

Lloveras Universal 500 Chocolate Mixer/Refiner/Conche

Mfg: Lloveras

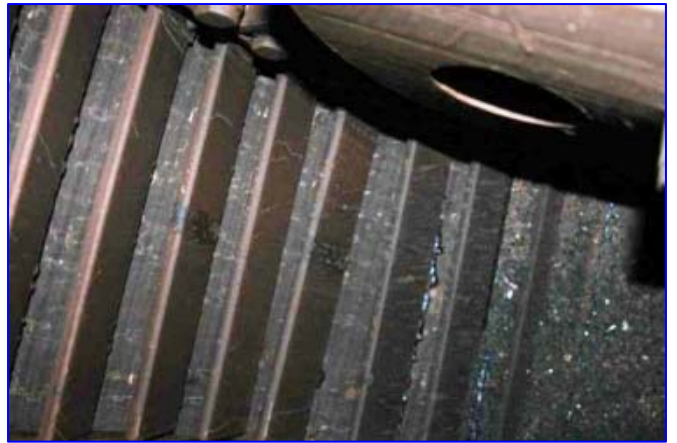
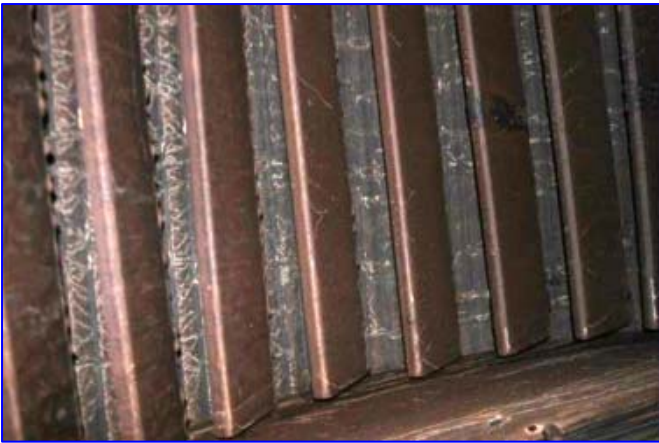
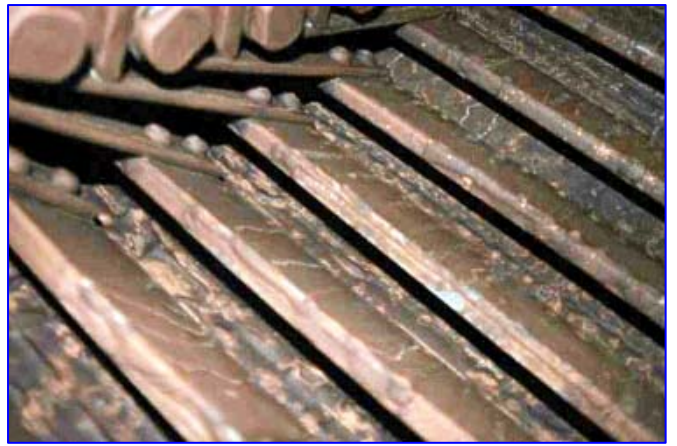
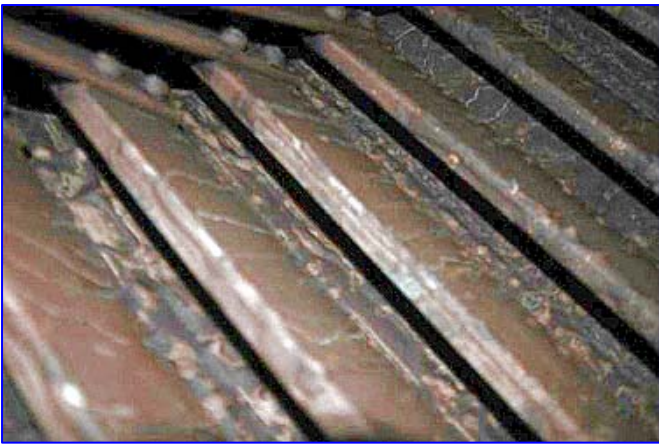
Model: Universal 500

Stock No. APLL001.

Serial No.

