



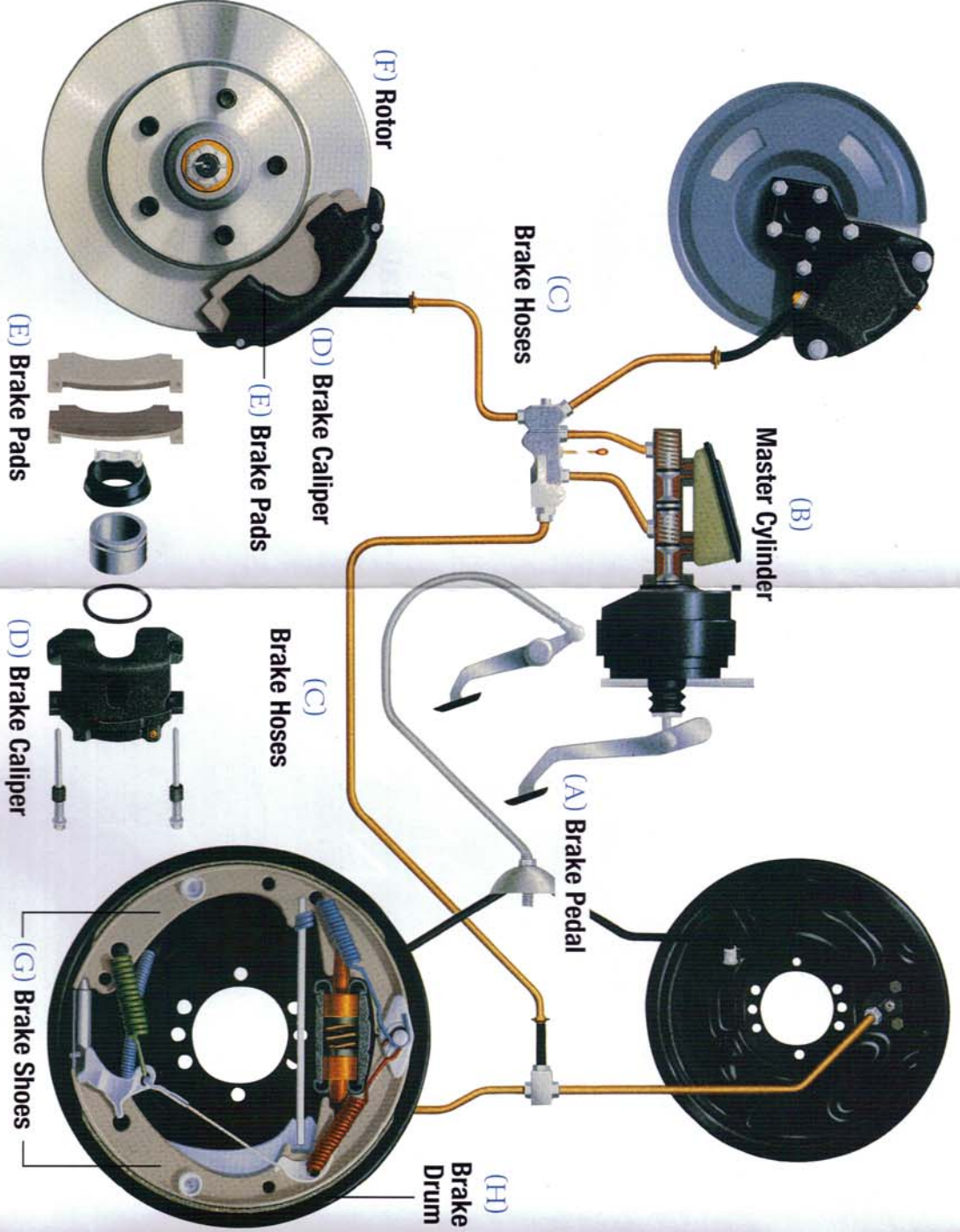
# HOW TO TELL A COMPLETE BRAKKE JOB FROM ONE THAT'S NOT

Ever wonder how  
repair shops know what  
cost to advertise for a  
brake job if they don't know  
what the problem is?

