

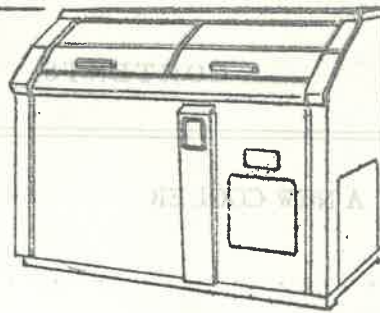
MODEL CL-21B

WORKING SPACE

width 19 13/16"
 front clearance 29"
 height 40 1/4"
 capacity
 504 6 oz. bottles

Dimensions

52 3/8" x 29" x 40 1/4"
 weight
 440 lbs.



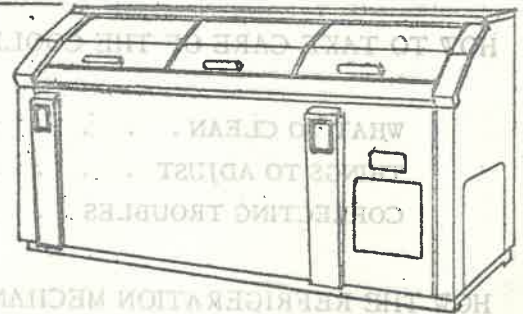
MODEL CL-35B

WORKING SPACE

width 19 13/16"
 front clearance 29"
 height 40 1/4"
 capacity
 840 6 oz. bottles

Dimensions

75 3/8" x 29" x 40 1/4"
 weight
 590 lbs.



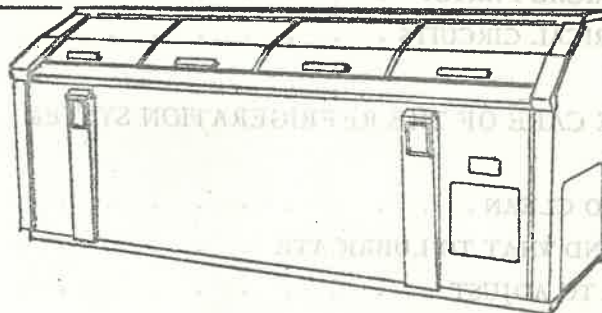
MODEL CL-50B

WORKING SPACE

width 19 13/16"
 front clearance 29"
 height 40 1/4"
 capacity
 1200 6 oz. bottles

Dimensions

98 3/8" x 29" x 40 1/4"
 weight
 740 lbs.



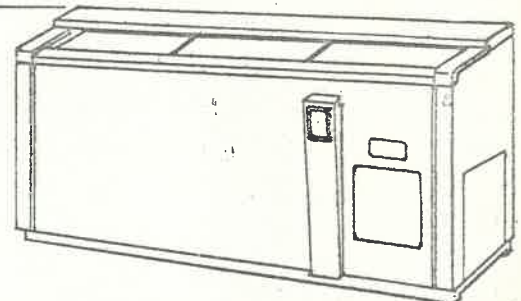
MODEL CFT-33C

WORKING SPACE

width 19 13/16"
 front clearance 29 1/4" 1/4"
 height 34"
 capacity
 792 6 oz. bottles

Dimensions

75 3/8" x 28" x 33 31/32"
 weight
 550 lbs.



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WHAT TO DO WHEN YOU GET A NEW COOLER

- SET IT UP -

LEVELING SCREWS

Take the wrappings off of the leveling screws (4 for models CL-21B, 35B, and CFT-33C; 6 for model CL-50B) and screw them into the threaded holes at the corners and center (CL-50B only) of the base of the cooler.

CROWN CATCHER

The crown catcher (1 for models CL-21B, and CFT-33C; 2 for model CL-35B, 50B) is in the cooling compartment of the cooler. Take the wrappings off of the crown catcher and put it on the cooler. To do this, hold the crown catcher in an upright position so the slot in the back of it lines up with the stainless steel hook in the hollow in the front of the cabinet. Hold the crown catcher against the cooler and slide it down into place on the hook.

- LOAD THE COOLER -

Fill the cooler with bottles. Lay them on their sides, with the crown of the first bottle to one end, the crown of the second bottle to the opposite end, and so on. If you want to change the size of any storage section, move the wire dividers.

- CHECK IT OUT -

What to Do

What Should Happen

What Shouldn't Happen

Plug the supply cord into a 110v outlet.

The compressor, condenser fan motor, and evaporator fan motor all run.

Refrigeration lines rattle.

Slide the stainless steel lid open and put your hand down into the cooling compartment.

The air in the cooler blows on your hand.

The air in the cooler is still.

Hang a thermometer in the center of the cooling compartment and close the lid.

After one to one and one-half hours the thermometer reads between 34°F. and 38°F.

When the compressor has stopped, look at the condenser fan.

The condenser fan blades are still.

While the compressor is stopped, put your hand down into the cooling compartment.

Cool air blows on your hand.

- CHECK IT OUT - (cont.)

What to Do

Slide the stainless steel lid open.

What Should Happen

The lid stays open until it is pulled closed.

What Shouldn't Happen

The lid closes without being pushed.

- PUT IT TO WORK -

SPACE NEEDED

The size of the working space needed around the cooler is shown on the title page of this cooler section. The sides and back of the cooler must be at least 2 inches from the walls.

ELECTRIC POWER NEEDED

Look at the name plate on the cooler to find out what its power needs are. This plate is on the compressor end of the cooler. Be sure that the cooler gets the right power.

LEVEL THE COOLER

Put a small carpenter's or machinist's level on top of the cooler, in the middle, parallel to the length of the cooler. Turn the leveling screws at the back corners of the cooler until the bubble is centered in the level. Turn the level until it is parallel to the ends of the cooler. Then turn the leveling screws in the front corners of the cooler until the bubble is centered in the level. Now check to see that the leveling screws in each corner of the cooler are touching the floor.

If the cooler also has leveling screws in the middle (front and back) these screws should now be screwed out until they touch the floor firmly. Make a final check to be sure that all leveling screws are touching the floor.

GROUND THE COOLER

The cooler must be grounded. This cooler is made with a 3-prong plug on the supply cord and it grounds when the plug is put into a 3-prong outlet. If there is no 3-prong outlet near the cooler, put a 2-prong adapter with a ground wire on the plug. If you use a 2-prong adapter here, make sure the ground wire is connected to a good ground.

HOW TO USE THE COOLER

If all the bottles in one section of the cooler are sold in one day, this section should be reloaded at the end of the day.

Cold bottles should be taken from only one compartment at a time, until that compartment is emptied. This compartment should then be reloaded and while the bottles in it are cooling, cold bottles should be taken from another compartment.

If at the end of the day, any one compartment is partly emptied, that compartment should be reloaded to cool over night. The warm bottles should be put on the bottom so the older product (on top) will be sold first. The following day bottles should be taken first from another compartment. Using the cooler in this way, you will always remove the older stock first, and in so doing, keep all your stock fresh.

HOW TO TAKE CARE OF THE COOLER

- WHAT TO CLEAN -

OUTSIDE OF CABINET

Wash the outside of the cabinet with a mild soap solution. Clean the stainless steel lids, rails and trim with a stainless steel polish. Then wax with a good grade of auto wax.

INSIDE OF THE CABINET

Wash the inside of the cabinet with water and a good detergent. After the inside has been thoroughly scrubbed, hook a garden hose up to the drain pipe in the bottom of the refrigeration compartment and run it over to a floor drain. The rinse water would come out in the refrigeration unit compartment otherwise. Rinse the cabinet thoroughly with clear water.

CONDENSER

Look at the condenser often and clean it when it is dirty. Use a vacuum cleaner, brush or compressed air to get the dust off.

