



**SERVICE MANUAL
RCR**



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SERVICE INFO

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Your ONYX Motorbike will last you forever if you properly service and maintain it. However, the frequency of your service checks and part replacements will vary depending on how much fun you have with your ONYX Motorbike. Under normal circumstances, check and adjust your ONYX according to the schedule below:

MAINTENANCE SCHEDULE

	BEFORE EVERY RIDE:	1 MONTH (30 HOURS)	6 MONTHS (100 HOURS) <i>Date / Mileage:</i>	ANNUALLY (200 HOURS) <i>Date / Mileage:</i>	2 YEARS (400 HOURS) <i>Date / Mileage:</i>
Check the Headlight, Tail Light, & Any Other Installed Lighting for Proper Operation					
Check Tire Rotation — Spinning smooth & straight					
Check Tire Pressure — 32 psi for Front and Rear tires					
Check Front & Rear Brake Operation					
Check Battery Charge Level					
Check & Torque Fork, Axle, Handlebar, and Suspension Nuts (see Detailed Hardware table pg 3)					
Wipe Down & Dry frame and bike parts using a soft cloth					
Carefully Check Tires for Any Debris					
If Storing Outside, Cover The Bike, Install Lock, & Set Alarm					
Check Basic Maintenance (see Bare Bones Guide, pg #)					
Check & Adjust Front & Rear Brake					
Check Front Brake Fluid Level via the Master Cylinder Reservoir Window					
Lube Rear Brake Cable					
Change Front Brake Fluid (DOT3)					
Change Front Brake Pads					
Change Rear Brake Pads					
Lube Bicycle Chain & Freewheel					
Check & Adjust Bicycle Chain Tension					
Check Tire Tread Depth					
Check & True Front and Rear Wheel Rims					
Check Rear Hub Motor Cable Condition and Clearance					
Check Rear Wheel & Motor Alignment					
Check Battery Strap to Make Sure Battery Is Secure					
Check Battery Connections for Wear					
Change Alarm Key Fob Battery					
Inspect & Clean Frame					
Check Tightness of ALL Nuts and Bolts (see Detailed Hardware table pg 3)					
Lube All Moving Parts & Bearings					

BASIC CARE

Bare Bones Guide

1. Regularly clean and lubricate all moving parts, tighten nuts/bolts, and adjust as required. This includes all steering, bicycle pedals, suspension, and wheel parts. See the Detailed Hardware tables for hardware and torque specifications for your ONYX Motorbike.
2. Keep your bike clean by wiping the frame with a damp cloth. If needed, apply a mild cleaner or soap mixture to the cloth and wipe the frame. Dry your bike by wiping with a clean, dry cloth. Never hose down or submerge the bike or any components in water or liquid as the electrical system may be damaged.
3. Occasionally check wiring and connectors, especially up and around the handlebars, to ensure that the connectors are secure and not damaged. Also check the condition of wire wraps. Check cable ties to make sure that they are intact. Replace any that are loose, frayed, or partially cut.
4. Properly maintain your battery by keeping it charged or charging before use. It is possible and normal for the battery to lose charge if it is left sitting for several days, so it may be necessary to top it off for up to a couple hours so to experience the performance of a fully charged battery.

If you plan on not riding for a week or more, be sure keep the battery charged to more than a 50% level and store the battery at or close to 59 degrees F. See the BASIC RCR MODEL MAINTENANCE section of your RCR Owner's Manual for more information.
5. Whenever possible, store your ONYX Motorbike under shelter or cover it with a quality cover. Avoid leaving the bike in the rain or exposed to corrosive materials. If exposed to rain, dry your bike afterwards and apply anti-rust treatment to chain and other unpainted steel surfaces.
6. Riding on and near beach, coastal, or on frequently winterized salted roads can corrode your bike. If you ride in these areas, wipe down your bike frequently and wipe or spray all unpainted parts with anti-rust treatment.

Please note that damage due to corrosion is NOT covered under warranty so special care should be given to extend the life of your bike when used in coastal areas or on winterized roads.
7. If the front hub, front fork, or swing arm bracket have been submerged in water or liquid, they should be taken apart to be cleaned and greased with a quality grease. Though the rear hub motor is protected and sealed against dirt and water intrusion to an IP54 level, it should not be submerged in water. A splash through a small creek is fine, but it doesn't mean your bike should go swimming. If the rear hub motor is submerged, dry it off thoroughly and air dry.
8. If the paint has become scratched or chipped in the metal, use colored touch up paint or even clear nail polish on the scratch to help prevent rust. If rust has already started, carefully clean the rust off with a small wire brush or emery cloth, and coat the scratch with touch up paint.

HARDWARE

Most of the hardware on the RCR model is standard and can be found in your local hardware store. Below is a table of common hardware used on the ONYX RCR along with the torque specifications for each bolt. Use a calibrated torque wrench to tighten bolts to their respective specifications and no more. For bolts that require threadlocker, we recommend red Loctite 272. You can always request hardware from us via phone or email: (805) 370-1991 or info@onyxmotorbikes.com

This table below is an at-a-glance guide for the frequently used hardware on the bike. This should give you an idea of what tools to keep on hand for longer rides.

