

# 1/8 Scale Brushless Buggy



**Model No.: A2015T & A2015T-EL Buggy**

Brushless ESC, Brushless Motor, 3-Cell 11.1V Li-Po Battery & Charger, FM Radio System and Torque Steering Servo Included!!!

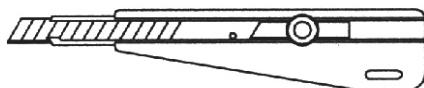
## **⚠ SAFETY PRECAUTIONS**

- THIS RADIO CONTROLLED RACING CAR IS NOT A TOY!
- THIS HIGH-PERFORMANCE R/C MODEL IS RECOMMENDED FOR AGES 14 AND OLDER.
- THIS IS ONLY FOR YOUR REFERENCE BEFORE YOU OPERATE THE MODEL CAR.
- PLS DO NOT CHANGE THE EQUIPMENT OF THE BRUSHLESS ESC, MOTOR AND LI-PO BATTERY CASUALLY, WE WILL NOT TAKE ANY CHARGE OF THE DAMAGES OR INJURIES CAUSED BY YOUR CHANGES!
- ASSEMBLE THIS KIT ONLY IN PLACES OUT OF CHILDREN'S REACH!
- TAKE ENOUGH SAFETY PRECAUTIONS PRIOR TO OPERATING THIS MODEL. YOU ARE RESPONSIBLE FOR THIS MODEL'S ASSEMBLY AND SAFE OPERATION!

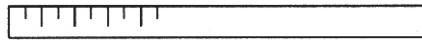
# BEFORE YOU RUN YOUR CAR

## Required equipment for operation

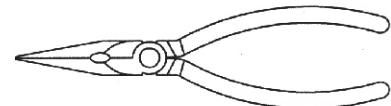
### 1. Tools required for building and maintenance:



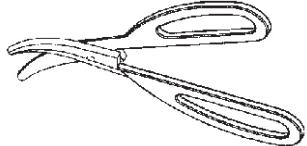
**Hobby knife**



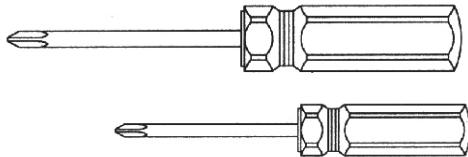
Precision ruler or caliper



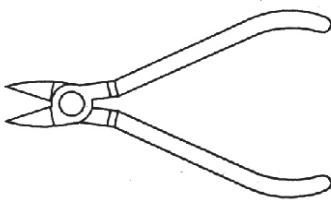
**Needle nose pliers**



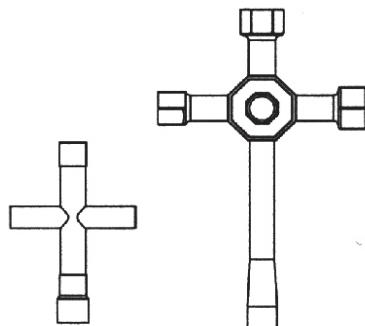
**Hobby scissors**



**Philips screwdriver**



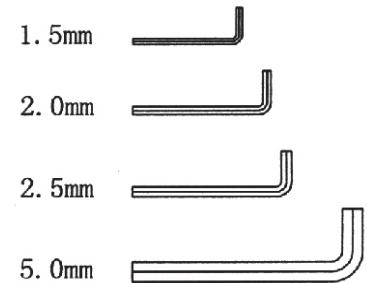
**Wire cutters**



**Cross wrench**



**Thread locking compound**



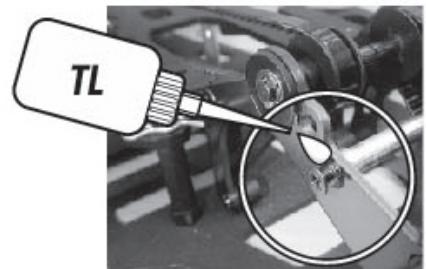
**Hex wrench**



**CA glue & rubber cement**

### IMPORTANT!!!

Check all the screws are tight before using the car!  
Check all the screws are still tight after every battery pack used in the car!



### RECOMMENDED:

Use thread lock on all screws that work loose.

### PLEASE READ BEFORE STARTING!

Before you throw down this manual and unleash your new vehicle, please continue reading for just a few short minutes. In addition to important safety precautions, just below you will also like to thank you for your purchase and hope that you enjoy the wonderful amount of fun and excitement that come from owning a high performance R/C vehicle. Whether you'll be hitting your local racetrack this coming weekend or just racing your vehicle down the driveway, experienced racers and novices alike are sure to enjoy the performance and versatility of the vehicle 1/8 4WD vehicle.

### SAFETY GUIDELINES

The vehicle is not intended for use by children without direct supervision of a responsible, knowledgeable adult. We shall not be liable for any loss or damages, whether direct or indirect

special, incidental, or consequential, arising from the use, misuse, or abuse of this product and/or any product or accessory required to operate this product.

## **IMPORTANT POINTS TO REMEMBER:**

Always, turn on your transmitter first before turning on your vehicle receiver switch. When turning a R/C vehicle off, the order is just the opposite: Turn the receiver switch off first and then turn the trans-mitter off. Just remember that when your vehicle is turned ON, your transmitter should always be turned ON. If not, your vehicle will no longer be under the control of your transmitter, and could unexpectedly take off on its own, causing damage to itself and other people.

Never use old, worn out batteries in your transmitter or vehicle. Use only fresh batteries or fully charged rechargeable batteries to ensure that you will not exceed the range of your radio system while driving your vehicle. It is also very important to stop your vehicle immediately when you begin to see that it is slowing down. This means the batteries in your vehicle are close to being fully discharged, and if you continue to run your vehicle after it has slowed, it may run "out of control" since it does not have sufficient voltage left to receive the signals from your transmitter. only run your vehicle in safe, open areas that will not put anything or anyone in danger of a collision. Use common sense when driving your vehicle to ensure that you are not causing a potential hazard to anyone(crowds of people and confined areas should be avoided). Although the model is small and light weight, it can still hurt when it runs into your ankle height. It can also startle someone who is not expecting it, so it is extremely important to ALWAYS keep a safe distance between any people and the path of your vehicle(don't forget this includes yourself)!

Never run your vehicle through puddles, wet grass, snow or any other type of moisture. Also never use any liquid cleaners around the electronic components on your vehicle. Any small amount of moisture can cause severe damage to your electronics. If you be running your vehicle with other R/C vehicles, always confirm before turning your transmitter on, that no one else is using your same frequency channel. If necessary, you may change frequencies.

Always let your motor and battery cool down completely between runs. The motor needs to cool completely at the end of a charge before using again. Heat is a big enemy of electric motors.

Overheating the motor will shorten its life and can cause it to fail. Prolonged running on high drag surfaces like grass, carpet etc. can heat the motor up and cause possible failure.

## **WHAT ELSE IS NEEDED**

8 "AA" alkaline batteries(for the radio transmitter)

## **GETTING STARTED**

### **1. INSTALLING TRANSMITTER BATTERIES**

Install 8 new "AA" batteries into your vehicle transmitter.

Check the life and proper installation of your batteries by switching the transmitter to ON. On vehicle transmitters, you should see all three LED'S light up(Red, yellow, and green). If you do not, your batteries may be low on voltage or you may not have installed them all correctly.

As the life of your transmitter batteries begins to decline, the green LED will no longer light. When you notice that you are down to only the yellow and red lights, this is a caution sign that it is time to install new batteries. If you continue operating your vehicle, and see that the yellow light goes out(and only the red light is lit), STOP IMMEDIATELY! Your vehicle may easily travel out of range causing you to lose all control, which could result in a collision causing damage to the vehicle or other property.



### **2. CHARGING YOUR VEHICLE**

Charge your vehicle's battery pack. Connect the charger to your battery pack(it will only plug in one direction) and then plug the charger into a standard wall outlet. Charging takes approximately 30 minutes. When the battery is charged unplug the charger and connect the battery to your speed control battery's connect plug.

Your vehicle charger will safely charge your battery pack and not over charge it. Be careful when using after market chargers that you do not overcharge the battery pack and ruin it.

