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# 1:10TH SCALE ELECTRIC 4WD OFF-ROAD COMPETITION BUGGY KIT



Tires not included | Body in kit comes clear

## BJ4 FEATURES

- 4wd shaft drive
- Adjustable slipper clutch
- Front one-way bearing
- MIP CVD's™
- B4 suspension components
- BJ4 blue aluminum components
- Graphite chassis, top deck and shock towers
- BJ4 body with Illuzion wing set
- Avid sealed ball bearings
- Factory Team titanium turnbuckles
- Factory Team threaded shocks with unobtanium shafts



Battery pack not included

(Not recommended for use without adult supervision)

## TOOLS

## TOOLS NEEDED TO BUILD THIS KIT:

### 1. ALLEN WRENCHES 3. MISC. TOOLS

- A. .050"
- B. 1/16"
- C. 5/64"
- D. 3/32"
- E. 2.5mm

- A. NEEDLE NOSE PLIERS
- B. THREAD LOCKING COMPOUND (BLUE)
- C. HOBBY KNIFE (DANGER!) THIS KNIFE CUTS PLASTIC AND FINGERS WITH EQUAL EASE.
- D. PRECISION RULER
- E. FLAT FILE
- F. 7/16" OPEN END WRENCH

### 2. NUT DRIVERS

- A. 3/16"
- B. 1/4"
- C. 11/32"

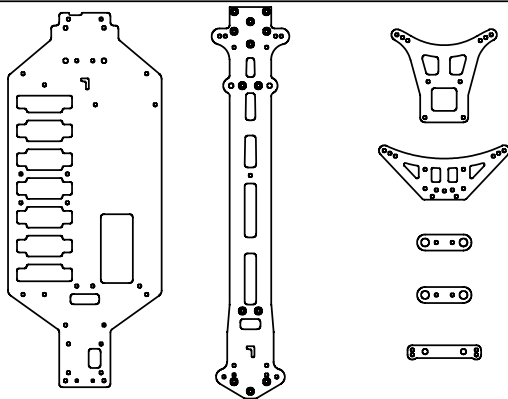
### 4. HELPFUL TOOLS (NOT REQUIRED)

- A. VERNIER CALIPERS
- B. HOBBY SCISSORS
- C. 2.5mm BALL END HEX DRIVER

### ITEMS NEEDED TO COMPLETE YOUR CAR:

- 1. R/C TWO CHANNEL SURFACE FREQUENCY RADIO SYSTEM.
- 2. BATTERY PACK (6 CELL)
- 3. BATTERY CHARGER (PEAK DETECTION CHARGER)
- 4. ELECTRONIC SPEED CONTROL
- 5. R/C ELECTRIC MOTOR
- 6. PINON GEAR (SIZE TO BE DETERMINED BY MOTOR CHOICE)
- 7. 1/10TH SCALE 4WD FRONT TIRES (BOX ART SHOWN: HOLESOTS)
- 8. 1/10TH SCALE BUGGY REAR TIRES (BOX ART SHOWN: HOLESOTS)

## BAG A



### BAG "A" INCLUDES:

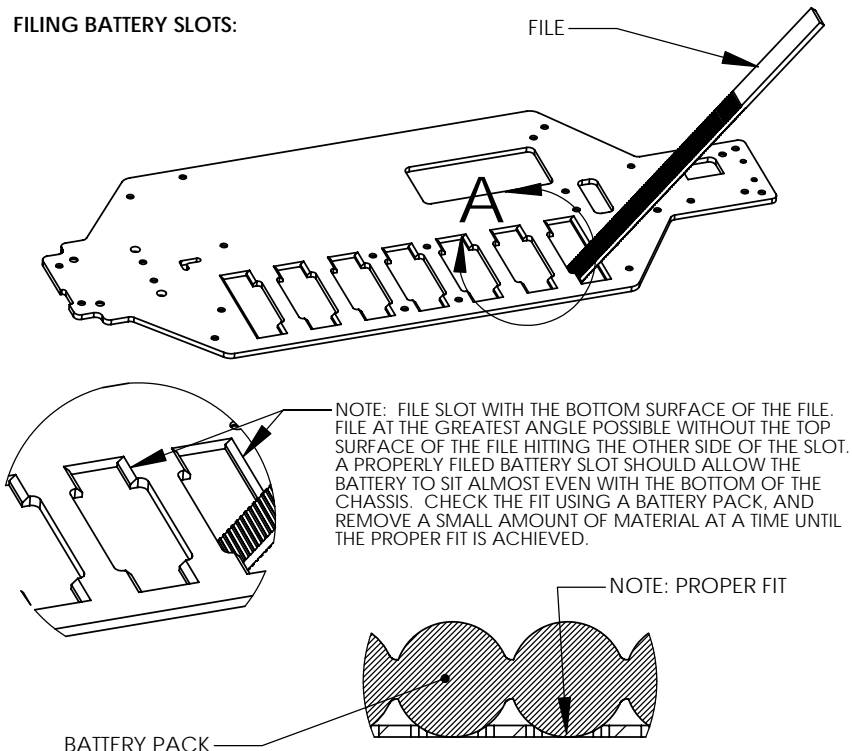
CHASSIS x 1  
TOP DECK x 1  
FRONT SHOCK TOWER x 1  
REAR SHOCK TOWER x 1  
BEARING BLOCK x 2  
STEERING RACK x 1

## STEP 1 CHASSIS PREPARATION:

- BATTERY SLOTS:** THE PURPOSE OF THIS STEP IS TO FILE THE BATTERY SLOTS SO THAT WHEN THE BATTERY PACK IS IN THE CAR, THE BOTTOM OF THE BATTERY IS ALMOST EVEN WITH THE CHASSIS. (REFER TO PICTURES BELOW)
- REAR TRANSMISSION SLOT:** THE PURPOSE OF THIS STEP IS TO FILE THE REAR TRANSMISSION SLOT TO ALLOW THE REAR TRANSMISSION CASE TO SIT FLAT ON THE CHASSIS. (REFER TO PICTURES BELOW)

### FILING BATTERY SLOTS:

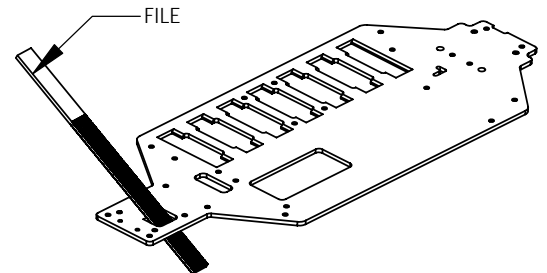
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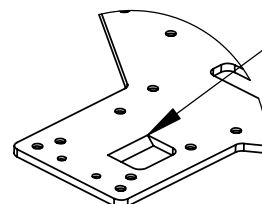
BATTERY PACK

### FILING TRANSMISSION SLOT:

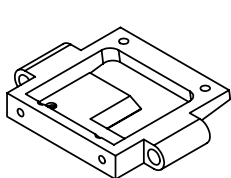
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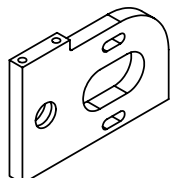
NOTE: THIS IS A CLEARANCE FOR THE BOTTOM OF THE REAR TRANSMISSION CASE. A PROPERLY FILED CHASSIS WILL ALLOW THE REAR TRANSMISSION CASE TO SIT FLAT ON THE CHASSIS. FILE CAREFULLY! USE THE PROPER CASE TO CHECK THE FIT WHILE REMOVING A SMALL AMOUNT OF MATERIAL AT A TIME.



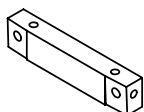
## BAG B



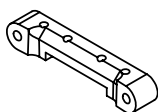
FRONT BULKHEAD  
x 1



MOTOR MOUNT  
x 1



REAR SUSPENSION MOUNT (FRONT) x 1  
NOTE MOUNTING DIRECTION IN DRAWING  
BELOW



REAR SUSPENSION MOUNT (BACK) x 1  
NOTE MOUNTING DIRECTION IN DRAWING  
BELOW

## HARDWARE INSIDE BAG "B" SCALE: 1:1



4-40 x 3/8" FLAT HEAD  
x 2



4-40 x 5/16" FLAT HEAD  
x 7



5-40 x 5/16" FLAT HEAD  
x 2



4-40 MINI LOCKNUT  
x 2

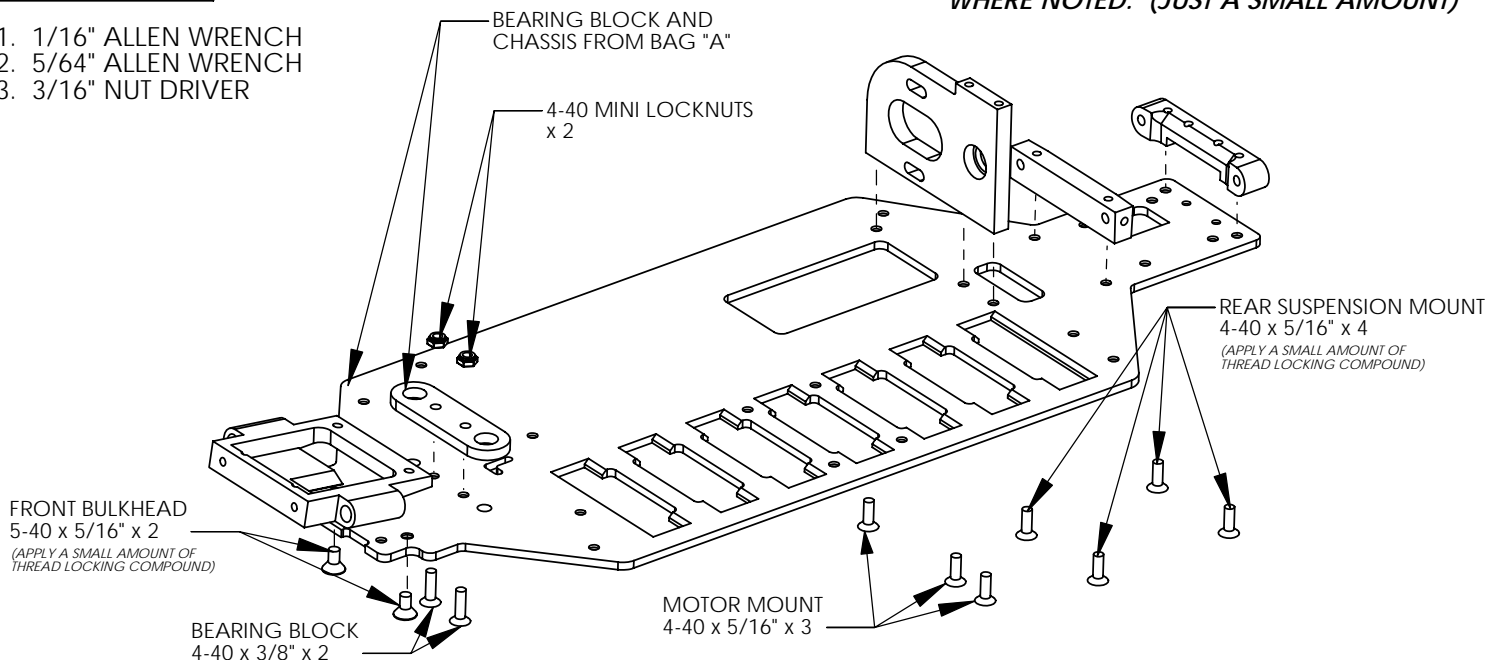
## STEP 1 ASSEMBLING CHASSIS COMPONENTS:

1. ATTACH FRONT BULKHEAD TO CHASSIS WITH TWO 5-40 X 5/16" FLAT HEAD SCREWS.
2. ATTACH BEARING BLOCK TO CHASSIS WITH TWO 4-40 X 3/8" FLAT HEAD SCREWS. SECURE WITH TWO 4-40 LOCKNUTS.
3. ATTACH MOTOR MOUNT TO CHASSIS WITH THREE 4-40 X 5/16" FLAT HEAD SCREWS. LEAVE SCREWS LOOSE SO THE MOTOR MOUNT HAS SOME MOVEMENT FRONT TO BACK. SCREWS WILL BE TIGHTENED LATER IN THE ASSEMBLY.
4. ATTACH REAR SUSPENSION MOUNT (FRONT) WITH TWO 4-40 X 5/16" FLAT HEAD SCREWS. NOTE DIRECTION
5. ATTACH REAR SUSPENSION MOUNT (BACK) WITH TWO 4-40 X 5/16" FLAT HEAD SCREWS. NOTE DIRECTION

## TOOLS USED

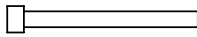
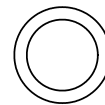
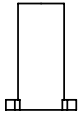
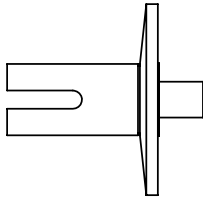
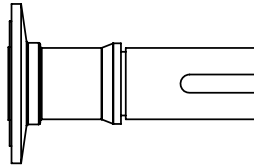
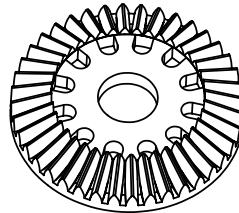
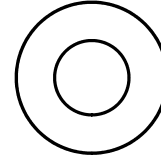
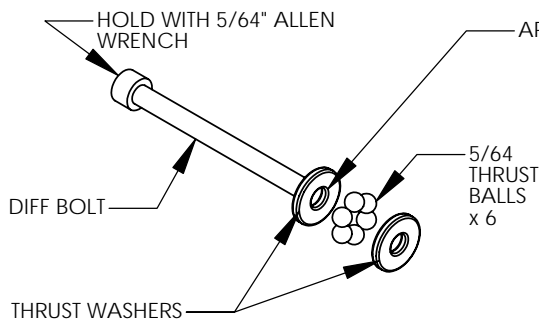
1. 1/16" ALLEN WRENCH
2. 5/64" ALLEN WRENCH
3. 3/16" NUT DRIVER

**APPLY BLUE THREAD LOCKING COMPOUND  
WHERE NOTED. (JUST A SMALL AMOUNT)**

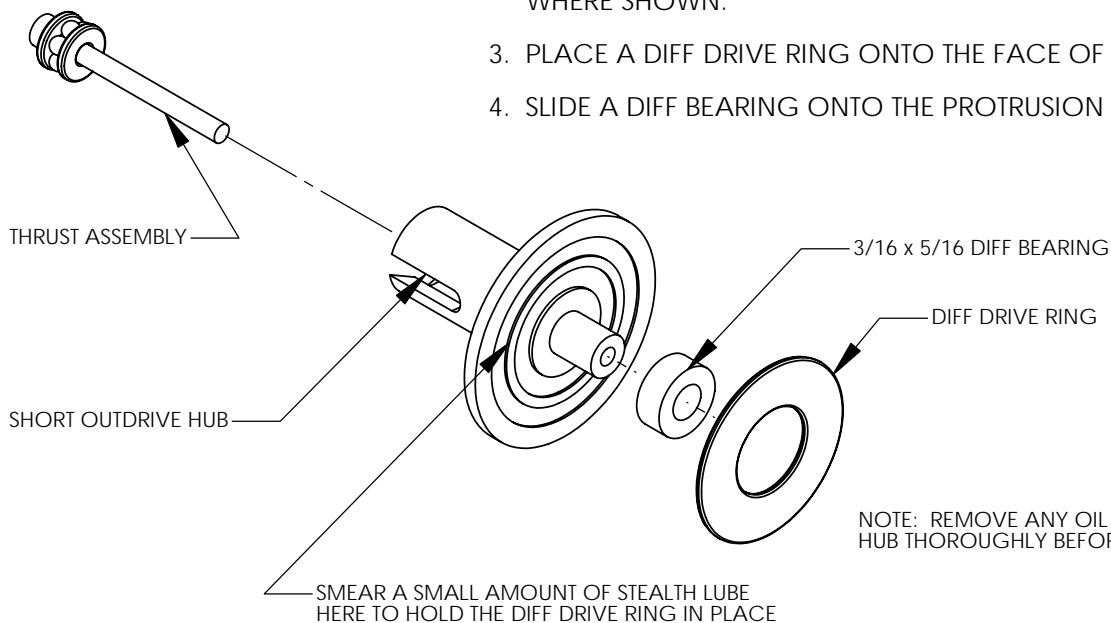


**BAG C****DRIVETRAIN COMPONENTS (DIFF x 2)****SCALE: 1:1****TOOLS USED**

1. 5/64" ALLEN WRENCH
2. NEEDLE NOSE PLIERS

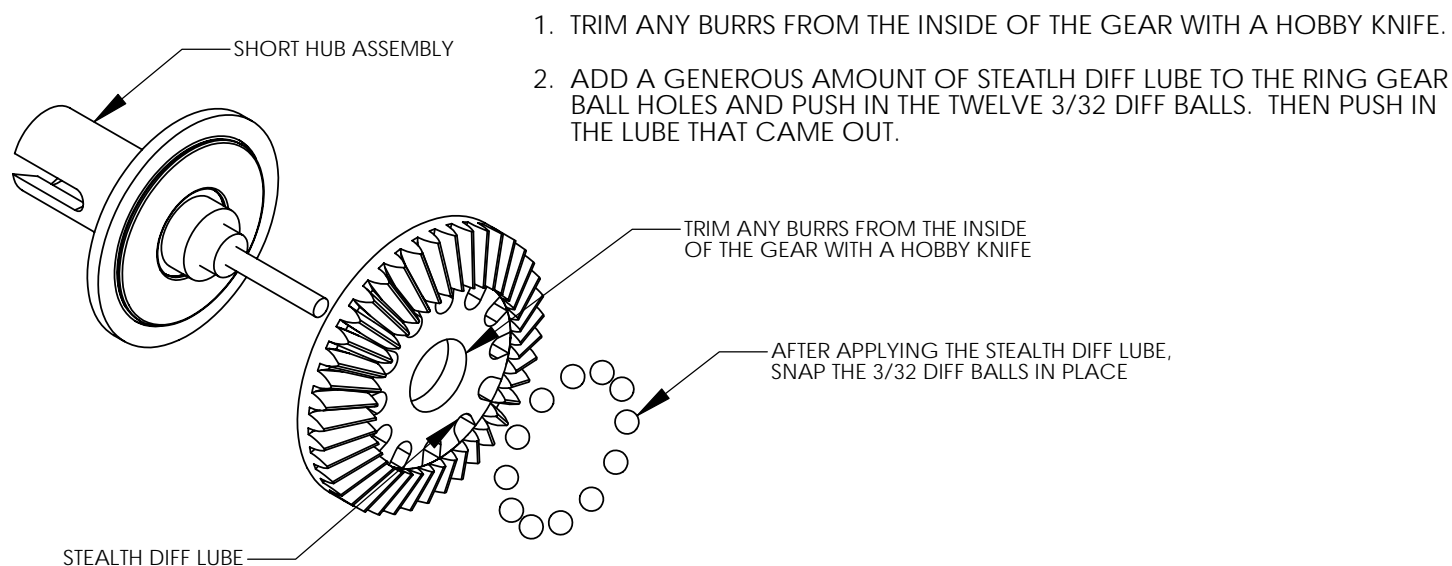
DIFF THRUST WASHER  
x 23/16 X 5/16 DIFF  
BEARING x 2DIFF BOLT  
x 13/32 DIFF BALL  
x 125/64 THRUST BALL  
x 6OUTDRIVE SHIM  
x 1DIFF T-NUT  
x 1SHORT OUTDRIVE HUB  
x 1LONG OUTDRIVE HUB  
x 1DIFFERENTIAL RING GEAR  
x 1DRIVE RING  
x 2DIFF SPRING  
x 1**STEP 1 THRUST BALL ASSEMBLY:**

1. HOLD THE DIFF BOLT WITH THE 5/64" ALLEN WRENCH AND SLIDE ONE THRUST WASHER ONTO THE DIFF BOLT.
2. APPLY A GENEROUS AMOUNT OF BLACK GREASE TO THE WASHER ON THE SIDE FACING AWAY FROM THE BOLT HEAD.
3. PLACE SIX THRUST BALLS INTO THE GREASE AGAINST THE BOLT AND WASHER. ADD THE OTHER THRUST WASHER. THE GREASE WILL HOLD THE BALLS IN PLACE DURING ASSEMBLY, SANDWICHED BETWEEN THE WASHERS.

