

## **Chrysler Group Customers on Track to Save \$2.5 Billion, 700+ Million Gallons of Gasoline With TorqueFlite Eight-Speed Automatic Transmissions**

- **TorqueFlite eight-speed automatic transmissions now in more than one million vehicles worldwide**
- **Vehicles projected to save more than 700 million gallons of gasoline; worth an estimated \$2.5 billion, based on fuel-price forecasts**
- **Total estimated reduction in CO2 emissions – more than six million metric tonnes**
- **TorqueFlite transmissions in model-year 2014 vehicles contribute to 19 fuel-economy/driving-range benchmarks across four vehicle segments**
- **TorqueFlite availability expanding to HEMI®-equipped Dodge Charger, Challenger lineups for model-year 2015**

June 16, 2014, Auburn Hills, Mich. - Fuel savings and emissions reductions attributed to TorqueFlite eight-speed transmissions are adding up to substantial gains for Chrysler Group customers.

The advanced-technology automatics – first of their kind ever made available to mainstream-brand customers – now are powering more than one million vehicles, worldwide. And their combined effect is staggering.

Over their lifetimes, vehicles equipped with TorqueFlite eight-speed transmissions are projected to save their owners more than 700 million gallons of fuel, compared with their predecessors that featured five- or six-speed automatics. That quantity of gasoline is worth approximately \$2.5 billion at the pump, based on current fuel-price forecasts.

This will also reduce combined CO2 emissions by more than six million metric tonnes.

TorqueFlite eight-speed transmissions in model-year 2014 vehicles also contribute to 19 Chrysler Group fuel-economy or driving-range benchmarks across four vehicle segments.

“This is precisely the kind of impact we targeted with the TorqueFlite program,” says Jeffrey Lux, Vice President and Head of Transmission Powertrain. “And we fully expect this momentum to continue as we expand availability.”

Starting in model-year 2015, the TorqueFlite 8HP70 transmission can be paired with HEMI®-equipped Dodge Chargers, Challengers and Challenger SRTs.

When the TorqueFlite 8HP45/845RE made its debut in model-year 2012 as the world’s first eight-speed available outside the luxury market, the transmission was mated exclusively to Chrysler Group’s award-winning 3.6-liter Pentastar V-6 in the Charger and Chrysler 300 lineups.

Since then, the TorqueFlite 845RE and 8HP70 have migrated, respectively, to Pentastar- and HEMI-powered versions of the Dodge Durango, Ram 1500 and Jeep Grand Cherokee lineups. The 8HP70 also serves EcoDiesel versions of the 1500 and Grand Cherokee.

With the introduction of the 2015 Dodge Challenger SRT Hellcat, the TorqueFlite transmission family adds its third member – the 8HP90 high-performance automatic that affords greater torque capacity than any eight-speed previously offered by Chrysler Group.

Depending on the application, a TorqueFlite transmission can account for fuel-economy improvements of up to nine percent, compared with a more conventional automatic.

"The TorqueFlite's wide 7.03 ratio spread is the reason it can deliver such superior performance," Lux says. "This enables engines to operate at peak efficiency in a broader range of driving conditions."

The TorqueFlite family shares these gear ratios:

- 4.71
- 3.14
- 2.10
- 1.67
- 1.29
- 1.00
- 0.84
- 0.67

Particularly close from fifth through eighth, the gear ratios also improve refinement by accommodating smoother shifts. In addition, the 4.71 first-gear ratio contributes to the kind of quick throttle response customers want and enjoy.

Fully electronic, the TorqueFlite family's software adapts the transmission's shift patterns to driver behavior and driving conditions such as:

- longitudinal and lateral acceleration
- grade steepness
- temperature
- electronic stability control activation

The TorqueFlite's design inherently contributes to efficiency. Paired with the 5.7-liter HEMI V-8 in the 2015 Dodge Challenger, it weighs just four lbs. (1.8 kg) more than the five-speed gearbox it replaces while contributing to a fuel-economy gain in the range of five percent.

