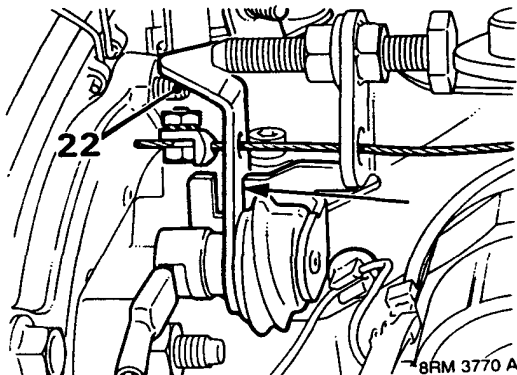




19. Increase idle speed to 2000 rev min and release accelerator. If engine speed falls below idle speed or it does not drop smoothly, repeat setting procedure.
20. Move stop lever 1 mm, idle speed should drop. If engine speed does not drop, repeat setting procedure.

## Automatic Fast Idle

21. Allow engine to idle.

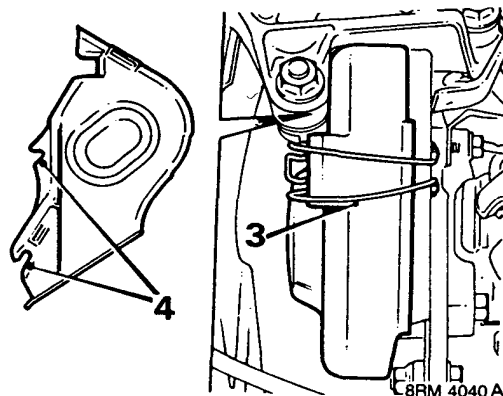


22. Move idle lever against its stop (to right) and note engine speed reading on tachometer.

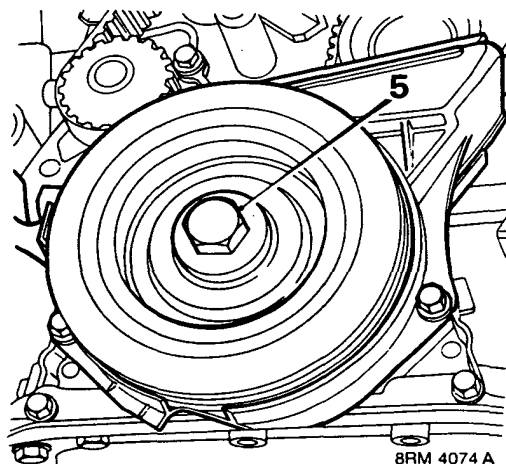
Automatic fast idle speed =  $1100 \pm 75$  rev min

23. Stop engine.

24. *Turbo Models:* Connect hoses to air box, intercooler and adapter; tighten hose clips.

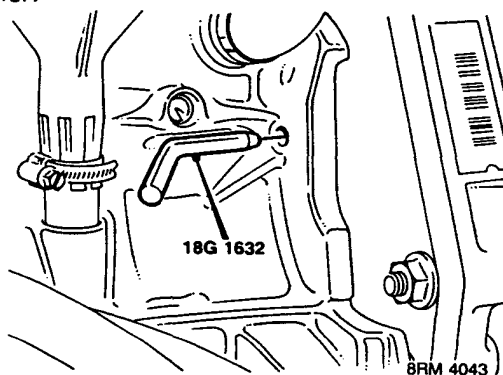


3. Release clip securing front portion of timing belt top cover to backplate.
4. Release front portion of timing belt top cover from locating pegs.



5. Using a 22 mm ring spanner on crankshaft pulley bolt, rotate crankshaft in a clockwise direction, viewed from crankshaft pulley, until timing pin holes in fuel injection pump gear are aligned with holes in fuel injection pump bracket.