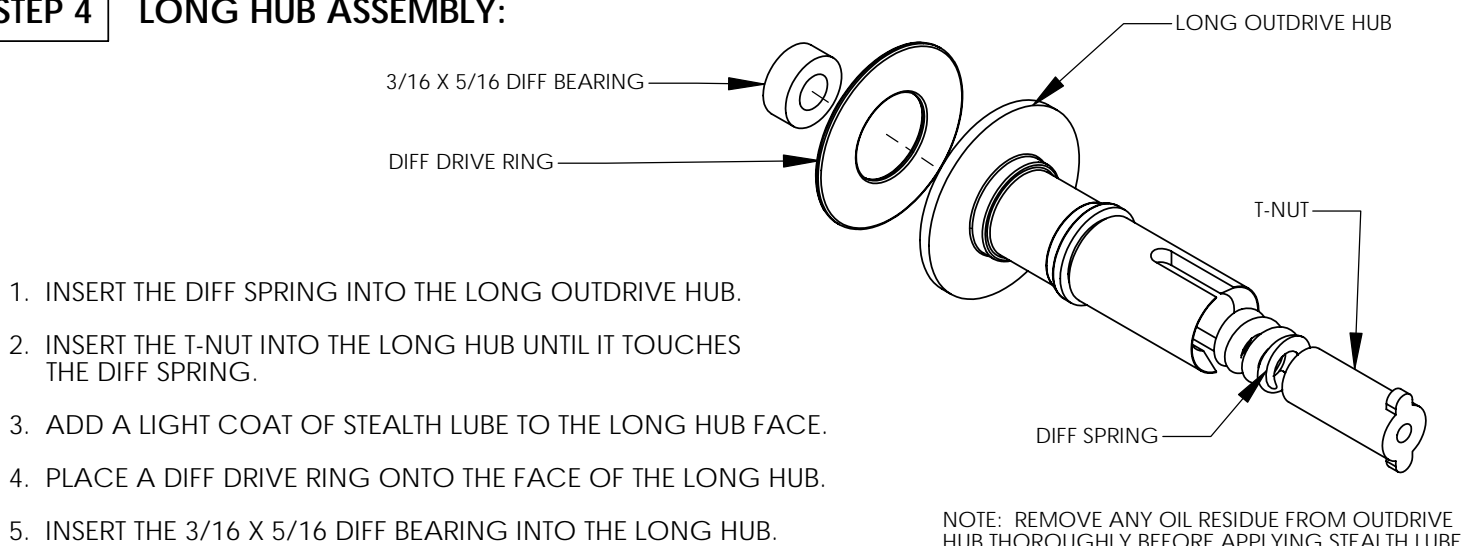
**STEP 2 SHORT HUB ASSEMBLY:**

NOTE: REMOVE ANY OIL RESIDUE FROM OUTDRIVE HUB THOROUGHLY BEFORE APPLYING STEALTH LUBE

### STEP 3 DIFFERENTIAL RING GEAR:



### STEP 4 LONG HUB ASSEMBLY:



### STEP 5 DIFF ASSEMBLY:

1. INSERT THE LONG HUB ASSEMBLY INTO THE SHORT HUB ASSEMBLY, MAKING SURE YOU LINE UP THE BOLT IN THE HUB AND THE BOLT THREADS INTO THE T-NUT.

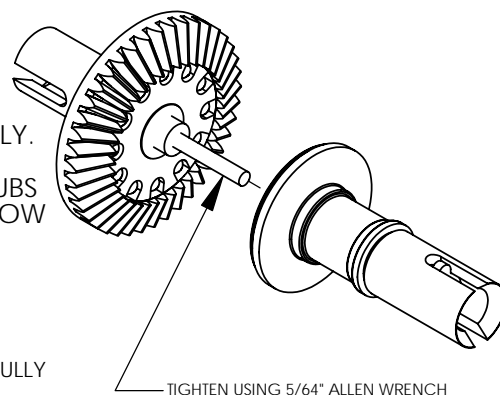
#### CHECK ALIGNMENT OF THE HUBS

2. TIGHTEN THE DIFF WITH YOUR 5/64" ALLEN WRENCH, BUT NOT COMPLETELY.
3. SCREW IN THE DIFF BOLT A FEW TURNS THEN STOP TO ROTATE THE DIFF HUBS IN OPPOSITE DIRECTIONS. THEN SCREW IN THE BOLT SOME MORE. FOLLOW THIS PROCEDURE TO CHECK PROPER ALIGNMENT OF THE PARTS. THE FOLLOWING NOTE CLARIFIES THIS.

#### READ THE FOLLOWING CAREFULLY

AS YOU TIGHTEN THE DIFF BOLT, PAY CLOSE ATTENTION TO THE FEELING WHEN THE SPRING IS FULLY COMPRESSED. DO NOT OVERTIGHTEN THE BOLT. WHEN YOU FEEL THE SPRING COMPRESSED, LOOSEN THE DIFF BOLT 1/4 TURN. NO MORE, NO LESS. AFTER YOU HAVE DRIVEN THE CAR FOR ONE BATTERY PACK, RECHECK THE DIFF ADJUSTMENT AS ABOVE SO THAT WHEN YOU FEEL THE SPRING FULLY COMPRESSED, LOOSEN THE DIFF BOLT 1/4 TURN. NEVER ADJUST THE DIFF ANY OTHER WAY.

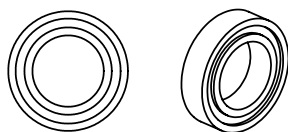
#### NOW ASSEMBLE THE SECOND DIFF THE SAME WAY



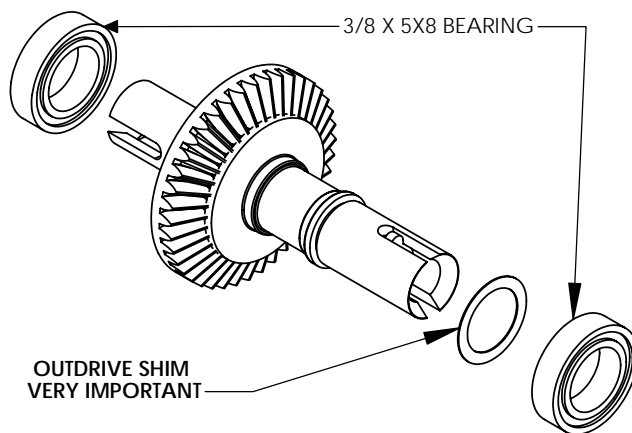
## STEP 6 FINAL OUTDRIVE ASSEMBLY:

1. PRESS ONE OUTDRIVE SHIM ON THE LONG HUB.  
(NOTE CORRECT DIRECTION ON DRAWING)
2. PLACE ONE 3/8 X 5/8 BEARING OVER EACH OUTDRIVE HUB.

SCALE: 1:1



3/8 x 5/8 RUBBER  
SEALED BEARING  
x 4



## BAG C FRONT INPUT SHAFT BAG CONTENTS SCALE: 1:1

\* (E-CLIPS ARE LOCATED IN THE SHOCK BAG)



\* SMALL E-CLIP  
x 1



INPUT SHAFT SHIM  
x 3



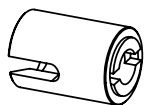
3/16 X 3/8 RUBBER  
SEALED BEARING  
x 2



4-40 X 3/16"  
BUTTON HEAD SCREW  
x 1



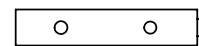
DRIVE PINON  
x 1



DRIVE CUP  
x 1



DOWEL PIN  
x 2



FRONT INPUT SHAFT  
x 1

## STEP 7 FRONT INPUT SHAFT ASSEMBLY:

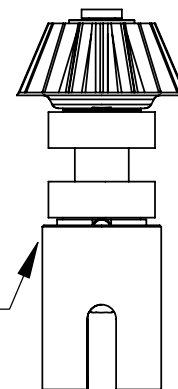
1. INSTALL AND CENTER THE DOWEL PIN INTO THE FRONT INPUT SHAFT. (FIGURE 1)
2. TRIM BURRS FROM THE DRIVE PINION EDGE WHERE SHOWN BELOW. SLIDE THE DRIVE PINION ON TO THE INPUT SHAFT. MAKE SURE THE DOWEL PIN ALIGNS PERFECTLY WITH THE SLOT IN THE PINION.
3. ADD THE SMALL E-CLIP.
4. SLIDE TWO INPUT SHAFT SHIMS AND ONE 3/16 X 3/8 BEARING ONTO THE INPUT SHAFT.
5. SLIDE THE SECOND BEARING ONTO THE INPUT SHAFT, THEN ONE INPUT SHAFT SHIM. (FIGURE 2)
6. INSTALL AND CENTER THE DOWEL PIN INTO THE INPUT SHAFT.
7. SLIDE A DRIVE CUP ONTO THE END OF THE INPUT SHAFT.
8. TIGHTEN IT DOWN WITH ONE 4-40 x 3/16" SCREW.

### ATTENTION!

CAREFULLY TRIM ANY BURRS FROM THIS EDGE OF THE DRIVE PINION WITH A HOBBY KNIFE.



FRONT INPUT SHAFT ASSEMBLED  
(PLEASE COMPARE YOUR ASSEMBLY CAREFULLY)



SCALE  
1.5 : 1

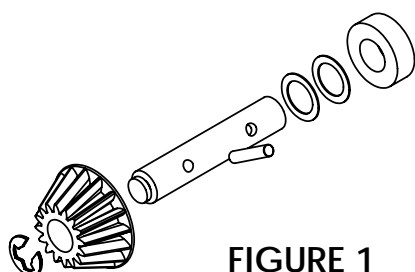


FIGURE 1

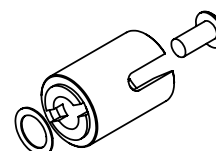
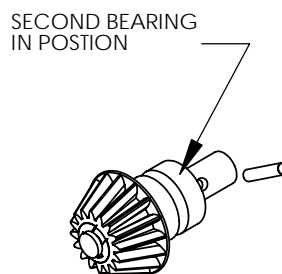


FIGURE 2

**BAG C****REAR INPUT SHAFT BAG CONTENTS**

\* (E-CLIPS ARE LOCATED IN THE SHOCK BAG)

**TOOLS USED**

1. 1/16" ALLEN WRENCH
2. 7/16" OPEN END WRENCH
3. NEEDLE NOSE PLIERS



\*SMALL E-CLIP  
x 1



SMALL C-CLIP  
x 1



INPUT SHAFT SHIM  
x 2



SLIPPER THRUST  
RETAINER  
x 1



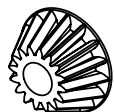
3/16 X 3/8 RUBBER  
SEALED BEARING  
x 2



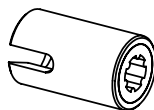
4-40 X 3/16"  
BUTTON HEAD SCREW  
x 2



1/4 X 28 LOCKNUT  
x 1



DRIVE PINON  
x 1



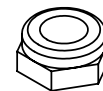
ONE-WAY HUB  
x 1



DOWEL PIN  
x 2



ONE-WAY SLIPPER SHAFT  
x 1



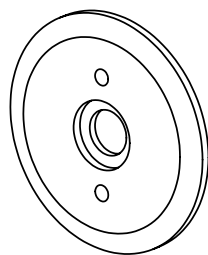
1/4 X 28 LOCKNUT  
x 1



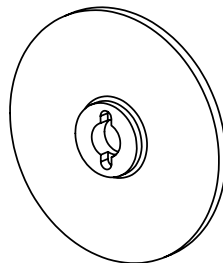
SLIPPER SPRING  
x 1



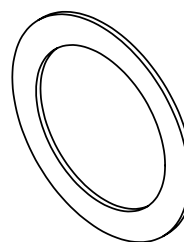
3/16 X 3/8 BUSHING  
x 1



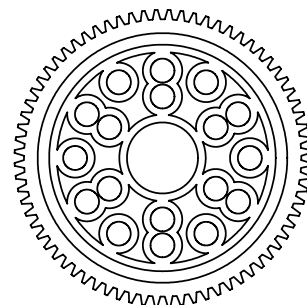
OUTER SLIPPER HUB  
x 1



INNER SLIPPER HUB  
x 1



SLIPPER PAD  
x 1

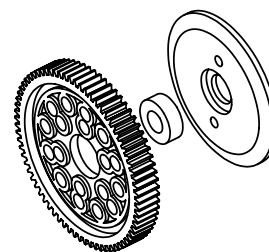


72 TOOTH SPUR GEAR  
x 1

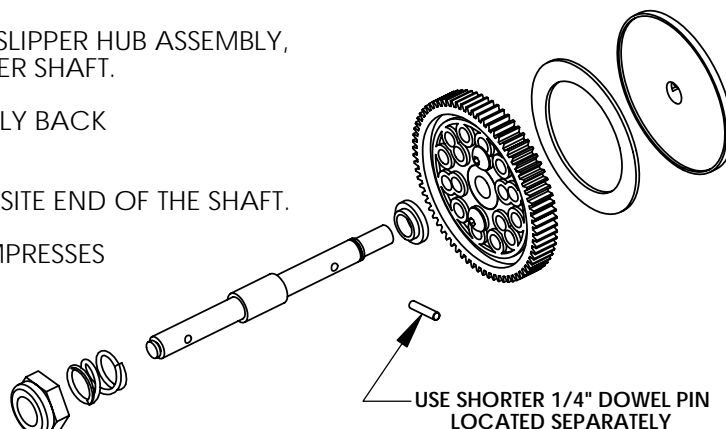
**STEP 8 OUTER SLIPPER HUB ASSEMBLY:**

1. PLACE BUSHING IN RECESS OF OUTER SLIPPER HUB.
2. SLIDE SPUR GEAR ONTO BUSHING AND FASTEN TO OUTER SLIPPER HUB WITH TWO 4-40 X 3/16" BUTTON HEAD SCREWS. (APPLY THREAD LOCKING COMPOUND TO SCREWS)

4-40 x 3/16" x 2  
(APPLY A SMALL AMOUNT OF  
THREAD LOCKING COMPOUND)

**STEP 9 REAR INPUT SHAFT/SLIPPER ASSEMBLY:**

1. IN ORDER, SLIDE THE SLIPPER THRUST RETAINER, OUTER SLIPPER HUB ASSEMBLY, SLIPPER PAD, AND INNER SLIPPER HUB ONTO THE SLIPPER SHAFT.
2. INSTALL DOWEL PIN AND SLIDE ENTIRE SLIPPER ASSEMBLY BACK SO IT CAPTURES THE DOWEL PIN.
3. SLIDE SLIPPER SPRING AND LOCKNUT ONTO THE OPPOSITE END OF THE SHAFT.
4. TIGHTEN THE LOCKNUT UNTIL THE SLIPPER SPRING COMPRESSES TO APPROXIMATELY 0.25" IN LENGTH.

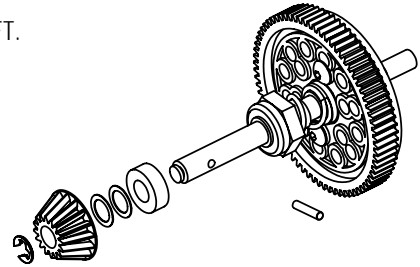
**ATTENTION!**

THE NYLON INSERT IN THE LOCKNUT IS VERY TIGHT ON THE SLIPPER SHAFT THREADS. IN ORDER TO TIGHTEN THE LOCKNUT TO THE GIVEN LENGTH, INSERT A .050" ROD THROUGH THE SHAFT AND TIGHTEN THE LOCKNUT WITH A 7/16" OPEN END WRENCH.

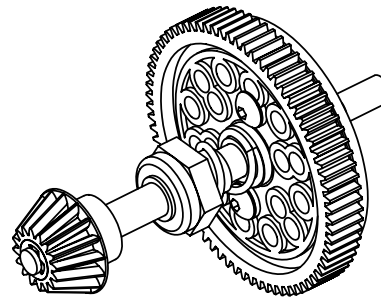
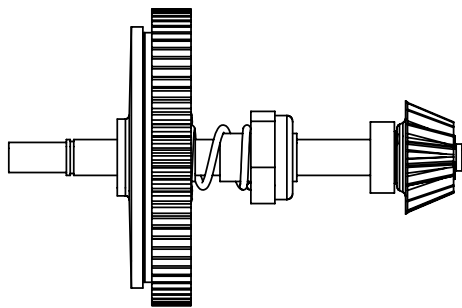
(DO NOT USE PLIERS ON THE SLIPPER SHAFT!!!)

## STEP 10 REAR INPUT SHAFT/SLIPPER ASSEMBLY:

1. SLIDE ONE BEARING AND TWO INPUT SHAFT SHIMS ONTO THE SLIPPER SHAFT.
2. INSTALL AND CENTER A DOWEL PIN INTO THE SLIPPER SHAFT.
3. SLIDE A DRIVE PINON ONTO THE END OF THE INPUT SHAFT. MAKE SURE THE DOWEL PIN ALIGNS PERFECTLY WITH THE SLOT IN THE PINION.
4. ADD A SMALL E-CLIP.



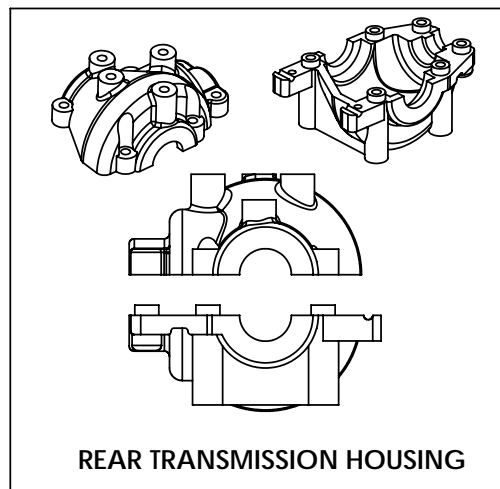
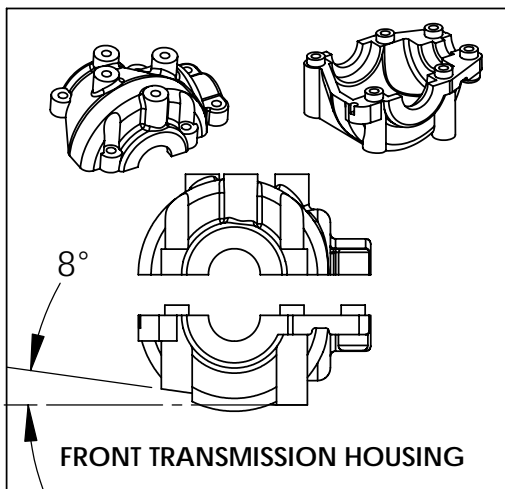
## STEP 11 COMPARE REAR INPUT SHAFT/SLIPPER ASSEMBLY



## BAG C TRANSMISSION COMPONENTS

### TOOLS USED

1. 1/16" ALLEN WRENCH
2. 3/32" ALLEN WRENCH
3. .050" ALLEN WRENCH



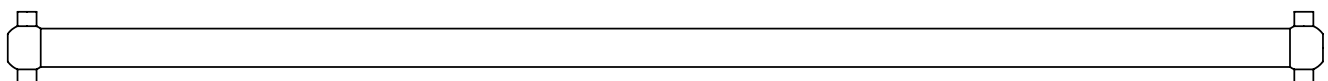
4-40 x 1/8"  
SET SCREW  
x 2

4-40 X 3/8"  
BUTTON HEAD SCREW  
x 4

4-40 X 3/8"  
SOCKET HEAD SCREW  
x 8

4-40 X 3/8"  
FLAT HEAD SCREW  
x 6

4-40 X 3/8"  
BUTTON HEAD SCREW  
x 4

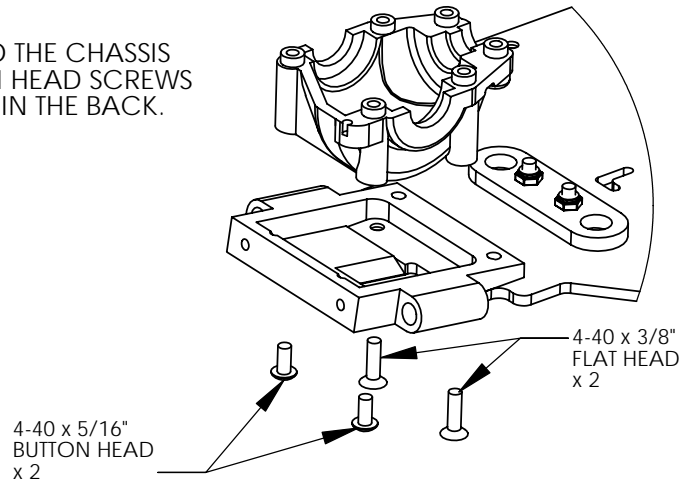


DRIVE SHAFT



## STEP 12 FRONT TRANSMISSION ASSEMBLY, LOWER HALF:

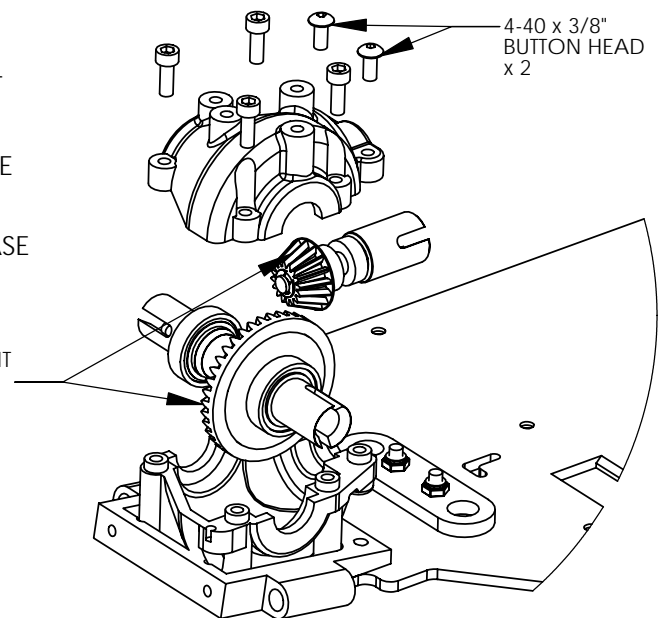
1. ATTACH THE LOWER FRONT TRANSMISSION HOUSING TO THE CHASSIS AND FRONT BULKHEAD USING TWO 4-40 x 5/16" BUTTON HEAD SCREWS IN THE FRONT AND TWO 4-40 x 3/8" FLAT HEAD SCREWS IN THE BACK.



