



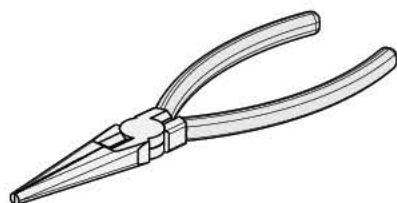
# **H10** optic

**HIGH PERFORMANCE** **TRAIL BUGGY**



**INSTRUCTION MANUAL**

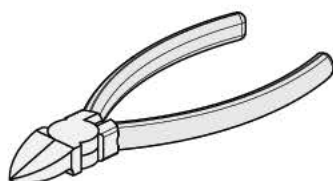
## ■ NECESSARY FOR MAINTENANCE



NEEDLE NOSE PLIERS  
(NOT INCLUDED)



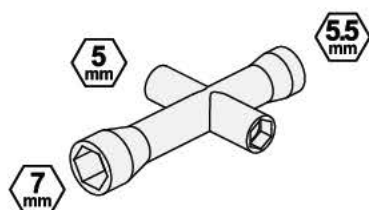
GREASE  
(NOT INCLUDED)



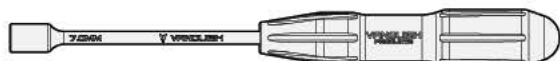
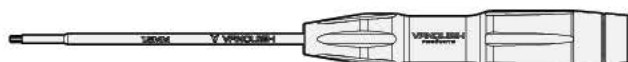
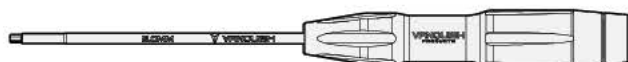
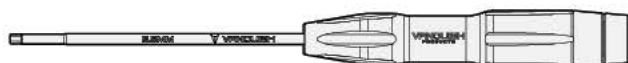
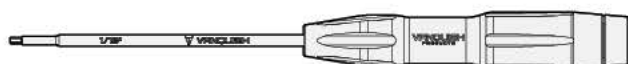
SIDE CUTTERS  
(NOT INCLUDED)



THREAD LOCK  
(NOT INCLUDED)



CROSS WRENCH  
(INCLUDED)



### SUGGESTED TOOLS (NOT INCLUDED):

VPS08410 STANDARD TOOL SET

VPS08400 METRIC TOOL SET

VPS08440 METRIC NUT DRIVER TOOL SET

## **First Step:**

Carefully read the entire instruction manual and any accompanying materials. Follow all directions in this manual to prevent serious damage to your model. This manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to setup or use, in order to operate correctly and avoid damage or serious injury. Failure to operate this product in a safe and responsible manner could result in injury or damage to the product or other property. This product is not intended for use by children without direct adult supervision. Do not use incompatible components or alter this product in any way outside of the instructions provided by Vanquish Products.

## **FCC Compliance**

This device contains a module that complies with the limits for a Class B digital device as described in part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The limits for a Class B digital device are designed to provide reasonable protection against harmful interference in residential settings. This product generates, uses and can radiate radio frequency energy, and, if not operated in accordance with the instructions, may cause harmful interference to radio communications. The user is cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

### **Canada, Industry Canada (IC)**

This Class B digital apparatus complies with Canadian ICES-003 and RSS-210. This device complies with Industry Canada license exempt RSS standard(s). Operation is subject to the following two conditions: This device may not cause interference, and This device must accept any interference, including interference that may cause undesired operation of the device.

### **Radio Frequency (RF) Exposure Statement**

This equipment complies with radio frequency exposure limits set forth by FCC and Industry Canada for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body or bystanders and must not be co-located or operating in conjunction with any other antenna or transmitter.

Operation Frequency: 2405.0 - 2478.0 Mhz

Output Power: 0.0043 Watts

## **Notice:**

All instructions, warranties and other collateral documents are subject to change at the sole discretion of Vanquish Products. For up-to-date product literature, visit [vanquishproducts.com](http://vanquishproducts.com).

Age Recommendation: Not for children under 14 years. This is not a toy.

The buyer assumes all risks associated with the use of this product. ASB Products Inc. d/b/a Vanquish Products and their retail partners, dealers, distributors, manufacturers and affiliates cannot control the use and operation of this product and as such shall not be held responsible or liable for any injury, accident or damage resulting from the use of this product.

Always fully read all instructions, manuals and warnings that come with your RC vehicle and any accessories required to operate the product.

