

# Printable Newsletter Link

March 24, 2026

New feature: a printable newsletter link has been added. Check the image below for the location of the new PDF link on the eahc main newsletter page.

The image is a screenshot of a website's newsletter page. At the top left is the TCRA logo. The main heading is "2026 February Newsletter" with a breadcrumb trail "Home > 2026 February Newsletter". Below the heading are filter options for "Categories", "Tags", and "Authors", and a "Show all" link. A red dashed oval highlights a link labeled "Printable Version of February 2026 Newsletter (pdf)". A red arrow points from a blue starburst graphic containing the text "CLICK HERE!" to this link. A yellow banner below the link says "PRINTABLE PDF AVAILABLE!". The page features two article previews. The first article is titled "UB80 / UA80 Torque Converter Shop Cheat" and includes a photograph of a torque converter. The second article is titled "Tariff Update: IEEPA Removal and New Section 122 Duties" and features the MEMA logo (The Vehicle Suppliers Association).

# SEMA's Q1 Economic Update: Consumer Strength Drives 2026 Outlook

March 24, 2026

*Despite years of economic disruption, from pandemic shutdowns to tariffs and inflation, the U.S. consumer continues to power forward. Now in March 2026, SEMA's Market Research team has provided the following Q1 update to industry members:*

The last several years have brought severe economic challenges—from COVID lockdowns, supply-chain constraints, inflation and tariffs. These successive shocks sowed uncertainty in the market and increased prices for consumers. Despite this, the U.S. consumer has been resilient, and spending has continued to climb. Personal consumption expenditures have shot up 20% from 2019 levels, adding nearly \$10 trillion into the economy.

As we push into 2026, the economy is expected to continue to see some growth, with about a 2.2% rise in GDP over the next two years.



***The U.S. economy is expected to continue to grow, with about a 2.2% rise in GDP over the next two years.***

Consumers continue to spend as disposable personal income rose by 15% over the last five years. Both personal income and consumer spending are forecast to grow over the next couple of years. The unemployment rate has dropped into the “normal” range at 4.3% across the economy—and there was stronger-than-expected January job growth to start 2026.

The challenges for consumers continue to be prices and interest rates. Inflation has slowed to a forecast 2.4% rate, and price hikes in many core categories appear to be leveling off. But many prices remain high. For example, the average price of a new passenger vehicle is now >\$50,000, a nearly 30% jump from pre-COVID levels. In addition, interest rates remain elevated when compared to the long streak of very low rates in the early 2010s.

The Federal Reserve System (Fed) has remained cautious in slowly reducing the prime rate, though a leadership change may accelerate rate cuts later in the year. High vehicle prices and interest rates put a strain on consumers, which may result in less disposable income for automobile customization. Although total U.S. debt balances have increased, incomes have risen, keeping consumer debt ratios aligned with historical norms. New-car sales in 2025 posted another gain to >16 million units, with consumers purchasing more crossover utility vehicles (CUVs) and shying away from electric vehicles (EVs).



***Both personal income and consumer spending are forecast to grow.***

On the business front, cost pressures are expected to ease as the Producer Price Index is projected to fall below 2% this year. An industry study in late 2025 showed that tariffs and the economy are the biggest concerns on executives' minds.

Tariffs are expected to be less volatile in 2026, which would create price stability and foster easier inventory planning. The recently announced U.S. Supreme Court decision to strike down tariffs authorized under the International Emergency Economic Powers Act opens new uncertainty. As publish date, tariffs on vehicles, auto parts, steel and aluminum remain in effect as they fall under separate authorities. It is unclear if the government will provide refunds and if the administration will reinstall tariffs under a different authority.

The stock market continues to grow, with the Dow Jones hitting all-time highs during the week of February 16 at over 50,000. The Dow has doubled since the start of 2019, despite COVID, supply chain shocks and tariffs. While day-to-day volatility remains, the index continues to show confidence in the market.

