

# MONSTER TRUCK™ BRUSHLESS



## ASSEMBLY AND MAINTENANCE GUIDE

### HELPFUL HINTS

- ✓ Avoid working over a deep pile carpet. If you drop a small part or screw, it may be difficult to find.
- ✓ Place a mat or towel over your work area. This will prevent parts from rolling off and will protect the work surface.
- ✓ Avoid running the car in cold weather. The plastic and metal parts can become brittle at low temperatures. In addition, grease and oil become thick, causing premature wear and poor performance.
- ✓ Dromida's all-weather electronics allow you to operate your vehicle in various conditions, including rain, snow, mud and more. DO NOT submerge your Dromida Vehicle!

### MAINTENANCE

#### BEFORE EACH RUN

- ✓ **IMPORTANT:** Check to make sure that all screws are tight. Check that the servo saver screw is fully tightened to ensure that your Dromida Monster Truck tracks straight.
- ✓ Always check the condition of your radio system batteries and replace if necessary.
- ✓ Check to make sure that all of the moving parts of the Dromida Monster Truck move freely and do not bind.
- ✓ Turn on the radio and make sure the servo moves easily and in the proper direction.
- ✓ Check for any broken or damaged parts. Replace them before running. Running with broken or damaged parts could damage additional parts.
- ✓ Check to make sure that all wires are properly connected.

#### AFTER EACH RUN

- ✓ Clean any debris from the chassis and moving parts.
- ✓ Check for any broken or damaged parts. Replace them before the next run.
- ✓ Disconnect and remove the battery from the chassis.





















#### AFTER EVERY 10 RUNS

- ✓ Check to make sure that the bearings are free of dirt and debris, and roll smoothly.
- ✓ Check the shocks for oil leakage.
- ✓ Check the tires to make sure they are still properly glued to the rims.

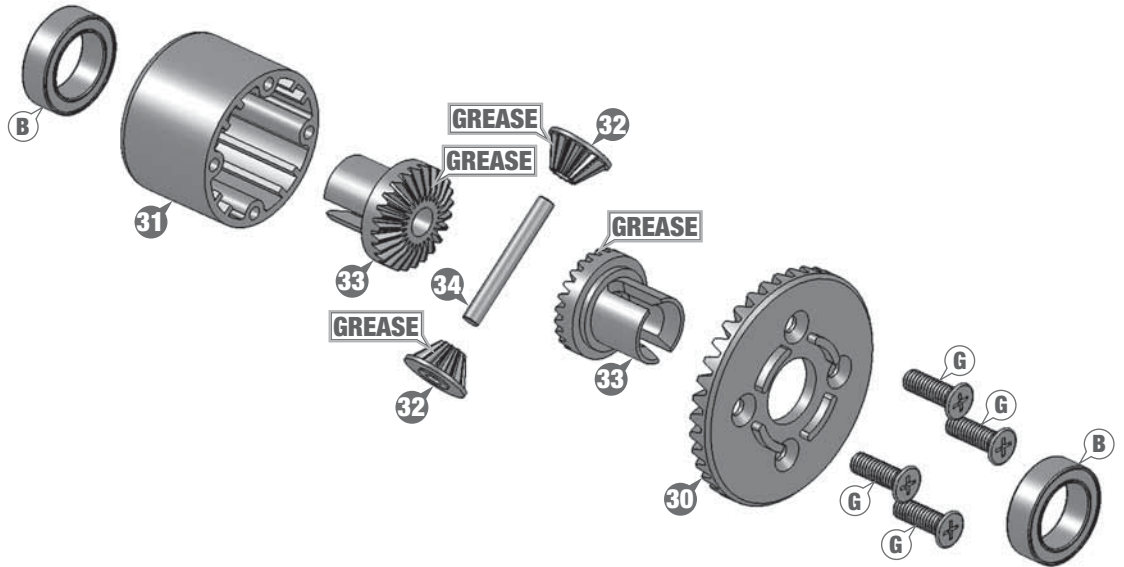


### HARDWARE CHART

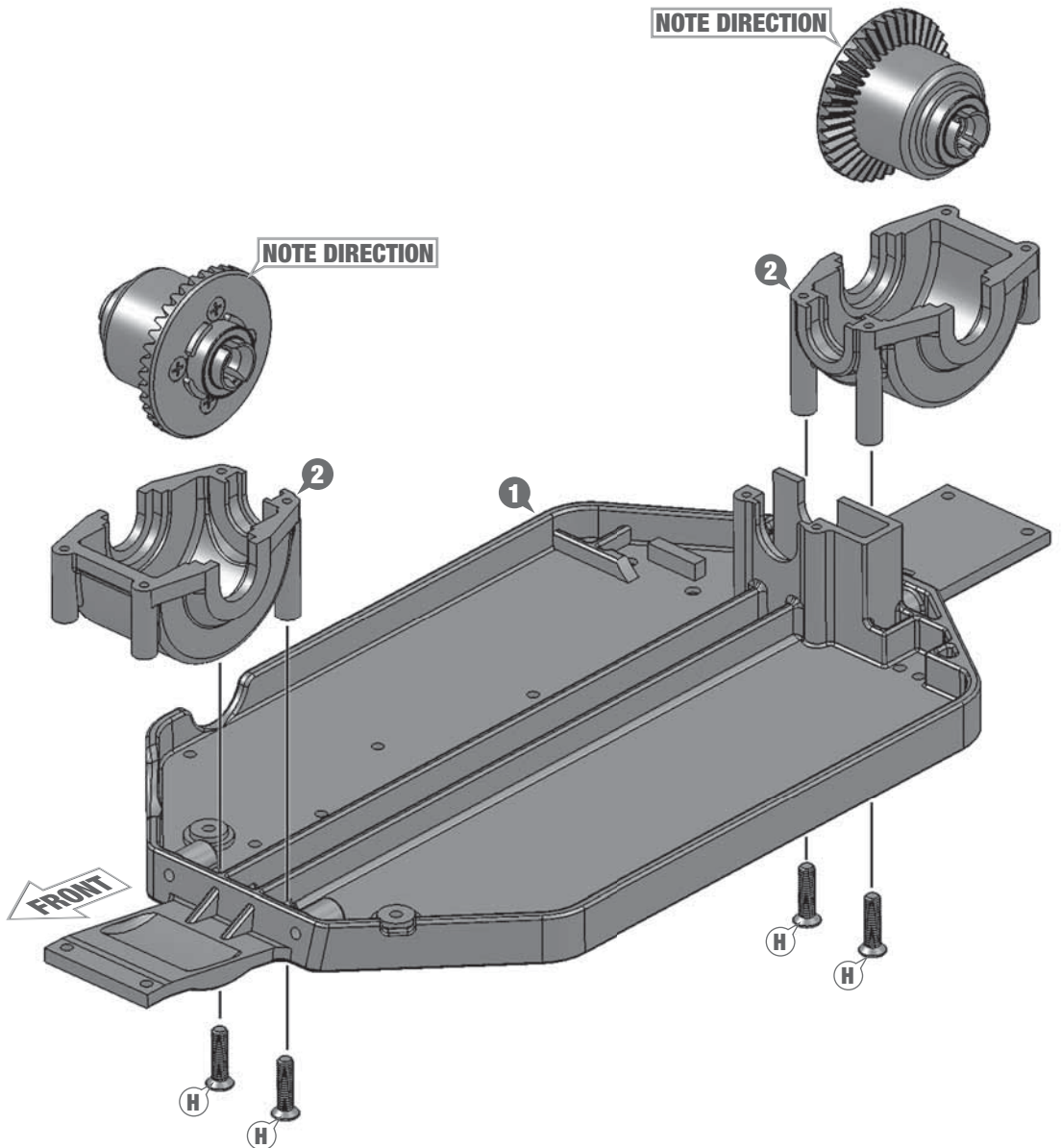
ACTUAL SIZE (WHEN PRINTED AT 100%)

