

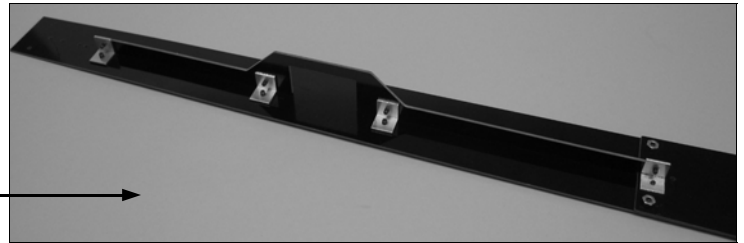


2103 NITRO RAIL DRAGSTER KIT

THANKS FOR BUYING RJ SPEED'S NITRO DRAG KIT . IT IS A LITEWEIGHT CAR MADE FOR STRAIGHT LINE DRAG RACING AND CAN BE BROKEN IF RUN INTO SOLID OBJECTS AT HIGH SPEED. YOU WILL NEED TO PURCHASE A .12 TO.18 SIZE SMALL BLOCK ENGINE, CLUTCH SETUP, AND EXHAUST SYSTEM. SEE OUR SEPARATE SHEET FOR INFORMATION AND SUGGESTIONS. IT REQUIRES A 2 CHANNEL RADIO WITH 2 SERVO'S .(STANDARD OR MINI SERVO'S WILL WORK FOR THE THROTTLE AND STEERING). YOU WILL NEED A SMALL PAIR OF PLIERS, AND A 1/4" WRENCH OR NUTDRIVER. HEX WRENCHES TO FIT THE SOCKET HEAD SCREWS ARE INCLUDED . YOU WILL ALSO NEED PAINT FOR THE LEXAN BODY AND WING, AS WELL AS NITRO FUEL FOR THE ENGINE. TAKE YOUR TIME WITH THE ASSEMBLY TO MAKE SURE IT IS DONE RIGHT. REFER TO THE WRITTEN INSTRUCTIONS , PICTURES, AND EXPLODED VIEW DRAWINGS.

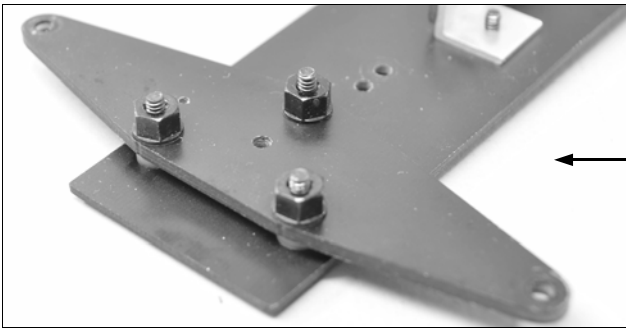
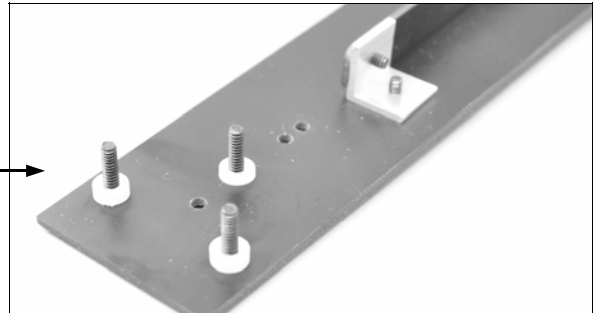


STEP 1 OPEN BAG DN1 AND THE HARDWARE BAG INSIDE IT. ASSEMBLE THE CHASSIS TO THE SUB FRAME (SUB FRAME ON TOP) WITH FOUR 1/4" SCREWS AND NUTS.



