

1 Component Locations: Engine Management System

- ◆ 2.0L gasoline BPY Overviews ⇒ [page 4](#)
- ◆ 2.0L gasoline CCTA Overviews ⇒ [page 7](#)
- ◆ 2.0L gasoline CDMA Overviews ⇒ [page 14](#)
- ◆ 2.0L gasoline CETA Overviews ⇒ [page 17](#)
- ◆ 3.2L gasoline BUB, CBRA Overviews ⇒ [page 20](#)
- ◆ Exhaust System Overviews ⇒ [page 27](#)
- ◆ Cooling Fans and Pumps ⇒ [page 29](#)
- ◆ Evap System Overviews ⇒ [page 31](#)
- ◆ Fuel Pump and Sensors ⇒ [page 32](#)
- ◆ Accelerator Pedal Module ⇒ [page 35](#)

1.1 Engine Management System

Select system above or component ID below to navigate to a location view.

Oil pressure switch -F1- / -F22- ◆ 2.0L BPY ⇒ page 10 ◆ 2.0L CCTA ⇒ Item 25 (page 8) ◆ 2.0L CDMA ⇒ page 10 ◆ 2.0L CETA ⇒ Item 25 (page 18) ◆ 3.2L BUB, CBRA ⇒ page 27	Fuel pressure sender for low pressure -G410- ◆ 2.0L BPY ⇒ Item 10 (page 4) ◆ 2.0L CDMA ⇒ Item 5 (page 14)	Turbocharger air recirculation valve -N249- ◆ 2.0L BPY ⇒ Item 2 (page 4) ◆ 2.0L CCTA ⇒ Item 3 (page 7) ◆ 2.0L CDMA ⇒ Item 17 (page 14) ◆ 2.0L CETA ⇒ Item 3 (page 17)	Camshaft Position (CMP) Sensor -G40- ◆ 2.0L BPY ⇒ Item 21 (page 5) ◆ 2.0L CCTA ⇒ Item 22 (page 8) ◆ 2.0L CDMA ⇒ Item 23 (page 15) ◆ 2.0L CETA ⇒ Item 22 (page 18) ◆ 3.2L BUB, CBRA ⇒ Item 22 (page 22)
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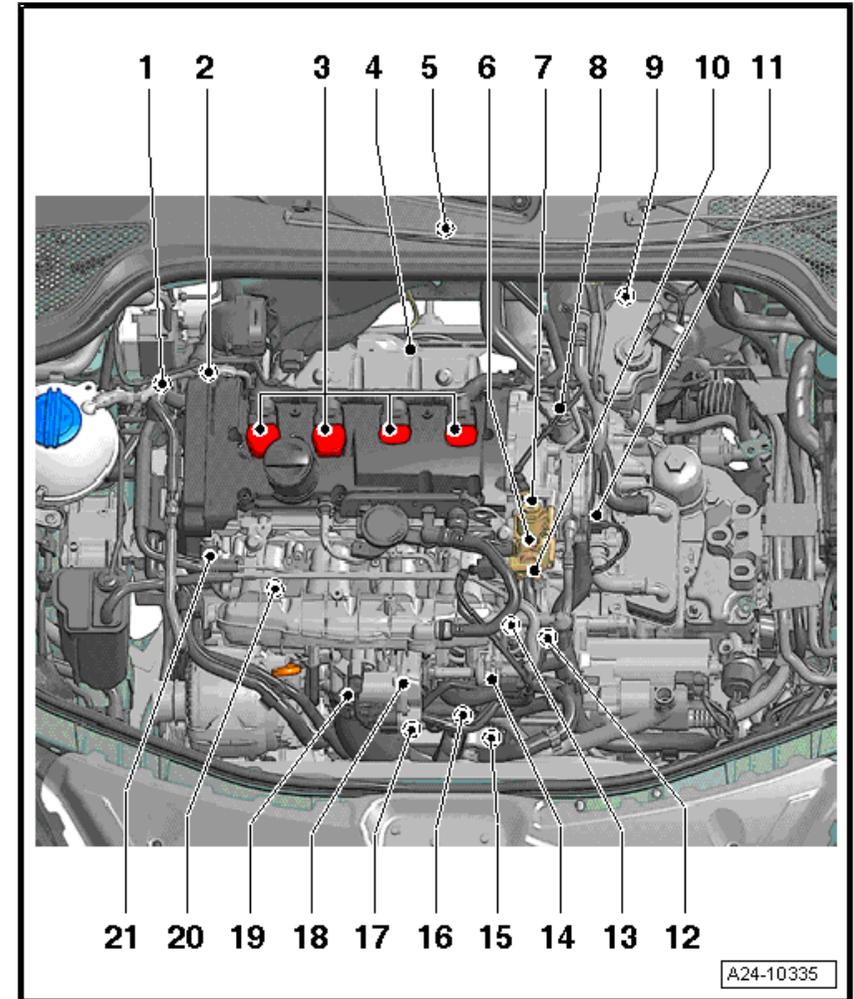
<p>Reduced Oil Pressure Switch -F378-</p> <ul style="list-style-type: none"> ◆ 2.0L CCTA ⇒ Item 25 (page 8) ◆ 2.0L CETA ⇒ Item 25 (page 18) 	<p>Intake air temperature sender -G42-</p> <ul style="list-style-type: none"> ◆ 2.0L BPY ⇒ Item 19 (page 5) ◆ 2.0L CCTA ⇒ Item 19 (page 8) ◆ 2.0L CDMA ⇒ Item 19 (page 14) ◆ (3.2L BUB, CBRA not shown) Manifold Absolute Pressure (MAP) Sensor -G71- and Intake air temperature sender -G42- ◆ 2.0L CETA ⇒ Item 24 (page 18) 	<p>Fuel pressure regulating valve -N276-</p> <ul style="list-style-type: none"> ◆ 2.0L BPY ⇒ Item 7 (page 4) ◆ 2.0L CCTA ⇒ Item 8 (page 7) ◆ 2.0L CDMA ⇒ Item 7 (page 14) ◆ 2.0L CETA ⇒ Item 9 (page 17) 	<p>Camshaft Adjustment Valve 1 -N205-</p> <ul style="list-style-type: none"> ◆ 2.0L BPY ⇒ Item 8 (page 4) ◆ 2.0L CCTA ⇒ Item 1 (page 7) ◆ 2.0L CDMA ⇒ Item 8 (page 14) ◆ 2.0L CETA ⇒ Item 1 (page 17) ◆ 3.2L BUB, CBRA ⇒ Item 21 (page 22)
<p>Fuel pressure sender -G247-</p> <ul style="list-style-type: none"> ◆ 2.0L BPY ⇒ Item 20 (page 5) ◆ 2.0L CCTA ⇒ Item 23 (page 8) ◆ 2.0L CDMA ⇒ Item 22 (page 14) ◆ 2.0L CETA ⇒ Item 23 (page 18) 	<p>Knock sensor 1 -G61-</p> <ul style="list-style-type: none"> ◆ 2.0L BPY ⇒ Item 12 (page 5) ◆ 2.0L CCTA ⇒ Item 20 (page 8) ◆ 2.0L CETA ⇒ Item 20 (page 18) ◆ 3.2L BUB, CBRA ⇒ Item 2 (page 21) 	<p>Intake Manifold Runner Control (IMRC) Valve -N316-</p> <ul style="list-style-type: none"> ◆ 2.0L CCTA ⇒ Item 13 (page 8) ◆ 2.0L CETA ⇒ Item 13 (page 18) 	<p>Camshaft Position (CMP) Sensor 2 -G163-</p> <ul style="list-style-type: none"> ◆ 3.2L BUB, CBRA ⇒ Item 19 (page 22)
<p>Oil level and oil temperature sender -G266-</p> <ul style="list-style-type: none"> ◆ 2.0L BPY ⇒ page 13 ◆ 2.0L CCTA ⇒ page 13 ◆ 2.0L CDMA ⇒ page 13 ◆ 2.0L CETA ⇒ page 13 ◆ 3.2L BUB, CBRA ⇒ page 26 	<p>Coolant temperature sender -G62-</p> <ul style="list-style-type: none"> ◆ 2.0L BPY ⇒ Item 11 (page 4) ◆ 2.0L CCTA ⇒ Item 21 (page 8) ◆ 2.0L CDMA ⇒ Item 11 (page 14) ◆ 2.0L CETA ⇒ Item 21 (page 18) ◆ 3.2L BUB, CBRA ⇒ Item 23 (page 22) 	<p>Oil Pressure Regulation Valve -N428-</p> <ul style="list-style-type: none"> ◆ 2.0L BPY ⇒ page 10 ◆ 2.0L CCTA ⇒ Item 24 (page 8) ◆ 2.0L CETA ⇒ Item 27 (page 18) 	<p>Camshaft Adjustment Valve 1 (exhaust) -N318-</p> <ul style="list-style-type: none"> ◆ 3.2L BUB, CBRA ⇒ Item 20 (page 22)
<p>Engine speed sender -G28-</p> <ul style="list-style-type: none"> ◆ 2.0L BPY ⇒ Item 12 (page 5) ◆ 2.0L CCTA ⇒ Item 14 (page 8) ◆ 2.0L CDMA ⇒ Item 12 (page 14) ◆ 2.0L CETA ⇒ Item 14 (page 18) ◆ 3.2L BUB, CBRA ⇒ Item 25 (page 22) 	<p>Knock sensor 2 -G66-</p> <ul style="list-style-type: none"> ◆ 2.0L BPY ⇒ Item 12 (page 5) ◆ 2.0L CDMA ⇒ Item 12 (page 14) ◆ 3.2L BUB, CBRA ⇒ Item 28 (page 22) 	<p>Wastegate Bypass Regulator Valve -N75-</p> <ul style="list-style-type: none"> ◆ 2.0L BPY ⇒ Item 1 (page 4) ◆ 2.0L CCTA ⇒ Item 2 (page 7) ◆ 2.0L CDMA ⇒ Item 1 (page 14) ◆ 2.0L CETA ⇒ Item 2 (page 17) 	<p>Intake Air Temperature (IAT) Sensor 2 -G299-</p> <ul style="list-style-type: none"> ◆ 2.0L CCTA ⇒ Item 10 (page 7)
<p>Charge air pressure sender -G31-</p> <ul style="list-style-type: none"> ◆ 2.0L BPY ⇒ Item 15 (page 5) ◆ 2.0L CCTA ⇒ Item 15 (page 8) ◆ 2.0L CDMA ⇒ Item 14 (page 14) ◆ 2.0L CETA ⇒ Item 15 (page 18) 	<p>Mass Air Flow (MAF) Sensor -G70-</p> <ul style="list-style-type: none"> ◆ 2.0L CCTA ⇒ Item 10 (page 7) ◆ 2.0L CDMA ⇒ Item 10 (page 14) ◆ 3.2L BUB, CBRA ⇒ Item 14 (page 21) 	<p>Heater element for crankcase breather -N79-</p> <ul style="list-style-type: none"> ◆ 3.2L BUB, CBRA ⇒ Item 10 (page 21) 	<p>Intake Flap Motor -V157-</p> <ul style="list-style-type: none"> ◆ 2.0L BPY ⇒ Item 13 (page 5) <p>Intake Air Switch-Over valve -N335-</p> <ul style="list-style-type: none"> ◆ 2.0L CDMA only ⇒ Item 10 (page 6)

<p>Intake Manifold Runner Position Sensor -G336-</p> <ul style="list-style-type: none"> ◆ 2.0L BPY ⇒ Item 13 (page 5) ◆ 2.0L CCTA ⇒ Item 26 (page 8) ◆ 2.0L CDMA ⇒ Item 13 (page 14) ◆ 2.0L CETA ⇒ Item 26 (page 18) ◆ 3.2L BUB, CBRA 	<p>Throttle valve module -J338-</p> <ul style="list-style-type: none"> ◆ 2.0L BPY ⇒ Item 18 (page 5) ◆ 2.0L CCTA ⇒ Item 17 (page 8) ◆ 2.0L CDMA ⇒ Item 18 (page 14) ◆ 2.0L CETA ⇒ Item 17 (page 18) ◆ 3.2L BUB, CBRA ⇒ Item 12 (page 21) 	<p>Evaporative Emission Canister Purge Regulator Valve 1 -N80-</p> <ul style="list-style-type: none"> ◆ 2.0L BPY ⇒ Item 14 (page 5) ◆ 2.0L CCTA ⇒ Item 18 (page 8) ◆ 2.0L CDMA ⇒ Item 16 (page 14) ◆ 2.0L CETA ⇒ Item 18 (page 18) ◆ 3.2L BUB, CBRA ⇒ Item 3 (page 21) 	<p>Secondary Air Injection (AIR) Pump Motor -V101-</p> <ul style="list-style-type: none"> ◆ 3.2L BUB, CBRA ⇒ Item 27 (page 22)
<p>Ignition Coils with Power Output Stages</p> <ul style="list-style-type: none"> ◆ Ignition Coil 1 -N70- ◆ Ignition Coil 2 -N127- ◆ Ignition Coil 3 -N291- ◆ Ignition Coil 4 -N292- ◆ Ignition Coil 5 -N323- ◆ Ignition Coil 6 -N324- ◆ 2.0L BPY ⇒ Item 3 (page 4) ◆ 2.0L CCTA ⇒ Item 4 (page 7) ◆ 2.0L CDMA ⇒ Item 2 (page 14) ◆ 2.0L CETA ◆ 3.2L BUB, CBRA ⇒ Item 11 (page 21) 	<p>Fuel Injectors</p> <ul style="list-style-type: none"> ◆ Cylinder 1 Fuel Injector -N30- ◆ Cylinder 2 Fuel Injector -N31- ◆ Cylinder 3 Fuel Injector -N32- ◆ Cylinder 4 Fuel Injector -N33- ◆ Cylinder 5 Fuel Injector -N83- ◆ Cylinder 6 Fuel Injector -N84- ◆ 2.0L BPY ⇒ Item 17 (page 5) ◆ 3.2L BUB, CBRA ⇒ Item 30 (page 22) 	<p>Intake Manifold Tuning (IMT) Valve -N156-</p> <ul style="list-style-type: none"> ◆ 3.2L BUB, CBRA ⇒ Item 26 (page 22) 	<p>Cam adjustment actuators</p> <ul style="list-style-type: none"> ◆ Cam adjustment actuator 1 -F366- ◆ Cam adjustment actuator 2 -F367- ◆ Cam adjustment actuator 3 -F368- ◆ Cam adjustment actuator 4 -F369- ◆ Cam adjustment actuator 5 -F370- ◆ Cam adjustment actuator 6 -F371- ◆ Cam adjustment actuator 7 -F372- ◆ Cam adjustment actuator 8 -F373- ◆ 2.0L CETA ⇒ Item 4 (page 17)

1.2 2.0L gasoline BPY Overview

- 1 - Wastegate Bypass Regulator Valve -N75- → [page 13](#)
- 2 - Turbocharger Recirculating Valve -N249- → [page 13](#)
- 3 - Ignition Coils with Power Output Stages
 - ❑ Ignition Coil 1 with Power Output Stage -N70-
 - ❑ Ignition Coil 2 with Power Output Stage -N127-
 - ❑ Ignition Coil 3 with Power Output Stage -N291-
 - ❑ Ignition Coil 4 with Power Output Stage -N292-
- 4 - Heated Oxygen Sensor (HO2S) -G39- with Oxygen Sensor (O2S) Heater -Z19- → [Item 13 \(page 28\)](#)
- 5 - Engine Control Module (ECM) -J623-
- 6 - Single Piston High Pressure Pump
- 7 - Fuel Pressure Regulator Valve -N276- → [page 9](#)
- 8 - Camshaft Adjustment Valve 1 -N205- → [page 10](#)
- 9 - Harness Connector for Heated Oxygen Sensor (HO2S)
- 10 - Low Fuel Pressure Sensor -G410- → [Item 7 \(page 6\)](#)
- 11 - Engine Coolant Temperature (ECT) Sensor -G62- → [page 12](#)

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Cont.