- WHEN AND WHAT TO LUBRICATE -

How Often	Part	Lubricant
When needed	Lid slide	Grease (Lightly)

- THINGS TO ADJUST -

TEMPERATURE CONTROL

The temperature control is in a box to the left of the grille opening of the refrigeration unit compartment. The temperature control cam is on the end of the temperature control box, and the range screw is under the end cover of the temperature control box.

The factory setting of the control cam is in the middle position of the half turn it can make. The temperature control cam may be turned with a screw driver. Turn the cam clockwise for colder temperatures, and counter-clockwise for warmer temperatures. This adjustment raises and lowers the cut-on and cut-off temperature.

If further adjustment is necessary, turn the range screw counter-clockwise for colder temperature, and clockwise for warmer cut-on and cut-off temperatures. When the range screw is turned, both the cut-off and cut-on temperatures change by the same amount.

There is also a differential screw under the terminal cover of the temperature control box; but, as it is very hard to make adjustments with this screw, it is best never to change its factory setting.

CONDENSATE WICKS

The upper ends of the wicks should be attached to the refrigerant line between the compressor to the condenser. The heat from this line helps to evaporate the water which climbs the wick from the condensate pan. The lower ends of the condensate wicks should always touch the bottom of the condensate pan.

HOW THE REFRIGERATION SYSTEM WORKS

- MECHANICAL PARTS -

COMPRESSOR MOTOR

The compressor motor (sealed in the compressor housing) drives the compressor with a shaft that is shared by both parts.

COMPRESSOR

The compressor (sealed in the compressor housing) sucks cold, low pressure freon gas from the evaporator and pumps hot, high pressure freon gas out to the condenser.

CONDENSER

The condenser located on right front of cooler takes heat out of the hot, high pressure gas that comes from the compressor. The gas loses heat as it goes through the condenser coils, and changes into a liquid because it is still under high pressure.

CONDENSER FAN

The condenser fan (between the condenser and motor-compressor) first sucks air from the outside of the cooler and through the condenser. This air takes heat from the condenser first and then is blown over the compressor housing from which it also takes heat before going back outside of the cooler. The condenser fan runs when the motor-compressor runs.

CAPILLARY TUBE

3 The capillary tube (between the condenser and the evaporator in the refrigerant line) has a very small inside diameter and so the flow of the liquid freon from the condenser into the evaporator is slow but steady even with the pressure the compressor builds up in the condenser. This helps to keep pressure in the evaporator low. ^o

EVAPORATOR

The evaporator (in the cooler cabinet) takes heat from the air in the cooler cabinet and gives this heat to the liquid refrigerant. The liquid refrigerant is evaporated (boiled off) as a gas, and the gas is sucked out by the compressor and so the pressure is kept low.

EVAPORATOR FAN

The evaporator fan sucks warm air from around the bottles in the cooling compartment, and blows it across the evaporator. As the air goes across the evaporator, it gives up heat to the evaporator, then goes back to the bottles, and takes heat from them. This fan runs all the time when the cooler is plugged in.

- ELECTRICAL PARTS -**TEMPERATURE CONTROL**

The temperature control is the name of a part that is made up of a control bulb connected by a small metal tube to the bellows, and a switch.

The control bulb is on top of the evaporator coil in the cooling compartment. The other parts are in the temperature control box which is fastened to the left side of the refrigeration unit compartment. The control bulb and the bellows have a liquid in them. When the temperature of the liquid in the bulb rises, it builds up pressure in the bellows through the tube. This pushes the bellows out, making it get longer. When the control bulb is cooled, the liquid shrinks back, and the bellows pull in and get shorter. These movements of the bellows work the switch - called the temperature control switch - closing it when the bulb is heated, and opening it when the bulb is cooled.

The temperature control switch is in the compressor motor's running and starting circuits. It is also in the condenser fan circuit.

When the cabinet temperature gets up to the cut-on setting, the temperature control switch closes the compressor motor's starting and running circuits and the condenser fan circuit. When the cabinet temperature gets down to the cut-off setting the temperature control switch opens these circuits.

The temperature cam is on the side of the temperature control box. The differential screw is under the terminal cover of the temperature control box.

COMPRESSOR MOTOR

The compressor motor (sealed in the compressor housing) runs the compressor. It is started by the temperature control switch, the starting relay and the thermal overload switch. It is stopped by the temperature control switch and if overloaded by the thermal overload switch.

THERMAL OVERLOAD ASSEMBLY

The thermal overload assembly (in the terminal box on side of the compressor shell) is the name of a part that is made up of a switch (the thermal overload switch) and a heating wire. The heating wire is in the compressor motor's running and starting circuits. The thermal overload switch can complete or break the compressor motor's starting circuit and running circuit. If the compressor motor gets too warm, or draws too much current (which will heat up the heating wire) the heat makes the thermal overload switch open the running and starting circuit of the compressor. When the thermal overload assembly, the motor, and the compressor shell have all cooled enough to run safely, the thermal overload switch closes the circuits.

STARTING RELAY

The starting relay (in the terminal box on side of the compressor shell) is an electro-magnetic relay whose contacts are closed by the magnetic field of the relay coil, and are opened by gravity. It is made up of a relay coil and one set of contacts. The relay coil is in the running circuit of the compressor motor. The relay contacts can complete or break only the starting circuit of the compressor motor. When the compressor motor and condenser fan motor first start, the starting relay closes and completes the compressor motor's starting winding circuit. After the compressor motor gets up to speed, the starting relay is opened by the force of gravity and the starting winding circuit is broken.

CONDENSER FAN MOTOR

The condenser fan motor (between the condenser and the motor-compressor) runs a small fan that sucks air

- ELECTRICAL PARTS - (cont.)

CONDENSER FAN MOTOR (cont.)

through the condenser coils. It starts when the temperature control switch is closed, and it stops when the temperature control switch opens.

EVAPORATOR FAN MOTOR

The evaporator fan motor (in cooling compartment) runs the evaporator fan. This motor runs all the time when the cooler is plugged in. There are no switches in its circuit.

CAPACITOR

1/3 horsepower and 1/2 horsepower refrigeration units only.

The capacitor (located over the terminal box housing which is fastened to the compressor shell) is in the starting circuit of the compressor motor. Its purpose is to help the motor get started.

ELECTRICAL OPERATION

When the cabinet temperature gets up to the cut-on setting

The temperature control switch,

Closes and completes the running circuit of the compressor motor and condenser fan motor circuit.

Closes the starting circuit of the compressor motor.

Electricity flows in the running winding circuits (including the starting relay coil) and

The starting relay contacts,

Are closed (by the pull of the relay coil) and complete the starting circuit of the compressor motor.

When the compressor motor gets up to speed,

The starting relay contacts

Drop open (because the relay coil stops pulling them together) and break the starting circuit of the compressor motor.

If the compressor motor draws too much current, the thermal overload assembly gets too warm and,

The thermal overload switch

Opens and breaks the compressor motor's running circuit.

When the thermal overload assembly cools down again,

The thermal overload switch

Closes and completes the compressor motor's running circuit; and closes the compressor motor's starting circuit.