## STEP 13 FRONT TRANSMISSION ASSEMBLY:

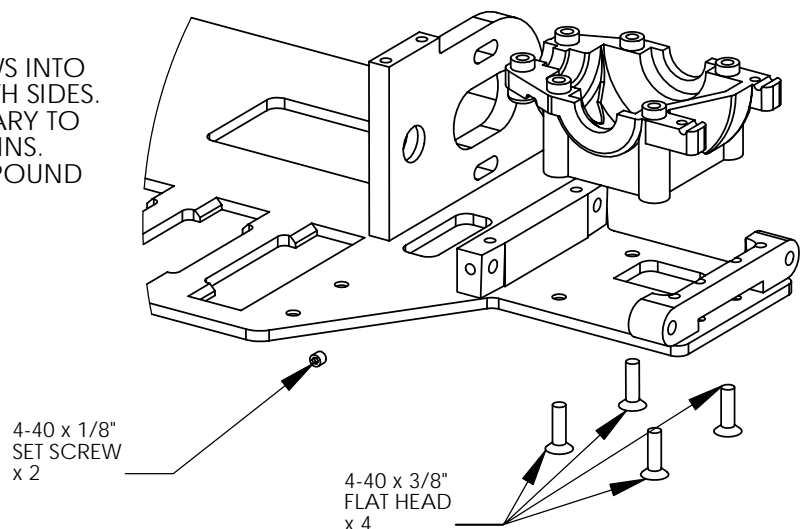
1. INSTALL THE FRONT DIFF ASSEMBLY AND FRONT INPUT SHAFT ASSEMBLY IN THE LOWER TRANSMISSION CASE.
2. ADD A SMALL AMOUNT OF STEALTH LUBE TO THE FRONT SIDE OF THE RING GEAR AND PINON GEAR.
3. ATTACH THE UPPER TRANSMISSION CASE TO THE LOWER CASE WITH FOUR 4-40 x 3/8" SOCKET HEAD SCREWS AND TWO 4-40 x 3/8" BUTTON HEAD SCREWS.

APPLY A SMALL AMOUNT  
OF STEALTH LUBE



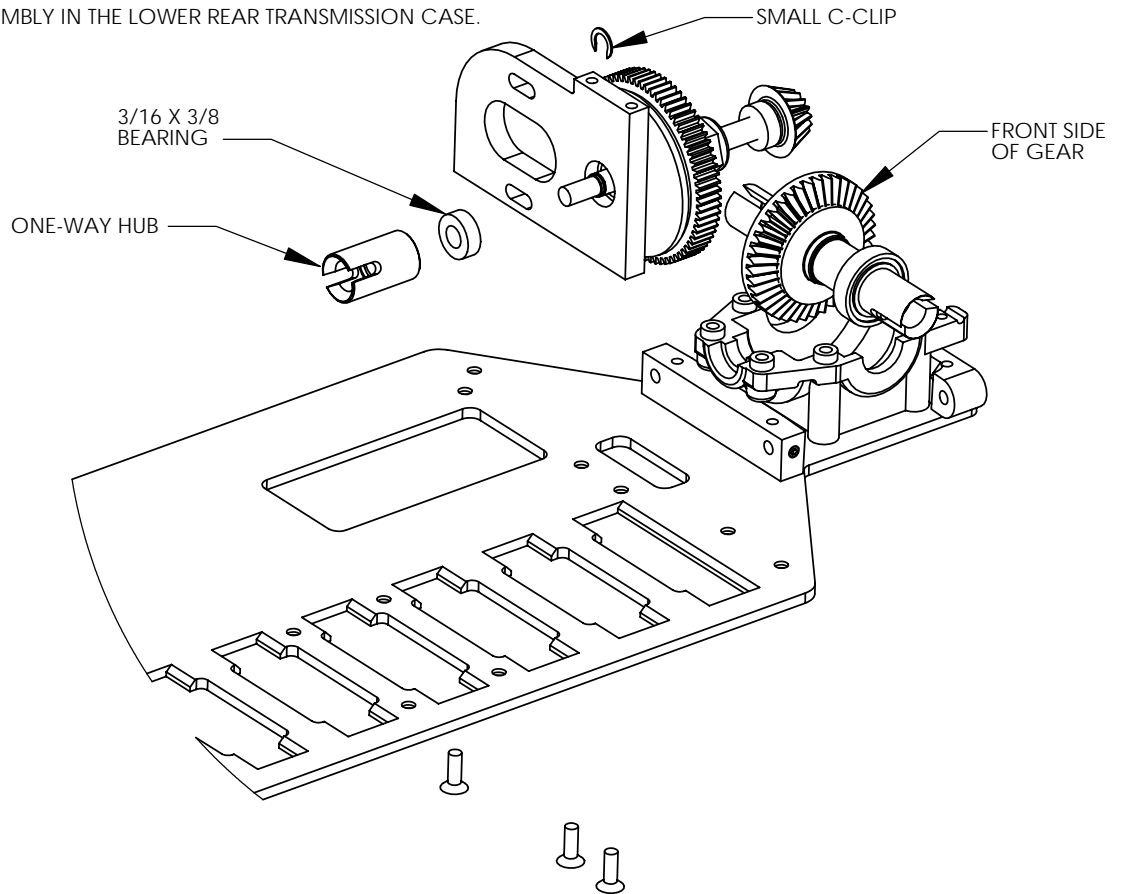
## STEP 14 REAR TRANSMISSION ASSEMBLY, LOWER HALF:

1. ATTACH THE LOWER REAR TRANSMISSION HOUSING TO THE REAR OF THE CHASSIS USING FOUR 4-40 x 3/8" FLAT HEAD SCREWS.
2. TEMPORARILY SCREW THE 4-40 x 1/8" SET SCREWS INTO THE REAR SUSPENSION MOUNT (FRONT) ON BOTH SIDES. LATER IN THE CAR ASSEMBLY IT WILL BE NECESSARY TO TIGHTEN THE SET SCREWS AGAINST THE HINGE PINS. A SMALL AMOUNT OF THREAD LOCKING COMPOUND WILL BE USED AT THAT TIME.



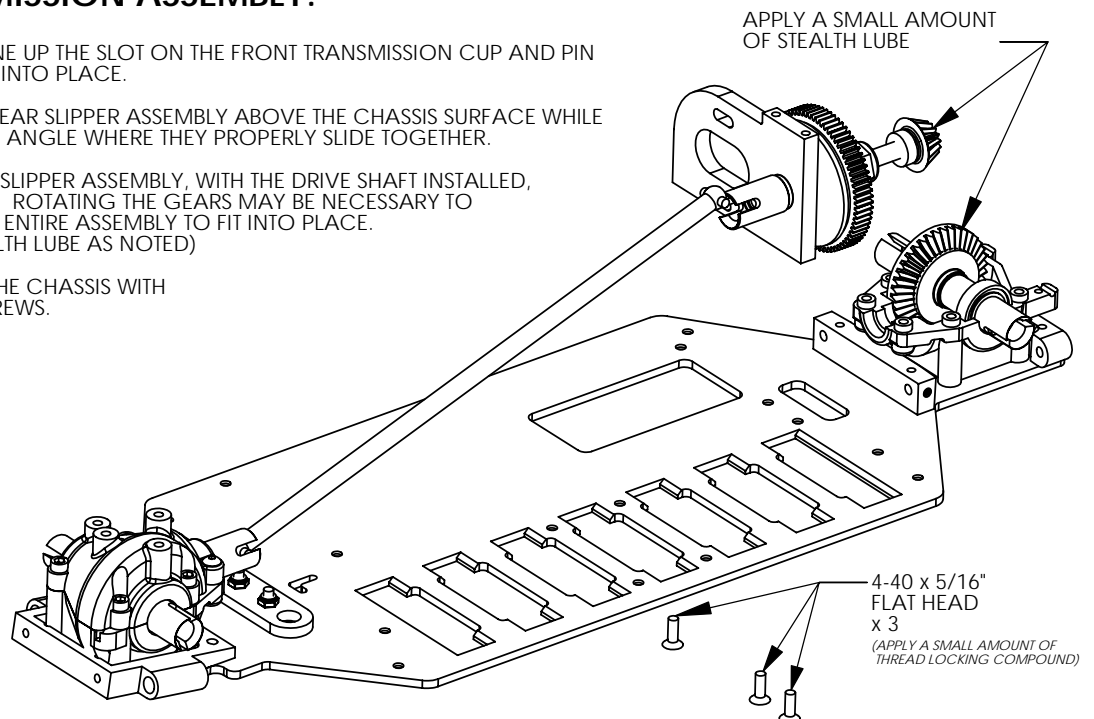
## STEP 15 REAR TRANSMISSION ASSEMBLY:

1. UNBOLT THE MOTOR MOUNT FROM THE CHASSIS WHERE IT WAS LOOSELY ATTACHED IN CHASSIS ASSEMBLY STEP 1.
2. SLIDE THE SLIPPER SHAFT ASSEMBLY THROUGH THE BACKSIDE OF THE MOTOR MOUNT. SLIDE ONE 3/16 x 3/8 BEARING ONTO THE SLIPPER SHAFT, MAKING SURE IT SETS NICELY INTO THE COUNTERBORED SIDE OF THE MOTOR MOUNT.
3. PRESS THE SMALL C-CLIP ON THE GROOVE LOCATED ON THE SLIPPER SHAFT AND SNAP INTO PLACE.
4. SLIDE THE ONE-WAY HUB ONTO THE SLIPPER SHAFT ASSEMBLY. TIP - SPINNING THE ONE-WAY HUB WHILE PRESSING IT ON THE SHAFT MAKES IT EASIER TO INSTALL.
5. INSTALL THE REAR DIFF ASSEMBLY IN THE LOWER REAR TRANSMISSION CASE.

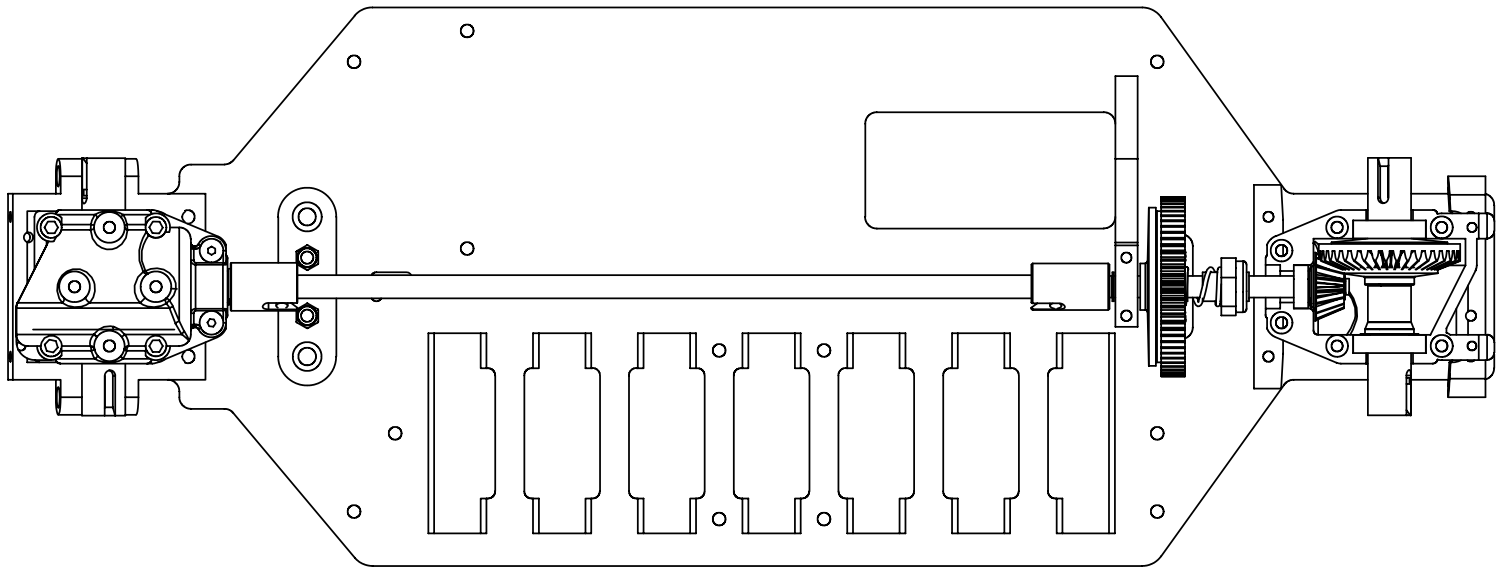


## STEP 16 REAR TRANSMISSION ASSEMBLY:

1. LOCATE THE DRIVE SHAFT AND LINE UP THE SLOT ON THE FRONT TRANSMISSION CUP AND PIN ON THE DRIVE SHAFT AND SLIDE IT INTO PLACE.
2. HOLD THE MOTOR MOUNT AND REAR SLIPPER ASSEMBLY ABOVE THE CHASSIS SURFACE WHILE HOLDING THE DRIVE SHAFT AT AN ANGLE WHERE THEY PROPERLY SLIDE TOGETHER.
3. LOWER THE MOTOR MOUNT AND SLIPPER ASSEMBLY, WITH THE DRIVE SHAFT INSTALLED, DOWN TO THE CHASSIS SURFACE. ROTATING THE GEARS MAY BE NECESSARY TO GET THEM TO MESH AND FOR THE ENTIRE ASSEMBLY TO FIT INTO PLACE. (ADD A SMALL AMOUNT OF STEALTH LUBE AS NOTED)
4. SECURE THE MOTOR MOUNT TO THE CHASSIS WITH THREE 4-40 x 5/16" FLAT HEAD SCREWS. (APPLY A SMALL AMOUNT OF THREAD LOCKING COMPOUND)

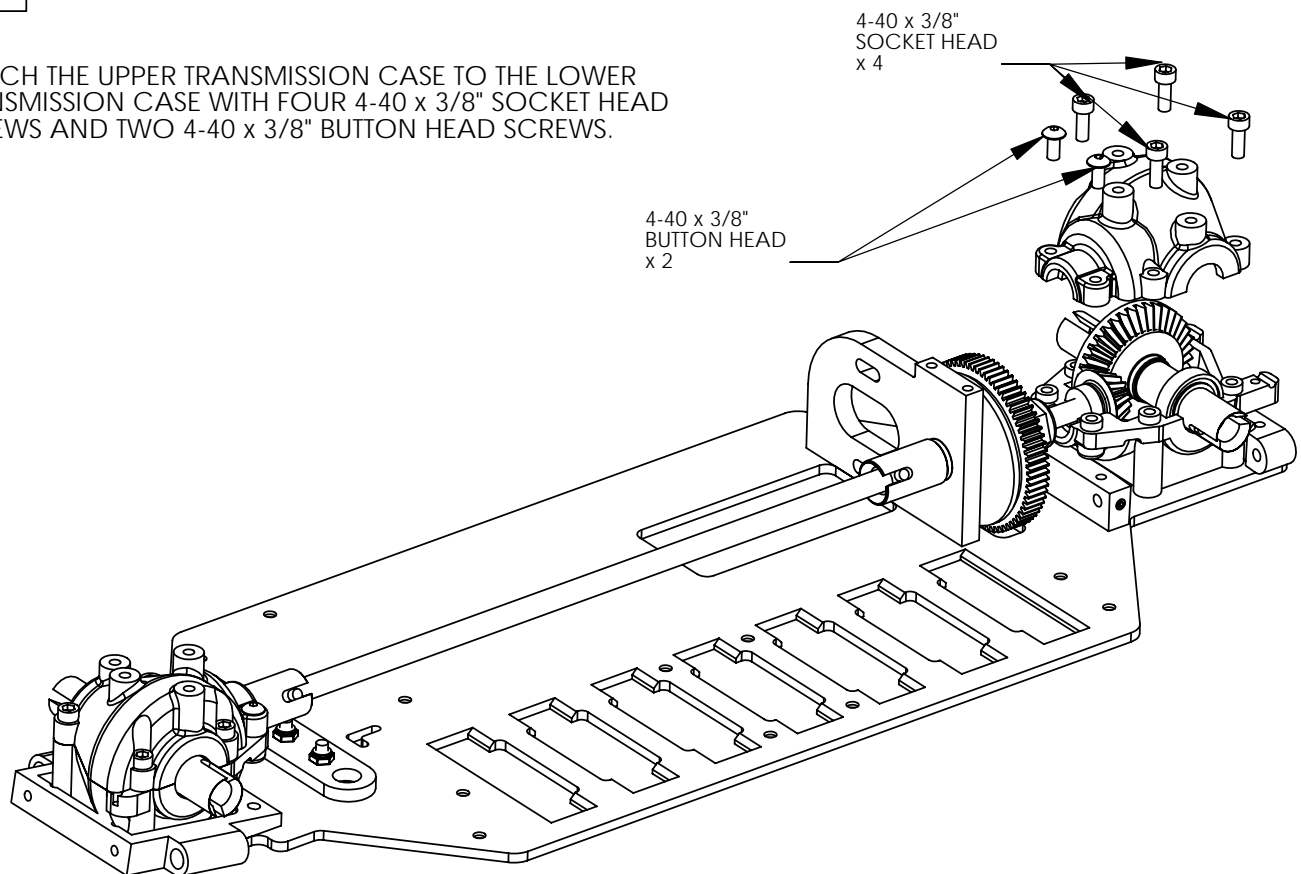


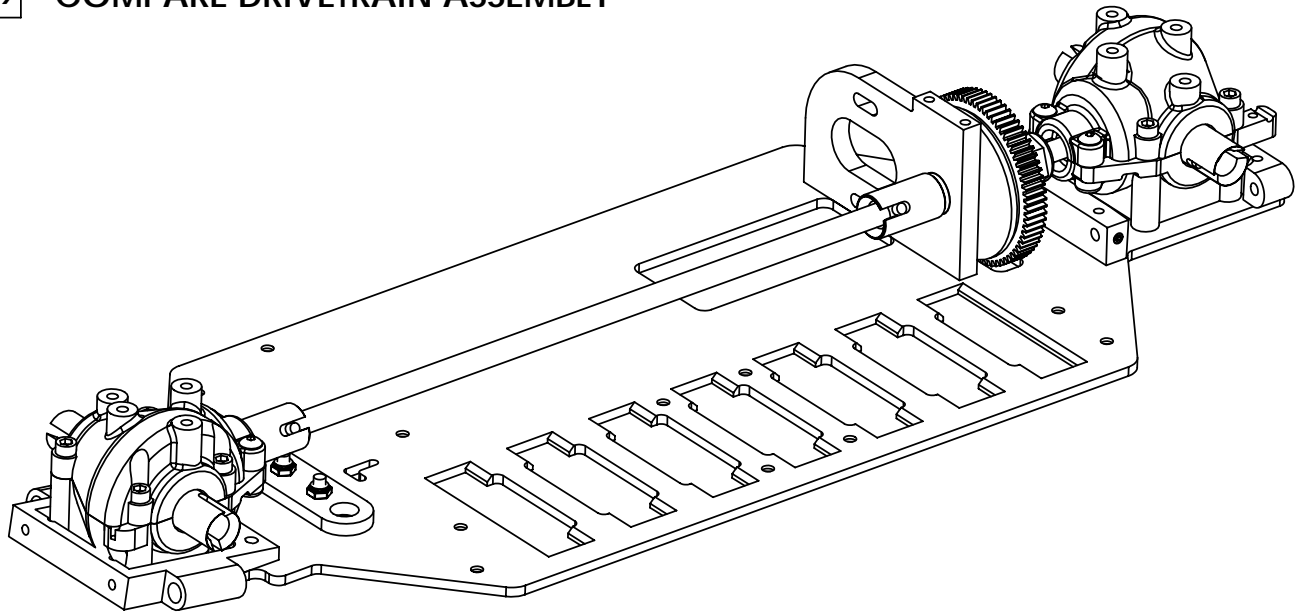
## STEP 17 COMPARE TRANSMISSION ASSEMBLY



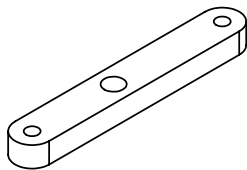
## STEP 18 REAR TRANSMISSION ASSEMBLY:

1. ATTACH THE UPPER TRANSMISSION CASE TO THE LOWER TRANSMISSION CASE WITH FOUR 4-40 x 3/8" SOCKET HEAD SCREWS AND TWO 4-40 x 3/8" BUTTON HEAD SCREWS.

