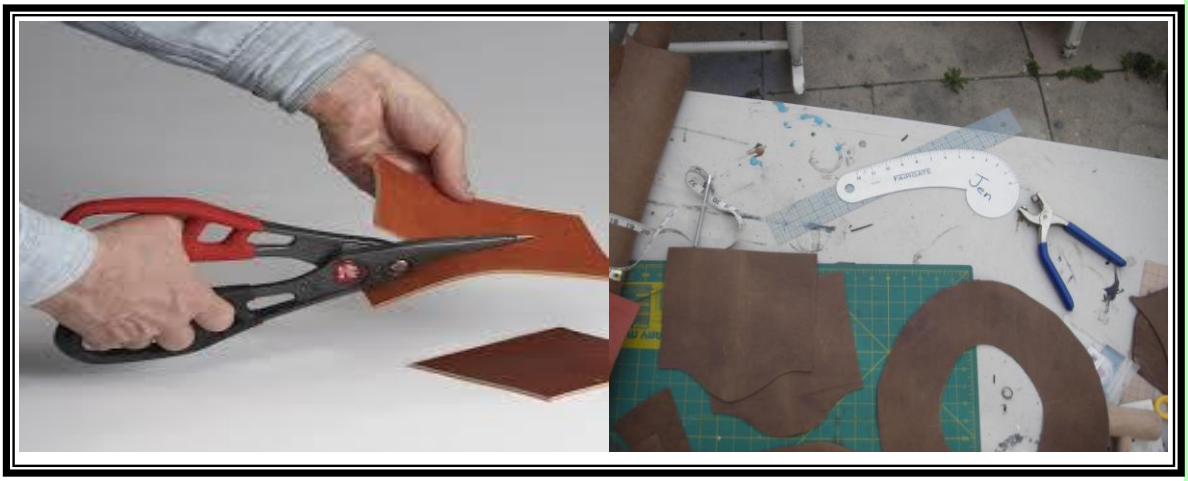
National Technical and Vocational Qualification Framework

NTVQF

Competency-Based Learning Material

Machine Operation
NTVQ Level 1

Cutting Leather by Hands



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HOW TO USE THIS COMPETENCY-BASED LEARNING MATERIAL

Welcome to the module **Cutting Leather by Hand**. This module contains training materials and activities for you to complete.

This unit of competency, **"Cut Leather by Hand"**, is one of the competencies of Machine Operator NTVQ Level 1 Occupation, a course which comprises the knowledge, skills and attitudes required to become a Basic-Skilled Worker.

You are required to go through a series of learning activities in order to complete each learning outcome of the module. These activities may be completed as part of structured classroom activities or you may be required to work at your own pace. These activities will ask you to complete associated learning and practice activities in order to gain knowledge and skills you need to achieve the learning outcomes.

Refer to **Learning Activity Page** to know the sequence of learning tasks to undergo and the appropriate resources to use in each task. This page will serve as your road map towards the achievement of competence.

Read the **Information Sheets**. These will give you an understanding of the work, and why things are done the way they are. Once you have finished reading the Information sheets complete the questions in the Self-Check Sheets.

Self-Checks follow the Information Sheets in the learning guide. Completing the Self-checks will help you know how you are progressing. To know how you fared with the self-checks, review the **Answer Key**.

Complete all activities as directed in the **Job Sheets and/or Activity sheets**. This is where you will apply your new knowledge while developing new skills.

When working though this module always be aware of safety requirements. If you have questions, do not hesitate to ask your facilitator for assistance.

When you have completed all the tasks required in this learning guide, an assessment event will be scheduled to evaluate if you have achieved competency in the specified learning outcomes and are ready for the next task.

MODULE CONTENT

MODULE TITLE: **Cutting Leather by Hand**

MODULE DESCRIPTOR:

This module covers portion of the required knowledge, skills and attitude in machine operation. This will guide you in cutting leather by hands. This module will also enable you to identify cutting equipment and tools which will be used in cutting leather by hand.

After completing this module, you will be assessed through written tests and demonstration of some packaging techniques.

NOMINAL DURATION: 50 hours

LEARNING OUTCOMES:

At the end of this module you MUST be able to:

1. Observe OSH practices.
2. Prepare and set up workstation
3. Assessment of leather to be cut
4. Cut leather by hand
5. Check out pieces
6. Clean workplace

ASSESSMENT CRITERIA:

The trainee will be assessed by observing the following performance criteria:

1. All safety requirements/regulations are adhered to before, during and after use.
2. Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.
3. Personal protective clothing (PPE) worn
4 Workstation is set up according to industry practices.
5 Cutting equipment and patterns are selected and prepared according to specified work and sizes, and manufacturer instructions.
6 Materials are collected, sorted and laid out in preparation for cutting.
7 Cutting board is routinely cleaned and maintained.
8 Records are maintained
9 Leather is checked carefully for scars, marks and faults that need to be considered during cutting.

