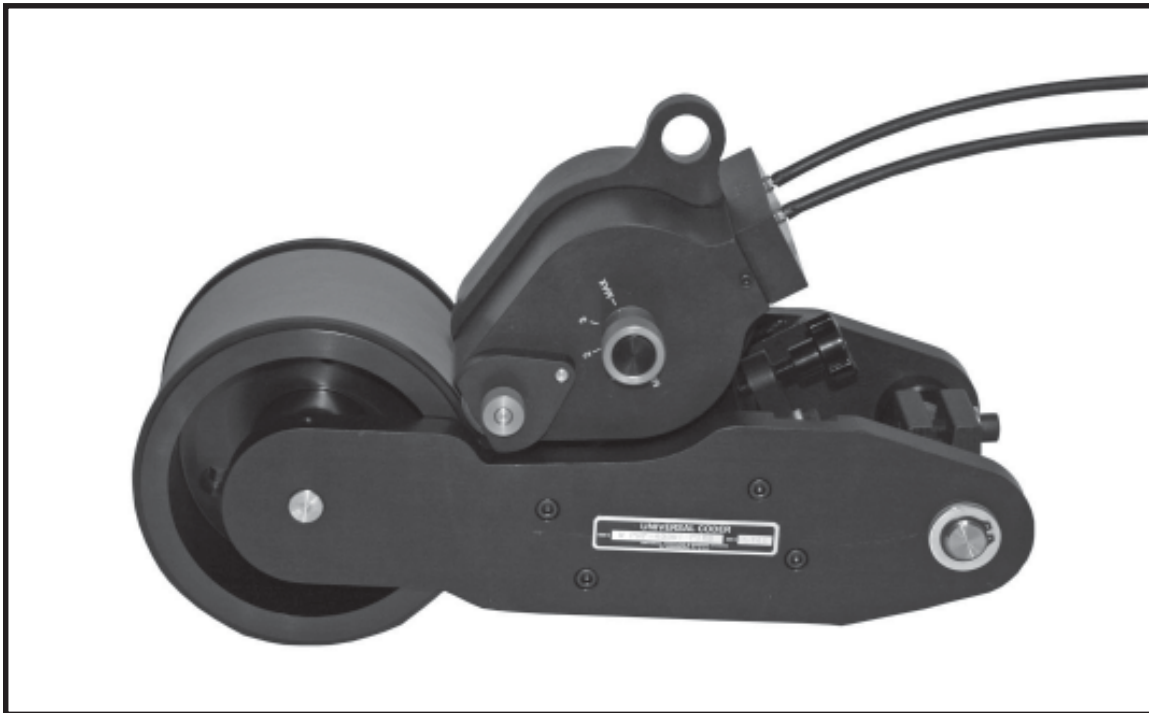# STENCILING & MARKING SYSTEMS

OWNER'S MANUAL

NON-POROUS
WPNP-400NI-PIDS, WPNP-400NI-T-PIDS,
WPNP-400NI-PIDS-D & WPNP-400NI-T-PIDS-D
WEB PRINTERS

INSTALLATION - OPERATION - MAINTENANCE

IMPORTANT NOTE

UNIVERSAL products are manufactured to exacting standards and every available step has been taken to assure your complete satisfaction. It is most important, however, that the instructions contained in this manual are read and carefully followed for best results. Failure to do so may result in unsatisfactory performance, damage to the equipment and personal injury.

- LIMITED WARRANTY -

The Universal WPNP-400NI-PIDS & WPNP-400NI-PIDS-D Non-Porous Web Printers meet the requirements for printing on non-porous continuous web materials. A 4" print width capacity and a 19.68" circumference print drum easily accommodates large logos and text messages. These printers are designed for top mount installations and are only available in a non-indexing (continuous print) model.

The WPNP-400NI-PIDS-D Digital Web Printers are offered in two different configurations for use with Universal's PIDS-DIGITAL-CE Programmable Ink Delivery Systems. To provide the necessary web motion and velocity information to the PIDS-DIGITAL Control, one of the installed Web Printers must be equipped with an inductive proximity sensor and a specially modified print drum. These specially modified printers are considered digital models and have model numbers WPNP-400NI-PIDS-D and WPNP-400NI-T-PIDS-D.

NOTE: The "D" in the stock number indicates a Digital model, the "T" indicates "Telos Drum Cover for metric RIBtype".

If a second Web Printer is installed on the same web line, it does not need the inductive proximity sensor and will operate as a slave printer to the primary digital printer installed. In this instance, the second printer must be printing on the same web as the primary printer and must be printing the same amount of text since both printers will receive the same amount of ink from the PIDS Control System. Specific details on the Digital Models are provided on page 16 of this manual.

The specification section includes drawings with the basic dimensions of the printers, the net weights, maximum die capacities, maximum print width and print drum circumferences. This section also lists the specifications for the printing dies and an explanation of the Non-Indexing models and the mounting configuration.

QUICK START

With a full understanding that very few people like to read manuals or have the time to do so, we have created a Quick Start manual which will get your printer operating in just a few minutes.

To keep your printer operating properly, it is important to read and understand this manual which explains the basic operation of this printer.

The following pages of this manual explain the installation, operation and maintenance of the WPNP-400NI-PIDS & WPNP-400NI-PIDS-D Series of Non-Porous Web Printers.

SPECIFICATIONS

WPNP-400NI-PIDS & WPNP-400NI-T-PIDS
WPNP-400NI-PIDS-D & WPNP-400NI-T-PIDS-D SPECIFICATIONS

4.53"
(115 mm)

6.53"
(166 mm)

14.27"
(362 mm)

16.16"
(410 mm)

8.69"
(221 mm)

3.72"
(94 mm)

11.54"
(293 mm)

6.27"
(159 mm)
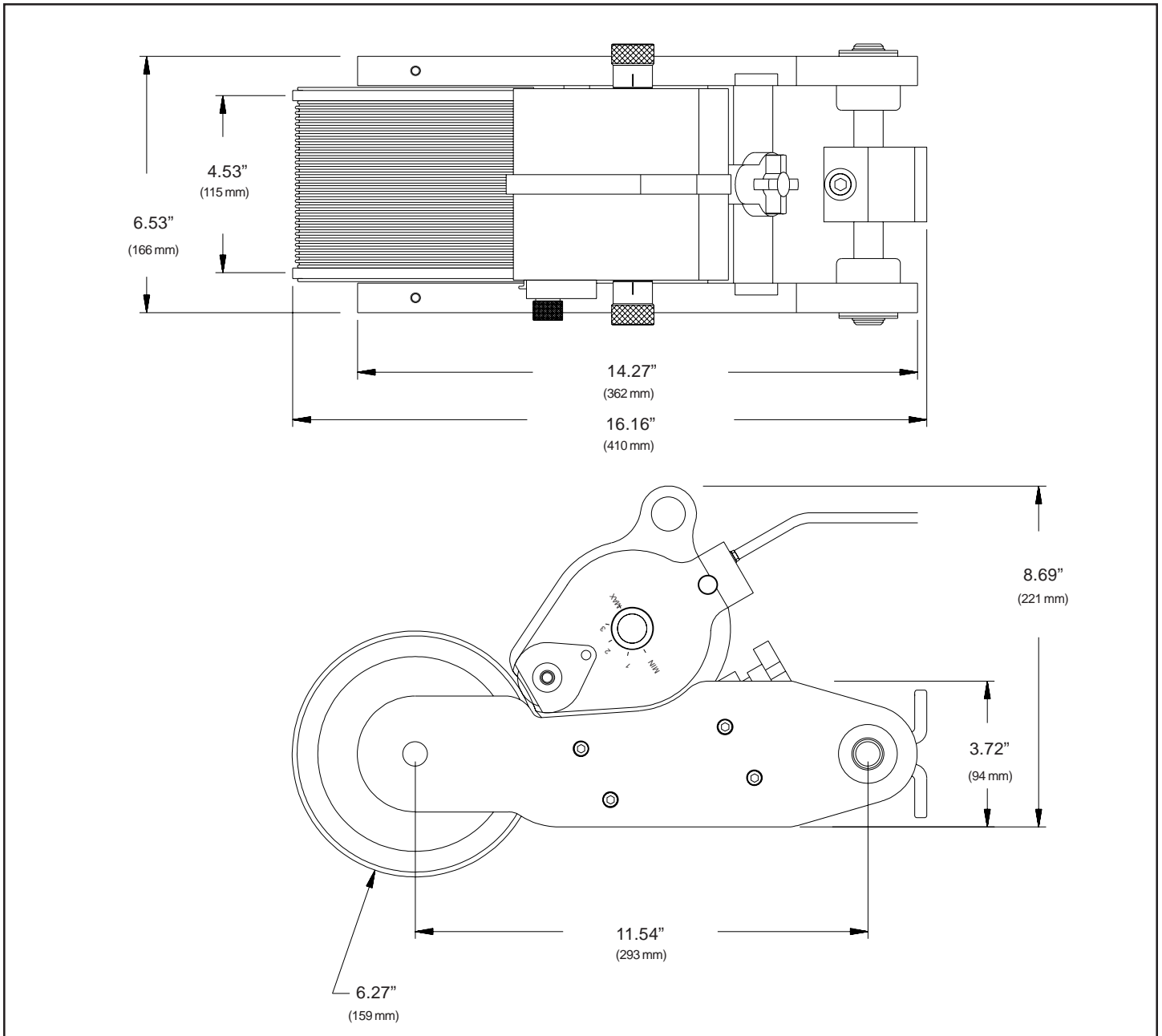
NET WEIGHT: 22 LBS. - 2 OZS. (10.04 KG.)
MAXIMUM DIE SIZE STANDARD: 4" (30 RIBS) X 19-1/8" LENGTH
MAXIMUM DIE SIZE METRIC: 100 MM (28 RIBS) X 430 MM LENGTH
PRINT DRUM CIRCUMFERENCE: APPROXIMATELY 19.68" (500 MM) MEASURED AT THE DIE FACE

4

RIBtype® PRINTING DIES

Universal Non-Porous Web Printers are designed to use Universal RIBtype® printing dies which have a molded rib backing. The ribs on the back of the die snap into mating ribs in the Drum Cover on the print drum. The printing dies are produced in many standard character styles and sizes and are available in sets containing a combination of individual alphabetic and numeric characters or in sets containing numeric characters only. These character sets or "sorts" can be used to make up text messages and code numbers as necessary.