<b>A</b>  6x10MM BALL BEARING	<b>H</b>  2x10MM FLAT HEAD SCREW	<b>P</b>  2x8MM ROUND HEAD SHOULDER SCREW
<b>B</b>  8x12MM BALL BEARING	<b>J</b>  2x14MM FLAT HEAD SCREW	<b>Q</b>  3x3MM SET SCREW
<b>C</b>  2x4MM ROUND HEAD SCREW	<b>K</b>  2.5x8MM FLAT HEAD SCREW	<b>R</b>  3MM LOCK NUT
<b>E</b>  2x8MM ROUND HEAD SCREW	<b>L</b>  2.5x8MM SOCKET HEAD SCREW	<b>S</b>  2.6x5MM WASHER
<b>F</b>  2x10MM ROUND HEAD SCREW	<b>M</b>  2.5x14MM SOCKET HEAD CAP SCREW	<b>T</b>  3x6MM WASHER
<b>G</b>  2x8MM FLAT HEAD SCREW	<b>N</b>  2.5x6MM SOCKET HEAD SCREW	<b>U</b>  1.5x6MM E-CLIP
		<b>V</b>  BODY CLIP (SMALL)
		<b>X</b>  2x6MM SELF-TAPPING ROUND HEAD SCREW

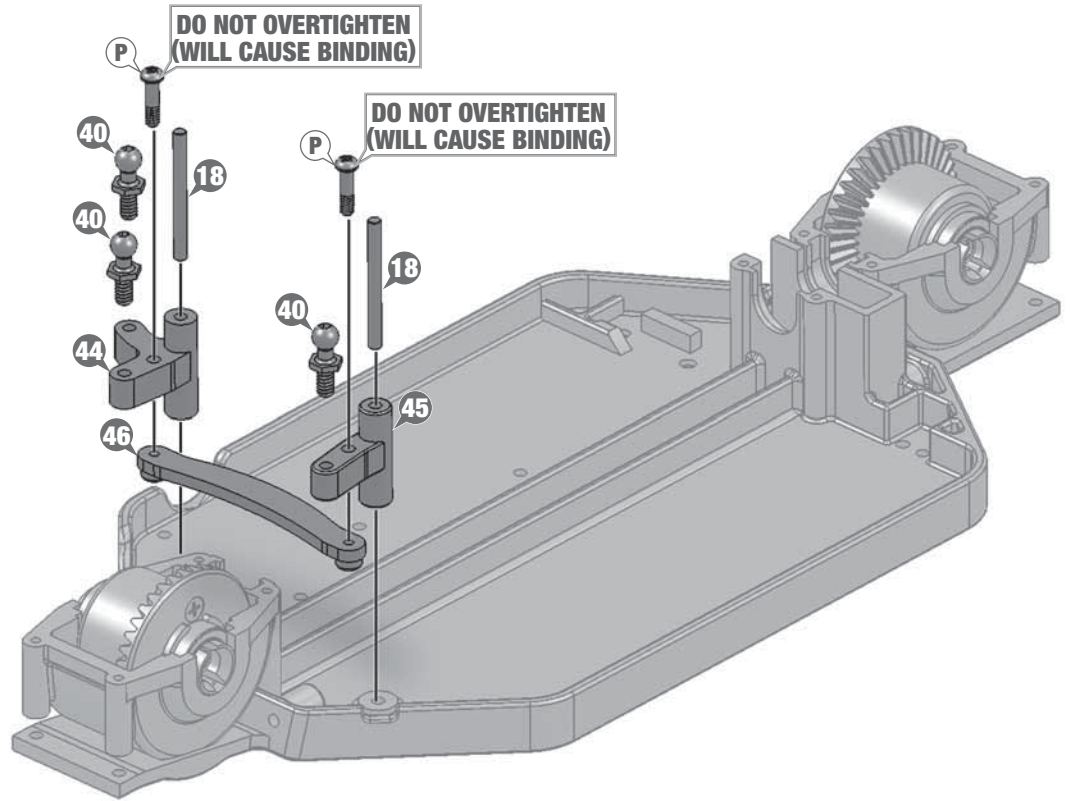
## 1. DIFFERENTIAL ASSEMBLY



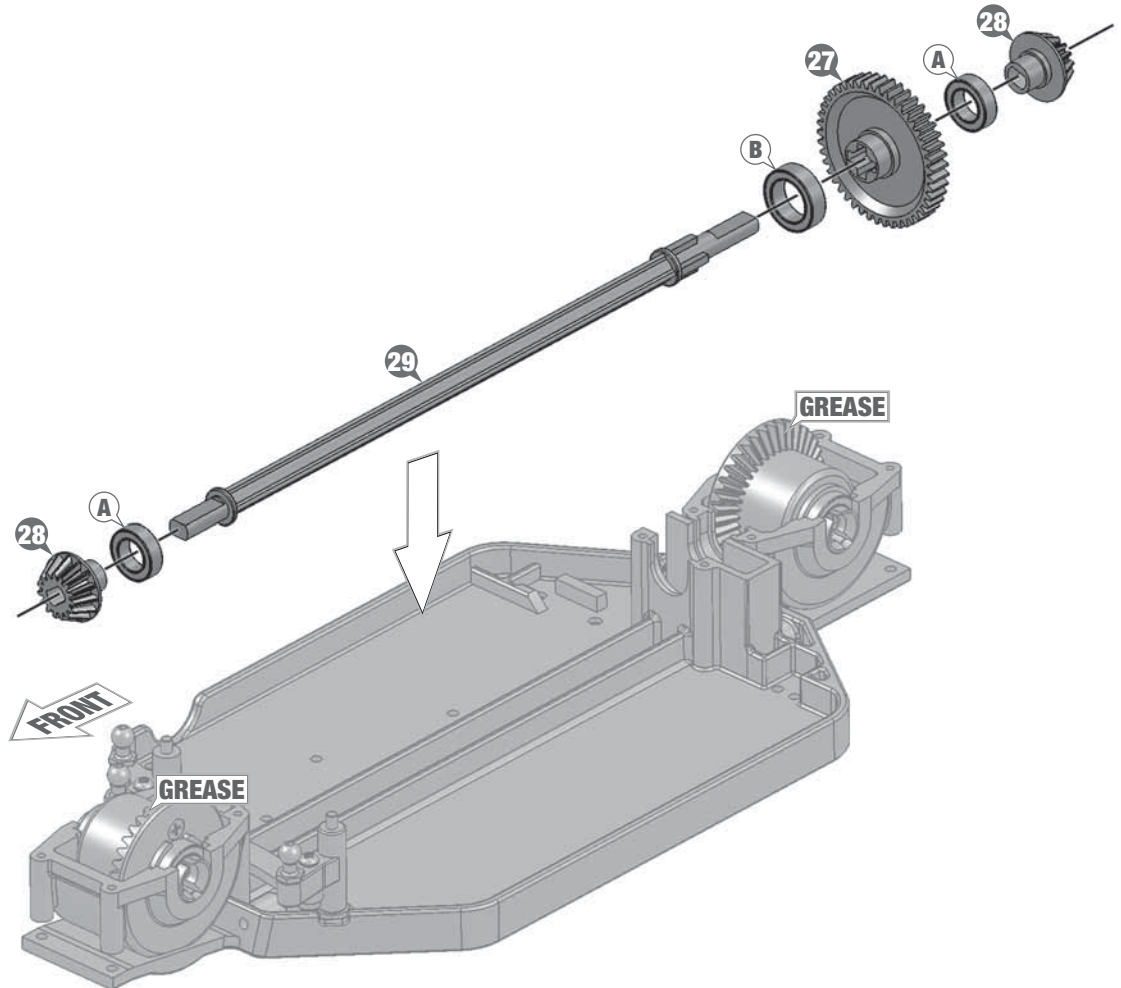
## 2. DIFFERENTIALS TO CHASSIS



### 3. STEERING ASSEMBLY

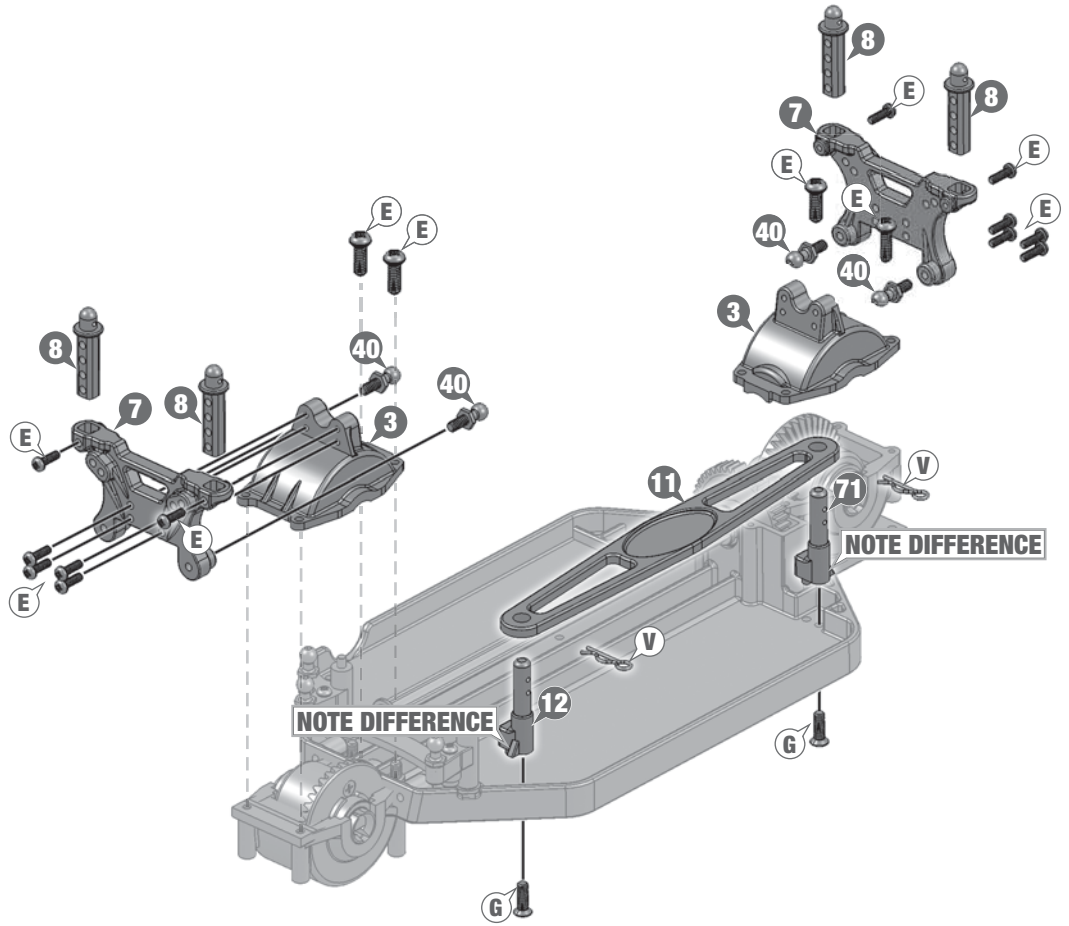


