



TEAM ASSOCIATED

MINI MGT 30

Instruction Manual



1:10 Scale Ready-to-Run 4WD Nitro Monster Truck



MINI MGT30

Mini-Monster GT #20515

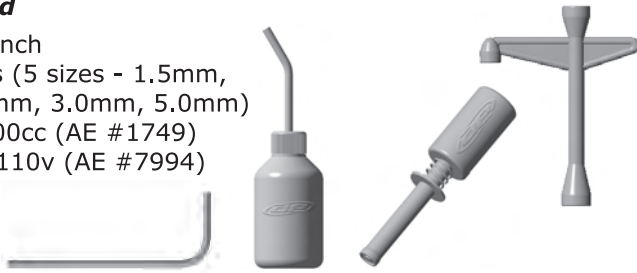
Thank you for purchasing the Team Associated Mini-Monster GT. This User's Guide contains the steps you will use to prepare and use your new vehicle. Please read the entire manual before attempting to start your car to help reduce any problems on start up. We hope that you will enjoy your new Team Associated Mini-Monster GT!

The Mini-Monster GT is not intended for use by children without the supervision of a responsible adult. Associated Electrics, Inc. 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 and any chemical or accessory required to operate this product.

1 Additional Equipment

Tools Supplied

MMGT Nut Wrench
Allen Wrenches (5 sizes - 1.5mm, 2.0mm, 2.5mm, 3.0mm, 5.0mm)
Fuel Bottle - 400cc (AE #1749)
Glow Igniter - 110v (AE #7994)



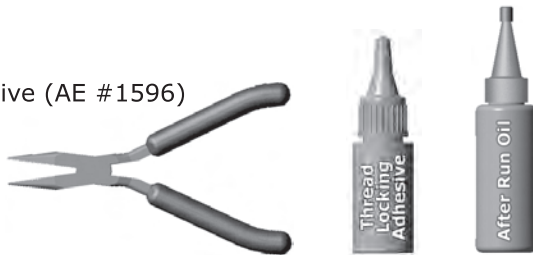
Items Required

Foam Pre-Filter Treatment (AE #7710)
Slotted Screwdriver (AE #1552)
Phillips Screwdriver (AE #1553)
AA Batteries (12)
Fuel (15%-30% only! See Fuel Selection on next page.)

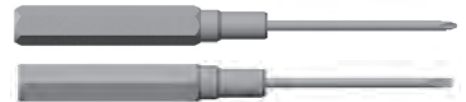


Helpful Items

Thread-Locking Adhesive (AE #1596)
After Run Oil
Needlenose Pliers



AA Battery



Warning!

Do not use a power screwdriver to install screws into nylon, plastic or composite materials. The fast rotation speed can heat up the screws being installed. They can then break the molded parts or strip the threads during installation.

Visit Team Associated's Web Site For:

- New Products - added after this manual was printed.
- Tuning Tips - setting up your truck for superior handling.
- Customer Support - the answer to your question may already be posted.
- Body Painting Ideas - check out the Racer's Spotlight section for some cool paint schemes.
- Subscribe to our FREE Team Associated Insider's Newsletter - delivered right to your e-mail box!
- Hobby shop & track locations worldwide.
- Nitro engine troubleshooting tips.

Contacting Us:

Associated Electrics, Inc.
26021 Commercentre Dr.
Lake Forest, CA 92630-8853 USA
<http://www.teamassociated.com>



Customer Support
Phone: 949 544-7500
Fax: 949 544-7501
Web Site: <http://www.rc10.com>

2 Guidelines for Operation

CAUTION TIPS! Read this before you drive!

- Keep fingers away from all rotating parts while engine is running. Be aware of the rotating driveshafts on the underside of the truck. Use the handle or bumpers when picking up or turning over the truck.
- Nitro engines get VERY hot. Keep fingers and flammable items away from the exhaust pipe, exhaust header and from the top of the engine.
- Nitro fuel is poisonous, dangerous and highly flammable! Follow all the directions and heed all the warnings shown on the fuel container. **KEEP FUEL OUT OF REACH OF CHILDREN!**
- Run your truck ONLY in a well-ventilated area and do not run it indoors.
- Never drive your truck in a crowded area. Always maintain safe driving distance from spectators and yourself. Always leave a safety margin around the truck to help prevent collisions.
- Practice good ON 1ST - OFF LAST transmitter discipline. Always make sure that you turn on your transmitter BEFORE turning on your truck. Likewise make sure that you turn off your transmitter only **AFTER** stopping the engine and turning off your truck. This will help prevent a runaway accident.
- Weak transmitter signals and slow servos cause problems and accidents. Use fresh batteries in BOTH the transmitter and the receiver. If the red light is flashing on your transmitter or the servos seem sluggish on your truck, it's time to replace or recharge (NiCD and NiMH only) your batteries.
- Be aware of transmitter frequencies. Each transmitter and receiver pair comes with a numbered frequency crystal. If you are driving your truck in an area where other radio controlled vehicles are running, you will need to make sure that you are not on the same frequency as anyone else. This will help prevent runaway vehicles and glitches; either of which could result in injury or serious damage to your or someone else's property.

Tips for Engine Longevity

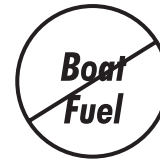
- Never allow the engine to overheat (260° F, measured at the glow plug; see included 3.0 AE Engine Manual for acceptable engine temperature ranges).
- Use only approved fuels. Fuels containing more than 20% nitro will run hotter and can reduce engine life.
- Do not run engine at full throttle for long periods of time. High engine speeds create more engine heat. Vary the engine speed.
- Do not use lean needle settings. Lean mixture settings will cause the engine to run too hot and decrease its life. Refer to the engine tuning section for proper adjustment.
- If your truck flips over, do not rev the engine! Revving the engine will only cause excess heat in the motor.
- Keep the intake area clean. Clean and re-oil the filter at regular intervals.
- Do not drive the truck in deep or continuous water. If the engine becomes flooded by water, it will most likely need to be rebuilt. This can damage the onboard electronics also.
- Use after run oil before you put the truck away for the day. This will keep the engine lubricated and fight corrosion. After run oil is available at most hobby shops.

Fuel Selection

- Choose a fuel from a reputable, brand name company that is approved for car/truck use. Do not use airplane or boat fuels in your truck.
- Choose a fuel that has a nitro content in the range 15%-30%. Lower nitro percentages will generally result in a cooler engine running temperature and therefore last longer before needing a rebuild; cooler-running engines also generally produce less power. 20% nitro is the most widely used fuel in these engines.
- Fuel color is for identification purpose only and is not important to performance or durability of your engine.