*They don't.*

We believe you can  
only tell what a brake job  
will cost after a  
thorough inspection of  
the brake system.  
You really do get what  
you pay for.





## HOW BRAKES WORK

When you press down on the brake pedal (A), brake fluid is sent from the master cylinder, (B) which is the little white box under the hood of your vehicle, through brake fluid hoses (C) down to the brake calipers (D).

With hydraulics, the brake fluid causes the caliper, which houses two brake pads (E), to squeeze against the spinning rotor (F) in each wheel. This action creates friction and slows the vehicle. Some vehicles have drum brakes in the back. When the brake pedal is pushed, a piston pushes the brake shoes (G) against the drum (H). Through use, the friction material on the brake pads and the surface of the rotor wear down and get dirty and rusty. Parts need to be cleaned, replaced and readjusted.



# THERE IS A DIFFERENCE IN BRAKE REPAIR. THERE ARE COMPLETE JOBS AND...

## JOBS THAT AREN'T.

# 1



### TEST DRIVEN

Your vehicle is taken for a test ride to verify your problem. With a minimal brake job most don't bother with a test drive.

# 2



### COMPLETE M.A.P. INSPECTION IS DONE

The brakes of all four wheels are checked, including the parking brakes using the Motorist Assurance Program guidelines. The results are documented and explained to the customer. A lot of garages don't follow M.A.P. guidelines.

# 3



### A QUOTE IS GIVEN

A quote is given on what is needed, and only an approved repair is done, which includes servicing the rear brakes. They are cleaned, relubricated and adjusted. Most only check the front brakes because they wear faster than the rear.

# 4



### FLUID IS CHANGED

Old, dirty brake fluid in the master cylinder is drained and replaced. Other garages don't replace the contaminated brake fluid.

# 5



### ROTORs ARE MEASURED AND CHECKED

Thickness variation of all the rotors is measured with a micrometer. Variation can cause brake pedal pulsation or the steering wheel to shake as the vehicle stops.



The rotor vanes, or cooling fins, are checked for mud and rust. Clogged vanes could affect the rotors' ability to remove heat from the brakes. This could lead to premature wear. Not every garage does this.

# 7

## WHEEL HUB IS CLEANED



Dirt and rust build-up is cleaned from the hub and the hardware is replaced. Not cleaning the hub can cause lateral run out. (See step 8.) Others don't take the time.

# 8

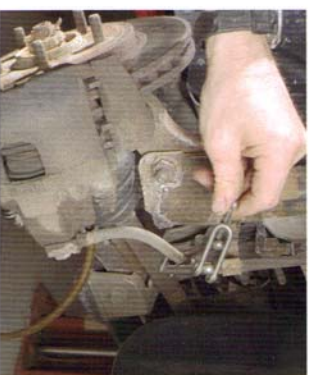
## EACH HUB AND ROTOR ARE CHECKED FOR LATERAL RUN OUT



A new or resurfaced rotor is checked for lateral run out when it's attached to the hub. That's when the rotor, while spinning, is not perpendicular to the wheel and it wobbles. It causes extra rotor wear and pedal pulsation (an additional repair.)

# 9

## FLUID IS REPLACED FROM THE LOWER PART OF THE SYSTEM



The dirty brake fluid is drained. A special clamp is attached to the hose leading into the caliper before pushing in the caliper piston to remove the caliper. This prevents the remaining contaminated fluid in the caliper from flowing back into your vehicle's anti-lock braking system, which can easily damage that costly unit. Many force the piston in and push dirty fluid back into the ABS unit.

# 9

## PARTS ARE LUBRICATED



All metal-to-metal parts are lubricated. Others don't take the time.



# 10



**PROPER  
TORQUE IS  
USED**

The wheels are put back on, each torqued to the proper specifications. Many don't torque at all.

# 11



**CALIPERS  
ARE  
READJUSTED**

Brake pedal is gently pumped to get the calipers readjusted. Pumping too fast can damage the master cylinder.

For a complete brake job, visit:

