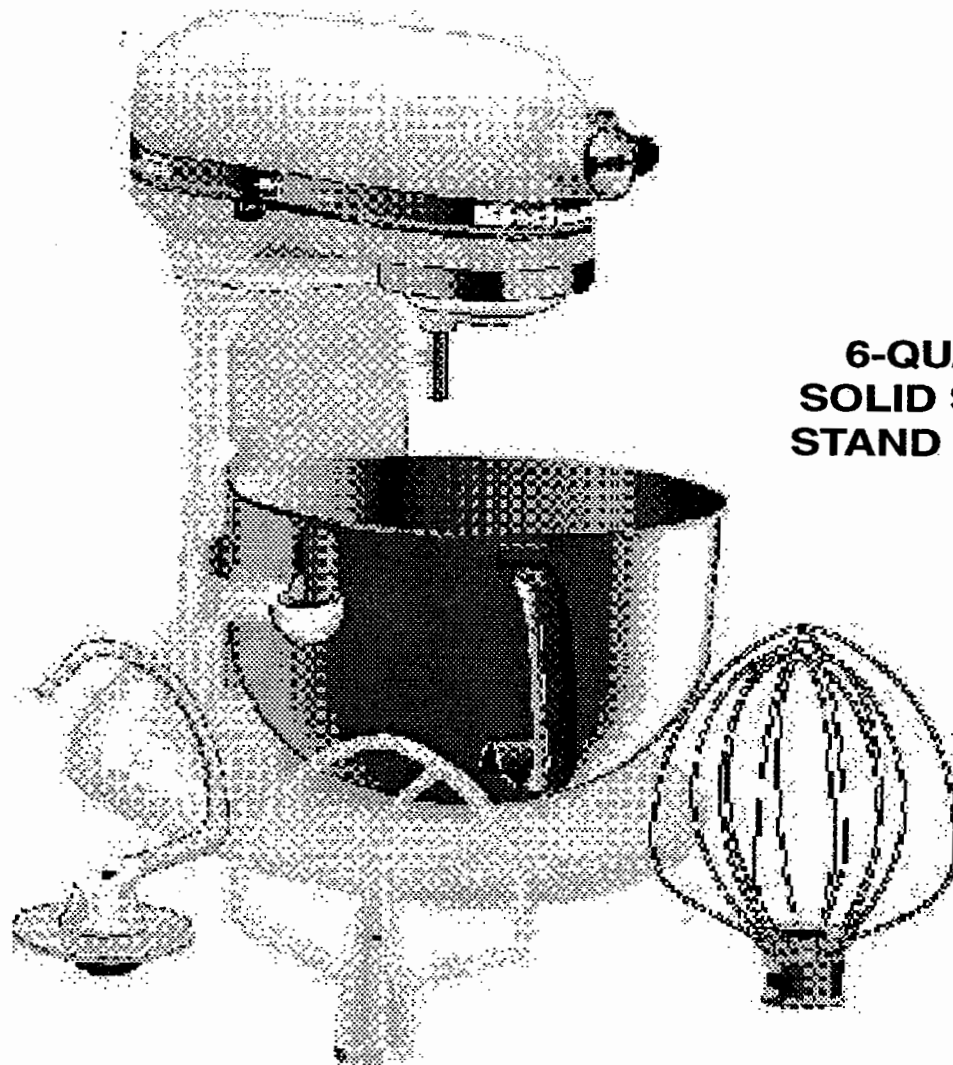


KitchenAid®



**6-QUART
SOLID STATE
STAND MIXER**

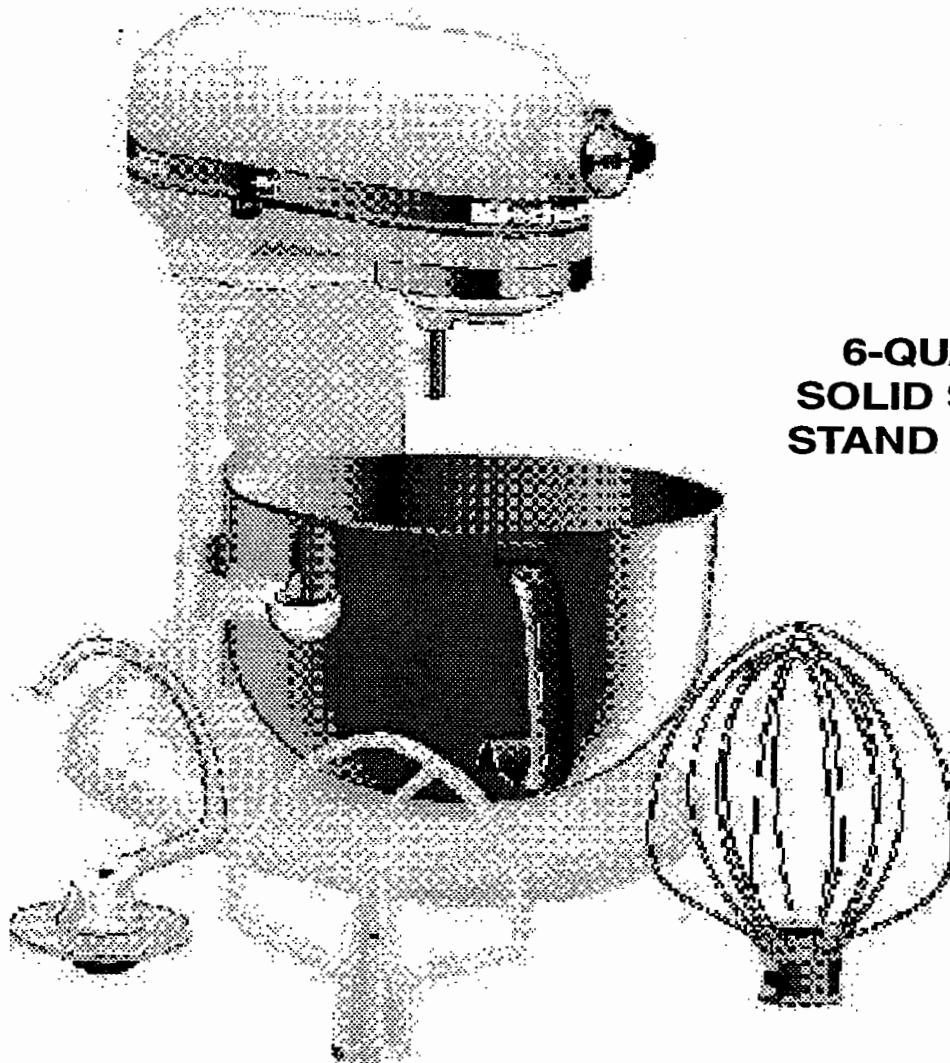
MODELS:

- **KP, 4KP**
- **KT, 4KT**
- **KD, 4KD**

**INCLUDES EXPORT
MODELS:**

- 5KP
- 8KP
- 9KP

KitchenAid®



**6-QUART
SOLID STATE
STAND MIXER**

MODELS:

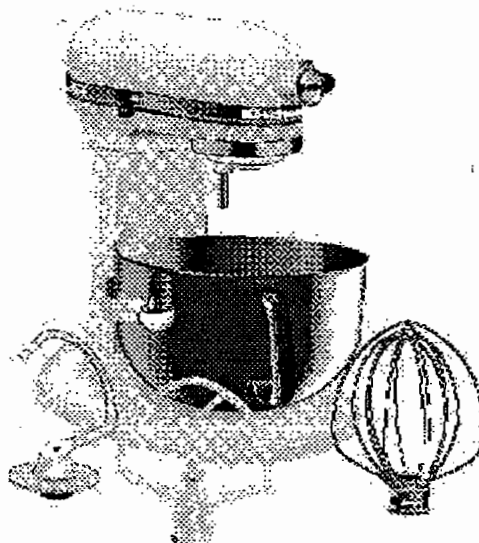
- **KP, 4KP**
- **KT, 4KT**
- **KD, 4KD**

**INCLUDES EXPORT
MODELS:**

- 5KP
- 8KP
- 9KP

PURPOSE: The purpose of this manual is to familiarize the housewares technician with the techniques required to repair the **KP** (Professional), **KT** (Epicurean) and **KD** (Custom) Stand Mixers.

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KITCHENAID
6-QUART STAND MIXER

IMPORTANT: This Manual does NOT cover Repair Procedures for the:

K45SS - KSM90 - K5SS - KSMC50 - KSM103 - KSM110 - KSM150 - KSM151

Refer to: **LIT4177310-B** for Repair Procedures on these models.

