Adjust the valves and N3 fuel injector settings as follows:

1. Disconnect starting power for engine.

2. Remove the engine valve rocker cover as outlined. Refer to section 1.6.2 for one-piece, refer to section 1.6.3 for two-piece rocker cover, and refer to section 1.6.5 or three-piece rocker cover.

3. Insert a 3/4 in. drive breaker bar or ratchet into the square hole in the center of the crankshaft pulley.

4. Bar the engine in the direction of rotation and observe a cylinder where the injector rocker arm is just beginning to depress the injector plunger, both the intake and exhaust valves should be closed.

   [a] Stop turning the engine and mount a magnetic base dial indicator so you can monitor the upward lift of travel of that injector lobe.

   [b] Set the pedestal of the dial indicator on the top of the injector cam roller. Adjust the pedestal so it can travel the entire upward movement of the lobe.

   [c] Continue to slowly bar the engine over in the direction of rotation until the dial indicator shows no more upward lift. The needle of the dial indicator will stop moving indicating maximum lift.

   [d] This is the point of maximum injector roller lift, the injector can now be set.

   [e] If you rotate the engine beyond this point you will have to bar the engine over in the opposite direction at least 1/4 turn and then bar the engine over in the direction of rotation until maximum injector roller lift is obtained.
5. Stop engine rotation and note which cylinder this is, and follow the sequence listed in Table 12-3a to correctly set injector and valves.

<table>
<thead>
<tr>
<th>Max. injector lobe travel on Cylinder No.</th>
<th>Adjust Injector on Cylinder No.</th>
<th>Adjust Valves on Cylinder No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
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<td>2</td>
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<td>3</td>
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<tr>
<td>3</td>
<td>3</td>
<td>6</td>
</tr>
</tbody>
</table>

Table 12-3a  Valve Lash and N3 Injector Setting Adjustment Sequence

6. This injector can now be set using this procedure:
   [a] Loosen the locknut on the adjusting screw at least two full turns.
   [b] Tighten the adjusting screw until the injector plunger bottoms out, torque value should be 4.51 N·m (40 in·lbs).
   [c] Back the adjusting screw off 3/4 of a turn 0.75 mm± 0.25mm and tighten the locknut to 41-47 N·m (30-35 lb·ft).
   [d] The injector is now adjusted.

7. Adjust the valves on the corresponding cylinders listed in Table 12-3a.
8. To adjust the intake valves, insert a 0.203 mm (0.008 in.) feeler gage between the tip of the valve stem and the valve button at the end of the rocker arm. See Figure 12-7a.

![Intake Valve Adjustment](image)

1. Intake Valve  
2. Valve Button  
3. Intake Rocker Arm Assembly  
4. Locknut  
5. Feeler Gage  
6. Tip of Intake Valve

9. Loosen the locknut, and turn the adjusting set screw until the feeler gage produces an even smooth pull between the valve stem and valve button.

10. Torque the locknut to 41 - 47 N·m (30 - 35 lb-ft) and remove the feeler gage. Reinsert the feeler gage to ensure that the adjustment did not change when the locknut was tightened. Readjust as necessary.
11. The exhaust valves are adjusted the same way as the intake valves, except use a 0.508 mm (0.020 in.) feeler gage see Figure 12-7b

![Exhaust Valve Adjustment Diagram](image)

1. Location of Identification Groove
2. Valve Button
3. Allen Wrench
4. Adjusting Screw
5. Locknut
6. Exhaust Rocker Arm Assembly
7. Feeler Gage
8. Tip of Exhaust Valve

**Figure 12-7b** Exhaust Valve Adjustment

12. Repeat steps 4 thru 11 until all injectors and valves have been set.

13. Install the engine rocker cover. Refer to section 1.6.8 for a one-piece rocker cover and refer to section 1.6.9 for two and three piece rocker covers.

14. Reconnect starting power to the engine.