

Crestline® Dampening System

Installation Instructions

Sakurai 252 & 258

ACCEL ®
Graphic Systems

GENERAL INFORMATION

ATTENTION CRESTLINE® DAMPENER OWNER!

Accel Graphic Systems provides parts and service through its authorized distributors and dealers. Therefore, all requests for parts and service should be directed to your local dealer.

The philosophy of Accel Graphic Systems is to continually improve all of its products. Written notices of changes and improvements are sent to Accel Graphic Systems' Dealers.

If the operating characteristics or the appearance of your product differs from those described in this manual, please contact your local Accel Graphic Systems Dealer for updated information and assistance.

Always update your dampener when improvements are made available, especially those related to safety.

YOUR AUTHORIZED CRESTLINE® DEALER IS:

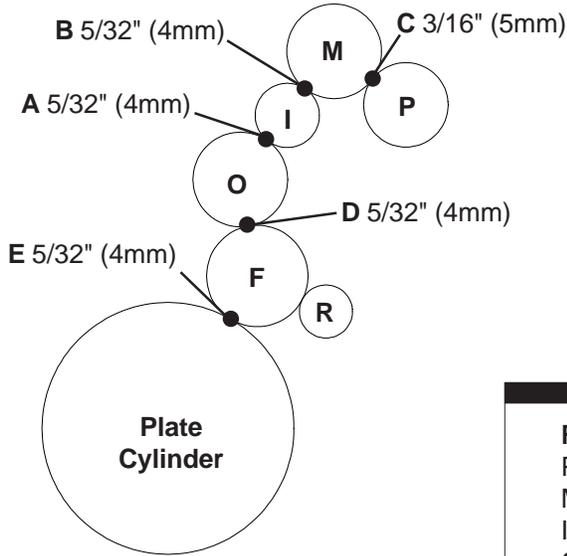
THE SERIAL NUMBER OF YOUR CRESTLINE® DAMPENER(S) IS:

SAFETY INFORMATION

FOR YOUR SAFETY, DO NOT DISENGAGE OR REMOVE ANY GUARDS FROM THE CRESTLINE® DAMPENER. THE DAMPENER CONTAINS SOME INWARD ROTATING ROLLER NIPS THAT CAN CAUSE INJURY IF LEFT UNGUARDED.

GENERAL INFORMATION

BASIC CONFIGURATION OF CRESTLINE®



| Adjustments |
|-------------------------------|
| A. Intermediate to Oscillator |
| B. Metering to Intermediate |
| C. Metering to Pan |
| D. Oscillator to Form |
| E. Form to Plate |

| Roller Description |
|--------------------|
| P = Pan |
| M = Metering |
| I = Intermediate |
| O = Oscillator |
| F = Form |
| R = Rider |

TERMINOLOGY

OPS = Operator's Side
 NOPS = Non Operator's Side

TECHNICAL ASSISTANCE

For technical assistance during the installation, please contact:

ACCEL GRAPHIC SYSTEMS
 11103 Indian Trail
 Dallas, TX 75229
 PHONE (972) 484-6808
 FAX (800) 365-6510
 E-MAIL accel@dallas.net
 WEB SITE www.accelgraphicsystems.com

Crestline® is covered by U.S. Patents and Patents Pending

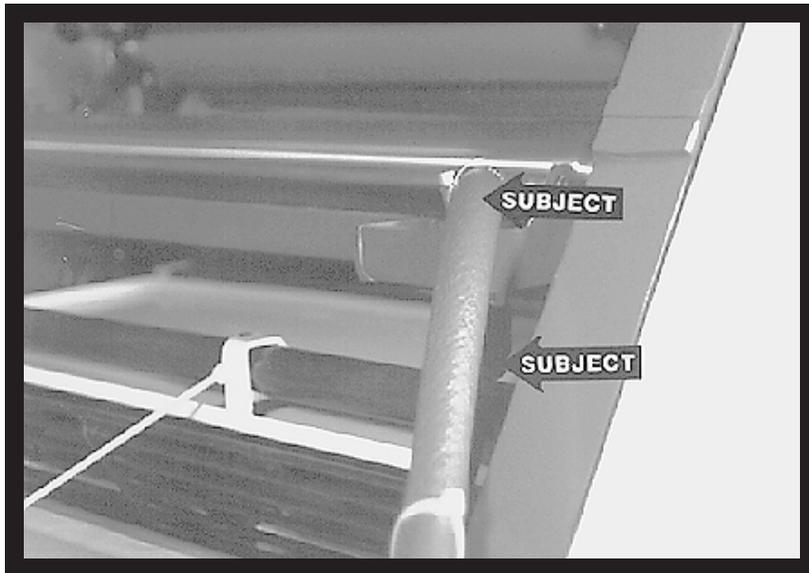
GENERAL INFORMATION

REQUIRED TOOLS

2.5MM Allen Wrench
4MM Allen Wrench
5MM Allen Wrench
6MM Allen Wrench
8MM Allen Wrench
8MM Open End Wrench
13MM Open End Wrench
17MM Open End Wrench (or socket)
19MM Open End Wrench
22MM Open End Wrench
24MM Open End Wrench
3/16"(5MM) Punch
1/4"(6MM) Punch
Hammer
Snap Ring Pliers
Standard Pliers
Flat Head Screwdriver
Phillips Screw Driver
Gear Puller (Optional)
Drill & 5/32" Drill Bit

PRE-INSTALLATION INFORMATION

1. Cut the ties holding the rollers and examine rollers for gouges, scratches, or nicks.
2. Check box and parts board to make sure all pieces are present and nothing had broken in shipping.
3. Check the dampener for parallel (cutter bed works best). If dampener rocks, it needs to be realigned. Loosen tie bar bolts at OPS and align the frames on the flat surface. Retighten bolts.



DISASSEMBLY

1

Dismantling of single or multi color presses is the same. Remove molleton covered ductor and water form rollers from press. Remove switch panels and disconnect plugs.

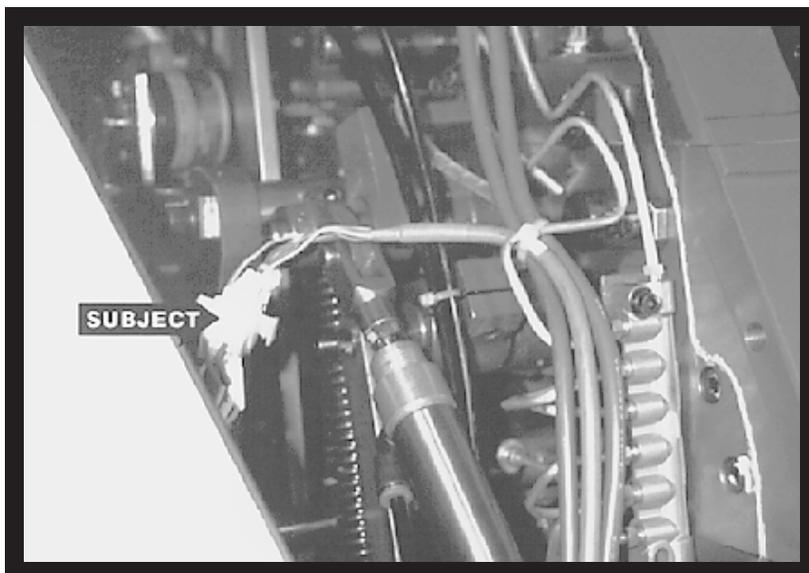
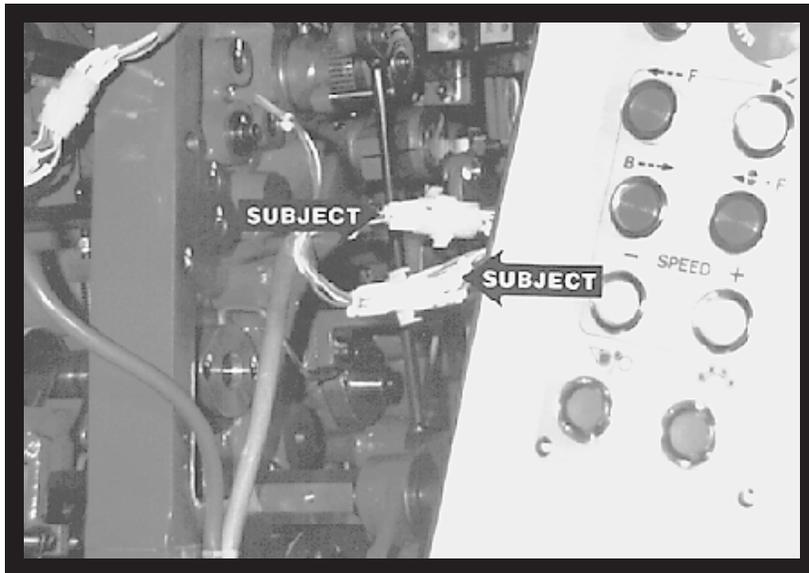
2

Remove circulator hoses from water pans at NOPS (subject arrows). Locate the bolts near the end of the water pan, loosen and remove water pan from press. On circulator equipped presses, remove filler tube from pan and save for reinstallation.

3

Remove the black collar (subject arrow) from the side cover.

7



DISASSEMBLY

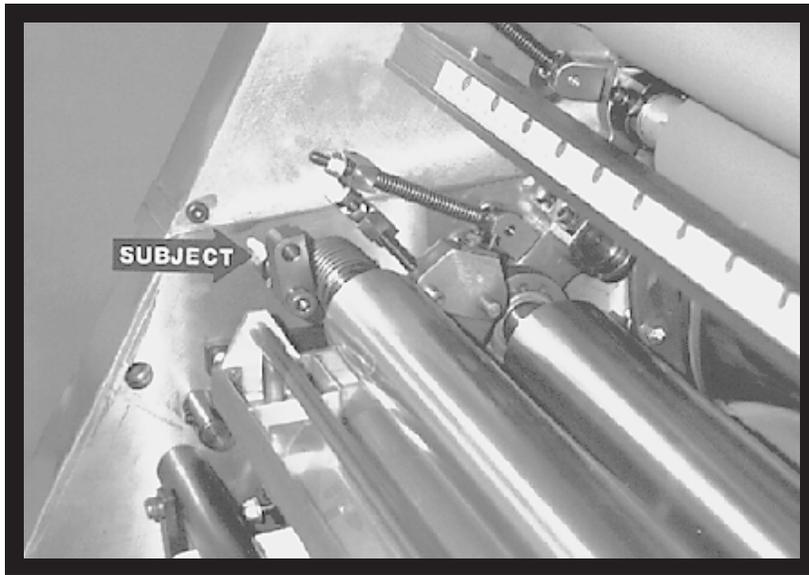
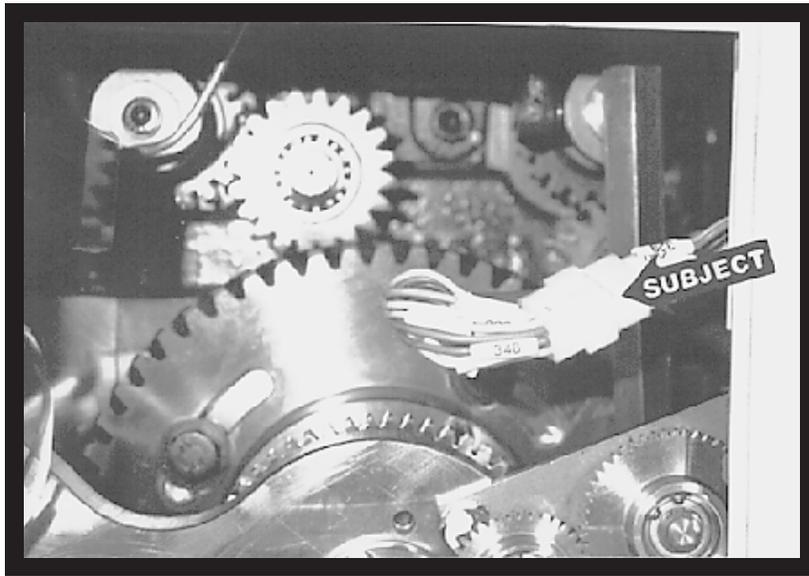
4

Remove the bolts holding the upper frame side covers in place. These are located on the inside of the press frame.

5

Unhook the 3 wire harnesses at the OPS & remove the side cover. Two of the harnesses will be toward the delivery end of the press (upper photo). The remaining harness will be toward the feeder (lower photo).

9



DISASSEMBLY

6

At NOPS, open cover door and disconnect wiring harness (subject arrow). Also, you will find a two-conductor harness (not shown) that connects to the safety switch. Locate and disconnect this as well. After harnesses are disconnected, remove the side cover.

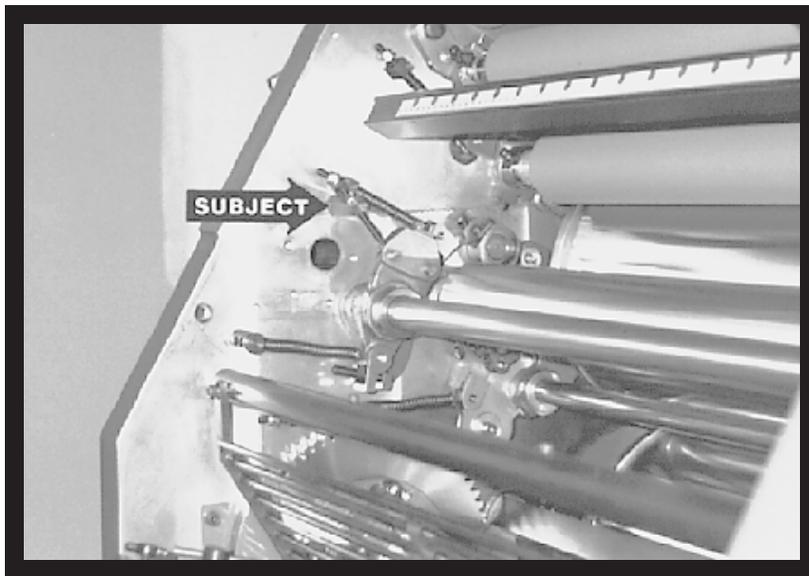
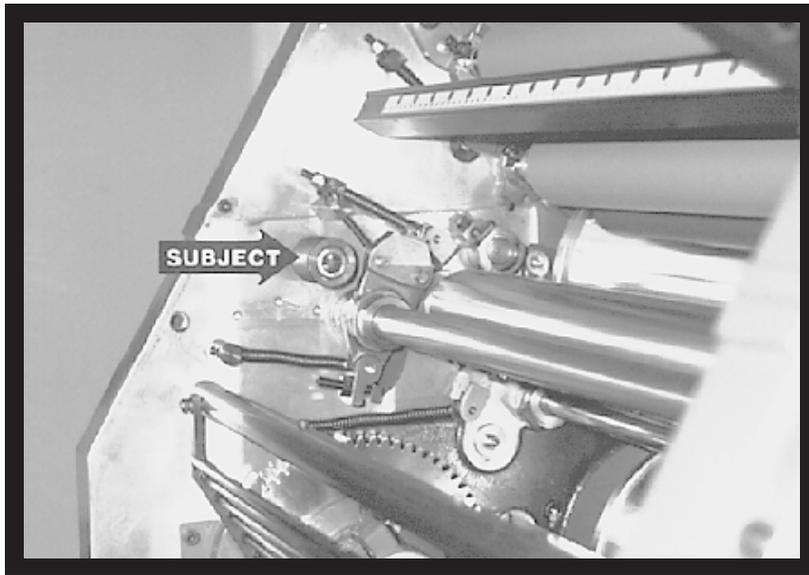
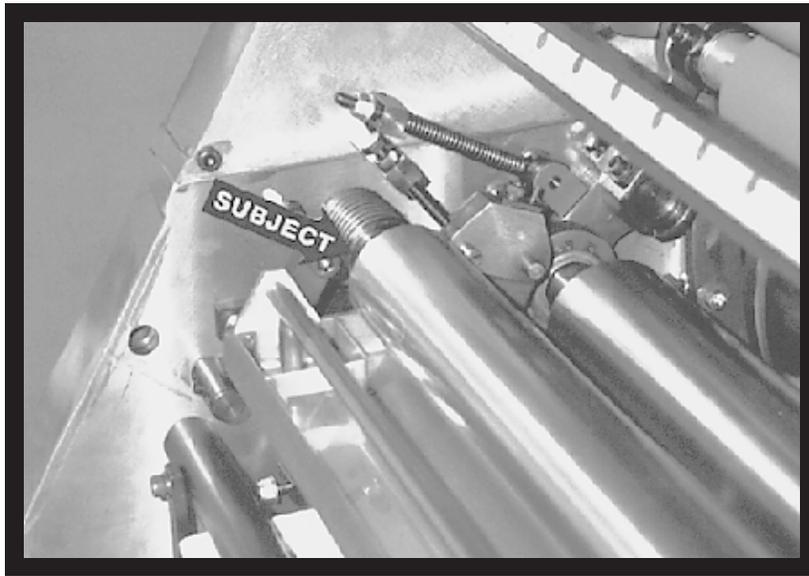
7

Loosen lock nut and remove mechanism at OPS (subject arrow).