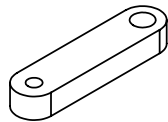


**STEP 19****COMPARE DRIVETRAIN ASSEMBLY****BAG D STEERING AND TOP DECK COMPONENTS****TOOLS USED**

1. 1/16" ALLEN WRENCH
2. NEEDLE NOSE PLIERS
3. 3/16" NUT DRIVER



LONG STEERING  
BELLCRANK  
x 1



SHORT STEERING  
BELLCRANK  
x 1



STEERING  
BUSHING  
x 2



.030 NYLON  
WASHER  
x 2



1/8 x 1/4  
BEARING  
x 4



STEERING POST  
x 2



LONG  
BALL END  
x 6



SHORT  
BALL END  
x 1



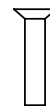
4-40 X 1/4"  
FLAT HEAD  
x 6



4-40 X 5/16"  
FLAT HEAD  
x 2



4-40 X 3/8"  
FLAT HEAD  
x 9



4-40 X 1/2"  
FLAT HEAD  
x 2



4-40 X 1/4"  
BUTTON HEAD  
x 4



4-40 X 3/8"  
BUTTON HEAD  
x 3



4-40 MINI  
LOCKNUT  
x 8



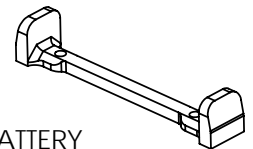
.030 ALUMINUM  
WASHER  
x 11



TRANSMISSION  
SPACER  
x 2



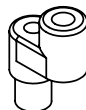
4-40 x 1/2" SOCKET  
HEAD WITH HOLE  
x 2



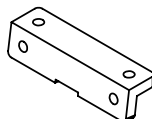
BATTERY  
RETAINER  
x 1



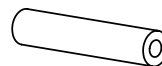
FRONT BODY  
MOUNT  
x 2



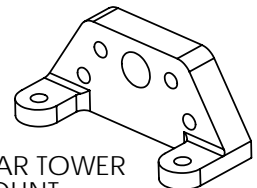
ANTENNA  
MOUNT  
x 1



FRONT TOWER  
MOUNT  
x 1



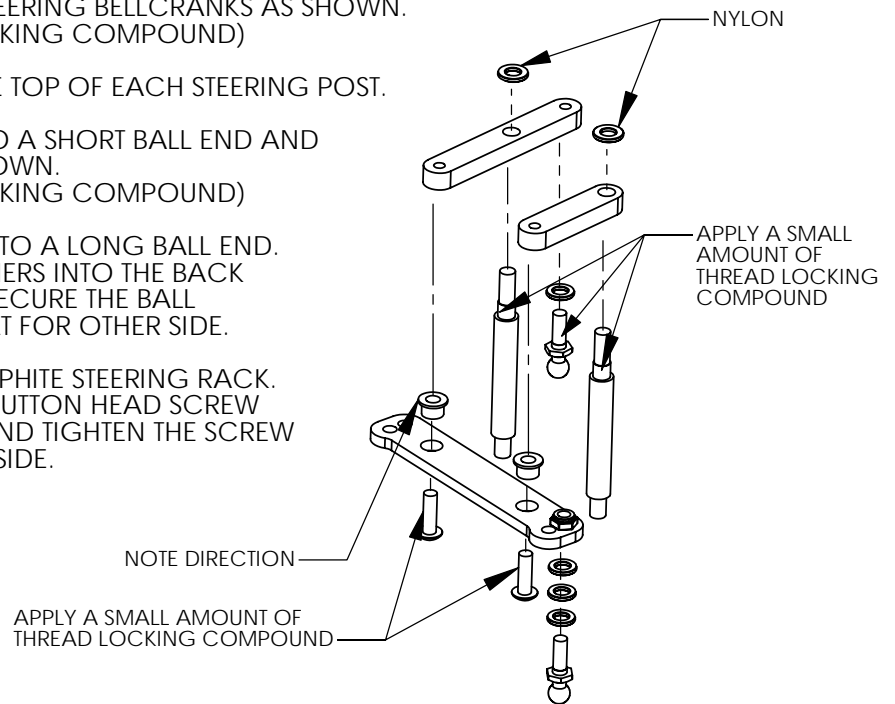
BATTERY POST  
x 2



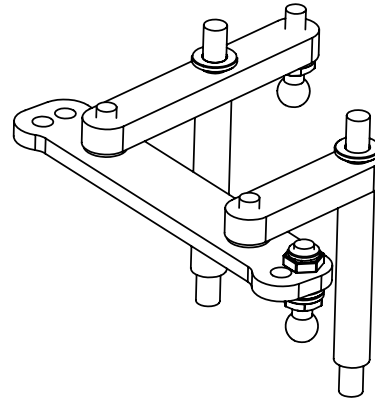
REAR TOWER  
MOUNT  
x 1

## STEP 1 STEERING ASSEMBLY:

1. THREAD BOTH STEERING POSTS INTO THE STEERING BELLCRANKS AS SHOWN.  
(APPLY A SMALL AMOUNT OF THREAD LOCKING COMPOUND)
2. SLIDE ONE .030" NYLON WASHER ONTO THE TOP OF EACH STEERING POST.
3. SLIDE ONE .030" ALUMINUM WASHER ON TO A SHORT BALL END AND FASTEN IT TO THE LONG BELLCRANK AS SHOWN.  
(APPLY A SMALL AMOUNT OF THREAD LOCKING COMPOUND)
4. SLIDE THREE .030" ALUMINUM WASHERS ONTO A LONG BALL END. INSERT THE BALL END WITH THE THREE WASHERS INTO THE BACK HOLE OF THE GRAPHITE STEERING RACK. SECURE THE BALL END WITH ONE 4-40 MINI LOCKNUT. REPEAT FOR OTHER SIDE.
5. INSERT A STEERING BUSHING INTO THE GRAPHITE STEERING RACK. (NOTE DIRECTION) SLIDE ONE 4-40 X 3/8" BUTTON HEAD SCREW UP THROUGH THE BOTTOM OF THE RACK AND TIGHTEN THE SCREW INTO THE BELLCRANK. REPEAT FOR OTHER SIDE.  
(APPLY A SMALL AMOUNT OF THREAD LOCKING COMPOUND)

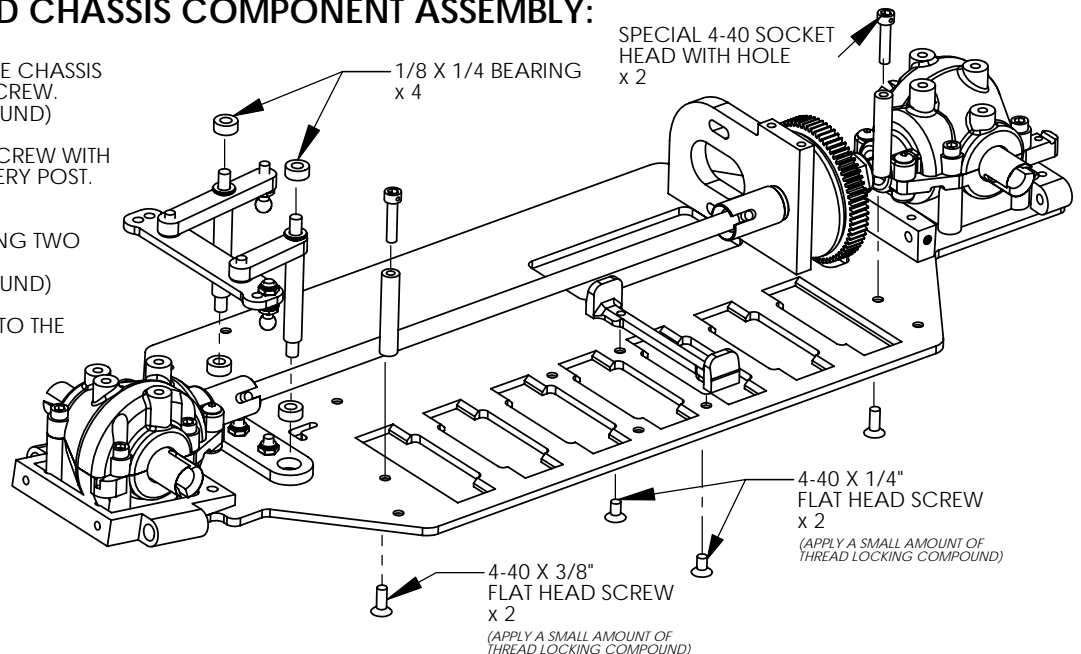


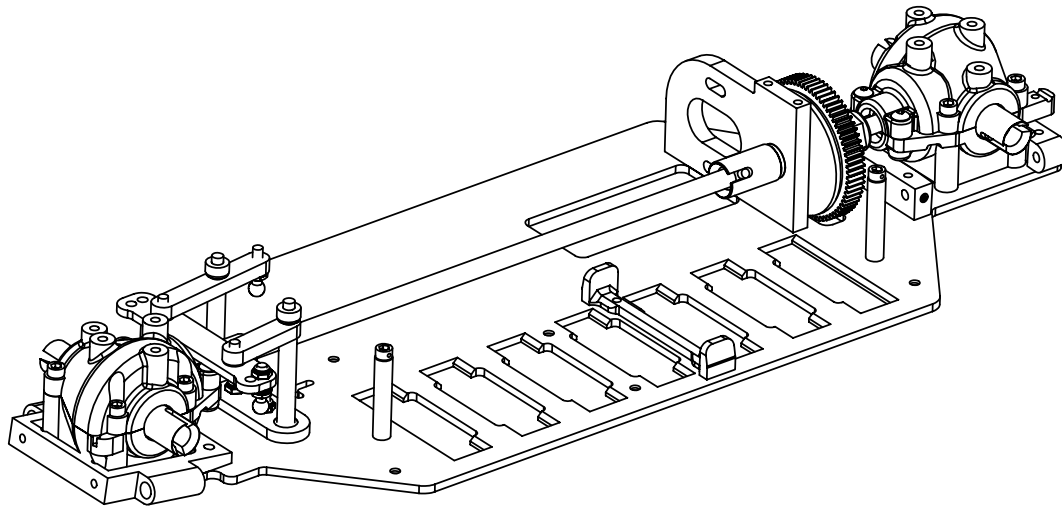
## STEP 2 COMPARE STEERING ASSEMBLY



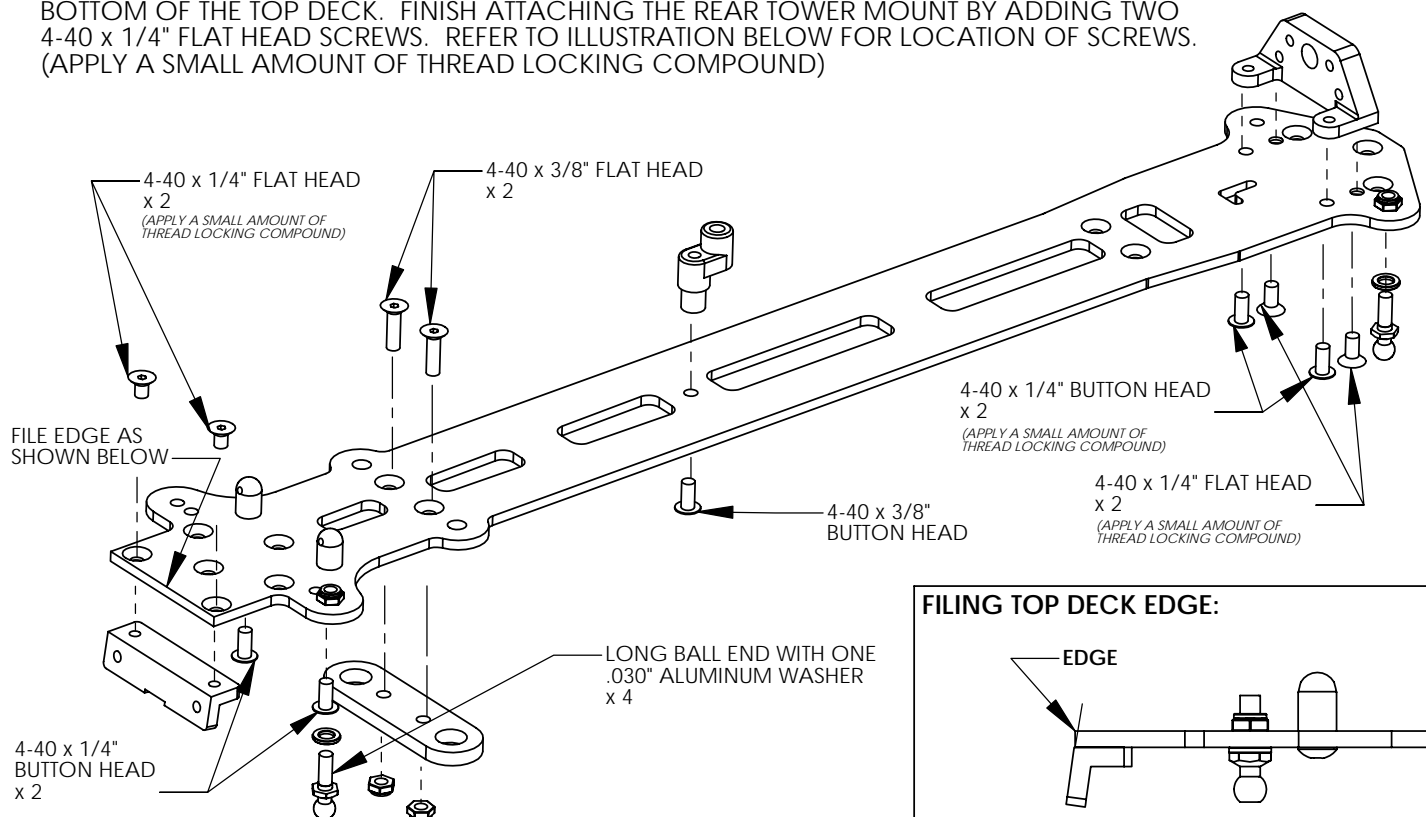
## STEP 3 STEERING AND CHASSIS COMPONENT ASSEMBLY:

1. ATTACH EACH BATTERY POST TO THE CHASSIS WITH ONE 4-40 X 3/8" FLAT HEAD SCREW.  
(APPLY THREAD LOCKING COMPOUND)
2. THREAD ONE SOCKET HEAD CAP SCREW WITH HOLE INTO THE TOP OF EACH BATTERY POST.  
(LENGTH WILL BE ADJUSTED LATER)
3. ATTACH THE BATTERY RETAINER USING TWO 4-40 X 1/4" FLAT HEAD SCREWS.  
(APPLY THREAD LOCKING COMPOUND)
4. INSERT TWO 1/8 X 1/4 BEARINGS INTO THE BEARING BLOCK ON THE CHASSIS.
5. SLIDE THE STEERING ASSEMBLY INTO THE BEARINGS.
6. SLIDE ONE 1/8 X 1/4 BEARING ONTO THE TOP OF EACH STEERING POST.



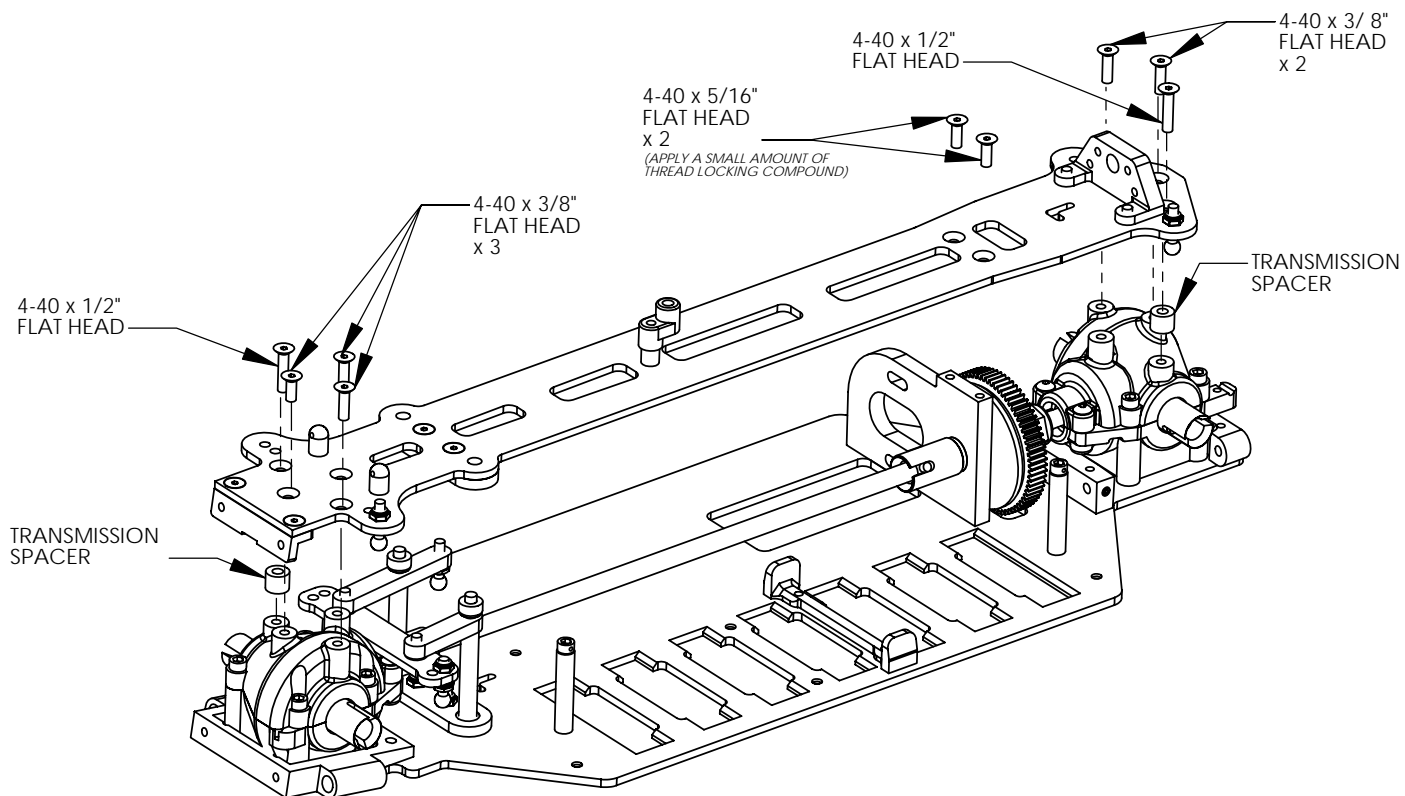
**STEP 4****COMPARE STEERING AND CHASSIS ASSEMBLY****STEP 5****TOP DECK ASSEMBLY:**

1. ATTACH THE FRONT TOWER MOUNT USING TWO 4-40 x 1/4" FLAT HEAD SCREWS. (APPLY A SMALL AMOUNT OF THREAD LOCKING COMPOUND)
2. CAREFULLY FILE THE LEADING EDGE OF THE TOP PLATE SO IT IS AT THE SAME ANGLE AS THE FRONT TOWER WHEN VIEWED FROM THE SIDE. (REFER TO ILLUSTRATION BELOW)
3. SLIDE ONE .030" WASHER ON EACH OF FOUR LONG BALL ENDS. INSERT THE BALL ENDS, WITH WASHERS, INTO THE HOLES SHOWN BELOW. SECURE THE BALL ENDS USING FOUR 4-40 MINI LOCKNUTS.
4. ATTACH THE FRONT BODY MOUNTS WITH TWO 4-40 x 1/4" BUTTON HEAD SCREWS.
5. ATTACH A BEARING BLOCK TO THE BOTTOM OF THE TOP DECK USING TWO 4-40 x 3/8" FLAT HEAD SCREWS. SECURE WITH TWO 4-40 MINI LOCKNUTS.
6. ATTACH THE ANTENNA MOUNT TO THE TOP DECK USING ONE 4-40 x 3/8" BUTTON HEAD SCREW.
7. ATTACH THE REAR TOWER MOUNT WITH TWO 4-40 x 1/4" BUTTON HEAD SCREWS FROM THE BOTTOM OF THE TOP DECK. FINISH ATTACHING THE REAR TOWER MOUNT BY ADDING TWO 4-40 x 1/4" FLAT HEAD SCREWS. REFER TO ILLUSTRATION BELOW FOR LOCATION OF SCREWS. (APPLY A SMALL AMOUNT OF THREAD LOCKING COMPOUND)

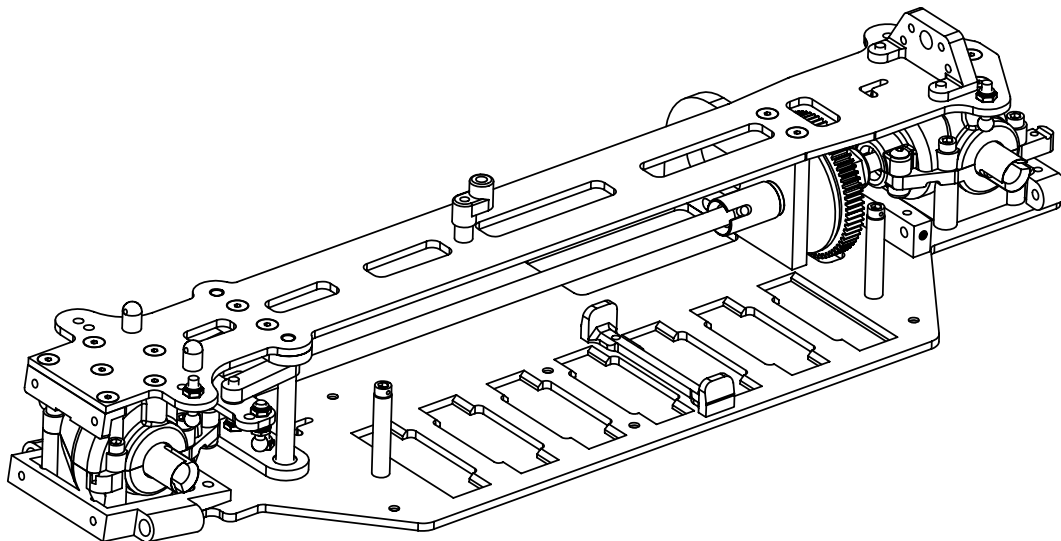


## STEP 6 TOP DECK ASSEMBLY:

1. ATTACH THE TOP DECK BY FIRST LINING UP THE BEARING BLOCK ON THE BOTTOM OF THE TOP DECK WITH THE TWO BEARINGS ON TOP OF THE STEERING POSTS. PRESS THE TOP DECK DOWN INTO PLACE.
2. SLIDE THE TWO ALUMINUM TRANSMISSION SPACERS BETWEEN THE TRANSMISSION CASES AND THE TOP DECK. INSERT TWO 4-40 x 1/2" FLAT HEAD SCREWS AND TIGHTEN. REFER TO ILLUSTRATION BELOW FOR LOCATION OF SCREWS.
3. SECURE THE TOP DECK IN FRONT WITH THREE 4-40 x 3/8" FLAT HEAD SCREWS. SECURE THE TOP DECK TO THE MOTOR MOUNT WITH USING TWO 4-40 x 5/16" FLAT HEAD SCREWS. (APPLY A SMALL AMOUNT OF THREAD LOCKING COMPOUND) FINISH WITH TWO 4-40 x 3/8" FLAT HEAD SCREWS IN THE REAR.