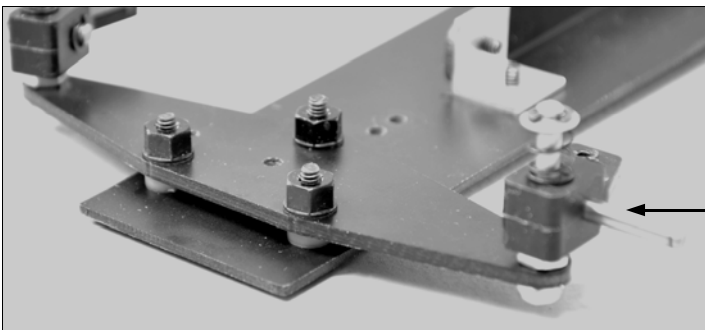
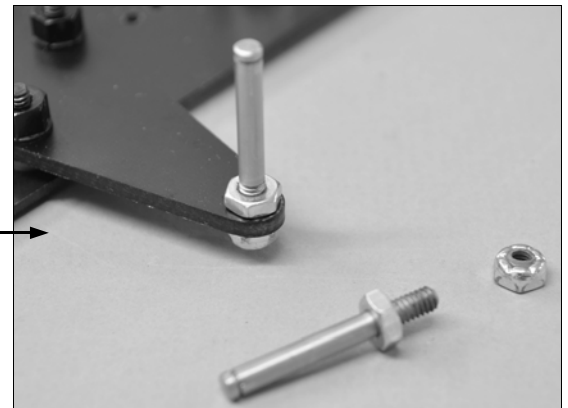
STEP 2 ATTACH THE BRACE WITH FOUR ANGLE BRACKETS AND EIGHT 1/4" SCREWS. INSTALL ALL THE SCREWS LOOSELY , THEN TIGHTEN THEM.

STEP 3 OPEN BAG D2 INSERT 3 - 1/2" LONG SCREWS THRU THE FRONT OF THE CHASSIS AND INSTALL 1/8 SPACERS (LONGER ONES) ON THE TWO FRONT SCREWS AND A 3/32 SPACER (SHORTER) ON THE REAR SCREW.



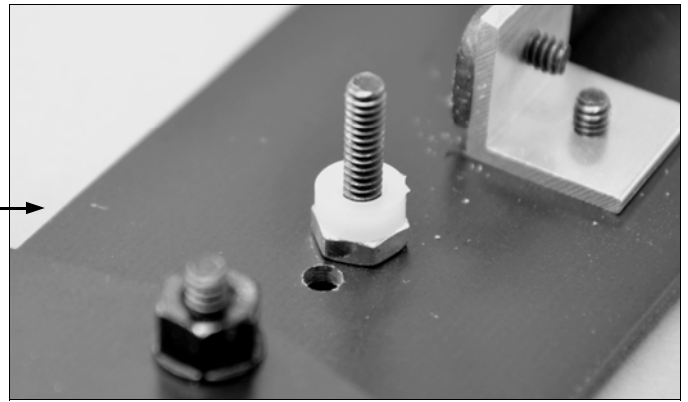
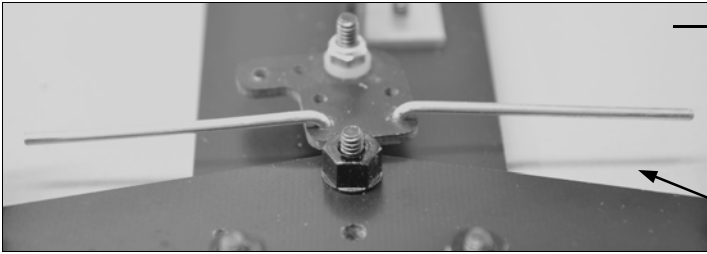
STEP 4 INSTALL THE 5238 FRONT AXLE PLATE AND RETAIN WITH THREE BLACK NYLON NUTS.

STEP 5 OPEN BAG D2A THREAD A THIN NUT ON EACH KINGPIN. INSTALL THE KINGPINS ON EACH END OF THE FRONT AXLE AND RETAIN EACH ONE WITH A LOCKNUT.

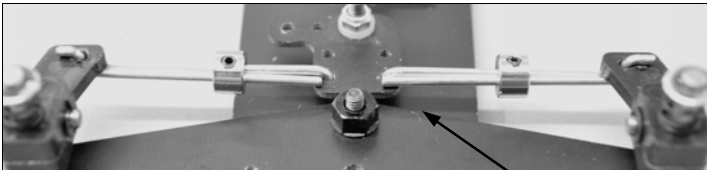


STEP 6 RUN A 1/8 DRILL THROUGH EACH 5351 STEERING BLOCK AND MAKE SURE IT SLIDES SMOOTHLY ON THE KINGPIN. LUBE THE KINGPINS WITH LIGHT OIL OR SILICONE LUBE AND SLIDE THEM ON FOLLOWED BY A 5228 SPRING , WASHER AND 5221 E-CLIP. INSTALL AN E-CLIP ON EACH AXLE AND SLIDE THEM THROUGH THE STEERING BLOCKS.

