



# PRODUCT CATALOG





# WE CREATE AMERICAN PRODUCTS

Whether you're hauling ass across the race track or hauling asses in a trailer, we have you covered. All our products are made in America, by men and women who make a living by supporting every type of American in the diesel industry. Because we know you have places to be and records to beat.

**AMERICAN PRODUCTS. AMERICAN WORKERS. AMERICAN CRAFTSMANSHIP.**



# FOR THE AMERICAN WORKING MAN.

SunCoast Converters, Inc. was established in 1989 as a two-man operation in the back of a transmission shop. Today, SunCoast has grown to more than 50 employees and 70,000 sq. ft. of room to conduct operations. SunCoast started with a quest to answer the demand for quality aftermarket torque converters, transmissions, and parts.

Since then, SunCoast has identified and corrected failure points within numerous OEM transmissions and torque converters. SunCoast formulates test data using real-world scenarios, along with the latest technology and design methods, to manufacture parts that correct the cause of these failures. This practice has helped SunCoast stay ahead of its competitors in not only quality, but also extending past that to the winners podium for its customers and sponsored vehicles.

The company's research and development, combined with years of transmission and torque converter experience, is unparalleled. Pride in design, manufacturing, technical support, and customer satisfaction has been and always will be the primary goal of SunCoast. The company tries to educate the public on the differences in products from other manufacturers, mainly so its customers know when they are getting product of substance versus a product that is simply

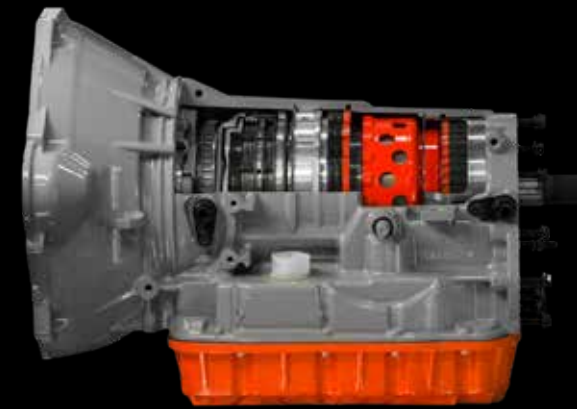


reabeled. SunCoast will never sacrifice quality for price point. They have numerous CNC machines that run around the clock making parts for in-house use. They also have multiple CAD developers, as well as programmers on staff, making innovation in design second nature.

SunCoast is known throughout the transmission world for its top-of-the-line torque converters, because the company has taken the time to listen, learn, research, and respond to its customers' suggestions, with outstanding results. The company will continue to make its converters and transmissions the best in the business, while continuously researching new technologies that shine new light on the industry. Design copying is easy. Innovations however, are more difficult.



# DODGE PRODUCTS



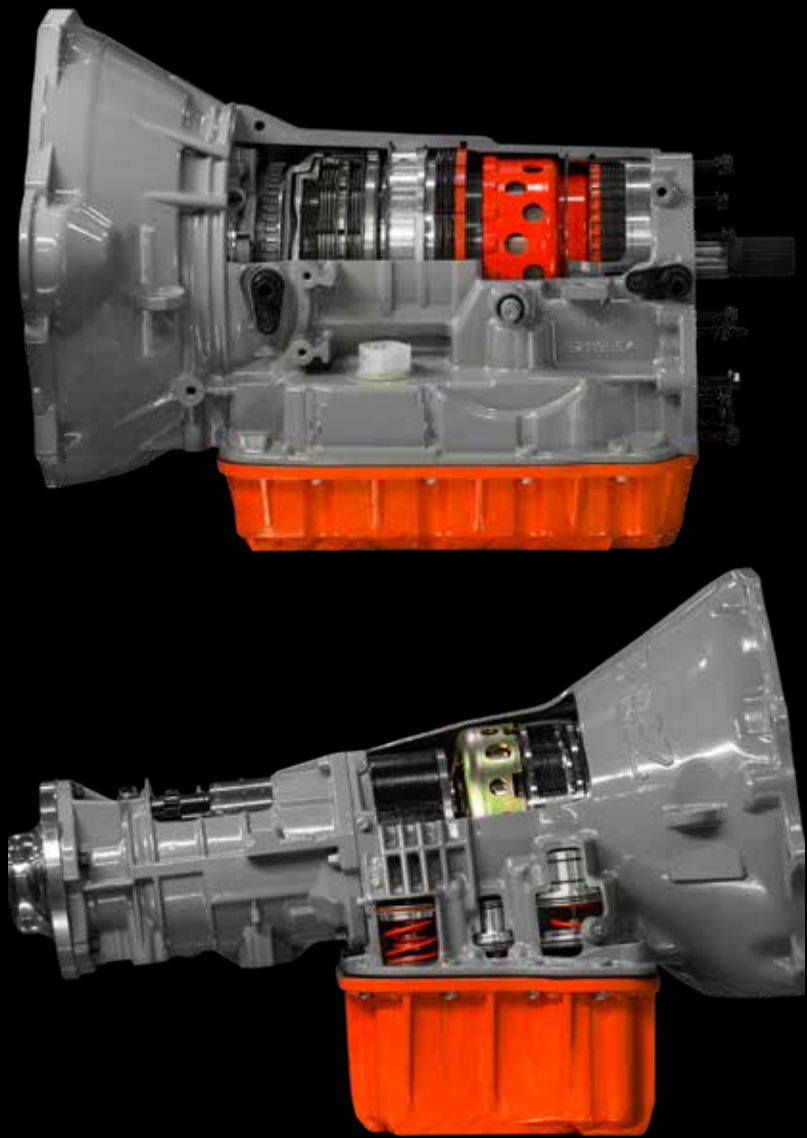
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## DODGE TRANSMISSIONS

46RH | 47RH | 47RE | 48RE | 68RFE

The SunCoast Dodge series transmission assemblies offer consumers the ultimate in performance and durability, which are needed to deliver Cummins power to the ground. All transmissions are rebuilt to exact specifications with new bushings, seals, rings, frictions, and steels. All hard parts are inspected, machined, and/or replaced to meet specifications. These blueprinted assemblies include the SunCoast valve body and are available with the Mag-Hytec double deep pan option. All transmissions are dyno-tested to ensure pressure and flow calibrations. Upgraded hard parts, such as billet input, intermediate, output shafts, and drums, vary depending on application (competition unit).

The SunCoast transmission includes increased clutch count with high-energy friction materials of choice (Alto® or Raybestos®), treated steels, and can also feature upgraded parts.

