

RAVE ENV



INSTRUCTION MANUAL

Table Of Contents

Introduction.....	2
Required Items And Tools Needed For Assembly.....	3-4
Foreword.....	5
Step 1 Assembling Main Frames.....	6-23
Step 2 Assembling Front Frames And Installing Nitro Engine.....	24-38
Step 3 Installing Servos And Assembling The Auto Unit.....	39-48
Step 4 Assembling And Installing Rotor Head.....	49-60
Step 5 Assembling And Installing Tail Section.....	61-81
Step 6 Installing Radio Gear And Installing Rotor Head Pushrods.....	82-84
Radio Setup.....	85-102
Installing Canopy.....	103-105
Final Preflight Checklist And Checking Blade Tracking.....	106-107
Step 4 Flybarless Assembling And Installing Flybarless Rotor Head.....	108-111
Step 1 Electric Assembling And Installing Electric Components.....	112-132
Replacement Parts.....	133-141

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903 S. Main Street
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Phone: (979)779-2172
Email: tech@curtisyounblood.com



Introduction

Congratulations on your purchase of the Rave model helicopter from Next D (a division of CJ Youngblood Enterprises Inc.). The Rave helicopter is an excellent choice for beginners new to the hobby, as well as the intermediate and expert 3D pilots. A 6 channel radio system, with 120 degree CCPM programming functions, is recommended as the bare minimum system to be used with the Rave. You may wish to check with your local or online dealer for compatible components.

Warning

This radio controlled model is not a toy! It is a precision machine requiring proper assembly and setup to avoid accidents. It is the responsibility of the owner to operate this product in a safe manner, as it can inflict serious injury and or death. It is recommended that if you are in any doubt of your abilities, seek assistance from experienced radio control helicopter modelers and associations. As the manufacturer, we assume no liability for the use of this product.

Pre-assembly Information

Upon opening the kit, you will notice all the major components are packaged in numbered bags to correspond with specific steps in the manual, making assembly much easier. Various assemblies have been pre-assembled, only requiring the final assembly and installation of the various sub-assemblies. It is highly recommended all screws in pre-assembled components be checked for proper use of threadlock compound, as well as tightness. The screws and nuts required for each step are packaged in the same bag as the parts required for that step. Be careful not to lose any of the hardware when opening each bag. In the unlikely event a piece of hardware is missing from a step bag, an extra bag of hardware has been provided for your convenience.

Warranty

Your new equipment is warranted to the purchaser against manufacturer defects in material and workmanship for 30 days from the date of the original purchase. During this period, Next D will repair or replace, at our discretion, any component that is found to be factory defective, at no cost to the purchaser. This warranty is limited to the original purchaser and is not transferable. This warranty does not apply to any unit that has been repaired or altered by any unauthorized agencies. Under no circumstances will the buyer be entitled to consequential or incidental damages. This limited warranty gives you specific legal rights. You also have other rights which may vary from state to state.

There are several warning boxes and attention signs throughout the manual. These were put in place to help assist you in properly assembling your model helicopter. Failure to follow these steps may lead to parts failure and or damage to the model. We suggest you read very carefully through every step to get a clear understanding of the assembly procedure. Please pay close attention to these tips and warnings.



Additional Gear Required To Complete Airframe

(Some of these items may or may not be included in your kit as a combo)



High Quality Carbon Fiber Main Rotor Blades 690-710mm In Length



Radix 105mm Tail Rotor Blades
(Optional Upgrade Accessory)



High Quality Exhaust System (Nitro Only)



High Quality Tail Servo

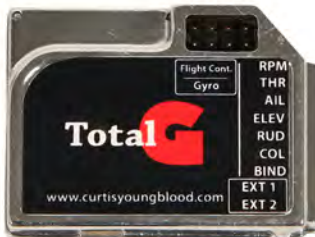
4 High Quality Servos For Cyclic And Throttle
(Electric Only Requires 3)



High Quality Gyro Unit



High Quality Helicopter Engine
(Nitro Only)



High Quality Flight Control System
(Flybarless Head Only)



Receiver Battery Pack
(2s 7.4 Volt Li-Po Recommended)



7-12 Channel Receiver



2 High Quality 5-6s Li-Po Batteries
(Electric Only)



Throttle Governor
(optional)



A 6 Channel Transmitter With 120 Degree CCPM Helicopter Programming Is Recommended As The Bare Minimum Radio System For The Rave. An 8 Channel Or Above Is Preferred. (We Do Not Recommend 72 Mhz Systems)



High Quality Electric Motor
(Electric Only)



110 Amp Electronic Speed Control
(Electric Only)



Tools Required



Required Adhesives And Lubricants



Note: Threadlock Colors May Vary Depending On Your Area. Be Sure To Use The Correct Strength Threadlock Where Indicated!

The Rave ENV can be built in many different configurations. Before you begin building, we recommend that you look through the instruction manual and familiarize yourself with the build steps needed to complete the build, with the configuration you have chosen.

The basic instructions show the model being built as a nitro helicopter. The rotor head in the basic instructions has a flybar installed. The instructions for building the model as an electric helicopter begin on page 112 and end on page 132. These instructions go over the differences between the nitro configuration and the electric, however, for most of the general build you will use the basic nitro instructions. When building an electric only kit, you will notice that the parts for running a nitro engine in your model are not present in the kit. These parts have been replaced with the necessary parts to install an electric power system. The same thing will apply to a nitro only kit, the needed parts to build the model as an electric powered model will not be in the kit. However, they can be purchased separately.

If you have chosen to purchase your kit with a flybarless rotor head, the instructions for assembling the rotor head are in the back of the manual, starting on page 108 and ending on page 111. The flybarless head can be used on either the nitro model or the electric model. For the basic mechanics assembly, follow the basic instructions as listed above.

The Rave ENV is capable of using 120° or 140° CCPM mixing. This is the type of mixing used to control the servos that will control the swashplate of your model helicopter. The transmitter you have chosen for your model will need to have the capability of running 120° CCPM, at the very least, to be usable for your model. Not all transmitters on the market will have the option to program 140° CCPM. You will need to verify that your transmitter has the capability to run 140° CCPM before beginning assembly, if that is the configuration you prefer. We suggest referring to the manufacturer's instructions when trying to verify if your transmitter is capable of running 140° CCPM, before beginning the assembly of your model.

**Enjoy The Build!
And Welcome To The Rave Family!**

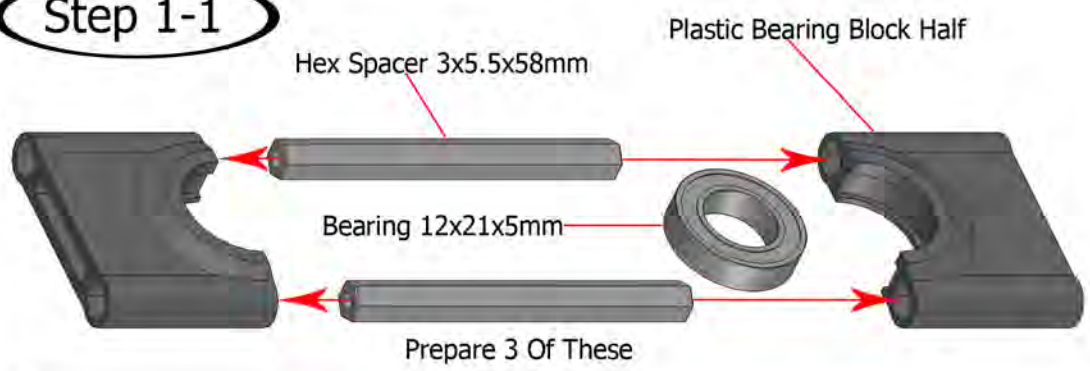


Next

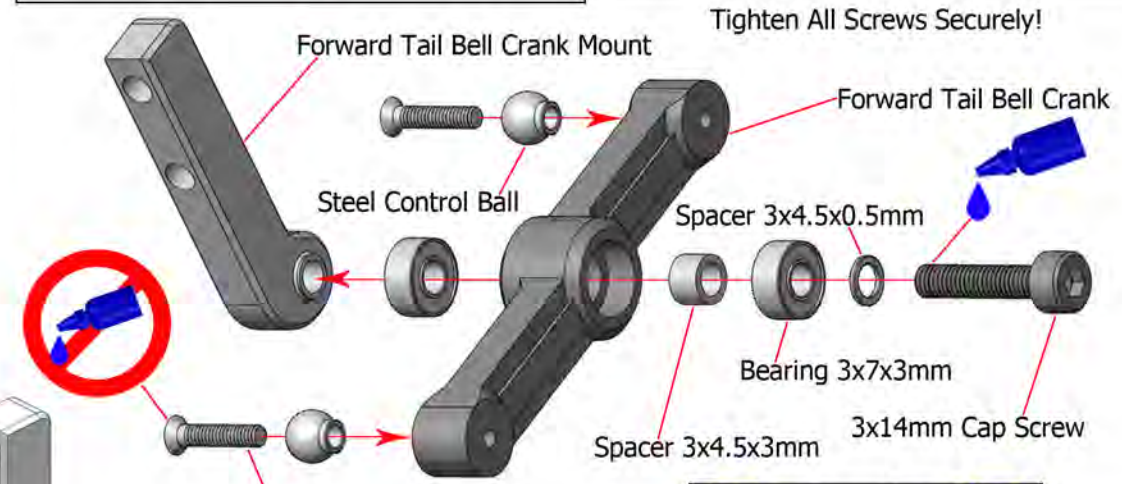
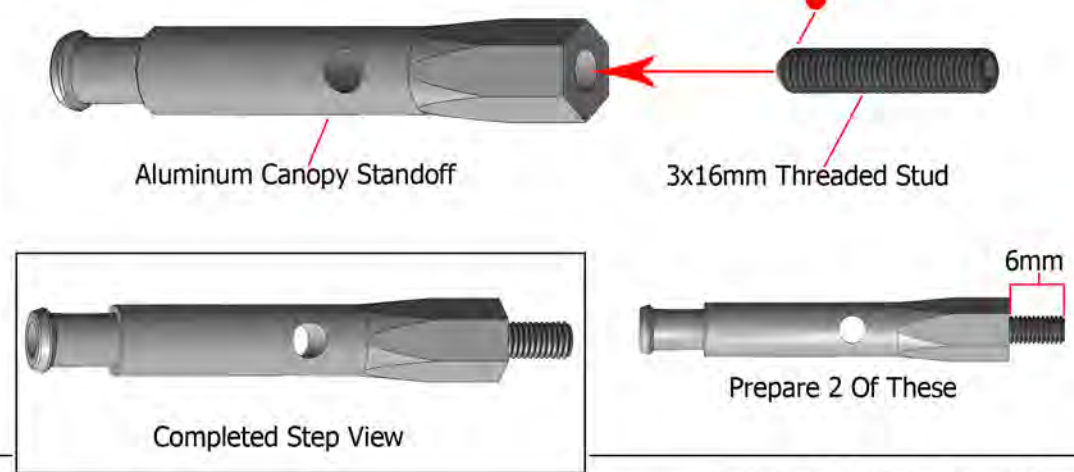
Step 1-1

Step 1-1

- Plastic Main Bearing Block Half - x6
ND-YR-F1021
- Hex Spacer 3x5.5x58mm - x6
ND-YR-G075
- Bearing 12x21x5mm - x3
ND-YR-G070
- Rear Canopy Standoff - x2
ND-YR7-F1011
- 3x16mm Threaded Stud - x2
ND-YR-G129
- Bearing 3x7x3mm - x2
ND-YR-G068
- Forward Tail Bell Crank Mount - x1
ND-YR7-F1008
- Forward Tail Bell Crank - x1
ND-YR7-F1009
- Spacer 3x4.5x3mm - x1
ND-YR-G100
- Steel Control Ball - x2
ND-YR-G001
- 3x14mm Cap Screw - x1
ND-YR-G123
- 2x10mm Phillips Head Screw - x2
ND-YR-G124
- Spacer 3x4.5x0.5mm - x1
ND-YR-G097

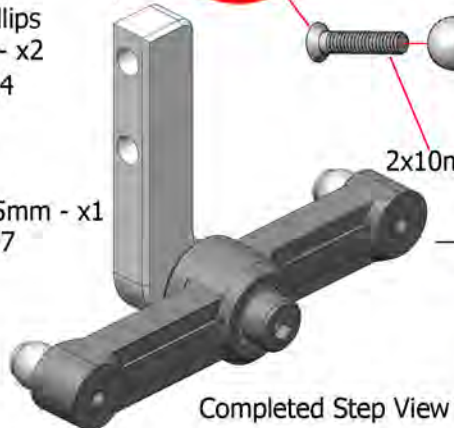


Apply Red Threadlock To The End Of The 3x16mm Threaded Stud And Thread Threaded Stud Into The Aluminum Canopy Standoff. Allow The Threadlock To Cure Before Mounting The Standoff.



Attention!
Use Blue Threadlock On All Screws Going Into Metal

Attention!
Do Not Use Threadlock On Any Screws Going Into Plastic





Main Frame Left And Right - x1
ND-YR7-F1028



3x8mm Cap Screw - x8
ND-YR-G114



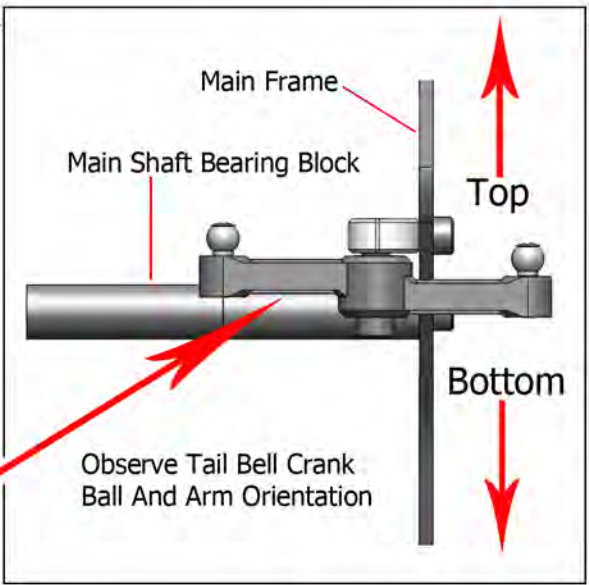
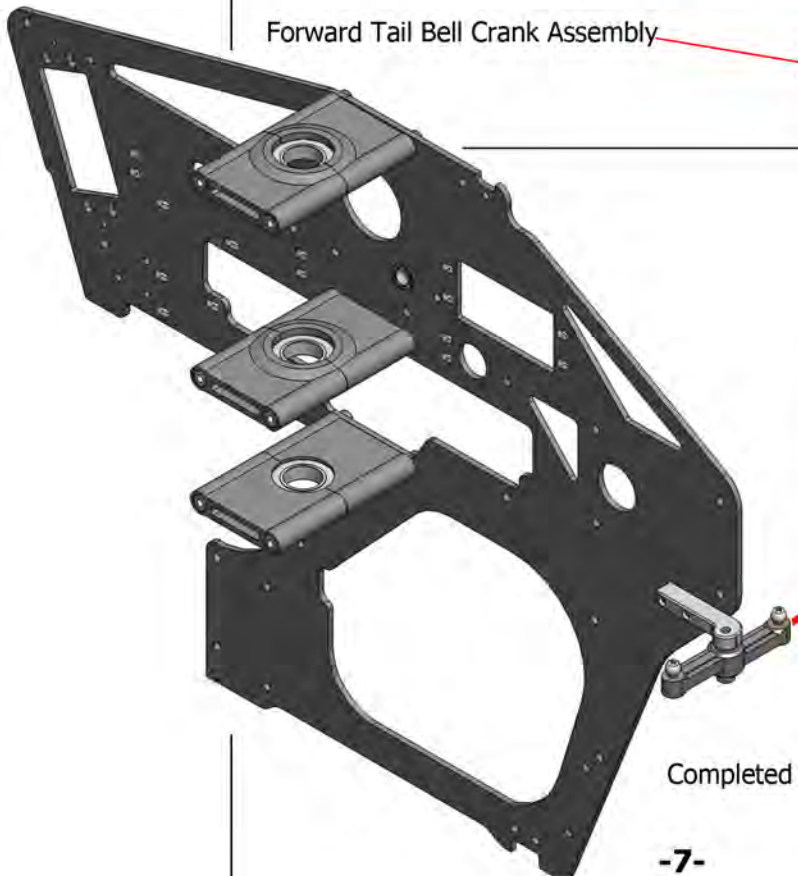
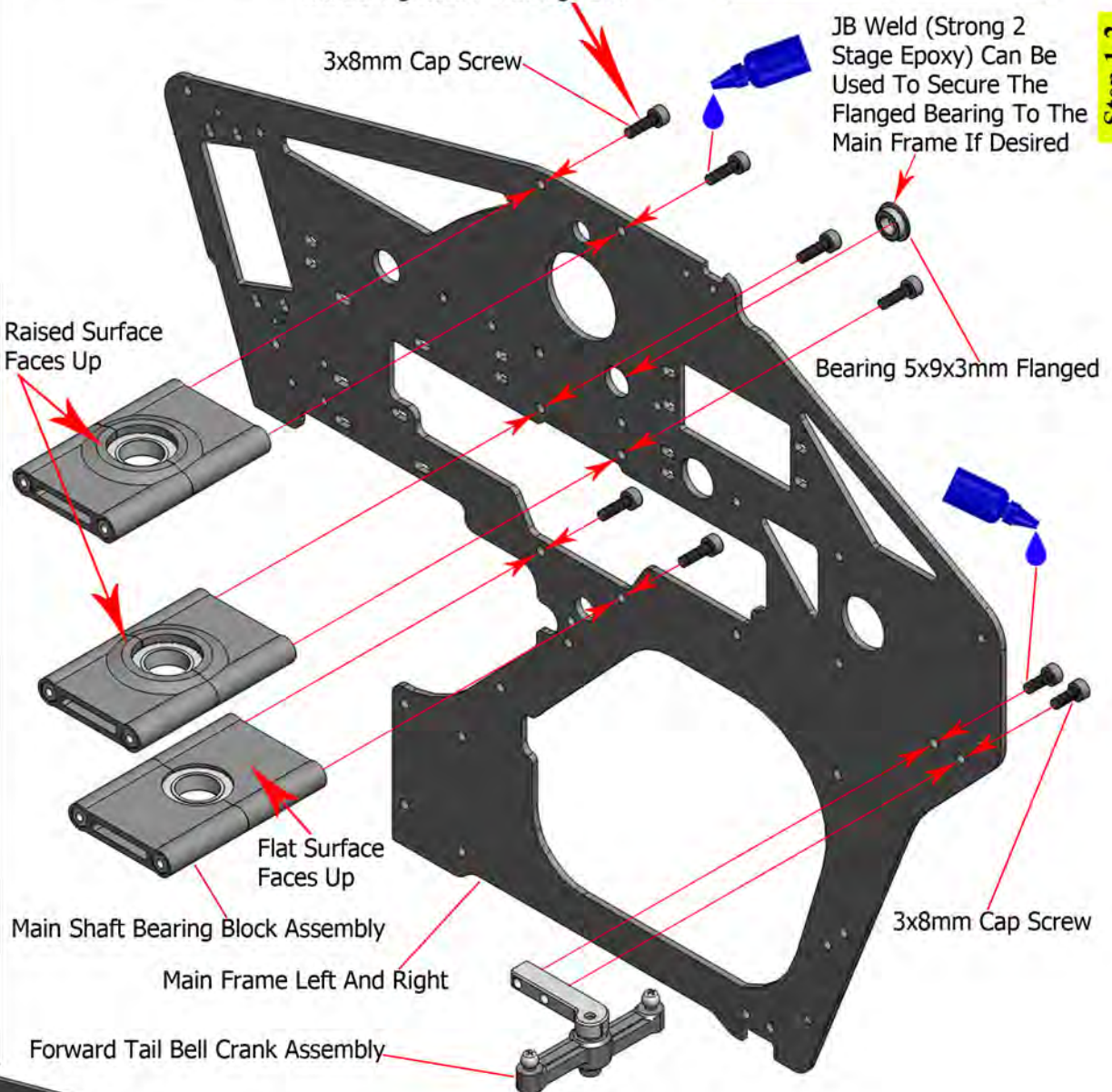
Bearing 5x9x3mm Flanged - x1
ND-YR-G069

Step 1-2

Leave Bearing Block Screws Loose At This Time. Tighten All Other Screws In This Step. All Other Screws Will Be Tightened On Page 28.

Attention!
Use Blue Threadlock On All Screws Going Into Metal

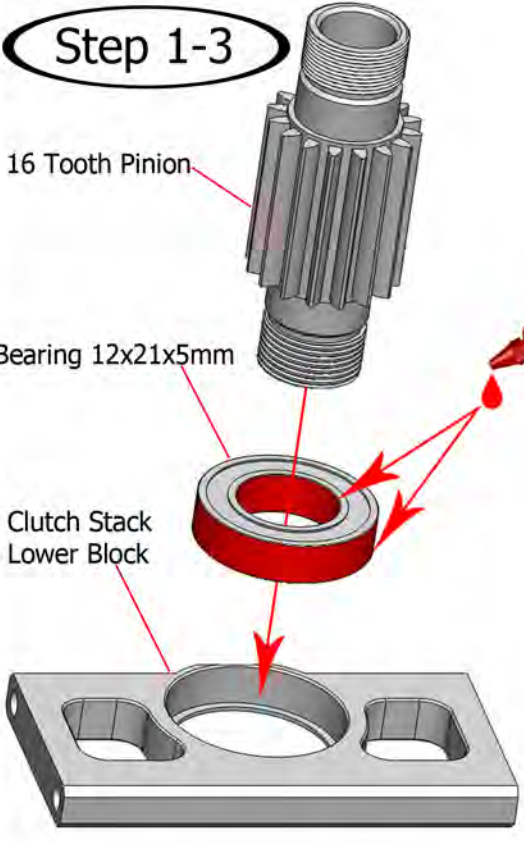
Step 1-2



Step 1-3

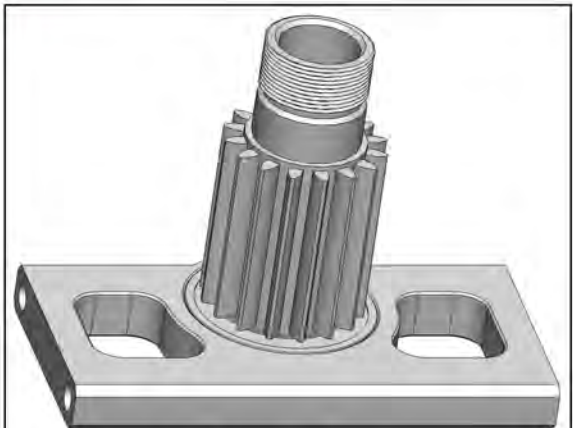
Step 1-3

- Bearing 12x21x5mm - x1 ND-YR-G070
- 16 Tooth Pinion - x1 ND-YR7-CS1002
- Clutch Stack Lower Block - x1 ND-YR7-CS1003
- Clutch Bell - x1 ND-YR7-CS1007
- Bearing 5x13x4mm - x1 ND-YR-G142



Clean All Surfaces With Alcohol. Apply Red Threadlock To The Areas Indicated. Wipe Away Excess Adhesive After The Bearing Is In Place. Be Careful Not To Get Threadlock Inside The Bearing.

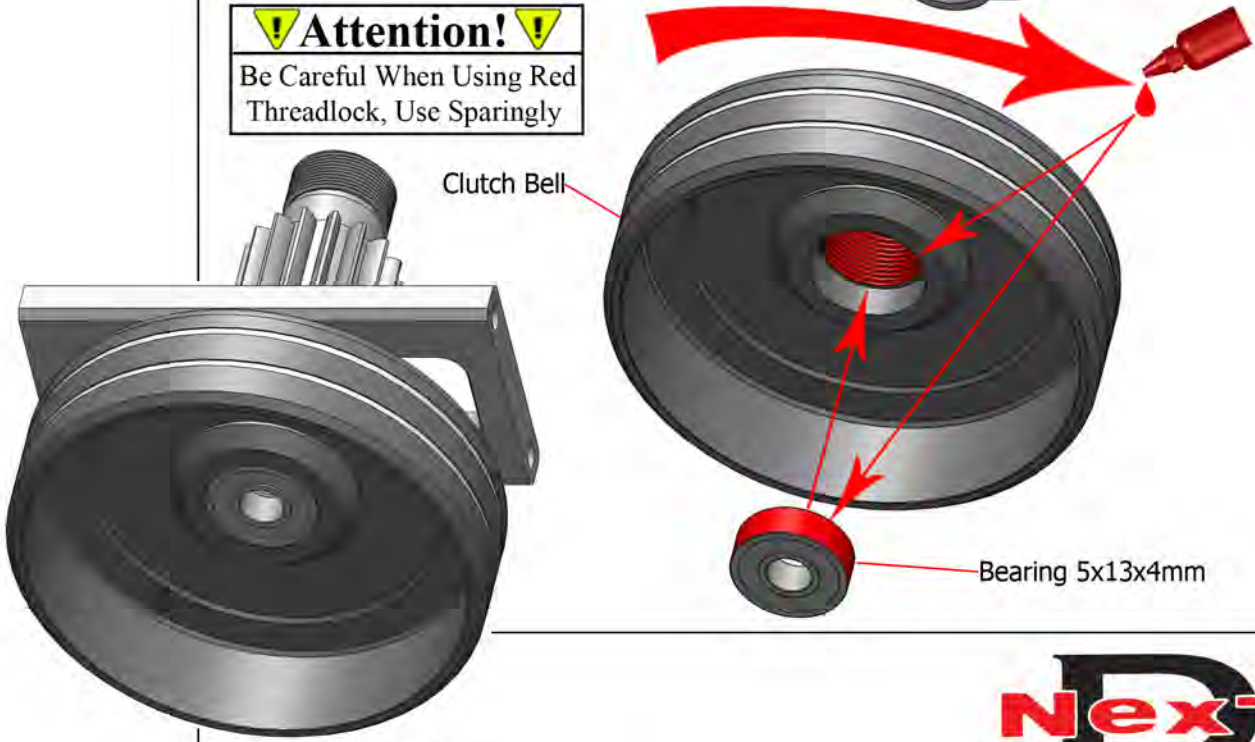
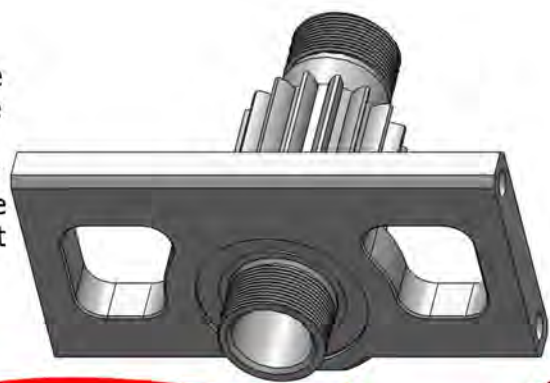
! Attention! !
Be Careful When Using Red Threadlock, Use Sparingly



Completed Step View

Apply Red Threadlock To The Clutch Bell Threads. Thread The Clutch Bell Onto The 16 Tooth Pinion. Be Sure The Clutch Bell Is Tightened Securely. Wipe Away Any Excess Adhesive. After The Clutch Bell Is Tightened Securely Apply Red Threadlock To The Outside Surface Of The 5x13x4mm Bearing And Press It In Place. Wipe Away Any Excess Adhesive. Be Sure Not To Get Any Threadlock Inside The Bearing.

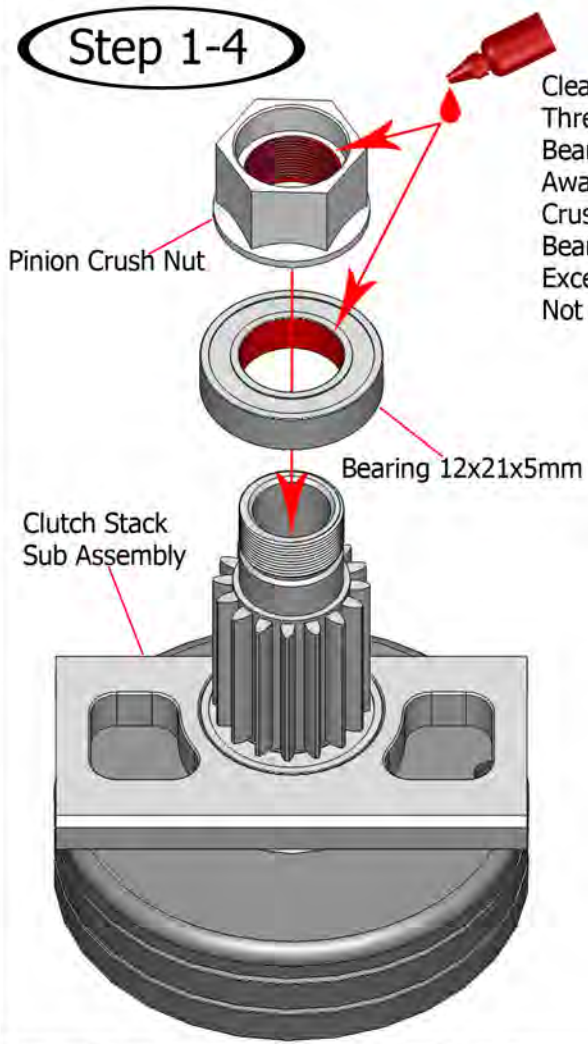
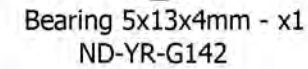
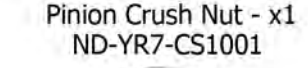
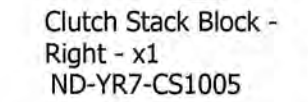
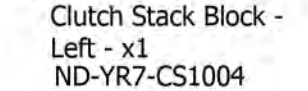
! Attention! !
Be Careful When Using Red Threadlock, Use Sparingly



Completed Step View

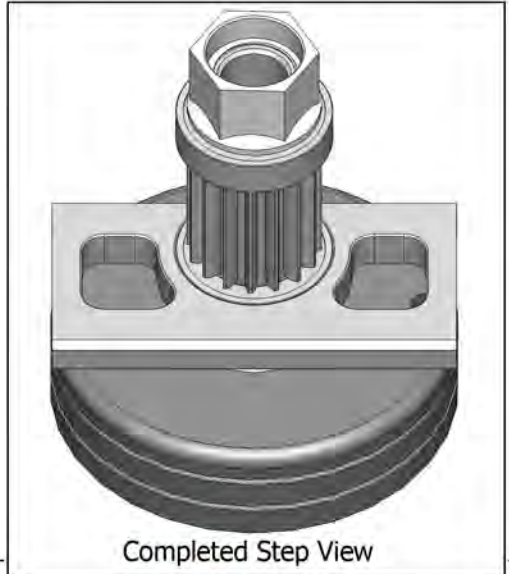


Step 1-4

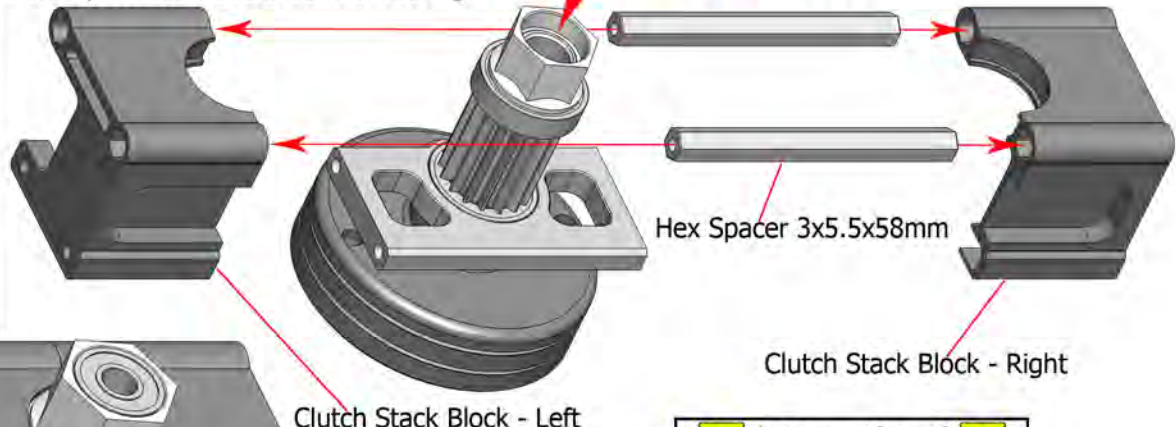


Clean All Surfaces With Alcohol. Apply Red Threadlock To The Areas Indicated. Press The Bearing Onto The 16 Tooth Pinion First. Wipe Away Any Excess Adhesive. Thread The Pinion Crush Nut On After Adhesive Is Cleaned Off Of The Bearing. After The Nut Is In Place, Clean Away Any Excess Adhesive. Tighten Nut Securely! Be Careful Not To Get Threadlock Inside The Bearing.

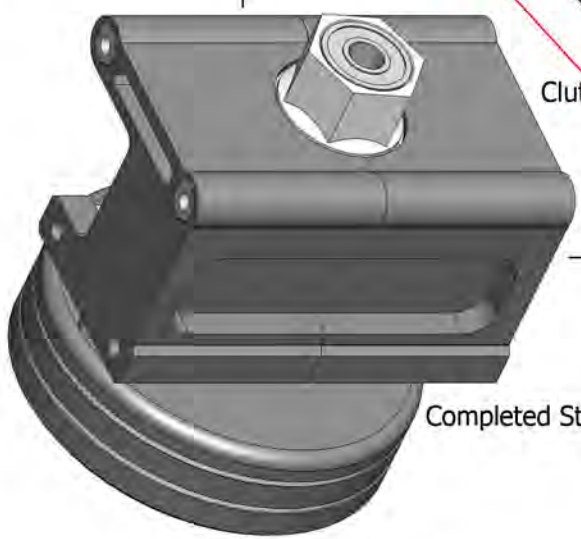
! Attention! !
Be Careful When Using Red Threadlock, Use Sparingly



Clean All Surfaces With Alcohol. Apply Red Threadlock To The Outside Surface Of The 5x13x4mm Bearing. Press The Bearing Into The Top Of The Pinion Crush Nut. Clean Away Any Excess Adhesive. Be Sure Not To Get Any Threadlock Inside The Bearing.



! Attention! !
Be Careful When Using Red Threadlock, Use Sparingly



Completed Step View



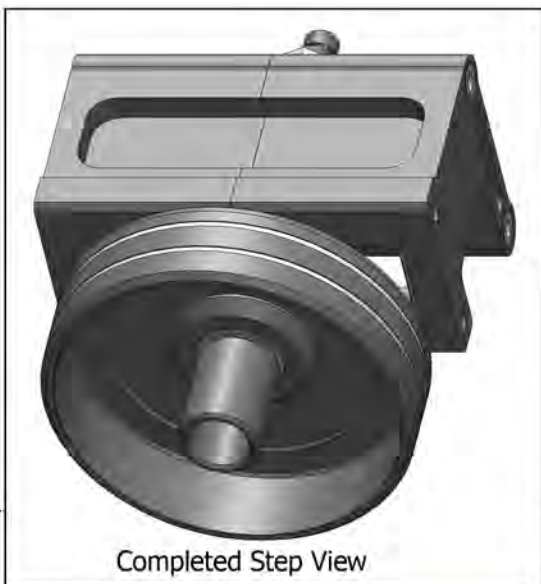
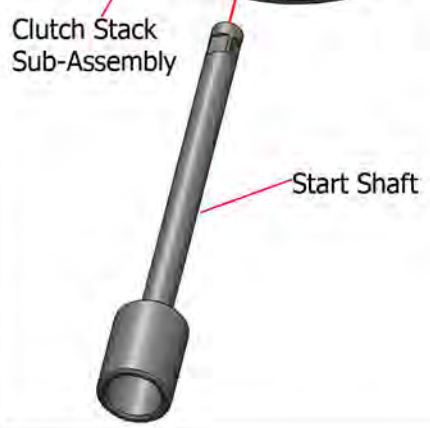
Step 1-5

- Start Shaft - x1
ND-YR7-CS1013
- Start Hex - X1
ND-YR7-CS1010
- 4x4mm Set Screw - X2
ND-YR-G120

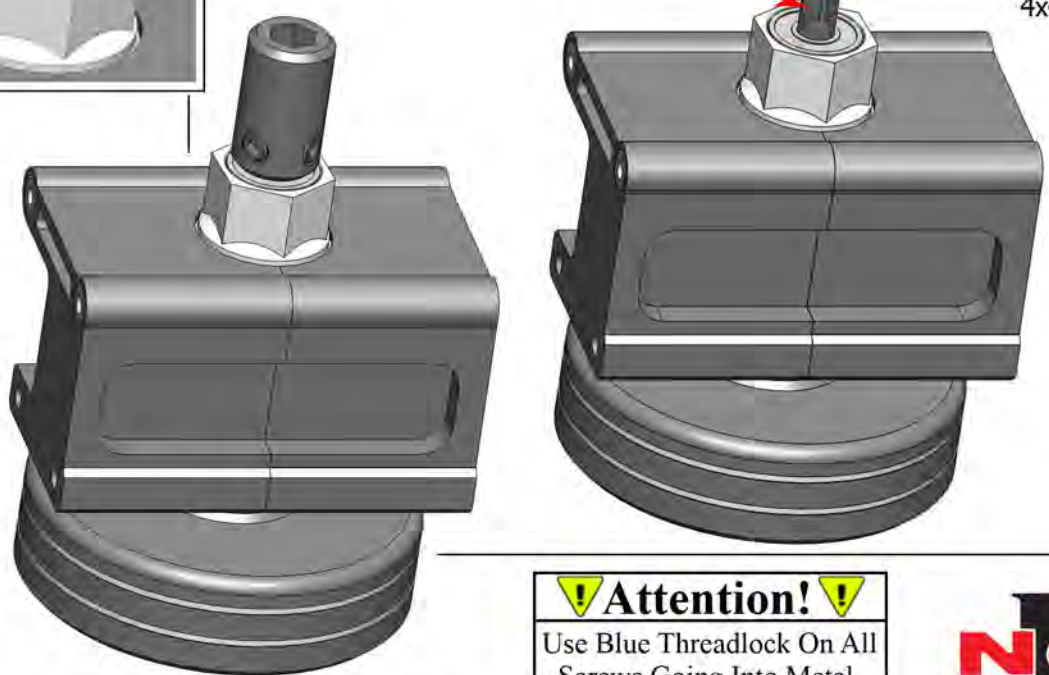
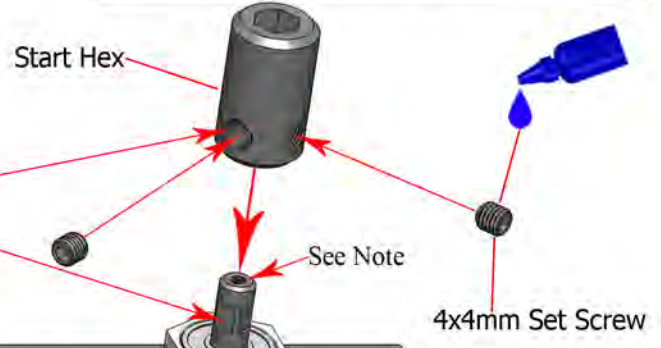
Push The Start Shaft All The Way Through The Bearings.

!Attention! !
No Adhesives Are Used In This Part Of This Step

Note: You Will Notice That The End Of The Start Shaft Is Threaded. This Threaded Hole Is There To Aid You In Pulling Up On The Start Shaft If The Set Screws In The Start Hex Come Loose. To Re-Secure A Loose Start Hex Thread A Long 2mm Cap Screw Into The End Of The Start Shaft. Pull Up On The Cap Screw, Push Down On The Start Hex, Tighten The Set Screws In The Start Hex Securely. Re-Apply Threadlock To The Set Screws If Needed.



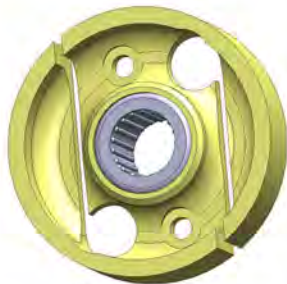
Line Up The Holes In The Start Hex With The Flat Spots On The Start Shaft. Lightly Push Up On The Start Shaft And Down On The Start Hex. Tighten Both 4x4mm Set Screws Securely.



!Attention! !
Use Blue Threadlock On All Screws Going Into Metal



Step 1-6

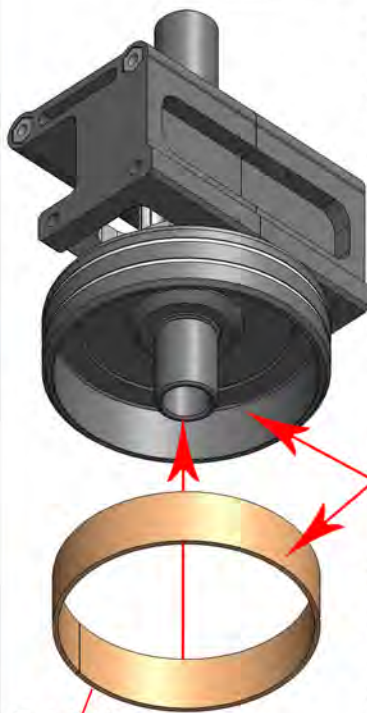


Clutch - x1
ND-YR7-CS1009



Clutch Liner - x1
ND-YR7-CS1006

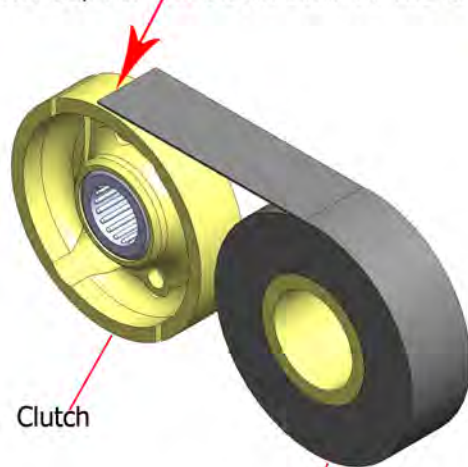
Tip:
To Remove The Clutch Liner Heat The Clutch Bell Up With A Heat Gun. Peel The Old Liner Out Of The Clutch Bell. Be Very Careful, The Clutch Bell Will Be Very Hot! Be Sure To Remove Any Of The Old Adhesive Residue Before Installing The New Clutch Liner.



Clutch Liner

Clean The Inside Surface Of The Clutch Bell With Alcohol. Apply A Thin Coat Of High Strength 2 Stage Epoxy To The Entire Outside Surface Of The Clutch Liner. Install The Clutch Liner Inside The Clutch Bell With The Adhesive Facing The Clutch Bell Surface. Wipe Away Excess Adhesive.

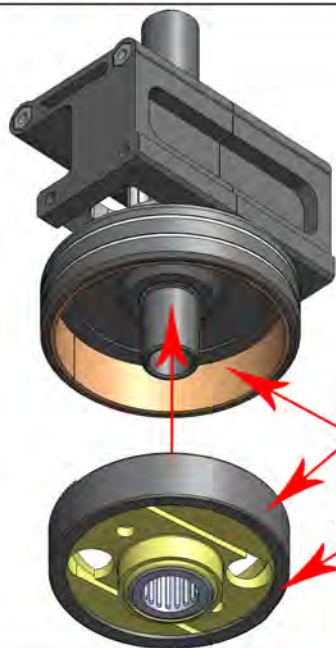
Using Electrical Tape Tightly Wrap 2 Layers Of Tape Around The Clutch. This Will Set The Gap For The Clutch Liner To The Clutch



Clutch

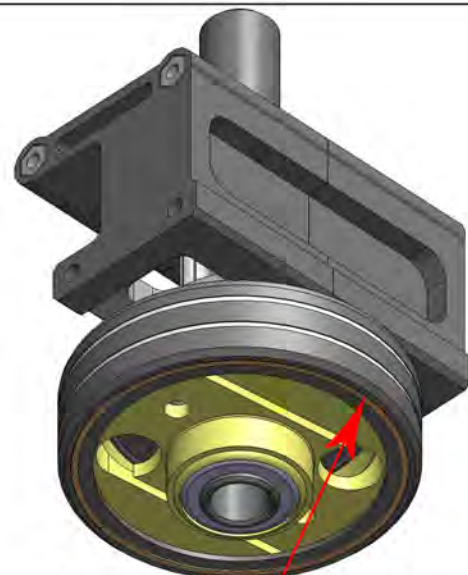
Electrical Tape

Step 1-6

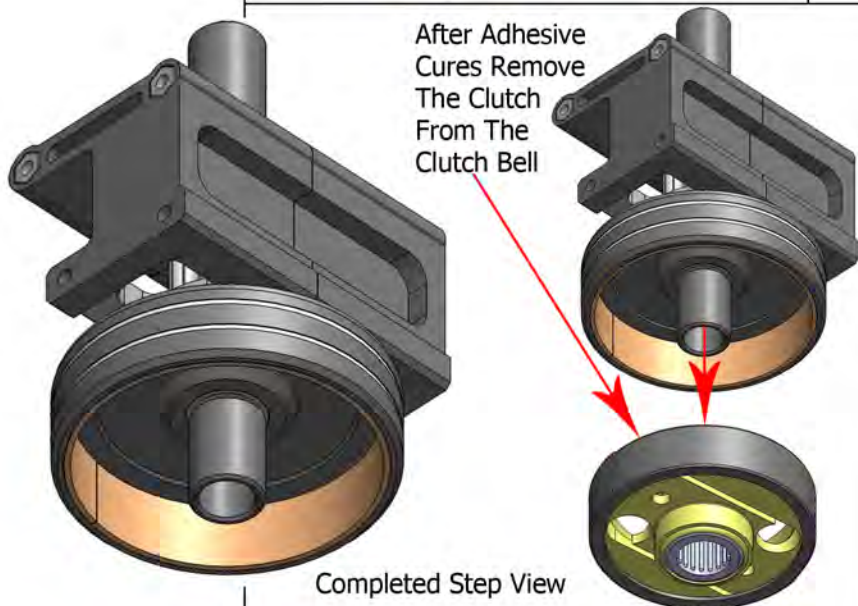


Slowly Slide The Clutch Up Inside The Clutch Bell

Be Sure The Tape Overlaps The Edges Of The Clutch



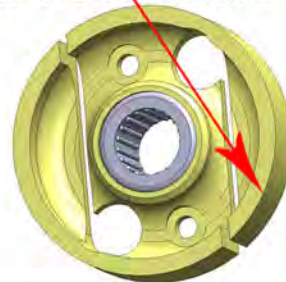
Wipe Away Any Excess Adhesive From The Edge Of The Clutch Bell.



After Adhesive Cures Remove The Clutch From The Clutch Bell

Completed Step View

Be Sure To Remove The Tape From The Clutch. Clean Away Any Of The Tape Residue With Alcohol. Set Clutch Aside.



Next



3x12mm Cap Screw - x4 ND-YR-G115



2.5x10mm Cap Screw - x2 ND-YR-G112



M3 Washer - x4 ND-YR-G094



CCPM-T Arm Left And Right - x2 ND-YR7-F1014



Bearing 3x7x3mm - x4 ND-YR-G068



2x10mm Phillips Head Screw - x6 ND-YR-G124



Spacer 3x4.5x3mm - x2 ND-YR-G100



Steel Control Ball - x6 ND-YR-G001



Anti-Rotation Bracket - x1 ND-YR7-F1029

Step 1-7

Attention!

Use Blue Threadlock On All Screws Going Into Metal

Leave All Screws Loose At This Time! Screws Will Be Tightened On Page 28

3x12mm Cap Screw

M3 Washer

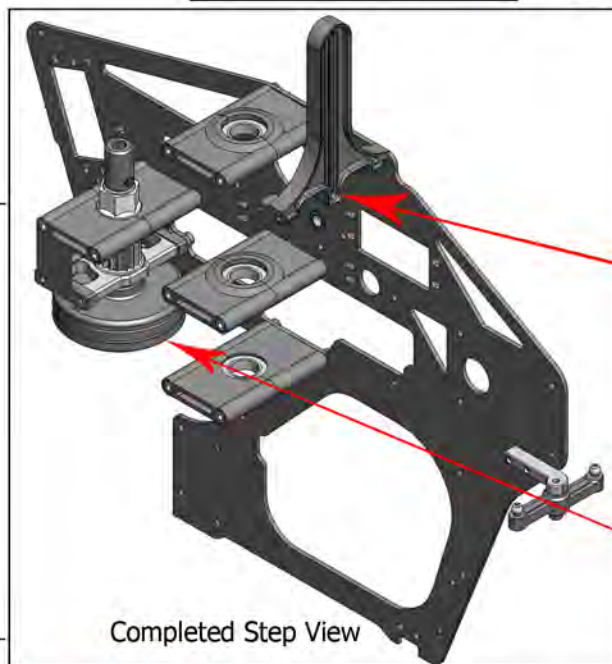
2.5x10mm Cap Screw

Clutch Stack Assembly

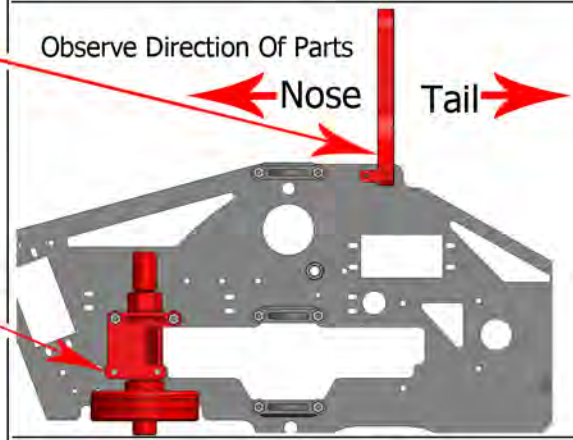
Anti-Rotation Bracket

Attention!

Do Not Use Threadlock On Any Screws Going Into Plastic



Completed Step View



Observe Direction Of Parts

Nose

Tail

Tighten All Screws In CCPM-T Arm Securely! Prepare 2 Of These

Spacer 3x4.5x3mm

Bearing 3x7x3mm

CCPM-T Arm Left And Right

2x10mm Phillips Head Screw

Steel Control Ball

Attention!

Do Not Over Tighten Screws Going Into Plastic Parts

Completed Step View



Step 1-8

A Small Amount Of Medium CA Can Be Used On The Edge Of The Frame To Hold The Rubber Frame Grommets In Place If Desired.

- CCPM-T Arm Spacer - x1 ND-YR7-F1012
- 3x22mm Cap Screw - x1 ND-YR-G125

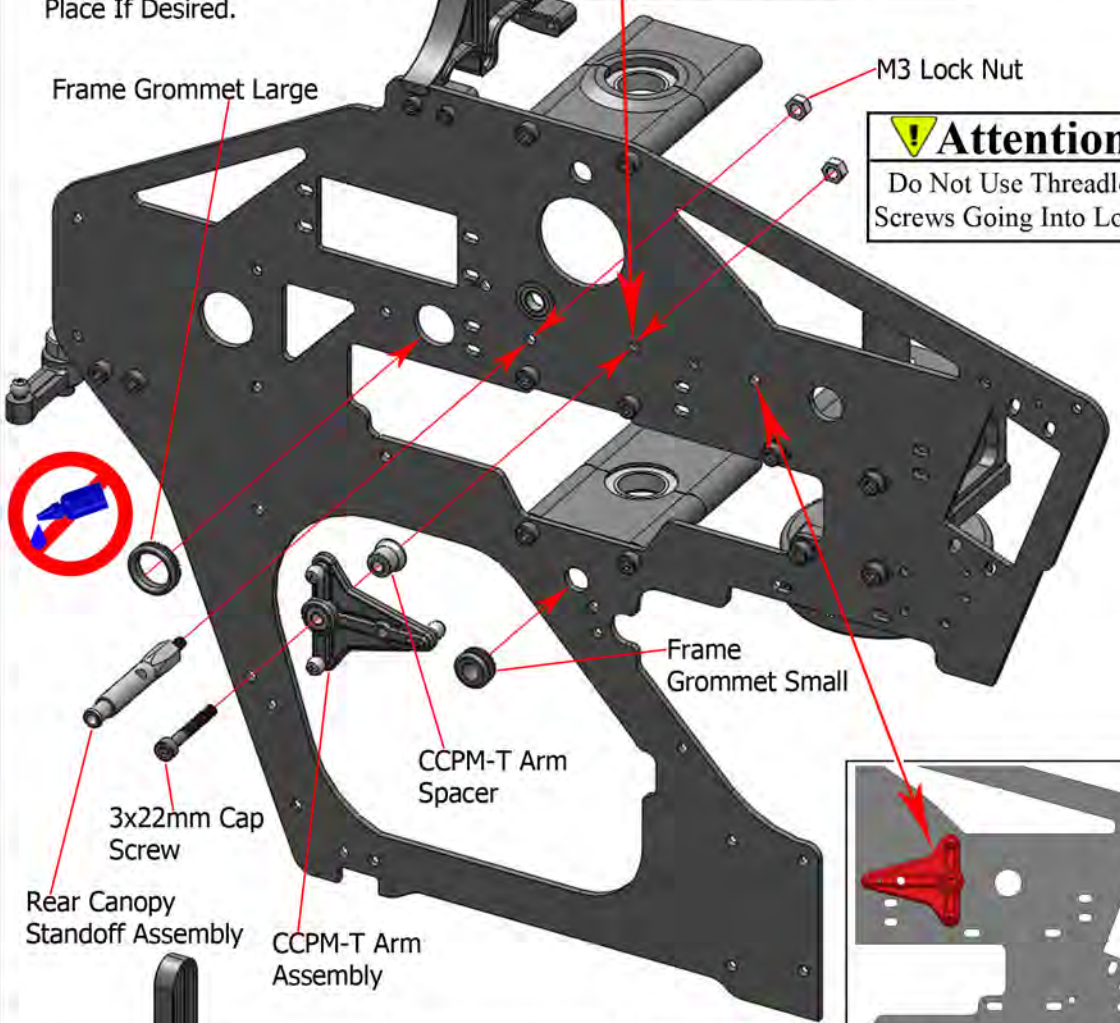
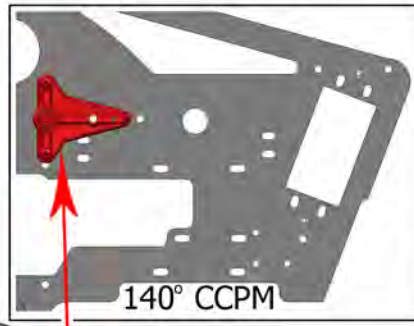
- Frame Grommet Large - x1 ND-YR-G110

- Frame Grommet Small - x1 ND-YR-G109

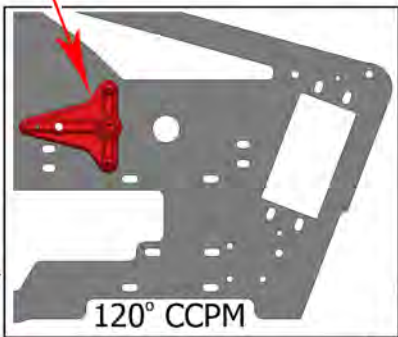
- Plastic Servo Mount Tab - x2 ND-YR7-F1017

- M3 Lock Nut - x2 ND-YR-G035

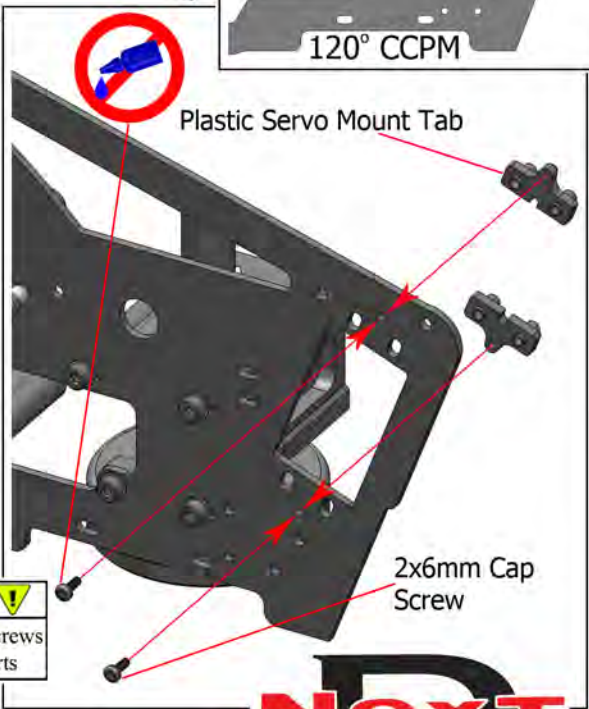
- 2x6mm Cap Screw - x2 ND-YR-G023



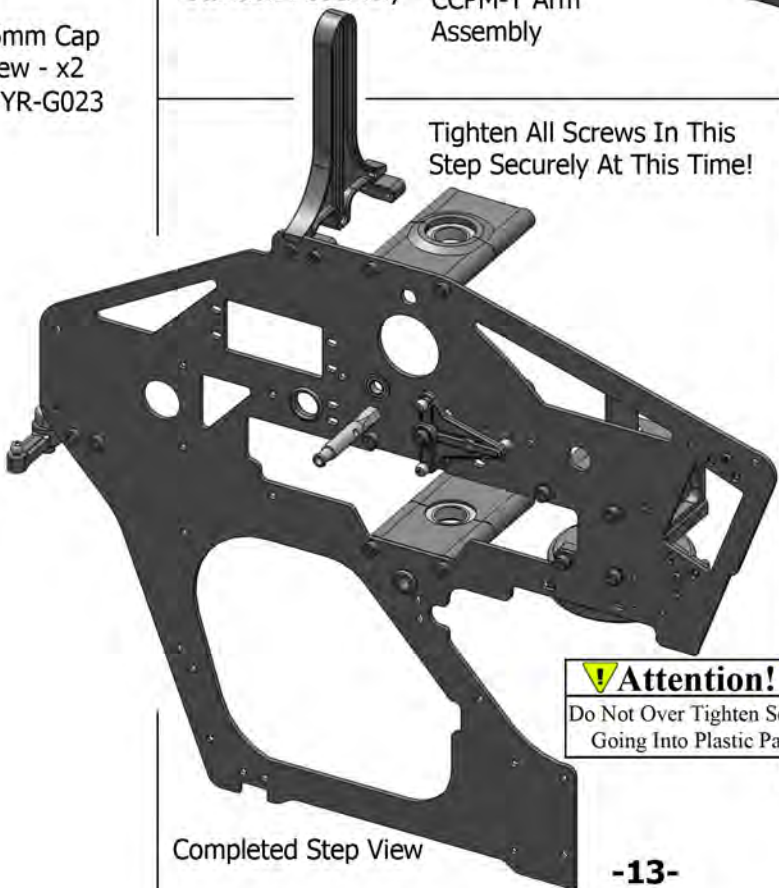
! Attention! !
Do Not Use Threadlock On Screws Going Into Lock Nuts



Tighten All Screws In This Step Securely At This Time!



! Attention! !
Do Not Over Tighten Screws Going Into Plastic Parts



Step 1-9

Step 1-9

Attention!
Use Blue Threadlock On All
Screws Going Into Metal



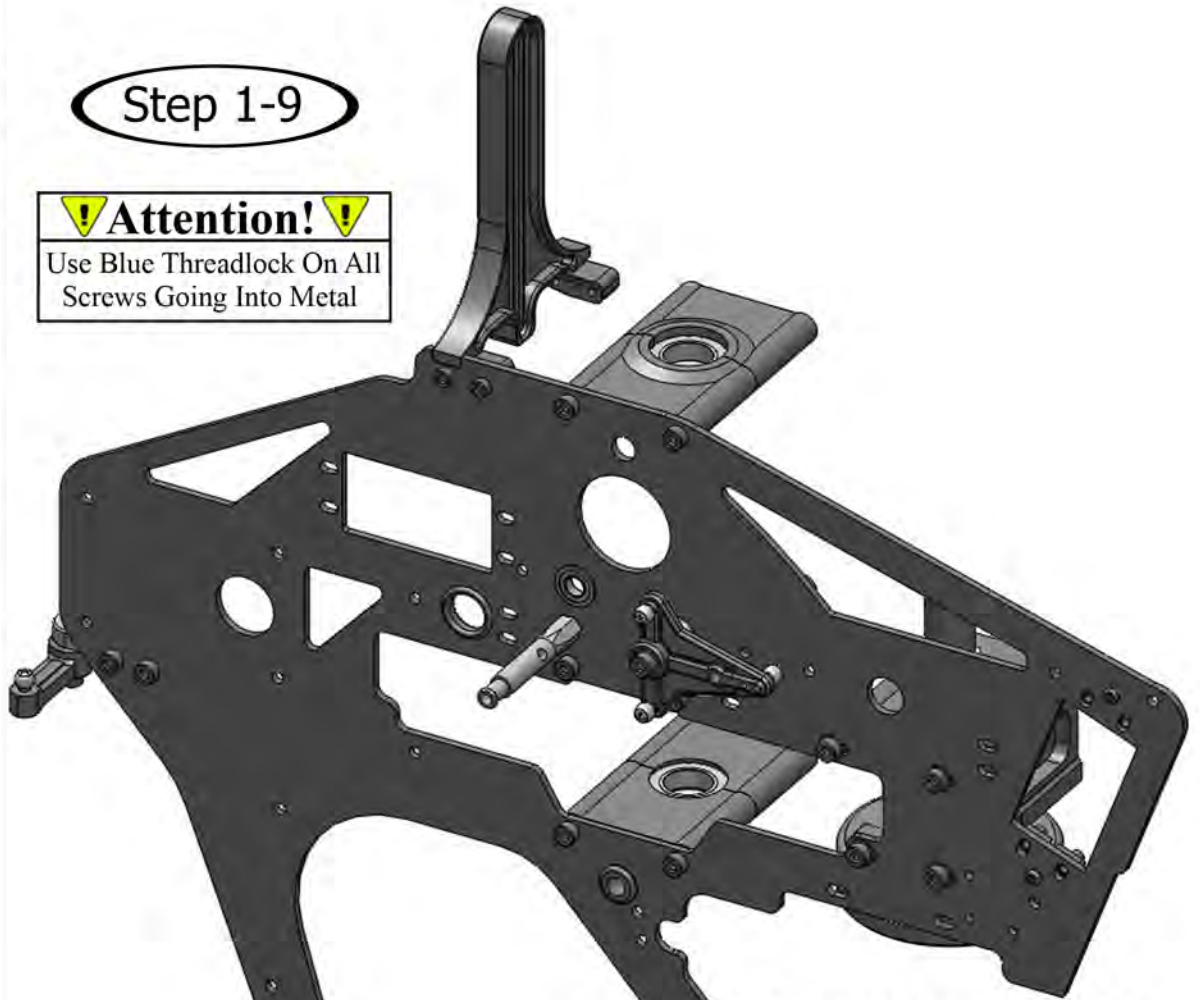
Motor Mount Half
Left & Right - x1
ND-YR7-F1030



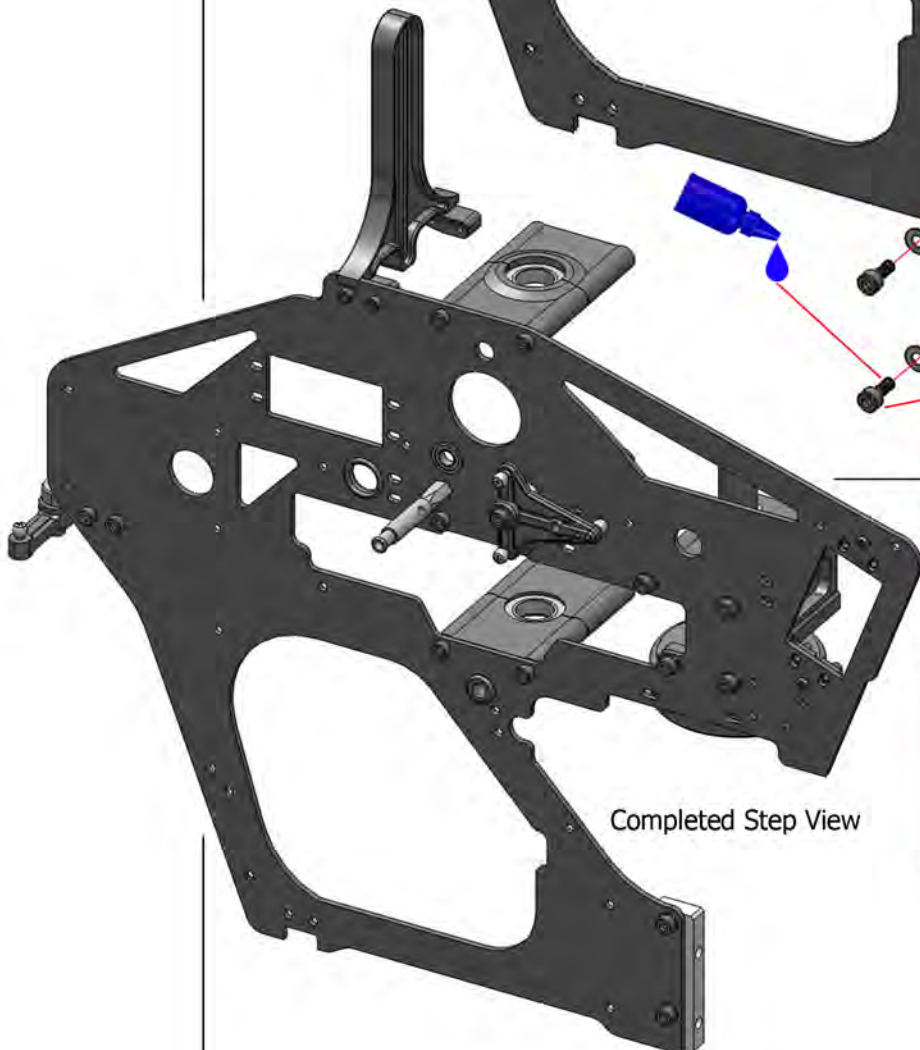
3x8mm Cap
Screw - x2
ND-YR-G114



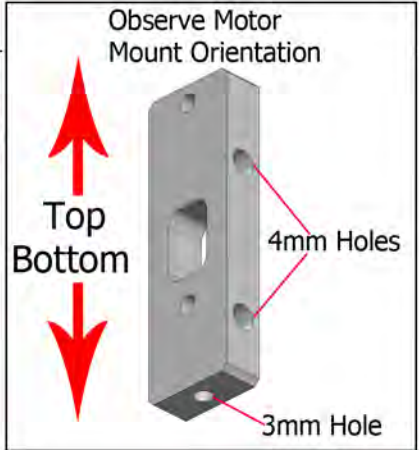
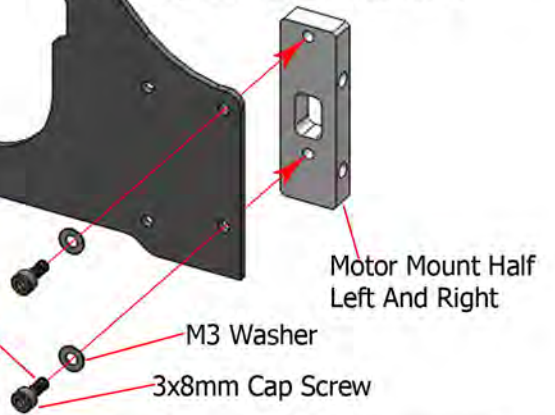
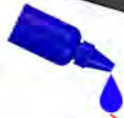
M3 Washer - x2
ND-YR-G094



Tighten All Screws Used In This
Step Securely At This Time!



Completed Step View





Fuel Tank - x1
ND-YR7-FT1001



Fuel Tank Nipple - x1
ND-YR7-FT1003



Fuel Tank Clunk - x1
ND-YR7-FT1004

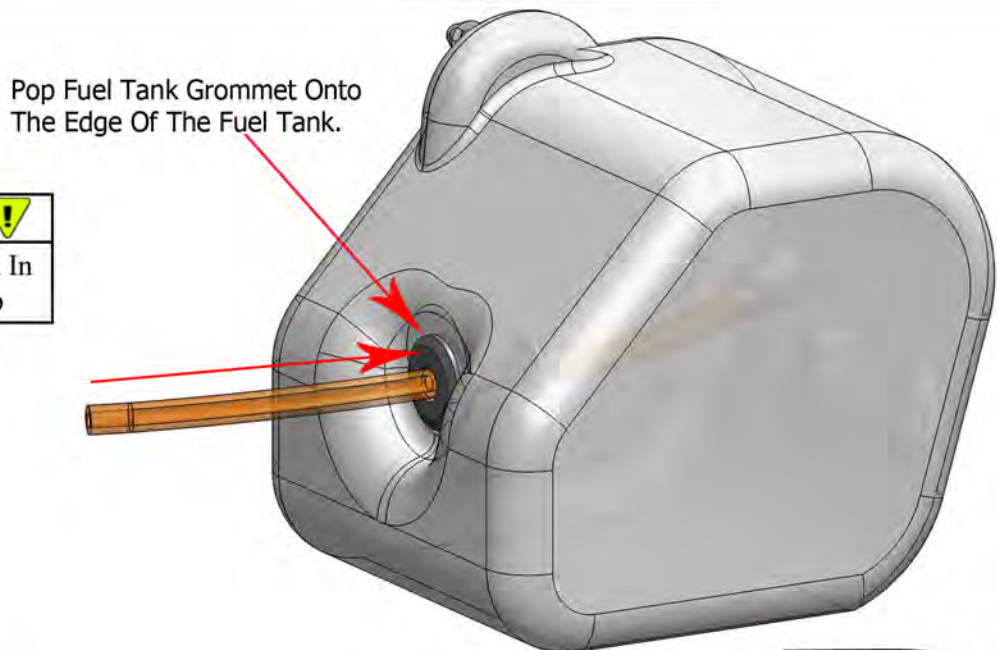
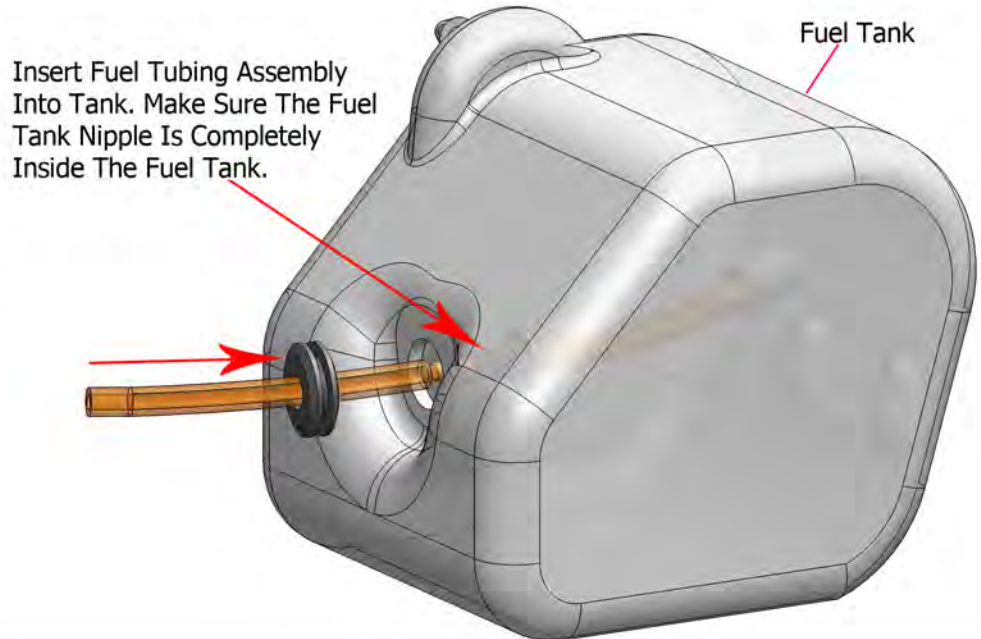
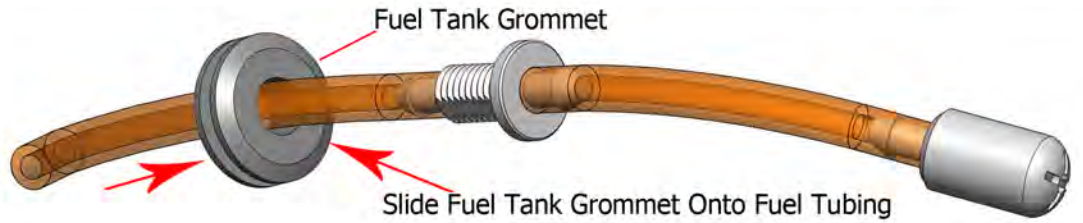
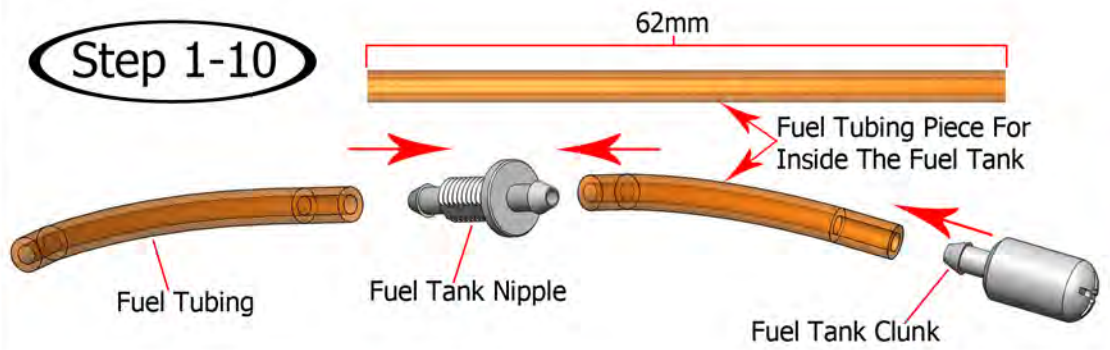


Fuel Tank Grommet - x1
ND-YR7-FT1002



Fuel Tubing 6 Inch
Section - x1
ND-YR-G105

Step 1-10



! Attention! !
No Adhesives Are Used In
This Part Of This Step

Step 1-10



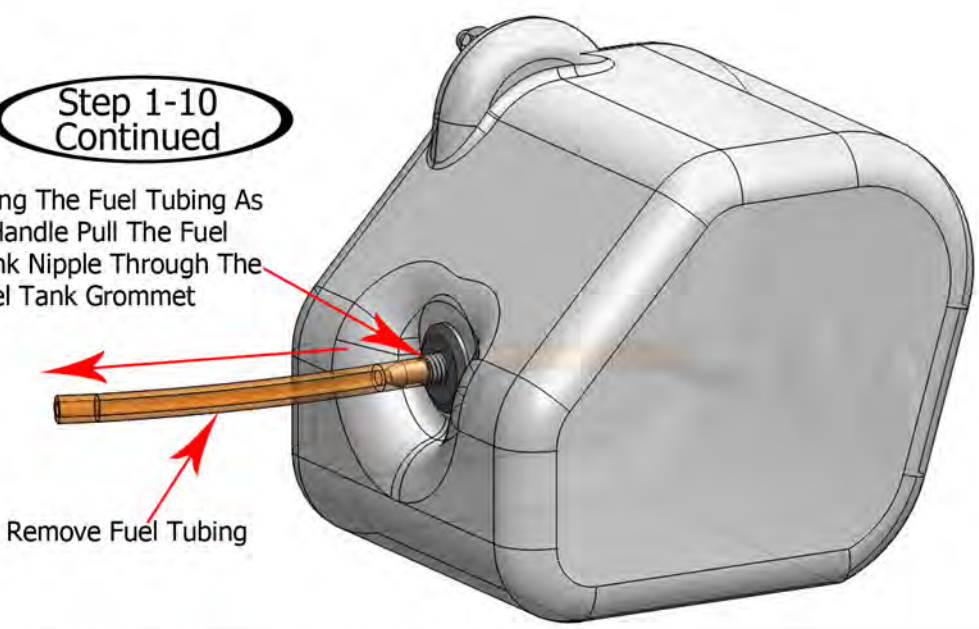
Fuel Tank Nut - x1
ND-YR7-FT1006



Fuel Tank Washer - x1
ND-YR7-FT1005

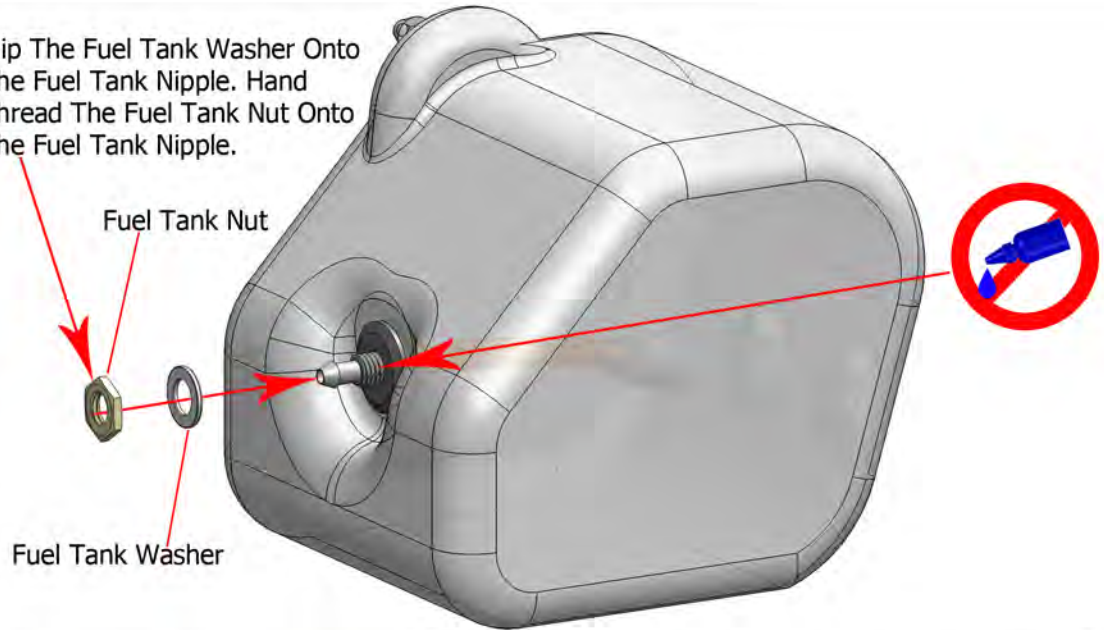
**Step 1-10
Continued**

Using The Fuel Tubing As
A Handle Pull The Fuel
Tank Nipple Through The
Fuel Tank Grommet



Remove Fuel Tubing

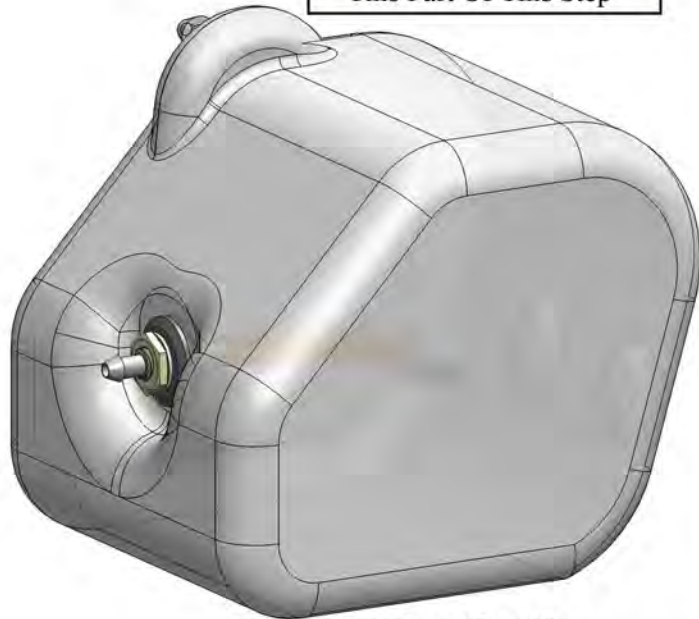
Slip The Fuel Tank Washer Onto
The Fuel Tank Nipple. Hand
Thread The Fuel Tank Nut Onto
The Fuel Tank Nipple.



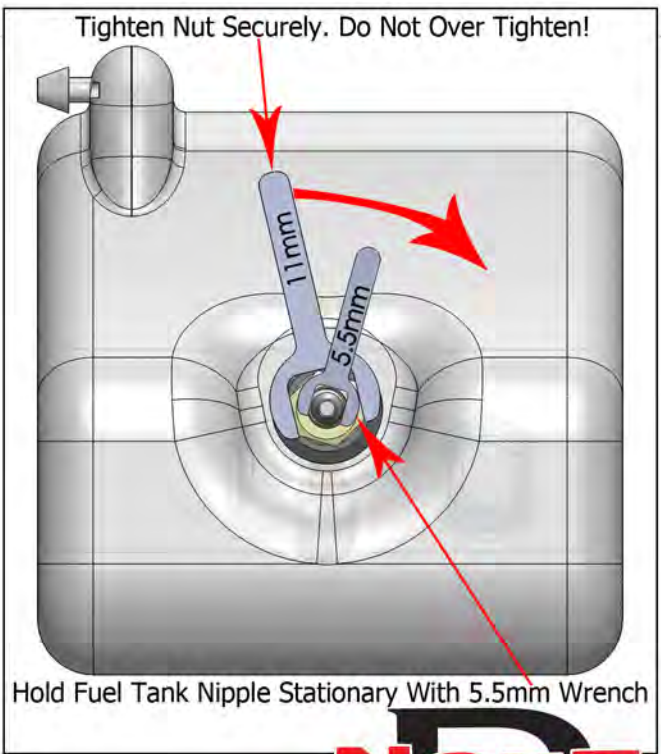
Fuel Tank Nut

Fuel Tank Washer

! Attention! !
No Adhesives Are Used In
This Part Of This Step



Completed Step View

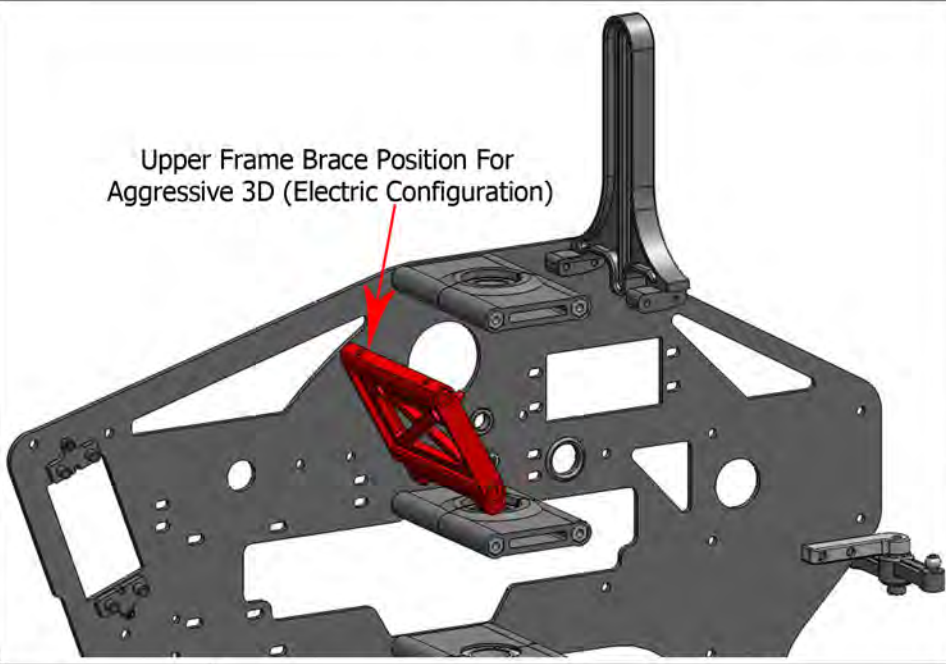


Hold Fuel Tank Nipple Stationary With 5.5mm Wrench

Next

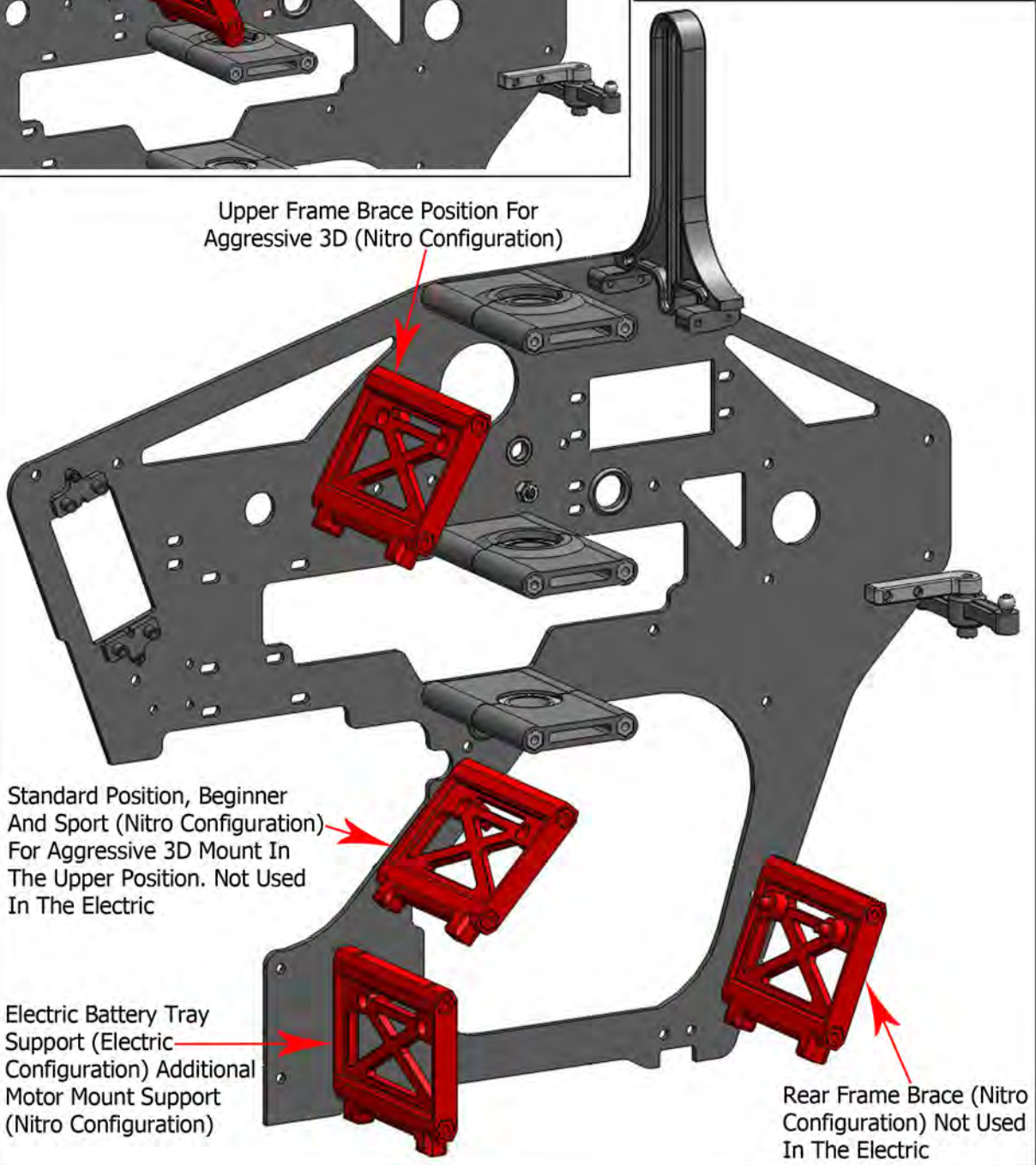
Rave ENV Tips And Tricks

Upper Frame Brace Position For Aggressive 3D (Electric Configuration)



The Plastic Frame Center Braces Can Be Used In Many Different Locations To Add Additional Strength And Rigidity To Your Model. Use The Illustrations On This Page To Decide Where They Should Be Located For The Configuration You Have Chosen. The Kit Comes With 2 Of These Braces. Additional Braces Can Be Purchased Separately If Desired.

Upper Frame Brace Position For Aggressive 3D (Nitro Configuration)



Standard Position, Beginner And Sport (Nitro Configuration) For Aggressive 3D Mount In The Upper Position. Not Used In The Electric

Electric Battery Tray Support (Electric Configuration) Additional Motor Mount Support (Nitro Configuration)

Rear Frame Brace (Nitro Configuration) Not Used In The Electric



Step 1-11



Plastic Frame Center Brace - x1
ND-YR7-F1010



Hex Spacer
3x5.5x58mm - x2
ND-YR-G075

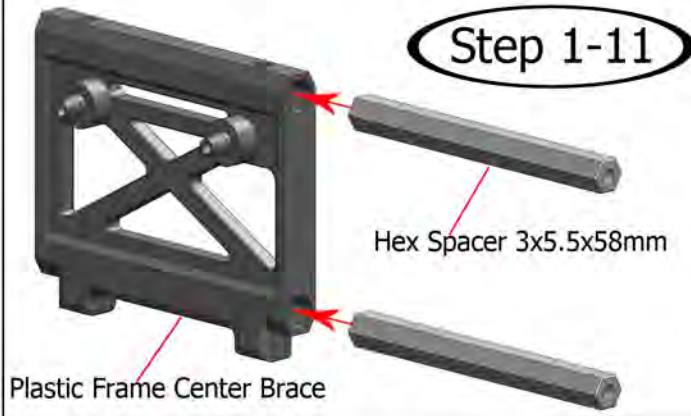


Rubber Fuel Tank Liner - x1
ND-YR7-F1032



3x8mm Cap Screw - x2
ND-YR-G114

Step 1-11



Plastic Frame Center Brace

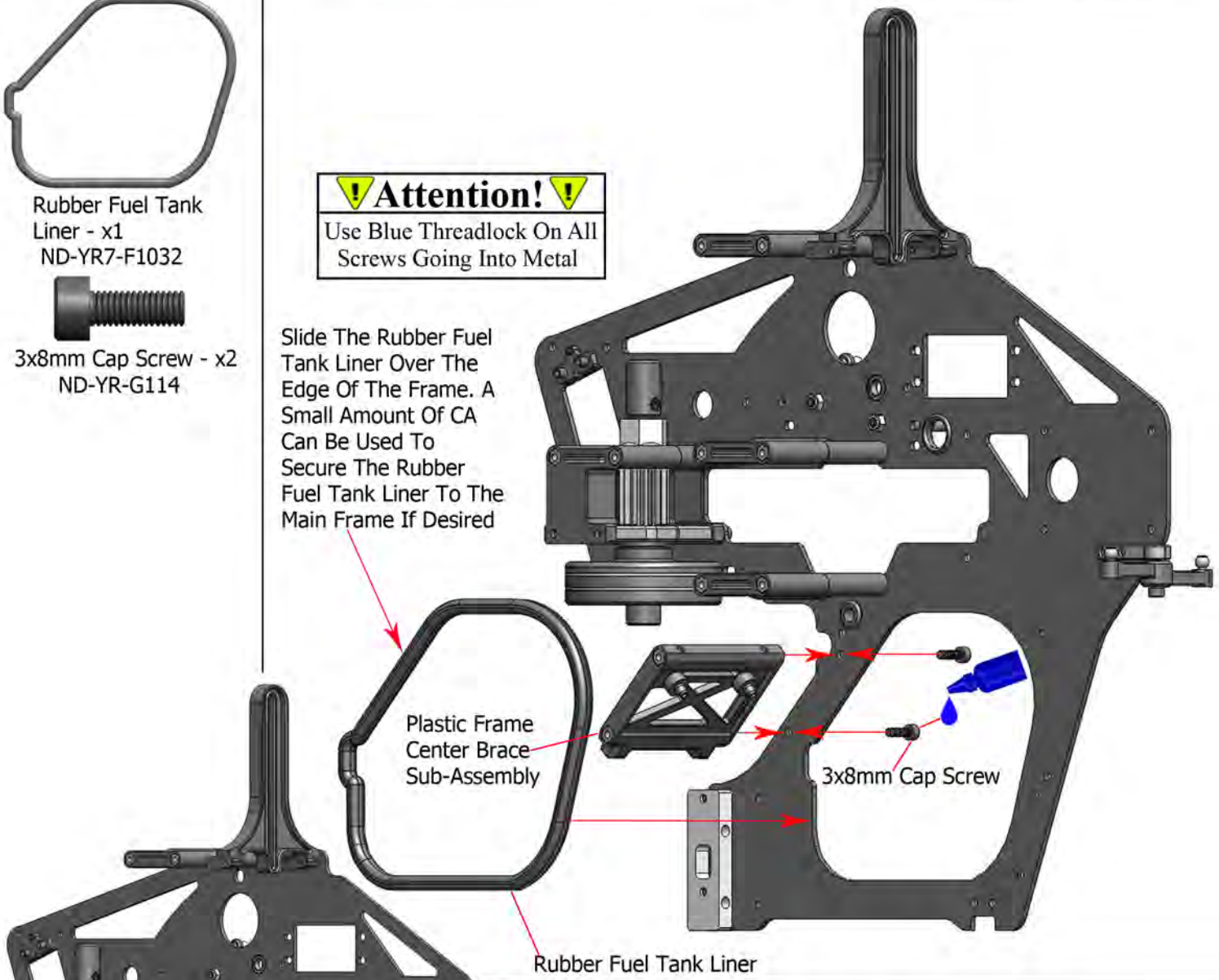
Hex Spacer 3x5.5x58mm



Completed Step View

! Attention! !
Use Blue Threadlock On All
Screws Going Into Metal

Slide The Rubber Fuel Tank Liner Over The Edge Of The Frame. A Small Amount Of CA Can Be Used To Secure The Rubber Fuel Tank Liner To The Main Frame If Desired

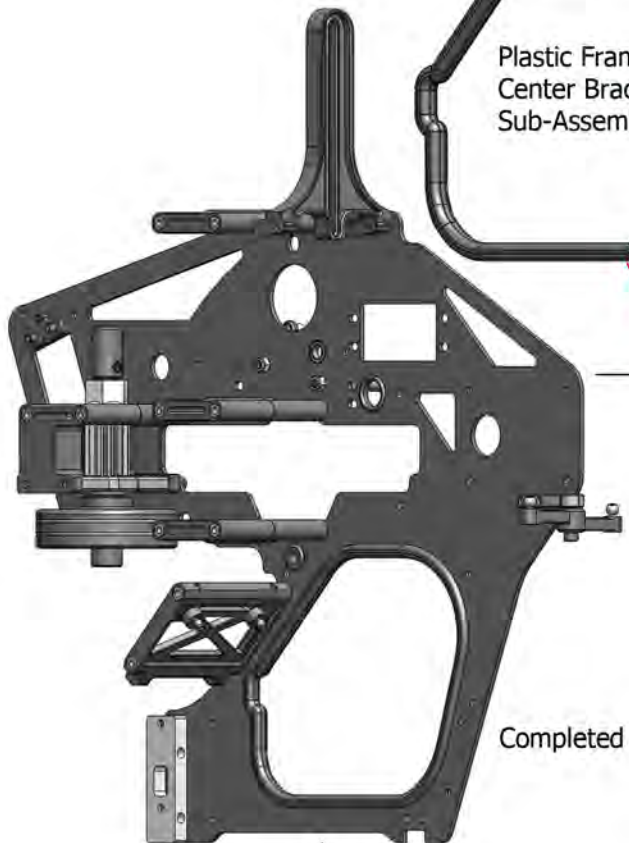


Plastic Frame Center Brace Sub-Assembly

Rubber Fuel Tank Liner

3x8mm Cap Screw

Leave All Screws Used In This Step Loose At This Time! Screws Will Be Tightened On Page 28



Completed Step View





Plastic Frame Center Brace - x1
ND-YR7-F1010



Rubber Fuel Tank Mount - X2
ND-YR7-F1001



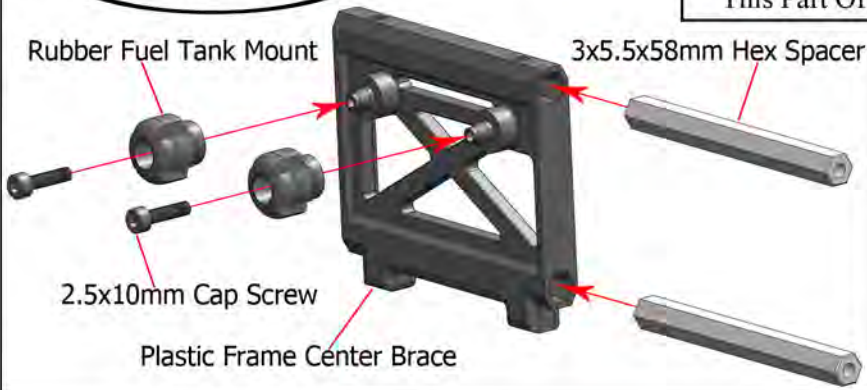
3x8mm Cap Screw - x1
ND-YR-G114



2.5x10mm Cap Screw - X2
ND-YR-G112

3x5.5x58mm Hex
Spacer - X2
ND-YR-G075

Step 1-12



! Attention! !
No Adhesives Are Used In
This Part Of This Step

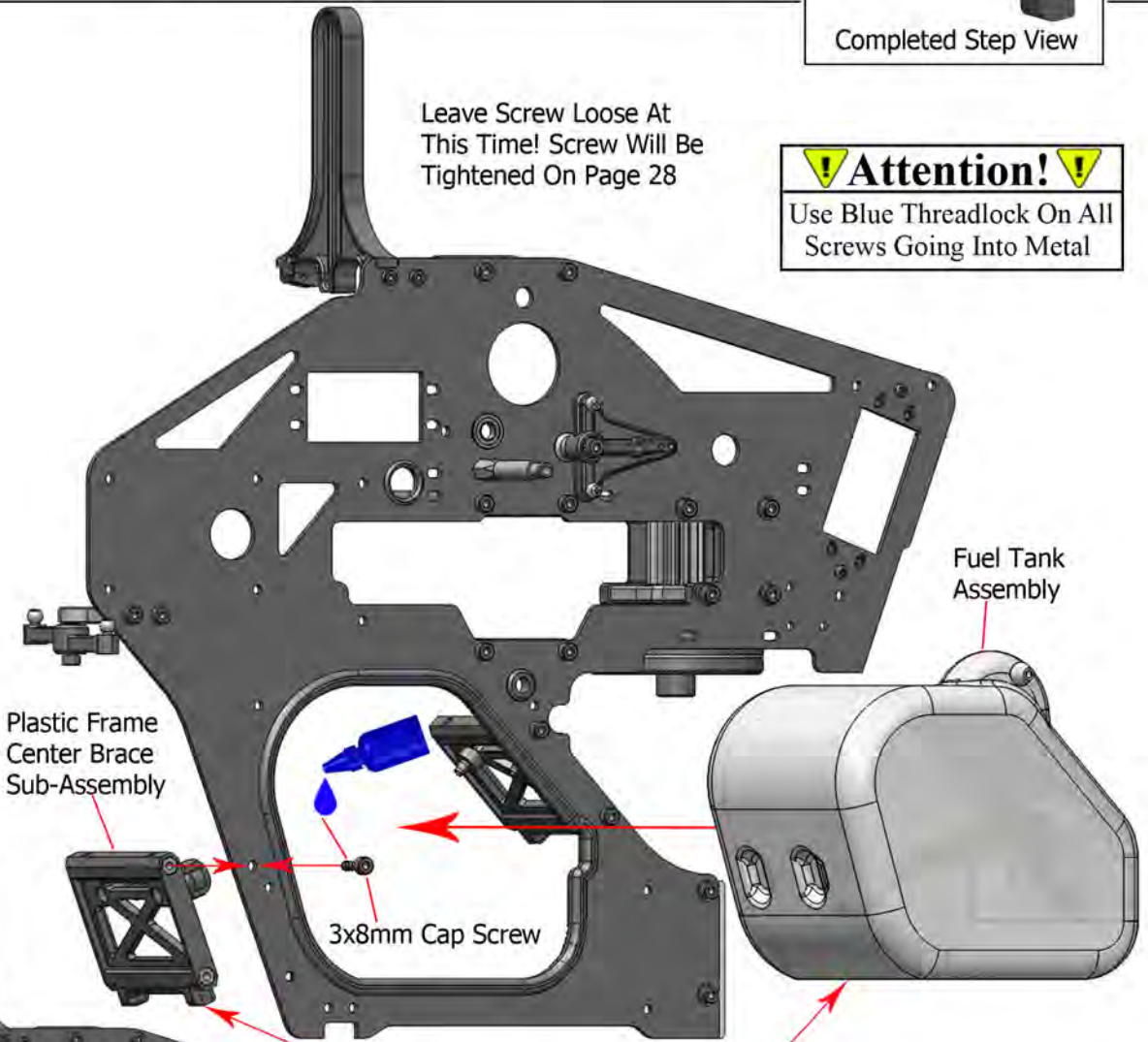


Completed Step View

Step 1-12

Leave Screw Loose At
This Time! Screw Will Be
Tightened On Page 28

! Attention! !
Use Blue Threadlock On All
Screws Going Into Metal

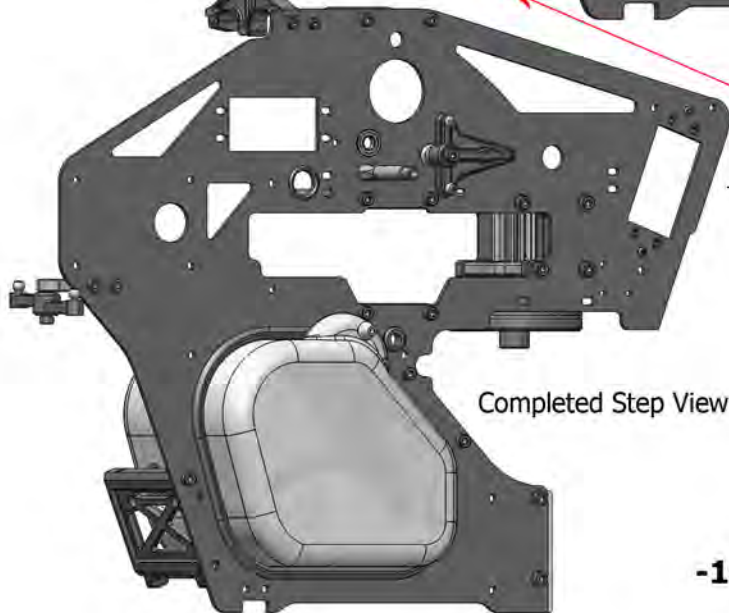


Plastic Frame Center Brace Sub-Assembly

Fuel Tank Assembly

3x8mm Cap Screw

Slide The Fuel Tank Into The Frame
And Then Install The Frame Brace
Sub-Assembly Onto The Side Frame.



Completed Step View

! Attention! !
Do Not Over Tighten Screws
Going Into Plastic Parts





Main Frame Left And Right - x1 ND-YR7-F1028



CCPM-T Arm Spacer - x1 ND-YR7-F1012



3x22mm Cap Screw - x1 ND-YR-G125



M3 Lock Nut - x2 ND-YR-G035



Bearing 5x9x3mm Flanged - x1 ND-YR-G069



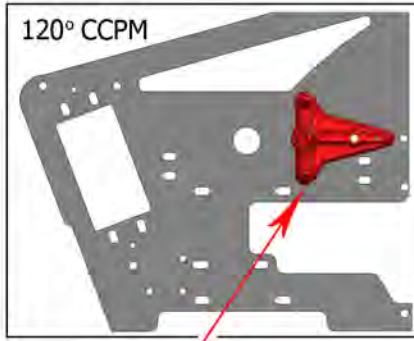
Plastic Servo Mount Tab - x2 ND-YR7-F1017



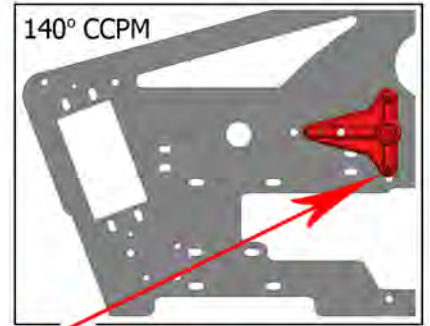
2x6mm Cap Screw - x2 ND-YR-G023

Step 1-13

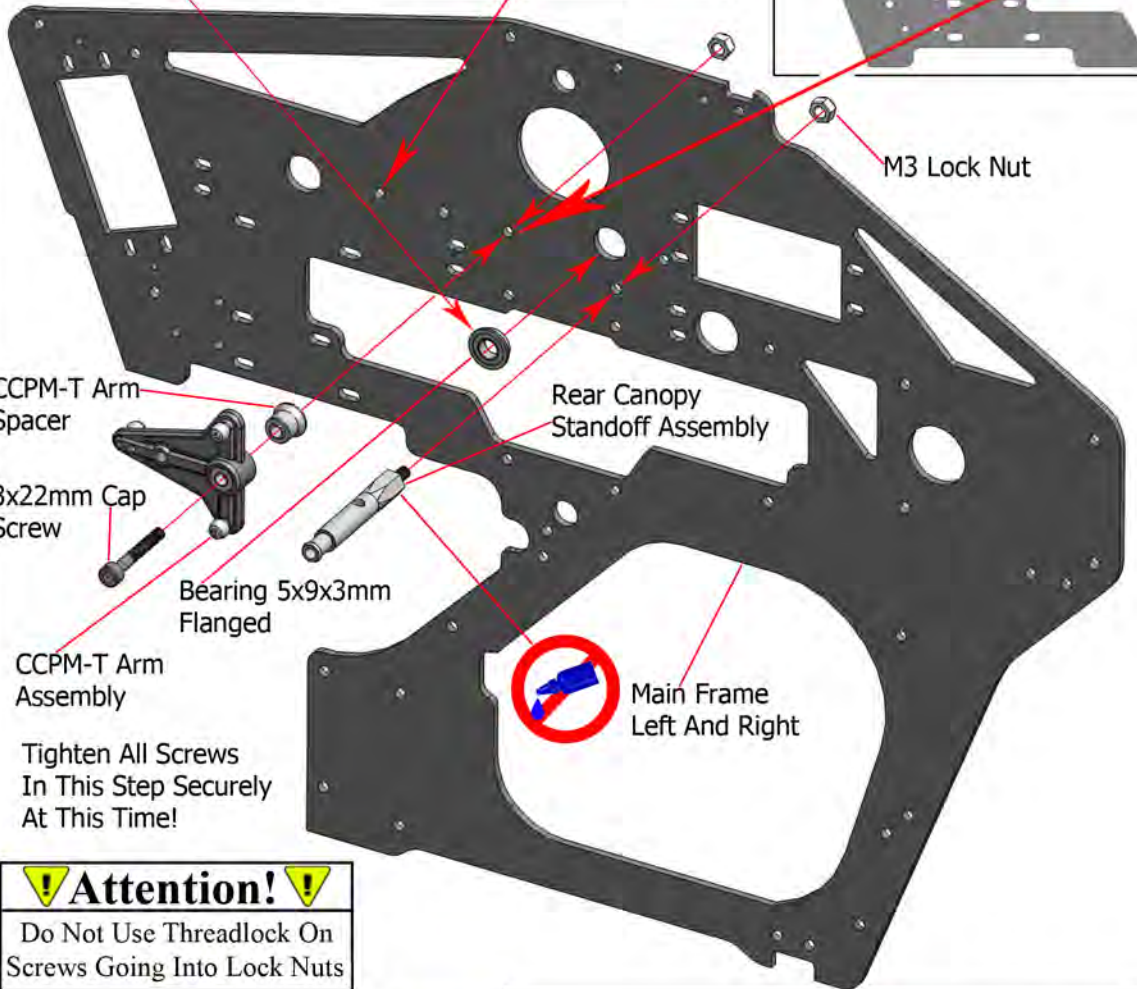
JB Weld (Strong 2 Stage Epoxy) Can Be Used To Secure The Flanged Bearing To The Main Frame If Desired



120° CCPM



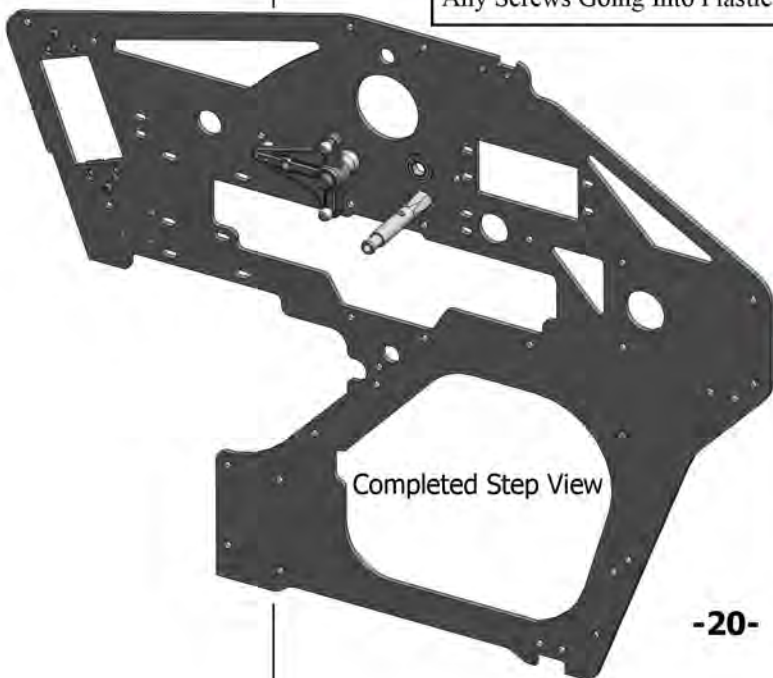
140° CCPM



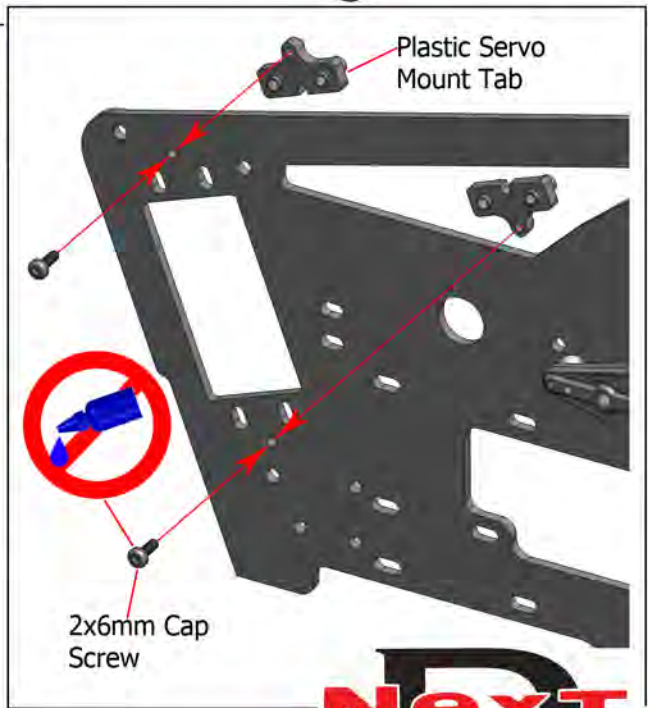
Tighten All Screws In This Step Securely At This Time!