8

Lift out the drip tray (subject arrow) beneath the water pan from the press.

11



DISASSEMBLY

9

Grasp water pan roller (subject arrow) and pull towards the OPS side of the press. Pan roller is spring loaded and can be removed in this manner. (Photo shows water pan still on press).

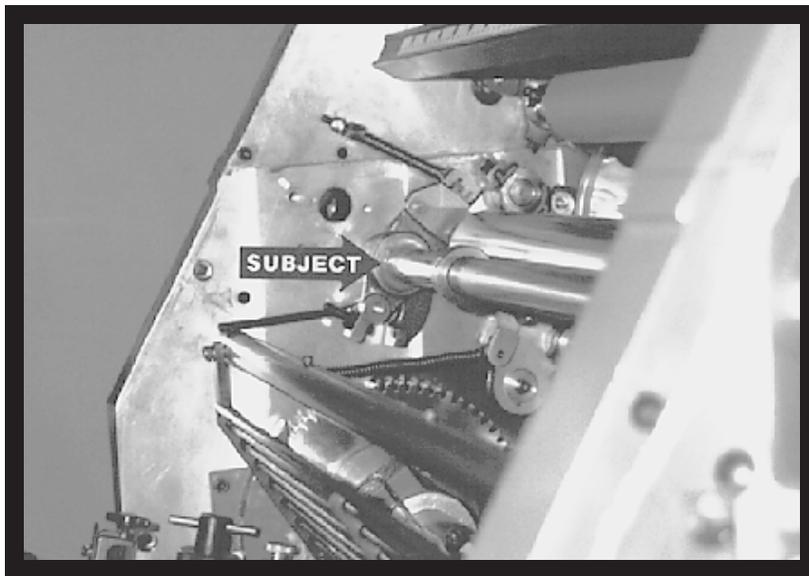
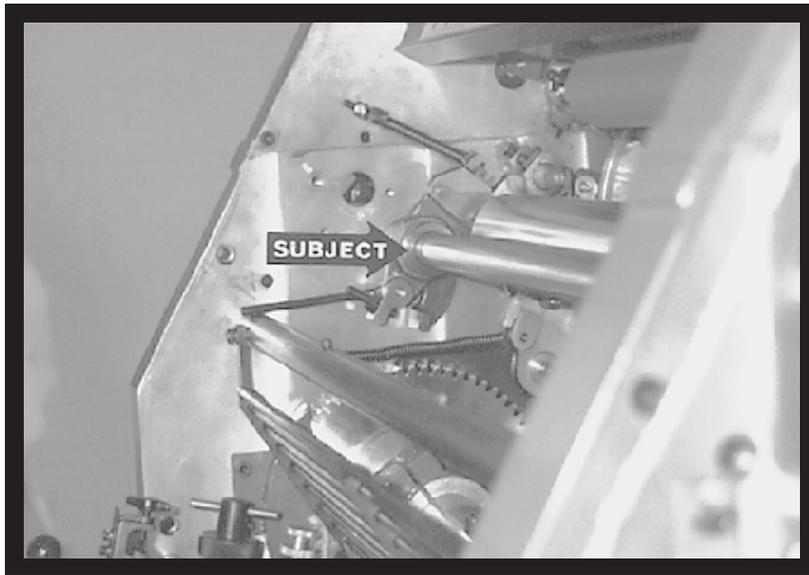
10

At OPS, remove the pan roller housing (subject arrow) by removing the stop block on the outer part of the side frame and pulling through the press frame.

11

Remove stop block held in place by nut (subject arrow) at OPS & NOPS.

13



DISASSEMBLY

12

Remove spring loaded arm at OPS & NOPS (subject arrow) by removing bolt from frame.

CAUTION: Spring is under high tension. Be sure to hold part when loosening mounting bolt.

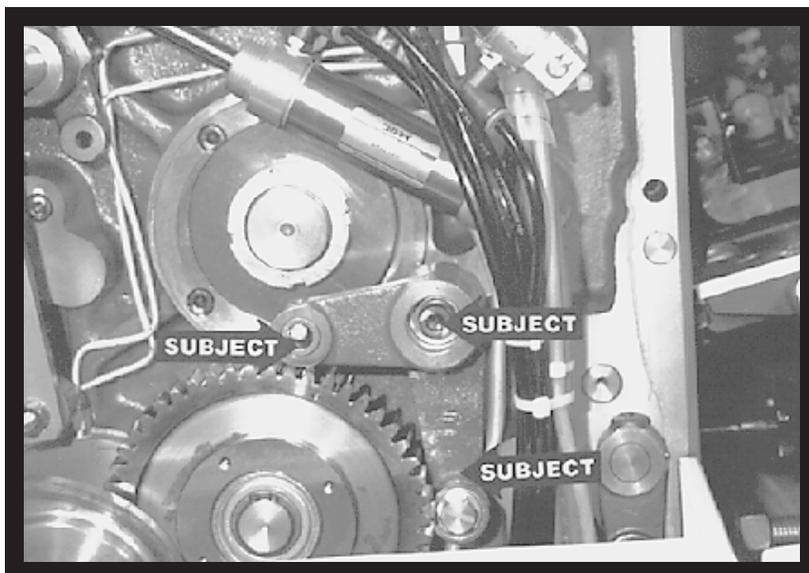
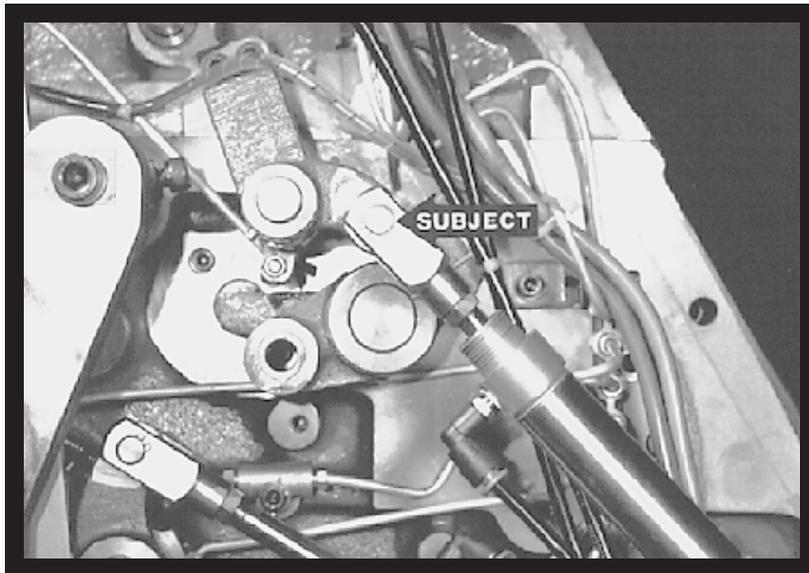
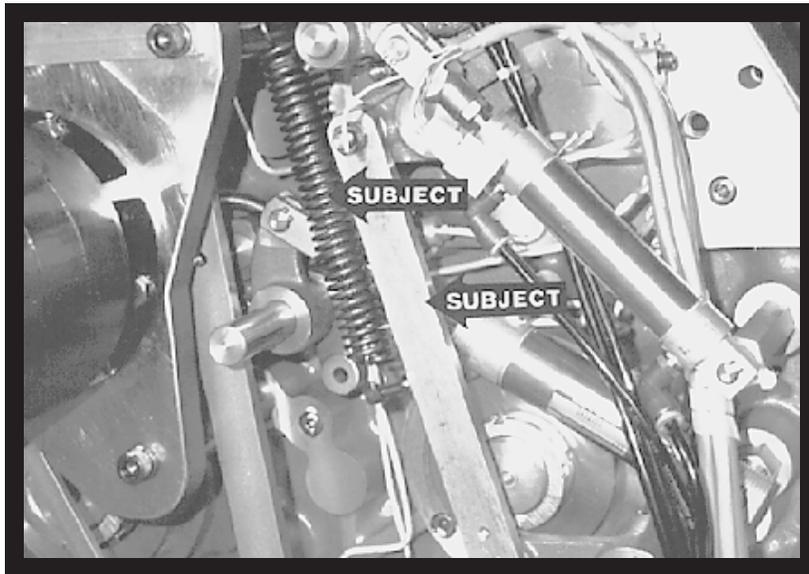
13

Loosen set collar (subject arrow) on water ductor shaft at OPS & NOPS. Collar should slide easily on shaft.

14

Loosen set screw in arm (subject arrow) on water ductor shaft at OPS & NOPS. Arm should slide easily on shaft.

15



DISASSEMBLY

15

Remove ductor link & springs at OPS (subject arrows).

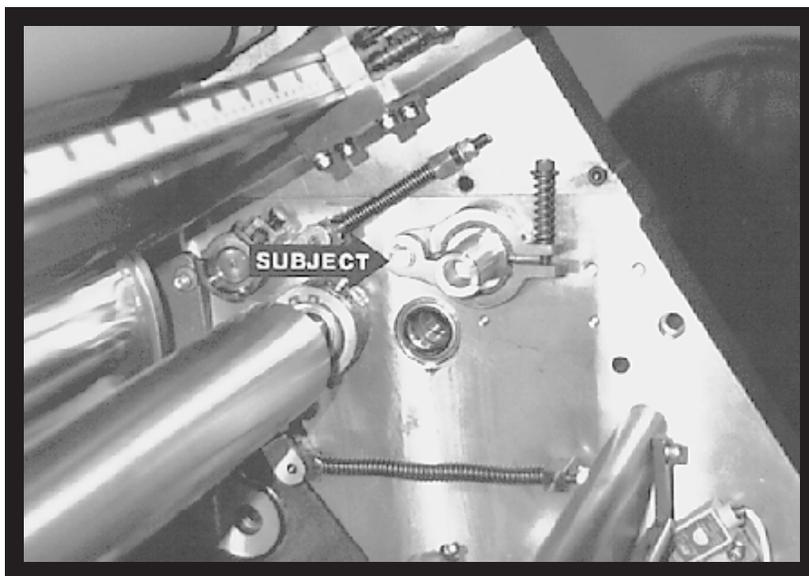
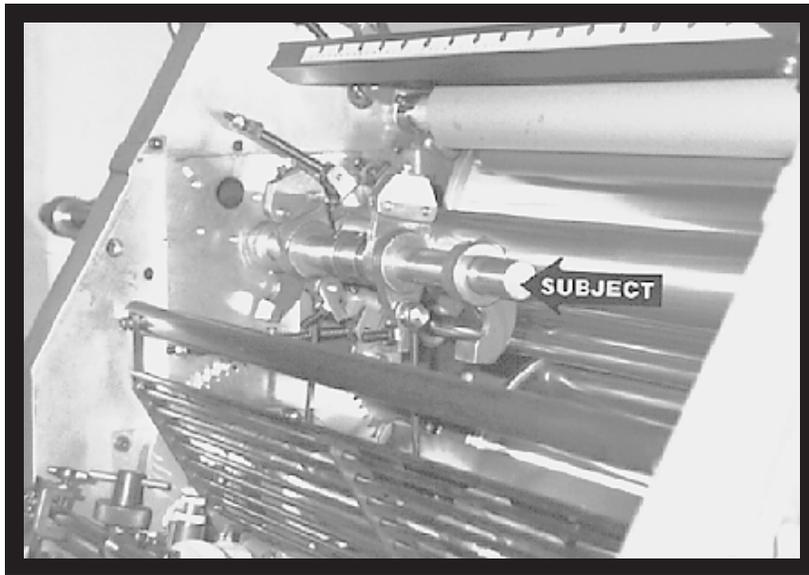
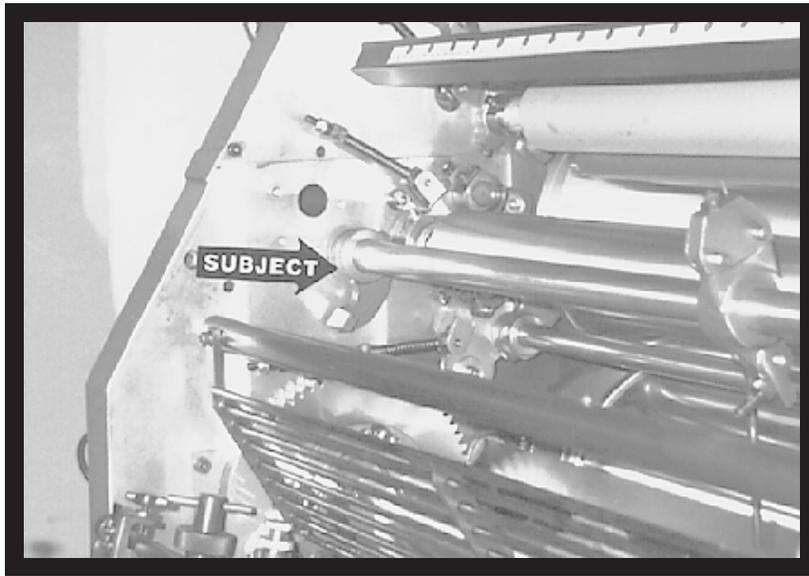
16

Remove snap ring (subject arrow) and drop pneumatic arm down to access the end of the ductor shaft. Save snap ring for reinstallation.

17

Remove bolt & arms at OPS (subject arrows).

17



DISASSEMBLY

18

Rotate the water ductor shaft to expose taper pin in arms and knock out pins at OPS & NOPS. (Pin has one end threaded for use with a slide hammer if you so choose.) Also, loosen set screws in ductor arms.

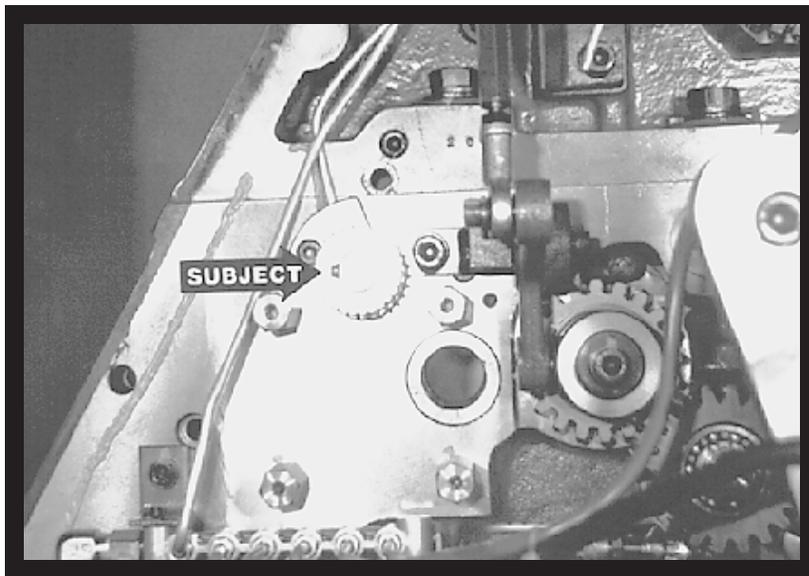
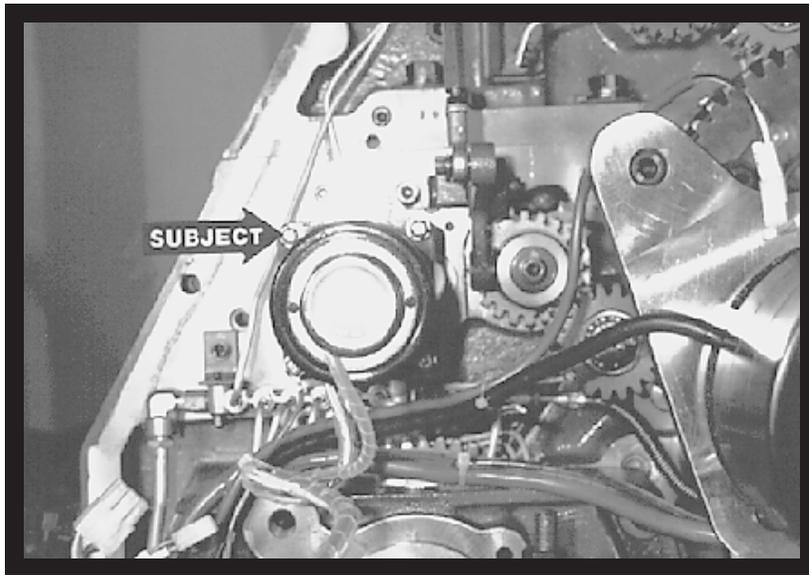
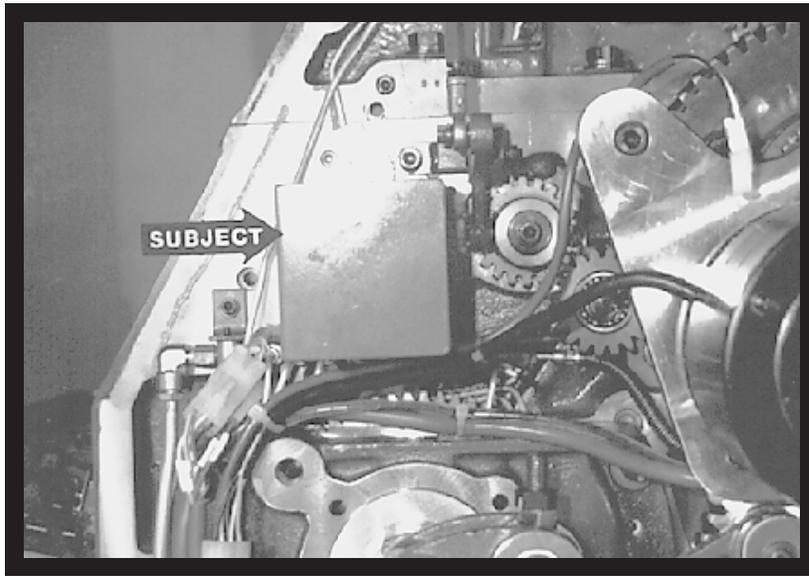
19

Grasp water ductor arm at OPS and pull out of press. The pieces on the shaft will slide off the end as it is removed. Once the shaft is removed, attach pneumatic cylinder which was detached in step 16.