- Billet Band
- Billet Strut & Anchor
- Billet Forward & Direct Piston
- Billet 4-ring Accumulator Piston
- Billet Upgraded Governor Solenoid
- Billet 1-2 Servo
- Multiple Input Shaft Options (some require custom torque converter)

## PART NUMBERS:



### 1989-1993

PLSD-46RH-2X.....	46RH 2WD TRANS ASSEMBLY
PLSD-46RH-4X.....	46RH 4WD TRANS ASSEMBLY

### 1994-1995

PLSD-47RH-2X.....	47RH 2WD TRANS ASSEMBLY
PLSD-47RH-4X.....	47RH 4WD TRANS ASSEMBLY
PLSD-47RH-COMP.....	47RH 4WD M3GA COMP TRANS ASSEMBLY

### 1996-2003

PLSD-47RE-2X.....	47RE 2WD TRANS ASSEMBLY
PLSD-47RE-4X.....	47RE 4WD TRANS ASSEMBLY
PLSD-47RE-M-COMP-2X.....	47RE 2WD M3GA COMP TRANS ASSEMBLY
PLSD-47RE-M-COMP-4X.....	47RE 4WD M3GA COMP TRANS ASSEMBLY

### 2003.5-2007

PLSD-48RE-2X.....	48RE 2WD TRANS ASSEMBLY
PLSD-48RE-4X.....	48RE 4WD TRANS ASSEMBLY
PLSD-48RE-27-COMP-2X.....	48RE 2WD M3GA COMP TRANS ASSEMBLY
PLSD-48RE-27-COMP-4X.....	48RE 4WD M3GA COMP TRANS ASSEMBLY

### 2007.5-2016

PLSD-68RFE-JR-2X.....	68RFE 2WD M3GA JR. TRANS ASSEMBLY
PLSD-68RFE-JR-4X.....	68RFE 4WD M3GA JR. TRANS ASSEMBLY
PLSD-68RFE-M3GA-2X.....	68RFE 2WD M3GA COMP TRANS ASSEMBLY
PLSD-68RFE-M3GA-4X.....	68RFE 4WD M3GA COMP TRANS ASSEMBLY

# 68RFE 2WD/4WD M3GA COMPETITION TRANSMISSION

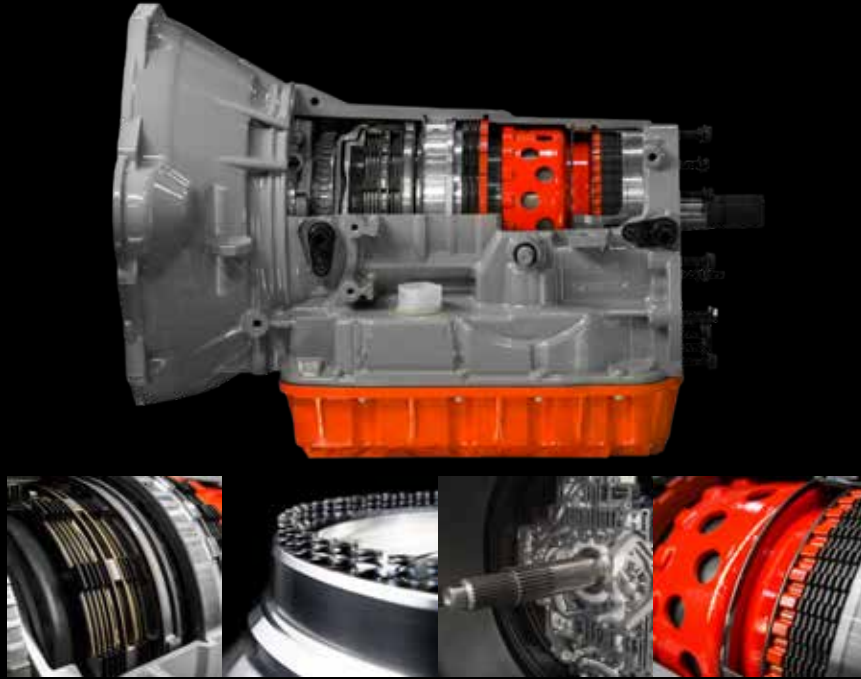
SKU#: *PLSD-68RFE-M3GA-2X / PLSD-68RFE-M3GA-4X*

## TRANSMISSION INCLUDES THE FOLLOWING:

- SunCoast Custom-patented M3GA Comp Full Billet Drum
- SunCoast Custom-calibrated Valve Body
- SunCoast Custom-calibrated Pump
- SunCoast Custom TC Limit Valve Modification
- SunCoast Custom Water-Jetted Separator Plate
- SunCoast Custom-machined Billet Overdrive Accumulator Piston
- SunCoast Custom-machined Billet Apply Plate
- SunCoast Custom-designed 2C Apply Plate
- SunCoast Custom-designed 2C Power Pack
- SunCoast Custom-designed Clutch Stack-ups
- SunCoast Custom-designed Overdrive/Underdrive Power Pack
- SunCoast Custom-patented Billet L/R Sprag
- SunCoast Custom Billet C2 Piston
- SunCoast Custom Billet C4 Spring Retainer
- New Bushings
- New Torrington Thrust Bearings
- New Thrust Washers

The SunCoast M3GA Comp. transmission is a perfect solution for a deleted, mildly modified truck that can serve as a dual-purpose unit. The transmission is a workhorse and works incredibly well as a towing unit for hot-shot drivers, 5th wheel RVs, and most anything else you can hook up to the back end. When coupled with one of our towing triple-disc billet torque converters, you will not find a more efficient transmission on the planet at any cost.

This unit is also capable of a mildly modified street performance machine. This base package is good for up to 600hp with the addition of a few key hard parts, such as the billet flexplate and billet input



shaft, which are highly recommended. It is specifically designed to eliminate the dreaded overdrive issues. We started researching this project with a clean slate. There are several key issues with the 68RFE that contribute to the premature failure of the overdrive clutches.

The 68RFE pump was the first problematic area that we addressed. Our engineers were able to determine the amount of clamping force needed to make the clutches hold. Unfortunately, the factory configuration is not capable of achieving this, so we addressed:

## LINE PRESSURE

The 68RFE pump was the first problematic area that we addressed. Our engineers were able to determine the amount of clamping force needed to make the clutches hold. Unfortunately, the factory configuration is not capable of achieving this. Let's take a quick look at some key issues addressed.

From the factory, the 68RFE transmission pump is incapable of exceeding line pressures of 170 PSI. Many times, we see tuners request from the transmissions lines pressures in excess of 200psi, which the factory pump is unable to achieve. In all forward gears, the factory pump bleeds off pressure at 165 PSI. This is done by design. When a vehicle is heavily modified (i.e. larger wheels and tires, aftermarket turbos, tuners) the line pressure becomes critical to keep the transmission alive.

The 68-SCP from SunCoast addresses this issue. When combined with our custom 68RFE separator plate, this pump half will allow you to achieve pressures in excess of 250 PSI. Another issue plaguing the 68RFE is the torque converter circuit within the pump. This issue often leads to the ballooning of the torque converter. Here at SunCoast, we address this issue by modifying the release oil circuit within the pump. Furthermore, each 68-SCP is vacuum-tested to ensure no cross leaks are present. This modified pump half fits all 68RFE transmissions.

## FLIPPING OUT OVER THE SPRAG

The factory low/reverse (L/R) sprag assembly has been a sore spot for many customers after a nasty boosted launch. It has left many of the 68RFEs stranded on the side of the road with a fat taste of disappointment in their mouth. The issue with this factory unit is inherent to the design. The factory unit utilizes a "dog bone" type sprag. The 68RFE L/R clutch is only on when the output shaft is turning below 150 RPM. These L/R clutches then release the load back onto the factory L/R sprag, which during heavy acceleration, boosted launches and burnouts will not stand up to such stress. The result will be the loss of first and second gear starts.

