

S6161-ZU-FSE-010

0910-LP-103-4834

TECHNICAL MANUAL
FOR

FOOD MIXER
HOBART MODEL D-300
DESCRIPTION, OPERATION, AND MAINTENANCE



DISTRIBUTION STATEMENT C: DISTRIBUTION AUTHORIZED TO U. S. GOVERNMENT AGENCIES AND THEIR CONTRACTORS; ADMINISTRATIVE/OPERATIONAL USE; 31 JULY 2004. OTHER REQUESTS FOR THIS DOCUMENT SHALL BE REFERRED TO COMNAVSEA (SEA 09T).

WARNING: THIS DOCUMENT CONTAINS TECHNICAL DATA WHOSE EXPORT IS RESTRICTED BY THE ARMS EXPORT CONTROL ACT (TITLE 22, U.S.C. SEC 2751, ET SEQ) OR THE EXPORT ADMINISTRATION ACT OF 1979, AS AMENDED, TITLE 50, U.S.C., APP 2401 ET SEQ. VIOLATIONS OF THESE EXPORT LAWS ARE SUBJECT TO SEVERE CRIMINAL PENALTIES. DISSEMINATE IN ACCORDANCE WITH PROVISIONS OF DOD DIRECTIVE 5230.25(D).

DESTRUCTION NOTICE: DESTROY BY ANY METHOD THAT WILL PREVENT DISCLOSURE OF CONTENTS OR RECONSTRUCTION OF THE DOCUMENT.

PUBLISHED BY DIRECTION OF COMMANDER, NAVAL SEA SYSTEMS COMMAND

31 JULY 2004

0910LP1034834



S6161-ZU-FSE-010

LIST OF EFFECTIVE PAGES

Date of issue for original pages is:

Original 0 31 July 2004

Total number of pages in this publication is 96 consisting of the following:

Page No.	Change No.*
Title and A.....	0
#Certification Sheet.....	0
Change Record-1.....	0
Change Record-2 blank.....	0
Foreword-1.....	0
Foreword-2 blank.....	0
i through iv.....	0
 SECTION 1	
1-1 through 1-12.....	0
 SECTION 2	
2-1 through 2-38.....	0
 SECTION 3	
3-1 through 3-28.....	0
 TMDER Forms (3 pages).....	 0

*Zero in this column indicates an original page.
#Pages are printed single-sided.

NAVSEA TECHNICAL MANUAL CERTIFICATION SHEET

Certification Applies to: S6161-ZU-FSE-010

Applicable TMINs/Change No.: S6161-ZU-FSE-010

Publication Date: 31 JULY 2004

Title: TECHNICAL MANUAL FOR FOOD MIXERS, HOBART MODEL D300

TMCR: NDMS 980115-000

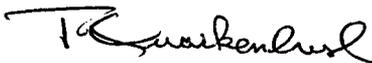
PURPOSE OF CHANGE:

Equipment Alteration Numbers Incorporated: N/A

TMDER/ACN Numbers Incorporated:

CERTIFICATION STATEMENT

This is to certify that responsible NAVSEA activities have reviewed the change for acquisition compliance, technical coverage, and printing quality. This form is for internal NAVSEA management use only, and does not imply contractual approval or acceptance of the technical manual by the Government, nor relieve the contractor of any responsibility for delivering the technical manual in accordance with the contract requirements.

Authority	Name	Signature	Organization	Date
Acquisition	T. Quackenbush TMMA Feedback Support Section		NSWCCD-SSES 9443	8/20/04
Technical	J. Burton, Head, Ship Maneuvering, Hull Outfitting & Habitability Branch DSN 443-7344 or Comm. (215) 897-7344		NSWCCD-SSES 978	8/30/04
Printing Release	J. Duggan Engineering Quality Assurance		NSWCCD-SSES 9441	

CHANGE RECORD

Change No.	Date	Title and/or Brief Description	Signature of Validating Officer

FOREWORD

This manual contains information necessary to operate, maintain, troubleshoot, and repair the Hobart Food Mixers, Model D300.

The manual consists of one volume arranged in three sections as follows:

Section I - Instructions Model D300 Mixers.

Section II - Service Manual Model D300 Mixers.

Section III - Catalog of Replacement Parts, Mixers Model D300.

Ships, training activities, supply points, depots, Naval Shipyards, and Supervisors of Shipbuilding are requested to arrange for the maximum practical use and evaluation of NAVSEA technical manuals. All errors, omissions, discrepancies, and suggestions for improvement to NAVSEA technical manuals shall be forwarded via E-mail to TMDER@phdnswc.navy.mil or via surface mail to:

COMMANDER
NAVSURFWARCENDIV
BLDG 1388
CODE 310 TMDER
4363 MISSILE WAY
PORT HUENEME, CA 93043-4307

on NAVSEA Technical Manual Deficiency/Evaluation Report (TMDER), form NAVSEA 4160/1. All feedback comments shall be thoroughly investigated and originators will be advised of action resulting there from. One copy of form NAVSEA 4160/1 is at the end of each separately bound technical manual, 8-1/2 x 11 inches or larger. Copies of form NAVSEA 4160/1 may be requisitioned from the Naval Systems Data Support Activity, Code 310, at the above address. Users are encouraged to transmit deficiency submittals via the Naval Systems Data Support Activity Web Page located at:

<http://nsdsa.phdnswc.navy.mil/>

Individual electronic TMs do not contain NAVSEA 4160/1 but are linked to an electronic version on the resident CD-ROM. Therefore, we encourage the user to transmit deficiency submittals via the Naval Systems Data Support Activity Web Page located above.

SAFETY SUMMARY

Before any attempt to operate, maintain, troubleshoot, or repair the Meat Slicer, all-applicable precautions shall be thoroughly reviewed and understood.

GENERAL SAFETY NOTICES

The following general safety notices supplement the specific warnings and cautions appearing elsewhere in this manual. They are recommended precautions that must be understood and applied during operation and maintenance of the equipment. Should situations arise that are not covered in the general or specific safety precautions, the Commanding Officer or other authority will issue orders as deemed necessary to cover the situation.

DO NOT REPAIR OR ADJUST ALONE

Under no circumstances should repair or adjustment of energized equipment be attempted alone. The immediate presence of someone capable of rendering aid is required. Before making adjustments, be sure to protect against grounding. If possible, make adjustments with one hand, with the other hand free and clear of the equipment. Even when power has been removed from equipment circuits, dangerous potentials may still exist due to retention of charges by capacitors. Circuits must be grounded and all capacitors discharged prior to attempting repairs.

TEST EQUIPMENT

Ensure test equipment is in good condition. If a test meter must be held, ground the case of the meter before starting measurements. Do not touch live equipment or personnel working on live equipment while holding a test meter. Some types of measuring devices should not be grounded; these devices should not be held when taking measurements.

INTERLOCKS

Interlocks are provided for safety of personnel and equipment and should be used only for the purpose intended. Interlocks should not be battle-shortened or otherwise modified except by authorized maintenance personnel. Do not depend solely upon interlocks for protection. Whenever possible, disconnect power at power distribution source.

MOVING EQUIPMENT

Personnel shall remain clear of moving equipment. Should equipment require adjustment while in motion, a safety watch shall have full view of operations being performed and immediate access to controls capable of stopping equipment in motion.

FIRST AID

An injury, no matter how slight, shall never go unattended. Always obtain first aid or medical attention immediately.

RESUSCITATION

Personnel working with or near high voltage shall be familiar with approved methods of resuscitation. Should someone be injured and stop breathing, initiate resuscitation immediately. A delay could cost the victim's life. Resuscitation procedures should be posted in all electrically hazardous areas.

GENERAL PRECAUTIONS

Observe the following general precautions at all times.

1. Install and ground all electrical components associated with this system/equipment in accordance with applicable Navy regulations and approved shipboard procedures.
2. Ensure maintenance operations comply with Navy Safety Precautions for Forces Afloat, OPNAVINST 5100 Series.
3. Observe precautions set forth in Naval Ships' Technical Manual (NSTM) chapters 233, 300, 302, 310, and 320 with respect to diesel engines, electrical generating equipment, and electrical circuits.
4. Observe proper installation and maintenance of protective guards and shutdown devices around rotating parts of machinery and high-voltage sources.
5. Ensure special precautionary measures are used to prevent applying power to the system/equipment at any time maintenance work is in progress. All ship's procedures regarding tag-out procedures must be followed.
6. Do not make any unauthorized alterations to equipment or components.
7. Ensure the system is not energized before working on electrical system/equipment. Make sure any circuit breaker switches are in the OFF position before servicing the Meat Slicer.
8. Consider all circuits not known to be "dead" as "live" and dangerous at all times.
9. Do not wear loose clothing while working around rotating parts of machinery.
10. When working near electricity, do not use metal rules, flashlights, metallic pencils, or any objects having exposed conducting material.
11. Deenergize all equipment before connecting or disconnecting meters or test leads.
12. When connecting a meter to terminals for measurement, use a range higher than expected voltage.
13. Ensure frames of all motors and starter panels are securely grounded before operating equipment or performing any tests or measurements.
14. Ensure area is well ventilated when using cleaning solvent and when applying silicone-caulking materials. Avoid solvent contact with skin or eyes and prolonged breathing of fumes. Avoid use near heat or open flame.

WARNINGS AND CAUTIONS. Specific warnings and cautions applying to the equipment covered by this manual are summarized below. These warnings and cautions appear elsewhere in the manual following paragraph headings, and immediately preceding the text to which they apply. They are repeated here for emphasis.

WARNING

ELECTRICAL AND GROUNDING CONNECTION MUST COMPLY WITH THE APPLICABLE PORTION OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER LOCAL ELECTRICAL CODES. (Page 1-4)

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES. (Pages 1-4 and 1-11)

WARNING

MOVING BEATER IN BOWL, KEEP HANDS, CLOTHING AND UTENSILS OUT WHILE IN OPERATION. DO NOT USE WITHOUT INTERLOCKED GUARD. (Page 1-5)

WARNING

DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AT THE MAIN CIRCUIT BOX. PLACE A TAG ON THE CIRCUIT BOX INDICATING THE CIRCUIT IS BEING WORKED ON. (Pages 2-3, 2-6, 2-19, 2-22, 2-24, 2-26, 2-27, 2-28, 2-30, 2-32 and 2-33)

TABLE OF CONTENTS

Section/Paragraph	Page
I INSTRUCTIONS, MODEL D300 MIXERS ML - 134211.....	1-1
INSTALLATION, OPERATION, AND CARE OF MODEL D300 MIXERS	1-3
GENERAL	1-3
INSTALLATION.....	1-3
OPERATION	1-5
MAINTENANCE	1-11
TROUBLESHOOTING	1-12
II SERVICE MANUAL MODEL D300 MIXER	2-1
GENERAL	2-2
PLANETARY	2-3
TRANSMISSION	2-6
ATTACHMENT HUB	2-19
GEAR SELECTOR/SHIFTER UNIT.....	2-22
BOWL SUPPORT AND LIFT UNIT.....	2-24
BASE AND PEDESTAL	2-28
MOTOR.....	2-30
ELECTRICAL SERVICE	2-35
POWER FLOW	2-38
III CATALOG OF REPLACEMENT PARTS D300 MIXERS	3-1
MAGNETIC CONTROL UNIT	3-2
TIMER CONTROL AND SWITCH UNIT	3-4
BASE AND PEDESTAL UNIT (ML-104421 & ML-134114)	3-6
BASE AND PEDESTAL UNIT (ML-134211 & ML-134213)	3-8
BOWL LIFT UNIT	3-10
TRANSMISSION CASE	3-12
MOTOR PARTS (ML-104421 & ML-134114)	3-14
MOTOR PARTS (ML-134211 & ML-134213)	3-16
SHIFTER UNIT	3-18
TRANSMISSION	3-20
PLANETARY AND ATTACHMENT HUB.....	3-22
BOWL GUARD UNIT	3-24
BOWL.....	3-26
AGITATORS	3-27
BOWL HEIGHT SENSING UNIT	3-28

INSTRUCTIONS



D300 MIXER

D300 MIXERS

ML - 134211

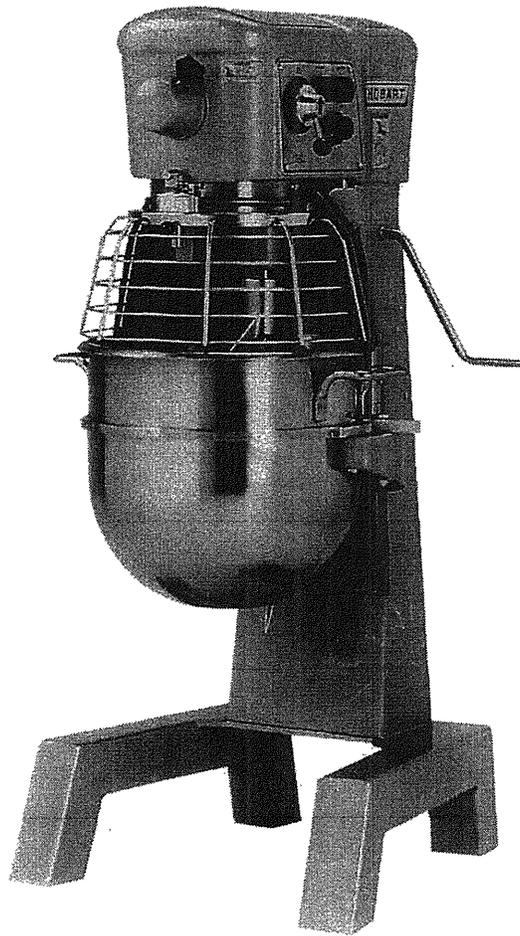


701 S. RIDGE AVENUE
TROY, OHIO 45374-0001

937 332-3000

www.hobartcorp.com

FORM 34840 (Nov. 2002)



Model D300 Mixer

Installation, Operation and Care of MODEL D300 MIXERS

SAVE THESE INSTRUCTIONS

GENERAL

The D300 Mixer (30 quart) features a $\frac{3}{4}$ horsepower motor, a timer and a #12 attachment hub as standard equipment. The standard 30 quart mixer bowl can be equipped with a variety of agitators. A 20 quart bowl, bowl adapter and agitators are available options on the D300.

Bowl Guard is standard equipment on all D300 models.

Programmable Timer Controller is optional on D300 models.

These mixers can be ordered with deluxe finish, which includes a chrome plated transmission case, base, bowl support and pedestal.

A variety of attachments and accessories are available for all mixers. These are described in a separate *Use and Applications Handbook*, which is furnished with each mixer.

INSTALLATION

UNPACKING

Immediately after unpacking the mixer, check for possible shipping damage. If this machine is found to be damaged, save the packaging material and contact the carrier within 15 days of delivery.

Prior to installation, have the electrical service tested to assure it agrees with the specifications on the machine data plate.

LOCATION

Place the mixer in its operating location. There should be adequate space around the mixer for the user to operate the controls and to install and remove bowls.

A Deck Plate Kit is available from Hobart and holes are provided in the base for permanent bolting to the floor, although this is not necessary in normal installations. Four plastic plugs are supplied with the mixer to plug these holes if they are not used.

ELECTRICAL CONNECTION

WARNING: ELECTRICAL AND GROUNDING CONNECTION MUST COMPLY WITH THE APPLICABLE PORTION OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER LOCAL ELECTRICAL CODES.

WARNING DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

ELECTRICAL DATA

Models	Volts/Hz/Ph	Rated Amps	Circuit Size (Amps)	Fuse Size* (Amps)	60°C Copper Wire Size	Circuit Size (Amps)	Circuit Breaker** (Amps)	60°C Copper Wire Size
D300	115/60/1	11.6	15	15	14	20	20	12
D300	200/60/1	6.3	15	6	14	15	10	14
D300	230.60/1	5.8	15	6	14	15	10	14
D300	200/60/3	2.5	15	3	14	15	3	14
D300	230/60/3	2.0	15	3	14	15	3	14
D300	460/60/3	1.0	15	1	14	15	1	14

*Dual Element Time-Delay Fuse

**Inverse Time Circuit Breakers

Circuit size (Minimum) & Fuse/Circuit Breaker Size (Maximum) compiled in accordance with the National Electrical Code (ANSI/NFPA 70), 1993 Edition.

A hole for 3/4" trade size conduit is located at the bottom of the pedestal (Fig. 1). Make electrical connections to the pigtail leads per the wiring diagram supplied with the mixer.

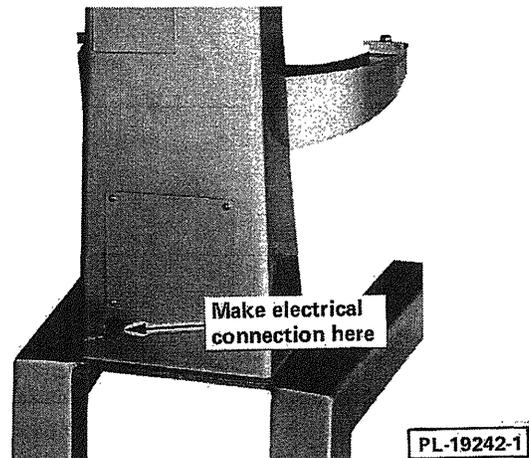


Fig. 1

Check Rotation (Three-Phase Machines Only)

Three-phase machines must be connected so the planetary rotates in the direction of the arrow on the Drip Cup. To check rotation:

Set the gear shift lever on 1.

Apply power to the mixer, set the Electro-Mechanical Timer on HOLD or, if equipped with a Programmable Timer Controller, set it on [-- : --]. With the Bowl Support all the way up, momentarily run the machine by pushing the START and then STOP buttons.

If rotation is incorrect, DISCONNECT ELECTRICAL POWER SUPPLY and interchange any two of the incoming power supply leads.

OPERATION

WARNING: MOVING BEATER IN BOWL, KEEP HANDS, CLOTHING AND UTENSILS OUT WHILE IN OPERATION. DO NOT USE WITHOUT INTERLOCKED GUARD.

Every D300 mixer is equipped with either an Electro-Mechanical Timer Control (described at the bottom of this page) or a Programmable Timer Controller (described on pages 6 through 8). Also, become familiar with the other operating parts (Fig. 2) and their functions, which are referenced throughout the OPERATION section (pages 5 through 11).

The Bowl Guard must be in position or the mixer will not operate. Refer to page 10.

If the Bowl Support is not all the way up, the mixer will not operate unless the START button is held in.

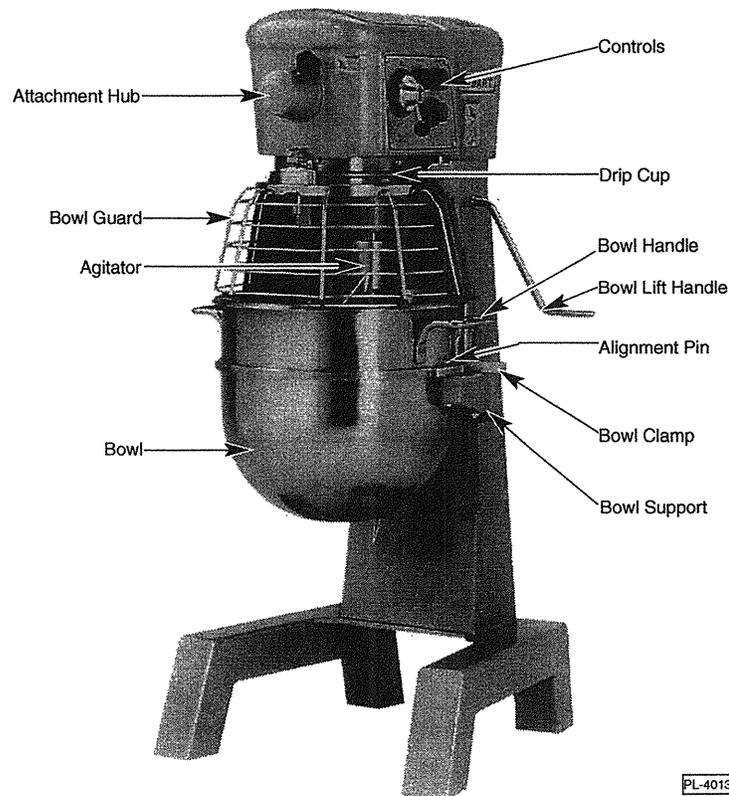


Fig. 2

ELECTRO-MECHANICAL TIMER CONTROLS (WHEN EQUIPPED)

The START button is used to start the mixer.

The STOP button is used to stop the mixer.

The TIMER is used in conjunction with the START button for timed mixing operations and will stop the mixer when a preset time has elapsed.

For non-timed mixing — Set the timer on HOLD and use the STOP button to stop the mixer.

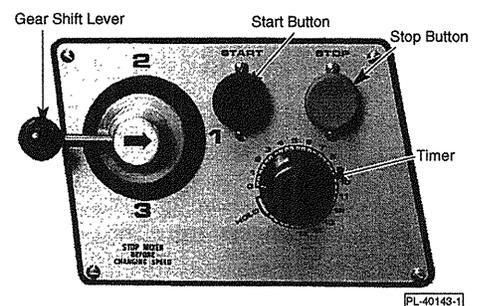


Fig. 3

PROGRAMMABLE TIMER CONTROLLER (WHEN EQUIPPED)

At Idle, the time display [-- : --] shows that no time has been set (Fig. 4).

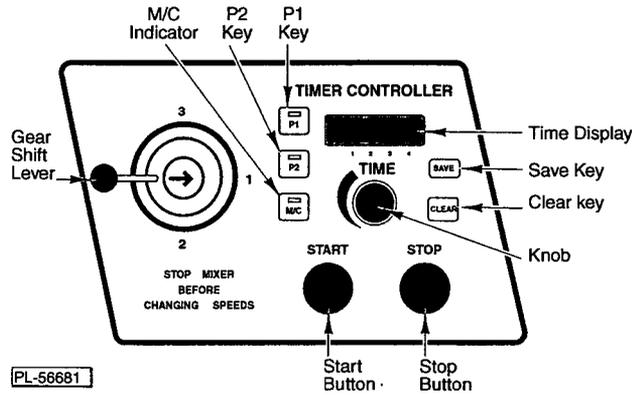


Fig. 4

Timer Keys	Programming Function (if the mixer is not mixing).
P1	Contains up to four preset times. Displays each preset time sequentially.
P2	Contains up to four additional preset times. Displays each preset time sequentially.
Knob	Changes the time as indicated by the display.
Save	Replaces the preset time with the indicated time.
Clear	Returns to Idle from a programming function.

For Continuous Mixing

START and STOP buttons control mixing operation.

Beginning from the Idle display [-- : --], press START to begin mixing. The M/C indicator will be lit, and the total mixing time will be indicated (minutes and seconds).

Press STOP when mixing is done. The M/C indicator light goes off and the Idle display [-- : --] returns.

Using the Dial Timer to set the Mixing Time

Beginning from the Idle display [-- : --], turn the KNOB to set the mixing time. The M/C indicator will be lit.

START and STOP buttons control mixing operation.

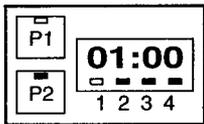
Press START to begin mixing: The timer will count down from the set time to [00 : 00].

If STOP is pressed, both mixing and timer countdown will be interrupted. After pressing STOP, press START to resume both mixing and timer countdown; or press CLEAR to return to the Idle display.

When the timer reaches [00 : 00] the mixer stops, M/C indicator goes off, a beep tone sounds for 2 seconds and the Idle display [-- : --] returns.

Using the Preset Keys, P1 or P2, to Set the Mixing Time

Each preset key has four time settings. The indicator above the number 1, 2, 3 or 4 and the P1 or P2 indicator light identifies which preset time is being displayed. The chart below shows the default settings; the next page shows how to revise these preset times. The Dial Timer KNOB can be used to adjust the mixing time if the knob is turned prior to pressing START.



PL-56622

- Indicator above P1 and 1 indicates the first preset time contained in P1.

Beginning from the Idle display [-- : --], press P1 or P2 to display the #1 preset mixing time. (Pressing P1 or P2 again will display the next preset time, etc.)

☛ The Dial Timer KNOB can adjust the time.

START and STOP buttons control mixing operation.

Press START to begin mixing: The timer will count down from the set time to [00 : 00].

If STOP is pressed, both mixing and timer countdown will be interrupted. After pressing STOP, press START to resume both mixing and timer countdown; or, press CLEAR to return to the Idle display.

When the mixer is stopped, you may perform any appropriate task, such as the following: Add ingredients, change speed, reset the timer, continue mixing or unload.

When the timer reaches [00 : 00], the mixer stops, a beep tone sounds for 2 seconds and the next preset mixing time displays. When the last preset time reaches [00 : 00], the P1 or P2 indicator goes off and the Idle display [-- : --] returns. Repeat from ☛ for each preset time (1, 2, 3 and 4 contained in P1 or P2).

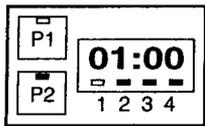
The timer reverts to the Factory-Programmed Preset Times after any power interruption:

Factory-Programmed Preset Times

Preset Key	Indicator			
	1	2	3	4
P1	01:00	02:00	10:00	00:00
P2	02:00	01:00	05:00	03:00

To Revise the Preset Mixing Times Contained in P1 or P2

Each preset key has four preset time settings. The indicator above the number 1, 2, 3 or 4 and the P1 or P2 indicator light identifies which preset time is being displayed.



PL-56882

Indicator above P1 and 1 indicates the first preset time contained in P1.

Beginning from the Idle display [-- : --], press P1 or P2 to display the #1 preset mixing time. (Pressing P1 or P2 again will display the next preset time, etc.)

Turn the KNOB to change the time for the indicated preset.

- Press SAVE to retain the revised time and move to the next preset time.

Repeat from Turn the KNOB for each preset time (1, 2, 3 and 4 contained in P1 or P2).

Pressing CLEAR will retain the saved times and return to the Idle display [-- : --].

The timer reverts to the Factory-Programmed Preset Times after any power interruption:

Factory-Programmed Preset Times

Preset Key	Indicator			
	1	2	3	4
P1	01:00	02:00	10:00	00:00
P2	02:00	01:00	05:00	03:00

CHANGING SPEEDS

The GEAR SHIFT LEVER is used to change speeds. Always stop the mixer before changing speeds. To change speeds, push the STOP button, move the gear shift lever to the desired speed and restart the mixer by pushing the START button.

Mixer Speeds

Speed 1 (Low) — This speed is for heavy mixtures such as bread dough, heavy batters and potatoes.

Speed 2 (Medium) — This speed is for light dough which must rise quickly, cake batters and some whipping operations.

Speed 3 (High) — This is a fast speed for light work, such as whipping cream, beating eggs and mixing thin batters.

BOWL LIFT HANDLE

The BOWL LIFT HANDLE is used to raise and lower the bowl. To raise the bowl, rotate the Handle downward; to lower the bowl, rotate the Handle upward.

MIXING

This section explains operation of the mixer and how to install bowls, agitators and attachments. A separate *Use and Applications Handbook* is provided with the mixer, which contains information on mixing procedures and outlines specific uses for agitators, attachments and accessories.

Bowl

New mixer bowls and agitators (beaters, whips and dough arms) should be thoroughly washed with hot water and a mild soap solution, rinsed with either a mild soda or vinegar solution and thoroughly rinsed with clear water **BEFORE** being used. This cleaning procedure should also be followed for bowls and agitators before whipping egg whites or whole eggs.

The bowl must be installed before the agitator.

To install the bowl, fully lower the bowl support. Position the bowl so the alignment bracket on the back of the bowl is in the bowl retainer on the bowl support and the alignment pins on the front of the bowl support fit in the holes in the bowl. Lock the bowl in place by rotating the bowl clamps over the ears of the bowl.

If a bowl adapter is required, install it on the bowl support as you would the bowl and then install the bowl on the adapter.

Agitator

To install an agitator, the bowl must be installed and fully lowered. Place the agitator in the bowl, push it up on the agitator shaft and turn it clockwise to seat the shaft pin in the slot of the agitator shank.

