VANQUISH®
PRODUCTS

VS4-10 PHOENIX PORTAL

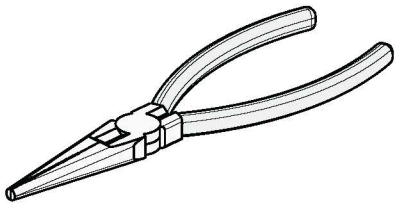
READY TO RUN

TOYO TIRES® EDITION

TOYO TIRES® DISSENT OFF-ROAD baja designs KMC WHEELS

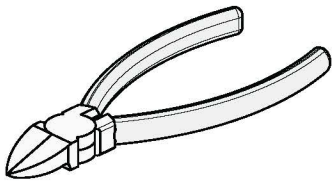
INSTRUCTION MANUAL

NECESSARY FOR MAINTENANCE



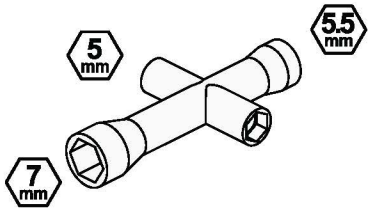
NEEDLE NOSE PLIERS
(NOT INCLUDED)

GREASE
(NOT INCLUDED)



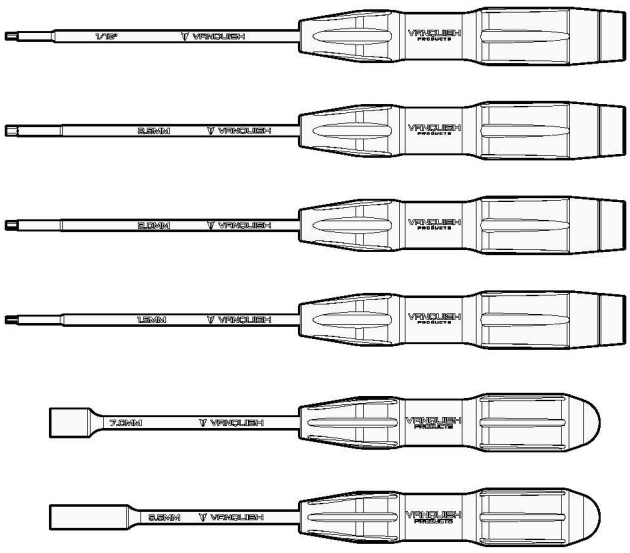
SIDE CUTTERS
(NOT INCLUDED)

THREAD LOCK
(NOT INCLUDED)



CROSS WRENCH
(INCLUDED)

8MM HEX ADAPTER
(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.

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)
IRC00230 ISD10 DRIVESHAFT SET
IRC00231 ISD10 REPLACEMENT PARTS TREE
IRC00263 15T 32P PINION
IRC00271 INCISION KINGPIN SHOULDER SCREWS (4)
IRC00272 M4 SCREW SHAFT (10)
IRC00273 BODY PINS (10)
IRC00275 WASHER HEAD SCREW (4)
IRC00403 52T SPUR GEAR
IRC00500 S8E 80MM SHOCK SET
IRC00502 S8E SHOCK MOLDED COMPONENTS
IRC00526 S8E 80MM SHOCK BODY
IRC00507 S8E SHOCK REBUILD KIT
IRC00509 S8E UPPER AND LOWER SHOCK PIVOT BALL SET
IRC00512 S8E 80MM SPRING SET
IRC00530 INCISION 1.9 KMC KM237 RIOT MOLDED BEADLOCK
IRC00541 S8E/S8I MOLDED LOWER SHOCK CAP
VPS07084 12MM PORTAL HEX
VPS08070 6 HOLE SPOOL / LOCKER
VPS08330 30T/8T HYPOID GEAR SET
VPS08335 5MM NON-FLANGED WHEEL NUTS
VPS08353 PORTAL OVERDRIVE GEAR SET (28T/20T)
VPS08363 PORTAL REAR AXLE SHAFTS
VPS08600 F10 PORTAL FRONT AXLE SET
VPS08601 F10 PORTAL REAR AXLE SET
VPS08604 F10 PORTAL FRONT HOUSING
VPS08605 F10 PORTAL REAR HOUSING
VPS08606 F10 PORTAL AXLE COMPONENTS
VPS08607 F10 PORTAL AXLE KNUCKLES
VPS08608 F10 PORTAL VDI
VPS08609 F10 PORTAL FRONT AXLE BRASS TUBES
VPS08610 F10 PORTAL REAR AXLE BRASS TUBES
VPS08611 F10 PORTAL REAR AXLE SHAFTS
VPS08612 F10 PORTAL FRONT STUB SHAFTS
VPS08613 F10 PORTAL REAR STUB SHAFTS
VPS10110 VANQUISH VELCRO STRAP
VPS10112 VS4-10 FRAME RAIL (2)
VPS10113 VS4-10 BODY POST SET
VPS10114 VS4-10 SHOCK TOWER SET (2 PAIR)
VPS10123 VS4-10 CHASSIS SLIDER MOUNTS WITH UNIVERSAL SLIDERS
VPS10125 VFD SKID PLATE SET
VPS10126 VS4-10 CHASSIS BRACES / SERVO MOUNT
VPS10129 VS4-10 MOLDED BATTERY AND ELECTRONIC TRAYS
VPS10131 VS4-10 MACHINED PANHARD MOUNT
VPS10133 PHOENIX BODY SET W/VRD1 CAGE
VPS10136 PHOENIX GRILL AND BODY DETAIL PARTS SET
VPS10142 VS4-10 VFD BEARING PLATE SET 30T OVERDRIVE
VPS10144 VS4-10 VFD TRANSMISSION HOUSING
VPS10147 VFD SINTERED GEAR SET
VPS10180 VS4-10 NARROW MOLDED INNER FENDERS
VPS10181 PHOENIX BUMPERS AND SLIDERS
VPS10182 VRD1 REAR CAGE SET
VPS10183 VRD1 REAR CAGE PARTS
VPS10184 VRD1 BODY MOUNTS
VPS10209 VFD SLIPPER LOCKOUT SET
VPS10352 S8E 80MM SHOCK SHAFT WITH BOLT ON PISTON
VPS10412 Heavy Alloy F10 Portal Knuckle Weight - Low Offset

