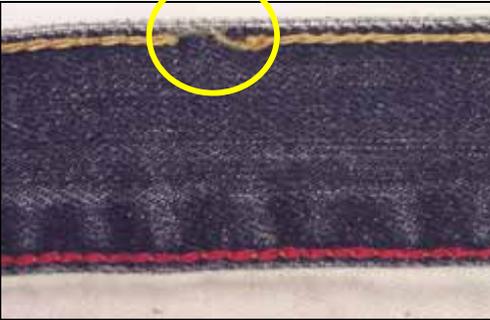
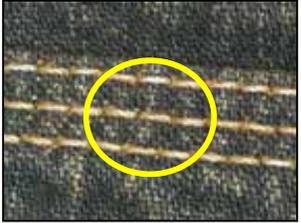


Common Denim Seam Unqualities



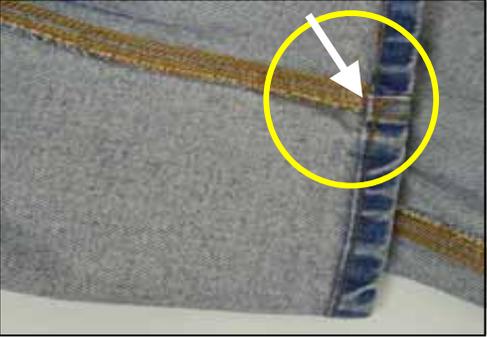
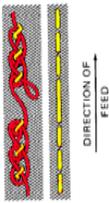
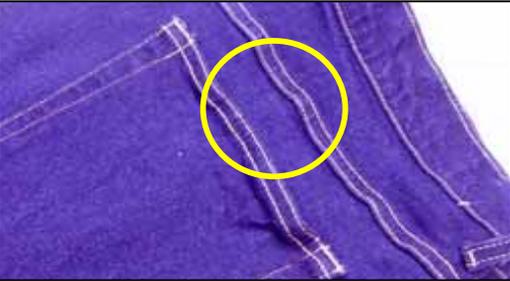
COMMON SEAM QUALITY DEFECTS

