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# The Modern Oxygen Sensor

**i** Bosch pioneered the invention of the Oxygen Sensor in the early 1970's drawing upon experience in the technology of high temperature ceramics developed from many years of spark plug development. The Oxygen Sensor's first vehicle application came in 1976 used on a K-Jetronic equipped Volvo 260 Series for the Californian market. This was the start of one of the most widely used emission control devices in automotive history.

Since then, Bosch has produced over 300 million Oxygen Sensors worldwide, supplying the majority of global vehicle manufacturers. Currently Bosch produces approximately 30 million Oxygen Sensors per year in plants located in Germany and the USA.

As a major worldwide developer of automotive technology, Bosch has continually improved the design and function of the engine management systems we produce to optimise Oxygen Sensor functionality and constantly improve vehicle exhaust emissions whilst improving overall vehicle performance.

Evolution of the sensor over the years has resulted in many design improvements in both operation and replacement intervals. Starting as a simple single wire sensor, developments include the introduction of improved earth circuits, heating elements to stabilise sensor temperature and now "planar" design sensors delivering superior sensitivity and accuracy as well improved service life.

Vehicle emissions are a major factor in the design of new vehicles. Bosch research and development in the area of engine management system and product technology has seen the introduction of "Broad-band" Oxygen Sensors, providing increased scope of operation of the Oxygen Sensor for control of mixture values outside of the normal control range. Future Bosch developments include the use of Oxygen Sensors in electronic diesel control [EDC] systems and "fuel quality" sensors, able to detect varying fuel qualities and their effect on the combustion process.



# Bosch Oxygen Sensor Design Types

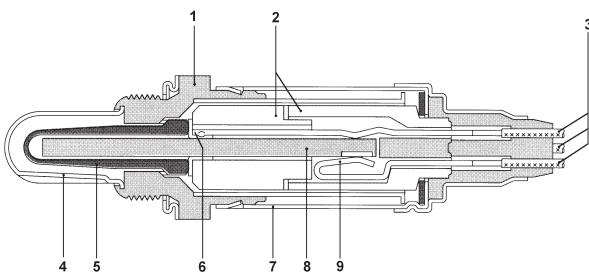
In the process of constant product improvement, Bosch has created many different oxygen sensor design types to meet the various requirements of our OE customers. As global emission legislation has become increasingly important in engine management system design, we have produced oxygen sensors with higher accuracy, faster light off times and superior service life.

## Thimble Type Sensors (Type Code LS, LSH, LSM 11)

So called due to the design of the ceramic sensor element used. These sensors can be constructed in various formats from simple single wire sensors to heated four wire sensors with either ground isolated or grounded cases. Using a patented "Platinum Grid" design thimble these sensors are manufactured in the following formats:

**Single Wire Sensor** - the original design, sensor output voltage via the single pole connector, grounded via the sensor body.

**Two Wire Sensor** - for improved earth reference of sensor output signal, a reference wire is also connected between control unit and sensor.



### Typical Heated Sensor

- 1 = Sensor housing
- 2 = Ceramic support tube
- 3 = Electrical connections
- 4 = Protective with slots
- 5 = Active sensor ceramic
- 6 = Contact element
- 7 = Protective sleeve
- 8 = Heating element
- 9 = Clamp type connections for heating element

**Three Wire Sensor** - heated sensors provide various advantages including,

- Earlier cut-in for closed loop operation
- Lower emissions with new and aged sensors
- Lower sensor deterioration caused by thermal stress
- Extended service life (from ~ 50,000km to 80,000km +)
- More accurate fuel management system calibration
- Greater flexibility in sensor location

Bosch manufactures heated sensors with either 12 or 18 watt ratings for correct sensor operation during warm up and the complete vehicle drive cycle.

Note: Use of a sensor with an incorrect heating element rating will result in overheating of the sensor measuring element causing the thimble to fracture.

**Four Wire Sensor** - heated sensor with integrated earth

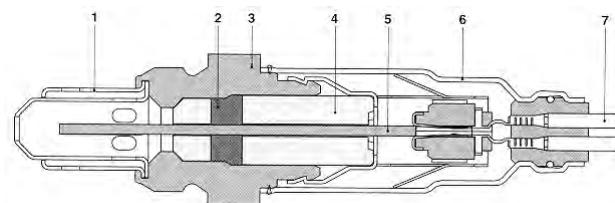
reference/supply circuit, these sensors may be either grounded through the body or earth isolated depending upon engine management system design and customer requirement. Earth isolated sensors are provided with an earthing circuit for the measuring cell by the engine management control unit. The engine management control unit purely references the earth of a sensor that has its body grounded.

Note: mis-matching of body ground/isolated sensors can result in the signal earth being open circuit causing the sensor signal to not be recognised by the engine management control unit.

**LSM 11 "Wideband" Sensor** - where the standard sensors described above are "narrow band" or "two step" sensors that purely cycle when the Lambda value of 1 is achieved, the LSM 11 sensor has a "wide band" operating characteristic. The LSM 11 sensor has a flatter operating curve than a standard sensor allowing it to measure lambda values of between ~ 0.80 and ~ 1.60.

## Planar Type Sensors (Type Code LSF, LSU)

Improved designed sensor using "Planar" or thick film manufacturing technology. These are heated four wire sensors and whilst operating on the same principle as the thimble type sensors, the planar design provides a more effective heater design, more robust construction, faster switching time and superior service life.



### Planar Type Sensor

- 1 = Guard Tube
- 2 = Ceramic seal assembly
- 3 = Sensor housing
- 4 = Ceramic support tube
- 5 = Planar sensor element
- 6 = Protective cap
- 7 = Connection cable

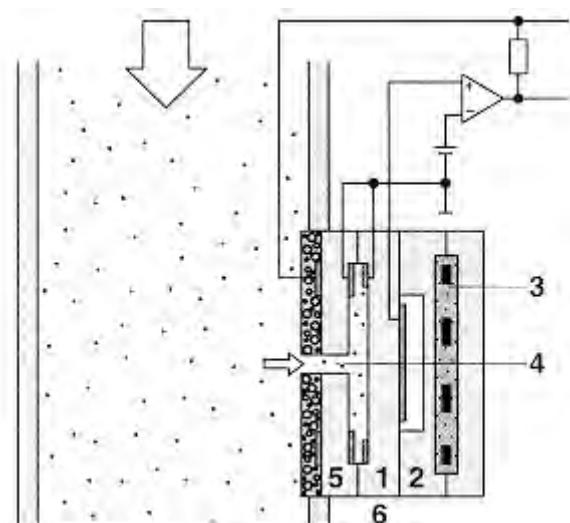
## Bosch Oxygen Sensor Design Types (continued)

**i** **LSU “Broadband” Universal Sensor** - as its name suggests, the broadband oxygen sensor has the ability to not only indicate an air/fuel ratio of Lambda = 1 but can measure as low as Lambda = 0.7 up to infinity (infinity = atmosphere containing oxygen of ~ 21% by volume). This is a unique quality compared to the “two step” rich/lean function of a standard thimble or planar sensor.

This LSU type sensor has not only been successfully applied to standard petrol engined passenger cars, but for lean-burn and gaseous fuelled engines. Due to their unique design these sensors are also used in diesel powered vehicles equipped with electronic diesel control (EDC) systems and industrial applications including gas powered furnaces, air/fuel ratio measuring equipment and engine/chassis dynamometers.

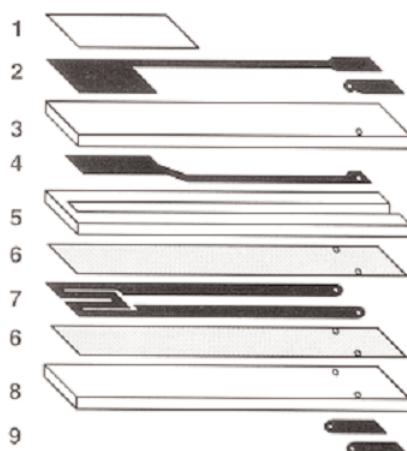
Broadband oxygen sensors can only be used in conjunction with a control unit that is specially designed to support the operational function and precise heater element management required by an LSU broadband sensor. It is important to note that a specifically designed wiring harness connector containing 6 pins is used for LSU type sensors. Whilst the physical appearance of the oxygen sensor connector will vary according to customer and vehicle design requirements, all LSU sensors have a calibration resistor built into the connector housing. Each individual LSU sensor is calibrated at the conclusion of the manufacturing process by laser altering this resistor value. Therefore removal or exchange of the oxygen sensor connector will render the sensor inoperable.

Comprehensive technical descriptions of construction and operation of these sensor types as well as many new Bosch sensor developments can be found in the Bosch Technical Instruction Manual titled “Automotive Sensors” (part # 1 987 722 131) available directly from Bosch Australia’s technical literature department on 03 9541 5305.



**Cross Section of LSU Broadband Sensor**

- 1 = Nernst cell
- 2 = Reference cell
- 3 = Heater
- 4 = Diffusion gap
- 5 = Pump cell
- 6 = Exhaust pipe



**Planar Sensor Operational Layers**

- 1 = Porous protective layer
- 2 = External electrode
- 3 = Sensor Laminate
- 4 = Internal Electrode
- 5 = Reference Air Laminate
- 6 = Insulation Layer
- 7 = Heater
- 8 = Heater Laminate
- 9 = Connection Contacts

# Dont just buy a diagnostic tool, invest in a reliable partner



From the days of the FJ Holden, Bosch has been supplying the Australian automotive industry with the best quality innovations and products available.

So when you're next thinking of updating your Diagnostic Tool, check to see if you receive a **Complete Diagnostic Solution**.

Only Bosch offers a guided repair analysis, starting from the control unit Fault Code and ending with the replacement part application.

This is all in one upgradeable PC software/hardware package with a broad coverage of control units including non-Bosch & Diesel Systems.

The Bosch **Total Support Package** offers regular software updates throughout the year, providing an ever-expanding coverage of Australian, Japanese/Asian and European vehicles.

A major strength of this package is direct access to Bosch Diagnostic Systems Training and Technical Hotline.

A critical component, is local software development which has been established in all major car manufacturing countries, including Australia.

When you buy your diagnostic tool from Bosch not only do you get a comprehensive and high tech service tool, you receive a complete business partner with a commitment to long term customer confidence.



## Bosch. Our Knowledge - Your Success

For further information visit our website [www.bosch.com.au](http://www.bosch.com.au) or ring 1300 30 70 40

# What is Lambda?

**i** Lambda is a mathematical calculation representing air/fuel ratio. The figure is derived by dividing the actual air/fuel ratio of the engine by the theoretically correct value [14.7:1].

Actual Air/Fuel Ratio

equals 14.7:1

divided by

Theoretically Correct Air/Fuel Ratio  
[14.7:1]

$$\lambda = 1$$

Rich mixtures produce Lambda values that are less than one, leaner mixtures are higher than one.

Actual Air/Fuel Ratio

<14.7:1 (rich)

divided by

Theoretically Correct Air/Fuel Ratio  
[14.7:1]

$$\lambda = <1$$

Lambda is a compromise between power [ $\lambda < 1$ ] and economy [ $\lambda > 1$ ] as shown on the diagram below.

Actual Air/Fuel Ratio

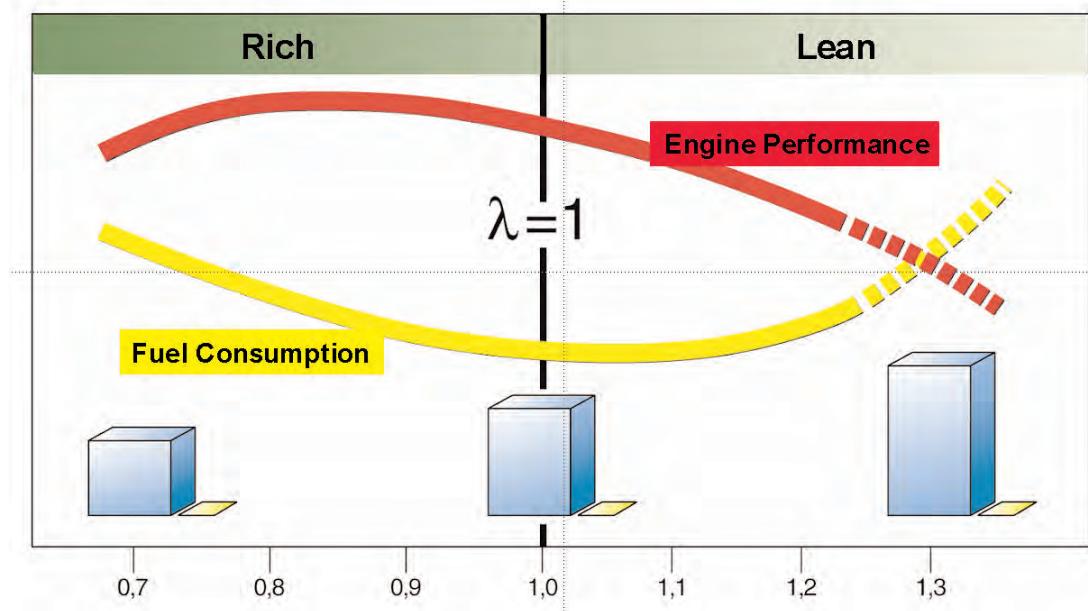
>14.7:1 (lean)

divided by

Theoretically Correct Air/Fuel Ratio  
[14.7:1]

$$\lambda = >1$$

Fuel-Air Mixture Graph



# Oxygen Sensor Construction & Operation -

## Conventional Design [ incl. LSM 11 ]

The exhaust gas Oxygen Sensor, or “Lambda Sensor” as it may be referred to, is located prior to the catalytic converter in the exhaust manifold or pipe. The sensor generates a voltage for the engine management system related to the amount of excess oxygen in the exhaust gas, providing “feedback” of the mixture composition.

The engine management system is designed to provide optimal engine power, emissions and economy over the entire engine operating range and various driving conditions. The Oxygen Sensor allows the engine management system to directly reference the optimal emission air/fuel ratio of 14.7:1. It can also learn the engines requirements and apply a correctional air/fuel ratio other than 14.7:1, for example compensation for engine wear or engine sensor drift.

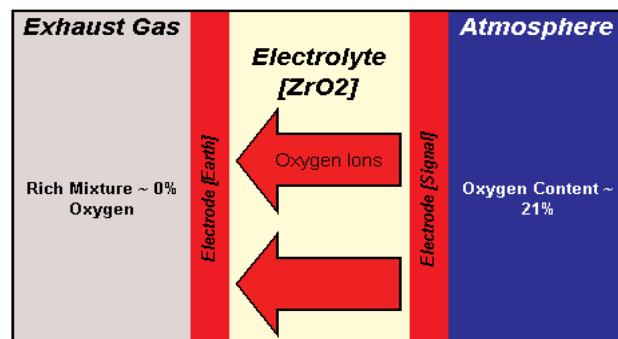
The Oxygen Sensor is a “Galvanic Cell”, a type of battery. The sensor contains two porous platinum electrodes with a ceramic electrolyte (Zirconium Dioxide) between them. The Oxygen Sensor generates a very small voltage, ranging from as little as 100mV (0.1 volts), up to a maximum of 900mV (0.9 volts) dependent upon exhaust gas oxygen level. The sensor references atmospheric oxygen, typically approximately 21%, to the varying amount of excess oxygen in the exhaust. The larger the differential in oxygen between the atmosphere and exhaust the higher the voltage output of the sensor. A rich mixture typically has 0% oxygen, whilst a lean mixture may have 3-4%. During normal engine operation the sensor voltage will oscillate between 100mV - 900mV as the mixture quickly swings between rich and lean. The system will average the sensor voltage to ~ 450mV which will result in the mixture ratio of 14.7:1.

