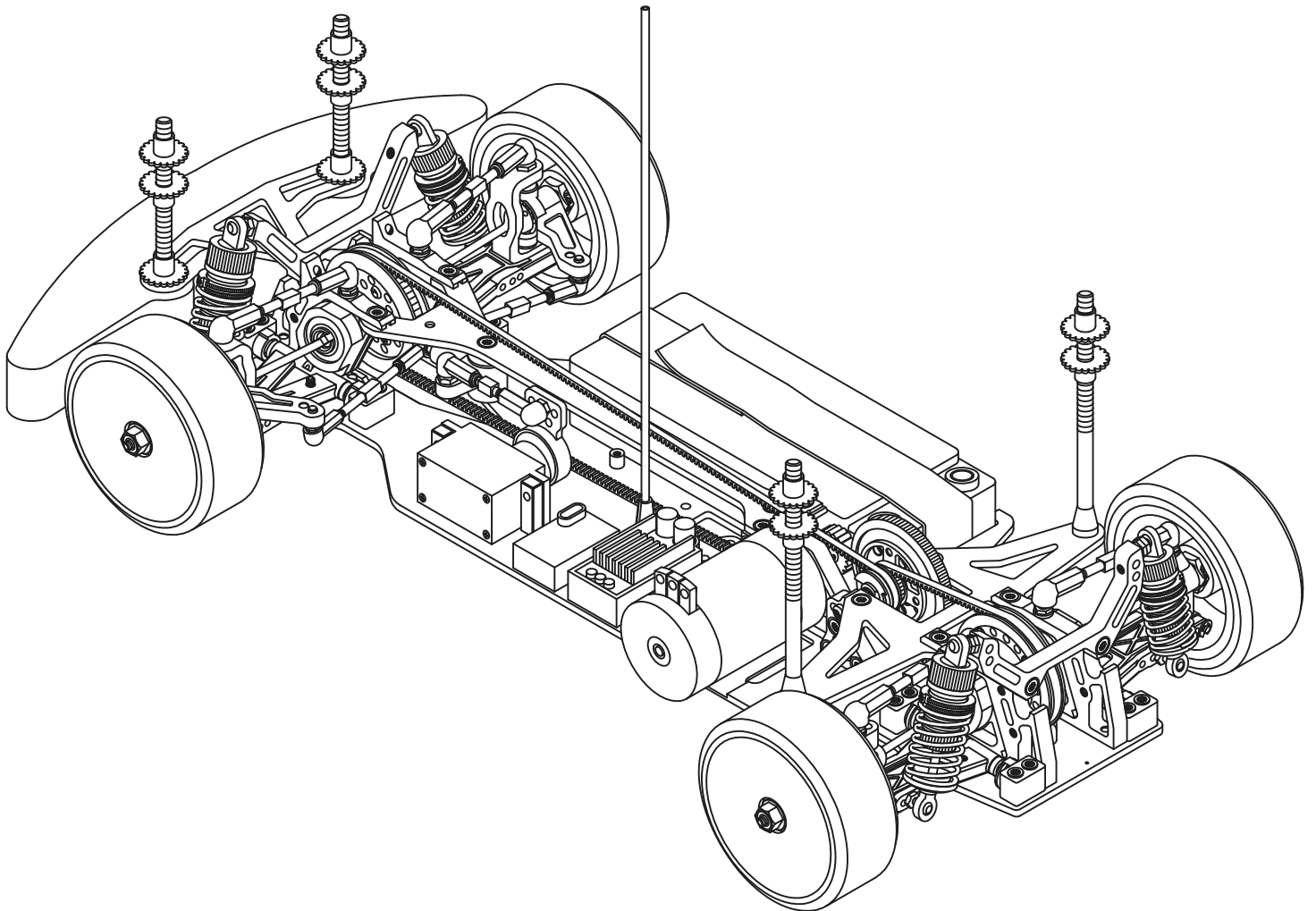




**TEAM ORALLY HMX**  
***Instruction Manual***



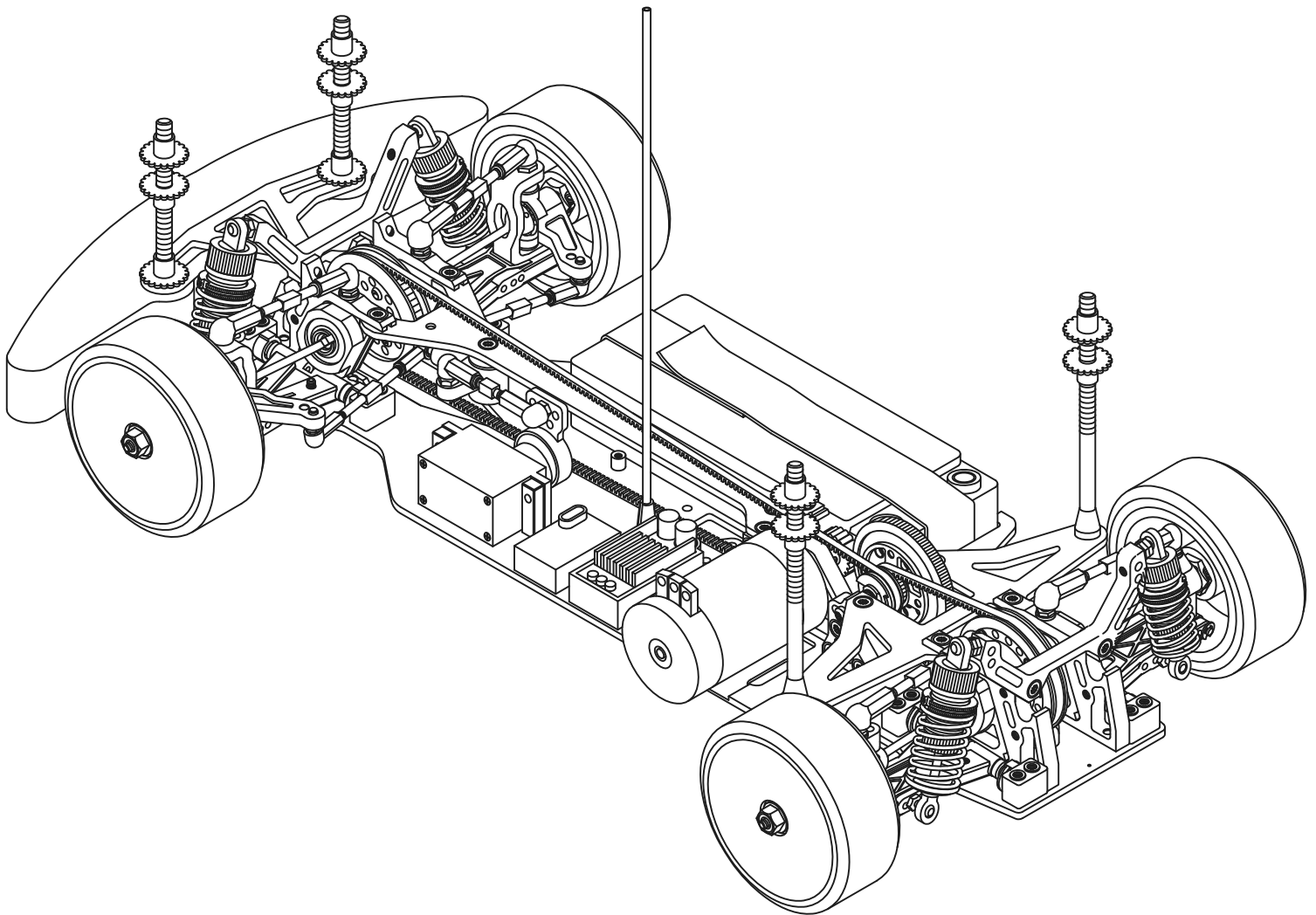
**#01625 - HMX M1 (SGX Gear Diff + Front Spool)**  
**#01626 - HMX 'US CARPET SPEC' M1 (2x SGX Gear Diff)**



At Corally we use high-tech, quality engineering to provide you, the racers, with superior racing equipment. State of the art production methods and extensive R&D ensure that every Corally product sets the pace of development in the R/C competition world. We are not followers of fashion but leaders in innovation and development.

## ***Corally HMX Instruction Manual***

This manual will guide you through all steps to get your car running. For best result it is advised to read the manual completely before building the car.



**Please note:**

During assembly of the HMX you might find some extra small parts. These extra parts have been included for your convenience. They do not necessarily need to be used during assembly.

# HMX Parts & Options

	10421	Antenna tube and holder
	10425	Antenna holder
	1121	Ball Bearings, Metal Shielded - 5 x 9 mm (1 pair)
	1122	Ball Bearings, Metal Shielded - 4 x 7 mm Flanged (1 pair)
	1131	Ball Bearings, Metal Shielded - 10 x 15 mm (1 pair)
	1132	Ball Bearings, Metal Shielded - 5 x 8 mm (1 pair)
OPTION	1133	Ball Bearings, Metal Shielded - 3 x 6 mm (1 pair)
	1137	Ball Bearings, Metal Shielded - 8 x 12 mm (1 pair)
OPTION	1151	Ball Bearings, Metal Shielded - CERAMIC - 5 x 9 mm (1 pair)
OPTION	1161	Ball Bearings, Metal Shielded - CERAMIC - 10 x 15 mm (1 pair)
OPTION	1162	Ball Bearings, Metal Shielded - CERAMIC - 5 x 8 mm (1 pair)
OPTION	11801	Titanium Screws M3 x 6 mm - 2 mm Hex Flat Head - 6 pcs
OPTION	11802	Titanium Screws M3 x 8 mm - 2 mm Hex Flat Head - 6 pcs
OPTION	11803	Titanium Screws M3 x 10 mm - 2 mm Hex Flat Head - 6 pcs
OPTION	11811	Titanium Screws M3 x 6 mm - 2 mm Button Head - 6 pcs
OPTION	11812	Titanium Screws M3 x 8 mm - 2 mm Button Head - 6 pcs
OPTION	11853	Titanium Screw Set HMX - 85 pcs Titanium Screws
	11960	Steel Screws M2 x 5 mm - 1.5 mm Hex Pan Head - 6 pcs
	11961	Steel Screws M2.5 x 6 mm - 2.0 mm Hex Pan Head - 6 pcs
	11962	Steel Screws M2.5 x 4 mm - 2.0 mm Hex Pan Head - 6 pcs
OPTION	11963	Steel Screws M2.5 x 6 mm - 1.5 mm Hex Flat Head - 6 pcs
	1244	Steel Screws M3 x 6 mm - Torx 10 Flat Head - 10 pcs
	1245	Steel Screws M3 x 8 mm - Torx 10 Flat Head - 10 pcs
	1246	Steel Screws M3 x 6 mm - Torx 10 Round Head - 10 pcs
	1248	Steel Screws M3 x 8 mm - Torx 10 Round Head - 10 pcs
	1249	Steel Screws M3 x 10 mm - Torx 10 Flat Head - 10 pcs
	1250	Steel Nuts, M3 - 10 pcs
	1254	Aluminium Insert Nuts, M3 - Long - 4 pcs
	1255	Aluminium Insert Nuts, M3 - 4 pcs
OPTION	1256	Aluminium Locknuts, M3 Black - 10 pcs
	1257	Aluminium Locknuts, M4 Black - Flanged - 4 pcs
	1259	Aluminium Insert Nuts, M4 - 4 pcs (For Molded C-Hubs)
	1260	O-Rings 2.0x1.0 - 10 pcs.
	1271	O-Rings 6.0x1.0 - 10 pcs.
	1272	O-Rings 20.5x1.0 - 10 pcs.
	1280	Steel washers 3x6 - 10 pcs.
	1281	Aluminium Washers 3mm - 10 pcs.
	1284	Aluminium Spacers - 3mm - 5 pcs.
	2210	Setscrews M3 x 3 - 5 pcs.
	2215	Setscrews M3 x 12 - 5 pcs.
	74750	M3 Post - 6mm length - alu
	75702	Body post set 65mm (1 pair)
	75703	Body post set 80mm (1 pair)
	75710	Body post nuts - 8 pcs
	77137A	Rear Belt S3M (186)
	79032	Front Wishbones - Straight - 2 pcs
	79037	Rear Wishbones - Straight - 2 pcs
	79111	Inner Hingeplns (1 pair)
	79112	Outer Hingeplns (1 pair)
	79113	Inner Hingepln Shims - White Nylon - 1,4 mm - 10 pcs
OPTION	79114	Inner Hingepln Shims - White Nylon - 0,5 mm - 30 pcs
	79116	Outer Hingepln E-Clips (10 pcs.)
OPTION	79117	Outer Hingepln Shims 0,2 mm - 10 pcs
OPTION	79118	Outer Hingepln Shims 0,1 mm - 10 pcs
OPTION	79132	Belt Gulde, Incl. 2 ball bearings & post
OPTION	79133	Rear Belt S3M (183)
	79138	Front Belt S3M (507)
	79140	Wheel Hex Adapter (1 Pair) - Duraluminium
	79141	Narrow Wheel Hex Adapter (1 Pair) - Duraluminium
OPTION	79157	Front Spool with 36 teeth pulley - Delrin (1 pc.)
OPTION	79169	Front 1-way Outdrives - Steel (1 pair)
	79180	MIP CVD TM Driveshafts - Lightweight (1 pair)
	79182	MIP CVD TM Bones - Lightweight (1 pair)
	79182A	MIP CVD TM Bones +2mm - Lightweight (1 pair)
	79184	MIP CVD TM Wheel Axles (1 pair)
	79184A	MIP CVD TM Wheel Axles - Short -2mm (1 pair)
	79185	MIP CVD TM Couplings & Plns (1 Pair)
	79189	Replacement Caps for Driveshafts (1 Pair)
	791898	Replacement Caps for Driveshafts (4 Pairs)
	79230	Black Spring Set - Standard (6 Pair)
OPTION	79231	Silver Spring Set - Hard (6 pairs)
	79251	Steering Lever Posts (1 pair)
OPTION	79257	Steering Lever (Horizontal ball type) - AL7075 (1 pc)
	79258	Steering Lever (Horizontal Type) - Molded (1 pc.)
	79259	Ball cups 5.8 mm - Nylon (2 pairs)
	79260	Ball cups 4.3 mm - Nylon (7 pairs)
	79261	Pivot Balls 4.3 mm, M3 x 2.5 mm - AL7075 (4 pcs)
	79264	Pivot Balls 4.3 mm, M3 x 5.5 mm - Hard steel (4 pcs)
	79267	Pivot Balls 5.8 mm, M3 x 6.5 mm - Short - AL7075 (2 pcs)
	79268	Pivot Balls 5.8 mm, M3 x 6.5 mm - Long - AL7075 (2 pcs)
	79269	Pivot Balls 5.8 mm, M3 (Inside thread) - AL7075 (4 pcs)
	79270A	Turnbuckles 21 mm - AL7075 - With adj. square (1 pair)
	79271A	Turnbuckles 28 mm - AL7075 - With adj. square (1 pair)
	79272A	Turnbuckles 33 mm - AL7075 - With adj. square (1 pair)
	79274	Turnbuckles 42 mm - AL7075 - With adj. square (1 pair)
OPTION	79277	Adjustment tool for turnbuckles with adj. square
OPTION	79281	Front C-Hub with 0° caster, Left or right - AL7075 (1 pc.)