12 - Engine Speed (RPM) Sensor -G28-

- Oil Pressure Sensor -G10-
- Electrical connectors Knock Sensor 1 -G61- and Knock Sensor 2 -G66- ⇒ [page 11](#)

13 - Intake Flap Motor -V157- with Intake Manifold Runner Position Sensor -G336- ⇒ [Item 10 \(page 6\)](#)

14 - Evaporative Emission (EVAP) Canister Purge Regulator Valve 1 -N80-

15 - Charge Air Pressure Sensor -G31- ⇒ [page 12](#)

16 - Connector

- For Camshaft Position (CMP) Sensor -G40- and Fuel Pressure Sensor -G247-

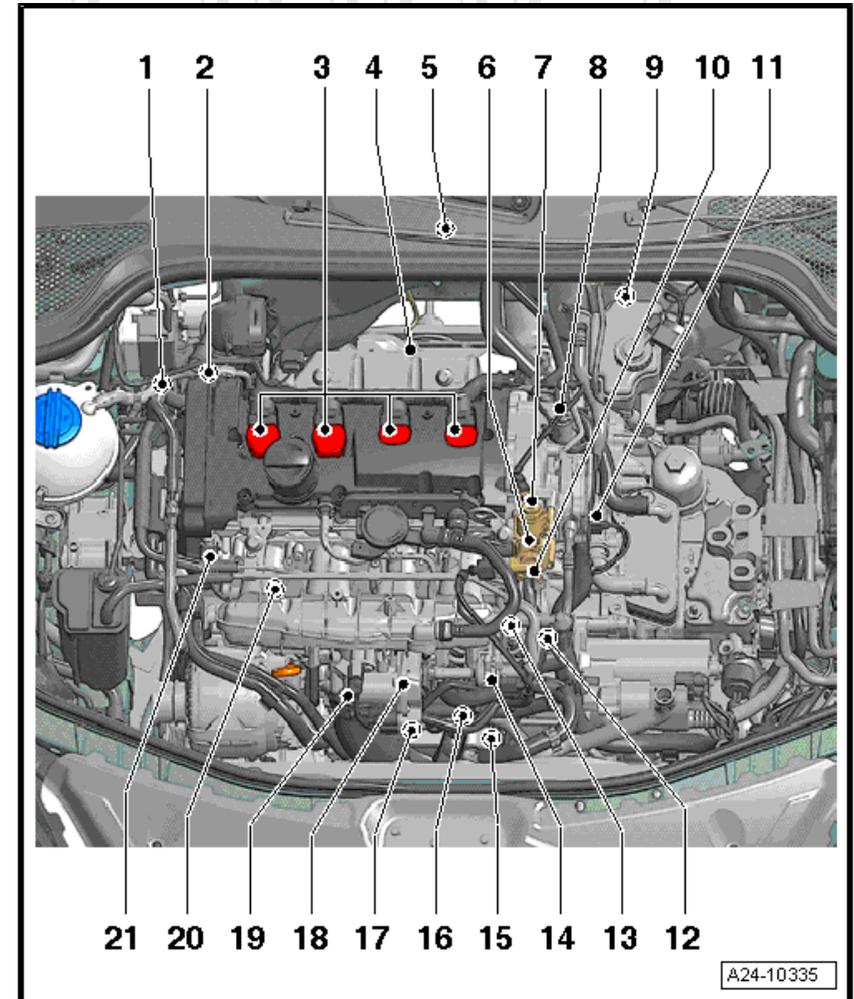
17 - Fuel Injector 8-Pin Harness Connector ⇒ [page 11](#)

18 - Throttle Valve Control Module -J338- , Throttle Drive (for Electronic Power Control (EPC)) -G186-

19 - Intake Air Temperature (IAT) Sensor -G42-

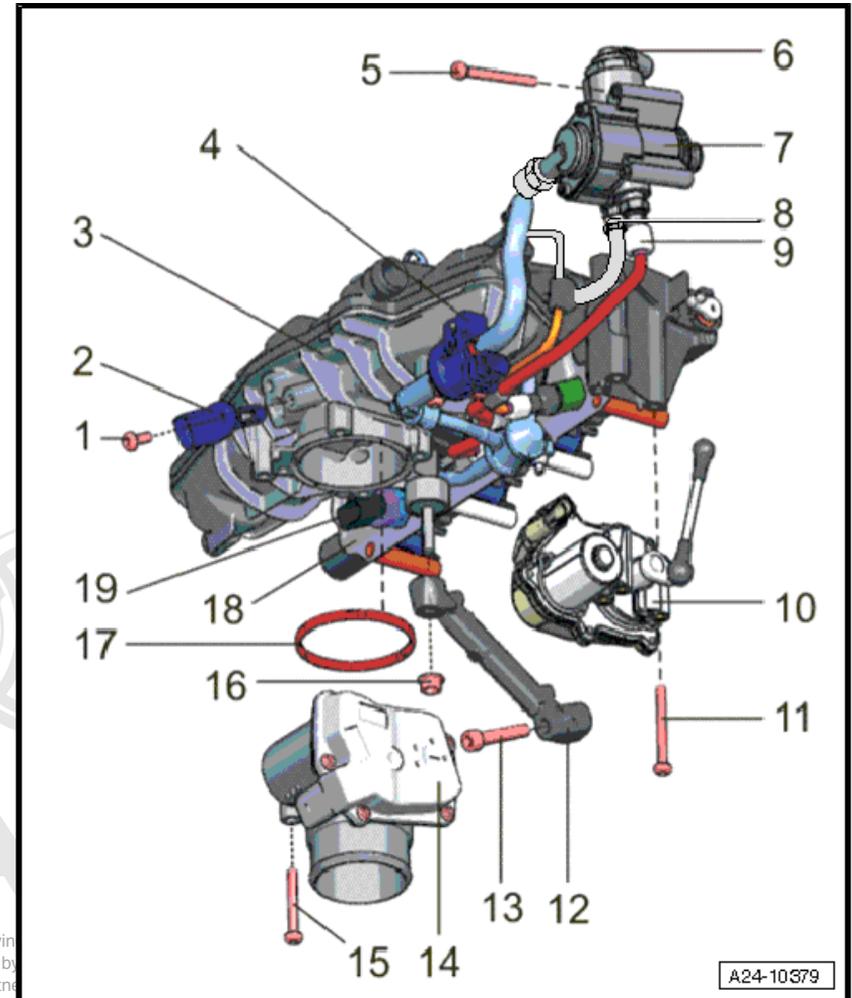
20 - Fuel Pressure Sensor -G247- ⇒ [page 9](#)

21 - Camshaft Position (CMP) Sensor -G40-



Intake Manifold Assembly Overview

- 2 - Intake Air Temperature (IAT) Sensor -G42-
- 4 - Evaporative Emission (EVAP) Canister Purge Regulator Valve 1 -N80-
- 6 - Fuel Pressure Regulator Valve -N276- → [page 9](#)
- 7 - Mechanical Single-Piston High-Pressure Pump with Low Fuel Pressure Sensor -G410-
- 10 - Intake Flap Motor -V157- with Intake Manifold Runner Position Sensor -G336-
 CDMA only : Intake Air Switch-Over valve -N335-
- 14 - Throttle Valve Control Module -J338- with Throttle Drive (for Electronic Power Control (EPC)) -G186-
- 19 - Fuel Pressure Sensor -G247- → [page 9](#)

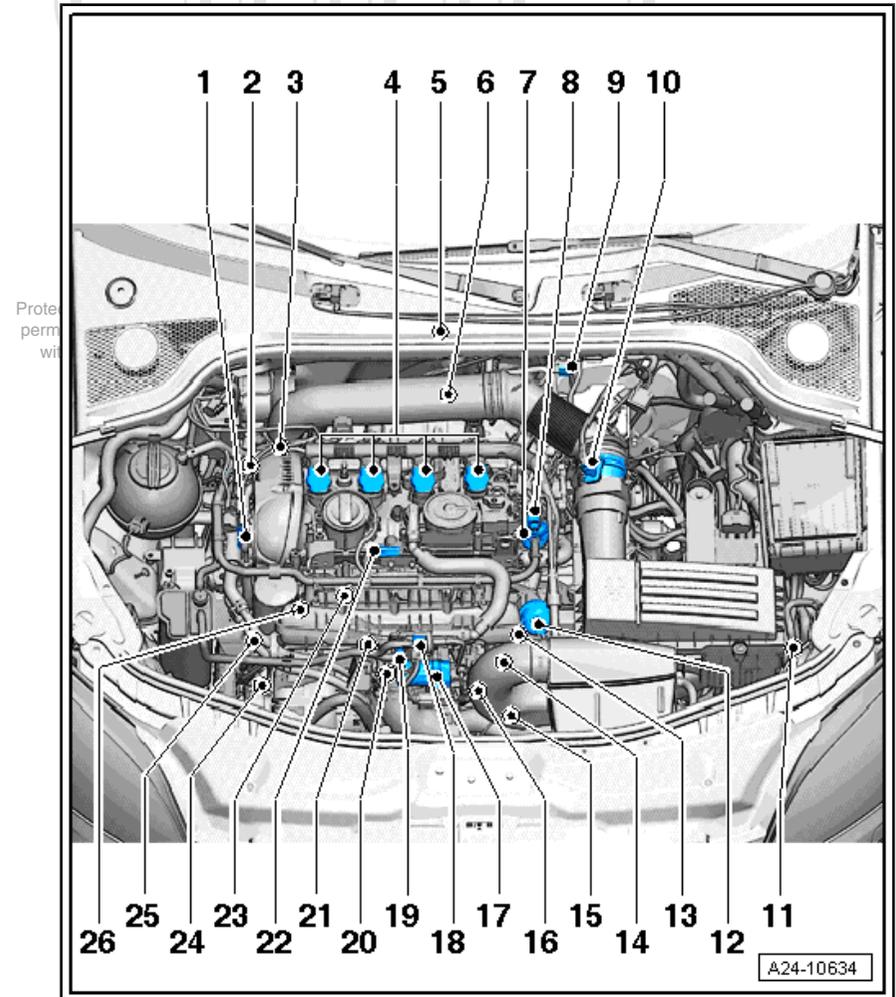


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1.3 2.0L gasoline CCTA Overviews

- 1 - Camshaft Adjustment Valve 1 -N205- ⇒ [page 10](#)
- 2 - Wastegate Bypass Regulator Valve -N75- ⇒ [page 13](#)
- 3 - Turbocharger Recirculating Valve -N249- ⇒ [page 13](#)
- 4 - Ignition Coils with Power Output Stages
 - ❑ Ignition Coil 1 with Power Output Stage -N70-
 - ❑ Ignition Coil 2 with Power Output Stage -N127-
 - ❑ Ignition Coil 3 with Power Output Stage -N291-
 - ❑ Ignition Coil 4 with Power Output Stage -N292-
- 5 - Engine Control Module (ECM) -J623-
- 6 - Heated oxygen sensor -G39- ⇒ [page 27](#)
- 7 - Mechanical Single-Piston High-Pressure Pump
- 8 - Fuel Pressure Regulator Valve -N276- ⇒ [page 9](#)
- 9 - Electrical connector from Heated Oxygen Sensor (HO2S) -G39-
- 10 - Mass Air Flow (MAF) Sensor -G70- and Intake Air Temperature (IAT) Sensor 2 -G299-



Cont.

