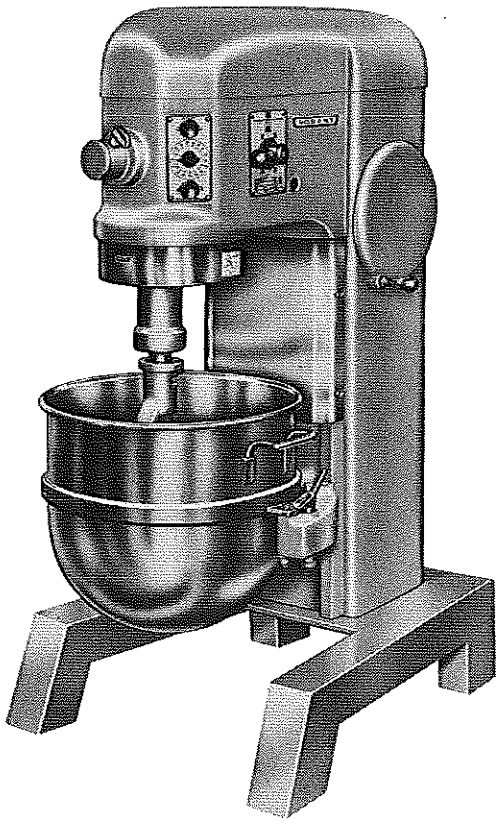
41060184

HOBART

INSTRUCTION MANUAL



MODEL H-600 SERIES MIXERS

(INCLUDES MOTOR PARTS)

ML-33631 H-600
ML-33632 H-600-T

ML-33635 H-600 (W/POWER BOWL LIFT)
ML-33636 H-600-T (W/POWER BOWL LIFT)

ML-33633 H-600-D
ML-33634 H-600-DT

ML-33637 H-600-D (W/POWER BOWL LIFT)
ML-33638 H-600-DT (W/POWER BOWL LIFT)

A product of HOBART CORPORATION TROY, OHIO 45374

FORM 14765 (10-83)

Installation, Operation and Care of MODEL H-600 SERIES MIXERS

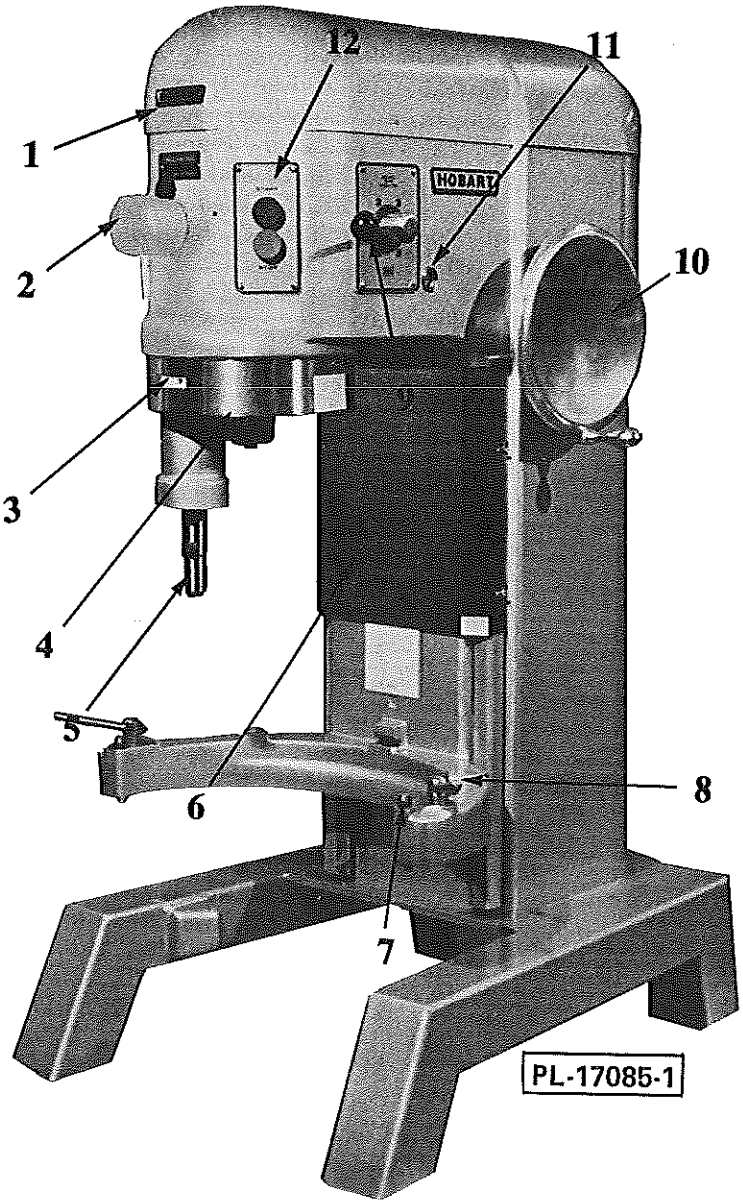


Fig. 1

GENERAL

The H-600 series mixers have a bowl capacity of 60 quarts. With the use of an adapter and special agitators, 30 or 40 quart bowls may also be used. The mixer is powered by a 1-1/2 H.P. motor and is available for single or three phase electrical service.