Sensor operation can be summarised as follows -

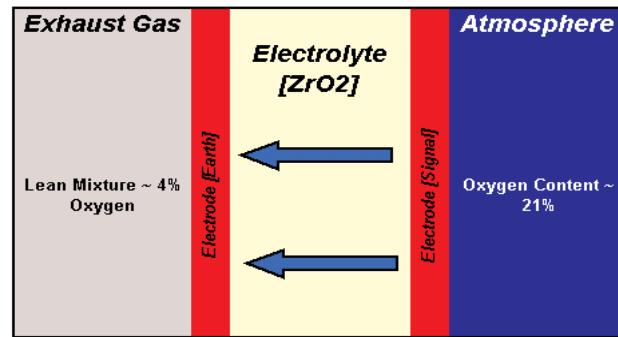
- The Oxygen Sensor allows the fuel management system to maintain the “Ideal” air/fuel ratio [14.7:1] or a Lambda value of 1, across various engine operating conditions.
- The Oxygen Sensor compares the amount of oxygen in the exhaust gas against the amount of oxygen in the atmosphere. These differing amounts of oxygen will allow the sensor to produce a voltage output to the vehicles fuel management system.
- An Oxygen Sensor is actually a “Galvanic Cell” a type of battery. The sensor contains two Platinum electrodes with an electrolyte between them.
- Zirconium Dioxide ( $ZrO_2$ ) is the electrolyte used.
- Oxygen Sensor output voltage will range between 100 - 900mV. Rich mixtures [low oxygen] will produce high voltage, lean mixtures [excess oxygen] will produce low voltage
- The amount of wires the Oxygen Sensor has is dependent upon fuel management and vehicle design criteria. Sensor variations are described in the section “Oxygen Sensor Design Types”
- Oxygen Sensors operate at a minimum temperature of ~ 360° C. The stability of sensor operating temperature is a function of the heater, as well as the physical position on the vehicle.
- All Bosch Oxygen Sensors feature the following -
  - Stainless Steel Wire - for resistance to corrosion and thermal stress.
  - Gold Plated Terminals - on signal and reference connector pins, giving superior contact for minute voltage/current signals.
  - Double laser welded sensor body to avoid moisture ingress to sensor element/heater.

- Every sensor undergoes functional quality test at 1000° C.
- Ceramic thimble is pressure tested to 420 bar to ensure integrity.
- Every sensor measuring element undergoes “Gas Permeation” testing during manufacture.

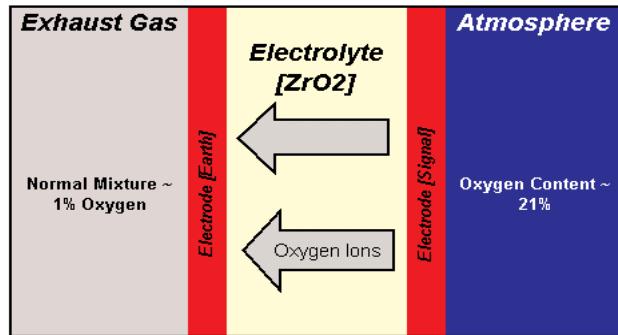
**Rich Mixture** - Large difference between atmospheric and exhaust oxygen levels results in high conductivity between the electrodes. Hence voltage output is high ~ 900mV.



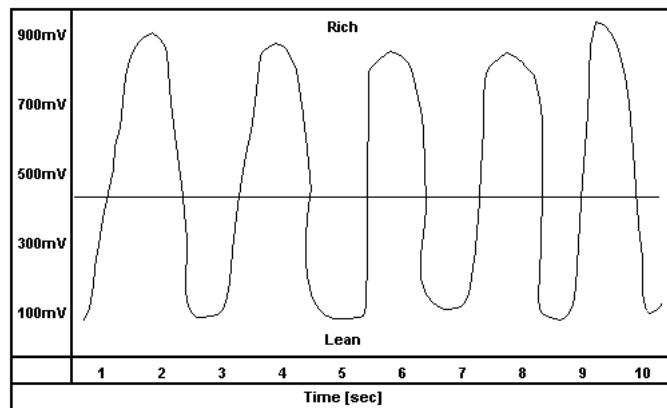
**Lean Mixture** - Smaller difference between oxygen levels result in less conductivity and smaller voltage output, typically ~ 100 mV.



**Normal Mixture** - when mixture level is approximately 14.7:1, the output from the Oxygen Sensor will be ~ 450mV.

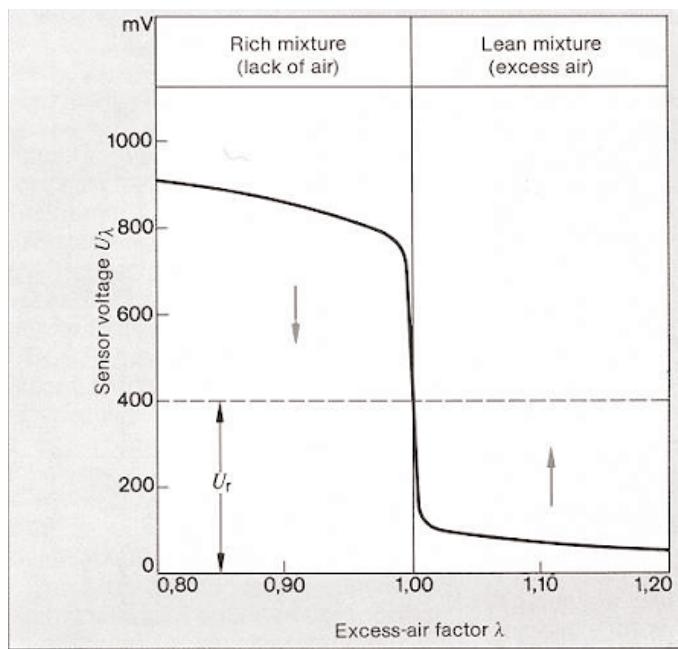


## Oxygen Sensor Construction & Operation - Conventional Design [ incl. LSM 11 ] ( continued )



### Oxygen Sensor Voltage Output

Normal Sensor - Voltage "cycles" between 100 & 900 mV as the ECU senses rich & lean and alternates the mixture accordingly. The average output from the Oxygen Sensor will be ~ 450mV.



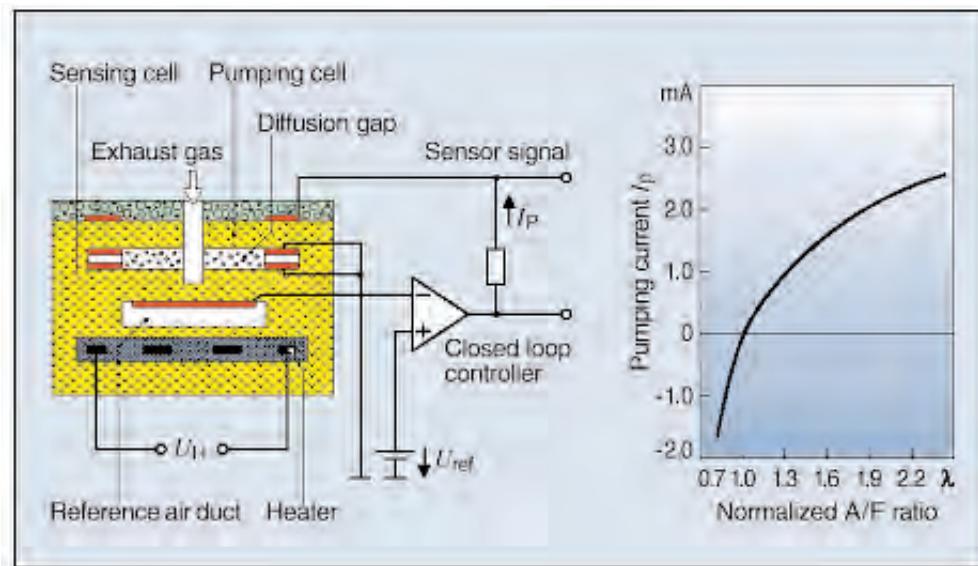
# Oxygen Sensor Construction & Operation

## [Broadband Design LSU 4]

Whilst it is beyond the scope of this catalogue to fully explain the operating principle and system support requirements of the "Broadband" LSU series sensor, we can provide an overview of its basic design principle.

Essentially in order to allow an infinite range of air/fuel ratio values (only as low as Lambda 0.7), the LSU sensor has two basic elements. Firstly it consists of a standard "Nernst" oxygen ion measuring cell that would be found in any standard planar or thimble type oxygen sensor. In order to be able to effect a much extended measuring range, an oxygen ion "pump" or pumping cell is also integrated into the sensor. This pump is controlled by a signal from the engine management ECU. The ECU will control the pump to maintain a constant signal from the conventional oxygen sensor cell, the amount of bias required to achieve this allows the ECU to determine how far rich or lean the mixture is from the emission optimal value of 14.7:1.

A comprehensive understanding of the operation of the LSU type oxygen sensor is essential for correct diagnosis. Comprehensive technical descriptions of the construction and operation of these sensor types can be found in the Bosch Technical Instruction Manual titled "Automotive Sensors" (part # 1 987 722 131) available directly from Bosch Australia's technical literature department on 03 9541 5305. Further practical testing and operational information can be obtained from the Bosch "Lambda Diagnosis" Training Course. Further information about Bosch Workshop Training including course topics, schedule dates and locations can be requested from Bosch Australia on 03 9541 5553.



# Oxygen Sensors - System Applications

## Why are there sensors before & after the catalytic converter?

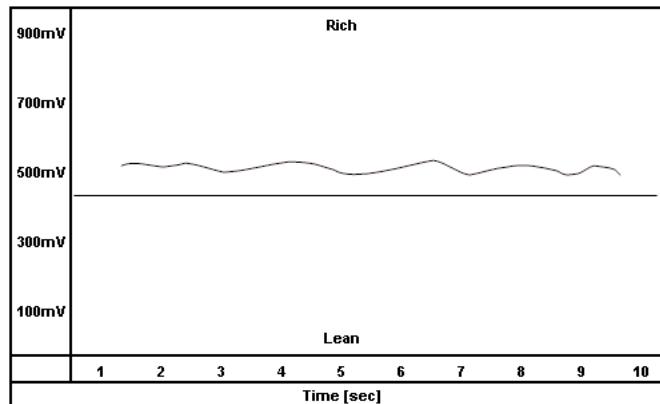


Since the introduction of ADR 36 in 1986 requiring all new passenger vehicles to operate on unleaded fuel in Australia, we have seen constant improvement and evolution of engine management systems. This major change also saw the introduction and broad use of Oxygen Sensors and Catalytic Converters in our market. Starting with fairly simple applications using one single wire sensor in the exhaust manifold, over the years we have seen the implementation of multiple sensors for "V" configuration engines providing more efficient air/fuel ratio control and diagnostic capabilities.

In recent years in Australia, we have seen a rapid increase of vehicles on our roads using pre and post catalytic converter oxygen sensors. These are referred to in this catalogue as Control (pre catalyst) and Diagnosis (post catalyst) oxygen sensors. The requirement for controlling the combustion process is now only one of the functions of the engine management system. Modern systems also control and monitor the operation of the vehicles' catalytic converter. With the fitment of sensors after the catalyst, the efficiency of the catalytic converter can now be evaluated and various engine control strategies can be employed to reduce harmful exhaust emissions throughout various driving and engine operating conditions.

### Diagnosis Sensor Operating Characteristics.

Whilst the diagnosis sensor is often of the same design family as the conventional Control Sensor, sensor activity is quite different to what would be expected of a correctly operating pre-catalyst sensor. As shown below, the output signal from the diagnosis sensor is generally a flat output signal of approximately 500mV, this is in contrast to the control sensor normal activity as shown.



Diagnosis Sensor voltage output - typical

Control Sensor voltage output - typical

Further detailed information about oxygen sensors, including diagnosis sensor operation and catalytic converter technology, can be obtained from the Bosch "Lambda Diagnosis" Training Course. Further information about the range of Bosch Workshop Training Programs including course topics, schedule dates and locations can be requested from Bosch Australia on 9541 5553.

# Testing of Oxygen Sensors

## Conventional Design [incl. LSM11]

Whilst the physical appearance and design principle of the modern oxygen sensor has improved and changed over the years, the testing procedures used to diagnose a faulty sensor have remained simple.

The information here is a simple guide only and does not replace any technical service procedures quoted by a vehicle manufacturer. Testing of the oxygen sensor should be made after all basic system checks have been carried out, including testing of the fuel system pressure and performing all minor service adjustments and checks as recommended by the vehicle manufacturer.

As previously mentioned the oxygen sensor will only operate correctly once its temperature is above ~ 360°C, so the engine should be fully warmed up prior to testing.

Preferred method of testing is to utilise an automotive oscilloscope, however a good quality Digital Multimeter (DMM) with an analog bar graph function can indicate basic operation. Testing should be done in conjunction with a good quality gas analyser capable of Lambda or air/fuel ratio measurement to accurately determine sensor calibration as well as function.

## Simplified Test Procedure

Locate the oxygen sensor and determine the wiring layout. On heated sensors check for heater element continuity, adequate 12 volt supply to heater and correct ground when the engine is running.

Note - Many late model vehicles have the ground circuit of the oxygen sensor heating element controlled by the engine management ECU for sensor temperature control purposes. Do not supply direct voltage or external ground to these circuits.

With engine speed at ~ 2000 RPM the sensor voltage should be seen to cycle smoothly between 100 – 900 mV (0.1 – 0.9 Volts) approximately eight times or more every ten seconds as shown.

A contaminated or tired sensor will be slow to cycle between the sensor voltage limits and may not generate the full potential of 900 mV. It may also be noticed that the lean swing may drop to zero voltage.

Remember!! – The oxygen sensor is a battery, a sensor that generates 900 mV constantly is generally not faulty. Faulty sensors, like a failing battery, will be slow to cycle between the control limits and be generally slower to react to mixture changes.

## Broadband Design [LSU4]

Testing of LSU type Broadband sensors should be done in conjunction with the vehicles diagnostic system. Engine Management systems using Broadband oxygen sensors have a vast array of integrated diagnostic and analytical software to determine the accuracy and performance of the LSU 4 type sensor. Physical checks of the sensor with either oscilloscope or multimeter will reveal little in relation to the sensors operation without specialist knowledge.

It should be noted that apart from monitoring the sensor output related to exhaust gas oxygen levels, the ECU also controls sensor temperature via a sophisticated closed loop control circuit. The physical measuring of this circuit will only prove the ECU control circuit is functioning; it is not possible to determine sensor temperature values or other heater control strategies.

Bosch recommends that the oxygen sensor is tested and replaced as a part of a regular vehicle maintenance schedule. Suggested replacement intervals for oxygen sensors are listed in the vehicle application section of this catalogue. A numerical listing can also be found on page A14.

Correct testing procedures are essential for accurate diagnosis of the oxygen sensor, particularly when dealing with modern LSU type sensors. The Bosch "Lambda Diagnosis" training course not only provides comprehensive practical training on the operation of the various oxygen sensor design types and system formats, but also covers the correct testing procedures required for their diagnosis.

Replacement of a faulty oxygen sensor will restore vehicle performance, improve fuel economy and reduce harmful exhaust emissions.



# Causes & Effects of Oxygen Sensor Failure



Whilst there are many factors that will contribute to accelerated oxygen sensor failure, it should be remembered that an oxygen sensor is a wearing part with a specific service life not unlike a platinum spark plug. The oxygen sensor should have a service life ranging from 50,000 Km - 160,000 Km dependant on sensor design, however this can be dramatically reduced by various conditions including overheating of the sensor, chemical poisoning and impact damage.

Excluding physical damage, the majority of these conditions will result in the failure of the ceramic thimble by affecting its porous nature. This will result in a sensor that is slow to react to mixture change as shown below. A slow sensor will tend to make the air / fuel ratio of the vehicle drift rich.