### 4. CENTER SHAFT

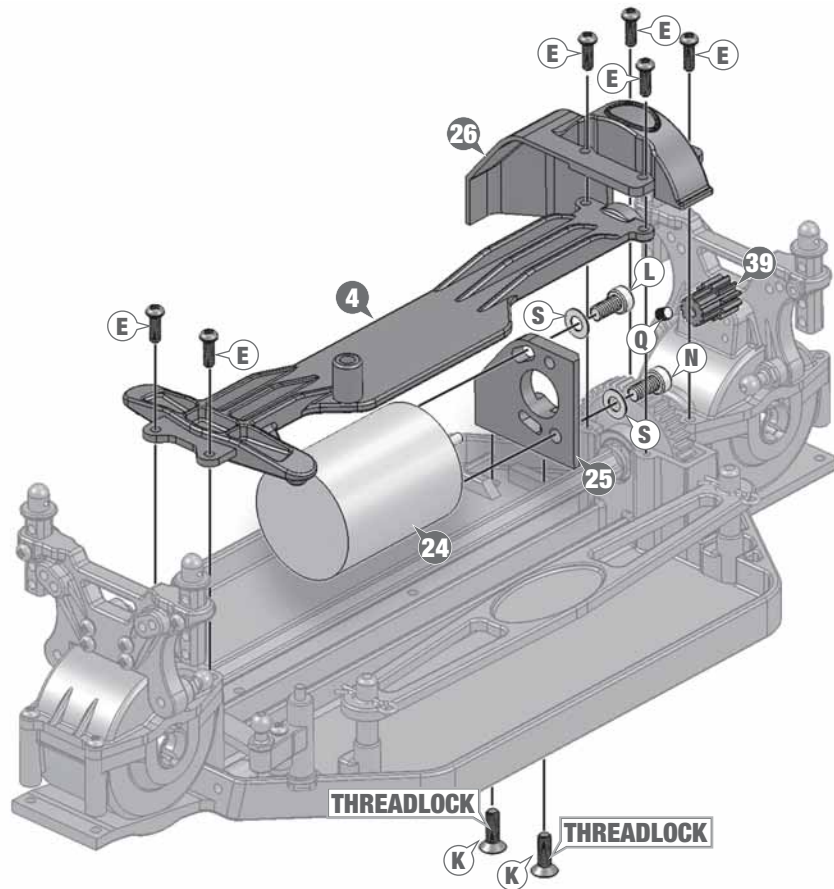




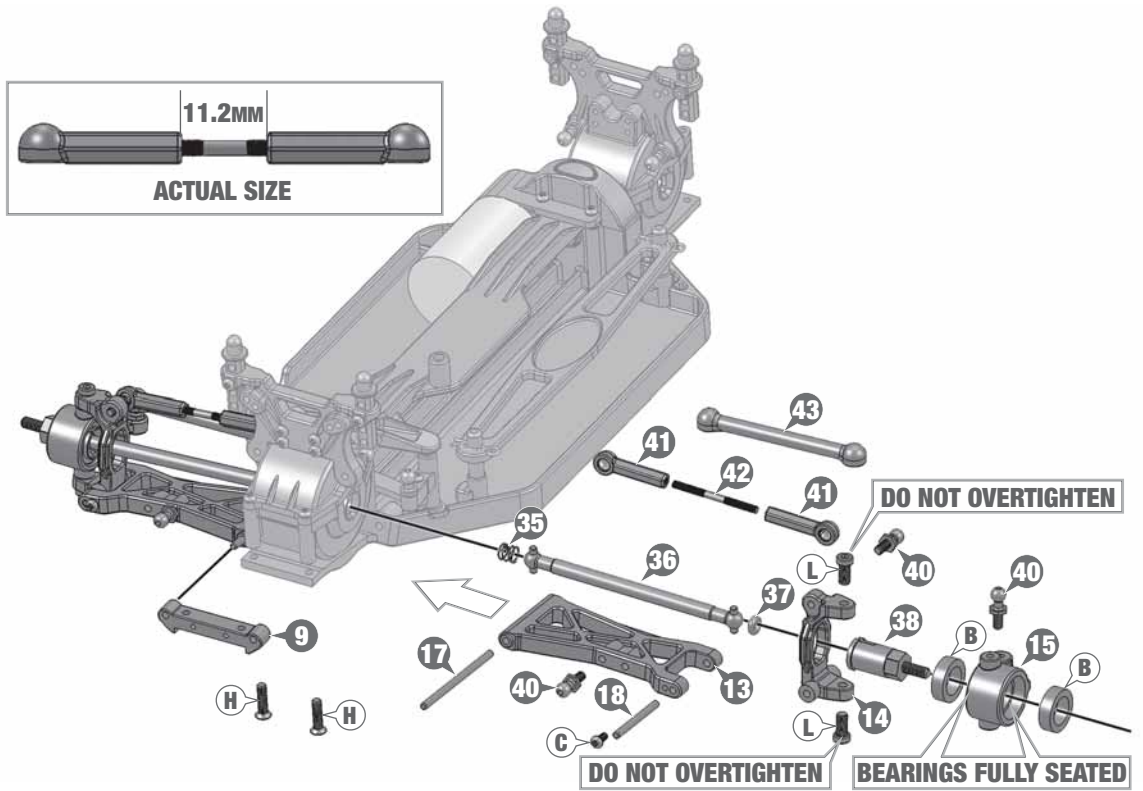
## 5. SHOCK TOWERS



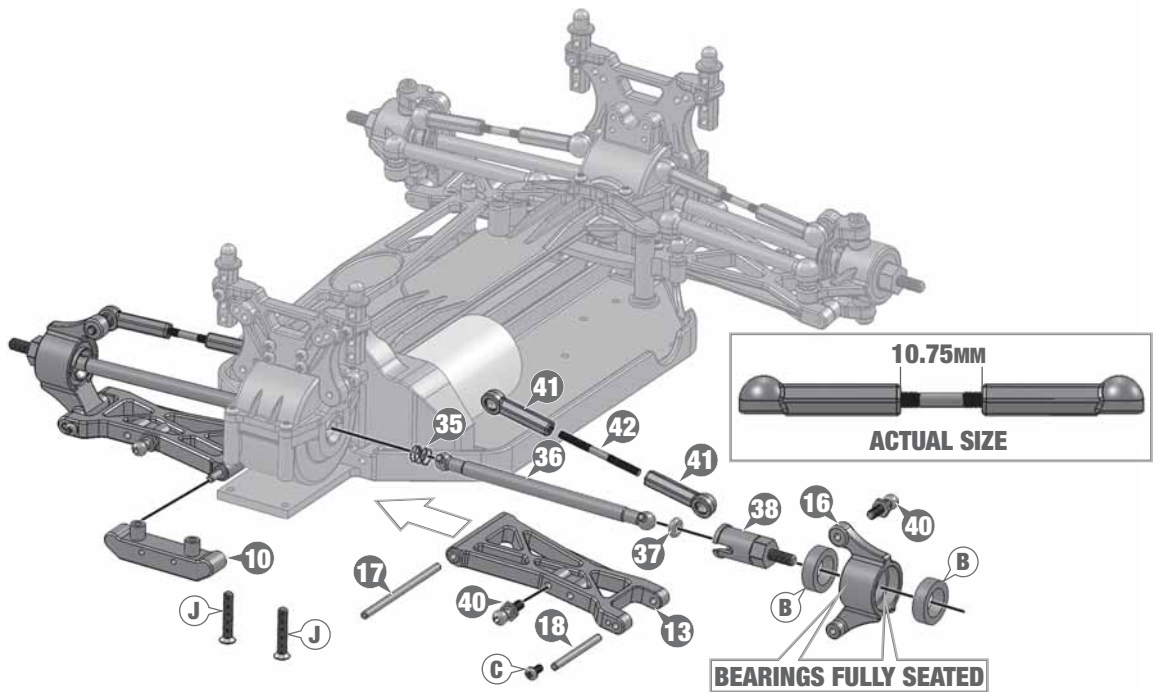
## 6. MOTOR MOUNT



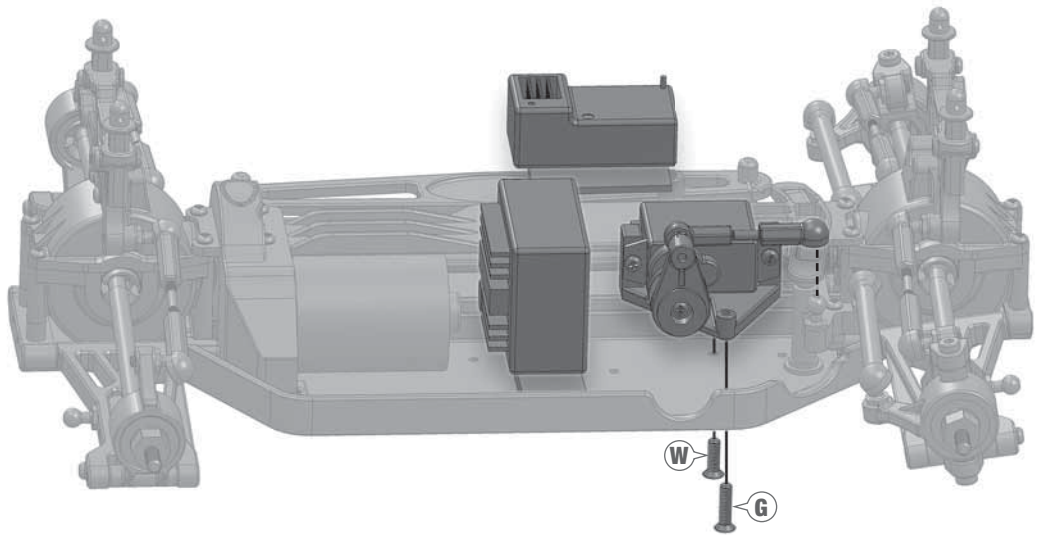
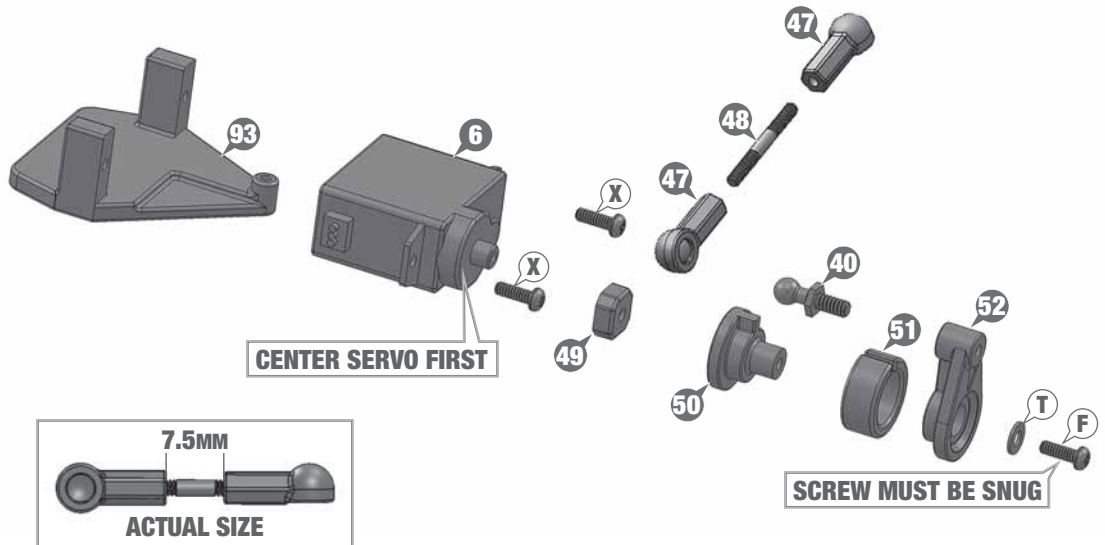
## 7. FRONT SUSPENSION