GENERAL INFORMATION: (For Domestic Models Only.) These KitchenAid Units are 6 Quart Capacity 115 Volt Stand Mixer that has the following key product features:

- **Heavy Duty Motor** - Delivers the power to mix double batches of even heavy cookie and bread doughs and cake batters. KP Models = 525 W. KD Models = 500 W. KT Models = 475 W.
- **Heavy Duty Transmission** - All metal gears are designed for many years of trouble-free operation.
- **Enhanced Electronic Speed Sensor** - Monitors operation to maintain precise speed regardless of load.
- **10-Speed Control** - Lets the user select the right speed for the mixing job, from very high to very slow stir.
- **Overload TCO Control** - Helps eliminate overheating.
- **Soft Start Mixing Feature** - Helps Prevent ingredient "splash-out" and "flour puff" at startup.
- **New Design 6 Quart Capacity Polished Stainless Steel Bowl** - Big enough to handle double batches of even heavy mixtures. Wide open design makes adding ingredients easy.
- **Hinged Hub Cover** - Flips up allowing easy installation of attachments - never leaves the mixer.
- **New Ventilation System** - Cools the entire mixer from the base through the mixer head, prolonging mixer life.
- **Unique Mixing Action** - Reaches every section of the bowl to blend ingredients thoroughly - no need to rotate the bowl.
- **All Metal Construction** - Broad base eliminates "mixer walk" while 5 rubber feet protect the counter and promote stable operation.
- **Clear 2-Piece Pouring Shield** - New design with an enlarged chute to facilitate addition of ingredients.
- **Ergonomically Designed Bowl Handles** - Bowl and Bowl Lift Lever are contoured to comfortably fit the hand.
- **Seamless Design** - No crevices or cracks to trap ingredients - makes cleanup easy.

The Product Specifications and Dimensions for the 6-Quart Stand Mixer are Listed in a separate section.

PRODUCT SPECIFICATIONS - The following product Specifications and Dimensions are subject to change without notice.

Dimensions are listed in inches and (centimeters).
Weights are listed in pounds and (kilograms).

- Electrical Requirements - 115 Volts AC - 60 Hz - Single Phase for Domestic Models.
- Height - 16.6 inches (41.9 centimeters)
- Width - 11.3 inches (28.7 centimeters)
- Depth - 14.6 inches (37.1 centimeters)
- Cord Length - 50.8 inches (129.0 centimeters)
- Net Weight - 25.0 pounds (11.3 kilograms)
- Carton Height - 19.4 inches (49.3 centimeters)
- Carton Width - 13.3 inches (33.8 centimeters)
- Carton Depth - 17.3 inches (43.9 centimeters)
- Shipping Weight - 25.5 pounds (11.6 centimeters)
- Colors - Many Colors are available.

Items Included with Product - The following items are included with the product at this time:

In KP Models:

- Burnished Flat Beater • Burnished Dough Hook
- Professional Wire Whip • 2-Piece Dual Purpose Pouring Shield.

In KD and KT Models:

- Coated Flat Beater • Coated Dough Hook
- Professional Wire Whip • 2-Piece Dual Purpose Pouring Shield.

Replacement Warranty - If the Stand Mixer fails within the first year of ownership, KitchenAid will arrange to deliver an identical or comparable replacement to your door free of charge and arrange to have the failed mixer returned. For more information concerning the product warranty contact the Customer Satisfaction Center at (800) 541-6390.

IMPORTANT SAFETY RECOMMENDATIONS

This Service Manual is written for the Professional Service Technician who has familiarity with the KitchenAid Stand Mixer.

The following Safety Guidelines should be adhered to when servicing this product.

- The workplace will be dry and sanitary at all times and all units should be inspected for cleanliness before any work is started.
- Visually inspect the unit requiring service in a well illuminated area.
- A mild, non-abrasive dishwashing soap solution and clean towel can be used to wash any unit requiring attention.
- The hands of the Service Technician should be clean at all times during the service procedure.
- ESD (Electro Static Discharge) protection should be provided when servicing the electronic components.

- The work place for the stand mixer will have properly grounded AC outlets that adhere to all Local Electrical Codes that are applicable at the time of the repair.

- The Stand Mixer Power Cord should always be inspected first before testing the mixer operation.
- Do NOT run the Mixer if the Power Cord is damaged--replace it.
- All disassembly and assembly procedures discussed in this manual should be conducted with the unit disconnected from the AC Supply.
- Do NOT leave the unit unattended while running the mixer for bowl clearance or any other check.
- Always unplug the unit immediately after concluding electrical tests.
- The Service Technician should wear Protective Eyewear at all times when conducting a repair on the Stand Mixer.
- Loose fitting sweaters, shirt sleeves or bracelets should NOT be worn while servicing the Stand Mixer.

TOOLS REQUIRED - The following tools are necessary to service the KitchenAid Stand Mixer.

- **PHILLIPS SCREWDRIVERS** - A Medium Size for numerous 8-32 x 5/8" screws used in Lower Cover. A Larger Size will be needed on the 1/4-20 x 3/4" screws used to secure the Pedestal to the base. A Power Screwdriver is recommended for the larger screws.

- **STRAIGHT SCREWDRIVER** - A Medium Size for removing the 10-24 x 1/2" Latch Bowl Spring and for adjusting the Bowl Clearance Adjusting Cam. A small size for removing the "C" Clip at the bottom of the Bowl Lift Rod.

- **SNAP RING PLIERS** - Used to remove the (2) Retaining Clips from the top of the Planetary Assembly Shaft and the Agitator Shaft on the Planetary. Always wear Safety Goggles when using Snap Ring Pliers.

- **NEEDLE NOSE PLIERS** - Used for removing Hall Effect Sensor, Motor and Power Cord Leads from the Control Board Assembly.

- **DRIFT PUNCH** - Used for removing the (2) Retaining Pins from the Planetary Assembly Shaft and the Agitator Shaft.

- **SMALL HAMMER** - Used for the light tapping force required to remove the (2) Retaining Pins discussed above.

- **VOLT-OHMMETER** - For diagnosis a Volt-Ohmmeter is useful in confirming continuity and an In-Line Wattmeter is particularly helpful in confirming Transmission drag problems.

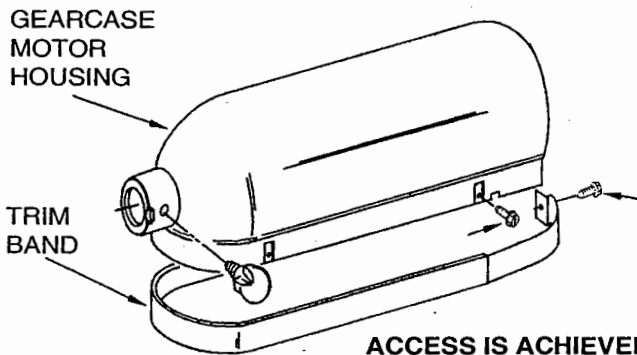
POWER CORD REPLACEMENT - Replacing the Power Cord on the KitchenAid Professional 6 Mixer is an excellent way for the service technician to become familiar with the product.

The Power Cord on this product must be replaced if it is damaged or abused in any way.

Before you begin, review the section in this manual on Disassembling the Gearcase and Planetary so you will be familiar with the removal of the Trim Band and Gearcase Motor Housing.

1. Gaining Access - Remove the Trim Band and the Gearcase Motor Housing Screws and set these parts aside.

The Gearcase Motor Housing is a good place to store your fasteners.



ACCESS IS ACHIEVED WITH THE REMOVAL OF (5) PHILLIPS SCREWS

Always place the Gearcase Motor Housing on a soft surface to avoid scratching the paint.

At this point you should have (1) 8-32 x 1/4 Phillips Screw that held the Trim Band and (4) 8-32 x 5/8" Phillips Screws that secured the Gearcase Motor Housing.

2. Clear the Deck - You will notice that the Lower Gear Case has a total of (9) additional 8-32 x 5/8" Phillips Screws that are used to secure the Ground Lug, Control Assembly, Transmission Cover and Motor.

Remove all of these screws from the Lower Gearcase in the following order: (2) Control Assembly, (4) Transmission Housing, (2) Motor and (1) Power Cord Ground Lug.

NOTE - Carefully loosen the Transmission Cover (do not remove) from the Lower Gearcase.