STEP 7 INSTALL THE LONGER SCREW THROUGH THE CHASSIS IN THE HOLE CLOSEST TO THE FRONT OF THE CHASSIS BRACE, RETAIN WITH A METAL NUT AND INSTALL A 3/32 SPACER ON TOP.



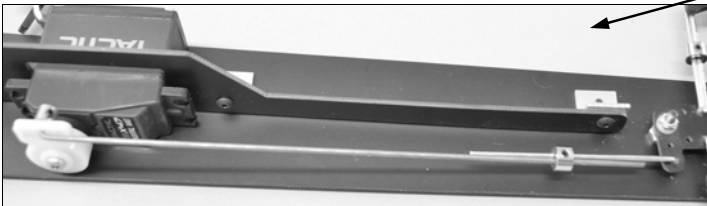
STEP 8 PRESS THE STEPPED SPACER INTO THE LARGE HOLE IN THE 5235 BELLCRANK AND SLIDE IT OVER THE LONG SCREW AND RETAIN WITH THE SMALL METAL LOCK NUT. TIGHTEN IT JUST ENOUGH THAT THE BELLCRANK ROTATES EASILY. INSTALL A STEERING LINK IN THE FRONT HOLE ON EACH SIDE OF THE BELLCRANK.



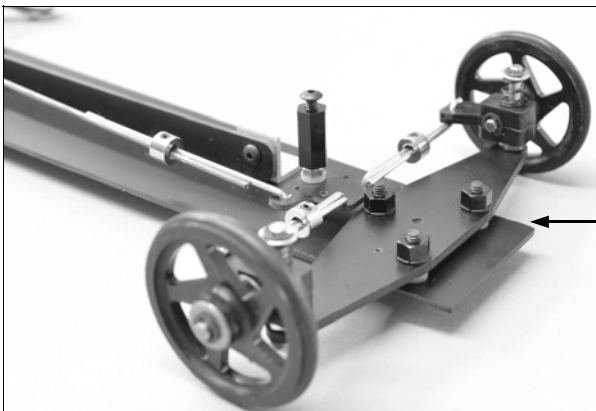
STEP 9 INSTALL A STEERING LINK IN EACH STEERING BLOCK FROM THE UNDERSIDE. SLIDE A 1/8 SET COLLAR OVER EACH PAIR. ALIGN THE AXLES, CENTER THE BELLCRANK AND TIGHTEN THE SET SCREW IN EACH COLLAR.



STEP 10 TEST FIT, THEN INSTALL YOUR SERVO WITH INCLUDED SERVO TAPE THROUGH THE CUTOUT IN THE CHASSIS BRACE. TRY TO GET IT CENTERED ON THE CHASSIS SO THE SERVO CASE OR THE SERVO SAVER WON'T RUB THE BODY.

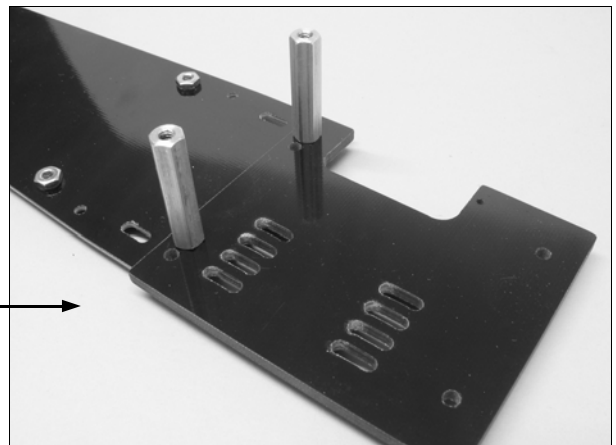


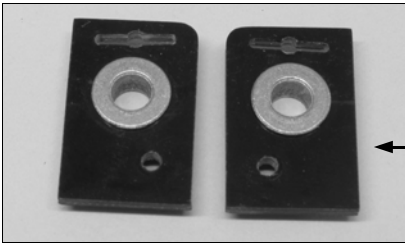
STEP 11 LOCATE ONE OF THE TWO PLAIN 10" MUSIC WIRES. BEND ONE END AT 90 Deg. ABOUT 3/8 INCH FROM ONE END. INSERT THE BENT END INTO A HOLE IN YOUR SERVO SAVER OR SERVO WHEEL AND RETAIN WITH THE SMALLER SET COLLAR AND SET SCREW. INSERT THE BENT END OF THE LONG STEERING LINK INTO THE HOLE AT THE END OF THE NARROW SIDE OF THE BELLCRANK. ALIGN YOUR STEERING AND SLIDE A LARGE COLLAR OVER THE LINK AND LONG WIRE AND RETAIN WITH A SETSCREW IN THE COLLAR.