Lloveras Universal 500 Chocolate Mixer/Refiner/Conche. Model: Universal 500. Capacity: 1100 lbs (500 kg). Simultaneously grinds, blends, warms, and refines ingredients. Rotating blades provide pressure against the inner wall of the working chamber. This chamber is fitted with grooved sections used by the blades to mix and refine the product, as required. Blades and grooved sections are easily removed for changing and cleaning. Double-jacketed for heating and cooling. In-line hot water heater. Thermocouple. Motor: 20 hp, 50-60 Hz, 220/440 V, 3 phase. Suitable for a wide range of manufactured products such as chocolate, chocolate substitutes, pralines, special coatings, and fillings. It can also be used for recovery and recycling of rejects from other product lines.





The Universal 500 mixer/refiner/conche is an exceedingly versatile machine designed for the manufacture of all kinds of chocolate and compounds. It can be used to produce a wide range of products, including those with relatively low fat content formulas. This compact piece of machinery is easy to install, start, and operate. For each batch, it simultaneously grinds the cocoa, and sugar, and thoroughly blends the ingredients, refining them as required. It also conches the resulting chocolate mass.

The Universal 500 works by means of rotating blades that provide pressure against the inner wall of the working chamber. This working chamber is fitted with grooved sections used by the blades to mix and refine the product as required. The blades are moved by means of a reduction gear that enables maximum energy transfer.

The amount of pressure exerted by blades against the grooved sections is determined by means of an electronically controlled and regulated hydraulic motor. The machine is fitted with a double-jacket for heating and cooling. It features a controlled automatic cold water inlet and water pump to ensure an even distribution of operating temperatures.

Both blades and grooved sections are easy to remove, clean, and change. The control panel is equipped with a PLC to regulate the operating parameters, function warnings and alarms. The machine is extremely easy to operate and offers easy access for cleaning and maintenance. It is suitable for the production of a wide range of manufacturing products such as chocolate, chocolate substitutes, compounds, pralines, special coatings and fillings. It can also be used for recovery and recycling of rejects from other product lines.



INSTRUCTIONS FOR THE STARTING OF THE MACHINE UNIVERSAL 5-1 FOR 500 KG. CAPACITY

- 1º- Fill of general lubrication oil SAE-40 or 50 the reducer box "1" to half the level "25" which is in there.

The maintenance recommended is at 150 working hours. Empty the lubricant, through the plug "26" and pour new one by "24" until it has dragged all the impurities produced by the running in; after this period change every five thousand hours of work, or every year.

For an environment of 6°C to 40°C the oil will be of the SAE-40 type with environment temperature over the 40°C use SAE-90.

- 2º- Fill of water the machines double jacket, by the "19" tap which is underneath until it gets off by the overflow pipe "22".

ATTENTION:

The machine mustn't work in closed circuit. The refrigeration of water mustn't enter with a upper pressure to 1 kg/cm² and it has to go out freely by the opened overflow which fit the machine.

If there isn't any possibility and it is indispensable to install the machine in a closed circuit, the water inlet the value already mentioned of 1 kg/cm².



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HOJA N.º 2

- 3^a- Once the double jacket of the machine is full of water, the heating resistances will be started, it must be connected in three phases at 220 volts, or at 380 volts, according to the electric current you have.
- 4^a- It must be taken into account not starting the machine till the thermometer "27" placed on the front side points out a prudential temperature, as is used in all conches.

MACHINE STARTING

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- 1^a- When the motor is connected the first time it is advised an special care TRYING THAT THE MACHINE WILL TURN IN THE SENSE INDICATED BY THE ARROW PAINTED ON THE MOTOR LID, not been able to turn even one centimetre on the opposite sense, because it is really bad for all the machine interior mechanisms. For all this, with the motor connected, start and stop immediately, if you are completely sure you have turned correctly the motor, leave the connection as definitive.
- 2^a- Once the machine is hot and started, you put, in the proportion you wish, the cocoa coming out from the winnowing machine, with a regular pressure, by the steering wheel placed in the machine rear, taking care that the nut lock will be tightened against the steering wheel, to avoid that it gets loosened. The temperature must be kept, according to formula from 50 to 60 degrees or 70 for cocoa.

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If the machine has the clutch, its tightness and its looseness is realized by two push buttons, placed in the electrical panel.

