

# DETROIT DIESEL



## Installation Instructions

### 18SP613 – MBE 4000 Front Engine PTO (FEPTO) Service Kit

#### KIT DESCRIPTION

MBE 4000 Front Engine Power Take-Off (FEPTO) Service Kit (P/N: 23535793) is now available. This kit will allow a FEPTO to be installed in MBE4000 engines not originally equipped with this feature from the OEM.

#### KIT CONTENTS

See Table 1 for the kit contents and see Figure 1 for identification of the kit contents.

Part No.	Qty.	Description
460 031 0046	1	Intermediate Pulley
460 035 0024	1	Plate (Hub)
460 032 0071	8	Bolt, Vibration Damper Mounting, M16 x 76
000000 001157	6	Bolt, Plate Mounting, M10 x 30
18SP613	1	Installation Instructions

Table 1 MBE 4000 FEPTO Service Kit P/N: 23535793

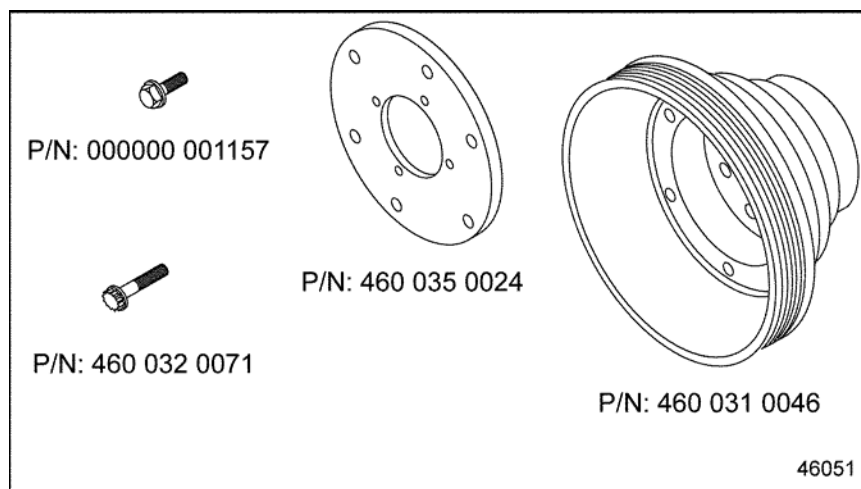
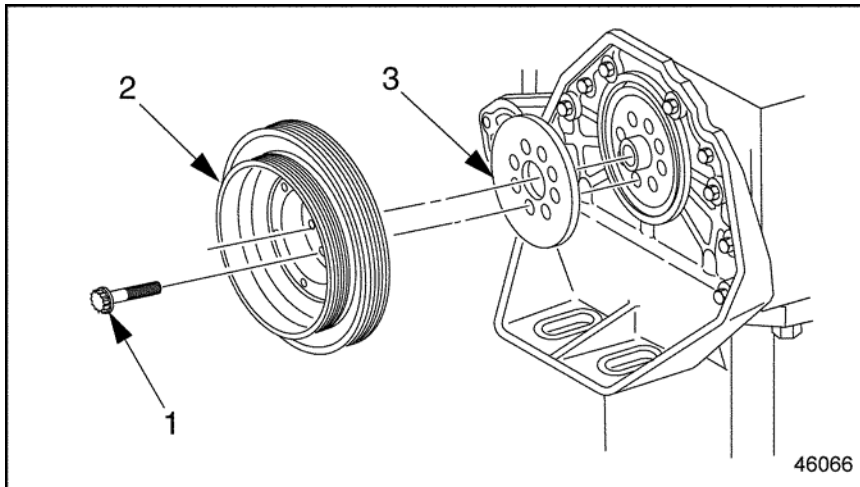


Figure 1 MBE 4000 FEPTO Kit (P/N: 23535793) Contents

## **INSTALLATION PROCEDURE**

### **Current Crankshaft Vibration Damper Removal**

The current two-belt pulley / vibration damper assembly and oil deflector are to be removed before installation of the FEPTO. (See Figure 2):