SEAM UNQUALITY PHOTO OR DRAWING	DESCRIPTION	RECOMMENDED SOLUTIONS
 <p data-bbox="90 553 548 578">BROKEN STITCHES - NEEDLE CUTTING</p>	<p data-bbox="604 139 1362 250">BROKEN STITCHES - NEEDLE CUTTING - where the thread is being broken where one seam crosses another seam (ex: bartacks on top of waistband stitching, seatseam on top of riser seam) resulting in stitch failure.</p> <div style="display: flex; justify-content: space-around;">   </div> <p data-bbox="674 540 926 565">Thread Tension Too Tight</p> <p data-bbox="1066 540 1289 565">Proper Thread Tension</p>	<p data-bbox="1371 139 2043 164">MINIMIZING BROKEN STITCHES DUE TO NEEDLE CUTTING</p> <p data-bbox="1371 167 2018 431">- 1) Use a higher performance Perma Core or D-Core thread. 2) Use a larger diameter thread on operations where the thread is being cut. 3) Make sure the proper stitch balance is being used. On a chainstitch seam on denim, you normally would like to maintain a 60%/40% relationship of Needle thread to Loper thread in the Seam. 4) Use needles with the correct needle point. 5) Change the needles at regular intervals on operations where the Needle Cuts are occurring frequently.</p> <p data-bbox="1398 467 2011 540"><i>Note: Using the proper thread and maintaining the proper stitch balance are the two best ways to minimize broken stitches due to Needle Cutting.</i></p>
 <p data-bbox="58 951 569 995">Here the looper thread has been broken due to harsh abrasion during stone-washing.</p> <p data-bbox="138 1052 501 1076">BROKEN STITCHES - ABRASION</p>	<p data-bbox="604 581 1362 691">BROKEN STITCHES - ABRASION - where thread on the stitch line is broken during stone-washing, sand blasting, hand sanding, etc. Broken stitches must be repaired by restitching over the top of the stitch-line.</p>  <p data-bbox="1104 792 1268 946">Row of Stitch on right sewn with Perma Core NWT</p>	<p data-bbox="1371 581 2018 605">MINIMIZING BROKEN STITCHES DUE TO ABRASION - 1)</p> <p data-bbox="1371 609 2043 873">Use a higher performance <i>Perma Core</i> or <i>D-Core</i> thread; 2) Use a larger diameter thread on operations where excessive abrasion is occurring (ex: use T-120 on Waistband); 3) Make sure stitches are balance properly, 4) Use a <i>Magic</i> air entangled thread in the Loper due to its lower seam profile making it less susceptible to abrasion (ex: use T-90 or T-135 Magic in loopers of the Yoke, Seat and Waistband seam); 5) Monitor the Finishing Cycle for compliance to specs.</p> <p data-bbox="1398 911 2011 984"><i>A&E's new Perma Core NWT was designed to today's more demanding finishing processes. Note the Picture to the left. The seam on the right was sewn with this new thread.</i></p>
 <p data-bbox="75 1333 577 1406">Here is an example of where the Cotton wrapper has been degraded by the harsh chemicals during Laundering</p> <p data-bbox="48 1503 590 1528">BROKEN STITCHES - CHEMICAL DEGRADATION</p>	<p data-bbox="604 1079 1362 1166">BROKEN STITCHES - CHEMICAL DEGRADATION - where thread is being compromised by the chemicals used during laundering resulting in loss or change of color and seam failure.</p> <div style="text-align: center;">  <p data-bbox="783 1222 1163 1349">Too much chemical Too long wash or drying cycles Improper Rinsing Too high of Temperature</p> </div> <p data-bbox="659 1422 1272 1495"><i>Note: Corespun threads with their continuous filament core has much greater resistance to chemical degradation than spun polyester threads.</i></p>	<p data-bbox="1371 1079 1965 1104">MINIMIZING BROKEN STITCHES DUE TO CHEMICAL DEGRADATION - 1) Use a higher performance Perma Core NWT that has greater resistance to chemical degradation. 2) It is recommended to go to larger thread sizes when the Denim Garments will be subject to Harsh Chemical washes. 3) To achieve the best laundering results make sure that the water temperatures and PH Levels are correct and that the proper amounts and sequence of chemical dispersion are within guidelines. 4) Make sure the garments are being rinsed properly to neutralize the chemicals in the fabric. 5) Monitor the drying process, cycle times, and temperatures to make sure they are correct so that the best possible garment quality can be achieved.</p>

