

Guidelines for making drill line cuts

Service life of drilling lines can be increased dramatically by following a planned cut-off program based on work performed. This moves the rope through the system so wear can be spread uniformly along the entire length of the rope, enabling the line to be removed from the drum

end when it has reached the end of its useful service life. As the rope is cut off the drum end, new rope is fed into the system on the dead line side, extending service life. When exercising a cut-off program, follow the guidelines below closely.

A 10-STEP GUIDE TO A DRILL LINE CUT-OFF PROGRAM

1. For the first few cuts, wrap the drill line at the point being cut with duct tape prior to making the cut to prevent unlaying.
2. When making a cut and slipping new rope into the string-up, all of the wraps should be removed from the deadline anchor. The rope should never be pulled through a loosened clamp which can put a twist in the rope. The clamp should be completely removed and inspected. If worn or damaged, replace.
3. After making a cut, the dead wraps should be spooled on the drum with sufficient tension to prevent excessive drum crushing or “milking” of the bottom layer.
4. Take ton-miles for drag into account.
5. Drill ships and semis using a crown motion compensator may operate with a lower ton-mile goal due to additional sheaves and extra rope on the drum.
6. Extended drilling between round trips may necessitate making a cut to avoid exceeding maximum allowable ton-miles.
7. Because of the additional weight, top drives accumulate more ton-miles for each rig operation. It has not been determined if ton-mile goals should be changed to accommodate this.
8. Short, frequent cuts will shift critical wear points caused by excessive jarring.
9. Long cuts are necessary when the amount of rope to be cut doesn't remove all the rope that meets removal criteria. This can be caused by failure to follow the ton-mile goal, improper calculation or recording of ton-miles. Damage at any point may require a long cut.
10. To prevent long cuts:
 - a. Find the optimal ton-mile goal for your drill line; experience may indicate you have to change your ton-mile goal. It's important to follow the cut-off program for a new rope. The first few cuts may seem excessive, but they are necessary to move rope through the system at the proper rate.
 - b. Ton-miles must be calculated and recorded accurately for each operation.
 - c. Inspect equipment to prevent conditions that adversely affect service life. Equipment problems such as bearing failure in a sheave can cause unusual wear leading to long cuts.

Union offers a manual cut-off program for drill lines, including a Ton-Mile Indicator and Calculator in a booklet, *Cut-Off Practice for Rotary Drilling*.

A computerized system is available on CD-ROM and can be obtained by contacting your wire rope supplier.