11 - Engine Coolant Temperature (ECT) Sensor (on Radiator) -G83- ⇒ [page 31](#)

12 - Vacuum Diaphragm for the Intake Manifold Flap ⇒ [page 9](#)

13 - Intake Manifold Runner Control (IMRC) Valve -N316- ⇒ [page 9](#)

14 - Engine Speed (RPM) Sensor -G28- ⇒ [page 11](#)

15 - Charge Air Pressure Sensor -G31- ⇒ [page 12](#)

16 - Electrical Harness Connectors ⇒ [page 11](#)

- ❑ For Knock Sensor 1 -G61- and Camshaft Position (CMP) Sensor -G40-

17 - Throttle Valve Control Module -J338-

18 - Evaporative Emission (EVAP) Canister Purge Regulator Valve 1 -N80-

19 - Intake Air Temperature (IAT) Sensor -G42-

20 - Knock Sensor 1 -G61-

- ❑ Located below the intake manifold behind the coolant pump

21 - Engine Coolant Temperature (ECT) Sensor -G62- ⇒ [page 12](#)

22 - Camshaft Position (CMP) Sensor -G40- ⇒ [page 11](#)

23 - Fuel Pressure Sensor -G247- ⇒ [page 9](#)

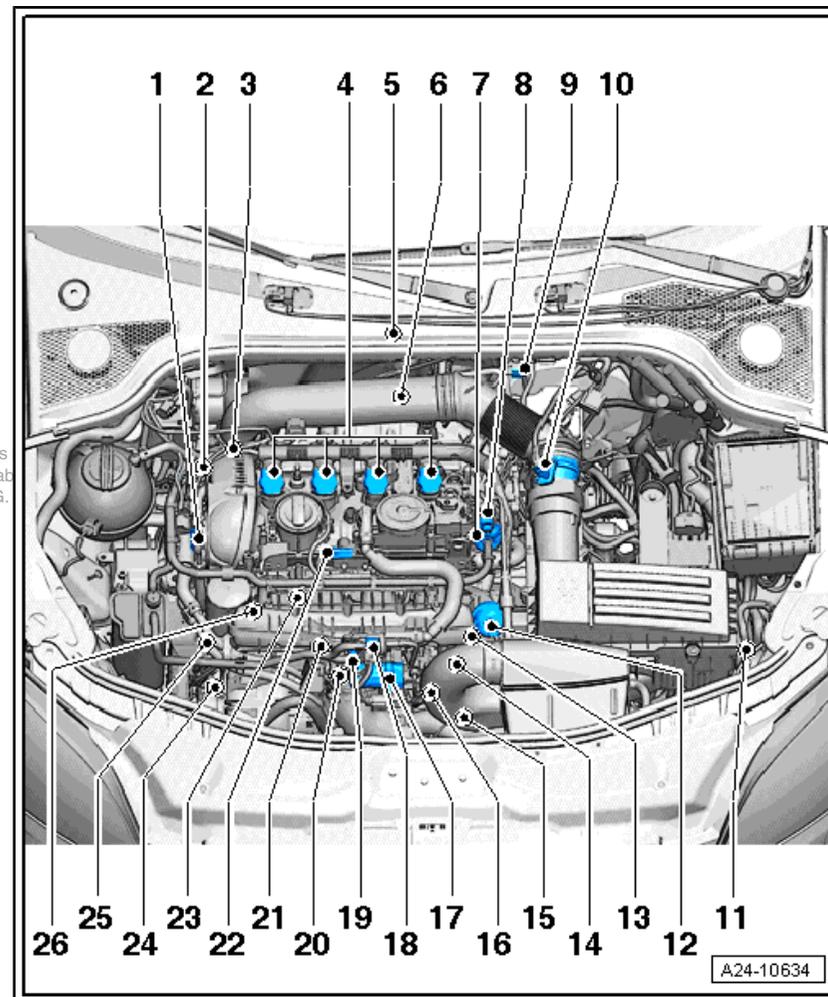
24 - Oil Pressure Regulation Valve -N428- ⇒ [page 10](#)

25 - Oil Pressure Switch ⇒ [page 10](#)

- ❑ Reduced Oil Pressure Switch -F378-
- ❑ Oil Pressure Switch -F22-

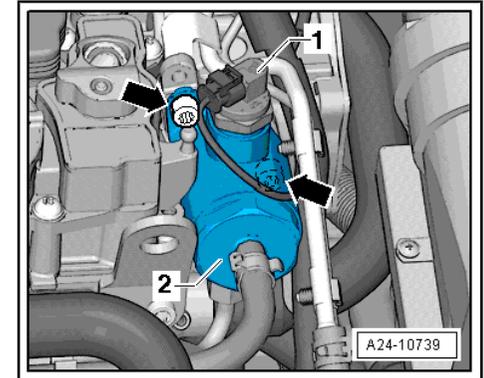
26 - Intake Manifold Runner Position Sensor -G336-

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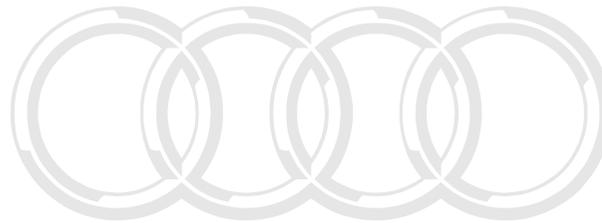
High Pressure Fuel Pump

- 1 - Fuel Pressure Regulator Valve -N276-
- 2 - High Pressure Fuel Pump



Intake Manifold Runner Control (IMRC) Valve

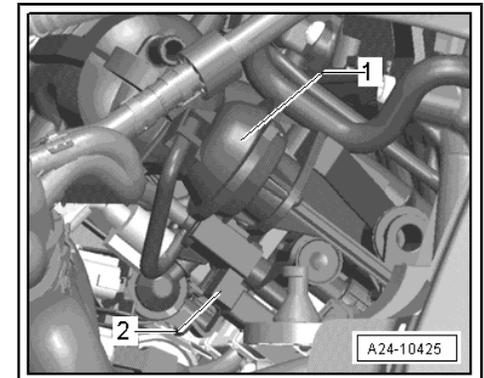
- 1 - Intake manifold flap vacuum diaphragm
- 2 - Intake Manifold Runner Control (IMRC) Valve -N316-



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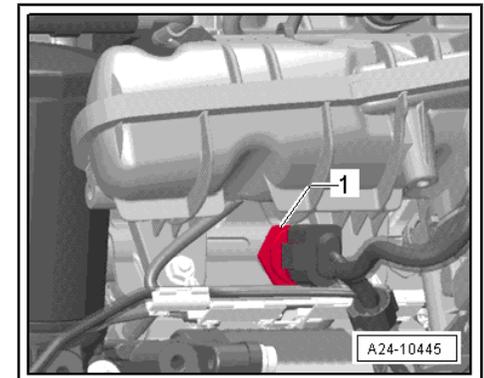
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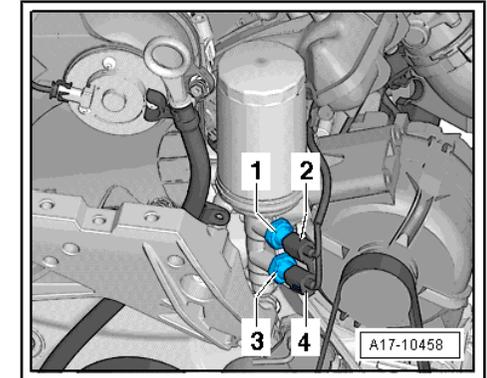
Fuel Pressure Sensor

- 1 - Fuel Pressure Sensor -G247-



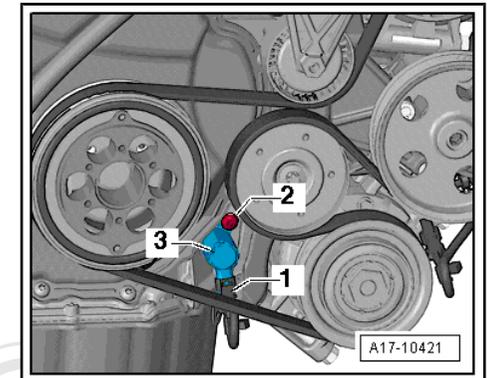
Oil Pressure Switch

- 1 - Reduced Oil Pressure Switch -F378-
- 3 - Oil Pressure Switch -F22- / -F1-



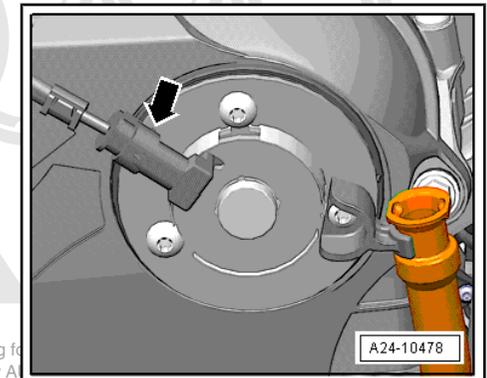
Oil Pressure Regulation Valve

- 3 - Oil Pressure Regulation Valve -N428-



Camshaft Adjustment Valve 1

- ARROW- Camshaft Adjustment Valve 1 -N205-

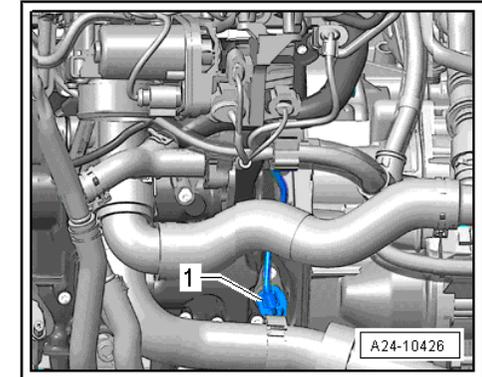


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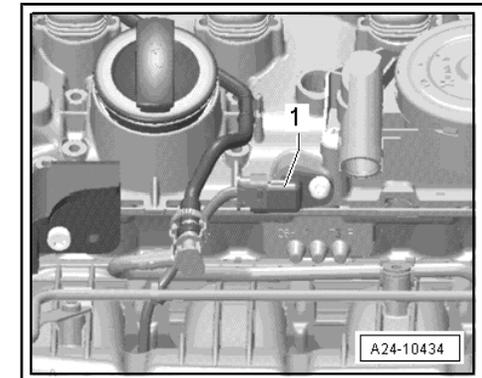
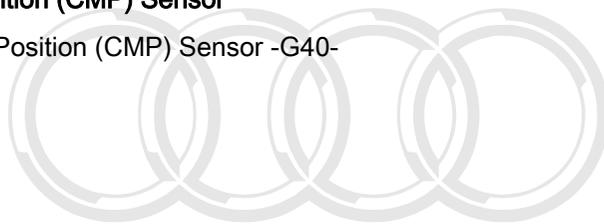
Engine Speed (RPM) Sensor

1 - Engine Speed (RPM) Sensor -G28-



Camshaft Position (CMP) Sensor

1 - Camshaft Position (CMP) Sensor -G40-



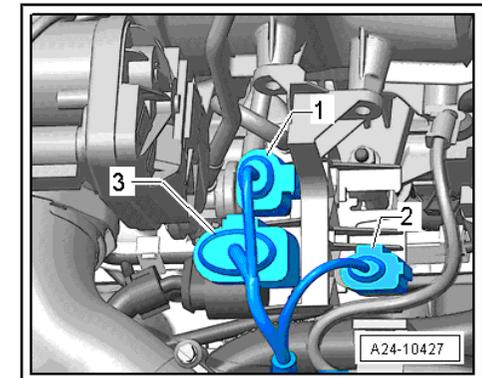
Electrical Harness Connectors

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1 - From Camshaft Position (CMP) Sensor -G40- and Intake Manifold Runner Position Sensor -G336-

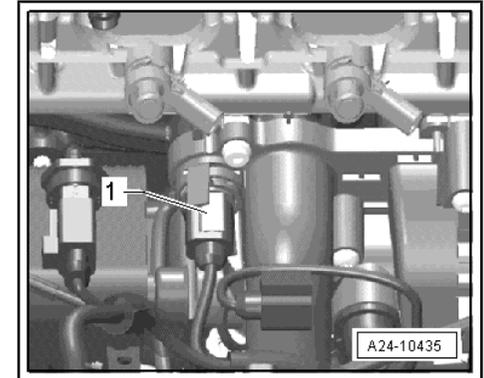
2 - From Knock Sensor 1 -G61- The sensor is located below the intake manifold behind the coolant pump

3 - 8-pin harness connector for fuel injectors



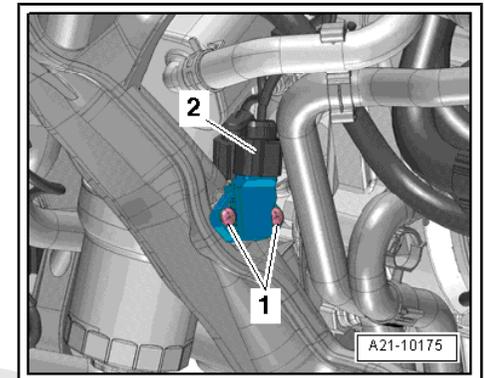
Engine Coolant Temperature (ECT) Sensor

1 - Engine Coolant Temperature (ECT) Sensor -G62-



Charge Air Pressure Sensor

2 - Charge Air Pressure Sensor -G31-

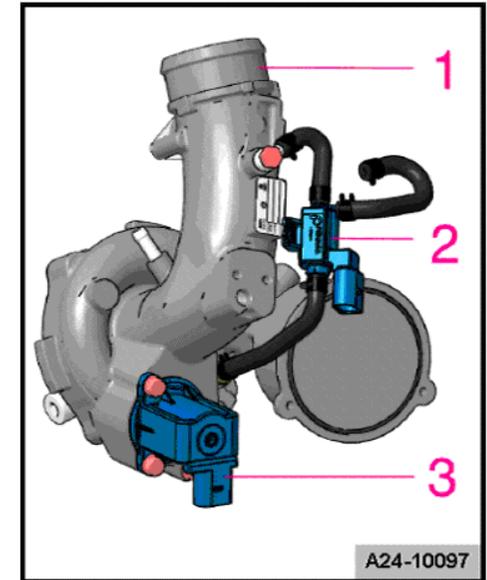


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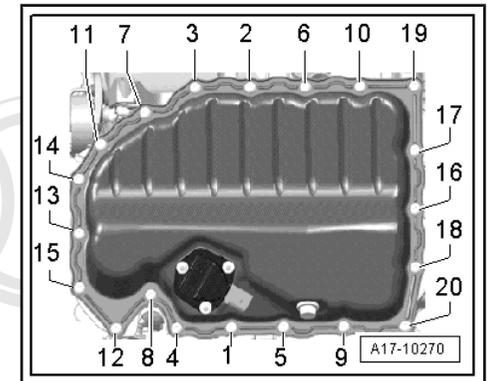
Components on Turbocharger

- 1 - Turbocharger Assembly
- 2 - Wastegate Bypass Regulator Valve -N75-
- 3 - Turbocharger Recirculating Valve -N249-



Oil Level Thermal Sensor

Oil Level Thermal Sensor -G266- located in bottom of oil pan



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1.4 2.0L gasoline CDMA Overviews

