



HELION

ROCK RIDER

Owner's Manual &
Technical Information



HLNA0768

Legal

Entire contents ©2016 Helion RC

Before using your product, review all documentation and inspect the product carefully. If for some reason you decide it is not what you wanted, then do not continue with unpacking, setup or operation of your product. Your local hobby dealer cannot accept a product for return or exchange after partaking in actions that produce wear and tear.

Read, understand and follow all instructions and accompanying material carefully before operating or assembling your product to prevent serious damage. Failure to complete these tasks properly or intentional aversion to the content will be considered abuse and/or neglect.

Product specifications are subject to change without notice. Due to ongoing development, the actual product may vary from images shown.

This product contains chemicals known to the State of California to cause cancer, birth defects and other reproductive harm.

This product is not a toy! (14+) Recommended for ages 14 and up. Adult supervision required for ages under 18 years old. Contains small parts, keep out of reach of children 3 years of age and younger.

Important Information

Throughout this manual you will see different notes, cautions and warnings to help alert you to important information about the section you are reading. Please see below for the descriptions and what to look for to identify each type.



WARNING: THIS INFORMATION IS IMPERATIVE FOR YOU TO UNDERSTAND AND FOLLOW AS LACK OF COMPLIANCE WITH THE CONTENTS OF THE WARNING COULD CAUSE PERSONAL INJURY OR PROPERTY DAMAGE.



CAUTION: THIS INFORMATION IS IMPORTANT FOR YOU TO UNDERSTAND AND FOLLOW AS LACK OF COMPLIANCE WITH THE CONTENTS OF THE CAUTION COULD CAUSE DAMAGE TO YOUR PRODUCT THAT IS NOT COVERED UNDER WARRANTY.

Note/Tip: This information is important for you to keep in mind, most commonly used to recall previously given information or to direct you to, or provide you with, additional information on a subject.

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Notice

Your product is calibrated and tested at the factory prior to final packaging, some issues may arise during shipping and handling that can be easily resolved at home. For other adjustments it should be known that hobby grade radio controlled products such as this differ from toy grade in that they are intended to be user-serviceable products where the user can program, disassemble and maintain their own product. We try our best to ensure the information you need to introduce you to this form of product ownership is available to you through this manual. Please see the troubleshooting guide at the back of this manual for assistance in resolving issues, either as they are experienced out of the box or as found after regular use.

Note: Assuming your product functions properly as intended out of the box, the best thing you can do is pay close attention to how it feels, sounds and functions. This will help you identify problems later since you will have a reference of how the product is supposed to perform.

If you require further information or assistance resolving a possible issue, please consult the warranty card included with your product.

Precautions

Although great for first time users, Helion RC products are indeed advanced radio controlled vehicles with sensitive electronics and moving parts capable of causing injury if used improperly. Always use caution and common sense as failure to operate your product in a safe and responsible manner can result in damage to the product or other properties. Therefore this product is not intended for use or maintenance by children without direct adult supervision. Helion RC and your hobby dealer shall not be liable for any loss or damages, whether direct, indirect, special, incidental, or consequential, arising from the use, misuse, or abuse of this product or any product required to operate or maintain it.



WARNING: ALWAYS KEEP LOOSE CLOTHING, HAIR, TOOLS OR OTHER MOVABLE OBJECTS AWAY FROM MOVING PARTS OF YOUR VEHICLE DURING SETUP AND CONFIGURATION. SPINNING TIRES CAN EXPAND AND MAKE CONTACT WITH SMALL TOOLS, OR HARDWARE AND SEND THEM FLYING AT HIGH SPEEDS RISKING INJURY TO YOU OR OTHERS AROUND YOU.

- Your model can cause serious damage or injury so please use caution and courtesy when operating your model.
- As a safety precaution, perform all transmitter and receiver adjustments with all parts of the vehicle off the ground. This ensures the complete control over the vehicle at all times during adjustments.
- Do not operate your model near traffic, bystanders, parking areas, or any other area that could result in injury to people or damage to property.
- If at any time during the operation of your model you observe any erratic or abnormal behavior of your model, immediately stop operation and bring the mode to a safe stop in a safe location to diagnose the problem.
- Always power on your transmitter before turning your vehicle on.

- If you have little or no experience operating R/C models, we strongly recommend you seek the assistance of your local hobby dealer.
- Do not expose the transmitter to water or excessive moisture.
- Do not operate radio controlled products in a lightning or thunder storm.
- Ensure your batteries (both Tx and vehicle) are charged before each use.
- Check all servos and electrical connections prior to each use.
- Use caution when handling your vehicle after use as electronics may get HOT and could cause a burn if handled carelessly.
- Always allow the motor in your vehicle to cool completely before using it again.

Charging

Although this information should be included with your batteries and charger, we have included it here again to ensure you have seen it and are familiar with the most common things to be aware of with regards to charging our batteries.

- Never leave the battery unattended while charging and never operate the charger without adult supervision.
- Never charge a warm battery, always allow the battery to cool to room temperature before charging.
- Never drop the charger or battery and do not attempt to charge a damaged battery.
- Inspect the battery and charger before use. Never use a battery or charger if the wire or connector has been damaged or if the battery has experienced a short.
- Incorrect use of the battery, connections, or charging equipment can cause personal injury or property damage.
- Never allow the battery or charger to come into contact with moisture at any time.
- Stop charging immediately if the battery or charger becomes hot or changes form during use.
- The battery pack must have a compatible HCT plug, or use an adapter that includes high current connectors.

R/C models are an extremely fun hobby, but safety should never be ignored or taken lightly. Always take caution when operating your model as damage to property and injury can result from careless operation. Please consult your local hobby dealer with any questions or troubleshooting issues. And, of course, don't forget to have fun, you deserve it after reading through all of these safety tips!

Package Contents

- 1 x Rock Rider 4WD rock racing truck
- 1 x IKONNIK SR2+ 2.4GHz 2-channel sport transmitter
- 1 x 1800mAh 6-cell 7.2V NiMH battery
- 1 x Mains charger for 7.2V NiMH battery
- 1 x Quick-start guide

Needed to Complete

- 8 x AA-size batteries for transmitter

Introduction

Helion Rock Rider + unrelenting terrain = ultimate challenge + massive fun. It's what physicists, chemists and RC dudes call a perfectly balanced equation – a balance you'll only fully appreciate when you get behind the wheel of the Rock Rider. This is a car that takes the skillful yet pedestrian art of rock crawling and gives it beans. And plenty of 'em!

