HURACAN®

OPERATIONS MANUAL

DESCRIPTION

The Huracan® Slow Rotating Nozzle is a precision nozzle used to clean sewer lines. It is designed to clean lines with diameters ranging from 4 to 48 inches through the use of water jetting action. The jet ports in this nozzle are positioned to rotate the head and pull the nozzle through the line. The Huracan® has an NPT threaded inlet connection and is capable of working in pressures up to 6,000 psi with flow rates ranging from 35 to 80 gpm. This nozzle is injected with an internal dampening fluid which controls the rotation speed. Replaceable carbide jet inserts are used in the jet ports to help eliminate turbulence and create a cohesive output stream of water.

OPERATION

Huracan® Hose Connection

Before connecting the Huracan® to any hose, make sure to flush it out to remove debris. Next, pass the hose end through a hose guard or Tiger Tail. If the Huracan® is being used in pipe diameters less than 10 inches it can be attached directly to the hose end, otherwise a skid should be used to prevent the nozzle from turning around in the pipe.

⚠ **Do not attempt to clean the manhole with the Huracan® hanging on the hose. This nozzle can turn around in the pipe and hit the operator.**

Note: A section of colored leader hose which is recommended to indicate how close the nozzle is from exiting the pipe during the cleaning process.

Huracan® Positioning and Startup

Before starting the cleaning process, position the Huracan® and Tiger Tail within the pipe. Slowly bring the pump up to pressure and allow the Huracan® to advance a few feet.

Note: Recommended cleaning direction is upstream from the manhole.

Cleaning with the Huracan®

Once the pump is up to operating pressure, feed the hose out at a reasonable rate to allow time for the nozzle to thoroughly clean the pipe. Depending on the amount of debris present in the pipe, it may be necessary to occasionally pull the Huracan® back toward the manhole to prevent large buildups of debris behind the tool.

OPERATION CONTINUED…

Huracan® Shutdown and Cleanup

When cleaning is finished, withdraw the Huracan® back to its initial starting point marked by the location of the colored leader hose. Shut down and secure the pump before removing the nozzle from the line. If the Huracan® will be removed from the line and stored for more than several days, blow out any remaining water with compressed air to prolong the life of the internal components.

TROUBLESHOOTING

Below are some useful troubleshooting tips for the Huracan® nozzle. As always, if any further questions/help is needed you can find contact information at www.shamrocktools.com/contact.

What to do if the head will not rotate: First try rotating the nozzle's head by hand and see if it feels rough or gritty when turning it. If it does, the tool must be disassembled and repaired. It is likely that the nozzle has bad bearings, seals and/or fluid. If the head feels normal when turned, check the jet ports to make sure none of them are plugged. If a jet port is only partially blocked it can prevent the head from rotating. If a repair is needed, one can be setup by visiting www.shamrocktools.com/repair.

What to do if the head spins too fast: In this case, it is likely that the nozzle is low on internal dampening fluid or that the fluid is contaminated with water. To fix this issue, a repair must be setup. One can be setup by visiting www.shamrocktools.com/repair.

What to do if a seal is leaking: The seals on the Huracan® may leak at low pressure but should pop closed as pressure is increased. If operating pressure is reached and the seal is leaking continuously, the high-pressure seal may need to be replaced. To fix this issue, a repair must be setup. One can be setup by visiting www.shamrocktools.com/repair.

What to do if the seals wear out too quickly: If the seals on the Huracan® are wearing out quickly, the nozzle must be disassembled and inspected. The seat should be checked for proper installation and should be replaced any time the high-pressure seal is replaced. The bore of the shaft, where the high-pressure seal is located, should be checked for grooving. If it is worn larger than .633", the shaft will need to be replaced. To fix this issue, a repair must be setup. One can be setup by visiting www.shamrocktools.com/repair.

Note: It is important to monitor the level of internal dampening fluid in the Huracan® at all times. This nozzle is designed with a high-pressure seal and seat that will need to be replaced if the tool begins to leak water. This nozzle may leak water at low pressure intermittently. If it begins to leak at operating pressure then the seal must be changed. Repair kits are available from Shamrock Pipe Tools, LLC. For more information, visit www.shamrocktools.com/contact.