1. Vibration Damper Mounting Bolt (8)
2. Two-belt Pulley / Vibration Damper Assembly
3. Oil Deflector

**Figure 2 Removing Existing Vibration Damper**

**⚠ DANGER:**

### **FALLING COMPONENT**

**To avoid injury from a falling component, ensure a proper lifting device is used.**

1. Remove the vibration damper. Remove the drive belts from the alternator, coolant pump, idler, and air-conditioner compressor pulleys, as installed.
2. To gain access to the vibration damper, it may be necessary to remove the lower mounting bolts from the bottom of the front fairing/bumper.
3. Remove the eight mounting bolts from the vibration damper and remove damper and pulley. Discard bolts.
4. Remove the oil deflector from the crankshaft.

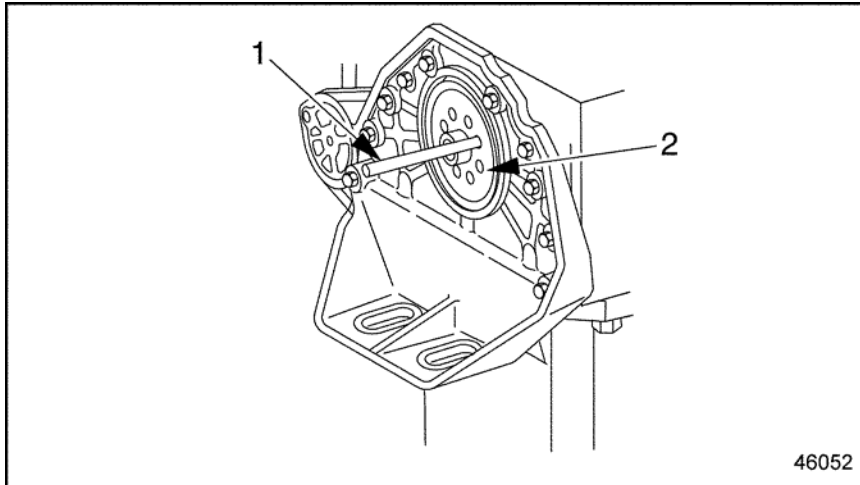
### **NOTE:**

Only the vibration damper and oil deflector will be *reused* with the FEPTO kit.

## Installation of FEPTO Kit

Install the FEPTO kit as follows:

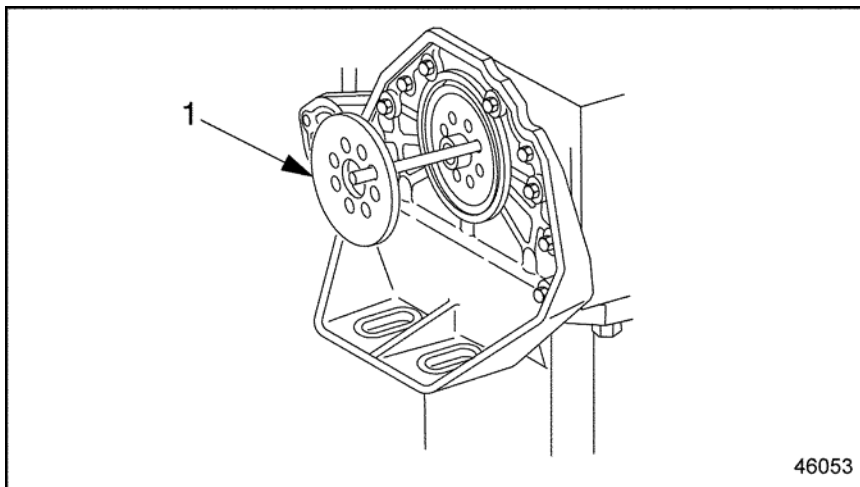
1. Install a flywheel guide pin (J-46172) into front end of crankshaft to aid in assembly. See Figure 3.



