2018-2019 Buying an used car

bought Mazda 6 2.0i 2010

- Searching a naturally aspirated engine
- Mazda
- Citroen
- Ford
- Mercedes-Benz
- BMW
- Audi
- Skoda
- Hyundai / KIA

Searching a naturally aspirated engine

- gasoline direct injection (GDI), also known as petrol direct injection, direct petrol injection, spark-ignited direct injection (SIDI) and fuel-stratified injection (FSI).
- variable valve timing (VVT) is the process of altering the timing of a valve lift event, and is often used to improve performance, fuel economy or emissions.
  - can be used with both direct and indirect injection
- best would be to find a indirect injection engine, like on Mazda 6 GH 2.0 pre-facelift (2008-2010) and all Mazda 6 GH 1.8 (2008-2012).
- VTi (Valve Timing injection) engines created by PSA Peugeot Citroën and BMW Group uses indirect injection
  - there are 2 variants, 1.4 with 95 bhp and 1.6 with 115bhp
- MIVEC is the brand name of a variable valve timing (VVT) engine technology developed by Mitsubishi Motors
- Honda VTEC ..
- Ford TI-VCT, non GDI
- PM (particulate matter) is produced only by engines with direct injection
- EURO 6
  - it is achived basically only with direct injection with very few exceptions
  - Toyota has some small 1.33 MPI EURO 6 engines
- EURO 5
  - most engines are designed with direct injection,
  - few exceptions for >1.6, like Mazda MZR 1.8i
  - easier to find for small engines, <1.4
- EURO 4
  - many engines can be found with indirect injection
  - but many use with direct injection, think about VW/Audi FSI

Mazda

Mazda 6 GH

Initial release 2008

- sequenzielle elektronisch geregelte Saugrohreinspritzung
- abgasnorm EURO 4
- 1.8i 88 kW
- 2.0i 108 kW
- 2.5i 125 kW

2010 Facelift

- 1.8i 88 kW - unchanged
  - KFZ Steuer 524E (44E/mo)
- 2.0i 114 kW - DISI = Direct Injection Spark Ignition
  - Benzindirekteinspritzung gibt sein Debüt im neuen Mazda 6 und ersetzt den bisherigen Zwei-Liter-Motor mit Saugrohreinspritzung
  - http://ww2.autoscout24.at/erster-test/mazda-6-facelift/fruehes-facelift/44465/171603/
  - https://www.heise.de/autos/artikel/Mazda-6-mit-Facelift-Fahrbericht-mit-neuem-Benziner-994220.html?artikelseite=2
  - https://de.wikipedia.org/wiki/Mazda6#6_(Typ_GH,_2008%E2%80%932012)
- 2.5i 125 kW - unchanged
  - KFZ Steuer 863E (72E/mo)

Citroen

C4

- First Generation Facelift 2008 - 2010
  - 1.6 seem to be very rare in AT
- Second Generation 2010 - 2014
- 2015 Facelift does not have VTi engines anymore
- 1.6 VTi 120 PS (88 kW)

C4 Picasso

- First Generation 2008-2012
- 1.6 VTi 88 kW

Ford

Focus Mk2 and C-MAX

- 2008 Facelift - 2010
- 1.6 Duratec Ti-VCT 115 PS, 74 kW
- 1.8 and 2.0 Duratec HE - developed by Mazda (LF model of MZR series)

Focus Mk3

- no engine with indirect injection, all engines are Ti-VCT GDI - Duratec HE GDI

C-MAX Mk3

- 1.6 Ti-VCT 77 kW
- 1.6 Ti-VCT 88 kW
- 1.6 Ti-VCT 92 kW

Mercedes-Benz

B Class T245

- all petrol engines are with indirect injection
  - Motor codes M 166 E xx (E = Saugrohreinspritzung, xx = engine size in deciliter)

C Class W204

- MPI engines use a Kompressor, while GDI engines a turbocharger
- C 180 Kompressor BlueEFFICIENCY 2008 - 2010 - 115 kW
  - from 2009 this engine was produced with gasoline direct injection
- C 180 Kompressor 2007 - 2008 - 115 kW
- C 200 Kompressor 2007 - 2010 - 135 kW
  - from 2009 this engine was produced with gasoline direct injection and turbocharger
- C 250 was produced after 2009, only with gasoline direct injection
- C 230 is a V6 engine with indirct injection - 150 kW

BMW

BMW 3 Series E9x

- E9x series with petrol engines, especially L4 N43, are known to have problems with oil leaks, water pump, cooling..
- inline 6 cylinder engines (325i) seems to be the best for car enthusiasts, but quite expesive to own
- N43 and N53 use direct injection
- N45, N46 and N52 engines use indirect injection
- N46 found on pre-2018-facelift 318i 95 kW and 320i 110 kW
- N52 found on pre-2018-facelift 330i 190 kW

Audi

A3 Second Generation (2003-2012)

- FSI engines
- facelift 2008
- 1.6 -> 2010 - 102 PS (75 kW)

Skoda

Octavia Second Generation (2005-2013)

- facelift 2009
- same platform with Golf Mk5 and Audi A3 Mk2
- no interesting engine. Only option is 1.4, but it has only 80 PS

Hyundai / KIA

i30 Second Generationa (GD) 2012-2017

- GDI models and T-GDI are engines with direct injection, T stand for turbo
- CVVT and MPI are engines with indirect injection
- 1.4 CVVT 73 kW (99 PS) EURO 5
- 1.4 CVVT 74 kW (101 PS) EURO 6