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## Gladiator 18072

# Gladiator Starter Motor Instruction Manual

FOR KOMATSU 4D105 & 6D105 ENGINES (MODEL 18072)

## 1. INTRODUCTION

This manual provides essential information for the proper installation, operation, maintenance, and troubleshooting of your new Gladiator Starter Motor. This starter is designed for specific Komatsu equipment utilizing 4D105 and 6D105 engines. Please read this manual thoroughly before attempting any installation or service to ensure safe and correct usage.

## 2. SAFETY INFORMATION

**WARNING: Improper installation or handling of electrical components can result in serious injury or damage to equipment. Always follow safety precautions.**

- Always disconnect the vehicle's battery terminals (negative first) before beginning any work on the electrical system.
- Wear appropriate personal protective equipment, including safety glasses and gloves.
- Ensure the vehicle is securely supported and cannot move during installation.
- If you are unsure about any step, consult a qualified technician.
- Avoid contact with hot engine components.

## 3. PRODUCT OVERVIEW

The Gladiator Starter Motor (Model 18072) is a 24-volt, 5.5KW, 13-tooth, off-set gear reduction unit designed to meet or exceed OEM specifications. It includes an integrated relay for reliable starting performance.

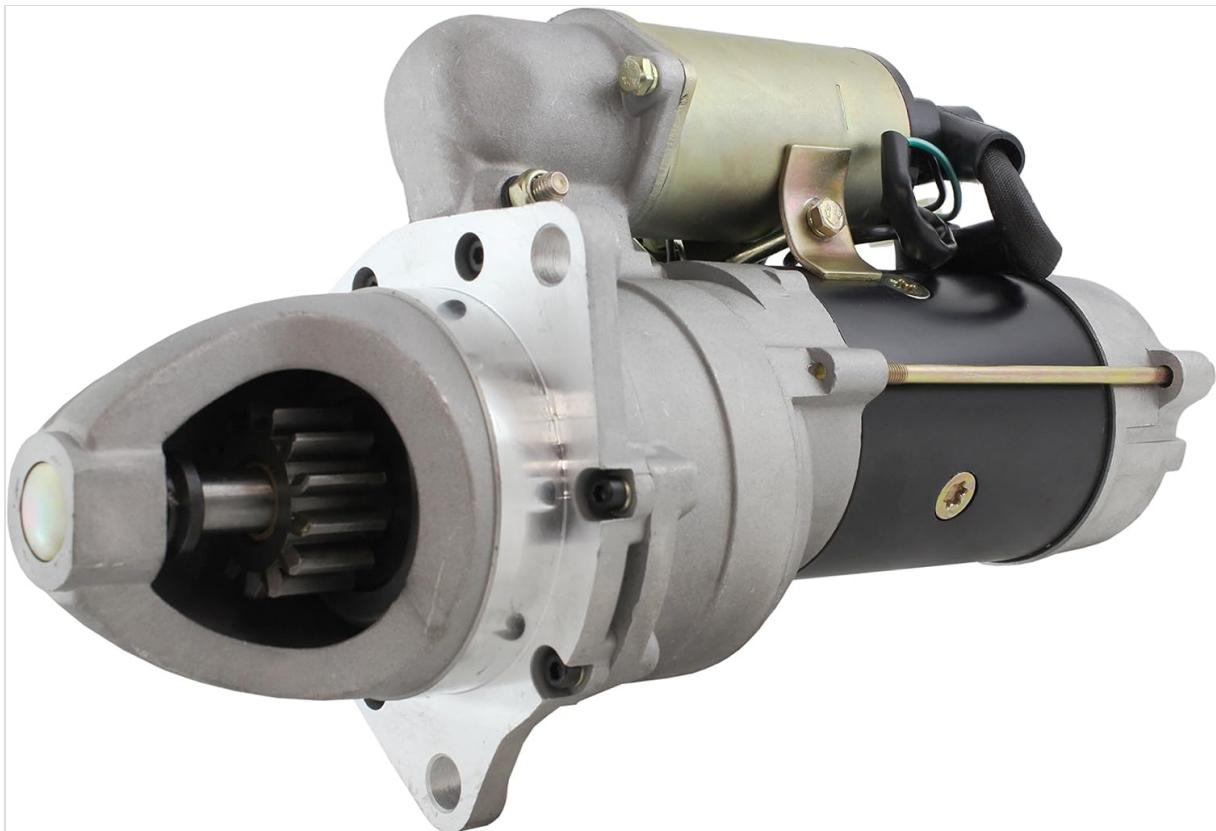


Figure 1: Main view of the Gladiator Starter Motor, showcasing its overall design and components.

