



Alfa 156 2.0 TSpark Timing Belt Replacement

Repair Time - hrs

Remove and install 2.95

Special Tools

- Camshaft locking tools - Alfa Romeo No.1.825.041.000
- Inlet camshaft holding tool - Alfa Romeo No.1.822.155.000
- Exhaust camshaft holding tool - Alfa Romeo No.1.822.146.000
- Timing Belt tensioning tool - Alfa Romeo No.1.822.149.000
- Balancer shaft belt tensioning tool - Alfa Romeo No.1.822.154.000

Special Precautions

- Disconnect battery earth lead
- DO NOT turn crankshaft or camshaft when timing belt removed
- Remove spark plugs to ease turning engine
- Turn engine in normal direction of rotation
- DO NOT turn engine via camshaft or other sprockets
- Observe all tightening torques.

Removal (numbers in brackets refer to diagram)

1. Remove:
 - RH Wheel
 - Engine undershield
 - RH wheel arch liner
 - Auxiliary drive belt and tensioner
 - Crank shaft pulley [1]
 - Timing belt upper cover [2]
 - Timing belt lower cover [3]
 - Ignition coils
 - Cylinder head cover [5]
 - Centre spark plug - cylinder no.1.
2. Insert dial gauge in No.1 cylinder centre plug hole [6]
3. Turn crankshaft slowly to TDC on No.1 cylinder. Use dial gauge [6]
4. Ensure balancer shaft marks aligned [7] & [8]
5. Ensure marks on belt aligned with marks on sprockets [9] & [10]
6. Slacken balancer shaft tensioner nut [11]
7. Remove balancer belt and sprocket from crankshaft [4]
8. Slacken timing belt tensioner nut [12]



9. Remove timing belt

Installation (numbers in brackets refer to diagram)

1. Ensure crankshaft at TDC on No.1 cylinder. Use dial gauge [6]
2. Hold camshaft sprockets. Use tool Nos. 1.822.155.000 and 1.822.146.000 [13] & [14]. Slacken bolt(s) of each camshaft sprocket.
3. Remove third bearing cap from each camshaft [15] & [16]. **NOTE: Mark bearing caps before removal from identification.**
4. Fit locking tools in place of bearing caps [15] & [16]. Tool No.1.825.041.000. **NOTE: Ensure locking tools aligned with respective cam profiles to prevent damage. Before fitting belt, ensure camshaft sprockets turned fully clockwise.**
5. Fit timing belt in anti clockwise direction, starting at crankshaft sprocket. Ensure directional arrows point in direction of rotation.
6. Ensure marks on belt aligned with marks on sprockets [9] & [10].
7. Tension timing belt to maximum. Use tool No.1.822.149.000 [17].
8. Tighten tensioner nut [12].
9. Hold camshaft sprockets. Use tool Nos.1.822.155.000 & 1.822.146.000 [13] & [14]/
10. Tighten bolt(s) of each camshaft sprocket.
 - (A) Except 146: 100-124 Nm.
 - 147: 108-132 Nm.
 - M6 Bolts: 10Nm.
11. Remove dial gauge and locking tools [6], [15] & [16].
12. Fit bearing caps in correct locations.
13. Lubricate camshaft bearing cap bolts. Tighten bolts. Except 147L 13-16Nm. 147: 14-17Nm.
14. Turn crankshaft two turns clockwise to TDC on No.1 cylinder [6]. Note: dial gauge will need to be replaced.
15. Fit tensioner tool [17]. Tool No.1.822.149.000.
16. Slacken tensioner nut [12].
17. Turn tensioner anti-clockwise until pointer [18] aligned with hole [19].
18. Tighten tensioner nut [12].
 - (A) Except 147: 21-26Nm.
 - (B) 147: 23-28Nm.
19. Ensure crankshaft at TDC on No.1 cylinder [6].
20. Align balancer shaft timing marks [7] & [8]
21. Fit balancer shaft belt and tensioning tool No.1.822.154.000 [20].
22. Turn tensioner until hole [21] aligned with centre of tensioner [22]. Tighten tensioner nut [11].
23. Turn crankshaft two turns clockwise to TDC on No.1 cylinder [6].



24. Ensure timing marks aligned [7], [8], [9] and [10].
25. Install components in reverse order of removal.
26. Tighten crankshaft pulley bolts.
 - a. Except 147: 24-26Nm.
 - b. 147: 23-28Nm.

