2005-2006 IFMAR WORLD CHAMPION
1:10TH SCALE ELECTRIC
4WD OFF-ROAD COMPETITION BUGGY KIT

BJ Worlds Edition

JCONCEPTS

IFMAR WORLD CHAMPION 2006

Not recommended for use without adult supervision
Tires, electrical and battery pack not included
Body in kit comes clear

BJ4 Worlds Edition Features:

- 4wd split shaft drive
- Adjustable Center Drive (A.C.D.)
- Dual geared slipper clutch
- Split top deck design
- Saddle pack battery configuration
- Molded battery trays
- Front and Rear MIP CVD's ™
- Center blue aluminum MIP CVD's ™
- BJ4 heavy-duty front a-arms
- Light-weight front bulkhead
- B4 suspension components
- 10 degree steering rack geometry
- BJ4 blue aluminum components throughout
- Graphite chassis, top deck, shock towers and battery straps
- BJ4 Worlds Illuzion body with 6" Illuzion high down force wing
- Avid sealed ball bearings
- Factory Team titanium turnbuckles
- Factory Team threaded shocks with unobtanium shafts

Saddle Pack Chassis Configuration

Adjustable Center Drive (A.C.D.)

TOOLS

TOOLS NEEDED TO BUILD THIS KIT

1. ALLEN WRENCHES

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

2. NUT DRIVERS

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

3. MISC. TOOLS

- 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

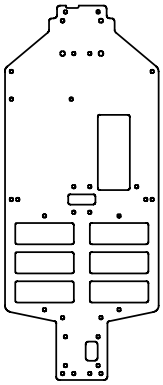
4. HELPFUL TOOLS (NOT REQUIRED)

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

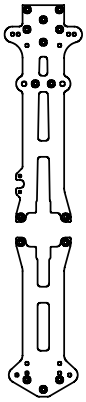
ITEMS NEEDED TO COMPLETE YOUR CAR:

1. R/C TWO CHANNEL SURFACE FREQUENCY RADIO SYSTEM
2. BATTERY PACK (6 CELL SADDLE PACK)
3. BATTERY CHARGER (PEAK DETECTION)
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: BLOCKHEAD)
8. 1/10TH SCALE BUGGY REAR TIRES (BOX ART SHOWN: X-2000)

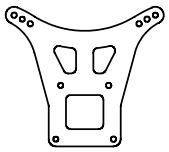
BAG A CHASSIS COMPONENTS



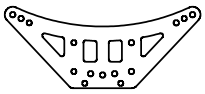
CHASSIS x 1



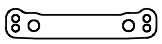
TOP DECK x 1 (2 PIECES)



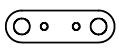
FRONT SHOCK TOWER x 1



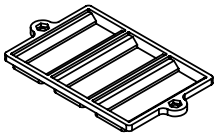
REAR SHOCK TOWER x 1



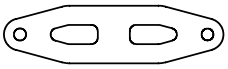
STEERING RACK x 1



BEARING BLOCK x 2



BATTERY TRAY x 2



BATTERY STRAP x 2

STEP 1 CHASSIS PREPARATION:

1. FILE REAR TRANSMISSION SLOT WITH THE BOTTOM SURFACE OF THE FILE. FILE AT THE GREATEST ANGLE POSSIBLE WITHOUT THE TOP SURFACE OF THE FILE HITTING THE OTHER SIDE OF THE SLOT. SEE FIGURE 1.
2. REFER TO FIGURE 2 FOR COMPLETED COMPARISON.

FIGURE 1

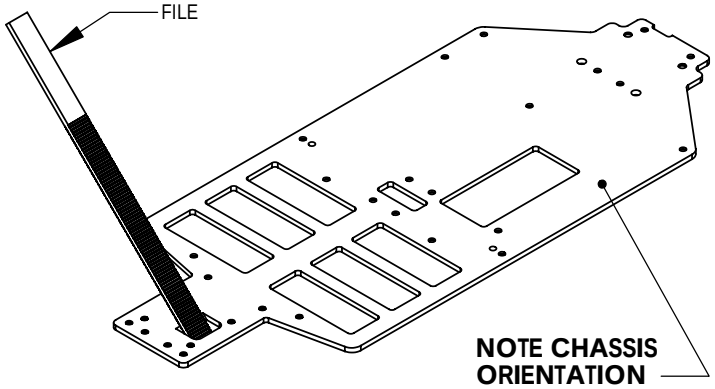
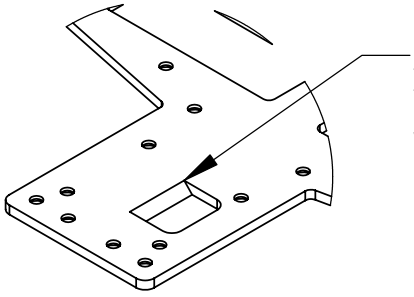


FIGURE 2



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 CHASSIS COMPONENTS

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

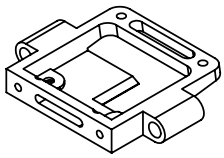
4-40 x 5/16"
FLAT HEAD
x 9

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

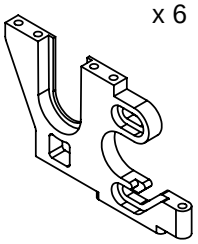
4-40 x 5/16"
SOCKET HEAD
x 8

4-40 MINI
LOCKNUT
x 2

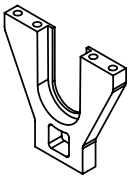
#4 WASHER,
ALUMINUM
x 4



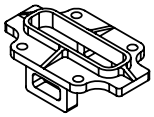
FRONT BULKHEAD
x 1



CENTER MOTOR
MOUNT x 1

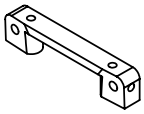


CENTER BULKHEAD
x 1

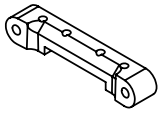


CENTER BULKHEAD
CAP x 1

BATTERY POST
x 4



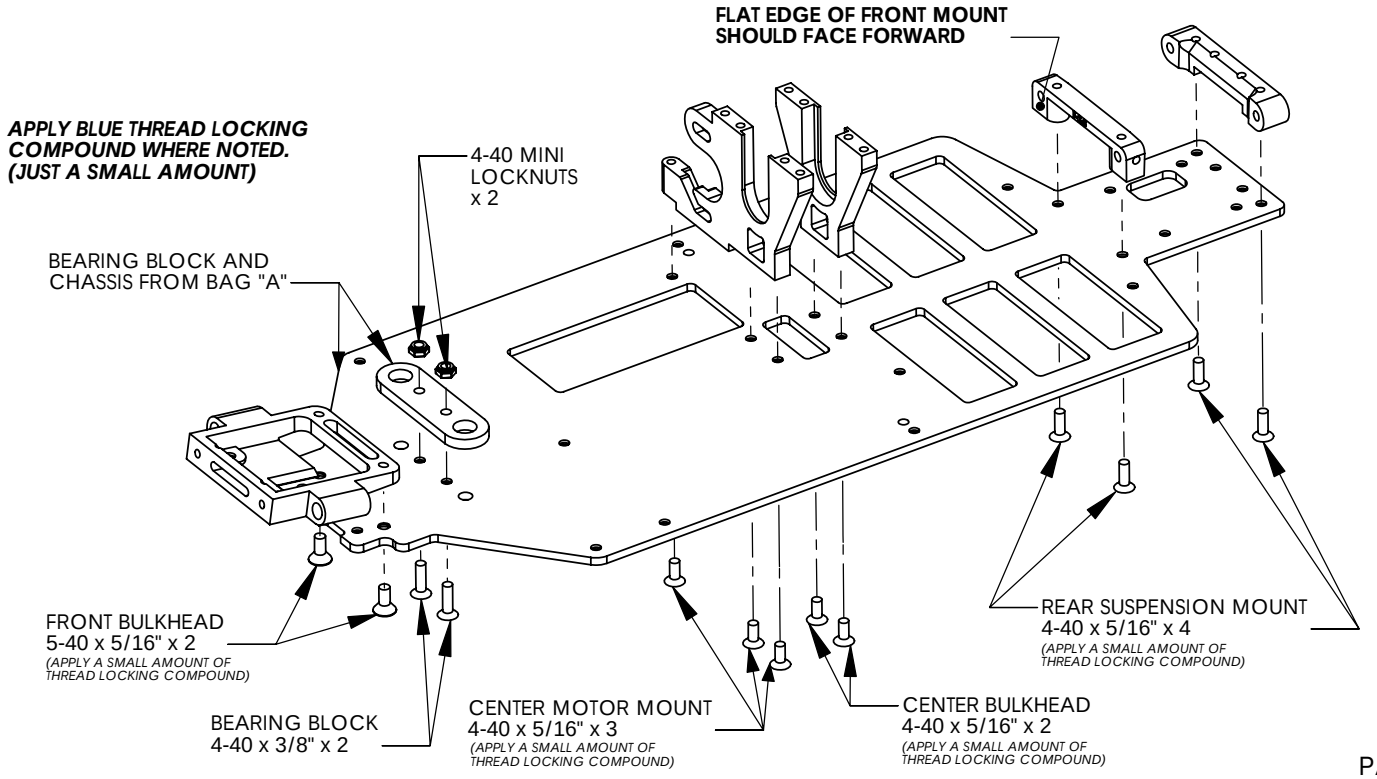
REAR SUSPENSION MOUNT (FRONT) x 1
NOTE MOUNTING DIRECTION IN
ASSEMBLY BELOW



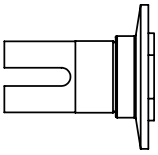
REAR SUSPENSION MOUNT (BACK) x 1
NOTE MOUNTING DIRECTION IN
ASSEMBLY BELOW

STEP 1 ASSEMBLING CHASSIS COMPONENTS:

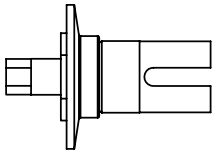
1. ATTACH FRONT BULKHEAD TO CHASSIS WITH TWO 5-40 x 5/16" FLAT HEAD SCREWS.
2. ATTACH BEARING BLOCK WITH TWO 4-40 x 3/8" FLAT HEAD SCREWS. SECURE WITH TWO 4-40 LOCKNUTS.
3. ATTACH CENTER MOTOR MOUNT TO CHASSIS WITH THREE 4-40 x 5/16" FLAT HEAD SCREWS.
4. ATTACH CENTER BULKHEAD TO CHASSIS WITH TWO 4-40 x 5/16" FLAT HEAD SCREWS.
5. ATTACH REAR SUSPENSION MOUNT (FRONT) WITH TWO 4-40 x 5/16" FLAT HEAD SCREWS. NOTE DIRECTION
6. ATTACH REAR SUSPENSION MOUNT (BACK) WITH TWO 4-40 x 5/16" FLAT HEAD SCREWS. NOTE DIRECTION



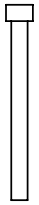
BAG B CENTER SLIPPER PARTS



SLIPPER OUTDRIVE FEMALE x 1



SLIPPER OUTDRIVE MALE x 1

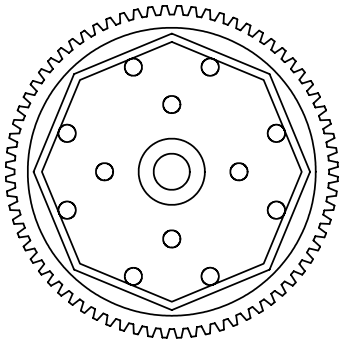


DIFF BOLT x 1

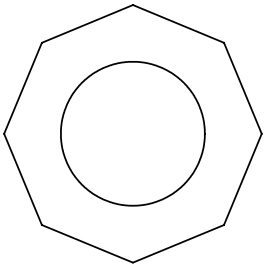
DIFF THRUST WASHER x 1

SLIPPER SPRING x 1

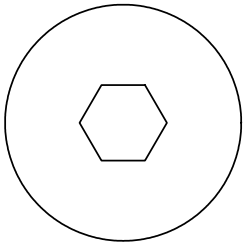
DIFF T-NUT x 1



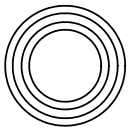
78 TOOTH SPUR GEAR x 1



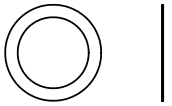
SLIPPER PAD x 2



SLIPPER PLATE x 2



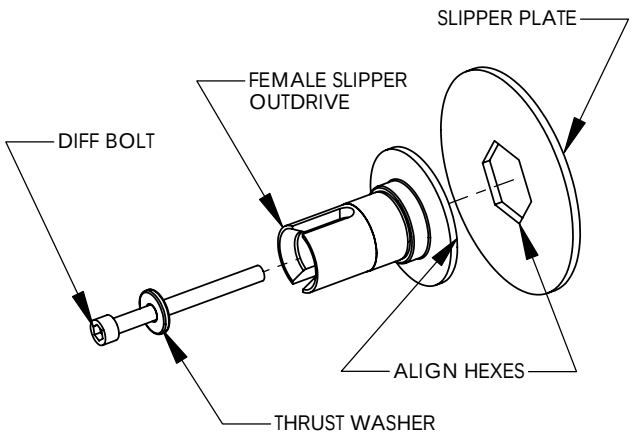
3/8 X 5/8 BEARING x 2



OUTDRIVE SHIM x 2

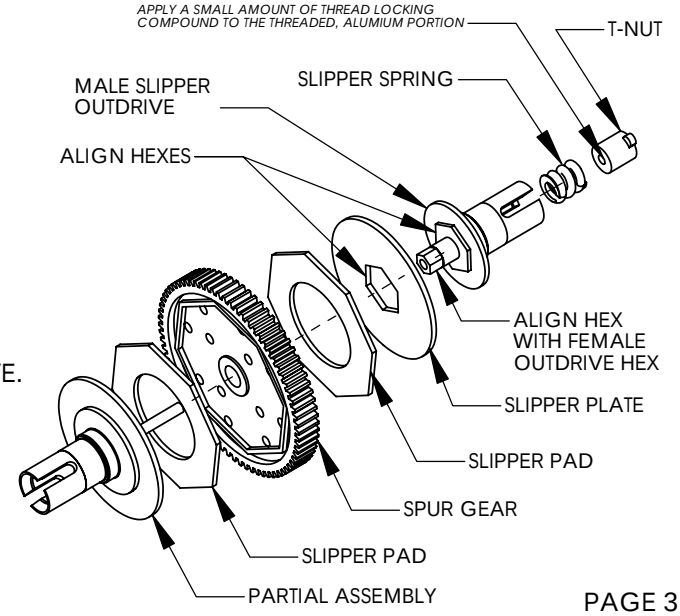
STEP 1 SLIPPER ASSEMBLY:

1. HOLD THE DIFF BOLT WITH A 5/64" ALLEN WRENCH.
2. SLIDE ONE THRUST WASHER ONTO THE DIFF BOLT.
3. SLIDE THE DIFF BOLT WITH THRUST WASHER INTO THE FEMALE SLIPPER OUTDRIVE.
4. WHILE ALIGNING THE HEXES ON EACH PART, SLIDE THE SLIPPER PLATE ONTO THE FEMALE SLIPPER OUTDRIVE.
5. HOLD THE PARTIAL ASSEMBLY WITH THE 5/64" ALLEN WRENCH SO THAT THE SLIPPER PLATE IS FACING UP.



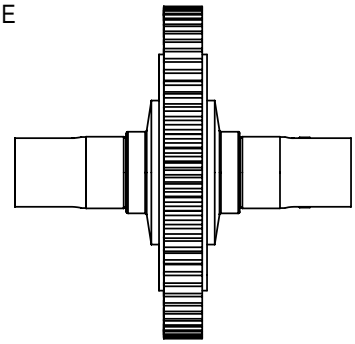
STEP 2 SLIPPER ADJUSTMENT:

1. STACK THE FOLLOWING PARTS ONTO THE PARTIAL ASSEMBLY IN THIS ORDER:
   - A. SLIPPER PAD
   - B. 78 TOOTH SPUR GEAR (ALIGN WITH SLIPPER PAD)
   - C. SLIPPER PAD (ALIGN WITH SPUR GEAR)
   - D. SLIPPER PLATE
   - E. MALE SLIPPER OUTDRIVE (ALIGN WITH SLIPPER PLATE)
2. CAREFULLY ALIGN ALL THE HEX SHAPED PARTS WHILE THE SLIPPER PADS REST IN THE SPUR GEAR.
3. INSERT THE SLIPPER SPRING INTO THE MALE SLIPPER OUTDRIVE.
4. INSERT THE T-NUT INTO THE MALE SLIPPER OUTDRIVE UNTIL IT TOUCHES THE DIFF SPRING. (APPLY A SMALL AMOUNT OF THREAD LOCKING COMPOUND WHERE SHOWN)
5. TIGHTEN THE SLIPPER USING THE 5/64" ALLEN WRENCH, BUT NOT COMPLETELY. JUST TIGHT ENOUGH TO HOLD THE COMPONENTS IN PLACE.



STEP 3 SLIPPER ADJUSTMENT:

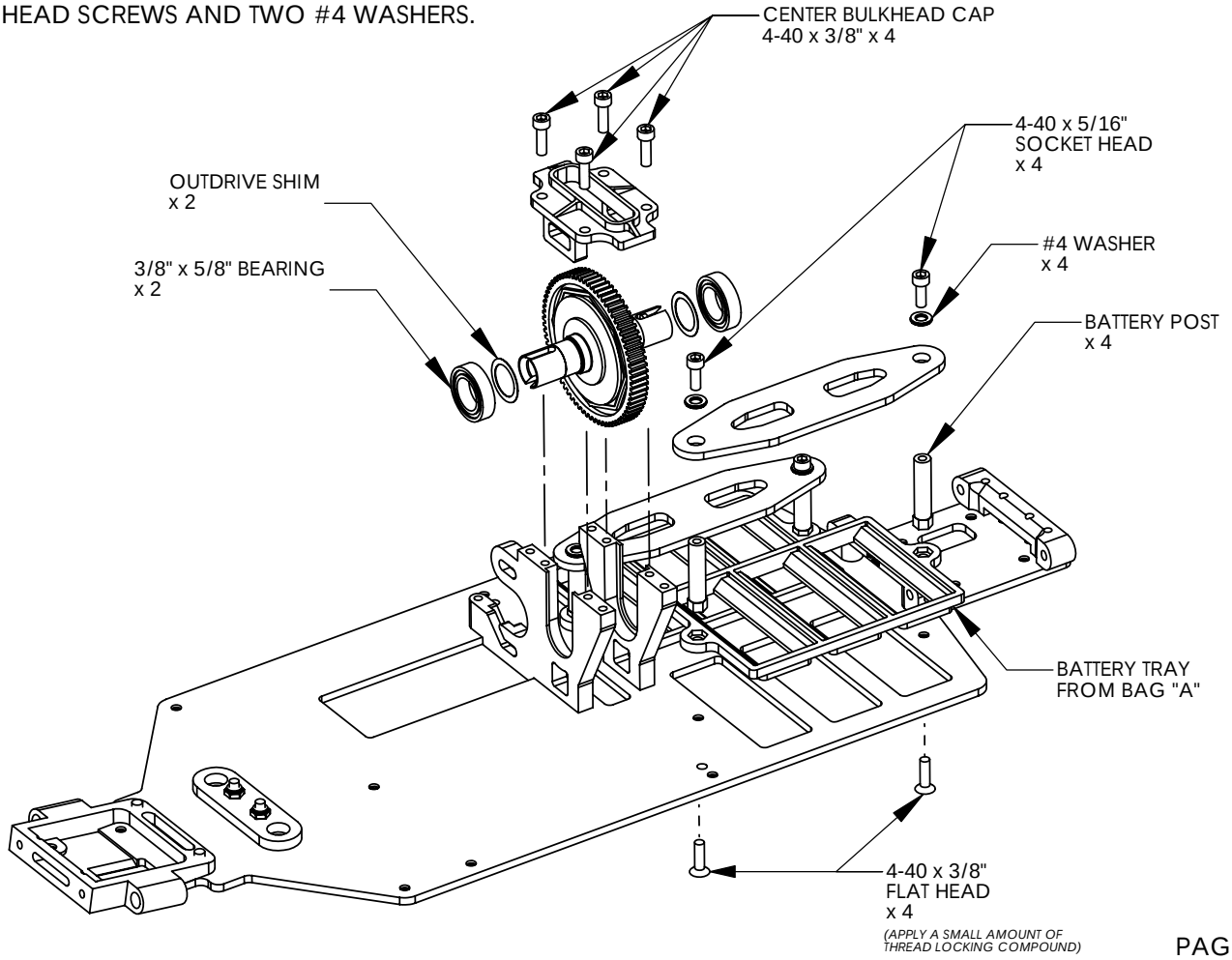
COMPARE ASSEMBLY:



1. THE SLIPPER IS ONE OF THE MOST CRITICAL ADJUSTMENTS ON THE BJ4. REMEMBER, THE SLIPPER IS DESIGNED TO ABSORB IMPACTS FROM THE DRIVETRAIN. SETTING THE SLIPPER TOO TIGHT WILL ONLY CAUSE PREMATURE DAMAGE TO THE DRIVETRAIN. IN ADDITION, HAVING THE SLIPPER TOO LOOSE WILL NOT HELP CREATE TRACTION.
2. SCREW IN THE DIFF BOLT UNTIL THE SPRING IS FULLY COMNPRESSED. PAY CLOSE ATTENTION TO THE ALIGNMENT OF THE PARTS. DO NOT OVERTIGHTEN THE BOLT. WHEN YOU FEEL THE SPRING COMPRESSED, LOOSEN THE DIFF BOLT ONE TURN.
3. AFTER YOU HAVE DRIVEN THE CAR FOR ONE BATTERY PACK, CHECK THE SLIPPER ADJUSTMENT. IF NECESSARY, REPEAT STEP 2 ABOVE.
4. IF MORE SLIP IS DESIRED, LOOSEN THE DIFF BOLT 1-1/4 TURNS FROM BOTTOM. IF LESS SLIP IS DESIRED, LOOSEN THE DIFF BOLT 3/4 TURNS FROM BOTTOM.