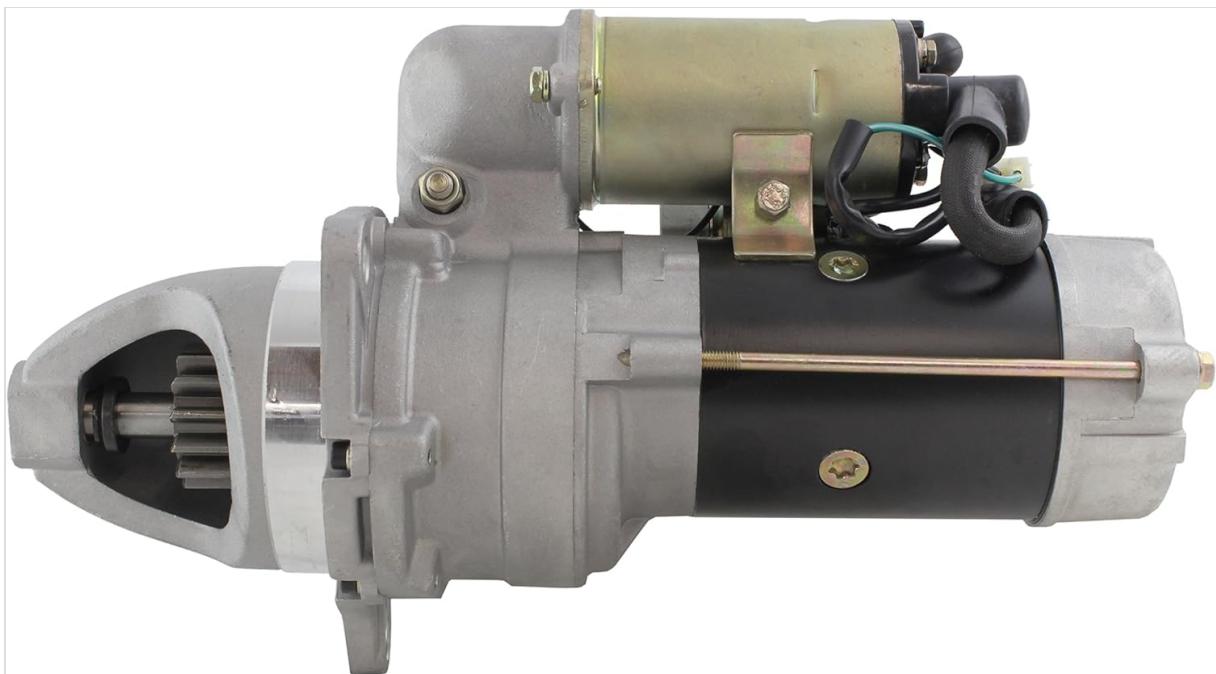


Figure 2: Side view of the starter motor, highlighting the solenoid and main body.



Figure 3: Close-up view of the pinion gear end, showing the 13-tooth gear.

#### 4. COMPATIBILITY

This starter motor is compatible with various Komatsu equipment models equipped with 4D105 and 6D105 engines. Please verify your specific model and engine type before installation.

##### **Compatible Komatsu Models and Engines:**

- Komatsu 510 (4D105, 1978-1985)