Dies are also available in "logo" form in which a complete text message is produced on a single piece of rib backed rubber. Logo dies are much faster to change and generally produce better print quality due to their unitized construction. Custom type styles, company logos, and trademarks can also be photographically reproduced from black and white art work.
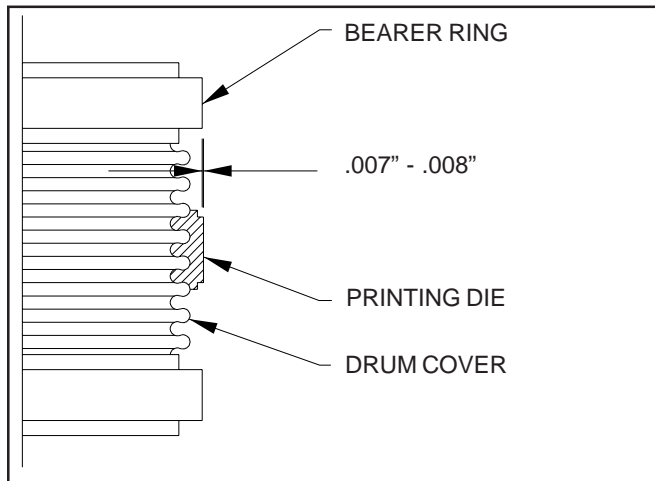

BEARER RING

.007" - .008"

PRINTING DIE

DRUM COVER

FIGURE 1

Printing dies are manufactured to precision thickness tolerances which are very critical to the performance of these printers. When installed, the face of the printing die should extend only .007" - .008" beyond the radius of the Bearer rings as shown in Figure 1. Using dies that do not meet the design specifications will result in poor print quality and possible damage to the transfer roll.

Although there are several competitive rib backed die systems available, it is very important to note that they are not all made to the same rib spacing or thickness specifications and they are not interchangeable.

PRINTER MODELS DESIGNED FOR METRIC RIBtype® PRINTING DIES

Universal also offers Metric RIBtype® Die Systems for use in countries where metric character sizes are the standard. The Metric dies are thicker and the rib spacing differs slightly from the standard printing dies therefore the two versions are not compatible. **To accommodate the differences, the print drums for Metric dies are machined to a slightly different diameter from the U.S. versions.**

The printer model numbers on Metric printers will have a "-T" suffix and the Metric Drum Covers have a distinct pink color.

XF NEOPRENE INK ROLLS FOR THE WPNP-400NI-PIDS SERIES

The WPNP-400NI-PIDS SERIES systems are designed to use the re-inkable, XF Neoprene Ink Rolls made from an extra firm density neoprene material. The extremely fine cell structure of these rolls provides exceptionally good print quality and can be used with a variety of alcohol or glycol base inks. Unless you ordered a pre-inked roll with your machine, these rolls are supplied in a dry condition. Pre-inked rolls are available from the factory and are recommended for first time users but if you have a dry roll, please follow the pre-inking instructions on page 14.

FIGURE 2

INSTALLING THE PRINTER

When choosing a location for the installation of the printer, several issues should be considered:

1 - It is always best to install the printer in a location that is free from dust and other contaminates which can cause degradation of the print quality. Fast drying Non-Porous Inks become tacky during the drying process and printing dies will pick up dust particles and require more frequent cleaning.

2 - If possible, install the printer in a location that provides for easy access. Although the inking system on these printers can be removed in seconds for convenient maintenance on a work bench, changing printing dies requires easy access to the print drum.

3 - The WPNP-400NI-PIDS Printers should be mounted at an angle of 15 to 30 degrees from horizontal as indicated in the Figure below.

Use two 3/8" diameter bolts to attach the printer's mounting bracket to a rigid mounting plate. Ensure that the printer is aligned to track parallel with the web material and that both Rubber Friction Bears on the Print Drum contact the web with equal pressure.

When printing on thin materials, it is imperative that the print drum is supported by an idler roll or a flat platen under the web as indicated.

The PIDS System which will supply ink to the printer during operation should be located as close as possible to the printer to minimize the length of the ink tubes through which the ink is fed. (See additional details on the installation of the PIDS System in the PIDS Manual.)
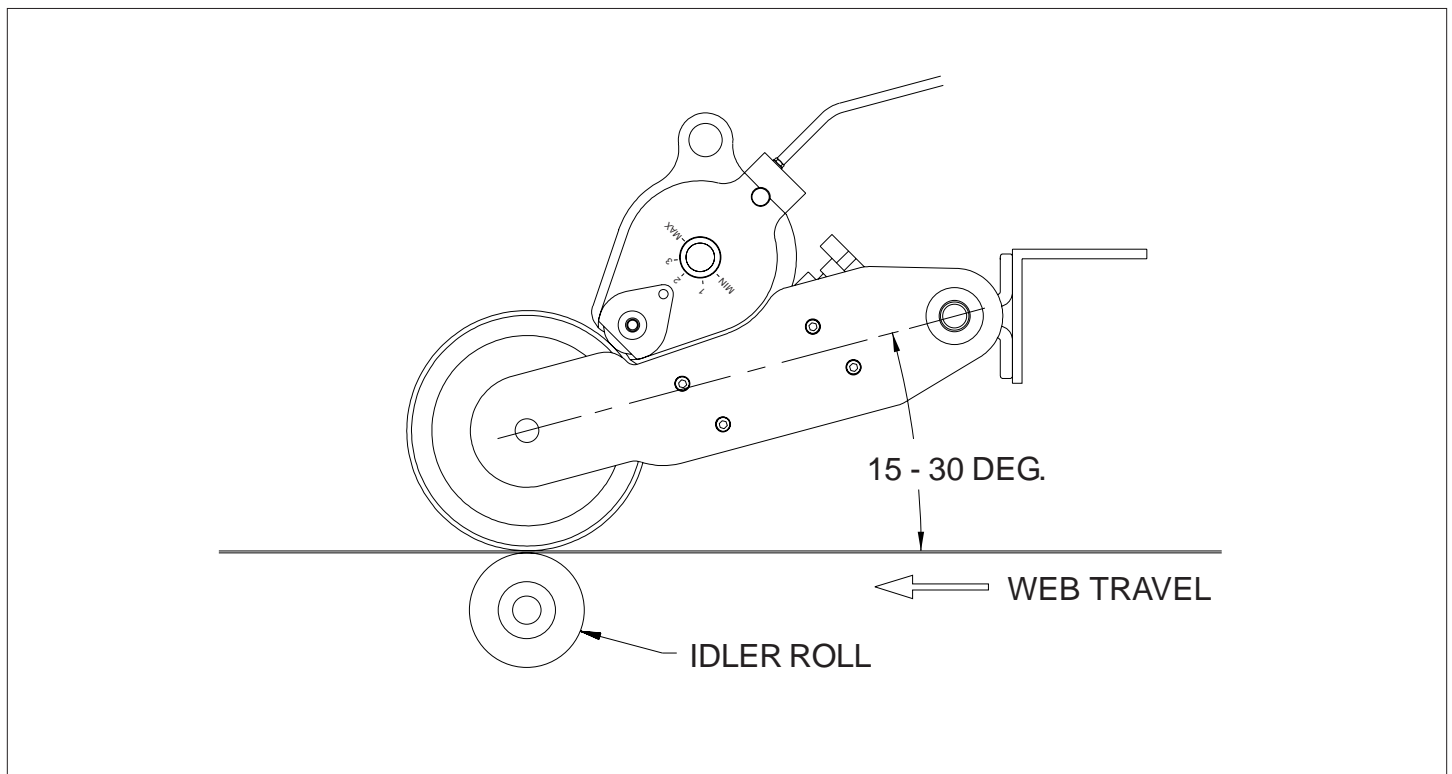

FIGURE 3

PREPARING THE PRINTER FOR INSTALLATION OF THE INK ROLL

The WPNP-400NI-PIDS SERIES Non-Porous Web Printers are designed for top mount installation to print on continuous non-porous web materials.   To prepare the printer for use, the following steps should be followed.

