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| Model: Standard 500/750T<br>and 275T     | Aug. 31, 2016 |
| Serial #: See Serial Numbers<br>Affected |               |
| Product Bulletin # TDS-162               |               |

## **Top Drive Lifting Configuration – Manual Update**

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The Standard 500/750T and 275T Top Drive Parts Manual has been updated to include lifting configurations for models 6027AC, 1250AC, and 1275AC.

Lifting configuration for above mentioned models is attached to this product bulletin for reference. Some units built for offshore installations may be configured differently, hence this procedure will not apply to those units.

### **Serial Numbers Affected**

- 275T Top Drive, S/N: 1112 and up and any units with guard # AY17787 or AY21530 installed.
- Standard 500T Top Drive, S/N: 221 and up.
- Standard 750T Top Drive, S/N: 151 and up.



## **SUBSECTION 3B: TOP DRIVE AND TORQUE GUIDE INSTALLATION INSTRUCTIONS**

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**The drawings in this Subsection are provided to represent  
TYPICAL TORQUE GUIDE INSTALLATIONS.  
As applications tend to differ from one rig to the next, the user should refer to the  
drawings in Section 6 of this Manual for specifications and instructions for the  
specific application.**



# Top Drive Lifting Configuration – Model 6027AC

The top drive may need to be lifted during rig-up, rig-down, or when performing a repair job. Canrig recommends lifting the top drive using the torque guide or shipping skid if any of these options are available. If this is not possible, then lift the top drive using the top drive lifting lugs located on the guard.

The following cases illustrate typical scenarios when it is required to lift the top drive using the lugs. Case 1 considers lifting the top drive while it is horizontal with two hooks, whereas case 2 considers lifting the top drive with one hook. Case 3 describes the scenario when lifting the top drive from a horizontal-to-vertical or vertical-to-horizontal position, which typically occurs during rig-up or rig-down.

This procedure applies to units with Guard # AY17787 or AY21530 installed – S/N: 1112 and up or some rebuilt units. Refer to the Top Drive Manual for additional information.

**CAUTION:** Prior to using the lifting lugs located on the guard, ensure the guard is mounted securely to the top drive.

## Case 1: Horizontal Lifting Configuration for Balanced Load (Two Hooks)

This lifting configuration considers using two hooks to lift the top drive while it is horizontal. The first hook should align with the location of the top drive lifting lugs (slings A and B) and the second hook (sling C) should align with the point on the quill halfway between the tool joint clamp and end of the spindle. See Figure 3B.1 for reference.

This configuration indicates the maximum load on the top drive lifting lugs when lifted while it is horizontal.

**CAUTION:** The top drive should never be higher on the quill side when lifted. Never exceed the maximum safe working load for each lifting lug of 12,000 lb.

### Lifting Considerations

- The minimum length for each lifting lug sling (see slings A and B on Figure 3B.1) is 5' 8" (1.7 m).  
**Note:** Length given above is overall length, which includes length of sling plus length of any hardware used (i.e., shackles, links, etc.).
- Adjust the length or elevation of the strap on the quill (sling C) such that the top drive remains horizontal at all times while lifting. See Figure 3B.1.