To Raise the Bowl While Mixing

To raise the bowl while the agitator is mixing the product (when required by recipe or when using the Bowl Scraper Attachment), load ingredients, close wire cage assembly and select low speed. To begin mixing, press and hold the Start button and then raise the bowl.

Bowl Guard (Fig. 5)

The Wire Cage Assembly on the Bowl Guard can be rotated out of the way to add ingredients or to access the bowl and agitator.

To Rotate the Wire Cage Assembly to the Rear

Push the Latch in to release the Centering Pin from the Centering Ramp. Note how the grooves on the nylon Retainers allow the Wire Cage to ride around the circular Ridge of the planetary Drip Cup. The Wire Cage can rotate 360° left or right. When the Wire Cage returns to the front and center position, the Centering Pin is captured and held by the Centering Ramp, restricting rotation of the Wire Cage until the Latch is pressed again.

The Wire Cage must be in the front-center position for the mixer to operate.

To Remove the Wire Cage Assembly for Cleaning

Lower the Bowl. Rotate the Wire Cage to the rear. Remove both Agitator and Bowl. Return the Wire Cage to the front.

While holding the Wire Cage securely with both hands, use your thumb to push down on the Black Release Knob. Lower and remove the Wire Cage. Wash it in a sink or dishwasher, rinse with clear water and dry with a clean cloth.

The stainless steel Splash Guard can be wiped off or washed easily with a cloth or sponge and warm, soapy water. Rinse with clear water. Dry with a clean cloth.

To Reinstall the Wire Cage Assembly

Hold the Wire Cage so its top ring is positioned around the planetary Drip Cup with the grooves in both nylon Rear Retainers straddling the Ridge on the Drip Cup. Push in the Front-Center Retainer until it stays in and so that its grooves also straddle the Ridge on the Drip Cup. The Wire Cage is properly assembled when all three Retainers straddle the Ridge on the Drip Cup in the three opposed locations.

Rotate the Wire Cage out of the way to install or remove the Agitator and Bowl or to add ingredients.

Return the Wire Cage to its front and center position to operate the mixer.

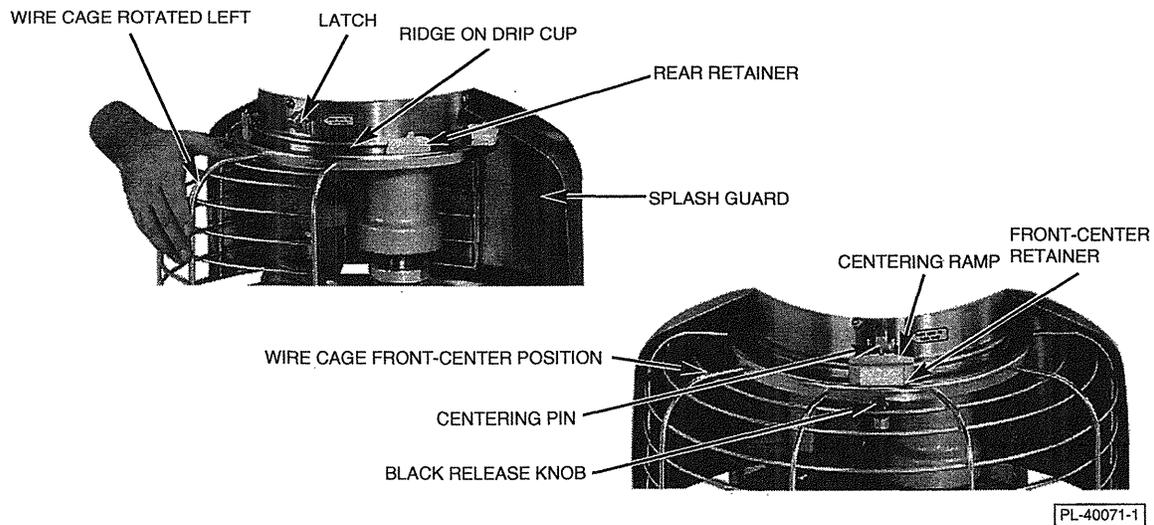


Fig. 5

Attachments

To install an attachment, loosen the attachment hub thumbscrew and remove the plug. Insert the attachment into the attachment hub, making certain that the square shank of the attachment is in the square driver of the mixer. Secure the attachment by tightening the thumbscrew.

Move the gear shift lever to the desired speed. With the bowl support all the way up and the wire cage in the front-center position, start the mixer to operate the attachment.

The meat and food chopper attachment should be operated in second or third speed. If material in the cylinder stalls the mixer, push the STOP button at once. DO NOT attempt to restart the mixer in a lower speed — remove the adjusting ring, knife, plate and worm and clear any obstruction. THIS ATTACHMENT MUST NOT BE USED TO CHOP BREAD CRUMBS.

NOTE: Do not use attachment hub while mixing.

Bowl Scraper Attachment

The Mixer Bowl Scraper Attachment (when ordered) is provided with a separate instruction manual covering its installation, operation, use and care.

CLEANING

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

The mixer should be thoroughly cleaned daily.

A flat scraper and a brush are furnished to aid in cleaning bowls and agitators. Bowls and agitators should be removed and cleaned in a sink.

DO NOT use a hose to clean the mixer — it should be washed with a clean, damp cloth. The apron may be removed by loosening the thumbscrews.

The base allows ample room for cleaning under the mixer.

The Drip Cup-Splash Guard (which is secured by three screws) should be removed periodically and wiped clean.

For cleaning the Bowl Guard (including both Wire Cage Assembly and Splash Guard), refer to page 10.

MAINTENANCE

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

LUBRICATION

Bowl Clamps

The bowl clamp area of the bowl support should be lubricated twice a year. Lightly coat with Lubriplate 630AA (supplied).

Bowl Lift

The bowl lift mechanism should be lubricated twice a year. Loosen the knob and remove the bowl lift access cover from the rear of the pedestal. Lightly coat moving parts (Fig. 6) with Lubriplate 630AA (supplied). Replace access cover and tighten knob.

Bowl Lift Slideways

The slideways (Fig. 7) should be lubricated once each month. Remove the apron (secured by two thumbscrews) from the front of the pedestal. Lightly coat both slideways with Lubriplate 630AA (supplied). Replace the apron and thumbscrews.

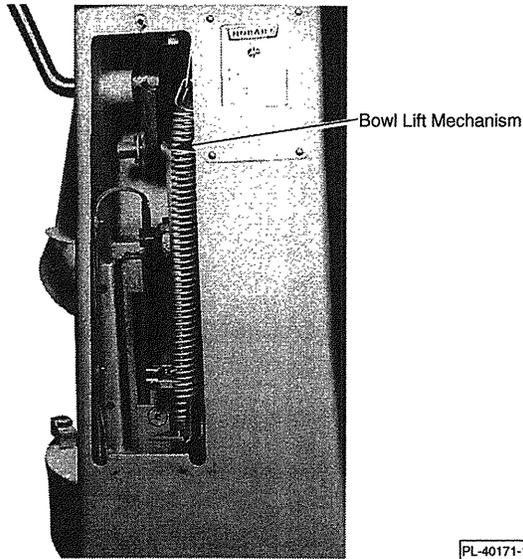


Fig. 6

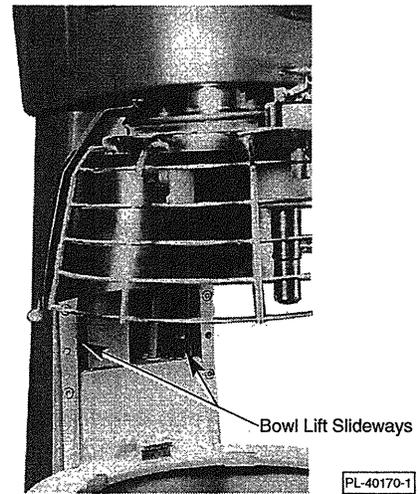


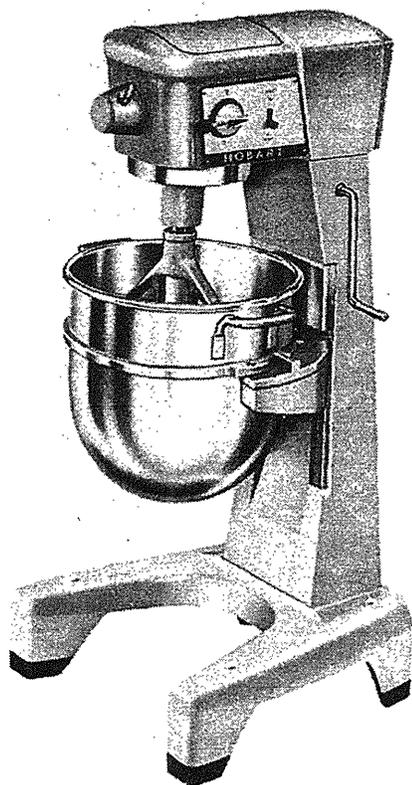
Fig. 7

TROUBLESHOOTING

SYMPTOMS	POSSIBLE CAUSES
Mixer will not start.	<ol style="list-style-type: none"> 1. Gear shift lever between gears (not fully engaged). 2. Circuit protector in open position — check fuse or disconnect switch. 3. Mixer or attachment overloaded. 4. Bowl not all the way up. 5. Wire Cage Assembly is not in the front-center position.

SERVICE

If service is needed on this equipment, contact your local Hobart Service Office.

HOBART**SERVICE MANUAL****MODEL D-300
MIXER****- NOTICE -**

This Manual is prepared for the use of trained Hobart Service Technicians and should not be used by those not properly qualified. If you have attended a Hobart Service School for this product, you may be qualified to perform all the procedures described in this manual.

This manual is not intended to be all encompassing. If you have not attended a Hobart Service School for this product, you should read, in its entirety, the repair procedure you wish to perform to determine if you have the necessary tools, instruments and skills required to perform the procedure. Procedures for which you do not have the necessary tools, instruments and skills should be performed by a trained Hobart Service Technician.

Reproduction or other use of this Manual, without the express written consent of Hobart Corporation, is prohibited.

A product of **HOBART CORPORATION****TROY, OHIO 45374**

SECTION 1

GENERAL

1. Introduction.

The Model D-300 is a dependable (30 quart) mixer with positive-drive three speed transmission and the exclusive planetary mixing action. Centralized controls facilitate ease of operation. Optional timer control (Model D-300T) and a bowl dolly further augment the convenience of this mixer. The D-300 is equipped with the standard No. 12 taper attachment hub.

2. Specifications.

A. Motor.

1/2 H.P., Hobart-built, permanently lubricated ball bearings, totally enclosed, internally ventilated. Single-phase is capacitor-start, induction-run type. Three phase is squirrel cage, induction-run type.

B. Electrical.

115-60-1	115-50-1	200-60-3	220-50-3
200-60-1	220-50-1	230-60-3	380-50-3
230-60-1		460-60-3	415-50-3
		575-60-3	

C. Operating Speeds.

<u>Speed</u>	<u>Agitator RPM</u>	<u>Attachment RPM</u>
1st	96	54
2nd	176	100
3rd	321	183

D. Over-all dimensions with standard bowl.

Height 45-1/4"
 Width 21"
 Depth 23-5/8"

E. Net Weight.

D-300 370 lbs.
 D-300D 220 lbs.

3. Operation and Care.

Detailed operation and care instructions are included in the "Instruction Manual ...with Replacement Parts" attached to each new machine.

4. Lubrication Chart.

Transmission Case:	Marfak 00	40 Fluid Oz.
Internal Gear:	Gredag #33	1 Fluid Oz.
Motor Bearings:	Pre-Lubricated	
Slideways:	Lubriplate 630AA	Lightly Coat

SECTION 2

PLANETARY

1. Removal.

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

- A. Remove the drip cup (Fig. 2-1). On early models it was held on by screws as shown in picture. Later models use thumb screws.

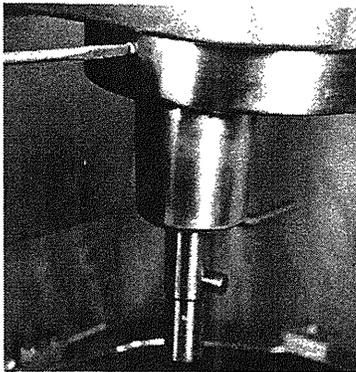


Fig. 2-1

- B. To keep the center shaft from turning, put the flat "B" beat er on and hold it while loosening the retaining screw (Fig. 2-2).

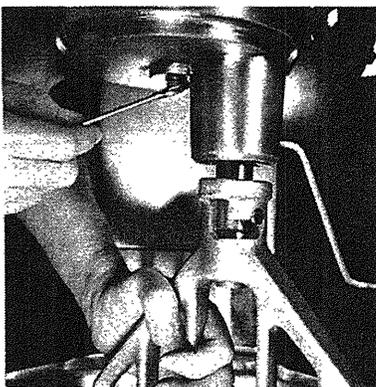


Fig. 2-2

- C. Remove retaining screw, lock-washer, and planetary washer (Fig. 2-3) while supporting the assembly.

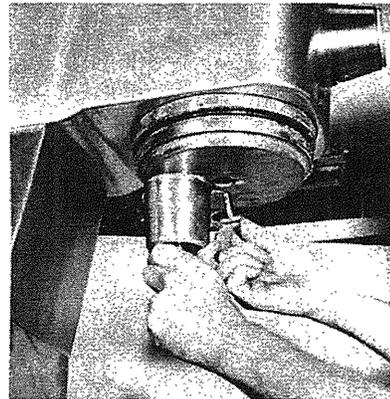


Fig. 2-3

- D. Slide the planetary from shaft. Key (1, Fig. 2-4) will remain in the shaft.
- E. Install the planetary in the reverse order of removal.

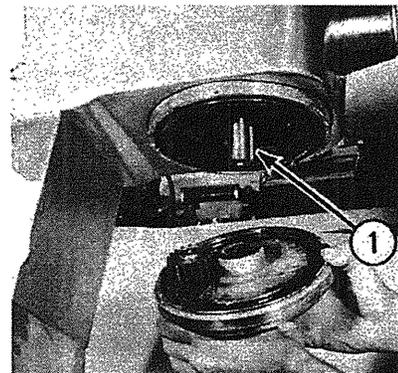


Fig. 2-4

2. Disassembly.

- A. Remove the planetary from the mixer as outlined in step 1 "Removal".
- B. Remove the retaining ring (Fig. 2-5).

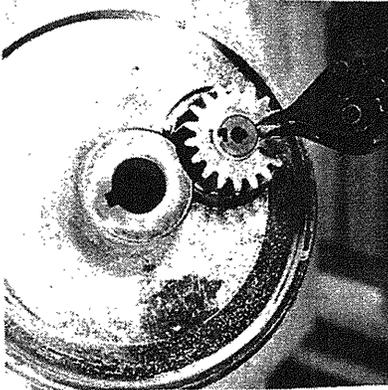


Fig. 2-5

- C. Remove the pinion and key (Fig. 2-6). The shaft can be pressed out of the planetary from the top side (Fig. 2-7).

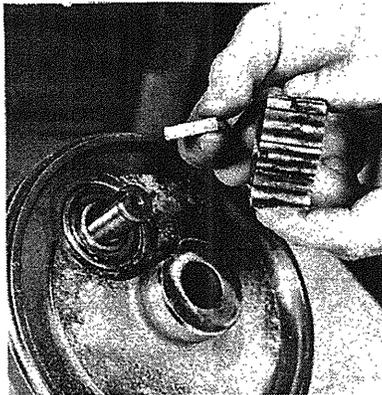


Fig. 2-6

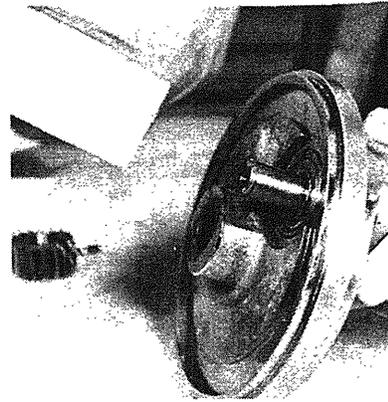


Fig. 2-7

- D. Lift the upper bearing (Fig. 2-8) out of the planetary.

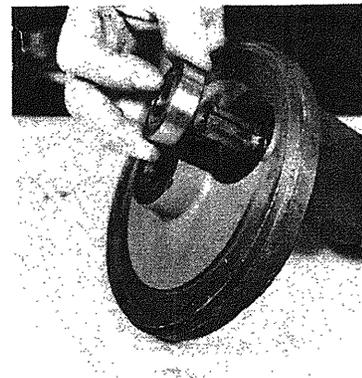


Fig. 2-8

D-300 SERVICE

- E. The lower bearing (1, Fig. 2-9) and seal (2, Fig. 2-9) can be removed from the shaft. The bearing must be removed from the top of the shaft.
- F. Reassemble in the reverse order of disassembly.

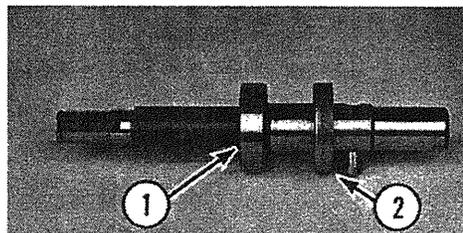


Fig. 2-9

3. Internal Gear.

- A. Remove the planetary from the mixer as outlined in step 1 "Removal".
- B. To remove the internal gear, take out the six screws that hold it to the gear case (1, Fig. 2-10). Remove the gear.
- C. Replace the internal gear in the reverse order of removal.

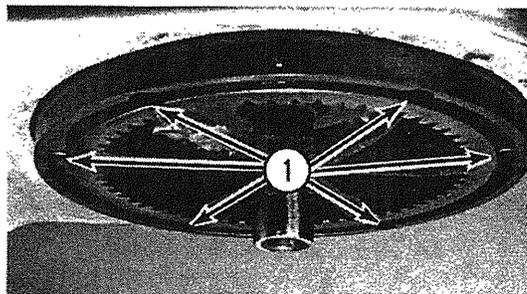


Fig. 2-10

NOTE: The Internal Gear is drilled and tapped for two machine screws which hold the drip cup. Install the gear so these screw holes will be on the sides of the mixer.

SECTION 3

TRANSMISSION

1. Opening Housing.

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

- A. The housing cover (1, Fig. 3-1) prevents dust and other outside materials from settling on the transmission. Remove the screw (2, Fig. 3-1), lift off the cover and set aside.

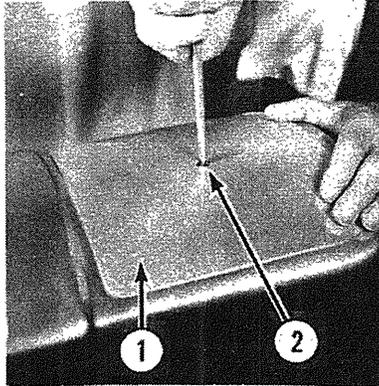


Fig. 3-1

2. Disassembling the Transmission.

- A. Remove four screws and lockwashers. Remove bearing retainer (1, Fig. 3-2).

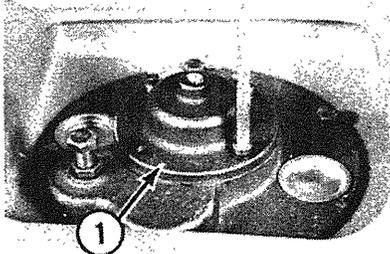


Fig. 3-2

- B. Remove stop nut from center shaft (1, Fig. 3-3). To loosen turn in clockwise direction. This nut has a LEFT HAND THREAD. If nut will not loosen, put the flat "B" beater on and hold it while loosening the nut.
- C. Remove drip cup and lower planetary as outlined in Section 2.

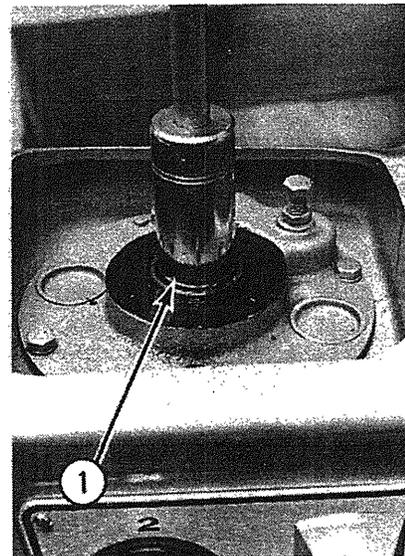


Fig. 3-3

- D. Remove four cap screws holding bearing carrier (1, Fig. 3-4). Remove two friction plugs (2, Fig. 3-4).

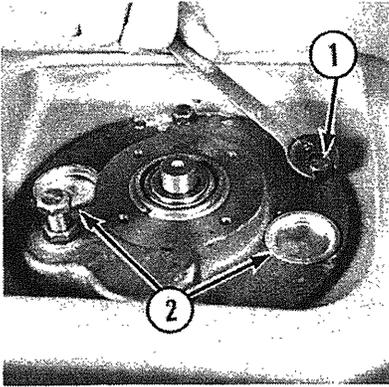


Fig. 3-4

- E. To remove the bearing carrier use a gear puller as shown in (Fig. 3-5). A light tapping in an upward motion around the perimeter of the carrier with a plastic or rubber mallet will help to break the cover loose. When the carrier has cleared the dowel pins, you can lift the carrier out of the machine with your fingers in the openings for the friction plugs.

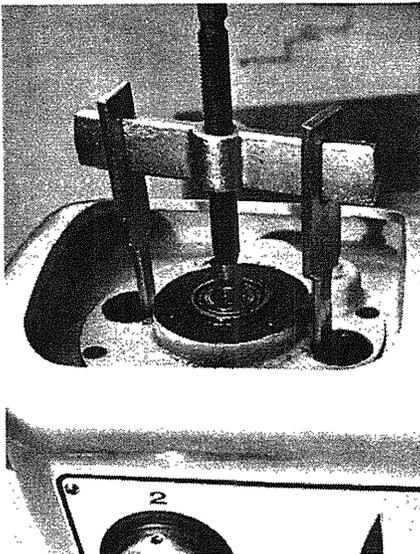


Fig. 3-5

- F. Remove bearing carrier and check for planetary shaft shims stuck to the carrier (1, Fig. 3-6). Remove and save these shims. These must be put back during reassembly.

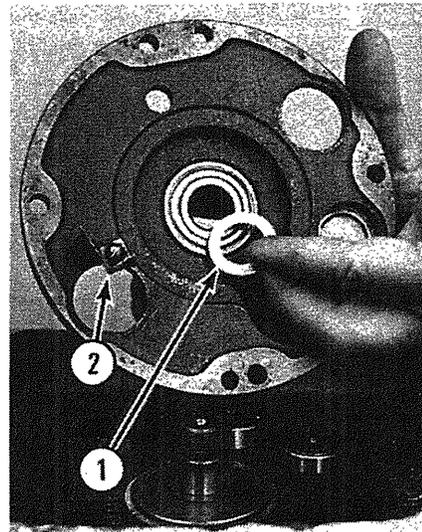


Fig. 3-6

- Remove upper planetary shaft spacer (1, Fig. 3-7).

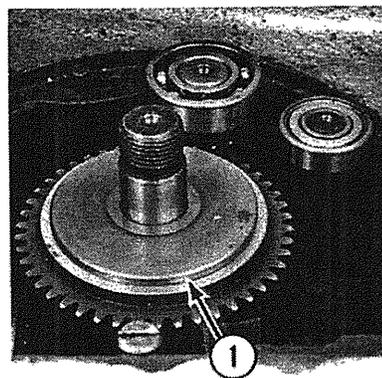


Fig. 3-7

- G. Position shifter handle in second gear. Loosen set screw (1, Fig. 3-8) and remove handle.

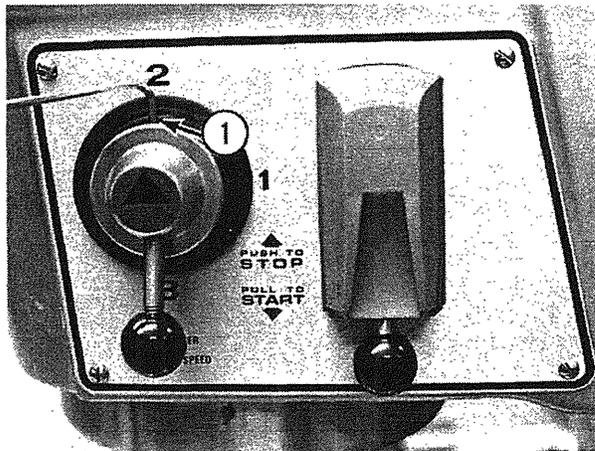


Fig. 3-8

- H. Remove four screws from switch plate (1, Fig. 3-9) and remove plate.

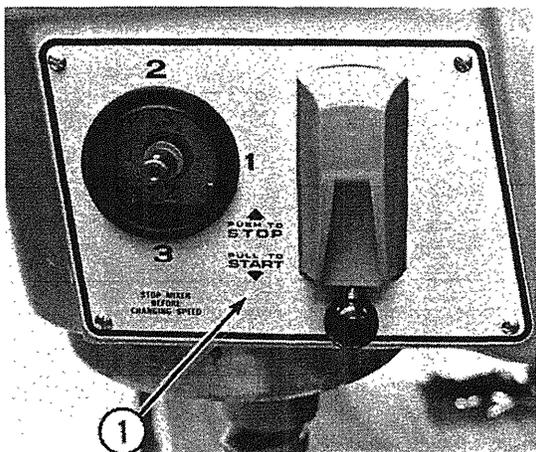


Fig. 3-9

- I. Remove four screws holding shifter assembly (1, Fig. 3-10) and remove the assembly.

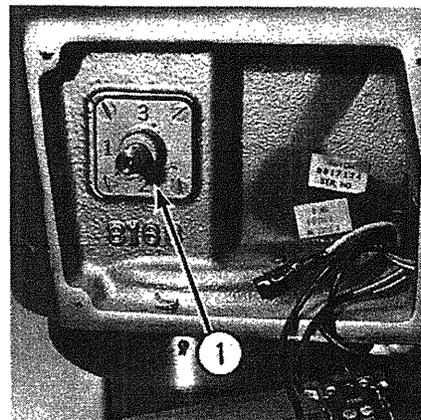


Fig. 3-10

- J. Turn the center (planetary) shaft so the teeth of bevel gear (1, Fig. 3-11) will pass those on transmission shaft gear (2, Fig. 3-11).

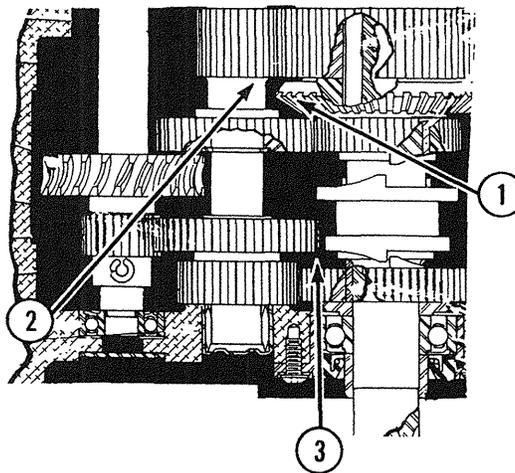


Fig. 3-11

- K. Remove bevel gear and roller clutch assembly as a unit (Fig. 3-12).

