Heli Cradle Replacement



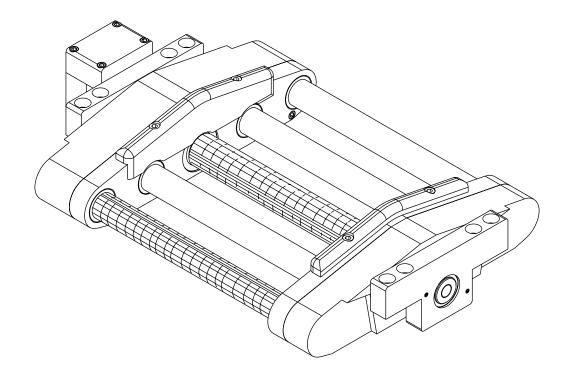
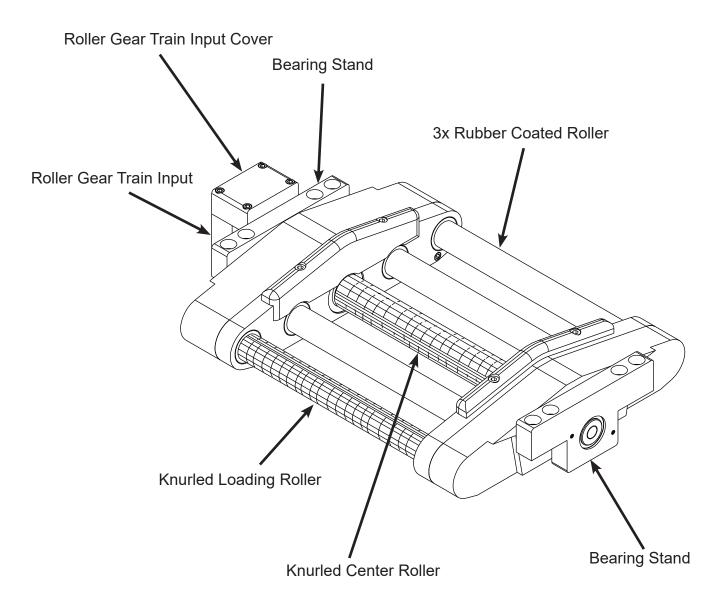


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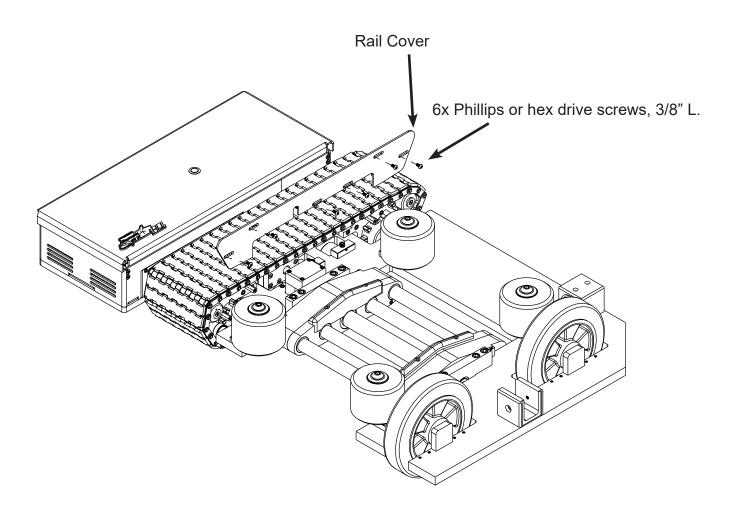
1. Cradle Components