20

Remove snap ring and housings (subject arrow) from around the water pan roller stud at NOPS.

19



DISASSEMBLY

21

Slide off water pan motor housing (subject arrow,) and detach wiring harness.

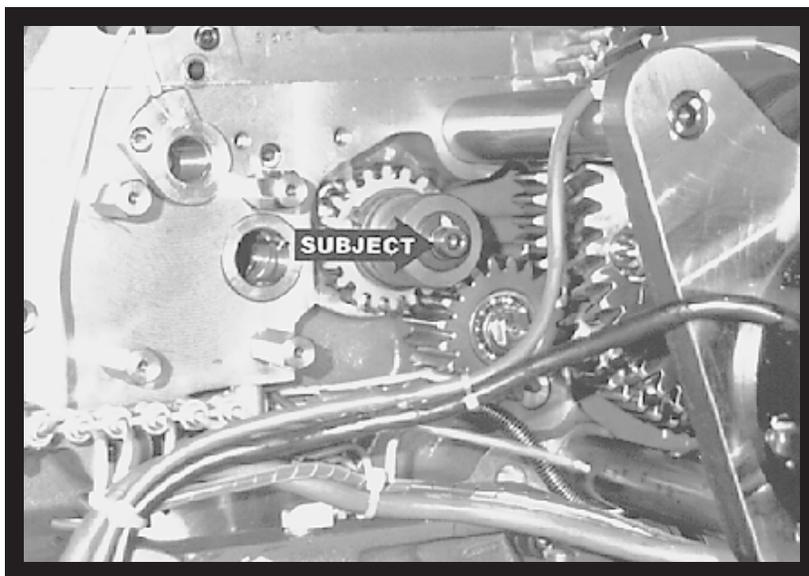
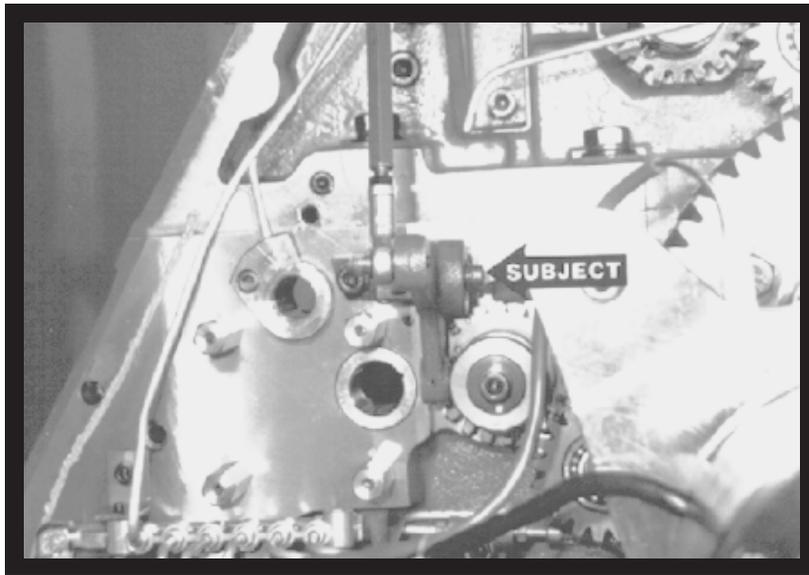
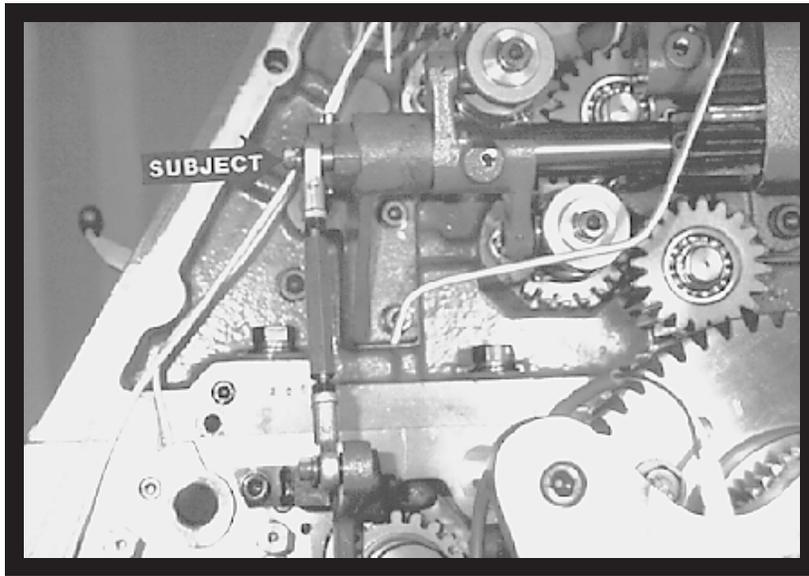
22

Remove the 4 Phillips head screws (subject arrow) and remove water pan motor from press.

23

Loosen set screw and knock out taper pin from gear at NOPS (subject arrow). Remove gear.

21



DISASSEMBLY

24

At NOPS, remove upper screw (subject arrow) holding turnbuckle for water oscillator mechanism. Save for reinstallation.

Note: be careful; there is a lock washer in between turnbuckle and mechanism.

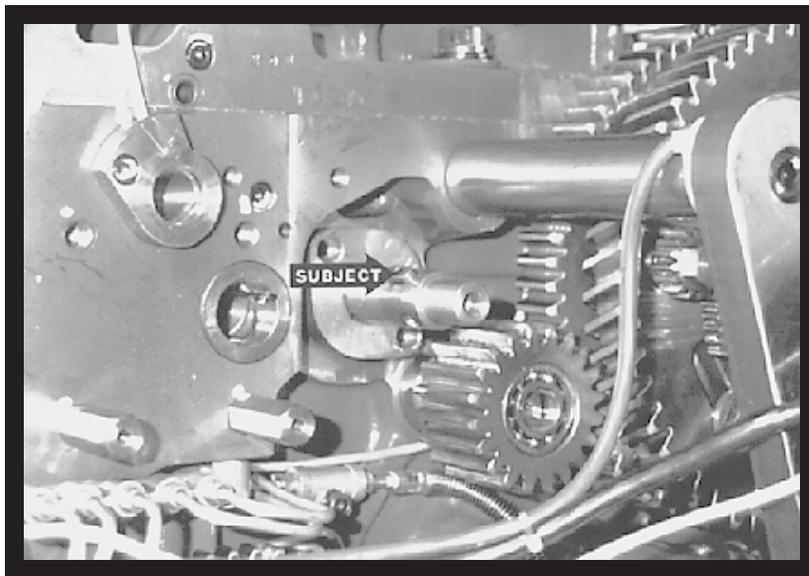
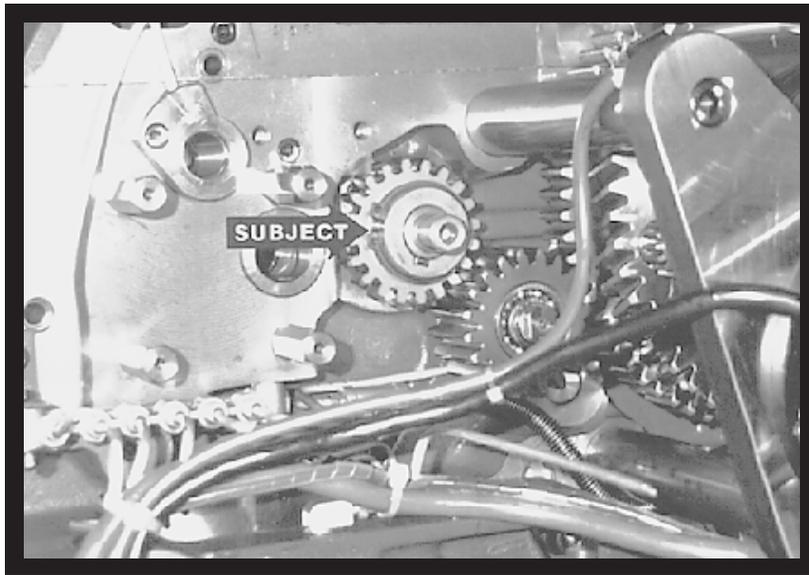
25

Remove bolt at NOPS (subject arrow) and remove arm and turnbuckle. Save for reinstallation.

26

Remove bolt & spool (subject arrow) at the end of the oscillator shaft. Save for reinstallation.

23



27

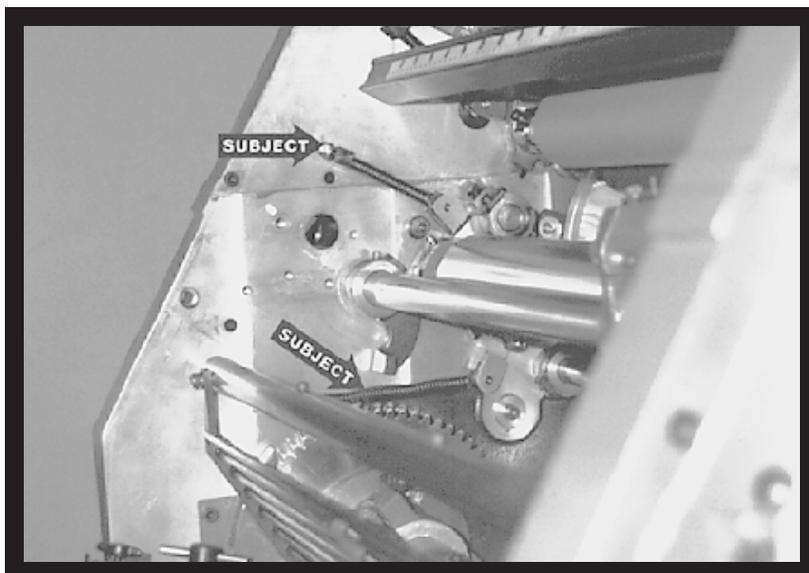
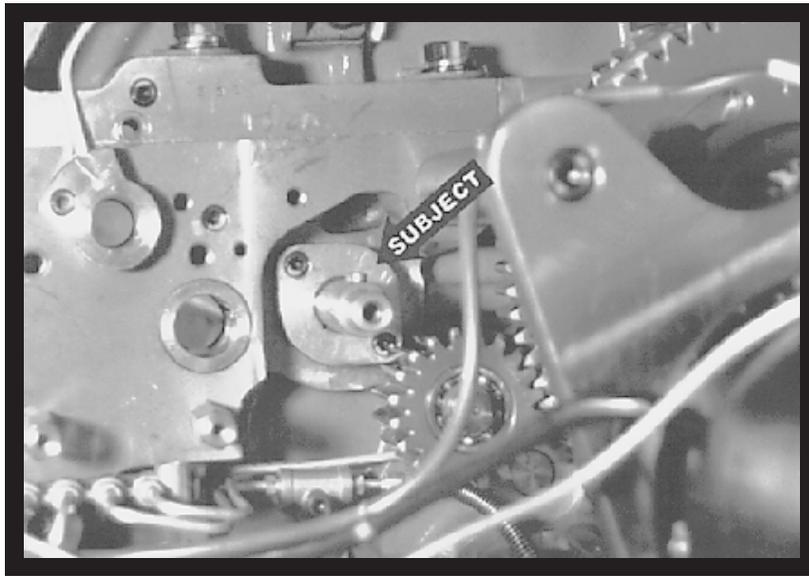
Disconnect snap rings at the interior portion of the oscillator roller (subject arrow). The rings will hang loosely around journals of oscillator roller.

28

Remove snap ring, set screw, and taper pin in oscillator gear (subject arrow) at NOPS. Pull off gear. Sometimes this taper pin may be very tight and must be drilled out. If so, center punch the end of the pin and drill out with 5/32" drill bit. Once the drill bit breaks through the opposite end of the pin, the pin may be easily tapped out. Save snap ring for reinstallation.

29

Remove keyway from end of oscillator roller (subject arrow).



30

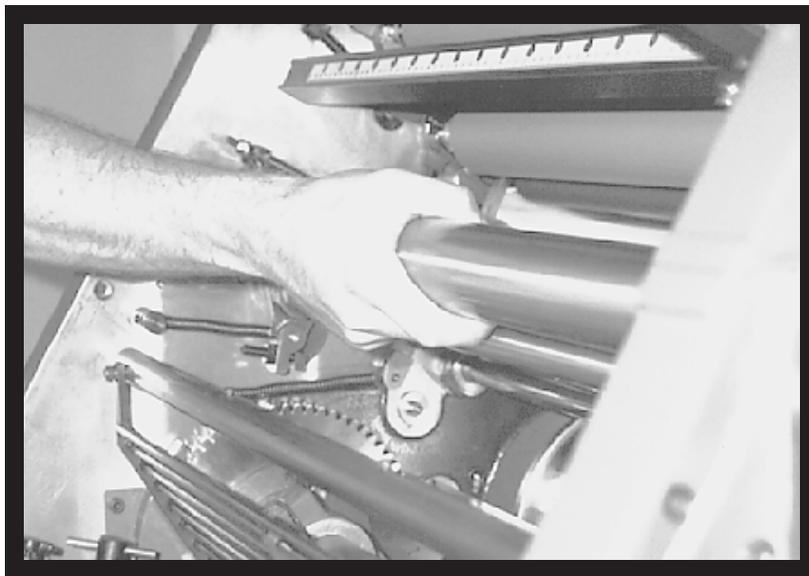
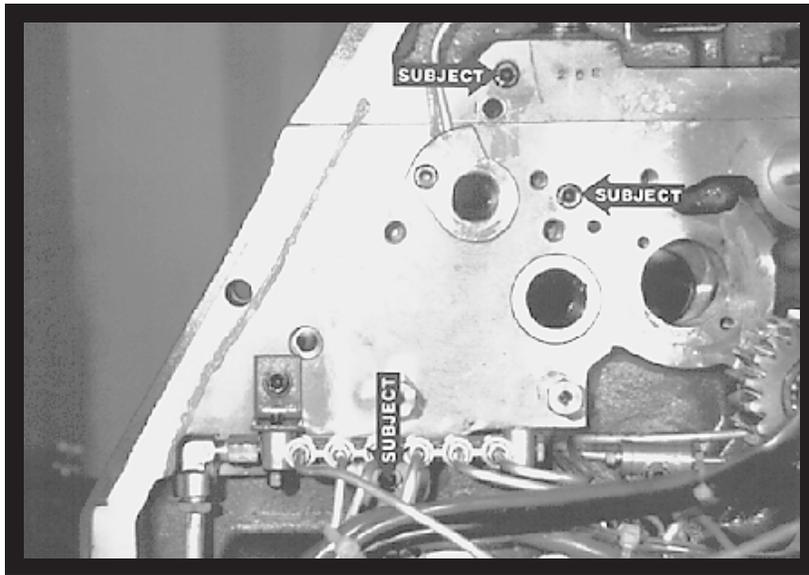
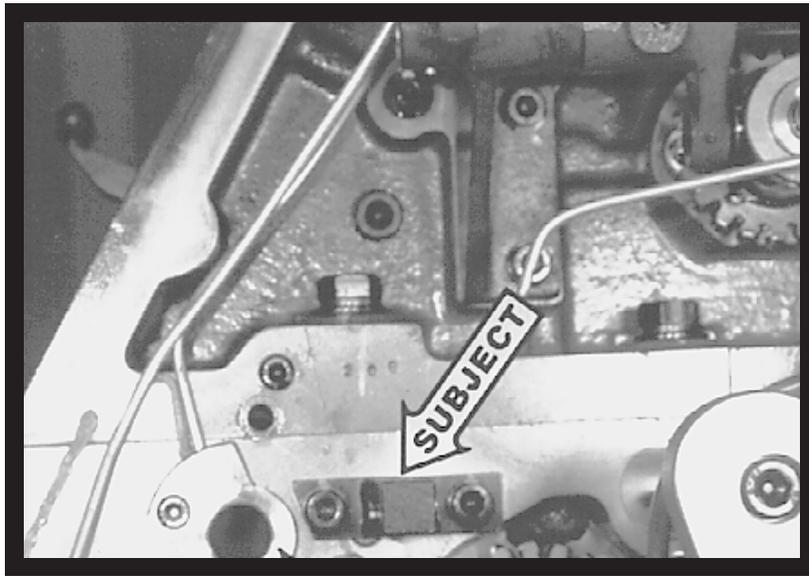
Remove bolts (subject arrow) in bronze oscillator housing at OPS & NOPS. Save for reinstallation. Pivot the housing so it will clear the gear to be removed.

