CAMERA LOWERING SYSTEMS

Operating Instructions
For CDP Pole Systems

GENERAL NOTES AND COMMENTS

Our raising and lowering system, using the **Individual Disconnect Unit** (**IDU**), incorporates the locked suspension, which ensures the full weight of the camera is carried by the IDU, relieving the lowering tool, pulleys, and wire rope from tension. These in fact, only come under tension during the actual raising and lowering operations. It should be borne in mind, however, that even when the IDU is in the locked position, the lowering cable is attached to the lowering tool or the eyebolt, giving the unit a secondary suspension.

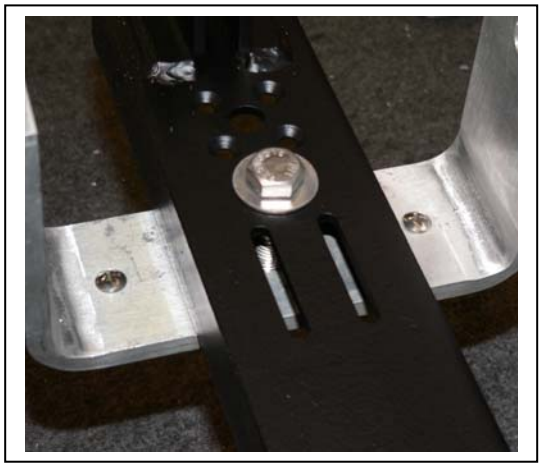
When the electrical connection is broken during unlocking and lowering, no live electrical wires are lowered with the camera.

CAUTION:

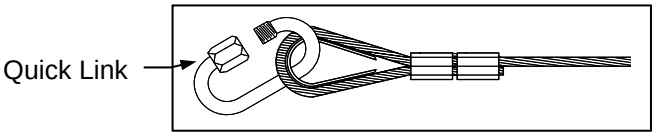
1. The camera should not be lowered during heavy winds.
2. **DO NOT STAND UNDER CAMERA DURING THE RAISING AND LOWERING OPERATIONS.**

LOWERING THE CAMERA

1. Read all instructions. If you do not understand any part of it, call your Sales Rep. or the factory, at 1 (800) 229-4330.
2. Bring the Portable Lowering Tool and drill to the pole.
3. With poles that have 2 service handholes, remove handhole covers from both handholes. If the pole has only one large handhole, remove the cover and set it aside. Do not misplace handhole cover screws.
4. Insert the Lowering Tool into the bottom handhole for a pole with 2 handholes (or the bottom of the handhole opening for a pole with one large handhole. Make sure that the handhole bracket clip "L" shaped piece catches underneath the inside of the handhole frame. (see the sketch).



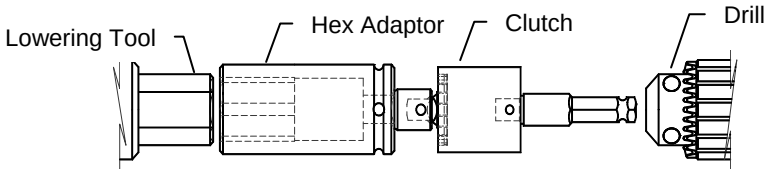
5. The bottom of the handhole has a ½"-13 tapped hole. Bolt the Lowering tool to the bottom of the handhole using the ½" bolt provided. This will stabilize the Lowering Tool to the pole.
6. Open the communications cabinet and check for electrical continuity of the camera.
7. Manually un-reel about 18 to 24" of cable from the winch drum.
8. Reach into upper handhole (for a pole with 2 handholes) and grab the cable that is connected to the camera being lowered. The cable should be attached to an eyebolt inside the pole.
9. Connect the lowering tool cable quick-link to the camera quick-link.
10. Close the quick-link to keep the lowering tool cable from slipping out.



11. Disengage the camera-cable quick-link from the eye bolt in the pole.
12. Manually crank the lowering tool, winding the loose cable on the drum. When the loose cable has been wound up on the drum, continue cranking (or raising) until extra resistance is felt. During the unlocking process, the camera will raise ¾" and then unlocks from the arm.

WARNING: DO NOT CONTINUE TRYING TO RAISE THE CAMERA WHEN ADDITIONAL RESISTANCE IS FELT because the cable will become tighter and tighter. As this occurs, damage to the cable or the Lowering Tool is possible, resulting in the camera disconnecting and falling to the ground.

13. After the camera is raised, reverse the cranking direction and manually lower the camera. If there is slack on the cable during the lowering process, repeat 12 above.
14. If a MANUAL lowering operation is used, continue cranking camera down until camera is about 4ft from the ground or until the operator sees slack on the drum cable. Slack on the drum cable means that the cable quick-link has reached the arm assembly mounted to the pole. The quick-link will not pass through the pulley assembly. The manual lowering operation is complete at this time.
15. If the DRILL ASSEMBLY is used, manually crank the camera and lower it 4ft from the top of the pole. Then the drill assembly can be used.
16. Make sure the drill direction is positioned for lowering the camera.
17. Remove the winch handle.



18. Attach the drill with clutch and adaptor, to the hex head on the winch (see drawing above). Although the Torque Limit is set at the factory, the torque limit may have to be field set.

