



## **Cold Start Ticking Tapping or Rattle Noise on 2019-2022 Ford and Lincoln 2.7L EcoBoost Engines**

The AERA Technical Committee offers the following information regarding ticking, tapping or a rattle on cold start ups in 2019-2022 Ford and Lincoln 2.7L EcoBoost engines. Customers may complain about a ticking, tapping or rattle noise from the top of the front cover area.

- Ford 2019-2022 Edge (Engine: 2.7L EcoBoost)
- Lincoln 2019-2022 Nautilus (Engine: 2.7L EcoBoost)

The sound is heard after the vehicle has had a cold soak of at least 6 hours before startup, this sound may last 2 to 5 seconds. This issue may be due to stuck internal components of the variable cam timing (VCT) unit. To correct the issue, replacement of all 4 VCT units is required.

| <b>Service Part Number</b> | <b>Quantity</b> | <b>Description</b> |
|----------------------------|-----------------|--------------------|
| L1MZ-6256-A                | 2               | VCT Unit - Intake  |
| L1MZ-6C525-A               | 2               | VCT Unit - Exhaust |
| CP9Z-6279-C                | 4               | VCT Unit Bolts     |

**Procedures for Left Hand and Right Hand Units are on the following pages.**

## Procedure - Left Hand Units

**NOTICE:** The VCT units have 2 timing marks on them, a triangle, and a circle. For installation of the LH units the circle marks are used.

- Ensure camshaft holding tool (303-1248) is installed.
- Install new VCT units. The circle timing marks on the VCT units will be at the 10 o'clock (Intake) and 12:30 o'clock (Exhaust) positions as seen in Figure 1.
- Install new VCT unit bolts.
  - Torque bolts
  - Stage 1: 30 FT/LBS
  - Stage 2: Loosen 360°
  - Stage 3: 37 FT/LBS
  - Stage 4: 90°
- Remove tool 303-1248.

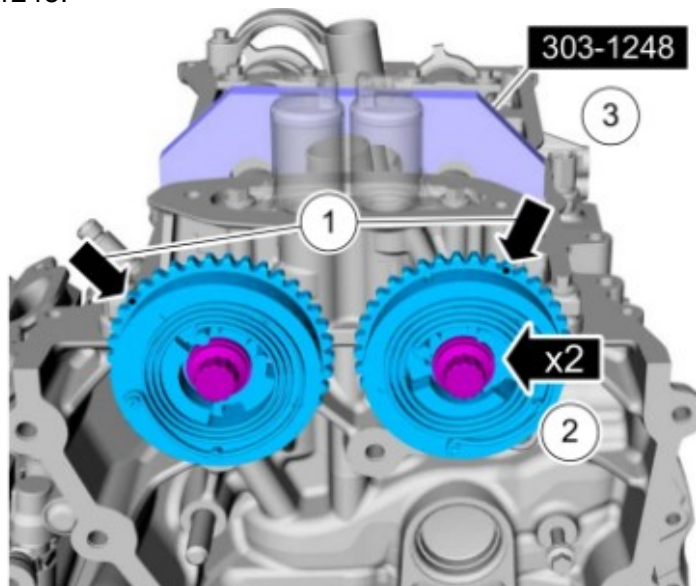


**Figure 1**

### Procedure - Right Hand Units

**NOTICE:** The VCT units have 2 timing marks on them, a triangle, and a circle. For installation of the RH units the triangle marks are used.

- Ensure camshaft holding tool (303-1248) is installed.
- Install new VCT units. The circle timing marks on the VCT units will be at the 2 o'clock (Intake) and 11 o'clock (Exhaust) positions as seen in Figure 2.
- Install new VCT unit bolts.
  - Torque bolts
  - Stage 1: 30 FT/LBS
  - Stage 2: Loosen 360°
  - Stage 3: 37 FT/LBS
  - Stage 4: 90°
- Remove tool 303-1248.

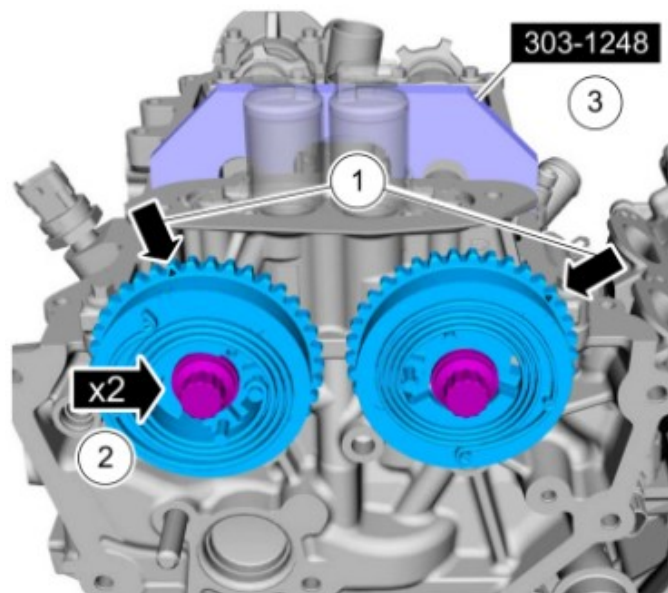


**Figure 2**