31

Pull the bronze bushings off the ends of the oscillator roller and out of the press frames. The bushings can be tapped out from the inside if necessary. The form roller hangers are still under spring pressure and will add friction when removing these bushings. It may help to oil the bushing before pulling out. After the bushings are out, the oscillator will sit loosely in the holes left by the bushings. Save for reinstallation.

32

Disconnect the form roller pressure studs (subject arrows) at NOPS. They are secured to the press frame by bolts from the outside (see step 34 photo, upper and lower subject arrows). The studs are sometimes tight and must be punched out. Save for reinstallation.



33

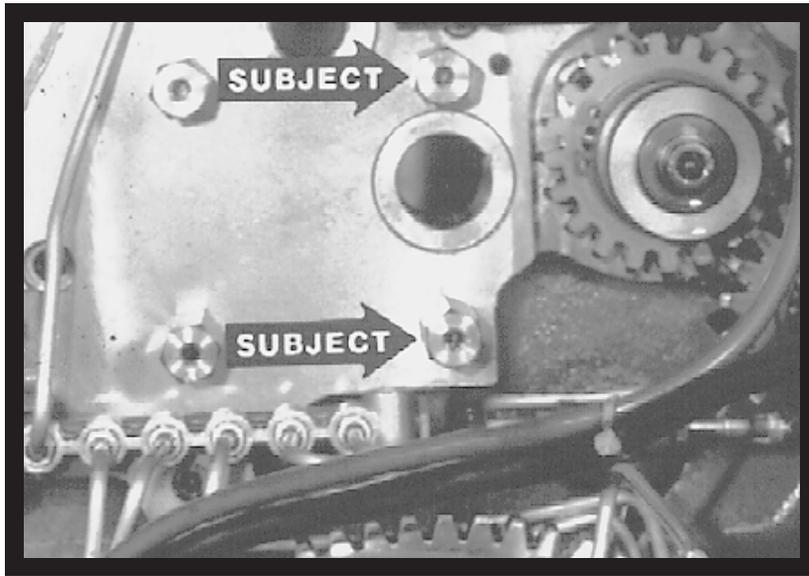
Remove the block (subject arrow) on the outside of the NOPS press frame. Save for reinstallation.

34

Remaining on the inside of the NOPS press frame is a stud that was part of the original pan roller housing (see step 20). Remove the specified bolt (middle subject arrow) and remove stud from press.

35

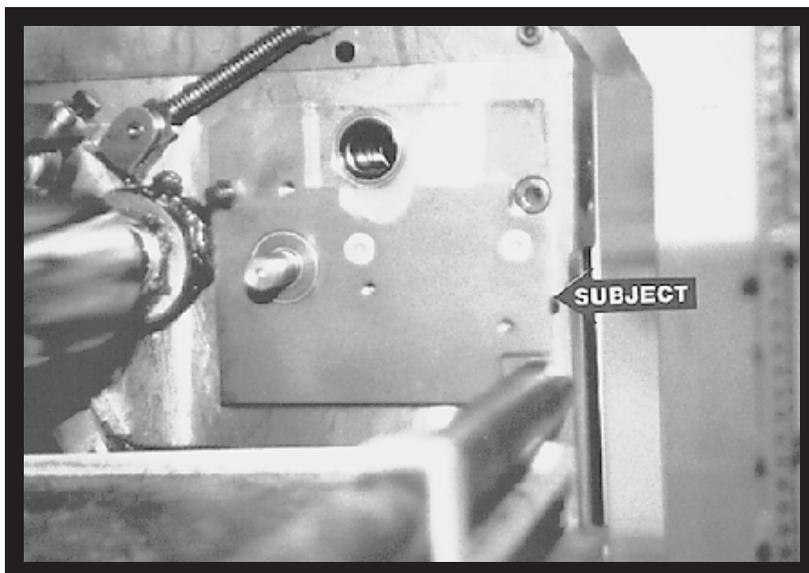
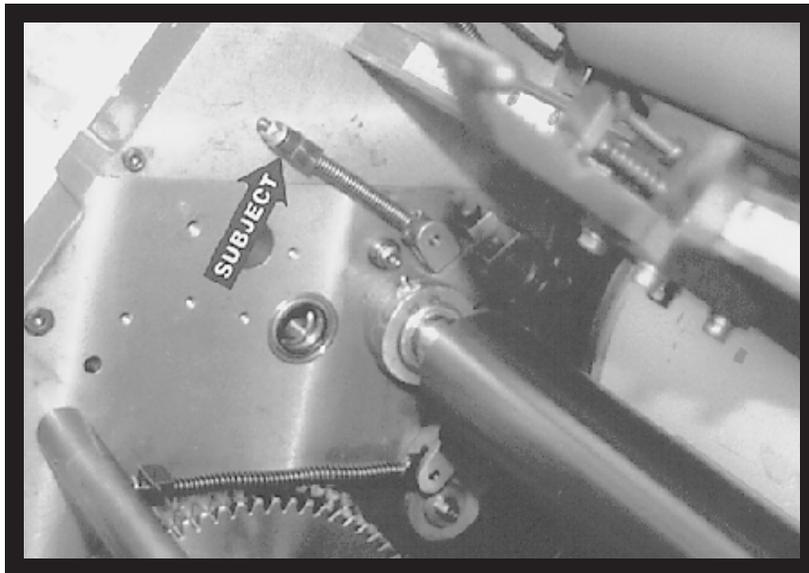
The oscillator can now be removed from the press. Be careful not to drop the snap rings or water form hangers into the press when working the oscillator out. Save water form hangers and snap rings for reinstallation.



36

Remove the right two stand-offs (subject arrow) at NOPS. These originally held the pan roller motor. The remaining two standoffs on the left will stay on the press.

YOU ARE NOW READY TO INSTALL CRESTLINE®.



1

Install new water oscillator roller as follows:

- A. At each end of the roller slip snap ring, inner (lower) water form casting and outer (upper) water form casting in that order.
- B. Turn back to the disassembly section of this manual and working backward through steps 26-32, assemble the oscillation mechanism using the new parts provided as well as parts saved earlier.
- C. When reinstalling guide spool on end of shaft (step 26) the thicker flange on the spool will point outward.

2

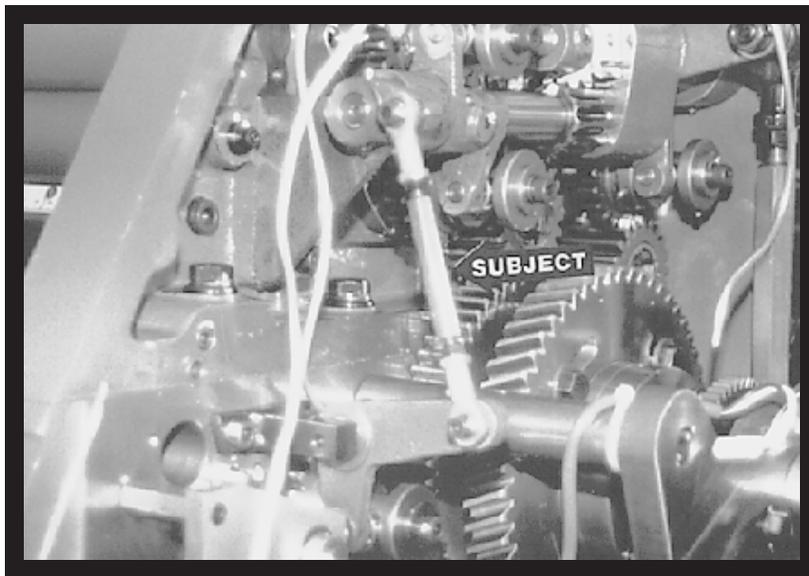
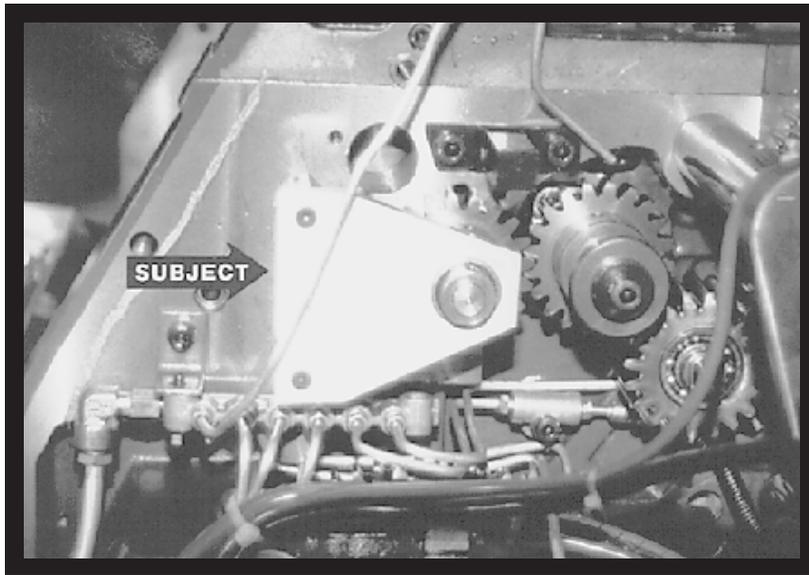
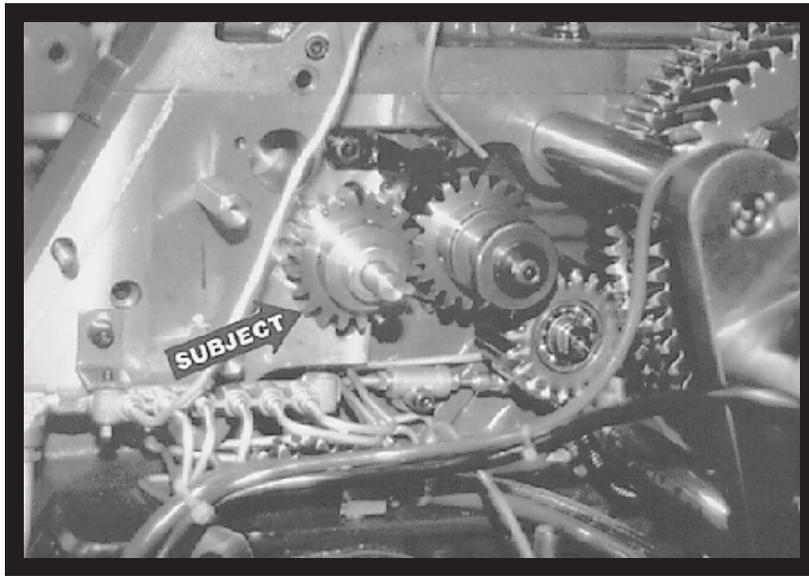
If this adjustment rod is shouldered then proceed with this step. If it is threaded all the way past the studs then skip this step.

At OPS & NOPS, on upper water form adjustment stud, remove lock nut, slip on provided spacer (subject arrow), and replace lock nuts with new ones provided.

3

Remove bearing caps and install Crestline mounting plates (subject arrow) at OPS & NOPS using provided flat head bolts. Spring studs on plates will point toward inside of press frame. Note that bearing caps and their respective mounting plates are stamped with matching numbers. Do not mix up the caps and plates.

NOTE: Frame in photo may differ slightly from actual part received.



INSTALLATION

4

Insert dampener drive shaft (subject arrow) and gear at NOPS as shown. Gear will mesh with the oscillator gear and longer end of shaft will protrude in toward the press frame and through the ball bearing in the NOPS mounting plate.

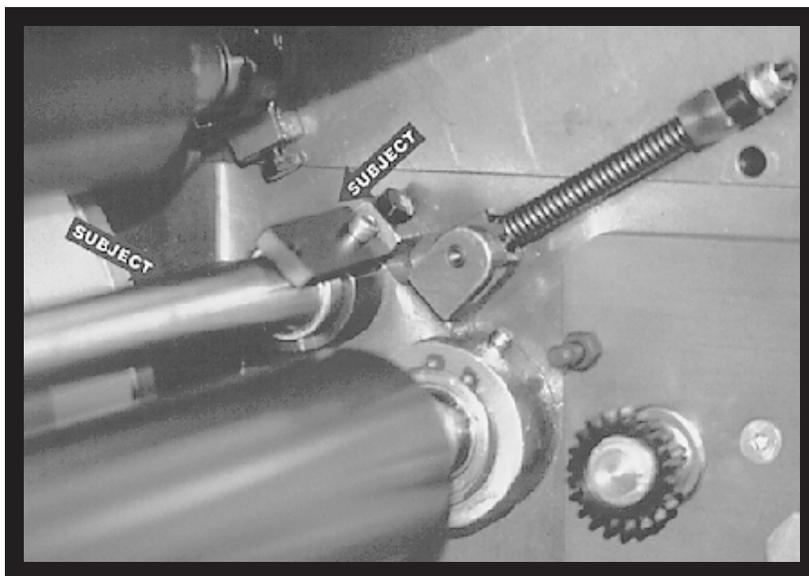
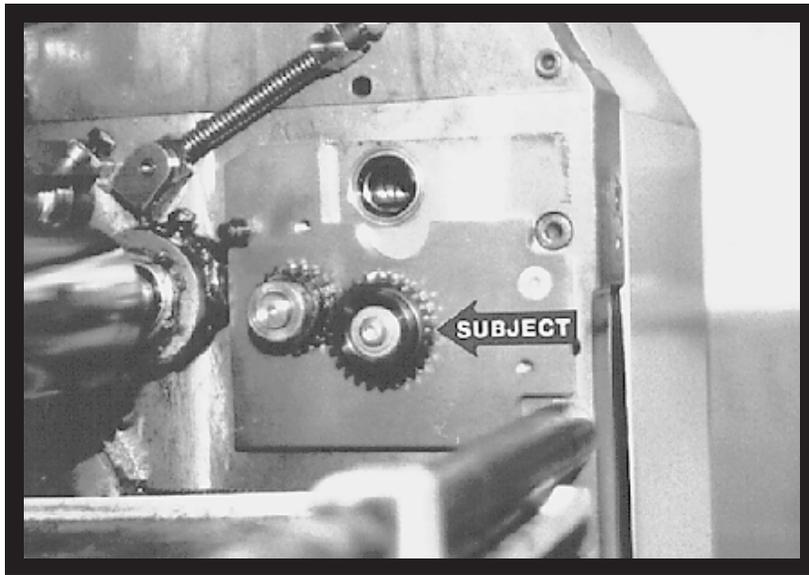
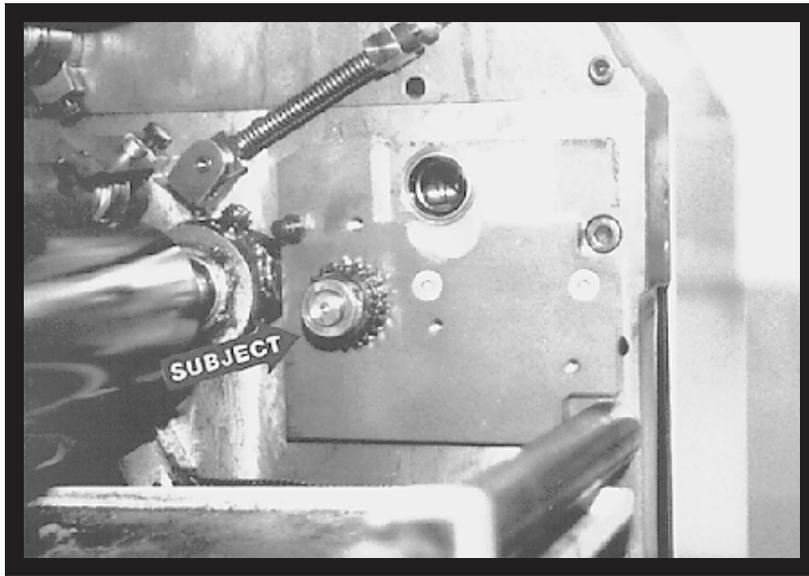
NOTE: Shaft does not line up with bronze bushing in press frame.

