

Adjustment Data

MAZDA - 626 - 2.0 Comprex D - RF-CX

Engine (general)

Item	Values	Units
Engine code	RF	
Capacity	1998	(cc)
Idle speed	725 ± 25	(rpm)
Valve clearance		
Valve clearance		
Cold		
Inlet	0.25	(mm)
Exhaust	0.35	(mm)
Compression pressure		
Normal	29	(bar)
Minimum	27	(bar)
Oil pressure	1.5/1000	(bar / rpm)
Injection pump (make & type)	ZEXEL / Kiki VE	
Injector firing order	1-3-4-2	
Injection-pump timing (static)	1.00	(mm)
Injector pressure	135	(bar)
Minimum	113	(bar)
Exhaust-gas analysis (opacity)	66	(%)
Oil temperature during test	60	(°C)
Idle speed, minimum	700	(rpm)
Idle speed, maximum	750	(rpm)
Min. empty running governed speed	5000	(rpm)
Max. empty running governed speed	5200	(rpm)
Exhaust-gas analysis	< 2.5	m-1

Cooling system

Item	Values	Units
Cap pressure	0.95 - 1.25	(bar)
Thermostat opens at	83 - 86	(°C)

Electrical

Item	Values	Units
Battery	70	(Ah)
Alternator	75	(A)

Brakes

Item	Values	Units
Disc thickness, front, min.	22.0	(mm)
Disc thickness, rear, min.	8.0	(mm)

Steering and wheel alignment

Item	Values	Units
Toe-in, front	17' ± 17'	(°)
Camber, front	-36' ± 45'	(°)
Castor, front	2° 37' ± 45'	(°)
K.P.I., front	15° 04'	(°)
Toe-in, rear	17' ± 17'	(°)
Camber, rear	-07' ± 45'	(°)

Wheels and tyres

Item	Values	Units
Tyre size	195/65R14	
Front tyre pressure	2.2	(bar)
Rear tyre pressure	1.8	(bar)

Capacities

Item	Values	Units
Engine sump, incl. filter	5.5	(l)
Manual transmission		
Gearbox refill	2.7	(l)
Automatic transmission		
Gearbox refill	6.5	(l)
Cooling system	9.5	(l)
Air-conditioner refrigerant	700	(g)
Air-conditioner compressor oil	175	(ml)

Torque settings

Item	Values	Units
Cylinder head		
Stage 1	30	(Nm)
Stage 2	90°	(°)
Stage 3	90°	(°)
Front hub	235 - 319	(Nm)
Rear hub	98 - 177	(Nm)
Wheel nuts	88 - 118	(Nm)
Injector nozzle	59 - 68	(Nm)
Glow plugs	15 - 19	(Nm)

Environmental Data

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MAZDA - RF-CX

Charger			
Type			Complex
Compression			
Compression ratio	21.1	: 1	
Compression pressure	30	bar	
Limit	27	bar	
Idle speed	700 - 750	/ min	
Oil pressure			
At idle speed	1.5 (1000)	bar (/ min)	
At rated power	3.4 (3000)	bar (/ min)	
Thermostat opening temperature			
	83.5 - 86.5	°C	main
	78.5 - 81.5	°C	auxiliary
Valve timing			
Intake opens	13	°	before TDC
Intake closes	15	°	after BDC
Outlet opens	60	°	before TDC
Outlet closes	8	°	after BDC
Valve clearance			
Condition			hot / cold
Intake	0.30 / 0.25	mm	
Outlet	0.40 / 0.35	mm	
Injection order	1-3-4-2		
Injection timing	1	°	after TDC
Injector nozzle pressure			
New	135	bar	
Min.	113	bar	

* Data from secondary source; No manufacturer's information

MAZDA - RF-CX

General cylinder head data

Number of cylinder heads	1	
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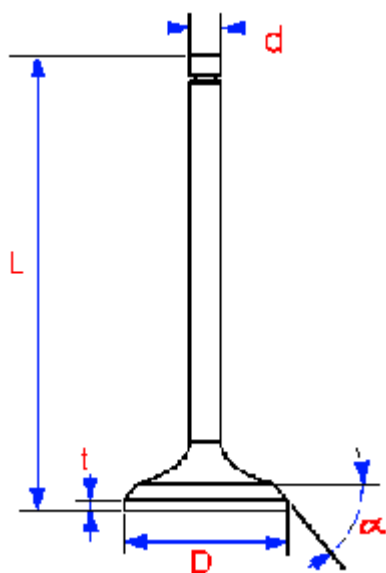
Warpage cylinder head fitting face

