



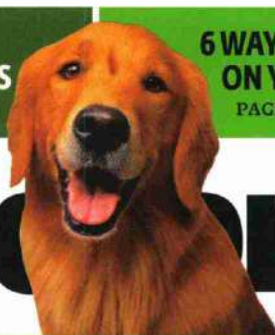
**ROAD TEST:
CHRYSLER CARS**
PAGE 50

**FAST FOOD
LOSERS**
PAGE 18



**BEST
CAMERAS**
PAGE 38

**6 WAYS TO SAVE
ON YOUR PET**
PAGE 30



AUGUST 2011 | CONSUMERREPORTS.ORG
Consumer Reports®

Repair or Replace It?

Save thousands by knowing
when to fix it (or not)



EXCLUSIVE

**Most and least reliable brands
27,000 consumers tell what breaks
and what doesn't**

Page 1 of 7

COVER STORY

Repair or replace it?

The right answer can save you thousands on appliances and gear

WHAT DO SIDE-BY-SIDE refrigerators, laptop computers, and zero-turn-radius riding mowers have in common? They're among the most repair-prone products you can buy, according to our latest reliability data as well as our most recent Repair or Replace survey, in which 27,404 subscribers told us about the troubles they had with 53,218 broken appliances, electronics, lawn equipment, and more.

It's not all doom and gloom. Though consumer goods have become more complex and contain more electronics than they did a decade ago, the 33 products we asked about aren't failing more frequently. But when things do go wrong, they tend to go horribly wrong, according to our surveys, conducted by the Consumer Reports National Research Center. More than half of the products that did break stopped working altogether, and another 30 per-

cent still worked, but poorly.

That won't surprise Kermit Moreau of Lumberton, Texas. His Whirlpool front-loading washer required three service calls before a cold-solder joint in the main computer was identified as the problem and fixed. "It meant us going to the washeteria each time to do the laundry," he said.

Cinnamon Howell of Indianapolis complained to The Consumerist, our sister website, about the icemaker on her GE re-

What breaks, what doesn't

Percentage of three- to four-year-old products that broke. Reliable brands are shown.

Refrigerator
side-by-side,
all have icemaker

REPAIR RATE

36%

RELIABLE BRANDS
Whirlpool, Kenmore
REPAIR-PRONE BRAND
LG

Refrigerator
top- and bottom-
freezer with icemaker

REPAIR RATE

28%

RELIABLE BRANDS
Whirlpool, Kenmore,
Frigidaire (TF), Jenn-Air,
Kenmore, KitchenAid (BF)
REPAIR-PRONE BRAND
GE

Refrigerator
top- and bottom-
freezer, no icemaker

REPAIR RATE

15%

RELIABLE BRANDS
Whirlpool, Frigidaire
(TF), Kenmore, LG,
Amana (BF)
REPAIR-PRONE BRANDS
Maytag (TF), GE (BF)

Dryer
gas and electric

REPAIR RATE

12%

RELIABLE BRANDS
LG, Whirlpool, GE (C);
LG, Bosch, Amana (E)
REPAIR-PRONE BRAND
Fisher & Paykel (E)

Washing machine
front-loading

REPAIR RATE

25%

RELIABLE BRAND
LG
REPAIR-PRONE BRANDS
none stood out

Washing machine
top-loading

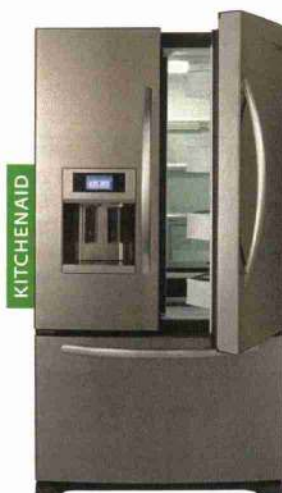
REPAIR RATE

20%

RELIABLE BRANDS
Roper, Amana
REPAIR-PRONE BRAND
Fisher & Paykel



LG



KITCHENAID



KENMORE

Appliances

A minor glitch can be enough to sideline a major appliance, so it's often worth considering a repair even on models that are five or more years old. For example, a fried circuit board might be to blame for an inoperable range or oven, a blown thermal fuse is the common cause of dead dryers, and a damaged water inlet valve shuts down many dishwashers. Those parts are all fairly easy to replace. Survey respondents were more satisfied with independent service shops than factory or authorized ones. Not only were the repairs done more quickly, but they also cost less. If you prefer factory service, make sure the technician who does the work on your machine—and not just his or her boss back at the office—has been properly trained.