- Komatsu 515 (6D105, 1981-1985)
- Komatsu 530 (6D105, 1981-1985)
- Komatsu 540 (6D105, 1981-1985)
- Komatsu D20 (4D105, 1978-1985)
- Komatsu D21 (4D105, 1978-1985)
- Komatsu D31 (4D105, 1981-1985)
- Komatsu D40 (4D105-5, 1981-1985; 6D105-5, 1982-1985)
- Komatsu D41 (4D105-5, 1982-1985; 6D105-5, 1982-1985)
- Komatsu D45 (4D105-5, 1982-1985)
- Komatsu EC170 (4D105, 1984-1985; 6D105, 1984-1985)
- Komatsu EC170Z (4D105, 1986-1995; 6D105, 1986-1995)
- Komatsu EC75 (4D105, 1984-1985)
- Komatsu EG100 (6D105, 1981)
- Komatsu EG100S (6D105, 1981)
- Komatsu EG45 (4D105, 1981)
- Komatsu EG45S (4D105, 1981)
- Komatsu EG50 (4D105, 1984)
- Komatsu EG50S (4D105, 1984)
- Komatsu EG55 (4D105, 1981)
- Komatsu EG55S (4D105, 1981)
- Komatsu EG65 (4D105, 1981-1984; 6D105, 1981-1984)
- Komatsu EG65S (4D105, 1981-1984; 6D105, 1981-1984)
- Komatsu EG75 (4D105, 1981-1984; 6D105, 1981-1984)
- Komatsu EG75S (4D105, 1981-1984; 6D105, 1981-1984)
- Komatsu FD180 (6D105, 1986-1994)
- Komatsu GD200A (4D105, 1984-1985)
- Komatsu GD300A (4D105, 1984-1985)
- Komatsu GD500R (6D105, 1982-1985)
- Komatsu GD505A (6D105, 1982-1985)
- Komatsu GD505R (6D105, 1982-1987)
- Komatsu JH63 (6D105, 1981-1985)
- Komatsu PW100 (4D105, 1982-1985)

## 5. SETUP AND INSTALLATION

Installation of a starter motor requires mechanical aptitude and adherence to safety protocols. If you are not experienced with automotive electrical systems, it is recommended to seek professional assistance.

### General Installation Steps:

1. **Preparation:** Ensure the vehicle is turned off, the parking brake is engaged, and the battery's negative terminal is disconnected. Allow the engine to cool if it has been running.
2. **Locate the Old Starter:** Identify the existing starter motor on your Komatsu equipment. It is typically mounted on the engine block near the flywheel.
3. **Disconnect Wiring:** Carefully disconnect all electrical connections from the old starter. Note the position of each wire for correct reinstallation. Take photos if necessary.
4. **Remove Mounting Bolts:** Remove the bolts securing the old starter motor to the engine block. Support the starter as you remove the last bolt to prevent it from falling.
5. **Install New Starter:** Position the new Gladiator Starter Motor in place and secure it with the mounting bolts. Ensure it is seated correctly and tightened to the manufacturer's specifications.

6. **Reconnect Wiring:** Reattach all electrical connections to the new starter motor, ensuring they are clean, tight, and in their correct positions.
7. **Reconnect Battery:** Reconnect the battery's negative terminal.
8. **Test:** Attempt to start the engine. Listen for proper starter engagement and engine cranking.



Figure 4: Rear view of the starter motor, showing the electrical connection points for proper wiring.

## 6. OPERATING INSTRUCTIONS

The starter motor is an integral part of your engine's starting system. When the ignition key is turned to the 'start' position, electrical current flows to the starter solenoid. The solenoid engages the starter motor's pinion gear with the engine's flywheel and simultaneously sends power to the starter motor. The motor then rotates the flywheel, cranking the engine until it starts. Once the engine starts, the ignition key should be released, disengaging the starter motor from the flywheel.

- Do not engage the starter for more than 10-15 seconds at a time. Allow a brief cool-down period (30-60 seconds) between attempts to prevent overheating.
- Ensure the vehicle is in neutral or park before attempting to start.

## 7. MAINTENANCE

Regular inspection and basic maintenance can extend the life of your starter motor and ensure reliable operation.

- **Terminal Inspection:** Periodically check all electrical connections to the starter motor and battery for corrosion, looseness, or damage. Clean terminals with a wire brush if corrosion is present.
- **Mounting Security:** Ensure the starter motor remains securely mounted to the engine block. Loose mounting can lead to misalignment and premature wear.
- **Battery Condition:** A weak battery can put excessive strain on the starter motor. Ensure your battery is properly charged and in good condition.
- **Environmental Protection:** Keep the starter motor free from excessive dirt, moisture, and debris.

