



- Grommets and wire clips are included per Original Equipment specifications to ensure proper mounting and routing within the car chassis
- Sensor housing is made from high quality reinforced plastic, offering superior resistance to the elements.
- OE connectors and terminals made from premium material are used to ensure an accurate, water-tight connection to the engine wire harness
- Wire harness comes with protective sleeve to prevent wires from damage

## ABS WHEEL SPEED SENSORS & HARNESSES

Anti-lock Braking, ABS Systems allow the driver to maintain control of the car in an emergency braking situation. The ABS system relies on sensors to monitor the speed of the wheel and communicate with the ABS computer to ensure ideal performance. The data from the ABS sensor allows the computer to balance the speed of each wheel to prevent the brakes from locking up and avoiding dangerous skidding situations.

- Holstein focuses on using only the highest quality materials, manufactured to exacting standards for an aftermarket product that is truly built to match or exceed the OE part
- Holstein ABS sensor line has superior coverage for domestic and import applications
- Over 2100 ABS numbers available covering 93% of the North American market.
- 3 Year / 36,000 Mile Warranty on Holstein Parts ABS Sensors



- More than 200 SKU's covering the most popular vehicles in North America
- Manufactured to exacting standards to provide long term function and performance
- Sealed Anti-Static Protective Packaging ensures that electrical components are not damaged during shipping

## BLOWER MOTOR RESISTORS

The Blower Motor Resistor is an electrical component that is a part of the vehicle's interior heating and air conditioning system. It is responsible for controlling the blower motor's fan speed. When the fan speed is changed via the dash controls the blower motor resistor is what changes the speed of the blower motor. A failed blower motor resistor can cause issues with the operation of the entire heating and air conditioning system. Usually a bad or failing blower motor resistor will produce a few symptoms that can alert the driver of a potential issue.

- Holstein Parts uses only the highest quality materials and engineering for parts that are truly built to match or exceed the OE part.
- Holstein Parts Blower Motor Resistors offer superior coverage for domestic and import applications.
- 3 Year / 36,000 Mile Warranty on all Holstein Parts Blower Motor Resistors



- Over 300 SKU's covering 99% of the North American market
- Holstein Brake Pad Wear sensors are direct OE replacements with perfect fit, form and function for flawless operation
- Manufactured with reinforced plastic, and able to withstand temperatures up to 400 degrees C

## BRAKE WEAR SENSORS

Brake Wear Sensors are used to warn the driver of a vehicle that the brake pads are in need of replacement. Brake Wear Sensors are installed into a vehicles brake pads and wired into the vehicles notification system. When the brake pads wear to the predetermined level the driver is notified that it is time to have the brake pads and wear sensors replaced. Brake Wear Sensors have been historically used on European Imports and more recently on higher end Asian and Domestic Models.

- Holstein Brake Wear Sensors are manufactured utilizing the highest-quality reinforced plastics able to withstand temperatures up to 400 degrees C.
- With more than 300 SKU's covering over 99% of the North American market, Holstein Parts is sure to have the sensor you need when you need it.
- 3 Year / 36,000 Mile Warranty on Holstein Brake Wear Sensors.



- More than 240 SKU's covering 98% of the North American market
- Manufactured with premium materials to withstand the elements and to ensure proper function
- Grommets, screws, and other hardware are included to ensure proper fit and routing within the car chassis
- Wire harness comes with protective sleeve to prevent wires from damage

## CAMSHAFT POSITION SENSORS

The Camshaft Position Sensor monitors the rotating position of the camshaft relative to the crankshaft position. This data is sent to the vehicles ECU where it is used to adjust the spark timing and the operation of the fuel injectors. There are two types of Camshaft Sensors, Magnetic and Hall-effect. The Magnetic type produces its own AC (alternate current) signal (a sine wave), and you can identify it by its two wires. The Hall-effect type uses an external power source to produce a digital signal (a “square wave,” on-or-off) and has three wires. For the engine to operate properly, the rates of the crankshaft and the camshaft need to be in sync with each other.

- Holstein focuses on using only the highest quality materials, manufactured to exacting standards for an aftermarket product that is truly built to match or exceed the OE part
- Holstein Camshaft Position Sensor line has superior coverage for domestic and import applications
- 3 Year / 36,000 mile warranty on all Holstein Camshaft Position Sensors



- More than 320 SKU's covering 98% of the North American market
- Manufactured with premium materials to withstand the elements and to ensure proper function
- Grommets, screws, and other hardware are included to ensure proper fit and routing within the car chassis
- Wire harness comes with protective sleeve to prevent wires from damage

## CRANKSHAFT POSITION SENSORS

The Crankshaft Position Sensor is an electronic device that monitors the position and/or rotational speed of the crankshaft. This sensor communicates with the vehicle's ECU to control ignition timing and fuel injection parameters. Crankshaft Position Sensors work in conjunction with the Camshaft Position Sensor to monitor the position of the valves and pistons. The Crankshaft Position Sensor also measures engine speed in revolutions per minute.