***The Dow has doubled since the start of 2019, despite COVID, supply chain shocks and tariffs.***

While some volatility will remain across the economy, the forecast is for GDP and consumer spending to continue climbing and employment to remain strong. **In our recent industry survey, 85% of manufacturers had some confidence in specialty-equipment market growth over the next two to three years.** Unless these indicators take a sudden turn, we expect to see the industry returning toward the steady growth we experienced throughout the 2010s.

**Get deeper insights into the trends shaping your business at the SEMA Market Research Center. Visit [sites.sema.org/market-research/](https://sites.sema.org/market-research/) to access the latest reports and tools to help you make smarter business decisions in 2026 and beyond.**

# 6L80 and 6L90 Torque Converter Similarities & Interchangeability

January 18, 2026

## Introduction

The General Motors 6L80 and 6L90 transmissions are widely used in a variety of GM vehicles, from trucks to performance cars. Both are six-speed automatic transmissions, prized for their robustness and adaptability. A key component in these transmissions is the torque converter, responsible for transmitting engine power to the transmission and facilitating smooth gear changes. Understanding the similarities and interchangeability of torque converters between the 6L80 and 6L90 is essential for automotive enthusiasts, mechanics, and anyone considering transmission upgrades or replacements.

## Overview of the 6L80 & 6L90 Transmissions 6L80 Transmission

The 6L80 transmission was introduced by GM in 2005 as a successor to the 4L60E and 4L80E. It is found in many GM vehicles, such as the Chevrolet Silverado, GMC Sierra, Camaro, and Cadillac CTS-V. The 6L80 is renowned for its balance of strength and versatility, designed for both cars and light trucks.

## 6L90 Transmission

The 6L90, debuting in 2007, is essentially an upgraded version of the 6L80. Its architecture is similar, but it is reinforced to handle higher torque and heavier vehicle applications, such as the HD Silverado/Sierra and large SUVs. The 6L90 features a larger case, more clutch capacity, and internal enhancements for durability.

## Similarities Between 6L80 & 6L90 Torque Converters

- **Design and Function:** Both torque converters are designed for their six-speed automatic transmissions, sharing similar mechanical principles and operating characteristics.
- **Lock-Up Clutch:** Both use an integrated lock-up clutch to improve fuel economy and reduce heat during highway driving.
- **Mounting Dimensions:** The converters often share similar bolt patterns for attaching to the flex plate and the transmission input shaft spline count is the same.
- **Electronic Control:** Both work in conjunction with the Transmission Control Module (TCM) for precise engagement and disengagement, offering smooth operation and efficiency.
- **Physical Appearance:** When viewed side by side, the overall size and construction of the torque converters are quite similar, with bell housing and input shaft alignments that echo each other in appearance.

## Key Differences Between 6L80 & 6L90 Torque Converters

While the similarities are notable, there are crucial differences:

- **Stall Speeds:** The stall speed (the RPM at which the torque converter transfers the most torque) varies depending on vehicle application and engine pairing. 6L90-equipped vehicles, often heavier or more powerful, may have lower stall speed converters for increased towing or load capacity.
- **Internal Strength:** The 6L90 torque converters share the same internal architecture and minus the turbine and impeller blade angle.
- **Physical Size:** These converters share the same height and weight depending on application.
- **Part Numbers and Applications:** GM assigns different part numbers to torque converters for the 6L80 and 6L90, reflecting their intended applications and internal specifications. Some of these numbers are shared between 6L80 and 6L90 this is for the towing package in the 6L80.

## Interchangeability: Can You Swap 6L80 & 6L90 Torque Converters?

The question of interchangeability is common, especially among those seeking replacement or performance upgrades. The answer is nuanced:

- Input Shaft Spline Count: 6L80 and 6L90 torque converters share the same 36-spline input, making them physically compatible in terms of turbine hub. However, there are some small differences between early and late turbine hubs.

