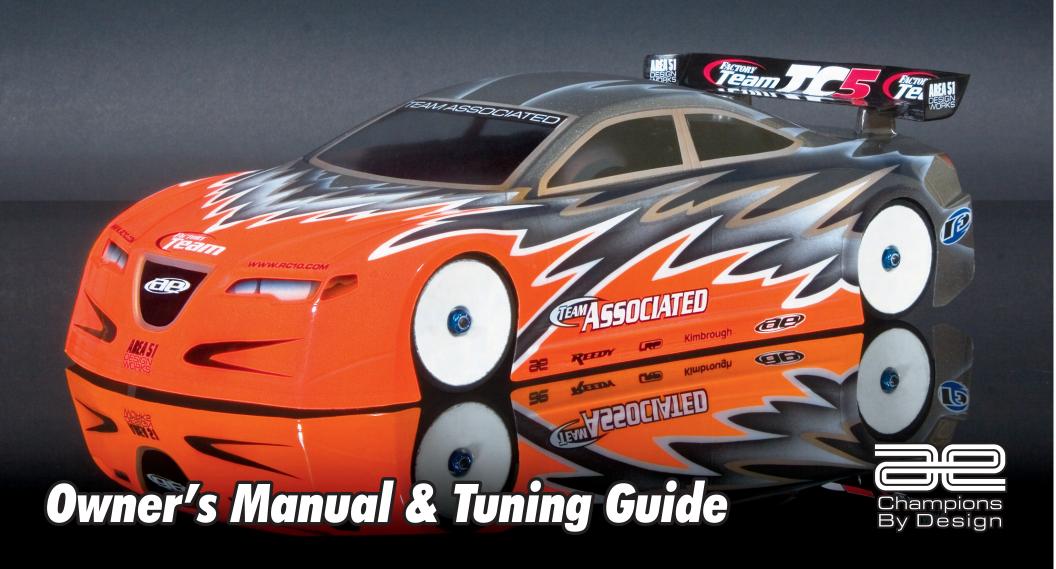
# TEATTORY TEATTORY

1:10th Scale 4wd Electric Touring Car Kit



# **Thank you!** ...for selecting this Team Associated model.

Associated's Factory Team TC5 is Area-51's answer to the most competitive onroad touring car field in history. Starting with a blank sheet of paper, many decades of race winning experience and new ideas, the designers built the TC5 from the ground up producing an entirely new platform. The result is the TC5, an electric touring car that offers the performance and durability to stand up to the highest demands of touring car racing.

Team Associated wants you to enjoy the process of building, driving and maintaining your new model. If you discover any problems or need help with the assembly of your model, please give us a call and we will do our very best to help you!

stomer Support

Tel: 949.544.7500 Fax: 949.544.7501

Hours: Monday-Friday 8:00am - 4:00pm, pst

Visit the following web sites for tips, setup help and racing information:

www.RC10.com www.TeamAssociated.com www.CompetitionX.com

Manual

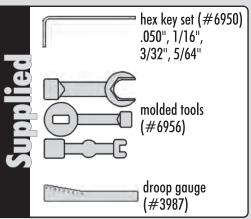
Examine each step carefully before building. Special notes will be listed for each step.

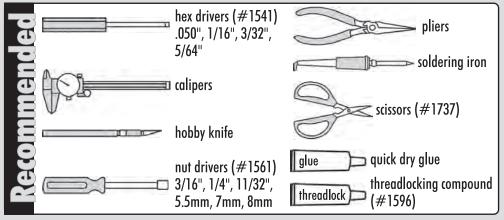
Bags

Open the bags in order according to each step. Some bags contain a large amount of small parts. We recommend using a small container to keep the parts together.

Suppl.

We are constantly developing new parts to improve our kits. These changes, if any, will be noted on supplementary sheets located in the appropriate parts bags. Check each bag for these sheets before you start to build.

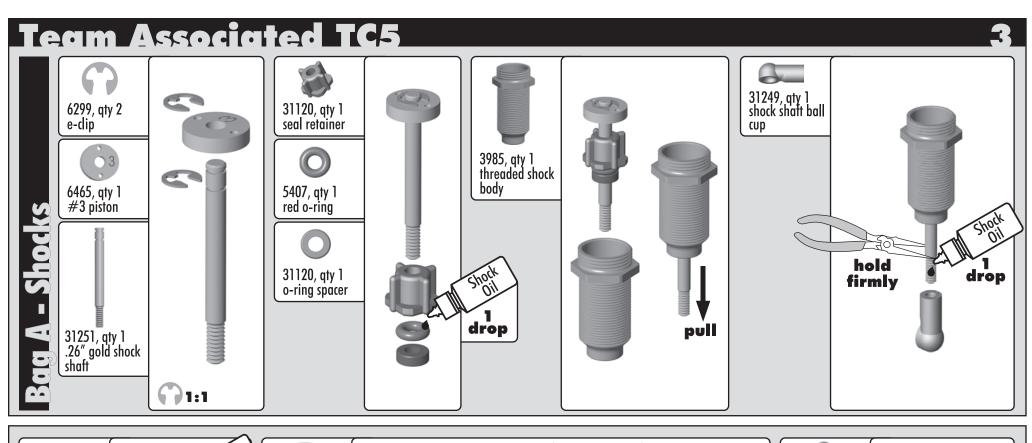


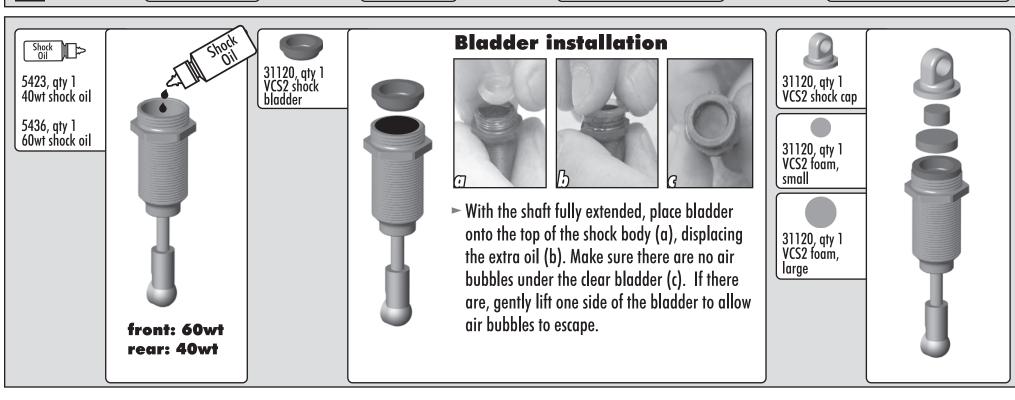


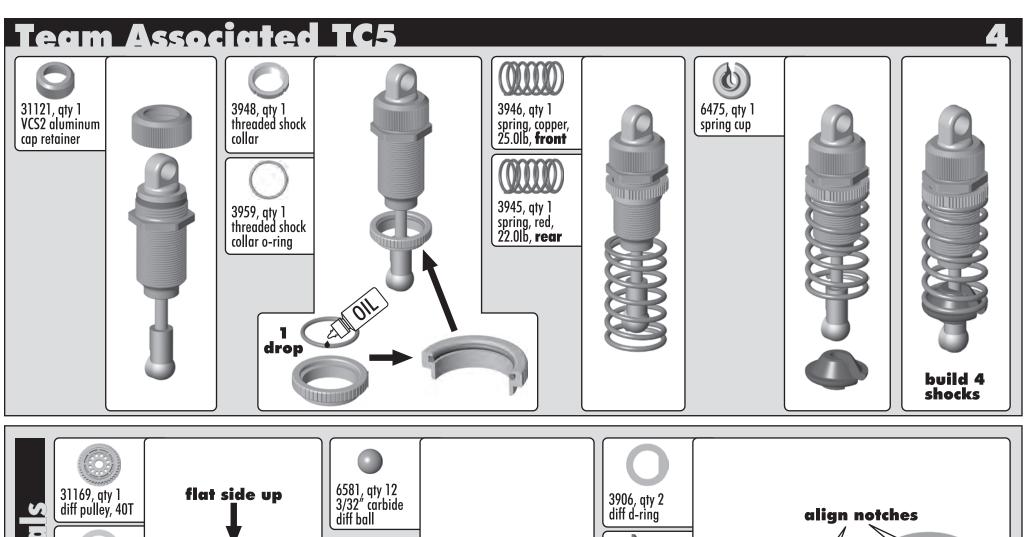
**ASSOCIATED ELECTRICS, INC.** 

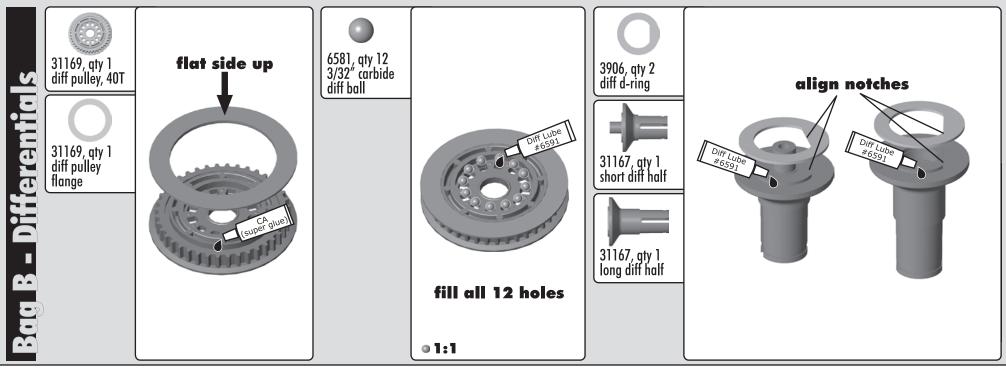
26021 Commercentre Drive Lake Forest, CA 92630-8853 You will need the following to complete you vehicle:

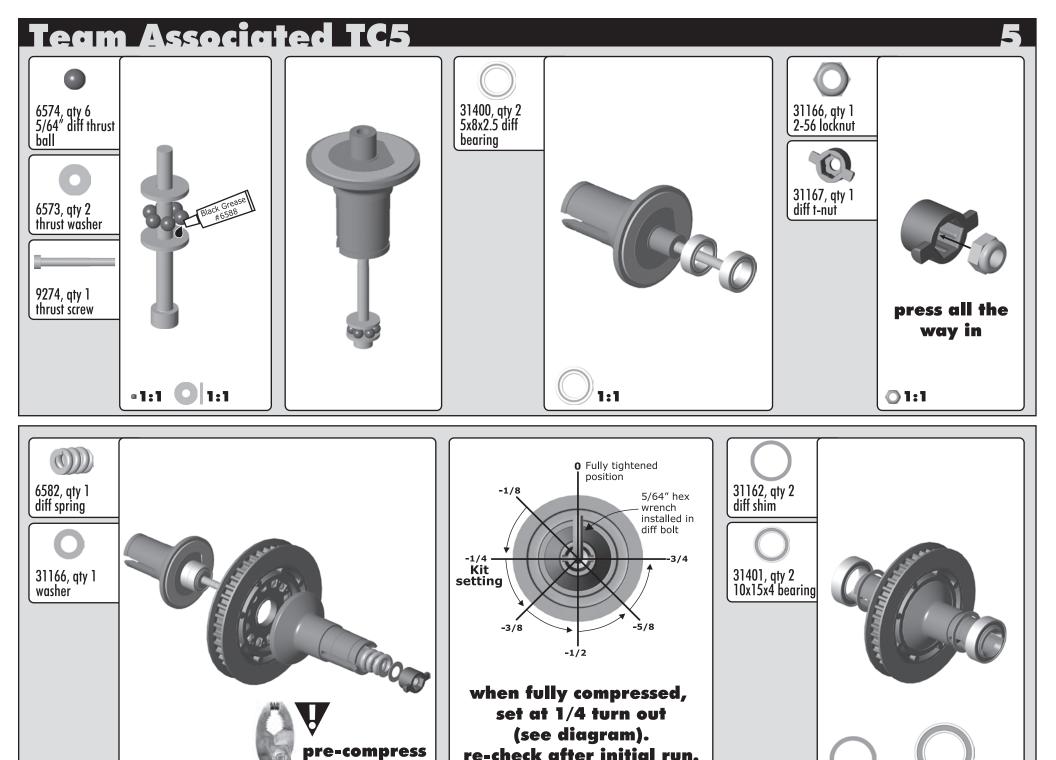
- 1. R/C two channel surface frequency radio system.
- 2. Electronic Speed Control.
- 3. R/C Electric Motor.
- 4. Battery pack.
- Battery charger (peak detection recommended).
- 6. Pinion gear (see motor gearing chart).
- 7. 190mm Lexan body.
- 8. Wheels and tires.