15% - 30% Nitro



Oiling the Air Cleaner

When the air filter starts to get dirty, do the following steps:

- Clean the foam with dish soap & water. When it's clean, remove excess moisture with a towel & let the filter dry completely before oiling.
- Apply Associated's #7710 Foam Pre-Filter Treatment to help keep the dirt out. Dab a small amount of treatment all around the filter, put the filter in a plastic sandwich bag, and knead it until the filter is saturated, but not soaked.

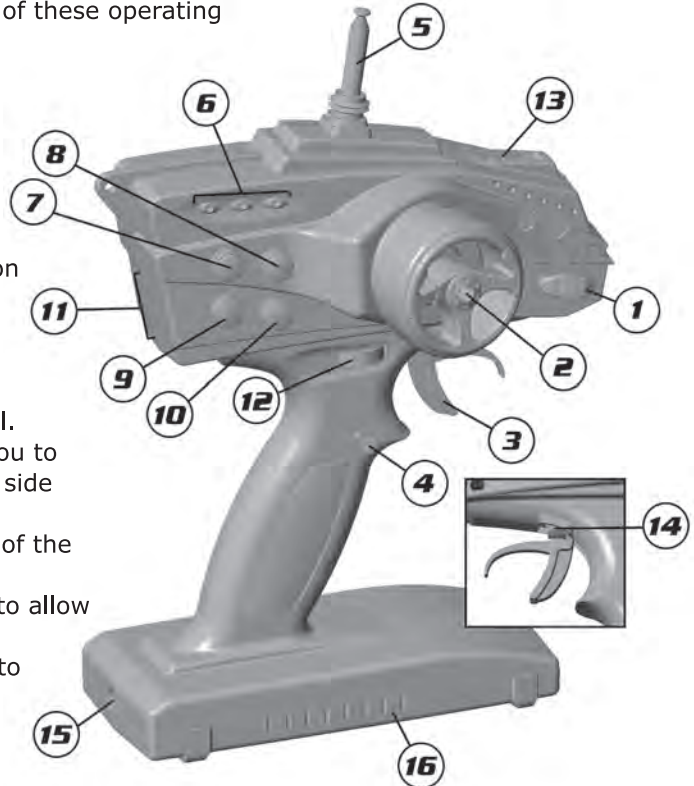


3 Getting to Know Your Radio System

The Mini-Monster GT is equipped with a high quality 3-channel XP3 radio system. The following transmitter terms will be used throughout the rest of these operating instructions.

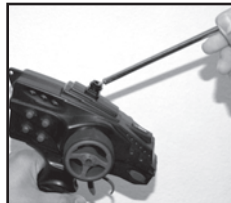
The XP Radio System

1. **Power Switch** – Switches your XP3 Radio ON and OFF.
2. **Steering Wheel** – Provides directional control of your truck.
3. **Throttle Trigger** – Provides throttle (pull) and brake (push) control of your truck.
4. **Forward/Reverse Button** – Toggles your truck's transmission between Forward and Reverse.
5. **Transmitter Antenna** – Transmits signals from your Transmitter. Always fully extend the Transmitter Antenna when you operate your truck.
6. **Battery Level Indicator** – Indicates the battery voltage level.
7. **Throttle HI ATV (Adjustable Throttle Volume)** – Allows you to preset the maximum travel of the throttle servo on the High side (throttle side).
8. **Throttle LO ATV** – Allows you to preset the maximum travel of the servo on the Low side (braking side).
9. **Steering Trim** – Adjusts the steering servo's center position to allow your truck to run straight.
10. **Throttle Trim** – Adjusts the throttle servo's center position to allow your engine to idle properly.
11. **Servo Reversing Switches** – Reverses the servo's rotation direction relative to your control input.
12. **Steering Dual Rate** – Limits the steering travel of your truck. A high setting increases the steering sensitivity of your truck while a low setting reduces the steering sensitivity.
13. **Transmitter Crystal** – Determines the frequency in which your radio transmits. Make sure that the corresponding Receiver Crystal has the same frequency as the Transmitter Crystal whenever you run.
14. **Trigger Neutral Position Lever** – Allows the neutral position of the Throttle Trigger to be changed.
15. **External Charging Jack** – Allows the Transmitter Batteries to be recharged using an optional charger. Use only with rechargeable NiCd or NiMH batteries. Do not use with Alkaline or Standard cells.
16. **Battery Cover** – Holds your Transmitter's batteries in place.



Preparing Your Radio System

1. Install Transmitter Antenna.
2. Install Transmitter Batteries. Requires 8 AA Batteries.
3. Install Receiver Batteries. Requires 4 AA Batteries.



Testing Transmitter & Truck

1. Switch ON the Transmitter and extend the Transmitter Antenna. You should see the Battery Level Indicator light up showing that the radio is ON.
2. Switch ON the Receiver switch. All the servos should move to their respective neutral settings.
3. Turn the Steering Wheel left and right. This will turn the truck's front wheels left and right (as viewed from the rear of the truck).
4. Pull the Throttle Trigger. This will open the throttle on the Carburetor.
5. Release the Throttle Trigger. This will return the Carburetor back to its closed position.
6. Push the Throttle Trigger. This will activate the brakes.
7. Press the Forward/Reverse Button. This will shift the truck into Reverse. Press the Forward/Reverse Button again to shift the truck into Forward.
8. Set the truck on the ground. Pull the Throttle Trigger and give the truck a push. The truck should roll freely. While it is still rolling, push on the Throttle Trigger to activate the brakes. The truck should come to an immediate stop. If these steps do not produce these results, refer to the Adjustments Section under Linkage Setup.

