
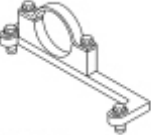

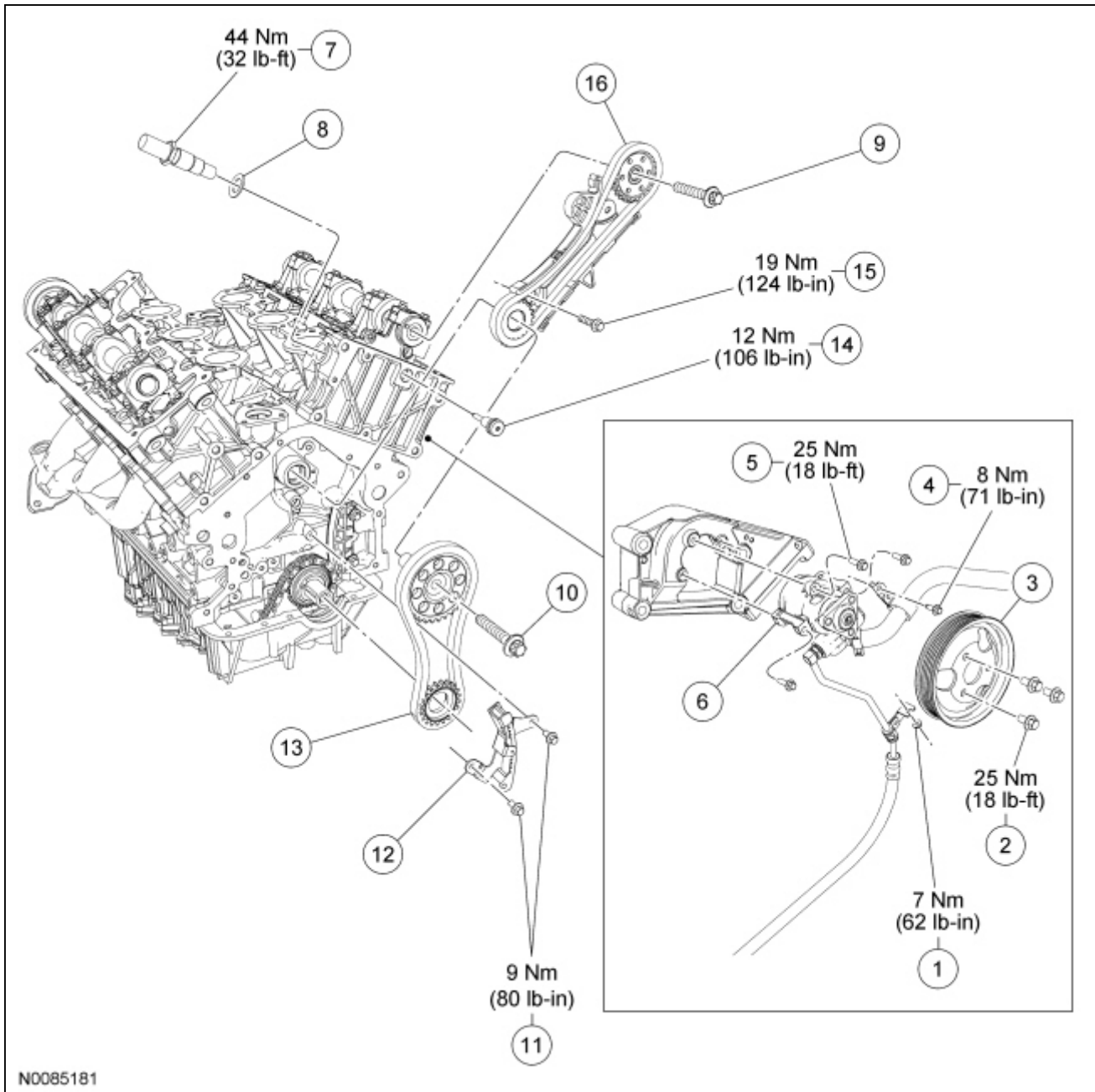


Timing Drive Components — Camshaft Drive Cassette, LH

Special Tool(s)

 <p>ST1776-A</p>	Adapter for 303-564 303-578 (T97T-6256-A)
 <p>ST1777-A</p>	Holding Tool, Camshaft Sprocket 303-564 (T97T-6256)
 <p>ST2694-A</p>	Holding Tool, Crankshaft 303-674



