CMP - GB - 02/2025

CMP SNR
Camshaft Position Sensor

CMP Camshaft Position Sensor

Respect for the environment and standards

In a context where sustainability and compliance with environmental regulations are becoming top priorities, it is crucial for vehicles to adapt to ecological requirements. Sensors play a key role in this transition, enabling vehicles to meet stringent standards while reducing their environmental impact. By monitoring and optimizing various aspects of the vehicle, these sensors not only contribute to performance and safety, but also to a cleaner future.

Sensor Function and Technologies

The camshaft position sensor (CMP) is essential for a correct engine operation. Placed at the level of the camshaft or its pulley, it informs the engine control unit of the precise angular position, allowing the management of injection and ignition for each cylinder. In combination with the TDC (Top Dead Center) sensor, the CMP allows the ECU to determine the phase of the pistons and the ignition order required to start the engine

There are two main types of CMP sensors:
Inductive sensor: Produces an electromagnetic field disturbed by the passage of the flywheel teeth, generating a sinusoidal signal proportional to the rotational speed.
Active or Hall effect sensor: Used in recent engines, it sends a precise electronic signal to the ECU with each passage of the flywheel tooth, generating a square signal

CMP Camshaft Position Sensor

Fault Code	Error Description
P000A	Camshaft adjustment A for 1st. cylinder bank - Trigger behaviour too slow
P000B	Camshaft adjustment B for 1st. cylinder bank - Trigger behaviour too slow
P000C	Camshaft adjustment A for 2nd. cylinder bank - Trigger behaviour too slow
P000D	Camshaft adjustment B for 2nd. cylinder bank - Trigger behaviour too slow
P0010	Inlet cam adjuster cylinder row 1 , Electrical circuit fault
P0011	Inlet cam adjuster cylinder row 1 , Excessive adjustment in the direction “early” , Functioning fault
P0012	Inlet cam adjuster cylinder row 1 , Excessive adjustment in the direction “late”
P0013	Inlet cam adjuster cylinder row 1 , Electrical circuit fault
P0016	Outlet cam adjuster - cylinder row 1 , Excessive adjustment in the direction “early” , Functioning fault
P0017	Outlet cam adjuster - cylinder row 1 , Excessive adjustment in the direction “late”
P0018	Position of crankshaft/camshaft - cylinder row 1 , Reference fault at sensor A
P0019	Position of crankshaft/camshaft - cylinder row 1 , Reference fault at sensor B
P001A	Control circuit for actuator A for-inlet camshaft profile, 1st. cylinder bank - Electric fault/interruption in circuit
P001B	Control circuit for actuator A for-inlet camshaft profile, 1st. cylinder bank - Signal too small
P001C	Control circuit for actuator A for-inlet camshaft profile, 1st. cylinder bank - Signal too high
P001D	Control circuit for actuator A for-inlet camshaft profile, 2nd. cylinder bank - Electric fault/interruption in circuit
P001E	Control circuit for actuator A for-inlet camshaft profile, 2nd. cylinder bank - Signal too small
P001F	Control circuit for actuator A for-inlet camshaft profile, 2nd. cylinder bank - Signal too high

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Fault Code	Error Description
P0020	Inlet cam adjuster cylinder row 2 , Electrical circuit fault
P0021	Inlet cam adjuster cylinder row 2 , Excessive adjustment in the direction “early” , Functioning fault
P0022	Inlet cam adjuster cylinder row 2 , Excessive adjustment in the direction “late”
P002A	Control circuit for actuator A for-outlet camshaft profile, 1st. cylinder bank - Electric fault/interruption in circuit
P002B	Control circuit for actuator A for-outlet camshaft profile, 1st. cylinder bank - Signal too small
P002C	Control circuit for actuator A for-outlet camshaft profile, 1st. cylinder bank - Signal too high
P002D	Control circuit for actuator A for-outlet camshaft profile, 2nd. cylinder bank - Electric fault/interruption in circuit
P002E	Control circuit for actuator A for-outlet camshaft profile, 2nd. cylinder bank - Signal too small
P002F	Control circuit for actuator A for-outlet camshaft profile, 2nd. cylinder bank - Signal too high
P003C	Actuator A for inlet camshaft profile, 1st. cylinder bank - Malfunction/component never active
P003D	Actuator A for inlet camshaft profile, 1st. cylinder bank - Component permanently active
P003E	Actuator A for inlet camshaft profile, 2nd. cylinder bank - Malfunction/component never active
P003F	Actuator A for inlet camshaft profile, 2nd. cylinder bank - Component permanently active
P005A	Actuator A for outlet camshaft profile, 1st. cylinder bank - Malfunction/component never active
P005B	Actuator A for outlet camshaft profile, 1st. cylinder bank - Component permanently active
P005C	Actuator A for outlet camshaft profile, 2nd. cylinder bank - Malfunction/component never active
P005D	Actuator A for outlet camshaft profile, 2nd. cylinder bank - Component permanently active
P0340	Camshaft position sensor A , Cylinder row 1 - Electrical circuit fault
P0341	Camshaft position sensor A , Cylinder row 1 - Area/function fault
P0342	Camshaft position sensor A , Cylinder row 1 - Input signal too low
P0343	Camshaft position sensor A , Cylinder row 1 - Input signal too high