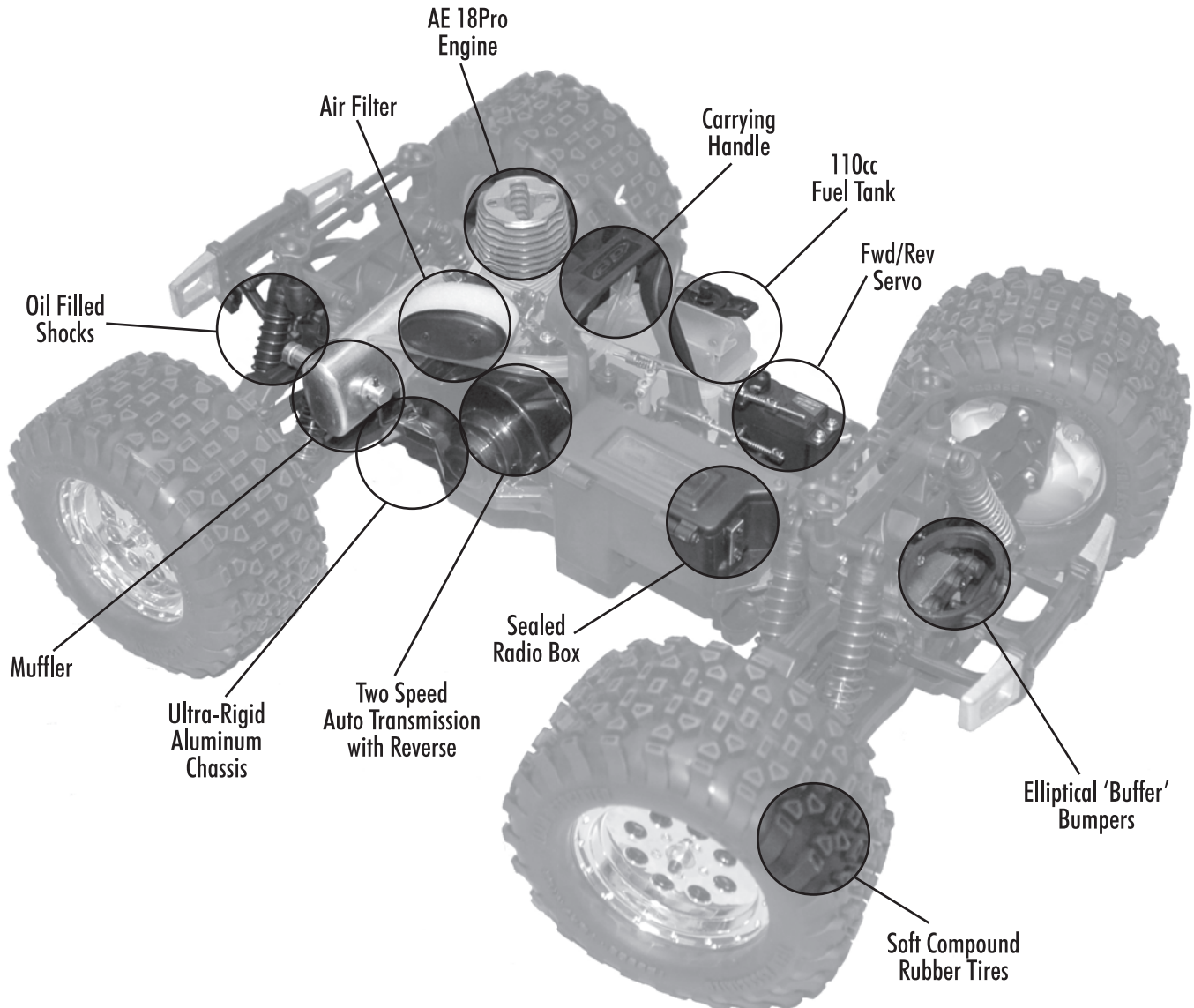
Frequency Crystals (Channels)

The 27MHz Frequency Band is divided into 6 Channels so that up to six different vehicles can be operated simultaneously. The XP3 Radio System includes one of these six Channels, in the form of a pair of Crystals; one for the Transmitter and one for the Receiver. Should you choose to run two Mini-MGT's, you will need to check to make sure both trucks are NOT on the same Channel. The chart below lists the channels and their flag colors.

27MHz AM	Flag Color	Channel	AE Part #
26.995	Brown	1	29108
27.045	Red	2	29109
27.095	Orange	3	29110
27.145	Yellow	4	29111
27.195	Green	5	29112
27.255	Blue	6	29113

4 Getting to Know Your Truck

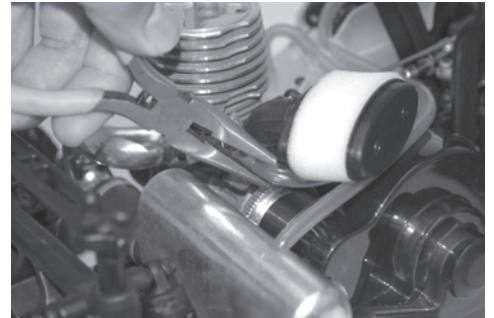
Please take a few moments to familiarize yourself with the Mini-Monster GT. The pictured truck below highlights only a few of the exciting features we have included with your new truck.



5 Shutdown Procedures

Make sure that you have read and understand the shut down procedure before starting the truck!

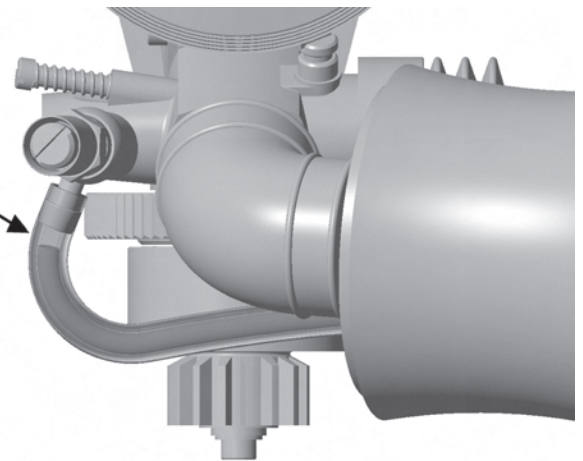
1. Bring your truck to a complete stop and idle.
2. Remove the body clips and body.
3. Using needle-nose pliers or a clothespin, pinch off the fuel line just before the carburetor until the engine stops (1-2 seconds) - be careful not to damage the fuel line.
4. **DO NOT ATTEMPT TO STOP THE MOTOR BY TOUCHING OR GRABBING THE FLYWHEEL!** These motors have a lot of torque and serious injury could occur from stopping the engine in this manner.
5. The exhaust gasses can be very hot, stopping the motor by plugging the exhaust with your finger could result in a serious burn.
6. Turn off your truck electronics at the battery box.
7. Turn off your radio.



6 Starting Your Truck

1. Have fresh batteries or a full charge (for rechargeable NiCd and NiMH versions) in your glow plug igniter.
2. Make sure that your radio system (transmitter and receiver) is ready (see section on transmitter settings and use).
3. Remove the truck body.
4. Add fuel to the fuel tank.
 - 4.1. Use a squeeze bottle to safely and easily transfer fuel to the tank.
 - 4.2. Fill the tank no higher than the bottom of the neck.
5. Turn on the transmitter.
6. Turn on the receiver switch.
7. Prime the engine by pinching the fuel pressure line and flipping the lid on the tank. Prime to the point shown to the right.
8. Put the glow plug igniter on the glow plug and make sure that it is seated properly.
9. Start the truck using the pull-start.

