



Portable Torque Guides

Discussion

The hinge plate assembly on the torque-guide section one is welded to the torque-guide tube. If this weld joint were to crack (See Figure 1 below), the following could happen:

- The torque-guide track could become misaligned and affect the travel of the top drive along the torque guide.
- The torque from the top drive might not be transferred back to the torque reaction beam during drilling operations.
- Section one of the torque guide could become separated from the rest of the torque guide during operation or rig down.



Figure 1: Cracked Portable Torque Guide Weld Joint



Model: See Affected Units section	April 18, 2013
Serial #: N/A	
Alert	

Affected Units

All top drives with portable torque guides delivered in 2010 or later.

Recommendations

1. Perform a visual inspection of the weld joints as soon as possible. Clean all end connecting plates to allow a clear view of inspection areas.
2. If any indications of cracks are found, proceed with a magnetic particle inspection as described in QAC 121 (attached).
3. All other areas not indicated should be visually examined for damage and signs of fatigue.
4. If no visual indications of cracks or fatigue are found, perform a magnetic particle inspection as soon as possible and follow the inspection recommendations in the product manual Inspection Section 4b (attached).

Additional Guidelines

Inspect the torque guide in the following situations:

- every three months
- after every rig move
- after periods of rough drilling or jarring

Weld Repairs

If weld repairs are required, contact RigLine 24/7™ support for instructions.

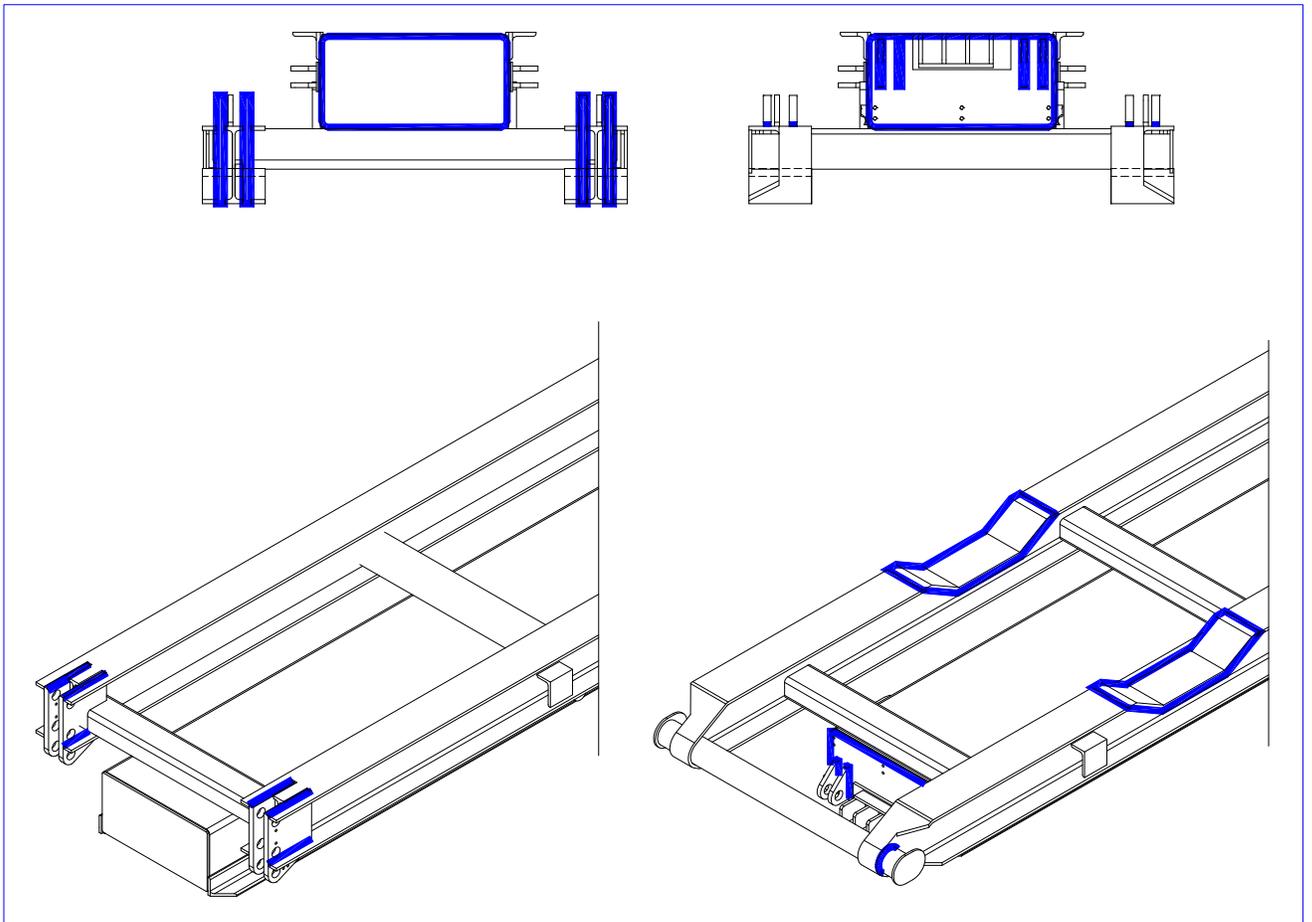
INSPECTION GUIDE

Part Name: Torque Guide Skid/Section 1

This is a guideline and it should not be assumed that the drawings are exact replicas of the parts being inspected. Actual parts may vary by size or model. All relevant indications should be documented on the Inspection Report/Map.