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Fault Code	Error Description
P0344	Camshaft position sensor A , Cylinder row 1 - Circuit temporarily interrupted
P0345	Camshaft position sensor A , Cylinder row 2 - Electrical circuit fault
P0346	Camshaft position sensor A , Cylinder row 2 - Area/function fault
P0347	Camshaft position sensor A , Cylinder row 2 - Input signal too low
P0348	Camshaft position sensor A , Cylinder row 2 - Input signal too high
P0349	Camshaft position sensor A , Cylinder row 2 - Circuit temporarily interrupted
P0365	Camshaft position sensor B , Cylinder row 1 - Electrical circuit fault
P0366	Camshaft position sensor B , Cylinder row 1 - Area/function fault Circuit
P0367	Camshaft position sensor B , Cylinder row 1 - Input signal too low
P0368	Camshaft position sensor B , Cylinder row 1 - Input signal too high
P0369	Camshaft position sensor B , Cylinder row 1 - Circuit temporarily interrupted
P0390	Camshaft position sensor B , Cylinder row 2 - Input signal too low
P0391	Camshaft position sensor B , Cylinder row 2 - Input signal too high
P0392	Camshaft position sensor B , Cylinder row 2 - Circuit temporarily interrupted
P0393	Camshaft position sensor B , Cylinder row 2 - Input signal too high
P0394	Camshaft position sensor B , Cylinder row 2 - Circuit temporarily interrupted
P03E5	Position sensor C for outlet camshaft adjustment, 1st. cylinder bank - Electric fault in circuit
P03E6	Position sensor C for outlet camshaft adjustment, 1st. cylinder bank - Voltage deviation/malfunction
P03E7	Position sensor C for outlet camshaft adjustment, 1st. cylinder bank - Signal too small
P03E8	Position sensor C for outlet camshaft adjustment, 1st. cylinder bank - Signal too high
P03E9	Position sensor A for actuator for inlet camshaft profile - Learn value exceeded

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Fault Code	Error Description
P03EA	Position sensor B for actuator for inlet camshaft profile - Learn value exceeded
P03EB	Position sensor C for actuator for inlet camshaft profile - Learn value exceeded
P03F2	Control circuit for actuator C for inlet camshaft profile, 1st. cylinder bank - Electric fault/interruption in circuit
P03F3	Control circuit for actuator C for inlet camshaft profile, 1st. cylinder bank - Signal too small
P03F4	Control circuit for actuator C for inlet camshaft profile, 1st. cylinder bank - Signal too high
P03F5	Actuator C for inlet camshaft profile, 1st. cylinder bank - Malfunction/component never active
P03F6	Actuator C for inlet camshaft profile, 1st. cylinder bank - Component permanently active
P03F7	Control circuit for actuator C for outlet camshaft profile, 1st. cylinder bank - Electric fault/interruption in circuit
P03F8	Control circuit for actuator C for outlet camshaft profile, 1st. cylinder bank - Signal too small
P03F9	Control circuit for actuator C for outlet camshaft profile, 1st. cylinder bank - Signal too high
P052A	Camshaft adjustment A for 1st. cylinder bank - Advance shift during cold start too large
P052B	Camshaft adjustment A for 1st. cylinder bank - Retardation shift during cold start too large
P052C	Camshaft adjustment A for 2nd. cylinder bank - Advance shift during cold start too large
P052D	Camshaft adjustment A for 2nd. cylinder bank - Retardation shift during cold start too large
P054A	Camshaft adjustment B for 1st. cylinder bank - Advance shift during cold start too large
P054B	Camshaft adjustment B for 1st. cylinder bank - Retardation shift during cold start too large
P054C	Camshaft adjustment B for 2nd. cylinder bank - Advance shift during cold start too large
P054D	Camshaft adjustment B for 2nd. cylinder bank - Retardation shift during cold start too large
P05CC	Camshaft adjustment A for 1st. cylinder bank - Malfunction during cold start
P05CD	Camshaft adjustment A for 2nd. cylinder bank - Malfunction during cold start
P05CE	Camshaft adjustment B for 1st. cylinder bank - Malfunction during cold start
P05CF	Camshaft adjustment B for 2nd. cylinder bank - Malfunction during cold start

