

# Allison's TC10<sup>®</sup> Delivers 5% Better Fuel Economy





# The Allison TC10<sup>®</sup> Delivers More

Real-world fleets have documented 5% better fuel economy with Allison TC10<sup>®</sup> equipped tractors over their current manual or automated manual transmission (AMT) equipped tractors. Thanks to FuelSense<sup>®</sup>, the TC10 achieves the best fuel economy, regardless of driver experience or expertise. It shifts at just the right points to maintain vehicle performance and maximize fuel economy.

## The Allison TC10 Transmission Provides A Powerful And Efficient Fuel Economy Package With Proprietary Enhancements

- The TC10 has the ability to down speed the engine and still maintain performance
- Lock up in first range maximizes fuel efficiency
- Close ratio steps in the higher ranges allow for precision engine speed control, maximizing your time in the sweet spot
- FuelSense features are customized specifically for tractor duty cycles

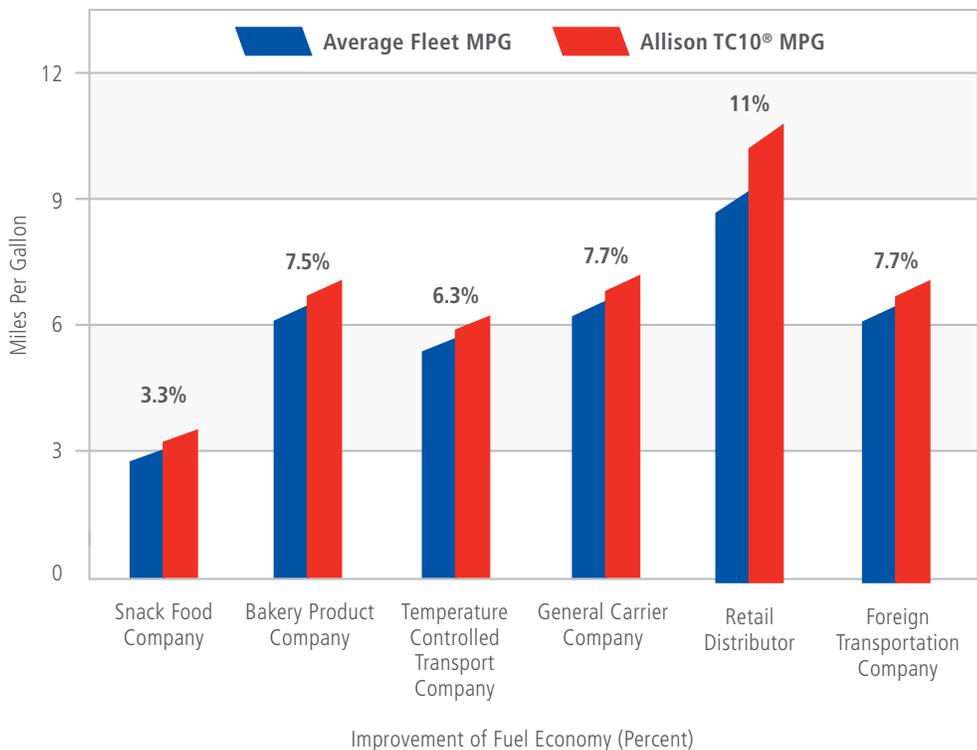
Now is the time to experience  
real savings and real performance.  
**Now is the time for the TC10.**



# Real-World Results Confirm Real-World Savings

Now you can have the reliable, driver-friendly operation of an Allison fully automatic transmission and improve your Class 8 tractor fuel economy. Equipped with FuelSense, a unique package of software and electronic controls that maximizes operational efficiency, the TC10 quickly finds the right gear saving fuel and money.