These Printers have been designed with an easily removable inking system. The Ink Rolls can be installed with the inking system on or off the printer. Prepare the printer as follows:

1 - Remove the Thumbscrews from both sides of the Inking System
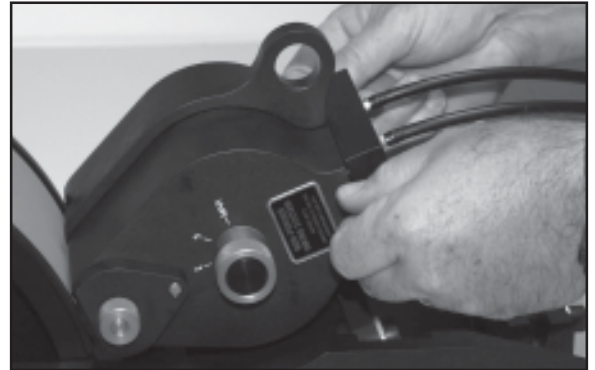

FIGURE 4

2 - Carefully remove the Wiper Adapter from the Inking System. Do not damage the thin Mylar Wiper.
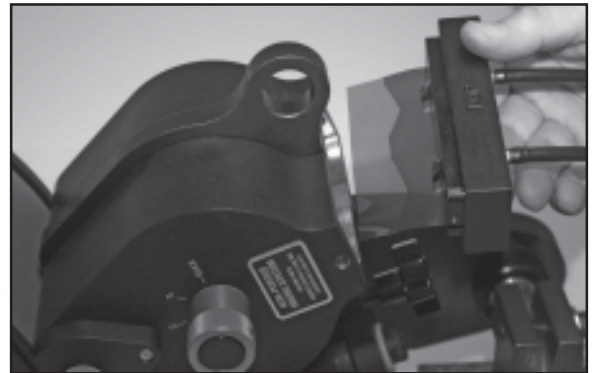
FIGURE 5

3 - Loosen the Inking System Locking Knob by turning the knob counterclockwise approximately 1 revolution.

FIGURE 6

4 -Swing the Inking System Locking Assembly to the left (counterclockwise) as shown.

FIGURE 7

5 -The Inking System can be removed for off-line installation of the Ink Roll by grasping the Inking System Assembly by the lifting tab and pulling the Inking System out of the machine.

FIGURE 8

6 -Remove the Knurled Retaining Nut by turning it in a counterclockwise direction.

FIGURE 9

5 -Remove the Drive Wheel Cover by lifting it straight off the axle and locating pin.

FIGURE 10

8

6 -Remove the Knurled Drive Wheel.

> **Note:** The Knurled Drive Wheel is installed on the top of the Anilox Roll and is engaged by 3 stainless steel drive pins.

FIGURE 11

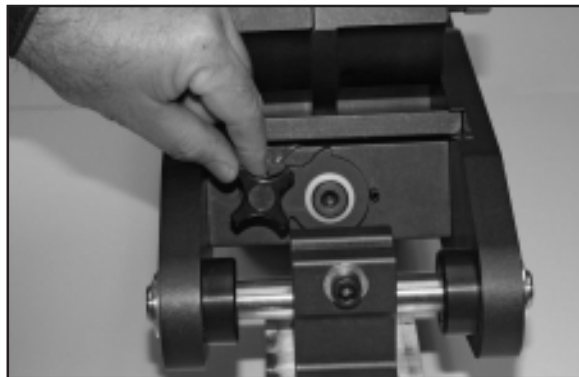**7 -Remove the Inking System Cover by carefully pulling the Cover straight off the axle. Be very careful not to let the cover drag across the surface of the Anilox Roll during removal.**
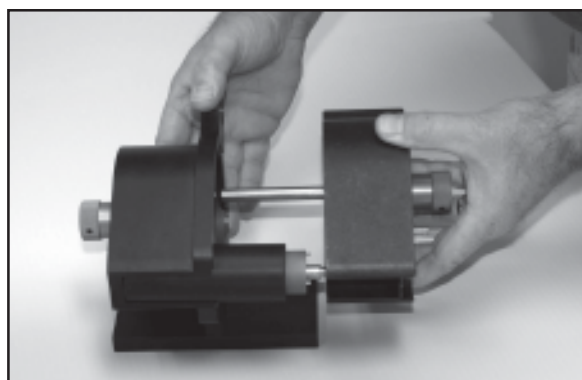
FIGURE 12

PREPARING THE XF NEOPRENE INK ROLL FOR INSTALLATION

It is imperative that the ink roll installed on this printer is properly inked and prepared for installation. If you ordered a pre-inked roll with your printer, the following steps will guide you through the preparation and installation of this roll. If you have a dry roll, see page 14 for inking instructions.

1 -To prepare the pre-inked roll for installation, you will need a clean piece of cardboard, a pair of rubber gloves, a pair of scissors or razor knife and a round metal rod approximately 1/4" - 3/8" (6mm - 9mm) diameter by at least 6" (150mm) long. A round shank Phillips screwdriver will work nicely.

> Note: Ink will stain clothes and other materials so careful handling is required during this procedure.

FIGURE 13

2 -Put on the rubber gloves and carefully cut the end of the bag open and remove the Ink Roll.

Pre-Inked Rolls are intentionally oversaturated to prolong storage life. There may be a small amount of liquid ink in the bag when it is opened so be careful handling the opened bag after the roll is removed. Ink may run out.
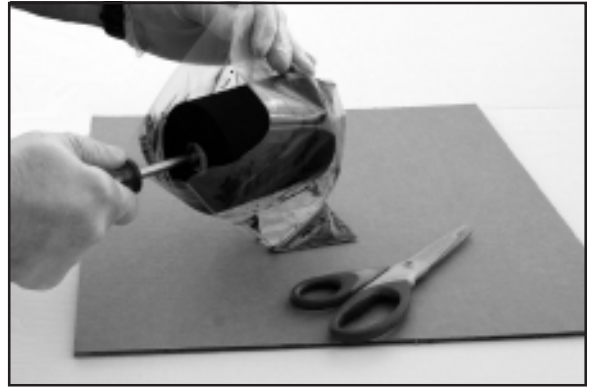

FIGURE 14

3 -Insert the screwdriver through the hole in the plastic core and roll the Ink Roll several times across the piece of cardboard while applying light pressure to remove the excess ink.

For most applications, you want the roll to be fully saturated but not dripping wet. If in doubt about the proper saturation level of the roll during this process, it is better to remove a bit more ink than not enough. Installing a roll with too much ink will cause dripping inside the inking system housing. For applications where web speed is over 400 RPM, remove more ink from the roll in this process.
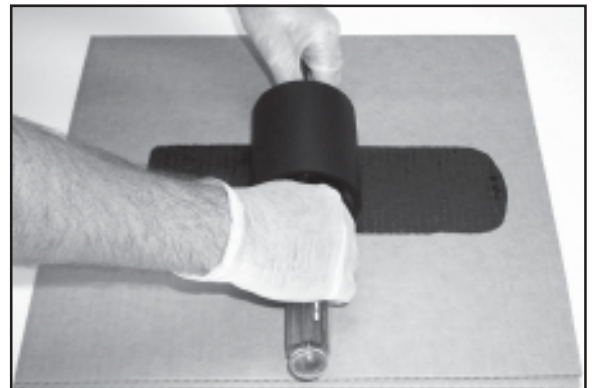
FIGURE 15

INSTALLING THE INK ROLL

1 -Rotate both the Ink Roll Eccentric Knobs on the Inking System Cover to the "MIN" position.

In this position, the ink roll will not touch the Anilox Roll when the cover is reinstalled.

FIGURE 16

2 -While holding the Inking System Cover in one hand, slide the Ink Roll onto the Ink Roll Axle.

Use the round rod or screwdriver used during the ink roll preparation procedure to position the roll and slide the roll onto the ink roll axle.
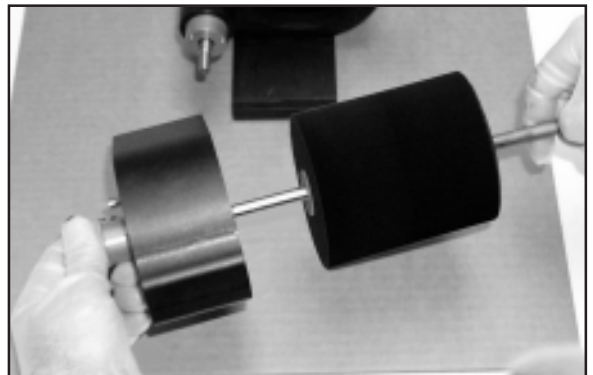
FIGURE 17

3 -Carefully guide the Cover Assembly onto the Inking System being careful not to scratch the surface of the Anilox roll in the process.
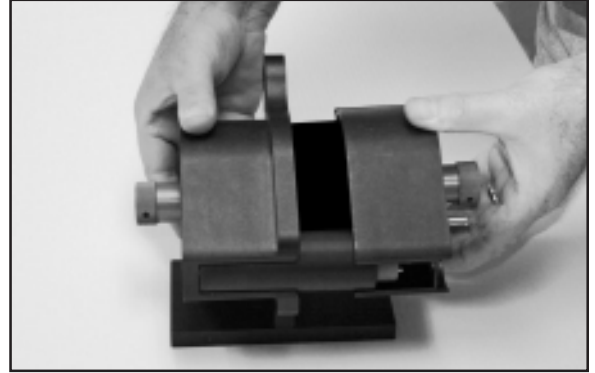
FIGURE 18

4 -When the cover assembly is properly positioned against the Inking System Assembly, replace the Knurled Drive Wheel.

