

SUNSTAR RK-102-39

SUNSTAR Rear Sprocket Instruction Manual

Model: RK-102-39

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1. PRODUCT OVERVIEW

The SUNSTAR Rear Sprocket (Part No. RK-102-39) is designed to enhance the performance of your motorcycle. Unlike standard steel sprockets, which are heavy due to cost and durability considerations (with exceptions for some competition vehicles), this sprocket is crafted from lightweight and durable A7075-T6 Super Duralumin. This material choice results in a weight approximately one-third that of steel, which is crucial for components rotating at ultra-high speeds. The design prioritizes performance and aesthetic appeal over mere cost, offering a significant upgrade in both function and appearance for your vehicle.

Key Features:

- **Part Number:** RK10239
- **Chain Size:** 520
- **Number of Teeth:** 39
- **Material:** Aluminum (A7075-T6 Super Duralumin)
- **Compatible Models:** Ninja250/R/SL, Z250/SL, ZEPHYR400, YZF-R25, MT-25, etc.

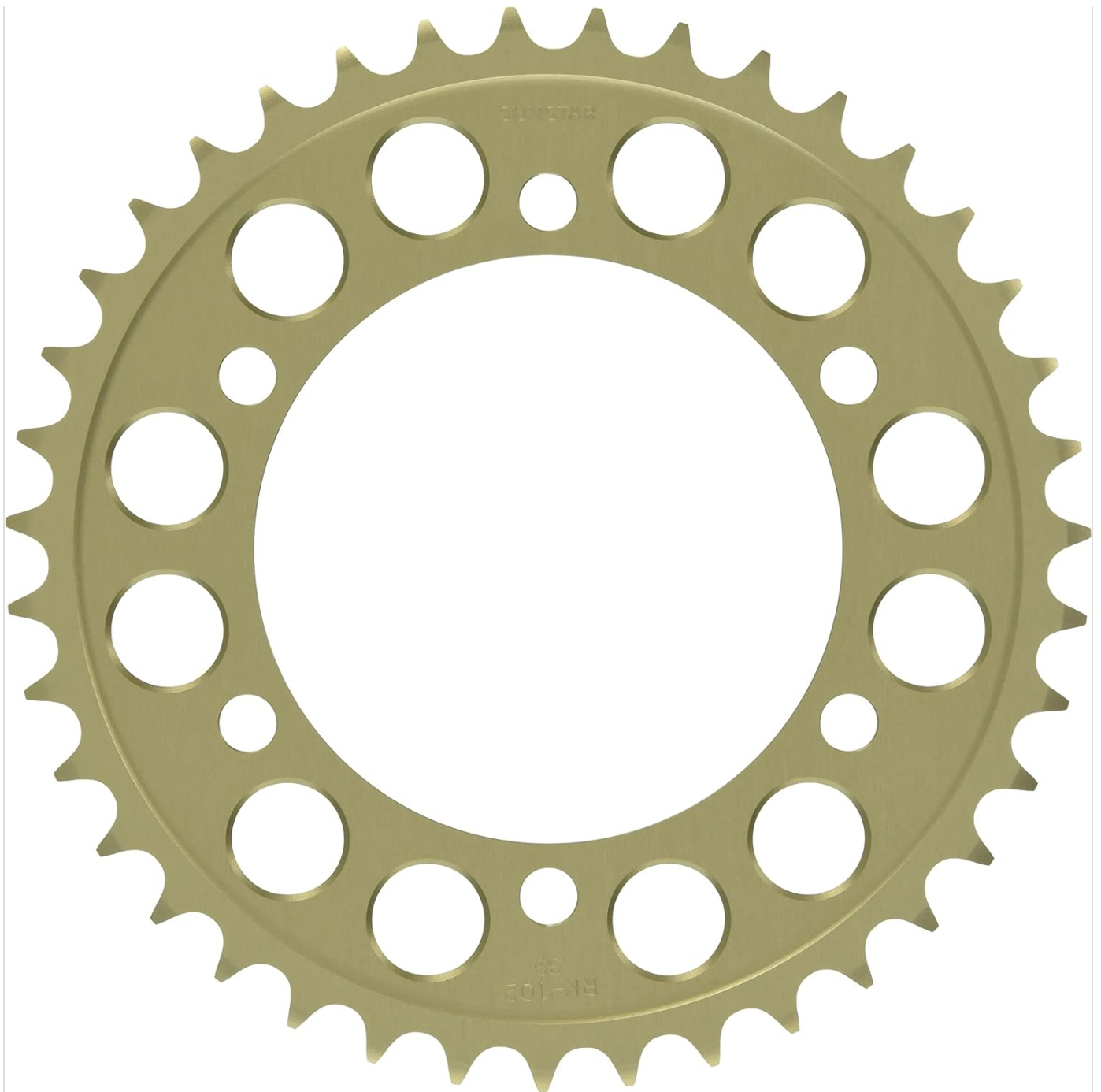


Figure 1: Front view of the SUNSTAR RK-102-39 Rear Sprocket, showcasing its lightweight design and precision machining.

2. SETUP & INSTALLATION

Installation of the rear sprocket requires mechanical knowledge and appropriate tools. If you are not confident in performing the installation yourself, it is highly recommended to seek assistance from a qualified motorcycle mechanic.