When SunCoast first saw this, we knew immediately this would not be acceptable for our torque-hungry clients, and so we went to work. SunCoast knew that the sprag had to be pre-loaded with tension, and the old "dog bone" style was not going to work. Hence, our very first design was to switch to an accordion style of spring. This proved to

not only provide a sufficient amount of tension to keep the sprag from flipping, but also held at the current power levels we were seeing at the time. However, we knew it was only a matter of time before we would see the limits being pushed with our new design. Fast forward to 8 years later, and now this design has been copied and almost every retailer is selling their version of this design. The unfortunate aspect of this is the design has reached its capacity with the power levels being reached in the new 6.7 Cummins, and we are seeing even the new design achieve catastrophic failure. However, we already were aware of this potential failure and have been hard at work with the patent office yet again.

In all of our 68RFE units, we now include our new Patent-Pending Billet M3GA Sprag. This is an all-billet design, not the plastic stuff the competition wants to sell you. SunCoast's all-billet M3GA Sprag also includes a redesigned spring style to ensure the pre-load is sufficient to alleviate the problems. This new billet design is absolutely unbreakable and currently has a patent pending. Plastic or Billet? We will let you decide.

## THE VALVE BODY

The valve body is like the brain of the transmission. It is the single most important item in the transmission. Here at SunCoast, we take a very scientific approach to how we calibrate these units. We start with addressing the accumulator cover plate. It has been shown time and time again that these factory side plates are prone to deflection, due to the fact they are made with inferior steel and a bit thinner than desired. If you start driving line pressure even higher, you will see this issue with deflection becomes even more prevalent. When this deflection occurs, it will often cause the screws to loosen and, in some instances, even break. SunCoast replaces the factory plate with a thicker, reinforced plate that adds 3 additional holes to allow for additional, stronger mounting screws to keep flex to a minimum. This new accumulator cover plate is standard on all SunCoast 68RFE builds.



## DODGE TRIPLE-CLUTCH CONVERTERS

47RE | 48RE

SunCoast Dodge series torque converters are designed and manufactured in-house. Because of this, we're able to supply almost any request in regard to stall, torque multiplication, efficiency to custom applications.

Custom-designed billet stators provide better torque and efficiency prior to lockup. SunCoast's custom-designed CNC-machined billet piston houses its 3-disc converter lock up clutches and will not flex like other billet converters on the market. This clutch then applies to the custom CNC-machined forged billet cover.

\*Core deposit required.

### FEATURES

- Multiple Billet Stators for Various Stalls (1800-3000 Stocked)
- Custom Pump and Turbine Modifications (in-house)
- Tig Welding to Reinforce Furnace-brazed Fins
- Proprietary Converter Clutches with Trapezoid Clutch Teeth (No Round Tabs)
- CNC-Machined Billet Stators (1800-3000 RPM Stall)
- 4140 Turbine Splines (Heat-treated Depending on Application)
- Billet Steel and Aluminum Pistons
- Forged Billet Cover Strength (Proprietary Raybestos Converter Clutch Plates) Pressure-tested welds/spun-balanced to ensure highest quality

## DODGE TRIPLE-CLUTCH CONVERTERS

68RFE

This triple-disc torque converter for the 2007-Current 68RFE-equipped 6.7L Cummins is manufactured and assembled at SunCoast. Boasting more than 3.4x the lockup clutch surface apply area over stock (8.7" vs. 29.7") and distributing the load over three separate surface apply areas, SunCoast's triple disc converters are sure to put all of the power to the ground. Starting with a solid chunk of steel, the cover is machined to exact specifications. Utilizing SunCoast's exclusive trapezoidal teeth design, the lockup portion of the converter is seamlessly integrated into the cover, eliminating a weak point and common source of chatter. An upgraded billet lockup apply piston is able to transfer a much higher pressure to the lockup clutch without sacrificing durability. Instead of the factory-style plastic stator cap/thrust spacer, SunCoast utilizes a metal Torrington roller style bearing, which is better suited to take the heat, as well as wear and tear. The turbine assembly is Tig-reinforced and heat-treated. This exponentially increases its lifespan under harsh conditions. Stall on this model is approximately 2000 RPM, and much more efficient at energy transfer than the factory offering.

### FEATURES

- Forged Billet Steel Covers
- Billet Aluminum Stators
- Pressure-tested Welds
- Spun-balanced on Stewart Warner Pro-balancer
- Furnace-brazed & Tig-Welded
- Signature Trapezoid Clutch Teeth (No Round Tabs)



# DODGE TRIPLE-CLUTCH CONVERTERS

PART NUMBER	DESCRIPTION
2361819	2200 STALL 12V SINGLE-DISC CONVERTER
2361819-3D	2200 STALL 12V 3D CONVERTER
2361819-3D-PF	2200 STALL POWERFLITE REG. SHAFT CONVERTER
2361822-3D	2200 STOCK STALL 3D CONVERTER
2361825-3D	2500 STALL 3D RACE CONVERTER
2361825-3D-DF	DURAFLITE CONVERTER
2361825-PF-3D	2500 STALL POWERFLITE CONVERTER
2361826-3D	2600 STALL RACE/SLED CONVERTER
2361826-1-3D	2600-2700 STALL RACE/SLED CONVERTER
2361827-3D	2700-3000 STALL RACE/SLED CONVERTER
2361827-3D-DF	DURAFLITE CONVERTER
2361827-PF-3D	2700-3000 STALL POWERFLITE CONVERTER
2361838	1800 LOW STALL 24V SINGLE-DISC CONVERTER
2361838-3D	1800 LOW STALL 3D CONVERTER
2361844	2000 STALL 24V SINGLE-DISC CONVERTER
2361844-3D	2000 STALL 24V 3D CONVERTER
2361848	2000 STALL 24V SINGLE-DISC CONVERTER
2361848-3D	2000 STALL 24V 3D CONVERTER
2361848-3D-250	2000 STALL 48/68 3D CONVERTER
2361848-9	2200 STALL SINGLE-DISC CONVERTER
2361848-9-3D	2200 STALL 3D CONVERTER
2361848-9-3D-DF	DURAFLITE CONVERTER

PART NUMBER	DESCRIPTION
23618-SRT-24-3D	2400 STALL V-10 3D CONVERTER
23618-SRT-26-3D	2600 STALL V-10 3D CONVERTER
23618181-12-3D	RACE 12 3D CONVERTER
2451816	518 NON LOCKUP CONVERTER
2451844	518 NON LOCKUP LOW STALL CONVERTER
2761819-3D	2200 STALL 27 SPLINE CONVERTER
2761825-3D	2500 STALL MEDIUM SHAFT 3D CONVERTER
2761825-3D-DF	27 SPLINE DURAFLITE CONVERTER
2761827-3D	618 27 SPLINE 48RE CONVERTER
2761844-3D	618 27 SPLINE 48RE CONVERTER
2761848-3D	27 SPLINE 48RE CONVERTER
BAC-2761819-3D	1900 STALL MEDIUM SHAFT 3D CONVERTER
BAC-2761822-3D	2200 STALL MEDIUM SHAFT 3D CONVERTER
BAC-2761827-3D	2700-3000 STALL MEDIUM SHAFT 3D CONVERTER
BAC-2761848-3D	2000 STALL MEDIUM SHAFT 3D CONVERTER
68RFE-46-3D	1900-2000 STALL 3D CONVERTER
68RFE-86-3D	68RFE 3D CONVERTER
SC-68RFEC1-20	68RFE CATEGORY 1 CONVERTER
SC-23618C1-20	47/48RE CATEGORY 1 CONVERTER
AS68-3D	AS68RC CONVERTER
AS69-4D	AS69RC CONVERTER

