



CAT: 101217AU

December 2017

# Overrunning Alternator Pulley Application Guide





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## Introduction

Since commencing operations in Australia and New Zealand in 1979, Dayco is a global leader in the research, design, manufacturing and distribution of essential engine products, drive systems and services for automobiles, trucks, construction, agriculture and industry.

Dayco's contributions are integral to how people get from place to place, goods are transported, food is harvested, and infrastructure is built. The company operates according to long-held values — keeping promises, delivering on time all the time, and an intense commitment to service no matter what the obstacles. For more than a century, Dayco has overcome challenges, emerging stronger and smarter at every turn.

Dayco improves how the world moves by creating products, systems and relationships that endure.

Move Forward. Always.™

## Markets

Dayco Aftermarket – manufactures and distributes belts, hoses and related cooling system components for virtually every automotive, light commercial, ATV, Scooter and heavy duty application.

## Research and development

Dayco's involvement in both the original equipment and Aftermarket segments of the business give the company a distinct competitive advantage. As a major supplier to automobile manufacturers, Dayco OEM engineers are developing future automotive technologies that are quickly incorporated into our aftermarket products. This connection enables us to bring quality replacement products to today's Aftermarket that meet or exceed OEM standards.

## Manufacturing

At the Dayco manufacturing facilities, quality is built into every product because of our quality-in-process systems. These systems employ closed-loop, computer

monitored and controlled quality checks at critical points throughout the manufacturing process. All manufacturing plants are certified to quality standard TS16949 and environmental standards ISO 14001.

## Most importantly

As a customer responsive company, Dayco Aftermarket sees each of our individual customers as the judge of our quality both in products and service. By meeting and whenever possible, exceeding customer needs, Dayco Australia Aftermarket constantly renews our commitment to every customer's ultimate business success.

## Management system policy statement

Dayco Australia Pty. Ltd is a supplier of world-class automotive products, primarily under the Dayco brand name. Dayco product line-up includes OE systems, sub-systems and components in the areas of power transmission and fluid transfer, drive belts, timing belts, tensioners, pulleys, harmonic balancers, all types of automotive hose and other cooling system components. The Dayco team is dedicated to the ongoing maintenance of our management systems throughout the company and in concert with our suppliers, customers and appointed distributors. The management systems require commitment to providing products and services that consistently meet our customers' quality and environmental needs and expectations and to continuously improve in all that we do.

At Dayco Australia, we are committed to achieving the following organisational objectives:

- Implementation of continuous quality and environmental ethics and standards that are appropriately communicated and clearly understood by all employees.
- Setting objectives and targets that demonstrate a commitment to the continual improvement of our quality and environmental performance.

- Maintaining management's commitment to the prevention of pollution and compliance with legal and regulatory requirements, and other requirements relevant to our industry, conventions and local community.
- Providing a work environment conducive to employee involvement and empowerment through teamwork.
- Providing training necessary to support and enhance the continuous improvement process.
- Establishing a work environment that stimulates and promotes open two-way communications with our customers, employees and suppliers.
- Ensuring the ongoing effectiveness and suitability of our management systems through planned internal and external audits and management reviews.
- To make this Policy Statement freely available to all interested parties.

Dayco Management Systems have been audited and certified by an independent authority to comply with current automotive and environmental international standards.

All employees will be encouraged to contribute to the development and improvement of the management systems through their work teams. Once authorized, management systems requirements must be consistently observed and adhered to by all employees.

## **Warranty**

Contact Dayco or refer to [www.dayco.com.au](http://www.dayco.com.au)

## **About this guide**

This GUIDE has been produced to assist purchasers of DAYCO automotive products. Whilst this guide is intended to be accurate, persons using this guide do so using their own expertise and judgement (including as to the fitness of the products for the particular intended use) and at their own risk. If in doubt about your ability to follow this Guide or to safely install the products in your particular application, arrange for the work to be undertaken by a trained mechanic. Dayco Australia Pty Ltd is not responsible for any death, injury, loss or damage suffered as a result of, or in relation to, this Guide (whether by negligence or otherwise) unless liability cannot be excluded by law. Where liability cannot be excluded, liability is limited, to the extent allowed by law, to the replacement of the DAYCO product.

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## **Complete Dayco Product Range**

- Drive Belts & Kits
- Drive Belt Automatic Tensioners
- Drive Belt Idler & Tensioner Pulleys
- Overrunning Alternator Pulleys
- Harmonic Balancers & Kits
- CVT Scooter Belts
- ATV Outdoor Activity Belts
- Timing Belt & Kits
- Timing - Hydraulic Automatic Tensioners (HAT)
- Shaft Repair Kits
- Heater Tap Control Valves
- Thermostats & Thermostat Gaskets
- Radiator Coolant Tanks
- Fan Clutches
- Hose Connector Kits
- Hose Air
- Hose Fuel
- Hose Heater
- Hose Service
- Hose Radiator
- Hose Clamps
- Service Tools

## NULINE OVERRUNNING ALTERNATOR PULLEYS

OVERRUNNING alternator pulleys are becoming increasingly popular on late model petrol and diesel engines, due to the increasing drive belt speed and engine vibration fluctuations. An overrunning alternator pulley is used to smooth out rotational irregularities on the alternator, which is caused from rapid acceleration, deceleration and even shut off.

During normal operating conditions these alternator pulleys can be rotating up to 18,000rpm and with major RPM fluctuations unit failure can lead to belt noise, vehicle vibrations and also alternator or drive belt failure.

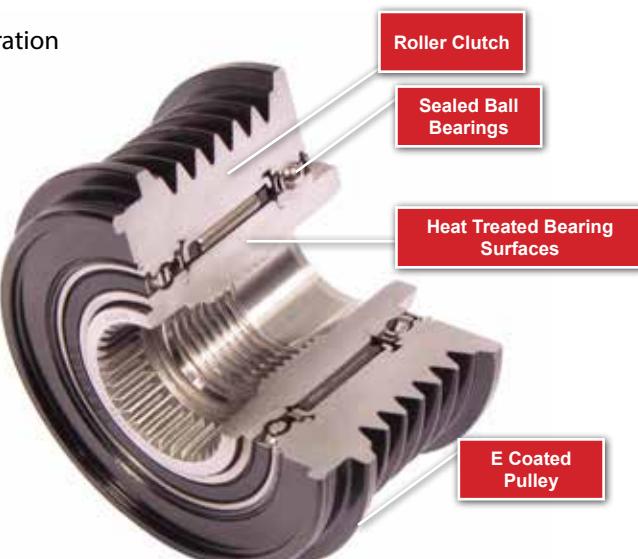
Nuline have developed a heavy duty replacement clutch pulley to disengage the alternator so it free spins during rotational irregularities.

### How does the Nuline overrunning alternator pulley work?

When the Nuline overrunning alternator pulley is rotated in the normal operating direction it connects to the alternator working as a normal pulley. But during deceleration the pulley disconnects from the alternator shaft, allowing the alternator to free spin. This is done by a special one way bearing that is mounted inside the Nuline overrunning alternator pulley.

### Advantages of using a Nuline overrunning alternator pulley

- Heavy duty designed for long service life
- Dampens drive belt vibration
- Reduced belt slippage during rapid acceleration or deceleration
- Reduced stress on drive belt and other accessory drives
- Increased alternator and drive belt life
- Reduction of drive belt noise
- Improvement in variation of drive belt tension



### Signs of an overrunning alternator pulley failing

- Unusual drive belt noises
- Unusual vehicle vibrations
- Steering shudder
- Alternator not charging battery
- Pulley free spins in both directions

### Checking the overrunning alternator pulley

- Remove drive belt
- Check pulley for chips, dents or damage to belt grooves
- Check for excessive bearing movement
- Rotate Alternator pulley in normal operation direction, pulley should lock up and turn alternator shaft
- Rotate alternator pulley in opposite direction, it should spin freely without the alternator shaft moving
- Rotate the pulley in the free spin direction, it should feel smooth not rough

If any of the above failure signs appear replace with a heavy duty Nuline overrunning alternator pulley.

## OVERRUNNING ALTERNATOR PULLEY REMOVAL/INSTALLATION TOOL KITS

Overrunning alternator pulleys are impossible to remove from the alternator without specific tools to do the job.

Nuline have the answer with each kit containing all the necessary tools needed to remove and fit a new pulley. Made from the highest quality materials our Alternator tools can be used with hand ratchets or impact rattle guns. These kits feature interchangeable components to work on almost all vehicles and come in a very handy moulded carry case.

Nuline Overrunning alternator installation tools are a must have for any mechanic or DIY professional.



**OAPTK001**  
13 PIECE TOOL KIT

T50 x 113mm Combination Socket  
M10 x 113mm Combination Socket  
15mm Hex 33 Teeth Spline  
22mm Hex 33 Teeth Spline  
21mm x 17mm Hex  
15mm Hex 4 Pin  
1/2" Drive Socket  
10mm X 75mm  
T40,T50,M8,M10,H8,H10



**OAPTK002**  
22 PIECE TOOL KIT

T50 x 113mm Combination Socket  
M10 x 113mm Combination Socket  
15mm Hex 33 Teeth Spline  
15MM Hex 33 Teeth Fine Spline  
22mm Hex 33 Teeth Spline  
22mm Hex  
17mm Hex  
28mm X 22mm Hex  
38mm Hex 3 Pin

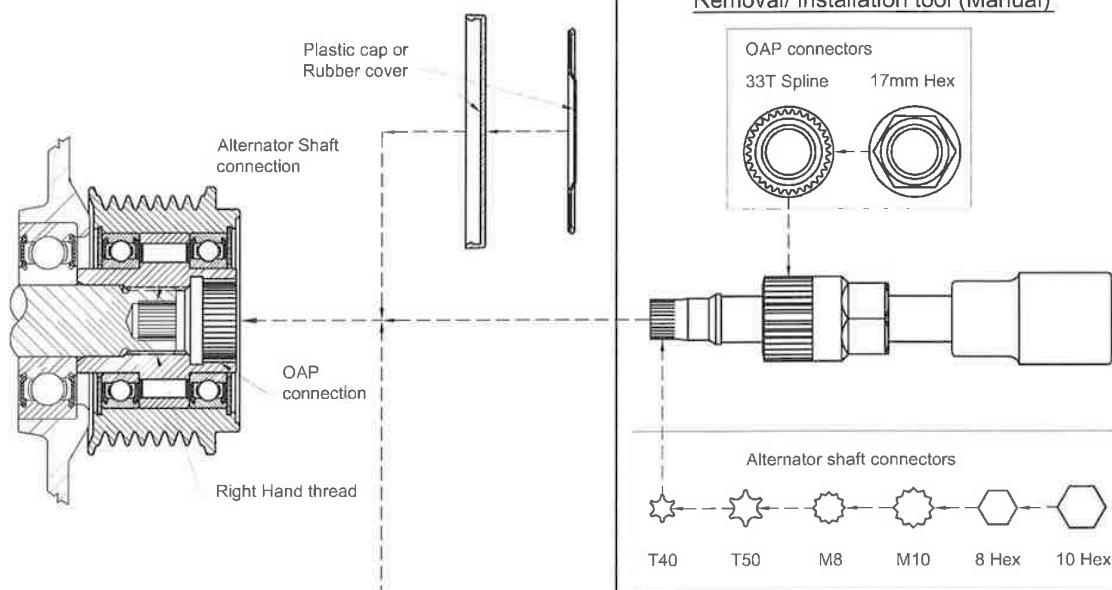
17mm Hex 4 Pin  
1/2" Drive Socket  
10mm X 75mm T40,T50,M8,M10,H8,H10  
110mm X M10 1/2" Drive Socket  
28mm X 21mm Hex  
64mm X M10 X 12mm Hex  
Hexagonal Nut 28mm X 19mm  
3/8"Drive X 90mm X M10 Socket



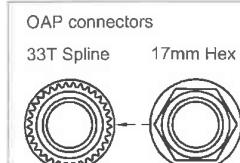
**RATTLE GUN  
REMOVAL TOOLS**

**OAPT003**  
33 TOOTH SPLINE/17MM HEX

# OAP INSTALLATION INSTRUCTIONS



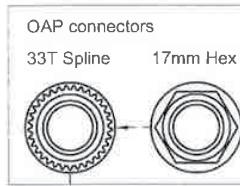
Removal/ Installation tool (Manual)



Alternator shaft connectors

T40      T50      M8      M10      8 Hex      10 Hex

Removal/ Installation tool (Rattle Gun)



OAP connectors  
33T Spline      17mm Hex

## Removal instructions

- 1) Remove cap or cover (if applicable).
- 2) Select correct tool (OAP & Alternator shaft connection).
- 3) Engage tool in the Alternator shaft & OAP.
- 4) Whilst undoing the OAP prevent the rotation of the shaft (Right hand thread).

## Installation instructions

- 1) Screw new OAP onto the alternator by hand.
- 2) With the correct tools tighten the OAP to the OEM torque specification or to 90Nm (65ftlb)
- 3) Fit the new cap or cover if applicable.

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**Alfa Romeo**

147

**Jan 2006 - Jan 2011**

1.9L 4 cyl DOHC 16V DTFI Turbo Diesel  
 Eng code: 937A5  
 OAP (Alt Denso) ..... OAP075

159

**Mar 2007 - Jun 2012**

1.9L 4 cyl DOHC 16V DTFI Diesel JTD  
 Eng code: 939A2  
 OAP (Alt Denso 100A, 120A, 51764265, 51793678) ..... OAP057  
 OAP (Alt Denso 120A, 140A) ..... OAP075

**Jan 2009 - Jun 2012**

2.4L 5 cyl DOHC 20V DTFI Diesel JTD  
 Eng code: 939A3  
 OAP (Alt Denso) ..... OAP064

**Brera****Jun 2006 - Feb 2012**

3.2L V6 DOHC 24V MPFI  
 Eng code: 939A0000  
 OAP ..... OAP064

**Audi**

A1

**Dec 2010 - May 2015**

1.4L 4 cyl DOHC 16V TFSI Turbo 8X  
 Eng code: CAXA  
 OAP ..... OAP028

**Nov 2011 - May 2015**

1.6L 4 cyl DOHC 16V DTFI Turbo Diesel 8X  
 Eng code: CAYB  
 OAP ..... OAP023

**Jun 2012 - May 2015**

1.2L 4 cyl SOHC 16V TFSI Turbo 8X  
 Eng code: CBZA  
 OAP ..... OAP028

**A3****May 1997 - Oct 1999**

1.6L 4 cyl SOHC 8V MPFI 8L  
 Eng code: AEH  
 OAP (Alt Bosch 120A) ..... OAP022

**May 1997 - Dec 2001**

1.8L 4 cyl DOHC 20V MPFI 8L  
 Eng code: AGN  
 OAP (Alt Bosch, Hitachi, Valeo, 120A) ..... OAP022

**Feb 1998 - Nov 2000**

1.8L 4 cyl DOHC 20V TMPFI Turbo 8L  
 Eng code: AGU  
 OAP (Alt Bosch 120A) ..... OAP022

**Oct 1999 - Nov 2000**

1.6L 4 cyl SOHC 8V MPFI 8L  
 Eng code: AKL  
 OAP (Alt Hitachi/Valeo 120A) ..... OAP022

**Oct 1999 - Jul 2004**

1.8L 4 cyl DOHC 20V MPFI 8L  
 Eng code: APG  
 OAP (Alt Bosch 120A) ..... OAP022

**Oct 2000 - Apr 2003**

1.6L 4 cyl SOHC 8V MPFI 8L  
 Eng code: AVU  
 OAP (Alt Bosch/Hitachi/Valeo 120A) ..... OAP022

**Oct 2000 - Jul 2004**

1.6L 4 cyl SOHC 8V MPFI 8L  
 Eng code: BFQ  
 OAP (Alt Bosch/Hitachi/Valeo 120A) ..... OAP022

**Nov 2000 - Jul 2004**

1.8L 4 cyl DOHC 20V TMPFI Turbo 8L  
 Eng code: AUM  
 OAP (Alt Bosch 70A, 90A, 120A, Hitachi 120A, Valeo 70A, 90A, 120A) ..... OAP022

**Jan 2004 - Dec 2007**

2.0L 4 cyl DOHC 16V EFI 8P  
 Eng code: AXW  
 OAP (Alt Bosch/Valeo 140A) ..... OAP023

**Jul 2004 - Sep 2005**

1.6L 4 cyl SOHC 8V MPFI 8P  
 Eng code: BGU  
 OAP (Alt Bosch/Valeo 110A, 140A) ..... OAP022

**Jul 2004 - Sep 2005**

2.0L 4 cyl DOHC 16V MPFI 8P  
 Eng code: BMB  
 OAP (Alt Bosch/Valeo 140A) ..... OAP023

**Jul 2004 - Sep 2005**

2.0L 4 cyl DOHC 16V MPFI 8P  
 Eng code: BLY  
 OAP (Alt Bosch/Valeo 140A) ..... OAP022

**Jul 2004 - Jan 2009**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel 8P  
 Eng code: BKD  
 OAP (Alt Bosch 110A, 140A, Valeo 110A, 140A) ..... OAP022

**Aug 2004 - Sep 2005**

3.2L V6 DOHC 24V MPFI 8P  
 Eng code: BDB  
 OAP (Alt Bosch) ..... OAP022

**2004 - 2005**

2.0L 4 cyl DOHC 16V EFI 8P  
 Eng code: BLX  
 OAP (Alt Bosch 140A) ..... OAP022

**Aug 2004 - Sep 2005**

3.2L V6 DOHC 24V MPFI 8P  
 Eng code: BMJ  
 OAP (Alt Bosch/Valeo 140A) ..... OAP022

**Jan 2005 - Dec 2006**

2.0L 4 cyl DOHC 16V MPFI 8P  
 Eng code: BLR  
 OAP (Alt Bosch/Valeo 140A) ..... OAP023

**Feb 2005 - Dec 2006**

2.0L 4 cyl DOHC 16V TMPFI Turbo 8P  
 Eng code: AXX  
 OAP (Alt Bosch/Valeo 140A) ..... OAP023

**Feb 2005 - Jan 2009**

3.2L V6 DOHC 24V MPFI 8P  
 Eng code: BUB  
 OAP (Alt Bosch 140A, Valeo 140A) ..... OAP022

**Feb 2005 - Mar 2011**

1.6L 4 cyl SOHC 8V MPFI 8P  
 Eng code: BSE  
 OAP (Alt Bosch 110A, 140A, Valeo 90A, 110A, 140A) ..... OAP022

**Sep 2005 - May 2007**

2.0L 4 cyl DOHC 16V MPFI 8P  
 Eng code: BVY  
 OAP (Alt Bosch 140A, Valeo 140A) ..... OAP023

**Sep 2005 - Jan 2009**

2.0L 4 cyl DOHC 16V TMPFI Turbo 8P  
 Eng code: BWA  
 OAP (Alt Bosch 140A, Valeo 140A) ..... OAP022

**Jan 2006 - Dec 2007**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel 8P  
 Eng code: BMN  
 OAP (Alt Bosch 110A, 140A, Valeo 110A, 140A) .....OAP022

**Jun 2007 - Oct 2008**

1.8L 4 cyl DOHC 16V TMPFI Turbo 8P  
 Eng code: BZB  
 OAP (Alt Bosch 140A, Valeo 140A) .....OAP076

**Jan 2007 - Dec 2008**

1.8L 4 cyl DOHC 16V TMPFI Turbo 8P  
 Eng code: BYT  
 OAP (Alt Bosch 140A, Valeo 140A) .....OAP023

**Mar 2008 - Jan 2010**

1.9L 4 cyl SOHC 8V DTFI Turbo Diesel 8P  
 Eng code: BLS  
 OAP (Alt Bosch 110A, 140A, Valeo 110A, 140A) .....OAP022

**Jul 2008 - Jan 2009**

2.0L 4 cyl DOHC 16V TMPFI Turbo 8P  
 Eng code: CAWB  
 OAP (Alt Valeo 110A) .....OAP022  
 OAP (Alt Bosch 140A) .....OAP076  
 OAP (Alt Valeo 140A) .....OAP122

**Oct 2008 - Mar 2013**

1.8L 4 cyl DOHC 16V TMPFI Turbo 8P  
 Eng code: CDAA  
 OAP .....OAP076

**Dec 2008 - May 2013**

1.4L 4 cyl SOHC 8V TMPFI Turbo 8P  
 Eng code: CAXC  
 OAP .....OAP028

**Jan 2009 - Sep 2011**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel 8P  
 Eng code: CBBB  
 OAP (Alt Bosch 110A, 140A, Valeo 110A, 140A) .....OAP076

**Jan 2009 - May 2013**

2.0L 4 cyl DOHC 16V TMPFI Turbo 8P  
 Eng code: CCZA  
 OAP (Alt Valeo 140A) .....OAP122

**Mar 2011 - May 2013**

1.6L 4 cyl DOHC 16V DTFI Turbo Diesel 8P  
 Eng code: CAYC  
 OAP (Alt Bosch, Valeo 140A) .....OAP023

**Oct 2011 -**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel 8P  
 Eng code: CLJA  
 OAP (Alt Bosch, Valeo 140A) .....OAP023

**May 2013 -**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel 8V  
 Eng code: CRBC  
 OAP .....OAP023

**May 2013 -**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel 8V  
 Eng code: CRLB  
 OAP .....OAP023

**A4****Aug 1995 - Jun 2001**

1.8L 4 cyl DOHC 20V MPFI B5  
 Eng code: ADR  
 OAP (Alt Valeo 120A) .....OAP142

**Feb 1996 - Mar 1998**

2.6L V6 SOHC 12V MPFI B5  
 Eng code: ABC  
 OAP .....OAP076

**Feb 1998 - Jul 2001**

2.4L V6 DOHC 30V MPFI B5  
 Eng code: APS  
 OAP (Alt Valeo, 90A, 120A) .....OAP065  
 OAP (Alt Bosch 90A, 120A) .....OAP082

**Feb 1998 - Jul 2003**

2.4L V6 DOHC 30V MPFI  
 Eng code: AGA  
 OAP .....OAP076

**May 1999 - Jun 2001**

1.8L 4 cyl DOHC 20V MPFI B5  
 Eng code: APT  
 OAP (Alt Valeo, 120A) .....OAP142

**Jul 2001 - Mar 2005**

1.8L 4 cyl DOHC 20V TMPFI Turbo B6  
 Eng code: AVJ  
 OAP (Up To Chassis 8E3029803 140A Valeo, 8E3024775 Valeo 120A)  
 OAP122  
 OAP (From Chassis 8E3024776, Valeo 120A, 140A, 150A, Bosch 120A,  
 140A) .....OAP076

**Jul 2001 - Mar 2005**

2.0L 4 cyl DOHC 20V MPFI B6  
 Eng code: ALT  
 OAP (Alt Bosch 120A, 140A, 150A, Valeo 120A, 140A, 150A, From Chassis  
 8E3024776) .....OAP076  
 OAP (Up To Chassis 8E3029803, 8E3024775, Valeo 120A, 140A)OAP122

**2001 - 2005**

1.8L 4 cyl DOHC 20V TMPFI Turbo B6  
 Eng code: AMB  
 OAP (Alt Bosch 120A, 140A, 150A, From Chassis 8E3024776 Valeo 120A,  
 140A, 150A) .....OAP076  
 OAP (Up To Chassis 8E3029803 Valeo 140A, 8E3024775 Valeo 120A)  
 OAP122

**Dec 2002 - Dec 2006**

3.0L V6 DOHC 30V MPFI B6  
 Eng code: BBJ  
 OAP .....OAP122

**Mar 2003 - Nov 2005**

1.8L 4 cyl DOHC 20V TMPFI Turbo B6  
 Eng code: BEX  
 OAP (Alt Bosch 120A, 140A, 150A, From Chassis 8E3024776 Valeo 120A,  
 140A, 150A) .....OAP076

**Apr 2002 - Mar 2005**

1.8L 4 cyl DOHC 20V TMPFI Turbo B6  
 Eng code: BFB  
 OAP (Alt Bosch 120A, 140A, Valeo 120A, 140A, 150A) .....OAP076

**Mar 2005 - Aug 2009**

1.8L 4 cyl DOHC 20V TMPFI Turbo B7  
 Eng code: BFB  
 OAP (Up To Chassis 8E6240000 Valeo 140A, From Chassis 8E6240001  
 Valeo 120A, 140A, Bosch 120A, 140A) .....OAP076  
 OAP (Alt Valeo 120A, 140A, Up To Chassis 8H-3007000) ....OAP122

**Aug 2005 - Mar 2009**

2.0L 4 cyl DOHC 16V MPFI B7  
 Eng code: BWE  
 OAP (Alt Bosch 120A, 140A, 150A, From Chassis 8E3007001 Valeo 120A,  
 140A, 150A Alt No. 06B903016AF) .....OAP076

**Mar 2005 - Aug 2008**

2.0L 4 cyl DOHC 20V MPFI B7  
 Eng code: ALT  
 OAP (Up To Chassis 8E6240000 Valeo 140A, From Chassis 8E6240001  
 Valeo 120A, 140A, 150A, Bosch 120A, 140A).....OAP076  
 OAP (Up To Chassis 8E3029803 Valeo 140A, 8E3024775 Valeo 120A)  
 OAP122

**Mar 2005 - Aug 2009**

2.0L 4 cyl DOHC 16V TMPFI Turbo B7  
 Eng code: BGB  
 OAP (Alt Bosch 140A, Valeo 150A, Up to Chassis 8E6240000 Valeo 140A,  
 From Chassis 8E6240001 Valeo 140A).....OAP076

**Oct 2005 - Mar 2008**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel B7  
 Eng code: BLB  
 OAP (Alt Bosch 140A, Valeo 140A).....OAP023

**Oct 2005 - Mar 2008**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel B7  
 Eng code: BRE  
 OAP (Alt Bosch 140A, Valeo 140A).....OAP023

**Jan 2006 - Dec 2007**

2.0L 4 cyl DOHC 16V TFI Turbo B7  
 Eng code: BUL  
 OAP (Alt Valeo 150A, Up To Chassis 8E6240000 Valeo 140A, Bosch 140A,  
 From Chassis 8E6240001 Valeo 140A).....OAP076

**Apr 2008 - Jun 2012**

1.8L 4 cyl DOHC 16V TMPFI Turbo B8  
 Eng code: CABB  
 OAP .....OAP234

**Apr 2008 - Jun 2012**

1.8L 4 cyl DOHC 16V TMPFI Turbo B8  
 Eng code: CDHB  
 OAP .....OAP234

**Apr 2008 - Jun 2012**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel B8  
 Eng code: CAGA  
 OAP .....OAP023

**Apr 2008 - Jun 2012**

2.7L V6 DOHC 24V DTFI Turbo Diesel B8  
 Eng code: CAMA  
 OAP .....OAP234

**Apr 2008 - Jun 2012**

3.2L V6 DOHC 24V MPFI B8  
 Eng code: CALA  
 OAP .....OAP234

**Jul 2008 - Jun 2012**

2.7L V6 DOHC 24V DTFI Turbo Diesel  
 Eng code: CGKA  
 OAP .....OAP234

**Oct 2008 - Jun 2012**

3.0L V6 DOHC VVT 24V Di Turbo  
 Eng code: CCWA  
 OAP .....OAP234

**Oct 2008 - Jun 2012**

2.0L 4 cyl DOHC VVT 16V MPFI Turbo B8  
 Eng code: CDNB  
 OAP .....OAP234

**Oct 2008 - Aug 2013**

2.0L 4 cyl DOHC VVT 16V MPFI Turbo B8  
 Eng code: CDNC  
 OAP .....OAP234

**Jul 2012 -**

1.8L 4 cyl DOHC 16V TMPFI Turbo B8  
 Eng code: CJEB  
 OAP (MY 2013 On).....OAP076  
 OAP .....OAP234

**Sep 2013 -**

2.0L 4 cyl DOHC 16V TMPFI B8 QUATTRO  
 Eng code: CNCD  
 OAP .....OAP076  
 OAP .....OAP234

**A5****Oct 2007 - Feb 2012**

3.2L V6 DOHC 24V MPFI 8T  
 Eng code: CALA  
 OAP .....OAP234

**Oct 2008 - Feb 2012**

3.0L V6 DOHC 24V DTFI Turbo Diesel 8T  
 Eng code: CCWA  
 OAP .....OAP234

**May 2009 - Aug 2013**

2.0L 4 cyl DOHC 16V TMPFI Turbo 8T  
 Eng code: CDNC  
 OAP .....OAP076  
 OAP .....OAP234

**Aug 2009 - Feb 2012**

2.0L 4 cyl DOHC 16V TMPFI Turbo 8T  
 Eng code: CDNB  
 OAP .....OAP234

**Mar 2012 -**

1.8L 4 cyl DOHC 16V TFSI Turbo 8T  
 Eng code: CJEB  
 OAP .....OAP076  
 OAP .....OAP234

**Mar 2012 -**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel 8T  
 Eng code: CGLC  
 OAP .....OAP023

**Sep 2013 -**

2.0L 4 cyl DOHC 16V TMPFI 8T QUATTRO  
 Eng code: CNCD  
 OAP .....OAP076  
 OAP .....OAP234

**A6****Nov 1997 - Jan 2002**

2.4L V6 DOHC 30V MPFI C5  
 Eng code: AGA  
 OAP (Alt Bosch 150A, Valeo 150A).....OAP076

**Feb 2002 - Feb 2004**

2.4L V6 DOHC 30V MPFI C5  
 Eng code: AGA  
 OAP (Alt Bosch 150A, Valeo 150A).....OAP076

**Sep 2006 - Feb 2011**

2.0L 4 cyl DOHC 16V TMPFI Turbo C6  
 Eng code: BPJ  
 OAP (Alt Valeo, 150A).....OAP076

**Oct 2011 -**

2.0L 4 cyl DOHC 16V TMPFI Turbo C7  
 Eng code: CDNB  
 OAP .....OAP076  
 OAP .....OAP234

**Allroad Quattro****Feb 2000 - Dec 2005**

2.7L V6 DOHC 30V MPFI C5  
 Eng code: BES  
 OAP .....OAP142

**Q3****Apr 2012 - May 2015**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel 8U  
 Eng code: CFFB  
 OAP .....OAP022

**Apr 2012 - May 2015**

2.0L 4 cyl DOHC 16V CRD Turbo Diesel 8U  
 Eng code: CFGC  
 OAP .....OAP022

Q5

**Mar 2009 - Sep 2010**

2.0L 4 cyl DOHC 16V TDCi Turbo Diesel 8R  
 Eng code: CAHA  
 OAP (Alt Bosch 140A) .....OAP023

**Mar 2009 - Sep 2012**

2.0L 4 cyl DOHC 16V TFSI Turbo 8R  
 Eng code: CDNC  
 OAP .....OAP076  
 OAP .....OAP234

**Mar 2009 -**

3.2L V6 DOHC 24V FSI Turbo 8R  
 Eng code: CALB  
 OAP .....OAP234

**Oct 2010 -**

2.0L 4 cyl DOHC 16V TDCi Turbo Diesel 8R  
 Eng code: CGLB  
 OAP .....OAP023

**Oct 2012 -**

2.0L 4 cyl DOHC 16V MPFI Turbo 8R  
 Eng code: CNCD  
 OAP .....OAP076

**Q7****Sep 2006 - Sep 2010**

3.6L V6 DOHC 24V MPFI 4L  
 Eng code: BHK  
 OAP (Alt Hitachi 190A, Valeo 180A) .....OAP056

**S4****May 2009 - Jun 2012**

3.0L V6 DOHC 24V SCMPFI B8  
 Eng code: CAKA  
 OAP .....OAP234

**TTS****Jul 2008 - Jan 2015**

2.0L 4 cyl DOHC 16V TMPFI Turbo 8J  
 Eng code: CDLB  
 OAP .....OAP023  
 OAP .....OAP122

**TT****May 1999 - Jul 2000**

1.8L 4 cyl DOHC 20V TMPFI Turbo 8N  
 Eng code: AJQ  
 OAP (Alt Bosch 120A, Hitachi 120A, Valeo 120A) .....OAP022

**Oct 1999 - Dec 2002**

1.8L 4 cyl DOHC 20V TMPFI Turbo 8N  
 Eng code: APX  
 OAP (Alt Bosch 120A, Hitachi 120A, Valeo 120A) .....OAP022

**Oct 1999 - Dec 2006**

1.8L 4 cyl DOHC 20V TMPFI Turbo 8N  
 Eng code: BAM  
 OAP (Alt Bosch 120A, Hitachi 120A, Valeo 120A) .....OAP022

**2000 - 2001**

1.8L 4 cyl DOHC 20V TMPFI Turbo 8N  
 Eng code: APP  
 OAP .....OAP022

**2001 - 2004**

1.8L 4 cyl DOHC 20V TMPFI Turbo 8N  
 Eng code: ARY  
 OAP (Alt Bosch 120A, Hitachi 120A, Valeo 120A) .....OAP022

**Jan 2001 - Jan 2006**

1.8L 4 cyl DOHC 20V TMPFI Turbo 8N  
 Eng code: AUQ  
 OAP .....OAP022

**Dec 2004 - Oct 2006**

3.2L V6 DOHC 24V MPFI 8N  
 Eng code: BHE  
 OAP (Alt Bosch 120A, Valeo 120A) .....OAP022

**Aug 2005 - Jan 2006**

1.8L 4 cyl DOHC 20V TMPFI Turbo 8N  
 Eng code: AUM  
 OAP (Alt Bosch 120A, Hitachi 120A, Valeo 120A) .....OAP022

**Aug 2005 - Dec 2006**

1.8L 4 cyl DOHC 20V TMPFI Turbo 8N  
 Eng code: BVR  
 OAP (Alt Bosch 120A, Hitachi 120A, Valeo 120A) .....OAP022

**Feb 2006 - Oct 2006**

1.8L 4 cyl DOHC 20V TMPFI Turbo 8N  
 Eng code: BVP  
 OAP (Alt Bosch 120A, Hitachi 120A, Valeo 120A) .....OAP022