OPTION PARTS

IRC00220 INCISION DRIVESHAFT SET
IRC00260 12T 32P PINION
IRC00261 13T 32P PINION
IRC00262 14T 32P PINION
IRC00264 16T 32P PINION
IRC00265 17T 32P PINION
IRC00270 INCISION MOTOR PLATE CAPHEAD WASHER
IRC00293 BRASS F10 PORTAL 12MM HEX
IRC00451 INCISION SERIES 2 LIGHT KIT
IRC00501 S8E 90MM SHOCK SET
IRC00514 S8E MACHINED SHOCK CAP Black
IRC00515 S8E MACHINED SHOCK CAP Orange
IRC00516 S8E MACHINED SHOCK CAP Blue
IRC00517 S8E MACHINED Spring COLLAR SET Black
IRC00518 S8E MACHINED Spring COLLAR SET Orange
IRC00519 S8E MACHINED Spring COLLAR SET Blue
IRC00528 S8E 80MM SHOCK BODY HARD ANODIZED
IRC00529 S8E 90MM SHOCK BODY HARD ANODIZED
IRC00553 S8E MACHINED PISTON SET
VPH025310 TITANIUM F10/H10 KINGPIN SCREWS
VPH026500 TITANIUM M5 WHEEL NUTS
VPH22001 TITANIUM HARDWARE F10 PORTAL FRONT AXLE KIT
VPH22002 TITANIUM HARDWARE F10 PORTAL REAR AXLE KIT
VPH22004 TITANIUM HARDWARE VFD TRANSMISSION KIT
VPS01360 VFD HURTZ DIG
VPS08331 AR44 Axle Underdrive Gear Set - 33T/8T
VPS08332 AR44 Axle Overdrive Gear Set - 27T/8T
VPS08354 PORTAL STANDARD GEAR SET (30T/18T)
VPS08614 OIL FILL CAP RED ANODIZED
VPS08615 F10 PORTAL ALUMINUM FRONT AXLE HOUSING BLACK
VPS08616 F10 PORTAL ALUMINUM FRONT AXLE HOUSING CLEAR
VPS08617 F10 PORTAL ALUMINUM REAR AXLE HOUSING BLACK
VPS08618 F10 PORTAL ALUMINUM REAR AXLE HOUSING CLEAR
VPS08623 F10 ALUMINUM FRONT AXLE THIRD MEMBER BLACK
VPS08625 F10 ALUMINUM REAR AXLE THIRD MEMBER BLACK
VPS08626 F10 ALUMINUM REAR AXLE THIRD MEMBER CLEAR
VPS08627 ALUMINUM F10 REAR PORTAL COVER BLACK
VPS08628 ALUMINUM F10 REAR PORTAL COVER CLEAR
VPS08640 F10 PORTAL ALUMINUM FRONT KNUCKLE BLACK
VPS08641 F10 PORTAL ALUMINUM FRONT KNUCKLE CLEAR
VPS08650 BRASS F10 PORTAL KNUCKLE WEIGHT
VPS08651 BRASS F10 REAR PORTAL COVER WEIGHT
VPS08652 BRASS F10 PORTAL KNUCKLE WEIGHT - LOW OFFSET
VPS10103 Falken Wildpeak M/T 1.9 Tires (2) Red Compound
VPS10141 VFD MACHINED GEAR SET
VPS10142 VFD TRANSMISSION 30T BEARING PLATE SET
VPS10145 VFD LIGHTWEIGHT MACHINED TRANSFER CASE GEAR SET
VPS10146 VFD 21% OVERDRIVE TRANSFER CASE GEAR SET
VPS10148 VFD ALUMINUM MACHINED MOTOR PLATE BLACK
VPS10149 VFD LIGHTWEIGHT ALUMINUM MOTORPLATE
VPS10151 VS4-10 VFD ALUMINUM TRANS POST
VPS10153 VFD LIGHTWEIGHT MACHINED FRONT GEAR SET
VPS10154 VFD MACHINED FRONT GEAR SET
VPS10200 VFD TWIN TRANSMISSION KIT
VPS10305 VTS STANCE 4.65" DUAL STAGE FOAM