## Sensor Voltage Output

**Normal Sensor** - Voltage "cycles" between 100 & 900 mV. The average output from the Oxygen Sensor will be ~ 450mV.

## Important facts about Oxygen Sensors.

- ▶ Oxygen Sensor life spans will vary between vehicle and sensor designs, and are effected by many factors including fuel quality and vehicle operational characteristics.
  - ▶ Oxygen Sensors should be checked and/or replaced at -
    - 50,000 km for single and two wire sensors.
    - 80,000 km for three or four wire heated sensors.
    - 160,000 km for planar type sensors
  - ▶ Oxygen Sensors can be contaminated in many ways including -
    - Lead fouling from incorrect fuel.
    - Severe carbon/oil fouling from engine/emission control defects.
    - Contamination from silicon products.
  - ▶ Thermal stress damage [fracturing of the ceramic thimble] from excessive water in the exhaust, ie- blown head gasket.
- Contamination of the Oxygen Sensor basically results in the coating of the platinum electrodes and therefore insulates them.  
**\*\*NOTE\*\*** - Oxygen Sensors cannot be cleaned!!
- ▶ Oxygen Sensors will die of "old age", they are a wearing service part like a platinum spark plug.
  - ▶ As the Oxygen Sensor deteriorates over time, or is contaminated the output from the sensor "slows down". This causes the "average" that the fuel management system calculates to reduce.
  - ▶ The lower average gives the impression that the engine is lean and the fuel management system overcompensates to rich.
  - ▶ Due to the fact that the engine will operate in a rich condition at all times, fuel consumption is naturally higher.

## **Slow, Contaminated or "Tired" Sensor**

Voltage slowly builds up and then rapidly drops off. The effect is that the average will drop causing a rich condition.

# Universal Oxygen Sensor Program Overview

To further complement and enhance our Oxygen Sensor program, a "Universal" range of oxygen sensors is now offered by Bosch. Drawing from many years of engineering experience as an OE supplier and global manufacturer of oxygen sensors, a consolidated range of universal sensors are available that fully comply to the technical specifications of the original sensor fitted to the vehicle.

Bosch Universal Oxygen Sensors are correctly OE matched by our engineering and development teams to ensure they meet or exceed the original design standard. All sensors are designed and built to the latest OE design types ensuring renowned Bosch quality, and complete confidence in application.

All sensors feature stainless steel wiring, double laser welded body and latest design protection tubes. Connection is easy and reliable as all Bosch 3 & 4 wire universal sensors are supplied with a patented "Posi-Lock" weather-tight connector.

The Bosch Universal Oxygen Sensor program consists of the following range of sensors,



## Single Wire Sensors

0 258 986 501 – Standard single wire sensor with "bullet" style connection.

0 258 002 031 – Single wire sensor with "bullet" style connection, supplied with removable "flange" type mounting (54 mm pitch).

## Two Wire Sensor

0 258 002 210 – Two wire sensor with "bullet" style connections, supplied with removable "flange" type mounting (54 mm pitch). Sensor can be used without mounting flange.

## Three Wire Sensors

0 258 986 502 - Three wire sensor with 12 watt heater and grounded case.

0 258 986 504 - Three wire sensor with 18 watt heater and grounded case.

## Four Wire Sensors

0 258 005 728 - Four wire sensor with "flange" type mounting.

0 258 005 732 - Four wire sensor with 12 watt heater, grounded case and special protection tube.

0 258 986 503 - Four wire sensor with 18 watt heater and grounded case.

0 258 986 505 - Four wire sensor with 18 watt heater and ground isolated case.

0 258 986 506 - Four wire sensor with 12 watt heater and grounded case.

0 258 986 507 - Four wire sensor with 12 watt heater and ground isolated case.

0 258 986 602 - Four wire "Planar" construction sensor.

0 258 986 617 - Four wire "Planar" construction sensor with "flange" type mounting.



# Cross Reference Direct Fit to Universal Sensor

Including Test and Replace Intervals

Original Sensor	Direct Fit Supersession	Universal Sensor	No. of wires	Check Interval Km's	Original Sensor	Direct Fit Supersession	Universal Sensor	No. of wires	Check Interval Km's
0 258 001 025		0 258 986 501	1	50,000	0 258 002 046		0 258 986 501	1	50,000
0 258 001 026		0 258 986 501	1	50,000	0 258 002 047		0 258 986 501	1	50,000
0 258 001 027		0 258 986 501	1	50,000	0 258 002 049		0 258 986 501	1	50,000
0 258 001 028		0 258 986 501	1	50,000	0 258 002 050		0 258 986 501	1	50,000
0 258 001 030		0 258 986 501	1	50,000	0 258 002 051		0 258 002 031	1	50,000
0 258 001 031		0 258 986 501	1	50,000	0 258 002 052		0 258 986 501	1	50,000
0 258 001 032		0 258 986 501	1	50,000	0 258 002 053		0 258 986 501	1	50,000
0 258 001 035		0 258 986 501	1	50,000	0 258 002 054		0 258 986 501	1	50,000
0 258 001 037		0 258 986 501	1	50,000	0 258 002 055		0 258 986 501	1	50,000
0 258 001 038		0 258 986 501	1	50,000	0 258 002 056		0 258 986 501	1	50,000
0 258 001 039		0 258 986 501	1	50,000	0 258 002 057		0 258 986 501	1	50,000
0 258 001 040		0 258 986 501	1	50,000	0 258 002 058		0 258 986 501	1	50,000
0 258 001 041		0 258 986 501	1	50,000	0 258 002 111		0 258 986 501	1	50,000
0 258 001 042		0 258 986 501	1	50,000	0 258 002 201		0 258 002 210	2	50,000
0 258 001 047		0 258 986 501	1	50,000	0 258 002 210		—	2	50,000
0 258 001 051		0 258 986 501	1	50,000	0 258 002 908		0 258 986 501	1	50,000
0 258 001 052		0 258 986 501	1	50,000	0 258 002 909		0 258 986 501	1	50,000
0 258 001 064		0 258 986 501	1	50,000	0 258 002 919		0 258 986 501	1	50,000
0 258 001 097		0 258 986 501	1	50,000	0 258 003 001		0 258 986 502	3	100,000
0 258 001 248		0 258 986 501	1	50,000	0 258 003 002		0 258 986 502	3	100,000
0 258 001 929		0 258 986 501	1	50,000	0 258 003 003		0 258 986 502	3	100,000
0 258 001 960		0 258 986 501	1	50,000	0 258 003 004	0 258 003 957	0 258 986 502	3	100,000
0 258 001 961		0 258 986 501	1	50,000	0 258 003 005		0 258 986 502	3	100,000
0 258 001 962		0 258 986 501	1	50,000	0 258 003 006	0 258 003 957	0 258 986 502	3	100,000
0 258 001 963		0 258 986 501	1	50,000	0 258 003 008		0 258 986 502	3	100,000
0 258 001 964		0 258 986 501	1	50,000	0 258 003 009	0 258 003 957	0 258 986 502	3	100,000
0 258 002 008		0 258 986 501	1	50,000	0 258 003 010		0 258 986 502	3	100,000
0 258 002 009		0 258 986 501	1	50,000	0 258 003 011		0 258 986 502	3	100,000
0 258 002 012		0 258 986 501	1	50,000	0 258 003 012		0 258 986 502	3	100,000
0 258 002 014		0 258 986 501	1	50,000	0 258 003 013	0 258 003 957	0 258 986 502	3	100,000
0 258 002 015		0 258 986 501	1	50,000	0 258 003 014	0 258 003 957	0 258 986 502	3	100,000
0 258 002 017		0 258 986 501	1	50,000	0 258 003 015		0 258 986 502	3	100,000
0 258 002 018		0 258 986 501	1	50,000	0 258 003 016		0 258 986 502	3	100,000
0 258 002 020		0 258 986 501	1	50,000	0 258 003 017	0 258 003 300	0 258 986 502	3	100,000
0 258 002 021		0 258 986 501	1	50,000	0 258 003 018		0 258 986 502	3	100,000
0 258 002 022		0 258 986 501	1	50,000	0 258 003 019	0 258 003 957	0 258 986 502	3	100,000
0 258 002 023		0 258 986 501	1	50,000	0 258 003 020	0 258 003 060	0 258 986 502	3	100,000
0 258 002 024		0 258 986 501	1	50,000	0 258 003 021		0 258 986 502	3	100,000
0 258 002 025		0 258 986 501	1	50,000	0 258 003 022		0 258 986 502	3	100,000
0 258 002 026		0 258 986 501	1	50,000	0 258 003 023		0 258 986 502	3	100,000
0 258 002 027		0 258 986 501	1	50,000	0 258 003 024		0 258 986 502	3	100,000
0 258 002 028		—	2	50,000	0 258 003 025		0 258 986 502	3	100,000
				- 80,000	0 258 003 026		0 258 986 502	3	100,000
0 258 002 029		0 258 986 501	1	50,000	0 258 003 027	0 258 003 060	0 258 986 502	3	100,000
0 258 002 030		0 258 986 501	1	50,000	0 258 003 028	0 258 003 957	0 258 986 502	3	100,000
0 258 002 031		0 258 002 031	1	50,000	0 258 003 030		0 258 986 502	3	100,000
0 258 002 032		0 258 986 501	1	50,000	0 258 003 031		0 258 986 502	3	100,000
0 258 002 033		0 258 986 501	1	50,000	0 258 003 032	0 258 003 957	0 258 986 502	3	100,000
0 258 002 034		0 258 986 501	1	50,000	0 258 003 033		0 258 986 502	3	100,000
0 258 002 035		0 258 986 501	1	50,000	0 258 003 034		0 258 986 504	3	100,000
0 258 002 036		0 258 986 501	1	50,000	0 258 003 035	0 258 003 097	0 258 986 502	3	100,000
0 258 002 038		0 258 986 501	1	50,000	0 258 003 036		0 258 986 502	3	100,000
0 258 002 039		0 258 986 501	1	50,000	0 258 003 037		0 258 986 506	4	100,000
0 258 002 040		0 258 986 501	1	50,000	0 258 003 038		0 258 986 503	4	100,000
0 258 002 041		0 258 986 501	1	50,000	0 258 003 039		0 258 986 502	3	100,000
0 258 002 042		0 258 986 501	1	50,000	0 258 003 040	0 258 003 957	0 258 986 502	3	100,000
0 258 002 044		0 258 986 501	1	50,000	0 258 003 041		0 258 986 502	3	100,000
0 258 002 045		0 258 986 501	1	50,000	0 258 003 042	F 00H L00 053	0 258 986 502	3	100,000

Original Sensor	Direct Fit Supersession	Universal Sensor	No. of wires	Check Interval Km's	Original Sensor	Direct Fit Supersession	Universal Sensor	No. of wires	Check Interval Km's
0 258 003 043		0 258 986 502	3	100,000	0 258 003 106		0 258 986 502	3	100,000
0 258 003 044		0 258 986 502	3	100,000	0 258 003 107		0 258 986 503	4	100,000
0 258 003 045		0 258 986 503	4	100,000	0 258 003 108	0 258 005 322	0 258 986 503	4	100,000
0 258 003 046		0 258 986 502	3	100,000	0 258 003 109		0 258 986 503	4	100,000
0 258 003 047		0 258 986 502	3	100,000	0 258 003 110	0 258 003 331	0 258 986 502	3	100,000
0 258 003 048		0 258 986 502	3	100,000	0 258 003 112		0 258 986 502	3	100,000
0 258 003 049		0 258 986 502	3	100,000	0 258 003 113		0 258 986 502	3	100,000
0 258 003 050	0 258 003 950	0 258 986 502	3	100,000	0 258 003 114		0 258 986 504	3	100,000
0 258 003 051		0 258 986 506	4	100,000	0 258 003 115		0 258 986 504	3	100,000
0 258 003 052	0 258 005 313	0 258 986 506	4	100,000	0 258 003 116	0 258 003 171	0 258 986 504	3	50,000
0 258 003 054		0 258 986 502	3	100,000					- 80,000
0 258 003 056		0 258 986 502	3	100,000	0 258 003 117	0 258 003 171	0 258 986 504	3	50,000
0 258 003 057	0 258 003 957	0 258 986 502	3	100,000					- 80,000
0 258 003 059		0 258 986 502	3	100,000	0 258 003 118		0 258 986 506	4	100,000
0 258 003 060		0 258 986 502	3	100,000	0 258 003 119		0 258 986 504	3	100,000
0 258 003 061	0 258 003 957	0 258 986 502	3	100,000	0 258 003 120	0 258 003 222	0 258 986 506	4	100,000
0 258 003 062		0 258 986 503	4	100,000	0 258 003 125		0 258 986 507	4	100,000
0 258 003 063	0 258 003 957	0 258 986 502	3	100,000	0 258 003 127		0 258 986 507	4	100,000
0 258 003 064	0 258 005 324	0 258 986 503	4	160,000	0 258 003 128		0 258 986 507	4	100,000
0 258 003 065		0 258 986 504	3	100,000	0 258 003 129		0 258 986 507	4	100,000
0 258 003 067	0 258 005 325	0 258 986 503	4	100,000	0 258 003 130		0 258 986 502	3	100,000
0 258 003 068		0 258 986 503	4	100,000	0 258 003 131		0 258 986 502	3	100,000
0 258 003 069	0 258 005 325	0 258 986 503	4	100,000	0 258 003 132		0 258 986 502	3	100,000
0 258 003 070	0 258 003 970	—	3	50,000	0 258 003 133		0 258 986 502	3	100,000
				- 80,000	0 258 003 134		0 258 986 502	3	100,000
0 258 003 072		0 258 986 502	3	100,000	0 258 003 135		0 258 986 502	3	100,000
0 258 003 073		0 258 986 502	3	100,000	0 258 003 136		0 258 986 502	3	100,000
0 258 003 074		0 258 986 506	4	100,000	0 258 003 137		0 258 986 502	3	100,000
0 258 003 075	0 258 003 957	0 258 986 502	3	100,000	0 258 003 138		0 258 986 502	3	100,000
0 258 003 077	0 258 003 189	0 258 986 502	3	100,000	0 258 003 139	0 258 003 300	0 258 986 502	3	100,000
0 258 003 078		0 258 986 506	4	100,000	0 258 003 140		0 258 986 502	3	100,000
0 258 003 079		0 258 986 504	3	100,000	0 258 003 141	0 258 003 021	0 258 986 502	3	100,000
0 258 003 080		0 258 986 502	3	100,000	0 258 003 142		0 258 986 502	3	100,000
0 258 003 081	0 258 003 189	0 258 986 502	3	100,000	0 258 003 143		0 258 986 502	3	100,000
0 258 003 082		0 258 986 502	3	100,000	0 258 003 144		0 258 986 504	3	100,000
0 258 003 083	0 258 003 995	0 258 986 504	3	50,000	0 258 003 145		0 258 986 504	3	100,000
				- 80,000	0 258 003 146		0 258 986 504	3	100,000
0 258 003 084	0 258 003 924	0 258 986 502	3	100,000	0 258 003 147		0 258 986 504	3	100,000
0 258 003 085	0 258 003 995	0 258 986 504	3	100,000	0 258 003 148		0 258 986 504	3	100,000
0 258 003 086	0 258 003 189	0 258 986 502	3	100,000	0 258 003 149		0 258 986 504	3	100,000
0 258 003 087		0 258 986 506	4	100,000	0 258 003 150		0 258 986 504	3	100,000
0 258 003 088		0 258 986 503	4	100,000	0 258 003 151		0 258 986 504	3	100,000
0 258 003 090	0 258 003 957	0 258 986 502	3	100,000	0 258 003 152		0 258 986 504	3	100,000
0 258 003 091		—	3	100,000	0 258 003 153		0 258 986 504	3	100,000
0 258 003 092		0 258 986 504	3	50,000	0 258 003 154		0 258 986 502	3	100,000
				- 80,000	0 258 003 155		0 258 986 502	3	100,000
0 258 003 093		0 258 986 502	3	100,000	0 258 003 156		0 258 986 502	3	100,000
0 258 003 094		0 258 986 502	3	100,000	0 258 003 157		0 258 986 502	3	100,000
0 258 003 095		0 258 986 504	3	100,000	0 258 003 160		0 258 986 502	3	100,000
0 258 003 095	0 258 003 097	0 258 986 504	3	100,000	0 258 003 161		0 258 986 502	3	100,000
0 258 003 096		0 258 986 502	3	100,000	0 258 003 162		0 258 986 502	3	100,000
0 258 003 097		0 258 986 502	3	100,000	0 258 003 163		0 258 986 503	4	100,000
0 258 003 099		0 258 986 502	3	100,000	0 258 003 164	0 258 003 957	0 258 986 502	3	160,000
0 258 003 101	0 258 003 957	0 258 986 502	3	100,000	0 258 003 165		0 258 986 502	3	100,000
0 258 003 102		0 258 986 502	3	100,000	0 258 003 166		0 258 986 502	3	100,000
0 258 003 103	0 258 003 222	0 258 986 506	4	100,000	0 258 003 167	0 258 003 331	0 258 986 502	3	100,000
0 258 003 104		0 258 986 502	3	100,000	0 258 003 169		0 258 986 504	3	50,000
0 258 003 105		0 258 986 502	3	100,000					- 80,000