Carefully align the 3 stainless steel pins on the top of the Anilox Roll with the 3 holes in the Knurled Drive Wheel. When the Knurled Drive Wheel is properly engaged, the top of the stainless steel pins will be approximately even with the top surface of the Knurled Drive Wheel.
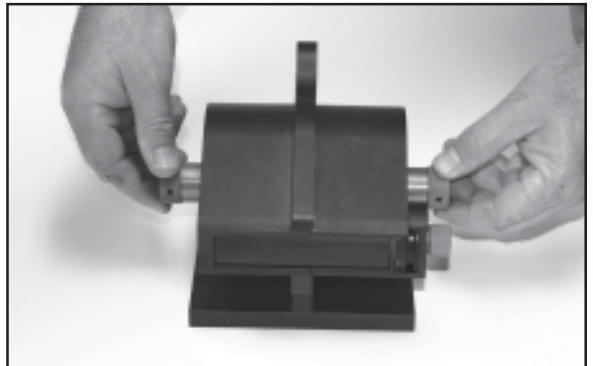
FIGURE 19

5 -Replace the Drive Wheel Cover by aligning the two holes in the cover with the Anilox Roll Axle and the Stainless Steel Locating Pin. Ensure that the cover is positioned completely against the Inking System Cover.

FIGURE 20

6 -While holding the Drive Wheel Cover in position, replace the Knurled Retaining Nut. The Knurled Nut should be just tight enough to hold the Drive Wheel in place. *Do not over tighten this nut.*

The inking system is now ready for final adjustment and use.
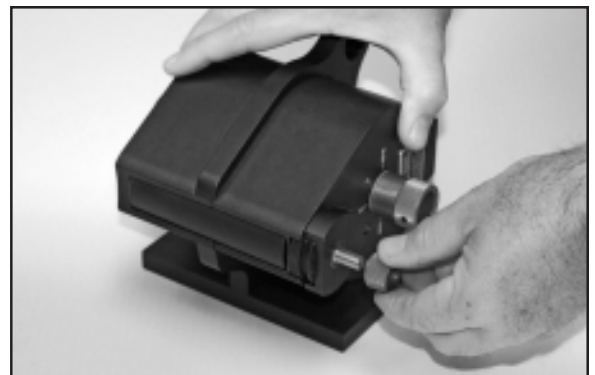
FIGURE 21

REINSTALLING THE INKING SYSTEM ON THE PRINTER

1 -Align the Inking System baseplate with the two slots on the inside of the Printer Side Frames and slide the Inking System into the printer.

FIGURE 22

2 - Rotate the Inking System Locking Assembly to the vertical position and lightly tighten the Locking Knob.
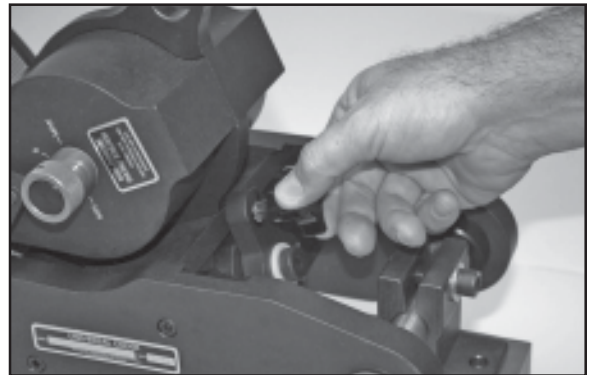
FIGURE 23

3 -Carefully insert the Wiper Adapter into the Inking System. The plastic Wiper must be installed under the Ink Roller with the side of the Wiper Block marked "INSTALL THIS SIDE UP" facing up as shown.

FIGURE 24

4 -Reinstall both Thumbscrews to secure the Wiper Adapter.

FIGURE 25

INSTALLING THE PRINTING DIES

1-To install Printing Dies on the Print Drum, first mix a solution of water with a small amount of liquid dishwashing detergent to serve as a lubricant. This will make the installation of the die much easier. Using a sponge saturated with this mixture, moisten the ribs on the back of the Die.

> Do not use any other lubricants such as silicone or oil on the Printing Dies.

FIGURE 26

2-Align the ribs on the back of the printing die with the grooves in the Drum Cover. Starting with one end, firmly press the die into the drum cover until fully engaged. Continue pressing the ribs together, working from one end of the die towards the other.

FIGURE 27

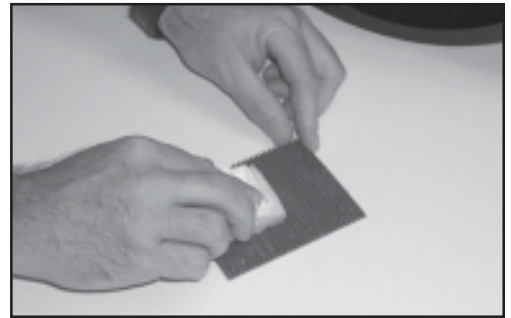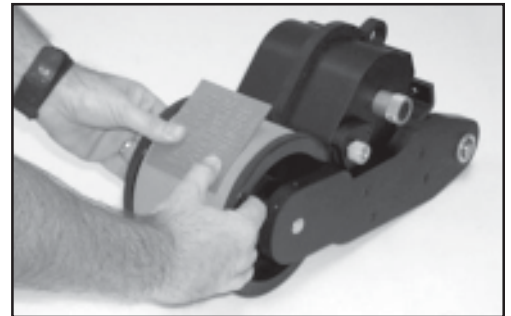**3- While rotating the Print Drum by hand or under power, slowly rotate <u>both</u> the Ink Roller Eccentric Knobs from the "MIN" towards the "MAX" position and observe the face of the printing dies for ink. Proper adjustment should be reached at a position between the "2" and "3" reference numbers.**

> The Ink Roller Eccentric Knobs move the Ink Roll into contact with the Anilox Roll. The Eccentrics should not be turned any more than necessary to apply a uniform coating of ink to the die face.
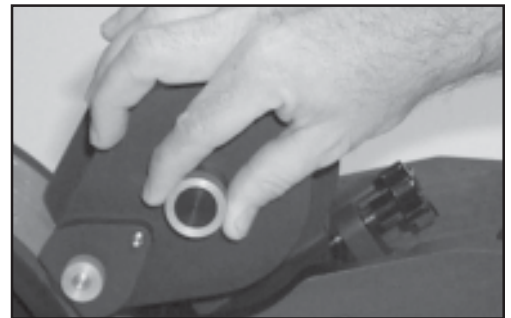
FIGURE 28

INKING SYSTEM POSITION ADJUSTING KNOBS

The Position Adjusting Knobs serve two functions. First, they provide adjustment for the contact pressure between the Anilox Roll and the face of the Printing Dies. The Anilox Roll should contact the face of the printing dies with just enough contact pressure to properly transfer ink. Secondly, the Adjusting Knobs allow for a small degree of angular alignment between the Anilox Roll and the face of the dies. The surface of the Anilox Roll must be adjusted exactly parallel with the face of the Printing Dies in order to ensure uniform transfer of ink across the full width of the Print Drum. If adjustment is required, loosen the Inking System Locking Knob and make small adjustments to the Position Adjusting Knobs. Retighten the Inking System Locking Knob and check the print quality. After the correct adjustment has been made, the Position Adjusting Knobs should require no further adjustment.

1 - There are 2 Position Adjustment Knobs on the Joining Bar at the bottom of the slots with threaded shafts which contact the front of the Inking System Baseplate. These knobs have been roughly set at the factory but may require fine adjustment when the system is first used.

> Do not adjust these Knobs unless the print quality indicates a need to do so.

FIGURE 29

PRE-INKING A NEW XF NEOPRENE INK ROLL

Note: Dry rolls must be pre-inked before using the PIDS System.

Warning: Non-Porous Inks contain flammable solvents. Do not smoke or handle these rolls in the presence of sparks or open flames. Inks will also stain clothing, furniture, carpeting and your hands. Rubber gloves should be worn during the following procedures.
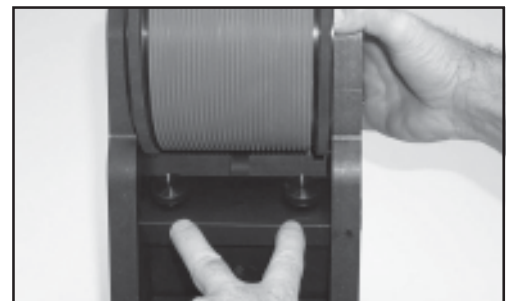
The XF Neoprene Ink Rolls used on the WPNP PIDS Printers are manufactured from an extra firm density neoprene foam material. The extremely fine cell structure of this foam gives it the capacity to hold and evenly distribute a large volume of ink which migrates through the foam by capillary action. The ink roll relies on capillary action to draw ink from the center of the roll and evenly distribute it to the surface where it is applied to the transfer roll. The capillary action of ink in a dry foam material is rather poor, much like when you submerge a dry sponge in water. When the roll is initially pre-inked, it must be thoroughly saturated to ensure all of the cells in the foam are wetted with ink. Even if all of the ink is squeezed out of the roll after the initial inking, the capillary action of the roll is dramatically increased. Maximizing capillary action is extremely important when using a PIDS System for subsequent automatic inking.

Please follow the guidelines below to properly pre-ink your roll:

1 - Wearing a pair of rubber gloves, pour approximately 1" of printer ink into the bottom of a clean container large enough to place the roll in on it's side. Carefully place the roll into the container of ink.