GEAR RATIO CHART

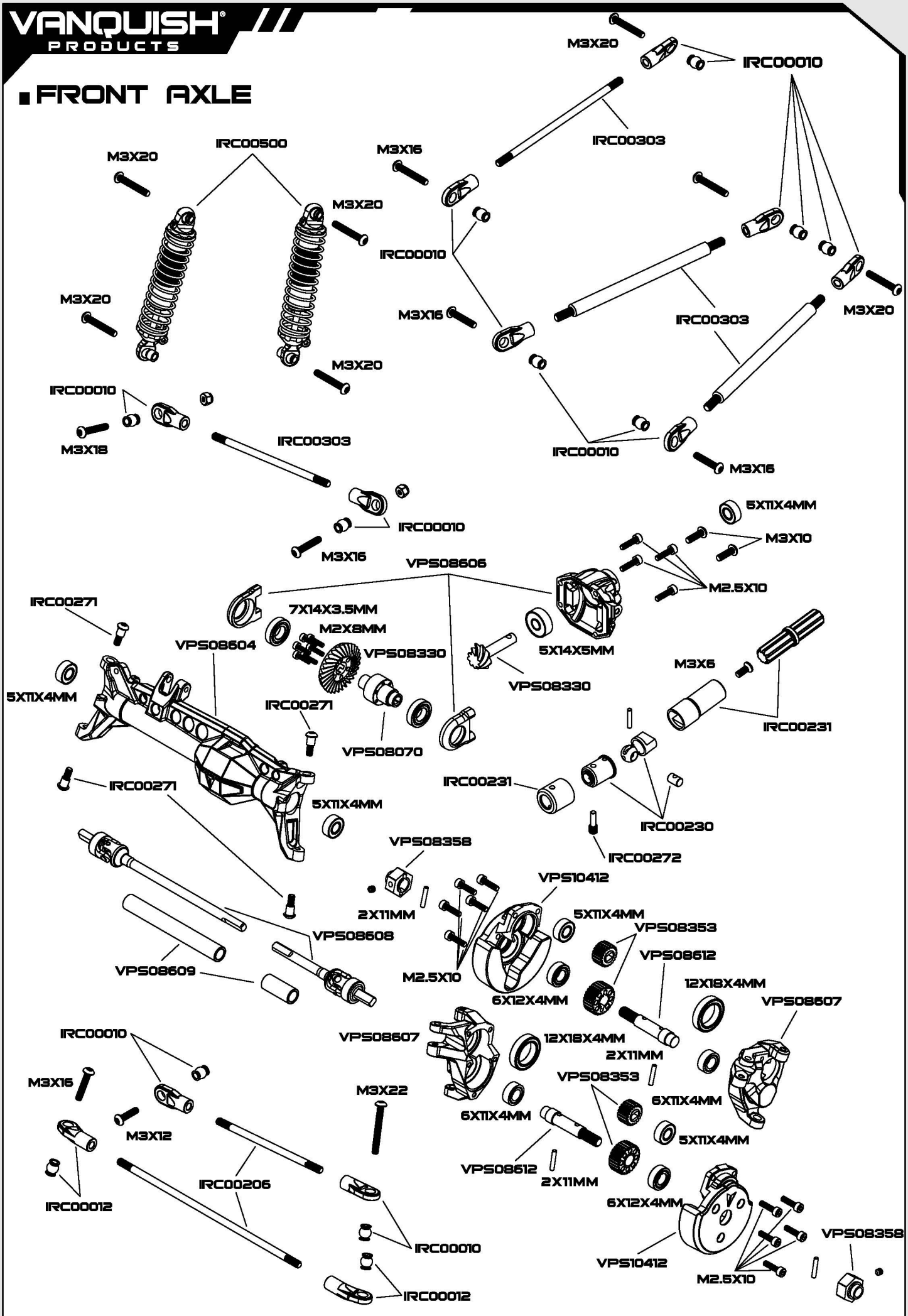
Axle Ratio: 5.25
Rear Ratio without spur/pinion: 16.5
Front Ratio 6.5% OD without spur/pinion: 15.5