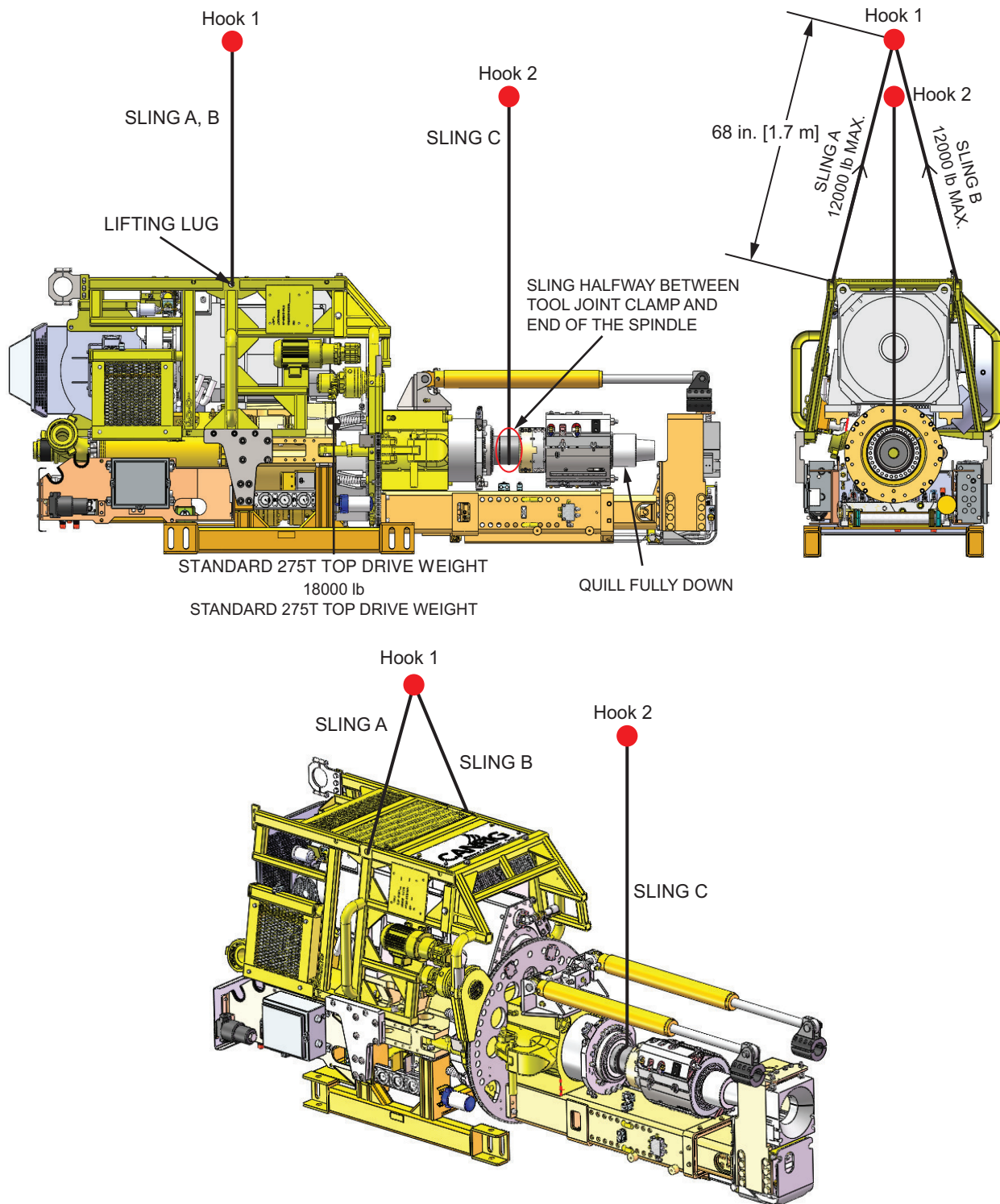


Figure 3B.1: Horizontal Lifting for Balanced Loads (Two Hooks)

## Case 2: Horizontal Lifting Configuration for Balanced Load (One Hook)

This lifting configuration is considering using only one hook to lift the top drive while it is horizontal. In this case, one hook lifts the top drive using three slings (slings A, B, and C). See Figure 3B.2 for reference.

This configuration indicates the maximum load on the top drive lifting lugs when lifted while it is horizontal.

**CAUTION:** The top drive should never be higher on the quill side when lifted.  
Never exceed the maximum safe working load for each lifting lug of 9,000 lb.

### Lifting Considerations

- The minimum length for each lifting lug sling (see slings A and B) is 5' 8" (1.7 m). Minimum length for sling C on quill is 9' 7" (2.9 m). See Figure 3B.2 for reference.
- Adjust the length of sling on quill (sling C) if top drive is not level while lifting. Top drive should be level while lifting.

**Note:** Length given above is overall length, which includes length of sling plus length of any hardware used (i.e., shackles, links, etc.).

