

## Thread Price versus Thread Cost

**Thread Price** and **Thread Cost** are terms that are sometimes used synonymously but may actually have very different meanings.

- **Thread Price** usually refers to the price you pay to get the thread to your manufacturing facility and may or may not include shipping and transportation charges.
- **Thread Cost** refers to all the costs related to thread performance including the purchase price.

Thread is often an overlooked trim item that many retailers, vendors and manufacturers consider as a commodity trim component that only needs to be the right color and the right price. Many conclude, “Thread is just thread – all threads are equal! Therefore what colors do you have and what is your price?”

However, consider that:

*“Thread only makes up a small percent of the total cost of a sewn product, but shares 50% of the responsibility of the seam.”*

Below is a common example where a manufacturer actually learned the difference between Thread Price and Thread Cost.

A manufacturer in the Far East was making cargo pants that were then subjected to a harsh stone-wash finishing process. They were averaging 48 percent repairs after laundering. After evaluating their situation, we recommended that they switch from a locally produced low-priced spun polyester thread to a poly-wrapped core thread. Initially they were very resistant to consider the change due to the higher selling price but agreed to a large sew trial. When this sewing trial was completed, the analysis showed that they were now averaging less than 2% repairs after laundering using the higher performance thread.

The plant manager still hesitated in purchasing this higher performance thread and stated that his labor was very inexpensive and he could afford to repair the garments. During our discussion, we acknowledged that the core thread was more expensive and his labor rates were low, however, we pointed out that there were many other costs related to the thread performance. They included:

- More equipment & operators required
  - Additional sewing machines are costly anywhere in the world
- Higher overhead costs per unit produced
  - floor space
  - utilities and power
  - training costs

- higher maintenance costs
- Longer In-process times leading to penalties due to Shipment Delays
- Charge-backs from Retailer when poor quality is found
- Seconds due to poor quality that could not be repaired
  - Waste of material and other trim costs that are very expensive
- Being recognized as a low quality producer

## **IS THERE REALLY A DIFFERENCE BETWEEN A&E THREAD AND THREAD FROM LOCAL SUPPLIERS?**

### **A&E**

First, American & Efird is a quality producer of high-performance threads and yarns for apparel and non-apparel applications. We are a global thread manufacturer with international distribution in 46 countries around the world.

A&E's primary spinning plants are located in the US, China, and India. We also have 23 international dyeing facilities that dye and wind our products on precision wound packages to meet our customers demands. We also adhere globally to rigid quality standards.

- A&E specifies only Premium Raw Materials
- A&E has rigid construction specifications using State-of-the-art Thread Manufacturing Processes
- A&E promotes a Quality Business Culture in all our global operations
- A&E uses a global monitoring tool called ANESTAT to monitor Key Process Characteristics using Statistical Process Control (SPC).

What also sets A&E apart from our competitors is our focus on satisfying our customers. Our Company Goal is "To be the preferred supplier of threads, embroidery and technical yarns by providing world-class products and services to our Customers." To us, world-class means providing high-performance products that minimize interruptions on your production floor and enhance the quality of your finished products. World-class service means delivering the right A&E product at a competitive price when and where you need it. It also means going the extra-mile in assisting our customers. Customers who have developed partnerships with A&E know that "There Is A Difference" in A&E's quality, consistency and commitment.

### **Local Competitors**

Many local thread companies are being used by sewing contractors because the use of globally recognized quality thread companies is not mandated. Below are reasons to consider changing this policy:

- "Bargain Basement" Raw Materials - many shop around for the lowest cost fiber available. Often times this fiber is being sold at discounted prices because it is

not first quality fiber. This usually translates to poor stability and high thread shrinkage.

- Old spinning, dyeing and winding processes - using old twisting technology that actually introduces knots and other yarn imperfections that will cause excessive sewing interruptions and seam quality defects.
- Inconsistent Yarn Sizes - the combination of "bargain basement" raw materials and old spinning processes cannot help but lead to inconsistent yarn sizes and variability in physical properties. This will almost always lead to more garment defects and consumer dissatisfaction.
- Little or No Sustainability Programs - this speaks for itself. Usually no sustainability programs. The entire business model of most of these local thread companies' is about having the cheapest thread which does not permit them to invest in personnel or processes that can make them an environmental sustainable company.
- Cheap Prices - you get what you pay for. "Bargain Basement" raw materials, old spinning, dyeing and winding processes ... no sustainability programs. Is this the type of trim supplier you want your contractors to do business with?

