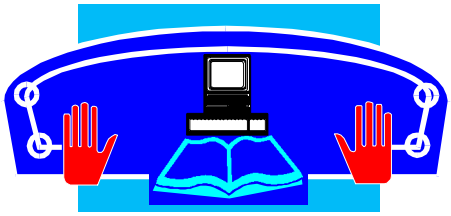

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RESEARCH AND COMPILATION OF INITIAL MANUSCRIPT
MR. R *LONG*
ARCTIC FOOD DEVELOPMENT OFFICER
BAFFIN REGIONAL HUNTERS AND TRAPPERS COMMITTEE
BAFFIN REGIONAL COUNCIL

THIS MANUAL WAS EDITED AND DIRECTED BY THE BAFFIN ARCTIC FOOD COMMITTEE.

COMMITTEE MEMBERS

MS. K TRUMPER
REGIONAL SUPERINTENDENT OF ECONOMIC DEVELOPMENT AND TOURISM

MR, J NOBLE
REGIONAL SUPERINTENDENT OF RENEWABLE RESOURCES

MR. R. MONGEAU
EXECUTIVE OFFICER OF BAFFIN REGIONAL COUNCIL

MR. R. ALLEN
REGIONAL *WAGER* OF FISHERIES AND OCEANS CANADA

TRANSLATION PROVIDED BY
MS. BLANDINA TULUGARJUK
QASIGIAQ TRANSLATIOB

FUNDING WAS PROVIDED BI THE CANADA/NWT ECONOMIC DEVELOPMENT AGREEMENT

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INTRODUCTION

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Set up the VCR/TV system and watch the relevant section

INTRODUCTION

Target user group

In southern Canada a journeyman meat cutter, like a journeyman carpenter, has to learn his trade over a period of years under the apprenticeship system. Within the apprenticeship period there are periods of college instruction followed by months of on-the-job training under the instruction and supervision of a journeyman meat cutter. Unfortunately the Arctic *food industry* is in its' infancy and can not afford to hire journeyman meat cutters for the various settlements that are developing arctic food products. This means that the process of training *heal* people as *arctic* food meat cutters has to develop anew route.

This manual with the companion video is aimed at training Inuit people in *basic* meat cutting utilizing the HTA *processing* room/freezer in their community. We are assuming that there will not be an experienced meat cutter available to "offer on the job training. These teaching tools will allow a person to teach themselves the basics of commercial meat cutting. Under ideal conditions there will bean experienced meat cutter or trainer available to offer "hands on" instruction and guidance.

Purpose of t&3 manual and vi&Q

The manual and video will accomplish three goals:

1. They will be a resource tool for local meat cutter trainees to use in learning basic meat cutting skills

2. They will be available in the processin g room/freezer as a resource for meat cutters to use when they are looking for information

3. They will be broken into modules as part of *a* competency based *training* system

This manual is not a complete text book on the trade of meat cutting. It is hoped that as the arctic food industry grows the *facilities*, equipment and skill levels of staff will grow to meet the industry needs. Because we are still discovering new products and searching for established products in new areas, the training approach used will have to *modular* and product specific. The meat cutting portion of this manual will become the basic meat cutting module in a competency based training system. It would seem logical that eventually the demand will grow and the financial resources will be found for this training to be delivered by Arctic College.

FIELD DRESSING AND HANDLING

Field handling and dressing

Set up the VCR/TV system and watch the relevant section "

FIELD DRESSING AND HANDLING

Since all commercial harvested caribou and muskox will be tilled by an Inuit hunter, holding a general hunting license, this manual will not presume to explain how to shoot or dress an animal, but will point out the procedures for commercial field dressing *and handing.*

1. For commercial use the hunter should make the kill with a neck shot.
   This will give the highest yield of meat. The *meat processing* plant should establish a policy to either accept only neck shot animals or depredate the price paid for animals that are body shot.

2. After shooting the animal it should have its' throat cut and bled.
   If possible with the heed end downhill.

3. Keep the animal clean and the meat as free from hairs as possible.

4. A deep cut should be made around the bung (anus, or anus and vulva in the doe). Pull the bung out so you can tie it off with a string.
   This will prevent leakage of manure into the body cavity when you pull it out of the body with the rest of the insides. (see figure # 1).

5. The skinning should be done on clean snow or on a clean tarp.
   After skinning the legs should be cut off at the knee joint and the head cut off high on the neck.

6. Set aside the heart and liver.
   The meat processing plant will buy the carcass as prepared above an&t&e liver and heart. They do not want the carcass cut into quarters or primal cuts in the field.

7. The prepared carcass should then be wrapped in a dean tarp and delivered to the processing plant as soon an possible.

Figure #1

With the dead animal on its side, cut deeply around the bung, pull it out, and tie it off with a string.

Reach up into the pelvis, and pull at the bung and the intestinal tract.

SETUP/MATERIALS NEEDED

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Set Up the VCR/TV system and watch the relevant section

SETUP/MATERIALS NEEDED

The freezer equipment

The HTA processing room/freezer is equipped with the basic tools and equipment for processing of arctic food products. In the freezer you will find a large room divided into two sections by a screen wall with screen lockers on one side. The original concept was to have the side with the lockers available for people to store their person supply of arctic foods. The side of the screen wall facing the processing room is to be used for the commercial production of arctic foods. It is separated from the public section for reasons of security and sanitation regulations. Many HTAs active in arctic food processing have modified this arrangement to suit their needs and many have also built shelving units for the storage and separation of various products.

There are two thermostats in this area. The freezer system has two complete and seperate cooling systems. If one breaks down then the other is capable of keeping the room at the required temperature. The double system requires that one thermostat be set 2 degrees lower then the other. The lower set system will come on first. The DPW refrigeration mechanic will reverse the order of the thermostats on his annual preventive maintenance inspection to ensure that both systems share the work load. As discussed in the maintenance of the freezer section of this manual, any problems should be reported to the local DPW office. It is their responsibility to repair and maintain the freezer.

For meat products a temperature of -19 degrees Celcius is required and fish should beheld at a temperature of -23 degrees Celcius. When the room has a mixture of both meat and fish then the lower temperature should be wed and the meat and fish products kept seperate from each other.

Some HTAs have had their freezer equipment break down and result in having frozen inventory thaw out and spoil. Although --cc of the facility is the responsibility of the Department of Public Works, they assume no liability when this happens.

It is strongly recommended that an arrangement be worked out between the local DPW staff and the HTA to do regular checks of the freezer, this is especially important on weekends and when the weather is warm. If the freezer is not working call DPW immediately If they can not fix the equipment right away, the HTA can look for another place to store the inventory before it spoils.

Processing area equipment

The processing room area has the following equipment
- Abeam scale for weighing meat and fish
-Three laminated wood top cutting tables
-A Hobart meat cutting bandsaw
-A Hobart table top meat grinder
-A portion scale
-A triple stainless steel sink
-A shrink wrap machine
-A variety of hand tools
-Accessories and blades for the power equipment
-Tubs, pans and pails
-Packaging materials
-cleaning supplies

The equipment listed above is adequate to start production. Some processing rooms have purchased additional equipment required for specific types of specialized local production. There have also been modifications made to plumbing systems and one settlement has put a major addition on the building to better handle a specific and high volume level of fish production. As supply and market demand for a specific products increase, there is merit in considering the purchase of high volume pieces of equipment that will produce more porduct with less work and at lower cost. All of this equipment is good quality, meets industry standards and the electrical system will carry the loads required. Please refer to the salon on suppliers to source various tools and additional pieces of equipment.

Storage areas

1. Both freezer and dry storage areas should have provisions for adequate aisles and exits.

2. All stacking should be limited to ● void striking and breaking pipes and light fixtures.

3. Freezers should be provided with adequate barriers to prevent frozen product from coming in contact with either Unit of piping. Valves, pump-out lines and the like should be so located at the installation so that they are not vulnerable to damage.

The theory of good housekeeping

Few responsibilities of management have less glamour than housekeeping - yet few *pay* off so well. The working force of the company is its most valuable asset and **helping employees avoid injury through maintaining an orderly environment makes sense.**

The term "housekeeping" is riot to be mistaken for an occasional pushbroom effort. **Housekeeping is an orderly arrange of operations, tools, equipment, storage, facilities and supplies.** It is a practical method of getting high production, low accident rates and improvement in employee morale and public relations. The theory of good housekeeping is expressed as follows:

1. Dirt is always evidence of waste, of material of energy, or both.

2. Although cleaning up dirt and disorder is a janitor's work, preventing them is a manager% job.

Personal hygiene & dress

1. The hair should be cut and kept well trimmed at all times, if not, hair nets must be worn.

2. Hands and fingernails must be kept clean. Nails should be clipped short and kept dean to prevent the harbouring of meal soil.

3. A *clean* shaven appearance must be maintained at all times.

4. Mouth area and teeth should be cleaned regularily.

s. Cuts must be covered with suitable waterproof dressings. in serious cases, a nurse should be consulted.

6. Smoking, gum of tobacco chewing will not be allowed in of near any meat cutting working area. Tobacco or cigarettes *will* not be carried in Shirt of pant pockets while working with meat.

7. Daily bathing and reguiar changing of all *garments* is a norm.

8. Hands and arms must be thoroughly cleansed with ● germicidal soap *before* commencing work.

9. Any unusual rashes should be attended to by ● nurse.

10. Fresh blood from a cut should be removed from any piece of equipment, of if on a product, the affected piece must be discarded.

11. *Shoes* should be cleaned regularity and kept free of meat soils.

12. Workers will not Sit on tables of any other platforms used for placing meat products.

13. Wrist watches, bracelets and signet rings will not be worn while cutting meat.

14. Meatcutters while engages in meat cutting ● ctivities, will adhere to the following dress code:

Clean pants
Clean white jackets
Clean white bib apron
Clean white bump hat
Hair nets required
Protective mesh glove
Shoes with smooth (leather of comparable material) @18. clogs, running shoes, of footwear of canvas of material composition are not acceptable.

Processing room layout

Most pieces of equipment are moveable and this is very useful in a multipurpose processing facility. It will permit the processing room to be set up in logical and efficient processing lines. It is difficult to standardize the layout for all purposes. Therefore it is important for workers to take the time at the start of a shift to plan the layout that will work best for the job that has to be done. Some of the points to consider in layout:

1. Are there unnecessary piles of cleaning supplies, wrapping material, boxes, tools or arctic food products lying around?

Unnecessary supplies will be moved to the proper storage area and then they will not be in the way. Cleaning supplies will be in their cupboard, deferrable in the bathroom. This will reduce the risk of injury, product contamination and make the work area more efficient.

2. Is the processing room clean and sanitized?

Cleanliess and sanitation are absolutely necessary and should never be left out of the plan. Details on cleaning and sanitation are found elsewhere in this manual. It is normal procedure for a thorough cleaning and sanitation of the facility to be completed at the end of a shift and therefore the processing area should not need to be cleaned in the morning. However, if there is any evidence that this work was not done or was done poorly then it will be necessary to do it again for the safety of your customers.

There are strict regulations set out and the Baffin Regional Health Board have environmental health officers who will periodically inspect the processing/freezer facility to ensure that regulations are being met. These inspections should be looked at positively as the environmental health officers will often be a source of good ideas to make your operation better.

3. What jobs are going to be done and which pieces of equipment will be used?

4. How many people will be working?

S. How can the shop be set up to move heavy loads to shortest distance and the easiest way?

6. What steps are required in the processing the product?

7. Will the the product move easily from one step to the next?

The pieces of equipment can be moved around to set up the processing line. All of these questions are variables in the setup of the processing line. After you are satisfied with the layout you will be sure that all necessary factors have been considered to reduce the risk of injury and make the work area as efficient as possible.

8. What hand tools, blades, accessories, pans and supplies will be required?

9. Are all the pans, tools and blades sharp, clean and sanitized?

10. Are there cans or pails for waste products?

At this stage of the setup plan, work stations are up. Tools, blades, accessories, pans and supplies are set out and prepared for operation. Once again the safety of workers is a primary consideration. A review of the chap& on training and safety for knife workers would be helpful.

11. What is the temperature in the processing room?

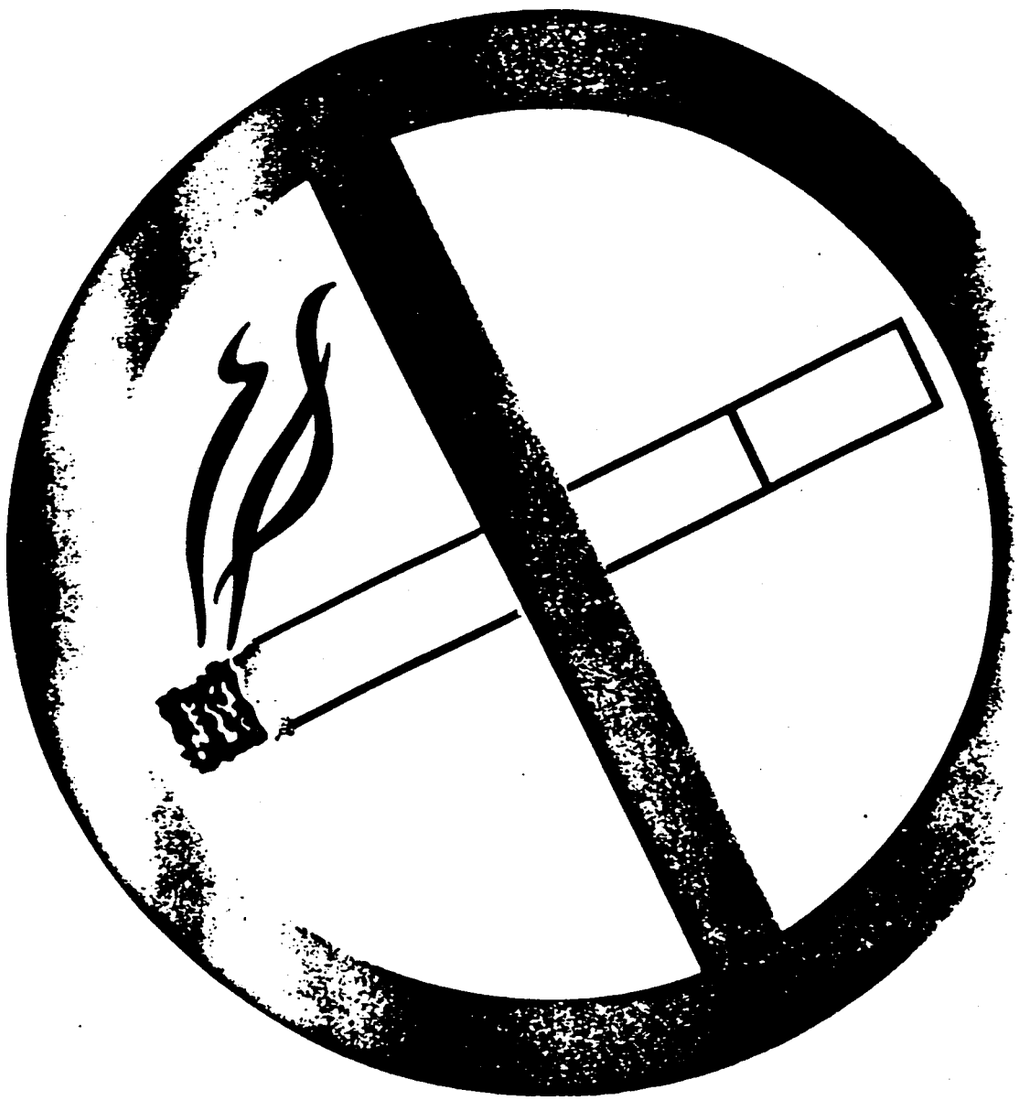
Meat spoils more quickly at higher temperatures. The processing room should be held at a temperature of 10 degrees Celcius or lower during fish or meat thawing. This is best accomplished by setting out the next days' processing product at the end of the shift. Then lower the thermostat to 10 degrees Celcius or lower before leaving. During the winter the door could be left open to get the temperature down. 15 degrees Celcius is a good temperature for processing. Workers may find this temperatures less comfortable then normal room temperature. However proper clothing and hard work will keep everyone comfortable.

12. Is everyone properly dressed and clean?

Please review personnel hygiene and the dress code on pages III-3 & 4. The HTA should purchase the white jackets, aprons, hats, hair nets and mesh gloves. These should be cleaned after every shift and available *for all* meat processors. The other clothing specified and the personal hygiene are responsibilities of the processors.

At this stage we have a facility, equipment and staff organized and ready to process meat of fish.

Smoke-free Workplace.



Northwest Territories Health

****

EMERGENCY TELEPHONE NUMBERS

NURSING STATION	_____-_____
FIRE DEPARTMENT	_____-_____
R. C. M. POLICE	_____-_____
HTA SEC./MGR.	_____-_____
D.P.W. MAINTENANCE	_____-_____
HAMLET OFFICE	_____-_____

****

****

DANGER !!!!!!

*******W**-**** **********

DISCONNECT THE PLUG

W HEI? THE BAND SAW

IS NOT IN USE

OR

WHEN IT IS BEING CLEANED

****

****

PLEASE !!!!!!!

****

WASH YOUR HANDS

BEFORE LEAVING

THE BATHROOM

****

****

CLOSE

THE

FREEZER DOOR

****

CONSERVE ENERGY

****

PERSONAL HYGIENE

****

1. The hair should be cut and kept well trimmed or hair nets must be worn.

2. Hands and fingernails mast be kept clean. Nails should be clipped short and kept clean.

3. A clean shaven appearance must be maintained.

4. Mouth area and teeth should be cleaned regularily.

5. Daily bathing and regular changing of all garments is required.

6. Hands and arms must be thoroughly cleansed with a germicidal soap before starting work.

7. Shoes should be cleaned regularity and kept free Of meat soils.

**********$***

DRESS CODE

****

Meatcutters while engages **in meat** cutting **activities** will **adhere to** t&~ following **dress coda**

clean **pants**

Clean white **jackets**

clean white **bib apron**

Clean white bump hat

Hair nets **required**

Protective mesh glove “

Shoes with smooth (leather **or comparable material) tops.**

(Clogs, funning **shoes,** or footwear **of canvas or composition** material **are not** ● ceeptamo)

Wrist watches, **bracelets** and signet rings will **not be worn while cutting meat.**

HEALTH & SANITATION RULES

1. Cuts must be covered wit& suitable waterproof dressings.

2. Any unusual rashes should be attended to by a nurse.

3. Fresh blood from a cut should be removed from any piece of equipment, or if on a product, the affected piece must be discarded.

4. Smoking, gum or tobacco chewing will not be allowed.

5. Tobacco or cigarettes will not be carried in shirt or pant pockets while working with meat.

6. Workers will not sit on tables or any other platforms used for placing meat products.

SELECTION & PURCHASE OF CARCASSES

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Set Up the VCR/TV system and watch the relevant section

SELECTION & PURCHASE OF CARCASSES

When to purchase meat

1. Biological factors
   -avoid male caribou in the rut season (August to October) because strong smelling meat is not disirable
   -handling of carcasses during warm weather is much more difficult. Spoilage and dirt are much harder to control and therefore there are increased risks to the consumer.

2. Market factors

The balance between supply and demand

Fresh meat has better flavour, is tender and looks much more attractive then meat that has been held for a long time. It would be ideal if caribou carcasses could be purchased when required, processed and sold immediately. With the biological factors this is not possible.

Therefore purchases have to be made when good quality and safely handled carcasses are available. We have to depend on careful control and packaging to keep the products acceptable to the market for the longest possible part of the year. There will always be a time of the year when supply is much greater then demand and after all the meat is sold there will be period when demand cannot be met.

Competition between communities

Competition between communities can cause supply and demand problems. If several communities harvest large volumes at the same time, then they will have to compete fort&e same sales of keep meat in the freezer for a longer time.

There is a lot of merit to communities co-ordinating their harvests to ensure that there is fresh meat available most of the year. Under a system like this the communities farther north would harvest early in the winter and late in the spring. More southern communities would take turns in the middle of the winter season. A plan of this type could be made at the annual general meeting of the Baffin Regional Hunters and Trapppers Committee.

Purchasing meat

The purchasing of carcasses and fish is extremely important if the the processing facility is going to be sucessful. Good quality meat and fish will satisfy your customers and your product will be in demand and if extremely high quality can be maintained people will pay more for it.

The first step in getting the quality required is to make it perfectly clear to the hunters what is wanted. This can be done by having a general HTA meeting to discuss it. Someone can go on the community radio to talk about commercial tags and the quality required. The wildlife officer can help by talking to individual hunters when they pick up commercial tags.

The HTA should make a policy on quality and set @a for carcasses that reflect the care and attention that hunters take in harvesting for commercial use.

THE PURCHASER OF CARCASSES SHOULD BE ABLE TO ANSWER YES TO ALL OF THESE QUESTIONS:

1. **Was the animal neck shot?**
2. **Was the animal carefully skinned and fairly free of loose hairs?**
3. **Was the animal well gutted and cleaned?**
4. **If organ meat is wanted by the processing plant, is it there?**
5. Is **this a healthy, mature, well fed animal?**
6. **Is the carcass fresh and clean?**
7. **Is the commercial tag attached?**

If the purchasing agent can say yes to all of these criteria, then he will be purchasing a top quality carcass that should process into excellent meat.

WHAT DO YOU DO WITH A LOW QUALITY CARCASS?

If the carcass does not meet all of these criteria then the purchasing policy should clearly set out the options.

-If the animal was underfed, old and/of sick then it should be refused for commercial processing.

-If it was a good healthy animal but poorly shot or handled by the hunter then the carcass should be devalued and less money paid to the hunter. The devaluation should reflect the lose in meat available for processing and addition time that may be required for processing.

Eventually, the hunters will understand dearly what is wanted and become more careful in their shooting and handling of commercial animals.

SPECIES _____ **COMMERCIAL MEAT LOG**

	PURCHASE DATE	KILL DATE	TAG, NUMBER	WEIGHT	PRICE/LB	TOTAL	CONDITION	HUNTER
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

Purchasing fish

Fish can be evaluated along similiar lines:

1. Is ita nice fresh, healthy looking fish?

2. Was the fish laid out on the ice to freeze in a straight natural looking position?

3. If requested, was it well gutted?

4. Is it within the most saleable size range?

5. Does it have good colour?

Again the purchasing agent can control the quality of the fish purchased to insure that the processing plant gets a reputation for selling top quality products. With fish, every fish should be evluated as it is placed on the scale and any that do not meet the standards set should be rejected.

As processing operations become involved in new or different different arctic food processing, evaluation criteria must be established, made know the harvesters and followed in purchasing.

SPECIES _____ **COMMERCIAL FISH LOG**

	PURCHASE DATE	CATCH DATE	LAKE	SHIPMENT WEIGHT	PRICE/LB	TOTAL	CONDITION	HUNTER
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

Meat storage

1. When purchasing carcasses, organize the processing room with a clear aisle to the freezer

2. Set up an freezer storage area **with dean wooden** pallets **and** 6 **mil polythiene** for storing **unprocessing carcasses**

3. Wrap carcasses for storage to avoid freezer burn

4. rotate your stock@ carcasses.
"the first carcases purchased should be the first carcasses used"

Storage of unprocessed carcasses

The first function of **meat processing is** purchasing the carcass of fish from a **hunter** and **placing it in** storage. When **the HTA issue commercial** tags to hunters, the processing room **can** expect **that carcass** purchasing will normally **occur** at **random intervals** during **the** course **of the workday** and **will** interrupt **other** meat processing activities. Therefore, when planning the processing assemble **line, access** to the beam scale and a clear aisle to the freezer **should be** considered. **The necessary** forms for receiving and valuing the carcass **should be** readily available. One **processor should** be **designated** as **the** meat **buyer** and **only he** should spend **time with** the hunter. **The arrival of** a **hunter with** a carcass **should** not be a **social** event **that** interrupts meat processing.

The freezer room **should** have an area prepared for **storage** of unprocessed **carcasses**. This area **should** have dean w-pallets as a base. This will **raise the** carcass off the metal floor and avoid any **possibility of the meat freezing to the metal floor.** New 6 **mil polythiene** or a clean plastic tarp **should** be spread over the pallets. **The polythiene is the same** product that is **used** in house construction for the **vapour - barrier** and **is recomm**ended because it **is fairly** inexpensive and readily **available** from **lumber dealers.** It **can** also **be** dined easily **and** reused.

When carcasses are purchased, the length of time that they will be held in the freezer in an unprocessed state will dictate whether or not they should be wrapped. If the plan is to sell whole carcasses or hold them for processing for longer then a week or two, then they should be wrapped. carcasses to be sold whole should be wrapped in large diameter polythlene tubing and the ends secured with wire twist ties. It is recommended that the legs be removed at the knee since there is little meat below them and the carcass will pack into a smaller tube. If tubing is not available or if the carcass will be processed, then 6 mil polythlene can be used to wrap the carcass. It will take longer to wrap and the end result will not be as neat but it will help avoid freezer burn.

Freezer burn

During freezing the moisture in meat is transformed into ice crystals. Freezer burn is caused by the ice crystals drying out of the meat slowly through exposure to the air. If meat or fish are left frozen and uncovered too long the ice crystals will not be available to return to the meat as juice when it thaws. This will arose a loss in flavour and freezer burned meat must be trimmed to remove the dried portions. This is a loss in good quality saleable meat product and consumes processor time. The tight wrapping of meat and fish will slowdown the process of freezer burn and stop the natural odours of one product from entering another.

Stock rotation

The unprocessed storage area should be laid out in such a manner that access can be gained to the oldest carcasses first The first carcass put into the freezer should be the first one taken out to process. This may seem like a very simple idea but frequently it is easier for an unknowledgable worker to just throw the new carcasses on the top of the pile. These new carcasses are taken out to process first because that is easier too. The result can be meat that stays on the bottom so long t&at it can only be used for dogfood when it is finally uncovered. This is an unnecessary waste that can be avoid by "first in - first out rotation of carcasses. This is equally true for fish and "first in - first out" use of boxes of fish should be practiced. After a carcass has been purchased it should be moved to the freezer as quickly as possible to avoid thawing.

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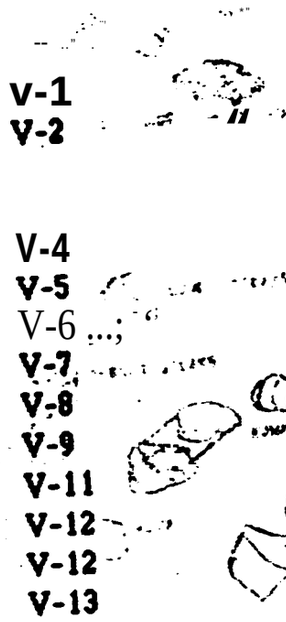
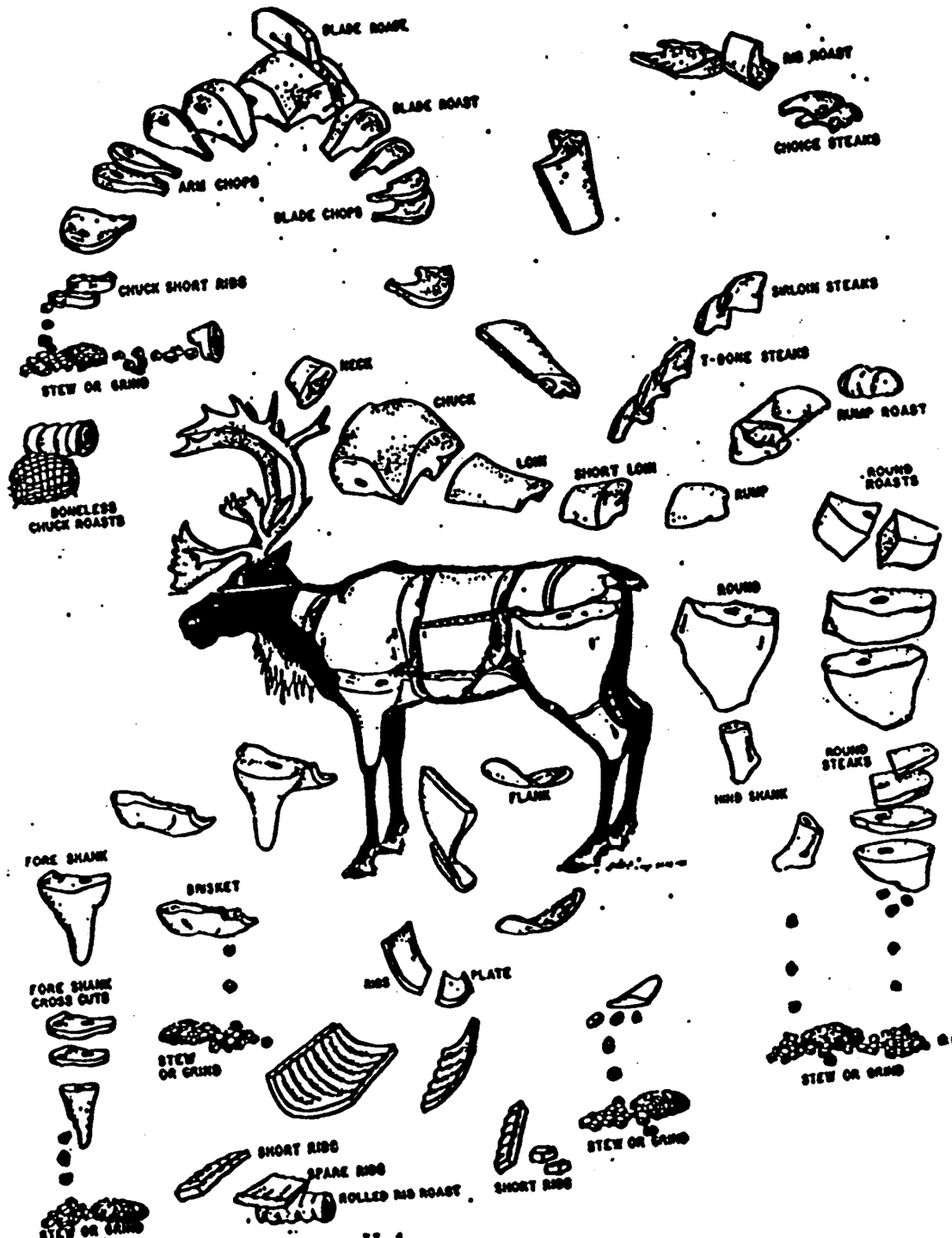
-regular ground meat	**V-18**
-Larding	



Set up the VCR/TV system and watch the relevant section

BASIC MEAT CUTTING

Figure #2 **CARIBOU** HEAT CHART



In processing caribou for commercial sale there are two alternatives available, basic meat cutting and advanced meat cutting. When we refer to basic meat cutting we are assuming that the carcass will be processed in a frozen state. This will limit the variety of cuts that can be produced but is quicker and easier for an inexperienced meat cutter. When we refer to advanced meat cuing we are discussing a higher level of training and the ability to produce all the cuts shown in figure *2. There is no difference in the quality of the meat, only in the variety. As in all training, a person learns the basics first and then can progress to more advanced skills. This section of the manual deals only with the basic level.

PRIMAL CUTS

The primal cuts on a caribou or muskox are the large parts that the whole carcass is cut into in order to make it more manageable to prepare for processing into commercial cuts. the primal cuts include hind leg, loin, rib rack and shoulder. It should be noted that there are other procedures for cutting a caribou into primal cuts and some meat cutters will leave two parts together, such as the rib rack and shoulder. We are recommending the following procedure asking the best for splitting a frozen carcass into primal cuts.

A caribou can be cut into primal @ens utilizing the bandsaw by one meat cutter by following these steps:

1. **With a boning knife, remove the four lower leg sections at the knee joint.**
   This gives more room to get the carcass through the bandsaw.

2. **Split the carcass into halves.**
   Start this cut at the hips and follow down the middle of the back bone to the shoulder and neck This results in two equal sized pieces from the carcass. These are referred to as halves.

3. **One half is set aside and the other is lifted onto the bandsaw table and usually cut into the four primal cuts.**
   The hind leg, loin, rib rack, and shoulder (see figure *3). All other parts and trimmings are set aside in a container and will be cut up and

CARIBOU PRIMAL CUTS

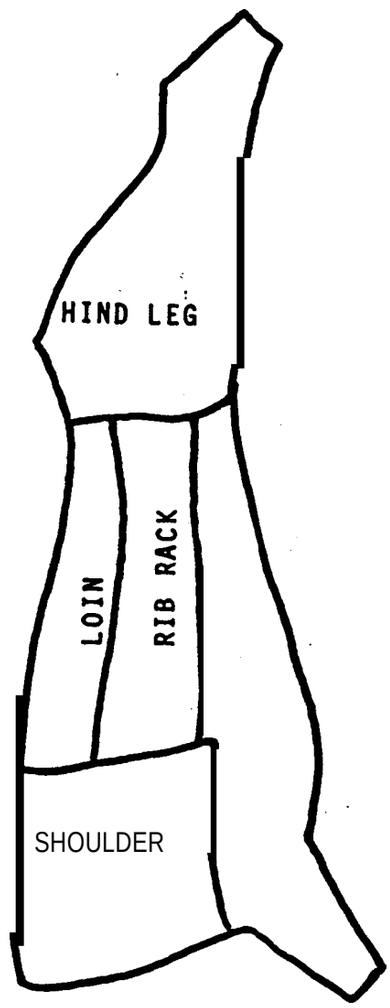


Figure #3

RETAIL CUTS

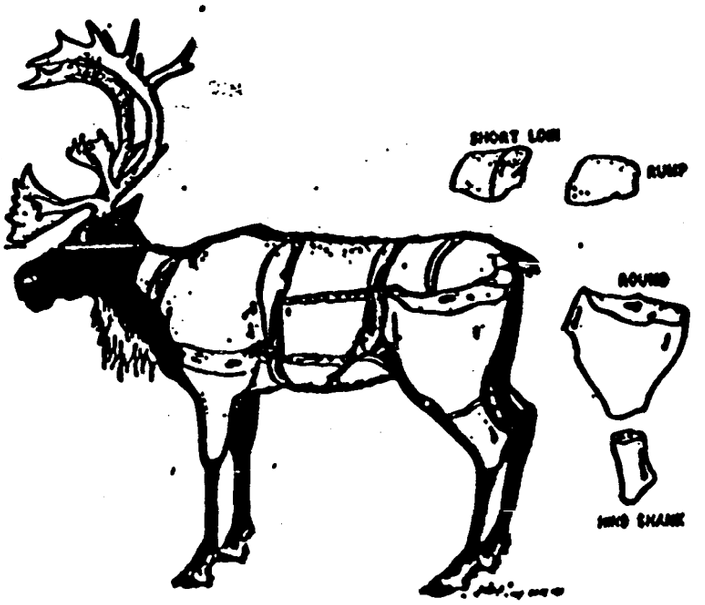
Hind leg cuts

Rump roasts, sirloin tip feasts, sirloin steaks, round roast, round steak, inside &outside round, eye of round.

. Basic hind leg cuts;
T-bone and sirloin steak, rump roasts, round steaks and round " roasts can be produced from a frozen hind leg on the bandsaw.

The T-bone and sirloin steaks are often called chops in the Baffin region. There has been good demand for these cuts. Experience as shown that all cuts from the hind leg of caribou are tender.

Figure #4



Steps to follow in cutting the hind leg into basic commercial cuts.

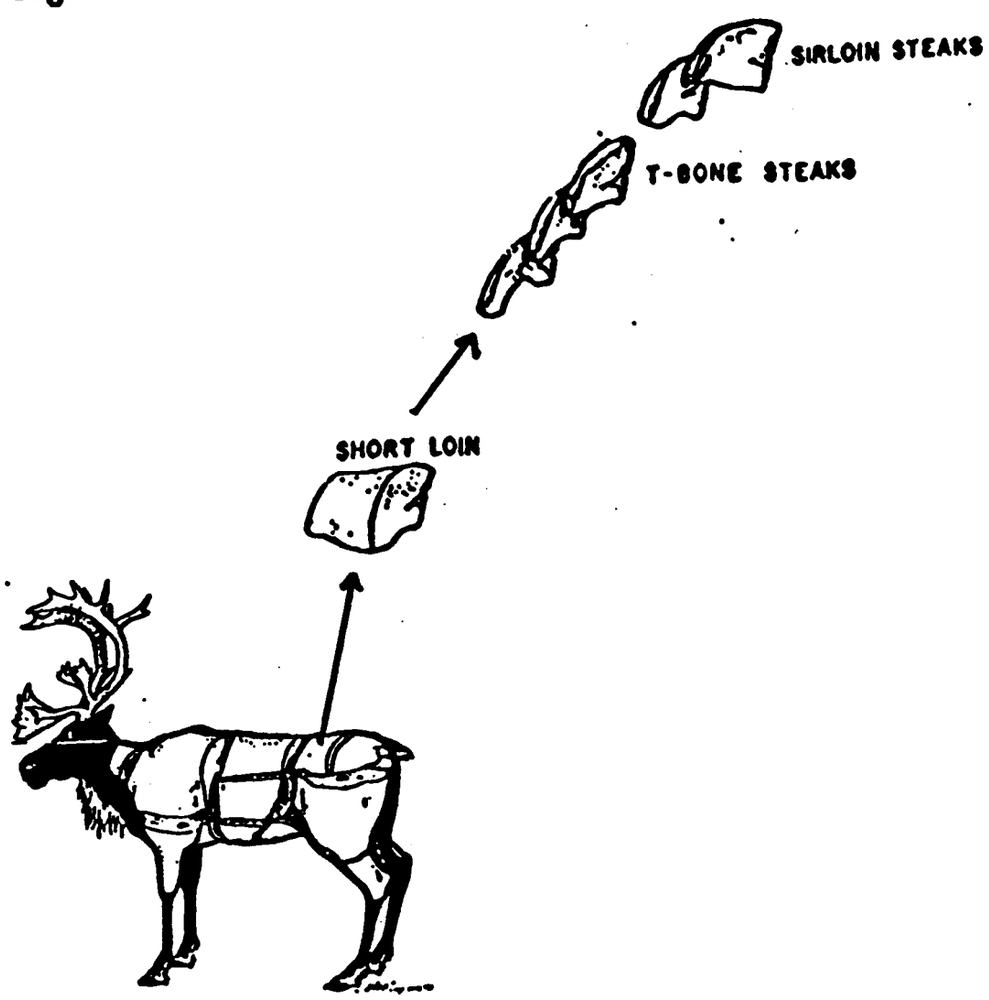
1. Cut off the hind shank and place it in the trimming pan for grinding.