OPTION	79282	Front C-Hub with 2° caster, Left - AL7075 (1 pc.)
OPTION	79283	Front C-Hub with 2° caster, Right - AL7075 (1 pc.)
OPTION	79284	Front C-Hub with 4° caster, Left - AL7075 (1 pc.)
OPTION	79285	Front C-Hub with 4° caster, Right - AL7075 (1 pc.)
OPTION	79286	Front C-Hub with 6° caster, Left - AL7075 (1 pc.)
OPTION	79287	Front C-Hub with 6° caster, Right - AL7075 (1 pc.)
OPTION	79288	Front C-Hub with 3° caster, Left - AL7075 (1 pc.)
OPTION	79289	Front C-Hub with 3° caster, Right - AL7075 (1 pc.)
	79291	Front C-Hub M5 Screw + Ballscrew - PH109 TYPE (1 pair)
OPTION	79294	Rear Uprights, Narrow - Vertical ball type - AL7075 (1 pc.)
	79330A	Lower bumper - Reinforced nylon (Incl. 2 alum. Inserts)
	79332	Upper Bumper Plate - Graphite
	79336	Large Foam Bumper - X Hard
OPTION	79383	Low COG balancing weight - 25 gram (1 pc.)
OPTION	79395A	Servo Posts, Lightweight - AL 7075 - Including screws (1 pair)
	79397	Servo Posts - Molded - Including screws (1 pair)
	79432	Anti-roll Bar balls 5,8 mm - AL7075 - For CF6 arms (1 pair)
	79440	Anti-roll Bar Pivot Mount - AL7075 (1 pc.)
	79442	Anti-roll Bar Kit, w. 1 each; 1,0 - 1,3 - 1,6 mm (1 set front or rear)
	79452	Chassis - 2.0mm Graphite
OPTION	79453	Chassis - 2.4mm Graphite
	79460	Topdeck - 2.0mm Graphite
OPTION	79461	Rear Topdeck - 2.0mm Graphite
	79462	Rear Topdeck (for Bodypost mounting) - 2.0mm Graphite
OPTION	79463	Topdeck - 2.4mm Graphite
OPTION	79464	Rear Topdeck - 2.4mm Graphite
OPTION	79465	Rear Topdeck (for Bodypost mounting) - 2.4mm Graphite
	79470	LiPo Battery Holder (Incl. 4 alu Inserts) - 2.0mm Graphite (1 pair)
OPTION	79500	Motor Cooling Fan 30 mm (5 - 6 V) with universal plug
	79520	Shock Absorbers - Aluminium (1 pair)
	79521	Shock Bodies incl. Cap & Adjustment Nut - Alu. (1 pair)
	79522	Shock Pistonshaft (1 pair)
	79524	Shock Pistons (1 pair)
	79526	Shock O-rings for Adjustment Nut (1 pair)
	79540	Shock Pivot balls 4,75 mm, Short - Brass (1 pair)
	79541	Shock Pivot balls 4,75 mm, Long - Brass (1 pair)
	79527	Shock Diaphragm (1 pair)
	79528	Shock Silicone O-rings, Spacers & Clips (1 pair)
	79529	Shock Springs Collars, Ballends & Balls (1 pair)
	79614	Bulkhead, Front / Rear - AL7075 (1 pc.)
	79615	Motor Plate - AL7075 (1 pc.)
	79616	Center Plate - AL7075 (1 pc.)
	79617	Center Plate Support, Right - AL7075 (1 pc.)
	79618	Layshaft Plate, Left - AL7075 (1 pc.)
	79619	Layshaft Plate, Right - AL7075 (1 pc.)
	79621	Bearing Holders, Rear - Molded (1 pair)
	79630	Steering Blocks - Molded (1 pair)
OPTION	79631	Steering Blocks with bushings - AL7075 (1 pair)
OPTION	79632	Steering Blocks with ball bearings - AL7075 (1 pair)
	79635	Rear Uprights - Molded (1 pair)
	79643	Front C-Hubs - Molded - 3° Caster (1 pair)
OPTION	79646	Front C-Hubs - Molded - 6° Caster (1 pair)
	79655	Front Spool (excluding pulley) - AL7075
OPTION	79671	Pulley 36 teeth for duraluminium spool / front 1-way
OPTION	79674	SGX Gear Differential - Incl. 37T Pulley for Tamlya a.o. (1 pc.)
	79675	SGX Gear Differential - Incl. 36T Pulley (1 pc. front or rear)
	79676	SGX Gear Differential Outdrive - Long (1 pc.)
	79677	SGX Gear Differential Outdrive - Short (1 pc.)
	79678	SGX Gear Differential Plastic Parts (Housing + 36T + Bushing)
	79679	SGX Gear Differential 9T Gears - Incl. Shaft (4 pcs.)
OPTION	79697	Bearing Holder Clips (4 pcs)
OPTION	79700	Bearing Holder, Rear - Left (256 / 264 mm) - AL7075
OPTION	79701	Bearing Holder, Rear - Right (256 / 264 mm) - AL7075
	79720	Wishbone Mounting Balls - Aluminium (4 pcs)
OPTION	79721	Wishbone Mounts - AL7075 - 0,5 (2 pcs)
OPTION	79722	Wishbone Mounts - AL7075 - 1,0 (2 pcs)
OPTION	79723	Wishbone Mounts - AL7075 - 1,5 (2 pcs)
OPTION	79724	Wishbone Mounts - AL7075 - 2,0 (2 pcs)
OPTION	79725	Wishbone Mounts - AL7075 - 2,5 (2 pcs)
OPTION	79727	Wishbone Mounts - AL7075 - 0 (2 pcs)
	79728	Wishbone Mounts - Molded - 0,5 / 1,0 / 1,5 / 2,0 (2 each)
OPTION	79729	Wishbone Mount Shims 1 (0,6 mm) - Aluminium (10 pcs)
OPTION	79730	Wishbone Mount Shims 2,5 (1,5 mm) - Aluminium (10 pcs)
	79750	Shock Tower, Front / Rear - AL7075 (1 pc.)
OPTION	79770	Center Link Mounts Type A+B - AL7075 (1 pair)
	79801	Layshaft with spacer - AL7075
OPTION	79807	Center pulley for front or rear belt - 21 Teeth - AL7075
	79808	Spur Gear & Pulley Adapter - AL7075
	79809	Spur Gear Gulde Ring - AL7075
OPTION	79810	Front 1-Way/Spool Pulley Gulde Ring - AL7075
	79821	Center pulley for front or rear belt - 21 Teeth - Delrin
	79825	Center pulley clip - Large - Black nylon (2 pcs)
OPTION	79920	Anti-roll bar wire 1.0 mm, Black - Rear
OPTION	79922	Anti-roll bar wire 1.3 mm, Silver - Rear
OPTION	79924	Anti-roll bar wire 1.6 mm, Brass - Rear
	90081	Team Corally Sticker Sheets - CORALLY LOGOS (2 pcs)
	90088	HMX Logo Decals



## INCLUDED

- |   |                              |
|---|------------------------------|
| - High-Grip Torx Screwdriver - T 10             | - <b>Corally part #16081</b> |
| - Differential Grease                           | - <b>Corally part #80010</b> |
| - Damper Syrup (for SGX Spur Gear Differential) | - <b>Corally part #80000</b> |

## TOOLS REQUIRED FOR ASSEMBLY

- |   |                              |
|---|------------------------------|
| - High-Grip Torx Screwdriver - T 10                   | - <b>Corally part #16081</b> |
| - High-Grip Hex Screwdriver - 1.5 mm                  | - <b>Corally part #16082</b> |
| - High-Grip Nut driver - 6.0 mm                       | - <b>Corally part #16038</b> |
| - High-Grip Nut driver - 7.0 mm                       | - <b>Corally part #16039</b> |
| - High-Grip Nut driver - 5.0 mm                       | - <b>Corally part #16086</b> |
| - Diff Nut Wrench - 7mm hex - Graphite                | - <b>Corally part #79685</b> |
| - Turnbuckle Tool                                     | - <b>Corally part #79277</b> |
| - Silicone Oil  |                              |
| - Double-sided Tape                                   | - <b>Corally part #13085</b> |
| - Thread Lock   | - <b>Corally part #13095</b> |
| - Cutting Pliers                                      |                              |
| - Long Nose Pliers                                    |                              |
| - Vernier Caliper or Precision Ruler                  |                              |
| - Hobby Knife <b>Be careful with the sharp blade!</b> |                              |
| - Hobby Scissors                                      |                              |

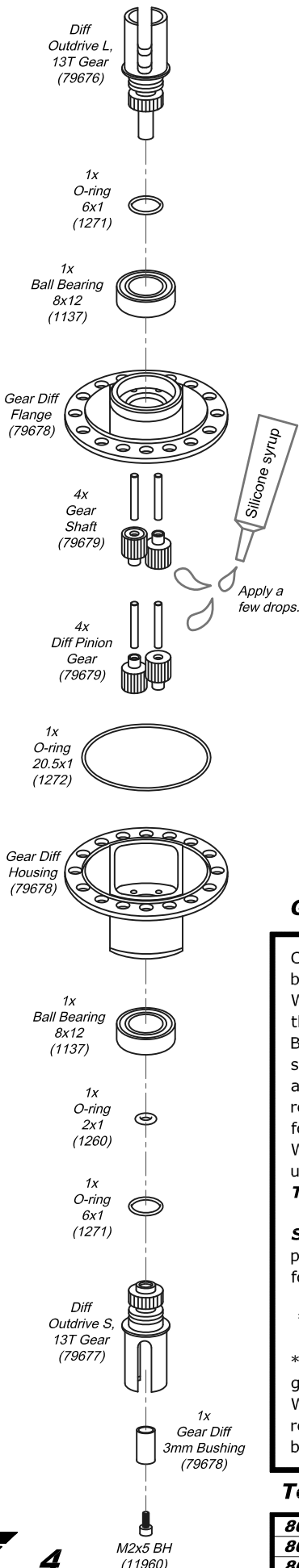
## ITEMS NEEDED TO COMPLETE YOUR CAR (NOT INCLUDED)

- |  |
|--|
| - R/C two channel surface frequency radio system |
| - Battery Pack                                   |
| - Battery Charger                                |
| - Servo with Servosaver                          |
| - Electronic Speed Control                       |
| - Electric Motor                                 |
| - 1:10 Scale Lexan Body 190mm                    |
| - Tires and wheels                               |

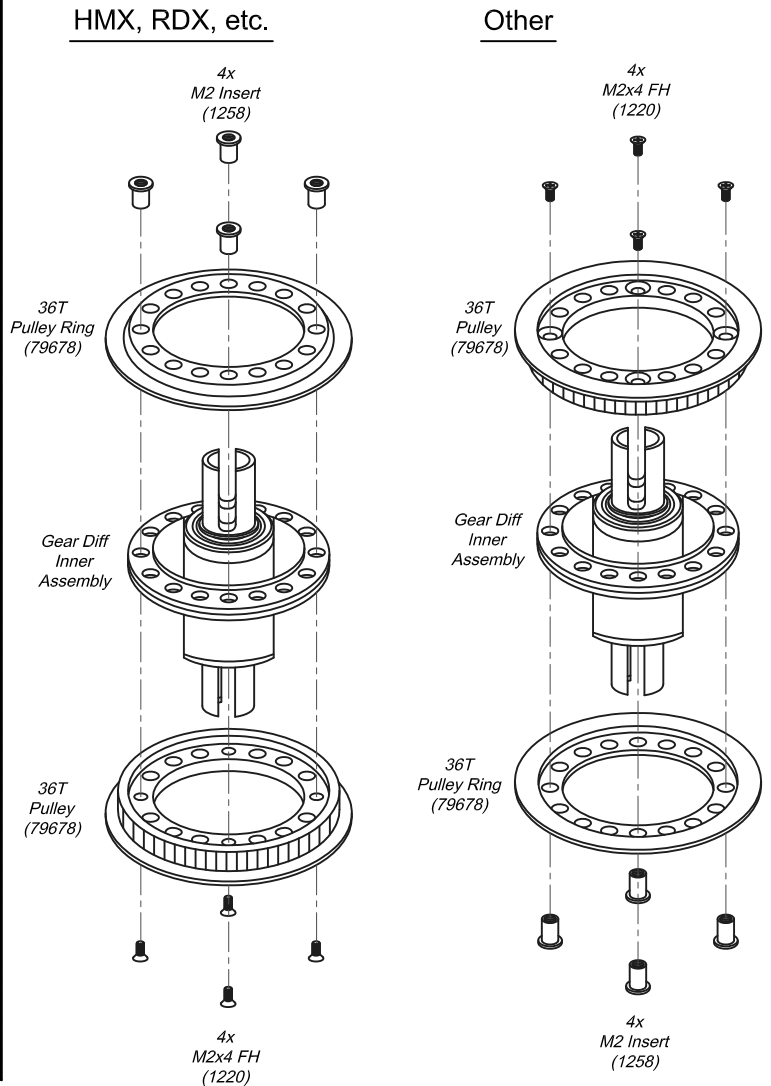
# Bag 1 **SGX** Spur Gear Differential

The differential is an important component of your car. Build it carefully and check if it functions smoothly.

## Step 1



## Step 2



### GO FASTER with **SGX SPUR GEAR DIFF**

Conventional gear diffs as commonly used in R/C cars run on efficient straight bevel gears\*.

Where the spur gears as used in the **SGX** diff continue to perform smoothly, the performance of bevel gears drops dramatically as loads increase\*\*. Bevel gear diffs may seem to work fine on the bench but during racing they suffer under the high torque of today's brushless motors, causing them to bind and may momentarily stall diff action. When pushing out of a corner it can result the tires to slide and the car to become unstable. Some improvement is found by completely filling bevel gear diffs with lubricant but problems remain. When using **SGX** Spur Gear differentials you can rely on consistent uninterrupted diff action providing maximum traction and superb control.

**Try and feel the difference!**

**SGX** differentials can be run completely dry, free of any lubrication, and will still perform with ease. Team Corally offers 3 types of high viscosity silicone syrup for those that desire some lubrication anyway.

\* The teeth on bevel gears produce a high degree of sliding friction, resulting in heat & wear.

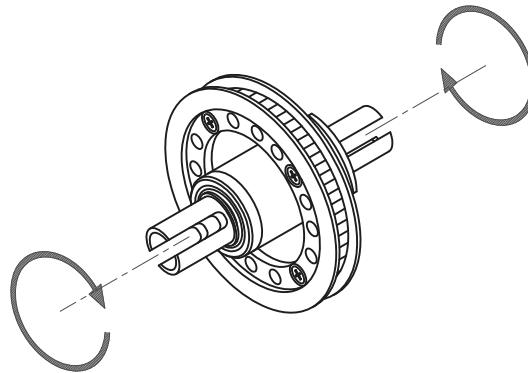
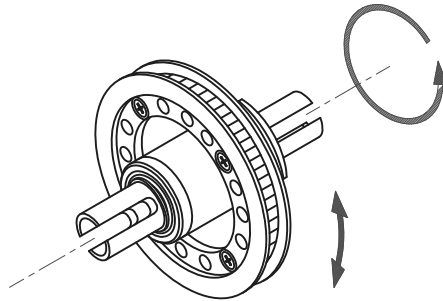
\*\* Additionally bevel gears suffer under a resultant thrust along the axis of the gear, which needs to be accommodated by appropriate thrust bearings. Weight and size limitations in R/C car applications prevent this from proper realisation. Under load it causes the differential to deteriorate and gear mesh to be lost.

### Team **CORALLY** Silicone Syrup

<b>8000</b>	Team CORALLY Silicone Syrup - Soft
<b>80001</b>	Team CORALLY Silicone Syrup - Hard
<b>80002</b>	Team CORALLY Silicone Syrup - X-hard

- 1x Diff Outdrive L -13T Gear
- 1x Diff Outdrive S - 13T Gear
- 4x Diff Pinion Gear 9T
- 1x Gear Diff 36T Pulley
- 1x 36T Pulley Ring
- 1x Gear Diff Housing
- 1x Gear Diff Flange
- 1x Gear Diff Bushing 3mm
- 2x Ball Bearing 8 x 12
- 1x O-ring 20.5x1
- 2x O-ring 6x1
- 1x O-ring 2x1
- 4x Gear Shaft
- 4x M2 Insert
- 1x M2 x 5 BH
- 4x M2 x 4 FH

The differential is an important component of your car.  
Build it carefully and check if it functions smoothly.



The differential should function smoothly to your required resistance of the gears.

If too smooth:

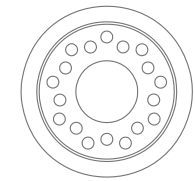
- rebuild it and add more syrup or replace syrup by thicker syrup

If too heavy:

- rebuild and decrease lube or replace syrup by thinner syrup.

# Bag 2 Front Spool

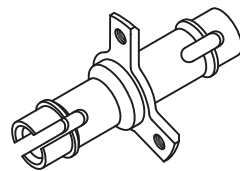
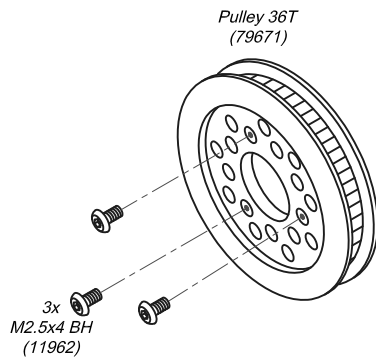
1x Spool Hub



1x Spool Pulley 36T

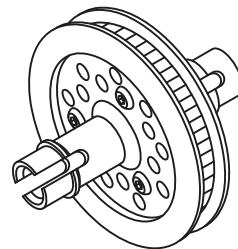


3x M2.5x4 BH



Spool Hub (79655)

FRONT

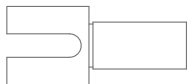


## Optional Front One-way.

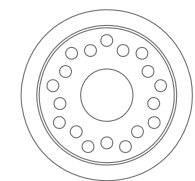
### Step 1

Mount the pulley on the one-way hub.

1x One-way Hub with pre-assembled 1-way bearings



2x LW 1-way Outdrive



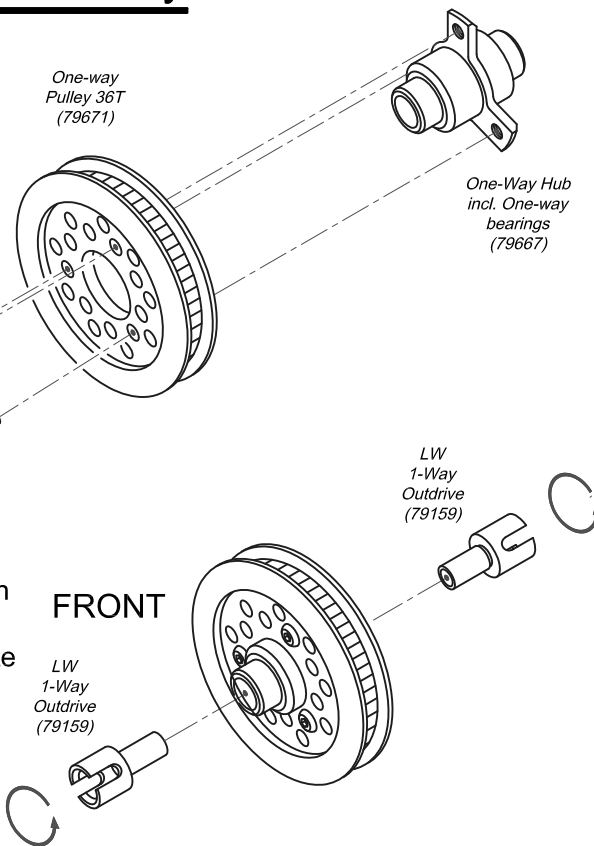
1x One-way Pulley 36T



3x M2.5x4 BH

### Step 2

Now slide the outdrives in the one-way bearings. Make sure that they rotate in the right direction.

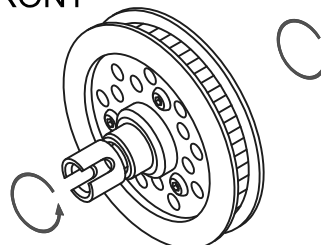


FRONT

LW 1-Way Outdrive (79159)

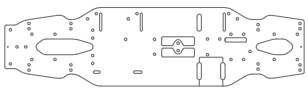
The outdrives have to rotate smoothly in forward direction only!