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Fault Code	Error Description
P2088	Camshaft adjustment B for 1st. cylinder bank - Malfunction during cold start
P2089	Camshaft adjustment B for 2nd. cylinder bank - Malfunction during cold start
P2090	Control circuit for camshaft adjustment A for 1st. cylinder bank - Signal too small
P2091	Control circuit for camshaft adjustment A for 1st. cylinder bank - Signal too high
P2092	Control circuit for camshaft adjustment B for 1st. cylinder bank - Signal too small
P2093	Control circuit for camshaft adjustment B for 1st. cylinder bank - Signal too high
P2094	Control circuit for camshaft adjustment A for 2nd. cylinder bank - Signal too small
P2095	Control circuit for camshaft adjustment B for 2nd. cylinder bank - Signal too high
P23E9	Output signal from position sensor for camshaft A for 2nd. cylinder bank - Electric fault/interruption in circuit
P23EA	Output signal from position sensor for camshaft A for 2nd. cylinder bank - Signal too small
P23EB	Output signal from position sensor for camshaft A for 2nd. cylinder bank - Signal too high
P23EC	Output signal from position sensor for camshaft B for 1st. cylinder bank - Electric fault/interruption in circuit
P23ED	Output signal from position sensor for camshaft B for 1st. cylinder bank - Signal too small
P23EE	Output signal from position sensor for camshaft B for 1st. cylinder bank - Signal too high
P23EF	Output signal from position sensor for camshaft B for 2nd. cylinder bank - Electric fault/interruption in circuit
P23F0	Output signal from position sensor for camshaft B for 2nd. cylinder bank - Signal too small
P23F1	Output signal from position sensor for camshaft B for 2nd. cylinder bank - Signal too high

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Fault Code	Error Description
P25CA	Control circuit for interlocking for parking position for inlet camshaft adjustment, 1st. cylinder bank - Electric fault/interruption in circuit
P25CB	Control circuit for interlocking for parking position for inlet camshaft adjustment, 1st. cylinder bank - Signal too small
P25CC	Control circuit for interlocking for parking position for inlet camshaft adjustment, 1st. cylinder bank - Signal too high
P25CD	Control circuit for interlocking for parking position for inlet camshaft adjustment, 2nd. cylinder bank - Electric fault/interruption in circuit
P25CE	Control circuit for interlocking for parking position for inlet camshaft adjustment, 2nd. cylinder bank - Signal too small
P25CF	Control circuit for interlocking for parking position for inlet camshaft adjustment, 2nd. cylinder bank - Signal too high
P25D0	Control circuit for interlocking for parking position for outlet camshaft adjustment, 1st. cylinder bank - Electric fault/interruption in circuit
P25D1	Control circuit for interlocking for parking position for outlet camshaft adjustment, 1st. cylinder bank - Signal too small
P25D2	Control circuit for interlocking for parking position for outlet camshaft adjustment, 1st. cylinder bank - Signal too high
P25D3	Control circuit for interlocking for parking position for outlet camshaft adjustment, 2nd. cylinder bank - Electric fault/interruption in circuit
P25D4	Control circuit for interlocking for parking position for outlet camshaft adjustment, 2nd. cylinder bank - Signal too small
P25D5	Control circuit for interlocking for parking position for outlet camshaft adjustment, 2nd. cylinder bank - Signal too high
P25DD	Position for inlet camshaft, 1st. cylinder bank - Component permanently in locked position
P25DE	Position for inlet camshaft, 1st. cylinder bank - Component does not reach the position for locking
P25E0	Inlet camshaft adjustment, 1st. cylinder bank - Functioning fault
P25E1	Position for inlet camshaft, 2nd. cylinder bank - Component permanently in locked position
P25E3	Position for inlet camshaft, 2nd. cylinder bank - Component does not reach the position for locking
P25E4	Inlet camshaft adjustment, 2nd. cylinder bank - Functioning fault
P25E6	Position for outlet camshaft, 1st. cylinder bank - Component permanently in locked position
P25E7	Position for outlet camshaft, 1st. cylinder bank - Component does not reach the position for locking
P25E8	Outlet camshaft adjustment, 1st. cylinder bank - Functioning fault

