Improved Oil Filter Securement and Protection

While using hoisting equipment such as winches and cranes around the top drive, the cable or the load may come in contact with the top drive. If a winch line is wrapped around the top drive, the line could become snagged. This may result in the cable or load catching on the top drive, or breaking components off of the top drive.

The oil filter is vulnerable when a winch line is wrapped under the top drive. Additional safety securement and protection for the oil filter is available.

![Image of tugger line snagging top drive oil filter](image)

Figure 1: Tugger Line Snagging Top Drive Oil Filter

Recommendation

1. When using hoisting equipment around the top drive, plan the lift in advance.
2. Perform a Job Safety Analysis (JSA) to identify potential hazards and snag points.
3. Avoid contacting the top drive with the winch line.
4. Where possible, reposition the top drive or equipment as needed to reduce the risk of snagging the cable or the load on the top drive.
5. Designate a spotter to look out for snags and potential contact with equipment during lifting operations.
6. Safety securement may be added to the filter element to prevent it from falling, should it be struck. See “Adding Safety Securement to the Oil Filter Element” on page 2.
7. A deflector may be added to the top drive frame to reduce the possibility of snagging the oil filter. See “Welding a Deflector Plate to the Top Drive Frame” on page 3.
Adding Safety Securement to the Oil Filter Element

Contact RigLine 24/7™ Support to order the parts below to add safety securement to the top drive oil filter.

<table>
<thead>
<tr>
<th>Item</th>
<th>Qty.</th>
<th>Unit</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>EA</td>
<td>M16730</td>
<td>Clamp, Worm Drive, 3 1/4&quot; – 4 1/8&quot;</td>
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<tr>
<td>2</td>
<td>2</td>
<td>EA</td>
<td>M19-3009-010</td>
<td>Ferrule, 1/8, Oval, Aluminum</td>
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<tr>
<td>3</td>
<td>2</td>
<td>FT</td>
<td>M10022</td>
<td>Wire Rope, 1/8, 7 x 19, Stainless</td>
</tr>
</tbody>
</table>

**Procedure**

1. Loop 1/8" wire rope (P/N: M10022) around the oil filter mounting bracket and secure using 1/8" ferrule as shown in Figure 2 on page 2.
2. Loop the other end of the 1/8" wire rope through the hose clamp (P/N: M16730) and secure using a 1/8" ferrule as shown in Figure 2 on page 2.
3. Position the 1/8" wire rope to prevent it from being a snag hazard.
4. Tighten the hose clamp on the filter.

![Figure 2: Oil Filter Element Safety Securement](image_url)
Welding a Deflector Plate to the Top Drive Frame

Contact RigLine 24/7™ Support to order the parts below to add a deflector plate to the top drive frame. **Welding must be performed by a welder certified to weld the applicable material in accordance with AWS D1.1 or equivalent.**

### Procedure:

1. Clean the surface to be welded. Ensure it is free from dirt, paint, or rust.
2. If required, preheat the joint to minimum of 75°F.
3. Position the deflector as shown in Figure 3 on page 3 and weld all around using a E7018 low hydrogen welding rod.
4. Allow the weld to slowly cool to ambient temperature using a thermal blanket over the weld. **Do not quench the weld.**
5. Clean the weld with a wire brush and MPI the weld per Canrig specification ENG 704 to ensure that no cracks are present.
6. Apply primer and paint to prevent corrosion.

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<tbody>
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<td>EA</td>
<td>DT24572</td>
<td>Deflector, Oil Filter, 275T-350T</td>
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</tbody>
</table>

![Figure 3: Deflector on 275T Top Drive Frame Base](image-url)