### **Early Design**

### **Late Design**

- Flex plate Compatibility: Flex plate bolt patterns are often the same for most of GM's powerplants. The exception to this is Cadillac models with the 4.4L engines in the early 2000's and diesel applications – the pilot and bolt circle pattern are different.
- Bellhousing Fitment: There are 3 different bellhousings. One for certain Cadillac models and the Corvette.
- Internal Specifications: The internal architecture remains the same.
- Electronics and Tuning: Both converters use a lock-up clutch controlled by the TCM. The TCC solenoid and Pressure control solenoid are both PWM. The TCC solenoid is duty cycle driven and uses ISS and engine RPM to keep slip around 4 RPM to as much as 20 RPM when applied.
- Aftermarket Solutions: Many aftermarket companies build upgraded torque converters for both transmissions. These may include billet covers and pistons to help combat the flexing of these parts.

## **Conclusion**

The 6L80 and 6L90 torque converters are similar in many physical respects but are optimized for their specific transmissions and application. Interchangeability exists, primarily due to the internal structure and intended use of each converter. Direct swaps are possible, but caution is required to avoid mismatches that could result in poor performance or converter damage. Knowing which parts can salvage appropriate cores, careful parts verification and attention to detail are the keys to a successful 6L80/6L90 converter build.

Caleb Perham  
TCRA Technical Coordinator

# Right-to-Modify Bill

January 18, 2026

## Right-to-Modify Bill Gets Congressional Hearing; SEMA Makes Case for Access to Calibration Data

The landmark, SEMA-supported bill to preserve Americans' ability to modify their vehicles has reached an important milestone, with members of a key congressional committee considering the merits of the "**ADAS Functionality & Integrity Act**" ([HR 6688](#)). This bipartisan legislation would require the **National Highway Traffic Safety Administration (NHTSA)** to create guidelines to ensure that automotive businesses have the information needed to properly calibrate **advanced driver assistance systems (ADAS)** after vehicles are modified.

- The U.S. House Energy and Commerce Subcommittee on Commerce, Manufacturing and Trade hearing, titled "Examining Legislative Options to Strengthen Motor Vehicle Safety, Ensure Consumer Choice and Affordability, and Cement U.S. Automotive Leadership," represents a key step for SEMA's top federal legislative priority, where it was discussed alongside other bills that strengthen motor vehicle safety, ensure consumer choice and affordability and cement American automotive leadership.

Bill sponsor U.S. Rep. **Diana Harshbarger (R-Tenn.)** spoke in support of her bill, which would require NHTSA to establish ADAS guidelines to create modification ranges and tolerances for new vehicles starting in **model-year '28**. The bill also requires the guidelines to establish ADAS test procedures that enable aftermarket businesses to properly test and validate that the vehicle systems have been properly calibrated.

SEMA submitted a statement for the record, outlining the critical need for lawmakers to pass HR 6688.

"Millions of Americans modify and customize their vehicles to enhance their vehicles' safety, performance and comfort. Their reasons for modifying vary. For some, it's a means for doing business and earning a livelihood; for others, it's how they recreate or express themselves. Regardless of their needs and preferences, it is imperative that evidence-based calibration and testing procedures are in place to ensure that ADAS is properly functioning for the protection of people both inside and outside the vehicle," wrote **SEMA President and CEO Mike Spagnola**. "Those who choose to modify or customize their vehicles are no less deserving of enjoying the safety benefits of ADAS than vehicle owners who choose to keep their vehicles in their stock condition."

### Background

The ADAS Functionality & Integrity Act would require NHTSA to establish ADAS guidelines to create modification ranges and tolerances for new vehicles starting in model-year '28. The bill also requires NHTSA to create guidelines that establish ADAS test procedures that aftermarket businesses can properly test and validate that the vehicle systems have been properly calibrated.

This legislation is crucial to being able to safely make common modifications, including installing bike racks, wrapping a vehicle, installing larger wheels and tires or installing a winch or aftermarket bumpers, without compromising the functionality of ADAS.

The bill is also timely, because a forthcoming federal mandate that would require new, model-year '29 vehicles to feature automatic emergency braking, bringing important safety systems to all new vehicles sold in the United States.