## **Items Needed to Complete**

- Vehicle battery (6 cell NiMH or 2-3s LiPo)
  - Battery Charger (compatible with battery type chosen to be used)
-

## **Important Safety Precautions and Warnings**

**Attention:** The ESC is set to LiPo from the factory.

**Note:** When using a LiPo battery, the ESC jumper clip **MUST** be set to LiPo or damage to the battery may occur.

**Note:** If using a NiMH battery, the ESC jumper clip must be set to NiMH.

### **Fire Hazard**

Your model is able to use LiPo batteries. Charging and discharging batteries has the potential for fire, explosion, serious injury, and property damage if not performed per the instructions. Before use, read and follow all manufacturer's instructions, warnings, and precautions. In addition, Lithium Polymer (LiPo) batteries pose a SEVERE risk of fire if not properly handled per the instructions and require special care and handling procedures for long life and safe operation. LiPo batteries are intended only for advanced users that are educated on the risks associated with LiPo battery use. Vanquish Products does not recommend that anyone under the age of 14 use or handle LiPo battery packs without the supervision of a knowledgeable and responsible adult. Dispose of used batteries according to the instructions.

- Never leave the battery connected when not in use and store batteries in accordance with manufacturer's instructions.
- Never leave a battery unattended while being charged. Never charge batteries while they are inside of the RC vehicle.
- There is a risk of fire and explosion when dealing with batteries. Rechargeable batteries may become hot and catch fire if left unattended or charged too quickly.
- Always use extra caution when charging LiPo batteries. Always, only use a LiPo specific charger when charging LiPo batteries.
- Always use a LiPo safe charging pouch when charging LiPo batteries.
- Always charge batteries away from flammable materials and in a well ventilated space.
- Overcharging can lead to fire and explosion.
- Always store battery packs in a cool dry place.
- Never use a LiPo battery that has previously overheated and/or shows signs of damage or swelling. If you suspect the battery to be damaged, immediately discontinue use and properly dispose of the battery.
- Never dispose of a LiPo battery with regular trash. To safely dispose of LiPo batteries, refer to your local disposal authority or recycling center.
- Always check the ESC settings to ensure that they match the battery type during operation. If using a LiPo battery, the ESC must be set to LiPo or damage may occur.
- Never mix old and new batteries. Do not change or charge batteries in a hazardous location. Do not mix alkaline, lithium, standard (carbon zinc), or rechargeable (NiMH, cadmium) batteries.
- If you do not agree with or are unable to follow these warnings and are not willing to accept full and complete liability for the use of this RC product; immediately return the product to your place of purchase in new and unused condition.

## **Before Use**

As the user of this product, you are solely responsible for operating in a manner that does not endanger yourself and others or result in damage to the product or property of others. This model is controlled by a radio signal subject to interference from many sources outside your control. This interference can cause momentary loss of control, so it is advisable to always keep a safe distance in all directions around your model as this margin will help avoid collisions or injury.

- Never operate your model with low transmitter batteries.
- Always operate your model in open spaces away from full-size vehicles, traffic and people.
- Never operate the model in the street or in populated areas for any reason.
- Carefully follow the directions and warnings for this and any optional support equipment (chargers, rechargeable battery packs, etc.) you use.
- Keep all chemicals, small parts and anything electrical out of the reach of children.
- Never lick or place any portion of the model in your mouth as it could cause serious injury or even death.
- Exercise caution when using tools and sharp instruments.
- Take care during maintenance as some parts may have sharp edges.
- Immediately after using your model, do NOT touch equipment such as the motor, electronic speed control and battery, because they generate high temperatures. You may burn yourself seriously touching them.
- Do not put fingers or any objects inside rotating and moving parts, as this may cause damage or serious injury.
- Always turn on your transmitter before you turn on the receiver in the car. Always turn off the receiver before turning your transmitter off.
- Keep the wheels of the model off the ground when checking the operation of the radio equipment.

## **Water-Resistance Warning**

Your new Vanquish Products vehicle has been designed to be water-resistant and allow you to operate the product in many wet conditions, these conditions may include puddles, creeks, and wet grass. While the entire vehicle is water-resistant, it is not completely waterproof and your vehicle should NOT be submerged in water. The components used in the vehicle, such as the Electronic Speed Control (ESC), servo and receiver are water-resistant, furthermore, most of the mechanical components are also water-resistant and should not be submerged. Metal parts, including the bearings, hardware, electrical contacts, will be susceptible to corrosion if appropriate maintenance is not performed after running in wet conditions. To maintain any applicable warranty and prolong the life of your vehicle, the procedures described in the "Additional Maintenance" section below must be performed regularly after subjecting your vehicle to moisture. If you are not willing to perform the additional maintenance required, then you should not operate the vehicle in those conditions.