Pop the clips, lift the body, and beneath you'll find a purpose designed 4WD powertrain and chassis that's been thoroughly tested in the full range of off-road conditions and given a qualified seal of approval by Helion test drivers. Here, a mix of high-strength composites, a rugged high-performance 540 motor, all-weather ESC, plus a proven transmission and suspension system, combine to offer traction, speed, and stability when you most need it. The fact is, we've given the Rock Rider an impressive arsenal of carefully considered mechanical weaponry, starting with a solid, 6-link rear axle that offers almost limitless tuning options. Meanwhile, twin heavy-duty differentials lie between corner-to-corner aluminum threaded shocks that provide easy pre-load adjustment, smooth movement, and consistent handling. Topped with an independent front suspension system and high-grip all-weather tires for ultimate off-road traction, there's much to admire. With hex bolts throughout, a fully protected spur gear housing and a shock-absorbing sprung servo saver, we've made low maintenance a priority, too.

A take-anywhere trail-blazer, mud bogger, hill climber and dust blaster, the Rock Rider is the perfect all-terrain all-rounder for back yard or back country driving.

Features

- Full ball bearings throughout
- High grip, long wear tires with realistic off-road style wheels
- Metal dogbone style drive shafts

- Aluminum threaded shocks
- High Performance 21-Turn 550 size motor
- Water resistant receiver box with an all-weather servo and ESC
- 6-link rear axle
- Transmission cover for belt and braces spur gear protection
- Semi-scale Rock Racer looks

Getting Started

1. Remove the components from the box and ensure the contents are correct:

- 1 x Rock Rider vehicle
- 1 x 1800mAh 6-cell NiMH battery pack
- 1 x IKONNIK SR2+ 2.4GHz 2-channel transmitter
- 1 x 6-cell wall charger
- 1 x Quick-Start Guide



2. Remove the four body clips from the car and lift the body clear.



3. Locate the battery cradle in the centre of the car, release the hook and loop tape and withdraw the battery pack.



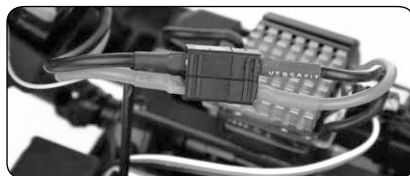
4. Plug the charger into a wall socket, connect the battery to the charger and place the battery on a non-flammable surface. Switch the wall socket ON noting that a fully discharged battery will be topped up in approximately 3 hours. Periodically monitor the temperature of the battery when charging and disconnect if it exceeds 120° F (49° C). Unplug the battery when charged.



5. Re-insert the fully charged battery pack into the cradle and tightly secure it with the hook and loop straps.



6. Ensure the radio switch is in the off position, then connect the battery to the ESC.



7. Remove the battery cover from the underside of the SR2+ transmitter, insert eight AA alkaline cells - ensuring correct polarity - then replace the battery cover.

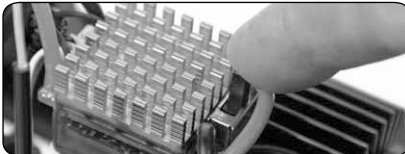


8. Switch ON your IKONNIK SR2+ transmitter and ensure the two LED lights are lit solid red and green and that no alarms are audible. Ensure that the ST.D/R (steering dual rate) dial is turned fully anticlockwise and that the ST.TRIM

(steering trim) and TH.TRIM (throttle trim) dials are centered at 0.



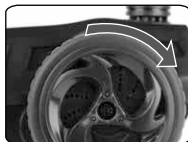
9. Locate the switch and turn ON your Rock Rider. In the unlikely event that the car does not operate, see the PAIRING / BINDING instructions detailed on page 12.



10. Replace the body and secure it with the four body clips.



11. Check the operation of the throttle and steering. Pulling the throttle trigger back will drive the car forward, pushing the trigger forward once will apply the brakes while pushing the trigger forward twice will drive the car in reverse. Turning the wheel to the right will cause the car to turn right and vice versa.



12. Use the throttle and steering trim dials to fine-tune the controls of your car. In doing so, ensure that your Rock Rider tracks in a straight line. Also that it doesn't creep forwards or backwards at zero throttle.



The IKONNIK SR2+ Radio System

Offering a class-leading feature set, the advanced IKONNIK SR2+ 2.4GHz 2-channel sport radio offers style, comfort and a solid, interference free, performance that you'll truly appreciate. Functions include servo reversing on both channels, dual rates on steering, throttle and steering trim, a low voltage warning, fail-safe option and ultra-bright LED status lights.

Understanding Your Transmitter

Features

1. Steering wheel: controls left/right motion (designed to be operated with right hand)
2. Throttle trigger: controls forward/reverse motion (designed to be operated with left index finger)
3. Handle: For holding the transmitter (designed to be held with left hand)
4. Antenna: Transmits signal to the receiver located in the vehicle
5. Control panel cover: Covers control panel housing radio setting controls
6. ON/OFF Switch: Turns the power ON/OFF for the transmitter
7. Indicator lights: Red Power LED and Green Status LED
 - a. Solid Green: Adequate battery voltage for proper operation
 - b. Flashing Green: Low battery voltage warning, batteries should be replaced/recharged before continued use
8. Pair/Bind button: Used for Pairing/binding the transmitter to the receiver
9. Steering Trim: Controls the "hands-off" left/right direction of the vehicle
10. Throttle Trim: Adjusts the motor speed to STOP when trigger is in "hands-off" (neutral) position
11. Steering Dual Rate (D/R): Adjust the total throw of the steering travel
12. Channel 1 and Channel 2 servo reverse switches
13. Battery compartment: houses [8] AA batteries for powering the transmitter
14. Bottom cover: Closes the battery compartment, containing the AA batteries



Batteries

WARNING: Do not attempt to charge non-rechargeable batteries

- Remove the lower door from the transmitter to access the battery compartment
- Install [8] AA type batteries into the compartment
 - Pay close attention to battery polarity (+/-) indicators during installation
- Never mix brands or old/new batteries
- Always remove dead batteries from the transmitter
- If using rechargeable batteries, be sure to follow the manufacturer's care and use instructions
- Rechargeable batteries must be removed from transmitter before charging
- Always be sure to be responsible and protect the environment when disposing batteries. Your local hobby dealer provides a FREE battery disposal service