**Note:** As crankshaft is rotated, allow 5 seconds for compression to bleed before repositioning spanner.



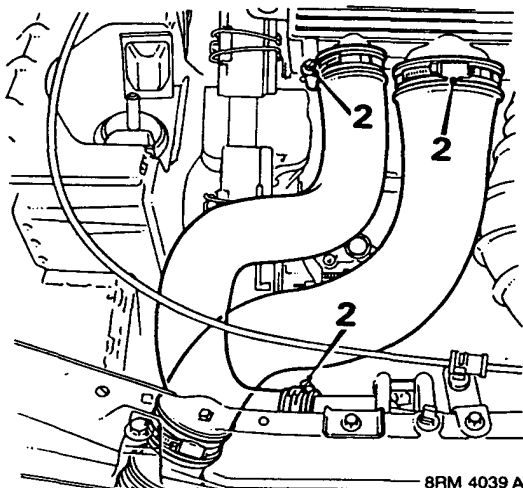
6. Rock crankshaft and fit timing pin 18G 1632 to hole in flywheel.

## FUEL INJECTION PUMP TIMING

### Check

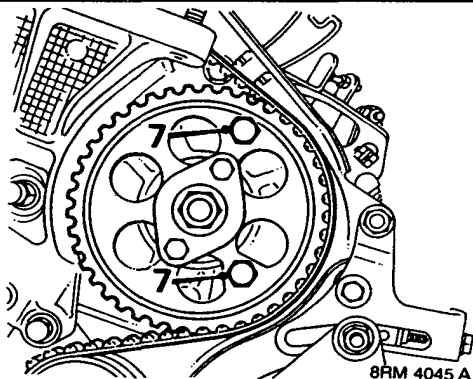
1. Raise front of vehicle. Tyres just touching ground.

**WARNING:** Support on safety stands.



2. *Turbo Models:* Slacken 3 clips, disconnect hoses from air box and intercooler.  
*Non Turbo Models:* Remove air box.

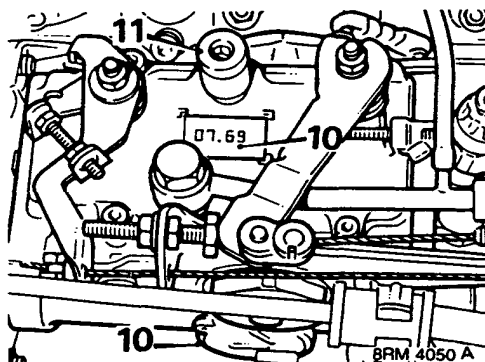
# Fuel system



7. Insert 2 M8 bolts through timing pin holes in fuel injection pump gear into fuel injection pump bracket; hand tighten bolts. Ensure bolt shanks are in contact with holes.

**Note:** Use M8 x 35 mm bolts having thread length of 25 mm

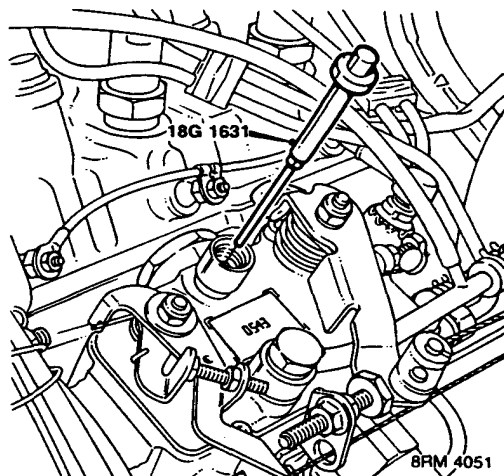
8. Remove timing pin 18G 1632 from flywheel and 2 bolts from fuel injection pump gear.
9. Rotate crankshaft 90° anti-clockwise.