1 - Wastegate bypass regulator valve -N75-

- Installed directly on turbocharger

2 - Ignition Coils with Power Output Stages

- Ignition coil 1 with power output stage -N70-
- Ignition coil 2 with power output stage -N127-
- Ignition coil 3 with power output stage -N291-
- Ignition coil 4 with power output stage -N292-

3 - Heated oxygen sensor -G39- ⇒ [page 27](#)

4 - Engine control module -J623-

5 - Low fuel pressure sensor -G410-

6 - Single Piston High Pressure Pump

7 - Fuel pressure regulator valve -N276-

8 - Camshaft adjustment valve 1 -N205-

9 - 6-Pin Harness Connector

- For Heated oxygen sensor -G39- ⇒ [page 27](#)

10 - Mass air flow sensor -G70-

11 - Engine coolant temperature sensor -G62- ⇒ [page 15](#)

12 - Engine speed sensor -G28-

- Electrical connectors on Knock sensor 1 -G61- and Knock sensor 2 -G66- ⇒ [page 15](#)

13 - Intake flap motor -V157- with Intake manifold runner position sensor -G336-

14 - Charge air pressure sensor -G31- ⇒ [page 12](#)

15 - Electrical Harness Connectors

- For the fuel injectors, Camshaft position sensor -G40- , and Fuel pressure sensor -G247-

16 - EVAP canister purge regulator valve 1 -N80- ⇒ [page 16](#)

17 - Turbocharger recirculation valve -N249- ⇒ [page 16](#)

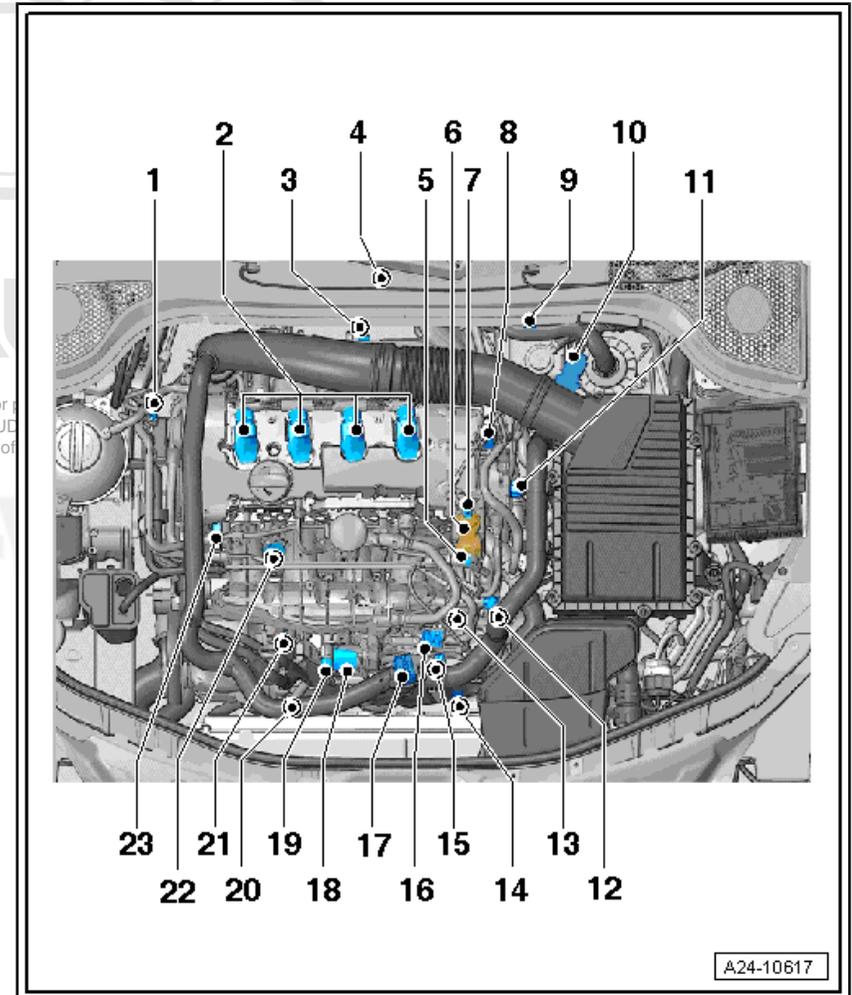
18 - Throttle valve control module -J338-

19 - Intake air temperature sensor -G42-

20 - After-run coolant pump -V51- ⇒ [page 31](#)

21 - Engine coolant temperature sensor on radiator -G83- ⇒ [page 31](#)

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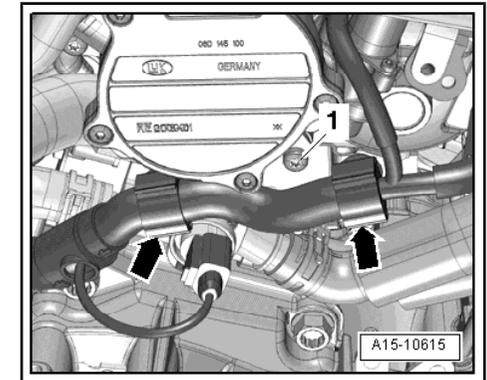


22 - Fuel pressure sensor -G247- ⇒ [page 9](#)

23 - Camshaft position sensor -G40- ⇒ [page 11](#)

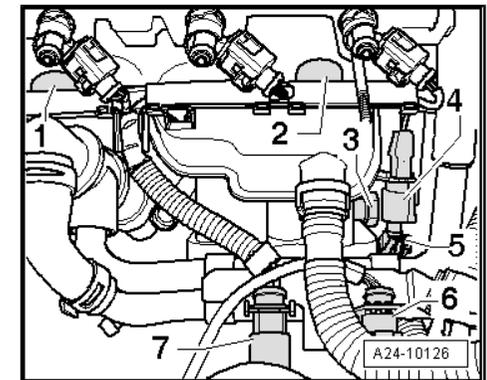
Engine Coolant Temperature Sensor

Engine coolant temperature sensor -G62-



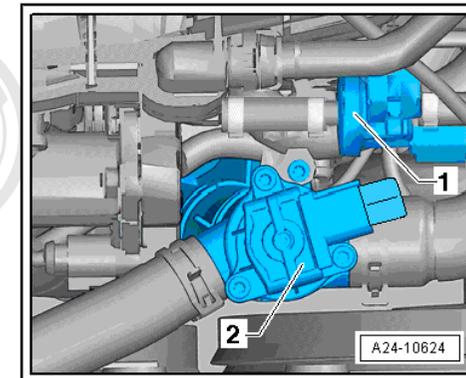
Component Locations Under Intake Manifold Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.

- 1 - Knock sensor 1 -G61-
- 2 - Knock sensor 2 -G66-
- 3 - Oil pressure switch -F1-
- 4 - 3-pin harness connector (brown) for Knock sensor 2 -G66-
- 5 - 3-pin connector (gray) for Engine speed sensor -G28-
- 6 - Electrical connector for Camshaft position sensor -G40- and Fuel pressure sensor -G247-
- 7 - 8-pin harness connector for fuel injectors



Turbocharger Recirculating Valve Engine Code CDMA

- 1 - EVAP canister purge regulator valve 1 -N80-
- 2 - Turbocharger recirculation valve -N249-

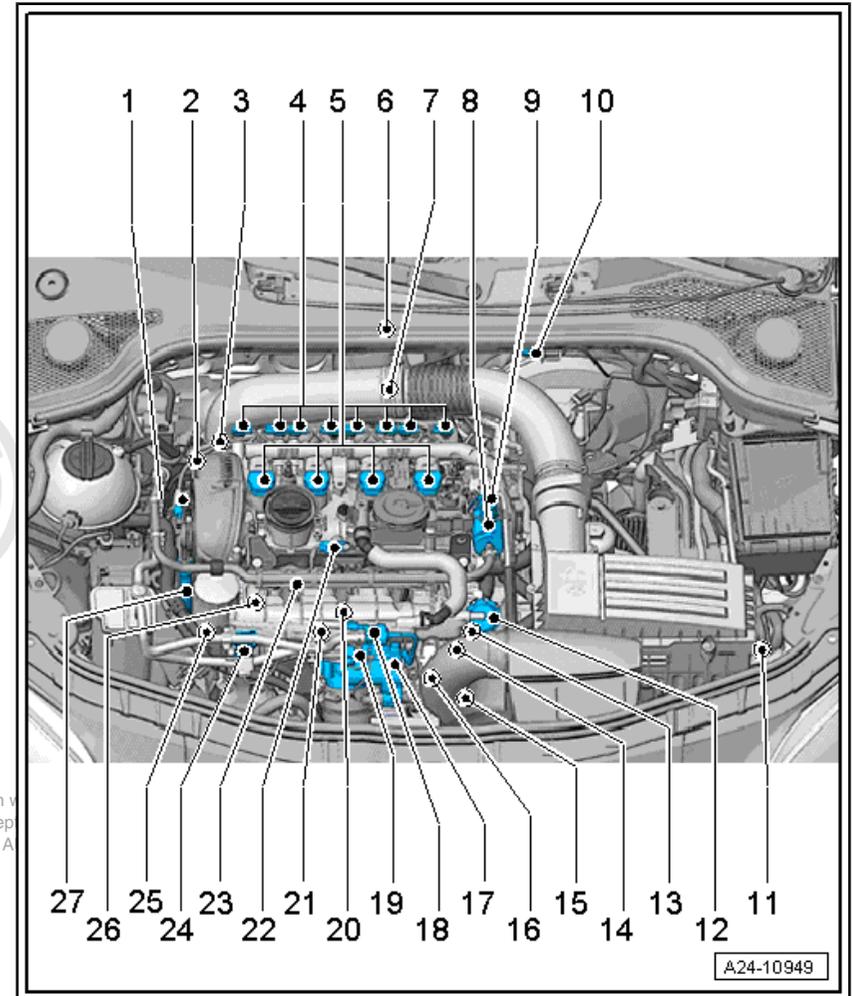


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1.5 2.0L gasoline CETA Overviews

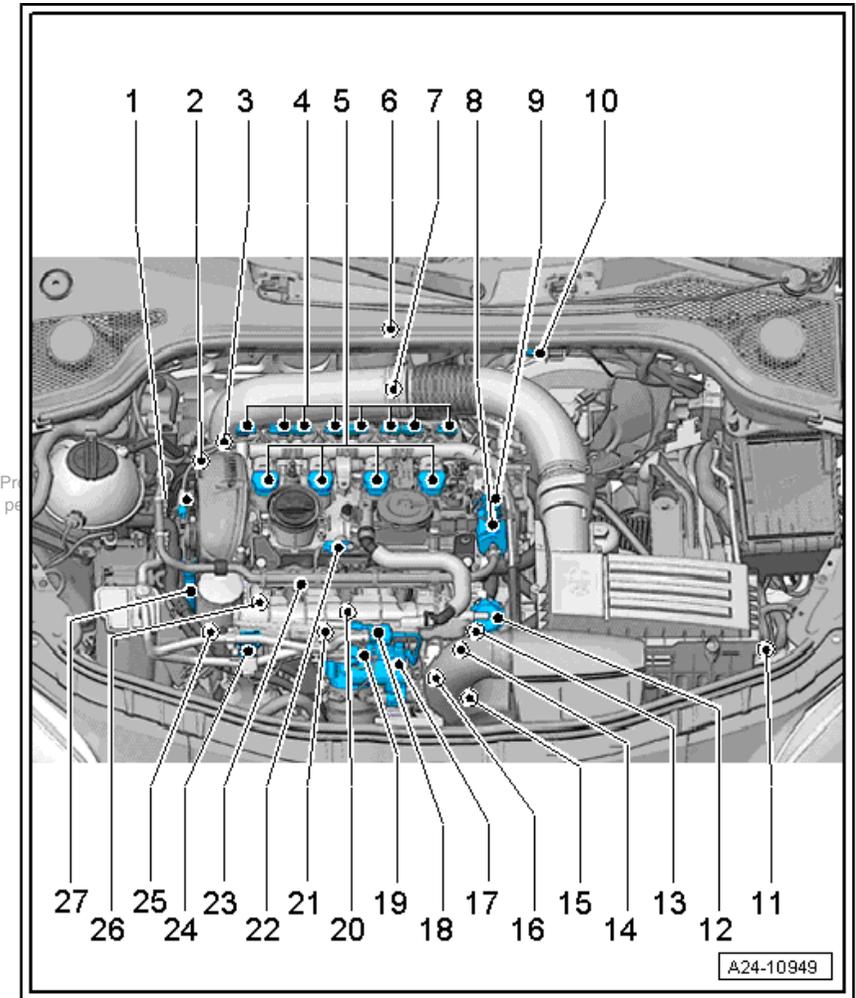
- 1 - Camshaft adjustment valve 1 -N205- ⇒ [page 10](#)
- 2 - Wastegate bypass regulator valve -N75- ⇒ [page 13](#)
- 3 - Turbocharger recirculation valve -N249- ⇒ [page 13](#)
- 4 - Cam adjustment actuators
 - Cam adjustment actuator 1 -F366-
 - Cam adjustment actuator 2 -F367-
 - Cam adjustment actuator 3 -F368-
 - Cam adjustment actuator 4 -F369-
 - Cam adjustment actuator 5 -F370-
 - Cam adjustment actuator 6 -F371-
 - Cam adjustment actuator 7 -F372-
 - Cam adjustment actuator 8 -F373-
 - Component location
- 5 - Ignition coils with power output stage ⇒ [page 20](#)
 - Ignition coil 1 with power output stage -N70-
 - Ignition coil 2 with power output stage -N127-
 - Ignition coil 3 with power output stage -N291-
 - Ignition coil 4 with power output stage -N292-
- 6 - Engine control module -J623-
- 7 - Heated oxygen sensor -G39- ⇒ [Item 13 \(page 28\)](#)
- 8 - High-pressure pump ⇒ [page 19](#)
- 9 - Fuel pressure regulator valve -N276- ⇒ [page 19](#)
- 10 - Electrical connector for Heated oxygen sensor -G39-