A 4" XF Neoprene Roll will hold approximately 14 fluid ounces of ink
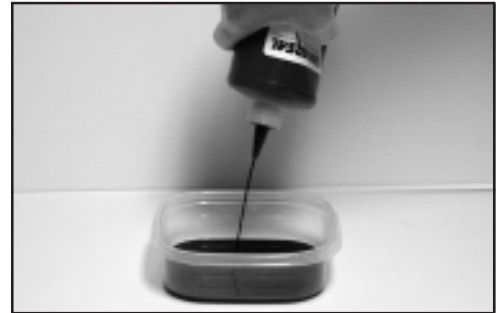
FIGURE 30

2 - Hold the roller in your hand and firmly press down on the foam side of the ink roll and then release the pressure. Rotate the roll and repeat this process several times pressing on different areas. This will force the air out of the roll and the voids will be filled with ink.

Repeat the process above until all the ink in the container has been absorbed into the roll. Add more ink to the container and repeat the process until the roll will absorb no more ink.

FIGURE 31

3 - Insert a round metal rod through the Ink Roll Core and roll the roller several times across a scrap piece of cardboard while applying light pressure to remove the excess ink.

You want the roll to be fully saturated but not dripping wet. If in doubt about the proper saturation level of the roll during this process, it is better to remove a bit more ink than not enough. Installing a roll with too much ink will cause dripping inside the inking system housing.

FIGURE 32

14

THE PIDS SYSTEM

Universal's Programmable Ink Delivery Systems were developed as an advanced method of supplying ink "on-demand" to contact roll printing equipment. The PIDS system combines the simplicity of electronic programming and the accuracy of peristaltic metering pumps to automatically deliver precise amounts of ink to the printers at prescribed intervals.

The positive displacement peristaltic pump heads used in the PIDS systems move ink through progressive waves of contraction and relaxation of a resilient pump tube. The ink never touches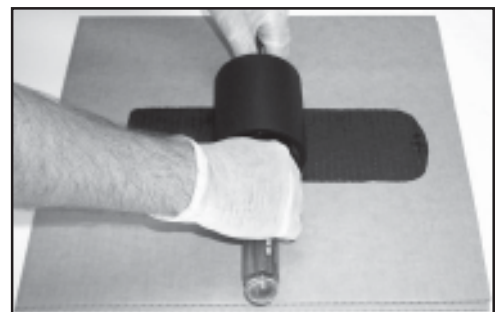 any of the pumps component parts so maintenance is limited to replacing the pump tube after approximately 1,000 hours of operation. Universal's quick disconnect replacement pump tube assembly, facilitates pump tube changes in less than 10 seconds.

The PIDS system works with the Non-Porous Web printers through a unique wiper adapter as shown. Ink from the PIDS System is injected through a pair of miniature duck bill check valves between two very thin plastic membrane wipers which rest against the face of the ink roll. The wipers transform the ink into a very thin film which is then evenly spread across the entire face of the roll. This design provides instantaneous printer response, ensures uniform print density over the full print width of the printer .
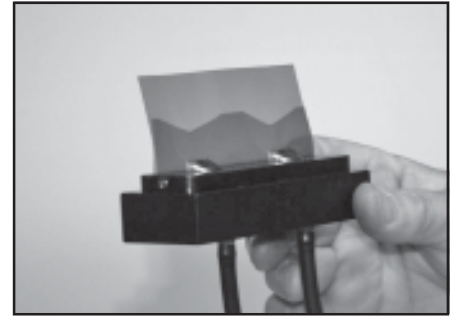

FIGURE 33

IMPORTANT NOTE FOR HIGH SPEED PRINTING APPLICATIONS

It is very important to note that when web velocities exceed 400 FPM, having a large volume of ink in the printer's ink roll can cause inking system leakage problems. The higher RPM of the ink roll at these web velocities will cause ink to rise to the surface of the ink roll and can result in ink being thrown off the surface of the roll and into the inking system housing. To avoid this potential problem in high speed printing applications, the ink roll should initially be thoroughly saturated to prepare it for use and then most of the ink should be removed from the roll prior to installation. This process wets all the cells in the foam and dramatically increases the rate of ink absorption when it is delivered by the PIDS-DIGITAL-CE System. It is important to understand that the ink required for printing will be delivered by the PIDS System as needed so having a large volume of ink in the ink roll is unnecessary and undesirable.

PIDS-DIGITAL-CE PROGRAMMABLE INK DELIVERY SYSTEMS

The PIDS-DIGITAL-CE Programmable Ink Delivery Systems require constant data input from a low resolution encoder in order to monitor web motion and velocity. To eliminate the need to install a separate friction driven encoder on the moving web, it was determined that the most efficient way to provide this data, without complicating the installation, was to modify the friction driven printers which allows them to serve a dual purpose.
The details of this modification are provided on the following pages.

BASIC PRINCIPLES OF OPERATION

ENCODER SENSOR FOR DIGITAL MODELS

The WPNP-400NI-PIDS-D Digital Printer has been modified to work with Universal's new PIDS-DIGITAL-CE Programmable Ink Delivery System. The PIDS Control System requires an encoder signal from the printer to track web velocity and to enable programming based on web distance traveled. To eliminate the need to install a separate, friction driven encoder on the moving web, a simple low resolution encoder assembly has been installed on the printer.
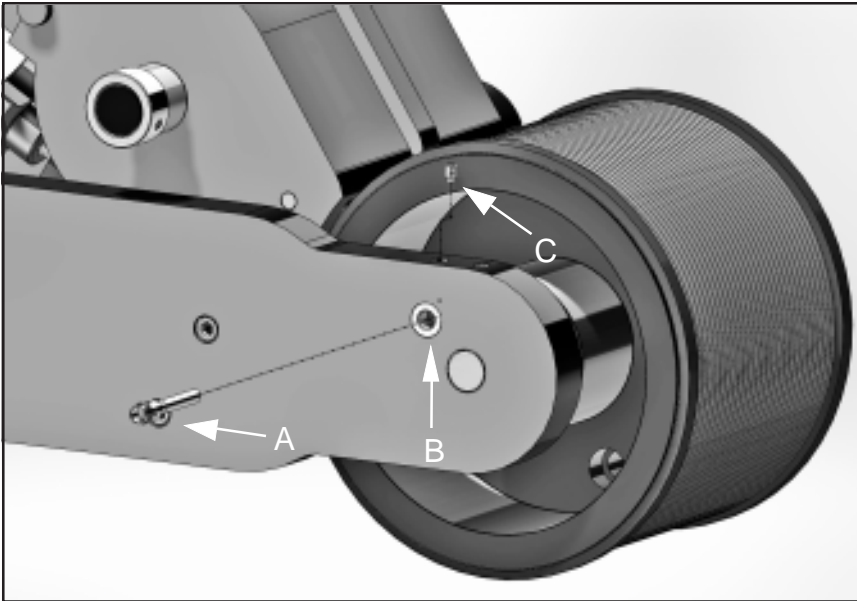
An inductive proximity sensor **(A)** is mounted in the side frame of the printer through an electrically isolated plastic bushing **(B)**.

When the sensor is threaded into the bushing and adjusted to the correct position, a nylon tipped set screw **(C)** is used to prevent it from vibrating out of its proper position.

The center hub of the print drum has four 0.250" diameter steel targets installed which are sensed by the inductive proximity sensor as the print drum rotates.

FIGURE 34

This design provides the PIDS Digital Control with the required 4 pulse per revolution encoder signal when the printer is operating and also lets the control know when the web has stopped moving.

Warning: The inductive proximity sensor is a very fragile device and must be handled carefully to prevent damage. The sensor extends out from the side of the printer side frame a short distance to expose the internal LED lights and enable connection of the communication cable. When handling the printer care must be taken not to damage the exposed end of the sensor.

INSTALLATION OR ADJUSTMENT OF THE INDUCTIVE PROXIMITY SENSOR

The inductive proximity sensor has been properly installed, adjusted and tested at the factory prior to shipment and no further adjustment should be required. If for any reason the sensor needs to be re-adjusted, please read the following instructions carefully.

1 - To remove or re-adjust the inductive proximity sensor you must first slightly loosen the nylon tip set screw. Use a 5/64" hex driver to loosen the set screw which holds the sensor in position. This set screw can be reached via the access hole in the top of the frame as shown in Figure 34.

BASIC PRINCIPLES OF OPERATION

Note: The nylon tip set screw is only very lightly tightened and should only need to be loosened by turning it approximately 1 revolution in the counter clockwise direction. Do not take the set screw completely out of the plastic isolator bushing or it will be somewhat difficult to re-install.

2 – The inductive proximity sensor can now be rotated in either direction for adjustment purposes or rotated in the counter clockwise (CCW) direction and unscrewed completely from the bushing for removal.

Note: The threaded body of the sensor has very fine 5mm x 0.5mm threads for accurate adjustment. Removing the sensor requires many revolutions before it will come free from the bushing.

3 – Adjusting the Inductive Proximity Sensor: This sensor has a very short distance sensing range and must be adjusted precisely for proper operation. The easiest way to begin the adjustment procedure is to use a 0.020" shim positioned between the face of the sensor and the hub of the print drum as shown in Figure 35. While holding the shim between these two surfaces, turn the sensor Clockwise (CW) until the face of the sensor just pushes the shim into contact with the hub of the print drum. When the sensor is in this position, just slightly tighten the nylon tip set screw to prevent the sensor body from turning.