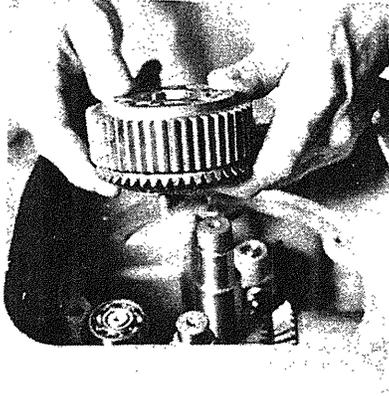


Fig. 3-12

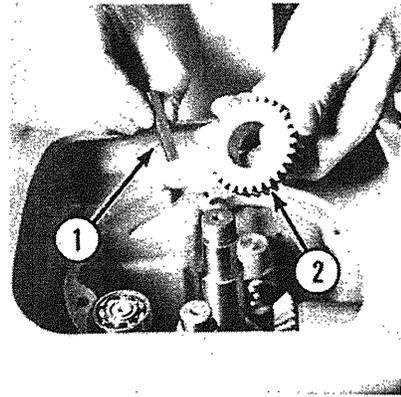


Fig. 3-13

- L. Remove key (1, Fig. 3-13) from the center shaft, then remove upper clutch gear with bushing (2, Fig. 3-13).
- M. Remove clutch sleeve and shifter yoke (Fig. 3-14). When removing the clutch sleeve notice that the smaller diameter is down. This allows clearance for gear (3, Fig. 3-11) on the transmission shaft.
- N. Rotor assembly must be moved to disengage worm from worm gear. Refer to Section 8 "Removing and Installing the Rotor and Stator".

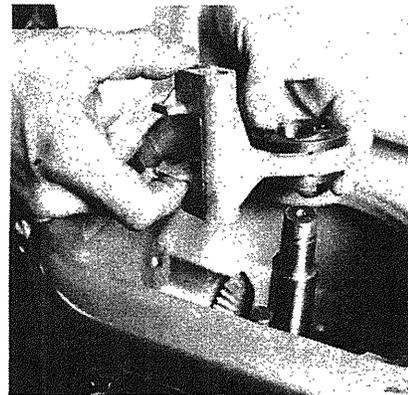


Fig. 3-14

- O. Remove worm gear shaft and transmission shaft together (Fig. 3-15).

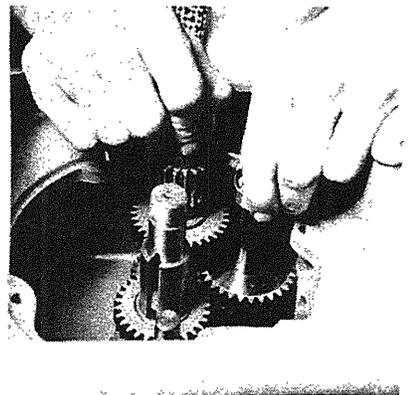


Fig. 3-15

NOTE: Lower ball bearing on the worm gear shaft will come out with the shaft. Do not misplace the spring washer (1, Fig. 3-16) located below the bearing. It provides for later adjustment of the worm gear position.

NOTE: The two lower gears on the transmission shaft can slip off while removing the shaft. Be careful not to drop these gears.

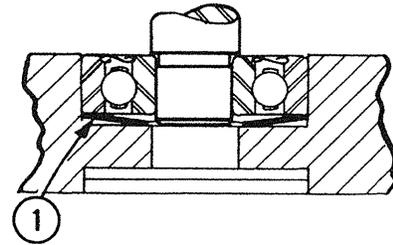


Fig. 3-16

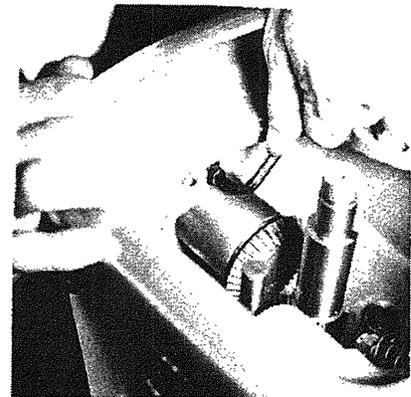


Fig. 3-17

- P. The attachment drive gear must be moved out of the way to remove the lower clutch gear and planetary shaft. Remove three screws and lockwashers (Fig. 3-17) and pull hub assembly forward far enough to clear the gear.

NOTE: If paint has not been broken around attachment joint, break with a knife to help prevent uneven paint joints.

- Q. Remove planetary shaft and lower clutch gear (Fig. 3-18).



Fig. 3-18

D-300 SERVICE

3. Worm Gear Shaft Disassembly.

- A. Both upper and lower ball bearings are press fitted. A gear puller or arbor press may be needed for removal.
- B. Remove lower ball bearing.
- C. Remove spirol pin (Fig. 3-19).
- D. Remove worm shaft gear (14t) (1, Fig. 3-20).
- E. Remove worm gear (29t) (2, Fig. 3-20).
- F. Remove key (3, Fig. 3-20).
- G. Remove upper bearing (4, Fig. 3-20).

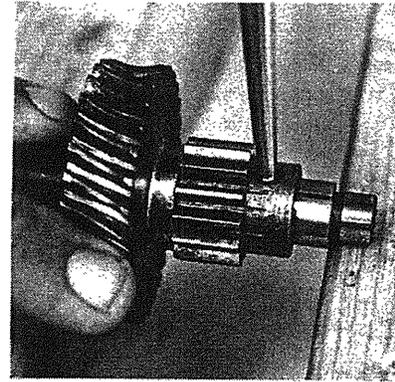


Fig. 3-19

4. Worm Gear Shaft Assembly.

- A. Install key (3, Fig. 3-20).
- B. Install worm gear (29t) (2, Fig. 3-20) with the hub down.
- C. Install worm shaft gear (14t) (1, Fig. 3-20).
- D. Install spirol pin (5, Fig. 3-20).
- E. Install lower ball bearing shielded side towards gear (6, Fig. 3-20).
- F. Install upper ball bearing shielded side toward gear (4, Fig. 3-20).

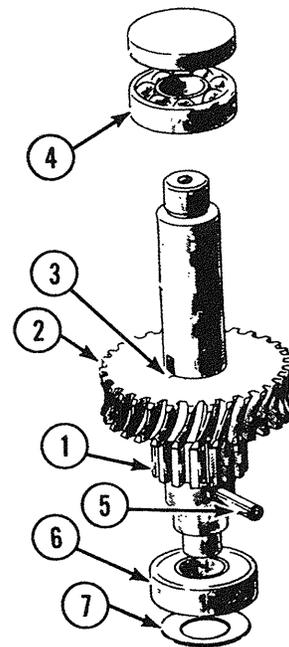


Fig. 3-20

5. Transmission Shaft Disassembly.

- A. Remove lower gear (23t) (1, Fig. 3-21).
- B. Remove (33t) gear (2, Fig. 3-21).
- C. Remove key (3, Fig. 3-21).
- D. Remove spacer (4, Fig. 3-21). Older models had snap rings as shown in (1, Fig. 3-22).
- E. Remove (32t) gear (5, Fig. 3-21) and short key (6, Fig. 3-21).
- F. Check needle bearing (still in gear case). If replacement is necessary drive bearing through bottom of housing. Install new bearing from top and seat with a wood block so top of bearing is flush with transmission case.

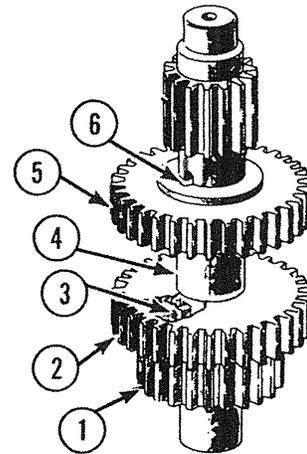


Fig. 3-21

6. Transmission Shaft Assembly.

- A. Install short key then (32t) gear with hub against shaft shoulder (5, Fig. 3-21).
- B. Old style install first and second retaining ring (1, Fig. 3-22). New style install spacer (4, Fig. 3-21).
- C. Install long key and (33t) gear (2, Fig. 3-21), hub down.
- D. Install 23t gear (1, Fig. 3-21).

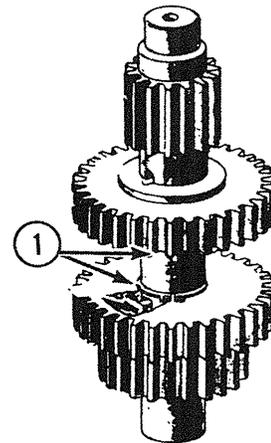


Fig. 3-22

D-300 SERVICE

7. Planetary Shaft Disassembly.

- A. All parts from the lower clutch gear up, were removed while disassembling the transmission.
- B. Take the shaft to an arbor press. Apply pressure to the planetary end, and force the shaft through the lower planetary spacer, ball bearing, spacer and gear (Fig. 3-23). The clutch gear bushing will remain on the shaft (1, Fig. 3-24).

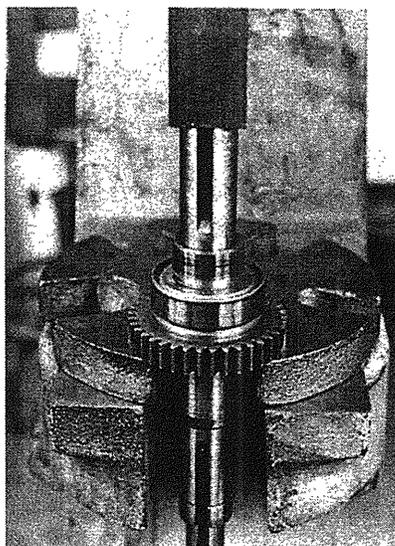


Fig. 3-23

- C. To remove clutch gear bushing. Put shaft in arbor press and apply pressure to planetary end of shaft.

8. Planetary Shaft Assembly.

- A. If lower clutch gear bushing was removed, use arbor press to replace. Flange goes towards top of shaft (1, Fig. 3-24).

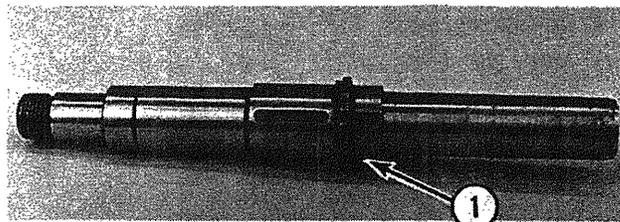


Fig. 3-24

- B. Install lower clutch gear (38t). Clutch teeth towards top of shaft (1, Fig. 3-25).
- C. Install lower planetary spacer with collar towards bearing (2, Fig. 3-25).
- D. Check ball bearing for roughness. If OK, place on shaft with shield toward planetary end and use arbor press to press on the shaft (3, Fig. 3-25).
- E. Check planetary spacer outer surface for roughness. This surface must be smooth. If rough replace. Press against inner race of ball bearing (4, Fig. 3-25). When replacing spacer make sure tapered end goes toward seal away from bearing.
- F. The rest of the shaft will be assembled when installed in the mixer.
- G. Model D-300D mixers have aluminum transmission cases. These have steel liners for the lower center shaft bearing cavity. Do not remove the liner but see that the holding screws are tight and that the bearing seat is clean (1, Fig. 3-26).

9. Transmission Assembly.

- A. Install planetary shaft seal (7, Fig. 3-25). Be sure the seal lip is turned toward the bearing and the seal is flush with bottom of transmission case.
- B. Lay the hard rubber spacing washer (8, Fig. 3-25) on top of seal.

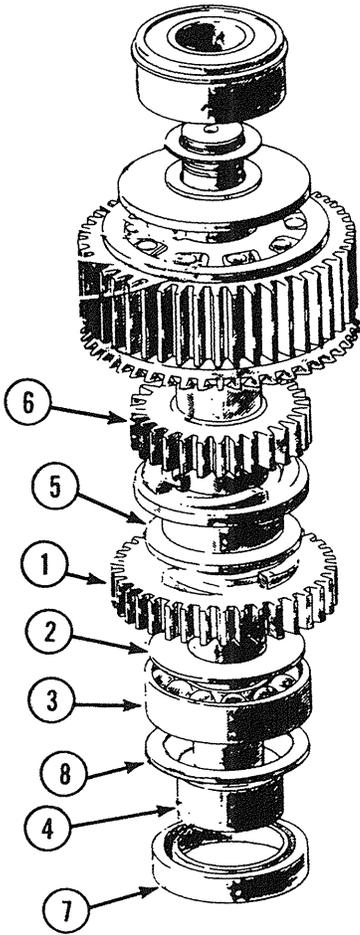


Fig. 3-25

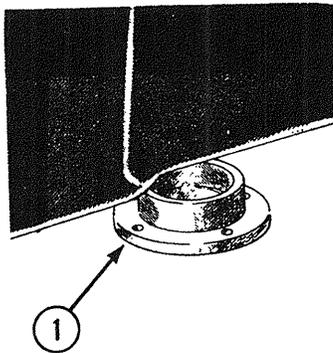


Fig. 3-26

D-300 SERVICE

- C. Install the planetary shaft assembly in the gear case (Fig. 3-27).
- D. Mesh (14t) gear on worm shaft with (33t) gear on transmission shaft then install both assemblies together in the housing (Fig. 3-28). Be sure (23t) gear on the transmission shaft (1, Fig. 3-28) is in place.
- E. (23t) gear on the transmission shaft must mesh with lower clutch gear on the planetary shaft. Turn the gears by hand to check assembly.
- F. Install the two 3/16" x 3/16" x 1" keys in the keyways of the planetary shaft (1, Fig. 3-29).
- G. Install shifter yoke with clutch sleeve (Fig. 3-14). Be sure clutch sleeve has smaller diameter down when installed or it will not clear the (33t) gear on the transmission shaft.
- H. At this time the rotor and back bearing bracket can be pushed forward to mesh the worm with the worm wheel. Tighten the four screws which hold the bearing bracket to the mixer.
- I. Install shifter control and index plate (Fig. 3-10).
- J. Install switch plate (Fig. 3-9).
- K. Install shifter handle (Fig. 3-8).

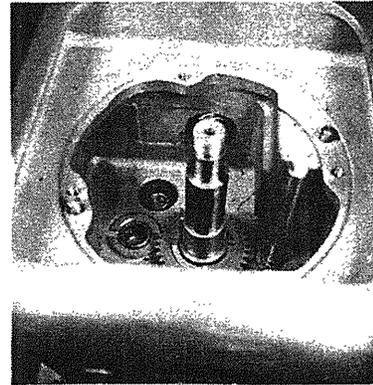


Fig. 3-27

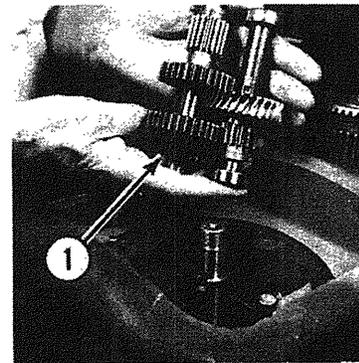


Fig. 3-28

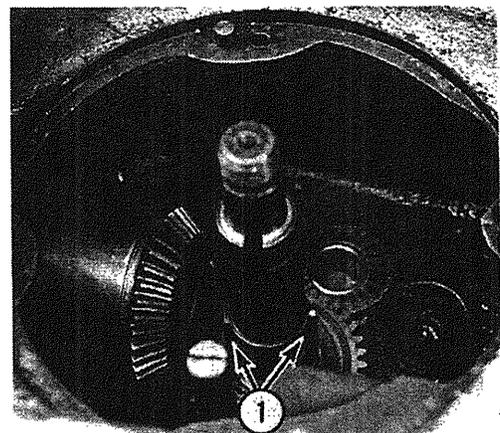


Fig. 3-29

- L. Install bushing in upper clutch gear (Fig. 3-30) and install on planetary shaft with clutch side down.

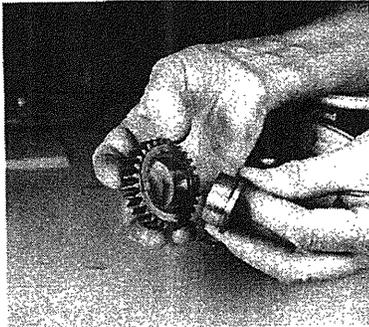


Fig. 3-30

- M. Install upper key in planetary shaft (1, Fig. 3-31).

- N. If the roller clutch gear has been disassembled, be sure to reassemble correctly. Slip the (46t) gear over the drive sleeve then insert the ten rollers and springs as shown (Fig. 3-32).

- O. For ease of reassembly, lubricate the clutch parts with Marfak 00.

- P. Install the bevel gear and roller clutch assembly as a unit (Fig. 3-12). Turn the planetary shaft so the gear teeth of the bevel gear pass through those of the low speed pinion on the transmission shaft.

- Q. Install upper planetary spacer with hub side up (1, Fig. 3-33).

THE FOLLOWING STEP IS VERY IMPORTANT.

- R. Put on the shim washer or washers exactly as they were removed during disassembly (2, Fig. 3-33). If shim washers

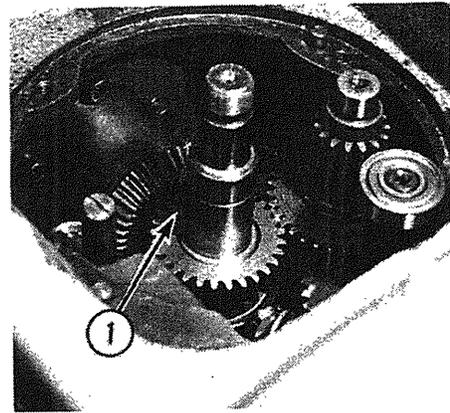


Fig. 3-31

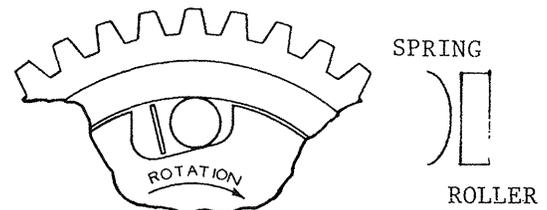


Fig. 3-32

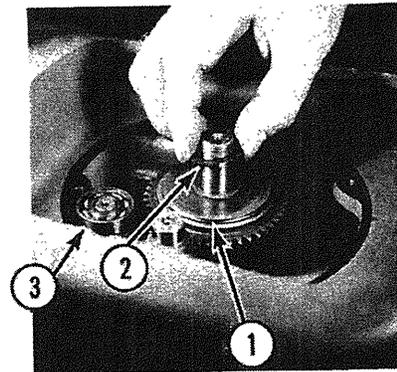


Fig. 3-33

were lost or misplaced put on a .010 thick shim if you recall removing only one. If two shims were removed, use a .010 and a .002 shim. These shims control the mesh of the bevel gears. Shim thickness may be increased or decreased if troublesome bevel gear noise develops.

- S. Shim washers also control the contact of shifter sleeve (5, Fig. 3-25) with gears (1, Fig. 3-25) and (6, Fig. 3-25).
- T. If change is made in the thickness of shim washers, it may be necessary to change attachment hub thrust washer (1, Fig. 3-34) to preserve bevel gear contact. Refer to Catalog of Replacement Parts.
- U. Install the upper ball bearing on top of the transmission shaft (3, Fig. 3-33).
- V. Lubricate the gears just enough so they are not dry.
- W. Be sure bearing pusher (1, Fig. 3-35) is in the bearing carrier. It must be installed with recessed side down toward the bearing.
- X. The position of the bearing pusher is controlled by the hex head cap screw (1, Fig. 3-36) and hex jam nut (2, Fig. 3-36). If you have not moved this screw and nut, it may not be necessary to make a new adjustment.
- Y. Observe the roller clutch grease deflector (2, Fig. 3-6). This is held by one screw and two external lockwashers. Do not change the angle of this deflector. Replace with new part if bent.
- Z. Install bearing carrier and tap down over the two dowels. Install four hex head bolts and lockwashers.
- AA. Install the upper planetary shaft ball bearing (3, Fig. 3-36). This is a snap ring bearing and is mounted with the shield up.



Fig. 3-34

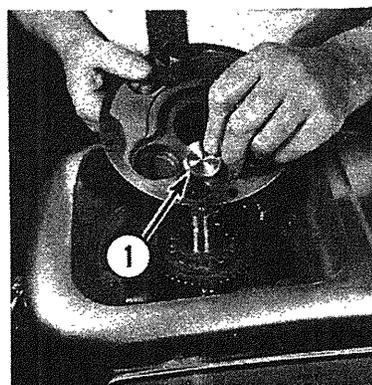


Fig. 3-35

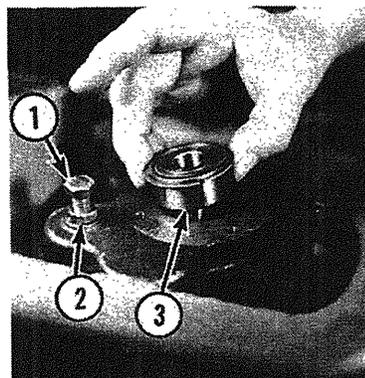


Fig. 3-36

- BB. Install the stop nut on the planetary shaft (Fig. 3-37) and draw it tight. THIS IS A LEFT HAND THREAD.
- CC. Install the bearing retainer and four screws and lock-washers (1, Fig. 3-38).
- DD. Install planetary and drip cup as outlined in Section 2.
- EE. Lay a wiping cloth over the transmission cover to prevent splash. Turn on the motor and try the mixer in all three speeds.
- FF. If the worm gear drive seems noisy, it may not be properly engaged with the worm. Adjustment is made by turning screw (1, Fig. 3-39) after loosening nut (2, Fig. 3-39). The worm gear shaft is supported on the cup spring washer (7, Fig. 3-20). The shaft can be raised or lowered to correct the worm and worm wheel contact. The adjustment will be most effective if made when the mixer is loaded. Loosen or tighten screw gradually until best sound level is reached.
- GG. Put in the remainder of the lubricant through the filler openings in the bearing carrier. Run the mixer for a brief time then press in the two friction plugs (2, Fig. 3-38).
- HH. Replace the housing cover (1, Fig. 3-1).

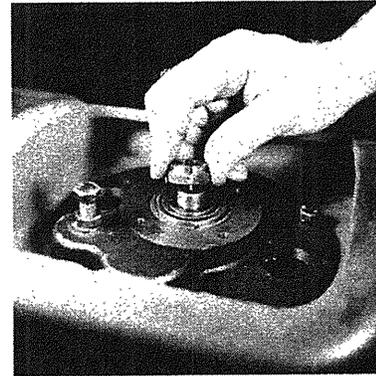


Fig. 3-37

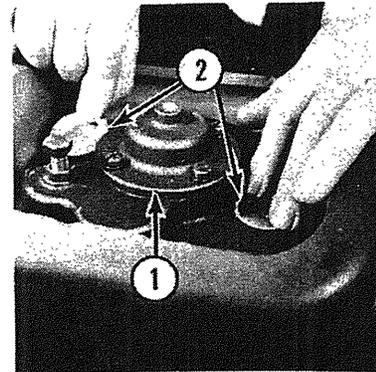


Fig. 3-38

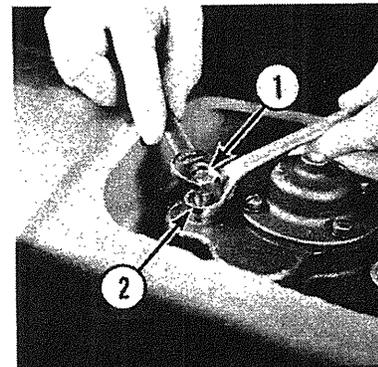


Fig. 3-39

SECTION 4

ATTACHMENT HUB

1. Removing Hub.

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

- A. When a painted unit is opened for the first time, the painted joint must be broken between the hub and transmission case. Run a knife point along the joint cutting through the paint. This helps to prevent a jagged joint.

NOTE: The three cap screws holding the attachment hub to the mixer are accessible inside the transmission case. Part of the transmission must be removed to gain access to the screws.

- B. Remove housing cover (1, Fig. 4-1).

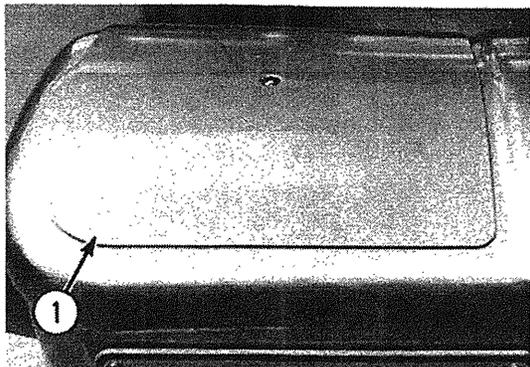


Fig. 4-1

- C. Remove four screws and bearing retainer (1, Fig. 4-2).

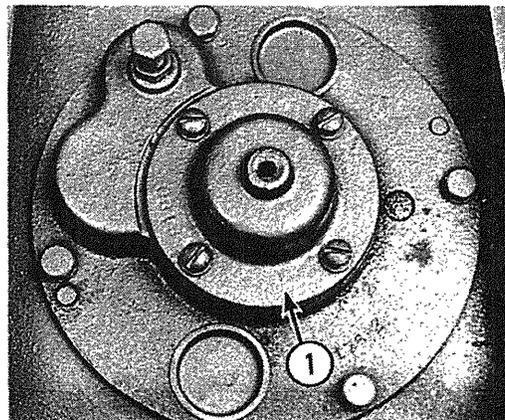


Fig. 4-2

- D. Remove stop nut from center shaft (1, Fig. 4-3). To loosen; turn in clockwise direction. This nut has a LEFT HAND THREAD. If nut will not loosen, put the flat "B" beater on and hold it while loosening the nut.
- E. Remove two friction plugs (2, Fig. 4-3).

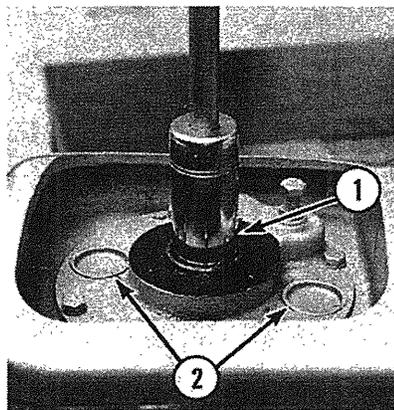


Fig. 4-3

- F. To remove the bearing carrier use a gear puller as shown in (Fig. 4-4). A light tapping in an upward motion around the perimeter of the carrier with a plastic or rubber mallet will help to break the cover loose. When the carrier has cleared the dowel pins, you can lift the carrier out of the machine with your fingers in the openings for the friction plugs.

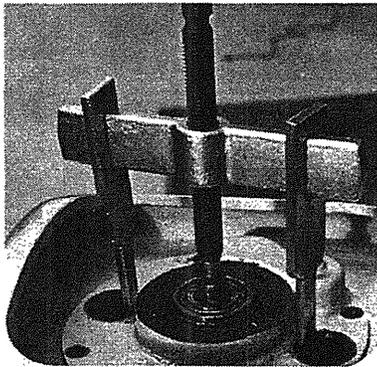


Fig. 4-4

- G. Remove bearing carrier and check for planetary shaft shims stuck to the carrier (1, Fig. 4-5). Remove and save these shims. These must be put back during reassembly.

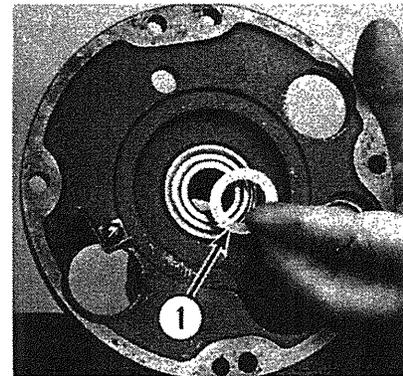


Fig. 4-5

- H. Turn the center (planetary) shaft so the teeth of bevel gear will pass those on transmission shaft gear.
- I. Remove upper planetary shaft spacer, roller clutch and bevel gear as a unit (1, Fig. 4-6).