Internally, the transmission features four gear sets and five shift elements consisting of multi-disc clutches and brakes. Only two shift elements are open at one time, which reduces drag losses stemming from the rotation of multiple parts.

Lower viscosity transmission fluid is used to improve operating efficiency and fuel economy, especially during cold environments or vehicle start-up. The TorqueFlite also is "fill-for-life," never requiring oil changes, when subjected to normal driving conditions.

In the Ram 1500, TorqueFlite function benefits further from a thermal management system that quickly raises engine and transmission fluid temperature. This improves fuel efficiency by 1.7 percent by reducing the parasitic losses that occur when engine oil and transmission fluid are in their natural, lower-viscosity states.

Model-year 2014 benchmarks to which TorqueFlite technology contributes are:

- Best-in-class city fuel economy, 2WD full-sized pickups (20 mpg; Ram 1500)
- Best-in-class highway fuel economy, 2WD full-sized pickups (28 mpg; Ram 1500)
- Best-in-class combined fuel economy, 2WD full-sized pickups (23 mpg; Ram 1500)
- Best-in-class city fuel economy, 4WD full-sized pickups (19 mpg; Ram 1500)
- Best-in-class highway fuel economy, 4WD full-sized pickups (27 mpg; Ram 1500)
- Best-in-class combined fuel economy, 4WD full-sized pickups (22 mpg; Ram 1500)
- Best-in-class city fuel economy, 2WD mid-size SUVs, non-hybrid (22 mpg; Jeep Grand Cherokee)
- Best-in-class highway fuel economy, 2WD mid-size SUVs (30 mpg; Jeep Grand Cherokee)
- Best-in-class combined fuel economy, 2WD mid-size SUVs, non-hybrid (25 mpg; Jeep Grand Cherokee)
- Best-in-class driving range, mid-size SUV (730+ miles; Jeep Grand Cherokee)
- Best-in-class driving range, full-size SUV with V-6 (600+ miles; Dodge Durango, full-size SUV)
- Best-in-class driving range, gasoline-powered mid-size SUV (600+ miles; Jeep Grand Cherokee)
- Best-in-class highway fuel economy, full-size RWD sedan with V-6 (31 mpg highway; Dodge Charger and Chrysler 300)
- Best-in-class highway fuel economy, full-size AWD sedan with V-6 (27 mpg city; Dodge Charger and

Chrysler 300)

- Unsurpassed\* city fuel economy, full-size AWD sedan with V-6 (18 mpg city; Dodge Charger and Chrysler 300)
- Unsurpassed\* combined fuel economy, full-size RWD sedan with V-6 (23 mpg; Dodge Charger and Chrysler 300)
- Unsurpassed\* combined fuel economy, full-size AWD sedan with V-6 (21 mpg; Dodge Charger and Chrysler 300)
- Unsurpassed\* city fuel economy, full-size RWD sedan with V-6 (19 mpg; Dodge Charger and Chrysler 300)
- Unsurpassed\* city fuel economy, full-size AWD sedan with V-6 (18 mpg; Dodge Charger and Chrysler 300)

The TorqueFlite 845RE is produced under license from ZF Friedrichshafen AG at Chrysler Group's manufacturing complex in Kokomo, IN. The 8HP70 and 8HP90, respectively, are produced at ZF's plants in Gray Court, SC, and Saarbrücken, Germany.

#### **Chrysler Group Powertrain**

Development of advanced-technology powertrains has been a primary focus of Chrysler Group since the Company was established in 2009. To date, Chrysler Group's investment in powertrain programs is approaching \$2.5 billion – nearly half of its total manufacturing outlay. From model-year 2011 to the present, Chrysler Group has introduced 18 new engines, 15 new transmissions and the battery-electric drive system featured in the acclaimed Fiat 500e all-electric vehicle.

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