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FactoryManuals.net is a great resource for anyone who wants to save money on repairs by doing their own work. The manuals provide detailed instructions and diagrams that make it easy to understand how to fix a vehicle.

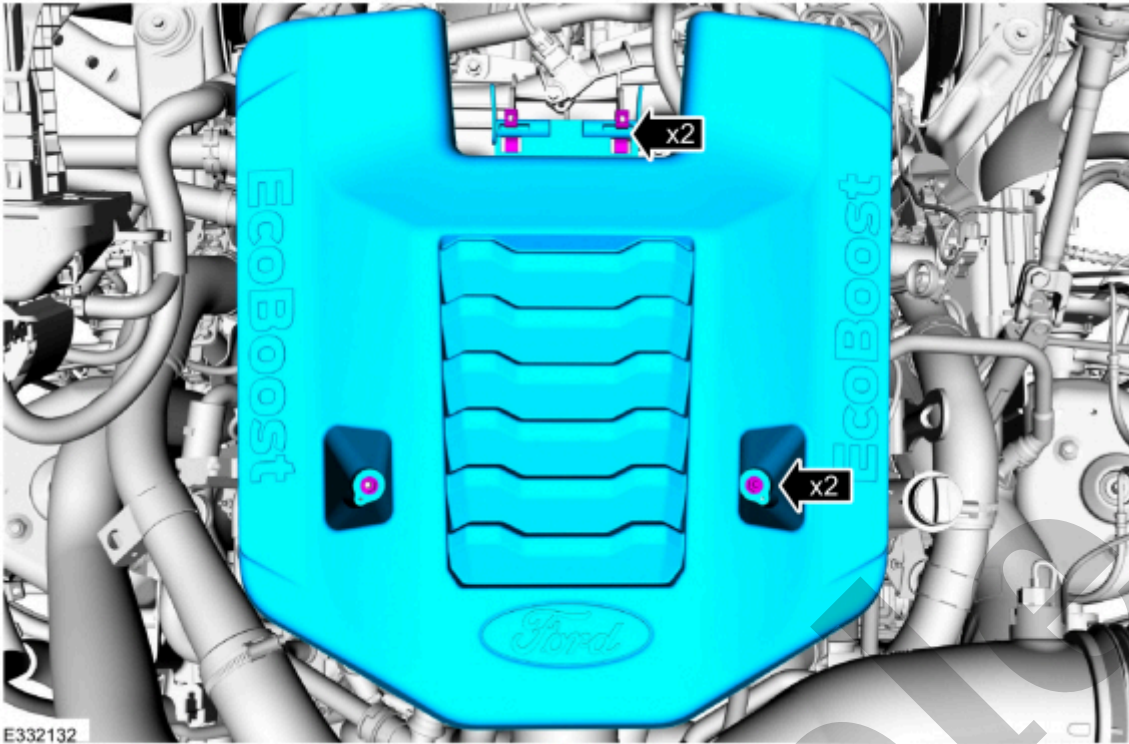## 2018 Ford C-Max Service and Repair Manual

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Installation

1. To install, reverse the removal procedure.

E332132

2. Disconnect the electrical connectors, remove the bolts and the RH (right-hand) VCT (variable camshaft timing) oil control solenoids.

