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**X-PRO 308-999110**

# X-PRO 150cc GY6 Moped Scooter Engine: Installation and Maintenance Manual

Model: 308-999110

## INTRODUCTION

This manual provides essential information for the safe and effective installation, operation, and maintenance of your X-PRO 150cc GY6 4-stroke moped scooter engine. Please read this manual thoroughly before attempting any installation or maintenance procedures to ensure proper function and longevity of the engine. Retain this manual for future reference.

## PRODUCT OVERVIEW AND SPECIFICATIONS

The X-PRO 150cc GY6 engine is a 4-stroke, air-cooled unit designed for moped and scooter applications. It features a CVT automatic transmission and supports both electric and kick starting methods.

### Key Features:

- 150cc GY6 4-stroke engine
- CVT Automatic Transmission
- Electric and Kick Start capability
- Air-cooled design
- Long Case design (uses 842 belt)
- Auto clutch system

### Detailed Specifications:

Engine Model	308-999110
Engine Type	Single Cylinder, 4-Stroke, 2-Valve
Cooling System	Air Cooled
Ignition Method	CDI

<b>Starter</b>	Electric/Kick starter
<b>Transmission</b>	CVT
<b>Clutch</b>	Shoe-type Automatic Centrifugal Dry Clutch
<b>Horsepower</b>	8.72HP/7500Rpm (6.5KW/7500Rpm)
<b>Max. Torque</b>	9.0N.m/5500Rpm
<b>Min. Stable Idle Speed</b>	1450-1750r/min
<b>Min. Fuel Consumption</b>	9.31oz/HP.h (354g/Kw.h)
<b>Cylinder Diameter</b>	2.26" (57.4mm)
<b>Piston Stroke</b>	2.28" (57.8mm)
<b>Bore &amp; Stroke</b>	2.26" x 2.28" (57.4mm x 57.8mm)
<b>Cylinder Working Volume</b>	0.03 Gallon (149.6ml)
<b>Compression Ratio</b>	10.5:1
<b>Fuel Supply</b>	Carburetor Atomization
<b>Carburetor Model</b>	PD24J
<b>Carburetor Type</b>	Horizontal Vacuum Carburetor
<b>Spark Plug Model</b>	A7TC
<b>Recommended Fuel</b>	No. >= 87#
<b>Lubrication Model</b>	SF15W/40-SE
<b>Lubrication Capacity</b>	0.26 Gallon (1200ml)

## COMPATIBILITY

This engine is designed to be compatible with a wide range of 150cc GY6 scooters and most China-made 150cc scooters. It is a long case engine, utilizing an 842 belt.

### Compatible Vehicles and Models:

- 150cc GY6 Scooters
- 150cc China made Scooters
- Includes models from brands such as Coolster, Taotao, Roketa, Kazuma, Terminator, Lynx, Redcat, Tank, and others.

**Important: Always measure the physical dimensions of your existing engine and compare them with the specifications provided to ensure correct fitment before purchase and installation.**

## SETUP AND INSTALLATION

Installation of a new engine requires mechanical aptitude. If you are not confident in your abilities, it is recommended to seek professional assistance.

