

	GROUP	MODEL
	Subsequent Repair Action	2012-2016MY Soul (AM, PS) w/Gamma 1.6L GDI
	NUMBER	DATE
	SC176Y	October 2024

SUBSEQUENT REPAIR ACTION

SUBJECT:

CATALYTIC CONVERTER REPLACEMENT AND ENGINE INSPECTION/REPLACEMENT (SC176Y)

This bulletin provides catalytic converter and engine sub-assembly diagnosis and repair information on certain 2012-2016MY Soul (AM, PS) vehicles produced from July 8, 2011 through August 11, 2016, that previously had the recall campaign SC176 completed. The affected vehicles may exhibit catalyst system efficiency deterioration or a malfunction indicator lamp illumination with an active, history or pending P0420 with or without a P030X misfire DTC. Follow the procedure outlined in this publication to inspect and, if necessary, replace the catalytic converter and engine sub-assembly on the applicable vehicle. Before conducting the procedure, verify that the vehicle is included in the list of affected VINs.

DTC Description:

P0420: Catalyst System Efficiency below Threshold (Bank 1)

P0300: Random/Multiple Cylinder Misfire Detected

P0301: Cylinder 1-Misfire detected

P0302: Cylinder 2-Misfire detected

P0303: Cylinder 3-Misfire detected

P0304 Cylinder 4-Misfire detected

NOTICE

Repair status for a VIN is provided on KDealer+ (Service → Warranty Coverage → Warranty Coverage Inquiry → Campaign Information). Not completed Recall / Service Action reports are available on KDealer+ (Consumer Affairs → Not Completed Recall → Recall VIN → Select Report), which includes a list of affected vehicles.

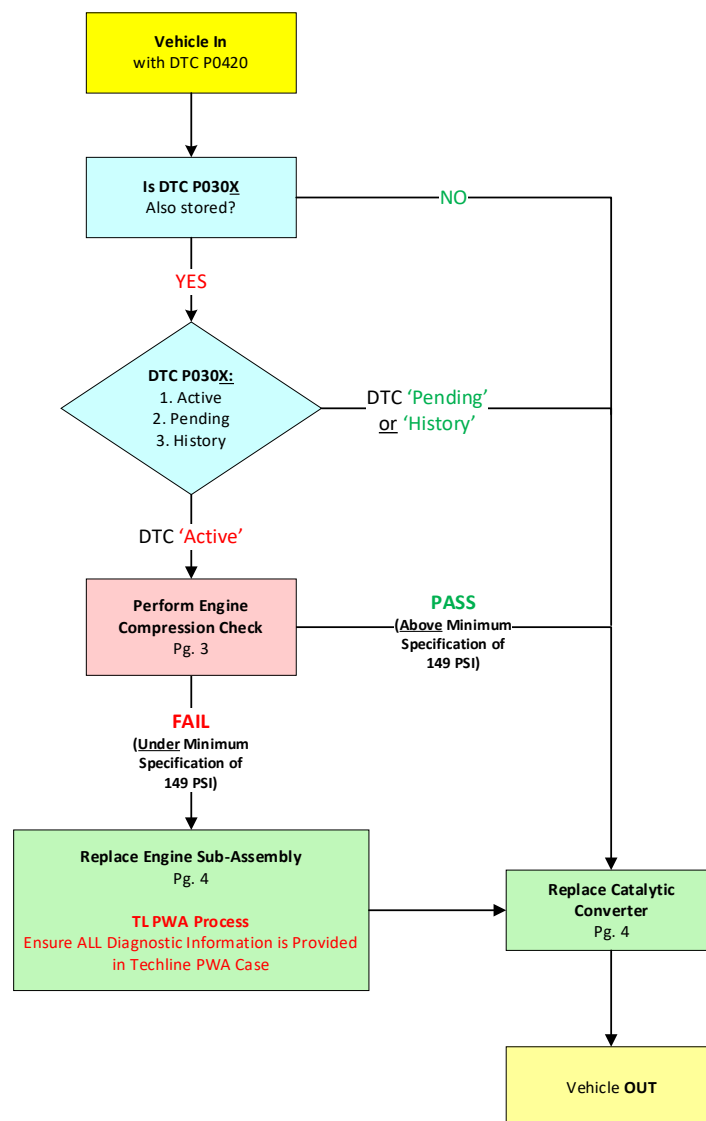
CATALYTIC CONVERTER REPLACEMENT AND ENGINE INSPECTION/REPLACEMENT (SC176Y)

Flowchart:

❗ IMPORTANT

This Subsequent Repair Action can only be initiated/opened with a DTC P0420. Before starting inspection/repairs related to this publication, vehicle ownership needs to be verified by completing the Ownership Validation Form for Subsequent Repair Actions.

