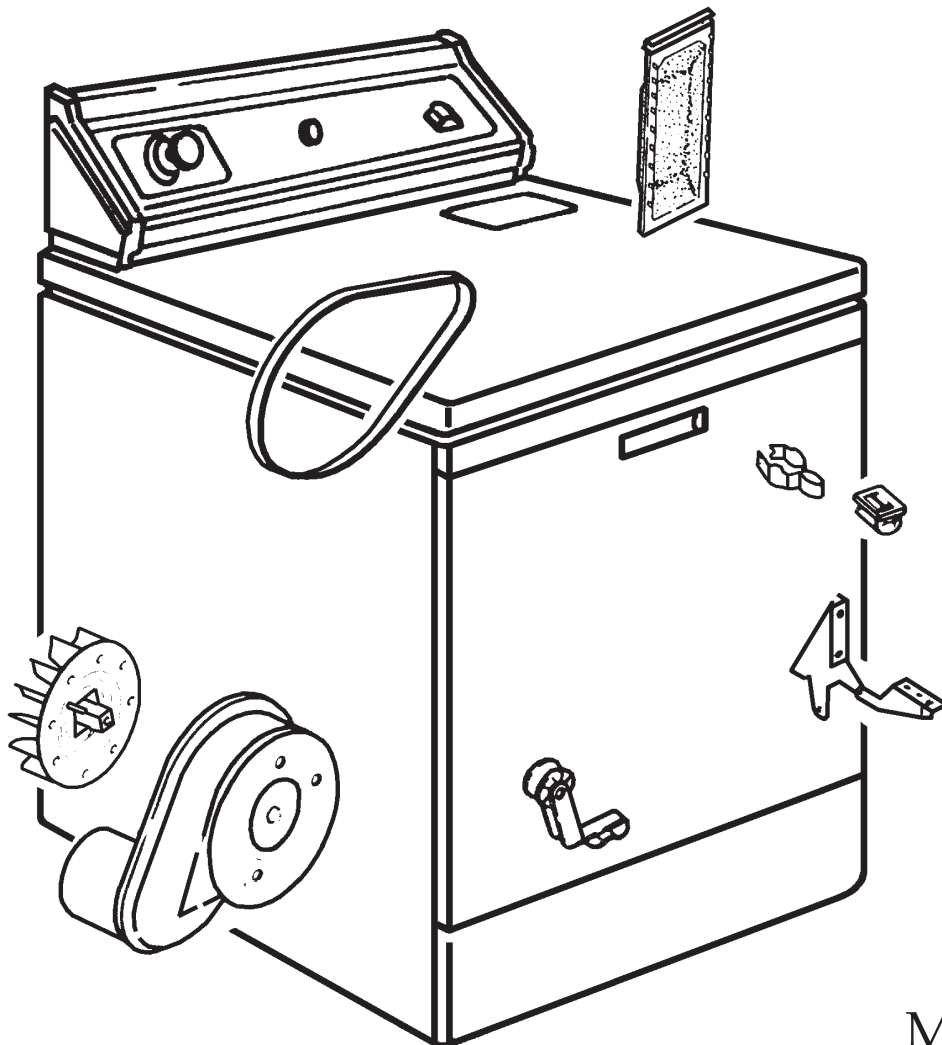


DRYER

STUDY COURSE for Home Appliances

UNDERSTANDING DRYER:

- *MECHANICAL COMPONENTS*





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INTRODUCTION

The material presented in this module is intended to provide you with an understanding of the fundamentals of gas and electric dryer servicing.

Major appliances have become more sophisticated, taking them out of the screwdriver and pliers category. Their electrical circuits include several different types of automatic controls, switches, heaters, valves, etc.. Semiconductors, solid-state controls, and other components usually associated with radio and television electronic circuits are being engineered into automatic washers, dryers, dishwashers, refrigerators and microwave ovens.