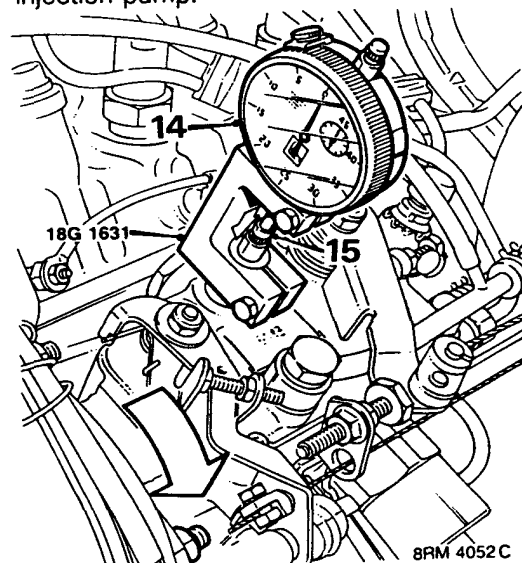
10. Note fuel injection pump timing figure marked on plastic cap adjacent to identification plate or on temporary label adjacent to timing boss.

**CAUTION:** Do not remove the plastic cap. If timing figure is not on pump, remove pump for Pump Servicing Agent to establish timing figure.

11. Remove timing plug from fuel injection pump.



12. Fit pin part of tool 18G 1631 into fuel injection pump.



13. Position D.T.I. mounting bracket of tool 18G 1631 on fuel injection pump timing boss, ensure bracket is between label corners, tighten clamp screw.
14. Fit metric D.T.I. gauge to mounting bracket 18G1631.
15. Pre-load D.T.I. stylus onto pin until small counting dial is at zero and lightly tighten bracket clamp. Check that stylus moves freely.
16. Zero D.T.I. gauge.
17. Carefully rotate crankshaft clockwise to T.D.C. (use holes in injection pump gear as guide) and fit timing pin 18G 1632 into hole in flywheel.

**Note:** As crankshaft is rotated, allow 5 seconds for compression to bleed before repositioning spanner.

Timing pin must be fitted as flywheel is rotated clockwise.

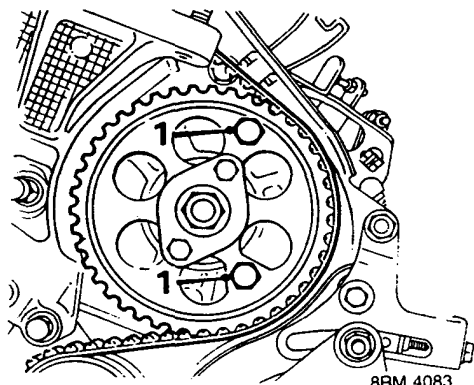
18. Record D.T.I. reading of total needle movement.



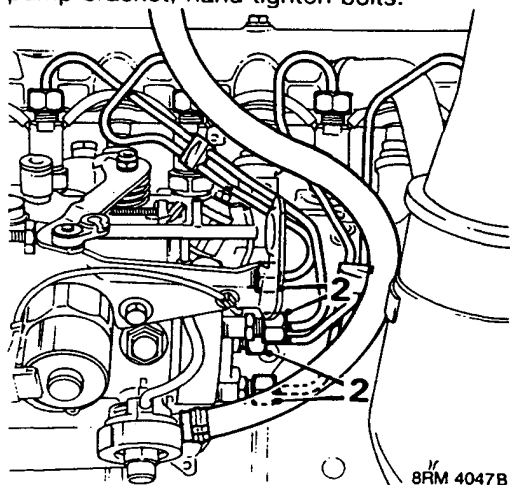
19. Compare D.T.I. reading with timing figure.  
Adjustment is required if reading is more than  $\pm 0.04$  mm outside timing figure.