If an appliance falls in the yellow "Consider repair" zone, more expensive models are usually worth keeping longer. If an item has already broken down once

before or isn't performing well, lean toward replacing it. Also pay attention to energy efficiency. Today's refrigerators, washers, and dishwashers use less energy and/or water than older models, another incentive for an upgrade. But our tests have found that some are more efficient than others, so check our Ratings.

Dispose of appliances properly.

Many retailers offer free haul-away when you buy a new appliance from them. But only ApplianceSmart, Best Buy, and Sears participate in the Environmental Protection Agency's Responsible Appliance Disposal Program, which ensures that any harmful chemicals will be reclaimed or destroyed and that all metal, plastic, and glass will be recycled. Your utility company might even pay you to get rid of an old energy-wasting appliance. Or contact the Steel Recycling Institute at www.recycle-steel.org to find an appliance-recycling program in your area.

About a third of desktops and laptops need a fix by year four.

frigerator, which broke not once or twice but three times before the refrigerator gave out completely.

So how do you avoid a lemon? Check our "What Breaks, What Doesn't" lists for the most temperamental products, and some of the most and least reliable brands. Then use our "Repair-or-Replace Timeline" charts to find out which products to fix and which aren't worth the effort and expense. Here's what else our survey found:

Computers break—a lot. Around one in three laptops and desktops break by their fourth year. And warranties are getting less generous. "With many electronics, parts are covered for one year, but labor is only good for 90 days," says Eric Arnun, editor of Warranty Week, an online trade publication. "I think that's designed to encourage people to dispose of the products when they find out the cost of the repair is more than their product is worth. You say to yourself, 'I'll just toss it and get a new one.' And manufacturers say, 'Aha! It worked.'"

Many computer breakdowns are due to malicious software (malware) or hard-drive failure. Installing antivirus software on your computer is the best defense



Repair-or-replace timeline

Appliance	Age of broken product								Cost			Repair problems					
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Replacement range	Median replacement	Repair	Satisfaction with repair	Percent with any problems	Expensive	Bad job	Hard to get parts	Took too long
Clothes dryer electric									\$400-\$1,100	\$ 650	\$136	🔴	35%				
Clothes dryer gas									450-1,150	750	136	🔴	33				
Cooktop electric									400-1,500	650	169	🔴	53			•	
Cooktop gas									400-1,500	650	171	🟡	57	•			
Dishwasher									300-800	550	137	🟢	47				
Microwave oven over-the-range									250-600	350	139	🟢	52				
Range electric									400-1,000	600	170	🟢	52			•	
Range gas									500-1,300	700	156	🟢	50	•		•	
Refrigerator built-in									5,000-8,000	6,500	309	🟡	62	•		•	
Refrigerator side-by-side									800-1,700	1,200	190	🟢	45				
Refrigerator bottom-freezer									800-2,200	1,500	188	🟢	52				
Refrigerator top-freezer									500-900	700	168	🟢	48	•			
Vacuum cleaner full-size canister									200-600	400	70	🟢	46				
Vacuum cleaner full-size upright									70-400	235	60	🟢	43				
Wall oven electric									800-2,000	1,000	239	🟢	67	•		•	•
Washing machine front-loader									650-1,200	750	176	🟢	50				
Washing machine top-loader									400-900	500	143	🟢	36				

What breaks, what doesn't

Dishwasher

REPAIR RATE

20%

RELIABLE BRANDS

Whirlpool, Kenmore, Hotpoint, Bosch

REPAIR-PRONE BRANDS
Fisher & Paykel, LG

Range

gas and dual-fuel

REPAIR RATE

16%

RELIABLE BRANDS

Hotpoint, GE, Kenmore, Frigidaire (G); GE (DF)