Standard operation

- Turning the transmitter wheel to the left from center makes the wheels on the vehicle turn LEFT
- Turning the transmitter wheel to the right from center makes the wheels on the vehicle turn RIGHT
- Pulling the transmitter trigger back towards the handle will make the vehicle accelerate forward
- Pushing the transmitter trigger forward away from the handle will have the following affects depending on the location of the trigger prior to pushing it forward
 - From a stop at neutral: the vehicle will travel in reverse
 - From pulled back: the vehicle will apply brakes to slow the speed
 - A second push forward of the trigger will apply reverse throttle

WARNING: Causing the vehicle to make quick transitions from forward/reverse motion to the opposite direction using the throttle control can cause damage to your vehicle and will void the warranty

Using your transmitter for the first time:

1. Turn the transmitter ON and ensure that the RED and GREEN LEDs are lit solid, indicating the batteries are supplying adequate voltage for proper operation

2. Setting the throttle trim

- If the wheels spin in a forward direction when the trigger is in the neutral position, turn down the, Th.Trim until the motor stops
- If the wheels spin in a reverse direction when the trigger is in the neutral position, turn up the TH.TRIM until the motor stops
- There will be a “dead band” area where the trim can be adjusted a slight amount in either direction and the wheels will not begin to move. It is ideal to have the trim set in the middle of this “dead band”

3. Setting the steering trim

- With your vehicle and transmitter turned on (and properly responding to transmitter inputs), set the vehicle down on the ground and slowly accelerate in a direction directly away from you. If the vehicle veers slightly either to the left or right, stop the vehicle and adjust the ST.TRIM dial in the opposite direction of the veer in small increments
- Reset the vehicle and re-test; adjust the trim as needed until the vehicle travels in a straight line while the transmitter wheel remains at center location (“hands-off”)

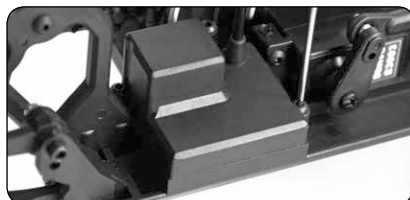
Pairing (Binding) the radio system

The process of allowing communication to occur between a 2.4GHz transmitter and receiver is called “pairing” (also referred to as “matching” or “binding”). The radio system included with your product comes pre-configured and paired from the factory. In the event that your system loses this pairing, or one of the components has been replaced, you will need to re-pair the transmitter and receiver. Follow these steps for re-pairing your radio system

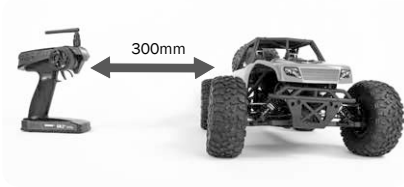
1. Remove the body, install a fully charged battery into the car, then connect it to the ESC. Ensure that the car is powered OFF.



2. Locate the receiver box and, using a 2mm hex driver, remove the protective cover.



3. Place your Rock Rider and SR2+ transmitter in close proximity but not less than 12" (300mm) apart.



4. Press and hold the PAIR / BIND button on the transmitter then switch the transmitter ON. The red light will glow solid and the green light will flash. Release the PAIR / BIND button.



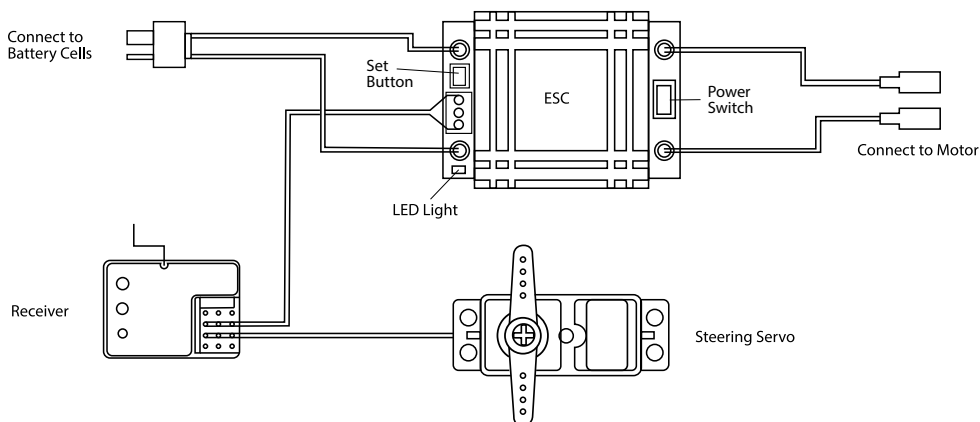
5. Plug the PAIR / BIND lead into the BIND/CH3 socket of the receiver then power ON the receiver. The receiver's LED will glow solid red.



6. Switch OFF the receiver followed by the transmitter, then remove the PAIR / BIND lead. Reboot the system by switching ON the transmitter then the receiver. Your Rock Rider will now be bound and you will have full control of throttle and steering. Replace the cover on the receiver box.



Wiring Schematic



ESC Programming and Calibration

Specification

Input voltage: 5 - 6 cell NiMH / NiCd; 2S LiPo

Current: 40A

BEC Output: 5.6V / 2A

Size: 30 x 28 x 22mm

Weight: 38g

Product Features

1. Low voltage protection
2. Overheat protection
3. Crawler Mode
4. Beginner Mode

Before configuring / programming your ESC use the following guide to check the LVC / Overheat Protection settings and the Crawler / Practice Mode settings:

Check the settings for LVC / Overheat Protection

1. Power ON the SR2+ transmitter then power ON the ESC and listen to the beeps / notes that are emitted.
2. If LVC / Overheat Protection is already set to OFF (unprotected) the ESC

will beep once then play three notes.

3. If LVC / Overheat Protection is already set to ON (protected) the ESC will beep twice then play three notes.
4. Power OFF the ESC then power OFF the SR2+ transmitter.

