

PLEASE READ THIS FIRST

CN1074 & CN1074A Bell47G II Detail Manual Updates

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The photo showing the landing gear mounted to the mechanics is backwards, see Step 12 and replace the original four self tapping screws with M3x12 self tapping screws.

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Bell 47G II ARF Helicopter

Detail Manual



FEATURES

- ⇒ **YELLOW GELCOAT FIBERGLASS**
- ⇒ **CRYSTAL CLEAR WINDSHIELD & WINDOWS**
- ⇒ **OPENABLE & REMOVEABLE PILOT DOORS**
- ⇒ **“OIL DERRICK” STYLE TAIL BOOM**
- ⇒ **ENGINE SIZE** **.50**
- ⇒ **MAIN ROTOR DIAMETER** **53.5”**
- ⇒ **HEIGHT** **16.25”**
- ⇒ **LENGTH** **50”**

Century Helicopter Products

Designed and Developed in USA

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Building Instructions for:

CN1074 Bell 47G II ARF Helicopter
CN1074A Bell 47G II Conversion Kit

Introduction

Congratulations on your purchase of Century Helicopter Product's scale RC Bell 47G II helicopter model. Whether you have purchased the conversion kit or the pre-painted and ARF mechanics, this is the beginning of a new breed of Almost Ready to Fly helicopters that are simpler to build, easier to see and look fantastic. Whether you are just beginning in helicopters, wanting to start in scale or an accomplished pilot, Century offers a wide selection of helicopters to fulfill your dreams in scale. Century has combined their world class helicopter mechanics with awesome fiberglass fuselages designed to mount directly inside with little or no modifications.

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. It is recommended that if you are in 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, all the major component parts are packaged in numbered bags to correspond to specific sections of the manual, greatly facilitating assembly. Various assemblies have been pre-assembled, only requiring the final assembly and installation of the various sub-assemblies. The screws and nuts required for each step are packaged in the same bag as the parts for that step. Be careful not to lose any of the hardware when opening each bag. Care has been taken in filling and packing of each bag. However mistakes do happen, if there is a parts shortage or any hardware missing, please feel free to contact us at:

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Bell 47G II Construction Manual












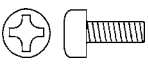
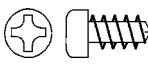
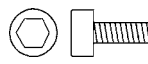

This manual has been written for Century's 50 size Bell 47G II scale helicopter available in ARF version and conversion kit. This is the detail construction of the Bell 47G II helicopter fuselage components, landing gear, tailboom assembly which work in cooperation with the scale mechanics instruction manual. This manual should be reviewed before starting the assembly as there are steps included that are different than in the generic scale mechanics manual. At steps that seem to be incorrect, simply refer back to this manual to find the correct components.

Instructional Detail

Every attempt has been made to ease the assembly of your helicopter, at each step where there are complex assemblies, there are detailed drawings, photos and written instructions to walk you through each step.

Remember to take a few minutes before each step to carefully examine the instructions in order to become familiar with the parts and assembly sequence before beginning that step.

Symbols used to help assist you in building the kit:

	Full Scale Drawing		Repeat Steps as specified		Partially tighten		Helpful Tip
	Apply oil		Apply threadlock		Purchased Separately		Cut away Shaded Portion
	Special Attention		Apply JB Weld		Apply Grease		
Hardware Description and Identification: M3x6 = 3x6mm and can refer to screws or ball bearings.							
M3x6 Phillips Machine Screw  M - metric 3 - diameter 6 - length		M3x6 Self Tapping Screw  M - metric 3 - diameter 6 - length		M3x10 Socket Cap Screw  M - metric 3 - diameter 10 - length		3x7 Ball Bearing  M - metric 3 - inside Ø 7 - outside Ø	

Recommended Tools & Accessories

The tools and materials listed below are the minimum needed to build the helicopter:

Screwdrivers - Slotted and Phillips head.

Long-Nosed Pliers, wide jaw pliers.

Allen Wrenches - 1.5mm, 2.0mm, 2.5mm.
(supplied in kit) + 3.0mm

Appropriate Socket Wrench

(glow plug wrench for engine shaft nut)

Hobby Scissors, clear tape, masking tape

Double Sided Foam Tape (1/16" - 3/32")

Foam Rubber (radio packing)

JB Weld, Goop or Zap-a-Dap-a-Goo

Thread lock liquid (e.g. Locktite)

Hobby Grease (Super Lube)

Oil to lubricate sliding shafts (Tri-Flow)

Drill bits 0.8mm[1/32"], 1.5mm[1/16"],

1.8mm[0.071"], 3mm[1/8"]

In addition, the following will make assembly and setup easier, and prove useful later in your model toolbox:

CN2015	Hardened Tip Hex Screw Driver Set
CN2026	Pitch Gauge with Paddle Gauge.
CN2034	15° Curve Tip Ball link Pliers.
CN2052	Main Blade Balancer.
CN2054	Special Glow Plug Wrench Set.
CN2055	Ball Link Sizing Tool.
CN2070	Universal Flybar Lock.
CN2155	Piston Locking Tool.
CN2219	Ball Link Easy Driver.
CN2255	Control Rod Gauge.
CNWI26555	5.5mm Nut Driver.
CNWI26570	7.0mm Nut Driver.

Updates to Steps in the Scale Mechanics Manual

The following Step numbers are referenced from the steps in the main Scale Mechanics Manual.

STEP 1-3 Main Blade Grip Assembly

From parts bag 1: Install one Long Ball and one Short Ball into the Bell Mixer, insert the slide tube into the bell mixer arm (**Note: the oilite bearings are pre-installed**) and secure onto the blade grip with one M3x16 Socket Cap screw and M3x7 Flat washer. Install two M6x13 Ball Bearings into each end of the blade grip assembly. Complete the second blade grip in exactly the same way.

STEP 1-4 Feathering Spindle & Blade Grips

From parts bag 1: Insert the Feathering Shaft into the head block, slide one M6x10 washer on each side of the shaft. Install the blade grip (Note the direction of the bell mixer arm) followed by one M8x13 washer, one M6x12 Thrust Ball Bearing (install the first steel washer (large inside diameter) followed by the ball race, remember to grease the ball race, followed by the second steel washer (smaller diameter) and one M6 Locknut. Tighten the locknut, using the glow plug socket wrench on one nut while holding the other with pliers, tighten the nuts until both blade grips turn freely without any excessive end play.