2. Cut the short loin and rump from the round.

3. Cut the short loin from the rump.

Short *loin;*
Steaks of loin **chops** are **produced**

Figure #5



1. **set the bandsaw guide for between 3/4" and 1"**

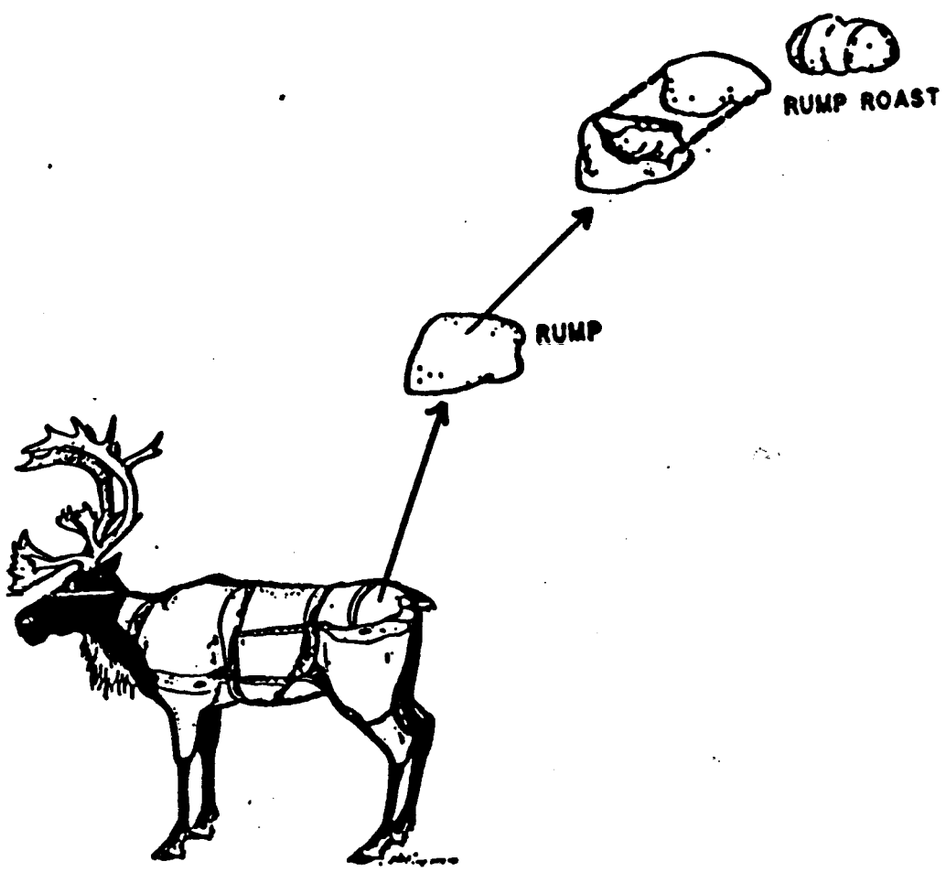
2. **cut across the meat grain and** bone.

3. trim **outside edges** and scrap **the surfaces** to remove **loose** bone **and meat particles from sawing**

4. **these cuts are ready for packaging.**

Rump;
The frozen rump can be cut into one or more roasts, depending on the sizes needed to meet market demand.

Figure #6



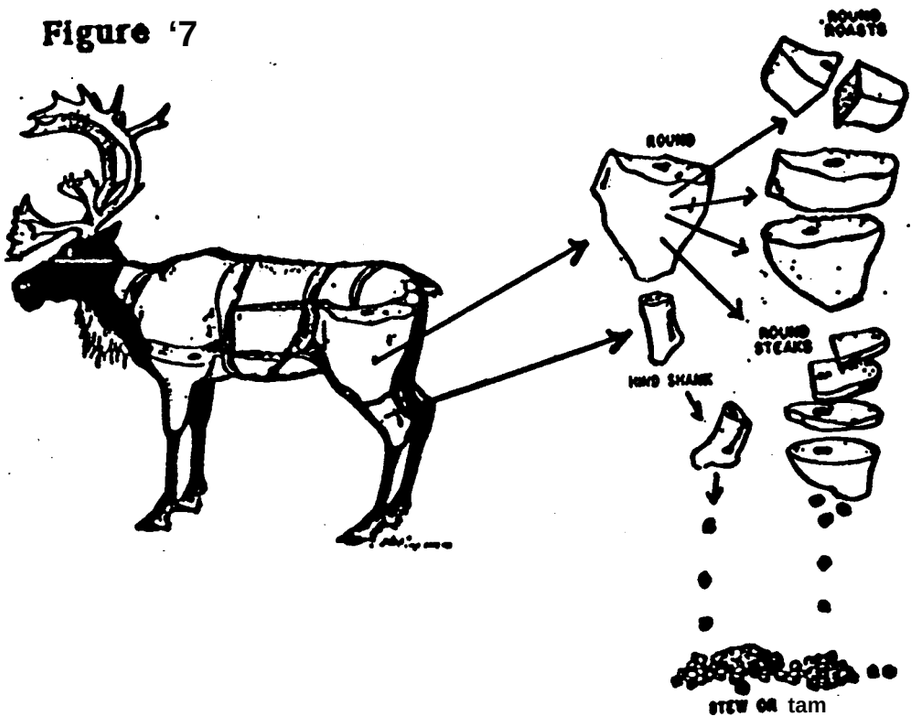
1. To create more than one roast simply cut across the meat grain and bone.

2. trim outside edges and scrap the surfaces to remove loose bone and meat particles from sawing

3. these cuts are ready for packaging.

Round;
The frozen round can be used to make either round steaks of round roasts. Both are very tender and popular. Market demand will dictate which you produce.

Figure '7



1. **round steaks** are **produced by** setting the **bandsaw** ***guide*** **for between 3/4"** and 1" **and cutting across the meat grain and bone.**

2. **Round roasts are produced by setting** ***the*** **bandsaw guide for between 3" and 6" and cutting across the meat grain and bone.**

3. **Depending on the weight of roasts required these pieces can now be cut along the bone of** ***left as they are.***

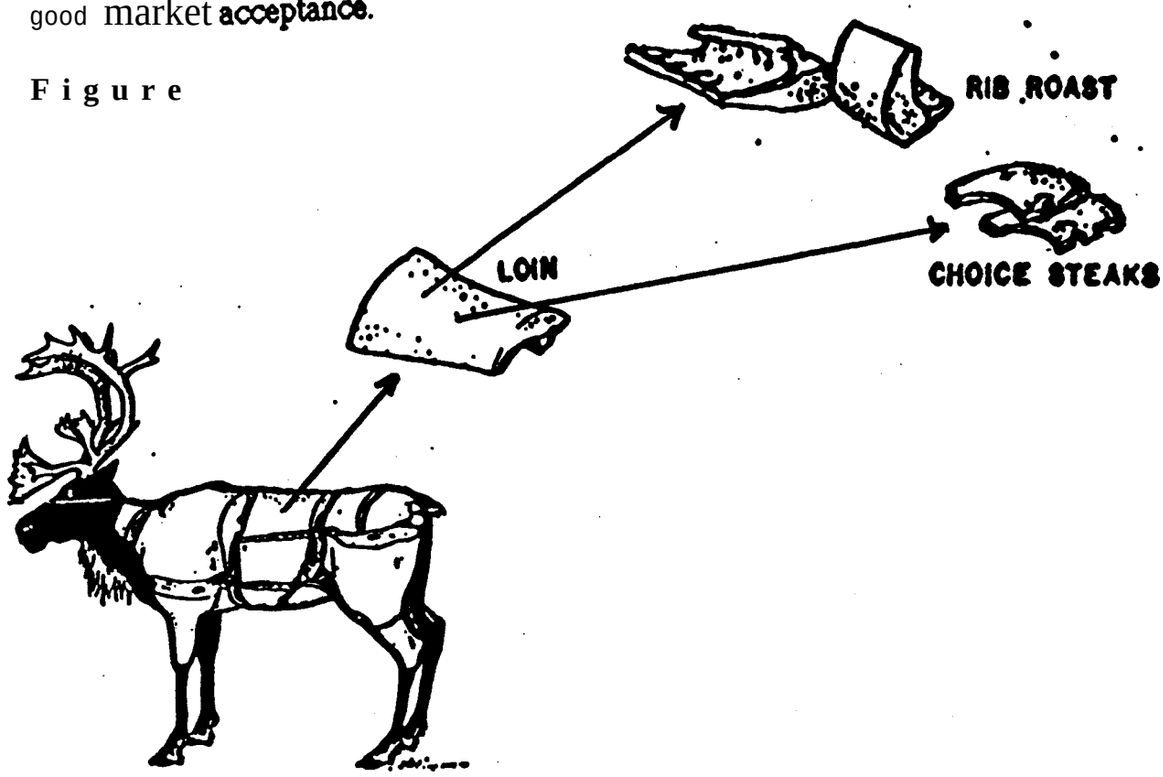
4. ***trim*** **outside edges and scrap the surfaces to remove loose bone and meat particles from sawing**

S. **these cuts are ready for packaging.**

Loin:

The loin can be cut into sirloin, porterhouse steak, t-bone steak, wing steak, strip loin or tenderloin. The loin on Baffin caribou is small. Therefore most of the cuts identified above are not possible. In dealing with a frozen loin, the best procedure is to cut the entire loin into chops which can be placed on *a* tray similair to pork chops. Market*@ for these chops has been very good. *If the* loin is to be cut unfrozen then tenderloin can be produced. This product will be very tender and have good market acceptance.

F i g u r e



1. loin chops are produced by setting the bandsaw guide for between 3/4" and 1"

2. cutting accross the meat grain and bone.

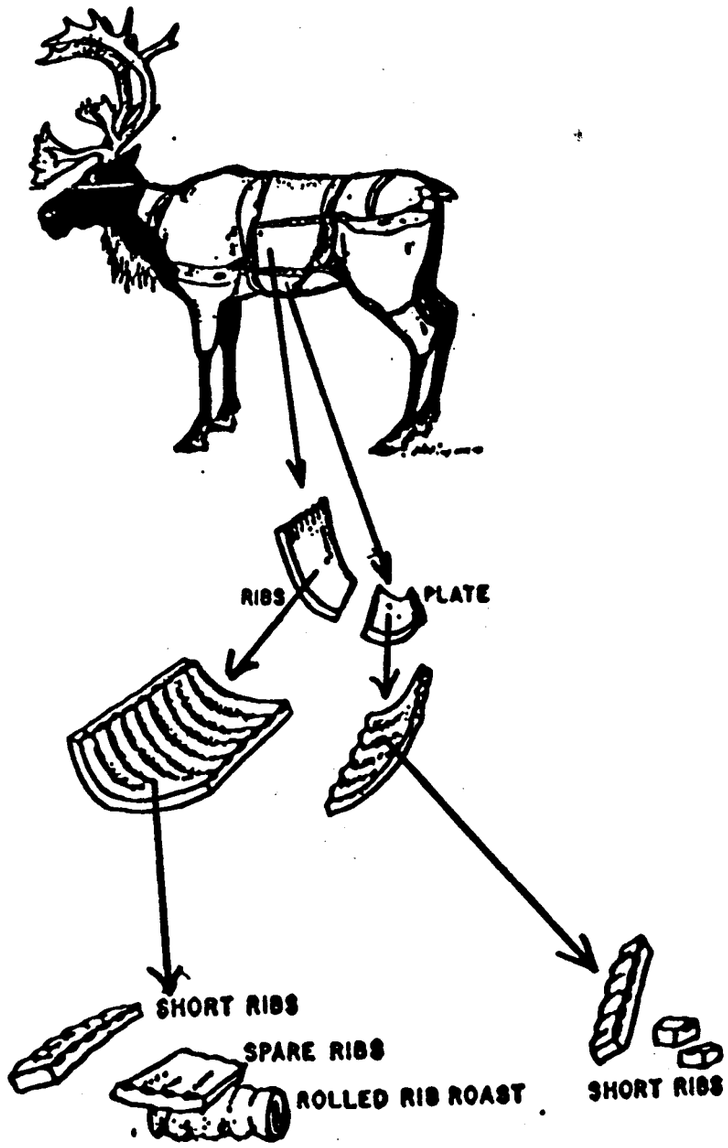
3. trim outside edges and scrap the surfaces to remove 100SU bone and meat particles from sawing

4. these cuts are ready for packaging.

Rib rack;

The rib rack can be cut into spareribs, short fibs of stripped for stew or ground meat. Market demand is generally high for both ground meat and sausage, so most rib racks will be used for this purpose. Market demand will dictate whether there is a demand for spare fibs of short ribs. Both can be produced Successfully from caribou.

Figure



Spareribs;

1. set the bandsaw guide for between 6“ and O

2. long strips are made cut across the meat and bone.

3. by *cutting the* meat between the bones, The long strips are cut to commercial size pieces. These should be sections of four to six fibs each.

4. the surfaces may need some trimming scrapping to remove loose bone and meat particles from sawing.

5. These cuts are ready for packaging.

---

short ribs;

1. set the bandsaw guide for about 2“

2. long strips are made cut across the meat and bone.

3. by cutting the meat between the bones, The long strips are cut to commercial size pieces. These should be sections of four to six ribs each.

4. the surfaces may need some trimming scrapping to remove loose bone and meat particles from sawing.

5. These cuts are ready for packaging.

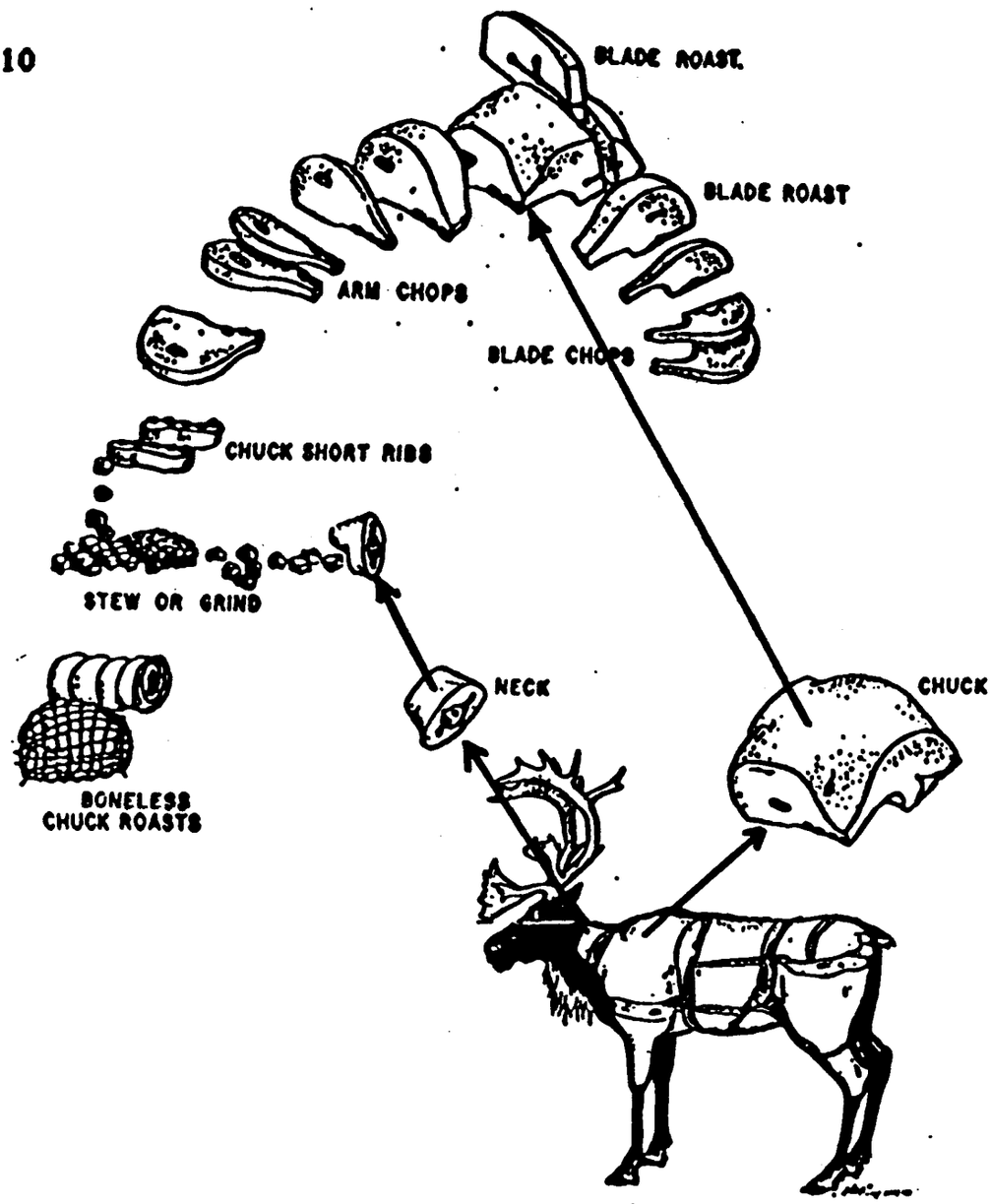
Grinding;

If the ribs are going to be stripped for grinding then they are set aside with the trimming for processing later.

Shoulder or chuck;

The caribou shoulder can be cut into arm chops, boneless chuck roast, blade f-blade chops, stew and ground meat. Experience as shown that the market does not find arm chops as tender as round steak or loin chops. Best sucess has been with cutting boneless chuck roast, blade roast, blade steak and grinding the balance for burger of sausage.

Figure #10



Arm chops;

1. set the bandsaw guide for between 3/4" and 1"

2. place the shoulder on the saw table with the lower end of the arm bone against the guide.

3. cuts are made across the meat grain and arm bone. Chops are cut until you get near to the shoulder joint.

4. the surfaces may need some trimming scrapping to remove loose bone and meat particles from sawing.

5. These cuts are ready for packaging.

Blade chops;

1. set the bandsaw guide for between 3/4" and 1"

2. place the shoulder on the saw table with the back end of the back bone against the guide.

3. cut across the meat grain and back bone. Chops are cut until you get near to the blade bone.

4. the surfaces may need some trimming scrapping to remove loose bone and meat particles from sawing.

5. These cuts are ready for packaging.

Blade roasts;

A large blade roast can be made by removing the arm chops as detailed above and treating the remaining piece as one roast.

Several smaller blade roasts

1. cut the length of the blade bone on the band saw. "
2. set the bandsaw guide at 4 to 6 inches
3. cut across the grain and bone on the pieces produced in step "2 above
4. the surfaces may need some trimming scrapping to remove loose bone and meat particles from sawing.
5. These cuts are ready for packaging.

Trimmings:

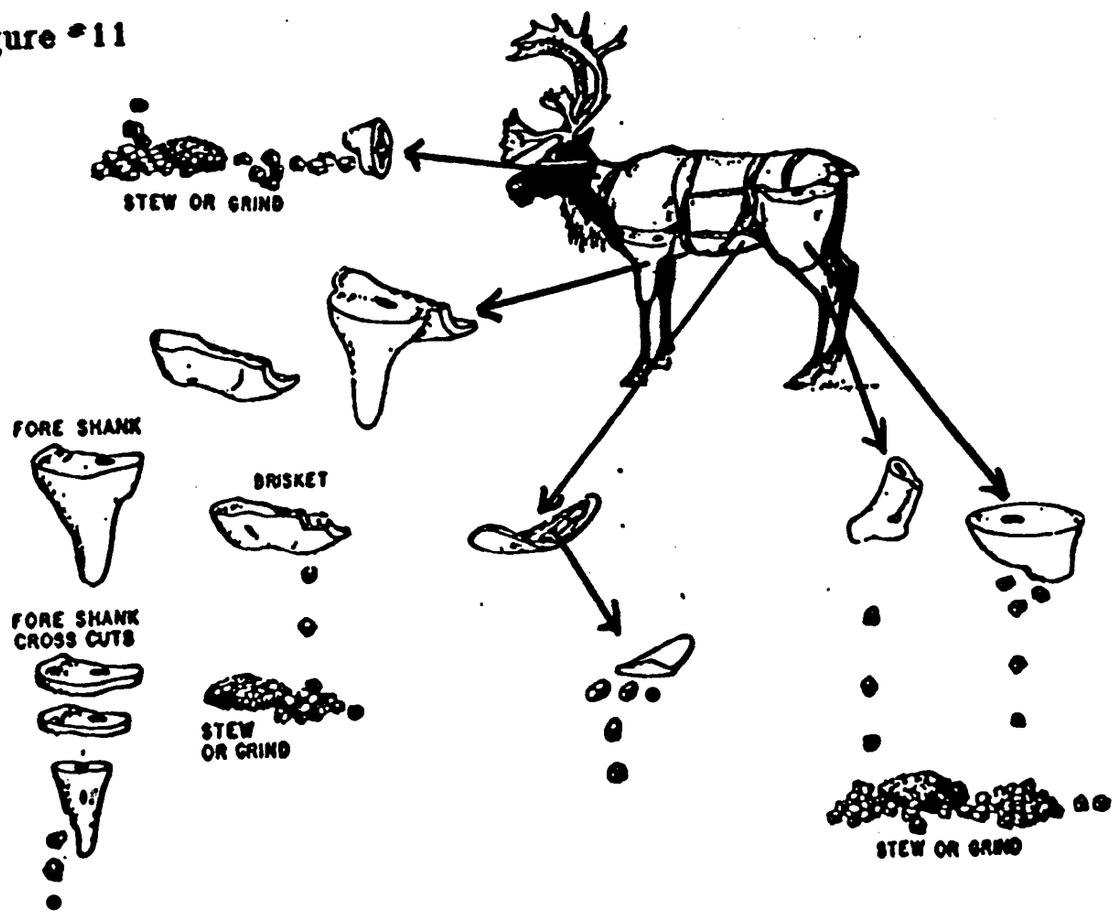
Waste trimmings;

Removal of outer parts that are freezer burned, dirty or covered with hair are trimmed and thrown into a garbage can for dog food or removal as garbage. Blood clotted or bruised areas are cut away and also treated in this way.

Good meat trimmings;

Flank, brisket, shanks, rib rack, neck, plates and other good meat trimmings from the primal cuts are good meat trimmings. When a cut is being trimmed to adjust size or appearance then the trimmings are good meat and these pieces should be placed in the trimmings pan.

Figure #11



Trimmings handling procedure;

1. the good meat trimmings are set aside as the other procedures described above happening.

2. trimming are put in plastic bags and place in the freezer for storage.

3. the bags should be placed on the freezer floor and flattened to about 8 inches high. This will stop any partially *frozen* meat from *fusing* the *trimmings* into a large *frozen* block that will take a long time to thaw.

4. when a trimmings processing shift is going to take place, the planning begins at the end *of the* shift the day before. After the processing room has been cleaned and sanitized, the the bags of trimmings are moved into the processing room and spread out on the floor.

5. the thermostat is turned down to 104agfees Celcius for the night. Meat should always be thawed slowly at this temperature.

6. in the morning the trimmings are placed on *a cutting* table and all good meat is trimmed from the bones and placed in tubs. That this stage the meat should be thawed but can still contain ice crystals.

7. waste bones and other trimmings are placed in *a garbage can for* disposal or dog *food.*

0. *the* trimmings can be cut to stew meat of cut into strips for grinding.

Stewing meat;

1. cut the pieces *of* meat into cubes about one inch square.
2. these cubes are then places on trays and shrink wrapped.

****

Very lean ground meat;

1. set up the grinder with a 3/8" cutting plate.
2. put the *trimming* pi-s through the grinder
3. The pure lean meat is then placed on trays and shrink wrapped of placed in plastic bags.

Lean **ground meat;**

- **Lean** or *regular* ground meat in the south is made from@ or beef trimmings with fat added.
- The fat content may vary from 10% to 40%.
- Fat is added for flavour and to bind the meat together in burgers.
- Fat is also cheaper then meat in the south and therefore saves the processor money.
- fat is scarce on our caribou. To produce any product requiring fat will require buying pork or beef fat from the south. The freight is expensive and rather then fat being a cheap filler it could be the most expensive part of sausage or ground meat.
- Fat is necessary for flavour. The flavour of pork fat is considered to be better then beef but beef fat does not go rancid as quickly. **Ground** products made with beef fat will have a longer shelf life.

Making lean ground beef; "

1. **weigh out nine pounds *of* meat strips and place in the pan**
2. **weigh out one pound of fat strips and place it in the pan**
3. **mix the strips of** meat **and fat in the pan until the fat is ' spread evenly thoughout the pan.**

   This makes a mixture of 10% fat.

4. **set up the grinder with a 3/0 cutting plate.**
5. **put the meat and fat mixture through the grinder.**
6. **the lean ground meat mixture is then placed on trays and shrink wrapped of placed in plastic bags.**

Try to put nine parts meat and one part fat on the grinder tray and push then through the grinder in this ratio. This is not usually done perfectly but practice will give you a nice even blend of meat and fat.

Regular ground meat;

1. weigh out six pounds of meat strips and place in the pan
2. weigh out four pounds of fat strips and place it in the pan
3. Mix the strips of meat and fat in the pan until the fat is spread evenly thoughout the pan

   This makes a mixture of 40% fat.
4. set Up the grinder with a 3/8" cutting plate.
5. put the meat and fat mixture through the grinder.
6. The lean ground meat mixture is then placed on trays and shrink wrapped or *placed in* plastic bags.

In the south regular ground meat is a lower priced product then lean ground but because of the high cost of fat this is not the case for caribou in the Baffin region. This product should only be made when specially requested.

****

Larding;

Very attractive roasts can be produced by tying fat on any lean roast. This procedure is known as larding.

1. Chilled fat is cut into strips about 1/4 inch thick and laid on the top of a roast.
2. The roast is then rolled and tied with string.

Save the caribou fat;

* When caribou fat is available, some should be left on roasts, steaks or chops.

* If there is a surplus, it should be saved and used in ground products or in larding.

****

This covers the basic cutting of *from* caribou meat. Reference has been made to other more advanced procedures that will produce a broad range of meat cuts. There are also many interesting value added products that can be made with caribou meat. Sausage making, caribou jerky and producing spiced preformed patties are products that have been tried and have received good market acceptance. The scope of this section of the manual will not deal these products. They are part of advanced *meat cutting. After mastering* the basic tehniques serious thought should& given to learning more advanced skills.

WRAPPING MEAT

Wrapping & presentation	VI-1
Trays and shrink wrap	VI-2
Vacuum packing	VI-3
plastic tubes	VI-3
Storage boxes	VI-4
Product labels	VI-4
Product storage	VI-5

Set up the VCR/TV system and watch the relevant section

WRAPPING AND PRESENTATION

Wrapping and presentation;

There are several reasons for wrapping meat.

1. *Most* important is to protect the meat in the package from dirt and bacteria.

2. Preserve the meat in storage. Well wrapped and airtight packaging will slow down freezer freezer burn. This will save flavour and preserve the moisture in the meat.

3. *Make* the meat look fresh and appealing to customers in the store.

Butcher shops in the old days used sheets of warned paper and covered this with brown paper. This did keep the meat dean. It did not slow down freezer burn but since most households didn't have deep freezers it didn't matter.

In todays' world, people do have deep freezers and buy in bulk Processors and stores have to hold inventory. This is especially ire-t to arctic food producers. Our customers, both stores and dining moms want to have a steady supply fort&e whole year if possible. In order to try to meet this need, when we can only harvest during specific seasons, packaging and storage methods are very important.

Trays and shrink wrap;

A *common* method of packaging today utilizes Styrofoam trays and plastic shrink rap. This is a more effective method of slowing freezer burn and makes the conventional supermarket presentation for retail sales of meat preoduct. Our processin g room/freezers are equiped with shrink wrap equipment making this *procedure* possible and the *normal* method we will use.

When packaging meat utilizing the tray and shrink wmp method several things are important:

1. The fight sized tray should be used for the product to be placed on it. It maybe necessary to cut some pieces of meat into two of more pieces of trim edges to achieve a nice fit. The portion scale should be near at hand because customers will often specify that they want packages of a certain size.

A trip to the local *Northern Store* or co-op store and a good look at the meat section will give you some ideas. If it works for pork or beef, it will work for caribou.

2. When the product has been properly placed on the tray, the next step is to place it on the shrink wrapper. The plasic film is pulled over the product, cut off the roll and tucked over all edges of the tray. As much air as possible is forced out from under the plasic film. The *package is* them set on the heat plate and the shrink wrap tightens and fuses itself closed. The tray can be placed in a shipping box and is ready to go into the storage freezer until *sold.*

Vacuum packing;

The best packaging for long term storage is vacuum packing. In this process the product is placed in a plastic bag. The bag is then placed in a vacuum pack machine to pump the air out of the bag and seal the bag shut. The vacuum action shapes the plastic to the meat and removes the air. This will slowdown freezer burning. It also creates a very attractive package for retail sales.

Unfortunately, our processing room/freezers do not have shrink wrap machines at this time, but as production volumes grow, they should be purchased. The actual operation of these machines vary from one model to another. If a machine is purchased, the operators should study the operations manual and follow the instructions.

Plastic tubes;

Plastic tubes of various sizes can be purchased from suppliers.

As mentioned earlier, rolls of large diameter tubing can be purchased to hold a whole caribou carcass. These are ideal for the sale and shipment of whole carcasses of long term storage of the carcasses to be processed. In packing the carcass try to force out as much. air as possible by trying keep the plastic as dose as possible to the meat. This continous tubing roll is cut to the required length and tied at the ends with wife ties.

A small diameter roll of plastic is available for wrapping arctic char. The Department of Economic Development and Tourism has had a special Baffin arctic char logo printed on this type of plastic.

Small bags are available that area perfect for holding bulk packs of 2 to 5 pounds of ground meat. These are not as attractive for retail presentation but are effecient for freezer storage.

Storage boxes;

There is a lot of merit in having standard sized meat and *fish* boxes for storing and shipping products. These Mines are the proper strength and size to hold manageable quantities of product. Uniform sizes stack better for storage. It also looks more professional to use proper boxes rather then recycling Pamper boxes that tend to split because they are not strong enough. The negative side is that they are ***quite expensive*** **and only make sense if they are purchased in bulk and shipped on sealift.**

****

Product labels;

Rolls of colourful product specific labels have been designed by the Department of Economic **Development** and Tourism. **These can be** purchased from the supplier.

Some producers have found the best way **to** put **more** detail about **their processing** operation and products is by using **labels printed** on a label making program on a computer system. **There** are computers **in every** community capable of **porducing** these. It may **be necessary to *pay* someone** to make then, but **until** the volume **justifies it,** labels **can** be made for a modest **cost.**

Product storage;

After your products have been carefully packaged, labelled *and* packed in proper storage boxes, it is ready to go back into the freezer for storage.

Some factors to consider:

1. **Fish should be stored seperate from meat products.**

2. Mark on *the* outside of the box details of product contained and date of processing. Make sure the label side is visible.

3. Tape and/of strap the boxes shut.

4. *Stack* the boxes to a safe and manageable height, without obstruction of the freezer coils.

5. Rotate the stock. The first product into the freezer should be the first out. Dating the label makes this easy to see. Time should be taken in planning the storage layout to make sure this happens.

PRODUCT PRICING

Why people buy your meat products	VII-1
Example primal and portion cutting test	VII-3
How to use the primal and portion cutting test	VII-4
Primal portion cutting test	VII-8
Potential markets	VII-9
List of HTAs	VII-14
Freight assistance program	VU-17

PRICING OF CARIBOU PRODUCTS

Why will people buy your products?

1. Good quality meat

* the carcass is handled fight in the field
* only good quality animals are purchased
*the carcasses and processed products are stored properly

2. Good **cutting and wrapping**

* good cutting will ensure that the cuts are tender
*me cuts will be right size and shape
* good wrapping will make the products look good
* good wrapping will keep it fresh

Follow these points and **fresh** tender meat will be **available.**

3. Products are available

* **Dining** rooms want a year **round** supply
* Retail stores like to make a phone call and get what they want

It is important to try to have your products available all year. If this can't be done then try to have products available for as long as possible each year.

4. Advertise

* Telephone customers
* Advertise *in* newspapers
* Mail out price lists to customers

Customers won't buy your products if they don't know you have them!

5. **Customers can** contact **you**

* The **HTA office should keep regular hours**
* **There** should be an answering machine on the telephone for times when **the** office is dosed

6. Fill orders promptly .

* Customers want their order filled on time
* use good **quality** boxes
* Get **the** arctic food freight rate from the airline, if one is available

6. Fair pricing

* The **processor should** not lose money **by** selling **arctic** food products
* **Arctic foods** have **to** compete **with meat products from the south**
* **Other processors** are selling **the** same products and **the prices** should be dose for **similiar products.**

Primal and portion cutting test

In order to calculate the profit on the processing of caribou we have **prepared the Primal** and Portion **Cutting Test.**

Figures 12 **has numbers** filled in as an example of how **to** use the form. Following **the** testis a description of how to use **it.**

Figure **13** is a **blank** Primal and **Portion Cutting Test that** can **be photocopied** and used regularly **to** assess **the** profitability of your meat **processing** operation.

Figure #12 PRIMAL & PORTION CUTTING TEST

DATE MARCH 31 HUNTER JOE TAG # 8394478

	PROCESSING COSTS					
	PRODIET PURCHASE	**WEIGHT**	X	**PRICE/LB**		**TOTAL**
1	WHOLE CARCASS COST	133	X	1.50		199.50
	PROCESSING WAGES	HOURS	X	RATE/HOUR		
2	MEAT CUTTER FRED	3		10.00		
3	MEAT CUTTER PETE	3		10.00		
4	SUB TOTAL	6	X	10.00	=	60.00
S	BENEFITS 16% OF WAGES					9.60
	PROCESSING SUPPLIES	**WEIGHT**	X	**COST/LB.**		
6	WRAPPING SUPPLIES	133	X	0.25	=	33.25
7	SPICES & ADDITIVES Est	4	X	2.00		8.00
8	PROCESSING SUBTOTAL					310.35
9	**ADMINISTRATION 10%**					31.04
10	**TOTAL PROCESSING COST**					34.39
	RETAIL PRODUCTION					
		WEIGHT	X	**PRICE/LB**		**TOTAL**
11	LOIN CHOPS	9	X	4.00	=	36.00
12	RUMP ROASTS	6	X	3.75	=	22.50
13	ROUND STEAKS	30	X	4.00	=	120.00
14	ROUND ROASTS	-	X	-	=	-
15	OTHER ROASTS	-	X	-	=	-
16	SPARE RIBS	-	X	-	=	-
17	SHORT RIBS	9	X	2.50	=	22.50
18	ARM CHOPS	16	X	4.00	=	64.00
19	BLADE CHOPS	2	X	4.00	=	8.00
20	BLADE ROASTS	-	X	-	=	-
21	STEWING CUBES	12	X	3.50	=	42.00
22	LEAN GROUND	14	X	3.50	=	49.00
23	BONE IN SHANK	8 X -	X	"7" 12	=	31.42
24			X		=	
25			X		=	
26			X		=	
27			X		=	
28	WASTE	31	X		=	
29	**PROCESSED WEIGHT**	137				
30	**RETAIL PRODUCT VALUE**					386.00
31	WHOLE CARCASS WEIGHT	133				
32	ADDITIVES & FAT WEIGHT	4				
33	**TOTAL WEIGHT**	137				
34	TOTAL RETAIL **PRODUCT VALUE**					386.00
3s	TOTAL **PROCESSING COST**					34.39
36	PROFIT					44.61

How to use the primal and portion cutting test

This description follows the numbers on the left hand side of the primal and portion cutting test form, figure #12

Pick a carcass from the freezer and record the date of the test, the hunters name and the commercial tag number in the spaces on the top of the form

1. Record the weight and price paid per pound for the carcass when it was purchased from the hunter. Multiply the two numbers to get the total price paid

2. & 3.
Keep track of the number of meat cutters working on the test carcass and the hours they work. No more then two people should work on the test carcass and they should work at the *normal speed* they use for meat processing. The hours worked and their hourly rate are recorded on the form.