Vehicle In with DTC(s) P0420 stored (Active, History or Pending). Follow the flow chart below and perform the necessary procedure(s).



Note: A Vehicle Diagnosis Number (VDN) must be created for DTC P0420 only or DTCs P0420 & P030X prior to ordering parts and performing necessary procedure(s), as outlined in this TSB. If a VDN is not created, Parts Ordering and Warranty claim submission issues WILL occur. Any claims for replacement parts are subject to Warranty review and chargeback.

SUBJECT:

CATALYTIC CONVERTER REPLACEMENT AND ENGINE INSPECTION/REPLACEMENT (SC176Y)

Inspection Procedure: (DTC and Engine Compression Check)

1. With DTC P0420 stored, is P030X also stored (Active, History or Pending)?

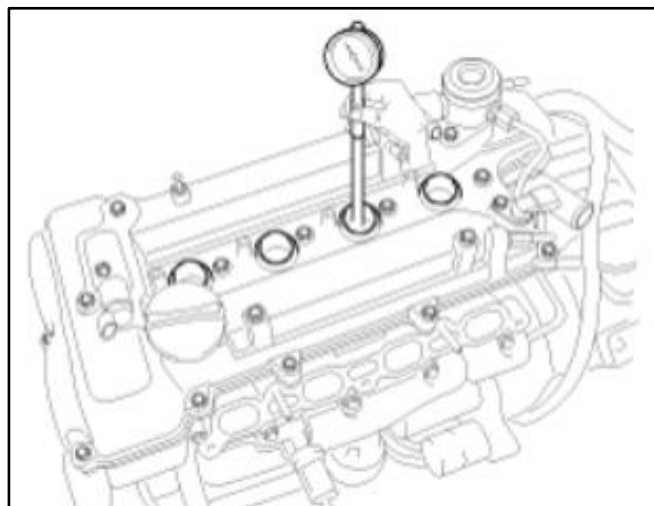
- DTC P030X is not stored or P030X stored as 'History/Pending' then Replace the Catalytic Converter by proceeding to the 'Replacement Procedure: (Catalytic Converter)' on page 4.
- DTC P030X 'Active', then proceed to step 2.

2. Perform an engine compression check by referring to the "Engine Mechanical System → Compression Test" chapter in the applicable Shop Manual on KGIS.

- If all cylinder compression results* are above the minimum specification (**PASS**), proceed to the 'Replacement Procedure: (Catalytic Converter)' on page 4.
- If any cylinder compression result* is below the minimum specification (**FAIL**), proceed to the 'Replacement Procedure: (Engine Sub Assembly)' on page 4.

*Perform all cylinder compression checks twice (2x) and record both peak cranking values clearly and legibly on the repair order.

Note: Refer to [TB018](#) and/or [VID052](#) for further engine compression check assistance.



Compression Pressure	
Standard	178PSI, 1225.83kPa, 12.5kg/cm ²
Minimum	149 PSI, 1029.69kPa, 10.5kg/cm ²
Difference	14PSI, 98kPa, 1.0kg/cm ²



Tightening torque for spark plugs:
10.8 - 18 lb.ft (14.7 - 24.5 N.m)

Tightening torque for ignition coils:
7.2 - 8.7 lb.ft (9.8 - 11.8 N.m)