STEP 4 ASSEMBLING CHASSIS COMPONENTS:

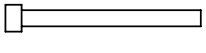
1. SLIDE ONE OUTDRIVE SHIM AND ONE 3/8" x 5/8" BEARING ONTO EACH SIDE OF THE SLIPPER ASSEMBLY.
2. SLIDE THE COMPLETE SLIPPER ASSEMBLY DOWN INTO THE CHANNELS OF THE CENTER BULKHEADS.
3. ATTACH THE CENTER BULKHEAD CAP WITH FOUR 4-40 x 3/8" SOCKET HEAD SCREWS.
4. ALIGN EACH BATTERY TRAY WITH THE SLOTS IN THE CHASSIS, AND SNAP INTO PLACE.
5. ATTACH EACH BATTERY POST WITH A 4-40 x 3/8" FLAT HEAD SCREW. MAKE SURE TO ALIGN THE HEX ON EACH BATTERY POST WITH THE CORRESPONDING HEX IN THE BATTERY TRAY.
6. SLIDE THE BATTERY STRAPS ONTO THE BATTERY POSTS AS SHOWN BELOW.
7. ATTACH EACH BATTERY STRAP WITH TWO 4-40 x 5/16" SOCKET HEAD SCREWS AND TWO #4 WASHERS.



BAG C DRIVETRAIN COMPONETS (DIFF x 2)

DIFF THRUST WASHER
x 2

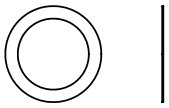
3/16 X 5/16
DIFF BEARING
x 2



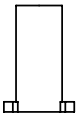
DIFF BOLT
x 1

3/32 DIFF BALL
x 12

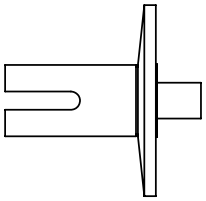
5/64 THRUST BALL
x 6



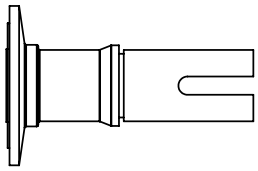
OUTDRIVE SHIM
x 1



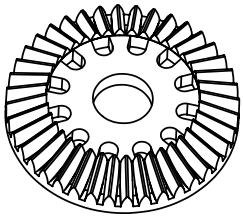
DIFF T-NUT
x 1



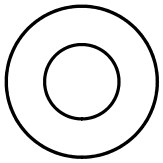
SHORT OUTDRIVE HUB
x 1



LONG OUTDRIVE HUB
x 1



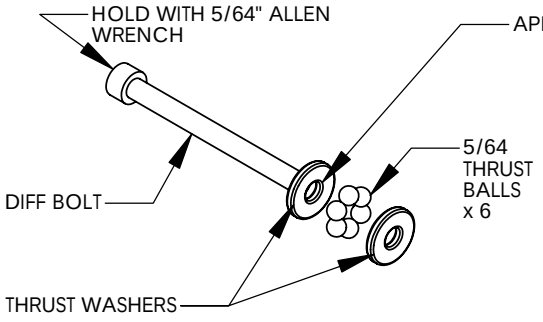
DIFFERENTIAL RING GEAR
x 1



DRIVE RING
x 2

DIFF SPRING
x 1

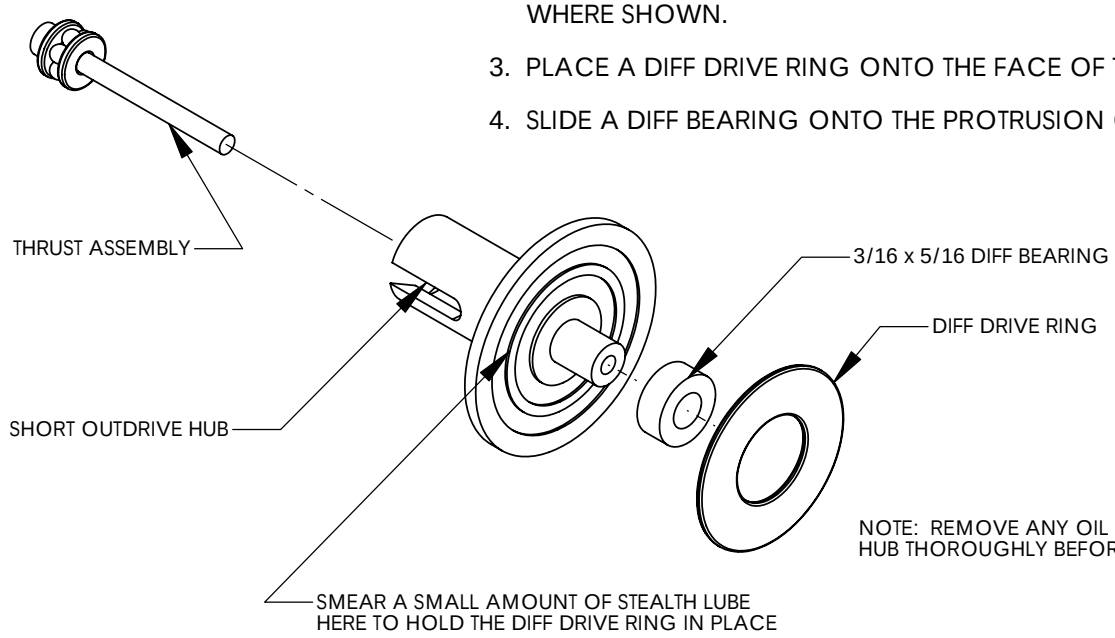
STEP 1 THRUST BALL ASSEMBLY:



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.

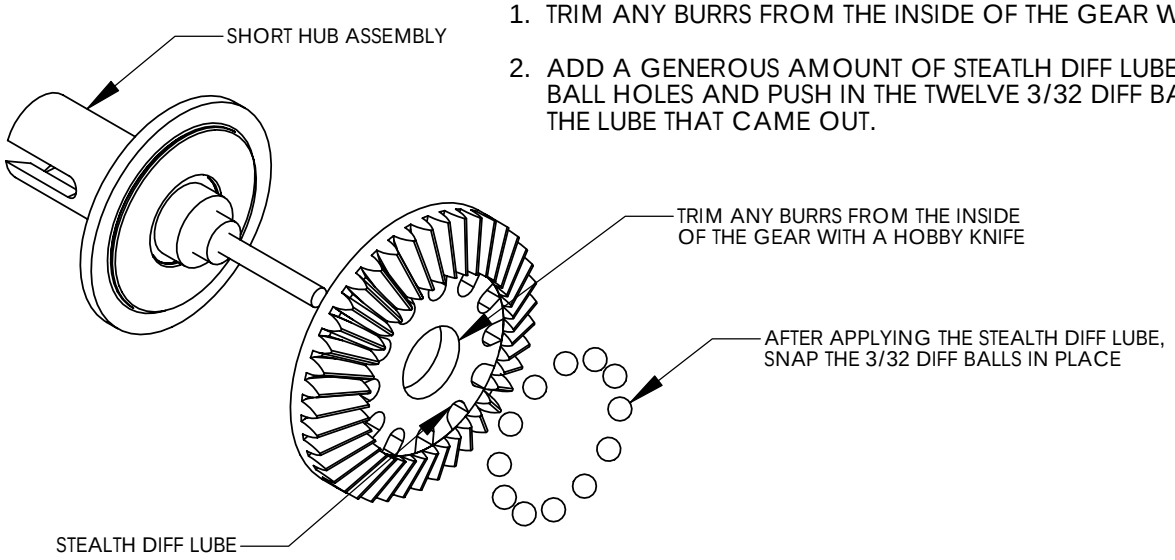
STEP 2 SHORT HUB ASSEMBLY:

1. INSERT THE THRUST ASSEMBLY INTO THE SHORT OUTDRIVE HUB.
2. ADD A LIGHT COAT OF STEALTH LUBE TO THE SHORT HUB FACE WHERE SHOWN.
3. PLACE A DIFF DRIVE RING ONTO THE FACE OF THE SHORT HUB.
4. SLIDE A DIFF BEARING ONTO THE PROTRUSION OF THE SHORT HUB.



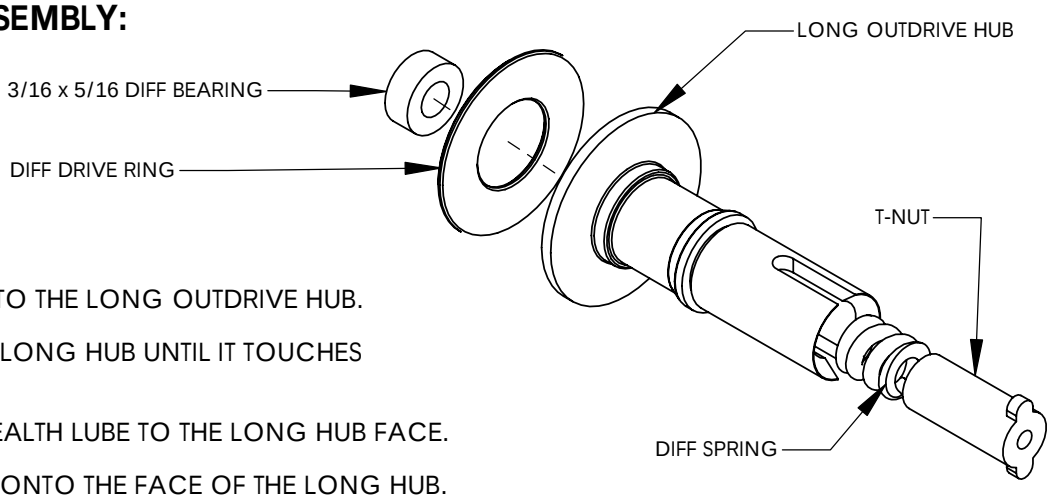
NOTE: REMOVE ANY OIL RESIDUE FROM OUTDRIVE HUB THOROUGHLY BEFORE APPLYING STEALTH LUBE

STEP 3 DIFFERENTIAL RING GEAR:



1. TRIM ANY BURRS FROM THE INSIDE OF THE GEAR WITH A HOBBY KNIFE.
2. ADD A GENEROUS AMOUNT OF STEATLH DIFF LUBE TO THE RING GEAR BALL HOLES AND PUSH IN THE TWELVE 3/32 DIFF BALLS. THEN PUSH IN THE LUBE THAT CAME OUT.

STEP 4 LONG HUB ASSEMBLY:



1. INSERT THE DIFF SPRING INTO THE LONG OUTDRIVE HUB.
2. INSERT THE T-NUT INTO THE LONG HUB UNTIL IT TOUCHES THE DIFF SPRING.
3. ADD A LIGHT COAT OF STEALTH LUBE TO THE LONG HUB FACE.
4. PLACE A DIFF DRIVE RING ONTO THE FACE OF THE LONG HUB.
5. INSERT THE 3/16 x 5/16 DIFF BEARING INTO THE LONG HUB.

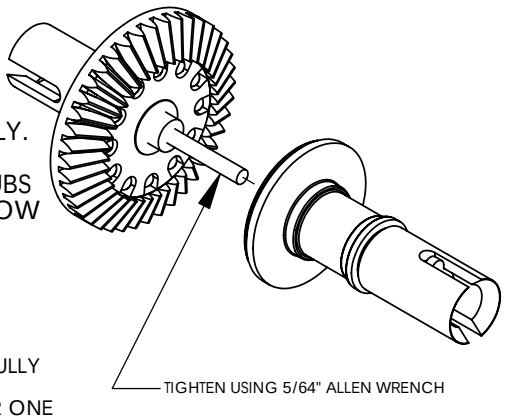
NOTE: REMOVE ANY OIL RESIDUE FROM OUTDRIVE HUB THOROUGHLY BEFORE APPLYING STEALTH LUBE.

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.



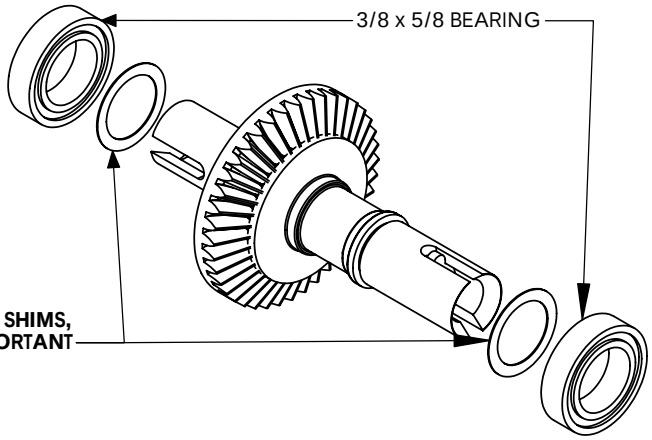
READ THE FOLLOWING CAREFULLY

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.

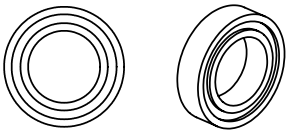
NOW ASSEMBLE THE SECOND DIFF THE SAME WAY

STEP 6 FINAL DIFF ASSEMBLY:

1. SLIDE ONE OUTDRIVE SHIM AND ONE 3/8 x 5/8 BEARING ONTO EACH SIDE OF THE DIFF ASSEMBLY.



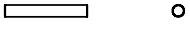
SCALE: 1:1



3/8 x 5/8 BEARING
x 4

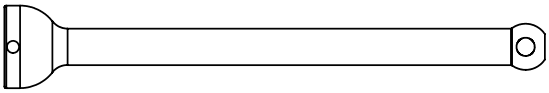
CENTER CVD BAG CENTER CVD COMPONENTS

CVD COUPLING
x 2

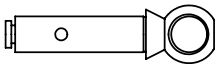


CVD CROSS PIN
x 2

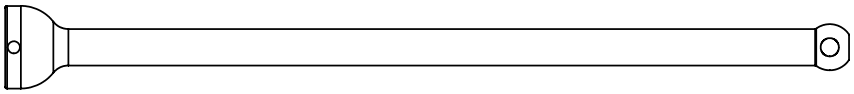
CVD SET SCREW
x 2



CENTER CVD BONE "REAR"
x 1



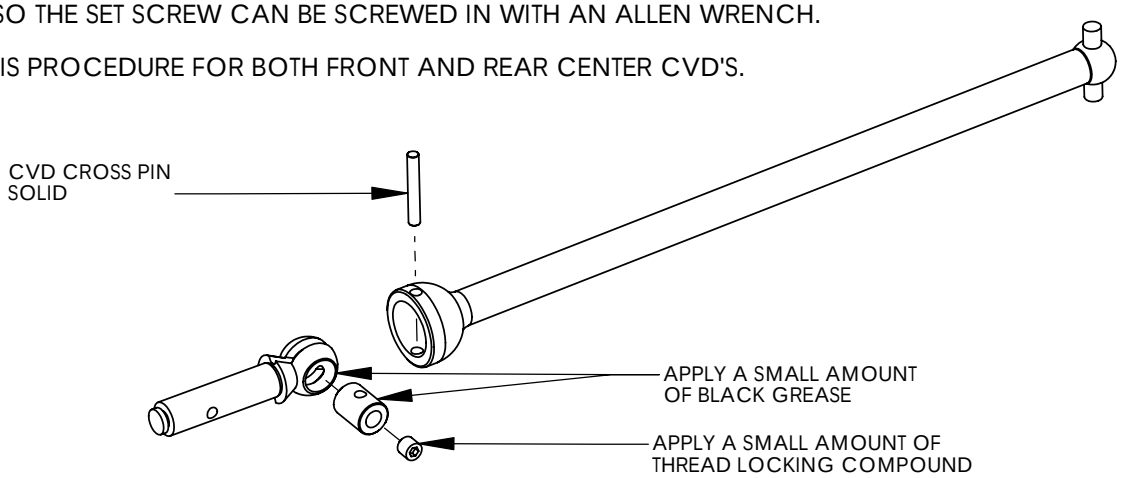
CENTER CVD INPUT SHAFT
x 2



CENTER CVD BONE "FRONT"
x 1

STEP 7 CENTER CVD ASSEMBLY:

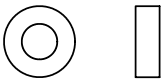
1. SPREAD A SMALL AMOUNT OF BLACK GREASE ON THE OUTSIDE OF THE CVD COUPLING AND INSERT THE COUPLING INTO THE AXLE AS SHOWN.
2. SPREAD A SMALL AMOUNT OF BLACK GREASE ON THE ROUND PORTION OF THE AXLE AND INSERT INTO THE CVD BONE, ALIGNING THE CROSS HOLES.
3. INSERT THE CROSS PIN, MAKING SURE IT IS EVENLY 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 BOTH FRONT AND REAR CENTER CVD'S.



BAG C INPUT SHAFT COMPONENTS

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

DRIVE PINON
x 2



3/16 x 3/8
BEARING
x 4

DOWEL PIN
x 2

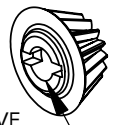
INPUT SHAFT SHIM
x 8

SMALL E-CLIP*
x 2

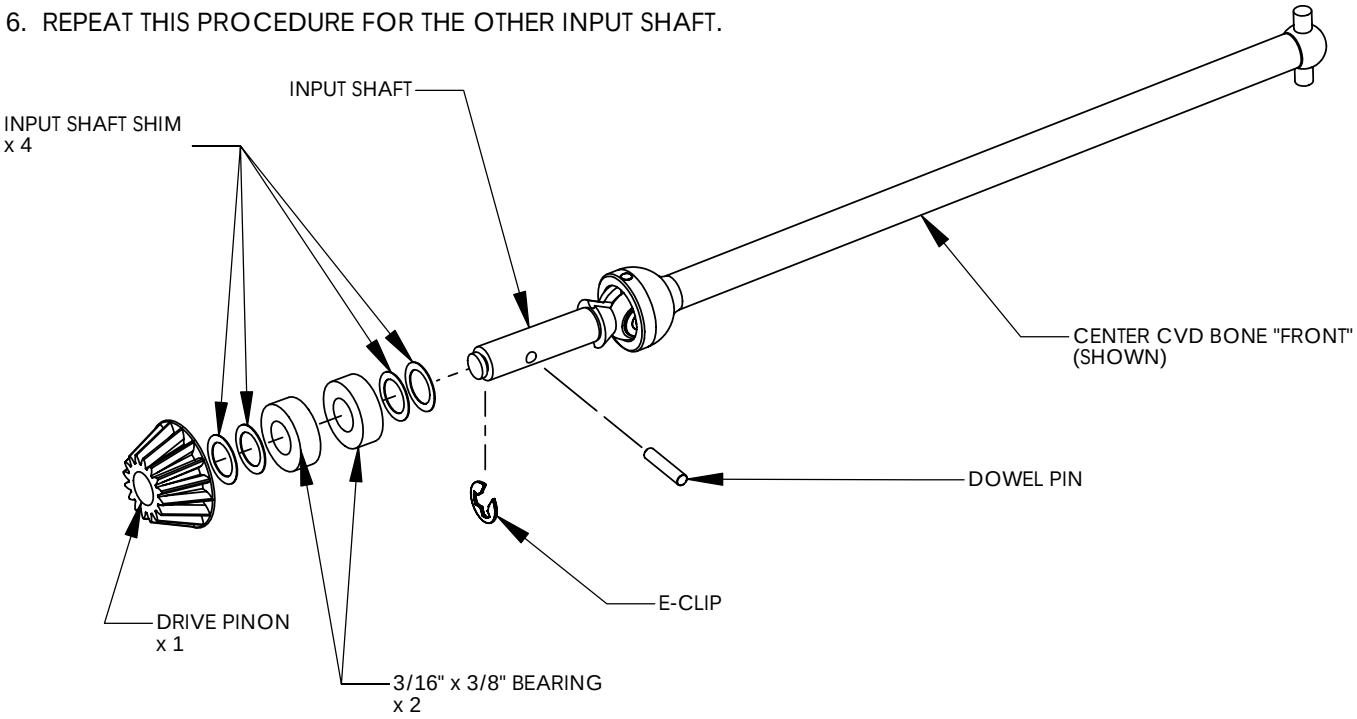
STEP 8 INPUT SHAFT ASSEMBLY:

1. SLIDE TWO INPUT SHAFT SHIMS AND TWO 3/16 X 3/8 BEARINGS ONTO THE INPUT SHAFT.
2. SLIDE TWO INPUT SHAFT SHIMS ONTO THE INPUT SHAFT.
3. INSTALL AND CENTER THE DOWEL PIN INTO THE INPUT SHAFT.
4. TRIM BURRS FROM THE DRIVE PINION EDGE WHERE SHOWN. SLIDE THE DRIVE PINION ON TO THE INPUT SHAFT. MAKE SURE THE DOWEL PIN ALIGNS PERFECTLY WITH THE SLOT IN THE PINION.
5. ADD THE SMALL E-CLIP.
6. REPEAT THIS PROCEDURE FOR THE OTHER INPUT SHAFT.

