

# **APE FIXED LEADS calculation Check List**

A check list to help the contractor consider all the factors involved in fixed lead set up.

Company Name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Contact Person: \_\_\_\_\_ Phone number: \_\_\_\_\_



The following check list must be filled out and approved prior to use.

## LOAD FACTOR DATA

www.apevibro.com  
253-872-0141

### Hammer and related accessories:

- a) Total operating weight of pile hammer (must include tripping device and guide rails): \_\_\_\_\_
- b) Weight of sticker plate: \_\_\_\_\_
- c) Weight of cushion material: \_\_\_\_\_
- d) Weight of drive cap: \_\_\_\_\_
- e) Weight of drive cap insert: \_\_\_\_\_
- f) Weight of wood cushion (concrete pile and only if attached to insert): \_\_\_\_\_

Total weight pile hammer complete with all accessories attached: \_\_\_\_\_

### Leads and lead components: (Check by serial number of each lead and/or component)

- a) Total weight of leads: (weight per foot: \_\_\_\_\_) \_\_\_\_\_
- b) Weight of headblock (located on top of leads): \_\_\_\_\_
- c) Weight of Rooster sheave assembly: \_\_\_\_\_
- d) Weight of boom tip connector complete (including pin) \_\_\_\_\_
- e) Weight of all gates and rabbits including any hydraulic cylinders: \_\_\_\_\_
- f) Weight of the spotter divided by 2: (50% of spotter weight) \_\_\_\_\_
- g) Weight of winches or any additional items mounted to leads: \_\_\_\_\_

Total weight of leads and lead components: \_\_\_\_\_

**Warning!: If using a drill, please fill out addition data below.**

### Pile data:

- a) Weight of pile per foot: \_\_\_\_\_  
 Note: Go to [apevibro.com](http://apevibro.com) and then to equations page for calculations: \_\_\_\_\_
- b) Weight of any pile tips or other items attached to pile: \_\_\_\_\_

Total weight of hammer and related accessories, leads and components & pipe: \_\_\_\_\_

**Notes:** If a drill is attached to the leads you must consider the following items as additional weight and stress on the leads:

- Auger motor: Weight, plus any gates or centralizers.
- Rigging: Is the drill single or two parted
- Type of mounting: The track the drill is running on should be studied by a structural engineer.  
 Diameter of flighting- helps determine possible weight of soil and also downward pull if "cork screwed". Also determines amount of torque on leads.
- Pitch of flighting: Pitch can changed the amount of force exerted on the leads when "cork screwed". Pitch is also important to calculate the total weight of the soil on the auger.

**Warning:** Many lead failures have been due to forces from the drill. Remember that if the drill should "cork screw", the crane operator must not try to stop the drill by braking the crane line. Do not try to stop a "run-a-way" drill motor that has "cork screwed" into the soil because all the force from the flight screwing into the ground will pull against the crane line and stress the leads beyond their capacity.  
 August 2001