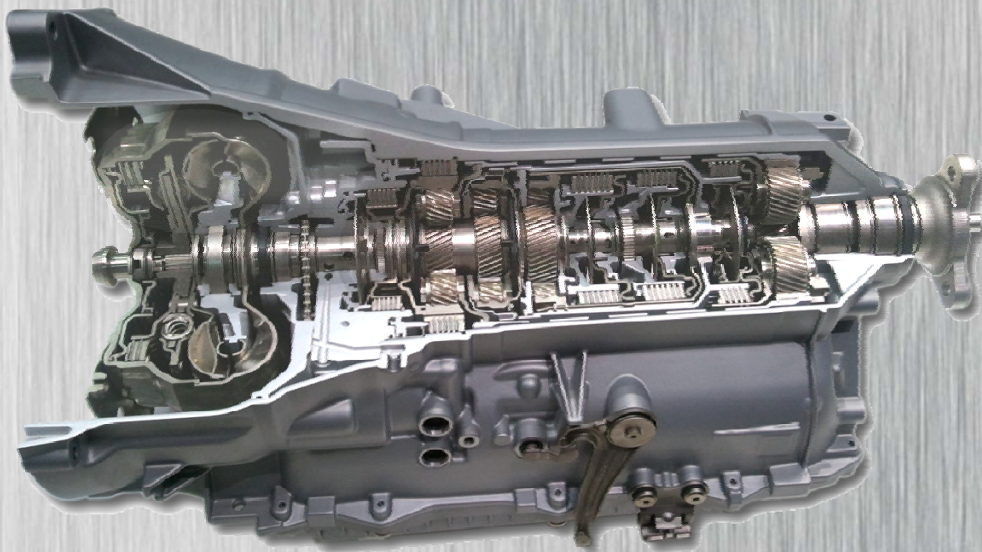




***8-Speed Automatic Transmission Update
and
Service Best Practices***



**REFERENCE BOOK AND TECH NEWS
November 2012**

INTRODUCTION

This month, we have two Master Tech programs. The first program will focus on the three different 8-speed transmissions offered in Chrysler Group vehicles: the 8HP45, the 845RE, and the 8HP70 (Fig. 1). We'll give a brief overview of the 8HP45 before we talk about some of the things you can look forward to in the near future.

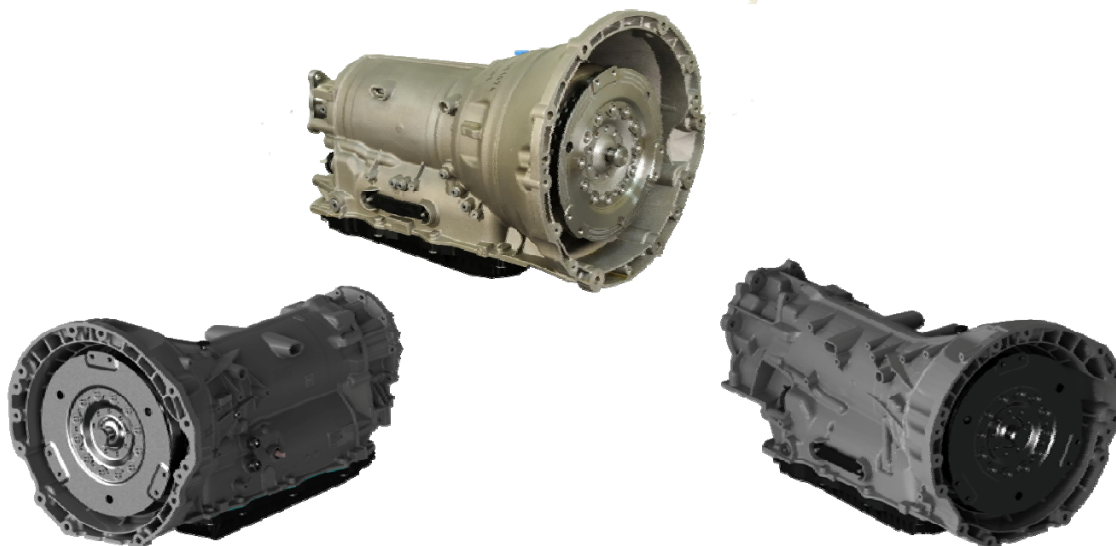


Figure 1: 8HP45 (left), 8HP70 (middle), 845RE (right)

We'll give a brief overview of the 8HP45 before we talk about some of the things you can look forward to in the near future. We'll then turn our attention to the 845RE. After discussing what vehicles you'll find the 845RE in, we'll get into some of the internal components and discuss some of the service implications, focusing on how it differs from the 8HP45 and 845RE. Then we're going to spend time looking at the service procedures that are unique and noteworthy.