The H-600 series mixer incorporates a #12 attachment hub (2, Fig. 1) which will accept any #12 attachment. Various attachments and accessories available for this mixer include: Power dicer; vegetable slicer and shredder; meat and food chopper; soup strainer and colander; tray support; bowl jacket; bowl truck; bowl truck adapter; splash cover and bowl extension ring.

INSTALLATION

Location

Mixer should be placed in a convenient location allowing adequate servicing space on the operational controls side, above and in front of the mixer. Holes are provided in the base for permanent bolting to the floor although this is not necessary in normal installations.

Leveling

The machine must be leveled once located. Remove the top cover screws and the top cover (1, Fig. 1). Place a level on the machined surface of the transmission case (4, Fig. 2). Slide shims under the legs of the base as necessary to level the mixer.

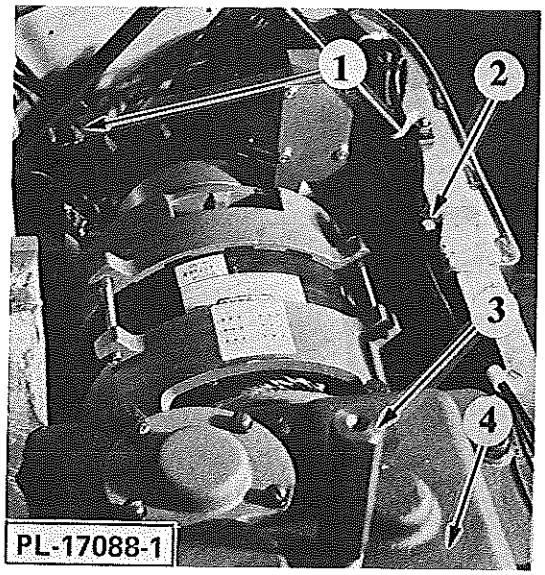


Fig. 2

Lubrication: All lubricating oils are drained from the machine before shipping and must be replaced before operating.

CAUTION: There are different lubricants for the transmission and planetary. Do not interchange the use of these oils as damage to the mixer may result.

Transmission: The front support (3, Fig. 2) for the top cover serves as the oil-fill plug. Remove the support and pour the contents of the bottle labeled "Transmission Oil", shipped with the machine, into the case. The oil level should be between the center and top of the oil level gauge (11, Fig. 1). If the oil level falls below the gauge when the motor is running, more oil is required. When adding oil, add small amounts at a time and check during operation.

Planetary: The recommended oil capacity is 5 to 7 fluid ounces. Since approximately 1 ounce remains in the planetary after draining, 6 ounces are shipped with the machine. Use the oil in the bottle labeled "Oil for Planetary".

Remove the drip cup (4, Fig. 1), which is held by two thumb screws. Check to assure the drain plug (2, Fig. 3) is tight. Slip one end of the tubing (supplied) over the nozzle end of the container labeled "Planetary Oil". Remove the fill plug (1, Fig. 3) and place the other end of the plastic tube in the planetary. Pour entire contents into the machine. Replace the fill plug and drip cup.

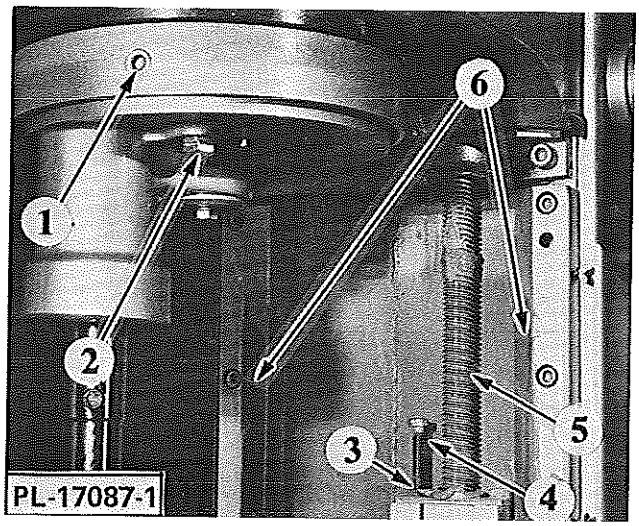


Fig. 3

NOTE: Additional information on routine lubrication may be found under MAINTENANCE.

