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› SCITOO Starter Instruction Manual for OMC, Johnson, and Evinrude Outboard Engines (Model 4730920-M030SM)

SCITOO 4730920-M030SM

SCITOO Starter Instruction Manual

Model: 4730920-M030SM for OMC, Johnson, and Evinrude Outboard Engines

1. INTRODUCTION

This manual provides essential information for the installation, operation, maintenance, and troubleshooting of your SCITOO Starter, model 4730920-M030SM. This starter is designed for specific OMC, Johnson, and Evinrude outboard marine engines. Please read this manual thoroughly before attempting any procedures to ensure proper function and safety.



Image 1.1: The SCITOO Starter Motor, model 4730920-M030SM. This image displays the overall design and components of the starter unit.

2. COMPATIBILITY

The SCITOO Starter, model 4730920-M030SM, is compatible with various OMC, Johnson, and Evinrude outboard engine models. Please verify your engine's specifications against the following compatibility lists and reference numbers before installation.

2.1. Evinrude Models

VEHICLE FITMENT

• Compatible With Evinrude Models:

Year	Make	Model	Engine
• 1997	For Evinrude	E130TLEUB	
• 1997	For Evinrude	E130TXAUM	
• 1996	For Evinrude	E130TLEDM	
• 1996	For Evinrude	E130TXADA	
• 1995	For Evinrude	E130CXAOR	
• 1995	For Evinrude	E130TLEOA	
• 1995	For Evinrude	E130TXAOR	
• 1994	For Evinrude	E140CXARC	
• 1994	For Evinrude	E140CXARK	

• Reference Number:

5721,393570,585060,586285,4730920-M030SM,4730940-M030SM,5721



Image 2.1: A table detailing compatible Evinrude outboard engine models by year, make, model, and engine type.

This starter is compatible with various Evinrude models, including but not limited to those listed in the image above, typically 120, 130, and 140 HP engines from 1985 to 1993. Specific models include E120TLCCA, E120TLCDC, E120TLCCEM, E120TLCOS, E120TLCUR, E120TLEIE, E120TLEND, E120TLESB, E120TLETF, E120TLETS, E120TXATF, E120TXATS, E120TXCCA, E120TXCDC, E120TXCEM, E120TXCOS, E120TXCUR.

2.2. Johnson Models

VEHICLE FITMENT

Compatible With Johnson Models:

Year	Make	Model	Engine
• 1997	For Johnson	BJ130TLEUB	
• 1997	For Johnson	HJ130TXAUM	
• 1997	For Johnson	J130TLEUB	
• 1996	For Johnson	BJ130TLEDM	
• 1996	For Johnson	HJ130CXADA	
• 1996	For Johnson	HJ130TXADA	
• 1996	For Johnson	J130TLEDM	
• 1996	For Johnson	J130TXADA	
• 1996	For Johnson	SJ130CXADA	
• 1996	For Johnson	SJ130TLEDM	
• 1996	For Johnson	SJ130TXADA	
• 1995	For Johnson	J130CXAOR	
• 1995	For Johnson	J130TLEOA	



Image 2.2: A table detailing compatible Johnson outboard engine models by year, make, model, and engine type.

This starter is also compatible with various Johnson models, including those listed in the image above, typically 120, 130, and 140 HP engines from 1985 to 1993. Specific models include BJ130TLEUB, HJ130TXAUM, J130TLEUB, BJ130TLEDM, HJ130CXADA, HJ130TXADA, J130TLEDM, J130TXADA, SJ130CXADA, SJ130TLEDM, SJ130TXADA, J130CXAOR, J130TLEOA.

2.3. Interchangeability and Reference Numbers

This starter is designed to interchange with the following part numbers: MOT2007, 5386, SAB0066, 112154, 410-21050, 5721, 393570, 585060, 586285, 18-5628, 4730920-M030SM, 4730940-M030SM, 5705040-M030SM, SM47309, SM57050.