## STEP 7 COMPARE TOP DECK ASSEMBLY

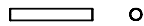
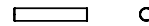
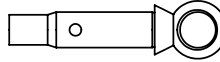
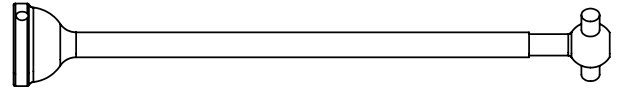


**CVD BAG****FRONT CVD COMPONENTS**

REMOVE THESE PARTS FOR THE FRONT CVD'S

**TOOLS USED**

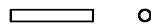
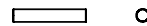
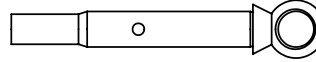
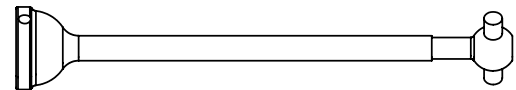
1. .050" ALLEN WRENCH

CVD COUPLING  
x 2CVD CROSS PIN  
x 2CVD SET SCREW  
x 2CVD ROLL PIN  
x 2BEARING SPACER  
x 2CVD FRONT HEX  
x 2CVD FRONT  
WHEEL NUT  
x 2CVD FRONT AXLE  
x 2CVD FRONT BONE  
x 2**CVD BAG****REAR CVD COMPONENTS**

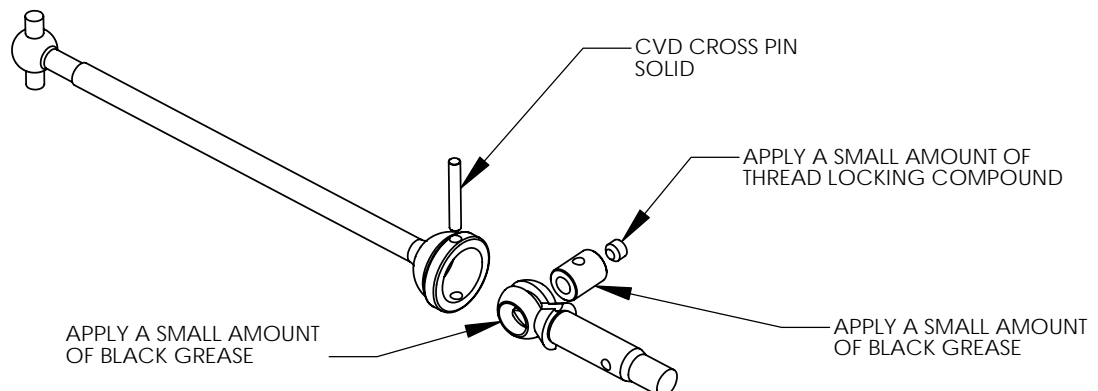
REMOVE THESE PARTS FOR THE REAR CVD'S

**TOOLS USED**

1. .050" ALLEN WRENCH

CVD COUPLING  
x 2CVD CROSS PIN  
x 2CVD SET SCREW  
x 2CVD ROLL PIN  
x 2CVD AXLE  
SHIM (THIN)  
x 6CVD AXLE  
SHIM (THICK)  
x 2CVD REAR  
WHEEL NUT  
x 2CVD REAR AXLE  
x 2CVD REAR BONE  
x 2**STEP 1****FRONT/REAR CVD ASSEMBLY:**

1. SPREAD A SMALL AMOUNT OF BLACK GREASE ON THE OUTSIDE OF THE CVD COUPLING AND INSERT THE COUPLING INTO THE AXLE AS SHOWN.
2. SPREAD A SMALL AMOUNT OF BLACK GREASE ON THE ROUND PORTION OF THE AXLE AND INSERT INTO THE CVD BONE, ALIGNING THE CROSS HOLES.
3. INSERT THE CROSS PIN, MAKING SURE IT IS EVENLY SPACED ON BOTH SIDES OF THE CVD BONE.
4. APPLY A SMALL AMOUNT OF MIP THREAD LOCKING COMPOUND TO THE SET SCREW. ANGLE AND TURN THE CVD SO THE SET SCREW CAN BE SCREWED IN WITH AN ALLEN WRENCH.
5. REPEAT THIS PROCEDURE FOR ALL OF THE CVD'S. SET THE COMPLETED CVD'S AND ADDITIONAL HARDWARE ASIDE FOR LATER ASSEMBLIES.





**BAG E FRONT END COMPONENTS****TOOLS USED**

1. .050" ALLEN WRENCH
2. 1/16" ALLEN WRENCH
3. 5/64" ALLEN WRENCH
4. NEEDLE NOSE PLIERS
5. 3/16" NUT DRIVER



SHORT  
BALL END  
x 4



KING PIN  
x 4



4-40 x 3/8"  
BUTTON HEAD  
x 2



4-40 x 1/4"  
BUTTON HEAD  
x 2



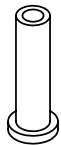
.030 ALUMINUM  
WASHER  
x 4



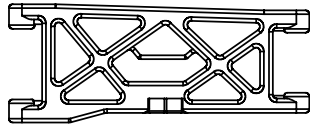
4-40 MINI  
LOCKNUT  
x 2



2-56 x 1/8"  
BUTTON HEAD  
x 4



PIVOT SLEEVE  
x 2



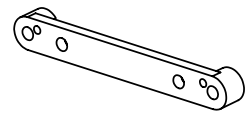
FRONT A-ARM  
x 2



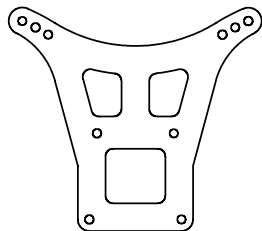
CASTOR BLOCK,  
LEFT & RIGHT  
x 1 EACH



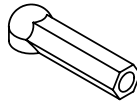
STEERING BLOCK,  
LEFT & RIGHT  
x 1 EACH



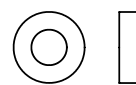
FRONT HINGE  
PIN BRACE  
x 1



FRONT SHOCK TOWER  
x 1



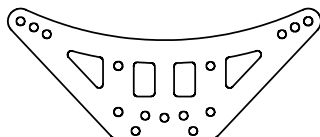
BALL CUP  
x 12



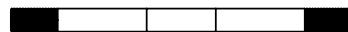
3/16 X 3/8 RUBBER  
SEALED BEARING  
x 4



BALL END DUST COVER  
x 14



REAR SHOCK TOWER  
x 1



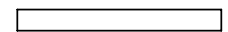
TITANIUM TURNBUCKLE  
1.775" (STEERING)  
x 2



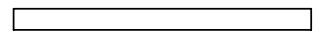
TITANIUM TURNBUCKLE  
2.00" (CAMBER)  
x 2



4-40 X 5/16"  
SOCKET HEAD  
x 4



HINGE PIN 1.00"  
(FRONT OUTER)  
x 2



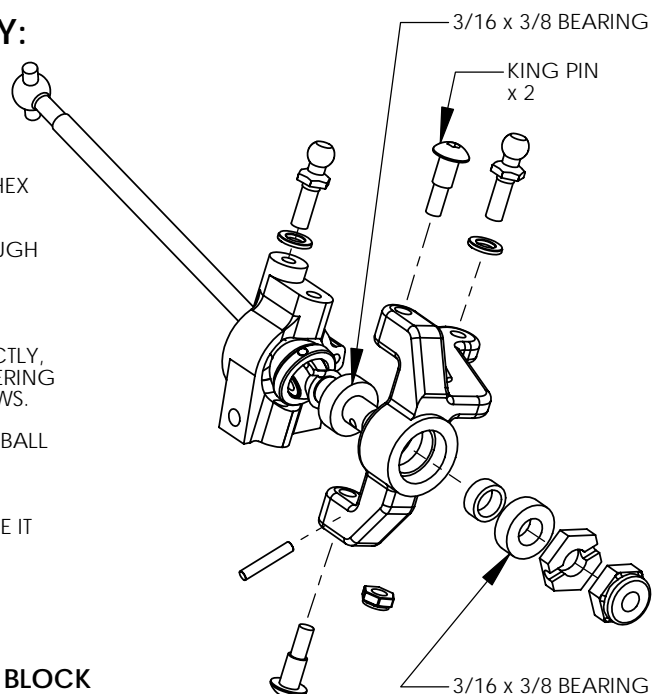
HINGE PIN 1.55"  
(FRONT INNER)  
x 2

**STEP 1 STEERING AND CASTER BLOCK ASSEMBLY:**

NOTE: USE COMPLETED FRONT CVD'S FOR THIS STEP

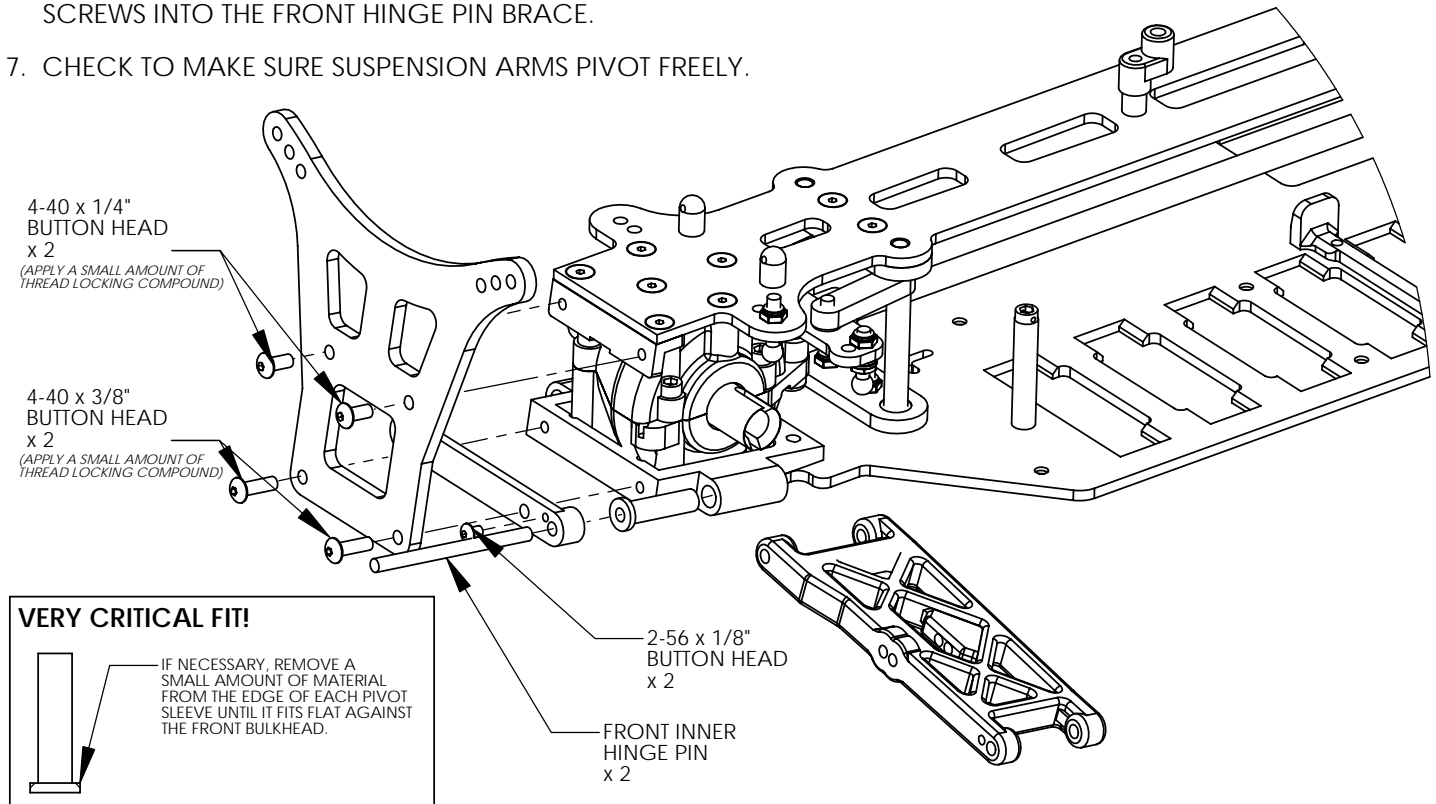
1. INSTALL ONE 3/16 X 3/8 BEARING ONTO THE CVD AXLE. SLIDE THE AXLE ASSEMBLY INTO THE BACK OF THE STEERING BLOCK.
2. IN ORDER, SLIDE A BEARING SPACER, 3/16 X 3/8 BEARING, AND CVD FRONT HEX ONTO THE CVD AXLE.
3. PRESS THE BEARING INTO THE STEERING BLOCK AND INSERT A ROLL PIN THROUGH THE GROOVE IN THE CVD HEX AND INTO THE AXLE.
5. PARTIALLY THREAD A FRONT WHEEL NUT ON THE AXLE.
6. SLIDE THE CVD BONE THROUGH THE CASTER BLOCK. WHEN ANGLED CORRECTLY, THE CVD BONE WILL DROP THROUGH THE CASTER BLOCK FREELY. FIT THE STEERING BLOCK OVER THE CASTOR BLOCK AND FASTEN IT USING TWO KING PIN SCREWS.
7. SLIDE ONE .030" WASHER ON EACH OF TWO SHORT BALL ENDS. THREAD ONE BALL END WITH WASHER INTO THE CASTOR BLOCK. (APPLY A SMALL AMOUNT OF THREAD LOCKING COMPOUND)
8. SLIDE ONE SHORT BALL END WITH WASHER INTO THE STEERING BLOCK. SECURE IT WITH ONE 4-40 MINI LOCKNUT.
9. CHECK TO MAKE SURE STEERING BLOCK PIVOTS FREELY.
10. REPEAT FOR THE OPPOSITE SIDE ASSEMBLY.

**ATTENTION! NOTE DIRECTION OF STEERING BLOCK AND CASTOR BLOCK**

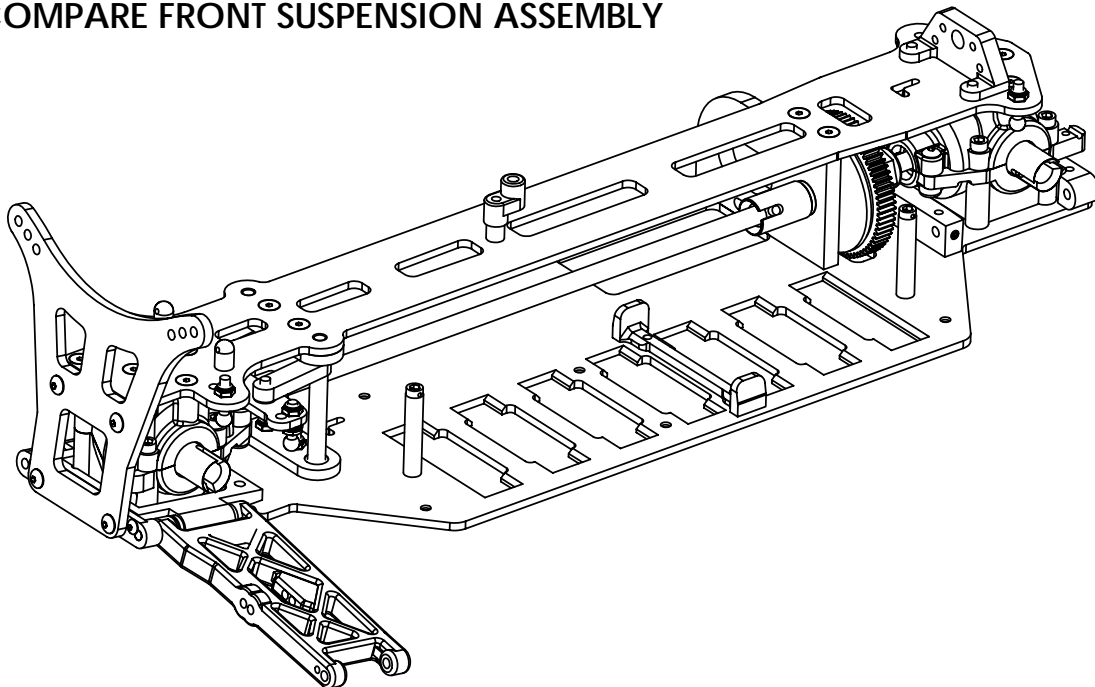


## STEP 2 FRONT SUSPENSION ASSEMBLY:

1. USE REFERENCE ILLUSTRATION BELOW TO PREPARE THE TWO PIVOT SLEEVES.
2. INSERT BOTH PIVOT SLEEVES INTO THE FRONT BULKHEAD.
3. ALIGN THE FRONT A-ARMS WITH THE PIVOT SLEEVES AND PRESS THE FRONT INNER HINGE PINS INTO PLACE.
4. SLIDE THE FRONT HINGE PIN BRACE OVER THE FRONT INNER HINGE PINS UNTIL IT PASSES AGAINST THE FRONT BULKHEAD. NOTE THE DIRECTION AND LOCATION OF THE 2-56 HOLES IN THE ILLUSTRATION BELOW.
5. ATTACH THE FRONT SHOCK TOWER USING TWO 4-40 x 3/8" BUTTON HEAD SCREWS AT THE BOTTOM AND TWO 4-40 x 1/4" BUTTON HEAD SCREWS AT THE TOP. (APPLY A SMALL AMOUNT OF THREAD LOCKING COMPOUND)
6. CAPTURE THE FRONT INNER HINGE PINS BY INSERTING TWO 2-56 x 1/8" BUTTON HEAD SCREWS INTO THE FRONT HINGE PIN BRACE.
7. CHECK TO MAKE SURE SUSPENSION ARMS PIVOT FREELY.

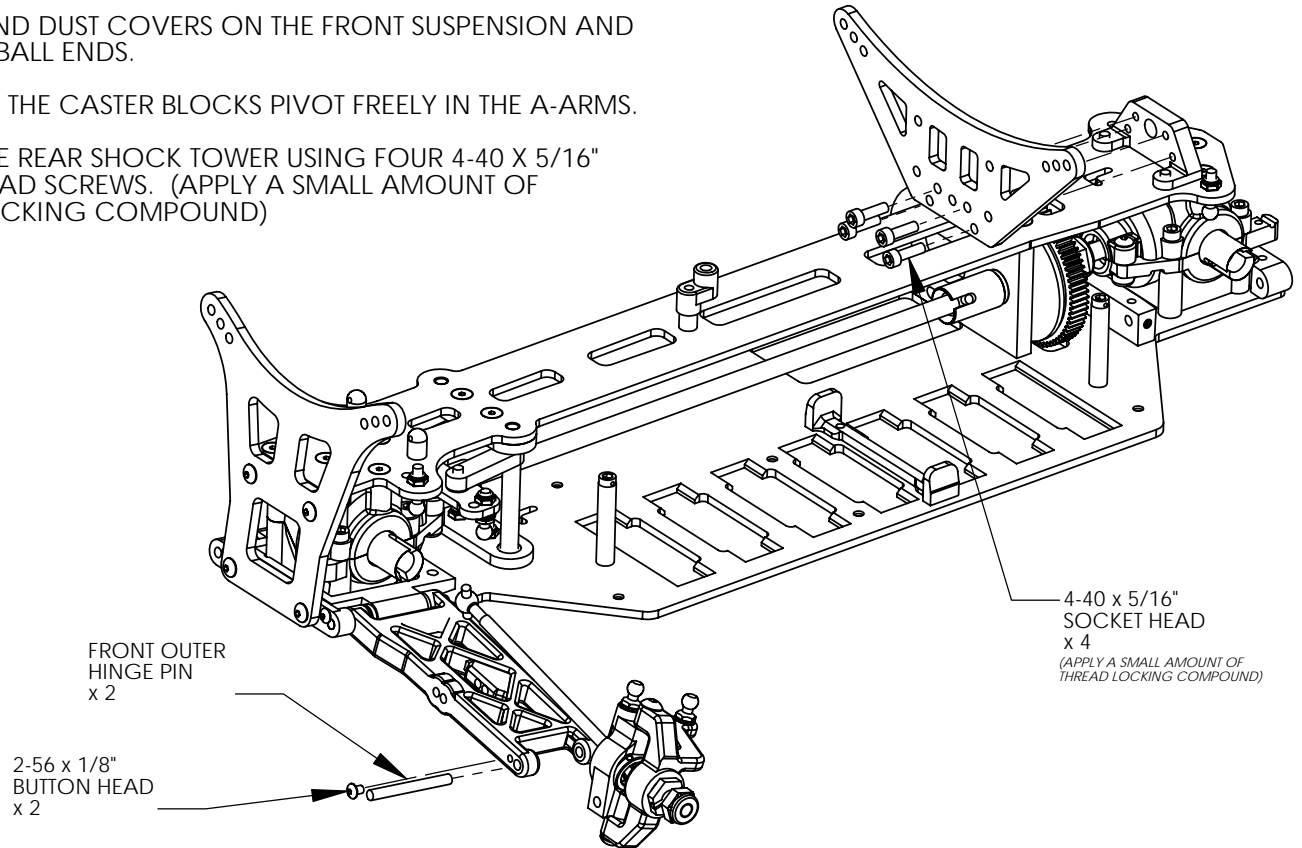


## STEP 3 COMPARE FRONT SUSPENSION ASSEMBLY



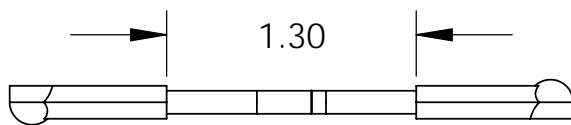
## STEP 4 FRONT SUSPENSION AND REAR TOWER ASSEMBLY:

1. POSITION THE STEERING AND CASTER BLOCK ASSEMBLIES AS SHOWN AND SLIDE THE FRONT OUTER HINGE PINS INTO PLACE.
2. CAPTURE THE FRONT OUTER HINGES BY INSERTING A 2-56 x 1/8" BUTTON HEAD SCREWS INTO EACH A-ARM.
3. PUT BALL END DUST COVERS ON THE FRONT SUSPENSION AND TOP DECK BALL ENDS.
4. MAKE SURE THE CASTER BLOCKS PIVOT FREELY IN THE A-ARMS.
6. ATTACH THE REAR SHOCK TOWER USING FOUR 4-40 X 5/16" SOCKET HEAD SCREWS. (APPLY A SMALL AMOUNT OF THREAD LOCKING COMPOUND)

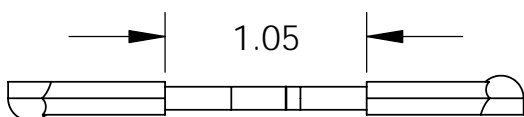


## STEP 5 FRONT TURNBUCKLE ASSEMBLY:

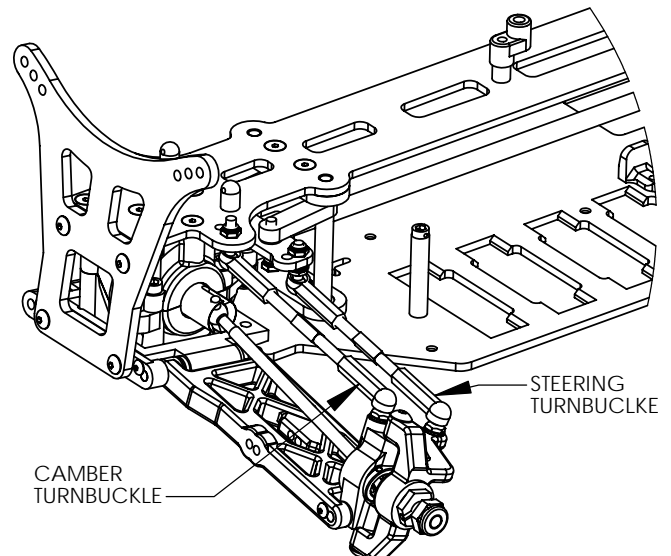
1. TWIST THE BALL CUPS ON TO EACH BLUE TITANIUM TURNBUCKLE UNTIL YOU GET THE DIMENSION SHOWN FOR EACH PART.
2. LOCATE THE NOTCH ON EACH TURNBUCKLE AND ROTATE THEM SO THAT IT IS LOCATED ON THE OUTSIDE OF THE CAR ON THE LEFT AND THE INSIDE ON THE RIGHT. SNAP ALL OF THE FRONT TURNBUCKLES INTO PLACE WHERE SHOWN. MAKE SURE THAT ALL OF THE CVD BONES ARE IN THE SLOTS OF THE OUTDRIVE HUBS.