5

Slip 12mm set collar over end of shaft and up against gear hub. Install drive shaft support plate (subject arrow) with the flat head screws provided. Plate bolts to studs that previously held original dampener motor. Slip set collar over outside end of the shaft. Position shaft so that there is approximately 2mm (1/16"0 clearance between gear and press frame and tighten both set collars against bearing in support plate. Make sure gears mesh properly when finished.

6

Reinstall pivot block for linkage. Reinstall oscillator linkage (subject arrow) as shown. The oscillator will have to be moved side to side in order to line up the bolt with the pivot block. Make sure connecting rod is in proper alignment and not binding.



7

Slip bronze thrust washer over the end of the portion of the drive shaft protruding through NOPS mounting plates. Next slip drive gear over shaft and against thrust washer. The stamped letters on clutch bearing in the gear will point toward OPS. Slip thin brass washer over shaft and against gear and clutch bearing and finally install the thin set collar at the end of the shaft and tighten.

8

At NOPS, install idler gear (subject arrow) using the provided shoulder bolt. A thrust washer will go between the gear and the plate. Spin the gears to be sure that there is no binding.

Note: the gears will only spin in one direction.

9

On upper water form housing, if you have not already done so, remove small black retaining tab that hold the roller in place. Install dummy roller shaft (left subject arrow) into the hangers and retain at OPS & NOPS with provided black plates (right subject arrow) in place of the removed tabs.



10

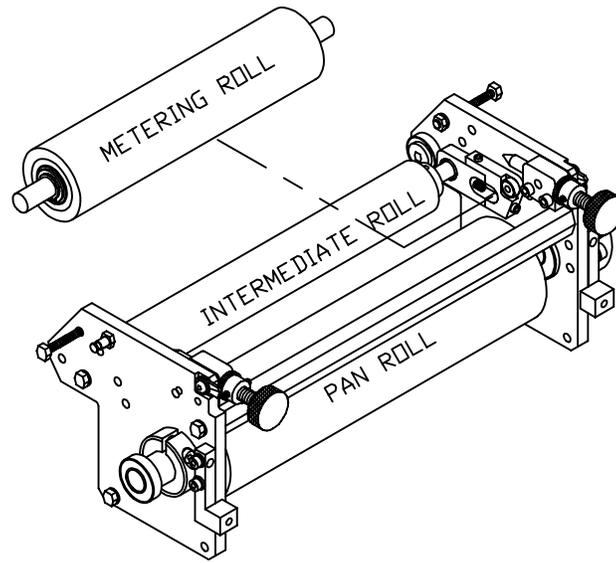
Install provided new water form roller into the original lower water form hangers and tighten tabs.

11

Place the dampener into the press with the ball bearings on the end of the pan roller shaft fitting into the notches on the newly installed mounting plates. The pan roller gear will mesh with the idler gear installed in step 8. Replace the bearing caps on the mounting plates remembering to match the numbers, but do not fully tighten bolts.

12

Position the dampener evenly from side to side. The best way is to check the position of the ball bearing in the mounting plates on each side. After centering, tighten the bearing caps, Also at the top of each dampener frame is a long hex head bolt and lock nut (subject arrow). Turn these bolts outward until they just touch the press frames and tighten lock nut. These bolts prevent the dampener from moving side to side when running. When finished you should be able to pivot the dampener up and down without it binding on the press frame.



13

Install tension springs at OPS & NOPS between spring stud in mounting plate and spring stud in top of dampener frame. Arrow in photo shows approximate location of spring which will be on the outside of the dampener frame. This is a little difficult and a wire type spring tool is helpful.

14

Reinstall dampener metering roller and turn knurled knobs down by hand until light pressure is applied against metering roller. Temporarily reconnect power supply and make sure the dampener is in the "OFF" position. Either electrically or by hand, jog the press forward and observe the upper dampener rollers. These rollers should rotate as the press is jogged forward, but should remain idle when the press is jogged backward. If this does not happen, either the drive gear from step 8 has been installed backward or the dampener intermediate roller is still in contact with the oscillator (dampener is in "ON" position).

15

Once you are sure everything is in working order, reinstall the press side covers, remembering to connect all wiring harnesses. Refer to disassembly steps 3-6 if necessary. Make sure all oil lines and wires clear all the newly installed parts as the covers are reinstalled.

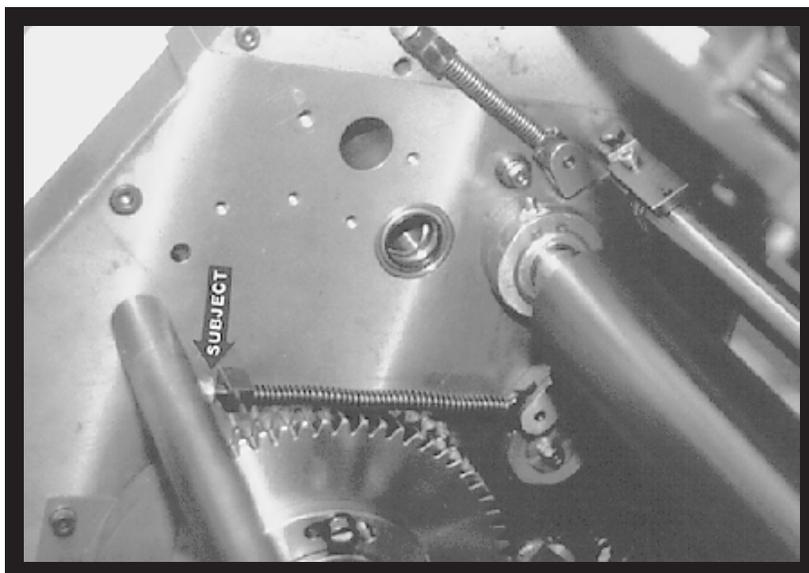
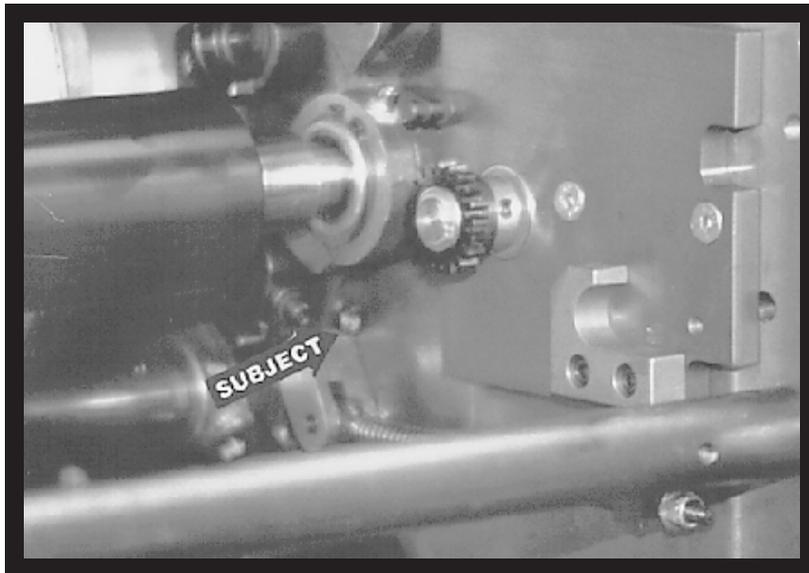
16

Remove the dampener pneumatic air cylinders and replace them with the new ones provided. It may be necessary to adjust the cylinder arms to match the original settings.

17

The existing dampener guard is still used. However, it must be modified. You will need to remove a small portion of the guard to accommodate the metering roller knobs. For a rod style guard (not sheet metal) plates have been provided to secure the cut rods.

YOU ARE NOW READY FOR FINAL ADJUSTMENTS.



FINAL ADJUSTMENTS

1

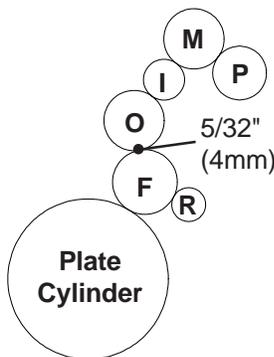
INK UP THE DAMPENER

Make sure the dampener is in the "OFF" position. Apply a small amount of ink on the dampener oscillator roller only. Turn on the press and run for 30-40 seconds and allow the ink to mill. Only the oscillator and form roller will ink up at this time.

2

OSCILLATOR TO FORM ROLLER PRESSURE

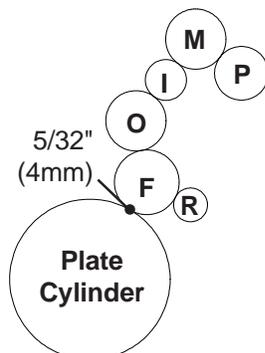
After press sits still for 15-20 seconds, jog the press forward slightly while looking at the form roller. A stripe or bead line should appear on the form roller which was created by the oscillator. This stripe should be 4mm (5/32") wide. To adjust, loosen hex bolt (subject arrow) on the water form hanger and rotate. The hangers are eccentric and you can observe the water form roller movement as you turn the hanger to determine the correct direction for adjustment. Refer to the Sakurai manual for this adjustment if necessary as it is the same as the original dampener. Once the proper stripe is obtained, tighten the hex bolt.

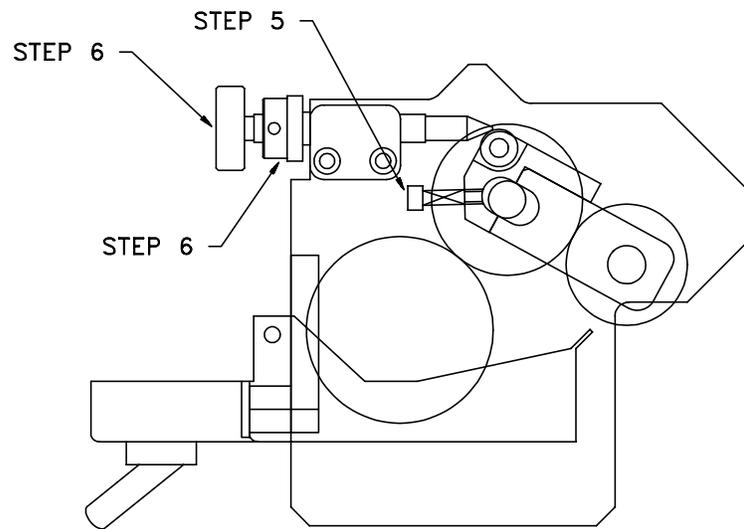
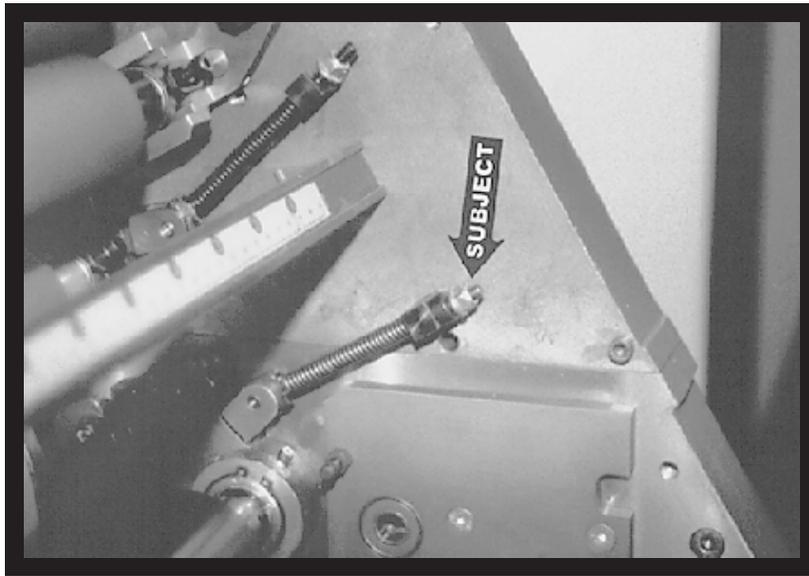


3

FORM ROLLER TO PLATE CYLINDER PRESSURE

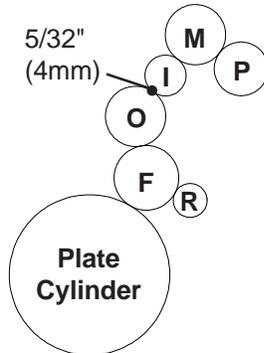
Drop the dampener form roller down to the plate and back to "OFF" again. This will leave a stripe on the plate which should be 4mm (5/32"). This stripe is adjusted exactly as the original dampener by turning the lock nuts on the adjustment studs (subject arrow). Turning the nut clockwise will decrease the stripe and vice versa.





FINAL ADJUSTMENTS

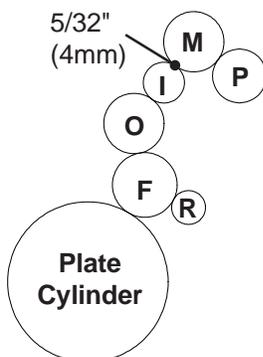
4



INTERMEDIATE TO OSCILLATOR ROLLER PRESSURE

Temporarily remove the dampener metering roller. Drop the dampener down to the plate cylinder and back off. In addition to the form roller contacting the plate, the intermediate roller will drop down and contact the oscillator roller. Turn the intermediate roller around by hand to reveal the stripe which should be 4mm (5/32"). This pressure is adjusted by turning the lock nut on what used to be the upper water form stripe adjustment (subject arrow). Turning the nut clockwise decreases this strip and vice versa.