## Pre-Installation Checks:

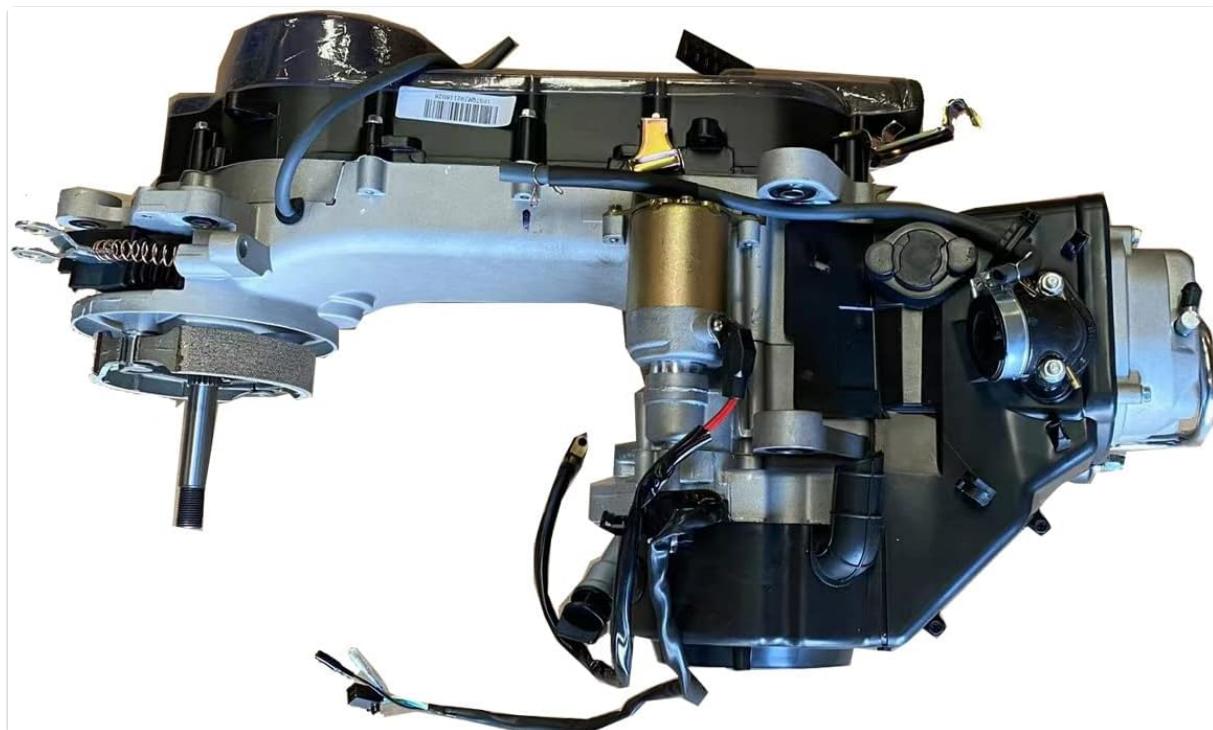
- **Verify Physical Size:** Before beginning installation, carefully measure the dimensions of the new engine and compare them to the space available in your scooter frame. Refer to the image below for a visual reference of engine dimensions.
- **Initial Oil Change:** The engine is shipped with a protective "shipping oil" which is thicker than required for operation. **It is crucial to drain this shipping oil and replace it with fresh 10W40 engine oil before the first start.** The lubrication capacity is 1200ml (0.26 Gallon).
- **Inspect Components:** Check all visible components, wiring, and hoses for any signs of damage during shipping.