REPAIR-PRONE BRANDS
KitchenAid (G); Jenn-Air (DF)

Range

electric

REPAIR RATE

13%

RELIABLE BRANDS

Hotpoint, GE, Whirlpool

REPAIR-PRONE BRANDS
Jenn-Air, KitchenAid

Wall oven

electric

REPAIR RATE

16%

RELIABLE BRANDS

Frigidaire, GE, Kenmore

REPAIR-PRONE BRANDS
Thermador, Jenn-Air

Vacuum

canister

REPAIR RATE

18%

RELIABLE BRANDS

Rainbow, Dyson

REPAIR-PRONE BRAND
Electrolux

Vacuum

upright

REPAIR RATE

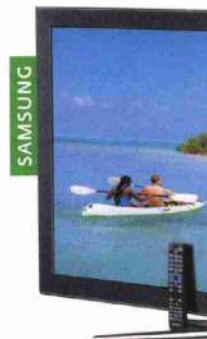
14%

RELIABLE BRANDS

Kirby, Kenmore, Dyson, Dirt Devil

REPAIR-PRONE BRAND
Simplicity

COVER STORY REPAIR OR REPLACE IT?



▶ Electronics

Given the speed of innovation, you might be less inclined to repair an electronic device even if it's only a few years old. For example, why repair a DVD player when a versatile Blu-ray player with Internet access now costs as little as \$100? There are also fewer repair shops and retailers that specialize in electronics, and those that still do often require some money up front before they'll even look at your device. Manufacturers are less likely to charge for estimates, but you'll probably have to pay for shipping at least one way.

Still, you might not want to learn how to use a new device, endure the hassle of replacing a TV set that's connected to a sound system and can be readily fixed, or transfer your entire "life" to a new computer. In our survey, repair-satisfaction rates were highest for digital cameras and LCD TVs with a 53-inch or larger screen. Overall satisfaction was about the same for independent repair shops

and factory-authorized ones, though independents charged slightly more. Cell phones aren't in our timeline because so few people try to fix them.

Dispose of electronics properly. Never toss nonworking electronics in the household trash because they can contain potentially hazardous materials, including cadmium, lead, and mercury. Go to www.earth911.com or www.digitaltips.org/green to find a recycling program in your area that will handle those materials responsibly. Some retailers also recycle. Best Buy takes computers and TVs free. Staples and Office Depot charge \$10 to \$15 per item.

Just looking for the latest innovation? Not everyone is an early adopter, so you might be able to sell a late-model computer, camera, or TV if it's in working order. The website www.ecosquid.com can match you with possible buyers and even give you an idea of how much the item is likely to fetch.

against malware. Some manufacturers have attempted to improve hard-drive protection by parking the drive head on a nondata section of the disk to minimize the risk of damage if the computer is dropped. We believe that protection should be standard on all laptops and netbooks. Regardless, you should always shut down your device before traveling even short distances.

Some rugged laptops, such as a Panasonic Toughbook or the Dell Latitude model, carry Military Standard 810-G certification. We haven't tested those devices, but the manufacturers claim that they can withstand all sorts of abuse, thanks to such features as magnesium-alloy cases, shock-mounted hard drives, and spill-resistant keyboards. Many are backed by a three-year warranty, although they can cost hundreds, if not thousands, of dol-

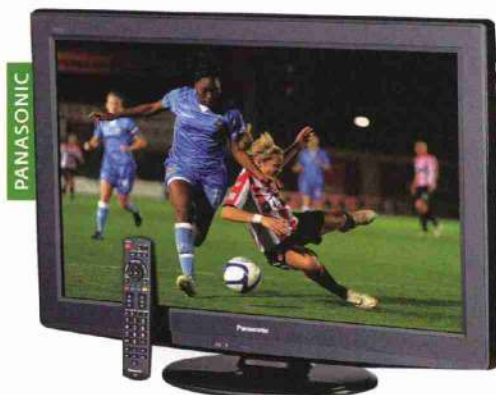
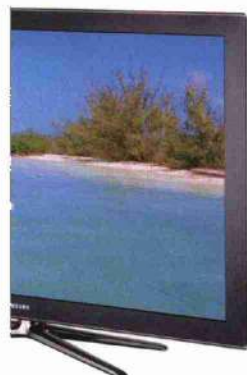
Don't get mad, get social