Electrical Connections

WIRE & FUSE SIZES

		Max Dual Element Time Delay Fuse Size	Minimum Conductor Ampacity	60°C Copper Wire Size
115/60/1		30	30	#10
200/60/1		20	20	#12
200/60/1	W/PBL	30	30	#10
230/60/1		20	20	#12
230/60/1	W/PBL	25	25	#10
200/60/3		10	15	#14
200/60/3	W/PBL	15	15	#14
230/60/3		10	15	#14
230/60/3	W/PBL	15	15	#14
460/60/3		6	15	#14
575/60/3		6	15	#14

Before making electrical connections, check the specifications on the data plate (2, Fig. 4) to assure they agree with those of your electrical service.

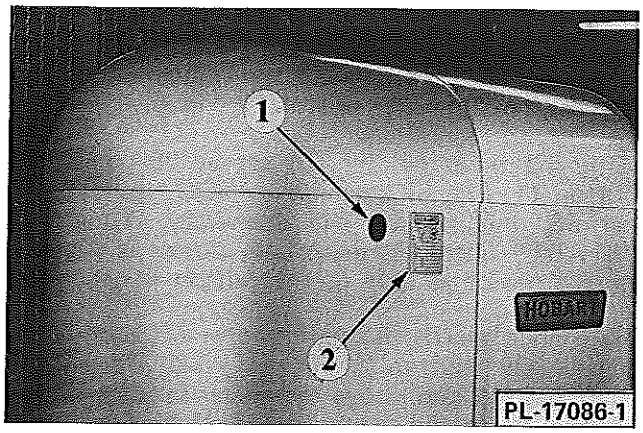


Fig. 4

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

WARNING: DISCONNECT ELECTRICAL POWER SUPPLY AT THE MAIN CIRCUIT BOX AND PLACE A TAG INDICATING THE CIRCUIT IS BEING WORKED ON.

A hole for 3/4" conduit is located at the top of the pedestal (1, Fig. 4). Connect the input power leads to the pigtail leads (1, Fig. 2) from the motor controller. A solderless lug is provided for the service ground.

Three phase machines must be connected so the planetary turns in the direction of the arrow (3, Fig. 1). To check the direction of rotation, turn the power disconnect switch "ON". Place the speed selector (9, Fig. 1) in #1. If machine is equipped with optional timer, place timer on "HOLD". Energize machine momentarily by pushing "START" then "STOP" (12, Fig. 1) and verify the direction of rotation.

WARNING: DISCONNECT ELECTRICAL POWER SUPPLY AT THE FUSED DISCONNECT SWITCH AND PLACE A TAG INDICATING THE CIRCUIT IS BEING WORKED ON.

If motor rotation is incorrect, interchange any two of the power supply leads (1, Fig. 2).

OPERATION

Bowl Lift

The manual bowl lift is operated by the hand wheel (10, Fig. 1). To raise the bowl, turn the wheel clockwise and counterclockwise to lower.

Power Bowl Lift (Optional)

The bowl can be automatically raised or lowered to any height by moving the control handle from the center "OFF" position, clockwise to raise or counterclockwise to lower. An overload slip clutch will ratchet at the top and bottom stop positions to signal end of travel and protect the operating mechanism.

In case of power failure, the bowl can be raised or lowered manually. First remove the apron (6, Fig. 1), held in place by four thumb screws, to expose the lift screw (5, Fig. 3). Place a 1" open end wrench on the lift screw hex and turn the bowl lift screw in the direction desired.

Bowl

NOTE: Due to variations in bowls and agitators, it is RECOMMENDED that the agitator clearance be checked and adjusted if necessary with every bowl or agitator change. See MAINTENANCE for adjustment procedure.

Lower the bowl lift to its bottom stop. Position the bowl so the square alignment bracket is to the back and the alignment pins (7, Fig. 1) in the bowl lift fit into the alignment holes of the bowl. Raise the bowl yoke until the bowl is seated. Lock the bowl in place by rotating the bowl clamps (8, Fig. 1) over the ears of the bowl.

Agitators

With the bowl in place and the lift at its bottom stop, push the agitator shank up on the shaft (5, Fig. 1) and turn clockwise until the drive pin of the shaft latches in the L-shape slot of the agitator shank. Agitators which may be used with this mixer are identified on the last page of this manual.

Speeds

Speed #1 (Low) is for heavy mixtures like dough, heavy batters and potatoes.
Speed #2 (Medium - Low) is for mixing cake batters, mashing potatoes and for developing dough.
Speed #3 (Medium - High) is for maximum incorporation of air into light batches. The "D" whip is used for whipping cream, beating egg whites, mixing; light icings, meringues and whipping.
Speed #4 (High) is for accelerated and maximum air incorporation into light batches.

NOTE: For additional information on attachment operation speeds and mixing speeds for specific

results, refer to the "Use and Applications Hand Book" included with this machine.

H-600; H-600-D

Turn power supply to mixer "ON". Set the speed selector handle (2, Fig. 5) at the desired speed and depress the "START" button (1, Fig. 5).