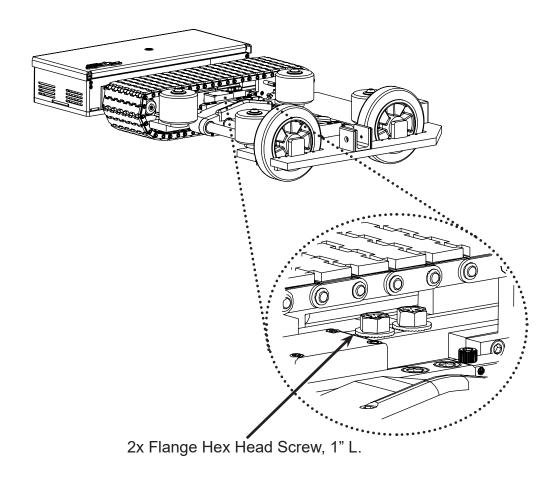
2. Removing the Cradle

1. Remove the rail cover. It is fastened with 6 Phillips screws or 6 hex drive screws.

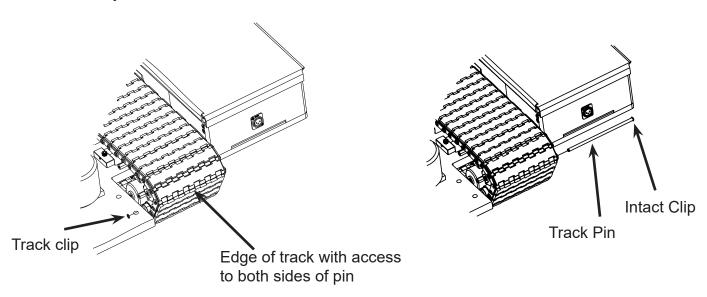




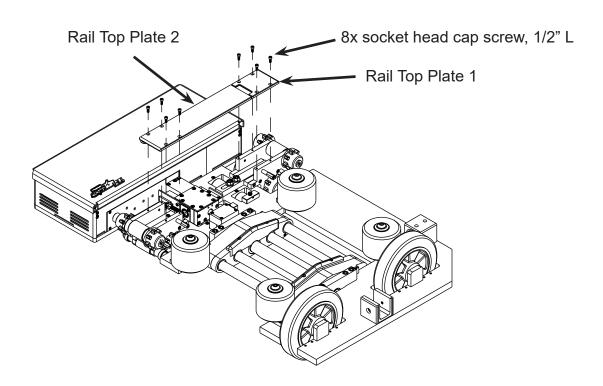
2. Loosen 2 flange hex head screws located underneath the track. This allows the tension in the track to be released.



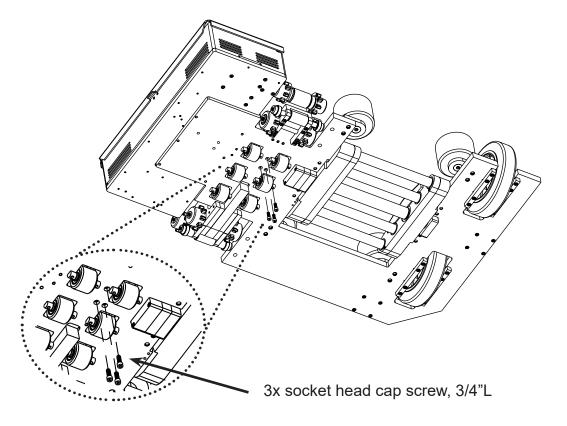
3. Using diagonal pliers (side cutters), cut off one track clip near the edge of the track (you will need access to both sides of the track pin). Discard the track clip, it will be destroyed once removed. Slide the pin and intact clip out and remove the track assembly.