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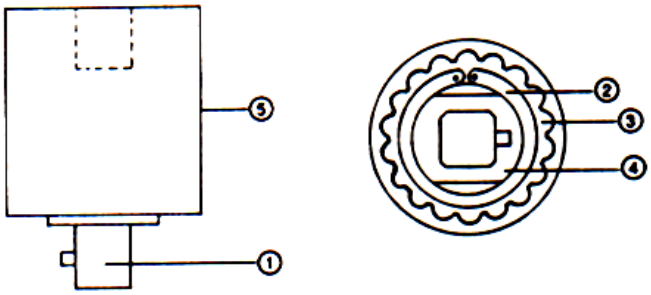
Part# 672-164-00

Torque Limiter

- Attach any calibrated torque indicator to output stub (1) and determine present torque setting while holding the body (5), or vice-versa.
- Remove snap ring (2) and locking plate (3).
- Adjust nut (4) with open-end wrench — clockwise to increase torque, counter-clockwise to decrease torque.
- Obtain new torque reading with the calibrated torque indicator. Repeat preceding step if more adjustment is necessary to reach desired limit.
- Replace locking plate into notches and install snap ring. If locking plate does not "seat," move the adjusting nut slightly until it drops in place. The direction is best determined by whether a minimum torque application or a maximum one is desired.



19. Lower the camera down (do not exceed 300 RPM with the drill) until the camera is about 4ft from the ground or until the operator sees slack on the cable. The lowering operation is complete at this time. **NOTE: USE THE DRILL PROVIDED BY *CAMERA LOWERING SYSTEMS* ONLY.** Higher revolutions will limit the life of the brake in the winch. The brake keeps the camera from free falling during raising and lowering operations.

RAISING THE CAMERA

20. While in the lowered position, check the Disconnect Unit for any irregularities. If there are any signs of irregularities, contact the factory 1 (800) 229-4330. See the Preventative Maintenance section at the end of this document for other items to check.
21. Before raising the camera, a “jumper cable” can be used for connecting the Disconnect Unit to the cabinet, in order to test the camera.
22. After completing the maintenance of the camera, raise the camera to within 4ft of the top using the drill or the crank handle. **Do not exceed 300 RPM with the drill**.
23. If using the drill, remove the drill assembly and put the manual crank handle on to raise the final 4ft.
24. Crank at a medium to slow pace until the camera reaches the top. The camera may rotate up to 180º clockwise or counter clockwise.
25. When the camera reaches the top and the operator feels like the camera cannot be cranked up any further, **STOP** cranking upwards and slowly reverse the cranking direction. **DO NOT OVERCRANK!**
26. The reversed cranking direction will lower the camera into the locked or resting position. The operator should see slack on the cable and on the lowering tool after about ½ of a cranking revolution. Check the communications cabinet. The camera should be energized.
27. With the slack on the cable and the camera cable still attached to the Lowering Tool cable, attach the camera cable to the eyebolt in the pole.
28. After the cable is attached to the eyebolt and the connecting quick-link is closed, disengage the Lowering Tool cable from the camera’s cable.
29. Loosen the outside handhole bracket on the lowering tool and push the Lowering Tool slightly into the pole.
30. Lift up and remove the Lowering Tool from the lower handhole.
31. Install the handhole covers back on the pole.
32. Close and secure the communications cabinet.

Preventive Maintenance

Upon installation of the lowering system, periodic preventive maintenance should be performed. The following is a list of preventive maintenance operations and schedule:

LOWERING TOOL

1. **The tool should be kept in a clean and dry area.**
2. **During <u>every</u> use of the Lowering Tool, the raising and lowering cable should be checked for kinks, cut strands, and any irregularities. Do not run the cable using bare hands, as strayed strands could cause cuts and injuries to hands.**
3. **The gears on the winch should be checked for gearing grease. If the gear box looks dry, gear grease should be applied on the gears only, with a small paint brush. The grease should be applied liberally to cover all gears. Recommended grease should be UNIWRI 2 product #C163520 Manufactured by: Fuchs Lubricants. (Phone: 800-800-OILS) This grease may be obtained through *Camera Lowering Systems*.**
4. **A drop of 10W-30 oil should be applied in opening of casement (see label on the winch). Only apply one drop annually. After applying, crank the winch at least 3 revolutions to distribute the oil.**
5. **Check the cable for any kinks, bends, or strayed cut wires. This will tell you if the cable is rubbing on an obstruction. If the cable is damaged, it will be weakened and possibly break. Damaged cables should be replaced. Handle the wire rope with gloves to avoid possible hand cuts caused by strayed wires.**

DISCONNECT UNIT

1. **Each time the Disconnect Unit is lowered, check the condition of the system. If there are any signs of irregularities (such as bent parts, missing hardware, or frayed cable) contact the factory.**
2. **Keep the guide pin greased and cleaned. Brush on *Super Lube*® by *Synco Chemical* (can be purchased through *Camera Lowering Systems*).**
3. **The locking cams should be checked each time the camera is lowered. Ensure that the shoulder screw is tightened. Check all screws, nuts, and fastenings to ensure that they are tight.**
4. **Check the composite cable for any irregularities.**