MODEL 706A/AL & B/BL

Laboratory Centrifuge

OPERATION MANUAL

Model 706B

THE DRUCKER CO.
Reliability in Laboratory Centrifuges Since 1932
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INTRODUCTION :

Centrifuges are an essential instrument in the laboratory preparation process and **The Drucker Company** has been *manufacturing centrifuges since **1932.***

The company was formed in St. Louis, Missouri, when Ken Drucker purchased the Phillips Company, an instrument repair company established in 1908. Within a few years, Mr. Drucker has turned the firm's business into the manufacturing of centrifuges. A man of foresight, Drucker began experimenting with instruments far in advance of his day, and in time became a respected figure in his industry. His concepts and ideas were so advanced that they are being used today in centrifuge design and operation.

We at **The Drucker Company** are proud of this long history of centrifuge manufacture. Today, as then, centrifuges continue to be the mainstay of the Company's business.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

REVISION STATUS

Issue: Number 2. Date: 01-18-01 Initial Issue: 11-06-00

Amended Pages:

Major Update:

1.0 DESCRIPTION

1.1 Intended Use

The Drucker model 706 is a high-performance laboratory centrifuge capable of separating suspended media from up to (12) fluid samples contained in 10ml and/or 15ml standard laboratory test tubes. There are three 706 versions; the model 706A is powered by a 3,300 RPM, single speed AC motor. The model 706B has a variable speed, DC motor and the model 706 AL/BL adds a lid locking mechanism. All models have an electric brake.

1.2 Features

Important features of the Model 706 centrifuge include the following:

- Timed operation from 1 to 30 minutes.
- Variable speed from 500 to 3,200 RPM. (Model 706B/BL)
- Single speed of 3,300 RPM (Model 706A/AL).
- Lid locking Mechanism (706AL and 706BL only)
- Dynamic electric braking, (706B/BL only)
- Heavy gauge steel construction for safety and durability.
- Transparent polycarbonate lid for optical calibration of speed.

1.3 Construction (see Figures 1 and 2)

Model 706B: The 706B is constructed out of 0.075 inch, formed steel panels that are welded together for maximum strength and durability. The motor is supported at its base by a suspended steel bracket and is attached at its top to the centrifuge motor well by a molded rubber collar. This unique mounting allows the motor to swing during operation thereby reducing noise and vibration. The lid of the 706B is machined out of a high strength polycarbonate plastic and is attached by two friction type nylon hinges. The lid is mechanically secured to the cabinet by a molded polycarbonate latch that grips the underside of the top opening. When rotated to the fully closed position the latch makes contact with a micro switch which permits the centrifuge to operate. The lid has a series of air inlet holes to provide for cooling of the samples. The base of the centrifuge is covered by a steel plate with louvers for air exhaust. The line cord and 4-amp fuse holder are located at the rear of the centrifuge. The centrifuge rests on (4) rubber feet.

A formed steel control panel is attached to the front of the centrifuge. Mounted to the rear of the control panel are the mechanical timer, speed control potentiometer, electric brake switch. and speed control PC board. The PC board is mounted to a steel support tray and is connected to the motor through an electrical connector. The control panel assembly is attached to the centrifuge body by (4) machine screws; (2) on the side and (2) on the bottom. The 12-place rotor is machined out of solid aluminum and has a 45^0 tube angle for improved sample separation.

Model 706A: The 706A cabinet is identical in design and construction to the model 706B. The 706A uses a single-speed AC motor. The 706AL adds a locking lid that restricts access to the rotor chamber while the rotor is spinning.

NOTE: The electrical line cord provided with the 706 must be properly plugged into a power supply receptacle that is approved and is well grounded. The model 706 operates on 120 volts AC at 60 Hz line frequency.

2.0 SPECIFICATIONS:

	706A/AL	706B/BL
Maximum Speed (RPM) (with loaded 12-place rotor)	3,300	3,200
Maximum Force (RCF xg)	1,550*	1,450*

Centrifuge Motor

706A: AC, shaded pole, 1/9 HP single phase

706B: Permanent Magnet DC, 1/8 HP single phase

Both Models:

Maximum capacity **180** ml. (12 x 15ml)

Overall Dimensions

Height with Lid Closed	9.0 in. (22.9 cm.)
Height with Cover Open	20.0 in. (50.8 cm.)
Outside Diameter	14.0 in. (38.1 cm.)
Inside Diameter	13.85 in. (38.1 cm.)