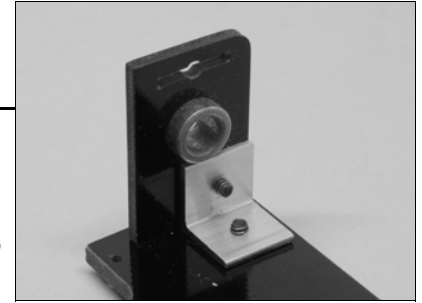
STEP 12 INSTALL THE BLACK HEX SHAPED BODY MOUNT ON THE SCREW THAT GOES THROUGH THE BELLCRANK, TIGHTEN IT AND THREAD THE 1/4" BODY MOUNT SCREW INTO IT SO IT WILL NOT GET LOST. *OPEN BAG D7* PRESS A BUSHING INTO EACH SIDE OF EACH FRONT WHEEL AND SLIDE AN O-RING ON EACH ONE. OIL EACH FRONT AXLE, ADD A THIN SHIM AND WHEEL. RETAIN WITH AN E-CLIP.

STEP 13 OPEN BAG 3. ATTACH THE NITRO BOTTOM PLATE ON THE REAR OF THE CHASSIS WITH TWO LONG SCREWS (3/8"). THREAD THE ALUMINUM THROTTLE PLATE SUPPORTS ONTO THE SCREWS AND TIGHTEN THEM. NOTE THAT THERE ARE TWO SETS OF HOLES IN THE PLATE SO THAT YOU CAN CHANGE THE REAR OFFSET AS NEEDED ONCE YOU INSTALL YOUR ENGINE.

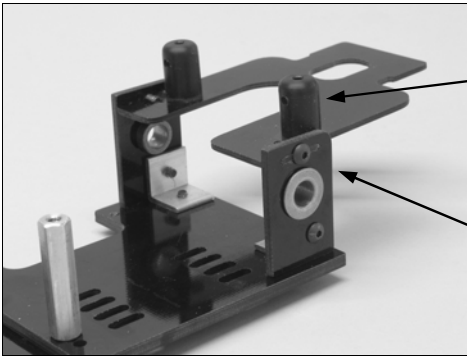




STEP 14 PRESS AN OILITE BUSHING INTO EACH OF THE REAR AXLE MOUNTS AS SHOWN. NOTE THAT BOTH MOUNTS ARE ALIKE AND THE ROUNDED TOP SIDE OF EACH ONE WILL GO TO THE REAR OF THE CAR. THE LARGE PART OF THE BUSHING SHOULD BE TO THE OUTSIDE WHEN YOU MOUNT THEM.

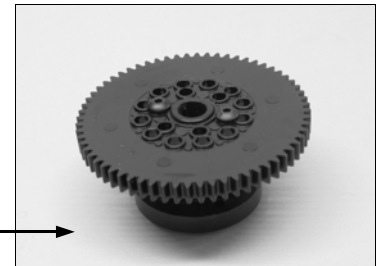


STEP 15 ATTACH ONE AXLE MOUNT TO THE BOTTOM PLATE WITH AN ALUMINUM ANGLE BRACKET AND TWO 1/4" SCREWS. DO NOT TIGHTEN.



STEP 16 ATTACH THE WING MOUNTS FROM D10 TO THE TANK PLATE WITH 1/4" SCREWS.

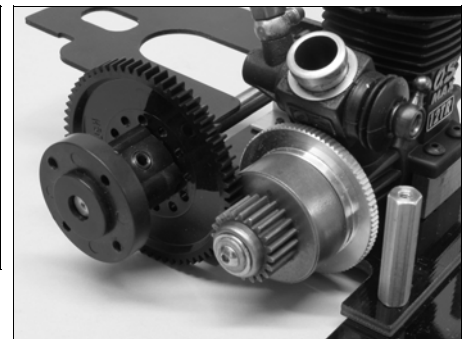
SLIDE THE FRONT OF THE REAR TANK PLATE INTO THE SLOT AT THE TOP OF THE AXLE PLATE YOU HAVE MOUNTED, THEN ADD THE OTHER AXLE PLATE AND ALUMINUM BRACKET AND TIGHTEN ALL. NOTE THAT THE PLATE IS ANGLED SLIGHTLY HIGHER AT THE REAR. ADD TWO SCREWS THRU THE AXLE PLATE AND INTO THE TANK PLATE.



