

# DETROIT DIESEL



## Installation Instructions

### 18SP625 – Series 50<sup>®</sup> Neoplan<sup>®</sup> Diesel Particulate Filter Installation

#### DESCRIPTION

A replacement diesel particulate filter assembly has been released for use in Neoplan buses with Series 50 diesel engines built after serial number 04R0041511. There are two variations on the filter design used. The appropriate part numbers to mate with the OEM-installed exhaust tubing are listed in Table 1 below. A partial list of available replacement parts is listed in Table 2.

#### PARTS LIST

See Table 1 for the Neoplan diesel particulate filter parts:

Part No.	Qty.	Description
23535757	1	Neoplan Diesel Particulate Filter Assembly
18SP625	1	Installation Instructions

**Table 1 Components of S50 Neoplan Diesel Particulate Filter Installation**

Part No.	Qty.	Description
23535829	*	V-Band Clamp
23535830	*	Gasket

\* V-Band Clamp and gasket part numbers are provided as a reference for ordering replacement parts, if required, in the event either is damaged during removal or installation.

**Table 2 Replacement Service Parts for S50 Neoplan Diesel Particulate Filter**

#### REMOVAL OF DIESEL PARTICULATE FILTER

Perform the following steps for removal of current components:

 <b>WARNING:</b>
<b>PERSONAL INJURY</b>
<b>To avoid injury from hot surfaces, wear protective gloves or allow engine to cool before removing any component.</b>

 **WARNING:**

**PERSONAL INJURY**

**To avoid injury when removing or installing a heavy engine component, ensure the component is properly supported and securely attached to an adequate lifting device to prevent the component from falling.**

**NOTE:**

The diesel particulate filter weighs approximately 36 Kg (80 lbs).

1. Gain access to the engine/filter compartment.
2. Disconnect the Exhaust Temperature Sensor probe lead, loosen the sensor retaining nut, and remove the sensor. Retain the sensor for reuse.
3. Remove clamp securing the tail pipe to the filter and remove the tail pipe.
4. Remove the bolts, washers, isolators, and nuts securing the top of the outlet section of the filter to the chassis. Retain parts for reuse.

**NOTE:**

If the isolators are damaged or missing they should be replaced.

5. Loosen and remove the large V-band clamps that secure the center section of old filter to the inlet and outlet sections.
6. Remove the center and outlet sections individually.
7. Loosen and remove the V-band clamp securing the inlet tube to the filter inlet; separate the pipe from the filter.
8. Remove the bolts, washers, isolators, and nuts securing the inlet section to the chassis. Retain parts for reuse.

**NOTE:**

If the isolators are damaged or missing they should be replaced.

9. Remove the inlet section from the chassis.

**INSTALLATION OF DIESEL PARTICULATE FILTER**

Perform the following steps for installation of new components:

1. Loosen the V-band clamps and separate the four sections of the filter. Be careful to avoid damage to the gaskets between each of the filter sections.
2. Install the inlet section and align the three mounting bracket holes with the holes in the chassis bracket. Install the three bolts, isolators, washers and nuts, removed in step 8 above. Do not tighten the fasteners at this time.
3. Line up the exhaust tube with the inlet flange of the filter. Install the exhaust clamp at the filter inlet but do not tighten.

4. Install the gasket and clamp on the inlet section upper surface and install the catalyst section with the part number tag oriented towards the side access door. Secure the clamp but do not tighten.
5. Install the gasket and clamp on the upper portion of the catalyst section and install the filter center section with the part number tag oriented towards the side access door. Secure the clamp but do not tighten.
6. Install the gasket and clamp on the top of the filter section and install the outlet section. Secure the clamp but leave loose.
7. Install the bolts, isolators, washers, and nuts removed in step 4 of removal section above, securing the top of the filter to the chassis. Do not tighten hardware at this time.
8. Install the tail pipe with the outlet oriented towards the rear of the vehicle. Install the pipe clamp on the tailpipe but do not tighten.
9. Install the temperature probe into the M14 x 1.5 threaded boss on the side of the outlet can. Tighten the nut with hand tools only.

**NOTE:**

Be sure the sensor wires are secured to avoid contact with the filter body and the harness is not under tension.

10. Tighten the three large V-clamps securing the filter sections to 16 N·m (12 lb·ft).

<b>NOTICE:</b>
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Do not use an impact wrench to tighten the clamps; this may cause galling of the threads. Check to be sure there is adequate clearance between the filter body and the chassis and adjust if necessary, to allow air circulation.
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11. Tighten the mounting hardware to secure the filter in the chassis. The exhaust pipe to inlet clamp torque is 20 N·m (15 lb·ft).
12. Check for exhaust leaks.
13. Re-secure any access doors.

<b>NOTICE:</b>
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Be sure the exhaust pipe does not contact the upper cover to avoid heat transfer and damage to the fiberglass rear cap on the bus.
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