Check the settings for Crawler Mode and Practice Mode

1. Power ON the SR2+ transmitter then power ON the ESC and listen to the beeps / notes that are emitted and pay attention to the LED light.
2. If Practice Mode is already set to ON the ESC will beep twice, play three notes and the LED will flash slowly.
3. If Crawler Mode is already set to ON the ESC will beep twice, play three notes and the LED will glow solid.
4. Power OFF the ESC then power OFF the SR2+ transmitter

Having established the presets use the following guide to make the changes you require:

Resetting the LVC / Overheat Protection

When changing settings note that each time you press the SET button to make an alteration the ESC will switch between the two, i.e. LVC / Overheat Protection ON to LVC / Overheat Protection OFF, then back to ON again.

1. Power ON the SR2+ transmitter then press the ESC SET button and power ON the ESC. Listen to the beeps / notes that are emitted.
2. If the ESC beeps once LVC / Overheat Protection will be set to OFF (unprotected). You can now release the SET button.
3. If the ESC beeps twice LVC / Overheat Protected will be set to ON (protected). You can now release the SET button.

Resetting Crawler Mode and Practice Mode

1. Power ON the SR2+ transmitter then power ON the ESC. Press and hold the ESC SET button for 2 seconds.
2. The ESC will beep once before releasing the button to confirm that Practice Mode is active.
3. The ESC will beep twice before releasing the button to confirm that Crawler Mode is active.

General Care

- Always use clean, dry cloth or soft bristle brush to clean your equipment.
- Never use chemical cleansers to avoid damage to the sensitive electronics and plastics.

Maintenance

We want you to enjoy your product to its fullest potential. For this to happen it is important to keep your product clean and properly maintained. Lack of cleaning and maintenance can cause component failure. For best and continued performance from your product it is recommended to briefly inspect your product for damage every few uses. Typically, a good time to do this is when changing the battery in your vehicle or while it is charging. If a problem is discovered, stop use immediately and perform repairs or seek assistance. Continued use of failed components can cause more unnecessary damage to your product.

ESC and Servo

The ESC and servo included in your vehicle are rated for all weather use. It is recommended that you avoid submersing the vehicle however running in puddles, rain and snow should not be damaging. Always remove excess water/snow from your vehicle after running to help prevent corrosion. Using an air compressor is effective but please use eye protection.

Transmitter

Although the receiver included with your radio system is rated for all weather use, the transmitter is not. The transmitter should not be used in the rain or other wet environment otherwise you risk damage to the sensitive electronics.

- Clean dirt and debris off of your transmitter regularly to avoid the consequences of these getting into the sensitive electronics where they can cause short circuits and/or restrict motion of the internal steering and throttle mechanisms.
- Ensure the antenna is kept in proper working order. The transmitter is not safe to use with a broken or missing antenna.

Receiver

Although the receiver included with your radio system is rated for all weather use, it is recommended that you avoid submersion of the receiver, however running in puddles, rain, and snow is okay.

To achieve full operating range with your radio system, it is critical that the receiver antenna be installed properly and undamaged.

- Inspect any exposed antenna for cuts or abrasions.
- Ensure there are no kinks in the antenna or antenna tube.
- Never fold the end of the antenna over the tube, this will reduce the range and damage the antenna.
- Ensure the antenna is not being pinched by the protective top cover of the receiver box

Gears

Periodically remove the gear cover to clearly inspect the gears and ensure there is no debris in the gear compartment.

Proper gear mesh setting is crucial for proper operation and life of gears in your product. It is important to have the pinion gear (attached to motor) as close to the spur gear (attached to drive shaft) as possible yet while providing a minimal amount of backlash. Backlash is the rotation one gear has to make before contacting the other. Having the gear mesh set too tight will cause excess load on the electrical components and may cause premature failure. Having gear mesh set too loose will cause excess wear and possible skipping of teeth during operation thus causing excess wear and premature failure.

Checking the gear mesh and setting proper backlash.

1. Remove the spur gear cover.
2. Check how much movement is allowed (backlash) of the spur gear before the pinion gear moves (this is mostly feel, not visual). Check this movement in multiple places by rotating the spur gear approximately 1/6 rotation and rechecking.
3. If the spur gear is allowed to move more than a very small amount, or if there is no backlash, the gear mesh must be adjusted. If there is a lot of movement, it is recommended to attempt to tighten the mesh. Attempted adjustment should only improve the situation; if the mesh was correct to begin with, you will know what that feels like, and if it wasn't correct, it will be when you are done after following these procedures.

Setting the Gear Mesh

1. Loosen the clamping screw securing the motor plate's rotation in the motor mount, only enough to allow the motor to rotate in the mount. Check and ensure there is no debris in the gears affecting the mesh.
2. Rotate the top of the motor away from the center of the chassis, insert a strip of notebook paper between the pinion and spur gear, then rotate the motor plate back until there is no backlash. You will have to push/twist relatively hard to ensure the paper is pressed all the way into the teeth.
3. Hold the motor snugly in position while retightening the screw. Only tighten the screw until the motor won't move. There should be a slight gap between the coils of the spring.
4. Rotate the spur gear (turn the tires) to feed the paper out of the mesh, re-check the gear mesh and adjust again if necessary.
5. Re-install the spur gear cover when the mesh is properly set.



WARNING: NEVER OPERATE YOUR VEHICLE WITH THE SPUR GEAR COVER REMOVED. SEVERE INJURY, DAMAGE TO ELECTRICAL COMPONENTS, AND EXCESSIVE WEAR AND TEAR ON DRIVETRAIN MAY RESULT.

Shocks

Periodically inspect the shocks for smooth motion, leaking oil and dirt residue build up around the shaft or caps. Do not allow dirt to build up around the shock shaft and bottom of the shock. Doing so will reduce the life of the shock and cause a shock to leak oil. Be sure to clean the shocks regularly with a clean and dry soft bristle brush and/or rag.



CAUTION: NEVER USE SPRAY CLEANERS TO CLEAN YOUR SHOCKS, DOING SO CAN CAUSE DAMAGE TO THE SEALS, CAUSING THEM TO LEAK MORE AND REDUCE THE LIEF AND PERFORMANCE OF YOUR SHOCKS.

Signs to look out for in determining if your shock needs to be maintained or rebuilt.

- Oil around the shaft means the oil leaked from inside and needs to be replaced.
- Persistent oil around the shock shaft or lower portion of the shock typically points to damaged O-rings which will need replacing. See your local hobby dealer for replacement parts.