STEP 1-7 Flybar, Paddles and Flybar Control Arms

The kit version is already pre-assembled, for reference, using an available M3x12 Button Head Screw, insert approximately half the length of the screw to form threads into the smaller, tapered ends of the control arms and the control arm stand-offs. Assemble Pushrod A and press one ball link end onto each double studded steel ball, making sure that pressure is applied from the side of the ball link with the Century name. All ball links are designed to be installed in one direction only. While holding one flybar control arm, start threading the double studded steel ball. When it becomes difficult to turn with fingers, start the control arm stand-off and use as a driver until tight. Complete the second flybar control arm.

Slide and center the Flybar through the seesaw arm assembly inserted from the bottom of the rotor head block. Carefully look at Flybar Control Arm and notice that when installed correctly, the securing set screw is on top. Loosely tighten the M4x5 Set Screws into the round aluminum inserts directly over the flat spots that are already on the flybar. Using a ruler, check the distance between the end of the flybar and the control arm and adjust until the lengths are the same. Remove one set screw at a time, apply threadlock and tighten in place. Slide the Flybar Weight (**Tip: the flat end of the weight faces the paddle**) and thread on the Flybar Paddle until all the threads are covered onto the flybar and align the paddles parallel. Again using the ruler, rotate one paddle or the other to get equal distances, remember leading edge of the paddles turn clockwise. Using two 3x3mm Set Screws secure the weights using threadlock.

STEP 6-1 Pushrod Setup & Adjustment

This helicopter is designed for a 46/50 size engine, as a result the following pushrod (end to end) measurements are:

Pushrod	Code	Length
Washout Arm to Flybar Control Arm	A	51mm
Aileron Bellcrank to Swashplate	J	62mm
Bell Mixer to Swashplate (long)	C	106mm
Throttle Pushrod	B	99mm
Collective Pushrod	D	96mm

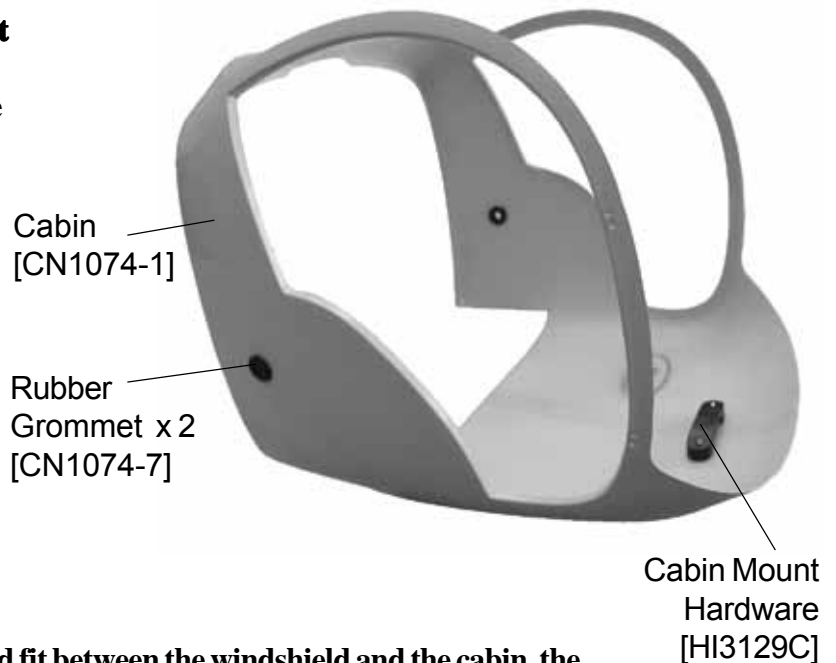
STEP 6-8 Assembly of ARF Main Blades

Main blades are 600mm, part number CN2324.

Prepare the fiberglass, wash all parts in warm water with mild detergent to remove all residue used in the molding process and let them dry completely. The cabin set can be used as is with the bright yellow gelcoat, simply applying the decals directly on the fiberglass. Alternately the cabin can be painted to match any existing full scale Bell 47G II or create your own unique paint scheme.

STEP 1 Cabin Grommets and Inside Mount

Install one rubber grommet into each side of the cabin. Once installed, apply “Goop” between the seam and the grommet by lifting the edge of the grommet and insert the adhesive. The cabin lights are then bonded directly over the grommets on the outside of cabin. Carefully apply adhesive to the edge of the cabin light and align level, clamp in place until dry. Using two M3x6 Washer Head Screws attach the inside mount making sure the beveled edge is towards the rear.

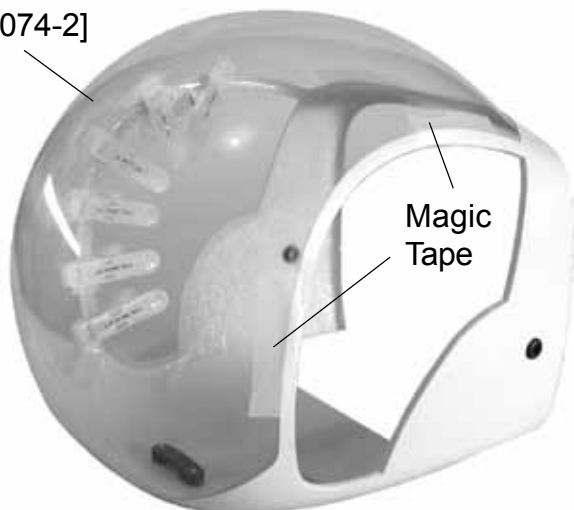


STEP 2 Windshield

Mark and trim out the windshield. To get a good fit between the windshield and the cabin, the edges that will mount against the upper door frames need to be bent inwards. Using wide jaw pliers, grip 1/8” of the edge of the windshield and bent inward. Test fit the windshield, if it does not “snap fit” into place, repeat the procedure. Install and tape the top and both sides in the final position. Insert a small part between the bottom of the windshield and the cabin, opening a 1/8” to 1/4” gap. Apply “Goop” along the center of the bottom edge, moving the part as adhesive is applied. After 30 minutes of holding, apply another layer of “Goop” along the edge of the joint to reinforce it. After 12 hours, remove the tape from one edge and repeat the process to bond one side. Complete the remaining two edges the same way.



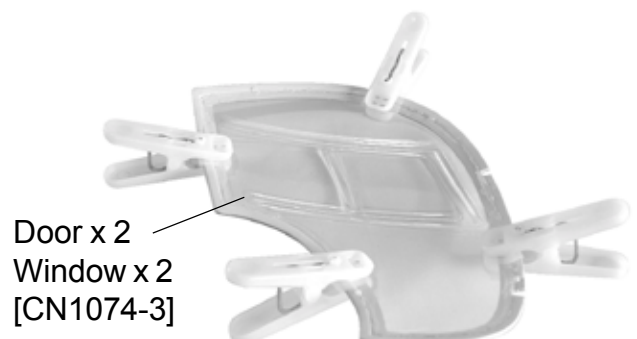
Windshield [CN1074-2]



Clamping the right side with clothes pin until dry.