1. Flywheel guide pin
2. Crankshaft

**Figure 3** Guide Pin Installation

2. Install the oil deflector. See Figure 4.



1. Oil deflector

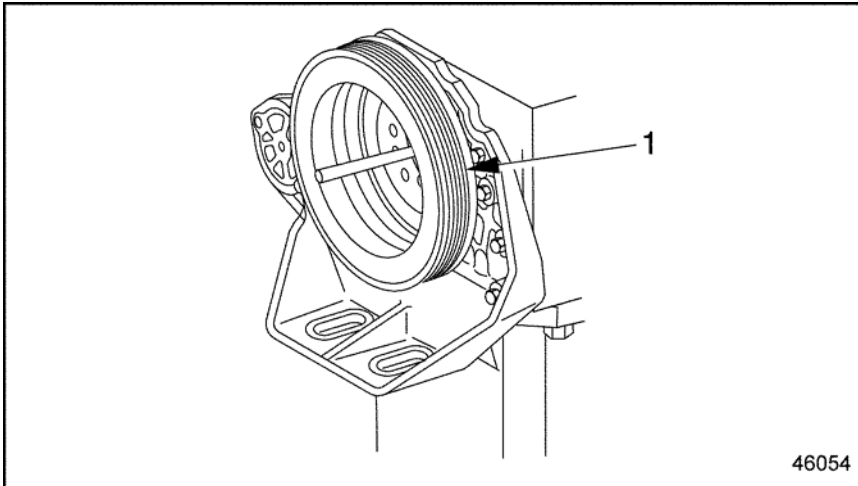
**Figure 4** Oil Deflector Installation

 **DANGER:**

## FALLING COMPONENT

To avoid injury from a falling component, ensure a proper lifting device is used.

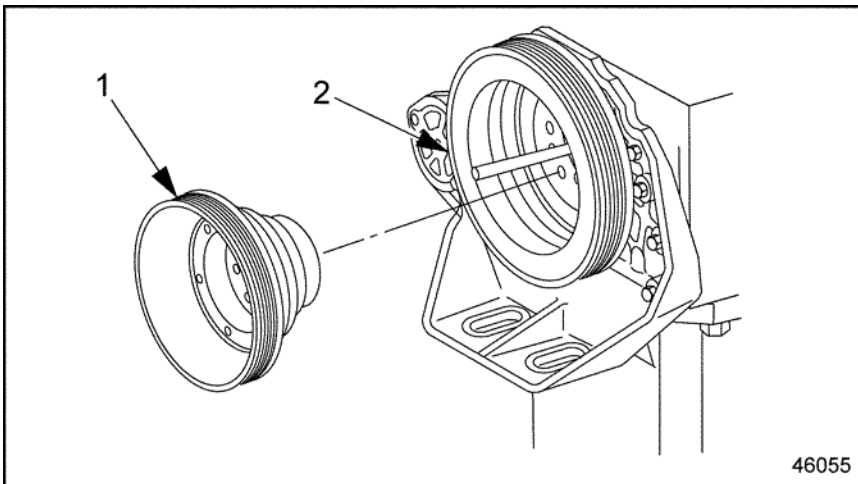
3. Install the vibration damper. See Figure 5.