**Figure 1:** X-PRO 150cc GY6 engine with a measuring tape for dimension reference. Ensure this fits your scooter frame.

### Installation Steps (General Guidance):

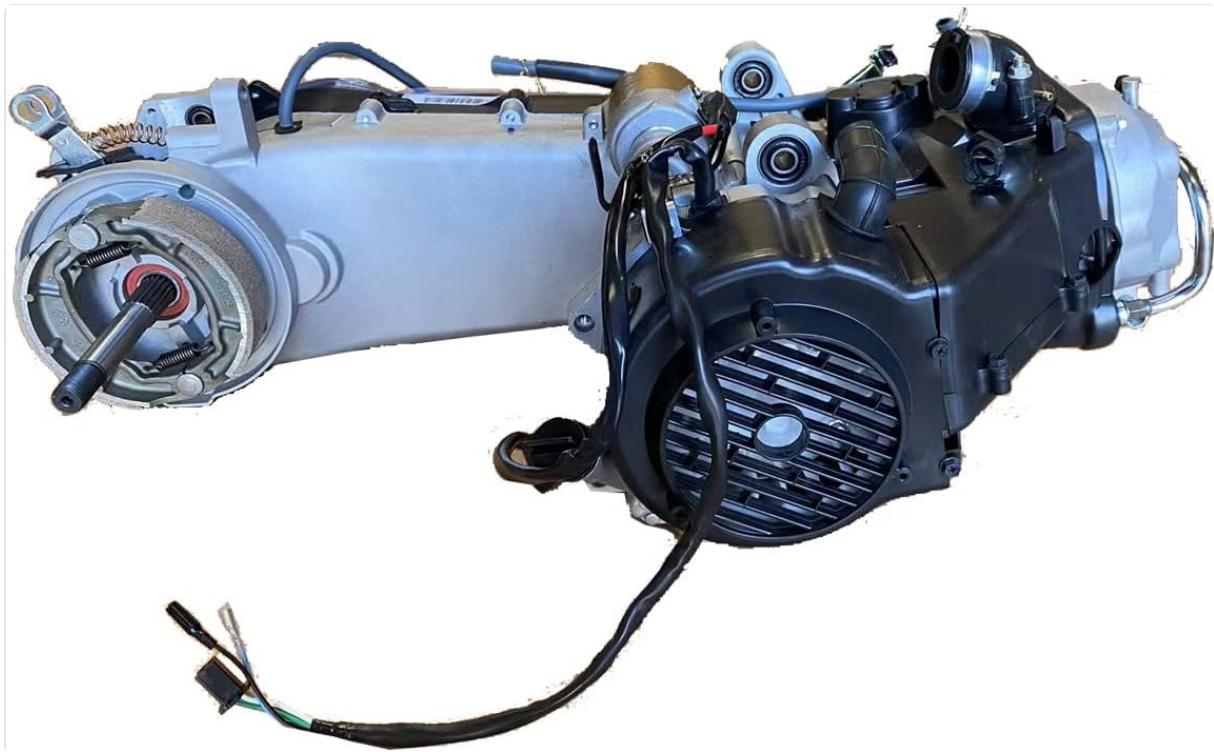
1. Securely mount the engine into the scooter frame.
2. Connect all necessary electrical components, including the starter motor and CDI ignition. Refer to the wiring harness image for connection points.
3. Connect fuel lines and vacuum lines to the carburetor.
4. Install the exhaust system.
5. Connect the rear wheel and brake assembly.
6. Fill the engine with the correct type and amount of engine oil (10W40, 1200ml).
7. Fill the fuel tank with recommended fuel (>=87#).
8. Perform a thorough check of all connections and fluid levels before attempting to start the engine.