Attention!
Do Not Use Threadlock On Screws Going Into Lock Nuts

Attention!
Do Not Use Threadlock On Any Screws Going Into Plastic



Completed Step View



Plastic Servo Mount Tab

2x6mm Cap Screw

Next

Step 1-14



Motor Mount Half Left & Right - x1 ND-YR-F1030



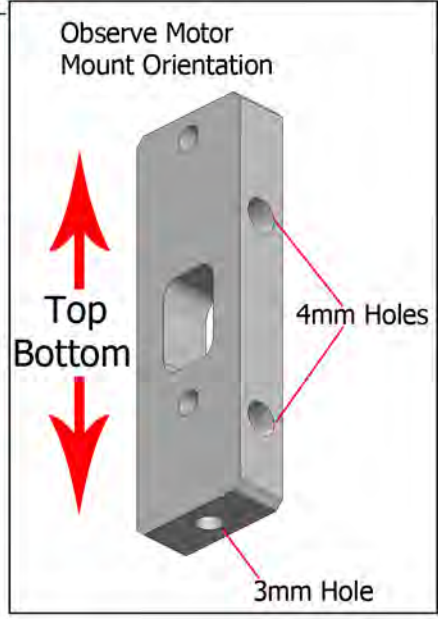
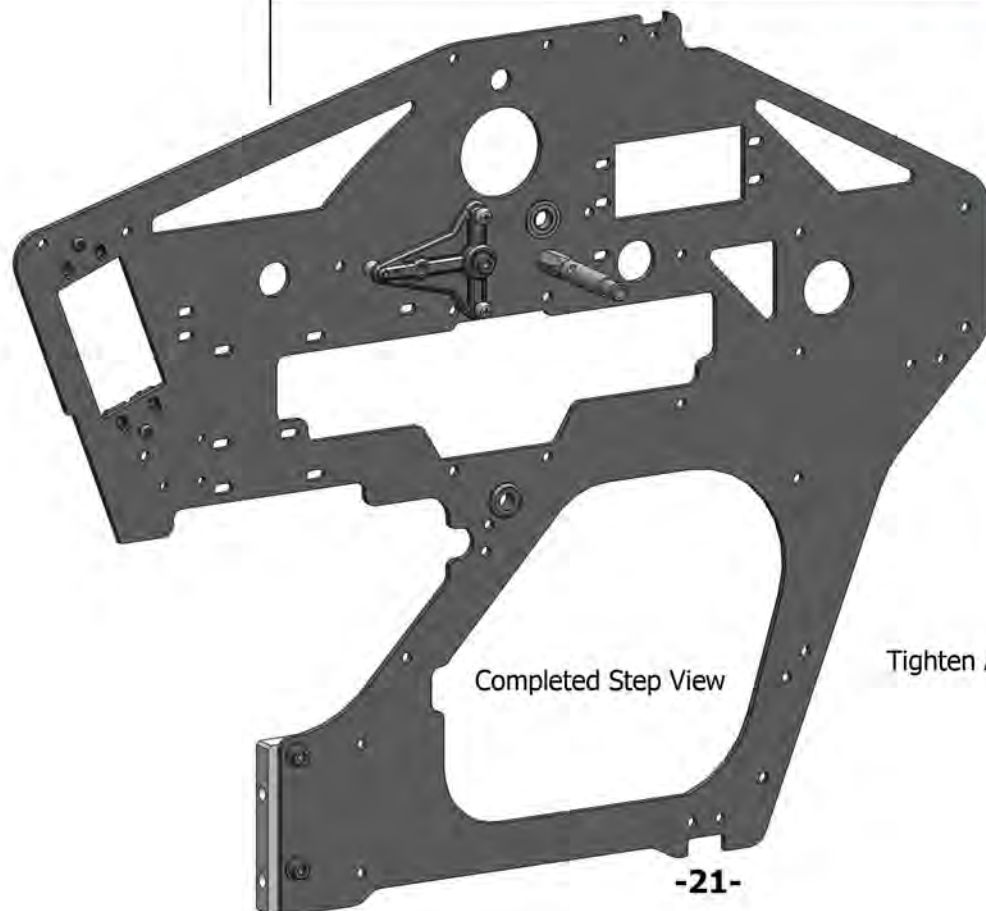
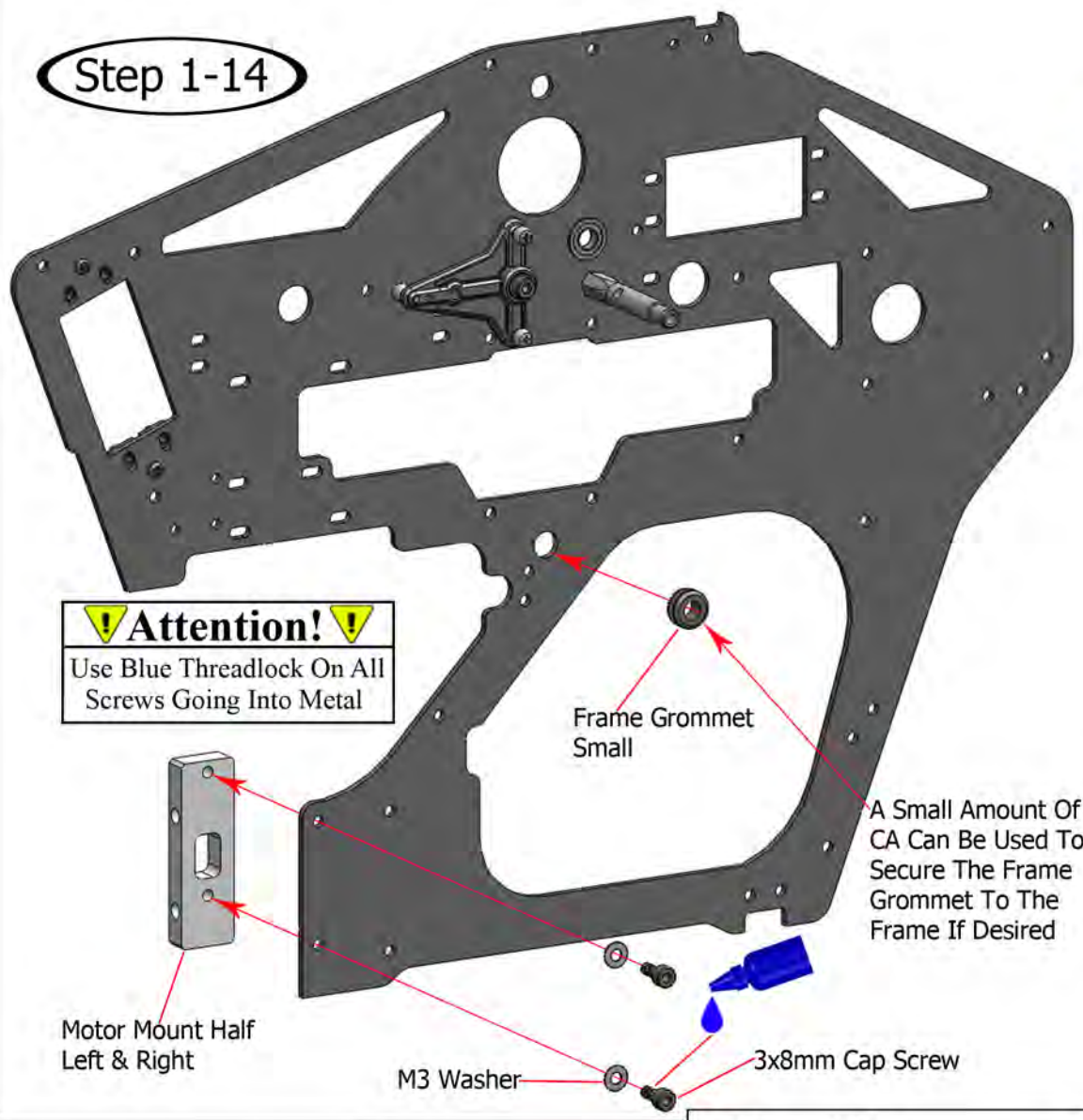
Frame Grommet Small - x1 ND-YR-G109



3x8mm Cap Screw - x2 ND-YR-G114



M3 Washer - x2 ND-YR-G094



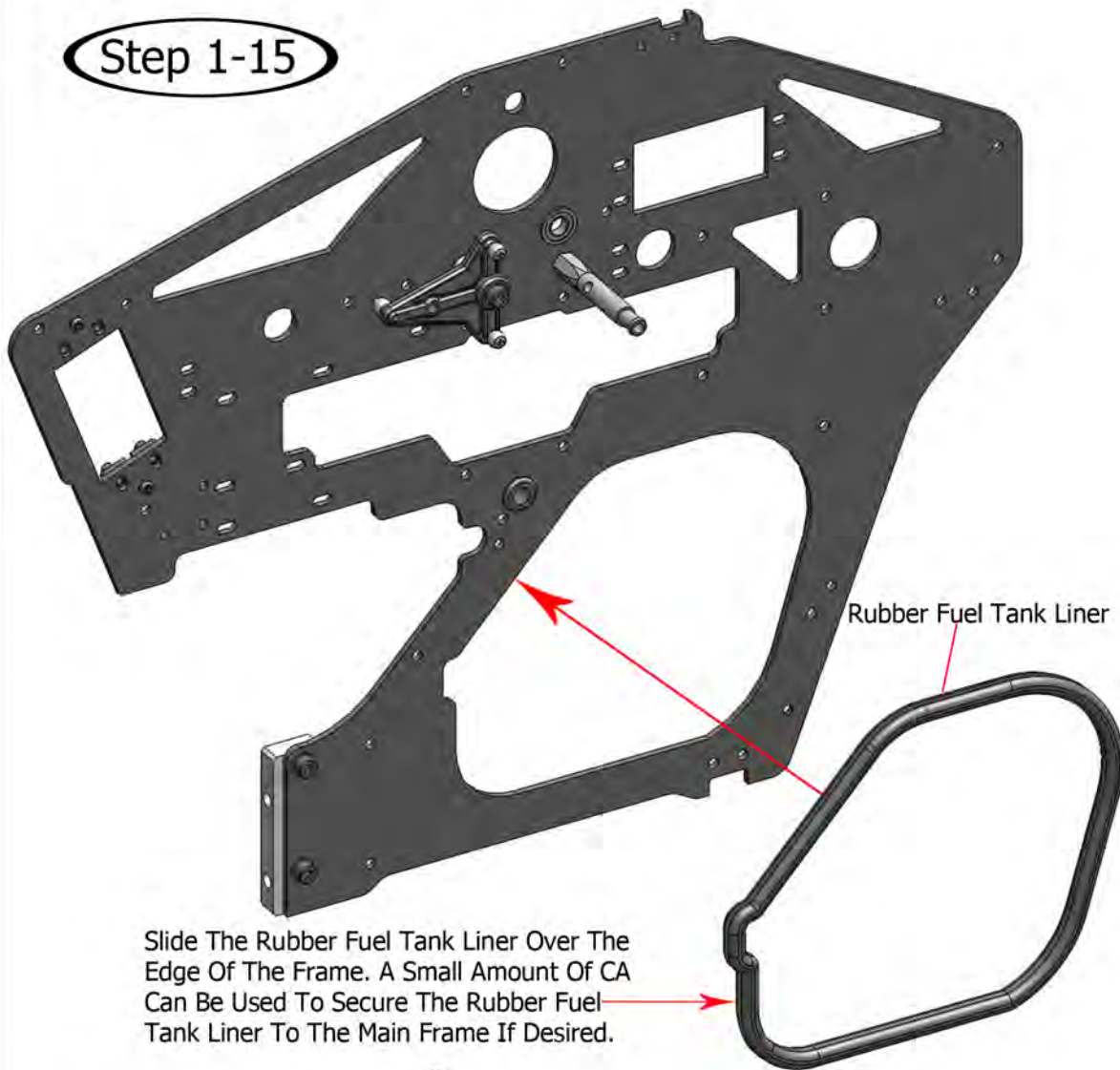
Tighten All Screws Securely In This Step!



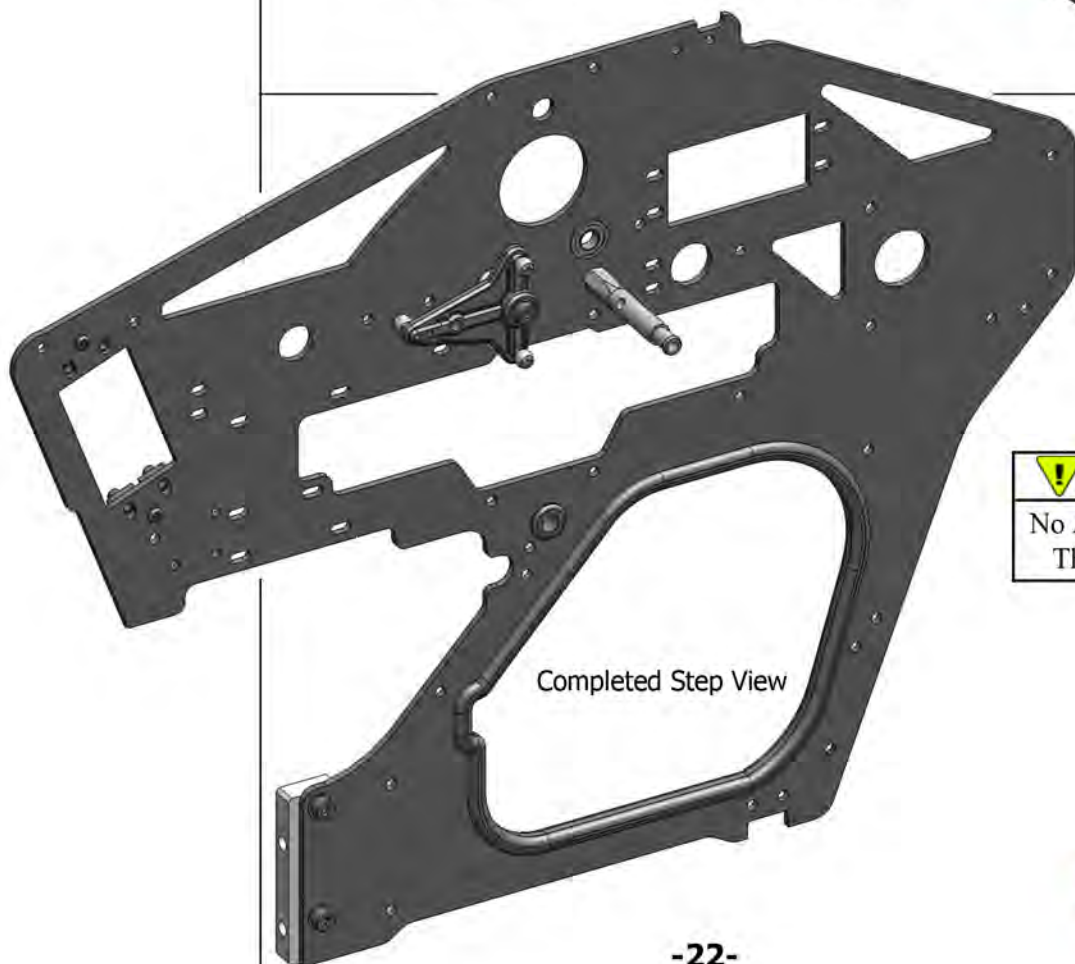


Rubber Fuel Tank Liner - x1
ND-YR7-F1032

Step 1-15



Slide The Rubber Fuel Tank Liner Over The Edge Of The Frame. A Small Amount Of CA Can Be Used To Secure The Rubber Fuel Tank Liner To The Main Frame If Desired.



Completed Step View

! Attention! !
No Adhesives Are Used In
This Part Of This Step



Step 1-16

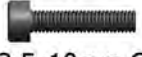
Join Frame Half Sub-Assemblies Together. Pay Close Attention To The Hardware Locations And Sizes Used. Leave All Screws Loose At This Time! Screws Will Be Tightened On Page 28.



3x12mm Cap Screw - x4
ND-YR-G115



3x8mm Cap Screw - x9
ND-YR-G114



2.5x10mm Cap Screw - x2
ND-YR-G112



M3 Washer - x4
ND-YR-G094



M3 Washer

2.5x10mm Cap Screw

3x12mm Cap Screw

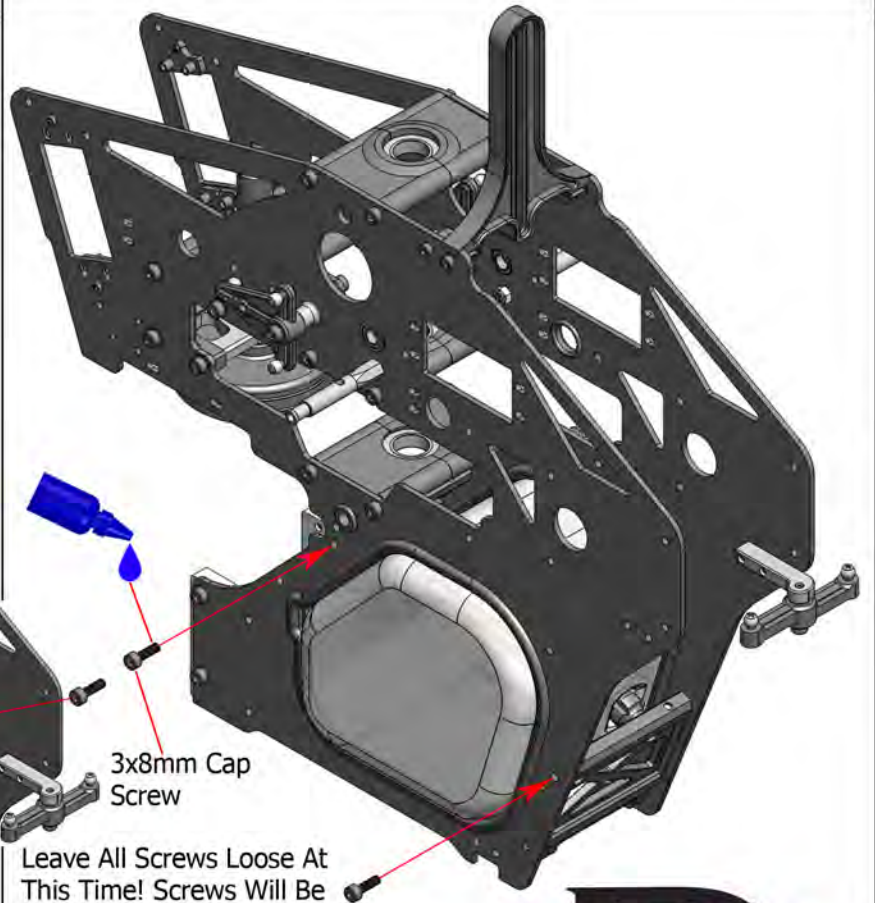
3x8mm Cap Screw

Attention!

Do Not Use Threadlock On Any Screws Going Into Plastic

Attention!

Use Blue Threadlock On All Screws Going Into Metal



3x8mm Cap Screw

Leave All Screws Loose At This Time! Screws Will Be Tightened On Page 28

Completed Step View

Next

Step 2-1

Step 2-1



Elevator Control Arm - x1
ND-YR7-F1022



2x10mm Phillips Head Screw - x3
ND-YR-G124



Steel Control Ball - x3
ND-YR-G001



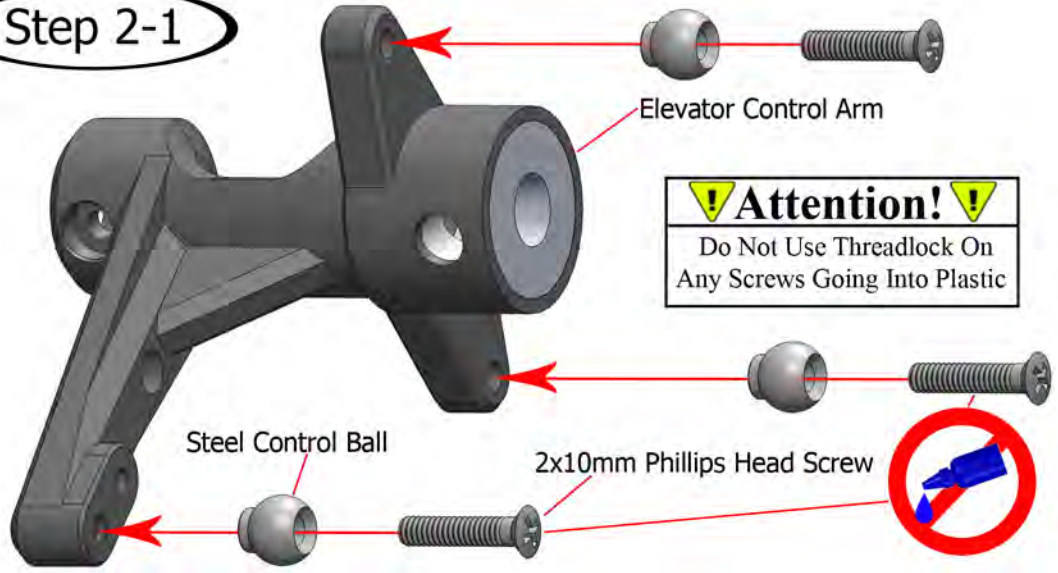
Elevator Control Arm Shaft - x1
ND-YR7-F1023



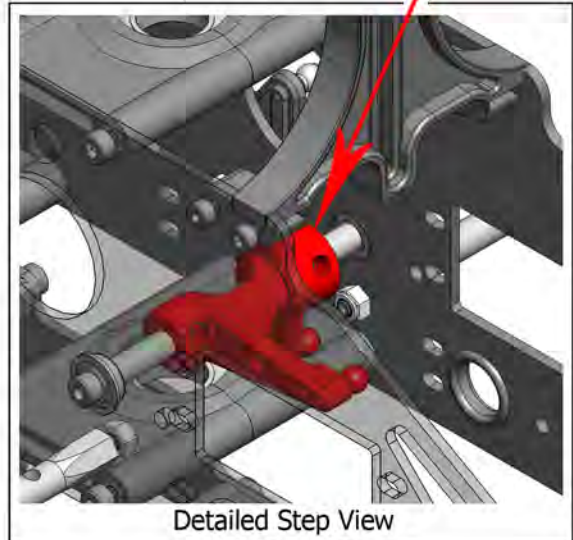
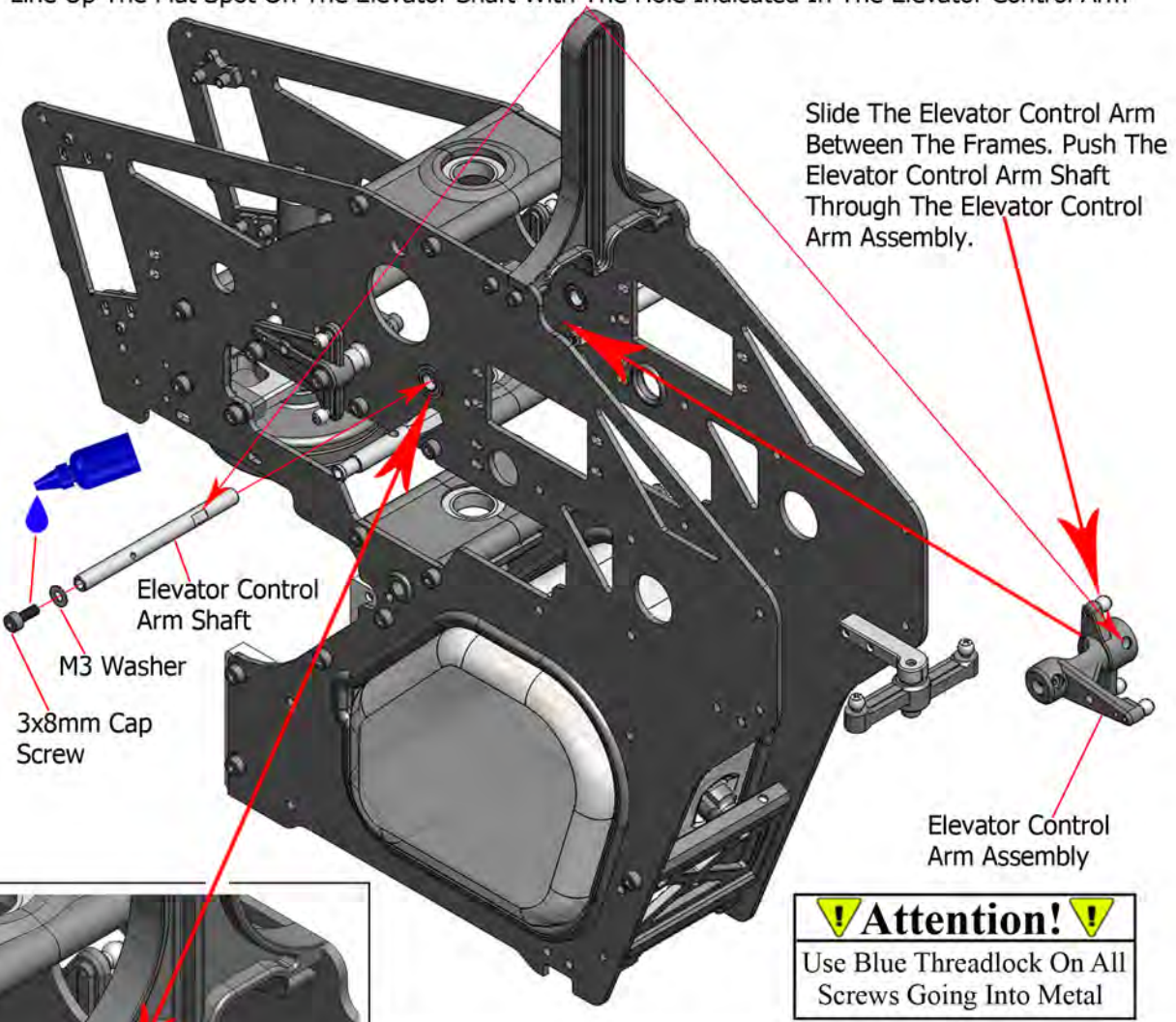
3x8mm Cap Screw - x1
ND-YR-G114



M3 Washer - x1
ND-YR-G094



Line Up The Flat Spot On The Elevator Shaft With The Hole Indicated In The Elevator Control Arm



Detailed Step View

Step 2-1 Continued On Next Page

Attention!
Do Not Over Tighten Screws
Going Into Plastic Parts





3x8mm Cap Screw - x1
ND-YR-G114



2x10mm Cap Screw - x1
ND-YR-G025



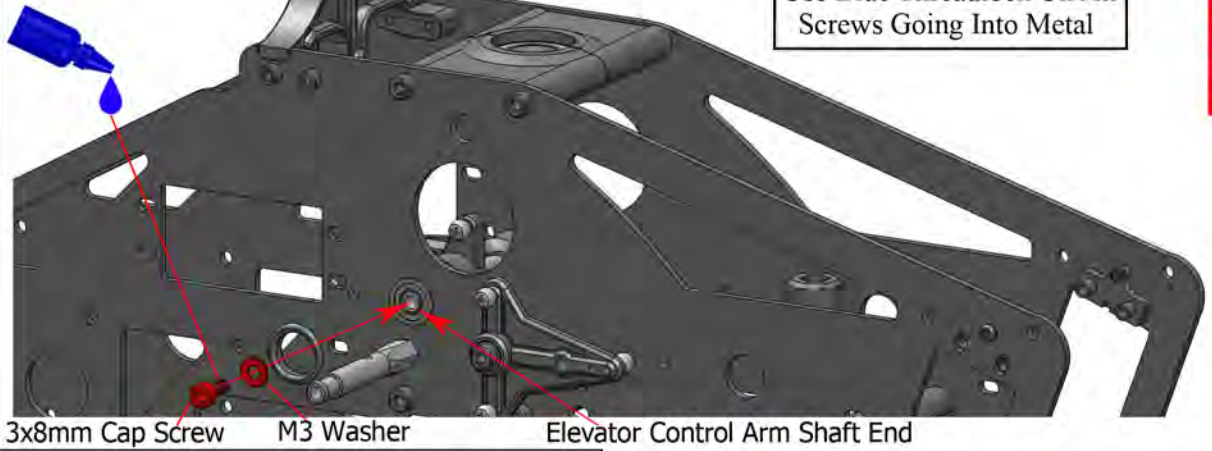
4x4mm Set Screw - x1
ND-YR-G120



M3 Washer - x1
ND-YR-G094

Step 2-1 Continued

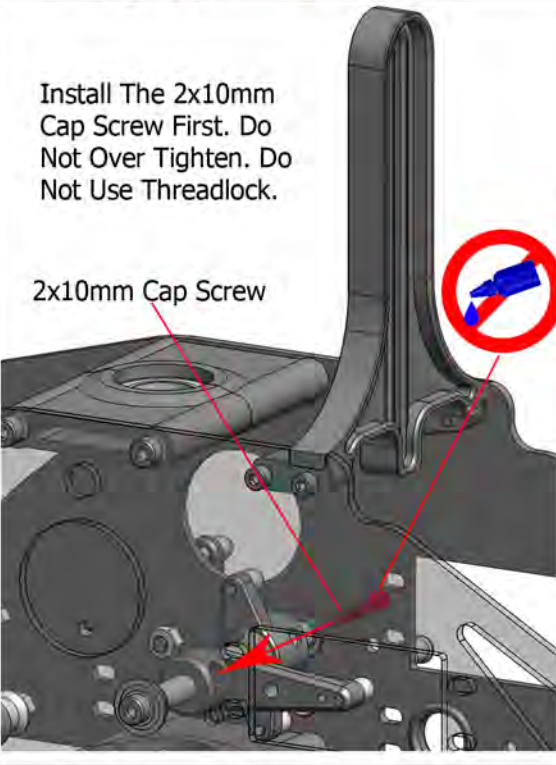
Apply Blue Threadlock To The 3x8mm Cap Screw And Slide The M3 Washer Onto The Screw. Thread The 3x8mm Cap Screw Into The End Of The Elevator Control Arm Shaft. Tighten Securely Using Two 2.5mm Handled Drivers, One On Either Side.



! Attention! !
Use Blue Threadlock On All Screws Going Into Metal

3x8mm Cap Screw M3 Washer Elevator Control Arm Shaft End

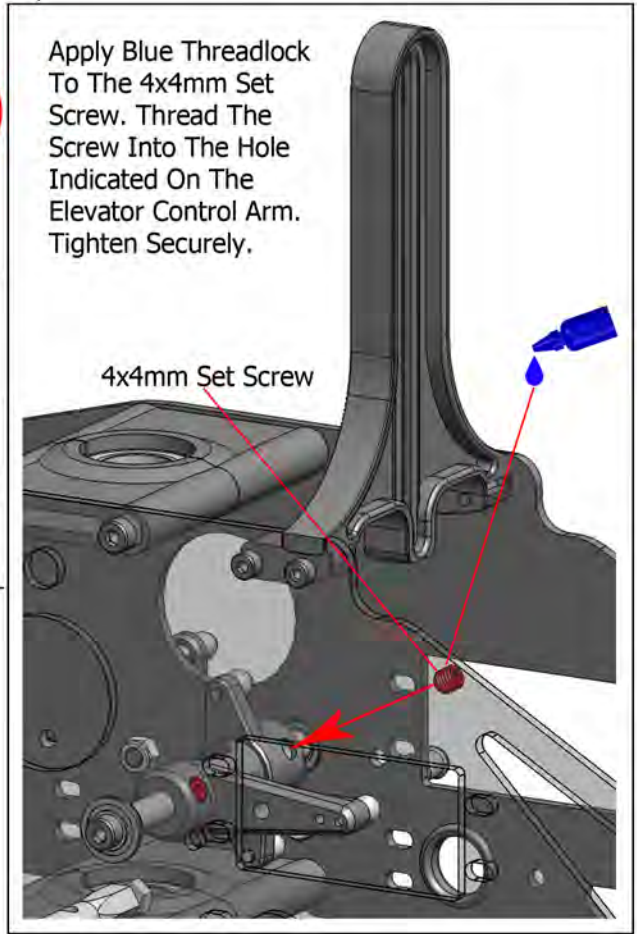
Install The 2x10mm Cap Screw First. Do Not Over Tighten. Do Not Use Threadlock.



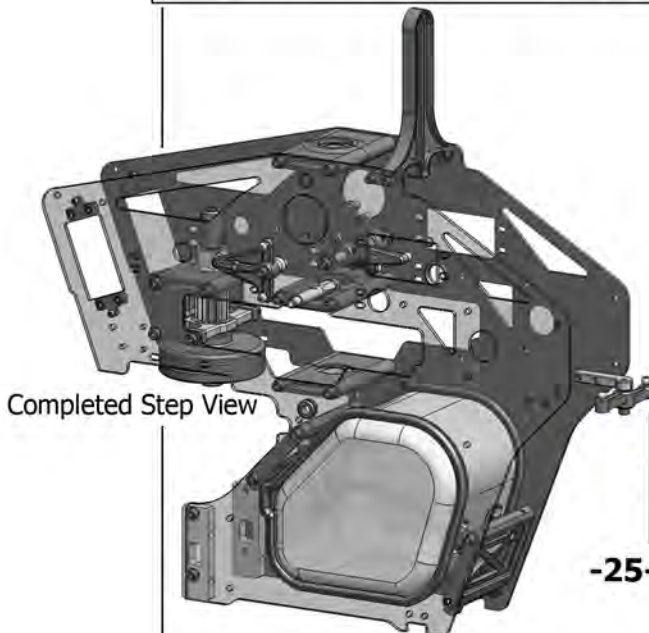
2x10mm Cap Screw

! Attention! !
Do Not Use Threadlock On Any Screws Going Into Plastic

Apply Blue Threadlock To The 4x4mm Set Screw. Thread The Screw Into The Hole Indicated On The Elevator Control Arm. Tighten Securely.



4x4mm Set Screw



Completed Step View

! Attention! !
Do Not Over Tighten Screws Going Into Plastic Parts

Next

Step 2-2



Front Radio Tray - x1
ND-YR7-F1005



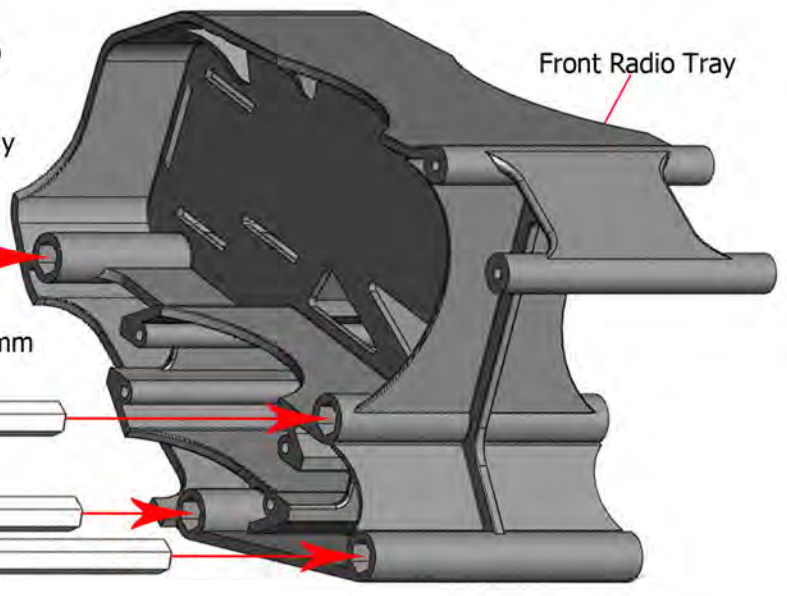
Hex Spacer
3x5.5x58mm - x4
ND-YR-G075

Step 2-2

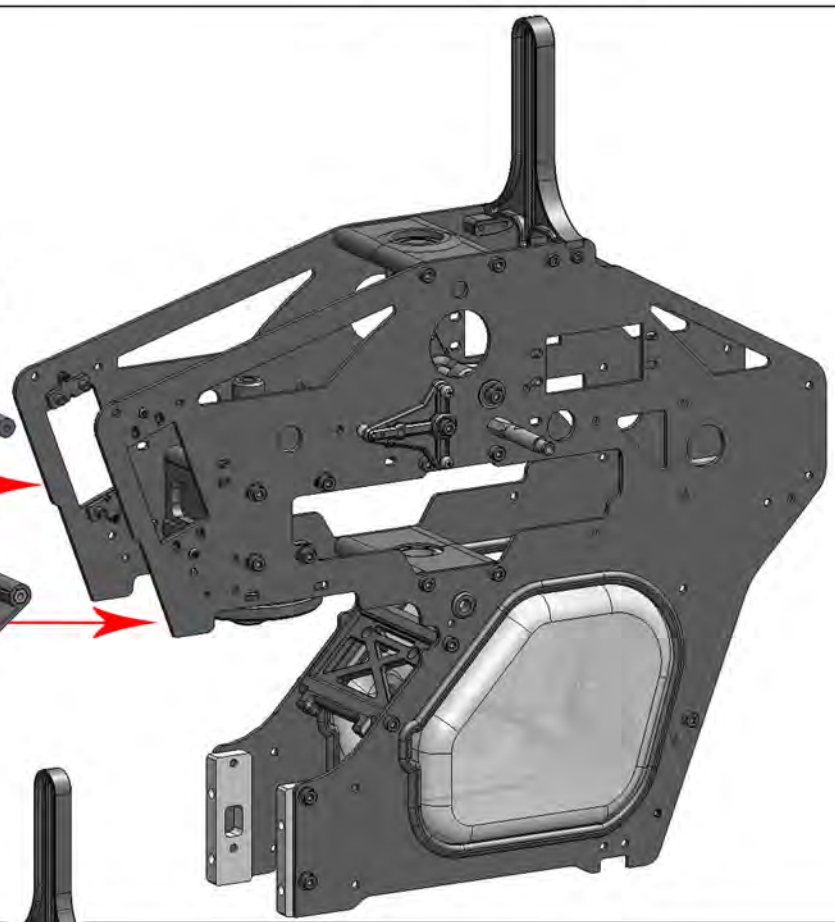
Insert Hex Spacers Fully Into Front Radio Tray.



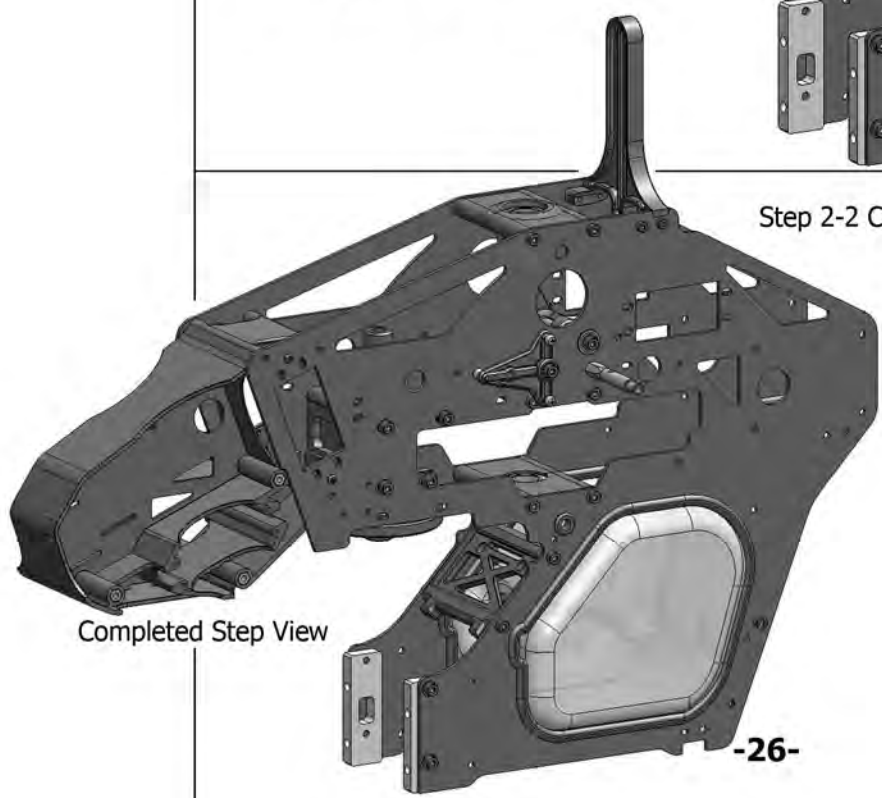
Hex Spacer 3x5.5x58mm



Place Front Radio Tray Between The Frames



Step 2-2 Continued On Next Page



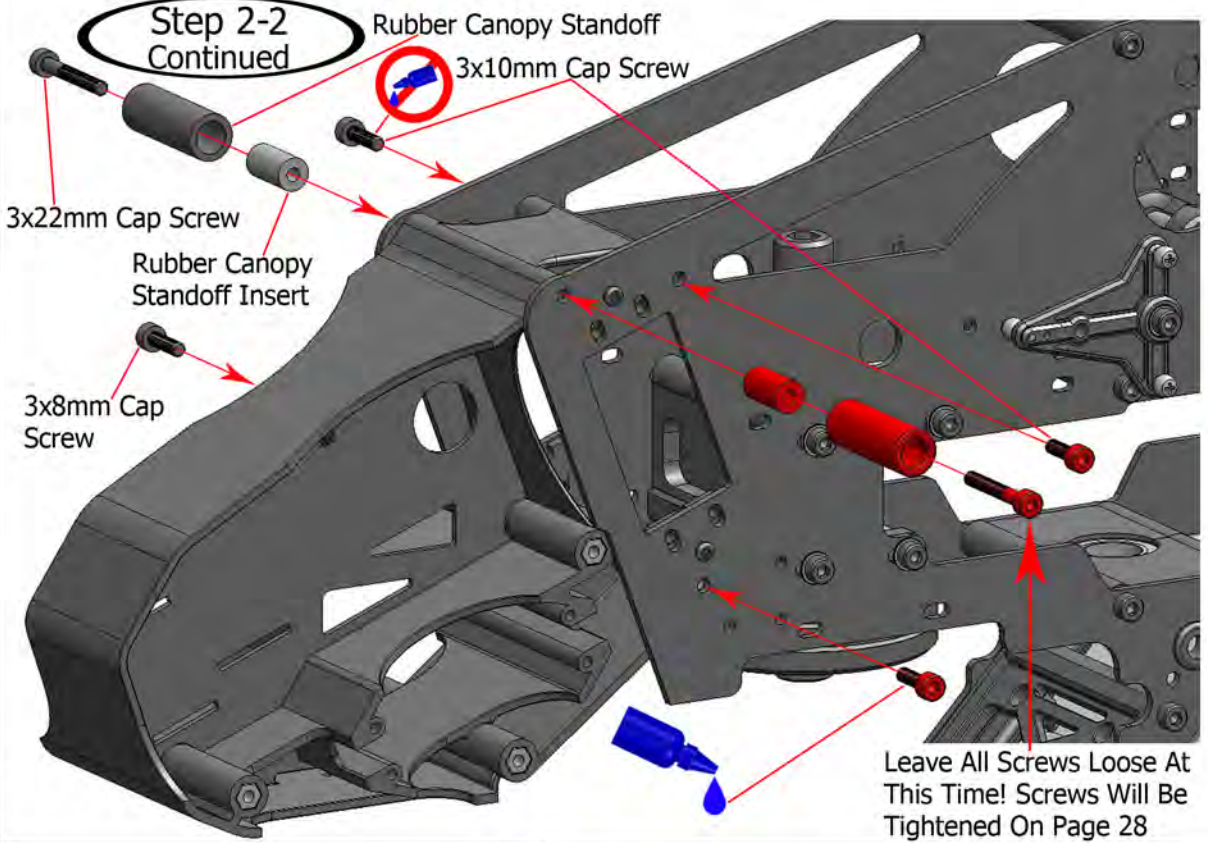
Completed Step View

! Attention! !
No Adhesives Are Used In
This Part Of This Step

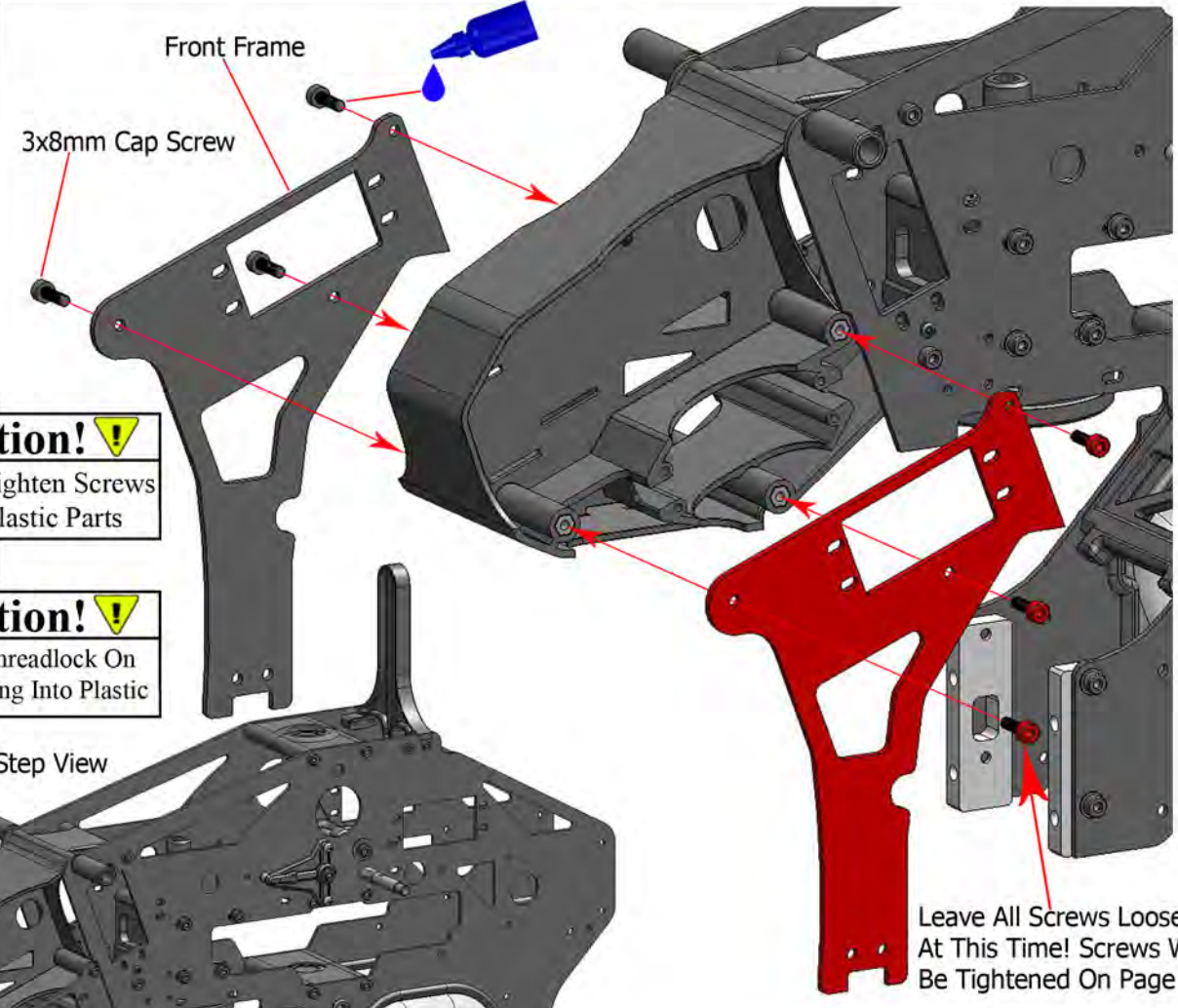


Step 2-2 Continued

- Rubber Canopy Standoff - x2 ND-YR7-F1018
- 3x22mm Cap Screw - x2 ND-YR-G125
- 3x10mm Cap Screw - x2 ND-YR-G065
- 3x8mm Cap Screw - x8 ND-YR-G114
- Rubber Canopy Standoff Insert - x2 ND-YR7-F1019



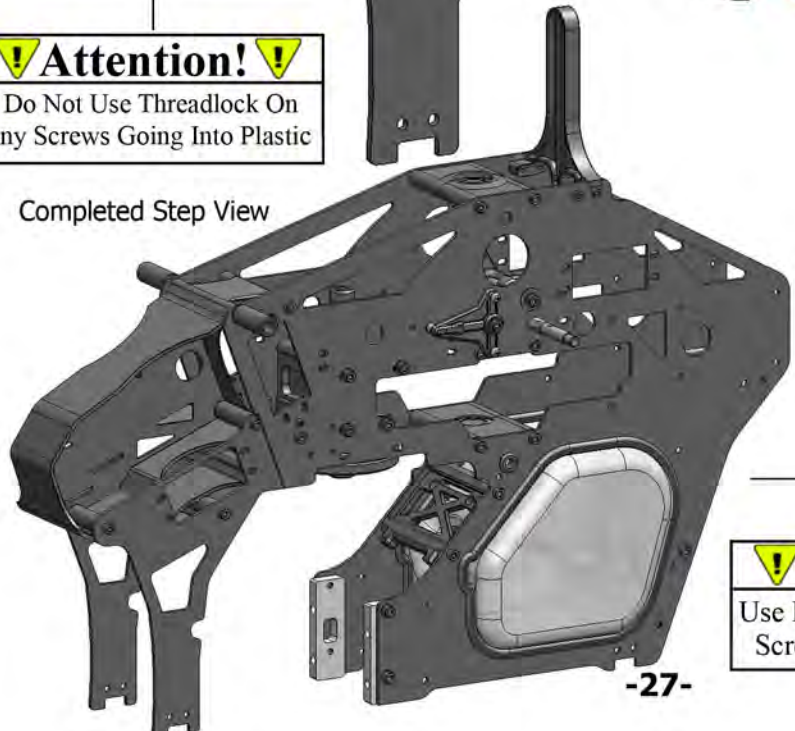
- Front Frame - x2 ND-YR7-F1025



⚠ Attention! ⚠
Do Not Over Tighten Screws Going Into Plastic Parts

⚠ Attention! ⚠
Do Not Use Threadlock On Any Screws Going Into Plastic

Completed Step View



Step 2-2 Continued On Next Page

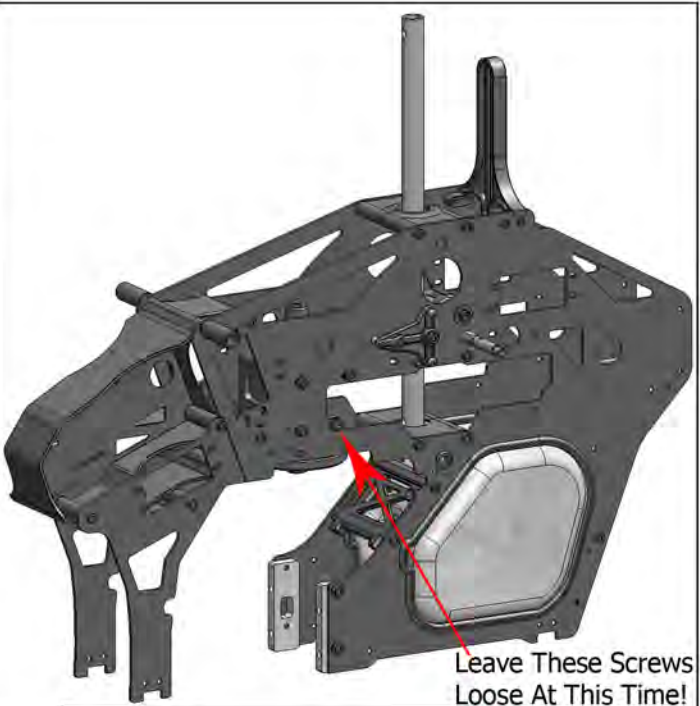
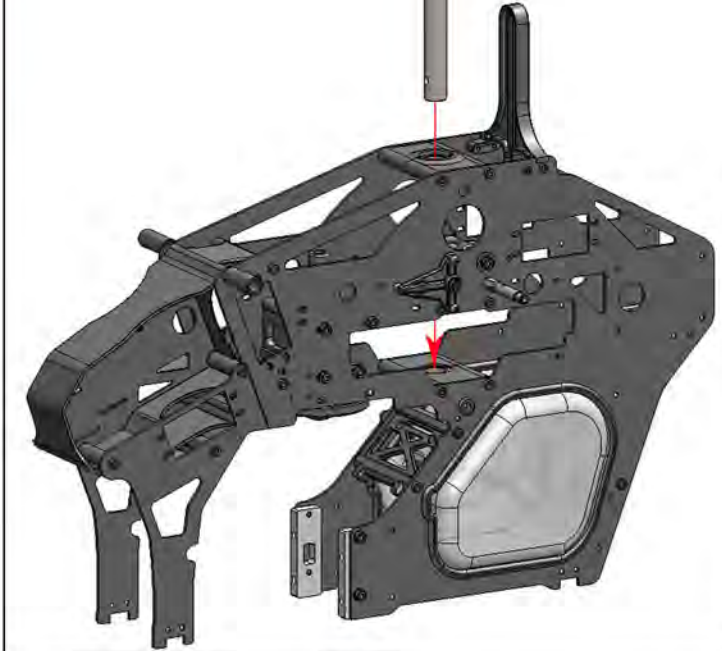
⚠ Attention! ⚠
Use Blue Threadlock On All Screws Going Into Metal



Step 2-2 Continued

Main Shaft

Remove The 12mm Main Shaft From Its Step Bag. Slide The Main Shaft Completely Through The Main Shaft Bearing Blocks. This Will Help Keep The Frames Square.



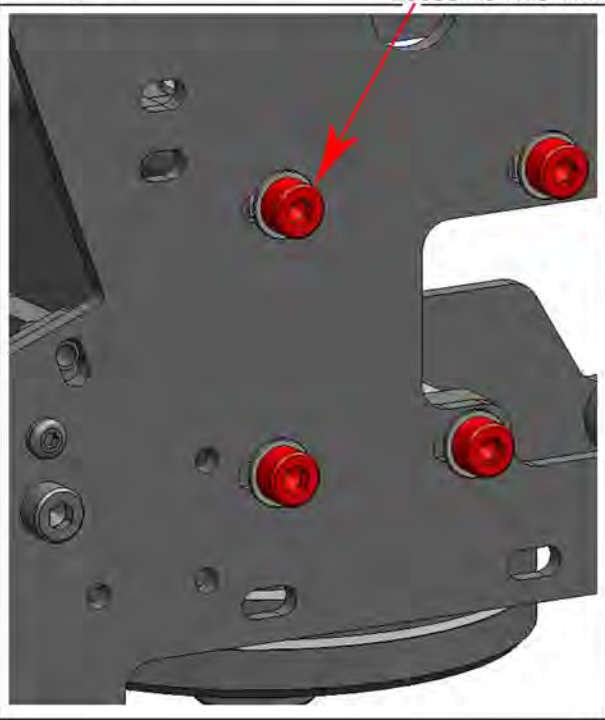
Leave These Screws Loose At This Time!

Remove Main Shaft After All Screws Are Tightened Securely!

Tighten Screws In A Cross Pattern

Place The Frame Assembly On A Flat Surface And Push Down On The Top Edges Of The Frames. Tighten All Screws Securely In A Cross Pattern. Leave Clutch Stack Screws Loose At This Time! Remove Main Shaft After All Hardware Is Tightened Securely.

Flat Surface



Step 2-3



Cooling Fan - x1
ND-YR7-CS1012



Cooling Fan Hub - x1
ND-YR7-CS1011



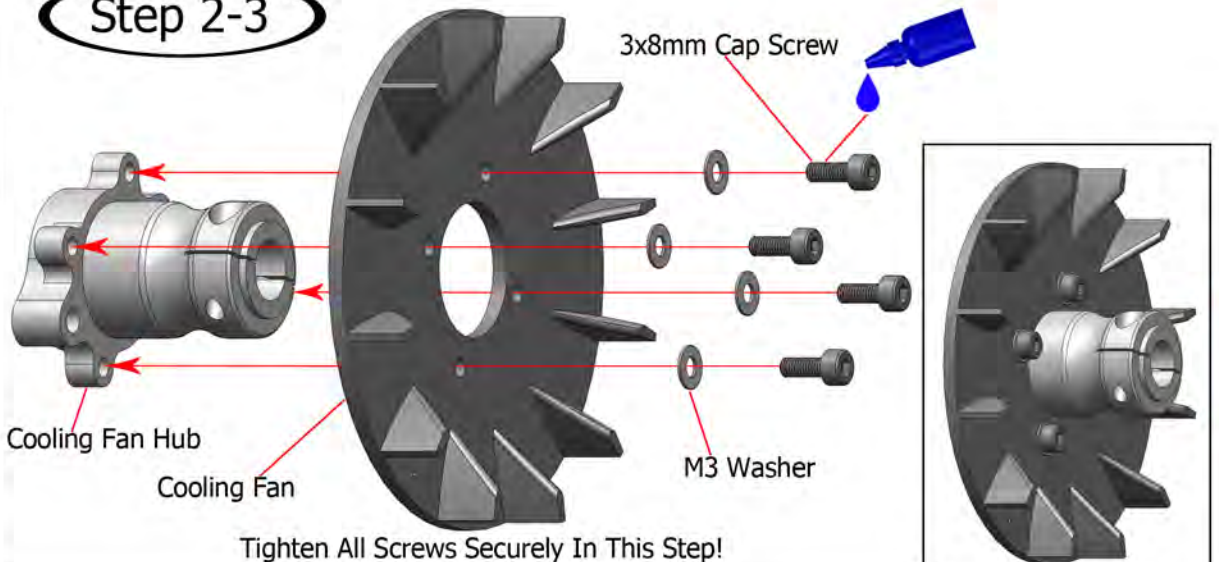
3x8mm Cap Screw - x4
ND-YR-G114



3x10mm Cap Screw - x2
ND-YR-G065



M3 Washer - x4
ND-YR-G094



Tighten All Screws Securely In This Step!

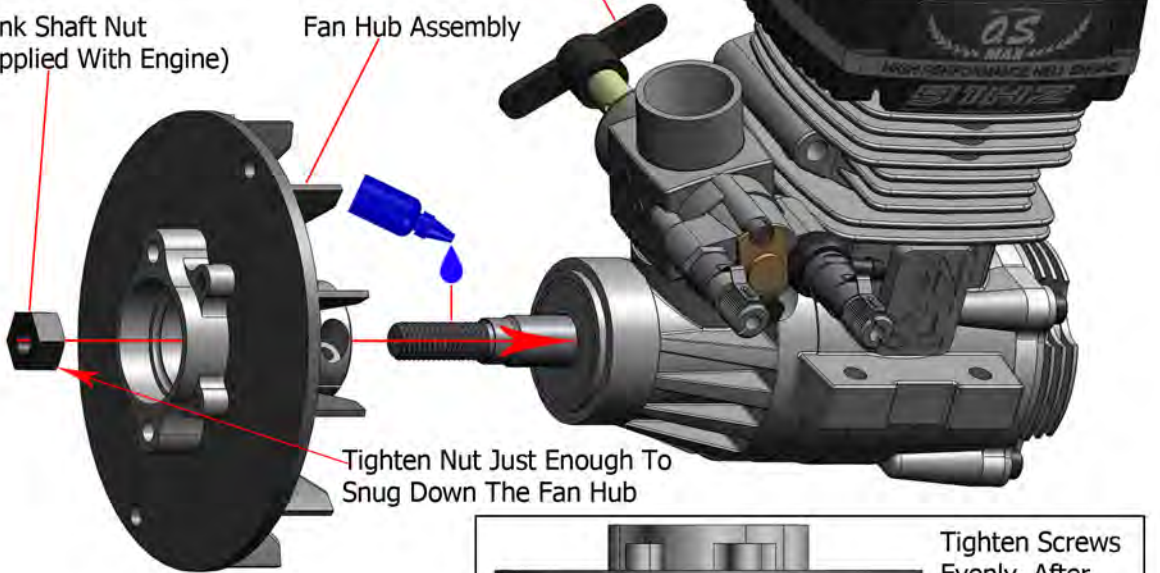
Completed Step View

! Attention! !
Use Blue Threadlock On All
Screws Going Into Metal

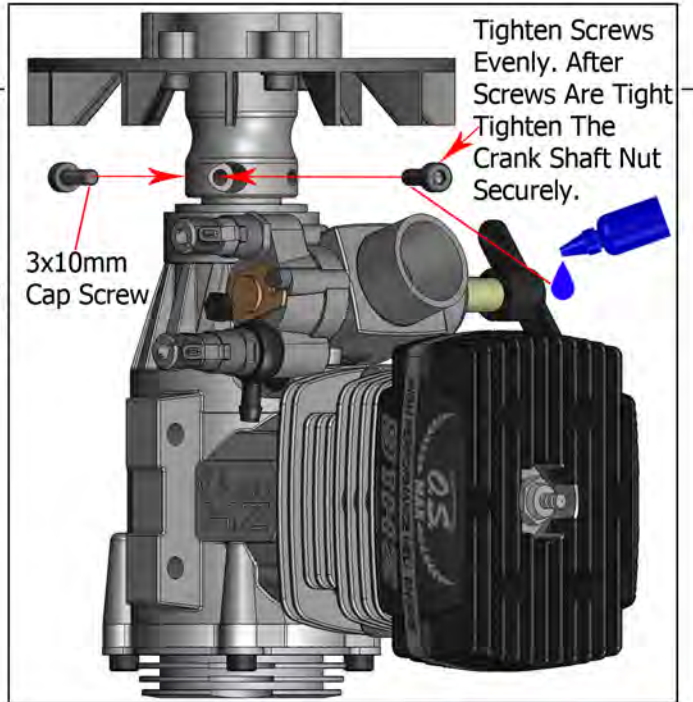
90 Size Engine Of Choice
(O.S. .91 HZ Shown)

Crank Shaft Nut
(Supplied With Engine)

Fan Hub Assembly

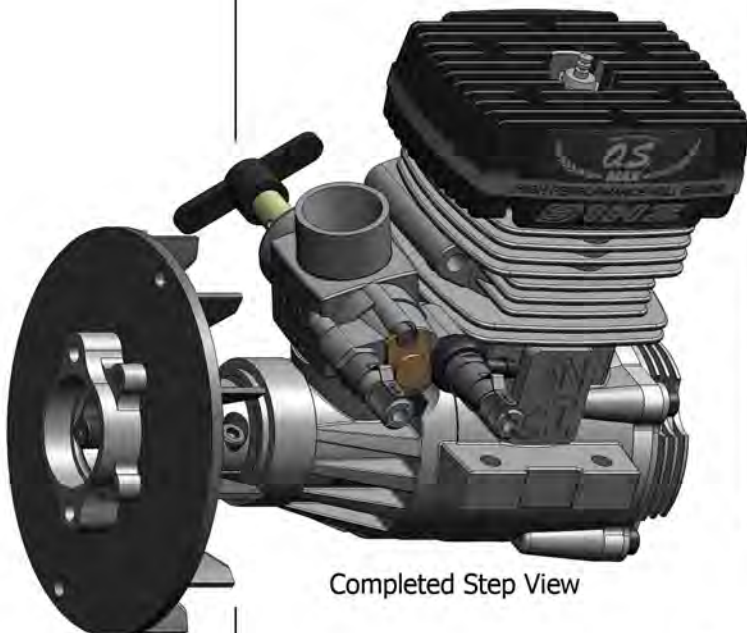


Tighten Nut Just Enough To
Snug Down The Fan Hub



Tighten Screws
Evenly. After
Screws Are Tight
Tighten The
Crank Shaft Nut
Securely.

3x10mm
Cap Screw



Completed Step View

Step 2-3



Step 2-4



Clutch - x1
ND-YR7-CS1009



4x6mm Cap
Screw - x2
ND-YR-G121



2x10mm Phillips
Head Screw - X1
ND-YR-G124

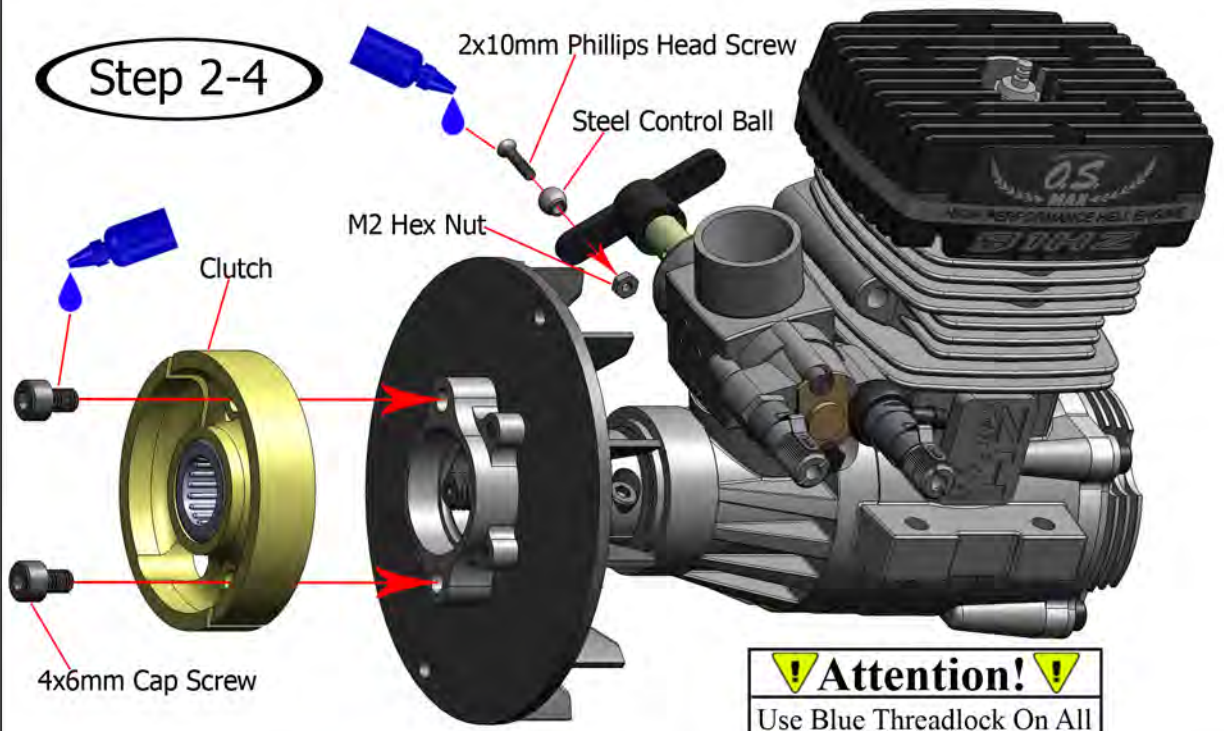


Steel Control
Ball - X1
ND-YR-G001

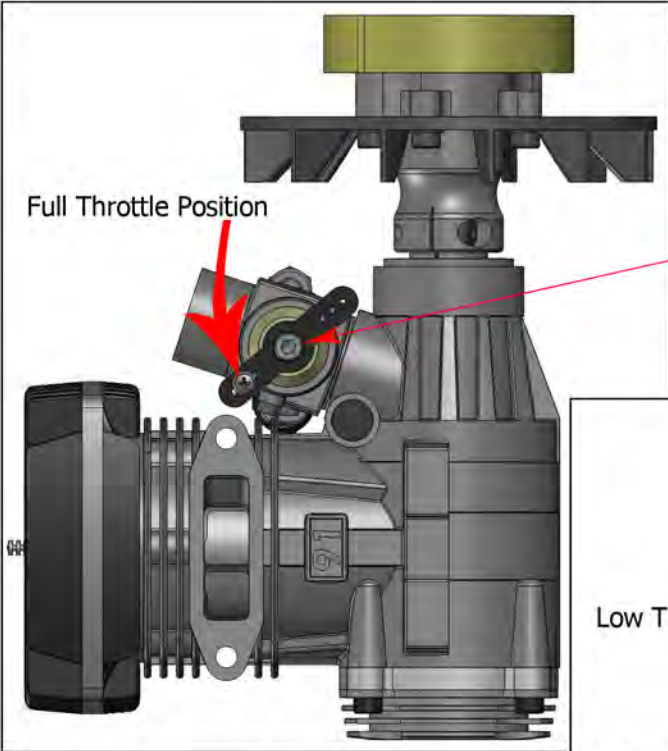


M2 Hex Nut - 1
ND-YR-G034

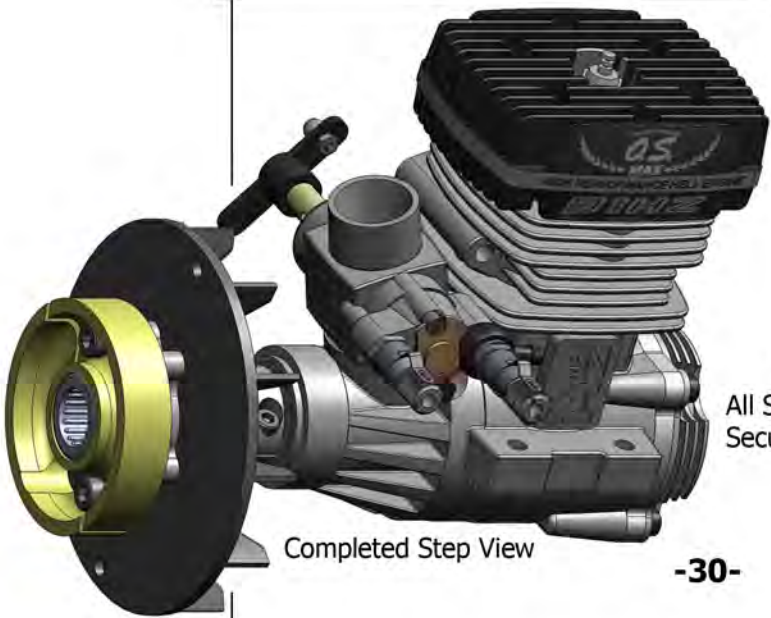
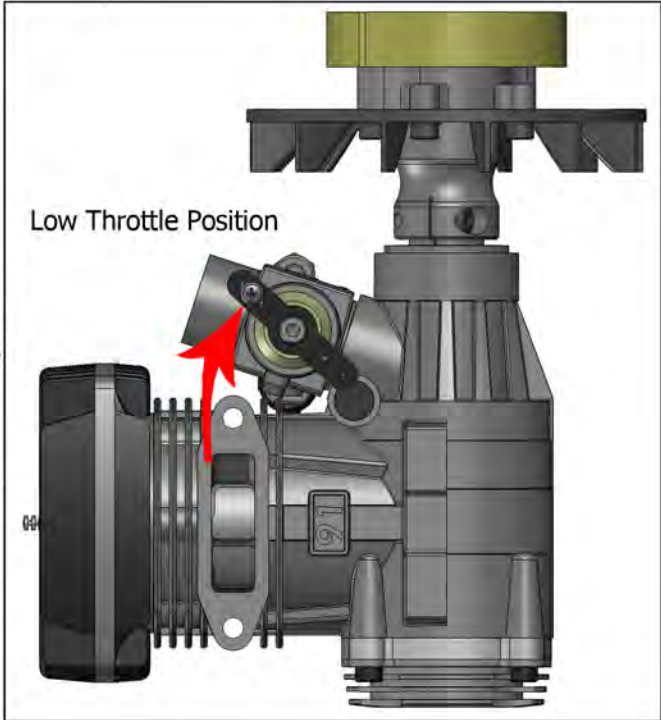
Step 2-4



Attention!
Use Blue Threadlock On All
Screws Going Into Metal



Loosen The Screw Indicated On Your Engine. Position The Plastic Throttle Control Arm In The Approximate Positions Indicated. This Position May Slightly Vary From One Engine To The Next. Tighten Screw Securely. No Threadlock Is Used In This Part Of This Step.



Completed Step View

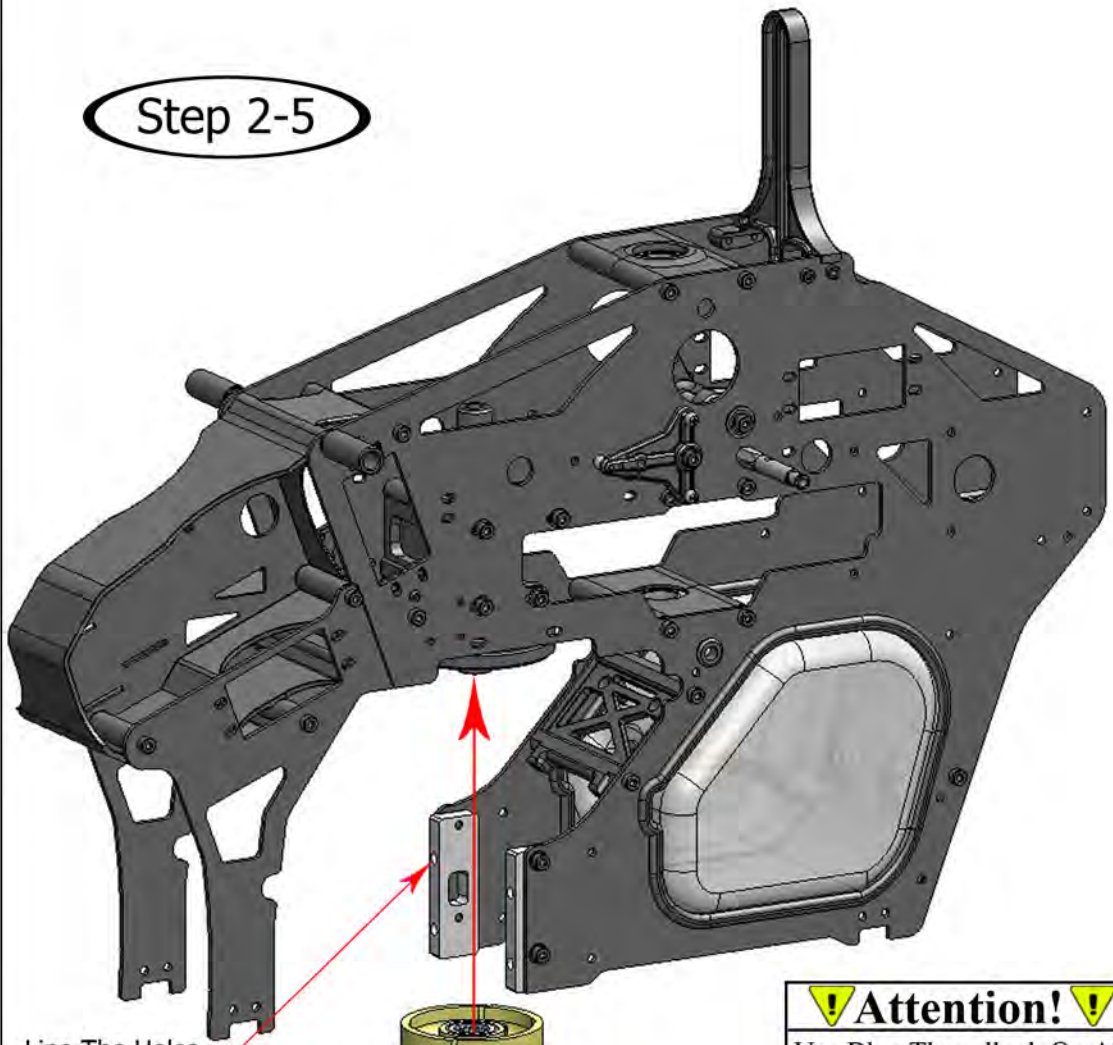
All Screws Should Be Tightened Securely At The End Of This Step!

Next

Step 2-5

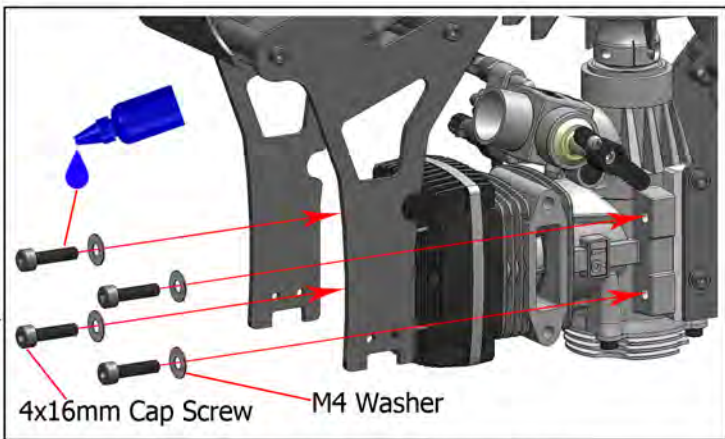
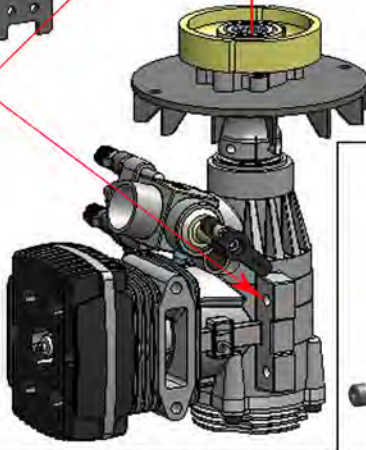
4x16mm Cap Screw - x4
ND-YR-G130

M4 Washer - x4
ND-YR-G082



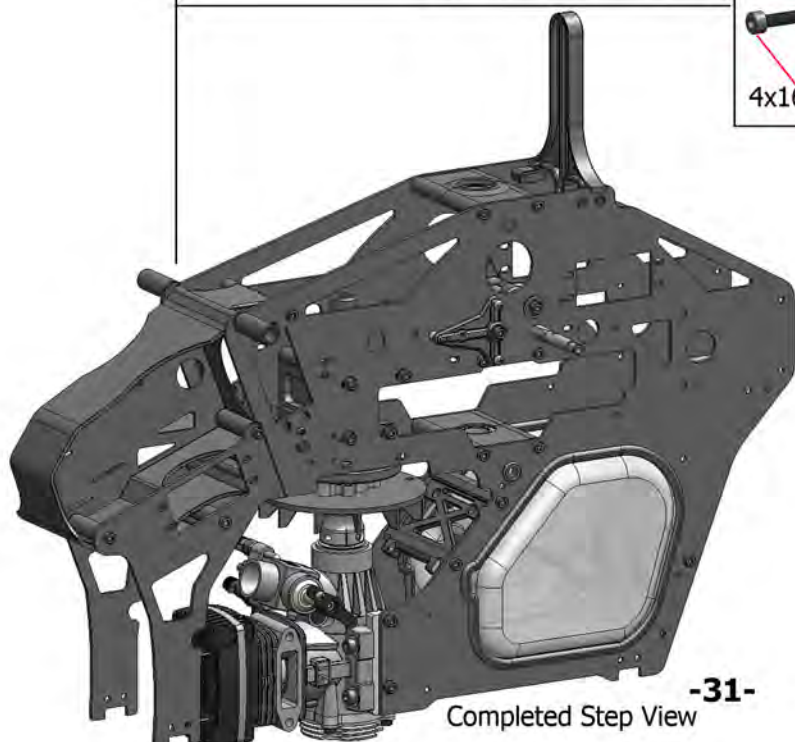
Line The Holes On The Engine Up With The Holes In The Motor Mounts

! Attention! !
Use Blue Threadlock On All Screws Going Into Metal



4x16mm Cap Screw M4 Washer

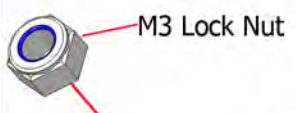
Be Sure All Screws Are Tightened Securely At The End Of This Step!



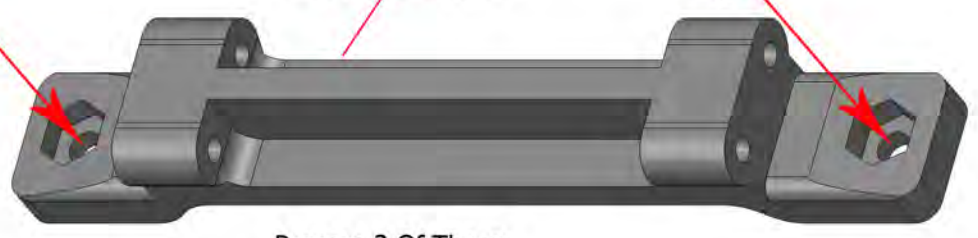
-31-
Completed Step View



Step 2-6



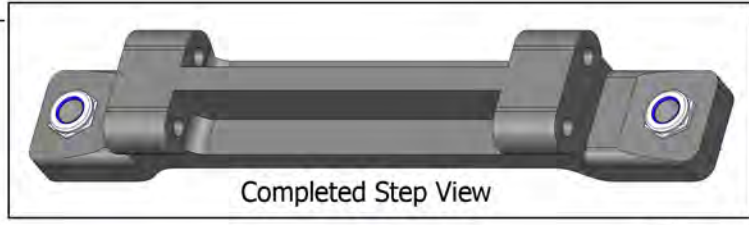
Lower Frame Brace



Prepare 2 Of These

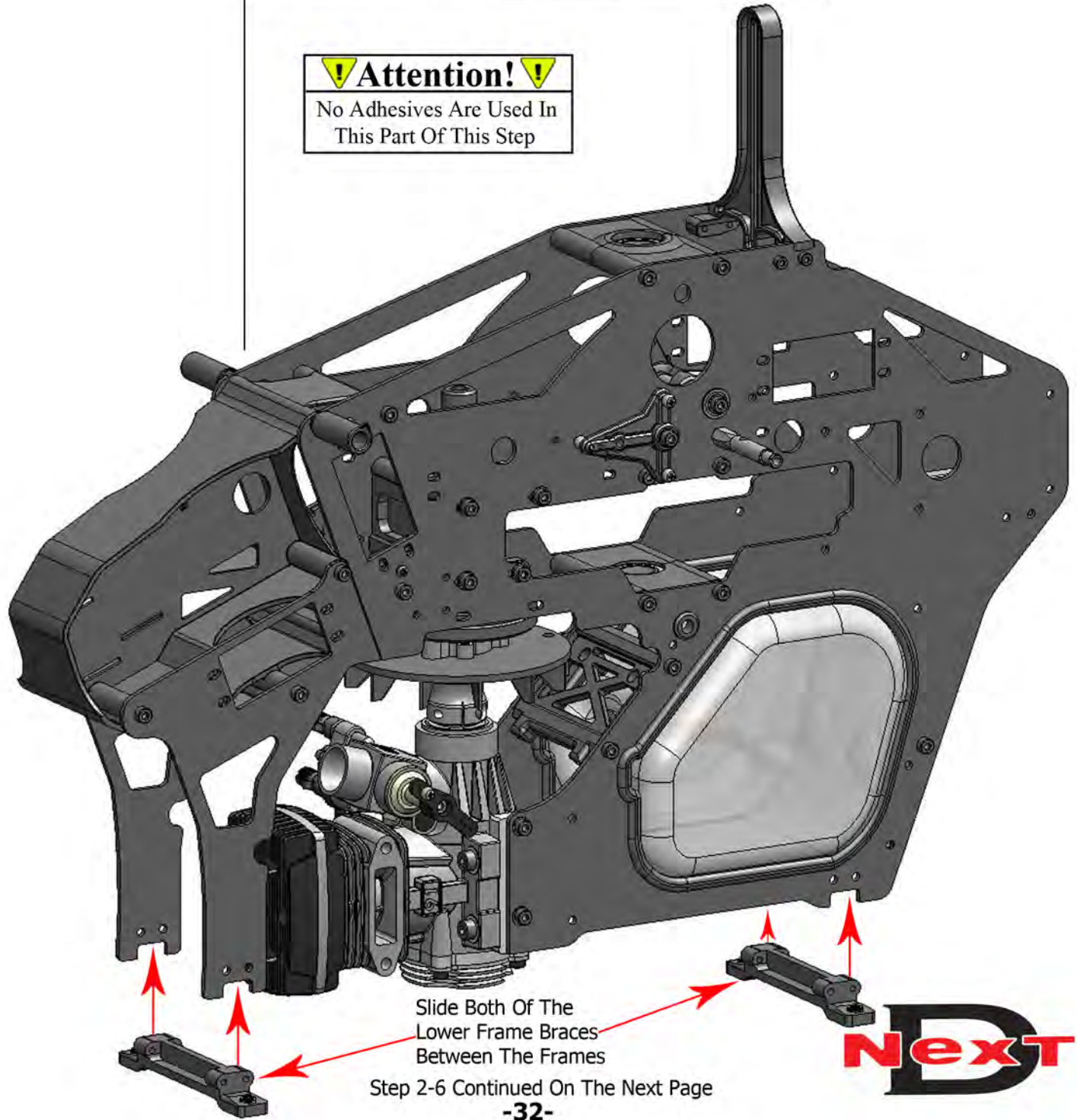


M3 Lock Nut - x4
ND-YR-G035



Completed Step View

! Attention! !
No Adhesives Are Used In
This Part Of This Step



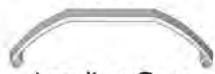
Slide Both Of The
Lower Frame Braces
Between The Frames

Step 2-6 Continued On The Next Page





3x10mm Cap
Screw - x8
ND-YR-G114



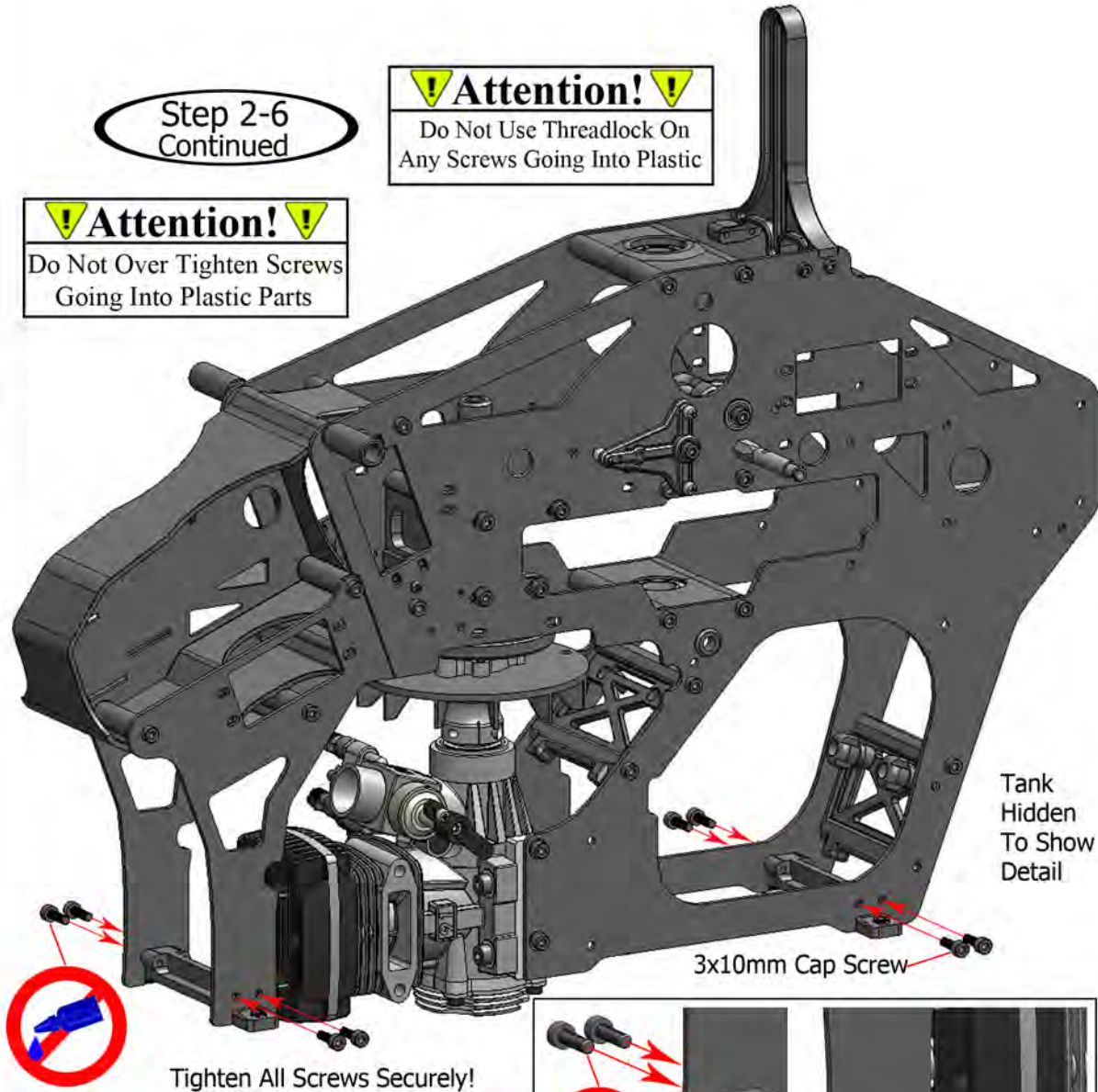
Landing Gear
Struts - x2
ND-YR7-F1002

Landing Gear
Skids - x2
ND-YR7-F1004

Step 2-6
Continued

! Attention! !
Do Not Use Threadlock On
Any Screws Going Into Plastic

! Attention! !
Do Not Over Tighten Screws
Going Into Plastic Parts



3x10mm Cap Screw



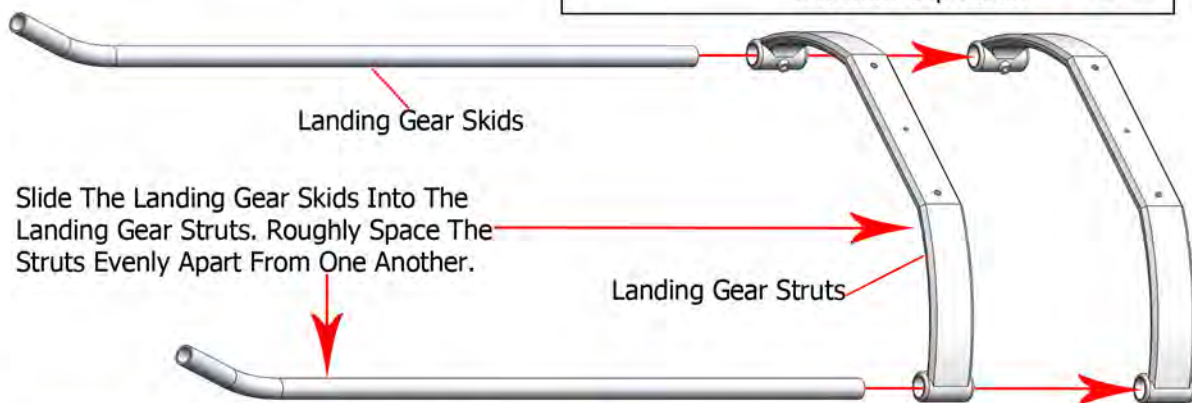
Tighten All Screws Securely!



Detailed Step View

3x10mm Cap Screw

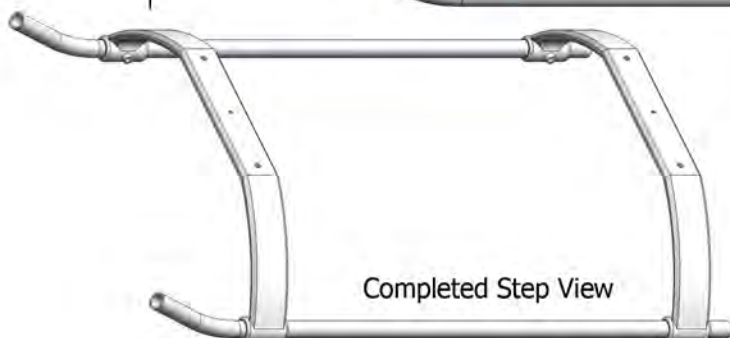
Step 2-7



Landing Gear Skids

Slide The Landing Gear Skids Into The
Landing Gear Struts. Roughly Space The
Struts Evenly Apart From One Another.

Landing Gear Struts



Completed Step View

! Attention! !
No Adhesives Are Used In
This Part Of This Step

Step 2-7 Continued On Next Page

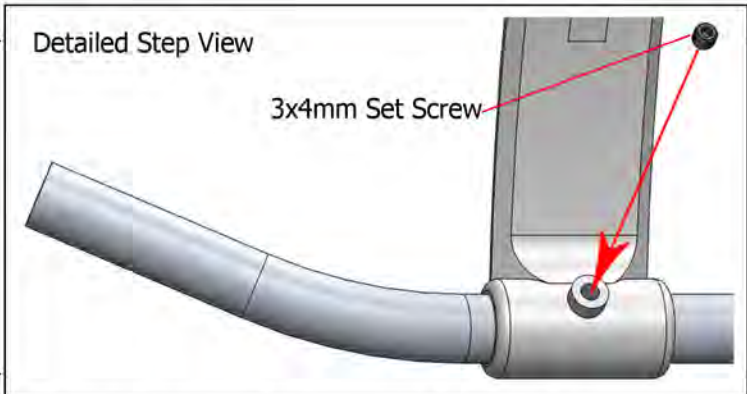


Step 2-7 Continued

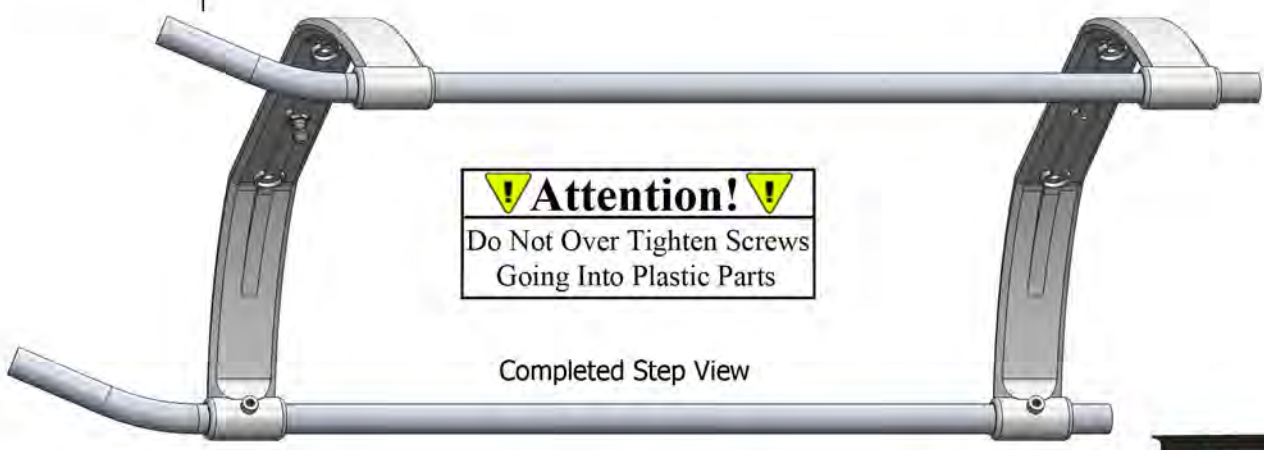
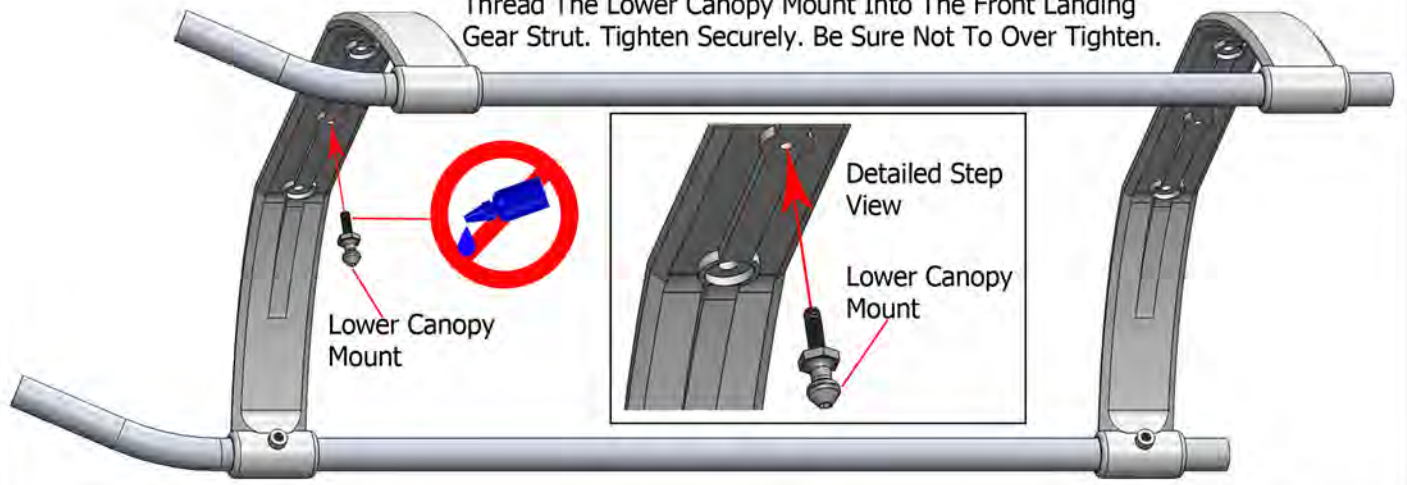
3x4mm Set Screw - x4 ND-YR-G032

Lower Canopy Mount -x1 ND-YR7-F1031

Thread The 3x4mm Set Screws Into The Struts In The Indicated Locations. Leave Screws Loose At This Time.



Thread The Lower Canopy Mount Into The Front Landing Gear Strut. Tighten Securely. Be Sure Not To Over Tighten.



Step 2-8



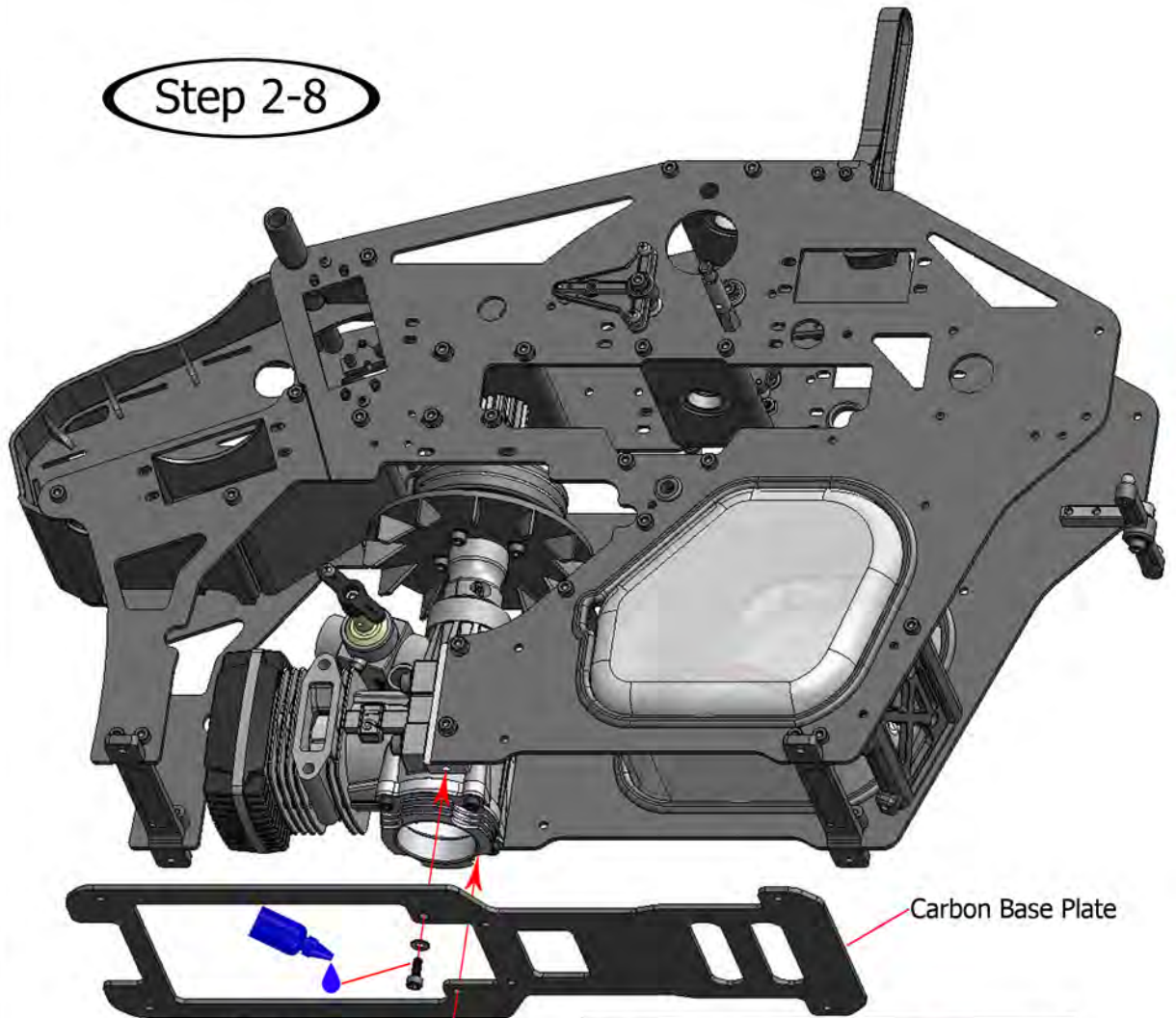
3x8mm Cap Screw - x2
ND-YR-G114



M3 Washer - x2
ND-YR-G094



Carbon Base Plate - x1
ND-YR7-F1016



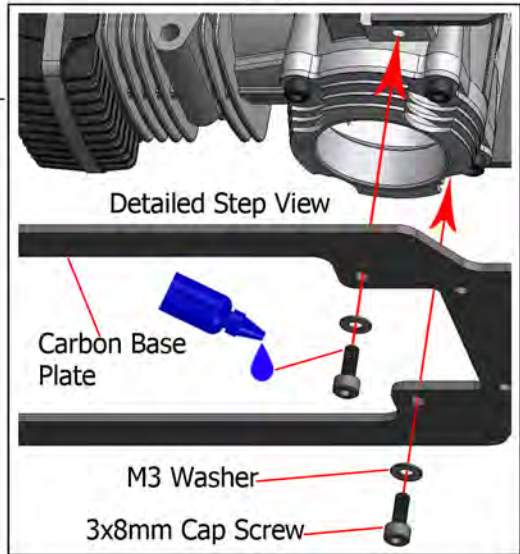
Carbon Base Plate

M3 Washer

3x8mm Cap Screw

Leave All Screws
Loose At This Time!

! Attention! !
Use Blue Threadlock On All
Screws Going Into Metal



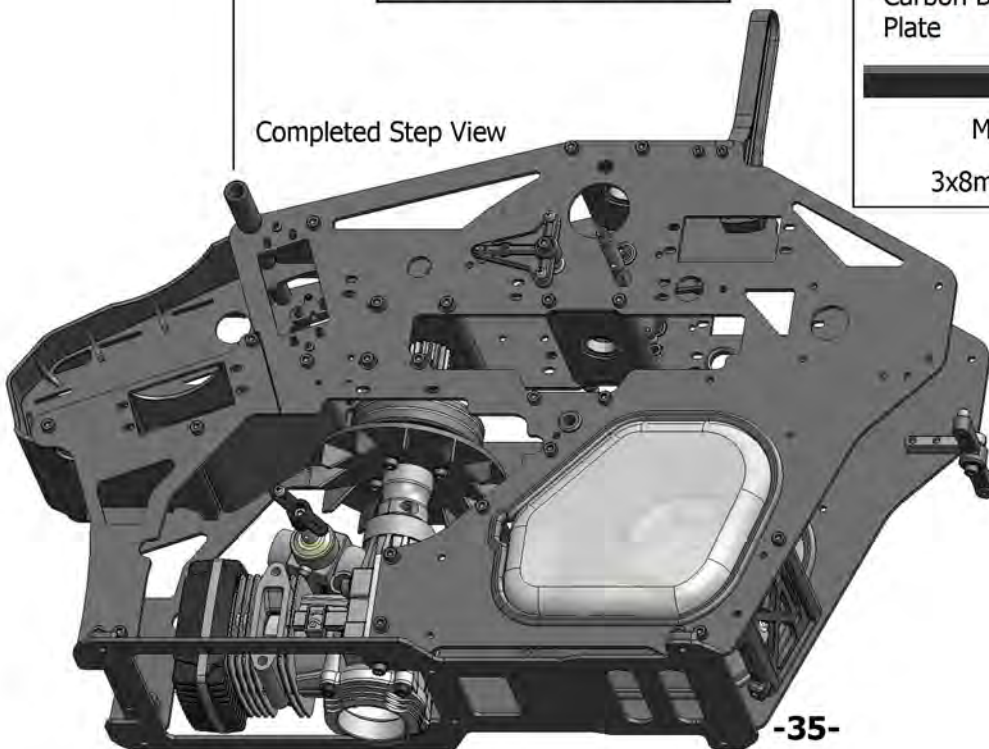
Detailed Step View

Carbon Base
Plate

M3 Washer

3x8mm Cap Screw

Completed Step View



Step 2-8



Step 2-9



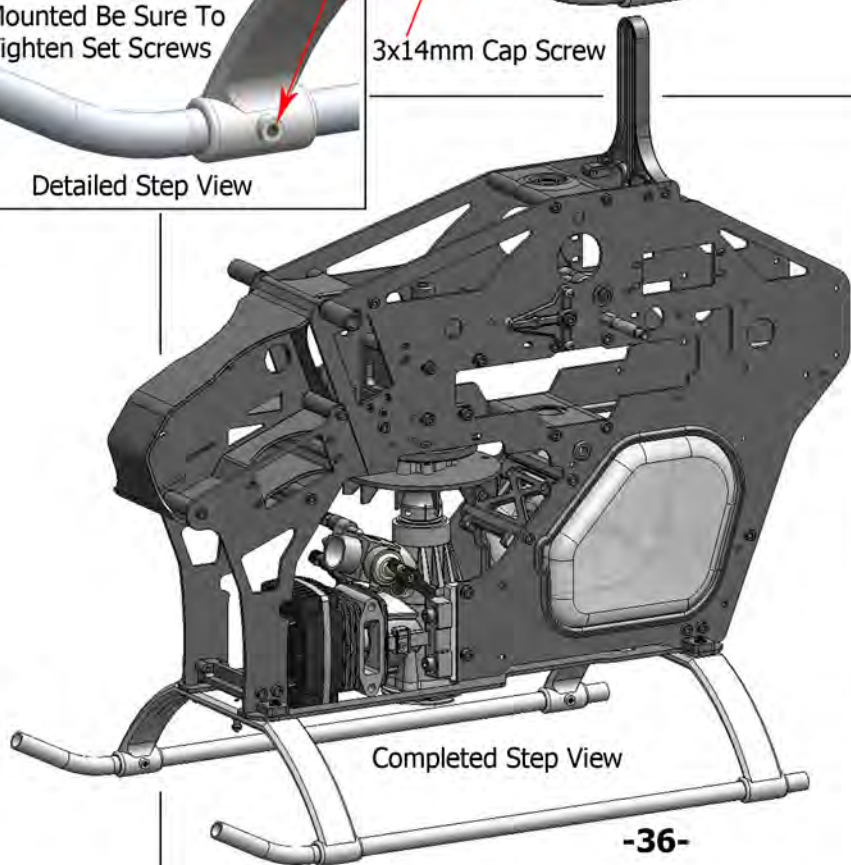
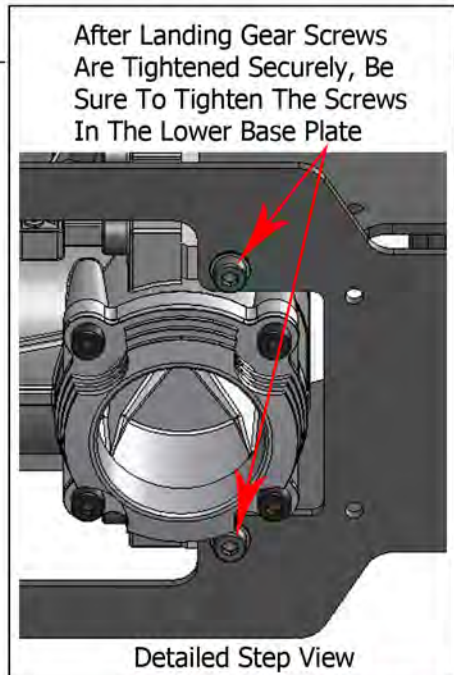
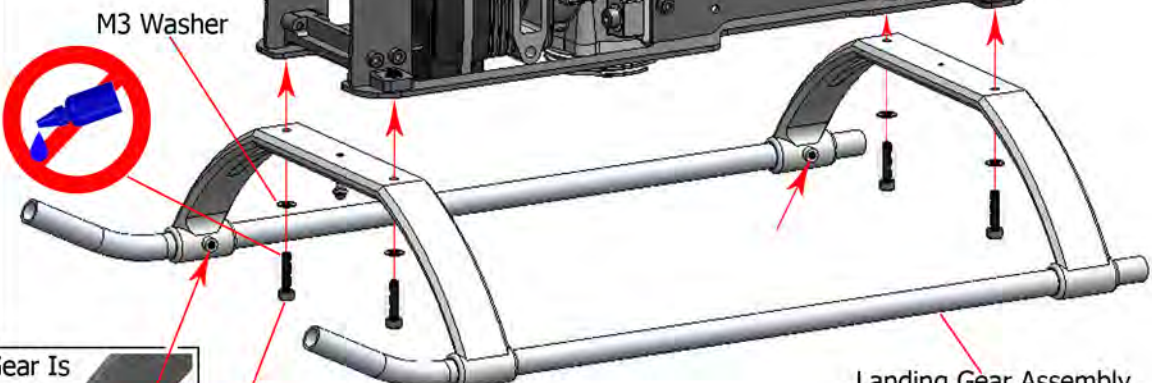
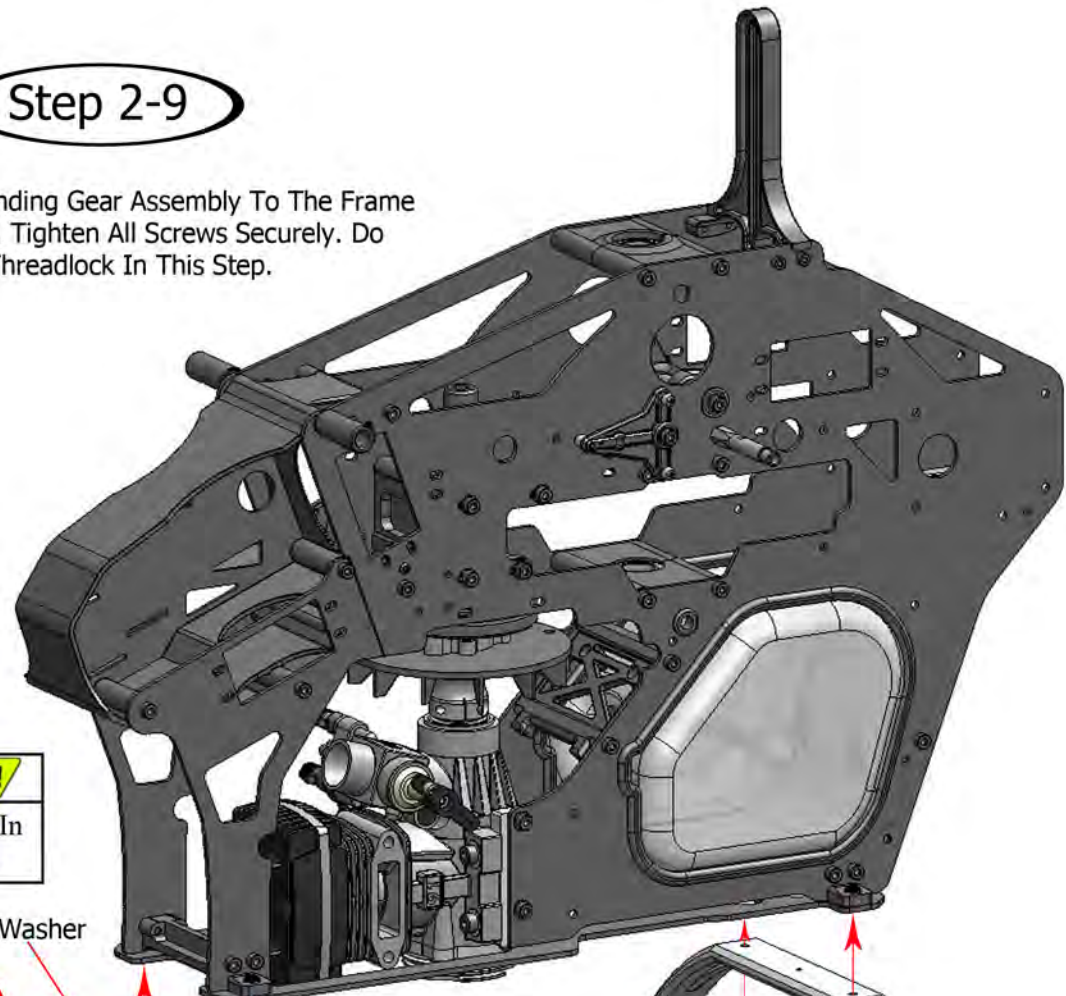
3x14mm Cap Screw - x4
ND-YR-G123



M3 Washer - x4
ND-YR-G094

Mount Landing Gear Assembly To The Frame Assembly. Tighten All Screws Securely. Do Not Use Threadlock In This Step.