N0085181

Item	Part Number	Description
1	W520101	Power Steering Pressure (PSP) tube bracket nut
2	N605784	Power steering pump pulley bolt (3 required)
3	3A733	Power steering pump pulley
4	W500213	Suction hose bracket bolt
5	W700839	Power steering pump bolt (3 required)
6	3A674	Power steering pump
7	6K254	Hydraulic chain tensioner
8	6M252	LH hydraulic chain tensioner washer
9	6M276	Camshaft sprocket bolt
10	6M276	Jackshaft sprocket bolt
11	W500011	Jackshaft chain tensioner bolts
12	6M271	Jackshaft chain tensioner
13	—	Primary chain and sprocket assembly
14	6U001	LH cassette-to-cylinder head bolt

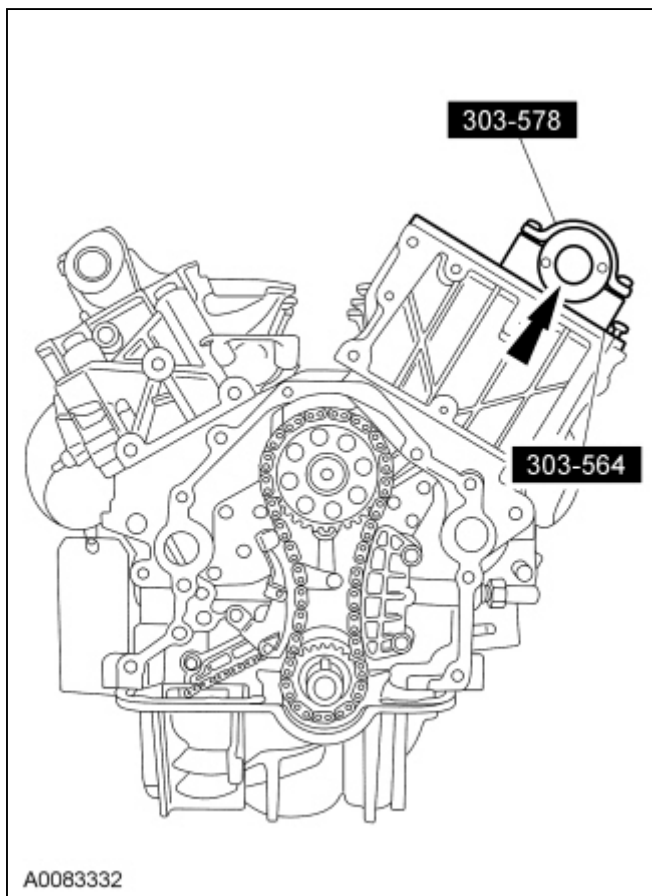
15	W500110	LH cassette-to-cylinder block bolt
16	6M289	Timing chain and guide assembly

Removal

1. Release the fuel system pressure. For additional information, refer to [Section 310-00](#).
2. Disconnect the battery ground cable. For additional information, refer to [Section 414-01](#).
3. Remove the intake manifold. For additional information, refer to [Intake Manifold](#) in this section.
4. Remove the engine front cover. For additional information, refer to [Engine Front Cover](#) in this section.
5. Remove all of the roller followers. For additional information, refer to [Camshaft Roller Follower](#) in this section.
6. **NOTE:** The LH and RH camshafts must be retimed when either camshaft is disturbed.

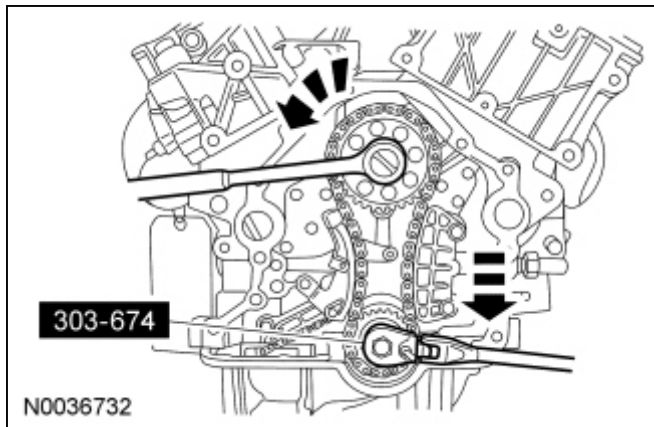
Turn the crankshaft clockwise to position the No. 1 cylinder at Top Dead Center (TDC).

7. Remove the LH hydraulic chain tensioner.
 - Remove and discard the washer.
8. Remove the LH camshaft sprocket bolt.
 - Install the Camshaft Sprocket Holding Tool and Adapter and tighten to 10 Nm (89 lb-in).
 - Remove the LH camshaft sprocket bolt.