**CAUTION:** Failure to exercise caution while using this product and complying with the following precautions could result in product malfunction and/or void the warranty.

#### **PRECAUTIONS**

- Read through the Additional Maintenance procedures and make sure that you have all tools required to properly maintain your vehicle.
- Not all batteries can be used in wet conditions. Refer to the battery manufacturer's guidance before use. Caution should be taken when using Li-Po batteries in wet conditions.
- The transmitter included with the vehicle is not water-resistant.
- Never operate your transmitter or vehicle where lightning may be present.
- Do not operate your vehicle where it could come in contact with salt water (ocean water or water on salt-covered roads), contaminated or polluted water. Salt water is very conductive and highly corrosive, so use caution.
- Driving in wet conditions can reduce the life of the motor. The additional resistance of operating in water causes excess strain.

## **Additional Maintenance**

After your vehicle has been run in any wet conditions, the following additional maintenance steps should be taken to ensure the vehicle is in proper working condition.

- Drain any water that has collected in the tires. With the body removed, place the vehicle upside down and pull full throttle for a few short bursts until the water has been removed. **CAUTION:** Always keep hands, fingers, tools and any loose or hanging objects away from rotating parts when performing the above drying technique.
- Remove the battery pack(s) and dry the contacts. If you have an air compressor or a can of compressed air, blow out any water that may be inside the recessed connector housing.
- Remove the tires/wheels from the vehicle and gently rinse the mud and dirt off with a garden hose. Avoid rinsing the bearings and transmission.

**NOTICE:** Never use a pressure washer to clean your vehicle.

- Use an air compressor or a can of compressed air to dry the vehicle and help remove any water that may have gotten into small crevices or corners.
- Spray the bearings, drive train, fasteners and other metal parts with a water-displacing light oil. Do not spray the motor.
- Let the vehicle air dry before you store it. Water (and oil) may continue to drip for a few hours.
- Increase the frequency of disassembly, inspection and lubrication of the following:
  - Front and rear axle hub assembly bearings.
  - All transmission cases, gears and differentials.
  - Motor—clean with an aerosol motor cleaner and re-oil the bushings with lightweight motor oil.