**Image courtesy of Shutterstock | Korawat Photo Shoot**

# Millions Reached, Jobs Protected: Inside SEMA and PRI's Advocacy Impact

January 18, 2026

In January, SEMA mapped its [advocacy agenda for 2025](#), and our advocates showed up in force as we elevated to heights previously unseen by the automotive aftermarket.

## Here's your 2026 SEMA/PRI advocacy wrap-up:

- More than 125,000 letters to Congress
- More than 3,000,000 voters reached
- Two pro-race track victories (North Carolina and Iowa)
- Two anti-race track bills defeated (Arkansas and Oregon)
- 330,000 jobs protected from electric vehicle (EV) mandates
- Biggest-ever increase of SEMA & PRI PAC Red Line Keyholder donors

## Preserving Vehicle Choice

SEMA was at the White House when President Trump signed into law a **Congressional Review Act** resolution that revoked California's 2024 waiver that allowed the state to ban the sale of new internal-combustion-engine vehicles, not only in California but in 12 other states. SEMA's successful campaign even won international accolades, with the **Federation Internationale de l'Automobile (FIA)** presenting SEMA with its first **President's Award for Excellence in Communication** for our unyielding efforts to mobilize the automotive community against EV mandates.

## Ensuring Your Right to Modify

In a watershed moment for American car culture, SEMA secured the introduction of the **"ADAS Functionality & Integrity Act" (HR 6688)** in the U.S. House of Representatives, marking the first time that Congress has introduced legislation to protect vehicle owners' right to modify. If passed, this bipartisan bill would ensure that aftermarket businesses have the information needed to properly calibrate **advanced driver assistance systems (ADAS) after vehicles are modified**, which is critical to being able to safely modify new vehicles, including common modifications like installing bike racks; wrapping a vehicle; installing larger wheels and tires; or installing a winch, bull bar or an aftermarket bumper.

## Protecting the Right to Race

SEMA and PRI took the checkered flag in a handful of efforts to protect race tracks nationwide. SEMA **halted legislation in Oregon and Arkansas** that would have shut down important local tracks, and in **North Carolina and Iowa**, helped establish new protections that will enable race tracks to stay open and fight back against nuisance complaints. SEMA and PRI also laid the groundwork for forthcoming action to secure a more sustainable economic landscape for race tracks across the nation via the bipartisan **Motorsports Fairness and Permanency Act (HR 2231/S 2462)**.

## Maintaining Access to Public Lands

SEMA kicked off 2025 with a win for the off-road community, as President Biden signed into law the **Expanding Public Lands Outdoor Recreation Experiences Act (EXPLORE Act)**, which improves the permitting process for motorized recreation events on federal lands. And the California Supreme Court ruled to uphold a SEMA-supported effort to **preserve motorized access to Oceano Dunes**, the only place in California where off-road enthusiasts can drive and camp on the beach for off-roading, camping and exploring.

## Telling Your Story About Tariffs

SEMA has used its platform to share with the Trump Administration and lawmakers how tariffs are impacting your business. SEMA met with the **Department of Commerce** to discuss survey data collected from our member businesses on tariff impacts

and continues to communicate how the automotive aftermarket is impacted by these policies.

#### **Helping Small Businesses Thrive**

SEMA helped secure passage of the **“One Big Beautiful Bill Act,”** which provides tax certainty to American small businesses and will help the aftermarket thrive. The law includes several key provisions that benefit SEMA member companies, including reduced tax rates for individuals and pass-through businesses, the 199a deduction made permanent, Section 179 expensing cap increased, full expensing for research and development and capital investments, expanded business interest deductions and 100% immediate deductibility of certain investments in new factories and improvements.

#### **Defense of Classic Vehicles and Collector Rights**

SEMA made significant gains in the fight to modernize California’s smog-check laws to help collectors of classic vehicles. This effort, dubbed **Leno’s Law**, earned bipartisan support and represents the most significant progress we’ve made in California on this sort of bill in decades.

#### **Protection of Small Businesses from Regulatory Overreach**

SEMA backed a **U.S. Environmental Protection Agency (EPA) proposal** to overturn the 2009 “endangerment” finding on greenhouse gases and repeal the greenhouse gas standards for light- and medium-duty motor vehicles. Our improved relationship with the EPA was never more evident than when EPA Administrator **Lee Zeldin** visited with SEMA leaders at the 2025 SEMA Show in Las Vegas.

