

Prestige Auto Sales & Service

906 Oriskany Blvd
 Yorkville, NY 13495
 315-219-0926
 Facility # 7129392

INVOICE/REPAIR ORDER

QTY	PART NO AND DESCRIPTION	PRICE
1	See attached TSB List of parts needed	
	Cost plus 10%	EST \$500

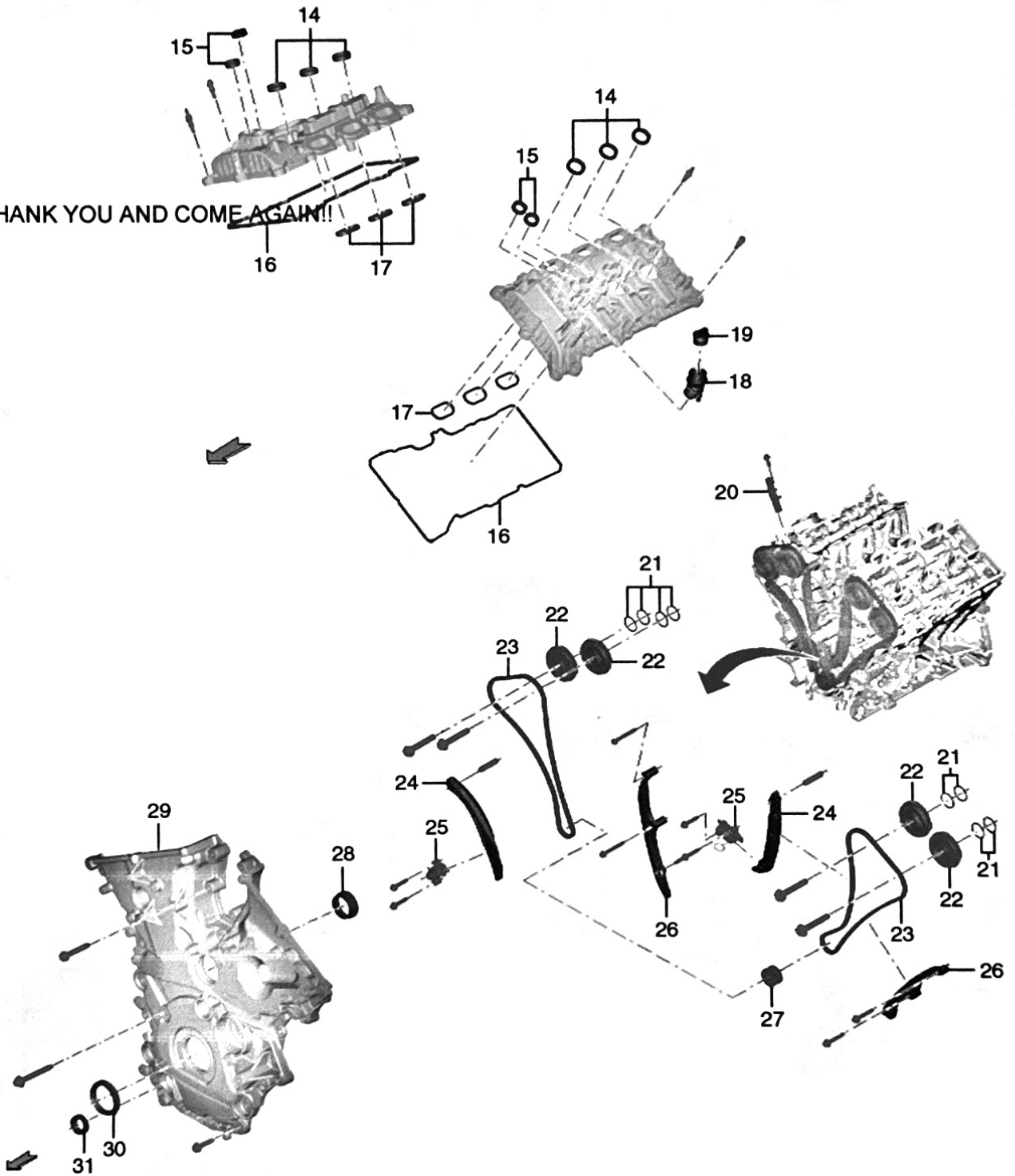
NAME Shawn Brennan	CUSTOMER ORDER NO.	ARRIVAL DATE 10/28/25
ADDRESS 45 Janet Terr	PHONE 315-209-7252	COMPLETION DATE
CITY New Hartford NY	ALTERNATE PHONE	ODOMETER IN 86,672
YEAR MAKE AND MODEL	SERIAL NUMBER	ODOMETER OUT
	MOTOR TRANS DRIVE LINE	LICENSE NO.