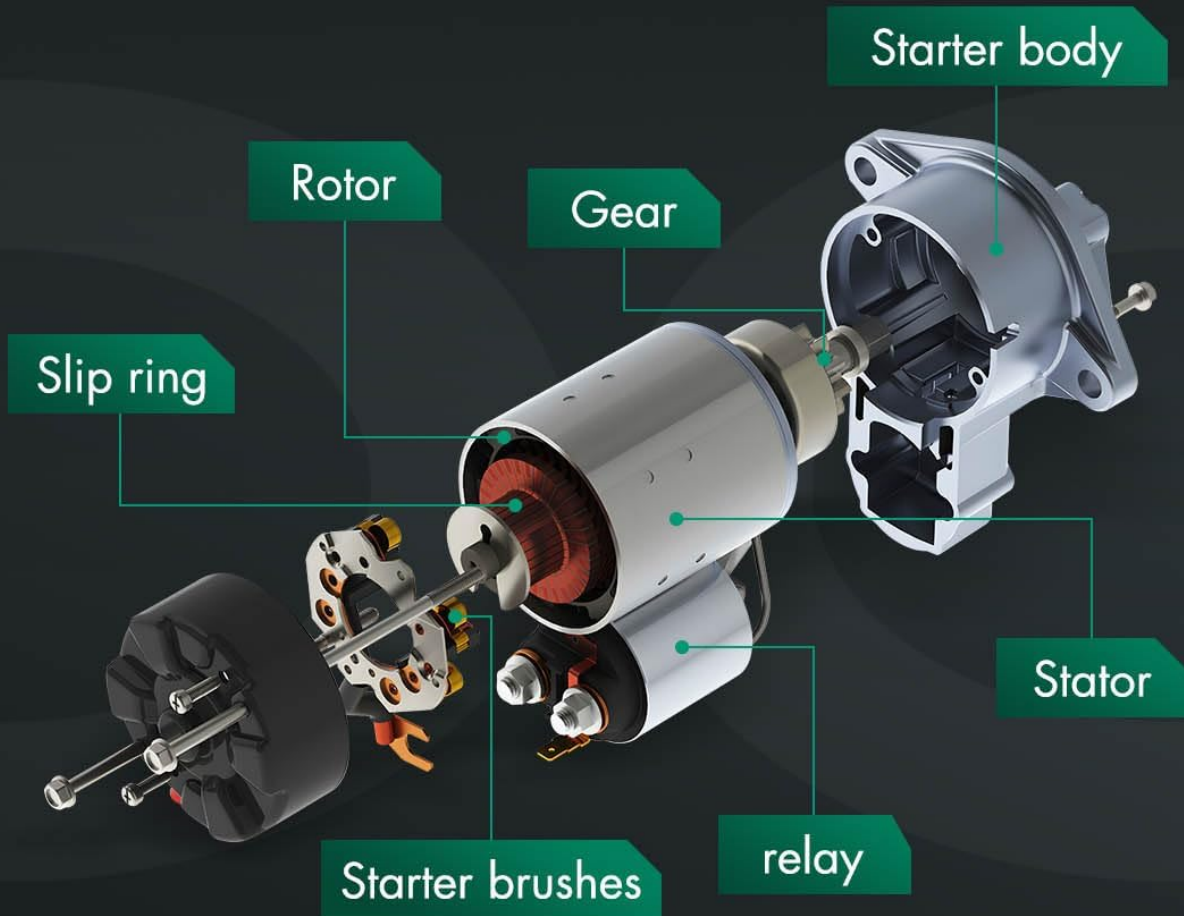
3. SPECIFICATIONS

Understanding the technical specifications of your SCITOO Starter is crucial for proper application and performance.

Specification	Value
Voltage	12 Volts
Rotation	Counter-Clockwise (CCW)
Number of Teeth	10-Tooth Pinion
Starter Type	PMDD (Permanent Magnet Gear Reduction)
Power Rating	1.6 kW
Material	Metal
Item Weight	6.99 pounds
Product Dimensions (L x W x H)	15.75 x 3.94 x 3.94 inches
OEM Part Numbers	5721, 393570, 585060, 586285, 4730920-M030SM, 4730940-M030SM

3.1. Component Overview

QUALITY COMPONENTS



1.6KW



12Volt



10-Tooth
Pinion



CCW



PMDD

Image 3.1: An exploded diagram illustrating the internal components of the starter, including the starter body, rotor, gear, slip ring, stator, starter brushes, and relay.