10 Leather pieces are sorted out for different parts and pattern pieces are considered for minimum wastage, according to industry requirements.
11 Problems or faults with patterns, knives and cutting boards are identified and referred for repair.
12 Cutting knives and patterns are used to minimize waste.
13 Identified areas of defects are avoided when patterns are positioned.
14 Cutting techniques are used to match pattern shape, size and leather quality.
15 Pieces are cut precisely to size and adjacent pieces are matched regarding grain pattern, color shade.
16 Cut products are checked for compliance with job specifications and quality standards set by the industry.
17 Reject pieces are replaced and records maintained.
18 Work place and machines are cleaned as per work place standard.
19 Waste is disposed of according to company regulations.

LEARNING OUTCOME 1 PREPARE AND SET-UP WORKSTATION

CONTENTS:

1. Set up work station is set up according to industry practices.
2. Select and prepare cutting patterns according to specified work and sizes and manufacturer's instructions.
3. Collect, sort and lay out in preparation for cutting.
4. Clean and maintain cutting board routinely.
5. Maintain records.

ASSESSMENT CRITERIA:

1. Work station is set up according to industry practices.
2. Cutting equipment and patterns are selected and prepared according to specified work and sizes, and manufacturer instructions.
3. Materials are collected, sorted and laid out in preparation for cutting.
4. Cutting board is routinely cleaned and maintained.
5. Records are maintained.

CONDITIONS:

Trainees must be provided with the following:

- Lap top
- LCD
- Learning Material
- Leather cutting equipment and tools
- Cutting patterns

LEARNING ACTIVITY

LEARNING OUTCOME: Prepare Set-Up Workstation

LEARNING ACTIVITIES	RESOURCES/SPECIAL INSTRUCTIONS
Preparing and setting the work station	• Read Information Sheet 1.1-1 • Answer Self-Check 1.1-1 and compare your answer with the answer key

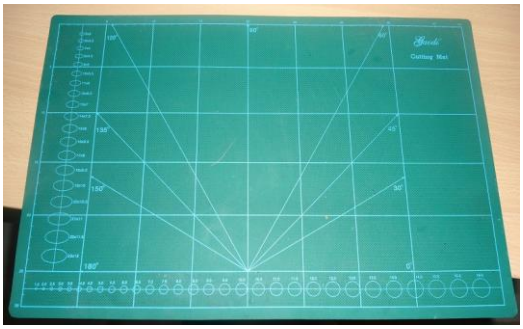
INFORMATION SHEET 1.1-1

Cutting tools and equipment used in cutting leathers

Leather is a tough and durable substance, and it can be very hard to cut. The diverse ways to cut leather include the following tools and equipment.

Cutter – use to cut leather

Scissor – use to cut leather



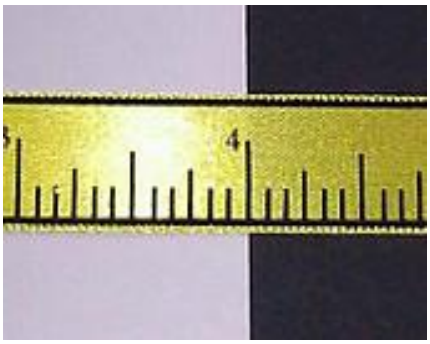
Cutting board – a surface to where the leather is cut off

Upholstery knives

French curve – use to trace curve line

leather cutting shear

Yard sticks



Ruler

Leather knife

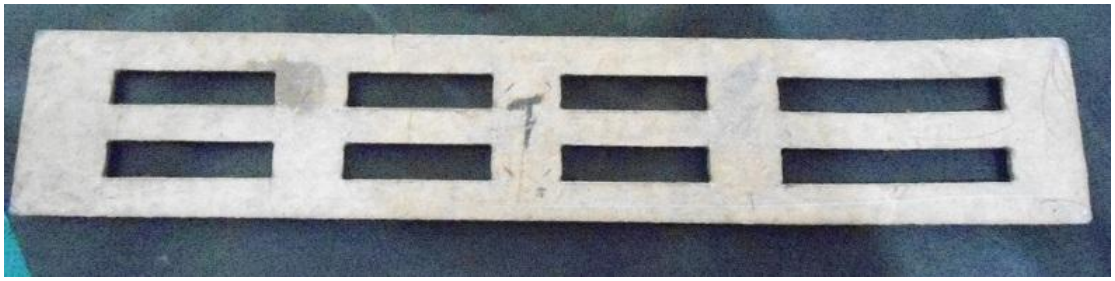
tapered round handle leather knife

Cutting pattern

tracing pencil – use to mark cutting line

Other examples of cutting pattern

Cutting pattern: By using these pattern Leather cutting by hand.



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SELF-CHECK 1.1-1

1. What are the materials used in cutting leather?
2. What is the purpose of French curve?
3. Why does leather require various tools and materials for cutting?

ANSWER KEY

1. The materials for cutting leather are:
   a. Cutter
   b. Scissor
   c. Cutting board
   d. French curve
   e. Yard sticks or ruler
   f. Upholstery knife
   g. Cutting pattern line
   h. Tracing pencil
2. French curve is used to trace curve lines.
3. Leather is a tough and durable substance, and it can be very hard to cut thus, it requires various types of cutting tools and equipment.