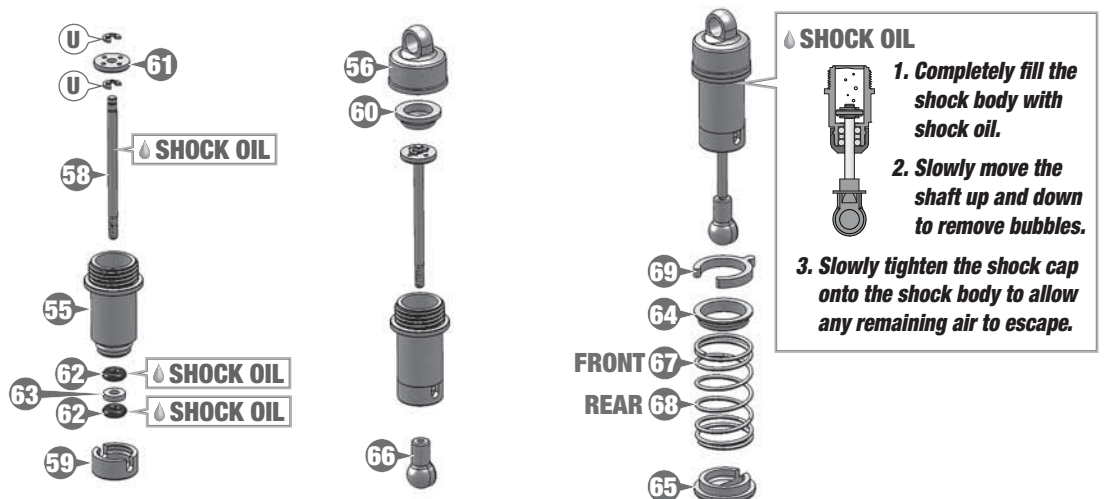
## 8. REAR SUSPENSION



## 9. RADIO BOX

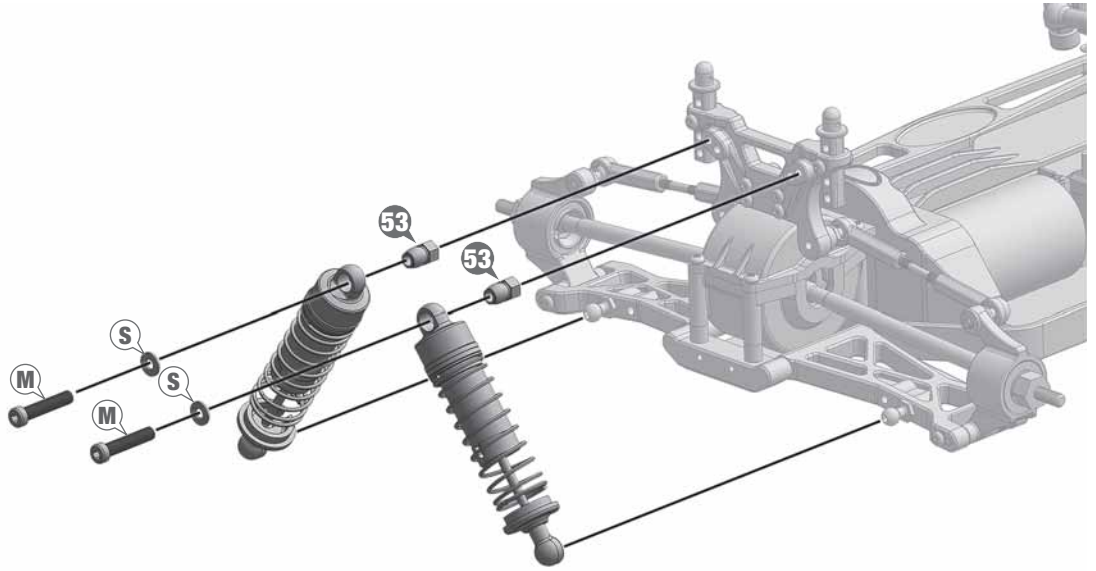


## 10. SHOCK ASSEMBLY

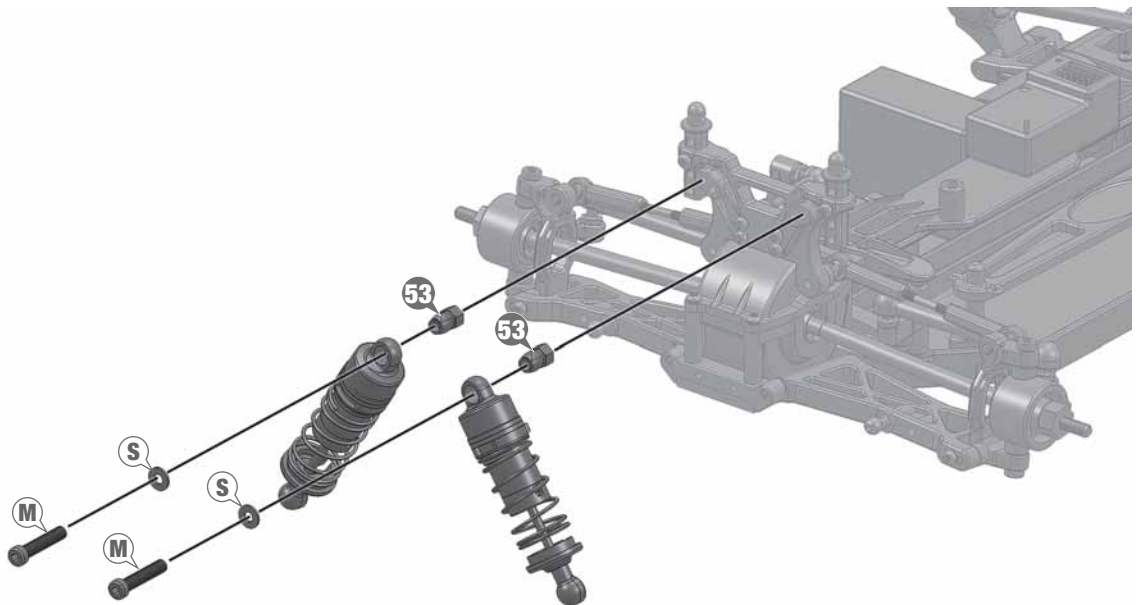




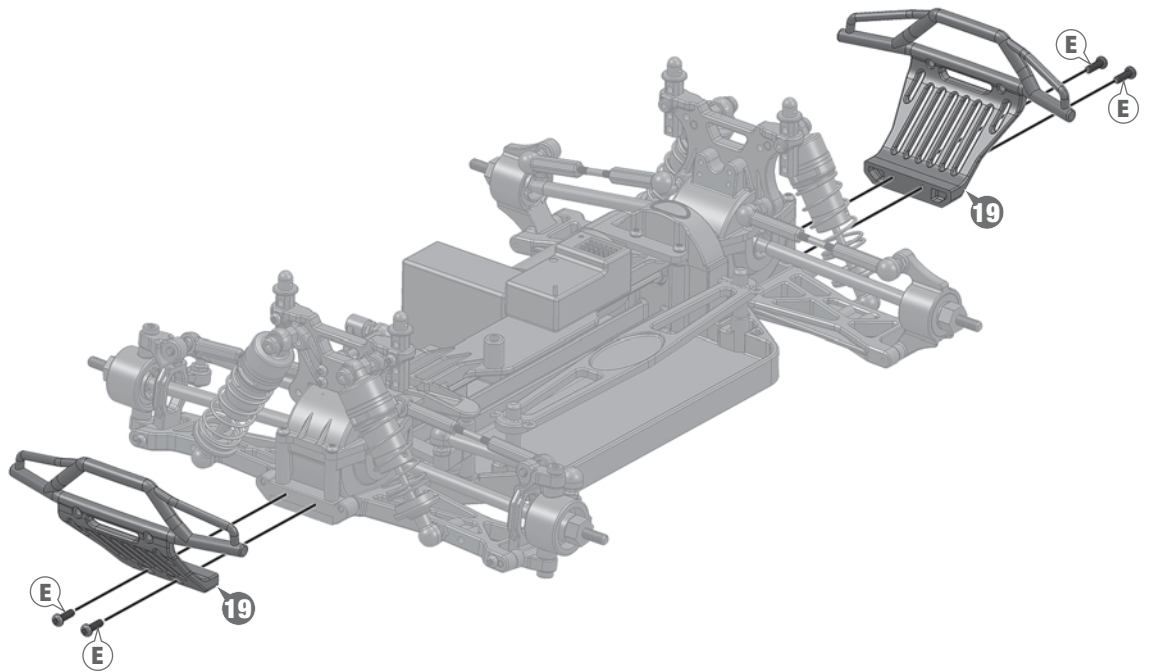
## 11. REAR SHOCK INSTALLATION



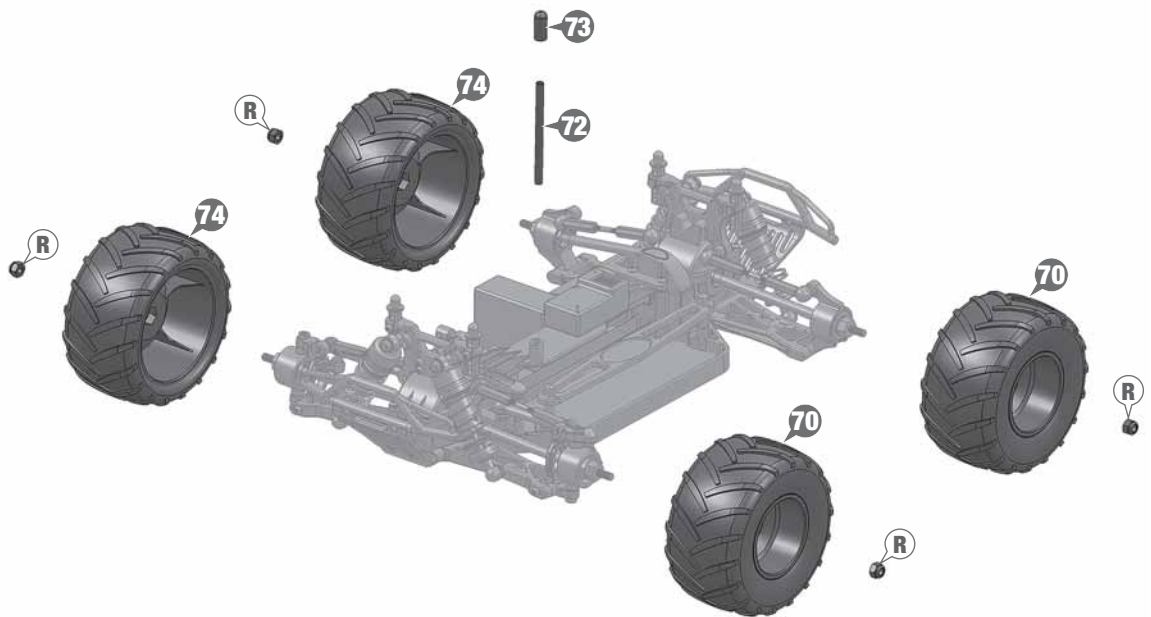
## 12. FRONT SHOCK INSTALLATION



### 13. BUMPER



### 14. WHEELS





## BRUSHLESS ESC

- Always monitor ESC, motor and battery temperatures during running.
- Disconnect the battery from the ESC immediately if the ESC or battery becomes hot. Allow the ESC or battery to cool completely before reconnecting.
- Never use more than a 2S LiPo or 6-cell NiMH battery.
- Always disconnect the battery from the ESC when not in use.
- Make sure the battery is fully charged before connecting to the ESC.
- Do not attempt to use the brushless ESC with a brushed motor.
- The ESC may become hot during running. Allow the ESC to cool before touching.
- Never turn on the ESC before plugging it into the receiver and switching on the transmitter.
- Dromida is not responsible for incidental damage or personal injury as a result of misuse of this product.

## THROTTLE CALIBRATION

Before the ESC can be used, throttle calibration must be performed to ensure the throttle is set up properly. Be sure that your throttle trim is set to ZERO before performing calibration and that throttle end points and dual rates are set to maximum.

**Note:** We recommend that you prop the vehicle up off the ground to prevent it from driving off the surface in case the calibration is not performed properly.

1. With the ESC turned off, turn on the transmitter.
2. Press and hold the ESC “SET” button on the on/off switch. Then, switch on the ESC. When the red LED begins to flash, release the button immediately.
3. With the transmitter throttle at neutral, press and release the ESC “SET” button. The green LED should flash one time.
4. With the transmitter throttle at full throttle, press and release the ESC “SET” button. The green LED should flash two times.
5. With the transmitter throttle at full reverse, press and release the ESC “SET” button. The green LED should flash three times.