Protection Fuses 4 Amp. slow blow

Timer Mechanical; 1 to 30 minutes

Power Requirements 120 VAC

Weight (Incl. Rotor and (12) tube shields) 30 lbs. (13.6 kg)

*** Caution:** ***Before spinning glass test tubes in the model 706 please check with the glass test tube manufacturer to ascertain that the tubes can withstand the high separation forces of the model 706.***

3.0 SUPPLIED EQUIPMENT:

The following items are supplied with each model 706 centrifuge, (standard accessories, may vary):

1. One (1), 12-place machined aluminum fixed angle rotor.
2. Twelve (12) tube cushions for 10ml test tubes.
4. One (1) **Operator's Manual.**

Model 706B Centrifuge

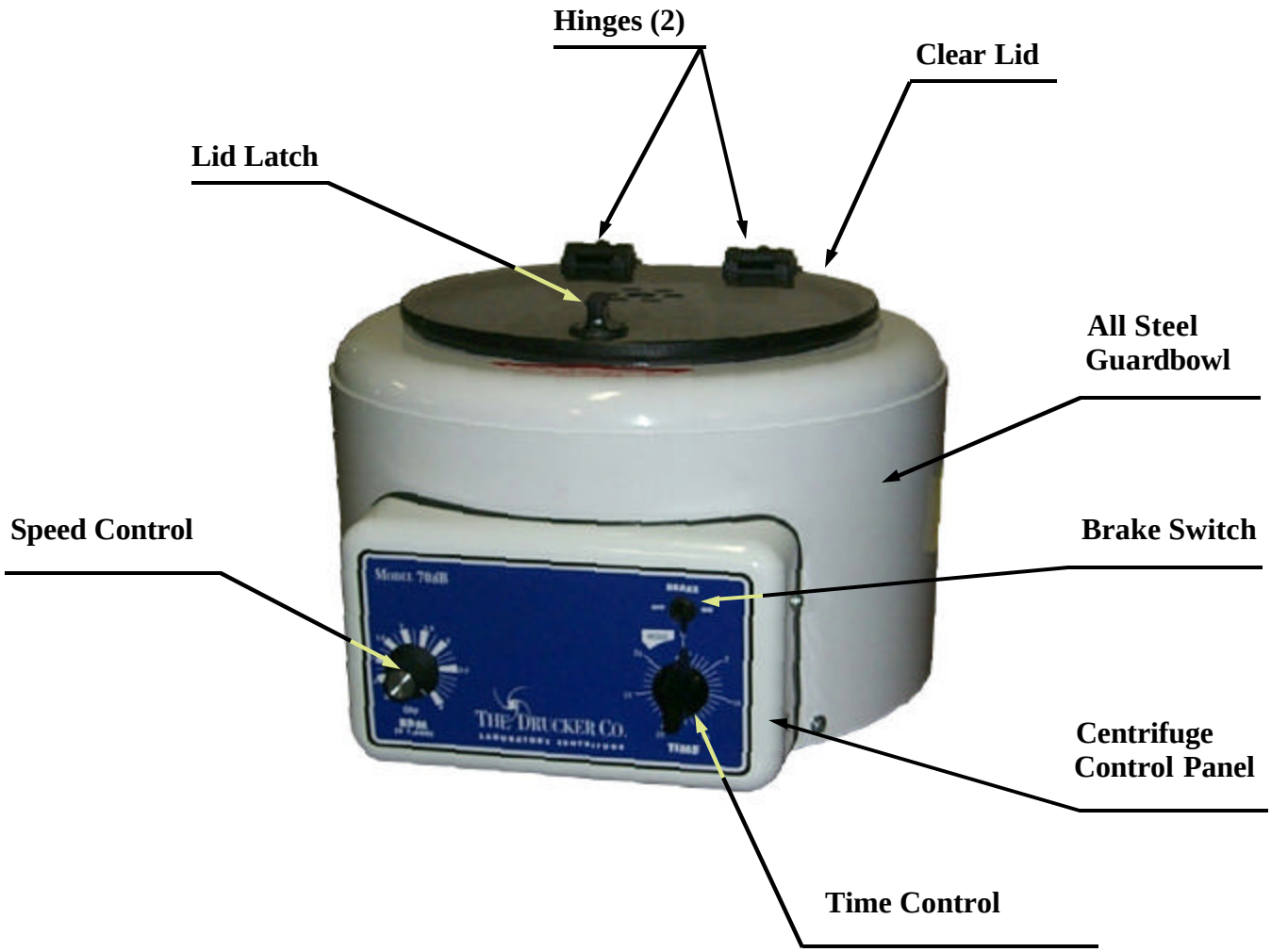


Figure 1.