FRONT



# Bag 3 Drivetrain Subassembly

## Step 1



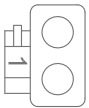
1x HMX Chassis



2x Wishbone Mount 2,0



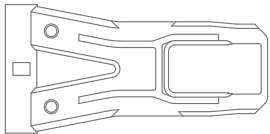
2x Wishbone Mount 1,5



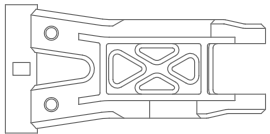
2x Wishbone Mount 1



2x Wishbone Mount 0,5



2x Front Wishbone



2x Rear Wishbone



8x Wishbone Mounting Ball



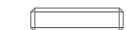
16x M3 Insert



4x Inner Hingepin



16x M3x6 FH



4x M3x12 Set Screw



8x Inner Hingepin Shim  
1.4 mm (White Nylon)

**Included  
for fine-tuning**



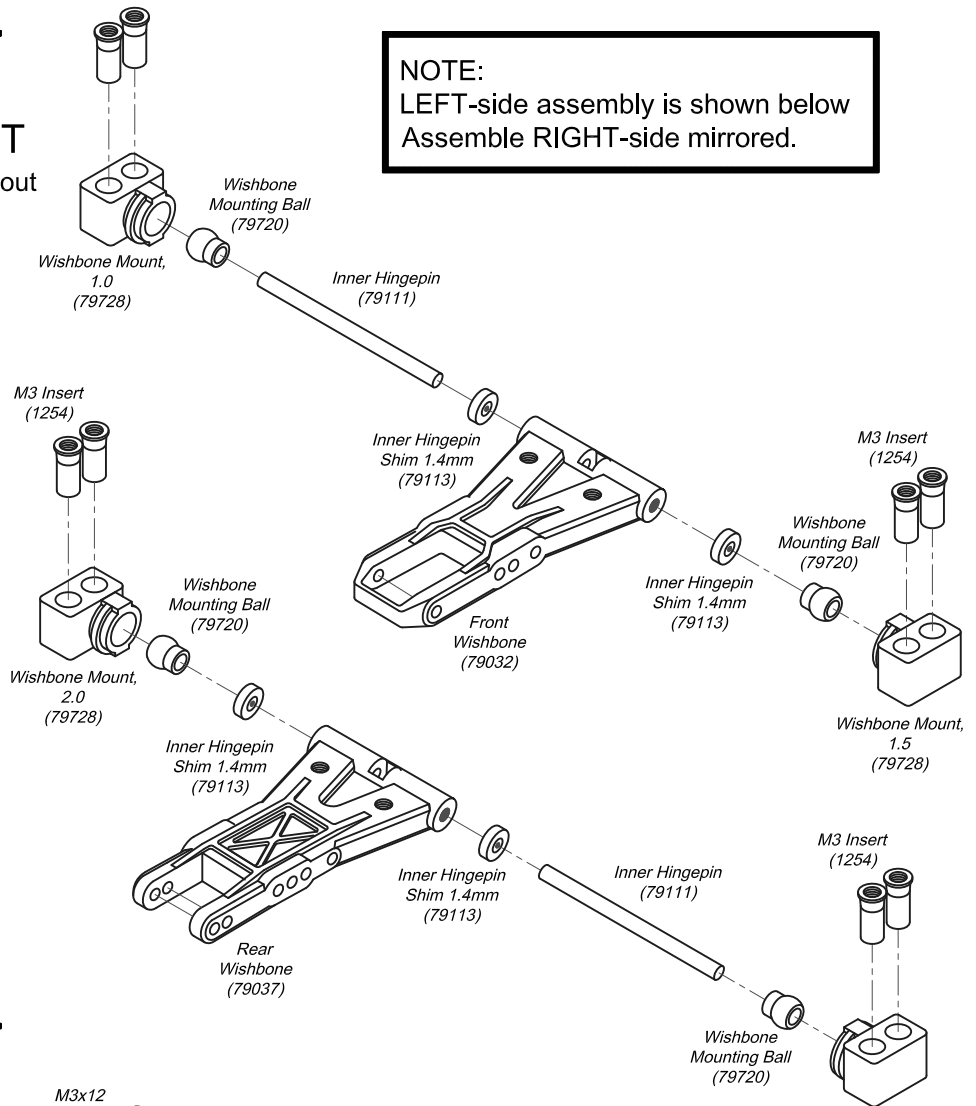
4x Inner Hingepin Shim  
0.5 mm (White Nylon)

**NOTE:**

LEFT-side assembly is shown below  
Assemble RIGHT-side mirrored.

**FRONT**  
0.5° Toe-out

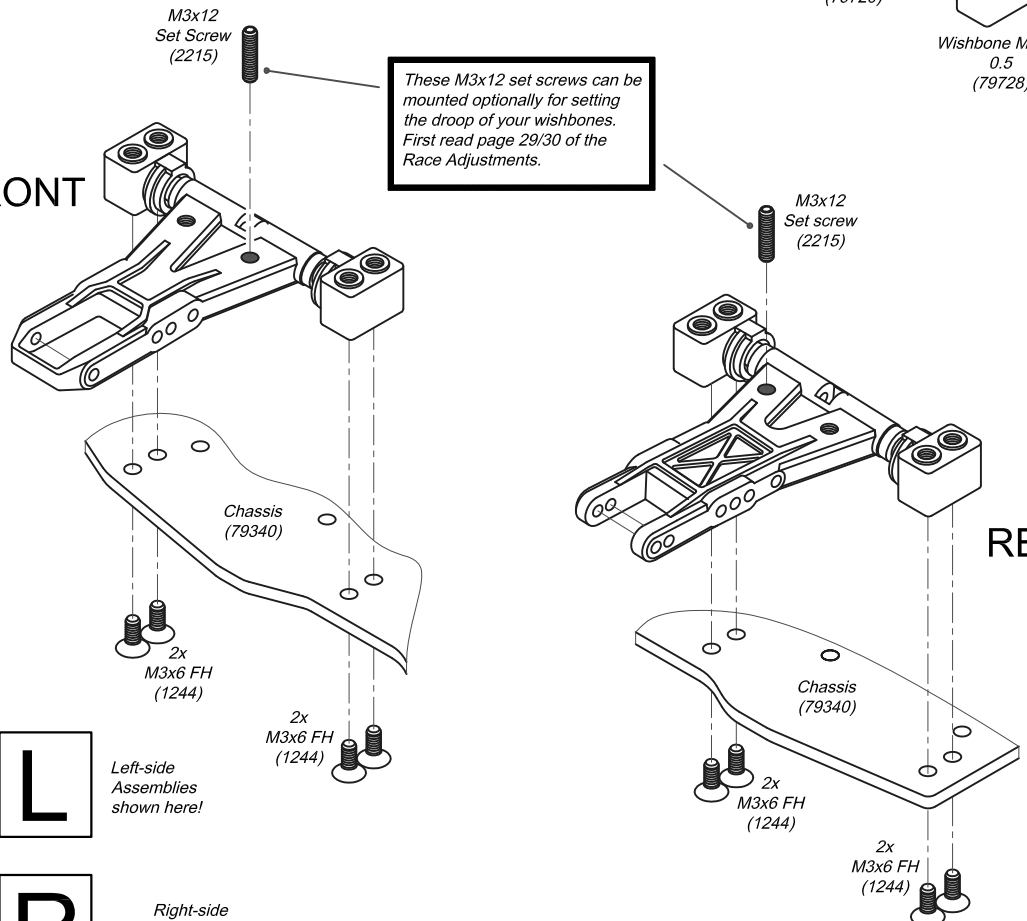
**REAR**  
3° Toe-in



## Step 2

**FRONT**

**REAR**



These M3x12 set screws can be mounted optionally for setting the droop of your wishbones. First read page 29/30 of the Race Adjustments.

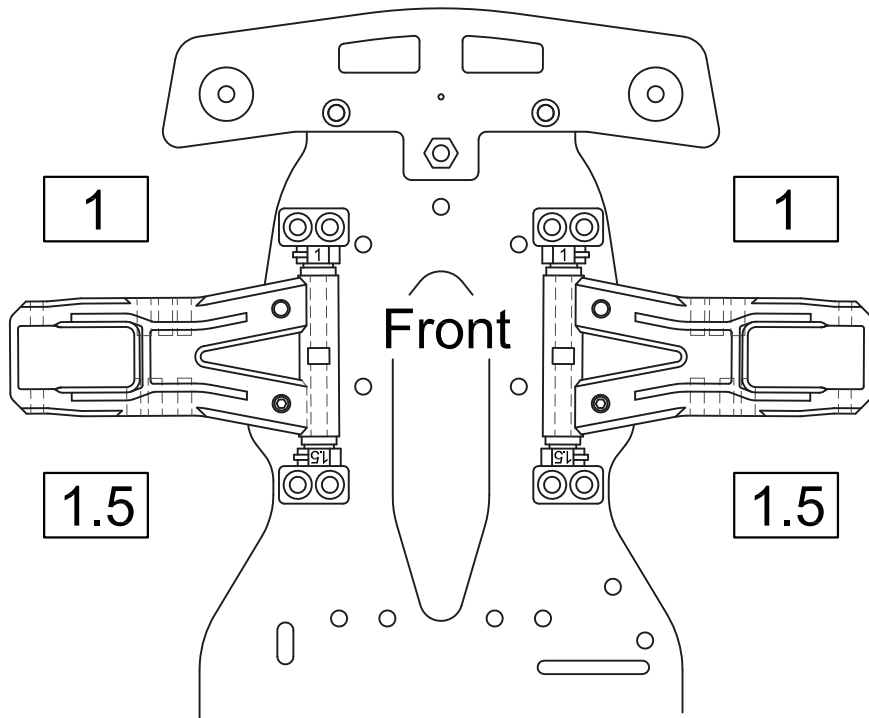
**L**





Left-side  
Assemblies  
shown here!







**R**

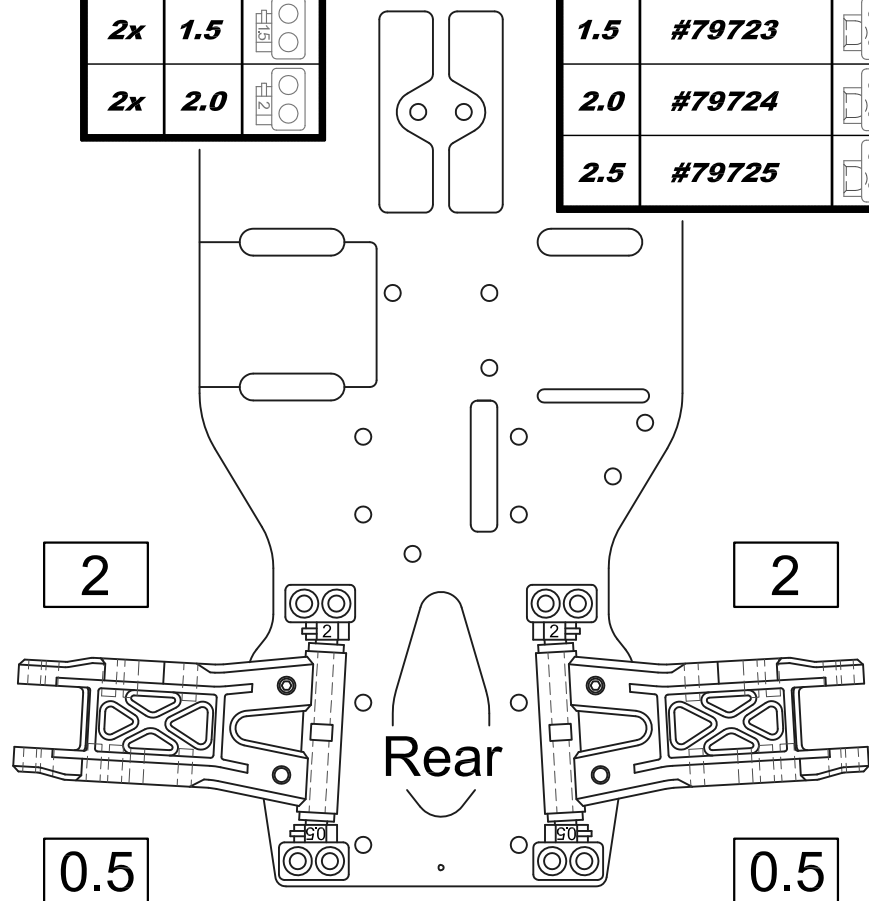
= Right-side  
Assembly must be  
mirrored!

# Wishbone Mount Initial Settings

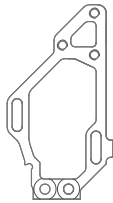


<b>Included in kit: #79728</b>		
<b>2x</b>	<b>0.5</b>	
<b>2x</b>	<b>1.0</b>	
<b>2x</b>	<b>1.5</b>	
<b>2x</b>	<b>2.0</b>	

<b>Aluminium option sets (no inserts required):</b>		
<b>0</b>	<b>#79727</b>	
<b>0.5</b>	<b>#79721</b>	
<b>1.0</b>	<b>#79722</b>	
<b>1.5</b>	<b>#79723</b>	
<b>2.0</b>	<b>#79724</b>	
<b>2.5</b>	<b>#79725</b>	



# Bag 4 Bulkheads



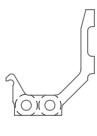
1x Motor Plate



1x Layshaft Plate Right



1x Layshaft Plate Left



1x Center Plate Support Right



4x Bulkhead



1x Front Bumper Post



1x Front Bumper



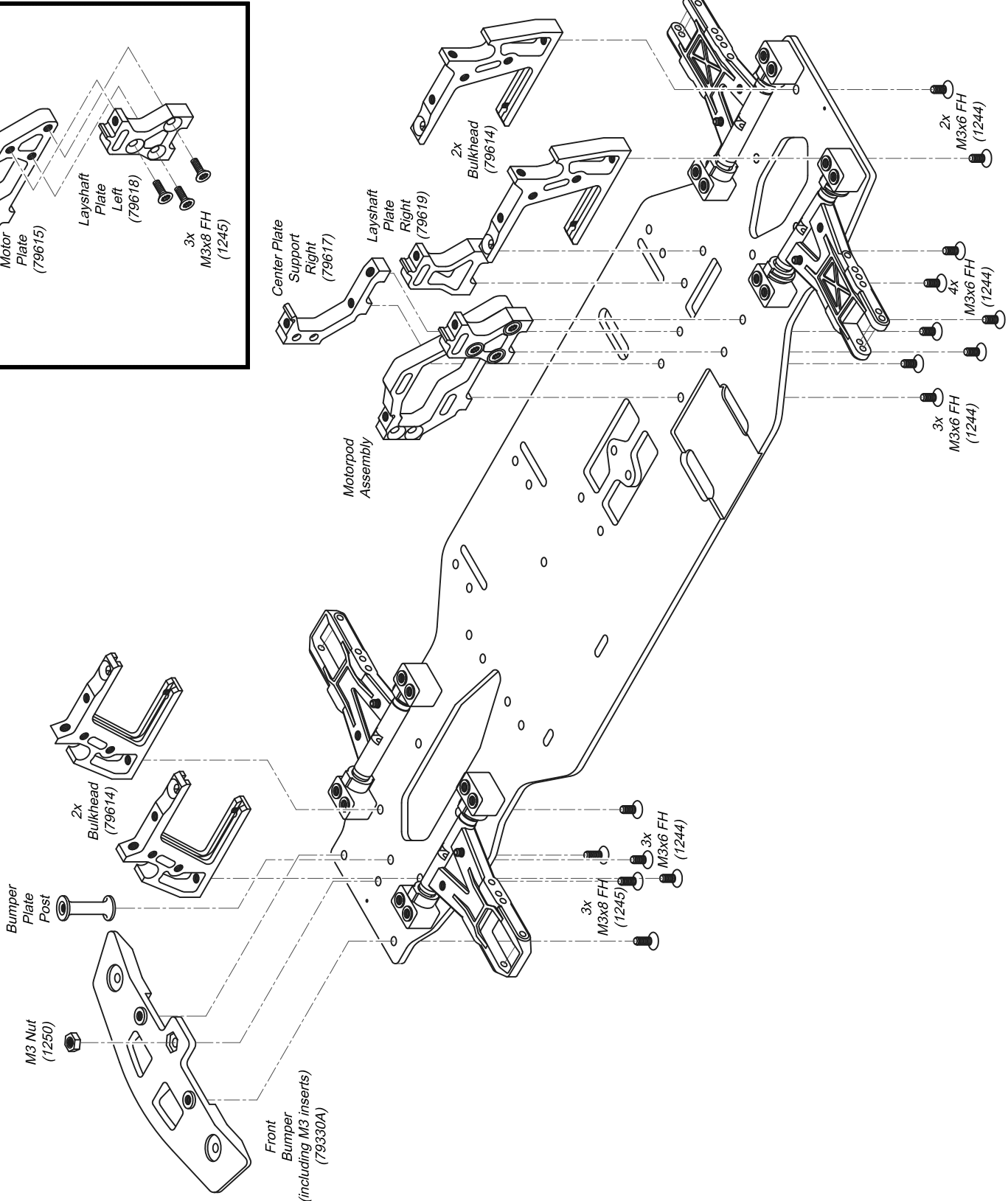
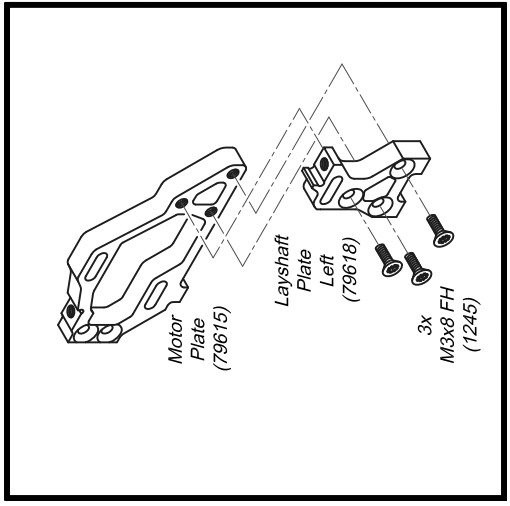
6x M3x8 FH