4. **Then calculate the wage costs for each worker on the test and record the total**

5. **Wage benefits are the total employer share of C.P.P.** and **U.I.C.** plus **workers** compensation and vacation pay. **This is 16% of total wages in #4** above. Multiply total **by .16** for this **amount.**

6. **Wrapping and other supplies are estimated at .25 for each pound of carcass weight. Since the wrapping materials, cleaning supplies and other items like knives are bought in bulk and last through many orders it is hard to pin point and exact amount for any one order. We believe** that .25 **per pound is close to the average cost. Write in the carcass weight from #1 above and multiply that number by .25 for the total.**

7. Spices and additives are generally used for;
-fat for ground meat,
-spicing and binders for sausage or preformed patties ,
-larding for roasts.

Weigh the amount used and multiply the weight by the cost per pound. If more then on item is used, list them by weight and price on the back of the form and show the total on *7.

8. Processing subtotal is calculated by adding the totals of * 1, *4, *5, '6, and *7

9. Administration fee is used to add into the processing cost a fee for management, office costs and use of the building. We have set 10% *of the* processing *cost* for this. Multiply the total in *8 by .10 to calculate the administration fee.

10. The total processing cost is now calculated by adding and *9.

11. to 25
Retail products produced gives a partial list of common products and five blanks to add other products you may produce in your test.

After your test caribou has been completely cut and wrapped, the total weight of each cut is recorded in the weight column. The retail price for each product is listed in the price/lb column. Each weight is multiplied by the price/lb. and recorded in the total column.

28. As the carcass is being cut all waste product is set aside. When the test cutting is completed, the weight of waste" is recorded in *28.*

29. The weight column of= 11 to *28 are added and recorded in the processed weight box in *29.

30. The total column of= 11 to *27 are added and recorded as retail product value in '30.

31. Whole carcass weight from ● 1 is recordedin'31

32. Spice and additives weight in *7 is recorded in *32.

33. Total weight *33 is theWalof*31 and *32. The total in procesed weight '29 should equal total weight *33. If there is a difference, check all the calculation and weigh the retail products produced again. When the difference has been found and adjusted the test can be considered accurate since you have accounted for the whole carcass.

34. Total retail product value is the addition of the totals for *11 to *27. This is the total value of selling all of the meat products.

3s. Total processing cost is the same ass 10 above.

36. Profit is found by subtracting *35 from '34. This tells you how much money will be ma& when the meat products produced in this test are sold.

If you are happy with the profit shown then your processing costs are reasonable and your prices for meat are correct.

<u>If your profit is too high;</u>
* you can consider lowering your prices
* you can consider raising the wages of the meat cutters
* you can consider paying the hunters more for carcasses.

<u>If Your profit is too low;</u>
• It is time to look at how much you pay the h~~-
8 It is time to look at how fast the workers cut meat.
* It@ also time to look at the prices charged for meat products.
Can you raise *your* prices and still compete with other processors?

*Waste of meat, freezer burn and poor buying practices can effect profit

*Theft of meat from the freezer can cost the HTA a lot of money

*As a rule of thumb a net profit of 15% to 20% might be reasonable

*The percentage should be set by the HTA board of directors

If you are happy with the profit shown in your portion test then your processing costs are reasonable and your prices for meat are correct.

If your profit is too high;

* you can consider lowering your prices

* you can consider raising the wages of the meat cutters

* you can consider paying the hunters more for carcasses.

If your profit is too low;

* It is time to look at how much you pay the hunters.

* It is time to look at how fast the workers cut meat. ,

* It is also time to look at the prices charged for meat products. Can you raise your prices and still compete With other processors?

There are *no easy* answers to any of these questions. The primal and portion cutting test is used as a management tool to check if the meat processing business is funning well and if not, to help find the problem and correct it.

Figure #13 PRIMAL & PORTION CUTTING TEST

DATE _____ HUNTER _____ TAG # _____

	PROCESSING COSTS				
	PRODUCT PURCHASE	**WEIGHT**	x PRICE/LB		**TOTAL**
1	WHOLE CARCASS COST		x	=	
	PROCESSING WAGES	**HOURS**	x **RATE/HOUR**		
2	MEAT CUTTER				
3	MEAT CUTTER				
4	SUB **TOTAL**		x	=	
5	**BENEFITS** 16% OF **WAGES**				
	PROCESSING SUPPLIES	**WEIGHT**	x **COST/LB.**		
6	WRAPPING SUPPLIES		x 0.2s	=	
7	SPICES & ADDITIVES		x		
8	**PROCESSING** SUB **TOTAL** ,				
9	**ADMINISTRATION 10%**				
10	**TOTAL PROCESSING COST**				
	RETAIL PRODUCTION	**WEIGHT**	x PRICE/LB		**TOTAL**
11	LOIN CHOPS		x	=	
12	RUMP ROASTS		x	=	
13	ROUND STEAKS		x	=	
14	ROUND ROASTS		x	=	
15	OTHER ROASTS		x	=	
16	SPARE RIBS		x	=	
17	SHORT RIBS		x	=	
18	ARM CHOPS		x	=	
19	BLADE CHOPS		x	=	
20	BLADE ROASTS		x	=	
21	STEWING CUBES		x	=	
22	LEAN GROUND		x	=	
23			x	=	
24			x	=	
25			x	=	
26			x	=	
27			x	=	
28	WASTE		x	=	
29	**PROCESSED WEIGHT**				
30	**RETAIL PRODUCT VALUE**				
31	WHOLE CARCASS WEIGHT				
32	ADDITIVES & FAT WEIGHT				
33	**TOTAL WEIGHT**				
34	TOTAL RETAIL PRODUCT **VALUE**				
35	**TOTAL PROCESSING COST**				
36	**PROFIT**				

POTENTIAL MARKETS
FOR THE SALE OF ARCTIC FOOD PRODUCTS

BUSINESS NAME	Government 02 the Northwest Territories Supply and Services Department
CONTACT PERSON	Supply and services Manager John Purvis
TEL. NUMBER	979-5097
TOWN	Iqaluit
PROCEDURES	-All HIAs have been registered under the Northern Business incentive program -Tenders will be faxed to Baffin Regional Hunters and Trappers Committee of Baffin Regional Council -BRHTC will fax the tender to all HTAs currently active in buying and processing the products required in the tender. -The interested HTAs will tender directly to Supply and Service for the products they want to supply
REQUIREMENTS	Various cut and *packaged* Arctic *food* products for: Baffin Correctional Centre Issumasununnittuq (Young offenders facility) Ulivik Centre (Open custody facility)

BUSINESS NAME	Baffin Regional hospital
CONTACT PERSON	Brent Boddy, purchasing Dept Gord Hoselton, Head Chef, Versa Foods
TEL. NUMBER	979-5231 .
TOWN	Iqaluit
	Various arctic foods for patients and cafeteria in the hospital in Iqaluit and for Baffin House in *Montreal*

BUSINESS NAME	Baffin Divisional Board Of Education
CONTACT PERSON	Donald Moors, Purchasing Officer
TEL. NUMBER	979-5236 Ext 143
TOWN	Iqaluit
REQUIREMENTS	Various cut and packaged Arctic food products for the Ukkivik student residence

BUSINESS NAME	Ivik Enterprises
CONTACT PERSON	Andy Arnould
TEL. NUMBER	*979-4806*
TOWN	Iqaluit
REQUIREMENTS	Various cut and packaged Arctic food products for: Iliagittuqut House (Childrens group home) Adult Group Home

BUSINESS NAME	Agvik Soceity
CONTACT PERSON	Lynn Johnson
TEL. NUMBER	979-4500
TOWN	Iqaluit
REQUIREMENTS	Various cut and packaged Arctic food products for Nutaraq's Place

BUSINESS NAME	Kamotiq Inn
CONTACT PERSON	Marcel Mahe
TEL. NUMBER	*979-5937* "
TOWN	Iqaluit
REQUIREMENTS	Cuts of caribou, Arctic char, scallops, muktuk and muskox for restuarant use

BUSINESS NAME	Navigator Inn
CONTACT PERSON	Al Woodhouse
TEL. NUMBER	979-6201
TOWN	Iqaluit
REQUIREMENTS	Cuts of caribou, Arctic char, scallops, muktuk and muskox for restuarant use

BUSINESS NAME	Frobisher Inn
CONTACT PERSON	Manager
TEL. NUMBER	979-5241
TOWN	Iqaluit
REQUIREMENTS	cuts of caribou, Arctic char, scallops, muktuk and muskox for restuarant we

BUSINESS NAME	Bayshore Inn
CONTACT PERSON	Manager
TEL. NUMBER	979-6733
TOWN	Iqaluit
REQUIREMENTS	Cuts of caribou, Arctic char, scallops, muktuk and muskox for restuarant use

BUSINESS NAME	Discovery Lodge
CONTACT PERSON	Tracy Jacobson
TEL. NUMBER	979-4433
TOWN	Iqaluit
REQUIREMENTS	cuts of caribou, Arctic char. scallops, muktuk and muskox for restuarant use

BUSINESS NAME	Amarok Country Food Store
CONTACT PERSON	Steve Saint
TEL. NUMBER	979-6848
TOWN	Iqaluit
REQUIREMENTS	Cuts of caribou, Arctic char, scallops, muktuk and muskox for retail sales

BUSINESS NAME	By the Sea Restaurant
CONTACT PERSON	Bob Crann
TEL. NUMBER	979-4866
TOWN	Iqaluit
REQUIREMENTS	cuts of caribou, Arctic char, scallops, muktuk and muskox for restuarant use

BUSINESS NAME	**Arctic Ventures**
CONTACT PERSON	**John Bens**
TEL. NUMBER	979-5992
TOWN	**Iqaluit**
REQUIREMENTS	cuts of caribou. **Arctic** char, scallops, **muktuk** and **muskox** for retail sales

BUSINESS NAME	**Iqaluit** Enterprises
CONTACT PERSON	Jim **Currie**
TEL. NUMBER	979-4458
TOWN	**Iqaluit**
REQUIREMENTS	Arctic Char for smoking and Arctic Char, **Turbot, scallops** and **muktuk** for retail sales

BUSINESS NAME	**Cumberland** *Sound* Fisheries Ltd.
CONTACT PERSON	**Peepeelee Qappik**
TEL. NUMBER	473-8966
TOWN	**Pangnirtung**
REQUIREMENTS	Wholesaler and retailer of **Pangnirtung fish products** including **turbot, Arctic char** and **scallops**

BUSINESS NAME	Seafood Outlet
CONTACT PERSON	**Harvey** Walsh
TEL. NUMBER	403-873-6280
TOWN	**Yellowknife**
REQUIREMENTS	Arctic char, scallops, **muktuk** and turbot for retail sales

BUSINESS NAME	**Seafood Outlet**
CONTACT PERSON	Manager
TEL. NUMBER	403-873-6280
TOWN	**Yellowknife**
REQUIREMENTS	Arctic char, scallops, **muktuk** and **turbot** for retail sales

BUSINESS NAME	Freshwater Fish Marketing Corp.
TEL. NUMBER	403-874-6630
TOWN	Hay River
TEL. NUMBER	204-983-6600
TOWN	Winnipeg
REQUIREMENTS	Arctic char

All hotels, dining rooms and restuarants
All Northern Stores, co-ops and private stores through out the region are possible purchasers of arctic food products

This listing is presented for information purposes. Any deal or sale must be made between the HTA and the possible purchaser. Price, quality, payment terms and delivery must be negotiated between producer and purchaser

This list is not complete or does it guarantee any purchaser will buy your products.

Various HTAs are interested in intersettlement trade to provide Arctic food products to their members that may be in short supply in their area. A list of Baffin region HTAs and contact people follows:

Ikajutit Hunters' & Trappers" Association
General Delivery
ARCTIC BAT, N.W.T.
X0A OAO

HTA Sec/Mgr: Frank Mays 439-9949

Broughton Island Hunters" & Trappers" Association
General Delivery
Broughton Island, N.W.T.
X0A OBO

HTA Sec/Mgr: Jeannie Kooneeluisie 927-0836

Cape Dorset Hunters" & Trappers Association
General Delivery
CAPE DORSET, N.W.T.
X0A 0C0

HTA Sec/Mgr: Vacant 89?-8978

Clyde River Hunters' & Trappers Association
General Delivery
CLYDE RIVER, N.W.T.
X0A OEO

HTA Sec/Mgr: Vacant 924-6202

Alikatuktuk Hunters' & Trappers" Association
General Delivery
GRISE FIORD, N.W.T.
X0A 0J0

HTA Sec/Mgr: Larry Audlaluk 980-9944 (home)

Hall Beach Hunters" **&** Trappers' **Association**
General **Delivery**
HALL BEACH, **N.W.T.**
X0A 0K0

HTA Sec/Mgr: **Sara** Gibbons 928-8994

Igloolik Hunters"& Trappers' **Association**
General **Delivery**
IGLOOLIK, NW.T.
X0A OLO

HTA Sec/Mgr: **Simonie Sappa** **934-8807**

Amarok Hunters" & **Trappers'** Association
P.O. Box 538
IQALUIT, N.W.T.
X0A 0H0

HTA Store Mgr: **Steve Saint** 9?9-6848

Mayukalik Hunters"& Trappers' Association
General Delivery
LAKE **HARBOUR, N.W.T.**
X0A 0N0

HTA Sec/Mgr: **Niaomi Akavak** 939-2355

Pangnirtung Hunters" & Trappers' **Association**
General Delivery
PANGNIRTUNG, N.W.T.
X0A 0R0

HTA Sec/Mgr: Vacant **473-8752**

Cumberland Sound Fisheries Ltd. **Tel:** **473-8966**
Fax **473-8507**

Cumberland Sound Fisheries Ltd. are sales agents for all seafood products available from Pangnirtung:

Aarqissuijit Hunters' & Trappers" Association
General Delivery
POND INLET, N.W.T.
X0A 0S0

HTA Sec/Mgr: **A/Levi Qumagapik** 899-8856

Resolute Bay Hunters' & Trappers" Association
General Delivery
RESOLUTE BAY, N.W.T.
X0A OVO

HTA Sec/Mgr: **Philip Nungak** 252-3654

Weasels, Keewatin Hunters' & Trappers" Association
General Delivery
SANIKILUAQ, N.W.T.
X0A OWO

HTA Sec/Mgr: Not known **266-6937**

COMMERCIAL FISHERIES FREIGHT ASSISTANCE PROGRAM

The Department *of Economic* Development and Tourism administer a program called the G.N.W.T.Commercial Fisheries Assistance Program for Intersettlement Trade in Fish.

Under this program 50% Of the freight-of shipping fish is paid by the G.N.W.T..

- Please read the following application for freight assistance.

After a shipment has been made, fill in the application and give it to your Area Eceonomic Development Officer with a photocopy of the airline waybill. He will submit the application for your refund.

If a lot of shipments are being made seethe A.E.D.O. and make arrangements to submit batches of waybills when required.

APPLICATION FOR FREIGHT ASSISTANCE UNDER
N.W.T. COMMERCIAL FISHERIES ASSISTANCE PROGRAM
FOR INTERSETTLEMENT TRADE IN FISH

This assistance is available to commercial fishermen, co-operatives, N.T.A.'s and companies licensed to trade in fish, who ship a annual minimum of 250 lb. of fish to a consuming community within the N.W.T. Assistance will be 50% of the freight cost to the consuming community.

PART ONE: TO BE COMPLETED BY APPLICANT
(Applicant must be person, co-op, N.T.A. or company paying the freight cost)

Name _____ Special Dealer's License # _____

Address _____ Shipping Weight of Fish _____

_____ Total freight cost _____

Fish shipped from which community? _____

Fish shipped to which community? _____

What is name of the person or organization which purchased the fish? _____

In the case of a applicant who is the purchaser of fish, whet is the noms of the person or organization from which fish purchased? _____

I HEREBY CERTIFY THAT:

1. I have paid the freight cost in full, and will not receive a reimbursement from the buyer (or seller, as the case may be) or any other source.

2. I have attached a copy of my Special Dealer's License.

3. I have attached a copy of the Bill of Lading respecting shipments of fish for which I am applying for freight assistance.

_____
SIGNATURE

_____ _____
TITLE DATE

PART TWO: TO BE COMPLETED BY AUTHORIZED OFFICER OF THE DEPARTMENT OF ECONOMIC DEVELOPMENT AND TOURISM.

The information contained in and accompanying this application has been verified. The applicant is eligible for freight assistance under the Inter settlement Trade section of the commercial Fisheries Assistance Program in the amount of: $_____
This is calculated as follows:
Eligible freight cost ----- _____ x 50% . $_____

_____ _____
SIGNATURE DATE

_____
TITLE

APPENDIX A

EQUIPMENT - MAINTENANCE AND OWNERS MANUALS

CONTENTS **PAGE**

Operation and maintenance of processing room/freezer A-1
Hobart grinder manual A-2
Hobart band saw A-17

OPERATION AND MAINTENANCE OF PROCESSING ROOM/FREEZER

The processing room/freezer is owned by the local *hunters* and trappers association. The HTA board of directors have responsibility for the proper use and operation of the facility. They *male* all decisions *as* to *who can use* their building and equipment, who can stem freezer food in the freezer, who can have keys to the doors and whether there should be any rental charge for use of the building.

The operation and maintenance costs of this building are currently being paid by the Department of Public Works of the Government of the Northwest Territories. This responsibility includes paying the costs of:

- electrical power
- fuel oil
- garbage collection
- water delivery
- sewage pumpout
- preventative maintenance on the building, and equipment
- repair of the building and any mechancial systems in it.

The meat cutting tools and equipment are not included in this arrangement and if they break or are stolen the HTA has to play for repairs or replacement.

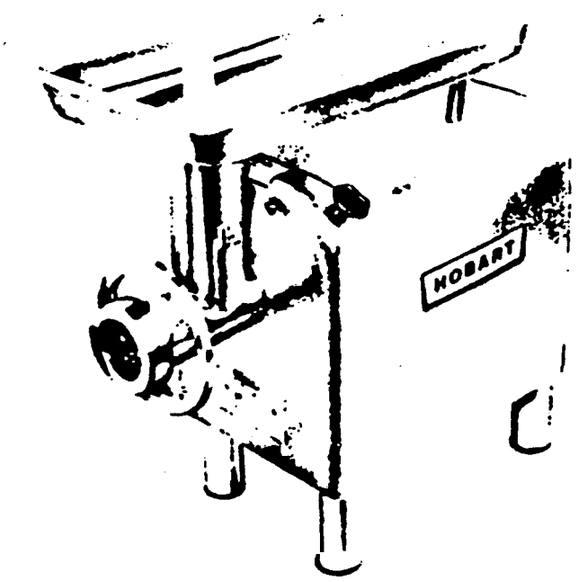
When there is a problem with the building or equipment the secretary manager of the HTA should be notified immediately. The secretary manager will then call the Department of Public Works to come and *fix* the problem. Workers in the building should not try *to* fix any real problem with plumbing, heating or refrigeration. Setting the thermostat in the cutting room or bathroom is OK but everything else should be left to the tradesmen.

The operation and safety *of* the meat processing equipments covered elsewhere in the manual. (Miming of the processing room/freezer is covered in the chapter on hygiene and sanitation

HOBART

INSTRUCTION MANUAL

. . . with Replacement **Parts**



MODEL 4812 CHOPPE

(INCLUDES MOTOR PARTS)

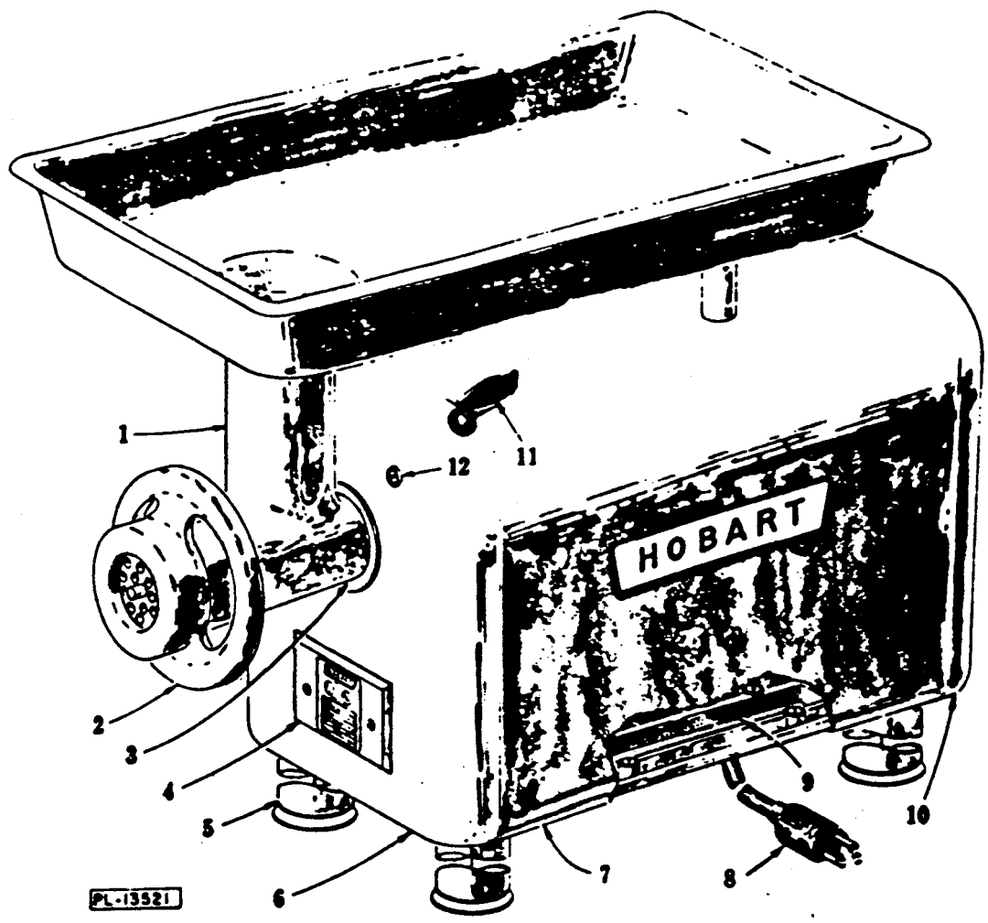
ML-33811 (REAR MOUNTED SWITCH)

THIS MANUAL BEPLACES AND SHOULD BE USE INSTEAD OF FORM 13002B (8-82)

PRIOR ML'S COVERED IN THIS MANUAL:

ML-3144 (REAR MOUNTED SWITCH)

A PRODUCT OF HOBART CANADA INC. DON MILLS, ONTARIO, M3A 1B1



Instructions for Operation and Care of

MODEL 4812 CHOPPER

INSTALLATION:

Before making electrical connection. CHECK THE SPECIFICATIONS ON THE NAME PLATE (4) TO MAKE SURE THEY AGREE WITH THOSE OF YOUR ELECTRICAL SERVICE.

Electrical connections should be made by qualified workmen who will observe all applicable Safety Codes and the National Electrical Code.

A cord and plug (8) is furnished as standard equipment on this machine. The base on the under side of the machine is tapped for 1/2" conduit. should a permanent installation be required. Run the conductors up through this tapped hole and connect directly to the switch on the end of the machine. It is IMPORTANT to use the proper conductor (wire) and fuse sizes. These are listed below and also on the tag attached to the machine

WIRE AND FUSE SIZES

volts	Phase	Line Fuse	Wire Size
115	1	30	12
230	1	15	14
200	3	20	14
230	3	20	14

Multiphase motors should be so connected that the attachment runs counterclockwise facing the attachment hub.

The four leg assemblies (5) are removed and packed in the chopper attachment carton before shipment. Reassemble these legs by simply screwing them into the four tapped holes of the base. The rubber feet on these legs cushion the machine. Under normal operation. the machine need not be bolted down.

CARE OF CHOPPER All ACHMENT:

Before using the chopper attachment, remove from machine, take it apart. and wash thoroughly. When reassembling. apply tasteless oil to the drive shaft and the composition thrust washer of the worm. The knife and plate need some preliminary lubrication; rub tallow over the cutting faces of these parts. When assembling the knife. be sure to turn the cutting side out toward the perforated plate and see that the notch on the circumference of the plate fits over the pin in the bottom of the cylinder.

Do not adjust hand wheel (2) too tight; if the knife and plate are both sharp, only a moderate pressure will be needed. Knives and plates must be sharp and true for proper cutting action. Rub a little tallow over newly-sharpened plates before use. NEVER allow your chopper to run without meat in the chopping end: only a few minutes of such running can ruin a knife and plate.

Wash all parts of the attachment daily, in warm soapsuds.

Take out the entire chopper attachment each time after using. and place it in the refrigerator until it is needed again.

INSERTING CHOPPER ATTACHMENT:

Each day, before assembling the chopper attachment. place a drop of mineral oil into the hole marked "oil" on the hub of the cylinder.

When putting on the chopper attachment, see that both the hub and the socket are clean, and insert with a slight twisting motion toward the left, so that the stop pin in the attachment is in contact with the side of the hole that receives it. Then tighten the thumb screw (11).

To remove the attachment. first turn the thumb screw (11) approximately three revolutions to the left (do not remove the screw), then give the attachment a twist to the right as you pull it out. Never strike the cylinder with an object to loosen it.

HUB DRAIN:

A drain hole in the trim washer (3) allows any meat juices to drain from the hub. "This hole should be inspected periodically to make sure that it is free of obstructions; a small wire can be used for removing any material which may have accumulated.

LUBRICATION:

Hobart servicing offices have the current lubricants listed in their lubrication manual. The gears and bearings are packed with special lubricant sufficient to last several years. To gain access to the drain and grease filling plug, it is necessary to remove the front housing panel (6) (see paragraph on "*Panel Removal"). Consult a Hobart service technician before adding grease. Lubrication of the chopper attachment is described under the paragraphs "Care of Chopper Attachment" and "Inserting Chopper Attachment ●'.

AIR INTAKE:

Under normal operating conditions the motor air intake screen (9) (located in the base of the chopper) will need little or no attention. However, in some installations where saw dust *or other* foreign materials are present in the air, this intake screen may become partially or completely covered and throttle the cooling air to the motor. Where an adverse dust condition does exist. periodically check the screen (using an adequate light) and wipe exposed side of screen clean with a rag *or* brush as required.

PANEL REMOVAL:

To disassemble the front panel (6). remove the thumb screw (11) and the chopper cylinder (1). next. remove the four lower screws on the under side of the base. the two upper screws (12). and the four screws that retain the hub trim washer (3). Lift off the panel.

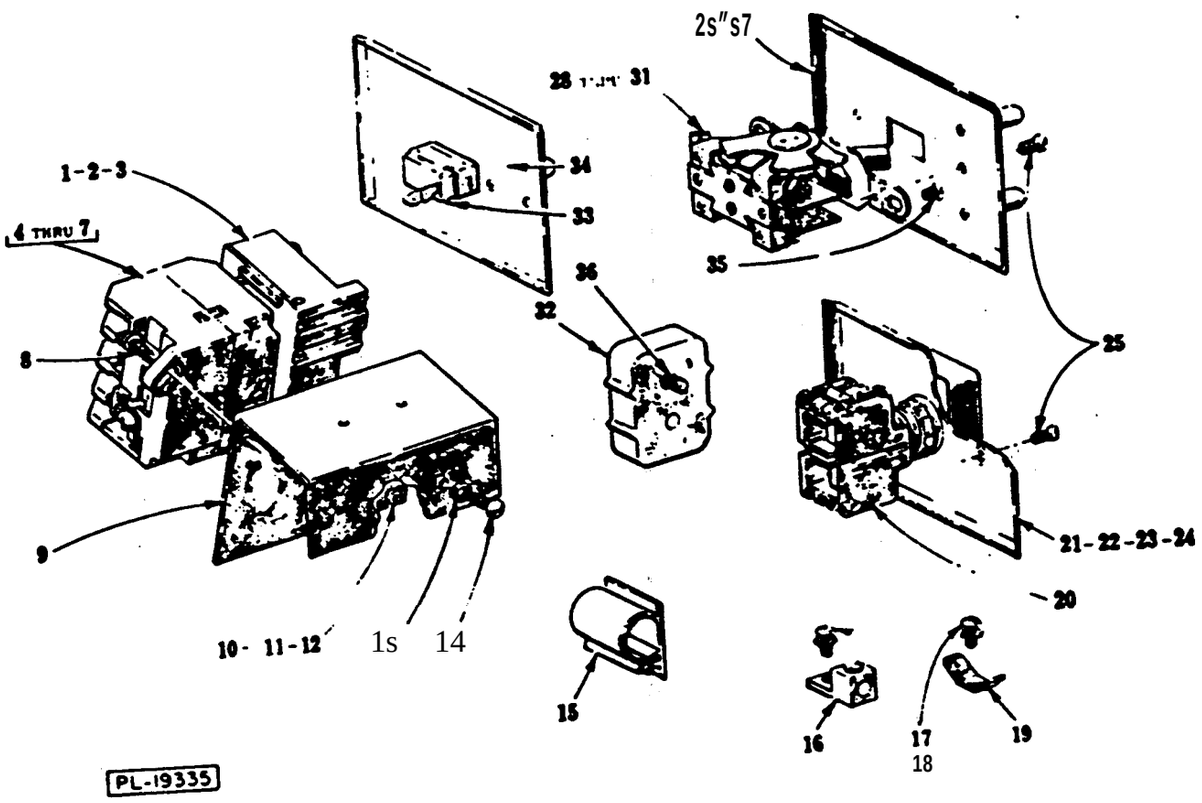
To take off the rear panel (10). remove the two upper screws and the four lower screws on the under side of the base. Remove the panel. being careful not to damage the switch leads.

To remove the center housing (7). after removing the front and rear panels. as described above. disassemble the eight *screws* on the under side of the base. Lift off the center housing.

MEAT CHOPPING:

Cut the meat into strips and feed it into the chopper, using the feed stomper only as needed. If the strips are cut to proper size, they will feed without assistance! from the feed stomper, allowing both hands of the operator free to feed meat. *When* running meat through the chopper a second time, more speed is attained by feeding small quantities at a time, than by trying to force large mounts with the feed stomper.

The feed pan should always be kept in place in th cylinder. It not only makes regular feeding easy but keeps the chopper attachment ready fc immediate usc. The ineness to which the meat i cut is governed by the size of the holes in th perforated plate. not by the tension put upon th adjusting ring.

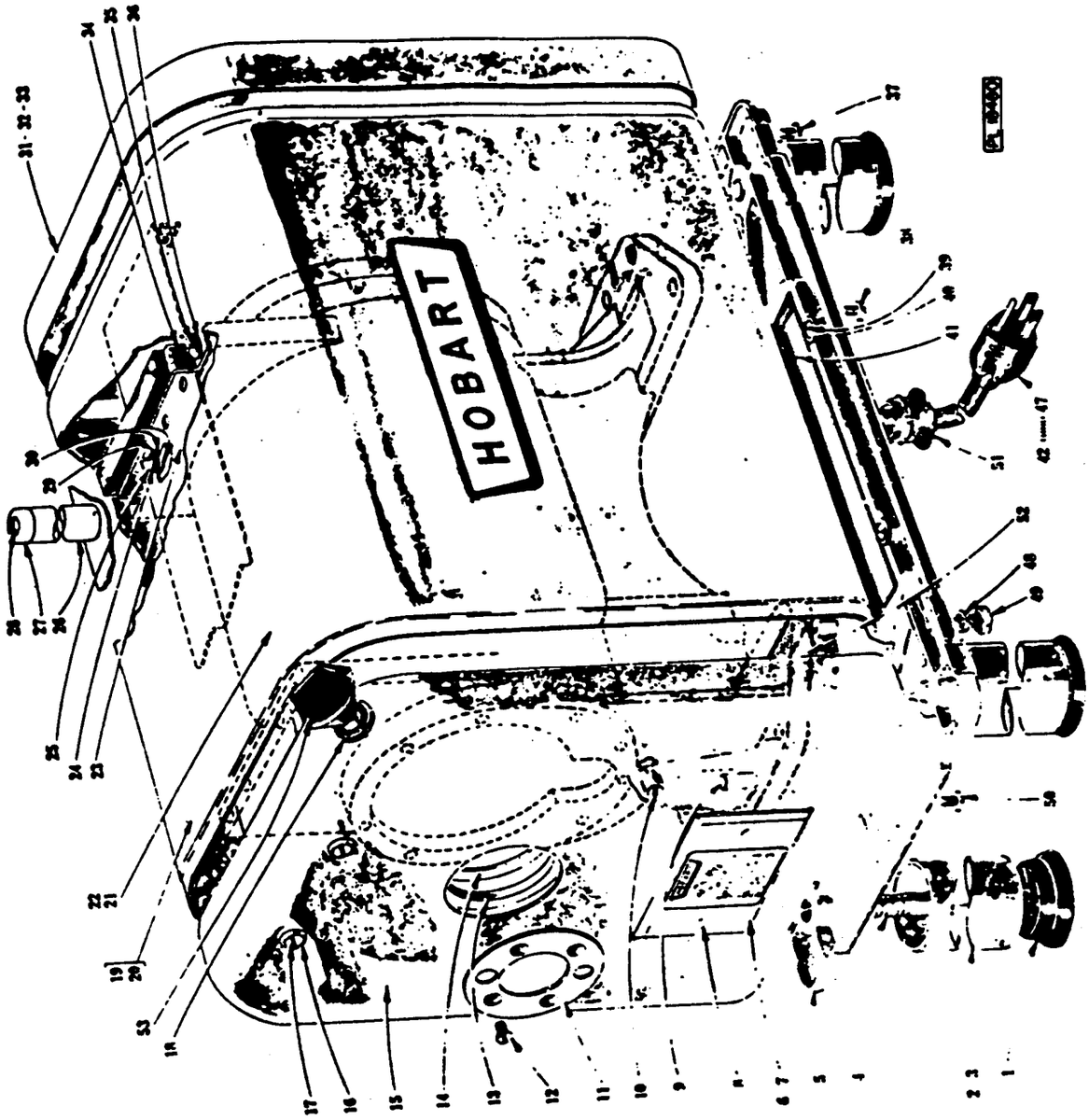


ELECTRICAL UNIT

ELECTRICAL UNIT

ILLUS. PL-19335	PART NO.	NAME OF PART	AMT.
1	C-88196-7-4	Relay . Thermal Overload (380/415 V.. 50 Hz.. 3 Ph.)	1
2	C-88196-7-5	Relay · Thermal Overload (220/240 V.. 50 Hz.. 3 Ph.)	1
3	C-88196-7-6	Relay · Thermal Overload (220/240 V.. SO Hz.. 1 Ph.)	1
4	C-8771 3-54-2	Contactor (220 V.. 50 Hz.. 1 & 3 Ph.: 380 V.. 50 Hz.. 3 N)	1
5	C-87713-54-3	Contactor (240 V.. SO Hz.. 1 & 3 Ph.: 415 V.. 50 Hz.. 3 N)	1
6	C-87713-54-4	Contactor (380 V.. 50 Hz.. 3 Ph.)	1
7	C-8771 3-54-5	Contactor (415 V.. 50 Hz.. 3 Ph.)	1
●8	SC-8-41	Mach. Screw - #10-32 x 1/2 R & H (All Voltages Except 115 V.. 50 Hz.)	2
●9	B-120324	Contactor Bracket Ass)". @ Voltages Except 115 V.. 50 Hz.)	1
●10	SC-21-8	Mach. Screw - #6-32 x 3/8 Rd. Hd. (All Voltages Except 115 V.. 50 Hz.)	1
•11	WL-7-1	Lock Washer - ● 6 Ext. Shakeproof (All Voltages Except 115 V.. 50 Hz.)	2
●12	NS-9-7	Mach. Nut - #6-32 Hex	1
')3	WL-3-8	Lock Washer - #6 Medium (All Voltages Except 115 V.. SO Hz.)	2
●14	SC-7-25	Mach Screw - #6-32 x 1/2 Rd. Hd. (All Voltages Except 115 V.. 50 Hz.)	2
●IS	B-106825-2	Clip -wu1o~(A3IVolta&$Empt115 V., 50 Hz.)	1
16	C-118544-1	Lug - Solderless (3 Ph. 60 Hz.)	1
17	SC-27-29	Mach. Screw- ● 8-32 x 3/8 Rd. Hd	1
18	WL-10-1	Lock Washer - ● 8 Ext. Shakeproof	1
●19	C-65890-90	Terminal - Grounding	1
●20	C-87711-142-1	Switch (All Voltages Except 115 V.. SO Hz.)	1
●21	C-119953	Plate . Switch (All Voltages Except 115 V.. 50 Hz.)	1
● 22	SC-21-8	Mach. Screw - ● 6-32 x 3/8 Rd. Hd. (Grounding Screw)	1
●23	WL-7-1	Lock Washer -=6 Ext. Shakeproof	1
●24	NS-9-7	Mach. Nut - #6-32 Hex	1
25	SC-30-6	Mach. Screw - #6-32 x 3/8 Oval Hd	2
26	B-124564-1	Plate - Switch (1 Ph. W/Overload)	1
27	B-124564.2	Mate. Switch (3 Ph.)	1
28	C-292052	Switch & Plate Assy. (Incl. items #33 & 34) ( )Ph.. W/O Overload) (Mach. ML-31440)	1
29	P-87810-19-1	Switch (1 Ph. W/Overload)	1
30	---	Heater Element - Starter @* Elec. Spec.. Mach. Model & Motor Type)	1
31	?-8771 1-138-1	Switch (3 Ph.)	1
'32	B-1 1679>2	Block - Terminal	1
33	?-8771 1.184-1	Switch (1 Ph. W/O Overload) (Mach. ML-33811)	1
34	C-291961	Switch Plate (1 Ph.. W/O Overload)	1
35	M-74835	screw. Switch Mounting	2
●36	SC-8-41	Mach Screw " #10-32 x 1/2 Rd. Hd	2

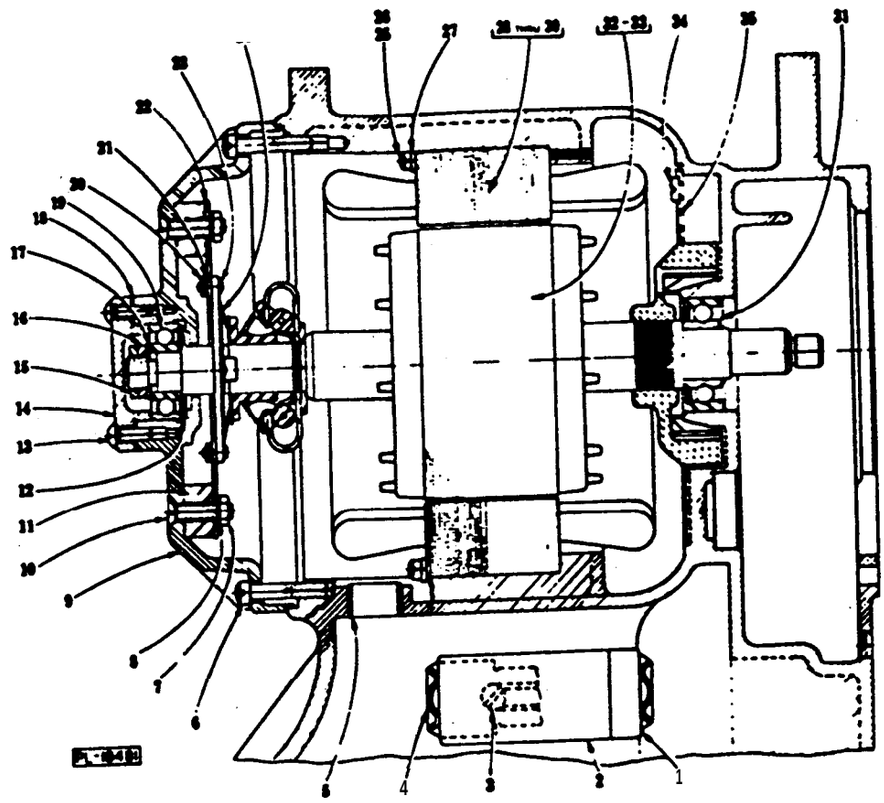
● SO Hz.