2.1 Pre-Installation Checklist:

1. Ensure the new sprocket matches the correct chain size (520) and tooth count (39T) for your motorcycle model.
2. Gather necessary tools: torque wrench, socket set, chain breaker/riveter, stand for lifting the rear wheel, cleaning supplies.
3. Inspect the chain and front sprocket for wear. It is often recommended to replace the chain and both sprockets simultaneously for optimal performance and longevity.

2.2 Installation Steps:

1. Safely lift the rear wheel of the motorcycle using a suitable stand.
2. Remove the rear wheel from the motorcycle.
3. Carefully remove the old rear sprocket from the wheel hub. Note the orientation and any spacers.
4. Clean the wheel hub thoroughly before installing the new sprocket.
5. Install the new SUNSTAR rear sprocket onto the wheel hub, ensuring it is seated correctly and all mounting bolts are aligned.
6. Tighten the sprocket mounting bolts to the manufacturer's specified torque settings using a torque wrench. Refer to your motorcycle's service manual for exact values.
7. Reinstall the rear wheel onto the motorcycle.
8. Adjust chain tension according to your motorcycle's specifications.
9. Perform a final check of all fasteners and ensure the chain runs smoothly.



Figure 2: The SUNSTAR rear sprocket correctly installed on a motorcycle, demonstrating proper fitment and alignment with the chain.

3. OPERATING CONSIDERATIONS

While a sprocket is a static component in terms of operation, its performance directly impacts the motorcycle's drivetrain efficiency and power delivery. The lightweight aluminum construction of the SUNSTAR sprocket reduces unsprung weight and rotational mass, which can lead to improved acceleration and more responsive handling. Ensure your chain is always properly lubricated and tensioned to maximize the lifespan of both the sprocket and the chain, and to maintain optimal power transfer.

4. MAINTENANCE

Regular maintenance is crucial for the longevity and safe operation of your SUNSTAR rear sprocket and the entire drivetrain.

4.1 Cleaning:

- Clean the sprocket regularly, especially after riding in dirty or wet conditions.
- Use a dedicated chain and sprocket cleaner to remove grime, dirt, and old lubricant.
- Avoid using harsh chemicals that could damage the aluminum finish.

4.2 Inspection:

- Periodically inspect the sprocket teeth for signs of wear, such as hooked or pointed teeth.
- Check for any cracks, bends, or damage to the sprocket body.
- Ensure all mounting bolts are secure and torqued to specification.
- Inspect the chain for tight spots, rust, or excessive stretch. A worn chain can accelerate sprocket wear.

4.3 Lubrication:

- While the sprocket itself doesn't require lubrication, proper chain lubrication is vital for the entire drivetrain.
- Lubricate your chain according to your motorcycle manufacturer's recommendations and riding conditions.



Figure 3: A close-up view highlighting the precision manufacturing and branding on the SUNSTAR sprocket, indicating quality and attention to detail.

5. TROUBLESHOOTING

Symptom	Possible Cause	Solution
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Symptom	Possible Cause	Solution
Excessive chain noise or vibration	Worn sprocket teeth, worn chain, incorrect chain tension, misaligned wheel.	Inspect sprocket and chain for wear; replace if necessary. Adjust chain tension. Check wheel alignment.
Premature sprocket wear	Worn chain, improper chain lubrication, incorrect chain tension, riding conditions (e.g., excessive dirt).	Replace worn chain. Ensure regular and proper chain lubrication. Adjust chain tension. Clean drivetrain frequently.
Sprocket bolts loosening	Improper torque during installation, lack of threadlocker.	Re-torque bolts to specification, applying threadlocker if recommended by motorcycle manufacturer.

If you encounter issues not listed here or are unsure about a problem, consult a professional motorcycle mechanic.

6. PRODUCT SPECIFICATIONS

Attribute	Detail
Manufacturer	SUNSTAR
Brand	SUNSTAR
Model Name	Rear Sprocket
Product Model Number	RK-102-39
Product Dimensions (L x W x H)	21 x 21 x 0.6 cm (8.27 x 8.27 x 0.24 inches)
Item Weight	240 g (0.53 lbs)
Chain Size	520
Number of Teeth	39
Material	Aluminum (A7075-T6 Super Duralumin)
ASIN	B06XC98DK5
Date First Available	February 28, 2017



Figure 4: The SUNSTAR sprocket presented on a display stand, highlighting its sleek profile and design.

7. WARRANTY & SUPPORT

7.1 Warranty Information:

This product is guaranteed only for defects found before installation (mounting) and use (running). Please inspect the product thoroughly upon receipt and before any installation attempts.

Any issues arising from improper installation, misuse, modification, or normal wear and tear are not covered under this guarantee. Always ensure installation is performed by a qualified professional if you are unsure.

7.2 Customer Support:

For further assistance, technical inquiries, or warranty claims, please contact your original point of purchase or the official SUNSTAR distributor in your region. Please have your product model number (RK-102-39) and purchase details ready when contacting support.

You can find more information and contact details on the official SUNSTAR website: www.sunstar-engineering.com

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

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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