The appliance technician is emerging into a professional status of his own. He must prepare himself now to be able to perform his duties today as well as to retain his professionalism in the future.

No longer is on-the-job training sufficient to prepare technicians for the complicated procedures required for today's sophisticated appliances. This training can best be obtained through organized classroom study and application. However, much of the knowledge necessary to service today's appliances can be obtained through study courses. Completion of this and other courses will provide you with sufficient understanding of appliances and their operation to enable you to do minor service. It will also serve as a valuable stepping stone to more advanced study and on-the-job training to improve your servicing skills.

Information contained in this module is used on WHIRLPOOL® appliances.

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TEST See Test Book LIT787852

**NOTE: We recommend taking the TEST for MODULE 3, right after studying it.*

CHAPTER 1

MECHANICAL COMPONENTS

LINT SCREEN

The lint screen is located in the right rear of the top, under the lint screen cover, and is used to catch lint as the air leaves the dryer drum.



Failure to push the screen all the way down could cause lint to pass under the bottom of the screen. This could cause lint to build up in your exhaust system, causing a possible fire hazard.

FRONT BEARING and SEAL

The bearing and seal is located on the inside flange of the front cabinet panel and is used to support the drum and make a seal between the front drum and panel openings.



When replacing this seal, make sure the folded edge of the seal is facing away from the front cabinet panel and the two holes in the bearing fit over the two rubber plastic clips.

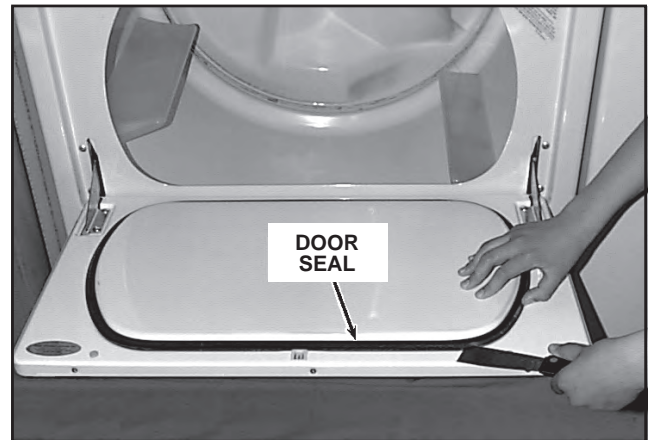
Reduced air pressure in the drum during operation draws the seals in and effectively seals the drum ends.

The two seals, one at the back and one at the front, are the points most susceptible to leaking. If either does not seal effectively while the drum is rotating, there would not be enough air passing through the heater box.

If air is allowed to leak in through any point other than the heat source, drying efficiency is greatly affected. Not only is the lack of heated air a factor, but it must also be remembered that the heater is generating a predetermined amount of heat. If not enough air is passing to carry off the heat as fast as it is being produced, the excessive temperature building up in the heat duct will open a high-temperature-limiting safety thermostat switch and shut off the heat source.

DOOR SEAL

This part is located on the rear door panel and is used to form a tight seal between the door and front cabinet panel when the door is closed.



When replacing this seal place a bead of silicone rubber adhesive/sealant around the groove in the rear door panel. Place the door seal with the round side in the groove in the rear door panel.

DOOR HINGE

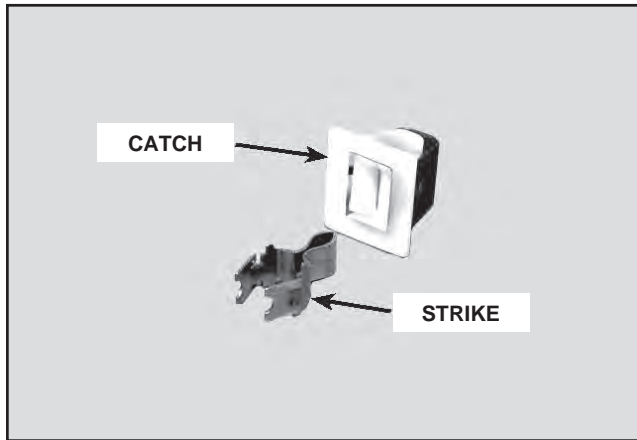
There are different types of door hinges that could have been used on dryers.



