



GUIDELINES FOR 8103 INK USERS

DM-1 CARTRIDGES

Due to the fast drying qualities of 8103 ink, needle tips on open cartridges will dry out when not in use. If the cartridge is not properly re-primed after idle time, clogging can lead to skipping and non-uniform dot size. These guidelines are being published in order to make 8103 DM-1 users aware of special procedures that need to be followed when using this ink.

- When opening a fresh cartridge, make sure that the cartridge is well primed before inking:
 - **Step 2** of the Instructions for Cartridge Use (see attached) describes plunging the main shaft up and down until the bottom of the cartridge is entirely filled with ink and no air bubbles are present. Due to the high viscosity of 8103 ink, this should be done for at least 30 seconds to ensure that the ink is well established in the area adjacent to the needle tip.
 - **Step 6** of the Instructions for Cartridge Use describes actuating the plunger “until ink is seen at the tip of the filament”. To ensure consistent dot size from initial startup, the user should perform additional actuations until the filament is completely saturated with ink.

The above steps should be sufficient to ensure consistent ink flow. If the cartridge does not yield uniform dots after priming and Z-height adjustment, remove the cartridge from the inker and repeat Step 2.

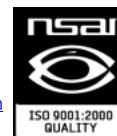
- Since 8103 is a fast drying ink, some additional priming may be necessary after long stoppages in order to replenish the supply of liquid ink at the needle tip. Once ink flow has been re-established, any residual dried ink is quickly dissolved and the cartridge will function consistently. If the down time was a few hours, clean the needle tip with a lint free swab saturated with DieMark Remover, M-Pyrrol, or another suitable solvent and actuate the inker several times to re-establish ink flow. Extended down times may require a larger number of actuations to re-establish flow. Additional priming is necessary if dot skipping and/or inconsistent dot size is observed after start-up.
- With proper priming, DM-1 cartridges will maintain consistent flow for 2 days after opening. Cartridges used beyond this length of time may produce sporadic results due to partial drying of the ink in the interior of the cartridge.

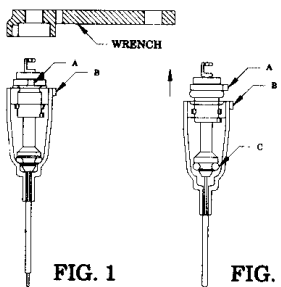
DM-2 CARTRIDGES

Since 8103 is a fast drying ink, open DM-2 cartridges may require additional priming if they are allowed to sit idle for extended periods of time. This becomes increasingly critical with smaller cartridge sizes and smaller dot size settings. Once ink flow has been re-established, any residual dried ink is quickly dissolved and the cartridge will function consistently.

To prime the cartridge:

- 1.) Push the “RESET” button on the controller for at least three seconds and hold down until ink appears at the needle tip. (For maximum efficiency, adjust controller dot size setting to maximum when performing this step. Reset dot size to desired setting after priming is complete.)
 - 2.) Once priming is completed, clean excess ink from the needle tip with a clean, lint free cloth or swab. Verify Z-height adjustment and adjust as required.
- The priming procedure described above is usually sufficient to get ink flowing again. If ink flow cannot be re-established by priming alone, a lint free swab saturated with DieMark Remover, M-Pyrrol, or another suitable solvent can be placed in contact with the needle tip during the priming operation. This will aid in dissolving the dried ink inside the needle.
 - DM-2 cartridges will maintain consistent flow for 2 – 3 days after opening. Cartridges used beyond this length of time may produce sporadic results due to partial drying of the ink in the interior of the cartridge.

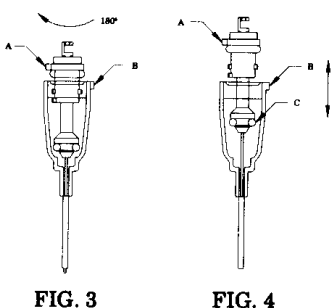




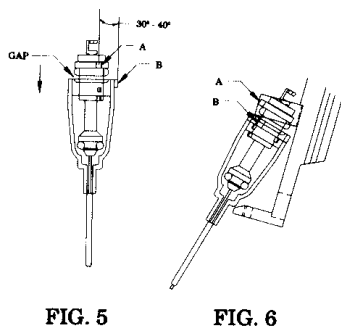
DIRECTIONS

1. Align main shaft indicator (A) with body indicator (B), (FIG. 1) using the plastic wrench. While holding the cartridge upright and keeping the indicators aligned, pull up the main shaft with the wrench until it stops (FIG. 2). Make sure the bottom O-ring (C) has also been raised. If not, lower the main shaft to original position and repeat the above procedure.

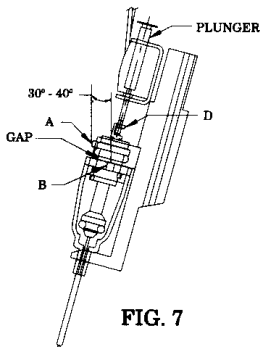
CAUTION: CARE SHOULD BE TAKEN TO AVOID DAMAGING EXPOSED FILAMENT.



2. Turn the wrench 1/2 turn to see indicator (B) through the wrench top hole (FIG. 3); slowly pull up the main shaft until the bottom O-ring (C) is half-way up the cartridge (FIG. 4). Using the main shaft slowly plunge up and down until the bottom of the cartridge is entirely filled with ink and no air bubbles are present.



3. Slowly lower the main shaft down to the position indicated in (FIG. 3), then turn it in either direction until the main shaft indicator (A) is 1/4 turn from the body indicator (B), (FIG. 5). Now there should be a GAP between top O-ring and cartridge body, and you should not be able to move the main shaft down or up any more unless the indicators are either aligned or at 180 degrees apart.
4. Push the filament holder (D), (FIG. 7) down, then remove the wrench. The cartridge is now ready to be mounted into place on the holder.



5. Push the main shaft section into the metal clip. Make sure the main shaft indicator (A) is pointing outwards (FIG.6), then press the body down until it snaps into place (FIG. 7). Make sure the GAP has not closed and the indicators are still at 1/4 turn from each other; if not, rotate the body until they are.
6. Insert the plunger through the solenoid hole and push until it snaps into the filament holder (D). In this position the plunger should move back and forth freely. Actuate the plunger until ink is seen on the tip of the filament. Now the inker is ready for use.