LEARNING OUTCOME 2 ASSESS LEATHER TO BE CUT

CONTENTS:

1. Check leather carefully for scars, marks and faults that need to be considered during cutting.
2. Sort out different parts leather and consider patterns for minimum wastage, according to industry requirements.

ASSESSMENT CRITERIA:

1. Leather is checked carefully for scars, marks and faults that need to be considered during cutting.
2. Leather pieces are sorted out for different parts and pattern pieces are considered for minimum wastage, according to industry requirements.

CONDITIONS:

- Lap top
- LCD
- Learning Material
- Leather cutting equipment and tools
- Cutting patterns

LEARNING ACTIVITIES

LEARNING OUTCOME: Assessment of Leather to Be Cut

LEARNING ACTIVITIES	RESOURCES/SPECIAL INSTRUCTIONS
Checking and sorting leathers according to industry requirements.	• Read Information Sheet 1.2-1 • Answer Self-Check 1.2-1 and compare your answer with the answer key

INFORMATION SHEET 1.2-1

Leather and its Characteristics

Learning Objectives:

After reading this Information Sheet, you should be able to describe leather and its characteristics.

What is Leather?

all-about-leaher.com.uk

The British Standard Definition of leather is:

'Hide or skin with its original fibrous structure more or less intact, tanned to be imputrescible. The hair or wool may, or may not, have been removed. It is also made from a hide or skin that has been split into layers or segmented either before or after tanning.' (BS: 2780)

The amount of surface coating applied to the leather influences whether or not the item can be described as genuine leather.

'..If the leather has a surface coating, the mean thickness of this surface layer, however applied, has to be 0.15mm or less, and does not exceed 30% of the overall thickness'. (BS: 2780)

What is not leather?

There are many types of leather items sold and described as leather, when in actual fact they are imitations. Some of the more common ones are described below.

Bonded Leather Fiber

'Hide or skin with its original fibrous structure more or less intact... If the tanned hide is disintegrated mechanically and/or chemically into fibrous particles, mall pieces or powders and then, with or without a binding agent is made into sheets, such sheets are not leather'

BS: 2780

It is possible to see the incorporation of several material types within this bonded leather structure as different color types.

Advantages
• Cheap
• Uniform cutting area

Disadvantages
• Not leather
• Poor flexibility
• Not durable
• Little strength
• Looks cheap

Coated Leather

'A product where the finish thickness does not exceed 30% but is in excess of 0.15mm'

The darker region toward the grain side of the leather contains the actual coating, which can be constructed with various chemical materials, such as a polyurethane mix. As the finish thickness exceeds 0.15mm, it cannot be termed genuine leather.

Advantages
• Cheap
• Consistent surface

Disadvantages
• Lacks natural look
• Not porous
• Physical performance, flex etc (low)

Laminated Leather

The main features of laminated leathers are that they are a composite of two or more layers, where the laminate has been affixed to the flesh side. Also a difference between this leather type and a coated leather is that the laminate accounts for greater than 30% of the leathers overall thickness.

Advantages
• Consistent surface
• Some flexibility and strength
• Color and light fastness good

Disadvantages
• Lacks natural look
• Not porous
• Physical performance not as good (tends to crack)

Areas

You'd be surprised the first time you see a full hide. Not only are they much larger than you think, they vary much more than you'd expect too.

Leather from different parts of the animal varies in its characteristics, and this has to be taken into account when using leather in products. The hide thickness varies all over the animal, and to get it to the right thickness it is usually split on a special cutting machine or buffed to an even thickness. The main parts of the hide are shown in the diagram below

Shoulder - the shoulder is thick and strong but tends to crease easily as this part of the hide is affected by movements of the head

Butt - the fibers in this part of the hide are tightly packed and hence the strongest part of the hide

Belly - this part of the hide is quite thin and has a much looser fiber structure than the back, and often stretches under stress.

Axillae **- these are like the human armpits - they move a lot - so the fibre structure is quite loose, making it even more prone to loosening than the belly areas.**

Types of Real Leather

There are several main types of leather this are listed as below.

Corrected grain

The most basic type of leather available. Corrected grain has a coated finish that creates a very uniform feel with a strong protective coating. Corrected grain has a fairly soft finish but it is not a luxurious as higher grades and is the favored type of leather in well known furniture stores. Corrected grain is a good choice for those who want a good hard wearing leather that can be wiped clean at a very keen price.

Fine grain/semi-aniline

A very soft smooth buffed hide ideal for those who want a soft warm inviting feel. Ideal on modern suites and soft sit designs. Fine grain leather is well protected and good for everyday use whilst being much softer and more luxurious than standard coated leather.

Double thickness

As indicated twice the thickness of normal hide and extremely durable. Looks fantastic on larger suites and square designs. Double thickness hide has a heavy grain and is very well protected and exceptionally good for everyday/ heavy use.