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Fault Code	Error Description
P2614	Position for outlet camshaft, 2nd. cylinder bank - Component permanently in locked position
P2615	Position for outlet camshaft, 2nd. cylinder bank - Component does not reach the position for locking
P2616	Outlet camshaft adjustment, 2nd. cylinder bank - Functioning fault
P2B33	Output signal from position sensor for camshaft A for 1st. cylinder bank - Electric fault/interruption in circuit
P2B34	Output signal from position sensor for camshaft A for 1st. cylinder bank - Signal too small
P2B35	Output signal from position sensor for camshaft A for 1st. cylinder bank - Signal too high
P2B36	Control circuit for actuator B for inlet camshaft profile, 1st. cylinder bank - Electric fault/interruption in circuit
P2B37	Control circuit for actuator B for inlet camshaft profile, 1st. cylinder bank - Signal too small
P2B38	Control circuit for actuator B for inlet camshaft profile, 1st. cylinder bank - Signal too high
P2B39	Control circuit for actuator B for inlet camshaft profile, 2nd. cylinder bank - Electric fault/interruption in circuit
P2B3A	Control circuit for actuator B for outlet camshaft profile, 1st. cylinder bank - Signal too small
P2B3B	Control circuit for actuator B for outlet camshaft profile, 1st. cylinder bank - Signal too high
P2B3C	Control circuit for actuator B for outlet camshaft profile, 2nd. cylinder bank - Electric fault/interruption in circuit
P2B3D	Control circuit for actuator B for outlet camshaft profile, 2nd. cylinder bank - Signal too small
P2B3E	Control circuit for actuator B for outlet camshaft profile, 2nd. cylinder bank - Signal too high
P2B3F	Position sensor B for inlet camshaft adjustment, 1st. cylinder bank - Electric fault in circuit
P2B40	Position sensor B for inlet camshaft adjustment, 1st. cylinder bank - Voltage deviation/malfunction
P2B41	Position sensor B for inlet camshaft adjustment, 1st. cylinder bank - Signal too small
P2B42	Position sensor B for inlet camshaft adjustment, 1st. cylinder bank - Signal too high
P2B43	Position sensor B for inlet camshaft adjustment, 2nd. cylinder bank - Electric fault in circuit
P2B44	Position sensor B for inlet camshaft adjustment, 2nd. cylinder bank - Voltage deviation/malfunction

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Fault Code	Error Description
P2B45	Position sensor B for inlet camshaft adjustment, 2nd. cylinder bank - Signal too small
P2B46	Position sensor B for inlet camshaft adjustment, 2nd. cylinder bank - Signal too high
P2B47	Position sensor B for outlet camshaft adjustment, 1st. cylinder bank - Electric fault in circuit
P2B48	Position sensor B for outlet camshaft adjustment, 1st. cylinder bank - Voltage deviation/malfunction
P2B49	Position sensor B for outlet camshaft adjustment, 1st. cylinder bank - Signal too small
P2B4A	Position sensor B for outlet camshaft adjustment, 1st. cylinder bank - Signal too high
P2B4B	Position sensor B for outlet camshaft adjustment, 2nd. cylinder bank - Electric fault in circuit
P2B4C	Position sensor B for outlet camshaft adjustment, 2nd. cylinder bank - Voltage deviation/malfunction
P2B4D	Position sensor B for outlet camshaft adjustment, 2nd. cylinder bank - Signal too small
P2B4E	Position sensor B for outlet camshaft adjustment, 2nd. cylinder bank - Signal too high
P2B4F	Actuator B for inlet camshaft profile, 1st. cylinder bank - Malfunction/component never active
P2B50	Actuator B for inlet camshaft profile, 2nd. cylinder bank - Malfunction/component never active
P2B51	Actuator B for outlet camshaft profile, 1st. cylinder bank - Malfunction/component never active
P2B52	Actuator B for outlet camshaft profile, 2nd. cylinder bank - Malfunction/component never active
P2B53	Actuator B for inlet camshaft profile, 1st. cylinder bank - Component permanently active
P2B54	Actuator B for inlet camshaft profile, 2nd. cylinder bank - Component permanently active
P2B55	Actuator B for outlet camshaft profile, 1st. cylinder bank - Component permanently active
P2B56	Actuator B for outlet camshaft profile, 2nd. cylinder bank - Component permanently active
P2B57	Camshaft timing - Deactivated due to low engine oil pressure