Social media tools have become some of the best ways to get a manufacturer's attention. More companies have started using monitoring software to scan Facebook, Twitter, YouTube, and the like. So there's a good chance they'll pick up your complaint (or praise, for that matter, should you broadcast a positive experience). Just ask Adam Fort of Baltimore, who told The Consumerist that after he posted comments on his Facebook page about his dead Whirlpool oven, he received a message from a customer-service representative for the manufacturer. "Even though the unit was not within its warranty period, [the representative] agreed to split the costs of both the parts and the labor," he wrote. Direct e-mail can also do the trick, as it did for the Koepfel family of Los Angeles, who wrote the CEO of Home Depot about their



dysfunctional LG dishwasher. Within 12 hours Home Depot responded, saying it would replace the dishwasher free.

ILLUSTRATION: GETTY IMAGES



PANASONIC

Repair-or-replace timeline

Product	Age of broken product								Cost		Repair problems						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Replacement range	Median replacement	Repair	Satisfaction with repair	Percent with any problems	Expensive	Bad job	Hard to get parts	Took too long
Digital camcorder									\$250-\$1,000	\$ 600	\$130	64%	•	•	•	•	•
Digital camera point-and-shoot									75-500	250	79	49	•	•	•	•	•
Digital camera SLR									600-2,700	800	158	50	•	•	•	•	•
Home theater system									250-2,000	500	145	60	•	•	•	•	•
PC desktop									300-1,200	600	163	43	•	•	•	•	•
PC laptop or notebook									300-2,300	800	166	51	•	•	•	•	•
TV LCD (37 inches or smaller)									225-1,200	650	159	59	•	•	•	•	•
TV LCD (40 to 52 inches)									500-2,400	1,400	262	59	•	•	•	•	•
TV LCD (53 inches or larger)									800-5,000	1,900	333	48	•	•	•	•	•
TV plasma (40 to 52 inches)									500-2,300	1,000	379	57	•	•	•	•	•

lars more than standard laptops.

Some technologies are finicky. Refrigerators with icemakers are twice as likely to break down as those without. "They're the bane of any refrigerator's existence," says Chris Hall, president of RepairClinic.com, which dispenses repair advice and sells appliance parts to consumers. The device's complicated design and the extreme environment it must operate in explain the high failure rate. Kenmore has switched to a simpler type of icemaker that's basically a mechanical version of a manual twist-style ice tray. "Fewer moving parts means less to go wrong," says Doug Constantine, product manager for Kenmore refrigeration. Even with this innovation, Constantine recommends emptying your icemaker and turning it off if it won't be in use for an extended period. And if your home has hard or sediment-

filled water, adding a whole-house water filter or a water softener should help the icemaker and your dishwasher because the water inlet valve on both appliances is susceptible to scaling and clogging.

Among laundry appliances, front-loading washers are more repair-prone than top-loaders. The large rubber gasket that forms a watertight seal around the door is a common culprit. Carefully loading and unloading clothes will minimize wear and tear to the gasket. Mold is another issue. Manufacturers recommend that you periodically clean the gasket with a bleach solution and keep the door ajar after each use to allow ventilation. We'd like to see more mold-eliminating innovations. LG, for example, has developed a special magnet that props the washer door slightly open. LG washers had been more vulnerable to mold in the past, but they

What breaks, what doesn't

Computer laptop

REPAIR RATE

36%

RELIABLE BRANDS

Toshiba, Acer

REPAIR-PRONE BRANDS
none stood out

Computer desktop

REPAIR RATE

32%

RELIABLE BRAND

Apple

REPAIR-PRONE BRAND
Gateway

TV

LCD

REPAIR RATE

15%

RELIABLE BRANDS

Panasonic, Sanyo, Sylvania

REPAIR-PRONE BRANDS
Westinghouse,
Polaroid, Mitsubishi

TV

plasma

REPAIR RATE

10%

RELIABLE BRANDS

Panasonic, Samsung, LG

REPAIR-PRONE BRANDS
none

When secondhand pays

We generally don't recommend buying used appliances, because you'll miss out on the latest efficiencies and innovations. Case in point: A refrigerator made today could cost \$100 less to run per year than a decades-old model, and it's likely to have better storage features. But homeowners sometimes ditch fairly new appliances if they're remodeling and the existing units don't match the new décor. So if the age of the appliance is in the repair zone of our Repair-or-Replace Timeline, the price is less than half that of a new model, and it's a product with a low repair rate, you might consider buying secondhand. Habitat for Humanity's ReStores are one source for used appliances; proceeds go to help local affiliates. You can also search the Internet for used-appliance outlets in your area.

COVER STORY REPAIR OR REPLACE IT?

HUSQVARNA



CRAFTSMAN



JOHN DEERE



LAWN-BOY



TORO



► Lawn equipment & home exercise gear

The more complex the lawn equipment, the more likely it is to break down. Zero-turn-radius riding mowers can turn on a dime but require complicated transmissions and steering systems and are the most repair-prone, followed by lawn tractors, riding mowers, and self-propelled mowers. There's not much that can go wrong with push mowers, because all the engine does is spin the blade. Not surprisingly, replacement cost goes up with complexity, which is why our repair windows are generally longer for riding mowers and tractors. Note that routine maintenance, including sharpening and balancing the blade, hosing clippings off the deck, adding fuel stabilizer during hot weather, and draining the fuel during the off season, can

extend the life of your equipment.

Dispose of equipment properly. The Salvation Army accepts lawn equipment that's in good condition. For a fee, a haul-away service like 1-800-Got-Junk will take mowers and tractors, as well treadmills and other large-scale exercise equipment, off your hands. Your city might run a drop-off recycling program. Some even offer mower-exchange programs, giving cash to residents who trade in their gas-powered mower for an electric one. See whether your local repair-and-retail shop wants it for parts, perhaps in exchange for credit toward a new model. Or you could put the equipment out on the curb with a "free" sign on it. A metal scavenger might come by and haul it off to the scrap yard.

now have the lowest repair rate among models of front-loaders.

Extended warranties don't deliver. Based on our survey, appliances usually don't break during the extended-warranty period, normally after the standard warranty has expired but within two to three years of purchase. Even when breakdowns do occur in that time, the median cost of repair, \$150, isn't much more than the median price of a warranty, \$142. And if the product doesn't break, you haven't wasted your money on needless protection.

A computer might be an exception, especially if you travel a lot or it's for your busy teenager. Make sure the warranty covers accidental damage and extended tech support. Some credit-card companies

extend the manufacturer's warranty free. American Express, for example, adds a year of protection for computers.

Buyback programs are another "peace of mind" come-on that probably don't

Most products don't break during their extended-warranty period.

pay. For one thing, they don't cover broken products. And what it costs to join is often more than the credit you might get on working items. Some retailers, including Amazon and Costco, have trade-in

programs, which don't cost anything up front. But broken items aren't covered, and the retailer can reject even those that work.

Brand reliability varies by product. Manufacturers often have strengths and weaknesses in different product categories. GE, for example, has made very reliable cooking appliances, but its refrigerators with icemakers have been repair-prone. John Deere's lawn tractors have been very reliable, but its self-propelled lawn mowers have been significantly more repair-prone than other brands. And LG has made reliable plasma TVs and clothes dryers but not reliable side-by-side refrigerators.