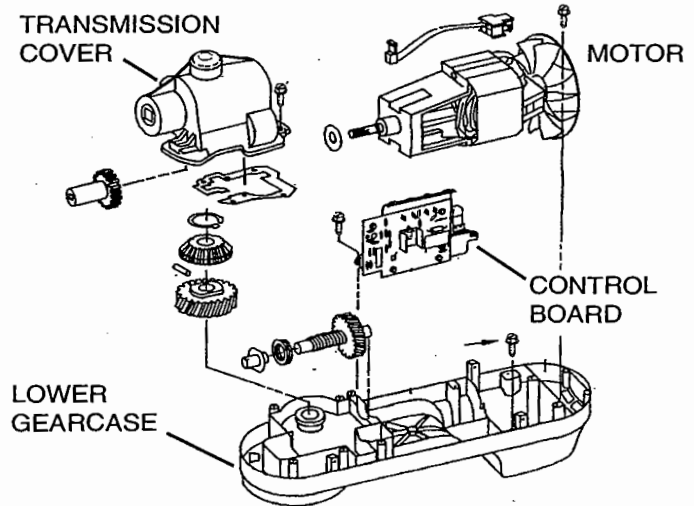
The Transmission Cover is packed with grease and it is best to keep the Cover in place after the Motor has been removed.

This Cover will be loosened and tipped open later to free the Motor.

3. Control Board Leads - Using Needle Nose Pliers, remove the Power Cord Leads from the Control Board.

4. Motor and Control Board Removal - The Motor is still attached to the Control Board by its leads and by the 3-Conductor Hall Effect Cable.

It is not necessary for you to remove these leads when replacing the Power Cord.



ACCESS TO POWER CORD REQUIRES THE LOWER GEARCASE TO BE REMOVED FROM COLUMN

Carefully tip the Transmission Cover up to free the Motor Drive, then carefully lift the Motor / Control Board up from the Lower Gearcase Cover and set them aside.

5. Secure Transmission Cover - After removing the Motor and Control Assembly, temporarily secure the Transmission Cover by replacing the (4) 8-32 x 5/8" Phillips Screws.

This step will allow the service technician to rotate the Lower Cover for access to the Power Cord and not spill any grease.

6. Column Assembly Screws - At this point the Power Cord is fully exposed and you can proceed with the access by removing the (3) 1/4 - 20 x 3/4" Phillips Screws that hold the Lower Cover to the Column.

These are larger than the 8-32 x 5/8" Screws and will often require a power Screwdriver to be loosened.

7. Power Cord Replacement - The old Power Cord can be freed from the Lower Cover by hand once the Column has been removed.

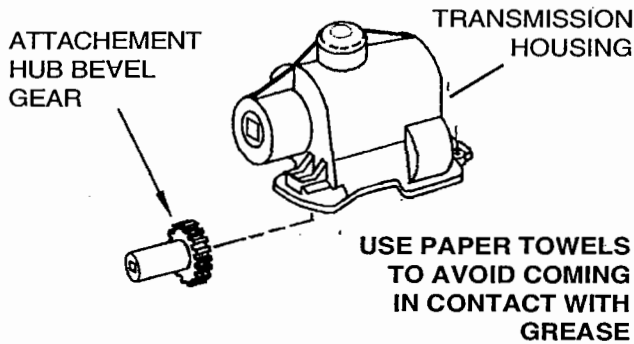
Always cut the old cord into small pieces and then dispose.

Follow these steps in reverse order after you have positioned the new Power Cord into the Lower Cover.

CONFIRMATION - Always test the Mixer for proper operation after replacing the Power Cord.

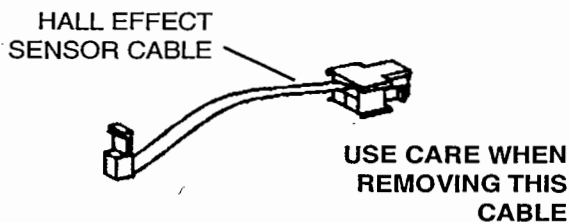
SERVICING GEARCASE AND PLANETARY -

The Transmission Housing can be removed by hand after the (4) 8-32 5/8" Phillips Screws have been removed. Grasp the Transmission Housing securely and simply lift it upward. Be careful as the Attachment Hub Bevel Gear is in this Transmission Housing.



This Gear can be removed later by hand for inspection. Carefully set the Transmission on your paper towels after inspecting it's condition.

Replace the Transmission Housing if cracks are evident. The Hall Effect Sensor Cable should be disconnected from the Control Board so the the Board can be moved away from the Transmission Housing.



Make sure that no grease comes in contact with the connector at the end of the Hall Effect Sensor cable.

DRIVETRAIN TERMINOLOGY - Before Servicing the Gearcase lets review the rotating gears that make up the gearcase. Additional details follow for servicing each of these gears.

- *Attachment Hub Bevel Gear* - This gear is located in the Transmission Housing and can be removed by hand from the Transmission Housing for inspection.

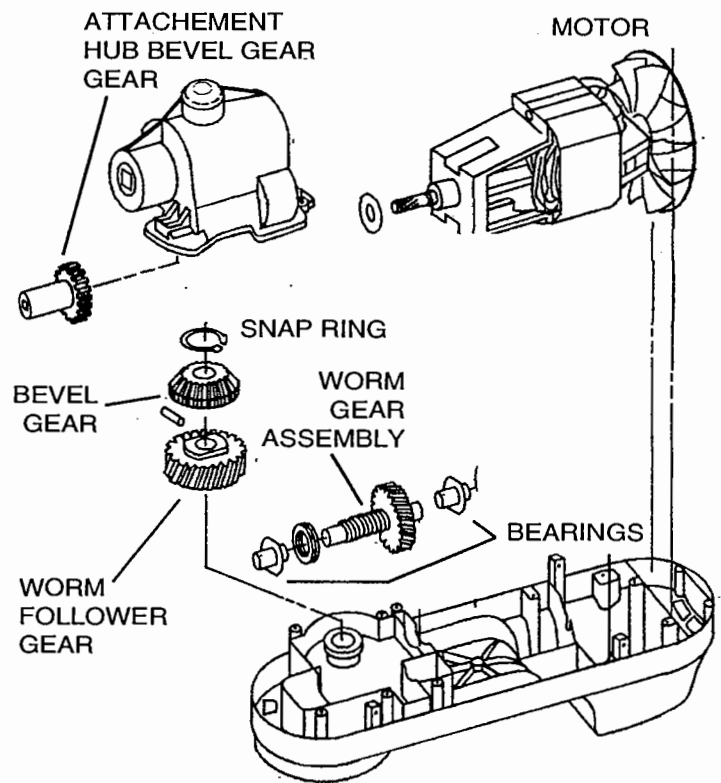
- *Bevel Gear* - This is the top gear on the Planetary Shaft. The Bevel Gear is held to the Planetary Shaft with a Snap-Ring. This Snap-Ring must be removed with Snap-Ring Pliers to remove the Bevel Gear.

- *Worm Follower Gear* - This is the bottom gear on the Planetary Shaft.

The Worm Follower Gear can be removed from the Planetary Shaft after the Bevel Gear and Retaining Pin are removed.

The Planetary is free to drop after the Pin is removed.

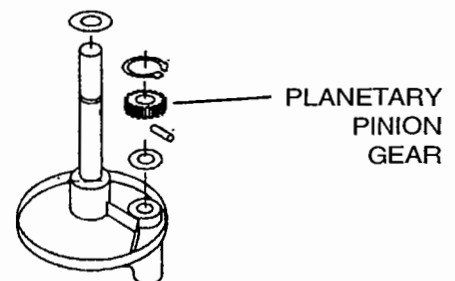
- *Worm Gear* - This is an assembly that has a "Front" and "Rear" bearing on each end of the Worm Gear Shaft. This worm gear assembly can be lifted from the lower gearcase after the Transmission Housing is removed.



The Technician should be aware of the three different Worm Gear Variations that have evolved with the product, as different replacement parts will be required, depending on the Date Code of the unit.

See: Worm Gear Assembly Variations Section

Before removing the worm gear, notice that both bearings are oriented so the flats of the bearing are vertical.



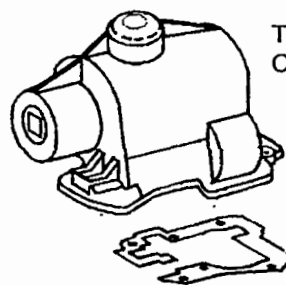
- *Planetary Pinion Gear* - This gear is attached to the Planetary Agitator Shaft and can be accessed by removing a Snap Ring. Retaining Pin removal is not needed to remove the Pinion Gear.

COMPONENT ACCESS - Access to the Gearcase components is outlined as follows:

- Remove the Transmission Cover
- The entire Worm Gear assembly can be lifted by hand once the Transmission Cover has been removed.
- The Bevel Gear is held on the Planetary Shaft with a Snap Ring that is located at the top of the Planetary Shaft.
- This Snap Ring must be removed with Snap Ring Pliers to gain access to the Bevel Gear.
- Carefully lift the Snap Ring off the shaft of the Planetary.
- Once the Snap Ring is removed, the Bevel Gear can normally be removed by hand and set on the paper towel for later inspection.
- The Pin on the Planetary Shaft can now be removed with a small punch and light tapping action with a small hammer.
- After the Pin has been removed place your hand under the Planetary and with your other hand push the shaft down to free the shaft from the Lower Housing.
- On older Mixers or cases where abuse is suspected, the technician should carefully inspect the other Drive Train components.

TRANSMISSION - The technician should be aware of the following changes related to the transmission.

- The Transmission Cover on models produced from Mixer Serial Number WL17 to Present, utilize a Transmission Cover Gasket.
- Transmission Cover Gaskets are not used on all models.
- Do not use a Transmission Cover Gasket on models that did not originally utilize the gasket.



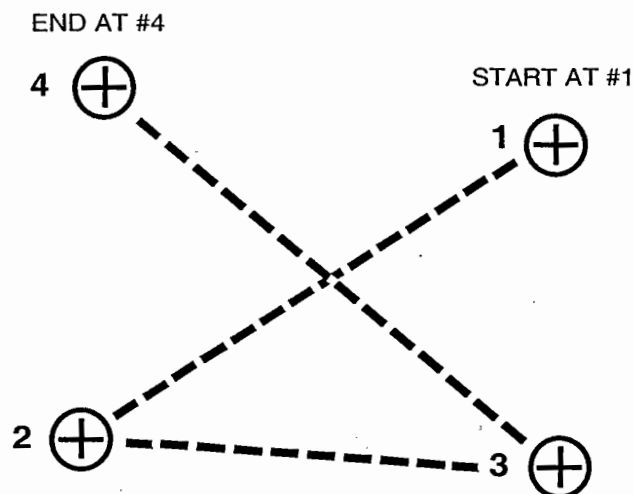
TRANSMISSION COVER

TRANSMISSION COVER GASKET

- Transmission gears should be packed after repair with approximately 2 ounces of #2 Grease.
- Apply the #2 Grease to the Gears—do not add excessive grease to the inside of the Transmission Cover.
- Torque the Phillips Screws that secure the units Transmission Cover with equal pressure on each fastener and follow the torquing sequence that follows.

TRANSMISSION COVER TORQUEING - Use the following pattern when torquing the Transmission Cover Fasteners.

Looking at TOP of Transmission Cover with the Motor to the RIGHT:



Carefully inspect the condition of the fasteners and replace if galled or damaged.

Be sure to use a good quality and correct size Phillips Screwdriver when torquing the fasteners.

Maintain an equal pressure at each fastener and do NOT over tighten.

DRIVE TRAIN OVERVIEW - On a mixer that is suspected of having been abused or used under extreme duty cycles, take particular care in inspecting all of the gears before beginning reassembly.

The Drive Train is lubricated with approximately 2 ounces of #2 Grease.

All gears should have a light coating of this lubricant applied prior to reassembly.

Grease collected in transmission cover should be scraped out and reapplied to the gears.

• **Attachment Hub Bevel Gear** - After inspection place this gear in the Transmission Housing.

Wipe any excess lubricant from the end that protrudes through the Transmission Housing.

• **Bevel Gear** - This is the top gear on the Planetary Shaft. The Bevel Gear is held to the Planetary Shaft with a Snap-Ring.

This Snap-Ring must be removed with Snap-Ring Pliers to remove the Bevel Gear.

• **Worm Follower Gear** - This is the bottom gear on the Planetary Shaft.

The Worm Follower Gear can be removed from the Planetary Shaft after the Bevel Gear and Retaining Pin are removed.

• **Worm Gear** - This is the assembly that has the bearings on each end of the Worm Gear Shaft.

This assembly can be lifted from the lower gearcase after the Transmission Housing is removed.

When reassembling, remember to replace the Thrust Washer on the end of the Worm Section and that both brass bearings rest in the Lower Gear Case with the flats of the brass bearings oriented vertically.

• **Bevel Gear** - The Bevel Gear should be removed from the Planetary Shaft and set on the paper towel with the other gears.

To continue the Drive Train tear down and inspection, the Pin on the Planetary Shaft must be driven out.

Be careful when completing this step as it is possible for the Planetary assembly to fall abruptly.

Simply keep the punch in the hole of the shaft while the Pin is being set aside. Remove the punch after you have secured the assembly with both hands.

Carefully push down to remove it from the base.

Again have the paper towel available and keep the grease away from other parts of the Mixer.

Since the Planetary Assembly is removed make your inspection and use the following two step procedure if disassembly is necessary.

1. Planetary Disassembly - If you see significant wear or damage use Snap Ring Pliers to remove the Retaining Clip from the Agitator Shaft.

You are again reminded as in the case of the Retaining Clip that secures the Bevel Gear, wear Safety Goggles whenever using Snap Ring Pliers!

The Pinion Gear on the Agitator Shaft can then be removed by hand.

The Retaining Pin on the Planetary Shaft must be removed to continue your inspection.

This pin can usually be removed with hand pressure as shown below.

Notice the washer under the Pin. Be sure to replace it correctly during reassembly.

The Agitator Shaft can now be removed from the Agitator Assembly and inspected or replaced as necessary.

2. Planetary Pinion Gear - Inspect the Agitator Shaft and Planetary for any damage.

Make sure that the Lower Retaining Clip on the Agitator Shaft is in good condition.

Place the Agitator Shaft into the Planetary.

The Agitator Shaft should rotate smoothly once inside the Planetary.

Place the Thrust Washer on the shaft and then position the Retaining Pin into the hole at the top.

The Planetary Pinion Gear has a slot on the bottom that sets over the Retaining Pin.

Set the Planetary Pinion Gear on the shaft centered over the Retaining Pin.

Using Snap Ring Pliers, install the Retaining "C" Clip to the top of the Agitator Shaft.

• **Worm Follower Gear Removal** - The Worm Follower Gear that links to the Worm Gear Assembly can now be lifted from the bottom of the Mixer Cover.

The Worm Gear Assembly, has two brass bearings on each end and can be lifted from the Bottom Cover with hand pressure.

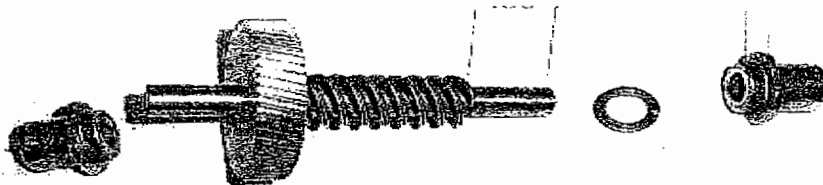
The collection of Gears can be cleaned with a benign Solvent like WD-40 and then inspected.

Any gear showing signs of galling, nicks, cracks or noticable wear should be replaced.

The (2) Worm Gear Assembly Bearings and Thrust Washers should also be replaced if noticable signs of wear are observed.

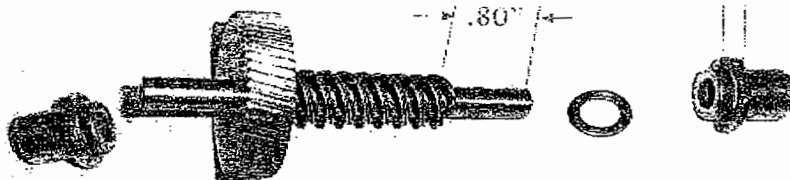
WORM GEAR VARIATIONS: Since the introduction of the 6-Quart Stand Mixer there have been changes made to the Worm Gear Assembly as described below:

FROM: Start of Production **THROUGH:** Date Code WL03
Rear Bearing - 9703351 (.193" Beyond Flange) 1st Stage Worm Assembly - 9703699
Front Bearing - 9703351 (.193" Beyond Flange) Thrust Washer - 9703677



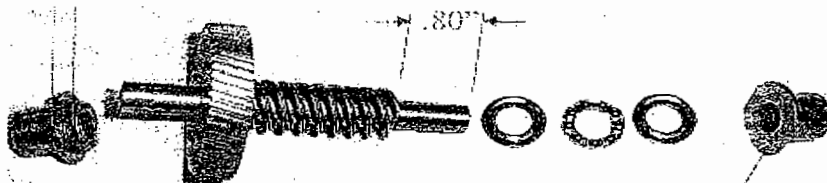
This Worm Gear Assembly will work with the Original and 4-Cavity Transmission Cover.