## 47/48RE TRIPLE-DISC BILLET CATEGORY 1 TORQUE CONVERTER

SKU#: SC-23618C1-20

### FEATURES AND BENEFITS:

- 3-YEAR, UNLIMITED-MILEAGE WARRANTY
- Billet Lockup Apply Piston
- CNC-Machined Billet Steel Cover
- Balloon Plate
- 4140 Turbine Splines
- 4140 Hardened Hub
- 3 Carbon-Graphitic Clutch Discs
- Furnaced-Brazed Fins
- Torrington Thrust Bearing Stator Design
- Pressurized "Hot Soak" Leak Testing
- Computer-Balanced to Within .01 Gram
- Precisioned-Assembled by Caring American Workers

### THE CATEGORY 1

This Category 1 SunCoast Torque Converter fits both 47 & 48RE transmissions and is engineered to handle all of your every-day duties. Whether you're towing a camper or hauling dirt to a job site, this torque converter is designed to improve vehicle response and give you years of solid, reliable performance. The converter comes with furnace-brazed fins and hardened



turbine splines. The clutches in this converter are carbon-graphitic for precise and accurate lock-up.

If you're looking to increase the performance of the factory unit—and looking for a cost-effective solution—this is the converter for you. This converter, while great for heavy duty towing and hauling, is not intended for racing.



# 68RFE TRIPLE-DISC BILLET CATEGORY 1 TORQUE CONVERTER

SKU#: SC-68RFEC1-20



## FEATURES AND BENEFITS:

- 3-YEAR, UNLIMITED MILEAGE WARRANTY
- Billet Lockup Apply Piston
- CNC-Machined Billet Steel Cover
- Balloon Plate
- 4140 Turbine Splines
- 4140 Hardened Hub
- 3 Carbon-Graphitic Clutch Discs
- Furnaced-Brazed Fins
- Torrington Thrust Bearing Stator Design
- Pressurized "Hot Soak" Leak Testing
- Computer-Balanced to Within .01 Gram
- Precision-Assembled by Caring American Workers

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This Category 1 SunCoast Torque Converter fits all 68RFE transmissions and is engineered to handle all of your everyday duties. Whether you're towing a camper or hauling dirt to a job site, this torque converter is designed to improved vehicle response and give you years of solid, reliable performance. It comes with furnace-brazed fins and hardened turbine splines. The clutches in this converter are carbon-graphitic for precise and accurate lock-up.

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## DODGE REBUILD KITS

47RE | 48RE | 68RFE

SunCoast's Dodge series rebuild kits cover all years from 1989-2017 (kit part number dependent upon year). These kits utilize the latest proven friction materials and steel technology from industry leading companies such as Alto® and Raybestos®. SunCoast works directly with these companies to design and manufacture proprietary exclusive SunCoast product lines, giving the end user uncompromised quality throughout the entire transmission. SunCoast has designed these kits in-house to exact specifications for many intents, including but not limited to towing, sled pulling, racing or having a vehicle to get from point A to point B. Along with these kits, SunCoast has a full line of billet single/triple disc torque converters ranging from 1800 stall to approximately 3000 RPM (manufactured in-house). In addition, the company has multiple input/output shaft options, multiple custom valve body options ranging from forward manual, reverse manual, trans brake, electronic valve bodies, billet steel and aluminum drums (year dependent), SFI-approved flexplates, SFI-approved transmission jackets, and much more.

## PRODUCT HIGHLIGHTS

- Billet 2nd gear band
- Billet strut anchor
- Billet accumulator (to replace the OEM plastic one).
- Governor pressure sensor – this is an upgrade that can be included in the kit or purchased separately. It has proven itself to be the most reliable governor pressure solenoid on the market. This part consists of a 4L60E EPC solenoid which is made from aircraft grade T-56 Billet Aluminum – this means no warping, leaking, sweating, or cracking and means it provides far more consistent pressures.
- SunCoast's billet 1-2 servo has 16% more apply area and provides more band holding power in second gear. Its easy-to-install part improves 1-2 and 2-3 shifts and features improved seal design which conserves pump volume.



## SUNCOAST 48RE M3GA CATEGORY REBUILD KITS

### KITS CONTAIN THE FOLLOWING:

- Complete Clutch and Steel Kit Using Raybestos Clutches and Steels
- 5 Alto Direct Clutches and 6 Raybestos Direct Clutch Steels
- 4 Alto Forward Frictions and 3 Kolene Steels
- 10 Overdrive Direct Frictions and 9 Kolene Steels
- 6 Overdrive Brake Frictions and 6 Kolene Steels
- SunCoast Custom Billet 2nd gear Band
- SunCoast Custom Billet Band Strut
- SunCoast Custom Billet Band Anchor
- SunCoast Custom Billet Accumulator Piston
- SunCoast Custom Billet Forward Clutch Piston
- SunCoast Custom Billet Direct Clutch Piston
- SunCoast Custom Billet 2nd Gear Servo
- SunCoast Custom Custom Direct Springs (10)
- SunCoast gasket and Sealing Kit
- New Front Pump Bushing
- New Filter
- Upgraded Governor Pressure Solenoid
- TransGo Shift Calibration Kit
- Upgraded Valve Body Electronics
- Billet Triple-disc Torque Converter
- Transmission Assembly Lube
- 3 Cans of Transmission Flush
- ATRA Rebuild Manual
- New Bushing Kit
- New Thrust Washers

### SUNCOAST "DO IT YOURSELF" REBUILD KIT

This is a custom SunCoast kit that includes everything you will need to build your unit just like we do.



Here are a few of the highlights of this kit and the components that these custom SunCoast rebuild kits include:

### THE BILLET BAND PACKAGE

The TorqueFlite transmission utilizes a band to shift the transmission into 2nd gear, then this band is released when shifting into 3rd gear. This band wraps around the direct drum (right behind the transmission pump) and this drum houses the direct clutches (3rd gear). When thinking about the amount of torque these trucks can make, coupled

with the torque multiplication of the converter, it soon becomes apparent why this area could be problematic. From the factory, the band itself is a very flexible, and will stretch and require constant adjustment. When even modest attempts of increased apply pressure occur, these bands break due to the flimsy construction. You will see some aftermarket attempts to use a very rigid material to keep these from flexing or breaking. SunCoast took a different approach and just redesigned the band all together. Each one of our units receives a new SunCoast custom billet band machined in-house. This new SunCoast billet band is also lined with a Carbon Fiber friction material, offering the best friction coefficient available.

Our next focus is with the hydraulic integrity of this band actuation. The best band in the world is useless without proper clamping force when the apply and a quick release off the drum is needed. This is where our SunCoast billet 2nd gear servo comes into play. The factory uses a cast servo, which offers two simple o'rings to help control cross-leaking within the bore. Over time, this bore will wear, causing cross leaking and lazy shifts, slips going into 2nd gear, and of course, in some events, bind-ups and dragging of the band going into 3rd. SunCoast corrects this by installing a custom CNC'd billet intermediate servo. This servo is made with 4 sealing rings of both teflon and rubber that is double what the factory uses. This servo is also larger in apply area—over 20% larger than the factory. This larger apply surface area allows for not only a dramatic increase in apply pressure, giving you an enormous amount of clamping load, but this also allows for a faster shift time. As almost everyone in our industry lusts over the additional clamping force and much quicker apply time, we often overlook the release of the band. The release of the band can be just as important, if not more. When they drag on release, it can cause bind-up issues, scoring of the band material, and of course, premature wear. SunCoast also modifies the length of this servo to achieve crisper shifting.