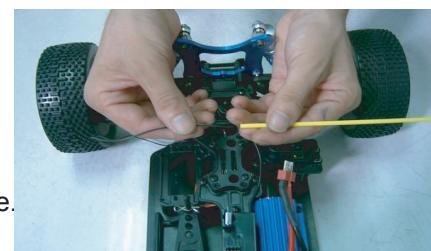
### **3. ASSEMBLING THE ANTENNA**

Locate the plastic antenna tube(found inside the manual bag).

Run the antenna wire up through the rear antenna mount hole in the upper chassis plate and begin feeding it into the plastic antenna tube until it comes out the other side.

Pull the remaining wire through the tube, and then press the tube into the antenna mount in the upper chassis plate. Bend the antenna wire down around the tube and install the black rubber antenna cap on the top of the tube. You may then wrap the remaining wire around the tube.

Do not cut the antenna wire off! This could shorten the range of your radio system.



## 4. LEARNING THE TRANSMITTER - FM

Before turning on your vehicle, please familiarize yourself with the controls and adjustments of the radio transmitter.

You may use the following diagram to confirm the location and function of each of these features.

- A. ON/OFF Switch: Controls power to the transmitter.
- B. Steering Wheel: Steering the vehicle left and right.
- C. Throttle Trigger: Controls the speed and the Forward/Reverse direction of the vehicle.
- D. Throttle Trim: Adjusts the neutral position of the throttle so your vehicle responds correctly to the trigger.
- E. Steering Trim: Adjusts the neutral position of the throttle so your vehicle travels straight.
- F. Throttle Reverse Switch: Reverses the forward/reverse direction of the steering wheel.
- G. Steering Reverse Switch: Reverse the left/right direction of steering wheel.
- H. Antenna: Transmits radio signals to your receiver.
- I. Recharging Jack: you can charge the battery with your charger if you are using rechargeable batteries in your transmitter.
- Caution: You can not recharge Non-rechargeable batteries.
- J. Battery Power Indicators: Signal when it is time to replace your transmitter batteries when the red indicator lit.
- K. Steering Knob: Adjusts the steering angle
- L. Frequency Crystal: Controls the operating frequency(channel) of your transmitter.



### RUNNING MULTIPLE VEHICLE

If you have some vehicles that would like to get a vehicle of their own or already have friends with other vehicles that you will be racing, it is very important that you first check what frequency channel your vehicle is on and confirm that none of your friends have the same frequency as yours. If you do find that someone else is using the same frequency channel that you are, you must wait for them to turn their transmitter and vehicle OFF or you may choose to change the frequency crystals in your transmitter and receiver (so that you can run together at the same time without causing any radio interference). Additional frequency crystal sets can be purchased separately and installed in a few quick seconds.

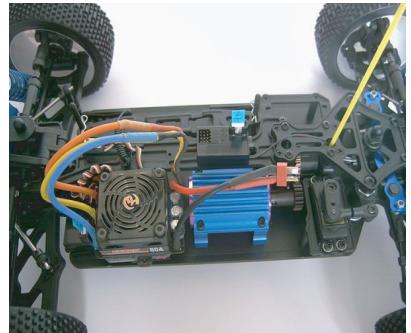
5. To change frequency crystals simply remove the black plastic crystal holder from the back of your transmitter by carefully pulling it straight out. Slide the crystal out of the holder and install the new crystal labeled "Tx" in its place. Then carefully align the two pins that extend from the transmitter, and gently press it into place.

Do not force the crystal! The pins can easily be broken! Remove the crystal from your receiver in the same careful manner using a pair of needle-nose pliers and install the new "Rx" crystal in its place.



### PLEASE NOTE:

It is very important that the crystal labeled "Tx" is installed in the transmitter and the crystal marked "Rx" is installed in the receiver.



## LEARNING THE TRANSMITTER - 2.4GHZ

Before turning on your vehicle, please familiarize yourself with the controls and adjustments of the radio transmitter.

You may use the following diagram to confirm the location and function of each of these features.

- A. ON/OFF Switch: Controls power to the transmitter.
- B. Steering Wheel: Steering the vehicle left and right.
- C. Throttle Trigger: Controls the speed and the Forward/Reverse direction of the vehicle.
- D. Throttle Trim: Adjusts the neutral position of the throttle so your vehicle responds correctly to the trigger.
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- I. Recharging Jack: you can charge the battery with your charger if you are using rechargeable batteries in your transmitter.
- Caution: You can not recharge Non-rechargeable batteries.
- J. Battery Power Indicators: Signal when it is time to replace your transmitter batteries when the red indicator lit.
- K. Steering Knob: Adjusts the steering angle.
- L. Start button: Channel.



## 2.4GHZ Frequency Pin Setup

### Pin Jumper



1. Switch on the transmitter.
2. Turn on the receiver power(you can choose any channel), plug the jumper into “BIND/BATT” of receiver. When the indicator starts flashing, that means the receiver comes into the set code mode. At this point, pull out the jumper immediately.
3. The receiver can automatically find the nearest transmitter to match with. Once they match successfully, the indicator would keep lighting(at this moment please plug the jumper into “BIND/BATT” again.) And if the indicator flashes continuously, that means they haven't matched successfully.

## 6. LET THE FUN BEGIN!

After reading all of the above information, you are likely ready to start racing!

Just proceed as follows:

- A. Fully extend the antenna on your transmitter.
- B. Turn your transmitter on.
- C. Turn your vehicle on.
- D. Adjust the “ThrottleTrim” knob on your transmitter if necessary(if the wheels are moving forward without touching the trigger, turn the throttle trim counter clockwise until the wheels stop).

## **PLEASE NOTE:**

If you do not have any “reverse” when pushing the trigger forward twice , adjust the throttle trim further in the counter clockwise direction. If you pull the trigger all the way back to forward full speed and your car stops, then adjust the throttle trim in the clockwise direction. But be careful not to go too far or your vehicle may not be able to reach full speed when pulling the trigger all the way back.

- E. Adjust the “Steering Trim” knob on your transmitter if necessary (so your car will travel in a straight line without turning the steering wheel)
- F. By now you are likely kicking up dust or burning up the asphalt. We highly recommend that you continue reading the remainder of this manual to find out how you can get even more enjoyment out of your vehicle.

## **An Instruction of Car Modeling Electric Speed Control**

### **Functions and Features:**

1. Specially designed for RC car, with excellent start-up, acceleration and linearity features.
2. Compatible with sensorless brushless motor.
3. Use top quality electronic components to enhance the current endurance ability of the ESC.
4. 2 running modes(Racing mode and Forward/Backward mode)
5. 4 steps of maximum reverse force adjustment
6. Proportional ABS brake function with 4 steps of maximum brake force adjustment, 8 steps of drag-brake force adjustment and 4 steps of initial brake force adjustment.
7. 4 start modes(also called “Punch”) from “soft” to “very aggressive”.
8. Multiple protection features: Low voltage cut-off protection for lithium or nickel battery / Over-heat protection / Throttle signal loss protection / Motor blocked protection.
9. 8 steps of timing adjustment
10. Waterproof and dustproof.
11. Easily program with only one button and compatible with pocket-size program card.

### **The LED Status in Normal Running**

1. In normal use, if the throttle stick is in the neutral range, neither the red LED nor the green LED will light.
2. The red LED lights when the car is run forward or backward and it will flash quickly when the car is braking.
3. The green LED lights when the throttle stick is moved to the top point(end point) of the forward zone or backward zone.

### **Alert Tones**

1. Input voltage abnormal alert tone: The ESC begins to check the input voltage when power on, if it is out of the normal range, such alert tone will be emitted: “beep-beep, beep-beep”(There is 1 second time interval between every “beep-beep” tone.)
2. Throttle signal abnormal alert tone: When the ESC can’t detect the normal throttle signal, such and alert tone will be emitted: “beep, bee, beep” (There is 2 seconds time interval between every “beep” tone).

### **Protection Function:**

1. Low voltage cut-off protection: If the voltage of a lithium pack is lower than the threshold for 2 seconds, the ESC will cut off the output power. Please note that the ESC can not be restarted if the voltage of each lithium cell is lower than 3.5V.
2. Over-heat protection: When the temperature of the ESC is over 95 Celsius degree for 5 seconds, the ESC will cut off the output power. You can disable the over-heat protection function for competition race.
3. Throttle signal loss protection: The ESC will cut off the output power if the throttle signal is lost for 0.2 second.