FROM: Date Code WL04 **THROUGH:** Date Code WL08
Rear Bearing - 9703350 (.160" Beyond Flange) 1st Stage Worm Assembly - 9703466
Front Bearing - 9703570 (.160" Beyond Flange) Thrust Washer - 9703677



This Worm Gear Assembly will work with the Original and 4-Cavity Transmission Cover.

FROM: Date Code WL09 **THROUGH:** Date Code WL45
Rear Bearing - 9703570 (.160" Beyond Flange) 1st Stage Worm Assembly - 9703466
Front Bearing - 9703560 (.160" Beyond Flange) 3 - Piece Roller Thrust Washer - 9703445



This Worm Gear Assembly will NOT work with the Original Style Transmission Cover. Requires the 4-Cavity Transmission Cover. The 4-Cavity Cover can be identified by looking inside the Cover. Next to the center Bearing is a number (1-4) molded into the Cover.

FROM: Date Code WL46 **THROUGH:** Present
Rear Bearing - 9703570 (.160" Beyond Flange) 1st Stage Worm Assembly - 9706590
Front Bearing - 9703560 (.160" Beyond Flange) 3 - Piece Roller Thrust Washer - 9703445



This Worm Gear Assembly will NOT work with the Original Style Transmission Cover. Requires the 4-Cavity Transmission Cover. The 4-Cavity Cover can be identified by looking inside the Cover. Next to the center Bearing is a number (1-4) molded into the Cover.

BOWL SUPPORT and COLUMN - If service is needed on the Bowl Support and Column the Lower Cover should be removed from the Column.

The Motor will have to be removed to gain access to the (3) 8-32 x 5/8" Phillips Screws that hold the Lower Gearcase to the Column.

Also remove the Base from the Column and Bowl Support Assembly.

This is accomplished by removing the (3) 1/4 -20 x 3/4" Phillips Screws from the bottom of the Base.

Remove the lower "C" Clip and the Bowl Support can now be removed. Later models may use a lock nut instead of a clip.

PEDESTAL - The rubber feet imbedded in the Pedestal should always be checked to insure that the Mixer has a solid foundation with the work surface.

REPLACING BOWL AND LIFT ARM - Remove the upper "C" Clip, then slide the Bowl Lift Rod out of the Bowl Lift Arm.

Remove the Pin (Screw on later models).

Pull Bowl Lift Handle out until the Arm can be removed.

Reverse Assembly steps to reassemble the Bowl Lift Mechanism.

FINAL INSPECTION - Before repackaging the Stand Mixer after a Bowl Support and Pedestal Repair check the following:

- Confirm that Base, Bowl Support and Column Assembly are soil free. Pay particular attention to the (5) Rubber Feet imbedded in the base clean if necessary with a mild soap solution.

- Check the tightness of all Phillips Screws used to fasten the Column to the Base and to the Lower Gear case. Retighten if necessary.

NOTE: 1/4" Screws are used to attach the Base to the Column. Use a LARGE Phillips Screwdriver.

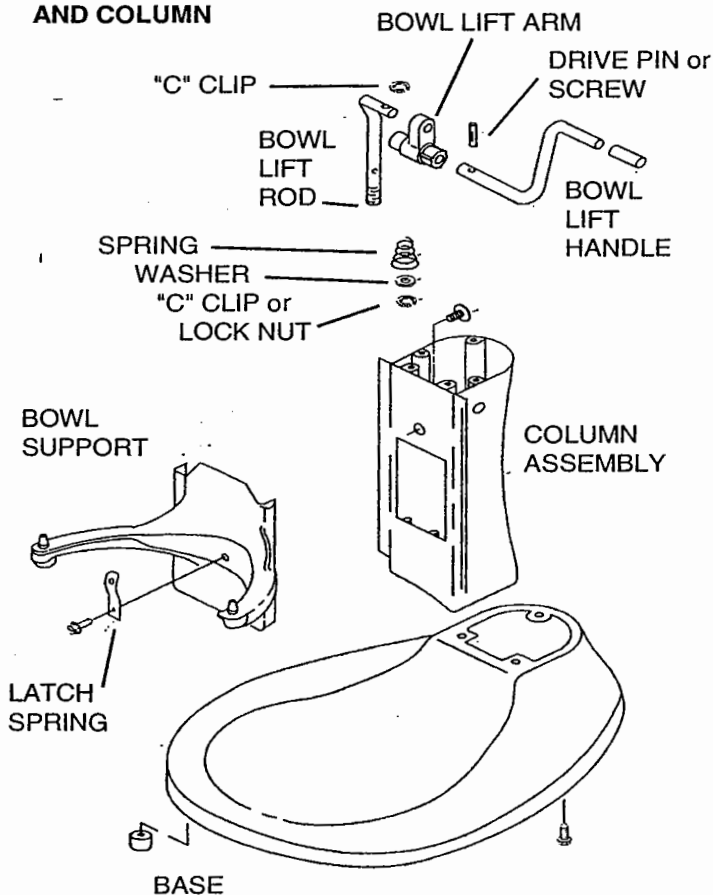
- Confirm that both "C" Clips (or Lock Nuts) are seated properly and are in good condition.

- Confirm the movement of the Bowl Support by lifting the Bowl Lift Handle.

PRODUCT IDENTIFICATION - The Model and Serial Number Identification Tag are located at the bottom of the Stand Mixer Base.

This information should always be recorded by the repair technician for future reference.

STAND MIXER BASE, BOWL SUPPORT AND COLUMN



REASSEMBLY - Slide the Bowl Support onto the Column and align the Bowl Lift Rod through the hole on the inside of the Bowl Support.

Position the Bowl Lift Handle so that the Bowl Lift Rod is extended fully through the hole of the Bowl Support.

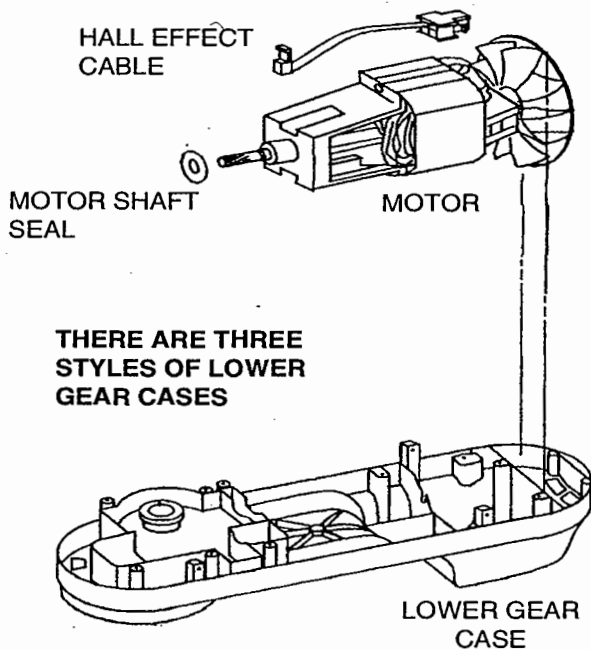
Set the Spring on the Bowl Lift Rod, followed by the Washer. Using Pliers, lock the "C" Clip to the end of the Bowl Lift Rod.

Always rotate the Bowl Lift Handle to test the operation of the Bowl Lift Arm.

MOTOR REPLACEMENT - The Motor on the KitchenAid Stand Mixer can be replaced by using the method outlined below.

Make sure that the Mixer is disconnected from the AC Supply before beginning the following procedure that begins after the Trim Band and Upper Cover have been removed.

IMPORTANT - There are (3) versions of the Lower Gear Case that require different Motors.



1. Remove the (4) 8-32 x 5/8" Phillips Screws that secure the Transmission Cover and carefully remove the cover and set aside.

The Transmission Cover contains Grease, so avoid contact with the Mixer and other components!

2. Remove the (2) 8-32 x 5/8" Phillips Screws that secure the Control Assembly to the Lower Cover.

3. Remove the (2) Black Motor Leads and the Grey Hall Effect Cable from the Mixer Control Assembly.

4. Remove the (2) 8-32 x 5/8" Phillips Screws that secure the Motor to the Lower Cover.

5. The Motor can now be removed for inspection or replacement.

Be sure to remove and save the Grey Hall Effect Sensor Cable from the original Motor for use with the Replacement Motor.