Refilling your shocks:

1. Remove shock from vehicle, remove spring and top cap. Remove the bleed screw from the cap.
2. With shock shaft extended, add oil to top of body (use only 100% silicone fluid) and reinstall the shock cap. Be sure the o-ring stays "seated" and does not squeeze out.
3. Slowly compress the shock shaft 100% of travel using a towel or paper napkin to clean up overflowed oil, then reinstall the bleed screw. Do not over-tighten.
4. Check for free motion of shock. If the shock feels like it gets stiffer at the end of compression, there is too much oil or air. Compress the shaft and remove the bleed screw slowly to allow excess air/oil to come out, then reinstall the screw.
5. It is normal for the shock to rebound (with the spring removed) after full compression and release.

Replacing the O-rings:

- Disassemble shock and remove shock end and shaft from the body.
- Carefully remove lower cap by unscrewing from the shock body.
- Remove the O-ring and spacer and replace with genuine replacement parts.
- Re-assemble the shock following the refilling instructions above.

Tires and Wheels

Inspect the tires to ensure they have adequate tread and they are properly glued to the wheels. The tires on your vehicle come pre-glued from the factory; however after running your vehicle it is possible for the glue to come loose in some areas.

- To reattach the tire to the wheel, use hobby grade Cyanoacrylate (CA) glue and apply small amounts (one drop at a time) between the tire and wheel. Allow the glue to fully dry before operating your vehicle.
- When reinstalling tires, use caution when tightening the nuts that secure the wheels to the vehicle. Ensure the wheels rotate freely but don't wobble excessively. Over tightening the wheels may cause excess strain on the electrical and mechanical components of your vehicle. Operating your vehicle under these conditions will void your warranty.
- Taking the above into consideration, leaving wheels too loose can cause them to strip. It is recommended to check that the wheel nuts are tight every time you run your vehicle.
- Consequently running your vehicle will cause the tires to eventually wear out. Be sure to obtain and use genuine replacement parts from your local hobby dealer when necessary.

General Wear and Tear

Using your vehicle will cause general wear and tear which is not covered under warranty yet may necessitate replacement of components. Continued operation of your product with worn components may cause continued damage to other components.

Be sure to regularly inspect your vehicle and accessories for excess wear and damaged components.

Storage and Disposal

Storage

- Always store all equipment in a cool dry place when not in use.
- Always disconnect the batteries before storage.
- Never store the transmitter or receiver in direct sunlight for extended periods of time.
- Never store the transmitter with batteries installed for extended periods of time. Doing so may allow the batteries to leak and cause permanent damage to the transmitter.
- Always disconnect electrical connections after use in wet environments. Allowing the contacts to dry will reduce corrosion.

Disposal

Your product is considered electronic waste and should never be discarded in standard garbage containers. Please visit your local hobby dealer (and some home improvement centers) and use the FREE battery disposal center for proper disposal/recycling. Consult your local city hall for information on recycling other electronic waste.

Troubleshooting Guide

Before contacting customer support, recall that this is a hobby grade product intended to be user serviceable. Please take the time to fully inspect your product for any obvious causes to the issues you are experiencing. Below are some of the most common issues experienced. Many control issues can be resolved by simply re-pairing the transmitter and receiver, always start here.

- Dead transmitter or vehicle batteries will cause the product to malfunction and not work properly. As with TV remote controls in your home, if the batteries are dead, they don't work. Start power related troubleshooting with fresh batteries in the transmitter and recharged batteries in the vehicle.
- Power connections between the Battery, ESC and receiver are critical to the performance of the product. Running in various debris may cause foreign objects to snag on wires, causing connections to come loose. It is a good idea to unplug and reconnect motor and battery connections when beginning power related troubleshooting. Also inspect for any damage caused to the antenna.
- Drivetrain issues can mask themselves as power related. Fully inspect the wheels, driveshafts, and motor for foreign objects that may have become tangled or wrapped around the spinning parts of the drivetrain. Small objects like fishing line for example, can wrap around a drive shaft, overheat and melt due to the friction and cause the entire drivetrain to lock up. Although a big problem, it can be difficult to see when inspecting. Always remove the wheels from your vehicle when troubleshooting drivetrain related issues.
- Inspect around the steering components to ensure no debris is preventing normal steering operation.
- Steering can become sluggish once components get dirty or "take a set" after running. Inspect the rod ends of the turnbuckles to ensure they are properly aligned and not binding. You should be able to grab a turnbuckle with your fingers and rotate it easily.
- Healthy gears are crucial to a properly functioning vehicle. If you hear your vehicle making very loud noises, you should immediately stop and check the gears for foreign debris. Even a small pebble can get lodged into the teeth of the pinion gear, which would practically destroy the spur gear in a very short period of time.

Troubleshooting Tables

| Problem / Symptom | Possible Cause | Possible Solution |
|--|--|---|
| Vehicle will not turn on | Battery voltage too low | Charge battery |
| | Battery not connected | Re/connect battery |
| | Batteries dead in car or transmitter | Replace batteries |
| | Damaged battery | Replace battery |
| Transmitter will not turn on | Battery voltage too low | Charge or change batteries |
| | Battery/ies installed improperly | Correct installation |
| Short radio range (Vehicle stops responding to transmitter at short distanced) | Damaged or improperly installed receiver and antenna | Check receiver antenna for damage. Ensure antenna is properly installed in tube and mount, extending perpendicular from the ground. Ensure all connections are secure |
| | Receiver is malfunctioning | Replace Receiver |
| | Battery voltage too low | Replace or recharge batteries in transmitter and vehicle |
| Steering not responding as expected | Trim not set properly | Adjust steering trim |
| | Screws too tight on steering parts | Adjust screws to allow for free motion |
| | Fasteners have become loose | Check and tighten all fasteners to as new condition, be careful to not over tighten |
| Vehicle not responding as expected to transmitter | Trims not set properly | Adjust throttle and/or steering trim |
| | Radio system lost bind | Re-bind radio system |
| | Bad electrical connections | Check motor and battery plugs to ensure they are fully connected |
| Wheels twitch while vehicle is idle (controls at neutral) | Transmitter too close to receiver (<1m) | Increase distance between the units |
| | Receiver wire damaged | Inspect antenna for damage and replace if necessary |
| | Receiver antenna not installed in vertical position | Install in mount with care to not damage antenna wire |