# A Special Instructions About Batteries

## Contents:

1. Keep batteries/storage batteries out of reach of children.
2. Do not let batteries lie around openly. There is a risk of batteries being swallowed by children or pets. In such case, seek instant medical care!
3. Batteries/rechargeable batteries must never be short-circuited, taken apart or thrown into fire. They might explode!
4. Leaking or damage batteries/rechargeable batteries might cause acid burns when getting into contact with skin. Therefore, use suitable protective gloves.
5. Conventional batteries must not be recharged. Danger of fire and explosion! Only charge rechargeable batteries which are intended for this purpose, use suitable rechargeable battery chargers.
6. Pls observe correct polarity of batteries/rechargeable batteries and the connection of a re-chargeable battery pack(note plus/+ and minus/-) when inserting the batteries.
7. If the device is not used for a longer period of time (eg storage), take out the inserted batteries/ rechargeable batteries of the remote control to avoid damage from leaking batteries/rechargeable batteries. Recharge the rechargeable battery about every 3 months, otherwise there may a so called deep discharge because of the self discharge, which makes the rechargeable batteries useless.
8. Always exchange the entire set of batteries or rechargeable batteries. Do not mix full batteries/rechargeable batteries with half-full ones. Always use batteries or rechargeable batteries of the same type and manufacturer.
9. Never mix batteries and storage batteries. Either use eight batteries or eight rechargeable batteries for the remote control/transmitter.

## Please Note:

Before the rechargeable battery pack delivery its maximum power, several complete dis-charge and charge cycles are necessary.

Always drive the rechargeable battery pack empty, since recharging a "half - full" rechargeable battery pack can cause a so called memory effect. That means that the rechargeable battery pack loses its capacity, it no longer releases all of its saved energy, drive time is decreased.

If you are using several rechargeable battery packs or rechargeable batteries, purchasing a high quality charger maybe worthwhile. They are normally also suitable for fast charging of rechargeable batteries.

## For this purpose, proceed as follows:

If the rechargeable battery pack was taken directly from the vehicle and is still hot, wait until the rechargeable battery pack has cooled down before you recharge. (min. of 5-10 minutes)

Connect the plug-in charger with a proper mains socket.

Connect the rechargeable battery pack with correct polarity with the plug-in charger.  
Normally the special design of the two plugs avoids the incorrect connection of the rechargeable battery.

## **Attention:**

Do not use any force when plugging in it!

For reason of safety place the rechargeable battery pack on a non-flammable surface, eg. a tiled floor.

Keep the rechargeable battery pack away from flammable objects.

Never leave the rechargeable battery pack unattended.

The rechargeable battery pack gets warm during charging, this is normal.

Keep the rechargeable battery pack away from flammable objects.

Never leave the rechargeable battery pack unattended.

The rechargeable battery pack gets warm during charging, this is normal.

Separate the rechargeable battery pack from the plug-in charger after charging, pull the plug-in charger from the mains socket.

Before using the rechargeable battery pack in the vehicle, wait until it has completely cooled down.

After your playing, please do not forget to cut the connections of battery and ESC!

## **Disposal:**

The user is legally obliged(battery regulation) to return used batteries and storage batteries.

Do not dispose of used batteries via the household rubbish!

Batteries/storage batteries containing harmful substances which been disposed via the household rubbish is prohibited.

You can return used batteries/accumulators free of charge to any collecting point in your local authority, so that you comply with your legal obligations and make your contribution to environmental protection.

## **Declaration for Using of Our Products**

Even if the vehicle is quite small at the first glance, there is risk of injuries in the case of crash with people(or animals), because of the high acceleration capacity and the high achievable speed. Sharp edges and rotating parts also present a high danger!

This is why you should drive very responsibly and carefully, this is especially the case for inexperienced drivers.

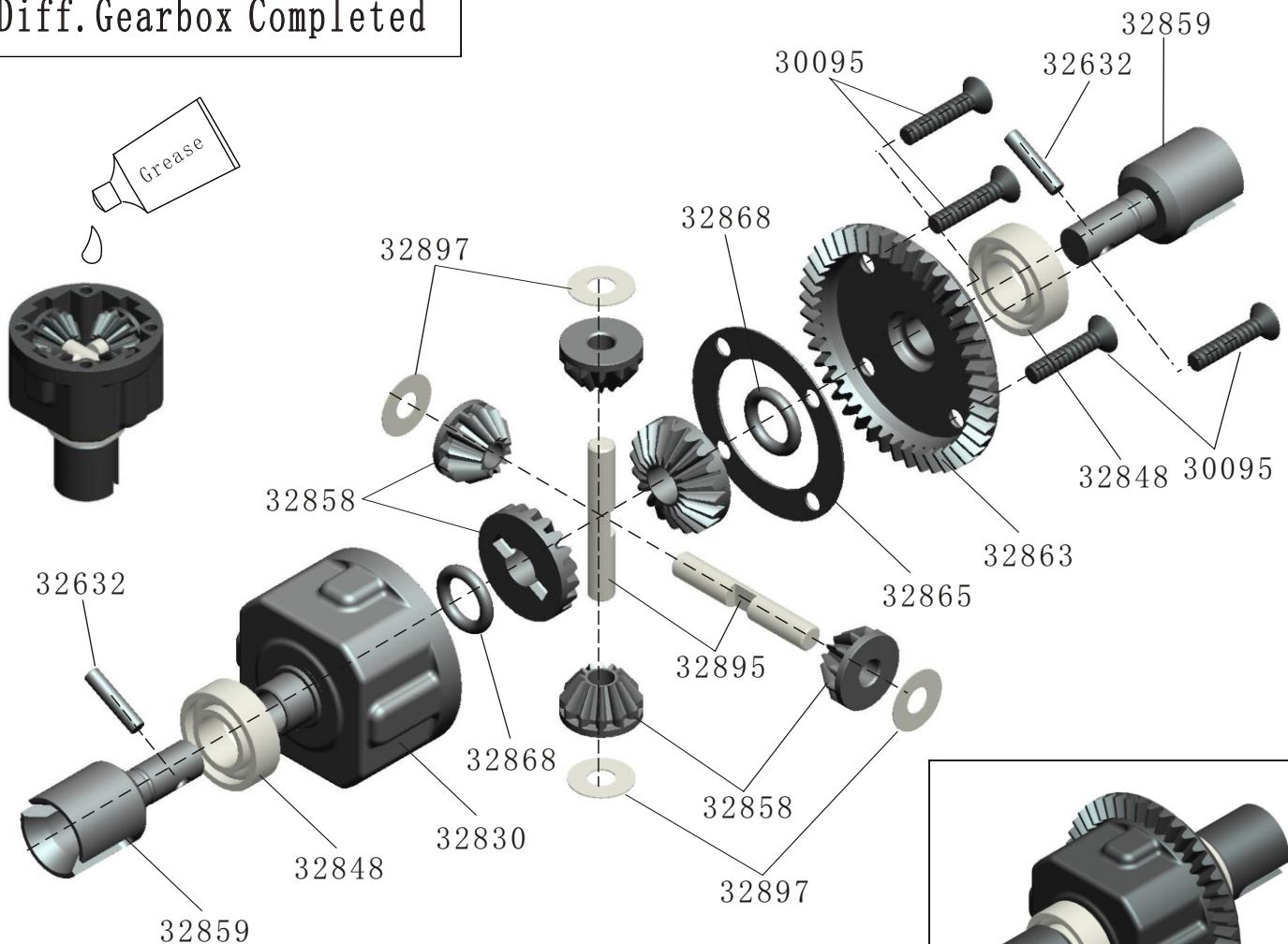
So, here we declare as below:

1. Please do note this manual carefully, especially the attention parts and if you are a new player without enough experience, we will not take any responsibility for the car damages or injuries caused by incorrect operation!
2. Please do not change the matches of the brushless ESC, motor and the Li-Po battery casually, if you want to make a change, please do ask for ideas of professional people, incorrect and unsuitable matches will affect the functions and the car's high performance, even it will cause the damages of the electronic parts and the crash of the car!

We do not take the responsibility of car damages and injuries of unsuitable matches or equipment changes!