## Fuel Economy Results Provided By Initial Customers



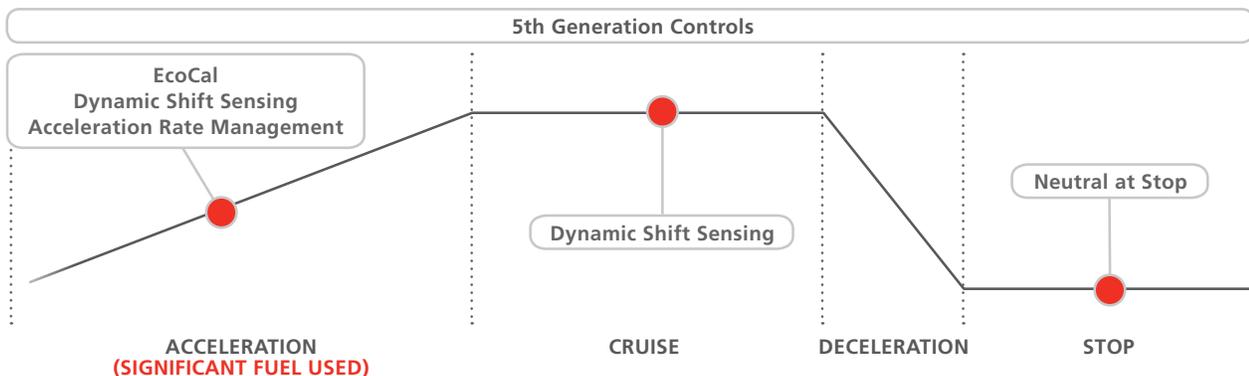


# The Savings Are **Automatic**

FuelSense® is the next generation in fuel-savings technology from Allison Transmission. Now you can easily provide your fleet and drivers with the tools necessary to maximize fuel economy and maintain productivity.

FuelSense is a unique package of software and electronic controls, available on all Allison fully automatic tractor transmissions, that improves fuel economy.

## FuelSense Features Improve Tractor Fuel Economy





Class 8 tractors have historically been forced to compromise overall vehicle drivability, along with transmission reliability, dependability and performance. **Not any longer.**

## FuelSense Features

To get the most out of every drop of fuel, Allison 5th Generation Electronic Controls offer an enhanced array of smart controls designed to increase fuel economy for the specific needs of any application.

**EcoCal**—Provides lower shift points to get into lock up as soon as possible, providing necessary performance without shift cycling.

**Dynamic Shift Sensing**—Automatically selects between lower/higher speed shift schedules based on the vehicle's actual payload and the grade on which it is operating. This optimizes fuel economy while maintaining superior performance.

**Acceleration Rate Management**—Mitigates aggressive driving by controlling engine torque based on the vehicle's grade and load.

**Neutral At Stop**—Automatically eliminates the load on the engine when the vehicle is at a full stop to save fuel and reduce overall vehicle emissions.



# The Power Of The Torque Converter

Allison's torque converter smoothly multiplies engine torque, delivering more power to the wheels. By multiplying the engine power, drivers get increased performance, faster acceleration and greater operational flexibility. An Allison fully automatic increases power while a manual or automated manual transmission (AMT) loses power with every shift. Power interrupts associated with daily shifting could cost you driving time, decreasing your productivity. An Allison Automatic eliminates power interrupts so you can accomplish more, even with a smaller engine.

## Proven Reliable And Durable

Allison is the world's leading supplier of fully automatic transmissions for commercial vehicles with over six million produced. We have a rock solid reputation for engineering excellence, and we give you peace of mind with a 5-year/750,000 mile warranty on every Allison TC10 automatic transmission.

"I was very pleased with the TC10 transmission. This product is better than what we operate today."

**Bennie Ellenberg**

*Driver, US Xpress, Greenville, SC*

## Life Cycle Value

When you factor in all life cycle costs (vehicle purchase price, fuel, tires, preventive maintenance, component repair, driver wages and retail resale value)—along with the increased productivity—an Allison Automatic equipped-vehicle costs less per mile\* to operate than a comparable competitively-equipped vehicle.

## Blended Architecture

The TC10 represents the best of both worlds by combining the powerful Allison torque converter with the drivability, performance and durability of Allison's fully automatic transmissions and the cruising fuel economy inherent in twin countershaft architecture.

## Fleet Flexibility

The TC10 not only makes it possible to have more deliveries per day, it also allows you to get more out of each truck. A TC10-equipped truck can run an urban delivery route during the day and then run a regional highway route at night.