STEP 3 Door Windows

Mark and trim out each door window. Test fit each into the matching door, some trimming may be necessary to get a perfect fit. Apply “Goop” along the outside edge and press into the door. Clamp for 12 hours until dry.



Hinges and door pivot locks must be drilled when on the sheet material. Follow the chart for hole size by part. As these parts are small, extra pieces are provided in case of accidental damage, it is best that all components are prepared at this time.

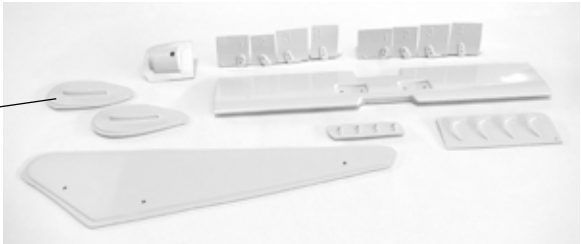


Location	Drill Bit Size	Req'd
Pivot lock wire holes	0.8mm [1/32"]	4
Pivot lock center hole	1.5mm [1/16"]	2
Hinge holes	"	12
Horizontal Fin (1/2 depth)	"	4
Hinge holes on doors	"	8
Hinge holes on cabin	"	8
Pivot lock hole on doors	"	2
Door handle holes on door	1.8mm [0.071"]	2
Vertical fin	2.0mm [0.079"]	3
Tail Light Mount	3.0mm [0.125"]	1

STEP 5 Trimming Components

After the parts are drilled, divide the sheet parts with heavy shears and then using a straight routing bit in a moto-tool trim each part leaving 1/32" of material on each part. Use a flat file for the horizontal fin end caps and vertical fin, use a needle file for the small parts to shape to final size.

Tail fins, strobe light, hinges & acc. [CN1074-5]



STEP 6 Mounting Hinges

Hinge order is important, left door top #3, bottom #1, left cabin top #4, bottom #2. Right door top #1, bottom #3, right cabin top #2, bottom #4. Attach each door hinge using two M1.4x5 Round Head Phillips Screws and two M1.4 Hex Nuts from the inside. Attach each cabin hinge using two M1.4x6 Flat Head Phillips Screws and two M1.4 Hex Nuts. When mounting the hinges on the doors and the cabin the ears of the hinge point toward the front. Also, test fit each door to its side as some slight filing of the slot in the door may be necessary for a good fit and note that the door hinges mount on top of the cabin hinges. After each bolt is secured, apply a single drop of locktight to each nut.

Doors are knotted to be able to swing open. When the door is closed it will overlap the cabin door opening and remain on the outside.

M1.4x5 Round Head Phillips Screws x 8
M1.4 Hex Nut x 8
[CN1074-8]

Door hinges have straight holes.



Left Door

M1.4x6 Flat Head Phillips Screws x 8
M1.4 Hex Nut x 8
[CN1074-8]

Cabin hinges have counter sunk holes.

As in the case with the fiberglass components, extra hardware is provided for convenience if a fasterener is lost or damaged.



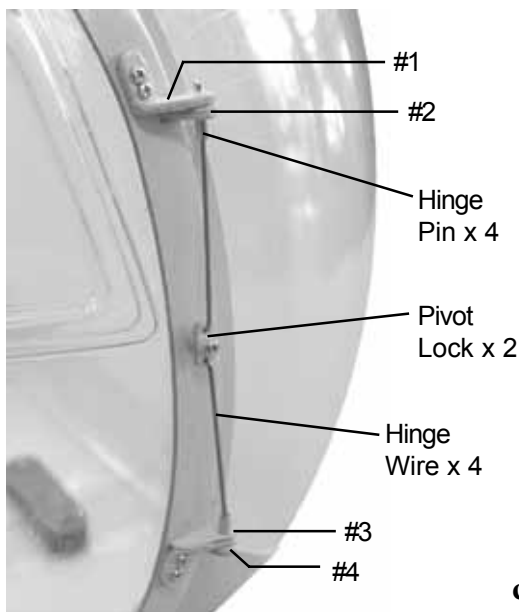
Right Cabin Door Opening

STEP 7 Door Hardware & Mounting

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Attach the pivot lock that will hold the hinge wires in place using one M1.4x8 Round Head Phillips Screw inserted from the short (the pivot lock has a long side and a short side) standoff side, through the door and secured with one M1.4 Hex Nut. Leave loose enough to rotate the lock by hand. Position the right door resting on top of the right side cabin hinges (right side hinge order #1234) and insert two brass hinge pins from inside out. Using pliers hold the hinge wire 2-3mm from the end and bend 90° degrees. Position the pivot lock vertically to trim the hinge wires. Insert the straight end of the wire into the upper hinge pin and trim the straight end until the length of the wire will fit fully seated in the hinge pin and into the pivot lock.

Now slightly trim the bent end of the hinge wire so that when inserted in the pivot lock the end of the wire does not touch the door, but be careful, make sure there is a minimum of 1mm of wire that extends past the edge of the pivot lock. Repeat for the left door.

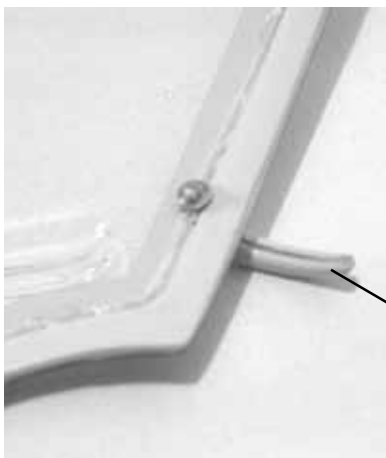


Right Side Door
Hinge Order #1234

Remove the pivot lock and the hinge pins from the door. Using epoxy or JB Weld permanently bond the straight end of the hinge wire into the brass hinge pin. To improve the bond strength, using the edge of a needle file, make a few straight scores into the last 2mm of the straight end, no more that 20% deep. Repeat for the four wires. To permanently attach the bent end to the pivot lock, insert the wire and mark the amount of wire that is exposed on the bottom of the pivot lock. Remove and make two similar scores on both sides near the end of the wire. Cut a small 1/4" square piece of plastic wrap and press over the end of the wire, using epoxy or JB Weld, form a fillet drop of adhesive against the plastic. Once cured, cut a slit in the plastic and carefully split apart and remove. Install both doors. To reduce the stress on the hinge wires, redrill the hinges to 2.1-2.2mm and rely on the tension of the M1.4x8 Screw at the center of the pivot lock to keep the hinge pins in place.