Attention!
No Adhesives Are Used In This Part Of This Step



Step 2-10

! Attention! !
Use Blue Threadlock On All Screws Going Into Metal



Fan Shroud Half Right - x1
ND-YR7-F1027



Fan Shroud Half Left - x1
ND-YR7-F1026



Hex Spacer 3x5.5x58mm - x2
ND-YR-G075



Fan Shroud Baffle - x1
ND-YR7-F1024



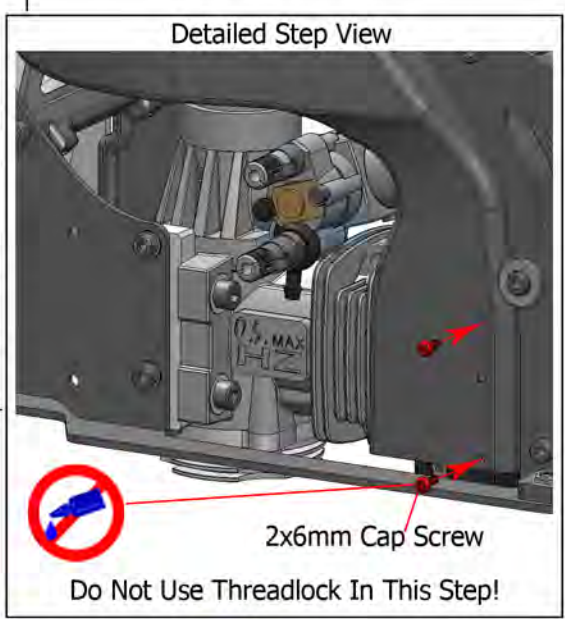
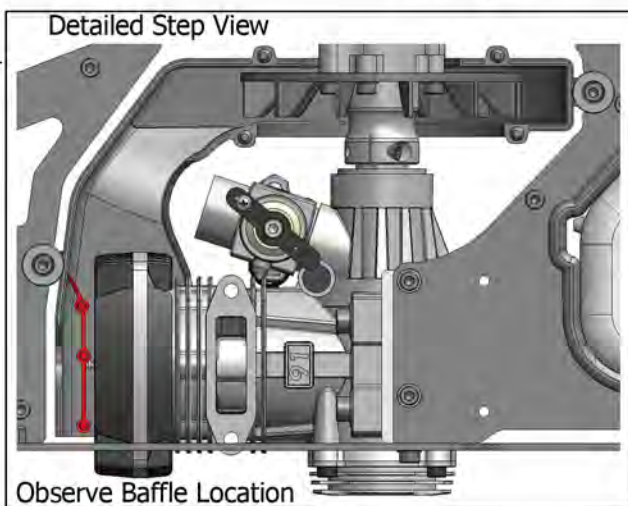
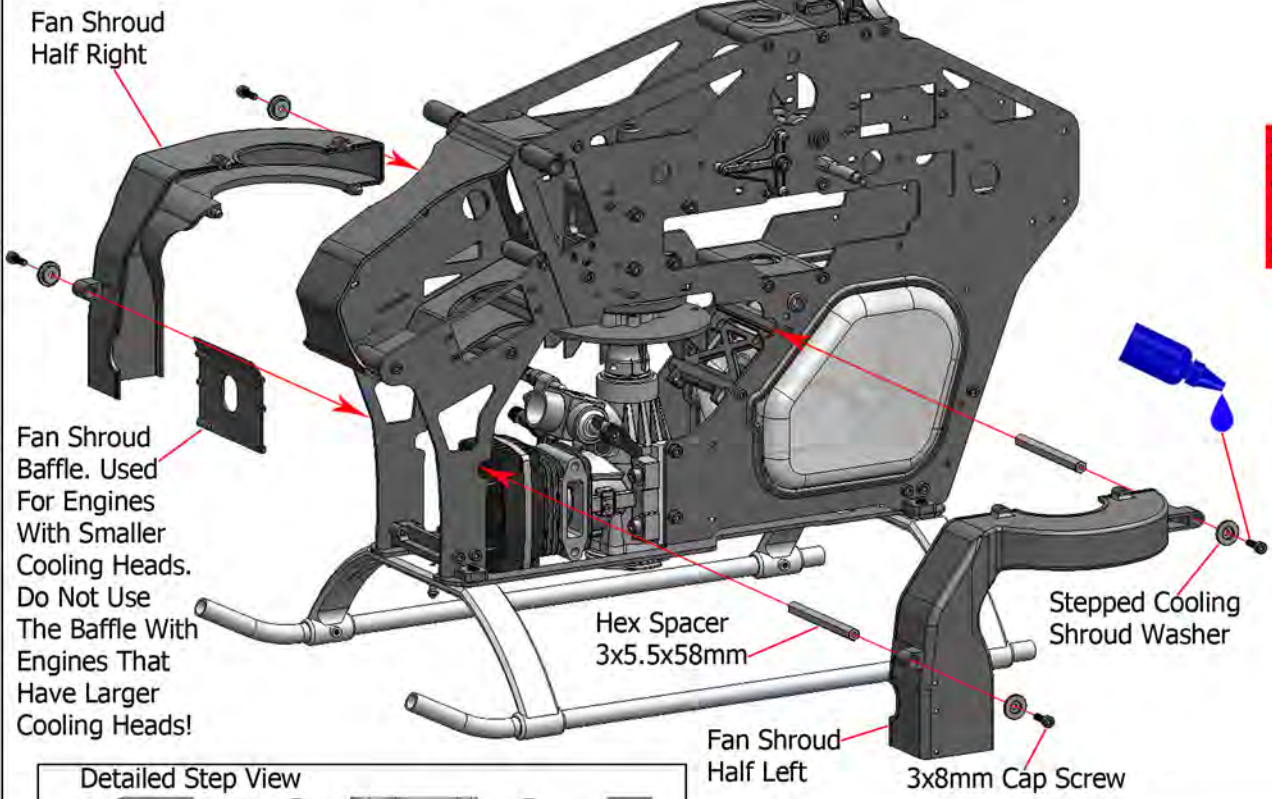
Stepped Fan Shroud Washer - x4
ND-YR-G122



3x8mm Cap Screw - x4
ND-YR-G114

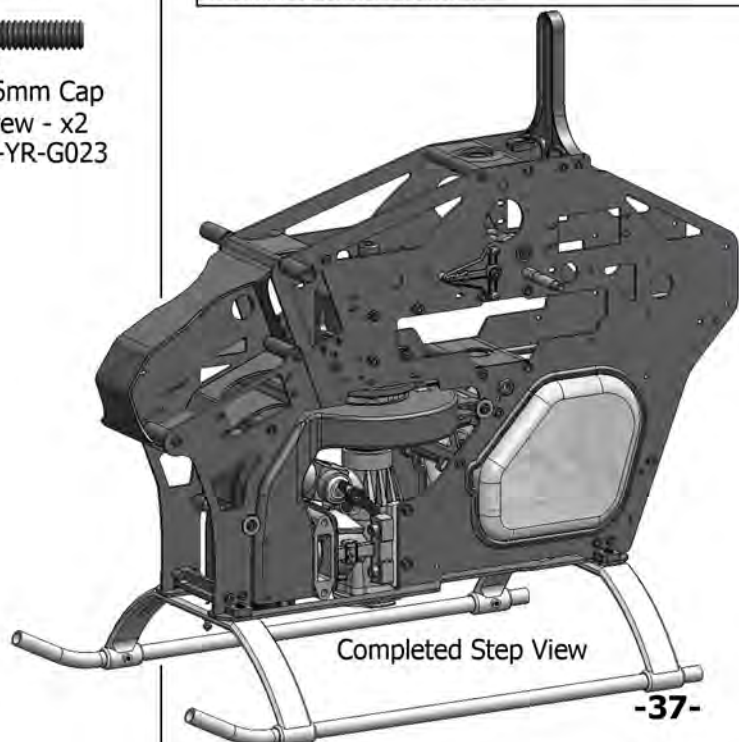


2x6mm Cap Screw - x2
ND-YR-G023



! Attention! !
Do Not Use Threadlock On Any Screws Going Into Plastic

! Attention! !
Do Not Over Tighten Screws Going Into Plastic Parts



Step 2-10



Rave ENV Tips And Tricks

Tips And Tricks

To Remove The Fan Shroud, Remove 2 Of The 3x8mm Cap Screws And The Stepped Fan Shroud Washers From One Side Of The Fan Shroud Assembly.

Using A 3mm Handled Driver, Push The Hex Spacers Out Of The Fan Shroud Half You Have Just Removed The Hardware From. Pull The Hex Spacers Completely Out Of The Fan Shroud.

Remove The Fan Shroud Halves



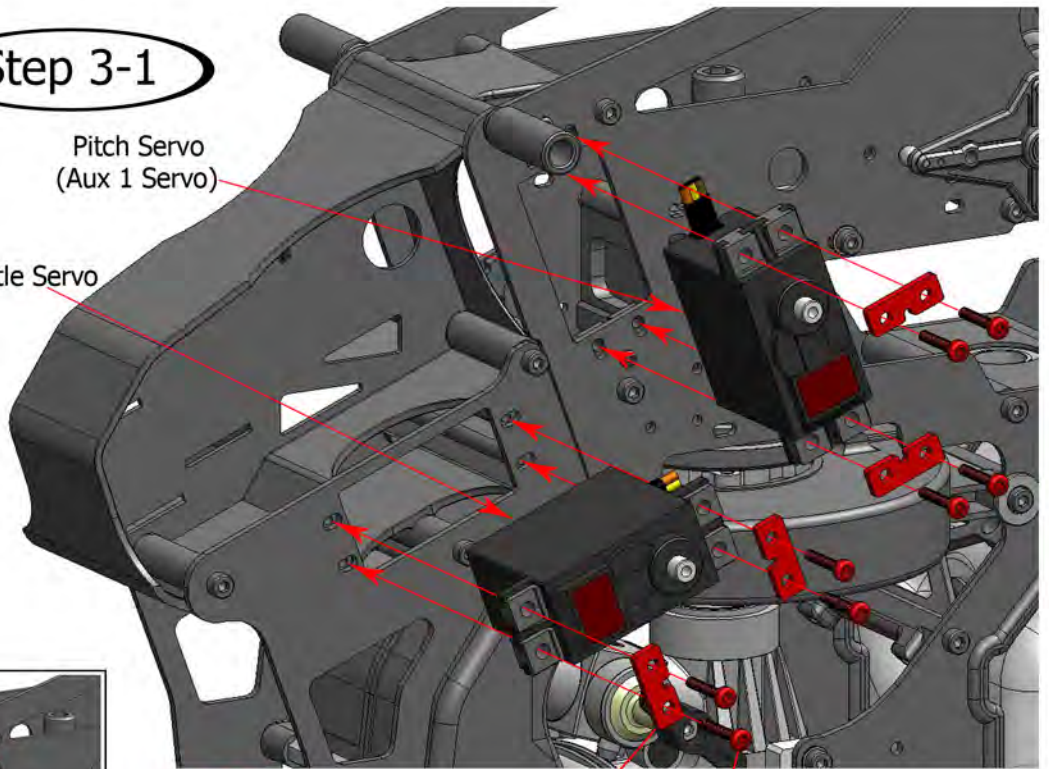
Carbon Servo Mount Tab - x8 ND-YR7-F1020



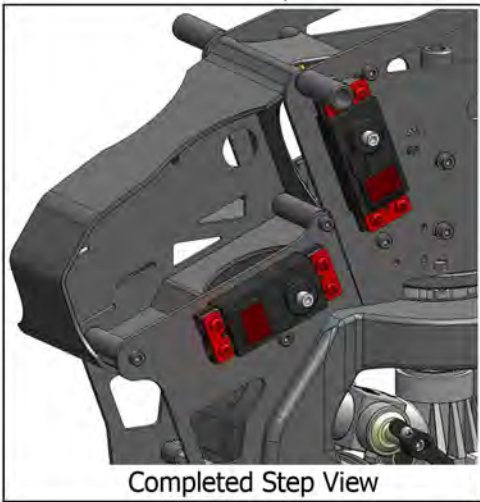
2.5x15mm Self Tapping Screw - x16 ND-YR-G128

Step 3-1

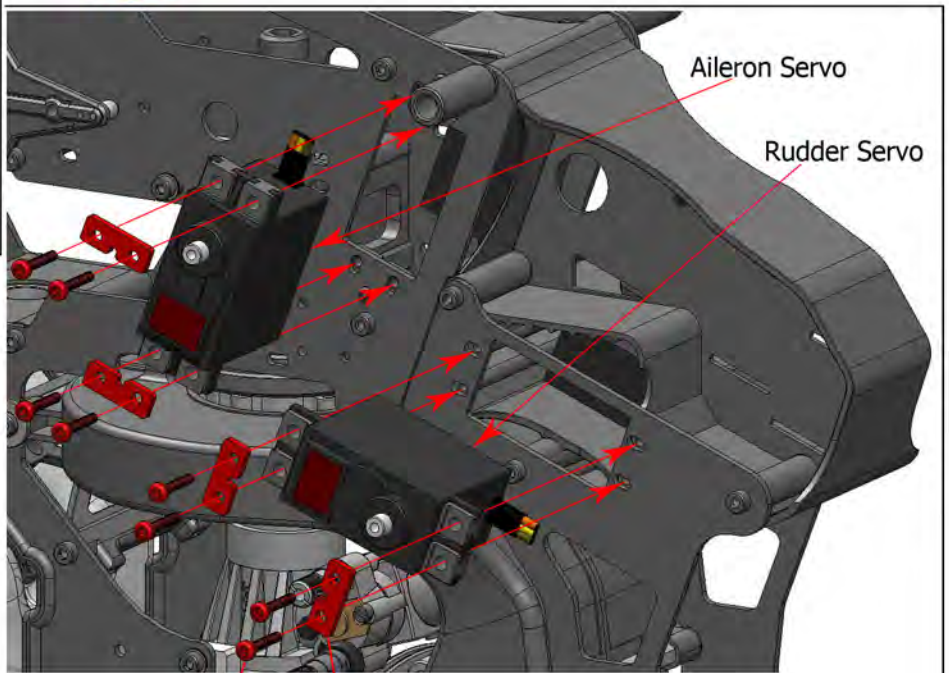
Pitch Servo (Aux 1 Servo)
Throttle Servo



Carbon Servo Mount Tab

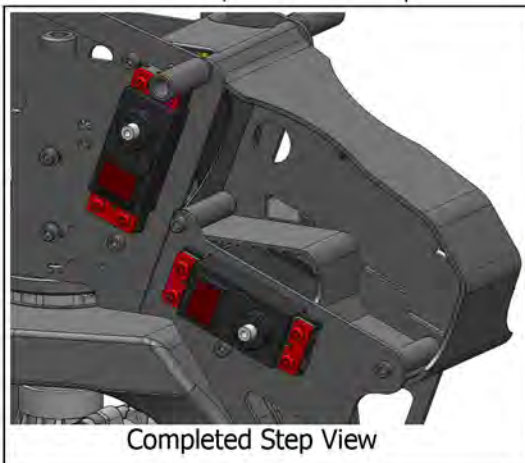


Completed Step View



Carbon Servo Mount Tab
2.5x15mm Self Tapping Screw

! Attention! !
Do Not Use Threadlock On Any Screws Going Into Plastic



Completed Step View

Step 3-1 Continued On Next Page

! Attention! !
Do Not Over Tighten Screws Going Into Plastic Parts



Step 3-1+



Carbon Servo Mount Tab - x2
ND-YR7-F1020

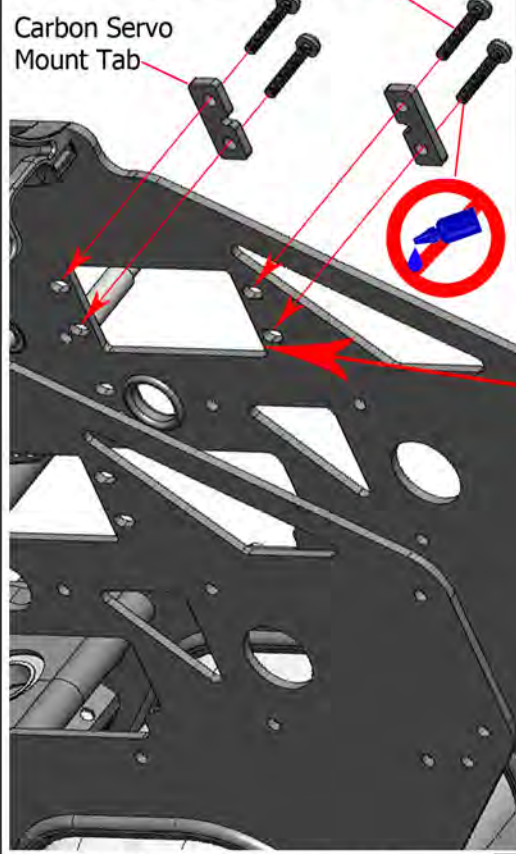


2.5x15mm Self Tapping Screw - x4
ND-YR-G128



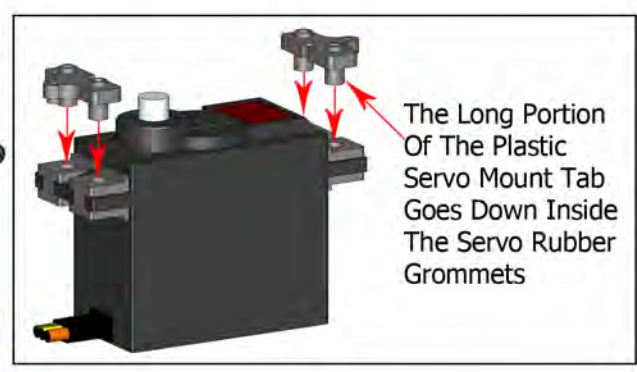
Plastic Servo Mount Tab - x2
ND-YR7-F1017

Step 3-1 Continued

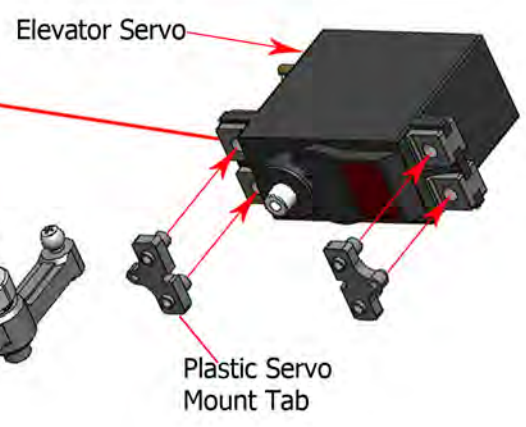


2.5x15mm Self Tapping Screw

Carbon Servo Mount Tab



The Long Portion Of The Plastic Servo Mount Tab Goes Down Inside The Servo Rubber Grommets

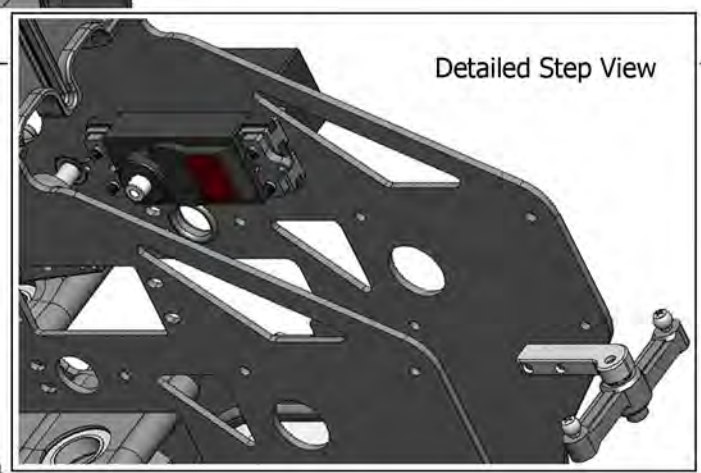


Elevator Servo

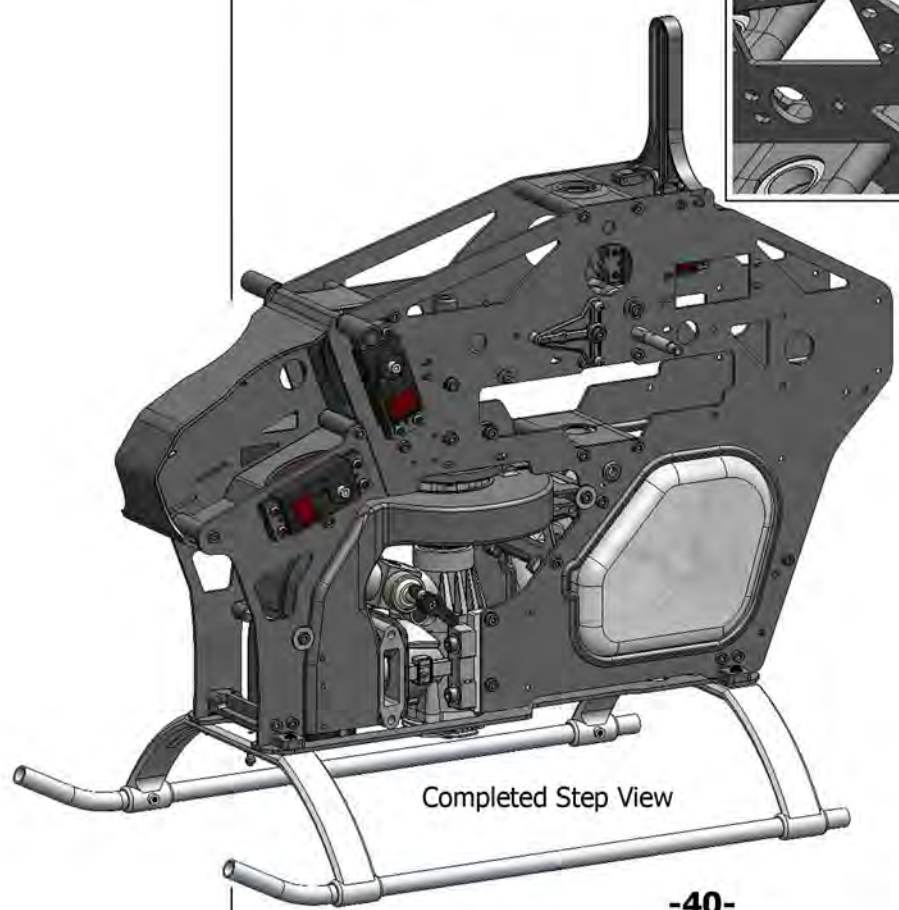
Plastic Servo Mount Tab

Tighten All Screws Securely!

! Attention! !
Do Not Use Threadlock On Any Screws Going Into Plastic



Detailed Step View



Completed Step View

! Attention! !
Do Not Over Tighten Screws Going Into Plastic Parts



Step 3-2

! Attention! !
Use Blue Threadlock On All Screws Going Into Metal



Auto Unit Housing - x1
ND-YR7-AU1001



Auto Unit Top Cap - x1
ND-YR7-AU1002



One Way Bearing - x1
ND-YR-G074



Hardened One Way Outer Sleeve - x1
ND-YR7-AU1006



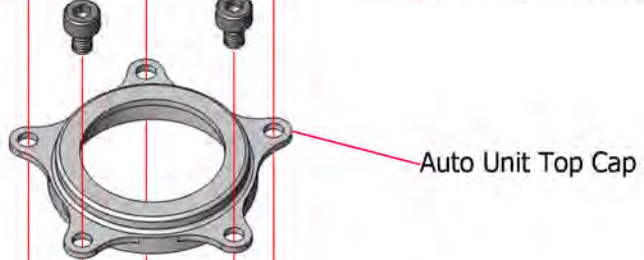
Bearing 14x21x4mm - x2
ND-YR-G158



2.5x4mm Cap Screw - x5
ND-YR-G143



2.5x4mm Cap Screw



Auto Unit Top Cap



Bearing 14x21x4mm

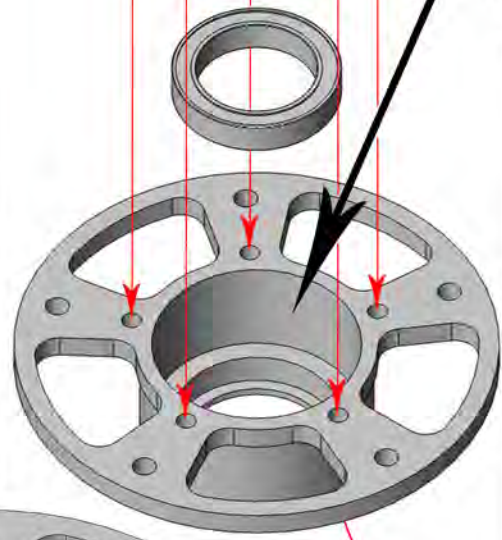


One Way Bearing
(Apply Light Oil)



Hardened One Way Outer Sleeve

Clean Both Surfaces With Alcohol And Apply Red Threadlock To The Area Indicated. Press The Sleeve In Place And Wipe Away Any Excess Adhesive.



Auto Unit Housing



Observe The Direction Of The One Way Bearing!

Top View

Points Face Left

Detailed Step View



Tighten All Screws Securely!

! Attention! !
Be Careful When Using Red Threadlock, Use Sparingly



Step 3-3

Step 3-3



130 Tooth Main Gear - x1
ND-YR7-AU1004



118 Tooth Tail Drive Gear - x1
ND-YR7-AU1005



Auto Unit Assembly - x1
ND-YR7-AU1007



Hardened Auto Unit Sleeve - x1
ND-YR7-AU1003



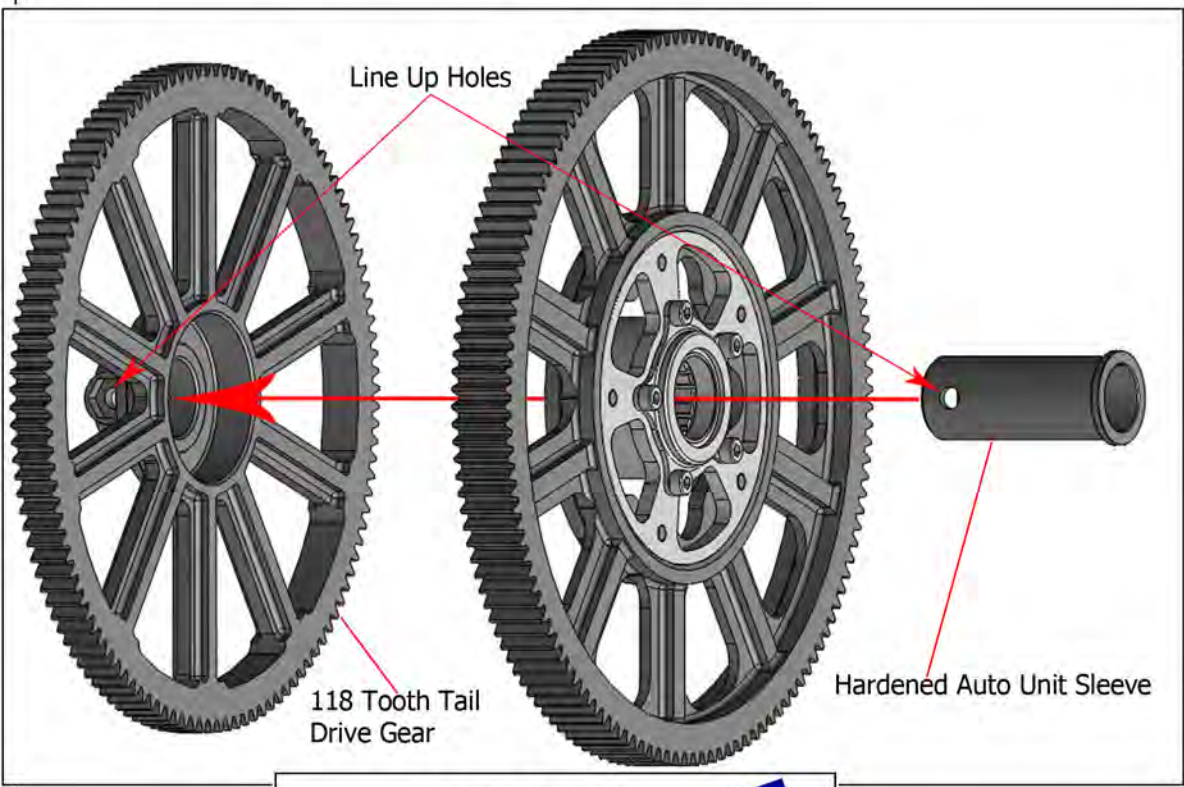
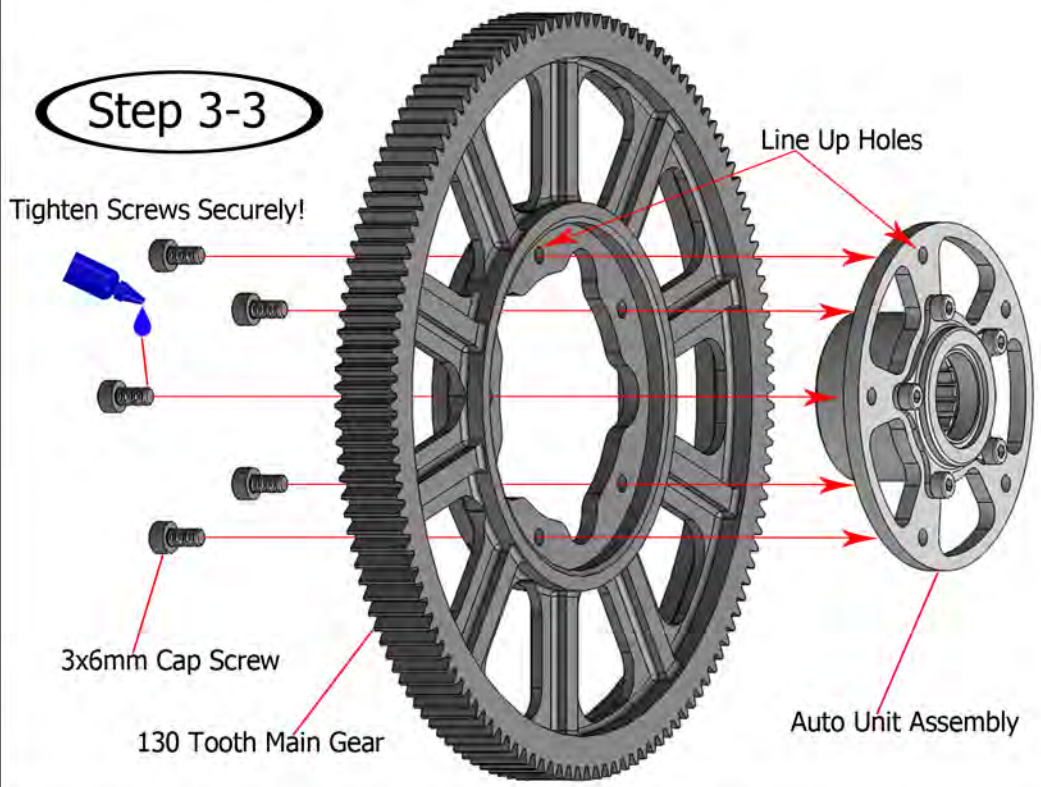
3x6mm Cap Screw - x5
ND-YR-G127



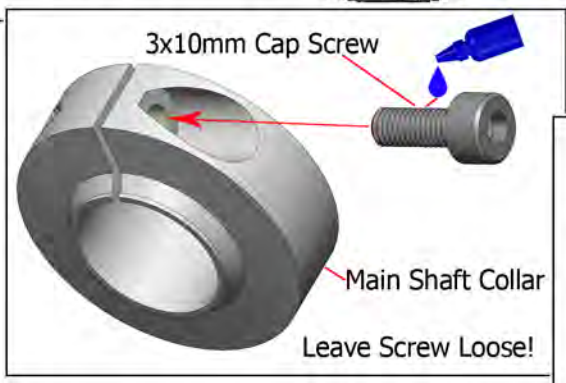
3x10mm Cap Screw - x1
ND-YR-G065



Main Shaft Collar - x1
ND-YR7-RH1015



Completed Step View



Completed Step View

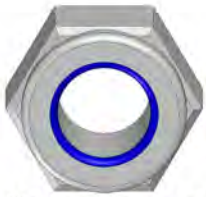
⚠ Attention! ⚠
Use Blue Threadlock On All
Screws Going Into Metal



Step 3-4



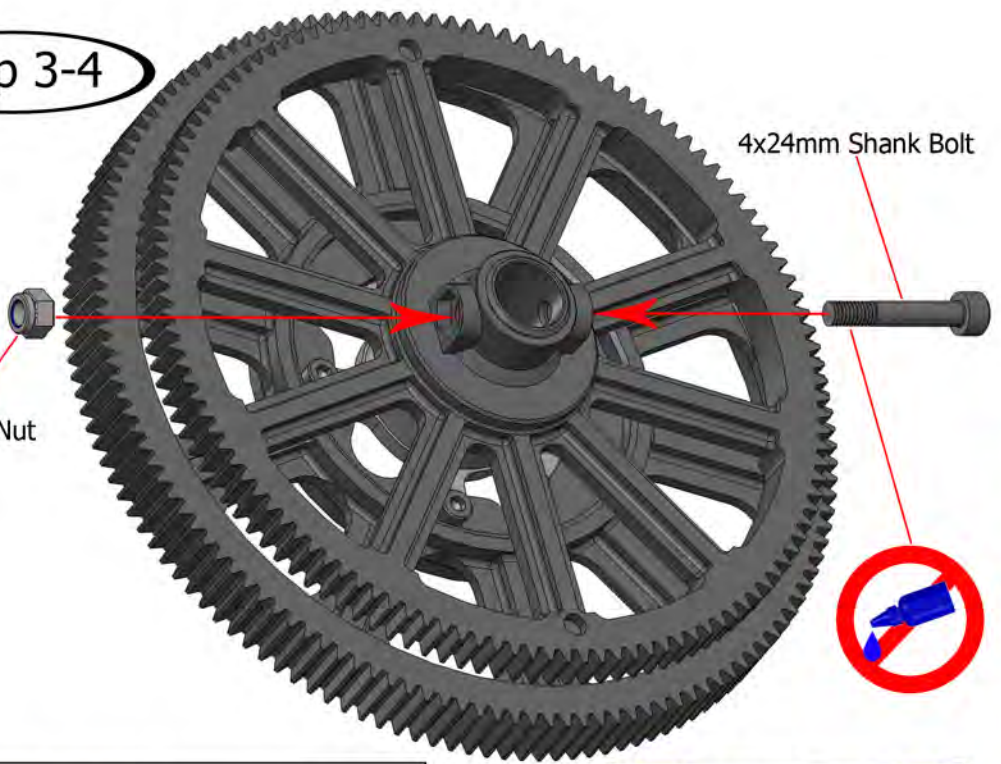
4x24mm Shank Bolt - x1 ND-YR-G135



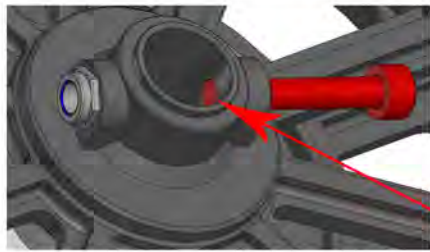
M4 Lock Nut - x1 ND-YR-G091

M4 Lock Nut

4x24mm Shank Bolt

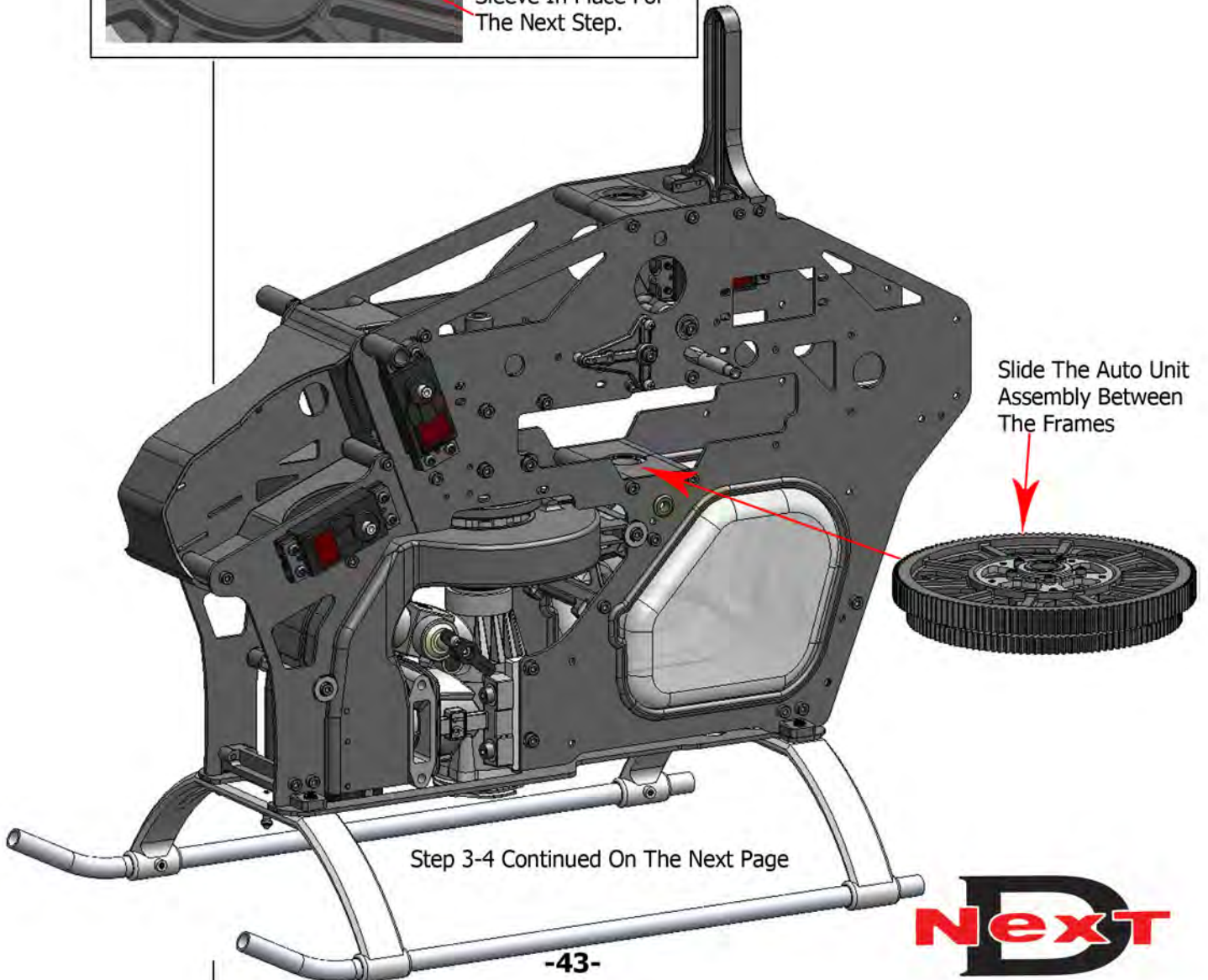


Step 3-4



Insert The 4x24mm Shank Bolt Just Far Enough To Engage The Auto Unit Sleeve. This Will Hold The Sleeve In Place For The Next Step.

! Attention! !
No Adhesives Are Used In This Part Of This Step



Slide The Auto Unit Assembly Between The Frames

Step 3-4 Continued On The Next Page

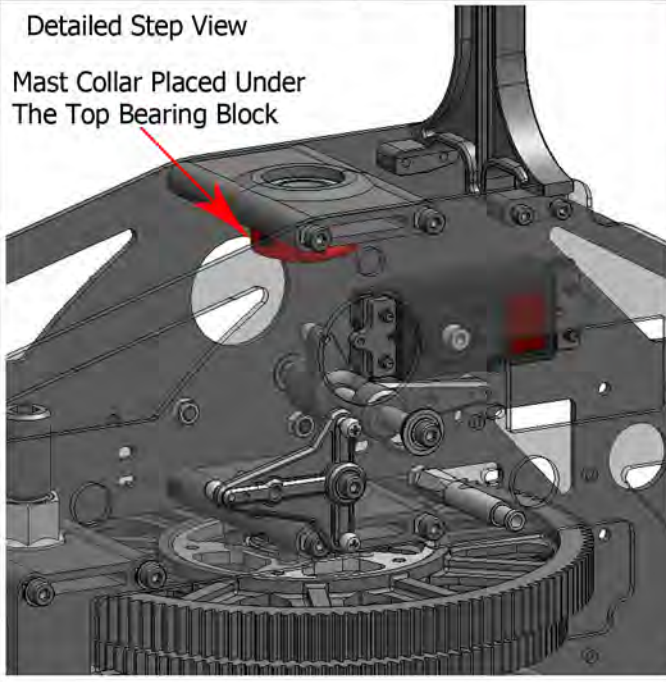
Next

12mm Hollow Main Shaft - x1
ND-YR7-RH1017

Step 3-4
Continued

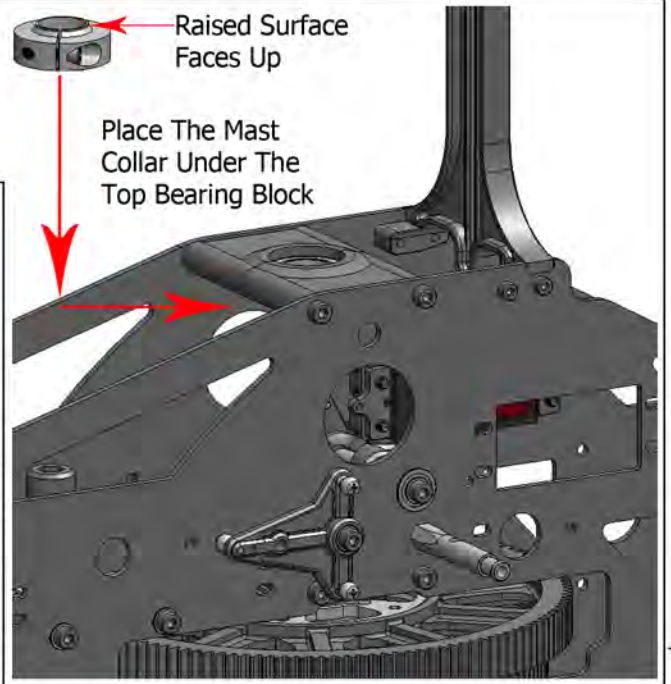
Detailed Step View

Mast Collar Placed Under
The Top Bearing Block



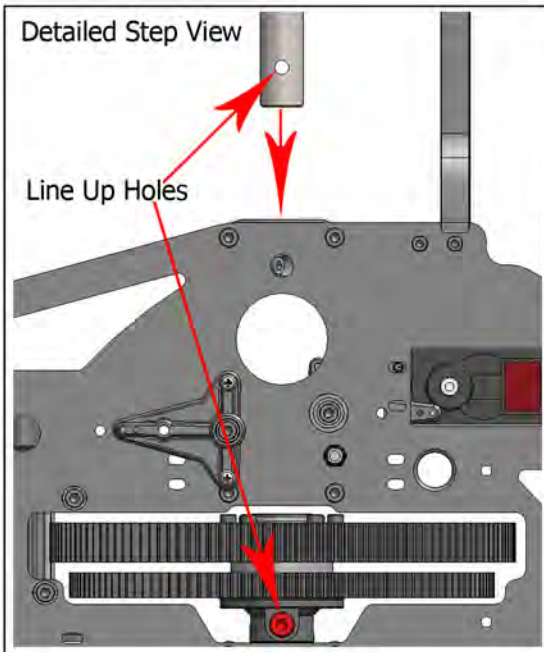
Raised Surface
Faces Up

Place The Mast
Collar Under The
Top Bearing Block



Detailed Step View

Line Up Holes



12mm Hollow
Main Shaft

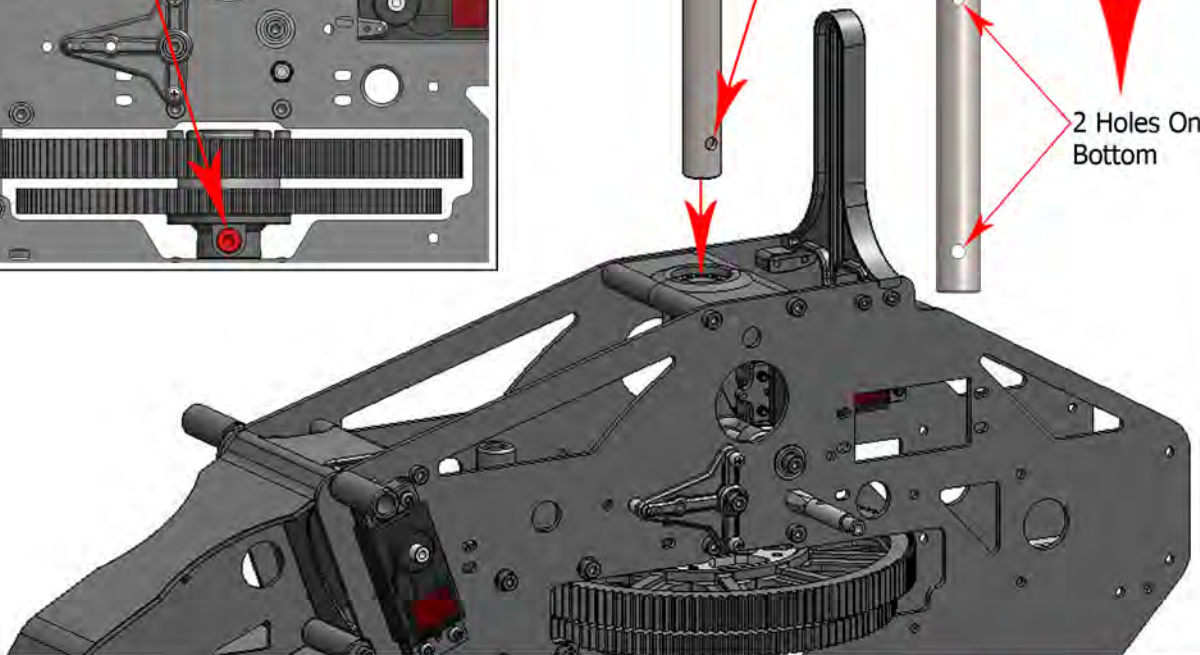
Slide The Main
Shaft Through
The Upper
Bearing Block
And Line The
Lower Hole Up
With The Bolt
Hole In The
Auto Unit

1 Hole On
Top

Top

Bottom

2 Holes On
Bottom

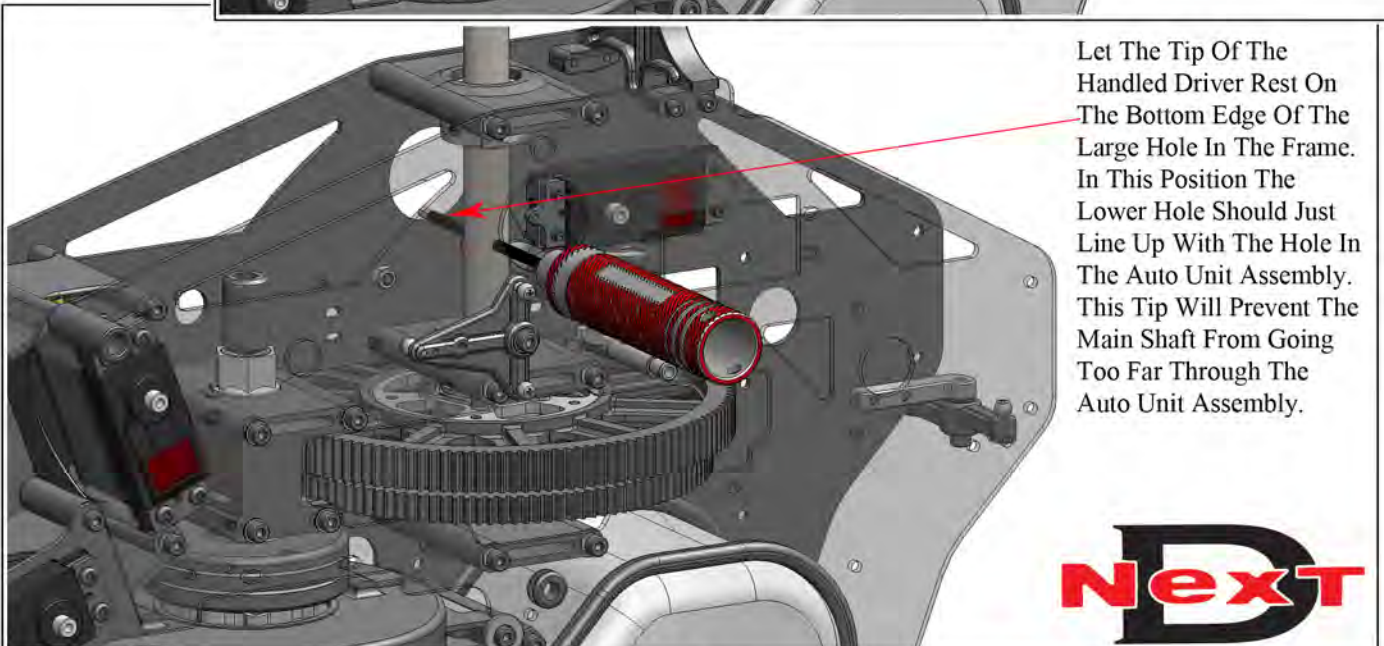
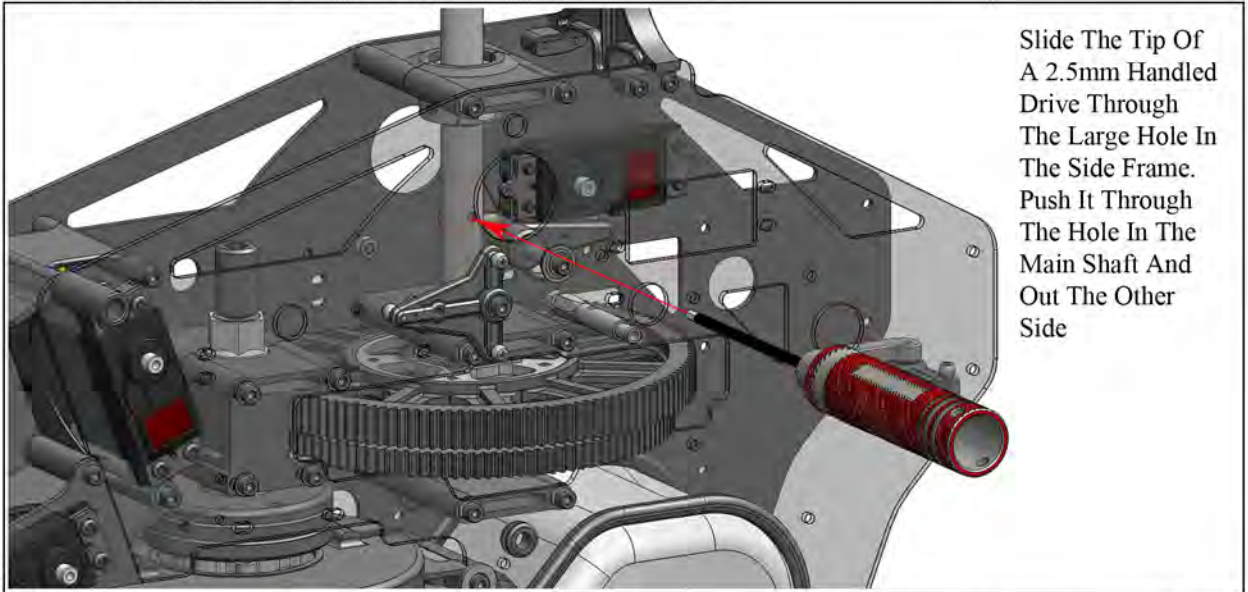
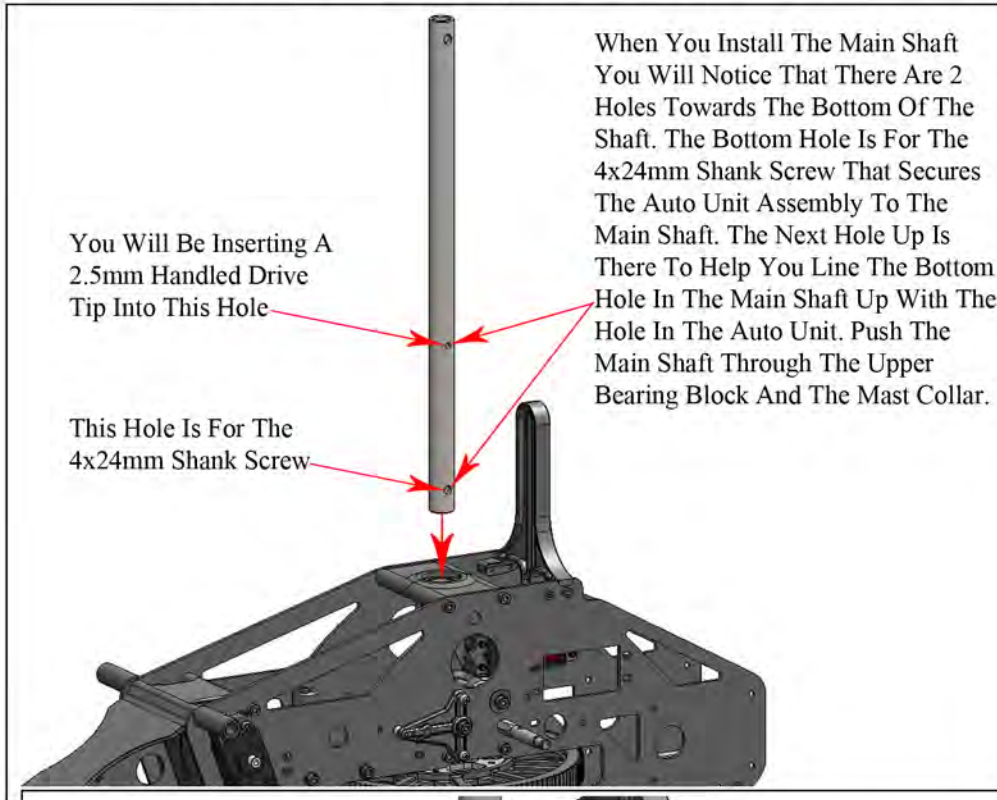


Step 3-4 Continued On The Next Page

Next

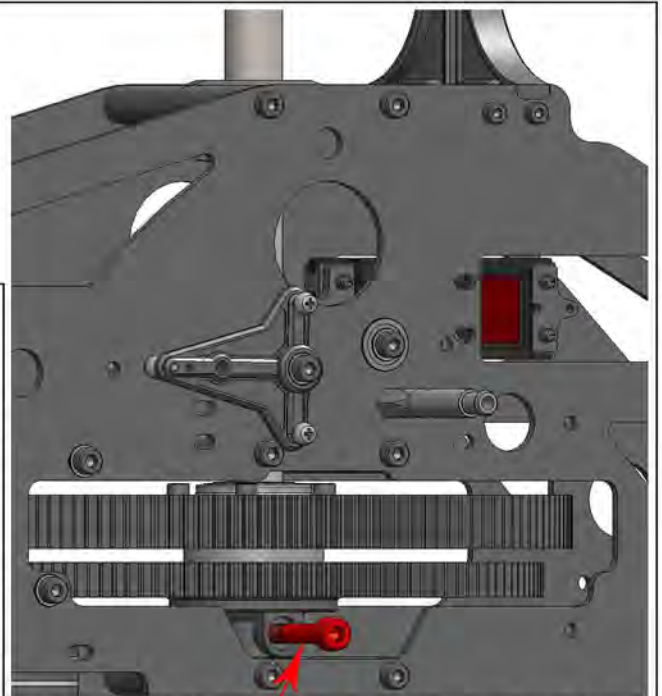
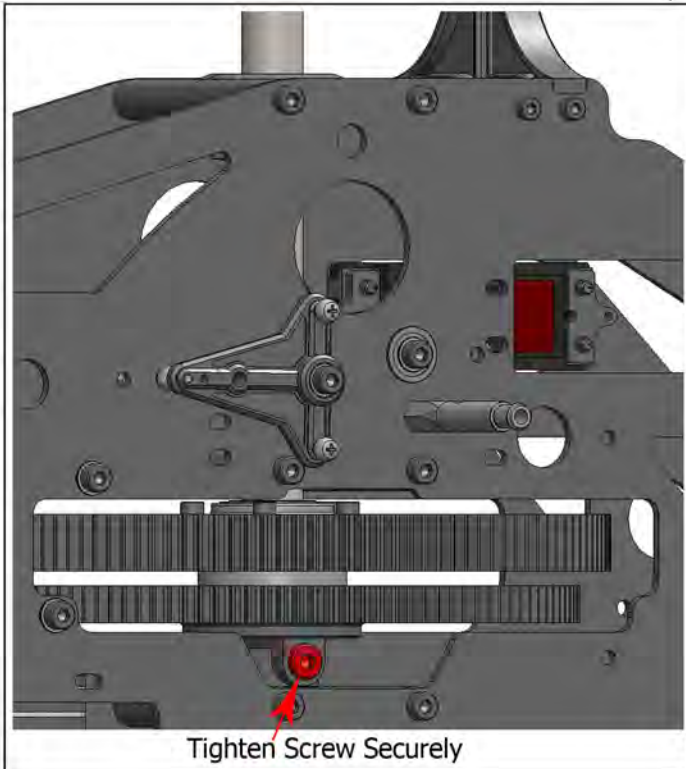
Step 3-4+

Rave ENV Tips And Tricks

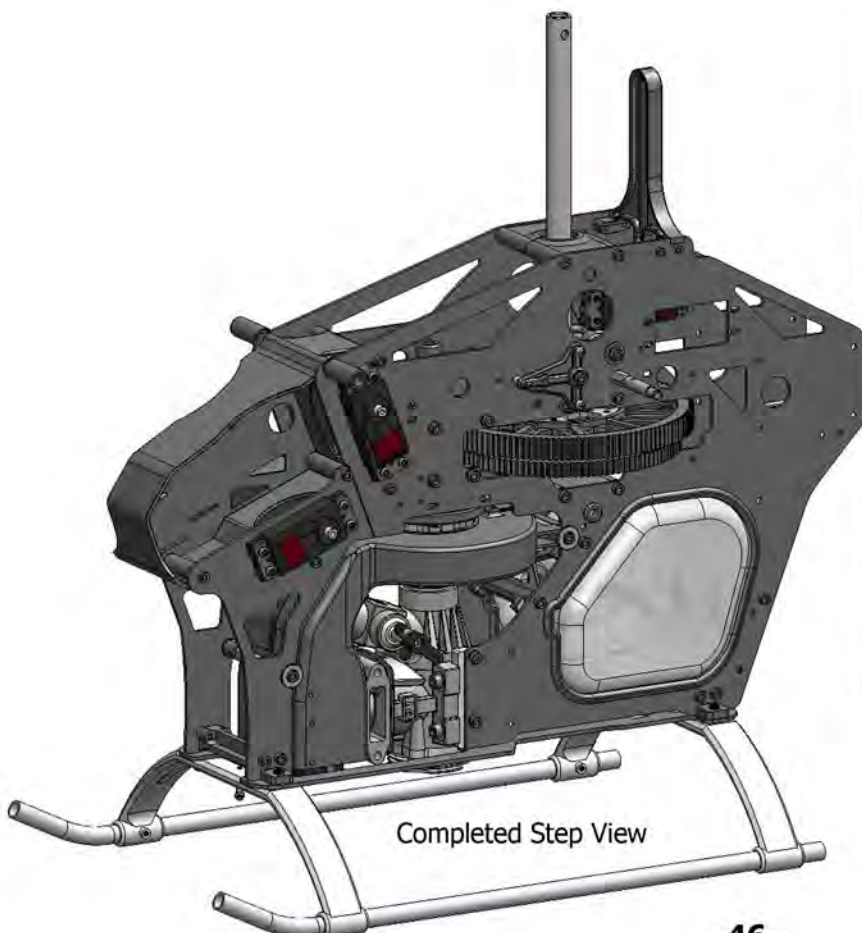
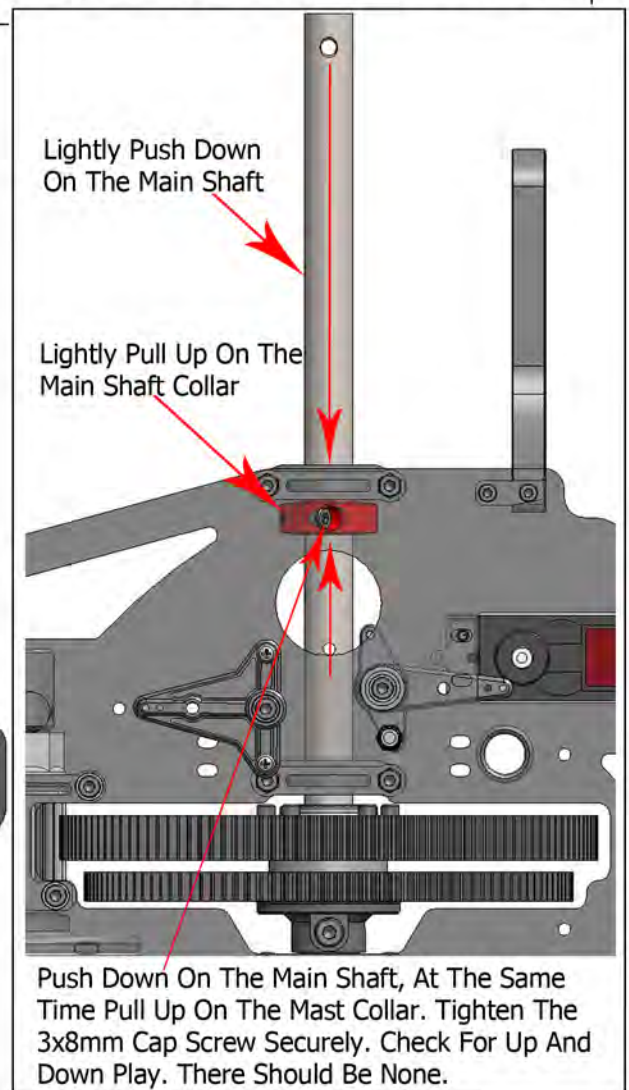


Step 3-4
Continued

Step 3-4++



Push The 4x24mm Shank Screw Through The Main Shaft. Be Careful Not To Push Out The M4 Lock Nut.

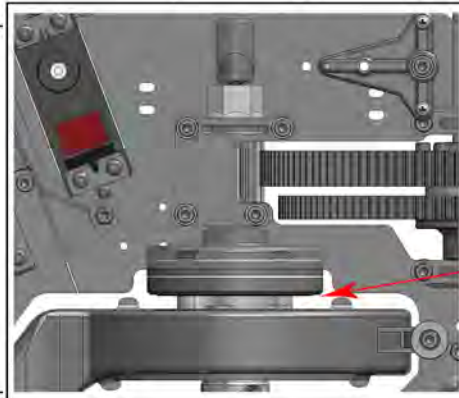
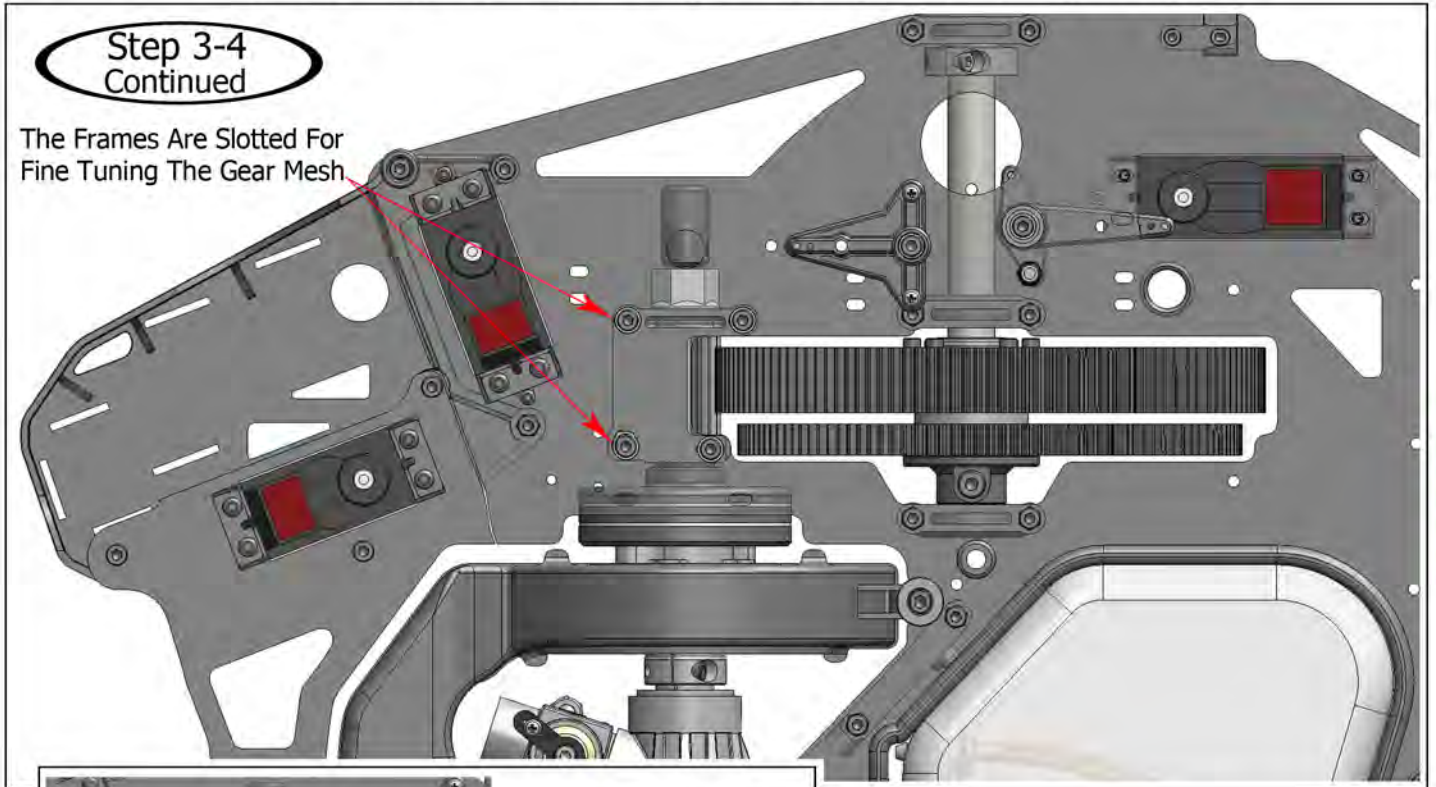


Next

Be Sure All Motor Mount Screws Are Tightened Securely Before Performing This Step!

**Step 3-4
Continued**

The Frames Are Slotted For Fine Tuning The Gear Mesh

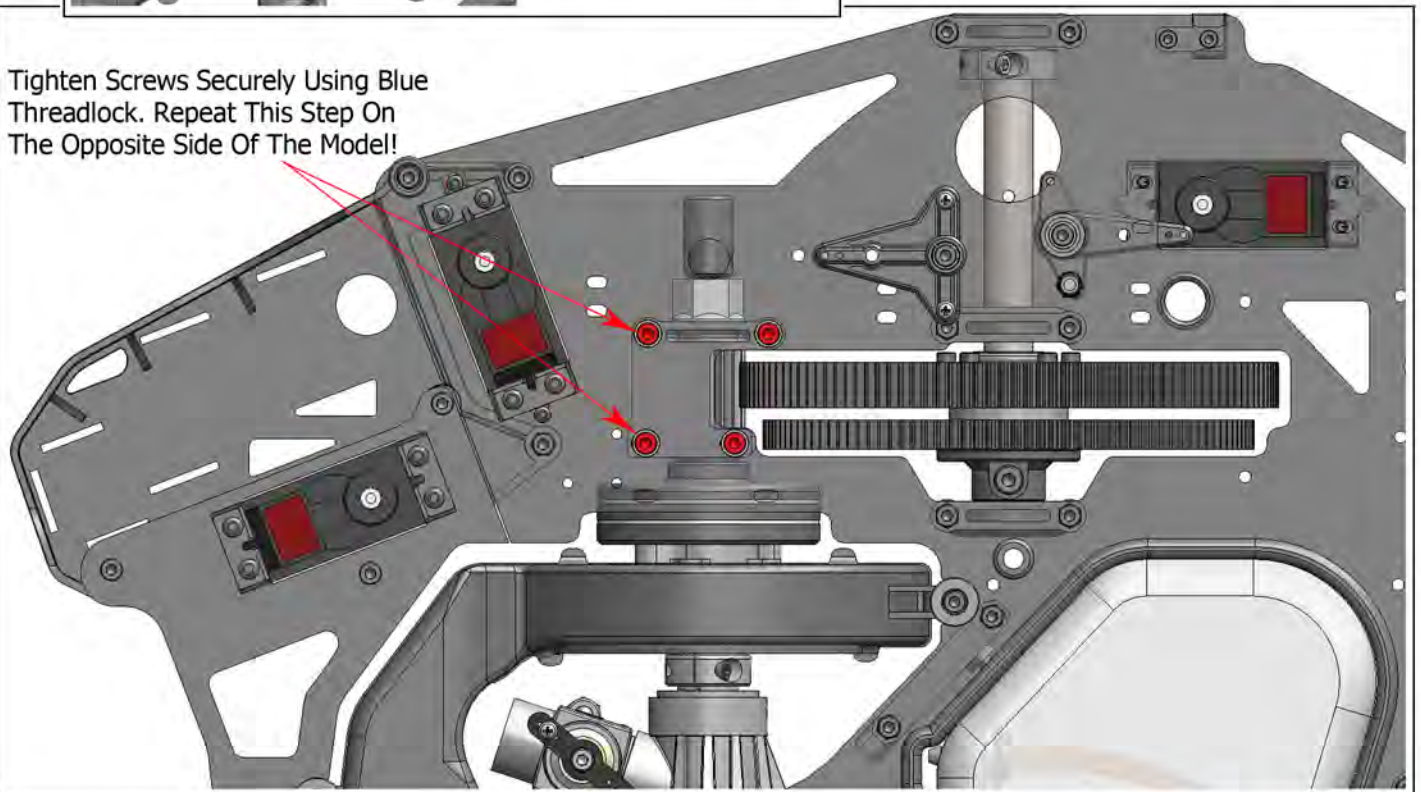


Be Sure The Clutch And The Clutch Bell Are Level With One Another. Check To Make Sure There Is No Drag In The Clutch Bell By Spinning The Main Gear Counter Clockwise.

! Attention! !

Use Blue Threadlock On All Screws Going Into Metal

Tighten Screws Securely Using Blue Threadlock. Repeat This Step On The Opposite Side Of The Model!



Be Sure All Of The Screws On Both Sides Of The Clutch Stack Are Tightened Securely At The End Of This Step!

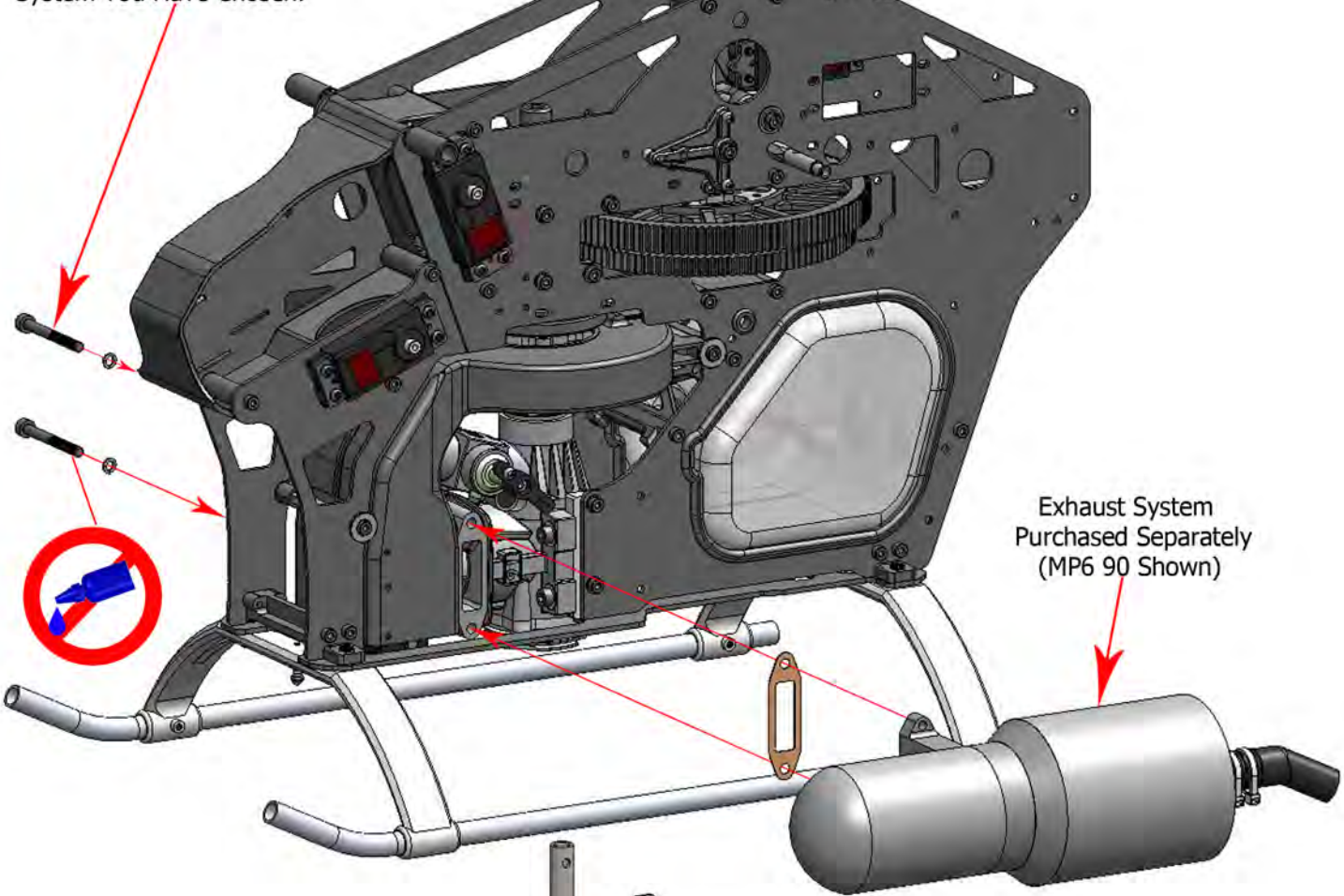
Next

Step 3-4+++

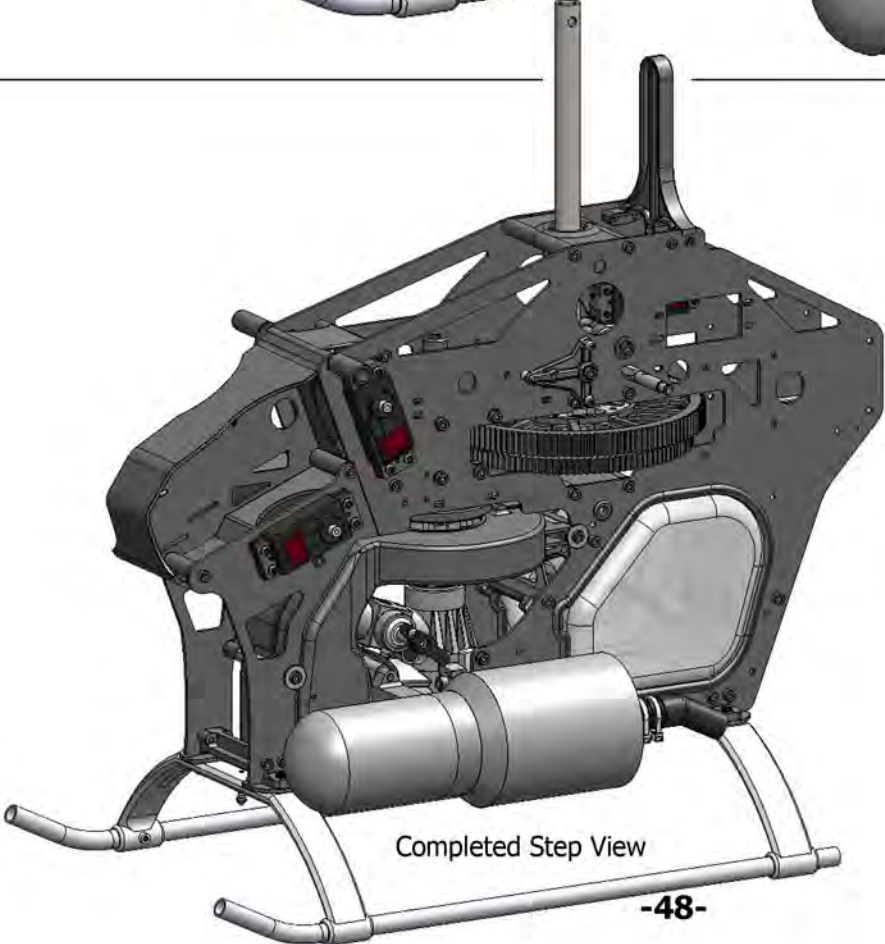
Step 3-5

Exhaust Mounting Hardware Is Included With The Exhaust System, It Is Not Included In The Kit! Mounting May Vary Depending On The Exhaust System You Have Chosen.

Step 3-5



Exhaust System Purchased Separately (MP6 90 Shown)



Completed Step View

Tighten Exhaust Mounting Screws Securely At This Time. When You Run The Engine For The First Time The Exhaust Could Come Loose. We Recommend Landing And Tightening The Exhaust Mounting Hardware 2 Or 3 Times During The First Test Flights. Check These Screws For Tightness Regularly!

⚠ Attention! ⚠
Do Not Use Threadlock To Mount Exhaust Systems





Swashplate Assembly - x1
ND-YR7-RH1029



140° CCPM Ball - x2
ND-YR-G107



Anti-Rotation Ball - x1
ND-YR-G106



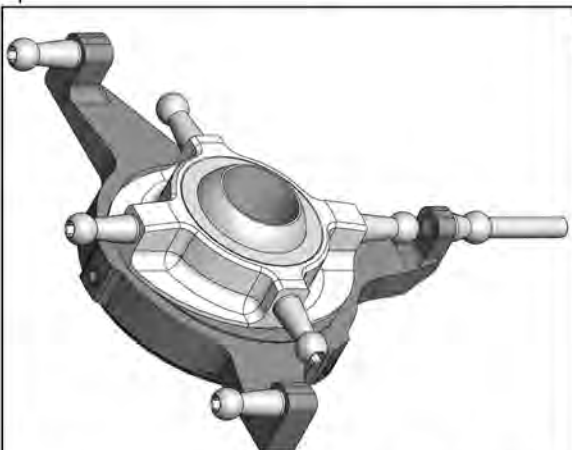
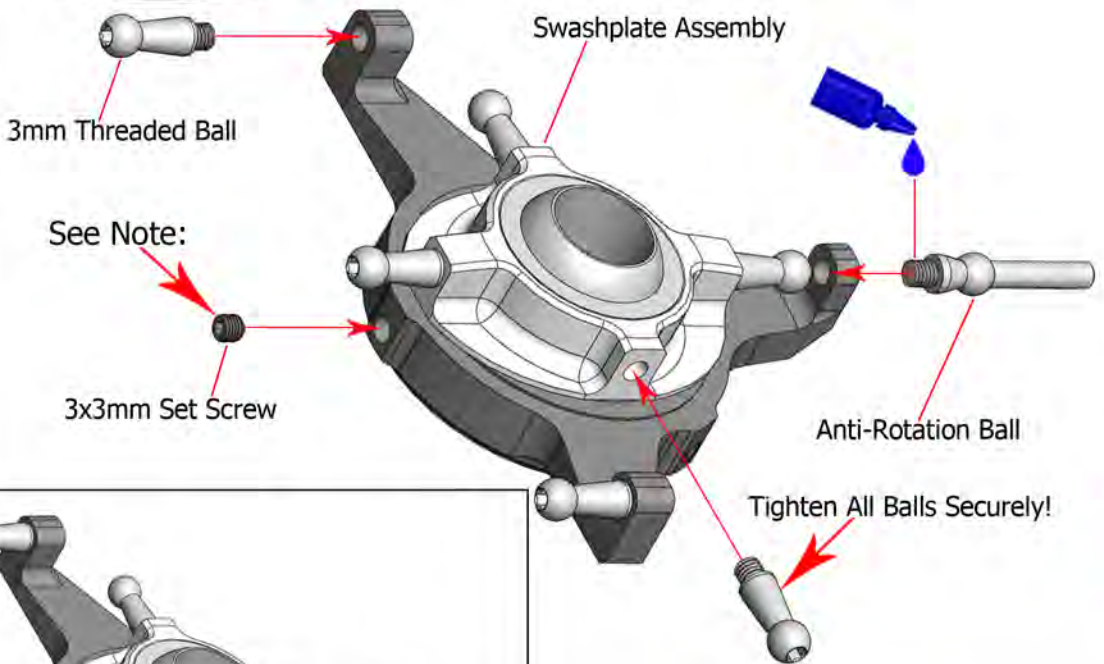
3mm Threaded Ball - x6
ND-YR-G108



3x3mm Set Screw - x3
ND-YR-G031

Step 4-1

120° CCPM Swashplate Assembly

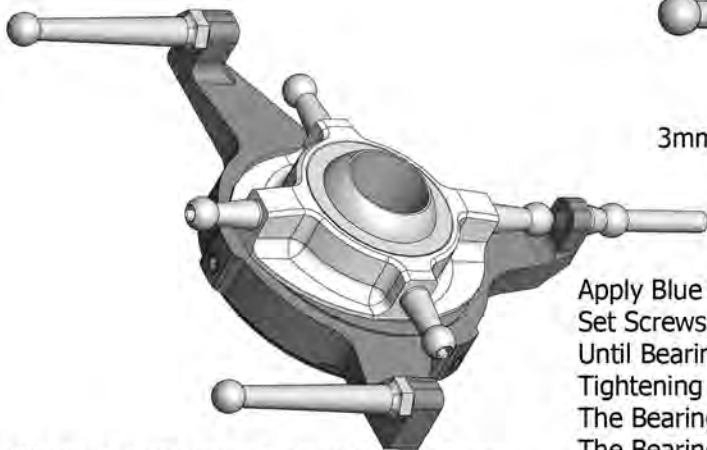
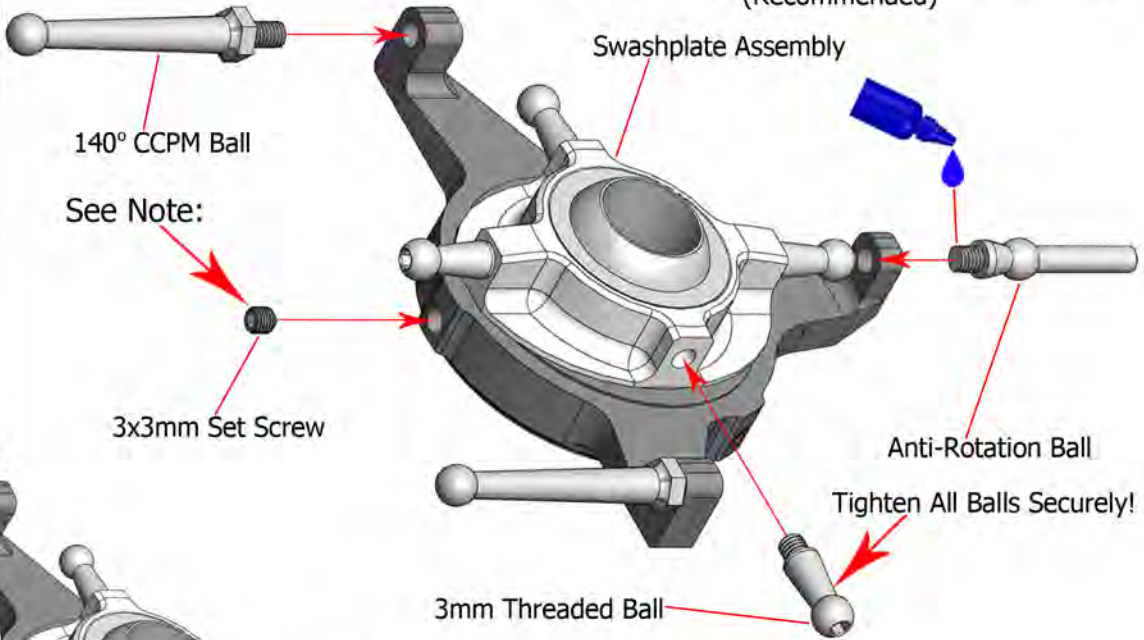


120° CCPM Swashplate Completed Step View

! Attention! !
Use Blue Threadlock On All Screws Going Into Metal

Step 4-1

140° CCPM Swashplate Assembly (Recommended)



140° CCPM Swashplate Completed Step View

Note:
Apply Blue Threadlock To The 3x3mm Set Screws. Tighten Screws Lightly Until Bearing Freeplay Is Gone. Over Tightening The Set Screws Can Make The Bearing Notchy And May Damage The Bearing. Do NOT Fly With The Set Screws Too Tight!





Ball Link Long - x2
ND-YR-G077

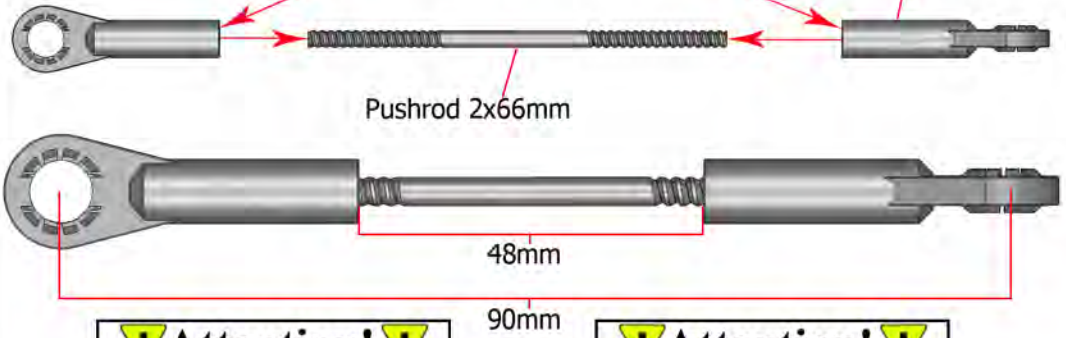


Pushrod 2x66mm - x1
ND-YR-G161

Step 4-2

Thread Ball Links Onto Pushrod Evenly

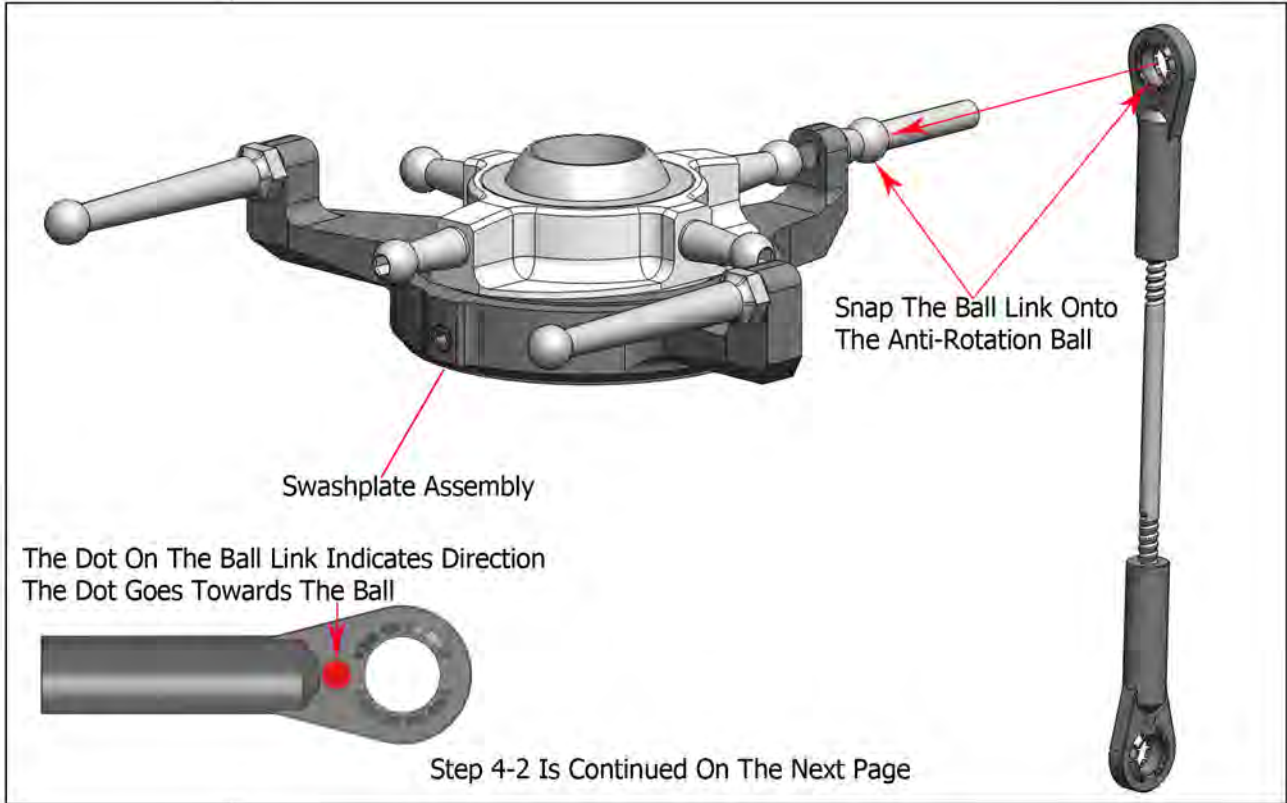
Ball Link Long



! Attention! !
No Adhesives Are Used In
This Part Of This Step

! Attention! !
Be Sure All Ball Links Are
Threaded On Equally

Step 4-2

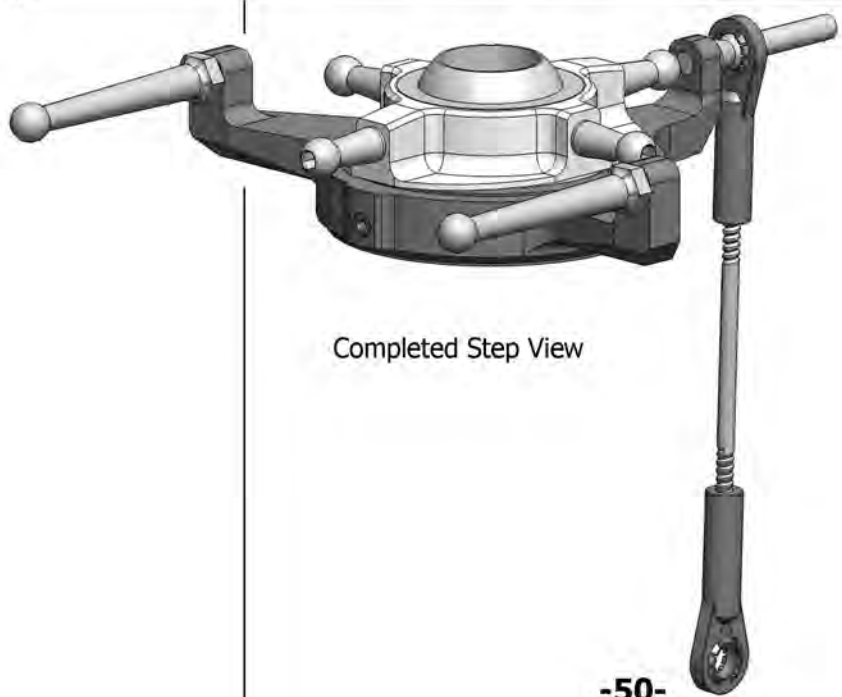


The Dot On The Ball Link Indicates Direction
The Dot Goes Towards The Ball

Snap The Ball Link Onto
The Anti-Rotation Ball

Swashplate Assembly

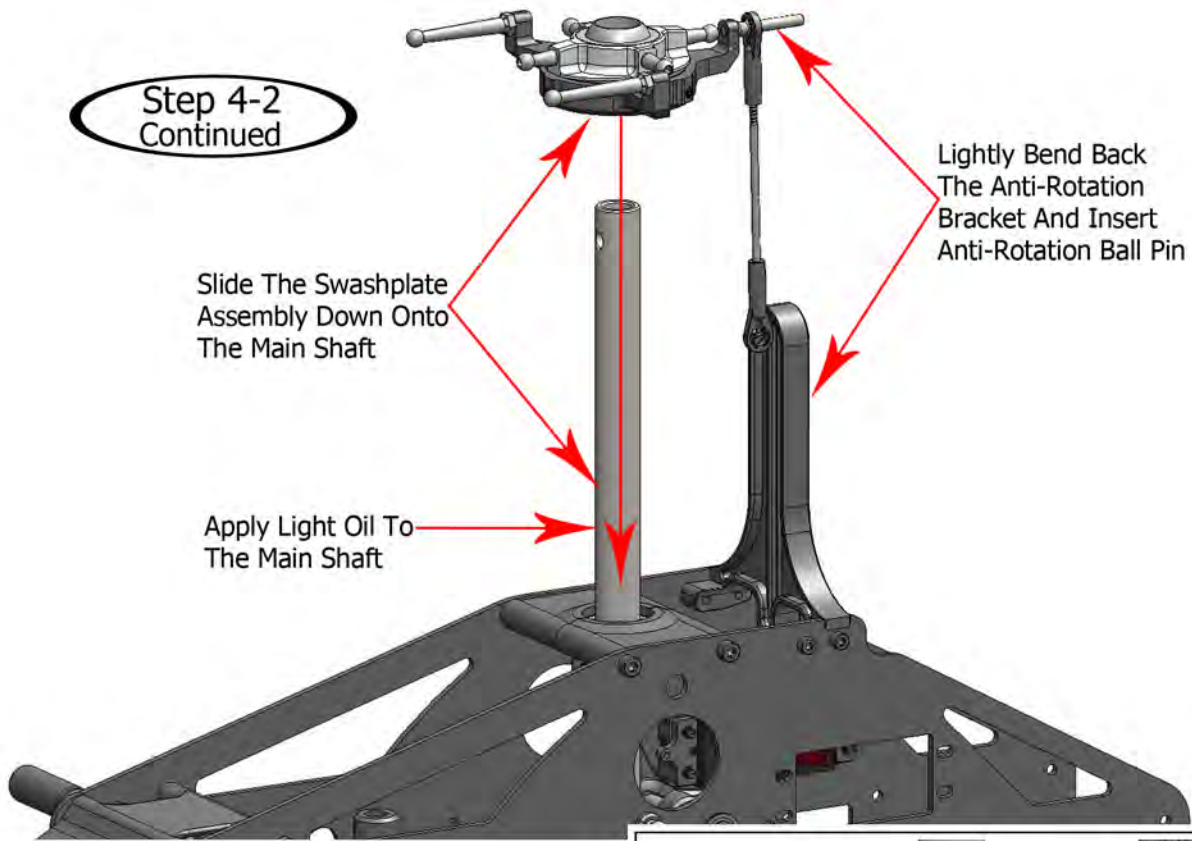
Step 4-2 Is Continued On The Next Page



Completed Step View

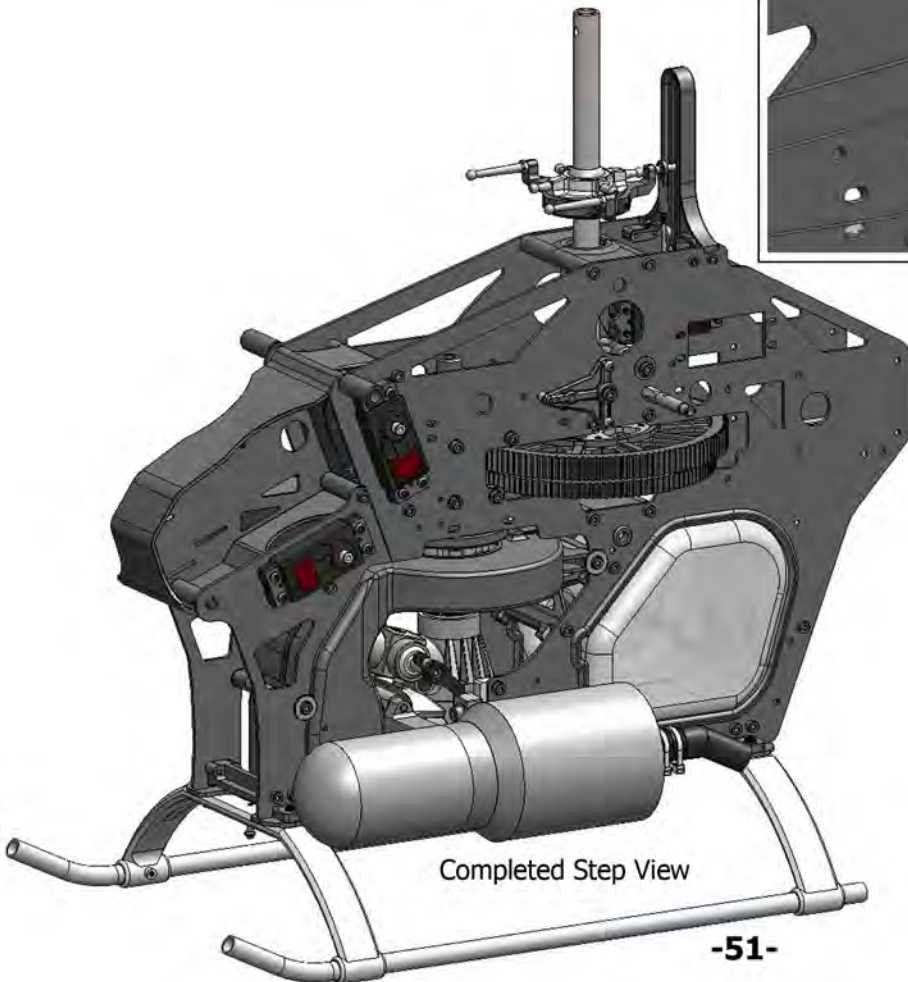
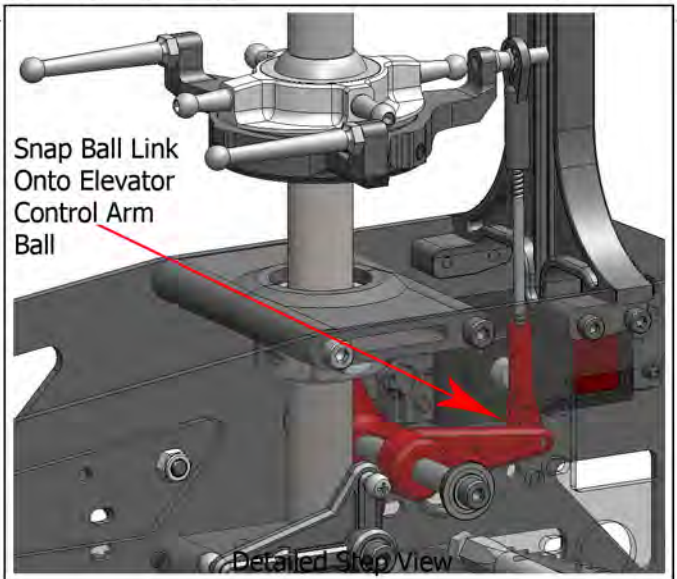
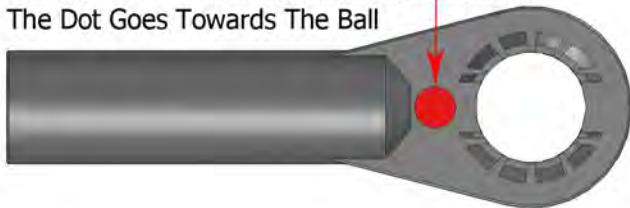


Step 4-2
Continued



Step 4-2+

The Dot On The Ball Link Indicates Direction The Dot Goes Towards The Ball



Next



Washout Arm - x2
ND-YR7-RH1019



Washout Base - x1
ND-YR7-RH1018



Washout A Arm - x2
ND-YR7-RH1020



3x12mm Cap Screw - x2
ND-YR-G115



2x14mm Cap Screw - x2
ND-YR-G054



Bearing 3x7x3mm - x4
ND-YR-G068



Spacer 3x4.5x1mm - x2
ND-YR-G098



Spacer 3x4.5x0.5mm - x2
ND-YR-G097



Bearing 2x6x3mm
Flanged - x4
ND-YR-G144

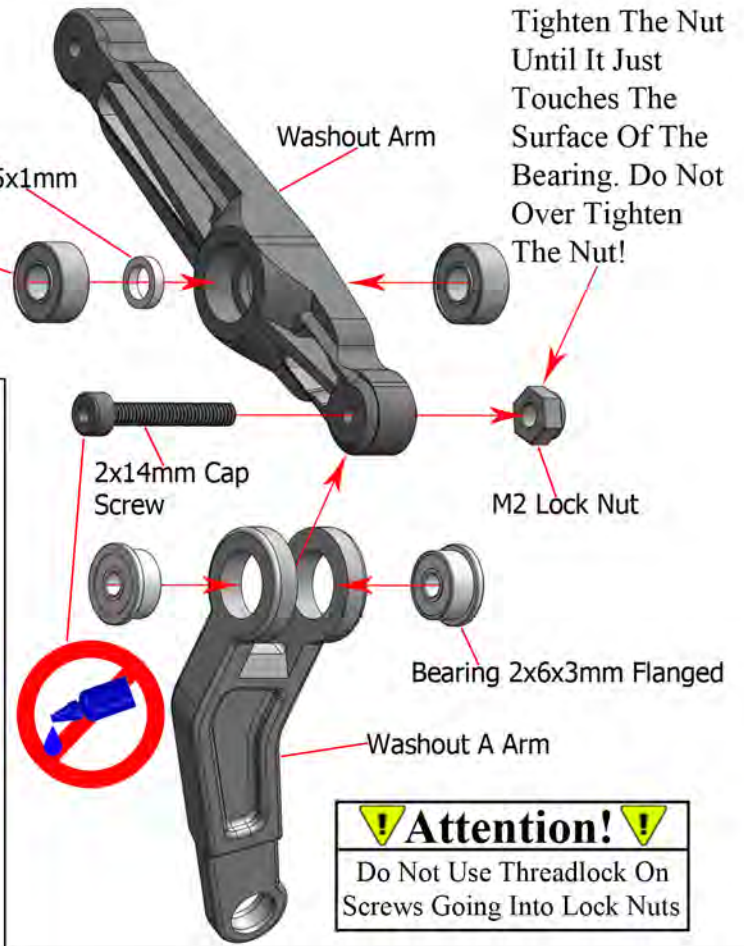


M2 Lock Nut - x2
ND-YR-G037

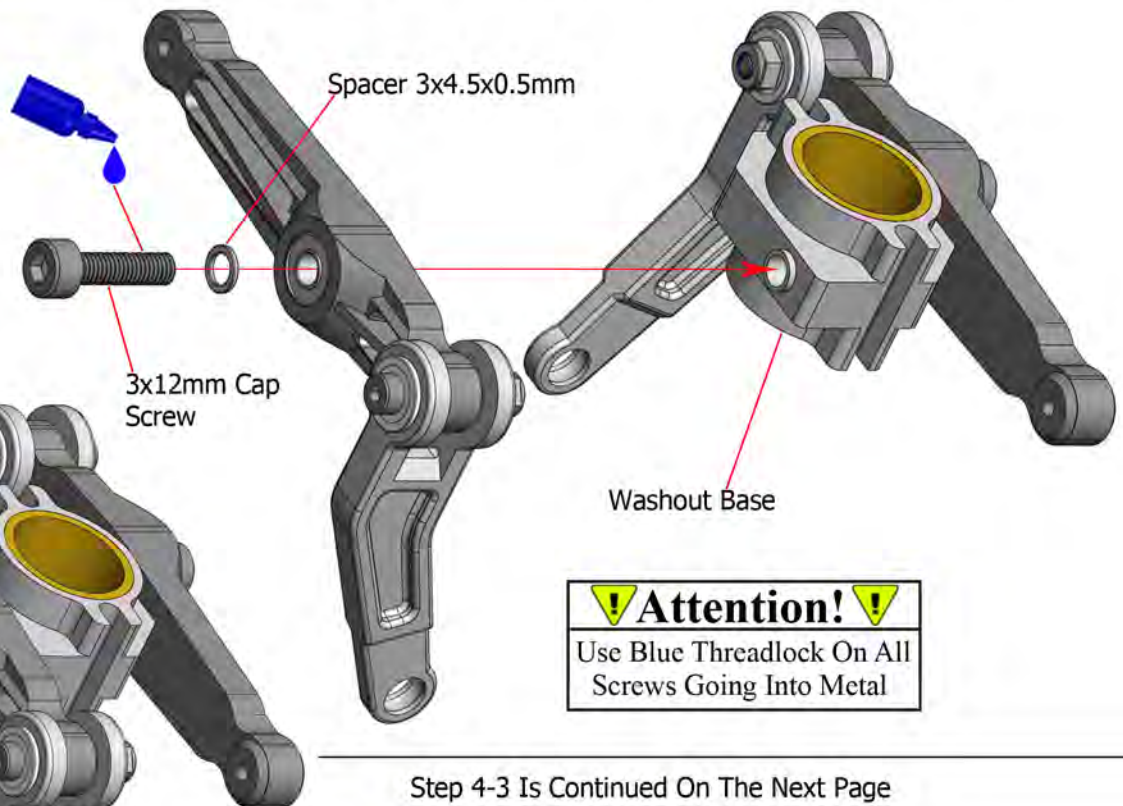
Step 4-3



Completed Step View



Tighten Screws Securely At This Time!