Now that we have increased the clamping force, we must address the two other problematic issues with the band strut and the band anchor.

Just as an engine builder would change to a stronger chrome moly push rod when changing the camshaft to ensure no deflection occurs, and the same can be said for the band strut and band anchor. Having more apply pressure on the band, we must correct the issue with the factory band strut, as well. SunCoast replaced the factory band strut with a much stronger billet band strut to keep any deflection at bay. The band anchor is also replaced with a billet one.

### THROWING OUT THE GARBAGE

The factory, through all of the engineering they have done, somehow thought it would be a good idea to put a plastic accumulator piston in this unit. We are still left scratching our head everytime we see a broken one. These very inexpensive plastic pistons will, in fact, break over time. This is not a matter of if but when this will happen. When you couple this with the fact that this piston also has issues with cross leaking within the bore, it only makes sense that it belongs in the trash. Here at SunCoast we manufacture our own new piston that has additional sealing rings to fix this issue. This accumulator piston is also designed with annular grooves to keep side loading from transpiring.

### THE SHAFTS

The SunCoast TorqueFlite transmission has set many world records within the diesel racing world. Supporting these racing teams through the years has taught us one thing: shafts have a limit. This kit is different than any other kit due to the fact that the input shaft, as well as the output shaft is larger than the standard.

The input shaft in this kit is the 27-Spline SunCoast M3GA Input Shaft and is only available in the Category 5 kits. This shaft is considerably larger than the factory shaft and helps improve reliability with both shear and fatigue breaks that are so common with these units. The TCC feed circuit is also modified with this larger shaft. This kit will come with a larger stator support to accommodate the larger shaft.

The output shaft is also increased in size to a 29-spline. This shaft will require you to change out the input shaft on the transfer case, as well.

**DEFLECTING THE BLAME**

Deflection can occur in many ways, and engineering deflection is the degree to which a structural element is displaced under a load. When we start talking about loads under hydraulic apply principles and deflection is always around us.

In both the direct and forward drum we see deflection and side loading contribute to repeated failures daily. At SunCoast, we have addressed the issue with the direct drum by making several improvements. The factory cast piston has several key issues we felt we needed to address. On every one of our competition transmissions, we simply replace the factory direct drum with a full billet one. While this is very costly, we felt it necessary despite the cost. This upgrade is not needed for mildly modded vehicles, and we can resolve the key issues by simply replacing the factory piston. Here are the key issues with this piston and how we address it:

**CROSSLEAKING** - The factory piston over time will wear in the inner diameter allowing it to crossleak and even cause side-loading. This uneven wear and side-loading can further aid the deflection occurring with the higher line pressure from, say, a shift kit. This is alleviated by simply changing the material that is much more resistant to wear.

**DEFLECTING** - In attempts to achieve greater clamping force, most builders will modify the separator plate and valve body to achieve both more volume and line pressure. The only issue is the factory "cast" piston was not designed for this. The modest attempts by the builder is now causing

deflection and uneven apply. We correct this issue using a custom SunCoast CNC'd direct piston that will not deflect under the most extreme loads.

**CLAMPING** - When SunCoast sat down to design our new billet direct piston, we knew we wanted to address the apply surface area, so we did just that. The new SunCoast billet direct piston has a larger-than-factory apply area. This, along with the fact it is billet, allows us to achieve the greatest undeflected apply pressures in the industry.

**STACK-UP** - SunCoast has specifically designed these apply pistons in both the forward and direct drums to a custom design allowing our own proprietary custom clutch and steel stack-ups. We manufacture each billet piston for both the direct and forward pistons with exact tolerances in mind.

**RELEASE** - The SunCoast custom redesigned billet direct piston also comes with our own custom spring count with a set of custom return springs. This was an important issue we wanted to address in the direct clutch; after all, the release is just as valuable as the apply.

**UPGRADED ELECTRONICS**

Governor Pressure Sensor: this is an upgrade that can be included in the kit or purchased separately. It has proven itself to be the most reliable governor pressure solenoid on the market. This part consists of a 4L60E EPC solenoid which is made from aircraft grade T-56 Billet Aluminum; this means no warping, leaking, sweating, or cracking, and means it provides far more consistent pressures.



**CATEGORY 1  
450HP**

SKU#: *M3GA-48-450HP*

BASE KIT. INCLUDES EVERYTHING LISTED ON PRECEEDING PAGES.



**CATEGORY 2  
550HP**

SKU#: *M3GA-48-550HP*

INCLUDES EVERYTHING FROM CATEGORY 1, IN ADDITION TO THE FOLLOWING:

- Billet Input Shaft
- Billet Flexplate



**CATEGORY 3  
650HP**

SKU#: *M3GA-48-650HP*

INCLUDES EVERYTHING FROM CATEGORY 2, IN ADDITION TO THE FOLLOWING:

- Billet Output Shaft



**CATEGORY 4  
750HP**

SKU#: *M3GA-48-750HP*

INCLUDES EVERYTHING FROM CATEGORY 3, IN ADDITION TO THE FOLLOWING:

- Billet Intermediate Shaft



**CATEGORY 5  
850HP**

SKU#: *M3GA-48-850HP*

INCLUDES EVERYTHING FROM CATEGORY 3, IN ADDITION TO THE FOLLOWING:

- Billet 27 Spline M3GA Input Shaft
- 27-Spline Larger Stator Support
- Billet 29-Spline Larger Output Shaft
- Billet Flexplate
- Billet Direct Drum

## E618 47/48RE TRANSMISSION CONTROLLER KIT

SKU#: E618-VB-TB

### FEATURES INCLUDE:

- Custom Calibrated Billet Valve Body
- Custom Valve Body Electronics
- Custom Calibrated Transmission Control Module
- Custom Wiring Harness
- Custom Software Calibration
- Custom Transbrake
- Full Manual & Automatic Control

SunCoast has separated the 47/48RE electronic automatic transmission from yesterday's 47RH hydro-mechanical automatic transmission with some never-before-seen abilities. SunCoast, with its speed and simplicity in tuning, has done what may have seemed like a complex or impossible task in the past. The TCU can use these inputs as well as torque converter speed, engine speed, wheel speeds, traction control parameters, electronic throttle position, fluid temperature, engine temperature, brake pedal actuation, forward and lateral acceleration, in addition to several other parameters.

The E618 controller can be configured in many different ways. This controller offers 16 different digital inputs/outputs. With the can bus connection in the harness you are able to open up a whole new world in regards to additional accessories that are plug and play. These include optional push button shifters, paddle shifters, and many more.

Tuning is very straight forward for individuals who are familiar with HP Tuners / EFI live tuning software. Lockup can be applied by TPS vs. MPH or by boost reference, if you so choose.

This new E618 controller can be configured with dual map tuning for shift strategies & converter lockup. This allows you to have a normal street daily shifting pattern and a tow/haul mode if so desired. This unit also still allows full manual control of each gear.