Model 706A Centrifuge

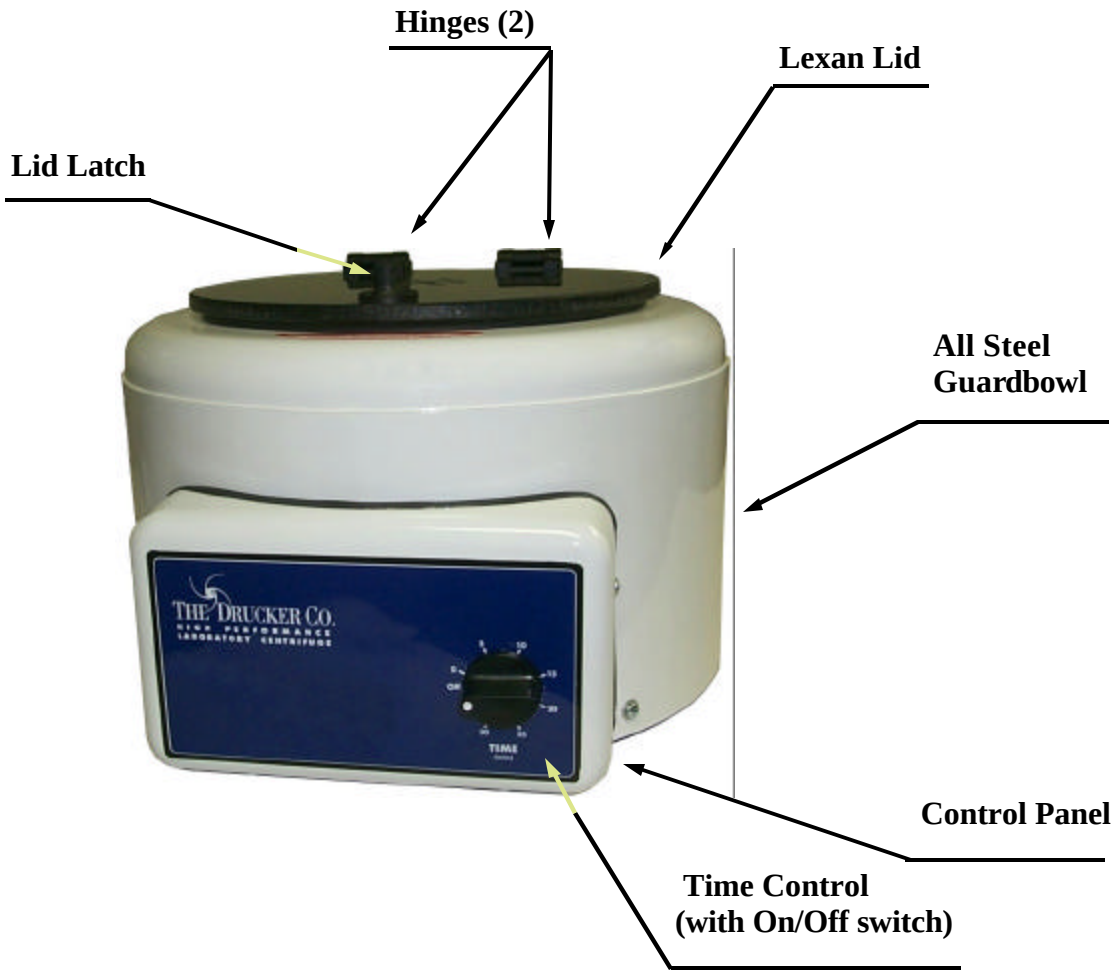


Figure 2.

4.0 INSTALLATION

4.1 External Packaging and Inspection

Carefully examine the centrifuge and document any damage that can be attributed to mishandling. A signed inspection report should be furnished by the shipping company. The Drucker Company is **Not Responsible** for transit damage.

4.2 Setup Procedure (both models)

1. Unpack the centrifuge and inspect for obvious damage; Place the centrifuge on a hard, stable surface.
2. ***Note:*** A bench top clearance height of 20 inches (min.) is required to open the centrifuge lid. ***Caution:*** ***Failure to provide adequate space for ventilation can cause damage to the samples plus overheating and premature failure to the centrifuge.***
3. Unlatch and open the lid; remove the test tube shields and any protective shipping material from the guard bowl that may have been shipped inside the centrifuge.
4. Slowly rotate the rotor by hand; check for free and level rotation. ***Caution:*** ***If the rotor wobbles or shows signs of uneven rotation, do not proceed. Contact your authorized dealer or The Drucker Company.***
5. Close and latch the lid. Verify that the Timer is in the off, (zero minutes), position. Plug the line cord into an approved electrical outlet. Proceed to section 4.3

4.3 Power On Safety Check (both models):

1. On the model 706B turn the speed control knob to 2,000 RPM; on the model 706A continue to step 2.
2. Turn the brake switch to off, (706B/BL only). Set the timer for (15) minutes.
3. The rotor should start spinning smoothly, without excessive noise.
4. Listen to the sound of the centrifuge; a smooth whirring sound should be heard. If there are any loud and unusual sounds, stop the centrifuge immediately ***Do not proceed !*** Call your Authorized Dealer or The Drucker Company.
5. Let the time expire. If the timing cycle is correct and the centrifuge operates properly, insert the (12) test tube shields in the rotor. Repeat steps 4.3A.1 to 4.3A.2

If the centrifuge successfully passes steps 1-5 of this section proceed to section 4.4.