Want to learn more? Keep an eye out for the forthcoming 2026 Advocacy Agenda, visit [sema.org/advocacy](https://sema.org/advocacy) for the latest news and resources, and give a follow to SEMA Action on [Instagram](#) to be a part of our growing community of advocates.

*Image courtesy of Tupungato, Shutterstock*

# Torque Converter Design in the New 8AP Transmission for 2025

March 24, 2026

## Torque Converter Design in the New 8AP Transmission for 2025+ Ram Cummins Diesel Trucks– The Basics

The heavy-duty diesel pickup market continues to push drivetrain technology forward as torque output climbs beyond what traditional automatic transmissions were originally designed to handle. With the release of the 2025 heavy-duty trucks from Ram powered by the Cummins 6.7L I-6 Turbo Diesel, the company introduced an entirely new transmission platform: the ZF PowerLine 8AP1075 (marketed as the **TorqueFlite HD 8-speed**).

While much of the attention has focused on the additional gear ratios and electronic architecture, the **torque converter system** is one of the most critical components enabling the transmission to handle modern diesel torque levels while improving drivability, towing performance, and efficiency.

This article examines the **design, operation, and technical characteristics of the torque converter used in the new 8AP transmission**.

### Overview of the 8AP Transmission Platform

The 8AP transmission is part of the **ZF PowerLine family of heavy-duty automatic transmissions**. It replaces the long-running 6-speed units previously used in Ram diesel trucks and is designed specifically for high-torque commercial applications.

Key transmission specifications include:

- **Maximum input torque capacity:** approximately 1,075 lb-ft
- **8 forward speeds with wide ratio spread**
- **Five clutch-pack architecture with only two open clutches in any gear**
- **Adaptive electronic control with full drive-by-wire integration**
- **Torque converter lockup capability across all gears**

The gear ratios range from a very deep **4.71:1 first gear to a 0.67 overdrive**, creating a total ratio spread of roughly **7.65:1**.

This wide spread significantly increases torque multiplication at launch while maintaining lower engine RPM at highway speeds.

However, the torque converter plays the central role in delivering this torque to the drivetrain.

### Torque Converter Architecture in the 8AP

The torque converter in the 8AP is engineered for **high-torque diesel applications** and includes several key features not commonly seen in older heavy-duty truck transmissions.

#### Core Converter Components

Like traditional hydraulic torque converters, the unit contains three primary rotating elements:

1. **Impeller (Pump)**
2. **Turbine**
3. **Stator**

However, the 8AP design incorporates **advanced torsional damping and multi-stage lockup capability** to manage diesel engine vibrations and torque spikes.

## Integrated Torsional Damper System

A defining feature of the 8AP converter is its **turbine torsional damper assembly**.

Diesel engines—particularly inline-six engines like the Cummins—produce significant **low-frequency torsional vibrations** due to their high compression ratios and long crankshaft strokes. These vibrations can cause:

- Harsh driveline oscillations
- Converter clutch chatter
- Gear train fatigue
- Premature transmission wear

To address this, the 8AP converter incorporates a **multi-spring torsional damper integrated into the turbine hub**.

### Function of the Damper

The torsional damper:

- Absorbs crankshaft torque fluctuations
- Reduces shock loading to the transmission
- Allows **earlier torque converter clutch engagement**

This is critical because the 8AP transmission is designed for **very early lockup events**, often beginning in **first gear under certain operating conditions**.

Early lockup improves efficiency and reduces heat generation in heavy towing scenarios.

## Multi-Gear Lockup Strategy

One of the most significant changes compared to previous Ram transmissions is the **expanded torque converter clutch (TCC) operating range**.

Older heavy-duty transmissions often limited lockup to higher gears to avoid harsh engagement. The 8AP system instead allows lockup **in nearly all gears from 1st through 8th** depending on load and throttle input.

