

**CHAPTER 19**

**GROUND HANDLING**

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**CHAPTER 19****GROUND HANDLING**19-10 Ground Handling19-11 Ground Handling Wheels**NOTE**

R22 ground handling wheels are installed outboard of landing gear skid tubes. A063-1 wheel assemblies are interchangeable (may be installed in right or left skid support). When wheels are installed and in locked position, handle on right skid tube points forward and handle on left skid tube points aft.

**CAUTION**

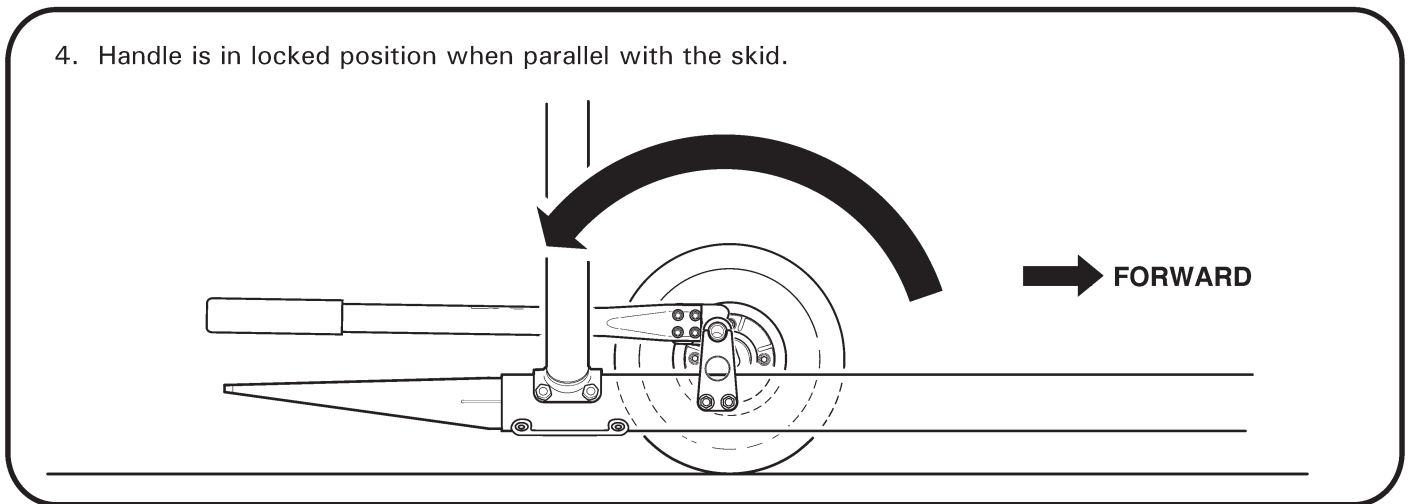
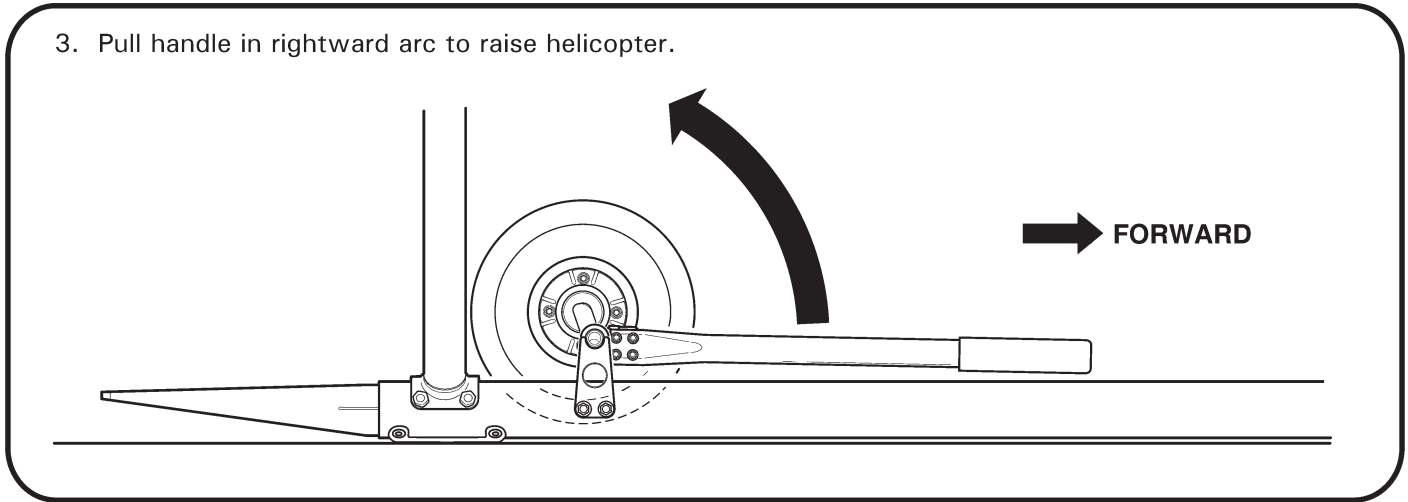
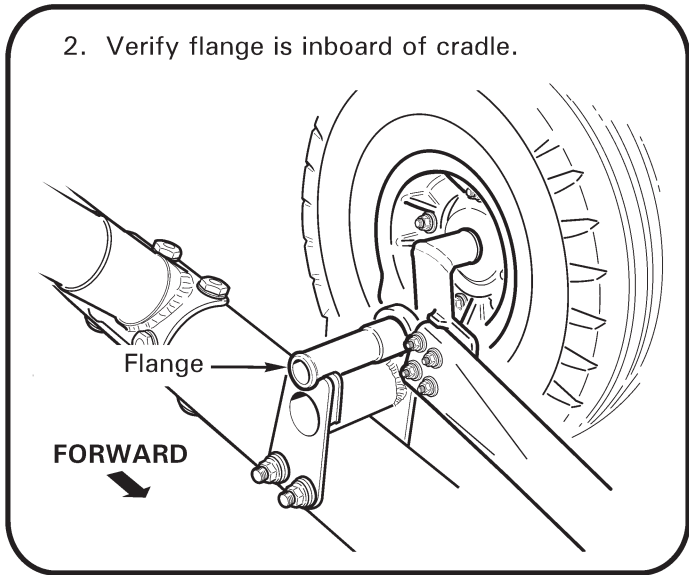
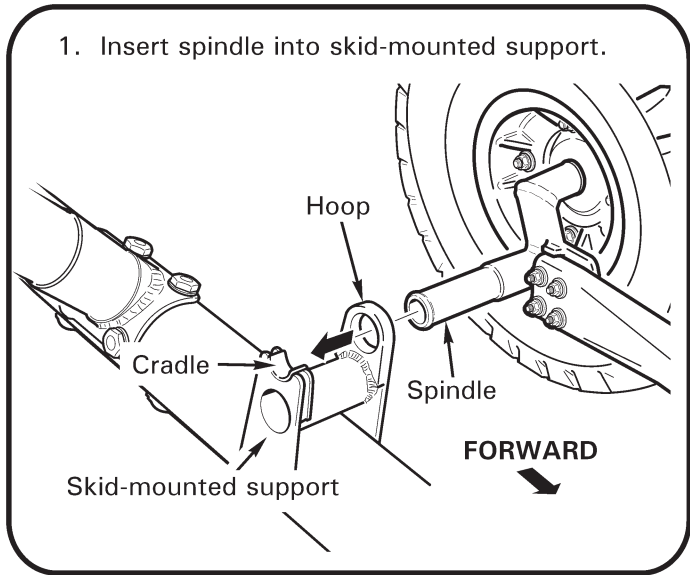
Handle has a tendency to snap over when raising and lowering the helicopter. Grip handle firmly with both hands during operation.