Be sure that the Motor Shaft Seal (9706247) is in place before setting the replacement motor into the Base of the Transmission.

Before tightening motor screws and transmission cover screws—push motor forward to ensure shaft seal is seated.

Hold motor in place and tighten all screws.

6-QUART STAND MIXER MOTOR REPLACEMENT TABLE DOMESTIC MODELS

The correct replacement part number is determined by the production date of the mixer.

- PRODUCTION DATE - WK08 (Production Start-up) through WK50
- LOWER HOUSING DESCRIPTION - Narrower Rib opening under Motor.
- TRANSMISSION COVER GASKET - No Gasket Used.
- PROD. 1ST STAGE GEAR & WORM ASSEMBLY - 9703699
- MOTOR FOR SERVICE - 9706251 or 9703571
(Requires NEW Lower Housing)

- PRODUCTION DATE - WK51 through WL03
- LOWER HOUSING DESCRIPTION - Wider Rib opening under Motor.
- TRANSMISSION COVER GASKET - No Gasket Used.
- PROD. 1ST STAGE GEAR & WORM ASSEMBLY - 9703699
- MOTOR FOR SERVICE - 120V (All) - 9706251

- PRODUCTION DATE - WL04 through WL16
- LOWER HOUSING DESCRIPTION - Wider Rib opening under Motor.
- TRANSMISSION COVER GASKET - No Gasket Used
- PROD. 1ST STAGE GEAR & WORM ASSEMBLY - 9703446
- MOTOR FOR SERVICE - 120V (All) - 9706251

- PRODUCTION DATE - WL17 through WL45
- LOWER HOUSING DESCRIPTION - Wider Rib opening under Motor.
- TRANSMISSION COVER GASKET - Gasket adhered to Transmission Cover.
- PROD. 1ST STAGE GEAR & WORM ASSEMBLY - 9703446
- MOTOR FOR SERVICE - 120V (All) - 9706251

- PRODUCTION DATE - WL46 through Present
- LOWER HOUSING DESCRIPTION - Wider Rib opening under Motor.
- TRANSMISSION COVER GASKET - Gasket adhered to Transmission Cover.
- PROD. 1ST STAGE GEAR & WORM ASSEMBLY - 9706590
- MOTOR FOR SERVICE - 120V (Professional) - 9703585
120V (Other) - 9706548

Replacement Motor part numbers for **Export Models** are provided in the Export Model Part Number Table.

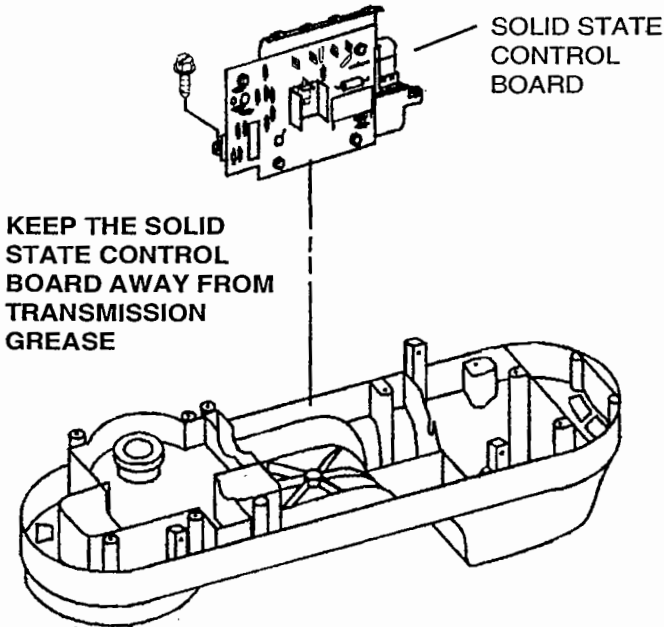
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SPEED CONTROL ASSEMBLY SERVICE - The KitchenAid Stand Mixer utilizes a Solid State Speed Control that mounts to the Lower Gearcase with (2) 8-32 x 5/8" Phillips Screws.

This component is not servicable or adjustable and will have to be replaced if it fails mechanically or electrically.



TESTING THE CONTROL ASSEMBLY - The Control Assembly should first be tested with the Mixer in the "Off" position and disconnected from the AC Mains.

NOTE: Before you begin this test check the condition of the Stand Mixer Power Cord and replace it if it is damaged or defective.

- Simply move the Handle from the "Off" position and observe each of the six speed detents.
- These should have a distinct locking action in each of the six running positions.
- Now return the Mixer to the "Off" position and plug it into the AC Supply.

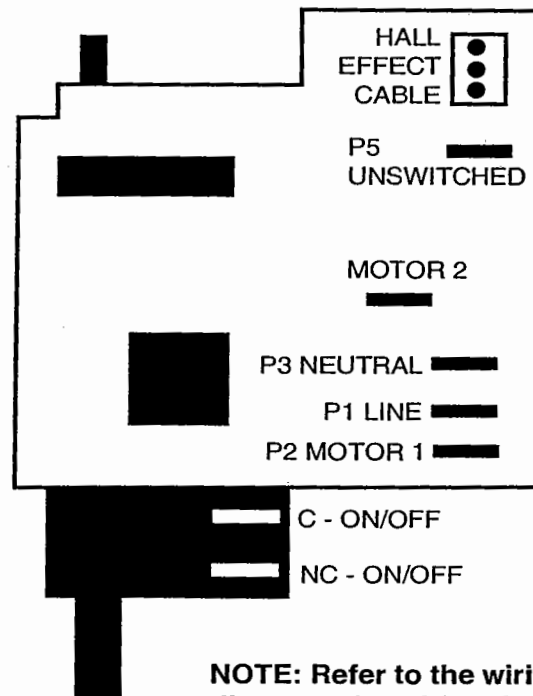
The Mixer should not run in the "Off" position.

NOTE: The mixer must be in the "Off" position for 5 seconds - in order to Reset.

- Carefully move the Control to the first "Stir" speed and confirm operation.
- Remember that ALL Speeds have a "Soft Start" feature that automatically starts the Mixer at a slower speed to help prevent "Splash Out".
- You should observe a slight pause as you move from each speed. Confirm the operation at each of the six (Stir -2-4-6-8-10) detents of the Control.

REPLACING THE SPEED CONTROL - If replacement of the Control Assembly is necessary, make sure that the Mixer is unplugged from the AC Mains and after removing the Motor Housing, remove the (2) 8-32 x 5/8" Phillips Screws that hold the Control Assembly to the Lower Cover.

SOLID STATE SPEED CONTROL BOARD CONTACTS



NOTE: Refer to the wiring diagrams for wiring details on specific 6-Quart Stand Mixer models.

Check the Control Assembly wire leads first and tighten them if a loose or broken connection is noted at the Spade Lug Connectors.

Retest before replacing Control Board—then if the fault persists: (Be sure unit is unplugged!)

- Verify that wire leads are identified relative to their position on the Control Board. (Label if necessary.)
- Using Needle Nose Pliers remove the (2) Motor Leads, the (2) Power Cord Leads and the Hall Effect Sensor Connector from the Circuit Board..
- Using the replacement Control Assembly, reconnect these leads to the appropriate points on the Circuit Board.

• Make sure that the Spade Lugs fit tightly. Mount the new Control Assembly on the Lower Gearcase using the (2) 8-32 x 5/8" Phillips Screws.