**Cross Reference Direct Fit to Universal Sensor****Including Test and Replace Intervals (continued)**

<b>Original Sensor</b>	<b>Direct Fit Supersession</b>	<b>Universal Sensor</b>	<b>No. of wires</b>	<b>Check Interval Km's</b>
0 258 003 170	0 258 003 169	0 258 986 504	3	50,000 - 80,000
0 258 003 171		0 258 986 504	3	100,000
0 258 003 172		0 258 986 504	3	100,000
0 258 003 173		0 258 986 502	3	100,000
0 258 003 174		0 258 986 502	3	100,000
0 258 003 175	0 258 003 957	0 258 986 502	3	100,000
0 258 003 177		0 258 986 507	4	100,000
0 258 003 178		0 258 986 507	4	100,000
0 258 003 179	0 258 003 331	0 258 986 502	3	100,000
0 258 003 181	0 258 003 331	0 258 986 502	3	100,000
0 258 003 182		0 258 986 502	3	100,000
0 258 003 183		0 258 986 507	4	100,000
0 258 003 184		0 258 986 507	4	100,000
0 258 003 186		0 258 986 507	4	100,000
0 258 003 187		0 258 986 507	4	100,000
0 258 003 188		0 258 986 507	4	100,000
0 258 003 189		0 258 986 502	3	160,000
0 258 003 190		0 258 986 502	3	100,000
0 258 003 191	0 258 003 171	0 258 986 504	3	50,000 - 80,000
0 258 003 192	0 258 003 171	0 258 986 504	3	50,000 - 80,000
0 258 003 193		0 258 986 506	4	100,000
0 258 003 194	0 258 003 957	0 258 986 502	3	100,000
0 258 003 195	0 258 003 429	0 258 986 503	4	100,000
0 258 003 196		0 258 986 503	4	100,000
0 258 003 197		0 258 986 503	4	100,000
0 258 003 198		0 258 986 503	4	100,000
0 258 003 199	0 258 003 427	0 258 986 503	4	100,000
0 258 003 200		0 258 986 503	4	100,000
0 258 003 201	0 258 003 189	0 258 986 502	3	100,000
0 258 003 202		0 258 986 503	4	100,000
0 258 003 203		0 258 986 506	4	100,000
0 258 003 204		0 258 986 503	4	100,000
0 258 003 206	0 258 003 957	0 258 986 502	3	100,000
0 258 003 207	0 258 003 211	0 258 986 502	3	100,000
0 258 003 211		0 258 986 502	3	100,000
0 258 003 212		0 258 986 502	3	100,000
0 258 003 213	0 258 003 211	0 258 986 502	3	100,000
0 258 003 215	0 258 005 324	0 258 986 503	4	100,000
0 258 003 216		0 258 986 506	4	100,000
0 258 003 217		0 258 986 506	4	100,000
0 258 003 218		0 258 986 507	4	100,000
0 258 003 219	0 258 005 324	0 258 986 503	4	100,000
0 258 003 220	0 258 005 324	0 258 986 503	4	100,000
0 258 003 222		0 258 986 506	4	160,000
0 258 003 224		0 258 986 507	4	160,000
0 258 003 226		0 258 986 507	4	160,000
0 258 003 227		0 258 986 507	4	160,000
0 258 003 228		0 258 986 507	4	160,000
0 258 003 229		0 258 986 506	4	100,000
0 258 003 231	0 258 005 324	0 258 986 503	4	100,000
0 258 003 232	0 258 003 211	0 258 986 502	3	100,000
0 258 003 233		0 258 986 502	3	100,000
0 258 003 234	0 258 003 957	0 258 986 502	3	100,000
0 258 003 236		0 258 986 503	4	100,000
0 258 003 237		0 258 986 503	4	100,000

<b>Original Sensor</b>	<b>Direct Fit Supersession</b>	<b>Universal Sensor</b>	<b>No. of wires</b>	<b>Check Interval Km's</b>
0 258 003 238		0 258 986 506	4	100,000
0 258 003 239		0 258 986 506	4	100,000
0 258 003 240	0 258 003 222	0 258 986 506	4	100,000
0 258 003 241	0 258 003 995	0 258 986 504	3	50,000 - 80,000
0 258 003 242	0 258 003 995	0 258 986 504	3	50,000 - 80,000
0 258 003 243	0 258 003 021	0 258 986 502	3	100,000
0 258 003 244	0 258 005 324	0 258 986 503	4	100,000
0 258 003 245	0 258 005 334	0 258 986 502	3	100,000
0 258 003 246	0 258 003 060	0 258 986 502	3	100,000
0 258 003 247		0 258 986 504	3	100,000
0 258 003 248		0 258 986 504	3	100,000
0 258 003 249		0 258 986 504	3	50,000 - 80,000
0 258 003 250	0 258 003 249	0 258 986 504	3	50,000 - 80,000
0 258 003 251		0 258 986 506	4	100,000
0 258 003 252		0 258 986 506	4	100,000
0 258 003 253		0 258 986 506	4	100,000
0 258 003 254	0 258 003 995	0 258 986 504	3	50,000 - 80,000
0 258 003 256		0 258 986 502	3	160,000
0 258 003 257		0 258 986 502	3	160,000
0 258 003 258		0 258 986 504	3	50,000 - 80,000
0 258 003 259	0 258 003 291	0 258 986 506	4	100,000
0 258 003 260		0 258 986 503	4	100,000
0 258 003 261	0 258 005 325	0 258 986 503	4	100,000
0 258 003 262	0 258 003 222	0 258 986 506	4	100,000
0 258 003 263	0 258 003 331	0 258 986 502	3	100,000
0 258 003 264		0 258 986 502	3	100,000
0 258 003 265	0 258 003 439	0 258 986 503	4	100,000
0 258 003 267		0 258 986 503	4	100,000
0 258 003 268		0 258 986 503	4	100,000
0 258 003 269	0 258 003 829	0 258 986 503	4	50,000 - 80,000
0 258 003 271	0 258 003 829	0 258 986 503	4	50,000 - 80,000
0 258 003 273		0 258 986 502	3	50,000 - 80,000
0 258 003 274		0 258 986 502	3	50,000 - 80,000
0 258 003 275		0 258 986 507	4	100,000
0 258 003 276		0 258 986 502	3	100,000
0 258 003 277		0 258 986 502	3	160,000
0 258 003 278		0 258 986 504	3	50,000 - 80,000
0 258 003 279	0 258 003 957	0 258 986 502	3	100,000
0 258 003 281	0 258 003 396	0 258 986 502	3	50,000 - 80,000
0 258 003 283		0 258 986 502	3	160,000
0 258 003 284		0 258 986 502	3	160,000
0 258 003 285		0 258 986 504	3	50,000 - 80,000
0 258 003 286		0 258 986 502	3	160,000
0 258 003 287		0 258 986 502	3	160,000
0 258 003 288	0 258 003 439	0 258 986 503	4	100,000



Original Sensor	Direct Fit Supersession	Universal Sensor	No. of wires	Check Interval Km's	Original Sensor	Direct Fit Supersession	Universal Sensor	No. of wires	Check Interval Km's
0 258 003 289		0 258 986 503	4	100,000	0 258 003 347		0 258 986 504	3	50,000
0 258 003 290		0 258 986 506	4	100,000					- 80,000
0 258 003 291		0 258 986 506	4	100,000	0 258 003 349		0 258 986 502	3	100,000
0 258 003 292		0 258 986 506	4	100,000	0 258 003 351		0 258 986 504	3	50,000
0 258 003 293		0 258 986 502	3	100,000					- 80,000
0 258 003 294		0 258 986 502	3	100,000	0 258 003 352		0 258 986 506	4	100,000
0 258 003 295	0 258 003 396	0 258 986 502	3	50,000	0 258 003 353		0 258 986 503	4	100,000
				- 80,000	0 258 003 354		0 258 986 503	4	160,000
0 258 003 297		0 258 986 502	3	100,000	0 258 003 355		0 258 986 506	4	160,000
0 258 003 298	0 258 003 957	0 258 986 502	3	100,000	0 258 003 356		0 258 986 505	4	160,000
0 258 003 299		0 258 986 502	3	100,000	0 258 003 357	0 258 005 324	0 258 986 503	4	100,000
0 258 003 300		0 258 986 502	3	160,000	0 258 003 358		0 258 986 506	4	160,000
0 258 003 301		0 258 986 506	4	100,000	0 258 003 359		0 258 986 503	4	100,000
0 258 003 302		0 258 986 506	4	100,000	0 258 003 360		0 258 986 506	4	100,000
0 258 003 303		0 258 986 506	4	100,000	0 258 003 363	0 258 003 554	0 258 986 504	3	100,000
0 258 003 304		0 258 986 506	4	100,000	0 258 003 365		0 258 986 506	4	100,000
0 258 003 305		0 258 986 504	3	50,000	0 258 003 366		0 258 986 506	4	100,000
				- 80,000	0 258 003 367		0 258 986 506	4	100,000
0 258 003 306		0 258 986 504	3	50,000	0 258 003 368		0 258 986 506	4	100,000
				- 80,000	0 258 003 369		0 258 986 505	4	160,000
0 258 003 307		0 258 986 507	4	100,000	0 258 003 370		0 258 986 502	3	160,000
0 258 003 308		0 258 986 504	3	100,000	0 258 003 371	0 258 003 439	0 258 986 503	4	100,000
0 258 003 309		0 258 986 506	4	100,000	0 258 003 373		0 258 986 506	4	100,000
0 258 003 310	0 258 005 324	0 258 986 503	4	100,000	0 258 003 374		0 258 986 505	4	160,000
0 258 003 311		0 258 986 502	3	160,000	0 258 003 375		0 258 986 505	4	160,000
0 258 003 312		0 258 986 502	3	160,000	0 258 003 376		0 258 986 502	3	160,000
0 258 003 313	0 258 003 957	0 258 986 502	3	160,000	0 258 003 377		0 258 986 504	3	160,000
0 258 003 314		0 258 986 503	4	100,000	0 258 003 378		0 258 986 504	3	160,000
0 258 003 315		0 258 986 503	4	100,000	0 258 003 379		0 258 986 504	3	100,000
0 258 003 317		0 258 986 503	4	100,000	0 258 003 380		0 258 986 504	3	100,000
0 258 003 318		0 258 986 506	4	160,000	0 258 003 381		0 258 986 502	3	100,000
0 258 003 319		0 258 986 506	4	160,000	0 258 003 382		0 258 986 507	4	160,000
0 258 003 320		0 258 986 506	4	100,000	0 258 003 383		0 258 986 507	4	160,000
0 258 003 321		0 258 986 506	4	100,000	0 258 003 384		0 258 986 507	4	100,000
0 258 003 322	0 258 003 320	0 258 986 506	4	100,000	0 258 003 385		0 258 986 507	4	100,000
0 258 003 323		0 258 986 506	4	100,000	0 258 003 386		0 258 986 507	4	100,000
0 258 003 324		0 258 986 506	4	100,000	0 258 003 387		0 258 986 507	4	160,000
0 258 003 325		0 258 986 506	4	100,000	0 258 003 389		0 258 986 507	4	160,000
0 258 003 326		0 258 986 503	4	160,000	0 258 003 390		0 258 986 506	4	160,000
0 258 003 327		0 258 986 503	4	160,000	0 258 003 391		0 258 986 503	4	50,000
0 258 003 328		0 258 986 503	4	100,000					- 80,000
0 258 003 329		0 258 986 503	4	100,000	0 258 003 392	0 258 003 714	0 258 986 507	4	160,000
0 258 003 330		0 258 986 507	4	160,000	0 258 003 393		0 258 986 502	3	100,000
0 258 003 331		0 258 986 502	3	100,000	0 258 003 394		0 258 986 505	4	160,000
0 258 003 332		0 258 986 502	3	100,000	0 258 003 395		0 258 986 505	4	160,000
0 258 003 333		0 258 986 506	4	100,000	0 258 003 396		0 258 986 502	3	160,000
0 258 003 334	0 258 003 439	0 258 986 503	4	100,000	0 258 003 397		0 258 986 502	3	160,000
0 258 003 336		0 258 986 505	4	160,000	0 258 003 399		0 258 986 507	4	160,000
0 258 003 337	0 258 005 334	0 258 986 502	3	160,000	0 258 003 401		0 258 986 507	4	160,000
0 258 003 338	0 258 005 327	0 258 986 503	4	100,000	0 258 003 403		0 258 986 503	4	50,000
0 258 003 339	0 258 003 714	0 258 986 507	4	100,000					- 80,000
0 258 003 340	0 258 003 485	0 258 986 507	4	100,000	0 258 003 414		0 258 986 505	4	160,000
0 258 003 341		0 258 986 507	4	100,000	0 258 003 415		0 258 986 505	4	160,000
0 258 003 342	0 258 003 714	0 258 986 507	4	100,000	0 258 003 417		0 258 986 502	3	160,000
0 258 003 343	0 258 003 485	0 258 986 507	4	100,000	0 258 003 418		0 258 986 502	3	160,000
0 258 003 344	0 258 003 396	0 258 986 502	3	160,000	0 258 003 419		0 258 986 502	3	160,000
0 258 003 346		0 258 986 504	3	50,000	0 258 003 420	0 258 003 256	0 258 986 502	3	160,000
				- 80,000					