## PART NUMBER

### ■ SPARE PARTS

|           |                                          |          |                                            |
|-----------|------------------------------------------|----------|--------------------------------------------|
| IRC00010  | ROD ENDS WITH PIVOT BALLS (12)           | VPS08805 | H10 REAR AXLE HOUSING                      |
| IRC00140  | 4MM FLANGED WHEEL LOCK NUTS              | VPS08806 | H10 HYDRO AXLE COMPONENTS                  |
| IRC00192  | H10 HYDRO STEERING SET                   | VPS08807 | H10 REAR AXLE SHAFTS                       |
| IRC00193  | H10 HYDRO VDI UNIVERSAL AXLE SHAFT SET   | VPS08808 | H10 HYDRO MOLDED LINK SET                  |
| IRC00230  | ISD10 DRIVESHAFT SET                     | VPS10105 | YOKOHAMA GEOLANDAR MT 4.75" RED COMPOUND   |
| IRC00231  | ISD10 REPLACEMENT PARTS TREE             | VPS10110 | VANQUISH VELCRO STRAP                      |
| IRC002633 | 15T 32P PINION                           | VPS10125 | VFD SKID PLATE SET                         |
| IRC00271  | INCISION KINGPIN SHOULDER SCREWS (4)     | VPS10131 | VFD MOLDED MOTOR PLATE & COMPONENTS        |
| IRC00272  | M4 SCREW SHAFT (10)                      | VPS10143 | VFD TRANSMISSION SHAFT SET                 |
| IRC00273  | BODY PINS (10)                           | VPS10144 | VFD TRANSMISSION HOUSING SET               |
| IRC00275  | WASHER HEAD SCREW (4)                    | VPS10147 | VFD SINTERED GEAR SET                      |
| IRC00290  | INCISION 12MM LOCKING HEX BLACK ANODIZED | VPS10152 | VFD TRANSMISSION KIT                       |
| IRC00307  | H10 SUSPENSION LINK SET                  | VPS10207 | E-5 CLIP                                   |
| IRC00402  | 56T SPUR GEAR                            | VPS10209 | VFD LOCKOUT TOPSHAFT SET                   |
| IRC00501  | S8E 90MM SHOCK SET                       | VPS10500 | ROCK BUGGY CAGE MAIN SIDES - BLACK         |
| IRC00502  | S8E SHOCK MOLDED COMPONENTS              | VPS10501 | ROCK BUGGY CAGE MAIN SIDES - GREY          |
| IRC00505  | S8E 90MM SHOCK BODY                      | VPS10504 | H10 CAGE COMPONENTS SET 1 - BLACK          |
| IRC00506  | S8E 90MM SHOCK SHAFT                     | VPS10505 | H10 CAGE COMPONENTS SET 1- GREY            |
| IRC00507  | S8E SHOCK REBUILD KIT                    | VPS10508 | H10 BATTERY TRAY AND FUEL CELL SET - BLACK |
| IRC00508  | E-2 CLIP                                 | VPS10509 | H10 OPTIC BODY PANEL SET - BLACK           |
| IRC00509  | S8E UPPER AND LOWER SHOCK PIVOT BALL SET | VPS10510 | H10 OPTIC BODY PANEL SET - REFLEX BLUE     |
| IRC00530  | KMC KM237 RIOT BEADLOCK                  | VPS10515 | H10 INTERIOR AND DRIVER FIGURE - BLACK     |
| VPH112210 | M2.5X10MM COARSE THREAD BUTTON HEAD      | VPS10516 | H10 CAGE COMPONENT SET 2 - BLACK           |
| VPH112310 | M3X10MM COARSE THREAD BUTTON HEAD        | VPS10517 | H10 CAGE COMPONENT SET 2 - GREY            |
| VPH112315 | M3X15MM COARSE THREAD BUTTON HEAD        | VPS20001 | VT1 4CH TRANSMITTER                        |
| VPH112325 | M3X25MM COARSE THREAD BUTTON HEAD        | VPS20002 | VR1 4CH RECEIVER                           |
| VPS02420  | SINTERED SERVO HORN 25T 20MM             | VPS20003 | VS1 SERVO                                  |
| VPS08606  | F10 AXLE COMPONENTS                      | VPS20004 | VE1 60AMP ESC                              |
| VPS08804  | H10 HYDRO FRONT AXLE HOUSING             | VPS20005 | VM1 35T MOTOR                              |

### ■ OPTION PARTS

|          |                                         |          |                                                 |
|----------|-----------------------------------------|----------|-------------------------------------------------|
| IRC00013 | PRO ROD ENDS WITH PIVOT BALLS (12)      | VPS05253 | 1.9 BRASS 0.8" WHEEL CLAMP RINGS (PAIR)         |
| IRC00220 | INCISION STEEL DRIVESHAFT SET           | VPS07080 | 12MM HEX CLEAR ANODIZED                         |
| IRC00260 | 12T 32P PINION                          | VPS07082 | 12MM HEX BLACK ANODIZED                         |
| IRC00261 | 13T 32P PINION                          | VPS08070 | 6 HOLE SPOOL / LOCKER                           |
| IRC00262 | 14T 32P PINION                          | VPS08330 | 30T/8T HYPOID GEAR SET                          |
| IRC00264 | 16T 32P PINION                          | VPS08331 | 33T/8T UNDERDRIVE HYPOID GEAR SET               |
| IRC00265 | 17T 32P PINION                          | VPS08623 | F10 FRONT AXLE THIRD MEMBER - BLACK             |
| IRC00292 | BRASS 12MM HEX                          | VPS08624 | F10 FRONT AXLE THIRD MEMBER - CLEAR             |
| IRC00410 | VFD 52T 32P SLIPPER SPUR GEAR           | VPS08625 | F10 REAR AXLE THIRD MEMBER - BLACK              |
| IRC00511 | S8E TINI 90MM SHOCK SHAFT               | VPS08626 | F10 REAR AXLE THIRD MEMBER - CLEAR              |
| IRC00513 | S8E 90MM SPRING SET                     | VPS10102 | VXT2 1.9 TIRES                                  |
| IRC00514 | S8E MACHINED SHOCK CAP Black            | VPS10103 | FALKEN WILDPEAK M/T 1.9 TIRES                   |
| IRC00515 | S8E MACHINED SHOCK CAP Orange           | VPS10141 | VFD MACHINED GEAR SET                           |
| IRC00516 | S8E MACHINED SHOCK CAP Blue             | VPS10145 | VFD LIGHTWEIGHT MACHINED TRANSFER CASE GEAR SET |
| IRC00517 | S8E MACHINED Spring COLLAR SET Black    | VPS10146 | VFD 21% OVERDRIVE TRANSFER CASE GEAR SET        |
| IRC00518 | S8E MACHINED Spring COLLAR SET Orange   | VPS10148 | VS4-10 VFD MACHINED MOTOR PLATE                 |
| IRC00519 | S8E MACHINED Spring COLLAR SET Blue     | VPS10149 | VFD LIGHT WEIGHT ALUMINUM MOTORPLATE            |
| IRC00521 | S8E 90MM SHOCK BODY HARD ANODIZED       | VPS10151 | VS4-10 VFD ALUMINUM TRANS POST                  |
| IRC00522 | S8E MACHINED PISTON SET                 | VPS10153 | VFD LIGHTWEIGHT MACHINED FRONT GEAR SET         |
| IRC00523 | SHOCK TUNING ROD ENDS                   | VPS10200 | VFD TWIN TRANSMISSION KIT                       |
| VPS01360 | VFD HURTZ DIG BLACK                     | VPS10208 | VFD SLIPPER SET                                 |
| VPS01361 | VFD HURTZ DIG CLEAR                     | VPS10306 | VTS STANCE 4.75" DUAL STAGE FOAM                |
| VPS02412 | STEERING CLAMPING 25T SERVO HORN - 20MM | VPS10413 | 1.9 SINTERED 0.8" WHEEL CLAMP RING              |