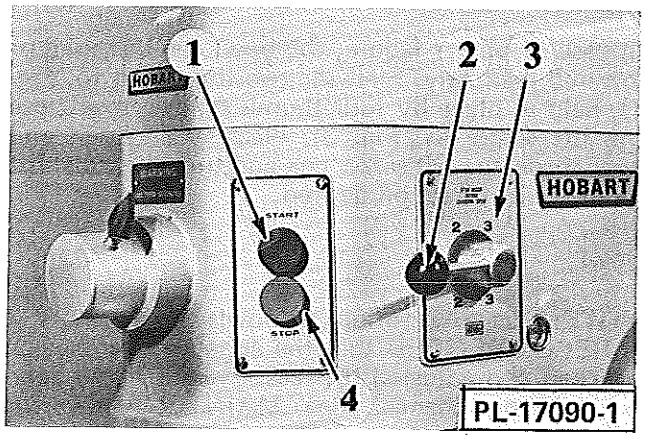


Fig. 5

To change speeds, turn the motor off by pressing the "STOP" button (4, Fig. 5). Allow the planetary to stop rotating. Move the speed selector handle (2, Fig. 5) to the desired speed. Make certain the speed selector handle lines up with the number on the shift selector plate (3, Fig. 5). Never position the handle between numbers. Restart the mixer.

H-600-T; H-600-DT

For non-timed operation, set the speed selector handle (2, Fig. 6) at the desired speed. Set the timer (4, Fig. 6) on "HOLD" and depress the "START" button (1, Fig. 6).

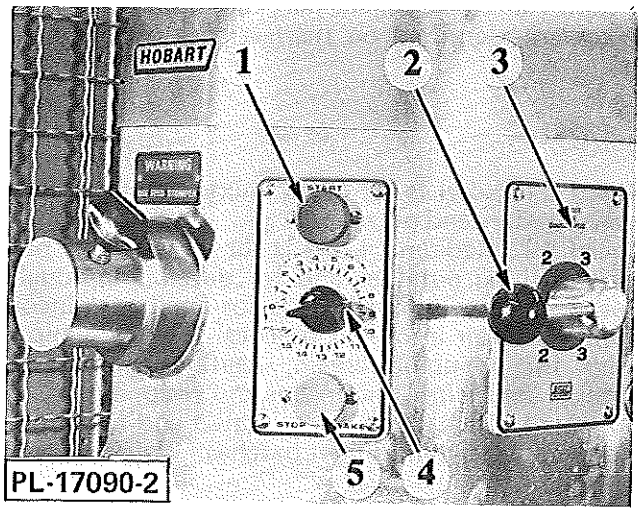


Fig. 6

For timed operation, set the speed selector handle (2, Fig. 6) at the desired speed. Set the timer (4, Fig. 6) at the desired time (if less than 3 minutes turn past "3" and back to the desired time), and depress the "START" button (1, Fig. 6).

With the timer (4, Fig. 6) set at "0", the start button (1, Fig. 6) becomes a "JOG" button and permits inching of the planetary. When the "START" button is depressed, power is supplied to the motor as long as the button is depressed.

To change speeds, turn the motor off by pushing the "STOP" button (5, Fig. 6). When the agitator shaft has stopped, move the speed selector handle (2, Fig. 6) to the desired speed. Make certain the speed selector handle lines up with the number on the shift selector plate (3, Fig. 6). Never position the handle between numbers. Restart the mixer.

Attachments

Install the attachment into the attachment hub of the mixer (2, Fig. 1). Make certain the square shank of the attachment is in the square drive of the mixer. Secure the attachment by tightening the thumb screw. Place the speed selector handle (9, Fig. 1) in the desired speed. Turn mixer "ON" (12, Fig. 1) to operate attachment.

The meat and food chopper attachment should be operated in speed #3. If material in the cylinder stalls the mixer, stop the mixer at once. Remove the adjusting ring, knife, plate and worm and remove the obstruction. Do not attempt to restart the mixer in a lower speed.

MAINTENANCE

WARNING: DISCONNECT ELECTRICAL POWER SUPPLY AT THE FUSED DISCONNECT SWITCH AND PLACE A TAG INDICATING THE CIRCUIT IS BEING WORKED ON.

Cleaning

A kit, including a brush and bowl scraper, is furnished to aid cleaning operations. The bowl scraper, with a cloth wrapped around it, provides a tool to reach the narrow opening between the bowl yoke and pedestal at the slideways (6, Fig. 3). Other areas may be cleaned by using the brush.

The mixer should be thoroughly cleaned daily. Do not use a hose on the mixer. It should be washed with a clean damp cloth. The base allows ample

room to clean under the mixer. The bowl support apron (6, Fig. 1) may be easily removed by loosening the thumb screws.

The drip cup (4, Fig. 1) should be removed periodically and wiped clean. The cup is removed by loosening the two thumb screws and pulling down.