STEP 8 Door Handles & Magnets

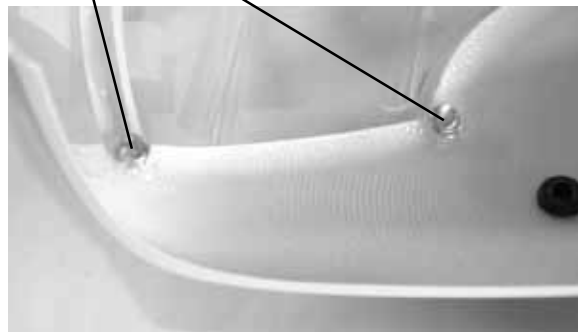
Press the door handle through the door and press one 2mm brass washer flat against the inside of the door, apply a drop of epoxy and let dry. Repeat for other door. Close the door and position one magnet at each corner of the inside cabin opening, the magnet will self-align, matching itself to the magnet that is already embedded in the door at the time of manufacture. Remove one magnet at a time and epoxy in place, encasing the magnet completely. Repeat for the other door and let dry. Check that when the doors are closed that the top and bottom of the doors match the contour of the cabin, if there is a gap between the two parts, heat the door with a heat gun until the surface is hot to the touch and tape flush to the cabin. Repeat if necessary.



Once the handles, hinges and doors are completed, a little painting along the seam will hide the mold seam nicely.

Door Handle x 2
M2 Brass Washer x 2
[CN1074-5]

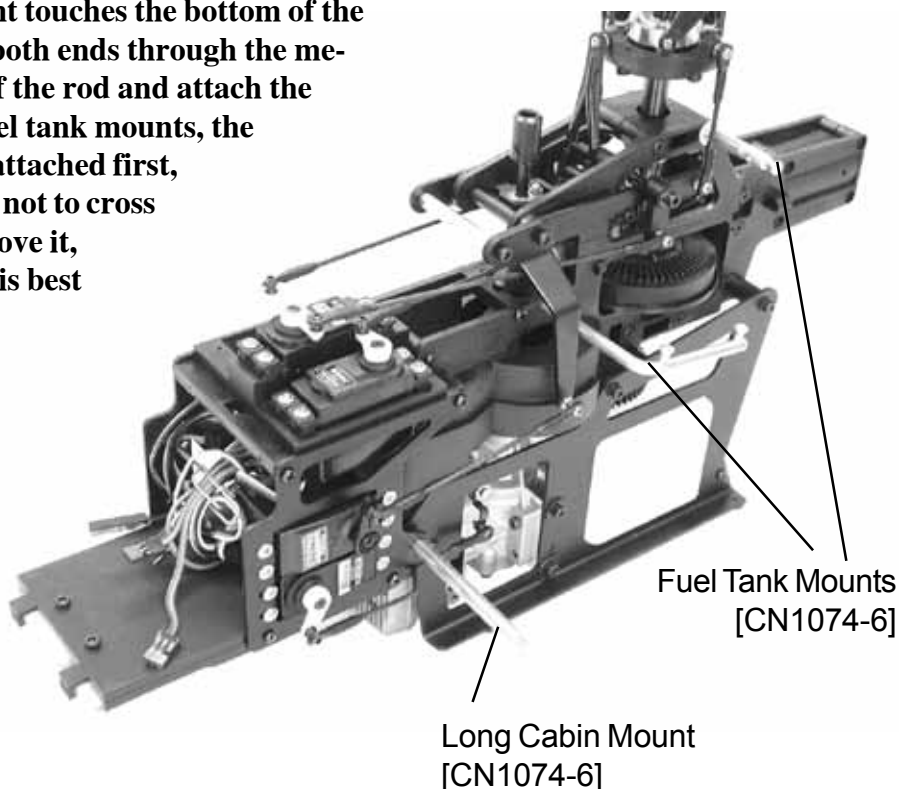
Magnets x 4
[CN1074-9]



STEP 9 Cabin & Fuel Tank Mount Hardware

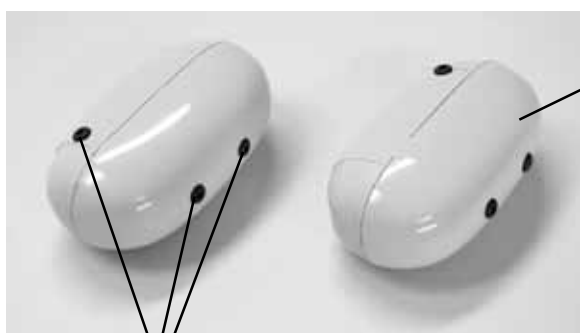
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The long cabin mounts will be fitted at the joint between the servo side frames and the upper side frames where the M2x12 threaded stud is pre-installed in the kit version. Remove the original M3x6 bolt. Insert one short all threaded rod with threadlock through the servo side frame and into the nut in the lower side frames using threadlock, then thread the long cabin mount onto the stud using threadlock. Tighten with a hex key inserted through the hole in the mount. Repeat for the other side. The short fuel tank mounts are installed into the rearward hole behind the main shaft. The left mount will fit easily into the recess for the socket head cap screw but the opposite side needs to be opened out to 6mm using a drill bit. Only drill until the mount touches the bottom of the recess. Insert the 3mm rod threaded on both ends through the mechanics, apply threadlock to both ends of the rod and attach the upper fuel tank mounts. On the lower fuel tank mounts, the two machined grommet fittings must be attached first, carefully insert the fittings, being careful not to cross thread them. Once each has started, remove it, apply threadlock and tighten in place. It is best to hold the narrow straight section with pliers to tighten as not to damage the head that will engage the grommet. Insert one all threaded rod into the end of the mount using threadlock. Remove the rearmost M3x12 Self Tapping Screws from the bottom starting block and insert the fuel tank mounts by threading in place. The final position has the mount at a slight downward angle to the rear.



STEP 10 Fuel Tanks

Insert three rubber grommets into each fuel tank, be careful not to crush the hollow tanks. Lift the edge of each grommet and insert a small amount of "Goop" adhesive to bond them in place. Each fuel tank is marked on the bottom for the left and right sides. To mount the fuel tanks, hold the tank at a horizontal position and "roll" onto the lower mounts and then press into the upper mount.