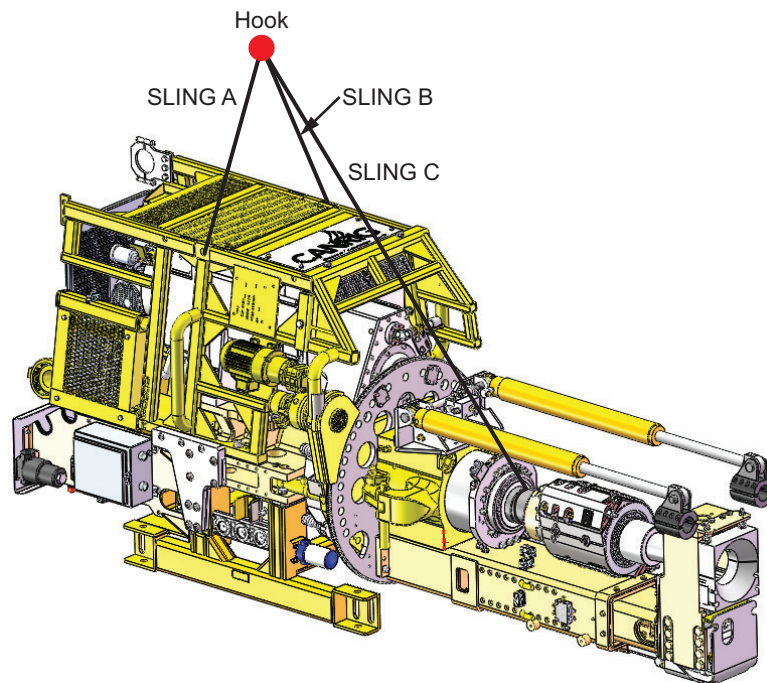
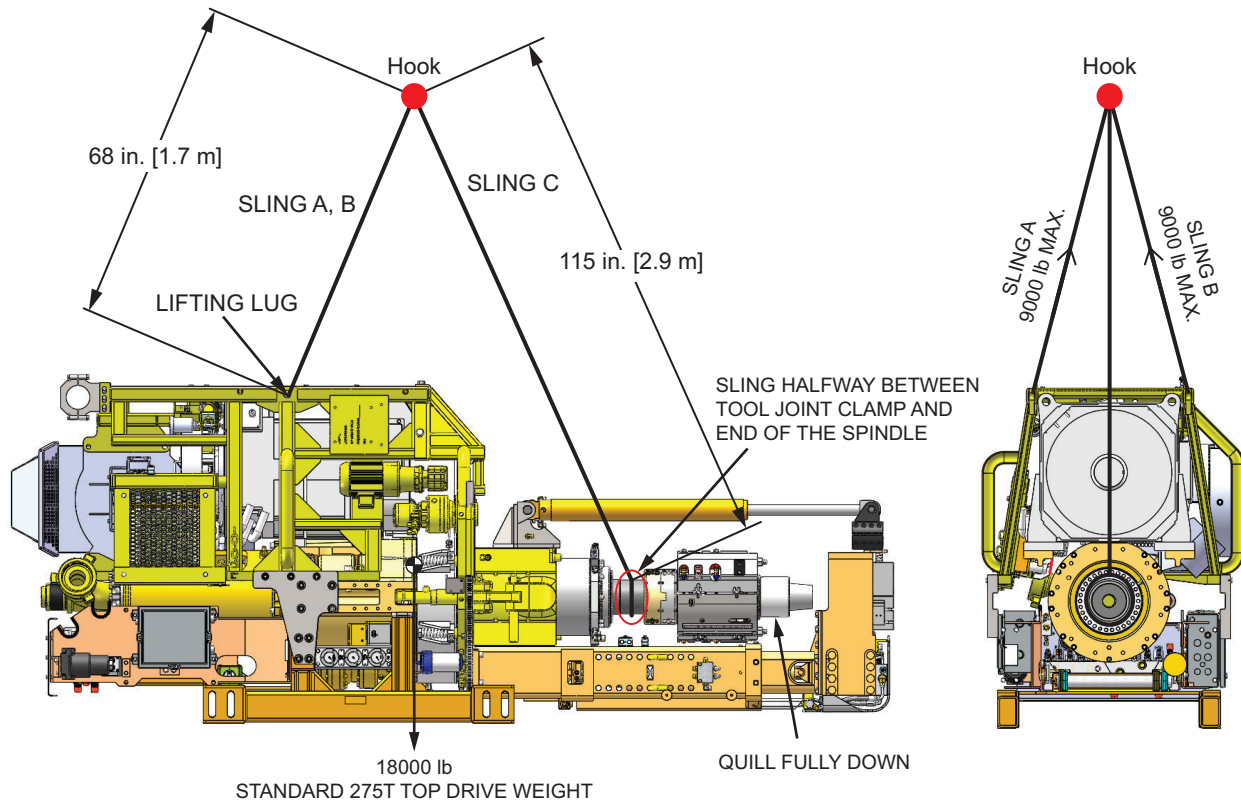


Figure 3B.2: Horizontal Lifting for Balanced Loads (One Hook)

## Case 3: Horizontal-to-Vertical or Vertical-to-Horizontal Lifting Configuration

As mentioned before, the recommendation is to lift the top drive using the torque guide or shipping skid. In this case, the top drive lifting lugs can be used to maneuver the top drive from horizontal to vertical position. See Figure 3B.3 for reference.

This configuration indicates the total maximum safe working load on lifting lugs at an angle from 0° to 45°. See Table 3B.1.

**CAUTION:** Never exceed the maximum safe working load for each lifting lug, see below.

Always use both lifting lugs while lifting. Never lift the top drive with only one lug.

### Lifting Considerations

- The minimum length for each lifting lug sling is 5' 8" (1.7 m). See Figure 3B.3 for reference.

**Note:** Length given above is overall length, which includes length of sling plus length of any hardware used (i.e., shackles, links, etc.).