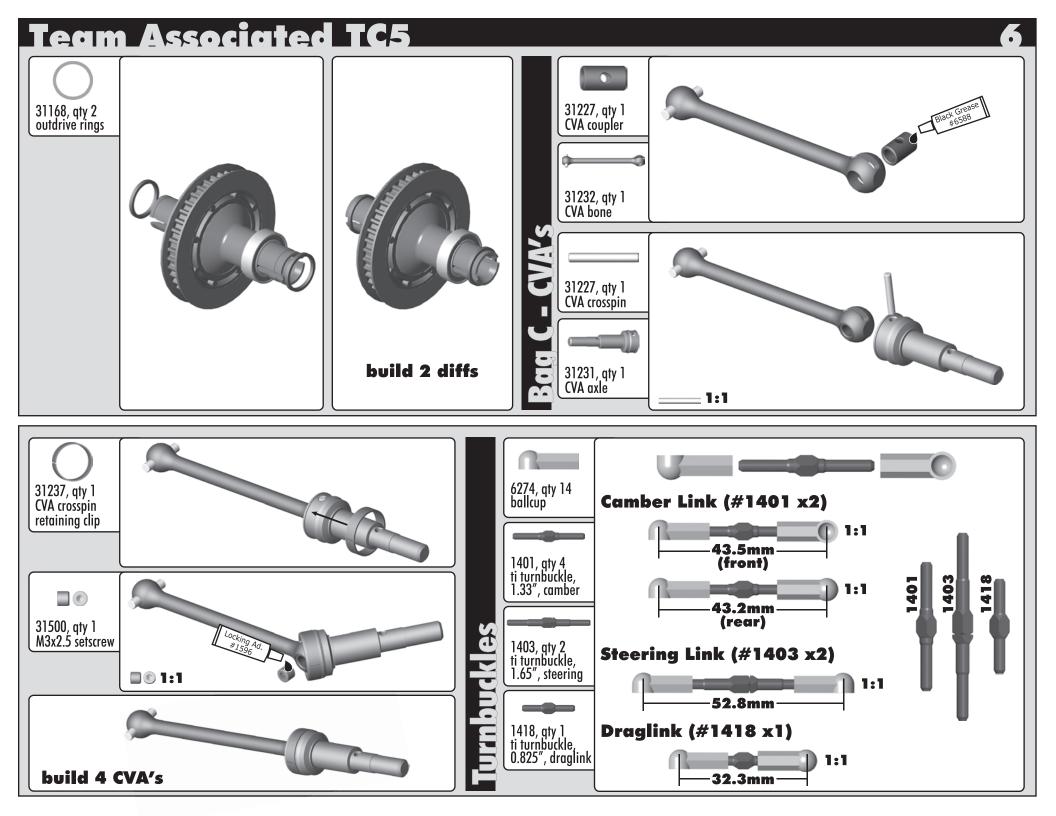


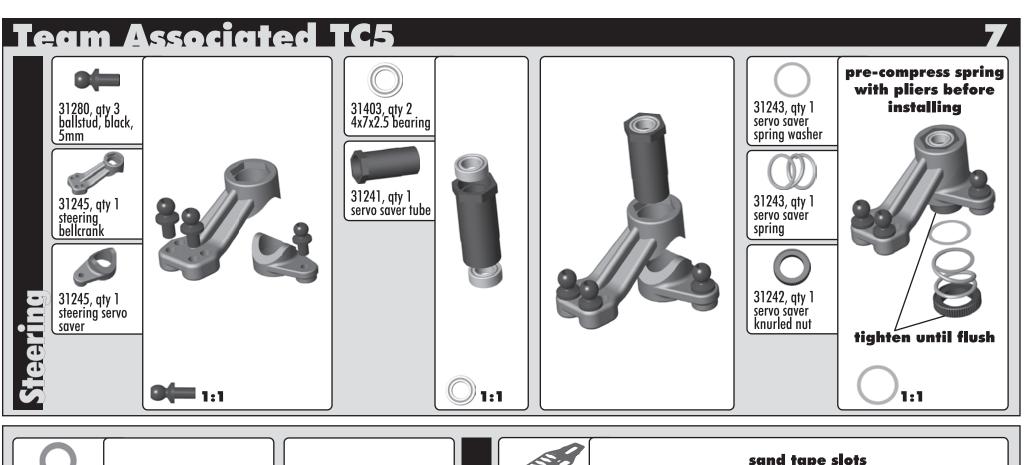


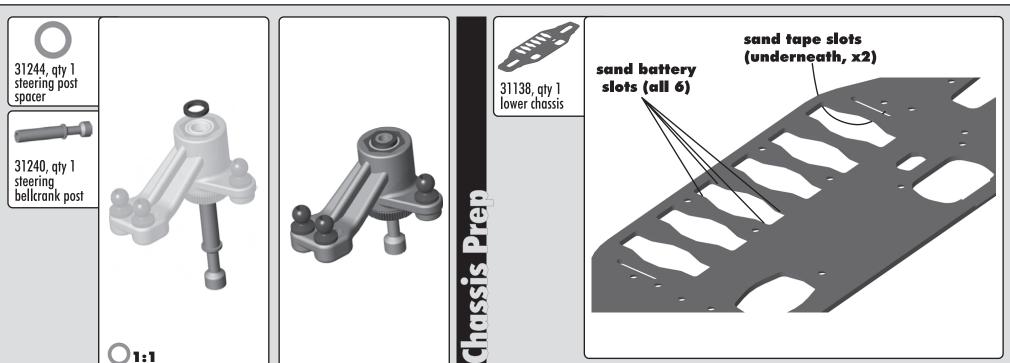


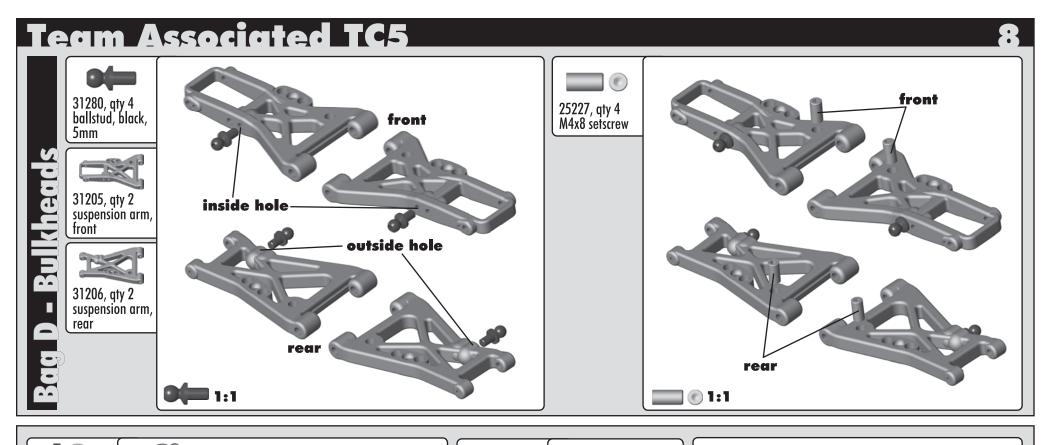
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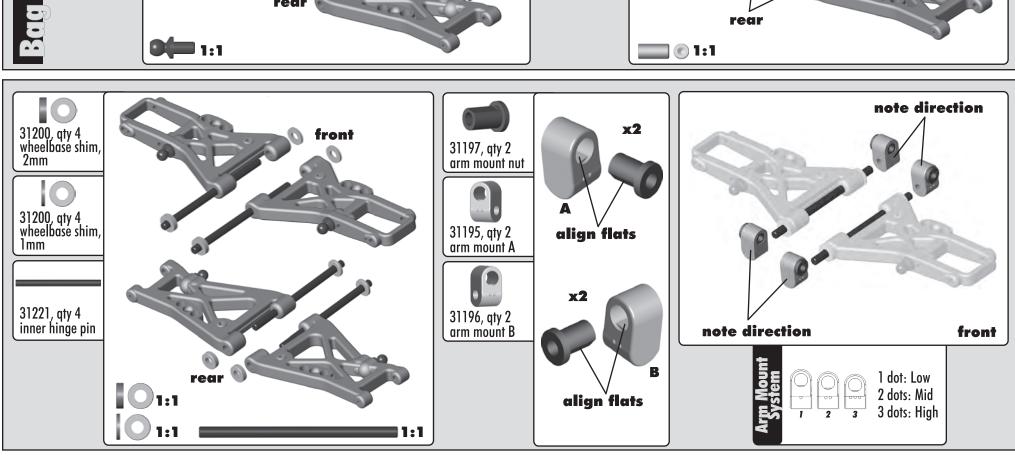
spring

