

Article No. 00-24-08

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FORD:
1998-2000 RANGER

This article is being republished in its entirety to update the Service Procedure and the Parts required.

ISSUE:

Some vehicles equipped with a 3.0L engine may exhibit spark knock (ping) under acceleration. This may be caused by the ignition coil and the Powertrain Control Module (PCM).

ACTION:

Replace the ignition coil and PCM assembly. Refer to the following Service Procedure for details.

SERVICE PROCEDURE

1. Verify spark knock by road testing vehicle.
2. Verify that the spark knock is in the combustion chamber by completely removing the fuel from the fuel tank and adding 2 gallons of 94 octane fuel.
3. Road test vehicle, check for spark knock, and then return the original fuel to the tank.
4. If the spark knock was still present during the road test, this TSB does not apply to your condition. Pursue other normal mechanical noise diagnostics and repairs.
5. If spark knock was eliminated during the road test, unplug the ignition wires from the coil and read the stamped black 5-digit code on the label (four numbers and one letter).
6. If the first four numbers of the code fall in the numerical range from 7001 to 9213, replace coil with revised Coil (F5SZ-12029-A). If the service coil label code falls in this range, obtain another service coil and again check the code on the label of the new service coil. Return coils that fall within the range for a refund per your part return policy. Only use the service coil if the first four numbers of the code DO NOT fall within the numerical range 7001 to 9213.
7. Replace the PCM assembly with a revised PCM assembly as per chart below. Refer to the appropriate Ranger Workshop Manual for removal and installation procedures.
8. After PCM and coil replacement, road test to verify repair.

NOTE:

ENGINE SPARK KNOCK WILL BE SIGNIFICANTLY REDUCED AFTER PCM REPLACEMENT. DO NOT BE CONCERNED IF THE ENGINE EXHIBITS SLIGHT SPARK ENGINE KNOCK (PING) UNDER CERTAIN DRIVING CONDITIONS AFTER PCM REPLACEMENT. THIS IS CONSIDERED A NORMAL CHARACTERISTIC FOR THIS PARTICULAR APPLICATION. REFERENCE YOUR APPROPRIATE OWNER'S MANUAL FOR FURTHER INFORMATION.

NOTE:

IF THE VEHICLE IS PASSIVE ANTI-THEFT SYSTEM (PATS) EQUIPPED, REFER TO THE APPROPRIATE RANGER WORKSHOP MANUAL FOR PROPER PATS PCM INSTALLATION. ALL KEYS MUST BE PROGRAMMED TO START THE SUBJECT VEHICLE. VERIFY ALL OF THE CUSTOMER KEYS WILL START VEHICLE PRIOR TO RELEASING THE VEHICLE.

9. If spark knock (ping) is still slightly objectionable, you "may" proceed to perform the octane adjust.

a. Obtain New Generation Star (NGS) Tester to perform engine octane adjust.

b. Use NGS Service Card and Cable 4.2 level or higher and select:

I Service Bay Functions

I Powertrain Control Module

I EEC V Configure

I Press trigger to continue on emission compliance authorization screen

I Highlight octane adjust column and press trigger

I Rotate dial to change ignition timing from "no retard" to "retard" and then press trigger

I Highlight the fuel octane and press trigger

I Rotate the dial to set to 87 octane and press trigger

Press start button - a message stating "Change has been successful" will appear

NOTE:

FAILURE TO PRESS THE START BUTTON WILL RESULT IN CHANGES IN OCTANE ADJUSTMENT NOT BEING ACCEPTED.

I Exit out of Service Bay Functions

10. After octane adjust, road test and verify repair.

NOTE:

ENGINE PERFORMANCE MAY BE SLIGHTLY REDUCED. OCTANE ADJUST AND TIMING RETARD CAN BE PERFORMED A MAXIMUM OF TWO TIMES WITHOUT REPROGRAMMING THE PCM. IF YOU NEED TO PERFORM THIS PROCEDURE MORE THAN TWO TIMES IT WILL BE NECESSARY TO REPROGRAM THE PCM.

Obtain an Authorized Modifications Decal (FPS 8262 - orderable through DOES II, 25/pkg) and list the date, dealer number, and summary of alterations performed. Select a prominent place adjacent to the Vehicle Emission Control Information Decal suitable for installing the Authorized Modifications Decal. Clean the area, install the decal, and cover it with a clear plastic decal shield.

OTHER APPLICABLE ARTICLES: NONE

SUPERSEDES: 00-7-3

WARRANTY STATUS: Eligible Under The Provisions Of Bumper To Bumper Warranty Coverage And Emissions Warranty Coverage

DEALER CODING

OASIS CODES: 615000, 615500