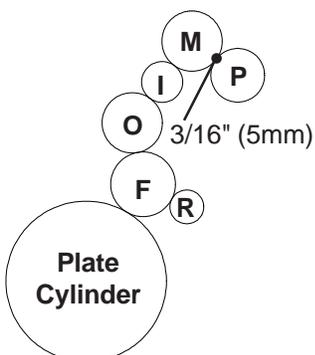
5



METERING TO INTERMEDIATE PRESSURE

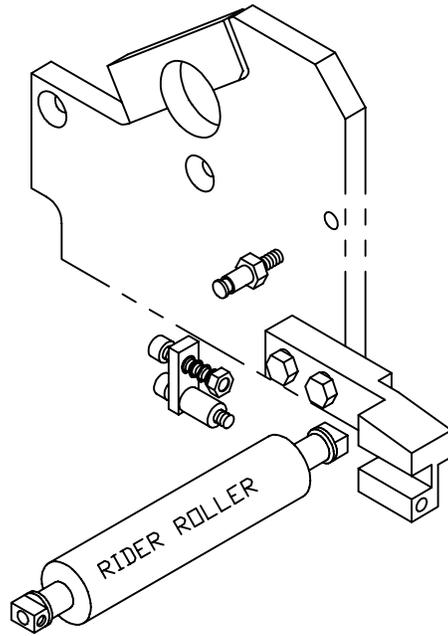
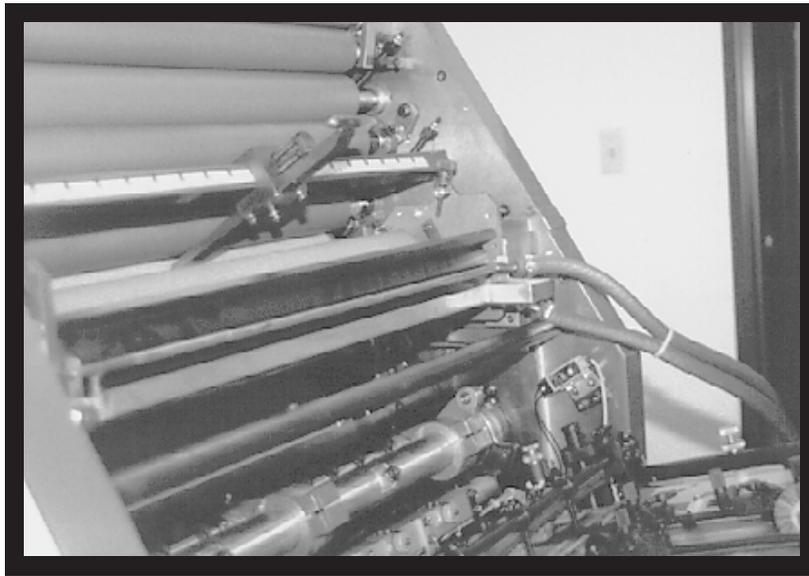
Dab a little ink on the upper section of the dampener and run press to mill. Place the dampener in the "ON" position, allow to sit still for 15 seconds and jog press backwards. Observe the stripe left on the metering roller by the intermediate roller. It should be 4mm (5/32"). To adjust, turn the cap screw (subject arrow) on the metering roller hanger. Turning the screw in (clockwise) increases the stripe and vice-versa.

6



MAXIMUM METERING TO PAN ROLLER PRESSURE

Apply a small amount of ink to the dampener metering roller, turn the press on and run 30-40 seconds to mill the ink. Stop the press and allow it to sit still for 15-20 seconds. Jog the press forward and observe the stripe on the pan roller. It should be 4.5mm - 5mm (3/16" - 7/32"). Turn the knurled metering knobs (upper arrow) clockwise to increase the stripe or vice versa. When the proper stripe has been obtained, spin the ratchet gears (lower arrow) down until they bottom out on the stud and secure ratchet gear to knurled knobs with the set screws.



FINAL ADJUSTMENTS

7

CIRCULATOR FLOW INTO WATER PAN

Attach water pan to the water pan blocks, center pan relative to the pan roller, and tighten bolts. Connect feed hose to the filler pipe on top of the pan. Connect drain hose to the bottom of the pan. Place brass drain weir in water pan drain hole (this controls the water level). Open circulator, locate control valve, and close completely. Turn on circulator pump and slowly open control valve until water starts filling the pan. A slow trickle is all that is required for proper circulation. If the flow is too fast, the pan will fill faster than it can drain and overflow. If refrigeration is used, keep the temperature between 58 - 65 degrees Fahrenheit (15 - 18 degrees Celsius).

8

Rider Roller Adjustment

An extra rider roller has been provided to be installed into the brackets located on the mounting frames. Set the end play of the shaft using the black bushings on each end. Make sure the rider roller is centered on the water form roller. The pressure is applied by spring loaded screw in the roller bracket cap. This pressure can be adjusted by turning the nut on the end of the screw. Be sure the screw fits into the dimples on the roller shaft bushings. (Dimples are on the opposite side of the set screw.) Tighten cap when finished and, by hand, check that the roller moves in the slot freely.

OPERATION PANEL CONTROLS

The features of the Sakurai operating levers and electronic control panels change very little with installation of Crestline®. Probably the most major change is that the original water ductor is no longer on the press so any related controls will no longer have a function. The manual water form levers will still raise and lower the Crestline®, or, if press is fully electronic, the Crestline® will still sequence properly in the press's automatic modes.

PREPARING THE DAMPENER FOR PRINTING

- A. Make sure all rollers are installed in the Crestline® and the knurled metering knobs are screwed clockwise until they stop.
- B. Apply a very small amount of ink on the dampener oscillator and metering rollers. Turn on press and idle for 30 - 40 seconds to mill ink. **OPTIONAL:** The dampener can be inked after the ink rollers are inked by turning on the press and dropping the ink and water forms to the printing plate. Since the dampener does not yet contain water, the plate will ink up solid and will therefore ink up the dampener. After a very light film of ink has covered the dampener rollers, water can then be turned on and the plate can be cleaned up by turning on the press and dropping the dampener to the plate.
- C. Attach water pan to mounting blocks and attach feed and drain hose from circulator. Close control valve, turn on pump, and slowly open control valve until a slow trickle of fountain solution flows into the pan.
- D. Place all ink and water controls in the "AUTO" mode where applicable.

ADJUSTING THE AMOUNT OF WATER DELIVERED TO THE PLATE

The amount of water delivered to the printing plate is adjusted by the knurled knobs on top of the dampener. Generally speaking, you should begin all jobs with the knobs turned all the way down. This is the minimum water position for Crestline®.

Should you require more on the plate, turn the knobs counterclockwise one "click" at a time until desired water volume is achieved. Typically, when the press is running slowly such as during make-ready, the Crestline® may need to be opened up one or two clicks to keep proper moisture on the plate, and, then when production

CLEANING & MAINTENANCE

printing speeds are initiated, the metering knobs can be turned back down.

FOUNTAIN SOLUTIONS AND ALCOHOL

Accel recommends using the manufacturer's instructions for mixing fountain solution. Generally, a pH factor of 4.0 to 4.5 is recommended for most metal plate solutions. Conductivity should be about 1000 - 1500 mmhos above your base water.

Alcohol is not required for the Crestline® to function properly, but will not harm the dampener if you so desire to use it, provided you keep the ratio under 15 %. Alcohol substitutes may also be used according to the manufacturer's recommendations.

WASHING UP THE CRESTLINE®

Generally speaking, the Crestline® must be washed up upon each color change and at the end of the day. The following procedures should be followed:

- A. Close circulator control valve, remove brass weir, and allow water pan to drain. If necessary, loosen pan knob at NOPS and drop pan down to aid draining. Turn off circulator pump when pan finishes draining.
- B. Make sure a metal plate is mounted to plate cylinder. Attach washup blade to inker, turn on press and wash inker as normal. When the inker is approximately 50% clean, drop the both the ink and water form rollers to the plate and continue washing the inker. Typically, the dampener will pick up enough solution off the plate to clean itself. Avoid applying excess wash directly to the dampener as most of it will end up in the water pan.
- C. When all the ink and water rollers are clean, be sure to wipe the excess wash that may accumulate on the ends of the Crestline® rollers.
- D. Remove water pan and inspect for any excess wash that may have dripped from the dampener rollers. If needed, wipe the pan clean and remount.
- E. If this is the last washup of the day, spin the knurled knobs counterclockwise to relieve the pressure. Be sure to spin these knobs back down before beginning the next day.

CLEANING & MAINTENANCE

DEGLAZING THE DAMPENER

Periodic deglazing of water-soluble contaminants will be necessary with the Crestline®. Typically, once every 2-3 weeks will be sufficient, unless you are running electrostatic plates on a daily basis whereas deglazing should be performed weekly. A 50/50 solution of household ammonia and hot water can be used for deglazing purposes. If you prefer a commercially available deglazer, avoid those containing pumice or gritty substances. Always follow deglazing with straight water and then roller wash. Accel offers a product called **COMPOUND X** that we recommend for deglazing our system. Contact your dealer or Accel for more information.

OILING AND GREASING THE DAMPENER

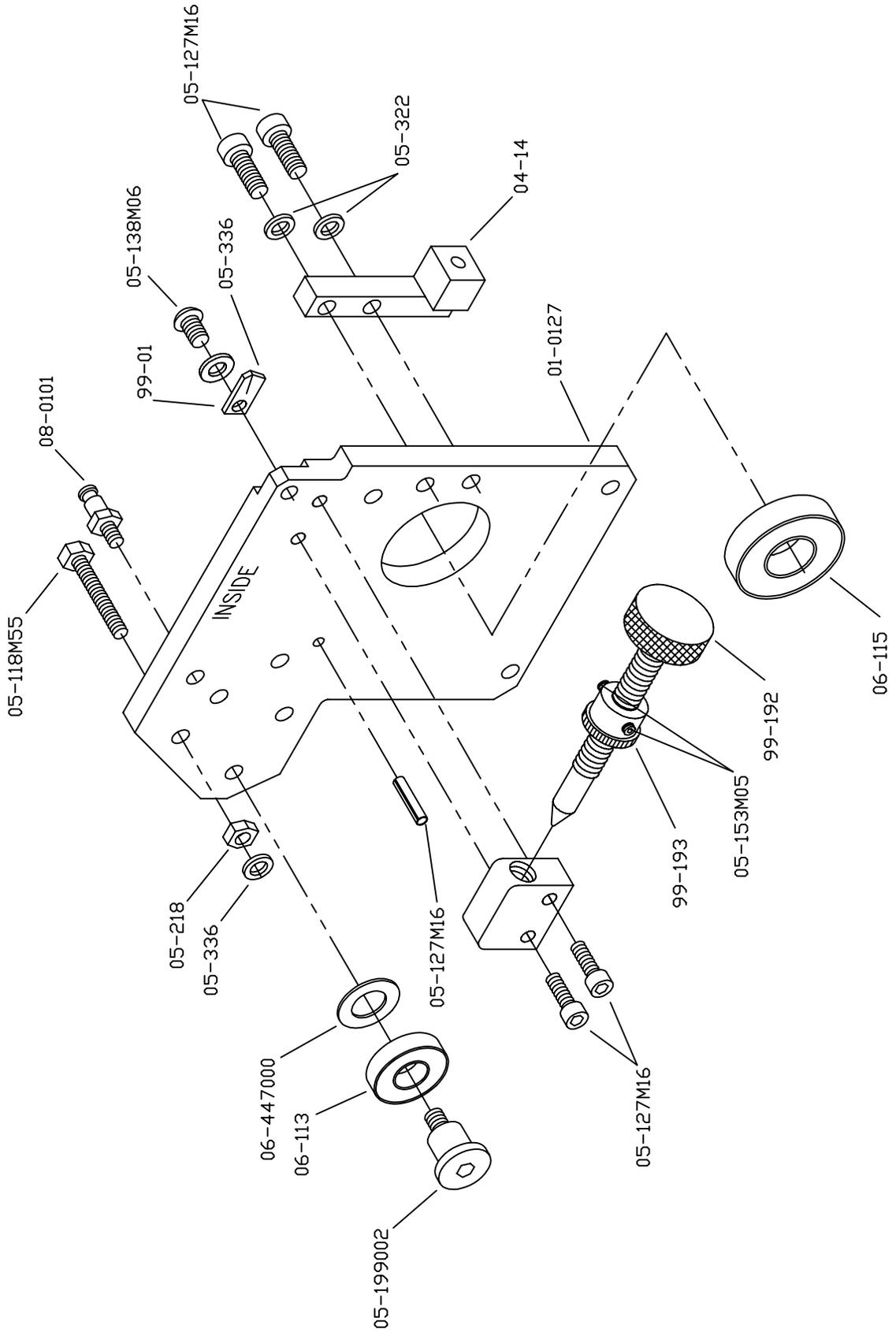
- A. Place a small amount of grease on the gears once a month.
- B. Inject grease into the oscillator grease fitting once a month.