   Torque : 97 lb.in (11 Nm)
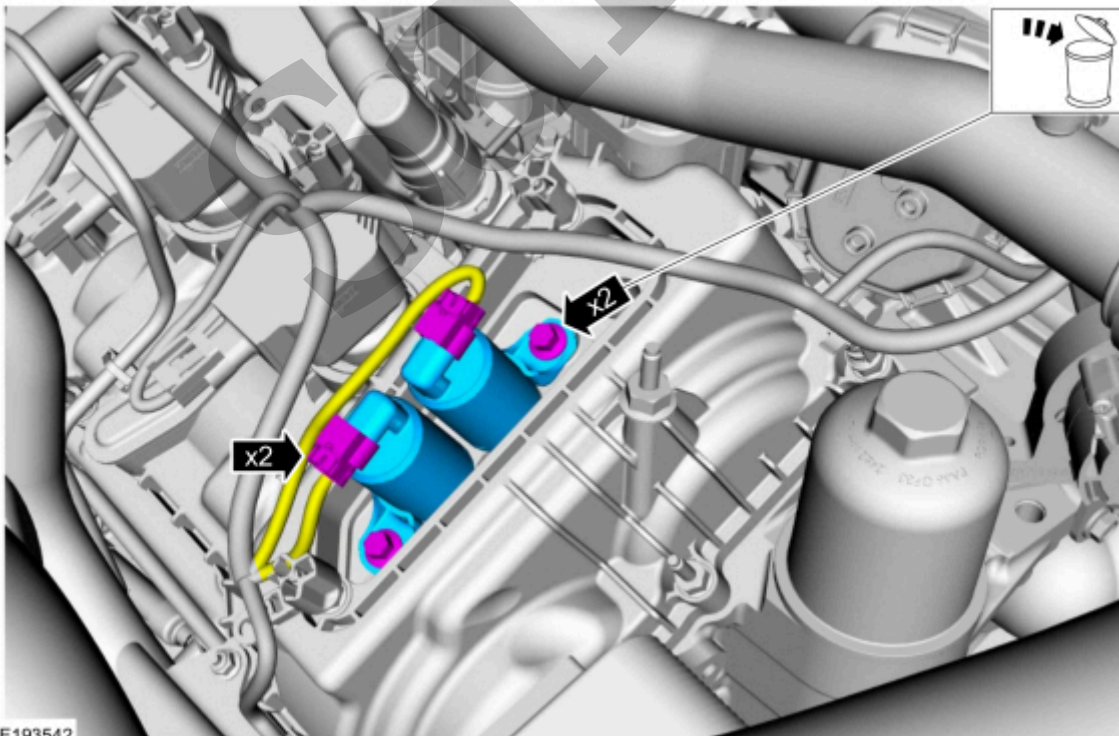
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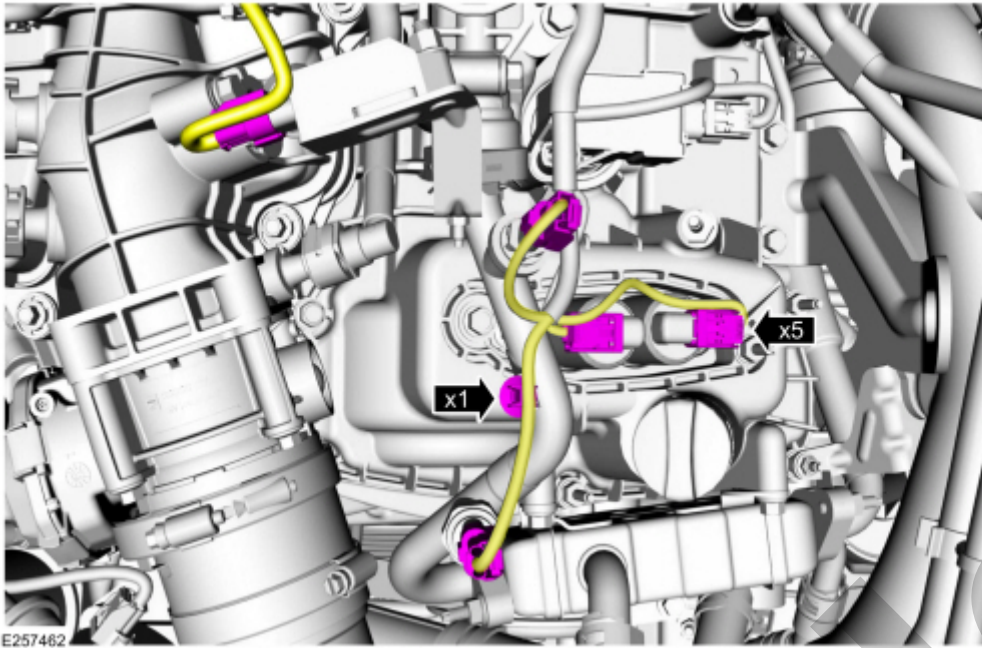
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5. Remove the hose clamps, nut