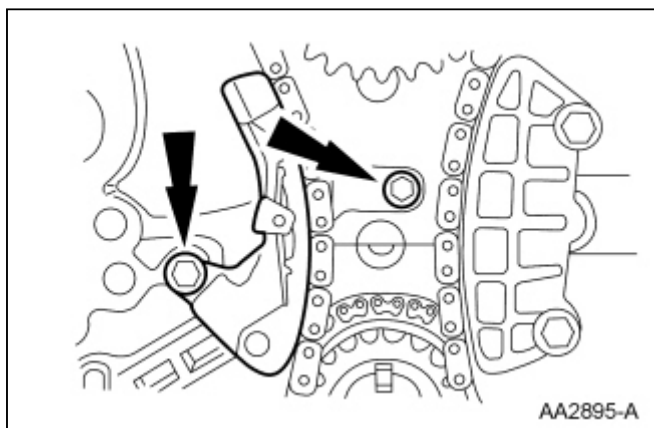


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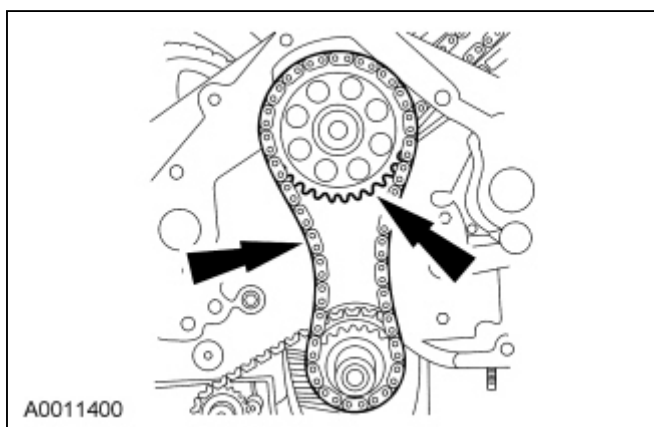
9. Using the Crankshaft Holding Tool, prevent the crankshaft from turning, remove the jackshaft sprocket bolt.



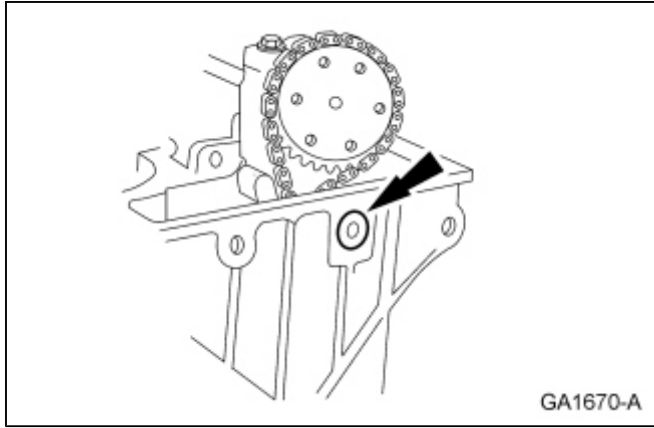
10. Remove the 2 bolts and the primary chain tensioner.



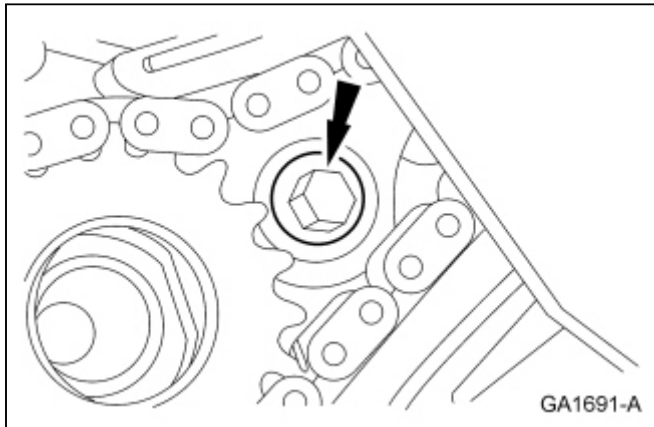
11. Remove the primary chain and sprockets as an assembly.



12. Remove the suction hose bracket bolt.
13. Remove the Power Steering Pressure (PSP) tube bracket nut.
14. Remove the 3 bolts and the power steering pump pulley.
15. Remove the 3 bolts and position the power steering pump aside.
16. Remove the LH cassette upper bolt.