When the cabinet temperature gets down to the cut-off setting,

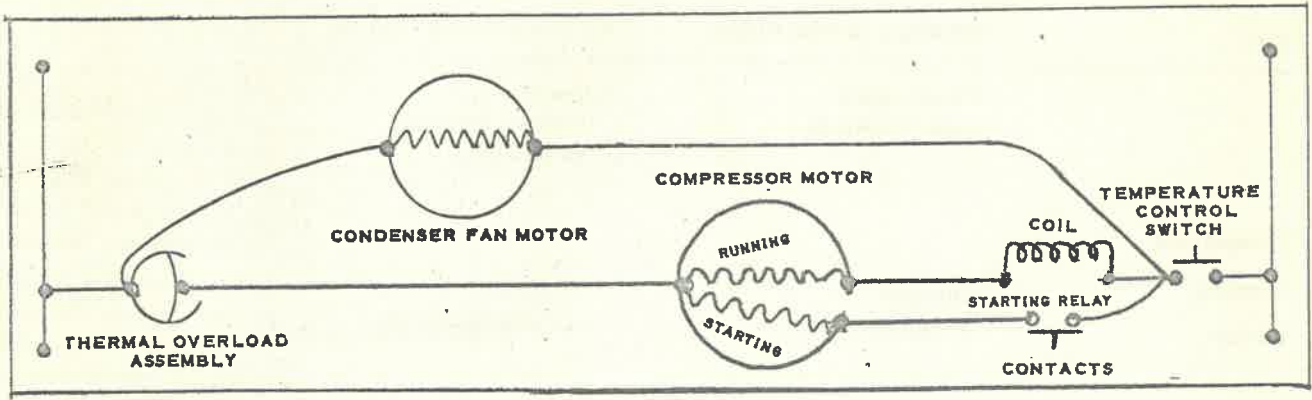
The temperature control switch

Opens and breaks the compressor motor's running circuit and the condenser fan circuit.

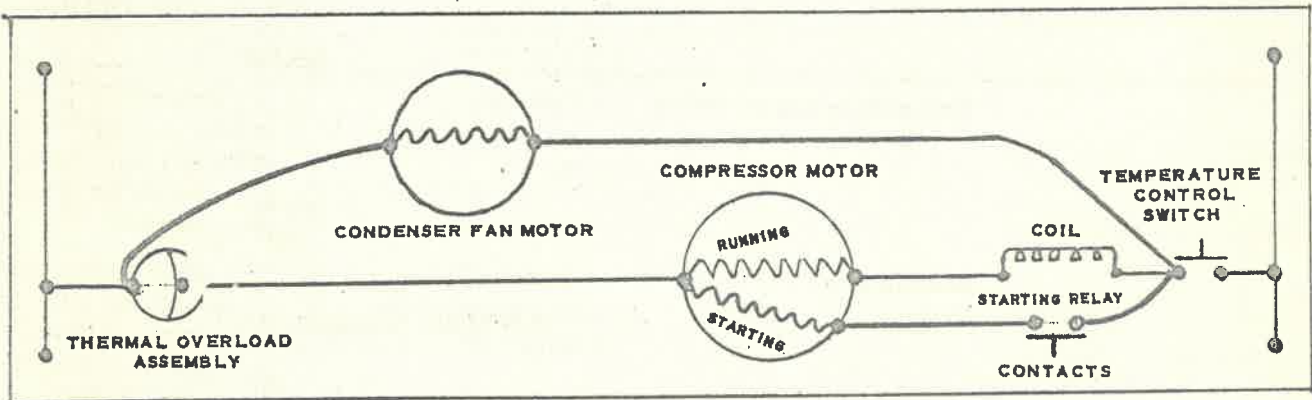
ELECTRIC CIRCUITS

Circuit	Switches In The Wiring	What The Switches Do	Why The Switches Act
Compressor Running Circuit	Temperature Control Switch	Turns the running winding on and off.	The temperature in the cooling compartment has come up to the cut-on point (or gotten down to the cut-off point) set on the temperature control.
	Thermal Overload Switch	Turns the running windings on.	Current drawn by the motor, or heat from the compressor, can raise the temperature of the Thermal Overload assembly and make the thermal overload switch cut off.
Compressor Starting Circuit	Temperature Control Switch	Turns the starting windings on.	The temperature in the cooling compartment has come up to the cut-on point set on the temperature control.
	Starting Relay Contacts	Turn the starting windings on and off.	The heavy current, drawn by the running winding of the compressor motor when it is first turned on, also flows through the starting relay coil. This heavy current gives the relay coil enough power to close the contacts.
	Thermal Overload Switch	Turns the starting winding off and on.	Current drawn by the motor, or heat from the compressor, can raise the temperature of the thermal overload assembly and make the thermal overload switch open.
Condenser Fan Circuit	Temperature Control Switch	Turns the Condenser Fan Motor on and off.	The temperature in the cooling compartment has come up to the cut-on point (or gotten down to the cut-off point) set on the temperature control.
Evaporator Fan Circuit	None	The evaporator fan motor runs all the time when the cooler is plugged in.	