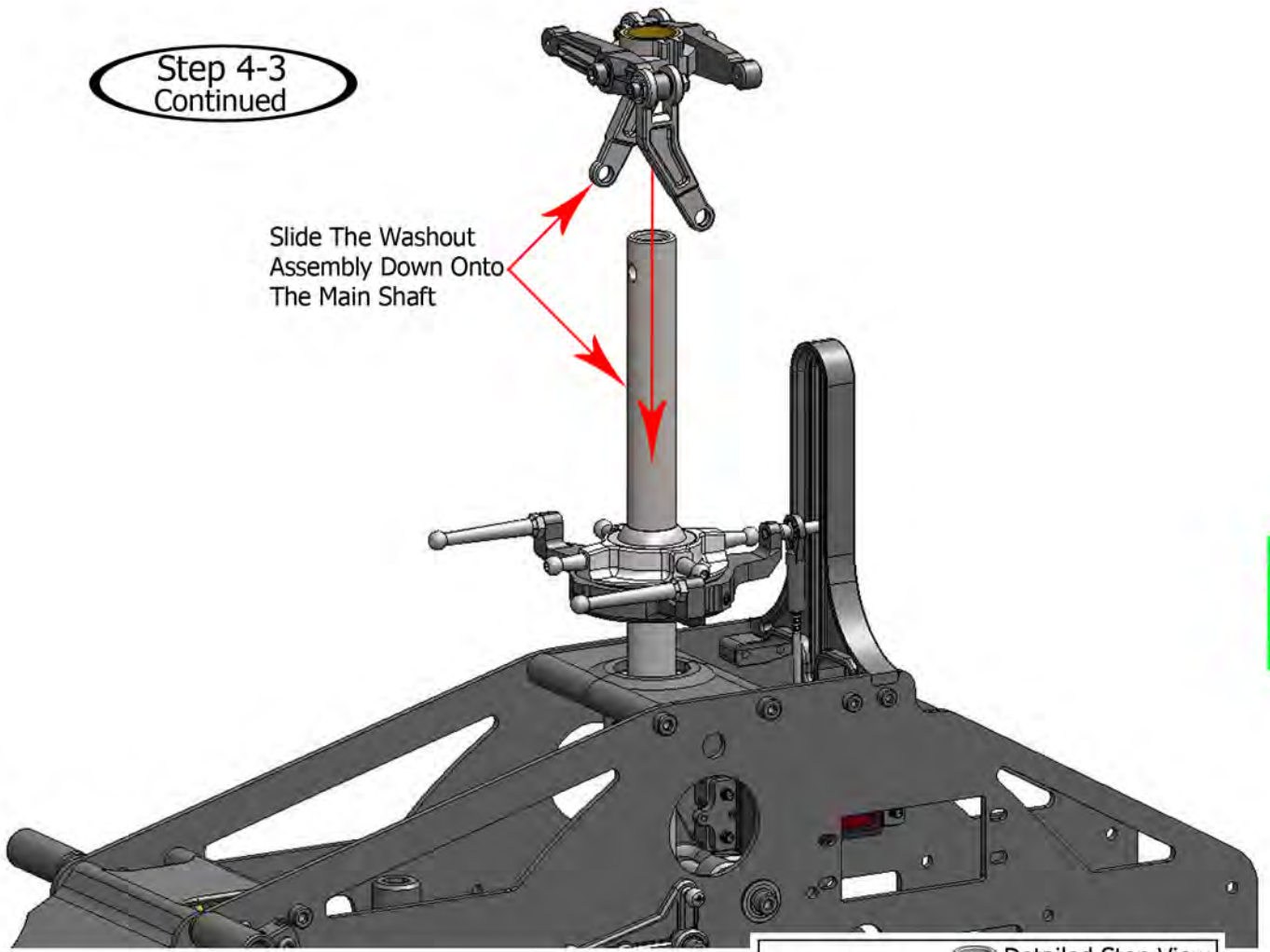
Completed Step View

!Attention! !
Do Not Over Tighten Screws
Going Into Plastic Parts

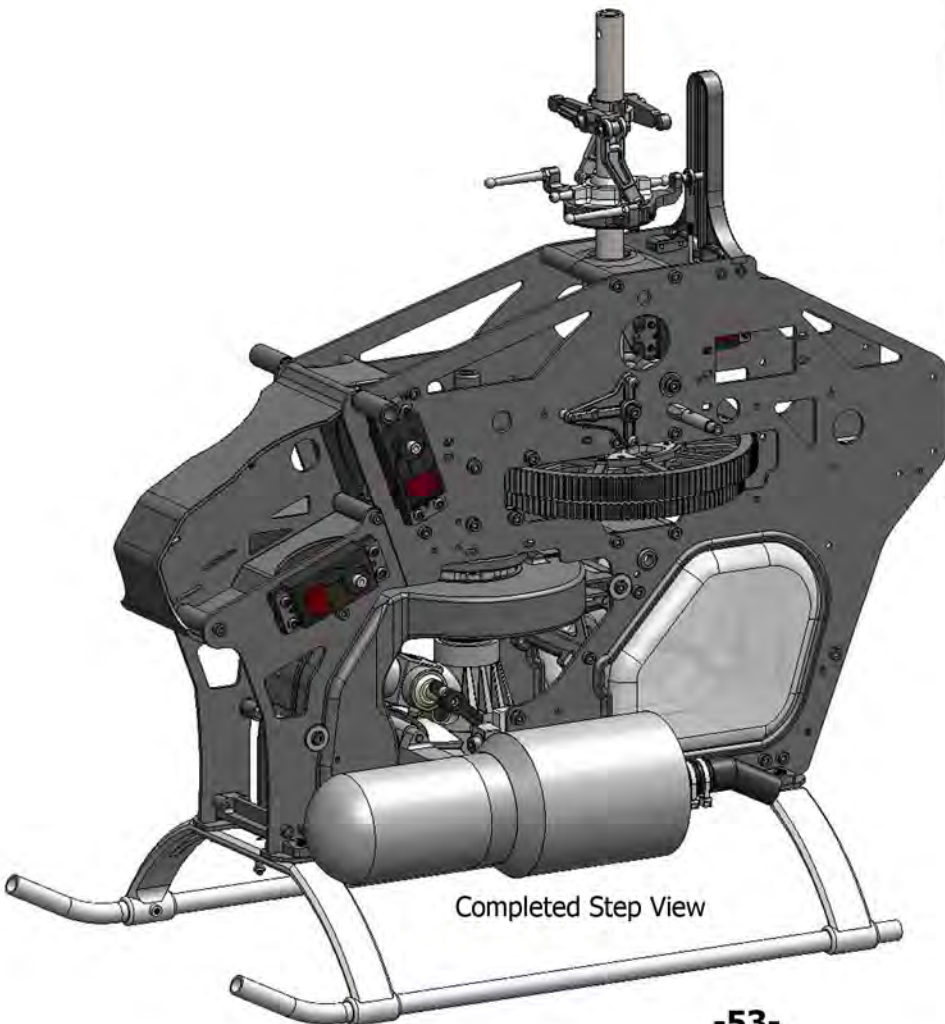
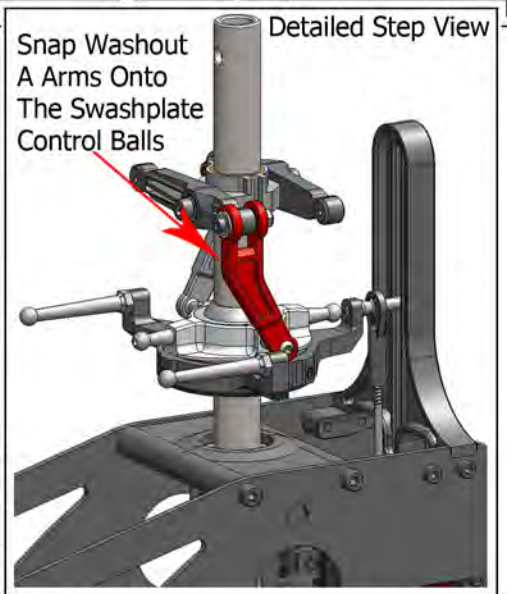


Step 4-3
Continued

Slide The Washout
Assembly Down Onto
The Main Shaft



Step 4-3+

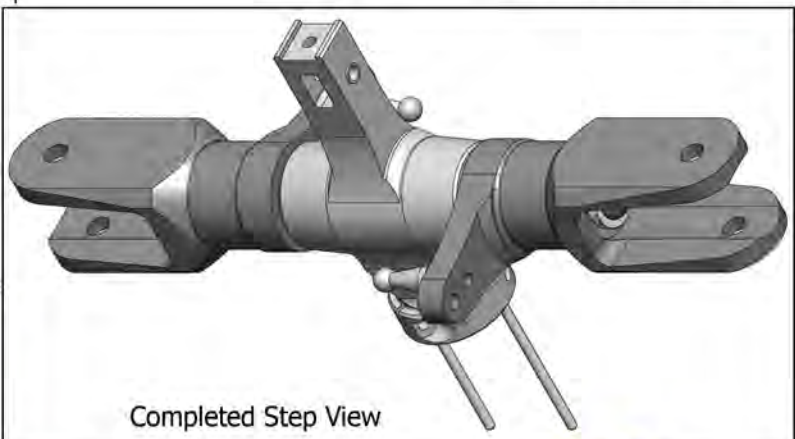
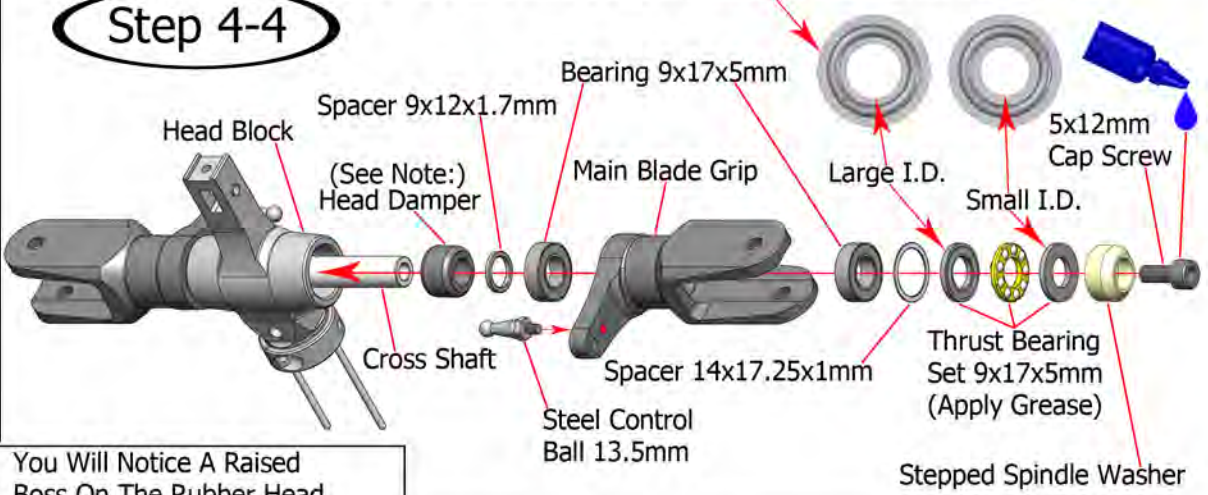


Next

Be Sure To Install Thrust Bearing Races In The Correct Orientation!

Step 4-4

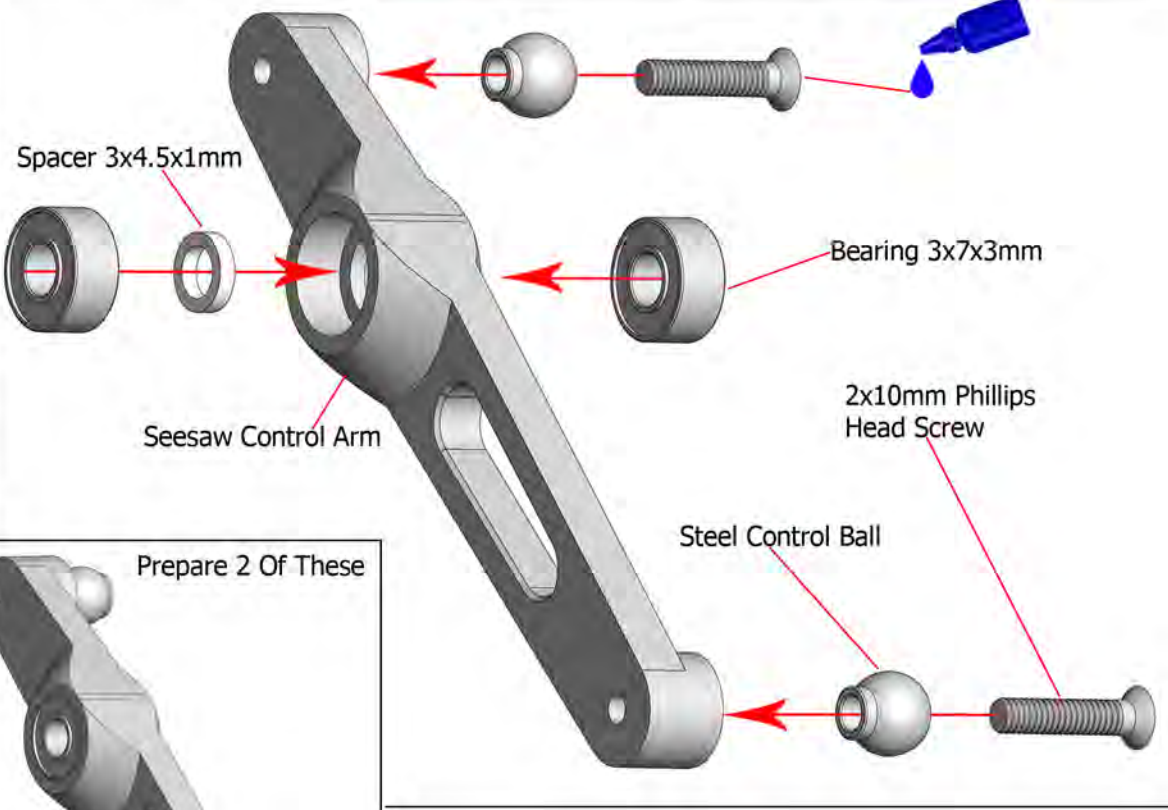
- Head Block - x1
ND-YR7-RH1012
- Cross Shaft - x1
ND-YR7-RH1005
- Main Blade Grip - x2
ND-YR7-RH1010
- Thrust Bearing Set
9x17x5mm - x2
ND-YR-G073



! Attention! !
Use Blue Threadlock On All Screws Going Into Metal

Step 4-4

- Head Damper - x2
ND-YR7-RH1009
- Spacer
14x17.25x1mm - x2
ND-YR-G096
- Steel Control Ball
13.5mm - x2
ND-YR7-RH1007
- Bearing 9x17x5mm - x4
ND-YR-G072
- Spacer 9x12x1.7mm - x2
ND-YR-G101
- Spacer 3x4.5x1mm - x2
ND-YR-G098
- Seesaw Control Arm - x2
ND-YR7-RH1011
- 5x12mm Cap Screw - x2
ND-YR-G116
- Stepped Spindle Washer - x2
ND-YR7-RH1030
- Bearing 3x7x3mm - x4
ND-YR-G068
- 2x10mm Phillips
Head Screw - x4
ND-YR-G124
- Steel Control Ball - x4
ND-YR-G001



Tighten All Screws Securely At This Time

Note: For Best Performance We Recommend Gluing The Head Dampers Into The Head Block With A Small Amount Of Medium CA



Step 4-5



Seesaw Cage - x1
ND-YR7-RH1014



3x12mm Cap Screw - x2
ND-YR-G115



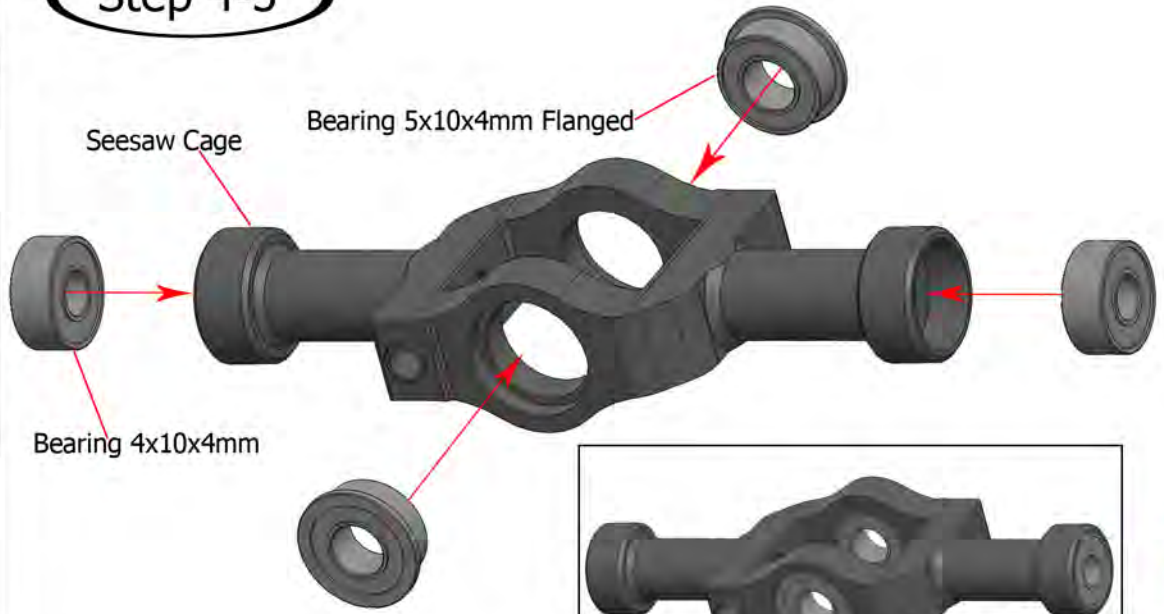
Bearing 4x10x4mm - x2
ND-YR-G006



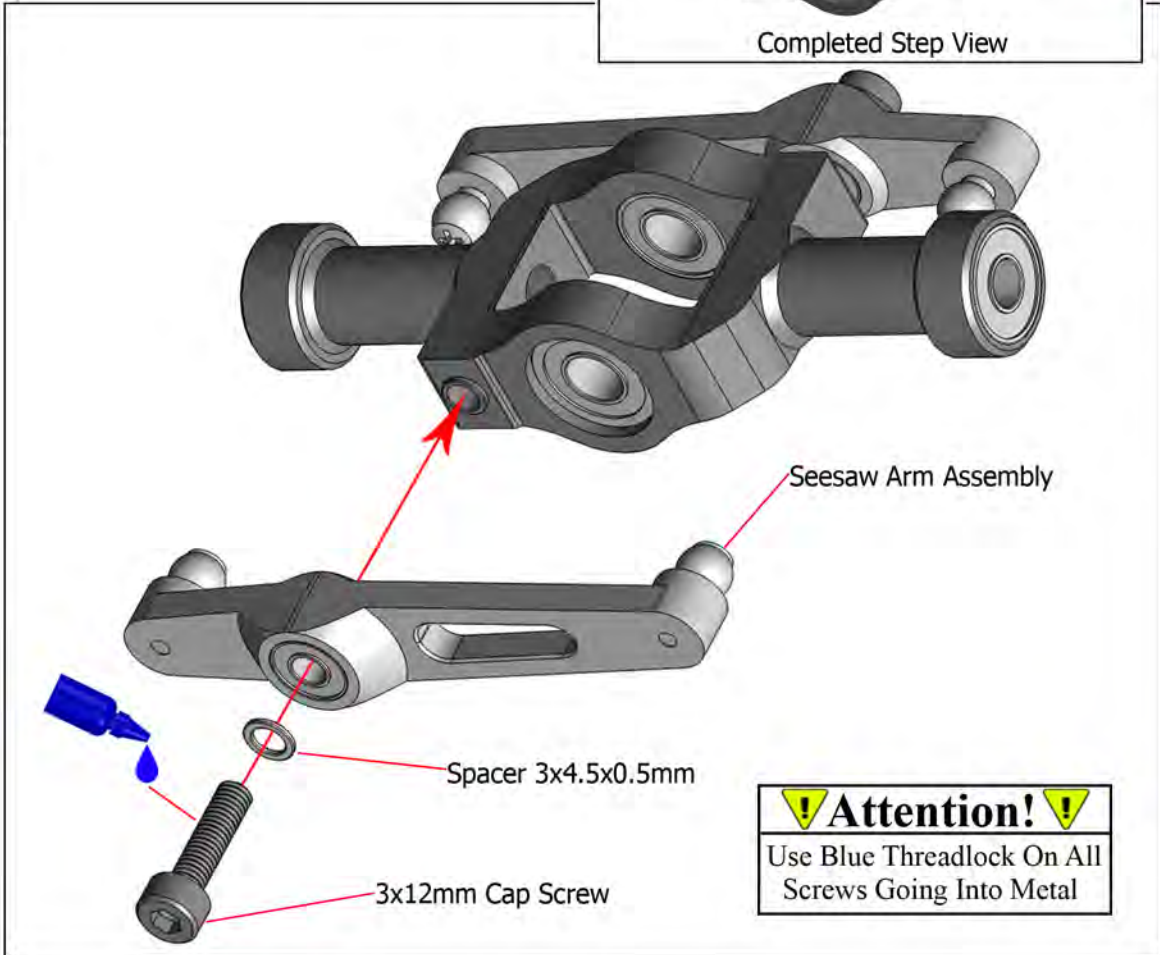
Bearing 5x10x4mm
Flanged - x2
ND-YR-G145



Spacer 3x4.5x0.5mm - x2
ND-YR-G097



Completed Step View



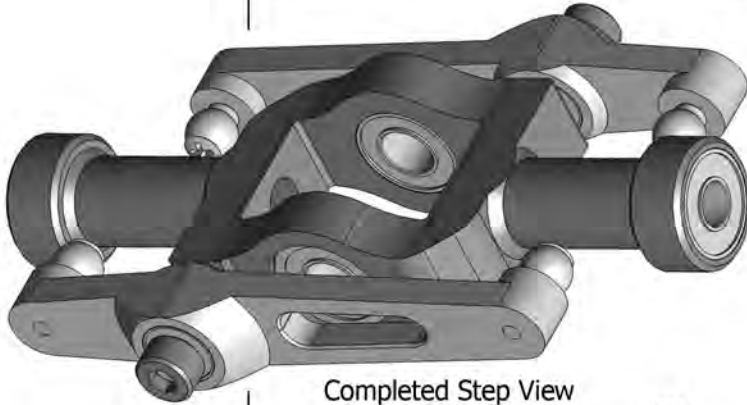
Seesaw Arm Assembly

Spacer 3x4.5x0.5mm

3x12mm Cap Screw

!Attention!
Use Blue Threadlock On All
Screws Going Into Metal

Tighten Screws Securely!



Completed Step View

Step 4-5





5x30mm Shank Screw - x2
ND-YR-G137



Spacer
5x22x1.5mm - x4
ND-YR-G136

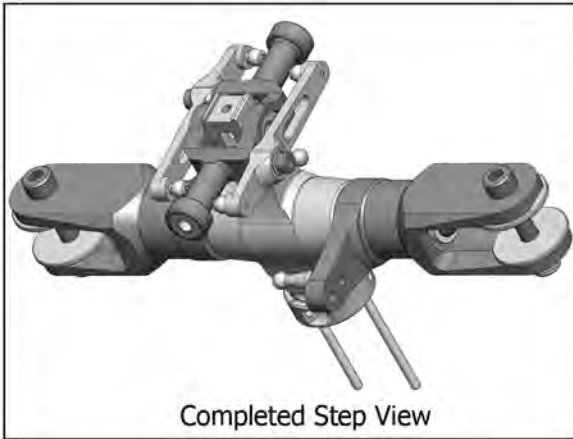
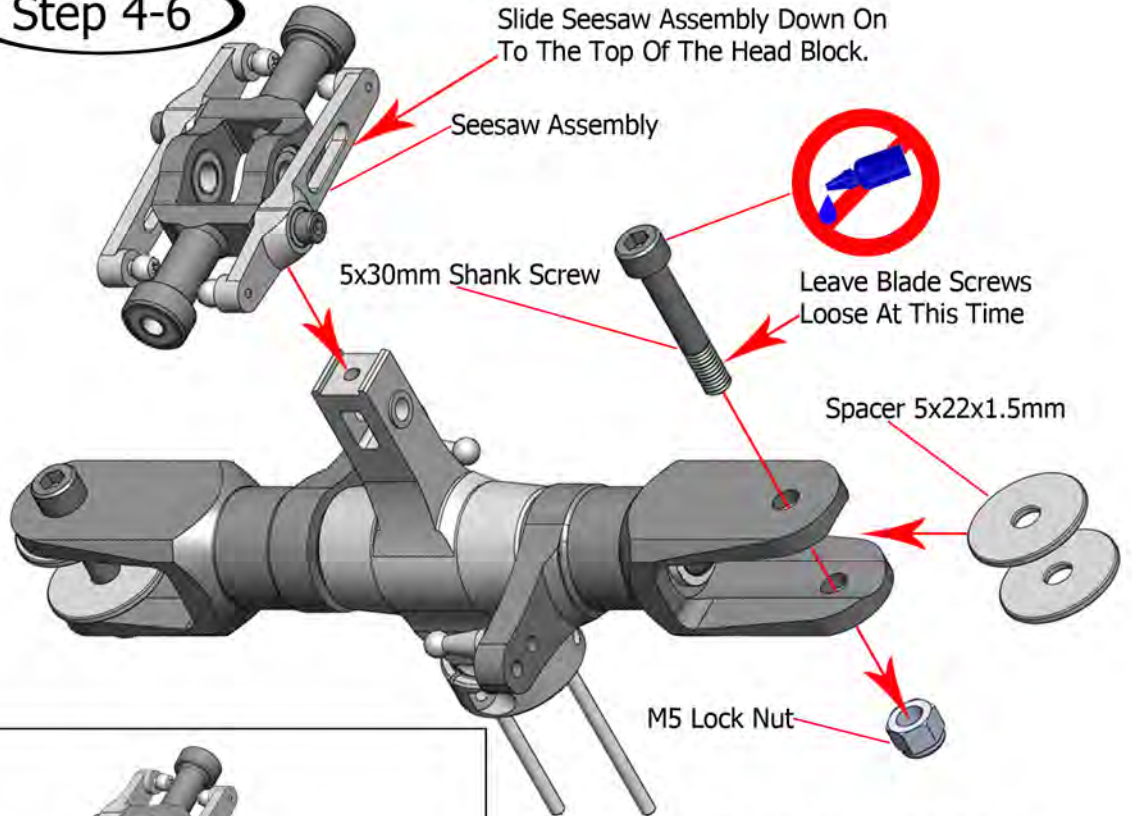


4x8mm Shanked Seesaw Screw - x2
ND-YR-G146



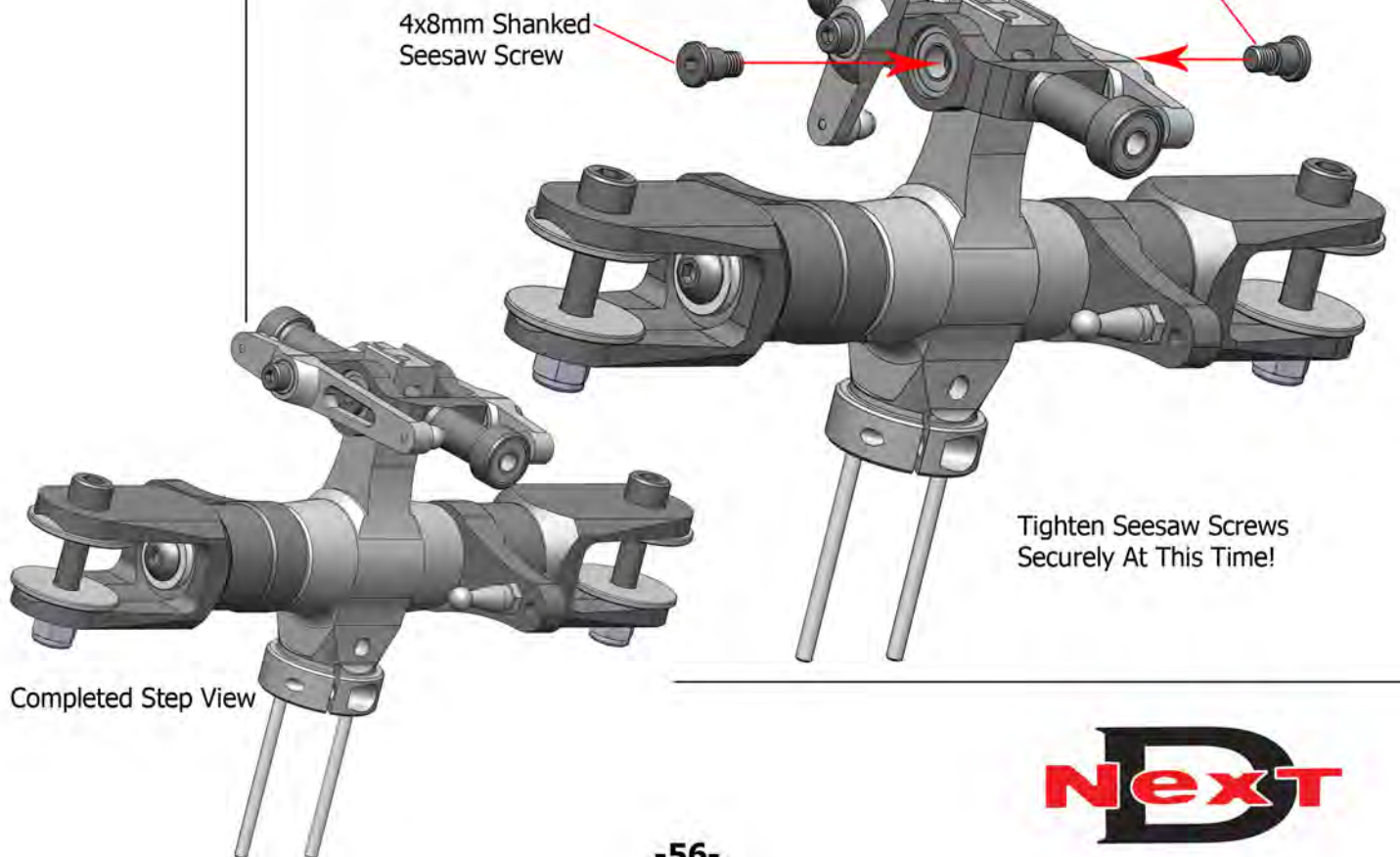
M5 Lock Nut - x2
ND-YR-G113

Step 4-6



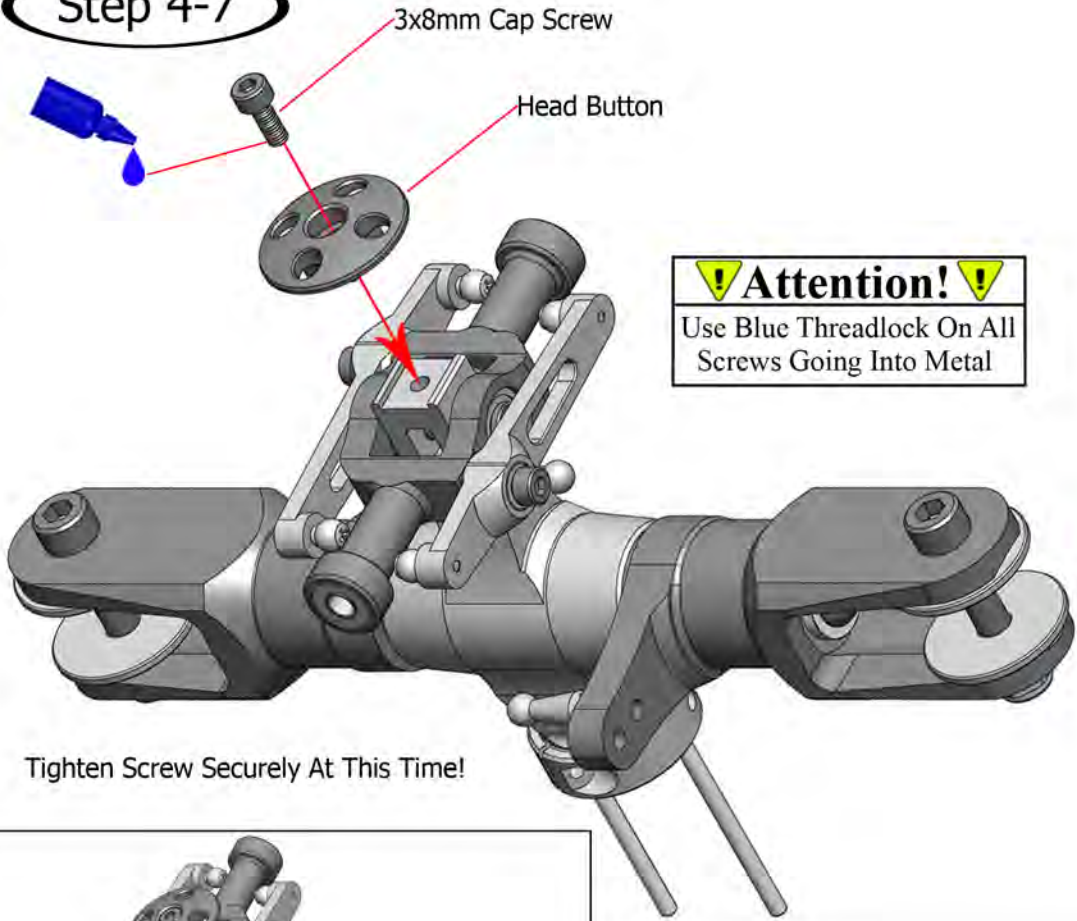
Do Not Use Threadlock On Blade Screws

! Attention! !
Be Careful When Using Red Threadlock, Use Sparingly



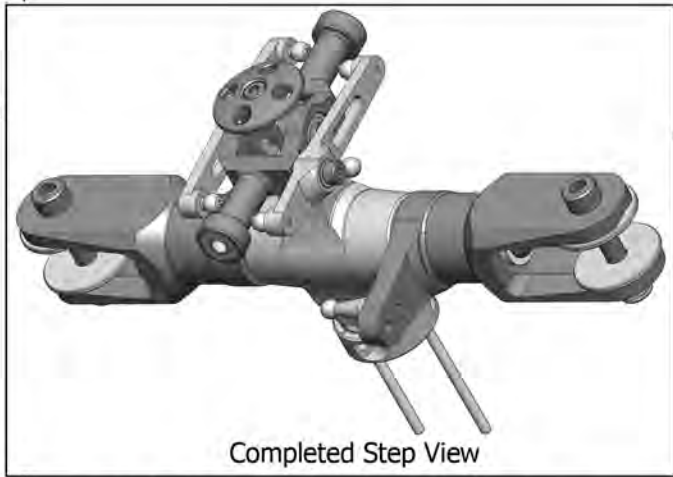
Step 4-7

-  Head Button - x1
ND-YR7-RH1008
-  Flybar Link - x2
ND-YR7-RH1016
-  Ball Link Short - x2
ND-YR-G078
-  Steel Control Ball - x2
ND-YR-G001
-  3x8mm Cap Screw - x1
ND-YR-G114
-  Pushrod 2x18mm - x2
ND-YR-G084

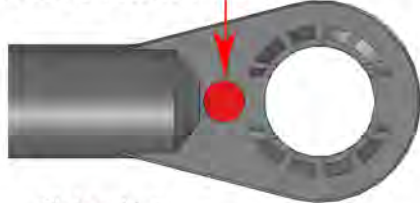


! Attention! !
Use Blue Threadlock On All Screws Going Into Metal

Tighten Screw Securely At This Time!



The Dot On The Ball Link Indicates Direction The Dot Goes Towards The Ball



Flybar Link



! Attention! !
No Adhesives Are Used In This Part Of This Step

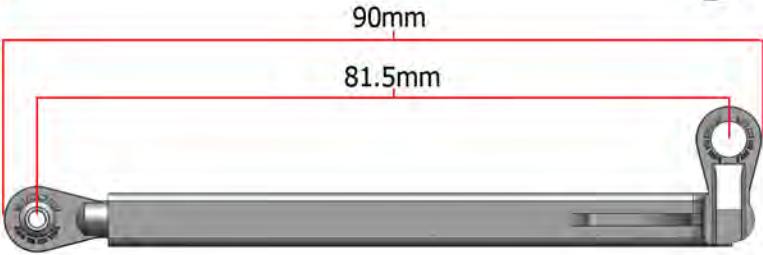


Ball Link Short

Pushrod 2x18mm

Steel Control Ball

Snap Steel Control Ball Into Ball Link. Pay Close Attention To Steel Control Ball Orientation.



Completed Step View

! Attention! !
Be Sure All Ball Links Are Threaded On Equally

Step 4-7



Step 4-8

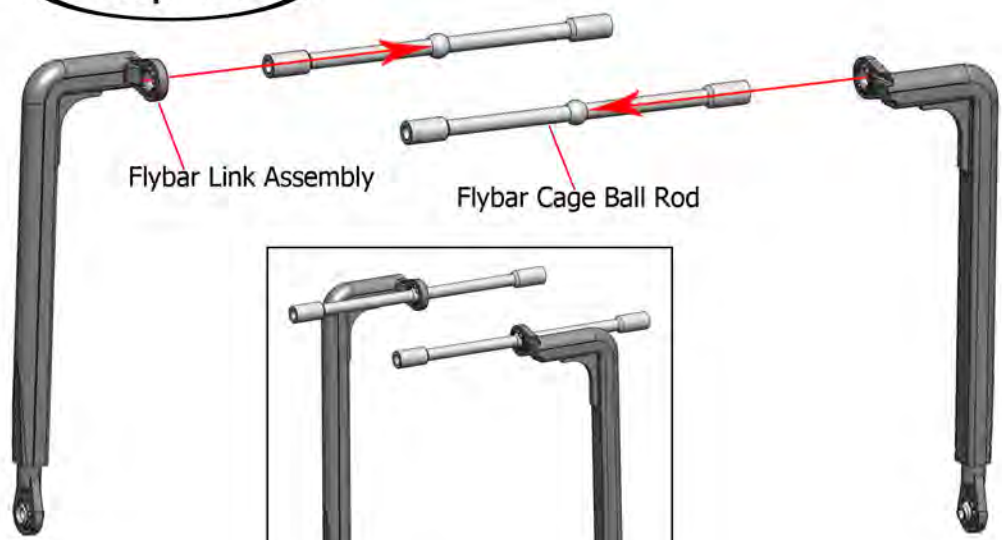
Flybar Cage Ball Rod - x2
ND-YR7-RH1003



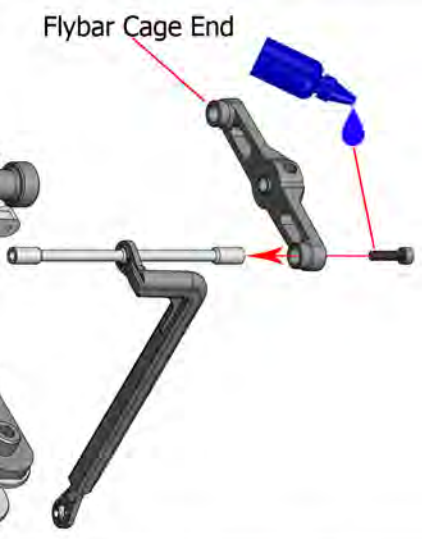
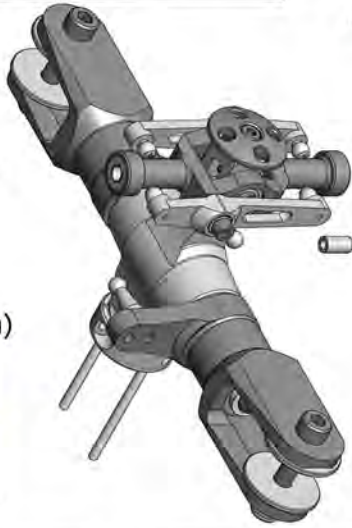
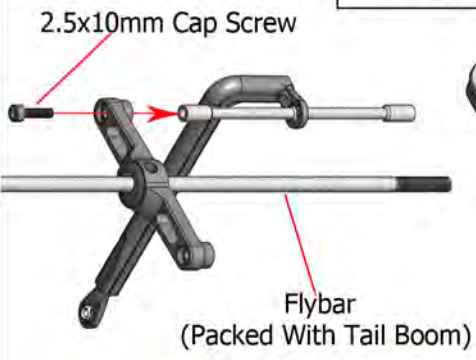
Flybar Cage End - x2
ND-YR7-RH1002



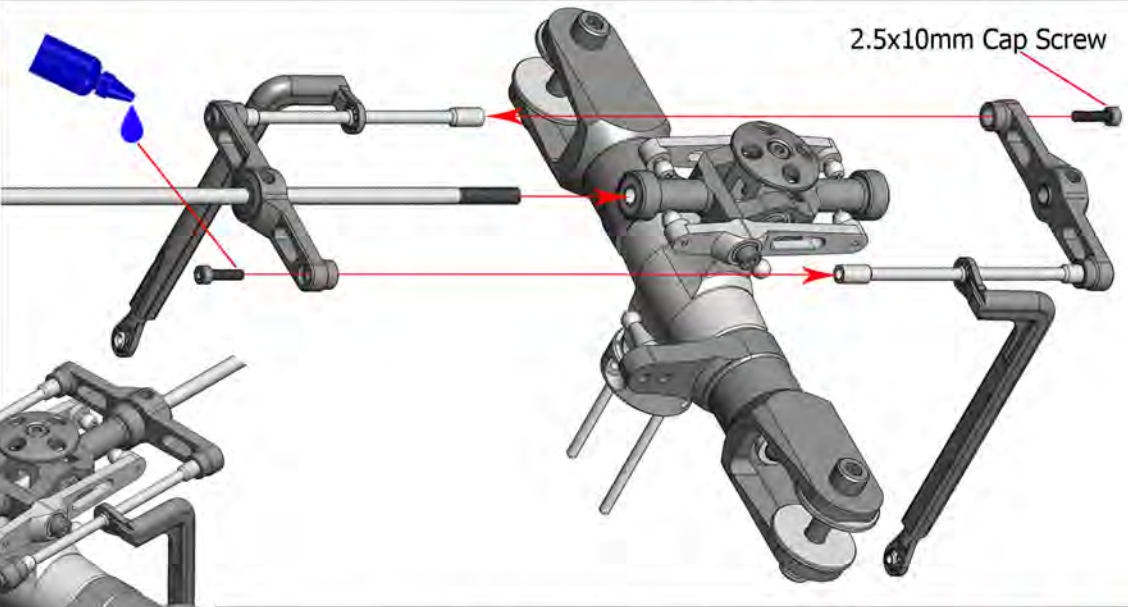
2.5x10mm Cap Screw - x4
ND-YR-G112



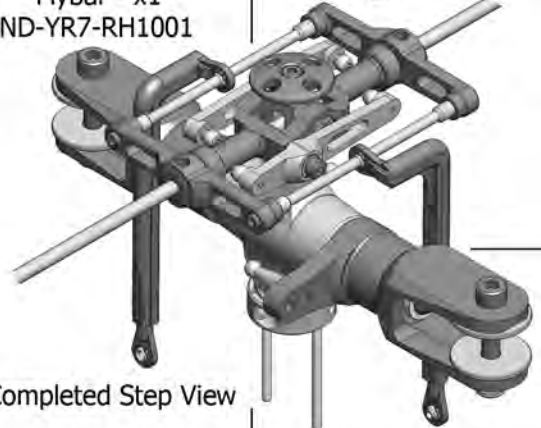
Step 4-8



Attention!
Use Blue Threadlock On All Screws Going Into Metal



Flybar - x1
ND-YR7-RH1001



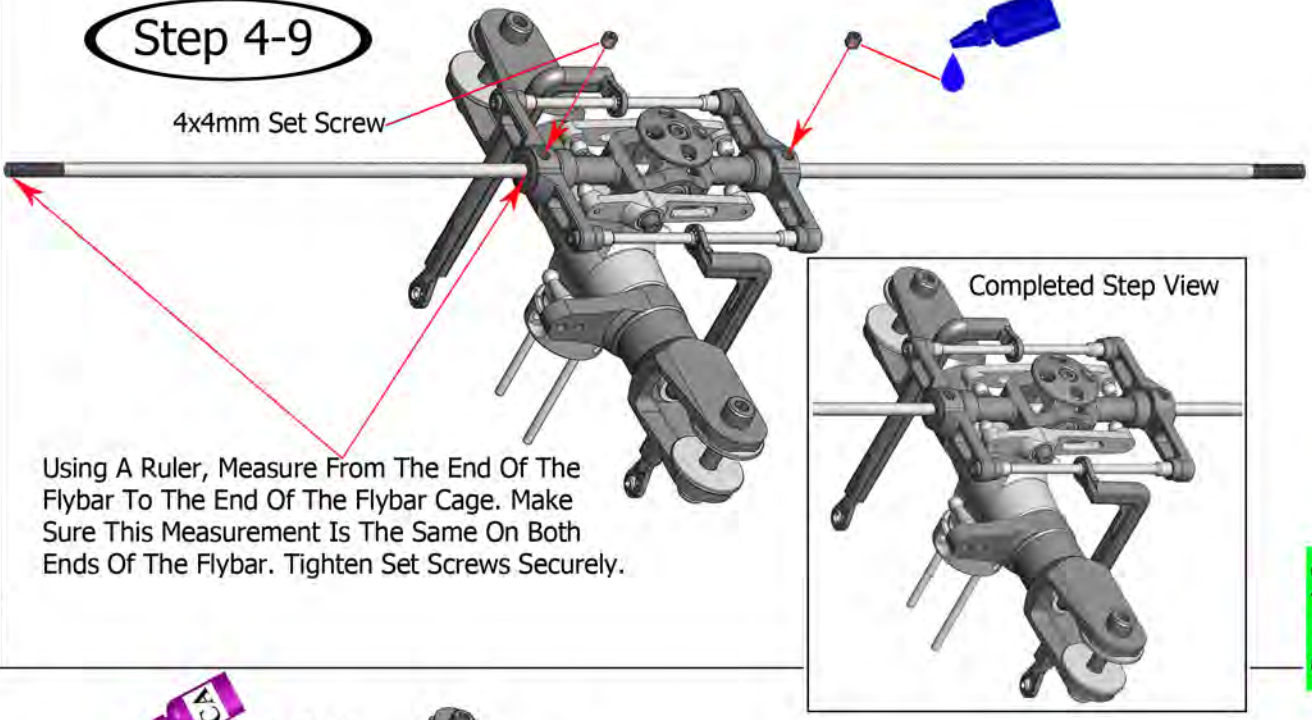
Tighten All Screws Securely!



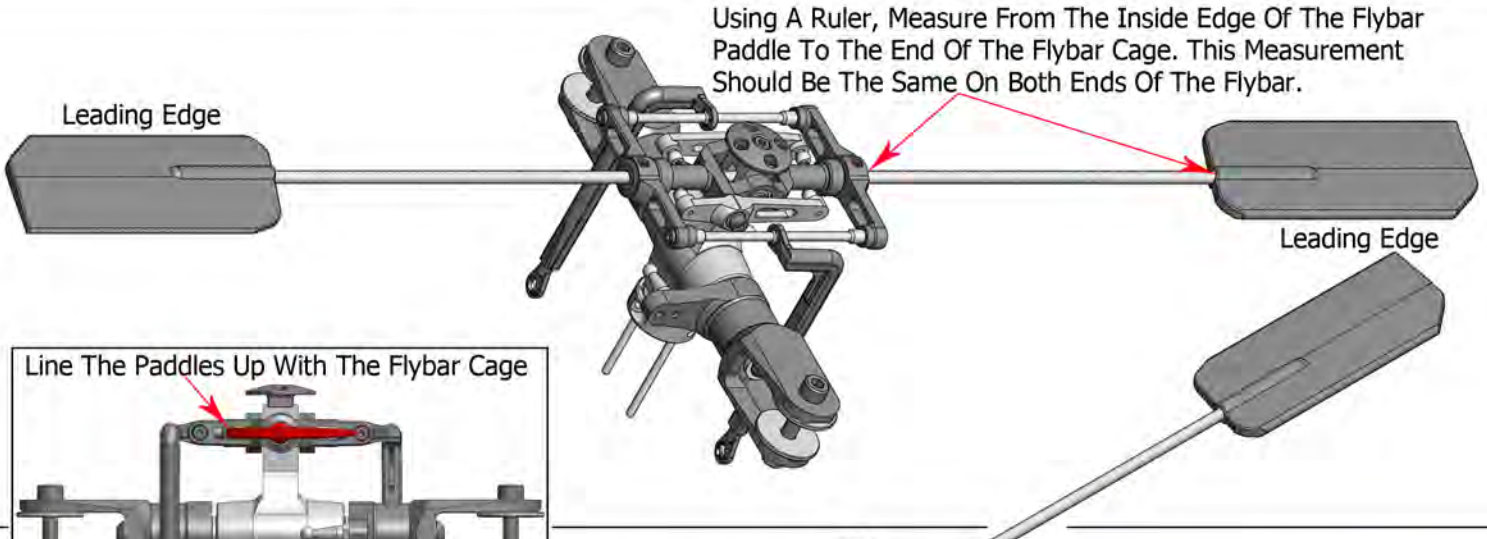
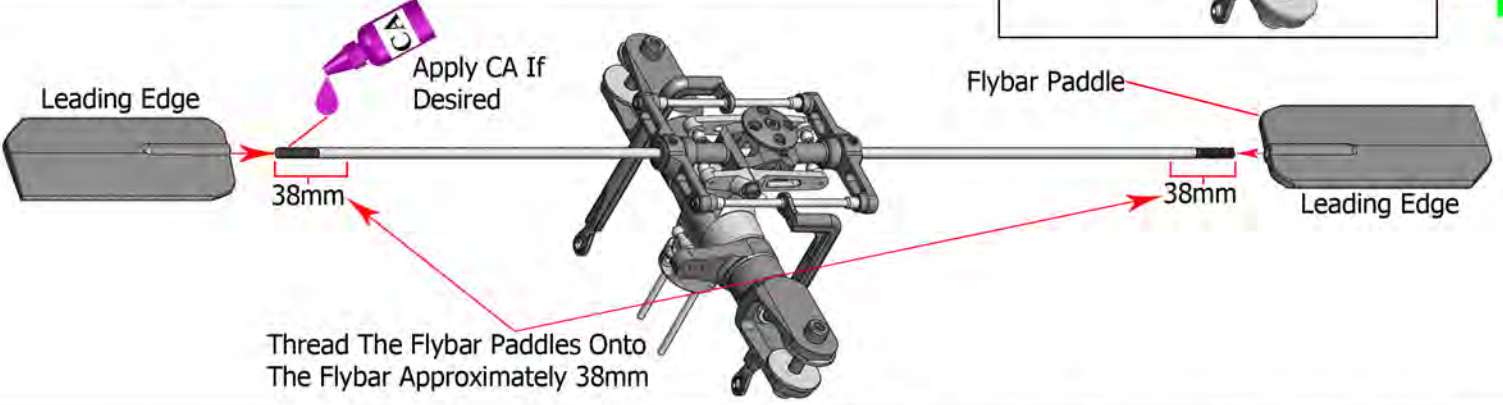
Step 4-9

4x4mm Set Screw - x2
ND-YR-G120

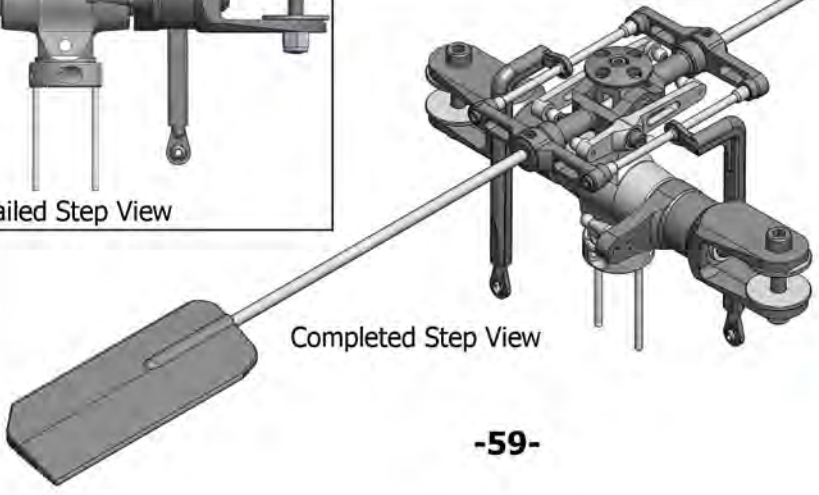
Flybar Paddle - x2
ND-YR7-RH1025



Step 4-9



! Attention! !
Use Blue Threadlock On All Screws Going Into Metal



Next

4x24mm Shanked Screw - x1
ND-YR-G135



M4 Lock Nut - x1
ND-YR-G091

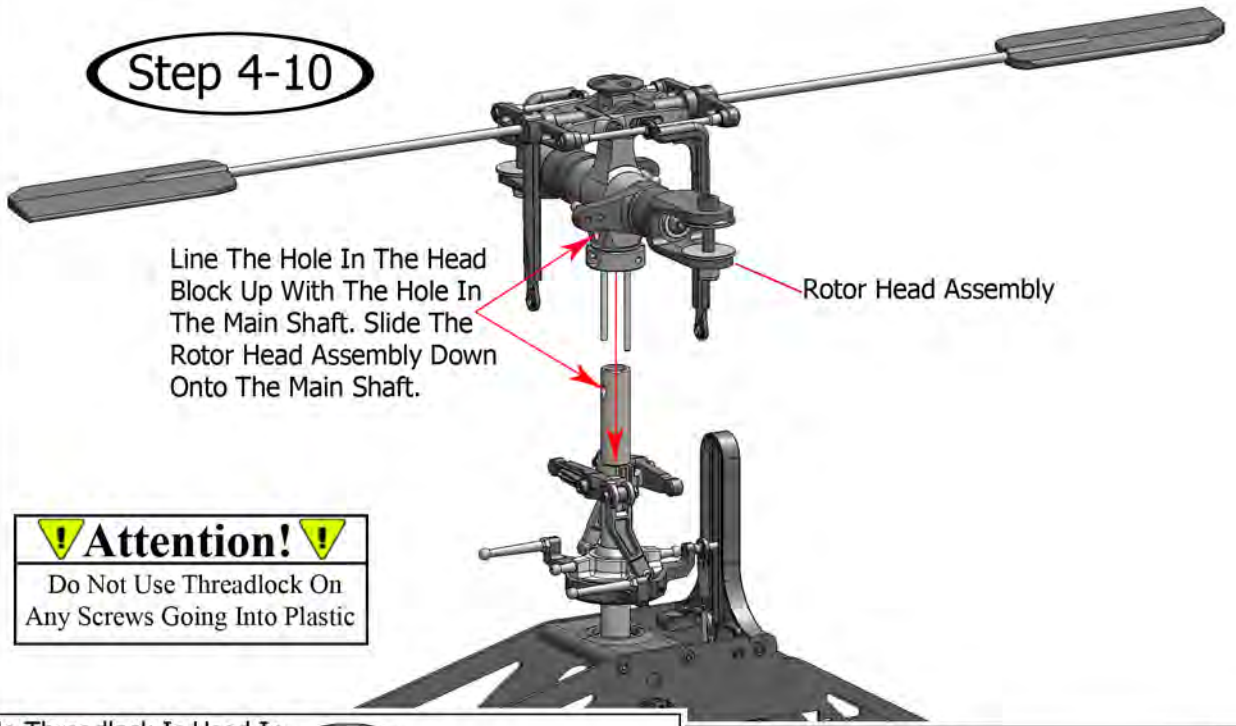
2x10mm Cap Screw - x2
ND-YR-G025



M2 Servo Washer - x2
ND-YR-G015

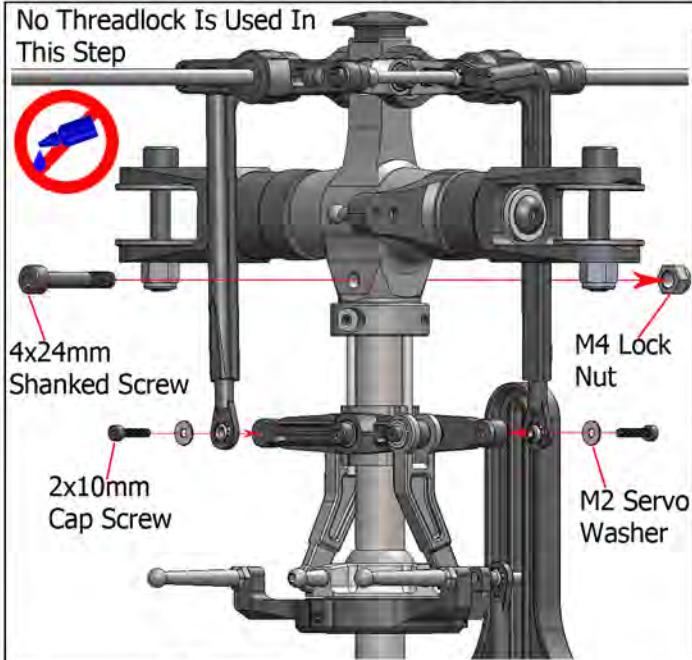
3x10mm Cap Screw - x2
ND-YR-G065

Step 4-10

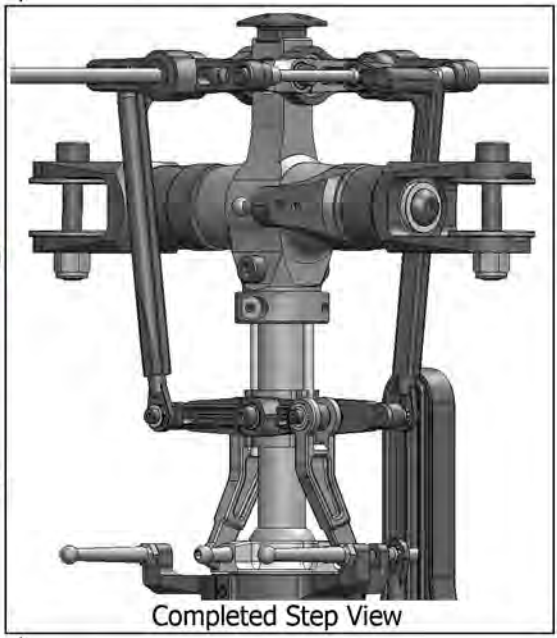


Line The Hole In The Head Block Up With The Hole In The Main Shaft. Slide The Rotor Head Assembly Down Onto The Main Shaft.

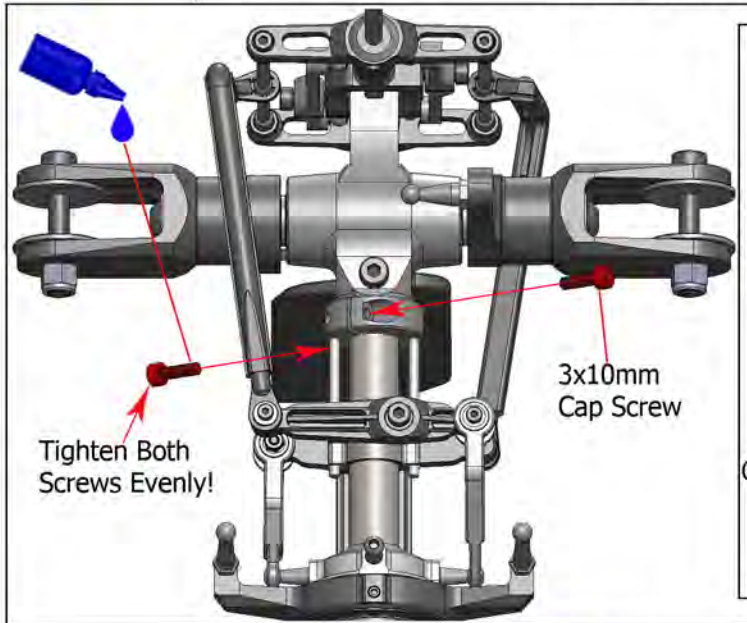
! Attention! !
Do Not Use Threadlock On Any Screws Going Into Plastic



No Threadlock Is Used In This Step

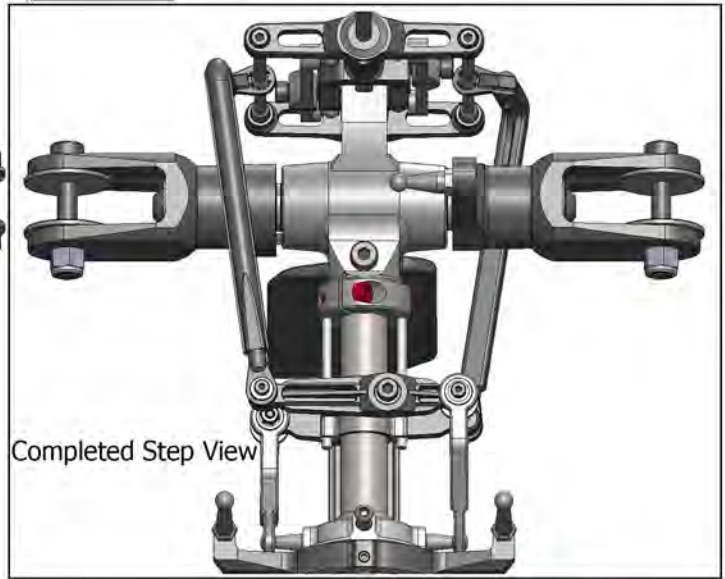


Completed Step View



Tighten Both Screws Evenly!

3x10mm Cap Screw



Completed Step View

! Attention! !
Use Blue Threadlock On All Screws Going Into Metal

Tighten All Screws Securely!





Tail Boom Insert Gear - x2
ND-YR7-TR1016



Plastic Tail Boom Insert - x2
ND-YR7-TR1017



Aluminum Tail Boom Insert - x2
ND-YR7-TR1015



Bearing 12x18x4mm - x4
ND-YR-G099



Tail Pitch Slider Tube - x1
ND-YR7-TR1007



Spacer 7x8.55x3mm - x1
ND-YR-G102



Tail Pitch Fork - x1
ND-YR7-TR1004



Tail Pitch Slider Ring - x1
ND-YR7-TR1003



Bearing 7x11x3mm - x2
ND-YR-G089



Tail Pitch Link - x2
ND-YR7-TR1005

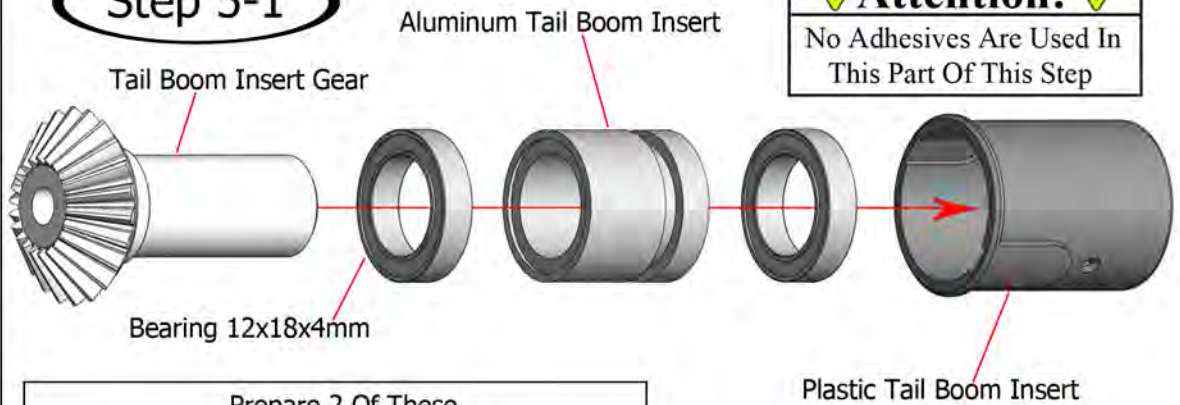


Tail Pitch Link Pin - x2
ND-YR7-TR1006

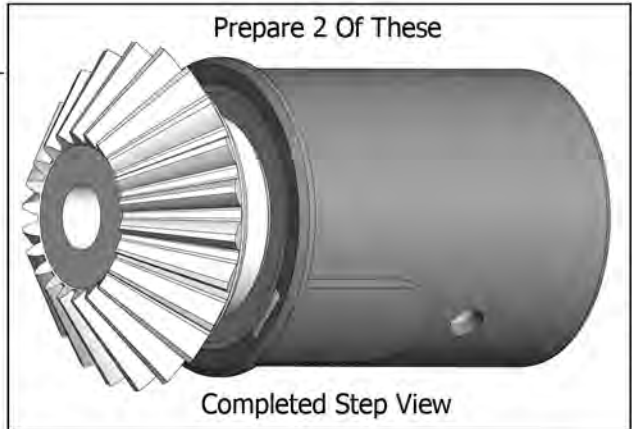


2mm E Clip - x2
ND-YR-G090

Step 5-1

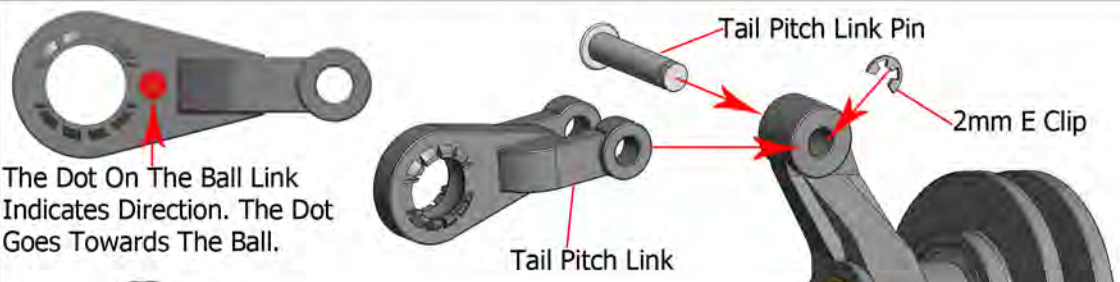
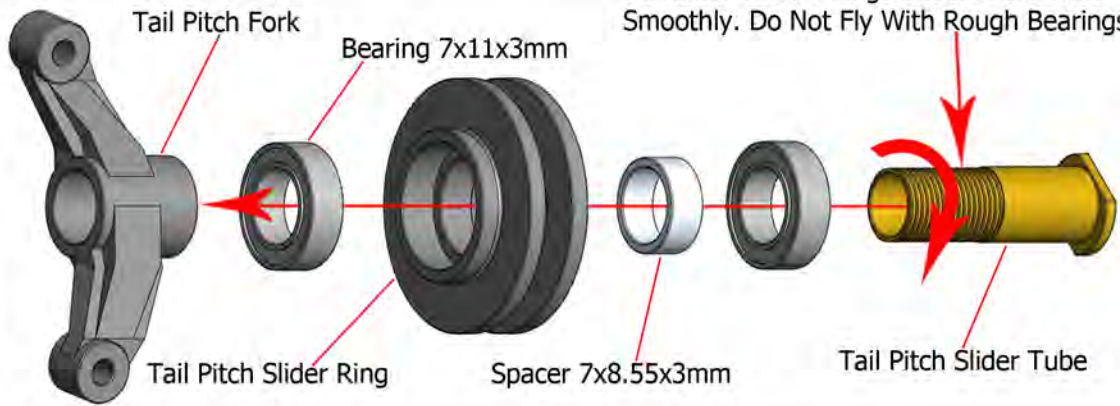


! Attention! !
No Adhesives Are Used In This Part Of This Step



! Attention! !
No Adhesives Are Used In This Part Of This Step

The Tail Pitch Slider Tube Is Reverse Threaded. Turn The Tail Pitch Slider Tube To The Left To Tighten It Down. Be Careful To Not Over Tighten. Check For In And Out Play In The Tail Pitch Slider. There Should Be None. The Bearings Should Also Turn Smoothly. Do Not Fly With Rough Bearings!



! Attention! !
No Adhesives Are Used In This Part Of This Step



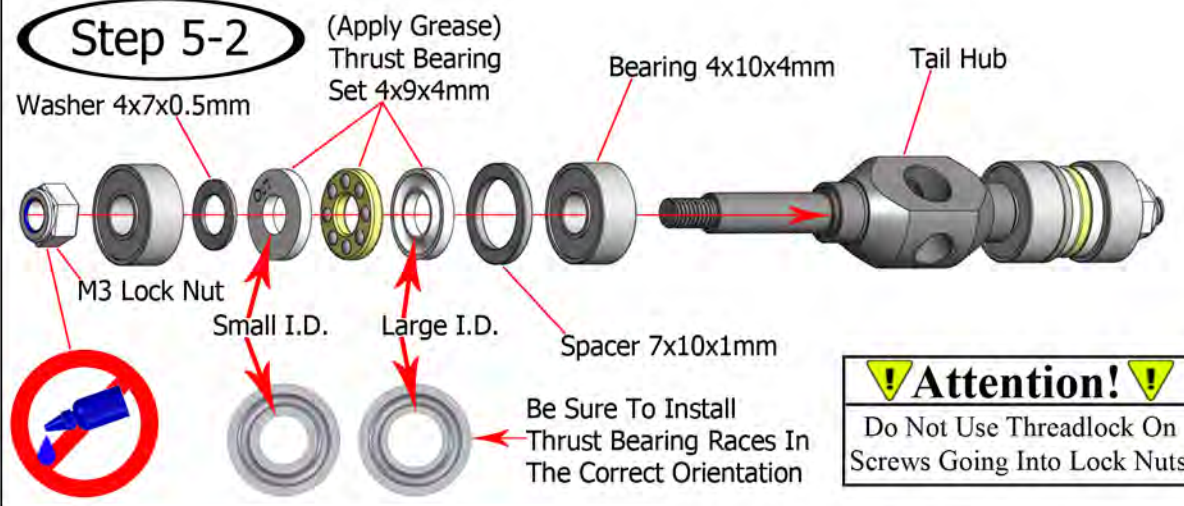
Step 5-1



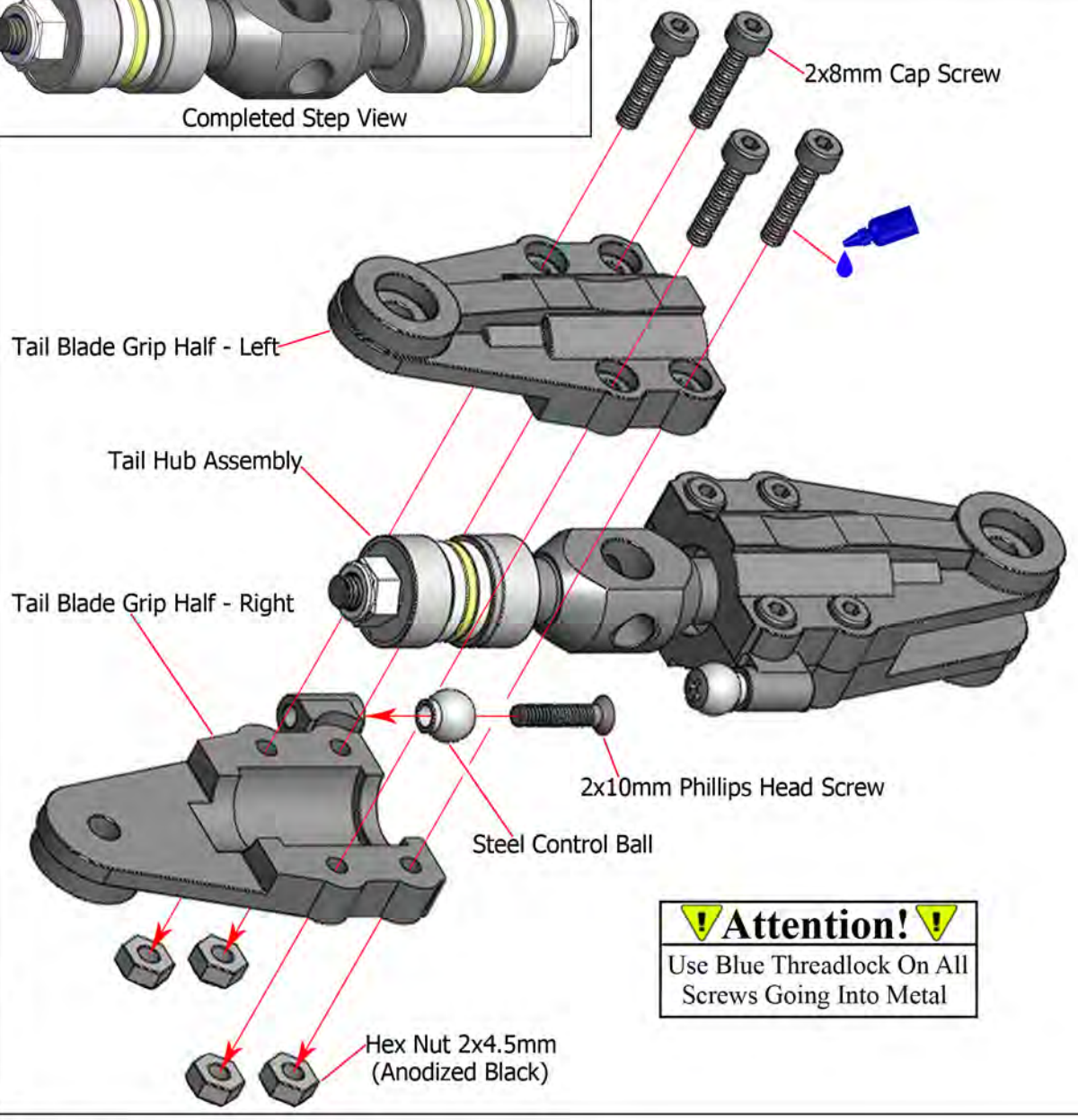
Step 5-2

Step 5-2

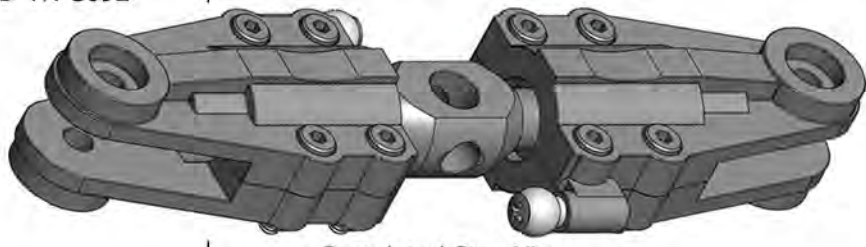
- Tail Hub - x1
ND-YR7-TR1028
- Tail Blade Grip Half - Left - x2
ND-YR7-TR1029
- Tail Blade Grip Half - Right - x2
ND-YR7-TR1030
- 2x8mm Cap Screw - x8
ND-YR-G024
- Thrust Bearing Set 4x9x4mm - x2
ND-YR-G012
- Bearing 4x10x4mm - x4
ND-YR-G006
- M3 Lock Nut - x2
ND-YR-G035
- Hex Nut 2x4.5mm - x8
ND-YR-G169
- Steel Control Ball - x2
ND-YR-G001
- 2x10mm Phillips Head Screw - x2
ND-YR-G124
- Spacer 7x10x1mm - x2
ND-YR-G095
- Washer 4x7x0.5mm - x2
ND-YR-G092



! Attention! !
Do Not Use Threadlock On Screws Going Into Lock Nuts



! Attention! !
Use Blue Threadlock On All Screws Going Into Metal



Step 5-3



Tail Blade - x2
ND-YR7-TR1036



3x14mm Cap Screw - x2
ND-YR-G123



M3 Lock Nut - x2
ND-YR-G035



Rear Tail Rotor Bellcrank - x1
ND-YR7-TR1012



Tail Rotor Bellcrank Carbon Plate - x1
ND-YR7-TR1027



3x8x4mm Flanged Bearing - x2
ND-YR-G064



3x6.5mm Pin Screw - x2
ND-YR-G119



3x8mm Cap Screw - x2
ND-YR-G114



2x10mm Phillips Screw - x1
ND-YR-G124



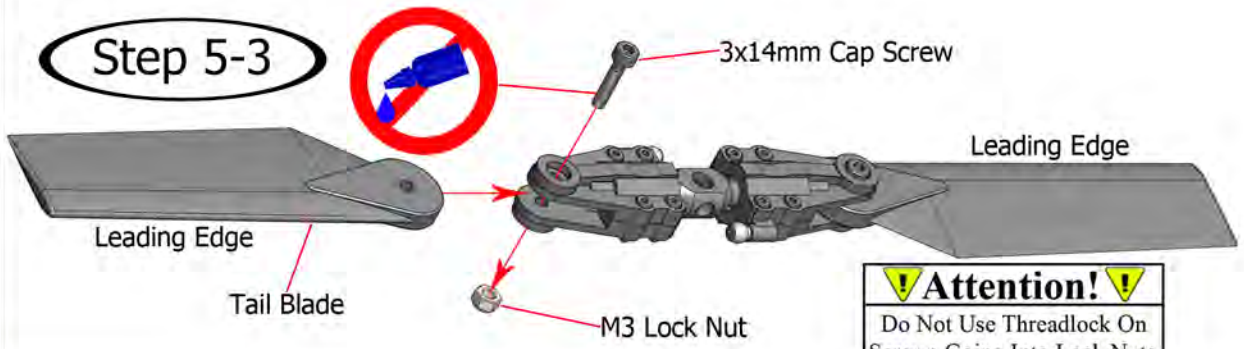
Steel Control Ball - x1
ND-YR-G001



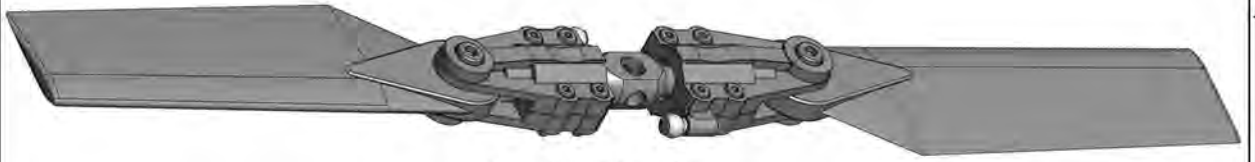
M2 Hex Nut - x1
ND-YR-G034



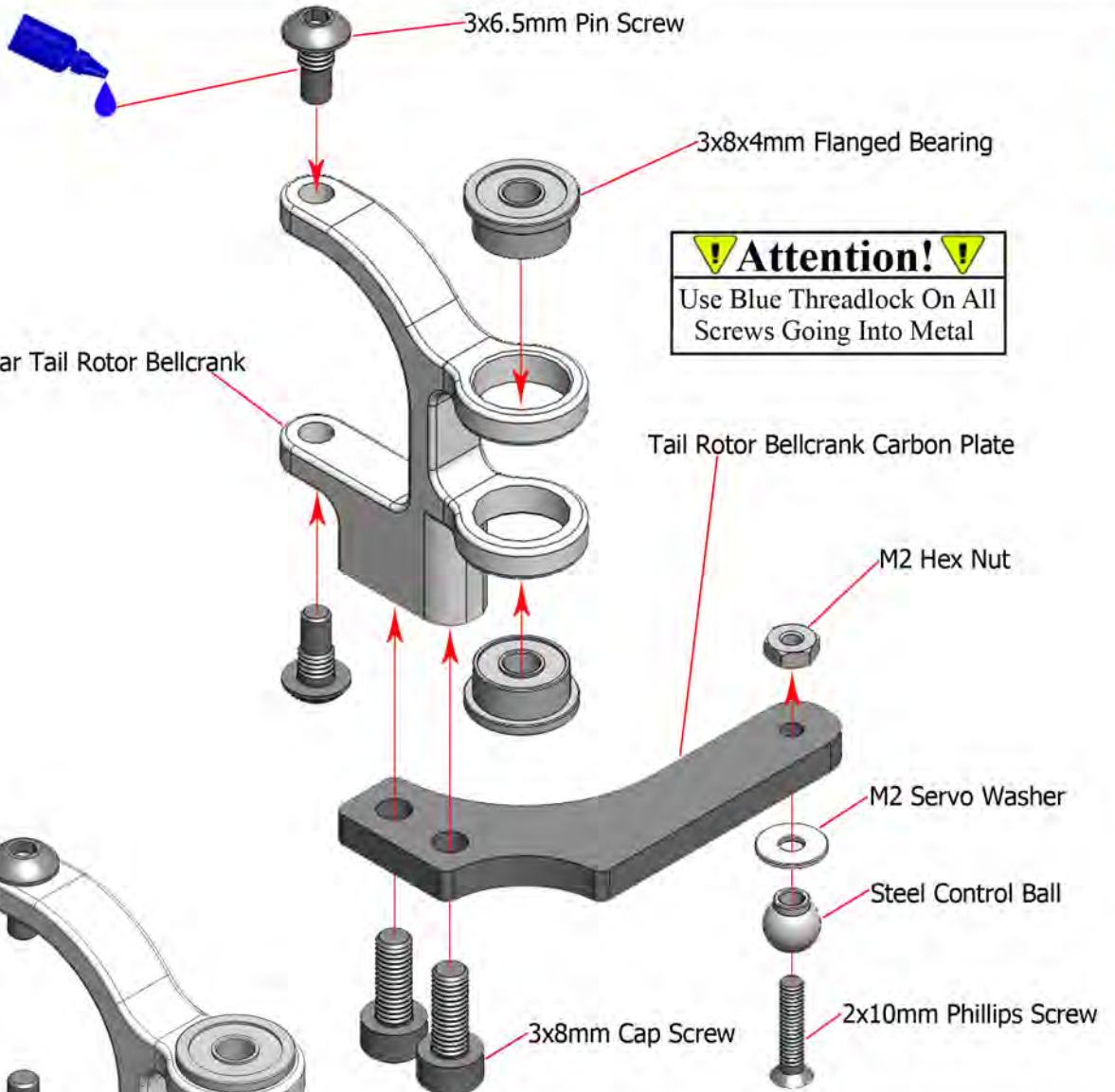
M2 Servo Washer - x1
ND-YR-G015



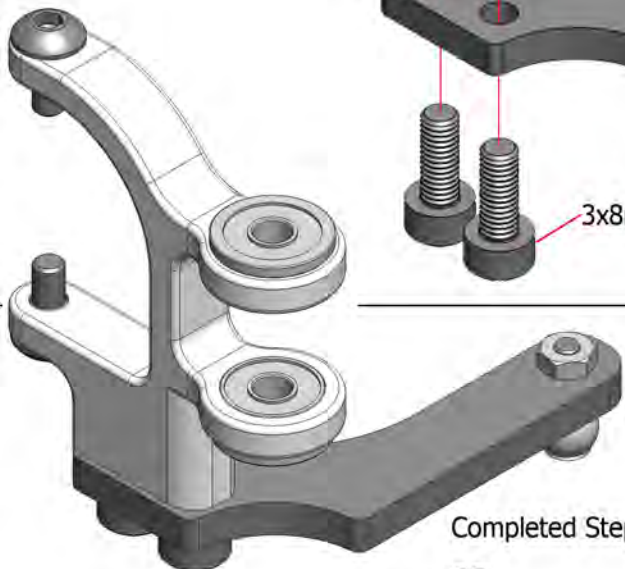
! Attention! !
Do Not Use Threadlock On Screws Going Into Lock Nuts



Completed Step View



! Attention! !
Use Blue Threadlock On All Screws Going Into Metal



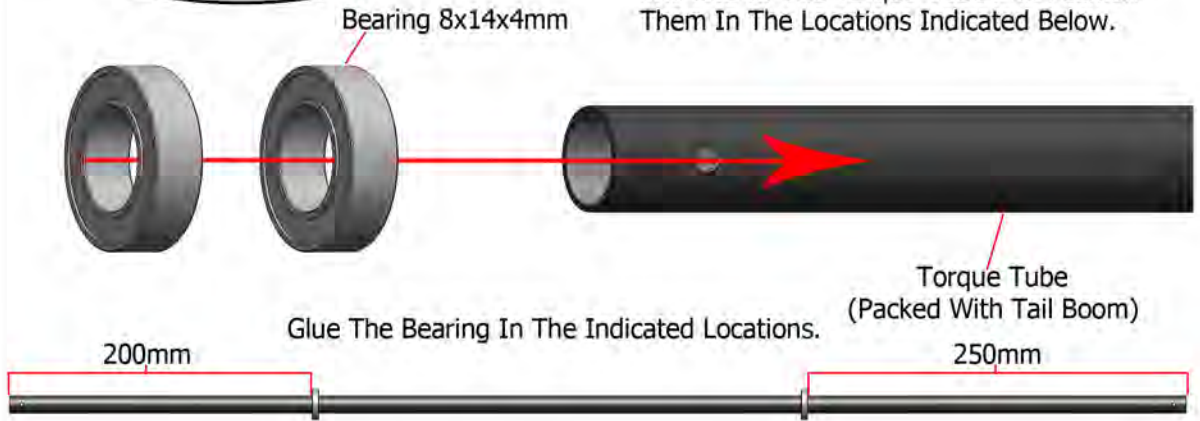
Completed Step View

Step 5-3



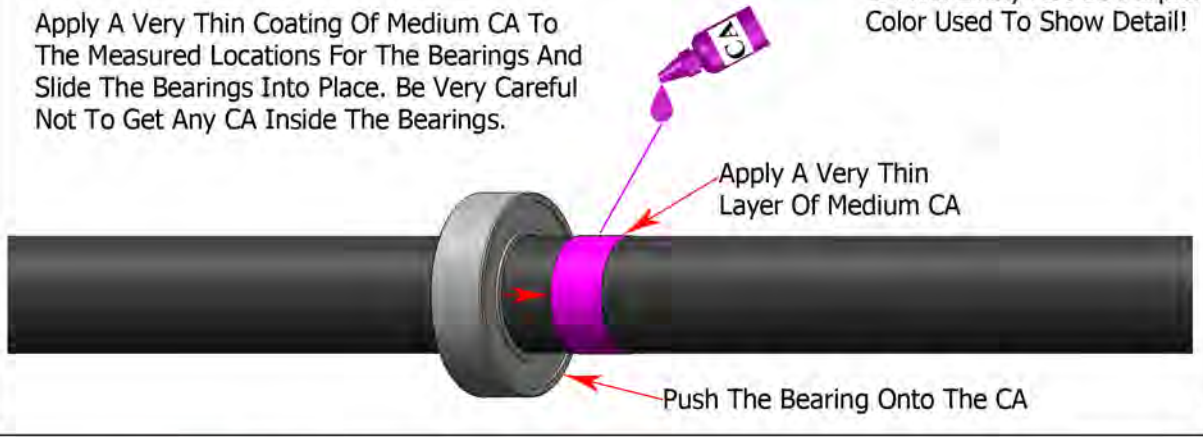
Step 5-4

Slide Both Of The 8x14x4mm Bearings Over The End Of The Torque Tube And Position Them In The Locations Indicated Below.

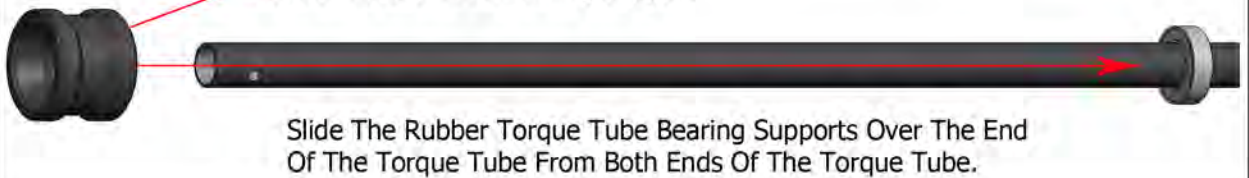


Apply A Very Thin Coating Of Medium CA To The Measured Locations For The Bearings And Slide The Bearings Into Place. Be Very Careful Not To Get Any CA Inside The Bearings.

CA Will Likely Not Be Purple. Color Used To Show Detail!



Rubber Torque Tube Bearing Support



Push The Rubber Torque Tube Bearing Supports Over The Bearings. Be Carefull Not To Break The Bearings Loose From The Torque Tube.



Attention!

No Adhesives Are Used In This Part Of This Step

Step 5-4 Continued On The Next Page

Completed Step View

Torque Tube - x1
(Packed With Tail Boom)
ND-YR7-TR1032

Rubber Torque Tube Bearing Support - x2
ND-YR7-TR1035

Bearing 8x14x4mm - x2
ND-YR-G066



Torque Tube End - x2
ND-YR7-TR1034

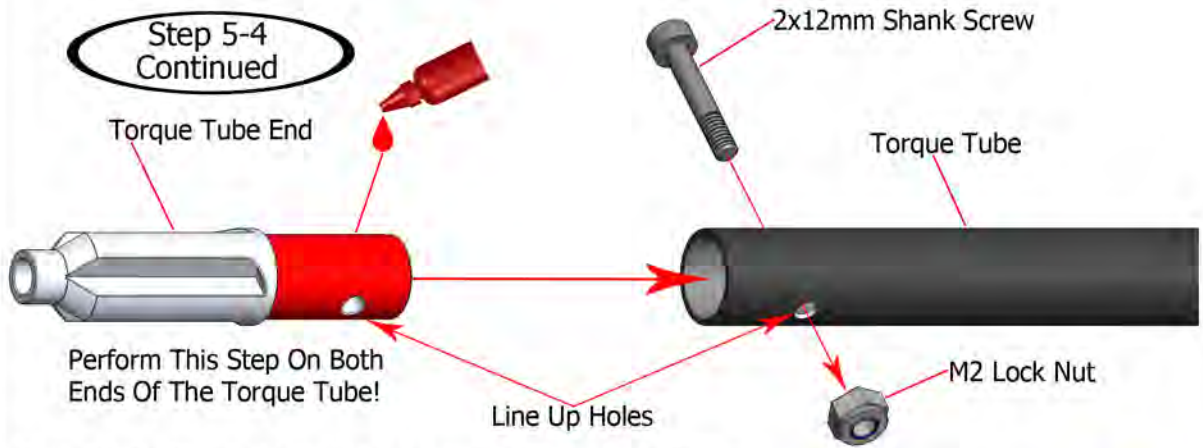
2x12mm Shank
Screw - x2
ND-YR-G053

M2 Lock Nut - x2
ND-YR-G037

Tail Rotor Pushrod
Guide - x4
ND-YR7-TR1031

Ball Link - Long - x2
ND-YR-G077

**Step 5-4
Continued**

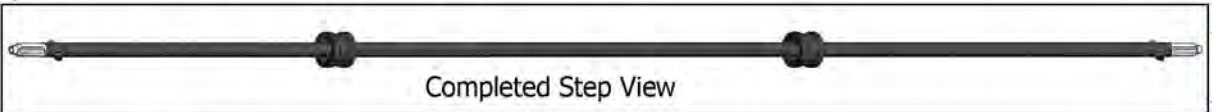


Perform This Step On Both
Ends Of The Torque Tube!

Line Up Holes

Clean All Surfaces With Alcohol. Apply Red Threadlock To The Area Indicated. Match The Holes In The Torque Tube Up With The Hole In The Torque Tube End. Push The Torque Tube End Into The Torque Tube. Push The 2x12mm Shank Screw Completely Through The Torque Tube And Secure It With The M2 Lock Nut. Tighten Nut Securely At This Time!

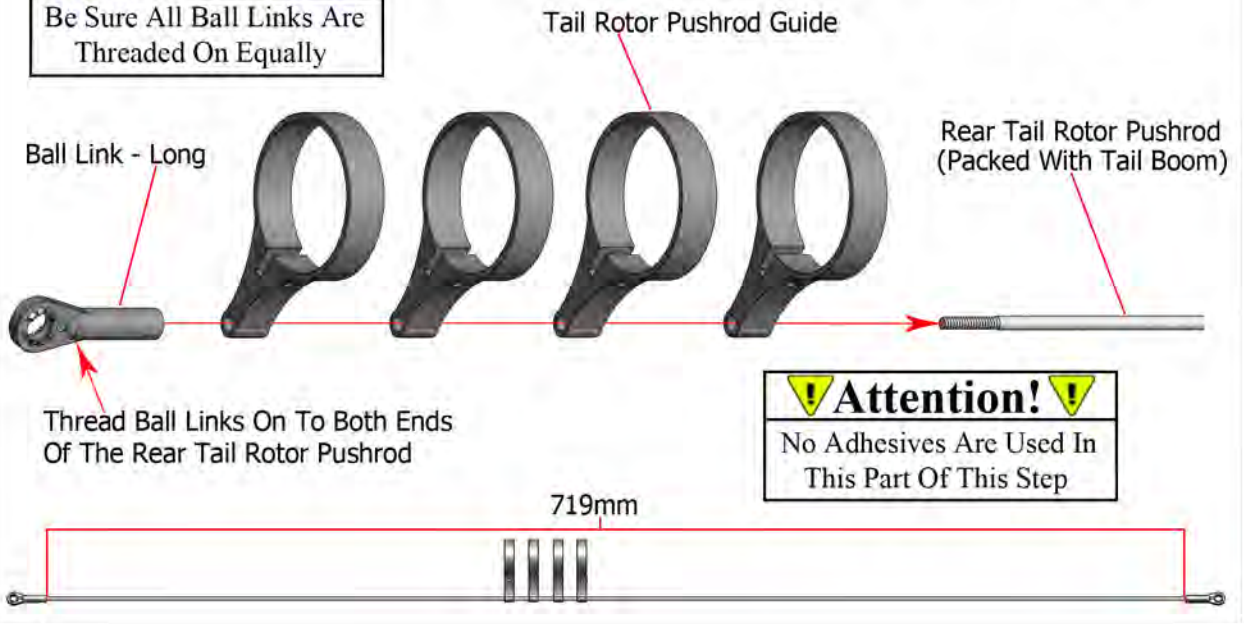
! Attention! !
Be Careful When Using Red Threadlock, Use Sparingly



Step 5-5

! Attention! !
Be Sure All Ball Links Are Threaded On Equally

Slide The Tail Rotor Pushrod Guides Onto The Tail Rotor Pushrod First. After The Tail Rotor Pushrod Guides Are On The Pushrod Thread The Ball Links Onto The Tail Rotor Pushrod Evenly From Both Ends Of The Tail Rotor Pushrod.



Ball Link - Long

Tail Rotor Pushrod Guide

Rear Tail Rotor Pushrod
(Packed With Tail Boom)

Thread Ball Links On To Both Ends
Of The Rear Tail Rotor Pushrod

! Attention! !
No Adhesives Are Used In
This Part Of This Step

719mm

Rear Tail Rotor
Pushrod - x1
(Packed With Tail Boom)
ND-YR-G080

Completed Step View

Next

Step 5-6

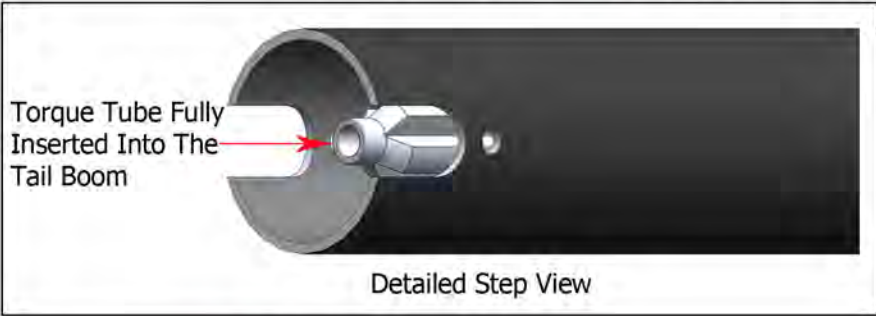
Apply Grease To The Inside Of The Tail Boom

Tail Boom



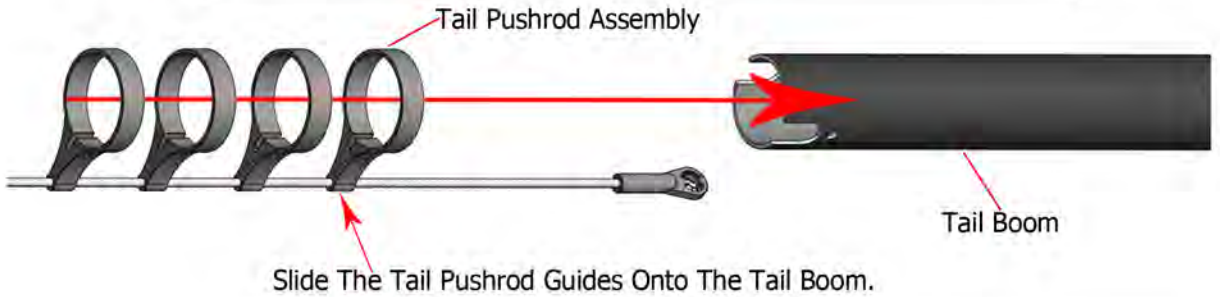
Torque Tube Assembly

Insert The Torque Tube Assembly Fully Into The Tail Boom



Torque Tube Fully Inserted Into The Tail Boom

Detailed Step View



Tail Pushrod Assembly

Tail Boom

Slide The Tail Pushrod Guides Onto The Tail Boom.

Roughly Space The Guides On The Tail Boom. Actual Spacing Will Be Set Later In The Assembly Process.



! Attention! !

No Adhesives Are Used In This Part Of This Step

Completed Step View

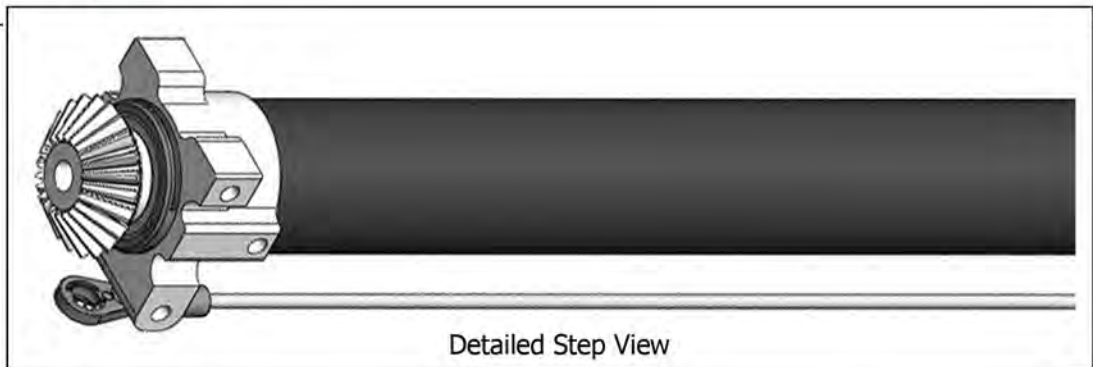
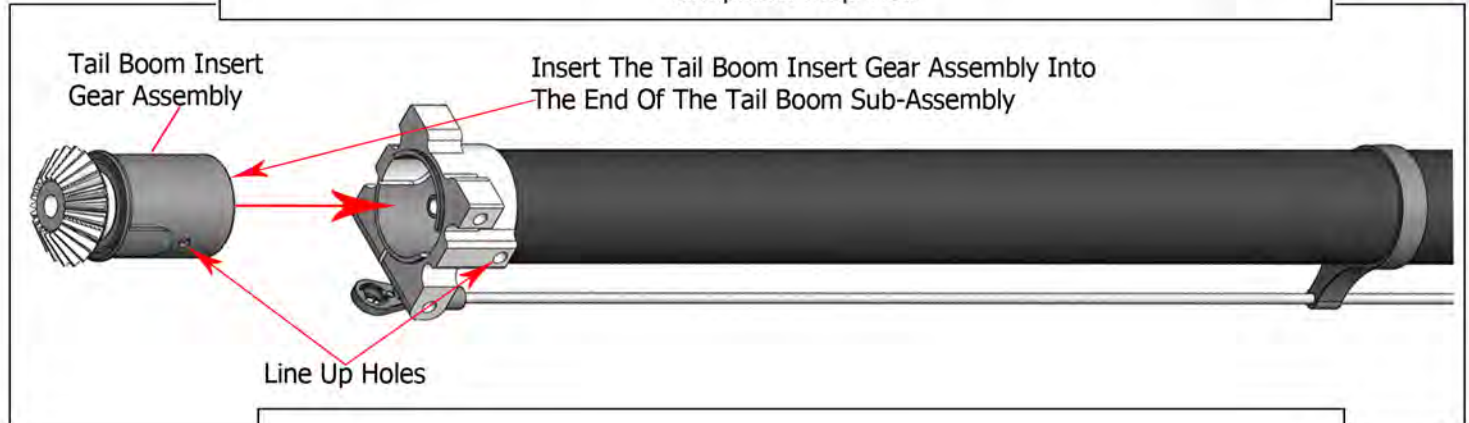
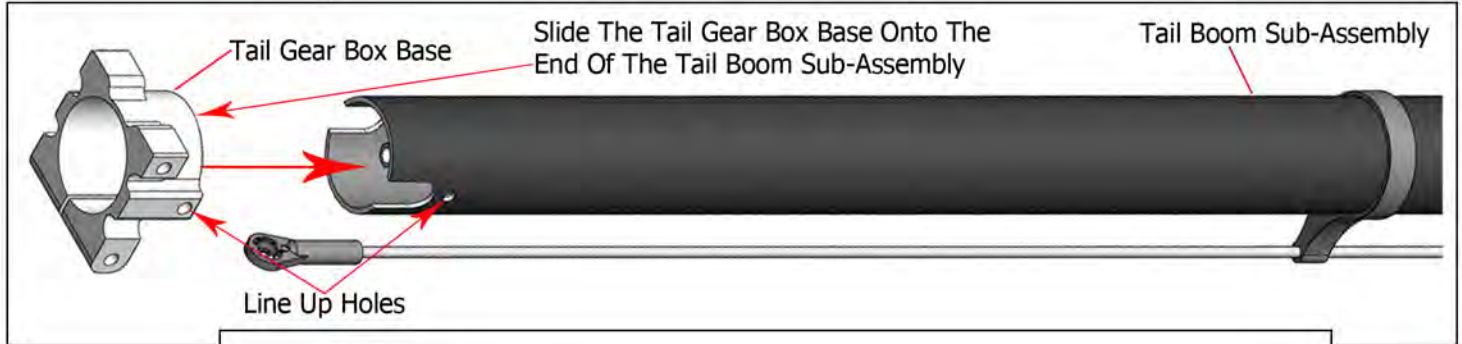
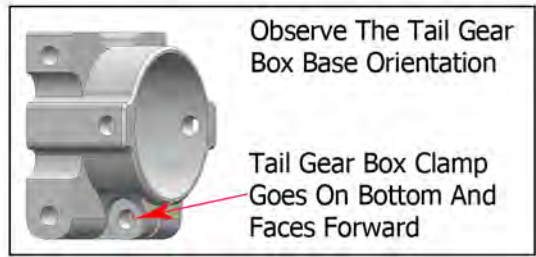
Tail Boom - x1
ND-YR7-TR1013

Next

Step 5-6



Step 5-7



! Attention! !
No Adhesives Are Used In This Part Of This Step

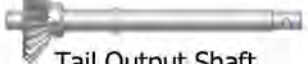


Step 5-7

Step 5-8



Vertical Fin - x1
ND-YR7-TR1010



Tail Output Shaft
With Gear - x1
ND-YR7-TR1002



Tail Gear Box
Spacer - x1
ND-YR7-TR1001



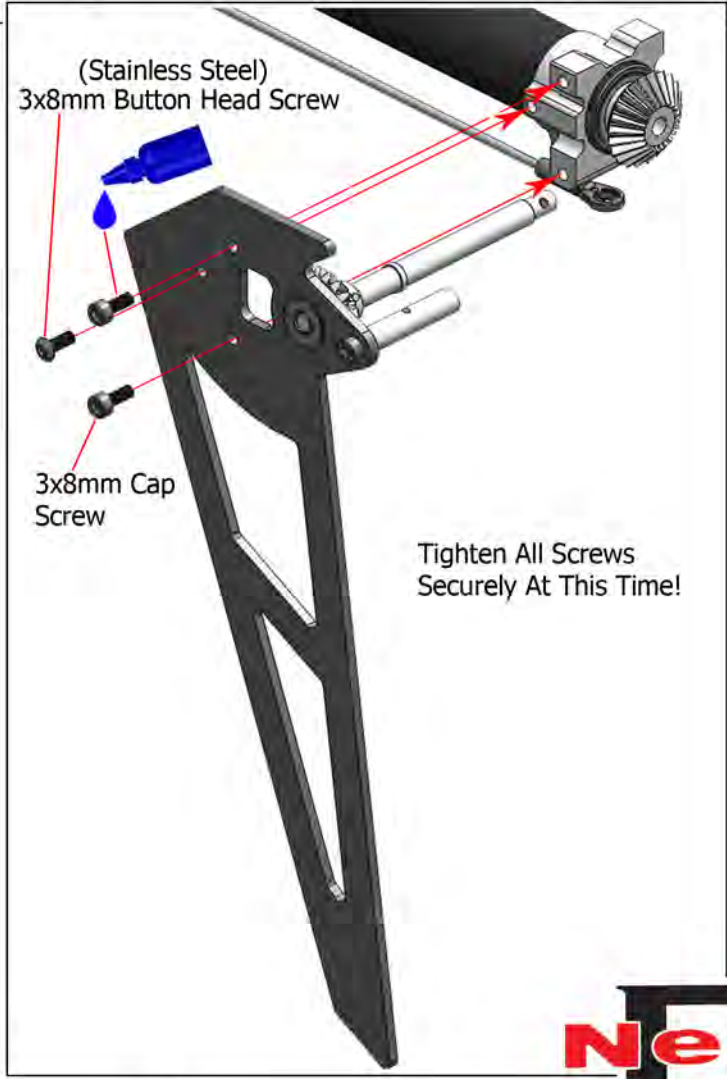
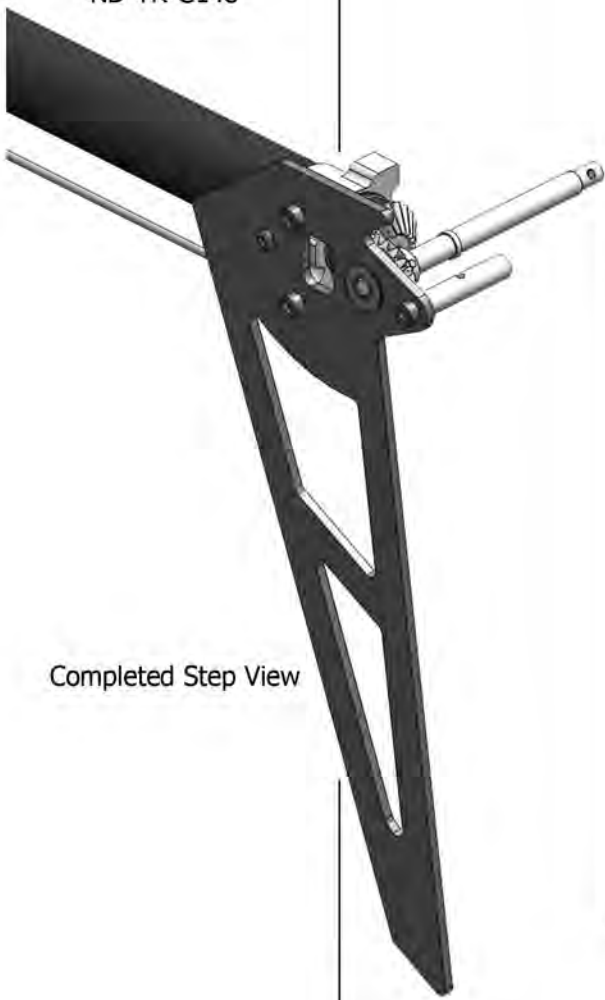
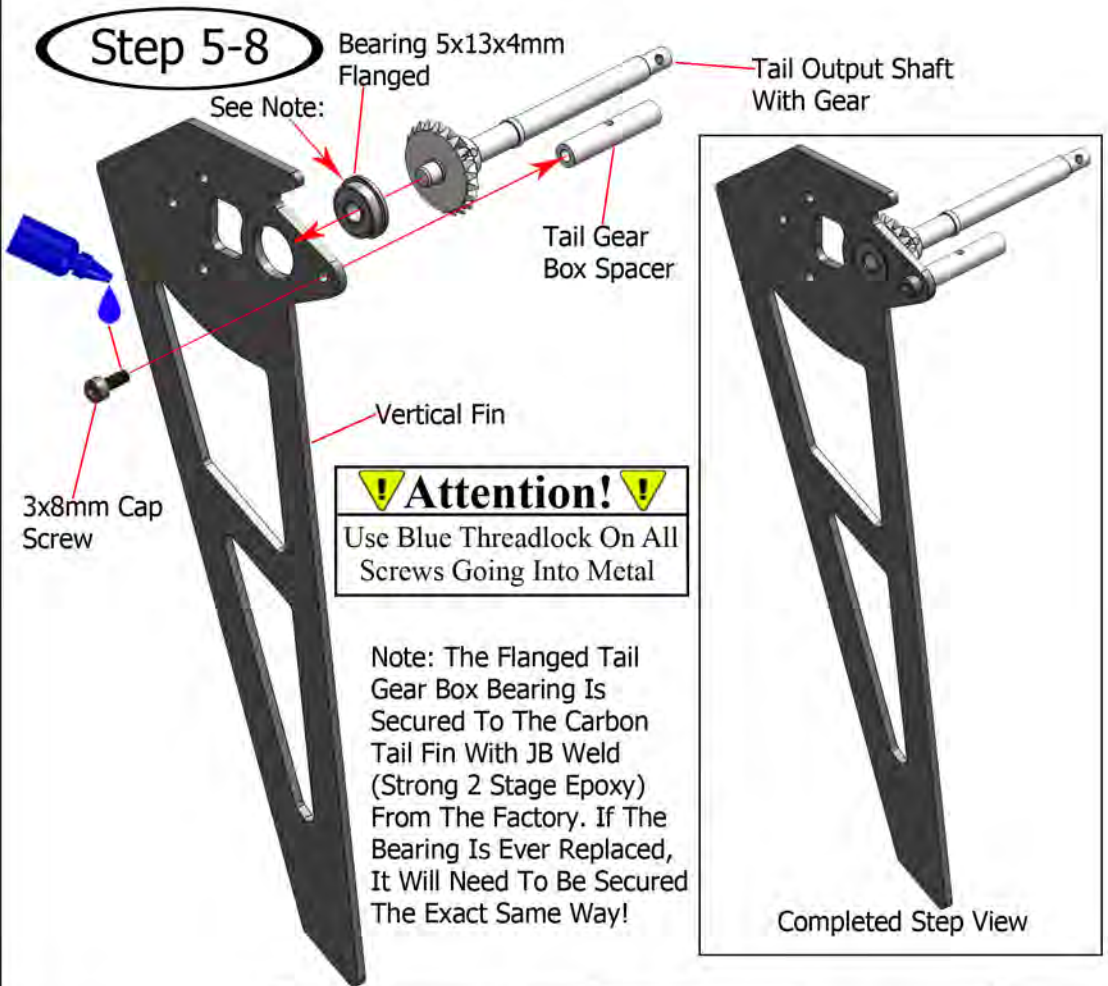
Bearing 5x13x4mm
Flanged - x1
ND-YR-G063



3x8mm Cap
Screw - x3
ND-YR-G114



3x8mm Button
Head Screw - x1
(Stainless Steel)
ND-YR-G148



Step 5-8

Step 5-9

Attention!
Use Blue Threadlock On All Screws Going Into Metal



Tail Gear Box Side Plate - x1
ND-YR7-TR1009



Rear Tail Bellcrank Mount - x1
ND-YR7-TR1011



Bearing 6x13x5mm Flanged - x1
ND-YR-G167



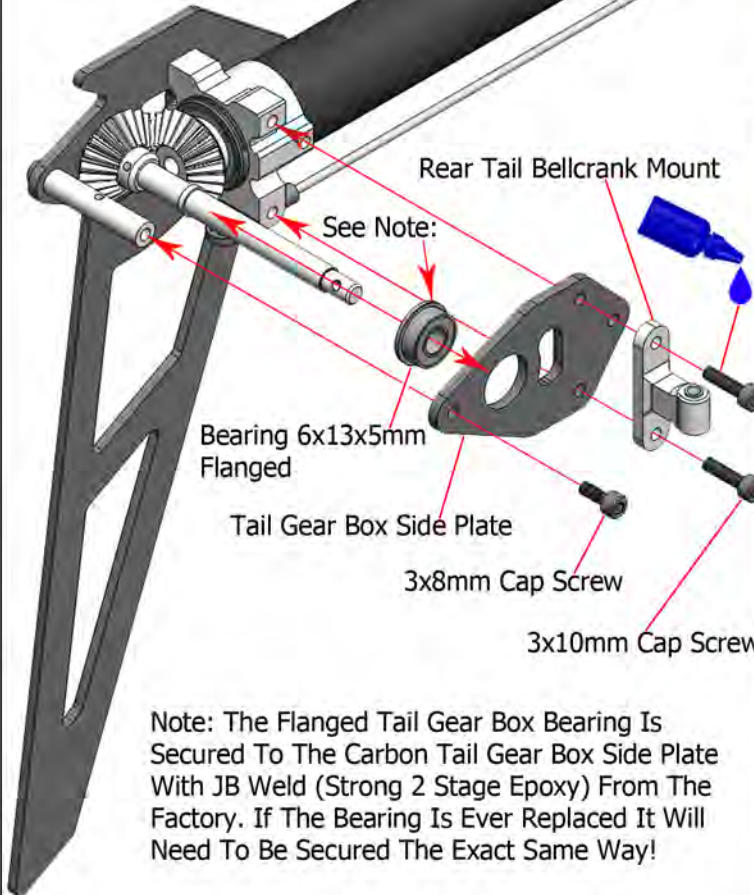
3x8mm Cap Screw - x1
ND-YR-G114



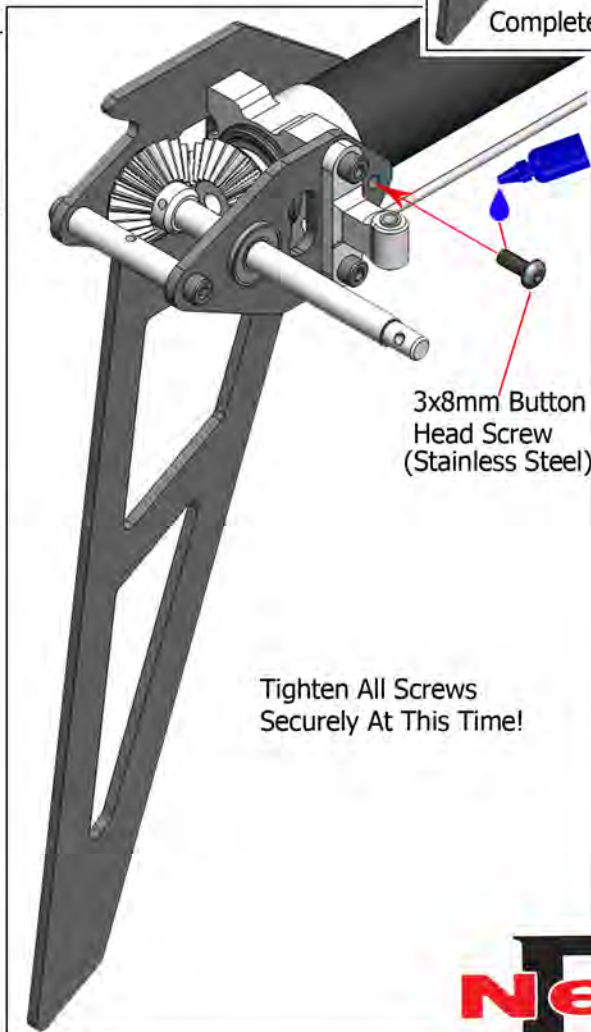
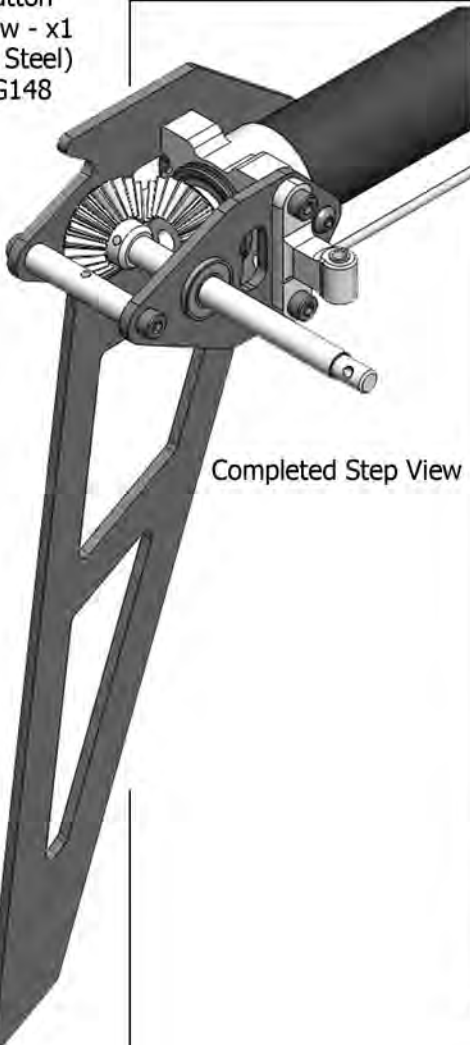
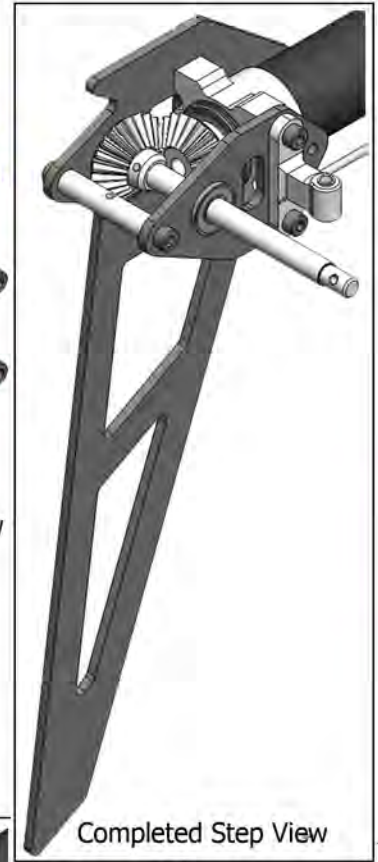
3x10mm Cap Screw - x2
ND-YR-G065



3x8mm Button Head Screw - x1
(Stainless Steel)
ND-YR-G148



Note: The Flanged Tail Gear Box Bearing Is Secured To The Carbon Tail Gear Box Side Plate With JB Weld (Strong 2 Stage Epoxy) From The Factory. If The Bearing Is Ever Replaced It Will Need To Be Secured The Exact Same Way!