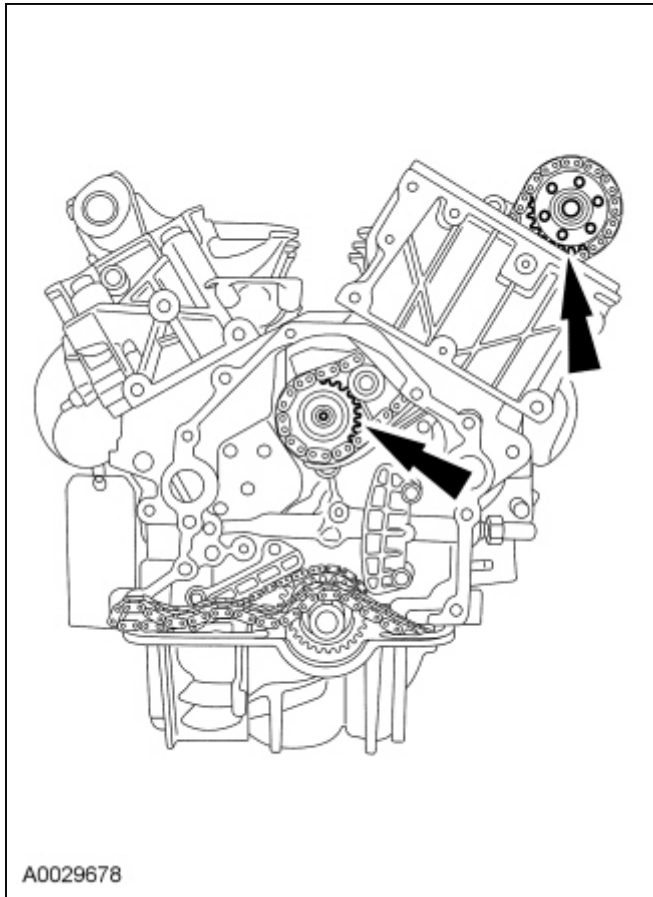
17. Remove the LH cassette lower bolt and the LH cassette.



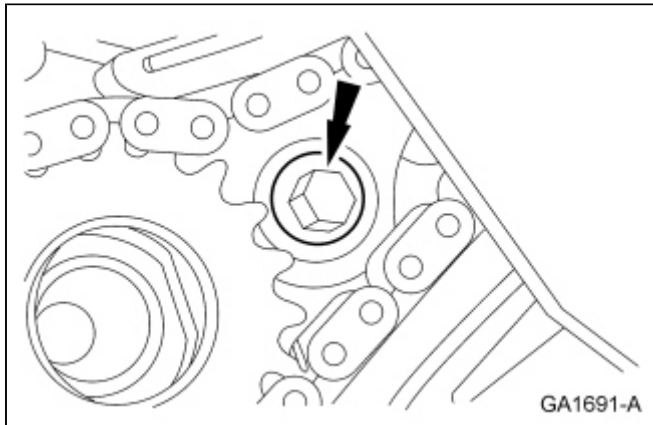
Installation

1. **NOTE:** The camshaft chain sprockets must be oriented correctly.

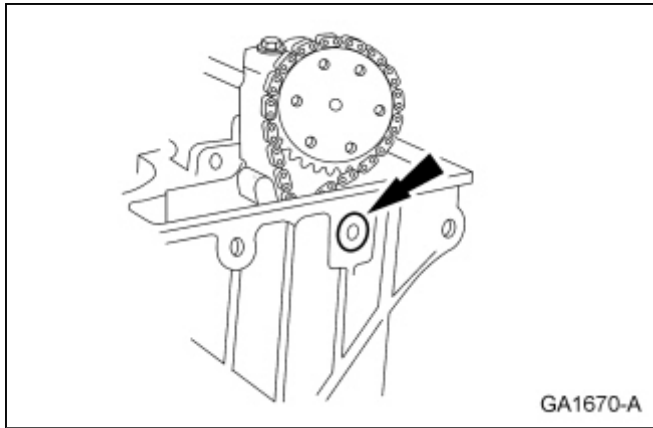
Position the LH cassette.