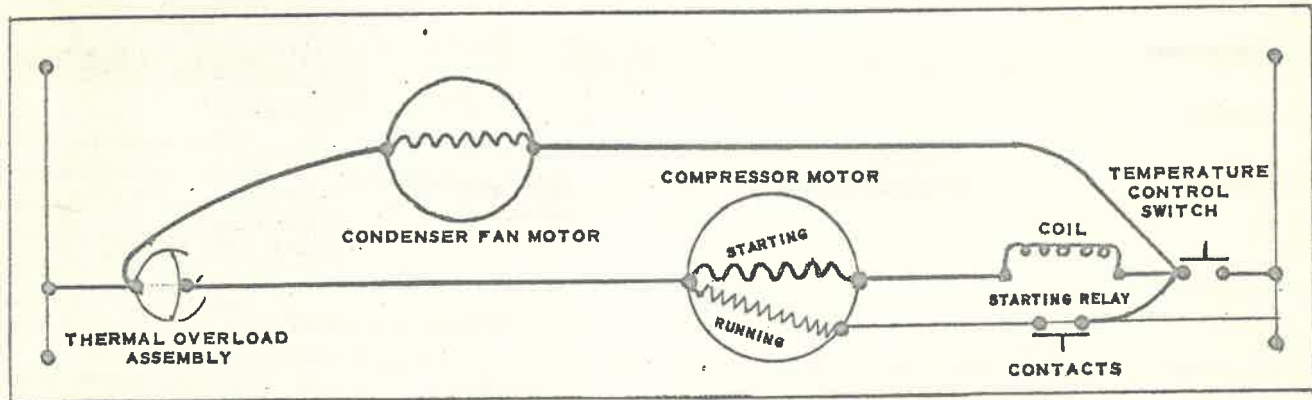
- CIRCUIT DIAGRAMS -



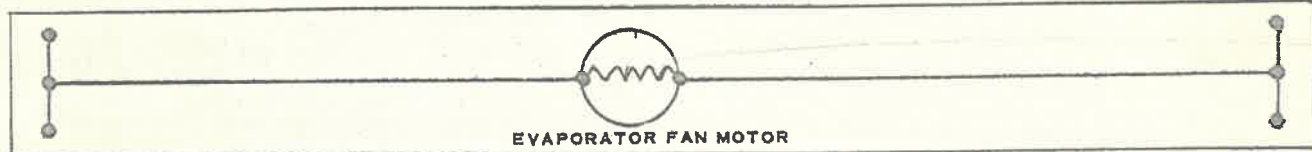
CONDENSER FAN CIRCUIT



COMPRESSOR RUNNING CIRCUIT



COMPRESSOR STARTING CIRCUIT



EVAPORATOR FAN CIRCUIT

3

— REFRIGERATION CYCLE —

What Does It	What Happens
Temperature in the Cooling Compartment Goes Up	The temperature control bulb gets warm, so the liquid in it expands, pushes through the tube, and stretches the bellows. The movement of the bellows closes the temperature control switch. This starts the Compressor Motor and the Condenser Fan Motor.
The Compressor Motor	Drives the Compressor.
The Condenser Fan Motor	Runs the Condenser Fan, which cools the condenser.
The Compressor	Sucks low pressure refrigerant gas from the evaporator, compresses it, and pumps it to the condenser.
The Condenser	Takes heat out of the high pressure refrigerant gas. As the gas gets cooler, it changes to liquid. More gas coming into the condenser, pushes the liquid refrigerant out of the condenser and into the Capillary Tube.
The Condenser Fan	Sucks air through the condenser coils, pushes it over the condenser fan motor, over the compressor shell and out of the refrigeration unit compartment. This air takes up heat from the condenser coils, the motor, the compressor and the refrigeration unit compartment.
The Capillary Tube	Is a tube that has a small inside diameter. Because of its small size, the liquid refrigerant runs slowly and steadily into the evaporator.
The Evaporator	(Where pressure is kept low by the suction of the Compressor) gives up heat to the evaporating liquid refrigerant, which changes into gas and is sucked back to the Compressor through the suction tube.
The Evaporator Fan	Sucks air from around the bottles in the cooling compartment, and blows it through the evaporator coils. This air loses heat to the evaporator, then goes on and takes heat from the bottles.
Temperature in the Cabinet Goes Down	(As the cabinet is cooled by the Evaporator) and the liquid in the Temperature Control Bulb also cools, it shrinks and lets the bellows pull up. This movement of the bellows opens the switch that started the Compressor Motor and the Condenser Fan Motor. They both stop.

HOW TO TAKE CARE OF THE REFRIGERATION SYSTEM

— WHAT TO CLEAN —

Clean dirt and lint from the condenser and evaporator with a brush, vacuum cleaner or compressed air.

- WHEN AND WHAT TO LUBRICATE -

The refrigeration system is sealed up, and does not have to be oiled or greased. Enough oil and grease are put into the condenser and evaporator fan motors when they are made, to last as long as they will run.

- THINGS TO ADJUST -

TEMPERATURE CONTROL

The temperature control is in a box on the left side of the refrigeration unit compartment. The temperature control cam is on the side of the temperature control box, and the range screw is under the end cover of the temperature control box.

The factory setting of the control cam is in the middle position of the half turn it can make. The temperature control cam may be turned with a screw driver. Turn the cam clockwise for colder temperatures, and counter-clockwise for warmer temperatures. This adjustment raises and lowers the cut-on and cut-off temperature.

If further adjustment is needed, turn the range screw counter-clockwise for colder cut-off and cut-on temperatures, and clockwise for warmer cut-off and cut-on temperatures. When the range screw is turned, it changes both the cut-off and cut-on temperature, and changes them both the same amount.

There is also a differential screw in the bottom of the temperature control box; but, as it is very hard to make adjustments with this screw, it is best never to change its factory setting.

- CORRECTING TROUBLES -

When the refrigeration system is not working right, find out what is happening, then go to the table called "Correcting Common Refrigeration Troubles" on the next pages. See what the possible causes are, and try the tests in the center column; these tests will tell you what the true cause of the trouble is. When you have found the cause of the trouble, either make the adjustment, repair the part, or put a new part in.

This table does not list *all* of the possible causes of any of the troubles - but it does have all of the *common* causes. If your cooler has a trouble that's not on the chart, or the trouble is not the result of one of the causes on the chart, study the section on "How The Refrigeration Mechanism Works" and and you will be able to figure out what is wrong and fix it.

Trouble	Page
The Compressor Will Not Run At All	13
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The Compressor Motor Never Stops Running	20
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— HOW TO CORRECT COMMON REFRIGERATION TROUBLES —
THE COMPRESSOR WILL NOT RUN AT ALL

A POSSIBLE CAUSE IS	TO MAKE SURE	THIS IS WHAT TO DO
1. The cooler is not plugged in.	Look; and if it isn't,	Plug the cooler in.
2. The power is off.	Plug a 110V lamp into the outlet. If it doesn't light,	Have someone who knows how, get power to the outlet.
3. The refrigeration unit is not made for the voltage it is getting.	Look at the name plate on the cooler to find out what voltage and cycle it is made for. Ask the local power company if they supply this kind of current. If they don't,	Put a cooler in that is made for the kind of current you are getting.
4. A wire in the supply cord or control cable is broken.	Put the prods of 110v test lamp on terminal 2 and L of the starting relay (CL21B) or on terminal 1 of thermal overload switch and on the common terminal of compressor motor (CL35B, CL50B and CFT33C). (Make sure temperature control switch is closed). If it doesn't light,	Put a new supply harness on.
5. The thermal overload switch is stuck open.	Unplug the cooler for at least 15 minutes. Then plug the cooler in, and put the prods of a 110v test lamp on thermal overload terminal (1) and on terminal (L) of the starting relay (CL21B) or on terminal (2) of terminal overload switch and on the common terminal of compressor motor. If the lamp doesn't light,	Put a new thermal overload assembly in.
6. The temperature control bulb is either touching the evaporator or it is covered with ice and frost.	Look at it. If it is touching the evaporator, or it is covered with ice or frost,	Defrost the evaporator and be sure the bulb is mounted right.
7. The temperature control bellows does not work.	Warm the temperature control bulb with your hand for about one minute. If the temperature control switch doesn't close,	Put a new temperature control in.
8. The temperature control switch contacts need cleaning.	Clean them and see if it helps.	Polish the faces of the contacts with fine sandpaper.

THE COMPRESSOR WILL NOT RUN AT ALL (cont.)

A POSSIBLE CAUSE IS

TO MAKE SURE

THIS IS WHAT TO DO

Check the relay out as explained in the next 2 steps. If they do close, skip the next 2 steps and go to step 13 of this section.

Warm the temperature control bulb to close the temperature control switch. If the starting relay contacts don't close at the same time.

On CL-21B remove power line from relay terminal (L). Put prods of 110v test lamp in series with terminal (L) and power line. Remove other power line from relay terminal (2). Touch this power line to relay terminal (M). If lamp does not light

On CL-35B, CL-50B and CFT-33C remove power line from Relay terminal (2/4). Put prods of 110v test lamp in series with terminal (2/4) and power line. Remove other power line from compressor motor terminal (C). Touch this power line to relay terminal (M). If the lamp does not light,

Put a new starting relay in.

Warm the temperature control bulb to close the temperature control switch. If the starting relay contacts don't close when the temperature control switch does,

Put a new capacitor in.

Warm the control bulb to close the temperature control switch. When the compressor tries to start, put the leads of a good capacitor on terminal (S) of Motor Compressor and terminal (S) of the starting relay. If the compressor motor starts,

Put a new motor-compressor in.

Unplug the cooler. Take all wires off the compressor terminals. Connect a 110v line to compressor motor terminals (C) and (R). At

once, with an insulated wire, connect (for 2 seconds) compressor terminals (R) and (S). If the compressor doesn't start,

9. The starting relay contacts aren't closing.

10.

11. The starting relay contacts are stuck open.

12. The capacitor is not working.

13. The compressor motor's starting or running winding is burned out.

THE COMPRESSOR STARTS, BUT WILL NOT KEEP RUNNING

A POSSIBLE CAUSE IS	TO MAKE SURE	THIS IS WHAT TO DO
1. The thermal overload switch opens every time, or almost every time, the compressor motor starts.	Wait till the compressor motor stops, then unplug the cooler and open the temperature control box to see if the temperature control switch is closed. If it is,	Check the "Possible Causes" in the next 6 steps. If it is not, skip the next 6 steps and go to step 8 of this section.
2. The tube from the compressor to the condenser is kinked or bent sharply.	Look. If it is,	Try to get the kink out.
3. The capillary tube is kinked or bent sharply.	If this does not help, and no other cause can be found for the trouble, Look. If it is,	Put a new piece of tubing in.
	If this does not help, and no other cause can be found for the trouble,	Try to get the kink out.
4. The starting relay contacts are sticking closed.	Plug the cooler back in. Then while the compressor is running, see the starting relay contacts stay closed. If they do, If the starting relay contacts stick closed again after cleaning,	Put a new capillary tube in. Clean the relay contacts with fine sandpaper.
5. The voltage at the cooler is either too high or too low.	1. <i>When an extension is not used on the supply cord:</i> While the compressor is running put one prod of a volt meter on terminal (2) of Starting Relay and other prod on terminal (L) of the starting relay (CL21B) or on (CL35B, CFT-33C, CL50B) put one prod on terminal (1) of overload and other prod on terminal (C) of compressor motor. If the voltage is not between 105v and 126v, 2. <i>When an extension is used on the supply cord:</i> Put a double socket on the plug end of the extension and plug it into the outlet. While the compressor is running, put the prods of a volt meter into one of the other sides of the double socket. If voltage is not between 105v and 126v,	Put a new starting relay in. Have the person in charge of the cooler tell the power company, so they can take care of.
		Have the person in charge of the cooler tell the power company, so they can take care of it.