DESCRIPTION OF WORK	AMOUNT
Customer states engine makes rattling noise on cold starts	
Pulled vehicle in shop	
Stayed in shop overnight	
Started vehicle and verified noises	
Refer to TSB - 22-2200	
Need to disassemble and inspect components	
Approx 15 hours labor \$150/hr	
TOTAL LABOR	\$2,250
TOTAL PARTS	\$500
FREIGHT	—
SHOP SUPPLIES	\$150
OUTSIDE REPAIRS	
TAX	253
Thank You TOTAL	3153
	75

I hereby authorize the above repair work to be done along with the necessary materials. You and your employees may operate above vehicle for purposes of testing, inspection, or delivery at my risk. An express mechanics lien in acknowledged on above vehicle to secure the amount of repairs thereto. It is also understood that you will not be held responsible for loss or damage to cars or articles left in cars in case of fire, theft or any other cause beyond your control.

SIGNATURE

THANK YOU AND COME AGAIN!!



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PRESTIGE AUTO SALES & SERVICE
906 ORISKANY BLVD
YORKVILLE, NY
13495
315-219-0926

YMMS: 2019 Ford F-150 Platinum
Engine: 3.5L
VIN: 1FTEW1E45KFA83737

Nov 5, 2025
License:
Odometer:

**3.5 L ECOBOOST - COLD START TICKING/TAPPING OR RATTLE TYPE NOISE -
BUILT ON OR BEFORE 31-OCT-2019**

TECHNICAL SERVICE BULLETIN

Reference Number(s): 22-2200, Date of Issue: May 20, 2022
FORD: 2017-2020 F-150, Engine: 3.5L EcoBoost, Built on or before 31-Oct-2019; 2018-2020 Expedition, Built on or before 31-Oct-2019
LINCOLN: 2018-2020 Navigator, Built on or before 31-Oct-2019
Superseded Bulletin(s): 21-2119, Date of Issue: May 20, 2022

NOTE: *This bulletin supersedes 21-2119.*

SUMMARY

This article supersedes TSB 21-2119 to update the Service Procedure.

NOTE: *Certain parts may now be reused for this repair.
Refer to the Service Procedure for details.*

ISSUE

Some 2017-2020 F-150 2018-2020 Expedition/Navigator vehicles built on or before 31-Oct-2019 and equipped with a 3.5L EcoBoost engine may exhibit a ticking/tapping or rattle type noise from the top front cover area of the engine on initial start-up after a cold soak of 6 hours or more that may last for 2-5 seconds. This may be due to a worn variable cam timing (VCT) unit. To correct the condition, follow the Service Procedure steps to replace the VCT units.

ACTION

Follow the Service Procedure steps to correct the condition on vehicles that meet all of the following criteria:

- One of the following vehicle lines:

- 2018-2020 Expedition/Navigator
- Built on or before 31-Oct-2019
- 3.5L EcoBoost engine
- Customer symptom of ticking/tapping or rattle noise from the front cover area after a cold start

NOTE: Dealers should only order parts for customer vehicles that require repairs. Because of part constraints, dealers may experience situational short-term backorders on some parts. Customers should continue to drive vehicles while parts are on order.

PARTS

PARTS INFORMATION

Service Part Number	Quantity	Description	Unit of Issue	Piece Quantity	Note
HL3Z-6256-CD	2	Intake VCT Unit	1	2	
HL3Z-6C525-CD	2	Exhaust VCT Unit	1	2	
HL3Z-6279-A	4	VCT Unit Bolt	1	4	
ML3Z-6584-G	1	Left Valve Cover Gasket	1	1	
HL3Z-6584-A	1	Right Valve Cover Gasket	1	1	
W503275-S437	1	High Pressure Fuel Tube Retaining Bolt	4	1	
W503280-S437	1	High Pressure Fuel Tube Retaining Bolt	4	1	
W714498-S900	1	High Pressure Pump Mounting Bolt	4	2	
AA5Z-9E583-A	1	High Pressure Pump O-ring	1	1	
HL3Z-	1	Coolant Pump Gasket	1	1	

8507-A					
BR3Z-8527-A	1	Coolant Pump O-ring	1	1	
HL3Z-6A340-A	1	Crankshaft Pulley Shaft Bolt	1	1	
XW4Z-6700-AA	1	Front Crankshaft Seal	1	1	
BR3Z-6020-A	1	Front Cover Coolant Pipe Seal	1	1	
BR3Z-6C535-A	1	Oil Pump Electrical Connector Seal	1	1	Oil Pump Electrical Connector Seal and VCT Oil Control Seal are the same service part number
AA5Z-6714-A	1	Oil Filter	1	1	
TA-357	As Needed	Motorcraft® High Performance Engine RTV Silicone			
ZC-30-A	As Needed	Motorcraft® Silicone Gasket Remover			
ZC-31-B	As Needed	Motorcraft® Metal Surface Cleaner			
VC-13-G	As Needed	Motorcraft® Yellow Antifreeze/Coolant Concentrated (All Markets Except Canada)			
CVC-13-G	As Needed	Motorcraft® Yellow Antifreeze/Coolant Concentrated (Canada Only)			
XO-5W30-Q1SP	As Needed	Motorcraft® SAE 5W-30 Premium Synthetic Blend Motor Oil (All Markets Except Canada)			
CXO-5W30-LSP6	As Needed	Motorcraft® SAE 5W-30 Super Premium Motor Oil (Canada Only)			
ZC-20	As Needed	Motorcraft® Engine Shampoo and Degreaser (All Markets Except Canada)			
CXC-66-A	As Needed	Motorcraft® Engine Shampoo (Canada Only)			