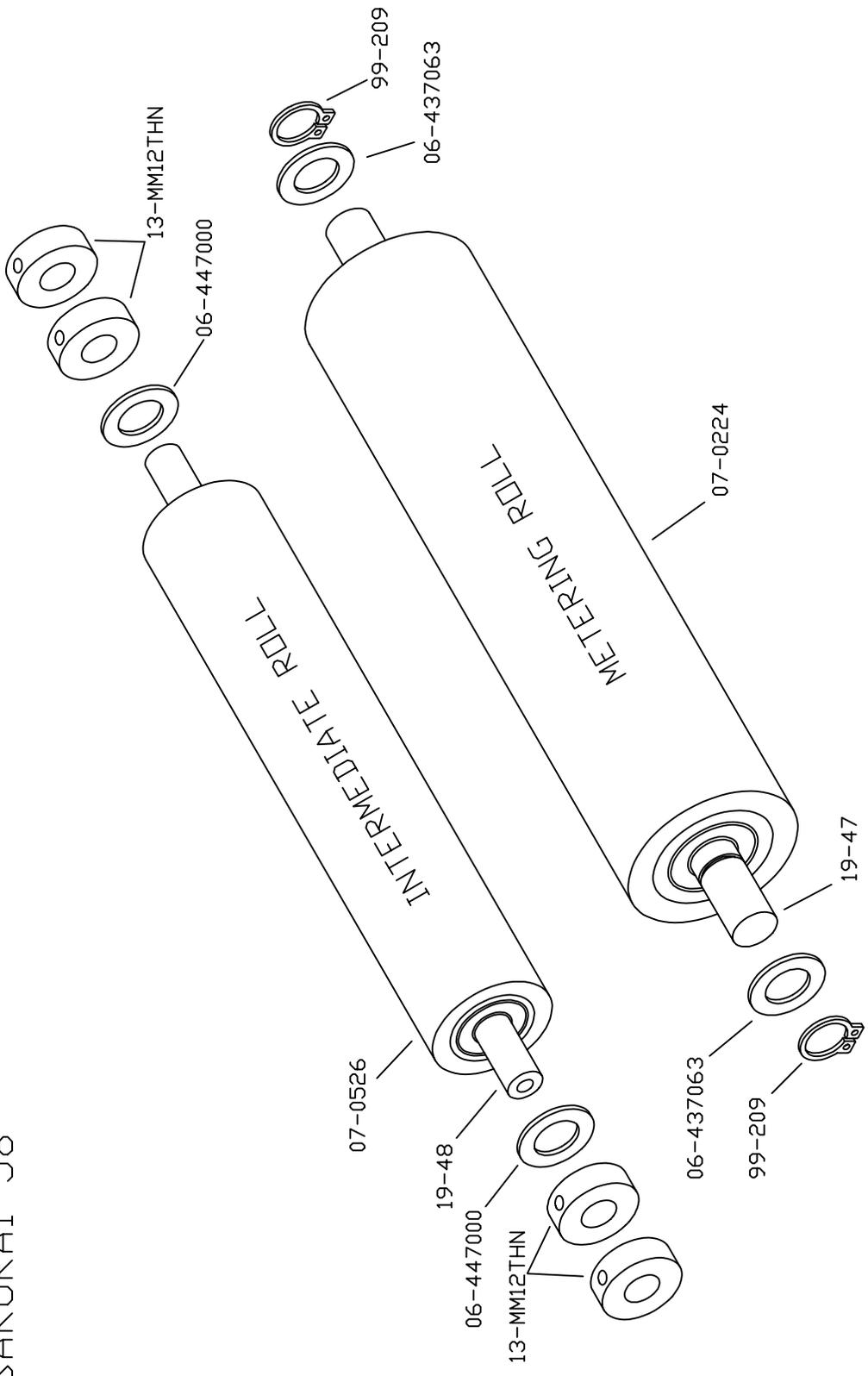
CLEANING & MAINTENANCE

CRESTLINE® CLEANING & MAINTENANCE CHART

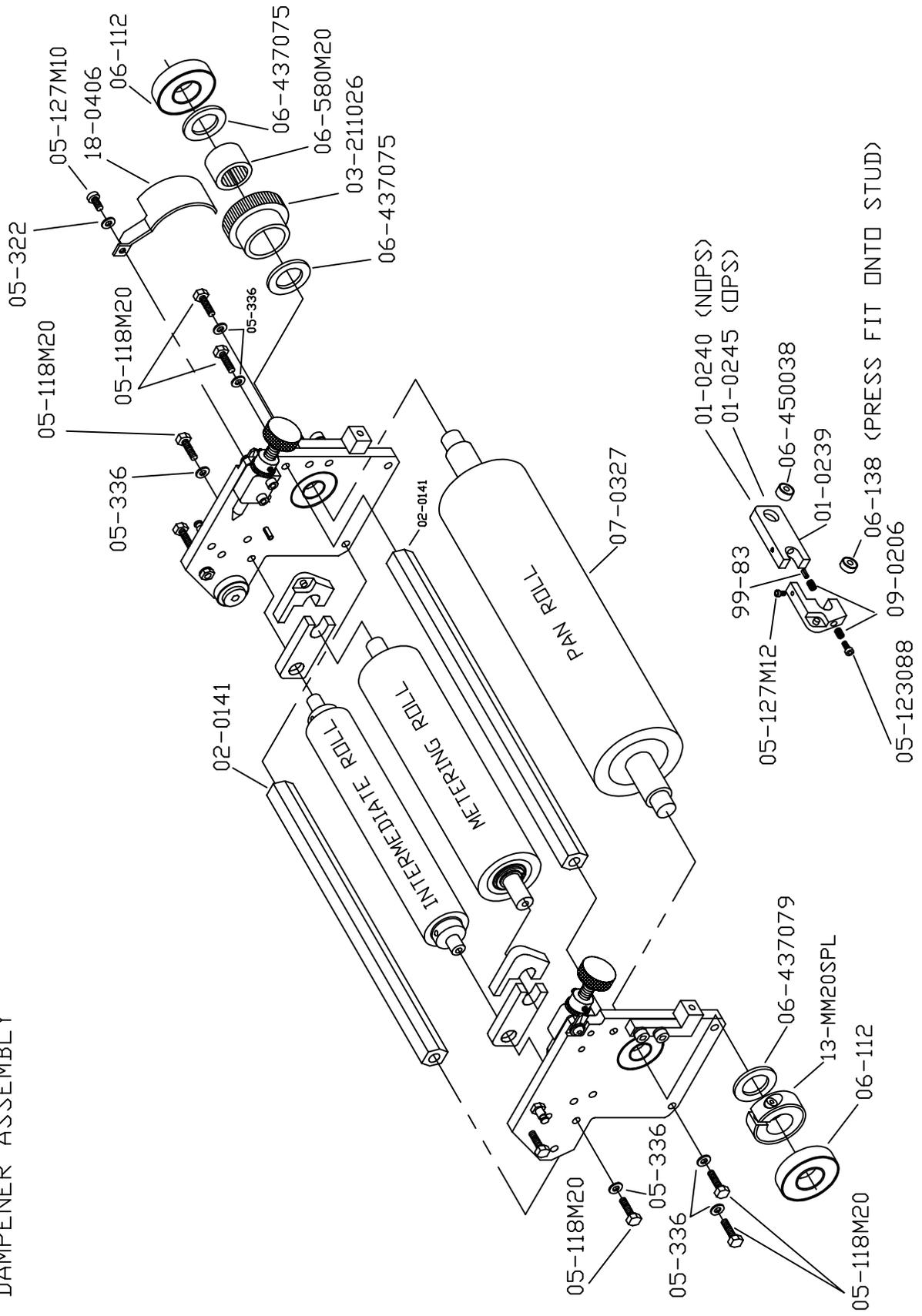
| | Daily | Weekly | Bi-Weekly | Monthly |
|---------------------------|-------|--------|-----------|---------|
| Wash Rollers | ✓ | | | |
| Deglaze Rollers | | | | |
| Metal Plate Users | | | ✓ | |
| Silvermaster Plate Users | | | ✓ | |
| Electrostatic Plate Users | | ✓ | | |
| Grease Gears | | | | ✓ |
| Inspect Ball Bearings | | | | ✓ |
| Check Roller Pressures | | | | ✓ |
| Check Roller Surfaces | | | | ✓ |

SAKURAI 58 NOPS DAMPENER FRAME ASSEMBLY



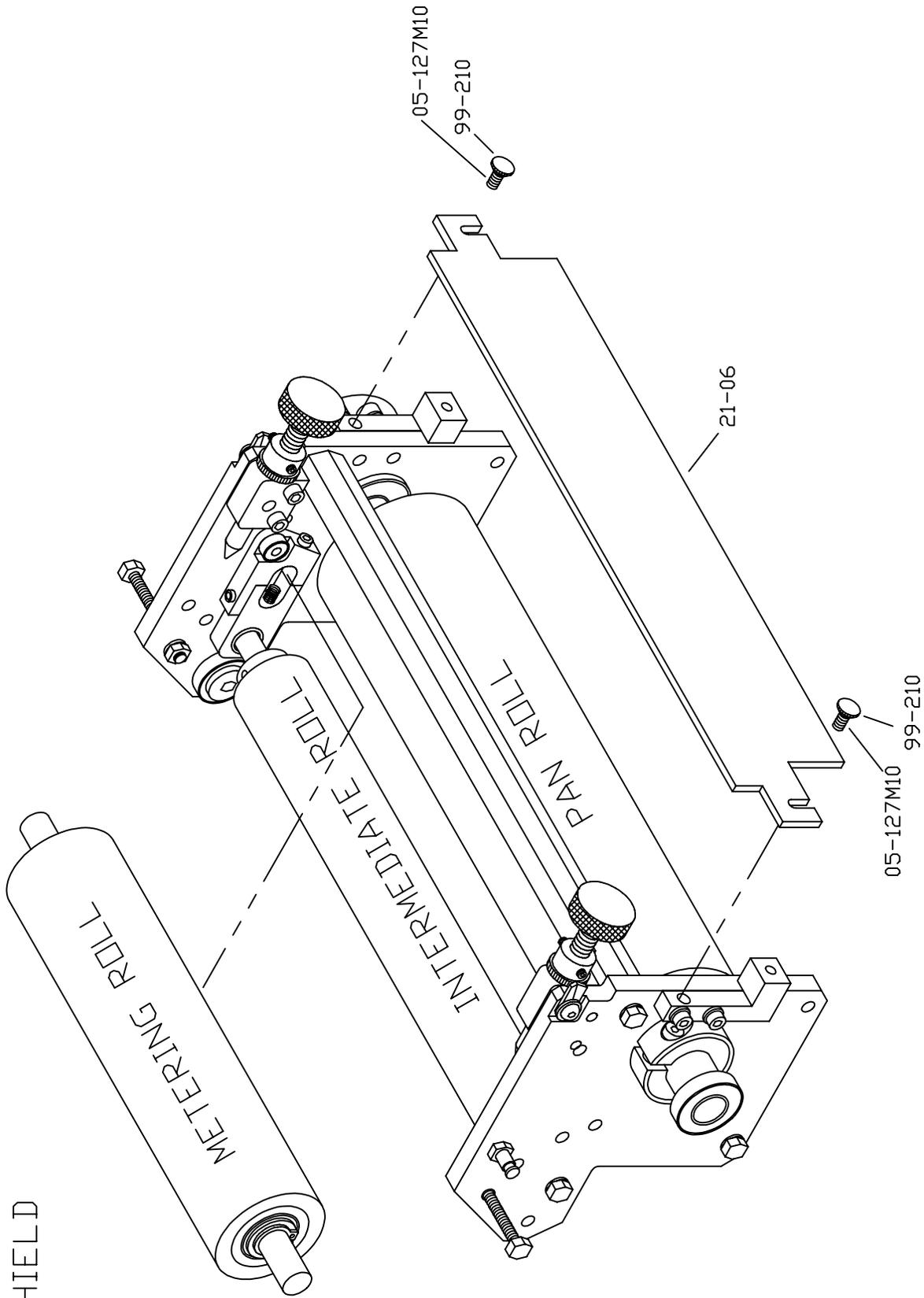


SAKURAI 58
DAMPENER ASSEMBLY

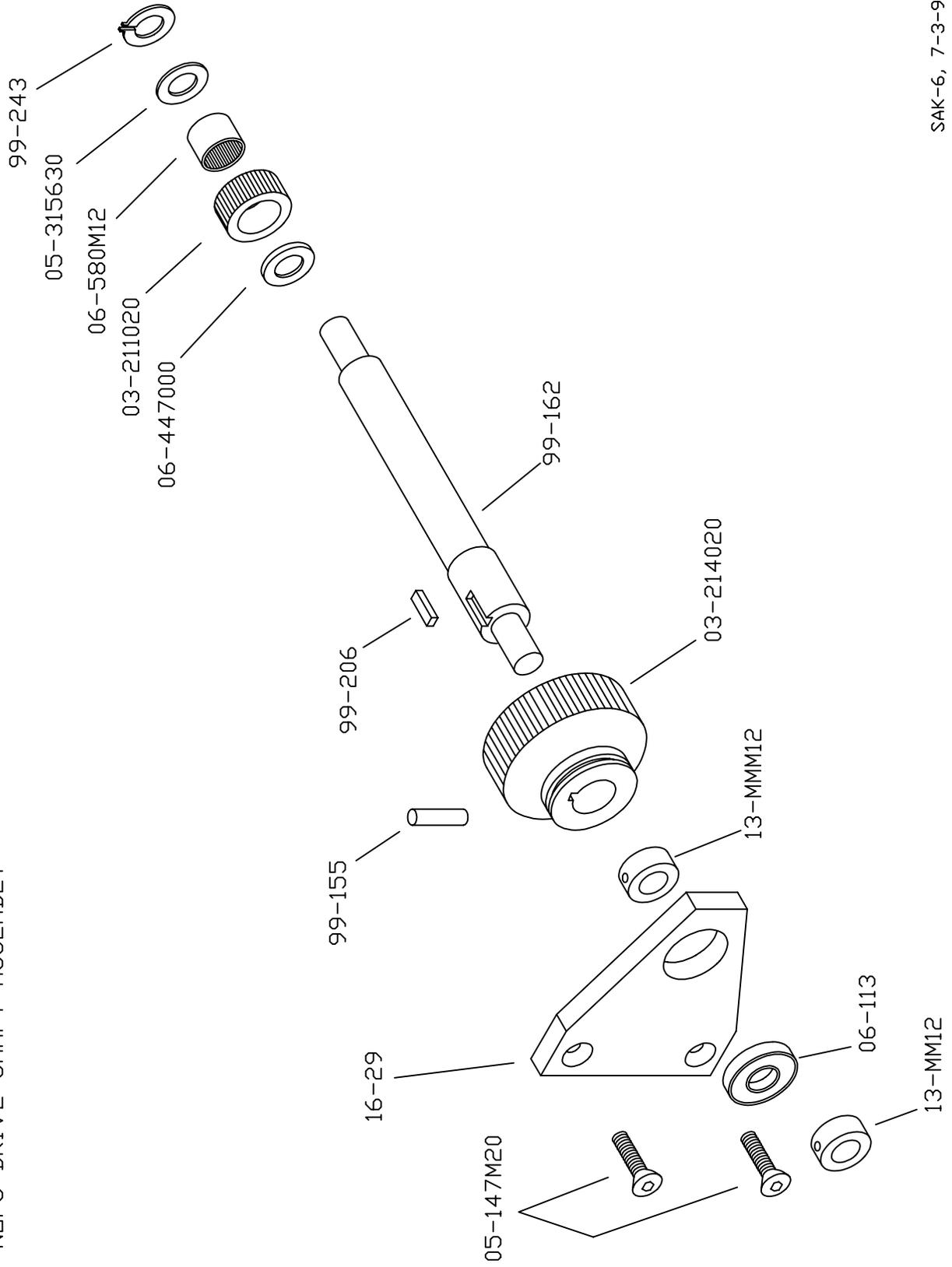


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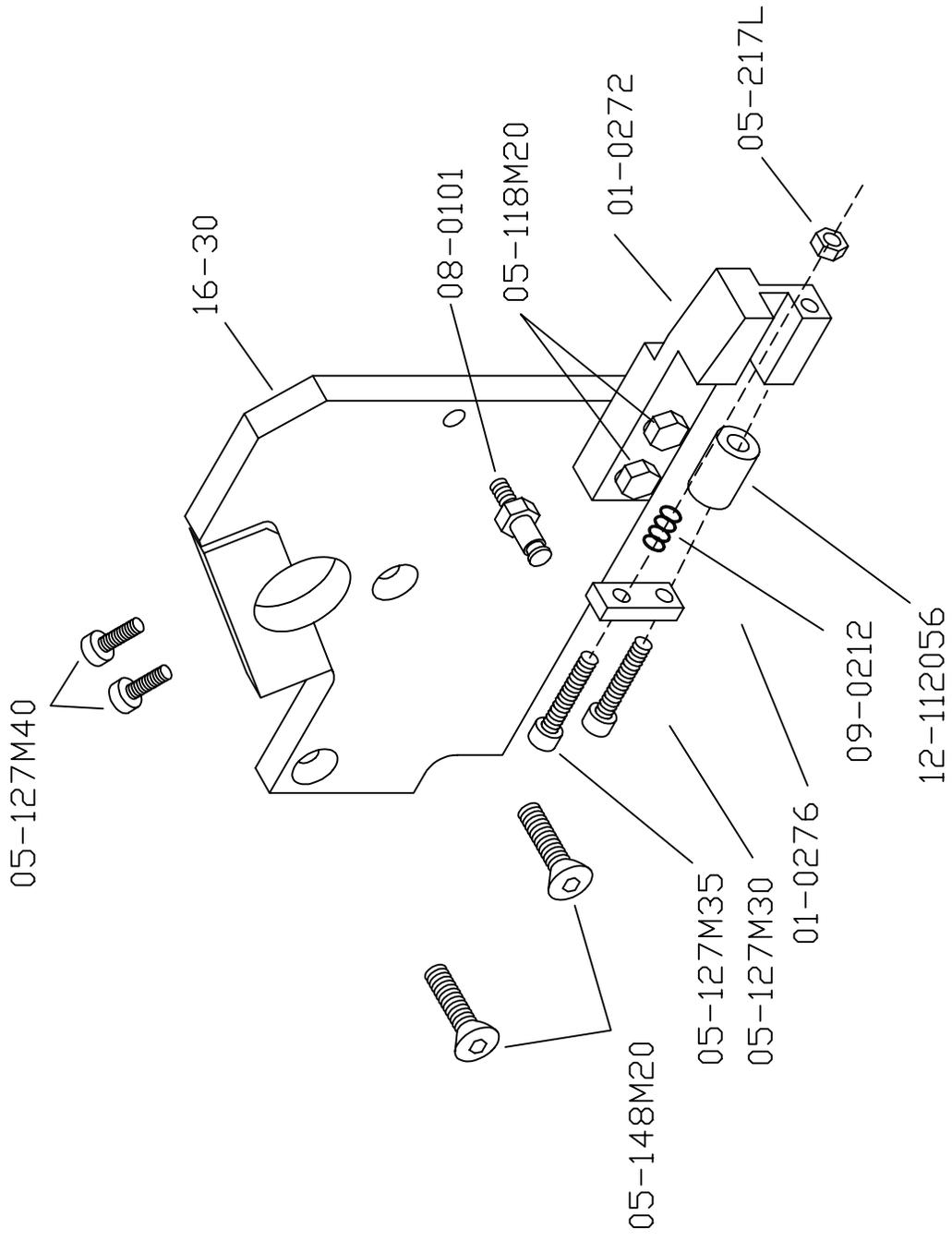
SAKURAI 58
SHIELD