**\*Tire size, gear ratio, wide open throttle shift RPM is required when ordering this controller.**

**\*This is a transbrake version of this valve body.**



## 68RFE UPGRADED L/R SPRAG

SKU#: 68-LRS

### FLIPPIN' OUT OVER THE SPRAG

The factory low/reverse (L/R) sprag assembly has been a sore spot for many customers after a nasty boosted launch. It has left many of the 68RFEs stranded on the side of the road with a fat taste of disappointment in their mouth. The issue with this factory unit is inherent to the design. The factory unit utilizes a "dog bone" type sprag. The 68RFE L/R clutch is only on when the output shaft is turning below 150 RPM. These L/R clutches then release the load back onto the factory L/R sprag, which during heavy acceleration, boosted launches and burnouts will not stand up to such stress. The result will be the loss of first and second gear starts.

When SunCoast first saw this, we knew immediately this would not be acceptable for our torque-hungry clients, and so we went to work. SunCoast knew that the sprag had to be pre-loaded with tension, and the old "dog bone" style was not going to work. Hence, our very first design was to switch to an accordion style of spring. This proved

to not only provide a sufficient amount of tension to keep the sprag from flipping, but also held at the current power levels we were seeing at the time. However, we knew it

was only a matter of time before we would see the limits being pushed with our new design.

Fast forward to 8 years later, and now this design has been copied and almost every retailer is



selling their version of this design. The unfortunate aspect of this is the design has reached its capacity with the power levels being reached in the new 6.7 Cummins, and we are seeing even the new design achieve catastrophic failure. However, we already were aware of this potential failure and have been hard at work with the patent office yet again.

In all of our 68RFE units, we now include our new Patent-Pending Billet M3GA Sprag. This is an all-billet design, not the plastic stuff the competition wants to sell you. SunCoast's all-billet M3GA Sprag also includes a redesigned spring style to ensure the pre-load is sufficient to alleviate the problems. This new billet design is absolutely unbreakable and currently has a patent pending. Plastic or Billet? We will let you decide.



## REBUILT VALVE BODY OR 68RFE SOLENOID PACK (AVAILABLE IN WHITE OR GREY)

SKU#: *68RFE-SCVB-W/ SC-68RFE-WHITE / SC-68RFE-GREY*

### THE VALVE BODY

The valve body is like the brain of the transmission. It is the single most important item in the transmission. Here at SunCoast, we take a very scientific approach to how we calibrate these units. We start with addressing the accumulator cover plate. It has been shown time and time again that these factory side plates are prone to deflection, due to the fact they are made with inferior steel, and a bit thinner than desired. If you start driving line pressure even higher, you will see this issue with deflection becomes even more prevalent. When this deflection occurs, it will often cause the screws to loosen and, in some instances, even break. SunCoast replaces the factory plate with a thicker, reinforced plate that adds 3 additional holes to allow for additional, stronger mounting screws to keep flex to a minimum. This new accumulator cover plate is standard on all SunCoast 68RFE builds.

### THE SOLENOID PACK

SunCoast continues the improvements on the valve body circuit by replacing each solenoid pack with a brand new factory OE Mopar solenoid pack.

Every other builder either uses the factory solenoid pack again, or a re-manufactured one. Here at SunCoast, this is unacceptable and here is why: It is well-documented that the solenoid pack has numerous fail issues. If you have a core that you are building from, more than likely it is there as a core because it failed. When failure occurs, debris, in the



way of metals, clutch material, and other contaminants, are circulated throughout the transmission. That debris is almost certain to have made its way into the solenoids. This contamination in the solenoids now remains there. So now we take this new, freshly built transmission and introduce the contaminants from the failure into our new unit.

Those contaminants can, and will, affect the spray pattern and flow of these solenoids.

In the early days, we took the liberty of purchasing a solenoid flow tester to verify the integrity of these solenoids. What we found is that the failure rate was in excess of 60% due to contaminants. Of that 60%, about 10% could be run through the flow tester with a special solvent to clean them enough to restore the spray pattern and flow rate. Our competition may make the argument that they spent the \$10,000+ to check and verify these solenoids and clean them, but the only issue with this is that you are still going to have a significant failure rate. SunCoast, as well as Chrysler, has documented that the factory boards on these solenoid packs flex, causing false pressure switch codes. So, even if you spent the 5+ hours to restore the flow rate and spray pattern, you still have a fatigued board. This could very well cause false codes and drivability issues.

SunCoast corrects this by throwing the factory solenoid pack in the trash and replacing it with a new factory unit from Mopar. SunCoast also installs a custom made solenoid spacer-block to correct the flexing issue. Some may tell you that this is overkill and unnecessary, but we believe it is our duty to ensure that our customers get exactly what they deserve. No corners cut; no shortcuts taken.

Another area of concern in the factory valve body is the issue with the factory solenoid switch valve. These factory pieces allow cross-leaking and continually cause burnt 4C and overdrive clutches. Very often, it causes the plugs to cock and hang up in the bore. This will result in a failsafe (limp mode), various codes, bind-ups, and burnt TCC clutches. Customers will often complain of the engine stalling, or loss of fuel economy, due to no lock-up. On every one of our SunCoast valve bodies we correct this by replacing the factory solenoid switch valve with a new, custom-designed valve made with annular grooves to help center the valve and plugs in the bore to prevent future side-load wear. This special

valve is also hard-coat anodized to prevent premature wear. We also have special o-ringed end bore plugs that have been redesigned to ensure cocking can no longer occur.

Finally, the next problematic area we correct is the issue with the factory overdrive/underdrive accumulator piston. You will see others attempting to shim these accumulators, trying to correct stroke issues, and they use re-calibrated springs to correct the cold driving 1-2 shudder, excessive CVI's, slide shift, etc. The fact that it is plastic doesn't help either. There are companies even making sleeves to try and attempt to fix the bore cross leaking. Our fix is to redesign it. SunCoast uses a custom billet accumulator piston with additional sealing rings, made in-house. This new custom billet overdrive/underdrive piston not only corrects cross-leaking, but it also changes the stroke of the accumulator, allowing much quicker shifts than could be achieved otherwise. This also extends the life of the overdrive/underdrive clutches.

Is a billet, custom CNC'd accumulator piston really needed? Well, if you're SunCoast, the answer is obvious, and it is in every one of our valve bodies. What does your builder do?



## 68RFE SC-961 JR BILLET DRUM & 68RFE M3GA DRUM W/ PRESSURE PLATES

SKU#: 68-961JR | 68-961-M3GA

### JR. DRUM FEATURES INCLUDE:

- SunCoast Custom Patented M3GA JR billet drum
- 64 custom SunCoast M3GA JR drum specially calibrated return springs
- SunCoast Custom-designed Overdrive/Underdrive Power-Pack

### M3GA DRUM FEATURES INCLUDE:

- SunCoast Custom Billet M3GA Drum
- SunCoast Custom Overdrive/Underdrive Stack-up with 51% Larger double-sided clutches

SunCoast's Dodge series rebuild kits cover all years from 2007.5/2016 (kit part number dependent upon year/parts required). These kits utilize the latest proven friction materials and steel technology from industry leading companies such as Alto and Raybestos. SunCoast works



directly with these companies to design and manufacture proprietary exclusive SunCoast product lines, giving the end user uncompromised quality throughout the entire transmission. SunCoast has designed these kits in house to exact specifications for many intents, including but not limited to towing, sled pulling, racing or having a vehicle to get from point A to point B. Along with these kits, SunCoast has a full line of billet single/triple disc torque converters ranging from 1800 stall to approximately 3000 RPM (manufactured in house). In addition the company has multiple Billet input shafts, oversized/stock aluminum drums (M3GA Drum & JR drum) JSFI approved flexplates, SFI-approved transmission jackets, and much more.