12x M3x6 FH



1x M3 Nut



# Bag 4 Drivetrain (Front)

1x Front Belt 507mm



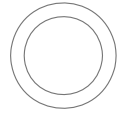
1x Bearing Holder - Type A



1x Bearing Holder - Type B



2x Ball Bearing 10x15

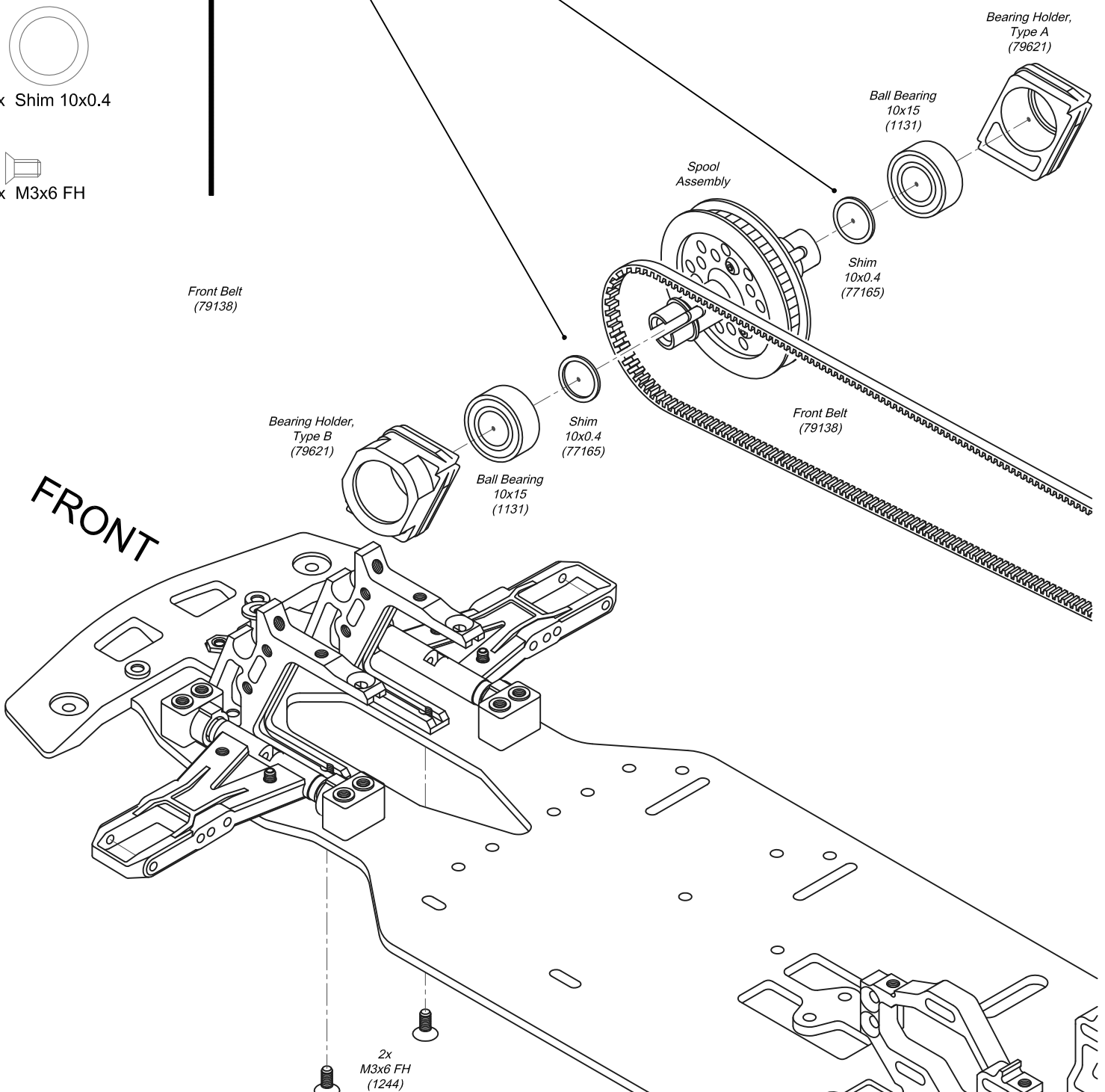


2x Shim 10x0.4



2x M3x6 FH

Shims may be added as shown in case of excessive side play. Some play may help efficiency so do not try to shim out all play.



FRONT

Front Belt (79138)

Bearing Holder, Type B (79621)

Ball Bearing 10x15 (1131)

Shim 10x0.4 (77165)

Spool Assembly

Front Belt (79138)

Ball Bearing 10x15 (1131)

Bearing Holder, Type A (79621)

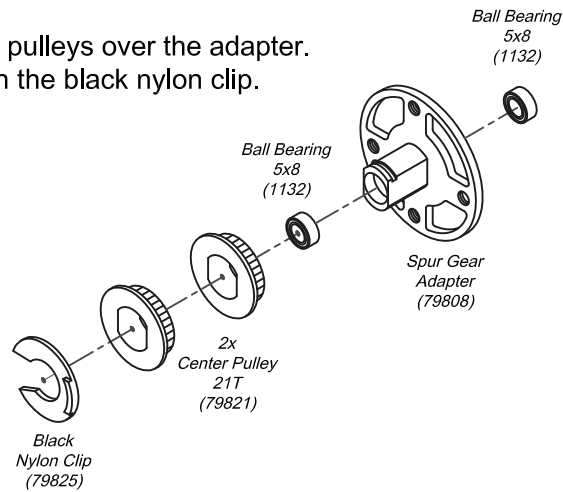
Shim 10x0.4 (77165)

2x M3x6 FH (1244)

# Bag 4 Center Pulley Assembly

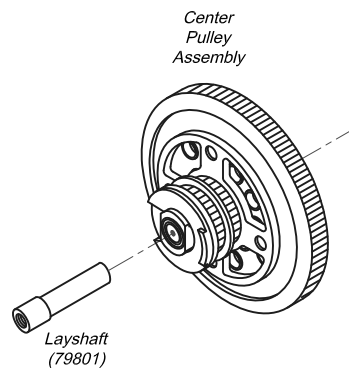
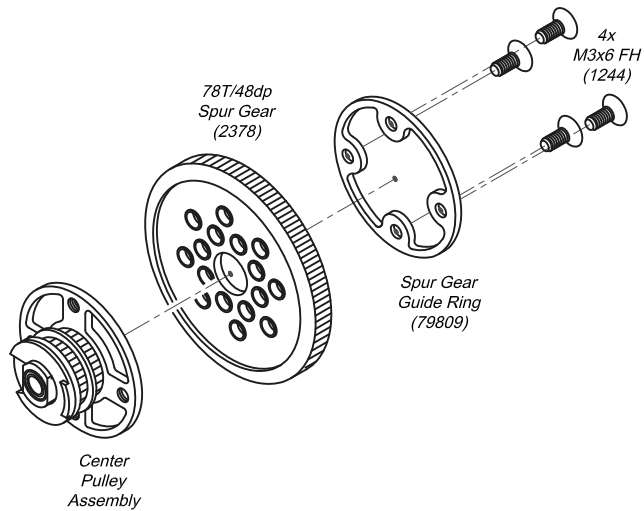
## Step 2

Install a ball bearing on each side of the spur gear adapter.  
Slide the two center pulleys over the adapter.  
Lock the pulleys with the black nylon clip.

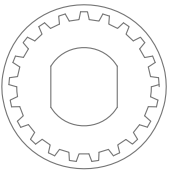


## Step 3

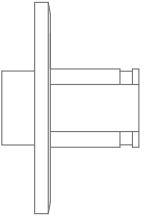
Attach the spur gear by using the spur gear guide ring.



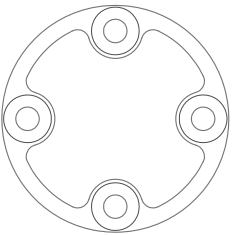
1x Layshaft



2x Center Pulley



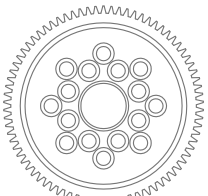
1x Spur Gear Adapter



1x Spur Gear Guide Ring



1x Black Nylon Clip



1x 78T / 48dp Spur Gear



2x Ball Bearing 5x8x2.5



4x M3x6 FH

# Bag 4 Drivetrain (Rear)

Shims may be added as shown in case of excessive side play. Some play may help efficiency so do not try to shim out all play.



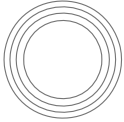
1x Rear Belt 186mm



1x Bearing Holder - Type A



1x Bearing Holder - Type B



2x Ball Bearing 10x15



2x Gear Diff Spacer 10mm



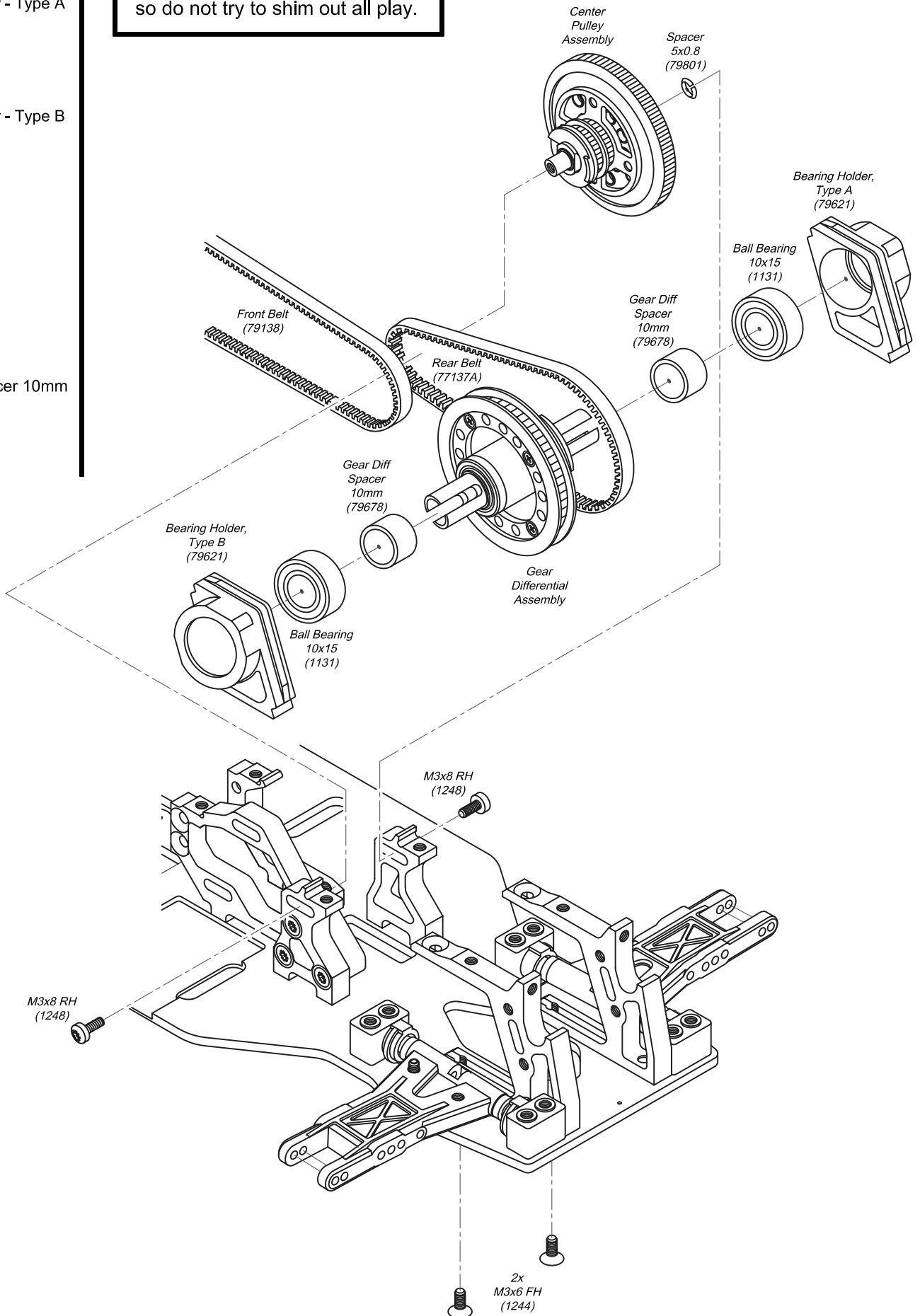
2x M3x8 RH



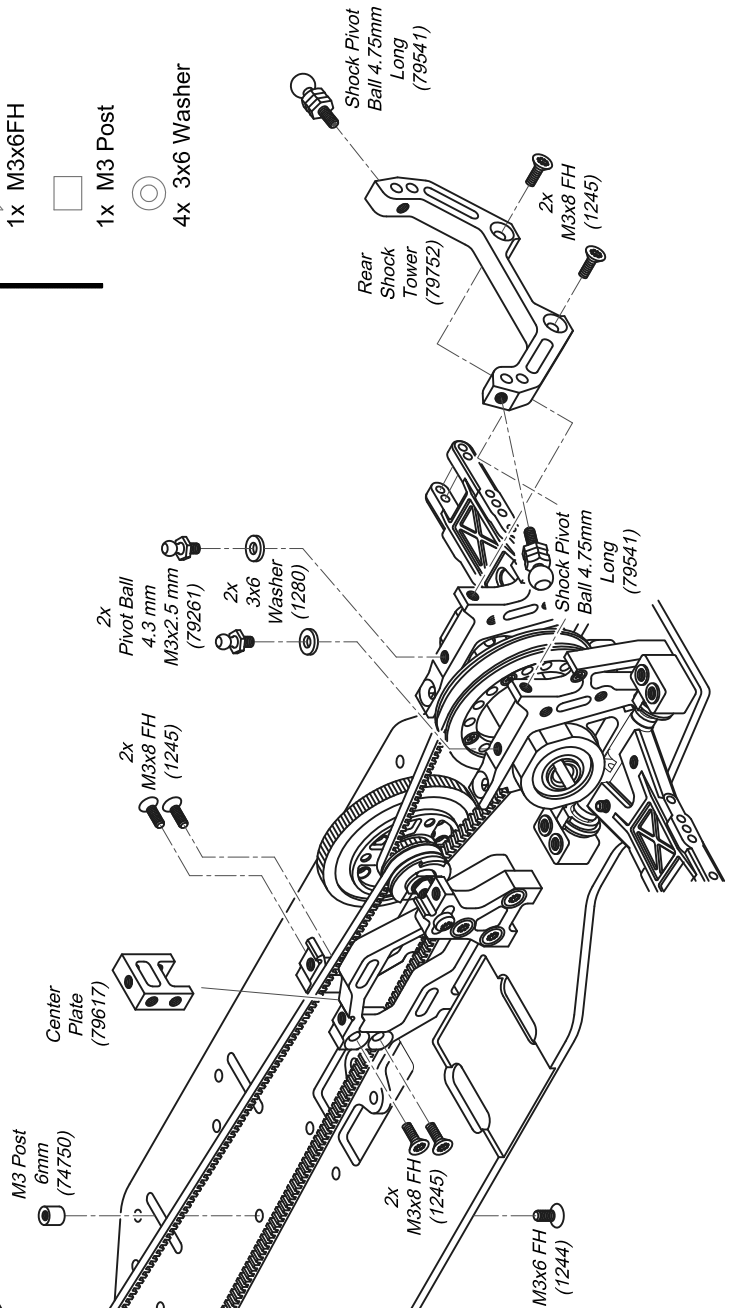
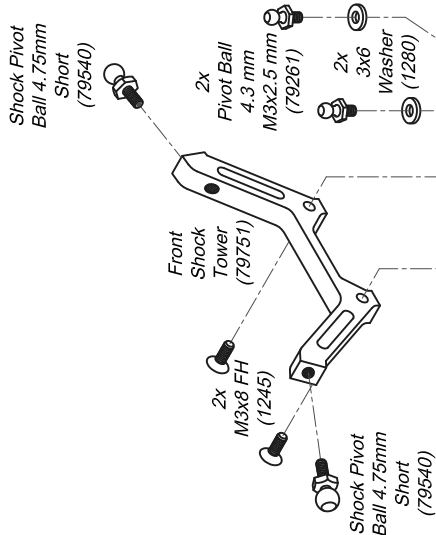
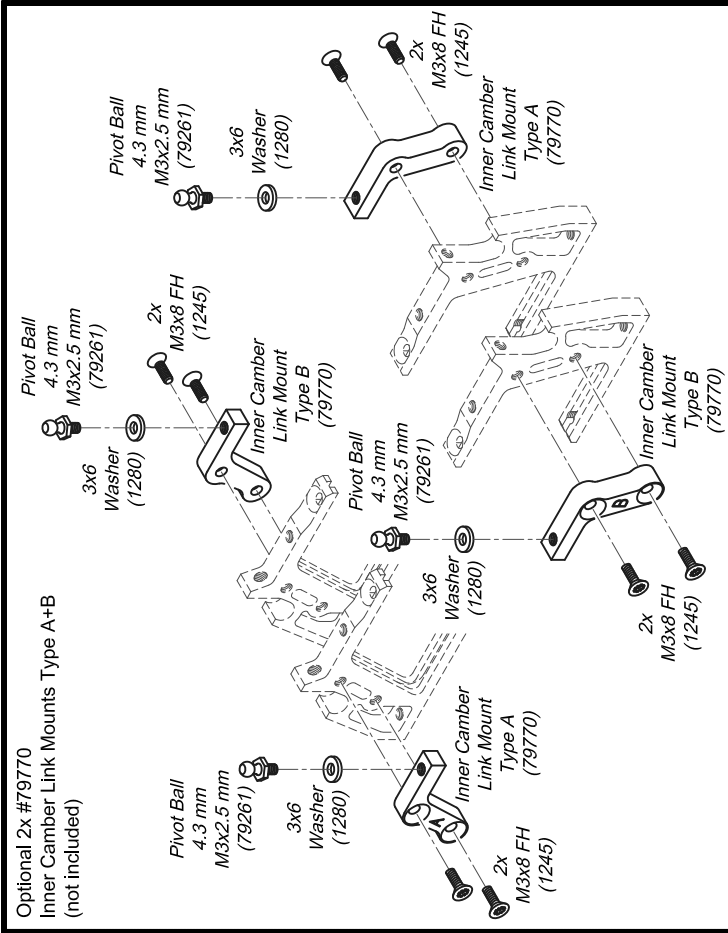
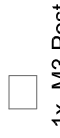
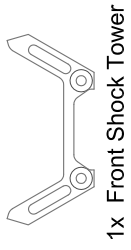
2x M3x6 FH