MOTOR AND HOUSING UNIT

MOTOR AND HOUSING UNIT

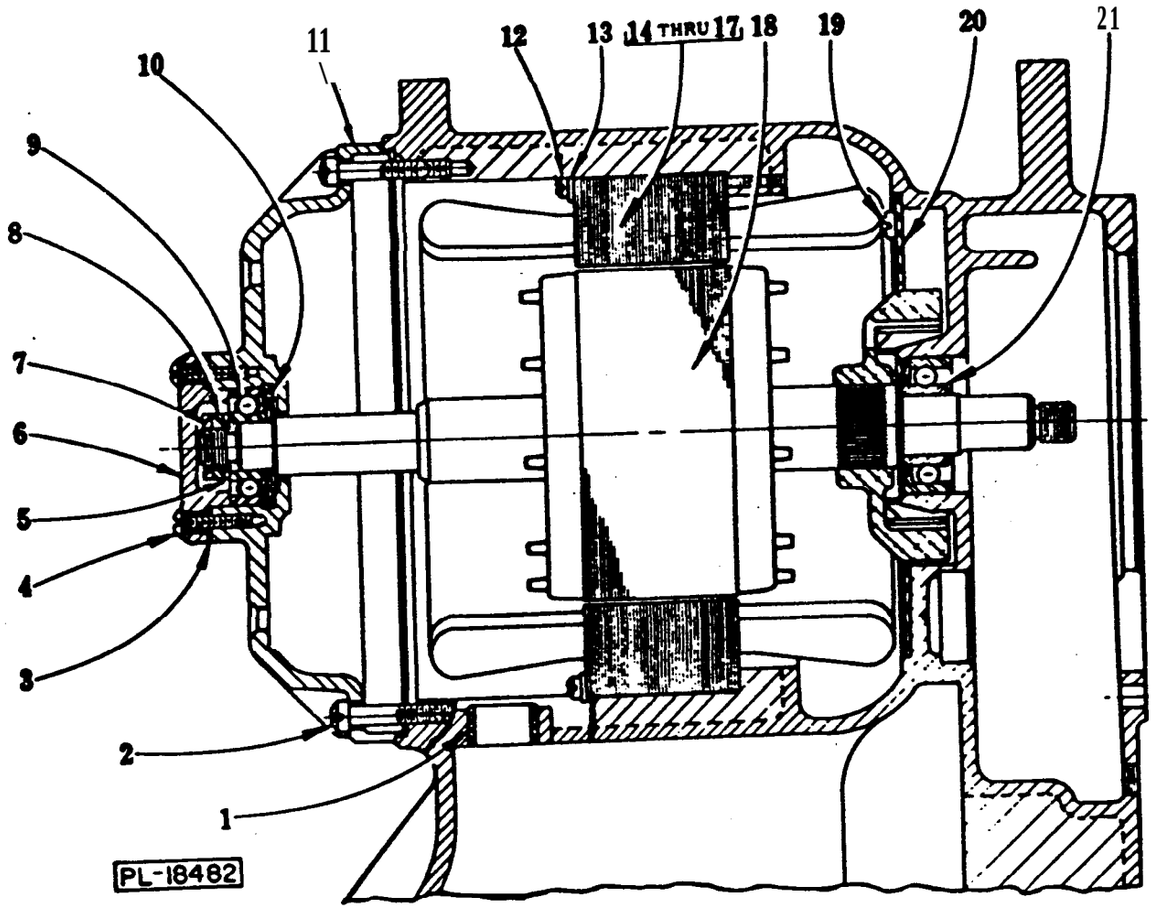
ILLUS. PL-18480	PART No.	NAME OF PART	AMT.
1	M-83681	Foot . Rubber	4
2	B-290060-2	Leg	4
3	M-64814	Cap - Leg End	4
4	B-290061-2	Stud . Leg (Special)	4
5	D-102214-1	Base Assy. (Incls. items =39. 40.41 & 52)	1
6	C-117867-1	Plate - Mach. Data (Give Serial No. & Elec. Spec.) (60 Hz.)	1
7	C-1 17867-2	Plate . Mach. Data (Give Serial No. & Elec. Spec.) (50 Hz.)	1
8	SC-30-6	Mach. Screw - ● 6.32 x 3/S Oval. lid	2
9	D-11800-141	Dowel	2
10	B-118827	Plug - Inspection	1
11	P-65152	Washer . Trim (Attach. Hub)	1
12	SC-22-17	Mach. Screw . ● 1024 X 3/8 Flat Hd	4
13	M-65140	Gasket - Attach. Hub	1
14	M-65142	Washer - Retaining	1
15	E-64965-5	Panel. Front Housing	1
16	WC-4-10	Csk. Washer - = 10	2
17	SC-I S.%	Mach. Screw . =10-24x S/8" Oval Hd	2
18	M-64824	Grommet (Thumb Screw)	1
19	C-290481-12	Housing Assy. MO Hz.)	1
20	:.:9,7:::;13	Housing Assy. (SO Hz.)	1
21	[illegible]	Motor (Give Eke. Spec.)	1
22	T-65058	Case - Motor @se& Gear	1
23	R-65148-1	Bracket. Front & Rear Locating	1
24	WL-3-37	Lock Washer - 1/4° Medium	4
25	SC-841	Mach. Screw . 1/4"-20 X 1/2" Rd. *	4
26	511991 I	Spacer - Pan Rest	2
27	V-19105-1	Bumper	2
28	SC-60-10	Mach. Screw - =8-32 x 3 "Rd. Hd	2
29	WS-3-20	Washer (STL)	4
30	M-66185	Washer (Rubber)	8
31	E-64805-5	Panel - Rear Housing	1
32	SC-15-36	Mach. Screw . =10-24 x S/8 Oval Hd	2
33	WC-4-10	Csk. Washer . = 10	2
34	M-65116	Center Panel Brkt. & Compression Strip Assy	2
3s	SC-8-81	Mach. Screw . 1/4"-20 x 1/2" Rd. Hd	4
36	WL-3-37	Lock Washer - 1/4" Medium	4
37	SC-25-7	Mach. Screw - =10-24x 5/16" Bind. Hd	4
38	SC-25-7	Mach. Screw . =10.24X 5/16 Bind. Hd	8
39	SC-8-9	Mach. Screw - =10-24 x 3/8" Rd. Hd	4
4s3	WS-2-21	Washer	4
41	P-651 19	Screen - Ail Inlet	1
42	B-117542-7	Cord & Plug Assy. (Under 150 V.. 3 Conductor)	1
43	B.117S42.1 2	Cord & Plug Assy. (230 V.. 60 Hz.. 1 Ph. 3 Conductor)	1
44	B-117542-24	Cord Assy. (I.E.C.) (2 20/240 V.. SO Hz.)	1
45	8-117542-36	Cord Assy. 11. E.C.) (115 V.. SO Hz.. 1 Ph.)	1
46	C-117613-5	Cord Assy. (I.E.C.) (380/415 SO Hz.. 3 N)	1
41	C-I 17613-8	Cord Assy. (I.E.C.) (220/240/380/415 V.. 50 Hz.. 3 Ph.)	1
48	WL-3-47	Lock Washer - S/16° Medium.	10
49	SC-36-40	Cap Screw. 5/16"18 X 1-1/4" Hex Hd	10
50	SC-25-7	Mach. Screw - =10-24X S/16 Bind. Hd	4
51	EE-2-45	Connector - Cord (All Voltages except 60 Hz.. 3 Ph.)	1
52	M-65141	Screen - Air Outlet	1
53	C-108197-4	Thumb Screw Assy	1



MOTOR PARTS (1PH.)

MOTOR PARTS (1 PH.)

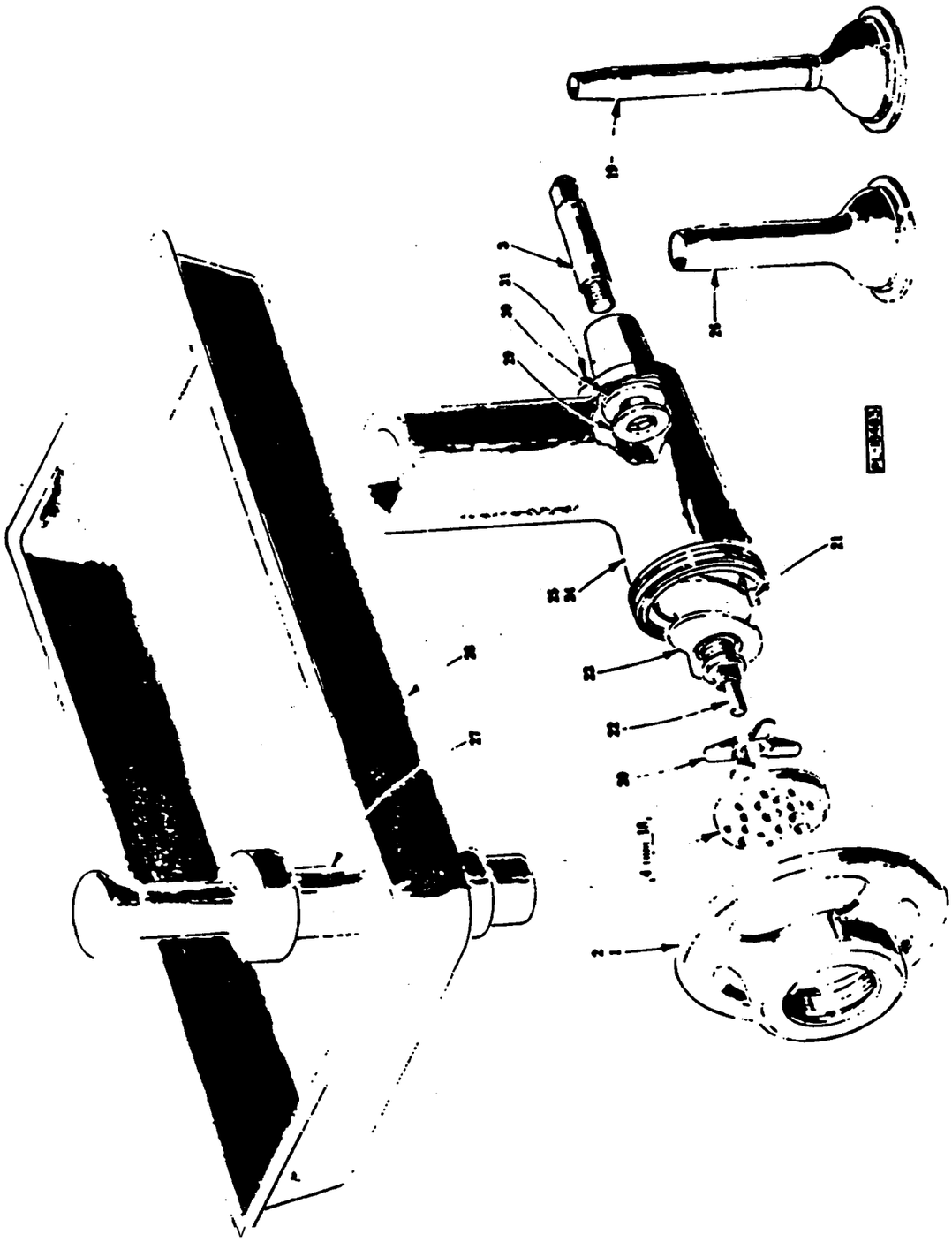
ILLUS. PL-18481	PART No.	NAME OF PART	AMT.
1	C-70486-1	End Cap- Capacitor	1"
2	D-70487-3	capacitor	1
3	SC-14-57	Mach. Screw - #10-24 x 1/2 Flat Hd	2
4	P-66621-1	Bracket - Capacitor	1
5	V-6651	Bushing - Insulating	1
6	SC-I 1432	Mach. Screw. I/4=20X I-1/4" Fil. Hd	4
7	NS-13-2	Full Nut - 1/4"-20 Hex Fin	2
8	WL-3-38	Lock Washer . 1/4" Medium	2
9	S-89073-2	Bracket - Bearing	1
10	SC-16-24	Mach. Screw - 1/4-20 x 1-1/4" Oval Hd	2
11	M-72818-1	Peat" Switch Retaining Plate	2
12	SL-2-4	Loading Spring - N.D. #S-17	1
13	SC-9-25	Mach. Screw . #10-24 x 5/8" Rd. Hd	4
i4	M-65219	cap- Bearing	1
Is	V-4478	Lock Nut . Motor Shaft	1
16	V.10928-2	Nut - Motor Shaft	1
17	WS-8-4	Washer	1
18	M-14030	Gasket - Bearing Cap	1
19	BB-17-12	Ball Bearing - N.D. #7503	1
20	NS-9-7	Mach. Nut -#6-32 Hex	2
21	WL-3-9	Lock Washer - ● 6 Medium	2
22	M-74738	Switch Plate & Weld Nut Assy	1
23	SC-9-79	Mach. Screw . ● 6-32 x S/16* Rd. Hd	2
24	P-66085	switch - Starting (Stationary Part)	1
25	SC-12-52	Mach. Screw - #10-24 x 2-3/4" Fil. Hd. (60 Hz.)	8
26	SC-11-32	Mach. Screw - ● 1$24 x 3" Fil. Hd . (50 Hz.)	8
27	WS-2-15	Washer	8
28	P-65477-67-1	Stator Assy. (115 V.. 60 Ha.)	1
29	P-65477-67-3	Stator Assy. (230 v.. 60 Hz.)	1
30	P-65477-142-1	Stator Assy. (11$/120/240 v.. 50 Hz.)	1
31	B&18-13	Ball Bearing - N.D. #Z9504	1
32	C-22275-265	Rotor Assy. (60 Hz.)	1
33	C-22275-266	Rotor Assy. (50 Hz.)	1
34	SC-18-11	Mach. Screw - #10-24 x 3/8" Pan Hd	3
35	P-65120	Shroud" Fan	1



MOTOR PARTS (3 PH.)

MOTOR PARTS (3 PH.)

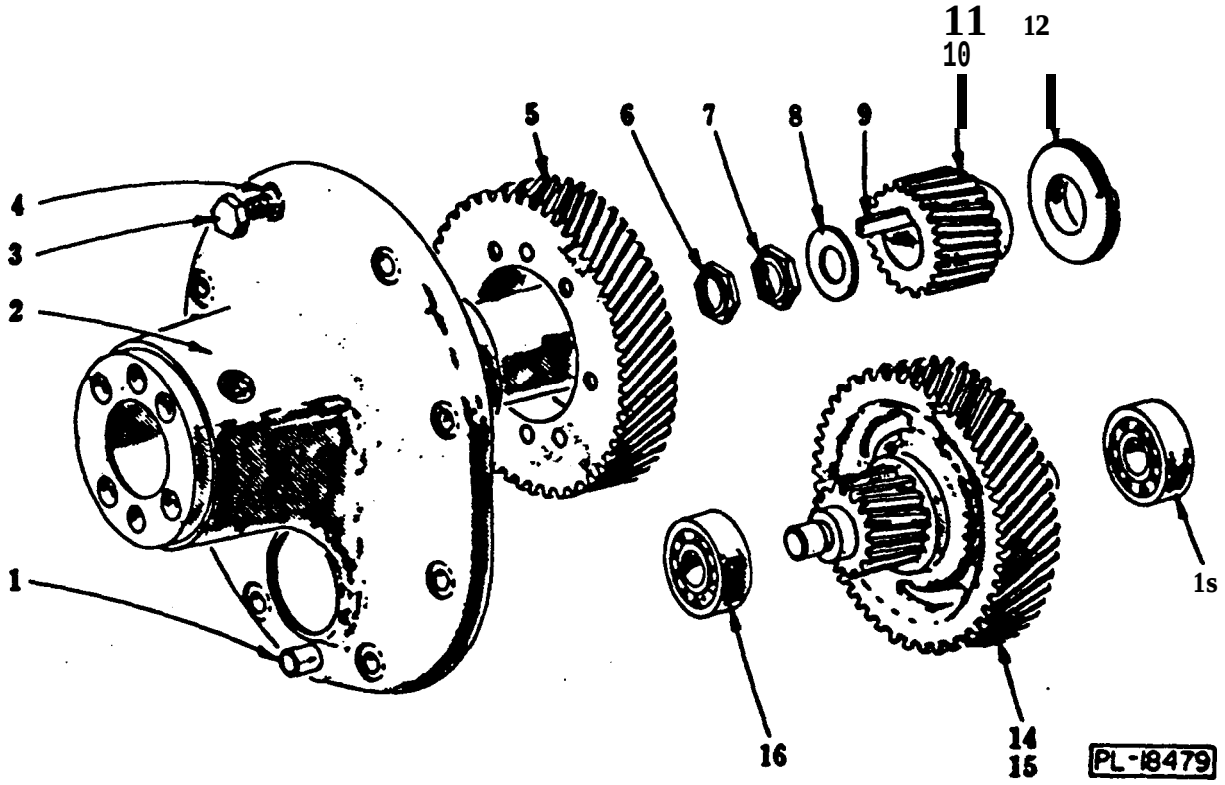
ILLUS. PL-18482	PART NO.	NAME OF PART	AMT.
1	V-6651	Bushing. Insulating	1
2	SC-11-82	Mach. Screw - 1/4"-20 x 14/4 Fil. Hd	4
3	M-14030	Gasket - Bearing Cap	1
4	SC-9-25	Mach. Screw - 10-24 x 5/8" Rd. Hd	4
5	WS-8-4	Washer	1
6	M-65219	Cap - Bearing	1
7	V-4478	Lock Nut . Motor Shaft	1
8	V-10928-2	Nut - Motor shaft	1
9	BB-17-12	Ball Bearing - N.D. #7503	1
10	SI-2-4	Spring - Loading	1
11	S-89073-2	Bracket - Bearing	1
12	SC-11-28	Mach. Screw - #10-24 x 2-1/2 Fil. Hd	8
13	WS-2-15	Washer	8
14	P-65478-14-1	Stator Assy. (200 V.. do Hz.)	1
15	P-65478-14-2	Stator Assy. (230 V., 60 Hz.)	1
16	P-65478-14-3	Stator Assy. (460 V., 60 Hz.)	1
17	P-65478-136-1	Stator Assy. (50 HZ.)	1
18	C-15747-306	Rotor Assy	1
19	SC-18-11	Mach. Screw. #10-24 x 3/8" Pan Hd	3
20	P-65120	Shroud - Fan	1
21	BB-18-43	Ball Bearing - N.D. #Z9504	1



4812 CHOPPER ATTACHMENT UNIT (NSF)

#12 CHOPPER ATTACHMENT UNIT (NSF)

ILLUS. PL-18483	PART NO.	NAME Of PART	AMT.
1	R-77667-1	Ring - Adjusting (Brite Metal)	1
2	R-77667-2	Ring - Adjusting (Tinned)	1
3	M-4284	Stub - Sq. Drive	1
4	P-19263-1	Chopper Plate (5/64" Dia. Holes) (Carbon Steel)	1
5	P-16423-1	Chopper Plate (1/8" Dia. Holes) (Carbon Steel)	1
6	P-16424-1	Chopper Plate (3/16" Dia. Holes) (Carbon Steel)	1
7	P-16425-1	Chopper Plate (1/4" Dia. Holes) (Carbon Steel)	1
8	P-16426-1	Chopper Plate (3/8" Dia. Holes) (Carbon Steel)	1
9	M-16427-1	Chopper Plate (1/2" Dia. Holes) (Carbon Steel)	1
10	M-103970-1	Chopper Plate (5/8" Dia. Holes) (Carbon Steel)	1
11	M-16429-1	Chopper Plate (11/16" Dia. Holes) (Carbon Steel)	1
12	P-16423-2	Chopper Plate (1/8" Dia. Holes) (Stay Sharp)	1
13	P-16424-2	Chopper Plate (3/16" Dia. Holes) (Stay Sharp)	1
14	P-16425-2	Chopper Plate (1/4" Dia. Holes) (Stay Sharp)	1
15	P-16426-2	Chopper Plate (3/8" Dia. Holes) (Stay Sharp)	1
16	M-16427-2	Chopper Plate (1/2" Dia. Holes) (Stay Sharp)	1
17	M-103970-2	Chopper Plate (5/8" Dia. Holes) (Stay Sharp)	1
18	M-16429-2	Chopper Plate (11/16" Dia. Holes) (Stay Sharp)	1
19	P-4980	Stuffer - Sausage (Sheep Casing)	1
20	P-290339	Knife - Chopper	1
21	B-122999	Pin. Plate	1
22	M-15877	stud . Plate	1
23	M-15878	norm .+. $. (Incls. items =3.22& 29)	1
24	D-119759-1	Chopper Cylinder Assy. (Tinned) (Incls. items =21. 30& 31)	1
25	D-119759-3	Chopper Cylinder Assy. (Brite Metal) (Incls items =21.30& 31)	1
26	P-5174	Stuffer - Sausage (Hog Casing)	1
27	A-119922-1	Feed Stomper (Plastic)	1
28	A-122555	Pm. Feed (Stainless)	1
29	W-3310	Washer - Worm Thrust	1
30	W-4838-1	Washer . Cylinder "1 hrust	1
31	M-79213	Stud . Stop	1



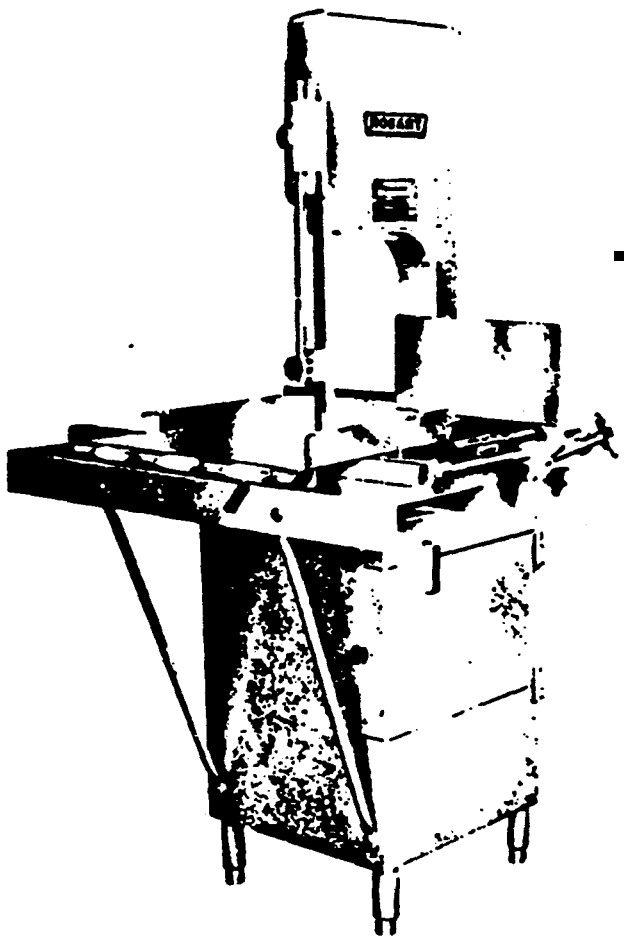
ATTACHMENT HUB ANO TRANSMISSION UNIT

ILLUS. ● L-18479	PART No.	NAME Of PART	AMT.
1	D-11$00457	Dowel	1
2	D-102328	Attachment Hub & Bushing Assy	1
3	SC-37-75	Cap Screw - 5/16"-18 x 3/4" Hex Hd	8
4	WL-3-47	Lock Washer - 5/16" Medium	8
s	M-15391	Sq. Drive Flange & Gear Assy. (53T)	1
6	V-4478	Nut - Motor Shaft Lock k	1
7	V-10928-2	Nut - Motor Shaft	1
6	WS-8-4	Washer	1
9	C-109070-4	Key	1
10	C-14026	Pinion - Motor (20T) (60 Hz.)	1
11	C-113393	Pinion - Motor (23T) (50 Hz.)	1
12	M-14029	Deflector - Grease	1
13	BB-5-50	Ball Bearing - Fafnir #201K	1
14	C45130	Main Dr. Gear & Co-Shaft Pinion Assy. (56T) (60 Hz.)	1
15	C-113392	Main Dr. Gear & Co-Shaft Pinion Assy. (53T) (50 Hz.	1
16	BB-5-50	Ball Bearing - Fafnir #201K	1

HOBART

INSTRUCTION MANUAL

.,. with Replacement parts



. MODELS 5212 AND 5212-MEAT SAWS

ML-31665 -6212
ML-31688 - 6212-F

THIS MANUAL REPLACES AND SHOULD BE USED INSTEAD OF FORM **11562C** (7-7S1.

PRIOR ML'S COVERED IN THIS MANUAL:

ML-18984 -6212
ML-18%5 - **5212-F**

A product of HOBART COR PO RATION T ROY, OH 10 45374

A-17

Installation, Operation and Care of MODELS 5212 & 5212-F MEAT SAWS

Save These Instructions

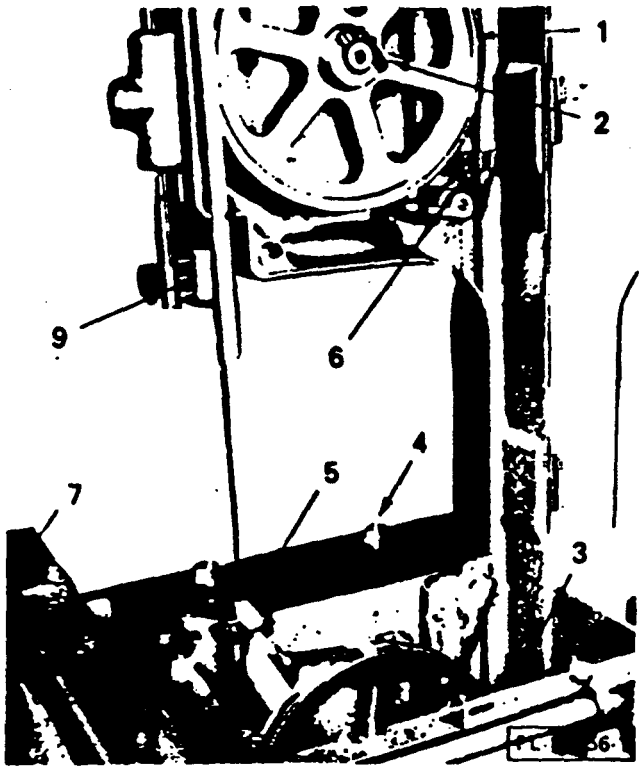


Fig. 1

GENERAL

The 5212 and 5212F Meat Saws are designed to process large quantities of product. They are equipped with a 2 H.P. electric motor. Applications above 250 volts include reduced voltage pilot circuit. Motor overload protection is offered as an option.

The 5212 features a movable carriage table, easily moved by operator's body, and a carriage lock.

The 5212F has stationary cutting tables, specially designed for poultry.

One long life blade is furnished with each meat saw. The blade cannot be resharpened and replacements are available through authorized Hobart offices.

INSTALLATION

Place the machine as close to its operating location as possible. Remove the shipping box. Remove and unpack all disassembled components. The pusher plate and scrap pan are packed in the base compartment. Remove the four retaining bolts from the underside of the skid and slide the machine off the skid.

FEET ASSEMBLY

Coat the *threads* of the feet with Lubriplate 630AA (supplied) and thread the feet into machine legs. Make final adjustments in machine location.

Level the machine side to side and front to back by placing a spirit level on top of the base unit (5, Fig. 1) and adjusting the feet as necessary. Lock feet in piece, using the set screws furnished.

CARRIAGE SUPPORT

Remove the fourteen retaining screws (4, Fig. 2) and the *motor access* panel on the left-hand side of

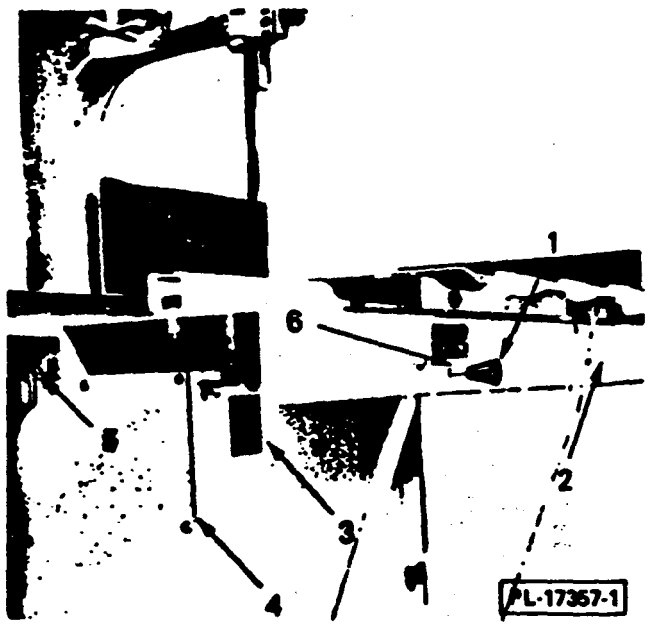


Fig. 2

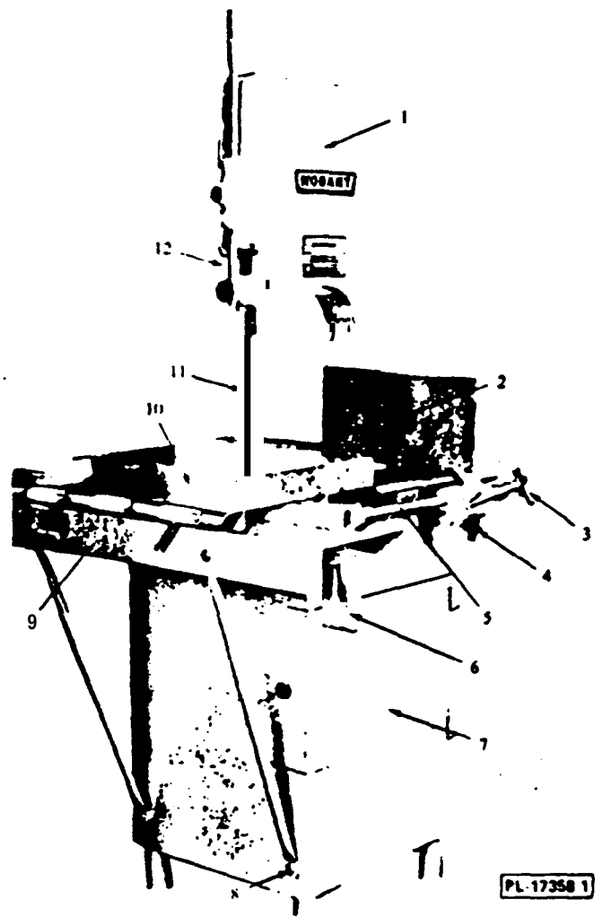


Fig. 3

machine. Locate the carriage support (9, Fig. 3), using dowel pins as locators, and bolt in place. Next, assemble the two support braces. NOTE: Spacers (8, Fig. 31 are used On lower carriage bolts with nuts and lock washers on inside of base.

BLADE

Lower upper Made pulley by turning tension adjusting hand wheel (5, Fig. 4) several revolutions to the left. Open head door (1, Fig. 3). Raise gauge plate (2, Fig. 3) to its vertical position. Completely lower the upper guide unit. Place the saw blade over the upper and lower blade pulleys. The blade teeth must point to the RIGHT and DOWN. If the teeth do not point DOWN, remove the blade, twist it inside out and replace on saw. Make sure the blade is properly placed in the upper guide (9, Fig. 1) and rear wiper (6, Fig. 1) units.

Turn the tension *adjusting* hand wheel (5, Fig. 4) to the right until the figure "3" starts to appear in the tension indicator (1, Fig. 4). Rotate the upper blade pulley, by hand, until the blade centers itself on the pulleys.

Turn the tension adjusting hand wheel (5, Fig. 4 slowly to the right until the indicator (1, Fig. 4 registers "4'" at eye level. This is the maximum operating tension for the blade. Swing nylon

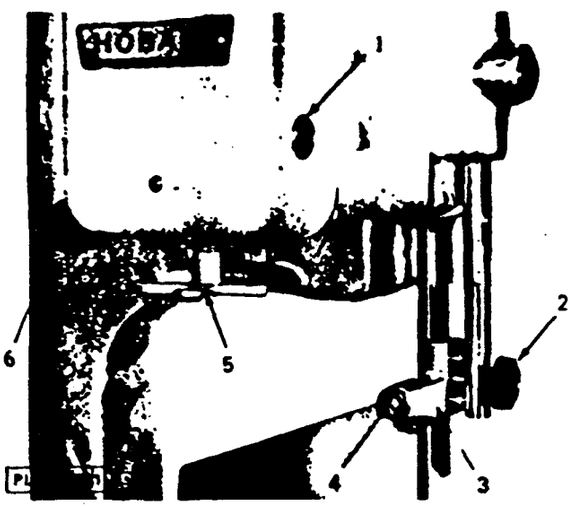


Fig. 4

guard (1, Fig. 51 up. Position front wiper assembly (7, Fig. 5), with blade in *dot* of steel block and wipers on both sides of blade .(5, Fig. 5). Align wiper assembly into wiper bracket slideway slot (6, Fig. 5) and lower into position. Close nylon guard. Close head door.