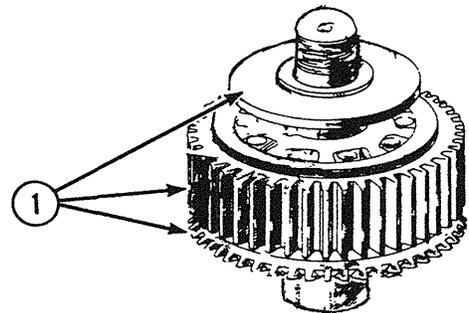


Fig. 4-6

D-300 SERVICE

- J. Remove key (1, Fig. 4-9) from the center shaft then remove upper clutch gear with bushing (2, Fig. 4-9).
- K. Remove three screws and lock-washers (1, Fig. 4-7). Remove attachment hub and bearing assembly out the front of the gear case and remove drive gear and thrust washer through inside of gear case.
- L. Before installing the hub assembly inspect the needle bearings (1, Fig. 4-8) and shaft seal (2, Fig. 4-8).
- M. Remove the old shaft seal and clean the seal cavity.
- N. If the needle bearings need replaced, press the bearings forward through the hub casting. Use an arbor press or wood block. Pressing out the bearings will also remove the oil seal.
- O. When replacing the bearings make sure that they are properly spaced. Press the inside bearing flush with the inside end of the hub casting. Press the second bearing in just far enough to pass the oil drain hole (3, Fig. 4-8).
- P. Always use a new seal. A special Hobart Tool No. 55460-3 is available for easy installation of seals. Use of this tool permits a second or third seal to be used when required. Do not use more than three seals as oil hole (3, Fig. 4-8) must be left open.
- Q. Reassemble in the reverse order of disassembly. When installing the hub casting, use a small amount of Permatex to seal the hub casting to the transmission case.

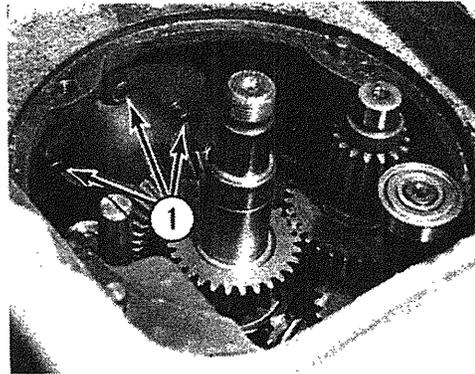


Fig. 4-7

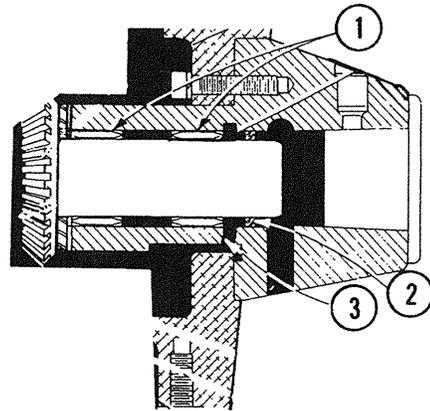


Fig. 4-8

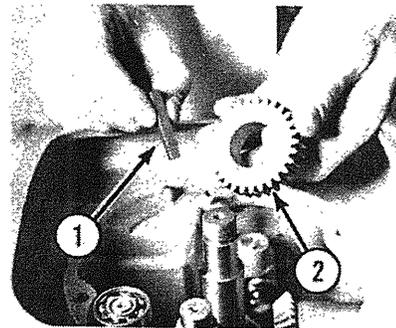


Fig. 4-9

SECTION 5

GEAR SELECTOR/SHIFTER UNIT

1. Removal (Gear Selector).

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

- A. Position gear selector in second speed and loosen set screw (1, Fig. 5-1). Then remove shifter handle.
- B. Remove four screws and remove switch plate (2, Fig. 5-1).
- C. Remove four screws and pull the gear selector plate (Fig. 5-2).

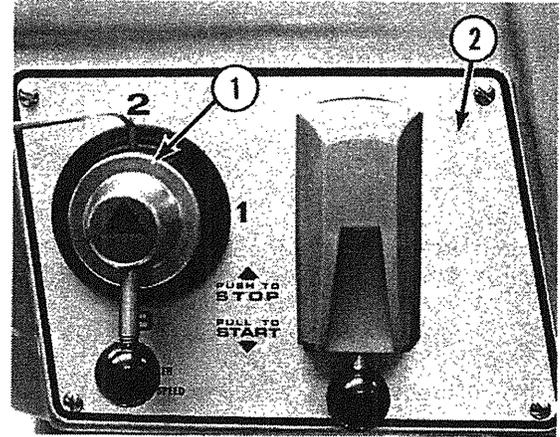


Fig. 5-1

2. Disassembly.

- A. Drive out the taper pin. Newer units have a spirol pin.
- B. Carefully separate the pieces.

3. Assembly.

- A. Install shifter shaft in plate (1, Fig. 5-3).
- B. Install springs in plate (2, Fig. 5-3).
- C. Place balls on springs (3, Fig. 5-3).
- D. Slip cam on the shaft with the flat part of cam on same side of shaft as dimple for shifter handle set screw.
- E. Press assembly together and drive in the pin.
- F. Make sure you have a gasket on the back of the index plate, then install assembly in the mixer.
- G. Install switch plate.
- H. Install shifter handle and set screw.

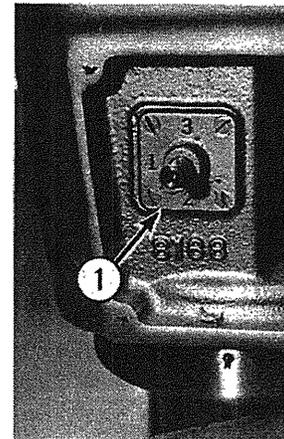


Fig. 5-2

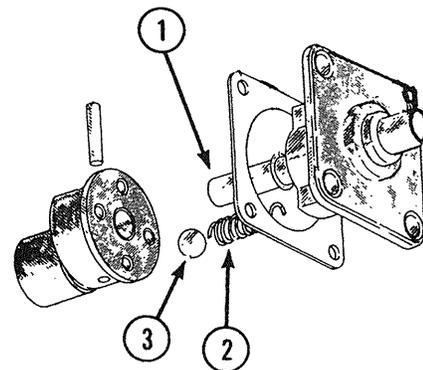


Fig. 5-3

4. Shifter Unit.

- A. To remove this assembly the gear case must be opened and disassembled. Refer to Section 3 "Transmission".
- B. The shifter yoke assembly consist of the yoke casting, two plungers and two springs (Fig. 5-4).
- C. Only spring failure, casting breakage or long hard wear will make service necessary.
- D. To replace a spring remove the retainer and take out broken or weak spring. Install new spring and replace retainer.
- E. It is advisable to replace both springs if one must be changed. Spring tension should be equal.

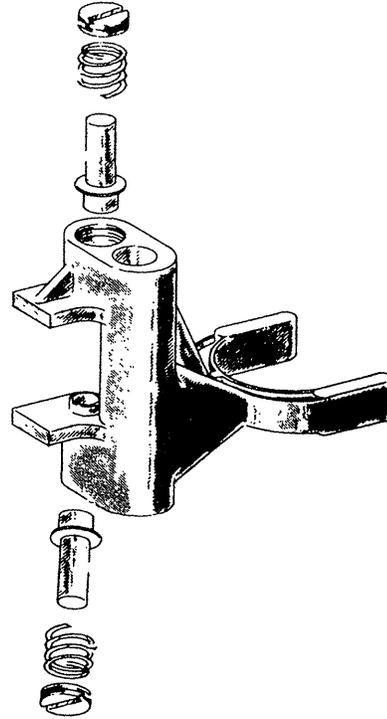


Fig. 5-4

SECTION 6

BOWL SUPPORT AND LIFT UNIT

1. Bowl Support Removal.

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

- A. Remove stainless steel apron by removing two screws (Fig. 6-1). Newer units have thumb screws instead of slotted head screws.

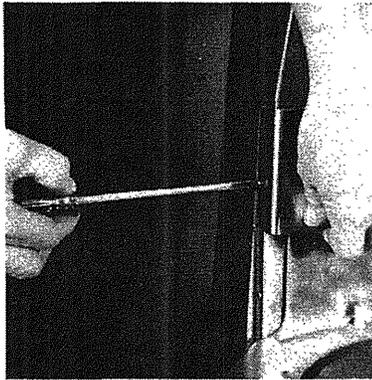


Fig. 6-1

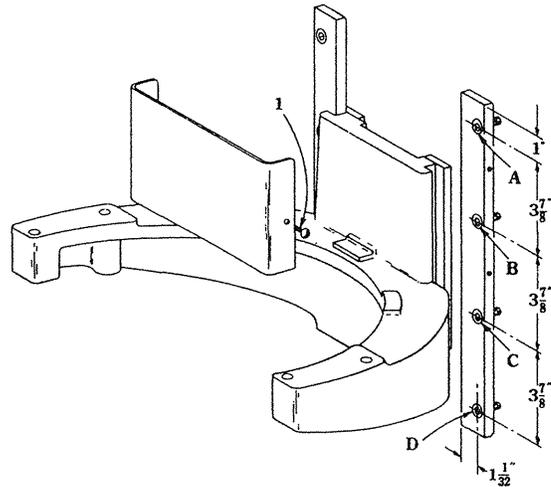


Fig. 6-2

- B. To remove the bowl support it is only necessary to loosen the left hand gib. Loosen four screws. (On new units paint covering the screw heads will need broken). Figure 6-2 gives dimensions to help locate screws.
- C. Remove lift access cover (1, Fig. 6-3).

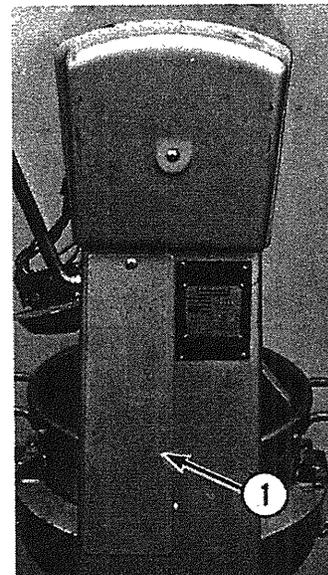


Fig. 6-3

- D. Lower bowl support to its lower position and remove two cap screws (1, Fig. 6-4).

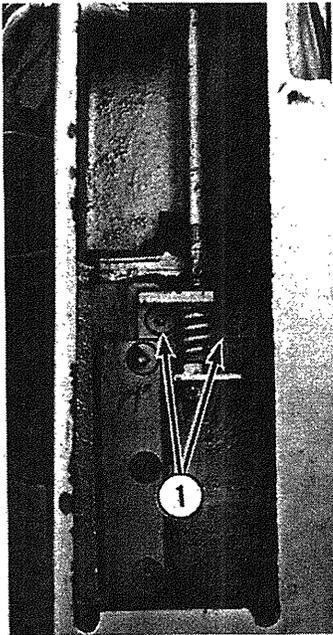


Fig. 6-4

- E. Remove four screws right hand gib (Fig. 6-5) and remove gib and bowl support shim.

- F. Remove bowl support.

2. Bowl Support Installation.

- A. Place bowl support in position and install gib and shim support on right side. Shim and gib were not removed from left side. Be sure shim on left side is in place.
- B. Install cap screws (1, Fig. 6-4).
- C. Tighten gib support on left side.
- D. Raise bowl support and use lead mallet to tighten support (Fig. 6-6). Tighten top two screws, right side.

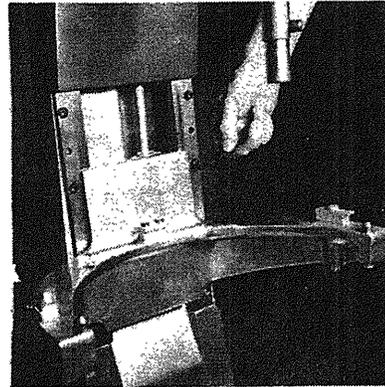


Fig. 6-5

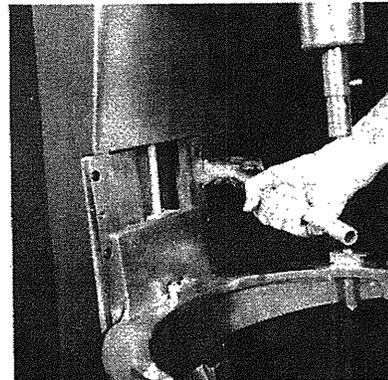


Fig. 6-6

- E. Lower bowl support to within about 1-1/2" of the bottom position. Pull in the lower end of the slideway with a clamp or bump in with a lead mallet and tighten bottom screw on the right side.
- F. Raise bowl support and tighten second screw from bottom on the right side.

3. Bowl Lock Adjustment.

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

- A. Remove lift access cover assembly (1, Fig. 6-3).
- B. When the bowl is raised, the lift handle will pass bottom center and stop when the bowl lift rod stops against the pedestal. Spring tension on the handle may be adjusted by turning jam nuts (8, Fig. 6-7).

4. Adjusting the Bowl to Beater Clearance.

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

Clearance between the "B" beater and the bottom of the bowl should be .050" to .111".(1, Fig. 6-8).

- A. Remove lift access cover assembly (1, Fig. 6-3).
- B. Lower bowl lift assembly to lowest position. Loosen jam nut (1, Fig. 6-7).
- C. Use an Allen wrench to turn the stop screw (2, Fig. 6-7) until the desired clearance is reached.
- D. Lock jam nut (1, Fig. 6-7) when clearance is correct.
- E. Install lift access cover.

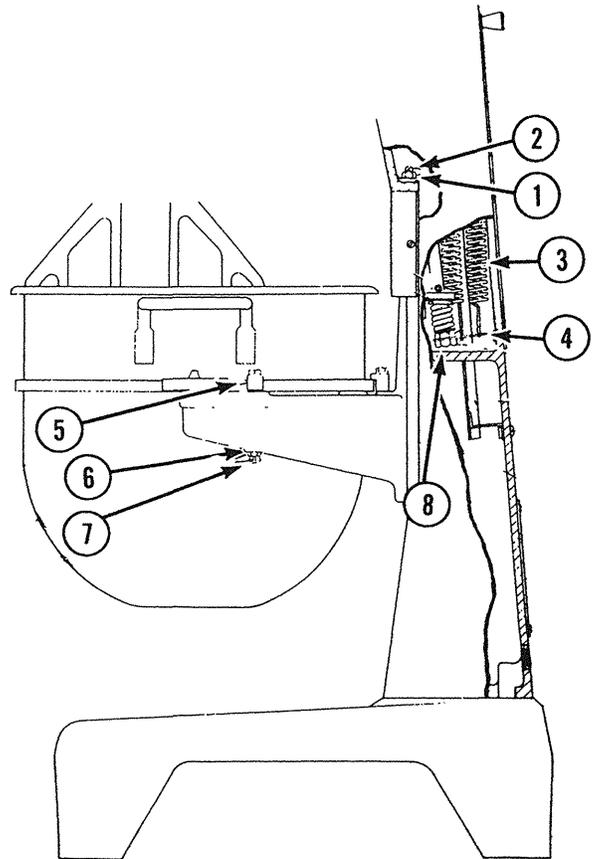


Fig. 6-7

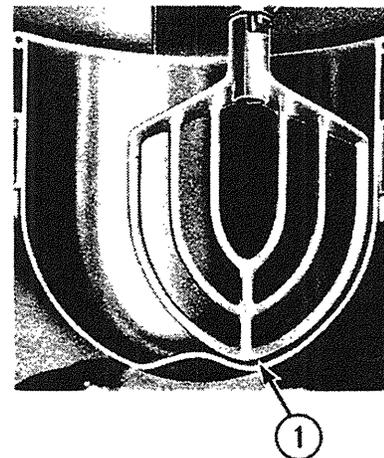


Fig. 6-8

D-300 SERVICE

5. Bowl Lift Handle, Lift Arm and Lift Rod Removal.

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

A. Replacing bowl lift handle.

- (1) Remove lift access cover assembly (1, Fig. 6-3).
- (2) Place lift handle in lower position and knock out rollpin (1, Fig. 6-9).
- (3) Remove handle.
- (4) Reassemble in reverse order.

B. Replacing bowl lift arm.

- (1) Refer to steps 1 through 3 "Replacing Bowl Lift Handle".
- (2) Remove rollpin (2, Fig. 6-9) and remove bowl lift arm.
- (3) Reassemble in reverse order.

C. Replacing bowl lift rod.

- (1) Support bowl lift in half raised position with a block of wood or some other object.
- (2) Remove lift access cover assembly (1, Fig. 6-3).
- (3) Knock out rollpin (2, Fig. 6-9).
- (4) Unhook the two counter balance springs (3, Fig. 6-7) from the lower spring bracket (4, Fig. 6-7).

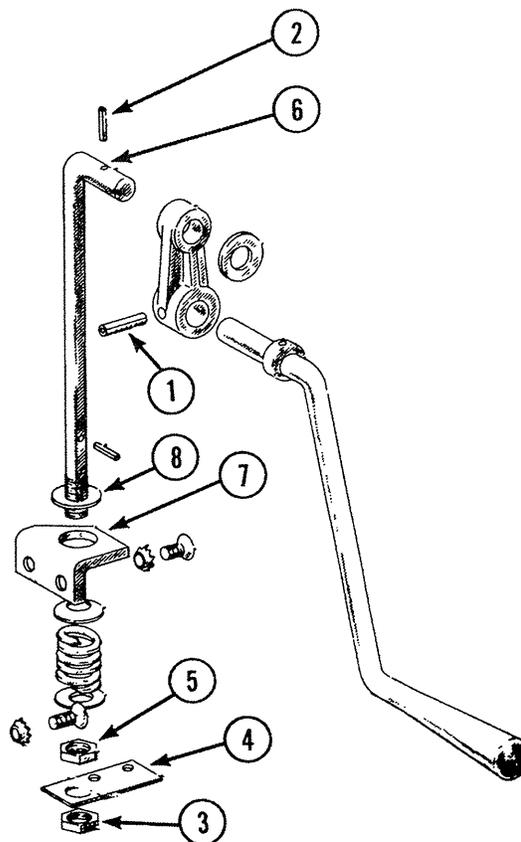


Fig. 6-9

- (5) Remove lower jam nut (3, Fig. 6-9) and lower spring lift bracket (4, Fig. 6-9).
- (6) Remove jam nut (5, Fig. 6-9). The flat washer, bowl lift spring and cupped washer will slide off the bowl lift rod.
- (7) Pull the bowl lift handle down. This will clear the bowl lift rod (6, Fig. 6-9) from the bowl support (7, Fig. 6-9). Do not lose the flat washer (8, Fig. 6-9) located above the bracket.
- (8) Remove the bowl lift rod.
- (9) Reassemble in the reverse order.

6. Bowl Clamp Adjustment.
- A. The height of the bowl clamp (5, Fig. 6-7) is adjustable.
 - B. It is regulated by a spring washer (6, Fig. 6-7).
 - C. To change the tension on the clamp tighten or loosen stop nut (7, Fig. 6-7).

SECTION 7

BASE AND PEDESTAL

1. Replacing the Base.

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

- A. A broken base can almost always be welded or brazed, often without removal from the mixer.
- B. If removal or replacement is necessary, lay the mixer forward and rest on the attachment hub with wood blocks under each side of bowl support.
- C. Remove four cap screws.
- D. Use a knife to cut paint joint between base and pedestal.
- E. Separate the base from the pedestal.
- F. Reassemble in the reverse order.

2. Replacing the Pedestal.

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

- A. A mixer pedestal is replaced only because of breakage. If welding or brazing is practical, it is generally more economical than replacing the pedestal.
- B. If a new pedestal is needed, be sure to order the two dowels for the left hand slideway and the two dowels for aligning the transmission case.
- C. Remove bowl support per Section 6.
- D. Remove switch plate and disconnect wires. Use diagram on back of capacitor and starter access cover for wire connections during assembly.
- E. Remove wires from starting switch (stationary part) Refer to Section 8-3.
- F. All parts (Fig. 6-9) can be removed and used on the new pedestal.

- G. Remove machine data plate (1, Fig. 7-1) and capacitor and starter access cover (2, Fig. 7-1).
- H. Remove two cap screws (1, Fig. 7-2).
- I. Remove cap screw (2, Fig. 7-2) and screw (3, Fig. 7-1). This will allow the air baffle to be moved to the lower part of the pedestal allowing you to remove screw (3, Fig. 7-2). It may be necessary to cut the paint seam between the pedestal and transmission case. (Transmission case will be heavy so it may take two people to lift from the pedestal).
- J. Remove base.
- K. Reassemble in the reverse order of disassembly.
- L. Check bowl to beater clearance after assembly. Refer to Section 6 Paragraph 4.

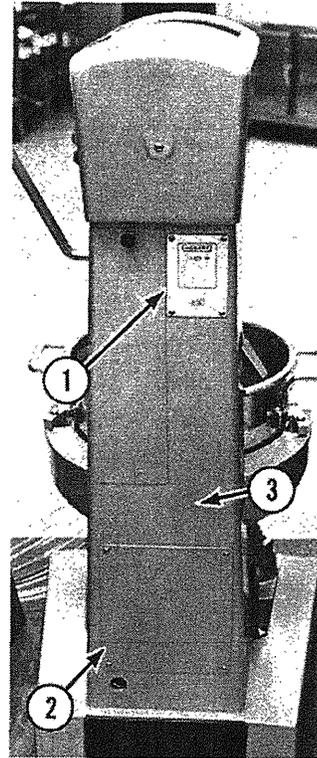


Fig. 7-1

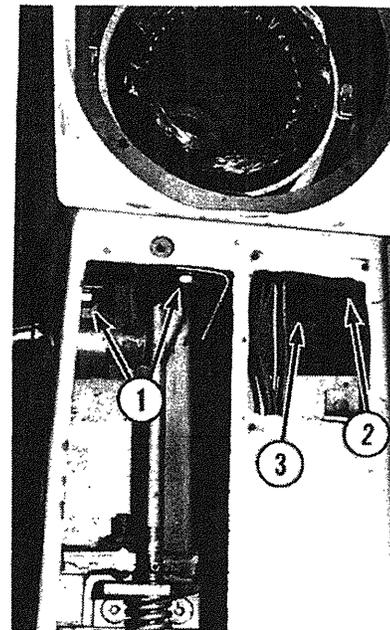


Fig. 7-2

SECTION 8

MOTOR

1. Removing the Rotor and Stator.

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

- A. Remove the retaining screw and trim cap (Fig. 8-1).

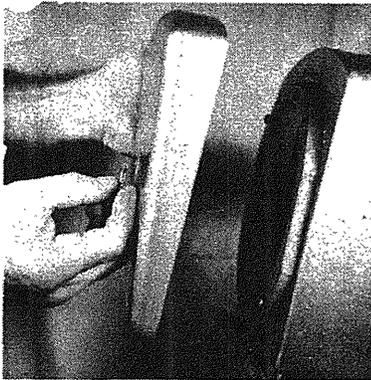


Fig. 8-1

- B. Tilt the mixer forward and block up the back legs 3-1/2" to 4" (Fig. 8-2). This helps to prevent transmission grease from leaking at the motor opening.
- C. Remove four screws (1, Fig. 8-3) and remove bearing cap.
- D. Remove two special nuts and washer (1, Fig. 8-4).
- E. Disconnect the two leads on the stationary start switch on single phase units. Remove four screws (2, Fig. 8-4). Bearing bracket can now be removed leaving the rotor in the stator.

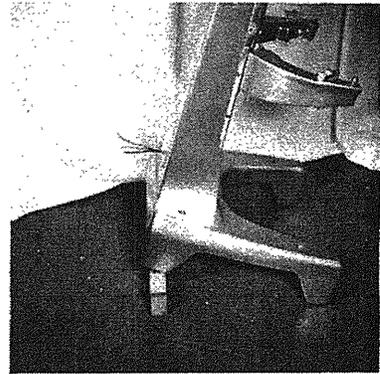


Fig. 8-2

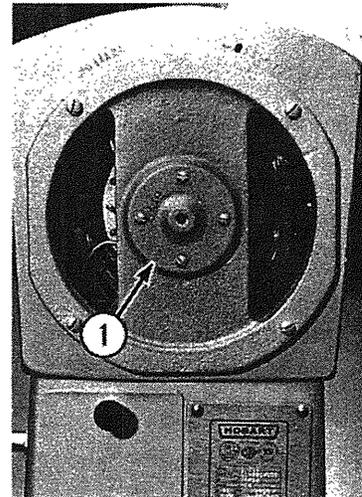


Fig. 8-3

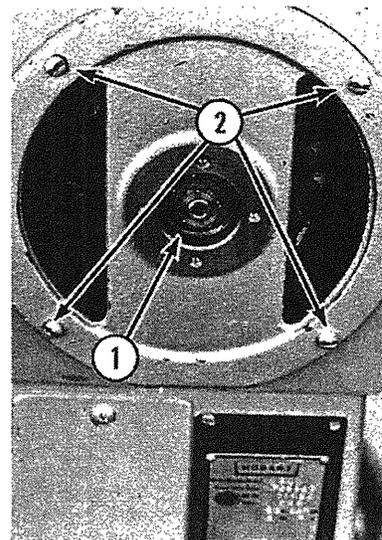


Fig. 8-4

- F. Remove rotor from stator. Rotor, worm and front bearing will come out as one assembly (Fig. 8-5).

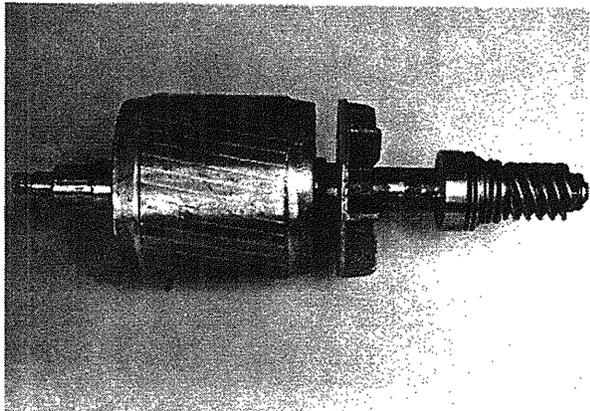


Fig. 8-5

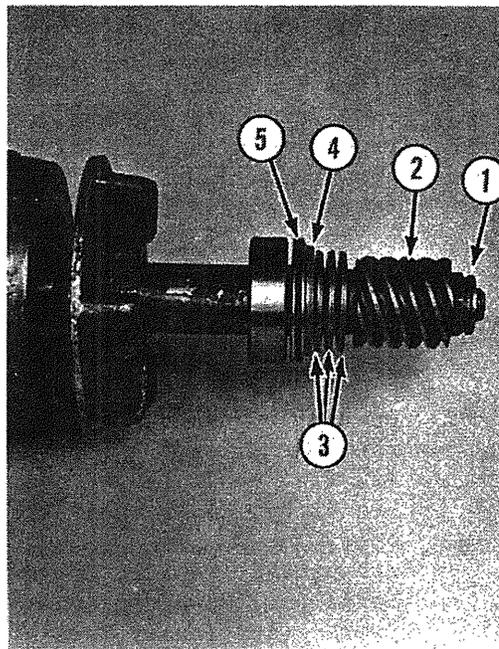


Fig. 8-6

- G. If a new front bearing is needed, the worm must be removed first. Remove stop nut (1, Fig. 8-6), worm (2, Fig. 8-6), six Belleville washers (3, Fig. 8-6), one washer (4, Fig. 8-6) and grease deflector (5, Fig. 8-6).
- H. Use a puller to remove the bearing. Use an arbor press to install the new bearing.
- I. Disconnect all electrical leads. Remove four screws (1, Fig. 8-7).
- J. Remove stator from the gear case.