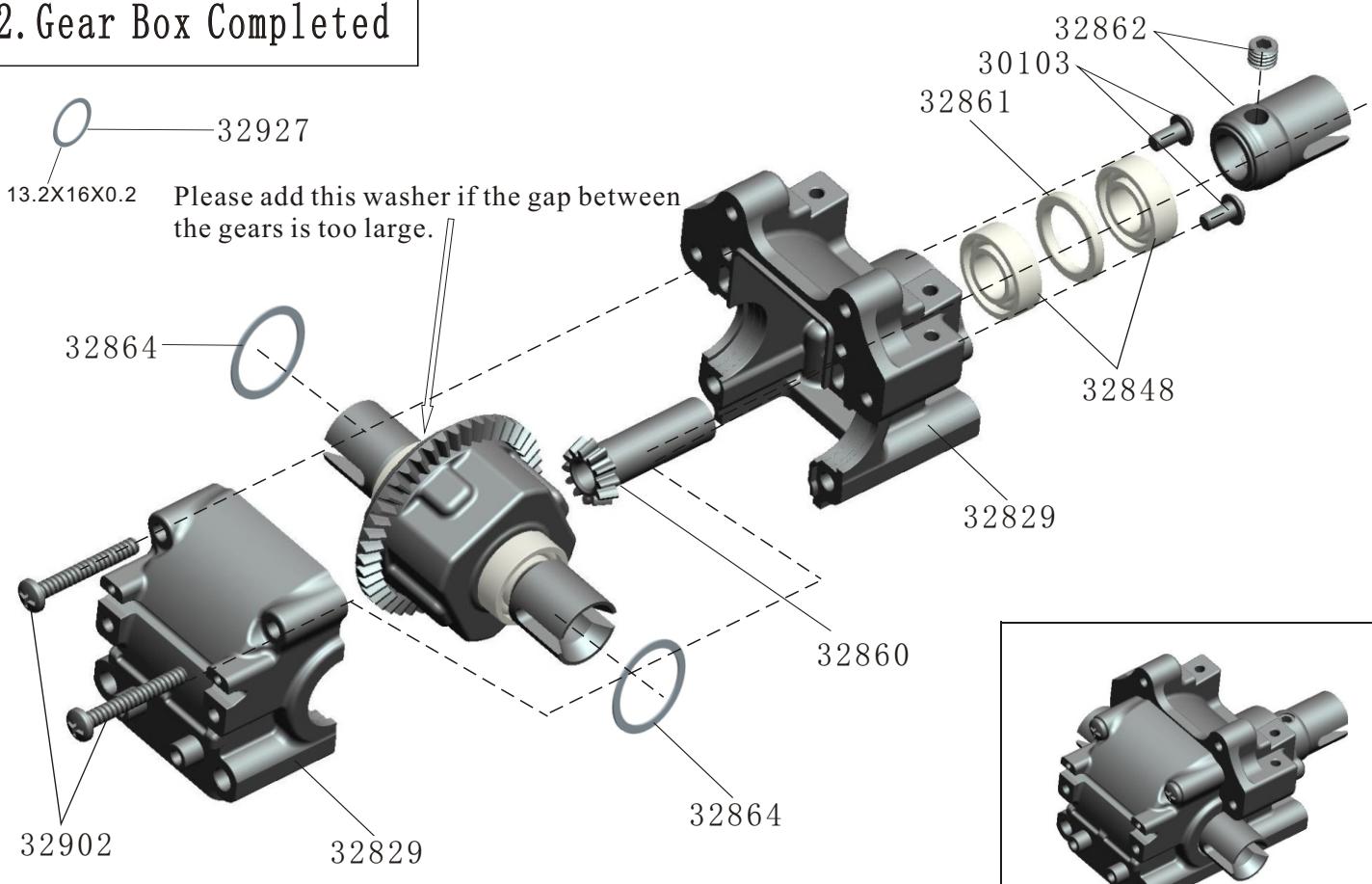
3. We have the right to change the specification and parameter of the model and without notice in advance, pls take the material object as the standard!

## 1. Diff. Gearbox Completed

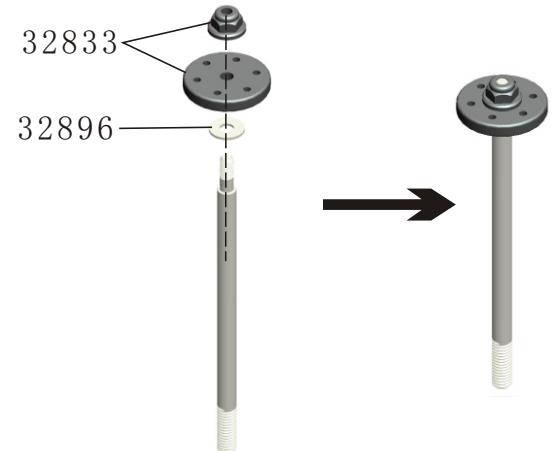
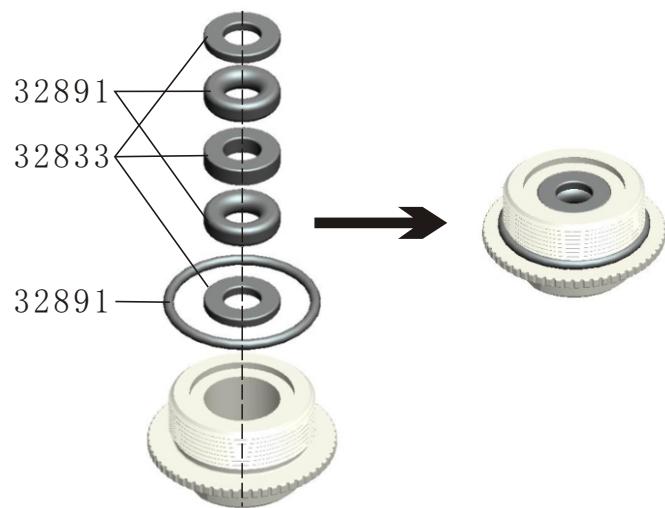


Remark: A2015T-EL version has only two spur gears!