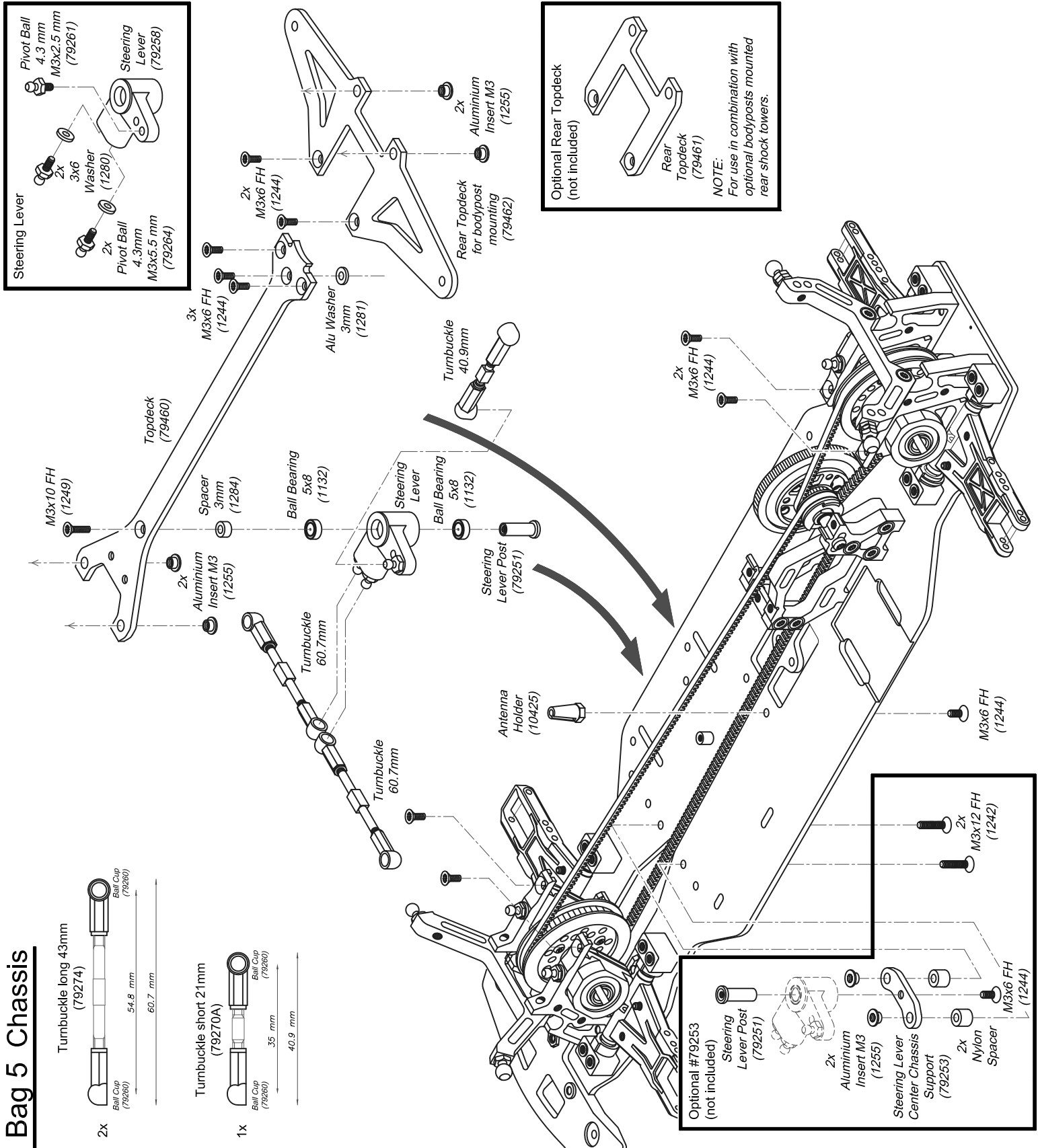
1x Spacer 5x0.8



# Bag 5 Chassis



# Bag 5 Chassis

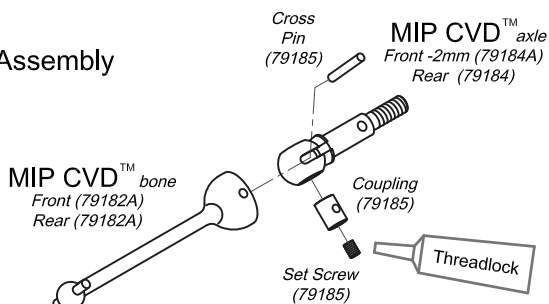


- 1x Topdeck
- 1x Rear Topdeck
- 1x Steering Lever Post
- 1x Steering Lever
- 1x Antenna Holder
- 2x Pivot Ball 4.3 mm M3x5.5 mm
- 1x Pivot Ball 4.3 mm M3x2.5 mm
- 2x Ball Bearing 5x8
- 2x Turbuckle 43 mm
- 1x Turbuckle 21 mm
- 6x Ballcup
- 1x M3x10 FH
- 10x M3x6 FH
- 1x Spacer 3mm
- 4x M3 Insert
- 2x 3x6 Washer
- 1x Alu Washer Ø3.2x7

# Bag 6 Suspension 1 (Subassembly)

## Step 1

MIP CVD™ Assembly  
(4 pieces)

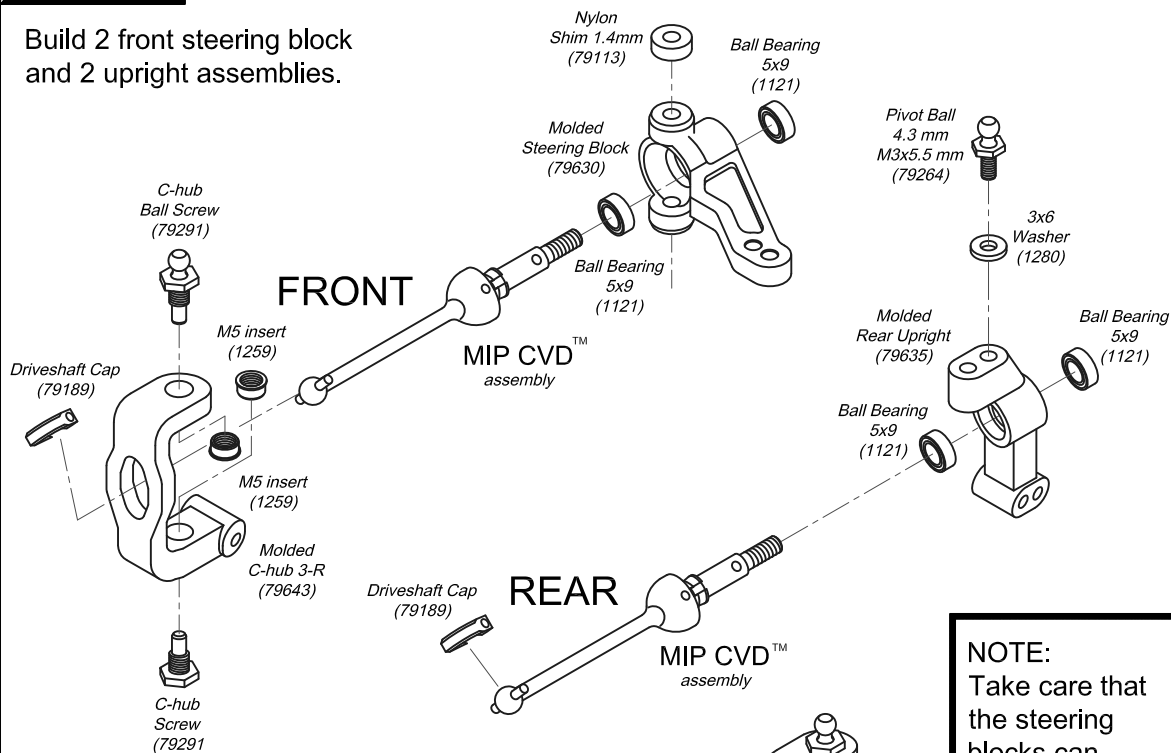


**NOTE:**  
Use long MIP CVD Bones with short Axles in the front and the long MIP CVD Bones with standard Axles in the rear

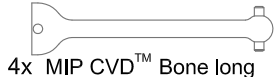
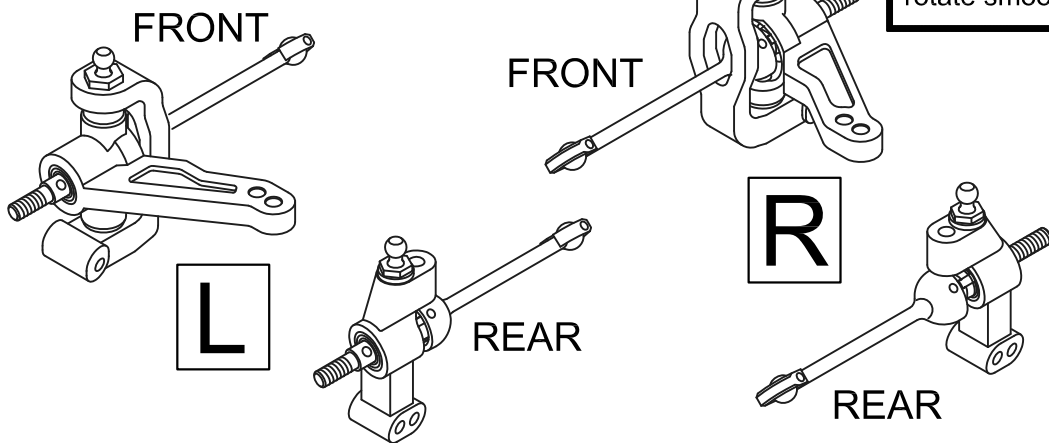
Apply a little bit of threadlock to the setscrew.

## Step 2

Build 2 front steering block and 2 upright assemblies.



**NOTE:**  
Take care that the steering blocks can rotate smoothly.



4x MIP CVD™ Bone long



2x MIP CVD™ Axle Std



2x MIP CVD™ Axle -2mm



4x MIP CVD™ Coupling



4x MIP CVD™ Cross Pin



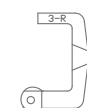
4x MIP CVD™ Set Screw



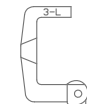
4x MIP CVD™ M4 Lock Nut



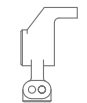
2x MIP CVD™ Set Screw Driver



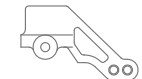
1x C-hub 3-R



1x C-hub 3-L



2x Rear Upright, Narrow 0°



2x Steering Block



4x Driveshaft Cap



2x Pivot Ball 4.3 mm M3x5.5 mm



2x C-hub Ball Screw



2x C-hub Screw



8x Ball Bearing 5x9



4x M5 Insert



2x Nylon Shim 1.4mm



2x 3x6 Washer

### MOLDED C-HUBS:

#### Included in kit:

**79643** Front C-Hubs - Molded - 3° Caster (1 pr.)


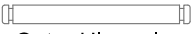


#### Optional available:

**79646** Front C-Hubs - Molded - 6° Caster (1 pr.)

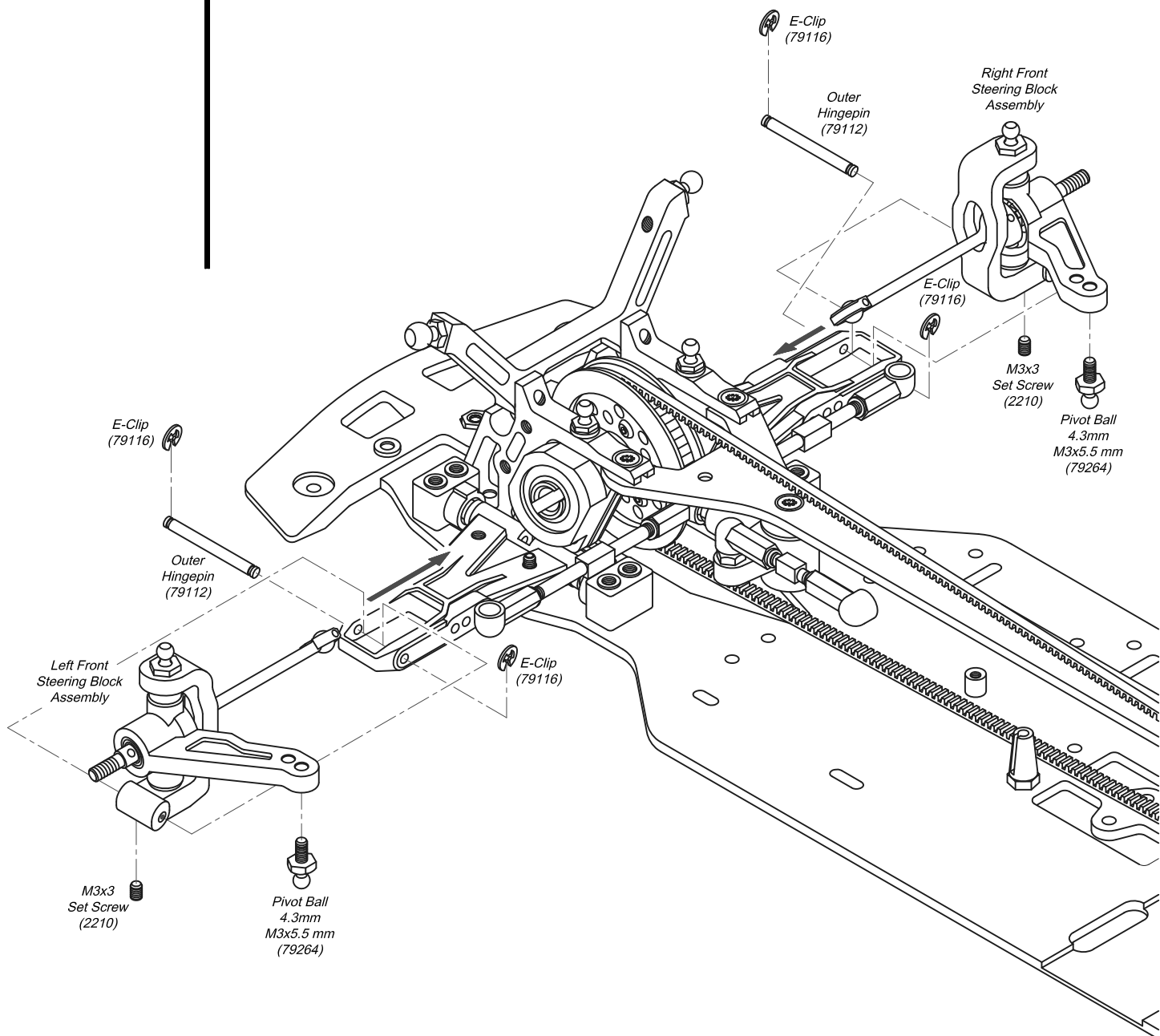
### OPTIONAL AL 7075 C-HUBS:

<b>79281</b>	Front C-Hubs 0° Caster, L or R - AL7075 (1pc)
<b>79282</b>	Front C-Hub 2° Caster, L - AL7075 (1pc)
<b>79283</b>	Front C-Hub 2° Caster, R - AL7075 (1pc)
<b>79284</b>	Front C-Hub 4° Caster, L - AL7075 (1pc)
<b>79285</b>	Front C-Hub 4° Caster, R - AL7075 (1pc)
<b>79286</b>	Front C-Hub 6° Caster, L - AL7075 (1pc)
<b>79287</b>	Front C-Hub 6° Caster, R - AL7075 (1pc)
<b>79288</b>	Front C-Hub 3° Caster, L - AL7075 (1pc)
<b>79289</b>	Front C-Hub 3° Caster, R - AL7075 (1pc)

# Bag 6 Suspension 1 (Front)

-  2x Pivot Ball 4.3 mm M3x5.5 mm
-  2x Outer Hingepin
-  2x M3x3 Set Screw
-  4x E-clip

Mount the front steering block assemblies to the wishbones by using the outer hingepins. Lock the hingepin with a set screw. The hingepins can also be secured with the e-clips.