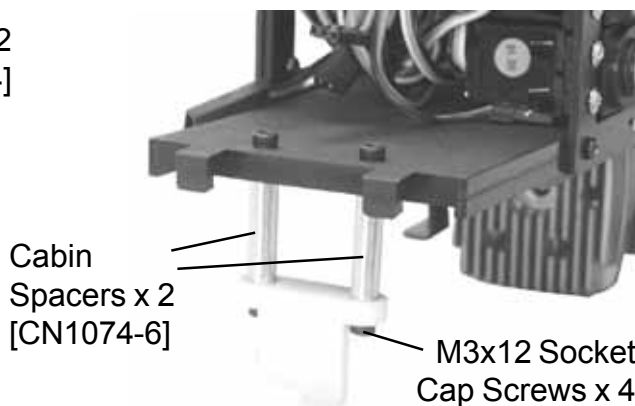


Rubber Grommets x 6
[CN1074-7]

Fuel Tanks x 2
[CN1074-4]

STEP 11 Cabin Mount

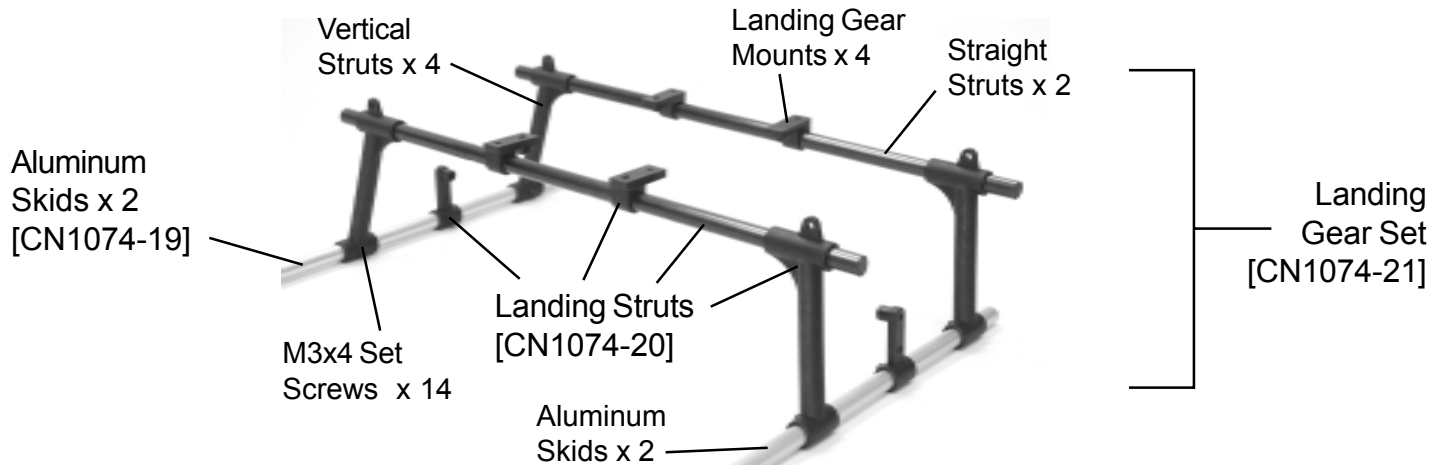
Drill the two holes on the plastic hook to 3mm. Attach two 27mm spacers between the battery tray and the plastic hook using four M3x12 Socket Cap Screws using threadlock.



STEP 12 Landing Gear

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Insert all the M3x4 Set Screws into the landing gear components. Slide two landing gear mounts onto the straight struts and align to the hole spacing on the lower side frames, notice that the rear mount face backwards and the front mounts are forward. Once centered, verify both are level and secured by tightening the M3x4 Set Screw on each mount. Slide the plastic vertical struts onto the ends of the straight struts, notice that the vertical struts should slant forward and insert the aluminum skids from the front to the rear, positioning the wheel mount inbetween. Position the end of the aluminum skid 15mm past the end of the rear strut and tighten the M3x4mm Set Screws at the bottom. Before tightening any other set screws, measure the distance between the aluminum skids at the back and front, slide the vertical struts to match the distances. Lay the mechanics onto the landing gear mounts and position the front strut assembly to align the holes. Finally, tighten all the remaining M3x4 Set Screws to lock the landing gear in place. Bond the skid caps in place with CA or epoxy. Attach the wheels with two M3x15 Socket Cap Screws.



STEP 13 Truss & Rudder Mounts

Insert two M3x40 Socket Cap Screws through one tail truss mount, through the main mechanics and slide the rudder servo mount and the second tail truss mount from the other side. Secure with two M3 Locknuts.



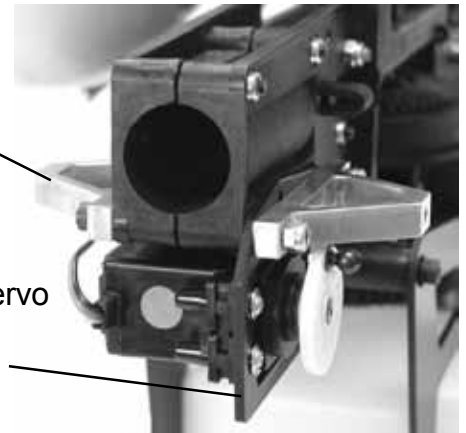
Tail Truss Assembly [CN1074-10]

M3x12 Self Tapping Screws x 4

Pre-Assembled
in Kit Version.

Tail Truss Mount x 2 [CN1074-11]

Rudder Servo Mount [HW3116]

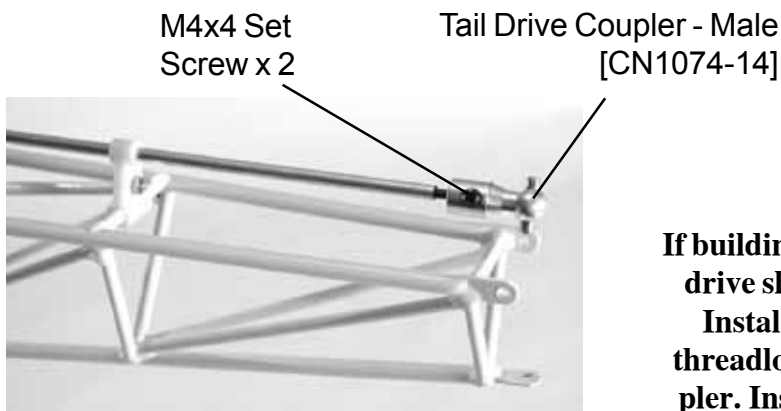


STEP 14 Mounting Tail Truss & Mechanics

Gently flex the upper tail truss fittings to overlap the tail truss mounts and secure using two M3x10 Socket Cap Screws using threadlock. Insert two M3x15 Self Tapping Screws through the lower tail truss legs (may require slight bending to align the holes as a result of manufacture, cracking of the powder coat surface may occur however it is purely cosmetic and can be repainted), the lower side frames and into the landing gear mounts. Insert two M3x12 Self Tapping Screws through the front landing gear holes into the landing gear mounts.