4.4 Electric Brake Check (706B):

1. Repeat section 4.3 but this time set the Brake Switch to the "On" position.
2. After the timer reaches "0" time and the power is cut to the motor the rotor should reach "0" RPM in approximately 25 seconds.
3. If the rotor takes longer than (45) seconds to stop ***Do not proceed !*** Call your Authorized Dealer or The Drucker Company.

4.5 Lid-Lock Safety Check (706AL and 706BL only)

While the rotor is spinning try to open the lid by turning the lid knob counter clock wise. You may, or may not, experience power loss to the centrifuge, ***but the lid should not open.*** If the lid does open, ***call The Drucker Company immediately.***

5.0 PROPER BALANCING:

Note: **All centrifuges have critical speeds at which vibration occurs. As the speed increases beyond the critical speed, vibration will diminish. This inherent condition also occurs during deceleration. An unbalanced load intensifies the effect of these critical speeds.**

If excessive vibration is noticed in normal laboratory use, the cause is most likely due to an unbalanced load. To attain a balanced load, use the following procedures:

1 The test tubes that are opposite each other in the rotor must be equal in mass and have the same center of gravity. Therefore, test tubes must be alike in shape, thickness and distribution of glass or plastic. The larger the test tubes, the more critical is this selection.

2 Use a laboratory balance with a sensitivity of at least one-tenth of a gram. Weigh all test tubes to be spun. Place equal weight test tubes across from each other in the rotor.

3 If necessary, fill a test tube, identical to the one with sample in it, with water to the same level as the test tube with sample so that they have as close to equal weight as possible. Place the water filled test tube opposite to the sample test tube in the rotor. Repeat this procedure for each test tube of sample as required.

4 Verify that all test tubes rotate freely in their test tube shields. Start the centrifuge and spin the load at a medium speed of 2,000 RPM and observe any vibration.

5 If excessive vibration is evident, ***DO NOT OPERATE THE CENTRIFUGE;*** recheck the balance weight of each test tube and repeat the above procedure.

6 If excessive vibration still persists, ***DO NOT OPERATE THE CENTRIFUGE;*** Remove all test tubes ***and Test Tube Shields*** from the centrifuge. Run the centrifuge at 2,000 RPM. If the vibration still exists call your Authorized Dealer or The Drucker Company.

7 If the centrifuge runs smoothly after step 5.0.6 the vibration problem is either in the weight of the samples or the test tube shields themselves.

8 Make certain that all the test tube shields are clean and empty and reinsert them in the centrifuge rotor. Restart the centrifuge per section 5.0.5.

9 If the centrifuge runs smoothly the problem was due to extra tube cushions, dirt or excess material in one or more of the test tube shields. Reinsert the sample test tubes and continue.

10 If the vibration is still present after step 5.0.9, weigh each test tube shield. They should be equal in weight to within 0.1 grams. If they are not, order a new set of test tube shields.

6.0 SERVICE

This section contains instructions for operator servicing of the Drucker Model 706 centrifuge. It is not intended to be a comprehensive description of servicing instructions or procedures but rather a guide to help a qualified service technician resolve minor operational problems. Servicing of the centrifuge must be carried out by a qualified service technician. Attempted service by anyone other than a qualified service technician will void any Drucker warranty.

6.1 Drucker Service Philosophy

All Drucker centrifuges are designed for maximum serviceability. A Model 706B may be completely repaired (i.e.: replacement of all the main serviceable parts) in approximately one hour. For example: the main control panel, which contains all the input/output regulating devices to drive the Model 706B, is harness connected to the motor and is replaceable in approximately 15 minutes.