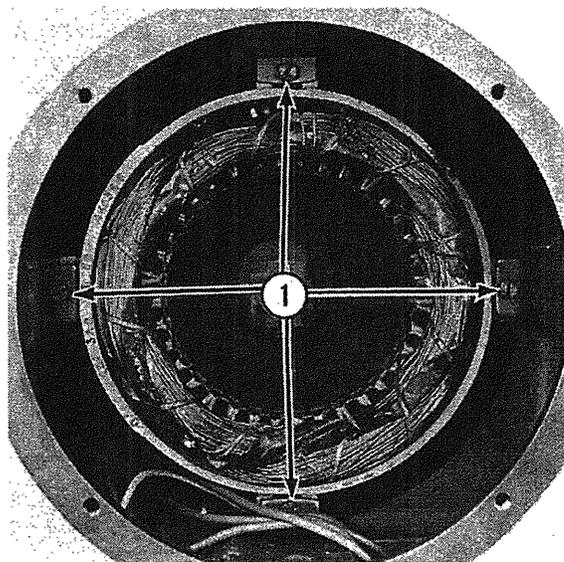


Fig. 8-7

2. Installing the Rotor and Stator.

- A. Place the stator into the gear case and make wiring connections according to wiring diagram on back of capacitor and starter access cover.
- B. Install four screws holding stator to gear case.
- C. Install the rotor.
- D. On single phase units inspect the starting switch contacts (1, Fig. 8-8). If the contacts are dirty, clean them with 4/0 emery paper. If the contacts are pitted, replace the switch. Refer to: "Replacing the Start Switch (Stationary Parts)".
- E. Check the ball bearing in the bearing bracket for smoothness of operation. If bearing turns roughly, replace bearing. Install bearing with shield toward the motor. Connect the two leads to the stationary start switch. Install bracket and secure with four screws.

NOTE: Be sure rounded part of bearing bracket is at the top of the mixer.

- F. Install special washer and two special nuts.
 - G. Install bearing cap and secure with four screws.
 - H. Install trim cap.
- ## 3. Replacing The Starting Switch (Stationary Part).

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

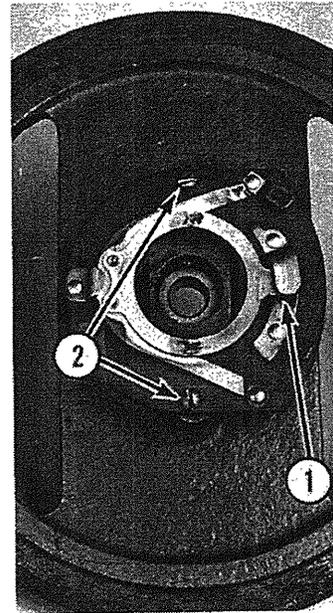


Fig. 8-8

- A. Remove the retaining screw and trim cap (Fig. 8-1).
- B. Remove four screws (1, Fig. 8-3) and remove bearing cap.
- C. Remove two special nuts and washer (1, Fig. 8-4).
- D. Disconnect the two leads on the stationary starting switch. Remove four screws (2, Fig. 8-4). Bearing bracket can now be removed leaving the rotor in the stator.
- E. Remove the two screws (2, Fig. 8-8) and lift up the switch.
- F. Install new switch and reassemble in the reverse order.

NOTE: Be sure rounded part of bearing bracket is at top of the mixer.

D-300 SERVICE

4. Replacing The Capacitor.

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

- A. Remove capacitor and starter access cover (1, Fig. 8-9).
- B. Remove capacitor from bracket and disconnect wires.
- C. Install new capacitor and reassemble in reverse order.

5. Testing The Motor Stator Windings.

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

- A. Disconnect all stator leads.
- B. With all motor leads disconnected and the ohmmeter set on RX1 range, check each winding for continuity (Fig. 8-10). A reading less than stated indicates a shorted stator. If there is no meter reading, the stator is open.
- C. Set the ohmmeter on RX100,000 and check for a grounded motor. Check any stator lead to chassis. Generally, if the motor is not grounded, the meter will indicate infinity. However, any reading above 500,000 ohms is acceptable.
- D. If the windings are shorted, open or grounded, replace the stator.

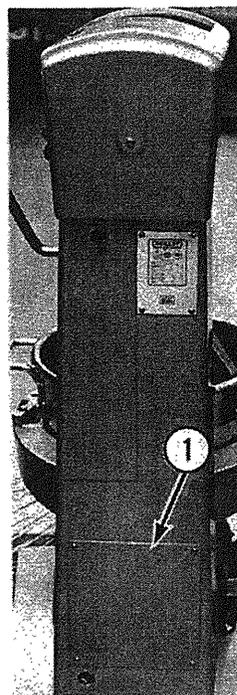
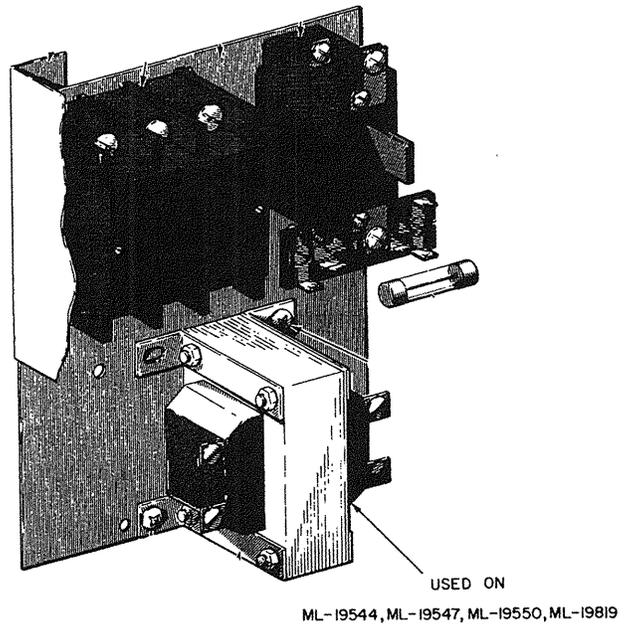
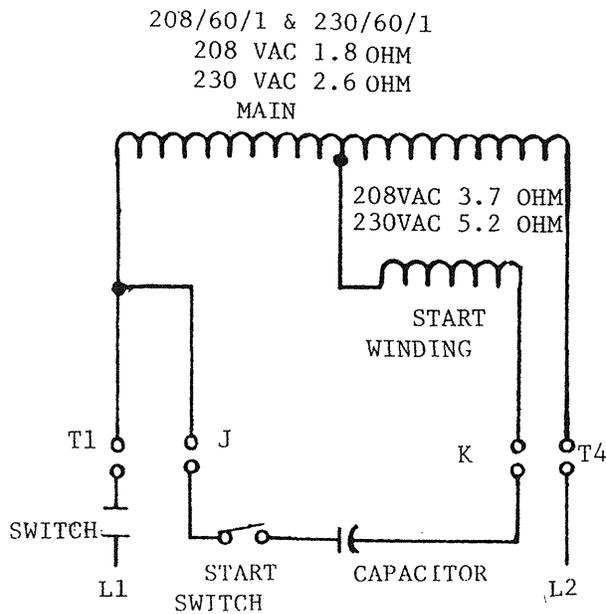
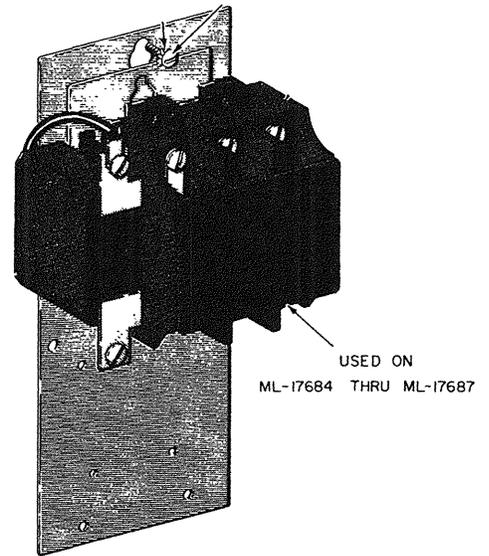
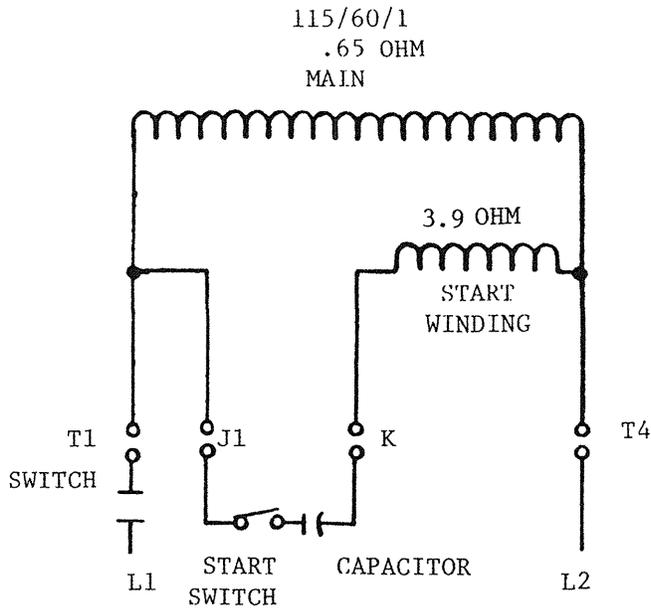


Fig. 8-9

6. Replacing Optional Magnetic Starter or Contactor Unit.

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

- A. If unit is equipped with either the starter or contactor assembly, they will be located behind the capacitor and starter access cover (1, Fig. 8-9).
- B. Remove cover and you have access to the assemblies (Fig. 8-11). Make required changes and follow wiring diagram on rear of capacitor and starter access cover for wire connections.



200/60/3	T1	T2, T2	T3, T3	T1	7.4.OHM
230/60/3	T1	T2, T2	T3, T3	T1	8 OHM
460/60/3	T1	T2, T2	T3, T3	T1	48 OHM

NOTE: ALL RESISTANCE READINGS ARE ONLY APPROXIMATE AND WILL VARY.

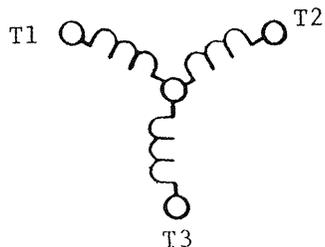


Fig. 8-10

Fig. 8-11

SECTION 9

ELECTRICAL SERVICE

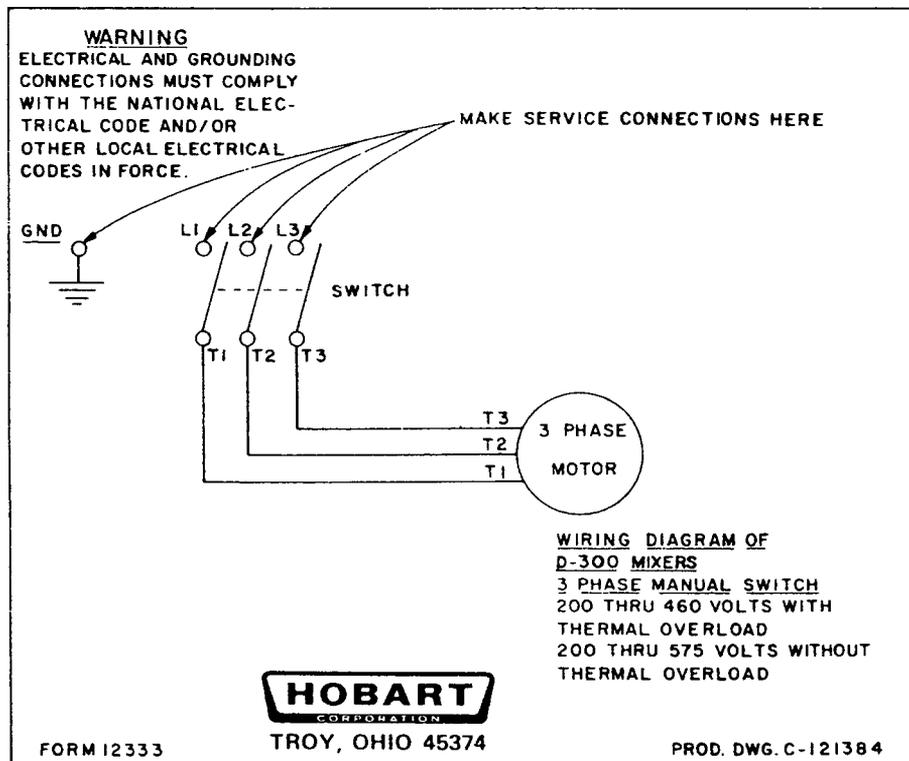
1. Operating Controls.

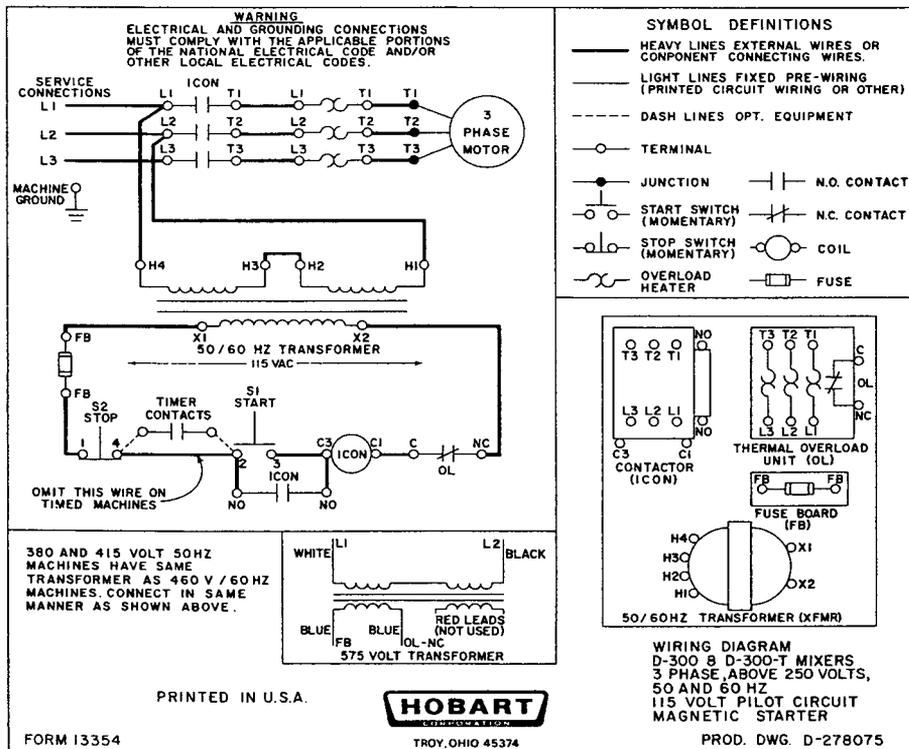
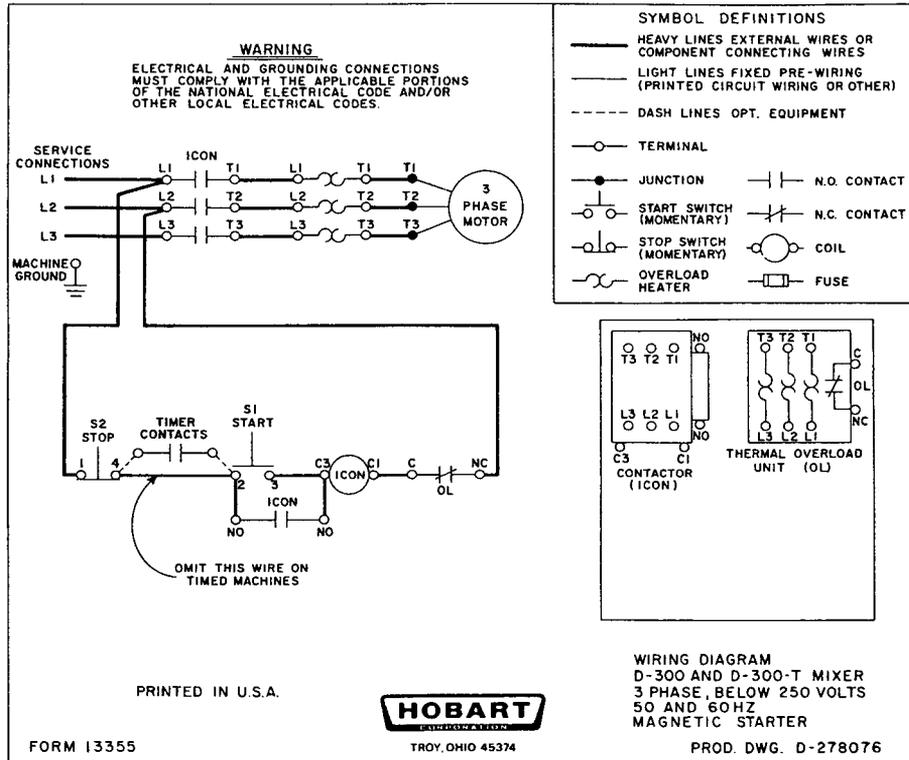
A. On-Off switch.

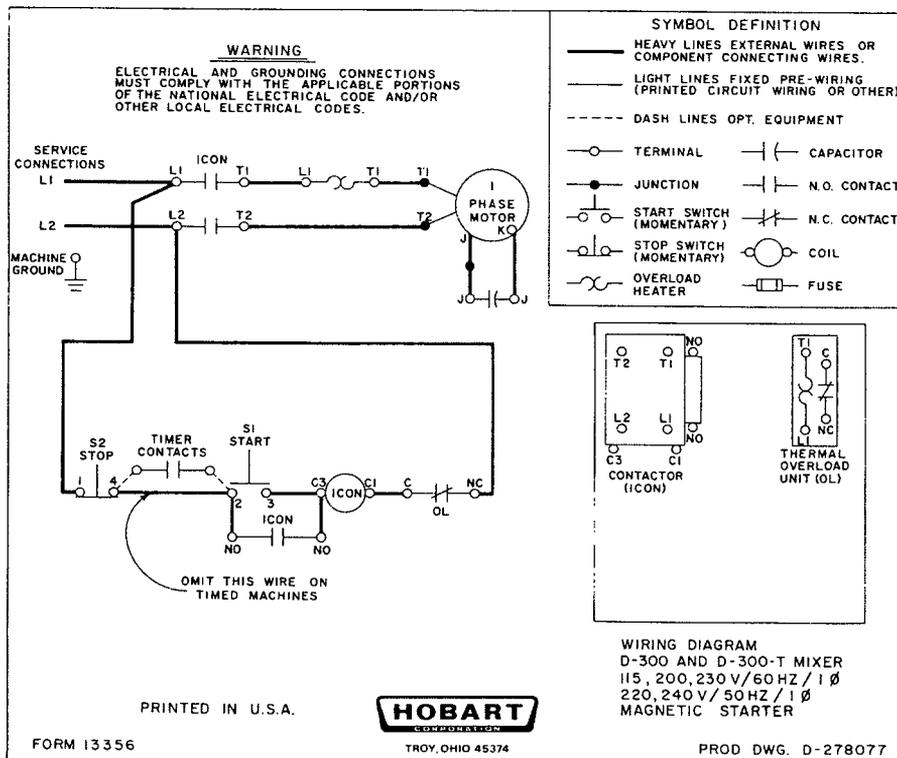
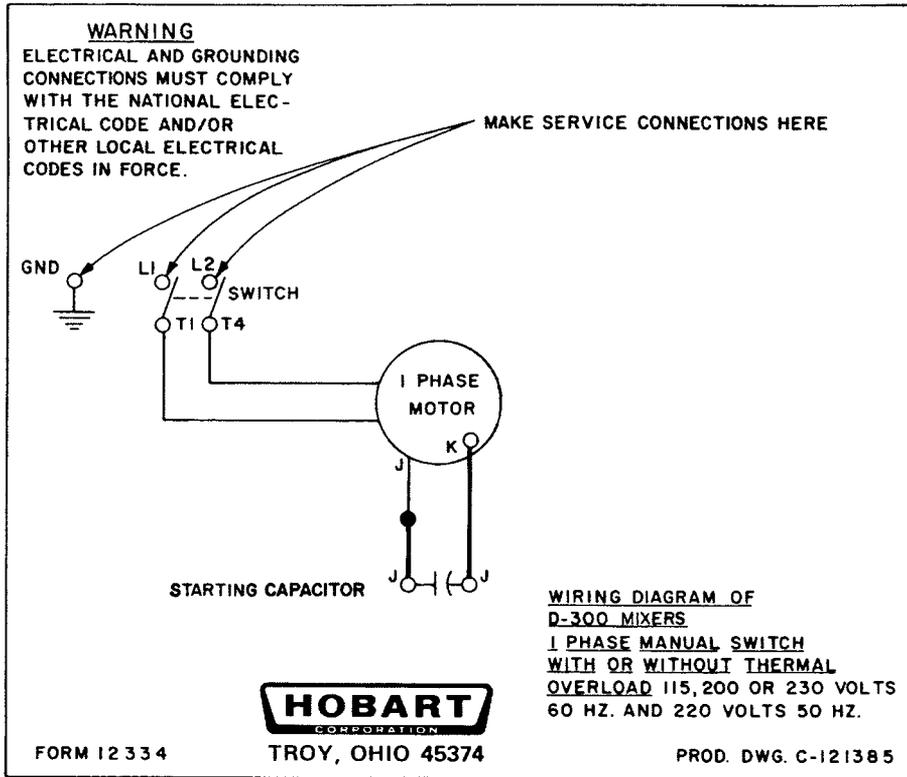
The On-Off switch is mounted on the right side of the transmission case, behind the shifter index plate. When the switch is on, the motor is powered and will run. (If the mixer is equipped with a timer, it must be set "To Hold" before the motor will run).

B. Timer (Optional).

The timer automatically shuts off the machine in any speed after the time set has elapsed. Nontimed operation is obtained by setting the dial to the "Hold" position.

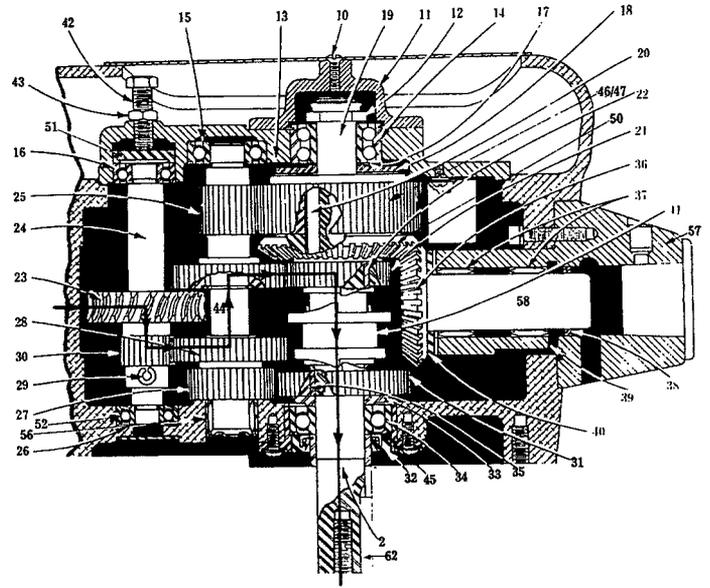
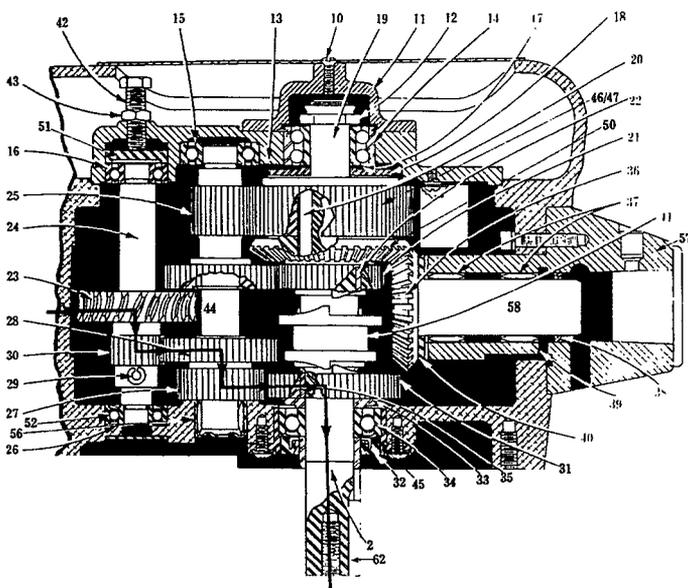
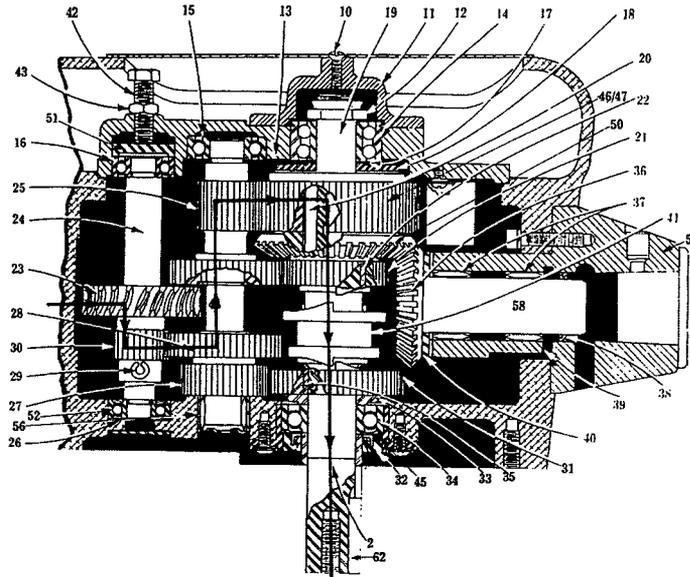






