

FW-200 SERIES TROUBLESHOOTING GUIDE

<u>No.</u>	<u>SYMPTOM</u>	<u>POSSIBLE CAUSES</u>	<u>SOLUTIONS</u>	<u>MODELS</u>
1	Blade misaligned vertically	1) Uneven clamping pressure distribution 2) Blade being clamped on teeth 3) Jaw gap too large 4) Forge pressure too high 5) Dirty or worn lower jaws 6) Dirt or other impurities between lower jaws and carriage 7) Timing too low 8) Lower jaws are different thickness 9) Clamping pressure too light 10) Blade ends are curled, bent, or not cut square 11) Carriages are misaligned	1) Check clamping pressure with carbon paper and adjust if necessary 2) Adjust blade guides to accommodate a larger blade tooth 3) Lower jaw gap 4) Lower forge pressure 5) Clean, resurface, or replace lower jaws 6) Remove lower jaws and clean jaws and carriage surface thoroughly 7) Increase timing 8) Resurface or replace lower jaws 9) Increase clamping pressure 10) Re-cut blade ends 11) Call T. L. Fahringer Co. for service	FW-200 MS FW-200 HS FW-200 HSA FW-200 HPA
2	Blade ends overlapping severely	1) Actual measured jaw gap 0.100" larger than jaw gap indicator reading 2) Lower jaws installed upside down 3) Severely uneven clamping pressure distribution	1) Measure actual jaw gap and check against jaw gap indicator 2) Reinstall lower jaws with the bevel side down 3) Check clamping pressure with carbon paper and adjust if necessary	FW-200 MS FW-200 HS FW-200 HSA FW-200 HPA

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3	When initiating a weld cycle the blade arcs briefly then stops	<ol style="list-style-type: none"> 1) Non-conductive impurities embedded in blade ends 2) Bad blade stock with too many impurities 3) Tripped main circuit breaker 4) Blown fuse or tripped control circuit breaker 5) Cam motor malfunction 6) Firing board malfunction 7) Timing switch malfunction 	<ol style="list-style-type: none"> 1) Re-cut blade ends and try again. This problem is most common when using a method other than shearing to cut the blade, such as an abrasive cut-off wheel, or squaring up the blade ends on a sander or grinder after cutting. 2) Replace blade stock 3) Reset main circuit breaker (If problem persists, replace circuit breaker) 4) Check fuses or breakers and replace or reset if necessary 5) Call T. L. Fahringer Co. for service 6) Call T. L. Fahringer Co. for service 7) Call T. L. Fahringer Co. for service 	FW-200 MS FW-200 HS FW-200 HSA FW-200 HPA
4	Welder moves off of weld start or anneal position while sitting idle	<ol style="list-style-type: none"> 1) Cam motor is "creeping" due to electrical line noise 	<ol style="list-style-type: none"> 1) Upgrade to new style motor & drive 	FW-200 MS FW-200 HS FW-200 HSA FW-200 HPA

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5	Inconsistent weld quality	<ol style="list-style-type: none"> 1) Dirty or worn lower jaws 2) Dirt or other impurities between lower jaws and carriage 3) Worn or bad main power circuit breaker, or breaker that is too small 4) Timing out of adjustment 5) Timing switch is bad 6) Jaw gap out of calibration 7) Uneven clamping pressure distribution 8) Blade being clamped on teeth 9) Clamping pressure too light 10) Upset spring worn out (MS & HSA Only) 11) Forge pressure out of calibration (HPA Only) 12) Main power cable gauge too small 13) Main power supply insufficient 	<ol style="list-style-type: none"> 1) Clean, resurface, or replace jaws 2) Remove lower jaws and clean jaws and carriage surface thoroughly 3) Replace breaker with new one of proper size 4) Recalibrate timing 5) Replace timing switch 6) Recalibrate jaw gap 7) Check clamping pressure with carbon paper and adjust if necessary 8) Adjust blade guides to accommodate a larger blade tooth 9) Increase clamping pressure 10) Replace upset spring 11) Recalibrate forge pressure 12) Replace power cable with one of proper size (at least 8 gauge depending on length) 13) Have power supply upgraded by power company 	FW-200 MS FW-200 HS FW-200HSA FW-200HPA
6	Alarm sounds with steady Green light and flashing Red light (No Weld Cut-Off Alarm) * Press Red Anneal button to reset alarm	<ol style="list-style-type: none"> 1) Timing switch out of calibration 2) Timing switch malfunction or failure 3) Timing switch did not trip due to symptom #3 4) Forge pressure switch tripping too early 	<ol style="list-style-type: none"> 1) Recalibrate timing switch 2) Repair or replace as necessary 3) See symptom #3 for remedy 4) Recalibrate forge pressure switch 	FW-200 MS FW-200 HS FW-200 HSA FW-200 HPA
7	Alarm sounds with steady Yellow light and flashing Red light (No Forge Pressure Alarm) * Press Red Anneal button to reset alarm	<ol style="list-style-type: none"> 1) Forge pressure switch out of calibration 2) Forge pressure switch malfunction or failure 3) Timing switch tripping too early 	<ol style="list-style-type: none"> 1) Recalibrate forge pressure switch 2) Repair or replace as necessary 3) Recalibrate timing switch 	FW-200 HPA

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8	Alarm sounds with flashing Red light only (Auto Anneal Malfunction) * Press Red Anneal button to reset alarm	<ol style="list-style-type: none"> 1) Encoder wheel tension wire is loose or broken 2) Loose or bad connection for encoder 3) Encoder is malfunctioning or broken 	<ol style="list-style-type: none"> 1) Tighten or replace encoder wheel tension wire 2) Fix encoder connection 3) Replace encoder 	FW-200 HSA FW-200 HPA
9	When initiating a Weld Cycle nothing happens (No weld voltage and Motor does not run)	<ol style="list-style-type: none"> 1) Welder is not positioned at weld start 2) Both clamps are not clamped (HSA & HPA Only) 3) Timing switch is activated 4) Weld button switch is malfunctioning 5) Loose or broken weld button input wire 	<ol style="list-style-type: none"> 1) Advance to the weld start position 2) Verify both left & right clamps are down 3) Check for timing switch calibration, position, obstruction, or malfunction. 4) Fix or replace weld button switch 5) Tighten or replace wire 	FW-200 MS FW-200 HS FW-200 HSA FW-200 HPA
10	When initiating a Weld Cycle the "No Weld Cut-Off Alarm" sounds after a few seconds of seemingly nothing happening (No weld voltage)	<ol style="list-style-type: none"> 1) Weld voltage switch is set to zero "0" 2) Weld voltage switch has a loose connection or is malfunctioning 3) Line voltage switch has a loose connection or is malfunctioning 4) Firing board has a loose connection or is malfunctioning 5) Thyristor has a loose connection or is malfunctioning 	<ol style="list-style-type: none"> 1) Select an appropriate weld voltage 2) Tighten the loose connection or replace weld voltage switch 3) Tighten the loose connection or replace line voltage switch 4) Tighten the loose connection or replace firing board 5) Tighten the loose connection or replace thyristor 	FW-200 MS FW-200 HS FW-200 HSA FW-200 HPA