## 8. TROUBLESHOOTING

If you experience issues with your starter motor, consider the following common problems and potential solutions:

Problem	Possible Cause	Solution
Starter does not engage (no click, no crank)	Dead battery, loose/corroded battery terminals, faulty ignition switch, faulty starter solenoid, open circuit.	Check battery charge and terminals. Inspect ignition switch and wiring. Test starter solenoid.
Starter clicks but does not crank engine	Low battery charge, corroded battery cables, faulty starter motor (internal), engine seized.	Charge/replace battery. Clean battery cables. Test starter motor. Check engine for seizure.
Starter cranks slowly	Low battery charge, corroded battery cables, high resistance in circuit, worn starter motor.	Charge/replace battery. Clean battery cables. Inspect wiring for resistance. Test starter motor.
Starter engages but makes grinding noise	Worn pinion gear or flywheel teeth, improper starter alignment.	Inspect pinion gear and flywheel. Recheck starter mounting.

If troubleshooting steps do not resolve the issue, it is recommended to consult a qualified mechanic or the product's support team.

## 9. SPECIFICATIONS

Specification	Detail
Model Number	18072
Brand	Gladiator
Voltage	24 Volts
Wattage	5.5 KW
Gear Type	Off Set Gear Reduction
Pinion Teeth	13 Tooth
Item Weight	38 Pounds (approx. 17.24 kg)
Product Dimensions (L x W x H)	14.5 x 8 x 5.8 inches (approx. 36.8 x 20.3 x 14.7 cm)
Manufacturer	Gladiator
Replaces OEM Part Numbers	0-21000-4872, 600-813-2620, 0-21000-4870, 0-21000-4871, 600-813-2243, 600-813-2251, 244-55201A, 91-28-4017

## 10. WARRANTY INFORMATION

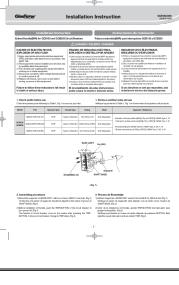
This Gladiator Starter Motor comes with a **one-year warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use. It does not cover damage resulting from improper installation, misuse, neglect, accident, or unauthorized repair or modification. For warranty claims, please retain your proof of purchase and contact the seller.

## 11. SUPPORT

For further assistance, technical questions, or warranty inquiries, please contact the seller or a qualified automotive

technician. When contacting support, please have your product model number (18072) and proof of purchase readily available.

## Related Documents - 18072

	<p><a href="#">Gladiator Refrigerator and Upright Freezer Use and Care Guide</a></p> <p>Comprehensive guide for Gladiator refrigerators and upright freezers, covering installation, operation, maintenance, troubleshooting, and warranty information.</p>
	<p><a href="#">Gladiator Long Range All Terrain Indoor/Outdoor Scooter User Manual</a></p> <p>This user manual provides comprehensive instructions for the Gladiator Long Range All Terrain Indoor/Outdoor Scooter, covering safety, assembly, operation, maintenance, and troubleshooting.</p>
	<p><a href="#">Gladiator Max GearLoft Shelf Assembly and Installation Guide</a></p> <p>Comprehensive assembly and installation instructions for the Gladiator Max GearLoft Shelf (models GAGL30WSJG, GAGL30WSJW), including safety information, dimensions, parts list, and mounting steps for Gladiator Wall Systems.</p>
	<p><a href="#">Gladiator GCB150/250 Circuit Breaker Extended Handle Installation Instructions</a></p> <p>Detailed installation instructions for the Gladiator GCB150/250 circuit breaker extended handle (EHR) accessory, including safety warnings, assembly procedures, and locking mechanisms.</p>
	<p><a href="#">Gladiator Welded-Steel Tall GearBox &amp; GearLocker Bracket Kit Compactor Installation Instructions</a></p> <p>Detailed installation guide for the Gladiator Welded-Steel Tall GearBox &amp; GearLocker Bracket Kit Compactor. Includes safety warnings, parts list, bracket requirements, unpacking, and step-by-step instructions for attaching brackets and mounting the cabinet to Gladiator GearWall panels or GearTrack channels. Warranty information is also provided.</p>
	<p><a href="#">Gladiator GAMT41HWJG Premier 41-Inch 9-Drawer Mobile Workbench Assembly Instructions</a></p> <p>Assembly instructions for the Gladiator GAMT41HWJG Premier 41-inch 9-drawer mobile workbench with hardwood top. Includes safety information, dimensions, parts list, and step-by-step assembly guidance.</p>