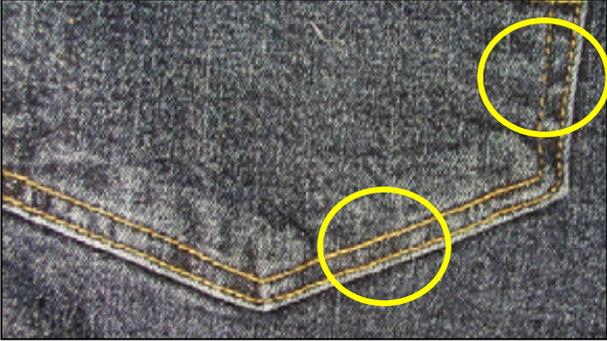
COMMON SEAM QUALITY DEFECTS

SEAM UNQUALITY PHOTO OR DRAWING	DESCRIPTION	RECOMMENDED SOLUTIONS
 <p style="text-align: center;">UNRAVELING SEAMS</p>	<p>UNRAVELING SEAMS - generally occurs on 401 chainstitch seams where either the stitch has been broken or a skipped stitch has occurred. This will cause seam failure unless the seam is Restitched.</p>  <p style="text-align: center;">Skipped Stitch</p>  <p style="text-align: center;">Broken Stitch that is unraveling</p>	<p>MINIMIZING UNRAVELED STITCHES - 1) Use a high performance Perma Core or D-Core thread that will minimize broken stitches and skipped stitches; 2) Insure proper machine maintenance and sewing machine adjustments; 3) Observe sewing operators for correct material handling techniques.</p> <p style="text-align: center;"><i>See A&E Technical Bulletins on our web-site on "Minimizing Thread Breakage and Skipped Stitches" and "Machine Maintenance Checklist".</i></p>
 <p style="text-align: center;">RESTITCHED SEAMS</p>	<p>RESTITCHED SEAMS - where there is a "splice" on the stitch line. If this occurs on Topstitching, then the seam does not appear to be 1st quality merchandise. Caused by 1) thread breaks or thread run-out during sewing; or 2) cut or broken stitches during a subsequent treatment of the finished product (I.e., stone washing).</p>   <p style="text-align: center;">Excessive Restitched Seams</p>	<p>MINIMIZING RESTITCHED SEAMS - 1) Use a better quality sewing thread. This may include going to a higher performance thread designed to minimize sewing interruptions. (see A&E "Thread Selection Guide" and/or A&E's Technical Bulletin "Minimizing Thread Breakage & Skipped Stitches"); 2) Insure proper machine maintenance and sewing machine adjustments; 3) Make sure sewing machines are properly maintained and adjusted for the fabric and sewing operation; (see A&E's Technical Bulletin - "Machine Maintenance Checklist". 4) Observe sewing operators for correct material handling techniques.</p>
 <p style="text-align: center;">SAGGING OR ROLLING POCKET</p>	<p>SAGGING OR ROLLING POCKETS - where the pocket does not lay flat and rolls over after laundering.</p>  <p style="text-align: center;">Setting the front pocket with a re-enforcement tape.</p>	<p>MINIMIZING SAGGING OR ROLLING FRONT & BACK POCKETS - 1) Make sure the sewing operators are not holding back excessively when setting the front pocket. 2) Make sure the hem is formed properly and that excessive fabric is not being put into the folder that will cause the hem to roll over. 3) Check to make sure pocket is cut properly and that pocket curve is not too deep. 4) Use a re-enforcement tape on the inside of the pocket that may help prevent the front panel from stretching along the bias where the front pocket is set. 5) The type and weight of denim, along with the fabric construction, may contribute to this problem. Contact your fabric supplier for assistance.</p> <p style="text-align: center;"><i>Note: In some cases the rolling may be an inherent characteristic of the fabric.</i></p>

COMMON SEAM QUALITY DEFECTS

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 <p>EXCESSIVE SKIPPED STITCHES</p>	<p>SKIPPED STITCHES - where the stitch forming device misses the needle loop or the needle misses the looper loop. Skips are usually found where one seam crosses another seam and most of the time occurs right before or right after the heavy thickness.</p>    <p>Excessive Skipped Stitches</p>	<p>MINIMIZING SKIPPED STITCHES - 1) Use corespun thread. 2) Use minimum thread tension to get a balanced stitch. 3) Use the ideal foot, feed and plate that helps to minimize flagging. 4) Training sewing operators NOT to stop on the thickness. 5) Make sure the machine is feeding properly without stalling. 6) Make sure the machine is not back-feeding.</p>
 <p>RAGGED / INCONSISTENT EDGE ON OVEREDGE OR SAFETY STITCH SEAMS</p>	<p>RAGGED / INCONSISTENT EDGE - where the edge of the seam is either extremely "ragged" or "rolls" inside the stitch.</p>	<p>SOLUTIONS TO RAGGED / INCONSISTENT EDGE - 1) Make sure the sewing machine knives are sharpened and changed often; 2) The knives should be adjusted properly in relationship to the "stitch tongue" on the needle plate to obtain the proper seam width or width bite.</p>
 <p>WAVY SEAMS ON STRETCH DENIM</p>	<p>WAVY SEAMS ON STRETCH DENIM - where the seam does not lay flat and is wavy due to the fabric stretching as it was sewn or during subsequent laundering and handling operations.</p>	<p>SOLUTIONS FOR WAVY SEAMS ON STRETCH GARMENTS 1) Use minimum presser foot pressure; 2) Instruct sewing operators to use proper handling techniques and not stretch the fabric as they are making the seam. 3) Where available, use differential feed to compensate for the stretch of the fabric.</p>

