

OPERATORS MANUAL

DYNAMIC PROBING RIG ON TRAILER
CRT

NOTE: Please read this manual before working!



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1	General	1
2	Usage Regulations	1
3	Safety	1
3.1	Responsibility of the Operator	1
3.2	Advises in this manual	1
3.3	General safety information	1
3.4	Protective Gear	2
4	Instruction Manual	2
5	Maintenance	8
6	Annex	8

1 General

The following manual contains important information on the handling of the dynamic probing rig on Trailer. The CRT unit serves to carry out dynamic probing procedures with drop weights of 10, 30, 50 kg or 63,5 kg (SPT). The drop height of the CRT is 500 mm for DP-L, DP-M and DP-H or 750 mm for SPT. Window sampling operations up to 80 mm diameter are also possible.

2 Usage Regulations

The CRT is designed to carry out dynamic probing tests. Warranty and operating permit will expire if the CRT is used for any other purpose.

3 Safety

Read the following section carefully. It contains important information for your personal safety and the safety of the CRT.

3.1 Responsibility of the Operator

The operator of the CRT is responsible to operate the CRT for its intended use as stated in section 2 only. Instruct co-workers thoroughly and request them to read the operating manual. Do not leave the CRT unattended to prevent misuse by third parties (e.g. children).

3.2 Advises in this manual

Please notice the “**CAUTION**” advises in this manual. CAUTION informs of impending damage for the machine caused by inappropriate handling of the CRT as well as not operating the CRT in conformity to its intended use as described in section 2 of this manual.

Please notice the “**WARNING**” advises in this manual. WARNING informs of impending danger for the operator or other persons caused by inappropriate handling of the CRT as well as not operating the CRT in conformity to its intended use as described in section 2 of this manual.

3.3 General safety information

Carrying out dynamic probing procedures with the CRT carelessly can lead to the injuries described below:

- ▶ Serious strokes caused by the falling hammer
- ▶ Burning by hot exhaustion parts
- ▶ Injury to the hearing due to disregarding the recommendations to wear hearing protection

3.4 Protective Gear

The operator should wear protective gear as listed below:

- ▶ Protective helmet
- ▶ Hearing protection
- ▶ Protective shoes
- ▶ Protective clothes
- ▶ Protective gloves

4 Instruction Manual

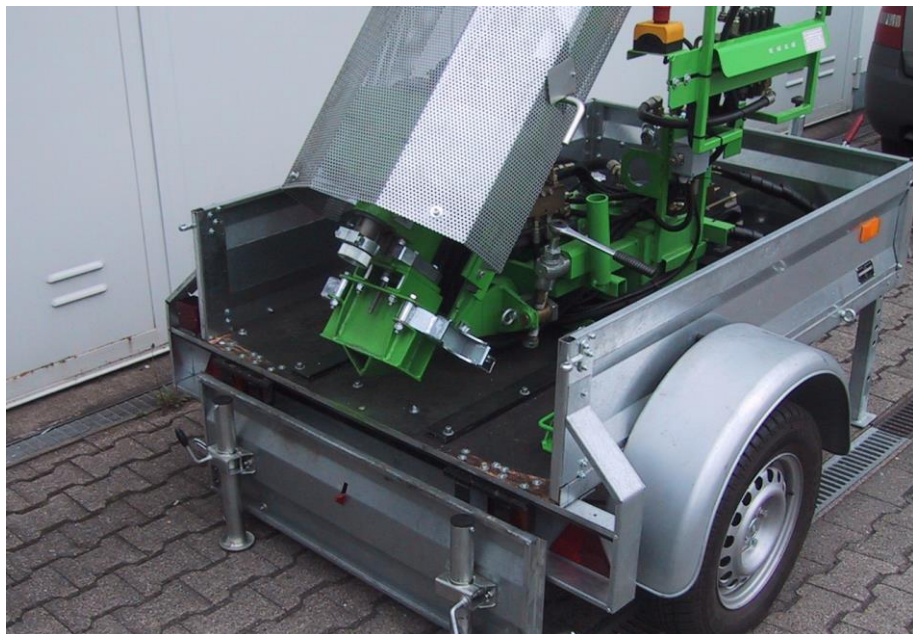


IMPORTANT!