The 50-percent rule still stands. We recommend that you replace a broken item if the repair will cost more than half the



Repair-or-replace timeline

Lawn equipment and home exercise gear	Age of broken product								Cost		Repair problems						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Replacement range	Median replacement	Repair	Satisfaction with repair	Percent with any problems	Expensive	Bad job	Hard to get parts	Took too long
Lawn mower gas, walk-behind, push-type	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>								\$150-\$300	\$225	\$74	○	47%	•			
Lawn mower gas, walk-behind, self-propelled	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>								300-500	400	108	○	50	•			
Lawn tractor	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>								1,100-2,500	1,800	223	○	53	•			
ZTR riding mower	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>								2,200-4,500	3,350	284	○	52	•			
Snowblower	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>								400-1,000	700	123	⊖	48	•			
Treadmill	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>								800-3,500	2,150	165	⊖	56	•			

Guide to the timelines

Data are based largely on our 2010 Annual Questionnaire and includes only nonwarranty professional repairs.

Repair-or-replace timelines take into account the product's age, usually repair and replacement costs, and the judgment of our marketing and engineering experts. Green shows when a repair is worthwhile; yellow signals a judgment call; red means we advise against repair. Timelines apply to the middle-of-the-road products most people buy. **Replacement range** and **median replacement** reflect what you should expect to pay

for a midpriced model. **Repair** is the median repair cost paid by survey respondents. **Satisfaction with repair** reflects respondents' overall satisfaction. **Percent with any problems** indicates how often readers encountered problems during repair, and bullets indicate those that cropped up more than average with each product. On average, 13 percent of readers complained about parts availability, 22 percent about lengthy repairs, 13 percent about bad repairs, and 14 percent about excessive cost.

price of a new product.

Replacing electronic gear might be less costly than you think because prices are steadily dropping in some categories. For example, you'll probably pay at least \$1,500 less for a new 50-inch flat-panel TV than you did in 2005.

Major appliances, on the other hand, are getting more expensive and they usually have long service lives, which is why we generally recommend holding onto them longer than electronics.

Some products are harder to repair. Celia Chapman of North Hills, Calif., discovered this firsthand when her KitchenAid double wall oven gave out over a Thanksgiving weekend. After a visit by an authorized repairman and repeated phone calls,

she finally contacted the manufacturer, who told her that the needed part was on back order indefinitely. Chapman tried to find the part online but gave up after six weeks of looking and instead opted to replace the oven. KitchenAid refunded the cost of the new oven, but Chapman says she ended up losing about \$700 on service calls and installation.

Our survey indicates that repairs of gas cooktops, built-in refrigerators, digital camcorders, and home-theater systems can also be frustrating because they take an inordinately long time or cost a lot, or because the item requires further service calls. Dryers, electric cooktops, and digital cameras have the highest success and satisfaction rates.

What breaks, what doesn't

Zero-turn-radius mower

REPAIR RATE

30%

RELIABLE BRAND

Toro

REPAIR-PRONE BRAND

Cub Cadet

Lawn tractor

REPAIR RATE

29%

RELIABLE BRANDS

John Deere, Husqvarna, Craftsman

REPAIR-PRONE BRANDS

Troy-Bilt, Cub Cadet

Mower

self-propelled

REPAIR RATE

20%

RELIABLE BRANDS

Toro, Lawn-Boy, Craftsman

REPAIR-PRONE BRAND

John Deere

Mower

push

REPAIR RATE

12%

RELIABLE BRANDS

Troy-Bilt, Toro, Honda

REPAIR-PRONE BRANDS

none

Brand repair rates are based on the Consumer Reports 2010 Annual Product Reliability Survey. There are often many reliable brands, and we have listed some of the more outstanding ones. Note that models within a brand might vary, and changes in design or manufacture might affect reliability.

Are you sure it's broken?

The service call alone will probably cost around \$50, so before you contact a repair shop, make sure your product is really broken.

Check the troubleshooting section of your owner's manual and look online at the manufacturer's website for repair instructions or for free technical support that can walk you through diagnosing the problem and making the fix. Sites such as www.repairclinic.com and www.pcappliancerepair.com offer extensive repair advice in the hopes of selling you the necessary parts.