Extra thick hide

Very similar to double thickness hide but about 1.5 times thicker than normal leather. A good choice hard wearing hide that is exceptional value for money.

Natural waxed hide

The fastest growing hide on the market today. Looks fantastic on classic, modern and contemporary ranges. Pull up hide is totally authentic with variations, natural features (such as original scarring) all part of the appeal. Pull up hide will lighten on areas that are scratched (this is the wax or oil separating) but will re-color when rubbed or specialist cream applied. Generally has a light protective coating. A great leather for those who are looking for a totally natural exceptionally soft look and feel.

Full aniline leather

The softest most luxurious leather available anywhere today. Full aniline is 100% natural hide without any coating and has a gorgeous look and beautiful feel to it. It is a perfect leather for those who want the ultimate in looks and comfort. Full aniline leather has only a very light protective coating but is fully dyed so does not scratch like waxed hide.

Because of the high cost of this leather it is advisable, when possible, to the vamp out of the best part of the leather first.

Always try to keep skin square by moving across the skin and cutting the lowest part of the skin first.

Closely inspect the leather for any flaws or surface defects and highlight these areas with chalk for easy identification,

When cutting craft it must be examined very closely before each cut.

Leather Selection:

Raw material - selecting leather that is fit for the purpose is crucial. For example; cowhide is not the most appropriate leather to make a lightweight ladies garment. If you need a strong, lightweight leather then a large mature sheepskin may be weak when cut down to a substance of 0.7mm. Seasonal variations and animal breed will affect quality and size, and potentially cutting values and costs. There are no hard and fast rules but a basic understanding of the types of raw material and their inherent characteristics is a good starting point.

Leather types - different finishes are available and once again the end use needs to be uppermost in the mind. Pigmented and semi aniline leathers will have better fastness properties than anilines, nubucks or suedes. However, pigmented leathers are more likely to have a less natural appearance. Aniline leathers and oily nubucks have a tendency to soil easily and are more difficult to clean. Color rub off problems may occur with waxy, greasy leathers and nubucks.

Leather quality - the old adage applies here ‘you get what you pay for'. It may be better to pay more for the leather than push the margins. If price is squeezed on a garment the most likely place for savings is the leather and this can mean different qualities of raw material from that sampled!

Sampling - make sure that the quality of the leather is clearly agreed at an early stage, specifying what is and is not acceptable on a finished garment. If you pay for top quality nappa that is what you expect to receive. It is advisable to keep a good-sized sample of the leather and fingerprint test for reference.

Quality - when buying or specifying leather, you need to be aware that leather can either be graded or bought as a mixed selection. If the leather is graded then you can set the standards and agree which grades should be used for each garment panel.

Variation - leather is a natural product and depending on the type of leather selected a degree of variation must be expected. This variation can be minimized and controlled through efficient process controls during manufacture. Once again be aware that some raw material may be subject to seasonal variations in quality and size. Clearly set the type of variations you are prepared to accept and check each delivery against samples prior to dispatch to stores.

Understanding the Natural Markings of Leather
AMERICAN HOME APPLIANCE
LEATHER EDUCATION BOOKLET
http://www.ahfa.us/uploads/documents/leather_booklet.pdf

Graining – The grain, similar to human fingerprints, is unique to each individual hide. It is the hallmark of full grain leather hides and can vary from hide to hide or even within one particular hide.

Branding Marks – Brand marks, or fire brands, are used as identification marks and are part of virtually every hide.

Stretch Marks – Stretch marks occur as a result of giving birth and become a permanent marking on the cow.

Healed Scars – Scratch marks are the result of the cow's unsheltered life and evidence that the hide is indeed top grain. Hides with fewer scratch marks are usually more expensive, but the marks do not affect strength or durability. Typical healed scars include those caused by insect/tick bites and barbed wire marks.

Insect/Tick Bites – Scars caused by the abundance of insect and/or tick bites. Typically, these scars heal but leave visible markings.

Fat Wrinkles – Wrinkles occur naturally in the loose skin around the neck and belly of all cows. The skin must be loose to allow the needed flexibility for grazing and overall growth.

Backbone – Natural furrows appear along the backbone of all hides due to the animal's physiology.

Basic Leather Classifications

Type A – Aniline

- Crust leather that has received only aniline dyes for color, then dried, softened and milled.
- No protective finish.
- Shades may vary from hide to hide and within a single hide.
- Requires a high degree of preventative maintenance.
- Susceptible to surface scratches.
- Absorbent
- May have special effects such as, but not limited, to wax, oil, etc.

Type P – Protected

- Crust leather that has received additional aniline dyes, pigmentation for color consistency, and/or a protective top coat finish, then dried, softened and milled.
- May be partially or fully corrected.
- Requires a low degree of preventative maintenance.
- Surface is more difficult to scratch.
- Least absorbent.
- May have special effects, such as, but not limited to, hand antiquing, savauge, etc.