THE COMPRESSOR STARTS, BUT WILL NOT KEEP RUNNING (cont.)

THIS IS WHAT TO DO

TO MAKE SURE

- | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <p>6. The cut-on temperature is set too close to the cut-off temperature.</p> | <p>Put a thermometer on the control bulb. Read the temperature when the refrigeration unit cuts on. Read the temperature again when it cuts-off. If the two temperatures are less than (8)° F. apart,</p> | <p>Put in a new control.</p> |
| <p>7. The thermal overload switch opens after the compressor has been running a short time, but before the temperature control switch cuts the motor off.</p> | <p>Wait till the compressor motor stops, then unplug the cooler and open the temperature control box, to see if the temperature control switch is closed. If it is,</p> | <p>Check the "Possible Causes" in the next 3 steps.</p> |
| <p>8. Not enough air getting to the condenser.</p> | <p>See if there is anything around the outside of the cooler. If there is,</p> | <p>Take it away.</p> |
| <p>9. The condenser is dirty.</p> | <p>Look. Also, feel the tube from the compressor to the condenser. If the tube is very hot, or if you see dirt on the condenser,</p> | <p>Clean the condenser with either a vacuum cleaner, a brush or compressed air.</p> |
| <p>10. The condenser fan motor is burned out.</p> | <p>With the condenser fan motor leads correctly connected to the compressor motor terminals. (See wiring diagram) See if the condenser fan runs when the compressor does. If it doesn't,</p> | <p>Put a new condenser fan motor in.</p> |

THE COMPRESSOR RUNS, BUT THE BOTTLES AREN'T COLD ENOUGH

- | | | |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| <p>1. The evaporator fan is not working.</p> | <p>Look. If it is not working.</p> | <p>Check the "Possible Cause" in the next step. If it is working, skip the next step and go to step 3 of this section.</p> |
| <p>2. The evaporator fan motor is burned out.</p> | <p>Remove black rubber junction block located on fan motor bracket. Connect a 110v line to evaporator fan motor leads. If the evaporator fan motor doesn't start,</p> | <p>Put a new evaporator fan motor in.</p> |

THE COMPRESSOR RUNS, BUT THE BOTTLES AREN'T COLD ENOUGH (cont.)

A POSSIBLE CAUSE IS	TO MAKE SURE	THIS IS WHAT TO DO
3. The temperature control cam is set too warm. (high)	Turn the temperature control cam clockwise to a colder setting and let the cooler run overnight. If the bottles get cold enough, If the temperature control cam cannot be turned to a colder setting, If, after the cooler has run over night, the bottles are still not cold enough, and the range screw cannot be turned to a colder setting, Look at it.	Leave the temperature cam at that setting. Turn the range screw to a colder setting. Put a new temperature control in.
4. The evaporator is covered with frost and ice.	Look at it.	Defrost the evaporator, then check the "Possible Causes" in the next 2 steps. If it isn't, skip the next 2 steps and go to step 8 of this section.
5. The temperature control cam is set too cold and evaporator is not defrosting.	Turn the temperature control cam counter clockwise to a warmer setting. If the evaporator coil does not defrost on each cycle, If after the second setting, the coil still does not defrost,	Turn the temperature cam to a warmer setting. Turn the temperature cam again to a warmer setting. Put a new temperature control in.
6. The temperature control switch contacts stick closed.	If the unit runs all the time and the evaporator builds up frost, Look at it. If it is touching the evaporator tube, Look. If it is not,	Put a new temperature control in. Bend the bracket so that there will be space between bulb sleeve and evaporator tube. Put the bulb in the sleeve (holder).
7. The temperature control bulb sleeve touching the evaporator	Look at it. If it is touching the evaporator tube, Look. If it is not,	Put a new temperature control in. Bend the bracket so that there will be space between bulb sleeve and evaporator tube. Put the bulb in the sleeve (holder).
8. The control bulb is not in the sleeve (holder).	Look. If it is not,	Put a new temperature control in.
9. The temperature control bellows is not working.	Warm the temperature control bulb with your hand for about one minute. If the temperature control switch doesn't close,	Put a new temperature control in.

THE COMPRESSOR RUNS, BUT THE BOTTLES AREN'T COLD ENOUGH (cont.)

A POSSIBLE CAUSE IS	TO MAKE SURE	THIS IS WHAT TO DO
10. The refrigerant tubing is kinked or bent sharply.	Look. If it is,	Try to get the kink out.
11. There isn't enough refrigerant in the refrigeration system or the capillary tube is partly plugged.	If this does not help, and no other cause can be found for the trouble,	Put some new refrigerant tubing in.
12. The condenser isn't getting enough air.	Let the cooler run at least 15 minutes and then see if the evaporator is frosted all over. If it isn't,	Try to blow the plug out of the capillary tube. (See "Basic Refrigeration Section" and then put a new change of gas in the refrigeration unit.
13. The condenser is dirty.	See if there is anything around the outside of the cooler to keep the air out. If there is,	Take it away.
14. The condenser fan motor is burned out.	Look. Also, feel the tube from the compressor to the condenser. If the tube is very hot, or if you see dirt,	Clean the condenser with either a vacuum cleaner, a brush or compressed
15. The thermal overload switch is starting and stopping the compressor.	With the condenser fan motor leads correctly connected to the compressor terminal see if the condenser fan runs when the compressor does. If it doesn't,	Put a new condenser fan motor in.
16. The voltage at the cooler is either too high or too low.	Unplug the cooler for at least 15 minutes, then plug it in again. Be sure the temperature control switch is closed. (Warm the temperature control bulb with your hand to close it.) If the compressor motor cuts off, then on, then off, while the temperature control switch stays closed,	Check the "Possible Causes" in steps 16 and 17.
1. When an extension is not used on the supply cord:	While the compressor is running, put one prod of a volt meter on terminal (2) of starting relay and other prod on terminal (L) of starting relay (CL21B) or on (CL35B, CFT33C, CL50B) put one prod on terminal (1) of thermal overload switch and other prod on terminal (C)	Have the person in charge of the cooler tell the power company, so they can take care of it.

THE COMPRESSOR RUNS, BUT THE BOTTLES AREN'T COLD ENOUGH (cont.)

A POSSIBLE CAUSE IS

16. The voltage at the cooler is either too high or too low. (cont.)

TO MAKE SURE

of compressor motor. If the voltage is not between 105v and 126v,

2. When an extension is used on the supply cord:

Put a double socket on the plug end of the extension and plug it into the outlet. While the compressor is running put the prods of a volt meter into one of the other sides of the double socket. If the voltage is not between 105v and 126v,

If the voltage is between 105v and 126v, (while the compressor is running) put the prods of a volt meter on terminal (2) of the starting relay and other prod on terminal (1L) of the starting relay (CL21B) or on (CL35B, CFT33C, CL50B) put one prod on terminal (1) of thermal overload switch and other prod on terminal (C) of compressor motor. If the voltage is not between 105v and 126v,

17. The starting relay contacts are sticking closed.

Look and see. If they are,

Put a new starting relay in.