### ANETRAK PLUS

To help measure the total thread cost of thread and the difference in performance of one thread versus another, A&E has developed tools called **ANETRAK** and **ANETRAK PLUS**.

**ANETRAK** is a tool used to collect data on the number of interruptions on the sewing floor that are caused by the thread performance. 1<sup>st</sup> data is collect on the current thread being used, and then data is collected on the performance A&E thread used on the same sewing operations, garment types, colors, etc. This data is then evaluated to determine the production efficiency difference, as well as the number and type of interruption. See the example below.

#### ANETRAK SUMMARY DATA

	1	2	3	4	5	
Sewing Operation:	Sideseam	Waistband	Fell Inseam	Bottom Hem	J Stitch	
<b>Using Good Thread Combo</b>						
Avg. Production Time Observed (Obser. Time - Stoppage Time = minutes) =	582	480	435	421	423	
Avg. Units Produced Per Operator Observed =	1020	775	664	564	2750	
Avg. Units Sewn Per Interruption =	340	65	39	94	344	
<b>Using A&amp;E Best Combo</b>						
Avg. Production Time Observed (Obser. Time - Stoppage Time = minutes) =	591	485	415	415	360	
Avg. Units Produced Per Operator Observed =	1170	870	722	599	2678	
Avg. Units Sewn Per Interruption =	1170	870	722	200	1339	
						Average
Increase in Productivity (%) =	11.5%	10.0%	12.3%	7.2%	12.6%	10.7%

As you can see from the data collected above, five sewing operations were evaluated comparing the performance of a “Good” thread combo versus using a “Best” thread combination on Denim. The net result was a 10.7% increase in productivity during the evaluation due to the reduction of stoppage time due to sewing interruptions.

**ANETRAK PLUS** is a tool used estimate the Total Thread Cost difference using actual labor and overhead cost information. See the example below.

**CALCULATING LABOR & OVERHEAD COSTS RELATED TO PERFORMANCE**

Garment Description: **5 POCKET JEAN**  
 Garment Style Number: **XXX -XXXXX**

LABOR CONTENT (SAM) - Standard Allow Minutes /Garment =	Production Units Produced	Current Thd Cost	A&E Thd Cost	Thread Price Difference	Current Labor & Overhead Cost	Labor & Overhead Cost using A&E Thread	Labor & Overhead Difference	Total Thread Cost
= 19.5	250,000	\$ 25,000	\$ 55,000	\$ (30,000)	\$ 281,667	\$ 251,519	\$ (30,147)	\$ (147)
Average Labor Cost per Hour = \$ 0.80								
Average Labor Cost per Minute = \$ 0.0133								
per Garment								

  

Overhead Cost to Labor Cost = 333%
Avg. Labor Cost / Sewn Item = \$ 0.26
Est. Overhead Cost / Sewn Item = \$ 0.87
Total Labor & OH Cost/Sewn Item = \$ 1.13
Current Thread Price Per Sewn Item = \$ 0.100
A&E Thread Price Per Sewn Item = \$ 0.220
Increase in Production Efficiency = 10.7%

  

	=	%
Material & Trim	=	62
Labor	=	6
Overhead	=	20
All Other	=	12
Total	=	100

Here you can see that even though the Current Thread Price was significantly lower than the A&E Thread Price, due to a reduction in labor and overhead costs, the higher performance thread actually had a total thread cost on the sewing floor that was less than the current thread being used.

**COST CALCULATIONS DUE REPAIRS & SECONDS IN THE LAUNDRY**

	Current	A&E New
#of Repairs (% of garments needing repair) *	44.0%	3%
Average time to inspect and repair a garment (minutes)	0.75	0.75
Total Labor / OH Cost to repair a garment	\$ 0.0433	\$ 0.0433
Units produced for Program	250,000	250,000
Number of Repairs after Laundry	110,000	7,800
Cost of Garment Repairs / Program	\$ 4,767	\$ 338
Percent of Garments that can not be repaired	0.0%	0.0%
No. of Garments Not Repairable	0	0
Cost/Garment Not Repairable	\$ 3.00	\$ 3.00
Total Cost of Garments Not Repairable	\$ -	\$ -
<b>Total Cost at Laundry/Program</b>	<b>\$ 4,766.67</b>	<b>\$ 338.00</b>
Laundry Thread Cost Difference	\$ (4,429)	
Total Thread Cost from Production Floor	\$ (147)	* See Cost Savings - Sewing Floor Sheet
<b>Total Thread Savings</b>	<b>\$ (4,576)</b>	<b>\$ (0.0183) Per Garment Diff.</b>



Then, when you consider what is costs to repair garments in the laundry after harsh finishing processes, the A&E performance thread not only is cost competitive compared to a cheaper priced thread, but it actually added to the bottom line of the manufacturer.