Standard	< 0.10	mm	
Limit	0.10	mm	
Max. grinding allowance		mm	grinding not allowed

Pre-combustion chamber

Pre-combustion chamber protrusion	-0.020 ... +0.005	mm
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Valves



Valve protrusion (+/-)	-0.75 - 1.05	mm
Limit	-1.55	mm

Valve length (L)

Intake new	106.9	mm
Limit	106.4	mm
Outlet new	106.8	mm
Limit	106.3	mm

Valve stem diameter (d) intake

Standard	7.970 - 7.985	mm
Limit	7.920	mm

Valve stem diameter (d) outlet

Standard	7.965 - 7.980	mm
Limit	7.915	mm

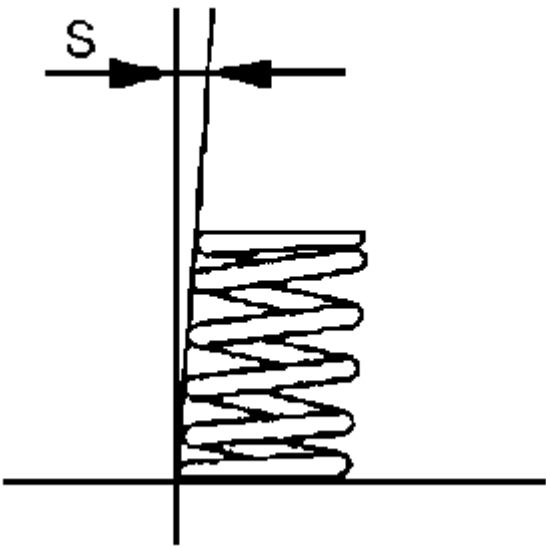
Valve seat angle

Intake	30	°
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* Data from secondary source; No manufacturer's information

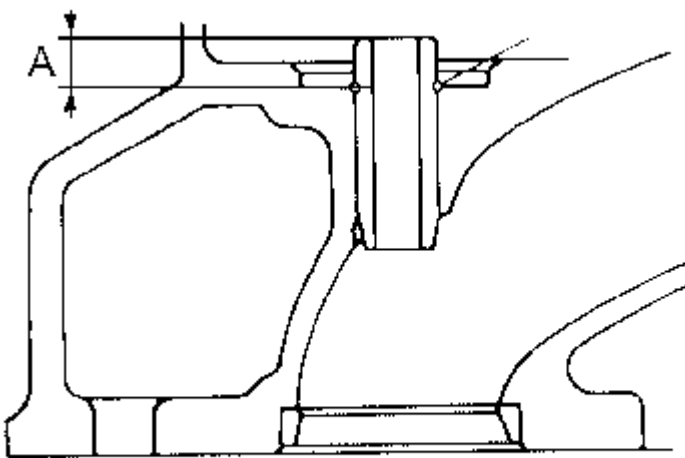
MAZDA - RF-CX

Outlet	45	°
Valve dish thickness (t)		
Intake	> 1.80	mm
Outlet	> 1.65	mm
Valve springs		
Length unladen	45.11	mm
Limit	44.80	mm
Inclination(s)	< 1.6	mm



Valve guides

Fitting height



Intake	A = 8.3 - 8.8	mm
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* Data from secondary source; No manufacturer's information