THIS IS WHAT TO DO

Have the person in charge of the cooler tell the power company, so they can take care of it.

Tell the person in charge of the cooler that the cooler will not run right with that extension.

THE BOTTLES ARE TOO COLD

1. The temperature control bulb is not in its sleeve (holder).
2. The temperature control cam is set too cold.

Look and see, if it isn't,

Turn the temperature control cam counter-clockwise to a warmer setting and let the cooler run over night. If the bottles get cold enough, but not too cold,

Put the bulb in its sleeve (holder).

Leave the temperature control cam at that setting.

THE BOTTLES ARE TOO COLD (cont.)

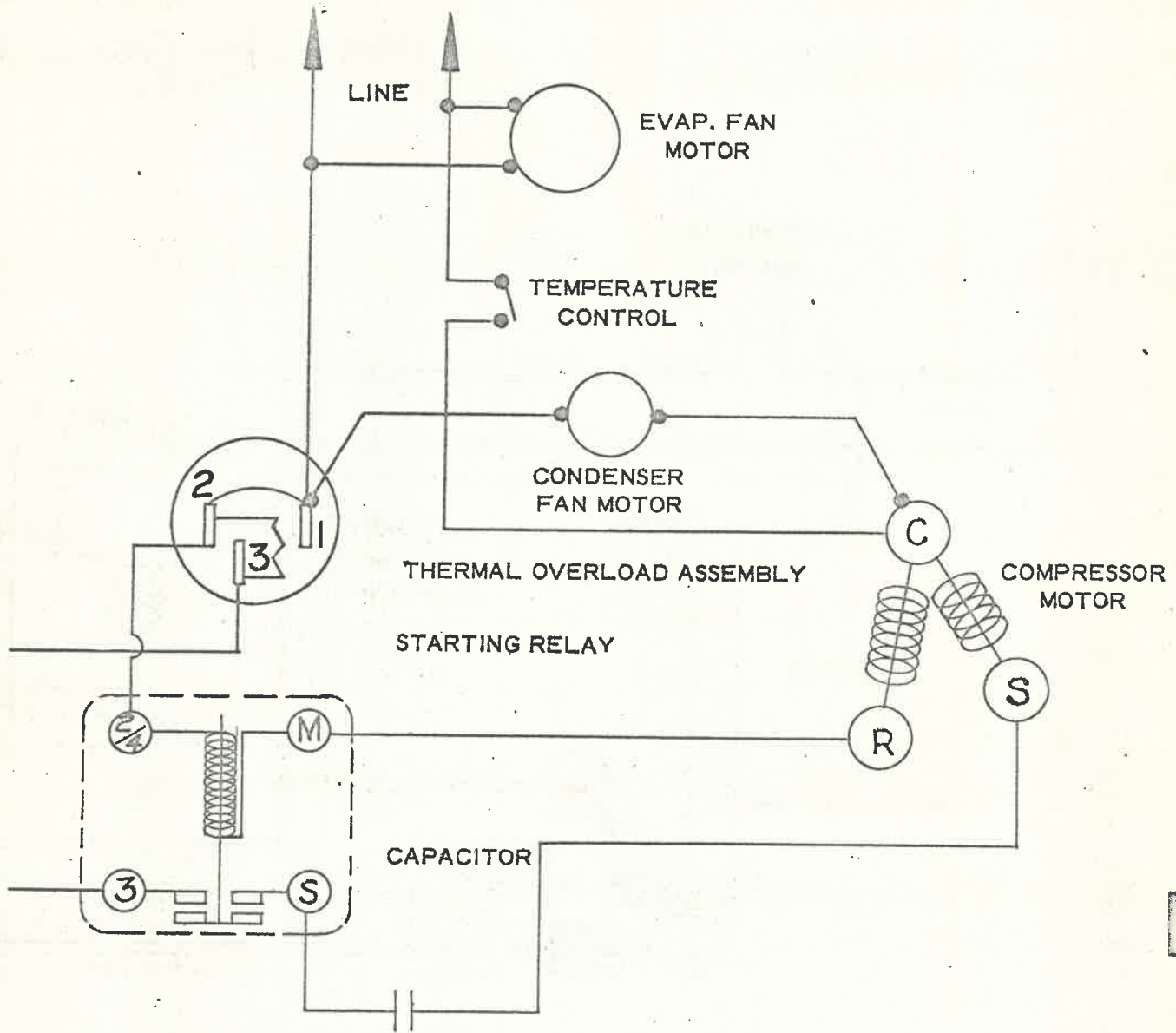
A POSSIBLE CAUSE IS	TO MAKE SURE	THIS IS WHAT TO DO
3. The temperature control switch is stuck closed.	Unplug the cooler and let the evaporator fan come to a stop. Then block the fan blade so it can't turn. Remove temperature control bulb from its sleeve (holder) and touch it to evaporator tube. Plug the cooler back in and let the compressor run until it cuts off, but not more than 30 minutes. If the cooler has not cut off,	Put a new temperature control switch in.

THE REFRIGERATION UNIT IS NOISY

- | | | |
|----------------------------------|------------------------------------------------------|-------------------------------------------------------|
| 1. The refrigerant lines rattle. | Hold them between your fingers. If the rattle stops, | Bend them gently away from whatever they are hitting. |
|----------------------------------|------------------------------------------------------|-------------------------------------------------------|