## Increase Safety And Your Driver Pool

Today's drivers are less familiar with driving manual transmissions. This is not a problem with an Allison Automatic. Even experienced drivers benefit from more precise, safer handling and improved comfort. Once behind the wheel, drivers are more alert and in tune with the truck, leading to increased driver retention and better safety records.



\* Results may vary depending on your operating conditions. See your local Allison representative to find the potential productivity gains for your particular business.



## An Idea Whose Time Has Come

The Allison TC10 is engineered specifically for Class 8 tractor applications. The TC10 maximizes powertrain efficiency while achieving and maintaining highway cruising speeds to save you time and money. In city and suburban driving, the fully automatic TC10 utilizes the torque converter only at launch, lowering cooling requirements and protecting the powertrain, while providing fast and smooth startability for stop-and-go situations.





# TC10 Ratings And Specifications

| RATINGS |                 |                               |                                |                                   |          |                 |
|---------|-----------------|-------------------------------|--------------------------------|-----------------------------------|----------|-----------------|
| MODEL   | MAX INPUT POWER | MAX INPUT TORQUE <sup>1</sup> | MAX OUTPUT TORQUE <sup>1</sup> | MAX TURBINE TORQUE <sup>2,3</sup> | MAX GVW  | MAX GCW         |
|         | hp (kW)         | lb-ft (N•m)                   | lb-ft (N•m)                    | lb-ft (N•m)                       | lbs (kg) | lbs (kg)        |
| TC10    | 600 (447)       | 1700 (2305)                   | 13,000 (17,625)                | 1750 (2372)                       | —        | 80,000 (36,288) |

<sup>1</sup> Gross power rating as defined by ISO 1585 or SAE J1995.  
<sup>2</sup> Turbine Torque limit based on ISCAAN standard deductions.  
<sup>3</sup> Lower Range Torque Protection (L RTP) required to limit turbine torque and to limit output torque to 13,000 lb-ft (17,625 N•m) or less.

| GEAR RATIOS—TORQUE CONVERTER MULTIPLICATION NOT INCLUDED |        |        |         |        |        |        |         |        |        |        |                  |                   |
|--|--------|--------|---------|--------|--------|--------|---------|--------|--------|--------|------------------|-------------------|
| RANGE  | FIRST  | SECOND | THIRD   | FOURTH | FIFTH  | SIXTH  | SEVENTH | EIGHTH | NINETH | TENTH  | STANDARD REVERSE | ALTERNATE REVERSE |
| RATIO  | 7.40:1 | 5.44:1 | 4.247:1 | 3.43:1 | 2.94:1 | 2.16:1 | 1.59:1  | 1.24:1 | 1.00:1 | 0.86:1 | -6.710:1         | -1.957:1          |
| STEP %   | —      | 36%    | 28%     | 24%    | 17%    | 36%    | 36%     | 28%    | 24%    | 16.28% |                  |                   |

| STANDARD POWER TAKEOFF PROVISION <sup>2</sup> |                                   |               |                      |
|---|-----------------------------------|---------------|----------------------|
| BASE MODEL                                    | MOUNTING PAD POSITIONS            | MAXIMUM VALUE | DRIVE SPEED          |
|   |                                   | lb-ft (N•m)   | RPM                  |
| TC10  | Rear                              |               | 1.28 x Turbine Speed |
|   | Continuous Operation <sup>1</sup> | 475 (645)     |                      |
|   | Intermittent Operation            | 650 (880)     |                      |

| OIL SYSTEM |                                   |
|------------|-----------------------------------|
| BASE MODEL | CAPACITY <sup>1</sup>             |
|            | quarts (liters)                   |
| TC10       | 56 <sup>2</sup> (53) <sup>2</sup> |

*Recommended fluid types for all models is Allison Approved TES 295® transmission fluid.*

<sup>1</sup> Drive shaft torque must not exceed continuous rating for more than one-third of the PTO operation.

