

# TECHNICAL BULLETIN FC-05 (Rev. A)

DATE: March 14, 2008  
MODEL YEAR: 2005 thru 2009  
ENGINE MODEL: J05 and J08  
CHASSIS MODEL: UD1300 ~ UD3300  
BULLETIN NUMBER: FC-05 (Rev. A - June 2, 2008)  
FILE IN THE FUEL SECTION OF THE TECHNICAL BULLETIN BINDER

## FUEL SUPPLY PUMP SUCTION CONTROL VALVE REPLACEMENT

### REVISION

This bulletin has been revised to provide the part number's for the 2008 and 2009 model year engines.

### PURPOSE

To provide service information related to the diagnosis and replacement of the Fuel Supply Pump Suction Control Valve.

### DESCRIPTION

Nissan Diesel America Inc. has released the Suction Control Valve (SCV) as a service replacement part. This bulletin includes the diagnostic procedures used in conjunction with the UDataLink™ Version 3.01-PC Consult Software to determine if the Final Fuel Supply Pump Current Value reading indicates that replacement of the SCV is necessary.

**Note: SCV replacement does not require the Denso ECD Supply Pump Check sheet (Form ECD-01) submission when performing a warrantable repair.**

### PARTS INFORMATION

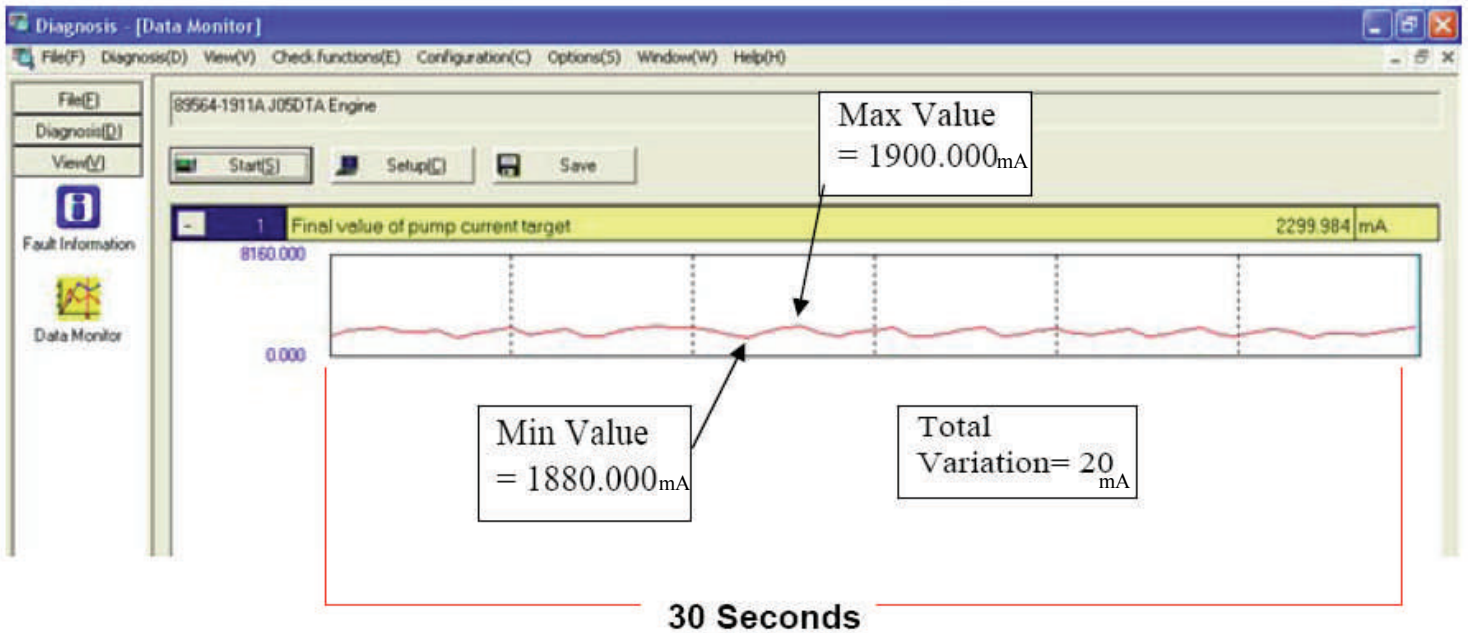
Description	Part Number	Quantity	Year / Engine Model
Valve pump control kit	16796Z501C	1	2005 ~ 2007 / J05
Valve pump control kit	16796Z500B	1	2005 ~ 2007 / J08
Valve pump control kit	16796Z502B	1	2008 ~ 2009 / J05
Valve pump control kit	16796Z501A	1	2008 ~ 2009 / J08

### SERVICE PROCEDURE

#### STEP 1 - DIAGNOSIS

- a) Allow the engine to reach normal operating temperature. ( 70°C or 158°F )

## SERVICE PROCEDURE (CONT.)



- b) With engine at base idle and all extra loads turned off such as A/C, PTO, etc., monitor the “Final value of pump current target “ using UDataLink software.
- c) Monitor the “Final value of pump current target “ for 30 seconds.
- d) Record the Maximum and Minimum values reached during the 30 second time frame.
  - Take note of the average current value.
  - Calculate the maximum current variation value. Maximum variation is calculated by subtracting the Minimum value from the Maximum value.
  - Reference the table below.