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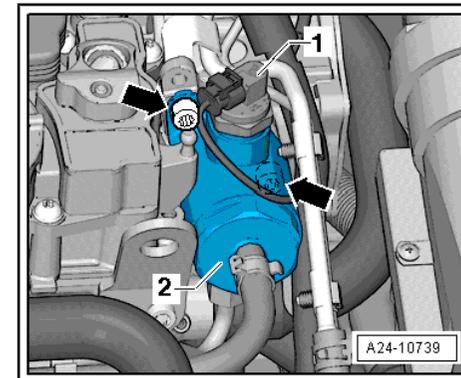
Cont:

- 11 - Engine coolant temperature sensor on radiator -G83- ⇒ [page 31](#)
- 12 - Vacuum Diaphragm for the Intake Manifold Flap ⇒ [page 9](#)
- 13 - Intake manifold runner control valve -N316- ⇒ [page 9](#)
- 14 - Engine speed sensor -G28- ⇒ [page 11](#)
- 15 - Charge air pressure sensor -G31- ⇒ [page 12](#)
- 16 - Electrical connectors
 - For Knock sensor 1 -G61-
 - For Camshaft position sensor -G40-
- 17 - Throttle valve control module -J338-
- 18 - EVAP canister purge regulator valve 1 -N80- ⇒ [page 19](#)
- 19 - Intake air temperature sensor -G42-
- 20 - Knock sensor 1 -G61- ⇒ [page 19](#)
- 21 - Engine coolant temperature sensor -G62- ⇒ [page 12](#)
- 22 - Camshaft position sensor -G40- ⇒ [page 11](#)
- 23 - Fuel pressure sensor -G247- ⇒ [page 20](#)
- 24 - Manifold absolute pressure sensor -G71- ⇒ [page 20](#)
- 25 - Oil pressure switches ⇒ [page 10](#)
 - Reduced oil pressure switch -F378-
 - Oil pressure switch -F22-
- 26 - Intake manifold runner position sensor -G336-
- 27 - Oil pressure regulation valve -N428- ⇒ [page 10](#)



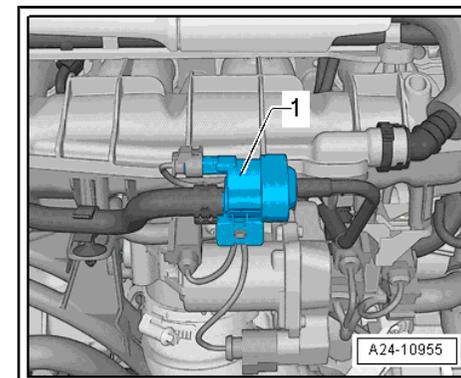
High pressure pump

- 1 - Fuel pressure regulator valve -N276-
- 2 - High pressure pump



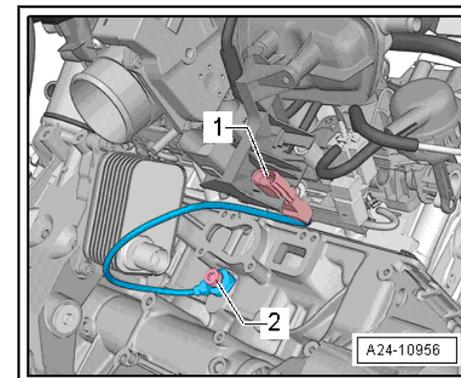
EVAP canister purge valve

- 1 - EVAP canister purge regulator valve 1 -N80-



Knock sensor 1

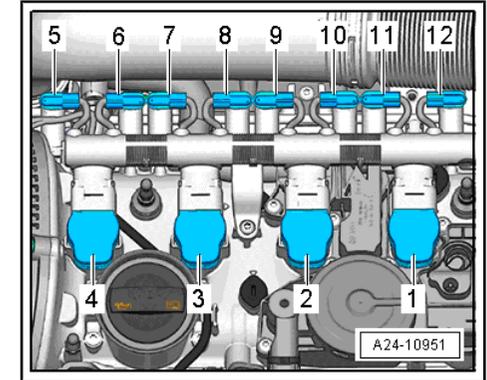
- Connector for Knock sensor 1 -G61-
- 2 - Knock sensor 1 -G61-



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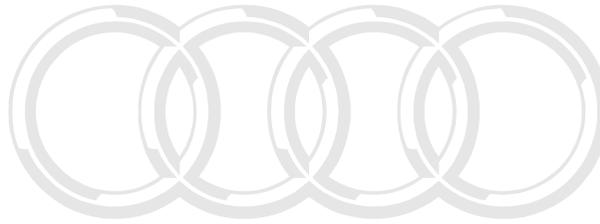
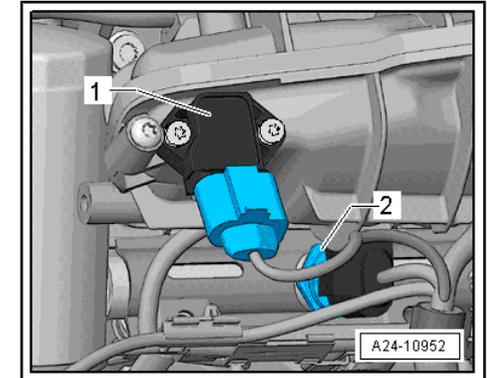
Ignition coils

- 1 - Ignition coil 1 with power output stage -N70-
- 2 - Ignition coil 2 with power output stage -N127-
- 3 - Ignition coil 3 with power output stage -N291-
- 4 - Ignition coil 4 with power output stage -N292-
- 5 - Cam adjustment actuator 2 -F367- (for cylinder 1)
- 6 - Cam adjustment actuator 1 -F366- (for cylinder 1)
- 7 - Cam adjustment actuator 3 -F368- (for cylinder 2)
- 8 - Cam adjustment actuator 4 -F369- (for cylinder 2)
- 9 - Cam adjustment actuator 6 -F371- (for cylinder 3)
- 10 - Cam adjustment actuator 5 -F370- (for cylinder 3)
- 11 - Cam adjustment actuator 7 -F372- (for cylinder 4)
- 12 - Cam adjustment actuator 8 -F373- (for cylinder 4)



MAP and fuel pressure sensors

- 1 - Manifold absolute pressure sensor -G71-
- 2 - Fuel pressure sensor -G247-



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1 - 3-pin Harness Connector

- For Knock Sensor 1 -G61- ⇒ [page 24](#)

2 - Knock Sensor 1 -G61- ⇒ [page 24](#)

3 - Evaporative Emission (EVAP) Canister Purge Regulator Valve 1 -N80-

4 - Heated Oxygen Sensor (HO2S) -G39- ⇒ [Item 13 \(page 29\)](#)

5 - Electrical Connectors

- For Oxygen Sensor (O2S) Behind Three Way Catalytic Converter (TWC) -G130-
- For Oxygen Sensor (O2S) 2 Behind Three Way Catalytic Converter (TWC) -G131-

6 - Oxygen Sensor (O2S) Behind Three Way Catalytic Converter (TWC) -G130- ⇒ [Item 14 \(page 29\)](#)

7 - Engine Control Module (ECM) -J623-

8 - Oxygen Sensor (O2S) 2 Behind Three Way Catalytic Converter (TWC) -G131- ⇒ [Item 14 \(page 29\)](#)

9 - Heated Oxygen Sensor (HO2S) 2 -G108- ⇒ [Item 13 \(page 29\)](#)

10 - Positive Crankcase Ventilation (PCV) Heating Element -N79-

11 - Ignition Coils with Power Output Stages

- Ignition Coil 1 -N70-
- Ignition Coil 2 -N127-
- Ignition Coil 3 -N291-
- Ignition Coil 4 -N292-
- Ignition Coil 5 -N323-
- Ignition Coil 6 -N324-

12 - Throttle Valve Control Module -J338-

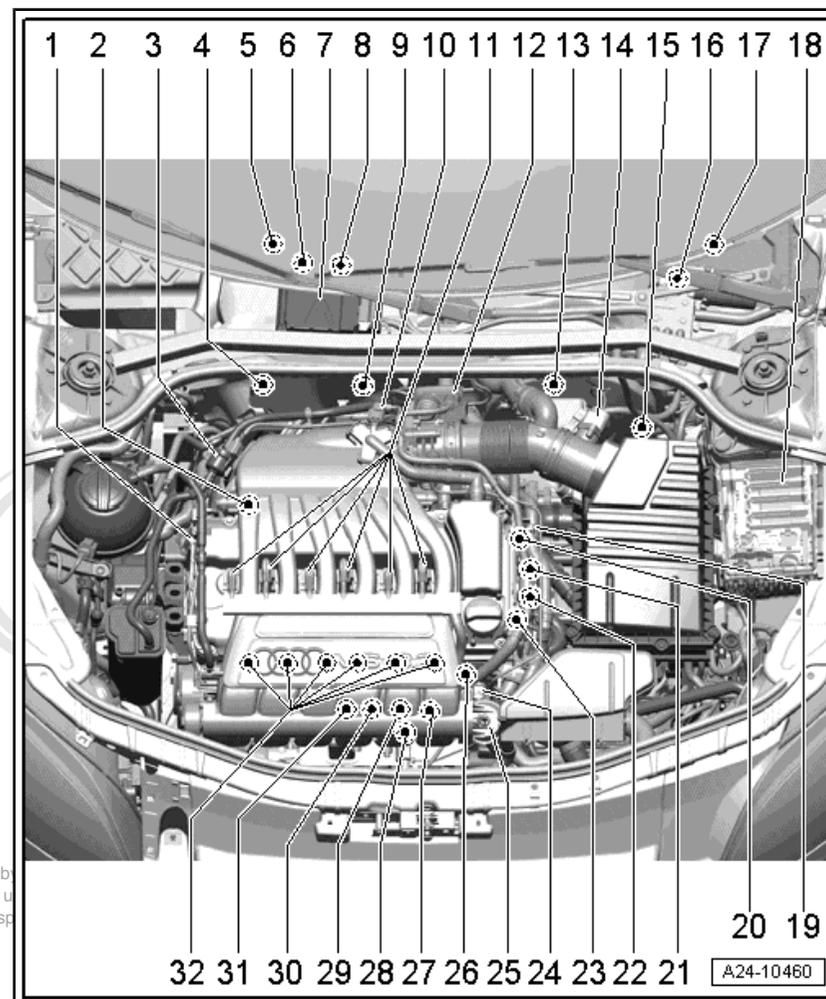
13 - Electrical Connectors

- For Heated Oxygen Sensor (HO2S) -G39-
- For Heated Oxygen Sensor (HO2S) 2 -G108-

14 - Mass Air Flow (MAF) Sensor -G70-

15 - Clutch Position Sensor -G476-

- For vehicles with manual transmission, installed on clutch master cylinder



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Cont.

16 - Throttle Position (TP) Sensor -G79- and Accelerator Pedal Position Sensor 2 -G185-
⇒ [page 35](#)

17 - Instrument Cluster

18 - Engine compartment E-box

19 - Secondary air injection sensor 1 -G609- ⇒ [page 26](#)

For engine code CBRA only

20 - Camshaft Position (CMP) Sensor 2 -G163- ⇒ [page 25](#)

21 - Camshaft Adjustment Valve 1 (exhaust) -N318- ⇒ [page 25](#)

22 - Camshaft Adjustment Valve 1 -N205- ⇒ [page 25](#)

23 - Camshaft Position (CMP) Sensor -G40- ⇒ [page 25](#)

24 - Engine Coolant Temperature (ECT) Sensor -G62- ⇒ [page 23](#)

25 - Vacuum Actuator for Intake Manifold Flaps

26 - Engine Speed (RPM) Sensor -G28- ⇒ [page 23](#)

27 - Intake Manifold Tuning (IMT) Valve -N156- ⇒ [page 23](#)

28 - Secondary Air Injection (AIR) Pump Motor -V101- ⇒ [page 25](#)

29 - Secondary air injection solenoid valve -N112- and Secondary air injection solenoid valve 2 -N320- ⇒ [page 25](#)

For engine code CBRA only

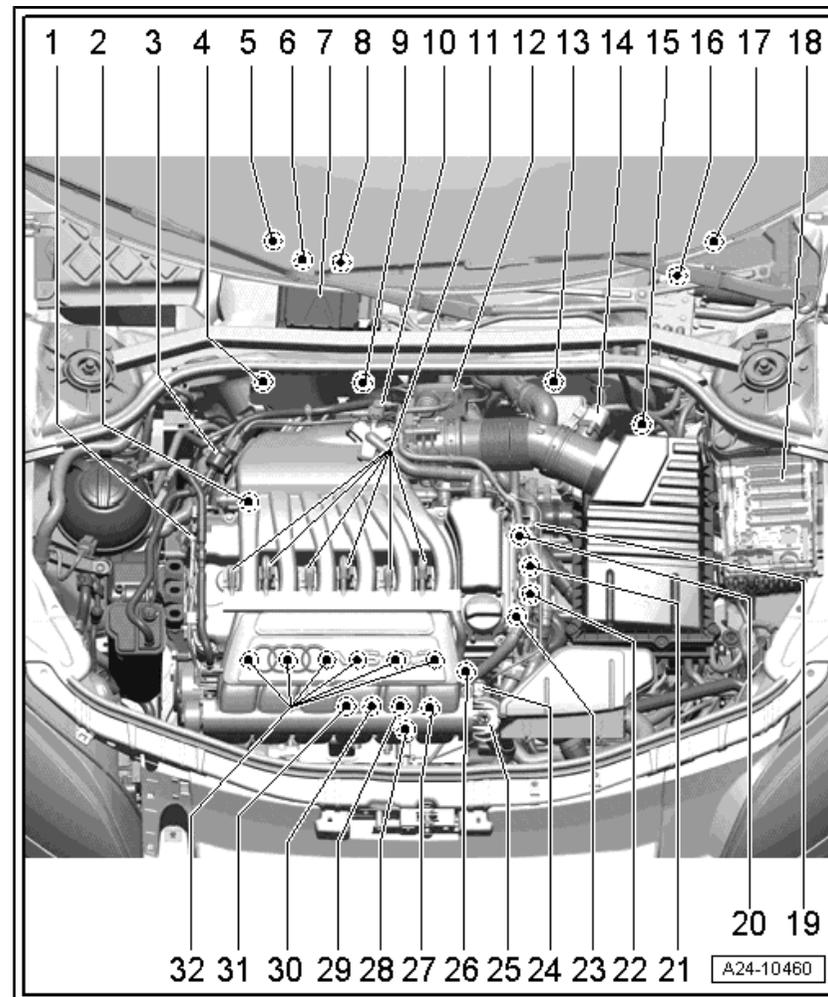
30 - Knock Sensor 2 -G66- ⇒ [page 24](#)