<sup>2</sup> The PTO Provision is optional for the TC10. All TC10 Transmissions have a PTO pad and cover located on the rear cover. The TC10 includes the PTO drive shaft if the PTO option is ordered with the transmission. Contact your Allison representative for more information.

<sup>1</sup> Amount to fill a dry transmission after assembly and rebuild. The initial fill for a transmission as received from the Allison factory will be less. Residual fluid remains in the transmission after acceptance testing.

<sup>2</sup> Transmission only. Does not include external circuits or additional volume which may be required if installed angle of the transmission is greater than zero degrees.

| ENGINE SPEEDS |                          |                     |                            |
|---------------|--------------------------|---------------------|----------------------------|
| MODEL         | FULL LOAD GOVERNED SPEED | IDLE SPEED IN DRIVE | OUTPUT SHAFT SPEED FORWARD |
|               | Min-Max (rpm)            | Min-Max (rpm)       | rpm                        |
| TC10          | 1700-2100                | 600-800             | 2440                       |

| PHYSICAL DESCRIPTION |                     |                            |            |
|----------------------|---------------------|----------------------------|------------|
| BASE MODEL           | LENGTH <sup>1</sup> | OIL PAN DEPTH <sup>2</sup> | DRY WEIGHT |
|                      | in (mm)             | in (mm)                    | lbs (kg)   |
| TC10                 | 40.98 (1040.9)      | 16.83 (427.5)              | 1074 (487) |

| TORQUE CONVERTER SPECIFICATIONS |                  |                      |
|---------------------------------|------------------|----------------------|
| BASE MODEL                      | TORQUE CONVERTER | NOMINAL STALL TORQUE |
| TC10                            | TC-633           | 1.84                 |

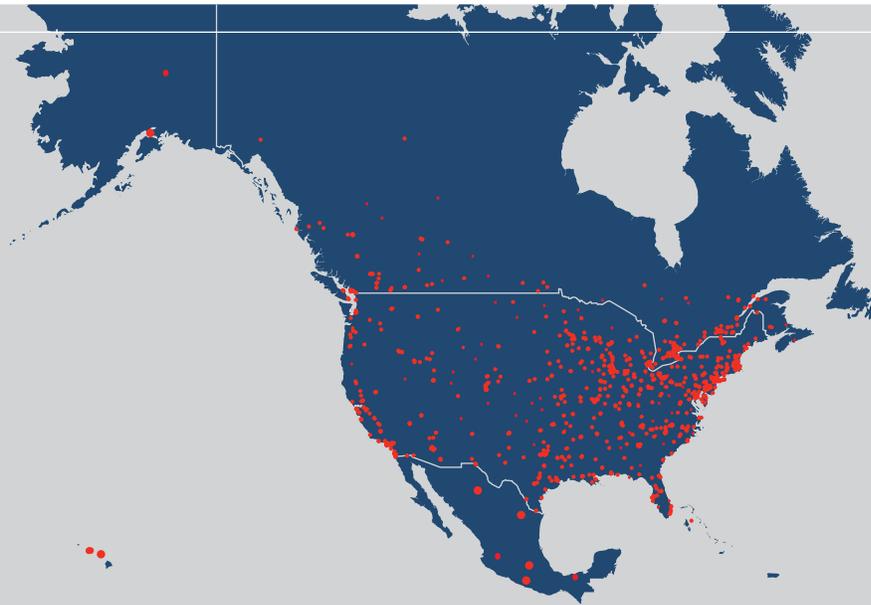
<sup>1</sup> Length from the engine transmission split line to the end of the output shaft.

<sup>2</sup> Depth below the transmission centerline.

“Great shift quality, smooth shifting, shifts rapidly when accelerating from a stop, allowing smoother entry into traffic.”

**Amanda Fisher**

Driver, Central Refrigeration Services, Salt Lake, UT



## Allison Has You Covered

Our extensive network of approximately 1,100 Allison Authorized Distributors and Dealers in North America means convenient, factory-quality Allison Transmission service is always close at hand.

*One Allison Way  
Indianapolis, Indiana, USA, 46222-3271*

*Information or specifications subject to  
change without notice or obligation.*

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