**Nov 2006 - Oct 2010**

2.0L 4 cyl DOHC 16V TFSI Turbo 8J  
 Eng code: BWA  
 OAP .....OAP023

**Jul 2009 -**

1.8L 4 cyl DOHC 16V TFSI Turbo 8J  
 Eng code: CDAA  
 OAP (Alt Bosch 140A) .....OAP122

**Jul 2009 - Oct 2010**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel 8J  
 Eng code: CBBB  
 OAP (Alt Bosch 140A, Valeo 140A) .....OAP023

**Jul 2009 - Oct 2010**

2.0L 4 cyl DOHC 16V TFSI Turbo 8J  
 Eng code: CCZA  
 OAP .....OAP122

**Nov 2010 - Jan 2015**

2.0L 4 cyl DOHC 16V CRD Turbo Diesel 8J  
 Eng code: CFGB  
 OAP .....OAP022

**Nov 2010 - Jan 2015**

2.0L 4 cyl DOHC 16V TFSI Turbo 8J  
 Eng code: CESB  
 OAP (Alt Valeo 140A) .....OAP076

**Feb 2015 -**

2.0L 4 cyl DOHC VVT 16V TFSI Turbo FV  
 Eng code: 2.0  
 OAP (Alt Valeo 140A) .....OAP076

**BMW****116i****Feb 2005 - Feb 2008**

1.6L 4 cyl V-DOHC 16V MPFI E87  
 Eng code: N45B16  
 OAP (Alt Bosch, 110A) .....OAP048  
 OAP (Alt Bosch, 150A) .....OAP049

**Oct 2011 -**

1.6L 4 cyl V-DOHC 16V TMPFI Turbo F20  
 Eng code: N13B16A  
 OAP .....OAP236

**118i****Feb 2005 - Feb 2007**

2.0L 4 cyl V-DOHC 16V MPFI E87  
 Eng code: N46B20  
 OAP (Alt Bosch, 110A) .....OAP048

**Jun 2015 -**

1.6L 4 cyl V-DOHC 16V TMPFI Turbo F20  
 Eng code: N13B16U  
 OAP .....OAP236

**Nov 2015 -**

1.5L 3 cyl DOHC VVT 12V TMPFI Turbo F20  
 Eng code: B38B15A  
 OAP ..... OAP236

**120i****Oct 2004 - Feb 2007**

2.0L 4 cyl V-DOHC 16V MPFI E87  
 Eng code: N46B20  
 OAP (Alt Bosch, 110A) ..... OAP048

**Feb 2007 - Sep 2011**

2.0L 4 cyl V-DOHC 16V MPFI E87  
 Eng code: N43B20  
 OAP (Alt Bosch, 180A) To % ..... OAP066

**Nov 2008 - Jan 2015**

2.0L 4 cyl V-DOHC 16V MPFI E88  
 Eng code: N43B20  
 OAP (Alt Bosch, 110A) ..... OAP048  
 OAP (Alt Bosch, 150A) ..... OAP049  
 OAP (180A) ..... OAP066

**Jun 2015 -**

2.0L 4 cyl DOHC VVT 16V TMPFI Turbo F20  
 Eng code: N13B16  
 OAP ..... OAP236

**125i****May 2008 -**

3.0L 6 cyl V-DOHC 24V MPFI E82  
 Eng code: N52B30  
 OAP (Alt Bosch, 120A, 140A, 150A, 155A) ..... OAP049  
 OAP (Alt Bosch, 180A) ..... OAP066

**May 2008 -**

3.0L 6 cyl V-DOHC 24V MPFI E88  
 Eng code: N52B30  
 OAP (Alt Bosch, 150A) ..... OAP049  
 OAP (Alt Bosch, 180A) ..... OAP066

**Apr 2012 -**

2.0L 4 cyl DOHC 16V Direct FI Turbo F20  
 Eng code: N20B20A  
 OAP ..... OAP236

**130i****Nov 2005 -**

3.0L 6 cyl V-DOHC 24V MPFI E87  
 Eng code: N52B30  
 OAP (Alt Valeo) ..... OAP031  
 OAP (Alt Bosch, 150A) ..... OAP049  
 OAP (Alt Bosch, 180A) ..... OAP066

**220i****Feb 2015 -**

2.0L 4 cyl DOHC VVT 16V TFSI Turbo F23  
 Eng code: N20B20A  
 OAP ..... OAP236

**228i****Aug 2014 -**

2.0L 4 cyl DOHC VVT 16V TFSI Turbo F22  
 Eng code: N20B20A  
 OAP ..... OAP236

**Feb 2015 -**

2.0L 4 cyl DOHC VVT 16V TFSI Turbo F23  
 Eng code: N20B20A  
 OAP ..... OAP236

**316i****May 2013 -**

1.6L 4 cyl DOHC VVT 16V TFSI F30  
 Eng code: N13B16A  
 OAP ..... OAP236

**316ti****Nov 2001 - Jul 2005**

1.8L 4 cyl DOHC 16V MPFI E46  
 Eng code: N42B18A  
 OAP (Alt Bosch, 110A) ..... OAP048  
 OAP (Alt Bosch, 120A, 150A) ..... OAP049  
 OAP (Alt Valeo, 90A, 110A, 120A, 140A) ..... OAP031

**318i****Oct 2001 - Jan 2004**

2.0L 4 cyl DOHC 16V MPFI E46  
 Eng code: N42B20  
 OAP (Alt Valeo, 90A, 110A, 120A, 140A) ..... OAP031  
 OAP (Alt Bosch, 110A) ..... OAP048  
 OAP (Alt Bosch, 120A, 150A) ..... OAP049

**Mar 2001 - Apr 2005**

2.0L 4 cyl DOHC 16V MPFI E46  
 Eng code: N46B20  
 OAP (Alt Valeo, 90A, 110A, 120A, 140A) ..... OAP031  
 OAP (Alt Bosch, 110A) ..... OAP048  
 OAP (Alt Bosch, 120A, 150A) ..... OAP049

**318Ci****Mar 2001 - May 2006**

2.0L 4 cyl DOHC 16V MPFI E46  
 Eng code: N46B20  
 OAP (Alt Valeo, 90A, 110A, 120A, 140A) ..... OAP031  
 OAP (Alt Bosch, 110A) ..... OAP048  
 OAP (Alt Bosch, 120A, 150A) ..... OAP049

**318Ti****Apr 2001 - Feb 2004**

2.0L 4 cyl DOHC 16V MPFI E46  
 Eng code: N42B20  
 OAP (Alt Valeo, 90A, 110A, 120A, 140A) ..... OAP031  
 OAP (Alt Bosch, 110A) ..... OAP048  
 OAP (Alt Bosch, 120A, 150A) ..... OAP049

**Oct 2003 - Dec 2004**

2.0L 4 cyl DOHC 16V MPFI E46  
 Eng code: N46B20  
 OAP (Alt Valeo, 90A, 110A, 120A, 140A) ..... OAP031  
 OAP (Alt Bosch, 110A) ..... OAP048  
 OAP (Alt Bosch, 120A, 150A) ..... OAP049

**320d****1999 - 2005**

2.0L 4 cyl DOHC 16V CRD Turbo Diesel E46  
 Eng code: M47D20  
 OAP (Alt Valeo) ..... OAP031

**Jun 2006 - Jan 2008**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel E90  
 Eng code: M47D20D  
 OAP (Alt Valeo) ..... OAP031

**Feb 2012 - Sep 2015**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel F30  
 Eng code: N47D20C  
 OAP ..... OAP194

**320i****May 2005 - Jan 2012**

2.0L 4 cyl DOHC VVT 16V MPFI E90  
 Eng code: N46B20  
 OAP (Alt Bosch, 180A) ..... OAP048  
 OAP (Alt Bosch, 150A) ..... OAP049

**Mar 2005 - Sep 2012**

2.0L 4 cyl DOHC VVT 16V MPFI E91  
 Eng code: N46B20  
 OAP (Alt Bosch 180A) ..... OAP048  
 OAP (Alt Bosch 150A) ..... OAP049

**Oct 2006 - Jan 2010**

2.0L 4 cyl DOHC VVT 16V MPFI E92  
 Eng code: N46B20  
 OAP (Alt Bosch 180A) .....OAP048  
 OAP (Alt Bosch 150A) .....OAP049

**Oct 2006 - Jan 2010**

2.0L 4 cyl DOHC VVT 16V MPFI E93  
 Eng code: N46B20  
 OAP (Alt Bosch 180A) .....OAP048  
 OAP (Alt Bosch 150A) .....OAP049

**Apr 2012 -**

2.0L 4 cyl DOHC 16V TMPFI F30  
 Eng code: N20B20B  
 OAP .....OAP236

**Dec 2012 -**

2.0L 4 cyl DOHC 16V TMPFI F31  
 Eng code: N20B20B  
 OAP .....OAP236

**May 2013 -**

2.0L 4 cyl DOHC 16V TMPFI F34  
 Eng code: N20B20B  
 OAP .....OAP236

**323i****Apr 2005 - Mar 2007**

2.5L 6 cyl DOHC VVT 24V MPFI E90  
 Eng code: N52B25  
 OAP (Alt Bosch, 150A) .....OAP049  
 OAP (Alt Valeo) .....OAP031

**Jun 2005 - Jan 2012**

2.5L 6 cyl DOHC VVT 24V MPFI E90  
 Eng code: N52B25  
 OAP (Alt Bosch, 150A) .....OAP049  
 OAP (Alt Valeo) .....OAP031

**Jun 2006 - May 2007**

2.5L 6 cyl DOHC VVT 24V MPFI E91  
 Eng code: N52B25  
 OAP (Alt Bosch, 150A) .....OAP049

**Jan 2007 - Apr 2010**

2.5L 6 cyl V-DOHC 24V MPFI E92  
 Eng code: N52B25  
 OAP (Alt Valeo) .....OAP031

**Jun 2007 - Sep 2012**

2.5L 6 cyl DOHC VVT 24V MPFI E91  
 Eng code: N52B25  
 OAP (Alt Bosch, 150A) .....OAP049

**325i****Jul 2004 - Aug 2007**

2.5L 6 cyl DOHC 24V MPFI E90  
 Eng code: N52B25  
 OAP (Alt Valeo) .....OAP031  
 OAP (Alt Bosch) .....OAP049

**Sep 2007 - Jan 2012**

2.5L 6 cyl DOHC 24V MPFI E90  
 Eng code: N52B25A  
 OAP (Alt Valeo) .....OAP031  
 OAP (Alt Bosch, 150A) .....OAP049

**328i****Feb 2012 -**

2.0L 4 cyl DOHC 16V TMPFI Turbo F30  
 Eng code: N20B20A  
 OAP .....OAP236

**Mar 2013 -**

2.0L 4 cyl DOHC 16V TMPFI Turbo F31  
 Eng code: N20B20B  
 OAP .....OAP236

**May 2013 -**

2.0L 4 cyl DOHC 16V TMPFI Turbo F34  
 Eng code: N20B20A  
 OAP .....OAP236

**330i****May 2005 - Nov 2006**

3.0L 6 cyl DOHC 24V MPFI E90  
 Eng code: N52B30  
 OAP (Alt Valeo) .....OAP031  
 OAP (Alt Bosch, 150A) .....OAP049

**335i****Dec 2006 - Mar 2010**

3.0L 6 cyl DOHC 24V TMPFI Turbo E90  
 Eng code: N54B30A  
 OAP (Alt Bosch, 180A) .....OAP066

**Apr 2010 - Jan 2012**

3.0L 6 cyl DOHC 24V TMPFI Turbo E90  
 Eng code: N55B30A  
 OAP (Alt Bosch, 180A) .....OAP066

**420i****Jan 2014 -**

2.0L 4 cyl DOHC VVT 16V TMPFI F32  
 Eng code: N20B20B  
 OAP .....OAP236

**428i****Oct 2013 -**

2.0L 4 cyl DOHC 16V TMPFI Turbo F32  
 Eng code: N20B20A  
 OAP .....OAP236

**525i****Mar 2005 - Feb 2007**

2.5L 6 cyl DOHC 24V MPFI E60  
 Eng code: N52B25  
 OAP (Alt Bosch, 150A, 180A) .....OAP049

**528i****Nov 2011 -**

2.0L 6 cyl DOHC VVT 24V TFSI Turbo F10  
 Eng code: N20B20B  
 OAP .....OAP236

**530i****May 2005 - Aug 2010**

3.0L 6 cyl DOHC VVT 24V MPFI E60/E61  
 Eng code: N52B30  
 OAP (Alt Valeo) .....OAP031  
 OAP (Alt Bosch 150A, 180A) .....OAP049

**X1****Apr 2010 - Aug 2012**

2.0L 4 cyl DOHC VVT 16V MPFI E84 18i  
 Eng code: N46B20B  
 OAP .....OAP049

**Apr 2010 - Jan 2012**

3.0L 6 cyl DOHC 24V MPFI E84 25i  
 Eng code: N52B30  
 OAP .....OAP049

**Sep 2012 - Sep 2015**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel E84 18d  
 Eng code: N47D20C  
 OAP .....OAP194

**Sep 2012 - Sep 2015**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel E84 20d  
 Eng code: N47D20C  
 OAP .....OAP194

**Sep 2012 - Sep 2015**

2.0L 4 cyl DOHC 16V TMPFI Turbo E84 20i  
Eng code: N20B20A  
OAP ..... OAP236

**X3****Dec 2006 - Feb 2011**

3.0L 6 cyl DOHC 24V MPFI E83 30i  
Eng code: N52B30  
OAP (Alt Bosch 180A) ..... OAP049

**Mar 2011 -**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel F25 20d  
Eng code: N47D20C  
OAP (Alt Valeo) ..... OAP194

**Dec 2011 -**

2.0L 4 cyl DOHC 16V TMPFI Turbo F25 20i  
Eng code: N20B20A  
OAP ..... OAP236

**May 2012 -**

2.0L 4 cyl DOHC 16V TMPFI Turbo F25 28i  
Eng code: N20B20A  
OAP ..... OAP236

**May 2014 -**

2.0L 4 cyl DOHC 16V CRD Turbo F25 20d  
Eng code: B47D40A  
OAP ..... OAP194

**X5****Mar 2007 - May 2010**

3.0L 6 cyl DOHC 24V MPFI E70  
Eng code: N52B30  
OAP (6PK To Suit Bosch Alt, 150A, 180A) ..... OAP049  
OAP (7PK To Suit Bosch Alt, 180A) ..... OAP066

**Nov 2013 -**

2.0L 4 cyl DOHC 16V CRD Twin Turbo Diesel F15 25d  
Eng code: N47D20C  
OAP ..... OAP194

**X4****Jun 2014 -**

2.0L 4 cyl DOHC VVT 16V TMPFI Turbo F26 20i  
Eng code: N20B20A  
OAP ..... OAP236

**Z4****Jun 2004 - Aug 2008**

2.0L 4 cyl DOHC VVT 16V MPFI E85  
Eng code: N46B20  
OAP ..... OAP049

**Oct 2007 - Aug 2011**

3.0L 6 cyl DOHC VVT 24V E85, E86, E89  
Eng code: N52B30  
OAP (6PK To Suit Bosch Alt, 150A, 180A) ..... OAP049  
OAP (7PK To Suit Bosch Alt, 180A) ..... OAP066

**Oct 2011 -**

2.0L 4 cyl DOHC VVT 16V Di Turbo E89  
Eng code: N20B20A  
OAP ..... OAP236

**Chevrolet****Lumina****Aug 2006 - Aug 2010**

6.0L V8 OHV 16V MPFI VE  
Eng code: L98 GEN 4  
OAP (Alt Mitsubishi From 2009) ..... OAP026

**Chrysler****300****Jun 2006 - Jan 2012**

3.0L V6 DOHC 24V CRD Turbo Diesel  
Eng code: OM642  
OAP ..... OAP203

**Grand Voyager****Jun 1997 - Apr 2001**

3.3L V6 OHV 12V MPFI GS  
Eng code: EGA  
OAP (From 3/00) ..... OAP009

**May 2001 - Mar 2008**

3.3L V6 OHV 12V MPFI RG  
Eng code: EGA  
OAP (Alt Denso) ..... OAP009

**Apr 2008 -**

2.8L 4 cyl DOHC 16V CRD Turbo Diesel RT  
Eng code: R428  
OAP ..... OAP027

**Voyager****May 2001 - Mar 2008**

3.3L V6 OHV 12V MPFI RG  
Eng code: 3Y  
OAP (Alt Denso, 140A, 160A) ..... OAP009

**Citroen****Berlingo****2007 - 2008**

1.6L 4 cyl DOHC 16V CRD Turbo Diesel  
Eng code: DV6B  
OAP (Alt Valeo, 150A, 180A) ..... OAP034  
OAP (Alt Bosch, 150A) ..... OAP035

**Feb 2008 - Oct 2011**

1.6L 4 cyl DOHC 8V DTFI Turbo Diesel B9 HDi  
Eng code: DV6ATED4  
OAP (Alt Valeo, 150A, 180A) ..... OAP034  
OAP (Alt Bosch, 150A) ..... OAP035

**Nov 2011 -**

1.6L 4 cyl DOHC 8V DTFI Turbo Diesel B9 HDi  
Eng code: DV6DBM  
OAP (Alt Valeo, 150A, 180A) ..... OAP034  
OAP (Alt Bosch, 150A) ..... OAP035

**Dec 2014 -**

1.6L 4 cyl SOHC 8V CRD Turbo Diesel  
Eng code: DV6DTED  
OAP (Alt Valeo, 150A, 180A) ..... OAP034  
OAP (Alt Bosch, 150A) ..... OAP035

**C3****Oct 2007 - Mar 2009**

1.6L 4 cyl DOHC 16V DTFI Turbo Diesel  
Eng code: 9HX (DV6ATED4)  
OAP (Alt Valeo, 150A) ..... OAP034  
OAP (Alt Bosch, 150A) ..... OAP035

**Nov 2010 - Jan 2012**

1.6L 4 cyl DOHC 16V CRD Turbo  
Eng code: 9HP (DV6ATED4)  
OAP (Alt Valeo, 97A, 150A,) ..... OAP034

**Nov 2010 -**

1.6L 4 cyl DOHC 16V MPFI A5  
Eng code: EP6C  
OAP (Alt Valeo, 120A) ..... OAP109

C4

2005 - Aug 2010

2.0L 4 cyl DOHC 16V CRD Turbo Diesel  
 Eng code: DW10BTED  
 OAP (Alt Valeo, 180A) .....OAP034  
 OAP (Alt Mitsubishi, 180A) .....OAP063

Feb 2006 - Sep 2011

1.6L 4 cyl DOHC 16V DTFI Turbo Diesel  
 Eng code: DV6TED4  
 OAP (Alt Valeo, 150A) .....OAP034  
 OAP (Alt Bosch, 150A) .....OAP035

Mar 2007 - Sep 2011

1.6L 4 cyl DOHC 16V DTFI Turbo Diesel  
 Eng code: DV6ATED4  
 OAP (Alt Valeo, 150A) .....OAP034  
 OAP (Alt Bosch, 150A) .....OAP035

Sep 2007 - Jan 2012

2.0L 4 cyl DOHC 16V CRD Turbo Diesel  
 Eng code: DW10BTED4  
 OAP (Alt Valeo, 180A) .....OAP034  
 OAP (Alt Mitsubishi, 180A) .....OAP063

Mar 2009 -

1.6L 4 cyl DOHC 16V MPFI  
 Eng code: EP6  
 OAP (Alt Valeo, 120A) .....OAP109

Oct 2011 -

1.6L 4 cyl DOHC 16V CRD I/C Turbo  
 Eng code: DV6C  
 OAP (Alt Valeo, 97A, 150A) .....OAP034  
 OAP (Alt Bosch, 150A) .....OAP035

Oct 2011 -

1.6L 4 cyl DOHC VVT 16V Di Turbo B7  
 Eng code: EP6CDT  
 OAP (Alt Valeo, 120A) .....OAP109

Jul 2012 -

2.0L 4 cyl DOHC 16V MPFI  
 Eng code: 4B11  
 OAP .....OAP011

C5

Jun 2001 - Jan 2005

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel Hdi  
 Eng code: DW10ATED  
 OAP (Alt Bosch, 150A) .....OAP035  
 OAP (Alt Valeo, 150A) .....OAP038

Mar 2005 - May 2006

2.2L 4 cyl DOHC 16V DTFI Turbo Diesel Hdi  
 Eng code: DW12TED4  
 OAP (Alt Bosch, 150A) .....OAP035  
 OAP (Alt Valeo, 150A) .....OAP038

Jun 2006 - Aug 2008

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel Hdi  
 Eng code: DW10BTED4  
 OAP (Alt Valeo, 180A) .....OAP034  
 OAP (Alt Mitsubishi, 180A) .....OAP063

Mar 2007 - Aug 2008

2.2L 4 cyl DOHC 16V Twin Turbo Diesel Hdi  
 Eng code: DW12BTED4  
 OAP (Alt Bosch, 150A) .....OAP035  
 OAP (Alt Mitsubishi, 180A) .....OAP063

Sep 2008 - Jan 2010

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel X7  
 Eng code: DW10BTED4  
 OAP (Alt Valeo, 180A) .....OAP034  
 OAP (Alt Mitsubishi, 180A) .....OAP063

Feb 2012 -

1.6L 4 cyl DOHC 16V DTFI Turbo Diesel X7  
 Eng code: EP6CDT  
 OAP (Alt Valeo, 120A) .....OAP109

Jun 2013 -

2.2L 4 cyl DOHC VVT 16V CRD Turbo Diesel X7  
 Eng code: 4HL (DW12)  
 OAP (Alt Valeo 97A, 150A) .....OAP034

Dispatch

Apr 2008 -

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel  
 Eng code: DW10UTED4  
 OAP (Alt Bosch, 150A) .....OAP035

DS3

Feb 2012 - Jan 2013

1.4L 4 cyl DOHC 16V MPFI Dstyle  
 Eng code: EP3C  
 OAP (Alt Valeo 97A, 150A) .....OAP109

DS4

Apr 2012 -

1.6L 4 cyl DOHC 16V CRD Turbo Diesel e-Hdi  
 Eng code: DV6C  
 OAP (Alt Valeo, 97A, 150A) .....OAP034

Feb 2012 - Jan 2013

1.6L 4 cyl DOHC 16V TMPFI Turbo DSTYLE  
 Eng code: EP6DT  
 OAP (Alt Valeo 120A) .....OAP109

Oct 2012 -

1.6L 4 cyl DOHC 16V TMPFI Turbo DSTYLE  
 Eng code: EP6DT  
 OAP (Alt Valeo 120A) .....OAP109

DS5

Sep 2012 - Jun 2015

1.6L 4 cyl DOHC VVT 16V TMPFI Turbo DSSPORT  
 Eng code: EP6CDT  
 OAP (Alt Valeo 120A) .....OAP109

Apr 2013 - Oct 2015

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel DSSPORT HDI  
 Eng code: DW10CTED4  
 OAP (Alt Valeo, 97A, 150A) .....OAP034

Nov 2015 -

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel DSSPORT  
 Eng code: DW10CTED4  
 OAP (Alt Valeo, 97A, 150A) .....OAP034

Xsara

2000 - 2005

2.0L 4 cyl SOHC 8V CRD Turbo Diesel  
 Eng code: DW10TD  
 OAP (Alt Mitsubishi 150A) .....OAP033  
 OAP (Alt Bosch, 150A) .....OAP035  
 OAP (Alt Valeo, 150A) .....OAP038

Dodge

Avenger

Aug 2007 - Jul 2009

2.0L 4 cyl DOHC 16V MPFI JS  
 Eng code: ECN  
 OAP .....OAP025

Aug 2007 - Jul 2009

2.4L 4 cyl DOHC 16V MPFI JS  
 Eng code: ED3  
 OAP .....OAP025

**Aug 2007 - Jun 2010**

2.0L 4 cyl DOHC 16V DTFI Diesel PM  
 Eng code: ECD  
 OAP ..... OAP025

**Caliber****Aug 2006 -**

2.0L 4 cyl DOHC 16V MPFI PM  
 Eng code: ECN  
 OAP (Alt Mitsubishi 115A) ..... OAP085

**Nitro****Jun 2007 - Jun 2010**

2.8L 4 cyl DOHC 16V DTFI Turbo Diesel KA  
 Eng code: ENR  
 OAP ..... OAP055

**Ram 2500****2007 -**

6.7L 6 cyl OHV 12V DTFI Turbo Diesel  
 Eng code: Cummins B series  
 OAP (Alt Bosch, 136A) ..... OAP111

**Ram 3500****2007 -**

6.7L 6 cyl OHV 12V DTFI Turbo Diesel  
 Eng code: Cummins B series  
 OAP (Alt Bosch, 136A) ..... OAP111

**Fiat****500****Feb 2008 - Sep 2010**

1.2L 4 cyl SOHC 16V DTFI Turbo Diesel  
 Eng code: 169A1.000  
 OAP (Alt Valeo, 90A, 105A) ..... OAP067

**Ducato****Feb 2007 - Jan 2012**

2.3L 4 cyl DOHC 16V Turbo Diesel  
 Eng code: F1AE0481D  
 OAP (Alt Bosch, 140A) ..... OAP068

**Punto****Jul 2006 - Jan 2009**

1.9L 4 cyl SOHC 16V DTFI Turbo Diesel Sport  
 Eng code: 199A5000  
 OAP (Alt Denso, 100A) ..... OAP057  
 OAP (Alt Denso, 120A) ..... OAP075

**Scudo****Apr 2008 -**

2.0L 4 cyl DOHC 16V DTFI Diesel  
 Eng code: DW10UTED4  
 OAP (Alt Valeo, 150A) ..... OAP034  
 OAP (Alt Bosch, 150A) ..... OAP035  
 OAP (Alt Mitsubishi, 180A) ..... OAP063

**Ford****Ecosport****Dec 2013 -**

1.0L 3 cyl DOHC 12V TMPFI BK  
 Eng code: M1JC  
 OAP ..... OAP236

**Everest****Jul 2015 -**

3.2L 5 cyl DOHC 20V DTFI Turbo Diesel UA  
 Eng code: P5AT  
 OAP ..... OAP077

**Falcon****Sep 1998 - Oct 2002**

4.0L 6 cyl OHC 12V MPFI AU  
 Eng code: H  
 OAP Retro Fit ..... OAP079

**Sep 1998 - Oct 2002**

4.0L 6 cyl OHC 12V MPFI AU VCT  
 Eng code: Y  
 OAP Retro Fit ..... OAP079

**Oct 2002 - Oct 2005**

4.0L 6 cyl DOHC 24V MPFI BA  
 Eng code: Barra 182  
 OAP Retro Fit ..... OAP079

**Jan 2003 - Oct 2005**

5.4L V8 SOHC 24V MPFI BA  
 Eng code: Barra 220  
 OAP ..... OAP047

**Jan 2003 - Oct 2005**

5.4L V8 DOHC 32V MPFI BA XR8  
 Eng code: Boss 260  
 OAP ..... OAP047

**May 2008 - Sep 2011**

5.4L V8 DOHC 32V MPFI FG XR8  
 Eng code: Boss 290  
 OAP ..... OAP047

**Fiesta****Nov 2009 - Sep 2010**

1.6L 4 cyl SOHC 16V DTFI Turbo Diesel WS  
 Eng code: HHJE  
 OAP (Alt Valeo, 97A, 150A) ..... OAP034  
 OAP (Alt Denso 120A) ..... OAP137

**Oct 2013 -**

1.0L 3 cyl DOHC VVT 12V TFSI Turbo WZ  
 Eng code: M1JE  
 OAP ..... OAP236

**Focus****May 2003 - Apr 2005**

2.0L 4 cyl DOHC VVT 16V MPFI LR ST170  
 Eng code: ALDA  
 Overrunning Alternator Pulley ..... OAP021

**May 2005 - Jun 2007**

2.0L 4 cyl DOHC 16V MPFI LS  
 Eng code: DURATEC  
 Overrunning Alternator Pulley (Alt Visteon 110A) ..... OAP021  
 Overrunning Alternator Pulley (Alt Denso 120A) ..... OAP146

**Apr 2006 - May 2008**

2.5L 5 cyl DOHC 20V MPFI Turbo XR5 LS  
 Eng code: B5254T  
 OAP (Alt Denso, 150A) ..... OAP110

**Apr 2006 - May 2008**

2.5L 5 cyl DOHC 20V MPFI Turbo XRS LT  
 Eng code: B5254T  
 OAP (Alt Denso, 150A) ..... OAP110

**Jul 2007 - Mar 2009**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel LT  
 Eng code: D4204T  
 Overrunning Alternator Pulley (Alt Denso 120A, 150A) ..... OAP137

**Jul 2007 - Mar 2009**

2.0L 4 cyl DOHC 16V MPFI LT  
 Eng code: DURATEC  
 Overrunning Alternator Pulley (Alt Visteon 110A) ..... OAP021  
 Overrunning Alternator Pulley (Alt Denso 120A) ..... OAP146

**Jun 2008 - Jun 2011**

2.5L 5 cyl DOHC 20V MPFI Turbo XR5 LV  
 Eng code: B5254T  
 OAP (Alt Denso, 150A) .....OAP110

**Apr 2009 -**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel LV  
 Eng code: D4204T  
 OAP (Alt Denso 120A, 150A) .....OAP137

**Apr 2009 - Jun 2011**

2.0L 4 cyl DOHC 16V MPFI LV  
 Eng code: A0DB  
 Overrunning Alternator Pulley (Alt Visteon 110A).....OAP021  
 Overrunning Alternator Pulley (Alt Denso 120A) .....OAP146

**Sep 2010 - Jun 2012**

2.5L 5 cyl DOHC 20V TMPFI Turbo RS  
 Eng code: B5254T  
 OAP (Alt Denso, 150A) .....OAP110

**Jul 2011 - Sep 2015**

2.0L 4 cyl DOHC 16V MPFI LW  
 Eng code: MGDA DURATEC  
 Overrunning Alternator Pulley (Alt Visteon 110A).....OAP021  
 Overrunning Alternator Pulley (Alt Denso 120A) .....OAP146

**Mondeo****Oct 2007 - Jun 2009**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel MA  
 Eng code: DURATorq  
 OAP (Alt Bosch, 150A, 156A) .....OAP035

**Oct 2007 - Jun 2009**

2.5L 5 cyl DOHC 20V TMPFI Turbo MA  
 Eng code: B5254T  
 OAP (Alt Bosch, 180A) .....OAP037

**Jul 2009 - Oct 2010**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel MB  
 Eng code: DURATorq  
 OAP (Alt Bosch, 150A, 156A) .....OAP035

**Jul 2009 - Mar 2014**

2.5L 5 cyl DOHC 20V TMPFI Turbo MB  
 Eng code: B5254T  
 OAP (Alt Bosch, 180A) .....OAP037

**May 2010 - Apr 2015**

2.0L 4 cyl DOHC 16V CRD Turbo Diesel MB,MC  
 Eng code: TXBA (D4204T7)  
 OAP .....OAP035

**May 2015 -**

2.0L 4 cyl DOHC 16V TDCi Turbo Diesel MD  
 Eng code: T8CF  
 OAP (Alt Bosch, 150A, 156A) .....OAP035

**Ranger****Sep 2011 - Jul 2015**

2.2L 4 cyl DOHC 16V TCDI Turbo Diesel PX  
 Eng code: P4AT  
 OAP .....OAP077

**Sep 2011 -**

3.2L 5 cyl DOHC 20V TCDI Turbo Diesel PX  
 Eng code: P5AT  
 OAP .....OAP077

**Aug 2015 -**

2.2L 4 cyl DOHC 16V TCDI Turbo Diesel PX  
 Eng code: P4AT  
 OAP .....OAP077

**Territory****May 2011 -**

2.7L V6 DOHC 24V TDCi Diesel SZ  
 Eng code: 276DT  
 OAP .....OAP027

**Transit****Jan 2001 - Apr 2004**

2.4L 4 cyl DOHC 16V DTFI Turbo Diesel VH  
 Eng code: D4FA  
 OAP (Alt Bosch, 110A) .....OAP061  
 OAP (Alt Visteon, 110A) .....OAP062  
 Overrunning Alternator Pulley (Alt Mako 110A) .....OAP186

**Jan 2001 - Apr 2004**

2.5L 4 cyl DOHC 16V DTFI Turbo Diesel VH  
 Eng code: D2FA  
 OAP (Alt Bosch, 110A) .....OAP061  
 OAP (Alt Visteon, 110A) .....OAP062  
 Overrunning Alternator Pulley (Alt Mako 110A) .....OAP186

**Mar 2004 - Sep 2006**

2.4L 4 cyl DOHC 16V DTFI Turbo Diesel VH  
 Eng code: H9FA  
 OAP (Alt Bosch, 110A) .....OAP061  
 OAP (Alt Visteon, RCP Alternator 110A) .....OAP062  
 Overrunning Alternator Pulley (Alt Mako 110A) .....OAP186

**May 2004 - Oct 2006**

2.4L 4 cyl DOHC 16V DTFI Turbo Diesel VJ  
 Eng code: FXFA  
 OAP (Alt Bosch, 110A) .....OAP061  
 OAP (Alt Visteon, RCP Alternator 110A) .....OAP062  
 Overrunning Alternator Pulley (Alt Mako 110A) .....OAP186

**Oct 2006 - Feb 2012**

2.4L 4 cyl DOHC 16V DTFI Turbo Diesel VM  
 Eng code: H9FB  
 OAP (Alt Bosch, 156A) .....OAP077