The starter consists of several key components working in unison: the **starter body**, **rotor**, **gear** (pinion), **slip ring**, **stator**, **starter brushes**, and **relay**. These components are engineered for efficient and reliable engine starting.

4. INSTALLATION AND SETUP

Proper installation is critical for the safe and effective operation of your new starter. It is highly recommended that installation be performed by a qualified professional.

4.1. Pre-Installation Checks

- Ensure the vehicle's battery is disconnected before beginning any work.
- Verify that the new starter matches the original unit in terms of mounting holes and electrical connections. The SCITOO starter is designed for original equipment (OE) fitment.
- Inspect the flywheel for any damage or excessive wear.



Image 4.1: Illustrates the original equipment (OE) mounting points and the stable design of the starter, ensuring a secure fit.

4.2. Installation Steps (General Guidelines)

1. **Disconnect Battery:** Always disconnect the negative battery terminal first to prevent electrical shorts.
2. **Remove Old Starter:** Locate and remove the electrical connections from the old starter. Unbolt the old starter from the engine block.
3. **Install New Starter:** Position the new SCITOO starter in place, ensuring the mounting holes align. Secure it with the appropriate bolts, tightening them to the manufacturer's specifications.
4. **Connect Electrical Wiring:** Reattach the electrical connections to the new starter. Ensure all connections are clean and tight.
5. **Reconnect Battery:** Reconnect the positive battery terminal first, then the negative terminal.
6. **Test Functionality:** Attempt to start the engine to confirm proper operation.

Important Notice: Professional installation is recommended. If the pinion is stuck or no work is done, recheck the installation. A "da da da" sound during operation may indicate improper installation.



NOTICE:

- Note its compatibility
- Professional installation recommended
- Please check if the pinion is stuck if no work is done
- There is a "da da da" sound during operation, and the installation may not be in place

Image 4.2: A notice highlighting key points for installation, including compatibility checks, professional installation recommendation, and troubleshooting tips for common issues like a stuck pinion or unusual noises.

5. OPERATING INSTRUCTIONS

The starter motor is designed to engage the engine's flywheel, initiating the combustion process. Proper operating procedures ensure the longevity of the starter and the engine.

- **Starting Procedure:** Turn the ignition key to the 'Start' position. The starter motor will engage, cranking the engine.
- **Release Key:** As soon as the engine starts, release the ignition key immediately. Do not hold the key in the 'Start' position once the engine is running.

5.1. Starting Precautions



Image 5.1: Visual representation of starter usage precautions, including recommended cranking times and rest periods.

1. **When starting:** The starter should not exceed 5 seconds each time it starts. Wait for more than 2 minutes when starting again. The third consecutive start should be stopped for 15 minutes before proceeding.
2. **After starting:** After the engine starts, the control circuit of the starter must be immediately cut off to stop the starter from working.

6. MAINTENANCE

Regular inspection and timely replacement of worn components can extend the life of your starter motor.

- **Regular Inspection:** Periodically check the starter for loose connections, corrosion, or physical damage.
- **Brush Replacement:** When the length of the carbon brush is less than 50% of its original length, or if the contact area shows wear exceeding 70%, the brushes should be replaced. Worn brushes can lead to intermittent starting or complete failure.
- **Cleanliness:** Keep the starter free from excessive dirt, oil, and debris, which can hinder its operation and lead to overheating.

7. TROUBLESHOOTING

If your engine fails to start or the starter exhibits unusual behavior, consult the following common issues and potential solutions.