Type N – Nubuck

- Crust leather that has received only aniline dyes for color, then dried, softened sanded or buffed, and milled.
- Surface has a visible nap.
- Shades may vary from hide to hide and within a single hide.
- Requires a high degree of preventative maintenance.
- Susceptible to surface scratches.
- May have special effects, such as, but not limited, to wax, oil, etc.

Some Faults and defects of Leather which given as bellow …

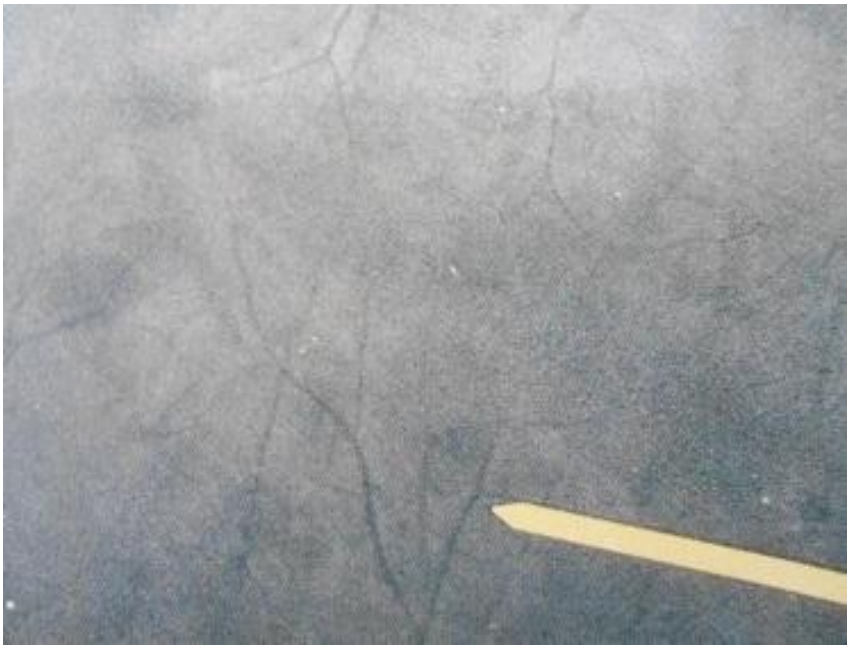
Some Faults and defects in Leather:

1. Color Fastness.
2. Flay cuts.
3. Vein Marks.
4. Trimming Bad Offal Area.
5. Bad Grain.
6. Warble Flay/ Holes or Scars.
7. Tick mark.
8. Growth marks.

Color fastness: Sometimes have a problem with the color fastness to test this wet a pieces of white cloth and rub on the surface of the grain, if lightly rubbed approx. 20 times reciprocations, the color should not come off.

Flaying cut: The skin is usually the by-product of a slaughtered animal the main product being the meat. When the skin is removed cuts through or partially through the skin may occur through the misuse of the flaying knife. These will appear on the flesh side of the skin

Vein Marks: After the skin has been tanned, veins may be visible through the surface finish of smooth leather. Mainly in goat but sometimes found in kid. These deep vein marks are more noticeable from the flesh side.



Tick Marks: The tick burrow's its head into the skin of the animal to suck the blood, at the same time he injects a poison into the animal which infect and after the tick withdraws he

SELF-CHECK 1.2-1

1. What is leather?
2. What are the types of leather items sold and described as leather, when in fact they are imitations?
3. What are the characteristics of leather from the butt part of the animal?
4. What are the types of real leather?
5. List down eight faults and defects in leather.

ANSWER KEY

1. The British Standard Definition of leather is: 'Hide or skin with its original fibrous structure more or less intact, tanned to be imputrescible. The hair or wool may, or may not, have been removed. It is also made from a hide or skin that has been split into layers or segmented either before or after tanning.
2. The types of items which are not genuine leather are:
    a. Bonded leather fiber
    b. Coated leather
    c. Laminated leather

3. Leather form the butt of animal has that are tightly packed and hence the strongest part of the hide.

4. The types of real leather are as follows:
    a. Corrected grain
    b. Fine grain / semi-aniline
    c. Double thickness
    d. Extra thick hide
    e. Natural waxed hide
    f. Full aniline leather
5. Some faults and defects in leather:
    a. Color Fastness.
    b. Flay cuts.
    c. Vein Marks.
    d. Trimming Bad Offal Area.
    e. Bad Grain.
    f. Warble Flay/ Holes or Scars.
    g. Tick mark.
    h. Growth marks.

LEARNING OUTCOME 3 CUT LEATHER BY HAND

CONTENTS:

1. Identify and refer for repair problems or faults with patterns, knives and cutting boards.
2. Minimize waste through the use of cutting knives and patterns.
3. Identify and avoid areas of defects when patterns are positioned.
4. Use cutting techniques to match patterns.
5. Cut and match pieces precisely and regarding grain pattern and color shade.