These hinges are used to support the door.

DOOR STRIKE / DOOR CATCH

These two parts fit together and hold the door in a closed position.



Models were built with either the catch or strike on the front cabinet panel and the mating part on the rear of the door.

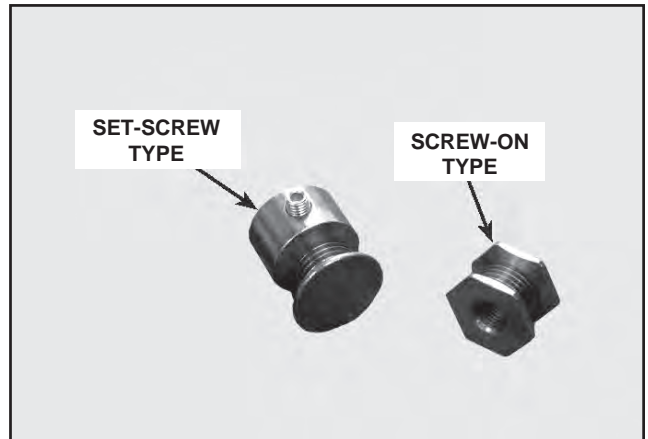
LEVELING FEET

These plastic or metal feet are screwed into the front and rear corners of the dryer.



DRIVE MOTOR PULLEY

The pulley is located on the end of the drive motor and is used with the drive belt in order to turn the drum.



IDLER PULLEY

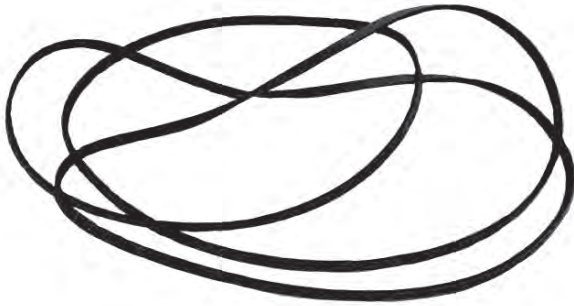
This part is located below the drum and in line with the drive motor pulley.



The function of this part is to supply tension to the drive belt.

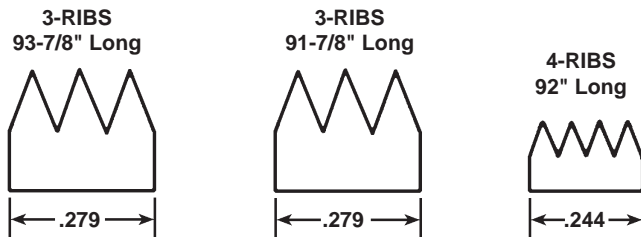
DRIVE BELT

The drive belt fits around the drum, under the idler pulley, and around the motor pulley. The motor pulley moves the belt which turns the drum, causing the clothes to tumble. The idler pulley maintains drum belt tension.



NOTE: It is recommended that anytime the front cabinet panel is removed, the drive belt be checked for frayed spots or wear, and replaced.