**FPV****Force 8****Nov 2006 - Jan 2008**

5.4L V8 DOHC 32V MPFI BF  
 Eng code: Boss 290  
 OAP .....OAP047

**Jan 2008 - May 2008**

5.4L V8 DOHC 32V MPFI BF  
 Eng code: Boss 302  
 OAP Pulley .....OAP047

**GS****Sep 2009 - Sep 2010**

5.4L V8 DOHC 32V MPFI FG  
 Eng code: Boss 302  
 OAP Pulley .....OAP047

**GT****Oct 2005 - Jan 2008**

5.4L V8 DOHC 32V MPFI BF  
 Eng code: Boss 290  
 OAP .....OAP047

**Jan 2008 - May 2008**

5.4L V8 DOHC 32V MPFI BF  
 Eng code: Boss 302  
 OAP Pulley .....OAP047

**Jun 2008 - Sep 2010**

5.4L V8 DOHC 32V MPFI FG  
 Eng code: Boss 315  
 OAP Pulley .....OAP047

**GT Cobra****Oct 2007 - May 2008**

5.4L V8 DOHC 32V MPFI BF  
 Eng code: Boss 302  
 OAP Pulley .....OAP047

**GT-E****Jun 2008 - Sep 2010**

5.4L V8 DOHC 32V MPFI FG  
 Eng code: Boss 315  
 OAP Pulley ..... OAP047

**GT-P****Mar 2003 - Sep 2005**

5.4L V8 DOHC 32V MPFI BA  
 Eng code: Boss 290  
 OAP ..... OAP047

**Oct 2005 - Jan 2008**

5.4L V8 DOHC 32V MPFI BF  
 Eng code: Boss 290  
 OAP ..... OAP047

**Jan 2008 - May 2008**

5.4L V8 DOHC 32V MPFI BF  
 Eng code: Boss 302  
 OAP ..... OAP047

**Jun 2008 - Sep 2010**

5.4L V8 DOHC 32V MPFI FG  
 Eng code: Boss 315  
 OAP ..... OAP047

**Pursuit****Mar 2003 - Sep 2005**

5.4L V8 DOHC 32V MPFI BA  
 Eng code: Boss 290  
 OAP ..... OAP047

**Oct 2005 - Jan 2008**

5.4L V8 DOHC 32V MPFI BF  
 Eng code: Boss 290  
 OAP ..... OAP047

**Jan 2008 - May 2008**

5.4L V8 DOHC 32V MPFI BF  
 Eng code: Boss 302  
 OAP Pulley ..... OAP047

**Jun 2008 - Oct 2014**

5.4L V8 DOHC 32V MPFI FG  
 Eng code: Boss 315  
 OAP Pulley ..... OAP047

**Super Pursuit****Apr 2005 - Sep 2005**

5.4L V8 DOHC 32V MPFI BA  
 Eng code: Boss 290  
 OAP ..... OAP047

**Oct 2005 - Jan 2008**

5.4L V8 DOHC 32V MPFI BF  
 Eng code: Boss 290  
 OAP ..... OAP047

**Jan 2008 - May 2008**

5.4L V8 DOHC 32V MPFI BF  
 Eng code: Boss 302  
 OAP Pulley ..... OAP047

**Jun 2008 - Sep 2010**

5.4L V8 DOHC 32V MPFI FG  
 Eng code: Boss 315  
 OAP Pulley ..... OAP047

**Holden****Astra****Apr 2000 - Jun 2004**

1.8L 4 cyl DOHC 16V MPFI TS  
 Eng code: Z18XE  
 OAP ..... OAP016

**Oct 2001 - May 2003**

2.2L 4 cyl DOHC 16V MPFI TS  
 Eng code: Z22SEL  
 OAP ..... OAP030

**May 2003 - Jul 2004**

2.2L 4 cyl DOHC 16V MPFI TS  
 Eng code: Z22SE  
 OAP ..... OAP030

**Nov 2004 - Mar 2007**

1.8L 4 cyl DOHC 16V MPFI AH  
 Eng code: Z18XE  
 OAP ..... OAP016

**Jun 2006 - Mar 2010**

1.9L 4 cyl SOHC 8V DTFI Turbo Diesel AH  
 Eng code: Z19DT  
 OAP (Alt Denso, 120A, 140A) ..... OAP071

**Jun 2006 - Mar 2010**

1.9L 4 cyl DOHC 16V DTFI Turbo Diesel AH  
 Eng code: Z19DTH  
 OAP (Alt Denso, 120A, 140A) ..... OAP071

**Apr 2007 - Mar 2010**

1.8L 4 cyl DOHC 16V MPFI AH  
 Eng code: Z18XER  
 OAP ..... OAP037

**Barina****Nov 2011 -**

1.6L 4 cyl DOHC 16V MPFI TM  
 Eng code: F16D4  
 OAP ..... OAP002

**Nov 2013 -**

1.4L 4 cyl V-DOHC 16V TMPFI Turbo RS  
 Eng code: A14NET  
 OAP ..... OAP194

**Calais****May 2013 -**

3.6L V6 V-DOHC 24V VF  
 Eng code: LFX  
 OAP ..... OAP025

**May 2013 -**

6.0L V8 OHV 16V MPFI VF  
 Eng code: L77  
 OAP ..... OAP026  
 OAP 8 Rib Retro Fit ..... OAP097

**Caprice****Oct 2000 - Apr 2003**

3.8L V6 OHV 12V MPFI WH  
 Eng code: L67  
 OAP Retro Fit ..... OAP078

**May 2013 -**

6.0L V8 OHV 16V MPFI WN  
 Eng code: L77  
 OAP ..... OAP026  
 OAP 8 Rib Retro Fit ..... OAP097

**May 2013 -**

3.6L V6 DOHC 24V MPFI WN  
 Eng code: LWR  
 OAP ..... OAP025

**Captiva****Mar 2007 - Jan 2011**

2.0L 4 cyl SOHC 16V DTFI Turbo Diesel CG  
 Eng code: Z20S1  
 OAP (Alt Bosch) ..... OAP004

**Feb 2011 -**

2.2L 4 cyl V-DOHC 16V DTFI Turbo Diesel CGII  
 Eng code: Z2D1  
 OAP ..... OAP018

**Colorado****Jun 2012 - Oct 2013**

2.8L 4 cyl DOHC 16V DTFI Turbo Diesel RG  
 Eng code: LWH  
 OAP ..... OAP152

**Jun 2012 - Oct 2013**

2.5L 4 cyl DOHC 16V DTFI Diesel RG  
 Eng code: LVN  
 OAP ..... OAP152

**Nov 2013 - May 2014**

2.5L 4 cyl DOHC 16V DTFI Diesel RG  
 Eng code: LVN  
 OAP ..... OAP152

**Nov 2013 -**

2.8L 4 cyl DOHC 16V DTFI Turbo Diesel RG  
 Eng code: LWN  
 OAP ..... OAP152

**Colorado 7****Nov 2012 - Oct 2013**

2.8L 4 cyl DOHC 16V CRD Turbo Diesel RG  
 Eng code: LWH  
 OAP ..... OAP152

**Nov 2013 - Sep 2016**

2.8L 4 cyl DOHC 16V CRD Turbo Diesel RG  
 Eng code: LWN  
 OAP ..... OAP152

**Commodore****Apr 1995 - Apr 1996**

3.8L V6 OHV 12V MPFI VS  
 Eng code: LG2 (L27)  
 OAP Retro Fit ..... OAP078

**May 1996 - Dec 2000**

3.8L V6 OHV 12V MPFI VS  
 Eng code: LG2 (L36)  
 OAP Retro Fit ..... OAP078

**Sep 1997 - Oct 2000**

3.8L V6 OHV 12V MPFI VT  
 Eng code: LN3 (L36)  
 OAP Retro Fit ..... OAP078

**Sep 1997 - Oct 2000**

3.8L V6 OHV 12V MPFI VT (Supercharged)  
 Eng code: L67  
 OAP Retro Fit ..... OAP078

**Jun 1999 - Oct 2000**

5.7L V8 OHV 16V MPFI VT  
 Eng code: LS1 GEN III  
 OAP Retro Fit ..... OAP019  
 OAP 8 Rib Retro Fit ..... OAP080

**Oct 2000 - Sep 2002**

3.8L V6 OHV 12V MPFI VX  
 Eng code: LN3 (L36)  
 OAP Retro Fit ..... OAP078

**Oct 2000 - Sep 2002**

3.8L V6 OHV 12V MPFI VX (Supercharged)  
 Eng code: L67  
 OAP Retro Fit ..... OAP078

**Oct 2000 - Sep 2002**

5.7L V8 OHV 16V MPFI VX  
 Eng code: LS1 GEN III  
 OAP Retro Fit ..... OAP019  
 OAP 8 Rib Retro Fit ..... OAP080

**Dec 2000 - Sep 2002**

5.7L V8 OHV 16V MPFI VU  
 Eng code: LS1 GEN III  
 OAP Retro Fit ..... OAP019  
 OAP 8 Rib Retro Fit ..... OAP080

**Sep 2002 - Aug 2004**

3.8L V6 OHV 12V MPFI VY  
 Eng code: LN3 (L36)  
 OAP Retro Fit ..... OAP078

**Sep 2002 - Aug 2004**

3.8L V6 OHV 12V MPFI VY (Supercharged)  
 Eng code: L67  
 OAP Retro Fit ..... OAP078

**Aug 2002 - Jul 2003**

5.7L V8 OHV 16V MPFI VY  
 Eng code: LS1 GEN III  
 OAP Retro Fit ..... OAP019  
 OAP 8 Rib Retro Fit ..... OAP080

**Aug 2003 - Aug 2004**

5.7L V8 OHV 16V MPFI VY II  
 Eng code: LS1 GEN III  
 OAP Retro Fit ..... OAP019  
 OAP 8 Rib Retro Fit ..... OAP080

**Feb 2004 - Jan 2006**

5.7L V8 OHV 16V MPFI VZ  
 Eng code: LS1 GEN III  
 OAP Retro Fit ..... OAP019  
 OAP 8 Rib Retro Fit ..... OAP080

**Feb 2006 - Aug 2007**

6.0L V8 OHV 16V MPFI VZ  
 Eng code: L76 GEN 4  
 OAP 6 Rib Retro Fit ..... OAP019  
 OAP 8 Rib Retro Fit ..... OAP080

**Aug 2006 - Aug 2010**

6.0L V8 OHV 16V MPFI VE  
 Eng code: L98 GEN 4  
 OAP (Alt Mitsubishi From 2009) ..... OAP026

**Sep 2009 - Aug 2010**

3.0L V6 V-DOHC 24V VE  
 Eng code: LF1  
 OAP (Alt Mitsubishi) ..... OAP025

**Sep 2009 - Aug 2011**

3.6L V6 V-DOHC 24V VE  
 Eng code: LLT  
 OAP (Alt Mitsubishi) ..... OAP025

**Sep 2010 - Apr 2013**

3.0L V6 V-DOHC 24V VE II  
 Eng code: LFW  
 OAP (Alt Mitsubishi) ..... OAP025

**Sep 2010 - Apr 2013**

6.0L V8 OHV 16V VE  
 Eng code: L77  
 OAP (Alt Mitsubishi) ..... OAP026  
 OAP 8 Rib Retro Fit (Alt Mitsubishi) ..... OAP097

**Sep 2010 - Apr 2013**

3.6L V6 DOHC 24V Direct FI VE II  
 Eng code: LFX  
 OAP (Alt Mitsubishi) ..... OAP025

**May 2013 -**

3.0L V6 V-DOHC 24V MPFI VF  
 Eng code: LFW  
 OAP (Alt Mitsubishi) ..... OAP025

**May 2013 -**

6.0L V8 OHV 16V MPFI VF  
 Eng code: L77  
 OAP ..... OAP026  
 OAP 8 Rib Retro Fit ..... OAP097

<b>May 2013 -</b>	3.6L V6 DOHC 24V MPFI VF Eng code: LFX OAP (Alt Mitsubishi) ..... OAP025	<b>May 2003 - Aug 2004</b>	3.8L V6 OHV 12V MPFI WK Eng code: LN3 (L36) OAP Retro Fit ..... OAP078
<b>May 2013 -</b>	3.6L V6 DOHC 24V LPG VF Eng code: LWR OAP (Alt Mitsubishi) ..... OAP025	<b>May 2003 - Jul 2003</b>	5.7L V8 OHV 16V MPFI WK Eng code: LS1 GEN III OAP Retro Fit ..... OAP019 OAP 8 Rib Retro Fit..... OAP080
<b>Oct 2015 -</b>	6.2L V8 OHV 16V MPFI VF Eng code: LS3 OAP ..... OAP026 OAP 8 Rib Retro Fit..... OAP097	<b>Aug 2003 - Aug 2004</b>	5.7L V8 OHV 16V MPFI WKII Eng code: LS1 GEN III OAP Retro Fit ..... OAP019 OAP 8 Rib Retro Fit..... OAP080
<b>Crewman</b>		<b>Aug 2004 - Jul 2006</b>	5.7L V8 OHV 16V MPFI WL Eng code: LS1 GEN III OAP Retro Fit ..... OAP019 OAP 8 Rib Retro Fit..... OAP080
<b>Aug 2006 - Aug 2007</b>	6.0L V8 OHV 16V MPFI VZ MY06 Eng code: GEN 4 L76 OAP Retro Fit ..... OAP019 OAP 8 Rib Retro Fit..... OAP080	<b>Feb 2006 - Jul 2006</b>	6.0L V8 OHV 16V MPFI WL Eng code: L76 OAP Retro Fit ..... OAP019 OAP 8 Rib Retro Fit..... OAP080
<b>Cruze</b>		<b>Aug 2006 - Aug 2010</b>	6.0L V8 OHV 16V MPFI WM Eng code: L98 OAP Retro Fit (2006 Only)..... OAP019 OAP 8 Rib Retro Fit (2006 Only)..... OAP080
<b>Jun 2009 - Feb 2011</b>	1.8L 4 cyl DOHC 16V MPFI JG Eng code: F18D4 OAP ..... OAP002	<b>Trailblazer</b>	
<b>May 2009 - Feb 2011</b>	2.0L 4 cyl SOHC 16V DTFI Turbo Diesel JG Eng code: Z20S1 OAP ..... OAP018	<b>Oct 2016 -</b>	2.8L 4 cyl DOHC 16V DTFI Turbo Diesel RG Eng code: LWN OAP ..... OAP152
<b>Mar 2011 - Feb 2015</b>	2.0L 4 cyl SOHC 16V DTFI Turbo Diesel JH II Eng code: Z20D1 OAP ..... OAP018	<b>Trax</b>	
<b>Mar 2011 - Jan 2015</b>	1.4L 4 cyl V-DOHC 16V TMPFI Turbo JH Eng code: A14NET OAP ..... OAP194	<b>Aug 2013 -</b>	1.8L 4 cyl DOHC 16V MPFI TJ Eng code: F18D4 OAP ..... OAP002
<b>Mar 2013 -</b>	1.6L 4 cyl DOHC 16V MPFI Turbo JH Series 2 Eng code: A16LET OAP ..... OAP002	<b>Vectra</b>	
<b>Epica</b>		<b>Mar 2003 - Dec 2006</b>	2.2L 4 cyl DOHC 16V MPFI ZC Eng code: Z22SE OAP ..... OAP030
<b>Jul 2008 - Feb 2011</b>	2.0L 4 cyl SOHC 16V DTFI Turbo Diesel EP Eng code: Z20S1 OAP ..... OAP004	<b>Zafira</b>	
<b>Statesman (From 1994)</b>		<b>Jun 2001 - May 2006</b>	2.2L 4 cyl DOHC 16V MPFI TT Eng code: Z22SE OAP ..... OAP030
<b>May 1996 - Jun 1999</b>	3.8L V6 OHV 12V MPFI VS Eng code: LG2 (L36) OAP Retro Fit ..... OAP078	<b>HSV</b>	
<b>Jun 1999 - Apr 2003</b>	3.8L V6 OHV 12V MPFI WH Eng code: LN3 (L36) OAP Retro Fit ..... OAP078	<b>Avalanche</b>	
<b>Jun 1999 - Apr 2003</b>	5.7L V8 OHV 16V MPFI WH Eng code: LS1 GEN III OAP Retro Fit ..... OAP019 OAP 8 Rib Retro Fit..... OAP080	<b>Dec 2003 - Sep 2004</b>	5.7L V8 OHV 16V MPFI VY II Eng code: LS1 GEN III OAP (Alt Mitsubishi) ..... OAP019 OAP 8 Rib Retro Fit (Alt Mitsubishi) ..... OAP080
<b>Oct 2000 - Apr 2003</b>	3.8L V6 OHV 12V MPFI WH Eng code: L67 OAP Retro Fit ..... OAP078	<b>Oct 2004 - Apr 2006</b>	5.7L V8 OHV 16V MPFI VZ Eng code: LS1 GEN III OAP (Alt Mitsubishi) ..... OAP019 OAP 8 Rib Retro Fit (Alt Mitsubishi) ..... OAP080

**Clubsport****Jul 1999 - Oct 2000**

5.7L V8 OHV 16V MPFI VTII  
 Eng code: LS1  
 OAP (Alt Mitsubishi) .....OAP019  
 OAP 8 Rib Retro Fit (Alt Mitsubishi) .....OAP080

**Sep 2000 - Oct 2002**

5.7L V8 OHV 16V MPFI VX  
 Eng code: LS1  
 OAP (Alt Mitsubishi) .....OAP019  
 OAP 8 Rib Retro Fit (Alt Mitsubishi) .....OAP080

**Oct 2002 - Jul 2003**

5.7L V8 OHV 16V MPFI VY  
 Eng code: LS1  
 OAP (Alt Mitsubishi) .....OAP019  
 OAP 8 Rib Retro Fit (Alt Mitsubishi) .....OAP080

**Aug 2003 - Sep 2004**

5.7L V8 OHV 16V MPFI VYII  
 Eng code: LS1  
 OAP (Alt Mitsubishi) .....OAP019  
 OAP 8 Rib Retro Fit (Alt Mitsubishi) .....OAP080

**Oct 2004 - Jul 2006**

6.0L V8 OHV 16V MPFI VZ  
 Eng code: LS2  
 OAP (Alt Mitsubishi) .....OAP019  
 OAP 8 Rib Retro Fit (Alt Mitsubishi) .....OAP080

**Aug 2006 - Mar 2008**

6.0L V8 OHV 16V MPFI VE  
 Eng code: LS2  
 OAP (Alt Mitsubishi) .....OAP026  
 OAP 8 Rib Retro Fit (Alt Mitsubishi) .....OAP097

**Apr 2008 - May 2013**

6.2L V8 OHV 16V MPFI VE  
 Eng code: LS3  
 OAP (Alt Mitsubishi) .....OAP026  
 OAP 8 Rib Retro Fit (Alt Mitsubishi) .....OAP097

**Sep 2010 - May 2013**

6.2L V8 OHV 16V MPFI VE LPG  
 Eng code: LS3  
 OAP (Alt Mitsubishi) .....OAP026  
 OAP 8 Rib Retro Fit (Alt Mitsubishi) .....OAP097

**Jun 2013 -**

6.2L V8 OHV 16V MPFI VF  
 Eng code: LS3  
 OAP .....OAP026  
 OAP 8 Rib Retro Fit.....OAP097

**Coupe 4****Jul 2004 - Apr 2006**

5.7L V8 OHV 16V MPFI V2  
 Eng code: LS1  
 OAP (Alt Mitsubishi) .....OAP019  
 OAP 8 Rib Retro Fit (Alt Mitsubishi) .....OAP080

**Coupe GTS****Dec 2001 - Jul 2003**

5.7L V8 OHV 16V MPFI V2  
 Eng code: LS1  
 OAP (Alt Mitsubishi) .....OAP019  
 OAP 8 Rib Retro Fit (Alt Mitsubishi) .....OAP080

**Aug 2003 - Sep 2004**

5.7L V8 OHV 16V MPFI V2  
 Eng code: LS1  
 OAP (Alt Mitsubishi) .....OAP019  
 OAP 8 Rib Retro Fit (Alt Mitsubishi) .....OAP080

**Coupe Signature****Jul 2006 - Nov 2007**

6.0L V8 OHV 16V MPFI VZ  
 Eng code: LS2  
 OAP (Alt Mitsubishi) .....OAP019  
 OAP 8 Rib Retro Fit (Alt Mitsubishi) .....OAP080

**Grange****Jul 1999 - Jul 2003**

5.7L V8 OHV 16V MPFI WH  
 Eng code: LS1  
 OAP (Alt Mitsubishi) .....OAP019  
 OAP 8 Rib Retro Fit (Alt Mitsubishi) .....OAP080

**Aug 2003 - Sep 2003**

5.7L V8 OHV 16V MPFI WH  
 Eng code: LS1  
 OAP (Alt Mitsubishi) .....OAP019  
 OAP 8 Rib Retro Fit (Alt Mitsubishi) .....OAP080

**Oct 2003 - Sep 2004**

5.7L V8 OHV 16V MPFI WK  
 Eng code: LS1  
 OAP (Alt Mitsubishi) .....OAP019  
 OAP 8 Rib Retro Fit (Alt Mitsubishi) .....OAP080

**Sep 2004 - Jul 2006**

6.0L V8 OHV 16V MPFI WL  
 Eng code: LS2  
 OAP (Alt Mitsubishi) .....OAP026  
 OAP 8 Rib Retro Fit (Alt Mitsubishi) .....OAP097

**Mar 2007 - Mar 2008**

6.0L V8 OHV 16V MPFI WM  
 Eng code: LS2  
 OAP (Alt Mitsubishi) .....OAP026  
 OAP 8 Rib Retro Fit (Alt Mitsubishi) .....OAP097

**Apr 2008 - May 2013**

6.2L V8 OHV 16V MPFI WM  
 Eng code: LS3  
 OAP 8 Rib Retro Fit (Alt Mitsubishi) .....OAP026  
 OAP 8 Rib Retro Fit (Alt Mitsubishi) .....OAP097

**Jun 2013 -**

6.2L V8 OHV 16V MPFI WN  
 Eng code: LS3  
 OAP .....OAP026  
 OAP 8 Rib Retro Fit.....OAP097

**GTS****Apr 2000 - Sep 2000**

5.7L V8 OHV 16V MPFI VTII  
 Eng code: LS1 GEN III  
 OAP (Alt Mitsubishi) .....OAP019  
 OAP 8 Rib Retro Fit (Alt Mitsubishi) .....OAP080

**Sep 2000 - Aug 2001**

5.7L V8 OHV 16V MPFI VX  
 Eng code: LS1 GEN III  
 OAP (Alt Mitsubishi) .....OAP019  
 OAP 8 Rib Retro Fit (Alt Mitsubishi) .....OAP080

**Oct 2002 - Jul 2003**

5.7L V8 OHV 16V MPFI VY  
 Eng code: LS1 GEN III  
 OAP (Alt Mitsubishi) .....OAP019  
 OAP 8 Rib Retro Fit (Alt Mitsubishi) .....OAP080

**Aug 2003 - Sep 2004**

5.7L V8 OHV 16V MPFI VY  
 Eng code: LS1 GEN III  
 OAP (Alt Mitsubishi) .....OAP019  
 OAP 8 Rib Retro Fit (Alt Mitsubishi) .....OAP080

**Aug 2006 - Mar 2008**

6.0L V8 OHV 16V MPFI VE  
Eng code: LS2  
OAP (Alt Mitsubishi) ..... OAP026  
OAP 8 Rib Retro Fit (Alt Mitsubishi) ..... OAP097

**Apr 2008 - Aug 2009**

6.2L V8 OHV 16V MPFI VE  
Eng code: LS3  
OAP (Alt Mitsubishi) ..... OAP026  
OAP 8 Rib Retro Fit (Alt Mitsubishi) ..... OAP097

**Sep 2010 - May 2013**

6.2L V8 OHV 16V MPFI LPG VE  
Eng code: LS3  
OAP (Alt Mitsubishi) ..... OAP026  
OAP 8 Rib Retro Fit (Alt Mitsubishi) ..... OAP097

**Maloo****Mar 2001 - Sep 2002**

5.7L V8 OHV 16V MPFI VU  
Eng code: LS1 GEN III  
OAP (Alt Mitsubishi) ..... OAP019  
OAP 8 Rib Retro Fit (Alt Mitsubishi) ..... OAP080

**Oct 2002 - Jul 2003**

5.7L V8 OHV 16V MPFI VY  
Eng code: LS1 GEN III  
OAP (Alt Mitsubishi) ..... OAP019  
OAP 8 Rib Retro Fit (Alt Mitsubishi) ..... OAP080

**Aug 2003 - Sep 2004**

5.7L V8 OHV 16V MPFI VYII  
Eng code: LS1 GEN III  
OAP (Alt Mitsubishi) ..... OAP019  
OAP 8 Rib Retro Fit (Alt Mitsubishi) ..... OAP080

**Oct 2004 - Sep 2007**

6.0L V8 OHV 16V MPFI VZ  
Eng code: LS2  
OAP (Alt Mitsubishi) ..... OAP019  
OAP 8 Rib Retro Fit (Alt Mitsubishi) ..... OAP080

**Oct 2007 - Mar 2008**

6.0L V8 OHV 16V MPFI VE  
Eng code: LS2  
OAP (Alt Mitsubishi) ..... OAP026  
OAP 8 Rib Retro Fit (Alt Mitsubishi) ..... OAP097

**Apr 2008 - May 2013**

6.2L V8 OHV 16V MPFI VE  
Eng code: LS3  
OAP (Alt Mitsubishi) ..... OAP026  
OAP 8 Rib Retro Fit (Alt Mitsubishi) ..... OAP097

**Senator****Jul 1999 - Oct 2000**

5.7L V8 OHV 16V MPFI VT  
Eng code: LS1 GEN III  
OAP (Alt Mitsubishi) ..... OAP019  
OAP 8 Rib Retro Fit (Alt Mitsubishi) ..... OAP080

**Sep 2000 - Sep 2002**

5.7L V8 OHV 16V MPFI VX  
Eng code: LS1 GEN III  
OAP (Alt Mitsubishi) ..... OAP019  
OAP 8 Rib Retro Fit (Alt Mitsubishi) ..... OAP080

**Oct 2002 - Jul 2003**

5.7L V8 OHV 16V MPFI VY  
Eng code: LS1 GEN III  
OAP (Alt Mitsubishi) ..... OAP019  
OAP 8 Rib Retro Fit (Alt Mitsubishi) ..... OAP080

**Aug 2003 - Sep 2004**

5.7L V8 OHV 16V MPFI VYII  
Eng code: LS1 GEN III  
OAP (Alt Mitsubishi) ..... OAP019

OAP 8 Rib Retro Fit (Alt Mitsubishi) ..... OAP080

**Oct 2004 - Jul 2006**

6.0L V8 OHV 16V MPFI VZ  
Eng code: LS2  
OAP (Alt Mitsubishi) ..... OAP019  
OAP 8 Rib Retro Fit (Alt Mitsubishi) ..... OAP080

**Aug 2007 - Mar 2008**

6.0L V8 OHV 16V MPFI VE  
Eng code: LS2  
OAP (Alt Mitsubishi) ..... OAP026  
OAP 8 Rib Retro Fit (Alt Mitsubishi) ..... OAP097

**Apr 2008 - May 2013**

6.2L V8 OHV 16V MPFI VE  
Eng code: LS3  
OAP (Alt Mitsubishi) ..... OAP026  
OAP 8 Rib Retro Fit (Alt Mitsubishi) ..... OAP097

**Honda****Jazz****Aug 2008 - Jul 2014**

1.5L 4 cyl SOHC 16V MPFI GE  
Eng code: L15A7  
Tensioner Pulley (Steel) ..... OAP075

**Hyundai****i30****Oct 2007 - Apr 2012**

1.6L 4 cyl DOHC 16V DTFI Turbo Diesel FD  
Eng code: D4FB  
OAP ..... OAP005

**Oct 2007 - Apr 2012**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel  
Eng code: D4EA  
OAP (2008-2009) ..... OAP001

**May 2012 -**

1.6L 4 cyl DOHC 16V DTFI Turbo Diesel GD  
Eng code: D4FB  
OAP ..... OAP005

**Jun 2015 -**

1.6L 4 cyl DOHC VVT 16V CRD Turbo Diesel GD  
Eng code: D4FB  
OAP ..... OAP005

**i40****Oct 2011 - May 2015**

1.7L 4 cyl DOHC 16V DTFI VF  
Eng code: D4FD  
OAP ..... OAP229

**Jun 2015 -**

1.7L 4 cyl DOHC 16V DTFI VF  
Eng code: D4FD  
OAP ..... OAP229

**i45****May 2010 -**

2.4L 4 cyl DOHC 16V MPFI YF  
Eng code: G4KJ  
OAP ..... OAP020

**May 2011 -**

2.0L 4 cyl V-DOHC 16V MPFI YF  
Eng code: G4KD  
OAP ..... OAP020

**i Load****Feb 2008 -**

2.5L 4 cyl DOHC 16V DTFI Diesel TQ  
Eng code: D4CB  
OAP (Alt Denso) ..... OAP044

<b>iMax</b>	<b>Jaguar</b>
<b>Feb 2008 -</b>	<b>S Type</b>
2.5L 4 cyl DOHC 16V DTFI Diesel TQ Eng code: D4CB OAP (Alt Denso) ..... OAP044	<b>Apr 2006 - May 2008</b> 2.7L V6 DOHC 24V DTFI Twin Turbo Diesel Eng code: 276DTT OAP (Alt Denso, 150A) ..... OAP013
<b>iX35</b>	<b>XE</b>
<b>Feb 2010 - Sep 2013</b>	<b>Aug 2015 -</b>
2.4L 4 cyl DOHC 16V MPFI LM Eng code: G4KG OAP ..... OAP020	2.0L 4 cyl DOHC VVT 16V Direct FI Turbo X760 Eng code: 204PT OAP ..... OAP013
<b>Feb 2010 -</b>	<b>XF</b>
2.0L 4 cyl DOHC 16V DTFI Diesel LM Eng code: D4HA OAP ..... OAP017	<b>Jun 2008 - Jul 2009</b> 2.7L V6 DOHC 24V DTFI Twin Turbo Diesel X250 Eng code: AJD27 OAP (Alt Denso, 150A) ..... OAP013
<b>Santa Fe</b>	<b>Nov 2011 -</b>
<b>Nov 2006 - Oct 2009</b>	<b>2.2L 4 cyl DOHC 16V DTFI Turbo Diesel CM</b> Eng code: D4EB OAP ..... OAP001
<b>Nov 2009 - Aug 2012</b>	<b>Nov 2011 -</b>
2.2L 4 cyl DOHC 16V DTFI Turbo Diesel CM Eng code: D4HB OAP ..... OAP001	<b>3.0L V6 DOHC VVT 24V DTFI Twin Turbo Diesel X250</b> Eng code: AJ4D OAP ..... OAP013
<b>Nov 2009 -</b>	<b>Dec 2012 -</b>
2.4L 4 cyl DOHC VVT 16V MPFI CM Eng code: G4KE OAP ..... OAP020	<b>2.0L 4 cyl DOHC 16V DTFI Turbo X250</b> Eng code: 204PT OAP ..... OAP013
<b>Sep 2012 -</b>	<b>Jan 2016 - Jun 2017</b>
2.2L 4 cyl DOHC 16V DTFI Turbo Diesel DM Eng code: D4HB OAP ..... OAP017	<b>2.0L 4 cyl DOHC 16V Direct Inj. Turbo X260 25t</b> Eng code: 204PT OAP ..... OAP013
<b>Sep 2012 -</b>	<b>Jul 2017 -</b>
2.4L 4 cyl DOHC 16V MPFI DM Eng code: G4KJ OAP ..... OAP020	<b>2.0L 4 cyl DOHC 16V Direct Inj. Turbo X260 25t</b> Eng code: 204PT OAP ..... OAP013
<b>Sonata</b>	<b>XJ</b>
<b>Jun 2005 - May 2008</b>	<b>Apr 2010 -</b>
2.4L 4 cyl DOHC 16V MPFI NF Eng code: G4KC OAP (Alt Poonsung, 110A) ..... OAP020	<b>3.0L V6 DOHC 24V DTFI Twin Turbo Diesel</b> Eng code: AJD OAP ..... OAP013
<b>Jun 2008 - Apr 2010</b>	<b>Jeep</b>
2.4L 4 cyl DOHC 16V MPFI NF Eng code: G4KE OAP ..... OAP020	<b>Cherokee</b>
<b>Dec 2014 -</b>	<b>Jan 2003 - Feb 2004</b>
2.4L 4 cyl DOHC VVT 16V MPFI LF Eng code: G4KJ OAP ..... OAP020	<b>2.8L 4 cyl DOHC 16V TCDI Turbo Diesel KJ</b> Eng code: ENR OAP (Alt Denso, 110A) ..... OAP027
<b>Terracan</b>	<b>Dec 2004 - Feb 2008</b>
<b>Jan 2005 - Jan 2007</b>	<b>2.8L 4 cyl DOHC 16V TCDI Turbo Diesel KJ</b> Eng code: ENR OAP (Alt Denso, 110A) ..... OAP027
2.9L 4 cyl DOHC 16V CRDi Turbo Diesel Eng code: J3 OAP (Alt Mando, 110A) ..... OAP029	<b>Mar 2008 - Apr 2013</b>
<b>Tucson</b>	<b>2.8L 4 cyl DOHC 16V DTFI Turbo Diesel KK</b> Eng code: ENS OAP ..... OAP055
<b>Aug 2004 - Jan 2010</b>	<b>Commander</b>
2.7L V6 DOHC 24V MPFI Eng code: G6BA OAP ..... OAP001	<b>May 2006 - Mar 2010</b>
<b>2006 - 2010</b>	<b>3.0L 6 cyl DOHC 24V DTFI Turbo Diesel XH</b> Eng code: EXL OAP ..... OAP168
2.0L 4 cyl DOHC VVT 16V Turbo Diesel JN Eng code: D4EA OAP ..... OAP001	

## Compass

Mar 2007 -

2.4L 4 cyl DOHC 16V MPFI MK  
 Eng code: ED3  
 OAP (Alt Mitsubishi 115A, 140A) ..... OAP085