| Problem / Symptom | Possible Cause | Possible Solution |
|--|--|---|
| Steering will not trim straight, always has right bias | Binding in steering system | Inspect and correct any binding components or loosen screws if over tight |
| | Side wheels too tight | Check and adjust wheel nuts on the right side of the vehicle to ensure the wheels are not too tight |
| Vehicle top speed and acceleration is slow | Battery voltage too low | Charge battery |
| | Drivetrain has too much friction | Check for debris/excessive wear on gears, inspect bearings |
| | Gear mesh too tight | Loosen gear mesh |
| | Pinion gear is loose | Check and tighten set screw on motor pinion |
| | Differential broken | Check differential and ensure the outdrives are secured and gears intact. You should not be able to pull them out |
| | Drive pin missing | Check for missing wheel pins (behind wheel hexes), or dogbone pins |
| Wheels not spinning freely | Wheels too tight | Check and adjust wheel nuts |
| | Differentials stripped | Check differentials and replace/repair if necessary |
| Battery charge stops lasting as long as it used to | The battery has become old | Replace battery |
| | Battery not charged completely due to insufficient charge time | Charge for longer period of time or try a peak detection charger. We recommend the Radient Primal (RDNA0001) |
| | Gear mesh too tight | Check and reset gear mesh setting |
| | Charger, battery, wires, or plug has malfunctioned | Check all connections and wires for damage or excessive wear and replace if necessary |
| Shocks and/or arms covered in oil | Shock O-ring seals are worn | Replace O-rings and refill shock with oil |
| | Top shock cap too loose or over tightened | Check tightness (finger tight), refill shock oil |
| | Bottom shock cap dislodged | Check installation, refill shock oil |
| Spur gears stripping | Gear mesh too loose | Tighten gear mesh for proper backlash |
| | Fasteners loose or missing | Check for loose fasteners on spur gear mount and ensure all E-clips are in place |

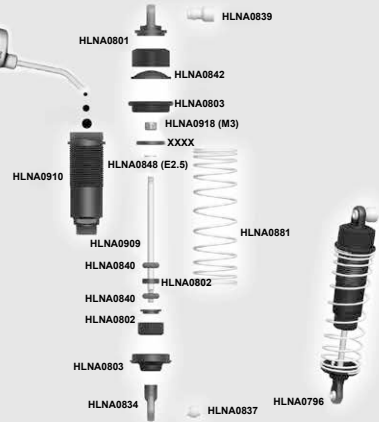
Exploded Views

Front Shocks



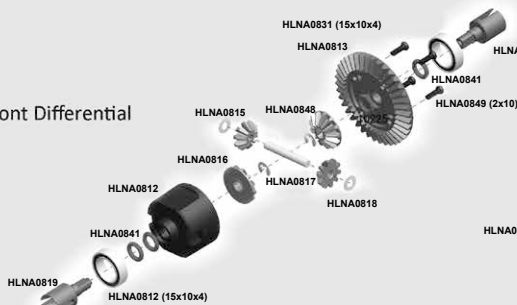
(Dia. 1-1)

Rear Shocks



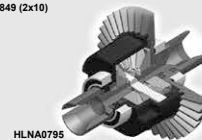
(Dia. 1-2)

Front Differential



(Dia. 2-3)

Diff. Box



Front Gearbox Assembly



Diff Box





Spare Parts List

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| HLNA0794 | Front Shock, Complete, 2pcs: Rock Rider |
| HLNA0795 | Differential Gearbox: Rock Rider |
| HLNA0796 | Shock Tower (Rear) Aluminum, 2pcs: Rock Rider |
| HLNA0797 | Shock Tower (Front): Rock Rider |
| HLNA0798 | Shock Springs (Front): Rock Rider |
| HLNA0799 | Shock Shaft with Piston Sets (Front): Rock Rider |
| HLNA0800 | Shock Bodies (Front): Rock Rider |
| HLNA0801 | Shock Caps (Upper): Rock Rider |
| HLNA0802 | Shock Caps (Lower): Rock Rider |
| HLNA0803 | Shock Lower Holder and Adjust Ring, 2 sets: Rock Rider |
| HLNA0804 | Lower Suspension Arm (Front) 2pcs: Rock Rider |
| HLNA0805 | Steering Knuckle Arm, 2 sets: Rock Rider |
| HLNA0806 | Uprights, 2pcs: Rock Rider |
| HLNA0807 | CVD (Front) 2pcs: Rock Rider |
| HLNA0808 | Suspension Holder (Front) 2pcs: Rock Rider |
| HLNA0809 | Bumper Set: Rock Rider |
| HLNA0810 | Gearbox Housing Set, 2pcs: Rock Rider |
| HLNA0811 | Differential Drive Gear with pin, 2 sets: Rock Rider |
| HLNA0812 | Differential Case, 2pcs: Rock Rider |
| HLNA0813 | Differential Drive Spur Gear, 2pcs: Rock Rider |
| HLNA0814 | Differential Drive Gear, 2pcs: Rock Rider |
| HLNA0815 | Differential Bevel Gear, S, 4pcs: Rock Rider |
| HLNA0816 | Differential Bevel Gear, B, 4pcs: Rock Rider |
| HLNA0817 | Differential Pin, 2pcs: Rock Rider |
| HLNA0818 | Washer, 6pcs: Rock Rider |
| HLNA0819 | Differential Drive Cup, 4pcs: Rock Rider |
| HLNA0820 | Center Coupler, 3pcs: Rock Rider |
| HLNA0821 | Body Post, 2pcs: Rock Rider |
| HLNA0822 | Servo Saver, Set: Rock Rider |
| HLNA0823 | Servo Saver, Post, 2pcs: Rock Rider |
| HLNA0824 | Steering Ackerman: Rock Rider |
| HLNA0825 | Upper Suspension Arm (Front) 2 sets: Rock Rider |
| HLNA0826 | Steering Arm, 2 sets: Rock Rider |
| HLNA0827 | Servo Linkage: Rock Rider |
| HLNA0828 | Wheel Hub, 4pcs: Rock Rider |
| HLNA0829 | Antenna Pipe, 2 sets: Rock Rider |