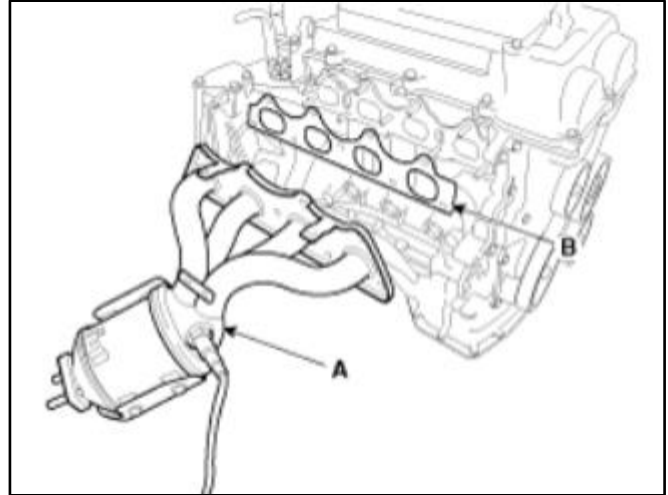
CATALYTIC CONVERTER REPLACEMENT AND ENGINE INSPECTION/REPLACEMENT (SC176Y)

Replacement Procedure: (Catalytic Converter)

1. Disconnect the negative (-) battery terminal.
2. Replace the catalytic converter (A) by referring to "Engine Mechanical System → Intake and Exhaust System → Exhaust Manifold → Repair procedures" in the applicable Shop Manual on KGIS.



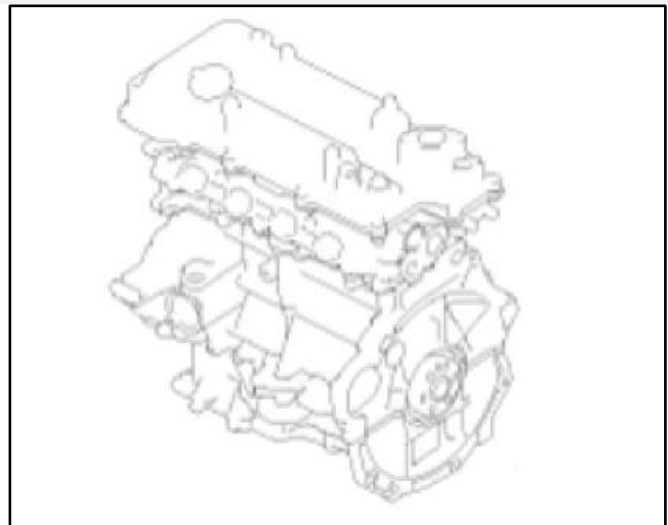
Tightening torque for catalytic converter bolts:
21.7 - 30.4 lb.ft (29.4 - 41.2 N.m)



3. Reinstall all removed parts in reverse order of removal.
4. Confirm normal operation.

Replacement Procedure: (Engine Sub Assembly)

1. Replace the Engine Sub Assembly (A) by referring to "Engine Mechanical System → Intake and Exhaust System → Exhaust Manifold → Repair procedures" in the applicable Shop Manual on KGIS.



2. Reinstall all removed parts in reverse order of removal.
3. Confirm normal operation.

SUBJECT:

CATALYTIC CONVERTER REPLACEMENT AND ENGINE INSPECTION/REPLACEMENT (SC176Y)

AFFECTED VEHICLE RANGE:

Model	Production Date Range
Soul (AM, PS)	July 8, 2011 through August 11, 2016

REQUIRED TOOL:

Tool Name	Part Number	Figure
Compression Gauge	Locally Sourced	

REQUIRED PART:

Model	Part Name	Part Number	Figure	Qty.	Comment
All	Catalytic Converter Assembly	28510 2BEF1QQK		1	DTC P0420 MUST Be Stored Prior to Catalytic Converter Replacement
	Exhaust Manifold Gasket	28521 2B400		1	
	Exhaust Front Pipe Gasket	28751 3S000		1	
AM	Exhaust Front Pipe Nuts	28679 21000		2	
PS		13183 12000		2	
AM (Non-ISG)	Engine Long Block (Gamma 1.6L GDI)	21101 2BK01FFFR		1	DTC P0420 and P030X MUST Be Stored Prior to Engine Replacement
AM (ISG)		21101 2BK02FFFR		1	
PS		21101 2BK03FFFR		1	
All	Service Kit I	21111 2BS01FFF		1	
	Service Kit II	21112 2BS01FFF		1	
	Fuel Tube	35305 2B000FFF		1	
	Knock Sensor	39250 2B000	N/A	1	
	Engine Oil	NPNENG5W30	N/A	5qts	
	Coolant (Concentrate)	UM022 CH271	N/A	1 gallon	

Note: The replacement part numbers will require a VIN entry for parts ordering. **DO NOT** order these parts for stocking purposes, related to this Campaign. Supply is very limited. Until supply stabilizes, please confirm part availability before scheduling customers. Please be sure to expedite warranty claim filing.