CMP Camshaft Position Sensor

Fault Code	Error Description
P2C05	Position sensor A for actuator for inlet camshaft profile, 1st. cylinder bank - Electric fault in circuit
P2C06	Position sensor A for actuator for inlet camshaft profile, 1st. cylinder bank - Signal deviation/malfunction
P2C07	Position sensor A for actuator for inlet camshaft profile, 1st. cylinder bank - Signal too small
P2C08	Position sensor A for actuator for inlet camshaft profile, 1st. cylinder bank - Signal too high
P2C09	Position sensor B for actuator for inlet camshaft profile, 1st. cylinder bank - Electric fault in circuit
P2C0A	Position sensor B for actuator for inlet camshaft profile, 1st. cylinder bank - Signal deviation/malfunction
P2C0B	Position sensor B for actuator for inlet camshaft profile, 1st. cylinder bank - Signal too small
P2C0C	Position sensor B for actuator for inlet camshaft profile, 1st. cylinder bank - Signal too high
P2C0D	Position sensor C for actuator for inlet camshaft profile, 1st. cylinder bank - Electric fault in circuit
P2C0E	Position sensor C for actuator for inlet camshaft profile, 1st. cylinder bank - Signal deviation/malfunction
P2C05	Position sensor A for actuator for inlet camshaft profile, 1st. cylinder bank - Electric fault in circuit
P2C06	Position sensor A for actuator for inlet camshaft profile, 1st. cylinder bank - Signal deviation/malfunction
P2C07	Position sensor A for actuator for inlet camshaft profile, 1st. cylinder bank - Signal too small
P2C08	Position sensor A for actuator for inlet camshaft profile, 1st. cylinder bank - Signal too high
P2C09	Position sensor B for actuator for inlet camshaft profile, 1st. cylinder bank - Electric fault in circuit
P2C0A	Position sensor B for actuator for inlet camshaft profile, 1st. cylinder bank - Signal deviation/malfunction
P2C0B	Position sensor B for actuator for inlet camshaft profile, 1st. cylinder bank - Signal too small
P2C0C	Position sensor B for actuator for inlet camshaft profile, 1st. cylinder bank - Signal too high
P2C0D	Position sensor C for actuator for inlet camshaft profile, 1st. cylinder bank - Electric fault in circuit
P2C0E	Position sensor C for actuator for inlet camshaft profile, 1st. cylinder bank - Signal deviation/malfunction

CMP Camshaft Position Sensor

Fault Code	Error Description
P2C0F	Position sensor C for actuator for inlet camshaft profile, 1st. cylinder bank - Signal too small
P2C10	Position sensor C for actuator for inlet camshaft profile, 1st. cylinder bank - Signal too high
P2C12	Position sensor A for actuator for outlet camshaft profile, 1st. cylinder bank - Electric fault in circuit
P2C13	Position sensor A for actuator for outlet camshaft profile, 1st. cylinder bank - Signal deviation/malfunction
P2C14	Position sensor A for actuator for outlet camshaft profile, 1st. cylinder bank - Signal too small
P2C15	Position sensor A for actuator for outlet camshaft profile, 1st. cylinder bank - Signal too high
P2C16	Position sensor B for actuator for outlet camshaft profile, 1st. cylinder bank - Electric fault in circuit
P2C17	Position sensor B for actuator for outlet camshaft profile, 1st. cylinder bank - Signal deviation/malfunction
P2C18	Position sensor B for actuator for outlet camshaft profile, 1st. cylinder bank - Signal too small
P2C19	Position sensor B for actuator for outlet camshaft profile, 1st. cylinder bank - Signal too high
P2C1A	Position sensor C for actuator for outlet camshaft profile, 1st. cylinder bank - Electric fault in circuit
P2C1B	Position sensor C for actuator for outlet camshaft profile, 1st. cylinder bank - Signal deviation/malfunction
P2C1C	Position sensor C for actuator for outlet camshaft profile, 1st. cylinder bank - Signal too small
P2C1D	Position sensor C for actuator for outlet camshaft profile, 1st. cylinder bank - Signal too high
P34A4	Temperature sensor for inlet camshaft adjustment, 1st. cylinder bank - Electric fault in circuit
P34A5	Temperature sensor for inlet camshaft adjustment, 1st. cylinder bank - Voltage deviation/malfunction
P34A6	Temperature sensor for inlet camshaft adjustment, 1st. cylinder bank - Signal too small
P34A7	Temperature sensor for inlet camshaft adjustment, 1st. cylinder bank - Signal too high
P34A8	Temperature sensor for inlet camshaft adjustment, 2nd. cylinder bank - Electric fault in circuit
P34A9	Temperature sensor for inlet camshaft adjustment, 2nd. cylinder bank - Voltage deviation/malfunction