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| HLNA0830 | Servo Saver: Rock Rider |
| HLNA0831 | Metal Bushing 15x10x4, 6pcs: Rock Rider |
| HLNA0832 | Metal Bushing 8x5x2.5, 6pcs: Rock Rider |
| HLNA0833 | M0.6 Pinion Gear, 17T (EP), 1pc: Rock Rider |
| HLNA0834 | Shock Ball End, 6pcs: Rock Rider |
| HLNA0835 | Servo Link Ball End, 6pcs: Rock Rider |
| HLNA0836 | Steering Linkage Ball End, 6pcs: Rock Rider |
| HLNA0837 | Ball A, 6pcs: Rock Rider |
| HLNA0838 | Ball B, 6pcs: Rock Rider |
| HLNA0839 | Ball C, 6pcs: Rock Rider |
| HLNA0840 | Shock O-ring (Lower), 6pcs: Rock Rider |
| HLNA0841 | Differential O-ring Seal, 6pcs: Rock Rider |
| HLNA0842 | Shock Seal Cover, 4pcs: Rock Rider |
| HLNA0843 | Pin, 10x2, 6pcs: Rock Rider |
| HLNA0844 | Hinge Pins (long and short), 2 sets: Rock Rider |
| HLNA0845 | Metal Bushing 10x5x4, 6pcs: Rock Rider |
| HLNA0846 | Metal Bushing 8x5x2.5, 6pcs: Rock Rider |
| HLNA0847 | E Clip, 8mm, 4pcs: Rock Rider |
| HLNA0848 | E Clip, 2.5mm, 6pcs: Rock Rider |
| HLNA0849 | Round Head Self Tapping Hex Screw, 2x10, 6pcs: Rock Rider |
| HLNA0850 | Round Head Self Tapping Hex Screw, M3x6, 6pcs: Rock Rider |
| HLNA0851 | Button Head Hex Screw, M3x8, 6pcs: Rock Rider |
| HLNA0852 | Button Head Hex Screw, M3x10, 6pcs: Rock Rider |
| HLNA0853 | Button Head Hex Screw, M3x14, 6pcs: Rock Rider |
| HLNA0854 | Cap Head Hex Screw, M3x10, 6pcs: Rock Rider |
| HLNA0855 | Cap Head Hex Screw, M3x14, 6pcs: Rock Rider |
| HLNA0856 | Cap Head Hex Screw, M3x18, 6pcs: Rock Rider |
| HLNA0857 | Cap Head Hex Screw, M3x28, 6pcs: Rock Rider |
| HLNA0858 | Flat Head Hex Screw, M3x8, 6pcs: Rock Rider |
| HLNA0859 | Flat Head Hex Screw, M3x12, 6pcs: Rock Rider |
| HLNA0860 | Flat Head Hex Screw, M3x14, 6pcs: Rock Rider |
| HLNA0861 | Flat Head Hex Screw, M3x20, 6pcs: Rock Rider |
| HLNA0862 | Flat Head Hex Screw, M3x36, 6pcs: Rock Rider |
| HLNA0863 | 1/10 Charger CE: Rock Rider |
| HLNA0864 | 1/10 Charger UL: Rock Rider |
| HLNA0865 | 1/10 Charger BS: Rock Rider |
| HLNA0866 | Ring Self Tapping Screw, 3x6, 6pcs: Rock Rider |

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| HLNA0867 | Pinion Gear, 23T: Rock Rider |
| HLNA0868 | Wheel, 2pcs: Rock Rider |
| HLNA0869 | Roll Cage Top Frame: Rock Rider |
| HLNA0870 | Roll Cage Side Frame, 2pcs: Rock Rider |
| HLNA0871 | Roll Cage Front: Rock Rider |
| HLNA0872 | Roll Cage Rear Plate: Rock Rider |
| HLNA0873 | Rear Link Holder: Rock Rider |
| HLNA0874 | Rear Central CVD, rear half: Rock Rider |
| HLNA0875 | Spare Wheel Support: Rock Rider |
| HLNA0876 | Roll Cage Window Frame: Rock Rider |
| HLNA0877 | Axle Housing (Rear): Rock Rider |
| HLNA0878 | Axle Cover (Rear): Rock Rider |
| HLNA0879 | Axle Adaptor, 2pcs: Rock Rider |
| HLNA0880 | Rear Holder for Rear Shock Support Rod, 2pcs: Rock Rider |
| HLNA0881 | Shock Spring (Rear) 2pcs: Rock Rider |
| HLNA0882 | Link Set (Rear) 2pcs: Rock Rider |
| HLNA0883 | Upper Plate: Rock Rider |
| HLNA0884 | Central Drive Shaft (Front): Rock Rider |
| HLNA0885 | Rx Cover: Rock Rider |
| HLNA0886 | Drive Shaft (Rear / Short): Rock Rider |
| HLNA0887 | Drive Shaft (Rear / Long): Rock Rider |
| HLNA0888 | Holder for Rear Shock Support Rod (Front) 2pcs: Rock Rider |
| HLNA0889 | Sway Bar: Rock Rider |
| HLNA0890 | Battery Case Holder, 2pcs: Rock Rider |
| HLNA0891 | Main Frame, 2pcs: Rock Rider |
| HLNA0892 | Shock Lower Support Rod (Rear) 2pcs: Rock Rider |
| HLNA0893 | Chassis Plate: Rock Rider |
| HLNA0894 | Sway Bar Pull Rod (Upper): Rock Rider |
| HLNA0895 | Sway Bar Pull Rod (Lower): Rock Rider |
| HLNA0896 | Main Gear, 62T: Rock Rider |
| HLNA0897 | Central Drive Shaft: Rock Rider |
| HLNA0898 | Motor Mount (For 17T): Rock Rider |
| HLNA0899 | Central Transmission Cover (Upper): Rock Rider |
| HLNA0900 | Central Transmission Cover (Lower): Rock Rider |
| HLNA0901 | Motor Mount (For 23T): Rock Rider |
| HLNA0902 | Rear Central CVD, front half: Rock Rider |
| HLNA0903 | Tyre and Foam, 2 sets: Rock Rider |