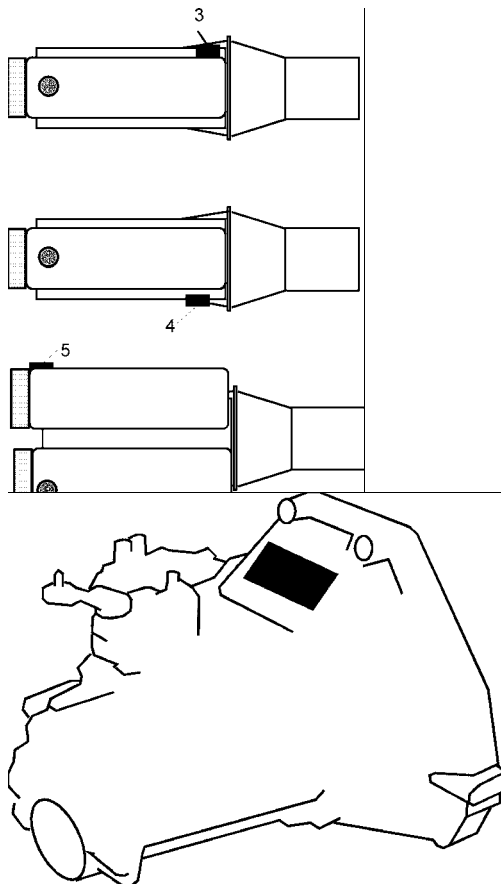
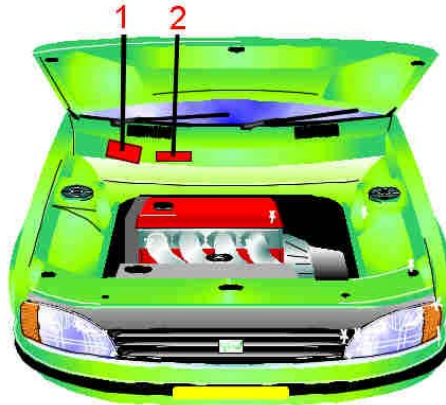
MAZDA - RF-CX

Outlet	A = 8.3 - 8.8	mm
Length		
Intake	40.5	mm
Outlet	37.6	mm
Inner diameter, standard		
Intake	8.030 - 8.050	mm
Outlet	8.030 - 8.050	mm
Valve seats		
Seating angle (°)		
Intake	30	°
Outlet	45	°
Seating size (A)		
Intake	1.4 - 1.8	mm
Outlet	1.64 - 2.04	mm
Valve lifter		
Valve lifter diameter		
Standard	34.949 - 35.010	mm
Valve lifter radial play		
Limit	0.025 - 0.061	mm
Camshaft		
Camshaft journal diameter, standard		
	31.959 - 31.975	mm
Camshaft bearing radial clearance		
Limit	0.10	mm
Camshaft end play		
Limit	0.02 - 0.15	mm
Max. camshaft swing		
	< 0.10	mm
Total camheight		
Intake new	42.521	mm
Intake min.	42.110	mm
Outlet new	45.300	mm
Outlet min.	44.900	mm

* Data from secondary source; No manufacturer's information

MAZDA - 626 - 2.0 Complex D - RF-CX

- 1 Identification plate
- 2 VIN
- 3 Engine code B3 / B5 / B6 / PN
- 4 Engine code BP / FP / FS
- 5 Engine code 6-cylinder
- 6 Manual transmission code



MAZDA - 626 - 2.0 Complex D - RF-CX

Engine	
Motor oil API CD	Below -20 °C SAE 5W-30
Motor oil API CD	From -25 °C to 30 °C SAE 10W-30
Motor oil API CD	From -15 °C to 35 °C SAE 15W-40
Motor oil API CD	From 0 °C to 40 °C SAE 30
Motor oil API CD	Above 40 °C SAE 40

Cooling system	
Coolant	All temperatures

Manual transmission	
Gear oil API GL-4	All temperatures SAE 75W-90
Gear oil API GL-5	All temperatures SAE 75W-90