Feb 2012 -

2.0L 4 cyl DOHC 16V MPFI MK  
 Eng code: ECN  
 OAP (Alt Mitsubishi 115A, 140A) ..... OAP085

## Grand Cherokee

2002 - 2003

2.8L 4 cyl DOHC 16V TCDI Turbo Diesel WG  
 Eng code: ENR  
 OAP (Alt Denso, 110A) ..... OAP027

Mar 2003 - May 2005

2.7L 5 cyl SOHC 20V DTFI Turbo Diesel WG  
 Eng code: ENF  
 OAP ..... OAP007

Jun 2005 - Jan 2011

3.0L V6 DOHC 24V DTFI Turbo Diesel WH  
 Eng code: EXL  
 OAP ..... OAP168

Jul 2011 - Jan 2012

3.0L V6 DOHC 24V CRD Turbo Diesel WK  
 Eng code: OM642  
 OAP ..... OAP027

Feb 2012 - Feb 2017

3.0L V6 DOHC 24V CRD Turbo Diesel WK  
 Eng code: EXF  
 OAP ..... OAP027

Feb 2017 -

3.0L V6 DOHC 24V CRD Turbo Diesel WK  
 Eng code: EXF  
 OAP ..... OAP027

## Patriot

Aug 2007 - Sep 2009

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel MK  
 Eng code: ECD/ECE  
 OAP (Alt Mitsubishi 140A) ..... OAP085

Aug 2007 - Sep 2009

2.4L 4 cyl V-DOHC 16V MPFI MK  
 Eng code: 8D  
 OAP (Alt Mitsubishi 115A, 140A) ..... OAP085

Oct 2009 -

2.4L 4 cyl V-DOHC 16V MPFI MK  
 Eng code: ED3  
 OAP (Alt Mitsubishi 115A, 140A) ..... OAP085

Feb 2012 -

2.0L 4 cyl DOHC 16V MPFI MK  
 Eng code: ACD  
 OAP (Alt Mitsubishi 115A, 140A) ..... OAP085

## Wrangler

Mar 2007 - Jan 2012

2.8L 4 cyl DOHC 16V DTFI Turbo Diesel JK  
 Eng code: ENS  
 OAP ..... OAP055

## John Deere

5100M

2009 -

4.5L 4 cyl Turbo Diesel  
 OAP (120A, 150A) ..... OAP116

5620

- 2008

4.5L 4 cyl Turbo Diesel  
 Eng code: 4045DL270  
 OAP (120A, With A/C, or With Air trailer brake system & A/C) OAP116

5720

- 2008

4.5L 4 cyl Turbo Diesel  
 Eng code: 4045TL273  
 OAP (120A, With A/C, or With Air trailer brake system & A/C) OAP116

5820

- 2008

4.5L 4 cyl Turbo Diesel  
 Eng code: 4045TL274  
 OAP (120A, With A/C, or With Air trailer brake system & A/C) OAP116

6090MC

2013 -

4.5L 4 cyl Turbo Diesel 6MC Series  
 OAP (90A, 120A, 150A, 200A) ..... OAP116

6090RC

2013 -

4.5L 4 cyl Turbo Diesel 6RC Series  
 OAP (90A, 120A, 150A, 200A) ..... OAP116

6100MC

2013 -

4.5L 4 cyl Turbo Diesel 6MC Series  
 OAP (90A, 120A, 150A, 200A) ..... OAP116

6100RC

2013 -

4.5L 4 cyl Turbo Diesel 6RC Series  
 OAP (90A, 120A, 150A, 200A) ..... OAP116

6105M

2013 -

4.5L 4 cyl Turbo Diesel 6M Series  
 Eng code: PowerTech PVX  
 OAP (90A, 120A, 150A) ..... OAP116

6110MC

2013 -

4.5L 4 cyl Turbo Diesel 6MC Series  
 OAP (90A, 120A, 150A, 200A) ..... OAP116

6110RC

2013 -

4.5L 4 cyl Turbo Diesel 6RC Series  
 OAP (90A, 120A, 150A, 200A) ..... OAP116

6115M

2013 -

4.5L 4 cyl Turbo Diesel 6M Series  
 Eng code: PowerTech PVX  
 OAP (90A, 120A, 150A) ..... OAP116

6120

2002 - 2007

4.5L 4 cyl Turbo Diesel  
 Eng code: 4045TL070  
 OAP (90A, 115A, 120A, 150A) ..... OAP116

6125M

2013 -

4.5L 4 cyl Turbo Diesel 6M Series  
 Eng code: PowerTech PVX  
 OAP (90A, 120A, 150A) ..... OAP116

<b>6130M</b>	<b>6420</b>
<b>2013 -</b>	<b>2002 - 2006</b>
4.5L 4 cyl Turbo Diesel 6M Series OAP (90A, 120A, 150A, 200A).....OAP116	4.5L 4 cyl Turbo 6020 Series Eng code: 4045HL070 OAP (90A, 115A, 120A, 150A).....OAP116
<b>6130R</b>	<b>6520</b>
<b>2013 -</b>	<b>2002 -</b>
4.5L 4 cyl Turbo Diesel 6R Series OAP (120A, 150A, 200A).....OAP116	4.5L 4 cyl Turbo Diesel 6020 Series OAP (90A, 115A, 120A, 150A).....OAP116
<b>6140M</b>	<b>2001 - 2006</b>
<b>2013 -</b>	
4.5L 4 cyl Turbo Diesel 6M Series Eng code: PowerTech PVX OAP (90A, 120A, 150A).....OAP116	6.8L 6 cyl 24V Turbo Diesel Eng code: 6068 OAP (90A, 115A, 120A, 150A).....OAP116
<b>6140R</b>	<b>6534</b>
<b>2013 -</b>	<b>2009 - 2011</b>
6.8L 6 cyl Turbo Diesel 6R Series OAP (120A, 150A, 200A).....OAP116	4.5L 4 cyl 8V Turbo Diesel OAP (90A, 120A, 150A, 200A).....OAP116
<b>6150M</b>	<b>6620</b>
<b>2013 -</b>	<b>2001 - 2006</b>
6.8L 6 cyl Turbo Diesel 6M Series Eng code: PowerTech PVX OAP (90A, 120A, 150A, 200A).....OAP116	6.8L 6 cyl Turbo Diesel Eng code: 6068T OAP (90A, 115A, 150A).....OAP116
<b>6150R</b>	<b>6820</b>
<b>2013 -</b>	<b>2001 - 2006</b>
6.8L 6 cyl Turbo Diesel 6R Series OAP (120A, 150A, 200A).....OAP116	6.8L 6 cyl Turbo Diesel 6020 Series Eng code: 6068T OAP (90A, 115A, 120A, 150A).....OAP116
<b>6170M</b>	<b>6920</b>
<b>2013 -</b>	<b>2001 - 2006</b>
6.8L 6 cyl Turbo Diesel 6M Series Eng code: PowerTech PVX OAP (90A, 120A, 150A, 200A).....OAP116	6.8L 6 cyl Turbo Diesel 6020 Series Eng code: 6068T OAP (90A, 115A, 120A, 150A).....OAP116
<b>6170R</b>	<b>6920S</b>
<b>2013 -</b>	<b>2001 - 2006</b>
6.8L 6 cyl Diesel 6R Series OAP (120A, 150A, 200A).....OAP116	6.8L 6 cyl Turbo Diesel 6020 Series Eng code: 6068T OAP (90A, 115A, 120A, 150A).....OAP116
<b>6190R</b>	<b>7220</b>
<b>2013 -</b>	<b>2003 - 2007</b>
6.8L 6 cyl Turbo Diesel 6R Series OAP (120A, 150A, 200A).....OAP116	6.8L 6 cyl Turbo Diesel Eng code: 6068HF475 OAP (115A, 150A).....OAP116
<b>6215</b>	<b>7230R</b>
<b>2003 - 2005</b>	<b>2011 - 2013</b>
4.5L 4 cyl Turbo Diesel OAP (90A, 115A, 120A, 150A).....OAP116	6.8L 6 cyl Turbo Diesel 7R Series OAP (120A, 150A, 200A).....OAP116
<b>6220</b>	<b>7320</b>
<b>2002 - 2007</b>	<b>2003 - 2007</b>
4.5L 4 cyl Turbo Diesel Eng code: 4045TL071 OAP (90A, 115A, 120A, 150A).....OAP116	6.8L 6 cyl Turbo Diesel 7020 Series Eng code: 6068HF475 OAP (115A, 150A).....OAP116
<b>6320</b>	<b>7520</b>
<b>2002 - 2007</b>	<b>2003 - 2007</b>
4.5L 4 cyl Turbo Diesel Eng code: 4045HL073 OAP (90A, 115A, 120A, 150A).....OAP116	6.8L 6 cyl Turbo Diesel Eng code: 6068HF475 OAP (115A, 150A).....OAP116
<b>6415</b>	
<b>2003 - 2010</b>	
4.5L 4 cyl Turbo Diesel Eng code: 4045T OAP (90A).....OAP116	

**Kia****Cerato****Jan 2009 - Sep 2013**

2.0L 4 cyl DOHC 16V MPFI TD  
 Eng code: G4KD  
 OAP (Alt Valeo, 110A) .....OAP020

**Magentis****Aug 2006 - Mar 2010**

2.4L 4 cyl V-DOHC 16V MPFI MG  
 Eng code: G4KC  
 OAP (Alt Valeo, 110A) .....OAP020

**Rondo****Apr 2008 - May 2013**

2.0L 4 cyl V-DOHC 16V MPFI UN  
 Eng code: G4KA  
 OAP .....OAP020

**Jun 2013 -**

1.7L 4 cyl DOHC 16V DTFI Turbo Diesel RP  
 Eng code: D4FD  
 OAP .....OAP229

**Shuma****Jan 2000 - Apr 2001**

1.8L 4 cyl DOHC 16V MPFI  
 Eng code: TE  
 OAP .....OAP029

**Soul****Apr 2009 -**

1.6L 4 cyl DOHC 16V DTFI Turbo Diesel AM  
 Eng code: D4FB  
 OAP .....OAP229

**Sorento****Aug 2007 - Sep 2009**

2.5L 4 cyl DOHC 16V DTFI Turbo Diesel BL  
 Eng code: D4CB  
 OAP .....OAP044

**Oct 2009 - May 2015**

2.2L 4 cyl DOHC 16V DTFI Turbo Diesel XM  
 Eng code: D4HB  
 OAP (Alt Valeo, 120A) .....OAP017

**Jun 2015 -**

2.2L 4 cyl DOHC VVT 16V DTFI Turbo Diesel UM  
 Eng code: D4HB  
 OAP (Alt Valeo, 120A) .....OAP017

**Sportage****Aug 2007 - Mar 2010**

2.0L 4 cyl SOHC 8V DTFI Turbo Diesel KM  
 Eng code: D4EA  
 OAP .....OAP001

**Aug 2010 - May 2013**

2.4L 4 cyl V-DOHC 16V MPFI SL  
 Eng code: G4KE  
 OAP .....OAP020

**Aug 2010 - Jan 2016**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel SL  
 Eng code: D4HA  
 OAP (Alt Denso, 150A) .....OAP017

**Aug 2010 - Jan 2016**

2.0L 4 cyl V-DOHC 16V MPFI SL  
 Eng code: G4KD  
 OAP .....OAP020

**Land Rover****Defender****Oct 2007 - Jan 2012**

2.4L 4 cyl DOHC 16V DTFI Turbo Diesel 110  
 Eng code: 244DT  
 OAP (Alt Bosch, 156A) .....OAP077

**Oct 2007 - Jan 2012**

2.4L 4 cyl DOHC 16V DTFI Turbo Diesel 130  
 Eng code: 244DT  
 OAP (Alt Bosch, 156A) .....OAP077

**Discovery Sport****Apr 2015 -**

2.2L 4 cyl DOHC 16V DTFI Turbo Diesel LC  
 Eng code: 224DT  
 OAP .....OAP035

**Freelander 2****Jun 2007 - Nov 2010**

2.2L 4 cyl DOHC 16V DTFI Turbo Diesel LF  
 Eng code: 224DT  
 OAP .....OAP035

**Dec 2010 - Sep 2015**

2.2L 4 cyl DOHC 16V DTFI Turbo Diesel LF  
 Eng code: 224DT  
 OAP .....OAP035

**Dec 2010 - Sep 2015**

2.2L 4 cyl DOHC 16V DTFI Turbo Diesel LF  
 Eng code: 224DT  
 OAP .....OAP035

**Lexus****ES 350****Nov 2013 -**

3.5L V6 DOHC VVT 24V MPFI GSV60R  
 Eng code: 2GRFE  
 OAP (Alt Denso, 150A) .....OAP013

**IS 220 D****2006 - 2008**

2.2L 4 cyl DOHC 16V CRD Turbo ALE20R  
 Eng code: 2ADFHV  
 OAP (Alt Denso, 130A) Must Remove Spacer/Washer From Alternator  
 Shaft .....OAP058

**IS 250****Nov 2005 -**

2.5L V6 DOHC 24V MPFI, EFI GSE20R  
 Eng code: 4GR-FSE  
 OAP (Alt Denso, 150A) .....OAP013

**IS 350****Oct 2010 - Jun 2013**

3.5L V6 DOHC 24V MPFI GSE21R  
 Eng code: 2GR-FSE  
 OAP (Alt Denso, 150A) .....OAP013

**Jul 2013 -**

3.5L V6 DOHC 24V MPFI GSE31R  
 Eng code: 2GR-FSE  
 OAP (Alt Denso, 150A) .....OAP013

**RX 350****Feb 2006 - Jan 2009**

3.5L V6 DOHC 24V MPFI GSU35R  
 Eng code: 2GR-FE  
 OAP (Alt Denso, 100A) .....OAP013

**Feb 2009 - Oct 2015**

3.5L V6 DOHC VVT 24V MPFI GGL15R  
 Eng code: 2GR-FE  
 OAP (Alt Denso, 100A) .....OAP013

**Mazda****3****Aug 2007 - Sep 2009**

2.0L 4 cyl SOHC 16V DTFI Turbo Diesel BK  
 Eng code: RF  
 OAP .....OAP024

**Nov 2009 - Jan 2014**

2.2L 4 cyl SOHC 16V DTFI Turbo Diesel BL  
 Eng code: R2  
 OAP (Alt Mitsubishi, 110A) .....OAP045

**Aug 2014 -**

2.2L 4 cyl DOHC VVT 16V CRD Turbo Diesel BM XD ASTINA  
 Eng code: SH  
 OAP .....OAP092

**6****Aug 2002 - Jan 2008**

2.3L 4 cyl DOHC 16V MPFI GG  
 Eng code: L3  
 OAP (Alt Melco, 90A) .....OAP011

**Oct 2005 - Jan 2008**

2.3L 4 cyl DOHC 16V TMPFI Turbo GG MPS  
 Eng code: L3  
 OAP (Alt Melco, 90A) .....OAP011

**Oct 2006 - Jan 2008**

2.0L 4 cyl SOHC 16V DTFI Turbo Diesel GG  
 Eng code: RF  
 OAP .....OAP045

**Dec 2008 - Feb 2010**

2.2L 4 cyl DOHC 16V DTFI Turbo Diesel GH  
 Eng code: R2  
 OAP (From 2009) .....OAP045

**Mar 2010 - Nov 2012**

2.2L 4 cyl DOHC 16V DTFI Turbo Diesel GH  
 Eng code: R2  
 OAP .....OAP045

**Dec 2012 -**

2.2L 4 cyl DOHC 16V CRD Twin Turbo Diesel GJ  
 Eng code: SH-VPTS  
 OAP .....OAP092

**BT50****Nov 2011 -**

3.2L 5 cyl DOHC 20V TCDI Turbo Diesel UP / UR  
 Eng code: P5AT  
 OAP .....OAP077

**Nov 2011 -**

2.2L 4 cyl DOHC 16V TCDI Turbo Diesel UP / UR  
 Eng code: P4AT  
 OAP .....OAP077

**CX-3****Mar 2015 -**

1.5L 4 cyl DOHC 16V CRD Turbo Diesel DK  
 Eng code: SKYACTIV-D  
 OAP .....OAP092

**CX-5****Feb 2012 - Mar 2017**

2.2L 4 cyl DOHC 16V DTFI Turbo Diesel KE  
 Eng code: SH-VPTS  
 OAP .....OAP092

**Mar 2017 -**

2.2L 4 cyl DOHC 16V DTFI Turbo Diesel KF  
 Eng code: SH-VPTS  
 OAP .....OAP092

**CX-7****Oct 2009 - Jan 2012**

2.2L 4 cyl DOHC 16V DTFI Diesel ER  
 Eng code: MZR CD R2  
 OAP .....OAP024

**CX-9****Jul 2016 -**

2.5L 4 cyl DOHC VVT 16V TFSI Turbo TC  
 Eng code: PY  
 OAP .....OAP092

**MPV****Jun 2002 - Sep 2006**

3.0L V6 DOHC 24V MPFI LWA2  
 Eng code: AJ  
 OAP .....OAP047

**Mercedes Benz****A-Class A140****Feb 2000 - Jun 2001**

1.4L 4 cyl SOHC 8V MPFI W168  
 Eng code: M166.940  
 OAP .....OAP038

**A-Class A150****Apr 2005 - Jul 2007**

1.5L SOHC MPFI W169  
 Eng code: M266.920  
 OAP .....OAP074

**A-Class A160****Oct 1998 - Apr 2005**

1.6L 4 cyl SOHC 8V MPFI W168  
 Eng code: M166.960  
 OAP .....OAP038

**A-Class A170****1999 - 2001**

1.7L 4 cyl SOHC 8V Di Diesel W168  
 Eng code: OM668.940  
 OAP (Alt Valeo, 150A) .....OAP065

**Apr 2005 -**

1.7L 4 cyl SOHC 8V MPFI W169  
 Eng code: M266.940  
 OAP .....OAP074

**A-Class A180****May 2005 - Jun 2010**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel W169  
 Eng code: OM640.940  
 OAP .....OAP065

**2009 -**

1.7L 4 cyl SOHC 16V MPFI W169  
 Eng code: M266.940  
 OAP .....OAP074

**A-Class A190****Sep 1999 - Apr 2005**

1.9L 4 cyl SOHC 8V MPFI W168  
 Eng code: M166.990  
 OAP (Alt Valeo, 90A) .....OAP130

## A-Class A200

**2005 - 2008**

2.0L 4 cyl DOHC CRD Turbo Diesel W169  
 Eng code: OM640.941  
 OAP ..... OAP065

**Dec 2005 - Jun 2010**

2.0L 4 cyl SOHC 16V MPFI Turbo W169  
 Eng code: M266.980  
 OAP ..... OAP074

## Atego

**Feb 2001 - Apr 2005**

6.4L 6 cyl OHV DT Turbo Diesel  
 OAP (Alt Bosch, 100A) ..... OAP135

## B180

**May 2006 -**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel W245  
 Eng code: OM640.940  
 OAP ..... OAP065

**Mar 2010 - Mar 2013**

1.7L 4 cyl SOHC MPFI W245  
 Eng code: M266.940  
 OAP (Alt Valeo, 90A, 115A) ..... OAP074

## B200

**Nov 2005 - Mar 2012**

2.0L 4 cyl SOHC 16V MPFI W245  
 Eng code: M266.960  
 OAP (Alt Valeo, 90A, 115A) ..... OAP074

**Nov 2005 - Jun 2012**

2.0L 4 cyl SOHC 16V MPFI Turbo W245  
 Eng code: M266.980  
 OAP (Alt Valeo, 90A, 115A) ..... OAP074

## C230

**Oct 2002 - Aug 2005**

1.8L 4 cyl DOHC 16V SCMPFI CL203  
 Eng code: M271.948  
 OAP (Alt Bosch, Valeo, 120A, Up To Valeo 2542582C) ..... OAP039  
 Overrunning Alt Pulley (Alt Valeo, 120A, From Valeo 2542582D)OAP100

## C200 CDI

**Jun 2011 -**

2.1L 4 cyl DOHC 16V CRD Turbo Diesel W204  
 Eng code: OM651.913  
 OAP ..... OAP052

## C180

**Oct 2002 - Jun 2007**

1.8L 4 cyl DOHC 16V SCMPFI W203  
 Eng code: M271.946  
 OAP (Alt Bosch, Valeo, 120A) ..... OAP039

**Oct 2002 - Jan 2008**

1.8L 4 cyl DOHC 16V SCMPFI CL203  
 Eng code: M271.946  
 OAP (Alt Bosch, Valeo, 120A, Up To Valeo 2542582C) ..... OAP039  
 Overrunning Alt Pulley (Alt Valeo, 120A, From Valeo 2542582D)OAP100

## C200

**Oct 2002 - Jan 2008**

1.8L 4 cyl DOHC 16V SCMPFI CL203  
 Eng code: M271.940  
 OAP (Alt Bosch, 120A) ..... OAP039

**Oct 2002 - Dec 2007**

1.8L 4 cyl DOHC 16V SCMPFI W203  
 Eng code: M271.940  
 OAP (Alt Valeo, 120A, Up To Valeo 2542582C) ..... OAP039  
 Overrunning Alt Pulley (Alt Valeo, 120A, From Valeo 2542582D)OAP100

**Jul 2007 - Feb 2010**

1.8L 4 cyl DOHC 16V SCMPFI W204  
 Eng code: M271.950  
 Overrunning Alt Pulley (Alt Valeo, 120A, 150A) ..... OAP100

**Mar 2010 -**

1.8L 4 cyl DOHC VVT 16V MPFI Turbo W204  
 Eng code: M271.860  
 OAP (Alt Valeo-Check Dimensions) ..... OAP052  
 Overrunning Alt Pulley (Alt Valeo- Check Dimensions)..... OAP100

## C250

**Jan 2010 -**

1.8L 4 cyl DOHC VVT 16V MPFI Turbo W204  
 Eng code: M271.860  
 OAP ..... OAP052

**Aug 2014 -**

2.1L 4 cyl DOHC 16V CRD Twin Turbo W205 S205  
 Eng code: OM651.921  
 OAP ..... OAP052

## C250 CDI

**Jul 2011 -**

2.1L 4 cyl DOHC 16V CRD Turbo Diesel W204  
 Eng code: OM651.911  
 OAP (Alt Valeo, 150A, 180A) ..... OAP052

## C220 CDI

**Mar 2001 - Aug 2004**

2.1L 4 cyl DOHC 16V CRD Turbo Diesel W203  
 Eng code: OM611.962  
 OAP (Alt Delphi, 190A) ..... OAP072

**Sep 2004 - Jun 2007**

2.1L 4 cyl DOHC 16V CRD Turbo Diesel W203  
 Eng code: OM646.963  
 OAP (Alt Bosch, 200A) ..... OAP040

**Jul 2007 - Feb 2010**

2.1L 4 cyl DOHC 16V DTFI Turbo Diesel W204  
 Eng code: OM646.811  
 OAP ..... OAP073

**Mar 2010 - May 2011**

2.1L 4 cyl DOHC 16V DTFI Turbo Diesel W204  
 Eng code: OM651.911  
 OAP (Alt Valeo, 150A, 180A) ..... OAP052

## C250 D

**1993 - 1999**

2.5L 5 cyl 20V Diesel W202  
 Eng code: OM605.910  
 OAP (Alt Bosch, 70A, 90A) ..... OAP050

**Nov 2015 -**

2.1L 4 cyl DOHC 16V CRD Twin Turbo Diesel W205  
 Eng code: OM651.921  
 OAP ..... OAP052

## C250 TD

**Nov 1996 - Nov 2000**

2.5L 5 cyl 20V Turbo Diesel W202  
 Eng code: OM605.960  
 OAP (Alt Bosch, Valeo, 90A) ..... OAP050

## C320 CDI

**Nov 2007 - Feb 2010**

3.0L V6 DOHC 24V DTFI Diesel W204  
 Eng code: OM642.960  
 OAP (Alt Valeo, 180A) ..... OAP168

<b>C350</b>	<b>CLS250 CDI</b>
<b>Jul 2011 -</b>	<b>Sep 2012 - Jul 2015</b>
3.5L V6 DOHC VVT 24V Di W204 Eng code: M276.957 OAP ..... OAP052	2.1L 4 cyl DOHC 16V CRD Turbo Diesel C218 Eng code: OM651.924 OAP ..... OAP052
<b>C350 CDI</b>	<b>Dec 2012 - Jul 2015</b>
<b>Mar 2010 -</b>	<b>Aug 2015 -</b>
3.0L V6 DOHC 24V DTFI Diesel W204 Eng code: OM642.960 OAP ..... OAP168	2.1L 4 cyl DOHC 16V CRD Turbo Diesel W218 Eng code: OM651.924 OAP ..... OAP052
<b>Jun 2011 -</b>	<b>Aug 2015 -</b>
3.0L V6 DOHC 24V CRD Turbo Diesel W204 Eng code: OM642.834 OAP ..... OAP203	2.1L 4 cyl DOHC 16V CRD Turbo Diesel C218 Eng code: OM651.924 OAP ..... OAP052
<b>C63 AMG</b>	<b>CLS320 CDI</b>
<b>Feb 2008 -</b>	<b>2005 - 2009</b>
6.2L V8 SOHC 32V MPFI W204 Eng code: M156.985 OAP (Alt Valeo, 180A) ..... OAP052	3.0L V6 DOHC 24V CRD Diesel C219 Eng code: OM642.920 OAP ..... OAP168
<b>CL63 AMG</b>	<b>CLS350 CDI</b>
<b>Apr 2007 - Oct 2010</b>	<b>Jul 2011 -</b>
6.2L V8 DOHC 32V MPFI C216 Eng code: M156.984 OAP (Alt Valeo, 220A) ..... OAP052	3.0L V6 DOHC 24V CRD Turbo Diesel C218 Eng code: OM642.853 OAP (Alt Valeo, 180A) ..... OAP168
<b>Jun 2011 -</b>	<b>E200</b>
5.5L V8 DOHC VVT 32V Di Twin Turbo C218 Eng code: M157.981 OAP ..... OAP052	<b>Jun 2012 - May 2013</b>
<b>CLK200</b>	
<b>Oct 2004 - Aug 2005</b>	
1.8L 4 cyl DOHC 16V SCMPFI C209 Eng code: M271.940 OAP (Alt Bosch, Valeo, 120A, Up To Valeo 2542582C) ..... OAP039 Overrunning Alt Pulley (Alt Valeo, 120A, From Valeo 2542582D) OAP100	2.0L 4 cyl DOHC 16V MPFI W212 Eng code: M271.860 OAP (Alt Valeo - Check Dimensions) ..... OAP052 Overrunning Alt Pulley (Alt Valeo - Check Dimensions) ..... OAP100
<b>Sep 2005 - Jun 2010</b>	
1.8L 4 cyl DOHC 16V SCMPFI C6 Eng code: M271.940 OAP (Alt Bosch, Valeo, 120A, Up To Valeo 2542582C) ..... OAP039 Overrunning Alt Pulley (Alt Valeo, 120A, From Valeo 2542582D) OAP100	<b>E200 K</b>
<b>Aug 2007 - Jun 2010</b>	
1.8L 4 cyl DOHC VVT 16V MPFI W209 Eng code: M271.955 Overrunning Alt Pulley (Alt Valeo, 150A) ..... OAP100	<b>Sep 2004 - Aug 2006</b>
<b>CLK230</b>	
<b>Oct 1997 - Oct 2000</b>	
2.3L 4 cyl DOHC 16V SCMPFI A208 Eng code: M111.975 OAP ..... OAP073	1.8L 4 cyl DOHC 16V SCMPFI W211 Eng code: M271.941 OAP (Alt Bosch, 150A) ..... OAP039
<b>Oct 1997 - Oct 2000</b>	
2.3L 4 cyl DOHC 16V SCMPFI C208 Eng code: M111.975 OAP ..... OAP073	<b>Sep 2006 - Sep 2009</b>
<b>CLC200</b>	
<b>Aug 2008 -</b>	
1.8L 4 cyl DOHC 16V SCMPFI C203 Eng code: M271.957 OAP (Alt Bosch, Valeo 120A, Up To Valeo 2542582C) ..... OAP039 Overrunning Alt Pulley (Alt Valeo, 120A, From Valeo 2542582D) OAP100	1.8L 4 cyl DOHC 16V SCMPFI W211 Eng code: M271.956 OAP (Alt Valeo, 120A) ..... OAP039
<b>CLK63 AMG</b>	
<b>Sep 2006 - Jun 2010</b>	
6.2L V8 DOHC 32V MPFI C216 Eng code: M156.982 OAP (Alt Valeo, 180A) ..... OAP052	<b>E220 CDI</b>
<b>Oct 2009 -</b>	
2.1L 4 cyl DOHC 16V CRD Turbo Diesel W212 Eng code: OM651.924 OAP (Alt Valeo, 180A) ..... OAP052	<b>Oct 2009 -</b>
<b>2011 - 2012</b>	
2.1L 4 cyl DOHC 16V CRD Turbo Diesel C207 Eng code: OM651.911 OAP (Alt Valeo, 150A) ..... OAP052	<b>E250 CDI</b>
<b>Oct 2009 - Apr 2016</b>	
2.1L 4 cyl DOHC 16V CRD Turbo Diesel C207 Eng code: OM651.911 OAP (Alt Valeo, 150A) ..... OAP052	2.1L 4 cyl DOHC 16V CRD Turbo Diesel C207 Eng code: OM651.924 OAP (Alt Valeo, 180A) ..... OAP052
<b>Oct 2009 -</b>	
2.1L 4 cyl DOHC 16V CRD Turbo Diesel W212 Eng code: OM651.924 OAP (Alt Valeo, 180A) ..... OAP052	

**E250D****Apr 2016 -**

2.1L 4 cyl DOHC 16V CRD Turbo Diesel C207  
 Eng code: OM651.911  
 OAP (Alt Valeo, 150A) .....OAP052

**E250 CGI****Oct 2009 - May 2013**

1.8L 4 cyl DOHC 16V MPFI Turbo C/A207 W212  
 Eng code: M271.860  
 Overunning Alt Pulley.....OAP100

**E270 CDI****Nov 1999 - Jul 2002**

2.7L 5 cyl SOHC 20V DTi Turbo Diesel W210  
 Eng code: OM612.961  
 OAP (Alt Bosch 150A) .....OAP072  
 OAP (Alt Valeo 120A) .....OAP149

**Aug 2002 - Aug 2005**

2.7L 5 cyl SOHC 20V TCDI Turbo Diesel W211  
 Eng code: OM647.961  
 OAP (Alt Bosch, 200A) .....OAP040

**E280 CDI****Sep 2005 - Sep 2009**

3.0L V6 DOHC 24V DTFI Turbo Diesel W211  
 Eng code: OM642.920  
 OAP (Alt Bosch, 180A) .....OAP041  
 OAP (Alt Valeo, 180A) .....OAP203

**E300D****Sep 1993 - Oct 1994**

3.0L 6 cyl DOHC 24V Diesel W124  
 Eng code: OM606.910  
 OAP .....OAP050

**Jul 1997 - Dec 1999**

3.0L 6 cyl DOHC 24V Turbo Diesel W210  
 Eng code: OM606.962  
 OAP (Alt Valeo, 180A) .....OAP050

**E320 CDI****1999 - 2003**

3.2L 6 cyl DOHC 24V CRD Diesel W210/S210  
 Eng code: OM613.961  
 OAP .....OAP072

**2003 - 2005**

3.2L 6 cyl DOHC 24V CRD Diesel W211  
 Eng code: OM648.961  
 OAP (Alt Bosch, 200A) .....OAP040

**2005 - 2007**

3.0L V6 DOHC 24V CRD Diesel W211  
 Eng code: OM642.920  
 OAP (Alt Bosch 180A) .....OAP041

**E350****Apr 2011 -**

3.5L V6 DOHC 24V MPFI A207 / C207  
 Eng code: M276.957  
 OAP .....OAP052

**E350 CDI****Oct 2009 - Jan 2011**

3.0L V6 DOHC 24V DTFI Turbo Diesel W212  
 Eng code: OM642.850  
 OAP (Alt Valeo, 180A) .....OAP168

**2011 -**

3.0L V6 DOHC 24V DTFI Turbo Diesel W207  
 Eng code: OM642.836  
 OAP (Alt Valeo, 180A) .....OAP168

**Jun 2011 -**

3.0L V6 DOHC 24V DTFI Turbo Diesel W212  
 Eng code: OM642.852  
 OAP (Alt Valeo, 180A) .....OAP168

**E63 AMG****Dec 2009 - Jan 2011**

6.2L V8 DOHC 32V MPFI W212  
 Eng code: M156.985  
 OAP .....OAP052

**GL320 CDI****Nov 2006 - Jan 2010**

3.0L V6 DOHC 24V DTFI Turbo Diesel X164  
 Eng code: OM642.940  
 OAP (Alt Bosch, 220A, P/N 0141541302) .....OAP041  
 OAP (Alt Bosch, 220A, From Chassis A114842, Up To Chassis A140233)  
 OAP117  
 OAP (Alt Valeo, 180A, From Chassis A140234), Up To Chassis A114841,  
 A390564, .....OAP193  
 OAP (Alt Valeo, 180A, From Chassis A390565) .....OAP203

**GL350 CDI****Jan 2010 -**

3.0L V6 DOHC 24V DTFI Turbo Diesel X164  
 Eng code: OM642.940  
 OAP 7PK (Alt Bosch, 220A, P/N 0141541302) .....OAP041  
 OAP 8PK(Alt Bosch, 220A, From Chassis A114842, Up To Chassis  
 A140233) .....OAP117  
 OAP 8PK(Alt Valeo, 180A, From Chassis A140234, Up To Chassis  
 A114841, A390564) .....OAP193  
 OAP (Alt Valeo, 180A, From Chassis A390565) .....OAP203