**Cross Reference Direct Fit to Universal Sensor****Including Test and Replace Intervals (continued)**

<b>Original Sensor</b>	<b>Direct Fit Supersession</b>	<b>Universal Sensor</b>	<b>No. of wires</b>	<b>Check Interval Km's</b>
0 258 003 421		0 258 986 502	3	160,000
0 258 003 422		0 258 986 504	3	100,000
0 258 003 423		0 258 986 507	4	100,000
0 258 003 425		0 258 986 505	4	160,000
0 258 003 426	0 258 005 324	0 258 986 503	4	100,000
0 258 003 427		0 258 986 503	4	160,000
0 258 003 428		0 258 986 503	4	160,000
0 258 003 429		0 258 986 503	4	160,000
0 258 003 430		0 258 986 503	4	160,000
0 258 003 431		0 258 986 503	4	160,000
0 258 003 432		0 258 986 503	4	160,000
0 258 003 433		0 258 986 503	4	160,000
0 258 003 434		0 258 986 503	4	160,000
0 258 003 436		0 258 986 505	4	160,000
0 258 003 437	0 258 003 303	0 258 986 506	4	100,000
0 258 003 439		0 258 986 503	4	100,000
0 258 003 440		0 258 986 503	4	100,000
0 258 003 441		0 258 986 504	3	50,000
				- 80,000
0 258 003 443	0 258 003 427	0 258 986 503	4	100,000
0 258 003 444		0 258 986 503	4	100,000
0 258 003 445		0 258 986 502	3	160,000
0 258 003 446	0 258 003 448	0 258 986 502	3	160,000
0 258 003 447	0 258 003 448	0 258 986 502	3	160,000
0 258 003 448		0 258 986 502	3	160,000
0 258 003 450		0 258 986 506	4	100,000
0 258 003 451	0 258 003 303	0 258 986 506	4	100,000
0 258 003 453	0 258 003 810	0 258 986 503	4	100,000
0 258 003 454	0 258 003 842	0 258 986 505	4	160,000
0 258 003 456	0 258 003 714	0 258 986 507	4	160,000
0 258 003 457	0 258 003 714	0 258 986 507	4	160,000
0 258 003 458		0 258 986 505	4	160,000
0 258 003 459		0 258 986 505	4	160,000
0 258 003 460	0 258 005 324	0 258 986 503	4	100,000
0 258 003 461		0 258 986 502	3	100,000
0 258 003 462		0 258 986 506	4	50,000
				- 80,000
0 258 003 463		0 258 986 506	4	160,000
0 258 003 464		0 258 986 506	4	50,000
				- 80,000
0 258 003 465		0 258 986 503	4	50,000
				- 80,000
0 258 003 467		0 258 986 507	4	100,000
0 258 003 468		0 258 986 507	4	160,000
0 258 003 469		0 258 986 506	4	100,000
0 258 003 470		0 258 986 505	4	160,000
0 258 003 472		0 258 986 507	4	100,000
0 258 003 473		0 258 986 502	3	160,000
0 258 003 474		0 258 986 502	3	160,000
0 258 003 475		0 258 986 505	4	160,000
0 258 003 476		0 258 986 505	4	160,000
0 258 003 477		0 258 986 505	4	160,000
0 258 003 478		0 258 986 505	4	160,000
0 258 003 479		0 258 986 505	4	160,000
0 258 003 481		0 258 986 507	4	50,000
				- 80,000
0 258 003 483		0 258 986 502	3	160,000
0 258 003 484	0 258 003 714	0 258 986 507	4	160,000

<b>Original Sensor</b>	<b>Direct Fit Supersession</b>	<b>Universal Sensor</b>	<b>No. of wires</b>	<b>Check Interval Km's</b>
0 258 003 485		0 258 986 507	4	160,000
0 258 003 486	0 258 003 714	0 258 986 507	4	160,000
0 258 003 492		0 258 986 507	4	160,000
0 258 003 494		0 258 986 507	4	160,000
0 258 003 496		0 258 986 507	4	160,000
0 258 003 498		0 258 986 507	4	160,000
0 258 003 500		0 258 986 507	4	160,000
0 258 003 503		0 258 986 502	3	50,000
				- 80,000
0 258 003 504		0 258 986 502	3	50,000
				- 80,000
0 258 003 505		0 258 986 502	3	50,000
				- 80,000
0 258 003 506		0 258 986 507	4	160,000
0 258 003 507		0 258 986 507	4	160,000
0 258 003 508	0 258 003 957	0 258 986 502	3	160,000
0 258 003 509		0 258 986 502	3	160,000
0 258 003 510	0 258 003 957	0 258 986 502	3	160,000
0 258 003 512	0 258 005 324	0 258 986 503	4	100,000
0 258 003 513		0 258 986 506	4	100,000
0 258 003 514		0 258 986 506	4	100,000
0 258 003 515		0 258 986 506	4	160,000
0 258 003 516		0 258 986 506	4	160,000
0 258 003 517		0 258 986 503	4	160,000
0 258 003 518	0 258 003 478	0 258 986 505	4	160,000
0 258 003 521		0 258 986 507	4	160,000
0 258 003 522	0 258 003 810	0 258 986 503	4	100,000
0 258 003 523	0 258 003 810	0 258 986 503	4	100,000
0 258 003 524		0 258 986 502	3	160,000
0 258 003 525		0 258 986 502	3	160,000
0 258 003 526		0 258 986 505	4	50,000
				- 80,000
0 258 003 528		0 258 986 503	4	50,000
				- 80,000
0 258 003 533		0 258 986 507	4	100,000
0 258 003 535		0 258 986 507	4	100,000
0 258 003 537		0 258 986 507	4	100,000
0 258 003 539		0 258 986 503	4	50,000
				- 80,000
0 258 003 540		0 258 986 506	4	100,000
0 258 003 541		0 258 986 507	4	160,000
0 258 003 542		0 258 986 505	4	160,000
0 258 003 543		0 258 986 505	4	160,000
0 258 003 544	0 258 003 759	0 258 986 507	4	160,000
0 258 003 546	0 258 003 548	0 258 986 503	4	160,000
0 258 003 548		0 258 986 503	4	160,000
0 258 003 549		0 258 986 503	4	160,000
0 258 003 550		0 258 986 505	4	160,000
0 258 003 551		0 258 986 505	4	160,000
0 258 003 552		0 258 986 505	4	160,000
0 258 003 553		0 258 986 505	4	160,000
0 258 003 554		0 258 986 504	3	160,000
0 258 003 555		0 258 986 504	3	160,000
0 258 003 556		0 258 986 507	4	160,000
0 258 003 557		0 258 986 507	4	160,000
0 258 003 558		0 258 986 505	4	160,000
0 258 003 559		0 258 986 505	4	160,000

Original Sensor	Direct Fit Supersession	Universal Sensor	No. of wires	Check Interval Km's	Original Sensor	Direct Fit Supersession	Universal Sensor	No. of wires	Check Interval Km's
0 258 003 560		0 258 986 503	4	50,000	0 258 003 637		0 258 986 506	4	160,000
				- 80,000	0 258 003 638		0 258 986 505	4	160,000
0 258 003 561		0 258 986 505	4	160,000	0 258 003 639		0 258 986 505	4	160,000
0 258 003 564		0 258 986 505	4	160,000	0 258 003 640		0 258 986 505	4	160,000
0 258 003 567		0 258 986 506	4	50,000	0 258 003 641		0 258 986 505	4	160,000
				- 80,000	0 258 003 642		0 258 986 505	4	160,000
0 258 003 568		0 258 986 506	4	100,000	0 258 003 643		0 258 986 505	4	160,000
0 258 003 569		0 258 986 502	3	100,000	0 258 003 644		0 258 986 507	4	160,000
0 258 003 570		0 258 986 506	4	100,000	0 258 003 645		0 258 986 505	4	160,000
0 258 003 571		0 258 986 506	4	160,000	0 258 003 646	0 258 003 842	0 258 986 505	4	160,000
0 258 003 572		0 258 986 506	4	160,000	0 258 003 648		0 258 986 506	4	100,000
0 258 003 573		0 258 986 506	4	100,000	0 258 003 649		0 258 986 506	4	100,000
0 258 003 574		0 258 986 506	4	100,000	0 258 003 652		0 258 986 502	3	160,000
0 258 003 575		0 258 986 503	4	160,000	0 258 003 653		0 258 986 502	3	160,000
0 258 003 576		0 258 986 503	4	160,000	0 258 003 654		0 258 986 505	4	160,000
0 258 003 577		0 258 986 505	4	160,000	0 258 003 655		0 258 986 505	4	160,000
0 258 003 578		0 258 986 506	4	160,000	0 258 003 656		0 258 986 505	4	160,000
0 258 003 579		0 258 986 506	4	160,000	0 258 003 657		0 258 986 505	4	160,000
0 258 003 580		0 258 986 505	4	160,000	0 258 003 658		0 258 986 505	4	160,000
0 258 003 581		0 258 986 505	4	160,000	0 258 003 660		0 258 986 507	4	160,000
0 258 003 582		0 258 986 505	4	160,000	0 258 003 661		0 258 986 505	4	160,000
0 258 003 583		0 258 986 505	4	160,000	0 258 003 662		0 258 986 505	4	160,000
0 258 003 584		0 258 986 506	4	160,000	0 258 003 664		0 258 986 503	4	50,000
0 258 003 585		0 258 986 506	4	160,000					- 80,000
0 258 003 586	0 258 003 548	0 258 986 503	4	160,000	0 258 003 666		0 258 986 503	4	160,000
0 258 003 588	0 258 003 868	0 258 986 503	4	160,000	0 258 003 669	0 258 003 718	0 258 986 506	4	100,000
0 258 003 590		0 258 986 507	4	160,000	0 258 003 671		0 258 986 506	4	50,000
0 258 003 591		0 258 986 507	4	160,000					- 80,000
0 258 003 592		0 258 986 505	4	160,000	0 258 003 672		0 258 986 506	4	50,000
0 258 003 593		0 258 986 505	4	160,000					- 80,000
0 258 003 596		0 258 986 503	4	160,000	0 258 003 673		0 258 986 506	4	50,000
0 258 003 597		0 258 986 503	4	160,000					- 80,000
0 258 003 598		0 258 986 503	4	160,000	0 258 003 674		0 258 986 503	4	50,000
0 258 003 599		0 258 986 503	4	160,000					- 80,000
0 258 003 600		0 258 986 503	4	160,000	0 258 003 676	0 258 003 759	0 258 986 507	4	160,000
0 258 003 601		0 258 986 503	4	100,000	0 258 003 678		0 258 986 507	4	160,000
0 258 003 602		0 258 986 503	4	100,000	0 258 003 679		0 258 986 507	4	160,000
0 258 003 603		0 258 986 505	4	160,000	0 258 003 681		0 258 986 507	4	160,000
0 258 003 604		0 258 986 503	4	160,000	0 258 003 683		0 258 986 507	4	160,000
0 258 003 605		0 258 986 503	4	160,000	0 258 003 684		0 258 986 505	4	160,000
0 258 003 607		0 258 986 507	4	160,000	0 258 003 685		0 258 986 505	4	160,000
0 258 003 611	0 258 003 630	0 258 986 505	4	160,000	0 258 003 686		0 258 986 506	4	100,000
0 258 003 613	0 258 003 584	0 258 986 506	4	160,000	0 258 003 687		0 258 986 503	4	50,000
0 258 003 621		0 258 986 507	4	160,000					- 80,000
0 258 003 622		0 258 986 502	3	160,000	0 258 003 689		0 258 986 505	4	160,000
0 258 003 623		0 258 986 502	3	160,000	0 258 003 690	0 258 003 630	0 258 986 505	4	160,000
0 258 003 624		0 258 986 502	3	160,000	0 258 003 692		0 258 986 505	4	160,000
0 258 003 625		0 258 986 502	3	160,000	0 258 003 693		0 258 986 505	4	160,000
0 258 003 626		0 258 986 505	4	160,000	0 258 003 694	0 258 003 842	0 258 986 505	4	160,000
0 258 003 627		0 258 986 506	4	100,000	0 258 003 696	0 258 003 842	0 258 986 505	4	160,000
0 258 003 629		0 258 986 507	4	160,000	0 258 003 698		0 258 986 505	4	160,000
0 258 003 630		0 258 986 505	4	160,000	0 258 003 699		0 258 986 505	4	160,000
0 258 003 631		0 258 986 505	4	160,000	0 258 003 700		0 258 986 503	4	100,000
0 258 003 632		0 258 986 503	4	160,000	0 258 003 703		0 258 986 502	3	160,000
0 258 003 633		0 258 986 503	4	160,000	0 258 003 704		0 258 986 502	3	100,000
0 258 003 634		0 258 986 502	3	160,000	0 258 003 705		0 258 986 503	4	50,000
0 258 003 635		0 258 986 502	3	160,000					- 80,000
0 258 003 636		0 258 986 506	4	160,000	0 258 003 709		0 258 986 503	4	160,000



**Cross Reference Direct Fit to Universal Sensor****Including Test and Replace Intervals ( continued )**

<b>Original Sensor</b>	<b>Direct Fit Supersession</b>	<b>Universal Sensor</b>	<b>No. of wires</b>	<b>Check Interval Km's</b>	<b>Original Sensor</b>	<b>Direct Fit Supersession</b>	<b>Universal Sensor</b>	<b>No. of wires</b>	<b>Check Interval Km's</b>
0 258 003 710		0 258 986 503	4	160,000	0 258 003 783		0 258 986 505	4	160,000
0 258 003 712		0 258 986 507	4	160,000	0 258 003 784		0 258 986 503	4	160,000
0 258 003 713	0 258 003 714	0 258 986 507	4	160,000	0 258 003 785		0 258 986 503	4	160,000
0 258 003 714		0 258 986 507	4	160,000	0 258 003 786		0 258 986 503	4	100,000
0 258 003 715		0 258 986 502	3	160,000	0 258 003 787		0 258 986 503	4	100,000
0 258 003 716		0 258 986 506	4	100,000	0 258 003 788		0 258 986 503	4	160,000
0 258 003 717		0 258 986 506	4	100,000	0 258 003 789		0 258 986 503	4	160,000
0 258 003 718		0 258 986 506	4	100,000	0 258 003 790		0 258 986 503	4	160,000
0 258 003 719		0 258 986 506	4	100,000	0 258 003 791		0 258 986 503	4	160,000
0 258 003 721		0 258 986 505	4	160,000	0 258 003 792		0 258 986 503	4	100,000
0 258 003 722		0 258 986 505	4	160,000	0 258 003 793		0 258 986 503	4	100,000
0 258 003 723		0 258 986 505	4	160,000	0 258 003 794		0 258 986 505	4	160,000
0 258 003 725		0 258 986 507	4	160,000	0 258 003 795		0 258 986 505	4	160,000
0 258 003 726		0 258 986 507	4	160,000	0 258 003 797		0 258 986 505	4	160,000
0 258 003 727		0 258 986 507	4	160,000	0 258 003 798		0 258 986 505	4	160,000
0 258 003 729		0 258 986 507	4	160,000	0 258 003 799		0 258 986 505	4	160,000
0 258 003 731		0 258 986 507	4	160,000	0 258 003 800		0 258 986 505	4	50,000
0 258 003 733		0 258 986 507	4	160,000					- 80,000
0 258 003 734	0 258 003 842	0 258 986 505	4	160,000	0 258 003 801		0 258 986 505	4	50,000
0 258 003 736		0 258 986 505	4	160,000					- 80,000
0 258 003 737		0 258 986 505	4	160,000	0 258 003 802		0 258 986 505	4	160,000
0 258 003 738	0 258 003 842	0 258 986 505	4	160,000	0 258 003 805		0 258 986 506	4	160,000
0 258 003 740		0 258 986 505	4	160,000	0 258 003 806		0 258 986 505	4	160,000
0 258 003 741		0 258 986 505	4	160,000	0 258 003 807		0 258 986 505	4	160,000
0 258 003 742		0 258 986 502	3	160,000	0 258 003 808		0 258 986 506	4	100,000
0 258 003 743		0 258 986 502	3	160,000	0 258 003 809		0 258 986 506	4	100,000
0 258 003 744		0 258 986 504	3	50,000	0 258 003 810		0 258 986 503	4	100,000
				- 80,000	0 258 003 811		0 258 986 505	4	160,000
0 258 003 745		0 258 986 505	4	160,000	0 258 003 812		0 258 986 505	4	160,000
0 258 003 746		0 258 986 505	4	160,000	0 258 003 813		0 258 986 507	4	160,000
0 258 003 748		0 258 986 505	4	160,000	0 258 003 814		0 258 986 507	4	160,000
0 258 003 749		0 258 986 505	4	160,000	0 258 003 815		0 258 986 507	4	160,000
0 258 003 750		0 258 986 505	4	160,000	0 258 003 816		0 258 986 507	4	160,000
0 258 003 751		0 258 986 505	4	160,000	0 258 003 817	0 258 005 074	0 258 986 505	4	160,000
0 258 003 752		0 258 986 505	4	160,000	0 258 003 819		0 258 986 507	4	160,000
0 258 003 754		0 258 986 503	4	160,000	0 258 003 820		0 258 986 505	4	160,000
0 258 003 755	0 258 003 478	0 258 986 505	4	160,000	0 258 003 821		0 258 986 502	3	100,000
0 258 003 757		0 258 986 505	4	160,000	0 258 003 822		0 258 986 502	3	100,000
0 258 003 758		0 258 986 505	4	160,000	0 258 003 823		0 258 986 505	4	160,000
0 258 003 759		0 258 986 507	4	160,000	0 258 003 824		0 258 986 505	4	160,000
0 258 003 760		0 258 986 507	4	160,000	0 258 003 825	0 258 003 759	0 258 986 507	4	160,000
0 258 003 762		0 258 986 507	4	160,000	0 258 003 827		0 258 986 502	3	160,000
0 258 003 763		0 258 986 504	3	160,000	0 258 003 828		0 258 986 502	3	160,000
0 258 003 764		0 258 986 504	3	160,000	0 258 003 829		0 258 986 503	4	50,000
0 258 003 765		0 258 986 504	3	160,000					- 80,000
0 258 003 766		0 258 986 504	3	160,000	0 258 003 830		0 258 986 503	4	50,000
0 258 003 769		0 258 986 506	4	160,000					- 80,000
0 258 003 770		0 258 986 506	4	160,000	0 258 003 832		0 258 986 502	3	160,000
0 258 003 771		0 258 986 505	4	160,000	0 258 003 833		0 258 986 502	3	160,000
0 258 003 772		0 258 986 506	4	160,000	0 258 003 835		0 258 986 507	4	160,000
0 258 003 773		0 258 986 505	4	160,000	0 258 003 837		0 258 986 507	4	160,000
0 258 003 774		0 258 986 502	3	160,000	0 258 003 839		0 258 986 507	4	160,000
0 258 003 776		0 258 986 507	4	160,000	0 258 003 841		0 258 986 502	3	160,000
0 258 003 778		0 258 986 507	4	160,000	0 258 003 842		0 258 986 505	4	160,000
0 258 003 779		0 258 986 507	4	160,000	0 258 003 843		0 258 986 505	4	160,000
0 258 003 780		0 258 986 507	4	160,000	0 258 003 844	0 258 003 868	0 258 986 503	4	50,000
0 258 003 781		0 258 986 507	4	160,000					- 80,000
0 258 003 782		0 258 986 505	4	160,000	0 258 003 846	0 258 005 081	0 258 986 505	4	160,000



