

INSTALLATION INSTRUCTIONS

The MIMIK tracer valve is a precision hydraulic valve that controls the amount and direction of oil flow.

The following must be done when installing to ensure proper operation:

1. Make sure hydraulic oil is clean. Use Sunoco Sunvis 747 or equivalent. Change oil and filter, and flush all hoses prior to installing the tracer valve.
2. If it is necessary to change or re-position the hose connectors at the valve:
  - a) Use sealing nuts (with teflon inserts) on the connectors. Do not use teflon tape on fittings.
  - b) When installing put the sealing nut on the connector, as far as it will go. Then screw connector into the valve finger tight at least 2 1/2 turns.
  - c) Tighten only sealing nut against valve body. Do not over tighten.
3. Connect hoses to valve connectors. Make sure they are connected as follows:
  - a) Pressure line from tank to connect to "P" at valve.
  - b) Return line from tank to connect to "R" at valve.
  - c) Connect drain line from tank to "D" at valve.

NOTE: There are 2, "D" (drain) ports on the valve. Connect the drain hose to the lowest "D" port. Make sure the other "D" port in valve has vented brass plug in it.
  - d) Connect lines from cylinder to "A" and "B" at valve. Turn on hydraulic tank to see if valve moves toward template with retract lever in infeed position. If it moves away, reverse cylinder "A" and "B" lines at valve. If a reversing valve is in the circuit, make sure it is set in the forward position prior to doing this check.
4. Ensure that return line at tank is not coupled to any other line going to the tracer valve. Return oil must be able to flow directly into tank. If not, oil may leak out stylus end of valve during operation.
5. If pressure and return lines are reversed (in error) at the valve, or if the return line flow is restricted, oil will leak out the stylus end of the valve during operation.
6. The drain line from valve to tank cannot be kinked, or looped up above the tracer valve, or oil may leak out stylus end of valve.

Attached are instructions for setting the feed rate and stylus pressure at the tracer valve.

Change oil and oil filter at least annually to ensure trouble free operation.

If hoses are removed from valve for any reason, cap the hose ends and the hydraulic connectors on the valve to prevent dirt from entering.

Mimik tracer valves are equipped with the following controls:

A) Ininitely Variable Infeed Rate Control

To adjust the infeed rate of the slide, rotate the knurled slow feed knob located on the tracer valve.

- Clockwise will decrease infeed rate.
- Counterclockwise will increase infeed rate.

The correct setting should provide an infeed slightly greater than needed to follow the template contour.

Most workpieces can be traced at 10 ipm.

B) Retract Control Lever

This two position control selects either infeed or retract. Rate of retract is not adjustable.

C) Stylus Pressure Control

Stylus actuating pressure is a function of the spool return spring pressure and frictional resistance. Stylus pressure adjustment on the tracer valve provides a stylus pressure of approximately 4 ounces to 2 pounds. A light stylus pressure provides maximum sensitivity and good surface finish, but must be heavy enough to ensure positive spool return.

Recommended stylus pressure is between 4 and 8 ounces. (Dot on adjusting screw about 3/16" counterclockwise from "L" position).

## INFEED RATE SETTING ON TRACER VALVE

If the normal range of infeed cannot be obtained through "slow feed knob" rotation, the eccentric tapered pin may be out of position. To reset, proceed exactly as follows:

Before making any adjustments, be sure hoses are connected correctly.

- a) Turn slow feed knob fully in (clockwise).
- b) Loosen retract lever clamping screw and turn slow feed knob further clockwise. Continue turning until tracer slide begins feeding toward template. (It is possible for slide to retract before infeed stroke begins.)
- c) With retract lever in trace position, tighten clamping screw. Move retract lever slowly toward retract position until tracer slide just begins to retract.
- d) Hold slow feed knob, loosen clamp screw and return retract lever to trace position. Tighten clamping screw.
- e) Turn slow feed knob counter clockwise to obtain desired infeed rate.

Proper infeed rate adjustment automatically puts retract - trace mechanism into proper relationship.

Stylus Pressure Adjustment Pin.  
Turn counter clockwise to increase stylus pressure.

Eccentric used for coarse adjustment.  
Sleeve and threaded pin rotate with retract lever movement.