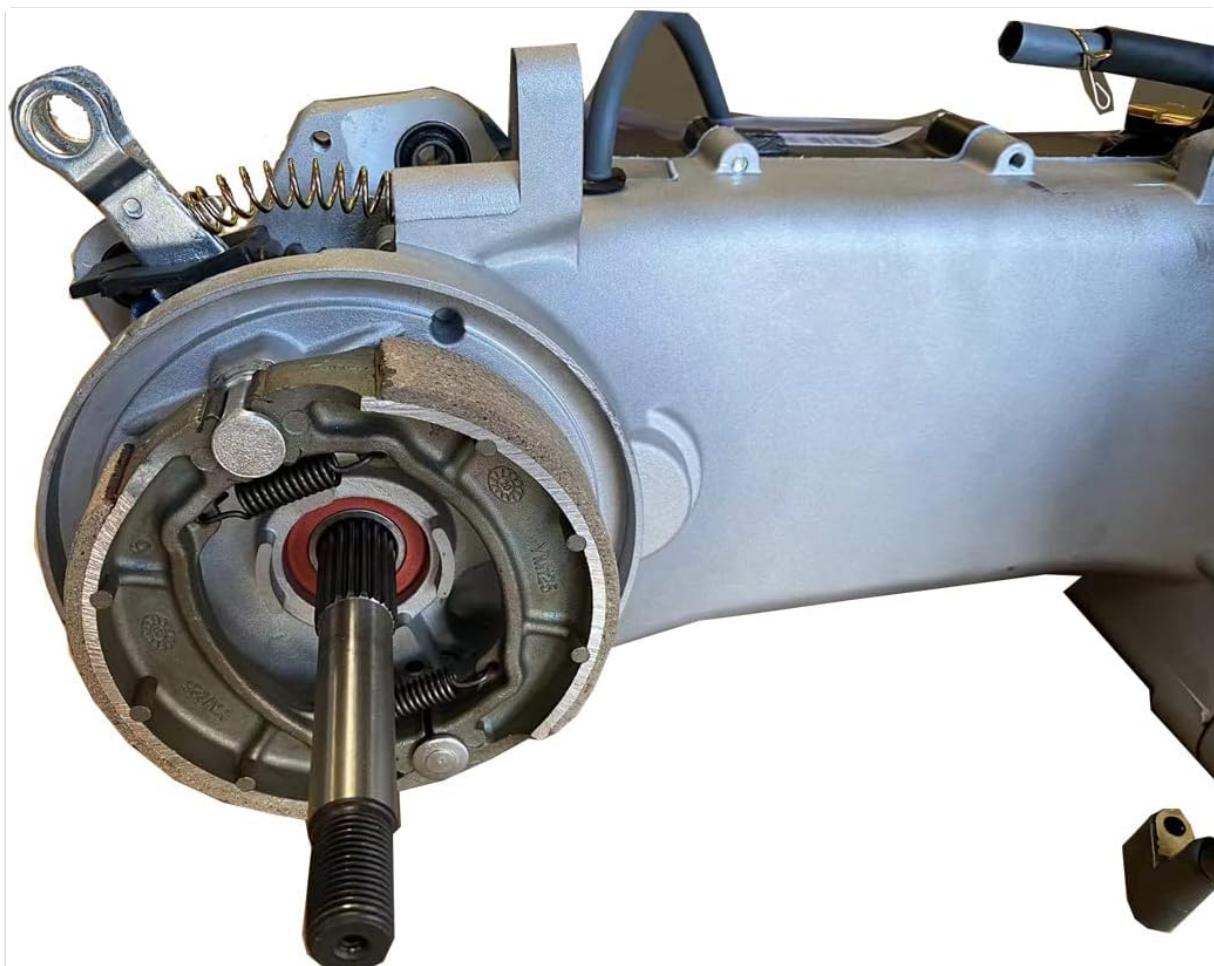
**Figure 2:** Top view of the X-PRO 150cc GY6 engine, showing the general layout of components.



**Figure 3:** Side view of the X-PRO 150cc GY6 engine, highlighting the CVT cover with X-PRO branding.



**Figure 4:** Rear view of the X-PRO 150cc GY6 engine, displaying the integrated brake assembly.



**Figure 5:** Detailed view of the rear brake shoes and drum assembly.



**Figure 6:** Front view of the X-PRO 150cc GY6 engine, showing the cylinder head and intake manifold area.



**Figure 7:** Close-up of the main wiring harness connector, essential for electrical connections.

## OPERATION

Once installed and all pre-checks are complete, the engine can be started using either the electric starter or the kick starter.

- **Electric Start:** Ensure the ignition is on and the brake lever is engaged (safety switch). Press the electric start button.
- **Kick Start:** With the ignition on, firmly depress the kick start lever.

Allow the engine to warm up for a short period before riding, especially in colder conditions.

## MAINTENANCE

Regular maintenance is vital for the performance and longevity of your X-PRO engine.

### Engine Oil:

- **Type:** Use SF15W/40-SE or equivalent 10W40 engine oil.
- **Capacity:** 1200ml (0.26 Gallon).
- **Change Interval:** Refer to your scooter's specific maintenance schedule. Generally, engine oil should be changed every 500-1000 miles or every 3-6 months, whichever comes first.
- **Initial Oil Change:** As noted in the setup section, drain the factory shipping oil and replace it with fresh 10W40 oil before the first use.

### Fuel:

- Use unleaded gasoline with an octane rating of 87# or higher.

## Other Maintenance:

- Regularly inspect the air filter, spark plug (A7TC), and carburetor for cleanliness and proper function.
- Check the CVT belt (842 belt) for wear and tension.
- Inspect all hoses and connections for leaks or damage.

## TROUBLESHOOTING

This section addresses common issues that may arise during the use of your engine.