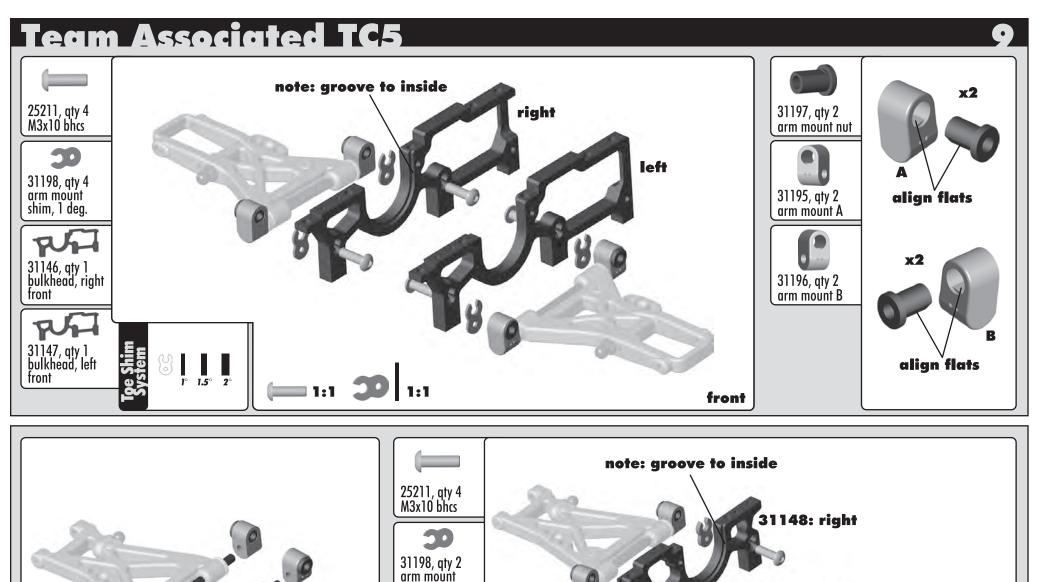


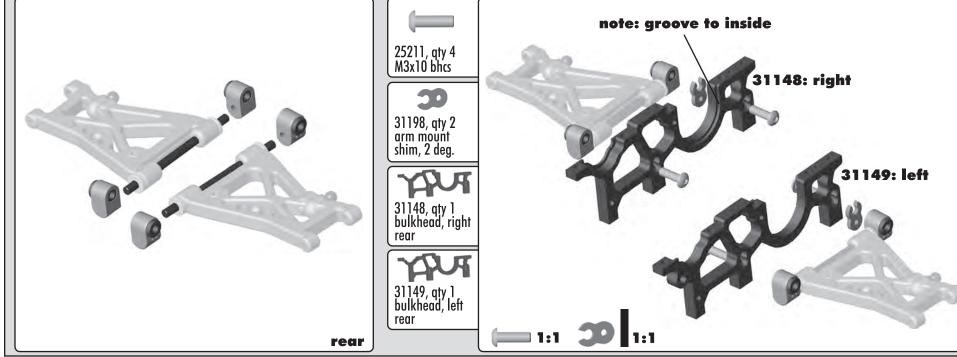




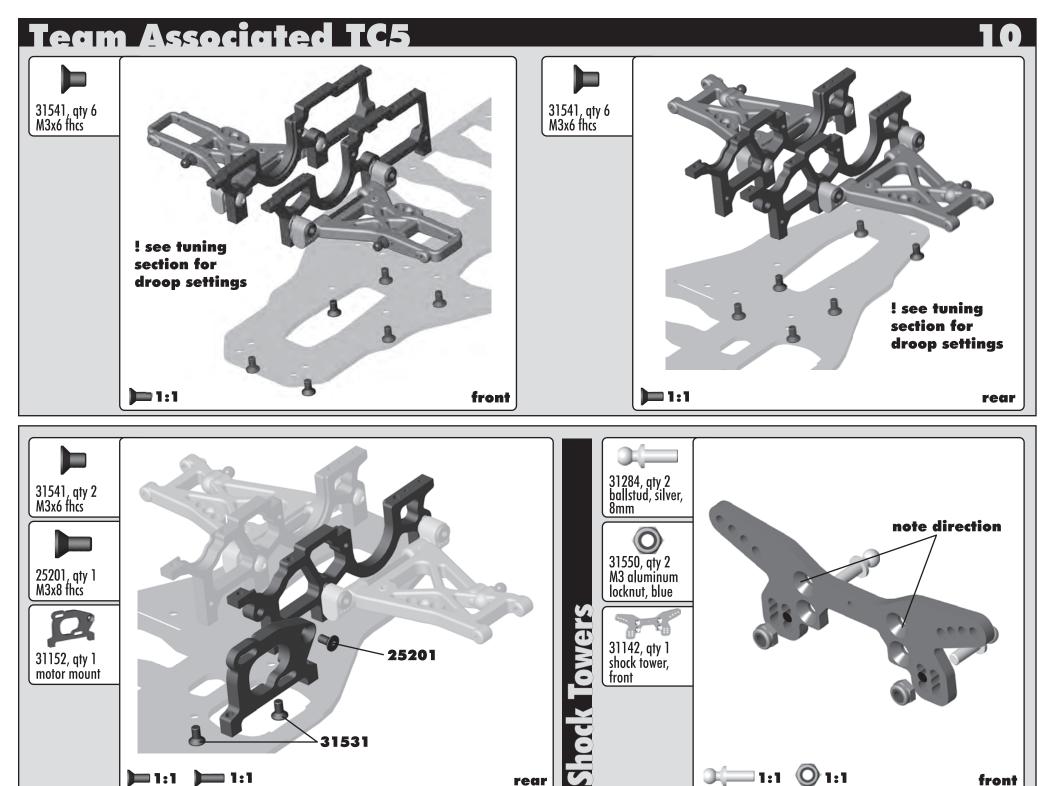








rear



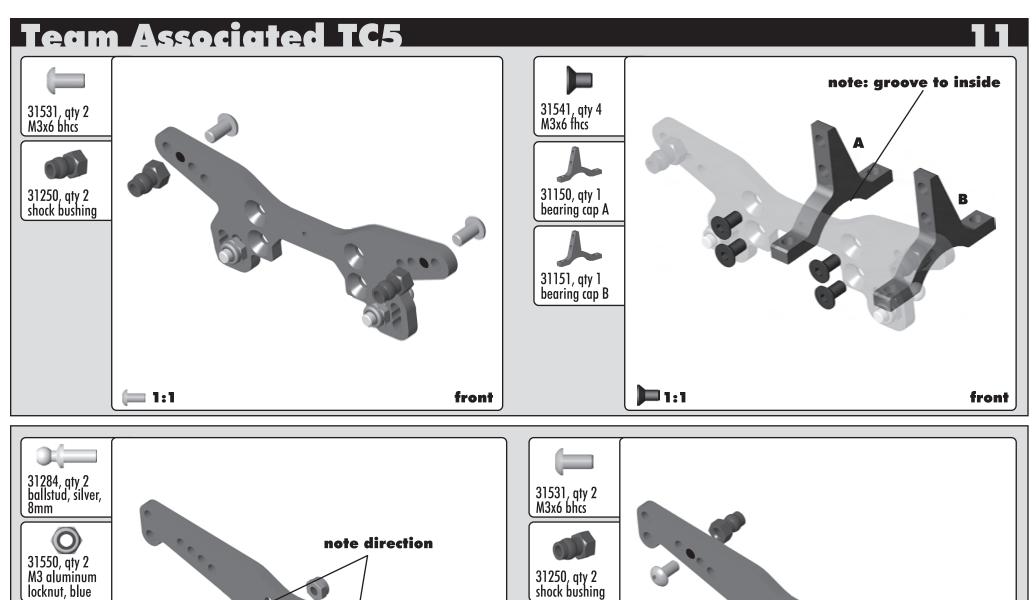
rear

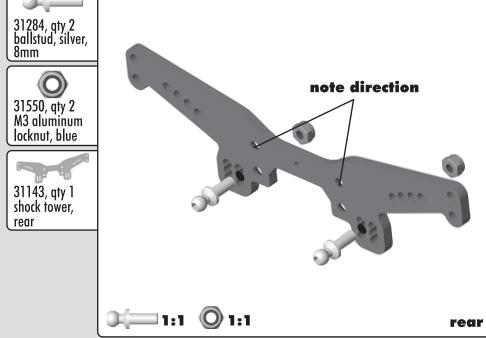
1:1 🔘 1:1

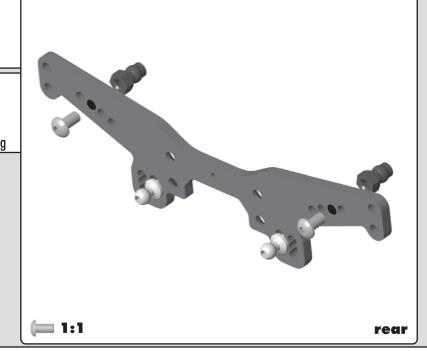
front

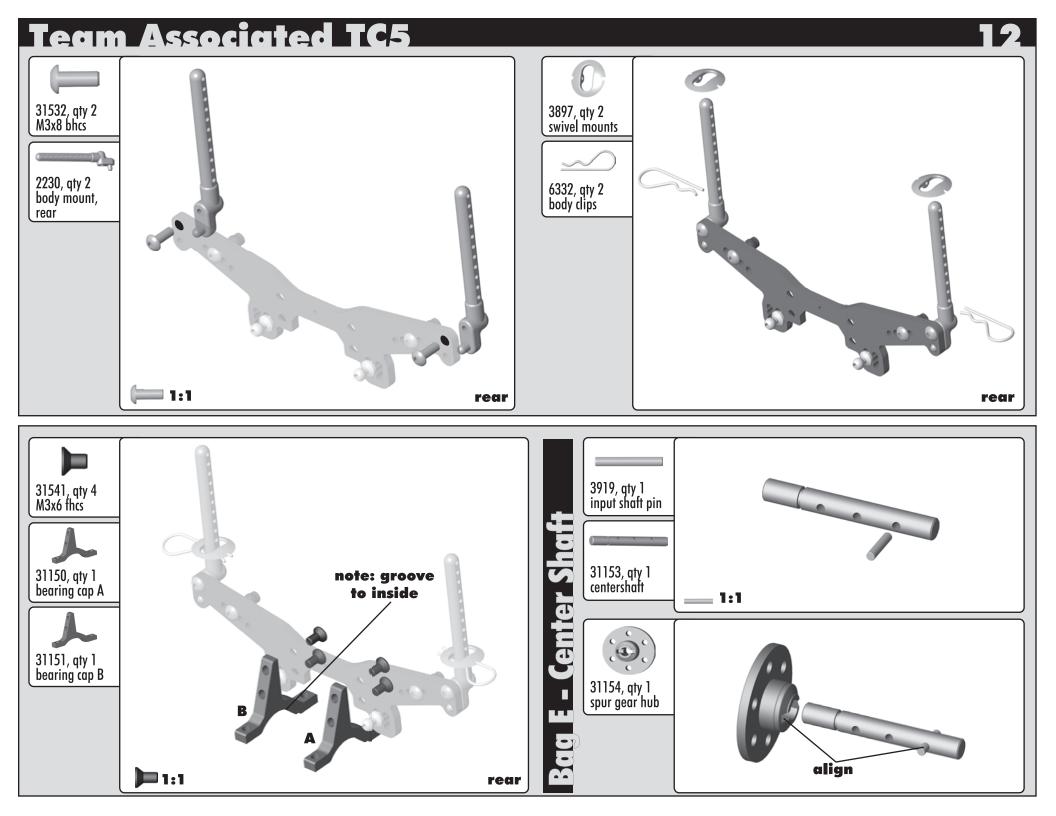
31531

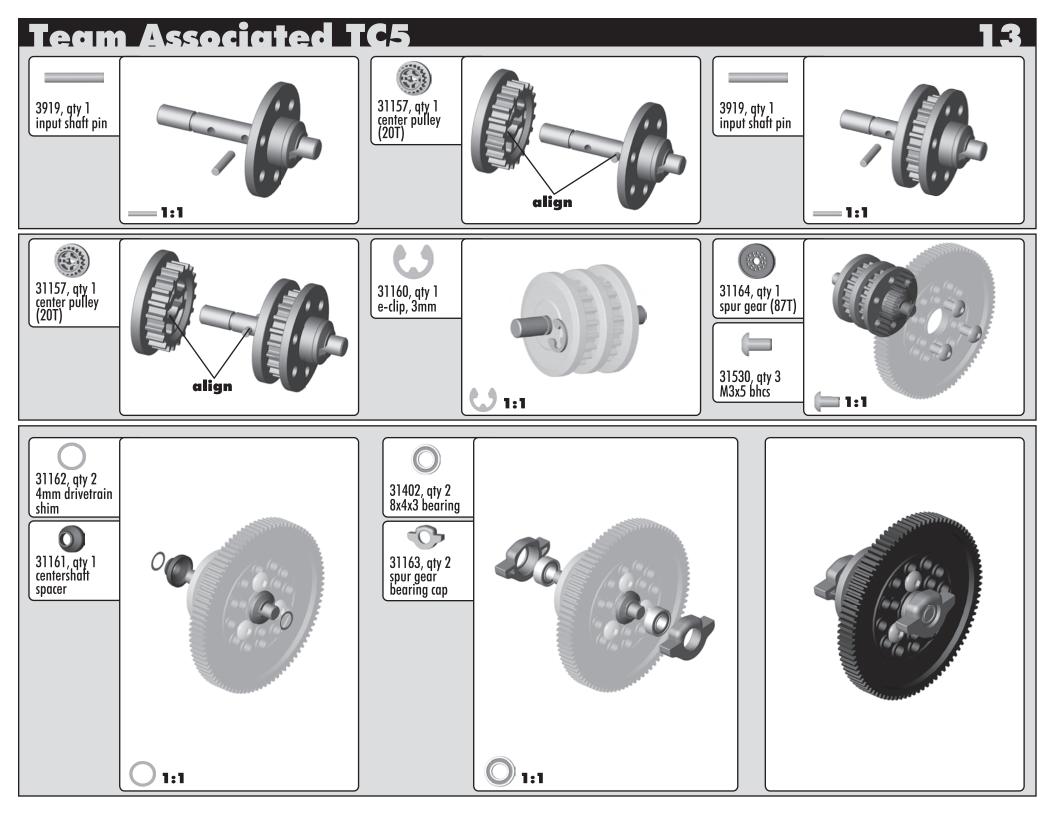
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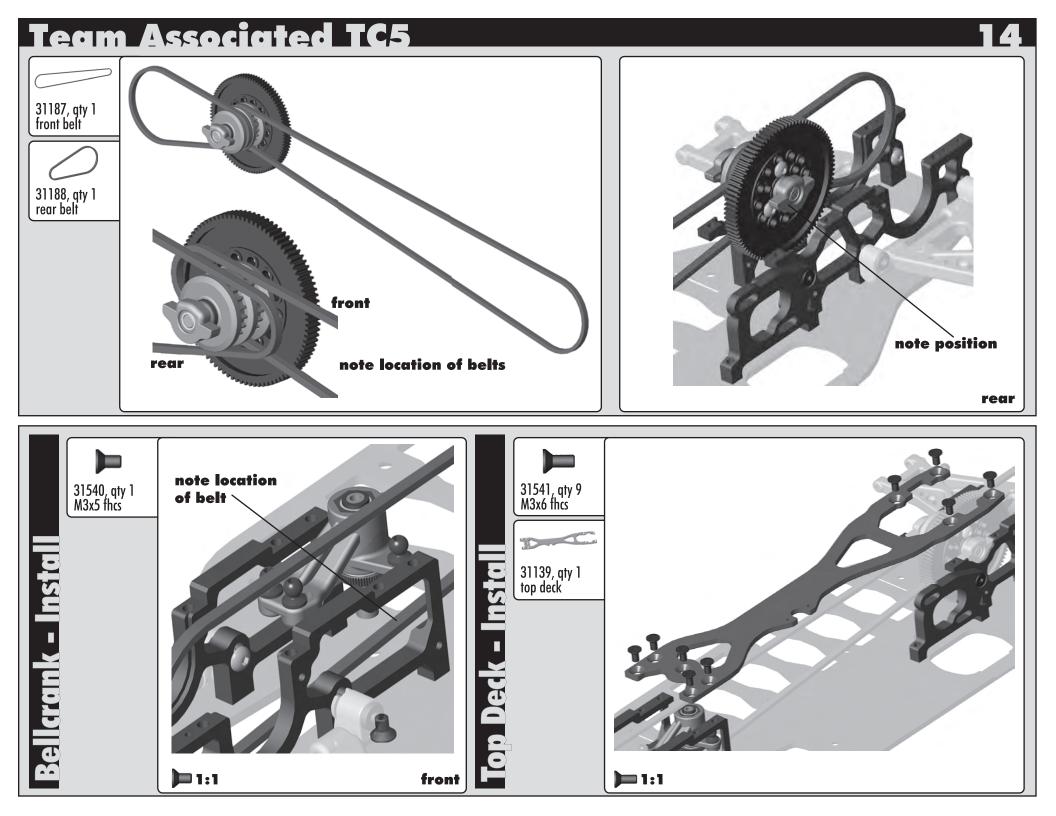