ATTENTION!

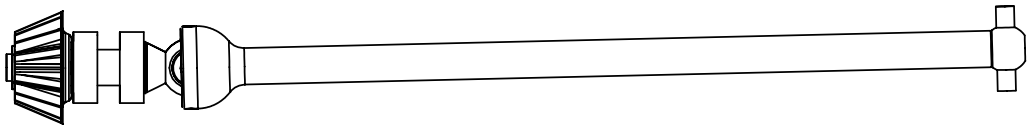


CAREFULLY TRIM ANY BURRS FROM THIS EDGE OF THE DRIVE PINION WITH A HOBBY KNIFE.



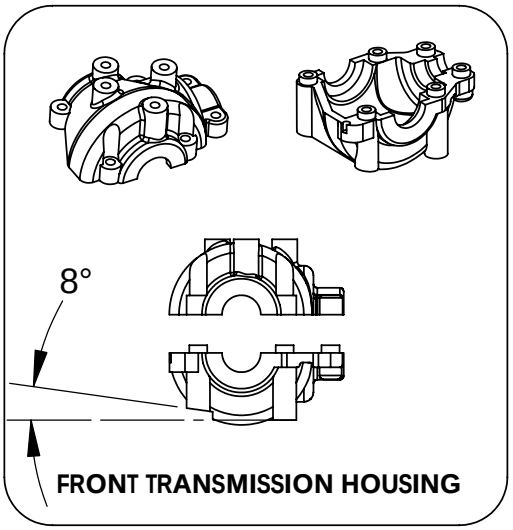
STEP 9 COMPARE ASSEMBLY:

1. COMPARE YOUR ASSEMBLY CAREFULLY!
2. COMPLETE OTHER INPUT SHAFT ASSEMBLY TO MATCH.

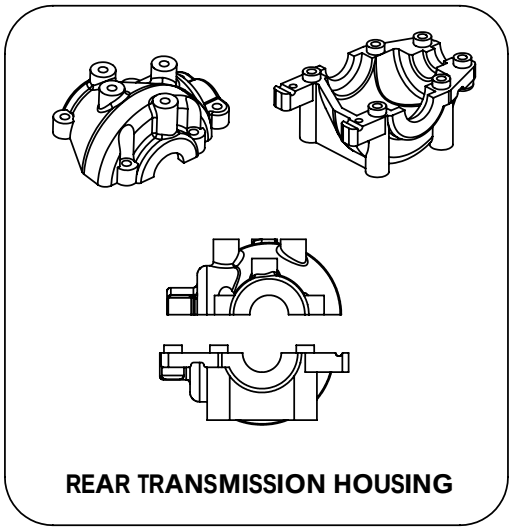


CENTER CVD BONE "FRONT" (SHOWN)

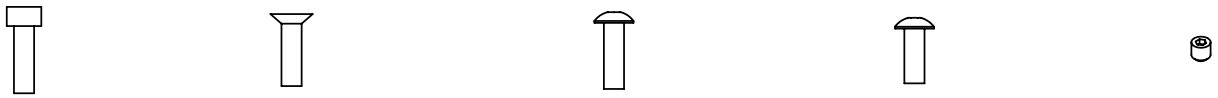
BAG C TRANSMISSION COMPONENTS



FRONT TRANSMISSION HOUSING



REAR TRANSMISSION HOUSING



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

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

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

4-40 x 5/16" BUTTON HEAD x 2

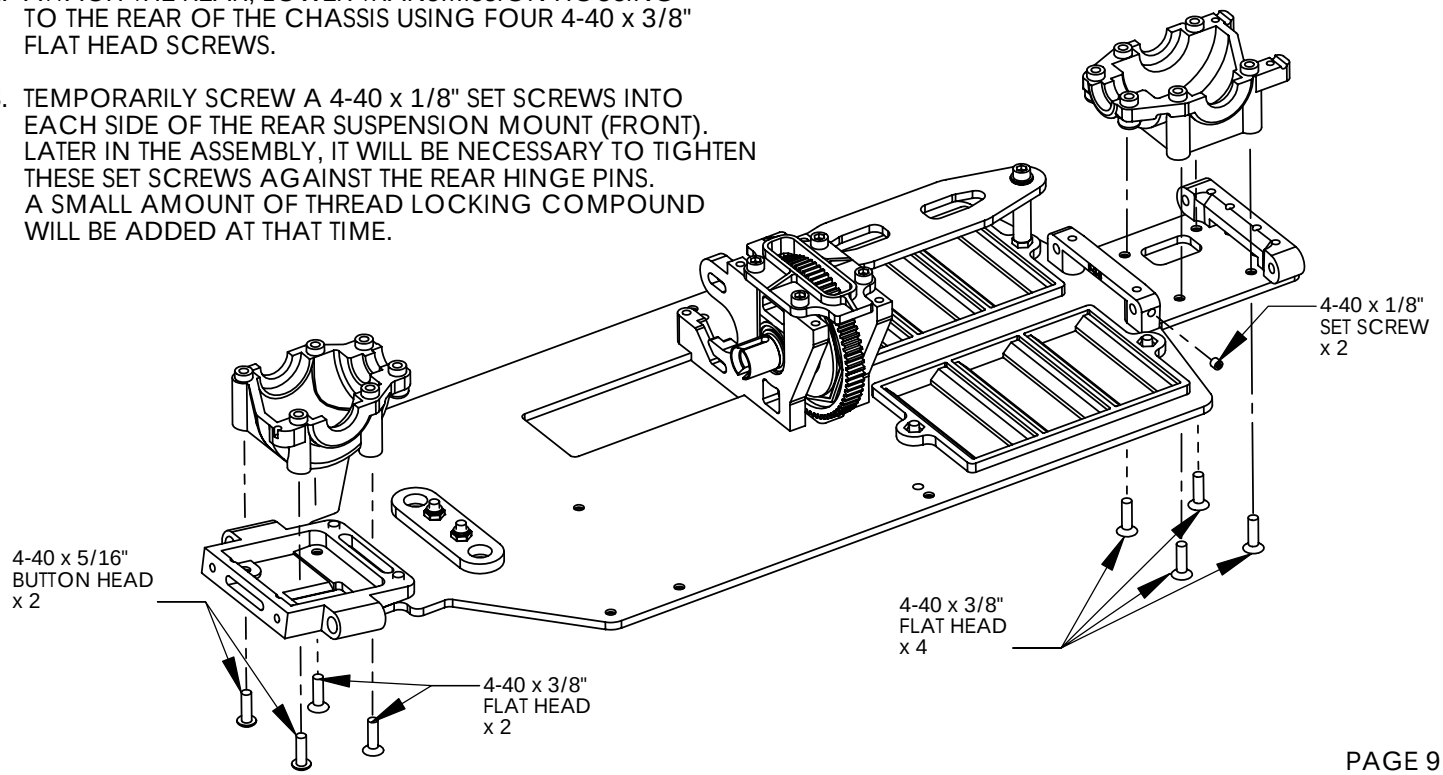
4-40 x 1/8" SET SCREW x 2

STEP 10 TRANSMISSION CASE ASSEMBLY:

1. ATTACH THE FRONT, LOWER 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.

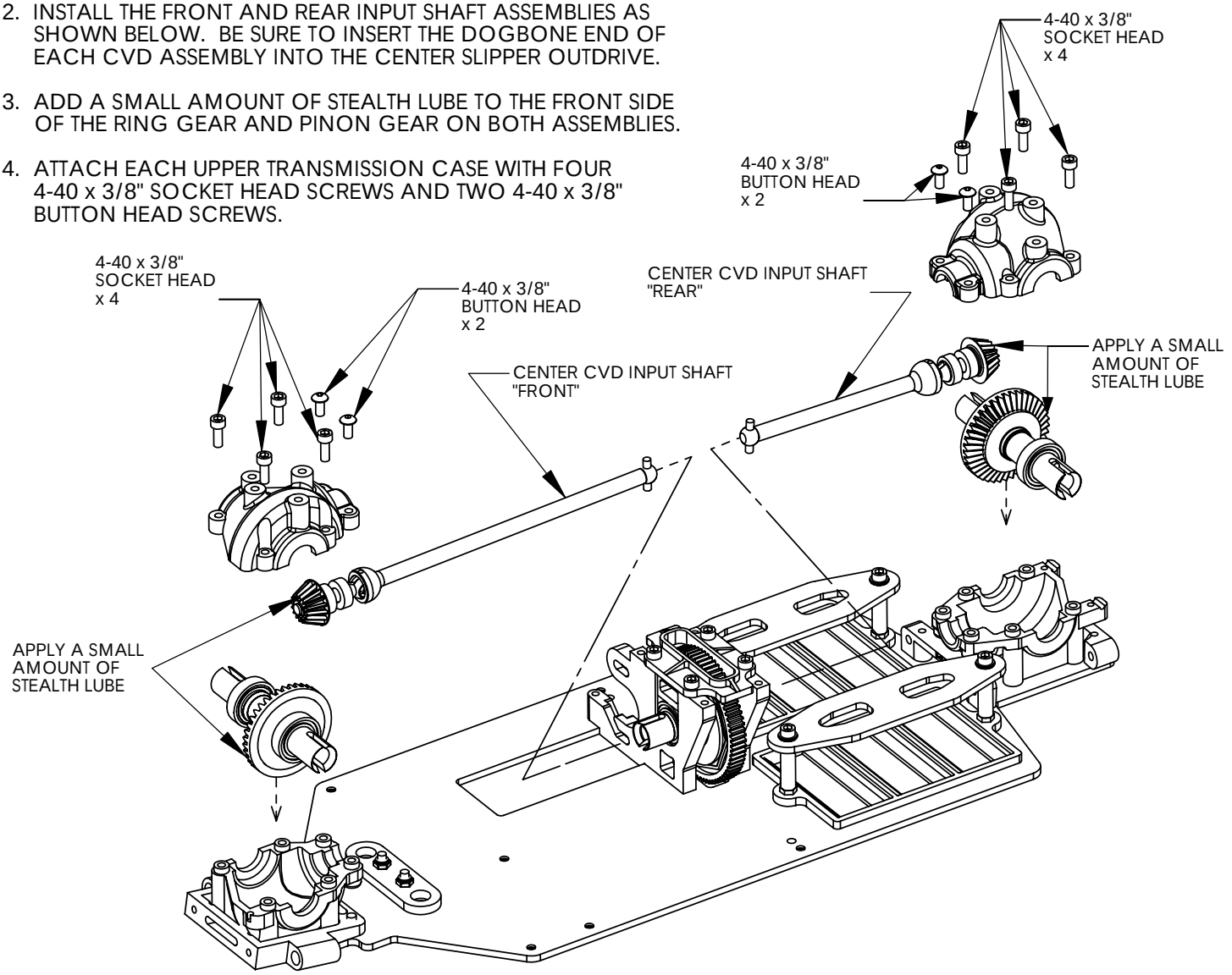
2. ATTACH THE REAR, LOWER TRANSMISSION HOUSING TO THE REAR OF THE CHASSIS USING FOUR 4-40 x 3/8" FLAT HEAD SCREWS.

3. TEMPORARILY SCREW A 4-40 x 1/8" SET SCREWS INTO EACH SIDE OF THE REAR SUSPENSION MOUNT (FRONT). LATER IN THE ASSEMBLY, IT WILL BE NECESSARY TO TIGHTEN THESE SET SCREWS AGAINST THE REAR HINGE PINS. A SMALL AMOUNT OF THREAD LOCKING COMPOUND WILL BE ADDED AT THAT TIME.

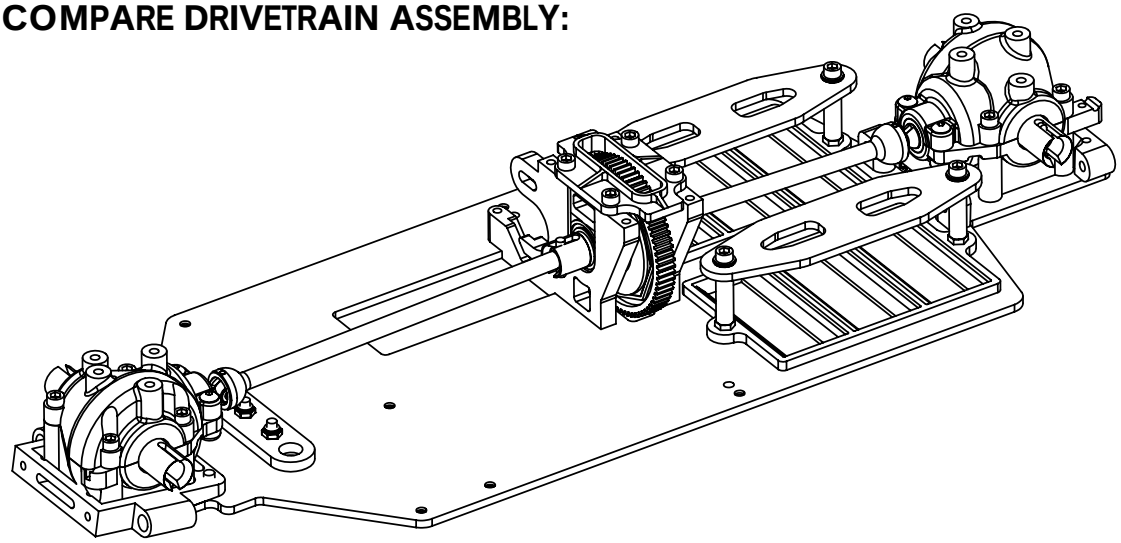


STEP 11 TRANSMISSION ASSEMBLY:

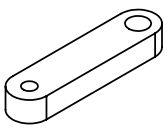
1. INSTALL THE FRONT AND REAR DIFF ASSEMBLIES IN THE LOWER TRANSMISSION CASES AS SHOWN BELOW.
2. INSTALL THE FRONT AND REAR INPUT SHAFT ASSEMBLIES AS SHOWN BELOW. BE SURE TO INSERT THE DOGBONE END OF EACH CVD ASSEMBLY INTO THE CENTER SLIPPER OUTDRIVE.
3. ADD A SMALL AMOUNT OF STEALTH LUBE TO THE FRONT SIDE OF THE RING GEAR AND PINON GEAR ON BOTH ASSEMBLIES.
4. ATTACH EACH UPPER TRANSMISSION CASE WITH FOUR 4-40 x 3/8" SOCKET HEAD SCREWS AND TWO 4-40 x 3/8" BUTTON HEAD SCREWS.



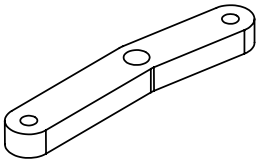
STEP 12 COMPARE DRIVETRAIN ASSEMBLY:



BAG D STEERING AND TOP DECK COMPONENTS



SHORT STEERING BELLCRANK x 1



LONG STEERING BELLCRANK x 1

STEERING BUSHING x 2

.030" NYLON WASHER x 2

1/8 x 1/4 BEARING x 4

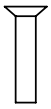
STEERING POST x 2

SHORT BALL END x 1

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

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

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

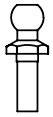


4-40 x 1/2" FLAT HEAD x 2

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

4-40 x 5/16" BUTTON HEAD x 2

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



LONG BALL END x 6

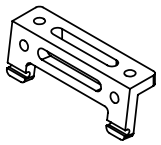
2-56 x 5/16" BUTTON HEAD x 2

4-40 MINI LOCKNUT x 8

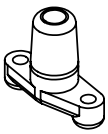
.030" ALUMINUM WASHER x 11

TRANSMISSION SPACER x 2

FRONT BODY MOUNT x 2

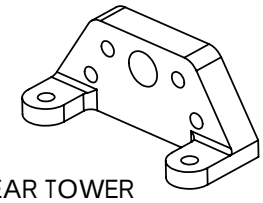


FRONT TOWER MOUNT x 1



ANTENNA MOUNT x 1

BODY MOUNT PAD x 2



REAR TOWER MOUNT x 1

STEP 1 STEERING ASSEMBLY:

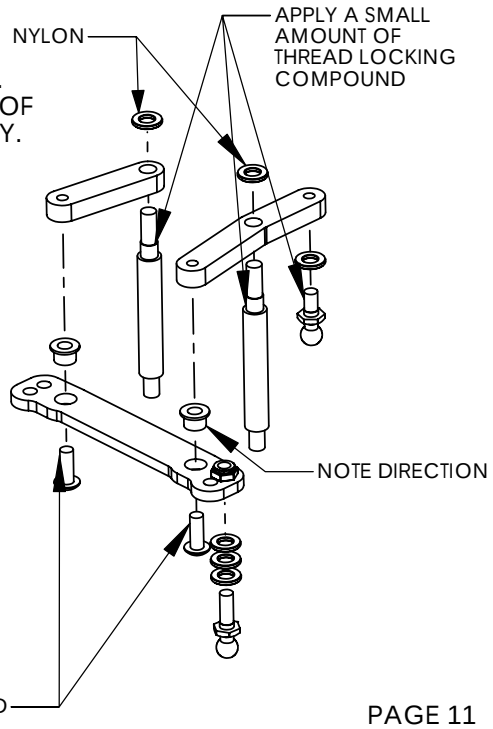
1. THREAD BOTH STEERING POSTS INTO THE STEERING BELLCRANKS AS SHOWN. PAY ATTENTION TO THE ANGLE ON THE LONG BELLCRANK. THE LONG SIDE OF THE BELLCRANK SHOULD ANGLE AWAY FROM THE CENTER OF THE ASSEMBLY. (APPLY A SMALL AMOUNT OF THREAD LOCKING COMPOUND)

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)

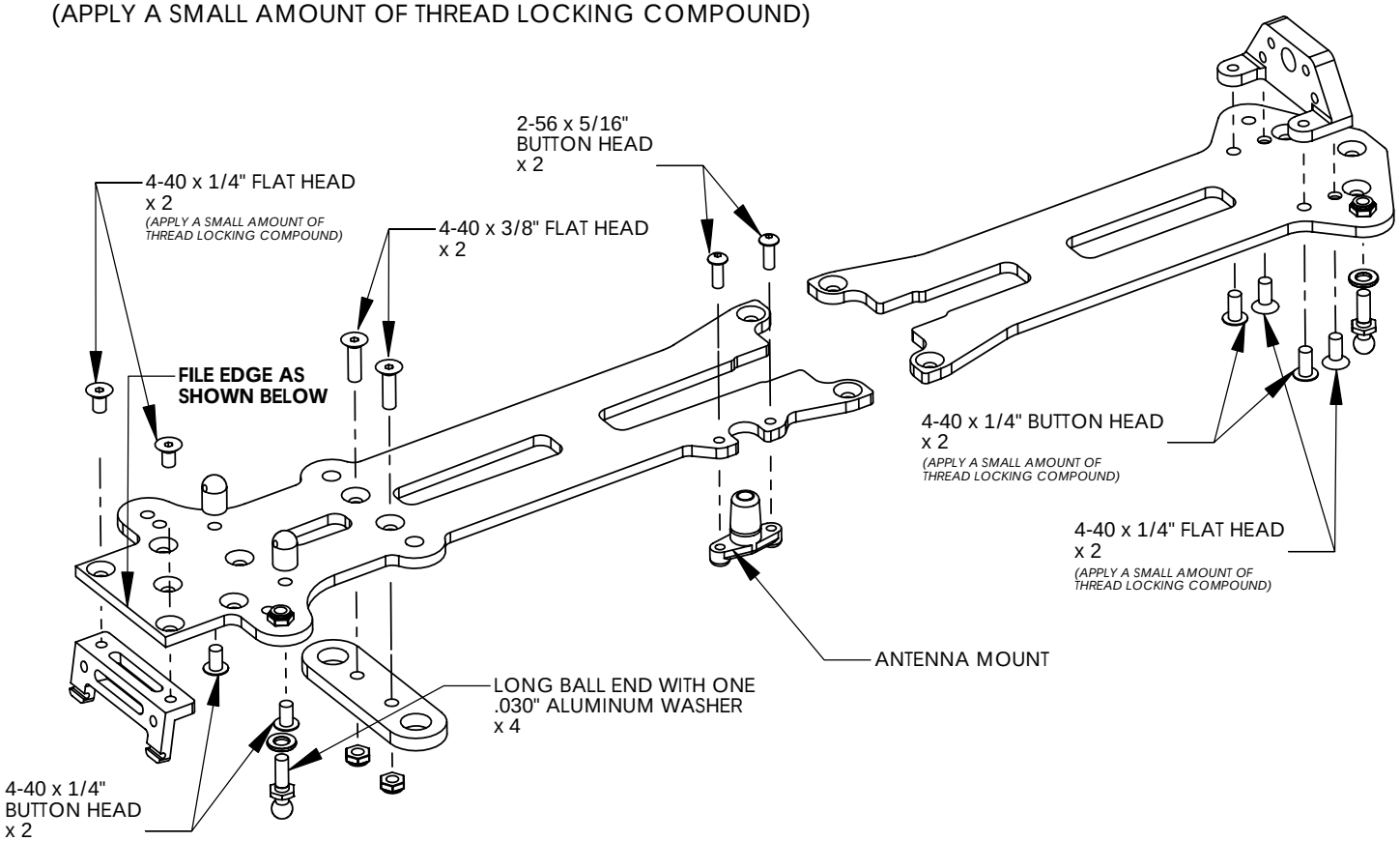
4. SLIDE THREE .030" ALUMINUM WASHERS ONTO A LONG BALL END. INSERT THE BALL END WITH THE THREE WASHERS INTO THE BACK HOLE OF THE GRAPHITE STEERING RACK (THE FLAT EDGE OF THE STEERING RACK IS THE BACK EDGE). SECURE THE BALL END WITH ONE 4-40 MINI LOCKNUT. REPEAT FOR OTHER SIDE.