Power steering	
ATF Dexron II	All temperatures
ATF M-III	All temperatures

Brakes system	
Brake fluid DOT 3	All temperatures

Air conditioning	
Refrigerant R134a	
Compressor oil PAG, ISO 46	

Capacities

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Timing

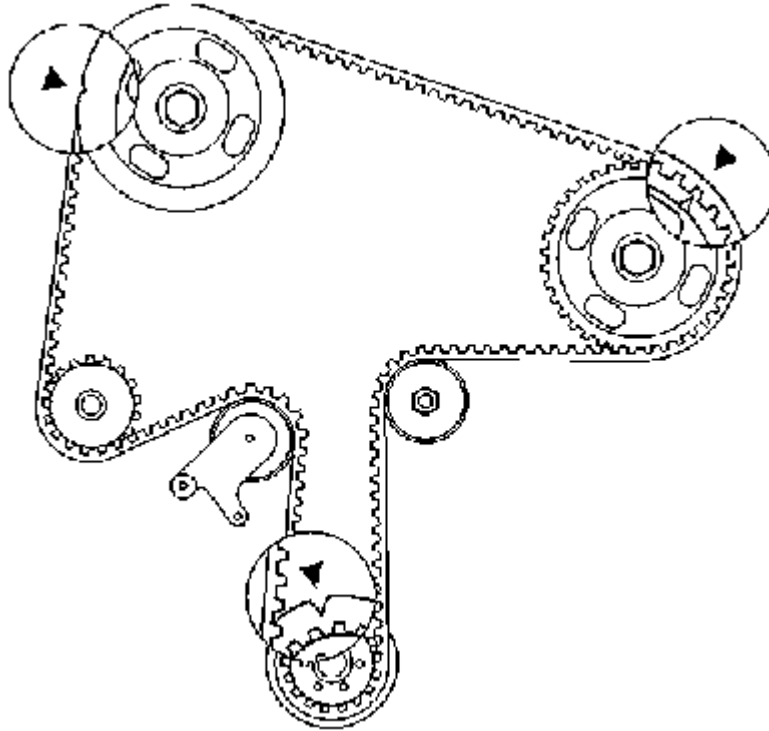
MAZDA - 626 - 2.0 Comprex D - RF-CX

General

Item

Always check the timing marks before timing belt removal

Note



Before disconnecting the battery cable, check the audio system security code

Removal

Item

Disconnect the battery

Drain the coolant

Remove the cylinder-head cover

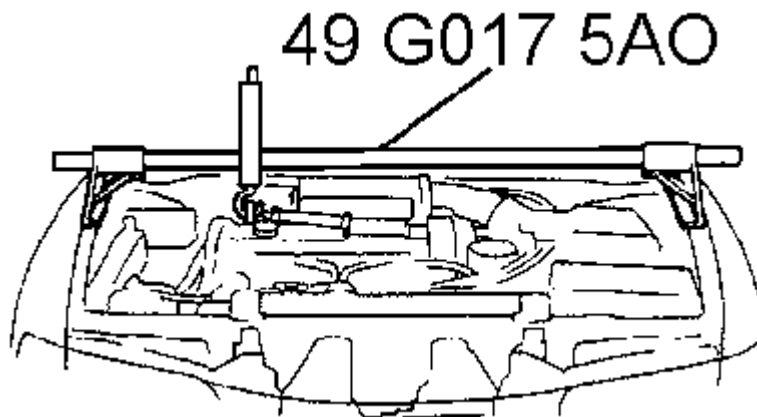
Remove the upper timing cover

Remove the ancillary drive belt

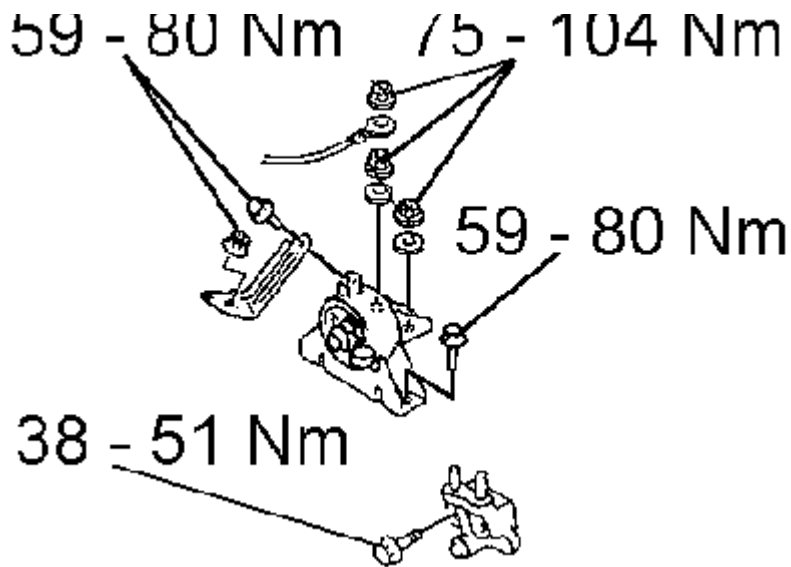
Fit the special tool to support the engine