1. Vibration damper

**Figure 5**      **Vibration Damper Installation**

4. Install the intermediate pulley. See Figure 6.

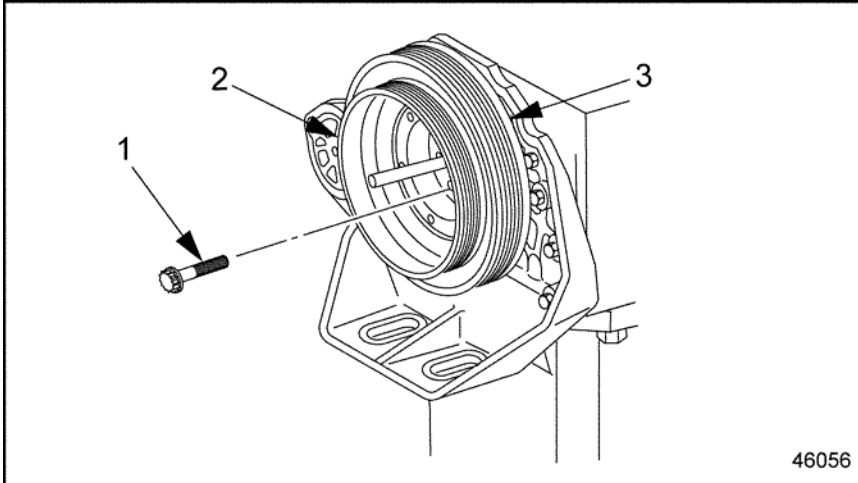


1. Intermediate Pulley
2. Vibration Damper

**Figure 6**      **Intermediate Pulley Installation**

5. Install eight new M16 x 76 mm vibration damper mounting bolts (P/N: 460 062 0071) into intermediate pulley and damper. Tighten all bolts following a criss-cross sequence. Torque to 200 N·m (148 lb·ft). Make sure all bolts are tightened. See Figure 7.

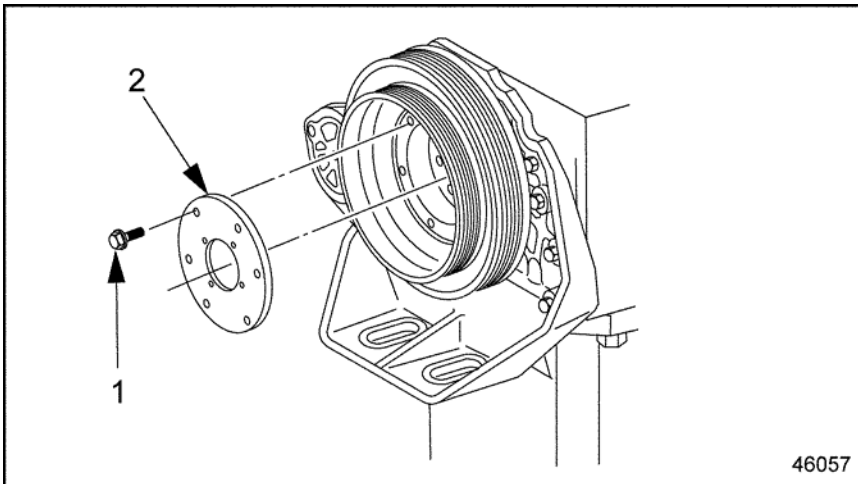
6. Remove the flywheel guide pin from crankshaft.



1. Bolt (8)
2. Intermediate Pulley
3. Vibration Damper

**Figure 7**      **Tightening the Pulley Mounting Bolts**

7. Install the plate (hub) using six bolts (P/N: 000000 001157), tightening in a criss-cross sequence. Torque bolts to 60 N·m (45 lb·ft). See Figure 8.



1. Mounting Bolt
2. Plate

**Figure 8**      **Plate Installation**

8. If previously removed, install lower bolts to the bottom of front fairing/bumper.
9. Install all belts as needed.



## PERSONAL INJURY

**To avoid injury from the projection of tools or other objects that may fall on or behind the vibration damper of an engine, always check and remove these items before starting the engine.**

**DETROIT DIESEL**



13400 Outer Drive, West, Detroit, Michigan 48239-4001  
Telephone: 313-592-5000  
[www.detroitdiesel.com](http://www.detroitdiesel.com)

Copyright© 2005 Detroit Diesel Corporation. Detroit Diesel®, DDC®, and the spinning arrows design are registered trademarks of Detroit Diesel Corporation. All other trademarks are the property of their respective owners.

**18SP613 0507 As technical advances continue, specifications will change. All rights reserved. Printed in U.S.A.**