ASSESSMENT CRITERIA:

1. Problems or faults with patterns, knives and cutting boards are identified and referred for repair.
2. Cutting knives and patterns are used to minimize waste.
3. Scars, marks and fault areas of high-quality leather are identified areas of defects are avoided when patterns are positioned.
4. Cutting techniques are used to match pattern
5. Pieces are cut precisely to size and adjacent pieces are matched regarding grain pattern, color shade.

CONDITIONS:

- Lap top
- LCD
- Learning Material
- Leather cutting equipment and tools
- Cutting patterns

LEARNING ACTIVITIES

LEARNING OUTCOME: Cut Leather by Hand

LEARNING ACTIVITIES	RESOURCES/SPECIAL INSTRUCTIONS
Cutting leather according to industry requirements and minimizing wastages.	• Perform Activity Sheet 1.3-1 • Refer to Performance Criteria Checklist

INFORMATION SHEET 1.3-1

How to Cut Leathers

Best Ways To Cut Leather
By: Ethan O. Tanner.

Leather is a tough and durable substance, and it can be very difficult to cut. The various ways to cut leather include a straight edge, a utility knife, a leather shears, a rotary knife, a mallet cutting die, a clicker die, or a laser cutting system.

A pattern is the first step in precisely cutting leather. To make a customized pattern, draw a design on paper with a pencil or use a computer drawing program. Lay the paper pattern on the leather piece. Start out cutting with either a straight edge utility knife or a rotary cutter. A rotary cutter is effortless to use and if used the right way, it results in a clean edge. Safety warning: This tool has an exceedingly sharp blade and should be used with care. Keep the rotary cutter, and all sharp cutting tools away from small children. Cut your leather using the rotary cutter, using a self-healing cutting mat beneath the leather. These mats keep your table or counter surface from being damaged by the cutter.

A Leather shears is a industrial scissors that usually has serrated blades, and it is able to cut soft or even heavy strap leather. A good quality leather shears will cut through most leathers with simplicity.

The razor utility, swivel knife or hobby knife pertains generally to cutting tools and more specifically to cutting tools that are engaged in leather craft. Conventional hand cutting tools that are generally utilized by hobbyists and others occupied in the art of decorative leather tooling typically consist knife-like blades fixedly and permanently mounted within a holder that is accommodated for manual operation by the user.

Strap cutter is a changeable wooden cutting tool that cuts parallel strips of leather from part of a hide. It works equally well with heavy strap leather or soft garment leather. It is able to cut 16 oz. leather into 4" straps or soft suede into strips.

A clicker press is a machine that cuts shapes out of rolls of soft material, such as rubber, cardboard, or leather, using a sharp metal piece called a die. A metal tool and die shop will take a pattern, and bend, weld and form pre-sharpened steel into a die. A cutting die is commonly a steel cutting tool to be used with a clicker press. Cutting dies are appropriate for cutting paper, leather, rubber, plastic and more including envelope cutting dies, label cutting dies, clicker dies, window dies, punch dies, gasket cutting dies, washer dies, trimming dies, high dies, threaded punch dies, rotary panel cutters, corner blades, strap dies and more.

Leather is increasingly cut by laser. Laser leather cutting is a highly skilled job. The operator will program the design to be cut by the laser cutting machine. Cutting leather in this method may be a time consuming exercise. The leather cut by laser is extremely accurate, and true to your pattern.

There are many different methods for cutting leather, which is a tough, durable, and difficult to cut material. For the small manufacturer a clicker or mallet cutting die would increase production. The larger manufacturer usually uses clicker dies or a laser cutting system for its leather cutting. For the home craftsman, the best ways to cut leather would include the leather shears, the utility knife and straight edge.

The following is an example of a step-by-step procedure on how to cut leather by hand given a sample pattern.

Cutting the leather
Madog's leather tutorial

http://www.geddon.org/Madog's_leather_tutorial_Cutting_the_leather

Tools needed
- Pen
- Leather
- Patterns
- Shears/ Scissors
- Husky Knife/ Leather Knife

- You're going to need some leather. Along with a ball point pen, this is the only new stuff you're going to need in this part of the project. Everything else you should already have.

- You're going to need your patterns of course.

- Use a pair of scissors on leather. But 2 things to remember. Never put excessive force on the scissors, if you do it breaks. If the leather is too thick (which is very often the case with this super hide we got) don't force it.

- This is going to be your main cutting tool in this part of the project. It is recommended to have some extra blades on hand. Go through 2 sides of a blade in the cutting of this hide. Use a knife sharpener on the blade when it starts to get really dull.

Lay out the Patterns

▪ You're always going to do this first. It is just the way things are. You want to find out where you can save the most leather in the project. Tragically this project calls for a lot of waste. Here is the layout on this ~3/4 of a hide. I had to pull out another hide to trace 2 more of the back lames / ribs on.

Note on the waste: From what is leftover on this project we will have tons of triangle pieces left over. Some of these pieces will be used to make the something else if they are long enough. The other pieces we will put in my scrap bin and will probably give to some goblins as payment for doing something for me.