STEP 17 OPEN BAG 4 ATTACH THE GEAR TO THE WIDER HUB WITH TWO 3/8" LONG SCREWS . IT CAN BE MOUNTED WITH THE FLAT SIDE IN OR OUT AS NEEDED TO GET IT TO LINE UP WITH THE CLUTCH BELL. SLIDE THE AXLE THRU THE HUB UNTIL THE END IS EVEN WITH THE TIRE SIDE OF THE HUB. INSTALL TWO SETSCREWS AND TIGHTEN VERY LIGHTLY.

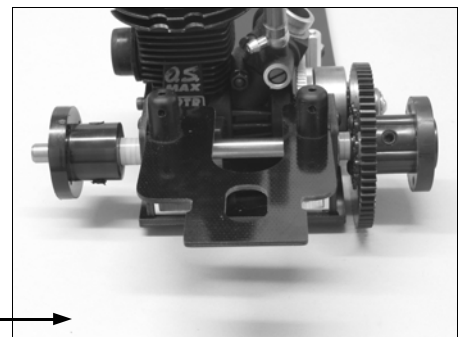


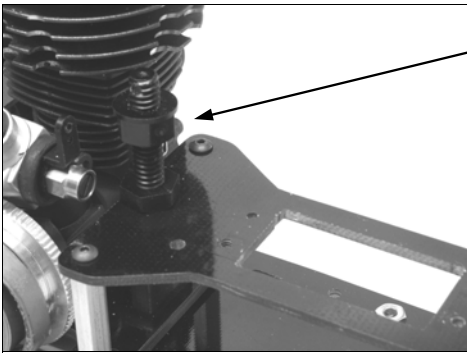
STEP 18 OPEN BAG 12 INSTALL YOUR CLUTCH ONTO YOUR ENGINE AND ATTACH THE ALUMINUM ENGINE MOUNTS TO THE ENGINE WITH FOUR 1/4" CAP SCREWS AND THIN STEEL WASHERS. IT MIGHT BE A GOOD IDEA TO USE A SMALL AMOUNT OF REMOVABLE LIQUID THREAD LOCK TO PARTS THAT WILL-CONNECT TO THE ENGINE . IF YOU ARE USING A PULLSTART ENGINE , YOU MAY NEED OUR #5145 SPACER AND SCREW KIT TO RAISE THE ENGINE TO CLEAR THE PULLSTART.



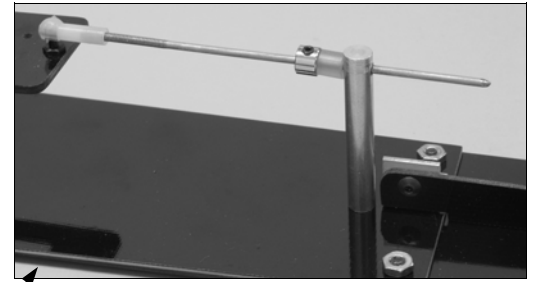
STEP 19 INSTALL THE ENGINE ON THE BOTTOM PLATE WITH FOUR 3/8" SCREWS AND THICK WASHERS.SLIDE THE AXLE ASSEMBLY THRU THE BUSHINGS AND MESH THE GEARS SO THAT THERE IS A SMALL AMOUNT OF PLAY BETWEEN THE GEARS, THEN TIGHTEN THE MOTOR SCREWS. MAKE SURE YOU HAVE THE ENGINE STRAIGHT OR THE REAR SLIGHTLY FORWARD.

STEP 20 REMOVE THE AXLE AND ADD ENOUGH THIN SHIMS TO KEEP THE GEAR FROM RUBBING THE FACE OF THE CLUTCH BELL. ADD THICK AND THIN SHIMS ON THE OPPOSITE SIDE TO SPACE THE HUB OUT AS FAR AS YOU WANT. YOU MAY HAVE TO ADJUST THE ENGINE POSITION , AXLE SPACING, OR BOTTOM PLATE OFFSET AS NECESSARY.