Note: Not all Spur and Pinion combinations are compatible

32P Rear output Ratio					
	Spur Gear				
Pinion	48	50	52	54	56
11	72.1	75.1	78.1	81.1	84.1
12	66.1	68.8	71.6	74.3	77.1
13	61.0	63.5	66.1	68.6	71.1
14	56.6	59.0	61.3	63.7	66.1
15	52.8	55.0	57.2	59.5	61.7
16	49.5	51.6	53.7	55.7	57.8
17	46.6	48.6	50.5	52.5	54.4

32P Front Standard OD 6.5% Output Drive Ratio					
	Spur Gear				
Pinion	48	50	52	54	56
11	67.6	70.4	73.2	76.0	78.8
12	61.9	64.5	67.1	69.7	72.2
13	57.2	59.5	61.9	64.3	66.7
14	53.1	55.3	57.5	59.7	61.9
15	49.5	51.6	53.7	55.7	57.8
16	46.4	48.4	50.3	52.3	54.2
17	43.7	45.5	47.4	49.2	51.0

FRONT AXLE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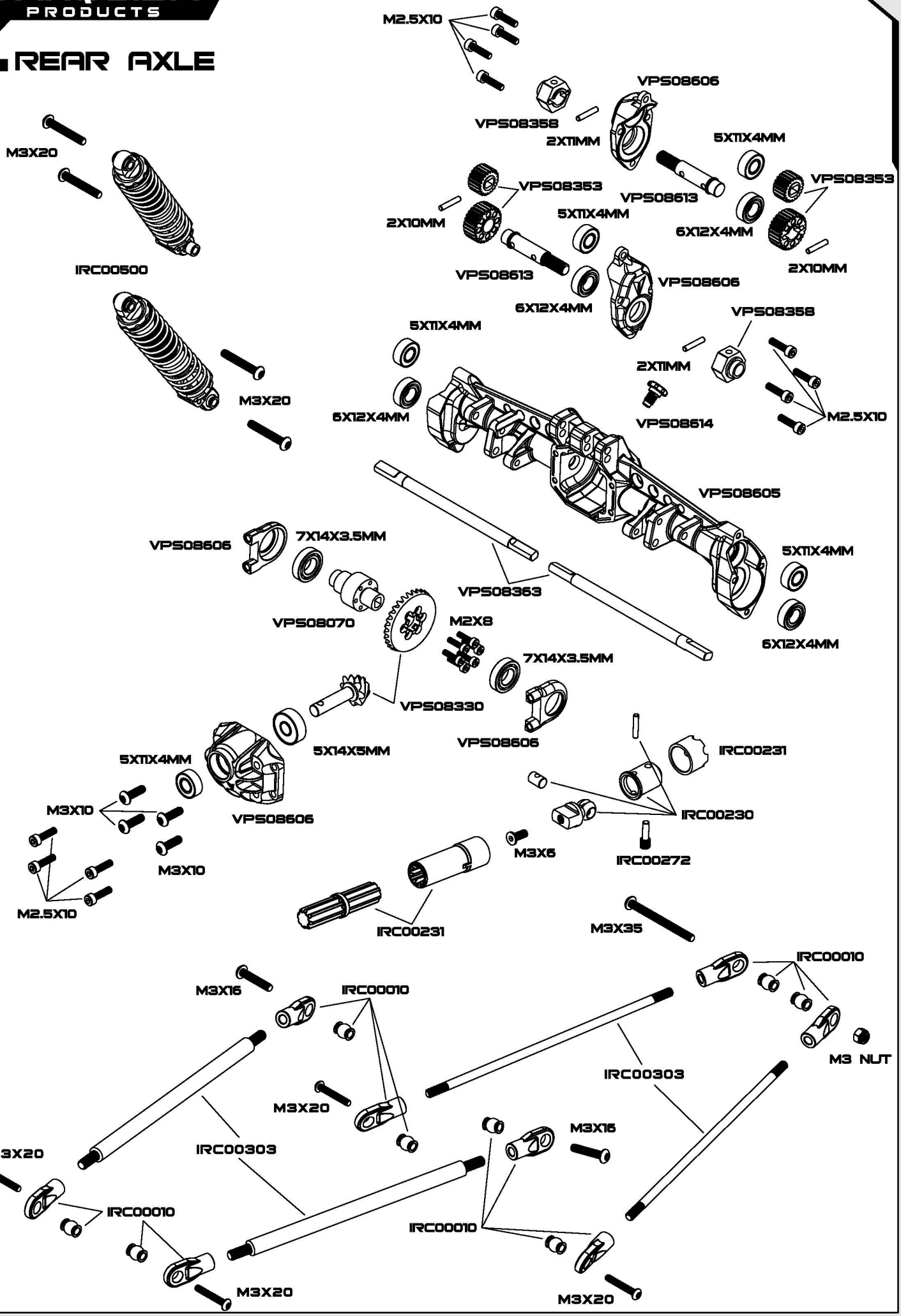
REAR AXLE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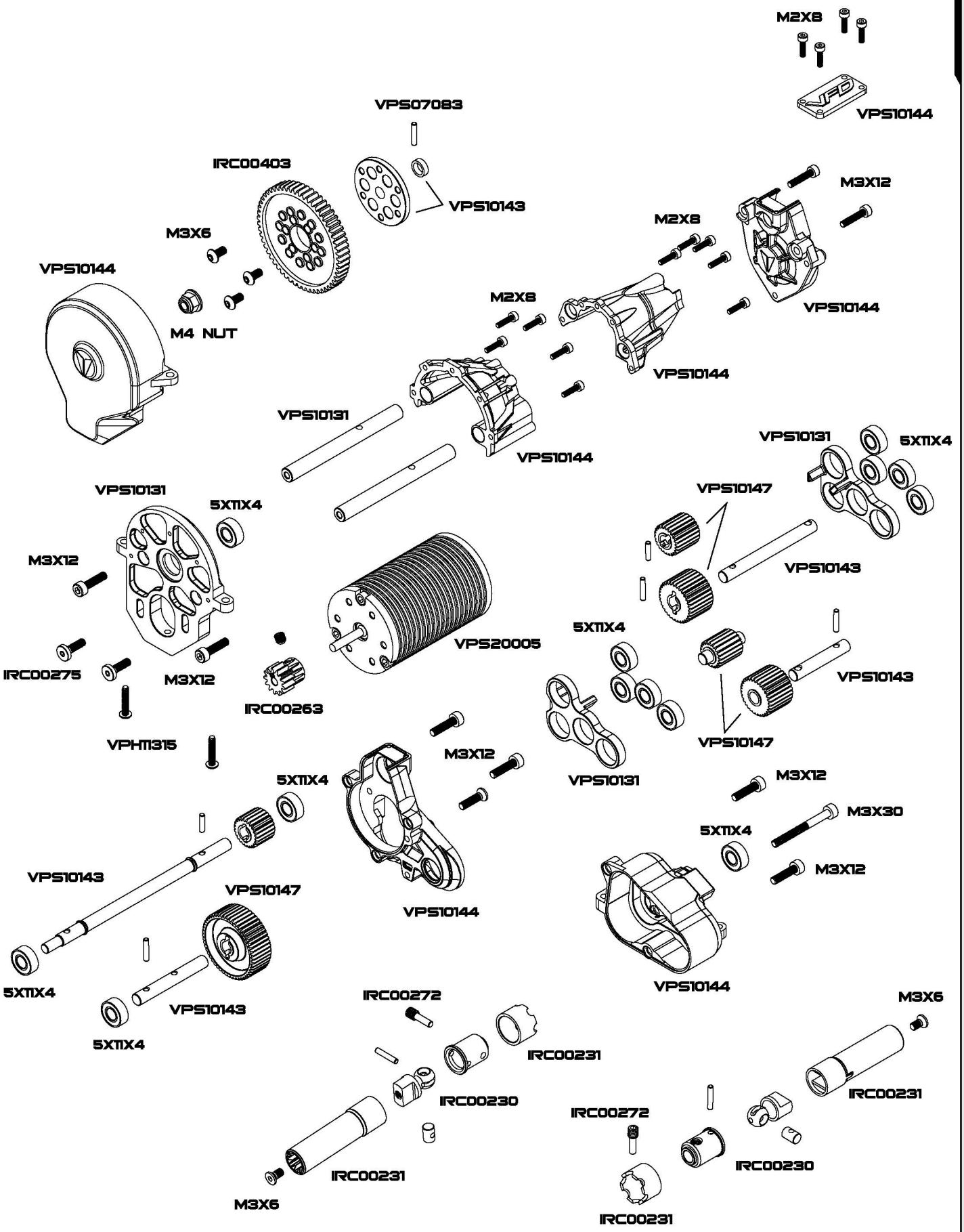
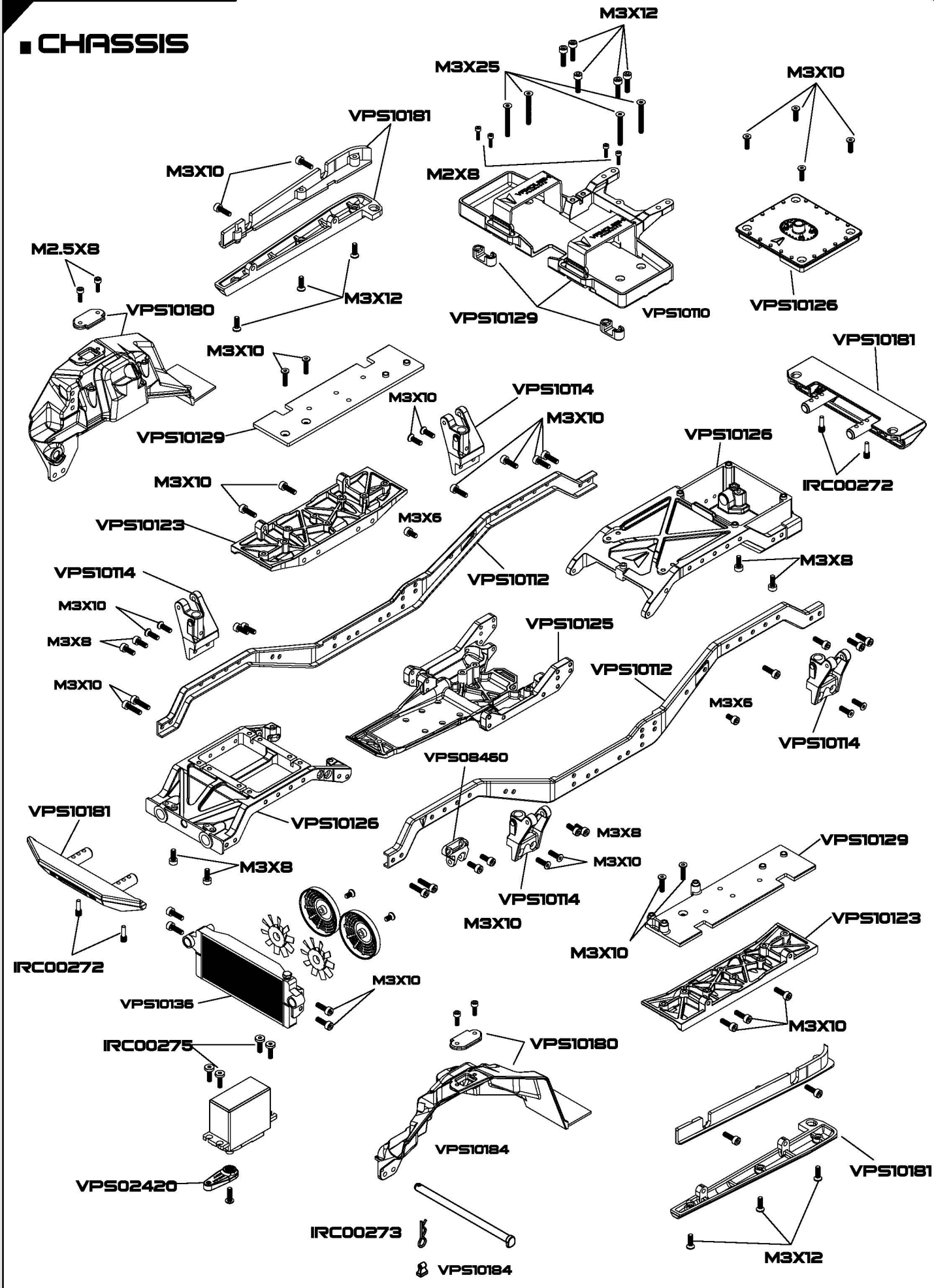
TRANSMISSION