**GL63 AMG****Apr 2014 -**

5.5L V8 DOHC 32V MPFI X166  
 Eng code: M157.982  
 OAP .....OAP052

**ML250 CDI****Apr 2012 -**

2.2L 4 cyl DOHC 16V DTFI Turbo  
 Eng code: OM651.960  
 OAP (Alt Valeo) .....OAP052

**MB 140****Nov 1999 - Jan 2005**

2.9L 5 cyl DOHC 10V Di Diesel  
 Eng code: OM662.911  
 OAP .....OAP004

**ML270 CDI****Feb 2000 - Aug 2005**

2.7L 5 cyl DOHC 20V TCDI Turbo Diesel W163  
 Eng code: OM612.963  
 OAP (Alt Delphi, 150A, Up To Eng No. 30044707, From Eng No.  
 30044708, Alt Delphi, 190A) .....OAP072

**MB 100****1997 - 2005**

2.9L 5 cyl SOHC 10V Diesel 661  
 Eng code: OM662.911  
 OAP .....OAP004

**ML280 CDI****Oct 2006 - Nov 2009**

3.0L V6 DOHC VVT 24V CRD Turbo Diesel W164  
 Eng code: OM642.940  
 OAP (Alt Bosch 220A, Alternator P/N 01415413) .....OAP041  
 OAP (Alt Bosch 220A, From Chassis A114842, Up To Chassis A140233)  
 OAP117  
 OAP (Alt Valeo, 180A, From Chassis A114841, A140234, Up To Chassis

A390564).....	OAP193
OAP (Alt Valeo, 180A, From Chassis A390565) .....	OAP203

**ML300 CDI****Dec 2009 - Jan 2011**

3.0L V6 DOHC 24V DTFI Turbo Diesel W164 Eng code: M642.940	
OAP (Alt Bosch 220A, P/N 0141541302) .....	OAP041
OAP (Alt Bosch 220A, From Chassis A114842, Up To Chassis A140233) OAP117	
OAP (Alt Valeo, 180A, From Chassis A114841, A140234, Up To Chassis A390564).....	OAP193
OAP (Alt Valeo, 180A, From Chassis A390565) .....	OAP203

**ML320 CDI****Sep 2005 - Nov 2009**

3.0L V6 DOHC VVT 24V CRD Turbo Diesel W164 Eng code: OM642.940	
OAP 7PK (Alt Bosch 220A, P/N 0141541302) .....	OAP041
OAP 8PK (Alt Bosch 220A, From Chassis A114842, Up To Chassis A140233).....	OAP117
OAP (Alt Valeo, 180A, From Chassis A390565) .....	OAP168
OAP 8PK (Alt Valeo 180A, From Chassis A114841, A140234, Up To Chassis A390564).....	OAP193

**ML350****Apr 2012 -**

3.5L V6 DOHC 24V MPFI W166 Eng code: M276.955	
OAP .....	OAP052

**ML350 CDI****Dec 2009 - Jan 2011**

3.0L V6 DOHC 24V DTFI Turbo Diesel W164 Eng code: M642.940	
OAP (Alt Bosch, 220A, From Chassis A140234, Up To Chassis A390564) OAP041	
OAP (Alt Bosch, 220A, From Chassis A114842, Up To Chassis A140233) OAP117	
OAP (Alt Valeo, 180A, From Chassis A114841, A140234, Up To Chassis A390564).....	OAP193
OAP (Alt Valeo, 180A, From Chassis A390565) .....	OAP203

**R280 CDI****May 2008 -**

3.0L V6 DOHC 24V DTFI Diesel W251 Eng code: OM642.950	
OAP (Alt Bosch 220A, To Chassis A101972, From Chassis A101973) OAP041	
OAP (Alt Valeo, 180A, From Chassis A080335) .....	OAP168
OAP (Alt Valeo, 180A, From Chassis A033123, Up To Chassis A080334) OAP193	

**ML63 AMG****Oct 2006 - Mar 2012**

6.2L V8 DOHC 32V MPFI W164 Eng code: M156.980	
OAP (Alt Valeo, 180A) .....	OAP052

**R300 CDI****Jan 2010 -**

3.0L V6 DOHC 24V DTFI Diesel W251 Eng code: OM642.950	
OAP (Alt Bosch, 220A, Up To Chassis A101972, From Chassis A101973) OAP041	
OAP (Alt Bosch 220A, From Chassis A025923, Up To Chassis A033122) OAP117	
OAP (Alt Valeo, 180A, Up To Chassis A080334, From Chassis A033123) OAP193	
OAP (Alt Valeo, 180A, From Chassis A390565) .....	OAP203

**R320 CDI****Apr 2006 - Feb 2008**

3.0L V6 DOHC 24V TCDI Turbo Diesel W251 Eng code: OM642.950	
OAP (Alt Bosch, 220A, Up To Chassis A101972, From Chassis A101973) OAP041	
OAP (Alt Bosch, 220A, Up To Chassis A033122, From Chassis A025923) OAP117	
OAP (Alt Valeo, 180A, Up To Chassis A080334, From Chassis A033123) OAP193	
OAP (Alt Valeo, 180A, From Chassis A390565) .....	OAP203

**R350 CDI****Jan 2010 -**

3.0L V6 DOHC 24V TCDI Turbo Diesel W251 Eng code: OM642.950	
OAP (Alt Bosch, 220A, Up To Chassis A101972, From Chassis A101973) OAP041	
OAP (Alt Bosch, 220A, Up To Chassis A033122, From Chassis A025923) OAP117	
OAP (Alt Valeo, 180A, Up To Chassis A080334, From Chassis A033123) OAP193	
OAP (Alt Valeo, 180A, From Chassis A390565) .....	OAP203

**S320 CDI****2000 - 2002**

3.0L V6 DOHC 24V CRD Diesel W220 Eng code: OM613.960	
OAP .....	OAP072

**May 2008 - Sep 2009**

3.0L V6 DOHC 24V DTFI Turbo Diesel W221 Eng code: OM642.930	
OAP (Alt Bosch, 220A, 0141541302) .....	OAP041
OAP (Alt Bosch, 220A, 0131540902) .....	OAP117

**SL350****Sep 2012 -**

3.5L V6 DOHC 24V FSI R231 Eng code: M276.954	
OAP (Alt Valeo, 180A) .....	OAP052

**SL500****Sep 2012 -**

4.7L V8 DOHC 32V TFSI Twin Turbo R231 Eng code: M278.927	
OAP .....	OAP052

**SL63 AMG****Jun 2008 - Jul 2012**

6.2L V8 DOHC 32V MPFI R230 Eng code: M156.981	
OAP (Alt Valeo, 220A) .....	OAP052

**SLK250****Feb 2012 -**

1.8L 4 cyl DOHC 16V TMPFI Turbo R172 Eng code: M271.861	
OAP .....	OAP052

**SLK200****Aug 2004 - Dec 2010**

1.8 4 cyl DOHC VVT 16V MPFI R171 Eng code: M271.944	
OAP (Alt Bosch, 120A) .....	OAP039
Overrunning Alt Pulley (Alt Valeo, 120A).....	OAP100

**Jun 2008 - Jun 2011**

1.8L 4 cyl DOHC VVT 16V MPFI Eng code: M271.954	
OAP (Alt Bosch, Valeo 120A, Up To Valeo 2542582C).....	OAP039
Overrunning Alt Pulley (Alt Valeo, 120A, From Valeo 2542582D)OAP100	

<b>Jul 2011 - Jul 2015</b>	1.8L 4 cyl DOHC VVT 16V Di Turbo R172 Eng code: M271.861 OAP ..... OAP052	OAP (Back Bore Depth 8.0mm, Alt Bosch 90A, 115A) ..... OAP149
<b>Aug 2015 -</b>	2.0L 4 cyl DOHC VVT 16V Di Turbo R172 Eng code: M274.920 OAP ..... OAP052	2.7L 5 cyl DOHC 20V DTFI Turbo Diesel 416CDI Eng code: OM612.981 OAP (Back Bore Depth 11.3mm, Alt Bosch 90A, 115A, 120A, 200A) OAP121 OAP (Back Bore Depth 8.0mm, Alt Bosch Alt 90A, 115A) .... OAP149
<b>SLS AMG</b>		2.2L 4 cyl DOHC 16V DTFI Turbo Diesel 311 Eng code: OM646.985 OAP (Alt Valeo, 90A, 115A, 120A, 200A) ..... OAP121
<b>Aug 2010 -</b>	6.2L V8 DOHC 32V MPFI W197 Eng code: M159.980 OAP (Alt Valeo, 180A) ..... OAP052	2.1L 4 cyl DOHC 16V TCDI Turbo Diesel 309CDI Eng code: OM646.984 OAP (Alt Valeo, 180A, 220A) ..... OAP052 OAP (Alt Bosch, 90A, 120A, 200A) ..... OAP121
<b>SLK350</b>		2.1L 4 cyl DOHC 16V TCDI Turbo Diesel 311CDI Eng code: OM646.985 OAP (Alt Bosch, 90A) ..... OAP121
<b>Jul 2011 -</b>	3.5L V6 DOHC 24V Direct FI R172 Eng code: M272.956 OAP ..... OAP052	2.1L 4 cyl DOHC 16V TCDI Turbo Diesel 315CDI Eng code: OM646.986 OAP (Alt Bosch, 120A) ..... OAP121
<b>Sprinter</b>		2.1L 4 cyl DOHC 16V TCDI Turbo Diesel 315CDI Eng code: OM646.986 OAP (Alt Bosch, 120A) ..... OAP121
<b>Feb 1998 - May 2000</b>	2.9L 5 cyl SOHC 10V DTFI Diesel 312D Eng code: OM602.980 OAP ..... OAP050	3.0L V6 DOHC 24V TCDI Turbo Diesel 318CDI Eng code: OM642.992 OAP (Alt Valeo, 180A) ..... OAP203
<b>Feb 1998 - May 2000</b>	2.3L 4 cyl SOHC 8V DFI Diesel 308D Eng code: OM601.943 OAP (Alt Bosch, 70A, 90A, 115A) ..... OAP050	3.0L V6 DOHC 24V TCDI Turbo Diesel 318CDI Eng code: OM642.992 OAP (Alt Valeo, 180A) ..... OAP203
<b>Feb 1998 - May 2000</b>	2.9L 5 cyl SOHC 10V DTFI Diesel 412D Eng code: OM602.980 OAP (Alt Bosch, 90A, 115A) ..... OAP050	2.2L 4 cyl DOHC VVT 16V MPFI Turbo Diesel 511CDI Eng code: OM646.985 OAP (Alt Bosch, 90A) ..... OAP121
<b>May 2000 - Oct 2006</b>	2.2L 4 cyl DOHC 16V TCDI Turbo Diesel 308CDI Eng code: OM611.987 OAP (Back Bore Depth 17.0mm, Alt Bosch, 90A, 115A, 120A, 200A) OAP121 OAP (Back Bore Depth 8.0mm, Alt Bosch 90A, 115A) .... OAP149	2.1L 4 cyl DOHC 16V MPFI Turbo Diesel 313CDI Eng code: OM651.955 OAP (Alt Valeo, 150A, 180A, 220A) ..... OAP052 OAP (Alt Bosch, 120A) ..... OAP121
<b>May 2000 - Oct 2006</b>	2.2L 4 cyl DOHC 16V TCDI Turbo Diesel 313CDI Eng code: OM611.981 OAP (Back Bore Depth 17.0mm, Alt Bosch, 90A, 115A, 120A, 200A) OAP121 OAP (Back Bore Depth 8.0mm, Alt Bosch 90A, 115A) .... OAP149	2.1L 4 cyl DOHC 16V TCDI Turbo Diesel 313CDI Eng code: OM651.957 OAP (Alt Bosch, 120A) ..... OAP121
<b>May 2000 - Oct 2006</b>	2.2L 4 cyl DOHC 16V TCDI Turbo Diesel 413CDI Eng code: OM611.981 OAP (Back Bore Depth 17.0mm, Alt Bosch, 90A, 115A, 120A, 200A) OAP121 OAP (Back Bore Depth 8.0mm, Alt Bosch 90A, 115A) .... OAP149	2.1L 4 cyl DOHC 16V MPFI Turbo Diesel 316CDI Eng code: OM651.955 OAP (Alt Valeo, 150A, 180A) ..... OAP052 OAP (Alt Bosch, 120A) ..... OAP121
<b>Apr 2002 - Oct 2006</b>	2.2L 4 cyl DOHC 16V TCDI Turbo Diesel 208CDI Eng code: OM611.987 OAP (Back Bore Depth 17.0mm, Alt Bosch, 90A, 115A, 120A, 200A) OAP121 OAP (Back Bore Depth 8.0mm, Alt Bosch 90A, 115A) .... OAP149	3.0L V6 DOHC VVT 24V MPFI Turbo Diesel 319 CDI Eng code: OM642.896 OAP ..... OAP203
<b>Apr 2002 - Oct 2006</b>	2.7L 5 cyl DOHC 20V DTFI Turbo Diesel 616CDI Eng code: OM612.981 OAP (Back Bore Depth 11.3mm, Alt Bosch 90A, 115A, 120A, 200A) OAP121 OAP (Back Bore Depth 8.0mm, Alt Bosch 90A, 115A) .... OAP149	2.1L 4 cyl DOHC 16V TCDI Turbo Diesel 516CDI Eng code: OM651.955 OAP (Alt Bosch) ..... OAP039 OAP (Alt Valeo) ..... OAP052
<b>Jul 2003 - Oct 2006</b>	2.7L 5 cyl DOHC 20V DTFI Turbo Diesel 316CDI Eng code: OM612.981 OAP (Back Bore Depth 11.3mm, Alt Bosch 90A, 115A, 120A, 200A) OAP121	

**Feb 2010 -**

3.0L V6 DOHC 24V TCDI Turbo Diesel 419CDI  
 Eng code: OM642.896  
 OAP ..... OAP203

**Feb 2010 -**

3.0L V6 DOHC 24V TCDI Turbo Diesel 519CDI  
 Eng code: OM642.896  
 OAP ..... OAP203

**Nov 2013 -**

2.1L 4 cyl DOHC 16V CDI Turbo 513CDI  
 Eng code: OM651.955  
 OAP (Alt Bosch) ..... OAP121

**Nov 2013 -**

2.1L 4 cyl DOHC 16V CDI Turbo 310CDI  
 Eng code: OM651.955  
 OAP (Alt Valeo) ..... OAP052  
 OAP (Alt Bosch) ..... OAP121

**Nov 2013 -**

2.1L 4 cyl DOHC 16V CDI Turbo 313CDI W906  
 Eng code: OM651.956  
 OAP (Alt Bosch) ..... OAP039  
 OAP (Alt Valeo) ..... OAP052

**Viano****2005 - 2006**

3.0L V6 DOHC 24V TCDI Turbo Diesel W639  
 Eng code: OM642.990  
 OAP (Alt Valeo, 180A) ..... OAP168

**Jul 2005 - Mar 2006**

2.2L 4 cyl DOHC 16V CRD Turbo Diesel W639  
 Eng code: OM646.982  
 OAP (Alt Valeo, 180A) ..... OAP052  
 OAP (Alt Bosch, 90A, 120A, 200A) ..... OAP121

**Apr 2006 - Jan 2011**

2.2L 4 cyl DOHC 16V CRD Turbo Diesel W639  
 Eng code: OM646.980  
 OAP (Alt Valeo, 180A) ..... OAP052  
 OAP (Alt Bosch, 90A, 120A, 200A) ..... OAP121

**Feb 2011 -**

3.0L V6 DOHC 24V TCDI Turbo Diesel W639  
 Eng code: OM646.890  
 OAP (Alt Valeo, 180A) ..... OAP168

**Vito****Feb 1998 - Aug 1999**

2.3L 4 cyl SOHC 8V DFI Diesel 108D  
 Eng code: OM601.942  
 OAP ..... OAP073

**Aug 1999 - Mar 2004**

2.2L 4 cyl DOHC 16V TCDI Turbo Diesel 108CDI  
 Eng code: OM611.980  
 OAP (Back Bore Depth 11.3mm, Alt Bosch Alt 90A, 120A) .. OAP121  
 OAP (Back Bore Depth 8.0mm, Alt Bosch Alt 90A, 115A) .... OAP149

**Feb 2001 - Mar 2004**

2.2L 4 cyl DOHC 16V DTFI Turbo Diesel 112CDI  
 Eng code: OM611.980  
 OAP (Back Bore Depth 11.3mm, Alt Bosch Alt 90A, 120A) .. OAP121  
 OAP (Back Bore Depth 8.0mm, Alt Bosch Alt 90A, 120A, 150A) OAP149

**Apr 2004 - Nov 2006**

2.1L 4 cyl DOHC 16V DTFI Turbo Diesel 109CDI  
 Eng code: OM646.983  
 OAP (Alt Valeo, 180A) ..... OAP052  
 OAP (Alt Bosch, 200A) ..... OAP121

**Apr 2004 - Nov 2006**

2.1L 4 cyl DOHC 16V DTFI Turbo Diesel 111CDI  
 Eng code: OM646.982  
 OAP (Alt Valeo) ..... OAP052  
 OAP (Alt Bosch) ..... OAP121

**Nov 2006 - Jan 2008**

2.1L 4 cyl DOHC 16V DTFI Turbo Diesel 109CDI  
 Eng code: OM646.980  
 OAP (Alt Valeo, 180A) ..... OAP052  
 OAP (Alt Bosch, 120A, 200A) ..... OAP121

**Nov 2006 - Jan 2008**

2.1L 4 cyl DOHC 16V DTFI Turbo Diesel 109CDI  
 Eng code: OM646.981  
 OAP (Alt Valeo) ..... OAP052  
 OAP (Alt Bosch) ..... OAP121

**Apr 2004 - Nov 2006**

2.1L 4 cyl DOHC 16V DTFI Turbo Diesel 115CDI  
 Eng code: OM646.982  
 OAP (Alt Valeo, 180A) ..... OAP052  
 OAP (Alt Bosch, 120A, 200A) ..... OAP121

**Apr 2004 - Nov 2006**

2.1L 4 cyl DOHC 16V DTFI Turbo Diesel 115CDI  
 Eng code: OM646.983  
 OAP (Alt Valeo, 180A) ..... OAP052  
 OAP (Alt Bosch, 200A) ..... OAP121

**Nov 2006 - Jan 2011**

2.1L 4 cyl DOHC 16V DTFI Turbo Diesel 115CDI  
 Eng code: OM646.980  
 OAP (Alt Valeo, 180A) ..... OAP052  
 OAP (Alt Bosch, 120A, 200A) ..... OAP121

**Feb 2007 - Jan 2011**

3.0L V6 DOHC 24V TCDI Turbo Diesel 120CDI  
 Eng code: OM642.990  
 OAP (Alt Bosch 120A, 200A) ..... OAP121  
 OAP (Alt Valeo, 180A) ..... OAP203

**Jan 2008 - Jan 2011**

2.1L 4 cyl DOHC 16V CRD Turbo W639, 111CDI  
 Eng code: OM646.980  
 OAP (Alt Valeo) ..... OAP052  
 OAP (Alt Bosch) ..... OAP121

**Feb 2011 - Jun 2015**

2.2L 4 cyl DOHC 16V DTFI Turbo Diesel 110CDI  
 Eng code: OM651.940  
 OAP (Alt Valeo) ..... OAP052  
 OAP (Alt Bosch) ..... OAP121

**Feb 2011 - Jun 2015**

2.2L 4 cyl DOHC 16V DTFI Turbo Diesel 113CDI  
 Eng code: OM651.940  
 OAP (Alt Valeo) ..... OAP052

**Feb 2011 - Jun 2015**

2.2L 4 cyl DOHC 16V DTFI Turbo Diesel 116CDI  
 Eng code: OM651.940  
 OAP (Alt Valeo) ..... OAP052

**Feb 2011 - Jun 2015**

3.0L V6 DOHC 24V DTFI Turbo Diesel 122CDI  
 Eng code: OM642.890  
 OAP (Alt Valeo) ..... OAP203

**Jul 2015 -**

1.6L 4 cyl DOHC 16V CRD Turbo Diesel 111CDI  
 Eng code: OM622.951  
 OAP (Alt Valeo) ..... OAP052

**Jul 2015 -**

2.2L 4 cyl DOHC 16V CRD Turbo Diesel 114CDI  
 Eng code: OM651.940  
 OAP (Alt Valeo) ..... OAP052

**Jul 2015 -**

2.2L 4 cyl DOHC 16V CRD Turbo Diesel 116CDI  
 Eng code: OM651.940  
 OAP (Alt Valeo) ..... OAP052

<b>Jul 2015 -</b>	2.2L 4 cyl DOHC 16V CRD Turbo Diesel 116CDI Eng code: OM651.950 OAP (Alt Valeo) ..... OAP052	<b>Oct 2010 -</b>	1.6L 4 cyl DOHC 16V MPFI Turbo R56 Eng code: N14B16CD OAP ..... OAP109
<b>Jul 2015 -</b>	2.2L 4 cyl DOHC 16V CRD Turbo Diesel 119CDI Eng code: OM651.940 OAP (Alt Valeo) ..... OAP052	<b>One</b>	
<b>Jul 2015 -</b>	2.2L 4 cyl DOHC 16V CRD Turbo Diesel 119CDI Eng code: OM651.950 OAP (Alt Valeo) ..... OAP052	<b>2001 - 2006</b>	1.6L 4 cyl SOHC 16V MPFI R50 Eng code: W10B16 OAP (Alt Bosch, 150A) ..... OAP035
<b>Mini</b>	<b>Mitsubishi</b>		
<b>Mini Cooper</b>	<b>ASX</b>		
<b>Mar 2007 - Mar 2014</b>	1.6L 4 cyl DOHC 16V MPFI R56, R57 Eng code: N12B6A OAP (Alt Valeo, 120A) ..... OAP109	<b>Jul 2010 -</b>	2.0L 4 cyl DOHC 16V MPFI XA Eng code: 4B11 OAP (Alt Melco, 120A) ..... OAP011
<b>Oct 2010 -</b>	1.6L 4 cyl DOHC 16V MPFI Turbo R56/R58/R59 Eng code: N14B16CD OAP (Alt Valeo, 120A) ..... OAP109	<b>Lancer</b>	
<b>Oct 2012 -</b>	1.6L 4 cyl DOHC 16V MPFI R58 Eng code: N16B16A OAP (Alt Valeo 120A) ..... OAP109	<b>Aug 2007 -</b>	2.0L 4 cyl DOHC 16V MPFI CJ Eng code: 4B11 OAP (Alt Melco, 120A, 130A) ..... OAP011
<b>Oct 2012 -</b>	1.6L 4 cyl DOHC 16V MPFI R59 Eng code: N16B16A OAP (Alt Valeo 120A) ..... OAP109	<b>Outlander</b>	
<b>Cooper Clubman</b>	<b>Oct 2006 - Oct 2011</b>		
<b>Feb 2013 - Oct 2015</b>	1.6L 4 cyl DOHC VVT 16V MPFI R55 Eng code: N16B16A OAP (Alt Valeo 120A) ..... OAP109	2.4L 4 cyl DOHC 16V MPFI ZG Eng code: 4B12 OAP ..... OAP011	
<b>Cooper D</b>	<b>Nov 2007 - Oct 2012</b>		
<b>Apr 2007 - Sep 2010</b>	1.6L 4 cyl DOHC 16V DTFI Turbo Diesel R56 Eng code: DV6TED4 OAP (Alt Bosch, 145A) ..... OAP035	2.4L 4 cyl DOHC 16V MPFI ZH Eng code: 4B12 OAP (Alt Melco, 120A, 130A) ..... OAP011	
<b>Cooper Ray</b>	<b>Aug 2010 - Nov 2012</b>		
<b>Apr 2011 -</b>	1.6L 4 cyl DOHC 16V MPFI R56 Eng code: N16B16A OAP ..... OAP109	2.0L 4 cyl DOHC VVT 16V MPFI ZH Eng code: 4B11 OAP ..... OAP011	
<b>Cooper S</b>	<b>Nissan</b>		
<b>May 2002 - Feb 2009</b>	1.6L 4 cyl SOHC 16V SCMPFI R52, R53 Eng code: W11B16 OAP (Alt Valeo 120A) ..... OAP109	<b>Dualis</b>	
<b>Aug 2005 - Feb 2009</b>	1.6L 4 cyl SOHC 16V SCMPFI R52, R53 Eng code: W11B16 OAP (Alt Valeo, 120A) ..... OAP109	<b>Dec 2007 -</b>	2.0L 4 cyl DOHC 16V MPFI J10 Eng code: MR20DE OAP (Alt Mitsubishi, 120A) ..... OAP012
<b>Mar 2007 - Sep 2010</b>	1.6L 4 cyl DOHC 16V TMPFI Turbo R56 Eng code: N14B6A OAP (Alt Valeo, 120A) ..... OAP109	<b>Juke</b>	
<b>Oct 2010 - Jan 2013</b>	1.6L 4 cyl DOHC 16V TMPFI Turbo R56 Eng code: N14B6A OAP (Alt Valeo, 120A) ..... OAP109	<b>Oct 2013 -</b>	1.6L 4 cyl DOHC 16V Direct FI Turbo F15 Eng code: MR16DDT OAP (Alt Mitsubishi, 110A) ..... OAP012
		<b>Navara</b>	
		<b>Dec 2001 - Jan 2008</b>	3.0L 4 cyl DOHC 16V Turbo Diesel D22 Eng code: ZD30 OAP (Alt Hitachi, 90A) ..... OAP014
		<b>Dec 2005 - Apr 2015</b>	2.5L 4 cyl DOHC 16V Di Turbo Diesel D40 (SPAIN) Eng code: YD25DDTi OAP (Up to %) ..... OAP006 OAP (From %) ..... OAP015
		<b>Jul 2008 - Apr 2015</b>	2.5L 4 cyl DOHC 16V Turbo Diesel D40 (THAILAND) Eng code: YD25DDTi OAP (Alt Mitsubishi) ..... OAP015
		<b>Jul 2008 - Oct 2015</b>	2.5L 4 cyl DOHC 16V Turbo Diesel D40 (THAILAND) Eng code: YD25DDTi OAP (Alt Mitsubishi) ..... OAP015

**May 2010 - Apr 2015**

2.5L 4 cyl DOHC 16V Turbo Diesel D40 (SPAIN)  
 Eng code: YD25DDTi  
 OAP (Alt Mitsubishi) .....OAP015

**Apr 2012 - Apr 2015**

2.5L 4 cyl DOHC 16V Turbo Diesel D40 (SPAIN)  
 Eng code: YD25DDTi  
 OAP (Alt Mitsubishi) .....OAP015

**May 2015 -**

2.3L 4 cyl DOHC 16V CRD I/C Turbo Diesel D23  
 Eng code: YS23DDT  
 OAP (Alt Bosch, 120A) .....OAP056

**Nov 2015 -**

2.3L 4 cyl DOHC 16V CRD I/C Turbo Diesel D23 / NP300  
 Eng code: YS23DDT  
 OAP (Alt Bosch, 120A) .....OAP056

**Pathfinder****Jul 2005 - May 2010**

2.5L 4 cyl DOHC 16V DTFI Turbo Diesel R51  
 Eng code: YD25DDTi  
 OAP (Back Bore Depth 11.5mm, Alt Mitsubishi) .....OAP006  
 OAP (Back Bore Depth 17.0mm, Alt Mitsubishi) .....OAP015

**Jun 2010 - Sep 2013**

2.5L 4 cyl DOHC 16V DTFI Turbo Diesel R51  
 Eng code: YD25DDTi  
 OAP (Alt Mitsubishi) .....OAP015

**Patrol****Apr 2000 -**

3.0L 4 cyl DOHC 16V DTFI Turbo Diesel GU / Y61 / TESY61  
 Eng code: ZD30DDTi  
 OAP (Alt Hitachi, 70A, 90A) .....OAP014

**Oct 2007 -**

3.0L 4 cyl DOHC 16V DTFI Turbo Diesel GU / UELY61 / UENY61  
 Eng code: ZD30DDTi  
 OAP (Alt Hitachi, 70A, 90A) .....OAP014

**Mar 2013 -**

3.0L 4 cyl DOHC 16V DTFI Turbo Diesel GU / UERY61 / UETY61  
 Eng code: ZD30DDTi  
 OAP (Alt Hitachi, 70A, 90A) .....OAP014

**Pulsar****Jun 2013 -**

1.6L 4 cyl DOHC 16V TMPFI C12  
 Eng code: MR16DDT  
 OAP (Alt Mitsubishi, 110A) .....OAP012

**Apr 2015 -**

1.6L 4 cyl DOHC VVT 16V TMPFI B17  
 Eng code: MR16DDT  
 OAP (Alt Mitsubishi, 110A) .....OAP012

**Qashqai****Jul 2009 -**

2.0L 4 cyl DOHC 16V MPFI J10  
 Eng code: MR20DE  
 OAP (Alt Mitsubishi, 120A) .....OAP012

**Jul 2014 -**

2.0L 4 cyl DOHC 16V MPFI J11  
 Eng code: R9M  
 OAP (Alt Mitsubishi, 120A) .....OAP012

**Jul 2014 -**

2.0L 4 cyl DOHC 16V MPFI J11  
 Eng code: MR20DD  
 OAP (Alt Mitsubishi, 120A) .....OAP012

**Jul 2014 -**

1.6L 4 cyl DOHC 16V CRD Turbo Diesel J11  
 Eng code: R9M  
 OAP .....OAP051

**Tiida****Feb 2006 - Apr 2013**

1.8L 4 cyl DOHC VVT 16V MPFI C11  
 Eng code: MR18DE  
 OAP (Alt Mitsubishi, 120A) .....OAP012

**X-Trail****Oct 2001 - Jan 2006**

2.5L 4 cyl DOHC 16V MPFI T30  
 Eng code: QR25DE  
 OAP (Alt Hitachi) .....OAP002

**Sep 2006 - Feb 2007**

2.5L 4 cyl DOHC 16V MPFI T30  
 Eng code: QR25DE  
 OAP (Alt Hitachi) .....OAP002

**Oct 2007 - Feb 2014**

2.5L 4 cyl DOHC VVT 16V MPFI T31  
 Eng code: QR25DE  
 OAP (Alt Hitachi, Up to 1/1) .....OAP002  
 OAP (Alt Valeo, From 1/1) .....OAP155

**Jul 2008 - Feb 2014**

2.0L 4 cyl DOHC 16V CRD Turbo Diesel T31  
 Eng code: M9RD  
 OAP (Alt Mitsubishi, 210A) .....OAP003

**Jul 2008 - Feb 2014**

2.0L 4 cyl DOHC 16V CRD Turbo Diesel T31  
 Eng code: M9RC  
 OAP (Alt Mitsubishi, 210A) .....OAP003

**Jan 2011 - Feb 2014**

2.0L 4 cyl DOHC 16V MPFI T31  
 Eng code: MR20DE  
 OAP (Alt Mitsubishi, 120A) .....OAP012

**Dec 2013 -**

2.0L 4 cyl DOHC 16V MPFI T32  
 Eng code: MR20DD  
 OAP (Alt Mitsubishi, 120A) .....OAP012

**Mar 2014 -**

2.0L 4 cyl DOHC 16V MPFI T31  
 Eng code: MR20DE  
 OAP (Alt Mitsubishi, 120A) .....OAP012

**Mar 2014 -**

2.5L 4 cyl DOHC VVT 16V MPFI T32  
 Eng code: QR25DE  
 OAP (Alt Hitachi, Up to 1/1) .....OAP002  
 OAP (Alt Valeo, From 1/1) .....OAP155

**Peugeot****206****Oct 1999 - Jan 2001**

1.6L 4 cyl SOHC 8V MPFI XR  
 Eng code: TU5JP  
 OAP (Alt Valeo, 150A) .....OAP034

**Oct 1999 - Jan 2001**

1.6L 4 cyl SOHC 8V MPFI XT  
 Eng code: TU5JP  
 OAP (Alt Valeo, 150A) .....OAP034

**Oct 2001 - Jun 2007**

1.6L 4 cyl DOHC 16V MPFI  
 Eng code: TU5JP4  
 OAP (Alt Valeo, 150A) .....OAP034

**Jan 2004 - Feb 2007**

2.0L 4 cyl DOHC 16V MPFI Gti 180  
 Eng code: EW10J4RS  
 OAP (Alt Valeo, 150A) .....OAP034

**207****Feb 2007 -**

1.6L 4 cyl DOHC 16V MPFI  
 Eng code: EP6  
 OAP (Alt Valeo, 120A) .....OAP109

**Feb 2007 - Mar 2009**

1.4L 4 cyl SOHC 8V MPFI XR  
 Eng code: TU3A  
 OAP (Alt Valeo, 150A) .....OAP034

**Feb 2007 -**

1.4L 4 cyl DOHC 16V MPFI XR  
 Eng code: ET3J4  
 OAP (Alt Valeo, 150A) .....OAP034

**Feb 2007 -**

1.6L 4 cyl DOHC 16V DTFI Turbo Diesel XT  
 Eng code: DV6TED4  
 OAP (Alt Valeo, 150A) .....OAP034

**Aug 2007 -**

1.6L 4 cyl DOHC 16V TMPFI Turbo Gti  
 Eng code: EP6DTS  
 OAP (Alt Valeo, 120A) .....OAP109

**Jul 2010 -**

1.6L 4 cyl DOHC 16V TMPFI Turbo  
 Eng code: EP6DT  
 OAP (Alt Valeo, 150A) .....OAP034

**308****Jun 2010 - Jan 2011**

1.6L 4 cyl DOHC 16V DTFI Turbo Diesel  
 Eng code: DV6TED4  
 OAP (Alt Valeo, 150A) .....OAP034

**Jun 2010 - Jul 2017**

1.6L 4 cyl DOHC 16V TMPFI Turbo  
 Eng code: EP6CDT  
 OAP (Alt Valeo, 120A) .....OAP109