6.2 Motor Brush Replacement (Model 706B) (refer to Figure 3.)

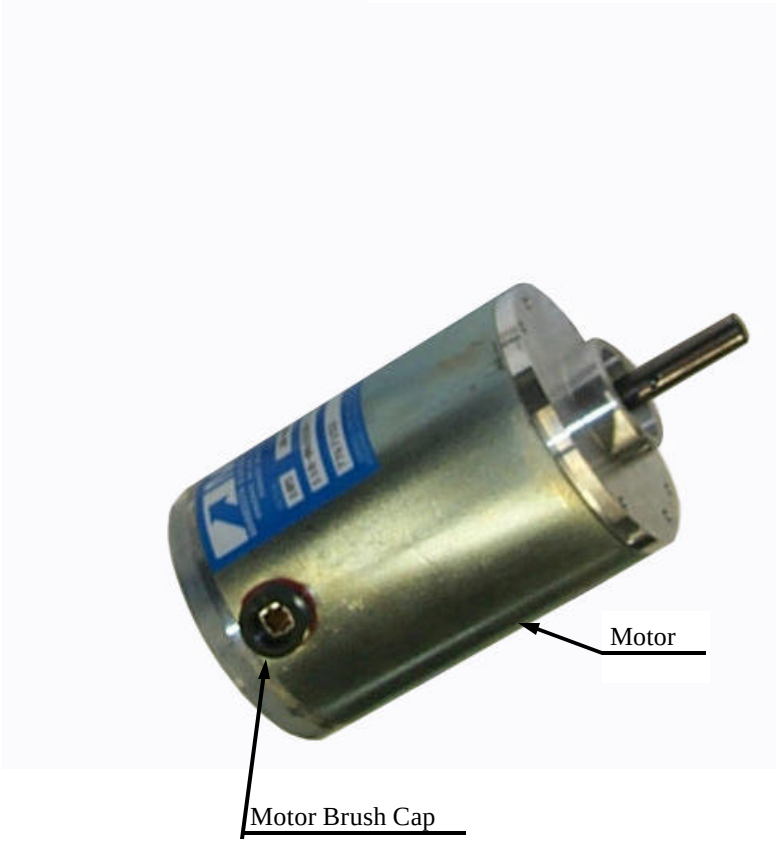
The electrical motor in the model 706B centrifuge is a permanent magnet DC motor designed to our particular specifications. Under normal use the motor brushes should have to be replaced every (500) hours or once each six months. When the brushes need replacement follow the following procedure:

1. Unplug the centrifuge from its electrical socket and lay it on its side.
2. Remove the bottom cover plate.
3. Using a short, flat bladed screwdriver, remove the black plastic motor brush cap located on each side of the motor.
4. Remove the old motor brush and replace with Drucker part number 7735023 motor brush.
5. Replace the motor brush cap.
6. Rotate the centrifuge to its other side and repeat steps 6.2.1 through 6.2.5 for the second motor brush.
7. Inspect the old motor brushes. If the carbon has worn down to the bare metal, the motor armature may have been damaged. If this has happened, ***Do not operate the centrifuge;*** have a technician remove the motor and have the armature repaired.
8. Replace the bottom cover plate and return the centrifuge to an upright position.
9. Plug the centrifuge into a proper electrical socket.
10. Set the speed control to 2,000 RPM and turn the time to (5) minutes; if the centrifuge starts up and operates normally it is ready for continued operation; If unusual sounds are heard or there is excessive vibration, ***Turn off immediately, do not proceed.*** Call a repair technician or The Drucker Company for help in locating the problem cause.

6.3 Troubleshooting

Before attempting Operator service on the Model 706, refer to Table 6.1 (on the following pages) for the most probable cause of a malfunction.

Model 706B
Motor Brush Replacement



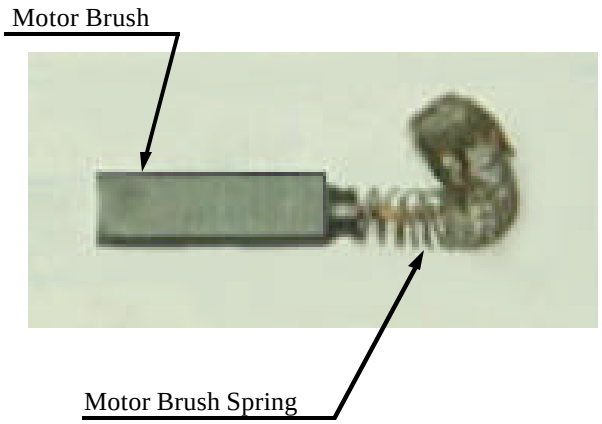


Figure 3.

TABLE 6.1

TROUBLESHOOTING

Symptom	Possible Cause	Suggested Solution
1. Centrifuge does not operate when power (Timer) is turned on.	Centrifuge not plugged in.	Check that the line cord is properly plugged into the electrical outlet.
	Defective circuit breaker.	Reset the circuit breaker. If it happens again, call a service technician.
(706B)	Defective Speed Control	Have a technician replace the speed control.
	Defective Timer	Have a technician replace the Timer.
	Disconnected wire	Remove the control panel and have a technician check all wires and connections.
	Motor unplugged from the Control Panel	Remove the control panel and have a technician check the motor connection to the PC board.
	Defective Motor	Have a technician replace the Motor.
(706B)	Worn Motor Brushes	If the motor brushes are allowed to wear down to the bear metal the motor will short out. If the Armature is not too badly damage, replace the motor brushes.
2. Centrifuge does not reach Set speed.	Improperly calibrated speed control board.	See Section 8.0 on Calibration.
(706B)	Defective speed control.	Have a technician replace the speed control.
	Low line Voltage.	Verify that the line voltage is at least 110 volts
	Defective Motor	Have technician replace the motor.
(706B)	Worn Motor Brushes	If the motor brushes are badly worn, but not to to the bear metal, the motor may run intermittently. Replace the motor brushes.
3. Circuit breaker pops when line cord is plugged in.	Short circuit in wiring.	Have a technician troubleshoot the electrical circuit; replace any defective components.
4. Circuit breaker pops when motor is accelerating to speed.	Short in motor circuit	Have a technician replace the motor assembly.
	Seized motor bearing.	Have a technician replace the motor assembly.
(706B)	Defective thermal switch in motor	Have a technician replace the motor assembly.

