Model A Hydro-Trip Sub

The Model A hydro-trip sub is designed to provide a temporary tubing plug in order to set a hydraulically actuated packer.

**Application**
- Temporary tubing plug for setting hydraulically actuated packers in single and dual completions

**Benefit**
- Can be run at any location in the tubing string

**Features**
- Full tubing ID after shearing
- One body joint with antitorque locking screws
- Adjustable shear value
- Reliable shear mechanism
- Allows circulation prior to dropping ball

**Description and Operation**
To actuate a hydraulic-set packer, a ball is dropped or circulated to its seat in the hydro-trip sub. To set the packer, the appropriate pressure differential is applied to the tubing. After setting the packer, continued pressure is applied to shear the pins retaining the collet seat. Once sheared, the collet in the sub moves down, allowing the collet fingers to expand. The ball then passes through collet and out the end of the sub. Once activated, the collet OD expands into a recess, and full tubing ID is maintained. Bronze and phenolic balls are available as an option to accommodate specific wellbore fluid characteristics. The shear value of the hydro-trip sub is fully adjustable. Once the hydro-trip sub is sheared and the ball is expended, the sub has a full tubing ID. This feature allows the sub to be placed virtually anywhere in the tubing string, since only the ball is discarded. The hydro-trip sub is available in a wide variety of materials and tubing connections.

**Model A Hydro-Trip Sub Specifications**

<table>
<thead>
<tr>
<th>OD (in. [mm])</th>
<th>Weight (lbf/ft)</th>
<th>Max. OD (in. [mm])</th>
<th>Dropping Ball OD (in. [mm])</th>
<th>Min. ID of Tool After Shear (in. [mm])</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.375 [60.3]</td>
<td>4.7</td>
<td>3.063 [77.8]</td>
<td>1.750 [44.5]</td>
<td>1.995 [50.7]</td>
</tr>
<tr>
<td>2.875 [73.0]</td>
<td>6.5</td>
<td>3.700 [94.0]</td>
<td>2.000 [50.8]</td>
<td>2.441 [62.0]</td>
</tr>
<tr>
<td>3.500 [88.9]</td>
<td>9.3</td>
<td>4.500 [114.3]</td>
<td>2.625 [66.7]</td>
<td>2.905 [73.8]</td>
</tr>
</tbody>
</table>

† Other sizes are available on request. Contact your local Schlumberger representative.