Note

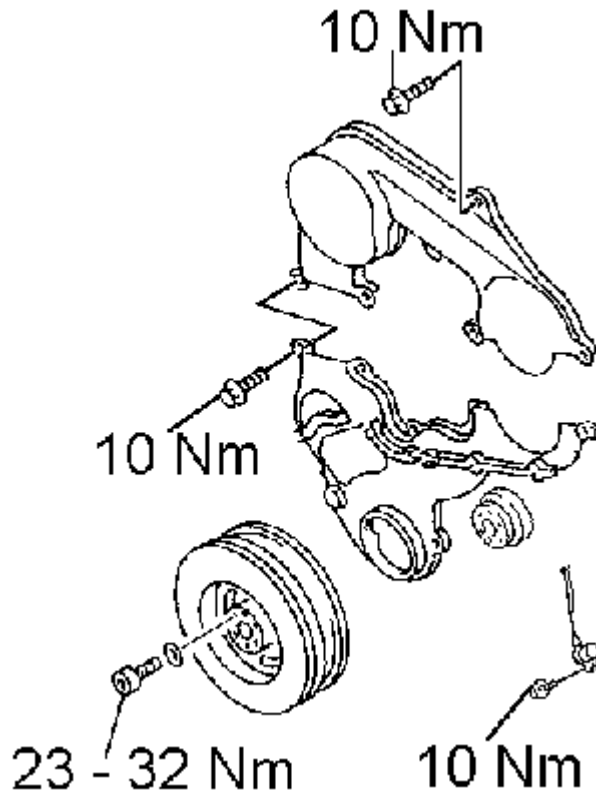
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Remove the engine mount



- Remove the crankshaft pulley
- Remove the lower timing cover
- Remove the timing belt guide plates
- Remove the crankshaft position sensor



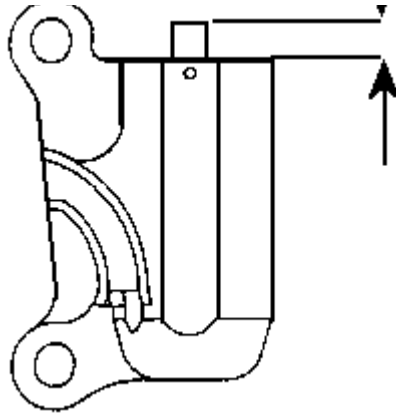
- Turn the crankshaft clockwise to align the timing marks
- Remove the timing belt tensioner
- Remove the timing belt

- Check the tensioner and idler pulleys, renew if necessary
- Measure the protrusion of the tensioner push rod from the housing end

12.9 - 14.6 mm

12.9 - 14.6 mm





If out of specification, replace with a new one
 Compress the tensioner
 The force needed should be approximately (N)
 If out of specification, replace with a new one
 Lock the tensioner, use a locking pin

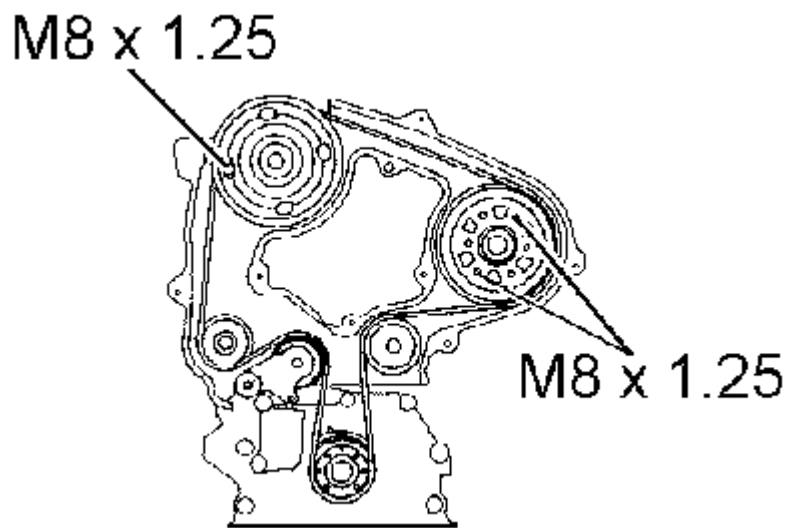
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Installation