Model	Base Idle (RPM)	Maximum Allowable Variation	Expected Average Current Value
J05	750	120 mA	1550~1950 mA
J08	750	120 mA	1550~1950 mA

### NO REPLACEMENT REQUIRED

- Average pump current values are within expected range.
- Total Variation is less than 120 mA.

### REQUIRES REPLACEMENT

- Average pump current target is less than or greater than expected average.
- Total Variation is greater than 120 mA.

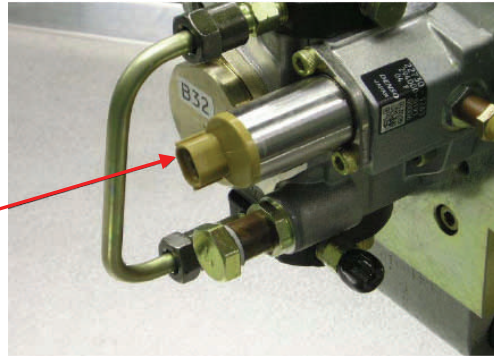
- e) Continue to Step 2 if the SCV was found to require replacement during diagnoses.

## SERVICE PROCEDURE (CONT.)

### STEP 2 - SCV REPLACEMENT

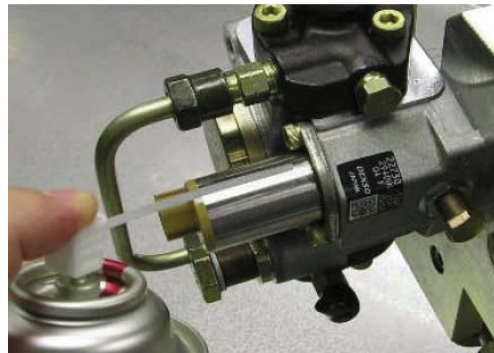
- a) Disconnect the SCV connector.

*Do not use excessive force when disconnecting or connector damage will result.*

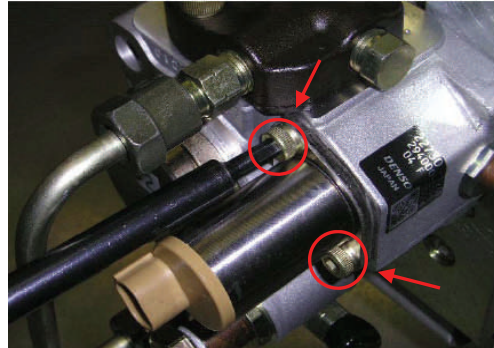


- b) Clean the SCV and mounting area.

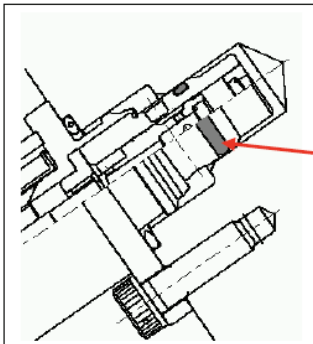
*Be sure to keep the area around the SCV clean to prevent dirt or foreign material from sticking to the pump housing or installation surface.*



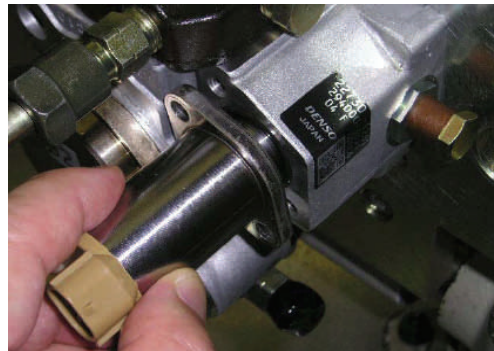
- c) Remove the two SCV mounting bolts.



- d) Remove the SCV by rotating right and left while gently pulling to disengage the O-ring.