match right side cam position to the left side cam position

front diff cam position

31186, qty 2 diff bearing cam holder

Mid-Low

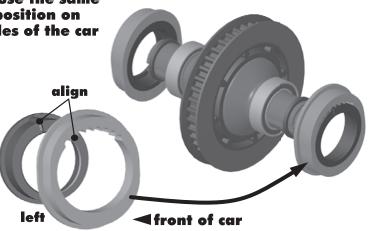
Low

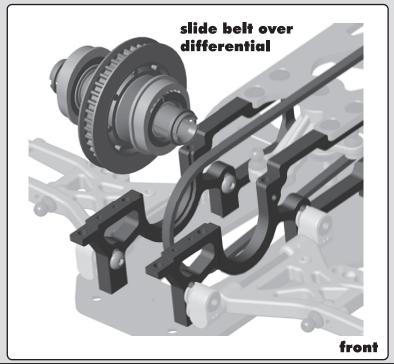
cam positions

Mid-Hiah

High

NOTE: always use the same cam position on both sides of the car





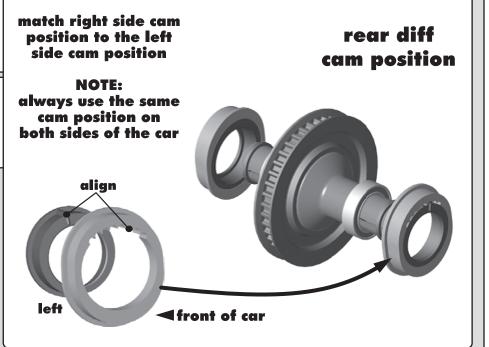


ifferenti

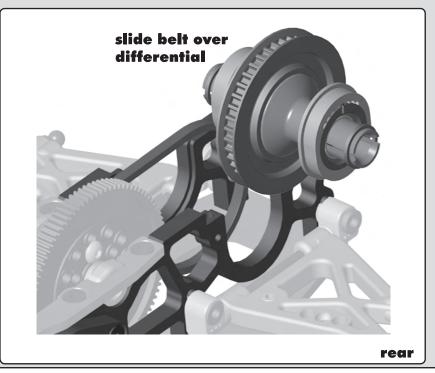


31185, qty 2 diff bearing cam

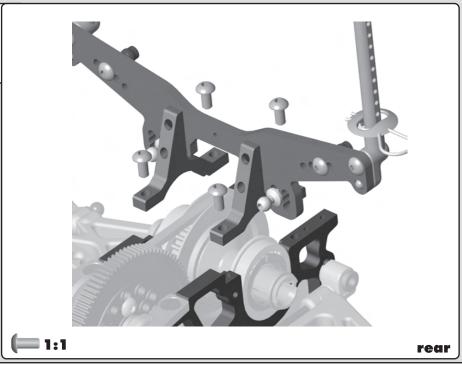
31186, qty 2 diff bearing cam holder







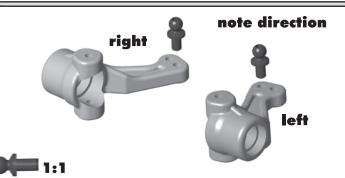








31215, qty 2 steering block

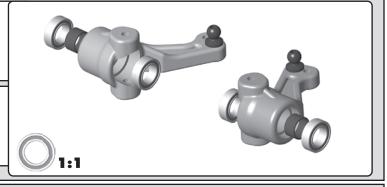


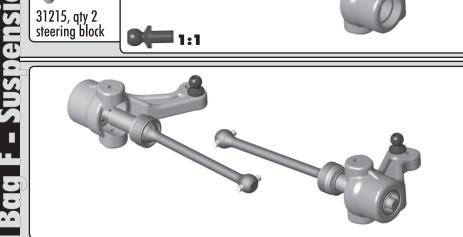


31404, qty 4 6x10x4 bearing



31233, qty 2 axle crush tube



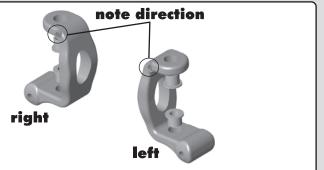


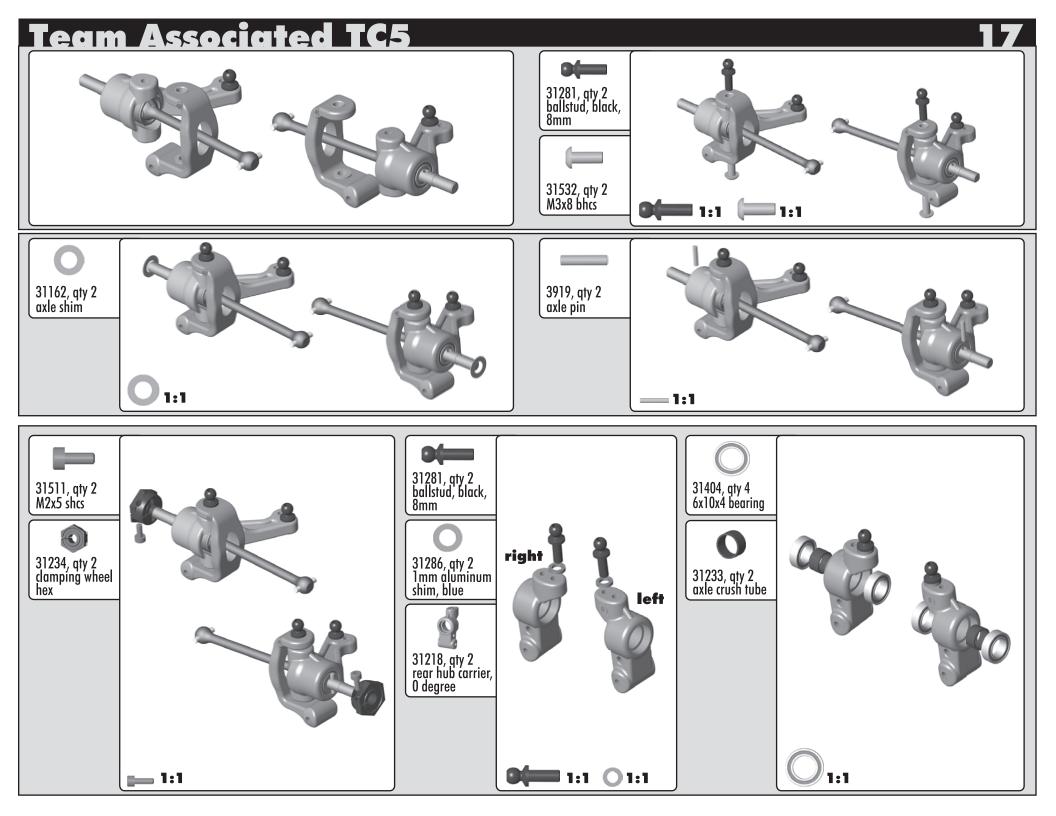


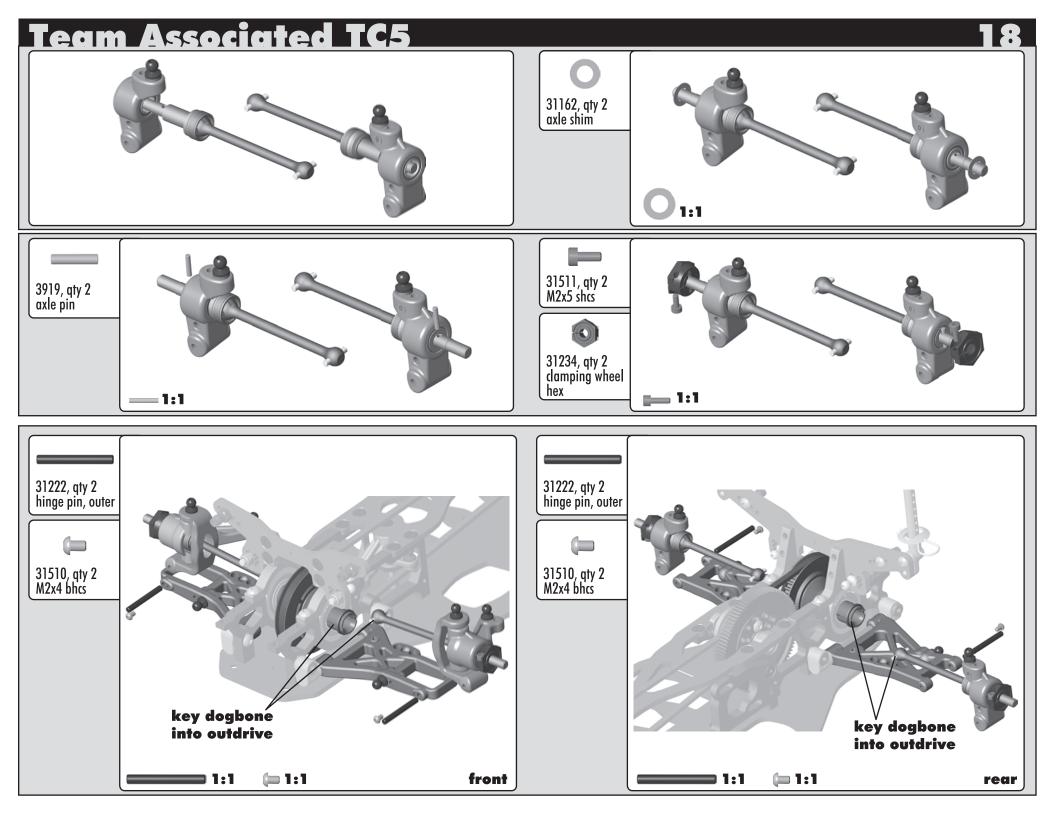
31214, qty 4 caster block bushing



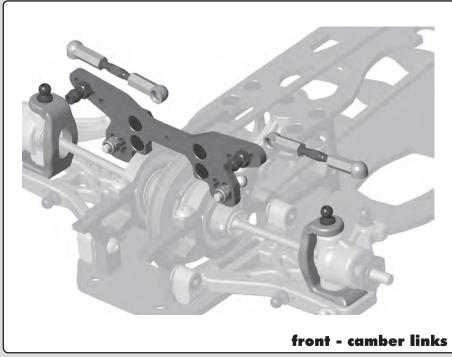
31212, qty 2 caster block, 4°

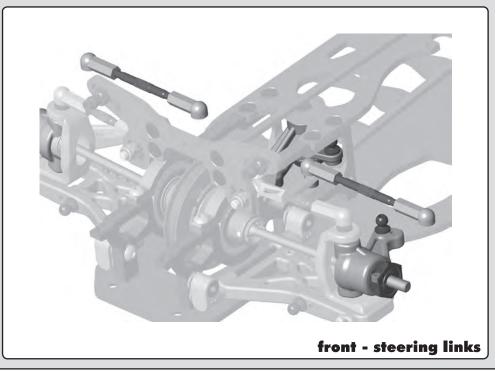


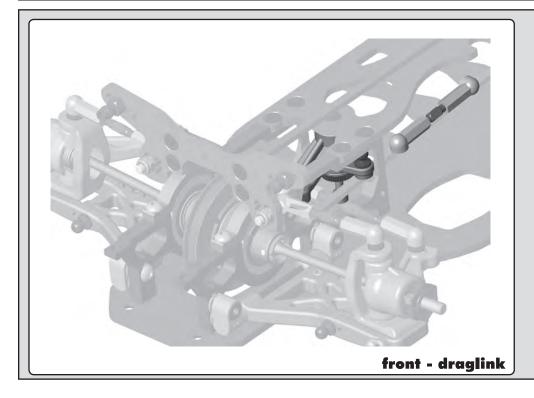


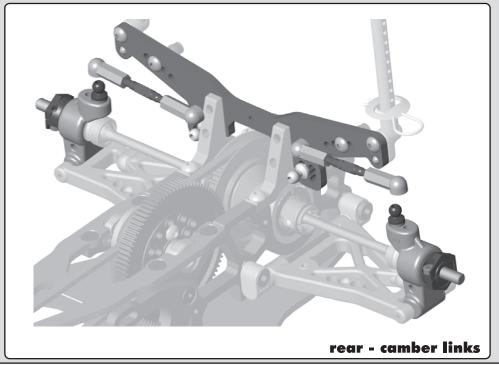


Turnbuckles -



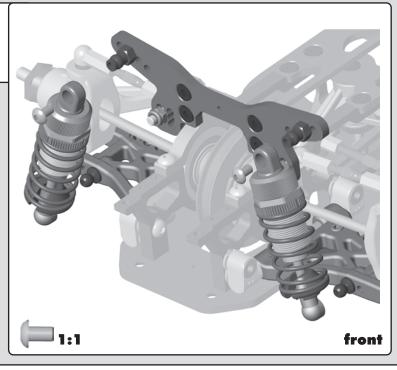






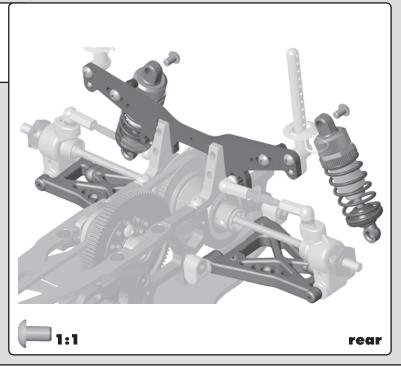


31530, qty 2 M3x5 bhcs





31530, qty 2 M3x5 bhcs





Bag G - Shocks

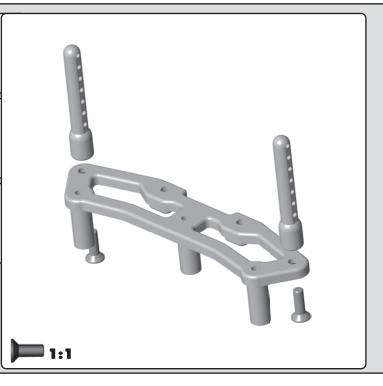
25202, gty 2 M3x10 fhcs



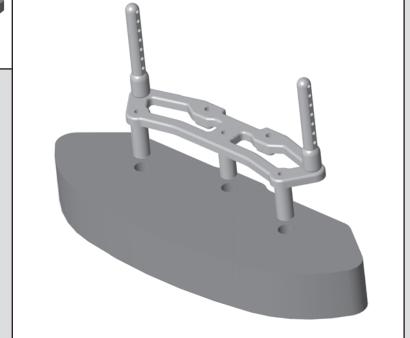
31271, qty 1 bumper brace

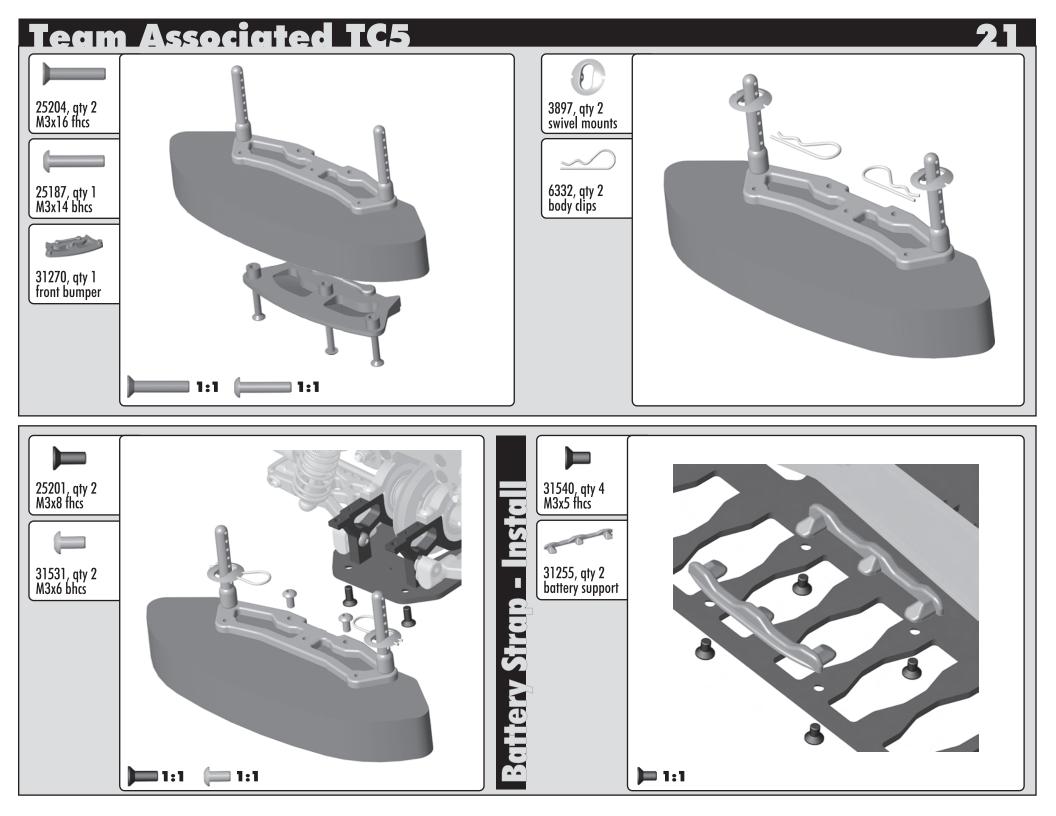


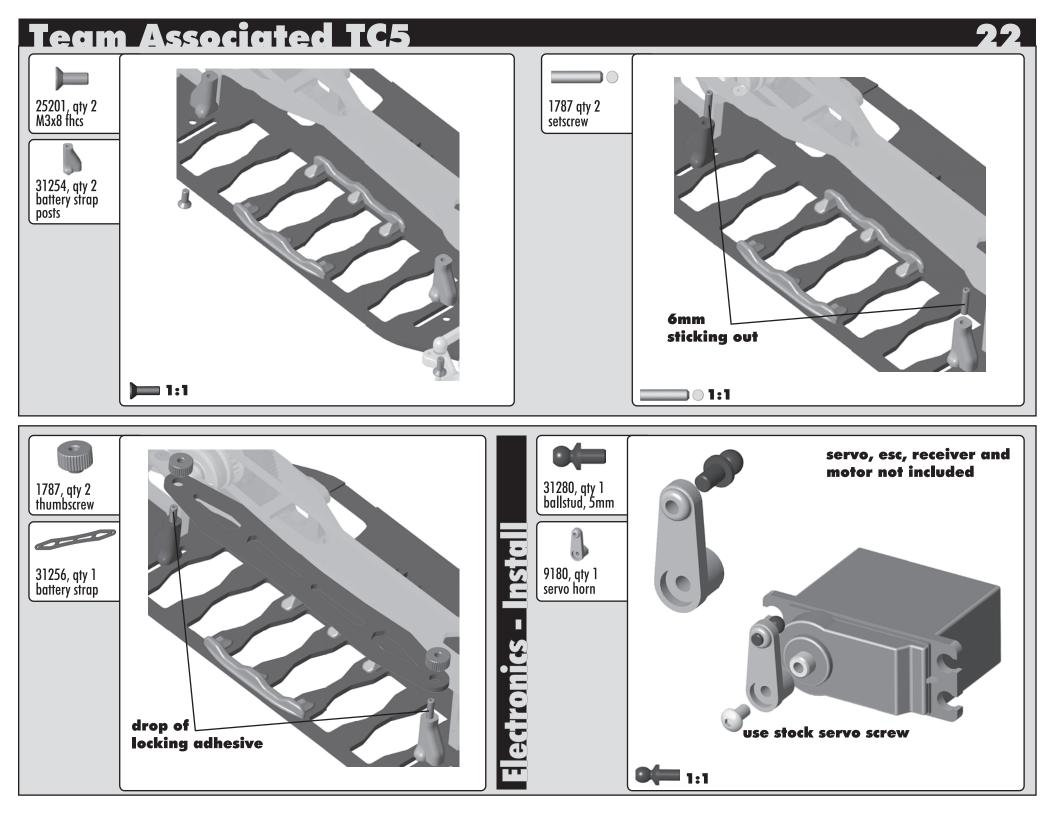
2230, qty 2 body post













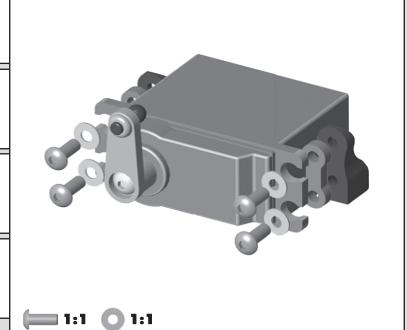
31532, qty 4 M3x8 bhcs