**306****Jul 1997 - Mar 2000**

2.0L 4 cyl DOHC 16V MPFI N5  
 Eng code: XU10J4RS  
 OAP .....OAP033

**Jul 1997 - Dec 2001**

2.0L 4 cyl DOHC 16V MPFI N5  
 Eng code: XU10J4R  
 OAP .....OAP033

**Mar 2000 - Dec 2001**

2.0L 4 cyl SOHC 8V DTFI Turbo Diesel  
 Eng code: DW10  
 OAP (Alt Mitsubishi 150A) .....OAP033  
 OAP (Alt Bosch, 150A) .....OAP035

**Apr 2000 - Oct 2000**

2.0L 4 cyl DOHC 16V MPFI N5  
 Eng code: XU10J4RS  
 OAP .....OAP033

**Mar 2002 - Dec 2003**

2.0L 4 cyl DOHC 16V MPFI NB  
 Eng code: XU10J4R  
 OAP .....OAP033

**307****Dec 2001 - Nov 2003**

1.6L 4 cyl DOHC 16V MPFI  
 Eng code: TU5JP4  
 OAP (Alt Valeo, 150A) .....OAP034

**Dec 2003 - Jan 2008**

1.6L 4 cyl DOHC 16V MPFI  
 Eng code: TU5JP4  
 OAP (Alt Valeo, 150A) .....OAP034

**Dec 2001 - Sep 2005**

2.0L 4 cyl DOHC 16V MPFI  
 Eng code: EW10J4  
 OAP (Alt Valeo, 150A) .....OAP034

**Dec 2001 - Sep 2005**

2.0L 4 cyl SOHC 8V DTFI Turbo Diesel Hdi  
 Eng code: DW10  
 OAP (Alt Bosch, 150A) .....OAP035  
 OAP (Alt Valeo, 150A) .....OAP038

**May 2005 - Jan 2008**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel Hdi  
 Eng code: DW10BTED4  
 OAP .....OAP035

**Feb 2004 - Dec 2008**

2.0L 4 cyl DOHC 16V MPFI  
 Eng code: EW10J4S  
 OAP (Alt Valeo, 150A) .....OAP034

**Oct 2005 - Feb 2007**

1.6L 4 cyl SOHC 16V DTFI Turbo Diesel Hdi  
 Eng code: DV6TED4  
 OAP (Alt Valeo 150A) .....OAP034

**Oct 2005 - Jun 2008**

2.0L 4 cyl DOHC VVT 16V MPFI  
 Eng code: EW10A  
 OAP (Alt Valeo, 150A) .....OAP034

**Oct 2005 - Jun 2009**

2.0L 4 cyl DOHC VVT 16V MPFI CC  
 Eng code: EW10A  
 OAP (Alt Valeo, 150A) .....OAP034

**Mar 2007 - Jan 2008**

1.6L 4 cyl SOHC 16V DTFI Turbo Diesel Hdi  
 Eng code: DV6TED4  
 OAP (Alt Valeo 150A) .....OAP034

**308****Feb 2008 - Jul 2011**

1.6L 4 cyl DOHC 16V DTFI Turbo Diesel  
 Eng code: DV6TED4  
 OAP (Alt Valeo, 150A) .....OAP109

**Feb 2008 - Sep 2014**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel  
 Eng code: DW10BTED4  
 OAP (Alt Valeo, 150A) .....OAP109

**Oct 2010 - Jul 2013**

1.6L 4 cyl SOHC 8V CRD Turbo Diesel  
 Eng code: DV6C  
 OAP .....OAP038

**Feb 2011 -**

2.0L 4 cyl DOHC VVT 16V CRD Turbo Diesel  
 Eng code: DW10CTED4  
 OAP .....OAP038

**Feb 2011 - Sep 2014**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel HDi  
 Eng code: DW10CTED4  
 OAP .....OAP034

<b>4008</b>		
<b>May 2012 -</b>	2.0L 4 cyl DOHC VVT 16V MPFI Eng code: 4B11 OAP ..... OAP011	
<b>406</b>		
<b>Aug 1999 - Oct 2004</b>	2.0L 4 cyl SOHC 8V DTFI Diesel D9 Eng code: DW10ATED OAP (Alt Mitsubishi 150A) ..... OAP033 OAP (Alt Bosch, 150A, 0124525035) ..... OAP035	
<b>407</b>		
<b>Sep 2004 - Aug 2009</b>	2.2L 4 cyl DOHC 16V MPFI Eng code: EW12J4 OAP (Alt Valeo, 150A) ..... OAP034	
<b>Sep 2004 - Aug 2009</b>	3.0L V6 DOHC 24V MPFI Eng code: ES9A OAP (Alt Valeo, 150A) ..... OAP034	
<b>Feb 2005 - Jun 2011</b>	2.0L 4 cyl DOHC 16V Turbo Diesel Eng code: DW10BTED OAP (Alt Valeo, 150A) ..... OAP034	
<b>Mar 2006 - Jan 2010</b>	2.7L V6 DOHC 24V Twin Turbo Diesel Eng code: DT17BTED4 OAP (Alt Valeo, 150A) ..... OAP034	
<b>2009 -</b>	2.0L 4 cyl DOHC 16V DTFI Turbo Diesel Eng code: DW10CTED4 OAP (Alt Valeo, 150A) ..... OAP034	
<b>Expert</b>		
<b>Aug 2008 -</b>	2.0L 4 cyl DOHC 16V DTFI Turbo Diesel G9P Eng code: DW10BTED4 OAP (Alt Valeo, 150A, 180A) ..... OAP034 OAP (Alt Mitsubishi, 180A) ..... OAP063	
<b>Aug 2008 -</b>	2.0L 4 cyl DOHC 16V DTFI Turbo Diesel G9P Eng code: DW10UTED4 OAP (Alt Valeo, 150A) ..... OAP034 OAP (Alt Mitsubishi, 180A) ..... OAP063	
<b>Partner</b>		
<b>Aug 2008 - Aug 2009</b>	1.6L 4 cyl DOHC 16V DTFI Turbo Diesel G9P Eng code: DV6BTED4 OAP (Alt Valeo, 150A) ..... OAP034	
<b>Aug 2008 - Aug 2009</b>	1.6L 4 cyl DOHC 16V DTFI Turbo Diesel G9P Eng code: DV6BUTED4 OAP (Alt Valeo, 150A) ..... OAP034	
<b>Aug 2008 -</b>	1.6L 4 cyl DOHC 16V DTFI Turbo Diesel G9P Eng code: DV6ATED4 OAP (Alt Valeo 150A) ..... OAP034 OAP (Alt Mitsubishi, 180A) ..... OAP063	
<b>RCZ</b>		
<b>Oct 2010 - Sep 2015</b>	2.0L 4 cyl DOHC VVT 16V CRD Turbo Diesel Eng code: DW10CTED4 OAP ..... OAP034	
<b>Porsche</b>		
<b>911</b>		
<b>Jan 1998 - Aug 2001</b>	3.4L 6 cyl DOHC 24V MPFI 996, Carrera Eng code: PSAXFZ OAP (Alt Bosch, 120A, 150A) ..... OAP083	
<b>Sep 1999 - Sep 2006</b>	3.6L 6 cyl DOHC 24V MPFI 996, GT3 Eng code: M96-76 OAP (Alt Bosch, 120A, 150A) ..... OAP083	
<b>Dec 2000 - Jun 2006</b>	3.6L 6 cyl DOHC 24V TTMPFI Twin Turbo 996 Eng code: M96-70 OAP (Alt Bosch, 120A, 150A) ..... OAP083	
<b>Oct 2004 - Jan 2012</b>	3.8L 6 cyl DOHC 24V MPFI 997 Eng code: M97.01 OAP (Pulley Dia 52.6mm To Suit Bosch Alt 150A) ..... OAP083 OAP (Pulley Dia 57.6mm To Suit Bosch Alt 150A) ..... OAP111	
<b>Oct 2006 - Sep 2008</b>	3.6L 6 cyl DOHC 24V MPFI 997, GT3 Eng code: M96-05 OAP (Outside Dia 52.6mm to suit Alt Bosch 150A) ..... OAP083 OAP (Outside Dia 57.6mm to suit Alt Bosch 150A) ..... OAP111	
<b>Boxster</b>		
<b>Oct 1999 - Aug 2002</b>	2.7L 6 cyl DOHC VVT 24V MPFI 986 Eng code: M96-21 OAP (Alt Bosch, 120A, 150A) ..... OAP083	
<b>Oct 1999 - Aug 2002</b>	2.7L 6 cyl DOHC VVT 24V MPFI 986 Eng code: M96-22 OAP (Alt Bosch, 120A, 150A) ..... OAP083	
<b>Aug 2002 - Dec 2004</b>	2.7L 6 cyl DOHC VVT 24V MPFI 986 Eng code: M96-23 OAP (Alt Bosch, 120A, 150A) ..... OAP083	
<b>Aug 2002 - Jan 2005</b>	3.2L 6 cyl DOHC VVT 24V MPFI 986 Eng code: M96-24 OAP (Alt Bosch, 120A, 150A) ..... OAP083	
<b>Feb 2005 - Oct 2006</b>	2.7L 6 cyl DOHC VVT 24V MPFI 987 Eng code: M96-25 OAP (Alt Bosch, 120A, 150A) ..... OAP083	
<b>Feb 2005 - Oct 2006</b>	3.2L 6 cyl DOHC VVT 24V MPFI 987 Eng code: M96-26 OAP (Pulley Dia 52.6mm To Suit Bosch Alt 150A) ..... OAP083 OAP (Pulley Dia 57.6mm To Suit Bosch Alt 150A) ..... OAP111	
<b>Cayenne</b>		
<b>Jun 2003 - Mar 2007</b>	4.5L V8 DOHC 32V MPFI Eng code: M48.00 OAP (Alt Bosch, 150A, 190A) ..... OAP056	
<b>Jun 2003 - Mar 2007</b>	4.5L V8 DOHC 32V TMPFI Turbo Eng code: M48.50 OAP (Alt Bosch, 150A, 190A) ..... OAP056	
<b>Cayman</b>		
<b>Feb 2006 - Feb 2009</b>	3.4L 6 cyl DOHC VVT 24V MPFI 987 Eng code: M97-21 OAP (Pulley Dia 52.6mm To Suit Bosch Alt 150A) ..... OAP083	

OAP (Pulley Dia 57.6mm To Suit Bosch Alt 150A) ..... OAP111

#### Oct 2006 - Feb 2009

2.7L 6 cyl DOHC VVT 24V MPFI 987

Eng code: M9T-20

OAP (Pulley Dia 52.6mm To Suit Bosch Alt 150A) ..... OAP083

OAP (Pulley Dia 57.6mm To Suit Bosch Alt 150A) ..... OAP111

#### Mar 2009 - Apr 2012

2.9L 6 cyl DOHC VVT 24V MPFI 987

Eng code: MA120

OAP (Pulley Dia 52.6mm To Suit Bosch Alt 150A) ..... OAP083

OAP (Pulley Dia 57.6mm To Suit Bosch Alt 150A) ..... OAP111

#### Feb 2011 - Apr 2012

2.9L 6 cyl DOHC VVT 24V MPFI 987

Eng code: MA121

OAP (Pulley Dia 52.6mm To Suit Bosch Alt 150A) ..... OAP083

OAP (Pulley Dia 57.6mm To Suit Bosch Alt 150A) ..... OAP111

#### Apr 2013 -

3.4L 6 cyl DOHC VVT 24V MPFI 981

Eng code: MA121

OAP (Pulley Dia 52.6mm To Suit Bosch Alt 150A) ..... OAP083

OAP (Pulley Dia 57.6mm To Suit Bosch Alt 150A) ..... OAP111

### Range Rover

#### Evoque

##### Oct 2011 - Aug 2015

2.2L 4 cyl DOHC 16V DTFI Turbo Diesel LV

Eng code: DT244

OAP ..... OAP017

##### Oct 2011 - Aug 2015

2.2L 4 cyl DOHC 16V DTFI Turbo Diesel LV

Eng code: DT244

OAP ..... OAP017

### Renault

#### Clio

##### Oct 1999 - Jun 2006

1.4L 4 cyl DOHC 16V MPFI X65 MK II

Eng code: K4J.<sup>7½</sup>

OAP (Alt Bosch, 98A) ..... OAP132

##### Jul 2006 - Aug 2008

1.4L 4 cyl DOHC 16V MPFI X85 MK III

Eng code: K4J.710/11/2/3

OAP (Alt Bosch, 98A) ..... OAP132

#### Espace

##### 2006 - 2008

2.0L 4 cyl DOHC 16V DTFI Diesel

Eng code: M9R.740/50

OAP ..... OAP003

#### Kangoo

##### Dec 2010 -

1.6L 4 cyl DOHC 16V MPFI X61

Eng code: K4M.830

OAP ..... OAP132

#### Koleos

##### Sep 2008 - Apr 2010

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel H45

Eng code: M9R.830

OAP ..... OAP003

##### Sep 2008 - Aug 2013

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel H45

Eng code: M9R.832

OAP ..... OAP003

#### Sep 2008 -

2.5L 4 cyl DOHC 16V MPFI H45

Eng code: 2TR

OAP ..... OAP155

#### Sep 2009 - Aug 2013

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel H45

Eng code: M9R.D

OAP ..... OAP003

#### Sep 2013 - Aug 2016

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel H45

Eng code: M9R.830

OAP ..... OAP003

### Laguna

#### Jun 2008 - Jan 2011

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel X91

Eng code: M9R.<sup>80%</sup>

OAP ..... OAP003

#### Jun 2008 - Jan 2011

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel X91

Eng code: M9R.816/20

OAP ..... OAP003

### Latitude

#### Apr 2011 - Jan 2014

2.0L 4 cyl DOHC 16V CRD Diesel X43

Eng code: M9R.817

OAP ..... OAP003

### Master

#### Oct 2010 - Aug 2013

2.3L DOHC 16V CRD Turbo Diesel X62

Eng code: M9TD

OAP ..... OAP003

#### Sep 2013 -

2.3L DOHC 16V CRD Turbo Diesel X62

Eng code: M9TD

OAP ..... OAP003

#### Feb 2014 -

2.3L DOHC 16V CRD Turbo Diesel X62

Eng code: M9TC

OAP ..... OAP003

### Megane

#### Mar 2001 - May 2002

1.6L 4 cyl DOHC 16V MPFI

Eng code: K4MA

OAP (Alt Bosch, 87A, 98A, Alt Valeo 120A) ..... OAP132

#### Jun 2002 - Jun 2006

1.6L 4 cyl DOHC 16V MPFI

Eng code: K4MA

OAP (Alt Bosch, 87A, 98A, Alt Valeo 120A) ..... OAP132

#### Dec 2003 - Mar 2005

1.6L 4 cyl DOHC 16V MPFI X84

Eng code: K4MA

OAP (Alt Bosch, 87A, 98A, Alt Valeo 120A) ..... OAP132

#### Apr 2005 - Jul 2008

1.6L 4 cyl DOHC 16V MPFI X84

Eng code: K4MA

OAP (Alt Bosch, 87A, 98A, Alt Valeo 120A) ..... OAP132

#### Jul 2007 - Jul 2010

1.9L 4 cyl DOHC 8V DTFI Turbo Diesel X84

Eng code: F9Q.803/18

OAP (Alt Valeo, 120A) ..... OAP144

#### Aug 2008 - Jul 2010

2.0L 4 cyl DOHC 16V DTFI Turbo X84

Eng code: M9R.724

OAP (Alt Valeo, 150A) ..... OAP059

**Sep 2010 - May 2013**

2.0L 4 cyl DOHC 16V MPFI X32  
 Eng code: M4RK  
 OAP .....OAP042

**Sep 2010 - May 2013**

2.0L 4 cyl DOHC 16V MPFI X32  
 Eng code: M4R.<sup>71/3</sup>  
 OAP .....OAP042

**Aug 2012 -**

2.0L 4 cyl DOHC 16V MPFI Turbo X95  
 Eng code: F4RM  
 OAP .....OAP059

**Jul 2013 - Jun 2014**

2.0L 4 cyl DOHC 16V MPFI K95  
 Eng code: M4R.<sup>71/3</sup>  
 OAP .....OAP042

**Jul 2013 - Jun 2014**

2.0L 4 cyl DOHC 16V MPFI B95  
 Eng code: M4R.<sup>71/3</sup>  
 OAP .....OAP042

**Trafic****Apr 2004 - Apr 2007**

1.9L 4 cyl SOHC 8V DTFI Turbo L2H  
 Eng code: F9Q  
 OAP (5PK, Valeo Alt 120A) .....OAP046  
 OAP (6PK, Valeo Alt 120A) .....OAP042

**Saab****9-3****Nov 2002 - Jun 2010**

2.0L 4 cyl DOHC 16V TMPFI Turbo  
 Eng code: B20T  
 OAP (Alt Bosch, 120A) .....OAP030

**9-5****Mar 2008 - Sep 2009**

1.9L 4 cyl 16V DTFI Turbo Diesel  
 Eng code: Z19DTH  
 OAP (Alt Denso, 140A) .....OAP057  
 OAP (Alt Bosch, 120A, 140A) .....OAP071  
 OAP (Alt Denso, 130A) .....OAP075

**Skoda****Fabia****2010 - Jun 2015**

1.4L 4 cyl DOHC 16V Di Turbo 5J  
 Eng code: CAV  
 OAP (Alt Bosch, 140A, Valeo, 110A, 140A) .....OAP028

**Oct 2011 - Jun 2015**

1.2L 4 cyl SOHC 8V Direct FI Turbo 5J  
 Eng code: CBZB  
 OAP (Alt Bosch, Valeo, 140A) .....OAP028

**Octavia****2005 - Nov 2013**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel 1Z  
 Eng code: BKD  
 OAP (Alt Bosch, Valeo, 140A) .....OAP022

**Oct 2007 - Feb 2009**

1.8L 4 cyl DOHC 16V TMPFI Turbo 1Z  
 Eng code: BZB  
 OAP .....OAP076

**Oct 2007 - Jul 2011**

1.9L 4 cyl SOHC 8V DTFI Turbo Diesel 1Z  
 Eng code: BXE  
 OAP (Alt Bosch, Valeo, 140A) .....OAP022

**Oct 2007 - Feb 2009**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel 1Z  
 Eng code: BMN  
 OAP .....OAP022

**Oct 2007 - Feb 2009**

2.0L 4 cyl DOHC 16V MPFI 1Z  
 Eng code: BVY  
 OAP .....OAP022

**Oct 2008 - Feb 2014**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel 1Z  
 Eng code: CEGA  
 OAP .....OAP022

**Mar 2009 - Aug 2010**

1.6L 4 cyl SOHC 8V MPFI 1Z  
 Eng code: BSE  
 OAP .....OAP022

**Mar 2009 -**

2.0L 4 cyl DOHC 16V TMPFI Turbo 1Z  
 Eng code: CCZA  
 OAP (Alt Bosch, Valeo, 140A) .....OAP076

**Mar 2009 - Nov 2013**

1.8L 4 cyl DOHC 16V TMPFI Turbo 1Z  
 Eng code: CDAA  
 OAP (Alt Bosch, Valeo, 140A) .....OAP076

**May 2010 - Nov 2013**

1.6L 4 cyl DOHC 16V TDi Turbo Diesel 1Z  
 Eng code: CAYC  
 OAP (Alt Bosch 110A, 140A, Valeo 140A) .....OAP022

**May 2010 - Jan 2013**

2.0L 4 cyl DOHC 16V CRD Turbo Diesel 1Z  
 Eng code: CFHC  
 OAP (Alt Bosch 110A, 140A, Valeo 140A) .....OAP022

**Oct 2010 -**

1.4L 4 cyl DOHC 16V MPFI Turbo 1Z  
 Eng code: CAXA  
 OAP (Alt Valeo 110A, 140A) .....OAP028

**Dec 2013 -**

1.8L 4 cyl DOHC 16V TMPFI Turbo NE  
 Eng code: CJSA  
 OAP (Alt Bosch, Valeo, 140A) .....OAP076

**Rapid Spaceback****Aug 2013 -**

1.4L 4 cyl DOHC 16V TFSI Turbo NH  
 Eng code: CAXA  
 OAP (Alt Valeo 110A, 140A) .....OAP028

**May 2014 -**

1.2L 4 cyl DOHC 16V TFSI Turbo NH  
 Eng code: CBZB  
 OAP (Alt Valeo 110A, 140A) .....OAP028

**Roomster****Oct 2007 - Oct 2010**

1.9L 4 cyl SOHC 8V DTFI Turbo Diesel 5J  
 Eng code: BSW  
 OAP (Alt Bosch, 70A, 110A, 120A, Valeo 70A, 90A) .....OAP022

**Superb****May 2008 - Jul 2011**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel 3T  
 Eng code: CBBB  
 OAP (Alt Bosch, Valeo, 180A) .....OAP022  
 OAP (Alt Bosch, Valeo, 140A) .....OAP023

**May 2009 -**

1.8L 4 cyl DOHC 16V TMPFI Turbo 3T  
 Eng code: CDAA  
 OAP (Alt Bosch, Valeo, 140A) .....OAP076

**May 2009 -**

3.6L V6 DOHC 24V MPFI 3T  
 Eng code: CDV  
 OAP (Alt Bosch, Valeo 140A) ..... OAP023

**2010 -**

2.0L 4 cyl DOHC 16V TDI Turbo Diesel 3T  
 Eng code: CFFB  
 OAP ..... OAP022

**May 2010 -**

2.0L 4 cyl DOHC 16V CRD Turbo Diesel 3T  
 Eng code: CFGB  
 OAP (Alt Bosch, Valeo, 180A) ..... OAP022  
 OAP (Alt Bosch, Valeo, 140A) ..... OAP023

**Yeti****Oct 2011 -**

1.2L 4 cyl DOHC 16V MPFI 5L  
 Eng code: CBZB  
 OAP (Alt Valeo, 110A, Bosch 140A) ..... OAP028

**2010 -**

2.0L 4 cyl DOHC 16V CRD Turbo Diesel 5L  
 Eng code: CFHC  
 OAP (Alt Bosch 110A, Hitachi 140A, Valeo 110A, 140A, 180A) OAP022

**Mar 2012 - Feb 2014**

1.8L 4 cyl DOHC 16V TSI Turbo 5L  
 Eng code: CDAA  
 OAP (Alt Bosch 140A, Valeo 140A) ..... OAP076

**May 2014 -**

1.4L 4 cyl DOHC 16V TFSI Turbo 5L  
 Eng code: CAXA  
 OAP (Alt Valeo 110A, 140A) ..... OAP028

**Ssangyong****Actyon****Mar 2007 - Feb 2012**

2.0L 4 cyl DOHC 16V CRD Turbo Diesel Q100  
 Eng code: OM664.951  
 OAP ..... OAP073

**Korando****May 2004 - Jun 2007**

2.9L 5 cyl SOHC 10V DTFI Turbo Diesel  
 Eng code: OM662.920  
 OAP ..... OAP004

**Kyron****Jun 2006 - Jul 2007**

3.2L V6 DOHC 24V MPFI D100  
 Eng code: M162.950  
 OAP (Alt Delphi) ..... OAP073

**Jun 2006 - Mar 2009**

2.7L 5 cyl DOHC 20V CRD Turbo Diesel Xdi D100  
 Eng code: M665.950  
 OAP (Alt Delphi) ..... OAP073

**Jun 2006 - Jun 2012**

2.0L 4 cyl DOHC 16V CRD Turbo Diesel D100  
 Eng code: OM664.950  
 OAP (Alt Delphi) ..... OAP073

**Musso****May 2004 - Sep 2007**

2.9L 5 cyl SOHC 10V DTFI Turbo Diesel  
 Eng code: OM662.920  
 OAP ..... OAP004

**Rexton****Jan 2004 - Jan 2013**

2.7L 5 cyl DOHC 20V DTFI Turbo Diesel RX270 Y200  
 Eng code: OM665.925  
 OAP (Alt Delphi) ..... OAP073

**Sep 2006 - Jan 2013**

2.7L 5 cyl DOHC 20V CRD Turbo Diesel RX270 Y200  
 Eng code: OM665.935  
 OAP (Alt Delphi) ..... OAP073

**Stavic****Mar 2005 - Apr 2013**

2.7L 5 cyl DOHC 20V CRD Turbo Diesel Xdi A100  
 Eng code: OM665.926  
 OAP (Alt Delphi, 150A) ..... OAP073

**Nov 2005 - Apr 2008**

2.7L 5 cyl DOHC 20V CRD Turbo Diesel SV270 A100  
 Eng code: OM665.926  
 OAP (Alt Delphi, 150A) ..... OAP073

**Subaru****Forester****Jun 2010 - Jan 2013**

2.0L 4 cyl DOHC 16V DTFI Diesel SH  
 Eng code: EE20  
 OAP ..... OAP086

**Jan 2013 -**

2.0L 4 cyl DOHC 16V DTFI Diesel SJ  
 Eng code: EE20  
 OAP (Up To 2014) ..... OAP086

**Jan 2013 -**

2.5L 4 cyl DOHC 16V MPFI SJ  
 Eng code: FB25  
 Overrunning Alt Pulley ..... OAP235

**Outback****Oct 2009 - Jan 2015**

2.0L 4 cyl DOHC 16V DTFI Diesel BR  
 Eng code: EE20  
 OAP (Up To 2014) ..... OAP086

**Dec 2012 - Jan 2015**

2.5L 4 cyl SOHC 16V MPFI BR  
 Eng code: FB25  
 OAP ..... OAP011

**Dec 2014 -**

2.5L 4 cyl SOHC 16V MPFI BS  
 Eng code: FB25  
 OAP ..... OAP011

**Suzuki****Grand Vitara****Apr 1998 - Aug 2005**

2.0L 4 cyl DOHC 16V MPFI  
 Eng code: J20A  
 OAP (Alt Valeo, 150A) ..... OAP038

**Sep 2005 - Jul 2008**

2.0L 4 cyl DOHC 16V MPFI JT  
 Eng code: J20A  
 OAP (Alt Valeo, 150A) ..... OAP038

**Toyota****Aurion****Oct 2006 - Mar 2012**

3.5L V6 DOHC 24V MPFI GSV40R  
 Eng code: 2GR-FE  
 OAP (Alt Denso, 100A) ..... OAP013

**Apr 2012 -**

3.5L V6 DOHC 24V MPFI GSV50R  
 Eng code: 2GR-FE  
 OAP .....OAP013

**Camry****Jul 2006 - Jan 2012**

2.4L 4 cyl DOHC 16V MPFI ACV40R  
 Eng code: 2AZ-FE  
 OAP (Alt Denso, 80A) .....OAP010

**Dec 2011 -**

2.5L 4 cyl V-DOHC 16V MPFI ASV50R  
 Eng code: 2AR-FE  
 OAP .....OAP009

**Corolla****May 2007 -**

1.8L 4 cyl DOHC 16V MPFI ZRE152R  
 Eng code: 2ZR-FE  
 OAP (Alt Denso, 100A) .....OAP009

**Estima****Jan 2000 - Jan 2006**

2.4L 4 cyl DOHC VVT 16V MPFI ACR40  
 Eng code: 2AZFE  
 OAP (Alt Denso, 150A) .....OAP010

**Jan 2006 -**

3.5L V6 DOHC VVT 24V MPFI GSR50 / 55  
 Eng code: 2GRFE  
 OAP (Alt Denso, 150A) .....OAP013

**FJ Cruiser****Mar 2011 -**

4.0L V6 DOHC 24V MPFI GSJ15R  
 Eng code: 1GR-FE  
 OAP (Alt Denso, 100A) .....OAP013

**Fortuner****Nov 2015 -**

2.8L 4 cyl DOHC 16V CRD Turbo Diesel GUN156R  
 Eng code: 1GDFTV  
 OAP .....OAP077

**Hiace****Mar 2005 - Oct 2006**

2.5L 4 cyl DOHC 16V DTFI Turbo Diesel KDH200R  
 Eng code: 2KD-FTV  
 OAP (Alt Denso, 70A, 80A, 100A) Must Remove Spacer/Washer From  
 Alternator Shaft.....OAP058

**Mar 2005 - Oct 2006**

2.5L 4 cyl DOHC 16V DTFI Turbo Diesel KDH220R  
 Eng code: 2KD-FTV  
 OAP (Alt Denso, 70A, 80A, 100A) Must Remove Spacer/Washer From  
 Alternator Shaft.....OAP058

**Mar 2005 - Oct 2006**

2.5L 4 cyl DOHC 16V DTFI Turbo Diesel KDH222R  
 Eng code: 2KD-FTV  
 OAP (Alt Denso, 70A, 80A, 100A) Must Remove Spacer/Washer From  
 Alternator Shaft.....OAP058

**Nov 2006 -**

3.0L 4 cyl DOHC 16V CRD Turbo KDH201R  
 Eng code: 1KD-FTV  
 OAP (Alt Denso, 130A) Must Remove Spacer/Washer From Alternator  
 Shaft.....OAP058

**Nov 2006 -**

3.0L 4 cyl DOHC 16V CRD Turbo KDH221R  
 Eng code: 1KD-FTV  
 OAP (Alt Denso, 130A) Must Remove Spacer/Washer From Alternator  
 Shaft.....OAP058

**Nov 2006 -**

3.0L 4 cyl DOHC 16V CRD Turbo KDH223R  
 Eng code: 1KD-FTV  
 OAP (Alt Denso, 130A) Must Remove Spacer/Washer From Alternator  
 Shaft.....OAP058

**Hilux****Oct 2001 - Jul 2004**

2.5L 4 cyl DOHC 16V CRD Turbo Diesel KDN165R  
 Eng code: 2KD-FTV  
 OAP (Alt Denso, 70A, 80A, 100A) Must Remove Spacer/Washer From  
 Alternator Shaft.....OAP058

**Apr 2005 -**

2.7L 4 cyl DOHC 16V MPFI TGN16R  
 Eng code: 2TR-FE  
 OAP (Must Remove Spacer/Washer From Alternator Shaft) OAP008

**Apr 2005 -**

3.0L 4 cyl DOHC 16V TDi Turbo Diesel KUN16R  
 Eng code: 1KD-FTV  
 OAP (Alt Denso, 80A, 27060-0L020) .....OAP077  
 OAP (Alt Denso, 80A, 27060-0L021) Must Remove Spacer/Washer From  
 Alternator Shaft.....OAP008

**Apr 2005 -**

3.0L 4 cyl DOHC 16V TDi Turbo Diesel KUN26R  
 Eng code: 1KD-FTV  
 OAP (Alt Denso, 80A, 27060-0L021) Must Remove Spacer/Washer From  
 Alternator Shaft.....OAP008  
 OAP (Alt Denso, 80A, 27060-0L020) .....OAP077

**Aug 2005 - Jul 2011**

2.5L 4 cyl DOHC 16V CRD Turbo Diesel KUN15R  
 Eng code: 2KD-FTV  
 OAP (Alt Denso, 70A, 80A, 100A) Must Remove Spacer/Washer From  
 Alternator Shaft.....OAP058

**Aug 2005 -**

2.5L 4 cyl DOHC 16V CRD Turbo Diesel KUN25R  
 Eng code: 2KD-FTV  
 OAP (Alt Denso, 80A) Must Remove Spacer/Washer From Alternator  
 Shaft.....OAP008

**Aug 2011 -**

2.5L 4 cyl DOHC 16V CRD Turbo Diesel KUN35L  
 Eng code: 2KD-FTV  
 OAP (Alt Denso, 80A, 27060-0L022) .....OAP077

**Jul 2015 -**

2.7L 4 cyl DOHC VVT 16V MPFI TGN121R  
 Eng code: 2TRFE  
 OAP (Alt, 80A) .....OAP013

**Oct 2015 -**

2.5L 4 cyl DOHC 16V CRD Turbo Diesel KUN112R  
 Eng code: 2KD-FTV  
 OAP (Alt Denso, 80A, 27060-0L022) .....OAP077

**Oct 2015 -**

2.8L 4 cyl DOHC 16V CRD Turbo Diesel GUN123R  
 Eng code: 1GDFTV  
 OAP .....OAP008

**Oct 2015 -**

2.4L 4 cyl DOHC 16V CRD Turbo Diesel GUN125R  
 Eng code: 2GDFTV  
 OAP .....OAP008

**Oct 2015 -**

2.8L 4 cyl DOHC 16V CRD Turbo Diesel GUN126R  
 Eng code: 1GDFTV  
 OAP .....OAP008

**Oct 2015 -**

2.8L 4 cyl DOHC 16V CRD Turbo Diesel GUN136R  
 Eng code: 1GDFTV  
 OAP .....OAP008