CHASSIS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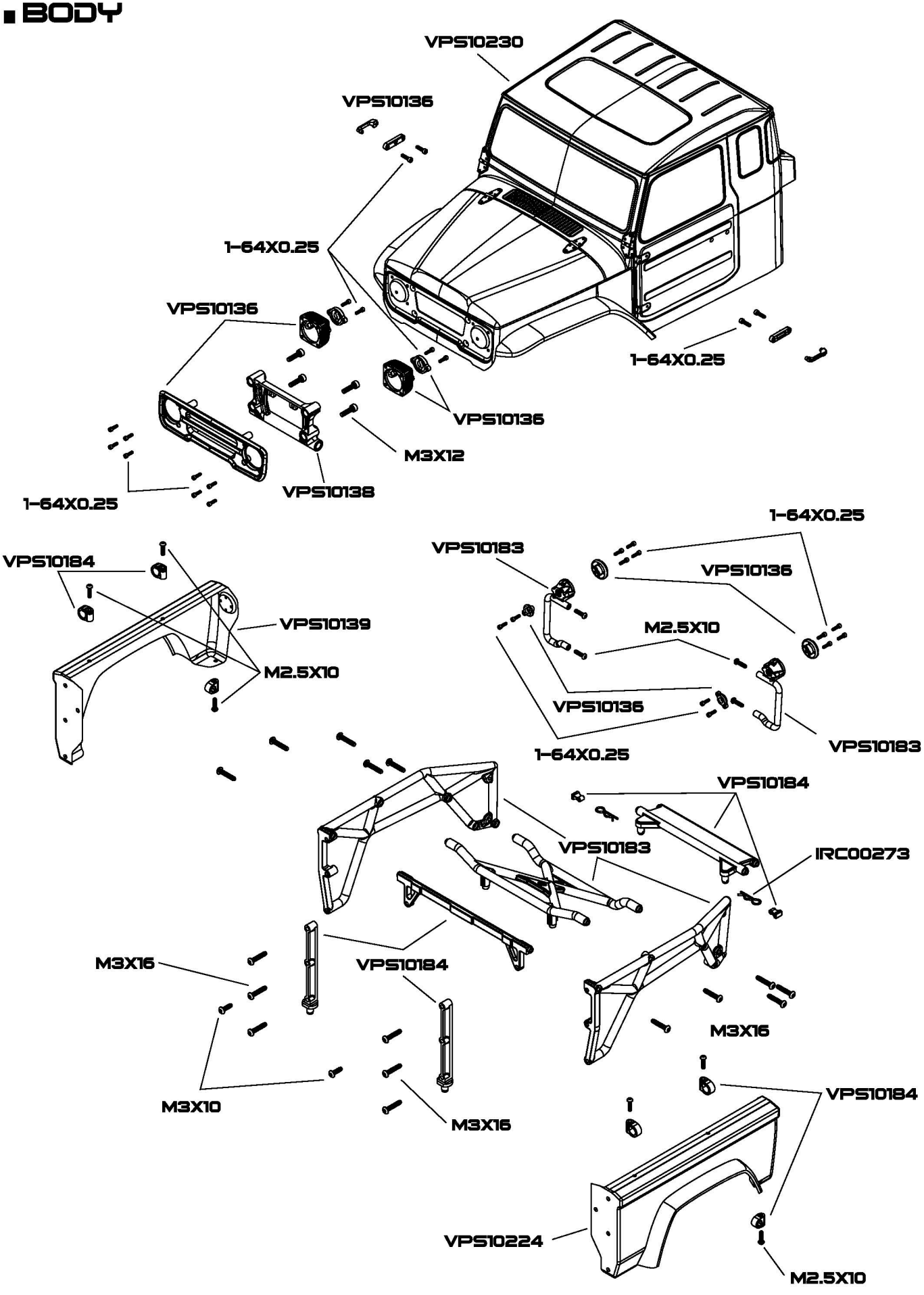
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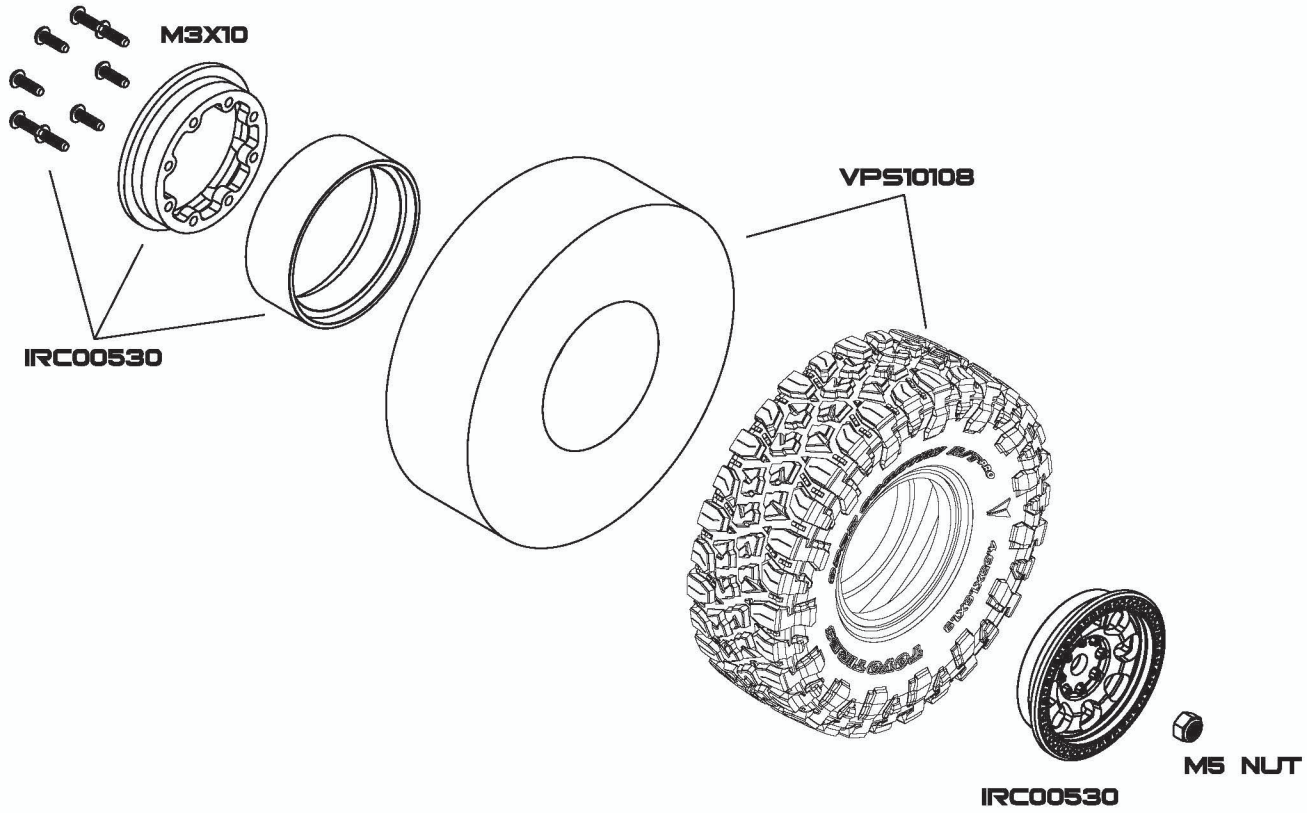