SECTION 10

POWER FLOW





CATALOG OF REPLACEMENT PARTS

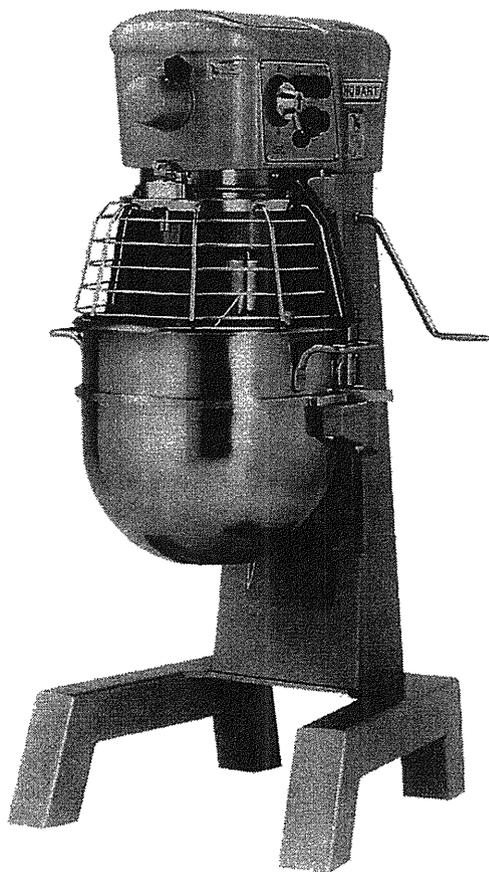
MODEL D300 SERIES MIXERS

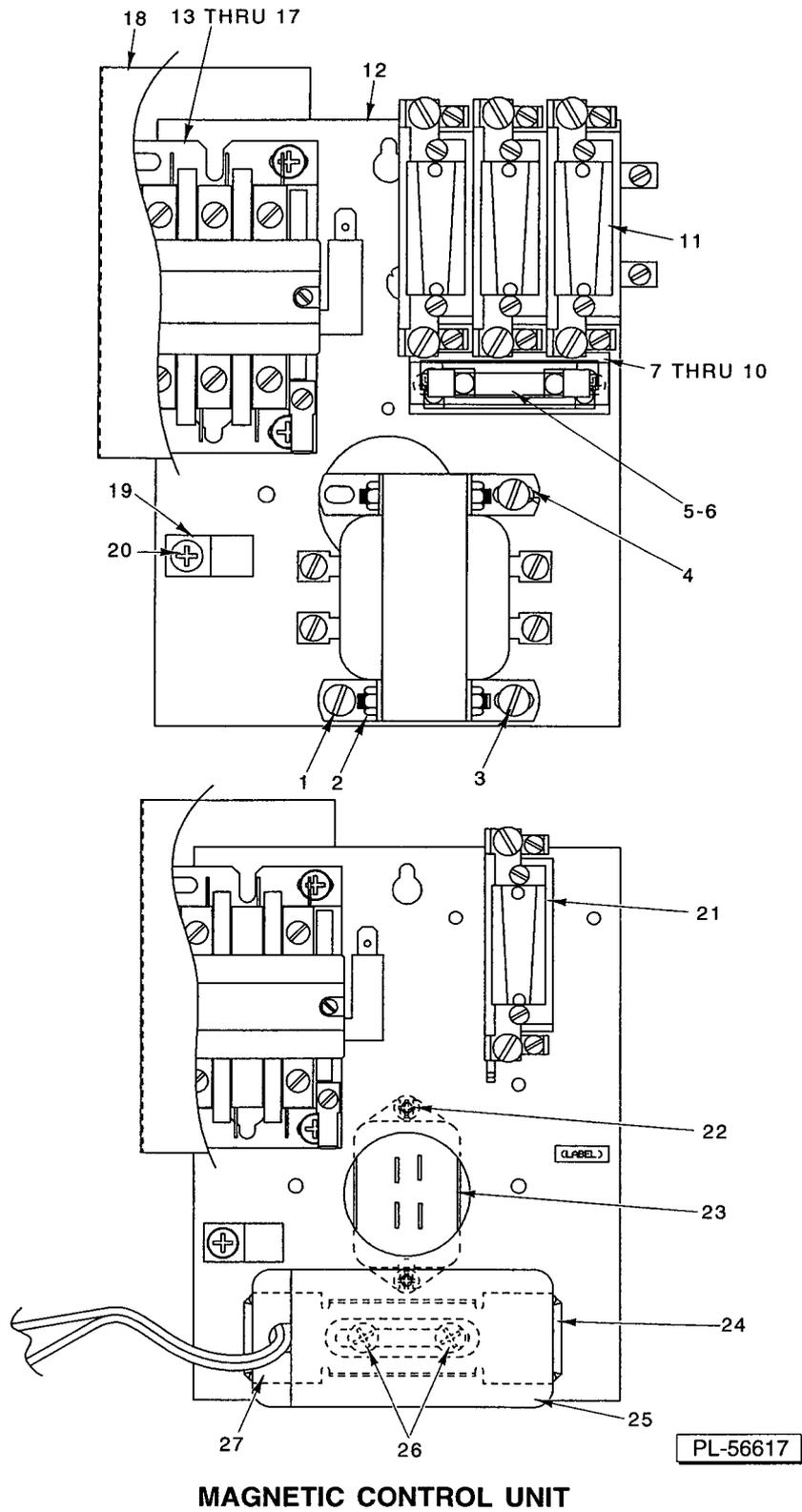
(INCLUDES MOTOR PARTS)

ML-134211	D300T (Timed)
ML-134213	D300C (Timed)

PRIOR MLS COVERED IN THIS MANUAL

ML-104421	D300T (Timed)
ML-134114	D300C (Timed)



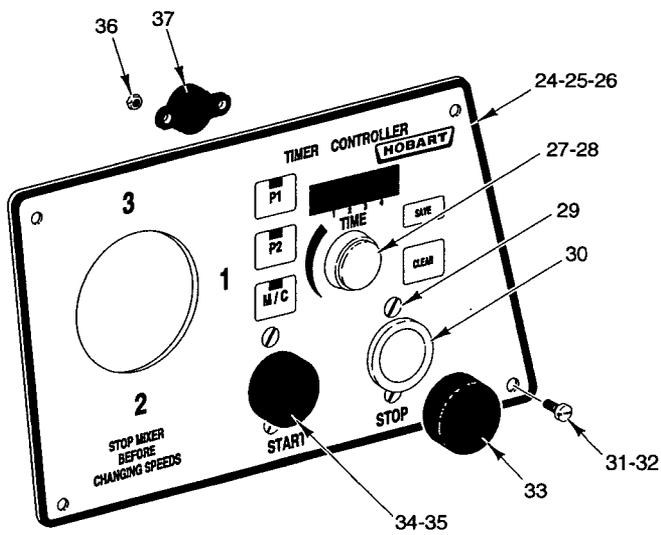
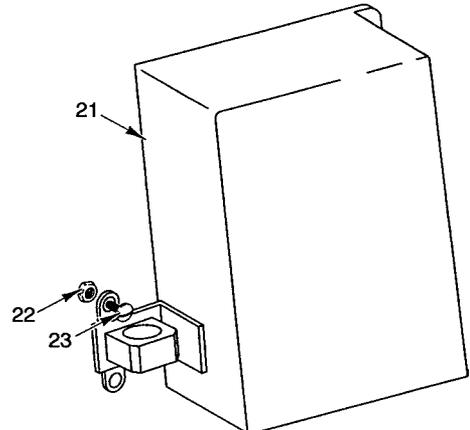
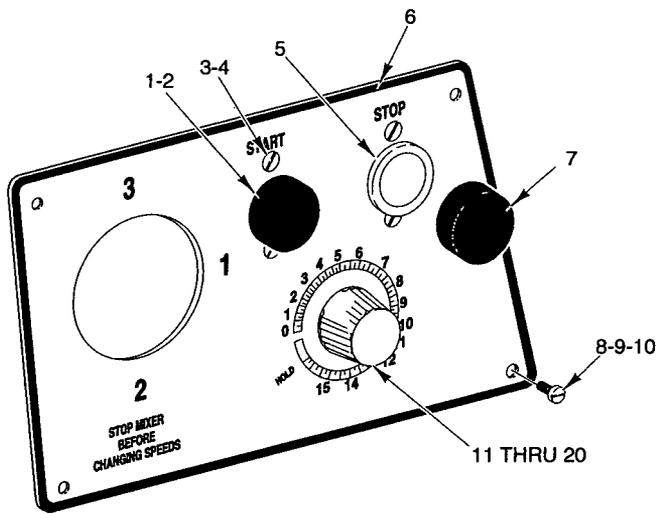


MODEL D300 SERIES MIXERS REPLACEMENT PARTS

MAGNETIC CONTROL UNIT

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-56617			
1	SD-015-20	Self-Tapping Screw 10-32 x 3/8 Phil. Pan Hd., Type TT (Above 250 V.) (3 Ph.)	1
2	00-101935	Transformer (Above 250 V.)	1
3	SD-015-20	Self-Tapping Screw 10-32 x 3/8 Phil. Pan Hd., Type TT (Above 250 V.) (3 Ph.)	1
4	SD-015-20	Self-Tapping Screw 10-32 x 3/8 Phil. Pan Hd., Type TT (Above 250 V.) (3 Ph.)	1
5	FE-009-25	Fuse (0.5 Amp.) (Above 250 V.) (3 Ph.)	1
6	00-022376-00001	Fuse Holder	1
7	00-124017	Fuse Block Assy. (Above 250 V.) (3 Ph.)	1
8	00-085432	Insulator – Fuse Block (Above 250 V.) (3 Ph.)	1
9	SC-009-49	Mach. Screw 6-32 x 3/8 Slotted Rd. Hd.	1
10	NS-009-07	Mach. Nut 6-32 Hex	1
11	00-088196-005-1	Relay – Thermal Overload (3 Ph.) (Tri-Block)	1
12	00-271911	Panel – Control	1
13	00-087713-037-2	Contact (115 V. Coil) (2 Pole)	1
14	00-087713-037-1	Contact (220 V. Coil) (2 Pole)	1
15	00-087713-101-1	Contact (200/300 V., 60 Hz.; 220 V., 50 Hz.) (3 Ph.) (3 Pole)	1
16	00-087713-101-2	Contact (460 V., 60 Hz.; 380/415 V., 50 Hz.) (3 Ph.) (3 Pole)	1
17	SD-019-23	Self-Tapping Screw 10-16 x 3/8 Phil. Pan Hd., Type B	2
18	00-294815	Insulator	1
19	00-078752-00004	Clip – Wiring	1
20	SD-019-23	Self-Tapping Screw 10-16 x 3/8 Phil. Pan Hd., Type B	1
21	00-088196-006-1	Relay – Thermal Overload (1 Ph.)	1
22	SD-015-39	Self-Tapping Screw 8-32 x 1/4 Phil. Pan Hd., Type TT	2
23	00-271612-00002	Electronic Start Switch (1 Ph.)	1
24	00-066621-00001	Bracket (1 Ph.)	1
25	00-070487-00001	Capacitor (1 Ph.)	1
26	SD-029-08	Self-Tapping Screw 8-32 x 3/4 Phil. Pan Hd., Type F	2
27	00-070486-00002	Cap (1 Ph.)	1
	00-112235	Data Plate – Machine	AR
	–	Heater Element – Overload (See Chart Below)	AR

Heater Part No.	Motor Part No.	Machine Voltage Code	Machine Voltage	Freq. Hz.	Ph.	Hp.	Motor RPM	Amp. Rating	Overload Relay
112235-42	875386-1	A	115	60	1	3/4	1725	11.6	E-56
112235-35	875386-3	B	200	60	1	3/4	1725	6.3	E-48
112235-35	875386-1	C	230	60	1	3/4	1725	5.8	E-48
112235-26	875386-2	F	200	60	3	3/4	1725	2.5	E-36
112235-23	875386-4	G	230	60	3	3/4	1725	2.0	E-32
112235-16	875386-4	H	460	60	3	3/4	1725	1.0	E-23
112235-35	875386-1	M	220	50	1	3/4	1425	6.4	E-48
112235-23	875386-4	AB	200	50	3	3/4	1425	2.0	E-32



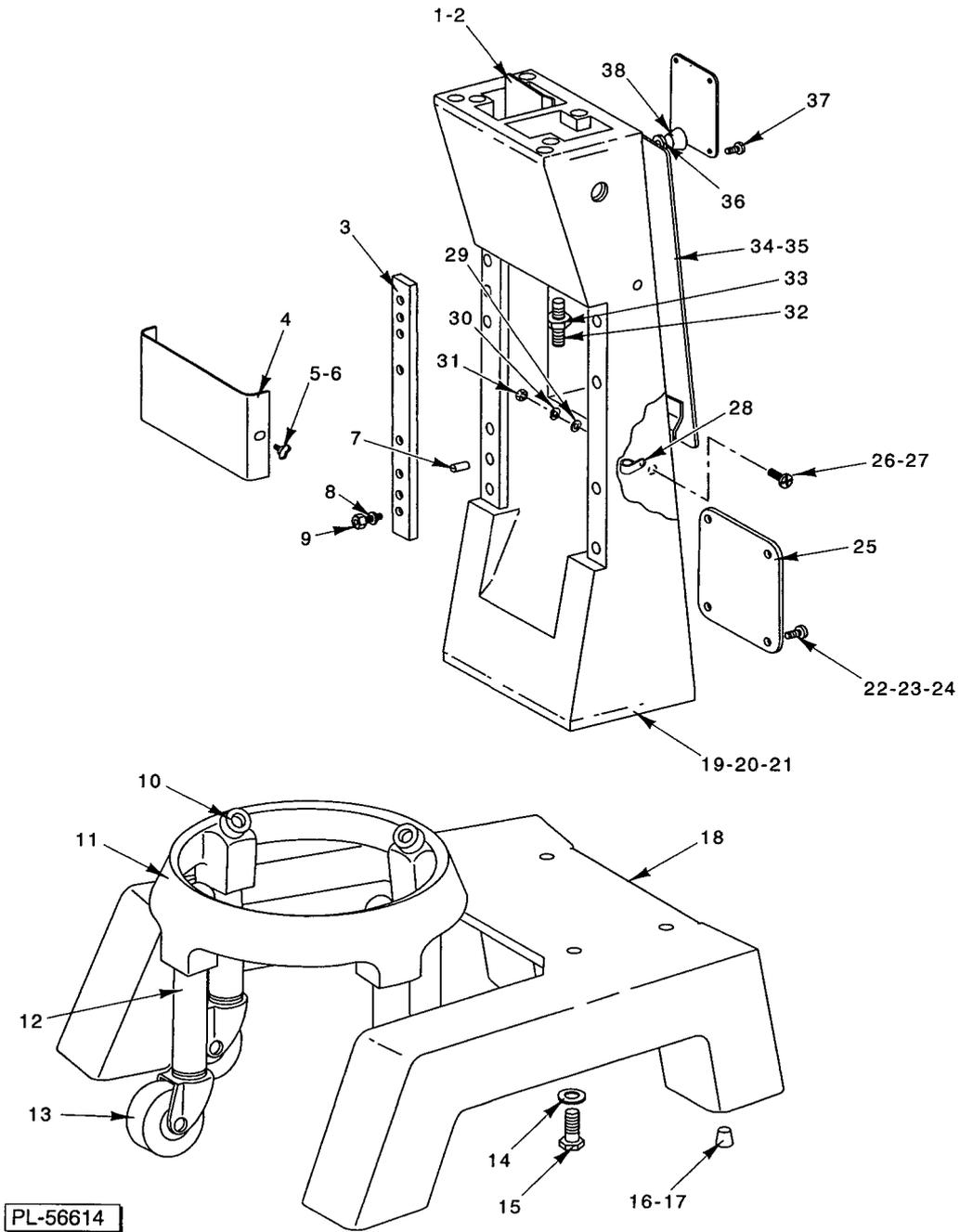
PL-56619

TIMER CONTROL AND SWITCH UNIT

MODEL D300 SERIES MIXERS REPLACEMENT PARTS

TIMER CONTROL AND SWITCH UNIT

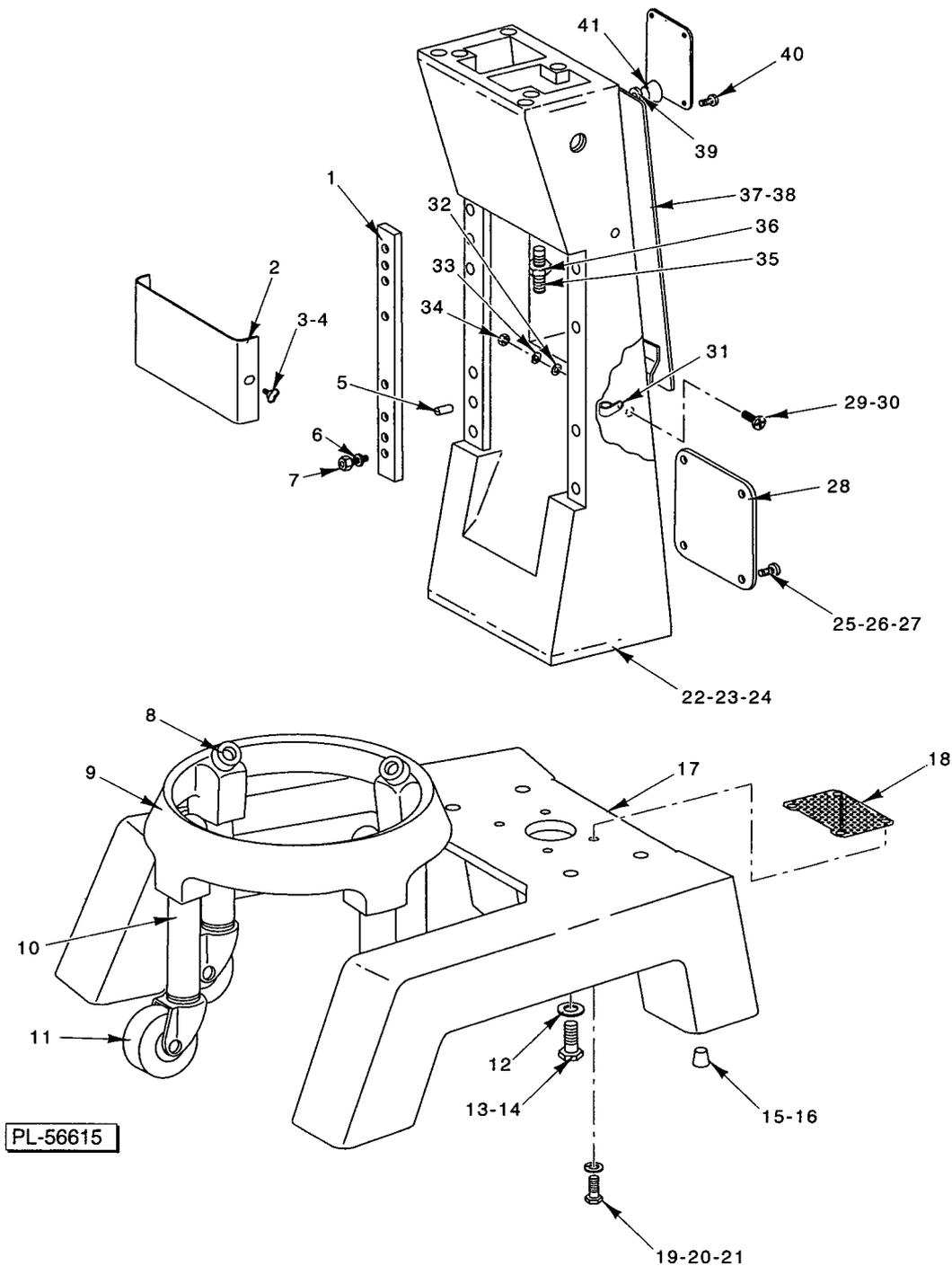
ILLUS.	PART NO.	NAME OF PART	AMT.
PL-56619			
1	00-087711-183-1	Switch – Push Button (N.O.)(Start)	1
2	00-102467-00001	Cap – Push Button (Start) (Black)	1
3	SC-013-12	Mach. Screw 6-32 x 1/4 Slotted Flat Hd. (Stop) (ML-104421 & ML-134211)	4
4	SC-121-89	Mach. Screw 6-32 x 1/4 Hex Flat Hd. (SST) (ML-134114 & ML-134213)	4
5	00-087711-183-2	Switch – Push Button (N.C.) (Stop)	1
6	00-291725	Plate – Switch & Timer	1
7	00-102467-00002	Cap – Push Button (Stop) (Red)	1
8	SD-024-01	Self-Tapping Screw 10-24 x 3/8 Slotted Pan Hd., Type TT (ML-104421 & ML-134211)	4
9	SD-037-58	Self-Tapping Screw 10-24 x 3/8 Hex Button Hd., Type F (SST) (ML-134114 & ML-134213)	4
10	WL-008-13	Lockwasher #10 Internal	4
11	00-291748	Knob – Timer	1
12	00-294650-004-1	Timer Assy. (115 V., 60 Hz.) (ML-134211 & ML-134213)	1
13	00-294650-004-2	Timer Assy. (200 V., 60 Hz.) (ML-134211 & ML-134213)	1
14	00-294650-004-4	Timer Assy. (200 V., 50 Hz.) (ML-134211 & ML-134213)	1
15	00-294650-004-5	Timer Assy. (115 V., 60 Hz.) (Machine W/Pilot Circuit) (ML-104421 & ML134114)	1
16	00-294650-004-6	Timer Assy. (230 V., 60 Hz.) (ML-104421 & ML134114)	1
17	00-294650-004-7	Timer Assy. (115 V., 50 Hz.) (Machine W/Pilot Circuit) (ML-104421 & ML134114)	1
18	00-294650-004-8	Timer Assy. (220 V., 50 Hz.) (ML-104421 & ML134114)	1
19	SC-013-07	Mach. Screw 5-40 x 1/4 Slotted Flat Hd.	2
20	00-291751	Insulation	1
21	00-437311	Cover & Hasp Assy. (Incls. Items 22 & 23) (ML-134114 & ML-134213)	1
22	NS-032-01	Lock Nut Special 10-24 (ML-134114 & ML-134213)	2
23	SC-121-94	Mach. Screw 10-24 x 3/8 Hex Button Head (SST) (ML-134114 & ML-134213)	2
24	00-439338	Switch Plate & Keypad Assy. (ML-104421 & ML-134211)	1
25	00-439400-00001	Board Assy. (120 V.) (ML-104421 & ML-134211)	1
26	00-439400-00002	Board Assy. (240 V.) (ML-104421 & ML-134211)	1
27	00-437775	Knob – Potentiometer (ML-104421 & ML-134211)	1
28	00-437742	Seal – Shaft (ML-104421 & ML-134211)	1
29	SC-053-38	Mach. Screw 6-32 x 1/4 Slotted Truss Hd. (SST) (ML-104421 & ML-134211)	4
30	00-087711-183-2	Switch – Push Button (N.C.) (Stop) (ML-104421 & ML-134211)	1
31	SD-024-01	Self-Tapping Screw 10-24 x 3/8 Slotted Pan Hd., Type TT (ML-104421 & ML-134211)	4
32	WL-008-13	Lockwasher #10 Internal (ML-104421 & ML-134211)	4
33	00-102467-00002	Cap – Push Button (Stop) (Red) (ML-104421 & ML-134211)	1
34	00-087711-183-1	Switch – Push Button (N.O.) (Start) (ML-104421 & ML-134211)	1
35	00-102467-00001	Cap – Push Button (Start) (Black) (ML-104421 & ML-134211)	1
36	NS-046-17	Stop Nut 4-40 Hex (ML-104421 & ML-134211)	2
37	00-438499-00002	Buzzer (ML-104421 & ML-134211)	1
	00-117542-00021	Cord & Plug (115 V.)	AR
	00-438074-00001	Snubber Assy.	1



**BASE AND PEDESTAL
(ML-104421 & ML-134114)**

**BASE AND PEDESTAL
(ML-104421 & ML-134114)**

ILLUS. PL-56614	PART NO.	NAME OF PART	AMT.
1	00-070145	Air Baffle Assy.	1
2	SC-013-55	Mach. Screw 10-24 x 1 Slotted Flat Hd.	1
3	00-068717	Slideway	2
4	00-437723	Apron.....	1
5	00-070641-00011	Thumb Screw 8-32 Special (ML-104421)	2
6	SC-121-92	Mach. Screw 8-32 x 3/8 Hex Button Hd. (SST) (ML-134114)	2
7	00-011800-00116	Dowel	2
8	WL-003-48	Lockwasher 5/16 High Collar	8
9	SC-040-14	Cap Screw 5/16-18 x 3/4 Hex Soc. Hd.	8
10	00-018682-00001	Bumper	4
11	00-315015	Bowl Truck Assy. (Incls. Items 10, 12, & 13)	1
12	00-070590-00001	Leg (6 1/8 Lg.) (30 Qt.)	4
13	00-087668-00002	Caster	4
14	WS-018-19	Washer	4
15	SC-097-53	Cap Screw 3/8-16 x 2 1/4 Hex Hd.	4
16	00-114992	Plug – Base (Plug for Foot Pad)	AR
17	00-116395	Plug – Base	4
18	00-110146-00002	Base Assy.	1
19	00-123961-00004	Pedestal	1
20	SD-024-01	Self-Tapping Screw 10-24 x 3/8 Slotted Pan Hd., Type TT	1
21	WL-010-06	Lockwasher #10 External Shakeproof (Bronze)	1
22	00-123109	Screw 6-32 x 3/8 Serrated Hd. (ML-104421)	4
23	SC-121-90	Mach. Screw 6-32 x 3/8 Hex Button Hd. (SST) (ML-134114)	4
24	WL-013-05	Lockwasher #6 Internal (SST)	4
25	00-123969-00001	Cover & Gasket Assy. (Capacitor & Starter Access)	1
26	SC-122-25	Mach. Screw 8-32 x 1 Phil. Pan Hd. (SST) (ML-104421)	2
27	SC-123-33	Mach. Screw 8-32 x 1 Hex Button Hd. (SST) (ML-134114)	2
28	00-078752-00011	P-Clamp 3/16 P	2
29	WS-019-16	Washer	2
30	WL-007-07	Lockwasher #8 External.....	2
31	NS-009-12	Mach. Nut 8-32 Hex	2
32	SC-047-46	Set Screw 3/8-16 x 1 1/4 Soc. Hdls., Half-Dog Pt.	1
33	NS-017-15	Jam Nut 3/8-16 Hex	1
34	00-070144-00001	Lift Access Cover Assy.	1
35	00-123109	Screw – Serrated Hd. 6-32 x 3/8	4
36	WS-019-26	Washer	1
37	00-121676-00003	Screw – Special	4
38	00-070450	Knob – Lift	1
	00-110717-00003	Bag & Plugs Assy. (Incls. Items 16 & 17)	1
	00-477597	Feet Kit (Set of 4) (SST)	1

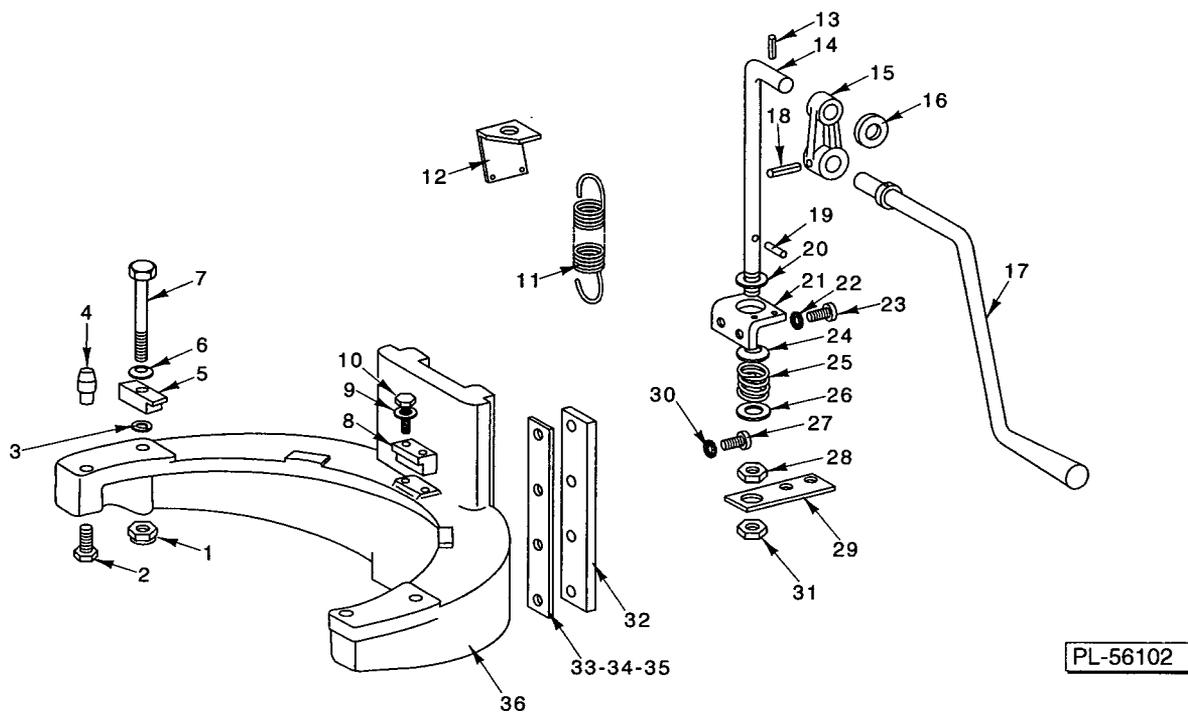


**BASE AND PEDESTAL
(ML-134211 & ML-134213)**

MODEL D300 SERIES MIXERS REPLACEMENT PARTS

**BASE AND PEDESTAL
(ML-134211 & ML-134213)**

ILLUS. PL-56615	PART NO.	NAME OF PART	AMT.
1	00-068717	Slideway	2
2	00-437723	Apron	1
3	00-070641-00011	Thumb Screw 8-32 Special (ML-134211)	2
4	SC-121-92	Mach. Screw 8-32 x 3/8 Hex Button Hd. (SST) (ML-134213)	2
5	00-011800-00116	Dowel	2
6	WL-003-48	Lockwasher 5/16 High Collar	8
7	SC-040-14	Cap Screw 5/16-18 x 3/4 Hex Soc. Hd.	8
8	00-018682-00001	Bumper	4
9	00-315015	Bowl Truck Assy. (Incls. Items 8, 10, & 11)	1
10	00-070590-00001	Leg (6 1/8 Lg.) (30 Qt.)	4
11	00-087668-00002	Caster	4
12	WS-018-19	Washer	4
13	SC-118-09	Cap Screw 3/8-16 x 1 1/4 Hex Hd.	4
14	00-512987	Adhesive	AR
15	00-114992	Plug - Base (Plug for Foot Pad)	AR
16	00-116395	Plug - Base	4
17	00-291499-00003	Base Assy.	1
18	00-108159	Screen - Air	1
19	WS-018-19	Washer	4
20	SC-118-10	Cap Screw 3/8-16 x 1 Hex Hd.	4
21	00-512987	Adhesive	AR
22	00-123961-00004	Pedestal	1
23	SD-024-01	Self-Tapping Screw 10-24 x 3/8 Slotted Pan Hd., Type TT	1
24	WL-010-06	Lockwasher #10 External Shakeproof (Bronze)	1
25	00-123109	Screw 6-32 x 3/8 Serrated Hd. (ML-134211)	4
26	SC-121-90	Mach. Screw 6-32 x 3/8 Hex Button Hd. (SST) (ML-134213)	4
27	WL-013-05	Lockwasher #6 Internal (SST)	4
28	00-123969-00001	Cover & Gasket Assy. (Capacitor & Starter Access)	1
29	SC-122-25	Mach. Screw 8-32 x 1 Phil. Pan Hd. (SST) (ML-134211)	2
30	SC-123-33	Mach. Screw 8-32 x 1 Hex Button Hd. (SST) (ML-134213)	2
31	00-078752-00011	P-Clamp 3/16	2
32	WS-019-16	Washer	2
33	WL-007-07	Lockwasher #8 External	2
34	NS-009-12	Mach. Nut 8-32 Hex	2
35	SC-047-46	Set Screw 3/8-16 x 1 1/4 Soc. Hdls., Half-Dog Pt.	1
36	NS-017-15	Jam Nut 3/8-16 Hex	1
37	00-070144-00001	Lift Access Cover Assy.	1
38	00-123109	Screw - Serrated Hd. 6-32 x 3/8	4
39	WS-019-26	Washer	1
40	00-121676-00003	Screw - Special	4
41	00-070450	Knob - Lift	1
	00-110717-00003	Bag & Plugs Assy. (Incls. Items 15 & 16)	1
	00-477597	Feet Kit (Set of 4) (SST)	1