5. INSERT A STEERING BUSHING INTO THE GRAPHITE STEERING RACK (NOTE DIRECTION). SLIDE ONE 4-40 x 5/16" 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)

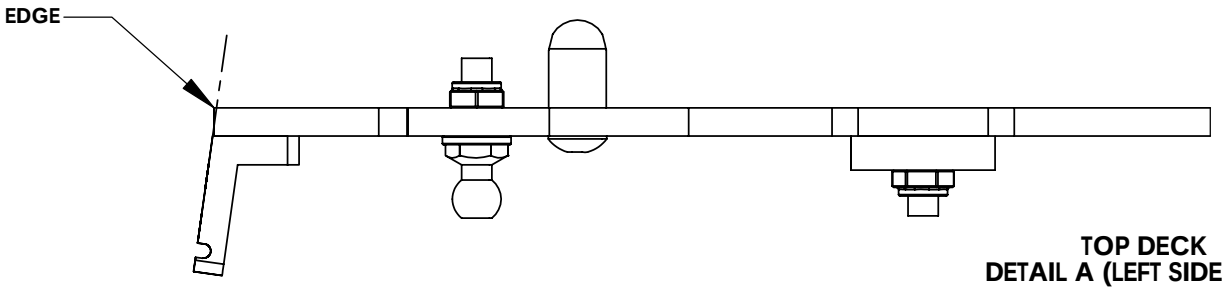


STEP 2 TOP DECK ASSEMBLY:

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 MOUNT 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 TWO 2-56 x 1/4" BUTTON HEAD SCREWS.
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)



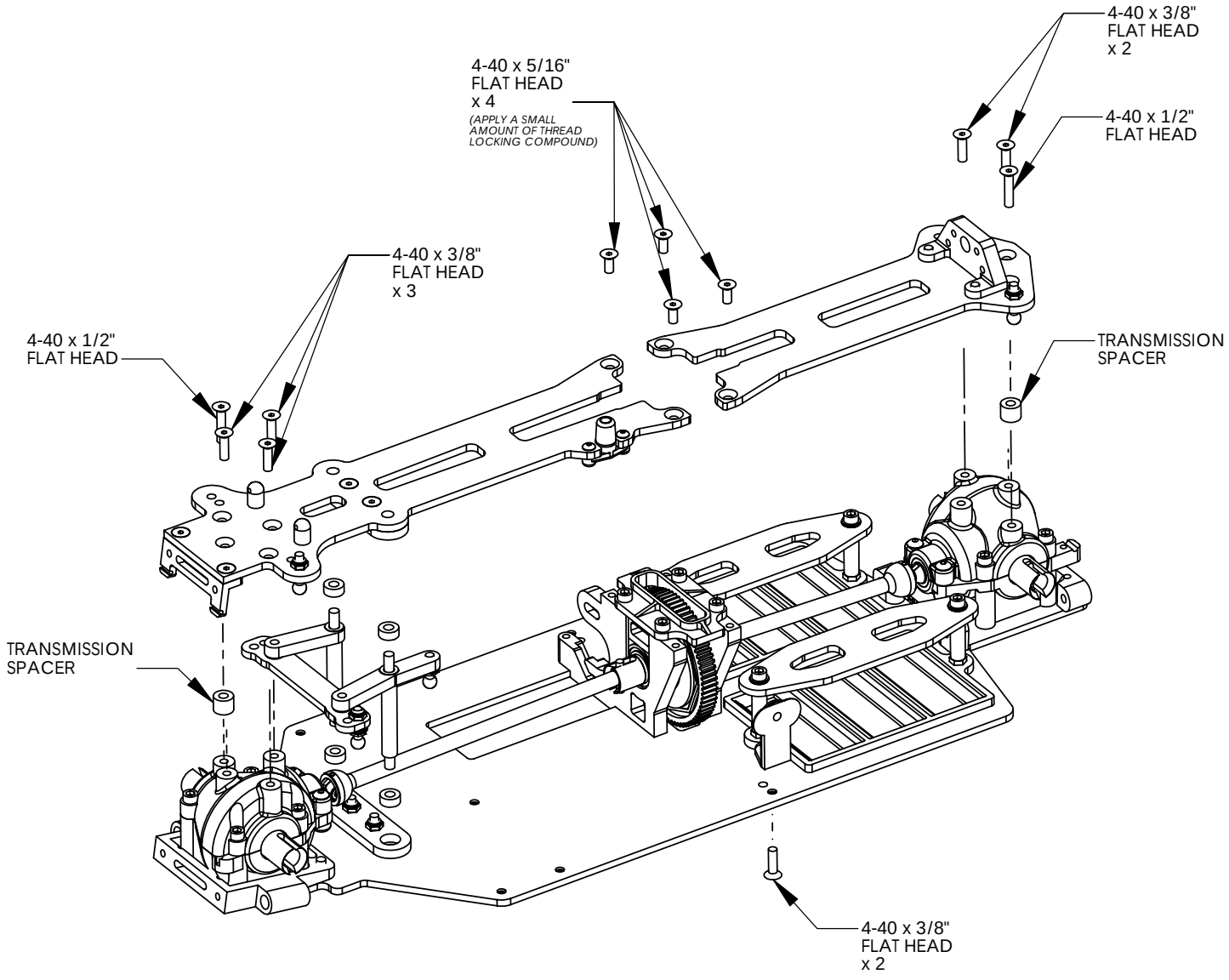
FILING TOP DECK EDGE



TOP DECK DETAIL A (LEFT SIDE VIEW)

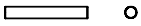
STEP 3 TOP DECK ASSEMBLY:

1. INSERT TWO 1/8 X 1/4 BEARINGS INTO THE BEARING BLOCK ON THE CHASSIS.
2. SLIDE THE STEERING ASSEBLY INTO THE BEARINGS.
3. SLIDE ONE 1/8 X 1/4 BEARING ONTO THE TOP OF EACH STEERING POST.
4. TO ATTACH THE FRONT PORTION OF THE TOP DECK, LINE 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.
5. SLIDE ONE ALUMINUM TRANSMISSION SPACER BETWEEN THE UPPER TRANSMISSION CASE AND THE TOP DECK. INSERT ONE 4-40 x 1/2" FLAT HEAD SCREW AND TIGHTEN. REFER TO ILLUSTRATION BELOW FOR LOCATION.
6. FINISH SECURING THE FRONT PORTION OF THE TOP DECK WITH THREE 4-40 x 3/8" FLAT HEAD SCREWS AND TWO 4-40 x 5/16" FLAT HEAD SCREWS. REFER TO ILLUSTRATION BELOW FOR LOCATION OF SCREWS. (APPLY A SMALL AMOUNT OF THREAD LOCKING COMPOUND TO THE 4-40 x 5/16" FLAT HEAD SCREWS)
7. POSITION THE REAR PORTION OF THE TOP DECK AS SHOWN BELOW, AND REPEAT STEP 5 ABOVE.
8. FINISH SECURING THE REAR PORTION OF THE TOP DECK WITH TWO 4-40 x 3/8" FLAT HEAD SCREWS AND TWO 4-40 x 5/16" FLAT HEAD SCREWS. REFER TO ILLUSTRATION BELOW FOR LOCATION OF SCREWS. (APPLY A SMALL AMOUNT OF THREAD LOCKING COMPOUND TO THE 4-40 x 5/16" FLAT HEAD SCREWS)
9. ATTACH ONE BODY MOUNT PAD ON EACH SIDE OF THE CHASSIS USING A 4-40 x 3/8" FLAT HEAD SCREW.



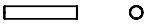
CVD BAG FRONT CVD COMPONENTS

CVD COUPLING
x 2



CVD CROSS PIN
x 2

CVD SET SCREW
x 2

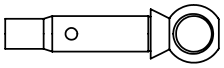


CVD ROLL PIN
x 2

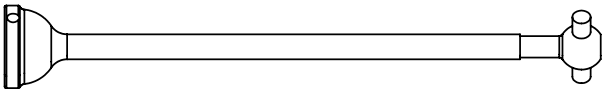
BEARING SPACER
x 2

CVD FRONT HEX
x 2

CVD FRONT
WHEEL NUT
x 2



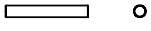
CVD FRONT AXLE
x 2



CVD FRONT BONE
x 2

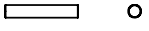
CVD BAG REAR CVD COMPONENTS

CVD COUPLING
x 2



CVD CROSS PIN
x 2

CVD SET SCREW
x 2

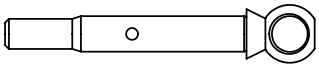


CVD ROLL PIN
x 2

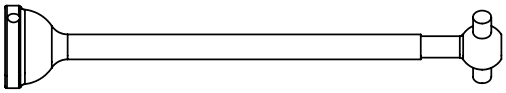
CVD AXLE
SHIM (THIN)
x 6

CVD AXLE
SHIM (THICK)
x 2

CVD REAR
WHEEL NUT
x 2



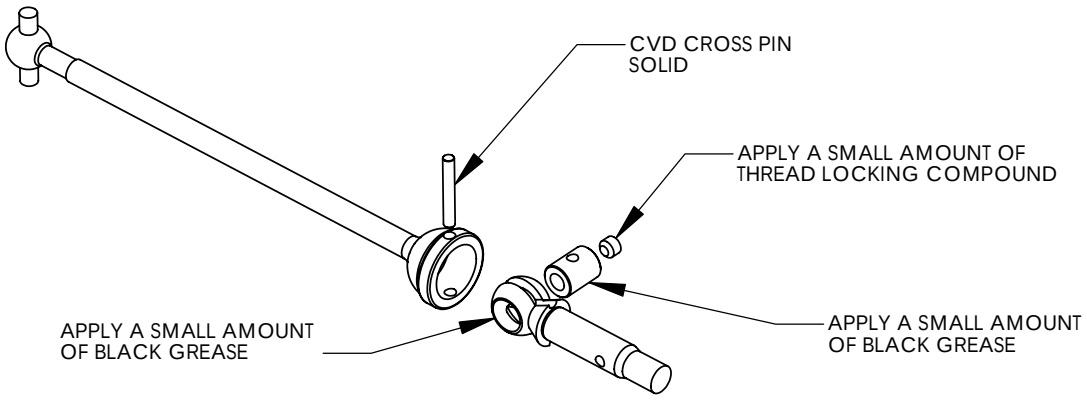
CVD REAR AXLE
x 2



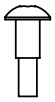
CVD REAR BONE
x 2

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



KING PIN
x 4

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

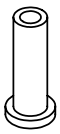
4-40 x 1/4"
BUTTON HEAD
x 2

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

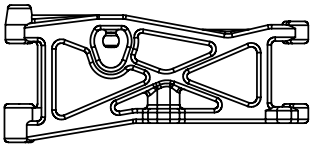
.030 ALUMINUM
WASHER
x 4

4-40 MINI
LOCKNUT
x 2

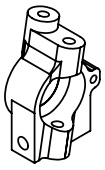
2-56 x 1/8"
BUTTON HEAD
x 4



PIVOT SLEEVE
x 2

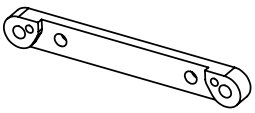


FRONT A-ARM
x 2



CASTER BLOCK
LEFT & RIGHT
x 1 EACH

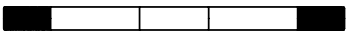
STEERING BLOCK
LEFT & RIGHT
x 1 EACH



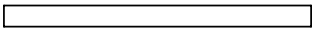
FRONT HINGE
PIN BRACE
x 1

SHORT
BALL END
x 4

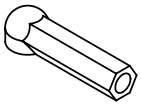
3/16 x 3/8
BEARING
x 4



TITANIUM TURNBUCKLE
1.775" (STEERING)
x 2

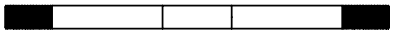


HINGE PIN 1.55"
(FRONT INNER)
x 2

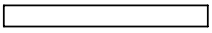


BALL CUP
x 12

BALL END DUST COVER
x 14



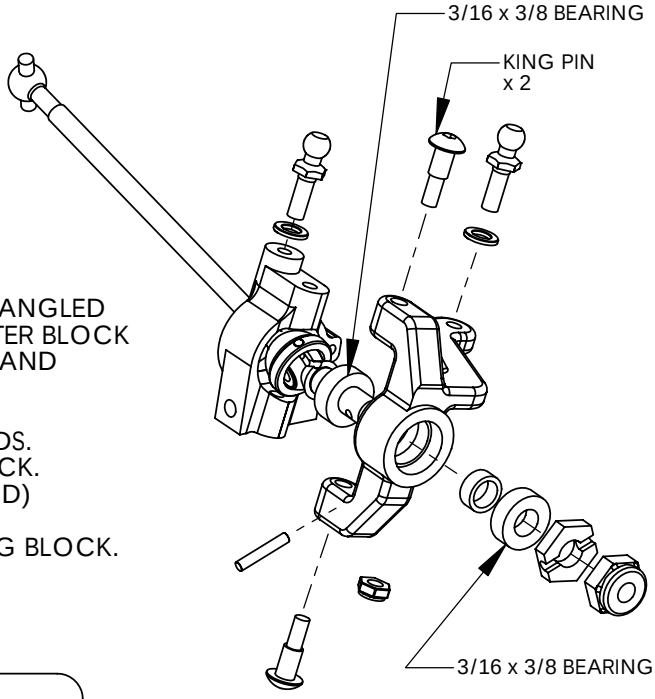
TITANIUM TURNBUCKLE
2.00" (CAMBER)
x 2



HINGE PIN 1.OO"
(FRONT OUTER)
x 2

STEP 1 STEERING AND CASTER BLOCK ASSEMBLY:

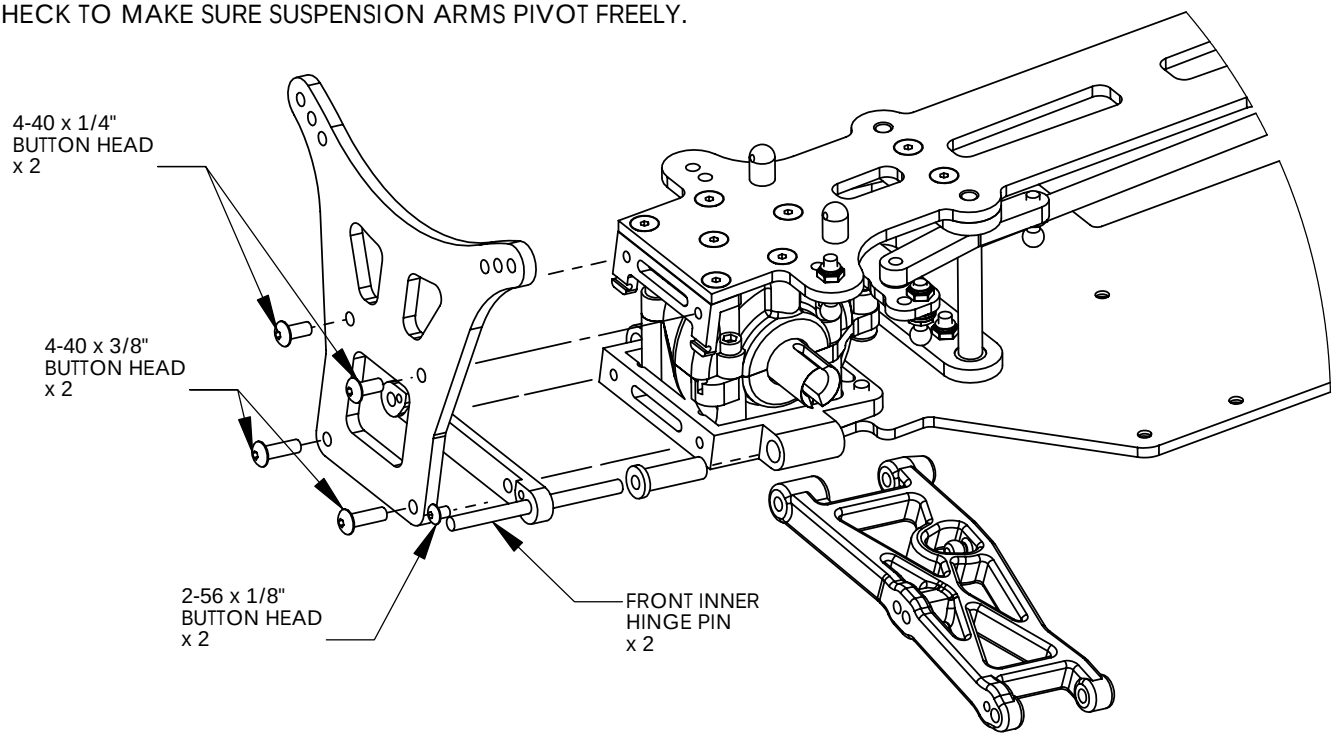
1. INSTALL ONE 3/16 x 3/8 BEARING ONTO THE CVD AXLE. SLIDE THE AXLE ASSEMBLY INTO THE BACK OF THE STEERING BLOCK.
2. IN ORDER, SLIDE A BEARING SPACER, 3/16 x 3/8 BEARING, AND CVD FRONT HEX ONTO THE CVD AXLE.
3. PRESS THE BEARING INTO THE STEERING BLOCK AND INSERT A ROLL PIN THROUGH THE GROOVE IN THE 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 SECURE 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 CASTER 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. REPEAT FOR THE OPPOSITE SIDE ASSEMBLY.



ATTENTION! NOTE DIRECTION OF STEERING BLOCK AND CASTER BLOCK

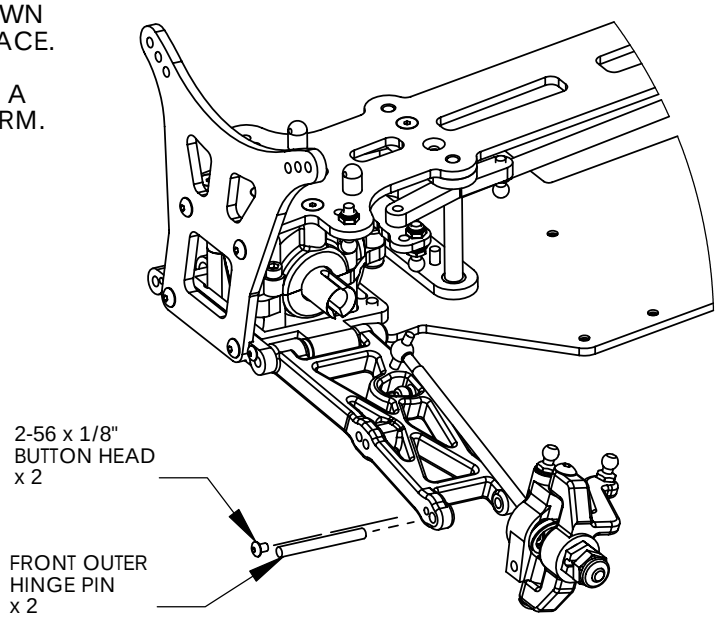
STEP 2 FRONT SUSPENSION ASSEMBLY:

1. INSERT BOTH PIVOT SLEEVES INTO THE FRONT BULKHEAD.
2. ALIGN THE FRONT A-ARMS WITH THE PIVOT SLEEVES AND PRESS THE FRONT INNER HINGE PINS INTO PLACE.
3. SLIDE THE FRONT HINGE PIN BRACE OVER THE FRONT INNER HINGE PINS UNTIL IT PRESSES AGAINST THE FRONT BULKHEAD. NOTE THE DIRECTION AND LOCATION OF THE 2-56 HOLES IN THE ILLUSTRATION BELOW.
4. 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)
5. CAPURE THE FRONT INNER HINGE PINS BY INSERTING TWO 2-56 x 1/8" BUTTON HEAD SCREWS INTO THE FRONT HINGE PIN BRACE.
6. CHECK TO MAKE SURE SUSPENSION ARMS PIVOT FREELY.