**CAUTION**

Remain clear of landing gear skid tubes when helicopter is raised.

**WARNING**

**Remove ground handling wheels for flight.**



**FIGURE 19-1 GROUND HANDLING WHEELS (LEFT SKID SHOWN)**

19-11 Ground Handling Wheels (continued)**A. Installation****NOTE**

Verify proper inflation of ground handling wheel tires. Maximum tire inflation pressure is 60 psi (4 bar).

**NOTE**

Refer to Figure 19-2 for float ship landing gear ground handling wheels installation.

1. Refer to Figure 19-1. Hold ground handling wheel assembly outboard of skid with handle left, wheel right, and spindle pointed inboard. Insert spindle completely into skid-mounted support, then pull handle in rightward arc (raises helicopter) until handle is in locked position, parallel with the skid.
2. Repeat step to install second wheel assembly (helicopter will rest on skid toes).

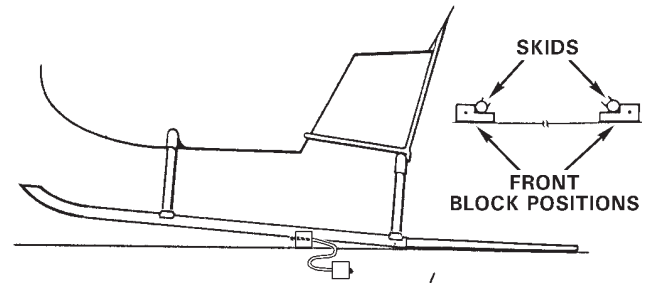
**B. Removal****NOTE**

Refer to Figure 19-3 for float ship landing gear ground handling wheels removal.