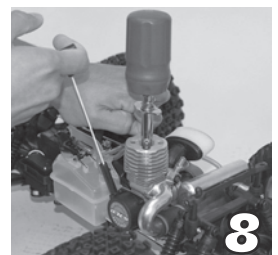
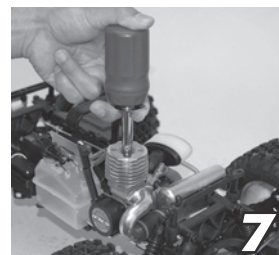
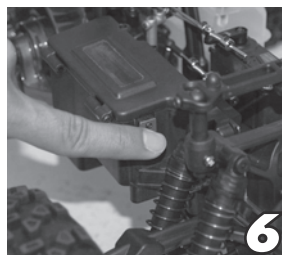
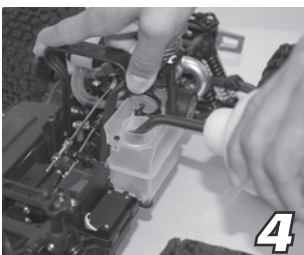
Prime fuel to this point.



Pull Start - Hold the truck by the handle with one hand and pull the pull-start-cord with the other. Use quick and short pulls and make sure that you are only pulling the cord about 5-7 inches. Pulling the cord more than 8 inches or all the way will damage the pull-start mechanism. If the cord is difficult to pull or is stuck it is an almost sure sign that the engine is flooded.

• If the engine becomes flooded: Turn off your truck, and then the radio. Remove the glow plug using a glow plug wrench and then remove the air filter. Turn the truck over to allow any excess fuel in the engine to run out. Turn the truck right side up. Reinstall the air cleaner. Slowly pull the pull-start cord about 7 inches, 5 to 7 times. Reinstall the glow plug with the glow plug wrench. Return to step 7.

10. Continue to pull the cord until the engine starts. If the engine still does not start, check the glow plug (see section 6 of the engine manual).
11. Remove igniter from the glow plug.
12. Install the truck body and body clips.



7 Driving & Storage Tips

Operating/Driving Tips

- Your truck is just that, a truck. Therefore, by design, it has a high center of gravity and will require slower cornering speeds to keep from rolling over.
- Forward and reverse use
 - Make sure that the truck has come to a stop before shifting directions.
 - Press the reverse button on your radio located near your thumb (see radio section).
 - Throttle and brake actuation work in the same directions as when the car is in forward gear (pull trigger for throttle, push trigger for brake).
 - Stop the truck when you would like again to return to normal driving.
 - Press the reverse button.
- Your truck has a two-speed transmission. The transmission can be thought of as an automatic transmission that is designed to shift when the truck is traveling at a certain set speed. Refer to the "Adjusting the two-speed" section in this manual to adjust that set point or if your truck does not appear to be shifting correctly.
- The electronic components on your truck are in compartments to keep them from malfunctioning because of dirt and debris build up. **The servos and the compartments housing the electronics are not waterproof.** Driving through water could cause damage and/or malfunction to occur.
- Follow all the caution tips listed in this manual and USE COMMON SENSE! Abusive and rough driving could result in broken parts.
- The Mini-Monster GT can be carefully refueled while the engine is running to extend the run time.
- Periodically check all the screws to make sure they have not vibrated loose. Use blue threadlocking compound on screws that have metal-to-metal contact to prevent them from vibrating loose.

Storing your truck

To keep your truck in good working condition, there are a few steps that need to be followed:

1. Remove the fuel from the tank. Both your truck and squeeze bottle should always be stored free of fuel.
 - Empty any fuel remaining in your squeeze bottle back into the fuel container.
 - Draw the fuel in the fuel tank into the squeeze bottle and squeeze it back into the fuel container.
 - Repeat the above step as necessary until the tank is as empty as is possible.
 - Make sure to store your fuel container out of reach of children in a cool, dark location and make sure that the lid is securely tightened.
2. Put the glow plug igniter on the glow plug, hold the carburetor all the way open and pull the pull-start a few times. This will make sure that there is no unused fuel in the engine or fuel lines.
3. Use after run oil.
 - Start out by taking an old toothbrush and cleaning off the dirt around the base of the filter. This will help to keep grit out of your engine.
 - Remove the glow plug.
 - Place 2-6 drops (as recommended by after run oil manufacturer) directly into the opening in the head.
 - Slowly pull the pull-start cord about 8 inches, 3-5 times.
4. Clean your truck – storing it dirty can lead to a gummy build up and poor performance.
 - Use nitro car cleaner, WD-40 or equivalent to clean up the dirt and oil.
 - Use an old toothbrush or a small paintbrush to get to the hard to reach areas.
 - A damp cloth works well for cleaning the body. Stubborn dirt and oil on the body is best removed with any diluted organic solvents (Simple Green, etc).
5. Lubricate the wheel bearings, drive axle joints, clutch bell bearings and suspension pivots using thin oil.
6. Verify that BOTH the radio and receiver switches are turned off. It is very disappointing to have dead batteries next time you want to run your truck.

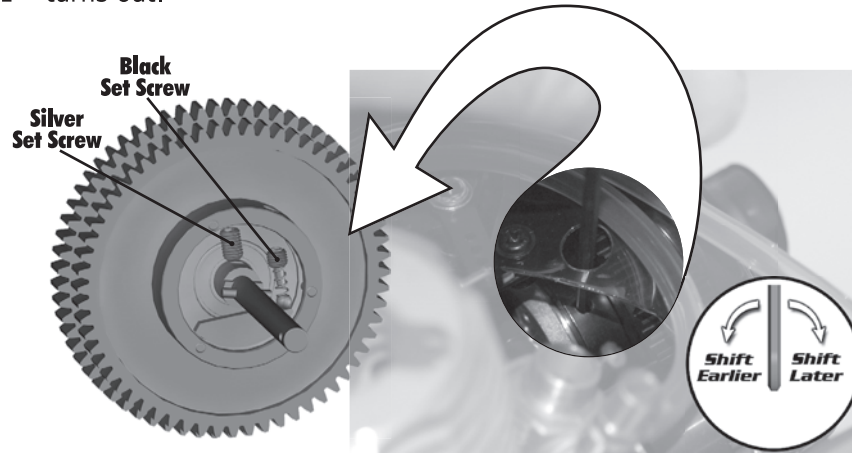
8 Adjustments

Two-Speed Adjustment

1. Your truck's two-speed shift point is preset from the factory. It should shift into 2nd gear within **12-15** feet on a full throttle, standing-start acceleration.
2. If you wish to adjust the shift point, first **shut down the engine** then find the opening in the gear two-speed cover. Align the **BLACK adjustment set screw** with the opening on the 2nd gear as shown on the diagram.
3. Using a **2mm Allen wrench**, turn the black adjustment set screw **clockwise to make the two-speed shift later**; turn it **counter-clockwise to make the two-speed shift earlier**. Only use ¼ turn increments whenever you adjust your two-speed.