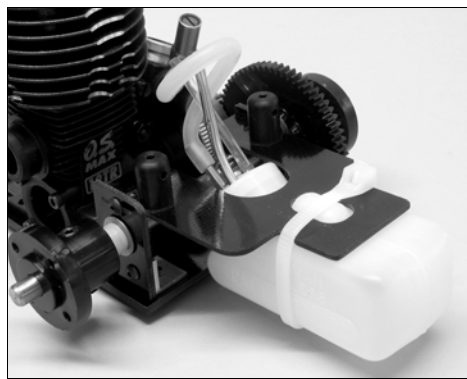
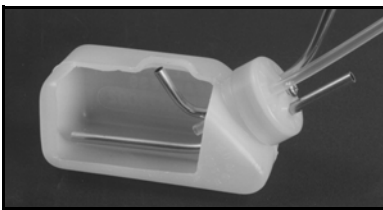
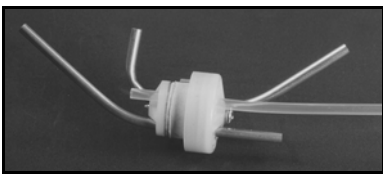


STEP 21 ATTACH A BODY POST FROM BAG 5 TO THE CENTER HOLE AT THE REAR OF THE THROTTLE PLATE. ATTACH THE THROTTLE PLATE TO THE TOP OF THE ALUM. SUPPORTS WITH TWO 1/4" SCREWS. THREAD THE BALL JOINT FROM BAG 6 INTO THE HOLE AT THE FRONT OF THE THROTTLE PLATE.

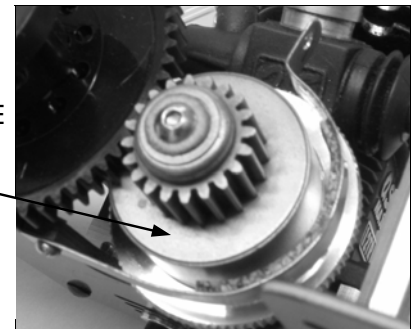


STEP 23 5147 FUEL TANK. WE HAVE PROVIDED EXTRA PICTURES INCLUDING A CUTAWAY VIEW IN ADDITION TO THE MANUFACTURER'S INSTRUCTIONS. SLIDE ALL TUBES THRU THE CAP, RUBBER SEAL AND INNER RETAINER BEFORE BENDING THEM. INSTALL THE SCREW, BUT DO NOT TIGHTEN. THE BRASS TUBE BENT ONLY INSIDE IS THE FUEL PICKUP. THE CLEAR PLASTIC ONE IS THE FILL LINE. THE BRASS LINE BENT INSIDE AND OUTSIDE IS THE VENT. YOU CAN ROTATE IT AROUND CLOSE TO THE PICKUP TO GET IT IN, THEN ROTATE IT BACK TO GET IT NEAR THE TOP OF THE TANK, THEN TIGHTEN THE SCREW. YOU CAN BUILD THE TANK WITH ONLY TWO LINES BY LEAVING OUT THE PLASTIC LINE AND FILLING THE TANK BY PULLING THE FUEL LINE OFF THE CARB. ON THE ENGINE TO FILL THE TANK. INSTALL THE TANK IN THE REAR PLATE WITH AN 8" TIE STRAP PROVIDED. IF YOU PREFER, YOU CAN MOUNT THE TANK ON THE CHASSIS BY CUTTING A SLOT IN THE CHASSIS AND USING THE TIE STRAP.

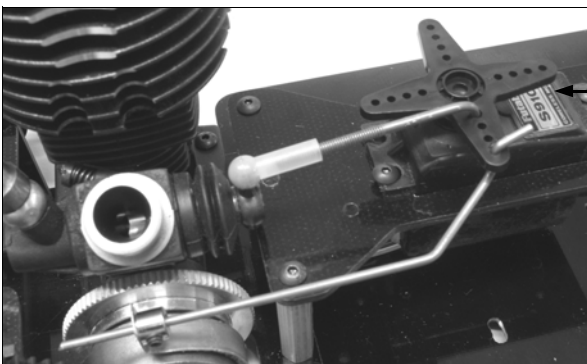
STEP 22 ATTACH THE PULL ROD POST TO THE CHASSIS WITH ONE 1/4 OR 3/8 SCREW. THREAD THE PULL ROD FROM BAG 1 INTO THE BALL CUP FROM BAG 6. SLIDE THE COLLAR AND SILICONE TUBE ON THE PULL ROD, SLIDE THE END THRU THE POST, AND SNAP THE CUP ONTO THE BALL JOINT. SLIDE THE COLLAR AGAINST THE TUBE AND POST AND TIGHTEN THE SET SCREW.