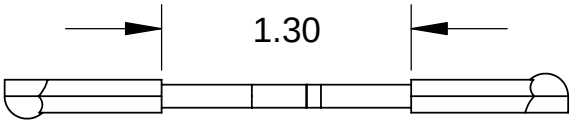
STEP 3 FRONT SUSPENSION ASSEMBLY:

1. POSITION THE 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 SCREW 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.

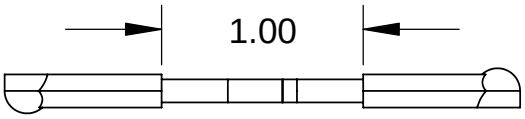


STEP 4 FRONT TURNBUCKLE ASSEMBLY:

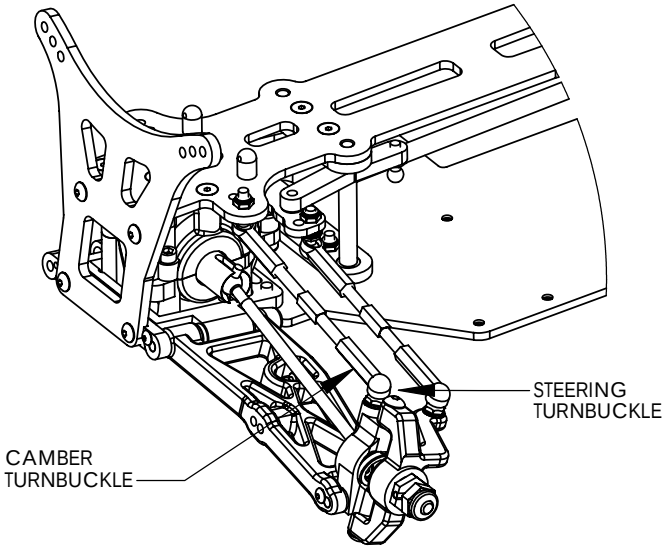
1. TWIST THE BALL CUPS ON TO EACH BLUE TITANIUM TURNBUCKLE UNTIL YOU GET THE DIMENSION SHOWN FOR EACH PART.
2. LOCATE THE NOTCH ON EACH TURNBUCKLE AND ROTATE THEM SO THAT IT IS LOCATED ON THE OUTSIDE OF THE CAR ON THE LEFT AND THE INSIDE ON THE RIGHT. SNAP ALL OF THE FRONT TURNBUCKLES INTO PLACE WHERE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



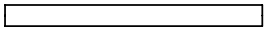
BAG F REAR END COMPONENTS

LONG BLACK BALL END x 2

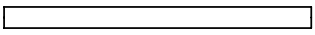
2-56 x 1/8" BUTTON HEAD x 2

4-40 MINI LOCKNUT x 2

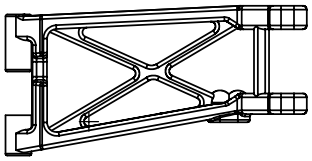
.030 NYLON WASHER x 4



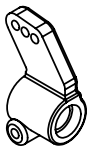
HINGE PIN 1.O6" (REAR OUTER) x 2



HINGE PIN 2.00" (REAR INNER) x 2



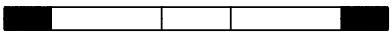
REAR A-ARM LEFT & RIGHT x 1 EACH



HUB CARRIER LEFT & RIGHT x 1 EACH

3/16 x 3/8 BEARING x 2

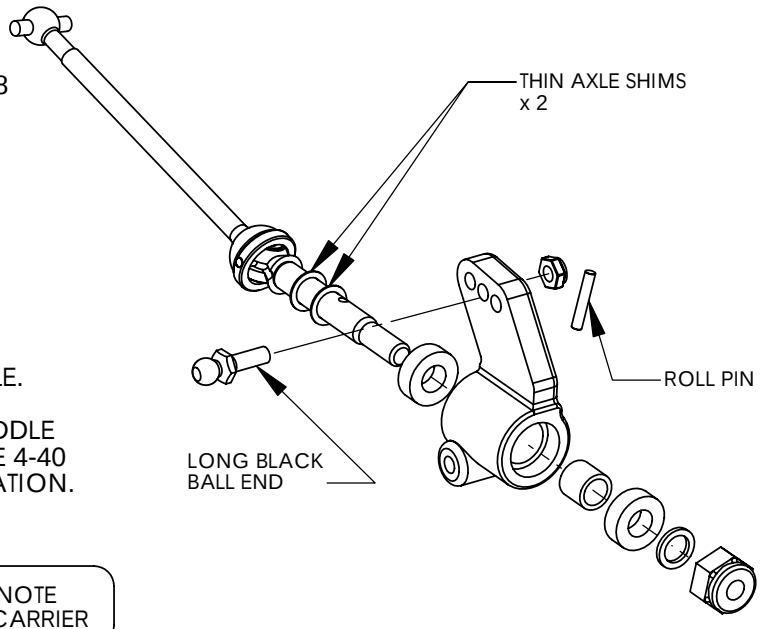
BEARING SPACER x 2



TITANIUM TURNBUCKLE 2.00" (CAMBER) x 2

STEP 1 HUB CARRIER ASSEMBLY:

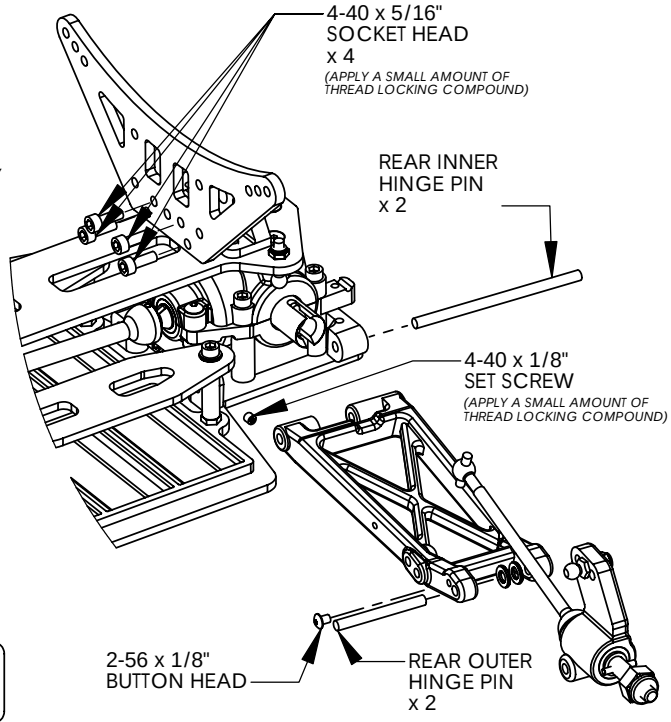
1. SLIDE TWO SMALL AXLE SHIMS AND ONE 3/16 x 3/8 BEARING ONTO THE CVD AXLE. SLIDE THE AXLE ASSEMBLY INTO THE BACK OF THE HUB CARRIER.
2. IN ORDER, SLIDE A BEARING SPACER, 3/16 x 3/8 BEARING, AND ONE THICK AXLE SHIM ONTO THE CVD AXLE.
3. PRESS THE BEARING INTO THE HUB CARRIER AND INSERT A ROLL PIN INTO 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 LOCKNUT. 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:

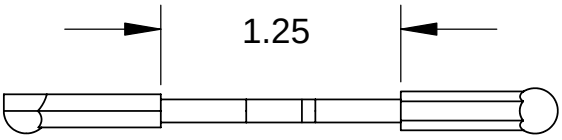
1. ATTACH THE REAR SHOCK TOWER WITH FOUR 4-40 x 5/16" SOCKET HEAD SCREWS. (APPLY A SMALL AMOUNT OF THREAD LOCKING COMPOUND)
2. ALIGN THE REAR A-ARMS BETWEEN THE REAR SUSPENSION MOUNTS. SLIDE THE REAR INNER HINGE PINS INTO PLACE AND SECURE THEM WITH WITH THE 4-40 SET SCREWS. (APPLY A SMALL AMOUNT OF THREAD LOCKING COMPOUND)
3. 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.
4. CAPTURE THE OUTER HINGE PINS WITH A 2-56 x 1/8" BUTTON HEAD SCREW INTO EACH A-ARM.
5. PUT BALL END DUST COVERS ON ALL OF THE REAR SUSPENSION BALL ENDS.
6. MAKE SURE THE A-ARMS AND HUB CARRIERS PIVOT FREELY.



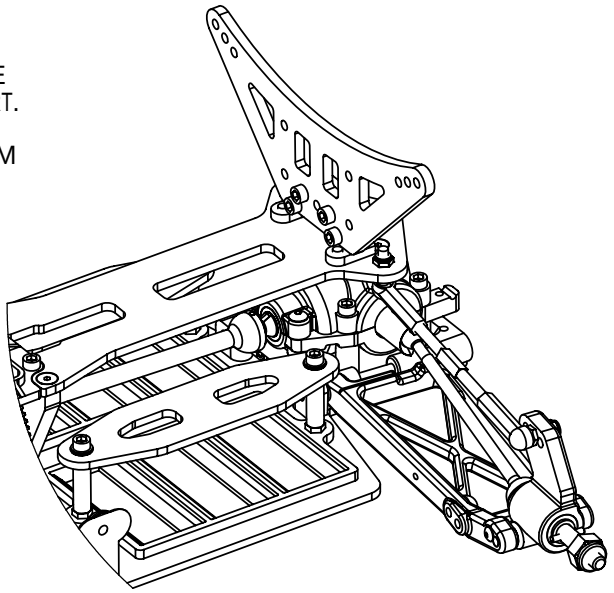
ATTENTION! THIS IS A LEFT SIDE ASSEMBLY ILLUSTRATION, NOTE DIRECTION AND CONFIGURATION OF HUB CARRIER

STEP 3 REAR TURNBUCKLE ASSEMBLY:

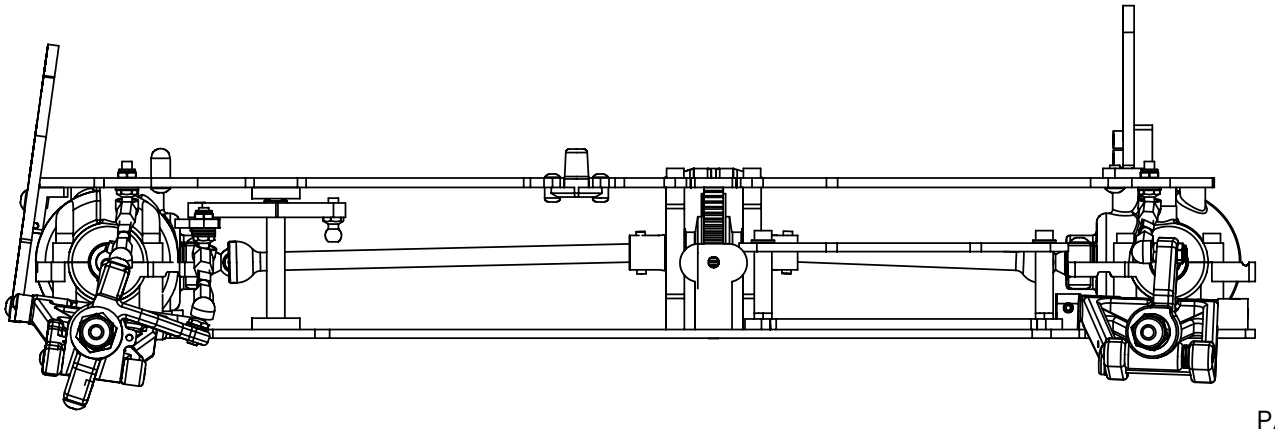
1. TWIST THE BALL CUPS ONTO EACH BLUE TITANIUM TURNBUCKLE UNTIL YOU GET THE DIMENSION SHOWN FOR EACH EACH PART.
2. LOCATE THE NOTCH ON EACH TURNBUCKLE AND ROTATE THEM SO THAT IT IS LOCATED ON THE OUTSIDE OF THE CAR ON THE LEFT AND THE INSIDE ON THE RIGHT. SNAP ALL THE REAR TURNBUCKLES INTO PLACE WHERE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



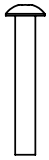
REAR CAMBER TURNBUCKLE 2.00": x 2
SCALE 1:1



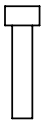
STEP 4 COMPARE SUSPENSION ASSEMBLY:



SHOCK BAG **SHOCK COMPONENTS**



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



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

4-40 PLAIN NUT x 4

GOLD WASHER x 4

SHOCK BUSHING x 4

SHOCK NUT x 4

.030 TRAVEL LIMITER x 2

E-CLIP ROLL x 1

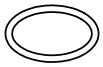
SHOCK PISTON #1, #2, #3 x 1 (TREE)

SMALL SHOCK SPACER x 8 (TREE)

LARGE SHOCK SPACER x 4 (TREE)

SHOCK SNAP RETAINER x 4 (TREE)

SHOCK O-RING x 8



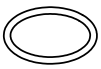
SHOCK CAP O-RING x 4

SHOCK CAP x 4

SHOCK EYELET x 4

SHOCK PIVOT BUSHING x 4

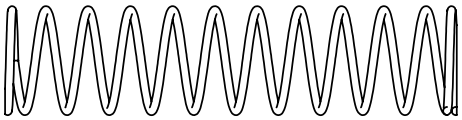
THREAED SHOCK COLLAR x 4



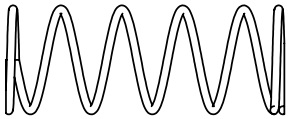
SHOCK COLLAR O-RING x 4

SPRING RETAINER x 4

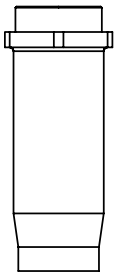
SPRING CUP x 4



REAR SPRING (BLACK) x 2

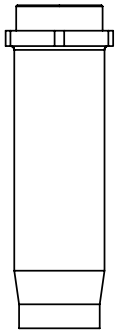


FRONT SPRING (SILVER) x 2



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

SETUP NOTES:

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 THE FOLLOWING STEPS COMPLETELY 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 ANY BURRS YOU FIND. BURRS CAN KEEP THE PARTS FROM SNAPPING IN CORRECTLY, AND CAN CAUSE THE SHOCK TO LEAK OR THE SHAFT TO JAM.
2. IN ORDER, LOAD THE SHOCK TOOL WITH THE FOLLOWING PARTS: (REFER TO FIGURE A BELOW)

    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"

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 BELOW 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 TOP OF THE SHOCK BODY. SLIDE THE SHOCK BODY O-RING OVER THE THREADS. (USE THE BLACK O-RINGS INCLUDED WITH ALL OF THE INNER SHOCK PARTS)
7. INSERT THE SHOCK COLLAR O-RING INTO THE THREADED SHOCK COLLAR. THREAD THE SHOCK COLLAR ON ALL THE WAY UP THE SHOCK BODY. (USE THE BLACK O-RINGS PACKAGED WITH THE SHOCK COLLARS)
8. COMPARE YOUR ASSEMBLY TO FIGURE C BELOW.

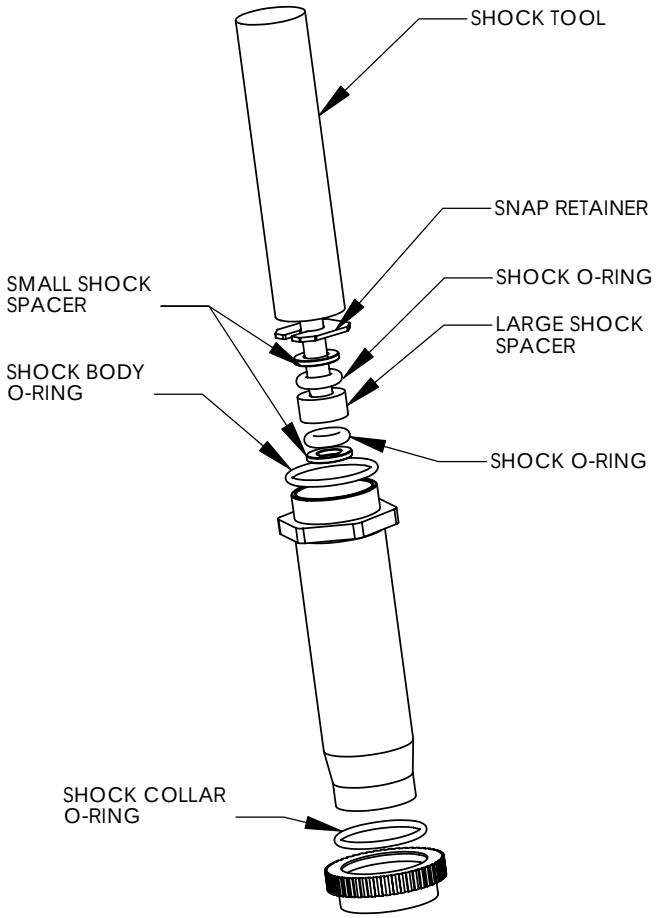


FIGURE A

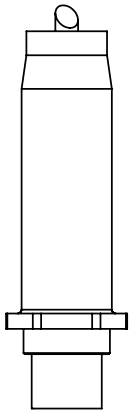


FIGURE B

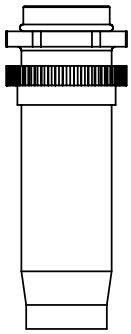


FIGURE C

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 THE FOLLOWING STEPS COMPLETELY BEFORE BEGINNING.

1. INSTALL AN E-CLIP ON BOTH SIDES OF THE SHOCK PISTON. USE #3 PISTONS FOR THE FRONT SHOCKS WITH NO LIMITERS. USE #1 PISTONS FOR THE REAR SHOCKS WITH ONE LIMITER.
2. THREAD THE SHOCK EYELET ONTO THE SHAFT. THEN, SNAP THE PIVOT BALL INTO THE EYELET.
3. FILL THE SHOCK HALF FULL WITH SHOCK OIL AND MOVE THE SHOCK SHAFT UP AND DOWN A FEW TIMES. MAKE SURE TO PUSH THE PISTON PAST THE HALF WAY POINT.
4. FIGURE D SHOWS A SHOCK WITH THE SHAFT AT ITS HALF WAY POINT.

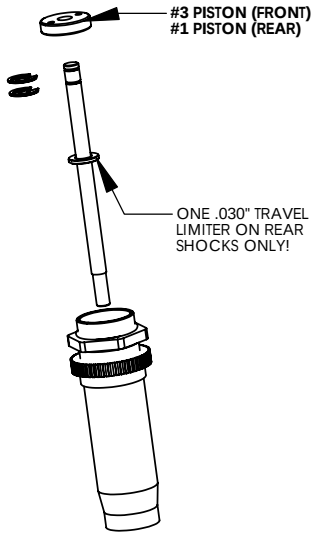


FIGURE A

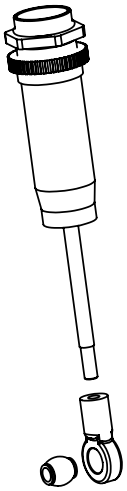


FIGURE B

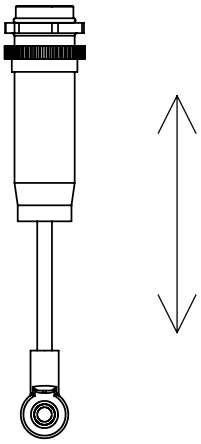


FIGURE C

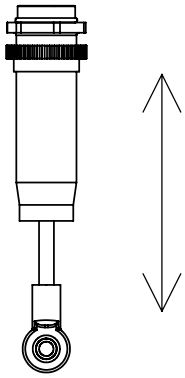


FIGURE D

5. FILL THE SHOCK BODY TO THE TOP OF THE THREADS WITH SHOCK OIL.
6. THREAD THE SHOCK CAP ON ALL THE WAY. THEN, LOOSEN IT A FEW TURNS. (SEE FIGURE G BELOW)
7. SLOWLY PUSH THE SHOCK SHAFT ALL THE WAY UP TO BLEED OUT EXCESS OIL. THEN, TIGHTEN THE CAP. NOW, WHEN YOU COMPRESS THE SHOCK, IT SHOULD ONLY REBOUND ABOUT .25". REPEAT THE BLEEDING PROCESS UNTIL .25" REBOUND IS ACHIEVED.
8. SLIDE THE SPRING AND RETAINER ONTO THE SHOCK. PUSH THE SPRING RETAINER UP ENOUGH TO INSERT THE SPRING CUP OVER THE SHOCK EYELET.
9. THREAD THE SHOCK COLLAR DOWN UNTIL IT TOUCHES THE SPRING. SET THE RIDE HEIGHT AFTER THE ELECTRICAL IS MOUNTED IN THE CAR.