Figure 2: 8HP70 Transmission

After going over the three 8-speed transmissions in detail, we'll turn our attention to the new for 2013 Ram 1500 Stop/Start system. We'll explore the components that are unique to the Stop/Start system first, and then we'll take a look at the enablers that make the system work.

Naturally, we'll discuss the service points you'll need to know in order to keep this system up and running properly.

Lastly, we'll cover some of the diagnostic information you'll need to service the Stop/Start system. After that we'll have a short bonus program: Service Best Practices. In that program, we'll look at some recommendations and new technology that will affect the entire service department.

Note that the Master Tech Reference Book contains information not found in this month's web program. However, you will need the web program to answer the questions in the online quiz.

This month's Tech News continues with a Tech's Corner article. It's a good practice to review the reference book as you progress through the web course.

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8-SPEED TRANSMISSION OVERVIEW

The 8HP45 was covered in-depth in the June 2011 Master Tech program. If you missed that one, you'll want to go back and review the program. Here is a quick overview.

The 8HP45 is built by ZF in Germany. It arrives in the U.S. and is installed as an assembly. This transmission was launched in the 2012 model year in the Dodge Charger and Chrysler 300. For the 2013 model year you'll also find the 8HP45 in the Ram 1500.

Vehicles with the Stop/Start feature have technologies that set them apart from vehicles without the Stop/Start system. (Fig. 3).

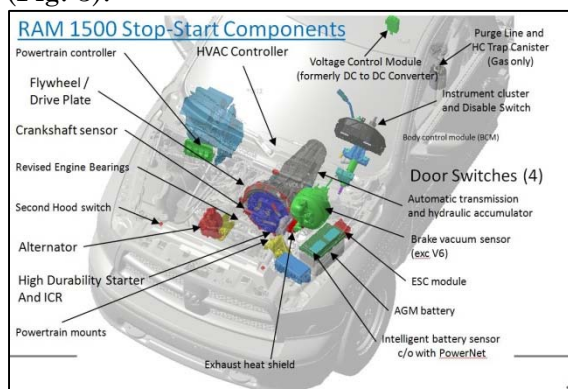


Figure 3: Unique Components of the Stop/Start System

It should also be noted that the 8HP45 only comes behind the 3.6L engine. The 845RE is based on the ZF-designed 8HP45, but it is built by Chrysler in Kokomo, Indiana. In 2012, expect to see this technology being used in more Chrysler Group vehicles, including the Jeep Grand Cherokee, Dodge Durango, and more.

In mid-2013, the Ram 1500 will switch from the ZF-built 8HP45 to the Chrysler-built 845RE, still paired only with the 3.6L V-6.

The 8HP45 and 845RE transmissions look nearly identical from the outside. It's only when you get inside the case that things start to look different (Fig. 4).



Figure 4: 8HP45 and 845RE internal components

While some internal components will share part numbers, most internal components will not be interchangeable between the 8HP45 and the 845RE. For instance, while the clutch packs look very similar, they are not interchangeable. Looking a little closer at the 845RE clutch packs, the D clutch has an extra pair of separator and friction plates for improved vehicle performance (Fig. 5).

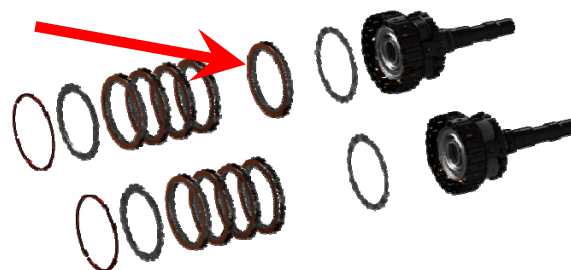


Figure 5: Extra Clutch and Separator in the D Clutch