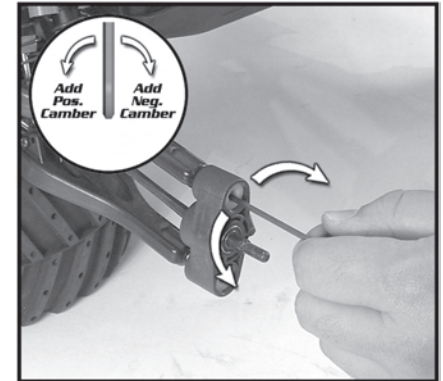
4. Be careful not to touch any **hot engine components** in the area.

Starting setting is $1\frac{1}{2}$ - $1\frac{3}{4}$ turns out.



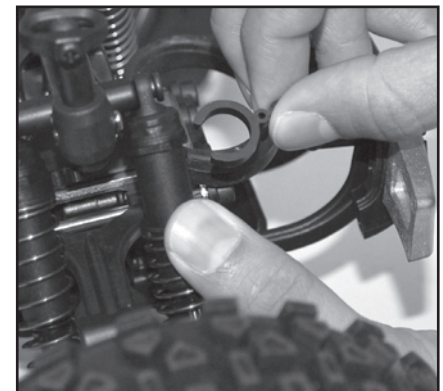
Front & Rear Camber

1. Use a **2mm Allen wrench** as shown to adjust the front & rear camber.
2. Turning the upper pivot ball clockwise increases camber towards the negative side; turning it counter-clockwise increases camber towards the positive side.



Ride Height

1. The truck's ride height can be increased by adding preload clips to the shocks. Removing preload clips will decrease the ride height.
2. Compress the spring and insert the preload clips between the spring collar and the shock body flange.



Slipper Clutch

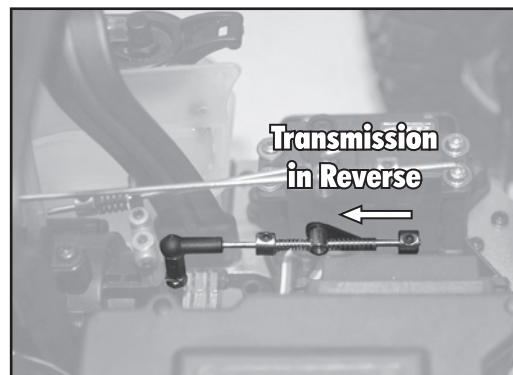
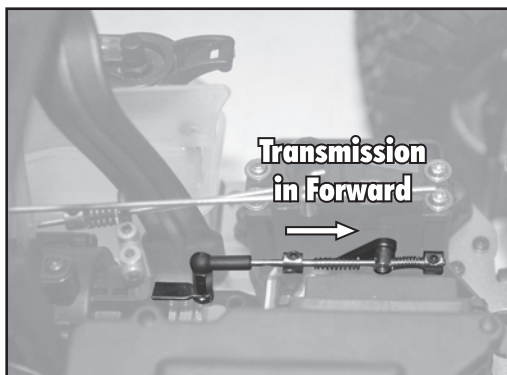
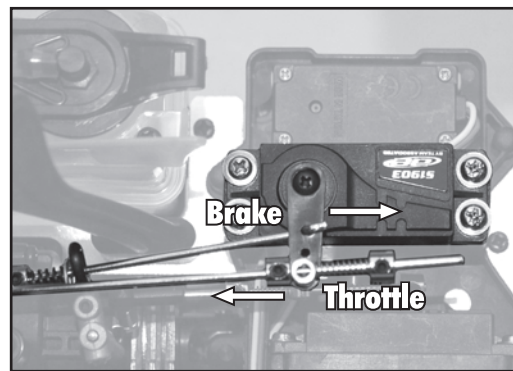
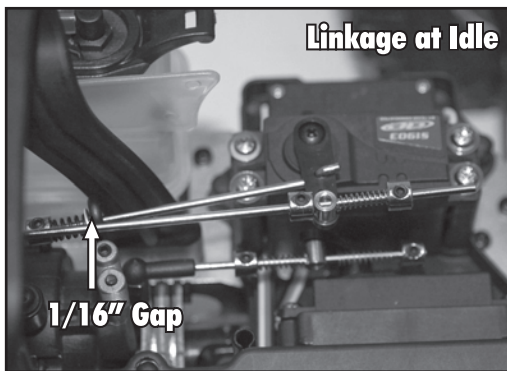
1. Use a **7mm nut driver** to adjust the slipper clutch.
2. Tighten the slipper nut until the spring is fully compressed.
3. Once you've reached the point where the spring is fully compressed, loosen the slipper nut $\frac{1}{4}$ turn.
4. Do not run your truck with the slipper nut any looser than $\frac{1}{4}$ turn from full spring compression. Setting the slipper too loose may result in a damaged spur gear.

Starting slipper setting is $\frac{1}{4}$ turn out.



Radio Adjustments

1. **Dual Rate** – Push the dial to the right to increase the amount of steering throw for a tighter turning radius; push the dial to the left to decrease the amount of steering throw for a larger turning radius.
2. **Steering Trim** – Start the truck and drive it forward slowly with no input on the steering wheel. If the truck veers to the right, turn the Steering Trim knob to the left until the truck runs straight. If the truck veers to the left, turn the Steering Trim knob to the right.
3. **Throttle Trim** – With the engine running, the truck should remain stopped (on level ground) when the throttle is in neutral. At the same time the truck should roll freely in both forward and reverse directions. If the truck creeps forward, turn the Throttle Trim knob to the left just enough so that the truck stops moving. If the truck doesn't roll freely turn the Throttle Trim knob to the right just enough to disengage the brakes.
4. **Throttle HI ATV** – Perform this adjustment only with the **engine OFF** and the **radio system ON**. Remove the air filter from the carburetor and turn the Throttle HI ATV knob all the way to the left. Pull the throttle trigger all the way to full throttle and look into the carburetor. You'll see that the slide valve is not open all the way. Now start turning the Throttle HI ATV knob to the right until the slide valve fully opens. Do not adjust the Throttle HI ATV past the point where the valve is fully open because it will strain the throttle servo.
5. **Throttle LO ATV** – You can use this adjustment to limit your truck's braking power. Turning the Throttle LO ATV to the right gives you more braking power; turning it to the left gives you less braking power.