COMMON HARDWARE

HARDWARE	TOOL	TORQUE
M6	5mm Hex	14nm
M8	6mm Hex	30 nm
FRONT AXLE NUT	19mm Socket	45nm
REAR AXLE NUT	24mm Socket	80nm

DETAILED HARDWARE

BRAKES

PART	HARDWARE	TOOL	TORQUE
Front Caliper Mounting Plate (top, fork-side)	M8 x 35mm	13mm Socket	30nm
Front Caliper Mounting Plate (bottom, fork-side)	M8 x 40mm	13mm Socket	30nm
Front Caliper Mounting Plate (caliper-side)	M8 x 35mm	13mm Socket	30nm
Rear Brake Caliper Mount Screws	M6	5mm Hex	12nm
Rear Brake Caliper Adjuster Screws	M6	5mm Hex	12nm
Rear Brake Caliper Cable Stay Screw	M6	5mm Hex	12nm

WHEELS

PART	HARDWARE	TOOL	TORQUE
Front Axle Nuts	M12 Hex Nut	19mm Socket / Wrench	45nm
Rear Axle Nut	M16 Hex Nut	24mm Socket	80nm
Rear Axle Lock Nut	M16 Hex Lock Nut	24mm Socket	30nm
Rear Axle Stay Screw	M6-1 x 16mm + M6 Hex Nut	10mm + 5mm Hex	12nm

SUSPENSION

PART	HARDWARE	TOOL	TORQUE
Triple Tree Fork Clamp	M8 x 45mm	6mm Hex	30nm
Rear Swingarm Mounting Hardware	M8 x 25mm + M8 Nyloc Hex Nut	13mm Socket + 6mm Hex	30nm
Upper Shock Nut	M8 Acorn Hex Nut	13mm Socket	30nm
Lower Shock Nut	M8 + M8 Hex Nut	13mm Socket	30nm

PEDALS

PART	HARDWARE	TOOL	TORQUE
Pedal Shaft Cotter Pin Nut	M8 x 45mm	6mm Hex	30nm
Pedal Shaft	M8 x 25mm + M8 Nyloc Hex Nut	13mm Socket + 6mm Hex	30nm

STEERING & HANDLEBARS

PART	HARDWARE	TOOL	TORQUE
Steering Stem Lock Nut	M20 Hex Nut	30mm Socket	22nm
Steering Stem Top Nut	M20 Hex Cap Nut	30mm Socket	40nm
Handlebar Clamp Screws	M6 x 45mm + M6 Nyloc Nut	10mm Socket + 5mm Hex	12nm
Speedometer Display Mount	M4 Hex Nut	7mm Socket	Handtight
Speedometer Display Bracket Clamp	M6 x 12mm + M6 Hex Nut	10mm Socket + 5mm Hex	12Nm
Left Control Internal Handlebar Screws	M5 x 10mm	#2 Philips Screwdriver	7Nm
Left Control External Casing Screws	M5 x 22mm	#2 Philips Screwdriver	7nm
Right Control, Front Brake Banjo Nut	M8 Hex Nut	13mm Socket	12nm
Right Control, Front Brake Mount Clamp Screw	M5 Hex Nut	8mm Socket	Handtight
Right Control, Throttle/Kill Switch Clamp Screw	M4 x 20mm	3mm Hex	Handtight
Headlight Ears Clamp Bolt	M6-1 x 25mm	10mm Socket	Handtight
Headlight Side Mount Bolts	M6-1 x 15mm	10mm Socket	Handtight

BODY PANELS & ACCESSORIES

PART	HARDWARE	TOOL	TORQUE
Body Panels	M5-0.8 x 6mm	4mm Hex Key	Handtight
Seat Mounts	M6 Hex Nut	10mm Socket	Handtight
Front Fender Mounts	M6 x 25mm	10mm Socket	12nm
Rear Fender Mounts	M6 x 16mm + M6 Hex Nut	10mm Socket	12nm
Rear Rack Shock Mounts	M8 Acorn Hex Nut	13mm Socket	30nm
Rear Rack Frame Mounts	M6 x 16mm	10mm Socket	12nm

ELECTRONICS

PART	HARDWARE	TOOL	TORQUE
12VDC Power Converter	M6 x 8mm	5mm Hex	Handtight (7nm)
72V/300A Speed Controller	M6 x 8mm	5mm Hex	12nm
Phase Wire Terminal Block Mounting Screws	M5 x 30mm + M5 Nyloc Nut	4mm Hex + 8mm Socket	Hand tight
Phase Wire Terminal Block Top Cover Screws	M4 x 25mm	#2 Philips Screwdriver	Hand tight
Phase Wire Terminal Block Post Nut	M6 Hex Nut	10mm Socket	Hand tight
Battery Wire Terminal Block Mounting Screw	M6 x 20mm + M6 Hex Nut	10mm Socket + 5mm Hex	12nm
Battery Wire Terminal Block Post Nut	3/8" Hex Nut	14mm	12nm
Left & Right Side Body Panels	M5 x 6mm	4mm	Handtight