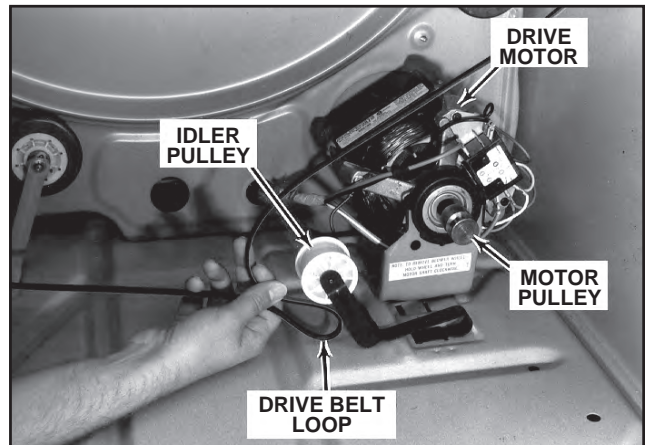
V-belts and pulleys have been changed several times since they were introduced. The belt must be compatible with the correct pulley for proper rpm. There are also belts and pulleys with five grooves. However, a 4-rib belt can be used on a 5-rib pulley.



Belt "Vees" must fit evenly into the grooves on the motor pulley. If the "Vees" are out of the grooves, higher-than-normal drum speeds will be attained, causing the clothes to cling to the drum sides, resulting in prolonged drying time or excessive wrinkling of clothing.

For proper tumbling of garments, all dryer drums should revolve at 48 rpm's or 55 rpm's if it is a compact dryer. Always check the service parts list to be sure that you have the correct belt for the model you are repairing. An incorrect drum drive belt or one not fitting in the pulley grooves can cause very high drum speeds.

To install the drum belt, begin by removing the dryer front panel. Then place the belt over the drum in the driving position, and install it under the idler pulley and over the motor pulley.



When assembling the belt on the motor pulley, first form a small loop, then slide the drive belt under the idler pulley. Push the idler assembly to the right, and at the same time place the loop of the belt over the end of the motor pulley.

LINT CHUTE

The lint chute is located in the right rear corner. The lint screen is housed in this part.



Air passes through the screen and chute before it is exhausted to the outside.

BLOWER HOUSING

The blower housing is located in the back of the dryer.



The blower wheel and thermostats are housed in this part.

BLOWER WHEEL

The blower wheel pulls the air out of the drum and pushes it out the exhaust duct.



HEATER BOX

The heater box houses the heat element on electric dryers and carries the heat from the gas burner to the drum on gas models.



This heat is pulled into the drum area by the blower wheel.

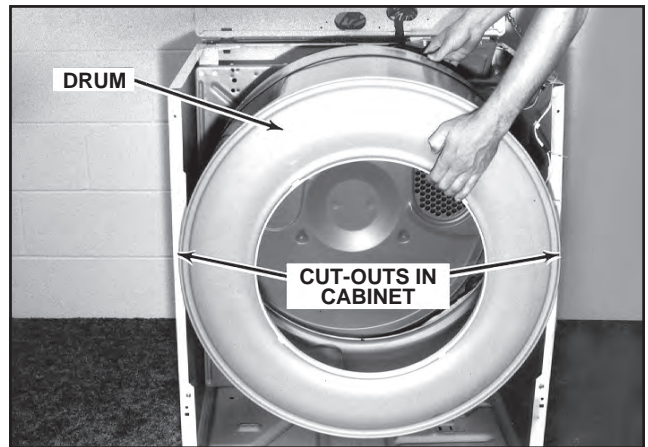
MANIFOLD COVER

This part is located behind the bulkhead and in front of the heater box.



DRUM

The drum is the large, round container mounted for rotation within the cabinet. Wet clothing is placed within the drum, to be heated and tumbled dry.



Baffles within the drum lift and tumble the clothing during drum rotation.

DRUM BAFFLE

The drum baffle is attached to the inside of the drum, and is used to tumble the clothes when the drum turns.



BEARING RING

The bearing ring snaps into place within the round opening in the front of the dryer drum. This bearing ring rides on the outer surface of the bearing and seal fastened to the outside of the flange formed in the center of the front cabinet panel.



To insure the minimum of air leakage and proper drum alignment when replacing the bearing ring, the bearing and seal should be changed at the same time.

REAR DRUM SEAL

The rear drum seal is used to keep cool air from being drawn into the drum area and the heated air from escaping.