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Fault Code	Error Description
P34A9	Temperature sensor for inlet camshaft adjustment, 2nd. cylinder bank - Voltage deviation/malfunction
P34AA	Temperature sensor for inlet camshaft adjustment, 2nd. cylinder bank - Signal too small
P34AB	Temperature sensor for inlet camshaft adjustment, 2nd. cylinder bank - Signal too high
P34AC	Position sensor A for inlet camshaft adjustment, 1st. cylinder bank - Electric fault in circuit
P34AD	Position sensor A for inlet camshaft adjustment, 1st. cylinder bank - Voltage deviation/malfunction
P34AE	Position sensor A for inlet camshaft adjustment, 1st. cylinder bank - Signal too small
P34AF	Position sensor A for inlet camshaft adjustment, 1st. cylinder bank - Signal too high
P34B0	Position sensor A for inlet camshaft adjustment, 2nd. cylinder bank - Electric fault in circuit
P34B1	Position sensor A for inlet camshaft adjustment, 2nd. cylinder bank - Voltage deviation/malfunction
P34B2	Position sensor A for inlet camshaft adjustment, 2nd. cylinder bank - Signal too small
P34B3	Position sensor A for inlet camshaft adjustment, 2nd. cylinder bank - Signal too high
P34B4	Temperature sensor for outlet camshaft adjustment, 1st. cylinder bank - Electric fault in circuit
P34B5	Temperature sensor for outlet camshaft adjustment, 1st. cylinder bank - Voltage deviation/malfunction
P34B6	Temperature sensor for outlet camshaft adjustment, 1st. cylinder bank - Signal too small
P34B7	Temperature sensor for outlet camshaft adjustment, 1st. cylinder bank - Signal too high
P34B8	Temperature sensor for outlet camshaft adjustment, 2nd. cylinder bank - Electric fault in circuit
P34B9	Temperature sensor for outlet camshaft adjustment, 2nd. cylinder bank - Voltage deviation/malfunction
P34BA	Temperature sensor for outlet camshaft adjustment, 2nd. cylinder bank - Signal too small
P34BB	Temperature sensor for outlet camshaft adjustment, 2nd. cylinder bank - Signal too high