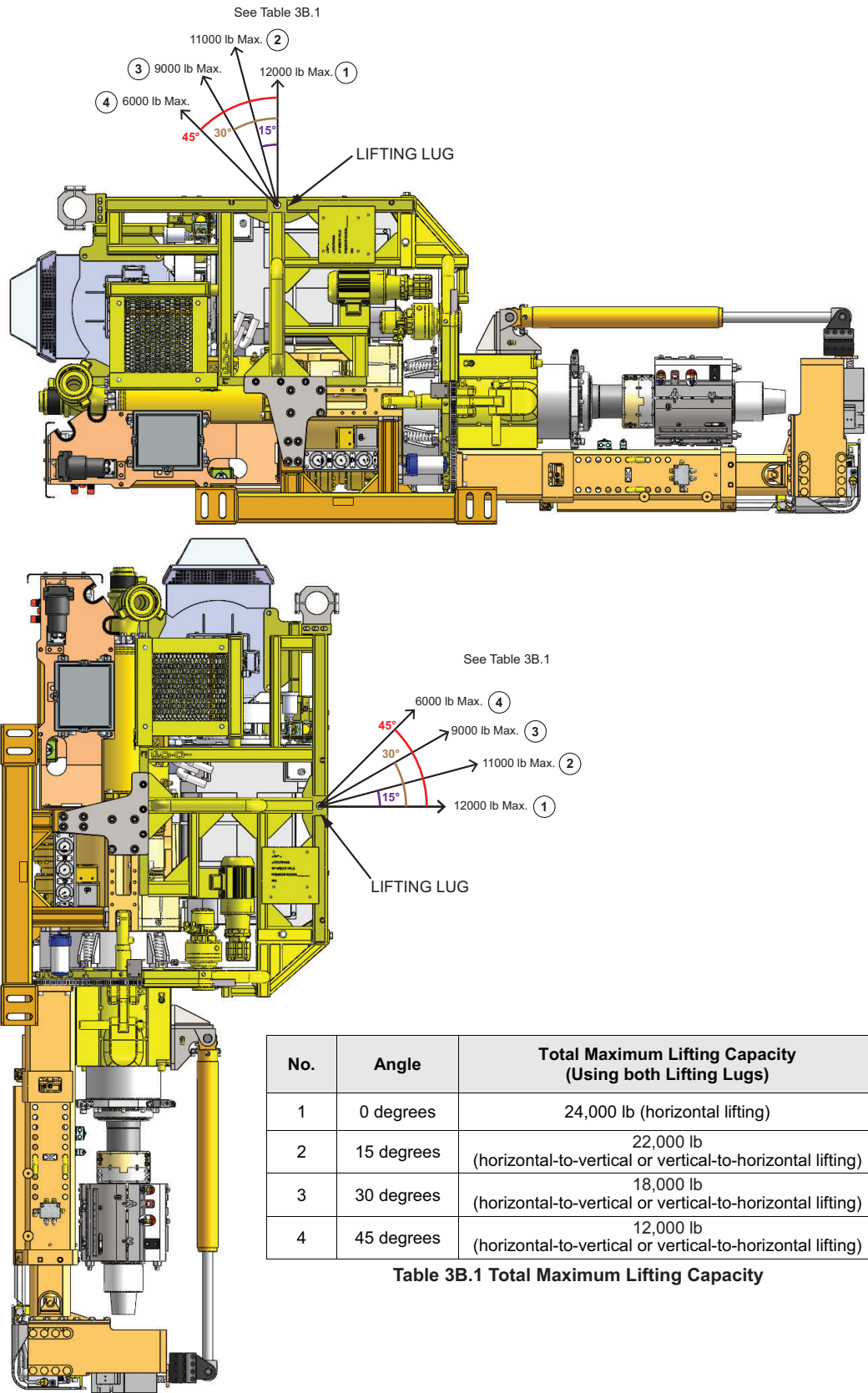


Figure 3B.3: Total Lifting Capacity (per lifting lug)

# Top Drive Lifting Configuration – Model 1250AC and 1275AC

The top drive may need to be lifted during rig-up, rig-down, or when performing a repair job. Canrig recommends lifting the top drive using the torque guide or shipping skid if any of these options are available. If this is not possible, then lift the top drive using the top drive lifting lugs located on the guard.

The following cases illustrate typical scenarios when it is required to lift the top drive using the lugs. Case 1 and case 2 consider lifting the top drive while it is horizontal with two hooks, whereas case 3 considers lifting the top drive with one hook. Case 4 describes the scenario when lifting the top drive from a horizontal-to-vertical or vertical-to-horizontal position, which typically occurs during rig-up or rig-down.

This procedure applies to 1275AC top drive with S/N: 151 and up, 1250AC top drive with S/N: 221 and up. Some units built for offshore installations may be configured differently, hence this procedure will not apply to those units. Refer to the Top Drive Manual for additional information.

**CAUTION:** Prior to using the lifting lugs located on the guard, ensure the guard is mounted securely to the top drive.

## Case 1: Horizontal Lifting Configuration for Balanced Load – Two Hooks (Top Lifting Lugs)

This lifting configuration considers using two hooks to lift the top drive while it is horizontal. The first hook should align with the location of the top drive top lifting lugs (slings A and B) and the second hook (sling C) should align with the point on the quill halfway between the tool joint clamp and end of the spindle. See Figure 3B.4 for reference.

This configuration indicates the maximum load on the top drive lifting lugs when lifted while it is horizontal.

