



GENERAL INSPECTION GUIDANCE FOR BLOCKS

Too often blocks are the last thing thought of when getting ready for a conductor pull but they are the first item installed for the pull and are integral to the job. While it is very important that the blocks be adequately sized for the conductor being pulled, it is also very important that the condition and quality of the block is good. A block that is in good shape with good bearings will spin easily. A cheap, damaged, or worn-out block will cause increased pulling and tensioning loads, potentially above the safe working load of the block or structure. Do not neglect to check each and every block to be used on the job to make sure they spin easily and smoothly. A single bad block can cause a major issue during the pull, shutting down the entire job and even cause dangerous situations.

CHECKLIST FOR INSPECTING BLOCKS:

- 1** First, give the block a thorough visual inspection. Check for loose, broken, or missing parts.
- 2** Inspect the block side frames for cracks.
- 3** Inspect the sheave(s) for cracks.
- 4** Check to make sure any “keeper” cables for ball-pin locks are in good shape, properly connected and fastened. Confirm the ball pen locks and springs are operating properly. Add a bit of light, penetrating oil if needed.
- 5** Confirm the frame locking mechanism is engaged, locking the frame in place. If the block looks good visually, next check to make sure the block spins freely. If it’s a smaller distribution block you may be able to hold it up and give it a spin with your hand. If it’s full frame block, stand it up and give it a spin. If the block is a half-frame, 72-Series, hang it from the socket connector on something sturdy and give it a spin. Listen for any grinding in the bearings. You can also carefully feel the outside of the hub with your fingers to feel for any vibration caused by bad bearings. **(WARNING: Keep your fingers clear of the hub spokes.)** A good block will spin freely and silently or very quietly. Sheaves should not be rubbing on the side of the frame. There should be very little to no wobble. Bundle block sheaves should not rub on one another; they should each rotate freely and independently.
- 6** If the block sheave is lined, with urethane for example, visually inspect that the lining is well bonded to the flanges of the sheave. Look for any areas where the lining is pulling away from the sheave flange. Visually inspect and feel the bottom of the groove to make sure there are no tears or burns in the lining.
- 7** If the block is gated, check to make sure the gate is functioning properly; that it can be opened, and that it will spring back closed, and lock. If needed, clean and add a bit of light oil to make sure the mechanisms are working smoothly.
- 8** Confirm any frame bolts are securely fastened. If any bolts are loose, apply Loctite® 243 or equivalent and retorque the bolt (*refer to a torque chart for proper torque*). Be careful not to over tighten, which could cause the sheave to bind and resist rotation. The sheave should turn freely.
- 9** Check the hanging hardware – socket connector. Make sure the connector you are using is rated for the block and planned load. Visually inspect to confirm that it is seated and installed in the socket connector. Make sure the cotter/keeper pin is present and in good shape to hold your hanger securely in the socket. The cotter pin should be placed in the “out” position to receive a hook or clevis.
- 10** **Seating Socket Connectors:** Once the hook/clevis fitting is seated, the cotter pen should be firmly tapped back into place to hold the hook/clevis securely in the socket. **(WARNING: Failure to securely seat the cotter pin can cause the hook/clevis to work loose causing the block to fall.)**

INSPECTING BLOCK HELICOPTER ATTACHMENT:

- 1 Clean the helicopter cable gate assembly free from any debris/dirt. De-grease and reapply new grease.
- 2 With block sitting on the ground, hold hanging strap on "cable-gate " side and rotate the "pac-man" to verify smooth rotation. (**CAUTION: DO NOT PLACE FINGERS NEAR POINT WHERE THE CABLE-GATE MEETS THE HOUSING.**)
- 3 Trigger should be able to move back and forth freely.
- 4 Trigger pin should line up with slot cut in the "cable-gate."
- 5 Ball lock pins should operate properly.
- 6 Hanger straps should not be damaged or bent in a way that would compromise their integrity.
- 7 Outrigger arm should slide easily into slot on "cable-gate" frame and should not be bent.
- 8 Barn doors should stay open after being tripped and clear of the way of the sheave.
- 9 Check springs on barn doors for integrity.
- 10 Barn doors should not rub on sheaves at any point.
- 11 Barn doors should be parallel to one another.
- 12 All bolts should be tightly fastened.
- 13 Check all steel safety wire for frays and cuts. If damaged, replace.

INSPECTING BLOCK GROUND:

- 1 All bolts should be tightly fastened.
- 2 Push down on both arms to verify operation of arms.
- 3 Check each upper and lower spring bracket for damage that would compromise their integrity.
- 4 Check rod and tube on spring assembly for deformation.
- 5 Check ground strap for damage - if damaged it must be replaced.
- 6 Each ground sheave should maintain a minimum of a 1/4" gap between ground sheave and conductor sheave.
- 7 The cam rotation of the ground sheaves should function properly.
- 8 Spin each ground sheave to check for free rotation.
- 9 Sheaves should not rub against another sheave during rotation.
- 10 Inspect sheave for damage that may compromise the integrity of the sheave.
- 11 Ground sheave pin should not be bent.
- 12 Check all steel safety wire for frays and cuts. If damaged, replace.