STEP 15 Drive Shaft Housing, Guides & Tail Beacon

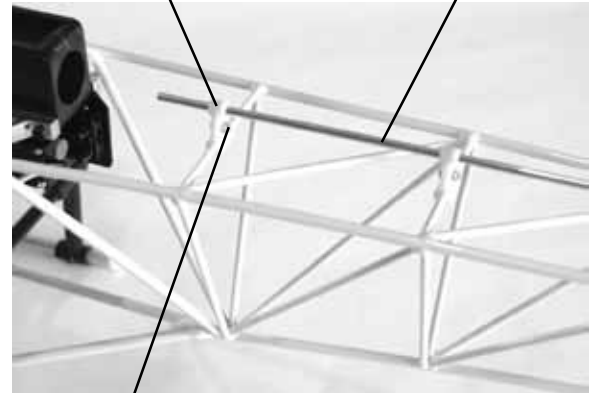
Position one pair of drive shaft support guides over each horizontal brace and insert one M2x6 Phillips Head Screw through the center hole in each of the guides and secure using one M2 Hex Nut using threadlock. Roughly center each guide along the brace. Trim and attach the clear light onto the beacon base using “Goop” adhesive. Slide the drive shaft housing through the first and second guides, then insert the tail beacon positioned between the second and third horizontal braces. Continue to slide the drive shaft housing to the front support guides. Sight from the rear to align them. Permanently bond the brass tube to the guides and the beacon to the brass tube.



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Tail Drive Shaft Support Guides x 7 [CN1074-16]

Tail Drive Shaft Housing [CN1074-16]



M2x6 Phillips Screw x 7
M2 Hex Nut x 7

STEP 16 Tail Drive Shaft

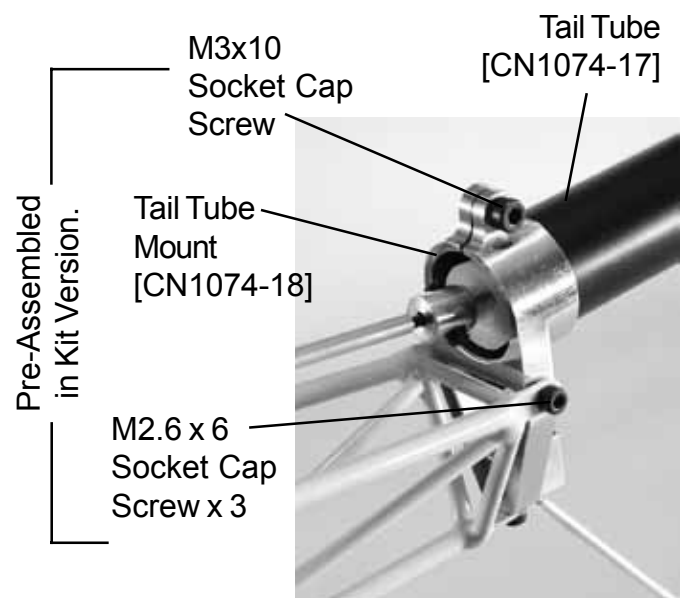
If building the conversion kit, replace the tail transmission drive shaft if tail drive was previously torque-tube drive.

Install the wire drive shaft. Clean both parts and apply threadlock to the shaft before inserting into the male coupler. Insert and tighten one M4x4 Set Screw over the flat spot first then insert the second set screw and tighten in

place using threadlock. Care must be taken to ensure that equal pressure is applied to the coupler, otherwise the coupler will turn out of round and vibrate the tail assembly. Insert a liberal amount of grease into the tail drive tube and work the tail drive shaft into the housing by sliding back and forth to thoroughly coat the drive shaft with grease. When the drive shaft exits the front of the drive housing, remove any bulk of grease and continue to slide it forward until it fully engages into the tail transmission drive shaft.

STEP 17 Tail Tube Mount

Kits are pre-assembled. Slide the tail tube into the mount and secure using one M3x10 Socket Cap Screw using threadlock. Loosely attach two M2.6x6 Socket Cap Screws to the upper holes of the tail tube mount. Lift the tail gear box assembly to align the bottom, forwardmost hole (some slight bending maybe necessary to get proper alignment, but if the tail drive coupler appears to deflect, shorten the tail drive shaft by 3mm[1/8"]). Insert the bottom M2.6x6 Socket Cap Screw and tighten in place using threadlock. Remove the top screws one at a time to apply threadlock and secure in place. Finally sight from behind and tweak (powder coat finish may crack but can be painted) the tail gear box assembly to align to the tail truss. Ensure the tail rotor turns smoothly when turning the main gear.