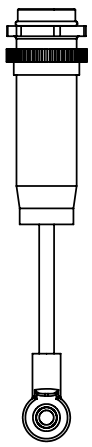


FIGURE E

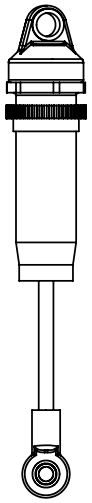


FIGURE F

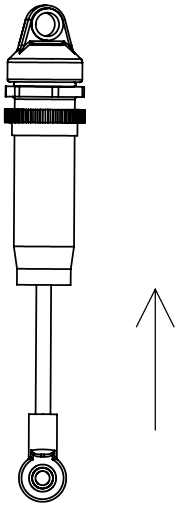


FIGURE G

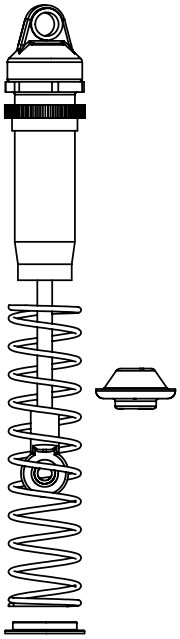


FIGURE H

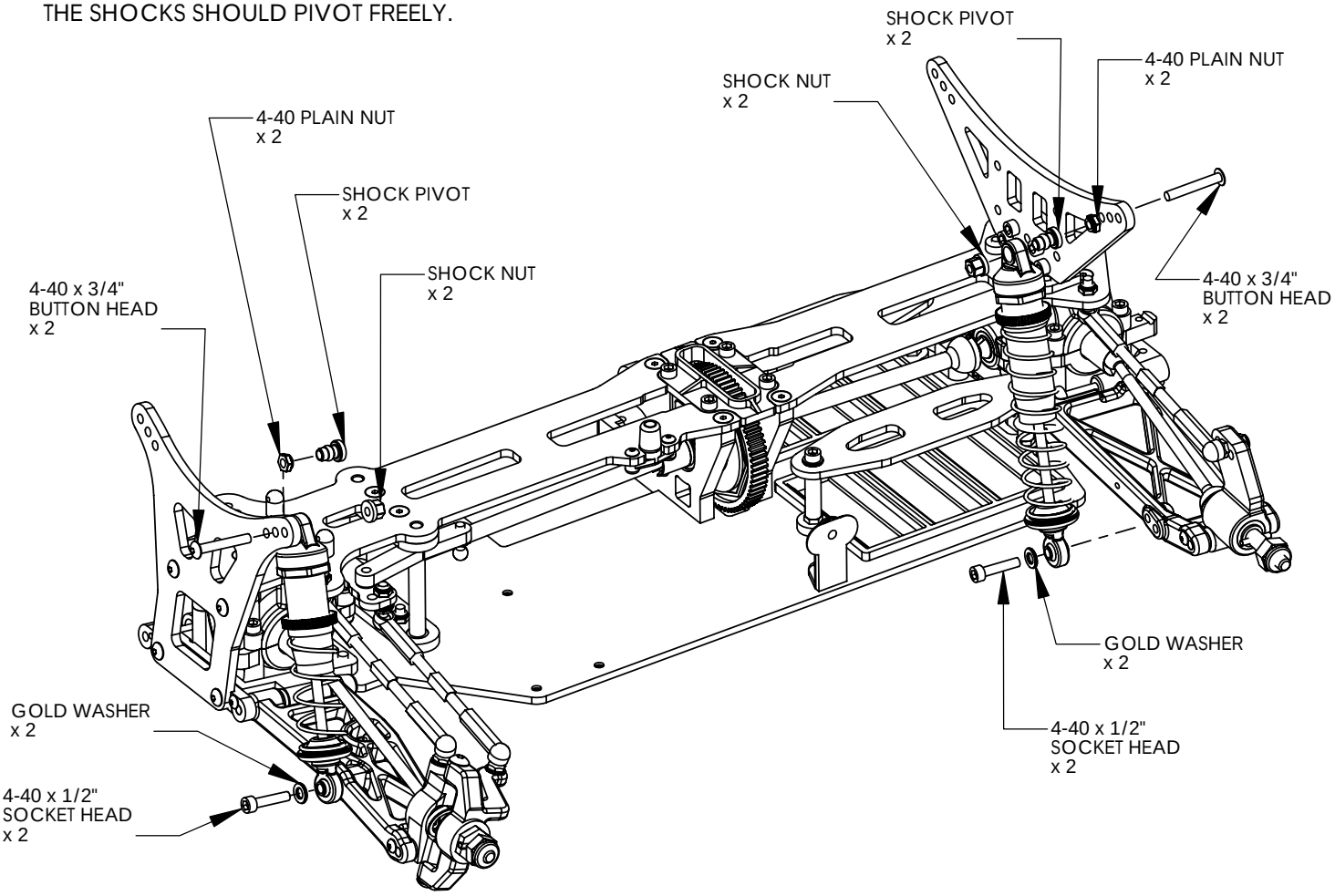
FIGURE I

STEP 3 SHOCK MOUNTING:

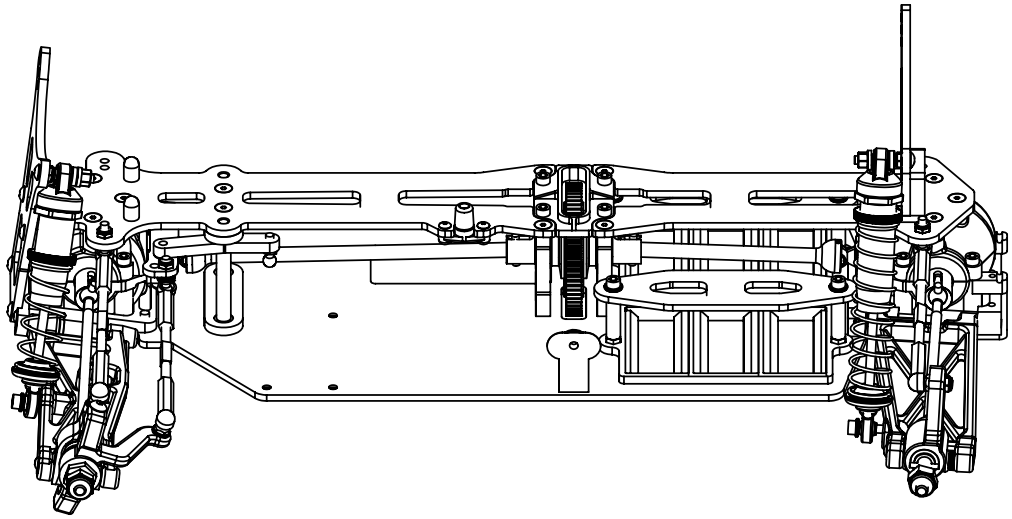
1. ATTACH THE BOTTOM OF THE FRONT SHOCKS TO THE OUTSIDE HOLES ON THE FRONT A-ARMS. USE THE 4-40 x 1/2" SOCKET HEAD SCREWS WITH A GOLD WASHER ON EACH.

2. ATTACH THE BOTTOM OF THE REAR SHOCKS TO THE INSIDE HOLES ON THE REAR A-ARMS. USE THE 4-40 x 1/2" SOCKET HEAD SCREWS WITH A GOLD WASHER ON EACH.

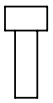
3. SLIDE THE 4-40 x 3/4" BUTTON HEAD SCREWS THROUGH THE MIDDLE HOLES ON THE FRONT AND REAR SHOCK TOWERS. SECURE THE SCREWS WITH THE 4-40 PLAIN NUTS. SLIDE THE SHOCK PIVOTS AND TOP OF EACH SHOCK ONTO THE SCREWS. SECURE THE SHOCKS WITH THE PLASTIC SHOCK NUTS. DO NOT OVER TIGHTEN THE PLASTIC SHOCK NUTS. THE SHOCKS SHOULD PIVOT FREELY.



STEP 4 COMPARE COMPLETED SUSPENSION ASSEMBLY:



BAG G MISCELLANEOUS COMPONENTS



3mm x 8mm
SOCKET HEAD
x 2

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

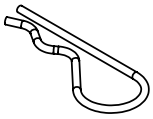
4-40 x 3/8"
BUTTON HEAD
x 8

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

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

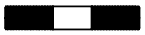
GOLD WASHER
x 6

SHORT
BALL END
x 1



BODY CLIP
x 5

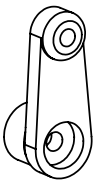
SHORT
BALL CUP
x 2



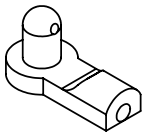
TITANIUM
TURNBUCKLE
x 1

SERVO MOUNT
x 2

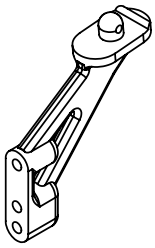
SERVO MOUNT
SPACERS
THICK x 2
THIN x 2



SERVO HORNS
A, F, H, J
x 1 EA

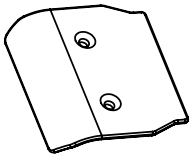


REAR BODY
MOUNT
x 1



WING MOUNT
x 2

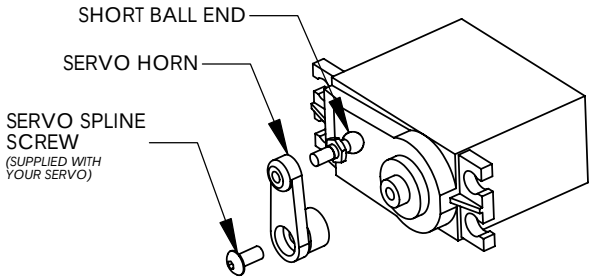
WING MOUNT
SPACER
x 2



FRONT BUMPER
x 1

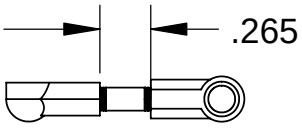
STEP 1 SERVO HORN ASSEMBLY:

1. INSTALL A SHORT BALL END INTO THE SERVO HORN THAT MATCHES YOUR BRAND OF SERVO.
2. ALIGN THE SPLINES ON THE SERVO HORN AT A VERY SLIGHT ANGLE TOWARD THE BODY OF THE SERVO, AND PRESS THE SERVO HORN ONTO THE SERVO.
3. USE THE SCREW THAT WAS SUPPLIED WITH YOUR SERVO TO SECURE THE SERVO HORN.



ATTENTION! AFTER ALL THE ELECTRONICS ARE INSTALLED, IT MAY BE NECESSARY TO COME BACK AND CENTER THE SERVO HORN ON THE SPLINE.

STEP 2 STEERING TURNBUCKLE ASSEMBLY:

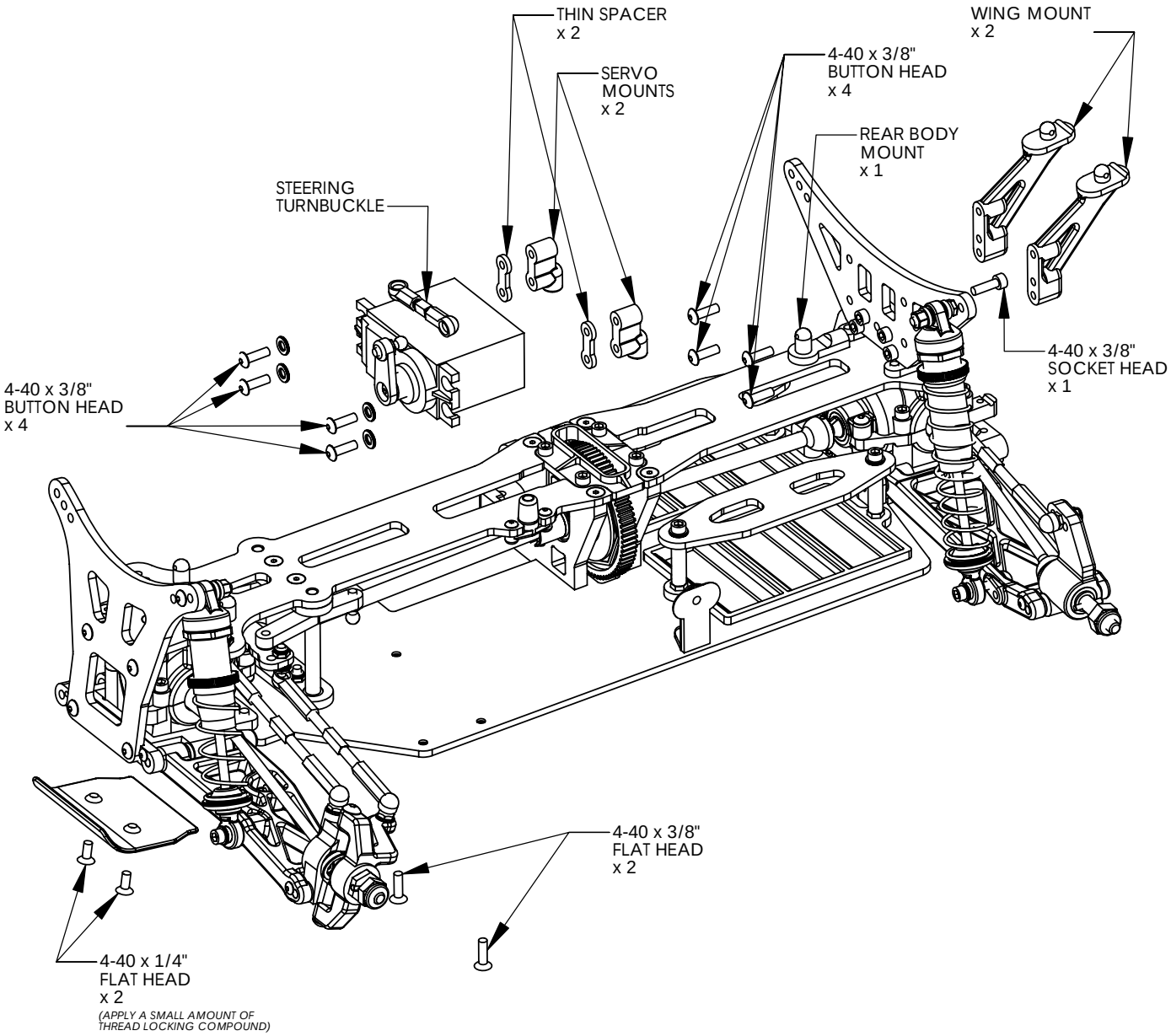


STEERING TURNBUCKLE 1.00": x 1
SCALE 1:1

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

STEP 3 MISCELLANEOUS ASSEMBLY:

1. ATTACH THE SERVO MOUNTS TO YOUR SERVO BY USING FOUR 4-40 x 3/8" BUTTON HEAD SCREWS WITH A GOLD WASHERS ON EACH. CHECK THE ALIGNMENT OF YOUR SERVO WITH THE SUPPLIED MOUNTS. SOME SERVOS REQUIRE SPACERS IN FRONT OF THE ACTUAL SERVO MOUNTS. TYPICALLY, AIRTRONICS SERVOS WILL REQUIRE THE THICK SERVO MOUNT SPACERS. JR AND FUTABA SERVOS WILL USE THE THIN SERVO MOUNT SPACERS.
2. SECURE THE SERVO MOUNTS TO THE CHASSIS WITH TWO 4-40 x 3/8" FLAT HEAD SCREWS.
3. PUT THE BALL END DUST COVERS ON THE SERVO HORN AND THE STEERING BELLCRANK BALL ENDS.
4. ATTACH THE ASSEMBLED STEERING TURNBUCKLE TO THE BALL ENDS LOCATED ON THE SERVO HORN AND STEERING BELLCRANK.
5. INSTALL THE WING MOUNTS USING FOUR 4-40 x 3/8" BUTTON HEAD SCREWS.
6. INSTALL THE REAR BODY MOUNT USING ONE 4-40 x 3/8" SOCKET HEAD SCREW.
7. INSTALL THE CHASSIS TAPE ON THE BOTTOM OF THE CHASSIS. USE THE PHOTOS LOCATED AT THE END OF THIS MANUAL FOR A REFERENCE.
8. 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)



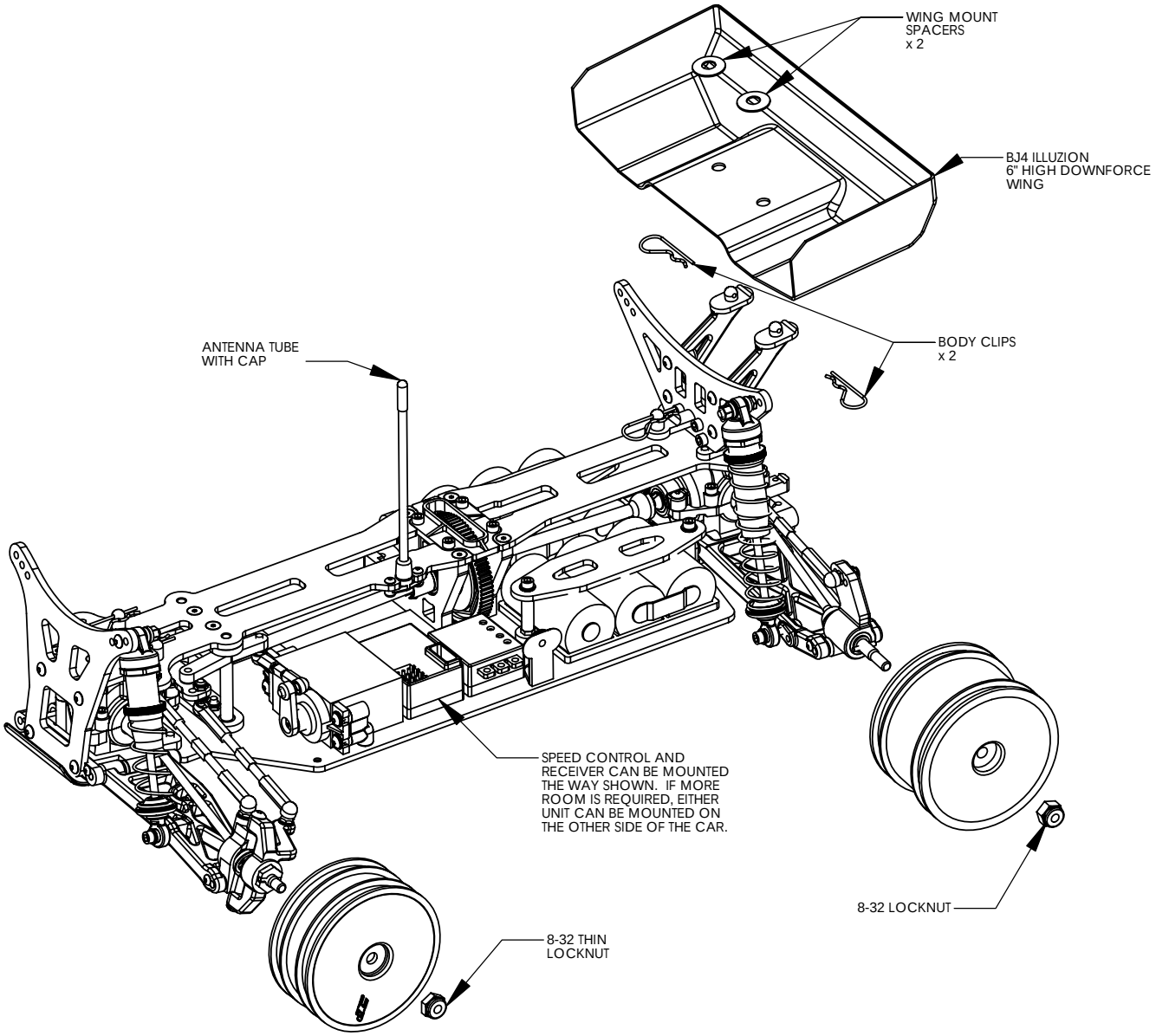
STEP 4 MISCELLANEOUS ASSEMBLY:

1. 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 RECOMMENED THAT YOU PUT TWO LAYERS OF SPEED CONTROL AND RECEIVER TAPE UNDER YOUR ELECTRONICS. RUN YOUR RECEIVER ANTENNA WIRE UP THROUGH THE ANTENNA MOUNT AND 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 THIS MANUAL FOR A REFERENCE.

2. CUT OUT THE ILLUZION WING ALONG THE CUT LINES USING LEXAN SCISSORS. ATTACH THE WING TO THE MOUNTS USING THE WING MOUNT SPACERS FIRST, THEN THE INCLUDED BODY CLIPS.