TABLE 6.1 (Continued)

Symptom	Possible Cause	Suggested Solution
5. Rotor begins rotation at a setting of "0" RPM (706B)	Defective Speed Control Board	Have a technician replace the Speed Control
	Improperly calibrated Speed Control.	See Section 8.0 on Calibration.
6. Motor rotates Intermittently (706B)	Defective motor.	Have a technician replace motor.
	Defective motor PCB	Have technician replace the main PCB.
7. Test tubes break during a run.	Test tubes inserted too far into test tube shields.	Use the right Test Tube Cushion; Insert the test tubes in the tube shields such that the test tube stoppers are fully exposed and the test tube rests flat against the tube shield wall.
(706B)	Speed setting too high for Test Tubes.*	Reduce speed to; check for proper laboratory protocol.
	Foreign material in test tube shields	Remove and clean all test tube shields.
	Foreign material embedded in test tube cushion.	Replace tube cushions.
	Weak Test Tubes	If possible, spin samples using a different manufacturer or an earlier lot. Contact the Test Tube manufacturer for possible lot control problems.
	Excessive Vibration	Refer to section 5.0 on Balancing.

* Note:
The model 706B was designed to provide separation for a variety of laboratory applications. The maximum attainable separation force (RCF) is 2,300 xg, Determine the RCF requirements for your material separation and refer to the RCF chart in section 9 for the proper speed/force setting.

TABLE 6.1 (Continued)

Symptom	Possible Cause	Suggested Solution
8. Excessive Vibration.	Too many tube cushions in one or more tube shields.	Verify that only one tube cushion is in each tube tube shield and all tube cushions are the same size.
	Out-of-balance samples	Refer to Section 5.0 on Balancing.
	Out-of-balance Rotor	Remove all test tubes and tube shields from the rotor. Spin centrifuge at 2,000 RPM. If the vibration persists, Check the rotor for foreign deposits. If none are found replace the rotor or return it to The Drucker Company for balancing.
9. Rotor does not spin freely.	Defective motor bearings	Remove the Motor and return it to The Drucker Company for repair.
(706B)	Rotor rubbing on rubber boot	Have a technician raise and realign the motor
10. Centrifuge body or motor overheating	Blocked air inlets or Blocked air exhaust	Verify that the holes in the center of the lid are not blocked for proper air intake and that the slots in the base, inside the rotor chamber or the slots in the underside of the cabinet are not blocked and are providing proper air exhaust.
	Defective motor	Have a technician replace the motor

7.0 MAINTENANCE

The following Preventative Maintenance procedures are to ensure consistent operation of the centrifuge and should be performed only by qualified personnel with a basic understanding of Electro-mechanical devices and laboratory instrumentation.

7.1 Centrifuge Cleaning

No daily cleaning of the centrifuge is required, however, in the event of tube breakage or spillage in the rotor chamber the centrifuge should be thoroughly cleaned immediately.

Caution: Always wear proper protective equipment and apparel.

1. If sample material has spilled into the centrifuge or on the accessories, exercise care and proper laboratory protocol for the handling of spilled samples.

2. Remove the rotor and any accessories (wash these per section 8.2).

3. Wash the inside of the centrifuge with a strong bleach solution or recommended laboratory disinfecting solution. Scrub with a stiff brush if necessary.

Caution: Wash with a wet cloth or sponge only, do not flush guard bowl with liquid unless it is equipped with the optional Guard Bowl clean out.

4. Thoroughly dry the inside of the guardbowl.

7.2 Accessory Cleaning

1. Remove the rotor and test tube shields using proper protective measures for the handling of spilled samples as outlined your laboratory protocol.

2. Properly dispose of any broken or damaged test tubes and spilled samples.

3. Remove any test tube cushions from the test tube shields.

4. Wash the accessories with a strong bleach solution or recommended laboratory disinfecting solution. Scrub with a stiff brush if necessary.

5. Oven dry the accessories .

6. Install new tube cushions in the test tube shields.

7. Reinstall the test tube shields in the centrifuge rotor.

8.0 VERIFICATION/CALIBRATION

8.1 Speed Verification/Calibration, model 706B:

In order to perform a speed calibration you will need an Optical Tachometer, suitable targets and a flat head screwdriver to adjust the position of the Speed Control knob (model 706B).