## GEAR RATIO CHART

Axle Ratio: 3.75

Rear Ratio without spur/pinion: 11.8

Front Ratio Standard 6.5% OD without spur/pinion: 11.1

Note: Not all Spur and Pinion combinations are compatible

**32P Rear output Ratio**

|        | Spur Gear |      |      |      |      |
|--------|-----------|------|------|------|------|
| Pinion | 48        | 50   | 52   | 54   | 56   |
| 11     | 51.5      | 53.6 | 55.8 | 57.9 | 60.1 |
| 12     | 47.2      | 49.1 | 51.1 | 53.1 | 55.0 |
| 13     | 43.6      | 45.4 | 47.2 | 49.0 | 50.8 |
| 14     | 40.4      | 42.1 | 43.8 | 45.5 | 47.2 |
| 15     | 37.7      | 39.3 | 40.9 | 42.5 | 44.0 |
| 16     | 35.4      | 36.9 | 38.3 | 39.8 | 41.3 |
| 17     | 33.3      | 34.7 | 36.1 | 37.5 | 38.9 |

**32P Front Standard OD 6.5% Output Drive Ratio**

|        | Spur Gear |      |      |      |      |
|--------|-----------|------|------|------|------|
| Pinion | 48        | 50   | 52   | 54   | 56   |
| 11     | 48.3      | 50.3 | 52.3 | 54.3 | 56.3 |
| 12     | 44.2      | 46.1 | 47.9 | 49.8 | 51.6 |
| 13     | 40.8      | 42.5 | 44.2 | 45.9 | 47.6 |
| 14     | 37.9      | 39.5 | 41.1 | 42.7 | 44.2 |
| 15     | 35.4      | 36.9 | 38.3 | 39.8 | 41.3 |
| 16     | 33.2      | 34.6 | 35.9 | 37.3 | 38.7 |
| 17     | 31.2      | 32.5 | 33.8 | 35.1 | 36.4 |