CMP Camshaft Position Sensor

Fault Code	Error Description
P2B3F	Capteur de position B du réglage de l'arbre à cames d'admission pour cylindre 1 - Défaut électrique dans le circuit
P2C05	Capteur de position A de l'actionneur du profil d'arbre à cames d'admission cylindre 1 - Défaut électrique dans le circuit
P2C06	Capteur de position A de l'actionneur du profil d'arbre à cames d'admission cylindre 1 - Variation de signal/Défaut de fonctionnement
P2C07	Capteur de position A de l'actionneur du profil d'arbre à cames d'admission cylindre 1 - Signal trop faible
P2C08	Capteur de position A de l'actionneur du profil d'arbre à cames d'admission cylindre 1 - Signal trop élevé
P2C09	Capteur de position B de l'actionneur du profil d'arbre à cames d'admission cylindre 1 - Défaut électrique dans le circuit
P2C0A	Capteur de position B de l'actionneur du profil d'arbre à cames d'admission cylindre 1 - Variation de signal/Défaut de fonctionnement
P2C0B	Capteur de position B de l'actionneur du profil d'arbre à cames d'admission cylindre 1 - Signal trop faible
P2C0C	Capteur de position B de l'actionneur du profil d'arbre à cames d'admission cylindre 1 - Signal trop élevé
P2C0D	Capteur de position C de l'actionneur du profil d'arbre à cames d'admission cylindre 1 - Défaut électrique dans le circuit
P2C0E	Capteur de position C de l'actionneur du profil d'arbre à cames d'admission cylindre 1 - Variation de signal/Défaut de fonctionnement
P2C0F	Capteur de position C de l'actionneur du profil d'arbre à cames d'admission cylindre 1 - Signal trop faible
P2C10	Capteur de position C de l'actionneur du profil d'arbre à cames d'admission cylindre 1 - Signal trop élevé
P2C12	Capteur de position A de l'actionneur du profil d'arbre à cames d'échappement cylindre 1 - Défaut électrique dans le circuit
P2C13	Capteur de position A de l'actionneur du profil d'arbre à cames d'échappement cylindre 1 - Variation de signal/Défaut de fonctionnement
P2C14	Capteur de position A de l'actionneur du profil d'arbre à cames d'échappement cylindre 1 - Signal trop faible
P2C15	Capteur de position A de l'actionneur du profil d'arbre à cames d'échappement cylindre 1 - Signal trop élevé
P2C16	Capteur de position B de l'actionneur du profil d'arbre à cames d'échappement cylindre 1 - Défaut électrique dans le circuit
P2C17	Capteur de position B de l'actionneur du profil d'arbre à cames d'échappement cylindre 1 - Variation de signal/Défaut de fonctionnement
P2C18	Capteur de position B de l'actionneur du profil d'arbre à cames d'échappement cylindre 1 - Signal trop faible

CMP Camshaft Position Sensor

Fault Code	Error Description
P34BC	Position sensor A for outlet camshaft adjustment, 1st. cylinder bank - Electric fault in circuit
P34BD	Position sensor A for outlet camshaft adjustment, 1st. cylinder bank - Voltage deviation/malfunction
P34BE	Position sensor A for outlet camshaft adjustment, 1st. cylinder bank - Signal too small
P34BF	Position sensor A for outlet camshaft adjustment, 1st. cylinder bank - Signal too high
P34C0	Position sensor A for outlet camshaft adjustment, 2nd. cylinder bank - Electric fault in circuit
P34C1	Position sensor A for outlet camshaft adjustment, 2nd. cylinder bank - Voltage deviation/malfunction
P34C2	Position sensor A for outlet camshaft adjustment, 2nd. cylinder bank - Signal too small
P34C3	Position sensor A for outlet camshaft adjustment, 2nd. cylinder bank - Signal too high
P34C4	Inlet camshaft adjustment, 1st. cylinder bank - Current strength / temperature too high
P34C5	Inlet camshaft adjustment, 2nd. cylinder bank - Current strength / temperature too high
P34C6	Outlet camshaft adjustment, 1st. cylinder bank - Current strength / temperature too high
P34C7	Outlet camshaft adjustment, 2nd. cylinder bank - Current strength / temperature too high
P34C8	Control unit for camshaft adjustment - Functioning fault

CMP Camshaft Position Sensor

Assembly Recommendations

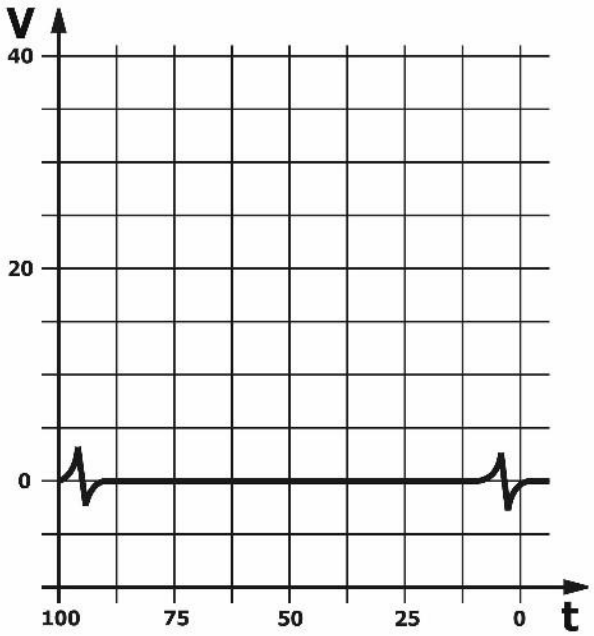
Camshaft position sensor (inductive)

Description
The camshaft position sensor is used for both the sequential injection systems and direct ignition systems with single spark coils (EFS). It provides the ECU with information about the ignition pulse.

