

DIAGNOSIS AND TESTING**Symptom-to-System-to-Component-to-Cause Diagnostic Procedure**

In order to properly diagnose an automotive concern, a logical diagnostic procedure must be used. Ford Motor Company workshop manuals are organized to guide the technician from the customer concern to the cause of the concern using the symptom-to-system-to-component-to-cause diagnostic procedure.

Because brakes wear at different rates based on operating conditions, it is important to follow this strategy all the way down to the cause of a problem. You do not want to fix a symptom, such as a worn brake pad, only to overlook the cause, such as a corroded caliper slide pin.

Customer Concern

The first step in the diagnosis of a customer concern is to make sure that the customer concern (symptom) is clearly defined and verified. This means that the technician may need to reproduce the concern by operating the vehicle under the same circumstances in which the customer states that the concern occurs. This is usually the first step listed in the Diagnosis and Testing section of the workshop manual. Once the concern is verified, the technician can use the Symptom Charts to determine the cause of the concern.

Symptom Charts

The Symptom Charts are located at the beginning of each main section of the workshop manual. The purpose of the Symptom Charts is to give the technician a list of the possible systems, subsystems, and components that may be the cause of the symptom.

Pinpoint Tests

In most cases, the Symptom Charts will guide the technician to a pinpoint test that will provide a logical sequence of subsystem and component tests to help determine the cause of the customer concern.

Removal and Installation

Once the cause of the customer concern is determined, the technician may have to replace a component. The proper procedure for component replacement can be found in the Removal and Installation Section.

Disassembly and Assembly

Some foundation brake components can be repaired instead of being replaced. The proper procedures for component repair can be found in the Disassembly and Assembly Section.

Other Component and Subsystem Tests

The workshop manual cannot include every possible test required to diagnose every possible customer concern. This means that the technician must possess certain knowledge and skills regarding automotive systems in order to properly diagnose and repair them. Ford Motor Company training programs are designed to give you the knowledge and skill required to properly diagnose and repair customer concerns.