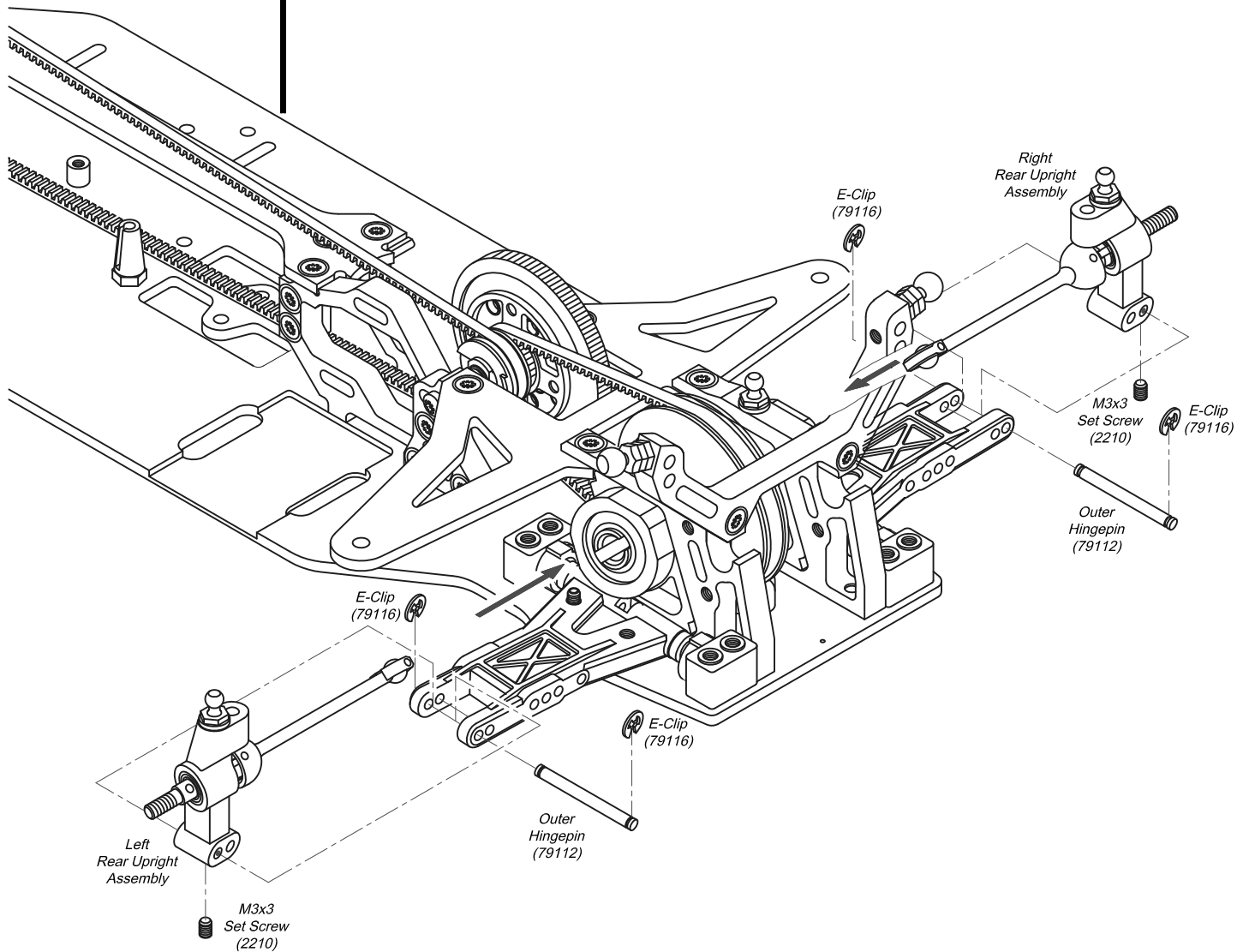
2x Outer Hingepin

2x M3x3 Set Screw

4x E-clip

## Bag 6 Suspension 1 (Rear)

Mount the rear upright assemblies to the wishbones by using the outer hingepins. Lock the hingepin with a set screw. The hingepins can also be secured with the e-clips.

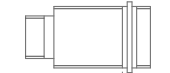


# Bag 7 Suspension 2 (Shocks)

Build 4 identical Shock Absorbers (79520).  
Build them very carefully.

Use pliers to hold shaft, but do not damage the shaft.

Grip it close to thread.



4x Shock Body



4x Spring Adjustment Nut



4x O-ring



4x Silicone O-ring



4x Shock Cap



4x Housing Cap



4x Piston Shaft



4x Shock Top



4x Piston



4x Spring Collar



4x Ball End



4x Shock Diaphragm



8x E-clip



4x Shock Diaphragm Foam



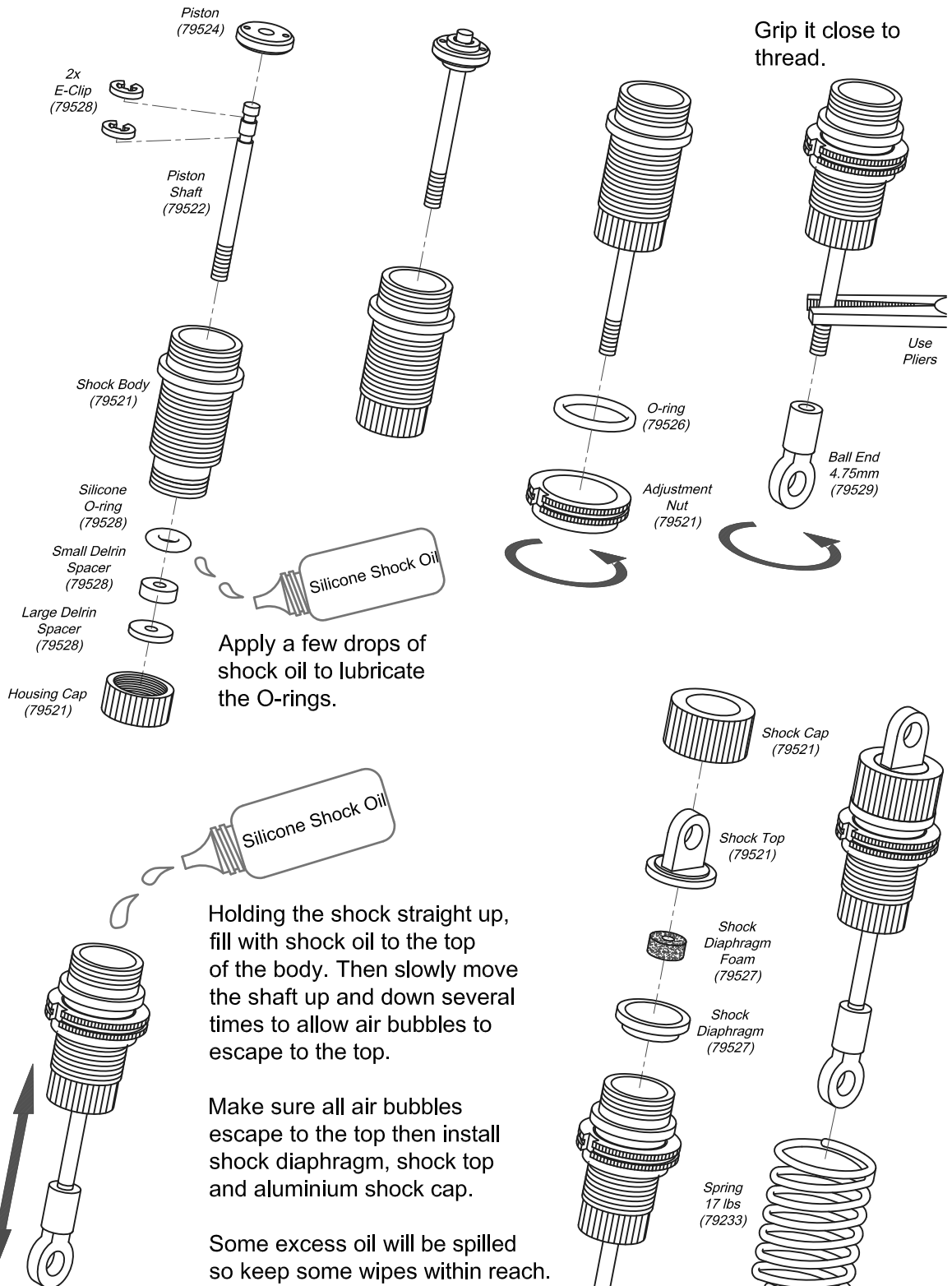
4x Small Delrin Spacer



4x Large Delrin Spacer



4x Spring 17.0 lbs



Apply a few drops of shock oil to lubricate the O-rings.

Holding the shock straight up, fill with shock oil to the top of the body. Then slowly move the shaft up and down several times to allow air bubbles to escape to the top.

Make sure all air bubbles escape to the top then install shock diaphragm, shock top and aluminium shock cap.

Some excess oil will be spilled so keep some wipes within reach.

## Team CORALLY Shock oils

### Small bottle 1 Oz / 30 ml

80120	Team CORALLY SHG SHOCK OIL, 1 Oz./30 ML - 20 Wt/200 Cst
80125	Team CORALLY SHG SHOCK OIL, 1 Oz./30 ML - 25 Wt/250 Cst
80130	Team CORALLY SHG SHOCK OIL, 1 Oz./30 ML - 30 Wt/350 Cst
80135	Team CORALLY SHG SHOCK OIL, 1 Oz./30 ML - 35 Wt/400 Cst
80140	Team CORALLY SHG SHOCK OIL, 1 Oz./30 ML - 40 Wt/500 Cst
80145	Team CORALLY SHG SHOCK OIL, 1 Oz./30 ML - 45 Wt/550 Cst
80150	Team CORALLY SHG SHOCK OIL, 1 Oz./30 ML - 50 Wt/600 Cst
80155	Team CORALLY SHG SHOCK OIL, 1 Oz./30 ML - 55 Wt/650 Cst
80160	Team CORALLY SHG SHOCK OIL, 1 Oz./30 ML - 60 Wt/700 Cst
80165	Team CORALLY SHG SHOCK OIL, 1 Oz./30 ML - 65 Wt/750 Cst
80170	Team CORALLY SHG SHOCK OIL, 1 Oz./30 ML - 70 Wt/800 Cst
80180	Team CORALLY SHG SHOCK OIL, 1 Oz./30 ML - 80 Wt/900 Cst

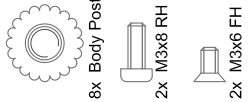
### Large bottle 2 Oz / 60 ml

80220	Team CORALLY SHG SHOCK OIL, 2 Oz./60 ML - 20 Wt/200 Cst
80225	Team CORALLY SHG SHOCK OIL, 2 Oz./60 ML - 25 Wt/250 Cst
80230	Team CORALLY SHG SHOCK OIL, 2 Oz./60 ML - 30 Wt/350 Cst
80235	Team CORALLY SHG SHOCK OIL, 2 Oz./60 ML - 35 Wt/400 Cst
80240	Team CORALLY SHG SHOCK OIL, 2 Oz./60 ML - 40 Wt/500 Cst
80245	Team CORALLY SHG SHOCK OIL, 2 Oz./60 ML - 45 Wt/550 Cst
80250	Team CORALLY SHG SHOCK OIL, 2 Oz./60 ML - 50 Wt/600 Cst
80255	Team CORALLY SHG SHOCK OIL, 2 Oz./60 ML - 55 Wt/650 Cst
80260	Team CORALLY SHG SHOCK OIL, 2 Oz./60 ML - 60 Wt/700 Cst
80265	Team CORALLY SHG SHOCK OIL, 2 Oz./60 ML - 65 Wt/750 Cst
80270	Team CORALLY SHG SHOCK OIL, 2 Oz./60 ML - 70 Wt/800 Cst
80280	Team CORALLY SHG SHOCK OIL, 2 Oz./60 ML - 80 Wt/900 Cst







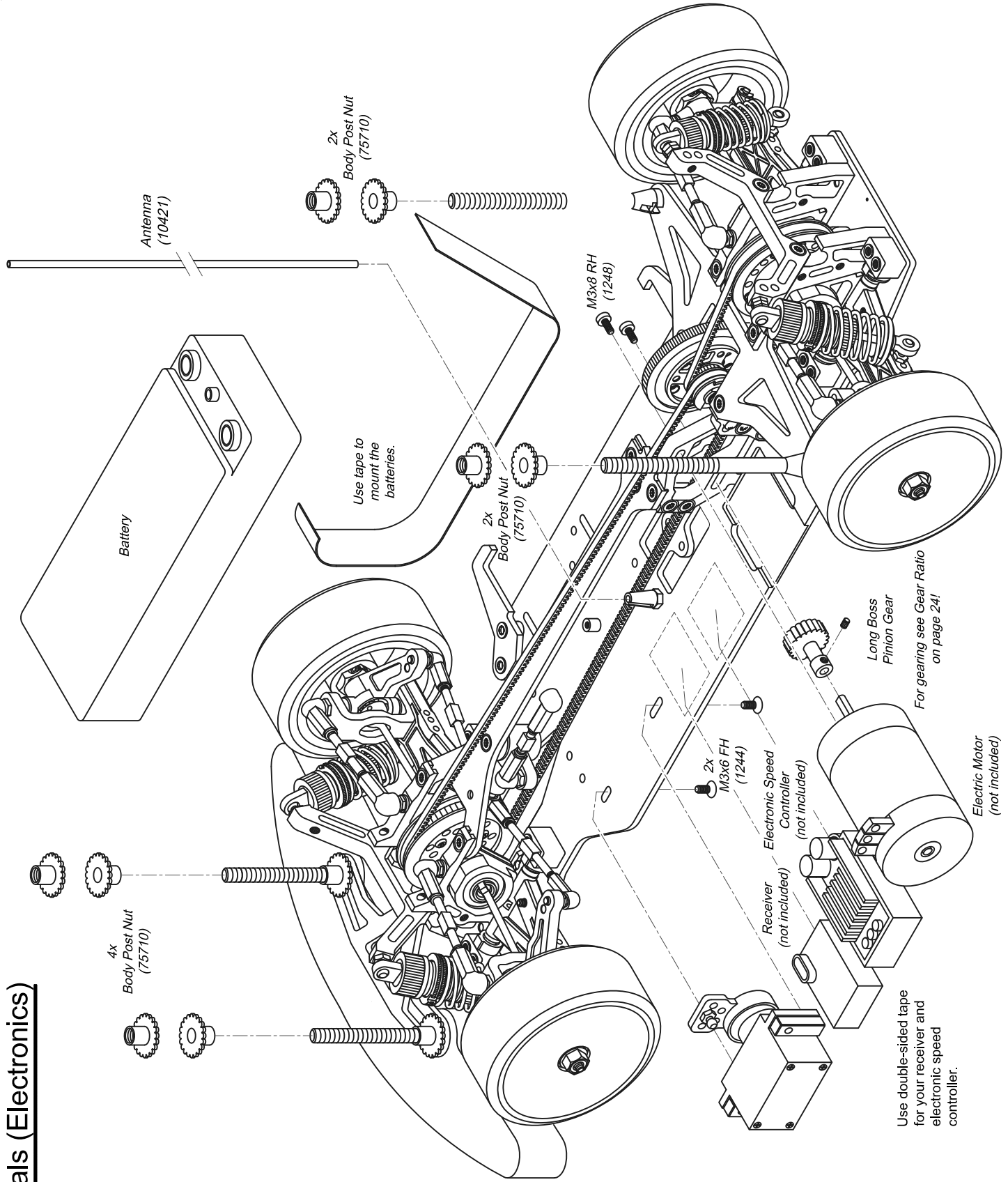


- 8x Body Post Nut
- 2x M3x8 RH
- 2x M3x6 FH

**Not Included:**

- Double-sided Tape
- Electronic Speed Control
- Receiver
- Battery-pack
- Electric Motor

Mount the servo with servo saver to the chassis.  
Then snap the turnbuckle 21mm to the pivot balls on the steering lever and the servo saver.

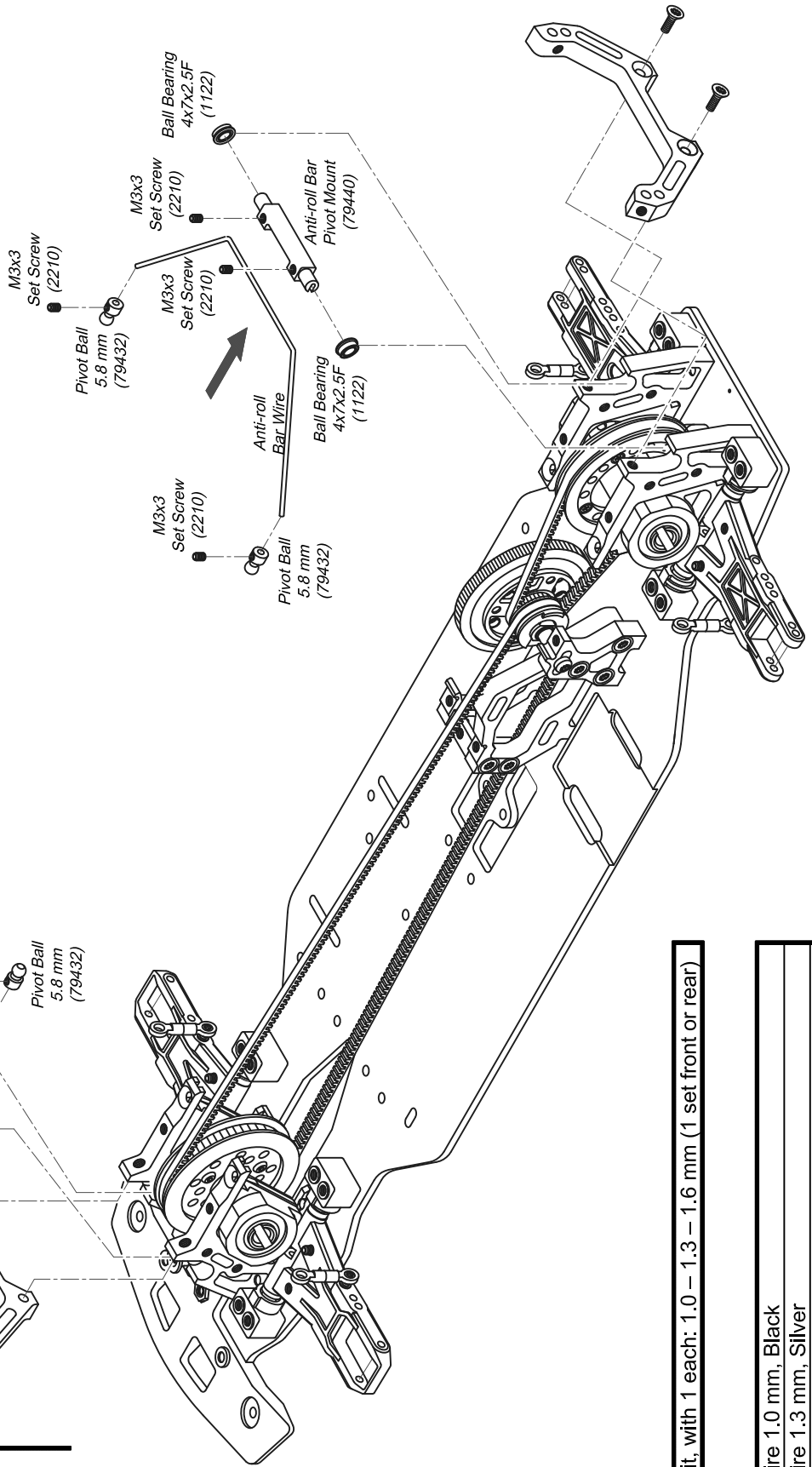
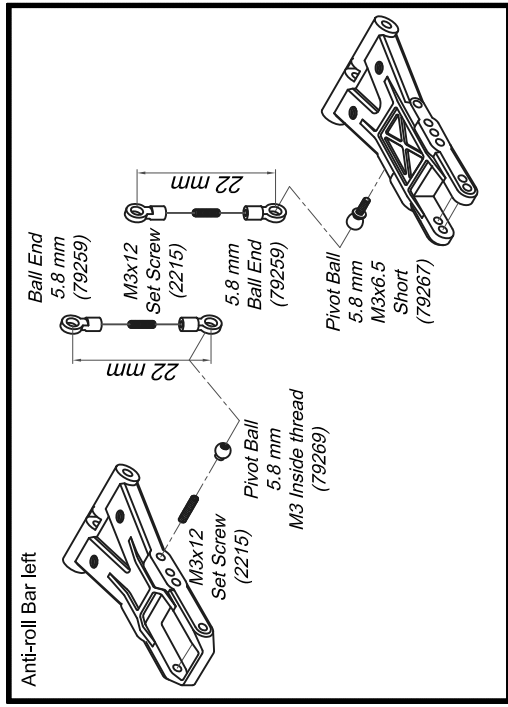
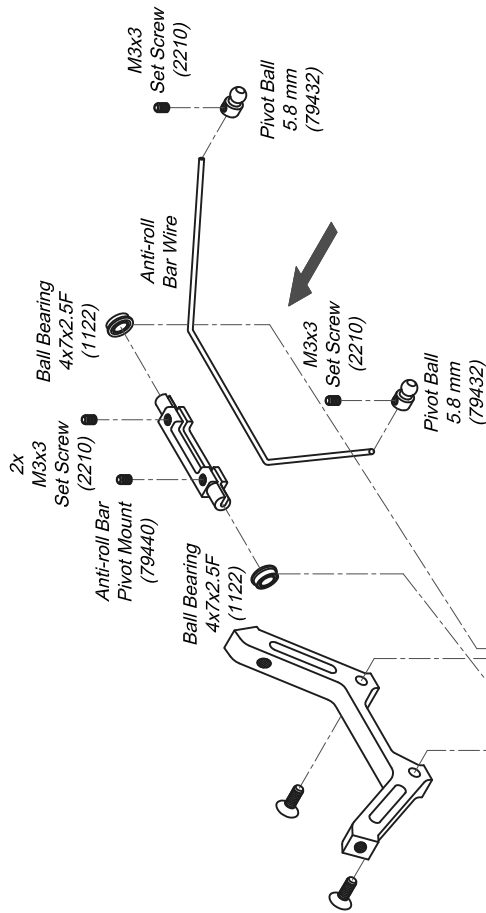


Use double-sided tape for your receiver and electronic speed controller.