The SunCoast M3GA & M3GA JR. Kits are the perfect solution for a deleted, mildly modified truck that can serve as a dual purpose unit. The transmission is a workhorse. It works incredibly well as a towing unit for hot-shot driving, 5th wheel motorhomes, and most anything else you can hook up to the back end. When coupled with one of our towing triple disc billet torque converters, you will not find a more efficient transmission on the planet at any cost.

This kits is also capable of a mildly modified street performance machine. This base package is good for up to 600hp with the addition of a few key hard parts, such as the billet flexplate and billet input shaft, which is highly recommended. The M3GA JR. 68RFE unit is specifically designed to eliminate the dreaded overdrive issues. We started researching this project with a clean slate. There are several key issues with the 68RFE that contribute to the premature failure of the overdrive clutches.

### THE BEAT OF A DIFFERENT DRUM

The 68RFE is known to be plagued with a number of issues during its life behind the 6.7L Cummins power plant. The torque the power plants produce wreaks havoc on everything it comes in contact with. Throw in some bigger wheels and tires, increase reciprocating mass and delete torque management it is now wonder the 68RFE is writing suicide notes and leaving them in your mailbox.

The most problematic area is the overdrive/underdrive clutch circuit. After correcting the pressure issues we then knew we needed to take a long look at the clutches and what could be done to tame these nasty demons. The rule around here is when we are evaluating issues is that we strive to take a scientific approach to the problem. When we are talking science, we know that doesn't lie. Well if math doesn't lie we knew fairly quickly where the problem stemmed.

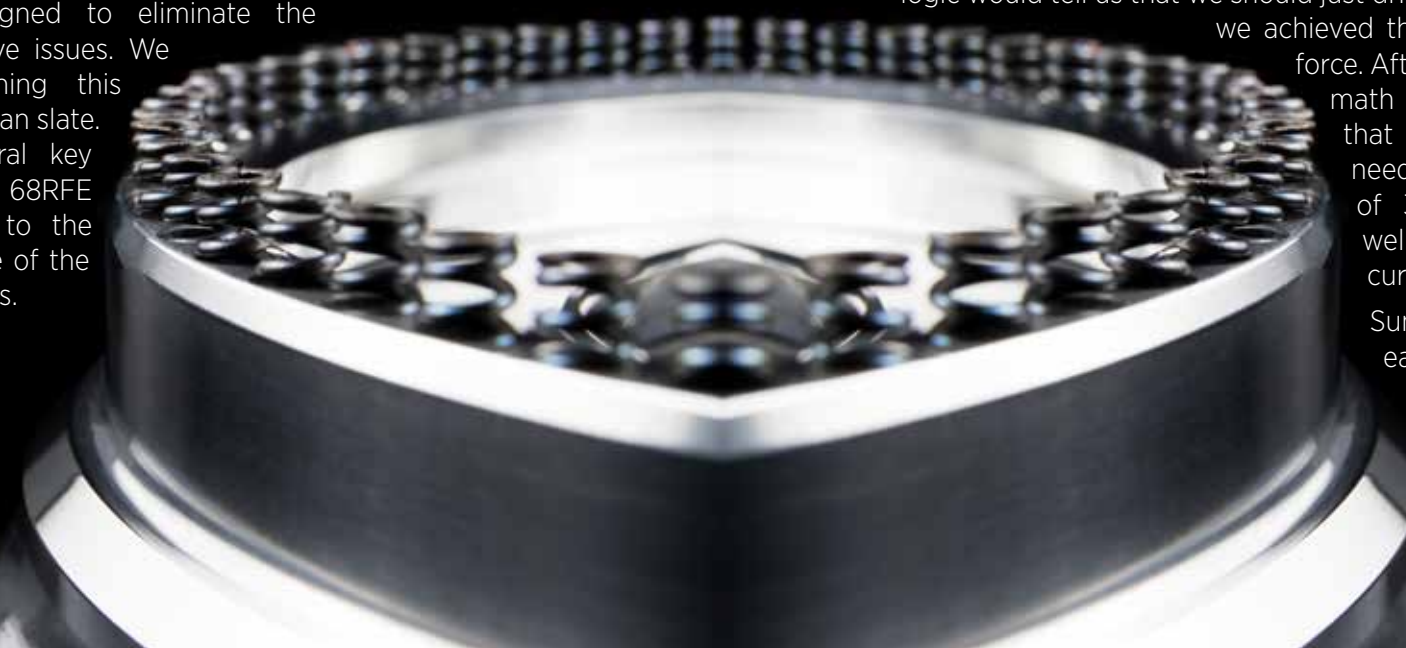
In testing we found that with the newly found pressure, we were still falling short. The factory drum at 200 psi of line pressure netted us a 4479lbs of clamping load. While this is a dramatic improvement over the factory piece this did fall short of our goals. We knew from previous testing that more clamping force would be needed to ensure that we needed more, a good bit more. One of the obstacles was the design of the drum and the piston that the factory left us with. Conventional logic would tell us that we should just drive line pressure until

we achieved the desired clamping force. After doing some quick math it became apparent that the pump would need to deliver in excess of 350psi, which was well in excess of the current pumps ability.

SunCoast decided early that we needed

to develop a new drum. When designing the drum we were able to change the piston apply area giving us a nice boost in clamping force. SunCoast then decided to make the apply piston larger increasing the size of the drum, as well. Increasing the size of the drum and piston netted us a clamping force of a whopping 6909psi at 200 psi of line pressure. When comparing to the factory drums 4479 psi, we saw a dramatic improvement over the factory. With the larger drum we were able to also increase the size of the clutch.

The SunCoast M3GA drum boasts a 51% increase in surface apply area versus the competition. SunCoast has also achieved a 54% increase in hydraulic apply area. This billet drum is manufactured in house using T-6061 billet aircraft grade aluminum. This new drum is the perfect solution for a heavily modified 6.7 power plant.



## 618 BILLET SFI-APPROVED FLEXPLATE

SKU#: 618-BFP

### FEATURES AND BENEFITS:

- Billet Construction
- Replaces Factory Flexplate
- Exceeds 29.3 SFI Specifications

The SunCoast 618-BFP Billet Flexplate for your 1994-2007 Dodge 5.9L Cummins is a must have when it comes to putting power to the ground in your truck. The high torque of your Cummins in conjunction with a better designed torque converter can transfer the torque with no slip. The flexplate is bolted to the crank shaft, then the converter is bolted to flexplate. The torque from your Cummins is transferred to the flexplate, from the flexplate to the torque converter then to your input shaft in the trans. With increased torque from the engine and no slip out of the converter it can crack and/or rip the center out of a stock flexplate.

NOTE: An SFI-certified flywheel flexplate is required on drag racing vehicles running 11.99 and quicker in the 1/4 mile and 7.49 and quicker in the 1/8 mile, or any vehicle exceeding 135mph. It was changed in 2008 from the 29.1 SFI specification to the SFI specification 29.3 for automatic transmission



flexplates for diesel applications. The new rules for the flexplate requires that the material can not be a stamped metal as many OEM and aftermarket flexplates are. To maintain the SFI specification 29.3 requirements, the flexplate must be replaced every three years.