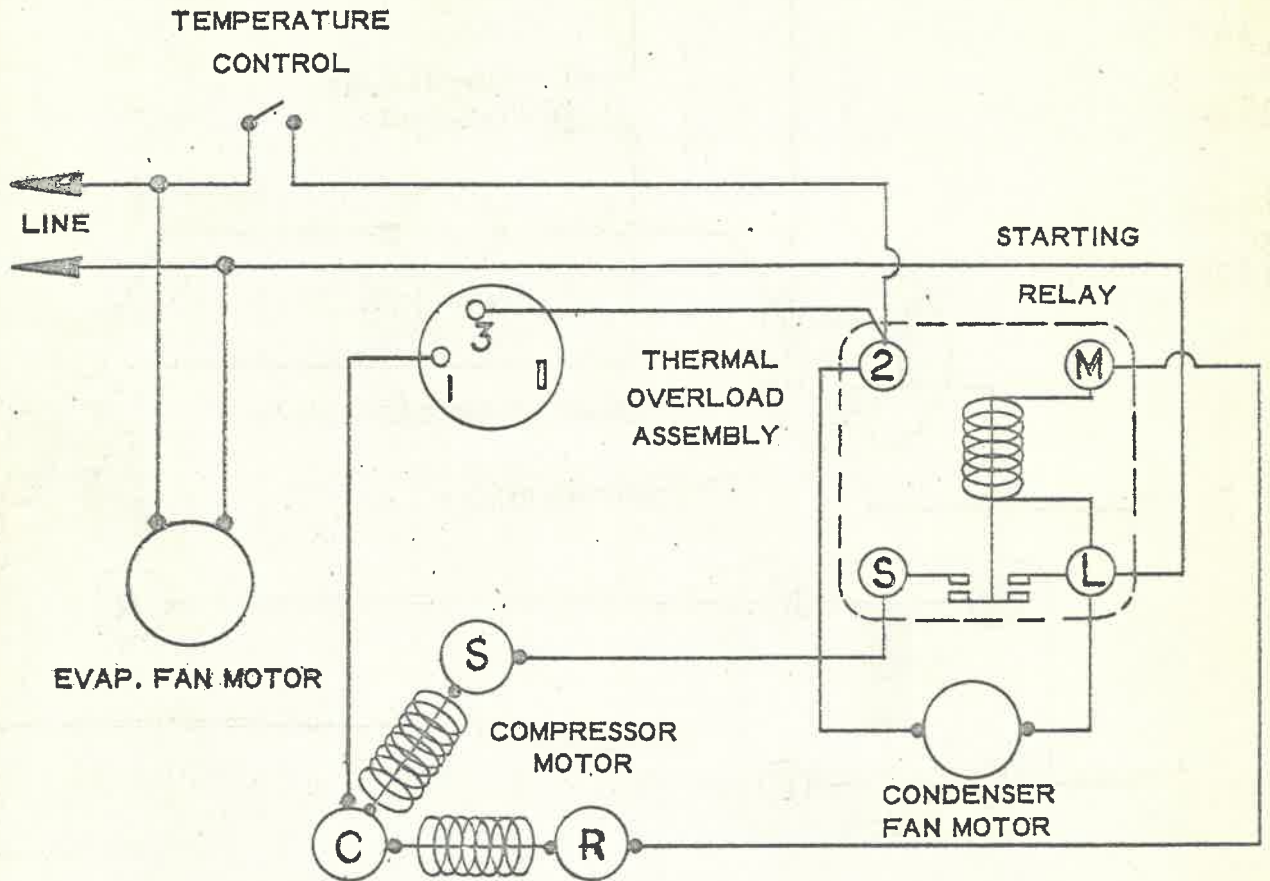
THE COMPRESSOR MOTOR NEVER STOPS RUNNING

- | | | |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| 1. The temperature control switch is stuck closed. | Turn the temperature control cam <i>and</i> the range screw to their warmest settings. Let the cooler run over night, or until it stops. If the compressor motor <i>doesn't</i> stop running, | Put a new temperature control in. |
| 2. The compressor has a broken valve or no refrigerant in the refrigeration system. | The tube from the compressor to the condenser is not warm and the evaporator is not cold. | Put a new charge of refrigerant in the refrigeration unit. |
| | If this does not help, | Put a new motor-compressor in the refrigeration unit. |



WIRING DIAGRAM

CL35B COOLER & CFT 33C COOLER WITH TECUMSEH 1/3 H. P. UNIT
CL50B COOLER WITH TECUMSEH 1/2 H. P. UNIT



WIRING DIAGRAM

CL21B COOLER WITH TECUMSEH 1/4 H. P. UNIT

ACCESSORIES

-COOLER MODEL-	-KIT-	-KIT NUMBER-
CL-21B	Locking Device	C19-01-30
CL-35B	Locking Device	C17-01-30
CL-50B	Locking Device	C18-01-30
CFT-33C	Locking Device	C17-01-30
CL-21B	Swivel Caster Assembly	D17-01-20
CL-35B	Swivel Caster Assembly	D17-01-20
CL-50B	Swivel Caster Assembly	D17-01-20
CFT-33C	Swivel Caster Assembly	D17-01-20
CL-21B	Counter Top	SCT-21
CL-35B	Counter Top	SCT-35
CL-50B	Counter Top	SCT-50

DIXIE-NARCO, INC.
Ranson, West Virginia

REPLACEMENT PARTS AND PRICE LIST FOR OPEN COOLERS

Code	Model
A	CL-21B
B	CL-35B
C	CL-50B
D	CFT-33C

PART NUMBER	DESCRIPTION	CABINET MODEL (See Code)	Net Price
VS28-0087	Leveling Screw	A B C D	\$.29
C17-04-50	S/A Fan Bracket	A B D	1.95
B18-04-60	S/A Fan Spider	C	.80
DN20-0007	Grommets - Air #705	C	4/.29
DN20-0005	Channel Gasket - Air #X2-00	A B C D	.29
VS4-0047	Grommet - Air #2113	A B C D	4/.29
DN13-0002	Fan Blade - Evaporator Motor Torrington P1034	C	2.24
DN13-0003	Fan Blade - Evaporator Motor Torrington #LV1020-3 CCW	A B D	2.24
B17-04-14	Partition Clip 7/8 x 3-3/16	A C D	6/.29
VS23-0212	Fan Motor - Morrill Spagem CCW Facing Shaft		9.82
D19-05-30	Heat Exchanger and Evaporator	A	24.53
D18-05-30	Heat Exchanger and Evaporator	C	48.22
D17-05-30	Heat Exchanger and Evaporator	B D	35.16
D18-05-40	Heat Exchanger and Assembly	C	5.38
D17-05-40	Heat Exchanger and Assembly	B D	4.76
DN26-0001	Evaporator - Tenny #4A3-62-B8	C	37.18
VS8G-0028	Evaporator - Tenny EWCR #6A2-39-B8	B D	26.66
VS30-0017	Lock Washer - Shakeproof #1110	A B C	10/.29
DN20-0003	Gasket Wiper	A B C	.34
DN20-0006	Partition Grommet - Air #174	A B C D	5/.29
VS23-0334	Partition Sleeve - 1/410 x 1/32 W x 1-1/2"	A B C D	6/.29
B18-00-17	False Top	C	7.28
VS30-0076	Lock Washer - Shakeproof #1114	B D	6/.29
B18-00-41	Trim - False Top	C	2.63
B17-00-40	Assembly - False Top	B	7.00
B18-00-70	Fan Cover Assembly	C	4.76
B17-00-41	Trim False Top	B	1.68
C17-00-10	Assembly Crown Catcher	A B C D	2.51
C17-00-120	Assembly, Fan Cover	B D	2.30
B17-00-21	Hanger - Crown Catcher	A B C D	1.24
DN20-0005	Channel Gasket Air X-200 x 33"	B D	.29
DN3-0001	Sheet Metal Screws #6 x 1/4, Type "Z"	A C	6/.29
VS6-0070	Screw Sheet Metal Stainless Steel #6-32 x 1/4 - Z	B D	6/.29
VS10-0019	Crown Puller	A B C D	.75
B19-00-40	Assembly False Top	A	5.54
DN2-0002	Machine Screw #10-24 x 3/4	A B C D	6/.29
B19-00-17	False Top	A	5.38