Step 5-9

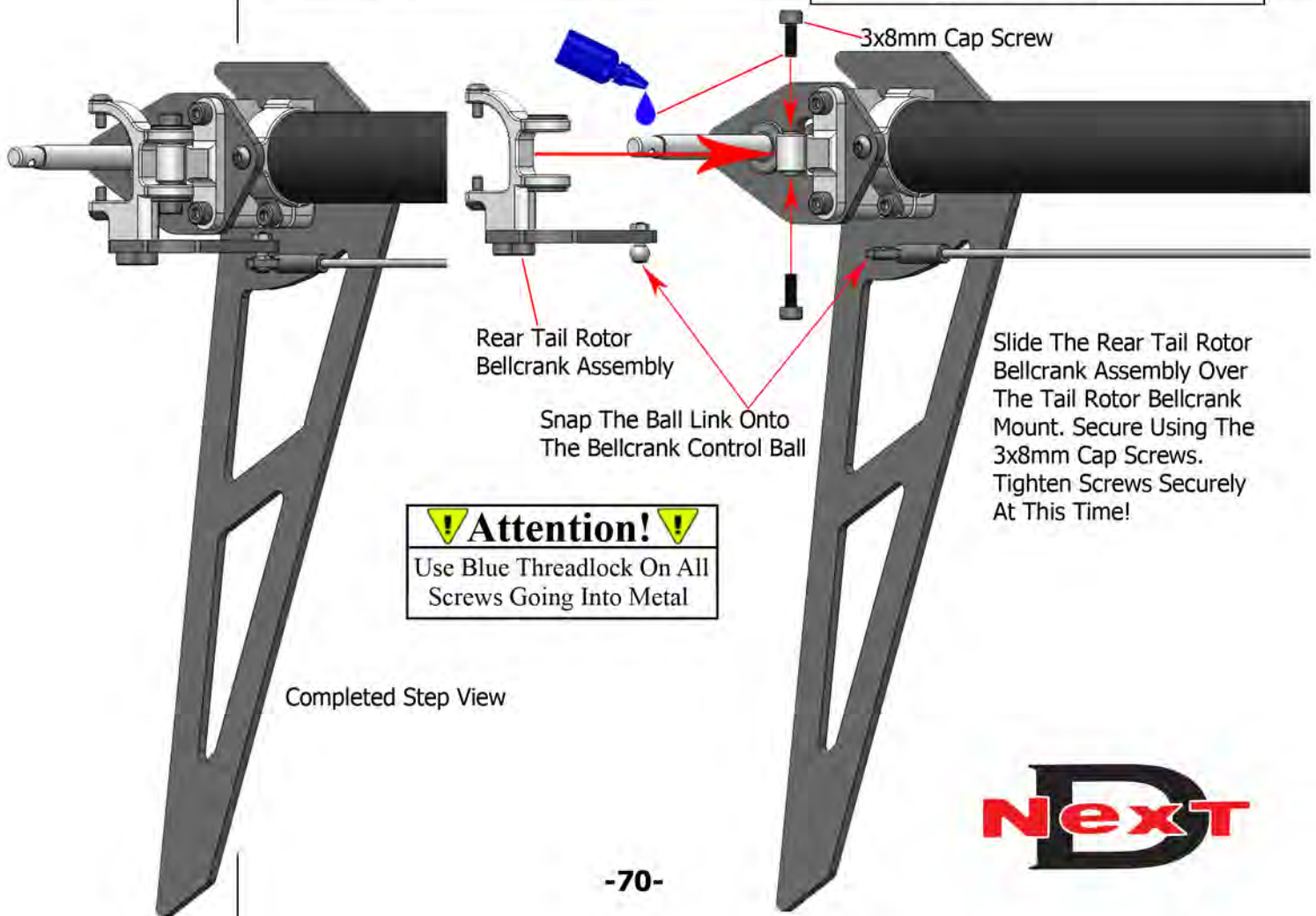
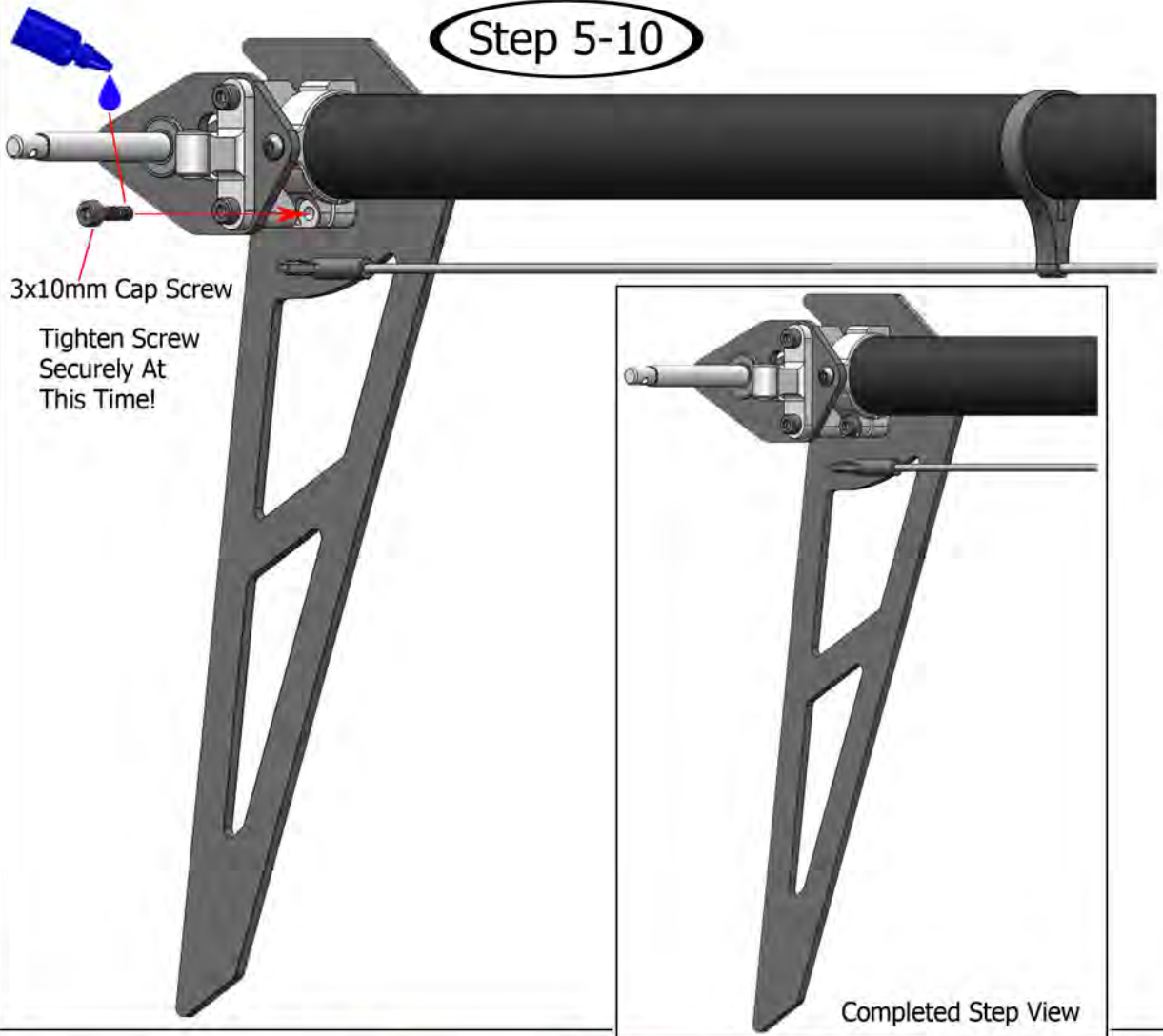


3x10mm Cap Screw - x1 ND-YR-G065



3x8mm Cap Screw - x2 ND-YR-G114

Step 5-10



Step 5-11

Apply Light Oil

Slide The Tail Pitch Slider Onto The Tail Output Shaft. Engage The Rear Tail Bellcrank Pins Into The Tail Pitch Slider Ring. Apply Light Oil To The Tail Output Shaft.

Tail Pitch Slider Assembly

Engage The Rear Tail Bellcrank Pins Into The Tail Pitch Slider Ring

Detailed Step View

Slide The Tail Pitch Slider Onto The Tail Output Shaft

Detailed Step View

Completed Step View

! Attention! !

No Adhesives Are Used In This Part Of This Step

Step 5-11

Next



4x4mm Set Screw - x2
ND-YR-G120

Step 5-12

Line Up Holes

Snap The Tail Pitch Slider Ball Links Onto The Tail Blade Grip Balls

Slide The Tail Hub Assembly Onto The End Of The Tail Output Shaft. Line The Holes In The Tail Hub Up With The Holes In The End Of The Tail Output Shaft. Snap The Tail Pitch Slider Ball Links Onto The Steel Control Balls On The Tail Rotor Blade Grips.

4x4mm Set Screw

Thread Set Screws Into The Tail Hub

Completed Step View

Tighten One Set Screw Securely First, And Then Tighten The Other Set Screw Securely!

⚠ Attention! ⚠

Use Blue Threadlock On All Screws Going Into Metal



Step 5-12

Step 5-13

Slide The 5x10x4mm Bearing Onto The Shaft As Indicated. No Adhesives Or Threadlock Are Used In This Step!



Forward Tail Drive Shaft With Gears - x1
ND-YR7-TR1018



Forward Tail Clamp Half Right - x1
ND-YR7-TR1026



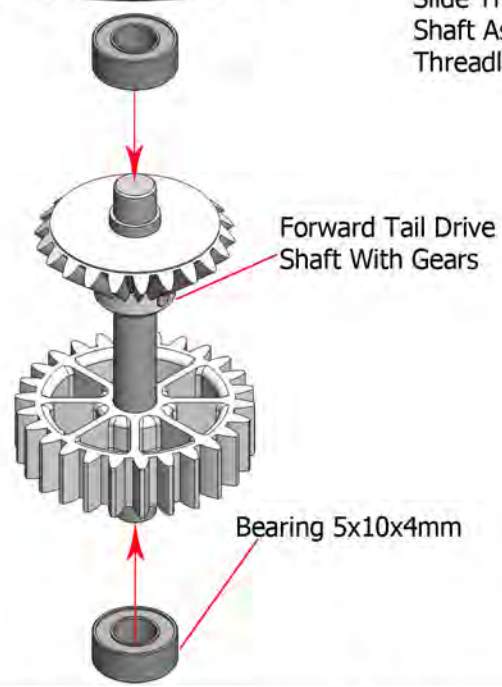
Forward Tail Clamp Half Left - x1
ND-YR7-TR1025



Bearing 5x10x4mm - x2
ND-YR-G007

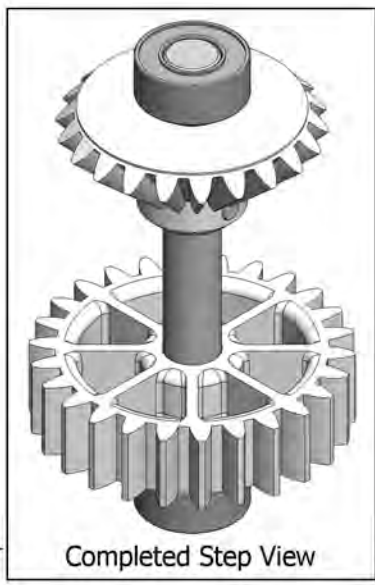


3x8mm Button Head Screw - x2 (Stainless Steel)
ND-YR-G148



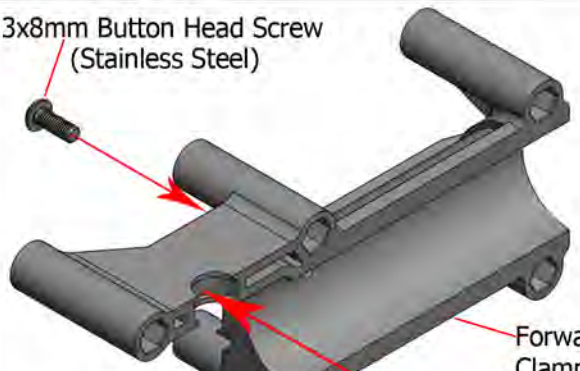
Forward Tail Drive Shaft With Gears

Bearing 5x10x4mm



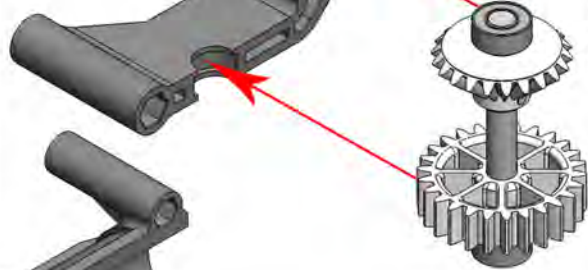
Completed Step View

3x8mm Button Head Screw (Stainless Steel)

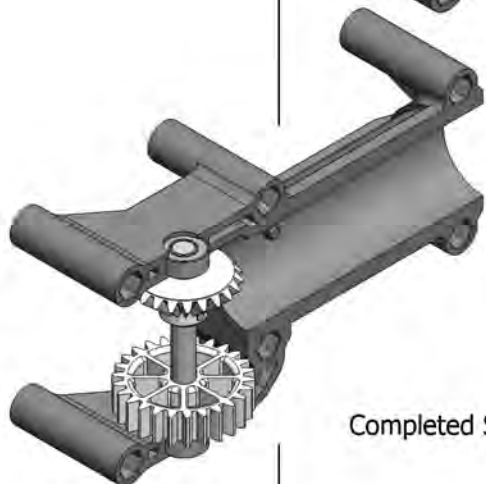


Forward Tail Clamp Half Right

Install The Forward Tail Drive Shaft With Gears In The Area Indicated. Thread The 3x8mm Button Head Screws Into The Side Of Each Of The Forward Tail Clamp Halves In The Holes Indicated. Do Not Overtighten The Screws.

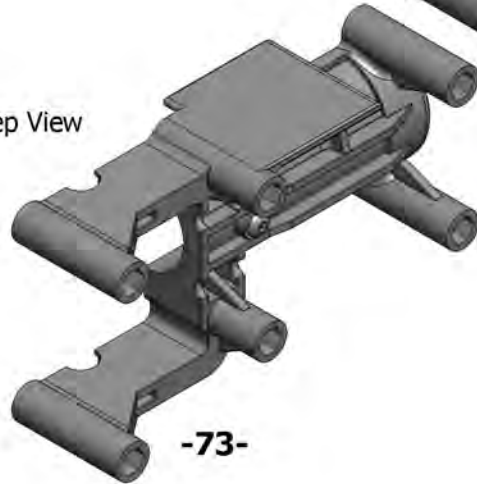


Forward Tail Clamp Half Left



Completed Step View

!Attention! !
No Adhesives Are Used In This Part Of This Step



Step 5-13

Hex Spacer
3x5.5x58mm - x6
ND-YR-G075

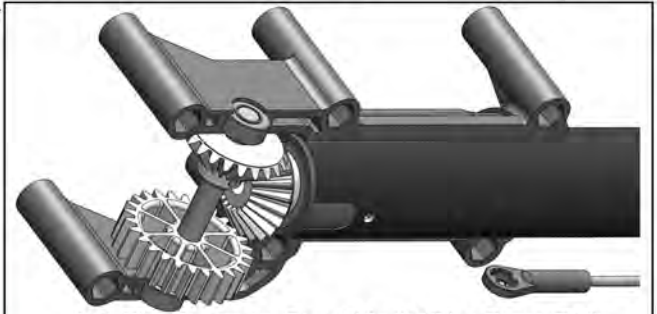
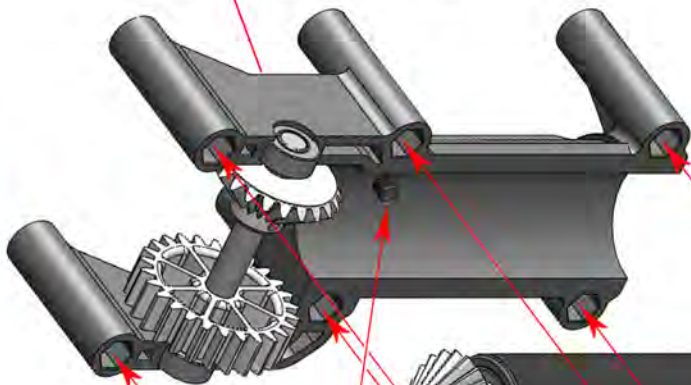
Step 5-14

Insert Tail Boom Insert Gear Assembly Into The End Of The Tail Boom Sub-Assembly

Tail Boom Sub-Assembly



Forward Tail Clamp Half Right

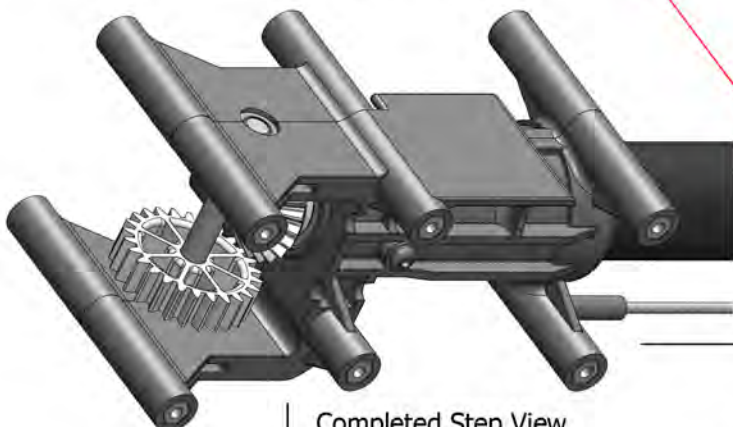
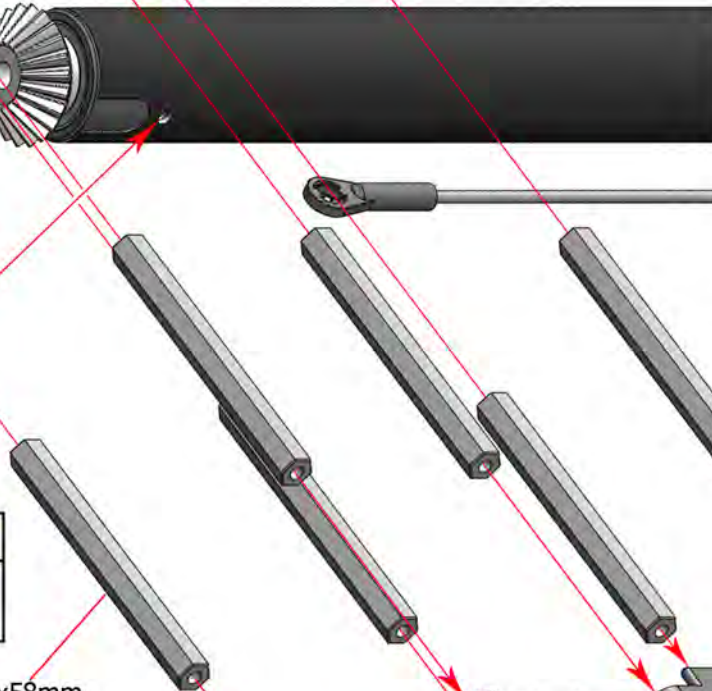


Insert Hex Spacers Into One Side Of The Front Tail Boom Clamp. Line Up The Holes In The Boom With The Pinning Screws In The Front Clamp. Set The Boom In One Side Of The Clamp. Join The Two Halves Together.

Line Up The Holes In The Boom With The Screws In The Forward Tail Clamp

! Attention! !
No Adhesives Are Used In This Part Of This Step

Hex Spacer 3x5.5x58mm

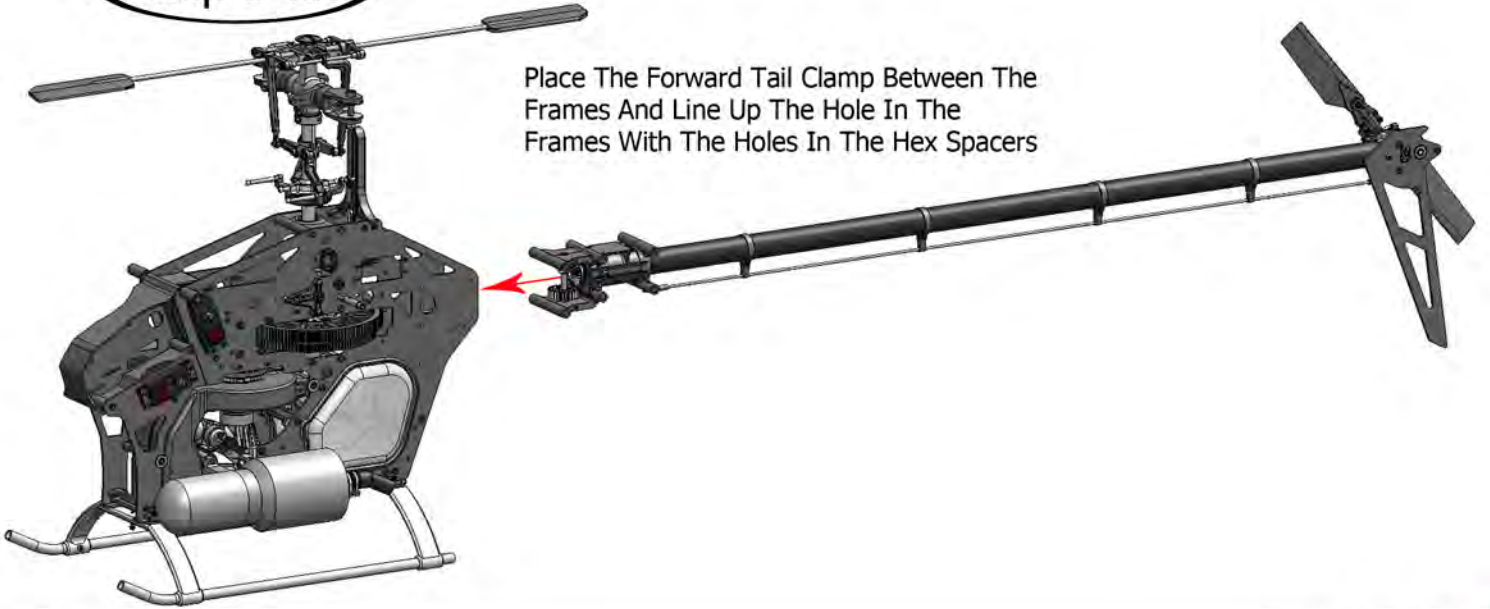


Completed Step View

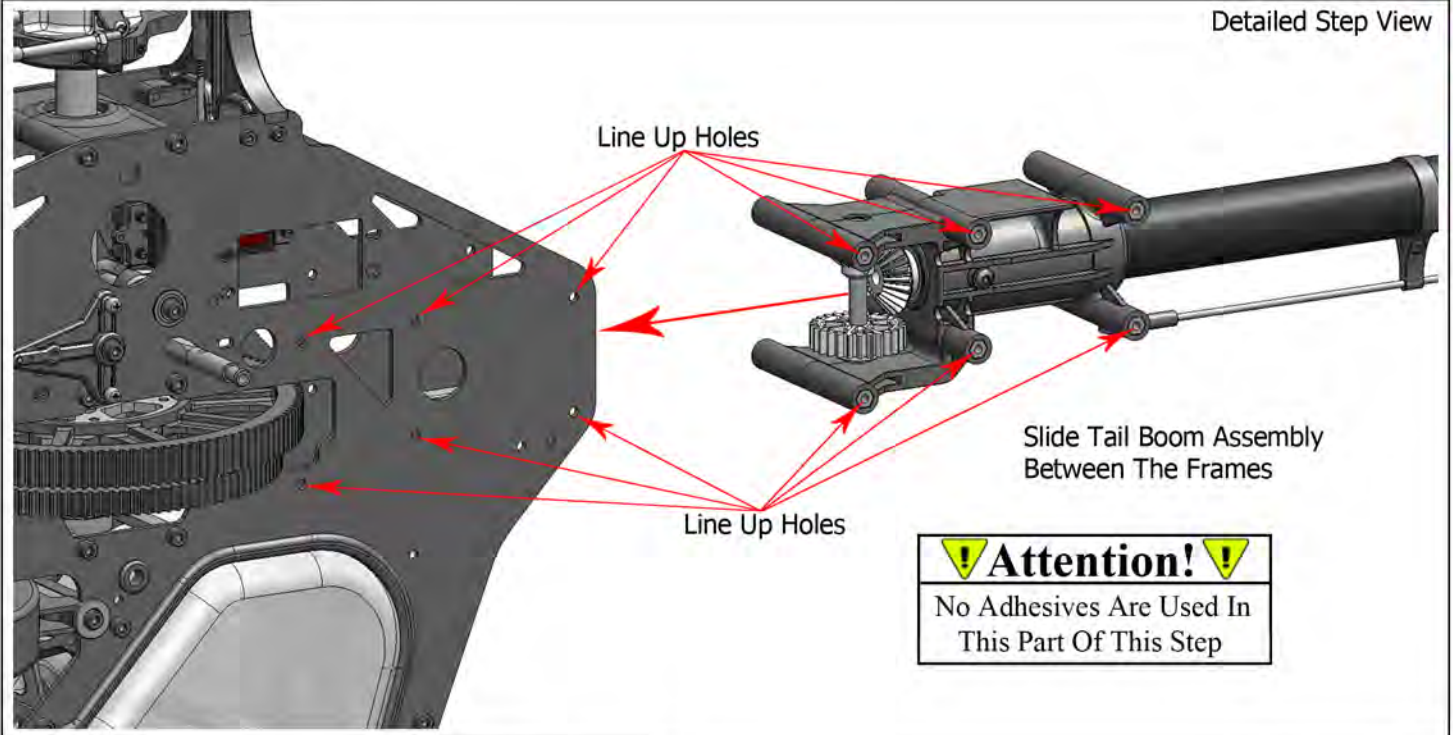
Forward Tail Clamp Half Left

Step 5-15

Place The Forward Tail Clamp Between The Frames And Line Up The Hole In The Frames With The Holes In The Hex Spacers



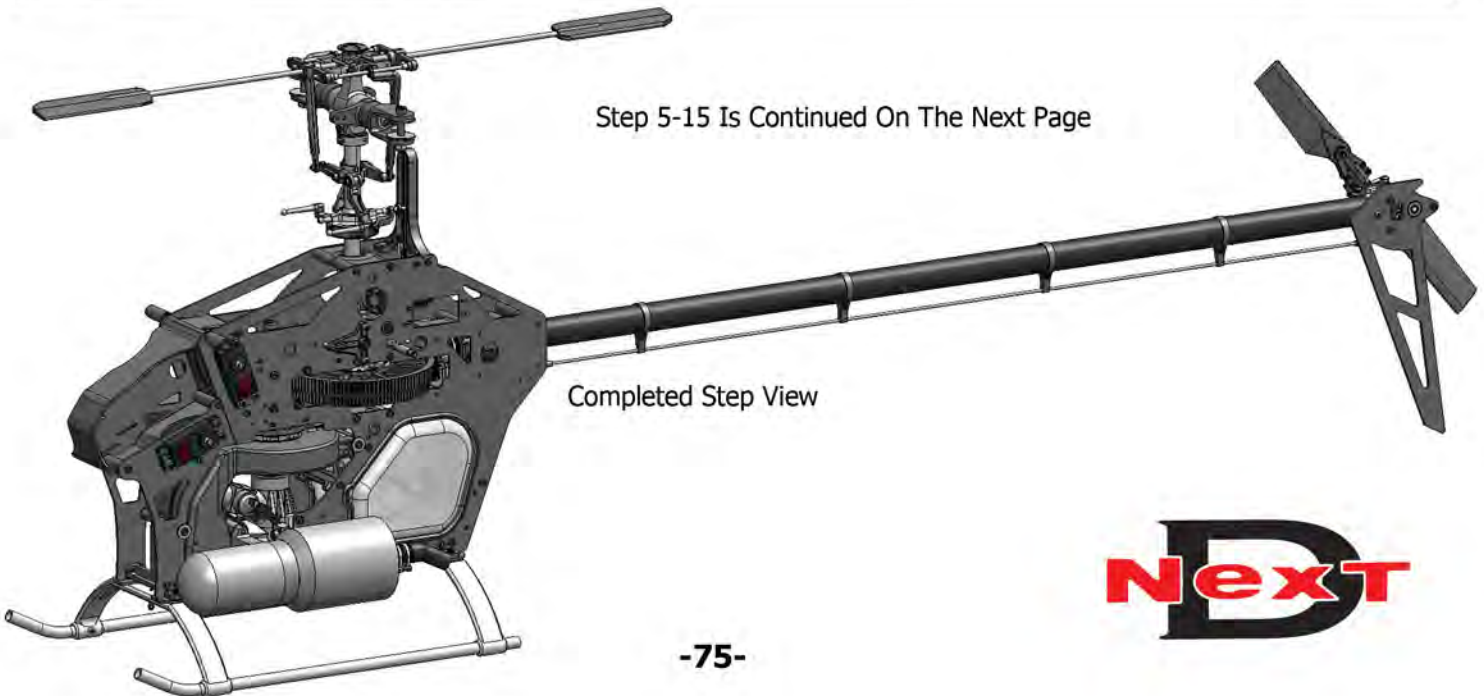
Detailed Step View



! Attention! !
No Adhesives Are Used In This Part Of This Step

Step 5-15 Is Continued On The Next Page

Completed Step View

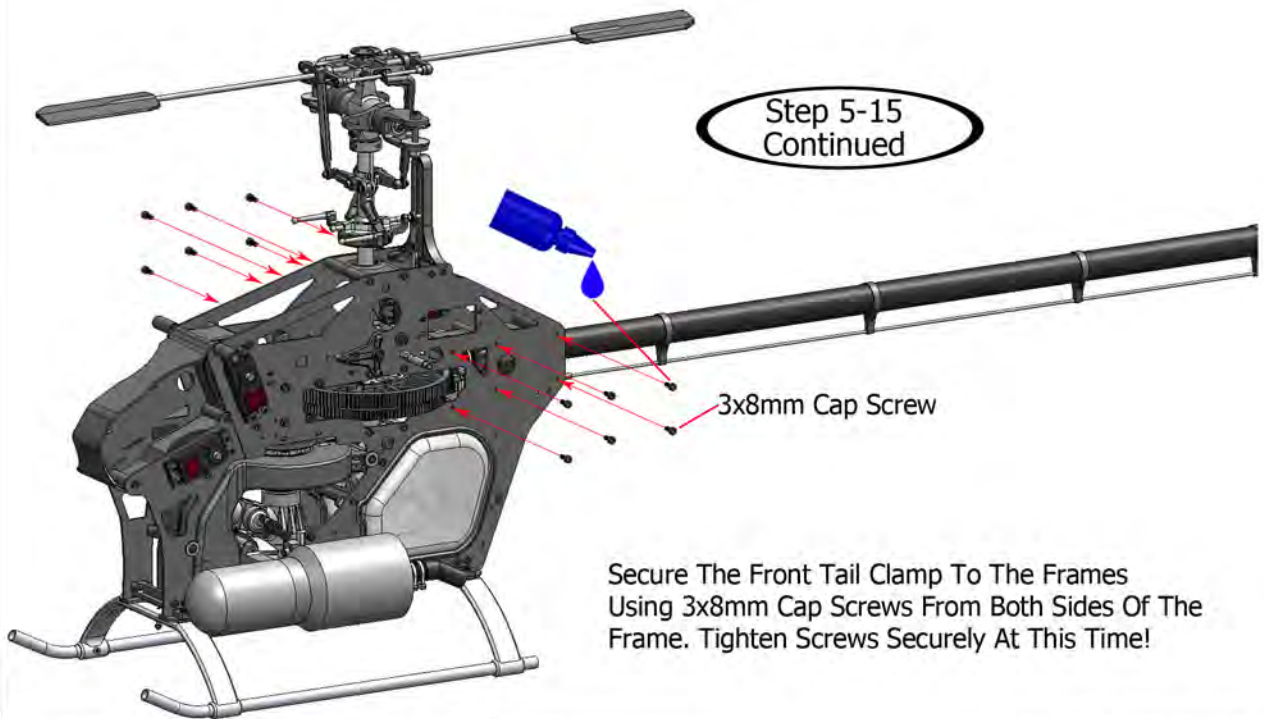


Next



3x8mm Cap Screw - x12 ND-YR-G114

Step 5-15 Continued

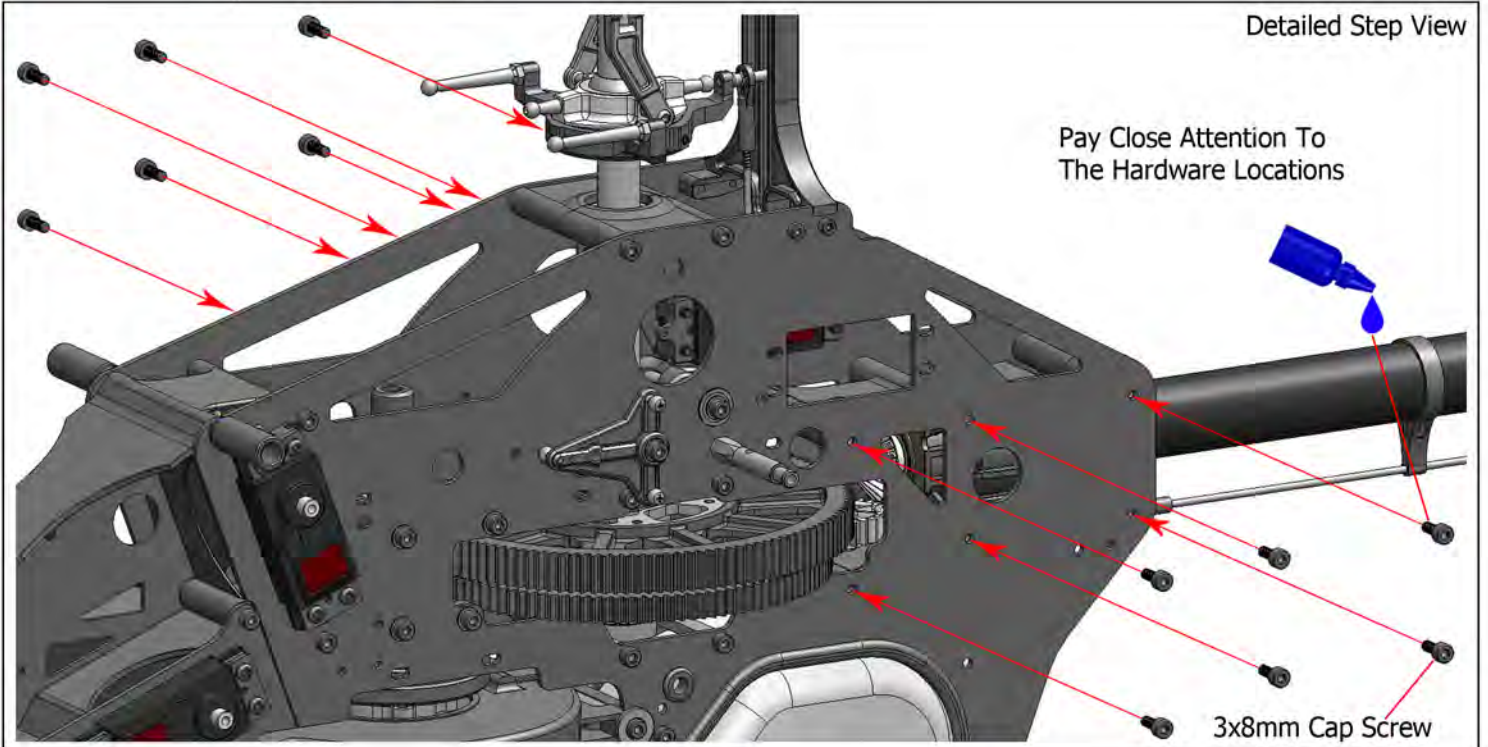


3x8mm Cap Screw

Secure The Front Tail Clamp To The Frames Using 3x8mm Cap Screws From Both Sides Of The Frame. Tighten Screws Securely At This Time!

Step 5-15+

Detailed Step View



Pay Close Attention To The Hardware Locations

3x8mm Cap Screw

! Attention! !
Use Blue Threadlock On All Screws Going Into Metal

Step 5-15 Is Continued On The Next Page



Completed Step View

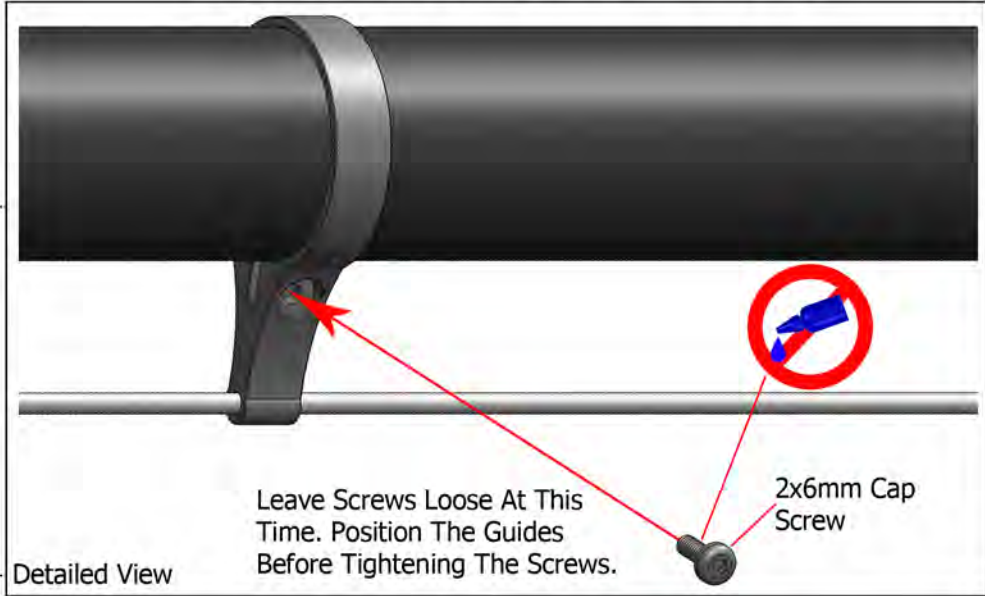


2x6mm Cap
Screw - x4
ND-YR-G023

Step 5-15
Continued



Thread The 2x6mm Cap Screws Into The Tail Pushrod Guides. Do Not Tighten Them At This Time.



Leave Screws Loose At This Time. Position The Guides Before Tightening The Screws.

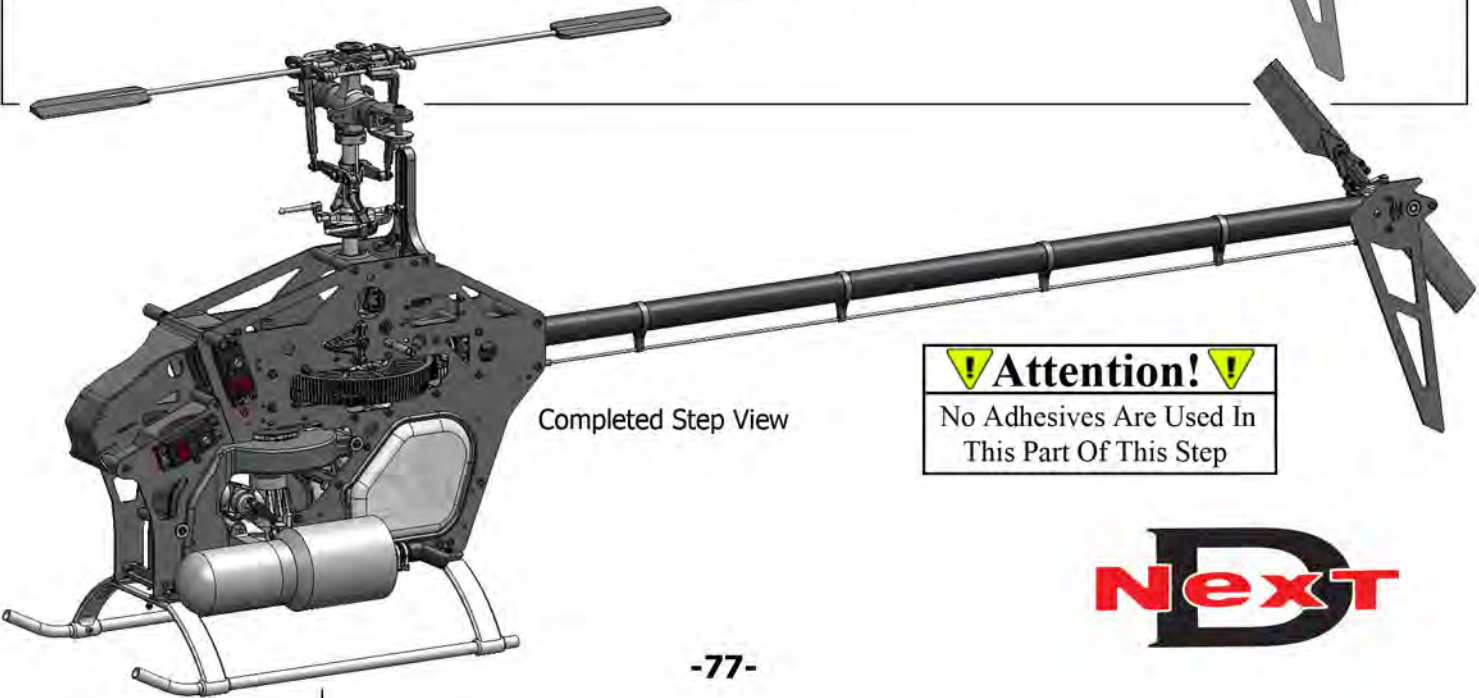
2x6mm Cap Screw

Detailed View

Place The Tail Pushrod Guides In The Indicated Locations And Tighten The 2x6mm Cap Screws Lightly. Be Careful Not To Over Tighten The Screws!



! Attention! !
Do Not Over Tighten Screws
Going Into Plastic Parts



Completed Step View

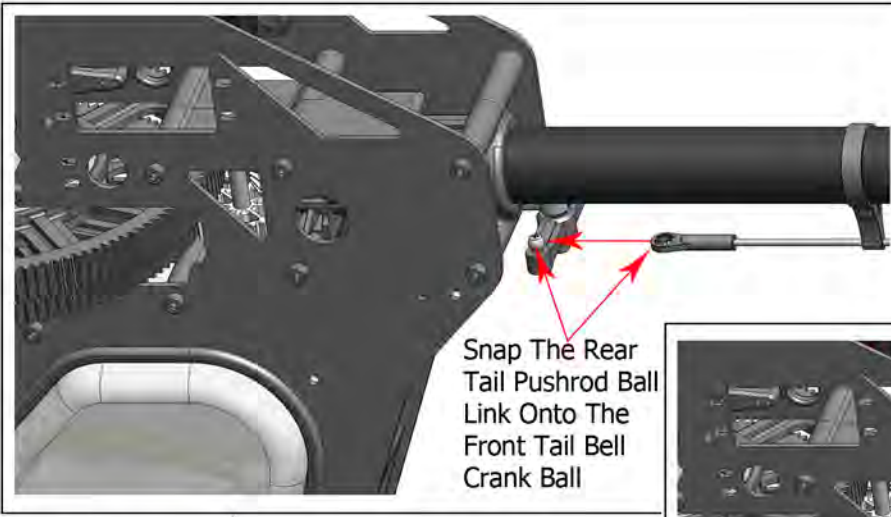
! Attention! !
No Adhesives Are Used In
This Part Of This Step

Next

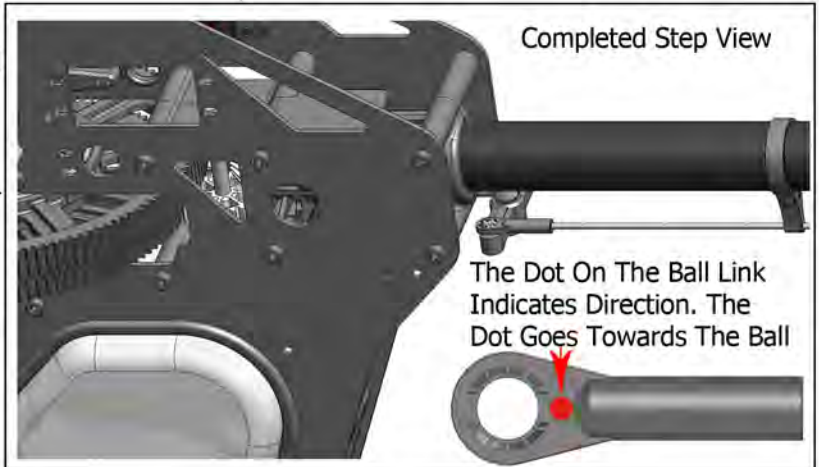
Step 5-15++

Step 5-15
Continued

! Attention! !
No Adhesives Are Used In
This Part Of This Step



Snap The Rear
Tail Pushrod Ball
Link Onto The
Front Tail Bell
Crank Ball



Completed Step View

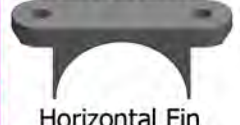
The Dot On The Ball Link
Indicates Direction. The
Dot Goes Towards The Ball

Step 5-16

Leave Screws Loose At This Time!



Horizontal Fin - x1
ND-YR7-TR1020



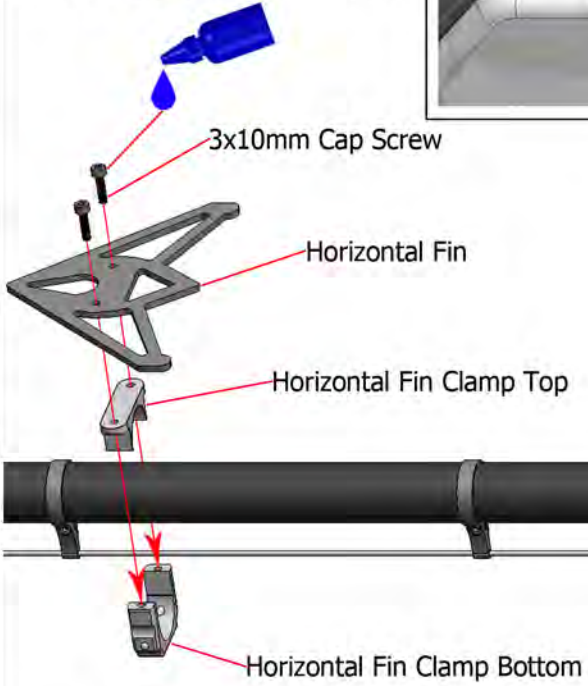
Horizontal Fin
Clamp Top - x1
ND-YR7-TR1021



Horizontal Fin
Clamp Bottom - x1
ND-YR7-TR1019



3x10mm Cap
Screw - x2
ND-YR-G065



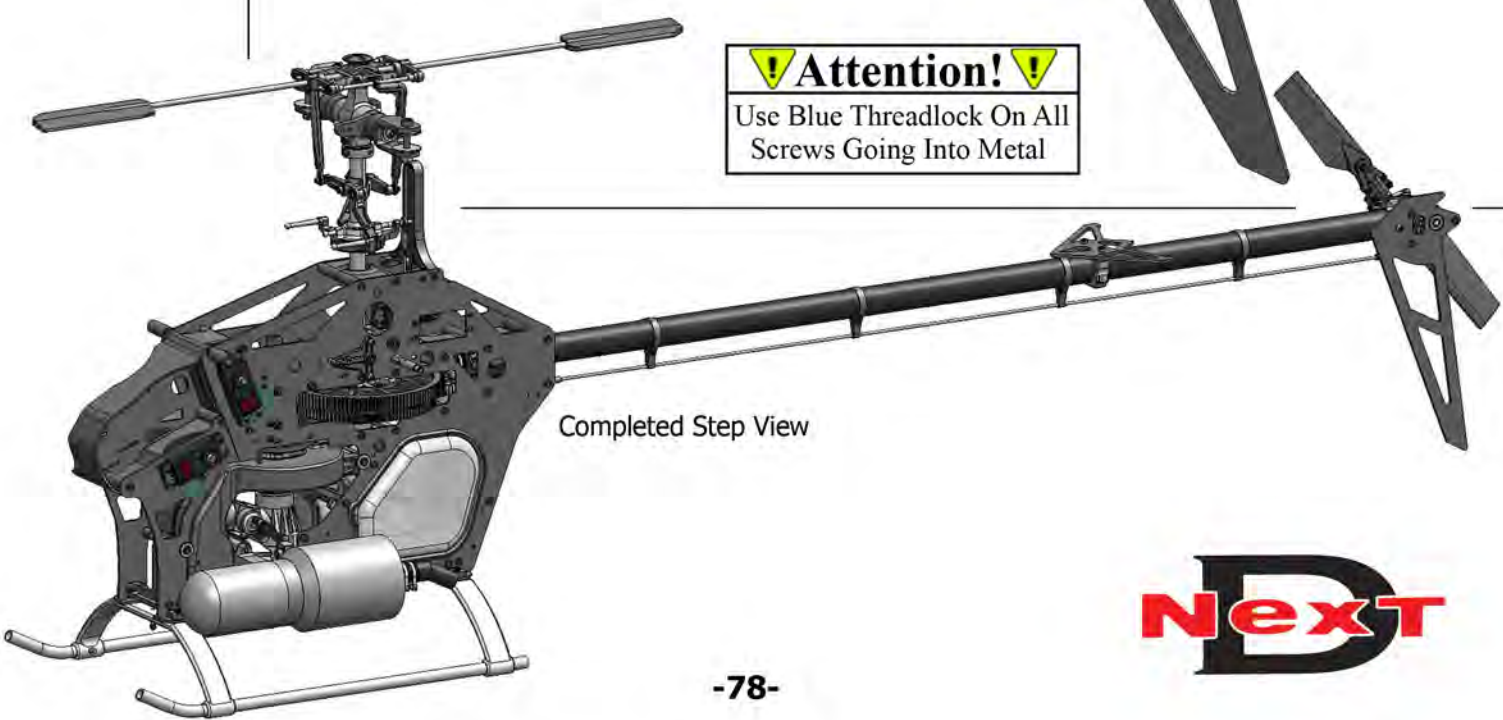
3x10mm Cap Screw

Horizontal Fin

Horizontal Fin Clamp Top

Horizontal Fin Clamp Bottom

! Attention! !
Use Blue Threadlock On All
Screws Going Into Metal

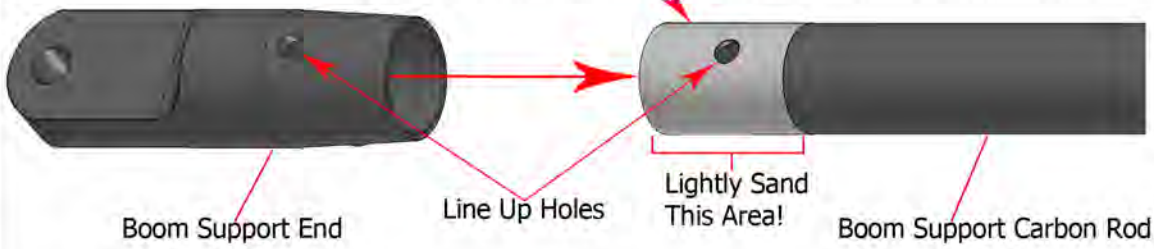


Completed Step View



Step 5-17

Lightly Sand The Area Indicated With Sand Paper. Clean The Area With Alcohol. Also Clean The Inside Of The Boom Support End With Alcohol. Apply JB Weld (Strong 2 Stage Epoxy) To The Indicated Area, Line Up The Holes In The Boom Support End With The Holes In The Boom Support Carbon Rod. Push The Boom Support End Onto The End Of The Carbon Rod. Wipe Away Any Excess Adhesive. Perform This Step On Both Ends Of The Carbon Rod. Be Sure To Install The 2x12mm Shanked Screw Before The Adhesive Cures!



Push The 2x12mm Shanked Screw Through The Boom Support End And Carbon Rod. Thread The Screw In Until Moderately Tight. Do Not Over Tighten The Screw! Repeat This Step On All Of The Boom Support Ends. Set The Boom Support Assemblies Aside Until The Adhesive Has Completely Cured.



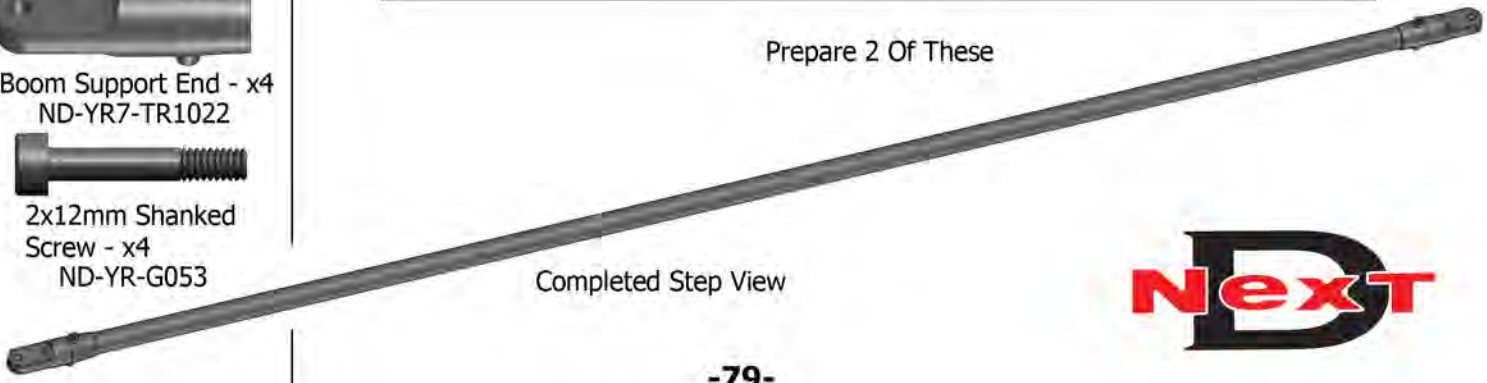
! Attention! !
Do Not Over Tighten Screws Going Into Plastic Parts

! Attention! !
Do Not Use Threadlock On Any Screws Going Into Plastic



Prepare 2 Of These

- Boom Support Carbon Rod - x2
ND-YR7-TR1023
- Boom Support End - x4
ND-YR7-TR1022
- 2x12mm Shanked Screw - x4
ND-YR-G053



Completed Step View



Step 5-17

Step 5-18



3x18mm Cap Screw - x2
ND-YR-G133



3x10mm Cap Screw - x2
ND-YR-G065



M3 Washer - x4
ND-YR-G094

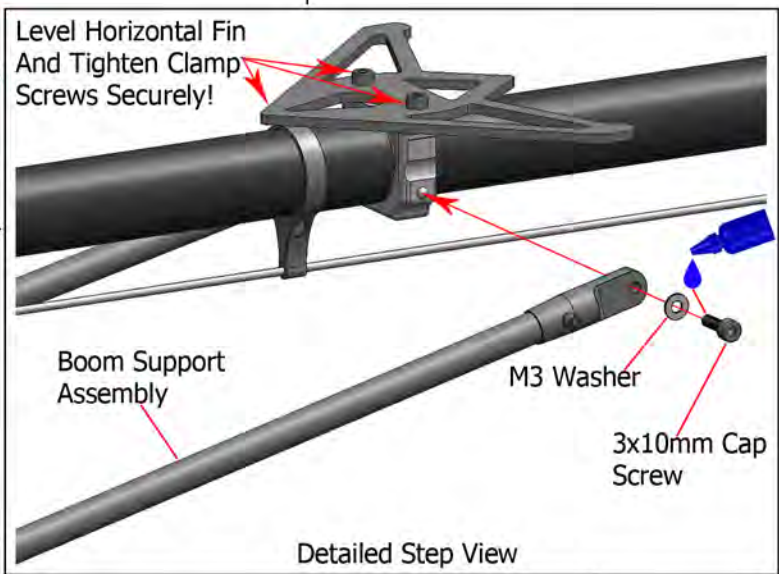
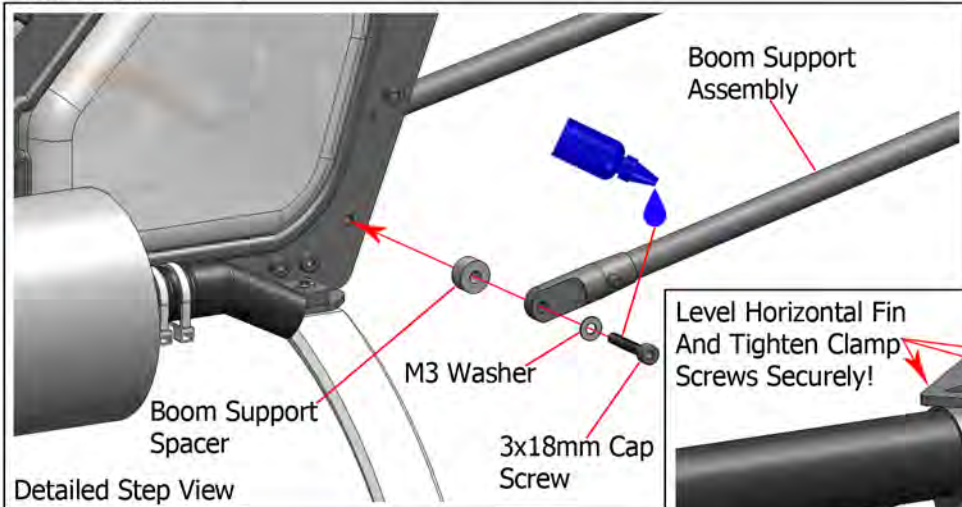


Boom Support Spacer - x2
ND-YR-G165

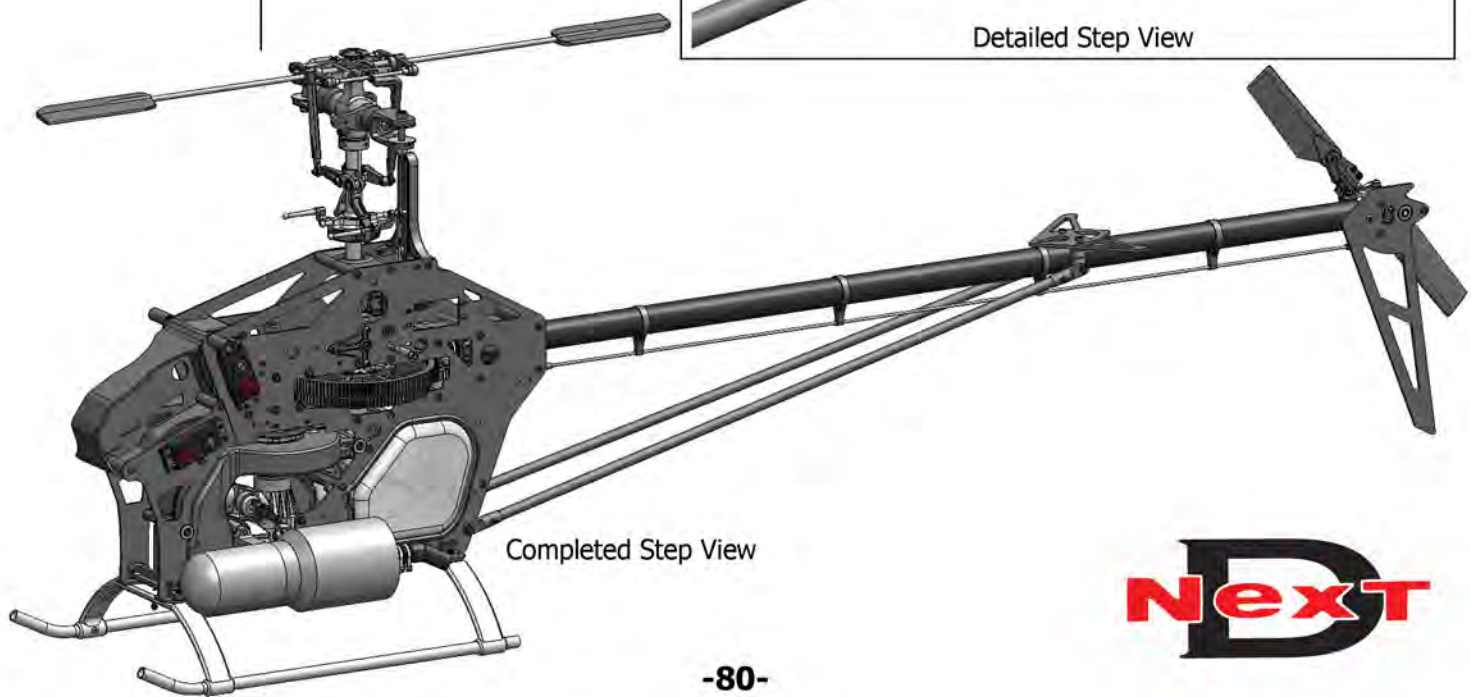


Mount One End Of The Boom Support To The Horizontal Fin Clamp And The Other End On The Lower Part Of The Main Frames Where Indicated. Pay Close Attention To The Sizes And Locations Of The Hardware Used In This Step. Tighten Screws Securely!

Step 5-18



! Attention! !
Use Blue Threadlock On All Screws Going Into Metal



Step 5-19



Boom Support Bridge Half - x2
ND-YR-TR1024



3x10mm Cap Screw - x1
ND-YR-G065



M3 Washer - x2
ND-YR-G094

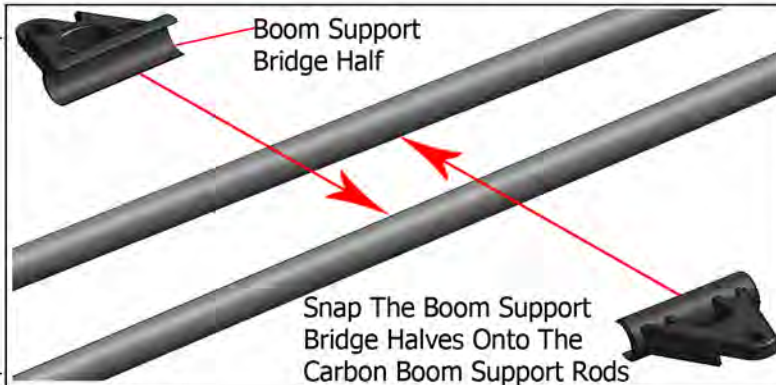


M3 Lock Nut - x1
ND-YR-G035

Small Zip Ties - x4
ND-YR-G045

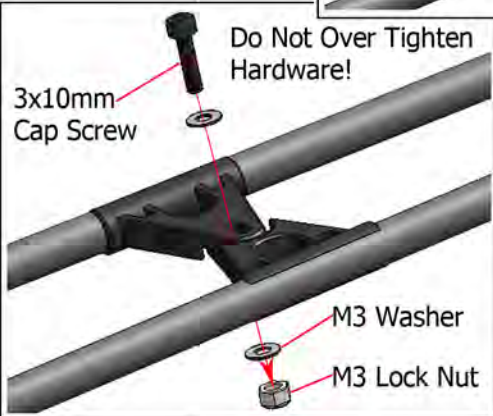


Snap The Boom Support Bridge Halves Onto The Carbon Boom Support Rods. Using The Included Hardware Secure The Two Halves Together. Do Not Over Tighten Hardware. Secure To The Carbon Rods Using The Included Zip Ties. Trim Off Any Excess Zip Tie Material.



Boom Support Bridge Half

Snap The Boom Support Bridge Halves Onto The Carbon Boom Support Rods



Do Not Over Tighten Hardware!

3x10mm Cap Screw

M3 Washer

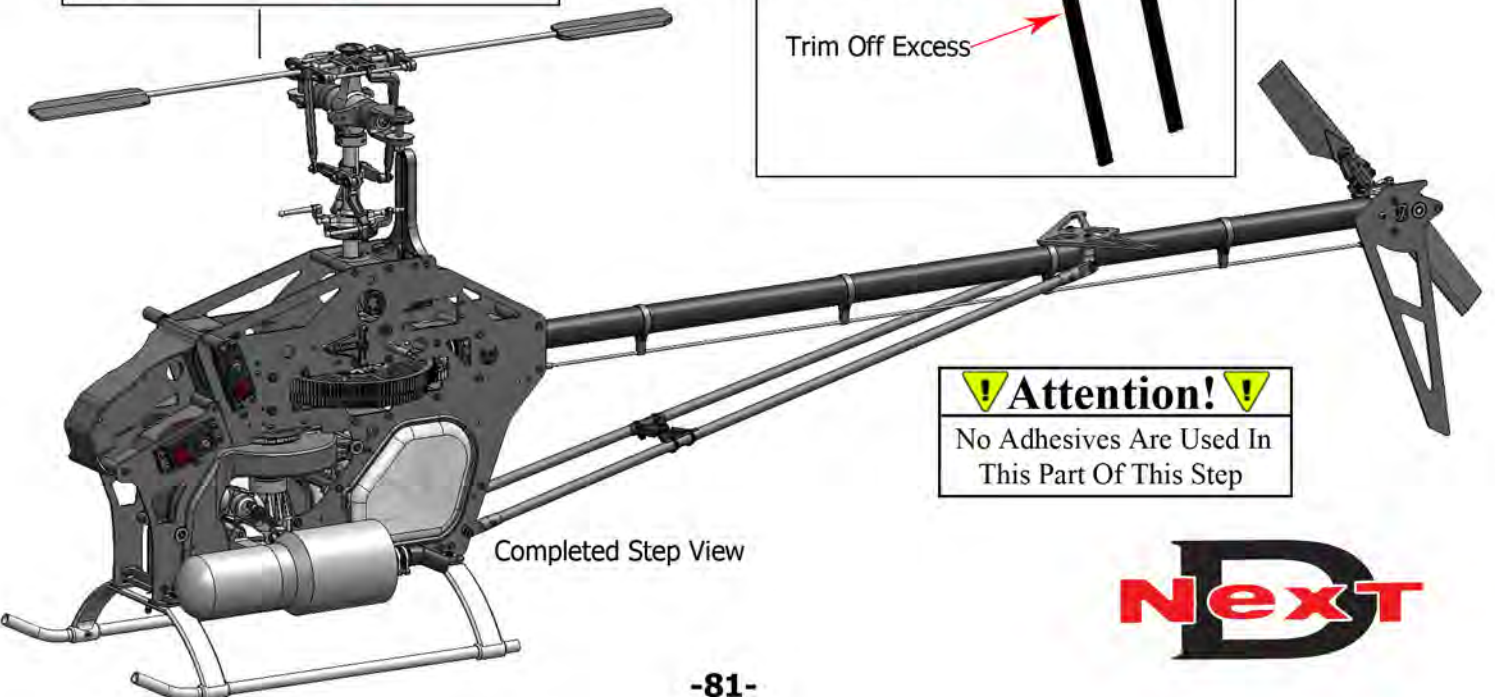
M3 Lock Nut



Feed Zip Ties Through The Slots And Pull Tight

Small Zip Ties

Trim Off Excess



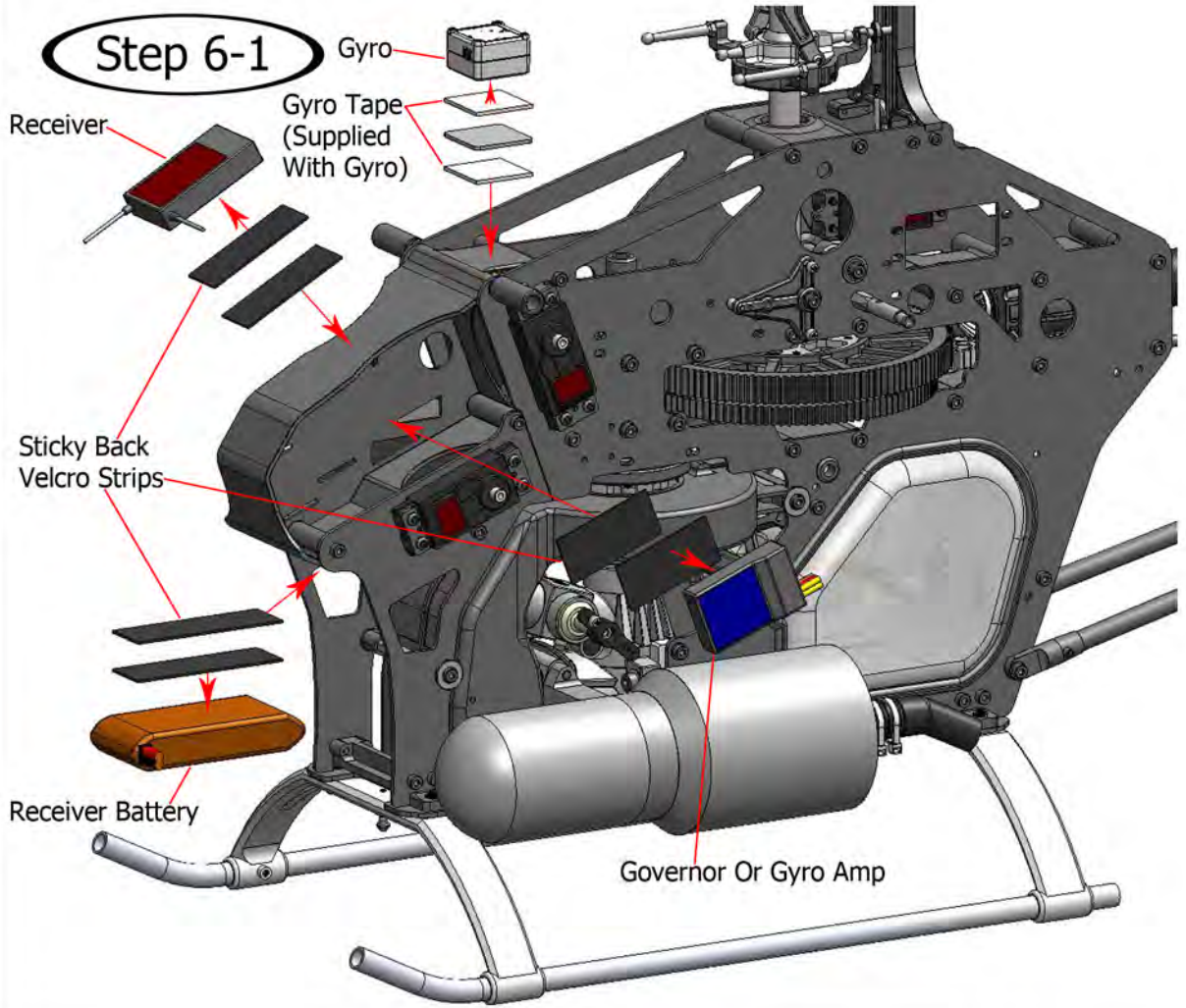
Completed Step View

! Attention! !
No Adhesives Are Used In This Part Of This Step



Step 5-19

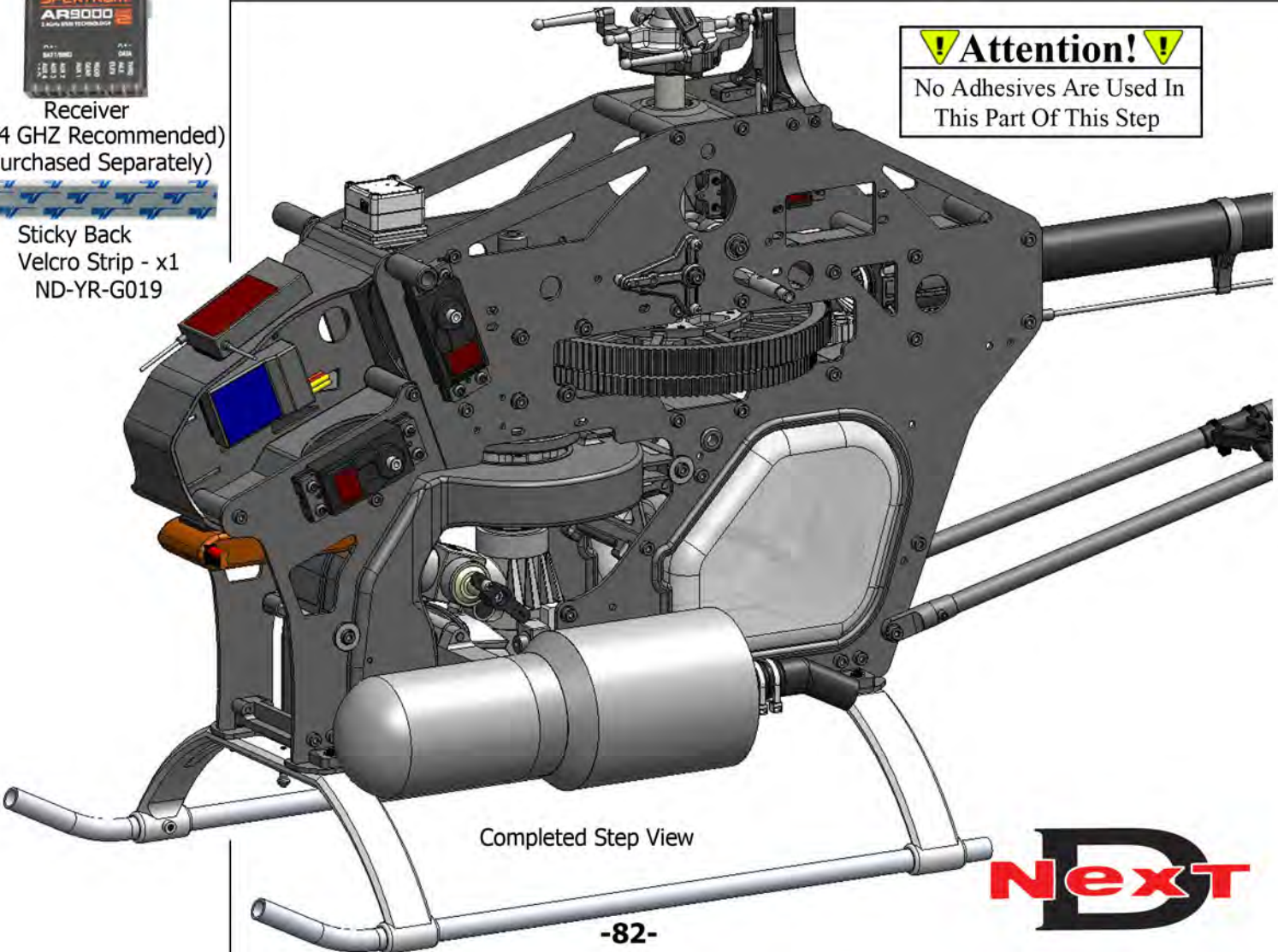
Step 6-1



Step 6-1



! Attention! !
No Adhesives Are Used In
This Part Of This Step



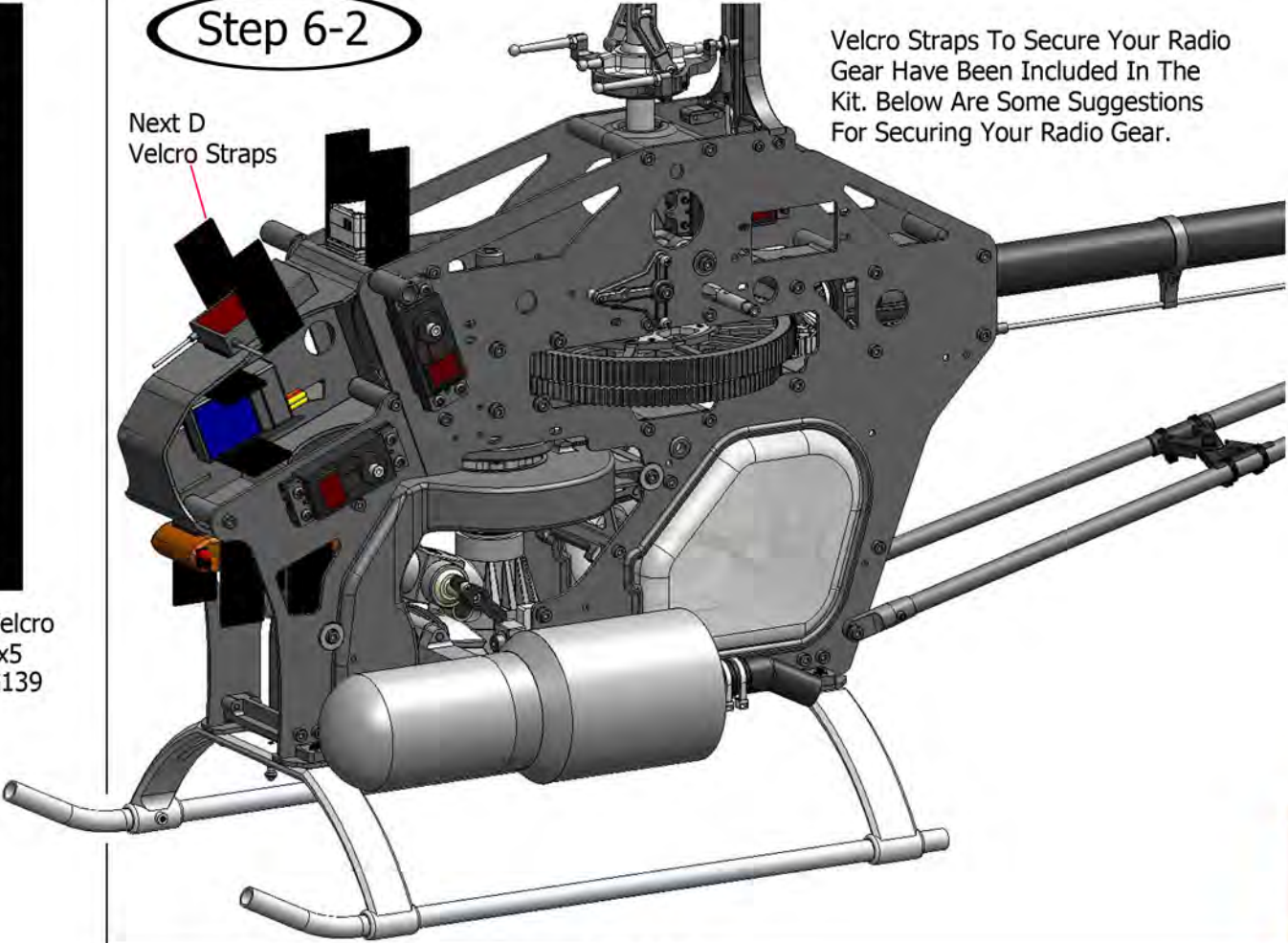
Next



Step 6-2

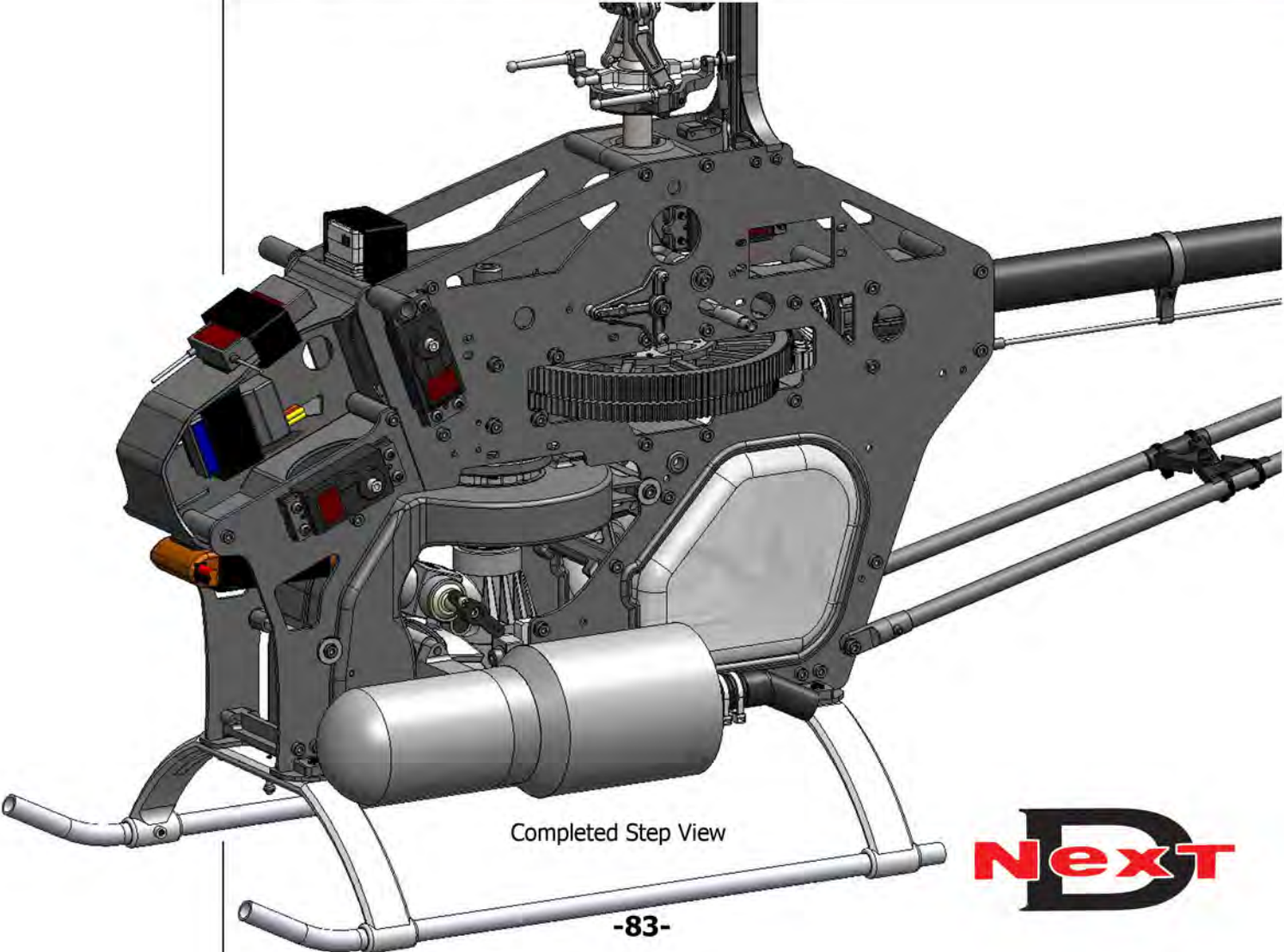
Velcro Straps To Secure Your Radio Gear Have Been Included In The Kit. Below Are Some Suggestions For Securing Your Radio Gear.

Next D
Velcro Straps



Next D Velcro Straps - x5
ND-YR-G139

Step 6-2

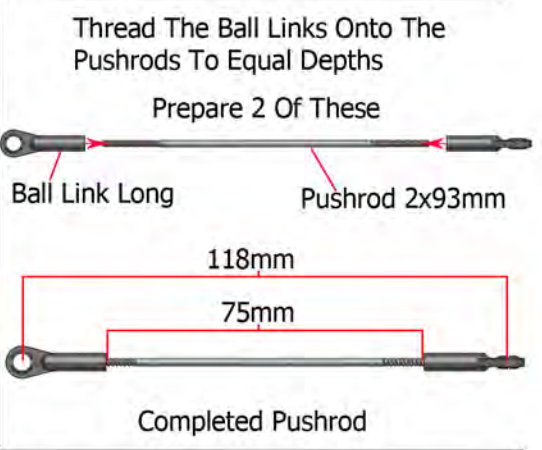
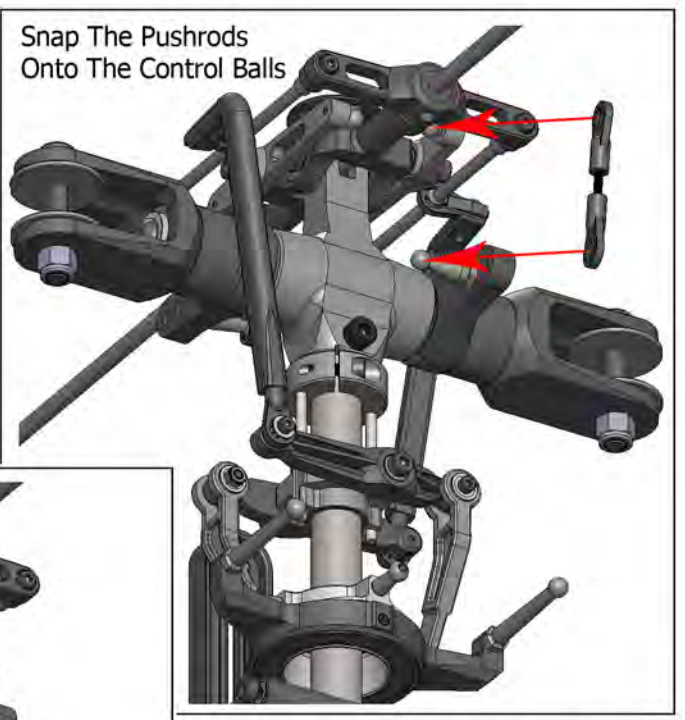
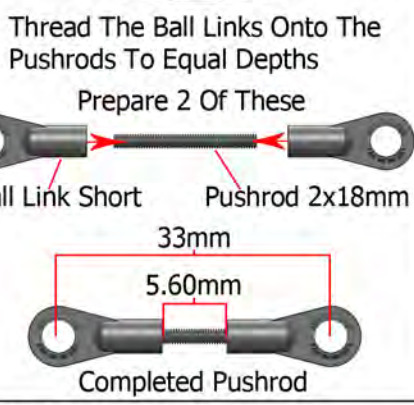


Completed Step View

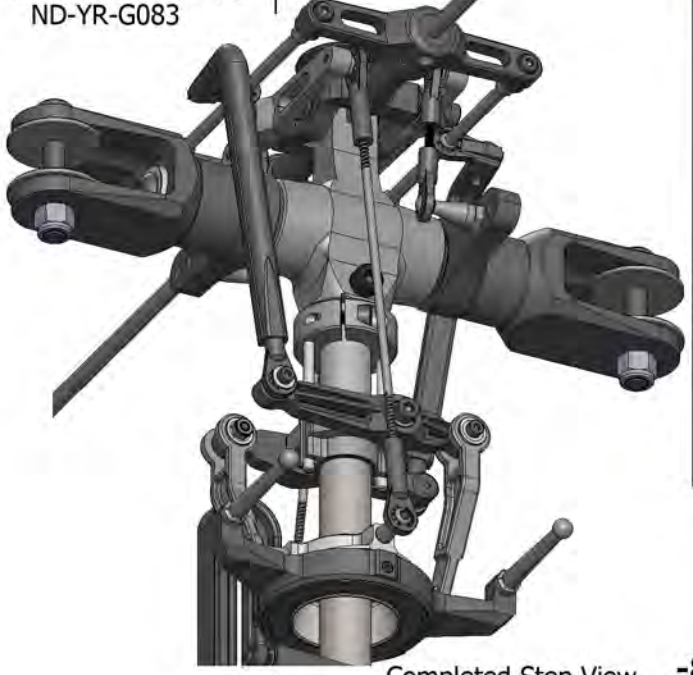
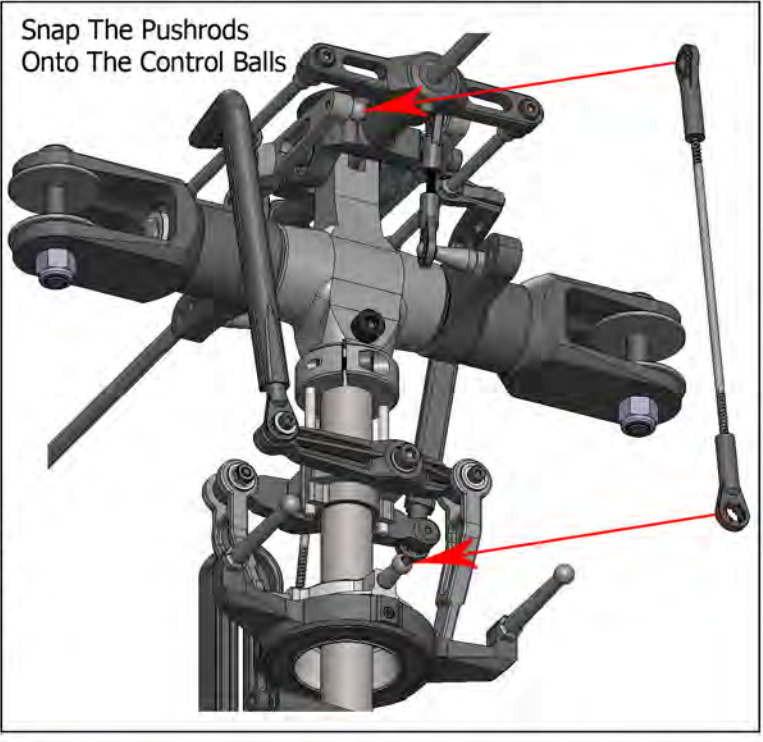
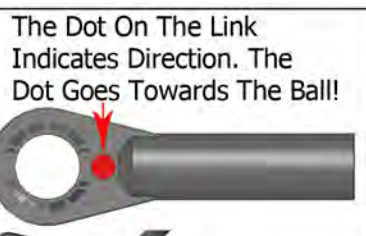


Step 6-3

- Ball Link Short - x4 ND-YR-G078
- Ball Link Long - x4 ND-YR-G077
- Pushrod 2x18mm - x2 ND-YR-G084



- Pushrod 2x93mm - x2 ND-YR-G083

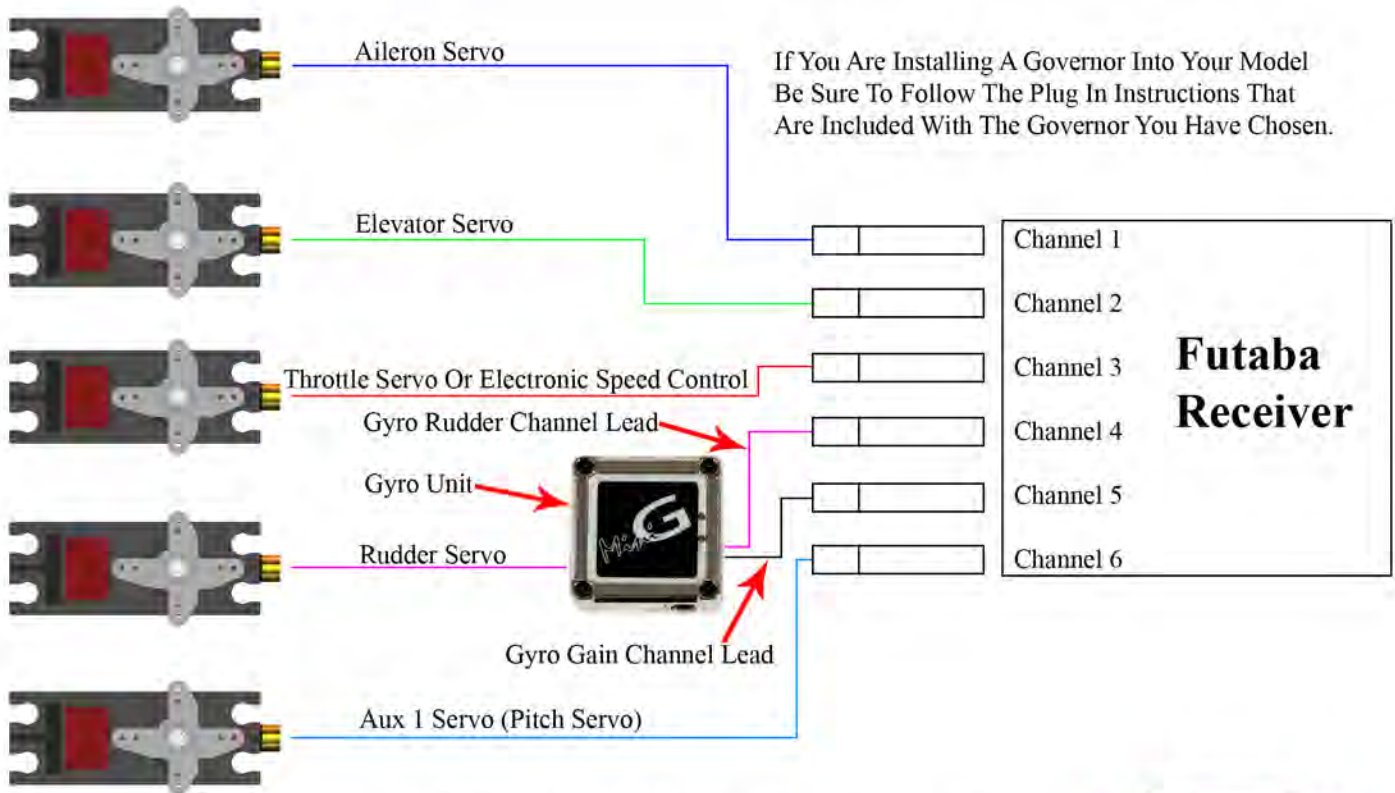
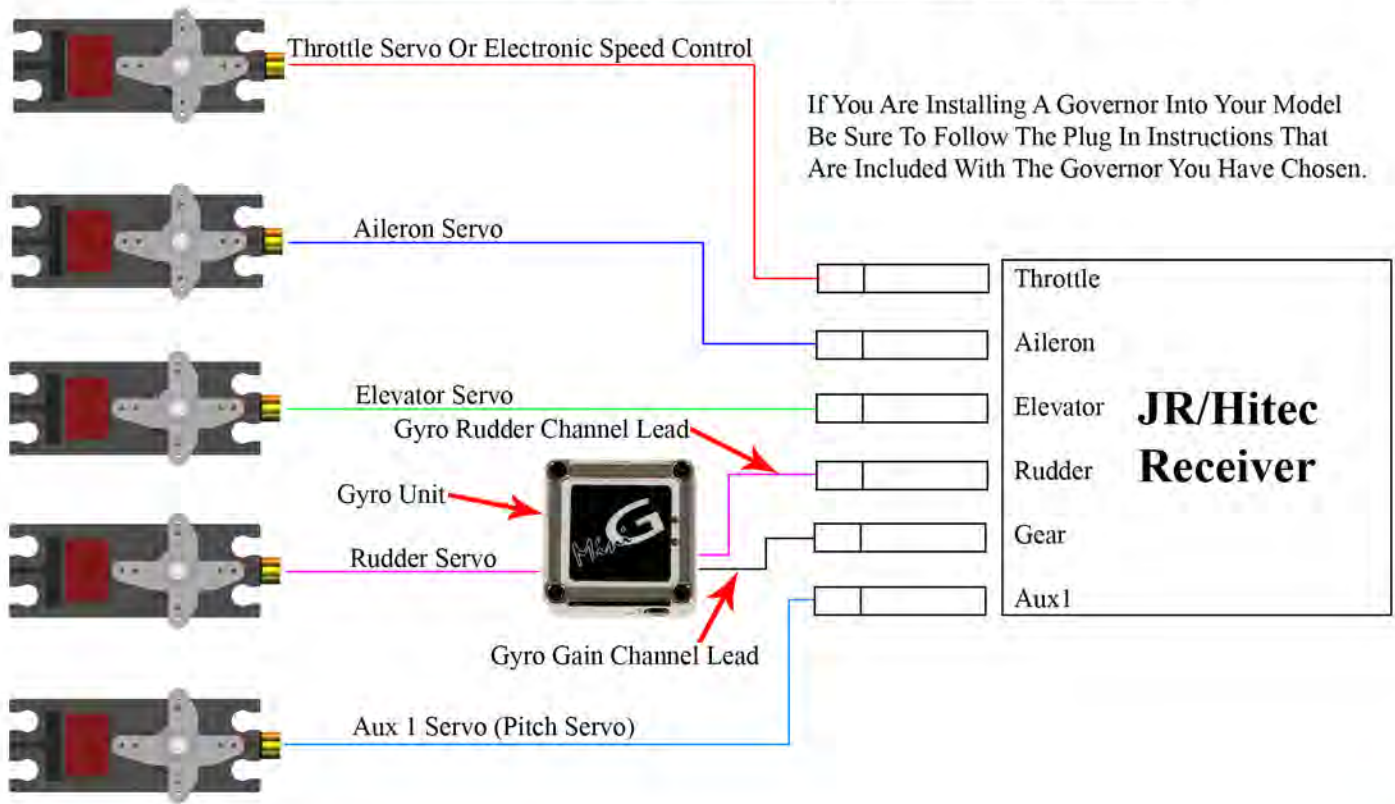


! Attention! !
No Adhesives Are Used In This Part Of This Step



Step 6-3

Rave ENV Radio Plug In Diagram



Pay Close Attention To The Positive (+) And Negative (-) Directions Of The Plugs On Your Radio Gear. Failure To Plug Radio Gear In Correctly Can Lead To Equipment Failure And Or Damage To Your Model.

Step 6-4 Radio Setup

This section covers setting up the push rods and servos that will control your model helicopter. It is very important at this time that you review the instructions provided with the transmitter, gyro, electronic speed control (electric only), and governor (optional) you have chosen. If this is your first model helicopter it is recommended you seek the assistance of experienced RC helicopter modelers. A local flying field, hobby shop, or RC club is a great source for help and valuable information.

Warning! Warning! Warning!

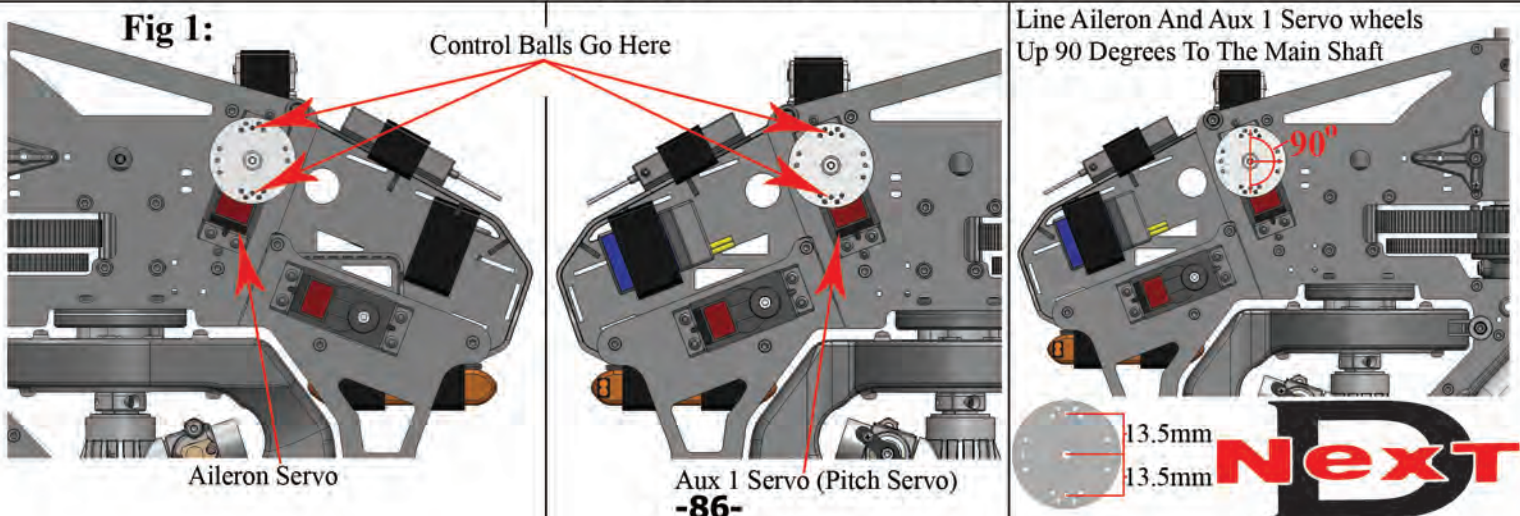
(Electric only)

Before proceeding with radio programming make 100% sure the motor has been deactivated. It is best to unplug 2 of the wires from the motor and the Electronic Speed Control (ESC) before you plug the battery into the ESC for the first time. It is recommended you do this anytime you are going to perform programming adjustments on your model. Failure to follow this step can result in the model spinning up and hitting you. Great care is needed to make sure the model is set up safely.

Radio Setup Procedure For Nitro And Electric

1. It is best to choose a new model memory when you begin programming your transmitter. If you are unsure if the model memory you have chosen has been used or not, use the reset function on the transmitter to return the memory to factory settings.
2. Check to make sure that all of the trims and sub-trims in the transmitter are set to their neutral positions.
3. Locate and activate the swashplate mixing for 120° or 140° CCPM mixing in the transmitter. Most transmitters are set to single servo pitch as default from the factory, so be sure your transmitter is set correctly before proceeding.
4. Adjust the servo reversing function in the transmitter, if needed, to make sure all of the servos travel in the correct directions. See pages 87 and 88 for a full illustration of correct servo directions. If servo reversing does not correct any servo travel direction issues, you can adjust the travel percentage in the swashplate mixing to get the desired results. Example: if you adjust the percentage for the Aileron from +60% to -60% in the transmitter's swashplate mixing function, it will reverse the travel direction of the Aileron inputs from the transmitter. The same applies to both the Pitch and Elevator channels.
5. After you have verified the servos are traveling in the correct direction, make sure to check the pitch curve function of the transmitter. Make sure it is set to factory settings (a straight line, 0 to 100%) before moving on to mounting the servo horns.
6. Set the collective stick on the transmitter to exactly 50% of its travel (50% in and 50% out). This can be observed in the transmitter's collective pitch curve function. With the collective in the center of its travel, you can start to position your servo horns. The servo horn direction can be seen below in Fig 1. Most major servo manufacturers number their servo horns on the back side to note spline orientation. This number corresponds to a small spline offset between the different horns. With enough attention to detail you can usually find servo horns that will line up correctly without the use of sub-trim. Should sub-trim be needed, it is recommended you use only a small amount. If an excess amount (over 50 units) is required, we suggest you locate new servo horns.