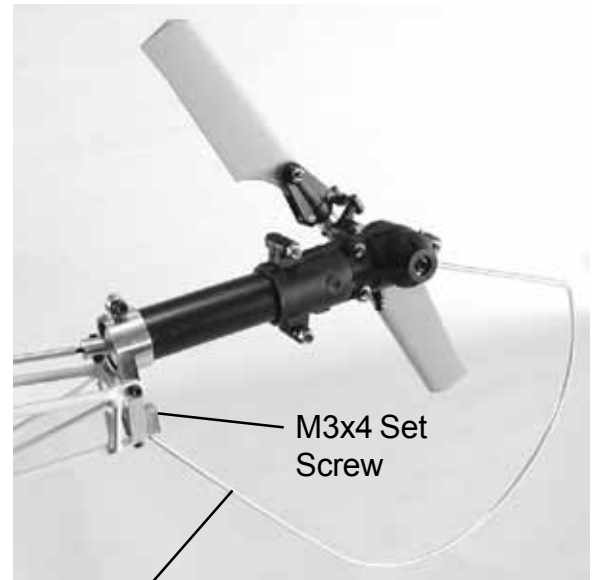


STEP 18 Tail Wire Skid

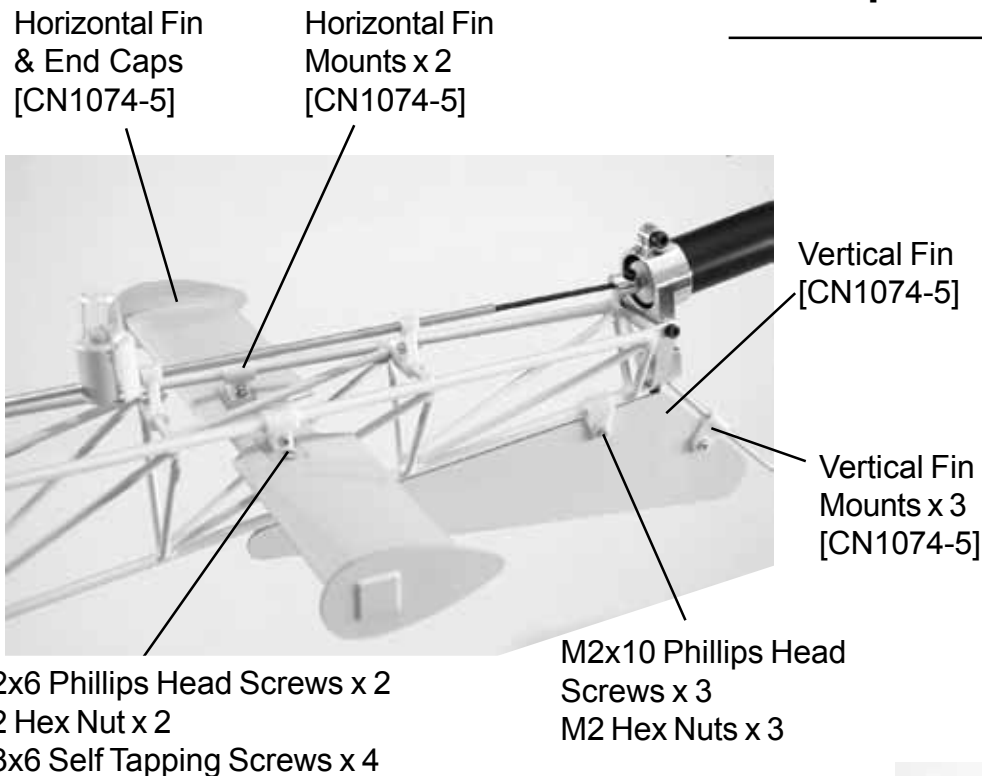
Loosen the end M3x10 Socket Cap Screw and insert the tail wire into the hole in the end of the gear box. Tighten the screw to secure. Insert the front end into the bottom of the tail tube mount and secure with one M3x4 Set Screw using threadlock inserted horizontally into the mount.

STEP 19 Horizontal Fin

Bond the end caps to the horizontal fin using “Goop” or CA adhesive. Assemble two horizontal fin mounts around the upper main truss rails using two M2x6 Phillips Head Screws and M2 Hex Nuts using threadlock. Slide the horizontal fin through the second open section from the rear of the truss and adjust the mounts until they align perfectly with the molded recesses in the fin. Attach the fin in place using four M3x6 Self Tapping Screws. To avoid the screws piecing through the bottom of the fin, cut the point off the screw, about 1/3rd of the length and test fit. Trim more if necessary.



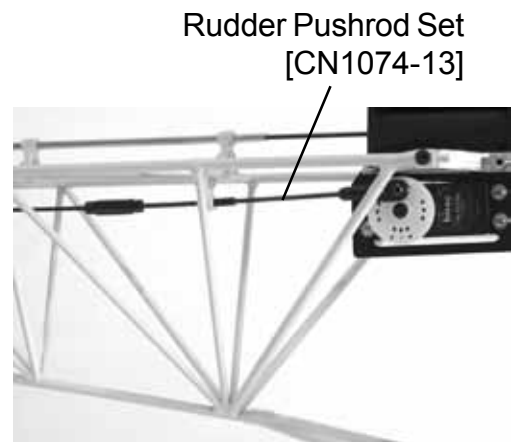
Tail Wire Skid
[CN1074-12]

**STEP 20 Vertical Fin**

Attach the vertical fin by inserting one M2x10 Phillips Head Screw into one half of the vertical fin mount, then through the fin and the opposite fin mount capturing the bottom rail of the tail truss and securing with one M2 Hex nut using threadlock. Repeat for the remaining holes.

STEP 21 Rudder Pushrod

Assemble two drive shaft guides and attach them upside down from 1st & 3rd horizontal braces. Slide the long rudder pushrod from the back, then through one guide positioned at the 3rd brace, slide a short clear pushrod guide tube through the guide and bond in place with CA adhesive. Attach the pushrod coupler and the short 105mm pushrod and insert through the guide on the last horizontal brace before the rudder servo. Ensure the pushrod is moving smoothly. Make sure the “Century” ball link is attached to the short (2.3mm) pushrod and the black ball link to the long (2.0mm) pushrod.



STEP 22 Decals

Bell47G II Detail Manual

Decals can be applied directly to the fiberglass finish, simple rub down the surface with rubbing alcohol to remove any grease from the surface.

Bell 47G II Decal Sheet [CN1074-22]



STEP 23 Final Balancing

Now that you have a fantastic looking Bell 47G II helicopter, all that is left is to apply the decals and balance the helicopter. Lifting by the flybar with main and tail blades without fuel, check that the model hangs level or slightly nose heavy, if the model is tail heavy, try moving the receiver battery forward or change the battery size to gain nose weight. Adding lead or similar nose weight is alright but do not be excessive. Happy flying.

Fuselage Replacement Parts:

CN1074-1	Cabin Only	1
CN1074-2	Windshield	1
CN1074-3	Side Doors & Windows (Left & Right)	2
CN1074-4	Fuel Tanks	2
CN1074-5	Tail Fins, Hinges, Pivot Locks, Beacon, Door Handles, Cabin Lights	1
CN1074-6	Cabin and Fuel Tank Mount Set	1
CN1074-7	Rubber Grommets	10
CN1074-8	Cabin Hardware Pack	1
CN1074-9	Cabin Door Magnets	4
CN1074-10	Tail Truss (Assembled)	1
CN1074-11	Tail Truss Side Mounts	2
CN1074-12	Tail Wire & Vertical Fin Mount Set	1
CN1074-13	Tail Pushrod Kit	1
CN1074-14	Tail Drive Coupler - Male	1
CN1074-15	Tail Drive Coupler - Female	1
CN1074-16	Tail Drive Shaft Set	1
CN1074-17	Tail Tube Set	1
CN1074-18	Tail Tube Mount	1
CN1074-19	Landing Skid Set (Aluminum) with Caps ..	2
CN1074-20	Landing Strut Set	2
CN1074-21	Landing Gear Set Complete	1
CN1074-22	Decal Set	1