31 - 3-pin Harness Connector

For Engine Speed (RPM) Sensor -G28- ⇒ [page 23](#)

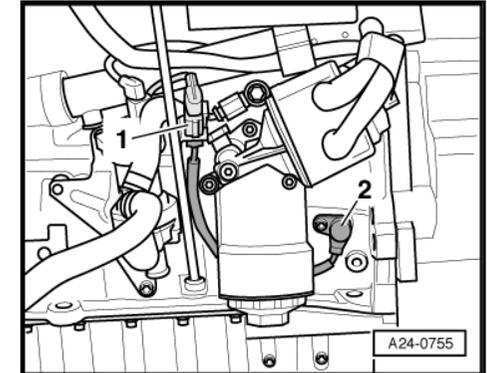
32 - Fuel Injector

- Cylinder 1 Fuel Injector -N30-
- Cylinder 2 Fuel Injector -N31-
- Cylinder 3 Fuel Injector -N32-
- Cylinder 4 Fuel Injector -N33-
- Cylinder 5 Fuel Injector -N83-
- Cylinder 6 Fuel Injector -N84-



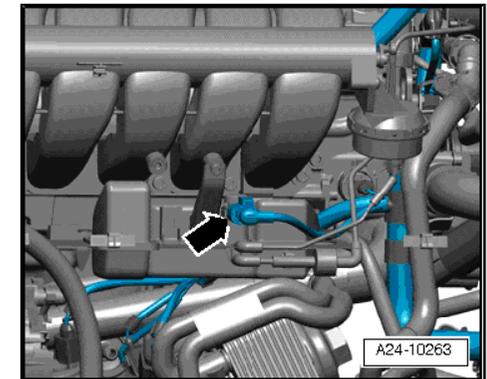
Engine Speed (RPM) Sensor

- 1 - 3-pin harness connector
- 2 - Engine Speed (RPM) Sensor -G28-



Intake Manifold Tuning (IMT) Valve

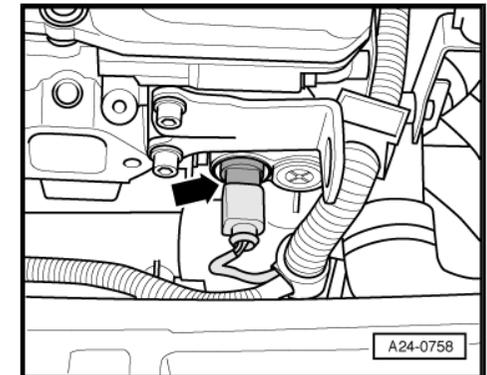
- ARROW- Intake Manifold Tuning (IMT) Valve -N156-
- On vacuum reservoir at front on engine



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Engine Coolant Temperature (ECT) Sensor

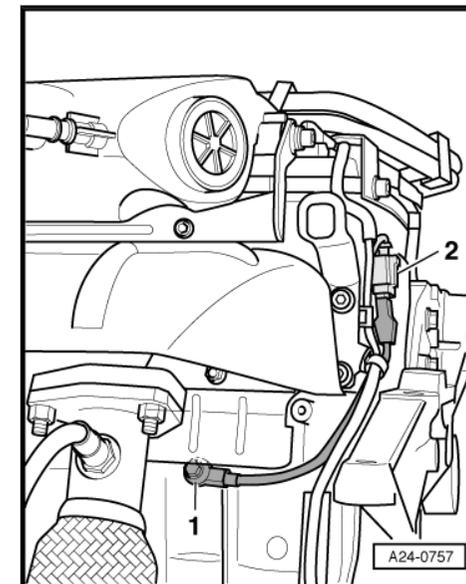
- ARROW- Engine Coolant Temperature (ECT) Sensor -G62-
- At left front of cylinder head



Knock Sensor (KS) 1

1 - Knock Sensor 1 -G61-

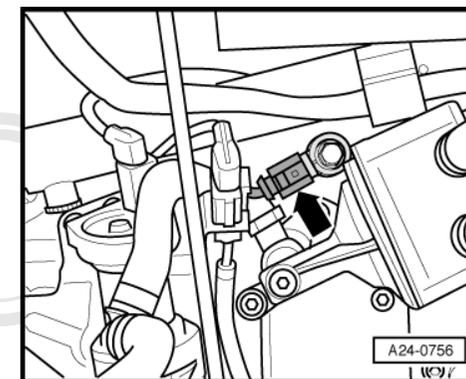
2 - 3-pin harness connector



Knock Sensor (KS) 2

-ARROW- Knock Sensor 2 -G66-

Front at cylinder head

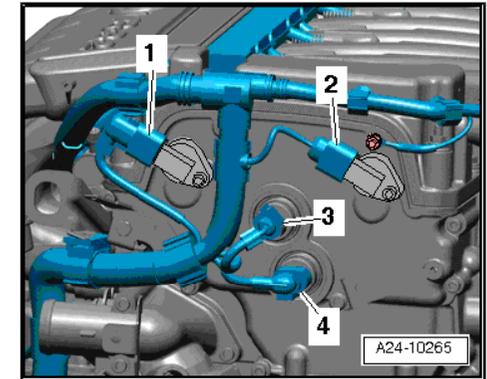


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Camshaft Sensors

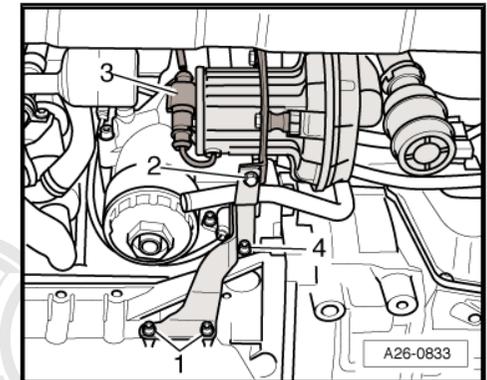
Left on cylinder head

- 1 - Camshaft Position (CMP) Sensor -G40-
- 2 - Camshaft Position (CMP) Sensor 2 -G163-
- 3 - Camshaft Adjustment Valve 1 -N205-
- 4 - Camshaft Adjustment Valve 1 (exhaust) -N318-



Secondary Air Injection Pump

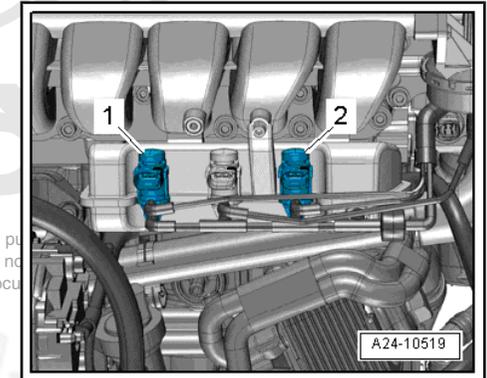
3 - Connector at Secondary Air Injection (AIR) Pump Motor -V101-



Secondary Air Injection Solenoid Valves- Engine Code CBRA

On vacuum reservoir at front on engine

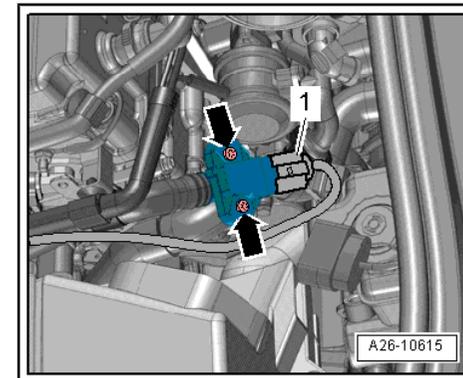
- 1 - Secondary Air Injection (AIR) Solenoid Valve -N112-
- 2 - Secondary Air Injection (AIR) Solenoid Valve 2 -N320-



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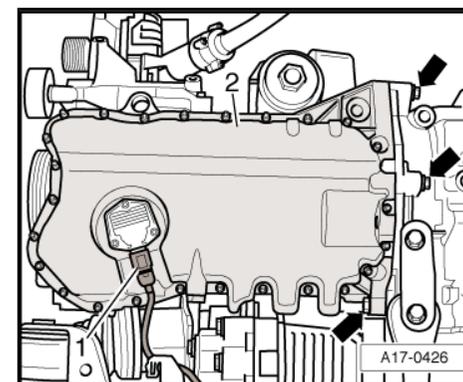
Secondary Air Injection Sensor 1 -G609- - Engine Code CBRA

1 - Secondary air injection sensor 1 -G609-



Oil Level Thermal Sensor

1 - Oil Level Thermal Sensor -G266-

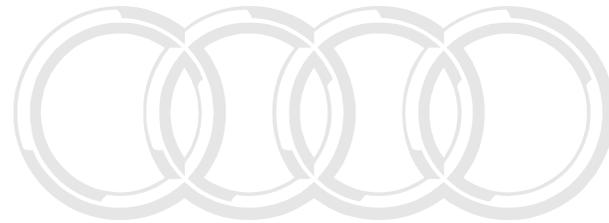
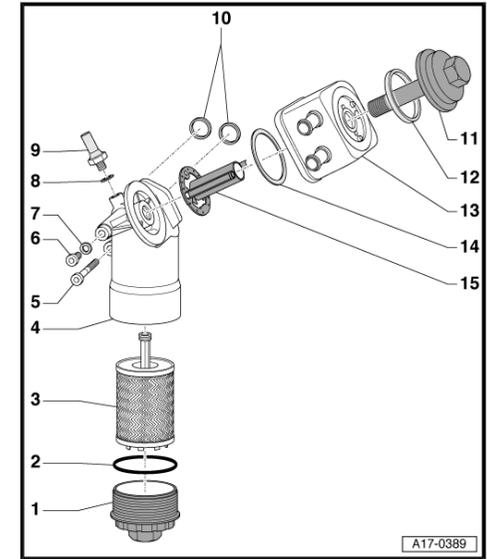


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Oil Pressure Switch

9 - Oil Pressure Switch -F1- / -F22-



1.7 Exhaust System Overviews



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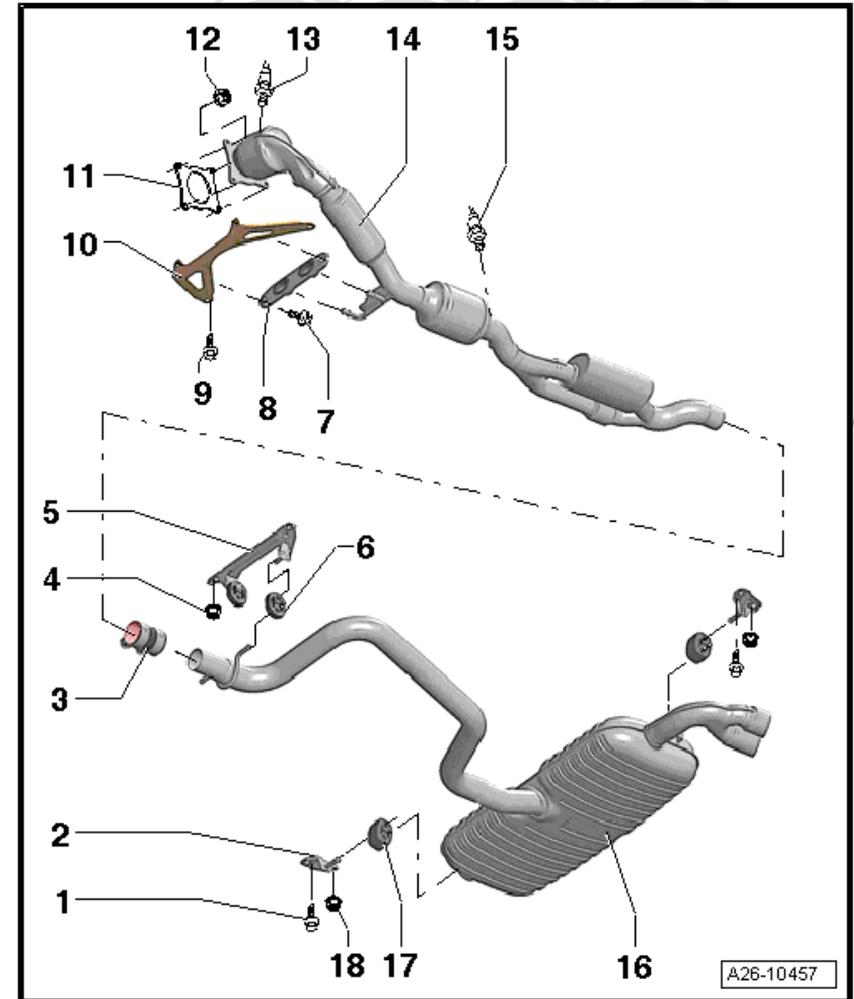
2.0L CCTA, BPY, CDMA, CETA

13 - Heated Oxygen Sensor (HO2S) -G39-

- 3.2L ⇒ [Item 13 \(page 29\)](#)

15 - Oxygen Sensor (O2S) Behind Three Way Catalytic Converter (TWC) -G130-

- 3.2L ⇒ [Item 13 \(page 29\)](#)