Lubrication

Planetary: The oil in the planetary should be checked periodically. Remove the drip cup (4, Fig. 1) by loosening the two thumb screws and pulling down. Remove the fill plug (1, Fig. 3). Oil should be even with the bottom of the fill plug hole. If oil does not run out, slowly add "Gearep #85" until it begins to overflow. Replace the fill plug and the drip cup.

An oil drain is located at the bottom of the planetary (2, Fig. 3). Should draining be necessary, remove the drip cup (4, Fig. 1) and place a suitable catch pan under the planetary. Remove the drain plug. When completely drained, replace the drain plug. Remove the fill plug (1, Fig. 3) and replenish with 6 ounces of "Gearep #85".

NOTE: If the planetary seal becomes dry, it may squeal. A little lubrication worked under the lip of the seal will stop the squeal.

Transmission: The oil level should be somewhere between the center and top of the oil gauge (11, Fig. 1) for correct lubrication. If the oil falls below this, remove the top cover (1, Fig. 1) and the front cover support (3, Fig. 2), which acts as a fill plug. Pour "Gearep #140" into the transmission until oil returns to the gauge line. Replace the bracket and the top cover. Use caution not to overfill the transmission as leakage may result.

Bowl Lift: The slideways (6, Fig. 3) and the lift screw (5, Fig. 3) should be lubricated about twice a year depending upon amount of use. To reach these areas, loosen the thumb screws and remove the apron (6, Fig. 1). Wipe a thin coat of "Lubriplate 630AA" (supplied) on each slideway and on the lift screw. Replace the apron and tighten the thumb screws.

On manual lift units also lubricate the handwheel gearing. To do this, remove the top cover (1, Fig. 1) and wipe some "Lubriplate 630AA" (supplied) on the gear teeth inside the pedestal. The handwheel shaft is oiled through an oiler (2, Fig. 2) on the handwheel bracket.

ADJUSTMENTS

WARNING: DISCONNECT ELECTRICAL POWER SUPPLY AT THE FUSED DISCONNECT SWITCH AND PLACE A TAG INDICATING THE CIRCUIT IS BEING WORKED ON.

Agitator Clearance

Remove the bowl support apron (6, Fig. 1). Install the bowl and lock in place. Install the "B" beater. Slowly raise the bowl to the "UP" position using caution to stop before the agitator touches the bottom of the bowl.

NOTE: On power bowl lift models turn the lift screw (5, Fig. 3) with an open end wrench on the machined hex at the top of the screw.

Rotate the agitator around the bowl by hand to locate the point of least clearance.

The clearance between the agitator and the bottom of the bowl should be no more than 1/8". A match book may be used as a gauge for this measurement.

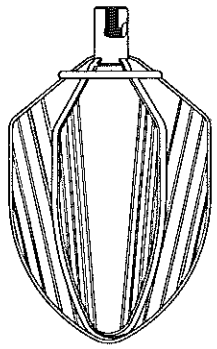
Loosen the lock nut (3, Fig. 3) and turn the stop screw (4, Fig. 3) clockwise several turns. Slowly turn the bowl lift (10, Fig. 1) to the specified clearance. Turn the stop screw counterclockwise until it is firmly seated against the mixer pedestal. Tighten the lock nut while holding the stop screw.

Operate the bowl lift several times contacting both bottom and top stops. With the bowl lift against the top stop recheck the clearance to assure correct adjustment.

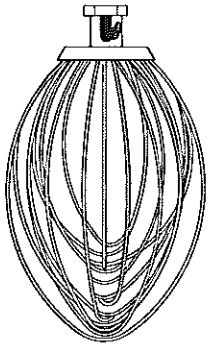
Bowl Clamp

The height of the bowl clamp (8, Fig. 1) is controlled by a spring washer and lock nut. The adjustment is made from the under side of the bowl lift. Turning the lock nut clockwise will loosen the clamp and counterclockwise will tighten the clamp.

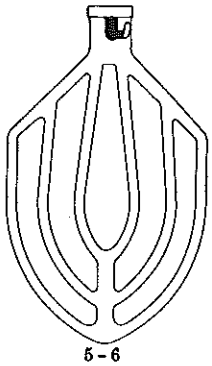
NOTE: If repeated adjustments are required, additional service is indicated. Contact an authorized HOBART SERVICE REPRESENTATIVE.