31246, qty 2 servo mount



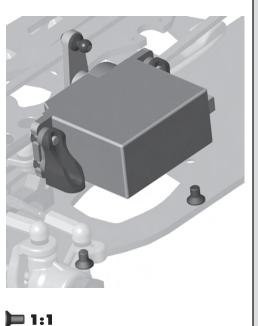
7336, qty 2 servo mount spacer



| Stee                        | ring Servo Chart*  | #31111<br>Spacer | #9180<br>Servo Arm |
|-----------------------------|--|------------------|--------------------|
| Airtronics                  | 94102  | no spacer        | A                  |
| Airtronics                  | 94738, 94157, 94158, 94257, 94258, 94357, 94358, 94452, 94453, 94751, 94755    | thick spacer     | A                  |
| Hitec                       | HS-5625MG, HS-5645MG, HS625MG, HS645MG   | no spacer        | Н                  |
| Hitec                       | HS-322HD, HS-325HB, HS-965, HS-985MG, HS-5965,<br>HS-5985MG, HS-425BB, HS-422  | thin spacer      | Н                  |
| JR                          | Z4725, Z4750, Z2750, Z8450, Z8550, NES-4750                                    | no spacer        | J                  |
| JR                          | Z250, Z550   | thin spacer      | J                  |
| Futaba                      | S9204, S9250, S9450, S148  | no spacer        | F                  |
| Futaba                      | S3003, S9202, S9101  | thin spacer      | F                  |
| Futaba                      | S9404  | thick spacer     | F                  |
| КО                          | PS-401, PS-2001, PS-2004, PS-2015, PS-2173, PS-2174, PS-2123, PS-2143, PS-2144 | thin spacer      | J                  |
| *Not all servo's are listed |  |                  |                    |



31540, qty 2 M3x5 fhcs





31520, gty 2 M2.5x6 bhcs

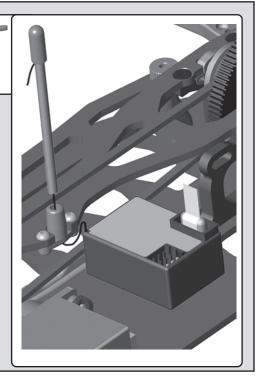