Adjusting throttle, brake, and FWD/REV linkages

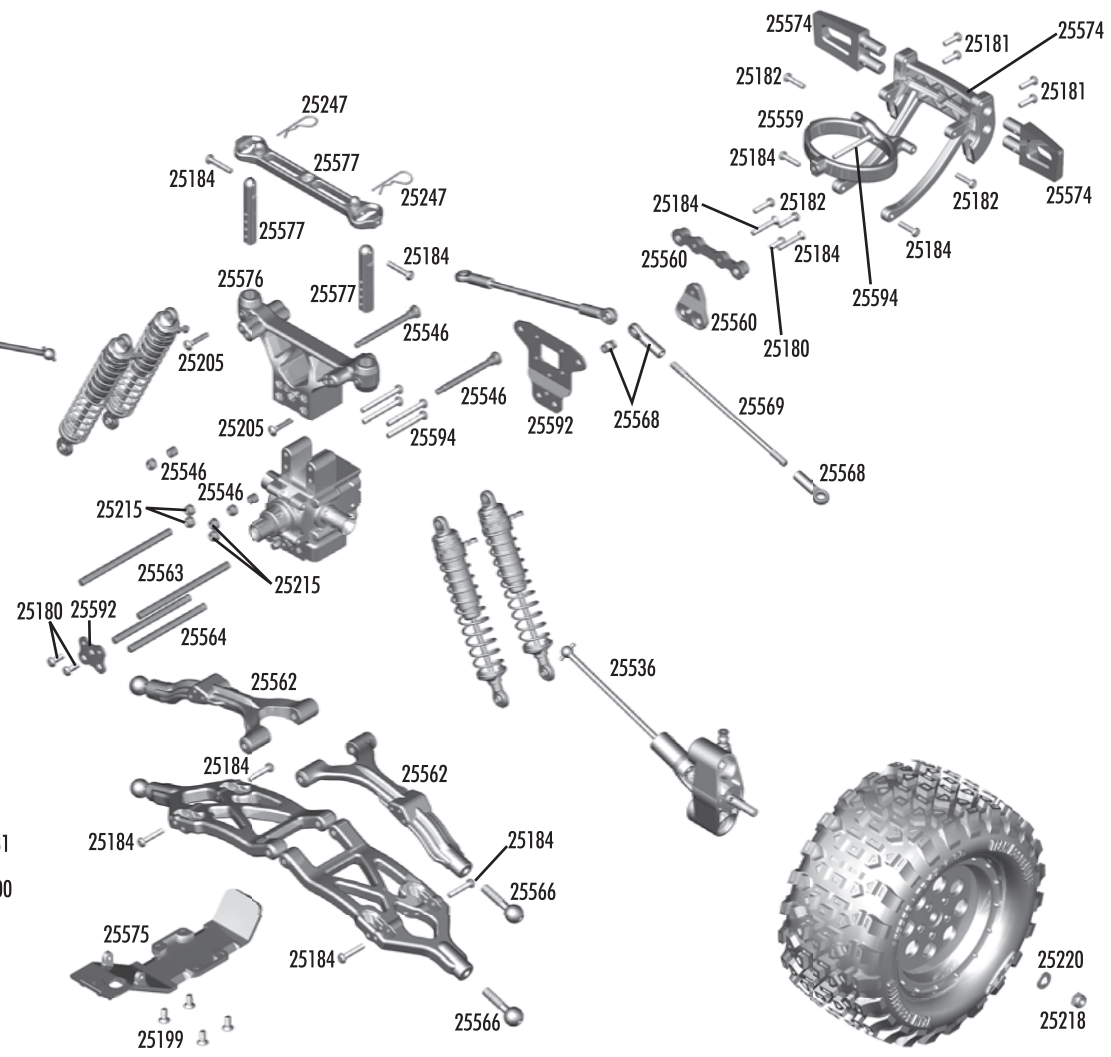
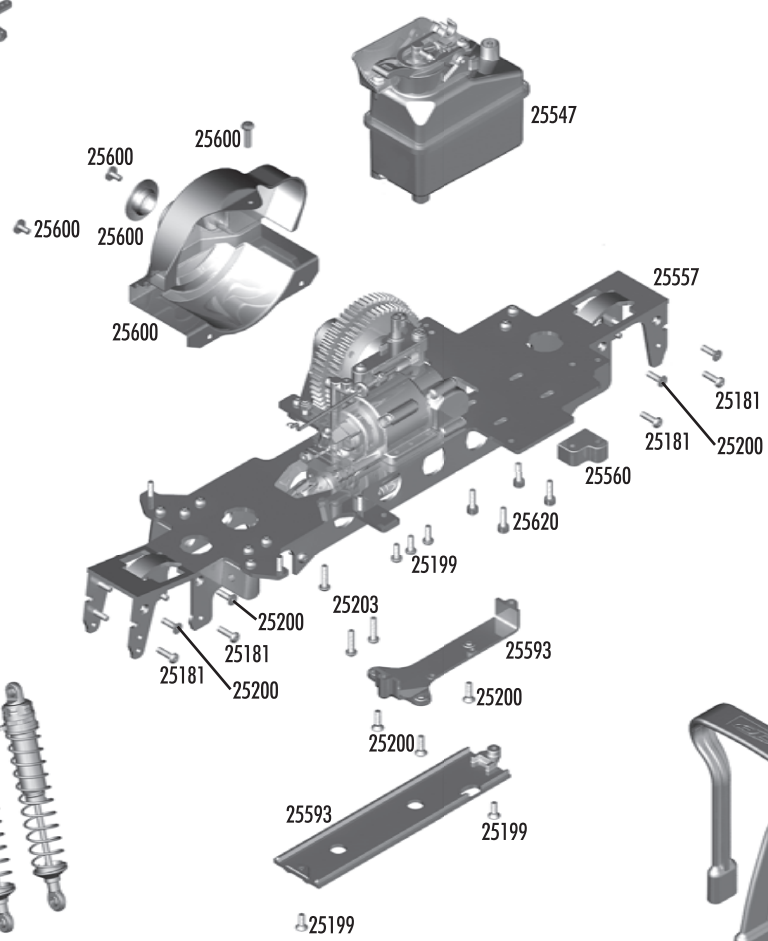
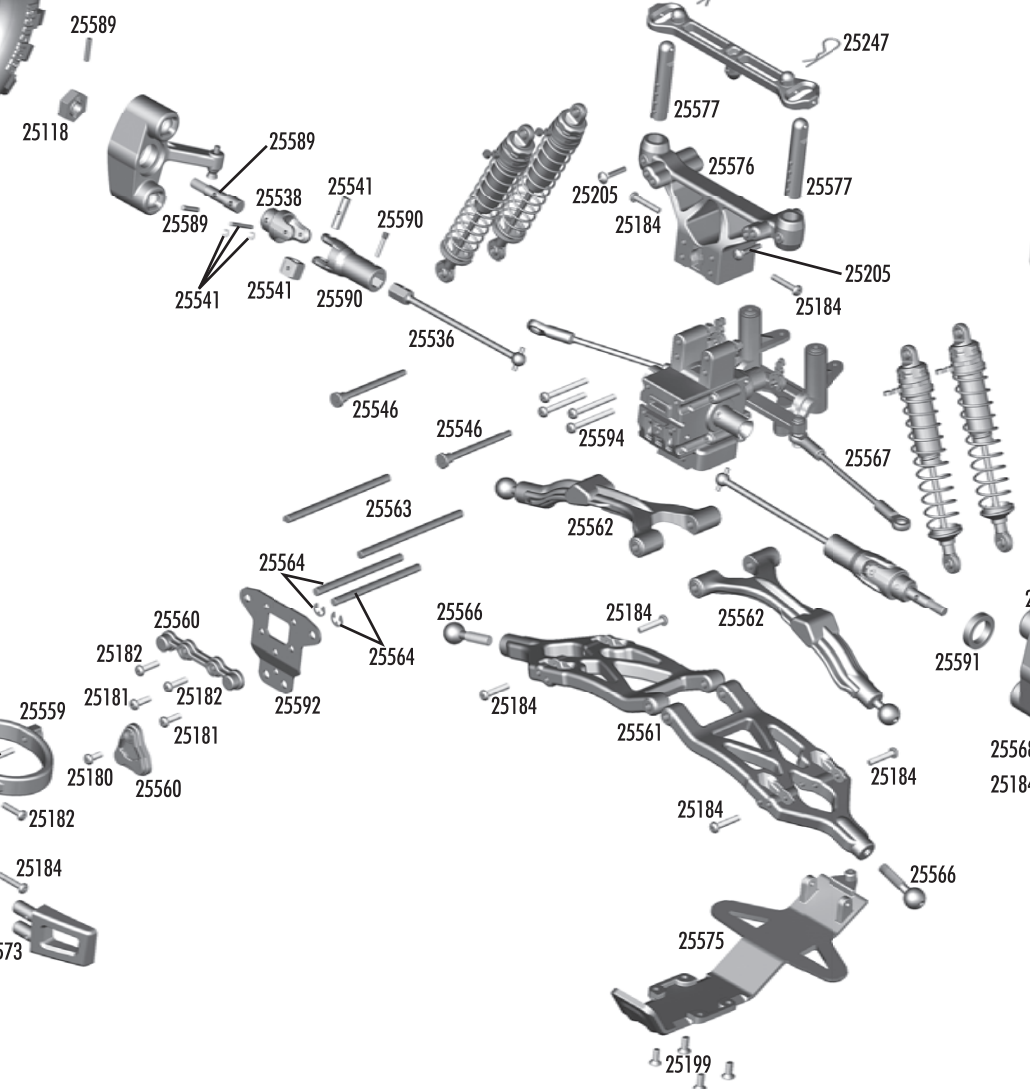
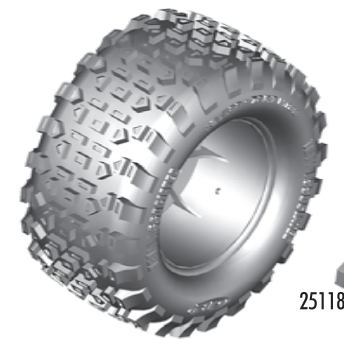
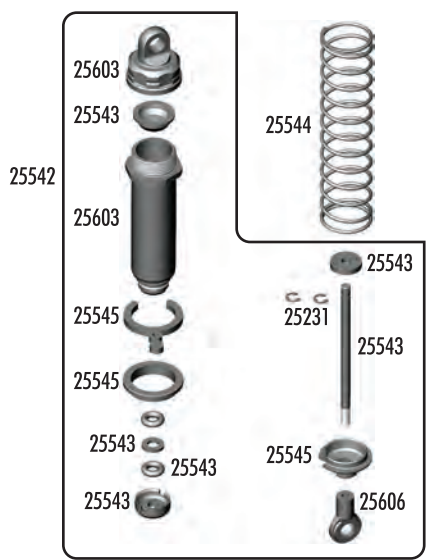
Your truck comes with linkages that are pre-set. At some point it may be necessary to adjust or replace the linkages that connect the servos to the throttle, brake, and/or transmission. See pictures above for reference.

