

Variable Camshaft Timing (VCT) Unit

Removal

NOTICE: During engine repair procedures, cleanliness is extremely important. Any foreign material, including any material created while cleaning gasket surfaces, that enters the oil passages, coolant passages or the oil pan, can cause engine failure.

Right hand VCT (variable camshaft timing) unit

1. **NOTE:** Only remove the RH timing chain, LH timing chain does not have to be removed to service the RH VCT unit.

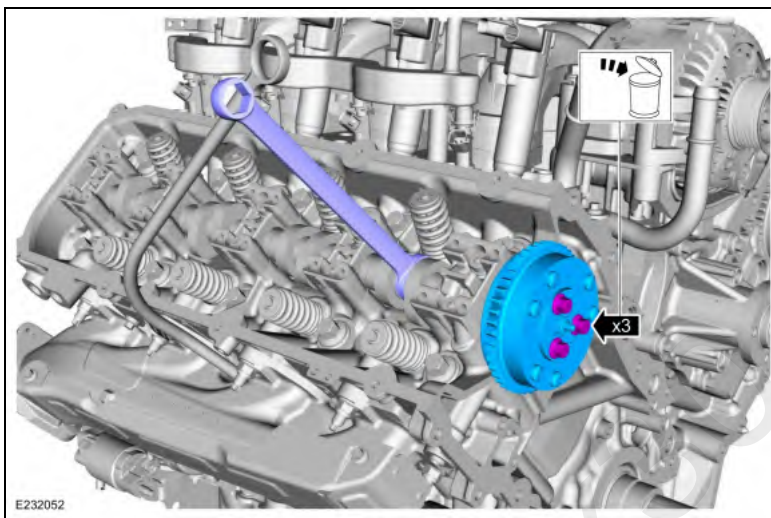
Remove the RH timing chain.

Refer to: Timing Chain (303-01A Engine - 6.2L V8, Removal and Installation).

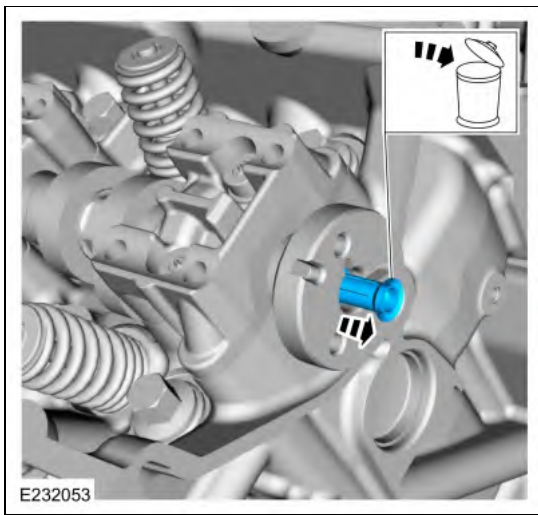
2. **NOTICE:** Damage to the VCT unit will occur if mishandled or used as a lifting or leveraging device.

NOTICE: Only use hand tools to remove the VCT unit or damage may occur to the camshaft or VCT unit.

- Using a 26 mm (1.023 in) wrench on the flats of the camshaft to secure the camshaft, remove the bolts and the RH VCT unit.
- Discard the bolts.



3. Remove and discard the VCT unit system oil filter.



Left hand VCT (variable camshaft timing) unit

4. **NOTE:** *If the RH VCT unit is being serviced at the same time as the LH VCT unit, remove the RH VCT unit first.*

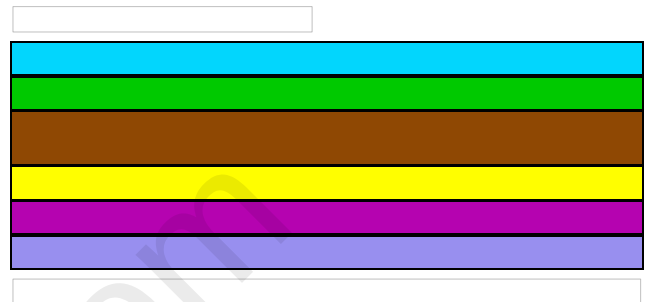
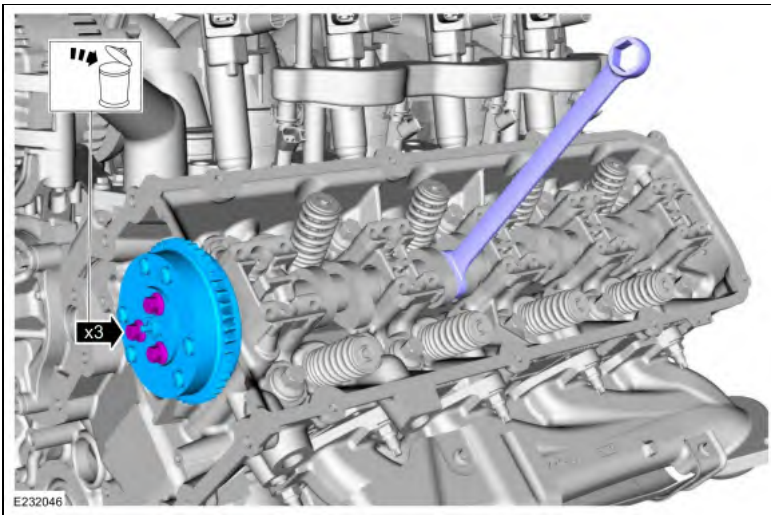
Remove the RH and LH timing chains.