- Holstein focuses on using only the highest quality materials, manufactured to exacting standards for an aftermarket product that is truly built to match or exceed the OE part
- Holstein Crankshaft Position Sensor line has superior coverage for domestic and import applications
- 3 year / 36,000 Mile Warranty on all Holstein Crankshaft Position Sensors



- Holstein uses only premium quality materials to ensure durability and reliable service
- All Holstein Vehicle Speed Sensors are rigorously tested to meet or exceed the manufacturer's requirements for OE parts
- Sensor housing is made from high quality reinforced plastic, offering superior resistance to the elements.
- OE connectors and terminals made from premium material are used to ensure an accurate, water-tight connection to the engine wire harness

## VEHICLE SPEED SENSORS

Vehicle Speed Sensors measure wheel speeds and provide this information to the vehicle's ECU (Electronic Control Unit). The ECU then calculates ignition timing, transmission shift points and air/fuel ratios for the vehicle. Data from the Vehicle Speed Sensor is also used in cruise control systems to maintain a constant speed.

- Holstein focuses on using only the highest quality materials, manufactured to exacting standards for an aftermarket product that is truly built to match or exceed the OE part
- Holstein Wheel Speed sensor line has superior coverage for domestic and import applications
- 3 Year / 36,000 Mile Warranty on Holstein Parts ABS Sensors

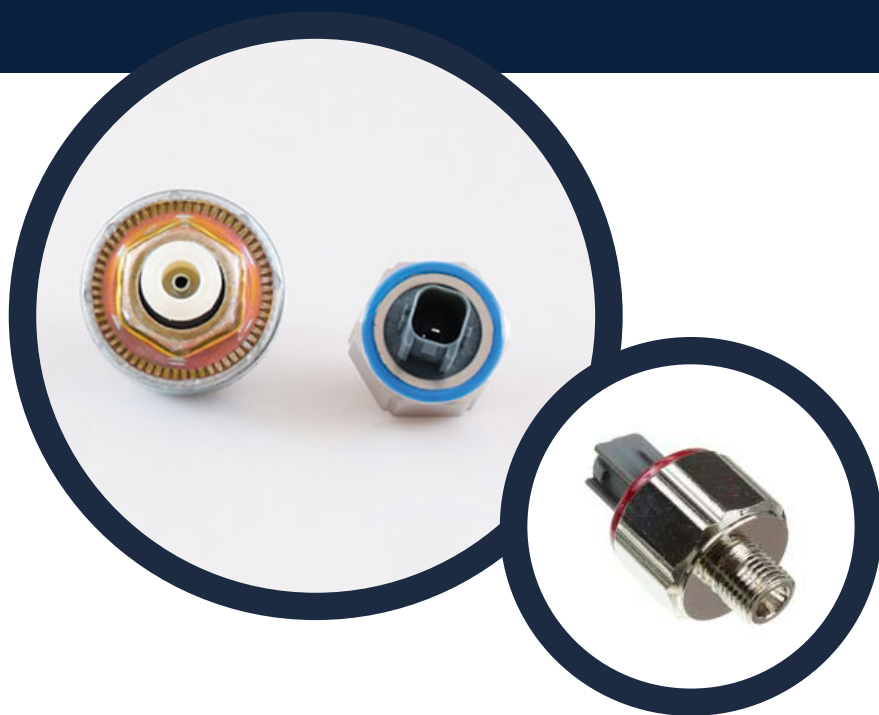


- More than 190 SKU's covering 97% of the North American market
- Reinforced materials protect against sludge build-up and oil leaks
- Units are tested to ensure correct flow and oil pressure to maximize performance
- Premium O-rings and gaskets are used to enhance product life and reliability

## VARIABLE VALVE TIMING SOLENOID

The Variable Valve Timing Solenoid alters the supply of oil pressure to the camshaft depending on the speed and load of the engine and can either advance or retard cam position which provides several benefits, including improved engine operation, increased engine power reduced fuel consumption and decreased emissions.

- Holstein focuses on using only the highest quality materials, manufactured to exacting standards for an aftermarket product that is truly built to match or exceed the OE part
- Holstein Variable Valve Position Sensor line has superior coverage for domestic and import applications
- Designed to maximize engine performance and fuel efficiency
- 3 Year / 36,000 Mile Warranty on all Holstein Parts VVT Sensors



- The electronic component continuously monitors sensor output to ensure it responds with the appropriate frequency rate
- Each knock sensor is engineered and designed to meet OE specifications for that vehicle, ensuring ideal performance
- The Piezoelectric disc is a crystalline element that receives the vibrations from the engine, and transmits them to the computer using a voltage signal.
- Wire harness comes with protective sleeve to prevent wires from damage

## KNOCK SENSORS

The knock sensor is able to detect mechanical stress and produces a voltage when the car knocks or pings. Under heavy acceleration, it sends signals to the ECU and the ECU retards the ignition timing to compensate for the knocking, which in effect protects the pistons and rings from damage. Knocking also occurs when using low-grade fuel and having the knock sensor allows you to use different grade fuels without causing engine damage.

- Holstein utilizes only premium materials to ensure durability and reliable service
- Global coverage of European, Asian, and Domestic vehicles
- Tested to ensure voltage specifications align with OE standards
- 3 Year / 36,000 Mile Warranty on all Holstein Knock Sensors