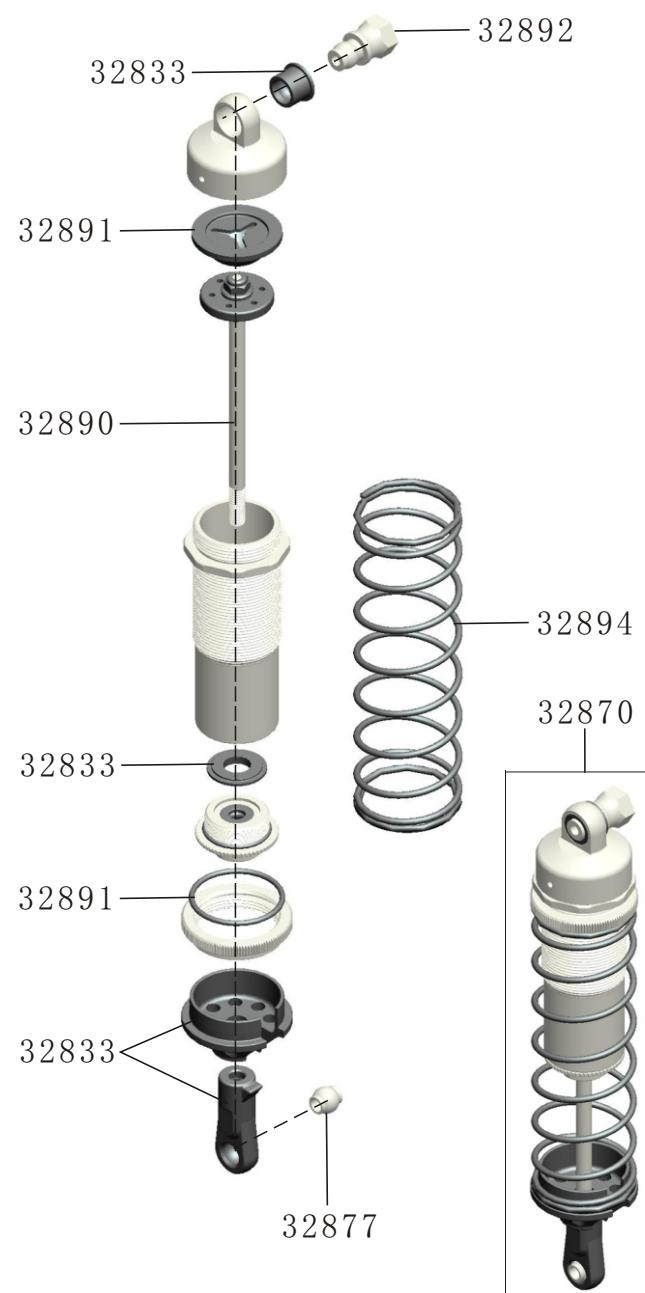
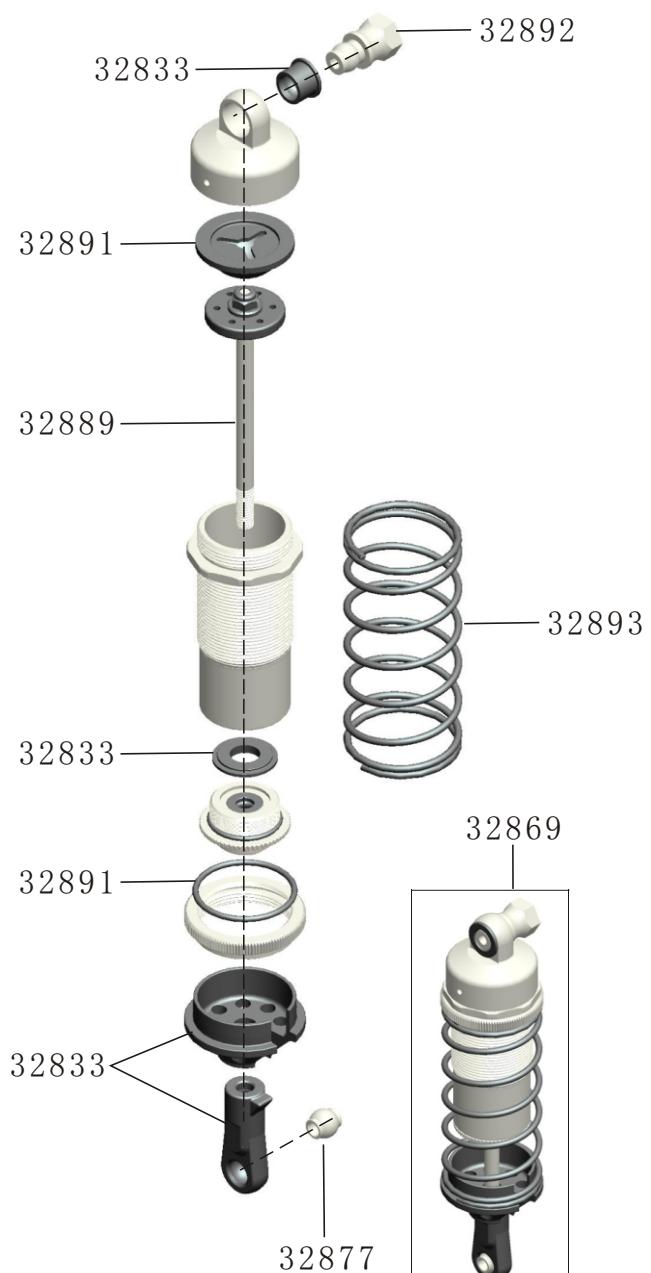
## 2. Gear Box Completed