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 <p data-bbox="247 565 390 586">ROPY HEMS</p>	<p data-bbox="604 142 1291 196">ROPY HEM - is where hem is not laying flat and is skewed in appearance.</p> 	<p data-bbox="1371 142 2043 315">SOLUTIONS FOR ROPY HEMS - 1) Usually caused by poor operator handling. Instruct the sewing operator to make sure they get the hem started correctly in the folder before they start sewing. Also, make sure the don't hold back excessively as the seam is being sewn. 2) Use minimum roller or presser foot pressure.</p>
 <p data-bbox="233 984 411 1005">TWISTED LEGS</p>	<p data-bbox="604 592 1356 646">TWISTED LEGS - is where the sideseam twists around to the front of the pant and distorts the appearance of the jeans.</p>	<p data-bbox="1371 592 2043 883">SOLUTIONS FOR TWISTED LEGS - 1) Usually caused by poor operator handling. Instruct the sewing operator to match the front and back properly so they come out the same length. Sometimes notches are used to insure proper alignment. They should NOT trim off the front or back with scissors to make them come out the same length. 2) Make sure the cut parts are of equal length coming to the assembly operation. 3) Check fabric quality and cutting for proper skew. 4) Make sure the sewing machine is adjusted properly for uniform feeding of the top and bottom plies.</p>
 <p data-bbox="69 1377 583 1419">Notice that the thread looks much smaller on the seat seam as compared to the Yoke seam.</p> <p data-bbox="54 1474 590 1495">DISAPPEARING STITCHES ON STRETCH KNITS</p>	<p data-bbox="604 1015 1335 1094">DISAPPEARING STITCHES IN STRETCH DENIM - is where the thread looks much smaller on seams sewn in the warp direction than in the weft direction of the fabric.</p> 	<p data-bbox="1371 1015 2039 1214">SOLUTIONS TO MINIMIZING DISAPPEARING STITCHES ON STRETCH DENIM - 1) Use a heavier thread size (T-120, T-135, T-150) on topstitching. 2) Go to a longer stitch length (from 8 to 6 spi). 3) Make sure the thread tensions are as loose as possible so the thread sits on top of the fabric rather than burying in the fabric on seams sewn in the warp.</p>

COMMON SEAM QUALITY DEFECTS

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 <p data-bbox="71 524 569 548">THREAD DISCOLORATION AFTER LAUNDRY</p>	<p data-bbox="606 141 1360 253">THREAD DISCOLORATION AFTER LAUNDRY - is where the thread picks up the indigo dyes from the fabric giving the thread a 'dirty' appearance. A common discoloration would be the pick-up of a greenish or turquoise tint.</p> <div data-bbox="785 298 1136 516" style="text-align: center;">  <p data-bbox="785 350 1136 472"> Improper PH level Improper Water Temperature Improper Chemical Selection Shortcuts on Wash Method </p> </div>	<p data-bbox="1373 141 2041 313">SOLUTIONS TO THREAD DISCOLORATION - 1) Use thread with proper color fastness characteristics. 2) Correct PH level (too low) and Water Temperature (too low) during laundry. 3) Use the proper chemicals & laundry cycles. 4) Use Denimcol PCC in wash or similar additive, 5) Do Not overload washers with too many garments at one time.</p>
 <p data-bbox="58 902 583 954">Notice how the bartack thread washed down differently than the Topstitching thread.</p> <p data-bbox="81 995 560 1019">POOR COLOR FASTNESS AFTER LAUNDRY</p>	<p data-bbox="606 553 1360 638">POOR COLORFASTNESS AFTER LAUNDRY - is where the thread does not washdown consistently in the garment or changes to a different color altogether.</p> <div data-bbox="705 711 1220 928" style="text-align: center;">  <p data-bbox="705 764 1220 857"> Mixing threads in a Garment Using threads with different color fastness Not doing pre-production testing </p> </div>	<p data-bbox="1373 553 2041 813">SOLUTIONS TO POOR COLORFASTNESS AFTER LAUNDRY - 1) Use thread with proper color fastness characteristics. 2) Use threads from the same thread supplier and do not mix threads in a garment. 3) Always do preproduction testing on denim garments using new colors to assure that they will meet your requirements. 4) Make sure sewing operators select thread by type and color number and do not just pick a thread off the shelf because it looks close in color.</p> <p data-bbox="1394 870 2020 919"><i>Note: If preproduction testing shows a problem, then make sure to contact your global thread company for assistance.</i></p>