6. After the calibration is completed, wait at least three seconds before giving any transmitter input.

**NOTE:** If you do not release the “SET” button once the red LED begins to flash, the ESC will enter the program mode. If this happens turn the ESC off and start over.

## ESC LED STATUS IN NORMAL RUNNING

- When the throttle is at neutral, all LEDs should be off.
- When running forward, the red LED will illuminate.
- At full throttle, the Red and Green LEDs will illuminate.
- During braking, the red LED will flash quickly.

## ALERT TONES

When you turn on the ESC it checks the battery’s voltage. If the battery is out of the normal voltage range it will alert you with a “beep-beep....beep-beep....beep-beep.”

If the throttle signal is abnormal it will alert with a “beep.....beep.....beep.”

## VOLTAGE PROTECTION WHEN USING LIPO BATTERIES

The Dromida brushless ESC is equipped with a “LVC” (Low Voltage Cut-off) to protect LiPo batteries from being drained too low. If the LiPo battery is lower than the designated cut-off for more than 2 seconds the ESC will cut off the output power. The ESC cannot be restarted if the voltage of each LiPo cell is lower than 3.5V. If using a non-LiPo pack, be sure to adjust the ESC to its No-Cutoff Option (“No LVC”) to maximize run time.

## OVERHEAT PROTECTION

If the ESC gets too hot, it will cut off output power after 5 seconds. If this happens, check for binding or broken parts on the vehicle.

## THROTTLE SIGNAL LOSS PROTECTION

The ESC will cut off the output power if the throttle signal from the transmitter is lost for 0.2 seconds.

## ESC PROGRAMMING

**Running Mode:** This function adjusts the running mode between forward/brake and forward/brake/reverse.

**Drag Brake Force:** This function adjusts the amount of drag brake applied at neutral throttle to simulate a slight braking effect of a neutral brushed motor while coasting.

**Low Voltage Cut-Off (LVC):** This program is used to prevent the LiPo battery from over-discharging. The ESC monitors the battery's voltage. At any time, if the battery's voltage is lower than the designated value, the output power will be reduced to 50%. After 10 seconds the ESC will cut the motor power off.