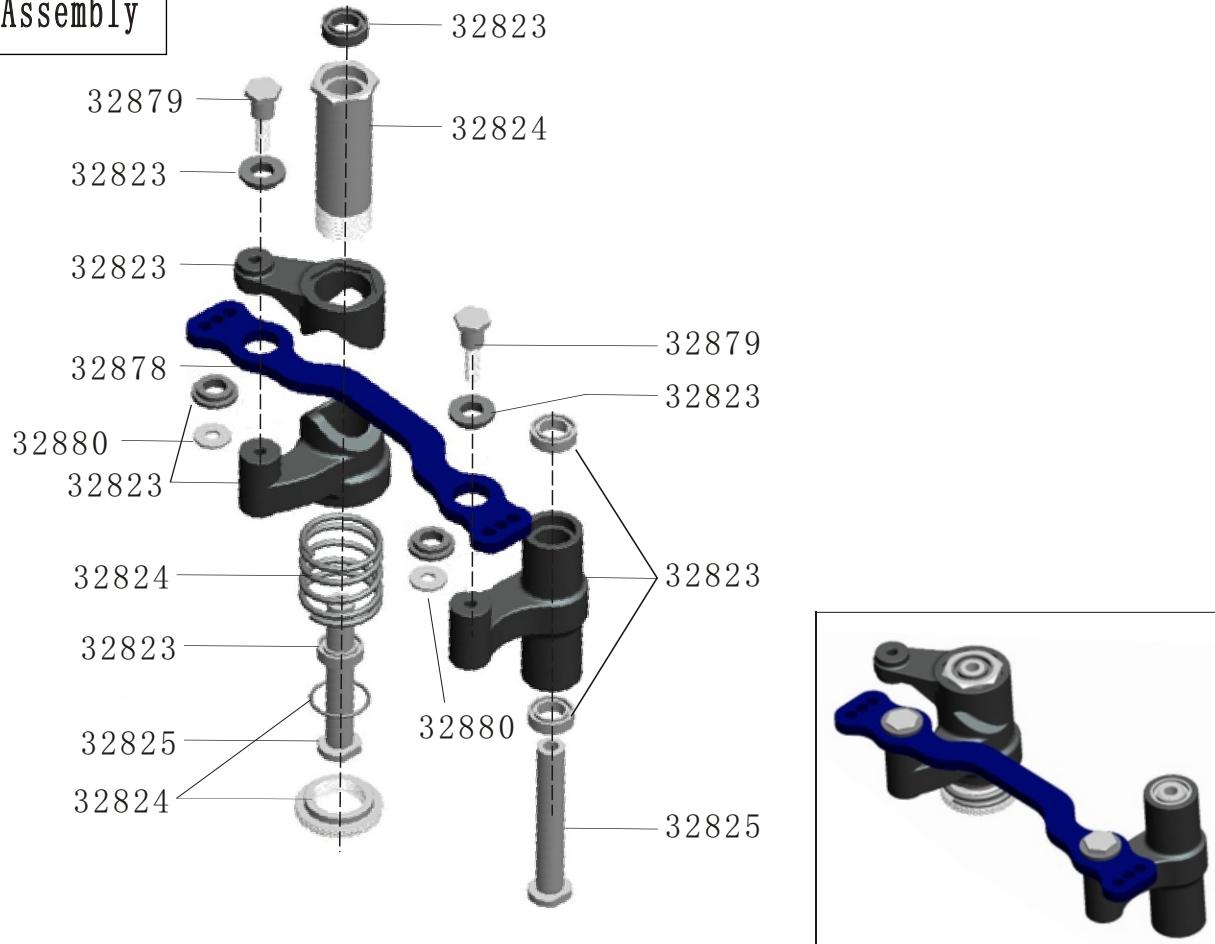
### 3. Shocks Components



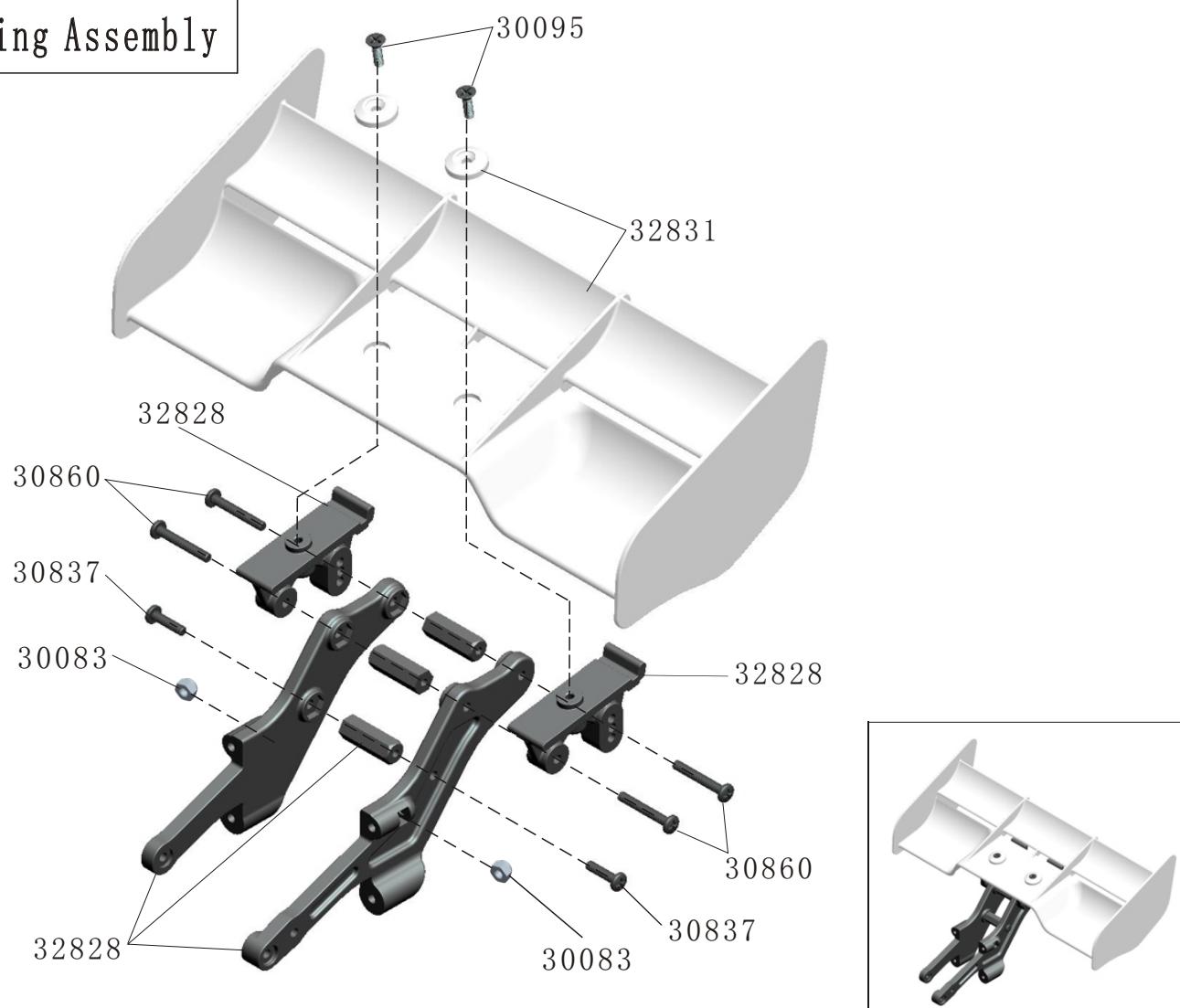
### 4. Shocks Assembly



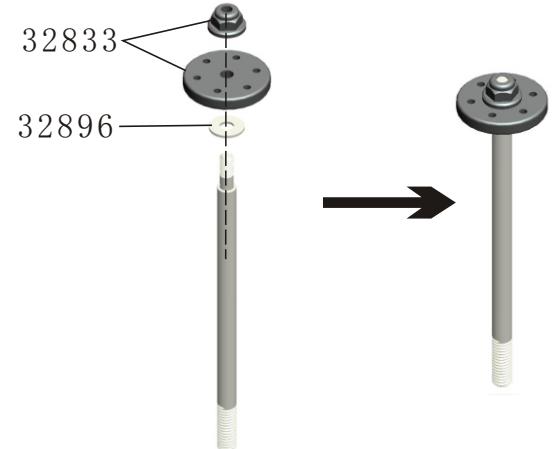