31113, qty 1 antenna mount

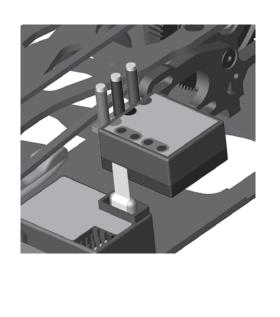


**= 1:1** 

6338, qty 1 antenna tube and cap





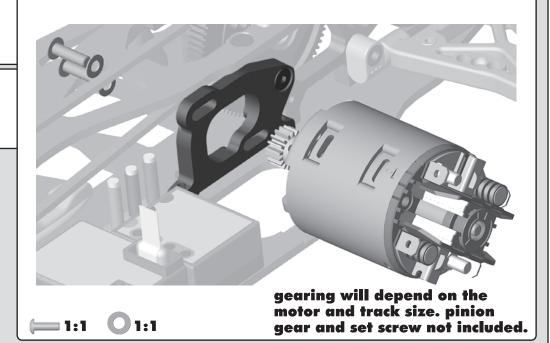


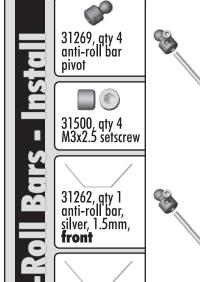


31531, qty 2 M3x6 bhcs

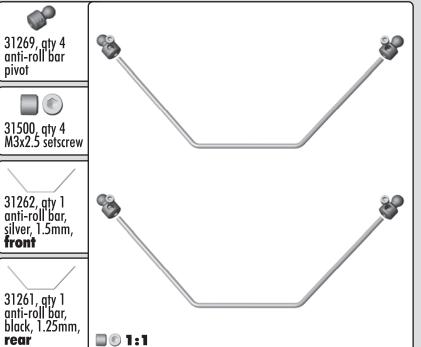


9630, qty 2 alum. washer





rear





31511, qty 2 M2x5 shcs



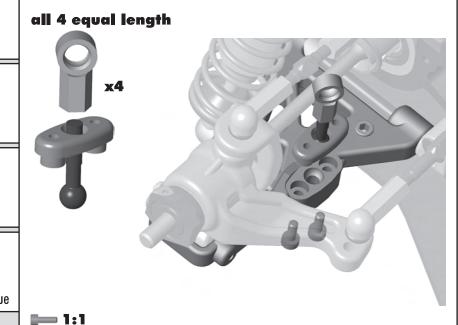
8828, aty 1 anti-roll bar ball cup



31269, qty 1 anti-roll bar pivot cap



31058, qty 1 anti-roll bar pivot ball, blue

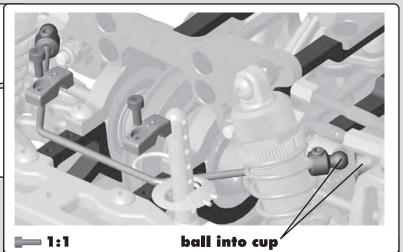




31511, qty 2 M2x5 shcs



31264, qty 2 anti-roll bar mount, 1.50mm



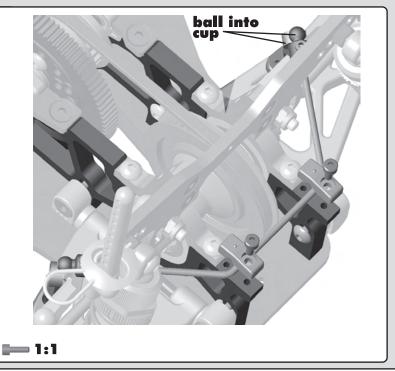
1 dot: 1.25mm bar

2 dots: 1.50mm bar

31511, qty 2 M2x5 shcs



31264, qty 2 anti-roll bar mount, 1.25mm



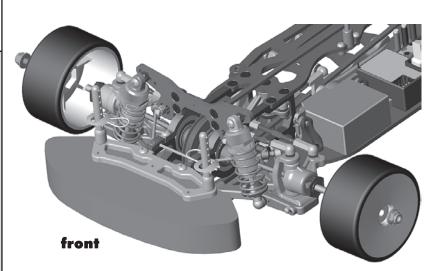
3 dots: 1.75mm bar

When changing the anti-roll bar, replace the anti-roll bar mount with the correct corresponding mount to ensure a tight fit. This helps prevent unwanted anti-roll bar movement.

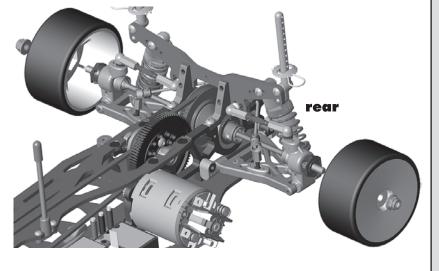


Wheels/Tires - Insta





#### wheel & tires not included



#### Ackermann

The inside hole on the steering blocks gives more Ackermann, while the outboard hole yields less Ackermann. Similarly, the rearward holes on the steering bellcrank produce more Ackermann, while the forward holes give less. Increasing Ackermann will smooth out steering and is best when running a one-way or on a high traction surface such as carpet. Reduced Ackermann will typically work best with a front diff or a solid axle. This will give more mid-to-exit steering and more corner speed.