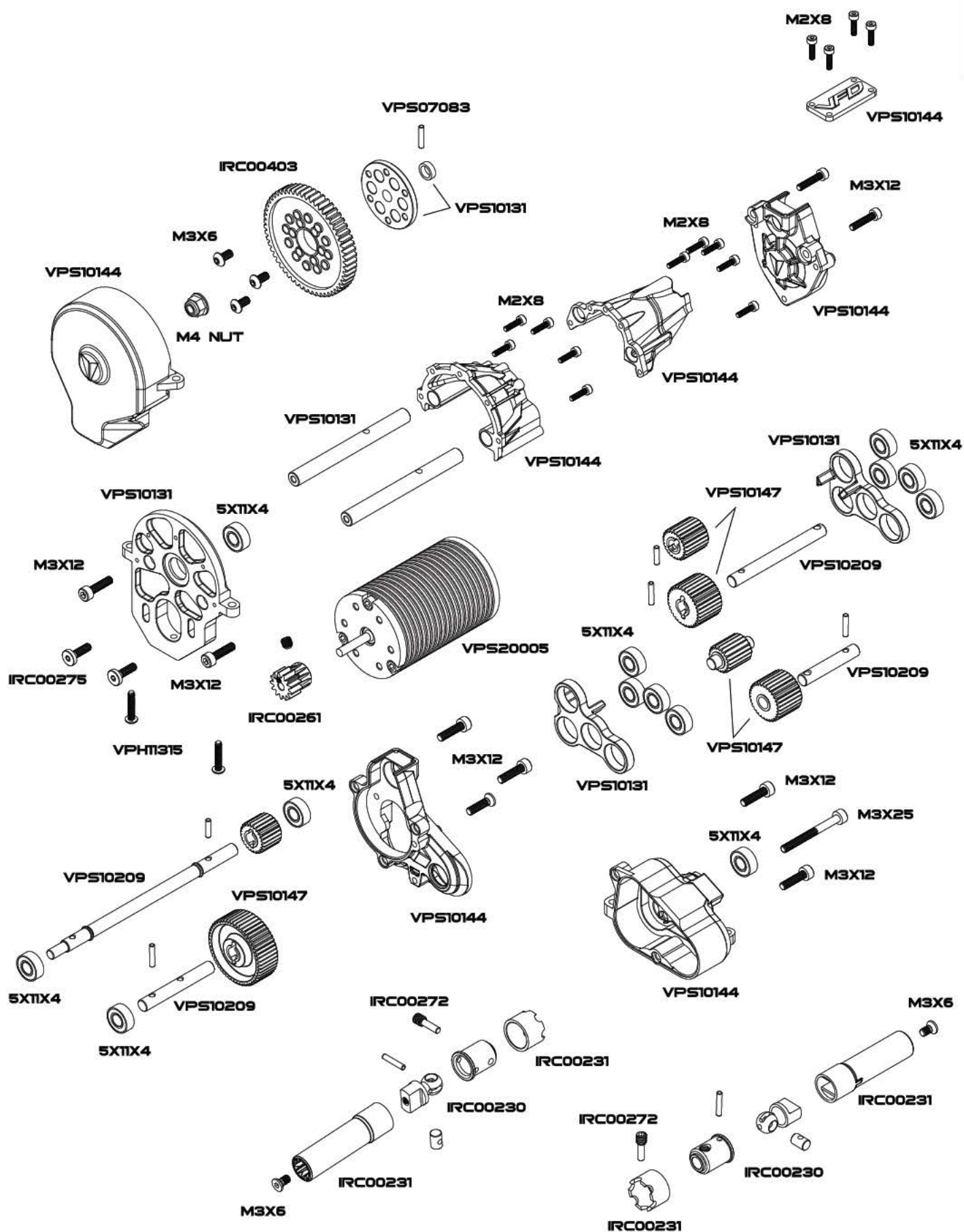
M3X20 IRC00010 IRC10509



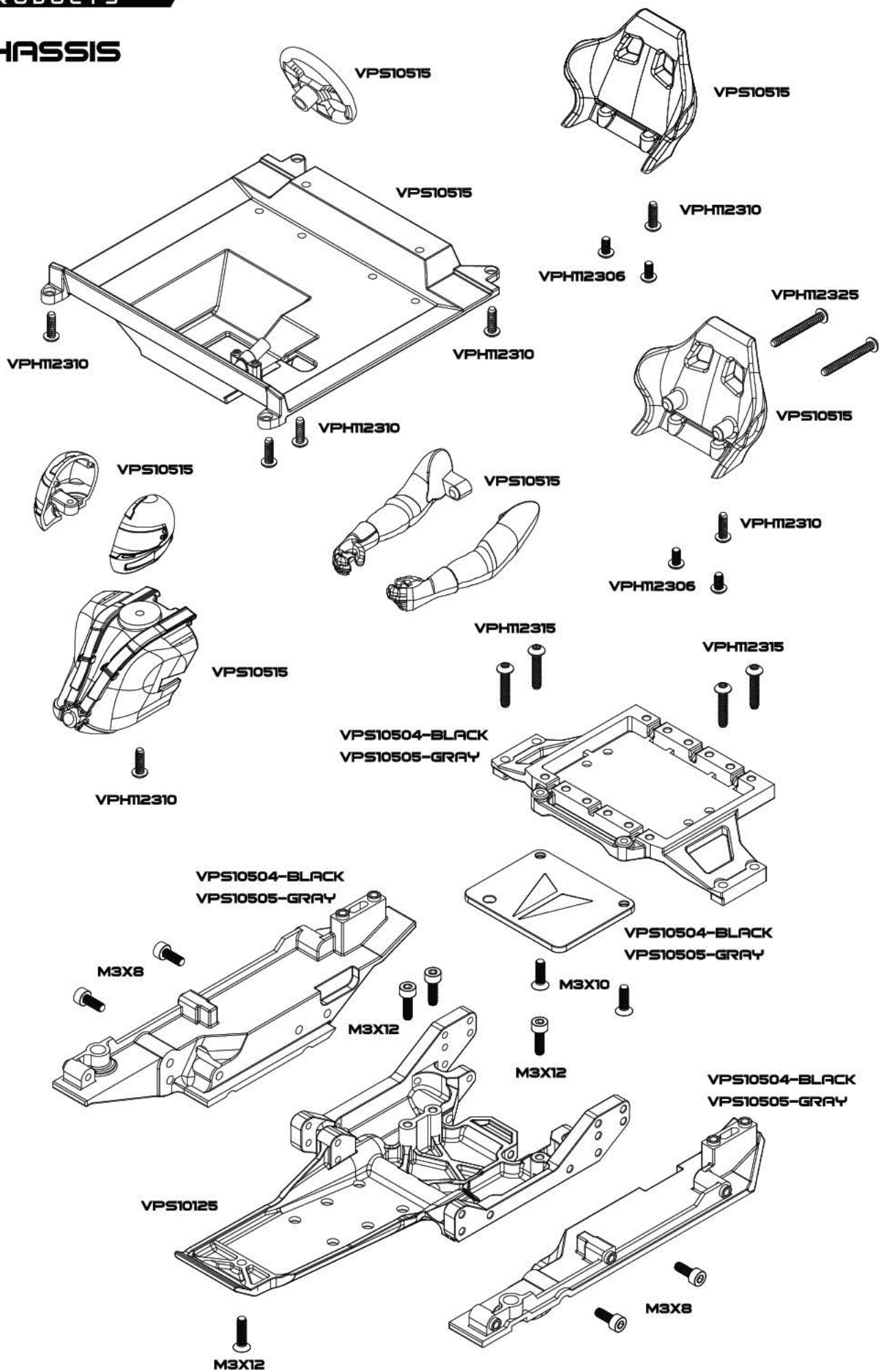
**IRCO0290**



**TRANSMISSION**

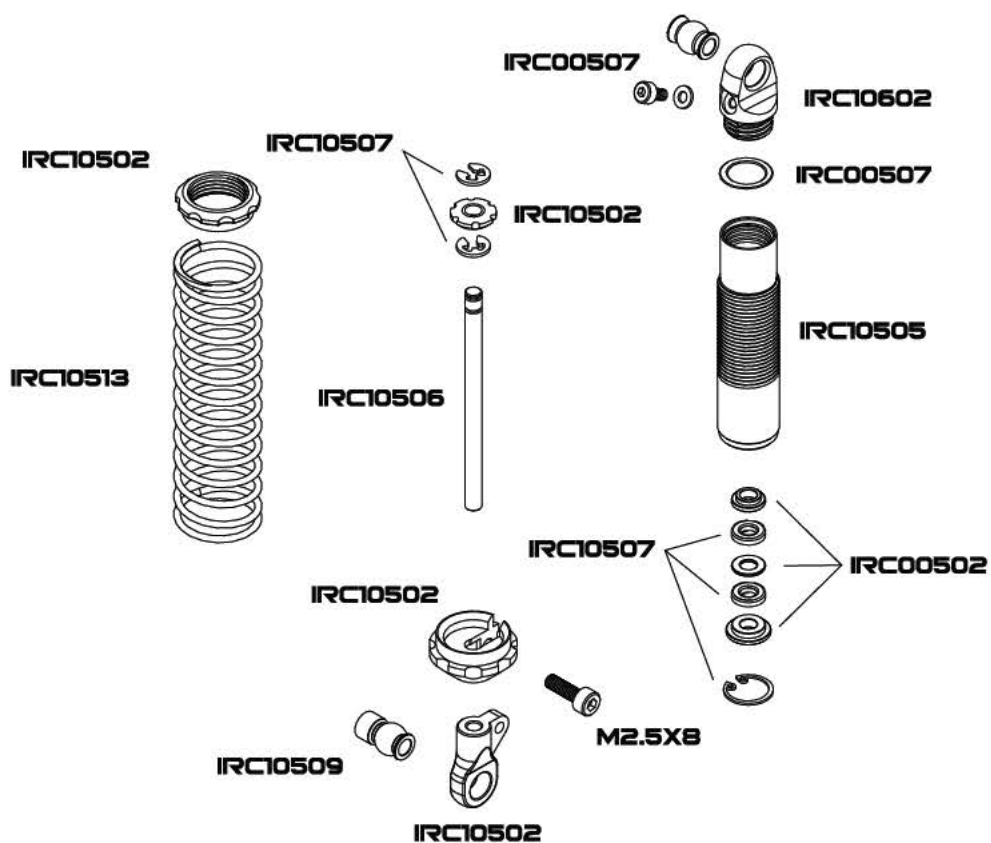
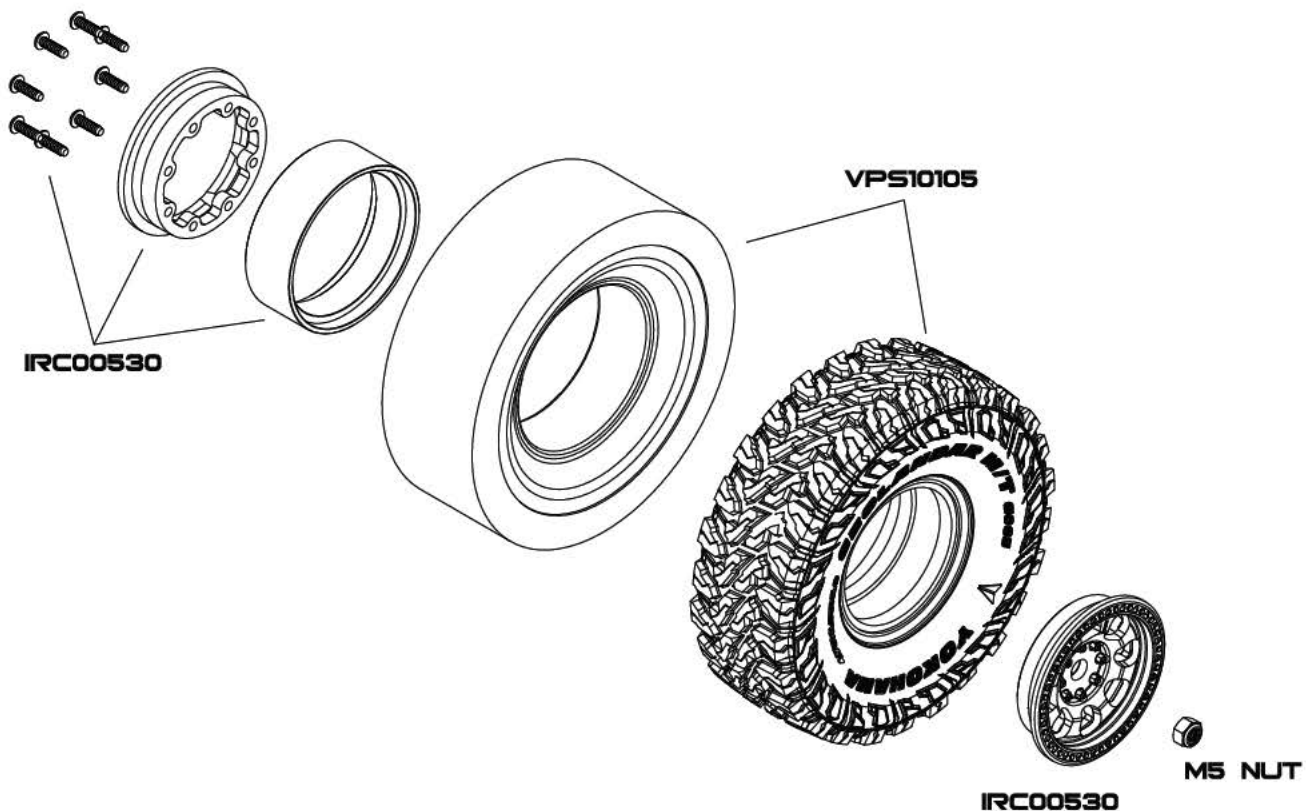


## ■ CHASSIS



[illegible]

## ■ TIRES, SHOCKS



# **H10** optic

**HIGH PERFORMANCE TRAIL BUGGY**

**KMC** **sparco** **YOKOHAMA** **POWER TANK** **ANTIGRAVITY BATTERIES** **MF MAGNAFLOW** *Throttle Therapy*

**DESIGNED IN CALIFORNIA** 

Vanquish Products • 5710 Roseville Rd Sacramento CA 95842 • Parts Manufactured in Taiwan

[www.vanquishproducts.com](http://www.vanquishproducts.com)