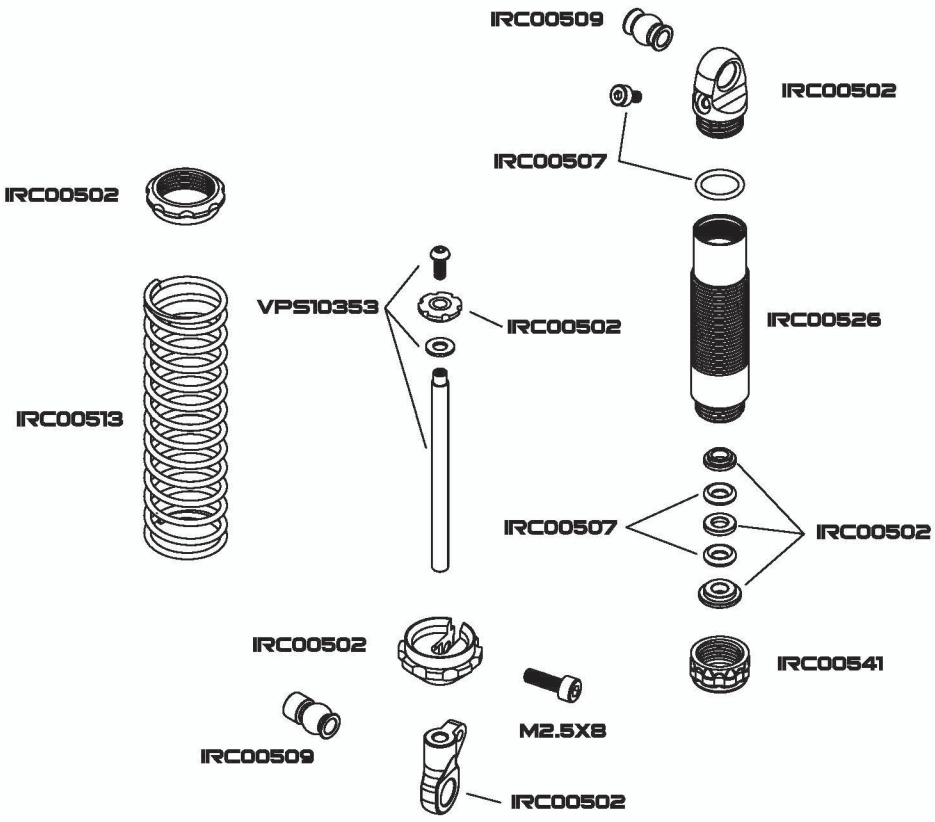
TIRES, SHOCKS





PRECISION & PERFORMANCE
VANQUISH PRODUCTS
DESIGNED IN CALIFORNIA • USA

VS4-10 PHOENIX PORTAL

TOYO TIRES® EDITION

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