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| HLNA0904 | Preamsembled Tires, 2 sets: Rock Rider |
| HLNA0905 | Driver Helmet, 2pcs: Rock Rider |
| HLNA0906 | Driver Body, Seat and Dashboard Molding, Set, with Decal: Rock Rider |
| HLNA0907 | Differential Shaft (Rear): Rock Rider |
| HLNA0908 | Ball Bearing, 11x5x4, 6pcs: Rock Rider |
| HLNA0909 | Shock Shaft and Piston (Rear) 2 sets: Rock Rider |
| HLNA0910 | Shock Body, Aluminum (Rear) 2pcs: Rock Rider |
| HLNA0911 | Pin, 2x13mm, 6pcs: Rock Rider |
| HLNA0912 | Servo Horns: Rock Rider |
| HLNA0913 | Servo Post, 2 sets: Rock Rider |
| HLNA0914 | Washer, 8x5x0.2mm, 6pcs: Rock Rider |
| HLNA0915 | Flat Head Hex Screw, M3x6, 6pcs: Rock Rider |
| HLNA0916 | Set Screw, M3x10, 6pcs: Rock Rider |
| HLNA0917 | Ring Self Tapping Screw, 2.5x3, 4pcs: Rock Rider |
| HLNA0918 | Nylon Lock Nut, M3, 6pcs: Rock Rider |
| HLNA0919 | Nylon Lock Nut, M4, 6pcs: Rock Rider |
| HLNA0920 | Set Screw, M3x3, 6pcs: Rock Rider |
| HLNA0921 | Set Screw, M4x4, 6pcs: Rock Rider |
| HLNA0922 | E Clip, 4mm, 6pcs: Rock Rider |
| HLNA0923 | Differential, 16T Gear, Washer, 6pcs: Rock Rider |
| HLNA0924 | Cap Head Hex Screw, M3x8, 6pcs: Rock Rider |
| HLNA0925 | Body Clip (Small) 6pcs: Rock Rider |
| HLNA0926 | Body Clip (Medium) 6pcs: Rock Rider |
| HLNA0927 | Cap Head Hex Screw, M3x5, 6pcs: Rock Rider |
| HLNA0928 | Flat Head Hex Screw, M3x10, 8pcs: Rock Rider |
| HLNA0929 | Flat Head Hex Screw, M3x18, 3pcs: Rock Rider |
| HLNA0930 | Button Head Hex Screw, M4x10, 6pcs: Rock Rider |
| HLNA0931 | Ring Self Tapping Screw, 3x4, 4pcs: Rock Rider |
| HLNA0932 | Round Head Self Tapping Hex Screw, 2x6, 4pcs: Rock Rider |
| HLNA0933 | Round Head Self Tapping Hex Screw, 3x15, 8pcs: Rock Rider |
| HLNA0934 | Cap Head Hex Screw, M3x10, 6pcs: Rock Rider |
| HLNA0935 | Button Head Hex Screw, M3x12, 6pcs: Rock Rider |
| HLNA0936 | Cap Head Hex Screw, M3x25, 6pcs: Rock Rider |
| HLNA0937 | Battery Case: Rock Rider |
| HLNA0938 | Velcro Tape: Rock Rider |
| HLNA1083 | Motor: Rock Rider |
| HLNA1084 | ESC: Rock Rider |

HobbyTown Warranty Information

30 DAY LIMITED WARRANTY

General Disclaimer: This item is to be free of manufacture defects at time of purchase. This warranty does not cover breakage due to abuse, improper break-in, improper setup, or improper operation.

We at Helion RC have made every effort in component design, material selection and assembly to make our products as durable as possible. Helion products are covered under warranty only against manufacturer's defect in materials, workmanship or assembly when it is new (before being used).

If you believe a defect in materials, workmanship or assembly was not apparent when the product was new and only became evident after the product was used, then please contact your local HobbyTown® to apply for warranty service. You must provide your original sales receipt verifying the proof-of purchase and date thereof.

Provided warranty conditions have been met, the components that are found to be defective, incorrectly made, or incorrectly assembled within the warranty coverage time period may be repaired or replaced under the sole discretion of HobbyTown®. In the event that your product needs a repair or a replacement part that is not covered by this warranty, your local HobbyTown® dealer can assist you with obtaining the genuine replacement parts and/or accessories to service your Helion RC product.

If you purchased your Helion RC product from a HobbyTown® internet site not affiliated with a local store, please consult that site for its service policies.

Model Engines Warranty Information

HELION RC 60 DAY WARRANTY

Model Engines (Aust.) Pty. Ltd. warrants this product to be free from defects in materials or workmanship for 60 days from the date of purchase and will repair, replace or refund the purchase should the product prove to be defective.

This warranty does not apply to any unit or system or component which has been dropped, damaged in a crash, improperly installed, assembled, handled or abused.

Model Engines (Aust.) Pty. Ltd. reserves the right to void the warranty if the product has been altered or modified, has had a foreign part added, has been misused or not used for the purpose for which it was designed, has been used near or in salt water, has been water damaged, or if the damage has been caused by the customer's use of the product.

Under no circumstances does Model Engines (Aust.) Pty. Ltd. warrant nor will the consumer be entitled to consequential or incidental damages. Model Engines (Aust.) Pty. Ltd. assumes no responsibility for any other damage, inconvenience or other claims whatsoever.

LODGING A CLAIM

To lodge a claim, present the goods to your place of purchase (retailer where you bought the product) with your original purchase receipt and a written explanation of the defect.

The place of purchase (retailer where you bought the product) will then contact Model Engines (Aust.) Pty. Ltd. for a Return Authority number and will return the item for warranty assessment to Model Engines (Aust.) Pty. Ltd.. Items delivered to Model Engines (Aust.) Pty. Ltd. for warranty assessment without a Return Authority number will be returned to sender.

The warranty process may take up to 14 business days from the date of receipt. Model Engines (Aust.) Pty. Ltd. must assess each item and if warranty applies must repair or replace the item at its discretion and return it to the place of purchase (retailer where you bought the product).

Goods presented for warranty may be replaced by refurbished goods of the same type rather than being repaired. Refurbished parts may be used to repair the goods.

If the product is proved to be defective the cost and expenses relating to the delivery of the goods to Model Engines (Aust.) Pty. Ltd., will be borne by Model Engines (Aust.) Pty. Ltd..

The benefits of this warranty are in addition to other rights and remedies of the customer under any law to which this warranty relates.

Our goods come with guarantees that cannot be excluded under the Australian consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Model Engines (Aust) Pty.Ltd
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Victoria
3174

www.modelengines.com.au

www.modelengines.com.au Ph (03) 8793 5555 warranties@modelengines.com.au

This warranty information relates to goods supplied on a wholesale basis by Model Engines (Aust.) Pty. Ltd. to Australian Retailers. The warranty complies with Australian regulatory requirements and supersedes all warranty information from the original manufacturer.