## Adjust

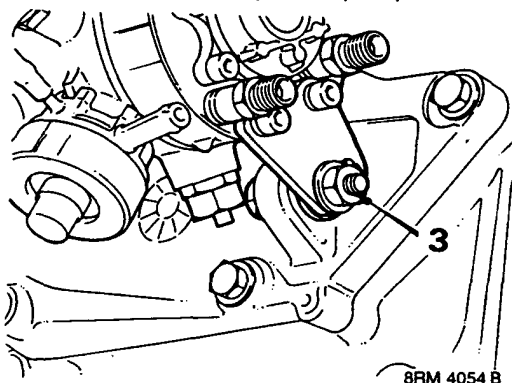
**Note:** If timing pin 18G 1632 is not fitted, fit timing pin as described in checking procedure. Timing pin 18G 1632 in flywheel from checking procedure.



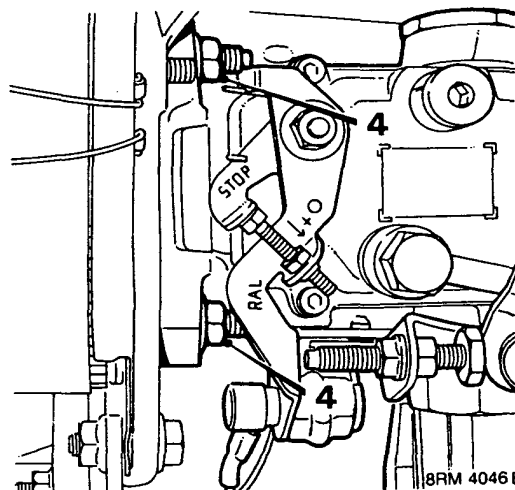
1. Insert 2 M8 bolts through timing pin holes in fuel injection pump gear into fuel injection pump bracket; hand tighten bolts.



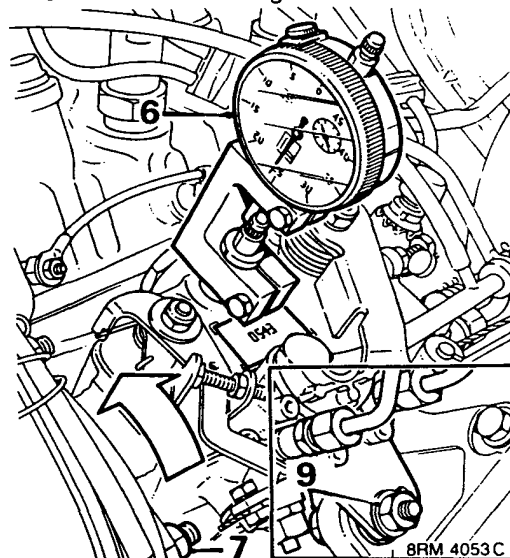
2. Slacken, but do not disconnect, 4 injector pipe unions at fuel injection pump.



3. Slacken, but do not remove, nut securing fuel injection pump to rear mounting bracket.



4. Slacken 3 nuts securing fuel injection pump to front mounting bracket just sufficiently to allow pump to be rotated.  
5. Move fuel injection pump fully away from engine to retard timing.



6. Move fuel injection pump towards engine until TOTAL reading on D.T.I. gauge equals pump timing figure.

**CAUTION:** If setting figure is passed, pull pump back and approach timing again.

7. Tighten fuel injection pump securing nuts to 18 Nm.

**CAUTION:** Ensure D.T.I. gauge needle does not move as nuts are tightened.

8. Check D.T.I. is still within  $\pm 0.04$  mm, reset if necessary.

## Fuel system

9. Hold through bolt and tighten rear nut to 18 Nm.
10. Remove tools **18G 1631** and **18G 1632**.
11. Lubricate timing plug 'O' ring with clean diesel fuel, renew 'O' ring if necessary. Fit timing plug and tighten to 18 Nm.
12. Tighten injector pipe unions to 20 Nm.
13. Remove M8 bolts from fuel injection pump gear.
14. *Turbo Models:* Connect hoses to air box and intercooler, tighten clips.  
*Non Turbo Models:* Refit air box.
15. Position front portion of timing cover to backplate and locating pegs; fasten clip.
16. Remove stand(s) and lower vehicle.
17. Check/adjust engine idle speed.