Step 6-4 Is Continued On The Next Page



Checking Servos For Correct 140° CCPM Direction

Below are examples of the directions your servo wheels should move with a given transmitter input. We suggest you refer to the instruction manual for your transmitter for CCPM servo setup procedures. These instructions are for mode 2 ONLY.

Right Aileron Input

Counter Clockwise Rotation

Stationary

Clockwise Rotation



Left Aileron Input

Clockwise Rotation

Stationary

Counter Clockwise Rotation



Back Elevator Input

Clockwise Rotation

Clockwise Rotation



Forward Elevator Input

Counter Clockwise Rotation

Counter Clockwise Rotation



Positive Collective Input

Counter Clockwise Rotation

Clockwise Rotation

Counter Clockwise Rotation



Negative Collective Input

Clockwise Rotation

Counter Clockwise Rotation

Clockwise Rotation



Some Parts Have Been Hidden To Show Detail

Checking Servos For Correct 120° CCPM Direction

Below are examples of the directions your servo wheels should move with a given transmitter input. We suggest you refer to the instruction manual for your transmitter for CCPM servo setup procedures. These instructions are for mode 2 ONLY.

Setup

Right Aileron Input

Clockwise Rotation

Stationary

Counter Clockwise Rotation



Left Aileron Input

Counter Clockwise Rotation

Stationary

Clockwise Rotation



Back Elevator Input

Counter Clockwise Rotation

Clockwise Rotation

Counter Clockwise Rotation



Forward Elevator Input

Clockwise Rotation

Counter Clockwise Rotation

Clockwise Rotation



Positive Collective Input

Clockwise Rotation

Clockwise Rotation

Clockwise Rotation



Negative Collective Input

Counter Clockwise Rotation

Counter Clockwise Rotation

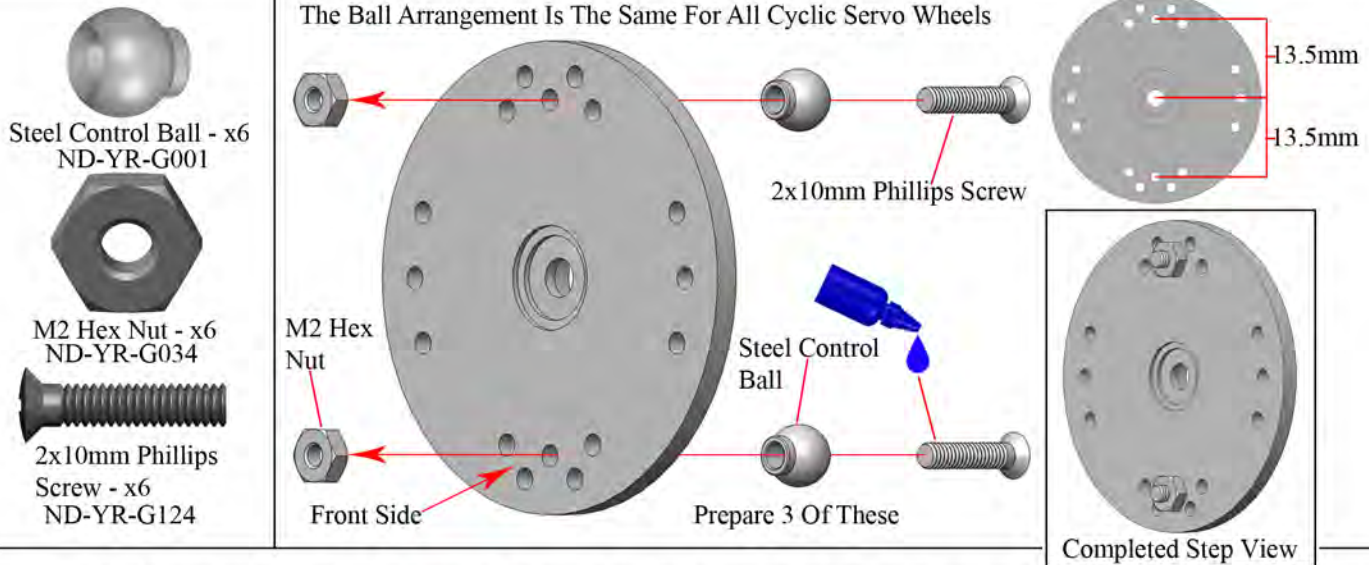
Counter Clockwise Rotation



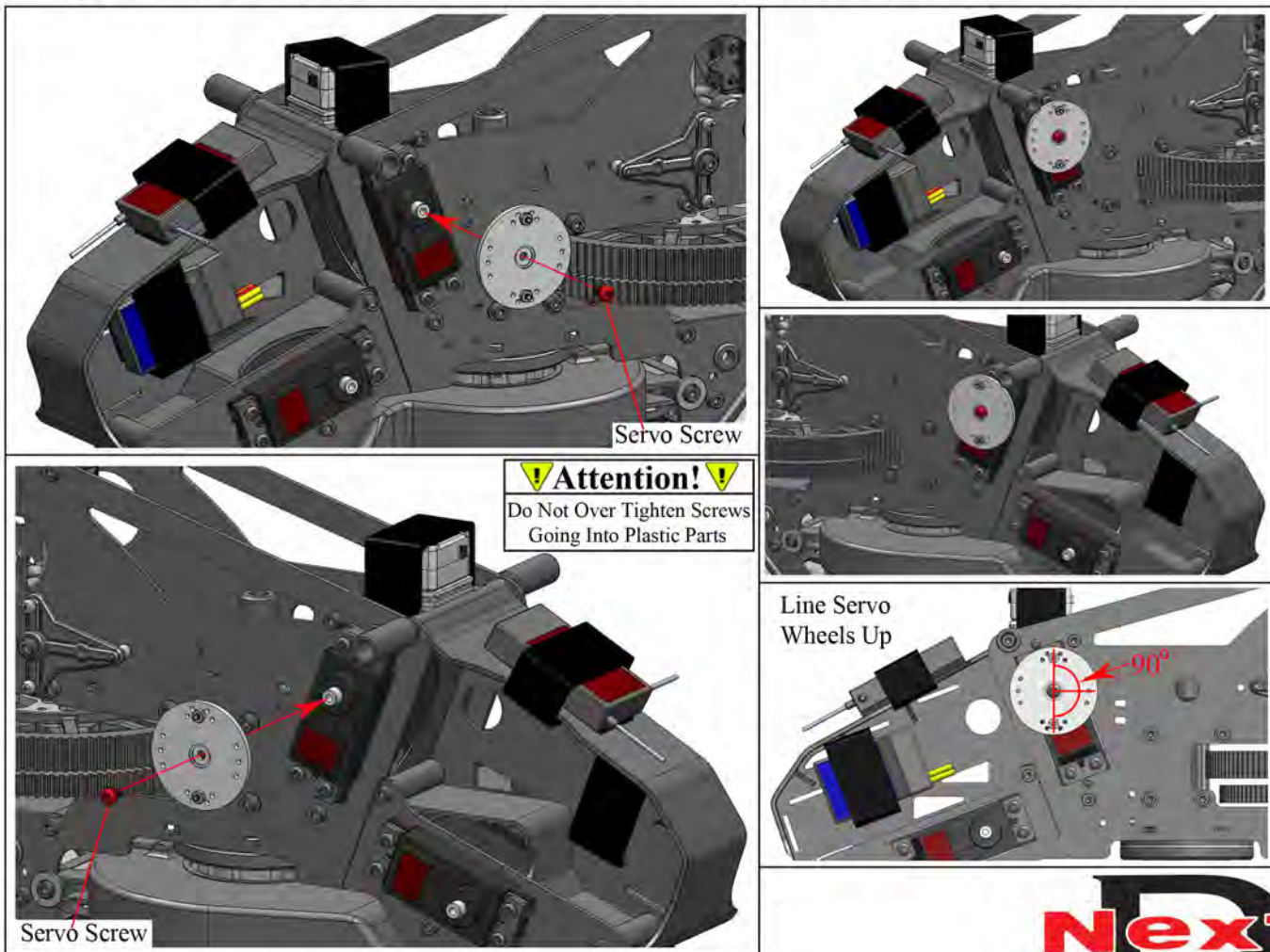
Some Parts Have Been Hidden To Show Detail

Step 6-4 Radio Setup Continued

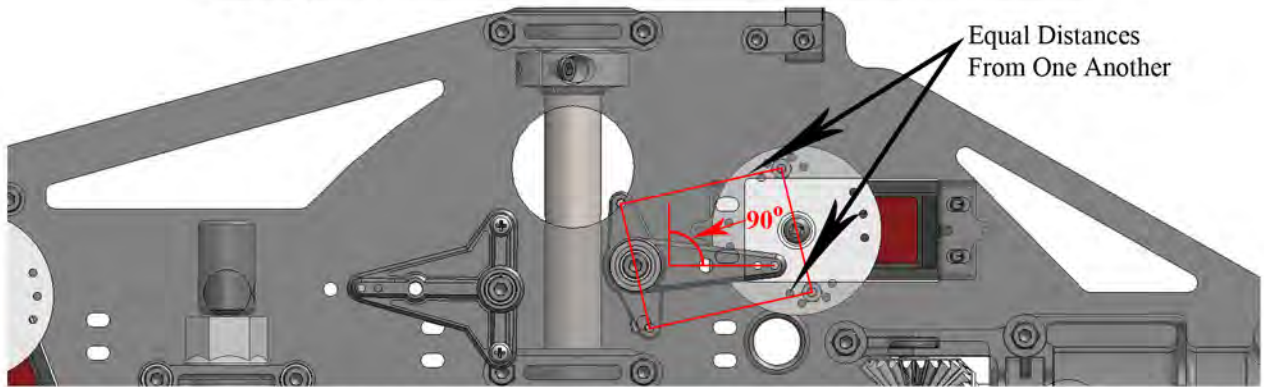
7. After you have selected the servo wheels that line up best, it is time to install the control balls. We recommend you do this one servo at a time to avoid mixing up the servo wheels you have selected. Before removing any of the servo wheels from the servos, mark the hole that is to be used for the control ball with a marker or felt tip pen. This will help keep from mounting the ball in the incorrect hole. Observe which side of the servo wheel the balls are mounted on below.



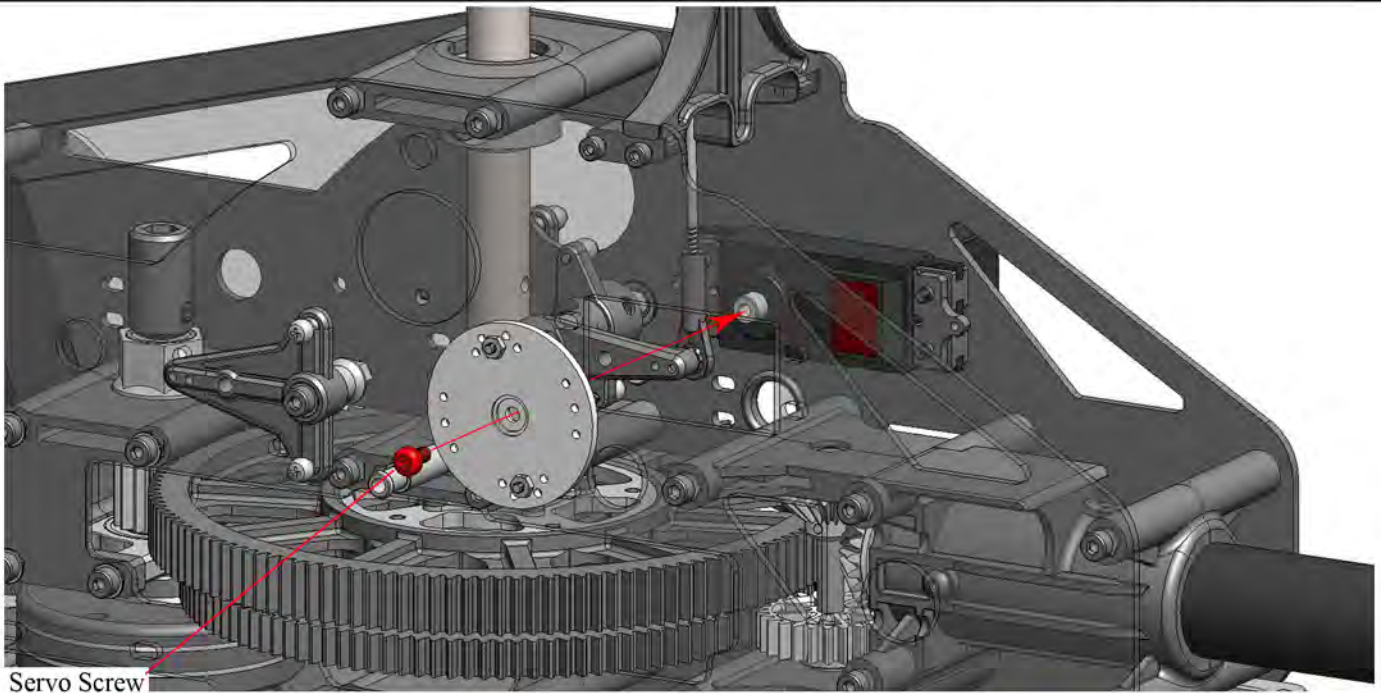
8. If your model is being built as an electric, be sure the motor in the helicopter has been deactivated. Turn the transmitter and model on. Reset the collective stick to 50% of its travel before you reinstall the servo wheels. Be sure the aileron and Aux 1 (Pitch servo) servo wheels are lined up 90 degrees to the main shaft. The screws used to secure the servo wheels are supplied with the servos, they are not in the kit. Be sure not to overtighten screws going into plastic parts.



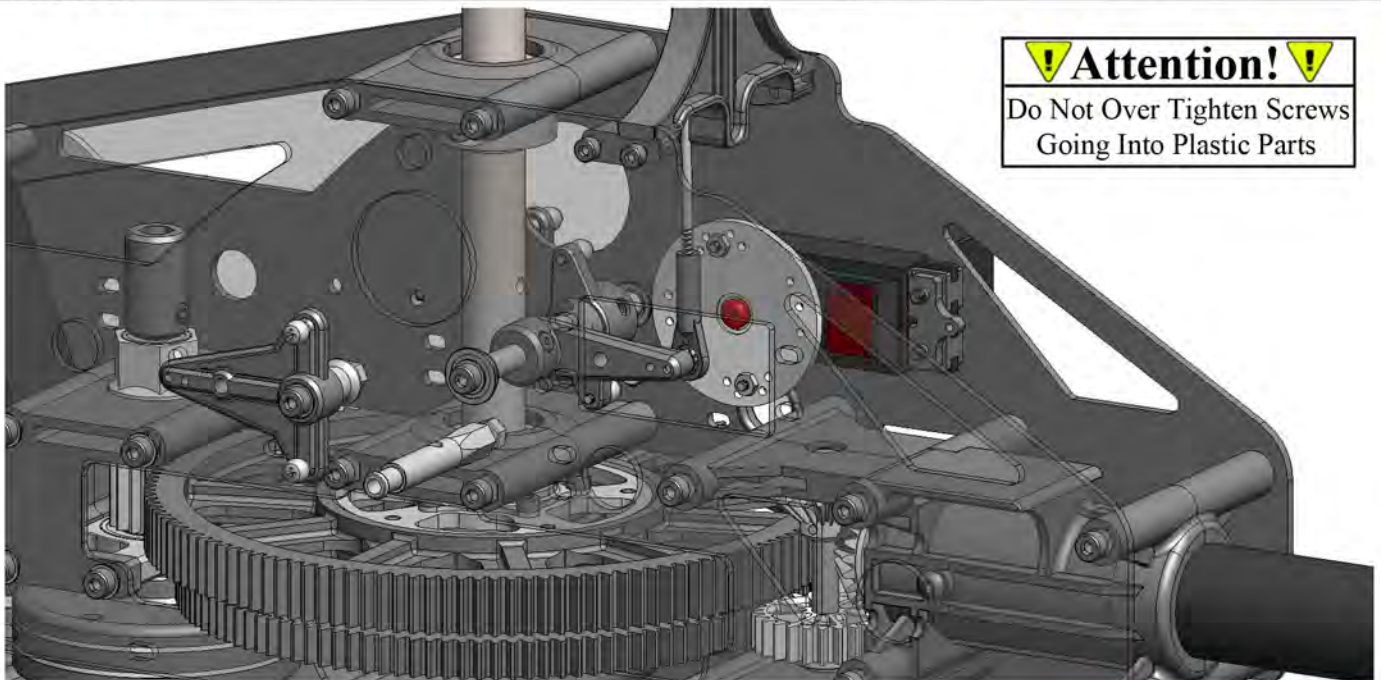
Step 6-4 Radio Setup Continued



9. Set the long arm on the elevator control arm 90 degrees to the main shaft. Line the elevator servo wheel up with the 2 short arms on the elevator control arm. Both of the balls on the elevator servo wheel should be at the same distances from the balls on the short arms on the elevator control arm. If they are not, you may have control interaction and or binding.



Servo Screw

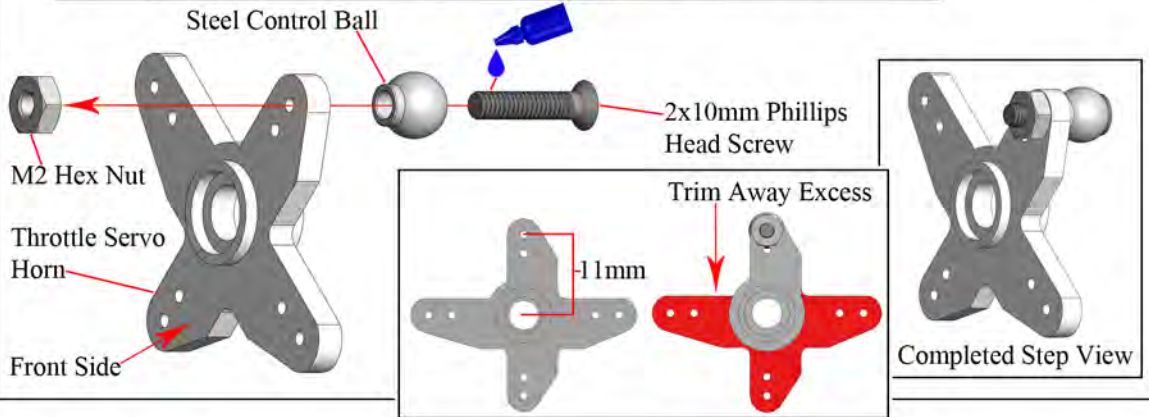


⚠ Attention! ⚠
Do Not Over Tighten Screws
Going Into Plastic Parts

Next

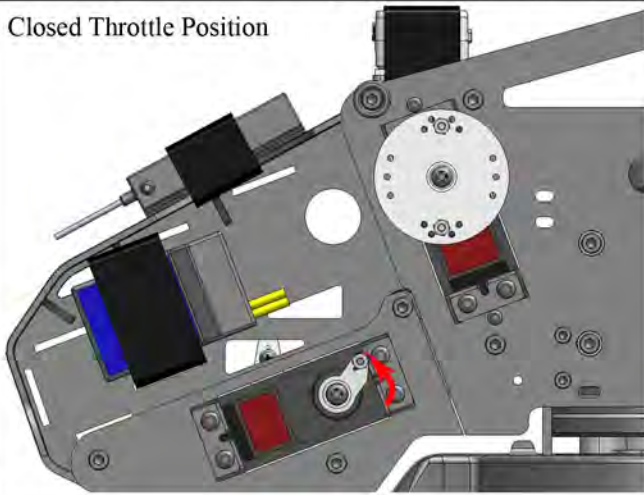
Step 6-4 Radio Setup Continued

- Steel Control Ball - x1
ND-YR-G001
- M2 Hex Nut - x1
ND-YR-G034
- 2x10mm Phillips
Head Screw - x1
ND-YR-G124

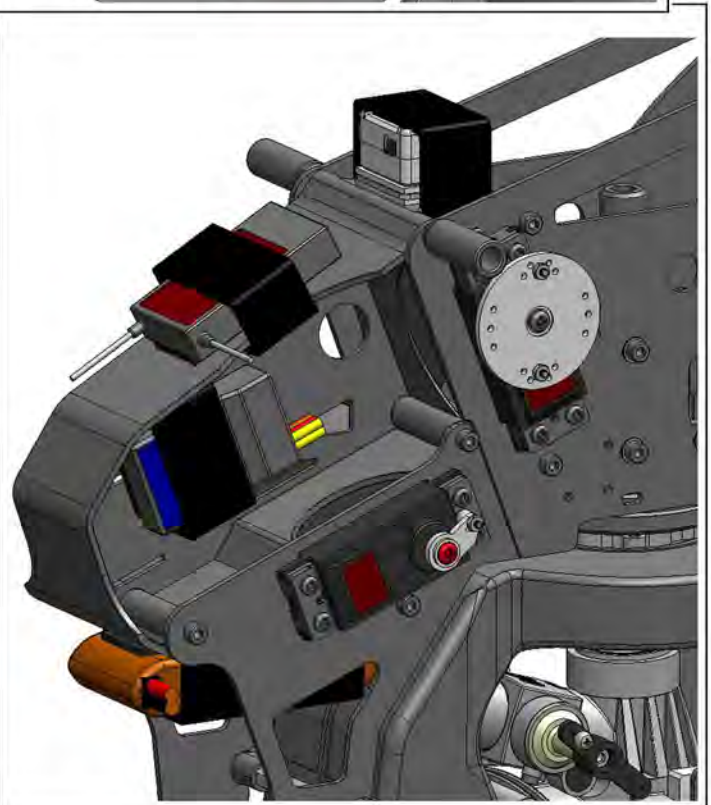
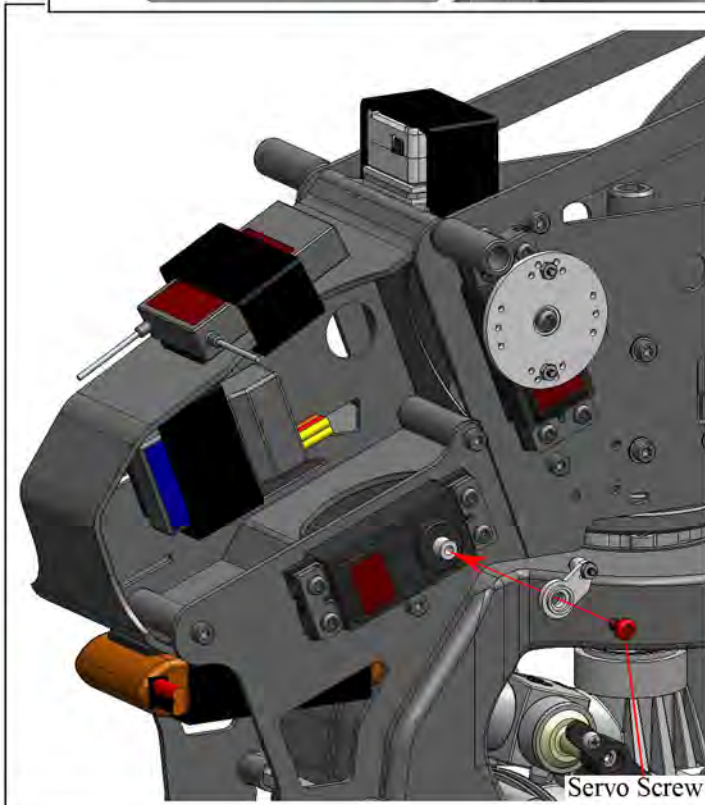
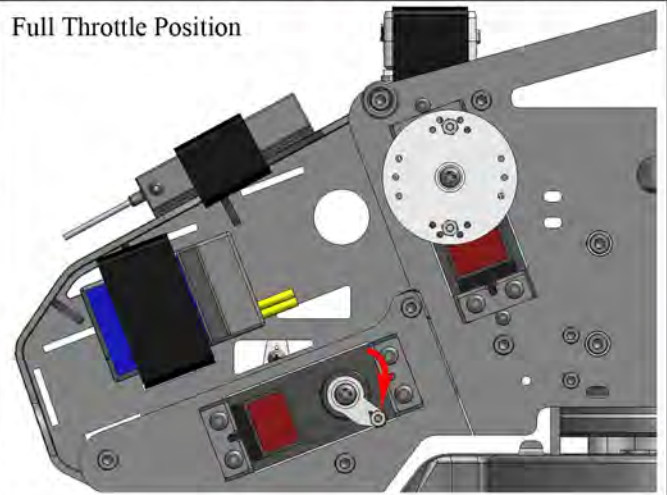


10. Check to make sure that the throttle channel is traveling in the correct direction. If it is not, you will need to reverse the channel in your transmitter using the reverse function. Also observe the servo horn positions at full throttle and closed throttle.

Closed Throttle Position



Full Throttle Position

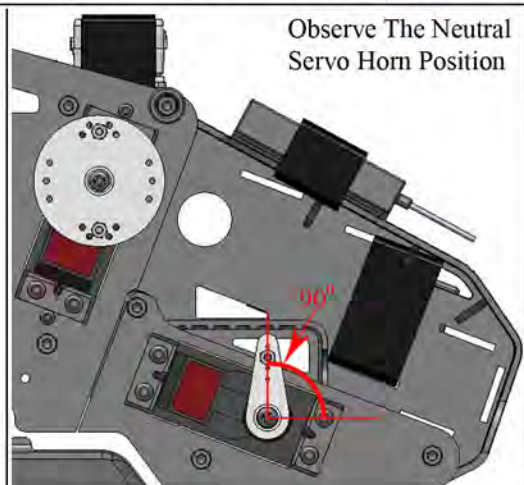
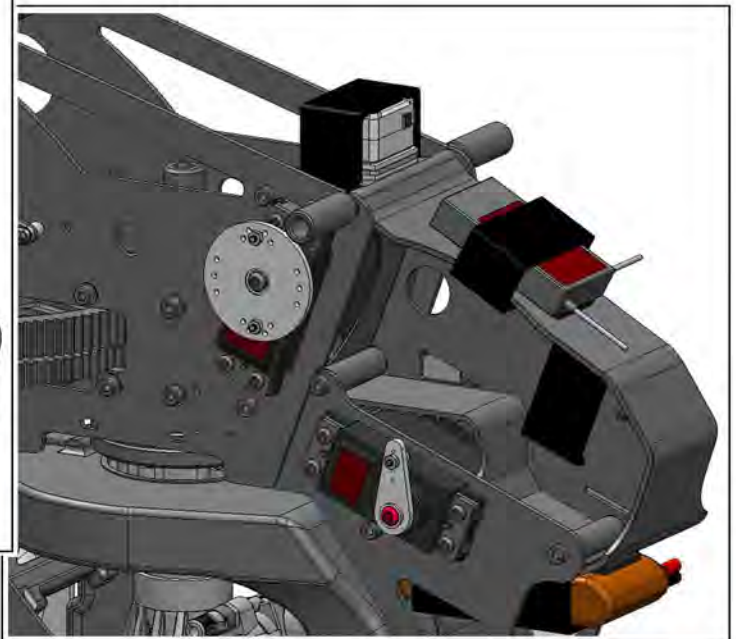
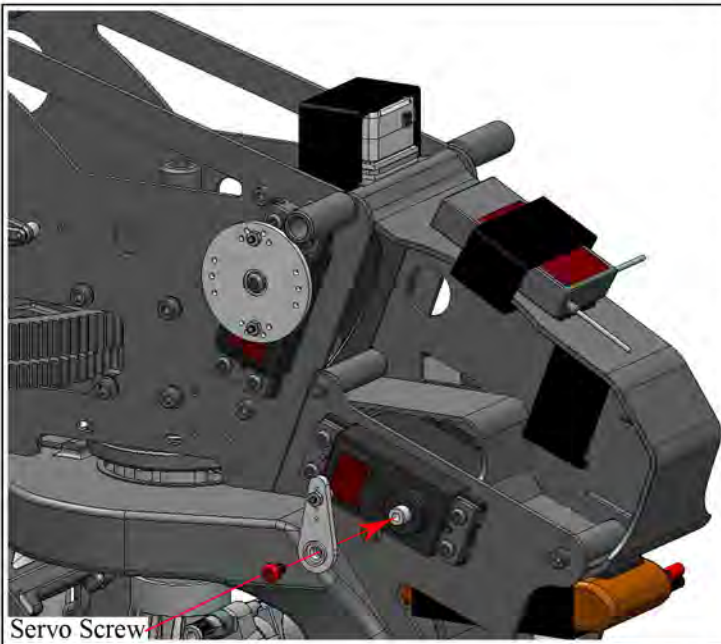
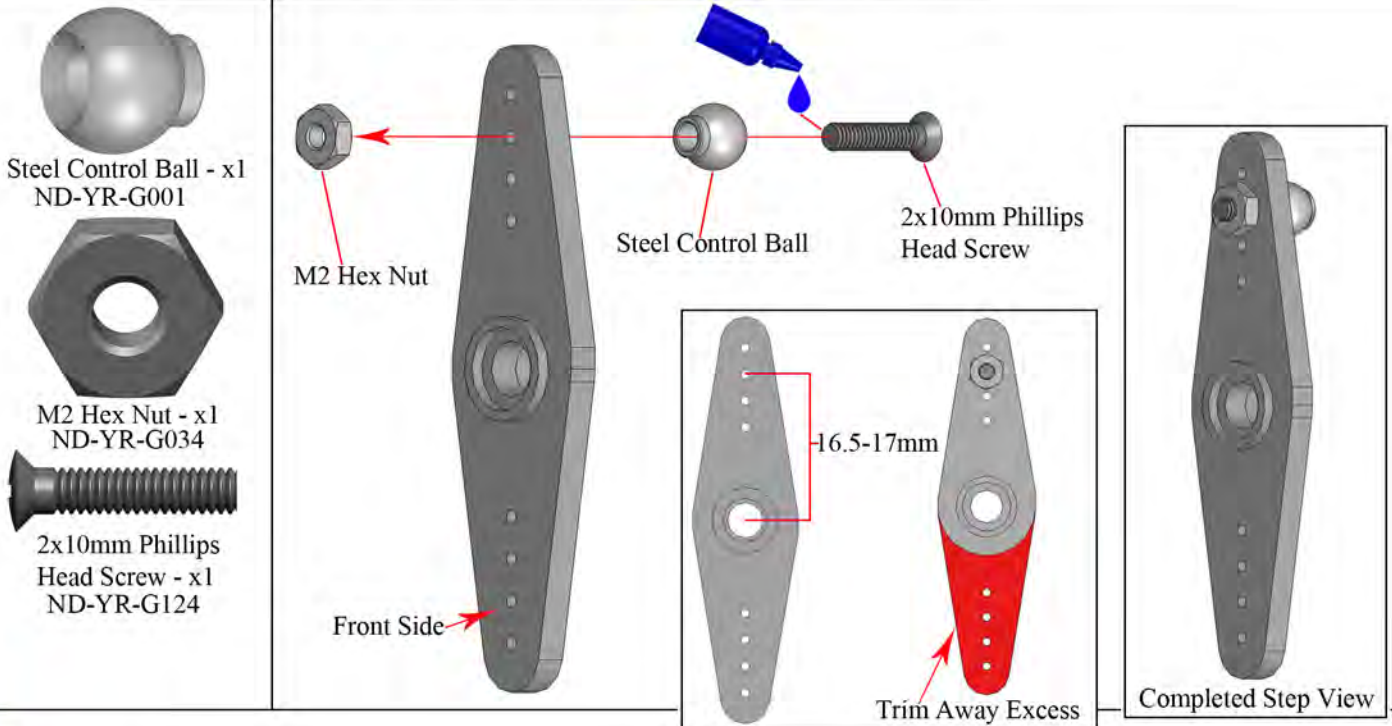


! Attention! !
Do Not Over Tighten Screws
Going Into Plastic Parts

Next

Step 6-4 Radio Setup Continued

11. After closely following the manufacturer's instructions included with the gyro unit you have chosen, it is now time to assemble and install the servo horn that will control the tail pushrod. Be sure the servo horn is lined up parallel with the main shaft when the gyro unit is at its neutral position.



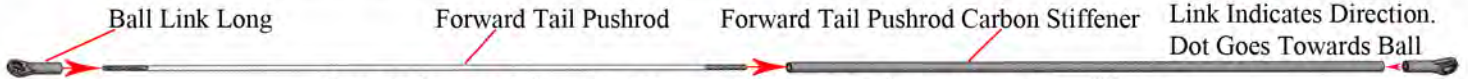
! Attention! !
Do Not Over Tighten Screws
Going Into Plastic Parts

Next

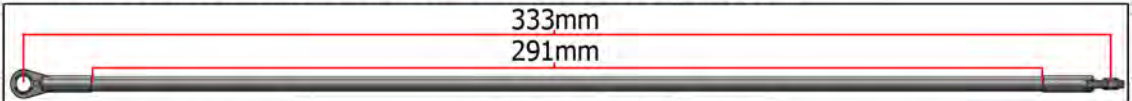
Step 6-4 Radio Setup Continued



The Dot On The Ball Link Indicates Direction. Dot Goes Towards Ball

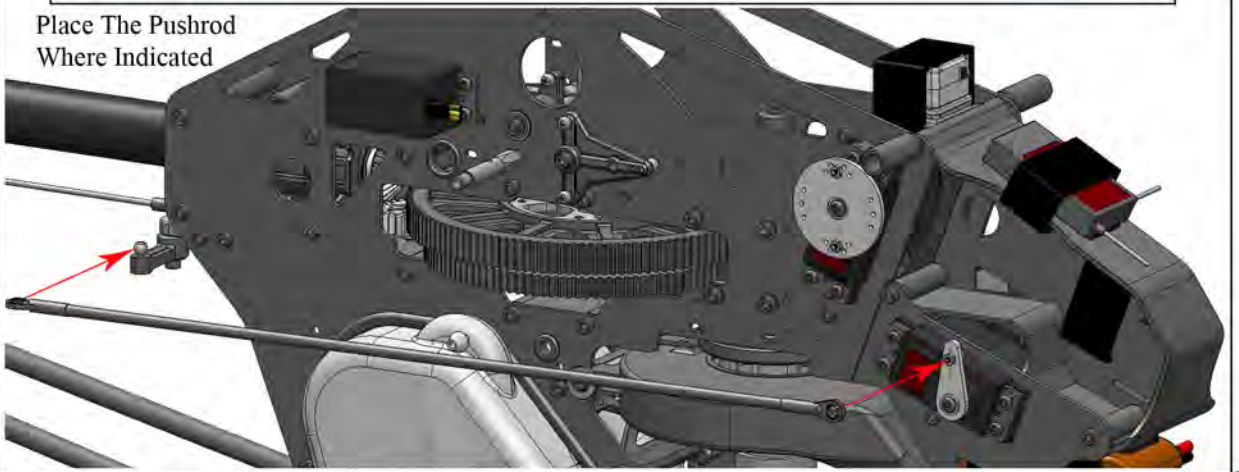


Push the forward tail pushrod through the forward tail pushrod carbon stiffener and thread the ball links onto either end of the pushrod to equal depths.

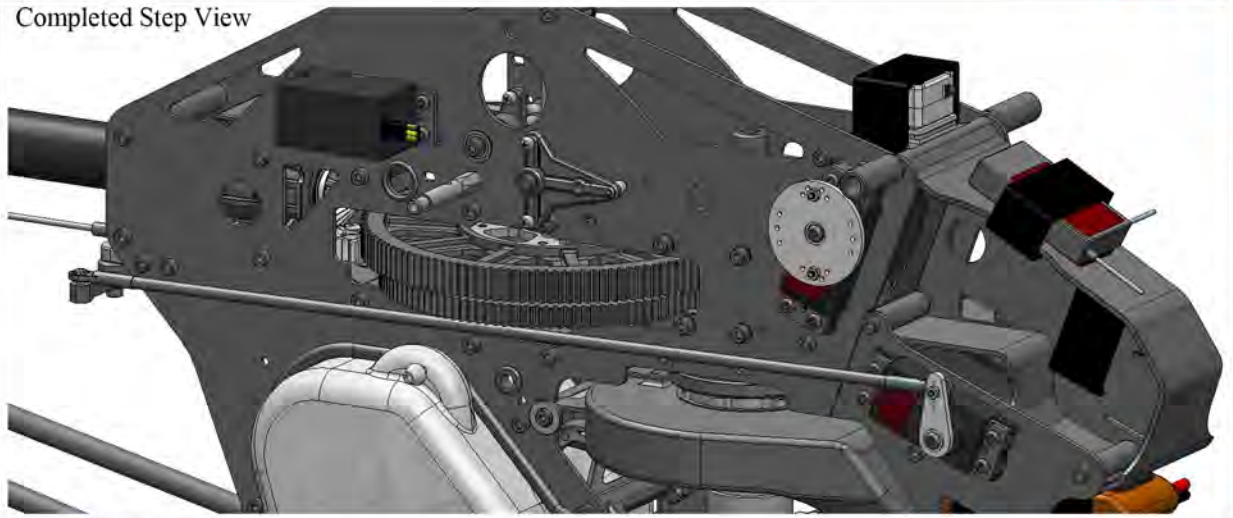


Ball Link Long - x2
ND-YR-G077

Place The Pushrod Where Indicated



Completed Step View

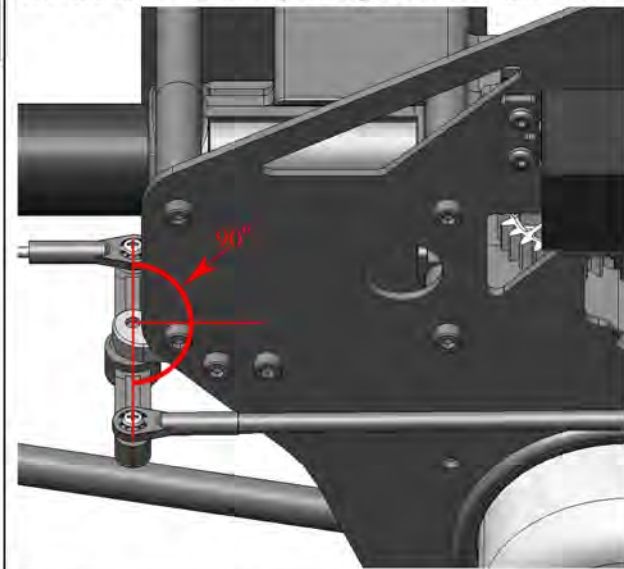


Forward Tail Pushrod
Carbon Stiffener - x1
ND-YR-G149

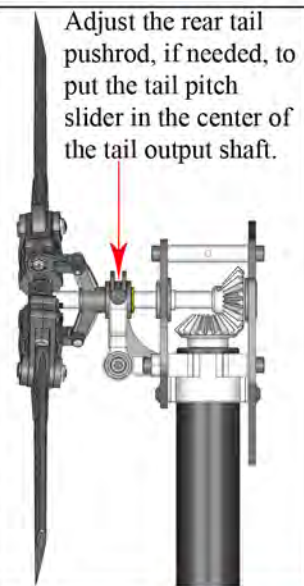
Attention!

Be Sure All Ball Links Are Threaded On Equally

Adjust the forward tail pushrod, if needed, to line the forward tail bell crank up 90 degrees to the main frames.



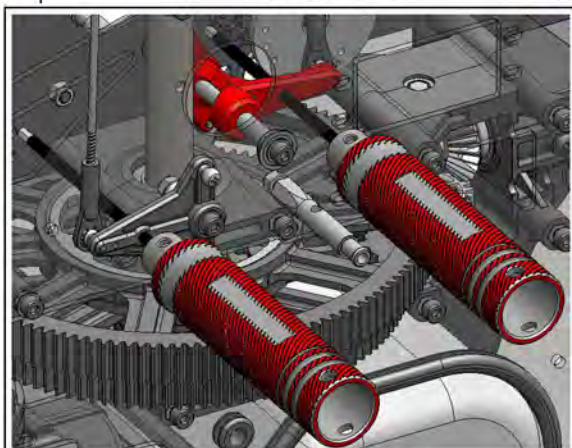
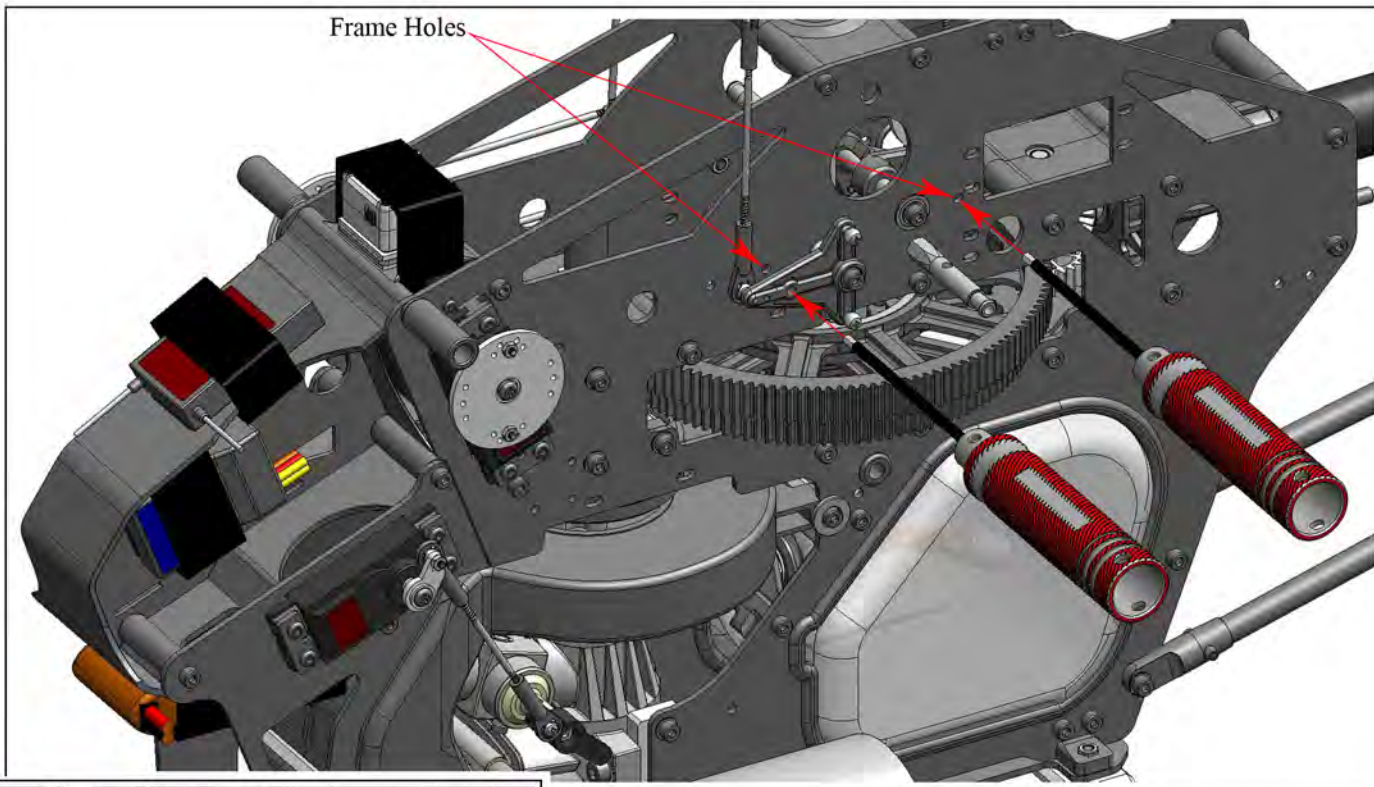
Adjust the rear tail pushrod, if needed, to put the tail pitch slider in the center of the tail output shaft.



You are now ready to complete your gyro setup according to the manufacturer's instructions.

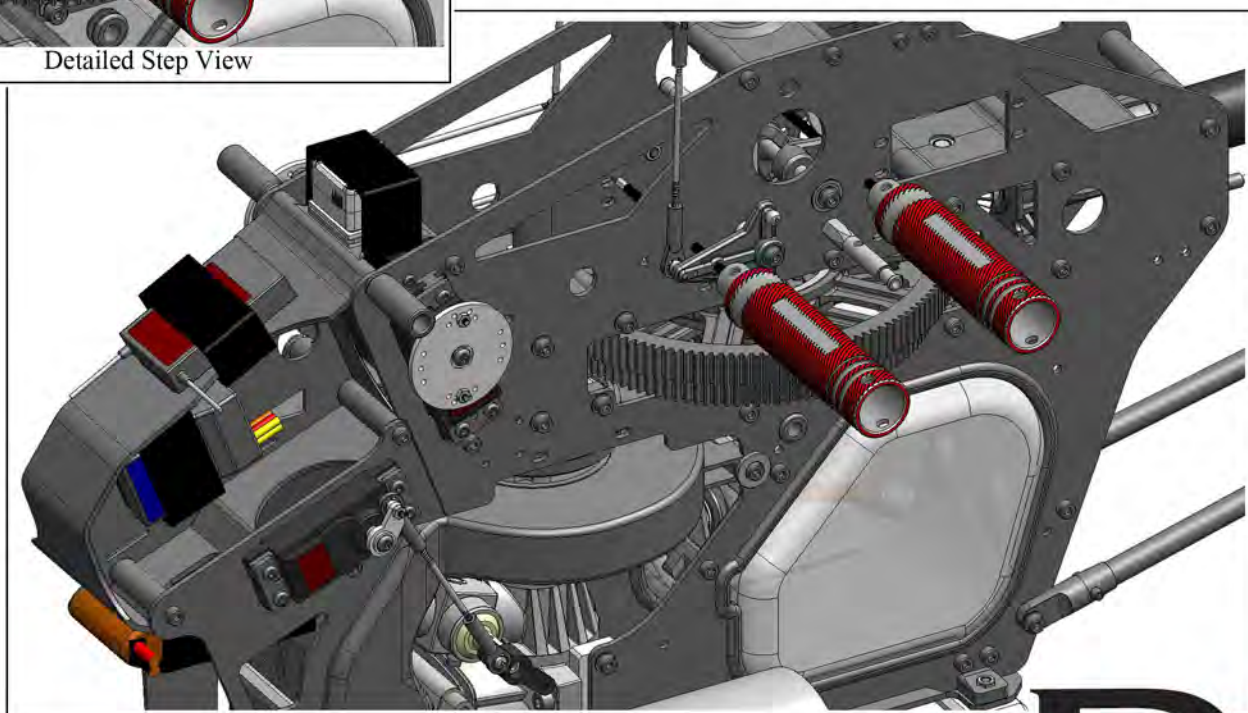
Forward Tail
Pushrod - x1
ND-YR-G079

Rave ENV Tips And Tricks



Detailed Step View

There Are Holes In The Frames That Match Up With Holes In The Swashplate Control Arms. You Can Use These Holes To Pin The Control Arms At 90 Degrees. This Tip Will Make Getting The Pushrods Set At The Correct Lengths Much Easier When Preparing The Model For Radio Setup. Use a 2.5mm Handled Driver To Pin The Arms In Place. We Do Not Recommend Pinning The Arms In Place With The Servo Pushrods In Place And The Radio Gear In The On Position. This Can Damage Your Radio Gear! Only Perform This Step With The Radio Gear In The Helicopter In The OFF position!

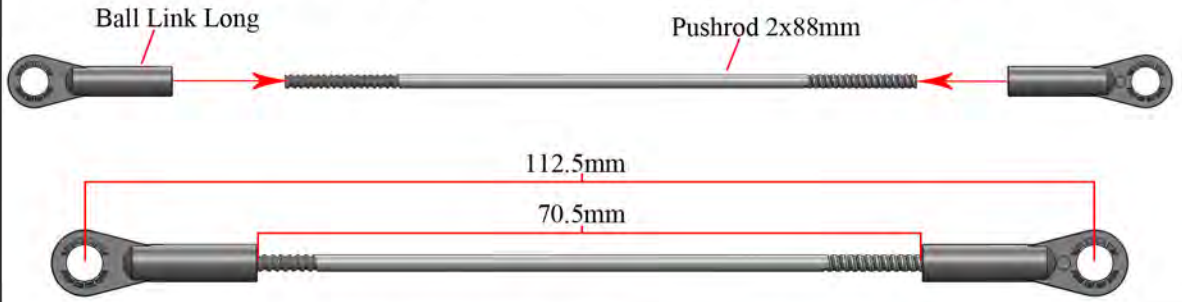


Step 6-4 Radio Setup Continued

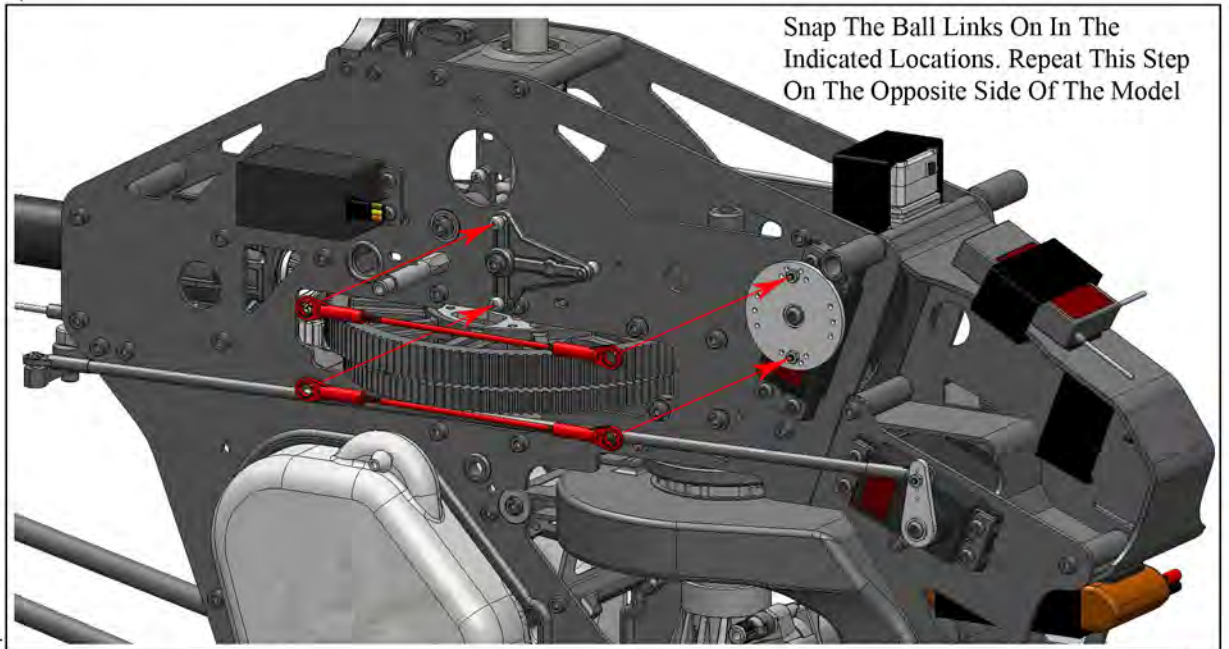
Servo Pushrods For 140° CCPM. Prepare 4 Of These. Thread The Ball Links On To Equal Depths.



Ball Link Long - x8
ND-YR-G077

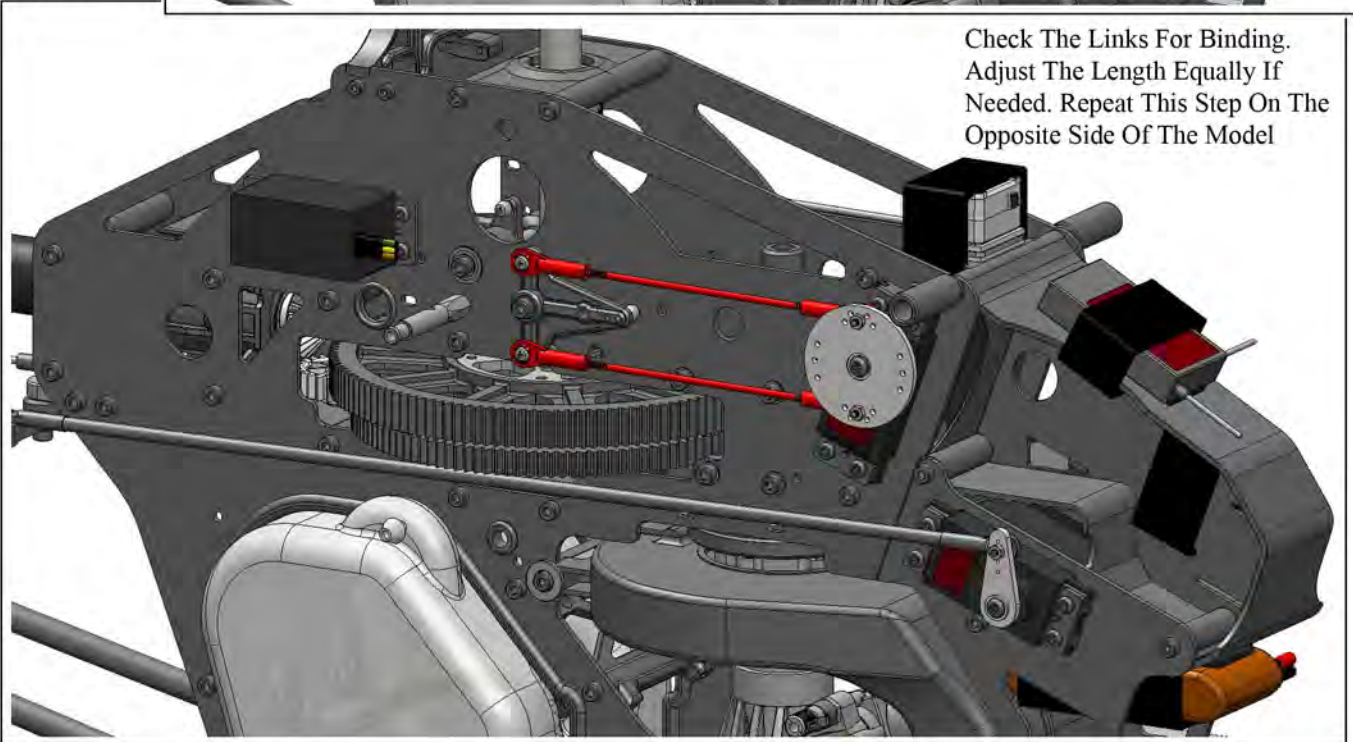


Pushrod 2x88mm - x4
ND-YR-G162



Snap The Ball Links On In The Indicated Locations. Repeat This Step On The Opposite Side Of The Model

Setup



Check The Links For Binding. Adjust The Length Equally If Needed. Repeat This Step On The Opposite Side Of The Model



The Dot On The Link Indicates Direction. Dot Goes Towards Ball

Attention!
Be Sure All Ball Links Are Threaded On Equally

Step 6-4 Radio Setup Continued

Servo Pushrods For 120° CCPM. Prepare 4 Of These. Thread The Ball Links On To Equal Depths.



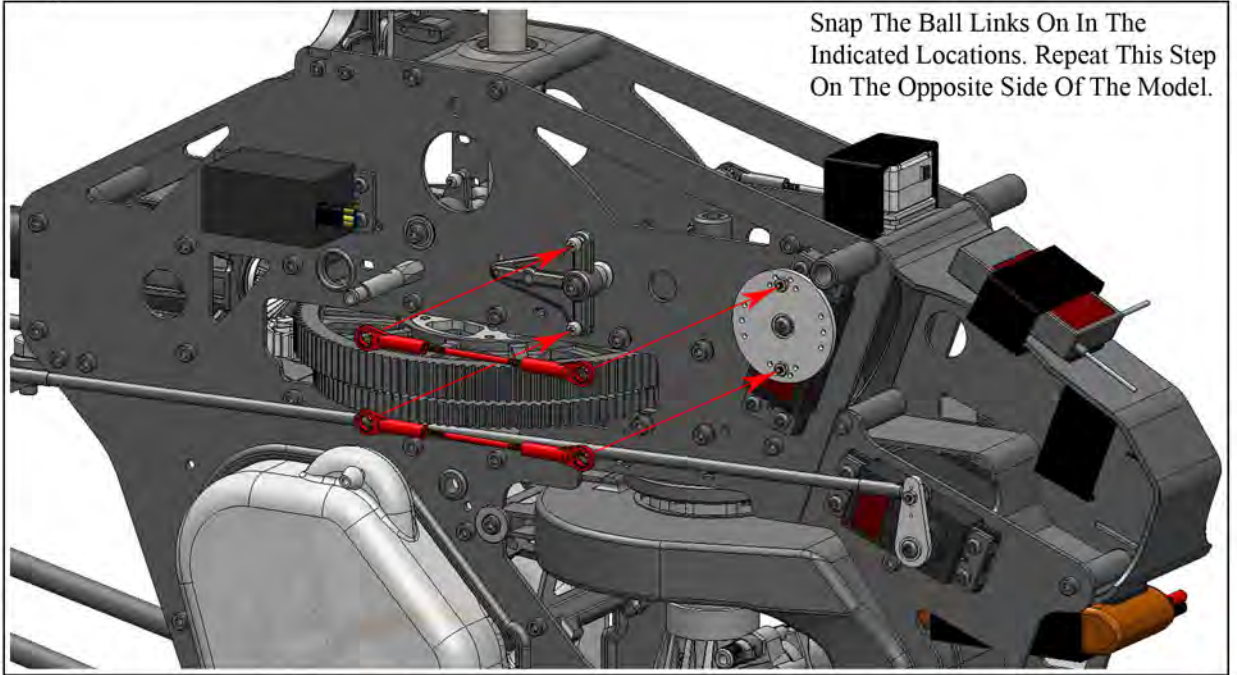
Ball Link Long - x8
ND-YR-G077

Ball Link Long

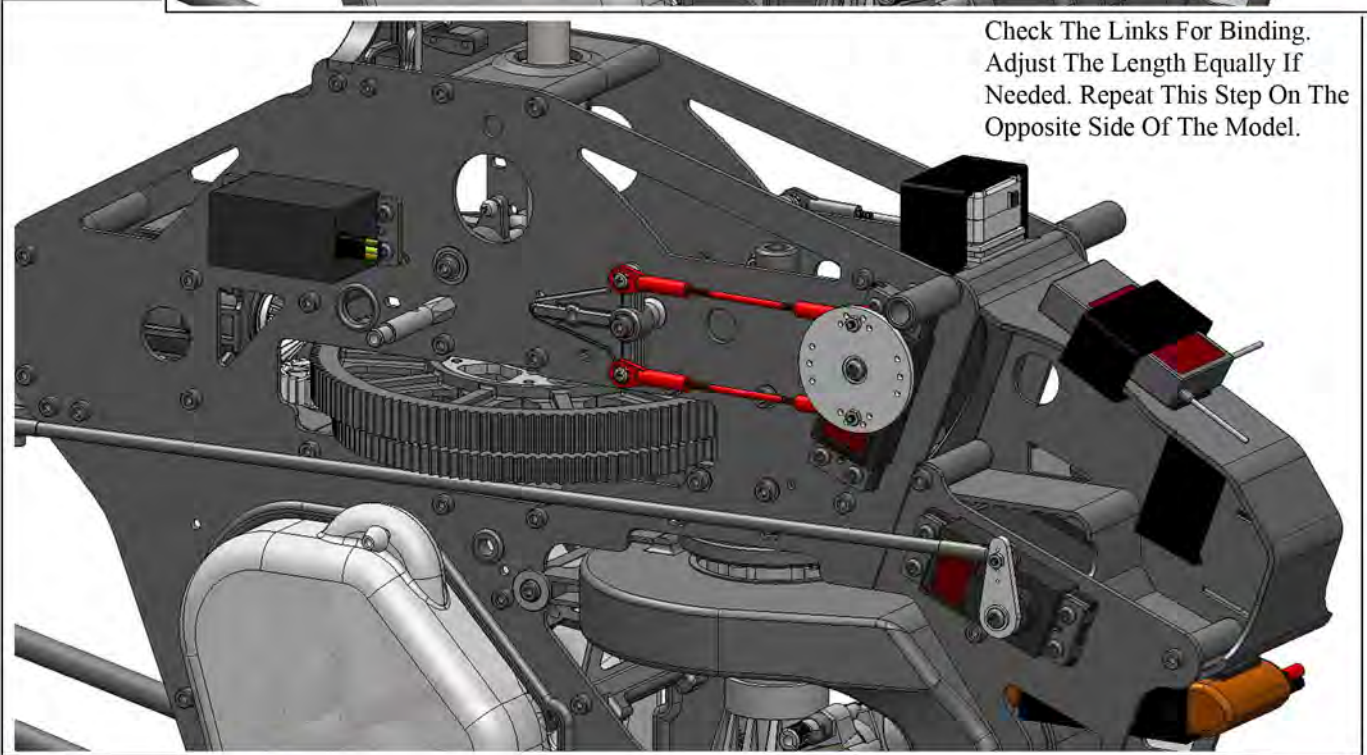
Pushrod 2x53mm



Pushrod 2x53mm - x4
ND-YR-G163



Snap The Ball Links On In The Indicated Locations. Repeat This Step On The Opposite Side Of The Model.



Check The Links For Binding. Adjust The Length Equally If Needed. Repeat This Step On The Opposite Side Of The Model.

Attention!

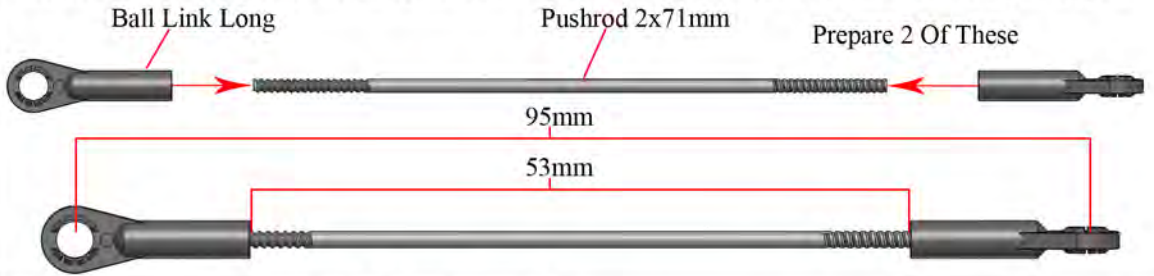
Be Sure All Ball Links Are Threaded On Equally



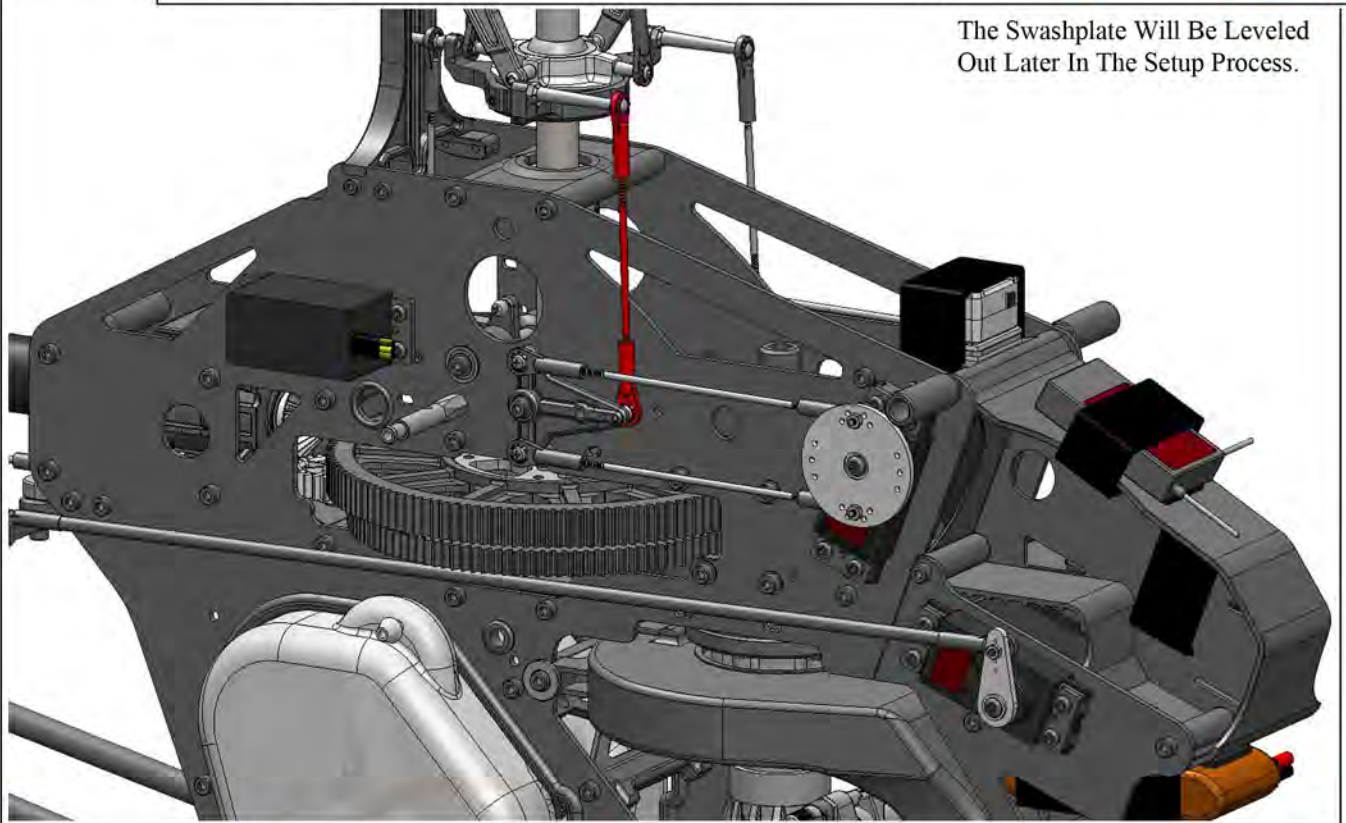
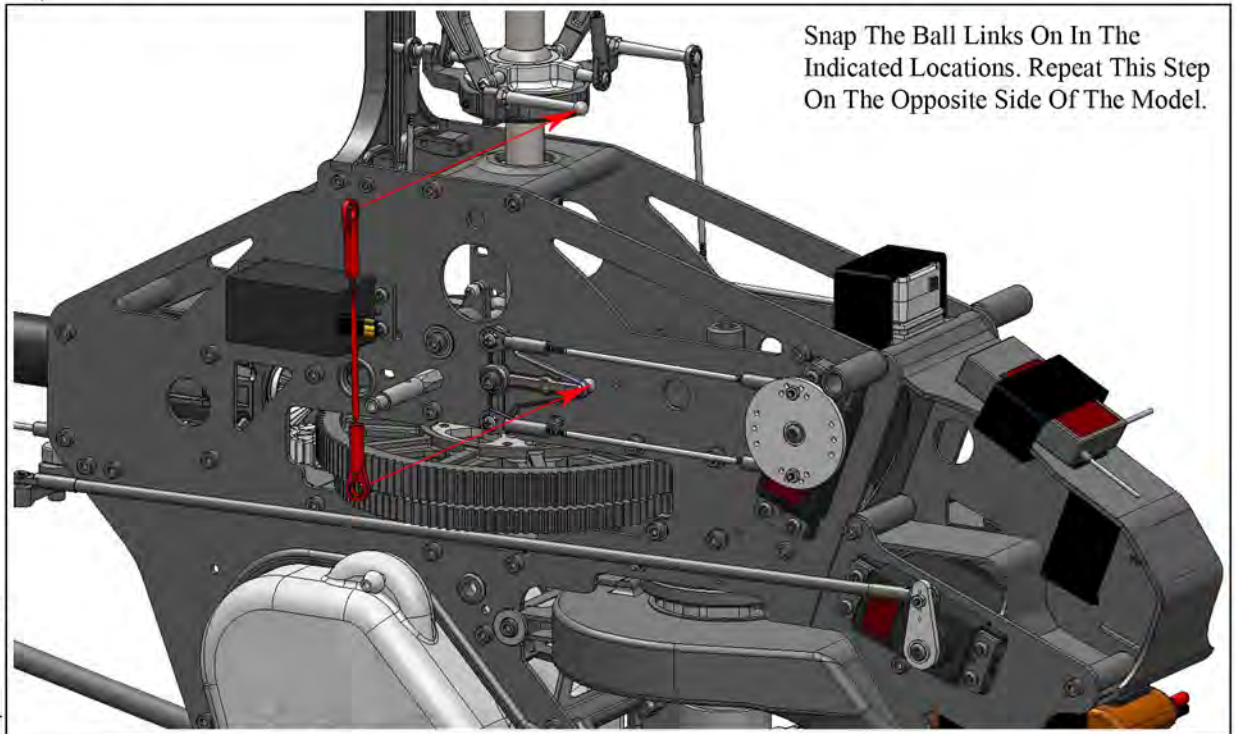
The Dot On The Link Indicates Direction. Dot Goes Towards Ball.

Step 6-4 Radio Setup Continued

The Rods In This Step Are The Same For 120° And 140° CCPM. Thread The Links On To Equal Depths.



Pushrod 2x71mm - x2
ND-YR-G087



! Attention! !
Be Sure All Ball Links Are Threaded On Equally



The Dot On The Link Indicates Direction. Dot Goes Towards The Ball.

Next

Step 6-4 Radio Setup Continued

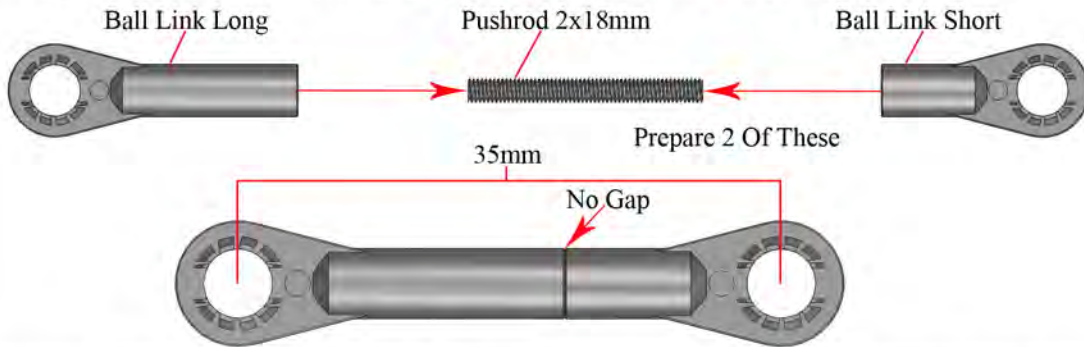
Assemble The Elevator Servo Pushrods. Thread The Links On To Equal Depths.



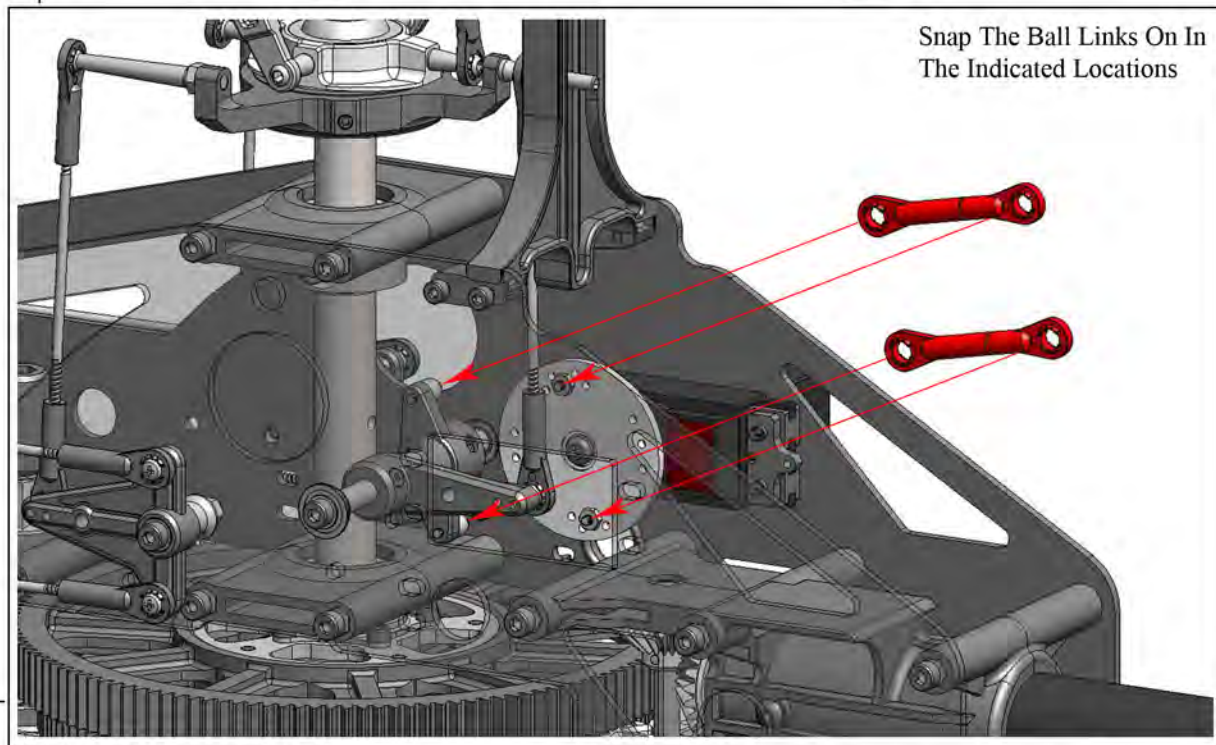
Ball Link Short - x2
ND-YR-G078



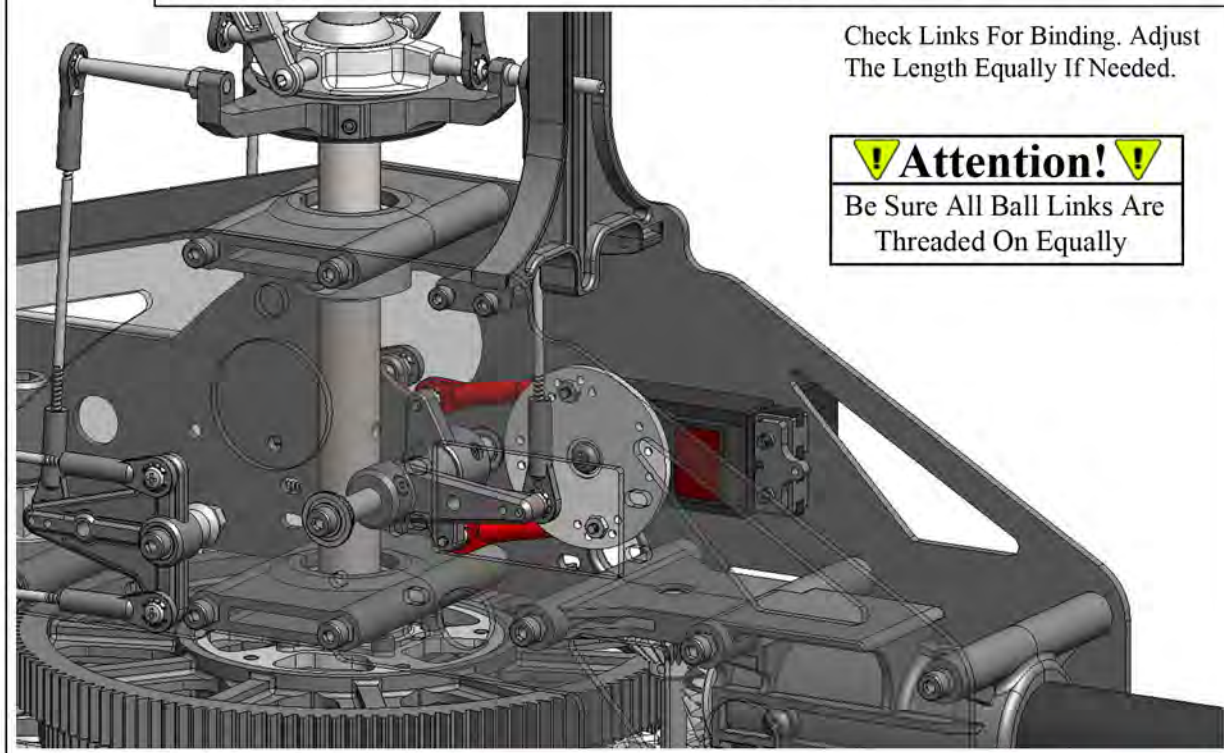
Ball Link Long - x2
ND-YR-G077



Pushrod 2x18mm - x2
ND-YR-G084



Snap The Ball Links On In
The Indicated Locations



Check Links For Binding. Adjust
The Length Equally If Needed.

! Attention! !
Be Sure All Ball Links Are
Threaded On Equally



The Dot On The Link
Indicates Direction. Dot
Goes Towards The Ball.

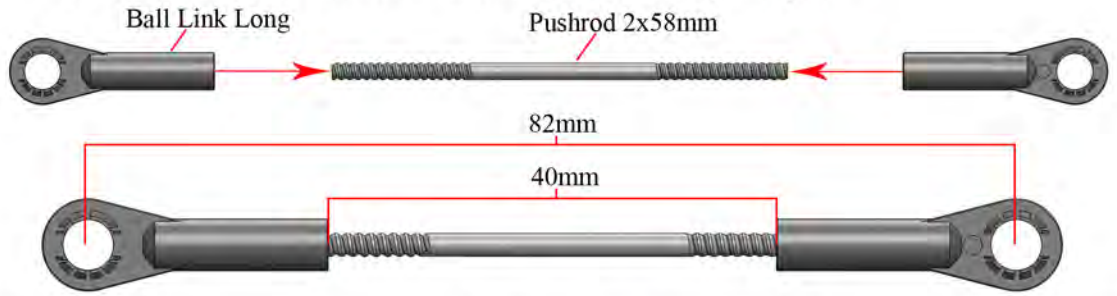
Setup

Step 6-4 Radio Setup Continued



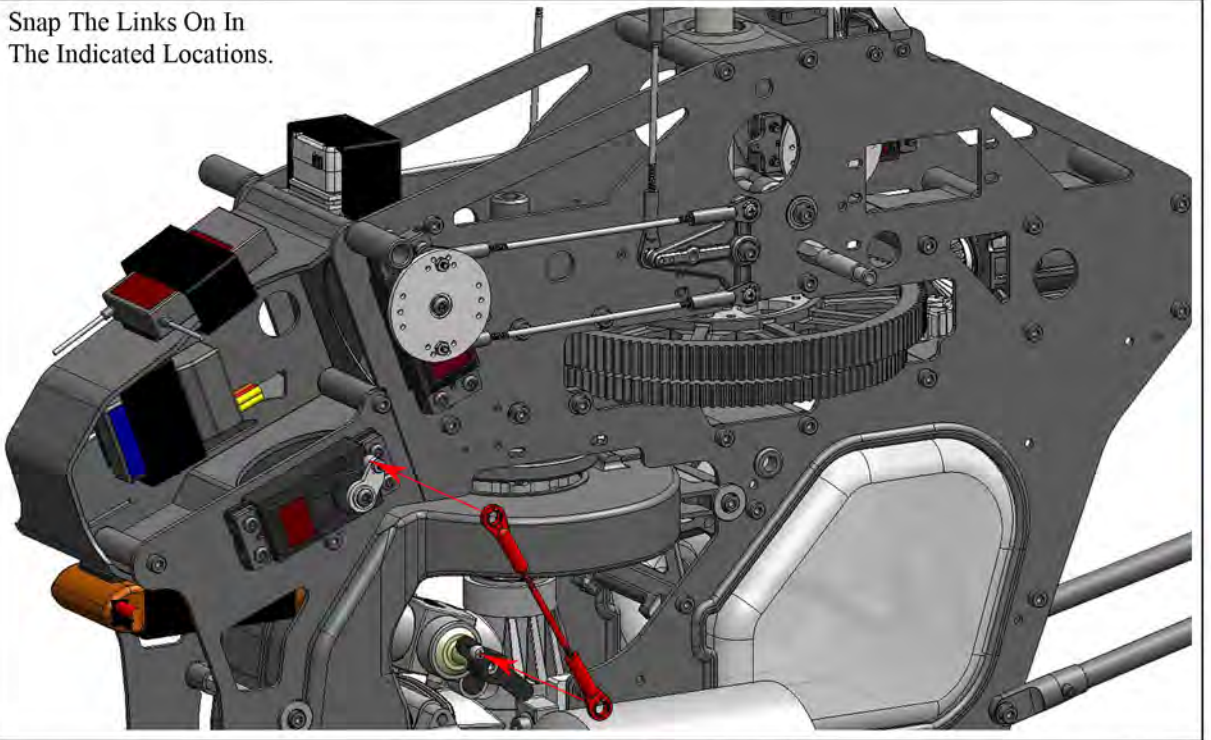
Ball Link Long - x2
ND-YR-G077

Assemble The Throttle Pushrod. Thread The Links On To Equal Depths.

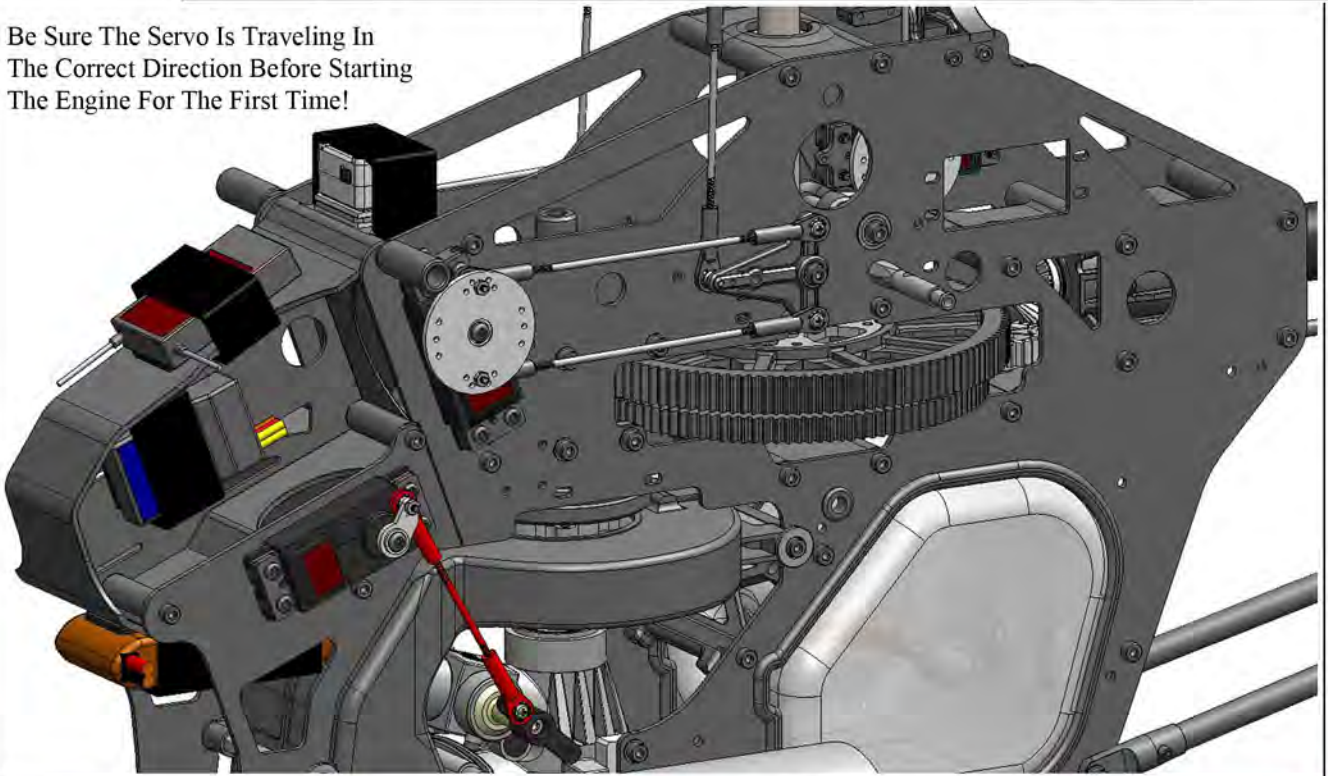


Pushrod 2x58mm - x1
ND-YR-G086

Snap The Links On In
The Indicated Locations.



Be Sure The Servo Is Traveling In
The Correct Direction Before Starting
The Engine For The First Time!



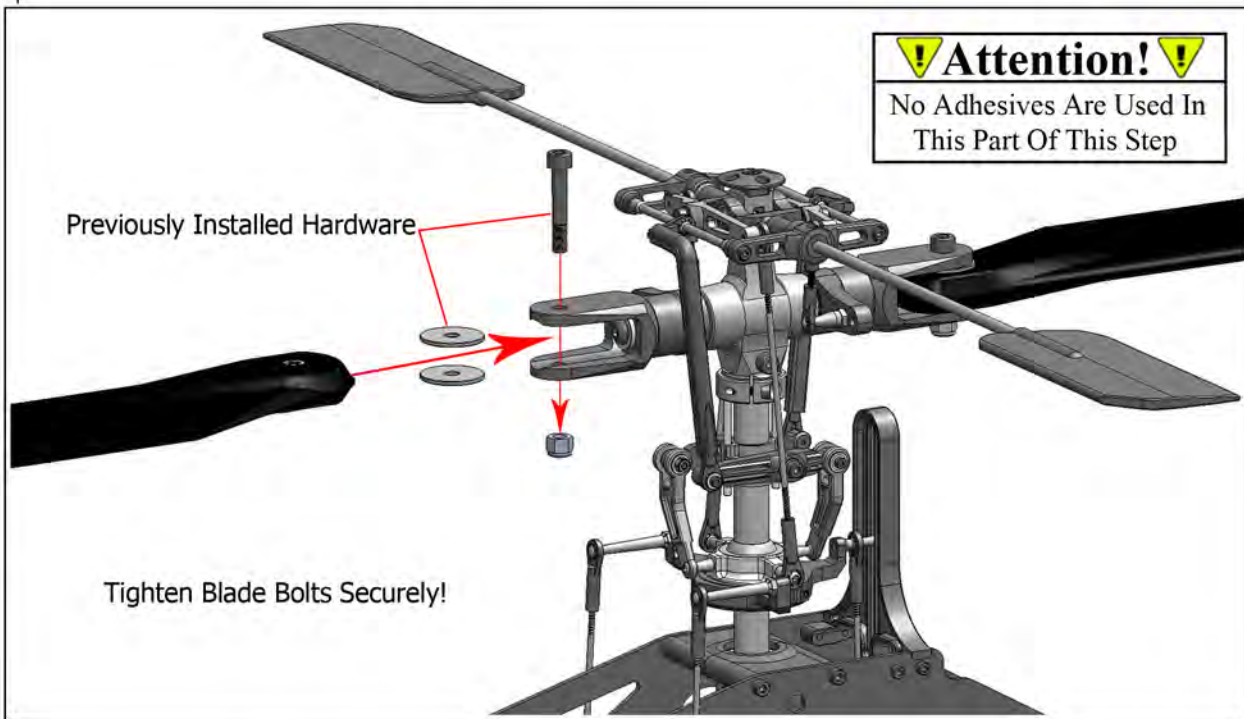
! Attention! !
Be Sure All Ball Links Are
Threaded On Equally



The Dot On The Link
Indicates Direction. Dot
Goes Towards The Ball.

Step 6-5

The Rave ENV Will Accommodate Blades Up To 710mm In Length. Blades Might Or Might Not Be In Your Kit From The Factory. If They Are Not, We Highly Recommend High Quality Carbon Fiber Blades. We Do Not Suggest Running Wood Blades For 3D.

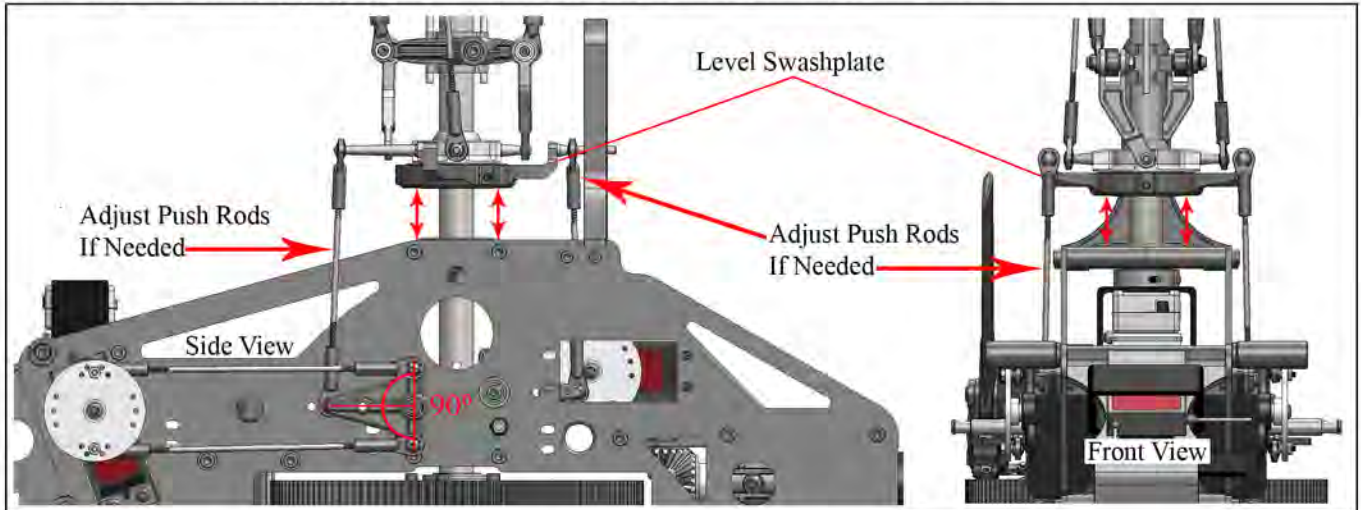


High Quality Carbon Fiber Main Rotor Blades 690-710mm In Length.

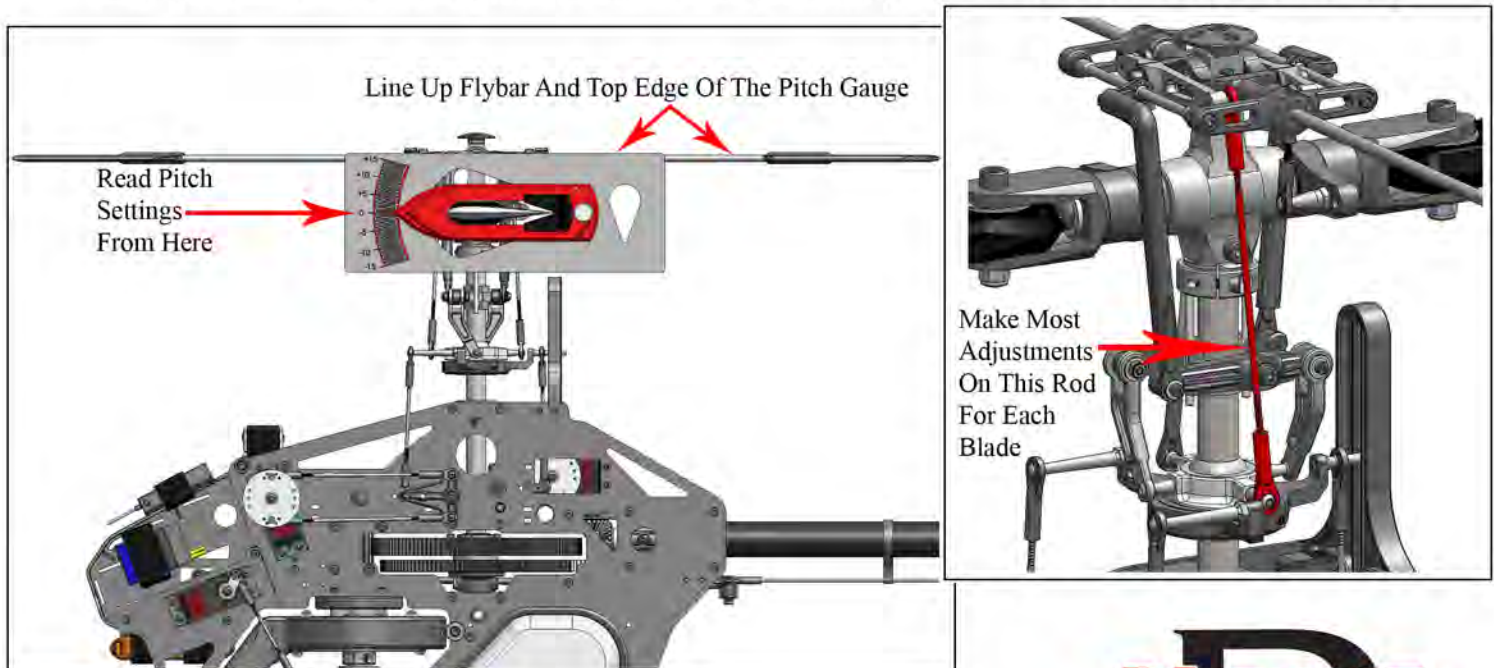


Pitch And Throttle Curve Setup

1. In this section we will go over setting up the pitch and throttle curves in your transmitter. If your model is being built as an electric, be sure the motor has been unplugged and is deactivated for this step. Turn on the transmitter and helicopter. Set the collective stick at exactly 50% of its travel (50 in and 50 out). This can be observed in the transmitter's pitch curve function. Check to make sure the swashplate is parallel with the top edge of the main frames when viewed from the side, and the upper bearing block when viewed from the front. If adjustments are needed, make these adjustments to the push rods going from the T lever control arms to the swashplate. If large adjustments are needed, check servo horns to make sure they are all lined up properly, as illustrated in the servo wheel installation instructions.



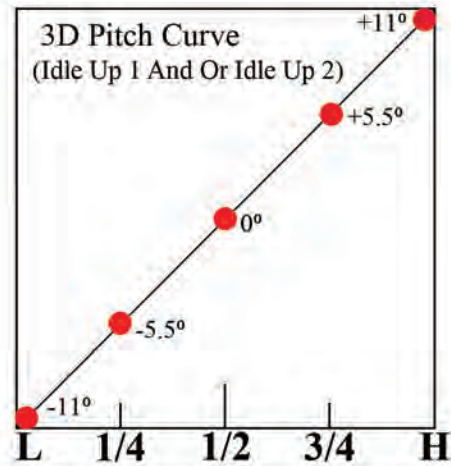
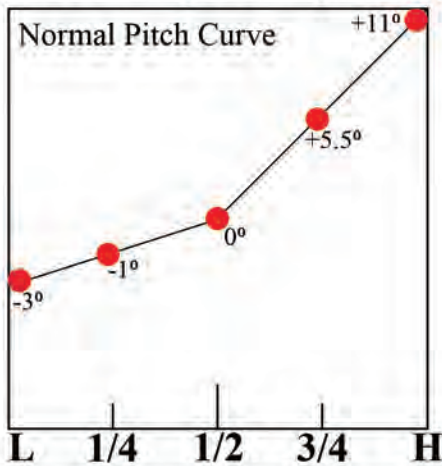
2. After the swashplate is level, move on to zeroing out the pitch on the blades. With the pitch curve still in the center of its travel put your pitch gauge on one of the main rotor blades. Turn the rotor head until the blade is 90 degrees to the tail boom. With your pitch gauge, check the current pitch of the blade at 50% travel. The goal is to get both blades set to zero degrees pitch at 50% collective travel. You will make adjustments by lengthening or shortening the long push rod that goes from the inner ring of the swashplate up to the bell mixer for the corresponding blade. Example: By lengthening this push rod you will add positive pitch to the blade. Shortening this push rod adds negative pitch, or takes out positive pitch. Meaning if you start out with 2 degrees of positive pitch, you will want to shorten the long rod going from the inner ring of the swashplate to the bell mixer for that blade grip. This will take out the positive pitch. Repeat this step on the opposite rotor blade. In some cases, the short rod going from the blade grip to the bell mixer will also need small length adjustments, but try to keep most adjustments to the longer rod. Make sure the ball links are threaded far enough onto either end of the push rods (at least 8 turns). When both are set at zero degrees at 50% of collective pitch travel, you are now ready to complete pitch curve setup.



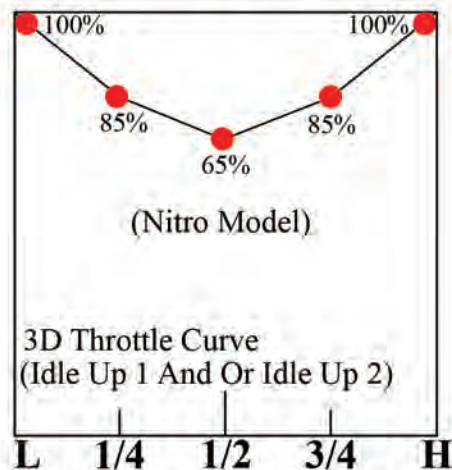
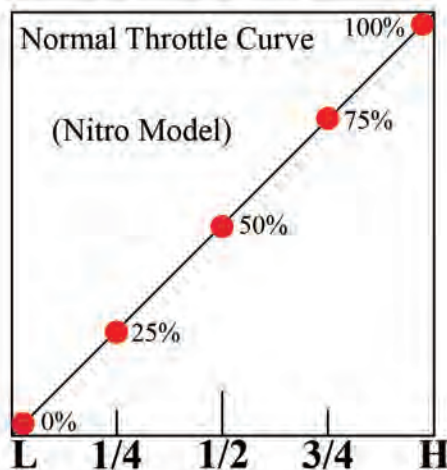
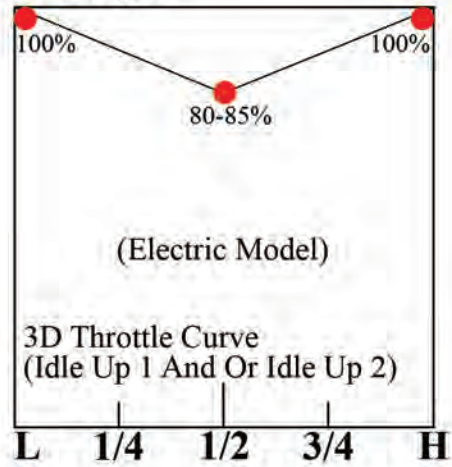
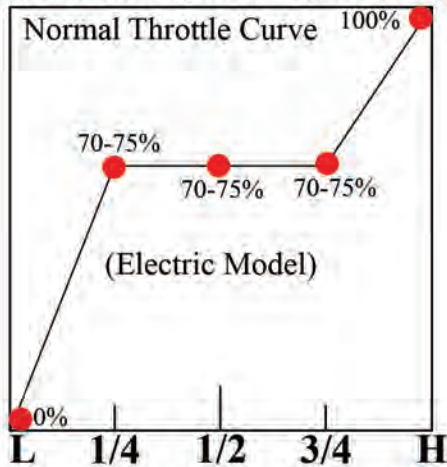
⚠ Attention! ⚠
Be Sure All Ball Links Are Threaded On Equally

Pitch And Throttle Curve Setup Continued

3. Below are examples of pitch curves used both for normal flight, as well as 3D flight. If this is your first helicopter, we recommend starting off with the normal pitch curve setting. Learning how to fly with the 3D pitch curve is possible, but can be more difficult at first. The numbers below the graphs represent the travel of the collective stick on the transmitter. The number next to the red dots represents the pitch setting at the given stick position.



4. Below are examples of throttle curves for both normal flight, as well as 3D flight. If this is your first helicopter, we recommend you start off learning how to fly with the normal throttle curve setting. The 3D throttle curve is for more advanced aerobatic flight. The percentage values represent the percentage of throttle at the given stick position. These numbers may need to be adjusted after your first flights to get the desired head speed.



Setup



Painted Fiberglass Canopy-Orange - x1
ND-YR7-F1006

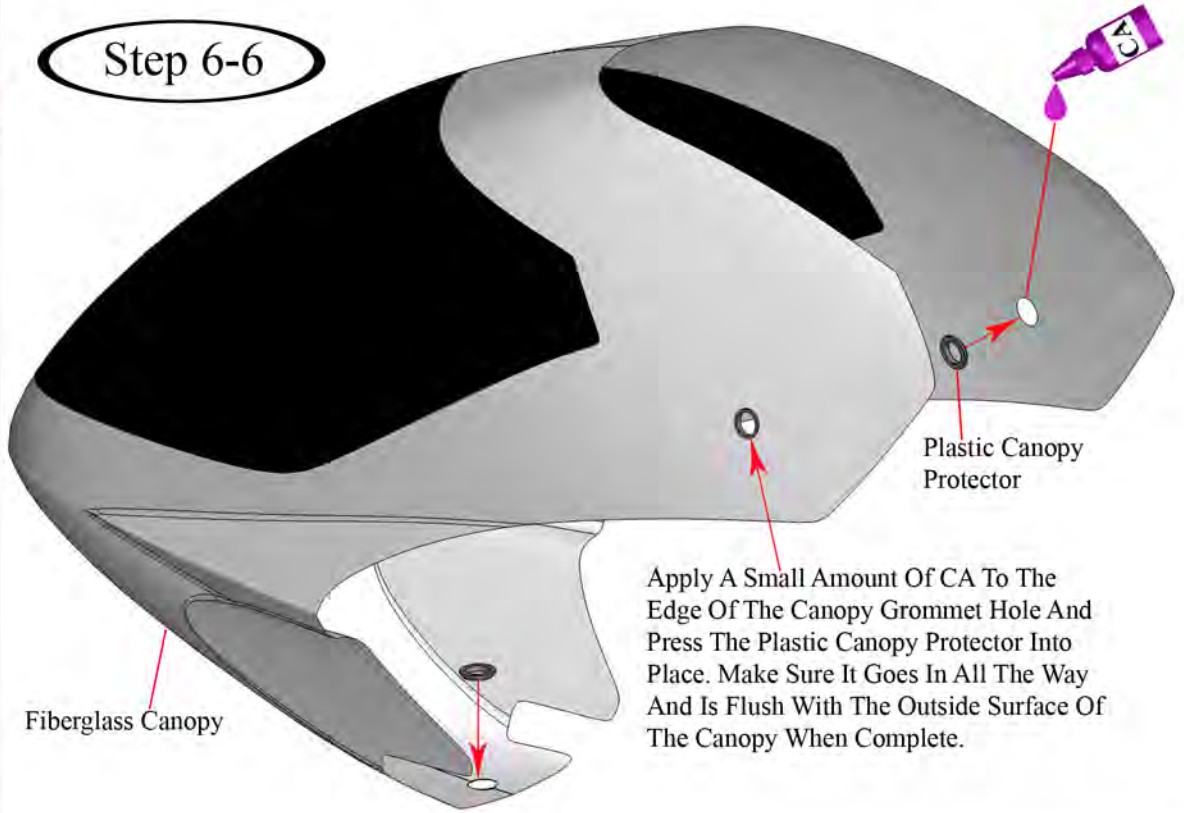


Rubber Canopy Grommet - x3
ND-YR-G111



Plastic Canopy Protector - x3
ND-YR7-F1003

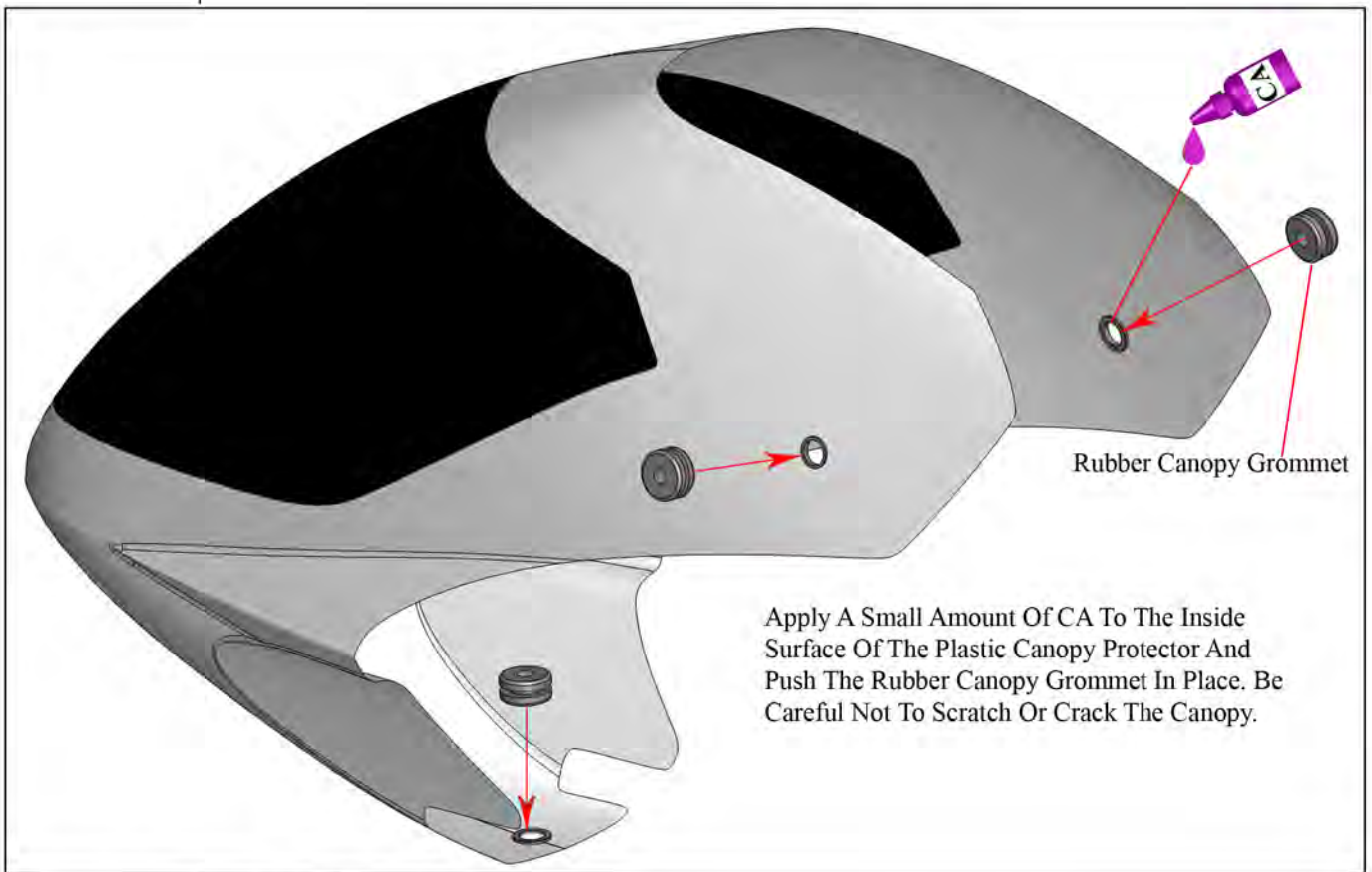
Step 6-6



Fiberglass Canopy

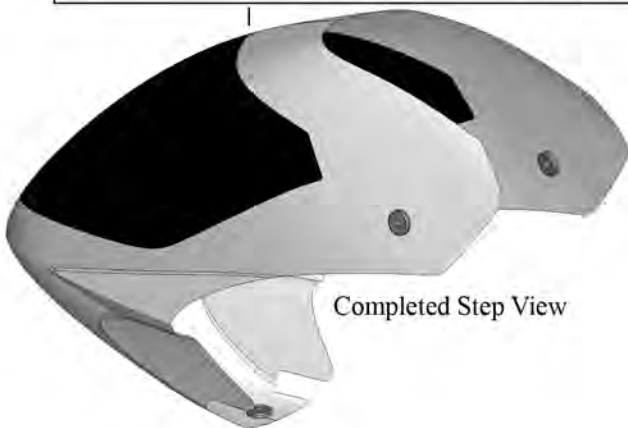
Plastic Canopy Protector

Apply A Small Amount Of CA To The Edge Of The Canopy Grommet Hole And Press The Plastic Canopy Protector Into Place. Make Sure It Goes In All The Way And Is Flush With The Outside Surface Of The Canopy When Complete.



Rubber Canopy Grommet

Apply A Small Amount Of CA To The Inside Surface Of The Plastic Canopy Protector And Push The Rubber Canopy Grommet In Place. Be Careful Not To Scratch Or Crack The Canopy.