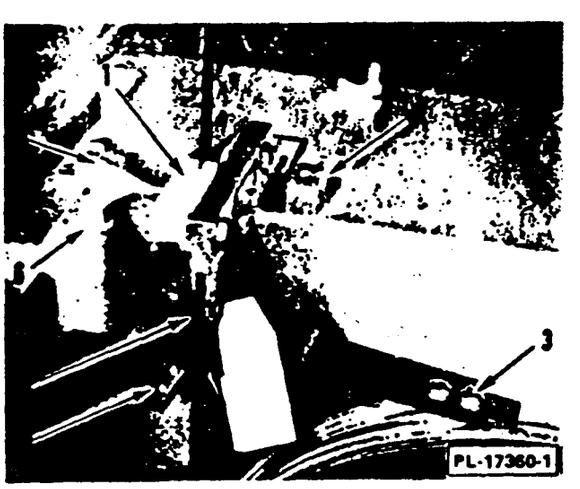


Fig. 5

TABLE

Tilt the table on its side, blade side edge up, slide"' under saw head and lower in position. The table is ● ligned and supported by a locator block (2, Fig. 5) and four table rests (4, F@ 1) fastened to the machine base. Raise the left end of the table ● nd slide it to the right so that the tongue is inserted into the slotted keeper (3, Fig. 1) of the base. Lower the left end of the table and check to assure the pins of the table rests are on the outside of the table angles. Latch table down with the table clamp (5, Fig. 2).

CARRIAGE

The carriage (10, Fig. 3) may be assembled from left or right side. Turn the "L" shaped carriage stop (7, Fig. 1) so that the rubber bumper is toward rear of machine. Align the center bearings of the carriage with the carriage guide. Roll carriage into position. Return carriage stop to stop ping position.

Store pusher plate on underside of carriage support (6, Fig. 3).

SWITCH

Insert the rod through the hole (6, Fig. 2) in the carriage support, then through the bushing in the base. Turn the switch rod and knob assembly clockwise and thread firmly into switch rod connector.

ELECTRICAL CONNECTIONS

Before making electrical connections, check the specifications on the data plate (3, Fig. 2) to assure they agree with those of your electrical service.

WARNING: DISCONNECT ELECTRICAL POWER SUPPLY ANO PLACE A TAG, AT DISCONNECT SWITCH, INDICATING CIRCUIT IS BEING WORKED ON.

Electrical and grounding connections must comply with the applicable portions of the National Electrical Code and/or other local electrical codes.

BRANCH CIRCUIT SIZE AND PROTECTION

Dual Element Time-Delay Fuse

Volts	Phase	Min. Ckt. Ampacity	Max. Fuse Size	60°C Copper Wire Size
115	1	40	40	8
200-230	1	25	25	10
200-230	3	15	15	14
460	3	15	6	14

Inverse Time Circuit Breaker

Volts	Phase	Min. Ckt. Ampacity	Max. Ckt. Bkr. Size	60°C Copper Wire Size
115	1	40	40	8
200-230	1	30	30	10
200-230	3	20	20	12
460	3	15	10	14

NOTE: The above information compiled in accordance with the National Electrical Code, 1981 edition.

Connect the individual branch electrical power supply to the contactor leads A 1-3/32" diameter hole (for 3/4" conduit) is provided in the base for connecting rigid or flexible conduit. Circuit conductors and fuse protection should conform to local, as well as national, code requirements.

MOTOR ROTATION

In three-phase applications, ● check must be made to verify correct direction of motor rotation. Apply electrical power and energize the machine momentarily by pulling, then pushing, the switch knob (1, Fig. 2). The blade must travel in the DOWNWARD direction.

If rotation is incorrect, DISCONNECT ELEG TRICAL POWER SUPPLY ● nd interchange any two power supply leads. Reenergize machine momentarily ● nd verify correct direction of rotation.

Replace motor access panel and fourteen retaining screws (4, Fig. 2).

CLEANING & SANITIZING

It will be necessary to thoroughly clean and sanitize the machine after installation and prior to being placed into service. Refer to MAINTENANCE for instructions.

SAFETY

Safety devices incorporated in the saw MUST be in correct operating position ● nytime the saw is in service.

Before turning machine ON, adjust the UPPER GUIDE ASSEMBLY by grasping the knob (2, Fig. 4) end sliding guide (3, Fig. 4) up or down as necessary to keep the guide as close to the work as possible.

The PUSHER PLATE is to be used when cutting short ends, thus keeping operator's hands away from saw blade.

The GAUGE PLATE (2, Fig. 3) is used to cut slices of uniform thickness.

All doors and inspection covers MUST be in operating (closed) position while machine is running.

OPERATION

CONTROLS

The SWITCH KNOB (1, Fig. 2) must be pulled to start the machine, thus eliminating accidental starting by bumping the knob. To turn machine OFF, push knob in.

SAWING

Place item to be cut on the carriage (10, Fig. 3) and turn saw ON by pulling switch knob (1, Fig. 2). Stand in front of machine, leaning lightly against the scalloped front of the carriage. Move the carriage to the left, past the saw blade (11, Fig. 3), at a steady and uniform rate. Use your left hand to remove and stack product as it is cut. NEVER REACH IN FRONT OF BLADE. Always reach around the left side or in back of saw blade. On the return stroke, pull the item back and away from saw blade.

To cut slices of uniform thickness, set the gauge plate (2, Fig. 3) at the desired position by turning the adjusting knob (3, Fig. 3). A scale is etched on the table.

If the gauge plate is not needed and interferes with work, it may be moved out of the way. Lift the adjusting knob, to disengage the teeth, and slide the gauge plate *to the* rear of the machine or raise the gauge plate to a vertical position and slide to a convenient location.

An adjustable gauging pin permits the operator to slide the gauge plate out of the way and then back to the original position at a later time. To set the pin, adjust the gauge plate to the desired position by turning hand knob. Loosen the gauging pin hand knob (4, Fig. 3) and slide the pin against the gauge plate support stop. Tighten the gauging pin hand knob.

The pusher plate is used to hold meat against the gauge plate when slicing short ends. Dowels in the pusher plate maintain the necessary alignment with the raised edge of the carriage. A stop on the carriage prevents over-travel. By holding the pusher plate handle with the right hand, a safe distance from the blade will always be maintained. Store the pusher plate on the underside of the carriage support (6, Fig. 3) when not in use.

If locked carriage operation is desired, ● lign th right edge of the carriage with the right edge of tl table. Turn the spring loaded carriage lock (2, Fi 2) until it snaps into place.

MAINTENANCE

WARNING: DISCONNECT ELECTRICA POWER SUPPLY AND PLACE A TAG, AT TH DISCONNECT SWITCH. INDICATING THE CIF CUIT IS BEING WORKED ON BEFORE BI GINNING ANY MAINTENANCE PROCEDURI

CLEANING ANO SANITIZING

It is recommended that the saw be thoroughl cleaned and sanitized after each day's operation c anytime it is not to be used for an extende period of time (over night).

Supplies

Recommended cleaning and sanitizing supplie include: a 12" handle nylon bristle brush; a tw compartment pail for cleaning solutions; a pail an spray bottle for sanitizer; a scrap pail; and clea cloths.

Solutions

For cleaning, ● powdered detergent such as Soila or Spic 'n' Span is recommended. Do not us liquid soaps es they. can corrode metal surfaces Prepare a hot detergent solution in one side of th two compartment pail. Fill the other compartmer with warm potable rinse water.

Mix a sanitizing solution by adding one tablespoo of household bleach (5.25%) or an iodopho sanitizer, such as Iodet, to one gallon of cool wate in a pail. This makes a 200 ppm solution. Use thi solution to fill the spray bottle, as well as the pail for sanitizing.

Disassembly

Release carriage lock.

Turn (at either end) the "L" shaped carriage stop (7, Fig. 1) and remove carriage.

Rotate gauge plate (2, Fig. 3) to raised (vertical) position.

Release table clamp. (5, Fig. 2). Pull the table to the left until tongue is clear of the slot. Tilt the table on its side, blade side edge up and remove from under saw head.

Open and lift off head door (1, Fig. 3). Open and lift off base door (7, Fig. 3). Remove scrap pan.

Swing nylon guard (1, Fig. 5) up and lift front wiper assembly (7, Fig. 5) from machine.

Turn tension adjusting hand wheel (5, Fig. 4) to the left, releasing blade tension. Remove blade.

Loosen upper wiper unit hand knob (6, Fig. 4) several turns. Bump knob with palm of hand to free stud. Remove hand knob and remove upper wiper unit (6, Fig. 1).

Open pulley retaining latches (2, Fig. 1) and slide the upper and lower blade pulleys from shafts. NOTE: Pulleys are interchangeable.

All removed parts can be cleaned and sanitized in ● sink. Clean and sanitize machine, starting ● t the top and working down.

Washing

Remove any *large scraps* of product and place in scrap pail. Dip a clean cloth in the detergent solution, wring it out, and thoroughly wash each component. Use the brush for hard to reach or stubborn soil. Use care to thoroughly ckan interior corners of pulley housings. Using a second clean cloth in the rinse water, thoroughly rinse each component immediately after washing.

Sanitizing

Soak a clean cloth in the sanitizing solution. Wring cloth out so that when wiping parts they are left moist, but not dripping wet. Thoroughly wipe all surfaces. Resoak and wring out cloth frequently. Use the spray bottle to sanitize hard to reach spots by spraying ● light mist on all surfaces. Do not wipe surfaces dry after sanitizing. Allow adequate time to dry.

Reassembly

Prior to reassembly a light coating of tasteless mineral oil should be applied to all surfaces. Reassembly is ● reversal of disassembly. Machine should be covered when stored.

Clean Up

Rinse all buckets, brush, the spray bottle ● nd any other tools in the remaining detergent and sanitizing solutions. Store cleaning tools in ● proper storage location. The cleaning cloths used should be sent to ● laundry for cleaning or discarded.

NOTE: Hydraulic cleaning equipment is available through private suppliers. If such equipment is used, follow supplier-s instructions.

LUBRICATION

Little lubrication is required as all high speed shafts have prepacked bearings.

A small amount of grease is required in the six ball bearing rollers of the carriage. Regularity of lubrication will depend on amount of use.

Frequently apply a few drops of oil to: the gauge plate rack (5, Fig. 3); upper blade slide rod (12, Fig. 3); and pulley shafts. Check to assure each component moves freely.

SAW BLADE REPLACEMENT

DISCONNECT ELECTRICAL POWER SUPPLY and move the carriage (10, Fig. 3) to the left-hand carriage stop. Raise the gauge plate (2, Fig. 3) to the vertical positon. Release the table clamp (5, Fig. 2). Pull the table to the left until the tongue is clear of the slot. Tilt the table on its side, blade side edge up ● nd remove from under saw head. Swing nylon guard up (1, Fig. 5). Open head door (1, Fig, 3).

Turn tension adjusting hand wheel (5, Fig. 4) to the left, releasing blade tension. Remove blade.

"Install new blade over upper and lower blade pulleys. The blade teeth must point to the RIGHT and DOWN. If the teeth do not point DOWN, remove the blade, twist it inside out and replace on saw. Make sure the blade is properly placed in the upper guide and rear wiper units.

Turn the tension adjusting hand wheel (5, Fig. 4) to the right until the figure "3" starts to appear in the tension indicator (1, Fig. 4). Turn the upper blade pulley (1, Fig. 1), by hand, until the blade centers itself on the pulleys.

Turn the tension adjusting hand wheel (5, Fig. 4) slowly to the right until the indicator registers "4*' at eye level. This is the maximum operating tension for the blade.

The remainder of assembly is ● reversal of disassembly.

BLADE BACK-UP BLOCK ADJUSTMENT

Clearance between back-up blocks and blade should be approximately 1/32". The clearance should always be checked ● fter blade installation.

Energize machine momentarily to allow blade to seat. Turn machine OFF. DISCONNECT ELECTRICAL POWER SUPPLY and measure the distance from the left edge of the blade to the back-up blocks, located in upper and lower blade guide units. If the clearance is not approximately 1/32" an adjustment will be necessary.

To adjust upper back-up block, loosen lock nut (4, Fig. 4) and turn screw as necessary. Tighten lock nut. To adjust lower back-up block, loosen lock nut and turn screw as necessary. Tighten lock nut.

Re-energize machine momentarily. DISCONNECT ELECTRICAL POWER SUPPLY and recheck clearance. Repeat procedure as required.

PULLEY WIPER ADJUSTMENT

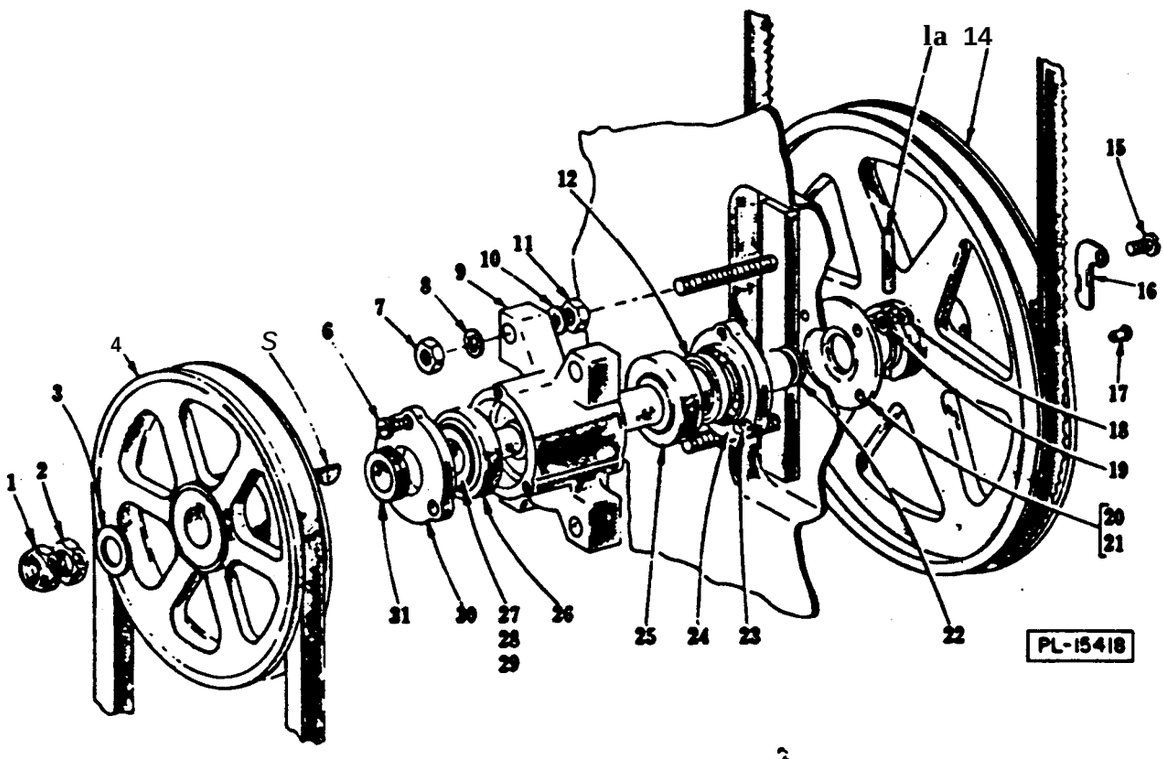
The upper (6, Fig. 1) and lower (3, Fig. 5) pulley wipers should be aligned so that they track squarely in the center of the pulley.

To adjust DISCONNECT ELECTRICAL POWE SUPPLY. Remove the table and open the he door to gain access to the pulleys. Make ● visu inspection to determine direction and ● ount c adjustment required. Loosen the two retainir screws (3, Fig. 5}, position wiper(s) ● nd retighte Momentarily energize machine to verify adjus ment.

BLADE SCRAPER ADJUSTMENT

Correct adjustment is achieved when scrapers ● slightly behind the blade teeth while the blade resting against the back-up block&

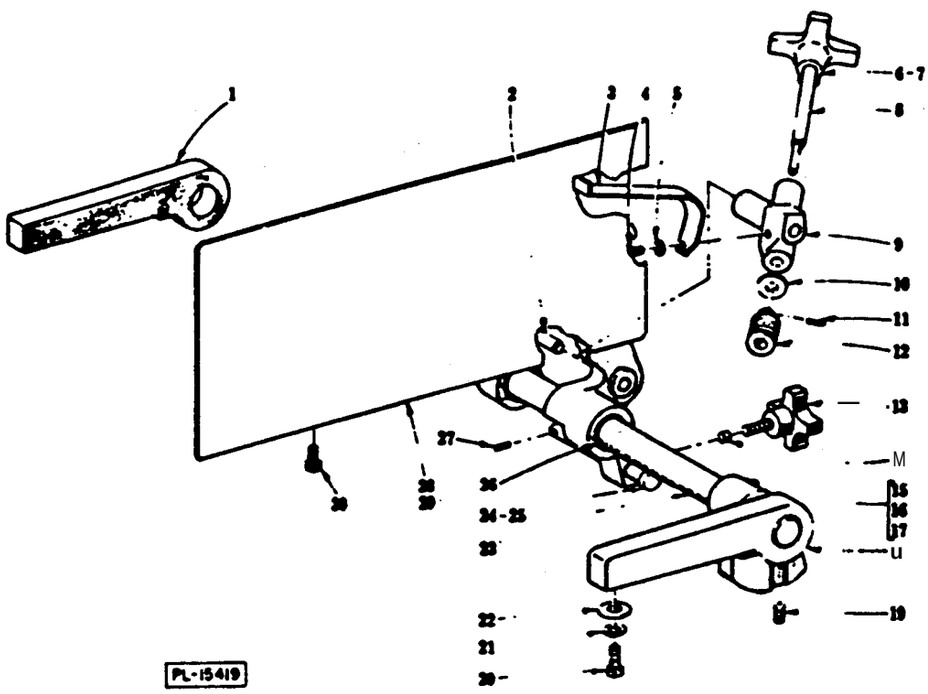
To adjust, DISCONNECT ELECTRICAL POWE SUPPLY. Remove the table and open the hea door. Remove the upper blade scraper unit {6, Fi 1) and lower guide and scraper unit (7, Fig. 5 Loosen the *scraper* retaining screws (4, Fig. 5) s that the scraper can be moved by pushing agains it. Replace the units. With a piece of wood, pus the blade against the back-up blocks. Position th scrapers. Remove the guide units and tighten th retaining screws. Replace guide units, table, ● *n* close *head door.*



LOWER BEARING CARRIER UNIT

LOWER BEARING CARRIER UNIT

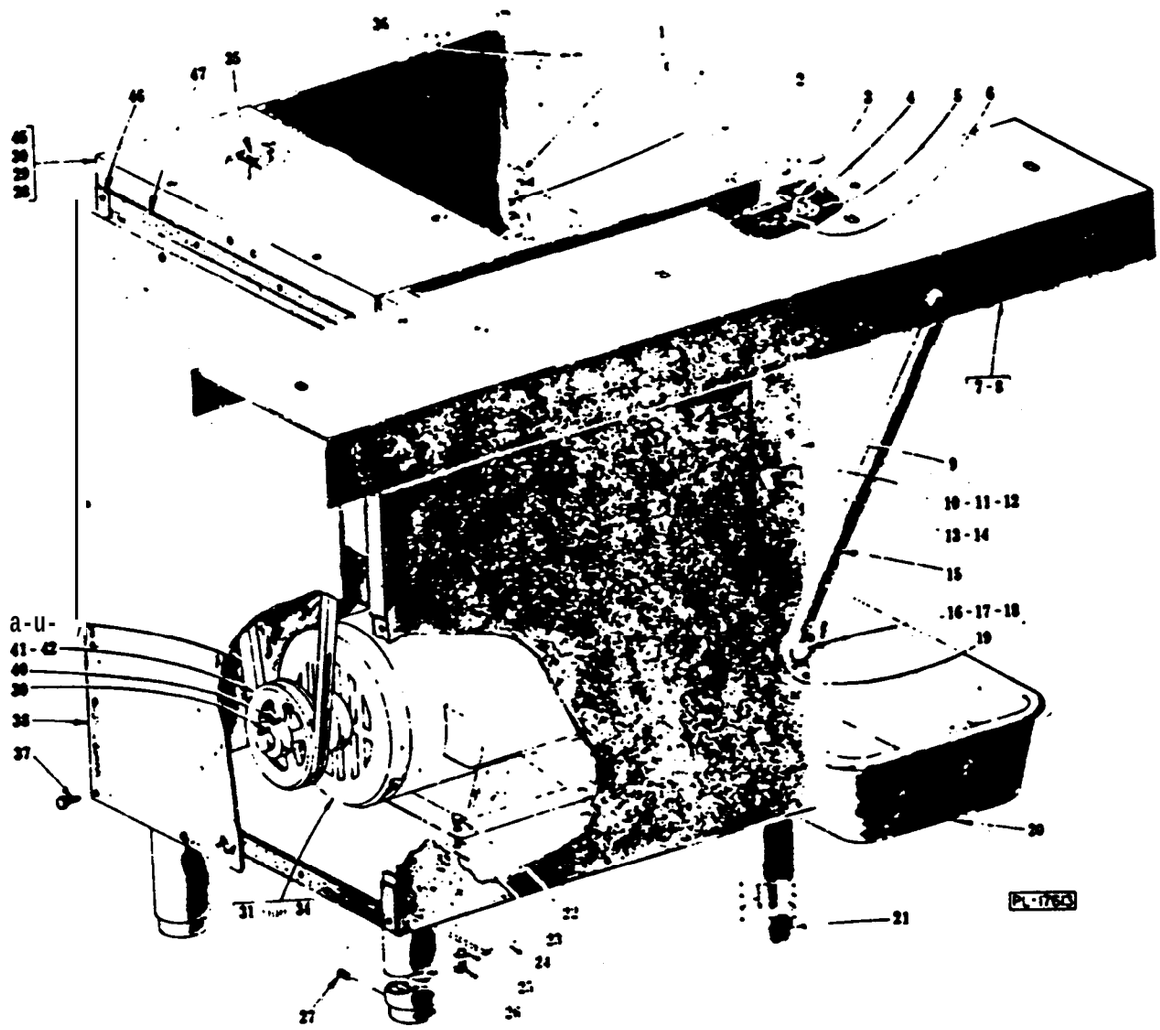
ILLUS. PL-15418	PART No.	NAME OF PART	AMT.
1	NS-31-43	Stop Nut - 3/4"-16"E14c-	)
2	NS-17-49	Jam Nut. 3/4"-16 Hex Fin	I
3	WS-29-12	Washer	1
4	E121033	"V" Pulley - Bearing Carrier (7-3/4 O.D.)	1
5	KW-3-15	Key - #807 Woodruff	1
6	SC-1249	Mach. Screw - 1/4"-20 x 1/2 Fil. Hd	3
7	NS-13-30	Full Nut. 1/2"-13 Hex Fix	4
8	WL-8-31	Lock Washer - 1/2" Int. Shakeproof	4
9	D-114562	Carrier - Lower Bearing	1
10	WL-8-31	Lock Washer - 1/2" Int. Shakeproof	4
11	NS-13-30	Full Nut .1/2-13 Hex Fin	4
12	M-71403	Seal - Grease	1
13	B-122922	Groov-Pin - Special	1
14	R-72362	Flanged Pulley (Blade) Assy. Unit (Incls. Items #15, 16 & 17)	1
15	M-20851	Screw - Latch	1
16	M-20852	Latch	
17	M-7%26	Catch - Friction	:
18	SC-67-12	Mach. Screw - #10-32 x 5/16 Trimmed Hex Hd	4
19	WS-23-34	Washer	4
20	M-77510-2	Washer & Seal Assy. (Incls. item 821)	1
21	M.77511	Seal - Diaphragm	1
22	D-117017	Shaft - Lower Bearing Carrier	1
23	SC-12-69	Mach. screw. 1/4"-20 x 1/2 Fil. Hd	3
24	M-77319	Bearing Cap & Seal Assy. (Incls. item #12)	1
25	BR-2-20	Roller Bearing - Cone A Cup Assy	1
26	BR-2-27	Roller Bearing - Cone & Cup Assy	I
27	8-123192-1	Washer . Shim (.002" Thk.)	AR
28	8-123192.2	Washer - Shim (.005" Thk.)	AR
29	B-123192-3	Washer - Shim (.00S" Thk.)	AR
30	C-l 14S61	Cap - Lower Bearing Carrier ("V" Belt Side)	1
31	B-114583	Conveyor - Lower Bearing Carrier Grease	1
	C-117022-1	Lower Bearing Carrier Assy. (Incls. items ● 6. 9,22 thru 29. 30& 31)	1



GAUGE PLATE UNIT

GAUGE PLATE UNIT
(5212 ONLY)

ILLUS. PL-15419	PART NO.	NAME OF PART	AMT.
1	R-77958	Bracket - Gauge Plate Support (Rear)	1
2	*M-77235*	Pin	1
3	*P-77848*	Spring - Gauge Plate	1
4	*SC-21-14*	Mach. Screw - ● 8.32 x 3/8 Rd. Hd	1
5	WL-6-1	~ Washer - ● 6 Light	1
6	B-1185S1	Knob	1
7	X.1 11.5	Set Screw - 1/4"-20 x 1/4 Soc. Hdls., Kn. Cup Pt. "Nylok"	1
8	M-77843	Shaft - Worm	1
9	M-83481	Worm Bracket & Bearing Assy	1
10	WS-18-36	Washer	1
11	PG-7-7	Groov-Pin - Type E. 1/8 x 7/16"	1
12	M-20887	Worm	1
13	C-118958-1	Knob - Positioning	1
14	M-78920	Slug	1
15	SC-47-1	Set Screw - l&24x 3/16" Soc. Hdls., Cup Pt	2
16	M-78168-1	Spacer (Front)	1
17	M-78168-2	Spacer (Rear) (Not Shown)	1
18	R-78915	Bracket - Gauge Plate Support (Front)	1
19	SC-1034O	Set Screw - S/16 -18 x 3/8 Soc. & Pt. "Unbrako/Loc-well"	2
20	SC-62-44	Cap Screw - S/16 48 x 3/4 Hex Hd	4
21	WL-3-47	Lock Washer - 5/16" Medium	4
22	WS-17-16	Washer	4
23	?.78167	Rack - Gauge Plate	1
24	M-8$397	Gauging Pitt	1
25	WS-18-36	Washer	1
26	M-74424	Bushing - Gauge Plate	2
27	PG-11.2	Grow-h. Type E. 7164 x 112	1
28	D-124056-1	Gauge Plate Assy. (SST) (USDA) (Incls. items # 26 & 29)	1
29	NS-25-4	Acorn Nut 1/4"-20	6
30	M-79155	Bolt (Special)	1
	E-120139-2	Gauge Plate Assy. (SST) (Incls. items # 2 thru 14.24.25.27.28 & 30)	1
	?.71846	Worm Bracket Assy. (Incls. items # 3 thru 12)	1



BASE UNIT

BASE UNIT

ILLUS. ● L.17613	ART NO.	NAME O? PART	AMT.
1	?.18917	Bracket . Hinge	2
2	SD-24.29	Self-Tapping ~.re~..s10-321 3/4 Phil. Flat Hd "Taptite"	4
3	WS-18-8	Washer	2
4	WL-4-4	Lock Washer - 3/8" Light	2
5	SC-62-43	CapScrew- 3/3 .16x 314k Hd	2
6	PG-11-3	Groov-Pin - Type 13. S/16- x 3/4 . . . "	2
●7	D-103728	Carriage Support Assy	1
●8	C-104167	Table Extension Support (Not Shown)	1
9	S-77204	Base Door Assy	1
10	SC-8-9	Mach. Screw - = IO-24 x3/8- Rd. Hd	1
11	NS-9-22	Mach. Nut - # 10-24 Hex	1
12	M-68176	Clip - Spring	1
13	B-120039	Knob - Door	1
14	SC-8-9	Mach. Screw . #10-24 x 3/8" Rd. HA	1
1s	2.78993-1	Brace - Carriage Support	2
16	SC-82-38	Carriage Bolt . 3:*8 "-16 x 1	4
17	WL-4-4	Lock Washer -318- Light	4
18	NS-13-25	Full Nut . 3/S=16 Hex Fin	4
19	M-74888-1	Washer - shim.	2
20	1{.10407s	Pan - Meat Scrap	1
21	M-290349	Foot & Insert Assy	4
22	SC-36-71	Cap Screw - 3/8"-16 x 1.1/4"%x Hd	4
23	B-122706	Booster - Motor	AR
24	P-78992	Reinforcement - Base	2
2S	WL-4-4	Lock Washer - 3/8" Light	4
26	NS-13-25	Full Nut . 3/8"-16 Hex Fin	4
27	SC-111-5	Set Screw - 1/4"-20 x 1/4"*. Hdls., Kn. Cup Pt. "Nylok"	4
28	C-118544-1	Lug . Solderless	1
29	WL-7-12	'be* W"adrer.•10 Ext. Shakeproof	2
30	NS-9-22	MA. Nut. #10-24 Hex	1
31	D-278201-1	Mt~14*ti I15'2.W 1...60 Hz.. 1 Ph.) (Incls. item #39)	1
32	B-294121	Motor (230/460 V.. 60 Hz.. 3 Ph.) (Incls. item =39)	1
33	D-118193-3	Motor (115/220 V.. 50 Hz.. 1 Ph.) (Incls. item #39)	1
34	D-118284-3	Motor (220/380 V.. 50 Hz.. 3 Ph.) (Incls. item ● 391	1
35	B-106825-1	Clip - Wiring	2
●036	PH-2-16	Plug - Button. 5 '16	4
37	SD-32-15	Self-Tapping Screw - # 10.32$ 3/8" Hex Washer Hd. "Tapute"	14
38	A-1099 37	Motor Access Panel & Gasket Assy. (Incls. items #46 & 47)	1
39	R-12430-62	Key	1
41r	SC-47-32	Set Screw . 5/16"-18 x 5/16" Soc. Hdls., Cup Pt	1
41	R-67309-1	"V" Pulley - Motor (4.80" O.D.) (60 Hz.) (Incls. item #40)	1
42	R-85405-1	'V' Pulley - Motor (5.95" 0.0.) (50 Hz.) (Incls. item #40)	1
43	B-121032-1	" V' Belt (60 Hz.)	1
44	B-121032-2	" v' Belt (50 Hz.)	1
4s	B-11s183	Base Unit Assy. (Incls. items #1 & 2)	1
46	B-107168	Gasket (Long)	2
47	B-103193	Gasket (Short)	2

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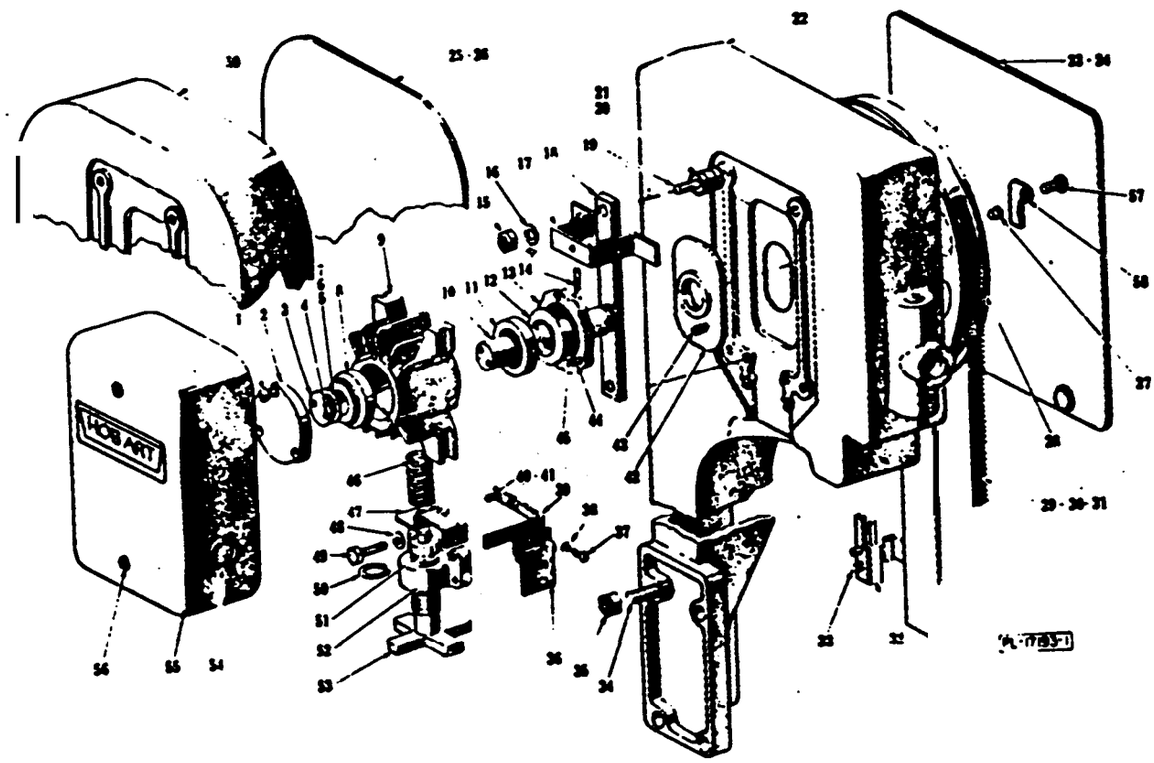
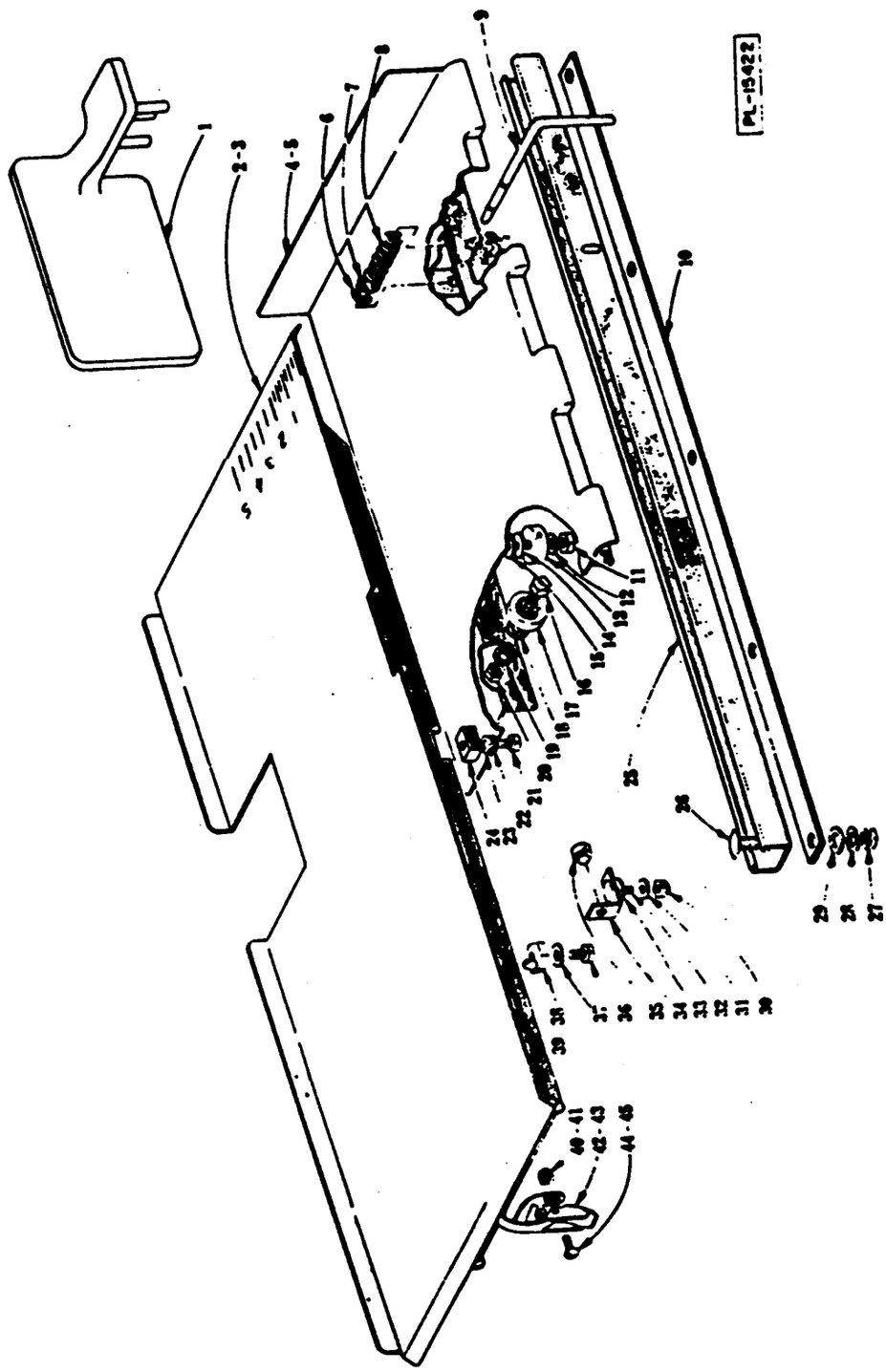