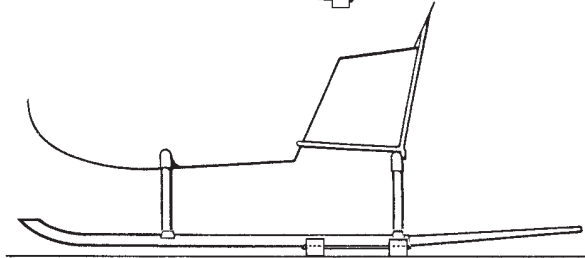
1. Refer to Figure 19-1. Pull ground handling wheel handle in leftward arc (lowers helicopter) until handle is in unlocked position, parallel with the skid. Remove spindle from skid-mounted support and remove wheel assembly.
2. Repeat step to remove second wheel assembly.

INSTALLATION

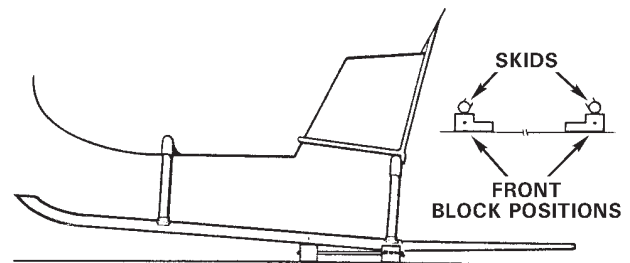
- 1. Pull tail down. Insert forward blocks at their lower height under both skids at forward marks.



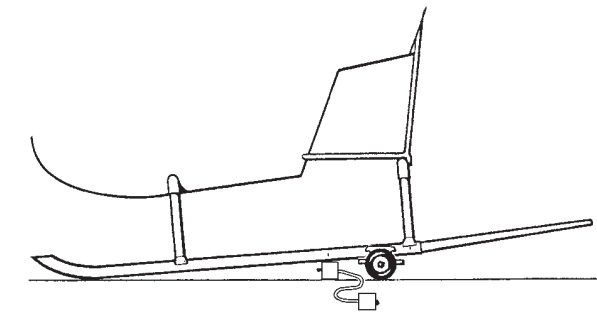
- 2. Push tail up. Insert rear blocks at their lower height under both skids at rear marks.



- 3. Pull tail down. Move forward blocks "inside" to their upper height under skid tubes.



- 4. Push tail up. Slide rear blocks out (upper height of rear blocks is not used) and insert wheels under skids at rear marks.



**NOTE**  
Adjust wheel placement as necessary to reduce force required to pull tail down.

- 5. Pull tail down and remove forward blocks. Installation is completed.

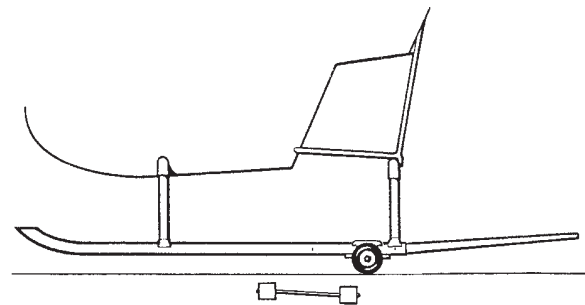
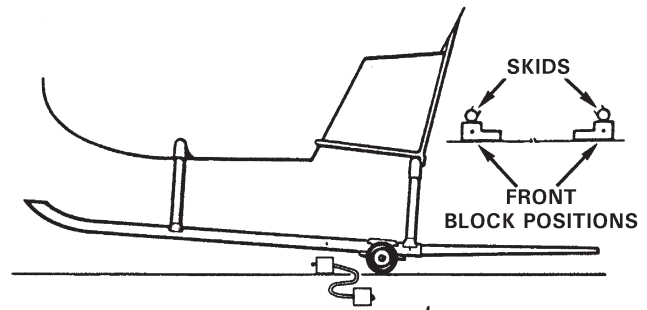


