

Division of J.B. Nottingham and Co., Inc.
75 Hoffman Lane
Islandia, NY 11749
631-234-2002
631-234-2360 (fax)
www.jbn-duraline.com

CLEANING AND MAINTENANCE PROCEDURES FOR DURALINE EQUIPMENT

Multi-pin connectors, Light sockets, VP Light Sockets and Ship to Shore style connectors

M182700 Maintenance Kit Contents:

- (1) Can of Electrical Contact Cleaner**
- (1) Can of Silicone Spray Lubricant**
- (1) Extension tube for spray can**
- (1) 1/4" diameter Nylon Tube Brush**
- (1) 3/8" diameter Nylon Tube Brush**
- (1) 1/2" diameter Nylon Tube Brush**
- (1) 1" diameter Nylon Tube Brush**
- (1) Sheet of Fine grit Emery Cloth**

Expected Life - Duraline connector and receptacle bodies are molded of rugged, oil, ozone, weather, water and abrasion-resistant rubber. There is no real designated "expected life" as various environmental conditions will determine how long the products will last in the field.

Recommended Care – The only required maintenance is that the plugs should be kept clean, and the rubber molded portion of the male pins and female sockets must be kept lubricated. Duraline's **M182700** Cleaning and Maintenance kit comes with a spray-on lubricant for this purpose. Clean and Lubricate approximately every 100 insertions and withdrawals, or every six months (whichever comes first) as a general guideline. Cleaning and maintenance should also be performed whenever dirt or contaminants are observed during regular use, when sealing portions of connectors appear dry and whenever the equipment may be in the maintenance shop for other repairs. Duraline plug and receptacle bodies and seal areas kept in storage should also be lubricated to prolong their usable life. Naturally, environmental factors and the specific lubricant used will affect the duration of its effectiveness; therefore, periodic inspections should be performed to insure that the molded pins and seal areas are pliable and lubricated. Periodic inspections should also be performed to check for damage that may affect safe operation of the equipment.

Cleaning procedure for Female contacts in multi-contact connectors

To clean female contacts ranging in I.D. from .187 (3/16") through .625 (5/8"), follow the steps below:

- Disconnect/shut down power to connector(s) to be cleaned.
- Verify that power has been disconnected with a voltmeter before proceeding.
- Using an OSHA compliant reduced-flow air gun and eye protection, blow any loose material from the inside of the contacts out.
- Using the provided electrical contact cleaner with guide tube installed, spray the cleaner into the contact to be cleaned. Allow to soak for 2-3 minutes.
- Select the appropriate sized tube brush from the cleaning and maintenance kit for the contact you are cleaning and manually scrub the inside surface area of the contact to remove buildup of contaminants that can cause reduced conductivity of connections.
- Shake out cleaner and loose debris.
- Use the reduced-flow air gun and wear eye protection to blow out the remaining material inside the contact.
- Spray the inside of the rubber sealing area between the face surface of the connector and the front edge of the contact with silicon spray-on lubricant (provided in the Maintenance kit).
- Return connector to service.

Cleaning procedure for Male contacts in multi-pin connectors

To clean male contacts ranging in diameter from .187 (3/16") through .625 (5/8"), follow the steps below:

- Disconnect/shut down power to connector(s) to be cleaned.
- Verify that power has been disconnected with a voltmeter before proceeding.
- Using an OSHA compliant reduced-flow air gun and eye protection, blow any loose material from the contact surface.
- Using Electrical contact cleaner with guide tube installed, spray the cleaner onto the contact to be cleaned. Allow to soak for 2-3 minutes.
- If contact is mildly dirty, rub with a rag to clean and remove cleaning fluid.
- If contact has evidence of corrosion, or if rag cleaning does not satisfactorily remove dirt, rub contact with a strip of emery cloth (fine grit). For convenience and ease of use, a 3/8" to 1/2" wide strip of emery cloth should work well for all Duraline multi-pin connectors (emery cloth can easily be torn by hand into even strips.) Be careful not to remove too much material during this process. Remove only enough to restore the bright yellow finish of the brass contact. Do not use emery cloth on sealing portion of the rubber-molded area.
- Wipe any loose material from the connector.
- Use the reduced-flow air gun and wear eye protection to blow away the remaining material on the connector.
- Spray the rubber sealing area between the face surface of the connector and the contact with silicon spray-on lubricant (provided in Maintenance kit) to lubricate and protect.
- Return connector to service.