3.2L BUB, CBRA

13 - Heated Oxygen Sensor (HO2S) -G39-

- and Heated Oxygen Sensor (HO2S) 2 -G108-

14 - Oxygen Sensor (O2S) Behind Three Way Catalytic Converter (TWC) -G130-

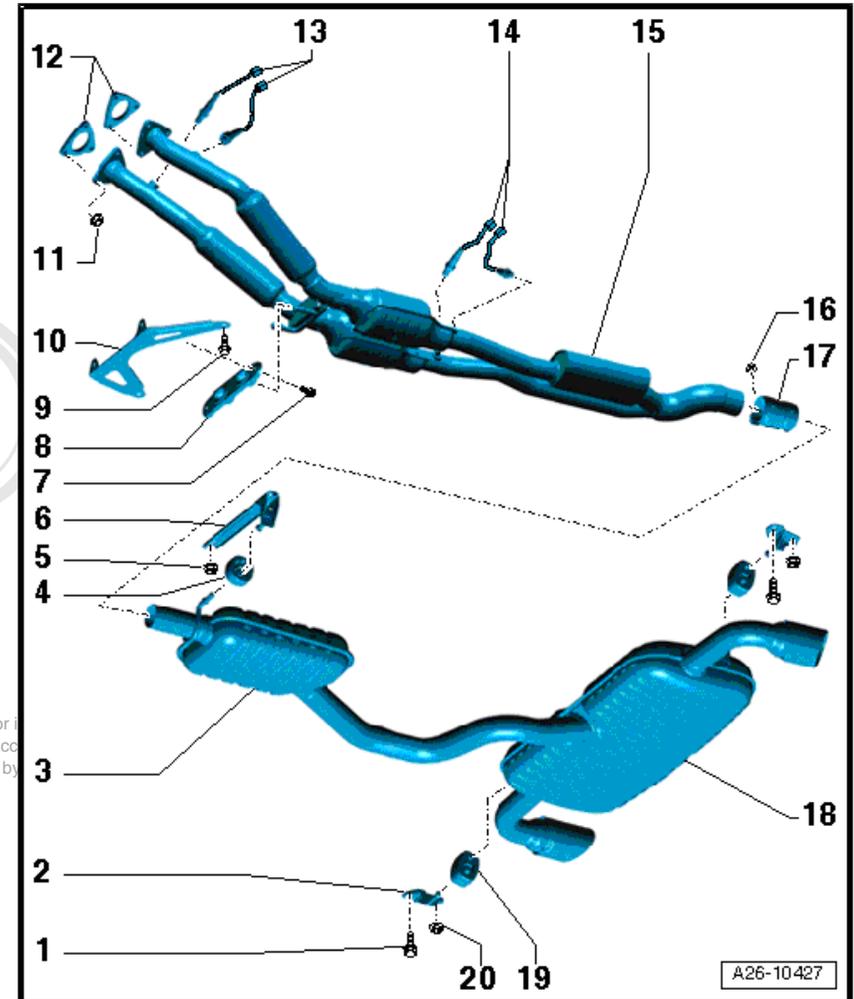
- and Oxygen Sensor (O2S) 2 Behind Three Way Catalytic Converter (TWC) -G131-



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1.8 Cooling Fans and Pumps

Not shown: Engine Coolant Level (ECL) Warning Switch -F66- located in the overflow bottle

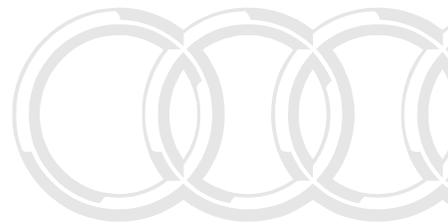
1 - Coolant Fan -V7-

- With Coolant Fan Control (FC) Control Module -J293-

5 - Coolant Fan Control (FC) Thermal Switch -F18-

17 - Coolant Fan 2 -V177-

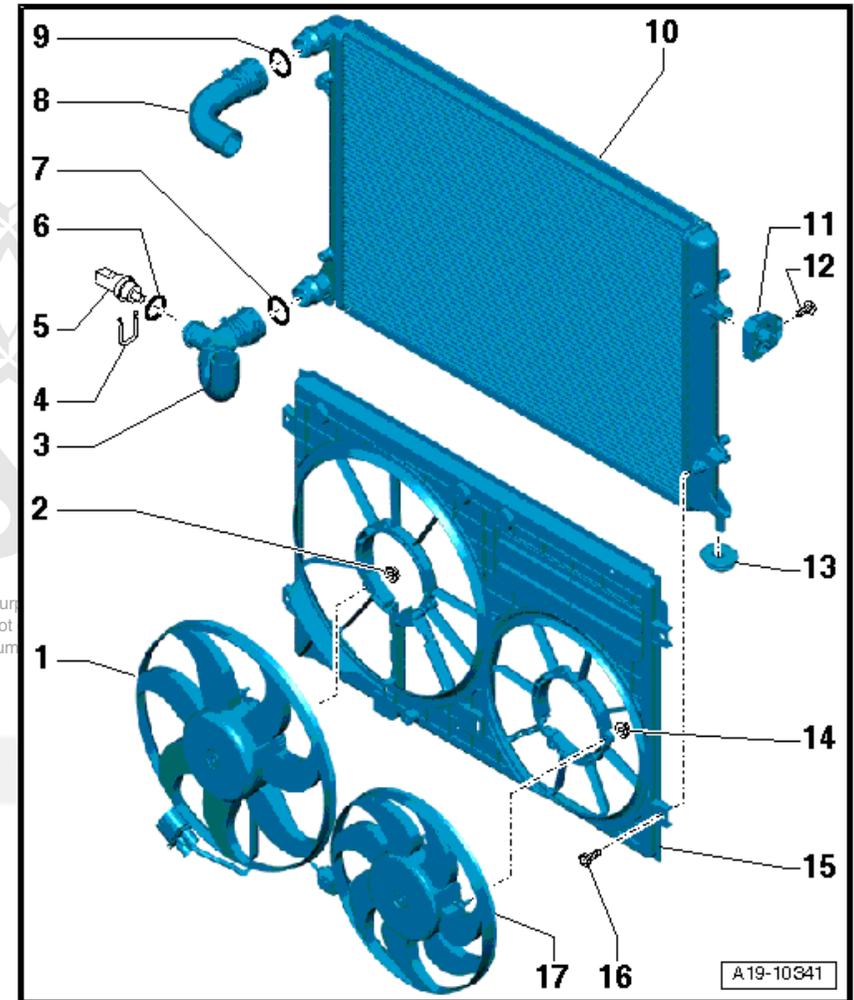
- For CCTA : Right Coolant Fan -V35-



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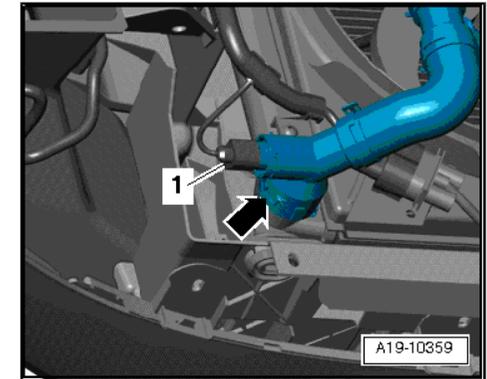
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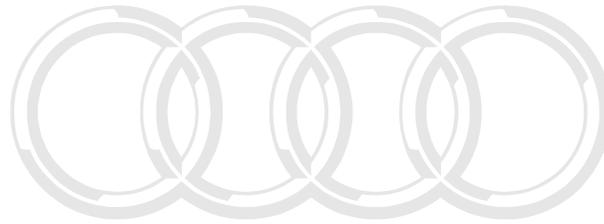
Engine Coolant Temperature (ECT) Sensor

1 - Engine Coolant Temperature (ECT) Sensor (on Radiator)
-G83-

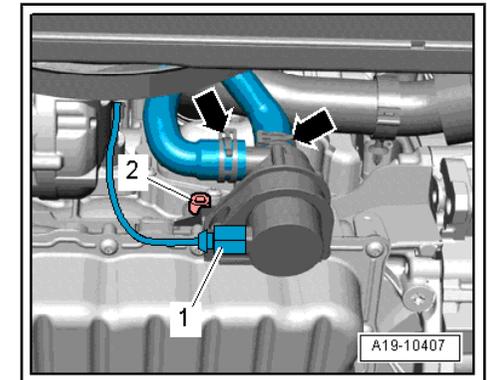


After-run coolant pump

1 - After-Run Coolant Pump -V51-
2.0L BPY, CCTA, CETA and CDMA shown



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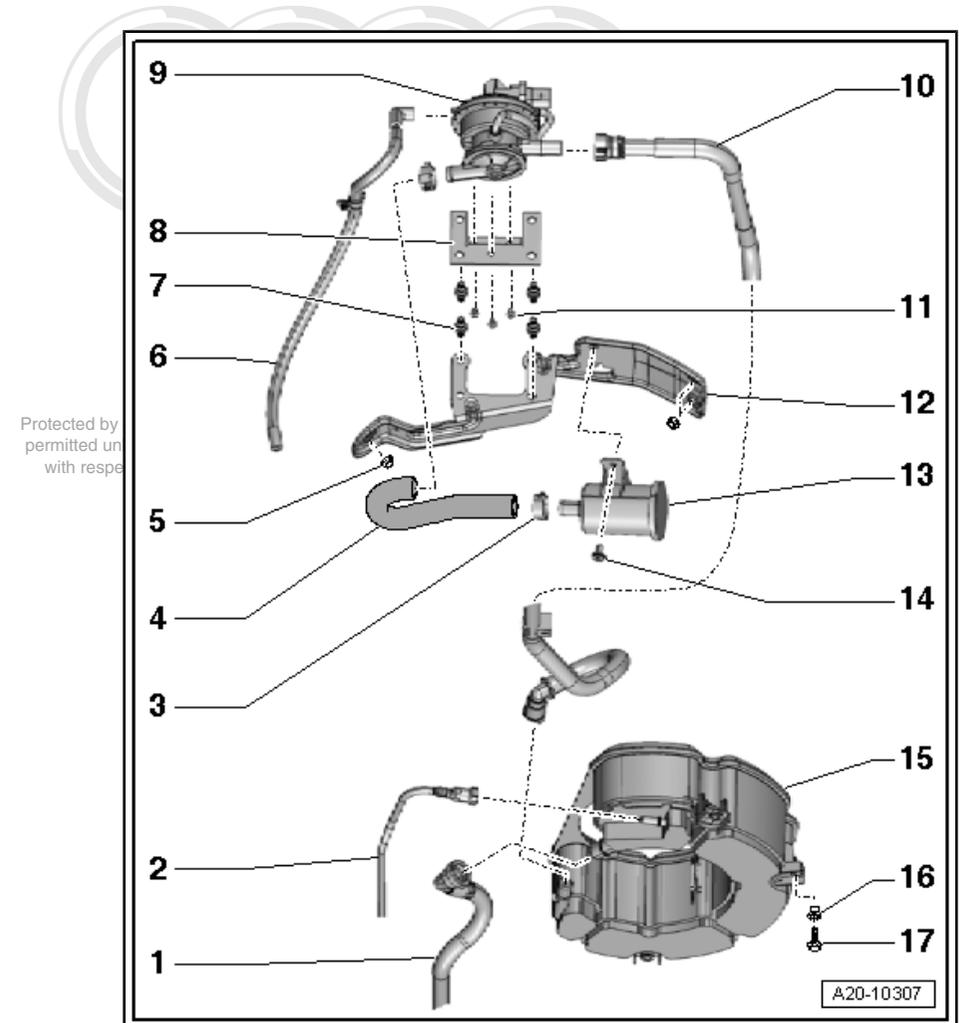
1.9 Evap System Overviews

9 - Leak Detection Pump (LDP) -V144-

- ❑ Component location: Under wheel housing liner in rear left wheel housing

15 - EVAP Canister

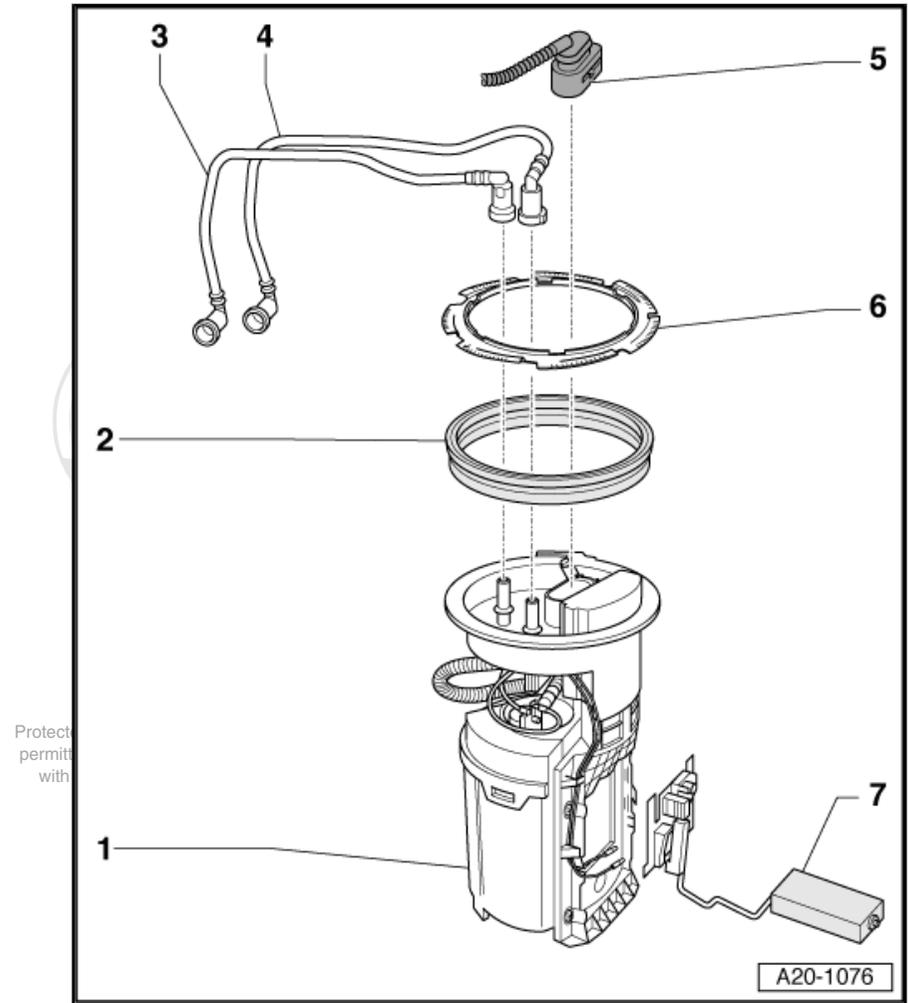
- ❑ Component location: Bottom of spare wheel well