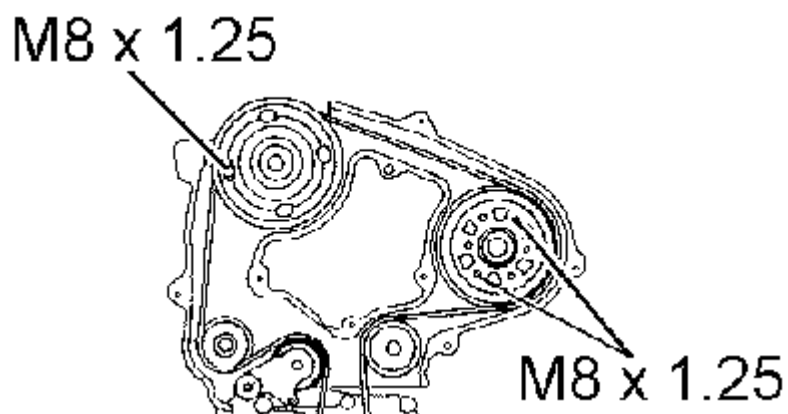
Item

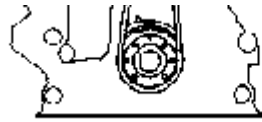
Note

Check the timing marks
 Lock the camshaft and injection pump with M8 bolts.

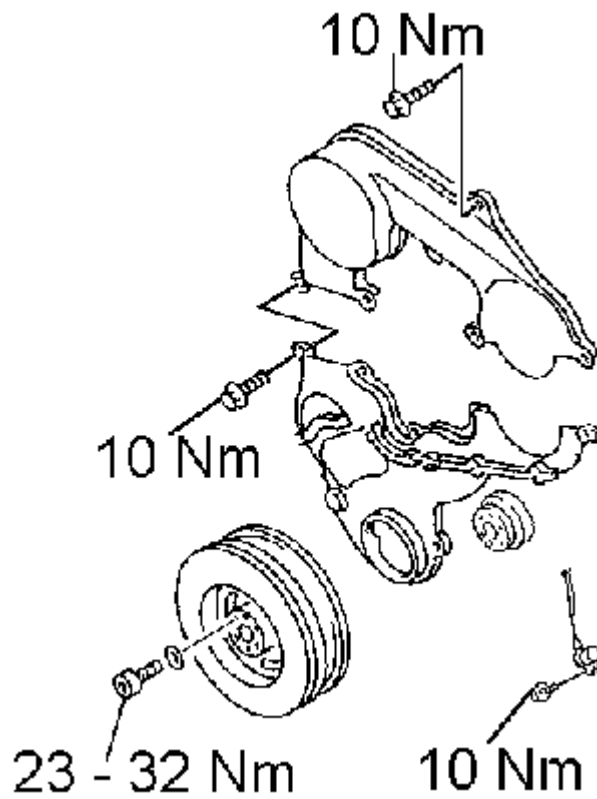


Note: Do not tighten the bolts
 Fit the timing belt anti-clockwise, starting at the crankshaft gearwheel
 Fit the locked tensioner
 Remove the bolts