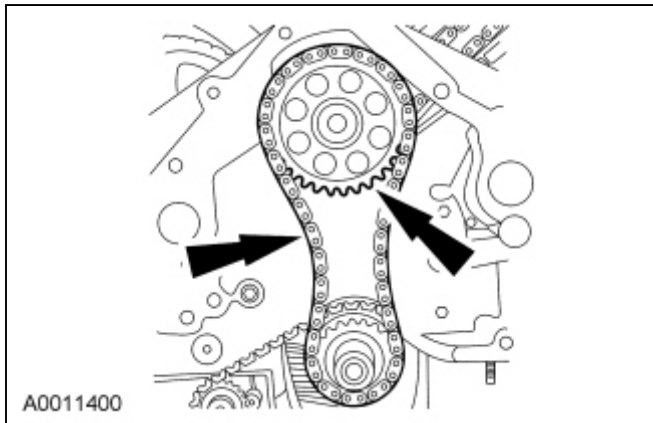
2. Install the LH cassette lower bolt.
 - Tighten to 12 Nm (106 lb-in).



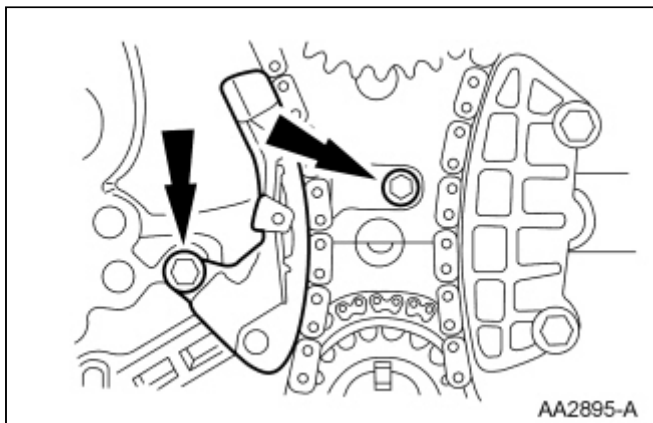
3. Install the LH cassette upper bolt.
 - Tighten to 19 Nm (168 lb-in).



4. Position the power steering pump and install the 3 bolts.
 - Tighten to 25 Nm (18 lb-ft).
5. Install the power steering pump pulley and the 3 bolts.
 - Tighten to 25 Nm (18 lb-ft).
6. Install the **PSP** tube bracket nut.
 - Tighten to 7 Nm (62 lb-in).
7. Install the suction hose bracket bolt.
 - Tighten to 8 Nm (71 lb-in).
8. Install the primary chain and sprockets as an assembly.



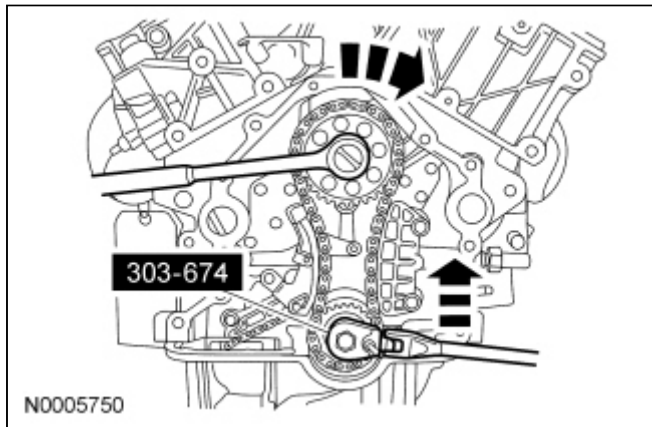
9. Install the jackshaft chain tensioner and the 2 bolts.
 - Tighten to 9 Nm (80 lb-in).



10. Using the Crankshaft Holding Tool, prevent the crankshaft from turning, tighten the jackshaft sprocket bolt

in 2 stages.

- Stage 1: Tighten to 45 Nm (33 lb-ft).
- Stage 2: Tighten an additional 90 degrees.



11. Loosely install the camshaft sprocket bolt.
12. Install the engine front cover. For additional information, refer to [Engine Front Cover](#) in this section.
13. **NOTE:** The LH and RH camshafts must be retimed when either camshaft is disturbed.

NOTE: The LH hydraulic chain tensioner will be installed during camshaft timing.

Retime the LH and RH camshafts. For additional information, refer to [Camshaft Timing](#) in this section.

14. Install the camshaft roller followers. For additional information, refer to [Camshaft Roller Follower](#) in this section.
 15. Install the intake manifold. For additional information, refer to [Intake Manifold](#) in this section.
 16. Connect the battery ground cable. For additional information, refer to [Section 414-01](#).
 17. Fill and bleed the engine cooling system. For additional information, refer to [Section 303-03A](#).
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