# **Ride Height**

The standard starting point for ride height is 4.5mm (keep in mind that your local track may have minimum ride height requirements). You can slightly raise the rear relative to the front to give the car more steering. Raise the car slightly for tracks with large bumps.

#### **Arm Mount Position**

The TC5s arm mounting system allows for maximum adjustability for both rubber tire and foam tire conditions. Six arm mount positions allow you to run the pins flat, or with angles to produce kick-up, anti-dive, anti-squat, and pro-squat. The arm mounts are indicated one, two, and three with the corresponding number of dots on the outer face, where one is the lowest and three is the highest. Each bulkhead has two positions for the arm mount, the lower (position A) and upper (position B). The following chart shows some examples of arm mount positions and there resulting arm angle shown in degrees:

|          | Fwd<br>Mount | Rwd<br>Mount | Result       | Roll<br>Center |
|----------|--------------|--------------|--------------|----------------|
|          | 1B           | 3A           | 1° Kick-Up   | High           |
|          | 3A           | 1B           | 1° Anti-Dive | $\wedge$       |
|          | 1B           | 2A           | 2° Kick-Up   | 1 42           |
|          | 2A           | 1B           | 2° Anti-Dive |                |
|          | 3A           | 3A           | Flat         |                |
|          | 3A           | 2A           | 1° Kick-Up   |                |
|          | 2A           | 3A           | 1° Anti-Dive |                |
|          | 3A           | 1A           | 2° Kick-Up   |                |
|          | 1A           | 3A           | 2° Anti-Dive |                |
|          | 2A           | 2A           | Flat         | Std.           |
|          | 2A           | 1A           | 1° Kick-Up   | Д              |
| Ç        | 1A           | 2A           | 1° Anti-Dive | V              |
| <u> </u> | 1A           | 1A           | Flat         | Low            |

|   | Fwd<br>Mount | Rwd<br>Mount | Result        | Roll<br>Center       |
|---|--------------|--------------|---------------|----------------------|
|   | 2B           | 1B           | 1° Anti-Squat | High                 |
|   | 1B           | 2B           | 1° Pro-Squat  | ΙŇΙ                  |
|   | 2B           | 3A           | 2° Anti-Squat | 42                   |
|   | 3A           | 2B           | 2° Pro-Squat  |                      |
|   | 1B           | 1B           | Flat          |                      |
|   | 1B           | 3A           | 1° Anti-Squat |                      |
|   | 3A           | 1B           | 1° Pro-Squat  |                      |
|   | 1B           | 2A           | 2° Anti-Squat |                      |
|   | 2A           | 1B           | 2° Pro-Squat  |                      |
| Ţ | 3A           | 3A           | Flat          | Std.                 |
| 0 | 3A           | 2A           | 1° Anti-Squat | ΙДΙ                  |
| 0 | 2A           | 3A           | 1° Pro-Squat  | $\mid \ \lor \ \mid$ |
|   | 2A           | 2A           | Flat          | Low                  |

#### Anti-Dive (front)

Rear mount higher than front mount, negative result. Adding anti-dive reduces weight transfer to the front on deceleration entering corners. It also reduces caster at the wheel.

# Anti-Squat (rear)

Front mount higher than rear mount, positive result. Increasing anti-squat will make the rear suspension stiffer. It tends to give the car more entry steering and reduce rearward weight transfer on power.

## Pro-Squat (rear)

Rear mount higher than front mount, negative result. Running Pro-Squat will increase rearward weight transfer on power.

## Kick-Up (front)

Front mount higher than rear mount, positive result. Increasing kick-up will give more entry steering, as well as increasing caster at the wheel.

## Droop

The standard settings of 5mm front and 4mm rear will work best in most cases.

Reducing the droop by 0.5 to 1mm both front and rear will increase responsiveness.

On carpet, you should run more droop to account for smaller tire diameters.

#### Caster

Caster describes the angle of the kingpin from vertical while looking from the side of the car. Positive caster means the top of the kingpin leans rearward. Negative caster means the kingpin is leaning towards the front of the car. Since caster is measured at the wheel, it is affected by running any inclination in your inboard arm mount. Kick-up adds (+) caster, and anti-dive adds (-) caster.

When figuring out your caster at the wheel, add the number of degrees of kick-up or anti-dive and add it to the degree caster blocks you have on the car.

Typically for most racing surfaces, 4 degrees caster is the normal starting point for the Team. From there, increase caster to reduce mid to exit steering and make the front end less responsive. Conversely, decreased caster gives a more responsive feel and more exit steering.

# **Motor Gearing**

Motor gearing is a starting recommendation only. You may need to adjust your gearing according to your track size. Internal Gear Ratio is 2.0.

|    | Si | Uľ   | (48   | Pitch | 1     |       |       |       |
|----|----|------|-------|-------|-------|-------|-------|-------|
|    |    | 84   | 85    | 86    | 87    | 88    | 89    | 90    |
|    | 17 | 9.88 | 10.00 | 10.12 | 10.24 | 10.35 | 10.47 | 10.59 |
|    | 18 | 9.33 | 9.44  | 9.56  | 9.67  | 9.78  | 9.89  | 10.00 |
|    | 19 | 8.84 | 8.95  | 9.05  | 9.16  | 9.26  | 9.37  | 9.47  |
|    | 20 | 8.40 | 8.50  | 8.60  | 8.70  | 8.80  | 8.90  | 9.00  |
|    | 21 | 8.00 | 8.10  | 8.19  | 8.29  | 8.38  | 8.48  | 8.57  |
|    | 22 | 7.64 | 7.73  | 7.82  | 7.91  | 8.00  | 8.09  | 8.18  |
| 2  | 23 | 7.30 | 7.39  | 7.48  | 7.57  | 7.65  | 7.74  | 7.83  |
| C  | 24 | 7.00 | 7.08  | 7.17  | 7.25  | 7.33  | 7.42  | 7.50  |
| ä  | 25 | 6.72 | 6.80  | 6.88  | 6.96  | 7.04  | 7.12  | 7.20  |
| co | 26 | 6.46 | 6.54  | 6.62  | 6.69  | 6.77  | 6.85  | 6.92  |
| 7  | 27 | 6.22 | 6.30  | 6.37  | 6.44  | 6.52  | 6.59  | 6.67  |
| 7  | 28 | 6.00 | 6.07  | 6.14  | 6.21  | 6.29  | 6.36  | 6.43  |
| 0  | 29 | 5.79 | 5.86  | 5.93  | 6.00  | 6.07  | 6.14  | 6.21  |
| E  | 30 | 5.60 | 5.67  | 5.73  | 5.80  | 5.87  | 5.93  | 6.00  |
| 上  | 31 | 5.42 | 5.48  | 5.55  | 5.61  | 5.68  | 5.74  | 5.81  |
|    | 32 | 5.25 | 5.31  | 5.38  | 5.44  | 5.50  | 5.56  | 5.63  |

# **Tips for Beginners**

Before making any changes to the standard setup, make sure you can get around the track without crashing. Changes to your car will not be beneficial if you can't stay on the track. Your goal is consistent laps.

Once you can get around the track consistently, start tuning your car. Make only ONE adjustment at a time, testing it before making another change. If the result of your adjustment is a faster lap, mark the change on the included setup sheet (make additional copies of the sheet before writing on it). If your adjustment results in a slower lap, revert back to the previous setup and try another change.

When you are satisfied with your car, fill in the setup sheet thoroughly and file it away. Use this as a guide for future track days or conditions.

For more racing tips and setup information, go to:
www.RC10.com • www.TeamAssociated.com • www.CompetitionX.com

## **Ballstud Height/Camber Location**

You can lower the front or rear roll center by lowering the arm mounts, or raising the inner ballstud. A lower roll center will put more weight on the tires during cornering, and increases traction to that end of the car. Shortening the link (typically used on high grip and carpet) will raise the roll center and decrease grip. A similar effect can come from lowering the ballstud.

#### Battery Placement (4 or 5 cell packs)

For most cases, run the battery in the standard forward position. Typically this will be the most stable and easiest to drive. Try moving the battery back if you encounter a low traction surface.

#### Wheelbase

Lengthening the front will reduce steering, shortening the front will increase steering. Shortening the rear will increase rear grip, lengthening the rear will decrease rear traction.

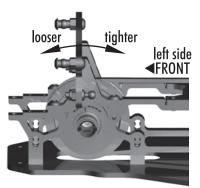
#### **Rear Toe-In**

Decreasing toe-in will decrease rear traction and increase corner speed. Use numbered toe shims for adjustment.

#### **Belt Tension**

When altering the differential height, you will need to adjust the tension of the belt. Follow the chart below.

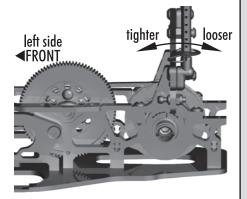
|          | Height   | Pos. |
|----------|----------|------|
|          | Mid-Low  | 2    |
|          | Mid-High | 9    |
|          | Low      | 1    |
| <u> </u> | High     | 10   |







|                    | Height   | Pos. |
|--------------------|----------|------|
| Ţ                  | Mid-Low  | 6    |
| $oldsymbol{\circ}$ | Mid-High | 13   |
| (1)                | Low      | 8    |
| ~                  | High     | 11   |



NOTE: Charts show left side cam positions from the left side of the car. Match right side cam position to left side cam position.