PM-4-A	As Needed	Motorcraft® Metal Brake Parts Cleaner (Compliant With Low Volatile Organic Compound Requirements As Required In Some USA States)			
PM-4-B	As Needed	Motorcraft® Metal Brake Parts Cleaner (Not Compliant With Volatile Organic Compound Requirements)			

PARTS

PARTS TO INSPECT AND REPLACE ONLY IF NECESSARY

PARTS INFORMATION

Service Part Number	Quantity	Description	Unit of Issue	Note
HL3Z-9439-A	If Needed	Valve Cover Intake Port Gasket	3	
HL3Z-9H486-A	If Needed	Upper Intake Manifold Gaskets	6	
BR3Z-6C535-A	If Needed	VCT Oil Control Seal	1	Oil Pump Electrical Connector Seal and VCT Oil Control Seal are the same service part number
BR3Z-6C535-B	If Needed	Spark Plug Tube Seal	1	
HL3Z-9417-A	If Needed	High Pressure Pump Mounting Plate Seal	1	
BL3Z-9374-A	If Needed	High Pressure Pump Mounting Plate O-ring	1	
HL3Z-8507-D	If Needed	Thermostat Housing O-ring	1	
HL3Z-8527-A	If Needed	Thermostat Housing O-ring	1	
HL3Z-8590-A	If Needed	Water Pump Outlet O-ring	1	
HL3Z-9J323-C	If Needed	High Pressure Pump to Rail Tube	1	

reused for this repair, if the fuel tube has not previously been reused. The high-pressure fuel pump to fuel rail high-pressure fuel tube flare nuts must be torqued to 32 Nm +/- 2 Nm when reusing the fuel tube for this TSB.

- VCT solenoid seals (BR3Z-6C535-A) and spark plug tube seals (BR3Z-6C535-B) should continue to be reused if no damage is present.

1. Replace all 4 VCT units. Refer to Workshop Manual (WSM), Section 303-01. Do not replace any additional VCT or engine timing related components not included in the Parts List.
 1. It is not necessary to remove the 2 left valve cover cam sensors.
 2. All the VCT solenoid and spark plug tube seals require inspection, but not all require replacement.

THANK YOU AND COME AGAIN!!

Quantity refers to the amount of the service part number required to repair the vehicle.
 Unit of Issue refers to the number of individual pieces included in a service part number package.
 Piece Quantity refers to the total number of individual pieces required to repair the vehicle.
 As Needed indicates the amount of the part may vary and/or is not a whole number. Parts can be billed out as non-whole numbers, including less than 1.
 If Needed indicates the part is not mandatory.

Warranty Status: Eligible under provisions of New Vehicle Limited Warranty (NVLW)/Emissions Warranty/Service Part Warranty (SPW)/Special Service Part (SSP)/Extended Service Plan (ESP) coverage. Limits/policies/prior approvals are not altered by a TSB. NVLW/Emissions Warranty/SPW/SSP/ESP coverage limits are determined by the identified causal part and verified using the OASIS part coverage tool.

LABOR TIMES

LABOR TIMES

Description	Operation No.	Time
* 2017-2020 F-150 3.5L EcoBoost: Replace All Four (4) VCT Units (Do Not Use With Any Other Labor Operations)	222200A	9.6 Hrs.
2017-2020 F-150 Raptor 3.5L EcoBoost: Replace All Four (4) VCT Units (Do Not Use With Any Other Labor Operations)	222200B	9.7 Hrs.
2018-2020 Expedition: Replace All Four (4) VCT Units (Do Not Use With Any Other Labor Operations)	222200C	9.8 Hrs.
2018-2020 Navigator: Replace All Four (4) VCT Units (Do Not Use With Any Other Labor Operations)	222200D	9.8 Hrs.

REPAIR/CLAIM CODING

REPAIR/CLAIM CODING

Causal Part:	6256
Condition Code:	42

SERVICE PROCEDURE

NOTE: The following parts may be reused for this repair if no damage is present.

- Upper intake manifold gaskets (HL3Z-9H486-A)
- Valve cover intake port gaskets (HL3Z-9439-A)
- High pressure fuel tube (HL3Z-9J323-C) may be