Original Sensor	Direct Fit Supersession	Universal Sensor	No. of wires	Check Interval Km's	Original Sensor	Direct Fit Supersession	Universal Sensor	No. of wires	Check Interval Km'sμ
0 258 003 848	0 258 005 143	0 258 986 505	4	160,000	0 258 005 004		0 258 986 505	4	160,000
0 258 003 852		0 258 986 502	3	160,000	0 258 005 005		0 258 986 505	4	160,000
0 258 003 853		0 258 986 502	3	160,000	0 258 005 006		0 258 986 505	4	160,000
0 258 003 854		0 258 986 505	4	160,000	0 258 005 007		0 258 986 505	4	160,000
0 258 003 855		0 258 986 507	4	160,000	0 258 005 009		0 258 986 507	4	160,000
0 258 003 856		0 258 986 507	4	160,000	0 258 005 011		0 258 986 507	4	160,000
0 258 003 857	0 258 003 478	0 258 986 505	4	160,000	0 258 005 013		0 258 986 507	4	160,000
0 258 003 860		0 258 986 505	4	160,000	0 258 005 015		0 258 986 507	4	160,000
0 258 003 861		0 258 986 505	4	160,000	0 258 005 017		0 258 986 507	4	160,000
0 258 003 862		0 258 986 505	4	160,000	0 258 005 019		0 258 986 507	4	160,000
0 258 003 863		0 258 986 505	4	160,000	0 258 005 021		0 258 986 507	4	160,000
0 258 003 864		0 258 986 505	4	160,000	0 258 005 023		0 258 986 507	4	160,000
0 258 003 865		0 258 986 505	4	160,000	0 258 005 024		0 258 986 505	4	160,000
0 258 003 866	0 258 003 548	0 258 986 503	4	160,000	0 258 005 025		0 258 986 505	4	160,000
0 258 003 868		0 258 986 503	4	160,000	0 258 005 027		0 258 986 505	4	160,000
0 258 003 869		0 258 986 503	4	160,000	0 258 005 030		0 258 986 503	4	160,000
0 258 003 870		0 258 986 507	4	160,000	0 258 005 034		0 258 986 507	4	160,000
0 258 003 871		0 258 986 507	4	160,000	0 258 005 036		0 258 986 507	4	160,000
0 258 003 872		0 258 986 507	4	160,000	0 258 005 038		0 258 986 507	4	160,000
0 258 003 873		0 258 986 507	4	160,000	0 258 005 047		0 258 986 506	4	160,000
0 258 003 890		0 258 986 507	4	160,000	0 258 005 049	0 258 003 842	0 258 986 505	4	160,000
0 258 003 891		0 258 986 507	4	160,000	0 258 005 051		0 258 986 506	4	160,000
0 258 003 892		0 258 986 502	3	160,000	0 258 005 052		0 258 986 507	4	160,000
0 258 003 893		0 258 986 507	4	160,000	0 258 005 053		0 258 986 507	4	160,000
0 258 003 894		0 258 986 507	4	160,000	0 258 005 054		0 258 986 505	4	160,000
0 258 003 895		0 258 986 505	4	160,000	0 258 005 055		0 258 986 507	4	160,000
0 258 003 896		0 258 986 505	4	160,000	0 258 005 058		0 258 986 503	4	160,000
0 258 003 897		0 258 986 502	3	160,000	0 258 005 059		0 258 986 503	4	160,000
0 258 003 898		0 258 986 502	3	160,000	0 258 005 061		0 258 986 507	4	160,000
0 258 003 913	0 258 003 097	0 258 986 502	3	100,000	0 258 005 062		0 258 986 505	4	160,000
0 258 003 915		0 258 986 502	3	100,000	0 258 005 063		0 258 986 505	4	160,000
0 258 003 918		0 258 986 502	3	100,000	0 258 005 065		0 258 986 505	4	160,000
0 258 003 924		0 258 986 502	3	100,000	0 258 005 066	0 258 003 842	0 258 986 505	4	160,000
0 258 003 925		0 258 986 502	3	100,000	0 258 005 068	0 258 003 842	0 258 986 505	4	160,000
0 258 003 926		0 258 986 502	3	100,000	0 258 005 070		0 258 986 507	4	160,000
0 258 003 930		0 258 986 502	3	100,000	0 258 005 071		0 258 986 507	4	160,000
0 258 003 931	0 258 003 957	0 258 986 502	3	100,000	0 258 005 074		0 258 986 505	4	160,000
0 258 003 936	0 258 003 973	0 258 986 502	3	100,000	0 258 005 075	0 258 003 842	0 258 986 505	4	160,000
0 258 003 942		0 258 986 502	3	100,000	0 258 005 078		0 258 986 505	4	160,000
0 258 003 943		0 258 986 502	3	100,000	0 258 005 079		0 258 986 505	4	160,000
0 258 003 950		0 258 986 502	3	100,000	0 258 005 080		0 258 986 505	4	160,000
0 258 003 953		0 258 986 502	3	100,000	0 258 005 081		0 258 986 505	4	160,000
0 258 003 956		0 258 986 502	3	100,000	0 258 005 082		0 258 986 505	4	160,000
0 258 003 957		0 258 986 502	3	100,000	0 258 005 083		0 258 986 507	4	160,000
0 258 003 965	0 258 003 995	0 258 986 504	3	100,000	0 258 005 084		0 258 986 507	4	160,000
0 258 003 970		—	3	50,000	0 258 005 087		0 258 986 506	4	160,000
				- 80,000	0 258 005 088		0 258 986 505	4	160,000
0 258 003 972		0 258 986 502	3	100,000	0 258 005 089		0 258 986 505	4	160,000
0 258 003 973		0 258 986 502	3	100,000	0 258 005 090		0 258 986 505	4	160,000
0 258 003 979		0 258 986 504	3	100,000	0 258 005 091		0 258 986 505	4	160,000
0 258 003 980		0 258 986 502	3	100,000	0 258 005 092		0 258 986 505	4	160,000
0 258 003 994		0 258 986 502	3	100,000	0 258 005 093		0 258 986 505	4	160,000
0 258 003 995		0 258 986 504	3	100,000	0 258 005 094		0 258 986 505	4	160,000
0 258 003 999		0 258 986 502	3	100,000	0 258 005 095		0 258 986 505	4	160,000
0 258 005 001		0 258 986 507	4	160,000	0 258 005 096		0 258 986 503	4	160,000
0 258 005 002		0 258 986 507	4	160,000	0 258 005 096		0 258 986 503	4	160,000
0 258 005 003		0 258 986 505	4	160,000	0 258 005 097		0 258 986 505	4	160,000

**Cross Reference Direct Fit to Universal Sensor****Including Test and Replace Intervals (continued)**

<b>Original Sensor</b>	<b>Direct Fit Supersession</b>	<b>Universal Sensor</b>	<b>No. of wires</b>	<b>Check Interval Km's</b>	<b>Original Sensor</b>	<b>Direct Fit Supersession</b>	<b>Universal Sensor</b>	<b>No. of wires</b>	<b>Check Interval Km's</b>
0 258 005 098		0 258 986 505	4	160,000	0 258 005 177		0 258 986 505	4	160,000
0 258 005 099		0 258 986 505	4	160,000	0 258 005 178		0 258 986 503	4	160,000
0 258 005 100	0 258 005 081	0 258 986 505	4	160,000	0 258 005 179		0 258 986 505	4	160,000
0 258 005 109		0 258 986 505	4	160,000	0 258 005 180		0 258 986 505	4	160,000
0 258 005 110		0 258 986 507	4	160,000	0 258 005 181		0 258 986 504	3	50,000
0 258 005 112		0 258 986 505	4	160,000					- 80,000
0 258 005 113	0 258 005 081	0 258 986 505	4	160,000	0 258 005 182		0 258 986 505	4	160,000
0 258 005 115		0 258 986 507	4	160,000	0 258 005 183		0 258 986 505	4	160,000
0 258 005 116		0 258 986 507	4	160,000	0 258 005 184		0 258 986 505	4	160,000
0 258 005 117	0 258 005 081	0 258 986 505	4	160,000	0 258 005 185		0 258 986 505	4	160,000
0 258 005 119	0 258 005 081	0 258 986 505	4	160,000	0 258 005 186		0 258 986 505	4	160,000
0 258 005 121	0 258 005 123	0 258 986 505	4	160,000	0 258 005 187	0 258 005 081	0 258 986 505	4	160,000
0 258 005 123		0 258 986 505	4	160,000	0 258 005 189	0 258 005 143	0 258 986 505	4	160,000
0 258 005 124		0 258 986 505	4	160,000	0 258 005 191		0 258 986 507	4	160,000
0 258 005 125		0 258 986 506	4	160,000	0 258 005 192		0 258 986 503	4	160,000
0 258 005 126		0 258 986 503	4	160,000	0 258 005 193	0 258 005 143	0 258 986 505	4	160,000
0 258 005 127		0 258 986 503	4	160,000	0 258 005 197		0 258 986 507	4	160,000
0 258 005 128		0 258 986 503	4	160,000	0 258 005 200		0 258 986 505	4	160,000
0 258 005 129		0 258 986 503	4	160,000	0 258 005 201		0 258 986 505	4	160,000
0 258 005 130		0 258 986 503	4	160,000	0 258 005 202		0 258 986 505	4	160,000
0 258 005 131		0 258 986 503	4	160,000	0 258 005 203		0 258 986 505	4	160,000
0 258 005 132		0 258 986 505	4	160,000	0 258 005 205		0 258 986 505	4	160,000
0 258 005 133		0 258 986 505	4	160,000	0 258 005 206		0 258 986 505	4	160,000
0 258 005 134		0 258 986 507	4	160,000	0 258 005 207		0 258 986 505	4	160,000
0 258 005 135		0 258 986 507	4	160,000	0 258 005 208		0 258 986 505	4	160,000
0 258 005 136		0 258 986 507	4	160,000	0 258 005 209		0 258 986 505	4	160,000
0 258 005 138		0 258 986 505	4	160,000	0 258 005 210		0 258 986 505	4	160,000
0 258 005 139		0 258 986 505	4	160,000	0 258 005 211		0 258 986 502	3	160,000
0 258 005 141		0 258 986 507	4	160,000	0 258 005 212		0 258 986 502	3	160,000
0 258 005 142		0 258 986 507	4	160,000	0 258 005 213		0 258 986 506	4	160,000
0 258 005 143		0 258 986 505	4	160,000	0 258 005 214		0 258 986 506	4	160,000
0 258 005 144		0 258 986 505	4	160,000	0 258 005 215		0 258 986 506	4	160,000
0 258 005 145	0 258 005 143	0 258 986 505	4	160,000	0 258 005 216		0 258 986 506	4	160,000
0 258 005 147		0 258 986 503	4	160,000	0 258 005 219		0 258 986 505	4	160,000
0 258 005 148		0 258 986 503	4	160,000	0 258 005 220		0 258 986 505	4	160,000
0 258 005 149		0 258 986 503	4	160,000	0 258 005 221		0 258 986 505	4	160,000
0 258 005 150		0 258 986 503	4	160,000	0 258 005 222		0 258 986 505	4	160,000
0 258 005 151		0 258 986 503	4	160,000	0 258 005 223		0 258 986 502	3	160,000
0 258 005 152		0 258 986 503	4	160,000	0 258 005 224		0 258 986 502	3	160,000
0 258 005 153		0 258 986 505	4	160,000	0 258 005 226		0 258 986 506	4	160,000
0 258 005 154		0 258 986 505	4	160,000	0 258 005 227	0 258 005 226	0 258 986 506	4	160,000
0 258 005 155		0 258 986 505	4	160,000	0 258 005 228		0 258 986 503	4	160,000
0 258 005 156		0 258 986 506	4	160,000	0 258 005 229		0 258 986 503	4	160,000
0 258 005 157		0 258 986 506	4	160,000	0 258 005 236		0 258 986 505	4	160,000
0 258 005 158	0 258 003 842	0 258 986 505	4	160,000	0 258 005 237		0 258 986 505	4	160,000
0 258 005 160		0 258 986 505	4	160,000	0 258 005 238		0 258 986 502	3	160,000
0 258 005 161		0 258 986 505	4	160,000	0 258 005 239		0 258 986 502	3	160,000
0 258 005 162		0 258 986 507	4	160,000	0 258 005 240		0 258 986 507	4	160,000
0 258 005 163		0 258 986 507	4	160,000	0 258 005 241		0 258 986 507	4	160,000
0 258 005 164		0 258 986 507	4	160,000	0 258 005 242		0 258 986 507	4	160,000
0 258 005 169		0 258 986 507	4	160,000	0 258 005 243		0 258 986 507	4	160,000
0 258 005 170		0 258 986 505	4	160,000	0 258 005 244		0 258 986 505	4	160,000
0 258 005 171		0 258 986 505	4	160,000	0 258 005 245		0 258 986 505	4	160,000
0 258 005 172		0 258 986 505	4	160,000	0 258 005 246		0 258 986 504	3	160,000
0 258 005 173		0 258 986 505	4	160,000	0 258 005 247		0 258 986 505	4	160,000
0 258 005 174		0 258 986 507	4	160,000	0 258 005 249		0 258 986 507	4	160,000
0 258 005 175		0 258 986 505	4	160,000	0 258 005 251		0 258 986 507	4	160,000
0 258 005 176		0 258 986 505	4	160,000	0 258 005 253	0 258 005 708	0 258 986 507	4	160,000