<b>Hilux Revo</b>	<b>Oct 2015 -</b>	3.0L 4 cyl DOHC 16V CRD Turbo Diesel KUN126 Eng code: 1KD-FTV OAP (Alt Denso, 80A, 27060-0L020) ..... OAP077 OAP (Alt Denso, 80A, 27060-0L021) Must Remove Spacer/Washer From Alternator Shaft..... OAP008	<b>Nov 2009 - Oct 2013</b>	3.0L 4 cyl DOHC 16V DTFI Turbo Diesel KDJ155R Eng code: 1KD-FTV OAP (Alt Denso, 100A) Must Remove Spacer/Washer From Alternator Shaft ..... OAP058
<b>Sep 2017 -</b>		2.4L 4 cyl DOHC 16V CRD Turbo Diesel GUN135R Eng code: 2GDFTV OAP ..... OAP008	<b>Nov 2009 - Aug 2015</b>	4.0L V6 DOHC 24V MPFI GRJ150R Eng code: 1GR-FE OAP (Alt Denso, 100A) ..... OAP013
<b>Hilux Revo</b>	<b>Oct 2015 -</b>	2.4L 4 cyl DOHC 16V CRD Turbo Diesel GUN122R Eng code: 2GDFTV OAP ..... OAP008	<b>Aug 2015 -</b>	2.8L 4 cyl DOHC VVT 16V CRD Turbo Diesel GDJ150R Eng code: 1GD-FTV OAP ..... OAP008
<b>Oct 2015 -</b>		2.4L 4 cyl DOHC 16V CRD Turbo Diesel GUN125R Eng code: 2GDFTV OAP ..... OAP008	<b>Sep 2015 -</b>	4.0L V6 DOHC 24V MPFI GRJ150R Eng code: 1GR-FE OAP (Alt Denso, 100A) ..... OAP013
<b>Oct 2015 -</b>		2.8L 4 cyl DOHC 16V CRD Turbo Diesel GUN126R Eng code: 1GDFTV OAP ..... OAP008	<b>RAV-4</b>	
<b>Oct 2015 -</b>		2.8L 4 cyl DOHC 16V CRD Turbo Diesel GUN123R Eng code: 1GDFTV OAP ..... OAP008	<b>Nov 2005 - Jan 2013</b>	2.4L 4 cyl DOHC 16V MPFI ACA33R Eng code: 2AZ-FE OAP ..... OAP010
<b>Oct 2015 -</b>		2.8L 4 cyl DOHC 16V CRD Turbo Diesel GUN136R Eng code: 1GDFTV OAP ..... OAP008	<b>Nov 2005 - Jan 2013</b>	2.4L 4 cyl DOHC 16V MPFI ACA38L Eng code: 2AZ-FE OAP ..... OAP010
<b>Kluger</b>			<b>Oct 2007 -</b>	3.5L V6 DOHC 24V MPFI GSU43R Eng code: 2GR-FE OAP (Alt Denso, 150A) ..... OAP013
<b>Aug 2007 - Feb 2014</b>		3.5L V6 DOHC 24V MPFI GSU40R Eng code: 2GR-FE OAP (Alt Denso, 150A) ..... OAP013	<b>Apr 2010 - Jan 2013</b>	2.4L 4 cyl DOHC 16V MPFI ACA38R Eng code: 2AZ-FE OAP ..... OAP010
<b>Aug 2007 - Feb 2014</b>		3.5L V6 DOHC 24V MPFI GSU45R Eng code: 2GR-FE OAP (Alt Denso, 150A) ..... OAP013	<b>Feb 2013 -</b>	2.0L 4 cyl DOHC 16V MPFI ZSA42R Eng code: 3ZR-FE OAP (Alt Denso, 100A) ..... OAP009
<b>Mar 2014 -</b>		3.5L V6 DOHC 24V MPFI GSU50R Eng code: 2GR-FE OAP (Alt Denso, 150A) ..... OAP013	<b>Feb 2013 -</b>	2.5L 4 cyl DOHC 16V MPFI ASA44R Eng code: 2AR-FE OAP ..... OAP009
<b>Mar 2014 -</b>		3.5L V6 DOHC 24V MPFI GSU55R Eng code: 2GR-FE OAP (Alt Denso, 150A) ..... OAP013	<b>Regius</b>	
<b>Landcruiser</b>			<b>Mar 2005 -</b>	2.7L 4 cyl DOHC 16V MPFI TRH Eng code: 2TR-FE OAP (Alt Denso, 130A) ..... OAP013
<b>Sep 2015 -</b>		4.0L V6 DOHC VVT 24V MPFI GRJ150R Eng code: 1GR-FE OAP (Alt Denso, 100A) ..... OAP013	<b>Rukus</b>	
<b>Landcruiser Prado</b>			<b>May 2010 -</b>	2.4L 4 cyl DOHC 16V MPFI AZE151R Eng code: 2AZ-FE OAP (Alt Denso, 100A) ..... OAP010
<b>Nov 2006 - Oct 2009</b>		3.0L 4 cyl DOHC 16V DTFI Turbo Diesel KDJ120R Eng code: 1KD-FTV OAP (Alt Denso, 80A) Must Remove Spacer/Washer From Alternator Shaft..... OAP008	<b>Tarago</b>	
<b>Nov 2009 - Aug 2015</b>		3.0L 4 cyl DOHC 16V Turbo Diesel KDJ150R Eng code: 1KD-FTV OAP (Alt Denso, 100A, 130A) Must Remove Spacer/Washer From Alternator Shaft..... OAP058	<b>Jun 2000 - Feb 2006</b>	2.4L 4 cyl DOHC 16V MPFI ACR30R Eng code: 2AZ-FE OAP (Alt Denso, 150A) ..... OAP010
			<b>Mar 2005 -</b>	2.4L 4 cyl DOHC 16V MPFI ACR50R Eng code: 2AZ-FE OAP (Alt Denso, 150A) ..... OAP010

**Feb 2007 -**

3.5L V6 DOHC 24V MPFI GSR50R  
 Eng code: 2GR-FE  
 OAP (Alt Denso, 150A) .....OAP013

**Volkswagen****Amarok****Feb 2011 - Jan 2013**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel 2H TDI400  
 Eng code: CDCA  
 OAP (Alt Bosch, Valeo) .....OAP023

**May 2011 - Jan 2013**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel 2H TDI340  
 Eng code: CDBA  
 OAP (Alt Bosch, Valeo) .....OAP023

**Jul 2012 -**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel 2H TDI420  
 Eng code: CSHA  
 OAP (Alt Bosch, Valeo) .....OAP023

**Jan 2013 -**

2.0L 4 cyl DOHC 16V CRD Turbo Diesel 2H TDI340  
 Eng code: CNFB  
 OAP (Alt Bosch, Valeo) .....OAP023

**Beetle****Jan 2000 - Nov 2003**

2.0L 4 cyl SOHC 8V MPFI 9C  
 Eng code: AQY  
 OAP (Alt Bosch, Hitachi, Valeo, 120A) .....OAP022

**Sep 2001 - Sep 2005**

1.8L 4 cyl DOHC 20V TMPFI Turbo 9C  
 Eng code: AWU  
 OAP (Alt Bosch, Hitachi, Valeo, 120A) .....OAP022

**Jan 2002 - Sep 2005**

1.6L 4 cyl SOHC 8V MPFI 9C  
 Eng code: AYD  
 OAP (Alt Bosch, Hitachi, Valeo, 120A) .....OAP022

**Jan 2002 - Sep 2005**

2.0L 4 cyl SOHC 8V MPFI 9C  
 Eng code: BER  
 OAP (Alt Bosch, Hitachi, Valeo, 120A) .....OAP022

**Jan 2002 - Oct 2011**

1.6L 4 cyl SOHC 8V MPFI 9C  
 Eng code: BFS  
 OAP (Alt Bosch, Hitachi, Valeo, 120A) .....OAP022

**Jul 2003 - Oct 2011**

2.0L 4 cyl SOHC 8V MPFI 9C  
 Eng code: AZJ  
 OAP (Alt Bosch, Hitachi, Valeo, 120A) .....OAP022

**Jul 2003 - Oct 2011**

2.0L 4 cyl SOHC 8V MPFI 1Y  
 Eng code: AZJ  
 OAP (Alt Bosch, Hitachi, Valeo, 120A) .....OAP022

**Feb 2013 -**

1.4L 4 cyl DOHC 16V TFSI Turbo 1L  
 Eng code: CTHD  
 OAP (Alt Bosch, Valeo) .....OAP028

**Bora****Dec 1999 - Jun 2001**

2.3L V5 SOHC 10V MPFI 1J  
 Eng code: AGZ  
 OAP (Alt Bosch, 70A, 90A, Hitachi 120A, Valeo, 70A, 90A) ..OAP022

**Dec 1999 - Sep 2005**

2.0L 4 cyl SOHC 8V MPFI 1J  
 Eng code: AZJ  
 OAP .....OAP022

**2001 - 2003**

2.8L V6 DOHC 24V MPFI 1J  
 Eng code: AUE  
 OAP (Alt Bosch, 70A, 90A, 120A, Hitachi 120A, Valeo, 70A, 90A, 120A)  
 OAP022

**Jul 2001 - Feb 2005**

2.8L V6 DOHC 24V MPFI 1J  
 Eng code: BDE  
 OAP (Alt Bosch, 70A, 90A, 120A, Hitachi 120A, Valeo, 70A, 90A, 120A)  
 OAP022

**Jul 2001 - Jun 2007**

2.3L V5 SOHC 20V MPFI 1J  
 Eng code: AQN  
 OAP .....OAP022

**Caddy****Jan 2005 - Nov 2010**

1.6L 4 cyl SOHC 8V MPFI  
 Eng code: BSE  
 OAP (Alt Bosch, 140A) .....OAP022

**Jan 2005 - Jul 2006**

1.9L 4 cyl SOHC 8V Turbo Diesel 2K  
 Eng code: BJB  
 OAP .....OAP022

**Aug 2006 - Nov 2010**

1.9L 4 cyl SOHC 8V Turbo Diesel 2K  
 Eng code: BLS  
 OAP (Alt Bosch, Valeo, 110A, 140A) .....OAP022

**Dec 2010 - Nov 2015**

1.2L 4 cyl DOHC 8V TMPFI Turbo 2K  
 Eng code: CBZB  
 OAP (Alt Bosch, 110A, Valeo, 140A) .....OAP028

**Dec 2010 - Nov 2015**

1.6L 4 cyl DOHC 16V DTFI Turbo Diesel 2K  
 Eng code: CAYD  
 OAP (Alt Bosch, 110A, 140A, Valeo 110A, 140A) .....OAP022

**Dec 2010 - Nov 2015**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel 2K  
 Eng code: CFHC  
 OAP (Alt Bosch, Valeo, 110A 140A) .....OAP022

**Caravelle****Sep 2000 - Jun 2005**

2.4L 5 cyl SOHC 10V Di Diesel T4  
 Eng code: AUF  
 OAP (Alt Bosch, 150A) .....OAP036

**Aug 2004 - Jul 2006**

2.5L 4 cyl SOHC 10V DTFI Turbo Diesel T5  
 Eng code: AXE  
 OAP Pulley .....OAP043

**Apr 2008 - Feb 2010**

2.5L 4 cyl SOHC 10V DTFI Turbo Diesel T5  
 Eng code: BPC  
 OAP Pulley .....OAP043

**Mar 2010 - Jan 2016**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel T5  
 Eng code: CCHA  
 OAP .....OAP023

**Dec 2015 -**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel T6  
 Eng code: CAAC  
 OAP .....OAP023

**CC****Jul 2012 - Jan 2013**

2.0L 4 cyl DOHC 16V CRD Turbo Diesel 3C  
 Eng code: CFGB  
 OAP (Alt Bosch 140A, 180A) .....OAP022

**Feb 2013 -**

2.0L 4 cyl DOHC 16V CRD Turbo Diesel 3C  
 Eng code: CFGC  
 OAP (Alt Bosch 140A, 180A) ..... OAP022

**Crafter****2007 - 2008**

2.5L 5 cyl SOHC 10V CRD Turbo  
 Eng code: BJJ  
 OAP (Alt Bosch, 110A, 140A) ..... OAP022

**Mar 2007 - Jan 2012**

2.5L 5 cyl SOHC 10V DTFI Turbo Diesel  
 Eng code: BJK  
 OAP (Alt Bosch, 110A, 140A) ..... OAP022

**Mar 2007 -**

2.5L 5 cyl SOHC 10V DTFI Turbo Diesel  
 Eng code: CECA  
 OAP (Alt Bosch, 110A, 140A, 180A) ..... OAP022

**Mar 2007 - Jan 2012**

2.5L 5 cyl SOHC 10V DTFI Turbo Diesel  
 Eng code: BJL  
 OAP (Alt Bosch, 110A, 140A) ..... OAP022

**Mar 2007 - Jan 2012**

2.5L 5 cyl SOHC 10V DTFI Turbo Diesel  
 Eng code: BJM  
 OAP (Alt Bosch, 110A, 140A, 180A) ..... OAP022

**EOS****Mar 2007 - Jul 2008**

2.0L 4 cyl SOHC 8V DTFI Turbo Diesel  
 Eng code: BMM  
 OAP ..... OAP022

**Mar 2007 - Jul 2008**

2.0L 4 cyl DOHC 16V TMPFI Turbo 1F  
 Eng code: BWA  
 OAP (Alt Bosch, Valeo, 14.55mm Vee Pos'n, 50.00mm OD) ..... OAP022  
 OAP (Alt Bosch, Valeo, 14.55mm Vee Pos'n, 55.90mm OD) ..... OAP023  
 OAP (Alt Bosch, Valeo, 12.80mm Vee Pos'n, 56.00mm OD) ..... OAP076

**Aug 2008 - Apr 2010**

2.0L 4 cyl DOHC 16V TMPFI Turbo 1F  
 Eng code: CAWB  
 OAP (Alt Bosch 110A, 120A, 140A, 180A, Valeo 110A, 120A, 140A) ..... OAP022  
 OAP (Alt Bosch, Valeo 150A) ..... OAP023  
 OAP (Alt Bosch 150A, Valeo 150A) ..... OAP076

**Aug 2008 - Apr 2011**

2.0L 4 cyl DOHC 16V TDi Turbo Diesel 1F  
 Eng code: CBAB  
 OAP ..... OAP022

**May 2010 -**

2.0L 4 cyl DOHC 16V TMPFI Turbo 1F  
 Eng code: CCZB  
 OAP (Alt Bosch, Valeo) ..... OAP076

**Golf****1997 - 2004**

1.9L 4 cyl SOHC 8V TDi Turbo Diesel Type 4  
 Eng code: AHF  
 OAP (Alt Bosch 70A, 90A, 120A) ..... OAP082

**Oct 1998 - Feb 2002**

1.6L 4 cyl SOHC 8V MPFI Type 4  
 Eng code: AKL  
 OAP ..... OAP022

**Nov 1999 - Mar 2001**

1.6L 4 cyl SOHC 8V MPFI Type 4  
 Eng code: AEH  
 OAP (Alt Bosch, 70A, 90A, 120A, Hitachi, 120A, Valeo, 70A, 90A, 120A) ..... OAP022

**Jul 2001 - Feb 2004**

2.8L V6 DOHC 24V MPFI Type 4  
 Eng code: BDE  
 OAP (Alt Bosch, 70A, 90A, 120A, Hitachi, 120A, Valeo, 70A, 90A, 110A, 120A) ..... OAP022

**2001 - 2005**

2.4L V5 DOHC 20V EFI Type 4  
 Eng code: AQN  
 OAP (Alt Bosch 70A, 90A, 120A, Hitachi 120A, Valeo 70A, 90A, 120A) ..... OAP022

**Mar 2002 - May 2003**

1.6L 4 cyl SOHC 8V MPFI Type 4  
 Eng code: BFQ  
 OAP (Alt Bosch, Hitachi, Valeo, 120A) ..... OAP022

**2002 - 2003**

1.9L 4 cyl SOHC 8V DTFI Turbo Diesel Type 4  
 Eng code: ATD  
 OAP (Alt Bosch, 70A, 90A, 120A, Hitachi, 120A, Valeo, 70A, 90A, 120A) ..... OAP022

**Mar 2002 - Jul 2004**

1.6L 4 cyl SOHC 8V MPFI Type 4  
 Eng code: AVU  
 OAP (Alt Bosch, Hitachi, Valeo, 120A) ..... OAP022

**Mar 2002 - Jul 2004**

2.0L 4 cyl SOHC 8V MPFI Type 4  
 Eng code: APK  
 OAP ..... OAP022

**2003 -**

2.0L 4 cyl DOHC 16V MPFI Type 5  
 Eng code: AXW  
 OAP (Alt Bosch, Valeo, 140A) ..... OAP022

**Aug 2004 - Feb 2009**

1.6L 4 cyl SOHC 8V MPFI Type 5  
 Eng code: BGU  
 OAP (Alt Bosch, Valeo, 110A, 140A) ..... OAP022

**Aug 2004 - Feb 2009**

1.6L 4 cyl SOHC 8V MPFI Type 5  
 Eng code: BSE  
 OAP ..... OAP022

**Aug 2004 - Feb 2009**

1.9L 4 cyl SOHC 8V DTFI Turbo Diesel Type 5  
 Eng code: BKC  
 OAP (Alt Bosch, Valeo, 110A, 140A) ..... OAP022

**Aug 2004 - Feb 2009**

2.0L 4 cyl DOHC 16V MPFI Type 5  
 Eng code: BLX  
 OAP (Alt Bosch, Valeo, 140A) ..... OAP022

**Aug 2004 - Feb 2009**

2.0L 4 cyl DOHC 16V MPFI Type 5  
 Eng code: BLR  
 OAP (Alt Bosch, Valeo, 140A) ..... OAP022

**Aug 2004 - Feb 2009**

2.0L 4 cyl DOHC 16V MPFI Type 5  
 Eng code: BVY  
 OAP (Alt Bosch, Valeo, 140A) ..... OAP022

**Aug 2004 -**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel Type 5  
 Eng code: BKD  
 OAP (Alt Bosch, Valeo, 110A, 140A) ..... OAP022

**May 2005 - Sep 2009**

2.0L 4 cyl DOHC 16V TMPFI Turbo Type 5  
 Eng code: AXX  
 OAP (Alt Bosch 110A, 120A, 180A) ..... OAP022  
 OAP (Alt Bosch 150A, Valeo 150A) ..... OAP076

**2005 - Sep 2009**

2.0L 4 cyl DOHC 16V TMPFI Turbo Type 5  
 Eng code: BWA  
 OAP (Alt Bosch 110A, 120A, 180A) .....OAP022  
 OAP (Alt Bosch 150A, Valeo 150A) .....OAP076

**Sep 2005 - Jul 2007**

2.0L 4 cyl SOHC 16V DTFI Turbo Diesel Type 5  
 Eng code: BMM  
 OAP (Alt Bosch, Valeo, 110A, 140A) .....OAP022

**2006 - 2007**

1.9L 4 cyl SOHC 8V DTFI Turbo Diesel Type 5  
 Eng code: BLS  
 OAP (Alt Bosch, Valeo, 110A, 140A) .....OAP022

**Jul 2006 - Mar 2010**

3.2L V6 DOHC 24V MPFI Type 5  
 Eng code: BUB  
 OAP (Alt Bosch, Valeo, 110A) .....OAP022

**May 2007 - Sep 2008**

1.4L 4 cyl DOHC 16V STMPFI Turbo Type 5  
 Eng code: BLG  
 OAP (Alt Valeo, 110A, Bosch, 140A) .....OAP028

**Mar 2009 - Feb 2014**

1.4L 4 cyl DOHC 16V TMPFI Turbo Type 6  
 Eng code: CAXA  
 OAP (Alt Valeo, 110A, 140A, Bosch, 140A) .....OAP028

**Mar 2009 - Aug 2012**

1.4L 4 cyl DOHC 16V DTFI Turbo Type 6  
 Eng code: CAVD  
 OAP (Alt Valeo, Bosch) .....OAP028

**Aug 2009 - Jan 2014**

1.6L 4 cyl DOHC 16V DTFI Turbo Diesel Type 6  
 Eng code: CAYC  
 OAP (Alt Bosch, Valeo, 140A) .....OAP022

**Oct 2009 - Aug 2013**

2.0L 4 cyl DOHC 16V TFSI Turbo Type 6  
 Eng code: CCZB  
 OAP .....OAP076

**Mar 2009 - Sep 2010**

2.0L 4 cyl DOHC 16V TDi Turbo Diesel Type 6  
 Eng code: CBAB  
 OAP (Alt Bosch, Valeo, 140A) .....OAP022

**Mar 2010 - Jan 2014**

2.0L 4 cyl DOHC 16V TDi Turbo Diesel Type 6  
 Eng code: CFHC  
 OAP .....OAP022

**Jun 2010 - Sep 2010**

2.0L 4 cyl DOHC 16V TDi Turbo Diesel Type 6  
 Eng code: CBBB  
 OAP (Alt Bosch, Valeo, 140A) .....OAP022

**Jun 2010 -**

2.0L 4 cyl DOHC 16V TMPFI Turbo Type 6  
 Eng code: CDLC  
 OAP (Alt Bosch, Valeo, 140A) .....OAP022

**Oct 2010 -**

1.2L 4 cyl DOHC 16V TDi Turbo Type 6  
 Eng code: CBZB  
 OAP (Alt Bosch, 140A, Valeo, 110A) .....OAP028

**Oct 2010 -**

2.0L 4 cyl DOHC 16V CRD Turbo Diesel Type 6  
 Eng code: CFGB  
 OAP .....OAP022

**Oct 2010 - Jan 2013**

2.0L 4 cyl DOHC 16V Di Turbo Diesel Type 6  
 Eng code: CFFB  
 OAP .....OAP022

**Sep 2011 - Jul 2012**

2.0L 4 cyl DOHC VVT 16V Di Turbo TYPE 6  
 Eng code: CDLG  
 OAP .....OAP022

**Sep 2012 - Jan 2014**

1.4L 4 cyl DOHC 16V TFSI Turbo Type 6  
 Eng code: CTHD  
 OAP (Alt Bosch, Valeo) .....OAP028

**Feb 2013 -**

1.6L 4 cyl DOHC 16V I/C Turbo Diesel Type 7  
 Eng code: CLHA  
 OAP (Alt Bosch, Valeo) .....OAP023

**Apr 2013 -**

2.0L 4 cyl DOHC 16V TDi Turbo Diesel Type 7  
 Eng code: CRBC  
 OAP (Alt Bosch, Valeo) .....OAP023

**Jetta****Aug 2004 - Jun 2008**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel 1K  
 Eng code: BKD  
 OAP (Alt Bosch, Valeo, 110A, 140A) .....OAP022

**Feb 2005 - Feb 2009**

2.0L 4 cyl DOHC 16V MPFI 1K  
 Eng code: BLR  
 OAP (Alt Bosch, 140A) .....OAP022

**2006 - 2007**

1.9L 4 cyl SOHC 8V DTFI Diesel 1K  
 Eng code: BXE  
 OAP .....OAP022

**2006 - 2007**

1.9L 4 cyl SOHC 8V DTFI Diesel 1K  
 Eng code: BLS  
 OAP (Alt Bosch, Valeo, 110A, 140A) .....OAP022

**Feb 2006 - Feb 2009**

2.0L 4 cyl DOHC 16V MPFI 1K  
 Eng code: BVY  
 OAP (Alt Bosch, 140A) .....OAP022

**Feb 2006 - Oct 2009**

2.0L 4 cyl DOHC 16V TMPFI Turbo 1K  
 Eng code: BWA  
 OAP (Alt Bosch, 140A) .....OAP022

**Feb 2009 - Jul 2011**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel  
 Eng code: CBDB  
 OAP (Alt Bosch, Valeo, 110A, 140A) .....OAP022

**Feb 2009 - Aug 2012**

1.4L 4 cyl DOHC 16V STMPFI Turbo 1K  
 Eng code: CAVD  
 OAP (Alt Bosch, Valeo) .....OAP028

**Nov 2009 - Jul 2011**

1.6L 4 cyl DOHC 16V DTFI Turbo Diesel 1KM  
 Eng code: CAYC  
 OAP (Alt Bosch, Valeo, 140A) .....OAP022

**Nov 2009 - Jul 2011**

2.0L 4 cyl DOHC 16V TMPFI Turbo 1K  
 Eng code: CAWB  
 OAP (Alt Bosch, Valeo) .....OAP022

**Aug 2011 - Aug 2016**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel 1B  
 Eng code: CFFB  
 OAP (Alt Bosch, 140A) .....OAP022

**Aug 2011 -**

2.0L 4 cyl DOHC 16V TMPFI Turbo 1B  
 Eng code: CCZA  
 OAP (Alt Bosch, Valeo) .....OAP022

**Sep 2012 -**

1.4L 4 cyl DOHC 16V STMPFI Turbo 1B  
Eng code: CTHD  
OAP (Alt Bosch, Valeo) ..... OAP028

**LT 35****Aug 2004 - Feb 2007**

2.8L 4 cyl SOHC 12V DTFI Turbo Diesel  
Eng code: AUH  
OAP (Alt Bosch, 90A, 120A) ..... OAP036

**Multivan****Jun 2005 - Feb 2010**

2.5L 5 cyl SOHC 10V DTFI Turbo Diesel T5  
Eng code: AXE  
OAP Pulley ..... OAP043

**Jun 2005 - Feb 2010**

3.2L V6 DOHC 24V MPFI T5  
Eng code: BKK  
OAP (Alt Bosch, 120A, 150A, 180A) ..... OAP022

**Mar 2010 - Aug 2011**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel T5  
Eng code: CAAC  
OAP (Alt Bosch, Valeo) ..... OAP023

**Mar 2010 -**

2.0L 4 cyl DOHC 10V DTFI Twin Turbo Diesel T5  
Eng code: CFCA  
OAP (Alt Bosch, Valeo) ..... OAP023

**Sep 2011 -**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel T5  
Eng code: CCHA  
OAP (Alt Bosch, 110A, 140A) ..... OAP023

**Dec 2015 -**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel T6  
Eng code: CAAC  
OAP (Alt Bosch, 110A, 140A) ..... OAP023

**Passat****1997 - 2000**

1.8L 4 cyl DOHC 20V TMPFI Turbo 3B  
Eng code: AEB  
OAP (Alt Valeo, 120A) ..... OAP142

**Mar 1998 - Jun 2000**

1.8L 4 cyl DOHC 20V MPFI 3B  
Eng code: ADR  
OAP (Alt Valeo, 120A) ..... OAP142

**May 2001 - Oct 2002**

1.8L 4 cyl DOHC 20V EFI Turbo 3B  
Eng code: AWT  
OAP (Alt Bosch, Valeo) ..... OAP142

**2002 - 2003**

1.9L 4 cyl DOHC 16V DTFI Turbo Diesel 3B  
Eng code: AVF  
OAP (Alt Bosch, 90A, 120A, 140A, 150A, Valeo 90A, 120A, 140A) OAP142

**Nov 2002 - Nov 2005**

2.3L V5 DOHC 20V MPFI 3B  
Eng code: AZX  
OAP (Alt Bosch, Valeo, 110A, 140A) ..... OAP022

**Mar 2006 - Jul 2008**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel 3C  
Eng code: BKP  
OAP (Alt Bosch, Valeo, 140A, 180A) ..... OAP022

**Mar 2006 - Jul 2008**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel 3C  
Eng code: BMR  
OAP (Alt Bosch, Valeo, 140A, 180A) ..... OAP022

**Mar 2006 - Jul 2008**

2.0L 4 cyl DOHC 16V TMPFI Turbo  
Eng code: BWA  
OAP (Alt Bosch, Valeo, 140A, 180A) ..... OAP022

**Mar 2006 - Jul 2008**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel 3C  
Eng code: BMP  
OAP (Alt Bosch, Valeo, 140A, 180A) ..... OAP022

**2006 - 2009**

2.0L 4 cyl DOHC 16V EFI 3C  
Eng code: BVY  
OAP (Alt Bosch, Valeo, 140A) ..... OAP022

**Mar 2006 - Mar 2011**

3.2L V6 DOHC 24V MPFI 3C  
Eng code: AXZ  
OAP (Alt Bosch, Valeo, 140A, 180A) ..... OAP022  
OAP (Alt Valeo, 140A, 180A, Bosch 180A) ..... OAP023

**Jan 2008 - Jun 2012**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel 3C  
Eng code: CBBB  
OAP (Alt Bosch, Valeo) ..... OAP022

**Jan 2008 - Jan 2010**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel 3C  
Eng code: CBAB  
OAP (Alt Bosch, Valeo, 140A) ..... OAP022

**Aug 2008 -**

3.6L V6 DOHC 24V MPFI 3C  
Eng code: BWS  
OAP (Alt Valeo, 140A, Bosch 180A) ..... OAP023

**Feb 2010 -**

1.8L 4 cyl DOHC 16V TMPFI 3C  
Eng code: CDAA  
OAP (Alt Bosch, Valeo, 140A) ..... OAP076

**Feb 2010 - Jan 2013**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel 3C  
Eng code: CFGB  
OAP (Alt Bosch, Valeo, 140A, 180A) ..... OAP022

**Polo****Nov 2005 - Apr 2010**

1.9L 4 cyl SOHC 8V DTFI Turbo Diesel 9N  
Eng code: AXR  
OAP (Alt Bosch, 70A, 90A, 120A, Hitachi, 120A) ..... OAP022

**Nov 2010 - Jul 2012**

1.4L 4 cyl DOHC 16V STMPFI 6R  
Eng code: CAVE  
OAP (Alt Bosch, Valeo) ..... OAP028

**May 2010 - Jul 2014**

1.2L 4 cyl SOHC 8V TMPFI Turbo 6R  
Eng code: CBZB  
OAP (Alt Valeo, 110A, Bosch, 140A) ..... OAP028

**May 2010 - Jul 2014**

1.6L 4 cyl SOHC 8V DTFI Turbo Diesel 6R  
Eng code: CAYB  
OAP (Alt Bosch, Valeo) ..... OAP022

**Aug 2012 - Nov 2014**

1.4L 4 cyl DOHC 16V STMPFI 6R  
Eng code: CTHE  
OAP (Alt Bosch, Valeo) ..... OAP028

**Scirocco****2009 - 2011**

2.0L 4 cyl DOHC 16V Direct FI Turbo  
Eng code: CAWB  
OAP (Alt Bosch, Valeo, 140A) ..... OAP076

**2009 - 2011**

1.4L 4 cyl DOHC 16V Direct FI Turbo  
 Eng code: CAVD  
 OAP (Alt Bosch, Valeo, 140A) .....OAP028

**Feb 2012 -**

2.0L 4 cyl DOHC 16V TMPFI Turbo 1S  
 Eng code: CDLC  
 OAP (Alt Bosch, Valeo) .....OAP022

**Tiguan****Mar 2008 - Oct 2010**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel 5NC  
 Eng code: CBAB  
 OAP (Alt Bosch, Valeo, 140A) .....OAP022

**May 2008 - Aug 2010**

2.0L 4 cyl DOHC 16V TMPFI Turbo 5NC  
 Eng code: CAWA  
 OAP (Alt Bosch, Valeo, 140A) .....OAP076

**Aug 2008 - Sep 2011**

2.0L 4 cyl DOHC 16V TMPFI Turbo 5NC  
 Eng code: CAWB  
 OAP (Alt Bosch, Valeo, 140A) .....OAP076

**Sep 2010 - Sep 2011**

2.0L 4 cyl DOHC 16V TMPFI Turbo 5NC  
 Eng code: CCZA  
 OAP (Alt Bosch, Valeo, 140A) .....OAP076

**Sep 2010 -**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel 5NC  
 Eng code: CFFB  
 OAP (Alt Bosch, Valeo) .....OAP022

**Oct 2011 -**

2.0L 4 cyl DOHC 16V TMPFI Turbo 5N  
 Eng code: CCZD  
 OAP (Alt Bosch, Valeo) .....OAP076

**Oct 2011 -**

2.0L 4 cyl DOHC 16V TMPFI Turbo 5N  
 Eng code: CCZB  
 OAP (Alt Bosch, Valeo) .....OAP076

**Oct 2011 - Jul 2013**

1.4L 4 cyl DOHC 16V SCMPFI Turbo 5N  
 Eng code: CAVD  
 OAP (Alt Bosch, Valeo) .....OAP028

**Sep 2014 -**

2.0L 4 cyl DOHC 16V CRD Turbo Diesel 5N  
 Eng code: CFGC  
 OAP (Alt Bosch 140A, 180A) .....OAP022

**Touareg****Sep 2003 - Oct 2006**

3.2L V6 DOHC 24V MPFI 7L  
 Eng code: AZZ  
 OAP (Alt Delphi, 90A, Hitachi 90A).....OAP056

**Sep 2003 - Oct 2006**

3.2L V6 DOHC 24V MPFI 7L  
 Eng code: BKJ  
 OAP (Alt Delphi/Hitachi 190A).....OAP056

**Sep 2003 - Oct 2006**

3.2L V6 DOHC 24V MPFI 7L  
 Eng code: BMV  
 OAP .....OAP056

**May 2004 - Oct 2006**

4.9L V10 DOHC 40V Turbo Diesel 7L  
 Eng code: AYH  
 OAP (Alt Delphi, Hitachi 190A) Alt;OAP A/C .....OAP043

**Oct 2004 - Nov 2009**

2.5L 5 cyl SOHC 10V DTFI Turbo Diesel 7L  
 Eng code: BAC  
 OAP (Alt Bosch, 150A, 180A) Alt;OAP A/C .....OAP043

**Nov 2006 - Aug 2010**

4.9L V10 DOHC 40V Turbo Diesel 7L  
 Eng code: BLE  
 OAP (Alt Delphi 190A, Hitachi 190A) Alt;OAP A/C .....OAP043

**Nov 2006 - Aug 2010**

3.6L V6 DOHC 24V MPFI 7L  
 Eng code: BHK  
 OAP (Alt Bosch, 150A, Valeo, 180A, Hitachi, 190A) .....OAP056

**Mar 2007 - Feb 2010**

4.9L V10 DOHC 40V Turbo Diesel 7L  
 Eng code: CBW  
 OAP (Alt Hitachi, 190A) Alt;OAP A/C .....OAP043

**Transporter****Jan 1994 - Jul 2004**

2.5L 5 cyl SOHC 10V MPFI T4  
 Eng code: ACU  
 OAP (From 1/94) .....OAP070

**Sep 1994 - Jul 2004**

2.0L 4 cyl SOHC 8V MPFI T4  
 Eng code: AAC  
 OAP (Alt Bosch, 90A) .....OAP070

**Jan 1996 - Jan 2000**

2.4L 5 cyl SOHC 10V Diesel T4  
 Eng code: AAB  
 OAP (Alt Bosch, 90A, 100A) .....OAP070

**1997 - 1999**

2.4L 5 cyl SOHC 10V Di Turbo T4  
 Eng code: AJA  
 OAP (Alt Bosch, 90A, 100A) .....OAP070

**Oct 1999 - Jul 2004**

2.5L 5 cyl SOHC 10V DT Turbo Diesel T4  
 Eng code: ACV  
 OAP (Alt Bosch, 150A) .....OAP036