Completed Step View

! Attention! !
Be Very Careful, CA Will Damage The Paint

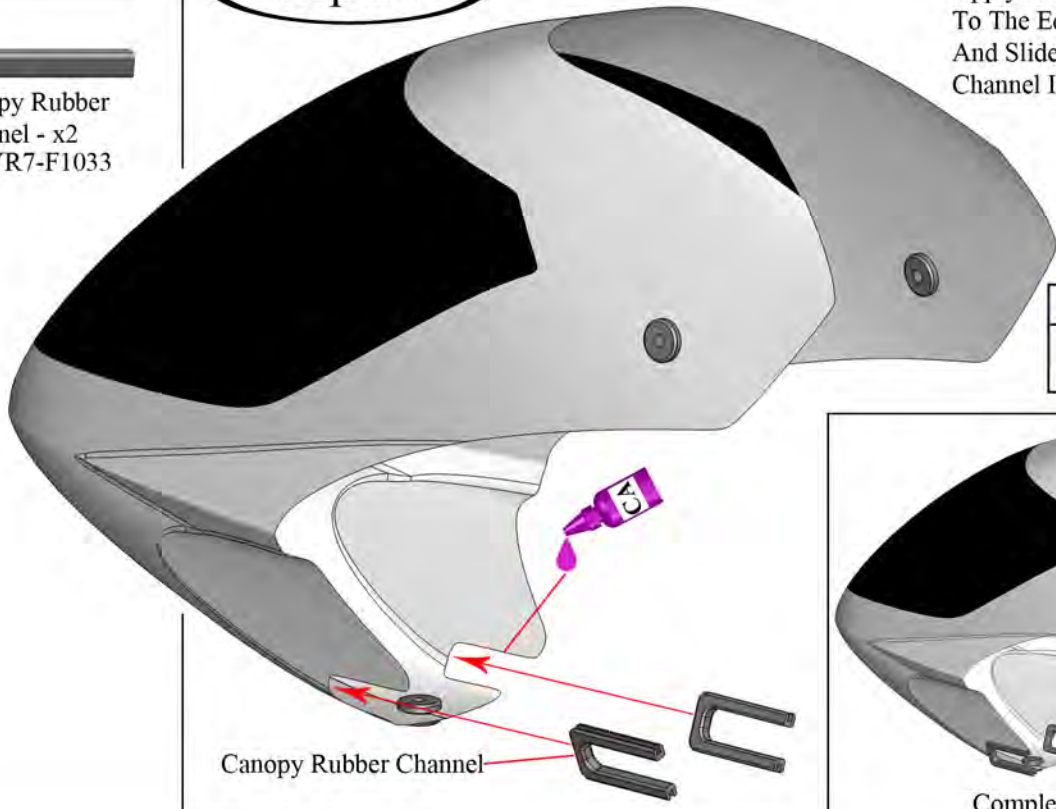




Canopy Rubber Channel - x2
ND-YR7-F1033

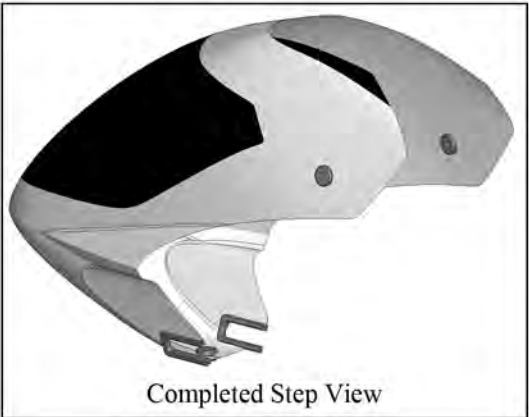
Step 6-7

Apply A Small Amount Of CA To The Edge Of The Canopy And Slide The Rubber Canopy Channel In Place



Canopy Rubber Channel

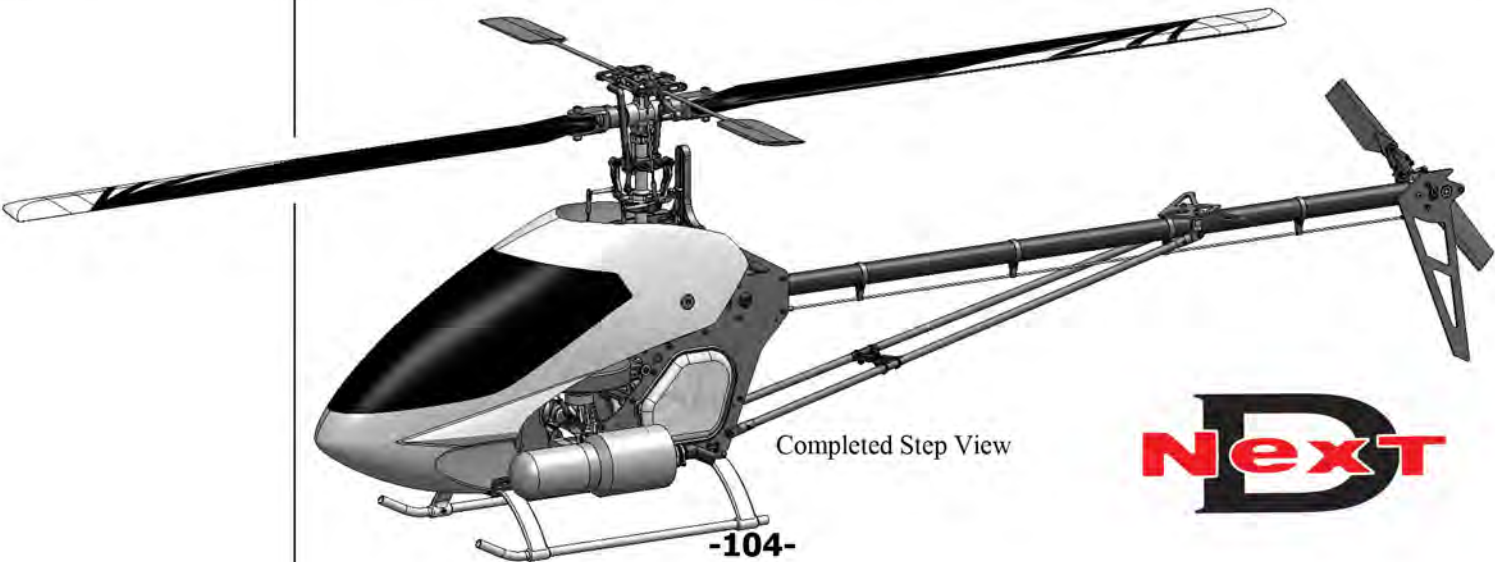
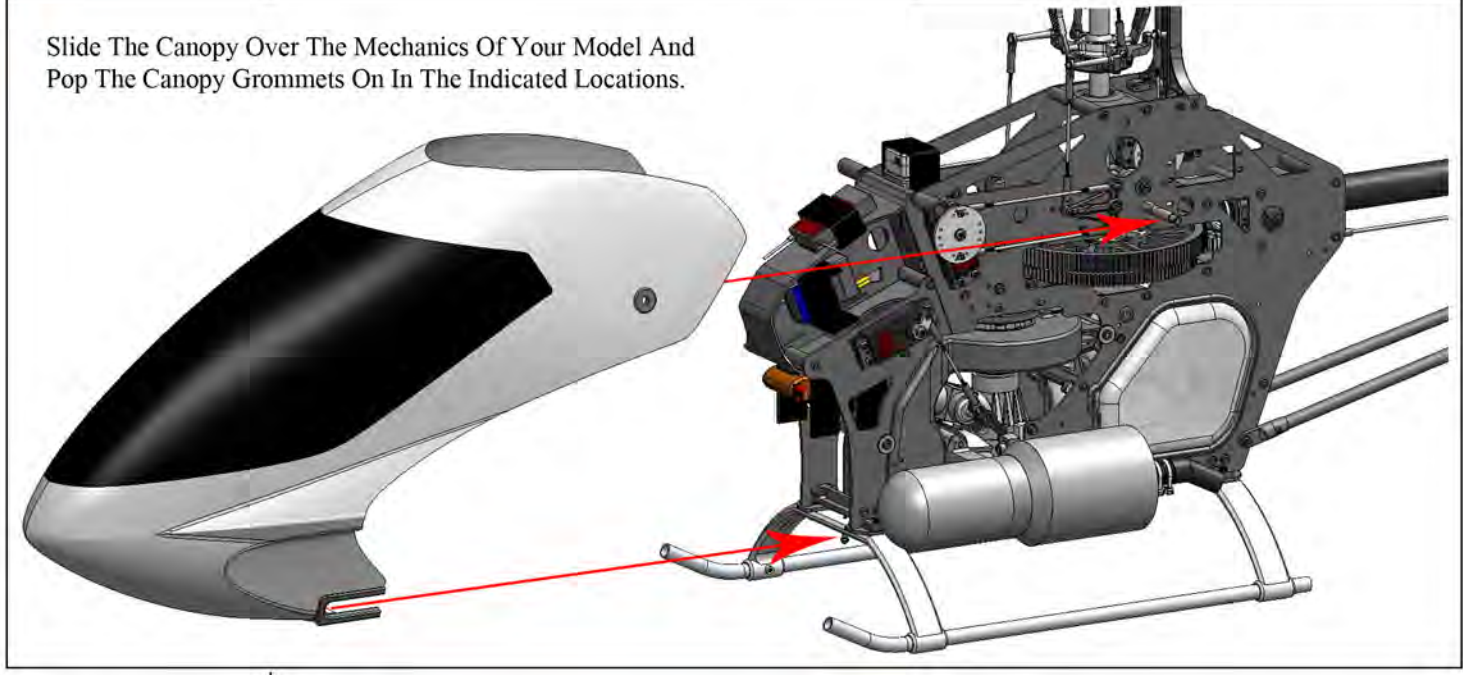
! Attention! !
Be Very Careful, CA Will Damage The Paint



Completed Step View

Step 6-7

Slide The Canopy Over The Mechanics Of Your Model And Pop The Canopy Grommets On In The Indicated Locations.



Completed Step View



Step 6-8

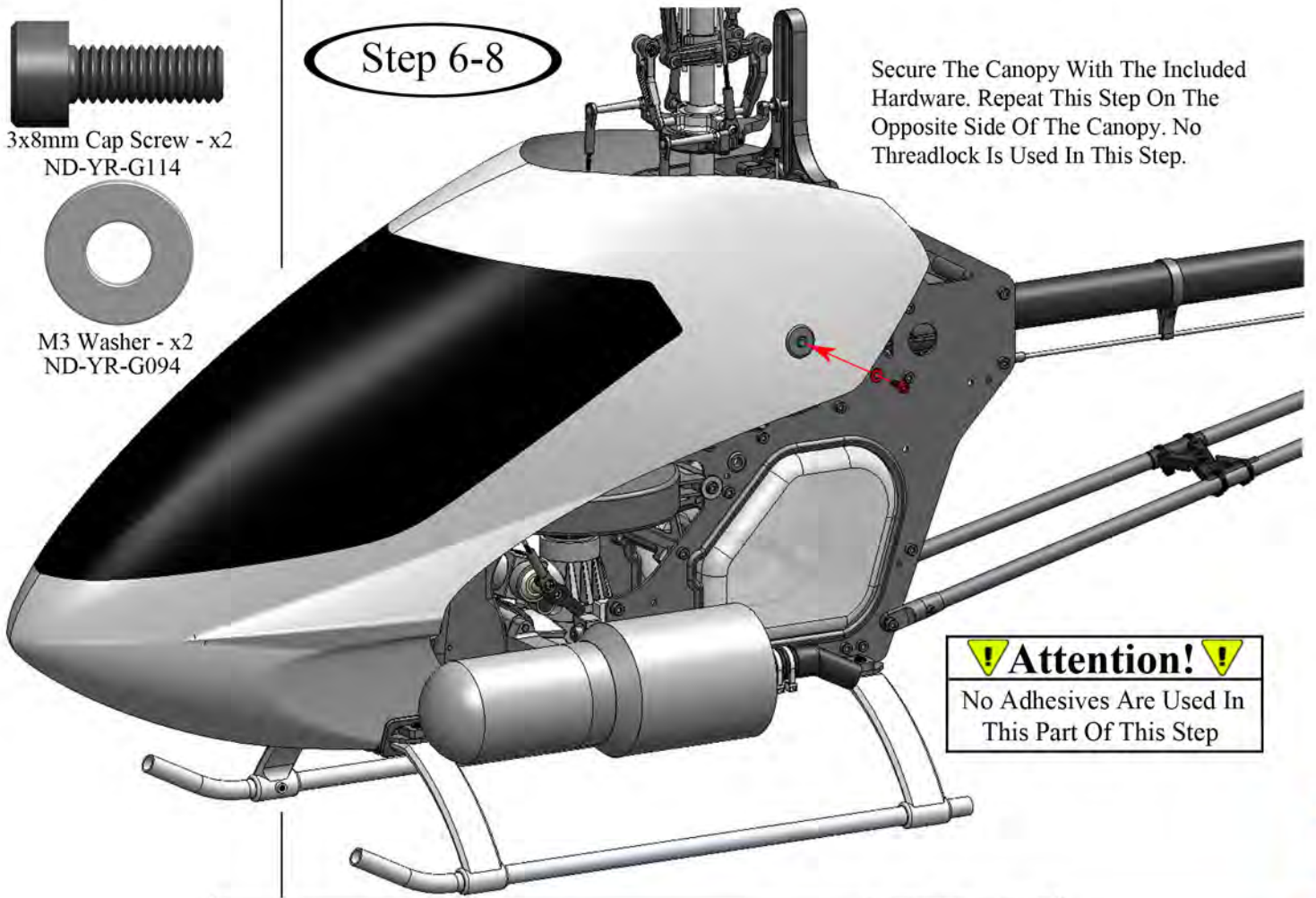


3x8mm Cap Screw - x2
ND-YR-G114



M3 Washer - x2
ND-YR-G094

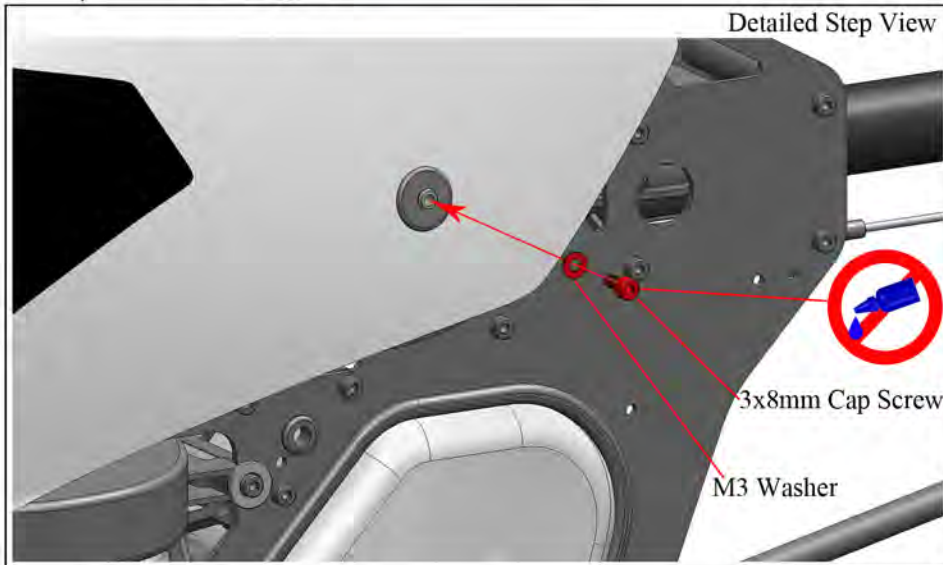
Secure The Canopy With The Included Hardware. Repeat This Step On The Opposite Side Of The Canopy. No Threadlock Is Used In This Step.



! Attention! !

No Adhesives Are Used In This Part Of This Step

Detailed Step View



3x8mm Cap Screw

M3 Washer



Completed Step View

Final Preflight Check List

Once all assemblies have been completed, please review the following suggestions before attempting initial flights.

1. Review the instruction manual and confirm that all assembly steps have been completed thoroughly and correctly.
2. Check to make sure all servos are operating smoothly and in the correct directions. Also verify that there is no binding in the control rods.
3. Verify that every servo horn has been properly secured with a servo horn mounting screw.
4. Check to insure all screws have been completely tightened and secured using blue or red threadlock where indicated.
5. Verify that the gyro is functioning properly and is compensating in the correct direction.
6. Verify that the electronic speed control has been properly setup according to the manufacturer's instructions. Verify that the throttle settings are set correctly. (Electric only)
7. Make sure none of the servo wires can chafe on the edges of the carbon frames or radio tray. If your model is electric, also verify that the servo wires cannot come into contact with the electric motor in flight.
8. Make sure the transmitter battery and flight pack battery have been fully charged. Refer to your radio system instructions for charging details. Also refer to the flight battery manufacturer's charging instructions for details.

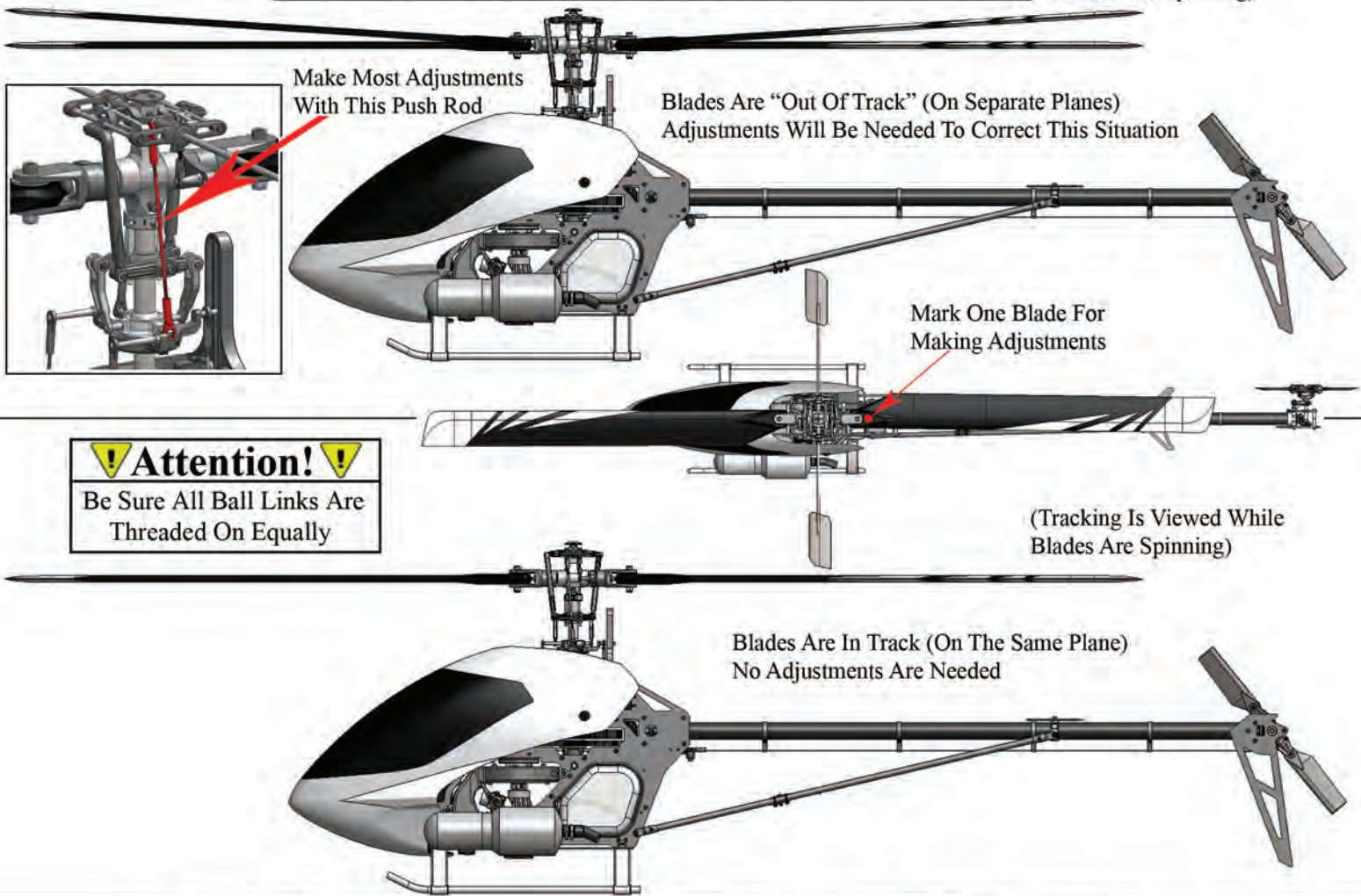
Making Blade Tracking Adjustments

Blade "tracking" is an adjustment to the main rotor blade pitch that must be accomplished during the initial flights. Although the blade pitch angle may appear to be the same when checked with a pitch gauge, it is still possible for the blades to run "out of track" (on separate planes) during the first flight, making adjustment necessary. Main rotor blades that are out of track can cause vibration, instability, and a loss of power due to additional drag.

Care needs to be taken to make sure adjustments are made safely. If at all possible, have a friend view the main rotor disk (spinning rotor blades) at eye level from a safe distance (approximately 15 to 20 feet). Increase the blade speed to just before lift off. Observe which blade appears to be lower than the other. Increase the pitch of the low blade one turn of the ball link at a time, until each blade runs in track with one another (on the same plane). If a friend is not available, we suggest great care be taken while making adjustments.

In the diagrams on the following page, we will show an illustration of what to look for. We will also cover marking one of the blades for making adjustments, as well as which push rod to use for making adjustments.

Field Checking Blade Tracking (Tracking Is Viewed While Blades Are Spinning)



! Attention! !
Be Sure All Ball Links Are Threaded On Equally

After First Flights And Regular Maintenance

After your first flights, we highly recommend you look over the entire model. Below is a list of things to check after the first flights. This list should also become part of a regular pre-flight check up. All model aircraft require regular maintenance to fly safely and reliably. It is the owners responsibility to properly check over and maintain this model helicopter.

1. Check all screws and fasteners to make sure they are still present and tight. We suggest you do this every time after the first 5 or 6 flights, and on a regular basis thereafter.
2. Check all wires and radio gear for chafing or components rubbing against one another. Wires chafing can cause a serious radio failure.
3. Check all gears to make sure they are still turning smoothly and that the gear mesh on all gears has not changed.
4. Check all ball links for binding and or excessive play. Replace or size any links requiring attention.
5. Check all shafts for binding. Lubricate shafts with a light oil.
6. Verify every servo horn is secured with a servo horn mounting screw.
7. Verify that gyro tape is still secure and not splitting apart.
8. Periodically check rubber dampers in rotor head for excessive wear or play. Replace if needed.
9. Check servos to make sure they are still tight in frames and not moving.

Next

Be Sure To Install Thrust Bearing Races In The Correct Orientation!

**Step 4-4
Flybarless**



Flybarless Head Block - x1
ND-YR7-RH1028

Cross Shaft - x1
ND-YR7-RH1005



Main Blade Grip - x2
ND-YR7-RH1010



Thrust Bearing Set
9x17x5mm - x2
ND-YR-G073



Head Damper - x2
ND-YR7-RH1009



Spacer
14x17.25x1mm - x2
ND-YR-G096



Steel Control Ball
20.5mm - x2
ND-YR7-RH1026



Bearing 9x17x5mm - x4
ND-YR-G072



Spacer 9x12x1.7mm - x2
ND-YR-G101



Spacer 4x5x1mm - x2
ND-YR-G150



Flybarless Control Arm - x2
ND-YR7-RH1027



5x12mm Special
Spindle Screw - x2
ND-YR-G116



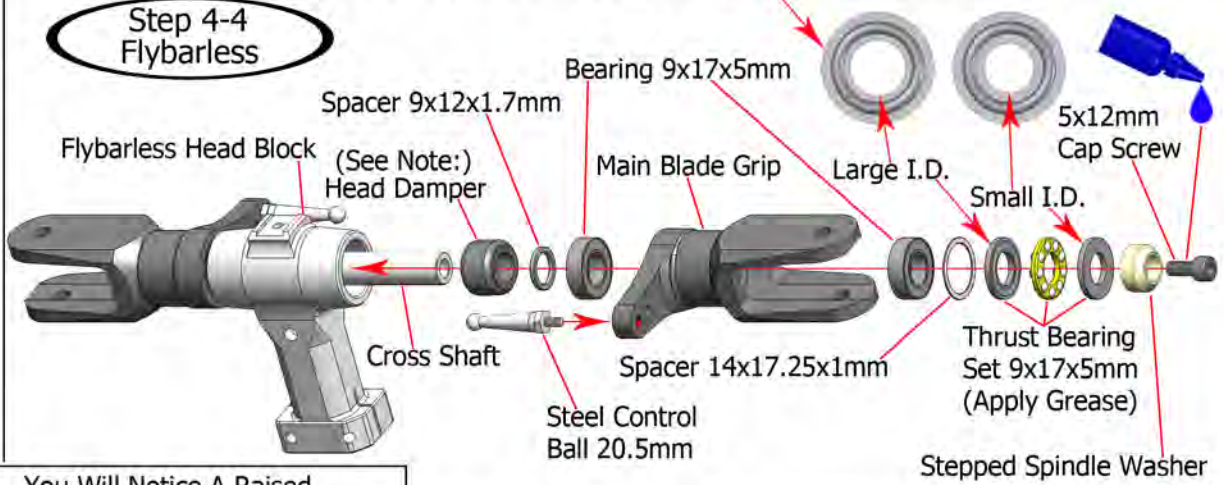
Stepped Spindle
Washer - x2
ND-YR7-RH1030



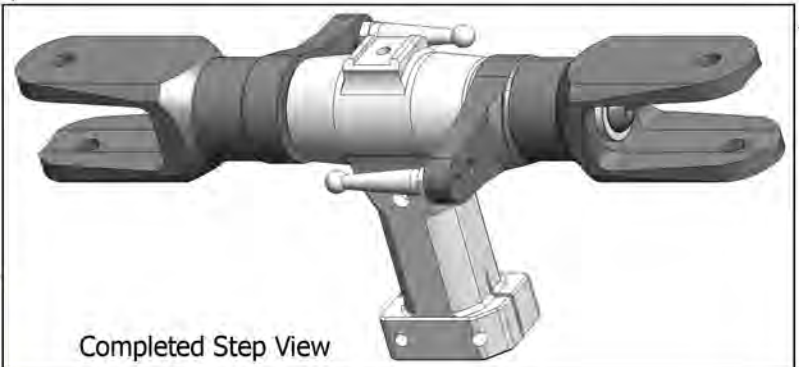
Bearing 4x7x2.5mm
Flanged - x4
ND-YR-G067



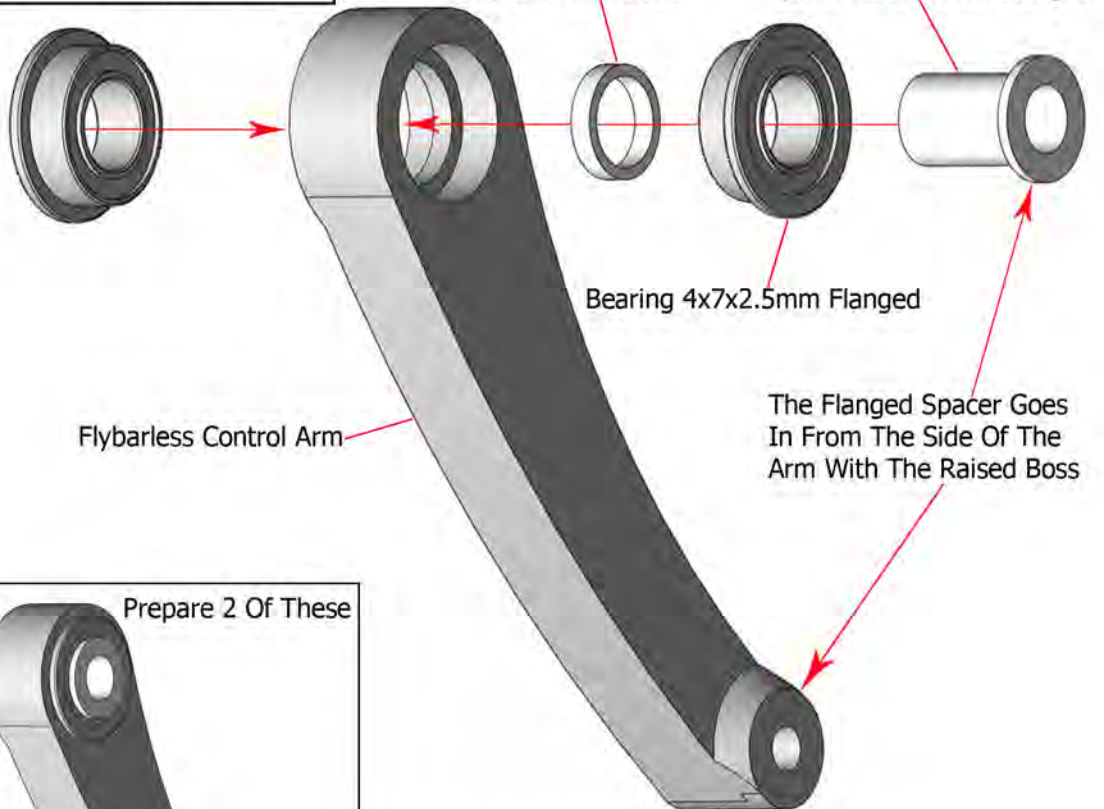
Spacer 3x4x6.5mm
Flanged - x2
ND-YR-G151



You Will Notice A Raised Boss On The Rubber Head Damper. This Boss Faces The Outside Of The Head Block.



Attention!
Use Blue Threadlock On All Screws Going Into Metal



Tighten All Screws Securely At This Time

Note: For Best Performance We Recommend Gluing The Head Dampers Into The Head Block With A Small Amount Of Medium CA



Step 4-4 Flybarless

**Step 4-5
Flybarless**

Washout A Arm - x2
ND-YR7-RH1020

Bearing 2x6x3mm
Flanged - x4
ND-YR-G144

Head Button - x1
ND-YR7-RH1008

2x14mm Cap
Screw - x2
ND-YR-G143

3x22mm Cap
Screw - x2
ND-YR-G125

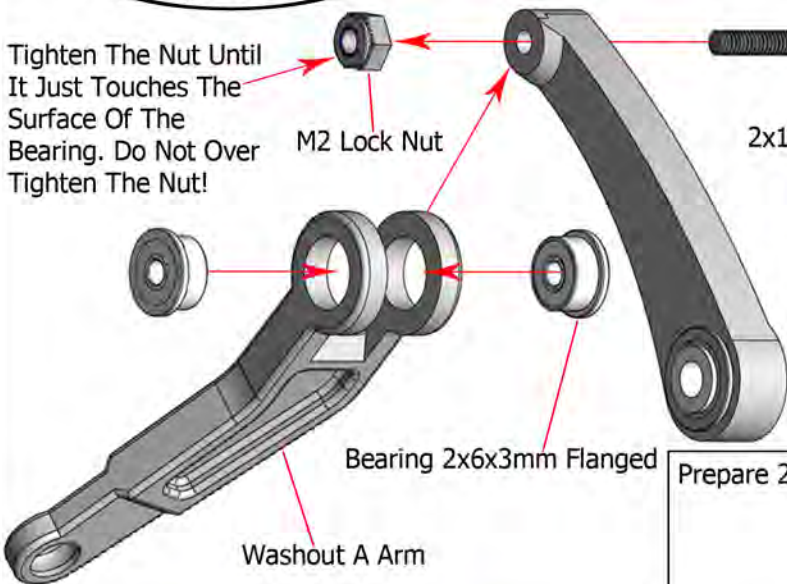
3x8mm Cap
Screw - x1
ND-YR-G114

M2 Lock Nut - x2
ND-YR-G037

Spacer
5x22x1.5mm - x4
ND-YR-G136

M5 Lock Nut - x2
ND-YR-G113

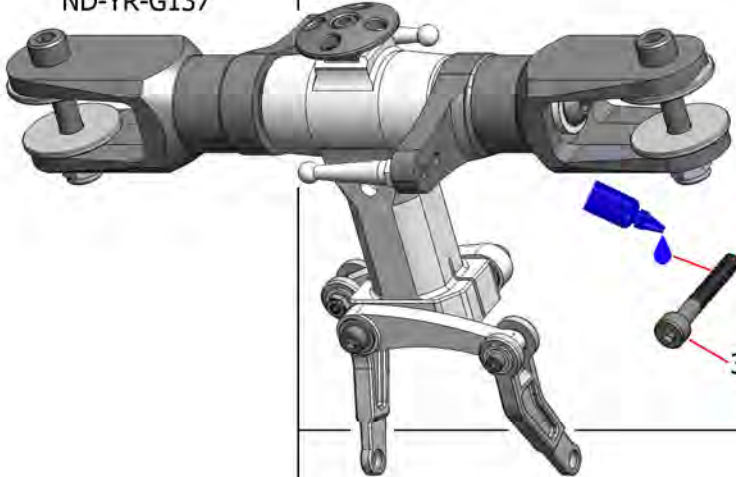
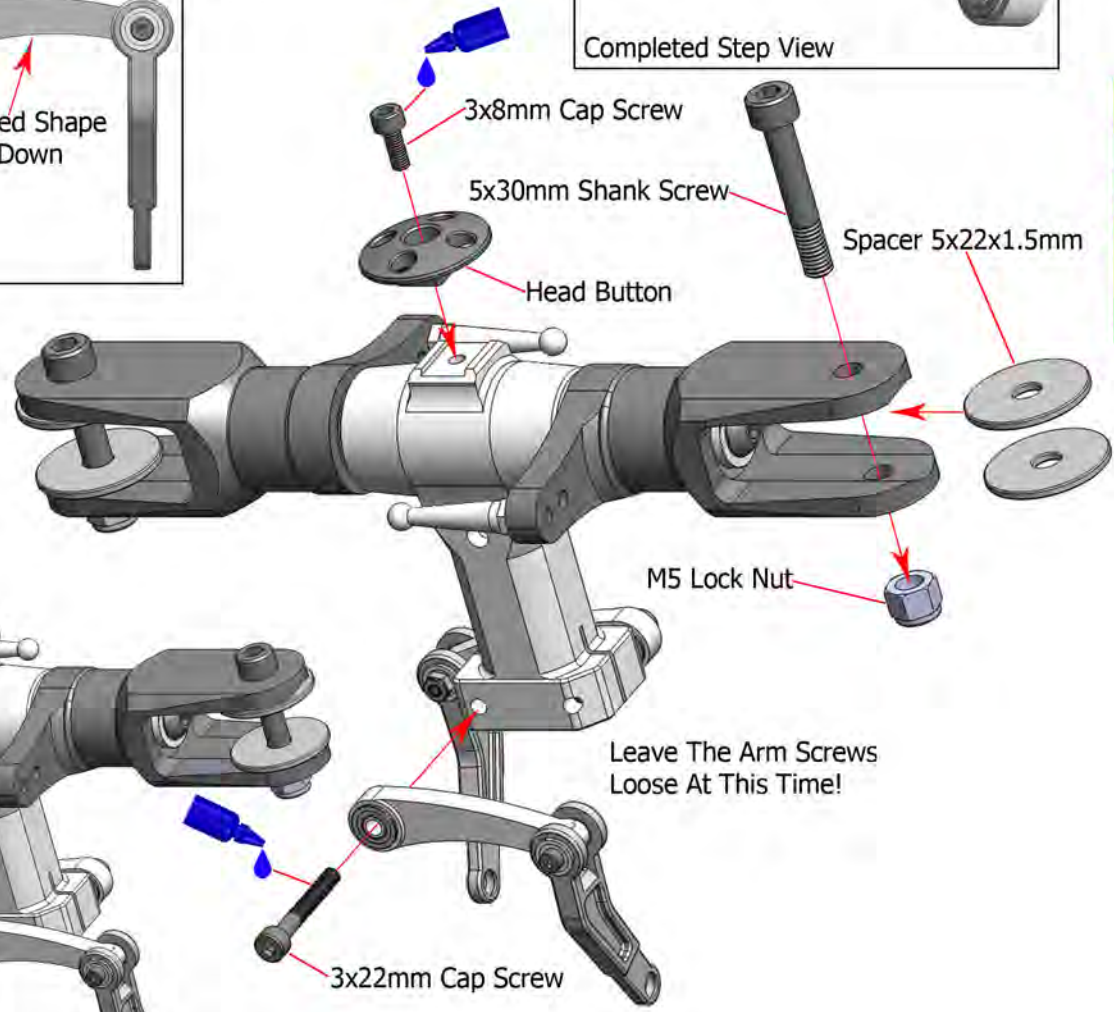
5x30mm Shank
Screw - x2
ND-YR-G137



! Attention! !
Do Not Use Threadlock On
Screws Going Into Lock Nuts



! Attention! !
Use Blue Threadlock On All
Screws Going Into Metal



Step 4-5 Flybarless





4x24mm Shank
Screw - x1
ND-YR-G135



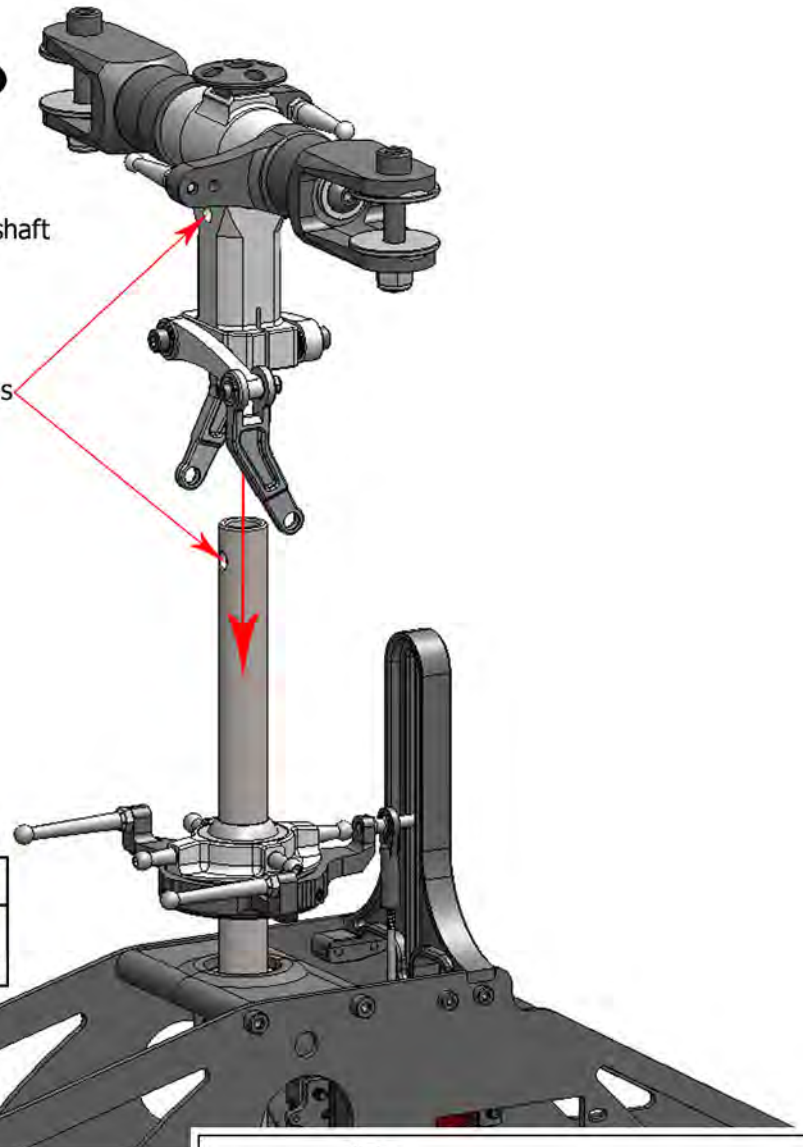
M4 Lock Nut - x1
ND-YR-G091

**Step 4-6
Flybarless**

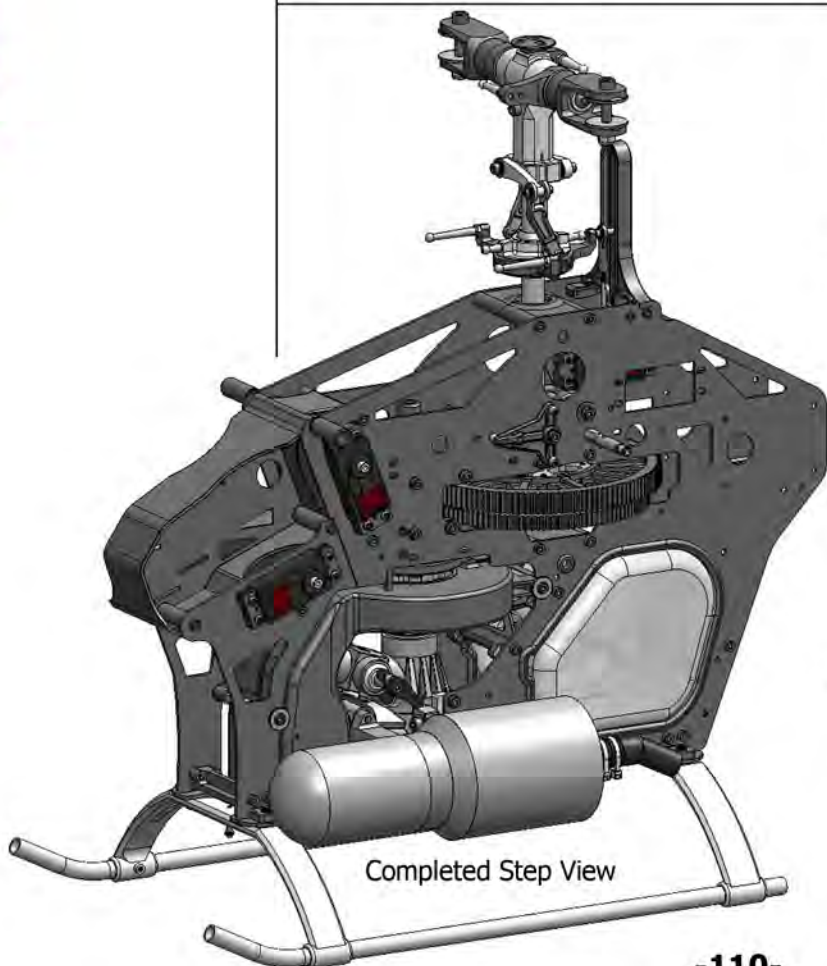
Slide The Rotor Head
Down Onto The Mainshaft

Line Up Holes

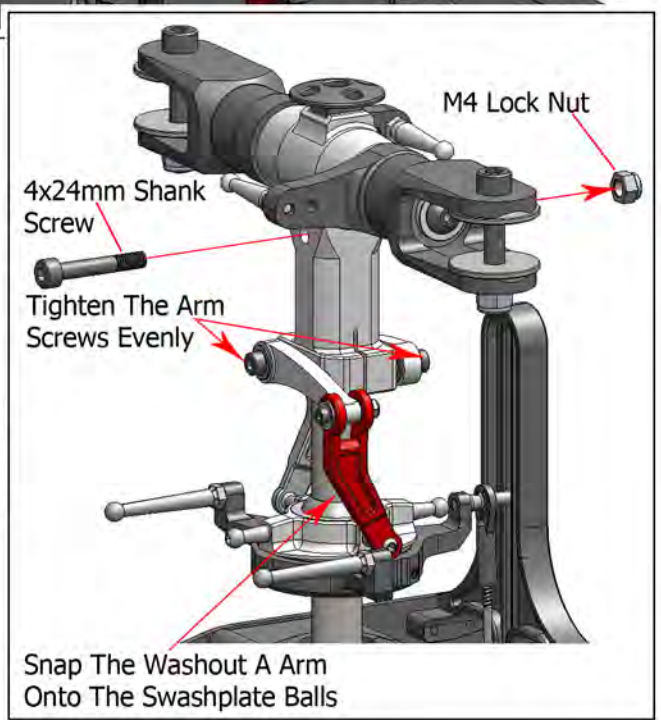
! Attention! !
Do Not Use Threadlock On
Screws Going Into Lock Nuts



Step 4-6 Flybarless



Completed Step View



4x24mm Shank
Screw

M4 Lock Nut

Tighten The Arm
Screws Evenly

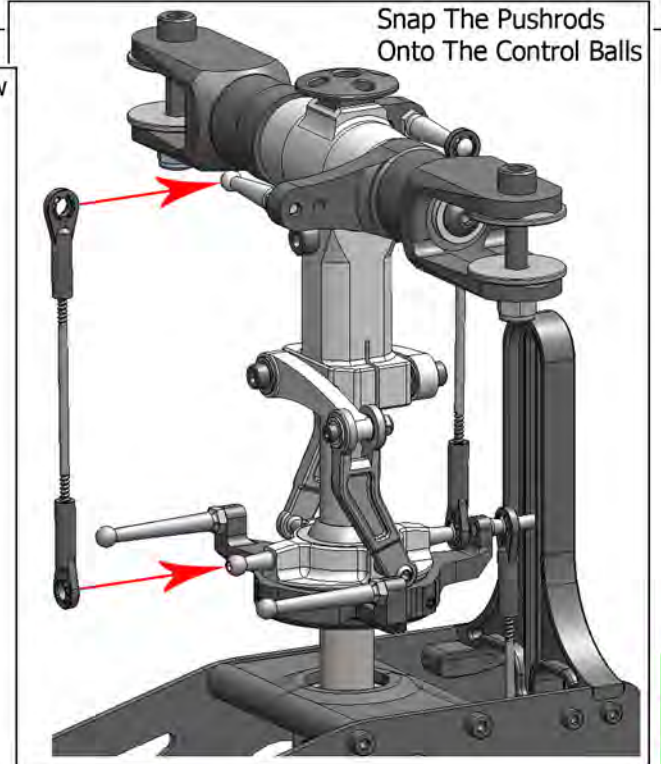
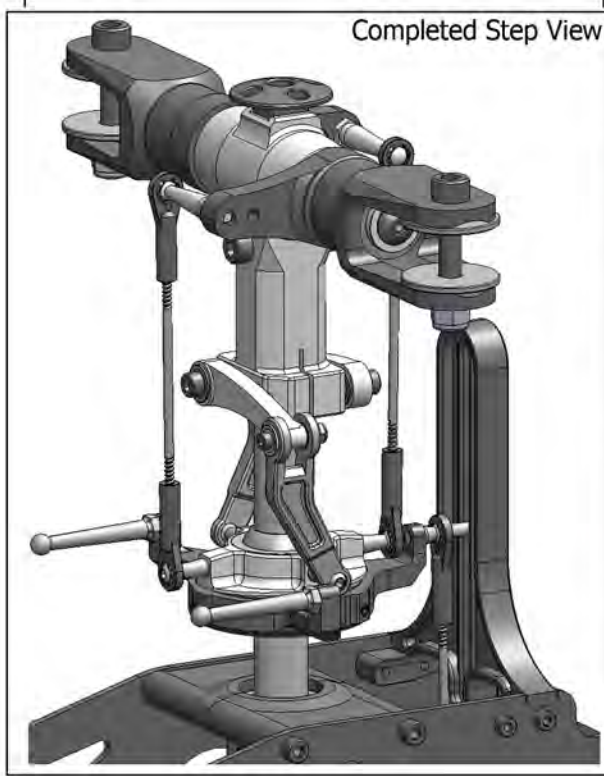
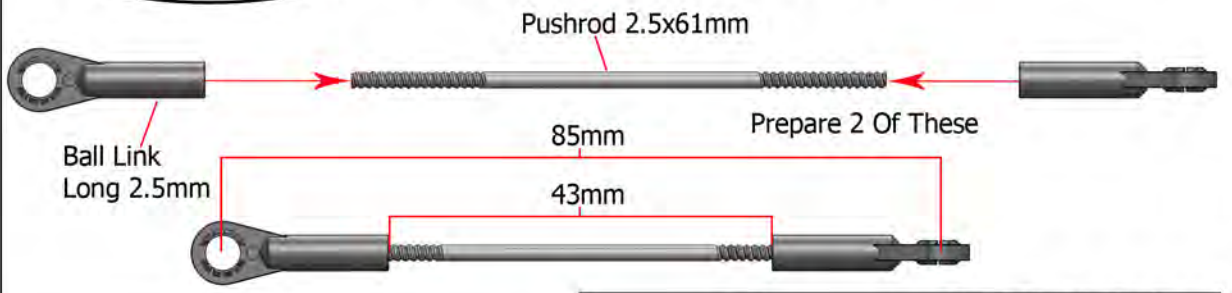
Snap The Washout A Arm
Onto The Swashplate Balls

Tighten All Screws Securely!



**Step 4-7
Flybarless**

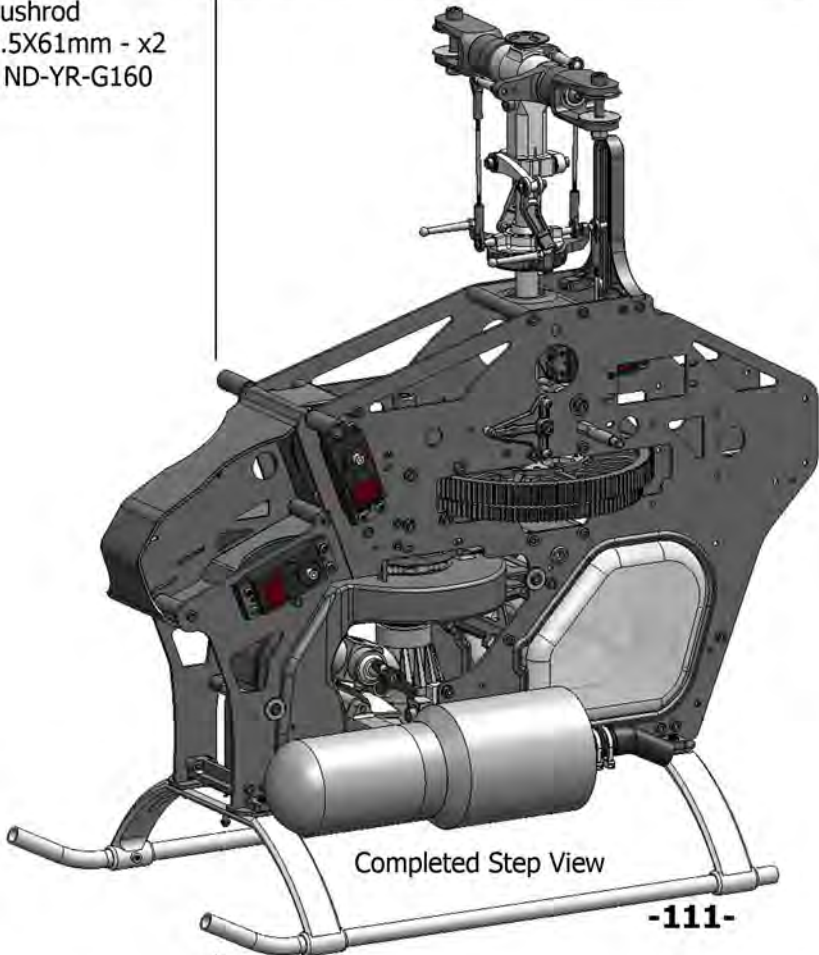
Thread The Ball Links On To Equal Depths



! Attention! !
Be Sure All Ball Links Are
Threaded On Equally



The Dot On The Link
Indicates Direction. Dot
Goes Towards The Ball.

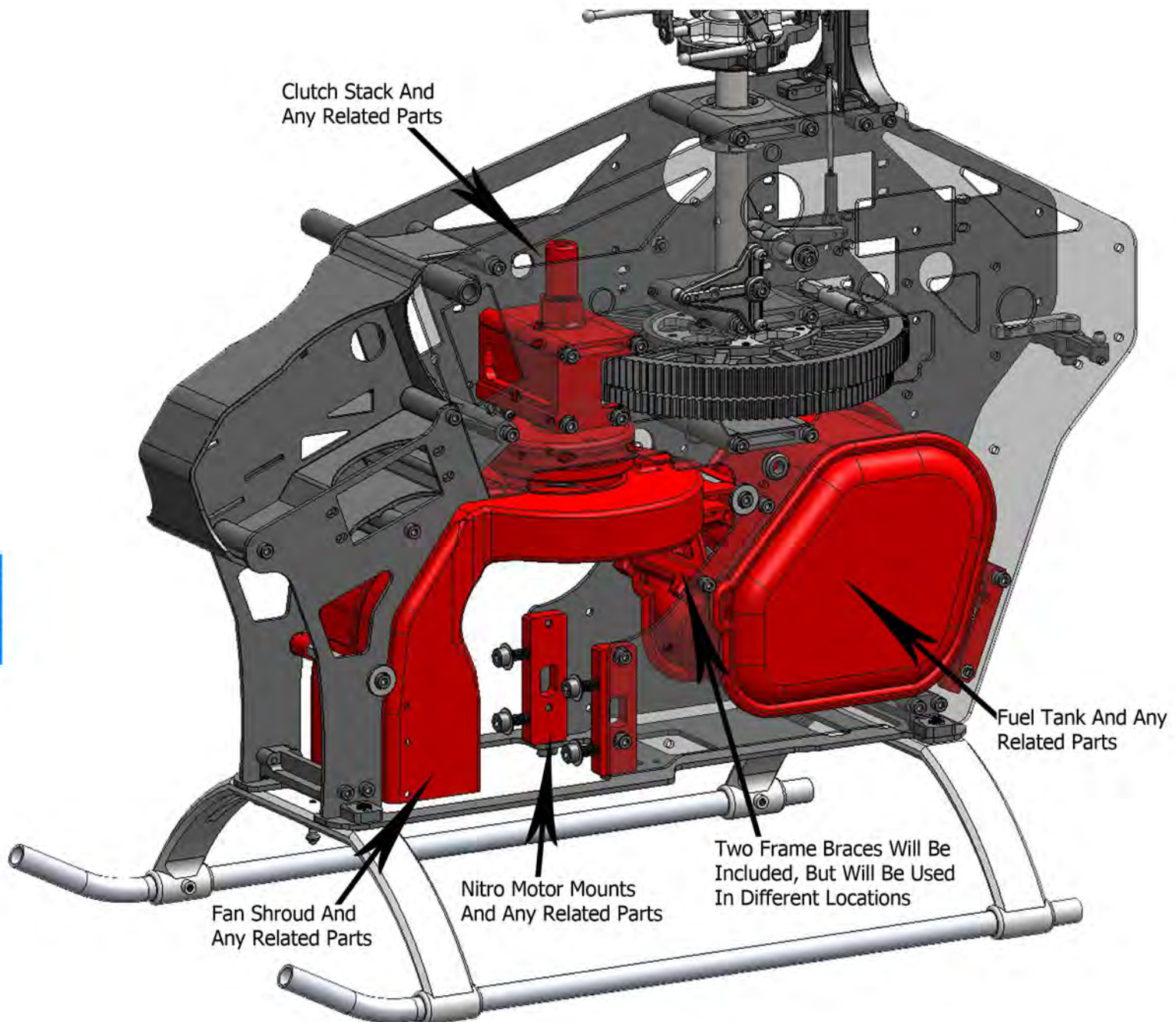


Step 4-7 Flybarless



Rave ENV Electric Part Layout Instructions

In this section, we will go over what parts are different in the electric version of the Rave 90 ENV, and where they are installed. The parts shown below highlighted in red are not used in the electric version and will not be included in your kit. Most of the build is the same, with a few exceptions. Use this section as a guide to show you where these different parts go. You will be able to then use the rest of the instructions to complete the build of the model. When going through the setup of your electric motor electronics, we suggest referencing the manufacturers instructions included with the equipment you have chosen. All other radio setup will be the same as is shown for the nitro model.



The next section will show the model with these parts removed and what other parts go in their locations. To finish the build, reference the nitro build of the model.



If The Shaft On Your Electric Motor Is Not At Least 33mm Long When Measured From The Top Of The Motor Case (Or Provided Motor Spacer If Used) To The End Of The Shaft, You Will Need To Trim The Shaft To 21mm. If The Shaft Does Measure 33mm Or Longer From The Top Of The Motor Case To The End Of The Shaft, Trimming Will Not Be Necessary.

Step 1-1 Electric



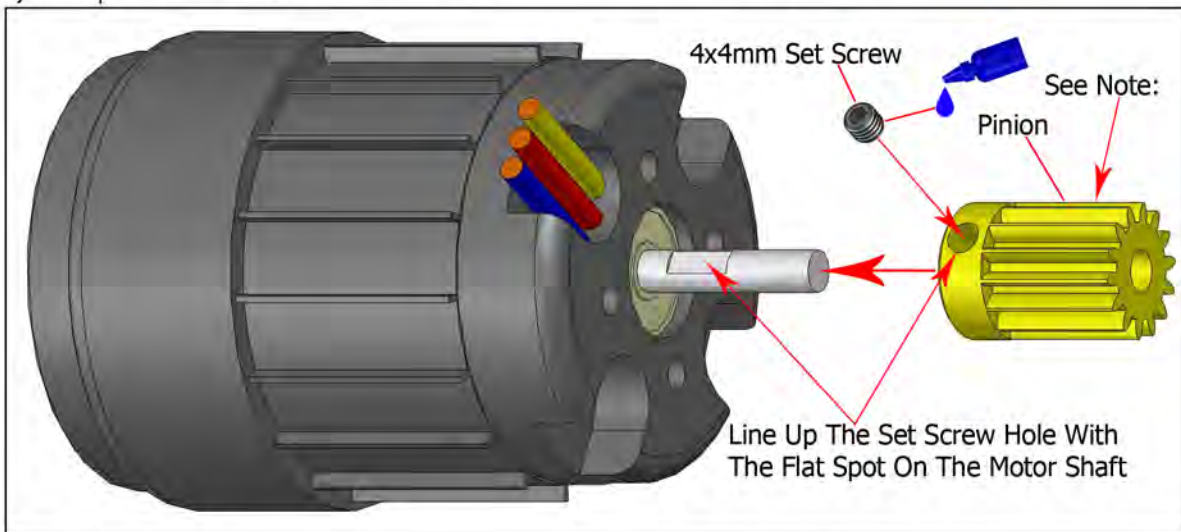
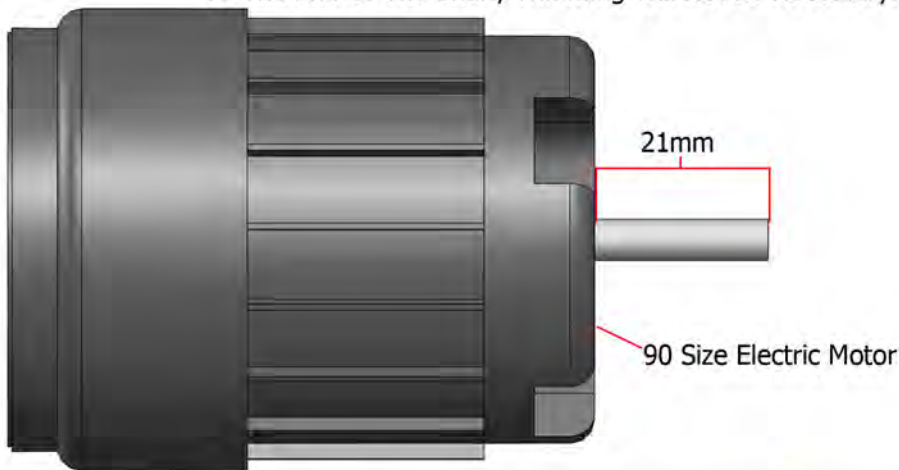
90 Size Electric Motor (Purchased Separately)



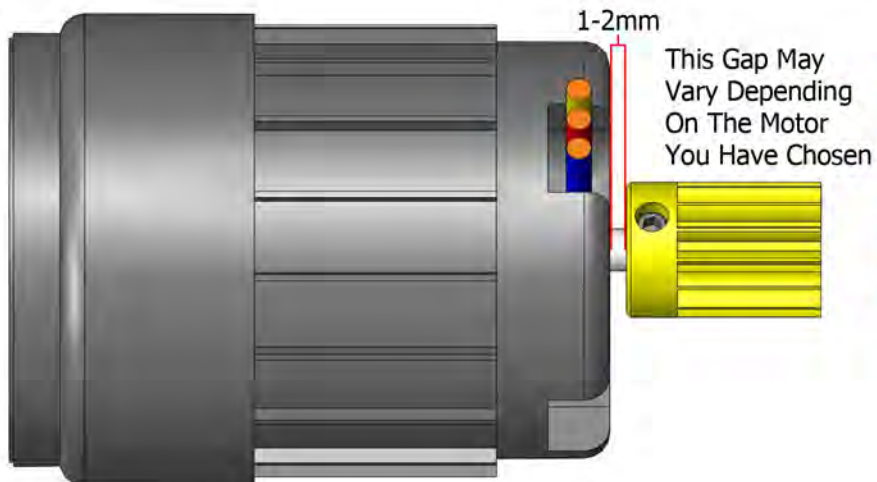
Electric Motor Pinion (Purchased Separately)



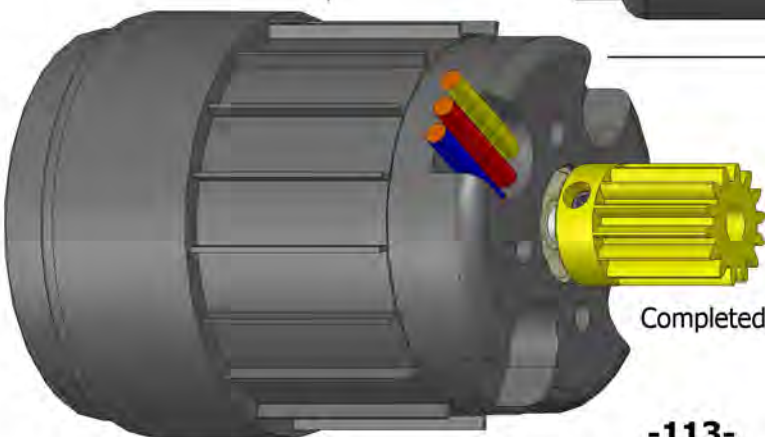
4x4mm Set Screw - x1 (Supplied With Pinion)



Note: The Tooth Count On The Pinion Will Depend On The KV Of The Motor You Have Chosen. Pinions Are Available For Purchase Separately.












Step 1-1 Electric



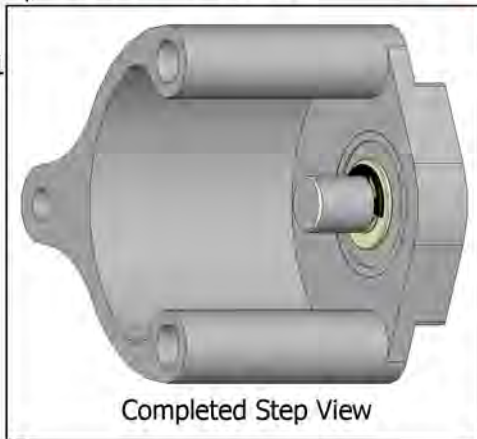
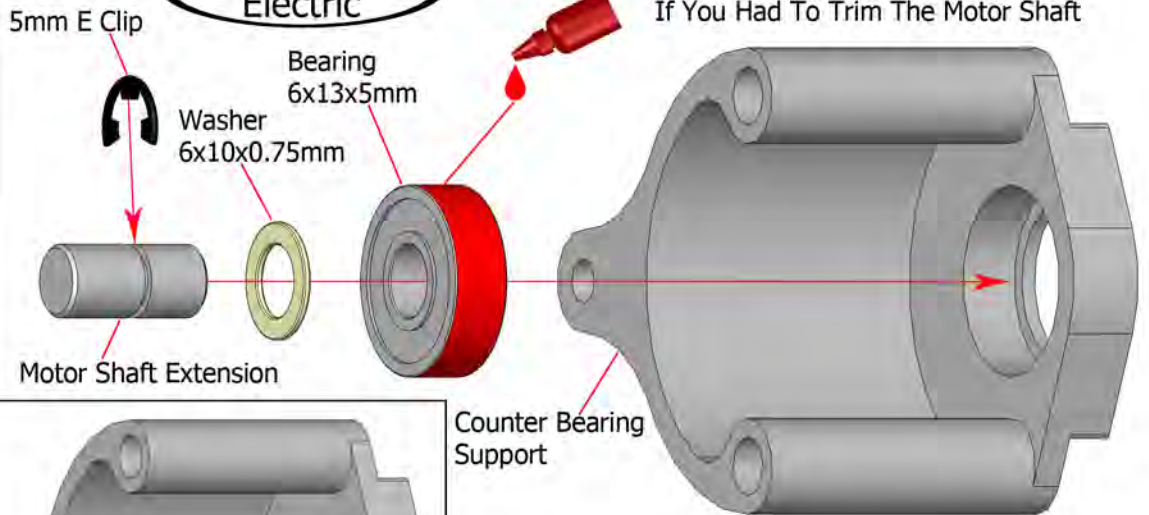
Completed Step View

! Attention! !
Use Blue Threadlock On The Pinion Set Screw



-  Counter Bearing Support - x1
ND-YR7-EC1003
-  Motor Shaft Extension - x1
ND-YR7-EC1004
-  5mm E Clip - x1
ND-YR-G152
-  3x10mm Cap Screw - x1
ND-YR-G065
-  M3 Lock Nut - x1
ND-YR-G035
-  M3 Washer - x1
ND-YR-G094
-  Bearing 6x13x5mm - x1
ND-YR-G166
-  Washer 6x10x0.75mm - x1
ND-YR-G153
-  Electric Motor Mount - x1
ND-YR7-EC1002

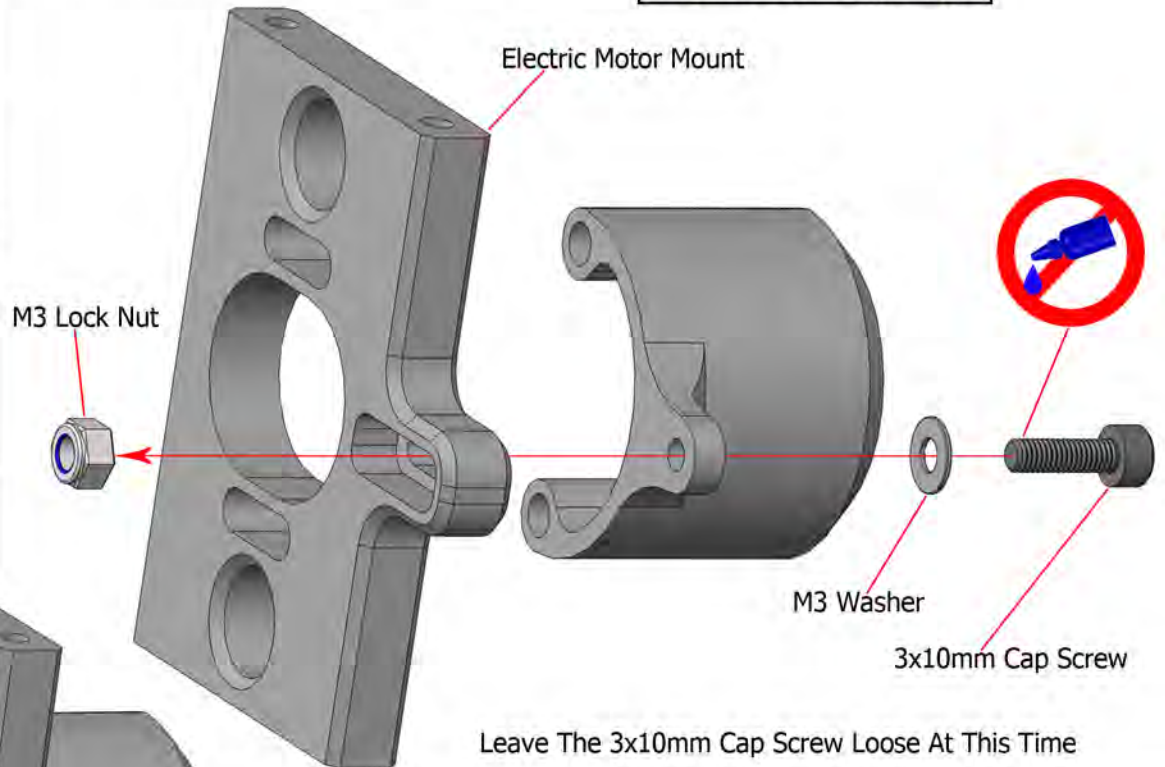
Step 1-2 Electric



Clean All Surfaces With Alcohol And Apply Red Threadlock To The Outside Surface Of The Bearing. Press The Bearing In Place And Wipe Away Any Excess Adhesive. Be Careful Not To Get Any Threadlock Inside The Bearing!

! Attention! !
Be Careful When Using Red Threadlock, Use Sparingly

Step 1-2 Electric



M3 Lock Nut
M3 Washer
3x10mm Cap Screw

Leave The 3x10mm Cap Screw Loose At This Time

Completed Step View

! Attention! !
Do Not Use Threadlock On Screws Going Into Lock Nuts



**Step 1-3
Electric**

Position The Motor Wires Towards The Back Side Of The Motor Mount Assembly. Place One M4 Star Lock Washer On Each Of The Two 4x30mm Cap Screws. No Threadlock Is Used On The 4x30mm Cap Screws. Push Them Through The Motor Mount Assembly And Thread Them Into The Motor Mounting Holes. Leave Them Loose At This Time.



4x30mm Cap Screw - x2
ND-YR-G154

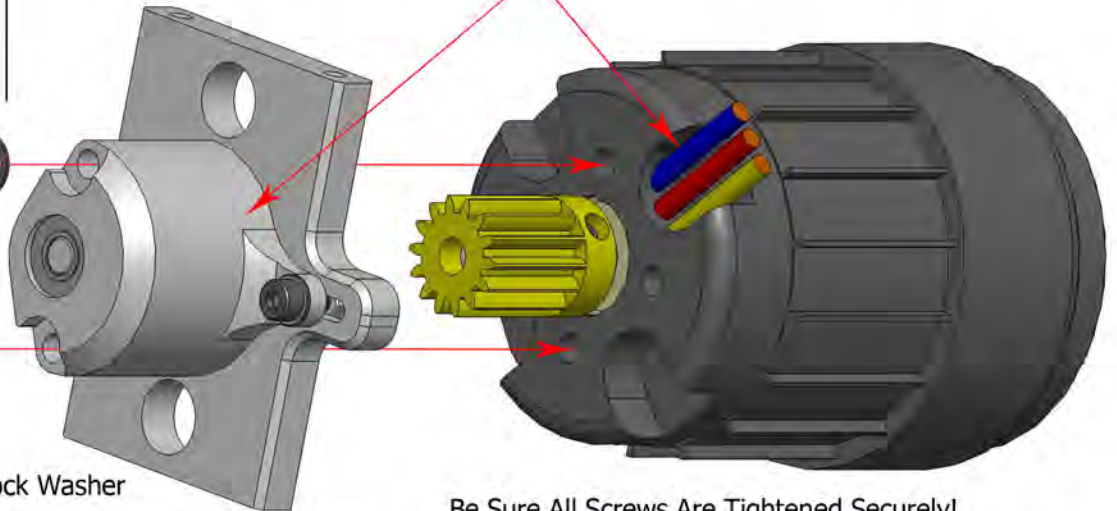


M4 Star Lock Washer - x2
ND-YR-G155



4x30mm Cap Screw

M4 Star Lock Washer

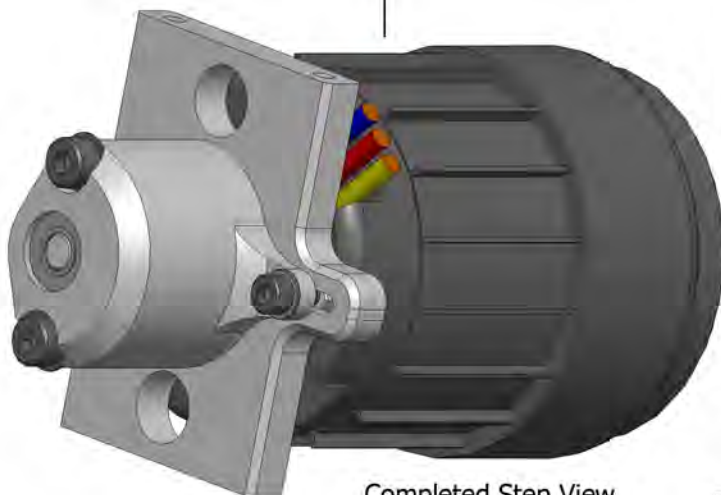
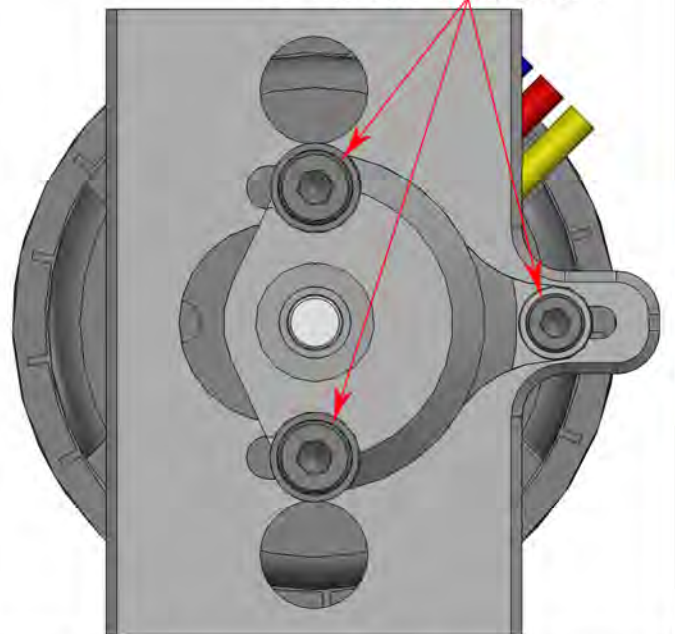
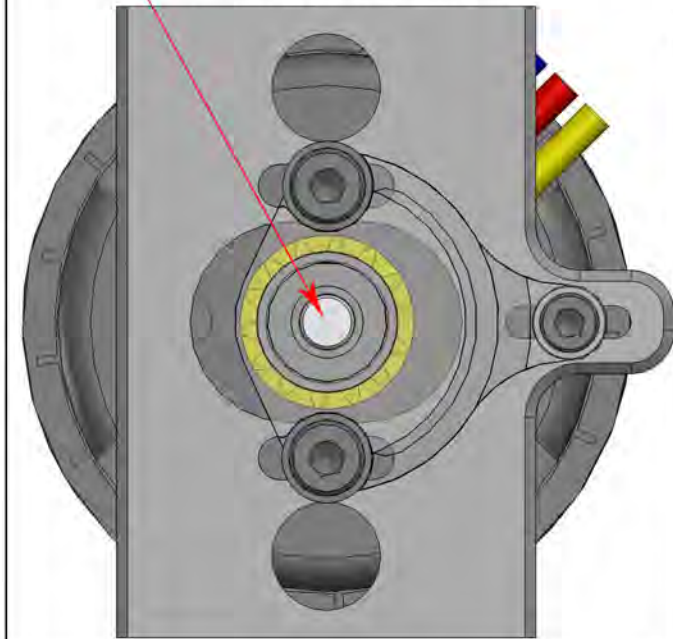


Be Sure All Screws Are Tightened Securely!

Position The Motor In The Center Of The Motor Mount. If You Are Using A Small Pinion You May Want To Move The Motor Closer To The Gear Side Of The Mount.

! Attention! !
Do Not Use Threadlock On The Motor Mount Screws

Tighten All 3 Indicated Screws Securely. No Threadlock Is Used On The Motor Mount Screws!



Completed Step View



2 Motor Mount Spacers Have Been Provided In The Kit To Accommodate For Different Motor Configurations. Longer Screws Have Also Been Provided. The Spacers Are 2.5mm Thick. If Only One Spacer Is Used, The Longer Screws May Need To Be Trimmed Shorter Or Have Spacers Added Under The Screw Heads To Avoid Motor Damage!

Step 1-4
Electric

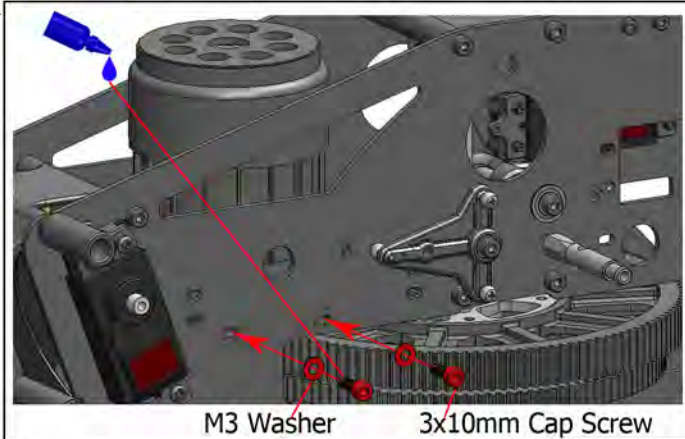
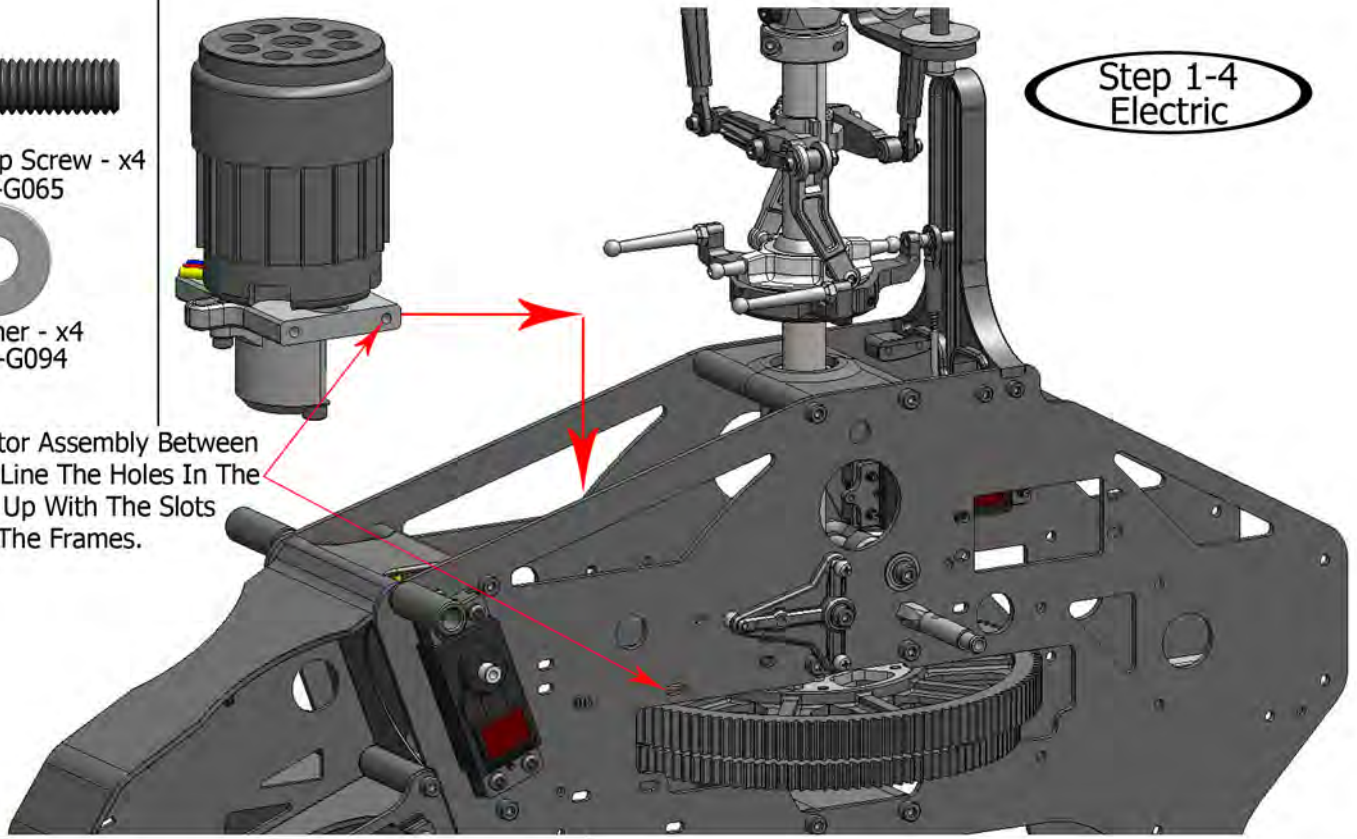


3x10mm Cap Screw - x4
ND-YR-G065

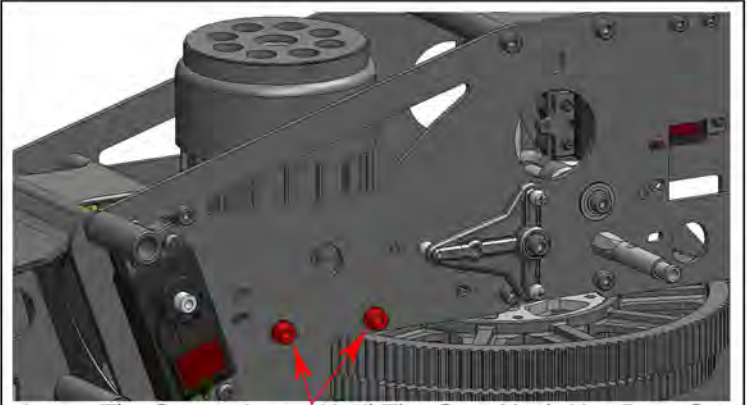


M3 Washer - x4
ND-YR-G094

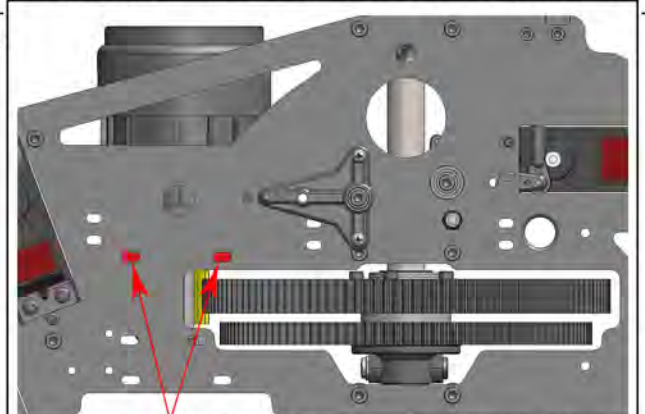
Slide The Motor Assembly Between The Frames. Line The Holes In The Motor Mount Up With The Slots Indicated In The Frames.



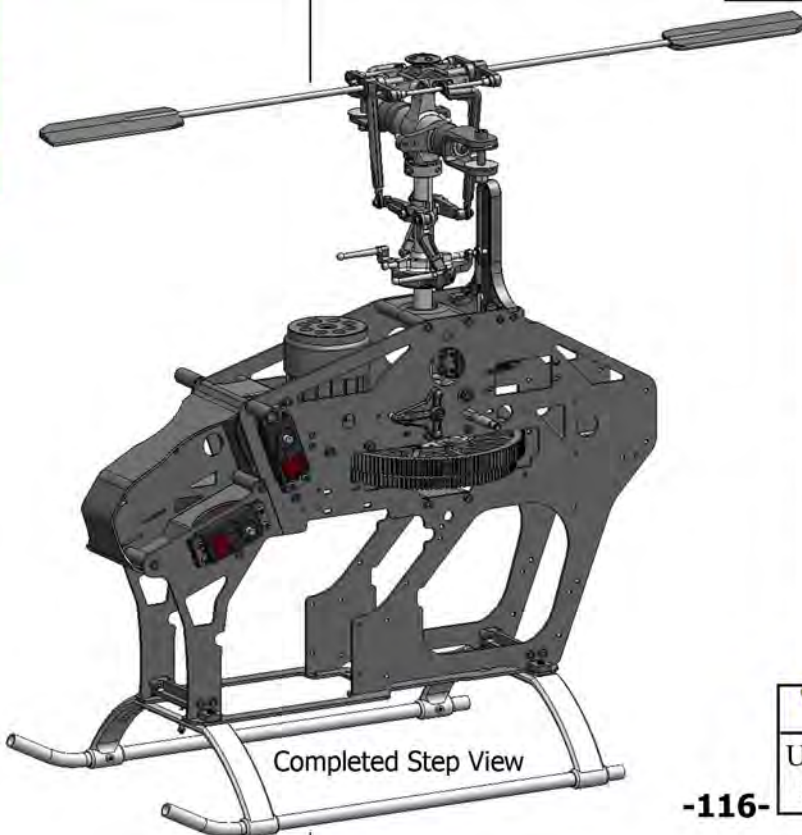
M3 Washer 3x10mm Cap Screw



Leave The Screws Loose Until The Gear Mesh Has Been Set



The Frames Are Slotted To Adjust The Gear Mesh. Adjust The Mesh Between The Main Gear And The Pinion Until There Is A Small Amount Of Backlash (Space Between The Gears) All The Way Around The Main Gear. Be Sure To Tighten The Screws Securely Using Blue Threadlock. The Motor Mount Is Also Slotted If Additional Space Is Needed For Setting The Gear Mesh.



Completed Step View

! Attention! !

Use Blue Threadlock On All Screws Going Into Metal



Step 1-5 Electric

The Rear Battery Tray Can Be Mounted High In The Frames Or Low In The Frames. After You Have Decided Which Configuration You Prefer Follow The Assembly Instructions Illustrated Below.

Hex Spacer EC Threaded
3x5.5x58mm - x3
ND-YR-G156



Plastic Frame
Center Brace - x1
ND-YR7-F1010



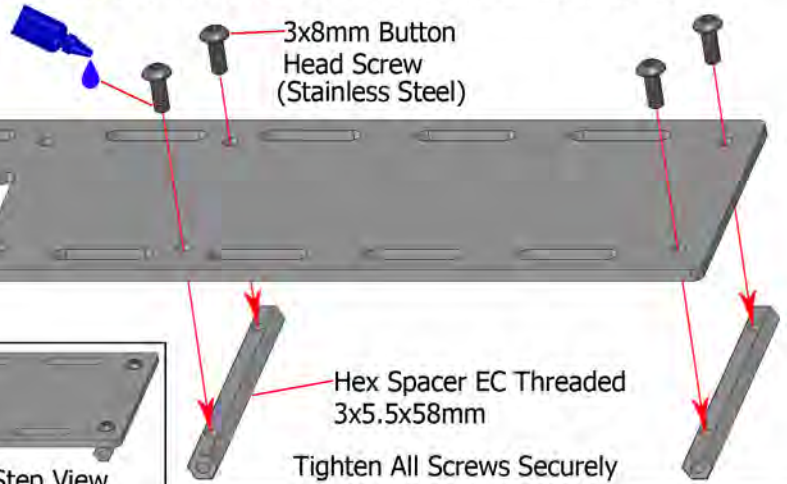
3x8mm Button
Head Screw - x4
(Stainless Steel)
ND-YR-G148



Rear Carbon
Battery Tray - x1
ND-YR7-EC1001

Upper Battery Tray Assembly

Rear Carbon
Battery Tray



Upper Battery Tray Completed Step View

Hex Spacer EC Threaded
3x5.5x58mm

Tighten All Screws Securely
Line Up Holes

Lower Battery Tray Assembly



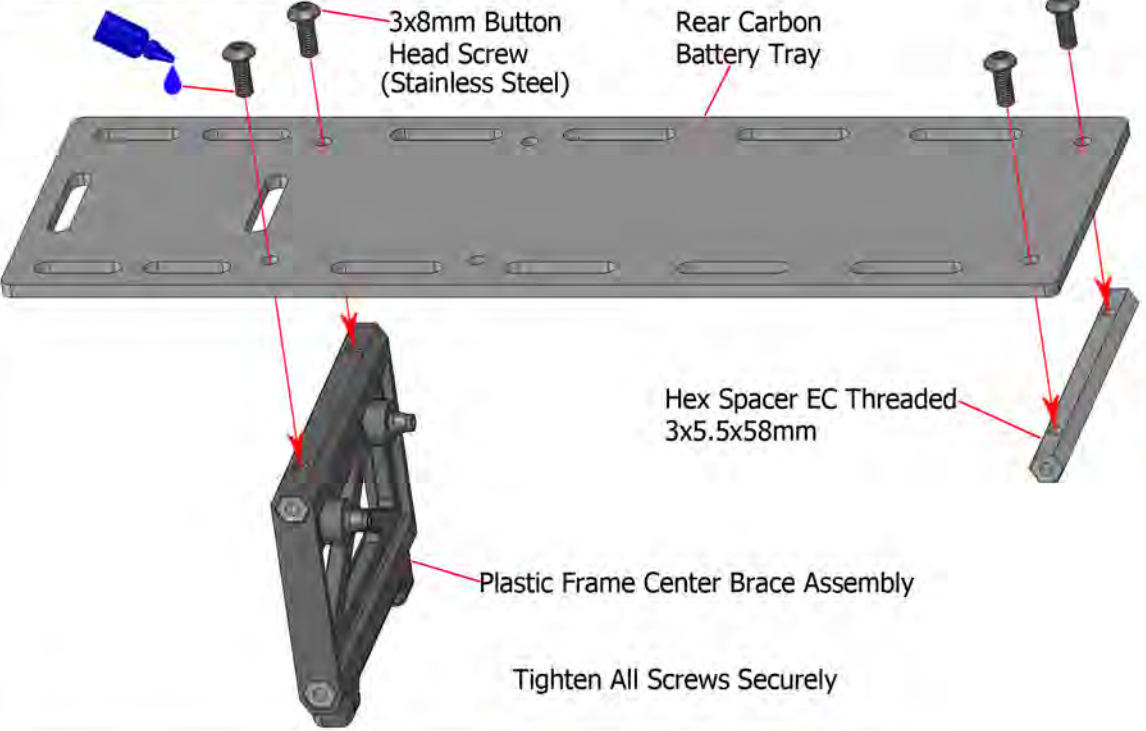
Completed Step View



Hex Spacer EC Threaded
3x5.5x58mm

Plastic Frame Center Brace

Lower Battery Tray Assembly



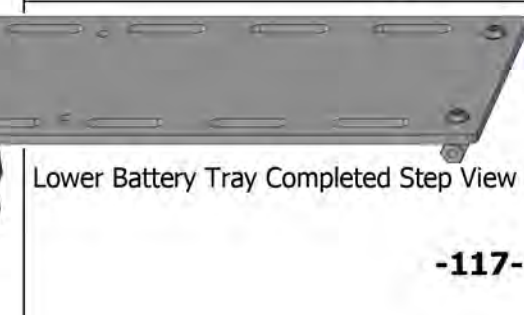
3x8mm Button
Head Screw
(Stainless Steel)

Rear Carbon
Battery Tray

Hex Spacer EC Threaded
3x5.5x58mm

Plastic Frame Center Brace Assembly

Tighten All Screws Securely



Lower Battery Tray Completed Step View

! Attention! !
Use Blue Threadlock On All
Screws Going Into Metal



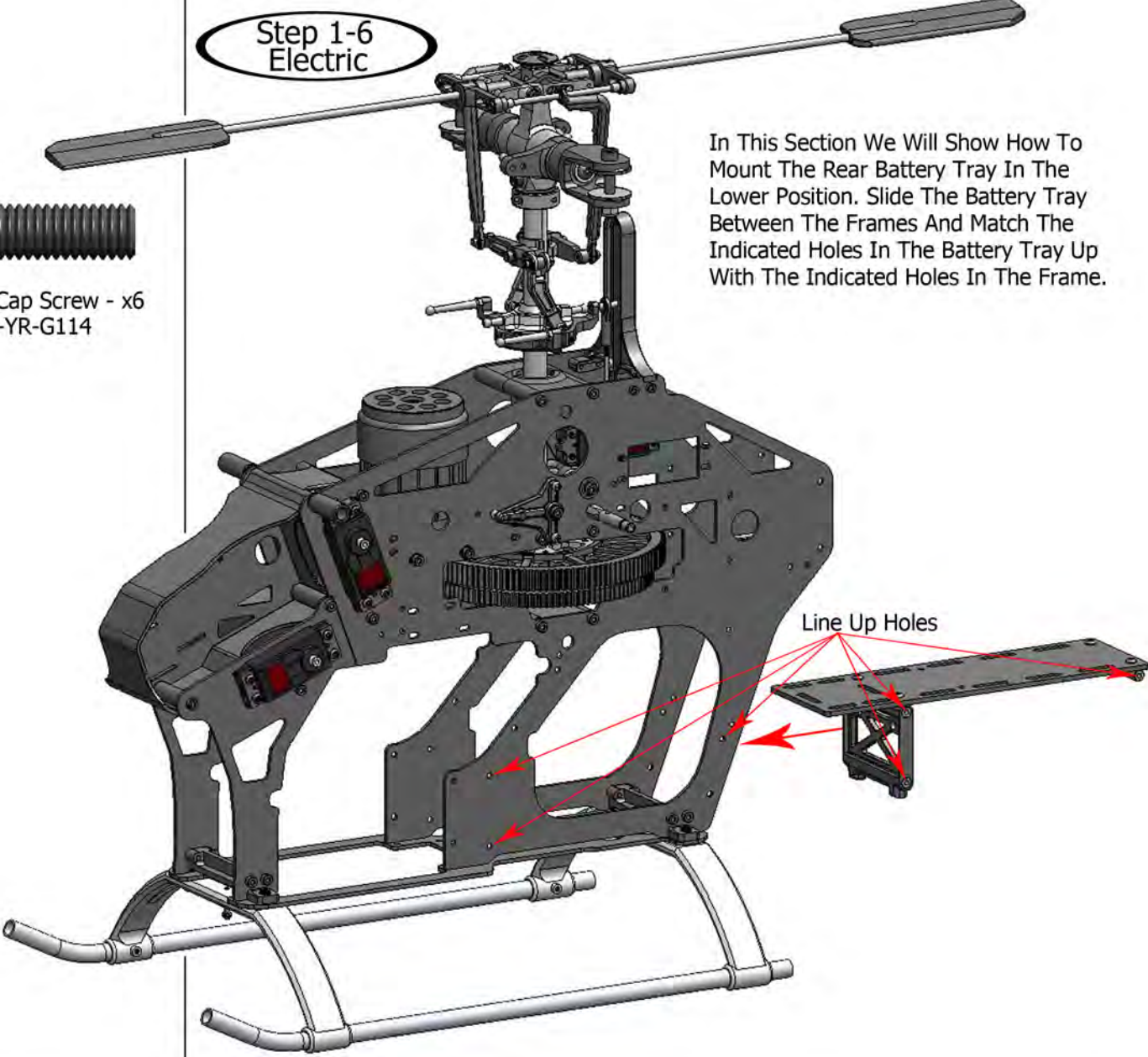
Step 1-5 Electric

Step 1-6
Electric

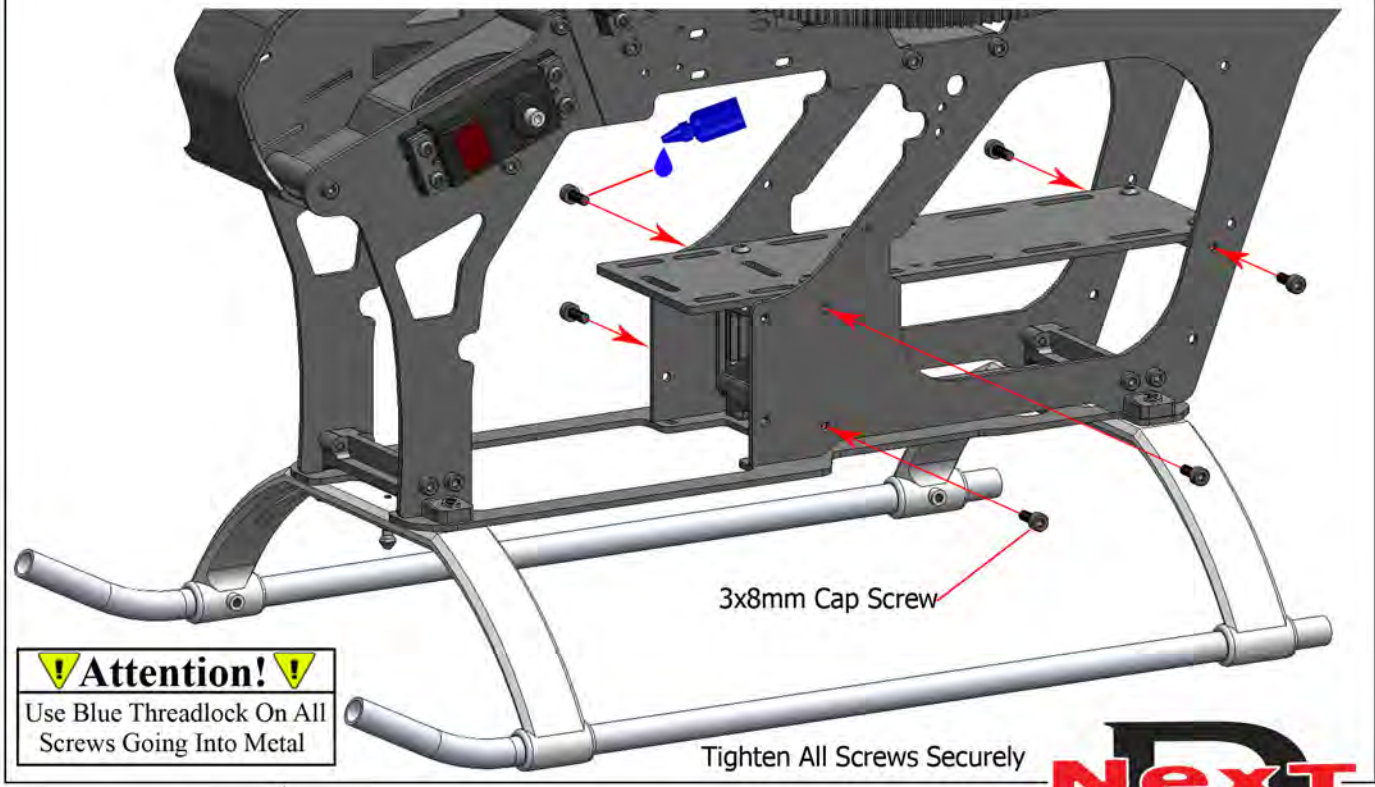


3x8mm Cap Screw - x6
ND-YR-G114

In This Section We Will Show How To Mount The Rear Battery Tray In The Lower Position. Slide The Battery Tray Between The Frames And Match The Indicated Holes In The Battery Tray Up With The Indicated Holes In The Frame.



Step 1-6 Electric



! Attention! !
Use Blue Threadlock On All
Screws Going Into Metal

3x8mm Cap Screw

Tighten All Screws Securely



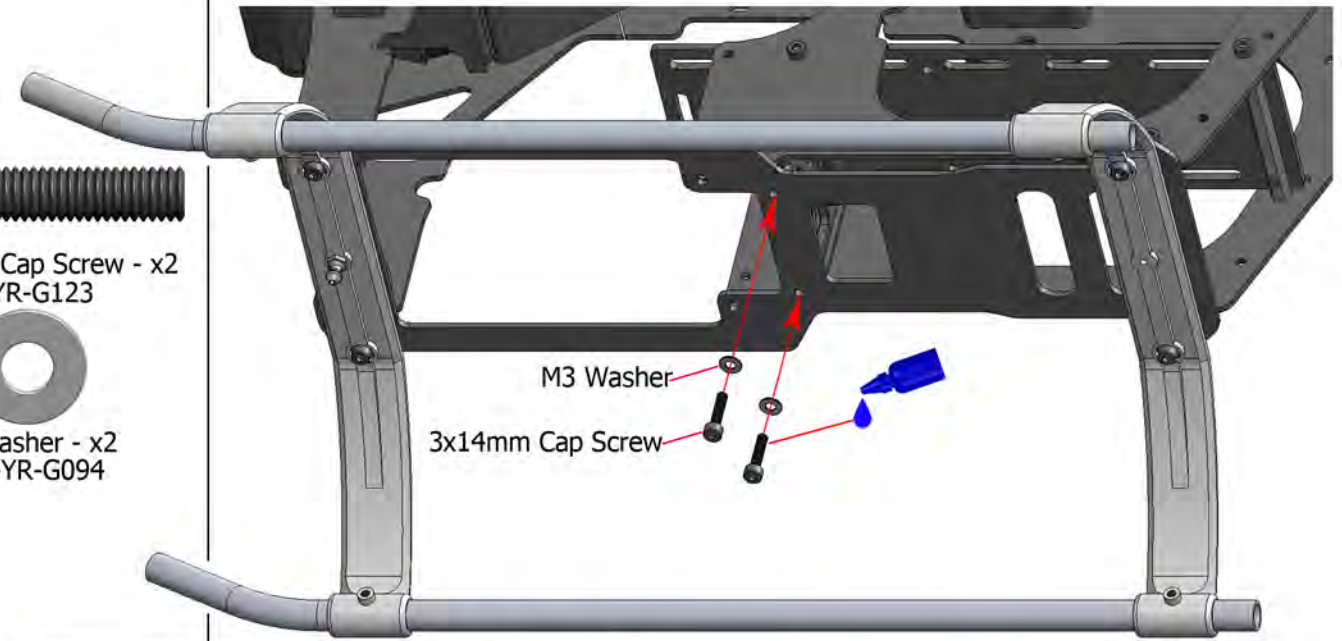
Step 1-7
Electric



3x14mm Cap Screw - x2
ND-YR-G123

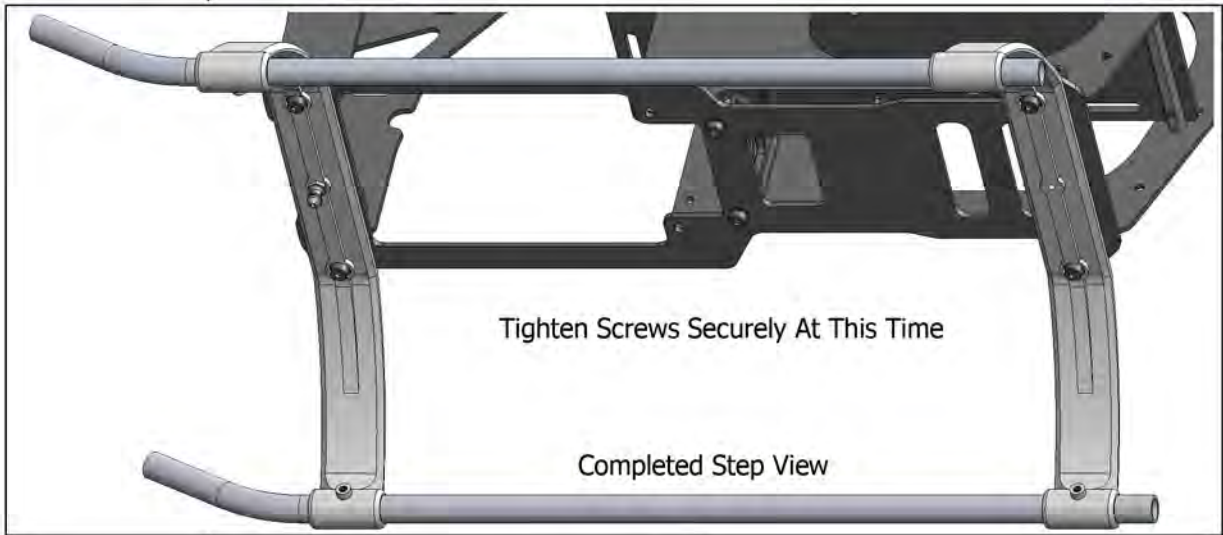


M3 Washer - x2
ND-YR-G094



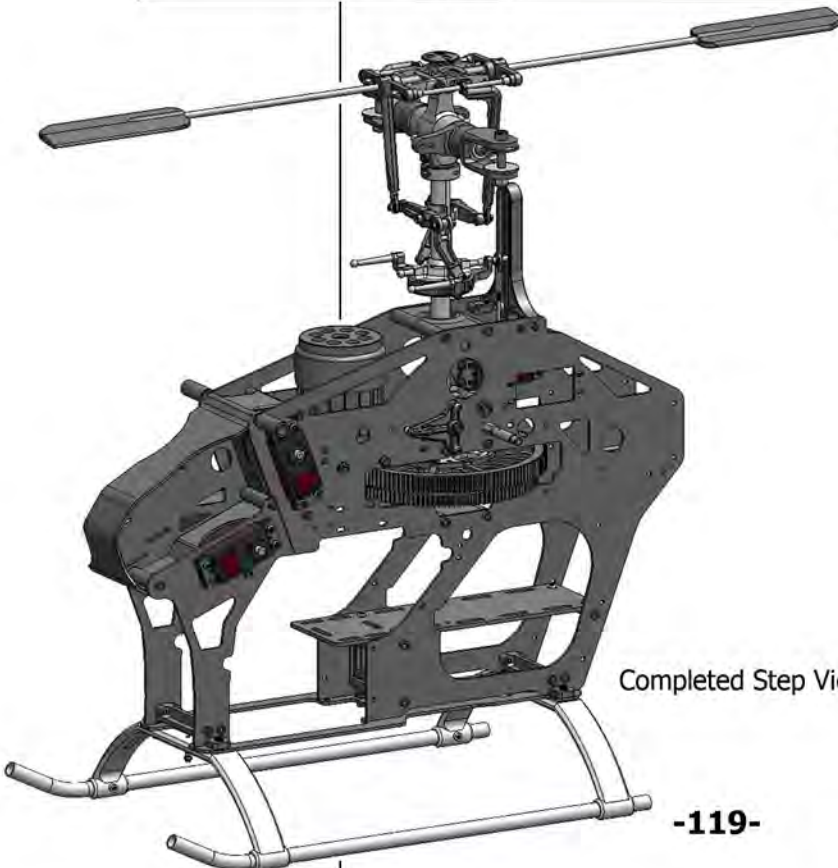
M3 Washer

3x14mm Cap Screw



Tighten Screws Securely At This Time

Completed Step View



Completed Step View

! Attention! !
Use Blue Threadlock On All
Screws Going Into Metal

Step 1-7 Electric

Step 1-8 Electric

In This Section We Will Show How To Mount The Rear Battery Tray In The Upper Position In The Frames. You Will Need To Modify The Plastic Center Frame Brace To Add Strength To The Bottom Of The Frames. Cut Away The Top Portion Of The Plastic Frame Center Brace Along The Indicated Line Using A Rotary Cutting Tool. The Top Portion Will Not Be Used In This Assembly Configuration.

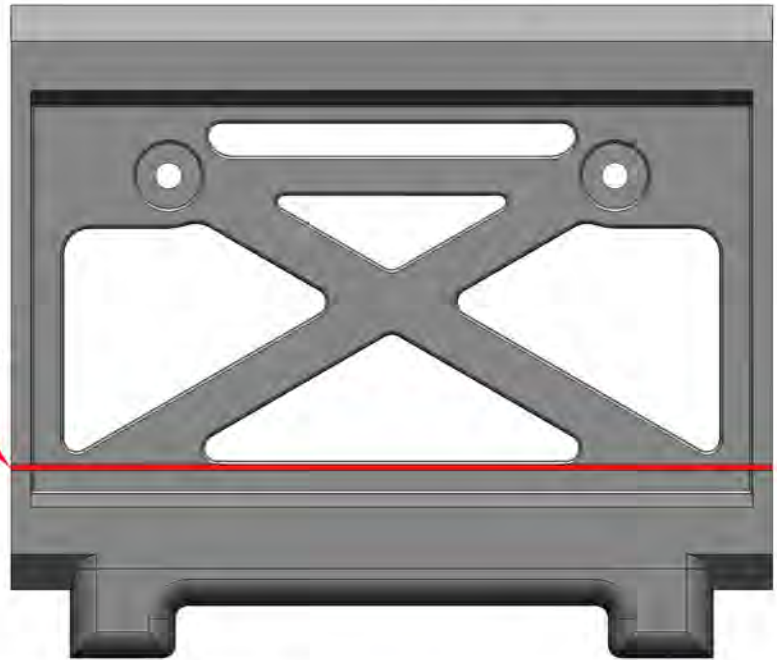


Plastic Frame
Center Brace - x1
ND-YR7-F1010



Hex Spacer EC Threaded
3x5.5x58mm - x1
ND-YR-G156

Cut Along This
Line Using A
Rotary Cutting
Tool. Discard The
Top Portion.



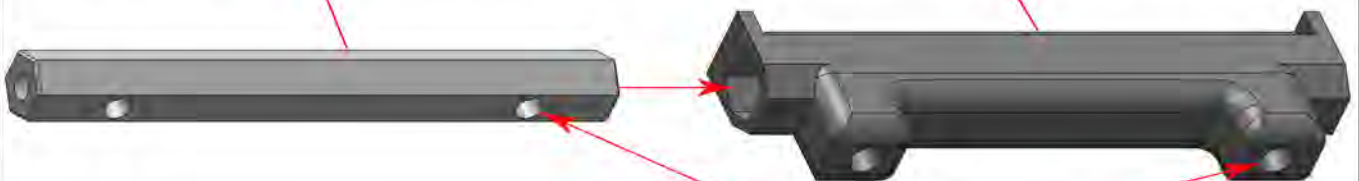
Completed Step View

! Attention! !