3. 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.

4. 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.



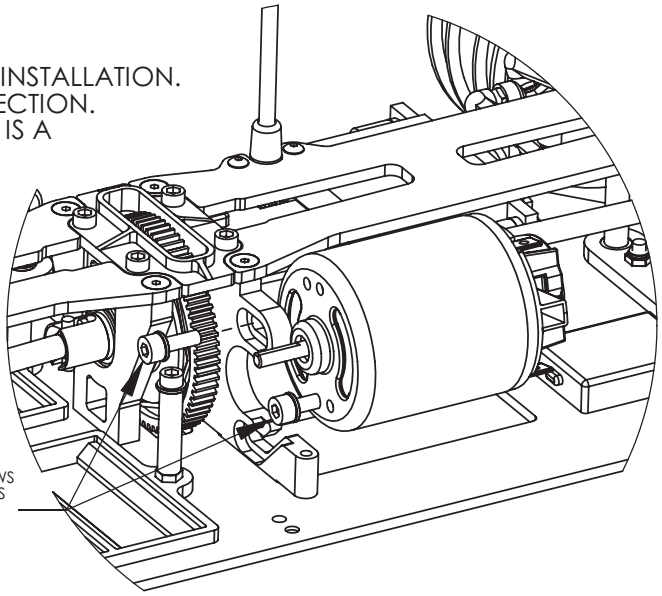
STEP 5 MOTOR INSTALLATION:

1. INSTALL YOUR PINON OF CHOICE ON THE MOTOR PRIOR TO INSTALLATION. THE PINON GEAR WILL BE DETERMINED BY YOUR MOTOR SELECTION. THE RECOMMENDED PINON FOR A 10 x 2 MODIFIED MOTOR IS A 20 TOOTH.

2. INSTALL YOUR MOTOR USING THE 3mm x 8mm SOCKET HEAD SCREWS WITH A GOLD WASHERS ON EACH. THREAD THE BOTTOM SCREW PARTIALLY INTO THE MOTOR PRIOR TO INSTALLATION.

3. SET THE GEAR MESH SO THAT THE PINON GEAR AND THE SPUR GEAR ROCK BACK AND FORTH A SMALL AMOUNT.

4. TIGHTEN THE SCREWS TO SECURE THE MOTOR.



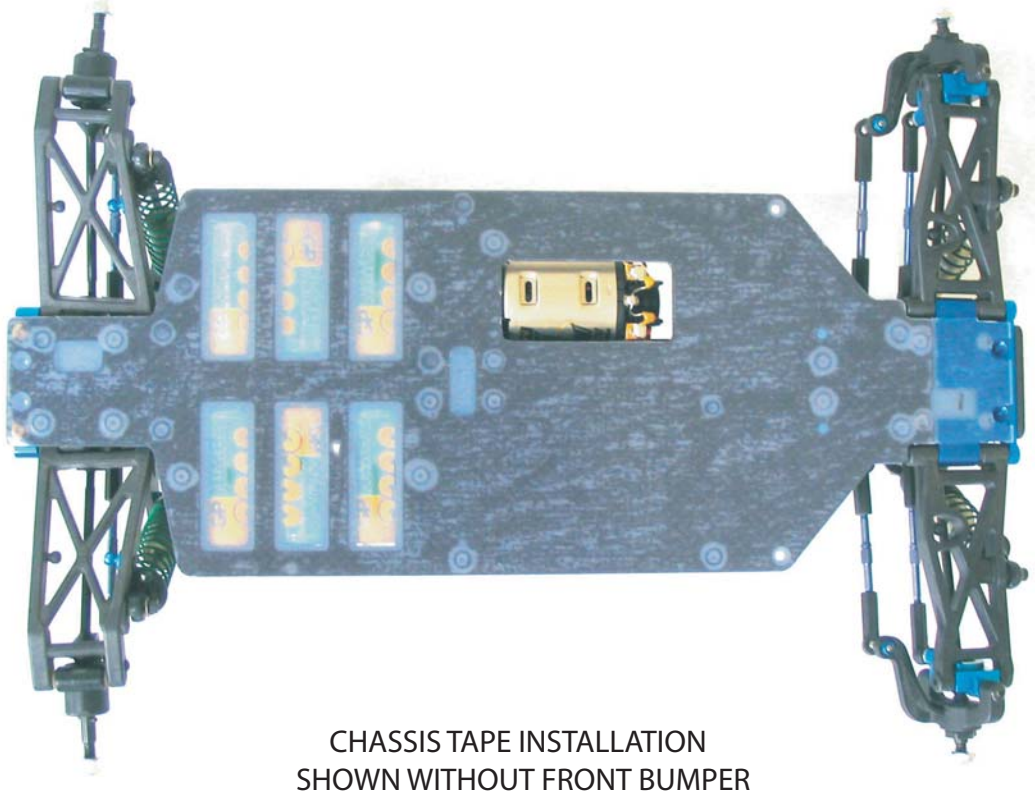
NOTE: IT IS HELPFUL TO HAVE A 2.5mm BALL END HEX DRIVER FOR MOTOR INSTALLATION.

STEP 6 BODY FINISHING AND COMPLETED ASSEMBLY:

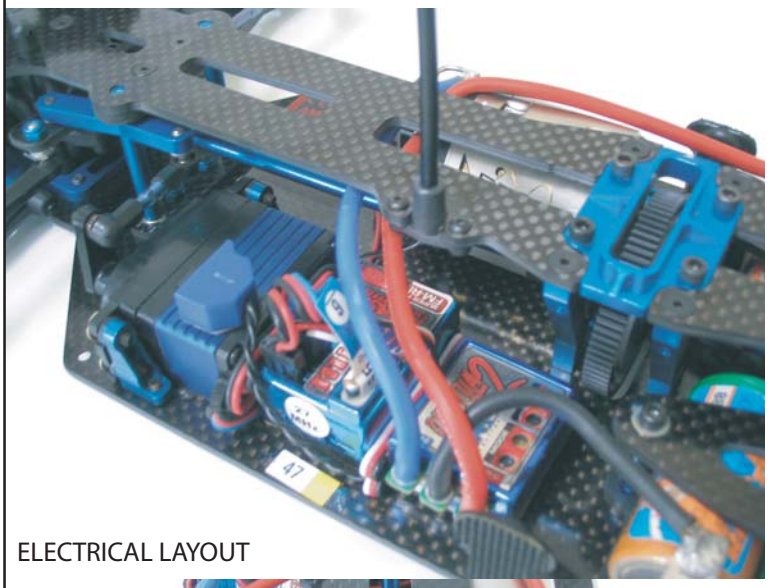
1. THE BODY COMES CLEAR. MASK AND PAINT THE INSIDE OF YOUR BODY AS DESIRED. WINDOW MASKS ARE INCLUDED FOR YOUR CONVENIENCE. BE SURE TO USE A PAINT THAT IS SPECIFICALLY FORMULATED TO ADHERE TO LEXAN.

2. CUT OUT THE BJ4 WORLDS EDITION BODY ALONG THE CUT LINES ON THE BODY USING LEXAN SCISSORS. NEXT, DRILL OUT THE LOCATIONS FOR THE BODY MOUNTS AND ANTENNA. MOUNT THE BODY USING THE INCLUDED BODY CLIPS. FOR A MORE SECURE ATTACHMENT, APPLY SOME HOOK AND LOOP TAPE TO THE BODY MOUNT PADS AND BODY.

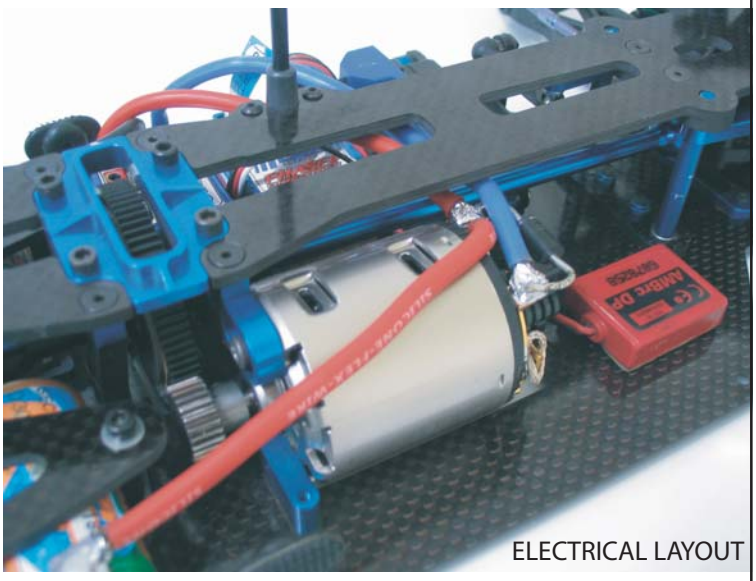
TIRES, ELECTRICAL AND BATTERY PACK NOT INCLUDED.
BODY IN KIT COMES CLEAR. SOME DECALS SOLD SEPARATELY.



CHASSIS TAPE INSTALLATION
SHOWN WITHOUT FRONT BUMPER



ELECTRICAL LAYOUT



ELECTRICAL LAYOUT

ELECTRICAL LAYOUT
BATTERY PACK WITH JUMPER
WIRE OVER TOP DECK

BJ Worlds Edition
JCONCEPTS
IFMAR WORLD CHAMPION 2005

BJ4 WORLDS EDITION SPECIFICATIONS

Wheel Base:	10.94" (278mm)
Vehicle Width:	9.65" (245mm)
Weight (ready to run):	3 lbs. 7.6 oz. (1575g)
Internal gear ratio:	2.50:1
Front bulkhead kick-up:	8 degrees
Front castor blocks:	10 degrees
Standard rear hub carrier toe-in:	0 degrees
Standard suspension mount toe-in:	3 degrees
Standard suspension mount anti-squat:	2 degrees

FINAL ADJUSTMENTS

Radio Adjustments:

Use the following steps to make the final adjustments to your car:

1. Turn the transmitter on.
2. Make sure the motor is disconnected.
3. Connect your battery pack and turn the power switch on.
4. Move the steering control on the transmitter to the right and left. Do the wheels move in the correct direction? If not, you must reverse the steering servo direction on your transmitter (see radio manual).
5. Adjust your steering trim (see radio manual) until the steering bell cranks are centered under the top deck. Then, using the two steering turnbuckles, fine-tune the adjustment on the front wheels so they are pointing straight ahead. Check them once again when the car is race ready and the ride height has been set.
6. Adjust the ESC (electronic speed control) according to the speed control manufacturer's instructions. *Some manufacturers have the motor connected during adjustment and some do not.* Now, turn the power switch off.
7. Connect the motor. Place your car on a block or car stand so that all four wheels are elevated. Turn the power switch on again. Check the ESC and steering settings you have made and then turn the power switch back off.
8. Remember this! The transmitter is always the **FIRST TO BE TURNED ON** and **THE LAST TO BE TURNED OFF.**

Advanced Radio Adjustments:

Some radio systems offer dual rate and end point adjustments (see radio manual). If your radio has these adjustments, adjust the dual rate to 100%. Using the end point adjustments, adjust the left and right steering throw so the servo stops at the same point as the car's physical steering stops. If less steering is desired, reduce the dual rate adjustment in small increments.

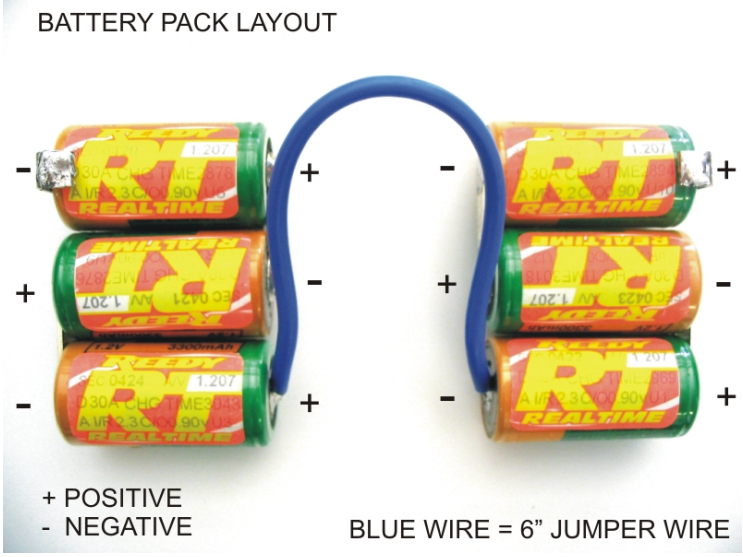
Advanced Speed Control Adjustments:

Some speed controls offer drag brake (see speed control manual). The drag brake adjustment can be use to automatically apply braking power when the driver lets off the throttle completely. This adjustment can be used when the racing surface has enough traction that the driver feels comfortable allowing the speed control to automatically slow the car down when entering the turns. This is a tricky adjustment that can work well when the traction is high enough. However, it tends to unsettle the car and can lead to unpredictable responses.

Another adjustment some speed controls offer is an initial brake setting (see speed control manual). This setting determines the minimum braking power the speed control applies when the driver initially applies the brake. This is a helpful adjustment for most track conditions. Reducing the initial brake makes the car more predictable, but less responsive.

Battery Pack Assembly:

Here is the preferred way to assemble battery packs for the BJ4 Worlds Edition. Solder the individual cell connections as shown. Team racers prefer battery bars for sturdier connections. Use a six inch long piece of 12-gauge wire for the jumper between each three-cell pack.



Motor Gearing:

To get the most from your motor, proper gearing is important. You can calculate the final drive ratio by using the following formula:

2.5 x **(spur gear / pinion gear) = final drive ratio**

Recommended competition modified motors are 13×2, 12×2, 11×2 or 10×2. Popular brushless motor combinations have also been added to the suggested gearing chart below.

Motor Type and Wind	Pinion	Spur	Final Ratio
24 degree stock motor	21	78	9.29:1
19 turn motor	20	78	9.75:1
13 turn motor	20	78	9.75:1
12 turn motor	20	78	9.75:1
11 turn motor	19	78	10.26:1
10 turn motor	18	78	10.83:1
Reedy Neo **2*** / LRP Sphere	17	78	11.47:1
Velociti 5.5 Racing / Novak GTB	17	78	11.47:1
Reedy Neo **3*** / LRP Sphere	16	78	12.19:1
Velociti 6.5 Racing / Novak GTB	16	78	12.19:1

MAINTENANCE

Suspension Maintenance:

You should periodically check all the moving parts: front and rear end, suspension arms, steering blocks, steering linkage, shocks, and so on. If any of these should get dirty or bind, then your car's performance will suffer.

Motor Maintenance:

Between runs, inspect the brushes to ensure they are moving freely in the brush holder. Do this by carefully removing the spring and sliding the brush in and out of the holder. If there is any resistance or rough spots, remove the brush and carefully wipe the brush clean. This will clean off any buildup so the brush slides smoothly in the brush holder.

After every 1 to 3 runs, remove the brushes from the holders and inspect the tips for wear and/or burning. If there is a noticeable amount of wear, replace the brushes with a new pair. If the tip is a burnt blue color, then the lubricant in the brush has been burned away and new brushes should be installed.

When you remove and inspect the brushes, inspect the condition of the motor cummutator also. If the motor commutator is rough or discolored from the normal, shiny copper color, it may be necessary to cut the commutator with a motor lathe. Before re-assembling the motor, spray the complete armature and can with motor cleaner. After completing the cleaning, apply a small amount of lightweight oil to each bearing for lubrication. Be careful not to apply too much oil, for this will pick up dirt and contaminate the commutator and brushes.

Differential:

Adjust the differential or "diff" as noted on page 6. Adjusting the diff is not meant to be a tuning option. If you can hear the diff making a "barking" or "chirping" sound on jump landings, either your diff is set too loose or your slipper clutch is set too tight. First check your slipper setting, then re-set the diff according to the instructions on step C-5.

Slipper Clutch:

The assembly instructions give you a base setting for the slipper clutch. The slipper clutch is not designed to help gain traction on low-grip surfaces. The slipper clutch is intended to relieve some of the load on the transmission under racing conditions. The slipper clutch should be set so that it has a faint slipping sound under hard acceleration on very high-grip surfaces. Setting it this way, and leaving it, will provide the best racing performance.

TUNING AND SETUP TIPS

Camber:

Camber describes the angle at which the tire and wheel rides when looked at from the front or back. Negative camber means that the tire leans inward at the top.

A good starting camber setting is 1°. A camber gauge of any type is helpful when setting your camber. Positive camber in the front, where the tire is leaning out, is not recommended. Adding a small amount of positive camber in the rear will tend to improve straight-line acceleration on loose tracks.

Front Camber Links:

Changing the length of the camber link is considered a bigger step than adjusting the ball end height on the top deck. Shortening the camber link (or lowering the ball end) will give the front end less roll and quicken steering response. Lengthening the camber link (or raising the ball end) will give the front more roll and slower steering response.

Raise or lower your inside camber links by removing or adding the .030" ball end washers between the ball stud and the top deck. Longer or higher camber links are typically used on high-grip tracks and shorter or lower links tend to work better on med-grip or loose tracks.

Rear Camber Links:

Changing the length of the camber link is considered a bigger step than adjusting the ball end height on the top deck. Shortening the camber link (or lowering the ball end) will give the rear end less roll and the car will tend to accelerate or "square up" better. Lengthening the camber link (or raising the ball end) will give the rear more roll and more cornering grip.

Raise or lower your inside camber links by removing or adding the .030" ball end washers between the ball stud and the top deck. Longer or higher camber links are typically used on high-grip tracks, while shorter links tend to work better on med-grip or loose tracks. The kit setting is a good compromise of cornering grip and acceleration.

Front Toe-In:

Toe-in describes the angle of the front tires when viewed from the top. With toe-in, the front of the tires point inward.

Zero degrees toe-in (tires pointing straight forward) is the setting that should be used for almost all track conditions. Occasionally, you can increase turn-in by adding a little toe-out (front of tires point slightly out). Front toe-in is not a typical tuning adjustment used by the team.

Ackermann:

When turning, the inside tire usually turns more than the outside tire. The difference between the angle of the front tires when turning is referred to as Ackermann.

The Ackermann can be adjusted by moving the ball ends on the steering rack. The forward set of holes give less Ackermann, while the rear set of holes give more. In theory, more Ackermann gives the car more low-speed steering. However, the steering on most RC cars is limited by the inside steering stop. Therefore, the Ackermann adjustment really only adjusts how far the outside tire turns. In general, more Ackermann means less steering.

Increasing Ackermann will smooth out steering response and is best when running a one-way or on high-grip tracks. Reduced Ackermann will typically give more mid-to-exit steering.

Wheelbase Adjustment:

You have three options for rear hub spacing, *forward*, *middle*, and *back*. The kit setting provides the most rear traction, and should be used most often. For improved handling in bumps or rhythm sections, try moving the hubs to the *middle* or *back* position. This will also make the car more stable in 180° turns.

Ride Height:

Ride height is the distance from the ground to the bottom of the chassis. Check the ride height by lifting the entire car about 8-12 inches off the bench and dropping it. After the suspension "settles" into place, raise or lower the ride height by threading the collars up or down on the shock bodies. Be sure to make them equal on each side.

Generally, raising the ride height will make the car jump better. Lowering the ride height will improve cornering speed and stability.

The standard ride height on the BJ4 is between the driveshafts and arms being level. An off-road ride height gauge can be used if more precision is necessary.

TUNING OPTIONS

Anti-Squat:

Anti-squat denotes the angle of the rear arms relative to the ground. Zero anti-squat means that the rear arms are flat, parallel with the ground. The kit setting is 2°. The stock anti-squat combination has been the best all around setting for most track conditions.

Optional rear suspension mounts are available with different anti-squat. The optional #1149 and #1150 rear suspension mounts (both must be used together) have 0° anti-squat. Reducing the anti-squat tends to make the car handle better through the bumps, but doesn't "rotate" as much in corners.

Anti-Roll Bars:

The optional #1144 front anti-roll bar kit and optional #1044 rear anti-roll bar kit (also called "swaybars") allow you to add roll resistance to the front or rear end with minimal effect on handling over bumps and jumps. These are especially helpful tuning items on high-grip tracks.

FRONT DRIVE OPTIONS

Front Differential − The kit comes standard with differentials front and rear. This setup provides the most predictable handling because all for wheels are linked, both on and off power. Rear end slide under braking is minimized with this setup. Braking is also maximized because all four wheels are used for braking.

NTC3 HD Front One-Way − Replacing the front diff with an Associated #1728 NTC3 heavy-duty front one-way assembly will greatly increase acceleration and on-power steering on high-grip tracks. It will also cause the rear end to slide under braking. The setup usually works well on "point and punch" type tracks. Drivers typically turn down the maximum brake setting on their radios when using this setup.

Input Shaft One-Way − The optional #1151 input shaft one-way is a good compromise between the two options described above. Some rear end slide under braking allows the car to turn-in harder and roll through turns easier. Because there is still a front differential, on-power steering is smoother and more predictable than with the NTC3 one-way assembly.