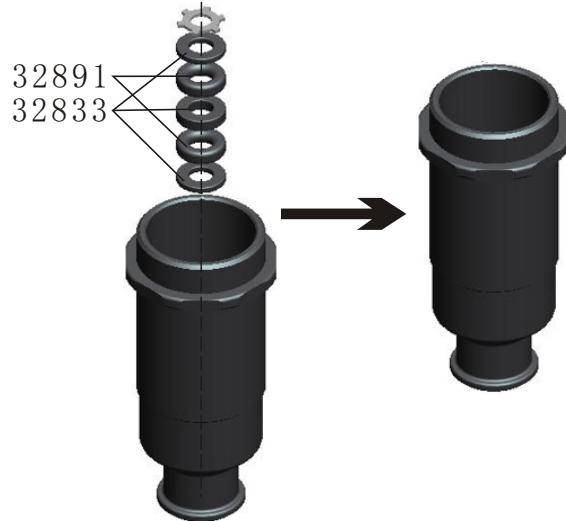
## 7. Servo Saver Assembly



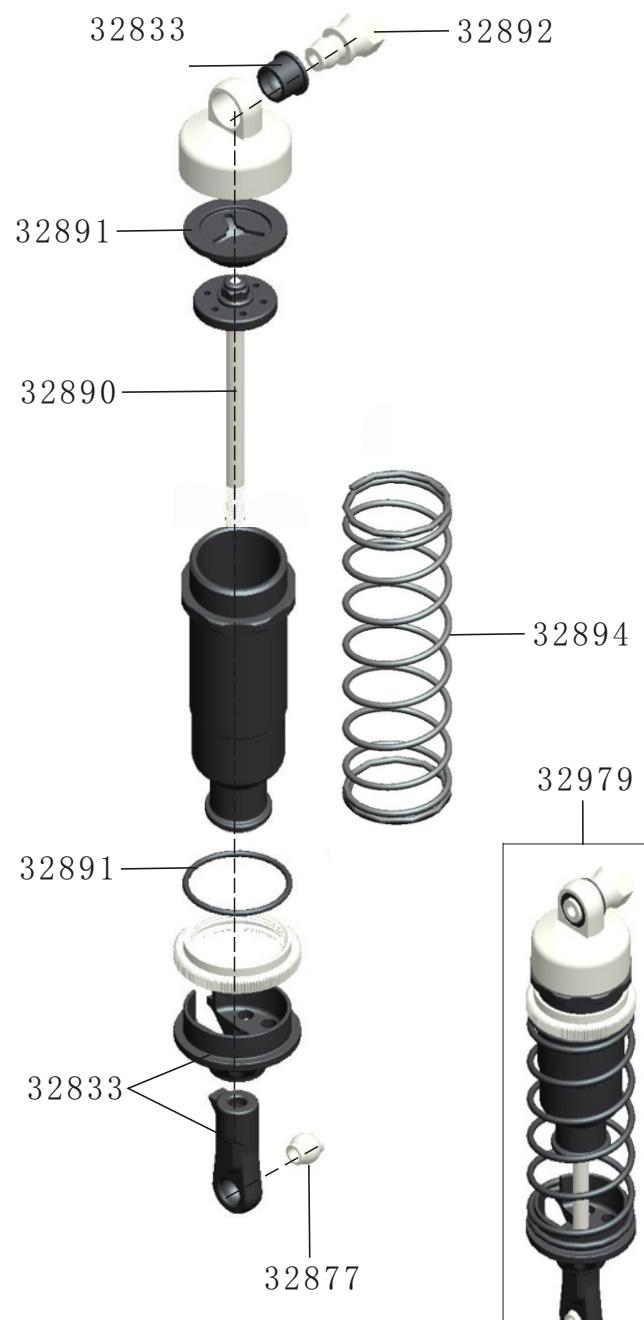
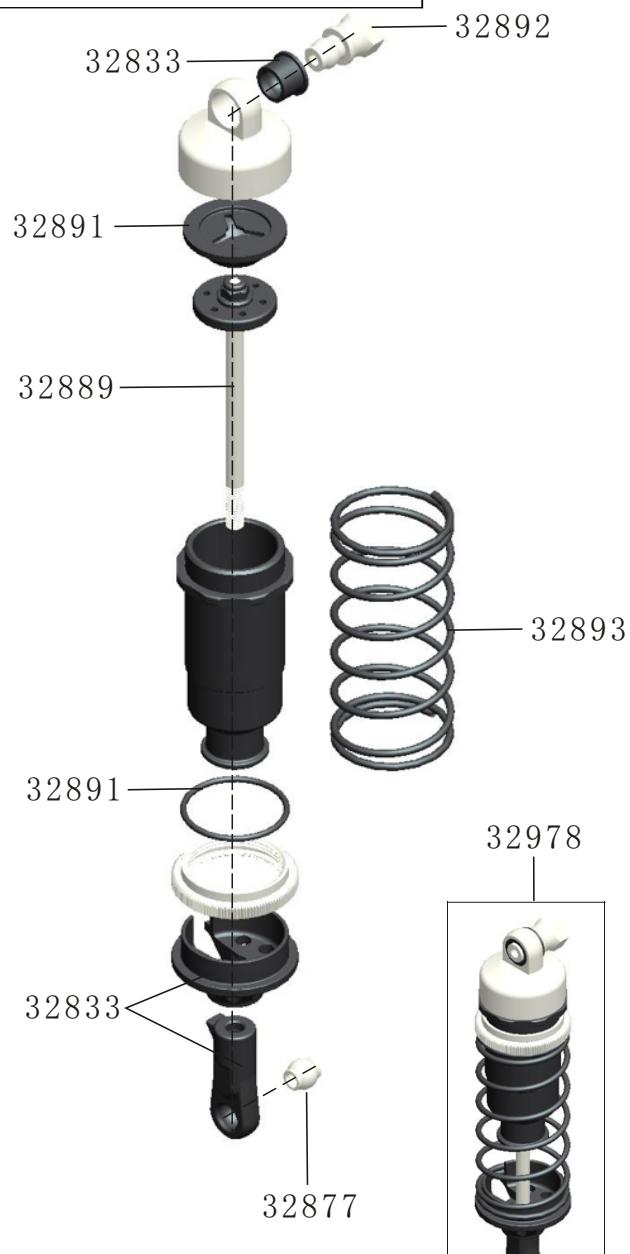
## 8. Rear Wing Assembly