7.1. Common Reasons for Starter Not Working

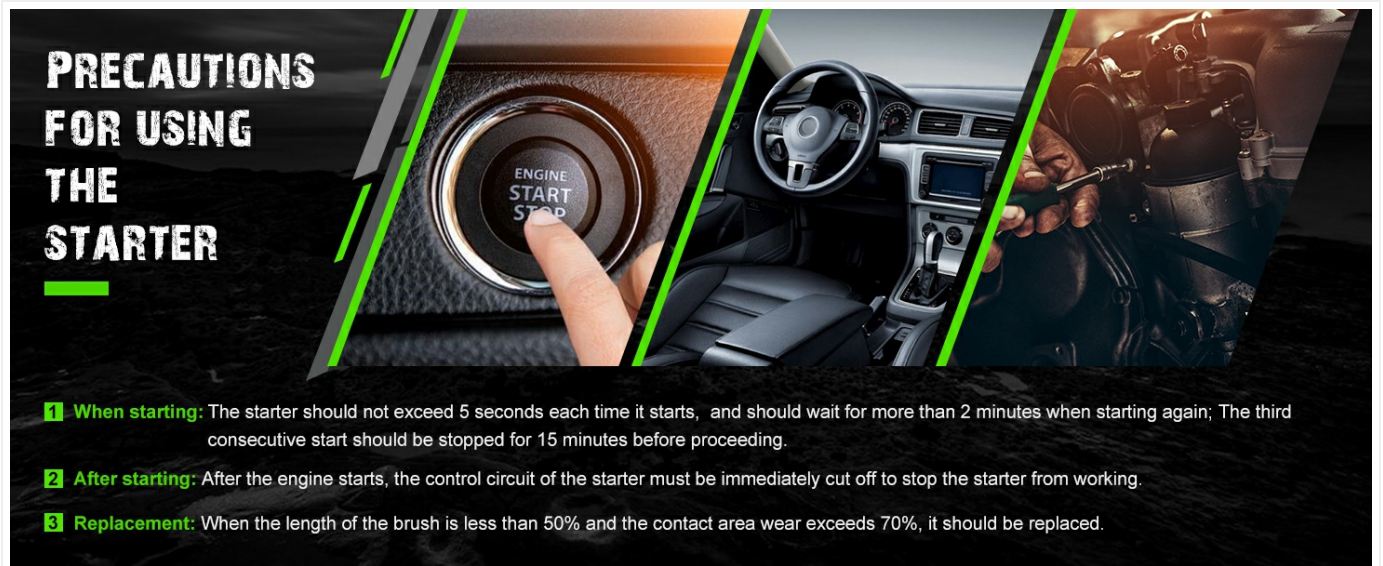


Image 7.1: A dashboard display with various warning lights, illustrating potential indicators of a non-functioning starter or related electrical issues.

1. **Severe Battery Loss:** Ensure the battery is fully charged and in good condition.
2. **Poor Contact of Starter Circuit and Switch:** Check all electrical connections to the starter and ignition switch for corrosion or looseness.
3. **Short Circuit, Open Circuit, or Grounding in the Excitation Winding or Armature Winding:** This indicates an internal electrical fault within the starter or its wiring. Professional diagnosis is required.
4. **Poor Contact Between Brush and Rectifier:** Worn brushes or a dirty commutator can prevent proper electrical contact. Refer to the maintenance section for brush replacement.
5. **Electromagnetic Switch Coil Short Circuit or Open Circuit:** Issues with the solenoid (electromagnetic switch) can prevent the starter from engaging.
6. **The Control Circuit is Faulty:** Problems in the wiring or components that send the signal to the starter.

7.2. Abnormal Starter Operation



Image 7.2: Hands giving a 'thumbs up' gesture over an engine bay, representing confidence in professional quality and problem resolution.

- **Abnormal Noise:** If the starter makes abnormal noise, it could indicate misalignment, worn gears, or internal damage.
- **Starter Idling:** If the starter spins but does not engage the engine, the pinion gear or solenoid may be faulty.
- **Weak Rotation:** A weak rotation can be caused by a low battery, poor electrical connections, or internal starter issues.
- **Collision Sound Between Gear and Flying Gear Ring:** This often points to improper engagement or a damaged flywheel/pinion.

For complex issues, professional diagnosis and repair are recommended.

8. WHAT'S IN THE BOX

Your SCITOO Starter package includes the following:

- 1 x SCITOO Starter Motor (Model 4730920-M030SM)

9. WARRANTY AND SUPPORT

For warranty information, technical support, or assistance with your SCITOO Starter, please refer to the documentation provided with your purchase or contact SCITOO customer service directly. Keep your purchase receipt as proof of purchase.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question