SUBJECT:

CATALYTIC CONVERTER REPLACEMENT AND ENGINE INSPECTION/REPLACEMENT (SC176Y)

WARRANTY INFORMATION:

N Code: N99 C Code: C99

Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
AM 12-13MY	R	39110 2BCG5	0	(SC176Y) DTC Inspection + Catalytic Converter Replacement	191025R4*	1.2 M/H	28510 2BEF1QQK	1
							28521 2B400	1
							28751 3S000	1
							28679 21000	2
				(SC176Y) DTC Inspection + Compression Test (OK) + Catalytic Converter Replacement	191025R5*	1.8 M/H	28510 2BEF1QQK	1
							28521 2B400	1
							28751 3S000	1
							28679 21000	2
				(SC176Y) DTC Inspection + Compression Test (NG) + Catalytic Converter Replacement + Engine Replacement (PWA)	212221C1*	6.9 M/H	28510 2BEF1QQK	1
							28521 2B400	1
							28751 3S000	1
							28679 21000	2
							21101 2BK01FFFR or 21101 2BK02FFFR	1
							21111 2BS01FFF	1
							21112 2BS01FFF	1
							35305 2B000FFF	1
							39250 2B000	1
							NPNENG5W30	5
							UM022 CH271	1
							28510 2BEF1QQK	1

Note: Refer to [Warranty Bulletin 2024-](#) for claim submission procedures. Manually enter sublet code 'X2' for reimbursement of one roundtrip rideshare expense or up to three (3) days of rental expense, with supporting documentation. A [Vehicle Diagnosis Number \(VDN\)](#) must be created for DTC P0420 only or DTCs P0420 & P030X prior to ordering parts and performing necessary procedure(s), as outlined in this TSB. If a VDN is not created, Parts Ordering and Warranty claim submission issues WILL occur. Any claims for replacement parts are subject to Warranty review and chargeback. Submit the [Ownership Validation Form](#) with claim.

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SUBJECT:

CATALYTIC CONVERTER REPLACEMENT AND ENGINE INSPECTION/REPLACEMENT (SC176Y)

WARRANTY INFORMATION:

N Code: N99 C Code: C99

Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
PS 14-16MY	R	39110 2BSH5	0	(SC176Y) DTC Inspection + Catalytic Converter Replacement	191026R4*	1.2 M/H	28510 2BEF1QQK	1
							28521 2B400	1
							28751 3S000	1
							13183 12000	2
				(SC176Y) DTC Inspection + Compression Test (OK) + Catalytic Converter Replacement	191026R5*	1.8 M/H	28510 2BEF1QQK	1
							28521 2B400	1
							28751 3S000	1
							13183 12000	2
				(SC176Y) DTC Inspection + Compression Test (NG) + Catalytic Converter Replacement + Engine Replacement (PWA)	212221C2*	7.4 M/H	28510 2BEF1QQK	1
							28521 2B400	1
							28751 3S000	1
							13183 12000	2
							21101 2BK03FFFR	1
							21111 2BS01FFF	1
							21112 2BS01FFF	1
							35305 2B000FFF	1
							39250 2B000	1
							NPNENG5W30	5
							UM022 CH271	1

Note: Refer to [Warranty Bulletin 2024-62](#) for claim submission procedures. Manually enter sublet code 'X2' for reimbursement of one roundtrip rideshare expense or up to three (3) days of rental expense, with supporting documentation. A [Vehicle Diagnosis Number \(VDN\)](#) must be created for DTC P0420 only or DTCs P0420 & P030X prior to ordering parts and performing necessary procedure(s), as outlined in this TSB. If a VDN is not created, Parts Ordering and Warranty claim submission issues WILL occur. Any claims for replacement parts are subject to Warranty review and chargeback. Submit the [Ownership Validation Form](#) with claim.

*There may be a mandatory parts return request for parts associated with this campaign repair when the catalytic converter and/or engine are replaced under labor op codes 191025R4, 191025R5, 212221C1, 191026R4, 191026R5, or 212221C2.

NOTICE

VIN inquiry data for this repair is provided for tracking purposes only. Kia retailers should reference SC176Y when accessing the KDealer+ system.