and the EGR (exhaust gas recirculation) differential pressure sensor.
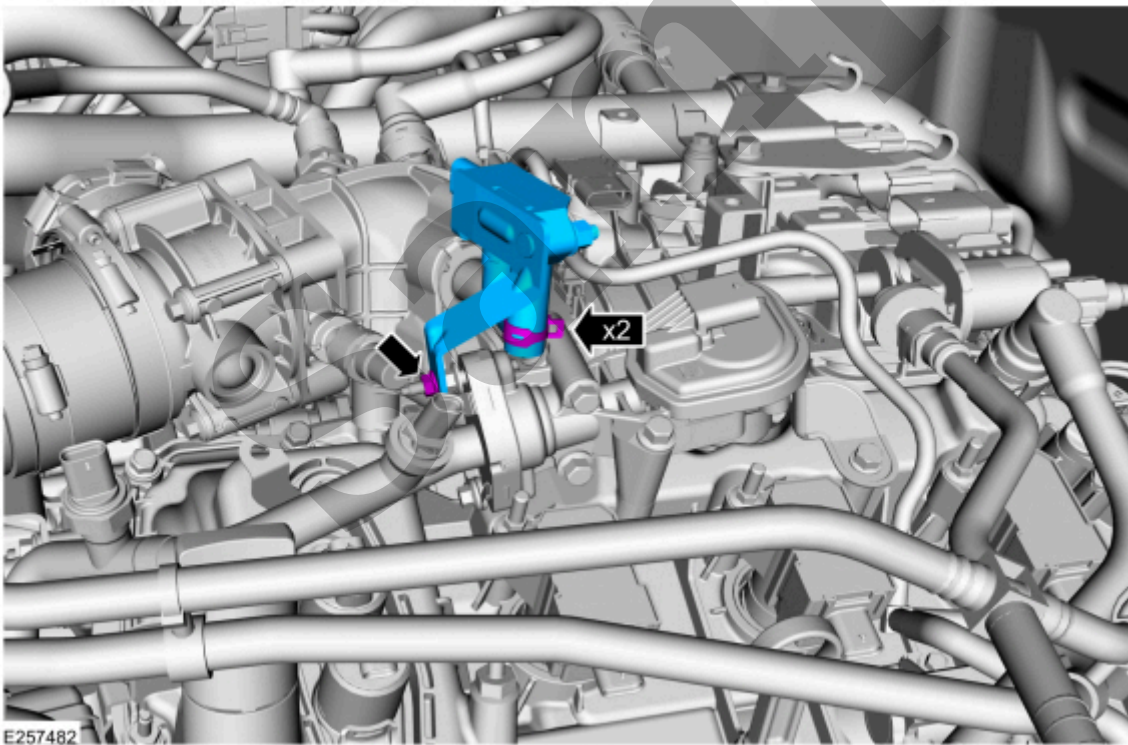
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6. Remove the retainers and the EGR (exhaust gas recirculation) intermediate tube.

