



GROUP

Engine

MODEL

2010-2013MY Soul (AM)
2014-2019MY Soul (PS)
2020~MY Soul (SK3)

NUMBER

PS731

DATE

May 2022



TECHNICAL OPERATIONS

SUBJECT:

DTC P0011/ P0014/ P0016/ P0017 DUE TO INCORRECT CAMSHAFT RELUCTOR WHEEL CONFIGURATION

This Pitstop provides information on some 2010-2013MY Soul (AM), 2014-2019MY Soul (PS), and 2020~MY Soul (SK3) vehicles equipped with the engines listed below, which may set DTC P0011, P0014, P0016, or P0017 after an engine replacement. If these DTCs were not present prior to engine replacement, the camshaft reluctor wheel (also called pulse wheel) may not be in the correct position when engine is at Top Dead Center and may be sending an erroneous signal to the PCM, causing the DTC. Follow the procedure outlined in this publication, with engine set to Top Dead Center (TDC), to inspect and identify whether the reluctor wheel is correctly clocked on the camshaft, and if not, how to correctly position it.

DTC Description:

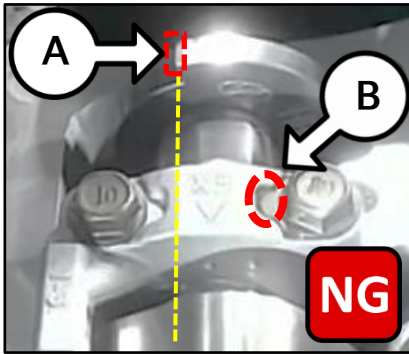
- P0011 - A (Intake) Camshaft Position - Timing Over-Advanced or System Performance (Bank 1)
- P0014 - B (Exhaust) Camshaft Position - Timing Over-Advanced or System Performance (Bank 1)
- P0016 - Crankshaft Position - Camshaft Position Correlation (Bank 1 Sensor A [Intake])
- P0017 - Crankshaft Position - Camshaft Position Correlation (Bank 1 Sensor B [Exhaust])

Model Year	Model	Engine
2010-2011	Soul (AM)	Beta 2.0L
		Gamma 1.6L
2012-2013		Gamma 1.6L GDI
		Nu 2.0L GDI
2014-2019	Soul (PS)	Gamma 1.6L GDI
		Nu 2.0L GDI
2020~	Soul (SK3)	Nu 2.0L MPI

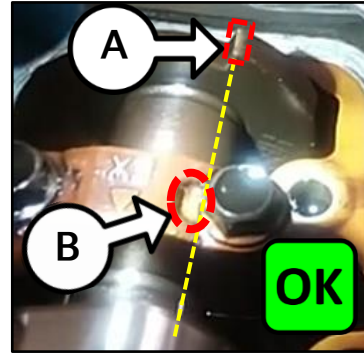
Shown below are the two types of reluctor wheels (end view), Two-Flank (or Half Moon) and Four-Flank (or Castle), shown in their correct positions with **engine set to Top Dead Center (TDC)**.



Two-Flank (Half Moon) Type Reluctor Wheel Positioning:



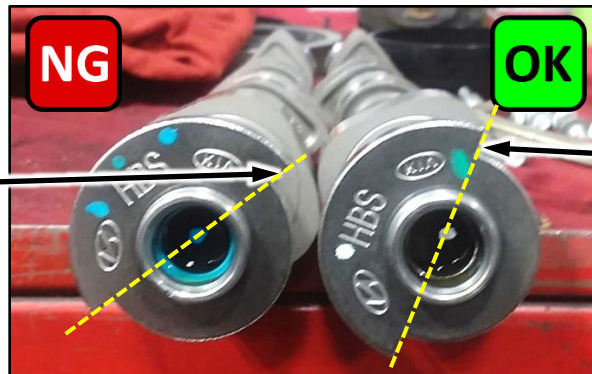
Incorrect: Edge (A) of reluctor wheel **NOT lined up** with camshaft cap bolt indentation (B).



Correct: Edge (A) of reluctor wheel **lined up** with camshaft cap bolt indentation (B).

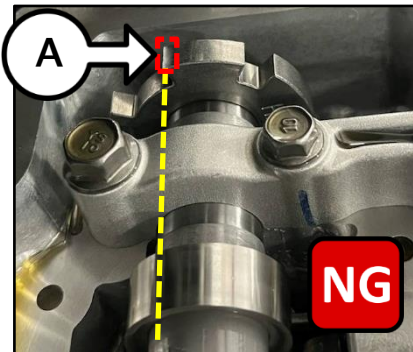
End View of Camshafts with Two-Flank Reluctor Wheel

NG: Flank edge **NOT** lined up correctly

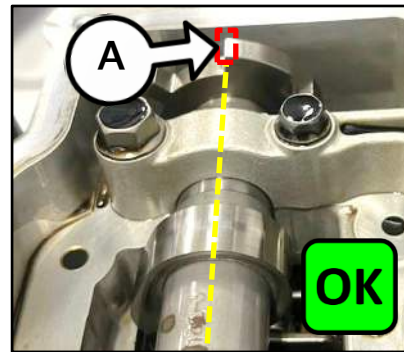


OK: Flank edge lined up correctly

Four-Flank (Castle) Type Reluctor Wheel Positioning:

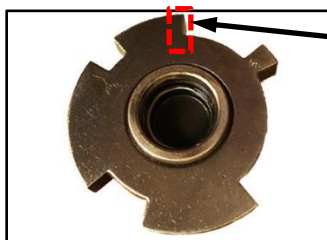


Incorrect: Flank edge (A) (see detail below) of reluctor wheel **NOT lined up** with top of camshaft.



Correct: Flank edge (A) of reluctor wheel **lined up** with top of camshaft.

End View of Four-Flank Reluctor Wheel



Flank edge "A" to be aligned with top of camshaft