 Warning: Over tightening this set screw can damage the sensor.
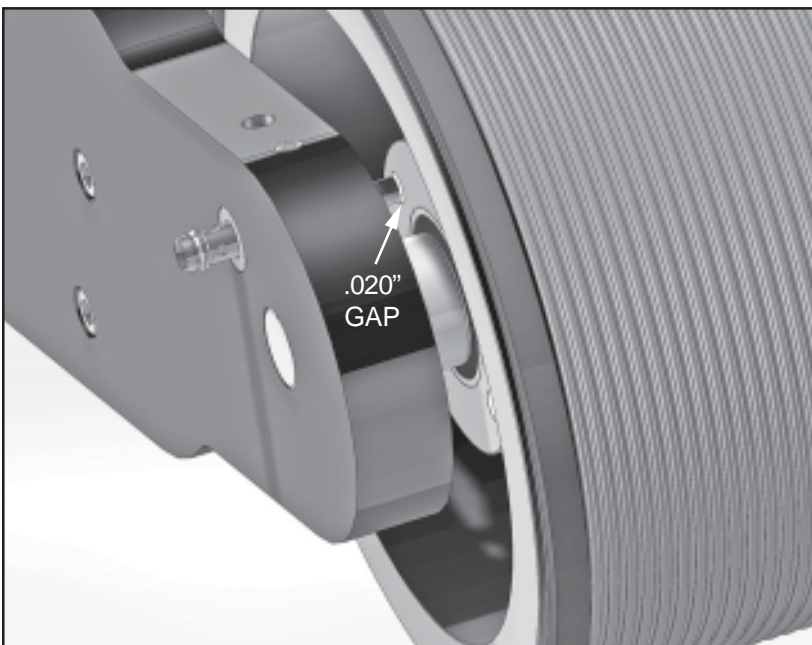

.020"
GAP

FIGURE 35

4 - Connect the communication cable from the PIDS Control to the sensor. Use your fingers to prevent the sensor body from turning when connecting the cable.

5 – Turn the control power on and rotate the print drum by hand. When the sensor is adjusted properly, the LED lights (visible on the sensor body) will flash each time one of the four steel targets in the print drum hub rotates past the face of the sensor.

If the LED lights stay on constantly while rotating the print drum, the sensor is picking up the aluminum hub.

To correct this, rotate the sensor body approximately 1/8th of a revolution CCW or until the LED lights only come on when a steel target passes the sensor's face.

If the LED lights do not turn on at all during print drum rotation, rotate the sensor body slightly CW until the lights begin to flash only when the steel targets pass the sensor face.

6 – When the sensor is working properly, **slightly** tighten the nylon tip set screw to prevent the sensor from moving out of position.

MAINTENANCE

CLEANING THE PRINTER

Periodically, the inking system should be disassembled and inspected for ink residue and dust contamination.

Warning: Most of the ink solvents used for cleaning are flammable liquids. Follow all safety precautions recommended by the manufacturer during this process.

1 - To remove ink contamination from the surface of the machine, moisten a soft cotton cloth with the appropriate ink solvent and rub it across the contaminated area.

The frequency of required cleaning can be greatly reduced if the inking system is kept in proper adjustment during normal operation and if the ink roll does not become over saturated with ink.
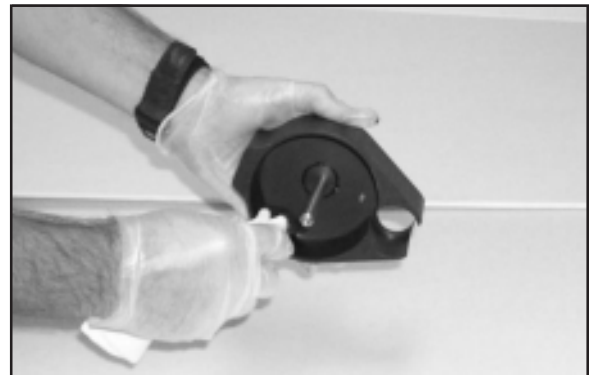
FIGURE 36

CLEANING THE TRANSFER ROLL

The surface of the transfer roll is made from DuPont Delrin material and the O.D. of the roll is finely engraved which enables it to hold a uniform film of ink. This surface material is very fragile and under no circumstances should you attempt to clean it with anything abrasive.

DO NOT SUBMERGE THE TRANSFER ROLL IN SOLVENT!

1 - To clean dust and ink residue from the surface of the transfer roll, first remove it from the printer. Lightly saturate a soft cotton cloth with the appropriate ink solvent and gently rub the surface of the roll until it is clean.

If the transfer roll is submerged in solvent, the bearings will be permanently damaged.

FIGURE 37

CLEANING THE PRINTING DIES

All inks which are formulated for printing on non-porous surfaces contain a resin binder which bonds the dye or pigment in the ink to the surface of the material being printed. As the ink begins to dry, this binder becomes "tacky" or "sticky". While in this stage of the drying process, the tack on the dies will tend to pick up both airborne dust and any dust or dirt on the surface of the material being printed. When this happens, the dies should be cleaned or replaced. The easiest method of cleaning the dies requires the appropriate solvent for the ink being used, a pair of rubber gloves, safety glasses, an apron to protect your clothing is recommended, a toothbrush, some clean paper towels and a plastic bag to protect your workbench from staining. (Naturally, the toothbrush will never be suitable for oral hygiene use after this process.)

After some period of use, the accumulation of contaminates on the dies will cause degradation of the print quality; cleaning the printing dies, excluding excessive wear to the die face, will restore the print quality of the printer.

1 - Place the contaminated Printing Die on top of several layers of paper towels to absorb the excess solvent. Pour just enough solvent on the face of the printing die to cover the die face.

FIGURE 38

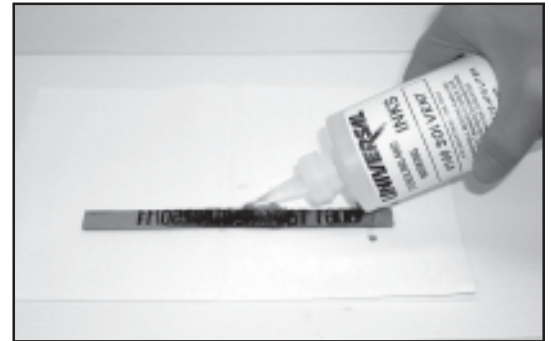**2 - Using the toothbrush, carefully scrub the face of the die to remove the contamination and old ink as shown. Add more solvent as necessary and repeat the process until the die is clean.**

Do not submerge or soak the dies in solvent as this may cause swelling of the rubber compound.

FIGURE 39

3 - Blot the surface of the die with a clean paper towel to dry and reinstall the clean dies on the printer.

FIGURE 40
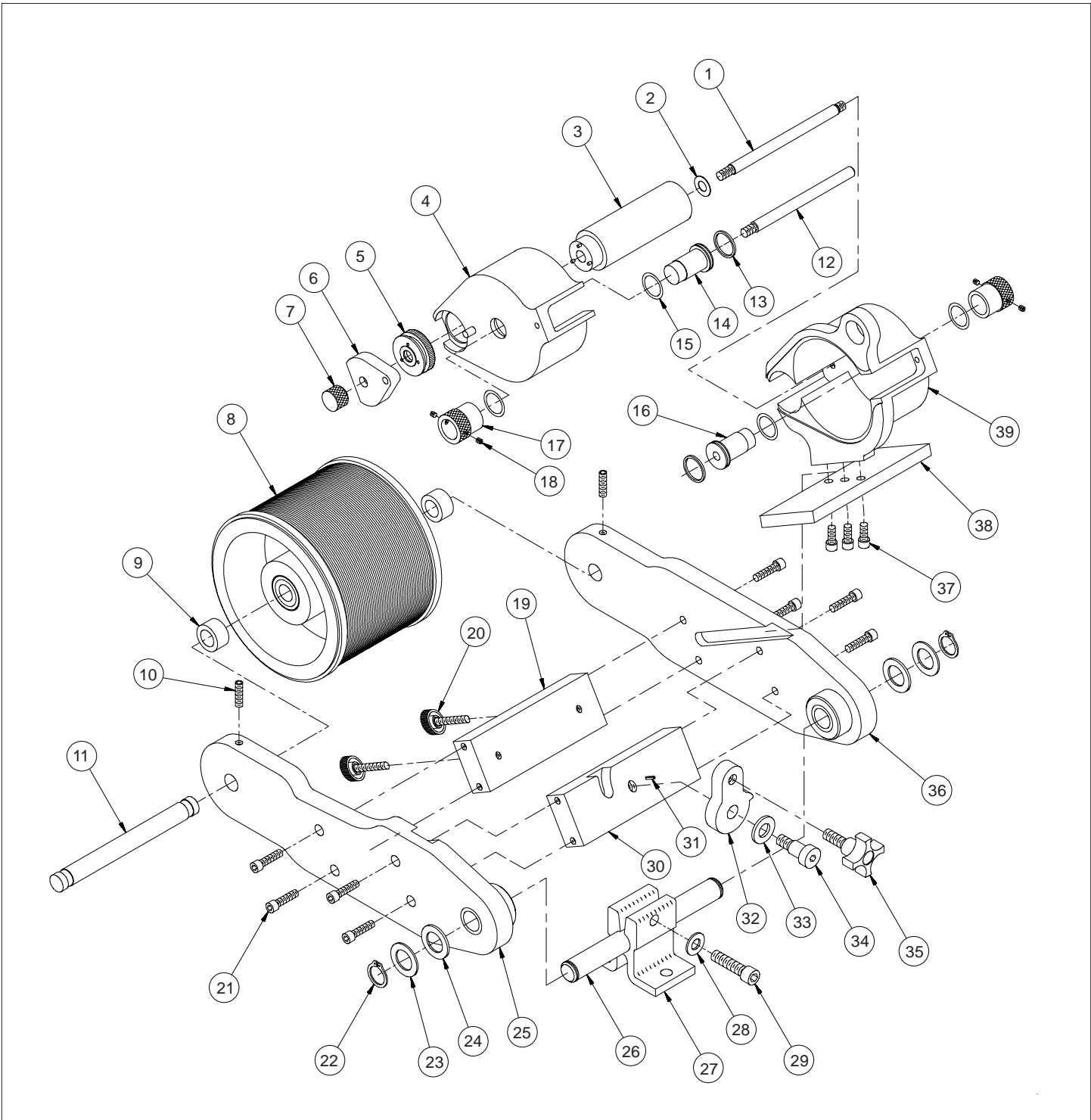
KEY NO.	PART NUMBER	QTY. REQD.	DESCRIPTION
1	WPNP-009	1	4" TRANSFER ROLL AXLE
2	HP-04	1	3/8" BRASS, FLAT WASHER
3	WPNP-TRA-4	1	4" TRANSFER ROLL ASSEMBLY
4	PIDS-60	1	WPNP INKING SYSTEM COVER, REMOVABLE
5	NP-14	1	KNURLED DRIVE WHEEL W/DELRIN WASHER