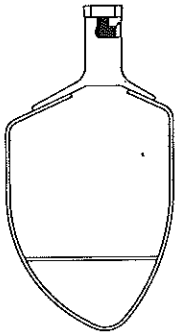
1-2



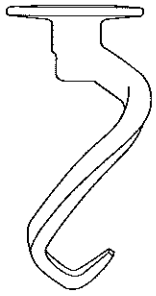
3-4



5-6

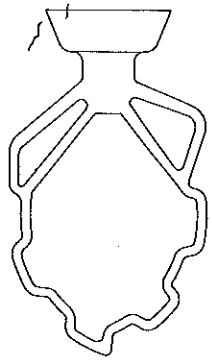


7



8

PL-15998



9

AGITATORS

ILLUS. PL-15998	PART NO.	PART NO.	PART NO.	NAME OF PARTS	AMT.
	60 Qt.	40 Qt.	30 Qt.		
1	D-123486	D-123682	---	"C" Six Wing Whip	1
2	---	---	D-123714	"C" Four Wing Whip (Not Shown)	1
3	S-24900-2	S-23591-2	R-10327-2	"D" Wire Whip (SST)	1
4			R-10327-1	"D" Wire Whip (Tinned)	1
5	S-24308-2	S-24847	S-60052-2	"B" Flat Beater (SST)	1
6	S-24308-1	T-23620	S-60052-1	"B" Flat Beater (Alum.)	1
7	S-68096	S-68095	R-68822	"P" Pastry Knife	1
8	E-121071	---	---	"ED" Dough Arm - Spiral	1
9	S-600-69	R-8400	R-10326	"S" Sweet Dough Arm	1
	R-60090	S-60132-2	R-72871	"I" Wire Whip (Not Shown)	1
	---	S-80693	S-72858	"E" Dough Arm (Not Shown)	1

PROCESS VALIDATION

Product CalfSpan/Spanbolet Top Layer

Phase Granulation Equipment Hobart Mixer

Asset No. 05101 Pharmaceutical I.D. No. 60-300

Initial Program Approval

Department	Name	Signature	Date
Quality Assurance	D.R. Haberstich	D.R. Haberstich	7-13-84
Engineering	A. Smith	Adam Smith	7-16-84
Pharm. Prod. Dev.	G.M. Grass	G.M. Grass	7-18-84
Manufacturing	H.E. Byram	H.E. Byram	7-16-84

Program approval signifies concurrence with acceptance criteria and methodology contained herein.

Final Review of Test Results and Approval

Department	Name	Signature	Date
Quality Assurance	D.R. Haberstich	D.R. Haberstich	12-3-84
Engineering	A. Smith	Adam Smith	12-3-84
Pharm. Prod. Dev.	G.M. Grass	G.M. Grass	12-3-84
Manufacturing	H.E. Byram	H.E. Byram	12-4-84

Final review approval signifies that testing performed herein and the results meet the objectives.

Final Review By Manager, Pharmaceutical Quality Assurance/Control

R.M. Grossman Date 12-5-84

PRODUCT: CalfSpan/Spanbolet Top Layer

PHASE: Granulation

EQUIPMENT: Hobart Mixer

ASSET NO.: 05101

PHARM. I.D. NO. - 60-300

1. History and Description

a. Date of Purchase - 12-7-83
b. Supplier - Hobart Corporation
c. P.O. No. - 52683
d. Model No. - H600T

The Hobart Model H600T mixer has a 60 qt. bowl and is powered by a 1 1/2 horsepower motor. The planetary action of this mixer achieves uniform mixing and thorough blending of ingredients. The mixing bowl is constructed of Type 316 stainless steel with a smooth surface for proper mixing and ease of clean-up. On the outside of the bowl is an alignment bracket and two alignment holes. These are used to position the bowl correctly and hold it in place during the mixing operation. The "B" flat beater is constructed of aluminum and is an all-purpose agitator giving a uniform dispersion of ingredients.

A bowl truck or "dollie" is included with the mixer. It provides convenience and ease of handling whenever a batch is moved from the mixer to the next location. It is constructed of cast iron and painted. It has four casters for ease of transporting. The motor is 1 1/2 horsepower, 460 volt, 60 cylce, 3 phase and operates at 1725 rpm.

Controls

a. On-Off buttons - pushbuttons used to turn electrical power to the mixer on or off.

b. Batch Timer - a device that can be set to turn the mixer off automatically when the desired mixing time has been reached. Also, with the timer set at "0", the start button becomes a jog button and permits inching of the planetary.

c. Bowl Lift - this mixer is equipped with a manual bowl lift. It is operated by a handwheel.

d. Speed Selector Lever - this mixer has four (4) speed settings. The speed selector lever must be set at the desired speed before the motor is started. To change speeds, the motor must be turned off allowing the planetary to stop rotating, and then moving the speed selector lever to the desired speed.

e. Transmission Oil Sight Gauge - indicates the transmission oil level.