STEP 24 ATTACH THE BRAKE STRAP UNDER THE BOTTOM PLATE WITH THE SMALL SCREW. YOU MAY HAVE TO ADJUST THE BEND TO LINE IT UP AS SHOWN. IT SHOULD NOT DRAG ON THE CLUTCH BELL.



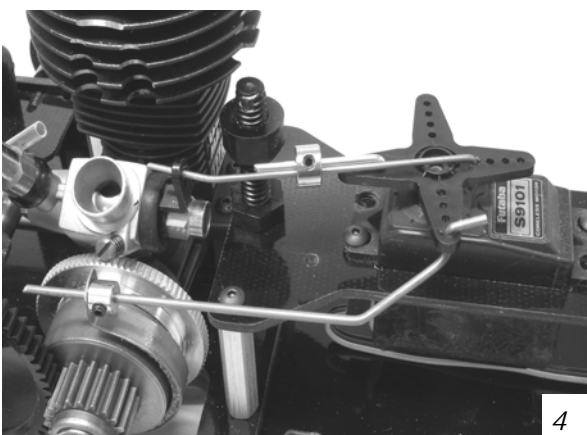
STEP 25 INSTALL YOUR THROTTLE SERVO IN THE THROTTLE PLATE.



USE THE LAYOUT ON THE TOP FOR A SLIDE VALVE CARB. THREAD THE BALL CUP ONTO THE THREADED ROD ALL THE WAY, THEN BACK IT OUT ABOUT HALFWAY. SNAP THE CUP ON THE CARB AND MARK THE ROD TO BEND IT TO GO THRU THE SERVO WHEEL. TRIM OFF THE EXCESS SO IT DOES NOT HANG ON THE SERVO HOUSING AND USE THE MIDDLE SIZE COLLAR (3/32) TO HOLD IT.

BEND THE LONG 1/16 WIRE LINK TO GO THRU THE SERVO ARM AND THRU THE HOLE IN THE BRAKE STRAP AS SHOWN. INSTALL THE SMALL COLLAR (1/16) ON THE LINK SO IT WILL PRESS ON THE BRAKE STRAP AT LOW THROTTLE.

USE THE BOTTOM LAYOUT FOR A ROTARY CARB. USE THE THIN WIRE LINK AND THE PREBENT SHORT LINK TO MAKE THIS LINK AND JOIN THEM WITH THE LARGE COLLAR. INSERT THE SHORT LINK IN THE SERVO ARM AND THE BENT END OF THE THIN WIRE IN THE ARM ON THE OPPOSITE SIDE. SLIDE THE COLLAR OVER THEM AND TIGHTEN. THIS ALLOWS THE SMALL WIRE TO BEND AT THE END OF THE CARB'S TRAVEL. YOU WILL NEED TO ADJUST YOU RADIO CAREFULLY WITH EITHER SETUP. YOU MAY ALSO HAVE TO VARY THE SETUP IF YOUR CARB OR SERVO OUTPUT VARIES IN SIZE OR LOCATION. SHORTEN LINKS AS NECESSARY.



STEP 26 INSTALL YOUR RADIO RECEIVER , SWITCH, AND BATTERY PACK ON THE CHASSIS WITH SERVO TAPE IN A CONVENIENT LOCATION. YOU SHOULD TEST YOUR RADIO SETUP AND MAKE SURE YOU HAVE ADJUSTED EVERYTHING CORRECTLY ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS. INSTALL YOUR EXHAUST SYSTEM. **YOU SHOULD ALSO INSTALL A THROTTLE RETURN SPRING ON YOUR CARB THAT IS STRONG ENOUGH TO CLOSE THE CARB TO IDLE IF YOU TURN THE RADIO OFF.THIS AN IMPORTANT SAFETY FEATURE.**

LUBE EACH REAR BUSHING WITH A SMALL AMOUNT OF LIGHT OIL. INSTALL THE REAR TIRES ON THE HUBS WITH TWO CAP SCREWS EACH FROM THE REAR AXLE BAG.

SET YOUR BODY DOWN OVER THE CHASSIS AND MARK THE OUTSIDE FOR BODY MOUNT LOCATIONS, TIRE AND/OR LINKAGE CUTOUTS AND ANY CLEARANCE REQUIRED FOR ENGINE OR EXHAUST. PAINT THE BODY AS DESIRED WITH PAINT FOR FUEL POWERED CARS, TRIM IT OUT AND TEST FIT IT ON YOUR CAR , AND MAKE CHANGES AS NECESSARY, THEN YOU CAN PEEL THE PROTECTIVE FILM. YOU CAN PUT A SMALL HOLE IN THE BODY AND RUN YOUR ANTENNA WIRE OUT IT AS YOU INSTALL YOUR BODY TO RUN THE CAR. THIS WILL IMPROVE YOUR RADIO RANGE.