# Anti-roll bar mounting instructions (option part)

(not included)

- 2x Anti-roll Bar Wire
- 2x Anti-roll Bar Mount
- 2x Pivot Ball 5.8mm M3x6.5 Short
- 2x Pivot Ball 5.8mm M3 Inside thread
- 4x Pivot Ball 5.8mm
- 8x Ball End 5.8mm
- 6x M3x12 Set Screw
- 8x M3x3 Set Screw
- 4x Ball Bearing 4x7x2.5F



**COMPLETE SET:**

79442	Anti-roll Bar Kit, with 1 each: 1.0 – 1.3 – 1.6 mm (1 set front or rear)
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**SEPERATE WIRES:**

79443	Anti-roll bar wire 1.0 mm, Black
79444	Anti-roll bar wire 1.3 mm, Silver
79445	Anti-roll bar wire 1.6 mm, Brass

# Gear Ratio Charts

The HMX requires long boss pinions!

The internal ratio of the HMX is **1,71 : 1**

- 507 mm / 186 mm belts with 36T / 21T pulleys

- Optional 510 mm / 183 mm\* belts with 36T / 21T pulleys

48dp	78T	81T
13	10.26	10.65
14	9.53	9.89
15	8.89	9.23
16	8.34	8.66
17	7.84	8.15
18	7.41	7.69
19	7.02	7.29
20	6.67	6.92
21	6.35	6.60
22	6.06	6.30
23	5.80	6.02
24	5.56	5.77
25	5.33	5.54
26	5.13	5.33
27	4.94	5.13
28	4.76	4.95
29	4.50	4.78
30	4.45	4.62
31	4.30	4.47
32	4.17	4.33

64dp	78T	80T	82T	84T	88T	90T	92T	94T	96T	98T	100T	104T	108T
17	7.85	8.05	8.25	8.45	8.85	9.05	9.25	9.45	9.66	9.86	10.06	10.46	10.86
18	7.41	7.60	7.79	7.98	8.36	8.55	8.74	8.93	9.12	9.31	9.50	9.88	10.26
19	7.02	7.20	7.38	7.56	7.92	8.10	8.28	8.46	8.64	8.82	9.00	9.00	9.72
20	6.67	6.84	7.01	7.18	7.53	7.69	7.87	8.04	8.21	8.38	8.55	8.55	9.23
21	6.35	6.51	6.67	6.84	7.17	7.33	7.49	7.65	7.82	7.98	8.14	8.47	8.79
22	6.06	6.22	6.37	6.53	6.85	6.99	7.15	7.31	7.46	7.62	7.77	8.08	8.39
23	5.80	5.95	6.10	6.24	6.54	6.69	6.84	6.99	7.14	7.29	7.29	7.73	8.03
24	5.56	5.70	5.84	5.99	6.27	6.41	6.56	6.70	6.84	6.98	6.98	7.41	7.70
25	5.33	5.47	5.61	5.75	6.02	6.16	6.29	6.43	6.57	6.70	6.70	7.14	7.39
26	5.13	5.26	5.39	5.52	5.78	5.92	6.05	6.18	6.31	6.44	6.45	6.84	7.10
27	4.94	5.07	5.19	5.32	5.57	5.70	5.83	5.95	6.08	6.20	6.20	6.59	6.84
28	4.76	4.86	5.00	5.13	5.37	5.49	5.61	5.74	5.87	5.99	6.11	6.35	6.60
29	4.60	4.72	4.84	4.95	5.19	5.31	5.42	5.54	5.66	5.78	5.89	6.13	6.37
30	4.45	4.56	4.67	4.79	5.02	5.13	5.24	5.36	5.47	5.59	5.70	5.93	6.16
31	4.30	4.41	4.52	4.63	4.85	4.96	5.07	5.18	5.29	5.40	5.52	5.74	5.96
32	4.17	4.28	4.38	4.49	4.70	4.81	4.92	5.02	5.13	5.24	5.34	5.56	5.77
33	4.04	4.15	4.25	4.35	4.56	4.66	4.76	4.87	4.97	5.08	5.18	5.39	5.60
34	3.92	4.02	4.12	4.22	4.43	4.53	4.62	4.73	4.83	4.93	5.04	5.23	5.43
35	3.81	3.91	4.00	4.10	4.30	4.40	4.49	4.59	4.69	4.79	4.88	5.08	5.28
36	3.70	3.80	3.89	3.99	4.18	4.27	4.37	4.47	4.56	4.66	4.75	4.94	5.13
37	3.60	3.70	3.79	3.88	4.07	4.16	4.25	4.34	4.44	4.53	4.62	4.81	4.99
38	3.51	3.60	3.69	3.78	3.96	4.05	4.14	4.23	4.32	4.41	4.50	4.68	4.86
39	3.42	3.51	3.60	3.68	3.86	3.95	4.03	4.12	4.21	4.29	4.38	4.56	4.74
40	3.33	3.42	3.51	3.59	3.76	3.85	3.93	4.02	4.10	4.19	4.27	4.45	4.62

## LONG BOSS PINIONS part #:

48dp	steel	64dp	steel	alu
13	2313	17	2417	2517
14	2314	18	2418	2518
15	2315	19	2419	2519
16	2316	20	2420	2520
17	2317	21	2421	2521
18	2318	22	2422	2522
19	2319	23	2423	2523
20	2320	24	2424	2524
21	2321	25	2425	2525
22	2322	26	2426	2526
23	2323	27	2427	2527
24	2324	28	2428	2528
25	2325	29	2429	2529
26	2326	30	2430	2530
27	2327	31		2531
28	2328	32		2532
29	2329	33		2533
30	2330	34		2534
31	2331	35		2535
32	2332	36		2536
		37		2537
		38		2538
		39		2539
		40		2540

## SPUR GEARS part #:

48dp	black	64dp	black	white Delrin
78	2378	78		24278
81	2381	80		24280
		82		24282
		84		24284
		86		24286
		88		24286
		90		24290
		92		24292
		94		24294
		96		24296
		98	24098	
		100	24100	
		104	24104	
		108	24108	

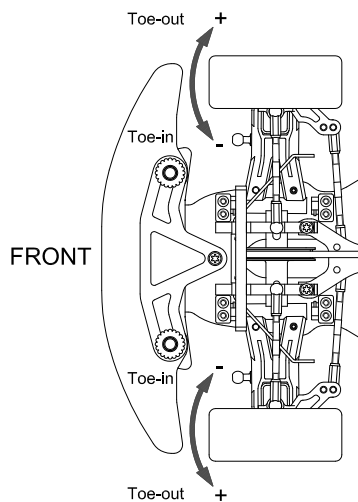


## Race adjustments:

Your HMX Touring Car comes with many possible geometry adjustments, shock adjustments, camber changes, etc. The standard setup in this manual is a good starting point to begin with. For optimising your car's performance, improvements can be made with the following tuning tips. Always make one step at a time, and see if there are any improvements or the performance is getting worse. On [www.corally.com](http://www.corally.com) you can download the latest setup sheets from Team Corally to help you find a good setup.

### ***Front toe-in / toe-out:***

Setting toe-in of the front wishbones in the center of the car will make the suspension work better on bumpy conditions. Toe-out will give a better steering response and stability.



#### **Toe-in:**

Stabilizes the car on the straight, and coming out of the corners.

It smoothes out the steering response, making the car easier to drive.

It can make the car turn in a little more in the middle and exit part of a corner.

#### **Toe-out:**

Increases turn-in steering a lot.

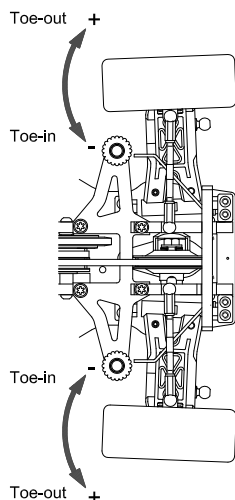
But can make the car very nervous on the straight.

More than 1° of front toe-out make the front even more nervous, so it's better not to use more than 1° toe-out.

Adjust for neutral feeling 0° toe. A slight amount of toe-out will increase the turn-in of the car but too much of it will make the car difficult to drive.

[min. = -1 / max. = +1]

### ***Rear toe-in:***



#### **Toe-in:**

This is one of the most sensitive adjustments! One degree goes a long way. Stabilizes the car greatly. It makes the rear end "stick". The more toe-in you use, the more the rear of the car sticks. This becomes especially apparent going in and coming out of the corners.

But more toe-in make more difference between sticking and breaking loose. Large amount of toe-in (2.5° ... 3°) scrub off a little speed on the straights.

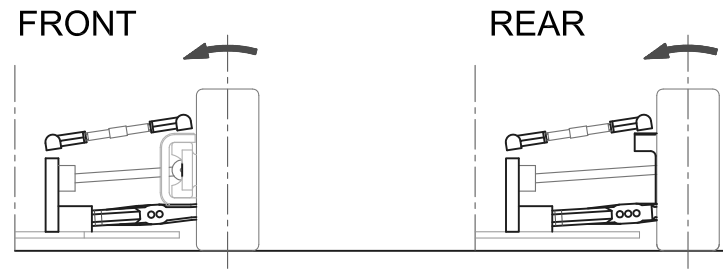
#### **Toe-out:**

Rear toe-out is never used. It makes the rear of the car very unstable.

Toe-in is set standard on 3° in the rear with the coupler clamps. To increase or decrease toe-in in the rear, use the optional wishbone mounts #1.0 and #1.5 to set more or less toe-in.

[min. 0 / max. 5]

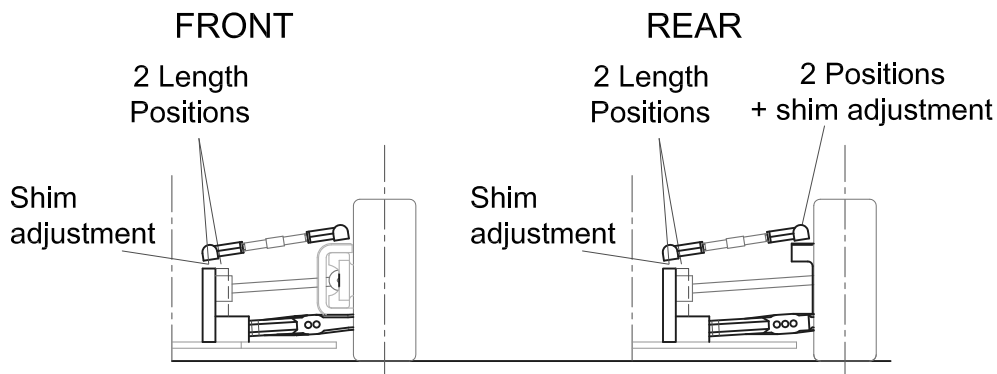
## Camber:



Camber is best set when the contact patches of the tires are always as big as possible. So with a stiff suspension and firm tires you'll need less camber than with soft suspension or tires with big, flexible sidewalls. If the tire wear evenly across their contact patches, the camber is about right. When using camber on the front in combination with caster blocks something must be kept in mind. Caster will cause camber in the front when steering and the front will lift up.

[min. 0 / max. 2]

## Camber Link Locations:



The HMX has 2 inner camber-link locations for length. The standard position, direct on the bulkhead. Or on the optional available Inner Camber Link Mounts, (#79770) The longer or higher the link, the more traction and less stability. The shorter or lower the link, the less traction and greater stability.

**Long Link:** A long link gives a lot of body roll in turns. It feels as if the body is willing to keep on rolling until it can't, but the springs prevent it from rolling any further.

The car has more grip in corners, especially in the middle part. But if there already is a lot of traction, long camber links can slow down in turns.

**Short Link:** A short link will make the chassis roll less. Its tendency to roll drops as it rolls.

It feels as if the car generates a little less grip.

**More Parallel Link:** A parallel link gives a little more roll than an angled one. It feels smooth, and constant as the body rolls in turns.

**Angled Link:** An angled link makes the car feel as if it has a tendency to center itself (level, no roll), other than through the spring or anti-roll bar. It will give more initial grip, steering into corners.

It makes it very easy to "throw" the car. The body rolls a little less than with parallel links. It's possible to use softer springs and a softer damping than with parallel links, without destabilising the car.

Always keep an eye on the balance of the car; large differences in roll-center front versus rear will make the car feel less constant!

## Inner Hingepin Locations:

It is possible to mount the wishbones on different heights to the bulkheads. This will change the roll-center of the car.

**Low mounting:** The roll-center becomes lower, which generates more chassis-roll into the corner.

**Higher mounting:** The roll-center becomes higher, which generates less chassis-roll.

Car changes quicker from direction, but less grip will be generated. Feels very stable.

### **Front Caster:**

Caster can be very important to the handling of the car. Adding or removing caster can transform the steering balance of a car. The total of Caster is degrees Kick-up + degrees Caster C-hub.

**More Caster:** Will give stability, especially at high speeds. More Caster generally suits large high-speed open tracks.

**Less Caster:** Will increase steering drastically. Steering feels more direct, so the car turns tighter and faster. Small amounts of caster are suitable for tight tracks.

These settings can be arranged with the optional C-hubs and the inner hinge pin settings.

[min. 0 / 2 / 4 / max. 6]

### **Front Kick-up and anti-dive:**

Refers to the angle in which the front suspension is mounted in relation to horizontal when looked from the side of car. **Kick-up** and **anti-dive** are adjusted by changing the angle of the front wishbones, which can be done by the 0.6mm (**#79729**) and 1.5mm (**#79730**) Wishbone Mount Shims.

These can be put under the Wishbone Mounts. The setting of 0° kick-up will have more aggressive steering feeling but will not absorb bumps well. The setting of a small amount of kick-up will work better in most conditions, especially in bumpy conditions. An anti-dive setting give a very aggressive steering feeling and will improve the front braking traction by entering corners. When using anti-dive a differential must be used in the front. Use at least 2° caster C-hubs. Anti-dive will not work on bumpy conditions.

### **Rear anti-squat:**

Describes the angle at which the rear suspension is mounted when looked sideways at the car.

Generally more anti-squat make the car more sensitive by throttle input. The car has more steering while braking (when diff is used), and also a little more powering out of the corners. Less anti-squat gives more side-bite, on-power and while braking. It feels easier to drive in low-grip situations.

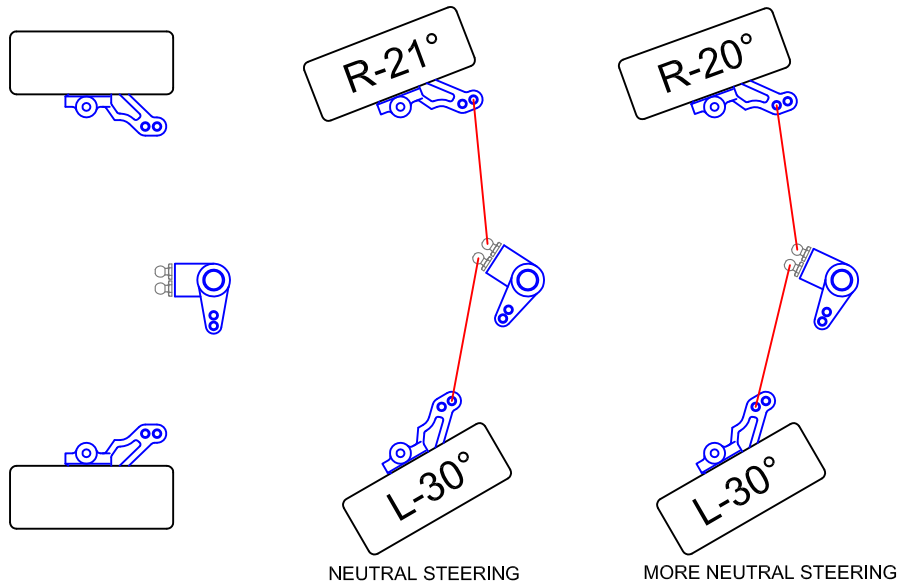
### **Wheelbase adjustment:**

Use the shims **#79113** and **#79114** to tune the wheelbase to your needs.