PRODUCT: CalfSpan/Spanbolet Top Layer

PHASE: Granulation

EQUIPMENT: Hobart Mixer

ASSET NO.: 05101

PHARM. I.D. NO. - 60-300

2. Instrumentation

a. Critical

1. Timer

b. Non-Critical

1. None

PRODUCT: CalfSpan/Spanbolet Top Layer

PHASE: Granulation

EQUIPMENT: Hobart Mixer

ASSET NO.: 05101

PHARM. I.D. NO. - 60-300

3. SOP's

a. P-CP-~~24~~ 48 Hobart Mixer Thorough Clean Up
b. PM-CP-~~28~~ 12 Hobart Mixer Preventive Maintenance

DRH 2-12-95

PRODUCT: CalfSpan/Spanbolet Top Layer

PHASE: Granulation

EQUIPMENT: Hobart Mixer

ASSET NO.: 05101

PHARM. I.D. NO. - 60-300

4. Replacement Parts List

a. Replacement parts will not be stocked for the Hobart Mixer. Parts will be ordered as needed. Only parts that meet manufacturer's specifications will be purchased.

PRODUCT: CalfSpan/Spanbolet Top Layer

PHASE: Granulation

EQUIPMENT: Hobart Mixer

ASSET NO.: 05101

PHARM. I.D. NO. - 60-300

5. Operating Parameters

a. Oil in transmission sight glass must be visible before running machine. Line across center of sight glass indicates full mark.

b. The bowl must be raised to its maximum limit so there is approximately 1/8" clearance between the agitator and the mixing bowl.

c. Timer: 0 - 15 minutes.

d. The speed selector has been changed so only one speed is available (slow speed setting #1).

PRODUCT: CalfSpan/Spanbolet Top Layer

PHASE: Granulation

EQUIPMENT: Hobart Mixer

ASSET NO.: 05101

PHARM. I.D. NO. - 60-300

6. Test Methodology

The planetary rpm's will be measured at three separate times. These will be documented for informational purposes and future reference. A written description will be made concerning the CGMP aspects of the design of the unit.

PRODUCT: CalfSpan/Spanbolet Top Layer

PHASE: Granulation

EQUIPMENT: Hobart Mixer

ASSET NO.: 05101

PHARM. I.D. NO. - 60-300

7. Acceptance Criteria

The planetary rpm's shall compare within 5%. The design aspects of the unit must meet CGMP requirements.

PRODUCT: CalfSpan/Spanbolet Top Layer

PHASE: Granulation

EQUIPMENT: Hobart Mixer

ASSET NO.: 05101

PHARM. I.D. NO. - 60-300

8. Results

The Hobart Mixer has been in use since January, 1984. It can be disassembled for cleaning very easily. The stainless steel mixing bowl is in excellent condition, free of nicks and dents, and cleans very easily. The mixing paddle is constructed of aluminum and is in very good condition, free of nicks and dents, and cleans easily. The plastic safety cover, which fits on the mixing bowl during the mixing process is in excellent condition and can be cleaned easily. The dollie, which is used to transport the mixing bowl from one lcoation to another, is in excellent condition and can be cleaned easily.

The mixer base and frame are made of painted steel and can be cleaned easily.

Mixer Paddle Speed

Date	Time	Speed
7-13-84	9:05 a.m.	32.2 rpm
7-13-84	11:33 a.m.	32.2 rpm
7-13-84	2:19 p.m.	32.1 rpm

Timer Calibration: Reference DZR 417 page 126

PRODUCT: CalfSpan/Spanbolet Top Layer

PHASE: Granulation

EQUIPMENT: Hobart Mixer

ASSET NO.: 05101

PHARM. I.D. NO. - 60-300

9. Conclusion

The Hobart Mixer is well suited for its intended purpose of mixing the ribbon mixer test batches. The fact that it has performed satisfactorily for many batches is proof of this conclusion. Because the mixer is relatively new, free of defects, and performs well, it is considered "qualified" equipment.

PRODUCT: CalfSpan/Spanbolet Top Layer

PHASE: Granulation

EQUIPMENT: Hobart Mixer

ASSET NO.: 05101

PHARM. I.D. NO. - 60-300

10. Revalidation

No requalification schedule for the Hobart Mixer needs to be established. Requalification needs to be performed only when major alterations are made. This will be monitored by the Engineering Change Control system.

NORDEN LABORATORIES STANDARD OPERATING PROCEDURES			Page: 1 OF 2
Title: HOBART MIXER (#60-286, 60-287 & 60-300) THOROUGH CLEAN-UP	Date Issued: 12-16-83	Index: P-CP-48	

Purpose: To describe the proper procedure used when performing a thorough clean-up on the Hobart Mixers.

Responsibility: Anyone performing a thorough clean-up on the Hobart Mixers will be responsible for following this procedur

1. Disconnect electrical power source to Hobart Mixer.
2. Vacuum and/or wipe particulate matter from all surfaces of Hobart Mixer and surrounding area. Remove mixing bowl and wash at step 8.
3. Prepare a suitable soap solution according to P-CP-1.
4. Using a clean cloth saturated with soap solution (step 3) thoroughly clean all surfaces of mixer.

   NOTE: Never use water hose to clean mixer.