6	WPNP-011	1	DRIVE WHEEL COVER
7	NP-17	1	COVER RETAINING KNOB
8	WPNP-400NI-PDA	1	PRINT DRUM ASSEMBLY - STANDARD
	WPNP-400NI-PDA-T		PRINT DRUM ASSEMBLY - METRIC
	WPNP-400NI-PDA-D		PRINT DRUM ASSEMBLY - DIGITAL
	WPNP-400NI-PDA-T-D		PRINT DRUM ASSEMBLY - METRIC, DIGITAL
9	WPNP-022	2	PRINT DRUM DELRIN AXLE SPACER
10	WPNP-020	2	SET SCREW - 1/4-20 X 1.00" LG.
11	WPNP-021	1	4" PRINT DRUM AXLE
12	WPNP-038	1	4" INK ROLL AXLE
13	NP-21	2	O-RING, ECCENTRIC
14	NP-20C	1	ECCENTRIC, INK ROLL
15	HP-42	4	DELRIN WASHER
16	WPNP-039	1	ECCENTRIC, INK ROLL (MODIFIED)
17	NP-19	2	ECCENTRIC KNURLED KNOB
18	HP-06	4	SET SCREW, 8-32 X 3/16"
19	WPNP-014	1	JOINING BAR "A"
20	WPNP-PAK	2	POSITION ADJUSTING KNOB
21	CR-13	8	SCREW, 1/4-20 X 1.0" SHC
22	CF-13	2	SNAP RING FOR 3/4" SHAFT
23	CW-01	2	3/4" STEEL FLAT WASHER
24	CW-05	2	3/4" NYLON FLAT WASHER
25	WPNP-SFB	1	SIDE FRAME "B"
26	WPNP-025	1	MOUNTING SHAFT
27	CM-17	1	BRACKET, MOUNTING COLUMN
28	CW-02	1	3/8" STEEL FLAT WASHER
29	CF-09	1	SCREW, 3/8-16 X 1-1/2" SHC
30	WPNP-015	1	JOINING BAR "B"
31	CR-16	1	COMPRESSION PIN
32	WPNP-016	1	PIVOT LOCK
33	WPNP-032	1	DELRIN LATCH WASHER
34	WPNP-019	1	PIVOT LOCK SHOULDER SCREW
35	WPNP-LKA	1	LOCK KNOB ASSEMBLY
36	WPNP-SFA	1	SIDE FRAME "A"
	WPNP-SFA-D		SIDE FRAME "A", DIGITAL
37	MC-02	3	SCREW, 1/4-20 X 5/8" LG. SHC
38	WPNP-029	1	INKING SYSTEM MOUNTING PLATE
39	PIDS-59	1	WPNP INKING SYSTEM COVER, STATIONARY

WPNP-400NI -PDA, WPNP-400NI -PDA-T
WPNP-400NI -PDA-D & WPNP-400NI-PDA-T-D
NON-POROUS WEB PRINTER PRINT DRUMS
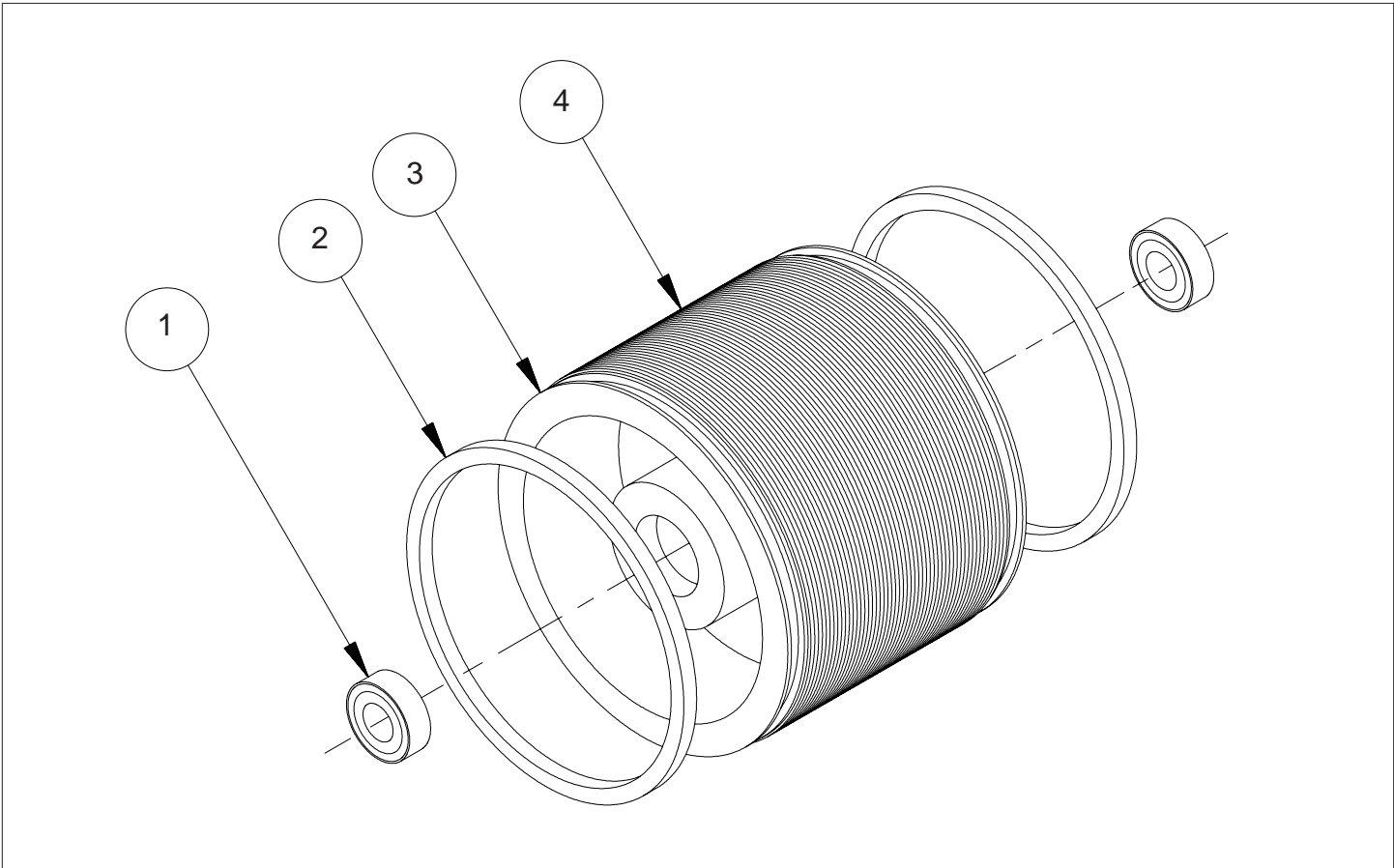
KEY NO.	PART NUMBER	QTY. REQD.	DESCRIPTION
1	CB-04	2	BEARING, PRINT DRUM
2	WPNP-024	2	RUBBER BEARER RING , PRINT DRUM (SQUARE CUT)
3	PRINT DRUMS ONLY AVAILABLE IN COMPLETE PRINT DRUM ASSEMBLIES. SEE PAGES 20 & 21 (KEY 8)		
4	WPNP-023	1	RIBtype® DRUM COVER - STANDARD
	WPNP-023T		RIBtype® DRUM COVER - METRIC

