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| **Department:** | **Public Works** | **Safework Procedure** |  |
| **Subject:** | **Cable Machine (Rootcutter)** | |

**CABLE MACHINE (ROOTCUTTER)**

**PURPOSE:**

The cable machine is a portable mechanical means of removing roots and/or grease from small diameter sewer lines. The cutting heads are interchangeable and are effective in removing heavy root/grease build-up where water jetting may not be.

**HAZARDS:**

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| * Electric shock | * Working around traffic and mobile equipment | * Flying debris |
| * Moving parts | * Contamination from bio-hazards |  |

**PPE:**

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| * Rubber gloves | * eye protection | * safety boots | * high -visibility vest or coveralls |

**Pre-Setup**

* Hook up trailer to vehicle
* Make sure hitch is secure and locked on ball.
* Secure safety chain
* Connect plug for trailer lights and check lights.
* Make sure cable machine is secured to trailer

**Setup:**

* Remove cable machine from trailer
* Set-up cable machine in an area free of obstruction with room to work
* Keep the machine within one meter of pipe opening - this prevents cable “looping” in high torque situations

**Procedure:**

* Make sure switch is in the “Off” position before plugging in
* Put power feed lever into neutral position
* Manually feed end of cable into the drain/sewer 6-12 inches before turning machine on
* Position yourself to one side of operating end of machine
* With two hands on cable, depress foot switch and manually feed cable up pipe while drum and cable are rotating.
* As the cutting blade makes contact with an obstruction, it stops the blade from turning and builds torque in the cable. Don’t allow blade to be hung-up for more than three seconds, torque build-up can be both helpful and dangerous. It is dangerous because excess torque can cause looping over the cable. When cable is pulled back from obstruction torque releases and blade turns quickly, this improves function. When blade is free, feed it back into obstruction making use of built up power to clean the line. Serious injury to fingers and hands is possible unless these precautions are observed.
* When the machine is positioned for overhead, or if it isn’t possible to position the machine within one meter of the pipe opening, additional safety precautions are necessary. Place the cable inside an extra piece of pipe, (approximately the size of the pipe being cleaned), the distance between the machine and the opening of the pipe.
* When retrieving cable from pipe, feed cable into machine until blade is close to pipe opening. Release foot switch and hand feed cable into drum once it has stopped turning.
* You can use power feed lever in reverse to retrieve cable from long distances to ease strain.

**SUMMARY**

* **Always** use genset with ground fault interrupter
* Inspect footswitch for air leaks
* Wear rubber boots in wet conditions
* **Always** wear rubber gloves to prevent binding to cable (lubricate with pipe soap)
* Never stand directly in front of working end of machine – cable could “shoot out” causing injury
* Two trained operators are recommended while operating cable machine
* Make sure bystanders are clear
* **Always** were eye protection
* **Do Not** wear loose fitting clothes

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| Date written: 2010-Mar-30  Revision Date | Written by: Riley St. Luke  Approved by: John Elliot |

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