4. Remove the rail top plates fastened with 8 socket head cap screws.

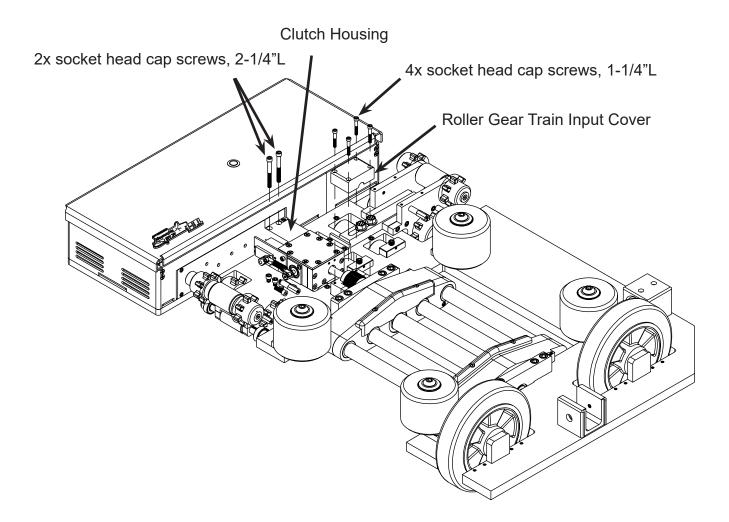


5. From underneath the tug main plate remove 3 socket head cap screws



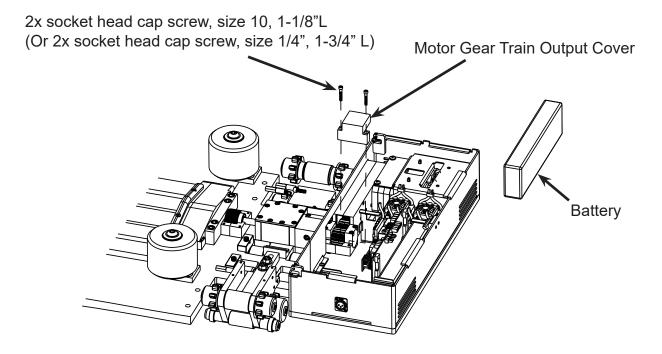


6. Remove 2 socket head cap screws located above the Clutch Housing and remove 4 socket head cap screws holding the Roller Gear Train Input Cover.

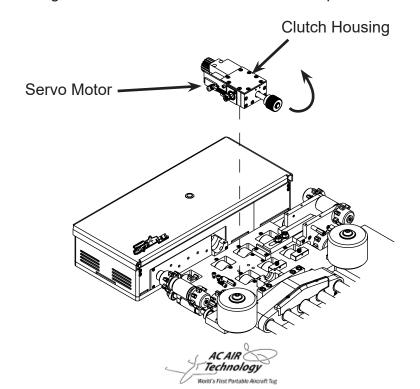




7. Open the electronics cover and remove the battery closest to the Clutch Housing. Then remove 2 socket head cap screws holding the Motor Gear Train Output Cover. Note: Older revisions of the Motor Gear Train Output Cover have the screws mounted at the top of the cover not on the side of the cover as shown below. The electronics cover is hidden from view for clarity.

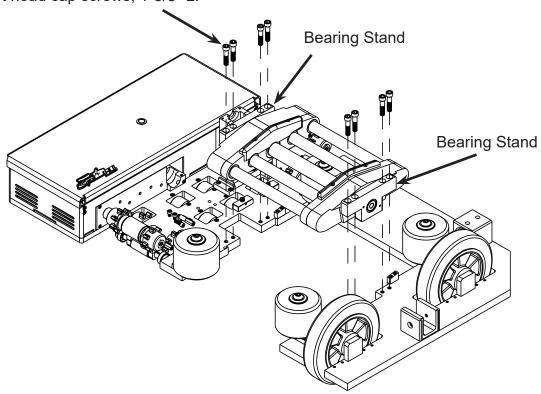


- 8. Follow the wire from the Servo Motor and disconnect it from the wire extension. The wire extension is held together with a wire clip.
- 9. Slightly pivot the Clutch Housing upward and slide the Clutch Housing out. Keep the clutch housing and all exposed gears free from debris. The Clutch Housing has oil inside the housing, store it on a flat surface in the same position.

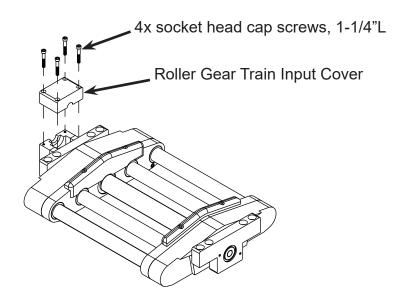


10. Remove 8 socket head cap screws. As the cradle is pulled up from its pocket, hold the cradle from the bearing stands keeping pressure inwards. This will prevent the cradle from disassembling.

8x socket head cap screws, 1-5/8" L.



11. Reinstall the Roller Gear Train Input Cover and strap the heli cradle along the length of the rollers and over the bearing stands to keep the assembly intact.