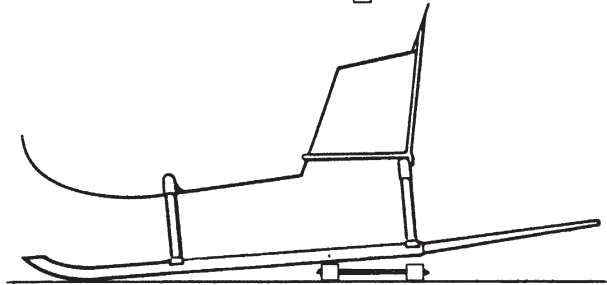
FIGURE 19-2 FLOAT LANDING GEAR GROUND HANDLING WHEELS INSTALLATION

**REMOVAL:**

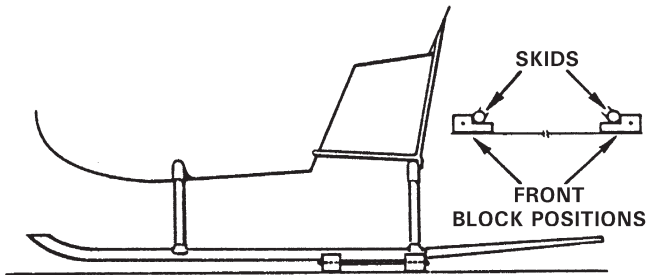
1. Pull tail down. Insert forward blocks at their upper height at forward marks under skids.



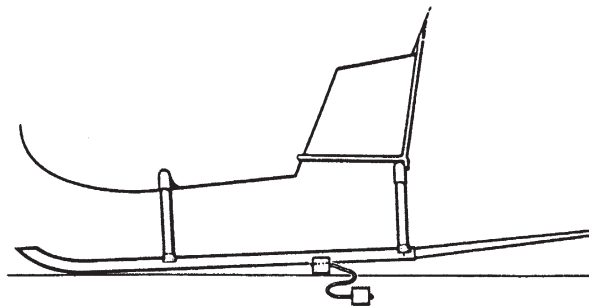
2. Push tail up. Remove wheels and insert rear blocks at their lower height (upper height of rear blocks is not used) at rear marks.



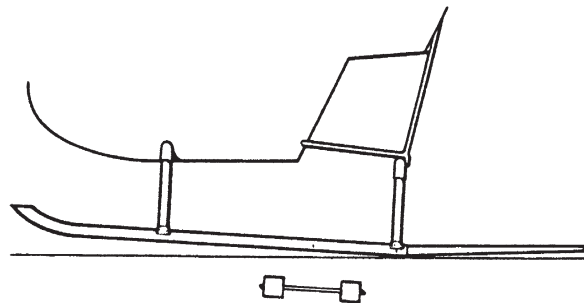
3. Pull tail down. Move forward blocks "outside" to their lower height.



4. Push tail up. Remove rear blocks.



5. Push tail down. Remove front blocks. Removal is completed.



**FIGURE 19-3 FLOAT LANDING GEAR GROUND HANDLING WHEELS REMOVAL**

### 19-12 Moving Helicopter on Ground Handling Wheels

1. Position main rotor blades approximately fore and aft and apply rotor brake.
2. Install ground handling wheels per § 19-11.
3. Verify ground handling area is free of foreign object debris.
4. Have one person pull down on tail rotor gearbox until skid tubes are parallel with the ground. During ground handling, balance helicopter to minimize wear on forward skid shoes and rear extensions.

**NOTE**

Steer helicopter by gripping the tail rotor gearbox, aft tailcone section, or inboard part of horizontal stabilizer between tailcone and vertical stabilizers.

**CAUTION**

Do not steer helicopter by gripping the tail rotor guard, vertical stabilizers, outboard part of horizontal stabilizer, tail rotor, tail rotor controls, or tail skid.

5. If additional help is needed, a second person may push on one of the aft vertical frame tubes or on the nose.

### 19-13 Ground Handling Carts

The R22 can be handled by one person using the MT900-1 or MT950-1 ground handling cart. MT900 and MT950 Operating Instructions, Maintenance Manuals, and Illustrated Parts Catalogs are available online at [www.robinsonheli.com](http://www.robinsonheli.com).



19-20 Trailing**CAUTION**

Trailing the R22 is not normally recommended. Most trailers large enough to accommodate the helicopter are designed for much heavier loads; the trailer's springs and shock absorbers will not function properly when lightly-loaded. Also, without support, the tailcone can resonate with trailer vibrations, subjecting the tailcone to greatly amplified loads.

If trailing is unavoidable, observe the following precautions:

1. Load trailer with ballast to an average weight the trailer is designed to carry.
2. Support the tailcone. Cushion support point(s) to prevent tailcone damage.
3. Perform one of the following options:
  - a. Remove main rotor blades per § 26-10. Pack blades in shipping crate.
  - b. Fabricate blade supports to unload droop stops. Position supports approximately five feet from blade tips. Cushion support points to prevent blade damage.
4. Restrain tail rotor to prevent teetering.
5. Fuel helicopter per § 22-51.
6. Protect windshield, windows, rotor systems, and all fragile equipment from exposure to highway debris and subsequent damage.
7. After trailing, perform 100-hour maintenance and inspection per § 2.400.

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