Only trained and capable personnel familiar with this manual is permitted to operate the rig. Before operating the CRT unit check the following parts and components for correct setting and remediate any possible damage:

- key bolt for drop weight carriage
- screw fastenings, bolt connections, safety pins
- drop weight carriage, allan screws, service status
- hard hat, gloves and ear protection available?

1. Place trailer at borehole location.
2. Apply trailer hand brake and remove unit from vehicle towing bar.
3. Lower front end legs and secure with bolt and R-clip.
4. Lift front wheel. The rig centre of gravity is between the trailer wheels and the front legs now.
5. Open trailer back completely and make sure it is secured by the red latch.



6. Lower back end legs and secure by clamping device.

7. Now start Honda engine and move rig fully back by using hydraulic control valve AE.



CAREFUL!

The centre of gravity moves backwards and the unit rests on the back end legs and the trailer wheels!

8. Move mast downwards with lever HS but do not yet touch the floor with the mast foot. To make erecting of top mast section easy bring mast bottom section back as shown.



9. Now erect top mast section by hand and secure it by using the wing nuts.



CAREFUL!

Keep hands off centre part of the mast to avoid being hurt!

10. Use spindle for lateral adjustment of mast.
11. Now set mast foot in the floor by using lever HS (wooden plank avoids sinking when soil is weak) and lift back end of the trailer until unit rests on mast foot and the two front end legs which is the operational position. The trailer wheels do not carry the weight in this position!
12. Position during operation:



13. Uneven floor conditions can be met by adjusting the back end legs as shown.



14. Spindle allows for lateral adjustment of the mast when fully erected.
15. As described before, in this position the unit rests on the mast foot and the two front end legs, too (the front end legs being extended differently).



IMPORTANT!

Every time when the drop weight carriage is moved up the mast it **must** be secured by fully inserting the **red safety bolt** as shown to avoid injuries.

**IMPORTANT!**

During drop weight operation always make sure that the hammer carriage follows the advance of each blow which means that the whole free length of the anvil shows underneath the bottom piece of the drop weight carriage before the next blow!

Tilted rods and sampling tubes not in line with the mast lead to the anvil getting stuck in its guide which can destroy the drop weight system. The mast immediately must be brought to a parallel position to the rod by means of hydraulic cylinders and/or spindle(s)!

5 Maintenance

The following section contains important information on the maintenance of the CRT. Read this section carefully. Insufficient and inappropriate maintenance of the CRT may cause engine trouble.

Interval	Maintenance work
daily	Clean and lightly spray oil chrome rod of the Drop weight frame / chrome rod.
daily	Oil latch mechanism.
daily	Check chain tension: 1. Lower drop weight frame fully down. 2. Attach spring scale to the chain at the front of the mast in the middle between drive sprocket and return sheave. At a pull force of 4-5 kg the distance between chain and mast profile shall be 8 mm.
weekly	Clean and lubricate chain.
weekly	Clean and grease must guiding profile.
weekly	Oil rope pulleys.
weekly	Clean latch mechanism
weekly	Check oil level of the gearbox.

Tensioning of Chain

1. Undo lateral 19 mm securing nuts at the return pulley axle.
2. Undo 19 mm securing nut on top of the mast.
3. Increase chain tension by fastening the 19 mm tensioning nut under the securing nut until correct setting is reached.
4. Fasten securing nuts on top and at the return pulley axle.

6 Annex

The following documents are attached at the end of the operators manual:

- ▶ CE Declaration of Conformity
- ▶ Operators Manual Motor
- ▶ List of spare parts