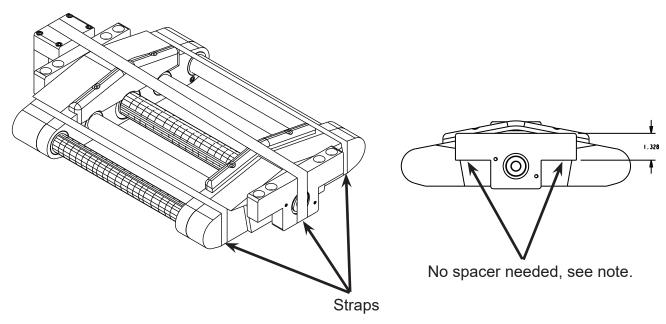




3. Installing the New Cradle

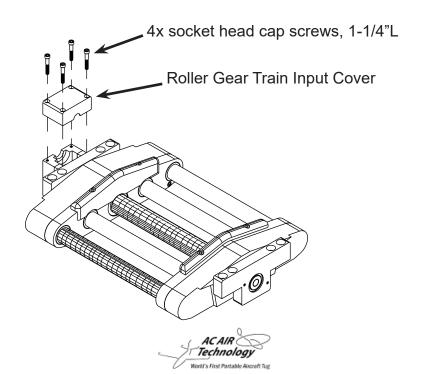
All screws in this section will initially be loosely fastened until all components are seated in their respective positions. Removable (non-permanent) threadlocker will be required for all screws on final torque.

1. Cut the straps on the new heli cradle. Hold the cradle from the bearing stands keeping pressure inwards. This will prevent the cradle from disassembling.

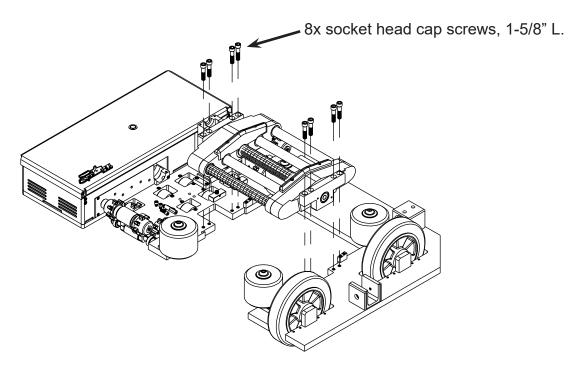


Note: Your old cradle may have 4 spacer (2 per side), do not use them with your new cradle. A distance of 1.328" does not require any spacer.

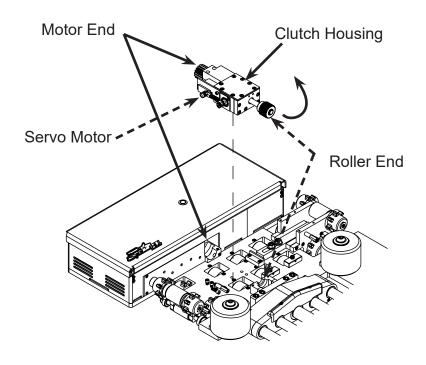
2. Remove 4 socket head cap screws holding the Roller Gear Train Input Cover.



3. Seat the heli cradle over the main plate. Loosely fasten the 8 socket head cap screws.

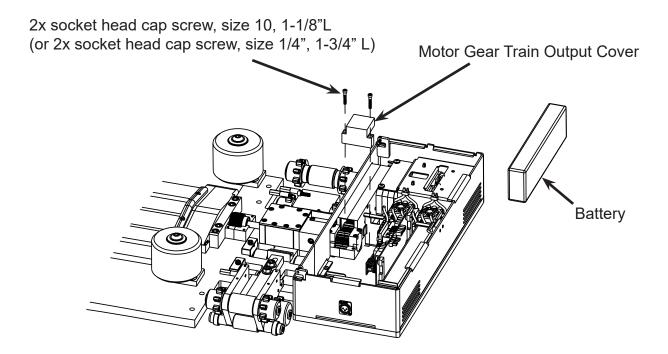


4. Slightly pivot the Clutch Housing upward and slide the Clutch Housing into the motor end. Confirm that the respective gears mesh, do not force them. Keep the clutch housing and all exposed gears free from debris.