- 3^a When the cocoa will be a liquid dough, is added the sugar and cocoa butter or the substitute you wish, growing the pressure to the maximum point, leaving the machine without any care, giving your attention only to the temperature, which due to the work and frozen of the shovels, will raise progressively. Then stop the heating and open the cold water lock until the raising of temperature will be compensated by this cold water, and temperature keeps at the correct point.
- 4^a If the machine is not working one or several days, it would have to be heated before starting it again, that is to avoid that the chocolate stuck on the mechanisms chokes the machine.
- 5^a Case that you put inside the machine the cocoa already grinded, that means liquid, and also the sugar already refined, no doubt that you would have saved hours of machine work, as that will avoid the work of grinding, doing the mixing, refining and conching.



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HOJA N.º 4

6^a- On the higher part there is a gases-extractor "17" which must be used according to the cocoa acidity, raising partially the product loading mouth, so that the air draught will have a forced circulation. This extractor must be stopped during the sugar or powder milk loading, as otherwise would extract the powder.

7^a- It must be considered that during the running the amperemeter which will control the 20 HP motor at 220 v. works a maximum of 50/52 Amp. and if it is at 380 v. 28/30 Amp. which is the maximum pressure recommended to the same motor and the machine parts, and will give the shovels the enough pressure for refining.

Following the values mentioned, more pressure don't mean more refining neither less time.

8^a- We repeat that the heater must not be started unless you are sure that the double jacket is full of water (it will be full when the water will come out the sillway) "23", a funnel for open drainage must be put for the observation.



CASE TO WORK ONLY WITH HIDROGENATED FATS
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- a) First heat the machine by electricals resistances.
- b) Once hot, introduce the vegetable fat, liquid is preferable, if there is not that possibility, cut the smaller you can the fat blocks, as loading the U-5-1 machine with the whole blocks, will mean a possible out of order, just with the fat, load the cocoa powder and a third part of the sugar, which can be in beans, without grinding. Give a good pressure to the shovels.
- c) After about 30 minutes, load the second third of the sugar and the milk. If you work a milky dough, you have to take care of the temperature, so the electricals resistances will be closed and a bit of cold water will be given. The thermometer temperature must be between the 60 and 65°C. Don't pass the 60-65°C because the taste of the milk can be changed.
- d) Wait about 30 minutes more and the rest of the sugar can be loaded, and with the temperature already controlled, the machine can be left working the necessary hours to do it's refining and conching task.

.../...



- d) Wait about 30 minutes more and the rest of the sugar can be loaded, and with the temperature already controlled, the machine can be left working the necessary hours to do it's refining and conching task.
- e) The dough must be always kepted in liquid state to work perfectly well. It is advisable to keep and small percentage of fat, to be added at the end of the work, just before emptying the machine, same as the lecithine and essences. If you are using lecithine, it is advisable to add in the beginning of process or during it, as the mass recomend it.
- f) The last working hours, when the dough is refined, it is much better that the shovels do not work too tightly, so that the machine works as conche.
- g) To stop the machine, it is better to leave the shovels without any pressure, like that it will be much more easy to start it again.



