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› Kyosho 82273 KS-5031-09MW Servo Instruction Manual

Kyosho KS5031-09MW

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Brand: Kyosho | Model: KS-5031-09MW

1. INTRODUCTION

Thank you for choosing the Kyosho 82273 KS-5031-09MW Servo. This high-performance metal gear servo is designed for precision and durability, making it an ideal replacement or upgrade for your RC vehicles, including the Kyosho MP9 RS (white) and MadForce Kruiser 2.0. This manual provides essential information for proper installation, operation, and maintenance to ensure optimal performance and longevity of your servo.

2. PRODUCT FEATURES

- **Metal Gear Construction:** Ensures enhanced durability and resistance to wear, crucial for demanding RC applications.
- **High Torque Output:** Delivers 9kg-cm of torque at 6.0V, providing strong and reliable control.
- **Responsive Speed:** Achieves a speed of 0.15 seconds per 60 degrees at 6.0V for quick and precise movements.
- **Direct Replacement:** Specifically designed as a replacement for Kyosho MP9 RS (white) and MadForce Kruiser 2.0 models.



Image: The Kyosho 82273 KS-5031-09MW Servo, a durable metal gear component for RC vehicles.

3. SPECIFICATIONS

Specification	Value
Model Number	KS-5031-09MW
Brand	Kyosho
Torque (at 6.0V)	9 kg-cm
Speed (at 6.0V)	0.15 sec/60°
Gears	Metal
Dimensions (L x W x H)	3.35 x 1.73 x 1.26 inches (85 x 44 x 32 mm)
Weight	2.11 ounces (60 g)

Specification	Value
Output Spline	25T
Compatibility	Kyosho MP9 RS (white), MadForce Kruiser 2.0

4. SETUP AND INSTALLATION

Proper installation is crucial for the performance and longevity of your servo. Always refer to your RC vehicle's specific instruction manual for detailed steps on removing the old servo and installing the new one.

4.1. Preparation

1. Ensure your RC vehicle's power is OFF and the battery is disconnected.
2. Gather necessary tools, typically a small Phillips head screwdriver and possibly a hex wrench.

4.2. Installation Steps

1. Carefully remove the old servo from its mounting location in the chassis.
2. Attach the appropriate servo horn (not included, typically comes with your RC vehicle or is purchased separately) to the output spline of the new Kyosho KS-5031-09MW servo. Ensure it is securely fastened.
3. Mount the new servo into the designated servo tray or mounting points in your RC vehicle. Use the provided screws or existing hardware to secure it firmly.
4. Connect the servo's wire to the correct channel on your receiver (usually Channel 1 for steering or Channel 2 for throttle/brake, depending on your vehicle type). Ensure the polarity is correct (signal, positive, negative).
5. Route the servo wire neatly to prevent it from interfering with moving parts or getting pinched.

5. OPERATING INSTRUCTIONS

Once the servo is installed, follow these general operating guidelines:

1. **Power On Sequence:** Always turn on your transmitter first, then your RC vehicle. When powering off, turn off the vehicle first, then the transmitter. This prevents unexpected servo movements.
2. **Centering:** Before attaching any linkages, ensure the servo is centered. Power on your system, and the servo should move to its neutral position. Adjust the servo horn if necessary so that it is perpendicular to the servo body or aligned as required by your vehicle's setup.
3. **Linkage Adjustment:** Connect the steering or throttle linkages to the servo horn. Adjust the length of the linkages to ensure full range of motion without binding or over-stressing the servo at its endpoints.
4. **Endpoint Adjustment (EPA/ATV):** Use your transmitter's endpoint adjustment (EPA) or adjustable travel volume (ATV) settings to fine-tune the servo's travel limits. This prevents the servo from trying to move beyond its mechanical limits, which can cause damage.
5. **Testing:** Slowly move the steering wheel or throttle trigger on your transmitter to verify smooth and consistent servo operation. Check for any unusual noises or resistance.

6. MAINTENANCE

Regular maintenance will help extend the life and performance of your Kyosho servo:

- **Cleaning:** Periodically clean the exterior of the servo to remove dirt, dust, and debris. Use a soft, dry brush or cloth. Avoid using harsh chemicals or solvents.
- **Gear Inspection:** Occasionally inspect the metal gears for any signs of wear, damage, or foreign objects. If accessible, a small amount of high-quality plastic-safe grease can be applied to the gears to reduce friction and wear.
- **Wire and Connector Check:** Ensure all wires are securely connected and free from cuts, fraying, or damage. Loose connections can lead to intermittent operation or failure.
- **Mounting Security:** Verify that the servo remains securely mounted in the chassis. Vibrations from operation can sometimes loosen mounting screws.

7. TROUBLESHOOTING

If you encounter issues with your servo, try these common troubleshooting steps:

- **Servo Not Responding:**
 - Check all connections between the servo, receiver, and power source.
 - Ensure the receiver and transmitter are properly bound and powered on.
 - Verify the battery is fully charged and providing adequate voltage.
 - Test the servo with a different receiver channel or a servo tester if available.
- **Erratic or Jerky Movement:**
 - Check for binding in the steering or throttle linkages.
 - Inspect the servo gears for damage or debris.
 - Ensure the servo wire is not damaged or experiencing interference.
 - Check for loose connections.
- **Servo Making Noise:**
 - A slight hum is normal for digital servos.
 - Loud grinding or clicking may indicate damaged gears or excessive load. Inspect the gears and linkages.
 - Ensure the servo is not being forced against its mechanical limits (adjust EPA/ATV).

If these steps do not resolve the issue, contact Kyosho customer support or your local hobby shop for further assistance.

8. IMPORTANT SAFETY INFORMATION

- Always disconnect the battery from your RC vehicle before performing any maintenance or installation.
- Keep small parts and tools out of reach of children.
- Do not attempt to modify the servo. Unauthorized modifications can void the warranty and lead to malfunction.
- Ensure proper ventilation when operating RC vehicles to prevent overheating of electronic components.
- Operate RC vehicles responsibly and in accordance with local laws and regulations.

9. WARRANTY AND SUPPORT

Kyosho products are manufactured to high standards. For warranty information or technical support, please refer to the official Kyosho website or contact your authorized Kyosho dealer. Keep your purchase receipt as proof of purchase.

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