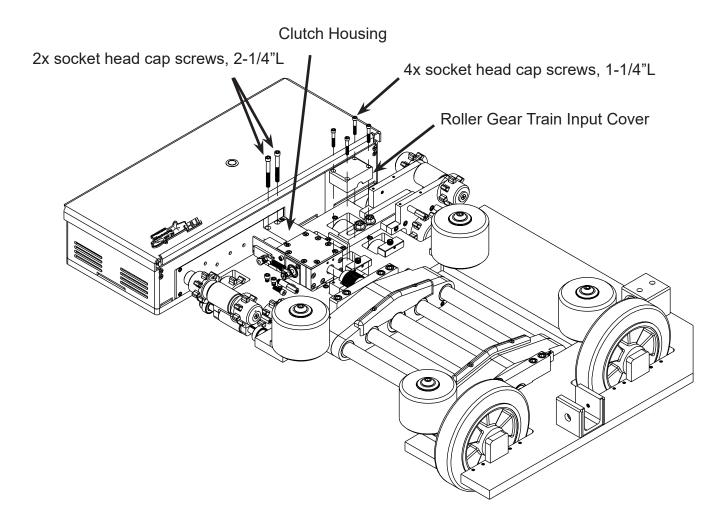
5. Open the electronics cover and turn the motor by hand to confirm the gears are seated properly on the motor end. Then install the Motor Gear Train Output Cover with 2 socket head cap screws. Note: Older revisions of the Motor Gear Train Output Cover have the screws mounted at the top of the cover instead of on the side of the cover as shown below. The electronics cover is hidden from view for clarity.



6. Reroute the wire for the Servo Motor and connect it to the wire extension. Reinstall the wire clip. Connect to matching colors. If they do not match, brown to black, red to red, and orange to white.

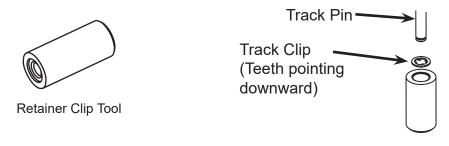


7. Install 2 socket head cap screws located above the Clutch Housing and install 4 socket head cap screws holding the Roller Gear Train Input Cover.



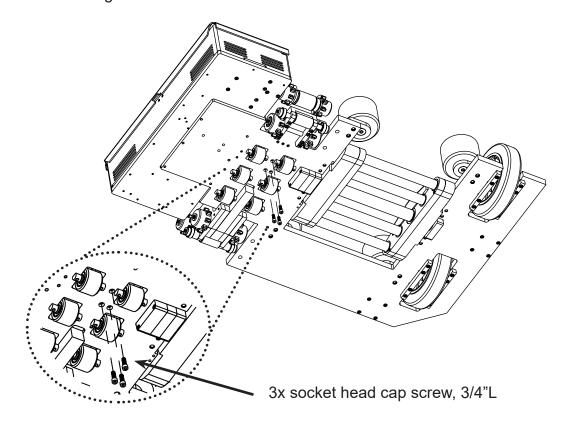
8. Removable threadlocker will be required for the following steps. Threadlocker will be applied to each of the screws, one at a time. To ensure all components stay aligned after final torque, remove one screw, apply threadlocker, reinstall the screw, then move on to the next screw. Once all screws in a particular step have threadlocker tighten all screws in that step.

The Retainer Clip Tool will be needed to reinstall the tracks. This tool can be found in the spare parts bag that came with the tug along with spare track clips.



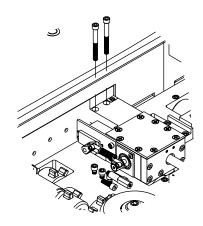


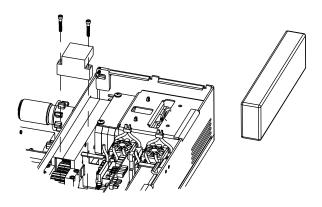
9. From underneath the tug main plate install 3 socket head cap screws. Verify all covers and gears are seated properly. Remove one screw at a time and apply removable threadlocker. Tighten the screws.



10. Apply threadlocker to the 2 screws above the clutch housing and tighten the screws.

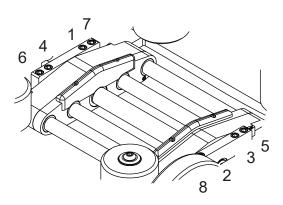
11. Open the cover and apply threadlocker to the 2 screws holding the Motor Gear Train Output Cover. Tighten the screws and reinstall the battery.