PL-56102

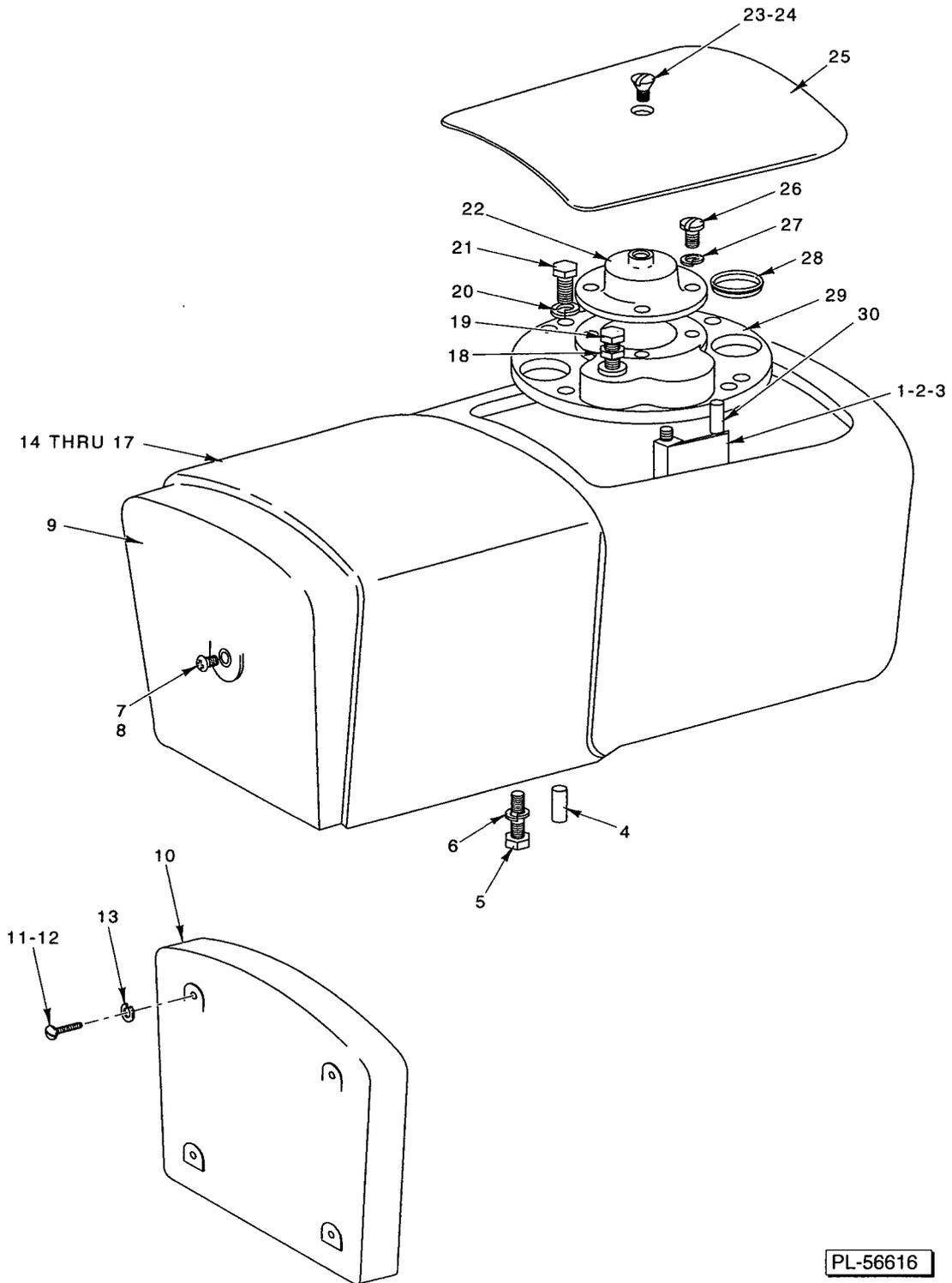
BOWL LIFT UNIT

MODEL D300 SERIES MIXERS REPLACEMENT PARTS

BOWL LIFT UNIT

ILLUS. PL-56102	PART NO.	NAME OF PART	AMT.
1	NS-032-13	Lock Nut $\frac{5}{16}$ -18 Flexloc	2
2	SC-037-75	Cap Screw $\frac{5}{16}$ -18 x $\frac{3}{4}$ Hex Hd.	2
3	WS-004-18	Washer	2
4	00-070411	Pin – Bowl Locating	2
5	00-070057	Clamp – Bowl	2
6	00-070087	Washer – Spring	2
7	SC-062-28	Cap Screw $\frac{5}{16}$ -18 x $3\frac{1}{2}$ Hex Hd.	2
8	00-070044	Retainer – Bowl	1
9	WL-006-16	Lockwasher $\frac{1}{4}$ Light (SST)	2
10	SC-036-09	Cap Screw $\frac{1}{4}$ -20 x $1\frac{1}{4}$ Hex Hd.	2
11	00-023884	Spring – Counterbalance	2
12	00-070056	Bracket – Upper Spring Lift	1
13	RP-002-25	Roll Pin $\frac{1}{8}$ Dia. x $\frac{7}{8}$ Lg.	1
14	00-068718	Rod – Bowl Lift	1
15	00-069995	Arm – Bowl Lift	1
16	WS-008-47	Washer	1
17	00-293564	Lift Handle Assy.	1
18	RP-002-26	Roll Pin $\frac{1}{4}$ Dia. x $1\frac{1}{8}$ Lg.	1
19	RP-002-10	Roll Pin $\frac{3}{16}$ Dia. x 1 Lg.	1
20	WS-008-47	Washer	1
21	00-438474	Bracket – Bowl Lift	1
22	WL-009-14	Lockwasher $\frac{5}{16}$ Csk. External Shakeproof	2
23	SC-061-03	Cap Screw $\frac{5}{16}$ -18 x $\frac{3}{4}$ Soc. Flat Hd.	2
24	00-070131	Washer – Cup	1
25	00-070104	Spring – Bowl Lift	1
26	WS-008-47	Washer	1
27	SC-061-03	Cap Screw $\frac{5}{16}$ -18 x $\frac{3}{4}$ Soc. Flat Hd.	8
28	NS-017-31	Jam Nut $\frac{1}{2}$ -20 Hex	1
29	00-070058	Bracket – Lower Spring Lift	1
30	WL-009-14	Lockwasher $\frac{5}{16}$ Csk. External Shakeproof	8
31	NS-017-31	Jam Nut $\frac{1}{2}$ -20 Hex	1
32	00-069996	Gib	2
33	00-070092-00001	Shim – Bowl Support (0.001 Thk.)	AR
34	00-070092-00002	Shim – Bowl Support (0.002 Thk.)	AR
35	00-070092-00003	Shim – Bowl Support (0.003 Thk.)	AR
36	00-069987-00002	Support – Bowl	1

MODEL D300 SERIES MIXERS REPLACEMENT PARTS



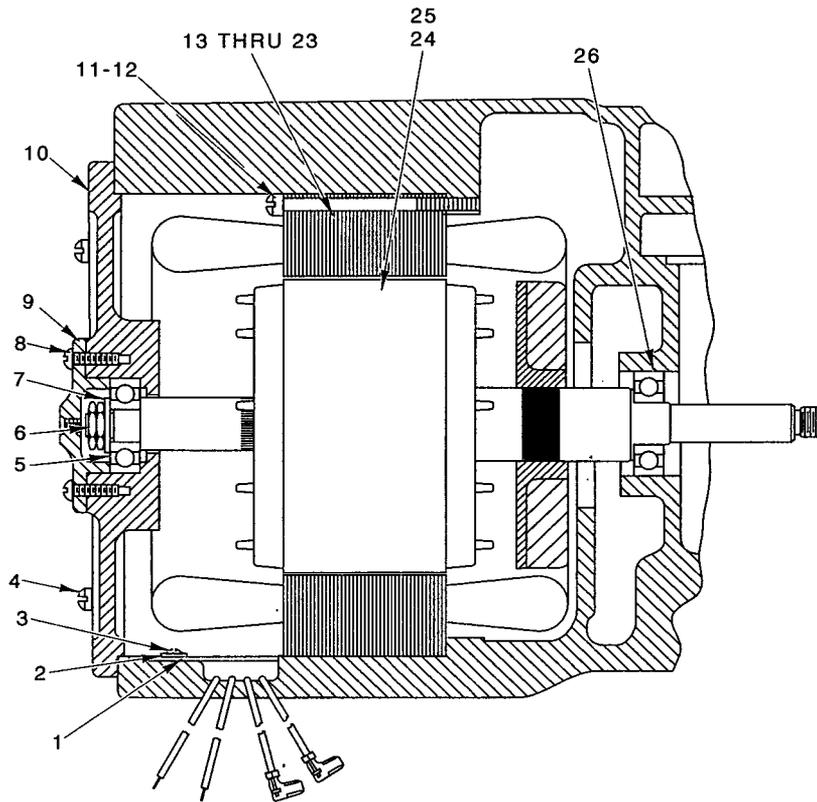
PL-56616

TRANSMISSION CASE

MODEL D300 SERIES MIXERS REPLACEMENT PARTS

TRANSMISSION CASE

ILLUS. PL-56616	PART NO.	NAME OF PART	AMT.
1	00-070872	Deflector – Roller Clutch Oil	1
2	SC-009-82	Mach. Screw 8-32 x 5/16 Slotted Rd. Hd.	1
3	WL-007-06	Lockwasher #8 External Shakeproof	2
4	00-270777	Dowel	2
5	SC-062-27	Cap Screw 3/8-16 x 1 3/4 Hex Hd.	4
6	WL-004-02	Lockwasher 3/8 Light	4
7	SC-113-52	Mach. Screw 10-24 x 1/2 Phil. Truss Hd. (SST) (ML-104421)	1
8	SC-121-97	Mach. Screw 10-24 x 3/4 Hex Button Hd. (SST) (ML-134114)	1
9	00-437918-00006	Cap – Trim (ML-104421 & ML-134114)	1
10	00-479497-00003	Cap – Trim (ML-134211 & ML-134213)	1
11	SC-128-45	Mach. Screw 12-24 x 2 Slotted Pan Hd. (ML-134211)	4
12	SC-122-01	Mach. Screw 12-24 x 2 Hex Flat Hd. (SST) (ML-134213)	4
13	WL-019-79	Lockwasher #12 Helical	4
14	00-290505-00001	Case – Transmission (ML-104421 & ML-134114)	1
15	00-874100-00002	Case – Transmission (ML-134211 & ML-134213)	1
16	–	Motor (ML-104421 & ML-134114) (See page 15)	1
17	–	Motor (ML-134211 & ML-134213) (See Page 17)	1
18	NS-017-14	Jam Nut 3/8-16 Hex	1
19	SC-118-09	Cap Screw 3/8-16 x 1 1/4 Hex Hd.	1
20	WL-003-43	Lockwasher 5/16 Light	4
21	SC-124-14	Cap Screw 5/16-18 x 7/8 Hex Hd.	4
22	00-070017	Retainer – Bearing	1
23	SC-015-36	Mach. Screw 10-24 x 5/8 Oval Hd. (ML-104421 & ML-134211)	1
24	SC-121-95	Mach. Screw 10-24 x 5/8 Flat Hd. (SST) (ML-134114 & ML-134213)	1
25	00-070005-00001	Transmission Case Cover Assy.	1
26	SC-011-74	Mach. Screw 1/4-20 x 5/8 Slotted Fil. Hd.	4
27	WL-003-37	Lockwasher 1/4	4
28	00-064871	Plug – Friction	2
29	00-068721	Bearing Carrier – Transmission Case	1
30	00-011800-00116	Dowel	2
	00-079621	Shim (Between Transmission Case & Pedestal)	AR



PL-56148

**MOTOR PARTS
(ML-104421 & ML-134114)**

MODEL D300 SERIES MIXERS REPLACEMENT PARTS

MOTOR PARTS
(ML-104421 & ML-134114)

ILLUS. PL-56148	PART NO.	NAME OF PART	AMT.
1	00-070441	Retainer – Lead Wire	1
2	WL-007-07	Lockwasher #8 External Shakeproof	1
3	SC-009-56	Mach. Screw 8-32 x 3/8 Slotted Rd. Hd.	1
4	SC-011-64	Mach. Screw 12-24 x 1 Slotted Fil. Hd.	4
5	BB-021-25	Ball Bearing – NTN 6301-ZZ-C2-5C	1
6	00-011430	Nut – Special	2
7	WS-007-09	Washer	1
8	SC-009-61	Mach. Screw 8-32 x 1/2 Slotted Rd. Hd.	4
9	00-070012	Cap – Bearing	1
10	00-068722-00002	Bracket – Bearing	1
*11	SC-011-32	Mach. Screw 10-24 x 3 Slotted Fil. Hd.	4
**12	SC-011-28	Mach. Screw 10-24 x 2 1/2 Slotted Fil. Hd.	4
*13	00-065477-163-1	Stator Assy. (115 V., 60 Hz.)	1
*14	00-065477-163-2	Stator Assy. (200/208 V., 60 Hz.)	1
*15	00-065477-163-3	Stator Assy. (230 V., 60 Hz.) (ML-104421)	1
*16	00-065477-163-4	Stator Assy. (115 V., 50 Hz.) (ML-104421)	1
*17	00-065477-163-5	Stator Assy. (220 V., 50 Hz.) (ML-104421)	1
**18	00-065478-029-1	Stator Assy. (200/208 V., 60 Hz.)	1
**19	00-065478-029-2	Stator Assy. (230 V., 60 Hz.) (ML-104421)	1
**20	00-065478-029-3	Stator Assy. (460 V., 60 Hz.) (ML-104421)	1
**21	00-065478-029-4	Stator Assy. (220 V., 50 Hz.) (ML-104421)	1
**22	00-065478-029-5	Stator Assy. (380 V., 50 Hz.) (ML-104421)	1
**23	00-065478-029-7	Stator Assy. (415 V., 50 Hz.) (ML-104421)	1
**24	00-015747-00219	Rotor Assy. (50/60 Hz.)	1
*25	00-022275-00275	Rotor Assy. (50/60 Hz.)	1
26	BB-018-17	Ball Bearing – Fafnir #H203PP	1

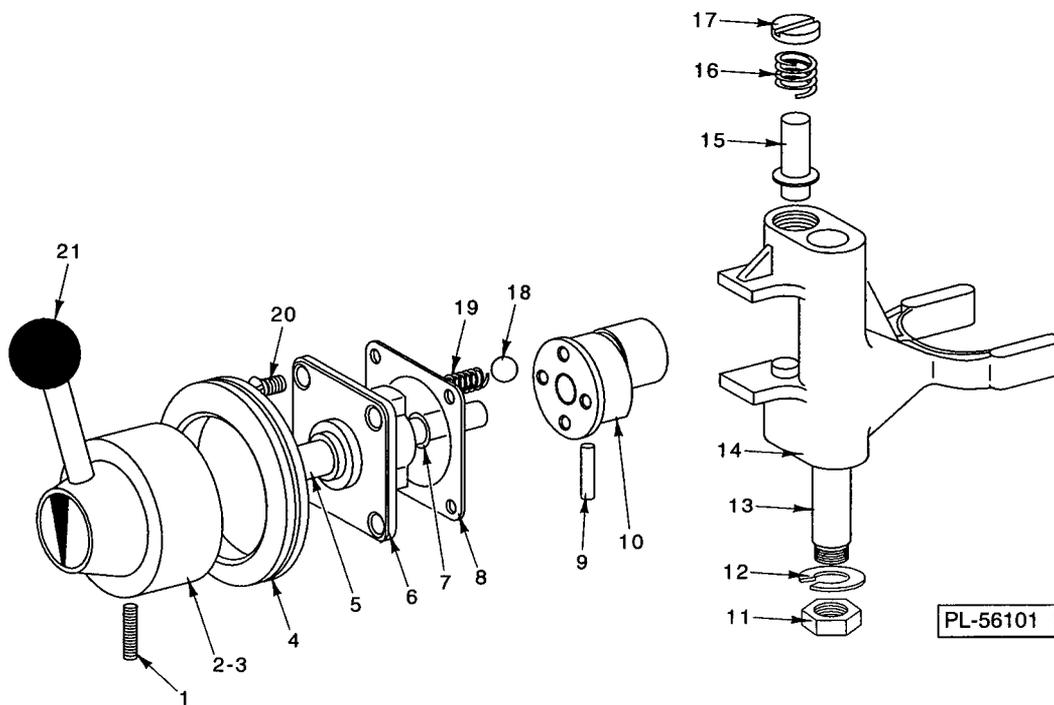
*1 Ph.

**3 Ph.

MODEL D300 SERIES MIXERS REPLACEMENT PARTS

MOTOR PARTS
(ML-134211 & ML-134213)

ILLUS. PL-56618	PART NO.	NAME OF PART	AMT.
1	00-437288	Fan and Clip	1
2	SC-110-83	Mach. Screw 10-32 x 7 ⁵ / ₈ Hex Hd.	4
3	00-875386-00001	Motor (120-240 V., 60 Hz., Ph. 1)	1
4	00-875386-00001	Motor (220 V., 50 Hz., Ph. 1)	1
5	00-875386-00002	Motor (200-208 V., 60 Hz., Ph. 3)	1
6	00-875386-00003	Motor (200-208 V., 60 Hz., Ph. 1)	1
7	00-875386-00004	Motor (240-460 V., 60 Hz., Ph. 3)	1
8	00-873057	Grease Deflector	1
9	00-077840	Washer – Belleville	6
10	00-877517	Spacer	1
11	NS-032-23	Lock Nut Special 7/16-20 Flexloc	1
12	00-291221	Gear – Worm (60 Hz.)	1
13	00-070407	Gear – Worm (50 Hz.)	1

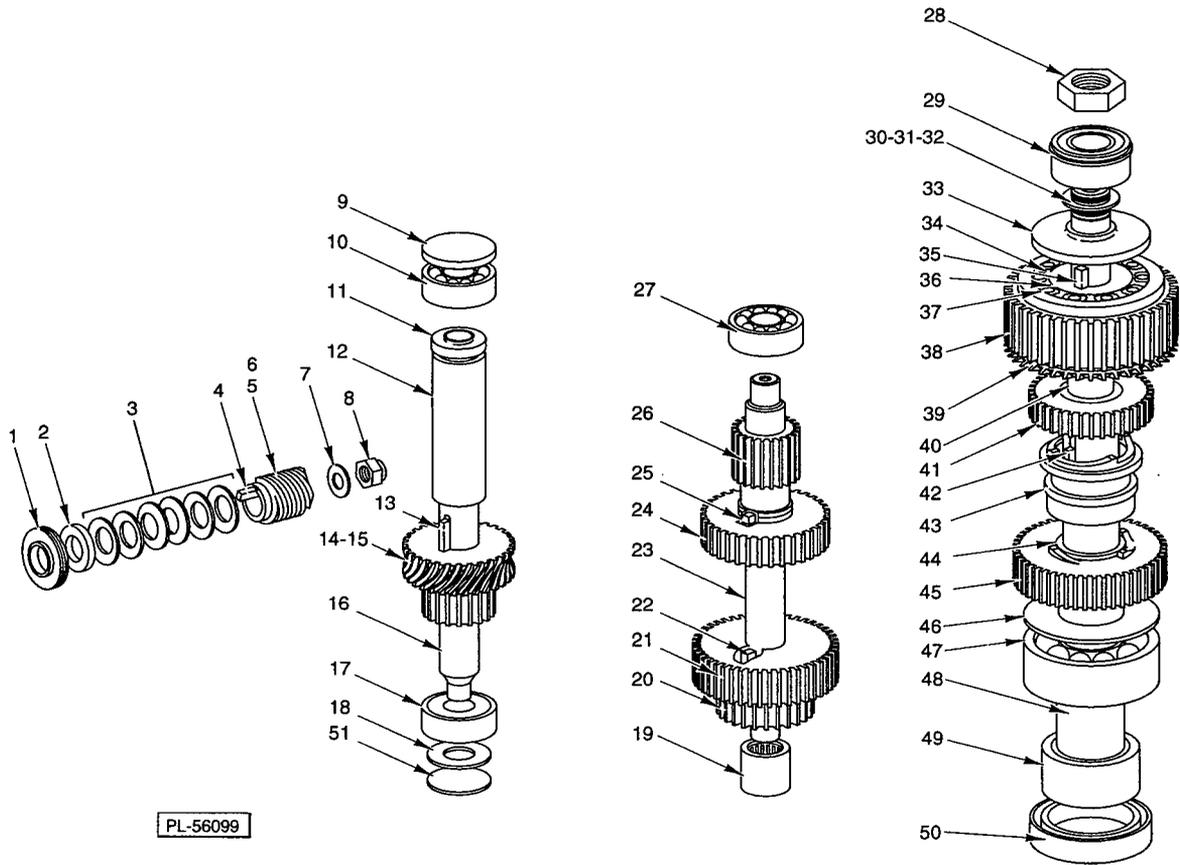


SHIFTER UNIT

MODEL D300 SERIES MIXERS REPLACEMENT PARTS

SHIFTER UNIT

ILLUS. PL-56101	PART NO.	NAME OF PART	AMT.
1	SC-047-17	Set Screw 1/4-20 x 3/4 Hds., Cup Pt.	1
2	00-291272	Shifter Handle Assy. (Incls. Items 1 & 21) (ML-104421)	1
3	00-439306	Shifter Handle Assy. (Pinned) (Incls. Items 1 & 21) (ML-134114)	1
4	00-110961	Grommet – Shifter Handle	1
5	00-875238	Shaft – Shifter	1
6	00-290115-00001	Plate – Index	1
7	00-067500-00044	O-Ring	1
8	00-023946	Gasket – Index Plate	1
9	PS-003-08	Spiral Pin 1/8 Dia. x 3/4 Lg.	1
10	00-873504	Cam – Gear Shifter	1
11	NS-013-22	Nut 3/8-16 Hex	1
12	WL-004-06	Lockwasher 3/8 Helical	1
13	00-070043	Rod – Shifter Guide	1
14	00-013160	Yoke – Shifter	1
15	00-012733	Plunger – Shifter Yoke	2
16	00-012734	Spring – Shifter Yoke	2
17	00-012732	Retainer – Shifter Yoke Spring	2
18	BA-002-09	Ball 1/4 Dia.	2
19	00-111170	Spring – Detent	2
20	SC-014-36	Mach. Screw 6-32 x 1 Slotted Flat Hd.	4
21	00-070085	Knob – Shifter Handle Ball	1
	00-815240	Shifter Sub-Assy. (Incls. Items 5 thru 10, 18, & 19)	1