HEAD UNIT

HEAD UNIT

ILLUS. ● L.171X3.1	PART NO.	NAME OF PART	AMT.
1	SC-12-69	Mach. Screw - 1/4"-20 x 1/2" Fil. Hd	3
2	P-67210	Cap. Bearing	1
3	M-67241	Retainer . Bearing	1
4	SC-99-4	Cap Screw .810.24 x 1/2" Flat Hd. "Eslok"	2
5	A-103036-1	Washer - Shim (.002" Thk.)	AR
6	A.1O.W6-2	Washer - Shim (.005" Thk.)	AR
7	A-103036-3	Washer . Shim (.008" Thk.)	AR
	BR-2-27	Roller Bearing - Cone & Cup Assy	1
:	D-103022	Carrier - Upper Bearing	1
10	D-I 17019	Shaft . Upper Bearing Carrier	1
11	BR-2-27	Roller Bearing - Cone & Cup Assy	1
12	B.103290	Plate - Bearing Carrier	1
13	S-103029	Cap. Bearing Carrier.	1
14	B-122922	crow-pin - Special	1
15	NS-13-22	Full Nut - 3/8-16 Hex Fin	4
16	WL-4-3	Lock Washer. 3/8 Medium	4
17	P-67147	Cover Bracket & Weld Nut Assy	2
18	P-67187	Gib . Upper Bearing Carrier	2
19	M-75894	Stud - Upper Bearing Carrier Support	4
20	B-123176-3	Spacer - Bearing Carrier (Upper)	2
21	B-1231764	Spacer - Bearing Carrier (Lower)	2
22	P-75872.5	Head & Magnetic Catch Assy. (Square Corners)	1
23	D-121542-1	Dour Assy. (Head) (60 Hz.)	1
24	D-121542-2	Door Assy. (Head) (50 W.). 0	1
25	R-77278.1	0001 Assy. (Head) (60 Hz.).	1
26	R-77278.2	Dour Assy. (Head) (50 Hz.).	1
27	M-79686	Catch - Friction	1
28	R-72362	Flanged Pulley (Blade) Assy. Unit (Incls. items #26. 27 & 57) . .0.	1
29	B-124444-1	Blade - Meat Saw (.020"-4T) (Standard)	1
30	C-118432	Blade - Meat Saw (.020"-2T) (Poultry)	1
31	s-124444-2	Blade -Meat Saw (.041 "-3T) (Frozen Fish)	1
32	?.78917	Bracket -Hitwe	2
33	SC-20-15	Mach. Screw - =10-24 x 7/8 Phil. Flat Hd	4
34	SC-40-33	Cap Screw - 1/2-43x 1-1/4" Soc. Fil. Hd	4
35	NS-41-9	Lock ~Ut.I/2".I3"t%kI&-	4
36	P-67249	Plate. Blade Tension Sight	1
37	SC-7-71	Mach. Screw - = 10-24 x 1/4" Rd. Hd	2
38	WL-3-22	Lock Washer - =10 Light	2
39	P-75817	Bracket - Tension Indicator	1
40	SC-90-45	Cap Screw . #10-24 x 3/8 Hex Hd	2
41	WL-3-22	Lock Washer - # 10 Light	2
42	15-103288	Shield - Bearing Carrier	1
43	M-75837	Spring . Detent	2
44	SC-12-69	Mach. Screw . 1/4"-20 x 1/2" Fil. Hd	3
45	A-103178	seal . Grease	1
46	M-20867	Spring - Blade Tension	1
47	P-75816	Indicator - Tension	1
48	WL-3-44	Lock Washer . 5/16 Medium	4
49	SC-41-14	Cap Screw -S/16-.18\ 1-1/8 Hex Hd	4
50	RR-4-8	Retaining Ring	1
51	BB-13-1	Thrust Bearing - Nice #603	1
52	?-7S897	Nut . Blade Tension Adjusting	1
53	C-120469-1	Hand Wheel & Screw Assy	1
54	M-75656	Window Unit	1
55	C-120830	Cover & Window Assy. (Incls. item #54)	1
56	SD-31-I	Self-Tapping Screw - 810.24x 5/8 Truss Hd. "Taptite"	2
57	M-20851	Screw . Latch	1
58	M-20852	Latch	1
59	P-75872-3	Head & Magnetic Catch Assy. (Rounded Corners)	1
	"AI14627	Upper Bearing Carrier & Spring Assy. (Incls. items ● 1 thru 14.42.43. U & 4$)	1



TABLE, CARRIAGE AND TRACK UNIT

TABLE, CARRIAGE AND TRACK UNIT

ILLUS. PL-15422	PART NO.	NAME OF PA at	AMT.
1	P-77576-1	Pusher Plate Ass}"	1
*2	S-77136	Table Assy	1
*J	S-80923	Table Assy. (Not Shown)	1
94	D-1 23879"	Carriage AS}.	1
*S	S-80915	Table I \tension Assy. (Not Shown)	1
6	RR-11-9	Retaining Ring	2
7	WS-17-8	Washer	1
8	B-123343	Spring - Carriage Locking	1
9	C-124016	Bar - Carriage Locking	1
10	?.77202	spacer	1
11	NS-13-25	Full Nut. 3/8"-16 Hex Fin	2
12	WL-4-6	Lock Washer - 3/8 Medium	2
*13	BB-8-11	Ball Bearing - Nice #SK-T2198	2
14	WS-18-34	Washer (.010" Thk.)	4
15	WS-18-14	Walter (3/64" Thk.)	2
16	SC-37-73	Cap Screw - 3/8.16x 1 Hex Hd	4
*17	BB-8-11	Ball Bearing - Nice ● SK-72198.	4
18	WS-18-5	Washer	4
*19	WL-4-6	Lock Washer. 3/S Medium	4
20	NS-13-25	Full Nut -3/8 46 Hex Fin.	4
21	SC-62-54	Cap Slew. 1/4"-20 x 314 Hex Hd	1
22	WL-3-38	Lock Washer. 1/4 Medium	1
23	WS-22-9	Washer	1
24	M-78924	Locator	1
25	C-124465	Carriage @& Assy	1
26	SC-94-20	Carriage Bolt . 5/16 -18 x 1"	5
27	NS-13-14	Full Nut - 5/16"-18 Hex Fin	5
*28	WL-3-47	Lock Washer .5/16 Medium	5
29	WS-17-16	Washer	5
30	NS-31-29	Stop Nut "5/t6-18"E~$fic" 0	2
*31	M-70087	Washer - Spring	2
32	SC-94-20	Carriage Bolt .S/16-18 \ 1	2
33	WS-18-34	Washer	2
*34	?-86049	Stop . Carriage	2
*35	M-77318	Bumper -Carriage Srop	2
36	SC-62-53	Cap Screw - 1/4-20\ 1/2 Hex Hd	AR
37	WL-3-38	Lock Washer - 1/4" Medium	AR
38	M-67153	Table Rest Assy. (Back Table)	4
39	A-102285	Table Rest (Front Table) (Not Shown)	4
40	NS-31-10	Stop Nut - .10-24 "Elastic"	2
041	NS-31-12	stOPNUI.810.24 "Elastic"	4
4Z	M-67319	Clamp - Table	1
8043	M-67319	Clamp. Table	3
44	SC-10-36	Mach. Screw - # 10-24 x S/8 Truss Hd	2
45	SC-10-33	Mach. Screw. # 10-24 \ 112" Truss Hd	4
	D-1 23878.1	Carriage Unit Assy. (Incls. items #4, 6 thru 9 & 11 thru 20)	1

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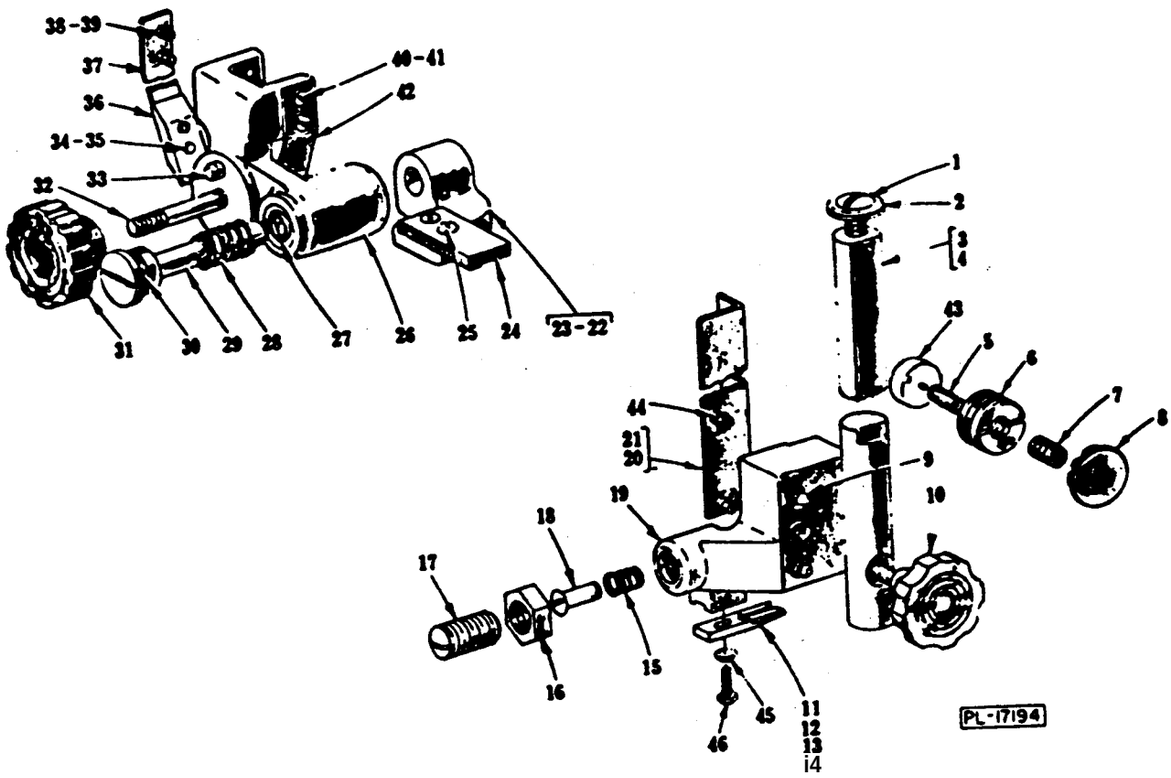
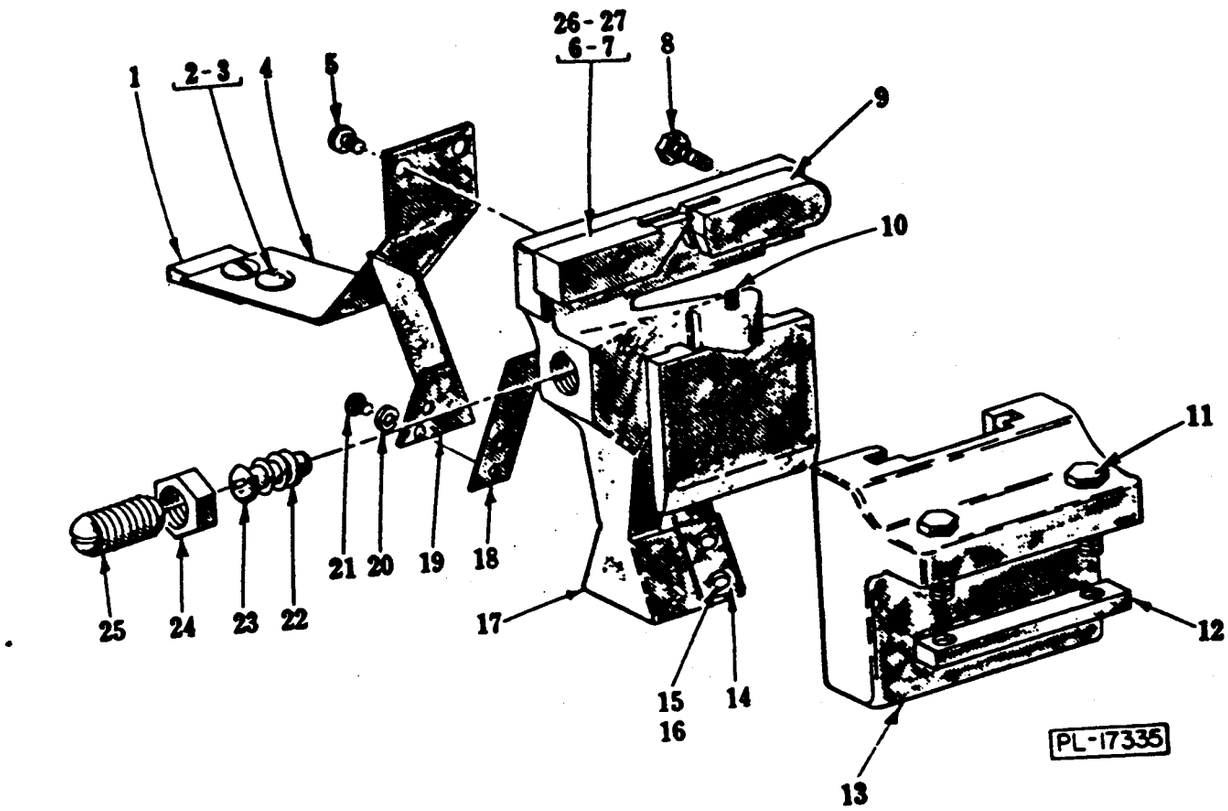


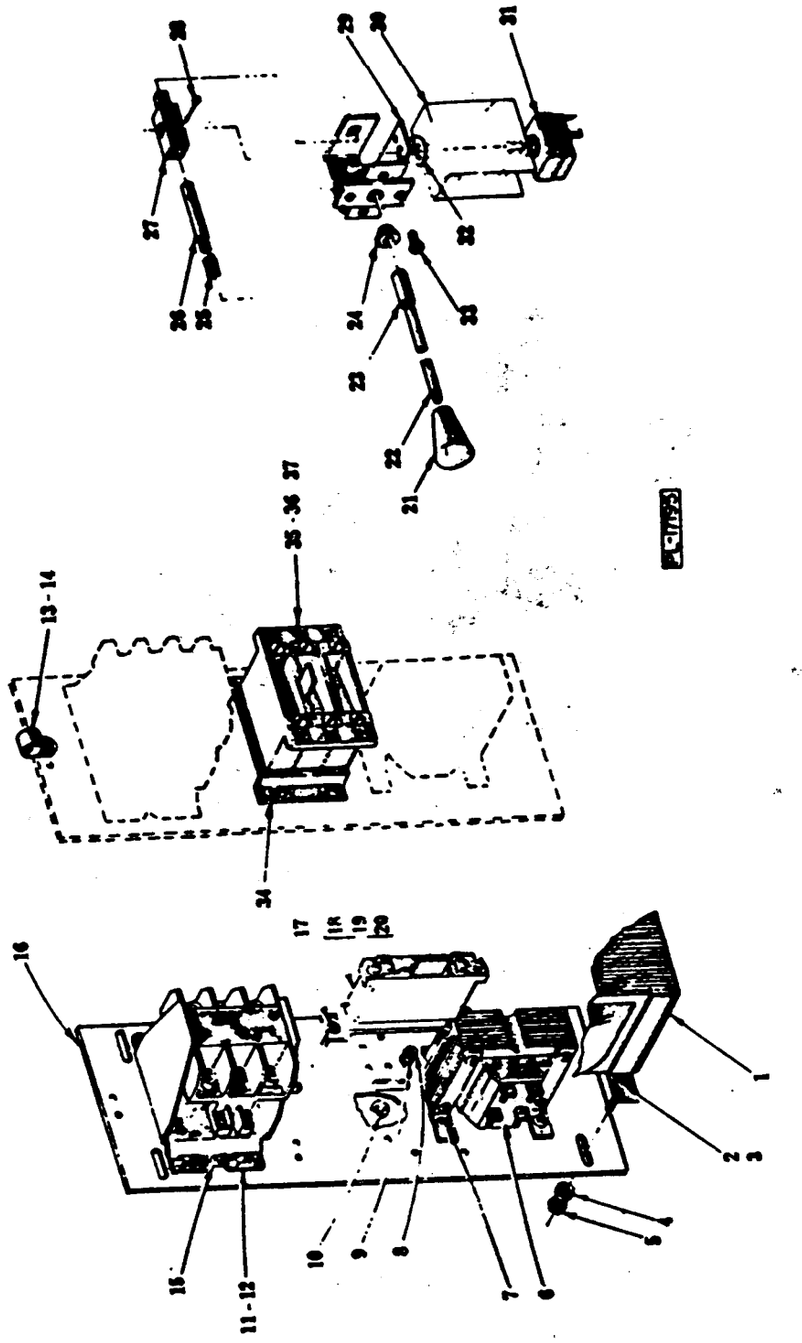
UP-R GUIDE AND PULLEY WIPER UNIT

UPPER GUIDE AND PULLEY WIPER UNIT

ILLUS. PL-17194	● ART No.	NAME OF PART	AMT.
1	5(-.53.16	Mach. Screw -S/16 48x 5/8" Truss Hd	1
2	M-69849	Stop - Slide Rod	1
3	B-102321 ·5	Rod. Upper Blade Guide Slide (18-3/16 Lg.)	1
4"	B.IU23214	Rod . Upper Blade Guide Slide (20-3/8 4.)	1
5	M-75866	Spring - Slide Rod Adjusting	1
6	B-120140	Screw - Slide Rod Adjusting	1
7	SC-63.33	Set Screw - 3/S-16 x 3/8 Halls.. Flat Pt	1
8	PB-2-26	Plug Button	1
9	A-102322	Screw . Adjusting	2
10	C-120444-1	Knob - Positioning	1
11	P-101929-4	Guide - Blade (.020" Blade)	1
12	P-101929-2	Guide . Blade (.014" Blade)	1
13	P.1OI929-I	Guide - Blade (.026° Blade)	1
14	P-101929-3	Guide. Blade (.03S Blade)	1
1s	M.10192S	Spring - Back Up Block	1
16	NS-18-33	Jam Nut - 9/16"-18 Hex Fin	1
)7	SC-49-22	Set Screw - 9/16"-18 x 7/8" Hdls.. Flat Pt	1
18	M.1OI924	Blade Back Up Block AssY	1
19	B-113663	Upper Guide Support & Bushing Assy	1
20	C-120443-1	Guard - Upper Guide Blade (I 3-7/8 Lg.)	1
21	C-120443-3	Guard - UpperGuide Blade (16-7/16 Lg.)	1
22	P-71359	Bracket - Upper Scraper	1
23	SC-88-70	Set Screw - #10-24 x 1/4 Soc. Halts.. Kn. Cup Pt	1
24	B-123656	Wiper . Blade Pulley	1
25	SC-10-33	Mach. Screw - #10-24x I/~ Truss Hd	2
26	R-71357	Bracket - Upper Pulley Wiper	1
27	D-67500-2	"O" Ring	1
2s	M-71364	Spring. Blade Pulley Wiper	1
29	P-71376	Shaft	1
30	D-67500-7	"O" Ring	1
31	M-67315	Knob	1
32	V-21158	Stud. Upper Wiper Support	1
33	M-67306	bin	1
34	SC-21-85	Mach. Screw - #8-32 x 3/16" Rd. Hd	4
35	WL-6-1	Lock Washer - #8 Light	4
36	B-110253	Scraper . Blade	2
37	B-110254	Spring - Scraper Blade	1
3s	SC-21-91	Mach. Screw - #8-32 x 5/16" Rd. Hd	2
39	WL-6-1	Lock Washer -=6 Light	2
40	SC-21-91	Mach. Screw - #8-32 x 5/16 Rd. Hd	2
41	WL-6-1	Lock Washer - =8 Light	2
42	B-110254	Spring. Scraper Blade	1
43	B-120141	Shoe . Slide Rod	1
44	SC-53-5	Mach. Screw - #10-24 x 3/8 Truss Hd	2
4s	A-104573	Washer - Belleville	1
46	SC-67-6	Mach. Screw. # 10-24 3/4 1/2 Trim & Herr Hd	1
	C-113850-7	Upper Guide & Guard Assy. (.020" Blade) (Incls. items #9, 11, 15 thru 20, 44, 4S & 46)	1
	C-1 138504	Upper Guide & Guard Assy. (.014" Blade) (Incls. items #9. 12, 15 thru 20, 44, 45 & 46)	1
	C-113850-9	Upper Guide & Guard As)". (.020" Blade) (Incls. items #9, 11, 15 thru 19,21 , 44, 45 & 46)	1
	C-113850-10	Upper Guide & Guard Assy. (.014" Blade) (Id items ● 9. 12, 15 thru 19.2) .44.4s & 46)	1
	R-104609-1	Upper Wiper Bracket& Knob Assy. (Incls. items #22 thru 42)	1



LOWER GUIDE AND WIPER UNIT



ELECTRICAL UNIT

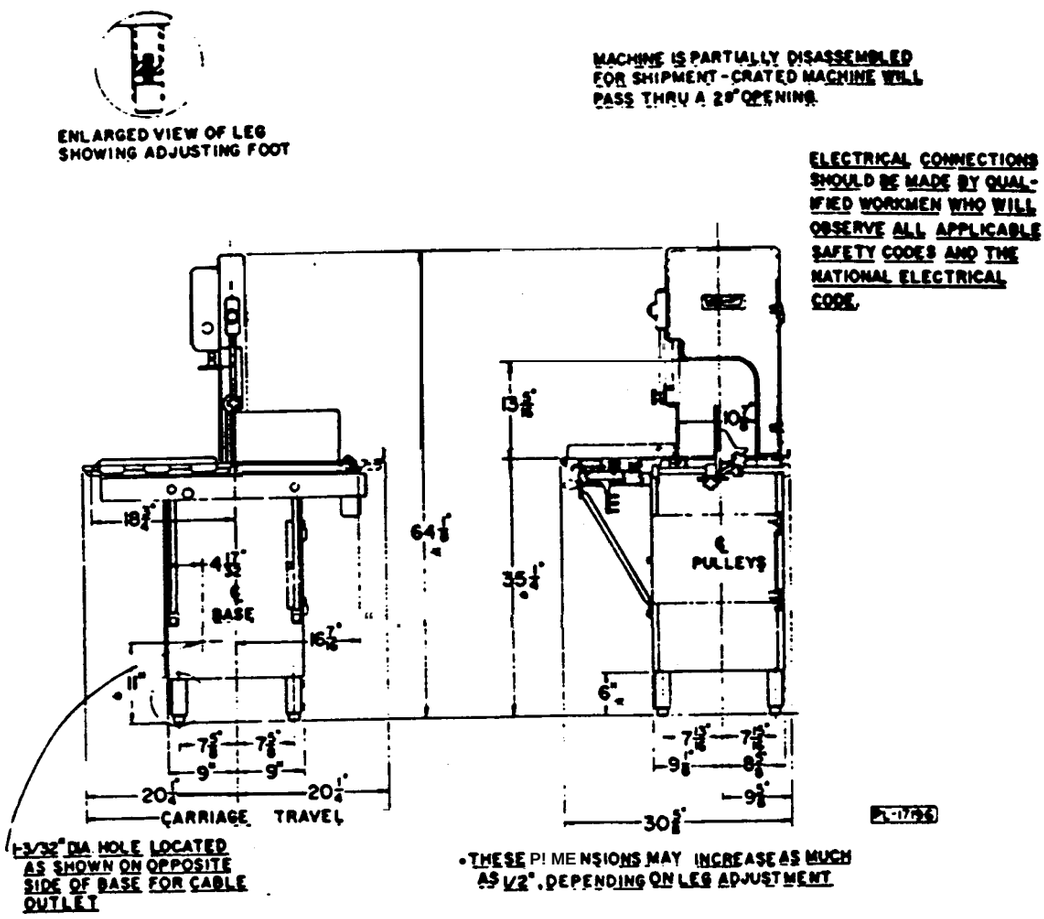
LOWER GUIDE AND WIPER UNIT

ILLUS. PL-17335	PART No.	NAME OF PART	Amt.
1	B-123886	Wiper - Pulley	1
2	SC-53-1	Mach. Screw - # 10.24x 1/4 Truss Hd	2
3	WS-23-34	Washer	2
4	C-123808-1	Spring - Pulley Wiper.	1
5	SD-15-3	self-lapping Screw - # IO-24 x 1/4" Pan Hd. "Taptiie	2
6	B-1091424	Guide - Saw Blade (.020" Blade)	1
7	B-109 I42.2	Guide - Saw Blade (.014 Blade)	1
8	SC-41-61	Cap Screw - 1/4".28x 3]4 Hex Hd	2
9	B-102653	Guard - Saw Blade	1
10	SC-109-84	Set Screw . # 10-24 x 5/8" Soc., Hdls., Flat Pt	1
11	SC41-1 3	Cap Screw - S/16 -18x 1 Hex M	2
12	M-67702	Plate - Wiper Bracket Retainer	1
13	C-121 161	Slideway - Wiper Bracket	1
14	B-121 170	scraper . Blade	1
1S	SC-2145	Mach. Screw - ● 8.32 x 3/16 M Hd	2
16	WL-6-2	Lock *.3*1. ● 8 Medium	2
17	B-121660	Lower Wiper Support & Bushing Assy	1
18	B-121 170	Scraper - Blade	1
19	B42116B	Deflector - Scrap	1
20	WL-6-2	Lock Washer - #8 Medium	2
21	SC-21-85	Mach. Screw - #8-32 x 3/16 Rd. Hd	2
22	M-101925	Spring . Back Up Block	1
23	M-101924	Blade Back Up Block Assy	1
24	NS-18-33	Jam Nut - 9/16-16 Hex Fin	1
25	SC-49-22	Set Screw - 9/16"-18 x 7/8 Hdls., Flat Pt	J
26	B-109142-1	Guide . Saw Blade (.026" Blade)	1
27	B-109142-3	Guide. Saw Blade (.038" Blade)	1
	D-123846-3	Lower Guide & Wiper Assy. (.020 Blade) (Incls. items 1 thru 6.8.9, 10 & 14 thru 25)	1
	D-123846-4	Lower Guide & Wiper Assy. (.014 Blade) (Inch. items # 1 thru 5. 7.8.9, 10& 14 thru 2S)	1

ELECTRICAL UNIT

ILLUS. ● L.1719B	PART NO.	NAME Of PART	AMT.
1	R-83449	Transformer (380 V., 50 Hz., 3 Pk.) (ML-18964* ML-18965 Only)	1
2	SD-1540	Self-Tapping S-W. #8-32 x 3/8" Phil. Pan Hd. "Taptite"	2
3	SC-9-61	Malt. Screw "418-32x 1/2" Rd. Hd	2
4	WL-3-12	Lock Washer -@8 Medium	2
5	NS-9-12	Mach. Nut .@8 32 Hex	2
6	B.1OI93S	Transformer [460 V./Pilot Circuit)	1
7	SD-15-40	Self-Tapping Screw . ● 8.32 x 3/8 Phil. Pan Hd. "Taptite	4
8	NS-I 3-2	Full Nut - 1/4"-20 Hex Fin	2
9	WL-3-38	Lock Washer - 1/4 Medium	2
10	WS-17-10	Washer	2
11	B-121926-I	Contactor (200/230 V., 60 Hz.; 220 V.. SO Hz.) (3 Ph.) (Incls. item #20)	1
12	B-)21926.2	Contactor (460 V., 60 Hz.; 380 V., SO Hz.) (200/230 V. 60 Hz. W/Pilot Circuit; 220 V.. 50 Hz. W/Pilot Circuit) (3 Ph.) (Incls. item #20)	1
13	C-78752-4	Clamp	2
14	SD-15-40	Self-Tapping Screw - 88.32x 3/8" Phil. Pan Hd. "Taptite"	2
15	SD-15-20	Self-Tapping Screw - #10-32 x 3/8 Phil. Pan Hd. "Taptite"	2
16	D-I 13861	Panel -Control	1
●17	SD-15-40	Self-Tapping Screw. ● 8-32 x 3/8 Phil. Pan Hd. "Taptite"	"AR
*18	A-I 17127	Thermal Overload Relay & Screw Assy. (1 Ph.) (Incls. item ● 17) (ML-18964 & ML-18965 Only)	1
*19	A-1 17127	Thermal Overload Relay & Screw Assy. (3 Ph.) (Incls. item ● 17) (ML-18964 & ML-18965 Only)	3
● 2O	---	Heater Element - Overload Relay (Give Eke. Spec., Mach. Model & Motor Type) (ML-18964 & ML-16965 Only)	AR
21	B-120054-I	Knob - Switch	1
22	B-290155-I	Extension - Switch Rod	1
23.	B-1143224	Connector - Switch Rod	1
24	M-80538. I	Bushing . Switch Rod	1
25	B-121547	Spring - Switch	1
26	B-124459	Shaft - Switch	1
27	C-121540-2	Actuator - Switch	1
28	PC-5-8	Cotter Pin	1
29	C-290156	Switch Bracket Assy	1
30	5290058	Insulator	1
31	B-120388	Switch Assy	1
32	8-121827	Ring - Locking	1
33	SC-53-5	Mach. Screw - #10-24 x 3/8 Truss lid	2
34	SD-15-40	Sell-Tappin# screw. #8-32 x 3/8 FM. Fan Hd. "Taptite"	2
●35	B-88196-6- I	Relay - Thermal Overload (1 Ph.) (ML-31665 & ML-31666 Only)	1
●36	B-881 96-9-I	Relay - Thermal Overload (3 Ph.) (ML-31665 & ML-31666 Only)	1
●37	- - -	Healer Element - Overload Relay (Give Elec. Spec., Mach. Model & Motor Type) (ML-31665 & ML-31666 Only)	AR

*Use with Overload Protection.



INSTALLATION DIAGRAM

APPENDIX B

KNIFE SHARPENING

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TRAINING AND SAFETY FOR KNIFE WORKERS

* Reports show that knife accidents are the most predominant cause of disabling injuries in the meat industry.

* The hand knife is the most commonly used tool in the meat cutting industry.

WHY SHARPEN YOUR KNIFE?

There are many good reasons for the proper instruction and training of workmen regarding their working tools.

* dull tools cause worker frustration and fatigue

* they are more dangerous because the operator must force a dull knife

* operators who know how to cafe for their tools properly are more inclined to take pride in their work.

PROPER KNIFE SHARPENING

Butcher knives, skinning knives, and most boning knives must first be beveled on a grindstone or with a file before finish sharpening techniques are applied.

BEVELLING WITH POWER GRIND STONE

1. When using the powered natural stone grinder, beginners should make no more than one pass on each side of the blade at a time, so the bevel will come out even.

2. The knife must be held at the proper angle as it is applied to the stone and pressed firmly with the fingers spread over the blade to apply uniform pressure.

3. Length and depth of the bevel will be regulated by the angle at which the knife contacts the stone. The higher the knife is placed on the stone, the more shallow the' bevel. As the knife is brought down towards the operator, the depth and angle of the bevel is increased.

4. Water should be continuously deposited on the natural stone grinder to prevent overhearing of the metal and to wash away deposits of stone and metal.

5. The travel of t&e stone must always be away from the knife. If the travel is allowed to progress towards the knife, it is possible that the sharpened edge may catch in the stone, causing the knife to turn out of control and injure the employee.

BEVELLING WITH A FILE

A satisfactory bevel can be cut on a knife with a file.

1. The file should be secured in a holder because of the hazard inherent in this method of sharping.

2. The file establishes a flat rather than a concave bevel.

GRINDING

Once a bevel is established, grinding is continued on a handstone.

1. A 320-grit stone is the recommended coarseness for general-purpose packing plant use.

2. The stone should be first thoroughly wetand continuously rewetted. A combination of liquid soap and water will help keep the surface of the stone free of impacted materials during handstoning.

3. The handstone may either be secured in a holder or held with reasonable safety in the hand opposite the knife hand, provided it is held atone end between the thumb and first finger, the thumb being on top. In the event the travel of the knife is too far along the stone, it will slide harmlessly between the stone and thumb.

4. *Draw* the knife across the stone using approximately 70 per cent of the stone face, and alternate the sides of the knife frequently. The knife should beheld at an angle exactly that of the bevel. This is normally about 20 degrees *from* the horizontal.

5. Handstoning will usually progress until a wife edge or rough mass of metal accumulates on the edge. The wife edge can best be removed by making four or five alternate passes on the handstone applying very light pressure, holding the knife at approximately 35 degrees from the horizontal.

BUTCHER*S STEEL

The edge is then aligned on a butcher's steel. Preparation and maintenance of the butcher's steel is as important as preparation of the knife.

1. *Its* purpose is to realign the sharpened edge *of the knife of* straighten it, as the edge becomes turned from cutting meat or striking bones and other hard tissue.

2. Butcher steels are made from hardened tool steel. They should be equipped with a handle having an adequate hilt guard to prevent the knife from striking the operator's hand.

3. The operator should also be trained to hold a steel in the palm of his hand with his thumb in line with his fingers rather than using a 'surrounding grip-. (See figure 14)

4. New steels have a smooth polished surface. Preparation on the surface for effective sharpened will vary with the employee% work.

5. Work that involves cutting skeletal muscle tissue and fat dictates the steel should be first polished to a mirror smooth finish. Grooves are then etched along its entire length. This is usually accomplished by holding the steel between apiece of with medium or coarse emery cloth, between the thumb and forefinger, and pulling the steel through the grit, in one . direction only. This is repeated until the steel is thoroughly grooved.

6. Cutting warm of soft meats, with no exposure to hard bony surfaces, calls for very shallow, fine grooves that are formed by using fine grit emery cloth.

7. The object of the butcher's steel is merely to straighten the microscopic edge of the knife blade as it becomes turned to misaligned. This dictates a very light pressure *of the knife* against the steel, alternating sides of the knife at each pass.

8. If the edge connot be restored after approximately six to eight passes over the steel, the knife edge may be destroyed and the knife should be reground or restoned.

KNIFE SAFETY

Experience shows that knife safety can realistically be obtained by incorporated all of the four basic principles as defined in the next section, "Control Measures". These four fundamentals of controlling knife injuries have be@ developed through many years study of the causes of knife injuries. Where recommended control measureS have been employed, knife injuries ceased to be an accident and injury problem. Where control measures are only partially applied the results are much less than satisfactory.

1. Protective equipment

* Metal mesh gloves are available in two, three, and five-finger styles. There is a ***range of sized in each style.*** Mesh gloves should be carefully selected for the employee's specific task. Because of their inflexibility, gloves should befitted so that the worker's hands will not be irritated by scraping of the metal mesh against the skin. (See figure= 15)

* Properly engineered arm guards are made of an easily cleanable material and are non-porous to avoid dermatitis, contamination and infection problems. These guards are also applicable where there is a great deal of pressure applied to the knife, and where that pressure-suddenly released as the cut is terminated-sends the knife toward the worker's arm.

* **Abdominal protectors are to be** worn on all cutting jobs where knives are used in an inverted position toward the body.

2. The selection of knives

* Employees may select tools that are unsuitable for their work. It is desirable to establish uniform types of knives.

* Knives should be purchased with adequate guards from reputable suppliers. The object of knife handle guarding is to prevent the employee's hand from sliding over the handle onto the blade, in the event the end of the knife stubs against a solid object. Knife guards cannot

always prevent this type Of accident, but in every case will prevent or minimize the severity of an injury by forcing the employee to release his grip on the handle.

* By tradition, knife manufacturers sharpen knives to a needle point. The possibility of a stab injury can be greatly minimized by removing the point from the knife if it is not absolutely needed in the performance of the job. .

3. Safe handling of knives when not being used

* This dictates that the knife be disposed of in a knife scabbard or pouch, worn on the worker's belt and used as a holster.

* It is equally safe to use table slots at work stations for easy knife disposal.

4. **Safety training and proper engineering of the worker's environment**

* Two knife workers should never work on the same piece of material, at the same time because of the hazard of cutting one another.

Knife work always requires close attention and concentration to achieve accuracy. Workers cannot concentrate on two things. Doing their job and not cutting their co-worker. Adequate space should be provided for jobs that involve long reaches so that one worker may avoid cutting another.

* A history of very serious accidents and fatalities arises from the strong inclination of knife workers to pick up and position product with their knives.

Typical examples are the worker who used his knife to pickup a ham prior to boning. The knife slipped out, struck his eyeball, and pierced it, causing loss of sight of his eye. This practice can be eliminated by removing points from knives so that it is impossible to stab, lift, position or move product using the knife as a positioning tool, rather than a cutting tool

Training and Consistency

* Efficiently of performance can be increased and operating costs reduced by the application of proper training and protection of knife workers.

* Proper training contributes to better quality workmanship, better yields, and considerably less worker frustration.