It is cemented to the rear of the drum and rides on an embossed area of the bulkhead.



Reduced air pressure in the drum during operation draws the seals in and effectively seals the drum ends.

The two seals, one at the back and one at the front, are the points most susceptible to leaking. If either does not seal effectively while the drum is rotating. There would not be enough air passing through the heater box.

If air is allowed to leak in through any point other than the heat source, drying efficiency is greatly affected. Not only is the lack of heated air a factor,

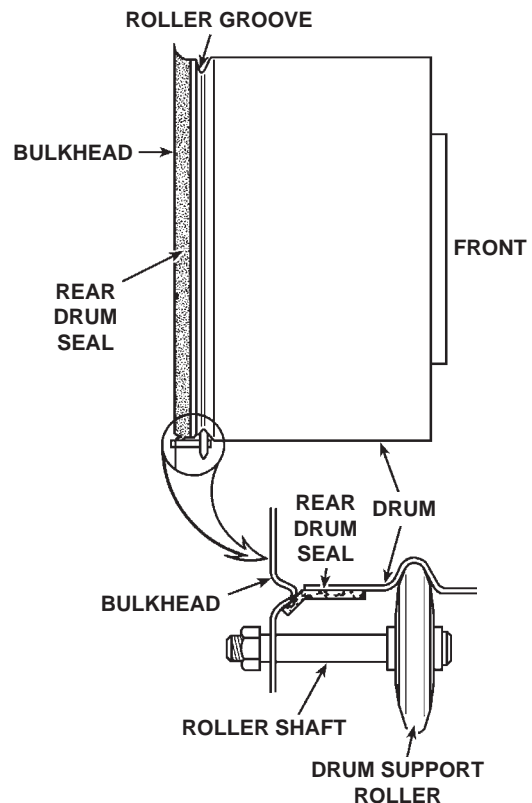
but it must also be remembered that the heater is generating a predetermined amount of heat. If not enough air is passing to carry off the heat as fast as it is being produced, the excessive temperature building up in the heat duct will open a high-temperature-limiting safety thermostat switch and shuts off the heat source.

SUPPORT ROLLER

These two rollers are located on the bulkhead. They support the rear of the drum while the drum turns.



The drum has a groove (shown below) embossed into its outer circumference, which acts as a track for the rollers. The track keeps the drum in alignment with the bulkhead and the front panel.



ROLLER SHAFT

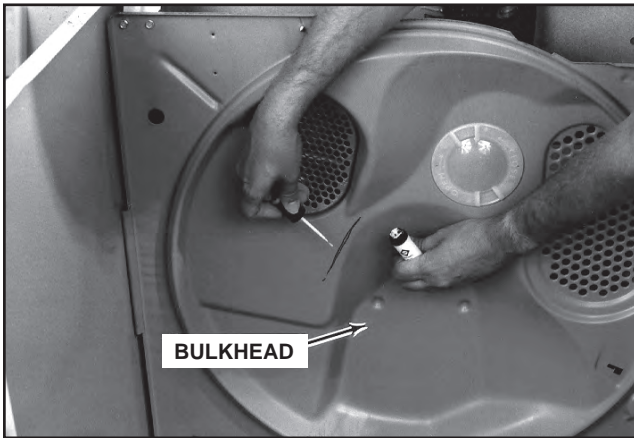
These two shafts are located on the bulkhead.



The drum support rollers ride on them.

BULKHEAD

This part is located inside the cabinet, and is used as a back for the drum and supports the sides of the cabinet.



This bulkhead also supports parts of the heat and air systems.

NOTE: This bulkhead can be touched up, if it has been scratched.

LINT ALERT

This lint alert is located on the lint chute. When the lint screen is blocked with lint, the lint alert sounds off a musical tone informing the consumer to clean the lint screen.



REAR SERVICE PANEL

This part is located on the back side of the cabinet. It is used to cover all of the components on the rear of the unit.



BLANK

BLANK