1. weigh out (12) test tubes filled with water such that all test tubes weigh the same within 0.1 grams.
2. Insert the water filled test tubes into the test tube shields in the rotor.
3. Clean the top surface of the centrifuge rotor and affix a suitable reflective target.
4. Rotate the Speed Control knob to 3000 RPM.
5. Set the Timer to 15 minutes.
6. Once the speed seems uniform place a calibrated optical tachometer over one of the holes in the centrifuge lid.
7. Measure the rotational speed of the rotor assembly with the optical tachometer.
8. If the measured speed matches the speed set on the control panel to within 100 RPM the Speed Control is properly calibrated.
9. If the measured speed varies by more than 100 RPM from the control panel setting;

   a) Stop the centrifuge.

   b) Loosen the screw attaching the Speed Control knob to the shaft.

   c) Rotate the knob so that the arrow points, as close as possible, to the control panel setting that matches the measured speed.

   d) Tighten the screw on the Speed Control knob
10. Repeat steps 8.1.4 through 8.1.8.
11. Repeat as necessary until the speed setting on the control panel matches the measured speed to within 100 RPM.

8.2 Speed Verification/Calibration, model 706A:

1. Follow steps 1, 2, 3, 5, 6 and 7 from section 8.1 above.
2. The measured speed should be between 3,200 RPM and 3,400 RPM.
3. If the measured speed does not fall within this range, remove the rotor and have a technician apply a few drops of light machine oil to the motor bearing at the base of the motor shaft.
4. Repeat steps 8.2.1 to 8.2.2.
5. If the measured speed does not fall within the range specified in step 8.2.2 have a technician replace the motor.

8.3 Time Verification/Calibration

1. In order to perform a Time calibration you will need a calibrated stop watch.
2. Set the speed control to 2,000 RPM.
3. Set the Time for 15 minutes and immediately start the stop watch.
4. As soon as you hear the mechanical timer time out to "0" stop the stop watch. There are no adjustments on the Timer module; If the measured time varies by more than 5% from the time shown on the control panel, replace the timer.

9.0 Relative Centrifugal Force (RCF)

9.1 Formula:

The motor driven rotation of the centrifuge results in a force being applied to the samples it contains. This relative centrifugal force, or **RCF**, may be critical in some laboratory applications. The **RCF** stated in these instructions is an approximate value that is subject to variations due to acceleration and braking times. During acceleration and braking periods, the speed of the centrifuge is less than the speed value set by the operator. The true cumulative **RCF** value is affected most by short run times and heavier rotor loads, since heavier loads they take longer to accelerate and decelerate.

An accurate **RCF** for any rotor size may be calculated from one of the following formulas:

RCF = 0.0000284 (R) $(RPM)^2$ **or** **RCF = 0.00001118 (r) $(RPM)^2$**

where: **R = Radius (in inches)** **r = radius (in cm.)**

Note:

- The radius is measured from the center of the rotor to the outermost tip of the tube shield.
- The total force exerted on the samples is the **RCF x Time** (in minutes)

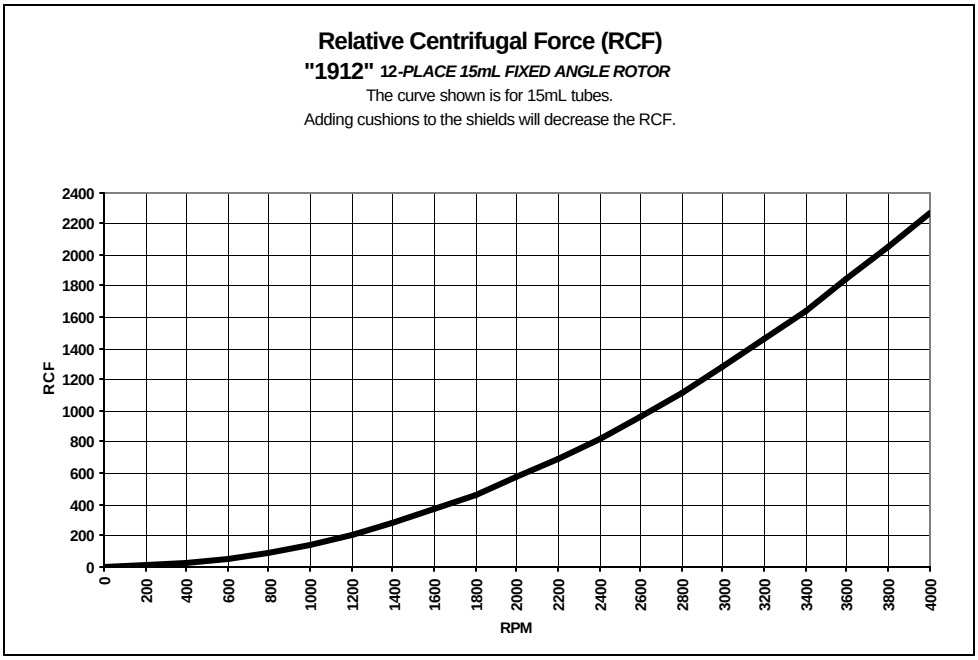
9.2 Relative Centrifugal Force (RCF) chart:

Centrifuge:
Model 706

Centrifuge rotor:
No. 1912,
12-place,
45 deg. Angle

Test Tube Holders:
No. 8404
Xenoy

Radius to sample tip:
5 inches



10.0 WARRANTY INFORMATION:

The Drucker Company warrants that it will repair or replace, at its option, free of charge, any centrifuge that fails after delivery to the original customer because of defective material or workmanship (provided it has not failed under the exceptions and conditions specified in the warranty given with the instrument), but within the following time periods:

a. One (1) year warranty on the centrifuge and its accessories from the time of purchase.

b. Sixty (60) day warranty on all replacement parts supplied after the warranty period.

Note: All failed/serviced parts must be returned to the factory before full warranty allowance or credit will be given.

Such exceptions and conditions include, but are not limited to, failure of parts due to improper use, accident, neglect, acts of God or operation in a manner not prescribed in this **Installation and Operation Manual**. The foregoing expresses The Drucker Company's sole warranty with respect to the centrifuge. This warranty is made in lieu of any and all other warranties and all implied warranties of merchantability and fitness for a particular purpose are hereby disclaimed and excluded. The Drucker Company and its authorized dealers will not be liable for consequential damages, losses, or expenses arising from the improper use of the centrifuge. The Drucker Company will not honor any other warranty given by the authorized dealer that is different from the warranty given by The Drucker Company. This warranty is not assignable and is operative only in favor of the original customer to whom this warranty is delivered.

10.1 Dealer Obligation Under Warranty:

Customers requesting service for an instrument during the period covered by the warranty should receive a response within a 48-hour period from the authorized dealer who sold the instrument. If this obligation is not met and the customer so advises The Drucker Company, such authorized dealer will be notified of, and will be held responsible for, the action taken and expenses incurred by The Drucker Company in satisfying the customer.

10.2 Disclaimers and Exclusions:

This Installation and Operations Manual includes a troubleshooting section. However, the customer is under no obligation to locate or remedy any service problem. The customer hereby releases and forever discharges The Drucker Company, its successors, assigns, subsidiaries, affiliates, officers, agents, and employees from any and all claims, demands and liabilities in law or in equity, of any nature, based upon, arising out of, or resulting from locating, remedying, or attempting to locate or remedy any service problem. If service is required, the customer should contact the dealer from whom the instrument was purchased to obtain service by factory-trained personnel, or return the instrument to The Drucker Company for factory repair.

10.2 Disclaimers and Exclusions (Continued)

The information included in this Installation and Operation Manual is believed adequate for the operation and intended use of this centrifuge. If the centrifuge is to be used for any purpose exceeding or deviating from the capabilities specified herein, then written confirmation of acceptability for such purpose should be obtained from The Drucker Company. Failure to do so may affect the warranty. The Drucker Company will not guarantee any results nor assume any obligation or liability arising from such action.

To obtain service and/or replacement parts under warranty, the customer should contact The Drucker Company dealer from whom the instrument was purchased, or:

THE DRUCKER COMPANY, Inc.

200 SHADY LANE
PHILIPSBURG, PENNSYLVANIA 16866
TEL: (814) 342-6205 FAX: (814) 342-6211

Your correspondence must include the model and serial numbers of the instrument, the date of its delivery, and the name of the dealer from whom the instrument was purchased. The Drucker Company can not accept goods returned without proper authorization. A "Returned Goods Authorization" must be obtained through a dealer or the factory, and must accompany the prepaid return shipment.

To obtain service and/or replacement parts not under warranty, or to order additional accessories, the customer should contact the factory or any authorized dealer.

NOTE: In the event the customer wishes to return the instrument or any part thereof, the customer must comply with the following requirements:

a Decontaminate the instrument or any part that has been exposed or used to process potential pathogenic or radioactive material. Decontamination must be performed to ensure no radioactivity or harmful bacteria is present and the customer must advise The Drucker Company accordingly.

b Decontaminate the instrument or any part that may have accumulated blood or any other chemical deposits by using standard laboratory procedures. If this instrument or any part thereof is received in a condition The Drucker Company considers to be a potential biological hazard to its personnel, the instrument will be returned to the customer unrepaired along with a report of the Company's findings. The centrifuge will be returned to the customer at the customer's expense.

10.3 Registration of the Instrument

The Drucker Company has a record of the serial number, ship date and intended location of each instrument. This information is also listed on our original invoice. If the information on the invoice is incorrect, contact the Drucker Company immediately for a corrective update. The Drucker Company will only warranty units sold to the original purchaser as listed on our invoice copy.