Maintaining and Re-lamping Light sockets (non-Vapor Proof)

Light Streamers and hand lights require only very minimal maintenance as long as bulbs are installed in the sockets. To replace the bulb, follow the instructions below:

- Disconnect/shut down power to socket(s) to be worked on.
- Remove bulb as you would any other household lamp bulb.
- Visually inspect socket to see if any contaminants or corrosion is present in the screw shell.
- Clean if required, Electrical Contact Cleaner and the appropriate sized nylon tube brush provided in the Duraline **M182700** Cleaning and Maintenance kit.
- Use a reduced-flow OSHA compliant air gun and eye protection, and blow the cleaning fluid and material from the socket.
- Spray the rubber lip around the socket (that will contact the neck of the bulb when installed) with silicon lubricant.
- Install new lamp bulb of the proper Wattage and Voltage for the application.
- Return light assembly to service.

Maintaining and Re-lamping Vapor Proof Light sockets

Vapor Proof Light Streamers and hand lights require only very minimal maintenance as long as bulbs are installed in the sockets. To replace the bulb, follow the instructions below:

- Disconnect/shut down power to socket(s) to be worked on.
- Remove metal-framed protective guard by removing screws located near the base of the guard.
- Unscrew (turn counter-clockwise) the clear globe to gain access to the lamp bulb.
- Remove bulb as you would any other household lamp bulb.
- Visually inspect socket to see if any contaminants or corrosion is present in the screw shell.
- Clean if required, Electrical Contact Cleaner and the appropriate sized nylon tube brush provided in the Duraline **M182700** Cleaning and Maintenance kit.
- Use a reduced-flow OSHA compliant air gun and eye protection, and blow the cleaning fluid and material from the socket.
- Spray the rubber lip around the socket (that will contact the neck of the bulb when installed) with silicon lubricant.
- Install new lamp bulb of the proper Wattage and Voltage for the application.
- A thin coating of Dow Corning 111 sealant should be applied around the threads of the globe. Install globe by fitting into the molded/threaded hole in the base of the lamp unit and turning clockwise until it bottoms out.
- Install metal-framed guard.
- Return light assembly to service.

Recommended Maintenance Procedures For Ship To Shore Contacts

Duraline recommends the following maintenance procedure to assure long-life of positive-latching, high amperage cable connectors. This procedure involves constant visual inspection as well as periodic scheduled maintenance procedures.

CONSTANT VISUAL INSPECTION

Each time a connection assembly is handled, a visual inspection should occur. Some of the visual points to look for are:

A) CONTACTS (BRASS PORTION)

- 1) Clean and free of any foreign objects such as grease, dirt, etc.
- 2) Deformation from any mechanical abuse
- 3) Burned contacts (caused by poor fit, mating or un-mating while under-load)
- 4) Positive latch blade in male contact works freely and is free of deformation

B) INSULATING SLEEVES

- 1) Free from cracks and tears
- 2) Clean and free of any foreign objects such as grease, dirt, etc.
- 3) Release button freely moves up and down

C) CABLE INSULATION and JACKET

- 1) Same as Items B-1 & 2

CLEANING INSTRUCTIONS

- Disconnect/shut down power to connector(s) to be cleaned.
- Verify that power has been disconnected with a voltmeter before proceeding.
- Set Connector in upright position in rack and clamp.
- Using an OSHA compliant reduced-flow air gun and eye protection, blow any loose material from the inside of the contacts out.
- Using the provided electrical contact cleaner with guide tube installed, spray the cleaner onto the contact to be cleaned. Allow to soak for 2-3 minutes.
- Insert tube brush between connector and sleeve and vigorously scrub along contact surface.
- Select the appropriate sized tube brush from the cleaning and maintenance kit for the contact you are cleaning and manually scrub the inside surface area of the contact to remove buildup of contaminants that can cause reduced conductivity of connections.
- Shake out cleaner and loose debris.
- Use the reduced-flow air gun and wear eye protection to blow out the remaining material inside the contact.
- Depress release button to empty cleaning fluid from button chamber.
- Spray the inside of the rubber sealing area with silicon spray-on lubricant (provided in the Maintenance kit).
- Return connector to service.