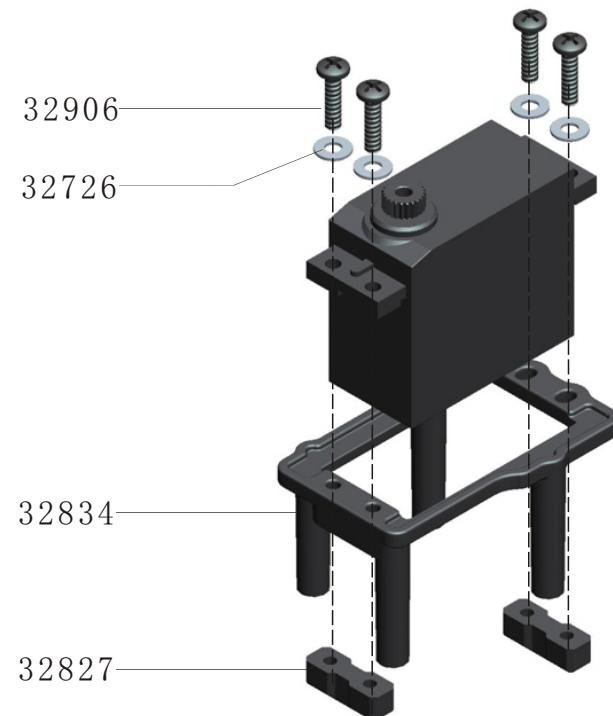
## 5. Plastic Shock Components



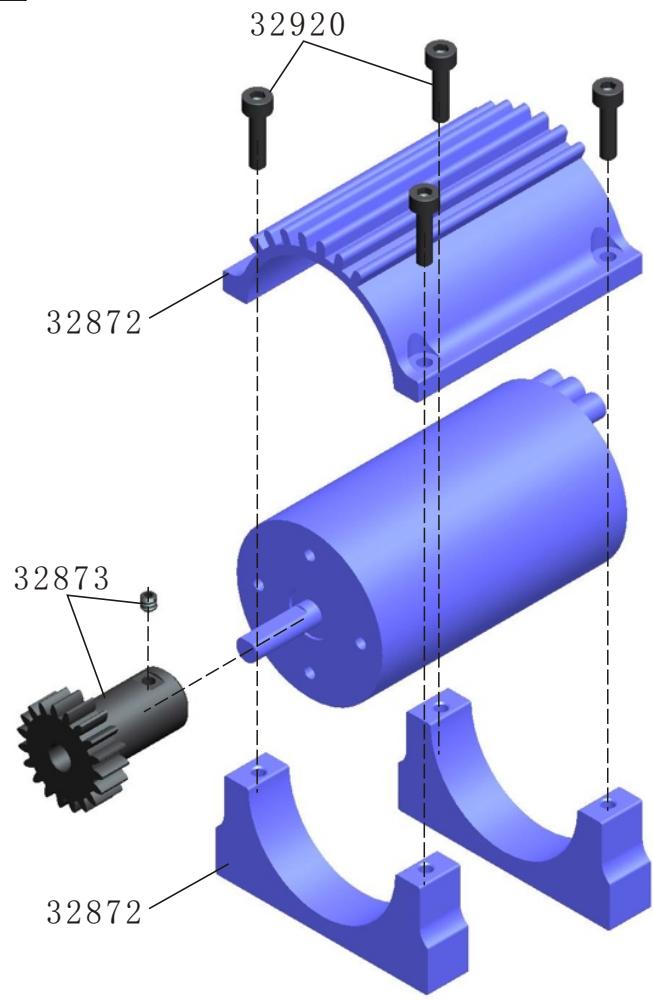
## 6. Plastic Shock Assembly



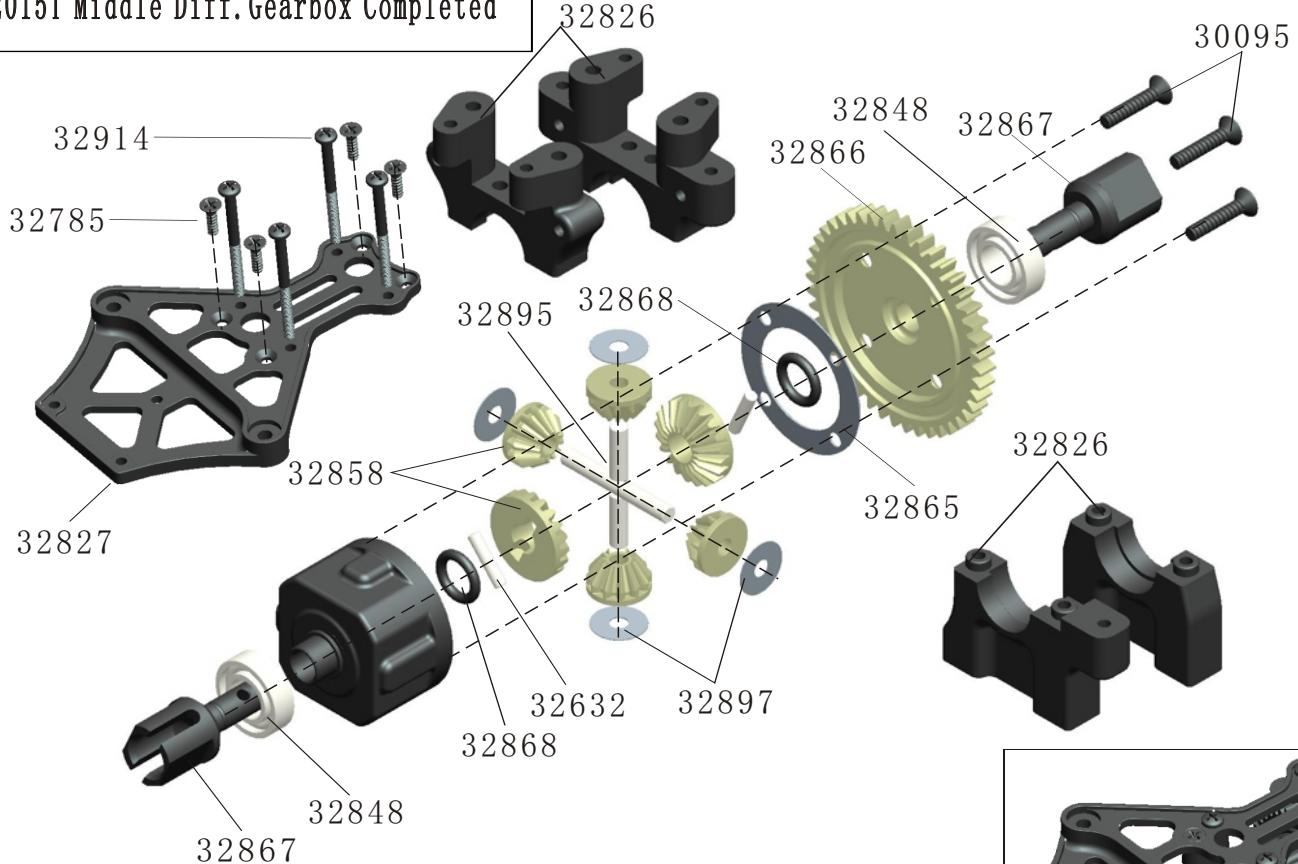
## 9. Servo Mount



## 10. Motor Mount



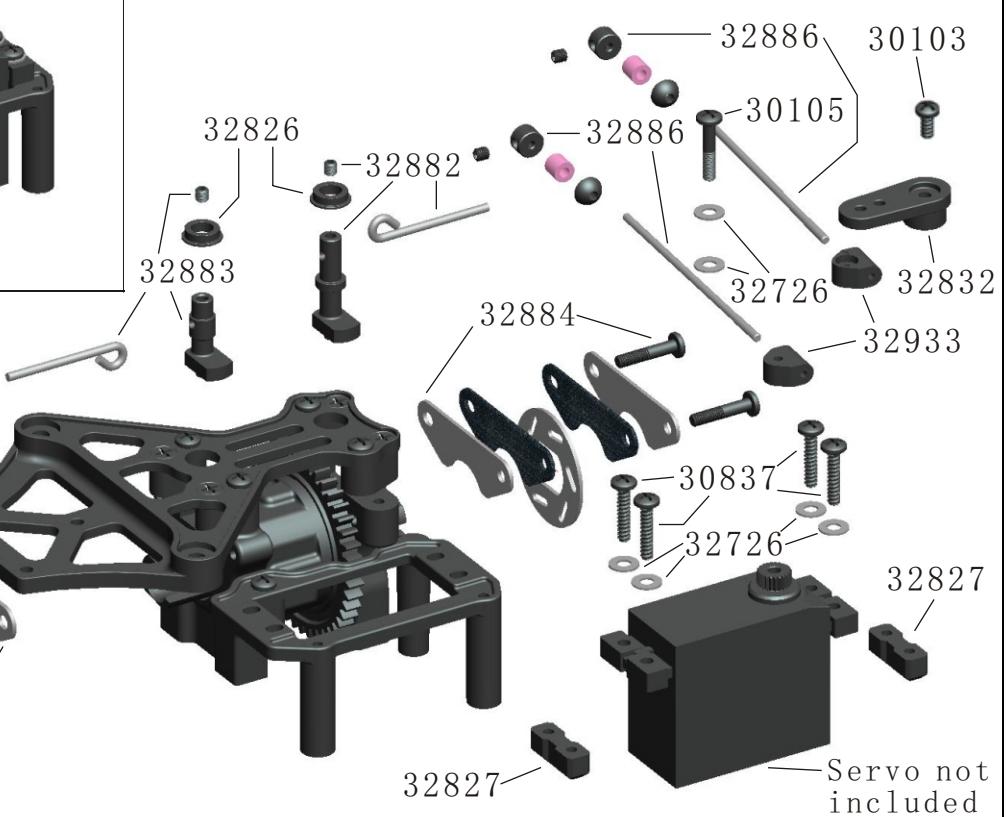
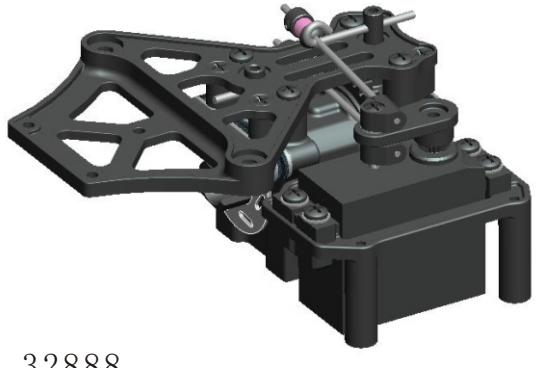
## 11. A2015T Middle Diff. Gearbox Completed



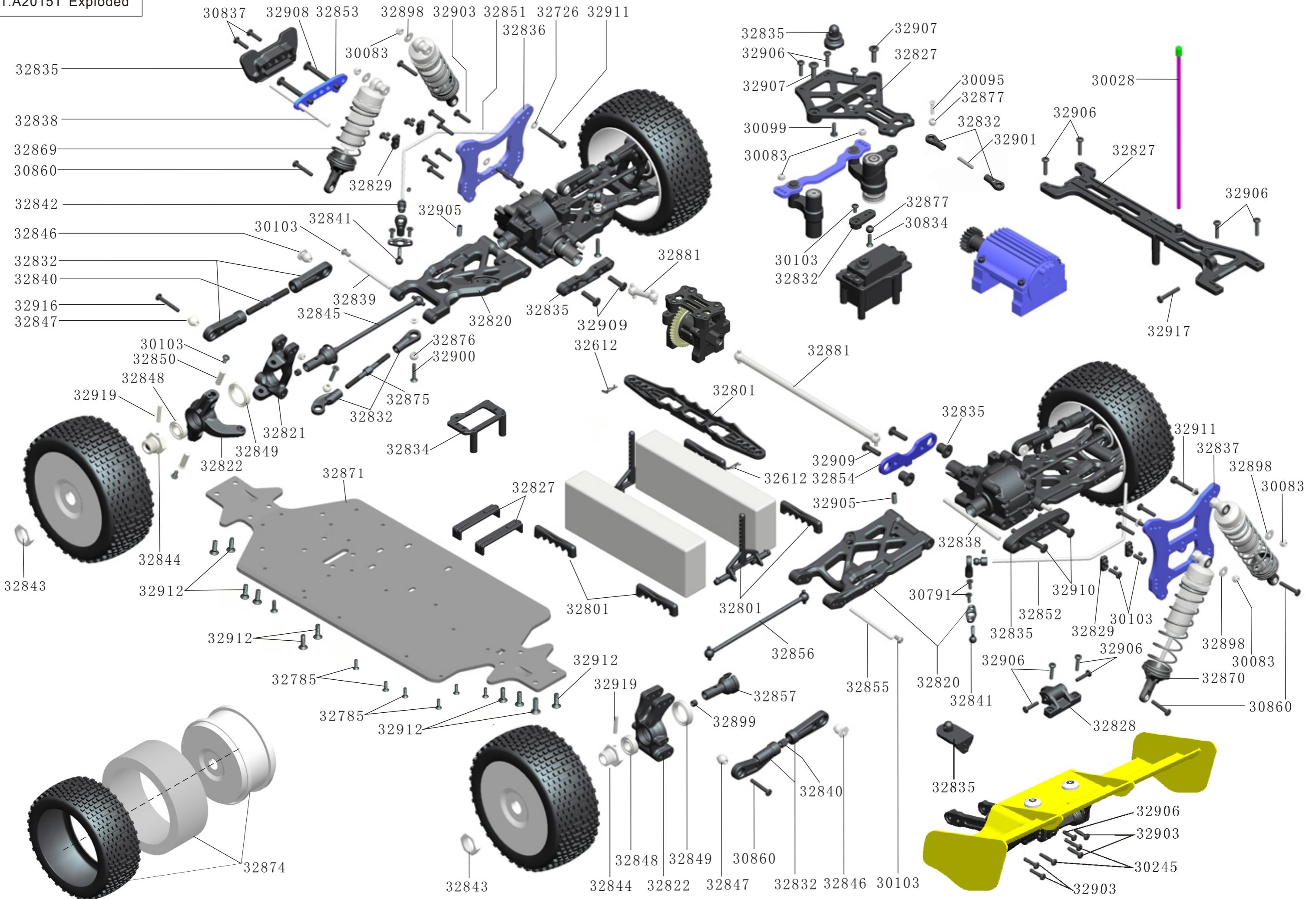
Remark: A2015T-EL version has only two spur gears!



## 12. Upgrade Brake System Assembly



11.A2015T Exploded



12.A2015T-EL Exploded