No Adhesives Are Used In
This Part Of This Step

Hex Spacer EC Threaded 3x5.5x58mm

Modified Plastic Frame Center Brace



Line Up Holes



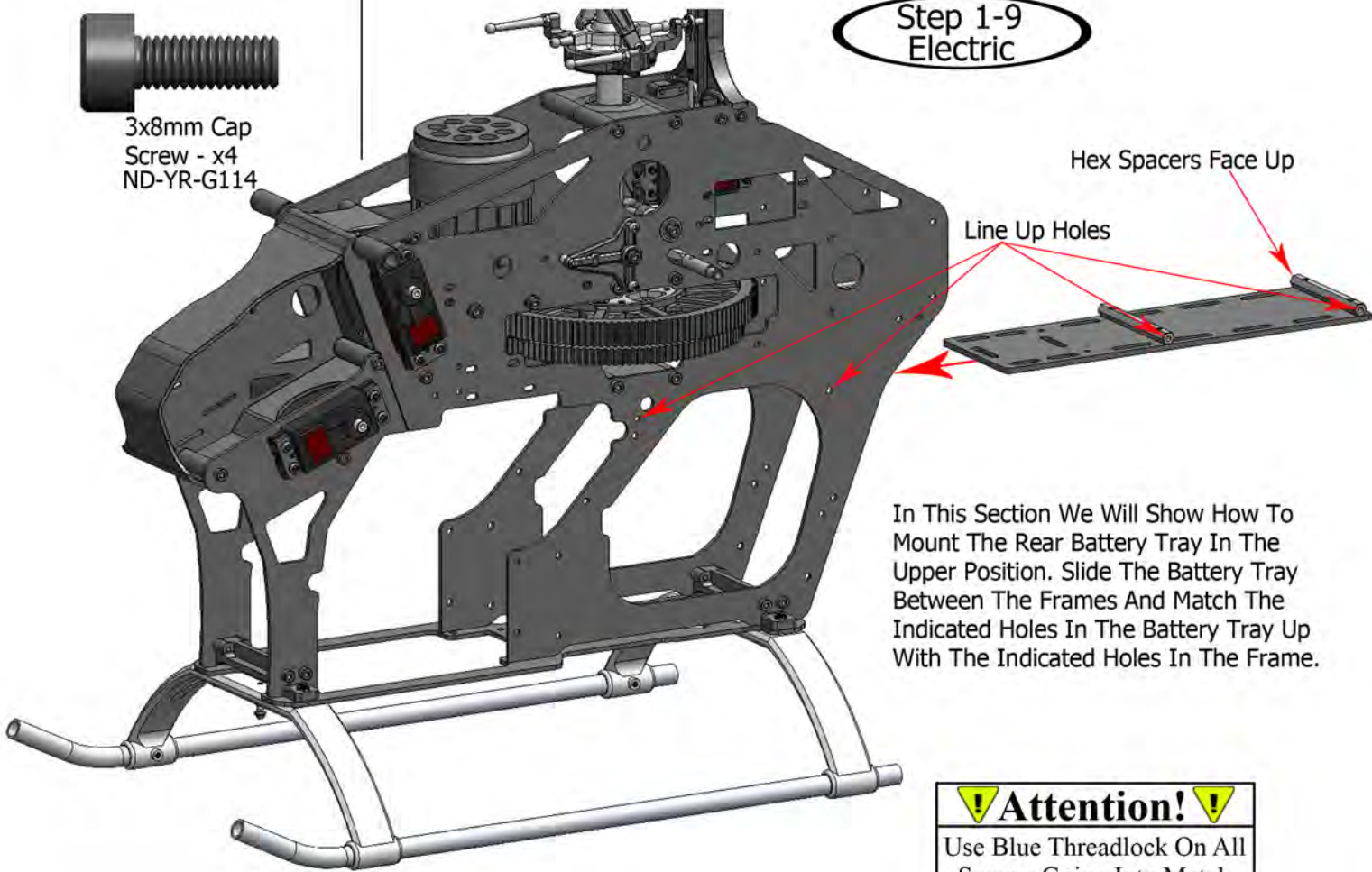
Completed Step View

Next

Step 1-9
Electric



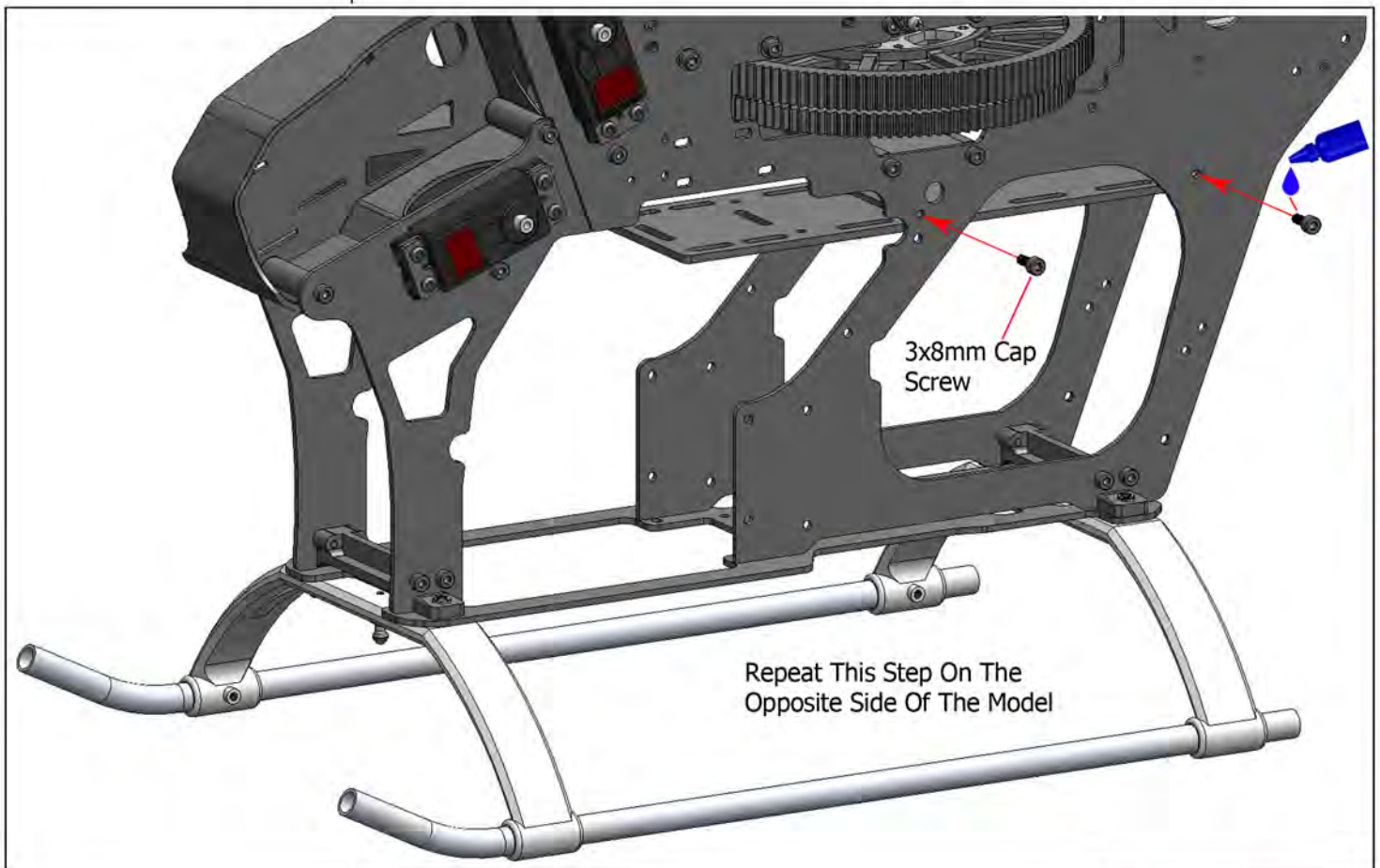
3x8mm Cap
Screw - x4
ND-YR-G114



In This Section We Will Show How To Mount The Rear Battery Tray In The Upper Position. Slide The Battery Tray Between The Frames And Match The Indicated Holes In The Battery Tray Up With The Indicated Holes In The Frame.

! Attention! !

Use Blue Threadlock On All Screws Going Into Metal



Repeat This Step On The
Opposite Side Of The Model

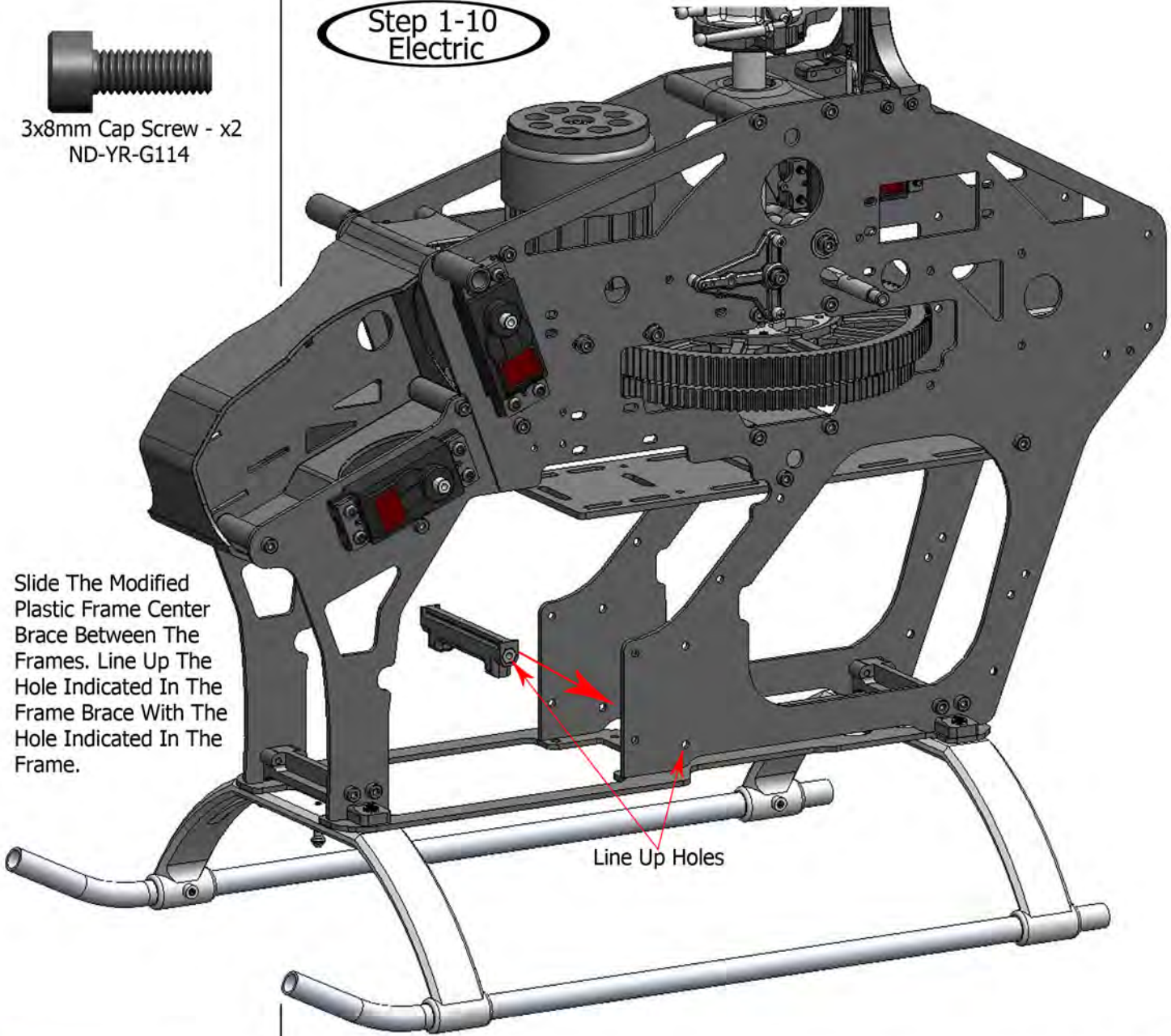
Step 1-9 Electric

Next

Step 1-10
Electric



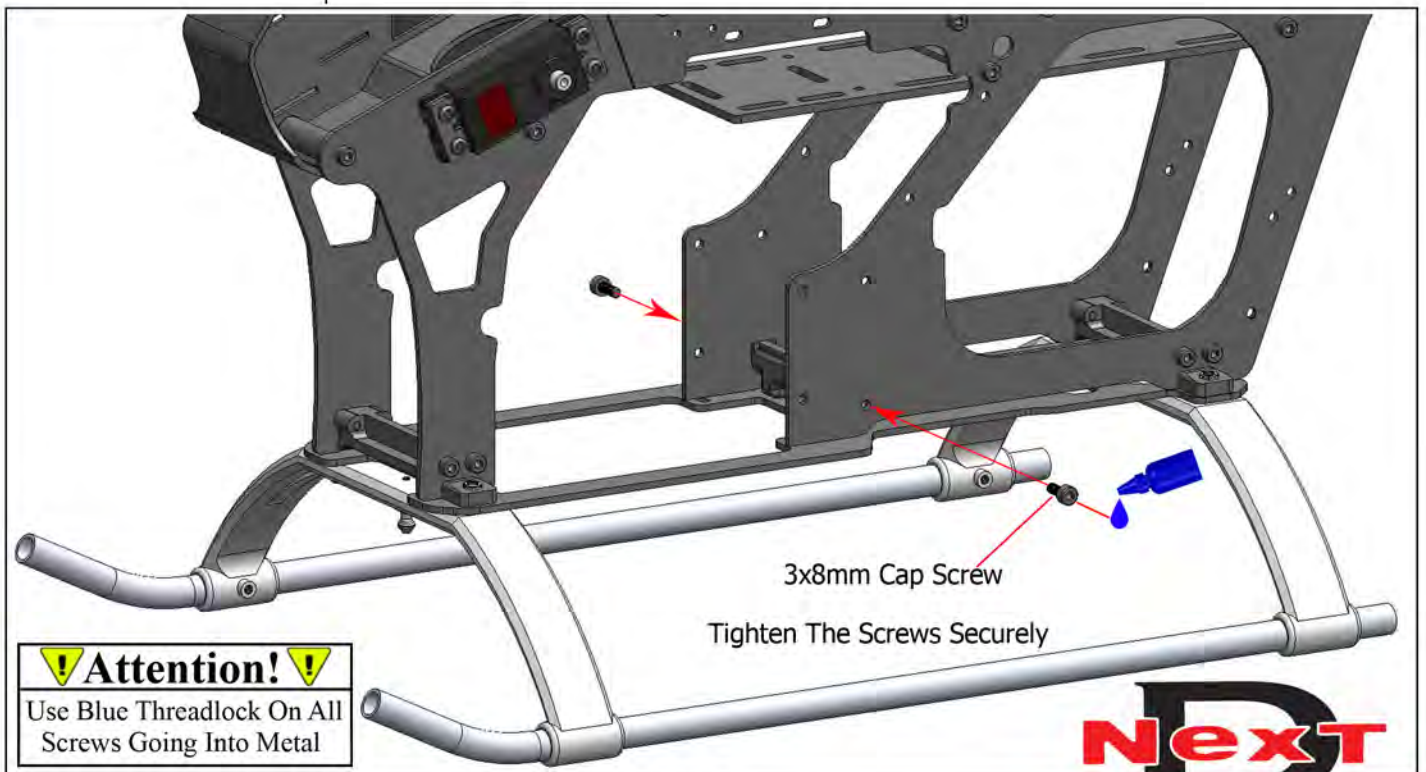
3x8mm Cap Screw - x2
ND-YR-G114



Slide The Modified Plastic Frame Center Brace Between The Frames. Line Up The Hole Indicated In The Frame Brace With The Hole Indicated In The Frame.

Line Up Holes

Step 1-10 Electric



3x8mm Cap Screw

Tighten The Screws Securely

! Attention! !

Use Blue Threadlock On All Screws Going Into Metal

Next

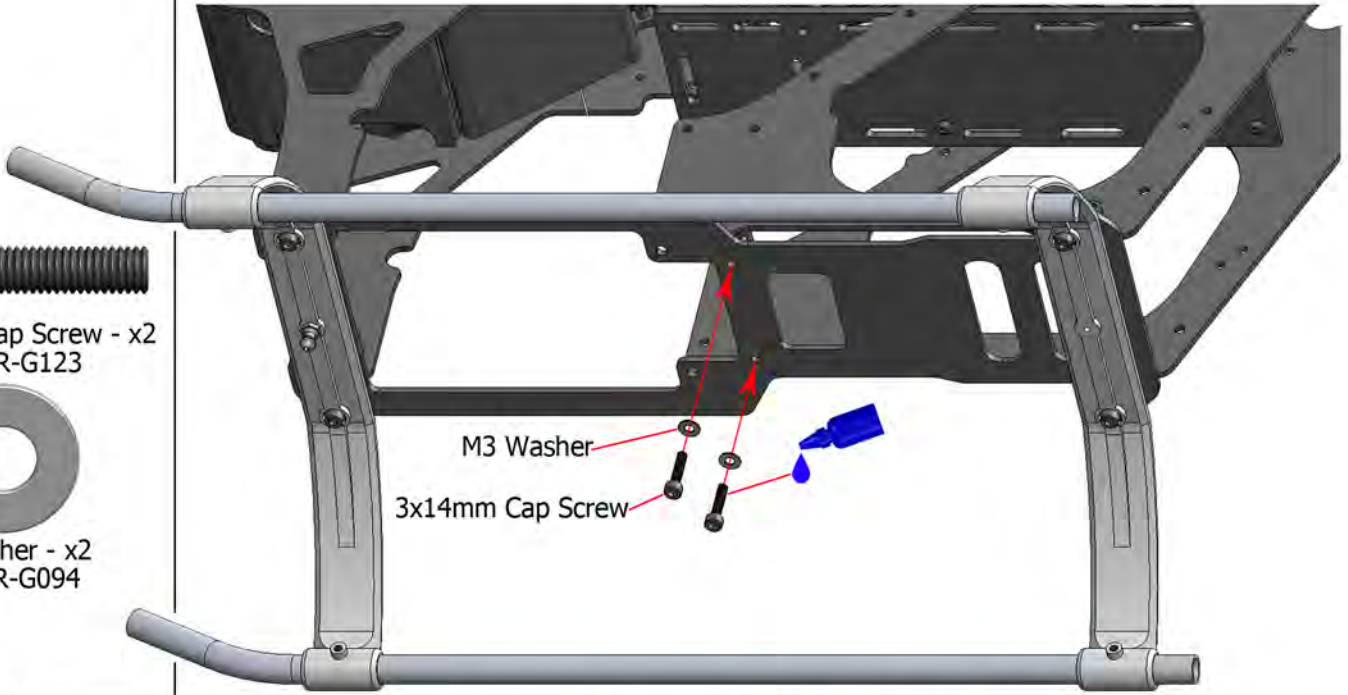
Step 1-11
Electric



3x14mm Cap Screw - x2
ND-YR-G123



M3 Washer - x2
ND-YR-G094



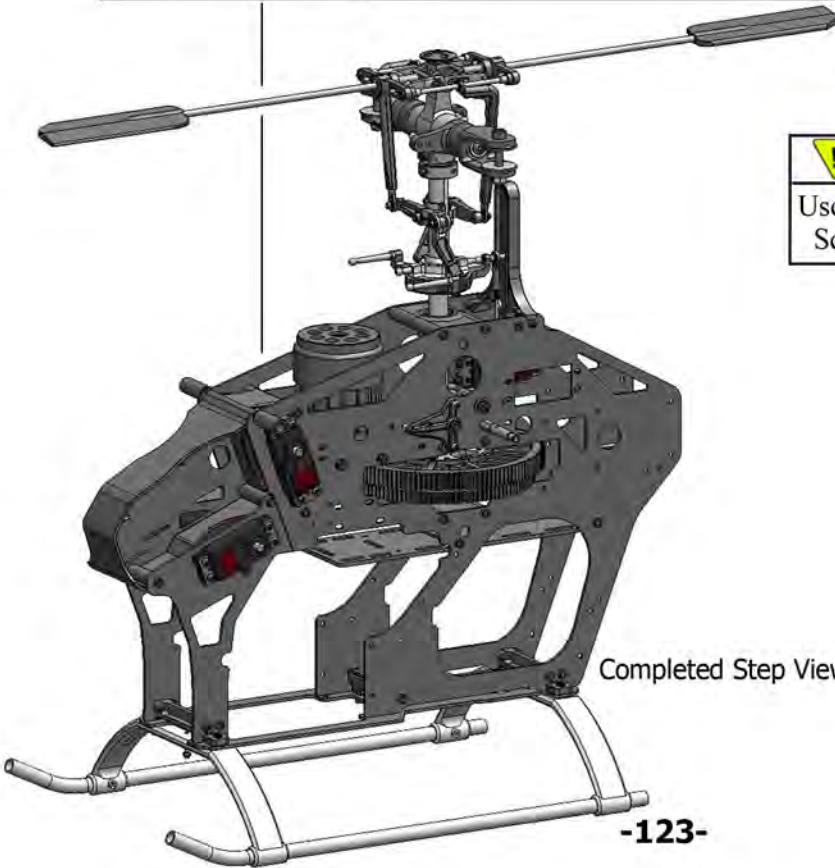
M3 Washer

3x14mm Cap Screw



Tighten Screws Securely At This Time

Completed Step View



Completed Step View

! Attention! !
Use Blue Threadlock On All
Screws Going Into Metal

Step 1-11 Electric

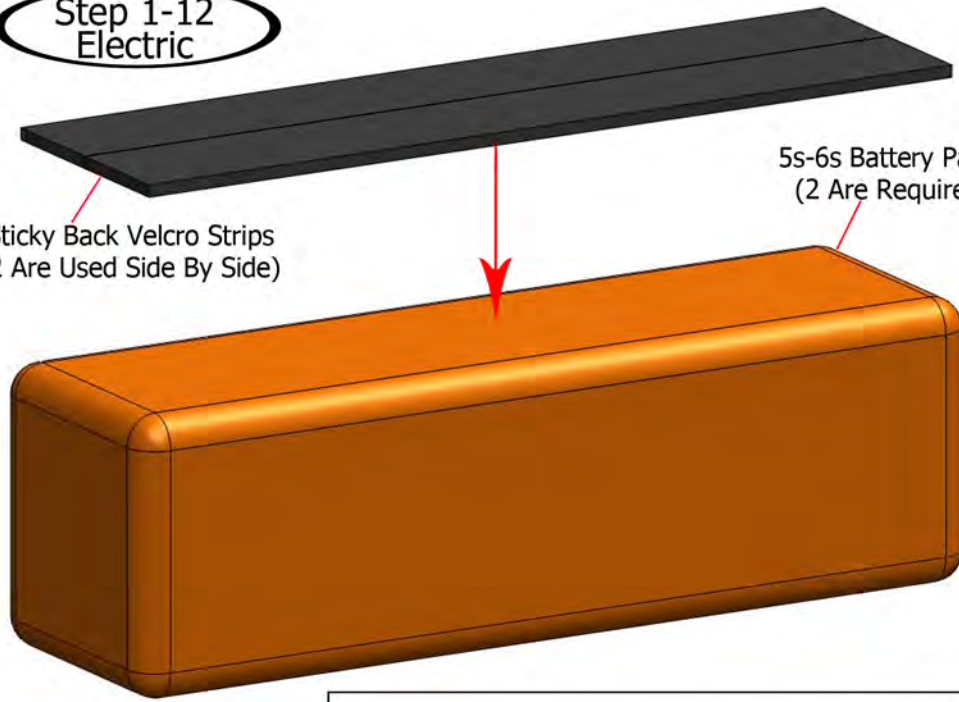
**Step 1-12
Electric**



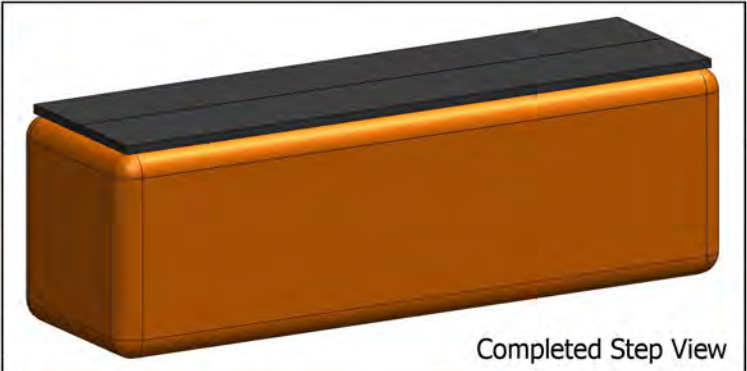
Sticky Back
Velcro Strips - x4
ND-YR-G019

Sticky Back Velcro Strips
(2 Are Used Side By Side)

5s-6s Battery Pack
(2 Are Required)



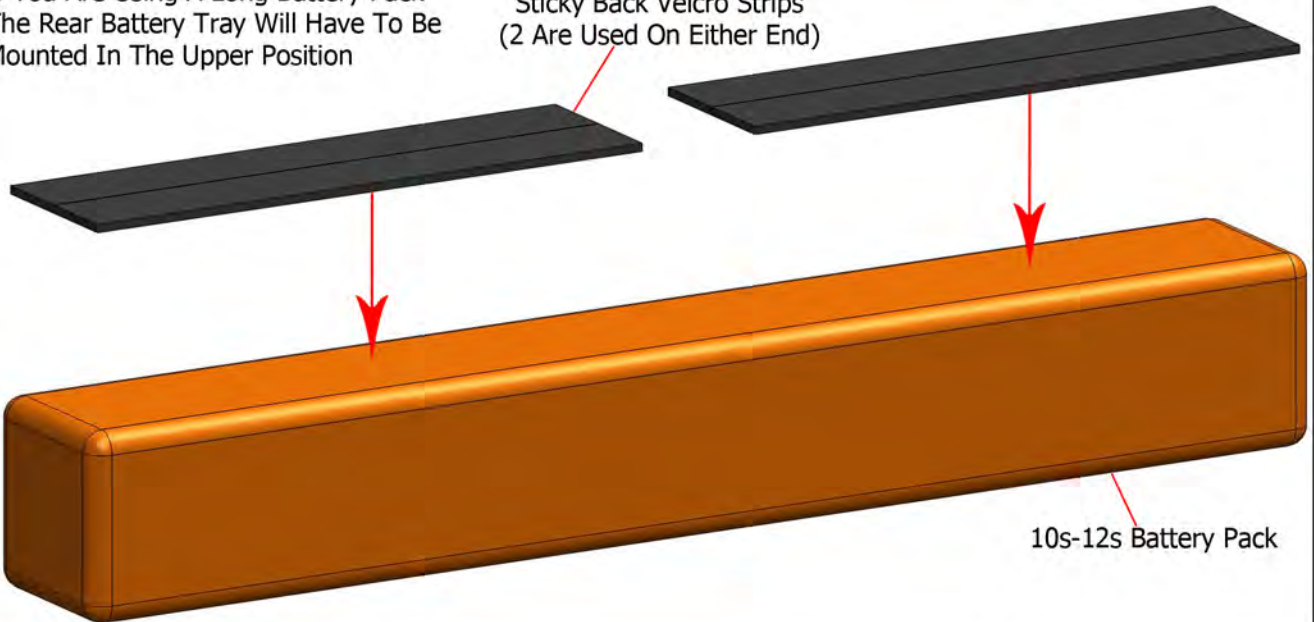
!Attention!
No Adhesives Are Used In
This Part Of This Step



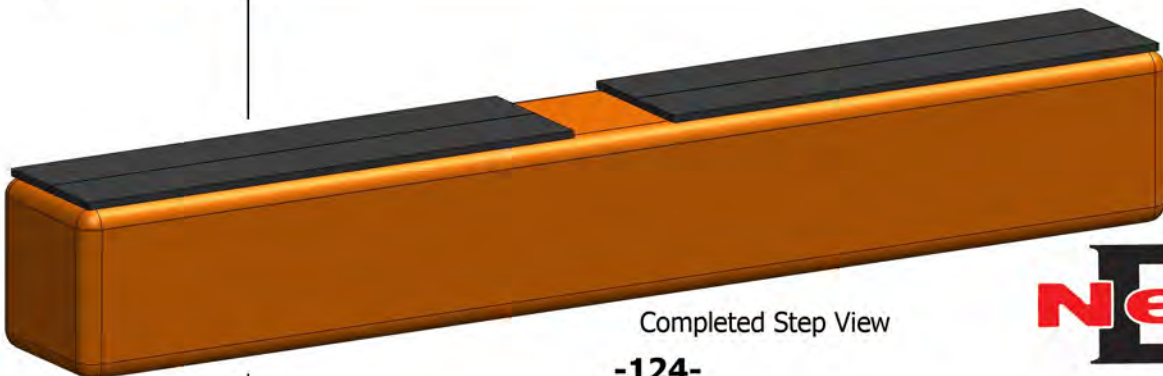
Completed Step View

If You Are Using A Long Battery Pack
The Rear Battery Tray Will Have To Be
Mounted In The Upper Position

Sticky Back Velcro Strips
(2 Are Used On Either End)



10s-12s Battery Pack



Completed Step View

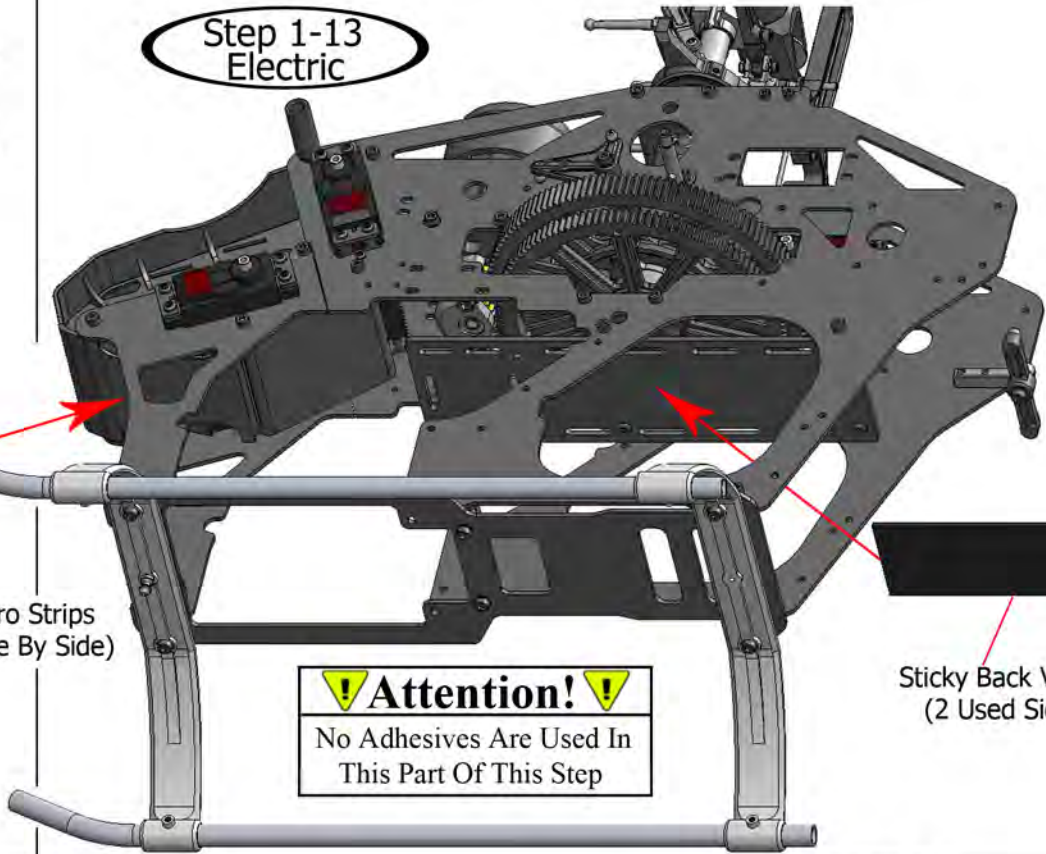


The Velcro Strips Used Are The Opposite Halves From The Velcro Strips Used On The Batteries.

**Step 1-13
Electric**



Sticky Back Velcro Strips
(1 Cut In Half Side By Side)

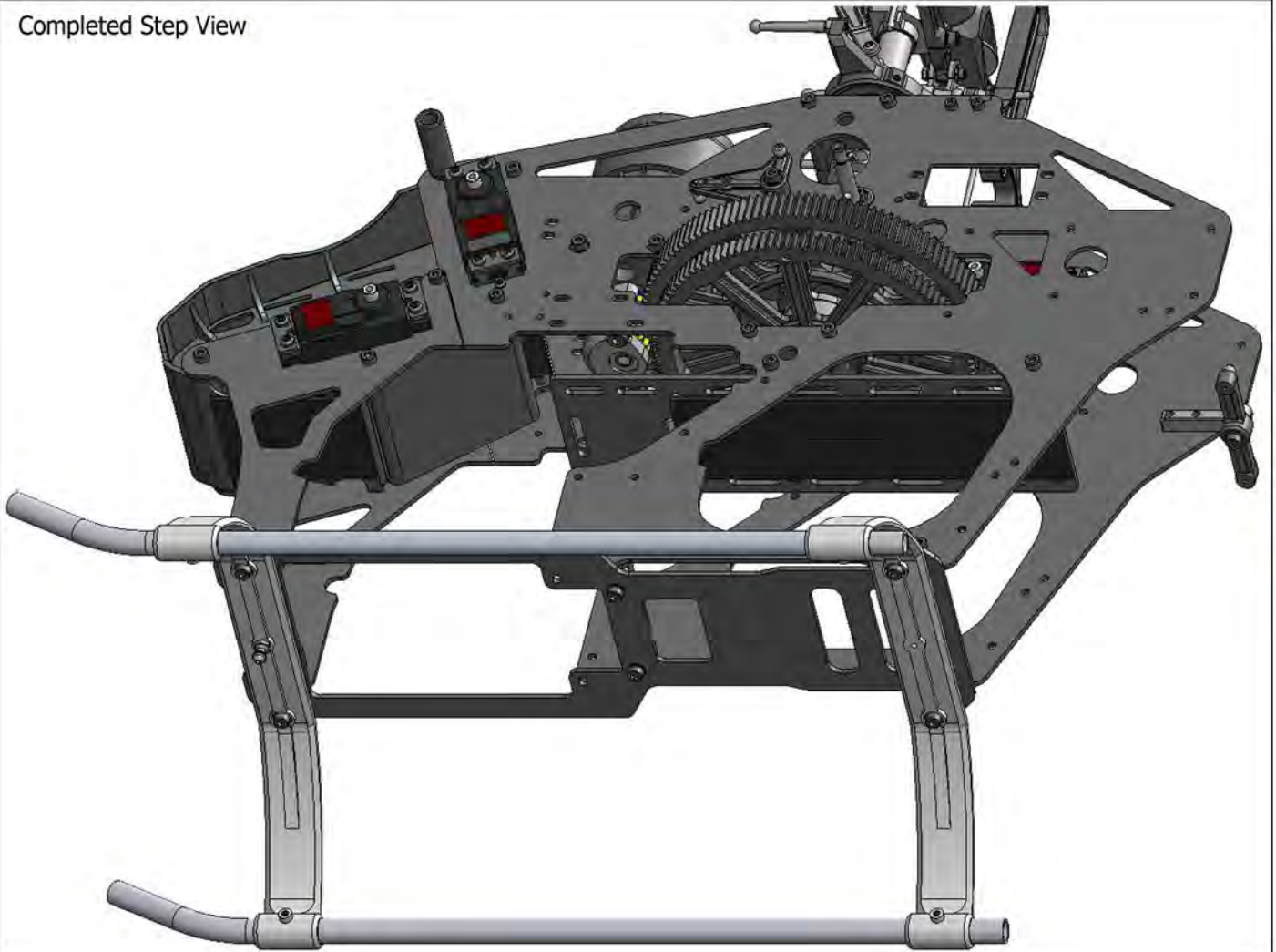


! Attention! !
No Adhesives Are Used In
This Part Of This Step



Sticky Back Velcro Strips
(2 Used Side By Side)

Completed Step View



Step 1-13 Electric

Next

Next

Next

Step 1-14
Electric

Slip The Velcro Straps Through The Slots In The Front Radio Tray And Rear Battery Tray. Slide The Batteries Between The Frames And Stick Them To The Velcro Strips That Are On The Trays.

Next D Sinch Down
Velcro Straps - x4
ND-YR-G168

Next D Sinch Down Velcro Straps

Be Sure The Velcro Straps Are
Securely Strapped Around The
Batteries Before Flying Your Model

Completed Step View

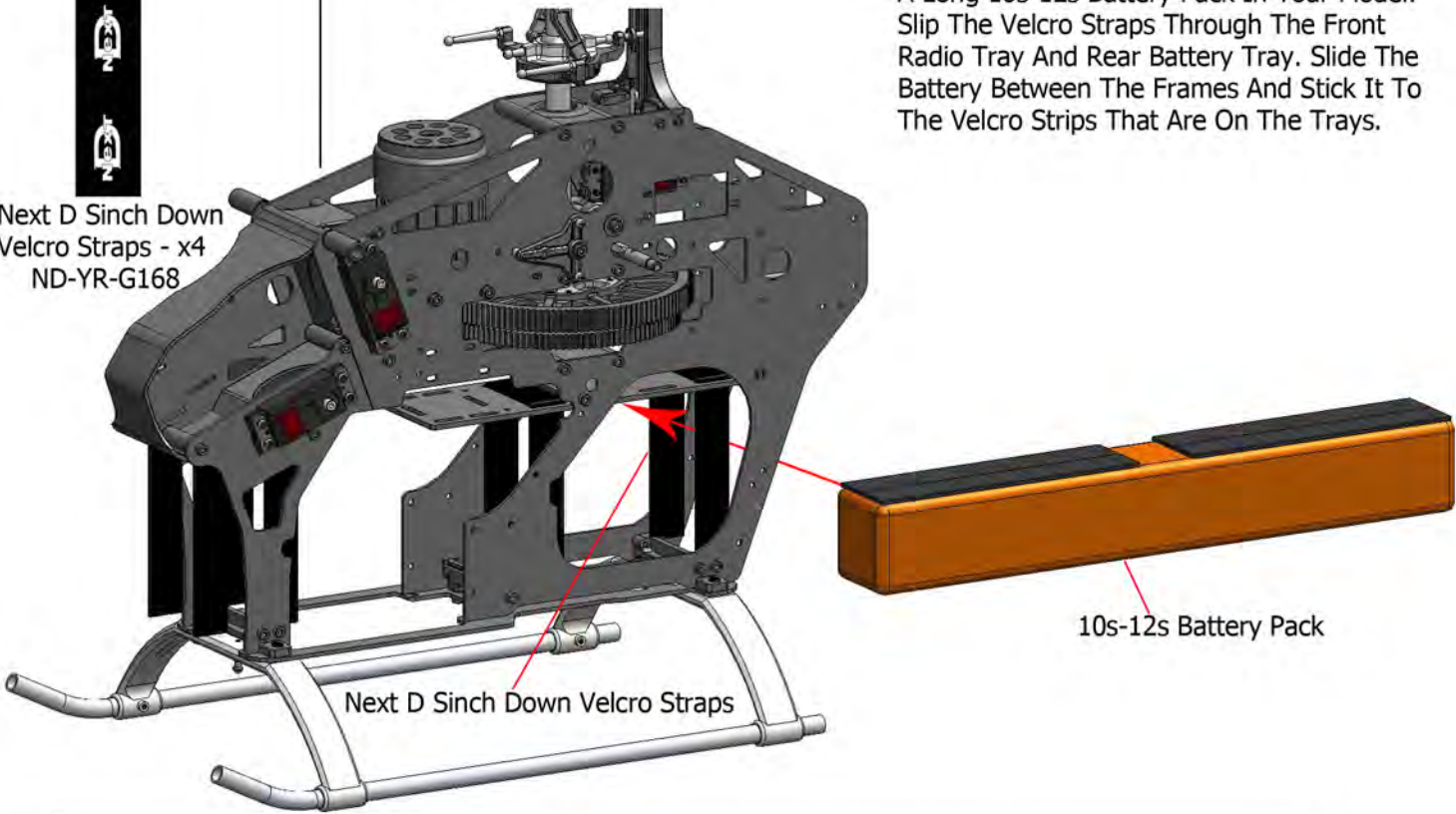
Next



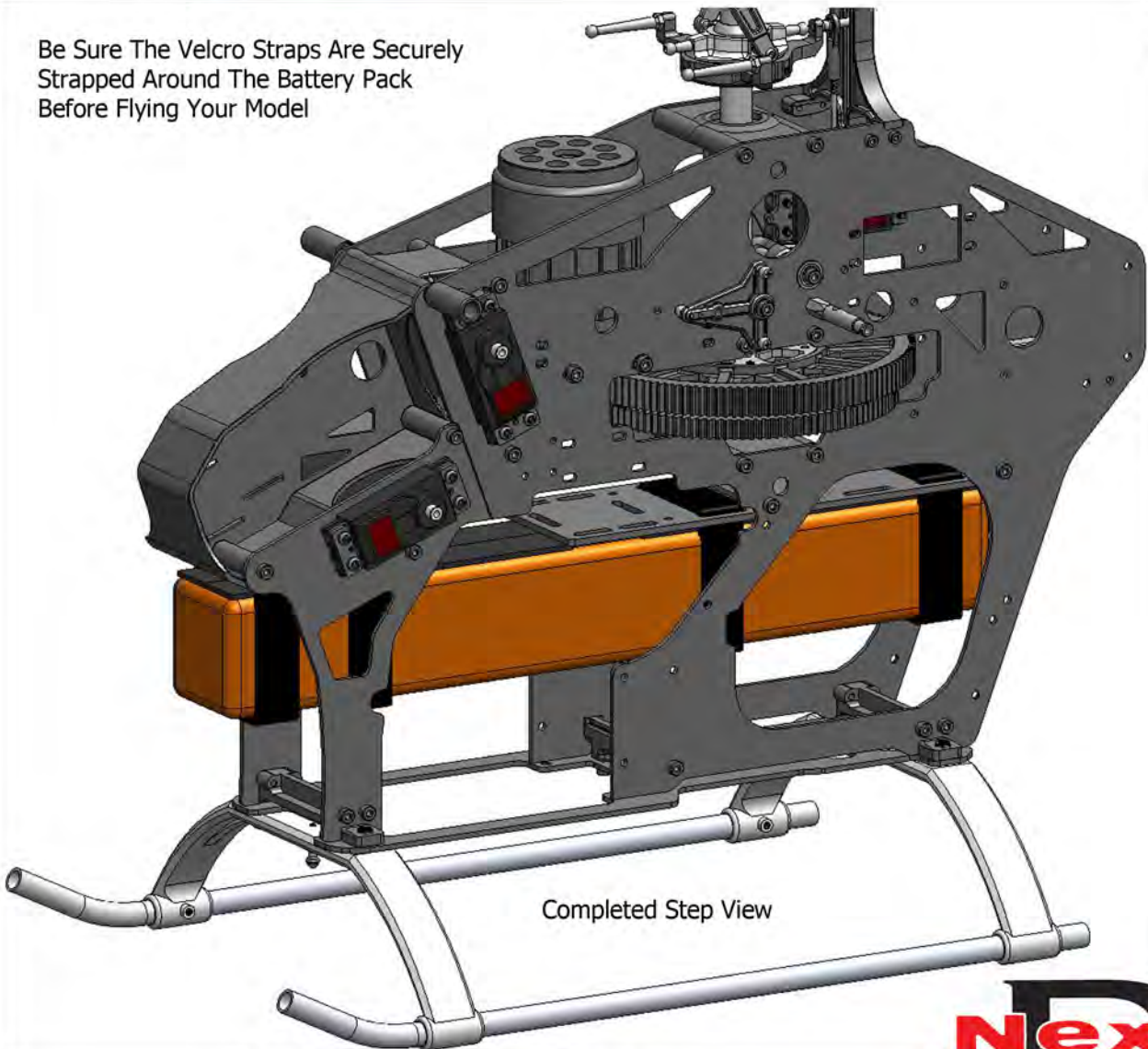
Step 1-15 Electric

In This Section We Will Show How To Mount A Long 10s-12s Battery Pack In Your Model. Slip The Velcro Straps Through The Front Radio Tray And Rear Battery Tray. Slide The Battery Between The Frames And Stick It To The Velcro Straps That Are On The Trays.

Next D Sinch Down
Velcro Straps - x4
ND-YR-G168



Be Sure The Velcro Straps Are Securely Strapped Around The Battery Pack Before Flying Your Model

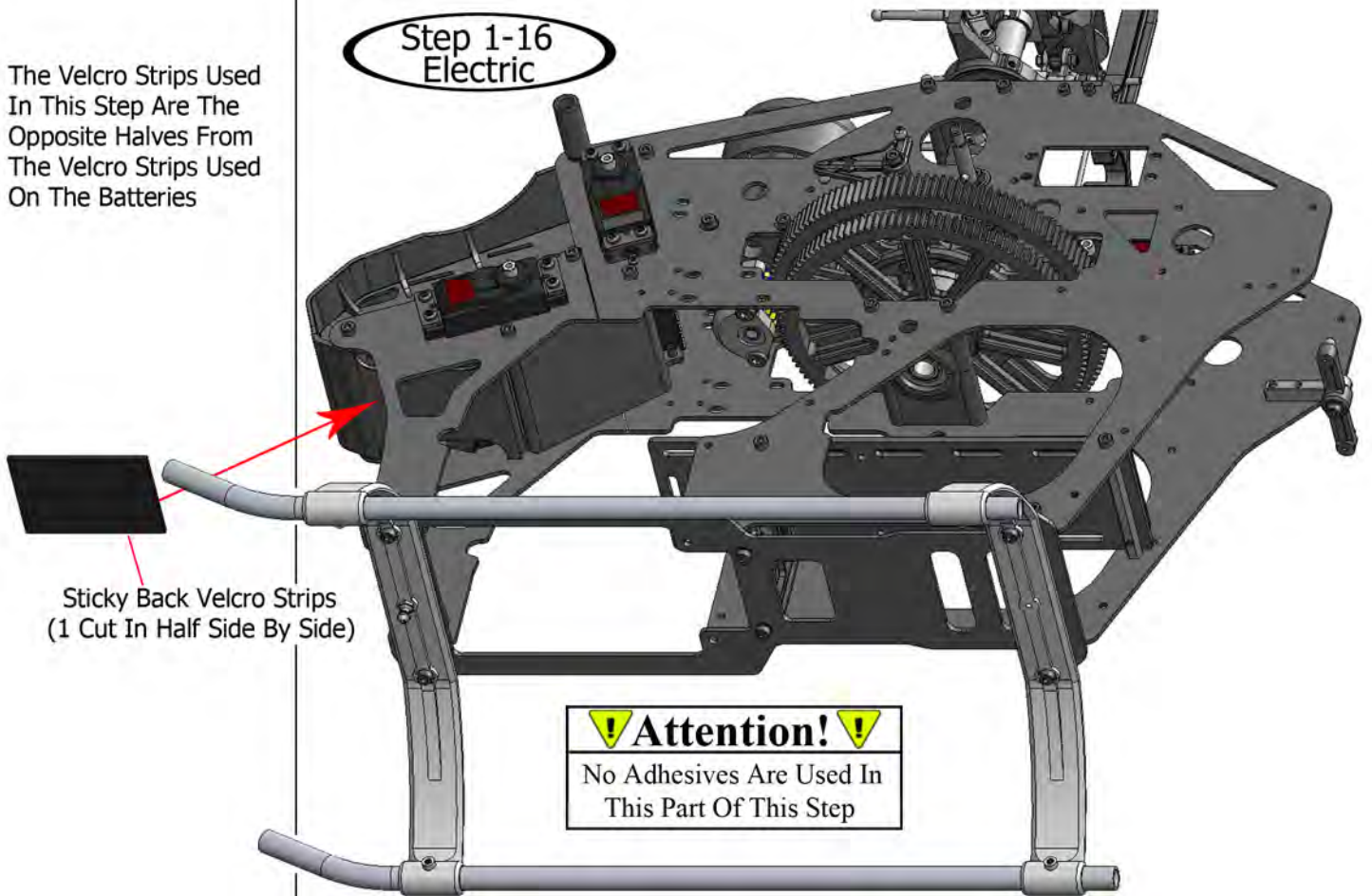


Step 1-15 Electric

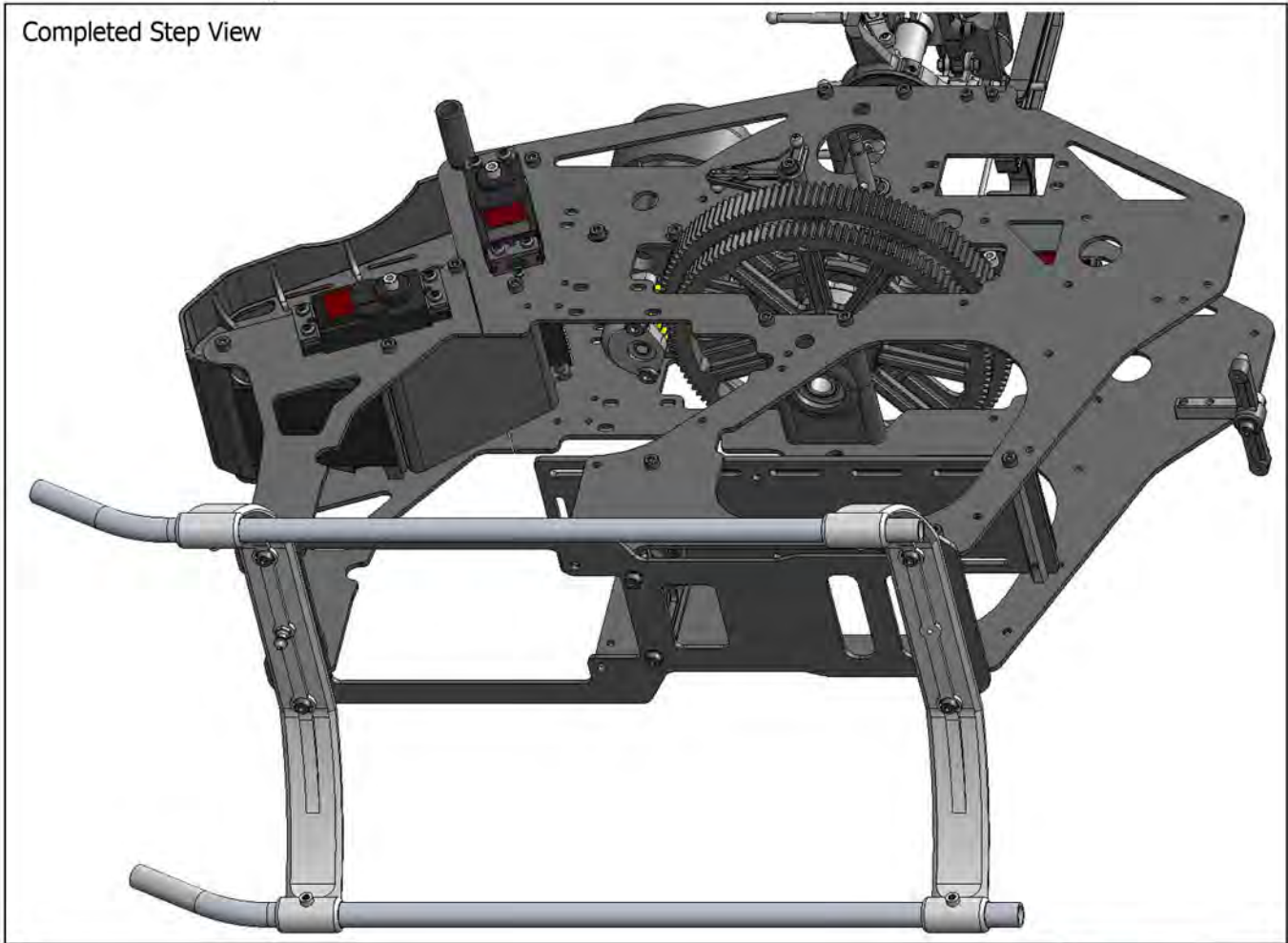


Step 1-16
Electric

The Velcro Strips Used
In This Step Are The
Opposite Halves From
The Velcro Strips Used
On The Batteries



Completed Step View

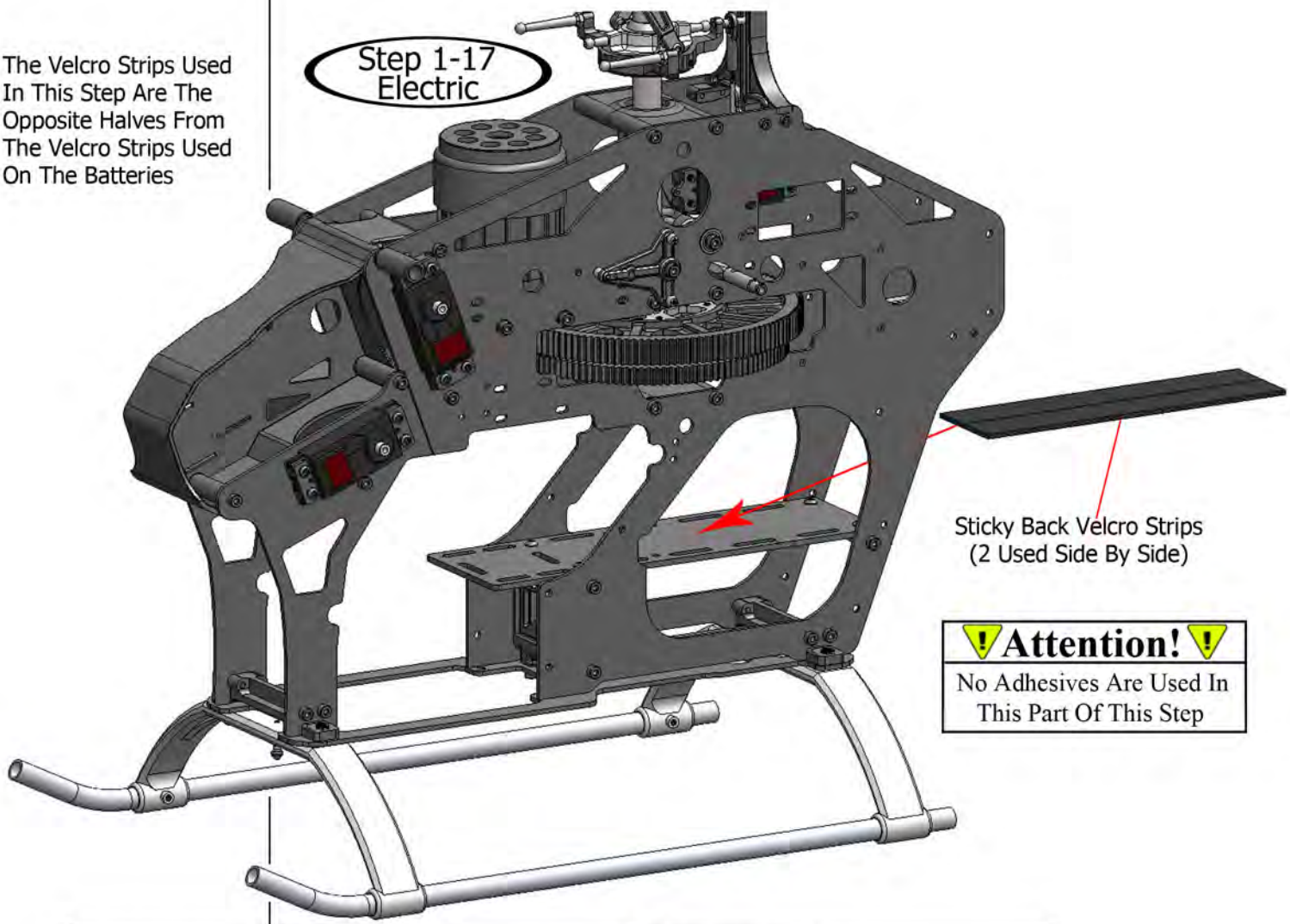


Step 1-16 Electric

Next

The Velcro Strips Used In This Step Are The Opposite Halves From The Velcro Strips Used On The Batteries

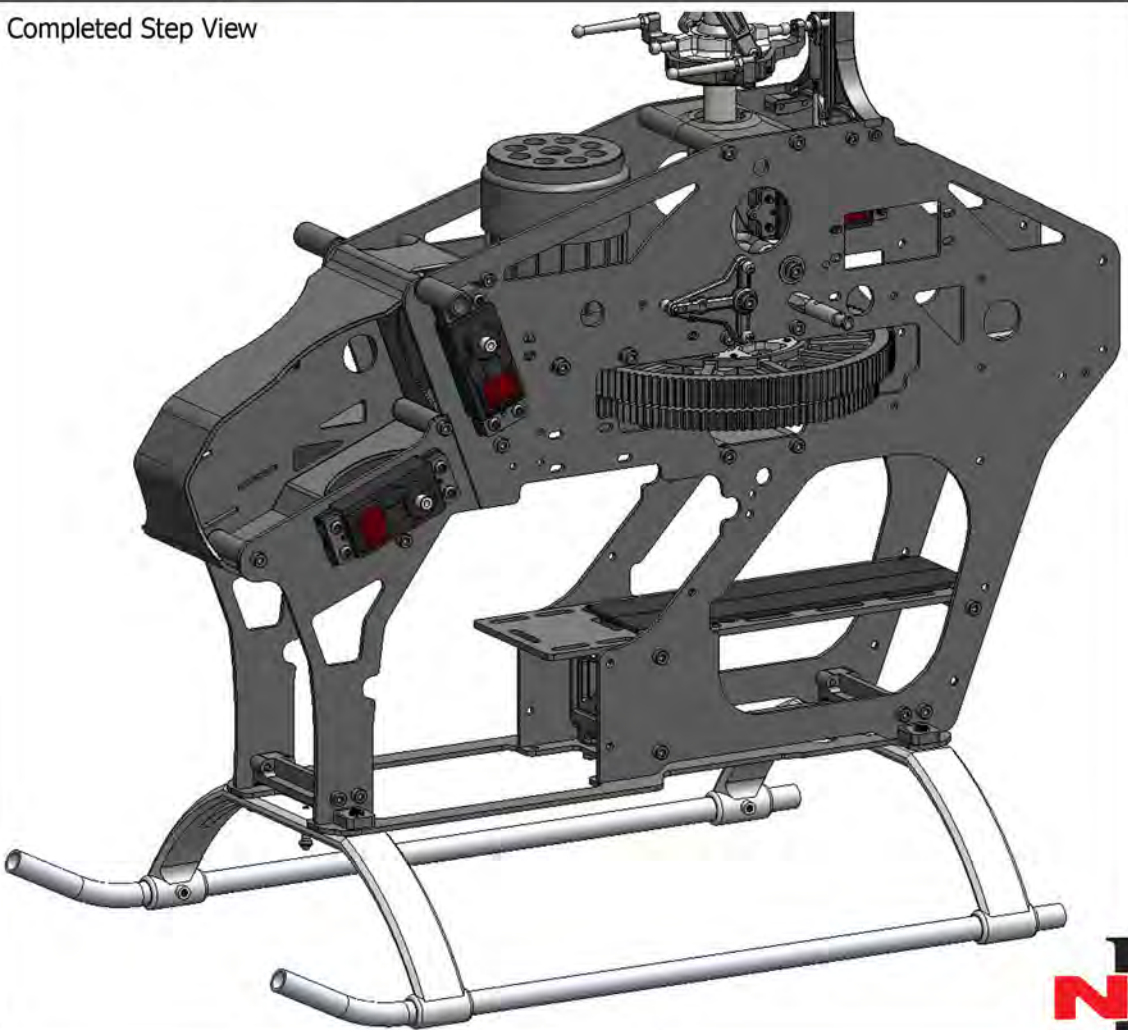
**Step 1-17
Electric**



Sticky Back Velcro Strips
(2 Used Side By Side)

! Attention! !
No Adhesives Are Used In
This Part Of This Step

Completed Step View



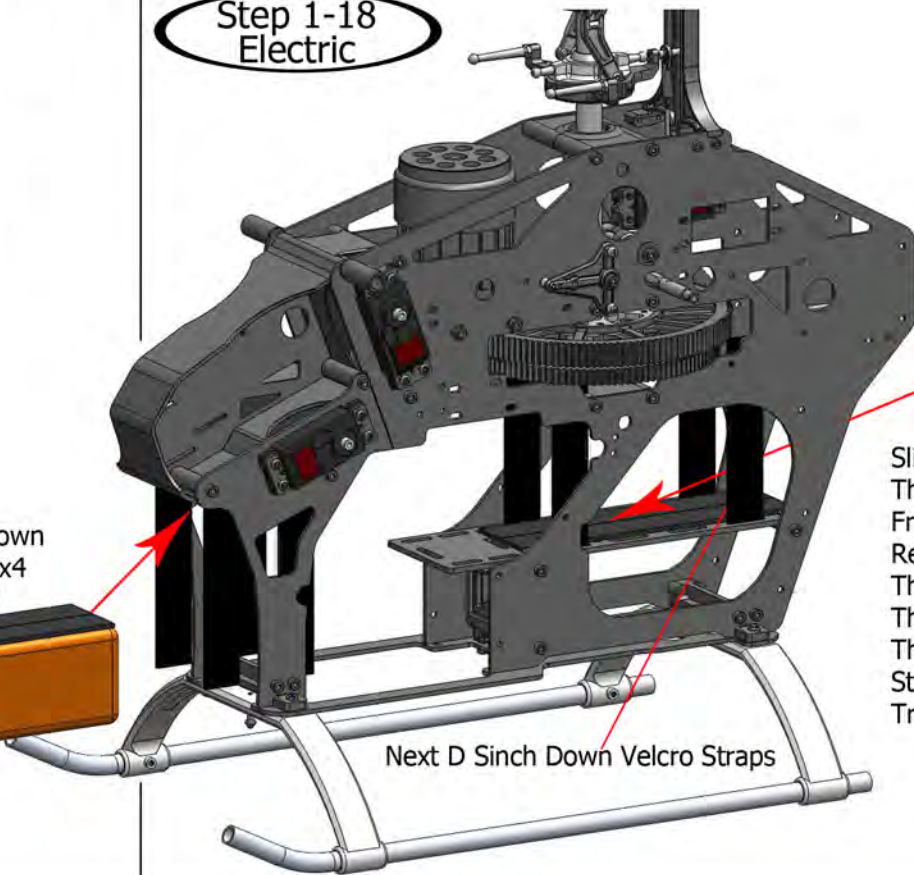
Step 1-17 Electric



Step 1-18
Electric



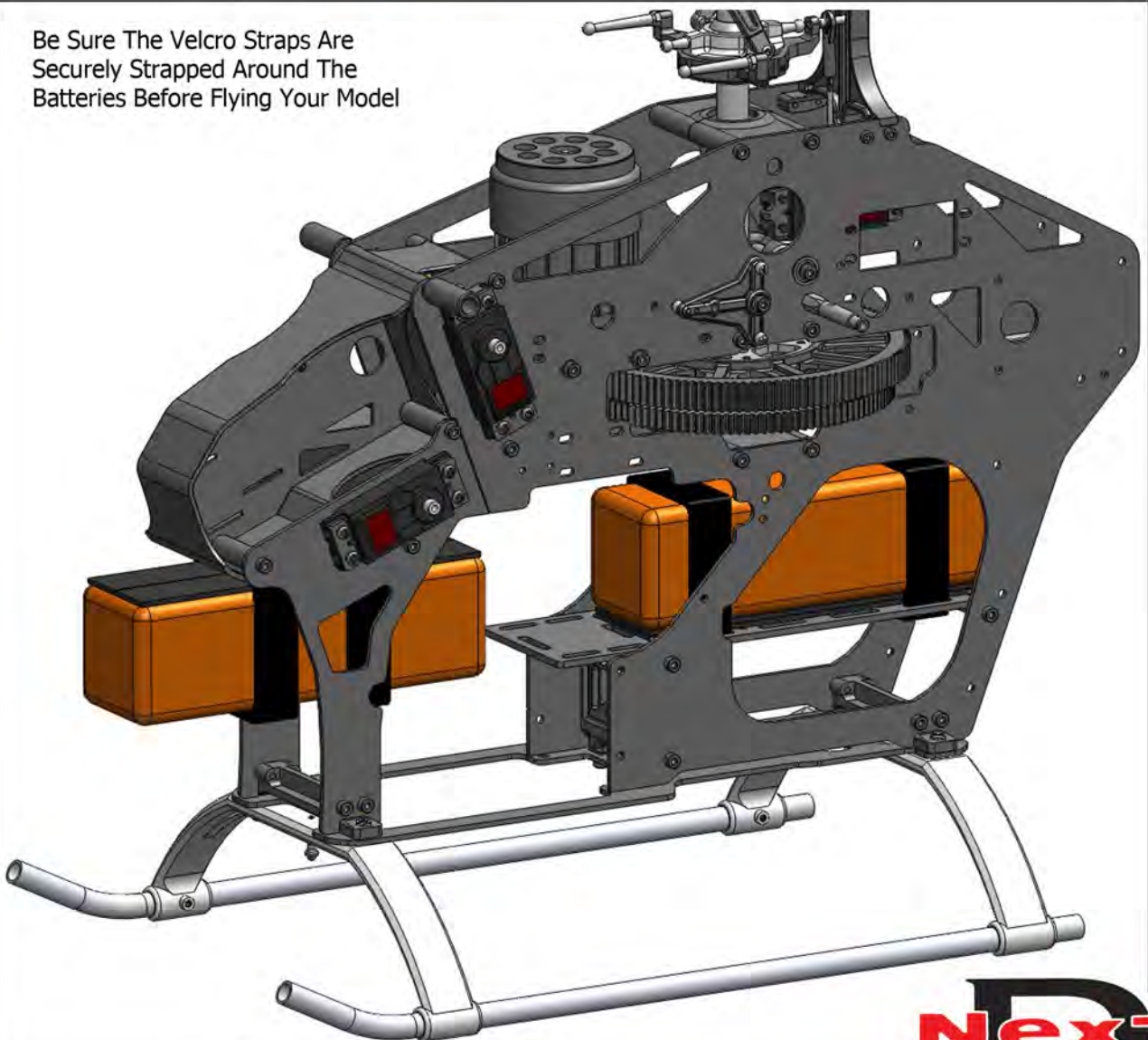
Next D Sinch Down
Velcro Straps - x4
ND-YR-G168



Slip The Velcro Straps
Through The Slots In The
Front Radio Tray And
Rear Battery Tray. Slide
The Batteries Between
The Frames And Stick
Them To The Velcro
Strips That Are On The
Trays.

Next D Sinch Down Velcro Straps

Be Sure The Velcro Straps Are
Securely Strapped Around The
Batteries Before Flying Your Model



**Step 1-19
Electric**

Hex Spacer
3x5.5x58mm - x1
ND-YR-G075

3x18mm Cap
Screw - x2
ND-YR-G133

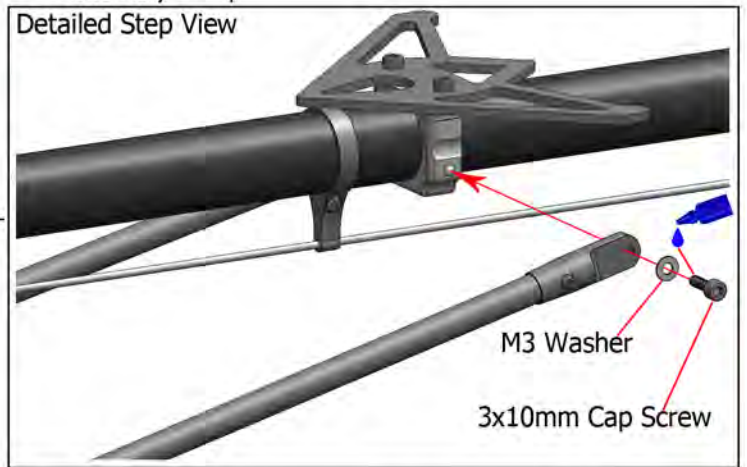
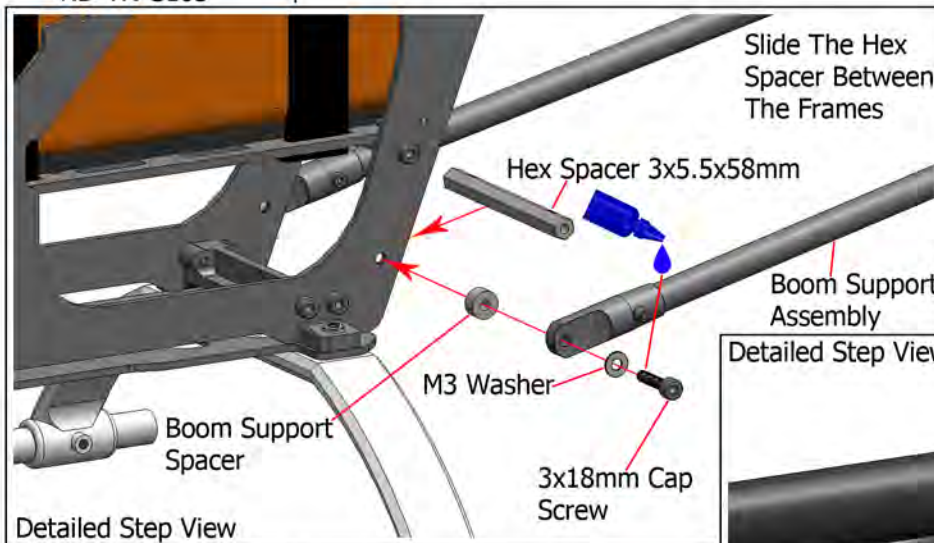
3x10mm Cap
Screw - x2
ND-YR-G065

M3 Washer - x4
ND-YR-G094

Boom Support
Spacer - x2
ND-YR-G165

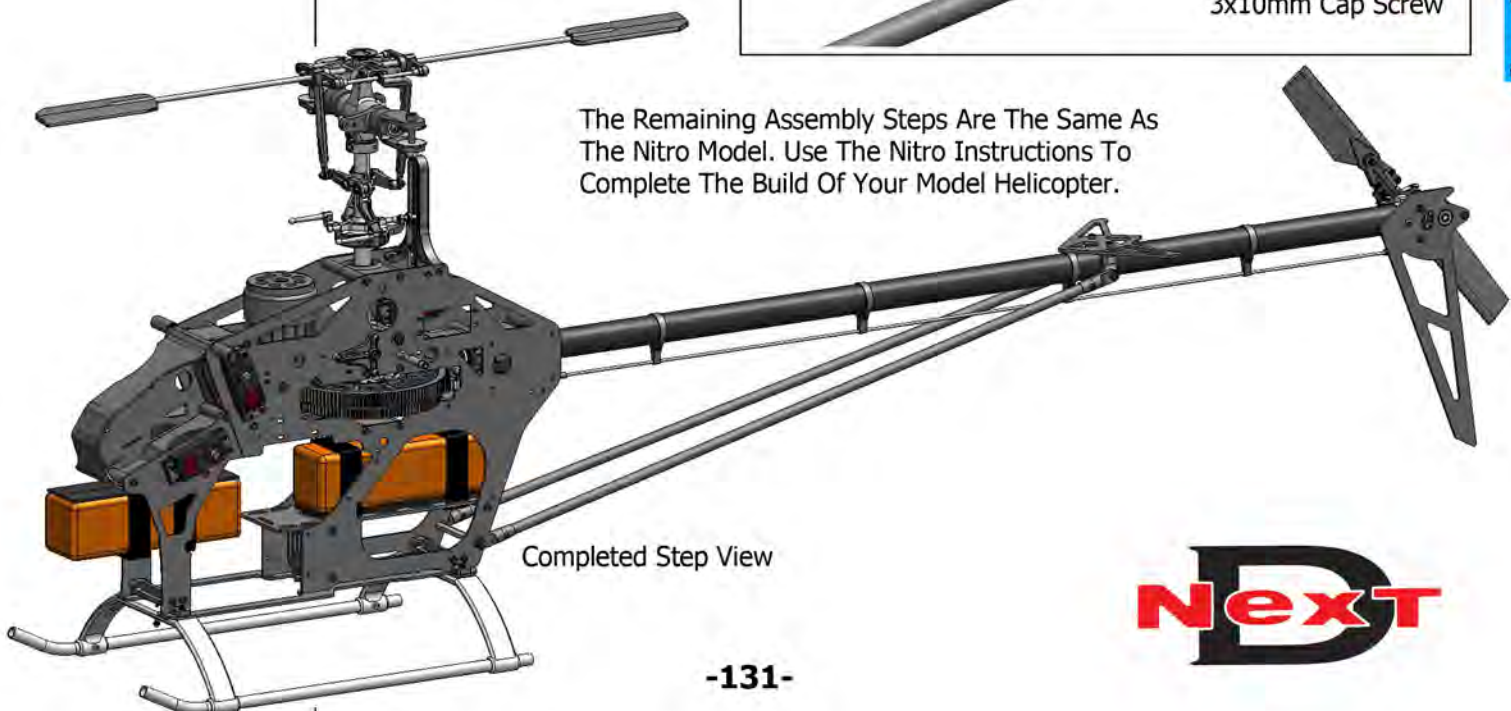


Mounting The Boom Supports On The Electric Model Is Slightly Different Than The Nitro Model. You Will Use 1 3x5.5x58mm Hex Spacer Between The Frames To Mount The Frame End Of The Boom Supports To The Model. Be Sure To Use Blue Threadlock On All Hardware. Tighten Screws Securely.



! Attention! !
Use Blue Threadlock On All
Screws Going Into Metal

The Remaining Assembly Steps Are The Same As The Nitro Model. Use The Nitro Instructions To Complete The Build Of Your Model Helicopter.



Completed Step View

Step 1-19 Electric





Rear Carbon Frame Brace - x2
ND-YR7-F1038



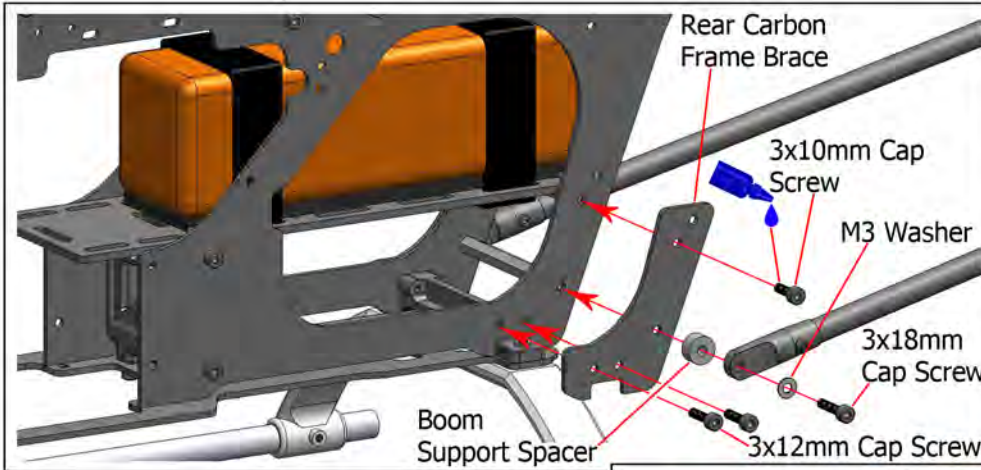
3x10mm Cap Screw - x2
ND-YR7-G065



3x12mm Cap Screw - x4
ND-YR-G115



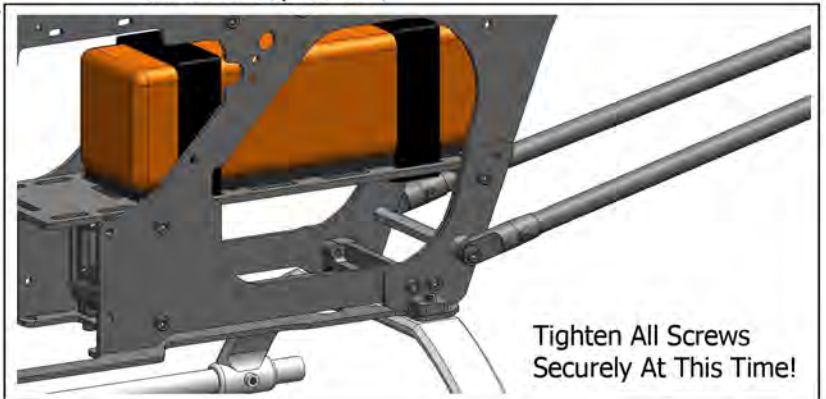
The Electric Kit Will Have A Set Of Rear Carbon Frame Braces Included In The Kit. These Braces Are Recommended But Not Required. They Can Also Be Used On The Nitro Model, But Are Not Included In The Nitro Kit.



! Attention! !
Use Blue Threadlock On All Screws Going Into Metal

! Attention! !
Do Not Use Threadlock On Any Screws Going Into Plastic

! Attention! !
Do Not Over Tighten Screws Going Into Plastic Parts






















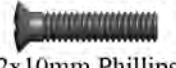















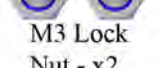

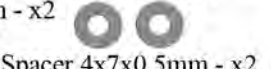



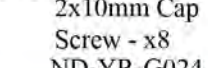


Tighten All Screws Securely At This Time!



















































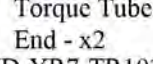








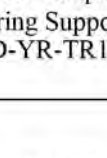












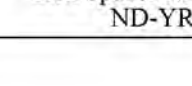
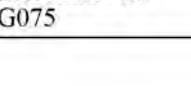


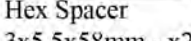




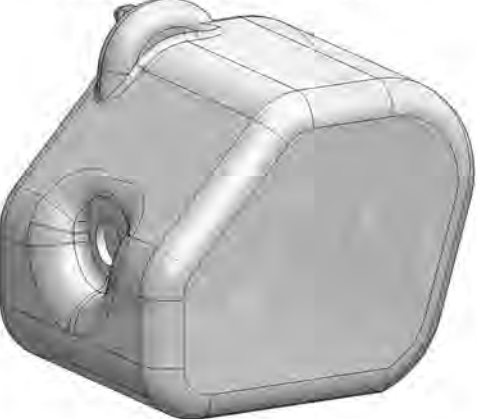


Step 1-20 Electric






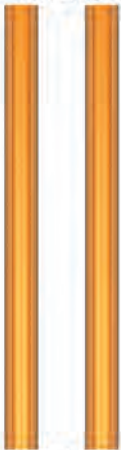




















Rave ENV Replacement Part Sets

<p>Order Number: ND-YR7-AS1001</p>  <p>Tail Gear Box Base - x1 ND-YR7-TR1008</p>  <p>Tail Gear Box Spacer - x1 ND-YR7-TR1001</p>  <p>3x8mm Cap Screw - x2 ND-YR-G114</p>	<p>Order Number: ND-YR7-AS1002</p>  <p>Horizontal Fin - x1 ND-YR7-TR1020</p>  <p>3x10mm Cap Screw - x2 ND-YR-G065</p>	<p>Order Number: ND-YR7-AS1003</p>  <p>Vertical Fin - x1 ND-YR7-TR1010</p>  <p>Bearing 5x13x4mm Flanged - x1 ND-YR-G063</p>  <p>Bearing 6x13x5mm Flanged - x1 ND-YR-G167</p>  <p>3x8mm Cap Screw - x2 ND-YR-G114</p>  <p>Tail Gear Box Side Plate - x1 ND-YR7-TR1009</p>  <p>3x12mm Cap Screw - x2 ND-YR-G115</p>
<p>Order Number: ND-YR7-AS1004</p>  <p>Tail Boom Insert Bevel Gear - x1 ND-YR7-TR1016</p>  <p>Tail Output Shaft With Gear - x1 ND-YR7-TR1002</p>	<p>Order Number: ND-YR7-AS1005</p>  <p>Rear Tail Bellcrank Mount - x1 ND-YR7-TR1011</p>	<p>Order Number: ND-YR7-AS1006</p>  <p>Rear Tail Rotor Bellcrank - x1 ND-YR7-TR1012</p>  <p>Tail Rotor Bellcrank Carbon Plate - x1 ND-YR7-TR1027</p>  <p>3x8mm Cap Screw - x2 ND-YR-G114</p>  <p>Steel Control Ball - x1 ND-YR-G001</p>  <p>Bearing 3x8x4mm Flanged - x2 ND-YR-G064</p>  <p>M2 Hex Nut - x1 ND-YR-G034</p>  <p>3x6.5mm Pinning Screw - x2 ND-YR-G119</p>  <p>2x10mm Phillips Head Screw - x1 ND-YR-G124</p>
<p>Order Number: ND-YR7-AS1007</p>  <p>Tail Pitch Slider Tube - x1 ND-YR7-TR1007</p>  <p>Tail Pitch Slider Ring - x1 ND-YR7-TR1003</p>  <p>Tail Pitch Fork - x1 ND-YR7-TR1004</p>  <p>2mm E Clip - x2 ND-YR-G090</p>  <p>Tail Pitch Link Pin - x2 ND-YR7-TR1006</p>  <p>Bearing 7x11x3mm - x2 ND-YR-G089</p>  <p>Spacer 7x8.55x3mm - x1 ND-YR-G102</p>  <p>Tail Pitch Link - x2 ND-YR7-TR1005</p>	<p>Order Number: ND-YR7-AS1008</p>  <p>Tail Hub - x1 ND-YR7-TR1028</p>  <p>4x4mm Set Screw - x2 ND-YR-G120</p>	<p>Order Number: ND-YR7-AS1009</p>  <p>Tail Blade Grip Half - Left - x2 ND-YR7-TR1029</p>  <p>Tail Blade Grip Half - Right - x2 ND-YR7-TR1030</p>  <p>Bearing 4x10x4mm - x4 ND-YR-G006</p>  <p>Thrust Bearing 4x9x4mm - x2 ND-YR-G012</p>  <p>Spacer 7x10x1mm - x2 ND-YR-G095</p>  <p>M3 Lock Nut - x2 ND-YR-G035</p>  <p>Steel Control Ball - x2 ND-YR-G001</p>  <p>Spacer 4x7x0.5mm - x2 ND-YR-G092</p>  <p>2x10mm Phillips Head Screw - x2 ND-YR-G124</p>  <p>M2 Hex Nut - x8 ND-YR-G034</p>  <p>3x14mm Cap Screw - x2 ND-YR-G123</p>  <p>2x10mm Cap Screw - x8 ND-YR-G024</p>
























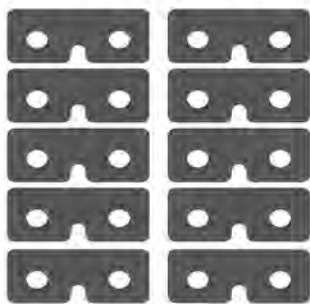






Rave ENV Replacement Part Sets

<p>Order Number: ND-YR7-AS1010</p>  <p>Plastic Tail Boom Insert - x1 ND-YR7-TR1017</p>  <p>Aluminum Tail Boom Insert - x1 ND-YR7-TR1015</p>  <p>Bearing 12x18x4mm - x2 ND-YR-G099</p>	<p>Order Number: ND-YR7-AS1011</p>     <p>3x8mm Button Head Screw (Stainless Steel Boom Pinning Screw) - x4 ND-YR-G148</p>	<p>Order Number: ND-YR7-AS1012</p>       <p>Ball Link - Long - x2 ND-YR-G077</p> <p>2x6mm Cap Screw - x4 ND-YR-G023</p> <p>Tail Boom - x2 ND-YR7-TR1013</p> <p>Rear Tail Rotor Pushrod Guide - x4 ND-YR7-TR1031</p> <p>Tail Rotor Pushrod Guide - x4 ND-YR-G080</p>	<p>Order Number: ND-YR7-AS1013</p>   <p>Horizontal Fin Clamp Top - x1 ND-YR7-TR1021</p> <p>Horizontal Fin Clamp Bottom - x1 ND-YR7-TR1019</p>   <p>3x10mm Cap Screw - x2 ND-YR-G065</p>
<p>Order Number: ND-YR7-AS1014</p>      <p>Boom Support Spacer - x2 ND-YR-G165</p> <p>2x12mm Shanked Screw - x4 ND-YR-G053</p>     <p>Boom Support End - x4 ND-YR7-TR1022</p>     <p>3x18mm Cap Screw - x2 ND-YR-G133</p>     <p>M3 Washer - x4 ND-YR-G094</p>   <p>3x10mm Cap Screw - x2 ND-YR-G065</p>  <p>Boom Support Carbon Rod - x2 ND-YR7-TR1023</p>	<p>Order Number: ND-YR7-AS1015</p>   <p>Boom Support Bridge Half - x2 ND-YR7-TR1024</p>   <p>3x10mm Cap Screw - x1 ND-YR-G065</p>   <p>M3 Washer - x2 ND-YR-G094</p>     <p>Small Zip Ties - x4 ND-YR-G045</p>   <p>M3 Lock Nut - x1 ND-YR-G035</p>	<p>Order Number: ND-YR7-AS1016</p>   <p>Torque Tube End - x2 ND-YR7-TR1034</p>   <p>2x12mm Shanked Screw - x2 ND-YR-G053</p>   <p>M2 Lock Nut - x2 ND-YR-G037</p>  <p>Torque Tube - x1 ND-YR7-TR1032</p>   <p>Bearing 8x14x4mm - x2 ND-YR-G066</p>   <p>Rubber Torque Tube Bearing Support - x2 ND-YR-TR1035</p>	
<p>Order Number: ND-YR7-AS1017</p>   <p>Forward Tail Clamp Half - Left - x1 ND-YR7-TR1025</p> <p>Forward Tail Clamp Half - Right - x1 ND-YR7-TR1026</p>         <p>3x8mm Cap Screw - x12 ND-YR-G114</p>     <p>Hex Spacer 3x5.5x58mm - x6 ND-YR-G075</p>	<p>Order Number: ND-YR7-AS1018</p>  <p>Plastic Frame Center Brace - x1 ND-YR7-F1010</p>   <p>Hex Spacer 3x5.5x58mm - x2 ND-YR-G075</p>     <p>3x8mm Cap Screw - x4 ND-YR-G114</p>	<p>Order Number: ND-YR7-AS1019</p>  <p>Fuel Tank - x1 ND-YR7-FT1001</p>	














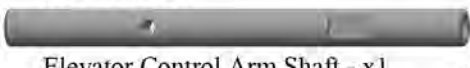

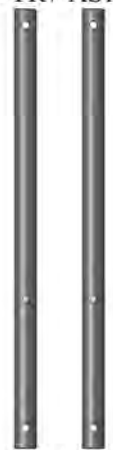























Rave ENV Replacement Part Sets

<p>Order Number: ND-YR7-AS1020</p>  <p>Fuel Tank Nipple - x1 ND-YR7-FT1003</p>  <p>Fuel Tank Clunk - x1 ND-YR7-FT1004</p>  <p>Fuel Tank Washer - x1 ND-YR7-FT1005</p>  <p>Fuel Tank Nut - x1 ND-YR7-FT1006</p>  <p>Fuel Tubing - 6 Inch Section - x1 ND-YR-G105</p>	<p>Order Number: ND-YR7-AS1021</p>  <p>Fuel Tubing - 6 Inch Section - x2 ND-YR-G105</p>	<p>Order Number: ND-YR7-AS1022</p>  <p>Rubber Fuel Tank Liner - x2 ND-YR7-F1032</p>	<p>Order Number: ND-YR7-AS1023</p>  <p>Lower Frame Brace - x2 ND-YR7-F1015</p>  <p>3x10mm Cap Screw - x8 ND-YR-G114</p>
<p>Order Number: ND-YR7-AS1024</p>  <p>Landing Gear Strut - x2 ND-YR7-F1002</p>  <p>Landing Gear Skid - x2 ND-YR7-F1004</p>  <p>3x4mm Set Screw - x4 ND-YR-G032</p>	<p>Order Number: ND-YR7-AS1025</p>  <p>Carbon Base Plate - x1 ND-YR7-F1016</p>	<p>Order Number: ND-YR7-AS1026</p>  <p>Main Frame Left And Right - x1 ND-YR7-F1028</p>	<p>Order Number: ND-YR7-AS1027</p>  <p>Front Frame - x1 ND-YR7-F1025</p>
<p>Order Number: ND-YR7-AS1028</p>  <p>Motor Mount Half - Left And Right - x2 ND-YR7-F1030</p>  <p>M3 Washer - x6 ND-YR-G094</p>  <p>M4 Washer - x4 ND-YR-G082</p>  <p>3x8mm Cap Screw - x6 ND-YR-G114</p>  <p>4x16mm Cap Screw - x2 ND-YR-G130</p>	<p>Order Number: ND-YR7-AS1029</p>  <p>Fan Shroud Half - Left - x1 ND-YR7-F1026</p>  <p>Fan Shroud Half - Right - x1 ND-YR7-F1027</p>  <p>Hex Spacer 3x5.5x58mm - x2 ND-YR-G075</p>  <p>3x8mm Cap Screw - x4 ND-YR-G114</p>	<p>Order Number: ND-YR7-AS1030</p>  <p>Cooling Fan Hub - x1 ND-YR7-CS1011</p>  <p>3x10mm Cap Screw - x2 ND-YR-G065</p>	

Rave ENV Replacement Part Sets




































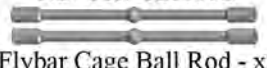




<p>Order Number: ND-YR7-AS1031</p>  <p>Cooling Fan - x1 ND-YR7-AS1012</p>  <p>3x8mm Cap Screw - x4 ND-YR-G114</p>  <p>M3 Washer - x4 ND-YR-G094</p>	<p>Order Number: ND-YR7-AS1032</p>  <p>Clutch - x1 ND-YR7-CS1009</p>  <p>4x6mm Cap Screw - x2 ND-YR-G121</p>	<p>Order Number: ND-YR7-AS1033</p>  <p>Clutch Bell - x1 ND-YR7-CS1007</p>  <p>Clutch Bell Liner - x1 ND-YR7-CS1006</p>  <p>Bearing 5x13x4mm - x1 ND-YR-G142</p>	<p>Order Number: ND-YR7-AS1034</p>  <p>Nitro Pinion - 16 Tooth - x1 ND-YR7-CS1002</p>  <p>Pinion Crush Nut - x1 ND-YR7-CS1001</p>  <p>Bearing 5x13x4mm - x1 ND-YR-G142</p>
<p>Order Number: ND-YR7-AS1035</p>  <p>Clutch Stack Block - Left - x1 ND-YR7-CS1004</p>  <p>Clutch Stack Block - Right - x1 ND-YR7-CS1005</p>  <p>Clutch Stack Lower Block - x1 ND-YR7-CS1003</p>  <p>Hex Spacer 3x5.5x58mm - x2 ND-YR-G075</p>  <p>Bearing 12x21x5mm - x2 ND-YR-G070</p>	<p>Order Number: ND-YR7-AS1036</p>  <p>Start Shaft - x1 ND-YR7-CS1013</p>	<p>Order Number: ND-YR7-AS1037</p>  <p>Start Hex - x1 ND-YR7-CS1010</p>  <p>4x4mm Set Screw - x2 ND-YR-G120</p>	<p>Order Number: ND-YR7-AS1038</p>  <p>Front Radio Tray - x1 ND-YR7-F1005</p>  <p>3x8mm Cap Screw - x10 ND-YR-G114</p>  <p>Hex Spacer 3x5.5x58mm - x4 ND-YR-G075</p>
<p>Order Number: ND-YR7-AS1039</p>  <p>Lower Canopy Mount - x1 ND-YR7-F1031</p>	<p>Order Number: ND-YR7-AS1040</p>  <p>Carbon Servo Mount Tab - x10 ND-YR7-F1020</p>	<p>Order Number: ND-YR7-AS1041</p>  <p>Rubber Canopy Standoff - x2 ND-YR7-F1018</p>  <p>Rubber Canopy Standoff Insert - x2 ND-YR7-F1019</p>  <p>3x22mm Cap Screw - x2 ND-YR-G125</p>	<p>Order Number: ND-YR7-AS1042</p>  <p>Rear Canopy Standoff - x2 ND-YR7-F1011</p>  <p>3x16mm Threaded Stud - x2 ND-YR-G129</p>  <p>M3 Lock Nut - x2 ND-YR-G035</p>

Rave ENV Replacement Part Sets



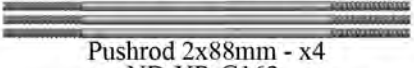
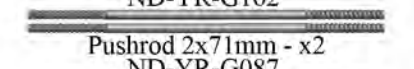
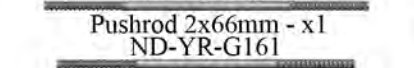
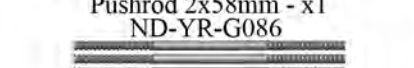
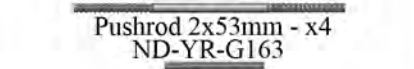
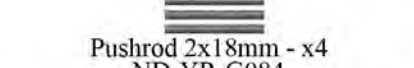


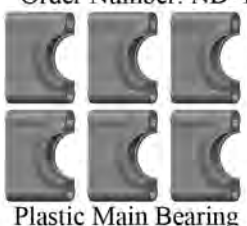

























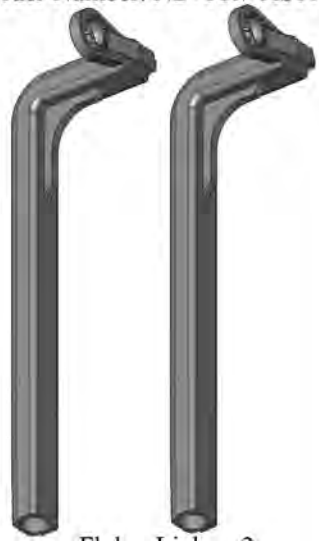
<p>Order Number: ND-YR7-AS1043</p>  <p>CCPM T-Lever Arm Left And Right - x2 ND-YR7-F1014</p>  <p>2x10mm Phillips Head Screw - x6 ND-YR-G124</p>  <p>Bearing 3x7x3mm - x4 ND-YR-G068</p>  <p>CCPM T-Arm Spacer - x2 ND-YR7-F1012</p>  <p>Spacer 3x4.5x3mm - x2 ND-YR-G100</p>  <p>M3 Lock Nut - x2 ND-YR-G035</p>  <p>Steel Control Ball - x6 ND-YR-G001</p>  <p>3x22mm Cap Screw - x2 ND-YR-G125</p>	<p>Order Number: ND-YR7-AS1044</p>  <p>Elevator Control Arm - x1 ND-YR7-F1022</p>  <p>3x8mm Cap Screw - x2 ND-YR-G114</p>  <p>2x10mm Phillips Head Screw - x3 ND-YR-G124</p>  <p>M3 Washer - x2 ND-YR-G094</p>  <p>Steel Control Ball - x3 ND-YR-G001</p>  <p>Elevator Control Arm Shaft - x1 ND-YR7-F1023</p>  <p>4x4mm Set Screw - x1 ND-YR-G120</p>	<p>Order Number: ND-YR7-AS1045</p>  <p>12mm Hollow Main Shaft - x2 ND-YR7-RH1017</p>	
<p>Order Number: ND-YR7-AS1046</p>  <p>Main Shaft Collar - x1 ND-YR7-RH1015</p>  <p>3x10mm Cap Screw - x1 ND-YR-G065</p>	<p>Order Number: ND-YR7-AS1047</p>  <p>118 Tooth Tail Drive Gear - x2 ND-YR7-AU1005</p>	<p>Order Number: ND-YR7-AS1048</p>  <p>130 Tooth Main Gear - x2 ND-YR7-AU1004</p>	<p>Order Number: ND-YR7-AS1049</p>  <p>Auto Unit Housing - x1 ND-YR7-AU1001</p>  <p>Auto Unit Top Cap - x1 ND-YR7-AU1002</p>  <p>One Way Bearing - x1 ND-YR-G074</p>  <p>Hardened One Way Outer Sleeve - x1 ND-YR7-AU1006</p>  <p>Bearing 14x21x4mm - x2 ND-YR-G158</p>  <p>Hardened Auto Unit Sleeve - x1 ND-YR7-AU1003</p>  <p>2.5x4mm Cap Screw ND-YR-G143</p>
<p>Order Number: ND-YR7-AS1050</p>  <p>Forward Tail Drive Shaft With Gears - x1 ND-YR7-TR1018</p>  <p>Tail Boom Insert Gear - x1 ND-YR7-TR1016</p>	<p>Order Number: ND-YR7-AS1051</p>  <p>Anti-Rotation Bracket - x1 ND-YR7-F1029</p>  <p>2.5x10mm Cap Screw - x4 ND-YR-G112</p>	<p>Order Number: ND-YR7-AS1052</p>  <p>Swashplate Assembly - x1 ND-YR7-RH1029</p>  <p>140 CCPM Ball - x2 ND-YR-G107</p>  <p>Anti-Rotation Ball - x1 ND-YR-G106</p>  <p>3mm Threaded Ball - x6 ND-YR-G108</p>  <p>3x3mm Set Screw - x3 ND-YR-G031</p>	<p>Order Number: ND-YR7-AS1053</p>  <p>Washout A Arm - x2 ND-YR7-RH1020</p>  <p>2x14mm Cap Screw - x2 ND-YR-G054</p>  <p>M2 Lock Nut - x2 ND-YR-G037</p>




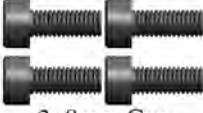




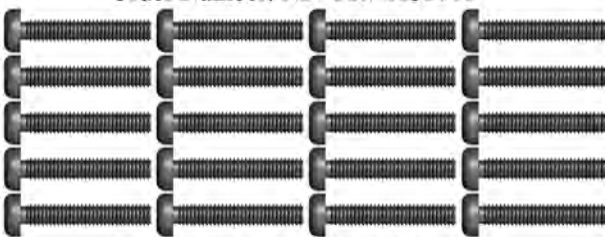


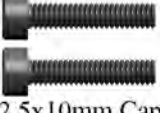


















Rave ENV Replacement Part Sets

<p>Order Number: ND-YR7-AS1054</p>  <p>Washout Arm - x2 ND-YR7-RH1019</p>  <p>Bearing 3x7x3mm - x4 ND-YR-G068</p>  <p>Spacer 3x4.5x0.5mm - x2 ND-YR-G097</p>  <p>Steel Control Ball - x2 ND-YR-G001</p>  <p>2x10mm Cap Screw - x2 ND-YR-G025</p>  <p>3x12mm Cap Screw - x2 ND-YR-G115</p>  <p>M2 Servo Washer - x2 ND-YR-G015</p>	<p>Order Number: ND-YR7-AS1055</p>  <p>Washout Base - x1 ND-YR7-RH1018</p>	<p>Order Number: ND-YR7-AS1056</p>  <p>Head Block - x1 ND-YR7-RH1012</p>  <p>Head Button - x1 ND-YR7-RH1008</p>  <p>3x8mm Cap Screw - x1 ND-YR-G114</p>	<p>Order Number: ND-YR7-AS1057</p>  <p>Rotor Head Rubber Damper - x2 ND-YR7-RH1009</p>  <p>Spacer 9x12x1.7mm - x2 ND-YR-G101</p>
<p>Order Number: ND-YR7-AS1058</p>  <p>Cross Shaft - x2 ND-YR7-RH1005</p>  <p>Stepped Spindle Washer - x2 ND-YR7-RH1030</p>  <p>5x12mm Cap Screw - x2 ND-YR-G116</p>	<p>Order Number: ND-YR7-AS1059</p>  <p>Main Blade Grip - x2 ND-YR7-RH1010</p>  <p>Steel Control Ball 13.5mm Threaded - x2 ND-YR7-RH1007</p>  <p>Bearing 9x17x5mm - x4 ND-YR-G072</p>  <p>Thrust Bearing 9x17x5mm - x2 ND-YR-G073</p>  <p>Spacer 14x17.25x1mm - x2 ND-YR-G096</p>	<p>Order Number: ND-YR7-AS1060</p>  <p>5x30mm Shanked Bolt - x2 ND-YR-G137</p>  <p>M5 Lock Nut - x2 ND-YR-G113</p>  <p>Spacer 5x22x1.5mm - x4 ND-YR-G136</p>	<p>Order Number: ND-YR7-AS1061</p>  <p>Seesaw Cage - x1 ND-YR7-RH1014</p>  <p>Bearing 4x10x4mm - x2 ND-YR-G006</p>  <p>Bearing 5x10x4mm Flanged - x2 ND-YR-G145</p>  <p>4x8mm Shanked Seesaw Screw - x2 ND-YR-G146</p>
<p>Order Number: ND-YR7-AS1062</p>  <p>Seesaw Control Arm - x2 ND-YR7-RH1011</p>  <p>Steel Control Ball - x4 ND-YR-G001</p>  <p>2x10mm Phillips Head Screw - x4 ND-YR-G124</p>  <p>3x12mm Cap Screw - x2 ND-YR-G115</p>  <p>Bearing 3x7x3mm - x4 ND-YR-G068</p>  <p>Spacer 3x4.5x1mm - x2 ND-YR-G098</p>	<p>Order Number: ND-YR7-AS1063</p>  <p>Flybar Cage End - x2 ND-YR7-RH1002</p>  <p>Flybar Cage Ball Rod - x2 ND-YR7-RH1003</p>  <p>2.5x10mm Cap Screw - x4 ND-YR-G112</p>  <p>4x4mm Set Screw - x2 ND-YR-G120</p>	<p>Order Number: ND-YR7-AS1064</p>  <p>Flybar (500mm) - x2 ND-YR7-RH1001</p>	<p>Order Number: ND-YR7-AS1065</p>  <p>Plastic Flybar Paddle - x2 ND-YR7-RH1025</p>

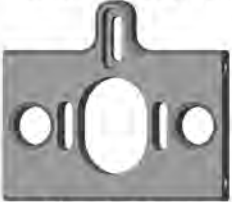






































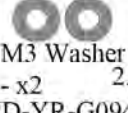



Rave ENV Replacement Part Sets

<p>Order Number: ND-YR7-AS1066</p>  <p>Carbon Tail Blade (107mm, Next-D) - x2 ND-YR7-TR1036</p>	<p>Order Number: ND-YR7-AS1067</p>  <p>Pushrod 2x93mm - x2 ND-YR-G083</p>  <p>Pushrod 2x88mm - x4 ND-YR-G162</p>  <p>Pushrod 2x71mm - x2 ND-YR-G087</p>  <p>Pushrod 2x66mm - x1 ND-YR-G161</p>  <p>Pushrod 2x58mm - x1 ND-YR-G086</p>  <p>Pushrod 2x53mm - x4 ND-YR-G163</p>  <p>Pushrod 2x18mm - x4 ND-YR-G084</p>	<p>Order Number: ND-YR7-AS1068</p>  <p>Ball Link Long - x13 ND-YR-G077</p>  <p>Ball Link Short - x4 ND-YR-G078</p>	<p>Order Number: ND-YR7-AS1069</p>  <p>Plastic Main Bearing Block Half - x6 ND-YR7-F1021</p>  <p>Bearing 12x21x5mm - x3 ND-YR-G070</p>  <p>Hex Spacer 3x5.5x58mm - x6 ND-YR-G075</p>  <p>3x8mm Cap Screw - x12 ND-YR-G114</p>
<p>Order Number: ND-YR7-AS1070</p>  <p>Forward Tail Pushrod - x1 ND-YR-G079</p>  <p>Forward Tail Carbon Stiffener - x1 ND-YR-G149</p>  <p>Ball Link Long - x2 ND-YR-G077</p>	<p>Order Number: ND-YR7-AS1071</p>  <p>Fuel Line Cutoff 5mm - x1 ND-YR-G103</p>  <p>Fuel Line Cutoff 6mm - x1 ND-YR-G104</p>	<p>Order Number: ND-YR7-AS1072</p>  <p>Adhesive Back Velcro Strips - 6 Inch Sections - x3 ND-YR-G019</p>	<p>Order Number: ND-YR7-AS1073</p>  <p>Forward Tail Bell Crank - x1 ND-YR7-F1009</p>  <p>Steel Control Ball - x2 ND-YR-G001</p>  <p>Spacer 3x4.5x0.5mm - x1 ND-YR-G097</p>  <p>3x14mm Cap Screw - x1 ND-YR-G123</p>  <p>Bearing 3x7x3mm - x2 ND-YR-G068</p>  <p>2x10mm Phillips Head Screw - x2 ND-YR-G055</p>  <p>Spacer 3x4.5x3mm - x1 ND-YR-G100</p>
<p>Order Number: ND-YR7-AS1074</p>  <p>Forward Tail Bell Crank Mount - x1 ND-YR7-F1008</p>  <p>3x8mm Cap Screw - x2 ND-YR-G114</p>	<p>Order Number: ND-YR7-AS1075</p>  <p>Painted Fiberglass Canopy-Orange - x1 ND-YR7-F1006</p>  <p>Rubber Canopy Grommet - x3 ND-YR-G111</p>  <p>Plastic Canopy Protector - x3 ND-YR7-F1003</p>  <p>Canopy Rubber Channel - x2 ND-YR7-F1033</p>	<p>Order Number: ND-YR7-AS1076</p>  <p>Rubber Canopy Grommet - x3 ND-YR-G111</p>  <p>Plastic Canopy Protector - x3 ND-YR7-F1003</p>  <p>Canopy Rubber Channel - x2 ND-YR7-F1033</p>	<p>Order Number: ND-YR7-AS1077</p>  <p>Flybar Link - x2 ND-YR7-RH1016</p>

Rave ENV Replacement Part Sets

<p>Order Number: ND-YR7-AS1078</p>  <p>Stepped Fan Shroud Washer - x4 ND-YR-G122</p>  <p>3x8mm Cap Screw - x4 ND-YR-G114</p>	<p>Order Number: ND-YR7-AS1079</p>  <p>Fan Shroud Baffle - x1 ND-YR7-F1024</p>  <p>2x6mm Cap Screw - x2 ND-YR-G023</p>	<p>Order Number: ND-YR7-AS1080</p>  <p>4x24mm Shanked Screw - x2 ND-YR-G135</p>  <p>M4 Lock Nut - x2 ND-YR-G091</p>	<p>Order Number: ND-YR7-AS1081</p>  <p>2.5x15mm Self Tapping Screw - x20 ND-YR-G128</p>  <p>Plastic Servo Mount Tab - x6 ND-YR7-F1017</p>  <p>2x6mm Cap Screw - x4 ND-YR-G023</p>		
<p>Order Number: ND-YR7-AS1082</p>  <p>2.5x10mm Cap Screw - x2 ND-YR-G112</p>  <p>Rubber Fuel Tank Mount - x2 ND-YR7-F1001</p>	<p>Order Number: ND-YR7-AS1083</p>  <p>3x6mm Cap Screw - x5 ND-YR-G127</p>	<p>Order Number: ND-YR7-AS1084</p>  <p>Bearing 5x10x4mm - x2 ND-YR-G007</p>  <p>Spacer 5x8x0.025mm - x2 ND-YR-G164</p>	<p>Order Number: ND-YR7-AS1085</p>  <p>Bearing 2x6x3mm Flanged - x4 ND-YR-G144</p>  <p>2x14mm Cap Screw - x2 ND-YR-G054</p>  <p>M2 Lock Nut - x2 ND-YR-G037</p>	<p>Order Number: ND-YR7-AS1086</p>  <p>Ball Link Short - x2 ND-YR-G078</p>  <p>Pushrod 2x18mm - x2 ND-YR-G084</p>	<p>Order Number: ND-YR7-AS1087</p>  <p>Blade Grip Ball 20.5mm - x2 ND-YR7-RH1026</p>
<p>Order Number: ND-YR7-AS1088</p>  <p>Flybarless Head Block - x1 ND-YR7-RH1028</p>	<p>Order Number: ND-YR7-AS1089</p>  <p>Flybarless Control Arm - x2 ND-YR7-RH1027</p>  <p>Bearing 4x7x2.5mm Flanged - x4 ND-YR-G067</p>  <p>Spacer 4x5x1mm - x2 ND-YR-G150</p>  <p>3x22mm Cap Screw - x2 ND-YR-G125</p>  <p>Spacer 3x4x6.5mm Flanged - x2 ND-YR-G151</p>	<p>Order Number: ND-YR7-AS1090</p>  <p>Pushrod 2.5x61mm - x2 ND-YR-G160</p>  <p>Ball Link Long 2.5mm - x4 ND-YR-G085</p>			

Rave ENV Replacement Part Sets

<p>Order Number: ND-YR7-AS1091</p>  <p>Electric Motor Mount - x1 ND-YR7-EC1002</p>  <p>Counter Bearing Support - x1 ND-YR7-EC1003</p>  <p>5mm E Clip - x1 ND-YR-G152</p>  <p>Motor Shaft Extension - x1 ND-YR7-EC1004</p>  <p>4x30mm Cap Screw - x2 ND-YR-G154</p>	<p>3x10mm Cap Screw - x1 ND-YR-G065</p>  <p>M3 Lock Nut - x1 ND-YR-G035</p>  <p>M3 Washer - x1 ND-YR-G094</p>  <p>Bearing 6x13x5mm - x1 ND-YR-G166</p>  <p>Washer 610x0.75mm - x1 ND-YR-G153</p>  <p>M4 Star Lock Washer - x2 ND-YR-G155</p>	<p>Order Number: ND-YR7-AS1092</p>  <p>Rear Carbon Battery Tray - x1 ND-YR7-EC1001</p>  <p>3x8mm Button Head Screw - x4 ND-YR-G148</p>	<p>Order Number: ND-YR7-AS1093</p>  <p>Hex Spacer EC Threaded 3x5.5x58mm - x3 ND-YR-G156</p>  <p>3x14mm Cap Screw - x2 ND-YR-G123</p>  <p>M3 Washer - x2 ND-YR-G094</p>	<p>Order Number: ND-YR7-AS1094</p>  <p>Rear Carbon Frame Brace - x2 ND-YR7-F1038</p>  <p>3x14mm Cap Screw - x2 ND-YR-G123</p>  <p>M3 Washer - x2 ND-YR-G094</p>  <p>3x10mm Cap Screw - x2 ND-YR-G065</p>  <p>3x12mm Cap Screw - x4 ND-YR-G115</p>
<p>Order Number: ND-YR7-AS1095</p>  <p>Fuel Tank Grommet - x2 ND-YR7-FT1002</p>	<p>Order Number: ND-YR7-AS1096</p>  <p>Steel Control Ball 13.5mm - x2 ND-YR7-RH1007</p>	<p>Order Number: ND-YR7-AS1097</p>  <p>Clutch Liner - x2 ND-YR7-CS1006</p>	<p>Order Number: ND-YR7-AS1098</p>  <p>4x8mm Shanked Seesaw Screw - x2 ND-YR-G146</p>	<p>Order Number: ND-YR7-AS1099</p>  <p>3x6.5mm Pin Screw - x2 ND-YR-G119</p>  <p>3x8mm Button Head Screw - x4 (Stainless Steel) ND-YR-G148</p>
<p>Order Number ND-YR7-AS1100</p>  <p>2x10mm Phillips Head Screw - x2 ND-YR-G124</p>  <p>2x6mm Cap Screw - x2 ND-YR-G023</p>  <p>2x12mm Shanked Screw - x2 ND-YR-G053</p>  <p>3x8mm Button Head Screw - x2 ND-YR-G148</p>  <p>3x8mm Cap Screw - x2 ND-YR-G114</p>  <p>3x10mm Cap Screw - x2 ND-YR-G065</p>  <p>3x12mm Cap Screw - x2 ND-YR-G115</p>  <p>3x14mm Cap Screw - x2 ND-YR-G123</p>  <p>Steel Control Ball - x2 ND-YR-G001</p>  <p>3x3mm Set Screw - x1 ND-YR-G031</p>  <p>M2 Hex Nut - x1 ND-YR-G034</p>  <p>M3 Lock Nut - x1 ND-YR-G035</p>  <p>4x4mm Set Screw - x1 ND-YR-G120</p>  <p>M3 Washer - x2 ND-YR-G094</p>  <p>Ball Link Long - x2 ND-YR-G077</p>  <p>2.5x15mm Servo Screw - x2 ND-YR-G128</p>  <p>Ball Link Short - x2 ND-YR-G078</p>				

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