1. Throttle linkage adjustment

- a. Loosen the setscrews of the collars using a 1.5mm Allen driver.
- b. Turn on your radio and truck but do not start the engine.
- c. Move the forward collar so it is just in contact with the pivoting linkage collar on the servo horn and tighten the setscrew.
- d. Move the rearward collar and spring so the spring is just in contact with the pivoting linkage collar and tighten the setscrew.
- e. Verify motion of the linkage by moving the throttle trigger through its full range of motion.
- f. Make small adjustments using the throttle TRIM and throttle High ATV if necessary.

2. Brake linkage adjustment - only make this adjustment after the throttle linkage has been set up correctly!

- a. Turn on the radio and the truck, but do not start the engine.
- b. Leave the throttle trigger on the radio set at the neutral setting.
- c. Hold the brake lever so the brake is engaged (minimal pressure) with one hand.



- d. Using your other hand, turn the plastic brake adjustment nut at the end of the linkage until there is a 1/16" (1.5mm) gap between the spring and the brake lever when the spring is not compressed.
- e. Verify motion of the linkage by pulling the throttle on the radio to full throttle and pushing it to full brakes, check to make sure that there is full actuation of the slide carburetor and the brake lever.
- f. While holding the trigger to full brakes, try to roll the truck forward and backward. It should not roll.
- g. Make small adjustments using the throttle TRIM and throttle High ATV if necessary.

3. FWD/REV linkage adjustment

- a. Loosen the setscrews of the collars on the wire linkages using a 1.5mm Allen driver.
- b. Turn on the radio and the truck, but do not start the engine.
- c. The servo will move automatically to the position for forward driving.
- d. Move the rearward collar toward the pivoting linkage collar on the servo horn until the spring is fully compressed. Uncompress the spring about 3/16" (4.5mm) by sliding the collar back and then tighten the setscrew.
- e. Press the FWD/REV button on the radio.
- f. Repeat step 3.d with the forward collar.

Shock Springs

Stiffer springs will give you better handling and higher cornering speed on smooth surfaces such as asphalt, concrete, and hard pack dirt. Soft springs are better for rougher terrain, rock crawling and jumping. Softer springs will increase the rollover tendency of the truck at higher speeds.

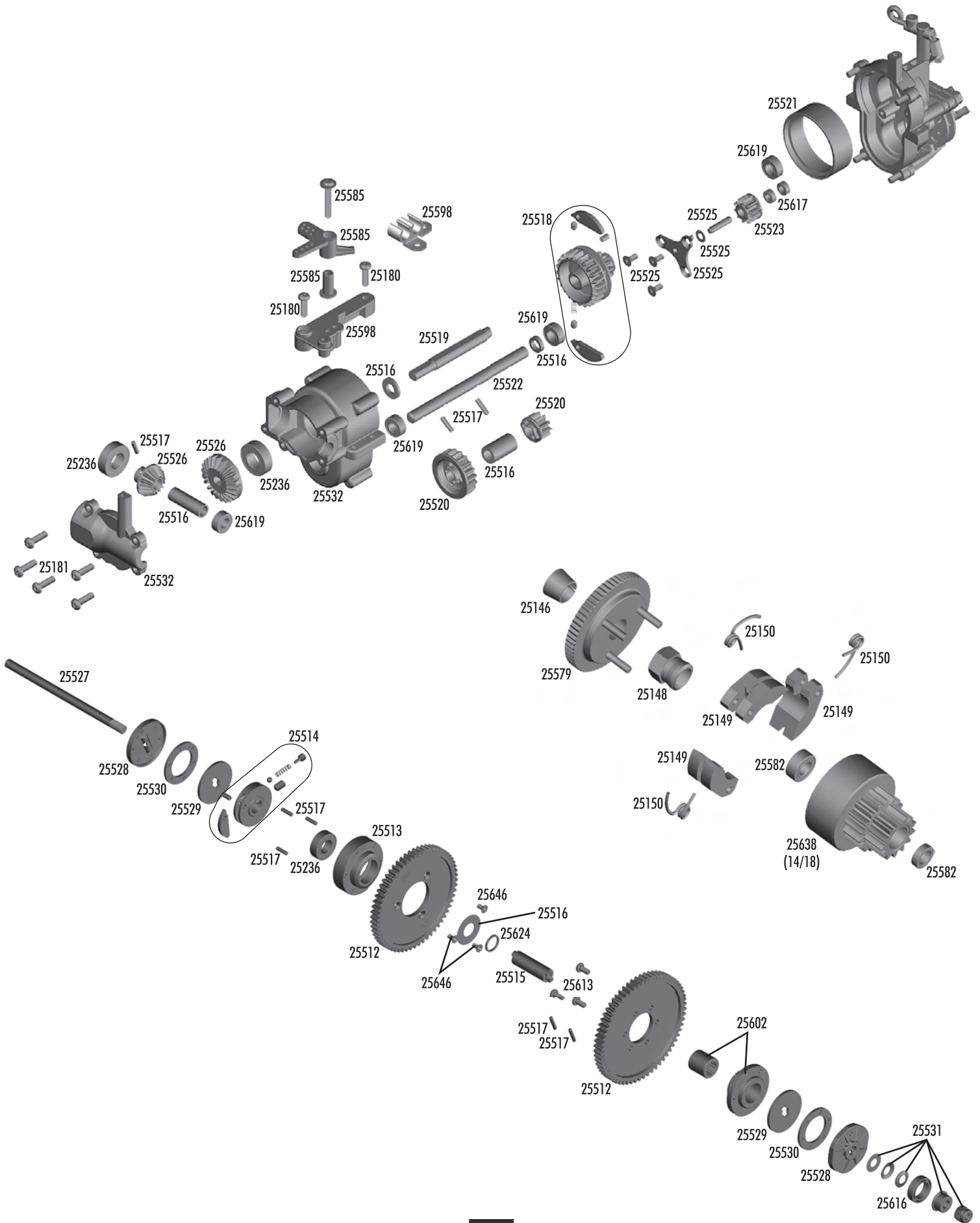
AE Part #	Spring Color	Rate	Relative Stiffness
25544	Blue (std)	2.70lb/in	Softest
25642	Gold	3.20lb/in	↓
25643	Red	3.60lb/in	
25644	Bronze	4.15lb/in	

Optional Gearing

Additional gearing is available for your Mini-Monster GT. Additional gearing allows you to match your engine and transmission to your driving situation. Bigger gears on the clutch bell (or smaller slipper gears) will result in greater top speed, but will have slower acceleration from a stop (see chart below). If you change the gearing you will need to reset the gear mesh:

1. Loosen (or tighten if engine was removed) the four engine mounting bolts located on the underside of the truck until you can just slide the engine forward and backward.
2. Slide the engine up to the spur gear until the teeth on the clutch bell are meshed tightly with the teeth on the slipper gear.
3. Move the engine back a little bit (1/32" or 0.8mm). Check the mesh by holding the smaller gear with one hand and rocking the bigger gear back and forth with the other. The big gear should rock back and forth slightly with little effort. A gear mesh that is too tight will be noisy, have lower performance and could ruin the gears.

Kit	2-Speed Clutch Bell Gear Size	Slipper Gear Size	Final Reduction 1st Gear	Final Reduction 2nd Gear	
AE #25639	13T	64T	22.32	16.00	↑ Better Acceleration ↓ Higher Top Speed
	17T	60T			
AE #25638	15T	56T	16.93	12.41	
	19T	52T			
AE #25640	17T	48T	12.80	9.50	
	21T	44T			



Mini-MGT 3.0