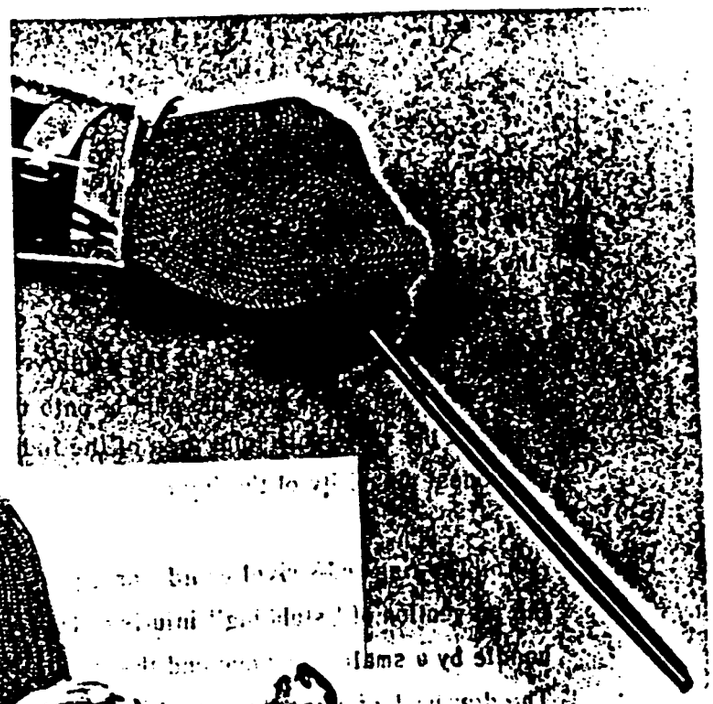
* The four points *of* knife safety are strongly recommended because they have been researched, tried, and found to be effective in reducing knife accidents and minimizing injuries.

* The application of standard training for safety provides an element of consistency *whereby knife* workers can be more effectively supervised on the basis of known policies and procedures.

* The uniform standardization of instructions and equipment will help fall@ costly inventories.

* The application of *only part* of these principles of training and safety does little or no good. Like all principles of management, they must all be kept in balance to be effective. Where these principles have been consistently applied, loss costs have be noticeably reduced, thereby proving these principles *have a high degree* of profitability.

Fi@fe814



– Proper way to grip butcher's steel. Note how thumb is in line with fingers.

Full-hand metal mesh glove. Gloves should be selected for specific task, be fitted to worker's hand.

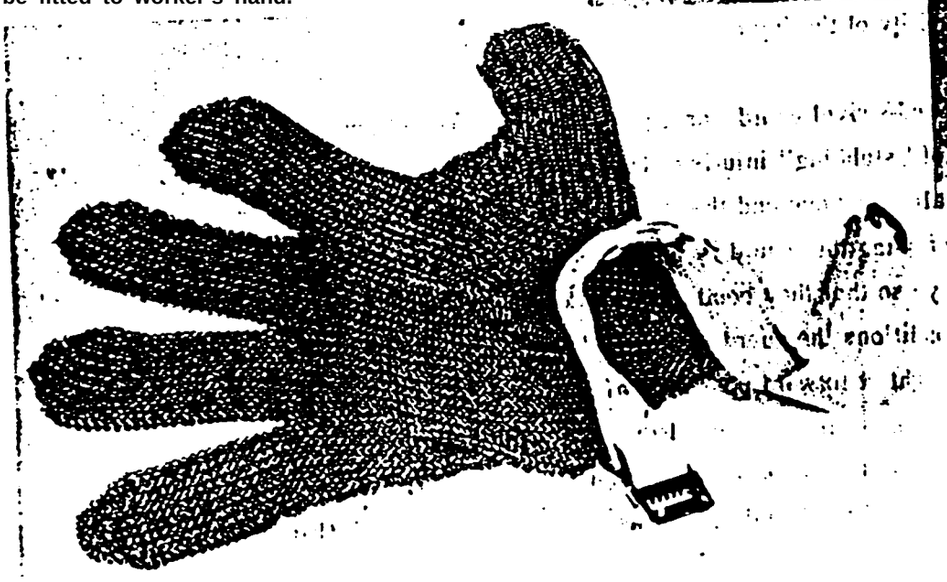


Figure # 15

APPENDIX C

FIRST AID AND MEDICAL PROCEDURES

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APPENDIX C

FIRST AID AND MEDICAL PROCEDURES

WHEN A WORKER IS INJURED, what is done for him immediately-between the time of the injury and the time he gets medical care-will affect severity of his injury. The purpose of this portion of the training manual is to promote proper practices in the treatment of emergencies, and is not a substitute for first-aid training.

Sound, fundamental knowledge in the handling of emergencies that may arise prevents panic and further harm to the victim. A first-aid kit should be in the building and then adequately supplied. Supervision of the first-aid area should always be in the hands of properly trained personnel, and not left open to the indiscriminate use of all employees.

GENERAL RULES

1. BE CALM; size up the situation as completely and quickly as possible before giving first aid.

2. Do the simplest things consistent with good first *aid.*

3. Take care of the most important conditions forst. Severe bleeding, stoppage of breathing, and inhalation of toxic fumes must be treated immediately.

4. Be gentle in handling an injured person. If the injury is serious, keep the person lying down and make him as comfortable as possible. Do not move him unless you know it can be done without aggravating the condition.

5. Be clean when treating a wound. A basic knowledge of bandaging and familiarity with aseptic technique concerning hands, instruments and materials is essential.

6. Call the nursing station immediately if the injured person's condition is serious!!!

Transportation

The way in which an injured person is moved is extremely important. Care is of greater importance than speed. It is essential for the first-aid worker to have an adequate knowledge of lifting and carrying before moving a seriously injured person, because improper methods may increase the severity of the injury or even cause death. This is particularly true in the case of neck or spine injuries. The means of transportation depends upon the nature and severity of the injury, the equipment available and whether there is need for immediate removal. If the injured person is free from danger where he is, it is generally advisable to call the nurse and transport the person under the nurse's instructions.

Keep the following points in mind in any event.

1. Be sure the necessary first aid has been given before moving the person (fractures properly splinted, bleeding controlled, and so forth). Handle persons who have suspected fractures, back, head, and neck injuries with extreme care.

2. Be sure that everything is ready before starting. If a stretcher is not available, one may be improved of blankets, *boards* and blankets, or boards and coats.

3. Be sure plenty of hands are available to move the person. The head and shoulders, trunk, and legs must be supported and this takes at least three able men. Unless there is imminent danger in the area, never attempt to move a person alone, and never ask an incapable person to assist in the moving.

4. Place injured person in a lying position on the *stretcher* unless he must sit up to breathe.

5. If you are unsure as to the injury, it is better to leave the patient lie where he is until qualified help arrives. Further injury to the patient can occur when moved without taking due precaution.

MEDICAL PROCEDURES AND FIRST-AID TRAINING

Good adminstration of first aid is an important part of every safety program. Itis recommended that a first-aid facility such as a deluxe first-aid kit. At least one person per shift should have St. Johns Ambulance First Aid training. Plans should be made to have at least one staff person take a St. Johns Ambulance instructors course. Then new employees can receive first aid training as soon as they are hired and at little cost to the employer. The plant should maintain good liaison with a the nursing station. The nurse should be invited to the plant occasionally to evaluate the quality of first-aid procedure, to make recommendations for improvement, and occasionally to tour the plant for the purpose of detecting conditions that might be detrimental to employees health or safety. The nurse should be well aware of the type of work done so she may better evaluate information given him by patients. The nurse and the secretary manager should routinely inspect first-aid supplies and stretchers, as well as hazardous operations in the plant.

OCCUPATIONAL SAFETY

VISION CONSERVATION

Visual testing should be arranged for all meat cutting employees because injuries are more frequent and work and work habits are poorer in employees with inadequate vision. This is *especially true in the packing* industry where jobs require precision cutting with sharp instruments at a rate of speed.

HEARING CONSERVATION

Noise has long been recognized as one of several causes of deafness. Exposure to high noise levels may cause temporary, or permanent, changes in hearing threshold levels.

Noise Reduction

Noise reduction is the most desirable exposure control method for the prevention of hearing loss. In the meat processing/freezer facilities noise can be reduced by:

1. Keeping the door to the equipment room closed.
2. Ensure that all covers and protective devices on machines are in place.

When noise levels can not be reduced any further and there is still a concern about noise levels then ear protectors are commercially available which are capable of reducing noise entering the ear to acceptable levels for most noise exposures encountered.

MATERIALS HANDLING

MATERIALS HANDLING account for about 22 per cent of all occupational injuries. These injuries are from every part of an operation, not just the storage areas of warehouses.

LIFTING

Workers must trained in safe lifting. Most people give little of no thought to the matter of lifting until they meet some exceptional lifting problem or are injured through using wrong lifting methods.

It is difficult to place lifting limits that apply to all persons. The physical condition, built and stature of an individual contribute to his ability to lift. Workers with physical weakness should not be assigned to jobs that involve continuous heavy lifting. There are many jobs of this nature in the meat packing industry. How a person lifts is more important than what he lifts. Jobs such as lugging carcusses require very capable people who are able not only to endure the strenous exercise connected with the job, but who are willing to learn to so them with the proper rhythm and leverage necessary to avoid injury. There are certain techniques that are used in all jobs involving lifting and the employee should be thoroughly . trained in these.

Some of the general rules for safe lifting areas follows:

1. Size up the load. Do not attempt to lift alone if there is any doubtas to ability to do so.

2. Be sure footing is secure. Geta good balance. This means feet fairly wide apart (8 to 12 inches).

3. Place the feet close to the base of the object to be lifted. This is important because it prevents the back muscles from taking all the load.

4. Bend the knees outward and straddle the load somewhat, keeping the back straight as possible.

5. Now start pushing up with the legs using the strongest set of muscles. Keep the load close to the body to take full advantage of mechanical leverage of the body.

6. Slowly lift the object to the carrying position. Do not jerk it. If necessary to change direction when in an upright position, be careful not to twist the body. Turn body by changes of foot position.

7. If the load is to be deposited on a bench or table, place R on the edge to make the table take part of the load and then push it forward with arms, of of necessary with part of the body in forward motion.

0. In putting t&e load down to the floor surface from a waist-high carrying position, bend the knees and with back straight and load close to the body, lower the load with the arm and leg muscles.

9. Never walk with a load that obstructs vision until sure that the path is clear and there are no floor obstructions.

Persons who have suffered back injuries or hernias are likely to have a repetition of those injuries if they continue heavy lifting - especially if they are not lifting properly. Persons having chronic back trouble should be made aware of the fact that they may have a congenital condition and have abused insufficiently over a period of time. They could be advised to take a job more suitable to &m. The first serious back strain is generally a clue to a repetition of such strains. This is the rule rather than the exception.

APPENDIX D

HAZARDOUS MATERIALS

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HAZARDOUS MATERIALS

USE OF **CLEANING COMPOUNDS**

Fresh meats packers today must be prepared under almost sterile conditions to prevent spoilage. Meat processors have necessarily increased their use of strong chemical mixtures for cleaning and sanitation. Another reason to use stronger formulations is that, in minutes, they will remove soil that would take hours to remove if milder, householder cleaners were used.

* Smaller plants generally purchase formulated cleaners in case lots. Hazard warnings on the label must be carefully observed.

* These strong chemical cleaners can cause burns, poisonings, dermatitis, and other ills to workers handling them. Although well down the list of accident causes, cleaners area significant hazard.

Cleaners are classified as soaps and synthetic detergents, add cleaners, scouring agents, and germicide% These compounds include acids, alkalis, strong oxidizing agents, and otherwise hazardous subtances. This chapter discuses the nature of the chemicals and their hazards, ways to prevent injuries to workers handling them, and first-aid measures if trouble does . occur.

Alkaline Cleaners

The degree of alkalinity or acidity of a substance is measured by its pH when dissolved in water. The stronger acids or alkalis can be harmful when misused. *their strength increases, they become more hazardous.

* Soaps and synthetic detergents are usually alkaline compounds. They emulsify fats, oils, and other types of soil which can then be washed away.

* Continuous exposure to them would cause harmful decreasing of the skin, but in ordinary usage, they are will within safety limits. Detergents can either remove the natural oils *from the skin of* set up a reaction with the oils of the skin to increase susceptibility to chemicals which ordinarily do not affect the-.

- The rapid and thorough alkaline cleaners used in industry, however, are often more strongly caustic and may cause chemical burns and serious eye injury if mishandled.

Acid Cleaner

Common acids used in cleaners are sulfamic, hydrochloric or muriatic, acetic, critic, and phosphoric. Occasionally, hydrofluoric acid is used, in very low concentrations. Sodium add sulfate and sodium add phosphate are somtimes found in dry acid cleaning compounds.

- Acid cleaners are used for removing enrusted surface materials and for dissolving mineral sale. When water is heated to high temperatures, a portion of the minerals in the water maybe deposited. The deposit adheres to metal surfaces and appears as a rusty or whitish scale. Add cleaners chemically react with such scales and make them water soluble so they can easily be removed.

- Acid cleaners are generally not regarded as effective, all-purpose cleaning compounds.

Scouring Compounds

Scouring compounds are frequently compounded from soaps and abrasive materials and are used for scouring with brushes.

- Scouring compounds such as borax and sodium bicarbonate are slightly alkaline.

- Neutral scouring compounds made from earths are frequently compounded with acid for cleaning encrusted material and alkaline deposits.

Germicides

- Germicides are used in good sanitation procedure, but serve an entirely separate function from cleaning compounds.

- They kill existing bacteria left after the removal of soil. Commonly, germicides are calcium hypochloric, sodium hypochlorite, and quatermary ammonium compounds.

Alkali Hazards

- Strongly alkaline cleaning materials have a corrosive action upon all body tissue, especially the eye.

- Exposure frequently causes burns and deep ulceration with ulimate scarring.

- Prolonged contact with dilute solutions may have a destructive effect upon tissue.

- It is important to be aware that the dry powder can get inside a glove or a shoe and cause a severe burn before a person realizes it.

- Inhalation of the *dust of concentrated mist* of alkaline solutions can cause damage to the upper respiratory tract and lung tissue.

- Many alkaline materials react violently when mixed with water - the heat of reaction upon mixing may elevate the temperature above the boiling point and large amounts of a hazardous mist and vapor may be thrown off.

Acid Hazards

- Acid cleaners do not always attack the skin of eyes as quickly as alkaline cleaners; therefore, a severly exposed person may not realize the extent of injury until serious injury has occurred. The acid, by then, will have penetrated the oil barrier of the skin so that washing and flushing the area may be of little value.

Scouring Compound Hazards

- Most of the scouring compounds are sold under specific trade names and are no more hazardous than ordinary hand soaps.

- Some contain chlorinated chemicals which are skin irritants.

Precautions

Hazards arise in three situations when handling cleaning chemicals:

(a) Blending raw ingredients or mixing concentrated solutions
(b) storage and handling; and
(c) application of the blended cleaning solution.

The means to prevent injury to men engaged in these activities include:

(a) Use of protective equipment;
(b) training in proper methods of mixing and handling;
(c) proper storage and transport.

Mixing and Using

* Cleaners should be mixed and dispensed only by experienced, well-trained personnel.

* All cleaners should be used in recommended concentrations. .

* Once a formula of dry cleaner is mixed or compounded it should be stored *in* a labeled container indicating its commonly used name, ingredients, precautions, and recommended concentration.

Storage and Transport

* It is important that cleaning ingredient and batches of compounded cleaners be kept in locked storage and dispensed only under supervision.

* Containers of alkaline material should be kept tightly sealed because these materials generally take up water from the air. They should be reclosed as soon as possible to protect the material from atmospheric moisture.

* Chemical compounds used in cleaning and sanitizing should be listed nd posted near the first aid kit, cleanup area, along with the suggested treatment.

* The nursing station may also want the list.

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MEAT PROCESSING SUPPLIES

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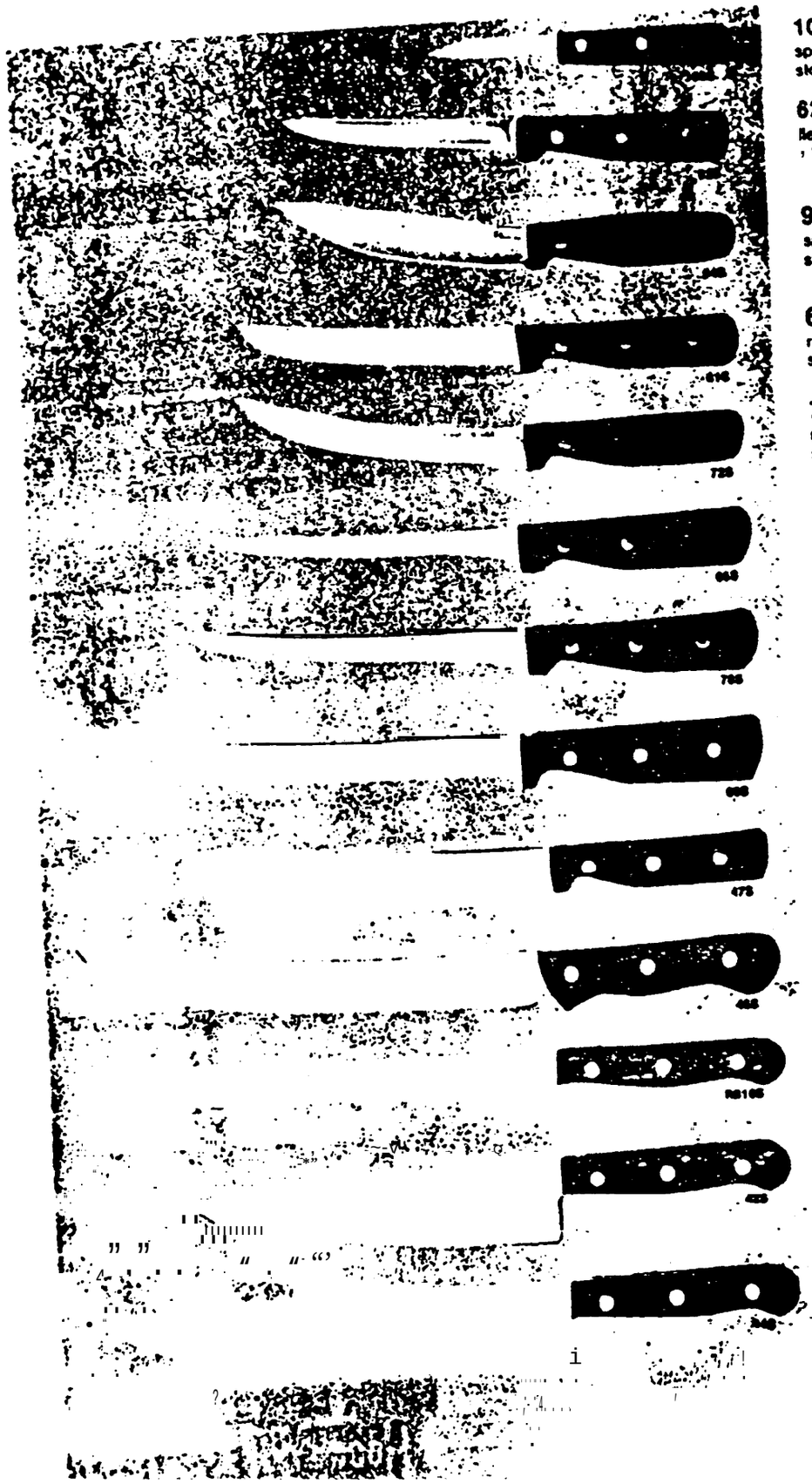

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1SK (40)	63-65	2 \ - 2 9/16	42	1 5/8
1SLB (41)	65-67	2 9/16 - 2 5/8	43	1 11/16
1 SL (42)	68-)0	2 11/16 -2 3/4	45	1 3/4
ILS (6S)	71-73	2 13/16 - 2 7/8	49	1 15/16
1 (48)	73-75	2 7/8 -2 M/16 .	52	2 1/16"
1 ¼ (50)	75-77	2 15/16 - 3 1/16	54	2 1/8
2C (55)	82-85	3 ¼ -3 3/8	58	2 1/4
2 (58)	81-90	3 7/16 -3 9/16	61	2 3/8
2 ¼ (60)	91-95	3 9/16 -3 3/4	65	2 9/16
2 ½S (65)	99-103	3 7/8 -4 1/16	72	. 2 7/8
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SAUSAGES

It is a mistake to imagine that ideal formulas for sausage exist. They don t. Every successful sausage maker has to discover what his own customers prefer. It is all right to start out using a printed formula, but soon it will be modified to suit local conditions. It will generally take some time and some experimenting to establish a sausage formula to suit the local customers. Once it is established, adhere to it religiously. Every ingredient must be weighed or measured.

Sausage can be made from any edible meat. It can be chopped fine or coarse or mixed. It can be fresh or cured; smoked or unsmoked; raw, partly cooked or fully cooked; formed into patties, loaves, or molds, or stuffed into casings of almost any size. And it can be seasoned with millions of different seasoning formulas.

Sausage is a very general word that describes thousands of different food products. They all contain chopped meat as the main ingredient. They fall into well-defined classes, along the lines of preparation methods.

1. **FRESH SAUSAGES**

   Fresh sausage is made of chopped meats that are neither cured nor smoked. It can be sold in bulk, or stuffed into bags or casings. Hamburger and fresh pork sausage are the best examples.

2. **UNCOOKED SMOKED SAUSAGES**

   These are finished in the smokehouse but are not cooked. The most popular example is smoked pork sausages.

3. **COOKED SMOKED SAUSAGES**

   Prime examples are frankfurters and bologna. After a light smoking they are cooked in water.

4. **DRY SAUSAGES**

   This class is typified by dry salami. These are the trickiest of all sausages to prepare. They require careful attention at every stage of processing and must be held for months under controlled conditions of temperature and humidity. Dried sausages have wonderful keeping quality after they are finished and can be held in a fairly cool room for very long periods of time. They are often called summer sausage, because of keeping qualities.

5. SEMI-DRY SAUSAGES

Semi-dry sausages are smoked at high temperatures. but dried a relatively short time. Formulas for semi-dry sausage are similar to those used for dry sausages. Since semi-dried sausages contain more moisture, they do not possess the keeping qualities of fully dry sausages.

6. MEAT.SPECIALTIES

This heading includes an almost bewildering variety of products, having in common only the fact they are based on chopped meats and usually cooked or baked rather than smoked. Chili, souse, meat loaves, lunch meats and *minced* ham are typical.

SAUSAGE MEATS

The flesh of any food animal, or for that. matter fish, can be used in making sausage. The meats ordinarily used are pork, beef, veal and mutton. Trimmings are more economical raw materials than cuts for which a ready market exists.

Cheek meat and head meat, necks and low profit cuts are best utilized in the form of sausage. Pork snouts, *and* the lips of all food animals can go into sausage. Hearts, livers, kidneys, tongues and tripe are used too.

Weasand meat is the muscular tissue around the lower part of the gullet and upper part of the stomach in beef. Giblet meat comes from the diaphragm. Weasands and giblets have poor binding qualities and spoil easily, but they are used in cheaper grades of sausage.

Trimmings from pickled or cured meats can be used In *formulas* calling for cured pork.

The term lean meat, when used in sausage formulas, means meat cuts *running* from 80% and up lean meat by weight. Regular trimmings run from 50% to 80% lean. And of course fat trimmings are those that run less than 50% lean meat. Trimmings are graded up to 9S$ lean. The best grades of sausage are made from fairly lean meat *as* a rule.

Meats vary a lot in the ability *to* hold water.Freezingmeat reduces the water holding power. Pickling meats does the same thing. The best fresh meat for retaining water is red muscle tissue. Connective tissue, pale muscle tissue and membranous tissues have very little value as binders.

" "CURING

Salting or the infusion of salt into meat of various types is called 'curing". This process causes the meat to undergo certain physical, chemical and bacteriological changes which result in greatly extended stability. More specifically. salt acts to suppress the growth of spoilage causing bacteria and to solubize the available proteins. With the introduction of salt to a cut of meat, the meat proteins dissolve and the meat becomes tacky. When heated the dissolved proteins set up and bind the meat. This phenomena is most important in the manufacture of sausage or heavily cured meats such as pork or certain dried fish products.

The three methods of curing are as follows:

(1) THE COVER BRINE — which is the easiest of the three and the most applicable to what we are trying to accomplish.

(2) THE DRY CURE -- excellent for old-fashioned curing of hams and bacon.

(3) INJECTION CURE . . used by commercial meat packers. It is fast and effective. allowing the processing firms to speed processing and Iower-in-house inventories.

The cover brine can do it all. Use glass, crockery or Plastic containers that will allow the brine solution to completely cover the food. Wooden or aluminum containers ARE NOT TO BE USED.

A large spoon and a glass quart jar are handy for mixing the brine. Meats should be completely immersed in the brine *and* they should be stirred or rearranged in the solution occasionally.

Keep brines as cool as possible. If you plan to reuse them, store them in the refrigerator. Reuse should be limited to 2 or 3 times only, and a storage period of no longer than 1 week 1s recommended.

Sausage makers must always be on guard against discoloration. nest discoloration is caused by improper handling of the sausage meat. Use meat as fresh as possible, without freezing or storing it more than absolutely necessary. Keep all sausage meats at a temperature that is cooler than 40°F. except *for* temporary periods during processing. And above all, NEVER USE MEAT OF DOUBTFUL QUALITY IN SAUSAGE. IF THERE'S DOUBT THROW IT OUT.

Never re-process sausage that has been slow to sell. The old meats will simply contaminate and ruin whatever other meats are mixed with them. Sausage may appear to be entirely fresh, but will still harbor bacteria that will contaminate *and* discolor other meats.

Every time meat is heated, it loses the ability to retain moisture. Meat contains albumen, similar to the white of an egg. Heating hardens the albumen; and it does not regain the original state when 1s 1s cooled again.. If meat is protected against overheating during processing, the resulting sausage will have more power to absorb moisture. It will stay fresh longer and shrink less.

Finished sausage need proper refrigeration. Most sausage 1s best stored at a temperature near *32°F.* Some varieties of summer sausage can be stored safely at 60°F, if the humidity is rider close control.

NATURAL CASINGS

BEEF CASINGS

Beef Rounds: Used for making Ring Bologna, Ring Liver sausage, Mettwurst, Polish Sausage, Blood sausage, Kishka & Holsteiner

Beef Middles: Used for Leona Style Sausage, all other types Of bologna, Dry & Semi Dry Cervelats, Dry & Cooked Salami & Veal Sausage

BEEP BUNGS: Used For Capocolla, Veal Sausage, Large Bologna, Lebanon & Cooked Salami

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HOG CASINGS

Used for Country Style Sausage, Linked Hog Sausage, Large Frankfurts, Kishka, Kielbasa & Pepperoni Sausage.

SHEEP CASINGS

Used principally for Pork Sausages & Frankfurts

Sheep casings are strong yet tender tasting. Good white color. Permits smoking or coloring of the frankfurts and gives desired finish to the pork Sausage.

ARTIFICIAL CASINGS

COLLAGEN CASINGS

Not a synthetic Casing. It 1s made from hides of cattle (the flesh side) and 1s edible. Provides uniformity and is superior machinability. practically all linking machines on the market to-day can use Collagen Casings. The ability to produce uniform links at high speed results in an increased flow of product, larger volume and less time. Sizes of Collagen Casings range from 14 mm to 4S mm. Usable for any smoking process. Smoking cycles may be shortened and because of rapid uptake of smoke color, leads to less smokehouse shrinkage. Collagen casings require refrigeration just as *natural* casing do. Should be kept at 50°F or lower. If *for some* reason casings become brittle, simpley dip in water and use. Do NOT SOAK. .

ARTIFICAL CASINGS

FIBROUS CASIN-

Generally used in making dry and semi-dry sausages. The inside of these casings are coated with protein and has the ability to shrink along with the meat as it is drying out. Easier to store and need not be refrigerated and does not have to be cleaned. The fibrous casings have the fibers running through them lengthwise which gives them added strength. Pourouse enough to absorb the smoke when smoking sausages.

A sausage, luncheon meat or salami will smoke just as brown in synthetic casings as it will in a natural casing. Synthetic fibrous casings must be soaked in water before using. Soaking allows the casing to become flexible and easier to work with. Some manufacturers Of synthetic fibrous casings suggest soaking in vinegar liquid smoke before using. This will prevent surface mold and prevent casing from sticking to meat after it is smoked.

HOG CASINGS (29 - 32 mm)

Breakfast Sausage
pork Sausage
Pepperoni
Smoked Pork Sausage

HOG CASINGS (32 - 35 mm)

Italian Sausage
Fresh Italian Sausage
English Bangers
Sccilian Sausage

Smoked & Cooked Sausage

Bratwurst
Weisswurst
Turkey Sausage
Smoked Venison Country Sausage
Landjager Sausage
Semi Dry Polish Mountain Sausage

HOG CASINGS (35 - 38 mm)

Kielbasa
Onion sausage
Swedish Potato Sausage
Linguisa (Longaniza)
Kielbasa Krakowska
Hungarian Paprika Sausage
Boudin
Polish Blood Sausage
Smoked Venison Polish Sausage
Semi Dry Kielbasa Mysliwska Sucha
Dry Cured Italian Sausage
Dry Cured Smoked Polish Sausage
Dried Chorezos

HOG CASINGS (38 - 42 mm)

Polish Sausage Fresh
Chorizo (Fresh)
Knockwurst
Smoked Polish (Kielbasa)
Chinese Style Sausage
Rice Liver Sausage
Semi Dry Cooked Pepperoni Sticks

SHEEP CASINGS (22 - 24 mm)

USED FOR:

Breakfast Sausage
Pork Sausage
Cabbage Pork Sausage
Kosher Beef Sausage
Smoked Pork Sausage
Dried Sausage Sticks

SHEEP CASINGS 24 - 26 mm)

USED FOR:

Bockwurst
Weiners
Turkey or Chicken Weiners .
Vienna sausage
Kielbasa Serdelowa (Serdelki)
Smoked Venison Breakfast Sausage
Dry Cured Pepperoni
Semi Dry Kabonosy

FEB./88

NATURAL CASINGS

BEEF CASINGS

Beef Rounds 1 1/2 to 1 5/8 (40/45)	$14 .00/Bdle
Beef Middles 2 1/4 to 2 1/2	$27 .50/Bdle
Beef Middles 2 1/2 up	$27. 50/Bdle
Beef Bungs S 1/2	$ 4 .50/each

HOG CASINGS

	PER BuNDLE	10 BUNDLES	25 BUNDLES
29/32	$15.50	$14.00	$13.00
32/3S	$15.50	$12.90	$11.10
35/38	$15.50	$11.90	$11.10
38/40,	$15.50	$11.90	$11.10 "
40/42	$16.50	$12.50	$11.20 "
42/45	$15.50	$14.00	$13.00

16.75 POR

SHEEP CASINGS

Speedi Fill 6 strand (1000.81)	$17.50
Speedi Fill 6 Strand - 50Bundle *Lots*	$15.70/Bdle

CASINGS

JAN/88

DEVRO - COLLAGEN CASINGS - EDIBLE

190 mm	48 tubes	45 ft. each	$3.00 ea.	Caddie	$114.00
220 mm	78 Tubes	80 ft. each	$5.50 ea.	Caddie	$264.00
230 mm	78 Tubes	80 ft. each	$5.50 ea.	Caddie	$264.00
260 mm	36 Tubes	40 ft. each	$2.1S ea.	caddie	$
310 mm					

NOJAX WEINER CASINGS - EZ PEEL

Size 18/70 ..... per Tube $ 1.44"

Size 2 3/70 (so Tubes per case $63.00).*** per Tube $ 1.44 "

N - FIBROUS BAK CASINGS

Has Protein Coating. Good for Boiled, Cooked & Smoked Meats.
All Sizes and colors available. Casing will shrink 1/" product
for good appearance.

NOTE: NOT SUITABLE FOR HAMS

	100 Lots	Each
UNCOLORED		
40, 50, 60	.50¢ ea.	.55¢ ea.
70 x 24	.57¢ ea.	.65¢ ea.
80 x 24	.65¢ ea.	.70¢ ea.
90 x 24	.75¢ ea.	.80¢ ea.
COLORED BLACK		
7s x 24		.90C ea.
DECORATED		
70 X 24		.86¢ ea.

NALO - FIBROUS "N" CASINGS uncolored

Good for Smoked Products

60 X 24	.47C ea.
85 X 24	.60¢ ea.

NALO FIBROUS "M" CASINGS - Uncolored

Good for cooking only - Moisture Proof. Total100% Plastic inside - Holds product moisture. Good for Liver Sausage, Ham and European Sausage.

100 x 24	.72C ea.

- Colored

100 x 24	$1.00 ea.

NALO FIBROUS "P" "CASINGS Uncolored)

Peel free - especially for hams. Impregnated or sealed for Smoked or Cooked Products. Not suitable for sausage.

120 x 24 Pierced	.87¢ ea.
100 x 24 Sealed	.67C ea.

NALO TOP CASINGS

Fiber reinforced cellulose casing with an inner barrier layer. Prevents weight loss. For gelatine products. Not suitable for smoking.

45 x 24	Brown	
60 x 24	Brown	
90 x 24	Brown, Gold, Black	
105 x 24	(Lyoner Sausage)	$1.00 ea.

NATURINE CASINGS (BRECHTEEN)

Ideal for Smoked Sausages, Salami, etc. Product 1s edible and will shrink to product.

43 X 24	.26C ea.
SO X 24	.32C ea.
6S X 24	.50¢ ea.
7S X 24	.60¢ ea.
90 X 24	.70¢ ea.
UNTIED 43 x 20 M	$8.90 ea.

NALOPHANE PLASTIC BAGS

suitable for Cooking (Oven ready) cooked hams, roasts & vegetables. will not take smoke.

7" x 18" Long 5" Diameter	.48¢ ea.
12" x 21" Long 8" Diameter	.70¢ ea.

WOMP - 90 mm Casings for Head Cheese - White .90¢ ea.

SAUSAGE BINDERS & SEASONINGS

B.B.Q. Rib Seasoning
1 lb Unit ..... ***** $ 3.45/Unit
50 lb Drum $105.00/Drum

Beef Jerky Seasoning & Cure
5 lb Unit ..... $ 12.75/Unit
1.06 lb Unit ..... $ 3.25/Unit

Beef Patty Binder
100 lb Drum $120.00/Dr
6.32 lb Unit ..... $ 9.65/Unit
Full Case 5 Units ..... $ 41.00/Case

Belmont Sausage Binder
50 lb Bag ..... $ 55.00/Bag
2 lb Unit ..... $ 2.60/Unit

Bone-In Ham Pickle
7.69 lb Unit ..... $ 9.95/Unit

Corned Beef Pickle (Spiced)
9.78 lb Unit ..... $ 14.20/unit

Corned Beef Cure (Savory)
10 lb Unit ..... $ 11.00/Unit

Dry Bacon Cure
25 lb Bag ..... $ 16.25/Bag
3.13 lb Unit ..... $ 2.90/Unit

Fresh Sausage Seasoning
1.68 lb Unit ..... $ 5.85/Unit

Garlic Sausage Binder & Cure
50 lb Drum $128.00/Drum
3 lb Unit ..... $ 8.90/unit

Bead Cheese Seasoning
1.25 lb Unit ..... $ 7.45/Unit

High Bloois # 29 Fresh 6 Freezer Style Binder
50 lb Bag ..... $ 55.00/Bag
2 lb Unit ..... $ 2.60/unit

Liver Sausage Seasoning
1.12 lb Unit ..... $ 6.00/Unit

Pastromi Seasoning
2 lb Unit ..... $ 5.75/unit

Pepperoni Seasoning
1 lb Unit ..... $ 3.00/Unit

pepperoni Binder (Medium)
50 lb Drum $122.50/Drum
1.90 lb Unit ..... $ 5.25/Unit

Pepperoni Binder (Hot)
50 lb Drum $122.50/Drum
1.88 lb Unit ..... $ 5.25/Unit

Pure Pork Sausage Seasoning	1 lb Unit ..... $ 7.95/Unit
	50 lb Drum ... *..*****"" $ 67.50/Drum
Salami Seasoning & Binder	1.63 lb Unit .....* *- $ 2*35/unit
	100 lb Drum ..... ."-0 $171.00/Drum
Salisbury Steak Binder	5 lb Unit ..... $ 9.50/Unit
	4.53 lb Unit .....**** $ 10*40/unit
Smoked Sausage Binder	Full Case 8 Units ..... S 65.60/Case
	2.5 lb Unit .... **=*.*"" $ 6.45/Unit
Summer Sausage Binder	Full Case 12 Units ..... $ 60.60/Case
	2.63 lb Unit .....*.o $ 6.45/Unit
Weiner Binder & Cure	Full Case 12 Units ..... $ 66.00/Case
	2.5 lb Unit ..... $ 7.10/Unit
Western Ham & Bacon Cure	5 lb Unit .....$ 10.30/Unit
Wild Game Sausage Binder	Full Case 4 Units ..... S 35.00/Case

MISCELLANEOUS

SOUP BASES

Beef Soup Base	2 lb Tin	$ 7.80/Tin
Chicken Soup Base	5 lb Tin	$10:80/Tin
Onion Soup Base	2 lb Tin	$12.25/Tin

GRAVY BASE

Beef Gravy Base	2 lb Tin	$ 8.20/Tin

SEASONINGS

Chicken Bar-B-Q Seasoning	8 lb Tin	$14.00/Tin
	10 lb Tin	$17.50/Tin
Montreal Steak Seasoning	2 lb Tin	$ 7.00/Tin

PRAGUE POWDER

Ultra Cure #200 (Prague #1)	10 lb Unit	$ 9.00/Unit
	1 lb Unit	$ 1.25/Unit
Hampshire Pickle(Prague #2	50 lb Drum	$49.50/Drum
	3 lb Unit	$ 4.50/Unit
	6 oz. Unit	$ .90/Unit
	1 lb Unit	$ 1.90/Unit

MISCELLANEOUS

Corn Flour		5 lb Unit	$ 2.80/Unit
	Bulk	10 lbs or More	$ .50/Lb.
Corn Meal		5 lb Unit	$ 2.35/Unit
	Bulk	10 lbs or more	$ .45/Lb.
Corn Starch		1 lb Unit	$ 1.60/Unit
	Bulk	10 lbs or more	$ 1.35/Lb.
Dextrose		10 lb Unit	$12.00/Unit
		1 lb Unit	$ 1.40/Unit
Fermento		1.5 lb Unit	$14.55/Unit
Glucose Solids		1 lb Unit	$ 3.00/Unit

MISCELLANEOUS

Soya Flour	1 lb Unit	$ 1.40/Unit
	10 lb Unit	$12.00/Unit
Soya Isolate (90% Protein)	1 lb Unit	$ 5.50/Unit
Toasted Wheat Krums	5 lb Unit	$ 7.00/Unit
	50 lb Drum	$57.50/Drum
Veginate (Soya 50% Protein)	2 lb Unit	$ 2.65/Unit

CHIPS & SAWDUST F/SMOKING

White Hickory Chips	50 lb Bag	$18.50/Bag
	5 or more Bags	$16.50/Bag
Cherry Chips'n Chunks	1 3/4 lb Bag	$ 3.80/Bag
Apple Chips'n Chunks	2 lb Bag	$ 3.80/Bag
Mesquite Chips'n Chunks	1 3/4 lb Bag	$ 3.80/Bag
Hickory Chips'n Chunks	2 lb Bag	$ 3.80/Bag

SEASONINGS & BINDERS
DIRECTIONS

DRY BACON CURE (SKIN ON BELLIES) #77264-0

INGREDIENTS: Salt, Sodium Nitrite, Sodium Nitrate Sugar

DIRECTIONS: Rub Unit (3. 13 lb) on 100 lbs meat. Stack and rotate often. Keep refrigerated for 48 hours.