**Oct 1999 - Jul 2004**

2.5L 5 cyl SOHC 10V DT Turbo Diesel T4  
 Eng code: AUF  
 OAP (Alt Bosch, 150A) .....OAP036

**Oct 1999 - Jul 2004**

2.5L 5 cyl SOHC 10V DT Turbo Diesel T4  
 Eng code: AYC  
 OAP (Alt Bosch, 150A) .....OAP036

**Aug 2004 - Feb 2010**

1.9L 4 cyl SOHC 8V DTFI Turbo Diesel T5  
 Eng code: AXB  
 OAP (Alt Bosch, 90A) .....OAP022

**Aug 2004 - Feb 2010**

2.0L 4 cyl SOHC 8V MPFI T5  
 Eng code: AXA  
 OAP (Alt Bosch, 120A, 140A) .....OAP022

**Aug 2004 - Jul 2006**

1.9L 4 cyl SOHC 8V Di Turbo Diesel T5  
 Eng code: AXC  
 OAP (Alt Bosch, 90A) .....OAP022

**Aug 2004 - Jul 2006**

2.5L 5 cyl SOHC 10V DTFI Turbo Diesel T5  
 Eng code: AXE  
 OAP Pulley .....OAP043

**Oct 2004 - Jul 2006**

2.5 L 5 cyl SOHC 10V EFI Turbo Diesel T5  
 Eng code: AXD  
 OAP Pulley .....OAP043

**Mar 2005 - Aug 2008**

3.2L V6 DOHC 24V MPFI T5  
Eng code: BKK  
OAP (Alt Bosch, 120A) ..... OAP022

**Jul 2006 -**

1.9L 4 cyl SOHC 8V DTFI Turbo Diesel T5  
Eng code: BRR  
OAP (Alt Bosch, Valeo) ..... OAP022

**Aug 2006 - Feb 2010**

2.5L 5 cyl SOHC 10V EFI Turbo Diesel T5  
Eng code: BNZ  
OAP Pulley ..... OAP043

**Aug 2006 - Feb 2010**

2.5L 5 cyl SOHC 10V EFI Turbo Diesel T5  
Eng code: BPC  
OAP Pulley ..... OAP043

**Mar 2010 -**

1.9L 4 cyl SOHC 8V DTFI Turbo Diesel T5  
Eng code: BRS  
OAP (Alt Bosch, 90A) ..... OAP022

**Mar 2010 -**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel T5  
Eng code: CAAB  
OAP (Alt Bosch, 110A, 140A, 180A) ..... OAP023

**Mar 2010 -**

2.0L 4 cyl DOHC 16V DTFI Turbo Diesel T5  
Eng code: CAAC  
OAP (Alt Bosch, 110A, 140A, 180A) ..... OAP023

**Mar 2010 -**

2.0L 4 cyl DOHC 16V DTFI Twin Turbo Diesel T5  
Eng code: CFCA  
OAP (Alt Bosch, 110A, 140A, 180A) ..... OAP023

**Up****Oct 2012 -**

1.0L 3 cyl DOHC 12V MPFI AA  
Eng code: CHYB  
OAP (Alt Bosch, Valeo) ..... OAP028

**Volvo****850****Oct 1993 - Jan 1997**

2.3L 5 cyl DOHC 20V TMPFI Turbo  
Eng code: B5234T  
OAP (Alt Bosch, 100A) ..... OAP053

**May 1996 - Jan 1997**

2.4L 5 cyl DOHC 20V TEFI Turbo  
Eng code: B5254T  
OAP (Alt Bosch, 100A) ..... OAP053

**C70****Jan 1998 - Feb 2003**

2.3L 5 cyl DOHC 20V TMPFI Turbo  
Eng code: B5234T3  
OAP (Alt Bosch, 120A) ..... OAP032  
OAP (Alt Bosch, 100A) ..... OAP053

**Sep 1999 - Dec 2002**

2.4L 5 cyl DOHC 20V TMPFI Turbo  
Eng code: B5254T  
OAP (Alt Bosch, 120A) ..... OAP032  
OAP (Alt Bosch, 100A) ..... OAP053

**Dec 2006 - Aug 2010**

2.5L 5 cyl DOHC 20V TMPFI Turbo  
Eng code: B5254T3  
OAP (Alt Denso, 150A) ..... OAP110

**Sep 2010 -**

2.5L 5 cyl DOHC 20V TMPFI Turbo  
Eng code: B5254T7  
OAP (Alt Denso, 150A) ..... OAP110

**S40****Feb 1997 - Sep 2000**

1.9L 4 cyl DOHC 16V MPFI  
Eng code: B4204S  
OAP (Alt Denso, 120A) ..... OAP069

**Sep 1997 - Jul 1999**

1.9L 4 cyl DOHC 16V TMPFI Turbo  
Eng code: B4194T  
OAP (Alt Denso, 120A) ..... OAP069

**Feb 1998 - Jul 1999**

1.9L 4 cyl DOHC 16V TMPFI Turbo  
Eng code: B4204T  
OAP (Alt Denso, 120A) ..... OAP069

**Jan 1999 - Sep 2000**

1.9L 4 cyl DOHC 16V TMPFI Turbo  
Eng code: B4194T2  
OAP (Alt Denso, 120A) ..... OAP069

**Jul 1999 - Mar 2001**

1.8L 4 cyl DOHC 16V MPFI  
Eng code: B4184S2  
OAP (Alt Denso, 120A) ..... OAP069

**Aug 2000 - May 2003**

2.0L 4 cyl DOHC VVT 16V MPFI Turbo  
Eng code: B4204T5  
OAP (Alt Denso, 120A) ..... OAP069

**Aug 2000 - May 2004**

1.9L 4 cyl DOHC 16V MPFI  
Eng code: B4204S2  
OAP (Alt Denso, 120A) ..... OAP069

**Aug 2000 - May 2004**

1.9L 4 cyl DOHC 16V TMPFI Turbo  
Eng code: B4204T3  
OAP (Alt Denso, 120A) ..... OAP069

**Jun 2004 - Aug 2010**

2.4L 5 cyl DOHC 20V MPFI  
Eng code: B5244S4  
OAP (Alt Denso, 150A) ..... OAP110

**Jun 2004 - Aug 2010**

2.5L 5 cyl DOHC 20V TMPFI Turbo  
Eng code: B5254T3  
OAP (Alt Denso, 150A) ..... OAP110

**Mar 2007 -**

2.5L 5 cyl DOHC 20V TMPFI Turbo  
Eng code: B5254T7  
OAP (Alt Denso, 150A) ..... OAP110

**S60****2000 - 2002**

2.0L 5 cyl DOHC 20V EFI Turbo  
Eng code: B5204T5  
OAP (Alt Bosch, 120A) ..... OAP032  
OAP (Alt Bosch, 100A) ..... OAP053

**Jan 2001 - May 2003**

2.3L 5 cyl DOHC 20V TMPFI Turbo  
Eng code: B5234T3  
OAP (Alt Bosch, 120A, 140A, 160A) ..... OAP032

**Jan 2001 - Feb 2003**

2.4L 5 cyl DOHC 20V TMPFI Turbo  
Eng code: B5244T3  
OAP (Alt Bosch, 120A, 140A, 160A) ..... OAP032

**Jan 2001 - Sep 2009**

2.4L 5 cyl DOHC 20V MPFI  
Eng code: B5244S  
OAP (Alt Bosch, 120A, 140A, 160A) ..... OAP032

**Mar 2003 - Oct 2005**

2.5L 5 cyl DOHC 20V TMPFI Turbo  
Eng code: B5254T2  
OAP (Alt Bosch, 120A, 140A, 160A) ..... OAP032  
OAP (Alt Bosch, 160A) ..... OAP036

**Nov 2003 - Oct 2005**

2.5L 5 cyl DOHC 20V TMPFI Turbo  
Eng code: B5254T4  
OAP (Back Bore Depth 8.0mm To Suit Bosch Alt 120A, 140A, 160A)  
OAP032  
OAP (Back Bore Depth 11.3mm To Suit Bosch Alt 160A) .... OAP036

**Oct 2011 - Jun 2012**

2.4L 5 cyl DOHC 20V DTFI Turbo Diesel  
Eng code: D5244T10  
OAP (Alt Bosch, 150A, 180A) ..... OAP037

**S70****Feb 1997 - Oct 1998**

2.3L 5 cyl DOHC 20V TMPFI Turbo  
Eng code: B5234T3  
OAP (Alt Bosch, 120A) ..... OAP032  
OAP (Alt Bosch, 100A) ..... OAP053

**Feb 1997 - Jul 1999**

2.4L 5 cyl DOHC 20V MPFI  
Eng code: B5254S  
OAP (Alt Bosch, 120A) ..... OAP032  
OAP (Alt Bosch, 100A) ..... OAP053

**Feb 1997 - Jul 1999**

2.4L 5 cyl DOHC 20V TMPFI Turbo  
Eng code: B5254T  
OAP (Alt Bosch, 120A) ..... OAP032  
OAP (Alt Bosch, 100A) ..... OAP053

**Dec 1997 - Aug 2000**

2.4L 5 cyl DOHC 20V MPFI BI FUEL  
Eng code: GB5252S  
OAP (Alt Bosch, 120A) ..... OAP032  
OAP (Alt Bosch, 100A) ..... OAP053

**Jul 1999 - Aug 2000**

2.4L 5 cyl DOHC 20V MPFI  
Eng code: B5244S  
OAP (Alt Bosch, 120A) ..... OAP032  
OAP (Alt Bosch, 100A) ..... OAP053

**Jul 1999 - Aug 2000**

2.4L 5 cyl DOHC 20V TMPFI Turbo  
Eng code: B5244T  
OAP (Alt Bosch, 120A) ..... OAP032  
OAP (Alt Bosch, 100A) ..... OAP053

**S80****1998 - 2005**

2.4L 5 cyl DOHC 20V MPFI  
Eng code: B5244S  
OAP (Alt Bosch, 120A) ..... OAP032  
OAP (Alt Bosch, 100A) ..... OAP053

**May 1998 - Jul 2001**

2.9L 6 cyl DOHC 24V MPFI  
Eng code: B6294S  
OAP (Alt Bosch, 120A) ..... OAP032

**May 1998 - Jul 2005**

2.8L 6 cyl DOHC 24V TTMPFI Twin Turbo  
Eng code: B6284T  
OAP (Alt Bosch, 120A) ..... OAP032

**1999 - 2000**

2.0L 5 cyl DOHC 20V EFI Turbo  
Eng code: B5204T5  
OAP (Alt Bosch, 120A) ..... OAP032  
OAP (Alt Bosch, 100A) ..... OAP053

**Jul 1999 - Oct 2000**

2.9L 6 cyl DOHC 24V MPFI  
Eng code: B6304S3  
OAP (Alt Bosch, 120A) ..... OAP032

**Oct 2004 - Jul 2005**

2.5L 5 cyl DOHC 20V MPFI Turbo  
Eng code: B5254T2  
OAP (Alt Bosch, 120A, 140A, 160A) ..... OAP032

**Jan 2007 - Oct 2009**

2.4L 5 cyl DOHC 20V DTFI Turbo Diesel  
Eng code: D5244T4  
OAP (Alt Bosch, 180A) ..... OAP037

**Nov 2009 - Aug 2010**

2.4L 5 cyl DOHC 20V DTFI Turbo Diesel  
Eng code: D5244T10  
OAP (Alt Bosch, 150A, 180A) ..... OAP037

**V40****Feb 1997 - Sep 2000**

1.9L 4 cyl DOHC 16V MPFI  
Eng code: B4204S  
OAP (Alt Denso, 120A) ..... OAP069

**Jul 1999 - Sep 2000**

1.8L 4 cyl DOHC 16V EFI  
Eng code: B4184S  
OAP (Alt Denso, 120A) ..... OAP069

**Jul 1999 - Sep 2000**

1.9L 4 cyl DOHC 16V TMPFI Turbo  
Eng code: B4204T2  
OAP (Alt Denso, 120A) ..... OAP069

**Jul 1999 - Mar 2001**

1.8L 4 cyl DOHC 16V MPFI  
Eng code: B4184S2  
OAP (Alt Denso, 120A) ..... OAP069

**Aug 2000 - May 2003**

1.9L 4 cyl DOHC 16V TMPFI Turbo  
Eng code: B4204T5  
OAP (Alt Denso, 120A) ..... OAP069

**V50****1997 - 2000**

2.0L 5 cyl DOHC 20V EFI Turbo  
Eng code: B5204T2  
OAP (Alt Bosch, 100A) ..... OAP053  
OAP (Alt Bosch, 120A) ..... OAP032

**Feb 1997 - May 2003**

2.3L 5 cyl DOHC 20V MPFI Turbo  
Eng code: B5234T3  
OAP (Alt Bosch, 120A) ..... OAP032  
OAP (Alt Bosch, 100A) ..... OAP053

**1997 - 2000**

2.0L 5 cyl DOHC 20V EFI Turbo  
Eng code: B5204T4  
OAP (Alt Bosch, 120A) ..... OAP032  
OAP (Up To 12/98 - Alt Bosch, 100A) ..... OAP053

**1997 - 2000**

2.0L 5 cyl DOHC 20V EFI Turbo  
Eng code: B5204T5  
OAP (Back Bore Depth 11.3mm To Suit Bosch Alt 160A) .... OAP036  
OAP (Alt Bosch, 120A) ..... OAP032

**Mar 2004 - Aug 2010**

2.4L 5 cyl DOHC 20V MPFI  
Eng code: B5244S  
OAP (Alt Denso, 150A) ..... OAP110

**Mar 2007 - Oct 2009**

2.4L 5 cyl DOHC 20V DTFI Turbo Diesel  
Eng code: D5244T8  
OAP (Alt Denso, 150A) ..... OAP110

**Nov 2003 - Oct 2005**

2.5L 5 cyl DOHC 20V TMPFI Turbo  
Eng code: B5254T4  
OAP (Back Bore Depth 8.0mm To Suit Bosch Alt 120A, 140A, 160A)  
OAP032

**V70****1997 - 2000**

2.0L 5 cyl DOHC 20V EFI Turbo  
Eng code: B5204T5  
OAP (Alt Bosch, 120A) ..... OAP032  
OAP (Alt Bosch, 100A) ..... OAP053

**Feb 1997 - Aug 1998**

2.3L 5 cyl DOHC 20V TMPFI Turbo  
Eng code: B5234T3  
OAP (Alt Bosch, 120A) ..... OAP032  
OAP (Alt Bosch, 100A) ..... OAP053

**Feb 1997 - Aug 2000**

2.4L 5 cyl DOHC 20V TMPFI Turbo  
Eng code: B5254T  
OAP ..... OAP053

**Nov 1997 - Oct 1998**

2.3L 5 cyl DOHC 20V TMPFI Turbo  
Eng code: B5234T4  
OAP ..... OAP053

**Jul 1999 - Aug 2000**

2.4L 5 cyl DOHC 20V MPFI  
Eng code: B5244S  
OAP (Alt Bosch, 120A, 140A, 160A) ..... OAP032

**Jul 1999 - Aug 2000**

2.4L 5 cyl DOHC 20V TMPFI Turbo  
Eng code: B5244T  
OAP (Alt Bosch, 120A) ..... OAP032  
OAP (Alt Bosch, 100A) ..... OAP053

**Jul 1999 - Aug 2000**

2.4L 5 cyl DOHC 20V TMPFI Turbo  
Eng code: B5244T2  
OAP (Back Bore Depth 8.0mm, Alt Bosch 120A) ..... OAP032  
OAP (Back Bore Depth 11.3mm, Alt Bosch Alt 120A, 140A) OAP036

**Jan 2000 - May 2003**

2.4L 5 cyl DOHC 20V TMPFI Turbo  
Eng code: B5244T3  
OAP (Alt Bosch, 120A, 140A, 160A) ..... OAP032

**Sep 2000 - Jan 2008**

2.4L 5 cyl DOHC 20V MPFI  
Eng code: B5244S  
OAP (Alt Bosch, 120A) ..... OAP032

**Nov 2003 - Jul 2005**

2.5L 5 cyl DOHC 20V TMPFI Turbo  
Eng code: B5254T4  
OAP (Back Bore Depth 8.0mm, Alt Bosch Alt 120A, 140A, 160A) OAP032  
OAP (Back Bore Depth 11.3mm, Alt Bosch Alt 160A) ..... OAP036

**Jun 2004 - Sep 2004**

2.5L 5 cyl DOHC 20V TMPFI Turbo  
Eng code: B5254T2  
OAP (Alt Bosch, 120A, 140A, 160A) ..... OAP032  
OAP (Alt Bosch, 150A) ..... OAP036

**XC60****Mar 2009 - Jul 2011**

2.4L 5 cyl DOHC 20V DTFI Turbo Diesel DZ  
Eng code: D5244T10  
OAP (Alt Bosch, 150A, 180A) ..... OAP037

**Oct 2009 - Aug 2010**

2.4L 5 cyl DOHC 20V DTFI Turbo Diesel DZ  
Eng code: D5244T4  
OAP (Alt Bosch, 150A, 180A) ..... OAP037

**Aug 2011 -**

2.4L 5 cyl DOHC 20V DTFI Twin Turbo Diesel DZ  
Eng code: D5244T15  
OAP (Alt Bosch, 150A, 180A) ..... OAP037

**Apr 2012 -**

2.4L 5 cyl DOHC 20V DTFI Twin Turbo Diesel DZ  
Eng code: D5244T15  
OAP (Alt Bosch, 150A, 180A) ..... OAP037

**Sep 2012 -**

2.0L 5 cyl DOHC 20V CRD Turbo Diesel DZ  
Eng code: D5204T2  
OAP (Alt Bosch, 150A, 180A) ..... OAP037

**XC70****2000 - 2004**

2.4L 5 cyl DOHC 20V EFI Turbo  
Eng code: B5244T3  
OAP (Alt Bosch, 120A, 140A, 160A) ..... OAP032

**Apr 2003 - Nov 2007**

2.5L 5 cyl DOHC 20V TMPFI Turbo  
Eng code: B5254T2  
OAP ..... OAP032

**Dec 2007 - Oct 2009**

2.4L 5 cyl DOHC 20V DTFI Turbo Diesel BZ  
Eng code: D5244T4  
OAP (Alt Bosch, 140A, 160A) ..... OAP032  
OAP (Alt Bosch, 180A) ..... OAP037

**Nov 2009 - Sep 2011**

2.4L 5 cyl DOHC 20V DTFI Turbo Diesel BZ  
Eng code: D5244T10  
OAP (Alt Bosch, 150A, 180A) ..... OAP037

**Oct 2011 - Oct 2012**

2.4L 5 cyl DOHC 20V DTFI Turbo Diesel BZ  
Eng code: D5244T15  
OAP (Alt Bosch, 150A, 180A) ..... OAP037

**Nov 2012 -**

2.4L 5 cyl DOHC 20V TFSI Turbo Diesel BZ  
Eng code: D5244T15  
OAP (Alt Bosch, 150A, 180A) ..... OAP037

**XC90****Jul 2003 - Feb 2007**

2.5L 5 cyl DOHC 20V TMPFI Turbo  
Eng code: B5254T2  
OAP (Alt Bosch, 140A, 160A) ..... OAP032

**Jul 2003 - Sep 2006**

2.9L 6 cyl DOHC 24V TMPFI Turbo  
Eng code: B6294T  
OAP ..... OAP032

**Oct 2006 - Jul 2011**

2.4L 5 cyl DOHC 20V DTFI Turbo Diesel  
Eng code: D5244T4  
OAP (Alt Bosch, 140A, 160A) ..... OAP032

## OAP001

Width: 35.9mm  
Inside diameter: 17mm  
Outside diameter: 59.7mm  
Type: 6PK



## OAP005

Width: 40.6mm  
Inside diameter: 17mm  
Outside diameter: 57mm  
Type: 5PK



## OAP002

Width: 40.2mm  
Inside diameter: 17mm  
Outside diameter: 52.1mm  
Type: 6PK



## OAP006

Width: 34.5mm  
Inside diameter: 17mm  
Outside diameter: 64.5mm  
Type: 7PK



## OAP003

Width: 38.3mm  
Inside diameter: 17mm  
Outside diameter: 49.1mm  
Type: 7PK



## OAP007

Width: 40.4mm  
Inside diameter: 17mm  
Outside diameter: 50mm  
Type: 6PK



## OAP004

Width: 36.5mm  
Inside diameter: 17mm  
Outside diameter: 55.6mm  
Type: 6PK



## OAP008

Width: 41.5mm  
Inside diameter: 15mm  
Outside diameter: 58.1mm  
Type: 7PK



**OAP009**

Width: 40.5mm  
Inside diameter: 17mm  
Outside diameter: 55mm  
Type: 6PK

**OAP013**

Width: 41.3mm  
Inside diameter: 17mm  
Outside diameter: 52.5mm  
Type: 7PK

**OAP010**

Width: 50.2mm  
Inside diameter: 17mm  
Outside diameter: 55mm  
Type: 7PK

**OAP014**

Width: 40.5mm  
Inside diameter: 17mm  
Outside diameter: 58.4mm  
Type: 7PK

**OAP011**

Width: 45.4mm  
Inside diameter: 17mm  
Outside diameter: 56mm  
Type: 6PK

**OAP015**

Width: 39.3mm  
Inside diameter: 17mm  
Outside diameter: 64.8mm  
Type: 7PK

**OAP012**

Width: 40mm  
Inside diameter: 17mm  
Outside diameter: 50mm  
Type: 6PK

**OAP016**

Width: 34.7mm  
Inside diameter: 17mm  
Outside diameter: 53.6mm  
Type: 5PK



## OAP017

Width: 38mm  
Inside diameter: 17mm  
Outside diameter: 55mm  
Type: 6PK



## OAP021

Width: 37.2mm  
Inside diameter: 17mm  
Outside diameter: 54.4mm  
Type: 6PK



## OAP018

Width: 42.4mm  
Inside diameter: 17mm  
Outside diameter: 55.8mm  
Type: 6PK



## OAP022

Width: 41.15mm  
Inside diameter: 17mm  
Outside diameter: 55.8mm  
Type: 6PK



## OAP019

Width: 47mm  
Inside diameter: 17mm  
Outside diameter: 57.6mm  
Type: 6PK



## OAP023

Width: 40.2mm  
Inside diameter: 17mm  
Outside diameter: 49.5mm  
Type: 6PK



## OAP020

Width: 38mm  
Inside diameter: 17mm  
Outside diameter: 60mm  
Type: 6PK



## OAP024

Width: 39.3mm  
Inside diameter: 17mm  
Outside diameter: 59.7mm  
Type: 8PK



**OAP025**

Width: 48.2mm  
Inside diameter: 17mm  
Outside diameter: 52mm  
Type: 6PK

**OAP029**

Width: 34.6mm  
Inside diameter: 17mm  
Outside diameter: 59.7mm  
Type: 5PK

**OAP026**

Width: 45.4mm  
Inside diameter: 17mm  
Outside diameter: 56mm  
Type: 6PK

**OAP030**

Width: 42.8mm  
Inside diameter: 17mm  
Outside diameter: 56.8mm  
Type: 5PK

**OAP027**

Width: 45.6mm  
Inside diameter: 17mm  
Outside diameter: 57.5mm  
Type: 6PK

**OAP031**

Width: 38.25mm  
Inside diameter: 17mm  
Outside diameter: 49mm  
Type: 6PK

**OAP028**

Width: 34.8mm  
Inside diameter: 17mm  
Outside diameter: 49.9mm  
Type: 6PK

**OAP032**

Width: 38mm  
Inside diameter: 17mm  
Outside diameter: 56mm  
Type: 6PK



**OAP033**

Width: 36.85mm  
Inside diameter: 17mm  
Outside diameter: 54.3mm  
Type: 6PK

**OAP037**

Width: 40.9mm  
Inside diameter: 17mm  
Outside diameter: 54mm  
Type: 5PK

**OAP034**

Width: 38.3mm  
Inside diameter: 17mm  
Outside diameter: 54.3mm  
Type: 6PK

**OAP038**

Width: 33.2mm  
Inside diameter: 17mm  
Outside diameter: 54.3mm  
Type: 6PK

**OAP035**

Width: 34.7mm  
Inside diameter: 17mm  
Outside diameter: 53.6mm  
Type: 6PK

**OAP039**

Width: 44.8mm  
Inside diameter: 17mm  
Outside diameter: 55.7mm  
Type: 7PK

**OAP036**

Width: 42mm  
Inside diameter: 17mm  
Outside diameter: 67.8mm  
Type: 6PK

**OAP040**

Width: 35.8mm  
Inside diameter: 17mm  
Outside diameter: 50mm  
Type: 6PK



**OAP041**

Width: 39.3mm  
Inside diameter: 17mm  
Outside diameter: 49.7mm  
Type: 7PK

**OAP045**

Width: 39mm  
Inside diameter: 17mm  
Outside diameter: 59.5mm  
Type: 8PK

**OAP042**

Width: 38.5mm  
Inside diameter: 17mm  
Outside diameter: 48.7mm  
Type: 6PK

**OAP046**

Width: 38.1mm  
Inside diameter: 17mm  
Outside diameter: 48.8mm  
Type: 5PK

**OAP043**

Width: 34.2mm  
Inside diameter: 17mm  
Outside diameter: 61.7mm  
Type: N/A

**OAP047**

Width: 39.7mm  
Inside diameter: 17mm  
Outside diameter: 60mm  
Type: 6PK

**OAP044**

Width: 41mm  
Inside diameter: 17mm  
Outside diameter: 68.8mm  
Type: 7PK

**OAP048**

Width: 33.9mm  
Inside diameter: 17mm  
Outside diameter: 49.2mm  
Type: 6PK



## OAP049

Width: 33.7mm  
Inside diameter: 17mm  
Outside diameter: 49mm  
Type: 6PK



## OAP053

Width: 36.2mm  
Inside diameter: 17mm  
Outside diameter: 56mm  
Type: 6PK



## OAP050

Width: 38.2mm  
Inside diameter: 17mm  
Outside diameter:  
55.67mm  
Type: 6PK



## OAP055

Width: 40.5mm  
Inside diameter: 17mm  
Outside diameter: 56.9mm  
Type: 6PK



## OAP051

Width: 36.1mm  
Inside diameter: 17mm  
Outside diameter: 49.9mm  
Type: 7PK



## OAP056

Width: 34.9mm  
Inside diameter: 17mm  
Outside diameter: 55.9mm  
Type: 7PK



## OAP052

Width: 45.75mm  
Inside diameter: 17mm  
Outside diameter: 50mm  
Type: 6PK



## OAP057

Width: 41.4mm  
Inside diameter: 17mm  
Outside diameter: 54mm  
Type: 6PK



**OAP058**

Width: 41.5mm  
Inside diameter: 17mm  
Outside diameter: 58mm  
Type: 7PK

**OAP063**

Width: 37.9mm  
Inside diameter: 17mm  
Outside diameter: 54mm  
Type: 6PK

**OAP059**

Width: 40.75mm  
Inside diameter: 17mm  
Outside diameter: 48.6mm  
Type: 7PK

**OAP064**

Width: 39.2mm  
Inside diameter: 17mm  
Outside diameter: 61.6mm  
Type: 5PK

**OAP061**

Width: 36.6mm  
Inside diameter: 17mm  
Outside diameter: 59.1mm  
Type: 7PK

**OAP065**

Width: 37.2mm  
Inside diameter: 17mm  
Outside diameter: 50mm  
Type: 5PK

**OAP062**

Width: 44.7mm  
Inside diameter: 17mm  
Outside diameter: 59mm  
Type: 7PK

**OAP066**

Width: 34.4mm  
Inside diameter: 17mm  
Outside diameter: 49mm  
Type: 7PK



## OAP067

Width: 38mm  
Inside diameter: 17mm  
Outside diameter: 54.1mm  
Type: 6PK



## OAP071

Width: 42.2mm  
Inside diameter: 17mm  
Outside diameter: 54mm  
Type: 6PK



## OAP068

Width: 33.7mm  
Inside diameter: 17mm  
Outside diameter: 56mm  
Type: 6PK



## OAP072

Width: 35.6mm  
Inside diameter: 17mm  
Outside diameter: 49.7mm  
Type: 6PK



## OAP069

Width: 41.6mm  
Inside diameter: 17mm  
Outside diameter: 55.5mm  
Type: 6PK



## OAP073

Width: 35.2mm  
Inside diameter: 17mm  
Outside diameter: 49.8mm  
Type: 6PK



## OAP070

Width: 40.6mm  
Inside diameter: 17mm  
Outside diameter: 49.5mm  
Type: 6PK



## OAP074

Width: 37.2mm  
Inside diameter: 17mm  
Outside diameter: 50mm  
Type: 5PK



**OAP075**

Width: 43.6mm  
Inside diameter: 17mm  
Outside diameter: 61.5mm  
Type: 6PK

**OAP079**

Width: 48.2mm  
Inside diameter: 17mm  
Outside diameter: 52mm  
Type: 6PK

**OAP076**

Width: 35.6mm  
Inside diameter: 17mm  
Outside diameter: 55.9mm  
Type: 6PK

**OAP080**

Width: 47.3mm  
Inside diameter: 17mm  
Outside diameter: 57.5mm  
Type: 8PK

**OAP077**

Width: 38mm  
Inside diameter: 17mm  
Outside diameter: 58.7mm  
Type: 7PK

**OAP082**

Width: 41.00mm  
Inside diameter: 17mm  
Outside diameter:  
56.00mm  
Type: 6PK

**OAP078**

Width: 42.4mm  
Inside diameter: 17mm  
Outside diameter: 56mm  
Type: 6PK

**OAP085**

Width: 36.7mm  
Inside diameter: 17mm  
Outside diameter: 53mm  
Type: 6PK



## OAP086

Width: 44.30mm  
Inside diameter: 17mm  
Outside diameter: 59mm  
Type: 7PK



## OAP109

Width: 42mm  
Inside diameter: 17mm  
Outside diameter: 49.30mm  
Type: 6PK



## OAP092

Width: 39.00mm  
Inside diameter: 17mm  
Outside diameter: 55.00mm  
Type: 6PK

## OAP110

Width: 39.5mm  
Inside diameter: 17mm  
Outside diameter: 55.55mm  
Type: 5PK



## OAP097

Width: 52mm  
Inside diameter: 17mm  
Outside diameter: 57.5mm  
Type: 8PK



## OAP111

Width: 36.2mm  
Inside diameter: 17mm  
Outside diameter: 57.6mm  
Type: 8PK



## OAP100

Width: 49.75mm  
Inside diameter: 17mm  
Outside diameter: 56mm  
Type: 7PK



## OAP116

Width: 38.7mm  
Inside diameter: 17mm  
Outside diameter: 56mm  
Type: 8PK



**OAP117**

Width: 43.6mm  
Inside diameter: 17mm  
Outside diameter: 50.3mm  
Type: 8PK

**OAP132**

Width: 43.5mm  
Inside diameter: 17mm  
Outside diameter: 55.3mm  
Type: 6PK

**OAP121**

Width: 40.4mm  
Inside diameter: 17mm  
Outside diameter: 50mm  
Type: 6PK

**OAP135**

Width: 44.2mm  
Inside diameter: 17mm  
Outside diameter: 71.4mm  
Type: 8PK

**OAP122**

Width: 47.5mm  
Inside diameter: 17mm  
Outside diameter: 55.7mm  
Type: 6PK

**OAP137**

Width: 42.1mm  
Inside diameter: 17mm  
Outside diameter: 53.8mm  
Type: 6PK

**OAP130**

Width: 44.6mm  
Inside diameter: 17mm  
Outside diameter: 51.7mm  
Type: 5PK

**OAP142**

Width: 35mm  
Inside diameter: 17mm  
Outside diameter: 55.9mm  
Type: 5PK



## OAP144

Width: 40.7mm  
Inside diameter: 17mm  
Outside diameter: 56.2mm  
Type: 6PK



## OAP154

Width: 40.2mm  
Inside diameter: 17mm  
Outside diameter: 52mm  
Type: 6PK



## OAP146

Width: 41.5mm  
Inside diameter: 17mm  
Outside diameter: 49.5mm  
Type: 6PK



## OAP155

Width: 36.6mm  
Inside diameter: 17mm  
Outside diameter: 52.57mm  
Type: 6PK



## OAP149

Width: 42mm  
Inside diameter: 17mm  
Outside diameter: 50mm  
Type: 6PK



## OAP168

Width: 49.3mm  
Inside diameter: 17mm  
Outside diameter: 50mm  
Type: 7PK



## OAP152

Width: 39.39mm  
Inside diameter: 17.00mm  
Outside diameter: 55.57mm  
Type: 6PK



## OAP186

Width: 35.30mm  
Inside diameter: 17mm  
Outside diameter: 59.20mm  
Type: 7PK



**OAP193**

Width: 52.5mm  
Inside diameter: 17mm  
Outside diameter: 50mm  
Type: 8PK

**OAP221**

Width: 37.47mm  
Inside diameter: 15mm  
Outside diameter: 59.37mm  
Type: 6PK

**OAP194**

Width: 37.85mm  
Inside diameter: 17.00mm  
Outside diameter: 59mm  
Type: 6PK Steel

**OAP229**

Width: 40.6mm  
Inside diameter: 17mm  
Outside diameter: 57mm  
Type: 5PK

**OAP197**

Width: 40.15mm  
Inside diameter: 17mm  
Outside diameter: 50.12mm  
Type: 7PK

**OAP234**

Width: 41.00mm  
Inside diameter: 17.00mm  
Outside diameter: 56.20mm

**OAP203**

17.00mm  
Outside diameter: 50.00mm

**OAP235**

Width: 38mm  
Inside diameter: 17mm  
Outside diameter: 59mm



## OAP236

Width: 38.2mm

Inside diameter: 17.00mm

Outside diameter:  
48.87mm