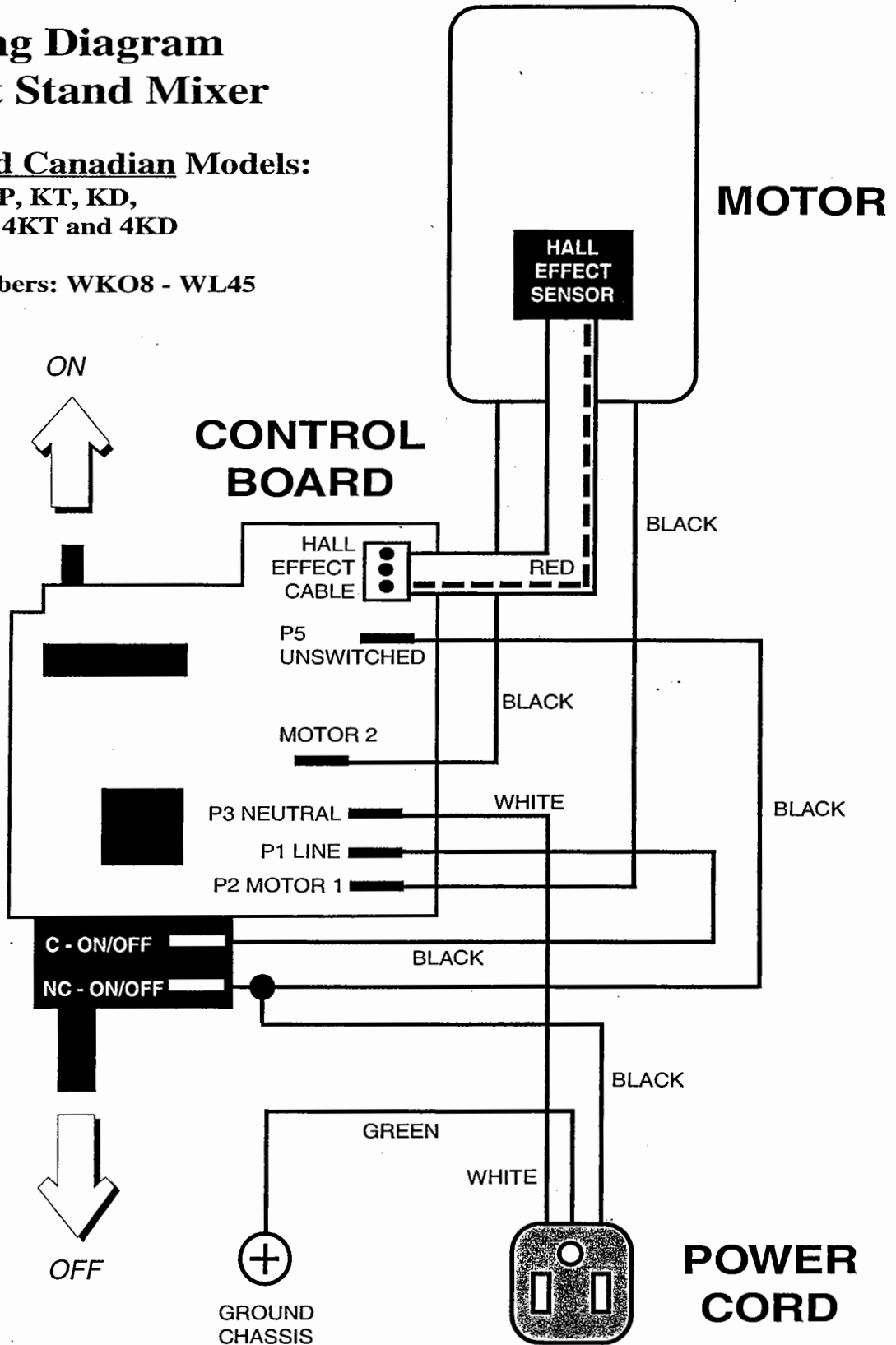
• Replace the Motor Housing and then repeat the Test Procedure outlined above to confirm proper operation.

Wiring Diagram 6 Quart Stand Mixer

Domestic and Canadian Models:

KP, KT, KD,
4KP, 4KT and 4KD

Serial Numbers: WKO8 - WL45



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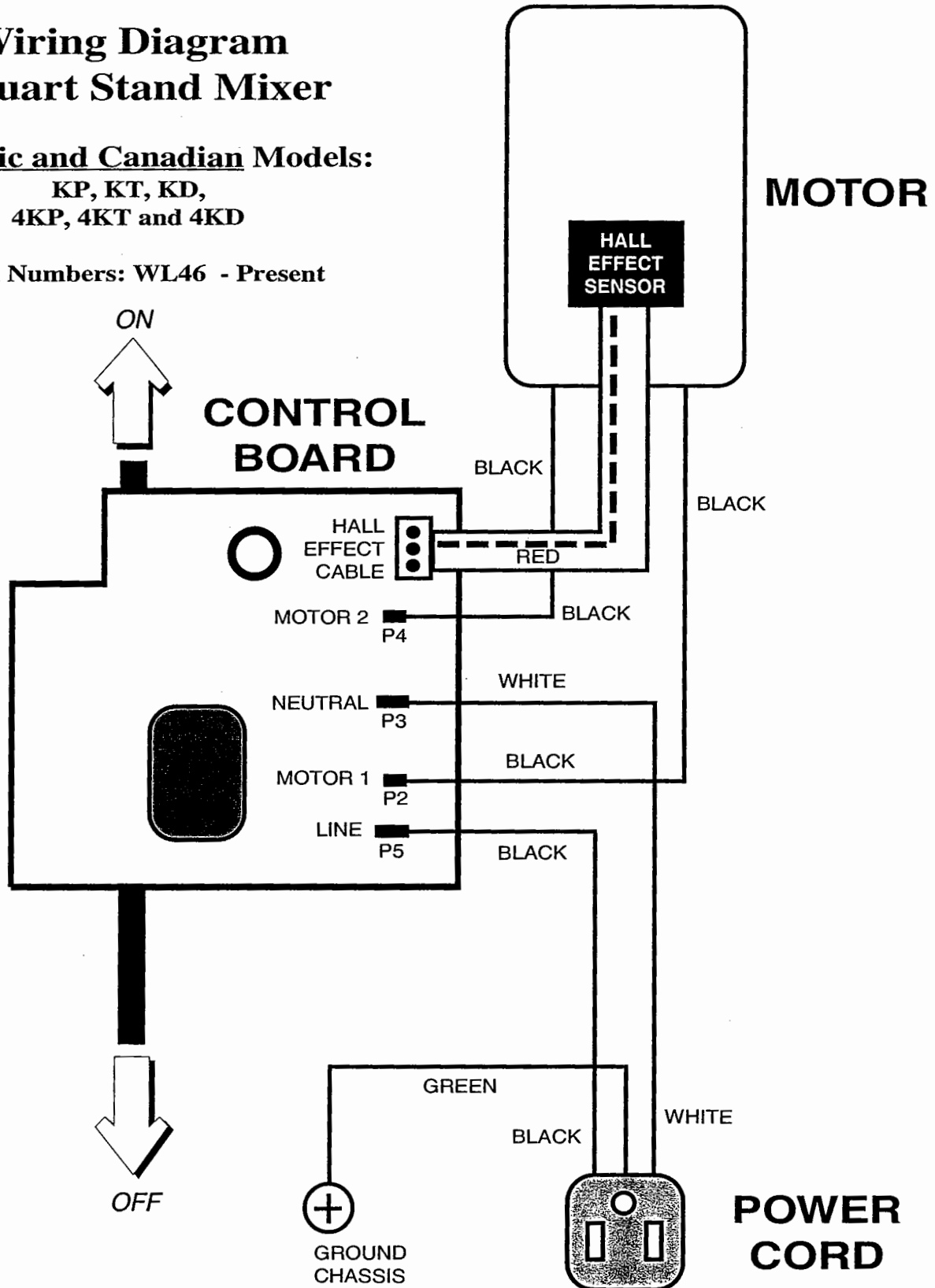
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Wiring Diagram 6 Quart Stand Mixer

Domestic and Canadian Models:

KP, KT, KD,
4KP, 4KT and 4KD

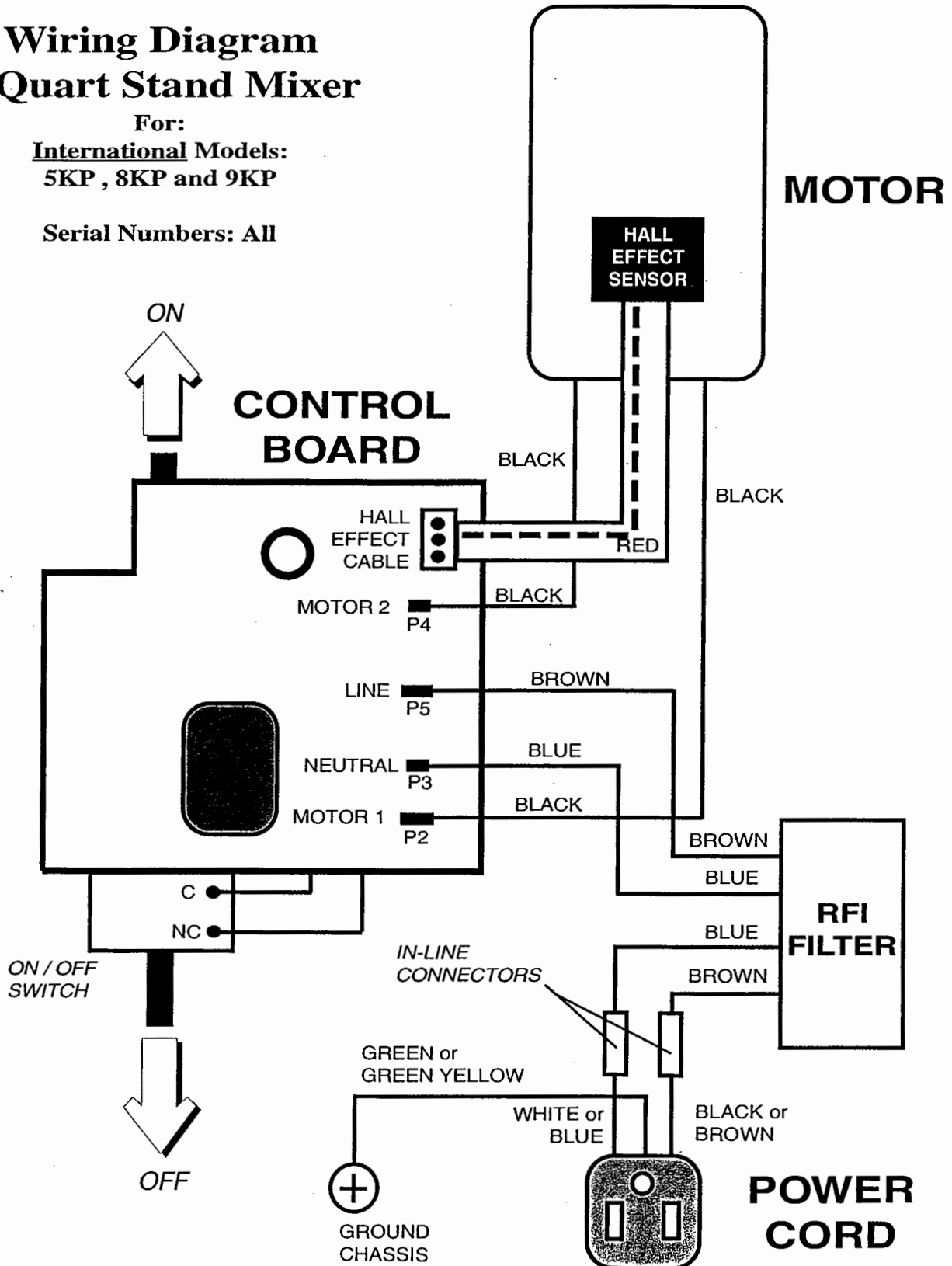
Serial Numbers: WL46 - Present



Wiring Diagram 6 Quart Stand Mixer

For:
International Models:
5KP, 8KP and 9KP

Serial Numbers: All



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PROBLEM GUIDE - The following list of Service PROBLEMS are reviewed with the likely CAUSE and most probable CORRECTION provided below to assist the Professional Mixer Technician with the diagnosis and corrective action required to make a successful repair.

- **PROBLEM:** Repeated Worm Gear failures.
- **CAUSE:** Galled Worm Gear.
- **CORRECTION:** Replace Worm Gear and Attachment Gear.

- **PROBLEM:** Switch lever clicks, but Mixer will not run or buzz.
- **CAUSE:** Open electrical circuit. Faulty Plug. Faulty attachment cord. Loose wire leads. Open TCO.
- **CORRECTION:** Determine Open Contact and replace or repair.

- **PROBLEM:** Mixer will not shut off with ON/OFF Switch
- **CAUSE:** The Mixer ON/OFF Switch is closed. Bad Switch Lever.
- **CORRECTION:** Replace Control Assembly.

- **PROBLEM:** Beater strikes Bowl or too much clearance between Beater and Bowl..
- **CAUSE:** Adjusting screw at rear of Column improperly set.
- **CORRECTION:** Turn the adjusting screw slightly to right or left to adjust clearance. Clearance should be 1/16" the thickness of a dime.

- **PROBLEM:** Planetary turns--but Beater does not revolve.
- **CAUSE:** Pinion Gear or Gear Drive Pin is broken.
- **CORRECTION:** Remove Planetary and replace Pinion Gear or Gear Drive Pin.

- **PROBLEM:** Mixer runs with raspy, bumpy noise at Planetary.
- **CAUSE:** Lower Gear Case internal Ring Gear teeth are worn or broken.
- **CORRECTION:** Remove the Planetary and Gear Case Cover.
The complete Gear Case Assembly must be replaced.

- **PROBLEM:** Switch knob clicks, but Mixer will not run or buzz.
- **CAUSE:** Open Electrical Circuit.
- **CORRECTION:** Progressively disassemble the Speed Control mechanism, plus the motor and perform the following checks until the open circuit is found. Look for: - Faulty plug. - Faulty Attachment Cord. - Bad connection in Speed Control . - Bad connection between Field and Cord. - Open circuited Armature.- Open circuited fFeld. - Correct brush orientation. - Open TEO Fuse.

- **PROBLEM:** Electrical shock to operator.
- **CAUSE:** Bare lead touching inside of housing.
- **CORRECTION:** Pull the plug, turn the switch on and check for a ground with a Test Lamp or Volt Meter. Touch one prong of the test lamp to a prong of the plug and the other prong to an unpainted spot on the housing. If the lamp lights the mixer is grounded. Examine all the wiring in the order of its accessibility, until the grounded lead is found. If mixer has radio interference condenser wired between stator screw and power cord - remove and discard.

- **PROBLEM:** Bad sparking at motor brushes.
- **CAUSE:** Worn motor brushes.
- **CORRECTION:** Replace Motor.

- **PROBLEM:** Faulty Armature or shorted Motor Field.
- **CAUSE:** Motor has internal short.
- **CORRECTION:** Replace Motor.

- **PROBLEM:** Mixer runs on one Speed only.
- **CAUSE:** Speed control.
- **CORRECTION:** Replace the Control Board

- **PROBLEM:** Mixer runs for a short time and then shuts off.
- **CAUSE:** Hall Effect is bad.
- **CORRECTION:** Replace the Hall Effect.

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6 Quart Stand Mixer Export Parts

VOLTS - COUNTRY	MODEL NUMBER	PRODUCTION DATE CODES	LOWER HOUSING DESCRIPTION	TRANSMISSION COVER GASKET	CONTROL SUB-ASSEMBLY	PRODUCTION & SERVICE MOTOR	PRODUCTION 1ST STAGE GEAR AND WORM ASSEMBLY	POWER CORD	RFI FILTER
230V - Australia (Early)	SKP2670A	WL18 - WL37	Shorter transmission mounting surface. (.260" to pads.)	Gasket adhered to transmission cover.	9703352 (230V, DNA)	9706034 (U98 - 8 tooth)	9703446 (53 tooth 1st stage gear)	9703565 (2 Receptacle Terminals)	9703582 (2 Tab and 2 Receptacle Terminals)
230V - Australia (Late)	SKP2670A	WL38 - Present	Shorter transmission mounting surface. (.260" to pads.)	Gasket adhered to transmission cover.	9703352 (230V, DNA)	9706034 (U98 - 8 tooth)	9703446 (53 tooth 1st stage gear)	9706064 (1 Tab and 1 Receptacle Terminals)	9706073 (1 Tab and 3 Receptacle Terminals)
230V - International	SKP2670E	WL18 - Present	Shorter transmission mounting surface. (.260" to pads.)	Gasket adhered to transmission cover.	9703352 (230V, DNA)	9706034 (U98 - 8 tooth)	9703446 (53 tooth 1st stage gear)	9703564 (2 Receptacle Terminals)	9703582 (2 Tab and 2 Receptacle Terminals)
110V - Taiwan	8KP	WL21 - Present	Shorter transmission mounting surface. (.260" to pads.)	Gasket adhered to transmission cover.	9706052 (100-110V, DNA)	9706251 (U98 - 8 tooth)	9703446 (53 tooth 1st stage gear)	9706065 (1 Tab and 1 Receptacle Terminals)	9706073 (1 Tab and 3 Receptacle Terminals)
100V - Japan	9KP	WL18 - Present	Shorter transmission mounting surface. (.260" to pads.)	Gasket adhered to transmission cover.	9706052 (100-110V, DNA)	9706035 (U98 - 8 tooth)	9703446 (53 tooth 1st stage gear)	9706050 (2 Receptacle Terminals)	9703582 (2 Tab and 2 Receptacle Terminals)

NOTE - Refer to Parts Manual for Ordering Information.