Common Bell47G Helicopter Parts:

HI3129C	Cabin Mount Hardware	1
HI3176C	4mm Flybar Control Arms	2
HI3179A	Flybar Paddles & Weights	2
HW3018	46~50 Engine Mount	1
HW3053A	10mm Main Shaft	1
HW3056	Main Gear	1
HW3059	Tail Transmission Output Shaft	1
HW3112C	Lower Side Frames (46-50)	1
HW3115A	Servo Side Frames	1
HW3116	Rudder Servo Mount	1
HW3173A	4mm Flybar	1
HW3180A	6mm Feathering Spindle	1
CN0402	Hex Start Adapter	1
CN2324	600mm ARF Main Blades	2
CNBB0840	4x8 Ball Bearing (seesaw cups)	2
CNBB1260T	6x12 Thrust Ball Bearing	2
CNBB1360	6x13 Ball Bearing (blade grips)	2

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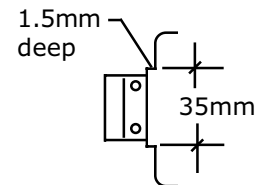
The scale accessory kit includes the key items to really make your Bell47G II super scale. The bottom plate positions the fuel tank facing backwards slimming the mechanics while the scale side frame extend up to the servo tray. The front mount muffler is now elegantly hidden below the battery tray.

Instructions:

1. Start by removing the cabin, fuel tanks, landing gear, both cabin body-mounts, the right lower side frame (to access the muffler bolts) and the side exhaust muffler. Remove and re-position the vent line to the top of the tank and make sure the pickup line moves freely in the bottom of the fuel tank in its vertical orientation.

2. Replace the right lower side frame to the main mechanics. The rear of the bottom plate has the shorter fuel tank bracket. Position the fuel tank with the opening to the rear. Insert two M3x8 Button Head Screws into the vertical bracket and attach the bottom plate, securing with two M3 Locknuts from below. Make sure the tab captures the top of the fuel tank to lock it in place.

3. Test fit the bottom plate to the mechanics, you will notice that the rear backplate bolts on the OS 50 engine interfere with the plate, remove and file a 35mm long by 1.5mm deep slot through the bracket and the bottom plate together. After removing enough to align the landing gear holes use a black marker to touch up the plate. Now position the tank assembly and insert two M3x8 Socket Cap Screws through the original front landing gear holes (the front landing gear is now mounted further forward) in the lower side frames, through the bottom plate and secure with two M3 Locknuts.

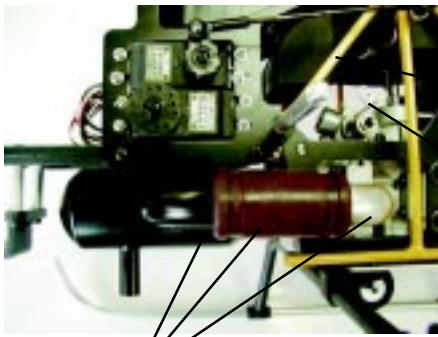


OS 50 modification.

4. Attach one round plastic standoff to each side of the upper truss pins, they are tight fit. Remove the two M3x12 Self Tapping Screws that attach the upper servo frame to the mechanics. Starting on the left side press the scale side frame (has only single brace to the cabin mount) onto the upper standoff on the tail truss and secure using one M3x35 Socket Cap Screw inserted through the hole in the front most horizontal brace, one 22mm spacer and threaded into the servo side frame. Repeat for the right side (right side has two braces to the cabin mount).

5. The bottom rail of the scale side frames are attached at the landing gear points using the yellow blocks. At the rear, insert one M3x20 Self Tapping Screw through the bottom leg of the tail truss, through the short yellow block, the side frame, the bottom plate and into the landing gear mount. Repeat for the other side. For the front, insert one M3x16 Button Head Screw through the tall yellow block, through the front-most hole in the bottom plate and into the front landing gear mount. Repeat for the other side. After the bolts are secured, press the bottom of the scale side frames in place (it is tedious to tighten the bolt when the side frame is in the final position) to engage the tab on the yellow blocks. Re-attach the cabin body-mounts through the scale side frame holes and thread into the captive nuts in the lower side frames using threadlock.





Left side scale frame has only one diagonal brace.

Throttle arm needs to be re-positioned to avoid touching the vertical brace.



Mount plate
M3x10 SHCS
M3x12 Self Tap
[CN1074C]

Pressure Fitting
[CN1074C]

Muffler, Header & Coupler
[CN1074C]

6. Attach the engine header, the silicon coupler and the muffler but do not attach the cable ties at this time. Remove the lower forwardmost M3x12 Self Tapping screw from the right side servo tray and install the 38mm mount plate, replacing the screw. Align the mount stud from the muffler to mount plate and secure with one M3x10 Socket Cap Screw using threadlock. Attach the pressure tap to the muffler. Attach the cabin to the side mounts without engaging the front hook and mark the center for the exhaust pipe where the pipe touches the bottom of the cabin and make the hole with the sanding stone in a moto-tool.

7. The throttle extension will need to be repositioned slightly forward (anti-clockwise) as in the basic setup it touches a vertical brace on the scale side frame. It may be necessary to bend the collective lever outwards from the mechanics to avoid it rubbing against the scale side frames. Attach the fuel lines and route on the right side of the mechanics to the carburetor and the pressure fitting on the muffler. Lastly, attach the cable tie wraps to the silicon coupler. As glow plug access is obscured, a remote glow plug adapter is recommended. When changing glow plugs remove the M3x10 SHCS that secures the muffler to the main mechanics and gently flex the muffler away from the glow plug to provide access.

Parts List:

CN1074B	Bell 47G II Scale Accessory Kit	
CN1074C	Scale Muffler with header	1 set
CN1074D	Scale Side Frames, Tank Mount & Hardware	1 set

Optional Accessories

CN2208	Anti-Rotation Bracket	
CN2220A	10mm Main Shaft Thrust Bearing Kit	
CN2222	Remote Glow Plug Adapter	
CN2235	Triple Bearing Tail Rotor Assembly	
CN2412	Hurricane 600mm Fully Symetrical Carbon Rotor Blades - White	
CN2413	Hurricane 600mm Semi Symetrical Carbon Rotor Blades - White	
CN2660	RotorTech 600mm Fully Symetrical Carbon Rotor Blades - Black/Carbon Weave	
CN3018	High Temperature Pipe Coupler 40-50	
CNBB1001	14 Piece Ball Bearing Upgrade Kit	

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