TROUBLE SHOOTING CHART

TROUBLE	CAUSE	REMEDY
1. VIBRATION Occurring when stylus feeds into template or meets profile change.	(a) Infeed rate too high.	Reduce by adjusting infeed rate knob.
	(b) Air in hydraulic system.	Cycle slide full stroke. Check for leakage at valve and tank fittings. Check for adequate oil level in tank. Bleed oil filter on tank.
	(c) Hydraulic pressure too high.	Reduce to 175 psi or less. Check for faulty pressure gauge.
	(d) Stylus pressure too high or too low.	Adjust (see Page 9).
	(e) Mechanical looseness.	Check mounting bolts, lathe compound and cross-slide, toolholder and template bracket for tightness. Tighten tracer slide gib if necessary.
	(f) Lathe Vibration.	Eliminate.
2. MARKS ON WORKPIECE	(a) Vibration in tracer system.	See 1.
	(b) Template edge not smooth.	File or Polish.
	(c) Incorrect tool grind.	Check for adequate clearance and correct rake and relief angles.
	(d) Mechanical looseness.	See 1 (e).
	(e) Looseness or vibration in lathe.	Check for spindle runout. Check for loose carriage or cross-slide with dial indicator. Take straight cut with tracer inoperative and check for similar marks.
	(f) Air in hydraulic system.	See 1 (b).
	(g) Sticky tracer valve.	See 5 (f).
	(h) Excessive stylus pressure.	Reduce.
	(i) Uneven tracer slide movement.	Reduce pressure to 50 psi and check for uniform slide movement. Adjust gib if necessary. Check for binding due to dirt or distortion and for adequate lubrication. If tracing fine taper increase slide angle to provide faster tracer slide movement.
	(j) Loose piston rod connection.	Tighten nut (See Page 20).
3. EXCESSIVE VARIATION BETWEEN TEMPLATE AND WORKPIECE	(a) Tool not on center.	Cutting point should be exactly on center.
	(b) Template not aligned with lathe axis.	Check with dial indicator and adjust.
	(c) Variation in cutting load over length of part.	Provide uniform allowance for finish cut over full contour.
	(d) Incorrect tracer slide angle.	Reset to ensure full contour coverage.
	(e) Incorrect tool grind.	See 2 (c).
	(f) Incorrect tool-stylus relationship.	Tool cutting point and stylus contact edge must have same profile and be properly aligned. Slight compensation may be needed to size of stylus radius. (See Page 18).
	(g) Excessive stylus deflection. (Can cause bumps at sharp corners).	Reduce infeed rate to 15-20 ipm. Set stylus pressure near mid-point.

TROUBLE	CAUSE	REMEDY
	(h) Mechanical looseness.	See 1 (e) and 2 (e).
	(i) Sticky tracer valve.	See 5 (f).
	(j) Uneven tracer slide movement.	See 2 (i).
	(k) Excessive machine feed (or insufficient tracer infeed).	Reduce machine feed, increase tracer infeed or change slide angle so stylus will follow contour without floating off template or over-deflecting. (See 3 (g).
4. VARIATION FROM PART-TO-PART.	(a) Variation in cutting load from part-to-part.	See 3 (c).
	(b) Excessive tool wear.	Change or grind tool more frequently. Use separate tool for finish cuts.
	(c) Inaccurate operator settings.	Use pre-set tools, overlay templates, etc., to eliminate operator settings wherever possible.
	(d) Mechanical looseness.	See 1 (e) and 2 (e).
	(h) Sticky tracer valve.	See 5 (f).
	(i) Uneven tracer slide movement.	See 2 (i).
	(j) Excessive variation in oil temperature.	Let oil warm up before tracing. Cycle slide frequently. Install oil cooler if ambient temperature is excessive. (Contact MIMIK for details).
	(k) Air in hydraulic system.	See 1 (b).
5. SLIDE WILL NOT FEED FORWARD WITH VALVE SET TO INFEED and STYLUS OFF TEMPLATE—OR SLIDE CONTINUES TO RETRACT WHEN STYLUS MEETS A REDUCED SLOPE.	(a) Infeed rate knob in retract range.	Turn fully clockwise, then turn clockwise to desired infeed rate (See page 10).
	(b) Slide at end of stroke.	Advance cross-slide to regain stroke.
	(c) Pressure and return lines crossed.	Connect tank hoses correctly.
	(d) No oil flow from pump.	Check for loose motor-pump coupling, burnt out motor, broken lines inside tank, faulty relief valve, plugged filter.
	(e) Slide hang-up.	See 2 (i).
	(f) Valve hang-up.	See below.

CAUSES OF VALVE HANG-UP	CORRECTIVE ACTION
1. Insufficient stylus pressure.	Increase stylus pressure slightly and actuate stylus by hand. If tracer does not begin to infeed immediately, hang-up may be due to dirt. Further increase in stylus pressure could then damage the valve.
2. Distortion from over tight fittings.	Back off Tru-Seals, make sure fittings are just finger-tight, and snug up Tru-Seals gently.
3. Hydraulic lock in valve. (Can cause distinct sluggishness in valve action).	Cycle tracer full stroke several times by actuating stylus.
4. Dirt or gummy oil deposits in valve.	Flush complete system and replace hydraulic oil and filter (See page 19).
5. Wrong hydraulic oil.	Replace with recommended type.
	If valve continues to hang up, contact Mimik for assistance.