Refer to: Timing Chain (303-01A Engine - 6.2L V8, Removal and Installation).

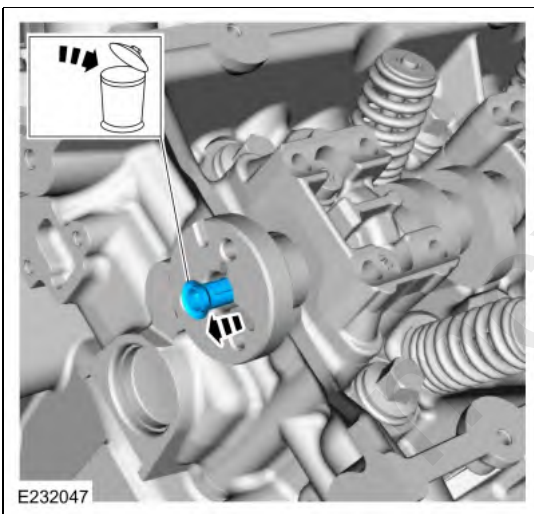
5. **NOTICE:** **Damage to the VCT unit will occur if mishandled or used as a lifting or leveraging device.**

NOTICE: **Only use hand tools to remove the VCT unit or damage may occur to the camshaft or VCT unit.**

- Using a 26 mm (1.023 in) wrench on the flats of the camshaft to secure the camshaft, remove the bolts and the LH VCT unit.
- Discard the bolts.



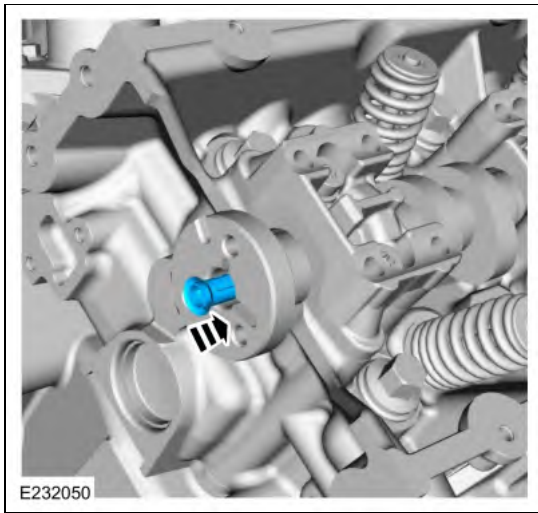
6. Remove and discard the VCT unit system oil filter.



Installation

Left hand VCT (variable camshaft timing) unit

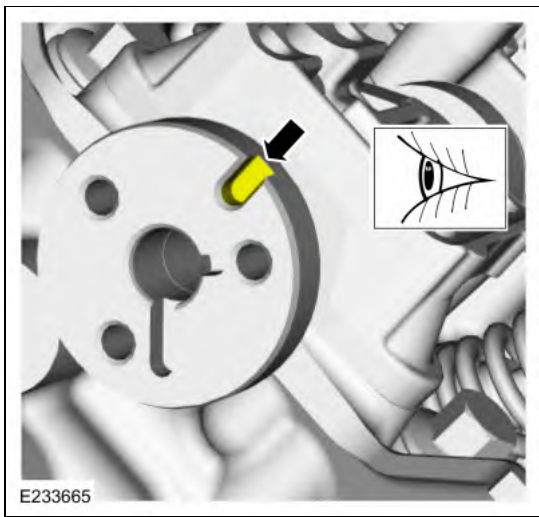
1. Install a new VCT unit system oil filter with the open end facing the front of the engine.



2. Locate the alignment pin on the back of the VCT unit.



3. Locate the alignment slot on the front of the LH camshaft.



4. **NOTICE:** Damage to the VCT unit will occur if mishandled or used as a lifting or leveraging device.

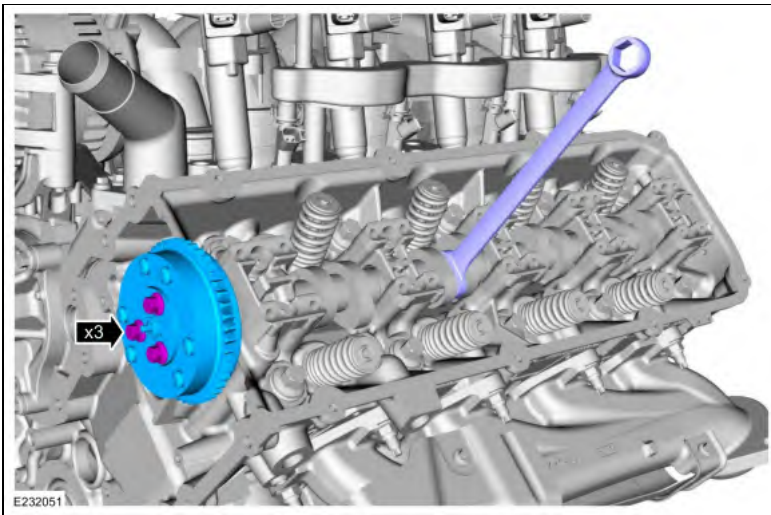
NOTICE: Only use hand tools to install the VCT unit or damage may occur to the camshaft or VCT unit.

