endbell*



*OK: Shaft is in contact, or endbell (with no pass-through shaft) is in contact*

## How to extract a pinion

- Loosen the knob screw
- Insert the multifunction tool with the proper plug (1.4 or 1.9mm) downwards and place it on the upper part of the extractor.
- Insert the steel extraction plate with the groove facing the tool
- Insert the motor so that the eyelet sits between the motor case and the pinion, facing the plug.
- Start fastening the handle screw until the pinion is fully extracted
- Upon completion, unscrew the handle screw and extract the motor.



Whenever you operate this tool, precision is of paramount importance: proper alignment between shaft, pinion, and tools is essential!

The pinion press and the extractor generate high loads, which may damage your parts *and* the tool itself, if used carelessly.

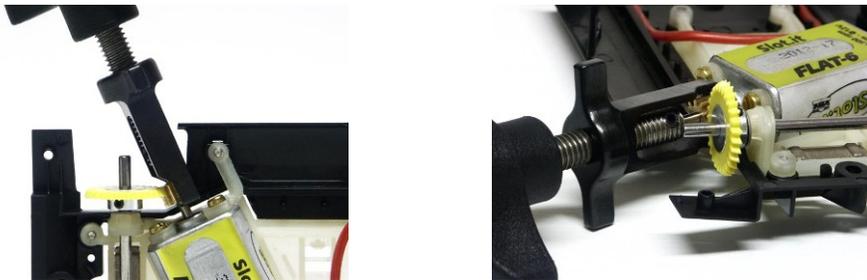
## How to replace a pinion on a sidewinder or anglewinder car without disassembling the chassis

The tool is also extremely effective when used in conjunction with the mini extractor SP31b and the SP30 special mini pinion press.



It's the first and as far as we know only tool that allows replacement of a pinion without the hassle to disassemble your model. How to do?

1. Remove the rear left wheel.
2. Position the mini extractor around the pinion. Make sure the extractor pin is aligned to the pinion's shaft and the pinion is properly centered in the tool. Failure to do so will lead to pinion and/or instrument damage



3. Turn the knob to extract pinion
4. Assemble the special brass counter bushing and the pinion holder on the universal tool. The pinion may be positioned later.



5. Insert the tool assembly around your chassis and align the counter bushing with the motor shaft



6. Place the pinion on the retractile pin (spring actuated) and adjust distance to bring the pinion and the shaft in contact. Now make sure the pinion is properly aligned with the shaft.



7. Press the pinion in place and remove tool. Done!