1.10 Fuel Pump and Sensors

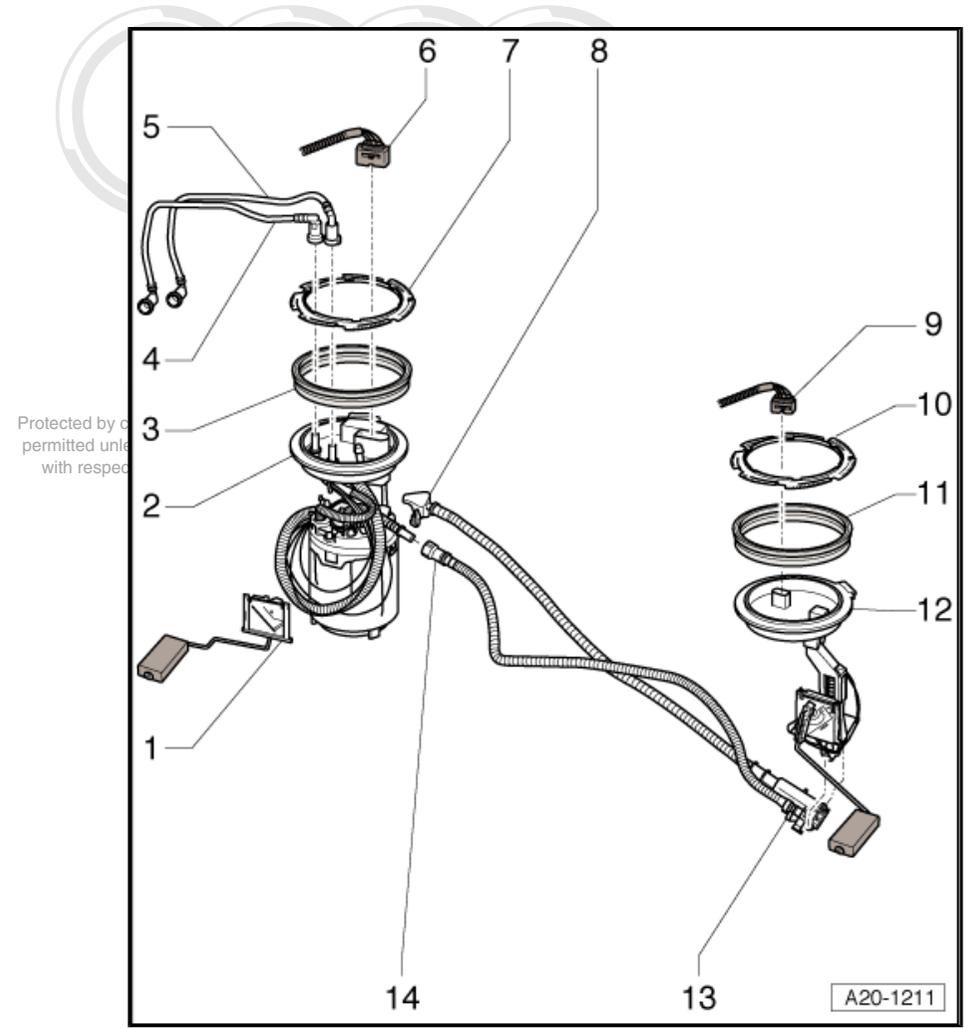
Front Wheel Drive

- 1 -
- 5 - Electrical Harness Connector
 - For Fuel Level Sensor -G- and Transfer Fuel Pump (FP) -G6-
- 7 - Fuel Level Sensor -G-



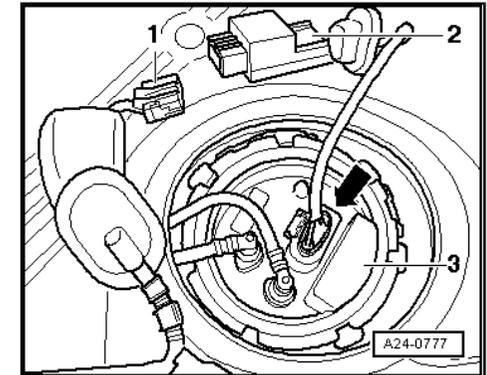
All Wheel Drive

- 1 - Fuel Level Sensor -G-
- 6 - Electrical Harness Connector
 - For Fuel Level Sensor -G- and Transfer Fuel Pump (FP) -G6-
- 9 - Electrical Harness Connector
 - For Fuel Level Sensor 2 -G169-
- 12 - Fuel Level Sensor 2 -G169-



Fuel Pump (FP) Control Module

- 1 - Fuel Pump (FP) Control Module -J538- connector
- 2 - Fuel Pump (FP) Control Module -J538-
- 3 - Transfer Fuel Pump (FP) -G6-



1.11 Accelerator Pedal Module



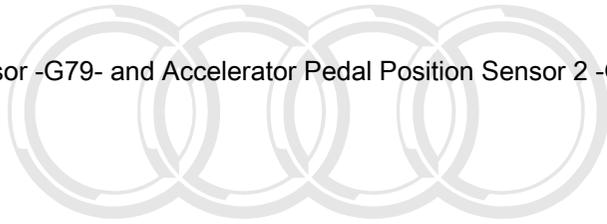
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3 - Accelerator Pedal Module

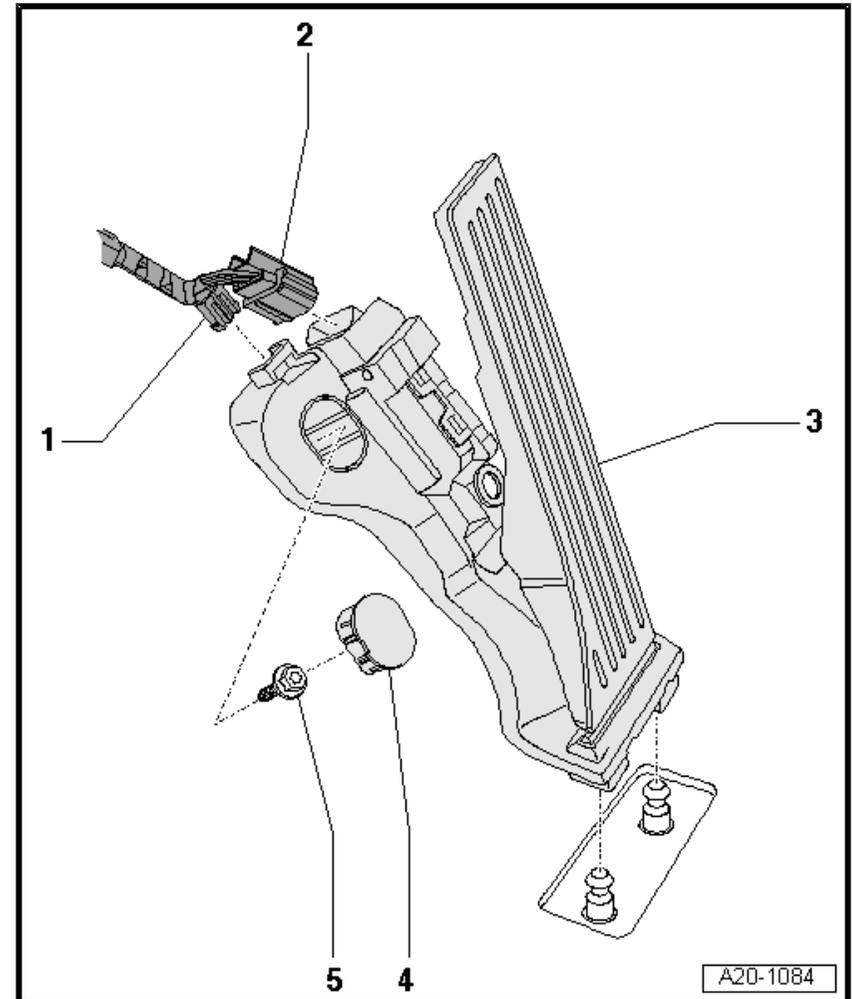
- Throttle Position (TP) Sensor -G79- and Accelerator Pedal Position Sensor 2 -G185-



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Cautions & Warnings

Please read these WARNINGS and CAUTIONS before proceeding with maintenance and repair work. You must answer that you have read and you understand these WARNINGS and CAUTIONS before you will be allowed to view this information.

- If you lack the skills, tools and equipment, or a suitable workshop for any procedure described in this manual, we suggest you leave such repairs to an authorized Audi retailer or other qualified shop. We especially urge you to consult an authorized Audi retailer before beginning repairs on any vehicle that may still be covered wholly or in part by any of the extensive warranties issued by Audi.
- Disconnect the battery negative terminal (ground strap) whenever you work on the fuel system or the electrical system. Do not smoke or work near heaters or other fire hazards. Keep an approved fire extinguisher handy.
- Audi is constantly improving its vehicles and sometimes these changes, both in parts and specifications, are made applicable to earlier models. Therefore, part numbers listed in this manual are for reference only. Always check with your authorized Audi retailer parts department for the latest information.
- Any time the battery has been disconnected on an automatic transmission vehicle, it will be necessary to reestablish Transmission Control Module (TCM) basic settings using the VAG 1551 Scan Tool (ST).
- Never work under a lifted vehicle unless it is solidly supported on stands designed for the purpose. Do not support a vehicle on cinder blocks, hollow tiles or other props that may crumble under continuous load. Never work under a vehicle that is supported solely by a jack. Never work under the vehicle while the engine is running.
- For vehicles equipped with an anti-theft radio, be sure of the correct radio activation code before disconnecting the battery or removing the radio. If the wrong code is entered when the power is restored, the radio may lock up and become inoperable, even if the correct code is used in a later attempt.
- If you are going to work under a vehicle on the ground, make sure that the ground is level. Block the wheels to keep the vehicle from rolling. Disconnect the battery negative terminal (ground strap) to prevent others from starting the vehicle while you are under it.
- Do not attempt to work on your vehicle if you do not feel well. You increase the danger of injury to yourself and others if you are tired, upset or have taken medicine or any other substances that may impair you or keep you from being fully alert.
- Never run the engine unless the work area is well ventilated. Carbon monoxide (CO) kills.
- Always observe good workshop practices. Wear goggles when you operate machine tools or work with acid. Wear goggles, gloves and other protective clothing whenever the job requires working with harmful substances.
- Tie long hair behind your head. Do not wear a necktie, a scarf, loose clothing, or a necklace when you work near machine tools or running engines. If your hair, clothing, or jewelry were to get caught in the machinery, severe injury could result.

Cautions & Warnings

- Do not re-use any fasteners that are worn or deformed in normal use. Some fasteners are designed to be used only once and are unreliable and may fail if used a second time. This includes, but is not limited to, nuts, bolts, washers, circlips and cotter pins. Always follow the recommendations in this manual - replace these fasteners with new parts where indicated, and any other time it is deemed necessary by inspection.
- Illuminate the work area adequately but safely. Use a portable safety light for working inside or under the vehicle. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.
- Friction materials such as brake pads and clutch discs may contain asbestos fibers. Do not create dust by grinding, sanding, or by cleaning with compressed air. Avoid breathing asbestos fibers and asbestos dust. Breathing asbestos can cause serious diseases such as asbestosis or cancer, and may result in death.
- Finger rings should be removed so that they cannot cause electrical shorts, get caught in running machinery, or be crushed by heavy parts.
- Before starting a job, make certain that you have all the necessary tools and parts on hand. Read all the instructions thoroughly, do not attempt shortcuts. Use tools that are appropriate to the work and use only replacement parts meeting Audi specifications. Makeshift tools, parts and procedures will not make good repairs.
- Catch draining fuel, oil or brake fluid in suitable containers. Do not use empty food or beverage containers that might mislead someone into drinking from them. Store flammable fluids away from fire hazards. Wipe up spills at once, but do not store the oily rags, which can ignite and burn spontaneously.
- Use pneumatic and electric tools only to loosen threaded parts and fasteners. Never use these tools to tighten fasteners, especially on light alloy parts. Always use a torque wrench to tighten fasteners to the tightening torque listed.
- Keep sparks, lighted matches, and open flame away from the top of the battery. If escaping hydrogen gas is ignited, it will ignite gas trapped in the cells and cause the battery to explode.
- Be mindful of the environment and ecology. Before you drain the crankcase, find out the proper way to dispose of the oil. Do not pour oil onto the ground, down a drain, or into a stream, pond, or lake. Consult local ordinances that govern the disposal of wastes.
- The air-conditioning (A/C) system is filled with a chemical refrigerant that is hazardous. The A/C system should be serviced only by trained automotive service technicians using approved refrigerant recovery/recycling equipment, trained in related safety precautions, and familiar with regulations governing the discharging and disposal of automotive chemical refrigerants.
- Before doing any electrical welding on vehicles equipped with anti-lock brakes (ABS), disconnect the battery negative terminal (ground strap) and the ABS control module connector.
- Do not expose any part of the A/C system to high temperatures such as open flame. Excessive heat will increase system pressure and may cause the system to burst.

Cautions & Warnings

- When boost-charging the battery, first remove the fuses for the Engine Control Module (ECM), the Transmission Control Module (TCM), the ABS control module, and the trip computer. In cases where one or more of these components is not separately fused, disconnect the control module connector(s).
- Some of the vehicles covered by this manual are equipped with a supplemental restraint system (SRS), that automatically deploys an airbag in the event of a frontal impact. The airbag is operated by an explosive device. Handled improperly or without adequate safeguards, it can be accidentally activated and cause serious personal injury. To guard against personal injury or airbag system failure, only trained Audi Service technicians should test, disassemble or service the airbag system.
- Do not quick-charge the battery (for boost starting) for longer than one minute, and do not exceed 16.5 volts at the battery with the boosting cables attached. Wait at least one minute before boosting the battery a second time.
- Never use a test light to conduct electrical tests of the airbag system. The system must only be tested by trained Audi Service technicians using the VAG 1551 Scan Tool (ST) or an approved equivalent. The airbag unit must never be electrically tested while it is not installed in the vehicle.
- Some aerosol tire inflators are highly flammable. Be extremely cautious when repairing a tire that may have been inflated using an aerosol tire inflator. Keep sparks, open flame or other sources of ignition away from the tire repair area. Inflate and deflate the tire at least four times before breaking the bead from the rim. Completely remove the tire from the rim before attempting any repair.
- When driving or riding in an airbag-equipped vehicle, never hold test equipment in your hands or lap while the vehicle is in motion. Objects between you and the airbag can increase the risk of injury in an accident.

I have read and I understand these Cautions and Warnings.