**Start Mode (Punch):** This function adjusts the amount of initial power when the trigger is applied.

**Maximum Brake Force:** This program adjusts the amount of overall brake force applied when at full brake.

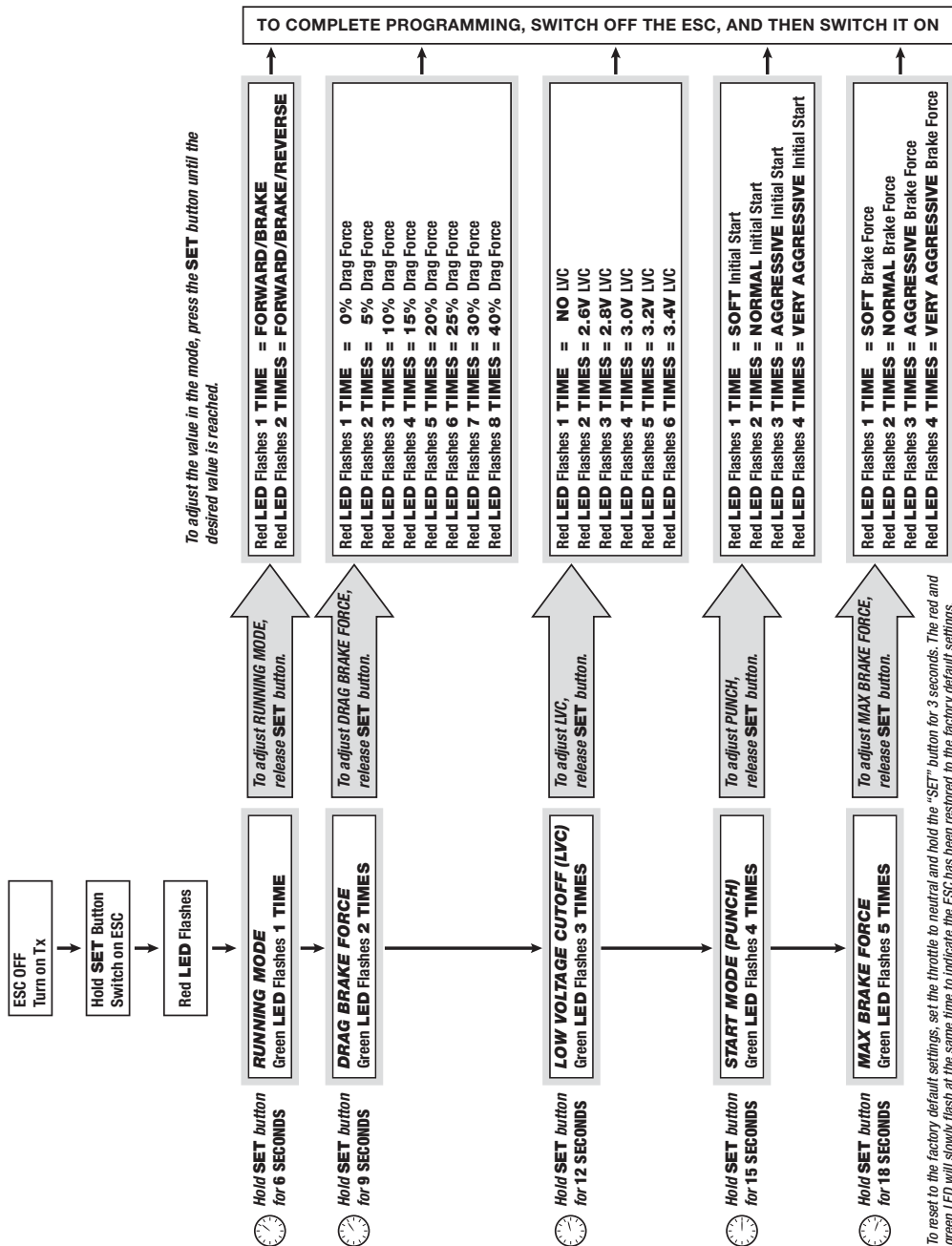
During programming the ESC the motor will emit a "beep" tone at the same time the LED flashes. A long time flash and long "beep" represents "5" so it is easy to identify items with large numbers.

*For example:*

A long time flash (motor sounds "beeeep") equals a value of 5.

A long time flash + 1 short flash (motor sounds "beeeep-beep") equals a value of 6.

A long time flash + 2 short flashes (motor sounds "beeeep-beep-beep") equals a value of 7.



## TUNING GUIDE

When tuning the Monster Truck make sure that you have equal lengths from one side to the other on the shocks and upper rods. Also, make sure to have the shock pre-load adjusters at the same setting from left to right. They do not have to be the same front to rear.

### PINIONS

The Monster Truck comes stock with the 12 tooth pinion. To obtain higher top speeds you can install a larger pinion gear onto the motor. This will, however, decrease your acceleration and run time. **TIP:** Smaller pinion equals more torque, less top speed. Larger pinion equals more top speed, less torque.

### SHOCK OIL

The Monster Truck comes stock with 30 weight oil in the shocks. The handling can be tuned by changing the shock oil to either heavier (bigger number) or lighter (smaller number). By putting heavier oil in the shocks, the car will have less chassis roll and become more responsive. Putting lighter oil in the shocks will cause the car to be less responsive and have more chassis roll. For smooth, high traction surfaces, a thicker oil would be best. For low traction or bumpy surfaces, a lighter oil would be best.

### CAMBER

Camber refers to the angle at which the tire and wheel ride in relation to the ground when viewed from the front or rear. Negative camber is when the wheels lean inward and positive camber is when the wheels lean outward. Usually adding a small amount of negative camber ( $0^\circ$  to  $-2^\circ$ ) will increase traction. However, adding too much camber will decrease traction. The objective is to keep as much of the tire as possible in contact with the running surface. Never put in positive camber. Make sure that both sides are equal.

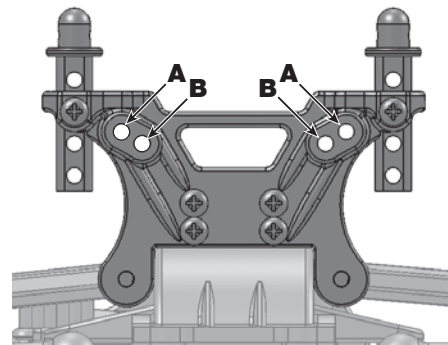


### SHOCK SPRINGS

For low traction or bumpy surfaces, a softer spring should be used. For high traction or smooth surfaces, a firmer spring should be used. The truck comes with medium/soft (Yellow) front springs and medium/heavy (Blue) rear springs.

### FRONT SHOCK ADJUSTMENT

Moving the tops of the shocks out (A) will increase steering reaction but decrease front traction. Moving the tops of the shocks in (B) will result in slower steering reaction but will be smoother over bumps and have more front traction.



### REAR SHOCK ADJUSTMENT

Moving the tops of the shocks out (A) will increase steering reaction and decrease rear traction. Moving the tops of the shocks in (B) will result in slower steering reaction but will be smoother over bumps and have more rear traction.