The realization of these 'hidden' costs convinced this customer to make the right choice by switching to the higher performing thread to minimize their overall thread cost.

Furthermore, there are additional ways to reduce thread costs without compromising sewability and seaming performance.

### HOW TO REDUCE OVERALL THREAD COST

The following list includes practical ways to reduce thread cost other than just using a cheaper thread.

- Use performance sewing threads that help reduce the Total Cost of Thread.
- Reduce your thread consumption
- Change to less expensive thread types or smaller thread sizes for serging and for looper threads.
- Use natural or white wherever possible.

### CHANGING TO SMALLER THREAD SIZES

Smaller thread sizes are generally less expensive than larger thread sizes. Therefore, you should use smaller thread sizes whenever possible. However, remember that on lockstitch seams the seam is only as strong as the needle and bobbin thread being used.

Below shows the difference in thread cost by going to a smaller thread size for Topstitching only.

#### JEAN THREAD COST COMPARISON

<u>ALTERNATIVES:</u>	<u>% Savings</u>
T-120 Perma Core®	0%
T-105 Perma Core®	- 9.4%
T-80 Perma Core®	- 18.8%
T-60 Perma Core®	- 22.6%

On chainstitch and overedge seams, smaller looper threads can be used without sacrificing seam strength.

EXAMPLE: Using different Tex Sizes on different operations for making Jeans

Topstitching Thread	T-80, T-105, T-120
Seaming & Loopers	T-60
Overedge Seams	T-40

In many cases this can reduce the thread cost for a sewn product by 10 to 15%.

## USING WHITE OR NATURAL INSTEAD OF DYED THREADS

Natural or white threads are generally less expensive than dyed threads because they don't have to be dyed. The least expensive cotton or cotton wrapped core thread is natural or an "off-white" color. Since the natural color of polyester thread is white, then the least expensive polyester thread is white and not "natural" color. If a "natural" or "off-white" thread is specified, the white polyester thread will have to be dyed increasing its cost.

### **Thread Cost Comparison**

Men's Zipper Fly - Relaxed Fit Jean

Topstitch = T-105,

Non-stress seams, Loopers & Overedge = T-60 & T-40

<u>ALTERNATIVES:</u>	<u>% Savings</u>
100% Dyed Cotton Wrapped Core	0%
Dyed CW Core for topstitching with Natural in loopers	6.5%
100% Dyed Poly Wrapped Core	6.9%
Dyed PW Core with White in Loopers	11.8%

## CHANGE TO A LESS EXPENSIVE THREAD TYPE

Changing to a less expensive thread type is always an alternative, however, as stated above, this can detract from the finished quality of the sewn product unless considerable testing is performed. Generally, inside threads can be changed with less of an impact on the seam quality or sewability. For example, a spun polyester, air entangled or textured polyester looper threads can replace more expensive core spun threads on loopers and overedge seams to reduce the total thread cost.

## REDUCING THREAD CONSUMPTION TO MINIMIZE THREAD COST

Another alternative to reducing thread cost is to minimize thread consumption. This can be done by changing stitch types, using automatic start/stop devices on the sewing machines, and monitoring thread waste.

A two thread overedge stitch consumes approximately 21% less thread than a three thread overedge. If this stitch is only being used to cover the edge to prevent it from unraveling, this might be a good alternative particularly considering that overedge stitches make up a large percentage of the total thread consumed in a sewn product.

## **SUMMARY**

As you can see from the information presented above, there are many ways to reduce thread cost other than just using the cheapest thread. There is a difference between thread price and thread cost.

A&E has trained professionals who can help you make the right choice to optimize your quality and costs. If you have any questions, please contact your local A&E Sales or GRS Representative or A&E's Technical Solutions Department.