IF YOU ARE GOING TO RUN YOUR CAR ON A SURFACE OTHER THAN A TRACK WHERE COMPOUNDS HAVE BEEN PUT ON THE SURFACE TO IMPROVE TRACTION, BE VERY CAREFUL TO PICK A SPOT THAT IS CLEAN AND FREE OF DEBRIS. YOU CAN PURCHASE OUR #5732 DIFF KITS TO REPLACE YOUR SOLID AXLE AND BE ABLE TO ADJUST HOW HARD YOUR CAR LAUNCHES TO AVOID GETTING SIDEWAYS. USE A LITTLE WD-40 TO CLEAN YOUR TIRES AND IMPROVE TRACTION. THEY WILL FEEL SLIPPERY AT FIRST, BUT RUB IT IN AND THE TIRES WILL GET SOFTER AND TACKIER AS THEY DRY OUT.

IF YOUR ENGINE IS NEW YOU SHOULD BREAK IT IN ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS, THEN GO OUT AND HAVE FUN WITH YOUR **RJ SPEED NITRO DRAG CAR.**

REPLACEMENT PARTS AND ACCESSORIES ARE AVAILABLE THRU YOUR LOCAL HOBBY SHOP. IF THEY DO NOT CARRY THEM , THEY CAN ORDER THEM FOR YOU. SEE OUR COMPLETE LINE AT www.rjspeed.com



STEP 27 WING INSTALLATION . BEND THE WING WIRE AS SHOWN AND CUT OUT THE WING AND SIDE PLATES (YOU MAY WANT TO PAINT THEM FIRST) USE THE LAYOUT BELOW FOR BENDING THE WIRE. DRILL TWO HOLES IN THE WING AND USE THE SMALL TIE STRAPS FROM BAG 10 TO ATTACH THE WIRE UNDER THE WING. PULL THEM TIGHT AND YOU WILL BE ABLE TO ADJUST YOUR WING POSITION FORWARD AND BACK . YOU CAN ALSO CHANGE THE WIRE BENDS TO INCREASE OR DECREASE THE WING ANGLE. THE WING HAS PROTECTIVE FILM ON IT. USE THE OTHER TWO SCREWS FROM BAG 10 TO LOCK THE WING WIRE IN THE MOUNTS.

WING WIRE LAYOUT



2103 NITRO DRAGSTER KIT

2016 VERSION WITH BELLCRANK STEERING

- 1013 NITRO DRAGSTER BODY
- 2501 1.5" O-RING FRONTS (BLACK)
- 2510 1.5 WIDE REAR TIRES, STD.
- 5031 CHASSIS WITH BRACE
- 5131 NITRO SUB FRAME
- 5140 NITRO BOTTOM PLATE
- 5141 NITRO AXLE MOUNT PLATE (2)
- 5142 THROTTLE PLATE
- 5143 NITRO TANK PLATE
- 5144 ALUMINUM ENGINE MOUNTS (2)
- 5146 THROTTLE PLATE SUPPORTS (2)
- 5221 1/8 E-CLIP
- 5238 FRONT AXLE PLATE
- 5282 ANGLE BRACKET, TAPPED (4)
- 5311 SET SCREW HUB
- 5312 GEAR / WHEEL HUB
- 5351 STEERING BLOCKS (2)
- 5377 KINGPIN (2)
- 5363 E-CLIP AXLE, .825 LONG (2)
- 5747 REAR AXLE, STAINLESS STEEL

HARDWARE

- 1- 4-40 X 1/4 BUTTON HEAD SCREW
- 2- 4-40 X 3/8 BUTTON HEAD SCREW
- 3- 4-40 X 5/8 BUTTON HEAD SCREW
- 4- 4-40 NYLON NUT
- 5- 4-40 LOCK NUT
- 6- 10-32 SOCKET SET SCREW (51600)
- 7- 1" BODY POST (2425)
- 8- 64 TOOTH 32P GEAR
- 9 - 1/4 X 3/8 BUSHING (5452)
- 10- 5-40 X 1/2 BUTTON HEAD SCREW