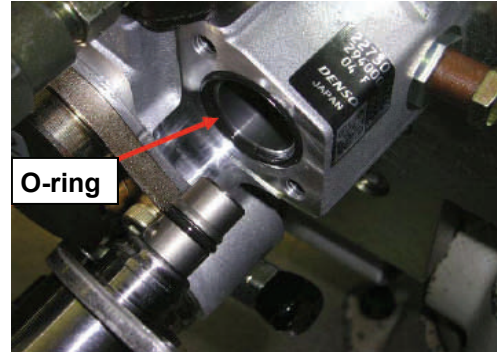


O-ring



## SERVICE PROCEDURE (CONT.)

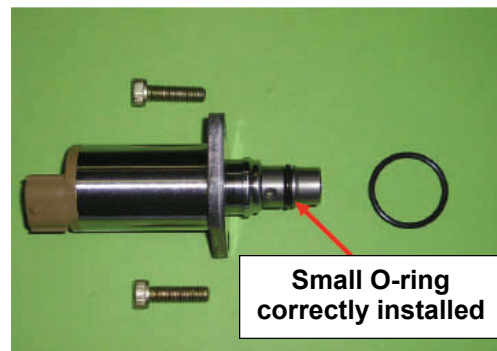
- e) Remove the O-ring from the pump housing and discard.



- f) Confirm that the SCV replacement kit contains all the parts shown in the picture.

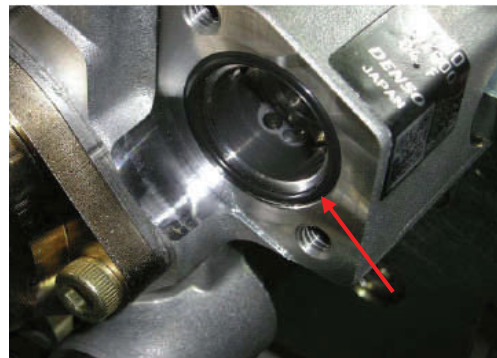
**Kit contains:**

- SCV
- 2 Bolts
- Large O-ring
- Small O-ring



- g) Install new O-ring in to the pump Housing.

*Make sure the O-ring groove is free from dirt and debris.*

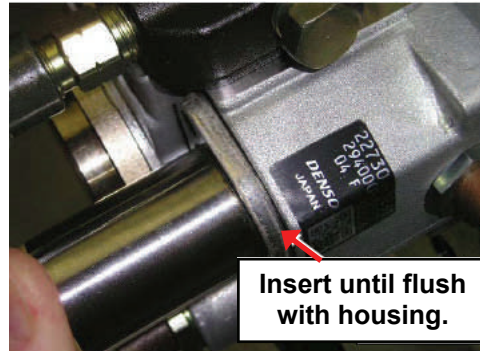


- h) Apply a light coat of fresh oil to the small O-ring to ease installation, and to prevent O-ring damage.

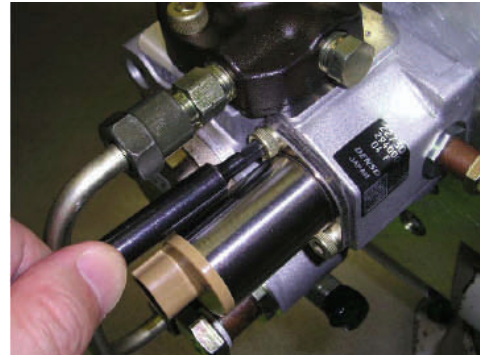


**SERVICE PROCEDURE (CONT.)**

- i) Insert the SCV in to the pump housing by gently rotating right and left until the SCV is flush with the pump housing.



- j) Hand tighten the SCV mounting bolts making sure the bolts are equally tightened to prevent binding.

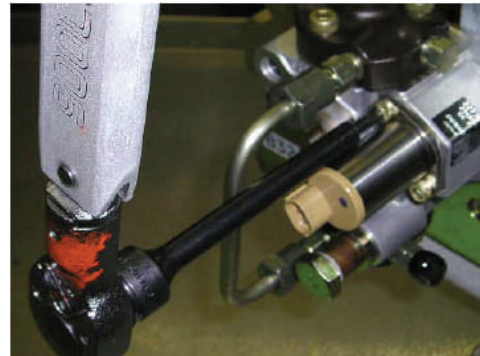


- k) Torque the SCV mounting bolts.

*Make sure the tool is not on an incline or hexagon bolt damage/breakage will result.*

**Torque spec: 5 - 8 ft. lb. (6.9 - 10.8 Nm)**

- l) Re-connect the SCV connector.



**STEP 3 - SUPPLY PUMP RELEARN**

- a) Perform "Supply Pump Specification Learning" based on model year.

**IMPORTANT:** Refer to Technical Service Bulletin FC-04 for important information when using the UDataLink - PC Consult Software for the pump relearn procedure.

- b) Inspect for leaks from the SCV and mounting area.

THE INFORMATION CONTAINED IN THIS BULLETIN SHOULD NOT BE INTERPRETED AS THE BASIS FOR WARRANTY CLAIMS							
FOR THE INDICATED PERSONNEL BELOW, PLEASE READ, INITIAL, AND ROUTE TO THE FOLLOWING:							
X	SERVICE MANAGER	X	WARRANTY MANAGER	X	SERVICE TECHNICIANS INITIAL BELOW:		
X	PARTS MANAGER	X	SHOP FOREMAN				