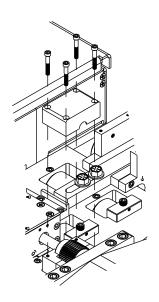




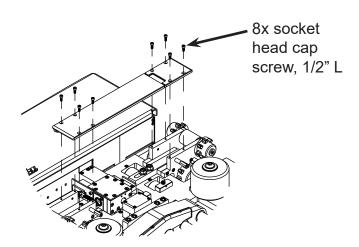
12. Apply threadlocker to the 8 screws holding the heli cradle. Tighten the screws from the center out in the sequence shown below



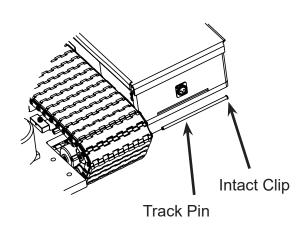
13. Apply threadlocker to the 4 screws holding the Roller Gear Train Input Cover. Tighten the screws.



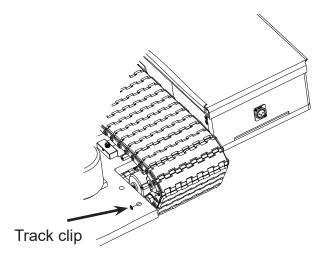
14. Apply threadlocker and install the rail top plates fastened with 8 socket head cap screws.



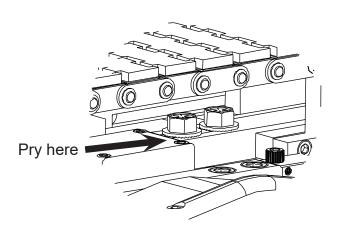
15. Reinstall the track.
Confirm that all the sprockets are seated properly on the inside of the track. Install the track pin with attached clip. You will need access to both sides of the pin.



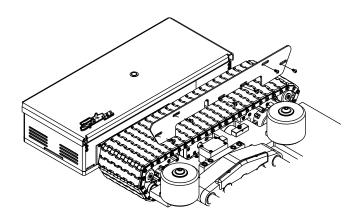
16. Reinstall the track clip using the Retainer Clip Tool (p.13)



17. Using a flat screw driver, pry the track to the proper tension. There should be no more than 1 inch of play at the center of the track. **Do not over tighten the tracks**. Once the track is adjusted properly tighten the 2 flange hex head screws.



16. Reinstall the track over with 6 button head hex drive or Phillips screws





4. Warranty

LIMITED WARRANTY

Your new AC Air Technology Tug is warranted to the original purchaser (only) for one full year from the date of purchase to be free from factory defects in material and workmanship. During this 12-month period, AC Air Technology will repair or replace, at our discretion, the defective component determined by AC Air Technology to be defective.

This warranty does not apply to damage or defect resulting from misuse, improper application, commercial use, or attempted repair by "non-AC Air Technology" service staff. The warranty does not cover shipping or handling cost or any incidental or consequential damage. Batteries and tracks are not covered by warranty.

DAMAGE LIMITS

AC Air Technology shall not be liable for any damage, indirect or consequential, loss of profits or commercial or production loss, or other special loss or damage in any way connected with this product regardless whether such claim is based on warranty, in contract, negligence, or strict liability. In no event shall the liability of AC Air Technology exceed the individual price of the product on which liability is asserted. AC Air Technology has no control of the set up, application, use, modification, or misuse of this product, thus no liability shall be assumed or accepted for any resulting damage or injury. By the first act of use, set up or assembly, the user in using the product accepts all resulting liability. Failure to operate this product in a safe and responsible manner can result in damage or injury, both to the user as well as to others, the product, or property. This product is not a toy and is NOT intended to be used by children with out adult supervision. It is essential to read the entire manual and warranty/liability information prior to first use/application/installation of this product to operate correctly and avoid damage/injury,

In cases where the purchaser or user are not prepared to accept liability associated with the use of this product, the user or purchaser is advised to return the unused product immediately in unused condition to the place of purchase.

RETURN PROCEDURE

When sending equipment in for requested warranty service, please include a note describing the problems/concerns with the equipment. You must include your name, address, telephone number and e-mail for prompt service. To request warranty service, a copy of your original sales receipt must be included. Warranty is approved and preformed at the discretion of AC Air Technology service department. You are required to pay all postage, shipping and insurance charges.