PACKED : 3.13 Unit F/100 lbs Neat

WESTERN HAM & BACON SEASONING "476126

INGREDIENTS: Sugar, Spices, Polysorbate 80

DIRECTIONS: Add 2. S lbs seasoning to 20 imperial gallons of water. Add meat, keep well covered with brine. Keep refrigerated for 48 hours. Pump brine into stock every 6 hours.

PACKED : 2.5 lb Unit F/25 lb Neat

CHICKEN BAR-B-QUE SEASONING 478201-0

INGREDIENTS: Salt, Sugar, Dextrose, Tricalcium Phosphate, Garlic, Flour, Tarula Yeast. Calcium Silicate, Hydrolyzed Plant Protein, Monosodium Glutamate, Disodium Inosinate, Disodium Guanylete, Spices

DIRECTIONS : . Sprinkle liberally over chicken. Also good for Ribs, Steaks & Hamburgers

PACKED: 8 lb Tins

CHICKEN SOUP BASE #93070

INGREDIENTS: Dextrose, Salt, Wheat Starch, Chicken Fat, Vegetable Oil, Shortening, Monosodium Glutamate, Flour, onions, Sugar, Garlic, Hydrolyzed Plant Protein, Disodium Inosinate, Disodium Guanylete

DIRECTIONS: Add 1 oz. Base to 32 fl. oz. cold water. Bring to a boil. Simmer for 3 minutes. (1 lb base to 3 gal. water)

PACKED: 5 lb Tins

CORNED BEEF PICKLE UNIT #772S4

INGREDIENTS : Salt, Sodium Phosphate, Sugar, Dextrose, Sodium Erythorbate, Sodium Nitrite, Spices

DIRECTIONS: Dissolve 1 Unit (8.90 lb (4.04 kg)) Seasoning and .88 lb (.40 kg) Ultracure 200 (packed separately) in 5 gals. (22.7 litres) cold water. Dissolve thoroughly. Cover brisket. Large pieces should be pumped. Leave in (38°F) cooler for 4 - 5 days.

PACKED: 8.90 lb Unit
F/25 lb Heat

BEEP JERKY SEASONING & CURE · # 7728S

INGREDIENTS: Salt, Sugar, Hydrolyzed Plant Protein, Monosodium Glutamate, Garlic, Sodium Erythorbate, Sodium Nitrite, Ultra Cure 200, Natural Smoke Flavour, Spices

DIRECTIONS: nix 1 unit 1.06 lb (.481 kg) to 20 lbs sliced Beef. Add cold water to mix to forma paste (watery). Cut Beef into thin slices removing all fat. Rub beef in marinade and leave in cooler at 38*F. for 24 hours. Mix beef in marinade 3 times during this time. Remove Beef, rinse excess *off beef* pieces. Let dry on paper towel for 3 minutes. Place beef *on rack* in oven or smoker on very low heat, turning every 4 hours till meat is dry. .

PACKED: SO lb Pail
F/943 lbs Heat
S lb Unit
F/95 lbs Meat
1.06 lb Unit
F/ 20 lbs Heat

BEEP PATTY BINDER #76986

INGREDIENTS: Toasted Wheat Crumbs, Salt, Monosodium Glutamate, Spices

DIRECTIONS: Add 1 unit 6.32 lb (2.87 kg) Binder Unit t" 100 lbs (45.4 Kg) Meat. Mix well and form into patties.

PACKED: 100 lb Drum
6.32lb. Unit
F/100 lbs Neat

SALISBURY STEAK SEASONING BINDER # 76980

INGREDIENTS : Toasted Wheat Crumbs, Salt, Onion, Hydrolyzed Plant Protein, Spices

DIRECTIONS: Add 5 lb (3.17 kg) Unit to 75 lbs (22.68 kg) Neat. Mix thoroughly. Let marinate for 3 hours in Cooler @ 38°F.

PACKED: 100 lb Drum
F/1400 lbs Neat
5 lb Unit
F/72-75 lbs Meat

SAVORY CORNED BEEF **CURE**

INGREDIENTS: Salt, Sodium Nitrite, Sodium Bicarbonate, Glycerine, Spices

DIRECTIONS: Add one unit 10 lbs (4.54 kg) to 5 imperial gallons cold water. Pump large pices of meat. Cover stock with brine. Refrigerate for 3 days at 38°F. If meat is not pumped, leave stock in brine 1 1/2 days per lb of meat.

PACKED: 10 lb Unit
F/25 lbs Neat

BONE IN HAM PICKLE " #77255

INGREDIENTS: Salt, Tripolyphosphate, Sugar, Dextrose, Sodium Erythorbate, Sodium Nitrite

DIRECTIONS: Dissolve 1 unit 7.69 lb (3049 kg) in 5 imperial gallons (22.7 litres) Cold water" Pump (25%) product thoroughly. Cwer meat and refrigerate for 48 hours or longer. Just brining ham may take weeks before the centre will be cured.

PACKED: 7.69 lb Unit
F/25 lbs Meat

BARBECUE RIB SEASONING " #90307

INGREDIENTS: Salt, Sugar, Flour, Dextrose, Monsodium Glutamate, Hydrolyzed Plant Protein, Spices

DIRECTIONS: Sprinkle liberally over ribs (pork or beef)

PACKED: 1 lb Unit
F/25 lb Neat

HAMPSHIRE PICKLE (FREEZE-EM PICKLE) # 77245
(PRAGUE # 2)

INGREDIENTS: Salt, Sodium Nitrate, Sodium Nitrite

DIRECTIONS : For use in making "Specialty Sausage".
Add only 2 oz. (56.7 gm) to 100 lbs (45.36 kg) meat prior to cooking, smoking or fermentation.

PACKED: SO lb
F/ 20 Tons Meat
3 lb Unit
F/2400 lbs Meat

LIVER SAUSAGE SEASONING & CURE UNIT #74215

INGREDIENTS: Salt, .OnIon, Extrose, Sodium Nitrite, Spices

DIRECTIONS: Add .62 lb (281.2 gm) seasoning *and* .S lbs (226.8 gm) cure (packed separately) to 50 lbs meat prior to cooking, smoking or fermentation.

PACKED: 1.12 lb Unit
F/100 lbs Meat

PASTROMI SEASONING " #74410

INGREDIENTS: . Dextrose, Salt, Monosodium Glutamate, Flour, Spices

DIRECTIONS: Add 2 lbs (.91 kg) to 100 lbs (45.36 kg) Meat.

CONTAINS 'SEASONING ONLY: NO CURE OR FERMENTO

PACKED: 2 lb Unit
F/100 lbs Meat

MEDIUM OR HOT PEPPERONI SEASONING, FILLER & CURE #74561

INGREDIENTS: Potato Starch, Salt, Buttermilk powder, Garlic, Sodium Erythorbate, Sodium Nitrite, Natural Smoke Flavour, Spices

DIRECTIONS: Use 1.81 lb" (.82 kg) seasoning and .07 lb (.003 'g) Cure (packed spearately) to 25 lbs (11.34 kg) Meat. Mix *thoroughly* with meat stock prior to smoking or cooking.

PACKED: 1.88 lb Unit
F/25 lbs Meat

E.B.P. FREEZER STYLE SAUSAGE BINDER #172201-3

INGREDIENTS : Flour, Toasted Wheat Crumbs, " Salt, Corn Flour, Spices

DIRECTIONS: Add 1 lb (.04S kg) Binder to 12.5 lbs (5*[70] 'g) Neat. Mix thoroughly.

PACKED 50 lb Bag
F/625 lbs Heat
4 lb Unit
F/50 lbs Meat

GARLIC BINDER & CURB " 4 174343-0

INGREDIENTS: Milk Solids, Flour, Salt, Hydrolyzed Plant Protein, Garlic, Sodium Erythorbate, Sodium Nitrate, Spices

DIRE&IONS: Add 2.66 lb (1.21 kg) binder and 34 lb (.15 'g) Cure (packed separately) to 25 lbs meat prior to smoking, cooking *or* fermentation.

PACKED: 50 lb Bag
F/667 lbs Meat
3 lb Unit
F/25 lbs Heat

EBP HIGH BLOOM # 29 # 172201-4

INGREDIENTS: Flour, Toasted Wheat Crumbs, Salt, Corn Flour, : Spices

Directions: Add 1 lb (0.45 kg) Binder to 12.5 lb (5.70 'g) Neat.

PACKED: 50 lb Bags
F/625 lbs Meat
2 lb Unit
F/25 lbs Meat

SALAMI SEASONING S BINDER UNIT # 74172

Ingredients: Potato Starch, Salt, Sodium Erythorbate, Spices

DIRECTIONS: Add 1.63 lb (.74 kg) to 25 lbs (11.34 kg) Meat.

CONTAINS NO-CURE

PACKED: 1.63 lb Unit
F/25 lbs Meat

SMOKED SAUSAGE SEASONING BINDER # 74S24

INGREDIENTS: Flour, Buttermilk powder, salt, Hickory smoke flavour, Sodium Nitrite, Spices

DIRECTIONS: Add 3.91 lb (1.77 kg) Binder Unit and .62 lb (0.28 kg) Cure (Packed separately) to 50 lbs Meat, prior to smoking, cooking or fermentation.

PACKED: 4.53 lb Unit
F/50 lbs Meat

SUMMER SAUSAGE BINDER & CURE UNIT # 74170 .

INGREDIENTS: Flour, Salt, Dextrose, Sugar, Sodium Nitrite, Monosodium Glutamate

DIRECTIONS: Add 2.14lb (.97 kg) binder unit and .36 lb (163 gm) cure unit (packed separately) to 25 lbs meat.

PACKED: 2.5 lb Unit
F/25 lbs Meat

WEINER BINDER & CURE UNIT " #71008

INGREDIENTS: Milk Solids, Flour, Salt, Sodium Erythorbate, sodium Nitrite, Onion Powder, Spices

DIRECTIONS: Add 2.35 lb (1.07 kg) Binder and .28 lb (.13 kg) Cure (packed separately) to 2S lbs Meat.

PACKED; 2.63 lb Unit
F/25 lbs Meat

WILD GAME SAUSAGE; SEASONING, BINDER UNIT # 72423

INGREDIENTS: Toasted Wheat Crumbs, Wheat Flour, Salt, Dextrose, Garlic, Monosodium Glutamate, Spices

DIRECTIONS: Add 1lb (.454 gm) seasoning/binder to 11 lbs Meat.
CONTAINS NO CURE.

PACKED: 5 lb Unit
F/55 lbs Meat

ULTRA-CURE 200 (PRAGUE NO. 1) # 7712S

INGREDIENTS: Salt, Sodium Nitrite

DIRECTIONS: Superior Cure for all meat products calling for Cure. USE NOT MORE THAN 5 oz. (142 gm) ULTRACURE 200 per 100 lb (4$036 kg) Meat Stock.

PACKED: 10 lb Unit
F/3200 lbs Neat
1 lb Unit
F/320 lbs Meat

DEXTROSE

Powdered Dextrose is 70% as sweet as regular sugar.
Dextrose 1s used as a browning agent for *breakfast* sausage.
Dextrose is an ideal nutrient to *assist* in fermentation.

PACKED: 10 lb Unit

GLUCOSE

Corn Syrup Solids - excellent for binding qualities especially if cured at lower temperature. Helps support fermentation. Holds color in meat especially if displayed under fluorescent lights.

PACKED: 1 lb Unit

VEGINATE (Soya Protein Concentrate)

Otherwise known as non fat dry milk. Contains 250% Protein than meat.

Use no more than 3 1/2% *of meat weight.* Helps bind ground *meat* and sausage together and prevents product shrinkage. Without veginate, sausages will be quite dry.

PACKED: 10 lb unit
F/700 lbs Meat
2 lb Unit
F/70 lbs Heat

WIBERG PRODUCTS

"16-242	Bauernbratwurst	$ 16.30
16-243	Bierwurst	$ 15*95
6820	Biobak	S 8.90
	Brathendlgewursalz Seasoning	$ 1.25
16-275	Cabanossi	$ 13.50
	Calf's Liver Sausage	$ 19.00
16-200	Cardomia	$ 1s.15
16-398	Cervelat	$ 16.50
16-226	Debrecziner	$ 1s.00
16-1S5	Feine Bratwurst	$ 17.6S
16-020	Fleischwurst	$ 16.00
16-142	Frankfurter Super	$ 19.90
	Fresh Red Super	$ 11.s5
16-577	Frischex	$ 16.50
	Fumaro	$ 20.00
	Grillgewurz Seasoning	$ 1.25
16-265	Grillwuerstal	$ 19.s5
	Gulasch Gewurz Seasoning	s 1.2s
16-555	HamSuper Red	$ 14.50
16-396	Hungarian Salami	S 17.20
16-266	Italian Sausage Hot	S 24.70
16-154	Italian Sausage Sweet	s 15.2s
16-219	Jagdwurst	s 18.65
16-372	Kantwurst	$ 21.50
6000	Klarifix (Gelatin for Headcheese)	$ 19.7s
16-116	Knocker	$ 12.45.
	Kolbassa	s 12.10
16-279	Kosakenwuerstel	$ 15.75
0s40	Lakewurzung	$ 12.45
16-213	Lyoner	S 15.95
	Malabar Super	$ 25.00
16-247	Mortadella Italian Style	$ 18.10
16-109	Parisia Fuer Fleischwurst	S 17.ss
16-321	Pepperoni	$ 13.70
	Perwienal Express	$ 11.95
16-231	Polnische	$ 14.60
16-232	Polnische with Juniper	$ 14.60
16-483	Presswurst *(For* Headcheese)	s 12.1s
5150	Purosa	$ 7.25
733C	Roasted Onion *Flakes*	s 14.1s
	Rofixa (Spiced Curing Agent)	S 9.20
16-357	Rohfit (F/Cervelat/Kantwurst)	$ 23.35
	Rovac	$ 11.80
16-393	Rum Salami	S 18.40
16-257	Schinkenwurst	s 1s.3s
	Schweinsknuspri Seasoning	$ 1.2s
	Steakgerwurzsalz Seasoning	$ 1.2s
16-236	Sulmtaler Krainer	S 16.S0
16-217	Tiroler	S 18.40
5020	Wuerzomat	s 19.15
	Wurzi Seasoning	s 1.2s
16-354	Zigeuner Salami	s 17.90
5141	Zitromat	s 14.40
	Garlic Paste Tubes	s 3.00

WIBERG PRODUCTS
DIRECTIONS

BIERWURST

A f lavour balanced seasoning guaranteeing a standard of consistent long lasting delicious taste of Bierwurst Sausage.

INGREDIENTS : Spices, Glucose. Monsodium Glutamate, spice extract.

MIX: 4 grams seasoning to 1 Kilogram of Meat.

PACKED: 1 Kg Unit.
F/550 lbs Meat

CALF'S LIVER

A flavour seasoning guaranteeing a standard of consistent longlasting delicious taste of Calf's Liver Sausage.

INGREDIENTS: Spices, Saccharose, Monsodium Glutamate, spice extracts

MIX: 4 Grams seasoning to 1 Kilogram of Meat

PACKED: 1 Kg Unit
F/550 lbs Meat

CERVELAT

A flavour balanced seasoning guaranteeing a standard of consistent long lasting delicious taste of Cervelat Sausage.

INGREDIENTS: Spices, Spice Extracts, Glucoise, Saccharose, Monsodium Glutamate

MIX; 6 grams seasoning to 1 Kilogram Meat

PACKED: 1 Kg Unit
F/367 lbs Neat

CREMA X117 FOOD ADDITIVE CW

Ingredients: 21% Protein, 29% Carbohydrates, 41% Fat

GRILLWURSTL

A flavour balanced seasoning guaranteeing a standard of consistent, long lasting delicious taste of Grillwurstl Sausage.

INGREDIENTS: Spices, Spice Extracts, Monsodium Glutamate, Saccharose, Salt (5%).

MIX: 4 - 5 *grams* seasoning to 1 Kilogram Meat.

PACKED: 1 Kg Unit
F/550 lbs Meat

HAM SUPER RED

Seasoned additive for faster reddening and better color stabilization in all pumped pickled products.

INGREDIENTS: Glucose, Saccharose, Pear Extract, Sodium Erythorbate

DIRECTIONS: Dissolve ham super red in the nitrite pickling brine. Additional pickling aids *not* required.

30 grams /1 when injecting 20%
23 grams /1 when injecting 30%
15 grams /1 when injecting 40%

HUNGARIAN SALAMI

A flavour balanced seasoning guaranteeing a standard of consistent long lasting delicious taste of Hungarian Salami. "

INGREDIENTS: Spices, Spice Extracts, Sugar, Monsodium Glutamate

MIX: 6 grams seasoning to 1 Kilogram Meat.

PACKED: 1 Kg Unit
F/367 lbs Meat

KANTWURST (SQUARE SALAMI)

A flavour balanced seasoning taste for speedy production. To be used with Nitrite Curing Salt.

INGREDIENTS: Spices, Saccharose, Glucose, Monsodium Glutamate. Sodium Ascorbate

141X: 10 grams seasoning to 1 Kilogram Seat.

PACKED: 1 Kg Unit
F/220 lbs Meat

KLARFIX

Edible gelatin for solid & clear jellies.

DIRECTIONS: Dissolve 100 grams Klarfixin 1 litre hot water (80 - 90°) while stirring. Salt & Vinegar for meat dishes or sugar, fruits & juice for confectionery may be added, but *not* before Klarfix is completely dissolved.
For harder or softer jellies use more or less Klarfix respectively.

PACKED: 1 Kg Unit

KOLBASSA

A flavor balanced *seasoning guaranteeing a* standard of consistent long lasting delicious taste for Kolbassa Sausage.

INGREDIENTS Spices, Monsodium Glutamate, Saccharose, Garlic

MIX: 4 grams to 1 Kilogram of Meat

PACKED: 1 Kg Unit
F/550 lbs Meat

PEPPERONI

A flavour balanced seasoning guaranteeing a standard of consistent long lasting delicious taste of Pepperoni Sausage.

INGREDIENTS: "Spices, Salt (28%), Saccharose, Monsodium Glutamate, Sodium Erythorbate, Garlic *Powder*

MIX: 10 grams seasoning to 1 Kilogram of meat.

PACKED: 1 Kg Unit
F/220 lbs Meat

POLNISCHE

A flavour balanced seasoning guaranteeing a standard of consistent long lasting delicous taste of Polnische Sausage.

INGREDIENTS: Spices, Spice Extract, Saccharose, Glucose, Monsodium Glutamate

MIX: 4 grams seasoning to 1 Kilogram Meat

PACKED: 1 KgUnit
F/550 lbs Meat

PRESSWURST

A flavour balanced seasoning guaranteeing standard of consistent lon s taste of Presswurst Sausage. Also For ong lasting deliciou
INGREDIENTS: Spices, Saccharose, Glucose, Monsodium Glutamate, Spice Extract, Salt & Curing Agent

MIX: 4 grams seasoning to 1 Kilogram Meat

PACKED: 1 Kg Unit
F/550 lbs Meat

ROH-FIT

Curing aid for the speedy production of raw fermented sausages. Contains ripening agents and full *seasonings.*

INGREDIENTS: Gdl, Glucose, Spices, Monsodium Glutamate, Sodium Ascorbate, Citric Acid

DIRECTIONS: First add 15 grams Roh-fit to the minced lean meat, then fat and afterwards 28 - 30 grams of nitrite curing salt (99.5 % table salt & 0.5 % sodium nitrite) to 1 Kilogram sausage mixture. The addition of other curing additives 1s unnecessary. Keep ready produced sausages refrigerated.

PACKED: 1 Kg Unit
F/137 lbs Meat

ROFIXA-SUPER

Spiced curing agent for raw ham, bacon, country style, etc.

INGREDIENTS: Salt (89%), Potassium Nitrate, Spice Extracts.

DIRECTIONS: 1 Part Rofixa Super is mexed with 20 parts of coarse table salt. This mixture is rubbed into the meat. *For* 1 Kilogram Heat use 40 grams mixture.

PACKED: 1 Kg Unit

WURZOMAT

Seasoned taste improver for sausages, SOUPS and all sorts of meat dishes.

INGREDIENTS: Salt (49.5%), Monsodium Glutamate, Sugar, Celery, Onions, Garlic Powder

MIX: 1/2 - 1 gram seasoning to 1 Kilogram Meat

PACKED: 1 Kg Unit
F/4400 lbs Heat

WIBERG PACKAGED SEASONINGS

WURZI (Beef Broth Flavoring)

Bring beef bones with cold water to boil. Add meat if desired to boiling broth. Add flavor spice from this package to desired taste. Boil about 1½ hours.

SCHWEINSKNUSPRI (Pork Crisp) - Spice Salt

Rub pork roast throughly with the pork spice, put in glass bowl with lid, let stand a few hours in cool place. Then proceed as usual in the oven or grill. No extra salt is required. If you like Garlic, you can add WibergGarlic Granuals.

BRATHENDL-GEWURZSALZ (Poultry Spice)

This spice adds a fresh flavor and golden color to your poultry. Mix spice with some oil and brush while you grill the poultry. For roasting, rub it throughly on all sides. No extra salt required.

GULASCH GEWURZ (Stew Spice) "

Fry 1/2 kg chopped onions in fat until glosy. Add 1/2 kg cubed meat. Stir both until lightly browned. Add soup or water. Add 2 - 3 soup spoons of stew spice. Cover and cook slowly until meat 1s half done. Remove the meat from the sauce, strain the sauce over the meat and continue cooking until meat 1s tender.

GRILLGEWURZ (Grill Spice)

This 1s used on all kinds *of meat.* Mix spice with some oil. Add salt if desired. Also some other spices to vary the flavor. Brush your meat with the mixthroughly. Let it rest a bit for the flavor to penetrate. This is ready for grilling.

DEC/87

SPICES

* NOT STOCKED IN EDMONTON

Allspice Whole	1 lb Tin $ 6.10 Tin
Allspice Whole	Bulk $ 4.10 lb.
Allspice Ground	1 lb Tin $ 5.S0 Tin
*Aniseed Levant Whole	Bulk $ 5.8S lb.
● Aniseed Levant Ground	Bulk $ S.10 lb
Apple Stuffing nix	5 lb Tin $ 2.70 Tin
Bacon Bits	1, lb Tin $ 4.20 Tin
Baking Powder	1 lb Tin $ 4.30 Tin
● msil Sweet Rubbed	Bulk $ 5.70 lb
● Basil Ground	Bulk $ 5.85 lb
Bay Leaves Whole	Bulk $ 1.20 pkg.
● Bay Leaves Ground	Bulk $ 6.80 lb
Carraway Seed Whole	1/2 lb Pkg. $ 1.50 pkg
● carraway Seed Ground	Bulk $ 2.25 lb
● CUdamon Seed Ground	Bulk $19.25 lb
Cayenne Pepper	1 lb Tin $ 3.85 Tin
Celery Salt	1 lb Tin $ 3.10 Tin
Celery Seeds Ground	1 lb Tin $ 4.00 Tin
*Celery Seeds whole	Bulk' $ 4.95 lb
Chili Powder (Mexican)	1 lb Tin $ 3.90 Tin
● Chilies Crushed	Bulk $ 2.30 lb
Cinnamon Ground Batavia	1 lb Tin $ 4.10 Tin
Cinnamon Ground Batavia	5 lb Tin s17.S0 Tin
*Cinnamon Ground Saigon	Bulk $ 4.6S lb
Cinnamon Sticks 3"	5 oz. Pkg. $ 2.55 pkg
Cinnamon Toast Mix	1 lb Tin s 3.7S Tin
Cloves Ground	1 lb Tin $ 9.60 Tin
Cloves whole	1 lb Tin $10.49 Tin
Corn Starch	Bulk(10 lbs or more) $ 1.60 lb
Corn Starch	1 lb pkg $ 1.8S pkg
● Correander Seed Whole	Bulk $ 1.70 lb

SPICES

Correander Seed Ground	1 lb Tin	$ 2.45 Tin
Correander Seed Ground	Bulk	$ 1.60 lb
Cumin Seed Ground	1 lb Tin	$ 4.25 Tin
● Curry Powder Regular	Bulk	$ 3.60 lb.
● Dill Seed Whole	Bulk	$ 5.20 lb
● Dill Seed Ground	Bulk	$ 4.25 lb
● Dill Seed Green Top	Bulk	$12.S0 lb
● Fennel Seed Whole	Bulk	$ 4.4S lb
● Fennel Seed Ground	Bulk	$ 2.30 lb
Garlic Granules	1 lb Tin	$ 5.15 Tin
Garlic powder Standard	1 lb Tin	$ 3.60 Tin
Garlic Powder Standard	5 lb Tin	$15.00 Tin
Garlic Salt	1 lb Tin	$ 2.85 Tin
Garlic Salt	5 lb Tin	$10.15 Tin
Ginger Ground	1 lb Tin	$ 5.10 Tin
Hickory Smoke Powder	1 lb Tin	$ 3.10 Tin
Juniper Berries	1 lb Tin	$ 7.90 Tin
Mace Ground	1 lb Tin	$14.1S Tin
● MarjOrarn Whole	Bulk	$ 3.75 lb
Marjoram Ground	1 lb Tin	$ 5.7S Tin
Mixed Pickling Spice	Bulk	$ 2.40 lb
Mixed Pickling Spice	1 lb Tin	$ 4.80 Tin
Monsodium Glutemate	1 lb Tin	$ 3.6S Tin
Mustard powder	1 lb Tin	$ 3.20 Tin
Mustard Seed Whole	Bulk	$ 1.20 lb
Mustard Seed Whole	1 lb Unit	$ 1.60 Unit
Nutmeg Ground	1 lb Tin	$10.50 Tin
● Nutmeg Ground	Bulk	$ 8.90 lb
Onion Flakes Chopped A	1 lb Tin	$ 5.80 Tin
Onion Flakes Chopped Toasted	1 lb Tin	$ 6.50 Tin
Onion Flakes Chopped Toasted	5 lb Bag	$21.65 Bag
Onion Powder Regular	1 lb Tin	$ 4.30 Tin*
Onion Powder Regular	5 lb Tin	$17.65 Tin
Onion Salt	1 lb Tin	$ 3.15 Tin

● OregenO Whole	Bulk	$ 5.85 lb
Oregeno Ground	1 lb Tin	$ 7.8S Tin
Paprika Spanish Standard	1 lb Tin	$ 3.75 Tin
Paprika Red Band & Spec 100	Bulk	$ 2.8S lb
Parsley Leaves Rubbed	1 lb Tin	$ 9.05 Tin
Pepper Black 32 Mesh	1/2 lb Bag	$ 4.40 Bag
Pepper "Black 32 Mesh	1 lb Tin	$ 8.0S Tin
Pepper Black 32 Mesh	1 lb Bag	$ 7.85 Bag
Pepper Black 32 Mesh	5 lb Tin	$36.35 Tin
Pepper Black Whole	1 lb Tin	$ 8.05 Tin
Pepper. Black	Bulk (10 or more lb)	$ 7.78 lb
Pepper White Ground "	1 lb Tin	$ 9.85 Tin
Pepper White Ground	5 lb Tin	$45.00 Tin
● pepPr White Ground.	Bulk	$ 9.85 lb
Poppy Seeds .	1 lb Tin	$ 4.15 Tin
Poppy Seeds	5 lb Tin	$17.00 Tin
*Poultry Seasoning .	Bulk	$ 5.60 lb
*Rosemary Leaves Ground	Bulk	$ 4.55 lb
*Safflower	Bulk	$13.25 lb
Sage Rubbed " "	1 lb Tin	"$ 6.10 Tin
● Savory Ground.	Bulk	$,5.20 lb
● Tarragon Leaves Whole	Bulk	$17.75 lb
● Thyme Whole"	Bulk	S 4.75 lb
Thyme Ground	1 lb Tin	$ 6.90 Tin
*Tumeric Ground	Bulk	$ 4.25 lb
*Vegetable Flakes	Bulk	$ 4.10 lb

SPICES

ALLSPICE GROUND - This spice resembles a blend of cinnamon, nutmeg and cloves. It is widely used in sausage making for blood sausages, pepperoni and Braunschweiger. It is the dried fruit of and *evergreen* tree.

ANISE SEED GROUND It is famous *for* its licorice flavor and used in making pepperoni as weel as pastries. It Is a dried fruit from an annual plant of the parsley family.

BASIL This delightful annual herb of the mint family (also called sweet basil) is native to India and Persia. Basil leaves rival oregano as a seasoning *for* pizza, spaghetti sauce *and tomato* dishes. They add appetizing aroma to vegetable soups, meat pies, stews and peas, zucchini, green beans or cucumbers.

BAY LEAVES These fragrant leaves reach us from Turkey, Greece, Portugal and Yugoslavia.

CARAWAY This biennial plant of *the* parsley family grows in the Netherlands and that country sends us most of the caraway seeds we use. Used in rye bread and other baked goods, in cheeses and scattered over pork and sauerkraut dishes, soups, meats and stews.

CELERY SEEDS It 1s a dried fruit and member of the parsley *family.* Used in many sausages like wiener or mettwurst.

CHILI POWDER It is a blend of spices consisting of chili pepper as the basic ingredient plus ground cumin *seed,* ground oregano, powdered. garlic and usually salt. Besides being a basic seasoning for Americanized Mexican cooking such as chill con came, chili powder is good in shellfish and oyster cocktail sauces, hard boiled and scrambled eggs, gravy and stew seasoning.

CINNAMON Most often used in baking pastry, cakes or pies. It is also used in the making of Bratwurst. It is really known as Cassia in the spice trade and comes to us from Korintje India.

CLOVES - A very strong and pungent spice and is the unopened bud of an evergreen tree. It is widely used in various sausages.

CORIANDER GROUND-Very aromatic and used in sausage recipes. It originates from the parsley family as an herb and is pleasantly reminiscent of lemon peels and sage.

CUMIN SEED - This 1s a very strong and aromatic spice. It is used to flavor Mexican chili and other dishes.

FENNEL SEED CRACKED - The fennel seed 1s a basic spice in the making of good Italian sausage. When using the whole fennel seed in making Italian sausage, it can leave a very bitter taste in your mouth when you bite into it. It is because of this that the cracked fennel seed seems to radiate more flavor into the sausage.

GARLIC GRANUALS- This Is not garlic powder or garlic salt; it is the real thing. Use it in place of fresh garlic when making sausage. If you like garlic bread, just mix with butter and spread on the bread. You will be pleasantly surprised. Use on steak, chops, pizza, etc. Very pungent and strong.

GARLIC PONDER" - This aromatic spice is developed in warm regions; hence California is headquarters for the modern garlic industry. Useon vegetables, meat and breads as well as in sausage.

GINGER GROUND - A very aromatic and pungent spice. It is used in various bratwurst recipes, liverwurst and salamis.

MACE *GROUND* - Widely used in wiener type products, brockwurst, knockwurst and many bratwurst. It is obtained as the dried skin of the nutmeg kernel but is less pungent than nutmeg.

MARJORAM - Whole marjoram is traditionally used in making Polish sausage (Kielbasa) either fresh or smoked. It is very aromatic and slightly bitter.

MUSTARD GROUND - The flavor is hot, sharp and pungent. This spice is widely used in sausage making - summer sausage, braunschweiger, krakowska and various other sausages too numerous to mention.

NUTMEG GROUND — Flavor is sweet but slightly bitter. It is widely used in sausage making and is obtained from the seed of a peach like evergreen.

ONION CHOPPED — Onions have been a favorite flavoring vegetable for so many centuries that their early history has been lost in the mists Of time. However, venerable as the flavor is, it has only been on the spice shelf since 1935, when dehydrated forms first became widely available.

ONION POWDER — Particularly suited to dishes requiring no onion texture. This product is full-strength onion, as is chopped onion and releases its flavor instantly upon use.

OREGANO — It is widely used on salads, pizza, etc. It 1s a member *of* the mint family and heavily used in Mexican Chorizo.

PAPRIKA — Paprika itself adds no flavor to a sausage and it 1s very mild. Over the years, food coloring has been banned in the making Of sausage and paprika used in its place. when a hot or mild sausage is made (breakfast or Italian) an amount of paprika is used to give it a reddish color to indicate a hot sausage. You can use as much as five tablespoons to 10 lbs of meat or four ounces to 2S lbs of meat. Paprika is widely used when you smoke sausage as well. It will give the smoked sausage a deeper mahogany color that usually cannot be obtained by the smoking only. In addition, it holds the smokey color much longer. You can add it to any salami or sausage you wish.

CAYENNE PEPPER — The hotness *of* a hot red pepper 1s rated by "heat units" throughout the food industry. Our hot cayenne pepper has a rating of 65,000 heat units, VERY HOT!

PEPPER BLACK WHOLE — A product of the same tropical vine - piper nigrum. As pepper corns dry, the color Change% to the deep mahogany shade with which we are most familiar. Inside the hull is a light colored core. This is why ground black pepper is a mixture of light and dark particles.

SPICES

ROSEMARY - An excellent spice for lamb, chicken, shrimp, spoon bread and vegetables such as eggplant, turnips, cauliflower, green beans, beets, summer squash. It is one of the more potent herbs, so it should be used with restraint for best effect.

WHITE GROUND PEPPER - A white ground pepper is traditionally used in making fine textured sausages like bologna, weiners, etc.

PICKLING SPICE - This is a blend of numerous spices that is used to give distinctive flavors to pickles and various other vegetables. It is also used in pickled pigs feet, corned beef and pickled salmon.

POPPY SEEDS - A pleasant nut like flavored seed. Used mostly in pastry and rolls or bread. Has no use in sausage making.

SAGE - This spice is widely used in a variety of sausages as well as poultry dressings. It is very aromatic but slightly bitter in flavor. Used in practically every breakfast sausage that is made.

SAVORY - This herb of the mint family has been known for centuries. It is included in poultry seasoning blends and is, by itself, very good in meats, meat dressings, chicken, soups, salads and sauces. Try a pinch of savory in scrambled eggs or omelets, too.

SESAME SEED - When baked or toasted it has a nut like flavor. Used mostly for bread, pastry, etc. Dont know of any use in sausage making.

THYME - A perennial plant of the mint family. A favorite herb in American Cookery *for* generations. It goes into New England clam chowder, Creole seafood dishes and middle western poultry stuffings. Flavorful, too, in cottage cheese, creamed chipped beef or creamed chicken.

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