**CAUTION:** The top drive should never be higher on the quill side when lifted. Never exceed the maximum safe working load for each lifting lug of 18,000 lb.

### Lifting Considerations

- The minimum length for each lifting lug sling (see slings A and B on Figure 3B.4) is 7' 0" (2.1 m).  
**Note:** Length given above is overall length, which includes length of sling plus length of any hardware used (i.e., shackles, links, etc.).
- Adjust the length or elevation of the strap on the quill (sling C) such that the top drive remains horizontal at all times while lifting. See Figure 3B.4.

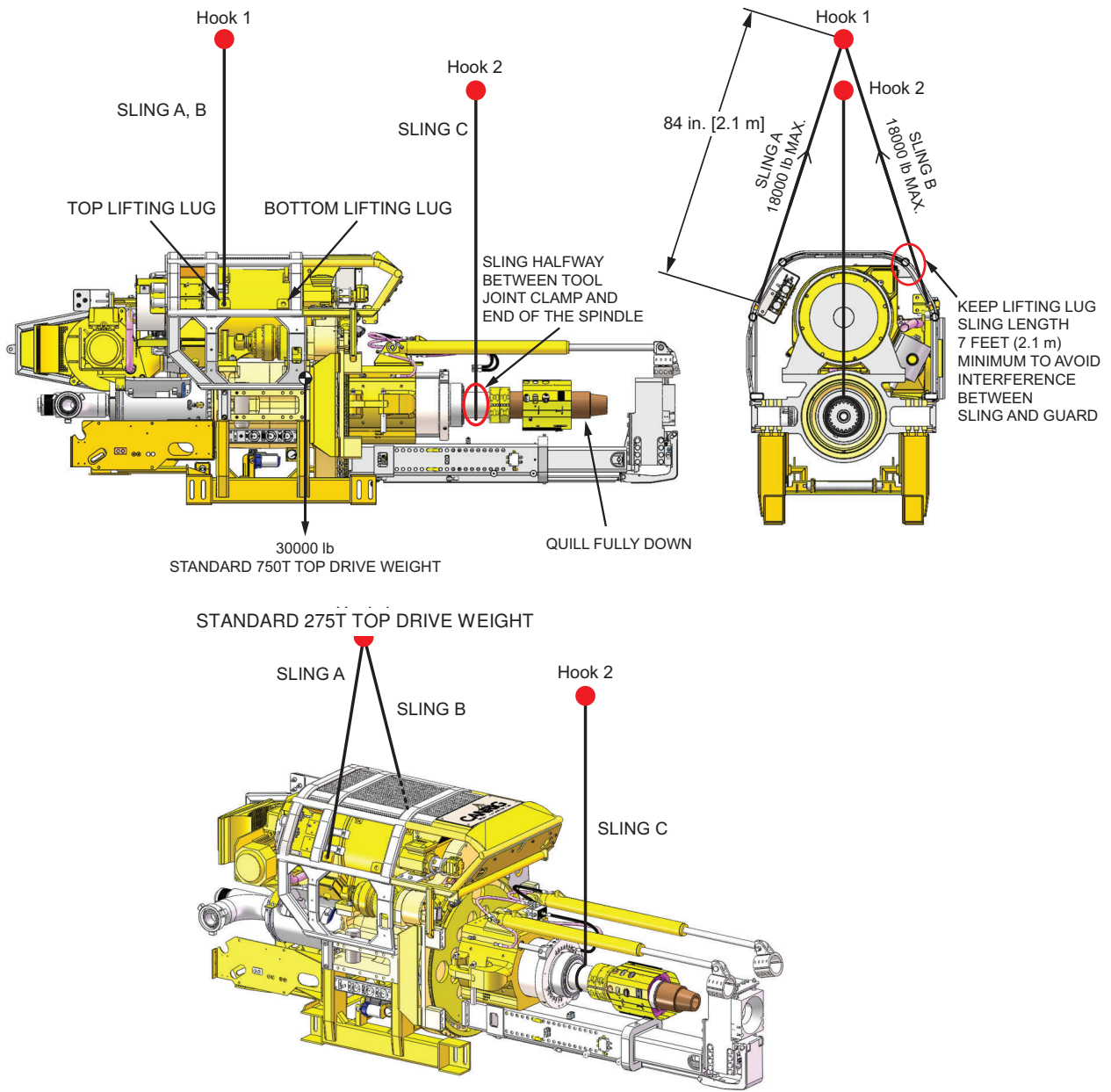


Figure 3B.4: Horizontal Lifting for Balanced Loads – Two Hooks (Top Lifting Lugs)

## Case 2: Horizontal Lifting Configuration for Balanced Load – Two Hooks (Bottom Lifting Lugs)

This lifting configuration considers using two hooks to lift the top drive while it is horizontal. The first hook should align with the location of the top drive bottom lifting lugs (slings A and B) and the second hook (sling C) should align with the point on the quill halfway between the tool joint clamp and end of the spindle. See Figure 3B.5 for reference.