Procedure:

Perform Dry Magnetic Particle Inspection on all welds shown in accordance with ASTM E709. Acceptance criteria are as defined in E709. All other areas not indicated shall be visually examined for damage and signs of fatigue.



Recommended Inspection Program

General Inspection

Inspection plans and inspection frequency of the top drive can be developed using API Recommended Practice 8B, Procedures for Inspections, Maintenance, Repair and Remanufacture of Hoisting Equipment. The following can be used as a guideline. The frequency and type of inspection can be affected by one or more of the following factors and should be taken into account when doing any inspection:

- Environment
- Load cycles
- Regulatory requirements
- Operating time
- Drilling conditions
- Maintenance

Inspections should always be performed by a person knowledgeable in the equipment and its function.

Category I Inspection - Daily

When in use, equipment should be visually inspected on a daily basis for cracks, loose fits or connections, elongation of parts or other signs of wear, corrosion, overloading and proper operation.

Category II Inspection - Weekly

This is a Category I inspection plus further inspection to include:

1. Visually inspect the following for wear, deformation, cracks or corrosion:
 - Bail (if applicable)
 - Block Interface
 - Upper links
 - Main housing
 - Rotary manifold outer sleeve
 - Upper link support
2. Visually check the welds on the top drive frame, guard, mounts and supports for cracks or damage. Inspect for paint flaking or cracking which may indicate potential failure. Examine for dents, bends, abrasion and corrosion.
3. Visually check the Top Drive unit for loose bolts, nuts, broken wires on bolts or damaged safety wire. Retorque and rewire as required.
4. Visually inspect the electrical cables for wear, damage or loose connections.
5. Check for worn, cracked or distorted parts such as: pins, shafts, gears and guards.

Category II Supplemental – 3 Months or at Rig Move

- Visually check the complete Torque Guide for any damage (i.e. bending or cracking).
- Visually check the integrity of all of the Torque Guide turnbuckles, pins, spherical bushings, and wire rope slings.
- Visually check all the welds on the Torque Guide System including the harpoon for cracks. If suspicious cracks were found, a full Dry Magnetic Particle inspection must be made to all the welds included but not limited to those shown in the Torque Guide Inspection Maps.
- Check for loose bolts and mountings for the blower, mast junction box, cable trays and hydraulic tubes.
- Visually check the service loop and service supports/mounts on the torque guide.
- Visually check the blower and welds on Blower Frame.
- Visually check the Grass Hopper for any damage (i.e. bending and cracking). In addition, check all the welds for cracks.
- Check the clearance in the main Top Drive bearings and re-shim if necessary according to the schedule and instructions in this manual.
- Check the gap between the Brake Disk and the caliper. The disc should be centered in the caliper.

Category III Inspection – Every 6 months

This is a Category II inspection plus further inspection, which should include NDE of critical exposed areas and may involve some disassembly to access specific components. This may include NDE of:

- Bail (if applicable)
- Block Interface
- Upper Links
- Upper Link Pins
- Main Housing Pin Holes
- Rotary manifold outer sleeve
- Upper link support Ears

Remove the LWCV and inspect the connections (including the quill pin) using NDE methods according to API RP7G.

Category IV Inspection - 1000 Working Days

This is a Category III inspection plus further inspection for which the equipment is disassembled to the extent necessary to conduct an NDE inspection of all primary load carrying components and is recommended every 1000 working days.

1. Disassemble the Top Drive unit.
2. Inspect all of the following hoisting load path components using NDE techniques:
 - Quill
 - Spindle
 - Split Ring
 - Upper link support
 - Rotary manifold outer sleeve
 - Housing
 - Upper links
 - Bail (if applicable)
 - Block Interface
 - Upper link pins (4)

Prior to inspection, remove all grease, paint, oil, etc. See the Inspection Maps at the end of Section 4B for procedure and acceptance criteria.

3. Check all bearings, seals, seal running surfaces, gears and splines. Refurbish as necessary.
4. Inspect all the welds in the Torque Guide System using NDE techniques as specified on the inspection maps at the end of Section 4B.
5. Inspect the end plates and lugs in the torque tubes for any damage and ensure that the lugs are properly aligned between sections.
6. Inspect the drilling motor for cleanliness or damage and send to a qualified repair shop for further inspection and repair if necessary. Refer to relevant manufacturers' literature for recommended procedures.

Inspection Following Periods of Rough Drilling or Jarring

After periods of rough drilling, especially on surface hole, various Top Drive components can loosen due to vibration. The following inspection procedure is recommended after periods of rough drilling:

- Perform a thorough visual examination of the Top Drive, looking for any signs of damage.
- Ensure proper operation of all top drive systems.
- Visually inspect the mud inlet piping.
- Check all wire-locked bolts for damaged or broken wires. If broken wires are detected, check the affected bolts for tightness and rewire. Refer to the Capscrew Torque Values information in Subsection 4A of this Manual. Replace damaged wires.
- Check all external bolts that are not wired for tightness.
- Check all guards, vents, and covers for tightness.
- Ensure that all safety cables are properly and securely attached.
- Visually check the welds on the Top Drive Guard and Frame, Blower Frame and Torque Guide System.
- Visually examine inside the electrical junction boxes for loose components.
- Inspect the motor armature to ensure it has not dropped:
 - If the Brake Disk is approximately in the center of the Caliper, then this maybe an indication that the armature did not drop.
 - If the Brake Disk is rubbing on the bottom of the caliper, this maybe an indication that the armature did drop.