

**NONDESTRUCTIVE TESTING MANAGEMENT ASSOCIATION (NDTMA)
RADIOGRAPHY CONTROL ASSEMBLY DRIVE CABLE
INSPECTION, CLEANING AND LUBRICATION**

February, 2000

This information is provided for guidance regarding the inspection and maintenance of drive cables. Radiography companies should combine this information with their own knowledge and experience to develop procedures that are best for them based on the environmental conditions of use. Drive cable connector inspection and maintenance is not included due to the disparity in connector designs and inspection procedures. The connector manufacturers should be contacted to obtain inspection procedures.

INSPECTION

- A. Visually check for defects such as rust, broken strands, kinks, excessive wear, and excessive space between strands.
- B. Physically inspect for stiffness by bending the last 6 inches of the cable into a AU@ shape approximately 3 inches wide. When the end of the cable is released the cable should spring back to an essentially straight shape. Failure to spring back indicates that corrosion or other abnormality has reduced the flexibility of the cable.

CLEANING

Frequency: 3 months and as needed based on daily inspections.

Solvents: Any grease solvent such as naphtha, mineral spirits, varsol, gasoline, or acetone.
The following solvents may be used under special conditions:
– Diesel – do not add dry graphite lubrication.
– WD-40 – allow to dry before applying other lubrications.
– Water based solvents – dry thoroughly and immediately.
Not recommended: Water

LUBRICATION

- A. Dry/Hot Environments: Graphite; Neolube by Huron Industries.
Silicone Grease – very light coat, Dow Corning DC33,
(temp range: -100°F to +355°F).
Mil-G-23827B (temp range: -94°F to +248°F).
Moly Dry Film.
Not recommended: Heavy oils or thick coat of grease.
- B. Wet Environments: Silicone Grease, Dow Corning DC33. Mil-G-23827B. Diesel.
Not recommended: Dry graphite.
- C. Sub-Freezing Environments: Very dry cable – no lubrication. Silicone Grease; Dow Corning DC33,
G.E Verselube.
Mil-G-23827B. Moly Dry Film.
Not recommended: Anything that thickens or freezes.

Note 1: A lubrication that is suitable for one environment might not be suitable for other environments.

Note 2: Lubrication should be applied immediately after cleaning to prevent oxidation.

Note 3: Use of Houghto-quench G oil after cleaning is recommended by the manufacturer of drive cable material; however, this is not a common practice in the radiography industry.