This configuration indicates the maximum load on the top drive lifting lugs when lifted while it is horizontal.

**CAUTION:** The top drive should never be higher on the quill side when lifted. Never exceed the maximum safe working load for each lifting lug of 18,000 lb.

### Lifting Considerations

- The minimum length for each lifting lug sling (see slings A and B on Figure 3B.5) is 7' 0" (2.1 m).  
**Note:** Length given above is overall length, which includes length of sling plus length of any hardware used (i.e., shackles, links, etc.).
- Adjust the length or elevation of the strap on the quill (sling C) such that the top drive remains horizontal at all times while lifting. See Figure 3B.5.

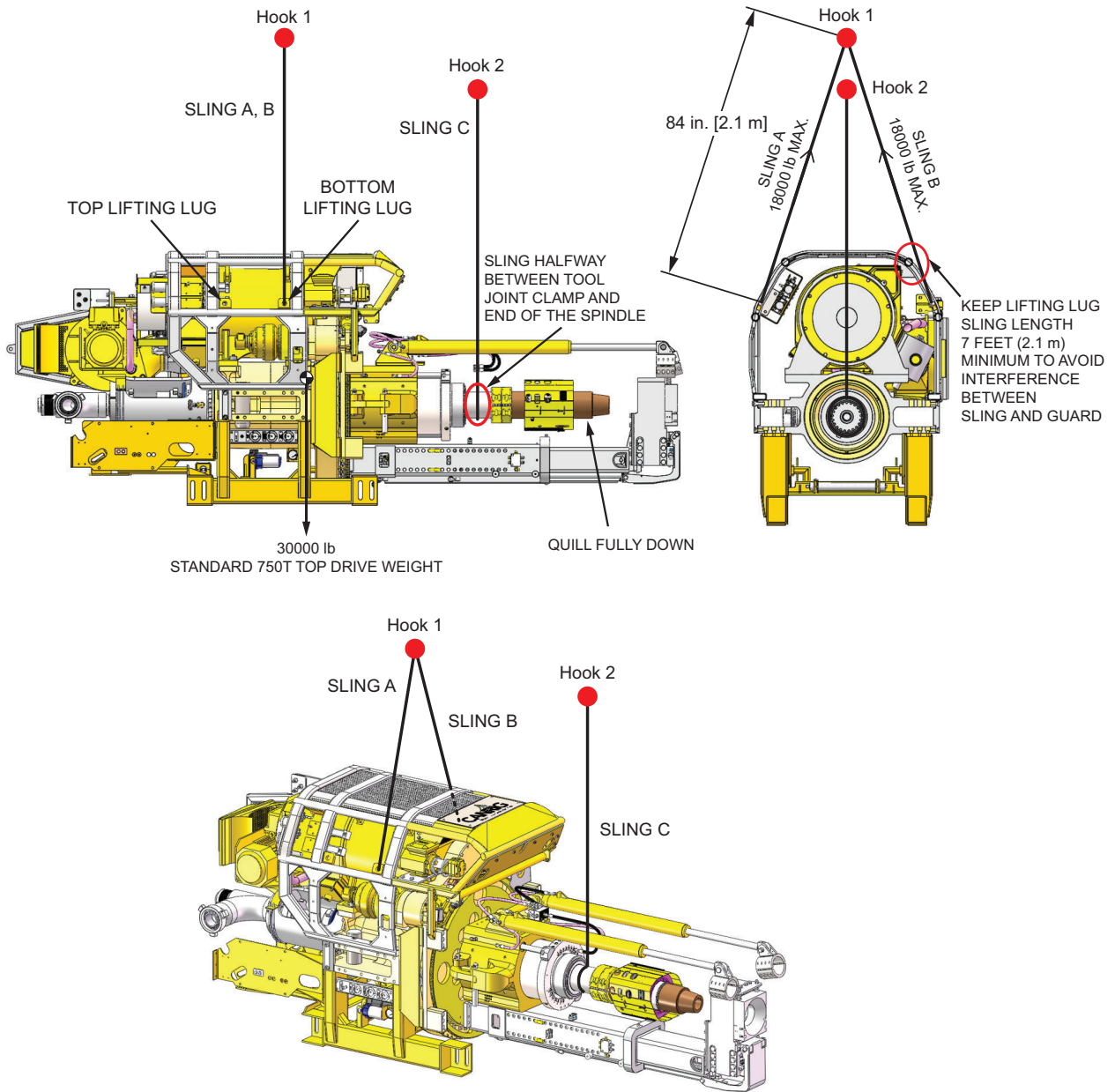


Figure 3B.5: Horizontal Lifting for Balanced Loads – Two Hooks (Bottom Lifting Lugs)

## Case 3: Horizontal Lifting Configuration for Balanced Load – One Hook (Top Lifting Lug)

This lifting configuration is considering using only one hook to lift the top drive while it is horizontal. In this case, one hook lifts the top drive using three slings (slings A, B, and C). See Figure 3B.6 for reference.

This configuration indicates the maximum load on the top drive lifting lugs when lifted while it is horizontal.

**CAUTION:** The top drive should never be higher on the quill side when lifted.  
Never exceed the maximum safe working load for each lifting lug of 18,000 lb.

### Lifting Considerations

- The length for each lifting lug sling (see slings A and B) is 8' 0" (2.4 m). Length for sling C on quill is 10' 11" (3.3 m). See Figure 3B.6 for reference.
- Adjust the length of sling on quill (sling C) if top drive is not level while lifting. Top drive should be level while lifting.

**Note:** Length given above is overall length, which includes length of sling plus length of any hardware used (i.e., shackles, links, etc.).



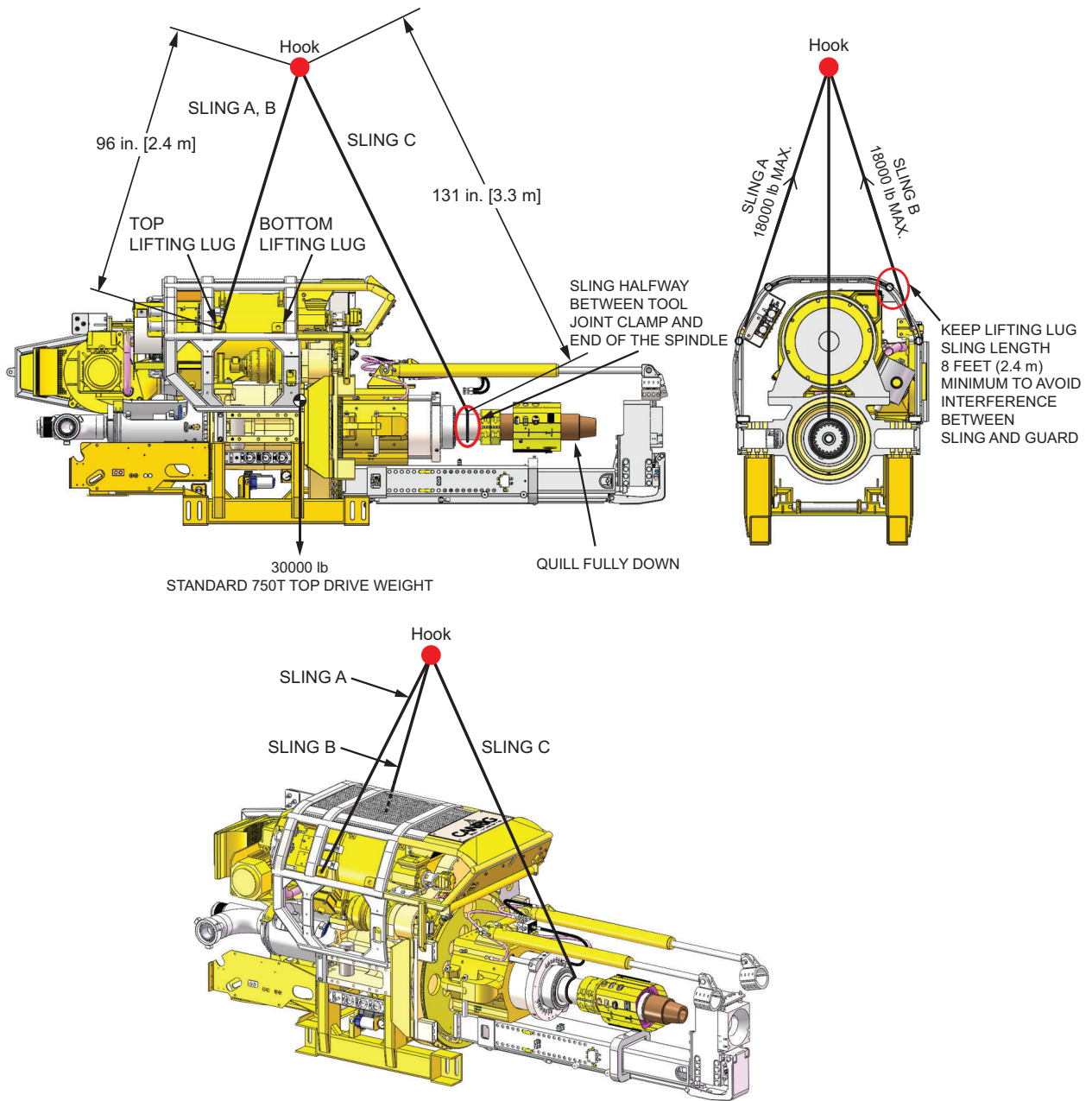


Figure 3B.6: Horizontal Lifting for Balanced Loads – One Hook (Top Lifting Lug)

## Case 4: Horizontal-to-Vertical or Vertical-to-Horizontal Lifting Configuration

As mentioned before, the recommendation is to lift the top drive using the torque guide or shipping skid. In this case, the top drive lifting lugs can be used to maneuver the top drive from horizontal-to-vertical or vertical-to-horizontal position. See Figure 3B.7 for reference.