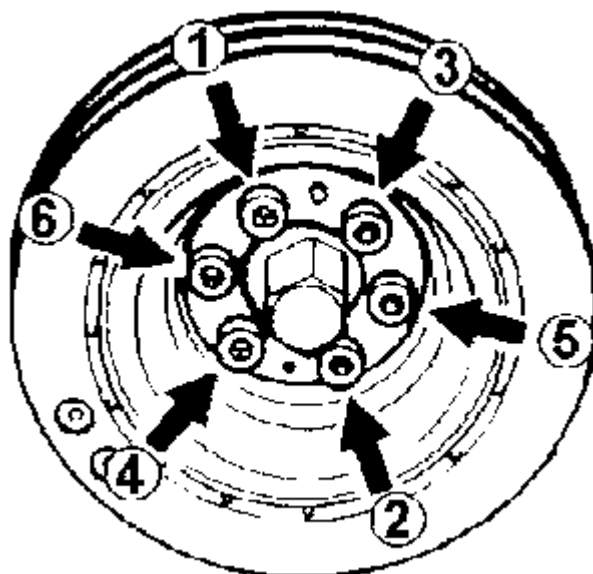


- Remove the locking pin
- Turn the crankshaft two rotations by hand
- Check the timing marks again
- Fit the crankshaft sensor
- Refit the timing belt guide plates
- Fit the lower timing cover

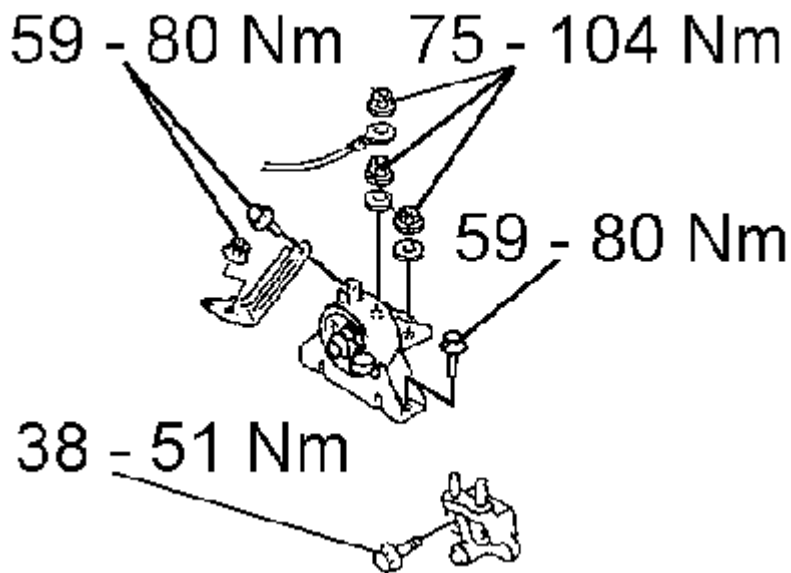


- Refit the crankshaft pulley
- Tighten the bolts
- In the order shown

23 - 32 Nm

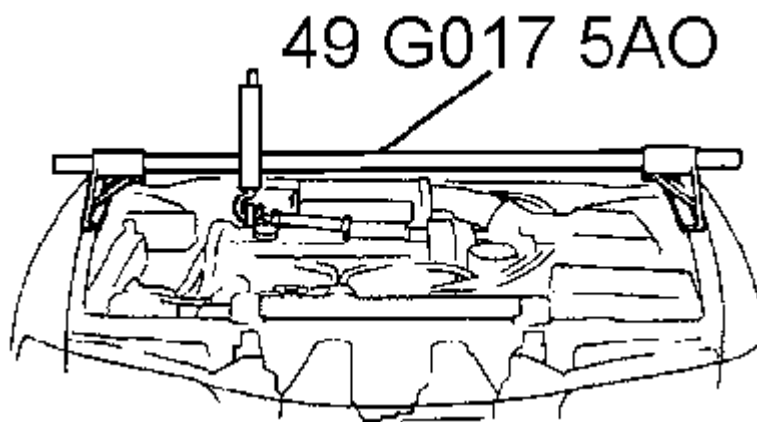


- Refit the engine mount



Remove the special tool

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- Fit the ancillary drive belt
- Fit the upper timing cover
- Replace fluids
- Refit the cylinder-head cover
- Reconnect the battery earth cable

Torque settings

Item	Note
Crankshaft pulley:	23 - 32 Nm
Tensioner:	19 - 25 Nm
Crankshaft sensor:	10 Nm
Timing cover	10 Nm

Special tools

Item	Note
Engine support:	49 G017 5A0