Original Sensor	Direct Fit Supersession	Universal Sensor	No. of wires	Check Interval Km's	Original Sensor	Direct Fit Supersession	Universal Sensor	No. of wires	Check Interval Km's
0 258 005 254		0 258 986 507	4	160,000	0 258 005 652		0 258 986 505	4	160,000
0 258 005 255		0 258 986 507	4	160,000	0 258 005 653		0 258 986 505	4	160,000
0 258 005 256		0 258 986 507	4	160,000	0 258 005 654		0 258 986 507	4	160,000
0 258 005 257		0 258 986 503	4	50,000	0 258 005 657		0 258 986 506	4	160,000
				- 80,000	0 258 005 658		0 258 986 507	4	160,000
0 258 005 258		0 258 986 505	4	160,000	0 258 005 659		0 258 986 507	4	160,000
0 258 005 259		0 258 986 505	4	160,000	0 258 005 701		0 258 986 504	3	160,000
0 258 005 260		0 258 986 504	3	160,000	0 258 005 703		0 258 005 732	4	160,000
0 258 005 261		0 258 986 507	4	160,000	0 258 005 704		0 258 986 507	4	160,000
0 258 005 262		0 258 986 507	4	160,000	0 258 005 705		0 258 986 507	4	160,000
0 258 005 263		0 258 986 507	4	160,000	0 258 005 708		0 258 986 507	4	160,000
0 258 005 264		0 258 986 507	4	160,000	0 258 005 709		0 258 986 507	4	160,000
0 258 005 265		0 258 986 507	4	160,000	0 258 005 710		0 258 986 602	4	160,000
0 258 005 266		0 258 986 507	4	160,000	0 258 005 711		0 258 005 728	4	160,000
0 258 005 267		0 258 986 506	4	160,000	0 258 005 714		0 258 986 507	4	100,000
0 258 005 268		0 258 986 506	4	160,000	0 258 005 716		0 258 986 507	4	160,000
0 258 005 269		0 258 986 506	4	50,000	0 258 005 717		0 258 986 507	4	160,000
				- 80,000	0 258 005 718		0 258 986 507	4	160,000
0 258 005 270		0 258 986 505	4	160,000	0 258 005 719		0 258 986 507	4	160,000
0 258 005 271		0 258 986 505	4	160,000	0 258 005 720		0 258 005 732	4	160,000
0 258 005 272		0 258 986 506	4	50,000	0 258 005 722		0 258 986 507	4	160,000
				- 80,000	0 258 005 735		0 258 986 507	4	160,000
0 258 005 273		0 258 986 506	4	50,000	0 258 005 785		0 258 986 507	4	160,000
				- 80,000	0 258 005 786		0 258 986 507	4	160,000
0 258 005 274		0 258 986 502	3	160,000	0 258 006 011		—	4	160,000
0 258 005 275		0 258 986 502	3	160,000	0 258 006 013		—	4	160,000
0 258 005 276		0 258 986 506	4	160,000	0 258 006 014		—	4	160,000
0 258 005 277		0 258 986 506	4	160,000	0 258 006 016		—	4	160,000
0 258 005 278		0 258 986 506	4	160,000	0 258 006 017	0 258 006 022	—	4	160,000
0 258 005 279		0 258 986 506	4	160,000	0 258 006 018		—	4	160,000
0 258 005 281		0 258 986 505	4	160,000	0 258 006 020		—	4	160,000
0 258 005 283		0 258 986 505	4	160,000	0 258 006 021		—	4	160,000
0 258 005 285		0 258 986 506	4	160,000	0 258 006 022		—	4	160,000
0 258 005 286		0 258 986 506	4	160,000	0 258 006 023		—	4	160,000
0 258 005 287		0 258 986 506	4	160,000	0 258 006 026		—	4	160,000
0 258 005 289		0 258 986 502	3	160,000	0 258 006 027		—	4	160,000
0 258 005 292		0 258 986 507	4	160,000	0 258 006 028		—	4	160,000
0 258 005 293		0 258 986 507	4	160,000	0 258 006 029		—	4	160,000
0 258 005 294		0 258 986 507	4	160,000	0 258 006 031		—	4	160,000
0 258 005 295		0 258 986 507	4	160,000	0 258 006 033		—	4	160,000
0 258 005 296		0 258 986 507	4	160,000	0 258 006 035		—	4	160,000
0 258 005 297		0 258 986 505	4	160,000	0 258 006 037		—	4	160,000
0 258 005 298		0 258 986 505	4	160,000	0 258 006 039		—	4	160,000
0 258 005 302		0 258 986 507	4	160,000	0 258 006 041		—	5 (6)	160,000
0 258 005 303		0 258 986 505	4	160,000	0 258 006 042		—	4	160,000
0 258 005 304		0 258 986 505	4	160,000	0 258 006 044		—	5 (6)	160,000
0 258 005 305		0 258 986 505	4	160,000	0 258 006 046		—	4	160,000
0 258 005 306		0 258 986 505	4	160,000	0 258 006 047		—	5 (6)	160,000
0 258 005 309		0 258 986 505	4	160,000	0 258 006 048		—	5 (6)	160,000
0 258 005 310		0 258 986 505	4	160,000	0 258 006 049		—	5 (6)	160,000
0 258 005 311		0 258 986 505	4	160,000	0 258 006 050		—	4	160,000
0 258 005 312		0 258 986 507	4	160,000	0 258 006 051	0 258 986 602	4	160,000	
0 258 005 322		0 258 986 503	4	100,000	0 258 006 052		—	4	160,000
0 258 005 324		0 258 986 503	4	100,000	0 258 006 053		—	4	160,000
0 258 005 325		0 258 986 503	4	100,000	0 258 006 055		—	4	160,000
0 258 005 334		0 258 986 502	3	100,000	0 258 006 057		—	4	160,000
0 258 005 650		0 258 986 507	4	160,000	0 258 006 059		—	4	160,000
0 258 005 651		0 258 986 505	4	160,000	0 258 006 061		—	4	160,000

**Cross Reference Direct Fit to Universal Sensor****Including Test and Replace Intervals (continued)**

<b>Original Sensor</b>	<b>Direct Fit Supersession</b>	<b>Universal Sensor</b>	<b>No. of wires</b>	<b>Check Interval Km's</b>	<b>Original Sensor</b>	<b>Direct Fit Supersession</b>	<b>Universal Sensor</b>	<b>No. of wires</b>	<b>Check Interval Km's</b>
0 258 006 063		—	4	160,000	0 258 006 172		—	4	160,000
0 258 006 064		0 258 986 602	4	160,000	0 258 006 173		—	4	160,000
0 258 006 065		—	5	160,000	0 258 006 174		0 258 986 602	4	160,000
0 258 006 066		—	5	160,000	0 258 006 175		0 258 986 602	4	160,000
0 258 006 067		—	4	160,000	0 258 006 176		—	4	160,000
0 258 006 069		—	4	160,000	0 258 006 179		0 258 986 602	4	160,000
0 258 006 071		—	4	160,000	0 258 006 181		—	4	160,000
0 258 006 072		—	4	160,000	0 258 006 183		0 258 986 602	4	160,000
0 258 006 073		—	4	160,000	0 258 006 185		—	4	160,000
0 258 006 077		—	4	160,000	0 258 006 186		—	4	160,000
0 258 006 079		—	4	160,000	0 258 006 187		—	4	160,000
0 258 006 081		—	4	160,000	0 258 006 189		—	4	160,000
0 258 006 083		—	4	160,000	0 258 006 190		—	4	160,000
0 258 006 085		—	4	160,000	0 258 006 191		—	4	160,000
0 258 006 087		—	4	160,000	0 258 006 192		—	4	160,000
0 258 006 089		—	4	160,000	0 258 006 193		—	4	160,000
0 258 006 091		—	4	160,000	0 258 006 194		—	4	160,000
0 258 006 093		—	4	160,000	0 258 006 196		—	4	160,000
0 258 006 095		—	4	160,000	0 258 006 197		0 258 986 602	4	160,000
0 258 006 097		—	4	160,000	0 258 006 198		—	4	160,000
0 258 006 099		—	4	160,000	0 258 006 199		—	4	160,000
0 258 006 101		—	4	160,000	0 258 006 200		—	4	160,000
0 258 006 103		—	4	160,000	0 258 006 201		—	4	160,000
0 258 006 105		—	4	160,000	0 258 006 203		—	4	160,000
0 258 006 107		—	4	160,000	0 258 006 204		—	4	160,000
0 258 006 109		—	4	160,000	0 258 006 205		0 258 986 602	4	160,000
0 258 006 111		—	4	160,000	0 258 006 206		—	4	160,000
0 258 006 113		—	4	160,000	0 258 006 207		—	4	160,000
0 258 006 115		—	4	160,000	0 258 006 209		—	4	160,000
0 258 006 117		—	4	160,000	0 258 006 213		0 258 986 602	4	160,000
0 258 006 119		—	4	160,000	0 258 006 215		—	4	160,000
0 258 006 121		—	4	160,000	0 258 006 217		—	4	160,000
0 258 006 123		0 258 986 602	4	160,000	0 258 006 219		—	4	160,000
0 258 006 125		—	4	160,000	0 258 006 221		—	4	160,000
0 258 006 127		—	4	160,000	0 258 006 223		—	4	160,000
0 258 006 128		—	4	160,000	0 258 006 225		—	4	160,000
0 258 006 131		—	4	160,000	0 258 006 227		—	4	160,000
0 258 006 133		—	4	160,000	0 258 006 229		—	4	160,000
0 258 006 135		—	4	160,000	0 258 006 231		—	4	160,000
0 258 006 137		—	4	160,000	0 258 006 233		—	4	160,000
0 258 006 139		—	4	160,000	0 258 006 234		—	4	160,000
0 258 006 141		0 258 986 602	4	160,000	0 258 006 235		—	4	160,000
0 258 006 146		0 258 986 602	4	160,000	0 258 006 237		0 258 986 602	4	160,000
0 258 006 147		—	4	160,000	0 258 006 239		—	4	160,000
0 258 006 149		—	4	160,000	0 258 006 241		—	4	160,000
0 258 006 151		—	4	160,000	0 258 006 243		—	4	160,000
0 258 006 153		—	4	160,000	0 258 006 245		0 258 986 602	4	160,000
0 258 006 155		—	4	160,000	0 258 006 247		0 258 986 602	4	160,000
0 258 006 156		—	4	160,000	0 258 006 247		—	4	160,000
0 258 006 157		—	4	160,000	0 258 006 248		—	4	160,000
0 258 006 159		—	4	160,000	0 258 006 249		0 258 986 602	4	160,000
0 258 006 161		0 258 986 602	4	160,000	0 258 006 251		—	4	160,000
0 258 006 163		—	4	160,000	0 258 006 253		—	4	160,000
0 258 006 165	0 258 986 603	0 258 986 602	4	160,000	0 258 006 255		0 258 986 602	4	160,000
0 258 006 167		0 258 986 602	4	160,000	0 258 006 257		0 258 986 602	4	160,000
0 258 006 169		—	4	160,000	0 258 006 259		0 258 986 602	4	160,000
0 258 006 170		—	4	160,000	0 258 006 260		—	4	160,000
0 258 006 171		—	4	160,000	0 258 006 261		0 258 986 602	4	160,000

Original Sensor	Direct Fit Supersession	Universal Sensor	No. of wires	Check Interval Km's
0 258 006 262		—	4	160,000
0 258 006 263		—	4	160,000
0 258 006 266		—	4	160,000
0 258 006 268		0 258 986 602	4	160,000
0 258 006 270		—	4	160,000
0 258 006 272		0 258 986 602	4	160,000
0 258 006 274		0 258 986 602	4	160,000
0 258 006 276		0 258 986 602	4	160,000
0 258 006 280		—	4	160,000
0 258 006 281		—	4	160,000
0 258 006 283		0 258 986 602	4	160,000
0 258 006 285		0 258 986 602	4	160,000
0 258 006 287		0 258 986 602	4	160,000
0 258 006 287		—	4	160,000
0 258 006 289		—	4	160,000
0 258 006 290		—	4	160,000
0 258 006 291		0 258 986 602	4	160,000
0 258 006 292		0 258 986 602	4	160,000
0 258 006 292		—	4	160,000
0 258 006 293		—	4	160,000
0 258 006 294		—	4	160,000
0 258 006 295		—	4	160,000
0 258 006 296		0 258 986 602	4	160,000
0 258 006 300		—	4	160,000
0 258 006 302		—	4	160,000
0 258 006 305		0 258 986 602	4	160,000
0 258 006 307		0 258 986 602	4	160,000
0 258 006 309		—	4	160,000
0 258 006 310		—	4	160,000
0 258 006 311		—	4	160,000
0 258 006 312		0 258 986 602	4	160,000
0 258 006 314		0 258 986 602	4	160,000
0 258 006 316		—	4	160,000
0 258 006 318		0 258 986 602	4	160,000
0 258 006 320		—	4	160,000
0 258 006 322		0 258 986 602	4	160,000
0 258 006 324		—	4	160,000
0 258 006 326		—	4	160,000
0 258 006 328		—	4	160,000
0 258 006 330		—	4	160,000
0 258 006 332		—	4	160,000
0 258 006 334		—	4	160,000
0 258 006 336		—	4	160,000
0 258 006 338		—	4	160,000
0 258 006 340		—	4	160,000
0 258 006 342		—	4	160,000
0 258 006 344		—	4	160,000
0 258 006 345		—	4	160,000
0 258 006 346		—	4	160,000
0 258 006 347		—	4	160,000
0 258 006 348		—	4	160,000
0 258 006 351		—	4	160,000
0 258 006 353		0 258 986 602	4	160,000
0 258 006 355		—	4	160,000
0 258 006 359		—	4	160,000
0 258 006 361		—	4	160,000
0 258 006 363		—	4	160,000
0 258 006 366		—	4	160,000

Original Sensor	Direct Fit Supersession	Universal Sensor	No. of wires	Check Interval Km's
0 258 006 368		—	4	160,000
0 258 006 369		—	4	160,000
0 258 006 371		—	4	160,000
0 258 006 373		0 258 986 602	4	160,000
0 258 006 374		—	4	160,000
0 258 006 375		—	4	160,000
0 258 006 376		—	4	160,000
0 258 006 377		—	4	160,000
0 258 006 378		—	4	160,000
0 258 006 379		—	4	160,000
0 258 006 380		—	4	160,000
0 258 006 381		—	4	160,000
0 258 006 382		—	4	160,000
0 258 006 384		—	4	160,000
0 258 006 386		—	4	160,000
0 258 006 387		—	4	160,000
0 258 006 388		—	4	160,000
0 258 006 389		—	4	160,000
0 258 006 390		—	4	160,000
0 258 006 391		—	4	160,000
0 258 006 392		—	4	160,000
0 258 006 394		—	4	160,000
0 258 006 396		—	4	160,000
0 258 006 398		—	4	160,000
0 258 006 400		—	4	160,000
0 258 006 402		—	4	160,000
0 258 006 404		—	4	160,000
0 258 006 406		—	4	160,000
0 258 006 408		—	4	160,000
0 258 006 410		—	4	160,000
0 258 006 411		—	4	160,000
0 258 006 412		—	4	160,000
0 258 006 414		—	4	160,000
0 258 006 416		—	4	160,000
0 258 006 418		—	4	160,000
0 258 006 420		—	4	160,000
0 258 006 422		0 258 986 602	4	160,000
0 258 006 424		—	4	160,000
0 258 006 425		—	4	160,000
0 258 006 426		—	4	160,000
0 258 006 427		0 258 986 602	4	160,000
0 258 006 428		—	4	160,000
0 258 006 429		—	4	160,000
0 258 006 431		—	4	160,000
0 258 006 432		—	4	160,000
0 258 006 433		—	4	160,000
0 258 006 434		—	4	160,000
0 258 006 435		—	4	160,000
0 258 006 436		—	4	160,000
0 258 006 438		—	4	160,000
0 258 006 440		—	4	160,000
0 258 006 442		—	4	160,000
0 258 006 444		0 258 986 602	4	160,000
0 258 006 446		—	4	160,000
0 258 006 447		—	4	160,000
0 258 006 448		—	4	160,000
0 258 006 452		0 258 986 602	4	160,000
0 258 006 454		—	4	160,000