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Hoja nº-9

A) Bearing : 22217 - 85/150 \varnothing x 36

Stopper : BA - 85/110 x 12

B) Bearing : 21319 - 95/200 \varnothing x 45

Stopper : BA - 105/130 x 12

C) Stopper : 35 x 52 x 7





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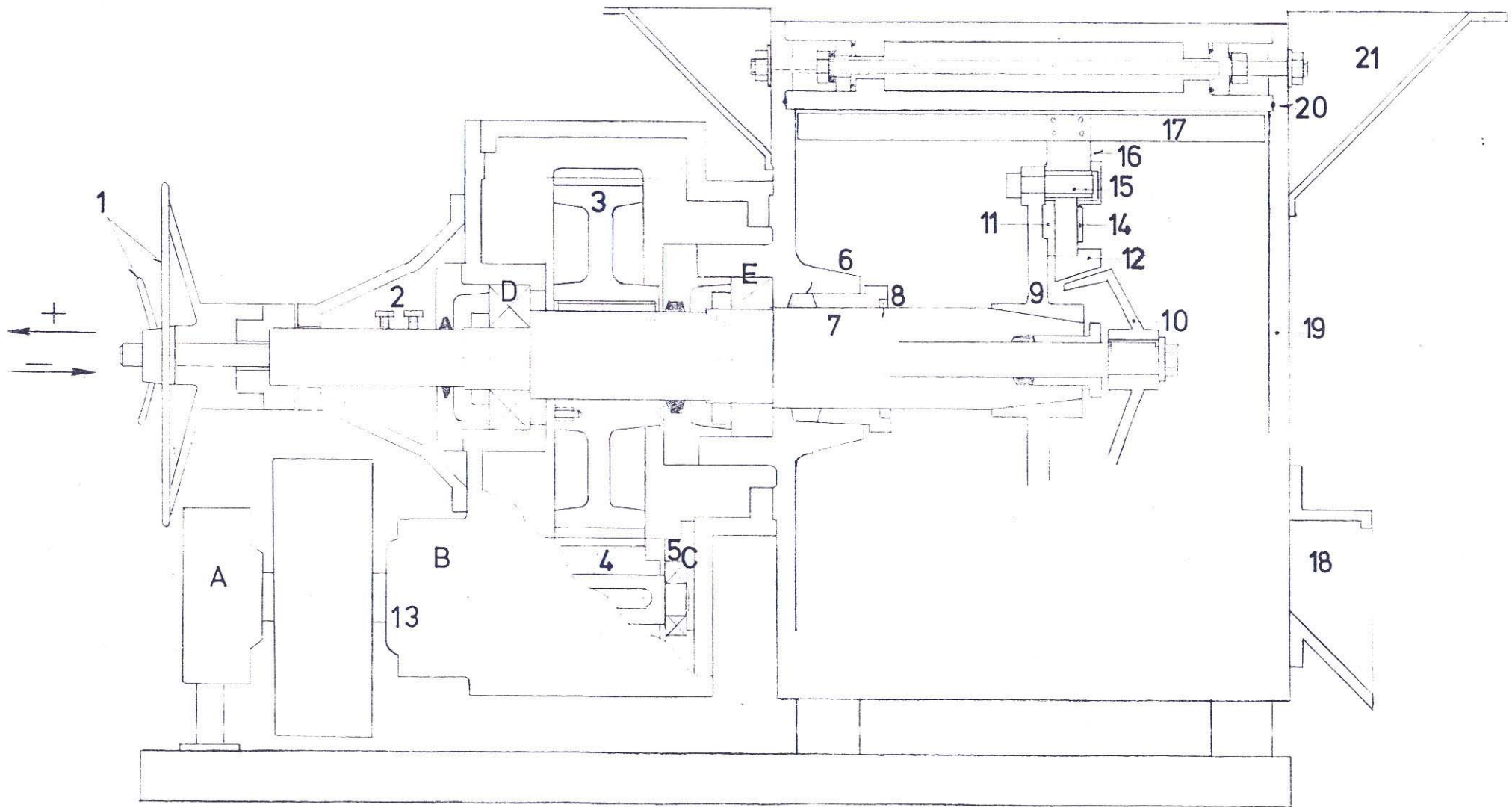
Hoja nº-10