Adjust the wheelbase by moving the white inner hinge pin shims. A short wheelbase makes the car feel good in tight turns. Use a short wheelbase on very small and tight tracks. A longer wheelbase makes the car feel a lot more stable, and better in wide, high-speed turns. Use a longer wheelbase on wide open tracks. Moving the shims to the front of the front wishbones will shorten the wheelbase and decrease rear traction and greater stability. Moving the shims to the rear of the front wishbones will lengthen wheelbase and increase rear traction. Moving the shims to the front of the rear wishbones will lengthen the wheelbase and decrease rear traction and greater stability. Moving the shims to the rear of the rear wishbones will shorten the wheelbase and increase rear traction.

## **Ackermann:**

This is a term describing the effect of the inner front wheel turning tighter than the outside front wheel. The perfect angle (no slip in theory) between the two front tires is called "the Ackermann angle". The angle can be varied by adjusting the steering linkages. The Ackermann setup works well in most conditions and will provide a very smooth, predictable steering.



## **Shock Springs:**

Try to keep your car level during acceleration, deceleration and cornering. Stiffer springs make the car feel more responsive, more direct. The car reacts faster to driver input. Stiff springs are suited for tight, high-traction tracks, which aren't too bumpy. Usually, when you stiffen the whole car, you lose a small amount of steering.

Softer springs are better for bumpy and very large and open tracks. They can also make the car feel as sluggish and slow.

### **Stiffer Front:**

The car has less front traction, and less steering. It's harder to get the car to turn, the turn radius is bigger and the car has a lot less steering exiting corners. On very high-grip tracks, if the track itself feels tacky or sticky, very stiff springs are the way to go.

### **Softer Front:**

The car has more steering, especially in the middle part and the exit of the corner. Front springs that are too soft can make the car hook and spin.

### **Stiffer Rear:**

The car has more steering, in the middle and exit of the turn. This is especially apparent in long, high-speed corners. But rear traction is reduced.

### **Softer rear:**

The car has generally more rear traction, in turns as well through bumpy sections and while accelerating.

## **Optional available spring sets:**

### **#79230 BLACK spring set**

- 12.5 Lbs / 6.25 Turns
- 14.5 Lbs / 6 Turns
- 17.0 Lbs / 5.75 Turns
- 19.0 Lbs / 5.5 Turns
- 22.0 Lbs / 5.25 Turns
- 24.0 Lbs / 5 Turns

### **#79231 SILVER spring set**

- 26.0 Lbs / 5 Turns
- 30.0 Lbs / 4.75 Turns
- 33.5 Lbs / 4.5 Turns
- 36.5 Lbs / 4.25 Turns
- 39.5 Lbs / 4 Turns
- 42.0 Lbs / 3.75 Turns

## **Damping:**

Thicker oil (heavier damping) makes the car more stable, and makes it handle more smoothly. If damping is too heavy, traction could be lost in bumpy sections. The car will also change direction slower. Soft damping makes the car react quicker. Damping should always be adapted to the spring ratio; the suspension should never feel to "springy" or too slow.

**Heavier Front or Softer Rear:** The turn radius is wider, but smoother. The car doesn't hook up suddenly. The car is easier to drive, and high-speed steering feels very nice. Easy to drive.

**Softer Front or Heavier Rear:** The steering reacts quicker. More and better low-speed steering.

## **Shock Pistons:**

The assumption is made that if pistons are changed, the viscosity of oil is also adapted, to give the same static feel. (Same low-speed damping)

**Smaller holes (#79223)** means more "pack". Pack means the damping gets very stiff, or almost locks up, over sharp bumps. Small holes are good for smooth tracks.

**Bigger holes (#79224)** mean less pack. The point at which the damping gets stiff (where the shock "packs up") occurs a lot later, at higher shock shaft speeds. Big holes are very good for bumpy tracks. The car is more stable and has more traction in the bumpy sections. It won't be thrown up over sharp bumps, the suspension will soak them up a lot better.

## **Ride Height:**

This describes the height of the chassis in relation to the surface sitting on. This adjustment must be made with the chassis ready-to-run but with no body. By turning the spring adjustment nut the chassis can be raised or lowered. Start with about 6mm clearance between the chassis and ground. Try using a slightly lower ride height for high traction conditions as carpet racing. Do not use a ride height lower than 4mm.

**Higher:** The car feels better in bumpy sections. It can feel tippy, or even flip over in high-grip conditions.

**Lower:** The car feels more direct, and it can potentially corner a bit faster. It's also harder to flip the car over. Lowering one end of the car, or putting the other end higher up, gives a little more grip at the lowest end, but try to avoid big differences in ride height between the front and the rear.

## **Anti-Roll Bars:**

Before using anti-roll bars first try to play with the droop settings. Anti-roll bars can be used to stabilize a car from excessive roll (which occurs when your car leans through the turns by centrifugal force). Anti-roll bars are generally used on smooth, high traction track conditions. If the conditions are very bumpy, then anti-roll bars are probably not necessary. If you are driving on a high traction surface and your car wants to oversteer, then use the optional **#79920** (Black), **#79922** (Silver), **#79924** (Brass) or **#79926** (Black) anti-roll bar on the front only. This will decrease the front chassis roll and decrease steering throughout the corner. This has the feeling of increasing rear traction. If your car is understeering, then try the optional **#79920** (Black), **#79922** (Silver), **#79924** (Brass) or **#79926** (Black) anti-roll bar on the rear only. The rear anti-roll bar will decrease rear chassis roll and decrease rear traction (this has the feeling of increasing steering).

## **Downstops (droop-setting):**

When the Wishbones have a lot of droop the chassis is free to roll in turns. The center of gravity of the car won't change much. Chassis rolls around its roll-center. But if the wishbones almost have no droop the chassis will be pulled down as it rolls. It cannot roll anymore around its roll-center, because the chassis will become one-piece with the wishbone as it rolls. Then the center of gravity will become lower.

## Front:

- **Less droop** makes the car smoother in the middle of a corner and gives more steering under acceleration. Sometimes too little droop makes a car difficult to accelerate out from corners.
- **More droop** gives more steering response in the middle of a corner and makes the car push on throttle.

## Rear:

- **Less droop** makes the rear more stable to the corner and gives less grip in the middle and out of the corner.  
Less droop will heat up tires more.
- **More droop** reduces rear grip into the corner, but rear tires stay cooler and the car works more stable through your heat.

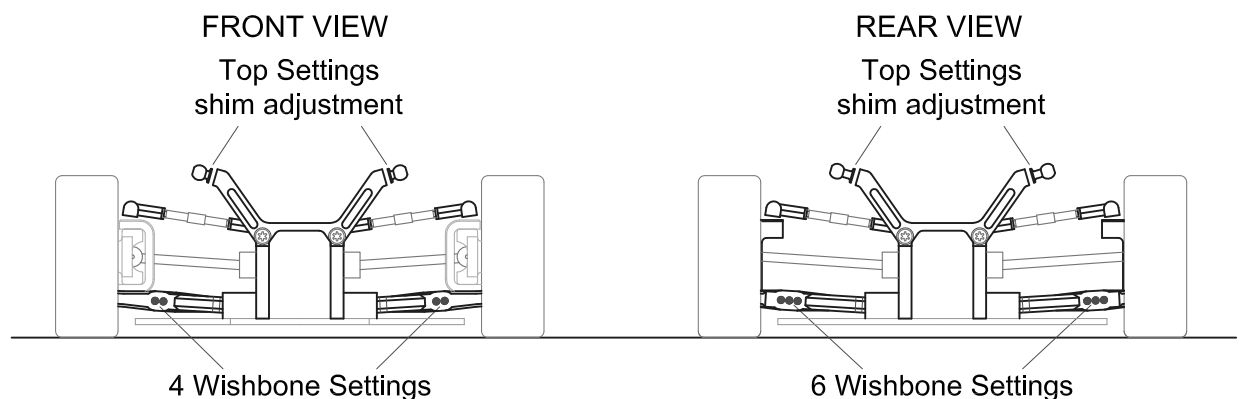
## Front Drive:

- **SGX Gear differential (#79675)** can be run completely dry, free of any lubrication, and will still perform with ease. Team Corally offers 3 types of high viscosity silicone syrup for those that desire some lubrication anyway.

- **(OPTIONAL) One-way (#79667)** contains two one-way bearings; one for each wheel. It acts like a diff in only the forward direction. The front wheels can only turn faster than the rear wheels, but not slower. Left and right wheel can rotate independently from each other, when power off entering a corner. This will give slightly more steering, so the corner can be taken faster. With a one-way front diff there will be no front braking, no differential action off power, high cornering speed, and excellent acceleration out of the corner. On really high-grip, open tracks with smooth, flowing high speed corners it is a one to have thing.

- **(OPTIONAL) Spool (#79655) or (OPTIONAL) Delrin Spool (#79157)** is like a fully locked diff but has no moving parts. It's super-solid with no adjustments. Because there's no differential action at all, a lot of speed is scrubbed off in corners. A spool at the front will make the car very hard to turn in. But gives stability under acceleration and deceleration. A spool at the rear will give a lot of steering.

## Shock position:



The HMX top fixing positions for the shock absorbers can be adjusted by shims. By flipping the 180° the front wishbones has 4 bottom shock positions and the rear wishbones 6 positions.

**More Inclined:** Has a more progressive smoother feel. More lateral grip. Having all shocks inclined makes the car very easy to drive, and it feels like the car has more grip, but it's not always fast...

**Less Inclined (more vertical):** More direct feel. Less lateral grip. (site-bite)

**Front more inclined than rear:** Steering feels very smooth. A little more mid-corner steering. Mounting the rear shocks very much upright can result in the rear end feeling unpredictable. It also makes the rear end jitter in turns.

**Rear more inclined than front:** Feels aggressive turning in, but for most of time the car has a little less steering. The car has a lot of side traction in the rear, and the turn radius isn't very tight.

## **Tire Additives:**

Corally tire additives come in a dauber bottle (125ml) complete with dauber for easy application.

TC-1: Classic formula for use on foam tires on carpet tracks.

TC-2: JACK THE GRIPPER is odorless and EFRA legal. This is the most popular choice for use on rubber and foam tires on any surface.

TC-3: Formulated for outdoor use.

TC-4: CARPET JACK is upgraded Jack The Gripper specially formulated to provide maximum grip for rubber tires on carpet tracks - odorless.

TC-5: ASPHALT JACK is specially formulated to provide maximum grip for rubber tires on tarmac. - odorless. **Note: Using tire warmers will improve results.**

- **TC-1 (#13741 80ml, #13746 125ml)** *Formulated for foam tires on carpet (Unpleasant smell)*
- **TC-2 (#13742 80ml, #13747 125ml)** *Jack the Gripper (Minimum Odor)*
- **TC-3 (#13743 80ml, #13748 125ml)** *Maximum Traction (Unpleasant smell)*
- **TC-4 (#13744 80ml, #13749 125ml)** *Carpet Jack (Minimum Odor)*
- **TC-5 (#13755 80ml, #13750 125ml)** *Asphalt Jack (Minimum Odor)*

## **Radio Adjustments:**

- Turn the transmitter on.
- Make sure the motor is disconnected.
- Connect your battery pack.
- Turn the power switch on.
- Make sure the wheels move in the right direction. If you turn the steering control to the left, the wheels should move to the left. If you turn the steering control to the right, the wheels should move to the right.
- Adjust the servo link so your servo saver is rising up.
- Using the two steering turnbuckles, adjust the front wheels so they are pointed straight forward.
- Adjust the Electronic Speed Controller according to your speed control manual. Turn off the power switch.
- Connect the motor. Be sure that the wheels do not touch anything. Turn on the power switch and check the settings of the ESC and steering. Turn the power switch off again.
- The transmitter is always the **FIRST TO BE TURNED ON** and **THE LAST TO BE TURNED OFF**

## **Setup Sheet:**

There's a setup sheet included in this manual. Set up your HMX with the standard settings at right, then deviate from them in response to your track conditions and driving style, as noted below.

For best result, make only one setup change at a time, testing it before making another change. Make a copy of the setup sheet included in this manual to help keep track of your changes. Before make any changes to standard setting, make sure you can get around the track without crashing. None of your setup changes will work if you cannot stay on the track. Your goal is consistent lap times. Inconsistent lap times may indicate poor control. When you have consistent lap times, then make changes to your car. If the change results in a faster lap, then mark the change in your setup sheet. If performance is worse, then revert to previous setup and try another change. Fill out your setup sheet thoroughly when you are satisfied with it and file it away. It can be a practical guide for future track lay-outs and conditions you encounter. Always keep in mind that your car stays in balance. Too much difference in front and rear setup can make the car feel unpredictable.

We at Team Corally wish you best luck and see you at the track!

## **Contact:**

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HIGH PERFORMANCE 1:10 ELECTRIC TOURING CAR  
**SETUP SHEET**

**Driver:** \_\_\_\_\_

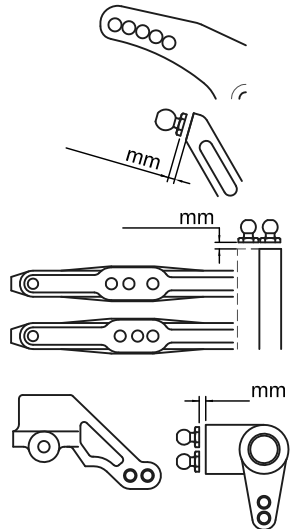
**Track / City:** \_\_\_\_\_

**Event:** \_\_\_\_\_

**Date:** \_\_\_\_\_

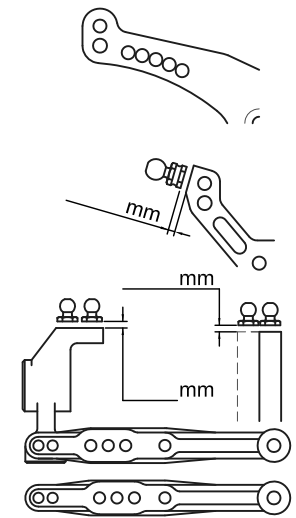
**Front**

SGX gear diff     Spool     One-way    SGX syrup \_\_\_\_\_  
 Caster \_\_\_\_\_    Downstops \_\_\_\_\_ mm    Oil \_\_\_\_\_ WT  
 Toe-out \_\_\_\_\_    Anti-roll bar \_\_\_\_\_ mm    Piston \_\_\_\_\_  
 Camber \_\_\_\_\_    Front width \_\_\_\_\_ mm    Rebound \_\_\_\_\_  
 Ride height \_\_\_\_\_    Front drive \_\_\_\_\_    Spring \_\_\_\_\_ lbs  
 Wishbone \_\_\_\_\_    Front pulley \_\_\_\_\_    Shock tower \_\_\_\_\_  
 Wheelbase \_\_\_\_\_    Steering \_\_\_\_\_    Steering block \_\_\_\_\_  
 F Mount \_\_\_\_\_    F Height shims \_\_\_\_\_ mm    F WB shims \_\_\_\_\_ mm  
 R Mount \_\_\_\_\_    R Height shims \_\_\_\_\_ mm    R WB shims \_\_\_\_\_ mm



**Rear**

SGX syrup \_\_\_\_\_  
 Anti-squat \_\_\_\_\_    Downstops \_\_\_\_\_ mm    Oil \_\_\_\_\_ WT  
 Toe-in \_\_\_\_\_    Anti-roll bar \_\_\_\_\_ mm    Piston \_\_\_\_\_  
 Camber \_\_\_\_\_    Rear width \_\_\_\_\_ mm    Rebound \_\_\_\_\_  
 Ride height \_\_\_\_\_    Center pulley \_\_\_\_\_ T    Spring \_\_\_\_\_ lbs  
 Wishbone \_\_\_\_\_    Rear pulley \_\_\_\_\_ T    Shock tower \_\_\_\_\_  
 Wheelbase \_\_\_\_\_    Upright \_\_\_\_\_ toe-in  
 F Mount \_\_\_\_\_    F Height shims \_\_\_\_\_ mm    F WB shims \_\_\_\_\_ mm  
 R Mount \_\_\_\_\_    R Height shims \_\_\_\_\_ mm    R WB shims \_\_\_\_\_ mm



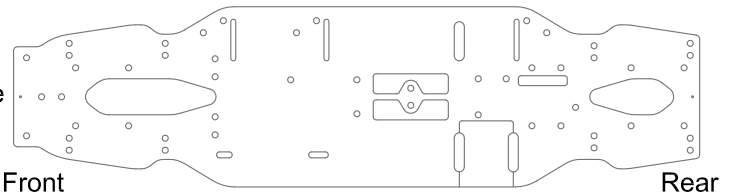
**Others**

Tires \_\_\_\_\_    Tire additive \_\_\_\_\_    Spur / Pinion \_\_\_\_\_ T / \_\_\_\_\_ T  
 Motor \_\_\_\_\_    Motor setup \_\_\_\_\_    ESC \_\_\_\_\_  
 Radio \_\_\_\_\_    Servo \_\_\_\_\_    Lead Weights \_\_\_\_\_ g  
 Body \_\_\_\_\_    Wing \_\_\_\_\_

**Track Conditions**

Surface \_\_\_\_\_  
 Traction \_\_\_\_\_  
 Temp. \_\_\_\_\_  
 Notes \_\_\_\_\_  
 \_\_\_\_\_

Weight balance



**Race Comments**

Main \_\_\_\_\_ Finish \_\_\_\_\_ Qual. Pos. \_\_\_\_\_ Time \_\_\_\_\_ Laps \_\_\_\_\_