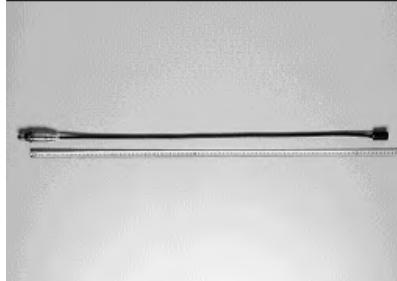
Original Sensor	Direct Fit Supersession	Universal Sensor	No. of wires	Check Interval Km's	Original Sensor	Direct Fit Supersession	Universal Sensor	No. of wires	Check Interval Km's
0 258 007 127	—	—	5	160,000	0 258 986 604	0 258 986 602	4	160,000	
0 258 007 129	—	—	5	160,000	0 258 986 605	0 258 986 602	4	160,000	
0 258 007 134	—	—	5	160,000	0 258 986 606	0 258 986 602	4	160,000	
0 258 007 135	—	—	5	160,000	0 986 258 002	—	3	100,000	
0 258 007 136	—	—	5	160,000	0 986 258 004	0 258 005 708	—	4	80,000
0 258 007 137	—	—	5	160,000	0 986 258 007	—	4	80,000	
0 258 007 138	—	—	5	160,000	0 986 258 010	—	3	80,000	
0 258 007 139	—	—	5	160,000	0 986 258 012	0 258 005 708	—	4	80,000
0 258 007 140	—	—	5	160,000	0 986 258 024	0 258 986 501	1	50,000	
0 258 007 142	—	—	5	160,000	2 269 013 000	0 258 986 501	1	50,000	- 80,000
0 258 007 143	—	—	5	160,000	2 269 013 001	0 258 986 501	1	50,000	- 80,000
0 258 007 144	—	—	5	160,000	2 269 013 003	0 258 986 501	1	50,000	- 80,000
0 258 007 145	—	—	5	160,000	2 269 013 005	0 258 986 501	1	50,000	- 80,000
0 258 007 146	—	—	5	160,000	2 269 013 006	—	3	100,000	
0 258 007 150	—	—	5	160,000	2 269 013 007	—	3	100,000	
0 258 007 151	—	—	5	160,000	2 269 013 008	—	3	100,000	
0 258 007 152	—	—	5	160,000	2 269 013 031	0 258 003 445	0 258 986 502	3	100,000
0 258 007 154	—	—	5	160,000	2 269 013 224	—	3	100,000	
0 258 007 156	—	—	5	160,000	2 269 013 228	—	3	100,000	
0 258 007 157	—	—	5	160,000	2 269 013 242	—	3	100,000	
0 258 007 158	—	—	5	160,000	2 269 013 250	F 00H L00 053	0 258 986 502	3	100,000
0 258 007 159	—	—	5	160,000	2 269 013 255	—	3	100,000	
0 258 007 160	—	—	5	160,000	2 269 013 419	F 00H L00 053	0 258 986 502	3	100,000
0 258 007 162	—	—	5	160,000	9 250 060 016	0 258 986 501	1	50,000	- 80,000
0 258 007 164	—	—	5	160,000	F 00H L00 034	0 258 986 507	4	160,000	
0 258 007 166	—	—	5	160,000	F 00H L00 036	0 258 005 732	4	160,000	
0 258 007 168	—	—	5	160,000	F 00H L00 048	—	4	100,000	
0 258 007 169	—	—	5	160,000	F 00H L00 050	—	4	100,000	
0 258 007 170	—	—	5	160,000	F 00H L00 053	0 258 986 502	3	100,000	
0 258 007 171	—	—	5	160,000					
0 258 007 172	—	—	5	160,000					
0 258 007 174	—	—	5	160,000					
0 258 007 175	—	—	5	160,000					
0 258 007 176	—	—	5	160,000					
0 258 007 178	—	—	5	160,000					
0 258 007 182	—	—	5	160,000					
0 258 007 184	—	—	5	160,000					
0 258 007 188	—	—	5	160,000					
0 258 007 190	—	—	5	160,000					
0 258 007 192	—	—	5	160,000					
0 258 007 194	—	—	5	160,000					
0 258 007 196	—	—	5	160,000					
0 258 007 198	—	—	5	160,000					
0 258 007 200	—	—	5	160,000					
0 258 104 002	—	—	4	50,000					
				- 80,000					
0 258 104 004	—	—	4	50,000					
				- 80,000					
0 258 986 001	—	—	2	50,000					
				- 80,000					
0 258 986 501	—	—	1	80,000					
0 258 986 502	—	—	3	160,000					
0 258 986 503	—	—	4	160,000					
0 258 986 504	—	—	3	160,000					
0 258 986 505	—	—	4	160,000					
0 258 986 506	—	—	4	160,000					
0 258 986 507	—	—	4	160,000					
0 258 986 603	0 258 986 602	—	4	160,000					



# Universal Oxygen Sensor Installation Instructions



Step 1



Step 2



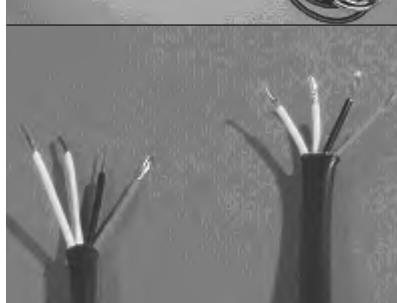
Step 3



Step 4



Step 5



Step 6

## **Installation must only be carried out by trained personnel**

Please read these instructions carefully before removing the Oxygen sensor from your vehicle

### **Tools required**

Removal tool for Oxygen Sensors or a 22mm open ended spanner  
Side cutter  
Cable stripper  
Measuring tape

### **Equipment supplied with the Bosch Universal Oxygen Sensor**

1 Bosch universal Oxygen Sensor  
1 Posi-lock connector  
4 Grey cable connectors  
8 Yellow cable seals  
2 Cable fasteners

### **Important preliminary instructions**

Make a note of how the cable of your vehicle's Oxygen Sensor is laid. The cable of the Universal Oxygen Sensor must be attached in the same way.

After removing the Oxygen Sensor, take care not to cut the cable too short. Part of this cable will be required as an extension for the Universal Oxygen Sensor to keep it in a strain free state during installation

Important: Under no circumstances, must the cable be soldered!

The maximum torque of 50 Nm must not be exceeded when screwing in the Oxygen Sensor.

Installing the Sensor [ see illustrations ]

### **Step 1**

Remove the Oxygen Sensor from the exhaust system of your vehicle. Take care not to damage the cable fixtures as they will be used again later.

### **Step 2**

After removing the Oxygen Sensor, measure the length of the cable from the hexagon to the end of the plug [ fig. 2 ]. If any special fixtures are attached to the cable, proceed to step 3. If there are no special fixtures on the cable and if

- a) the cable is shorter than 75 cm, proceed to step 4
- b) the cable is longer than 75 cm, proceed to step 5

### **Step 3 ( cable with fixtures )**

Cut through the cable of the original Sensor at least 13 cm and no more than 60 cm from cable outlet on the Sensor. Leave all cable fixtures on the original cable.

Place the Universal Oxygen Sensor beside the original Sensor. Shorten the cable of the Universal Oxygen Sensor until it is the same length as the cable of the original sensor.

Proceed to step 6

### **Step 4 ( cable shorter than 75 cm )**

Cut the cable of the original Sensor in two around 10 cm from the connecting plug. Place the Universal Oxygen Sensor beside the original. Shorten the cable of the Universal Oxygen Sensor until it is the same length as the cable of the original Sensor

Proceed to step 6

**Step 5** ( cable longer than 75 cm )

Place the Universal Oxygen Sensor beside the original Sensor. Cut the cable of the original sensor in two until it is as long as the cable from the Universal Oxygen Sensor ( fig. 5 ) Remove the cable fastener on the Universal Oxygen Sensor. - Proceed to step 6

**Step 6**

Using installation pliers , remove approx. 1 cm (important! ) of the cable insulation (fig. 6) from all cable ends, taking care not to damage any wires.

**Step 7**

Cable colour allocations for the Universal Oxygen Sensor are as follows, sensor output signal wire = black, sensor heater element cables = White ( Note - heater is not polarity sensitive ) Sensor signal ground ( where used ) = Grey

Important: The cable allocations must be assigned correctly. Otherwise the Sensor could be destroyed . Put the large plug housing over the cable from the Universal Oxygen Sensor and the small plug cover over the cable from the original Oxygen Sensor (fig. 7 ).

**Step 8**

Put the yellow seals over each cable end in such a way that the narrow end of the seals points to the rear of the plug housing (fig. 8)

**Step 9**

Insert the insulated cable ends from the Universal Oxygen Sensor into the grey cable connectors. Screw the centre pieces of the cable connectors together (fig. 9) ensure the leads are fitted tightly inside the cable connectors.

**Step 10**

Connect the Sensor to the cable harness in the vehicle (fig. 10) Check again that the cables are correctly assigned as in step 7 above

Note: Cables must not be knotted. Pull the cable connections into the plug housing . Check that the tension is correct.

**Step 11**

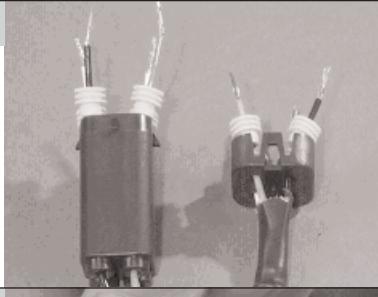
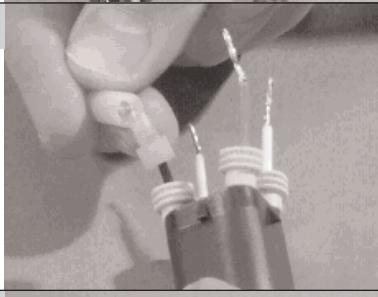
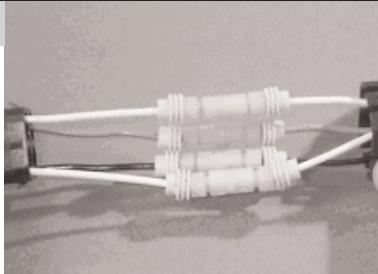
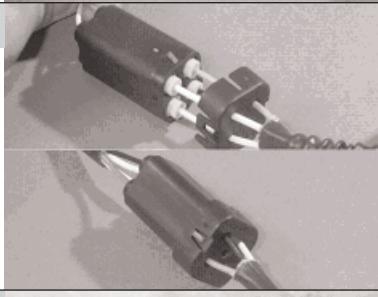
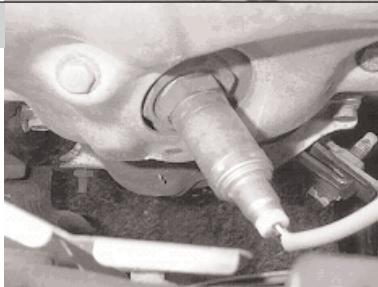
Insert the cable connectors into the plug housing. Press the plug cover onto the plug housing until it can be heard locking in place. (fig. 11)

**Step 12**

Install the Universal Oxygen Sensor into the vehicle (fig 12).

Secure the cable so that it is safe from extreme heat and scuffing .

Use the cable fixtures from the original Sensor. If neccessary, use the cable fasteners so that the plug housing is free from strain and does not vibrate. This ensures that the cable will not wear when the engine is in motion.

**Step 7****Step 8****Step 9****Step 10****Step 11****Step 12**



# Vehicle Applications

		BOSCH		ALFA ROMEO			
		Type	Cyl.	Icon	Icon	Icon	Icon
Vehicle make							
Alfa Romeo							
Alfa 33 Berlina							
Alfa 33 1.7 IE.							
(105) 10.87-17.88 AR331560	4	1.7		Control 0 258 003 080	Control 0 258 986 502	100,000	
(907) 01.90-03.97 AR331721 KAT	4	1.7		Control 0 258 003 080	Control 0 258 986 502	100,000	
Alfa 33 Sport Wagon							
Alfa 33 SW 1.7 I.E. 16V 4x4							
(eu1) 06.90-10.91 AR33U14	4	1.7		Control 0 258 003 080	Control 0 258 986 502	100,000	
Alfa 75							
Alfa 75 2.0 Twin Spark							
Alfa 75 2.5 V6							
(09.87-02.92 AR 00166 KAT)	4	2.0	00.87-05.91	Control 0 258 003 057	Control 0 258 986 502	100,000	
(12.88-12.92 AR 01111 KAT)	8	2.5		Control 0 258 003 085	Control 0 258 986 502	100,000	
Alfa 75 3.0 V6							
(02.87-01.90 (II) 08124 KAT)	8	3.0		Control 0 258 003 057	Control 0 258 986 502	100,000	
Alfa 80							
Alfa 90 2.5 i.e. V6							
(02.89-12.90 AR 01911 MP-Bosch)	8	3.0		Control 0 258 003 005	Control 0 258 986 502	100,000	
Alfa 147							
Alfa 147 2.0 TS 16V							
(937) 11.98- AR132310	4	2.0		Diagnosis 0 258 006 376		150,000	
Alfa 147 3.2 GTA							
(341) 01.93- 8824000	8	3.2		LAB Control 0 258 006 296		150,000	
RAB Diagnosis 0 258 006 424						100,000	
Control 0 258 006 395						100,000	
Diagnosis 0 258 006 391						100,000	
Alfa 156 Berlina							
Alfa 156 2.0 JTS 16V							
(352MIV02) (01.92-10.95 88/A1.000)	4	2.0	(II) 02411 05	Diagnosis 0 258 006 198		150,000	
Control 0 258 007 198						150,000	
Alfa 156 2.0 TS 16V							
(932) 10.97-09.00 AR3201 CP2	4	2.0	12.97-08.01	Control 0 258 006 100		100,000	
Alfa 156 2.5 24V							
(352MIV02) (II) 02 10.05 AR32405	8	2.5		LAB Diagnosis 0 258 006 424		100,000	
RAB Control 0 258 006 389						100,000	
Diagnosis 0 258 006 391						100,000	
Alfa 156 3.2 GTA							
(352MIV02) (03.92-10.95 8824000)	8	3.2		LAB Diagnosis 0 258 006 424		150,000	
RAB Control 0 258 006 389						100,000	
Diagnosis 0 258 006 391						100,000	
Alfa 164							
Alfa 164 3.0 i.e.							
(158) 04.88-09.92 (II) 08412	8	3.0	04.88-05.91 05.91-09.92	Control 0 258 003 957	Control 0 258 986 502	100,000	
Control 0 258 003 957						100,000	
Alfa 164 3.0 i.e. Q.V.							
(169) 09.91-09.92 AR 87801	8	3.0	09.91-05.91 05.91-09.92	Control 0 258 003 957	Control 0 258 986 502	100,000	
Control 0 258 003 957						100,000	
Alfa 166							
Alfa 166 3.0 V6 24V							
(158) 10.91-10.99 AR 342811 CP2	8	3.0		Control 0 258 006 190		100,000	
09.00- AR36101 CP2	8	3.0		Control 0 258 006 389		100,000	
RAB Diagnosis 0 258 006 391						100,000	
Control 0 258 006 206						100,000	
Diagnosis 0 258 006 424						100,000	
GT							
GT 2.0 JTS							
(357) 10.93- 387A1000	4	2.0		Diagnosis 0 258 006 193		100,000	
Control 0 258 007 193						100,000	
Capacity							
GT 3.2 V6							
(357) 10.00- 388A000	8	3.2		LAB Control 0 258 006 391		100,000	
RAB Diagnosis 0 258 006 389						100,000	
Control 0 258 006 206						100,000	
Diagnosis 0 258 006 424						100,000	

Direct fit oxygen sensor

Universal fit oxygen sensor

Abbreviations refer inside back cover

Fitment date for oxygen sensor

Recommended replacement interval