Working method
The sensor is located on either the camshaft, the camshaft drive or the ignition distributor. It examines the attachment of pins, sensor wheels, or sensor discs. The amplitude of the signal's amplitude must exceed minimum size, and the vehicles timing must be correct.. There should also be no background noise in the generated signal.

Symptoms of the defect:
The engine is in limp mode
High fuel consumption
The engine management light will flash.
Error codes stored.

Signal verification
Turn the vehicle off and remove the keys
Oscilloscope Verification
Start the engine and let it run at idle.
Prescribed values: An oscillogram must be visible on the oscilloscope.



If the prescribed value is not reached, the following procedure must be followed:

- It is necessary to check the existence of a short circuit or a break between the camshaft position sensor(s) and the engine control unit.

- Control the air gap between the sensor and the tone wheel.

- Replace the camshaft sensor

CMP Camshaft Position Sensor

Camshaft Position Sensor (Hall Sensor)

Description
The camshaft sensor provides the ECU with information on cylinder recognition and/or the number of revolutions of the camshaft. It is also used for both sequential fuel injection systems or direct ignition systems with single spark coils. The sensor looks for studs, teeth, sensor wheels, or sensor discs attached to the camshaft or camshaft transmission.

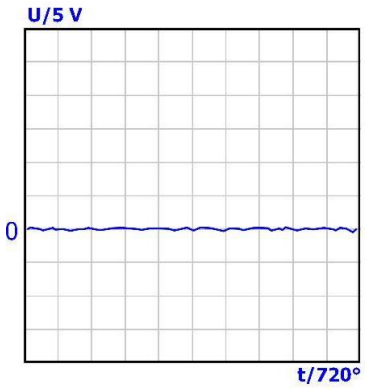
Working method
A rotor made of ferromagnetic material rotates with the camshaft. The Hall IC phenomenon is located between the rotor and a permanent magnet that provides a magnetic field perpendicular to the Hall sensor. If a tooth is in front of the sensor, then the strength of the magnetic field changes. This causes a voltage inducement, and a digital signal is produced in the CI of the sound wave. The rotation of the wheel with camshaft sensor therefore changes the resonant voltage of the IC in the sensor head. The changing voltage is transmitted to the ECU and is used to calculate the postion of the camshaft.

Symptoms of the defect:
The engine goes into limp mode
High fuel consumption
The engine management light appears on the dash
Error codes stored.

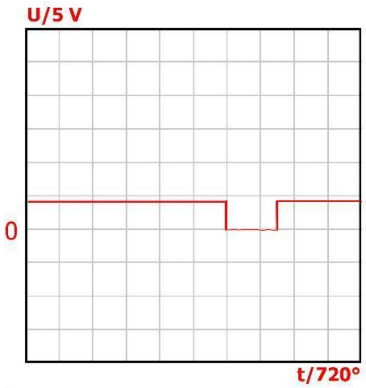
Signal verification
Start the engine and let it run at idle.
Perform the voltage measurement.

Prescribed values:0 - 12 V

If the prescribed value is not reached, the following procedure must be followed:
- Control the power lines between the Hall sensor and the motor management device.
- Replace the Hall sensor.



Camshaft Position Sensor
(positive example)



Camshaft Position Sensor
(negative example)

Controlling the current supply to the Hall sensor

Turn the vehicle off and remove the keys

Remove the Hall generator connector.
Turn on the ignition
Perform the voltage measurement.

Prescribed values: 5 V or 12 V

If the prescribed value is not reached, the following procedure must be followed:
- Check the fuses
- Check the power cables between the Hall sensor and the engine control unit (ECU)
- If no line interruption or short circuit is present, the engine control unit (ECU)must be checked.

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Tightening torque:

Camshaft Sensor
10 Nm

Recommandations

Observe the manufacturers' assembly procedures and the torques indicated.
Consult the vehicle applications in our online catalogue: eshop.ntn-snr.com
Consult the dedicated assembly video on the SNR Youtube channel:
https://youtu.be/hqLV4vX_8eM?list=PLIEYgq5nxNl_WXO3q14F5ZISigdc5aOwx
https://youtu.be/bT2WNhf_Nvg?list=PLIEYgq5nxNl_WXO3q14F5ZISigdc5aOwx

Flash this QR Code to find our technical information.

RESPECT THE RECOMMENDATIONS OF THE VEHICLE MANUFACTURER!