

## HELICOPTER PLANNING REQUIREMENTS

W J FUNNELL  
Pilot/Manager  
HELICOPTERS (NZ)LTD

### AIM

Safe, efficient and economical extraction of timber to road access.

### PREPARATION OF HELICOPTER

To allow maximum utilization, the basic weight must be as light as possible. This can be achieved by the removal of seats, doors and equipment that is not necessary for the logging operation. My experience has shown that 50kgs of unnecessary extras can be removed.

Fuel should be kept to a minimum, particularly if the loads are near the maximum weight. I usually work with 30 mins fuel on board maximum, and refuel after 20 mins operation, this allows a 10 min. safety margin. This means that the lifting capacity of the helicopter is increased by 3kgs per minute as the fuel is burnt off, a total increase of 60kgs capacity on the last load, as compared to the first, after refueling.

### HELIPAD

The pad should be at least 4 rotor diameters in length and width. These would be minimum requirements for refueling purposes. A larger pad allows faster access, particularly with a long tag line which has to be laid out on the ground clear of the helicopter skids and tail rotor. As fuel is usually only carried for 20 mins flying time, three landings and takeoffs are made every hour, therefore smaller refueling pads can involve the helicopter in additional flying time while a careful and slow approach is being made. Ideally the pad should be restricted to helicopter support personnel while the helicopter is operating, due to the danger of rotor blades, particularly tail rotors.

### TAG LINE AND HOOK

The tag line has to be long enough to allow the load to be attached while the helicopter hovers well clear of surrounding obstacles. Consideration should also be given to terrain when deciding on the length.

As the tag line can be momentarily subject to loads in excess of 4 times the lifting capacity of the helicopter, due to, the line snagging in standing timber, air turbulence etc, the safe working load of the tag line must therefore be based on the above.

The hook is capable of being operated electrically from the pilots controls, which allows for quicker log release.

### WEIGHING OF THE LOAD

To allow maximum utilization of the helicopter the loads must be as near to the maximum capacity as possible, without exceeding the maximum lifting capacity. To facilitate this Helicopters (NZ) Ltd has a Strain Meter calibrated in kilograms. It enables the pilot to monitor the performance of the helicopter and also to keep a check on timber density, that may change due to age difference etc.

### SUPPORT CREWS

Support crews must be aware of the dangers of helicopter logging and be capable of undertaking their job with the maximum of efficiency, due to the high cost, per minute, of helicopter operations. It is preferable that they have radio contact with the pilot, to advise where they are in relation to the helicopter.