### Advantages of Early Lockup

1. **Reduced Heat Generation**
  - Less converter slip reduces fluid temperatures during towing.
2. **Improved Fuel Efficiency**
  - Direct mechanical coupling improves drivetrain efficiency.
3. **Better Engine Braking**
  - Lockup enables stronger exhaust brake effectiveness.
4. **Improved throttle response**
  - Eliminates converter slip during acceleration under load.

This strategy effectively allows the transmission to behave like a **manual gearbox with controlled slip during launch**.

## Launch Torque Multiplication

Even with early lockup capability, the converter still performs its primary role during vehicle launch.

When starting from a stop:

- The **stator redirects returning fluid flow** to multiply torque.
- Torque multiplication can exceed **2:1 depending on stall characteristics**.

Combined with the transmission's **4.71 first gear ratio**, the drivetrain can deliver substantial wheel torque when pulling heavy loads.

Example:

Engine torque × converter multiplication × gear ratio = wheel torque.

With the Cummins HO producing over **1,000 lb-ft**, the multiplication effect at launch is significant.

### **Tow-Haul Mode and Converter Operation**

The 8AP also integrates torque converter strategy with **tow-haul mode programming**.

Under towing conditions the control module may:

- Delay upshifts
- Increase line pressure
- **Command earlier converter lockup**

Interestingly, in many daily driving conditions the transmission may **start in second gear**, reserving the very deep first gear primarily for towing or heavy loads.

This reduces unnecessary torque multiplication when the vehicle is unloaded.

### **Thermal Management**

Converter slip is the largest source of heat in an automatic transmission. The 8AP converter design minimizes this by:

- Enabling **rapid lockup**
- Using **high-efficiency hydraulic circuits**
- Integrating advanced cooling strategies

Reduced slip translates directly into:

- Lower transmission temperatures
- Improved clutch life
- Greater durability under sustained towing loads

These factors are critical for heavy-duty diesel trucks frequently pulling trailers exceeding **20,000 lb**.

### **Durability and Torque Capacity**

The 8AP converter is engineered to support transmission input torque levels exceeding **1,075 lb-ft**, matching the capability of the Cummins high-output engine variant.

Design elements that contribute to durability include:

- Reinforced turbine hubs

- Heavy-duty stator clutch assemblies
- High-capacity lockup clutch friction materials
- Improved fluid flow for cooling

Because diesel engines produce maximum torque at relatively low RPM, converter components must withstand **extreme torque loads during stall and launch conditions**.

### Comparison with Previous Ram Diesel Converters

Feature	68RFE / Aisin Converters	8AP Converter
Lockup gears	Usually 3rd–6th	1st–8th possible
Damper design	Basic multi-spring	Advanced turbine torsional damper
Gear count	6 speeds	8 speeds
Torque capacity	Lower	1,075 lb-ft
Launch gear	Higher ratio	4.71 deep first gear

The new converter design allows the transmission to operate more efficiently while maintaining the durability expected in heavy-duty diesel applications.

### Conclusion

The torque converter in the ZF 8AP transmission represents a major evolution in diesel truck drivetrain design. By combining **advanced torsional damping, early lockup capability, and high torque capacity**, the converter enables the new Ram heavy-duty trucks to fully utilize the output of the Cummins diesel engine while maintaining efficiency and durability.

Key improvements include:

- Multi-gear lockup capability
- Integrated turbine torsional damper
- High torque capacity exceeding 1,000 lb-ft
- Improved thermal management
- Enhanced towing performance

As diesel truck torque figures continue to climb, converter design will remain a critical component in balancing **power delivery, reliability, and drivability**.