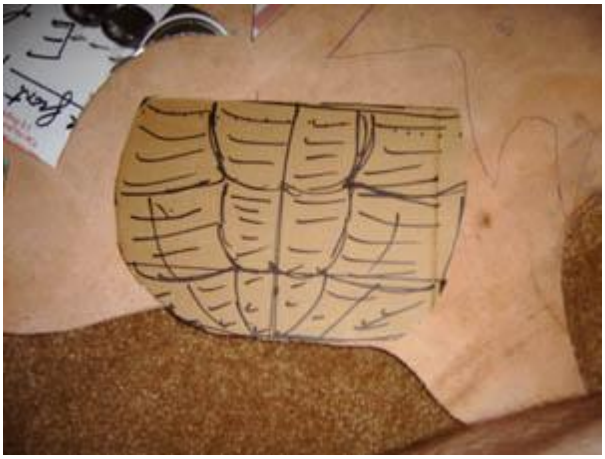
Trace out the pieces

- Start tracing. It takes up a lot less time than cutting.

- See the nice shape.

- Don't forget to label each piece so you don't forget what it is!

Planned modify on the fly



- Remember those pesky ab/ bulkhead stencils from the stencil section? Well they're back and now we are ready to follow the instructions.

- First read the back... "1/2 -->" basically means to expand out 1/2 an inch.

- So we are going to trace it leaving enough space for 1/2 on the outer edges.

- Now simply shift the pattern over 1/2 to the right and trace the right edge a second time.

- Repeat for the left side as well.

- Voila! You now have it traced with the instructions.

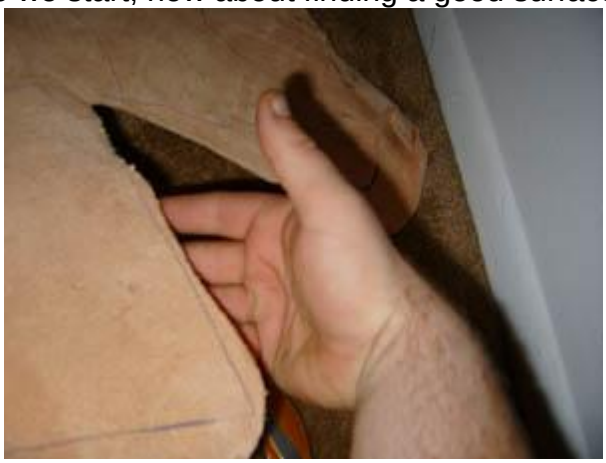
Marvel at the traced hide

- Here is a finished pic of the hide before I started cutting. See how everything is nice and planned out.

- We have to turn these cardboard stencils into leather armor

- Use the leather cutter if the leather is too thick for scissors

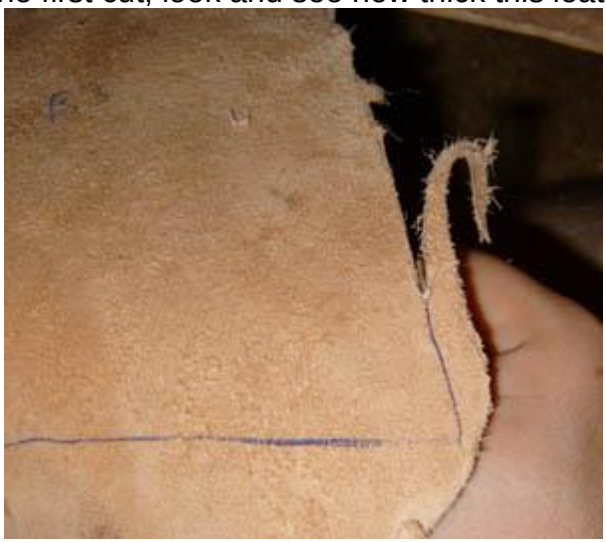
- Now before we start, how about finding a good surface to cut on.



- Lift the leather and handle it.

- Cut into the leather with the cutter. It is hard to stab directly into the leather. It is best to use a drawing motion always when cutting. A little note about following lines. Extra is always good, but take note that the lines are generally always larger than the stencil you traced.

- After the first cut, look and see how thick this leather is.



- For longer mostly straight cuts, use a different cutting method. Go from underneath. Hold the leather in a closed fist and pull or draw the knife towards me. Use the rotation of the wrist to keep the blade straight up and down perpendicular to the work. A combination of the flex of the wrist and the direction the elbow points determines the direction of the line. It is a lot like backing up a trailer when making curves, where the elbow starts to turn and then the wrist follows.

- Some parts of a hide are fuzzier than others. At a 45* angle, trim the fuzz that sort of balls up and looks all nasty. This quick snip cleans up the edge.

- Cutting deep with the knife makes it harder to turn but quicker to cut. If you're doing straight lines, this is the way to go.

- A shallow cut that only uses the tip makes it easy to turn but slower and more unstable to cut straight.

- Using a combination of shallow and deep cuts, we are able to cut out piece:

- Sometimes it is easy to simply cut to an edge and then go through and finish up a piece. Holding the entire stock can get tiring. The last thing you want to do is be tired, drowsy, or weakened while cutting leather.