FRONT CAMBER TURNBUCKLE 2.00": x 2  
SCALE 1:1



FRONT STEERING TURNBUCKLE 1.775": x 2  
SCALE 1:1



## BAG F REAR END COMPONENTS

## TOOLS USED

1. .050" ALLEN WRENCH
2. 1/16" ALLEN WRENCH
3. 5/64" ALLEN WRENCH
4. NEEDLE NOSE PLIERS
5. 3/16" NUT DRIVER



LONG BLACK  
BALL END  
x 2



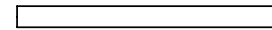
2-56 x 1/8"  
BUTTON HEAD  
x 2



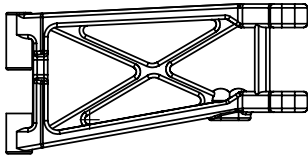
4-40 MINI  
LOCKNUT  
x 2



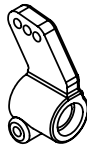
.030 NYLON  
WASHER  
x 4



HINGE PIN 1.06"  
(REAR OUTER) x 2



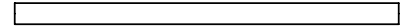
REAR A-ARM  
LEFT & RIGHT  
x 1 EACH



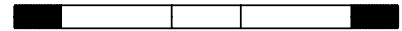
HUB CARRIER  
LEFT & RIGHT  
x 1 EACH



BEARING SPACER  
x 2



HINGE PIN 2.00"  
(REAR INNER) x 2

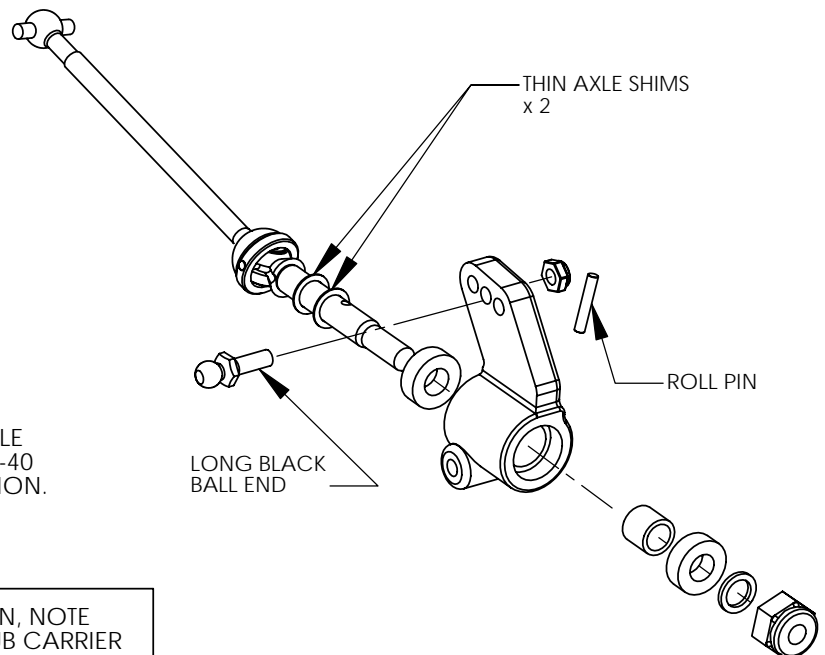


TITANIUM TURNBUCKLE  
2.00" (CAMBER) x 2

## STEP 1 HUB CARRIER ASSEMBLY:

NOTE: USE COMPLETED REAR CVD'S FOR THIS STEP

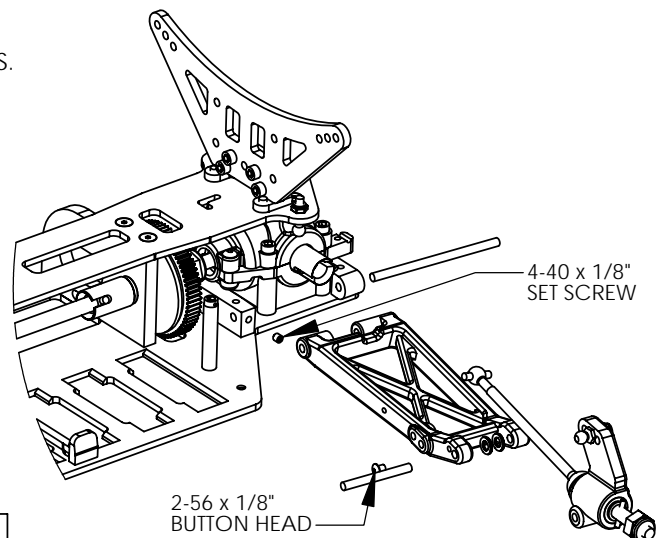
1. SLIDE TWO SMALL AXLE SHIMS AND ONE 3/16 x 3/8 BEARING ON TO THE CVD AXLE. SLIDE THE AXLE ASSEMBLY INTO THE BACK OF THE HUB CARRIER.
2. IN ORDER, SLIDE A BEARING SPACER, 3/16 x 3/8 BEARING, AND ONE THICK AXLE SHIM ONTO THE CVD AXLE.
3. PRESS THE BEARING INTO THE HUB CARRIER AND INSERT A ROLL PIN INTO THE AXLE.
4. PARTIALLY THREAD A REAR WHEEL NUT ON THE AXLE.
5. THREAD ONE LONG BLACK BALL END INTO THE MIDDLE HOLE ON THE HUB CARRIER. SECURE IT USING ONE 4-40 MINI LOCK NUT. REFER TO ILLUSTRATION FOR LOCATION.
6. REPEAT FOR THE OPPOSITE ASSEMBLY.



**ATTENTION!** THIS IS A LEFT SIDE ASSEMBLY ILLUSTRATION, NOTE DIRECTION AND CONFIGURATION OF HUB CARRIER

## STEP 2 REAR SUSPENSION ASSEMBLY:

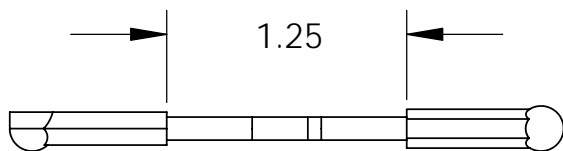
1. ALIGN THE REAR A-ARMS BETWEEN THE REAR SUSPENSION MOUNTS. SLIDE THE REAR INNER HINGE PINS INTO PLACE AND SECURE THEM WITH THE 4-40 SET SCREWS. (APPLY A SMALL AMOUNT OF THREAD LOCKING COMPOUND)
2. POSITION THE HUB CARRIER ASSEMBLY AS SHOWN AND SLIDE THE REAR OUTER HINGE PINS PARTIALLY THROUGH THE HUB CARRIERS. POSITION TWO .030" NYLON WASHERS BEHIND EACH HUB CARRIER AND CONTINUE TO PUSH THE HINGE PIN THROUGH THE WASHERS INTO THE A-ARM.
3. CAPTURE THE OUTER HINGE PINS BY INSERTING A 2-56 x 1/8" BUTTON HEAD SCREW INTO EACH A-ARM.
4. PUT BALL END DUST COVERS ON ALL OF THE REAR SUSPENSION BALL ENDS.
5. MAKE SURE THE A-ARMS AND HUB CARRIERS PIVOT FREELY.



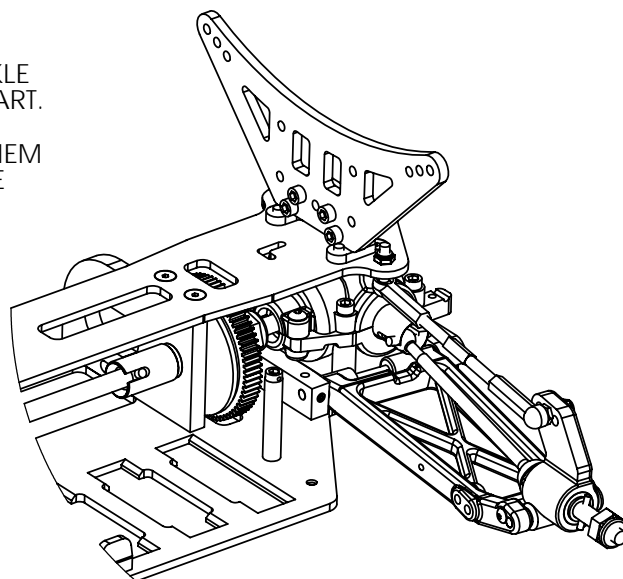
**ATTENTION!** THIS IS A LEFT SIDE ASSEMBLY ILLUSTRATION, NOTE DIRECTION OF HUB CARRIER AND SUSPENSION ARM

### STEP 3 REAR TURNBUCKLE ASSEMBLY:

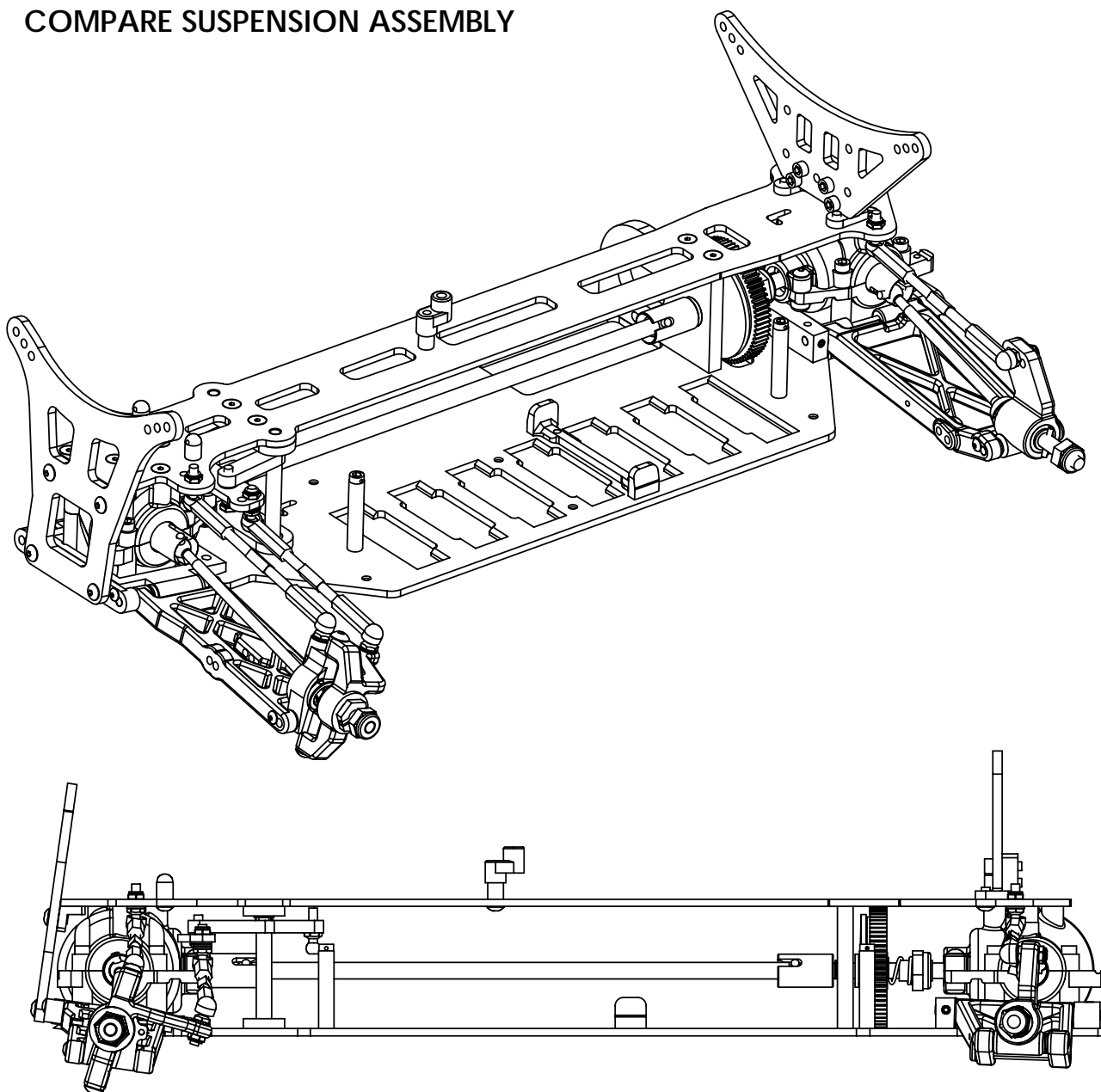
1. TWIST THE BALL CUPS ONTO EACH BLUE TITANIUM TURNBUCKLE UNTIL YOU GET THE DIMENSION SHOWN FOR EACH EACH PART.
2. LOCATE THE NOTCH ON EACH TURNBUCKLE AND ROTATE THEM SO THAT IT IS LOCATED ON THE OUTSIDE OF THE CAR ON THE LEFT AND THE INSIDE ON THE RIGHT. SNAP ALL THE REAR TURNBUCKLES INTO PLACE WHERE SHOWN. MAKE SURE THAT ALL THE CVD BONES ARE IN THE SLOTS OF THE OUTDRIVE HUBS.



REAR CAMBER TURNBUCKLE 2.00": x 2  
SCALE 1:1



### STEP 4 COMPARE SUSPENSION ASSEMBLY

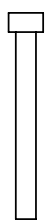


# SHOCK BAG

# SHOCK COMPONENTS

# TOOLS USED

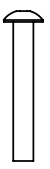
1. 1/16" ALLEN WRENCH
2. 3/32" ALLEN WRENCH
3. MOLDED WRENCH SET
4. HOBBY KNIFE
5. SHOCK TOOL



4-40 x 1"  
SOCKET HEAD  
x 2



4-40 x 1/2"  
SOCKET HEAD  
x 2



4-40 X 3/4"  
BUTTON HEAD  
x 4



4-40 PLAIN  
NUT  
x 4



GOLD  
WASHER  
x 4



SHOCK  
BUSHING  
x 4



SHOCK PIVOT  
BUSHING  
x 4



SHOCK  
NUT  
x 4



E-CLIP ROLL  
x 1



SHOCK PISTON  
#1, #2, #3 (TREE)  
x 1



SMALL SHOCK  
SPACER (TREE)  
x 8



.030" WASHER  
TRAVEL LIMITER  
x 6



THREADED SHOCK  
COLLAR  
x 4



SHOCK COLLAR  
O-RING  
x 4



SHOCK O-RING  
x 8



SHOCK SNAP  
RETAINER (TREE)  
x 4



LARGE SHOCK  
SPACER (TREE)  
x 4



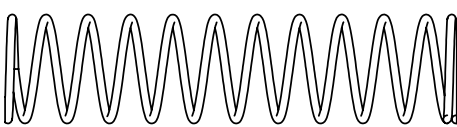
SPRING RETAINER  
x 4



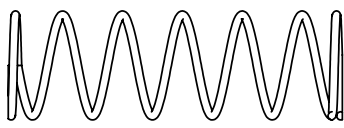
SHOCK EYELET  
x 4



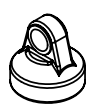
SPRING CUP  
x 4



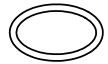
REAR SPRING  
BLACK  
x 2



FRONT SPRING  
SILVER  
x 2



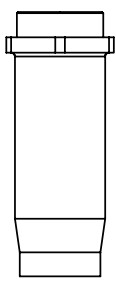
SHOCK CAP  
x 4



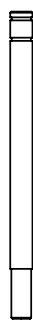
SHOCK CAP  
O-RING  
x 4



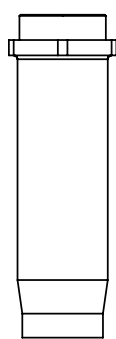
A-ARM  
SPACER  
x 2



FRONT SHOCK  
BODY (.89")  
x 2



FRONT SHOCK  
SHAFT (.89")  
x 2



REAR SHOCK  
BODY (1.18")  
x 2



REAR SHOCK  
SHAFT (1.02")  
x 2

## STEP 1

## SHOCK ASSEMBLY: BUILD ALL FOUR SHOCKS USING THIS METHOD

**ATTENTION: BUILDING THE SHOCKS IS ONE OF THE MOST IMPORTANT PARTS OF THE KIT ASSEMBLY. PLEASE READ THROUGH EVERYTHING FIRST BEFORE BEGINNING.**

1. BEGIN THE SHOCK ASSEMBLY BY FIRST TRIMMING EACH PART OFF THE SHOCK PARTS TREE. CAREFULLY TRIM EACH PART FROM THE PARTS TREE SO NO PART OF THE TWO MOLDING RUNNERS REMAIN. IT IS SAFER TO REMOVE A TINY AMOUNT OF THE PART THAN TO RISK THE CHANCE OF A BURR REMAINING. SHORT BLADE SCISSORS OR A HOBBY KNIFE WILL WORK FINE. RUN YOUR FINGER OVER THE EDGES TO FEEL FOR BURRS YOU CANNOT SEE. REMOVE THE ONES YOU FIND. BURRS CAN KEEP THE PARTS FROM SNAPPING IN CORRECTLY, AND CAN CAUSE THE SHOCK TO LEAK OR THE SHAFT TO JAM.

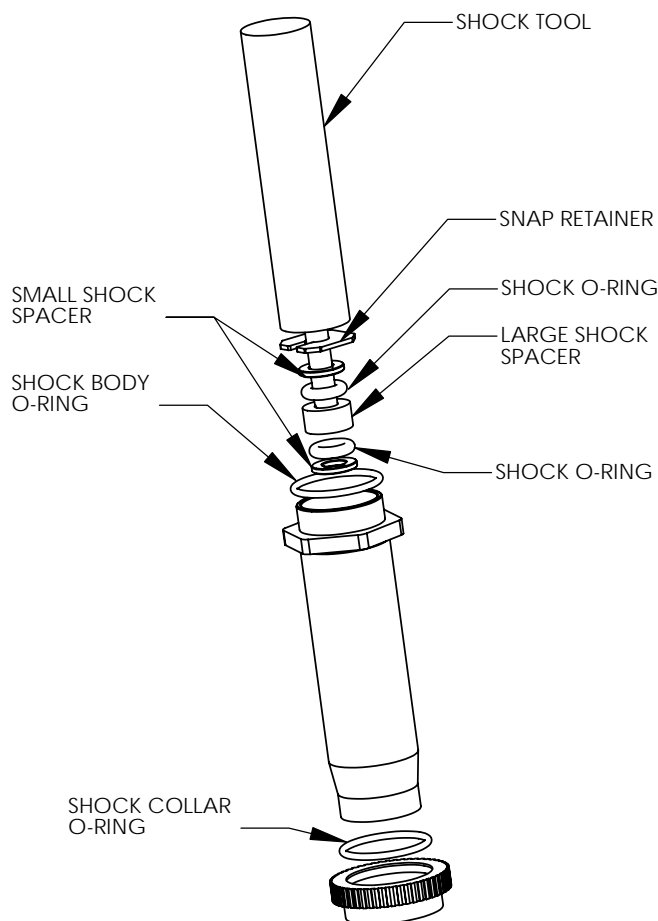
2. LOAD THE SHOCK TOOL WITH THE PARTS JUST TRIMMED OFF THE SHOCK PARTS TREE.