Torque : 89 lb.in (10 Nm)

Installation

1. To install, reverse the removal procedure.

	Slow	7
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	Rolling	9
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	Rough	11
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	Backfires	13
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information as possible. Some vehicles may not display all input and output signals. The Typical Diagnostic Reference Value Charts do not display fault parameter identifications (PIDs). These are PIDs which indicate a hard fault with the circuit. They display a value of FAULT or NO FAULT and are PIDs ending with the letter F. Reference values may vary 20% depending on operating conditions, altitude, and other factors. The RPM values are axle and tire dependent. Values are taken at an altitude of approximately 189 meters (620 ft) above sea level with the engine at normal operating temperature and accessories off. For detailed transmission diagnostics, refer to the Workshop Manual. Transmission signals may be referred to in either alpha or numeric form. For example, 1=A, 2=B, 3=C.

A. Value is not useful under this condition.

B. Value depends on fuel tank level. Typical operating range is 15% (empty) to 90% (full).

C. Heated oxygen sensors (HO2S) should switch from rich to lean at least once every 3 seconds. HO2S voltage should toggle above and below 0.450 DCV and never be a negative value. Valid HO2S switching occurs only during closed loop fuel control operation.

D. Downstream oxygen sensors stay close to a constant voltage when the catalyst monitor is off (positive value only). When the catalyst monitor is on, the HO2S switches from rich to lean above and below 0.450 DCV and should never be a negative value. For downstream oxygen sensors (12, 22) greater activity results when the catalyst monitor is active.

E. The normal operation value is from -1.5 to 3.5 degrees.

PID	Units Measured/PID	Component/PID Only	Measured/PID Values			
			KOEO	Hot Idle	48KM/H (30 MPH)	89 KM/H (55 MPH)
PCM (powertrain control module) AAT (Ambient Air Temperature) (Deg C)	DEG C (DEG F)	AAT Sensor	18 (64.4)	17 (62.6)	15 (59)	13 (55.4)
PCM (powertrain control module) AAT_V (Ambient Air Temperature Sensor Voltage) (V)	VOLTS	AAT Sensor	3.10	3.14	3.28	3.38
PCM (powertrain control module) AEIS_ACTION (Number of Drive Cycles where Automatic Engine	NUMERIC VALUE	PID	1	1	1	1

PCM (powertrain control module) BARO_V (Barometric pressure voltage) (V)	VOLTS	PID	3.90	3.90	3.90	3.89
PCM (powertrain control module) BATT_V_INF (Voltage at the Battery Terminals - Inferred) (V)	VOLTS	PID	12.44	11.84	14.88	14.81
PCM (powertrain control module) BOO1 (Brake Pedal Position)	TRUE/FALSE	BPP Switch	FALSE	FALSE	FALSE	FALSE
PCM (powertrain control module) BOO2 (Brake Pressure Applied)	TRUE/FALSE	BPP Switch	FALSE	FALSE	FALSE	FALSE
PCM (powertrain control module) BRKOVRD_POSS (Number of Drive Cycles in which Brake Override Accelerator Action Possible) (Undefined / Not Used)	NUMERIC VALUE	PID	14	14	15	15
PCM (powertrain control module) BRKOVR_ACTION (Number of Drive Cycles where Brake Override Accelerator Action Occurred) (Undefined / Not Used)	NUMERIC VALUE	PID	0	0	0	0
PCM (powertrain control module) CAC_T (Charge Air Cooler Temperature Bank 1, Sensor 1) (Deg C)	DEG C (DEG F)	CACT Sensor	21 (69.8)	18 (64.4)	19 (66.2)	21 (69.8)
PCM (powertrain control module) CAM_SYNC (State	YES/NO	PID	NO	NO	NO	NO

PCM (powertrain control module) DIST_BRKOVRD (Distance Since Brake Override Accelerator Action occurred) (km)	KM (MILES)	PID	39.5 (24.54)	39.5 (24.54)	39.5 (24.54)	40.5 (25.17)
PCM (powertrain control module) DPFE_PRES (Differential Pressure Feedback EGR Sensor - Raw) (kPa)	kPa (PSI)	Differential Pressure Feedback EGR Sensor	-0.05 (-0.01)	-0.05 (-0.01)	1.14 (0.17)	-0.05 (-0.01)
PCM (powertrain control module) DPFE_V (Differential Pressure Feedback EGR (DPFE) Sensor Voltage) (V)	VOLTS	Differential Pressure Feedback EGR Sensor	1.99	1.99	2.11	1.98
PCM (powertrain control module) DTCCNT (DTC Count (includes those needing no action)) (Undefined / Not Used)	NUMERIC VALUE	PID	0	0	0	0
PCM (powertrain control module) DTCCNT_OBD (Number of confirmed emission-related DTCs stored) (Undefined / Not Used)	NUMERIC VALUE	PID	0	0	0	0
PCM (powertrain control module) EBP (Exhaust Pressure Sensor 1) (kPa)	kPa (PSI)	EBP Sensor	94.49 (13.70)	94.04 (13.64)	96.14 (13.94)	98.87 (14.34)
PCM (powertrain control module) EBP_V (Exhaust Pressure Sensor Voltage) (V)	VOLTS	EBP Sensor	0.91	0.93	0.80	0.96