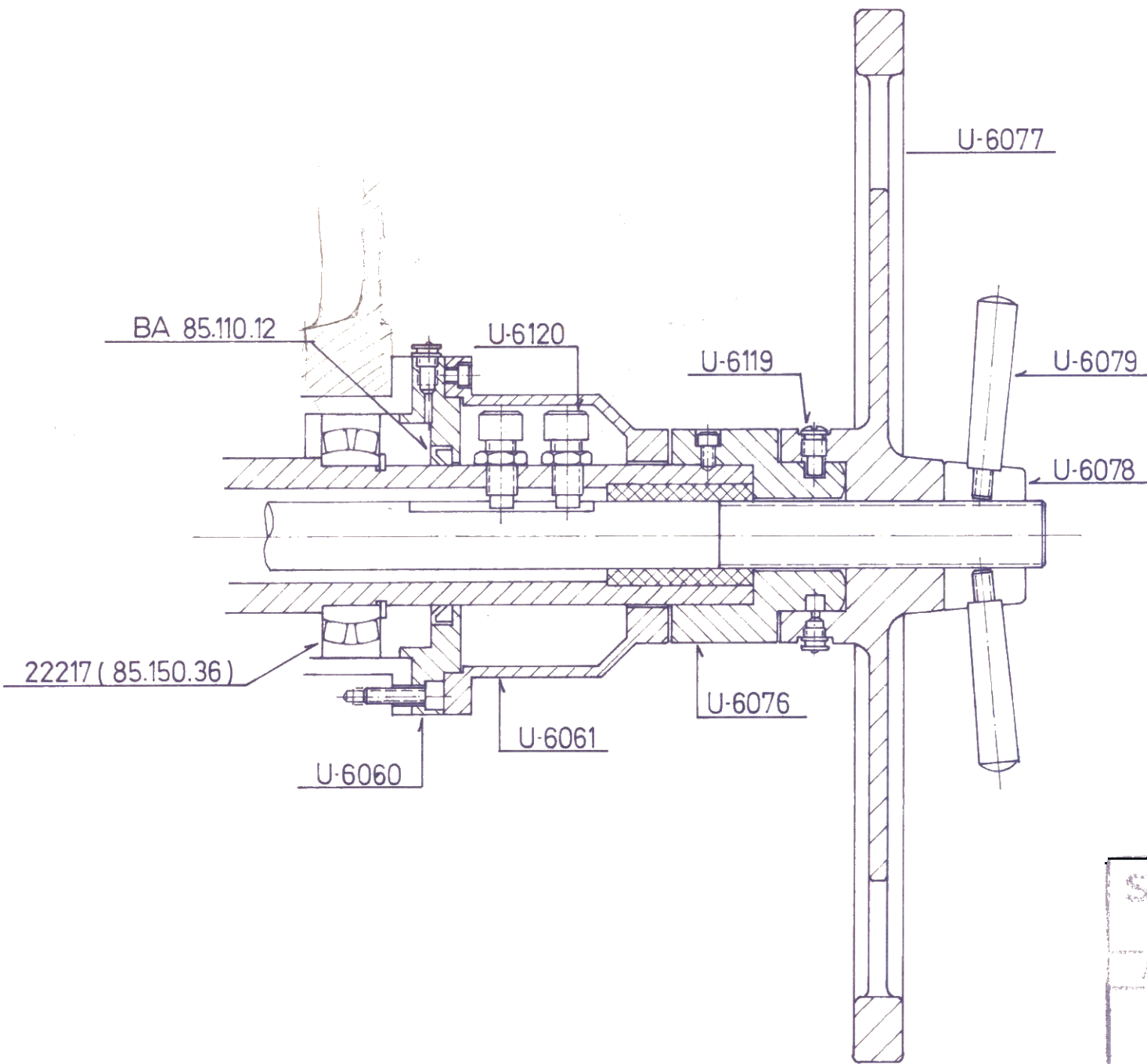
The machine delivered is protected with an special fat which is edible but of course necessary to clean.


In the Universal, a cleaning by steam and soap can be done, but for safety reasons, the most efficient way is to introduce about 100 kgs. of fat, which should be the same you are going to use in the chocolate recipee.

When the fat in liquid state, connect the machine, with some pressure on (not to much) for half an hour. Then empty and do the same operation with 100 kgs. more for one hour. Once this two cleaning jobs are done, then the machine is prepared to start working with real product. Representative tests in the U-500 must be done with not less than 200 kgs.

Tanks and pipes can be cleaned with rags and metilic alcohol, taking care of your breathing, due that metilic can produce a state similar to rapture and even consciousness loosing.





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U-500 con apriete manual

ESPECIA	PROYECTO	REVISOR	
%	821103	MMI	NºPF4339



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Hoja nº-7

DRAWING PF-4335 NOMENCLATURE

1. WHEELS
2. BOLTS
3. GEAR
4. PINION
5. BEARING
6. STUFFING ROPE
7. MAIN AXLE
8. OIL SEAL
9. SUPPORT PLATES
10. CONE
11. SUPPORT OF LIFTERS
12. LIFTERS
13. GEAR BOX
14. RING OF LIFTERS
15. BOLT
16. SPRING
17. BLADE
18. DISCHARGE
19. FRONT COVER
20. RUBBER JOINT
21. HOPPER