ALL PRICES FOR PARTS ON LIST ARE SUBJECT TO CHANGE WITHOUT NOTICE

REPLACEMENT PARTS AND PRICE LIST FOR OPEN COOLERS

Code	Model
A	CL-21B
B	CL-35B
C	CL-50B
D	CFT-33C

PART NUMBER	DESCRIPTION	CABINET MODEL (See Code)	NET PRICE
CDN14-0005A	Grille	A B C D	\$ 1.60
B19-00-41	Trim False Top	A	1.60
DN38-0002	Name Plate	A B C D	.67
B19-00-120	Fan Cover Assembly	A	3.89
VS8D-0006	Accumulator	A B C D	1.85
D19-05-40	Heat Exchanger Assembly	A	6.50
BDN20-0004	Refrigeration Sleeve	A B C D	.62
VS8G-0027	Evaporator	A	16.66
VS29-0086	Cable Clamp - Etholoc #5/16 - 6R	A B C D	5/.29
VS29-0087	Cable Clamp - Etholoc #1/8 - 5	A B C D	6/.29
VS29-0102	Cable Clamp - Etholoc #1/2 - 6R	A B C D	4/.29
VS23-0179	Wiring Harness	C D	5.39
VS29-0036	Speed Grip Nuts - Tinnerman C7957-5618-4	A B C D	3/.29
VS8G-0009	Condenser TEC #50653-3	B D	11.25
VS8G-0030	Condenser TEC Part #50627	C	16.13
VS8F-0054	Condenser	A	6.94
VS21-0055	Shroud Condenser	C	.67
VS29-0039	Shroud Clips TEC #70059	A B C D	6/.29
VS29-0041	Speed Nut - Tinnerman #C8079-1420-1	B D	6/.29
VS23-0158	Condenser Fan Motor 9W	C	8.50
VS21-0016	Shroud Condenser TEC #70148	A B D	.67
VS1-0136	Bracket - Fan Motor	A B C D	1.06
VS1-0150	Fan Blade - Condenser 10" TEC #51508	C	1.00
VS23-0212	Evaporator Fan Motor - Morrill #Spagem CW-ROT	A	9.82
VS8A-0054	Strainer - Kenmore #51047A	A B C D	.84
DN28-0005	Control - Ranco	A B C D	7.97
VS43-0006	Lable - Control Decal	A B C D	6/.29
C25-00-10	Large Partition	D	1.46
D25-00-05	Top Cap	D	4.59
VS6-0084	Sheet Metal Screws #10 x 1-1/4 Ph Tr Head	D	5/.29
C25-06-00	Lid Assembly	D	11.54
ADN18-0011	Button - Lid Slide	A	2/.29
ADN19-0003-1	Gasket 46" long	A	1.18
DN16-0004	Retainer - Trim Molding 25 - 1/4"	A B C	.41
DN16-0005-1	Trim Molding With Track	A	1.90
DN16-0005-3	Trim Molding With Track	C	4.20
DN16-0005-2	Trim Molding With Track 17"	B	3.08
D17-00-90	Grid Assembly	B C D	.79
VS6-0023	Screw - Sheet Metal	B D	6/.29
C17-00-100	Grid Assembly (Over Drain)	A B C D	1.14

ALL PRICES FOR PARTS ON THIS LIST ARE SUBJECT TO CHANGE WITHOUT NOTICE

REPLACEMENT PARTS AND PRICE LIST FOR OPEN COOLERS

<u>Code</u>	<u>Model</u>
A	CL-21B
B	CL-35B
C	CL-50B
D	CFT-33C

PART NUMBER	DESCRIPTION	CABINET MODEL (See Code)	NET PRICE
DN20-0008	Gasket Sponge Rubber 1/2" x 1"	A	\$ 5/.29
D18-00-30	Grid Assembly (Fan Compressor)	C	4.76
A18-00-19	Gasket Clip	A	6/.29
C17-00-22	Drain Pan	A B C D	1.28
C17-00-110	Grid Assembly (Fan Compressor)	B D	5.01
C17-00-70	Assembly - Small Partition	A B C D	1.36
C19-00-30	Grid Assembly (Fan Compressor)	A	5.01
C17-00-80	Assembly Large Partition	B C	1.50
F17-06-00	Lid Assembly	A B C	10.64
C19-00-80	Assembly Large Partition	A	2.55
VS3-0003	Handle	A B C D	1.22
VS9-0022	Machine Screw - Stainless Steel #10-24 x 1/2	A B C D	6/.29
DN19-0002	Soakers - Condensate	A B C D	.20
VS1-0297	Bracket - Fan Motor Morrill B537-SE	A B D	.43
B18-00-40	Assembly - False Top	C	9.52
VS1-0097	Fan Blade - Condensate TECX51510- 8-3/4 dia -3" pitch	A B D	1.07
VS8F-0088	Dome TEC. 1/4 H.P. S4414 BM #6046-1-4A	A	46.30
	Overload TEC Part #83172-1 Spencer MRA 3901	A	2.19
	Relay - TEC Part #82310-1 Spencer C6360-20119	A	3.19
VS8A-0062	Dome, TEC, 1/3 S3N14 - BM #1539-21-4	B D	53.70
	Overload TEC Part #83059 Spencer MRL-80-JV	B D	2.29
	Relay TEC #82058 Spencer C6360-2703	B D	3.27
	Capacitor TEC Part #85514 110Volts	B D	2.46
VS8F-0063	Dome TEC 1/2 H.P. S2S16 BM #1729-49-4B	C	60.33
	Overload TEC, Part #83221 Spencer MRB-2974	C	2.68
	Relay TEC, Part #82054 Spencer C6260-3833	C	4.86
	Capacitor TEC, Part #85515 158-191	C	4.24
DN9-0004	Speed Clip	A B C D	6/.29
B25-04-07	Partition Clip	D	5/.29
A25-00-02	Lid Support Member	D	1.96
DN16-0008	Trim Molding 28-3/8	D	1.57
DN16-0009	Retainer - Trim 27-5/8	D	.50
DN16-0010	Trim Molding 29-3/16	D	1.62
DN16-0011	Retainer - Trim 28-7/16	D	.50
ADN19-0003-2	Gasket	B C	1.50
DN16-0003	Trim Molding - 26"	A B C	1.10

ALL PRICES FOR PARTS ON THIS LIST ARE SUBJECT TO CHANGE WITHOUT NOTICE

REPLACEMENT PARTS AND PRICE LIST FOR OPEN COOLERS

<u>Code</u>	<u>Model</u>
A	CL-21B
B	CL-35B
C	CL-50B
D	CFT-33C

PART NUMBER	DESCRIPTION	CABINET MODEL (See Code)	NET PRICE
BDN18-0004	Handle, Lid	Indicate Model	\$ 1.43
BDN18-0014	Lid	Indicate Model	3.49
BDN20-0003	Complete set lid gaskets	Indicate Model	.31
CDN14-0002	Partitions	" "	1.41
DN26-0002	Evaporator	" "	20.20
DN26-0003	Evaporator coil	" "	26.04
DDN14-0003	Partitions	" "	1.41
VS3-0086	Runner	" "	3.71
C25-05-30	Evaporator w/heat exchanger formed and soldered to evaporator	" "	25.87
A17-06-03	Lid retainers	" "	3/.29
D17-00-18	Intermediate track	" "	2.66
DN45-0014	Evaporator motor	" "	16.47
C18-04-70	Bracket	" "	.95
ADN18-0012-1	Plastic strip for cabinet & lids	" "	.93
ADN18-0012-2	Plastic strip for cabinet & lids	" "	.98
C17-05-01	Discharge line	" "	2.66
C17-05-02	Liquid line	" "	.66
DN3-0016	Sheet metal screws	" "	5/.29
DN7-0005	Flat washer	" "	10/.29
DN29-0004	Capillary tube	" "	1.56
VS4-00-90	Washer, Fan (Neoprene)	" "	5/.29
B25-02-10	Side rails for end lids	" "	3.59/set
83017	Overload protector	" "	2.66
B17-06-02	Bumper	" "	.35
C25-00-20-1	Left end rail	" "	1.50
C25-00-20-2	Right end rail	" "	1.50
C18-05-10	Condensate assy.	" "	42.71
C17-06-01	Lid cover	" "	19.02
A11-04-11	Brackets that hold lid rail	" "	5/.29
C25-05-40	Heat Exchanger	" "	26.50
C17-00-13-2	Track assembly right side w/screws	" "	1.82
VS3-0068	Door slide	" "	2.71
A25-06-04	Sets insulation for lid	" "	.37
82639	Relay	" "	5.17
83669	Overload	" "	2.67
B25-02-16	Left rail	" "	1.82
	Right Rail	" "	1.82
DDN20-0009	Gaskets	" "	.65
DN25-0010	1/3 H.P. Dome model AT-34	" "	60.08
DN39-0004	Capillary for CFT-33C	" "	1.57
DN29-0005	Capillary tubes for CL-50	" "	2.14
B25-06-03	Inner liner for lids	" "	.91
B25-00-04-1	End Rail R/H	" "	3.00
B25-00-04-2	End Rail L/H	" "	3.00
EK-16	Kit - overload and relay	" "	5.00
D17-01-20	Set casters	" "	13.34

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