

SHIMANO TL-FC10

Shimano TL-FC10 Crank Arm Extractor User Manual

Model: TL-FC10

1. INTRODUCTION

The Shimano TL-FC10 Crank Arm Extractor is a specialized tool designed for the safe and efficient removal of square taper and square conical crank arms from bicycle bottom bracket spindles. This tool is essential for bicycle maintenance, allowing access to the bottom bracket for service or replacement. Proper use ensures the integrity of both the crank arm and the bottom bracket threads.

2. SAFETY INFORMATION

- Always wear appropriate personal protective equipment, such as safety glasses, when performing bicycle maintenance.
- Ensure the bicycle is stable and securely supported before beginning any work.
- Use the correct size wrenches or tools to operate the extractor to prevent stripping fasteners or damaging the tool.
- Never force the tool. If resistance is encountered, re-evaluate the situation to identify the cause.
- Keep hands and fingers clear of moving parts during operation.

3. COMPONENTS

The Shimano TL-FC10 Crank Arm Extractor consists of a main body with external threads and an internal plunger with its own threads. The tool is designed as a single unit for its intended function.



Image 1: The Shimano TL-FC10 Crank Arm Extractor. This image shows the complete tool, featuring its main body and the internal plunger, ready for use in removing bicycle crank arms.

4. SETUP AND PREPARATION

1. **Remove Crank Arm Fixing Bolt/Nut:** Locate the bolt or nut securing the crank arm to the bottom bracket spindle. Use an appropriate wrench (typically a 14mm or 15mm socket or an 8mm hex key) to loosen and remove this fastener.
2. **Inspect Threads:** Carefully inspect the internal threads of the crank arm for dirt, debris, or damage. Clean the threads thoroughly with a brush or rag if necessary. Damaged threads can prevent the extractor from seating correctly and may cause further damage.

5. OPERATING INSTRUCTIONS

Follow these steps to safely remove a square taper crank arm using the TL-FC10 extractor:

1. **Thread Outer Body into Crank Arm:** Ensure the inner plunger of the extractor is fully retracted (turned counter-clockwise) so it does not protrude. Carefully thread the larger, outer body of the TL-FC10 tool clockwise into the internal threads of the crank arm. Hand-tighten first to ensure it is not cross-threaded. Once hand-tight, use an adjustable wrench or a 32mm open-end wrench to tighten

the outer body firmly into the crank arm. It is crucial that this part is fully seated and tight to prevent stripping the crank arm threads.

2. **Engage Inner Plunger:** Once the outer body is securely threaded into the crank arm, begin turning the inner plunger of the tool clockwise. This can typically be done with a 14mm socket wrench or an adjustable wrench.
3. **Extract Crank Arm:** As you turn the inner plunger, its tip will press against the end of the bottom bracket spindle. Continue turning the plunger clockwise. You will feel increasing resistance as the crank arm is slowly pushed off the tapered spindle. Continue until the crank arm separates from the spindle.
4. **Remove Tool and Crank Arm:** Once the crank arm is free, unthread the inner plunger counter-clockwise, then unthread the entire extractor tool counter-clockwise from the crank arm. The crank arm can now be removed from the bicycle.

6. MAINTENANCE

- After each use, clean the tool to remove any grease, dirt, or metal shavings.
- Store the TL-FC10 in a dry environment to prevent rust or corrosion.
- Periodically apply a light coat of grease to the threads of the inner plunger to ensure smooth operation and longevity.

7. TROUBLESHOOTING

- **Tool will not thread into crank arm:** Check for cross-threading. Ensure the tool is aligned straight with the crank arm threads. Inspect crank arm threads for damage or debris; clean or repair if necessary.
- **Crank arm is stuck and difficult to remove:** Ensure the outer body of the tool is fully tightened into the crank arm. Apply a penetrating oil to the spindle/crank arm interface and allow it to soak for some time before attempting extraction again. Ensure you are using sufficient leverage on the inner plunger.
- **Tool feels like it's stripping:** Immediately stop applying force. Re-evaluate the threading of the tool into the crank arm. If the outer body is not fully engaged, it can strip the crank arm threads. If the inner plunger is stripping, ensure it is clean and lubricated.

8. SPECIFICATIONS

Feature	Detail
Brand	SHIMANO
Model Number	TL-FC10 (Manufacturer Part Number: Y13009010)
Material	Aluminum
Compatibility	Square taper and square conical crank arms
Item Dimensions (L x W x H)	2 x 6 x 2 inches
Item Weight	109 Grams

9. WARRANTY INFORMATION

This Shimano TL-FC10 Crank Arm Extractor is covered by a Limited Warranty. For detailed information regarding the terms, conditions, and duration of the warranty, please refer to the official Shimano website or contact Shimano customer support directly. Keep your proof of purchase for warranty claims.

10. SUPPORT AND CONTACT

If you encounter any issues not covered in this manual or require further assistance, please contact Shimano customer support through their official website. You may also consult with a qualified bicycle mechanic for professional service and advice.