### Common Issues and Solutions:

- **Engine Not Starting / Poor Performance:**
  - **Incorrect Oil:** Ensure the shipping oil has been drained and replaced with 10W40 engine oil. Running with shipping oil can cause severe engine damage.
  - **Fuel Issues:** Check fuel level, fuel quality, and ensure the fuel lines are not clogged. Inspect the carburetor for blockages.
  - **Spark Plug:** Check the spark plug (A7TC) for fouling or damage. Ensure it is gapped correctly.
  - **Electrical Connections:** Verify all wiring harness connections are secure and free from corrosion.
- **Stator Overcharging:**
  - If experiencing issues with overcharging (e.g., blown CDI, voltage regulator, or coil), the supplied stator might be overcharging. This may require checking the stator output and potentially adjusting pickup mounting holes or replacing the stator/voltage regulator.
- **Engine Noise / Premature Wear:**
  - **Oil Level/Quality:** Always ensure correct oil level and use recommended 10W40 oil. Low oil or incorrect oil can lead to rapid wear of internal components like the crankshaft.
  - **Manufacturing Defects:** In rare cases, manufacturing defects can occur. If significant engine noise or failure occurs shortly after proper installation and initial oil change, contact customer support.
- **PAIR Emission System:**
  - This engine may include a PAIR (Pulsed Secondary Air Injection) emission system. If you wish to remove or modify this system, consult online resources or a qualified mechanic for guidance.
- **Engine Displacement Discrepancy:**
  - Some users have reported receiving engines with 125cc components despite being advertised as 150cc. The serial number "1P57QMJ" indicates a 125cc variant, while "157QMJ" typically indicates a 150cc. If you suspect a discrepancy, verify the engine's serial number and internal components.

## IMPORTANT NOTES AND WARNINGS

- Always wear appropriate safety gear when working on or operating a scooter.
- Ensure the work area is well-ventilated when handling fuel or performing maintenance.
- Dispose of used oils and fluids responsibly according to local regulations.

- Modifications to the engine or scooter may affect performance, safety, and warranty.

## WARRANTY AND SUPPORT

For warranty information, technical support, or to inquire about replacement parts, please contact X-PRO customer service directly. Refer to your purchase documentation for specific warranty terms and contact details.

You can visit the official X-PRO store on Amazon for more products and support information: [X-PRO Store](#)

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## Related Documents - 308-999110

	<p><a href="#">SUBARU Vehicle Operation Guide</a></p> <p>This guide provides essential information for operating and maintaining your SUBARU vehicle, covering starting procedures, fuel requirements, transmission operation, safety features like ABS and VDC, and driving assistance systems.</p>
	<p><a href="#">Startfun X3 Pro Electric Scooter User Manual</a></p> <p>Comprehensive user manual for the Startfun X3 Pro electric scooter for kids, covering specifications, assembly, riding instructions, safety tips, and warranty information.</p>
 <p>X-11 PRO SCOOTER NBPROCSCOTA</p>	<p><a href="#">Kogan X-11 Pro Scooter User Guide - Assembly, Operation &amp; Safety</a></p> <p>Comprehensive user guide for the Kogan X-11 Pro Scooter (NBPROCSCOTA), detailing safety warnings, assembly instructions, operation, and maintenance tips.</p>
	<p><a href="#">NGH GT9-Pro 2-Stroke RC Gasoline Engine Operating Manual</a></p> <p>Comprehensive operating instructions and safety guidelines for the NGH GT9-Pro 2-Stroke RC Gasoline Engine, including specifications, starting procedures, maintenance, and troubleshooting.</p>
 <p>Kick Scooter KQi3 Service Manual</p> <p>Jiangsu Niu Electric Technology Co., Ltd</p> <p>V1.0.0</p>	<p><a href="#">Niu Kick Scooter KQi3 Service Manual</a></p> <p>Comprehensive service manual for the Niu Kick Scooter KQi3, detailing part names, specifications, disassembly, and maintenance procedures. Includes important safety notices and troubleshooting information.</p>



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## [Jetson Orbit X Light-Up Kick Scooter User Manual](#)

User manual for the Jetson Orbit X Light-Up Kick Scooter, covering safety warnings, product overview, getting started, riding instructions, maintenance, and warranty information.