

PROBLEMS	CAUSES	PERSON INVOLVED
Uneven stitches	- incorrect balance between upper and lower tension - uneven pull-off of the upper thread - worn upper tension unit - broken or weakened check spring - bobbin unevenly wound - worn bobbin case tension spring - too coarse or uneven thread - incorrect needle for the thread	Operator
	- incorrect timing of hook and needle - too little clearance between base and retaining finger - incorrect timing of base and looper - base does not move freely in hook - poor hook lubrication	Technician
Upper thread breaking	- incorrect threading of upper thread - upper thread tension too tight - damaged thread guide - bent or blunt needle - incorrect needle for the thread - needle hole of needleplate too small - poor quality thread, too dry or badly stored - needle overheating - defective bobbin case latch	Operator
	- incorrect timing of hook and needle - too little clearance between base and retaining finger - incorrect timing of base and looper - damaged hook point - scratched needle guard on the hook - sharp edges on feed dog or needle hole	Technician
Lower thread breaking	- lower thread tension too tight - bobbin case threaded incorrectly - bobbin unevenly wound - damaged or poor quality bobbin - damaged bobbin case	Operator
	- sharp edges or needleplate needle hole - feed dog too sharp behind the needle	Technician
Skipped stitches	- needle not inserted correctly - damaged or blunt needle - needle too thin compared to fabric - incorrect needle point for fabric - too elastic or badly wound thread - upper thread incorrectly threaded	Operator
	- needle bar height wrong - incorrect clearance between needle and hook point - needle and hook not correctly timed - damaged hook point - needle hole in needleplate too large - needle hole in feed dog too large	Technician
Needle unthreading at start	- too little upper thread coming through the needle - too little bobbin thread coming out of the bobbin case	Operator
	- thread trimmer leaving bobbin thread too short - tension tightening during trimming operation	Technician
Looping underneath material	- lower thread tension too tight - upper thread tension too loose - bobbin not running smoothly - upper thread too stiff or too variable - needle eye too small for thread - pressure or presser foot too heavy	Operator
	- hook is not passing the thread easily - incorrect timing of needle and hook - incorrect timing of base and looper - feed dog timing too advanced - needleplate or presser foot do not have the correct thread groove	Technician
Needle breaking	- incorrect needle for the material - material too thick for the sewing machine - sewing over buttons, pins, zips etc. - bobbin case incorrectly inserted - using up the lower thread on machines with roller presser foot - needle stop not correctly timed	Operator
	- feed dog timing retarded - needle striking hook point - needle guard fitted too far back - needle and hook not correctly timed	Technician
Hook jams	- starting sewing with too long or uncontrolled upper thread - upper thread tension too loose - sewing at the start or end without material	Operator
	too little clearance between base and retaining finger - base not running smoothly in hook - insufficient lubrication	Technician