LOAD THE SHOCK TOOL IN THIS ORDER:

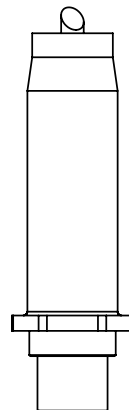
- A. SHOCK SNAP RETAINER
- B. SMALL SHOCK SPACER .030"
- C. SHOCK O-RING
- D. LARGE SHOCK SPACER
- E. SHOCK O-RING
- F. SMALL SHOCK SPACER .030"

(USE REFERENCE ILLUSTRATION FIGURE A BELOW.)

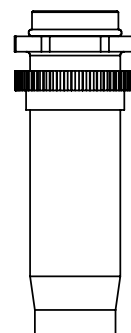
- 3. ADD 3-4 DROPS OF THE INCLUDED SHOCK OIL TO THE SHOCK SEAL PARTS WHILE IT IS ON THE SHOCK TOOL.
- 4. INSERT THE TOOL TIP INTO THE SHOCK BODY ALL THE WAY. PUSH EASILY UNTIL THE PARTS SNAP INTO PLACE.
- 5. CHECK THE TOOL HEIGHT IN FIGURE B AND COMPARE IT TO YOUR ASSEMBLY. IF YOUR SHOCKS DO NOT SNAP TOGETHER EASILY, CHECK THE PARTS FOR BURRS AGAIN.
- 6. ADD 1-2 DROPS OF OIL TO THE THREADS ON THE TOP OF THE SHOCK BODY. SLIDE ON THE SHOCK BODY O-RING. (USE THE BLACK O-RINGS INCLUDED WITH ALL INNER SHOCK PARTS)
- 7. INSERT THE SHOCK COLLAR O-RING INTO THE THREADED SHOCK COLLAR. THREAD ON THE SHOCK COLLAR ALL THE WAY UP THE SHOCK BODY. (USE THE BLACK O-RINGS PACKAGED WITH THE SHOCK COLLARS.)
- 8. COMPARE YOUR ASSEMBLY TO FIGURE C.



**SHOCK ASSEMBLY  
FIGURE A**



**SHOCK ASSEMBLY  
FIGURE B**



**SHOCK ASSEMBLY  
FIGURE C**

## STEP 2

## SHOCK ASSEMBLY: BUILD ALL FOUR SHOCKS USING THIS METHOD

**ATTENTION: BUILDING THE SHOCKS IS ONE OF THE MOST IMPORTANT PARTS OF THE KIT ASSEMBLY. PLEASE READ THROUGH EVERYTHING FIRST BEFORE BEGINNING.**

1. INSTALL AN E-CLIP ON BOTH SIDES OF THE SHOCK PISTON.  
#3 PISTONS FOR FRONT SHOCKS.  
NO LIMITERS  
#1 PISTONS FOR REAR SHOCKS.  
THREE .030" LIMITERS
2. THREAD ON THE SHOCK EYELET AND SNAP THE PIVOT BALL INTO THE EYELET.
3. FILL THE SHOCK HALF WAY WITH SHOCK OIL AND MOVE THE SHOCK SHAFT UP AND DOWN A FEW TIMES. MAKING SURE TO PUSH THE PISTON PAST HALF WAY A FEW TIMES. AS IN FIGURE D.
4. FIGURE D IS SHOWING THE SHOCK SHAFT AT IT'S HALF WAY POINT.

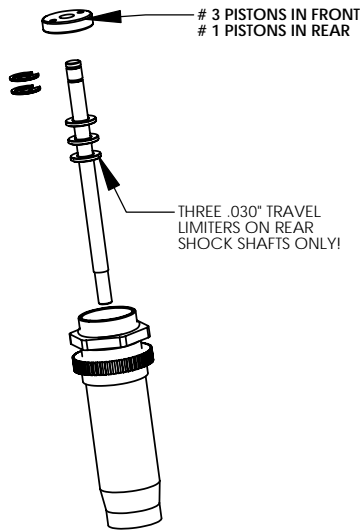


FIGURE A

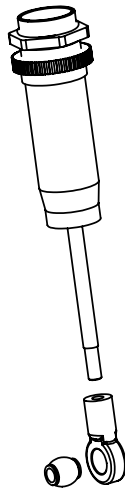


FIGURE B

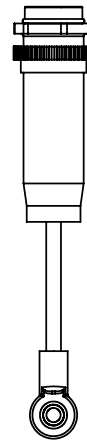


FIGURE C

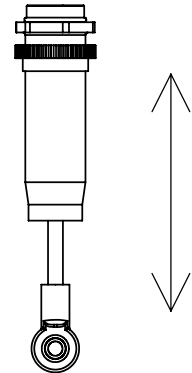


FIGURE D

5. NOW FILL THE SHOCK BODY TO THE TOP OF THE THREADS WITH THE SHOCK OIL.
6. THREAD ON THE SHOCK CAP ALL THE WAY AND THEN LOOSEN IT A FEW TURNS. AS SHOWN IN FIGURE G.
7. NOW PUSH THE SHOCK SHAFT UP UNTIL IT PUSHES OUT EXTRA SHOCK OIL IN THE BODY. TIGHTEN THE CAP. NOW WHEN YOU PUSH IN THE SHOCK IT SHOULD ONLY REBOUND ABOUT .25". REPEAT THE BLEEDING PROCESS UNTIL .25" REBOUND IS ACHIEVED.
8. SLIDE ON THE SHOCK SPRING THEN SLIDE ON SPRING RETAINER. SLIDE ON THE SPRING CUP AND PUSH DOWN ON TO THE SHOCK EYELET.
9. THREAD THE SHOCK COLLAR DOWN UNTIL IT TOUCHES THE SPRING. SET THE RIDE HEIGHT ONCE THE ELECTRICAL IS MOUNTED IN THE CAR.

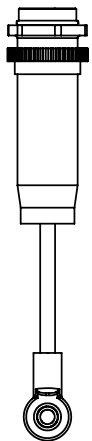


FIGURE E

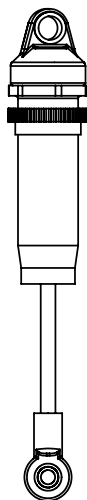


FIGURE F

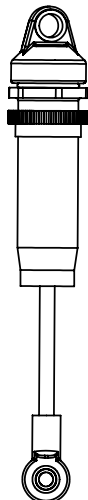


FIGURE G

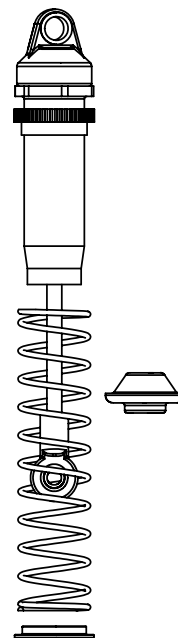


FIGURE H

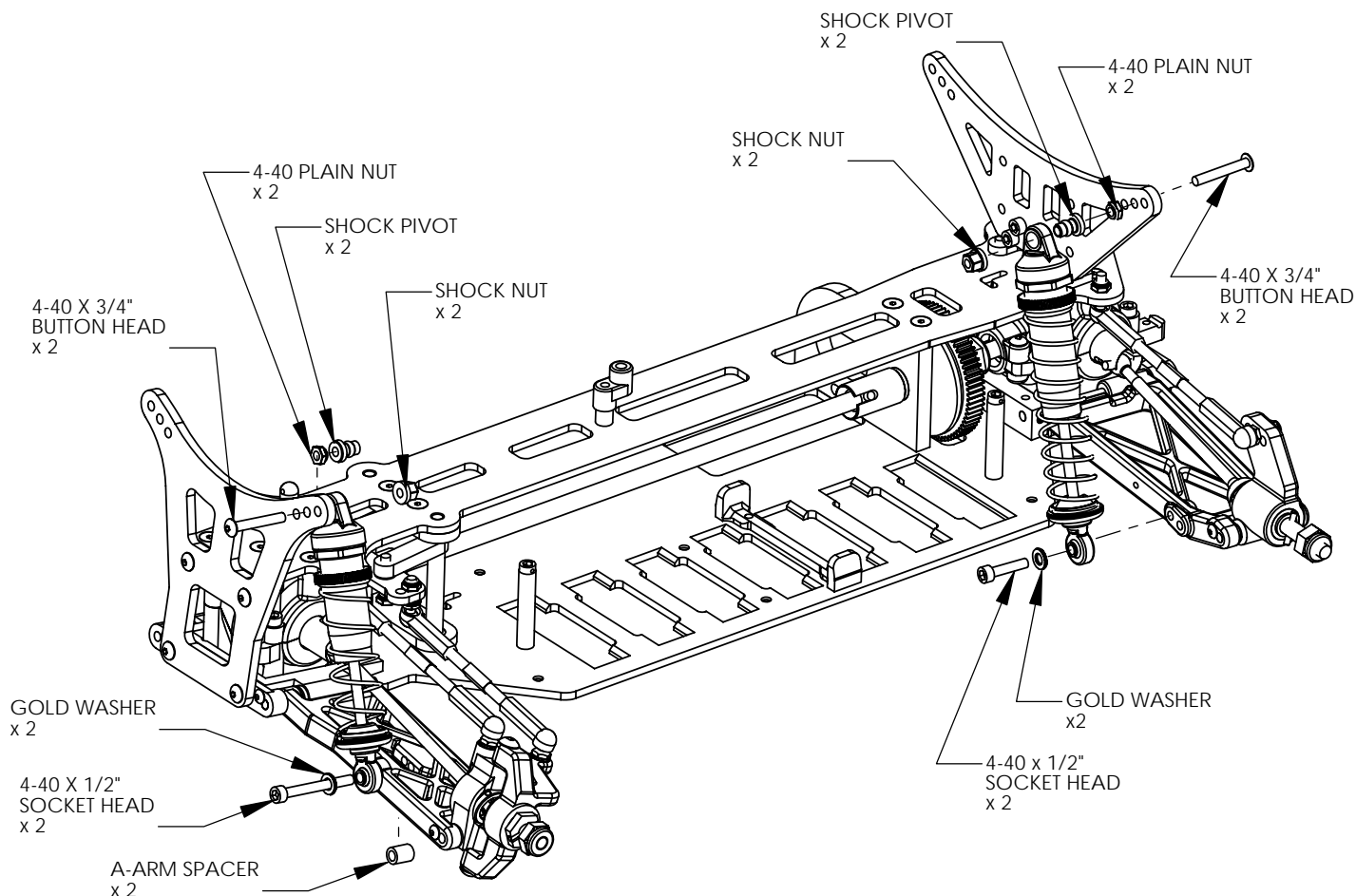


FIGURE I

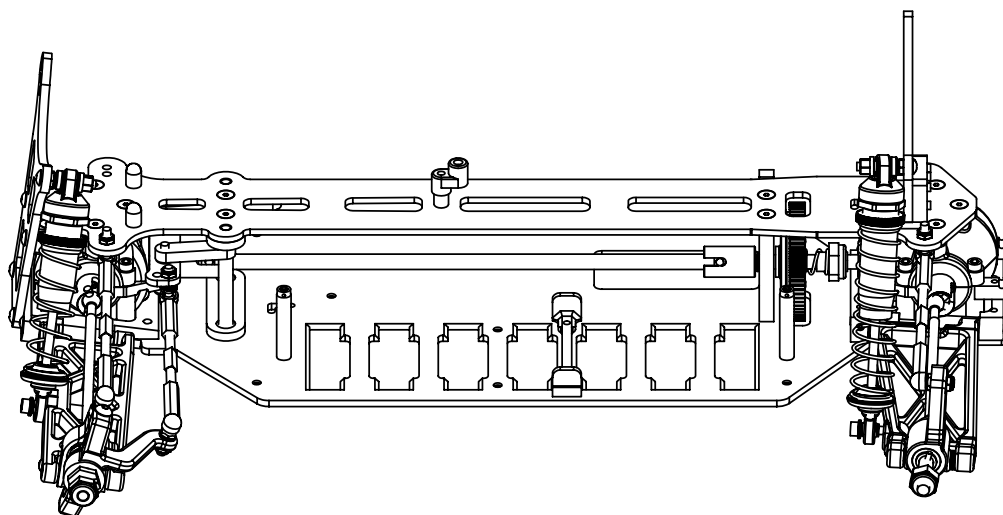


### STEP 3 SHOCK MOUNTING:

1. MOUNT THE BOTTOM OF THE FRONT SHOCKS TO THE OUTSIDE HOLES ON THE FRONT A-ARMS USING THE 4-40 X 1" SOCKET HEAD SCREWS, WITH A GOLD WASHER ON EACH. MAKE SURE THE A-ARM SPACER IS IN POSITION ON THE A-ARM. THE SCREW WILL SHOULD PASS THROUGH THE SPACER.
2. MOUNT THE BOTTOM OF THE REAR SHOCKS TO THE INSIDE HOLES ON THE REAR A-ARMS USING THE 4-40 X 1/2" SOCKET HEAD SCREWS, WITH A GOLD WASHER ON EACH.
3. SLIDE THE 4-40 X 3/4" BUTTON HEAD SCREWS THROUGH THE MIDDLE HOLES ON THE FRONT AND REAR SHOCK TOWERS. SECURE THE SCREWS WITH THE 4-40 PLAIN NUTS. SLIDE THE SHOCK PIVOTS AND TOP OF EACH SHOCK ONTO THE SCREWS. SECURE THE SHOCKS WITH THE PLASTIC SHOCK NUTS. DO NOT OVER TIGHTEN. ALLOW THE SHOCKS TO PIVOT.



### STEP 4 COMPLETED SUSPENSION ASSEMBLY



## BAG G MISCELLANEOUS COMPONENTS



SHORT  
BALL END  
x 1



4-40 x 3/8"  
SOCKET HEAD  
x 1



3mm x 10mm  
SOCKET HEAD  
x 2



4-40 x 3/8"  
BUTTON HEAD  
x 8



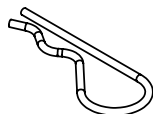
4-40 x 3/8"  
SOCKET HEAD  
x 2



4-40 x 1/4"  
FLAT HEAD  
x 2



GOLD WASHER  
x 6



AE BODY CLIP  
x 2  
LOSI BODY CLIP  
x 5



SHORT  
BALL CUP  
x 2



TITANIUM  
TURNBUCKLE  
(STEERING)  
x 1



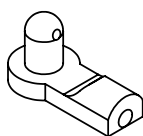
SERVO MOUNTS  
(PARTS TREE)  
x 2



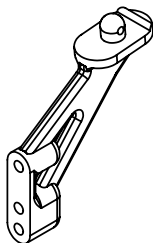
SERVO MOUNT  
SPACERS  
(PARTS TREE)  
THICK x 2  
THIN x 2



SERVO HORNS  
AIRTRONICS  
FUTABA  
HI-TEC  
JR  
x 1 EA



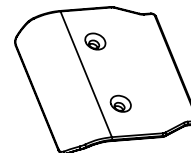
REAR BODY  
MOUNT  
x 1



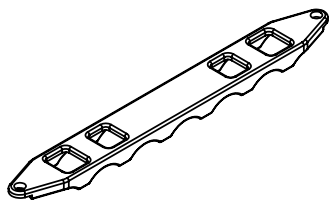
WING MOUNTS  
x 2



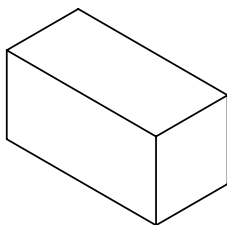
WING MOUNT  
SPACER  
x 2



FRONT BUMPER  
x 1



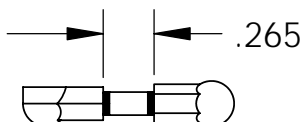
BATTERY  
HOLD DOWN  
x 1



FOAM BLOCK  
x 1

### STEP 1 STEERING TURNBUCKLE ASSEMBLY:

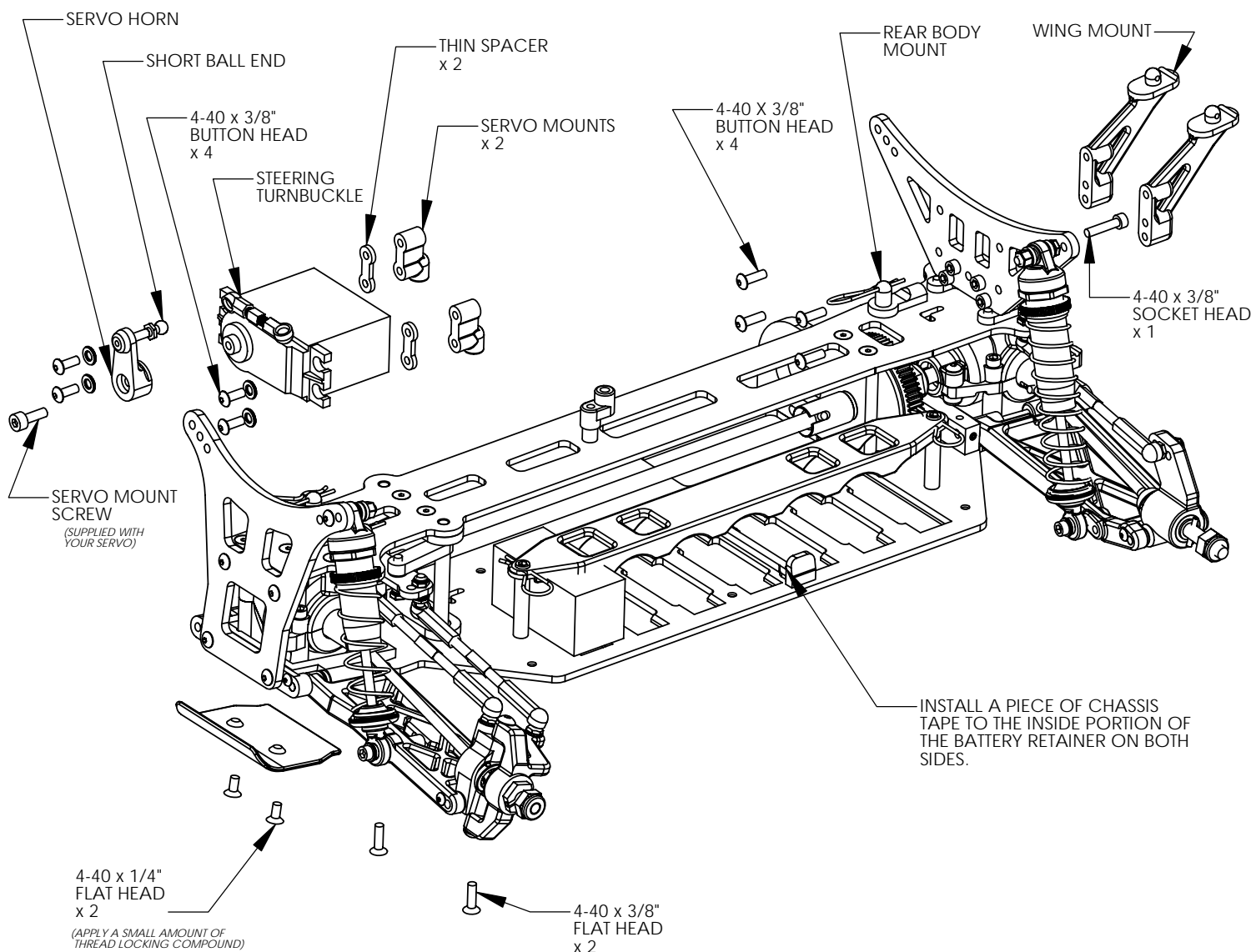
1. TWIST THE BALL CUPS ONTO THE BLUE TITANIUM TURNBUCKLE UNTIL YOU GET THE DIMENSION SHOWN.