# 6L90

March 8, 2026



Year	Make	Model	Engine	Transmission
2009 – 2015	Cadillac	CTS-V	6.2L SuperCharged	6L90
Year	Make	Model	Engine	Transmission
2012 – 2015	Chevy Camaro		6.2L SuperCharged	6L90

Metal Stamp	n/a
Ink Code	Label – 2424 2552
Paint Code	n/a

Overall Height	6.185(157.099mm)
Diameter	12.5(317.500mm)
Internal End Play	.028(0.711mm)
Internal Clearance	.085(2.159mm)
Converter Weight	

Hub Style	FL. – Step. – Slots
Hub OD	1.834(46.584mm)
Hub ID	1.518(38.557mm)
Hub Length	2.410(61.214mm)
Depth of Hub Drive	
Thru Hub Length	2.577(65.456mm)

Impeller OD	n/a
Impeller ID	12.160(308.864mm)
Fin Angle	Low Stall
Impeller Height	4.560(115.824mm)

Pilot Style	Solid
Pilot Diameter	1.703(43.256mm)
Pilot Height	.975(24.765mm)

Mounting System	6 Step Pads
Thread Size	10mm x 1.5
Cover OD	12.140(308.356mm)
Cover Thickness	
Cover Height	1.950(49.530mm)
Cover ID	n/a
Pad Height	.820(20.828mm)
Bolt Circle	11.075(281.305mm)
Part Number	Vendor
Turbine Diameter	12(304.800mm)
Internal Spline	36
External Spline	55
Stator Diameter	8(203.200mm)
Stator Code	007-1100-1241
Spline Count	33 Splines + 3 Spaces
Blade Count	14
Friction Material	Carbon – Grooved
Notes	
Friction Dimension	X
Piston Markings	
Piston Diameter	
Bore Diameter	2.578(65.481mm)
Piston Thickness	.145(3.683mm)
Damper Style	Captive Clutch
Spring Description	Leaf
Notes	n/a
Clutch Release Clearance	Captive Clutch
Ring Gear OD	n/a
Ring Gear ID	n/a
Ring Gear Thickness	n/a
Ring Gear Tooth Count	n/a
Ring Gear Width	n/a

#### Parts List – Bearings, Seals, Thrust, etc

1 – Partially Enclosed Bearing

1 – Race

1 – 1 PC Bearing

1 – Teflon Seal

Captive Clutch

#### Notes

1 – Clutch Plate

[Disclaimer](#) for information published on this website.

# 48RE, 618

March 8, 2026



Year	Make	Model	Engine	Transmission
1994 – 2004	Dodge Ram	2500-35	5.9L Cummins T.D.	48RE, 618
Year	Make	Model	Engine	Transmission

Metal Stamp	n/a
Ink Code	634, 644, 868
Paint Code	n/a

Overall Height	6.650(168.910mm)
Diameter	13.5(342.900mm)
Internal End Play	.015(0.381mm)
Internal Clearance	.140(3.556mm)
Converter Weight	

Hub Style	Flanged With Slots
Hub OD	1.875(47.625mm)
Hub ID	1.498(38.049mm)
Hub Length	2.040(51.816mm)
Depth of Hub Drive	
Thru Hub Length	2.252(57.201mm)

Impeller OD	13.040(331.216mm)
Impeller ID	n/a
Fin Angle	Low Stall
Impeller Height	4.460(113.284mm)

Pilot Style	Solid
Pilot Diameter	1.810(45.974mm)
Pilot Height	.315(8.001mm)
Mounting System	6 Pads

Thread Size	3/8 x 24
Cover OD	n/a
Cover Thickness	.160(4.064mm)
Cover Height	2.600(66.040mm)
Cover ID	13.055(331.597mm)
Pad Height	.660(16.764mm)
Bolt Circle	12.250(311.150mm)
Part Number	Vendor
Turbine Diameter	12.3(312.420mm)
Internal Spline	23
External Spline	34
Stator Diameter	8.250(209.550mm)
Stator Code	275-10141
Spline Count	27
Blade Count	17
Friction Material	Carbon
Notes	
Friction Dimension	12.5 X 10.7
Piston Markings	n/a
Piston Diameter	13(330.200mm)
Bore Diameter	2.250(57.150mm)
Piston Thickness	.132(3.353mm)
Damper Style	Enclosed
Spring Description	8 Doubles
Notes	
Clutch Release Clearance	.015(0.381mm)
Ring Gear OD	n/a
Ring Gear ID	n/a
Ring Gear Thickness	n/a
Ring Gear Tooth Count	n/a
Ring Gear Width	n/a

Parts List – Bearings, Seals, Thrust, etc

1 – 1 PC Bearing

1 – 'O' Ring

1 – Lip Seal

1 – Thrust Washer

**Notes**

Cover Specs Are For Factory Cover.