- Here is piece:D3 cut out and ready to go to the next step.

Tips in cutting leather

Most leather-working projects require that the leather be cut, but cutting a piece of leather requires a sharp mind and a sharp blade. You will need to measure and mark the area and cut it on a flat surface. You must also keep the leather damp while you work it so it's easier to manipulate. Either spray the entire piece lightly and evenly with a spray bottle of water or dampen it with a sponge.

- Lay the leather out on a flat work surface. Protect the surface with a rubber mat made especially for leather working. This mat will also help protect your tools from being blunted or damaged by contact with the surface.
- Use a pencil and a ruler or yardstick to make the cutting line along the leather's surface. Make very light pencil marks that don't score the leather.
- Use a French curve or other rounded edge to trace a curved line.
- Place a straightedge, such as a metal ruler, along the drawn line. A thick straightedge provides stability for the cutting blade.
- Draw the tip of a utility knife along the straightedge, cutting into the leather as you go. Keep the blade pushed against the straightedge as you move it.
- Cut only as deep as you can while still being able to control the blade. Take as many cutting passes as necessary to cut through the leather.
- Cut curved lines in the same manner. If you draw your curve freehand, position your razor so it's perpendicular to the leather's surface. Make several light passes with the razor along the drawn line until the leather is cut.
- Use leather shears to cut suede and garment leather.
- Change the knife blade as often as needed. One blade should last for the duration of a project.
- If a few drops of water spill onto the piece, then wet the entire piece again to prevent water spots.

ACTIVITY SHEET 1.3-1

Activity Title : Cutting leather by hand

Purpose : To be able to cut leather by hands

Materials for the activity:

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Cutting knives
Pencil
Cutting pattern
Ruler
French curve
Scissor
Cutting board
Leather materials

Procedure:

- Inform your trainer that you are ready for this activity.
- Your trainer will now provide you with cutting equipment and materials as well as the cutting pattern.
- Study the pattern and perform cutting of leather according to job requirement.
- Identify and report problems with patterns, knives and cutting boards in order to achieve quality standard
- Check the cut products for compliance with job specification and quality standard.
- Identify and replace rejects
- Record the results.
- Clean workplace and equipment as per workplace standard
- Dispose waste properly.

PERFORMANCE CRITERIA CHECKLIST

CRITERIA	YES	NO
Did I…		
• Select and prepare cutting equipment and pattern according to specified work and sizes, and manufacturing instructions.		
• Collect materials and sort and lay out in preparation for cutting.		
• Check leather for scars, marks and faults that need to be considered during cutting.		
• Sort out leather pieces for different parts and consider pattern for minimum wastage according to industry requirements.		
• Use cutting techniques to match pattern shape, size and leather quality.		
• Cut pieces precisely to size and adjacent pieces are matched regarding grain pattern, color and shade		
• Check cut products for compliance with job specifications and quality standard set by the industry.		
• Replace reject pieces and maintain records		
• Clean workplace and equipment as per workplace standard.		
• Dispose of waste according to company regulations.		

REVIEW OF COMPETENCY

Below is your performance criteria checklist for the module: Cutting Leather by Hand.

Performance Criteria	Yes	No
1. All safety requirements/regulations are adhered to before, during and after use.	☐	☐
2. Unsafe or faulty tools are identified and repaired according to designated procedures before, during and after use.	☐	☐
3. Personal protective clothing (PPE) worn	☐	☐
4. Workstation is set up according to industry practices.	☐	☐
5. Cutting equipment and patterns are selected and prepared according to specified work and sizes, and manufacturer instructions.	☐	☐
6. Materials are collected, sorted and laid out in preparation for cutting.	☐	☐
7. Cutting board is routinely cleaned and maintained.	☐	☐
8. Records are maintained	☐	☐
9. Leather is checked carefully for scars, marks and faults that need to be considered during cutting.	☐	☐
10. Leather pieces are sorted out for different parts and pattern pieces are considered for minimum wastage, according to industry requirements.	☐	☐
11. Problems or faults with patterns, knives and cutting boards are identified and referred for repair.	☐	☐
12. Cutting knives and patterns are used to minimize waste.	☐	☐
13. Scars, marks and fault areas of high-quality leather are identified areas of defects are avoided when	☐	☐

patterns are positioned.		
14. Identified areas of defects are avoided when patterns are positioned.	☐	☐
15. Cutting techniques are used to match pattern	☐	☐
16. Pieces are cut precisely to size and adjacent pieces are matched regarding grain pattern, color shade.	☐	☐
17. Cut products are checked for compliance with job specifications and quality standards set by the industry.	☐	☐
18. Reject pieces are replaced and records maintained.	☐	☐
19. Work place and machines are cleaned as per work place standard.	☐	☐
20. Waste is disposed of according to company regulations	☐	☐

I now feel ready to undertake my formal competency assessment.

Signed:

Date:

REFERENCES

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