WPNP-400NI-PIDS-D & WPNP-400NI-T-PIDS-D
NON-POROUS WEB PRINTERS, DIGITAL
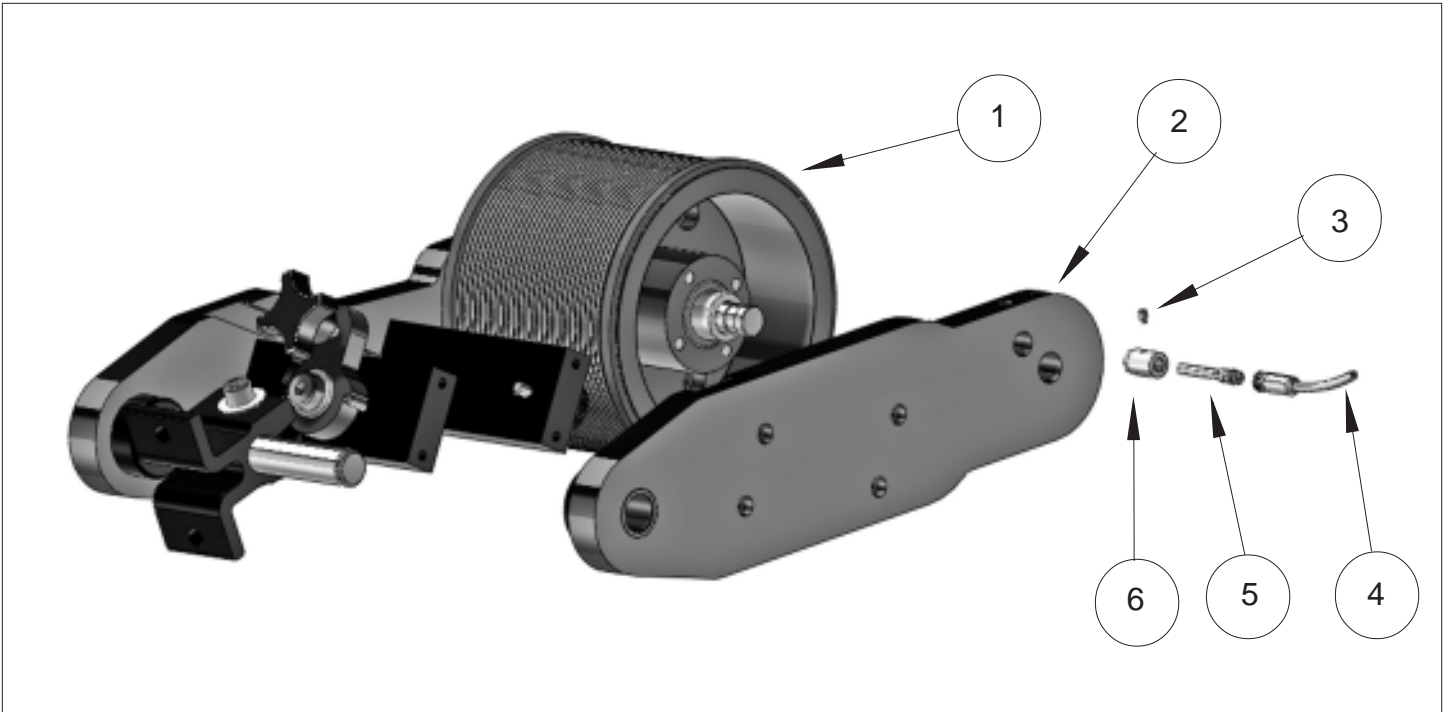
KEY NO.	PART NUMBER	QTY. REQD.	DESCRIPTION
1	WPNP-400NI-PDA-D	1	PRINT DRUM ASSEMBLY - DIGITAL
	WPNP-400NI-PDA-T-D		METRIC PRINT DRUM ASSEMBLY - DIGITAL
2	WPNP-SFA-D	1	SIDE FRAME ASSEMBLY - DIGITAL
3	CF-05	1	NYLON TIP SET SCREW
4	MRM-EC-206	1	CABLE, INDUCTIVE PROXIMITY SENSOR-3 METER
5	MRM-EC-208	1	INDUCTIVE PROXIMITY SENSOR
6	WPNP-042	1	SENSOR INSULATOR BUSHING

WPNP PIDS WIPER COMPONENTS
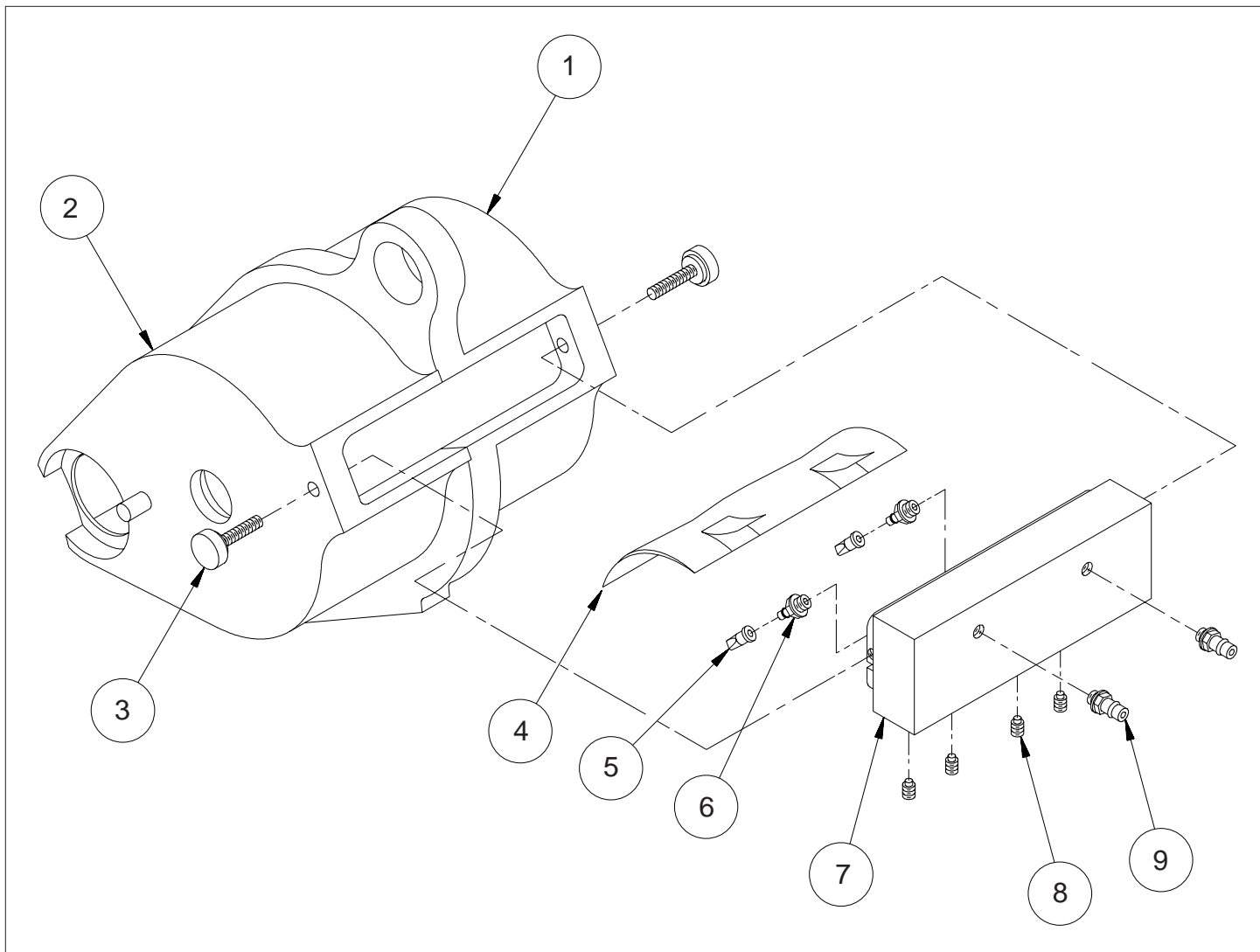
KEY NO.	PART NUMBER	QTY. REQD.	DESCRIPTION
1	PIDS-59	1	WPNP INKING SYSTEM COVER, STATIONARY
2	PIDS-60	1	WPNP INKING SYSTEM COVER, REMOVABLE
3	PIDS-TSA	2	WPNP THUMB SCREW ASSEMBLY
4	PIDS-57	1	PLASTIC WIPER, WPNP 4"
5	PIDS-16	2	CHECK VALVE, DUCK BILL
6	MRM-PC-69	2	10-32 BARB FITTING X 1/16" I.D. TUBE
7	PIDS-58	1	WPNP WIPER BLOCK
8	CF-05	4	NYLON TIP SET SCREW, 8-32 THREAD
9	MRM-PC-70	2	10-32 BARB FITTING X 1/8" I.D. TUBE

NOTE: ITEMS 4 THRU 9 MAKE UP THE WPNP-WA4, 4" WIPER ADAPTER ASSEMBLY.

Note: *Ink rolls must be pre-inked before use, once the ink is depleted from the roll, the roll can be taken off the printer and re-inked for extended use. To determine the type of ink to use, please contact customer service.*

STOCK NO.	DESCRIPTION
WPNP-XC4	4" - WPNP XF NEOPRENE INK ROLL - DRY
WPNP-XC4-P1	4" - WPNP XF NEOPRENE INK ROLL - BLACK
WPNP-XC4-P2	4" - WPNP XF NEOPRENE INK ROLL - RED
WPNP-XC4-P3	4" - WPNP XF NEOPRENE INK ROLL - GREEN
WPNP-XC4-P4	4" - WPNP XF NEOPRENE INK ROLL - BLUE
WPNP-XC4-P5	4" - WPNP XF NEOPRENE INK ROLL - YELLOW
WPNP-XC4-P6	4" - WPNP XF NEOPRENE INK ROLL - WHITE
WPNP-XC4-P9	4" - WPNP XF NEOPRENE INK ROLL - VIOLET