TRANSMISSION

MODEL D300 SERIES MIXERS REPLACEMENT PARTS

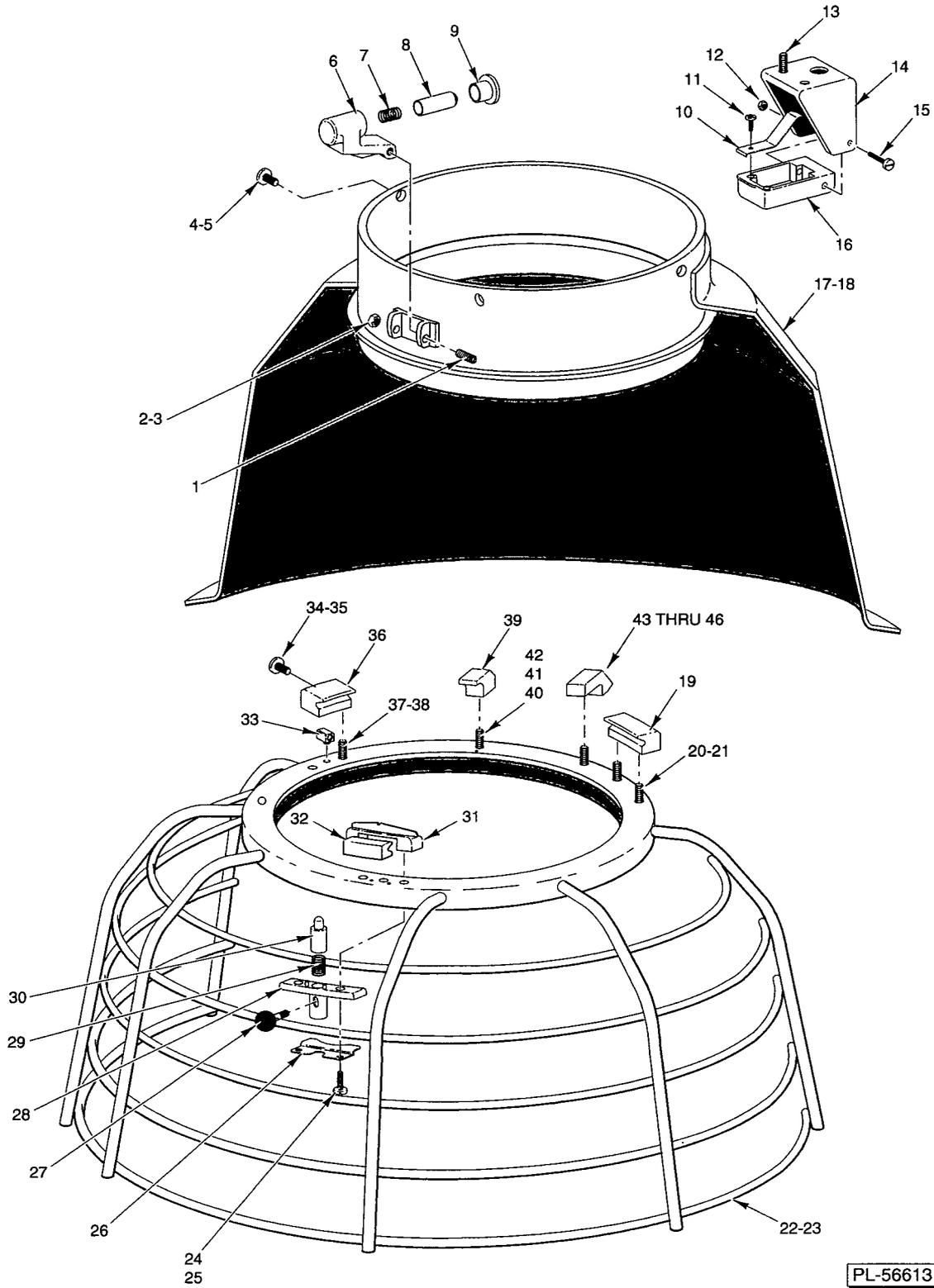
TRANSMISSION

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-56099			
1	00-013174-00001	Deflector – Grease (ML-104421 & ML-134114)	1
2	WS-010-36	Washer (ML-104421 & ML-134114)	1
3	00-077840	Washer – Belleville (ML-104421 & ML-134114)	6
4	00-478601	Key (ML-104421 & ML-134114)	1
5	00-291221	Worm (5T) (60 Hz.) (ML-104421 & ML-134114)	1
6	00-070407	Worm (5T) (50 Hz.) (ML-104421 & ML-134114)	1
7	WS-007-09	Washer (ML-104421 & ML-134114)	1
8	NS-032-23	Lock Nut $7/16$ -20 Flexloc (ML-104421 & ML-134114)	1
9	00-070026	Pusher – Bearing	1
10	BB-017-04	Ball Bearing – ND #7501	1
11	00-270526	Spacer	1
12	00-124765-00003	Spacer – Gear	1
13	00-012430-00049	Key	1
14	00-070034	Gear – Worm (29T) (60 Hz.)	1
15	00-070251	Gear – Worm (24T) (50 Hz.)	1
16	00-291130	Shaft – Worm Gear	1
17	BB-017-04	Ball Bearing – ND #7501	1
18	00-070166	Spring – Worm Shaft	1
19	BN-002-02	Needle Bearing	1
20	00-070028	Gear (23T)	1
21	00-070030	Gear (33T)	1
22	00-875419-00060	Key	1
23	00-089829	Spacer	1
24	00-089831	Gear (32T)	1
25	00-875419-00053	Key	1
26	00-875435	Shaft – Transmission	1
27	BB-017-09	Ball Bearing – MRC 2035-01-ST-E-92-C	1
28	NS-032-32	Stop Nut $3/4$ -16 (LH Thread) Flexloc	1
29	BB-009-41	Ball Bearing – ND #45505	1
30	WS-012-46	Washer (0.003 Thk.)	AR
31	WS-012-47	Washer (0.010 Thk.)	AR
32	WS-030-79	Washer (0.005 Thk.)	AR
33	00-070015	Spacer – Upper Planetary Shaft	1
34	00-070033	Sleeve – Drive	1
35	00-012430-00161	Key	1
36	00-070039	Roller – Clutch	10
37	00-070055	Spring – Roller	10
38	00-070032	Gear – Roller Clutch (46T)	1
39	00-070020-00002	Gear – Bevel (46T) (Order 75393-2 Also)	1
40	00-070042	Bushing – Upper Clutch Gear	1
41	00-070040	Gear – Upper Clutch (29T)	1
42	00-012430-00055	Key $3/16$ x $3/16$ x 1	2
43	00-070035-00001	Sleeve – Clutch	1
44	00-070031	Bushing – Lower Clutch Gear	1
45	00-124743	Gear – Lower Clutch (38T)	1
46	00-070046	Spacer – Lower Planetary Shaft	1
47	BB-008-33	Ball Bearing – Fafnir #205WD	1
48	00-070024	Planetary Shaft	1
49	00-070016	Spacer – Planetary	1
50	00-110334	Seal – Planetary	1
51	PL-003-14	Expansion Plug (Located In Transmission Housing)	1
	00-875436	Transmission Shaft & Gear Unit (Incls. Items 20 thru 26)	1

MODEL D300 SERIES MIXERS REPLACEMENT PARTS

PLANETARY AND ATTACHMENT HUB

ILLUS. PL-56103	PART NO.	NAME OF PART	AMT.
1	00-114824-00001	Plug – Attachment Hub	1
2	00-070090	Seal – Attachment Hub	1
3	00-070511-00003	Attachment Hub & Bearings Assy. (Incls. Item 4)	1
4	BN-002-12	Needle Bearing	2
5	00-070045-00001	Washer – Thrust (0.125 Thk.)	AR
6	00-070045-00002	Washer – Thrust (0.119 Thk.)	AR
7	00-070045-00003	Washer – Thrust (0.121 Thk.)	AR
8	00-070045-00004	Washer – Thrust (0.123 Thk.)	AR
9	00-070045-00005	Washer – Thrust (0.127 Thk.)	AR
10	00-070045-00006	Washer – Thrust (0.129 Thk.)	AR
11	00-070045-00009	Washer – Thrust (0.131 Thk.)	AR
12	00-070045-00010	Washer – Thrust (0.133 Thk.)	AR
13	00-070045-00011	Washer – Thrust (0.136 Thk.)	AR
14	00-070045-00012	Washer – Thrust (0.139 Thk.)	AR
15	00-070045-00013	Washer – Thrust (0.116 Thk.)	AR
16	00-075393-00002	Attach Drive Gear (35T) & Expansion Plug Assy. (Order 70020-2 Also)	1
17	00-012430-00158	Key 1/4 Sq. x 1 1/2 Lg.	1
18	SC-040-16	Cap Screw 5/16-18 x 1 Soc. Fil. Hd.	6
19	WL-003-48	Lockwasher 5/16 High Collar	6
20	00-438472	Gear – Internal (59T)	1
21	00-070047-00001	Washer – Planetary	1
22	WL-006-27	Lockwasher 3/8 Light (SST)	1
23	SC-062-58	Cap Screw 3/8-24 x 1 1/4 Hex Hd.	1
24	BB-017-36	Ball Bearing – SKF #6205Z	1
25	00-110335	Seal – Agitator Shaft	1
26	00-070019	Pin – Agitator	1
27	00-070339	Agitator Shaft Assy. (Incls. Item 26)	1
28	00-069990-00001	Planetary	1
29	BB-020-06	Ball Bearing – Fafnir 204KDF A51580	1
30	00-070014	Pinion – Agitator Shaft (18T)	1
31	00-012430-00142	Key 1/4 Sq. x 1 Lg.	1
32	RR-004-06	Retaining Ring	1
33	SC-040-15	Cap Screw 5/16-18 x 1 1/4 Soc. Fil. Hd.	3
34	WL-003-43	Lockwasher 5/16 Light	3
35	00-108197-00001	Thumb Screw	1
	00-113703	Tie – Cable	2



PL-56613

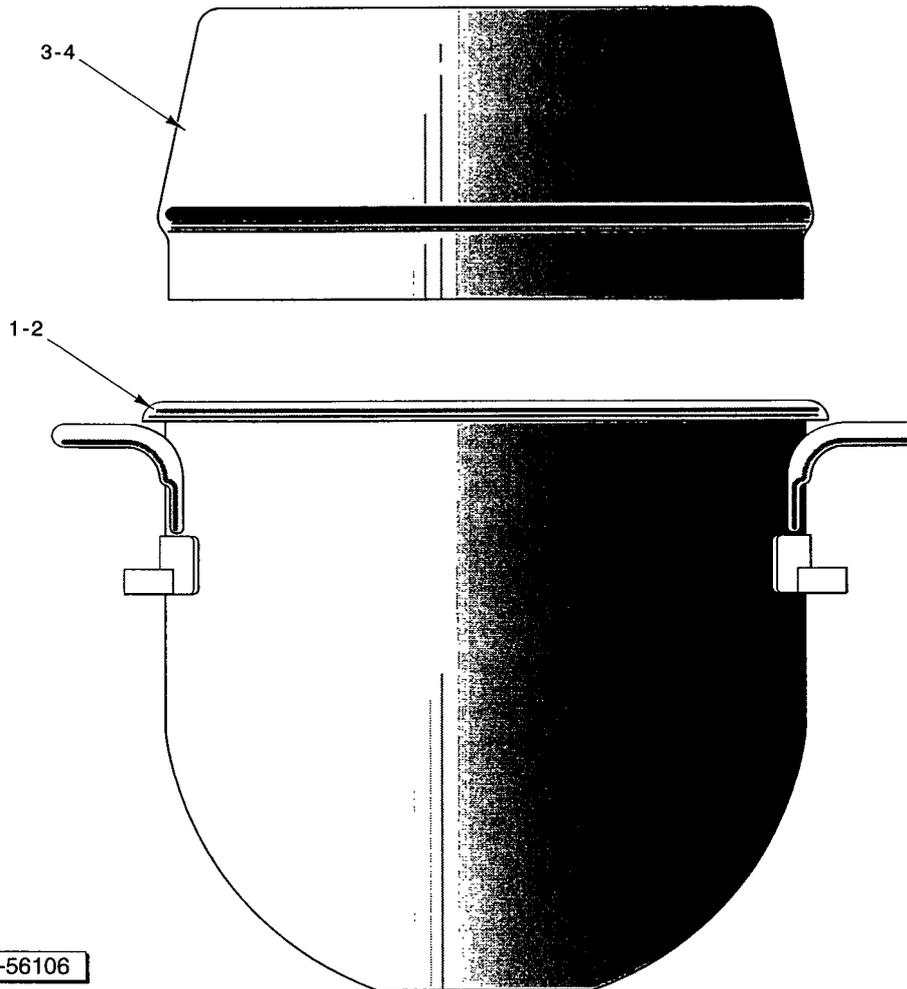
BOWL GUARD UNIT

MODEL D300 SERIES MIXERS REPLACEMENT PARTS

BOWL GUARD UNIT

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-56613			
1	00-478602	Screw – Shouldered Slotted Hd.	1
2	NS-031-50	Stop Nut Special 6-32 (SST) (ML-104421 & ML-134211)	1
3	NS-011-07	Mach. Nut 6-32 Hex (SST) (ML-134114 & ML-134213)	1
4	00-070641-00011	Thumb Screw 8-32 Special (ML-104421 & ML-134211)	3
5	SC-121-91	Mach. Screw 8-32 x 1/4 Hex Button Hd. (SST) (ML-134114 & ML-134213)	3
6	00-479007	Latch – Cage Detent (Incls. Items 7, 8, & 9)	1
7	00-437446-00001	Spring – Cage Detent	1
8	00-437724	Plunger – Detent	1
9	00-437725	Bushing – Detent	1
10	00-437815	Spring – Reed Switch	1
11	SC-018-50	Mach. Screw 6-32 x 1/4 Slotted Pan Hd.	1
12	NS-048-11	Lock Nut Special 8-32 (SST)	1
13	SC-068-14	Mach. Screw 8-32 x 3/8 Hex Hd.	2
14	00-437728-00004	Housing – Reed (Painted)	1
15	SC-122-48	Mach. Screw 8-32 x 1 3/4 Slotted Rd. Hd. (SST)	1
16	00-087711-304-1	Housing – Reed Switch	1
17	00-437802	Splash Guard & Latch Assy. (Painted) (Incls. Items 1, 2, & 6) (ML-104421 & ML-134211)	1
18	00-439658	Splash Guard & Latch Assy. (Incls. Items 1, 3, & 6) (ML-134114 & ML-134213)	1
19	00-437713	Shoe – Fixed	1
20	SC-122-45	Mach. Screw Special 1/4-20 x 3/8 Slotted Truss Hd. (SST) (ML-104421 & ML-134211)	2
21	SC-122-52	Mach. Screw Special 1/4-20 x 3/8 Hex Button Hd. (SST) (ML-134114 & ML-134213)	2
22	00-437819	Wire Cage Assy. (ML-104421 & ML-134211)	1
23	00-439659	Wire Cage Assy. (ML-134114 & ML-134213)	1
24	SC-122-46	Mach. Screw Special 1/4-20 x 3/4 Slotted Truss Hd. (SST) (ML-104421 & ML-134211)	2
25	SC-122-68	Mach. Screw 1/4-20 x 3/4 Hex Button Hd. (SST) (ML-134114 & ML-134213)	2
26	00-437817	Stop – Cage	1
27	00-437436	Pin – Plunger	1
28	00-437799	Housing – Plunger	1
29	00-437446-00002	Spring – Cage On/Off	1
30	00-437432	Plunger	1
31	00-437718-00002	Saddle – Shoe	1
32	00-437715	Shoe – Saddle	1
33	00-437720	Key – Shoe	1
34	SC-123-07	Mach. Screw Special 8-20 x 1/2 Slotted Truss Hd. (SST) (ML-104421 & ML-134211)	1
35	SC-121-92	Mach. Screw Special 8-32 x 3/8 Hex Button Hd. (SST) (ML-134114 & ML-134213)	1
36	00-437714	Shoe – Adjustable	1
37	SC-122-45	Mach. Screw Special 1/4-20 x 3/8 Slotted Truss Hd. (SST) (ML-104421 & ML-134211)	2
38	SC-122-52	Mach. Screw Special 1/4-20 x 3/8 Hex Button Hd. (SST) (ML-134114 & ML-134213)	2
39	00-437816	Block – Rear Guide	1
40	SC-122-44	Mach. Screw Special 8-32 x 3/8 Slotted Truss Hd. (SST) (ML-104421 & ML-134211)	1
41	SC-121-92	Mach. Screw Special 8-32 x 3/8 Hex Button Hd. (SST) (ML-134114 & ML-134213)	1
42	00-512987	Adhesive (ML-134114 & ML-134213)	AR
43	00-437719	Retainer – Magnet	1
44	00-111941	Magnet	1
45	SC-122-44	Mach. Screw Special 8-32 x 3/8 Slotted Truss Hd. (SST) (ML-104421 & ML-134211)	1
46	SC-121-92	Mach. Screw Special 8-32 x 3/8 Hex Button Hd. (SST) (ML-134114 & ML-134213)	1
	00-438607	Ingredient Chute	1
	00-437828	Reed Assy. (Incls. Items 10, 11, & 16)	1
	00-437803	Cage Assy. (Incls. Items 19, 20, 22, 24, 26 thru 34, 36, 37, 39, 40, 43, & 45) (ML-104421 & ML-134211)	1
	00-439657	Cage Assy. (Incls. Items 19, 21, 23, 25 thru 33, 35, 36, 38, 39, 41, 42, 43, & 46) (ML-134114 & ML-134213)	1

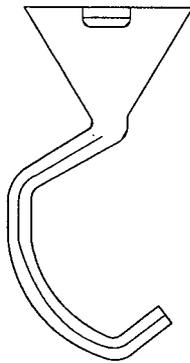
MODEL D300 SERIES MIXERS REPLACEMENT PARTS



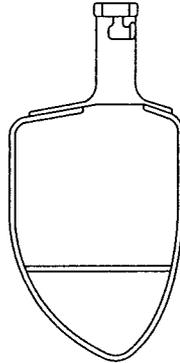
BOWL

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-56106			
1	00-437410	Bowl – 30 Qt. (SST) (Packaged)	1
2	00-295647	Bowl – 20 Qt. (SST) (Packaged)	1
3	00-438080	Splash Cover Assy. – 30 Qt. (Packaged)	1
4	00-438079	Splash Cover Assy. – 20 Qt. (Packaged)	1
	00-438607	Scraper – Bowl (Packaged)	1

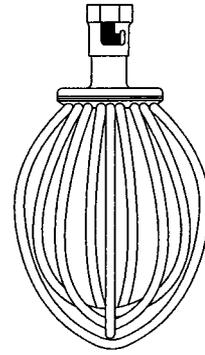
MODEL D300 SERIES MIXERS REPLACEMENT PARTS



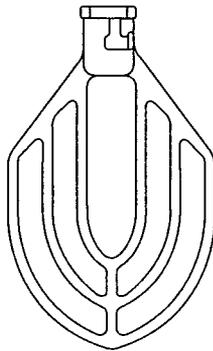
1



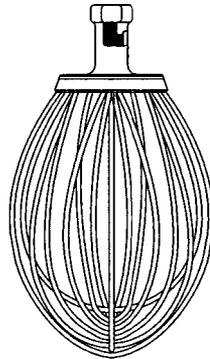
2



3

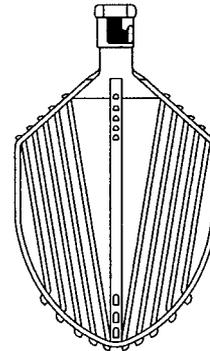


4-5



6

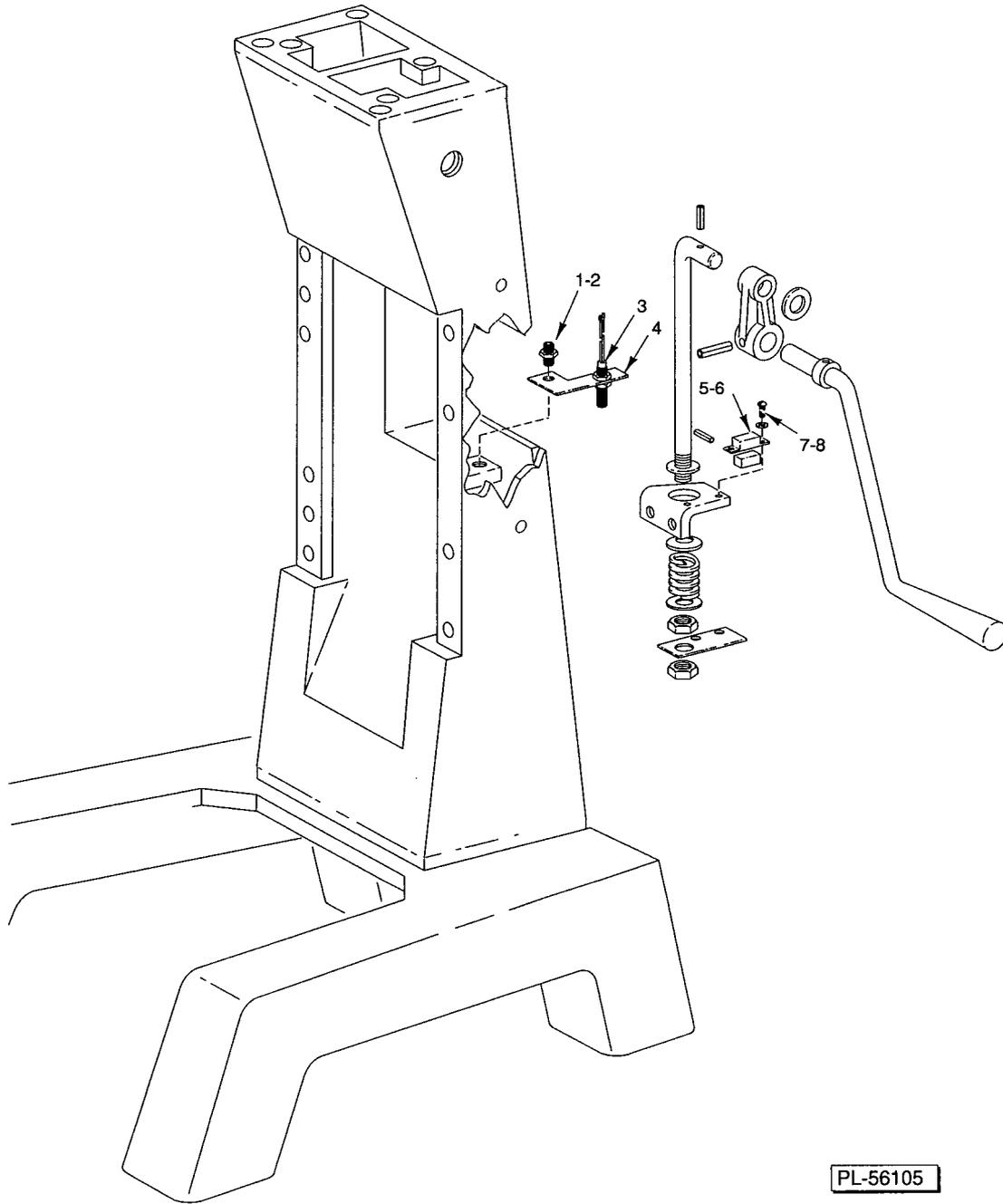
PL-56612



7

AGITATORS

ILLUS. PL-56612	PART NO. 30 Qt.	PART NO. 20 Qt.	NAME OF PART	AMT.
1	00-295120	00-275465	"E" Dough Arm (Alum.) (Packaged)	1
2	00-295037	---	"P" Pastry Knife (Packaged)	1
3	00-295163	---	"I" Wire Whip (SST) (Packaged)	1
4	00-275450	00-275461	"B" Flat Beater (Alum.) (Packaged)	1
5	00-275451	00-275462	"B" Flat Beater (SST) (Packaged)	1
6	00-275899	00-295029	"D" Wire Whip (SST) (Packaged)	1
7	00-295161	---	"C" Wing Whip (Packaged)	1
	00-478596	---	"ED" Dough Arm - Spiral (Not Shown) (Packaged)	1



PL-56105

BOWL HEIGHT SENSING UNIT

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-56105			
1	SC-047-46	Set Screw 3/8-16 x 1 1/4 Soc. Hdls., Half-Dog Pt.	1
2	NS-017-15	Jam Nut 3/8-16 Hex	1
3	00-087711-306-1	Switch – Bowl Height Sensing	1
4	00-438387	Bracket – Bowl Height Sensor	1
5	00-120332	Retainer – Magnet	1
6	00-111941	Magnet	1
7	SC-021-01	Mach. Screw 4-40 x 1/4 Slotted Rd. Hd. (SST)	2
8	WL-003-01	Lockwasher #4 Light	2
	00-065890-00029	Connector – Insulated	1

NAVSEA/SPAWAR TECHNICAL MANUAL DEFICIENCY/EVALUATION REPORT (TMDER)

INSTRUCTIONS: Continue on 8 1/2" x 11" page if additional space is needed.

1. Use this report to indicate deficiencies, problems and recommendations relating to publications.
2. For CLASSIFIED TMDERs see OPNAVINST 5510H for mailing requirements.
3. For TMDERs that affect more than one publication, submit a separate TMDER for each.
4. Submit TMDERs at web site <http://nsdsa.phdnswc.navy.mil> or mail to: **COMMANDER, CODE 310 TMDER Bldg 1388, NAVSURFWARCENDIV NSDSA, 4363 MISSILE WAY, PORT HUENEME CA 93043-4307**

1. PUBLICATION NUMBER	2. VOL/PART	3. REV/DATE or CHG/DATE	4. SYSTEM/EQUIPMENT ID
5. TITLE OF PUBLICATION			6. REPORT CONTROL NUMBER (6 digit UIC-YY-any four: xxxxxx-03-xxxx)

7. RECOMMEND CHANGES TO PUBLICATION

7a. Page #	7b. Para #	7c. RECOMMENDED CHANGES AND REASONS

8. ORIGINATOR'S NAME AND WORK CENTER	9. DATE	10. ORIGINATOR'S E-MAIL ADDRESS	11. TMMA of Manual (NSDSA will complete)
--------------------------------------	---------	---------------------------------	---

12. SHIP OR ACTIVITY Name and Address (Include UIC/CAGE/HULL)	13. Phone Numbers: Commercial () ___-____ DSN ___-____ FAX () ___-____
---	---

FOLD HERE AND TAPE SECURELY
PLEASE DO NOT STAPLE

INCLUDE COMPLETE ADDRESS

USE
PROPER
POSTAGE

FOR OFFICIAL USE ONLY

**COMMANDER
CODE 310 BLDG 1388
NAVSURFWARCENDIV NSDSA
4363 MISSILE WAY
PORT HUENEME CA 93043-4307**

FOLD HERE AND TAPE SECURELY
PLEASE DO NOT STAPLE

NAVSEA/SPAWAR TECHNICAL MANUAL DEFICIENCY/EVALUATION REPORT (TMDER)

INSTRUCTIONS: Continue on 8 1/2" x 11" page if additional space is needed.

1. Use this report to indicate deficiencies, problems and recommendations relating to publications.
2. For CLASSIFIED TMDERs see OPNAVINST 5510H for mailing requirements.
3. For TMDERs that affect more than one publication, submit a separate TMDER for each.
4. Submit TMDERs at web site <http://nsdsa.phdnswc.navy.mil> or mail to: **COMMANDER, CODE 310 TMDER Bldg 1388, NAVSURFWARCENDIV NSDSA, 4363 MISSILE WAY, PORT HUENEME CA 93043-4307**

1. PUBLICATION NUMBER	2. VOL/PART	3. REV/DATE or CHG/DATE	4. SYSTEM/EQUIPMENT ID
5. TITLE OF PUBLICATION			6. REPORT CONTROL NUMBER (6 digit UIC-YY-any four: xxxxxx-03-xxxx)

7. RECOMMEND CHANGES TO PUBLICATION

7a. Page #	7b. Para #	7c. RECOMMENDED CHANGES AND REASONS

8. ORIGINATOR'S NAME AND WORK CENTER	9. DATE	10. ORIGINATOR'S E-MAIL ADDRESS	11. TMMA of Manual (NSDSA will complete)
12. SHIP OR ACTIVITY Name and Address (Include UIC/CAGE/HULL)		13. Phone Numbers: Commercial () ___-____ DSN ___-____ FAX () ___-____	

FOLD HERE AND TAPE SECURELY
PLEASE DO NOT STAPLE

INCLUDE COMPLETE ADDRESS

USE
PROPER
POSTAGE

FOR OFFICIAL USE ONLY

**COMMANDER
CODE 310 BLDG 1388
NAVSURFWARCENDIV NSDSA
4363 MISSILE WAY
PORT HUENEME CA 93043-4307**

FOLD HERE AND TAPE SECURELY
PLEASE DO NOT STAPLE

NAVSEA/SPAWAR TECHNICAL MANUAL DEFICIENCY/EVALUATION REPORT (TMDER)

INSTRUCTIONS: Continue on 8 1/2" x 11" page if additional space is needed.

1. Use this report to indicate deficiencies, problems and recommendations relating to publications.
2. For CLASSIFIED TMDERs see OPNAVINST 5510H for mailing requirements.
3. For TMDERs that affect more than one publication, submit a separate TMDER for each.
4. Submit TMDERs at web site <http://nsdsa.phdnswc.navy.mil> or mail to: **COMMANDER, CODE 310 TMDER Bldg 1388, NAVSURFWARCENDIV NSDSA, 4363 MISSILE WAY, PORT HUENEME CA 93043-4307**

1. PUBLICATION NUMBER	2. VOL/PART	3. REV/DATE or CHG/DATE	4. SYSTEM/EQUIPMENT ID
5. TITLE OF PUBLICATION			6. REPORT CONTROL NUMBER (6 digit UIC-YY-any four: xxxxxx-03-xxxx)

7. RECOMMEND CHANGES TO PUBLICATION

7a. Page #	7b. Para #	7c. RECOMMENDED CHANGES AND REASONS

8. ORIGINATOR'S NAME AND WORK CENTER	9. DATE	10. ORIGINATOR'S E-MAIL ADDRESS	11. TMMA of Manual (NSDSA will complete)
12. SHIP OR ACTIVITY Name and Address (Include UIC/CAGE/HULL)		13. Phone Numbers: Commercial () ___-____ DSN ___-____ FAX () ___-____	

FOLD HERE AND TAPE SECURELY
PLEASE DO NOT STAPLE

INCLUDE COMPLETE ADDRESS

USE
PROPER
POSTAGE

FOR OFFICIAL USE ONLY

**COMMANDER
CODE 310 BLDG 1388
NAVSURFWARCENDIV NSDSA
4363 MISSILE WAY
PORT HUENEME CA 93043-4307**

FOLD HERE AND TAPE SECURELY
PLEASE DO NOT STAPLE