5. Obtain suitable container and a sufficient amount of fresh tap water to rinse mixer. Additional fresh water may be required to thoroughl rinse mixer (step 6).
6. Using damp, lint free, clean cloth and fresh water (step 5) thoroughly remove all soap and particulate matter residue from Hobar Mixer.
7. Allow mixer to air dry or dry with clean (dry) lint free cloth.
8. Transfer mixing bowl (step 2) to wash area and thoroughly clean with brush and soap solution (prepared at step 3).
9. Thoroughly rinse bowl (step 8) to remove all particulate matter and soap residue.
10. Thoroughly dry all surfaces of bowl (step 9) with lint free (clean) cloth and/or in-plant compressed air.
11. Transfer mixing bowl (step 10) to Hobart Mixer. (Do not place bowl on mixer until inspection (step 12) has been completed.)
12. Prior to assembly have supervisor conduct a visual inspection of mixer and bowl for cleanliness.
13. Reassemble Hobart Mixer.

Written by: Michael Hickman 12-15-83	Manufacturing Approval: Mann Wong 12-15-83	Div. Director Approval: H. E. Bye 12-16-83
Quality Assurance Approval: Evelyn Hastings 12-15-83	Annual Review:	

Title: HOBART MIXER (#60-286, 60-287 & 60-300) THOROUGH CLEAN-UP	Date Issued: 12-16-83	Index: P-CP-48

14. Properly label equipment with "Clean Equipment" tag and cover with clean plastic cover if more than two hours will lapse prior to operation.

15. Return all cleaning equipment to proper storage area.

16. Complete all appropriate documentation.

Written by:	Manufacturing Approval:	Div. Director Approval:
Michael Heckman 12-15-83	Marcus Wong 12-15-83	L.E. Bym 12-16-83
Quality Assurance Approval: Evelyn Hastings 12-15-83	Annual Review:	

NORDEN LABORATORIES STANDARD OPERATING PROCEDURES	Page: 1 OF 1

Title: PREVENTIVE MAINTENANCE - HOBART MIXER	Date Issued: 1-18-85 Supercedes: New Issue	Index: PM-CP-12

Purpose: Describes preventive maintenance performed on this equipment.

Responsibility: The Manager, Pharmaceutical Compounding Operations shall assure compliance with this procedure.

Asset No. 5101 Dept. I.D. No. 60-300

Whenever equipment is serviced (inspected, lubricated, repaired, etc.) details of service are to be entered in the Preventive Maintenance Log for that equipment.

I. Lubrication

A. Frequency -
1. Monthly
2. Semi-Annually
3. Annually

B. Approved Lubricants -
1. Food Grade (per P-GP-79)
2. Non-food Grade (per P-GP-80)

C. Lube Points -
See Lubrication Chart (Preventive Maintenance Log, page 1)

II. Inspection

A. Manufacturing - Not required

B. Maintenance - Semi-Annual
1. Electric motor - condition
2. Electric cord - condition
3. Drive gears and other internal parts - condition

0538m

Written by: 12-17-84	Manufacturing Approval: 1-4-85 1-3-85	Div. Director Approval: 1-18-85
Quality Assurance Approval: 1-16-85	Annual Review:	

NORDEN LABORATORIES

P.O. BOX 80809
601 WEST CORNHUSKER HIGHWAY LINCOLN, NEBRASKA 68501
PHONE: 402-475-4541

AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER

Veterinary Pharmaceuticals and Biologicals
Subsidiary SmithKline Corporation

THIS NO. MUST APPEAR ON ALL PACKAGES, BILLS, CORRESPONDENCE, INVOICES, ETC.

PURCHASE ORDER

NO. 52683

complete 12-7-83

Hobart Corporation
Omaha, NE

ORDER DATE	DATE DUE	TERMS	F.O.B.	SHIP VIA
11-23-83	ASAP	SEE BELOW	~~S.P.~~ Lincoln, NE	Best Way

STOCK NO.	ITEM	QUANTITY	UNIT	DESCRIPTION/SPECIFICATIONS	UNIT PRICE
	A	One	ea	Hobart 60 qt. Mixer Model H600T 480 Volt 1 1/2 H.P. Motor 3 Phase 316 Stainless Steel Bowl Aluminum "B" Beater Bowl Truck Included	~~$6,250.00~~ 5700.00

Please invoice Norden Laboratories for $1,900.00 in 1983. Remaining to be billed in 1984.

NOTE

- This order is also subject to instructions and conditions on reverse side.
- To insure prompt payment advise if the material covered by this order will be shipped or invoiced under any other name than the above addressee.

NORDEN LABORATORIES, INC.

BY _____

Gary Thompson, Asst. Mgr. Purchasing

RECEIVING SEND GOODS TO: Bill Honnor

REQUISITION NO.: 88613 1-82

CHARGE ACCOUNT NO.: 4-60-83-05

LABELS REQUIRED _____

STOCK NO. _____

ORM 60701

PURCHASING FILE

CUSTOMER ACKNOWLEDGEMENT