SHOCK SETTINGS

Front Shock Position:

Moving the top of the shocks in will make the suspension softer, slow steering response, and make the car smoother through the bumps. Moving the top of the shocks out will make the suspension stiffer, increase steering response, and make the car react quicker. The standard location (center hole on the tower) works well for most tracks.

The bottom of the shocks can also be moved on the suspension arms. Moving the bottom of the shocks to the inside holes on the arms will result in more low-speed steering and less high-speed steering. Mounting the shocks to the inside hole will require limiters inside the shocks to limit the travel. The springs should also be replaced with stiffer ones.

Rear Shock Position:

Moving the top of the shocks in will make the suspension softer, increase side-bite (traction in corners), and make the car smoother through the bumps. Moving the top of the shocks out will make the suspension stiffer, increase forward traction, and help keep the car from bottoming out on big jumps. The standard location (center hole on the tower) works well for most tracks.

Moving the bottom of the shocks to the outside holes on the rear suspension arms is not recommended.

Front Damping:

Shock oil changes can dramatically affect steering and handling characteristics. In general, lighter oil will increase steering response, increase low-speed steering, and make the car handle small bumps better. Heavier oil will increase high-speed steering and make the car handle large jumps better. Changing oil to far in either direction can have the opposite of the desired effect, so make changes in reasonable increments.

Damping can also be adjusted by changing shock pistons. The kit includes Associated #1, #2, and #3 pistons. The higher the number, the smaller the holes in the piston. Smaller holes create more damping with the same weight oil.

Rear Damping:

Shock oil changes can dramatically affect steering and handling characteristics. In general, lighter oil will increase rear traction and make the car handle small bumps better. Heavier oil will slow front to rear weight transfer, resulting in more high-speed steering and better landings off large jumps. Changing oil to far in either direction can have the opposite of the desired effect, so make changes in reasonable increments.

Damping can also be adjusted by changing shock pistons, as described above.

Springs:

Increasing spring rates generally tens to increase steering response and make the car react quicker. However, stiffer springs tend to make the car more erratic through the bumps. Decreasing spring rates tends to slow steering response and make the car smoother through the bumps. It is necessary re-check the ride height after any spring adjustment.

TIRE SELECTION

Tire selection should be based on track conditions and will greatly affect your car's performance. In general, tires with large spikes should be chosen for tracks with loamy, fluffy, or wet dirt. Soft compound tires with small pins should be used for hard-packed, dusty, or slick tracks. Hard-packed, high-bite, abrasive (blue groove) tracks require tires with small pins and a slightly harder compound. Front tire selection and wear can dramatically affect steering and performance on hard-packed tracks.

Check driver setup sheets for recommended tires before attending large events. Always be prepared for changing surfaces and conditions with your tires. Typically, most handling problems can be tracked to worn-out or the wrong tires.

Although it is impossible to classify every track type and surface, the following guide can be used to give you some direction and help in tire selection. Most tracks have either hard or soft surfaces and one or more of the various conditions noted.

Soft Surfaces:

Sand/Soil:	Loose sand or topsoil covers part of the surface.
Loamy:	Wet, loose dirt covers most of the surface.
Ruts:	Potholes and wavy sections develop.
Wet:	Condition where the surface has moisture in it.
Dry:	Dry, loose dirt covers most of the surface.

Hard Surfaces:

Wet:	Condition where the surface has moisture on it or in it.
Hard Slick:	Surface packs but does not take rubber. Usually dry looking.
Abrasive:	Natural abrasion also accelerates wear.
Blue Groove:	Rubber has been laid down creating a dark groove. Usually has some dust on it.
Black Groove:	Heavy amounts of rubber have been laid down. Usually has minimal dust.
Broken:	Holes, ridges, or scaling of the track.

Tire Construction:

The combination of the tread/carcass design and the rubber compound strongly affect how well tires work on different track conditions. The construction/tread affects the way the tire reacts to directional loading and how it presents the compound to the track surface. The compound affects the way a tire handles surface irregularities, as well as the friction or bite as it contacts the surface.

Losi Tire Compounds:

Silver (S): The most common and reliable Team Losi compound. This compound works well under varying conditions and on soft surfaces.

Red (R): The Team Losi soft compound that picks up where Silver stops. This soft/sticky compound works well on dry, hard, slick surfaces and is exceptional on blue-groove surfaces.

Pink (P): The newest Team Losi soft compound. This compound offers traction similar to Red with handling characteristics similar to Silver. It works well on indoor, wet groove track surfaces.

Pro-Line Tire Compounds:

M2: Pro-Line's harder compound. It works well under varying conditions but excels on soft surfaces.

M3: Pro-Line's soft compound that picks up where M2 stops. This soft/sticky compound works well on dry, hard, slick surfaces.

R3: Pro-Line's newest soft compound. This compound offers traction similar to M3 but with less wear and longer life on hard surfaces.

How to Read the Tire Guide:

Tire Grading: A=Excellent B=Good C=Fair (-) not recommended

Looking at the chart for 4wd Blockhead, for *dry*, from left to right; it is not recommended in Pink (P) compound, it is "good" in the Red (R) compound, and is considered "fair" in the Silver (S) compound.

If a compound has a (-) for a recommendation, that means it is not recommended for that surface.
Example: A-7282 4wd Blockhead is not recommended for *sand* in the Pink (P) compound.

If a tire pattern has three (---) under a surface, it is not recommended for that surface in any compound. Example: A-7285 4wd Taper-Pin is not recommended for any *soft surface*.

Popular tire choices for dirt and clay tracks are listed below:

Popular Tire Tread Designs			SOFT SURFACE					HARD SURFACE					
			Sand Soil	Loamy	Ruts	Wet	Dry	Wet	Hard Slick	Abras.	Blue Groove	Black Groove	Broken
Team Losi: P=Pink R=Red S=Silver Compounds - Denotes not recommended			PRS	PRS	PRS	PRS	PRS	PRS	PRS	PRS	PRS	PRS	PRS
LOSI 4WD FRONT	A-7282	4wd Blockhead	---	---	---	---	-BC	AAB	-BB	-BB	-AA	-AA	-AA
	A-7283	4wd Stud	-AA	-AA	-AA	-AA	-BB	---	---	---	---	---	---
	A-7285	4wd Taper-Pin	---	---	---	---	---	AAA	-CC	-AB	-AB	-AA	-AB
LOSI BUGGY REARS	A-7364	IFMAR Stud	-AA	-AA	-AA	-AA	-BB	---	---	---	---	---	---
	A-7367	IFMAR-Pin	---	-AA	-AA	-AA	-AB	-AC	-B-	-B-	---	---	-C-
	A-7368	Big Shot	---	-AA	-AA	-AA	-AB	-AC	-B-	-B-	---	---	-C-
	A-7369	X-2000	---	---	---	---	---	-B-	-B-	-B-	-B-	-B-	-B-
	A-7371	BK-Bar	---	---	---	---	---	---	---	---	-B-	-A-	-C-
	A-7372	Taper-Pin	---	---	---	---	---	AAA	---	-B-	-A-	-A-	-C-
	A-7378	2.0 Step-Pin	-AA	-AA	-AA	-AA	---	---	---	---	---	---	---
Pro-Line: M2, M3, R3 Compounds - Denotes not recommended			M2 M3 R3	M2 M3 R3	M2 M3 R3	M2 M3 R3	M2 M3 R3	M2 M3 R3	M2 M3 R3	M2 M3 R3	M2 M3 R3	M2 M3 R3	M2 M3 R3
P.L. 4WD FRONT TIRES	8185	Holeshot	- - -	- - -	- B -	- A -	- A -	- A -	- A -	- A -	- B -	- B -	- B -
P.L. BUGGY REARS	8087	Step-Pin	- A -	- A -	- A -	- A -	- B -	- - -	- - -	- - -	- - -	- - -	- - -
	8089	Square Fuzzie	- - -	- - -	- - -	- - -	- - -	- B -	- B -	- A B	- A B	- B -	- B -

SETUP SHEETS

The best way to get your car handling right is to go to our website, www.jconcepts.net, and click on the links under BJ4 products. There, you can find setup sheets for different tracks and conditions from our team drivers. You can look for track conditions and tires that are similar to your local track, and mimic that setup. Also, most drivers have a "base" setup that they use as a starting point for every event. If you do not find any track conditions similar to your track, try running one of these "base" setups. Remember, it helps to try setup changes back to back to truly determine the effect.

SPRING RATE CHART

Use the following spring rate chart to compare Associated and Losi buggy springs.

ASSOCIATED				***LOSI***			
FRONT		REAR		FRONT		REAR	
COLOR	SPRING RATE	COLOR	SPRING RATE	COLOR	SPRING RATE	COLOR	SPRING RATE
BROWN	2.80	BLACK	1.74	RED	2.50	GRAY	1.60
BLACK	3.20	GREEN	1.90	ORANGE	2.90	WHITE	1.80
GREEN	3.50	SILVER	2.10	SILVER	3.20	YELLOW	2.00
SILVER	3.85	GRAY	2.33	GREEN	3.50	PINK	2.30
BLUE	4.20	BLUE	2.55	BLUE	3.80	RED	2.50
		GOLD	2.75	BLACK	4.50	ORANGE	2.90
		RED	3.03			SILVER	3.40
						GREEN	3.70
						BLUE	4.10

JCONCEPTS ONLINE

Get online help, tips, and new product information for your car through the JConcepts website, www.jconcepts.net.

Kit Tips and Help: Have easy questions? Look to your instruction manual, exploded view, or the tuning guide located on the website, www.jconcepts.net.

Parts Catalog: Look to our website for new products and the latest catalogs.

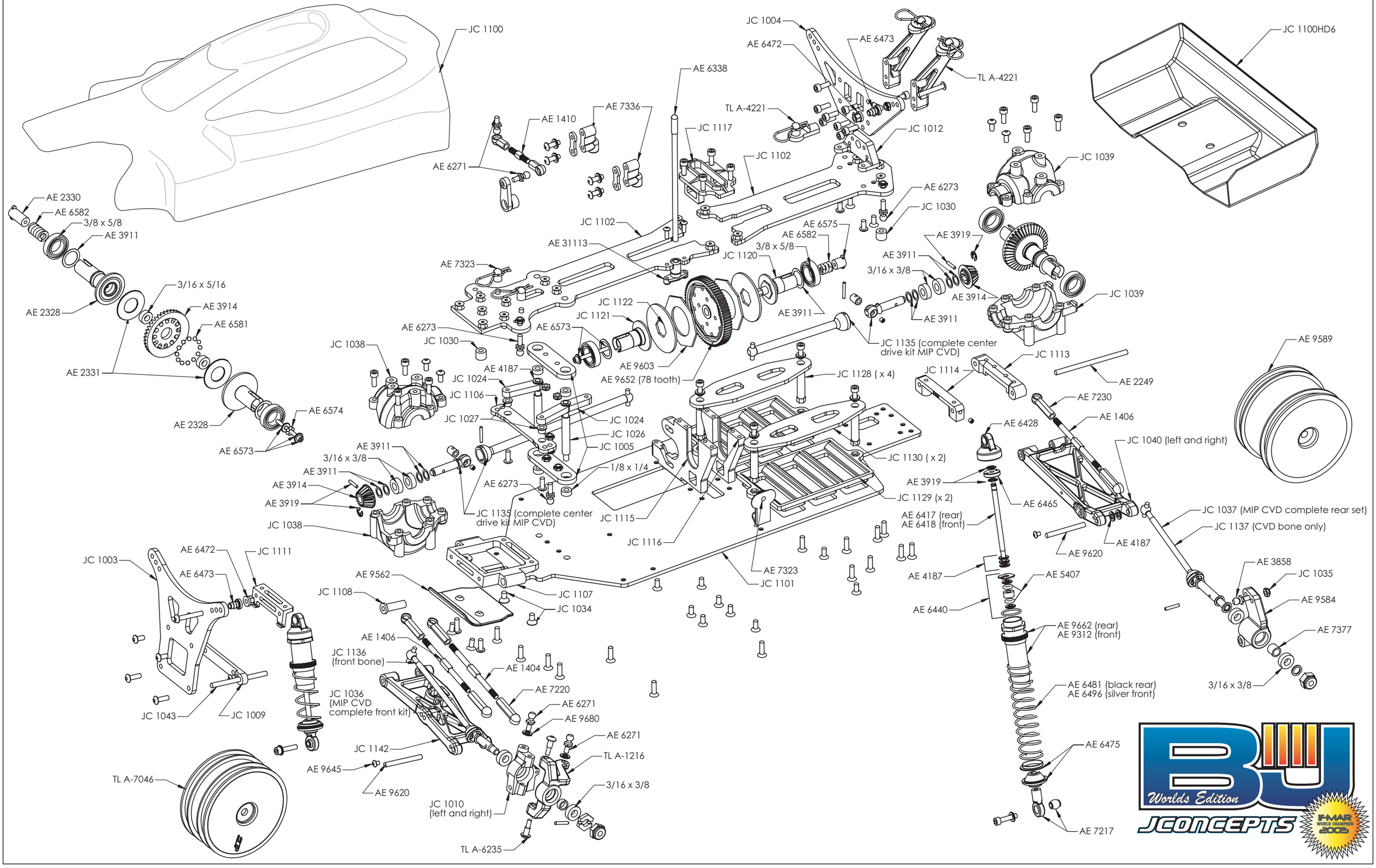
Advanced Kit Tips and Help: Have tough questions? Look to our website and e-mail for your most advanced questions.

Setup Sheets: Racers can find blank and team driver setup sheets in the BJ4 products section of the website.

New Products: Learn of new products on our website, before they are announced anywhere else.

Domestic Ordering Online: You can order online with us at anytime. You will have to sign-up as a user to begin shopping on the website. At that time, you can also choose to subscribe to our random e-mail notifications of new products or important JConcepts information.

International Ordering Online: Due to differences with international shipping, it is necessary to e-mail us directly for international orders.


JC 1100
JC 1100HD6
JC 1004
AE 6472
AE 6473
TL A-4221
AE 6338
AE 1410
AE 7336
AE 6271
JC 1117
TL A-4221
JC 1012
JC 1102
JC 1039
AE 6273
JC 1030
JC 1102
AE 6575
AE 6582
3/8 x 5/8
JC 1120
AE 31113
AE 7323
AE 3919
AE 3911
3/16 x 3/8
AE 3914
JC 1039
AE 3911
JC 1122
JC 1121
AE 6273
AE 6573
JC 1030
AE 9603
AE 9652 (78 tooth)
JC 1135 (complete center drive kit MIP CVD)
JC 1038
AE 4187
JC 1024
JC 1106
JC 1027
JC 1024
JC 1026
JC 1005
JC 1128 (x 4)
JC 1113
JC 1114
AE 2249
AE 9589
AE 7230
AE 1406
AE 6428
JC 1040 (left and right)
AE 2330
AE 6582
3/8 x 5/8
AE 3911
3/16 x 5/16
AE 2328
AE 3914
AE 6581
AE 2331
AE 2328
AE 6574
AE 6573
AE 3911
3/16 x 3/8
AE 3911
AE 3914
AE 3919
JC 1038
1/8 x 1/4
AE 6273
JC 1135 (complete center drive kit MIP CVD)
JC 1115
JC 1116
JC 1130 (x 2)
JC 1129 (x 2)
AE 3919
AE 6465
AE 6417 (rear)
AE 6418 (front)
JC 1037 (MIP CVD complete rear set)
JC 1137 (CVD bone only)
AE 9620
AE 4187
JC 1003
AE 6472
AE 6473
JC 1111
AE 9562
JC 1108
JC 1107
JC 1034
AE 7323
JC 1101
AE 4187
AE 5407
AE 3858
JC 1035
AE 9584
AE 6440
AE 9662 (rear)
AE 9312 (front)
AE 7377
JC 1136
(front bone)
AE 1406
AE 1404
AE 7220
AE 6271
AE 9680
JC 1036
(MIP CVD
complete front kit)
JC 1043
JC 1009
AE 6481 (black rear)
AE 6496 (silver front)
3/16 x 3/8
JC 1142
AE 6271
TL A-1216
AE 9645
AE 9620
3/16 x 3/8
JC 1010
(left and right)
TL A-7046
TL A-6235
AE 6475
AE 7217
Worlds Edition
JCONCEPTS
IFMAR WORLD CHAMPION 2005

BJ4 WORLDS EDITION SET-UP SHEET:

DRIVER

DATE

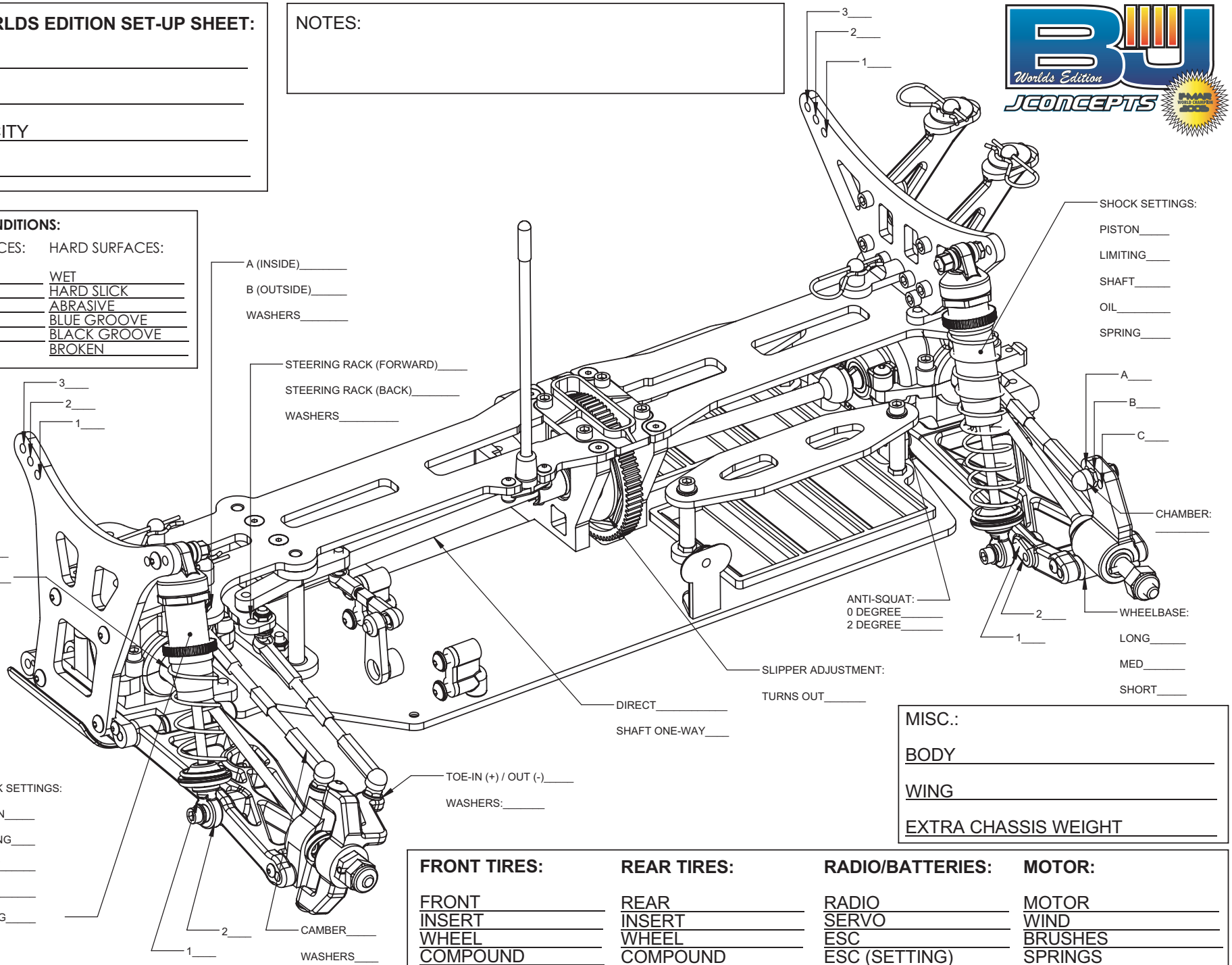
TRACK/CITY

EVENT

NOTES:

TRACK CONDITIONS:

SOFT SURFACES:	HARD SURFACES:
SAND / SOIL	WET
LOAMY	HARD SLICK
RUTS	ABRASIVE
WET	BLUE GROOVE
DRY	BLACK GROOVE
	BROKEN



MISC.:

BODY

WING

EXTRA CHASSIS WEIGHT

FRONT TIRES:	REAR TIRES:	RADIO/BATTERIES:	MOTOR:
FRONT	REAR	RADIO	MOTOR
INSERT	INSERT	SERVO	WIND
WHEEL	WHEEL	ESC	BRUSHES
COMPOUND	COMPOUND	ESC (SETTING)	SPRINGS
ADDITIVE	ADDITIVE	BATTERIES	PINON/SPUR