STEERING TURNBUCKLE 1.00": x 1  
SCALE 1:1

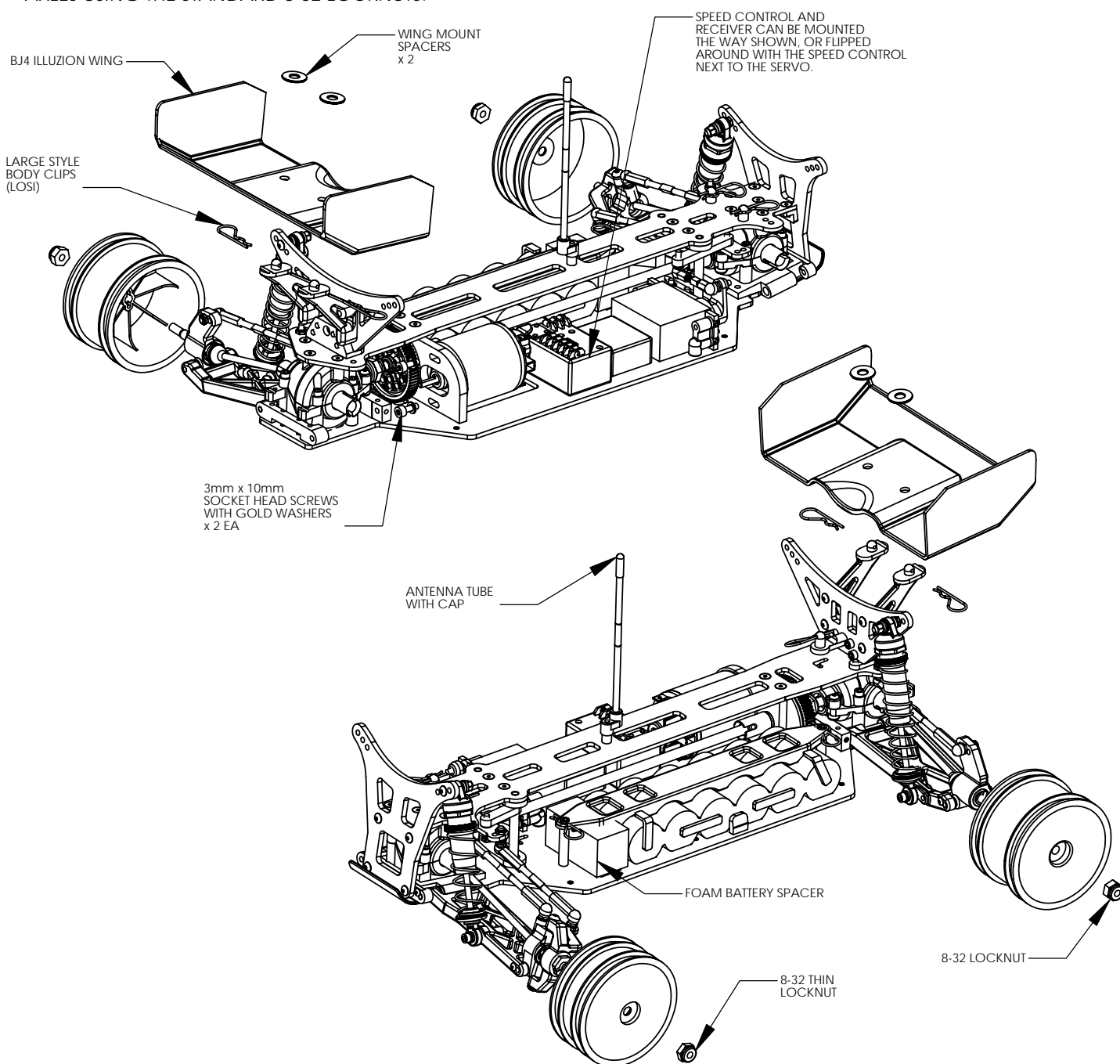
## STEP 2 MISCELLANEOUS ASSEMBLY:

1. ATTACH THE SERVO MOUNTS TO YOUR SERVO BY USING FOUR 4-40 x 3/8" BUTTON HEAD SCREWS WITH THE GOLD WASHERS IN PLACE. CHECK THE ALIGNMENT OF YOUR SERVO WITH THE SUPPLIED MOUNTS. TYPICALLY, AIRTRONICS, JR AND FUTABA SERVOS WILL USE THE THIN SERVO MOUNT SPACERS IN FRONT OF THE ACTUAL SERVO MOUNTS.
2. INSTALL A SHORT BALL END INTO THE SERVO HORN THAT MATCHES THE BRAND OF YOUR SERVO. ALIGN THE SPLINES ON THE SERVO HORN WITH YOUR SERVO AT A VERY SLIGHT ANGLE TOWARD THE CENTER OF THE CAR. PRESS THE SERVO HORN ONTO THE SERVO. USE THE SCREW THAT WAS SUPPLIED WITH YOUR SERVO TO ATTACH THE SERVO HORN. AFTER ALL THE ELECTRONICS ARE INSTALLED, IT MAY BE NECESSARY TO COME BACK AND ALIGN THE ACTUAL CENTER ON THE SERVO.
3. SECURE THE SERVO TO THE CHASSIS BY WITH TWO 4-40 x 3/8" FLAT HEAD SCREWS.
4. PUT THE BALL END DUST COVERS ON THE SERVO HORN AND THE STEERING BELLCRANK BALL ENDS.
5. ATTACH THE ASSEMBLED STEERING TURNBUCKLE TO THE BALL ENDS LOCATED ON THE SERVO HORN AND STEERING BELLCRANK.
6. INSTALL THE WING MOUNTS USING FOUR 4-40 x 3/8" BUTTON HEAD SCREWS.
7. INSTALL THE REAR BODY MOUNT USING ONE 4-40 x 3/8" SOCKET HEAD SCREW.
8. INSTALL THE CHASSIS TAPE ON THE BOTTOM OF THE CHASSIS. USE THE PHOTOS LOCATED AT THE END OF THE MANUAL FOR A REFERENCE.
9. INSTALL A PIECE OF THE CHASSIS TAPE TO EACH INSIDE PORTION OF THE BATTERY RETAINER WHERE IT WOULD TOUCH THE BATTERY PACK.
10. INSTALL THE FRONT BUMPER OVER THE CHASSIS TAPE WITH TWO 4-40 x 1/4" FLAT HEAD SCREWS. (APPLY A SMALL AMOUNT OF THREAD LOCKING COMPOUND)
11. INSTALL THE BATTERY HOLD DOWN WITH THE SUPPLIED AE BODY CLIPS. (THE BATTERY HOLD DOWN CAN ALSO BE SCREWED DOWN WITH WASHERS FOR A MORE SECURE ATTACHMENT)



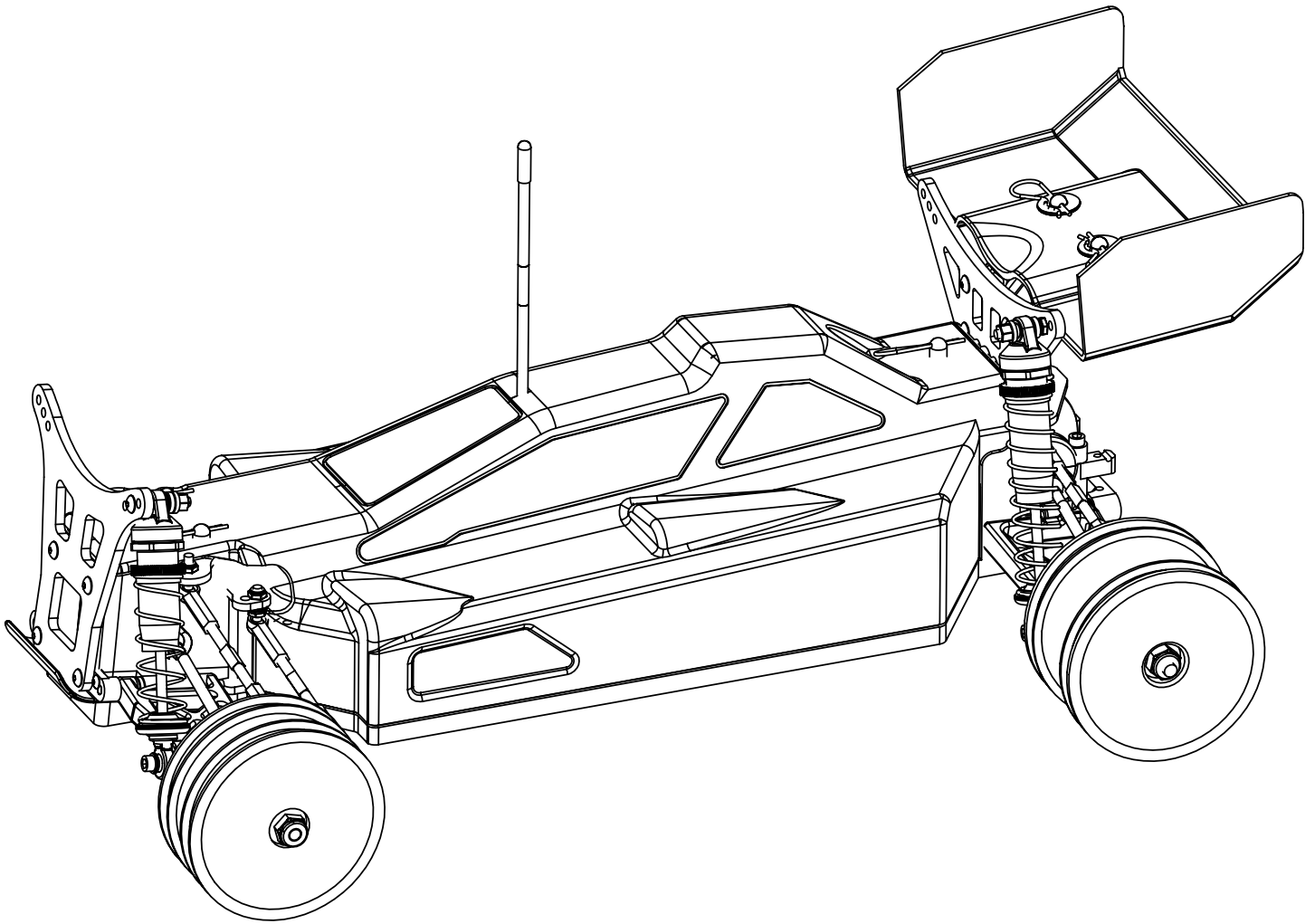
### STEP 3 MISCELLANEOUS ASSEMBLY:

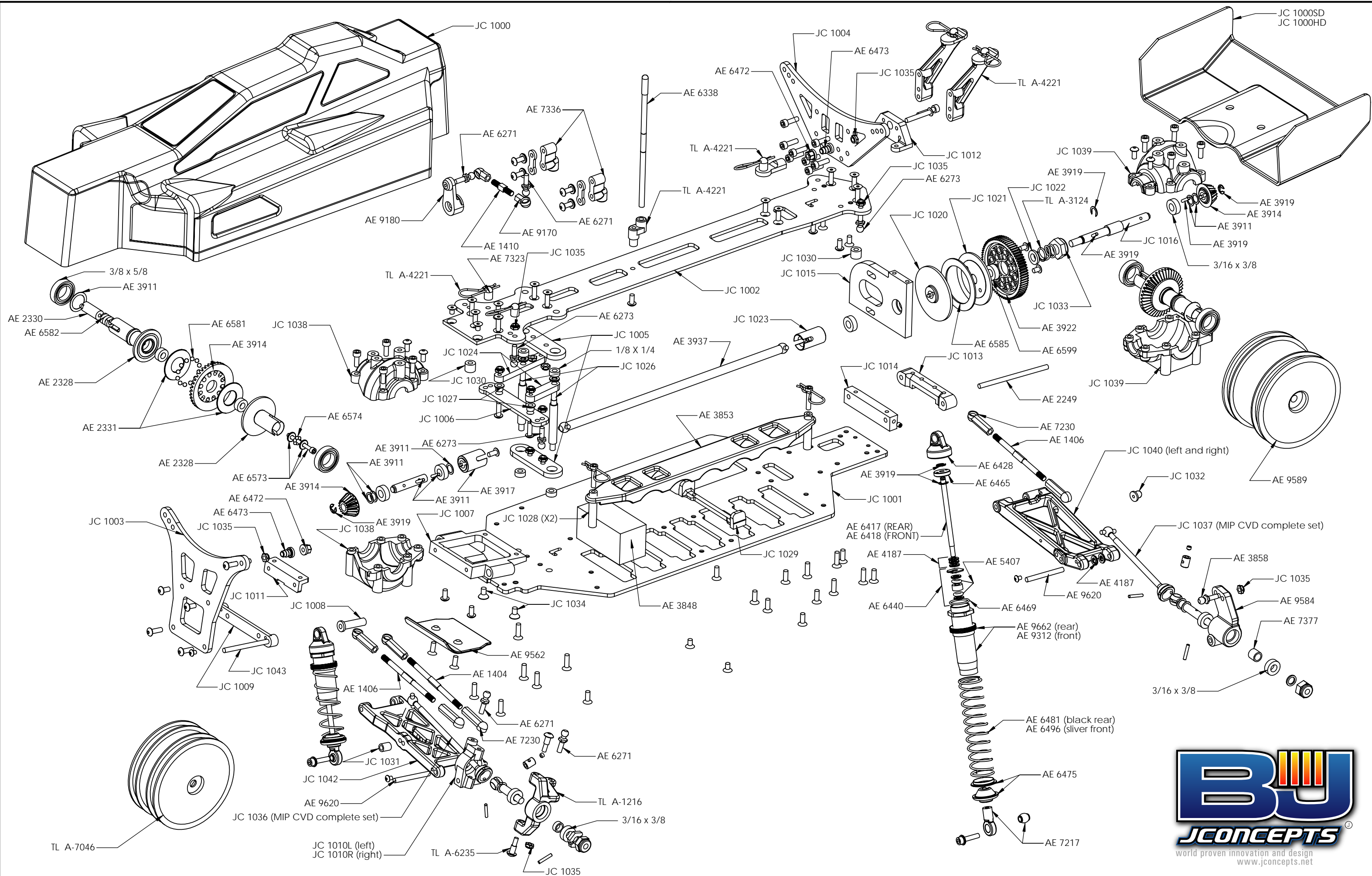
1. INSTALL YOUR MOTOR USING THE 3mm x 10mm SOCKET HEAD SCREWS WITH THE GOLD WASHERS IN PLACE. YOUR PINON GEAR WILL BE DETERMINED BY YOUR MOTOR SELECTION. THE RECOMMENDED PINON GEAR FOR A 10x2 MODIFIED MOTOR IS A 17 TOOTH. SET THE GEAR MESH SO THAT THE PINON GEAR AND THE SPUR GEAR ROCK BACK AND FORTH JUST A SMALL AMOUNT.
2. ATTACH THE REST OF YOUR ELECTRICAL TO THE CHASSIS USING THE INCLUDED SPEED CONTROL AND RECEIVER TAPE. KEEP IN MIND THAT THE GRAPHITE CHASSIS AND TOP DECK ARE VERY CONDUCTIVE. IT IS RECOMMENDED THAT YOU PUT 2 LAYERS OF SPEED CONTROL AND RECEIVER TAPE UNDER YOUR ELECTRONICS. IT IS ALSO RECOMMENDED THAT A SMALL AMOUNT OF ELECTRICAL TAPE BE PUT BETWEEN THE BATTERY PACK AND THE EXPOSED EDGES OF CHASSIS SLOTS. ALSO PUT A PIECE OF ELECTRICAL TAPE BETWEEN THE TOP DECK AND THE RECEIVER ANTENNA WIRE. RUN YOUR RECEIVER ANTENNA WIRE UP THROUGH THE ANTENNA MOUNT AND ANTENNA TUBE. PRESS THE ANTENNA TUBE DOWN INTO THE MOUNT. INSTALL THE ANTENNA CAP TO HOLD THE ANTENNA WIRE IN PLACE. USE THE PHOTOS LOCATED AT THE END OF THE MANUAL FOR A REFERENCE.
3. CUT OUT THE ILLUZION WING ALONG THE CUT LINES USING LEXAN SCISSORS. MOUNT THE WING TO THE MOUNTS USING THE WING MOUNT SPACERS FIRST, THEN THE INCLUDED LARGER STYLE BODY CLIPS (LOSI).
4. MOUNT YOUR 4WD FRONT TIRES OF CHOICE ON THE FRONT WHEELS AND INSTALL THE TIRES AND WHEELS TO THE FRONT AXLES USING THE THIN 8-32 LOCKNUTS.
5. MOUNT YOUR BUGGY REAR TIRES OF CHOICE ON THE REAR WHEELS AND INSTALL THE TIRES AND WHEELS TO THE REAR AXLES USING THE STANDARD 8-32 LOCKNUTS.



**STEP 4****BODY TRIMMING AND COMPLETED ASSEMBLY:**

1. CUT OUT THE BJ4 BODY ALONG THE CUT LINES USING LEXAN SCISSORS. THEN DRILL OUT THE LOCATIONS FOR THE BODY MOUNTS. MOUNT THE BODY USING THE INCLUDED LARGER STYLE BODY CLIPS (LOSI). WHEN THE BODY IS CUT OUT, IT HAS THE TENDENCY TO FLARE OUT. FLEX THE BODY AT BOTH ENDS TO HELP IT REGAIN ITS NATURAL SHAPE. IT SHOULD FIT CLOSE TO THE SIDES OF THE CHASSIS.





## J-CONCEPTS BJ4 SET-UP SHEET:

DRIVER: \_\_\_\_\_

DATE: \_\_\_\_\_

TRACK/CITY: \_\_\_\_\_

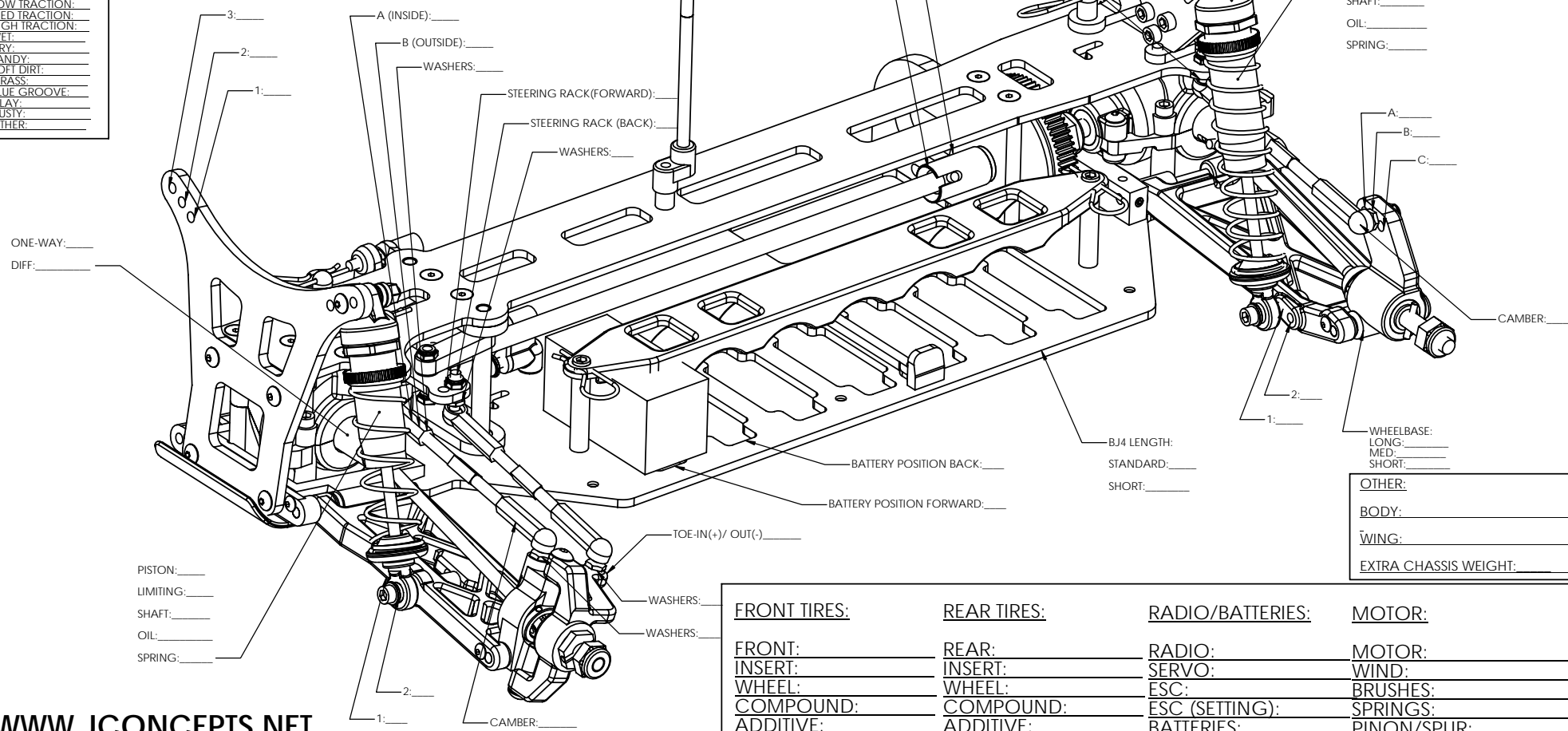
EVENT: \_\_\_\_\_

NOTES:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### CONDITIONS:

SMOOTH: \_\_\_\_\_  
BUMPY: \_\_\_\_\_  
LOW TRACTION: \_\_\_\_\_  
MED TRACTION: \_\_\_\_\_  
HIGH TRACTION: \_\_\_\_\_  
WET: \_\_\_\_\_  
DRY: \_\_\_\_\_  
SANDY: \_\_\_\_\_  
SOFT DIRT: \_\_\_\_\_  
GRASS: \_\_\_\_\_  
BLUE GROOVE: \_\_\_\_\_  
CLAY: \_\_\_\_\_  
DUSTY: \_\_\_\_\_  
OTHER: \_\_\_\_\_



[WWW.JCONCEPTS.NET](http://WWW.JCONCEPTS.NET)

### FRONT TIRES:

FRONT: \_\_\_\_\_  
INSERT: \_\_\_\_\_  
WHEEL: \_\_\_\_\_  
COMPOUND: \_\_\_\_\_  
ADDITIVE: \_\_\_\_\_

### REAR TIRES:

REAR: \_\_\_\_\_  
INSERT: \_\_\_\_\_  
WHEEL: \_\_\_\_\_  
COMPOUND: \_\_\_\_\_  
ADDITIVE: \_\_\_\_\_

### RADIO/BATTERIES:

RADIO: \_\_\_\_\_  
SERVO: \_\_\_\_\_  
ESC: \_\_\_\_\_  
ESC (SETTING): \_\_\_\_\_  
BATTERIES: \_\_\_\_\_

### MOTOR:

MOTOR: \_\_\_\_\_  
WIND: \_\_\_\_\_  
BRUSHES: \_\_\_\_\_  
SPRINGS: \_\_\_\_\_  
PINON/SPUR: \_\_\_\_\_