- Position the VCT unit with the alignment pin in the alignment slot of the camshaft and install the new bolts finger-tight.
- Using a 26 mm (1.023 in) wrench on the flats of the camshaft to secure the camshaft, tighten the new LH VCT unit bolts in 2 stages.

Torque:

Stage 1: 80 lb.in (9 Nm)

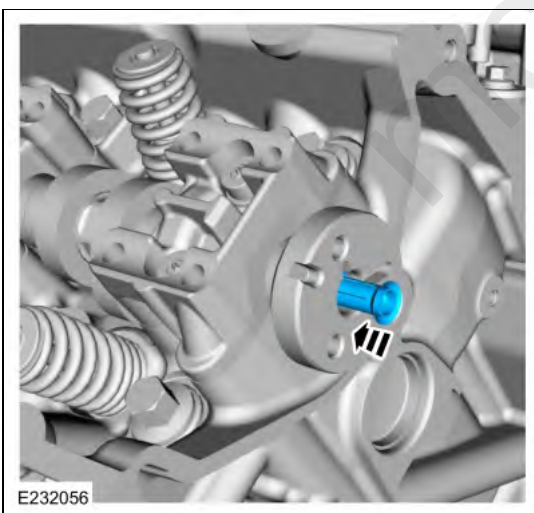
Stage 2: 90°



5. Install the RH and LH timing chains.
Refer to: Timing Chain (303-01A Engine - 6.2L V8, Removal and Installation).

Right hand VCT (variable camshaft timing) unit

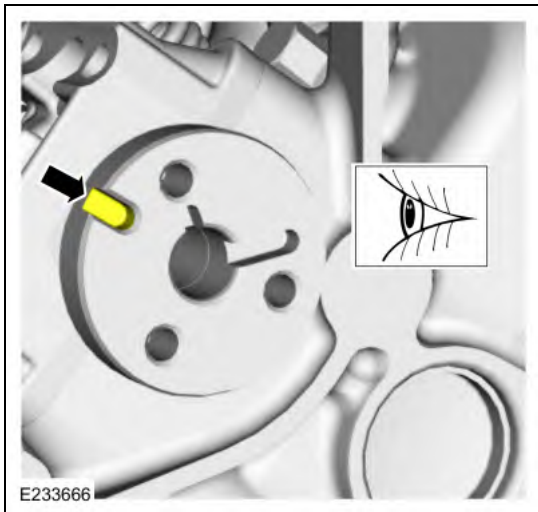
6. Install a new VCT unit system oil filter with the open end facing the front of the engine.



7. Locate the alignment pin on the back of the VCT unit.



8. Locate the alignment slot on the front of the RH camshaft.



9. **NOTICE:** Damage to the VCT units will occur if mishandled or used as a lifting or leveraging device.

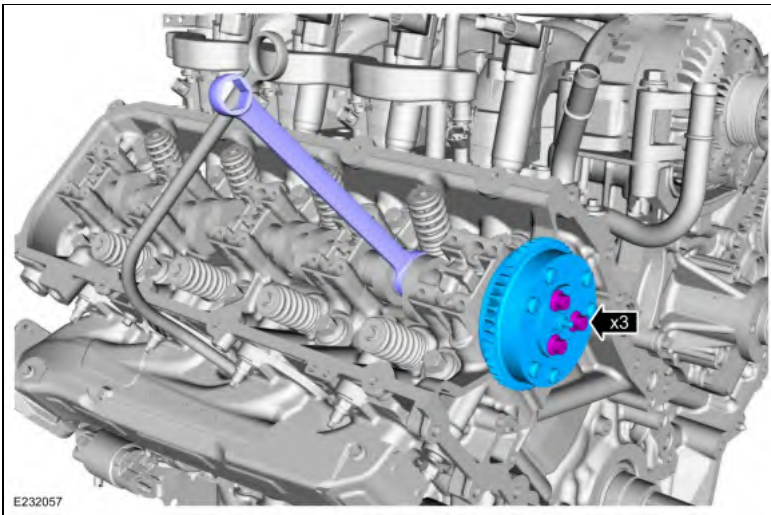
NOTICE: Only use hand tools to install the VCT unit or damage may occur to the camshaft or VCT unit.

- Position the VCT unit with the alignment pin in the alignment slot of the camshaft and install the new bolts finger-tight.
- Using a 26 mm (1.023 in) wrench on the flats of the camshaft to secure the camshaft, tighten the new RH VCT unit bolts in 2 stages.

Torque:

Stage 1: 80 lb.in (9 Nm)

Stage 2: 90°



10. Install the RH timing chain.
Refer to: Timing Chain (303-01A Engine - 6.2L V8, Removal and Installation).