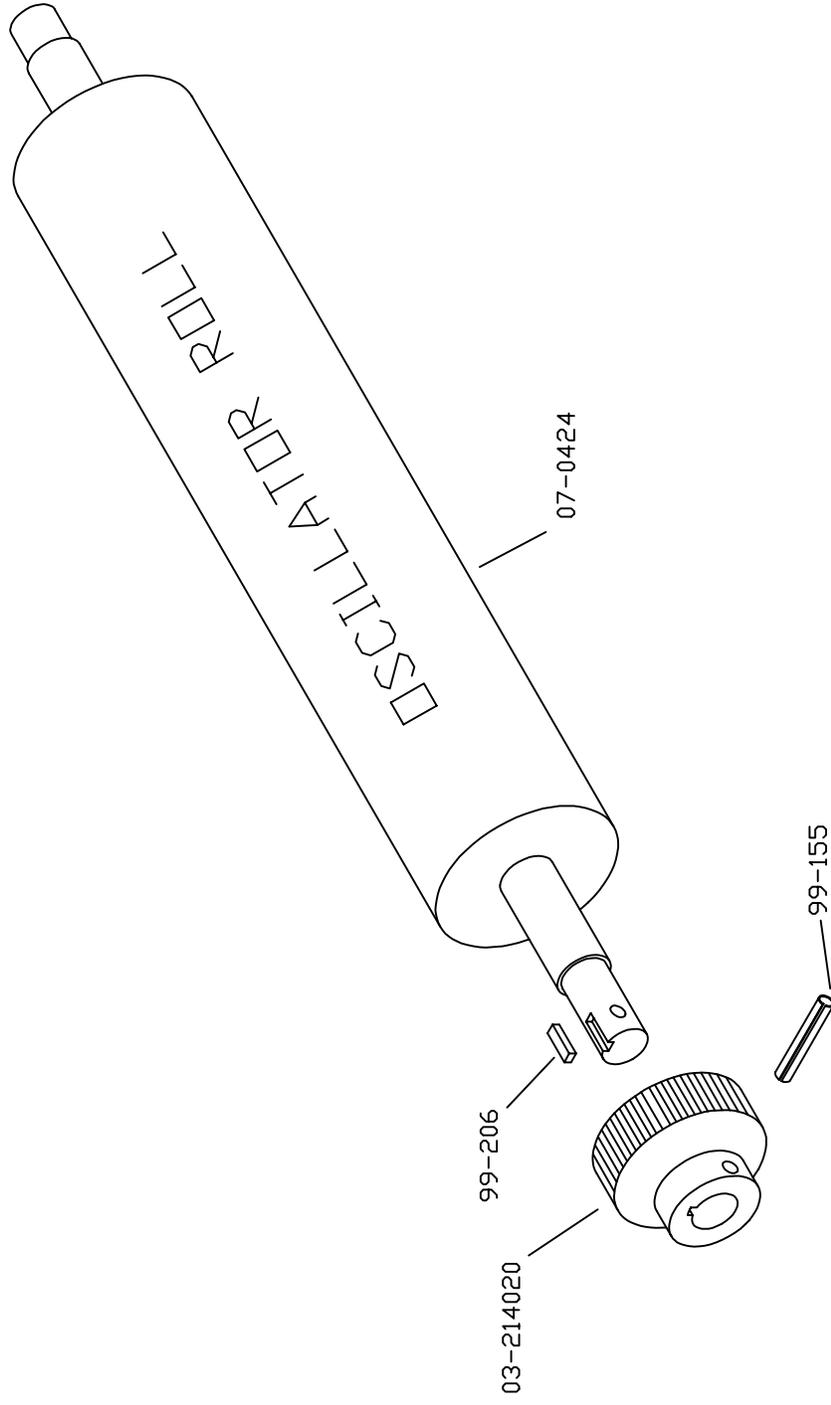
SAKURAI 58
 NOPS DRIVE SHAFT ASSEMBLY

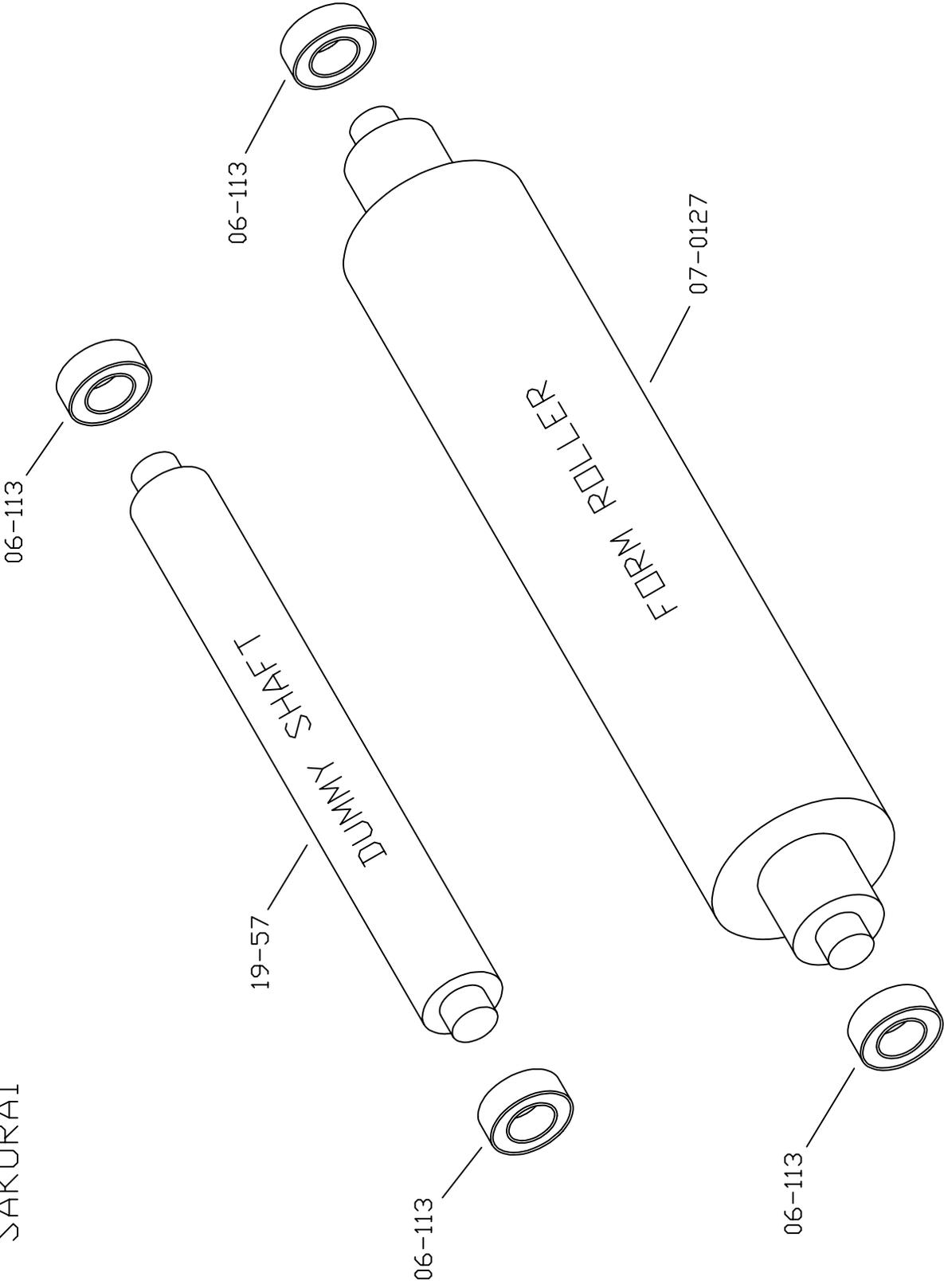


SAKURAI 58
DPS MOUNTING FRAME ASSEMBLY

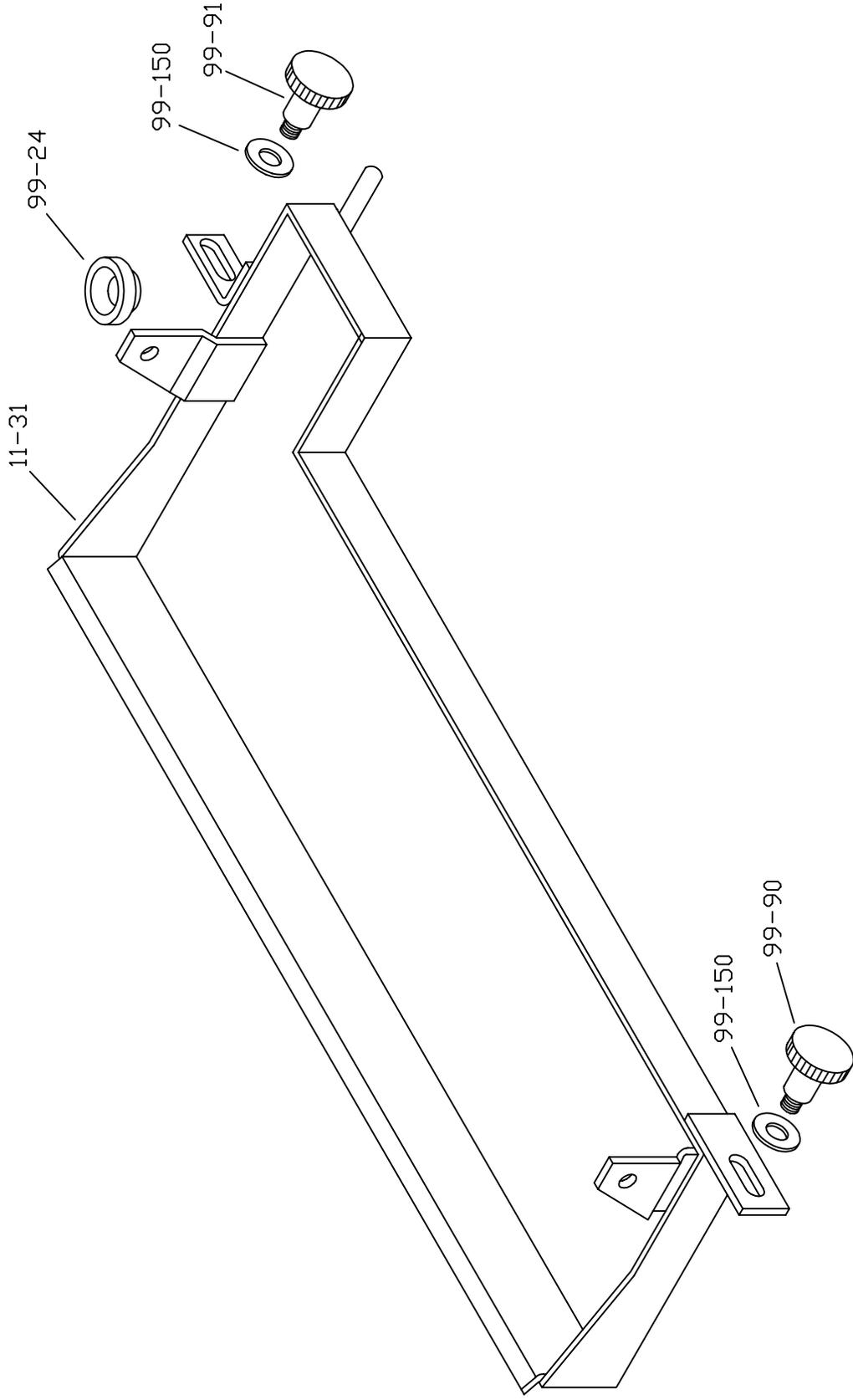


SAKURAI 58
OSCILLATOR ASSEMBLY

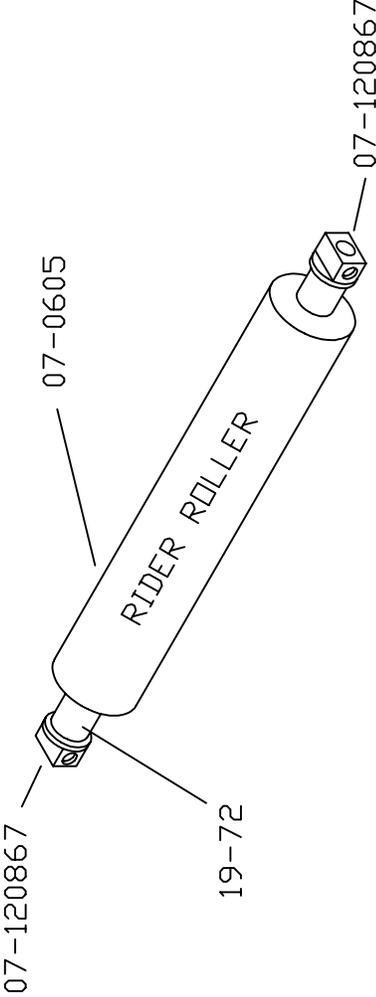




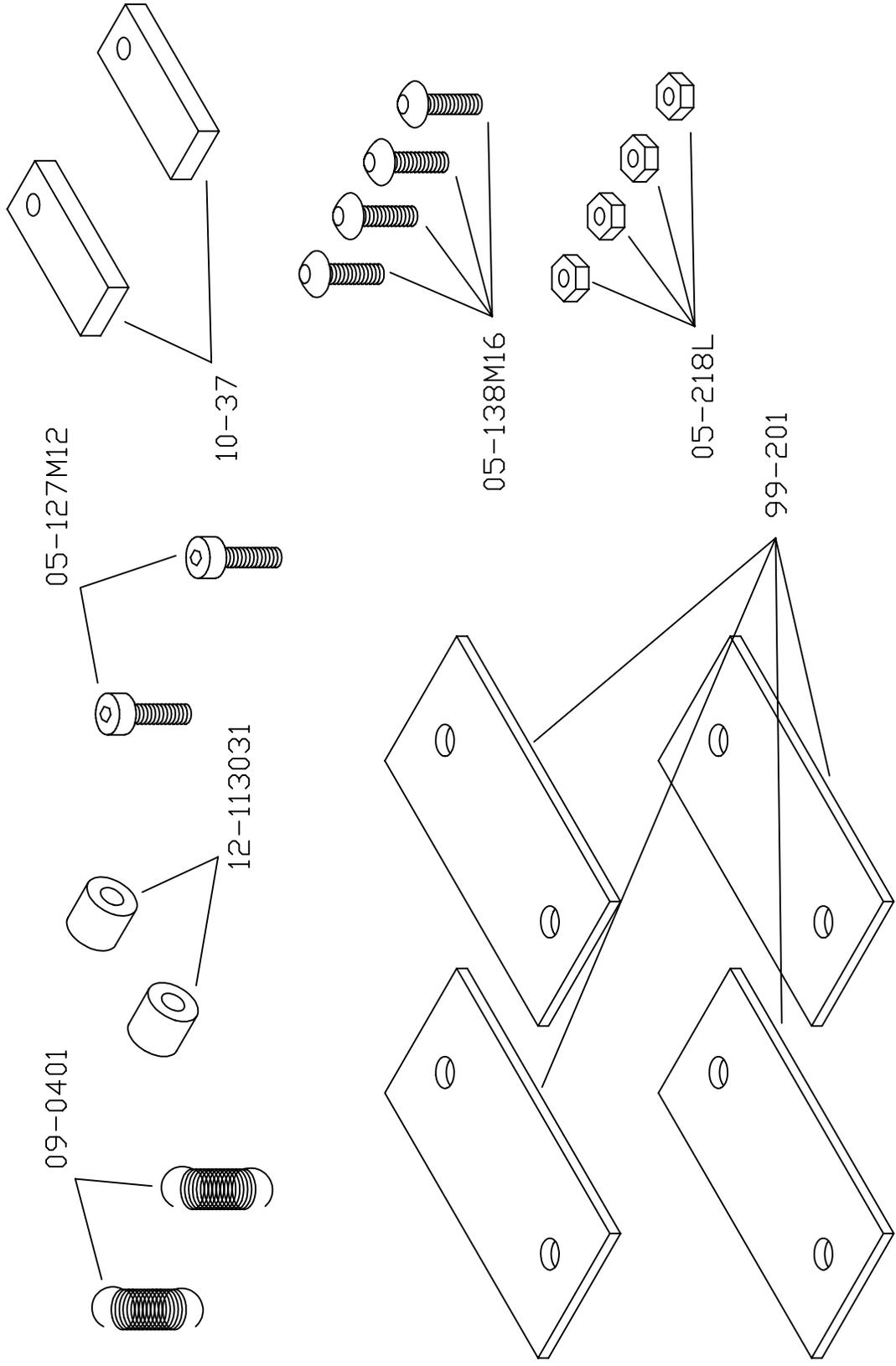
SAKURAI 58
WATER ASSEMBLY

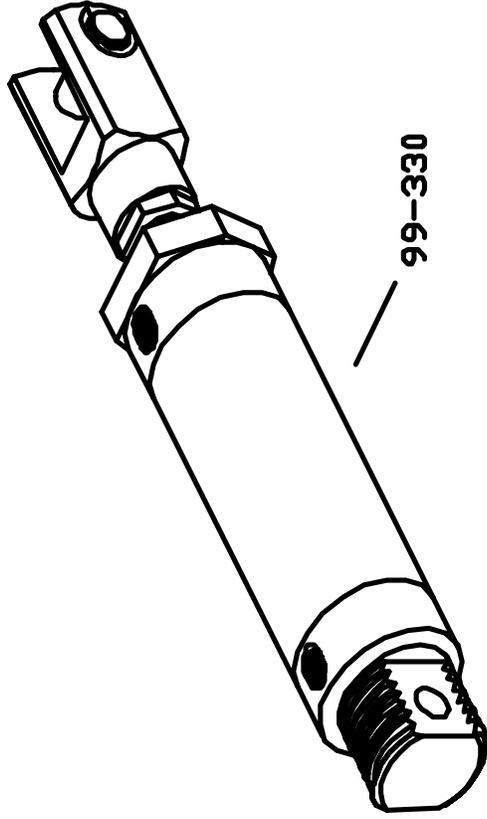


SAKURAI 58
RIDER ROLLER ASSEMBLY



SAKURAI 58 MISCELLANEOUS PARTS





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