[Disclaimer](#) for information published on this website.

# Board of Directors Nomination Form



I, \_\_\_\_\_ of \_\_\_\_\_

being a member in good standing of TCRA, Nominate the following member for election to the TCRA Board of Directors

Name \_\_\_\_\_ of \_\_\_\_\_

I, the undersigned, accept the nomination

Signed \_\_\_\_\_ Date \_\_\_\_\_

Please send the completed form via e-mail to Chris Horbach, TCRA Executive Director, at [chorbach@tcraonline.com](mailto:chorbach@tcraonline.com)

Or send via traditional USPS to

TCRA

523 Hampton Manor Drive

Valparaiso, IN 46385

# 2025 TCRA Seminar – 27th Annual TCRA Seminar April 11th-12th, 2025

June 23, 2024

The Chifley Houston, A Tapestry Collection Hotel by Hilton | 2400 W. Loop S., Houston, TX 77027

TCRA hotel rate extended to April 4

Book Your Room

713-586-2444

A Group Reservation Link Will Be Available Online At  
[2025 TCRA Seminar \(hilton.com\)](https://www.hilton.com)

Register For The 2025 TCRA Seminar Below

Any Questions? Contact Keri Baer at [kbaer@tcraonline.com](mailto:kbaer@tcraonline.com)

View the [2025 Seminar Itinerary](#)



Tour Their State-Of-The-Art Torque Converter Technology & Manufacturing Facility Taking Drag Racing Converters To A Previously Unheard Level Of Performance!

**27th Annual TCRA Seminar April 11th-12th, 2025**  
The Chifley Houston, A Tapestry Collection Hotel by Hilton | 2400 W. Loop S., Houston, TX 77027

**Book Your Room**  
**713-586-2444**  
A Group Reservation Link Will Be Available Online At  
[www.tcraonline.com](http://www.tcraonline.com)

Photos courtesy of Hilton

**Register For The 2025 TCRA Seminar**

The TCRA Seminar Registration Rate has not been adjusted for inflation, so attendees are encouraged to take advantage of early registration.

Initial Member attendee is \$345 with additional attendees \$200

Non Member attendee is \$495 with additional attendees \$400

## TO REACH OUR BOARD OF DIRECTORS

Eric Saxberg President  
esaxberg@tcraonline.com

Manley Tate Vice President  
mtate@tcraonline.com

Robbie Ferguson Secretary  
rferguson@tcraonline.com

Steve Hilton Treasurer  
shilton@tcraonline.com

Christina McGee Board Member  
cmcgee@tcraonline.com

Brian Wing Board Member  
bwing@tcraonline.com

Jeff Stuck Board Member  
jstuck@tcraonline.com

## CONTACT INFORMATION

Chris Horbach Executive Director  
chorbach@tcraonline.com

Caleb Perham Tech Coordinator  
cperham@tcraonline.com  
Tech Support Hotline: (775) 895-5532

Keri Baer Bookkeeper  
kbaer@tcraonline.com  
775-742-6215

## JOIN OUR FACEBOOK GROUP

This private group is limited to members only and can be accessed by using the link below:

<https://www.facebook.com/groups/666871553488814>

Should you encounter any issues, please contact Chris Horbach at [chorbach@tcraonline.com](mailto:chorbach@tcraonline.com)

### PLATINUM SPONSORS:

BORGWARNER SCHAEFFLER WOLFPACK ENTERPRISES sonnax®



### Gold Sponsors:



TCRA is a member of: **MEMO**  
Part of the SEMA® Network  
[WWW.MEMA.ORG](http://WWW.MEMA.ORG) | [WWW.SEMA.ORG](http://WWW.SEMA.ORG)