This configuration indicates the total maximum safe working load on lifting lugs at an angle from 0° to 45°. See Table 3B.2.

**CAUTION:** Never exceed the maximum safe working load for each lifting lug, see below.  
Always use both lifting lugs while lifting. Never lift the top drive with only one lug.

### Lifting Considerations

- The minimum length for each lifting lug sling is 5' 8" (1.7 m). See Figure 3B.7 for reference.  
**Note:** Length given above is overall length, which includes length of sling plus length of any hardware used (i.e., shackles, links, etc.).



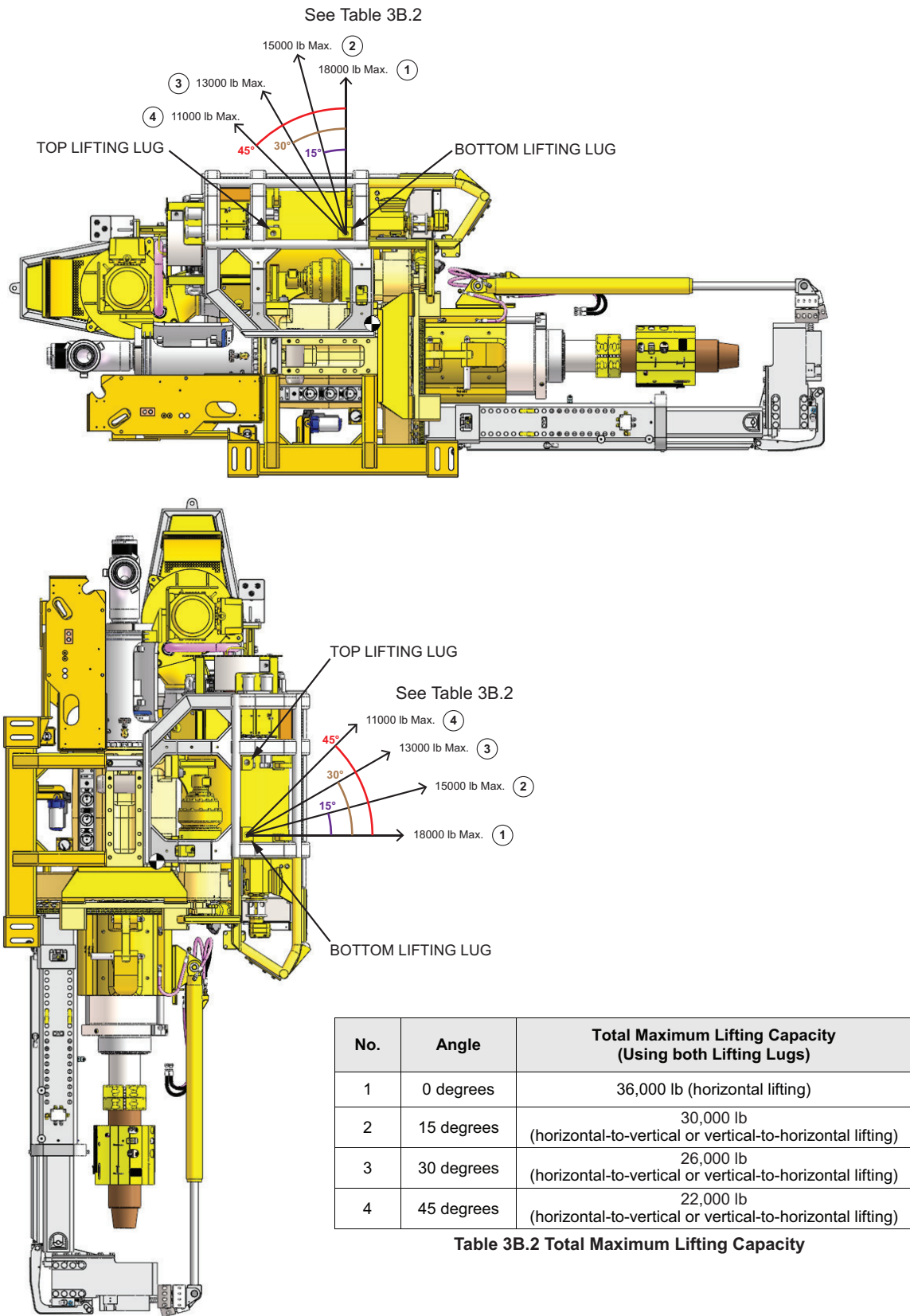


Figure 3B.7: Total Lifting Capacity (per lifting lug)