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for automatic transmission flexplates for diesel applications. The new rules for the flexplate requires that the material can not be a stamped metal as many OEM and aftermarket flexplates are. To maintain the SFI specification 29.3 requirements, the flexplate must be replaced every three years.

## 48RE TRANSFER CASE SUPPORT

SKU#: 48-TCS

### FEATURES AND BENEFITS:

- Prevents cracking of the overdrive tail housing
- Quick installation—a few minutes and you're done
- Fits between transfer case and existing skid plate
- Uses a very popular universal GM RWD mount (included)
- All necessary hardware included

### CRACK KILLS

The 48RE Dodge Diesel 4WD transmissions are known for having repeated issues with cracking the overdrive housing. Their transfer cases, mated to the overdrive housing, weigh about 80lb but have absolutely nothing in place to support them. This new transfer case support solves this issue.

A special designed steel bracket installs in place of the lower two bolts (longer bolts supplied), and includes the common GM universal mount.

With the constant twisting and flexing of the tail housing, it is not uncommon to see constant leaks from the tail housing where it meets the transfer case. This constant torsional flexing and fatigue will cause the repeated fluid leaks and damaged housings.

This fits like Dodge intended for this to be here. The factory skid plate actually has existing holes drilled. This kit also includes a machined steel spacer/washer (fits below the skid plate) with a tapered groove to clear the OEM stamping.

If you have a cracked or damaged overdrive housing after replacing it, this is the solution to prevent this problem from rearing its ugly head in the future. This is an ideal product for customers who make 450HP and higher or who tow/haul consistently.



This can be installed, even if you do not have the factory skid plate, by using the following parts below available from Chrysler:

- SKID PLATE [52022048AH]
- CROSSMEMBER [52022046E]
- BOLTS (8 REQUIRED) [6507342AA]

## ULTRALIGHT BILLET REACTION SHELL

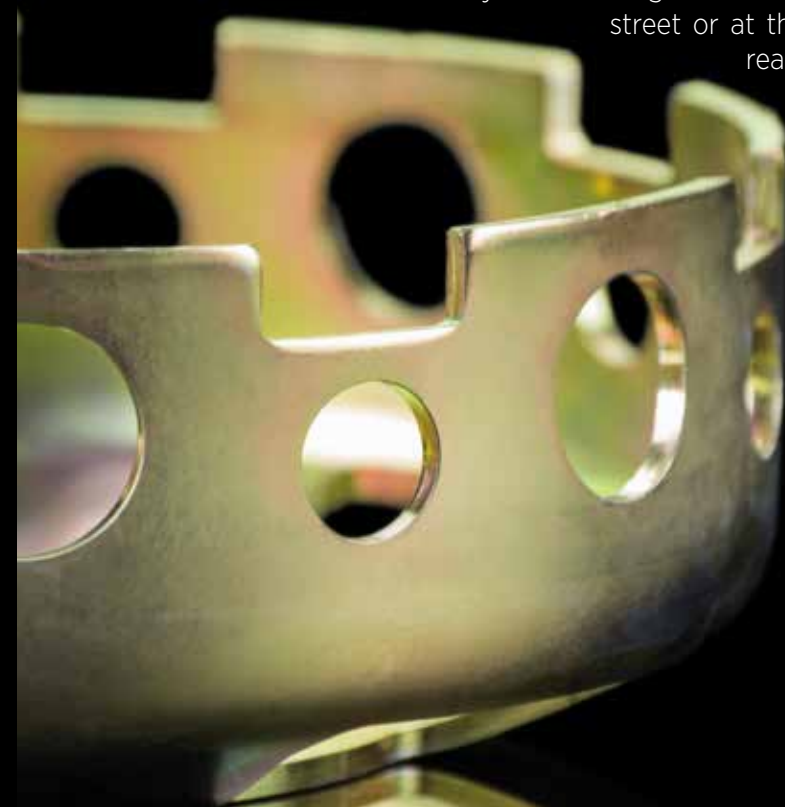
SKU#: 48-LRS

### THE REASONING

Weight is always on the mind of any drag racer. Reciprocating mass is one of the most efficient ways to improve the performance of any vehicle. Lighter rotating mass improves an engine's response to throttle input, and it reduces parasitic loss, as well.

This new ultralight billet reaction shell weighs 30% less than the factory piece and yields itself much stronger. This piece fits both 727 TorqueFlites and 47/48 RH/RE transmissions. This piece is perfect for drag racers, sled pulls, and max effort street builds.

Whether you're looking to dominate on the street or at the track, this reaction shell has proven time and time again to be a must.



### TECHNICIAN'S NOTE:

On-diesel applications require the driving of the factory Sun Gear to repitch the splines. This is a common practice and can be done by a technician level of "D" or higher.

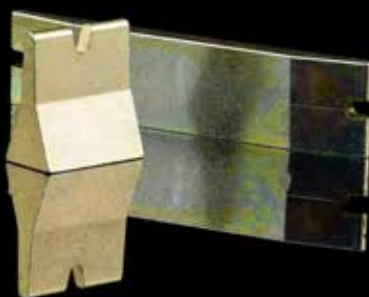
## 4-RING ACCUMULATOR PISTON



SKU#: 61822841HD

The SunCoast 4-Ring Billet Accumulator Piston is an upgrade for the plastic 2-ring piston found in the transmission of your 1994-2007 Dodge 5.9L Cummins. This 4-ring piston stops cross leaks and piston breakage commonly associated with the factory unit.

## BILLET STRUT AND ANCHOR KIT



SKU#: 618-BSK

This replaces failure-prone factory struts that bend and break. The OEM band struts, manufactured from steel by stamping are notorious for bending, causing excessive band clearances that can potentially contribute to premature transmission failure.

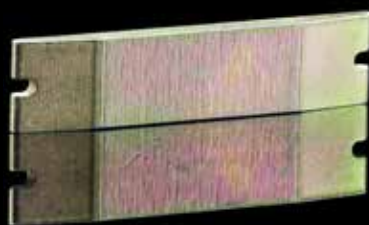
## 618 4.4 BILLET BAND LEVER



SKU#: 618-44

This SunCoast custom ratio 4.4 band lever is a product of our performance roots. This billet band lever is custom-machined from 4140 heat-treated, stress-relieved steel. When used with our billet band and billet intermediate servo, the SunCoast 618-44 lever provides shift timing that's unmatched by anything else within the industry.

## BILLET BAND STRUT



SKU#: 618-BS

SunCoast's solution to OEM band strut failure. O.E.M. Band Struts are notorious for bending and causing excessive clearances that can result in premature transmission failure. SunCoast's billet band strut is made of heavier-duty material, preventing said damages.

## GOVERNOR PRESSURE SOLENOID



SKU#: 618-GK

The governor pressure solenoid kit was specifically designed to improve the reliability of the governor solenoid in normal use and handle higher base pressure in high-performance applications. This unit will fit both early and late styles. We recommend you also install a new Governor Pressure Sensor/Transducer with this kit.

This kit in testing was found to be extremely reliable in every situation. Contamination metal, fiber, clutch materials do not phase the RE conversion kit.

### CONTAINS THE FOLLOWING:

- Manifold is made of 6061T6 Billet Aluminum
- New Borg Warner Solenoid
- 1/4 20 Grade 5 bolts (4)
- Viton O-Rings (3)
- Gasket
- Cap screws (3)
- Set screw
- Delphi/Packard connectors
- Bracket for Solenoid and Governor sensor

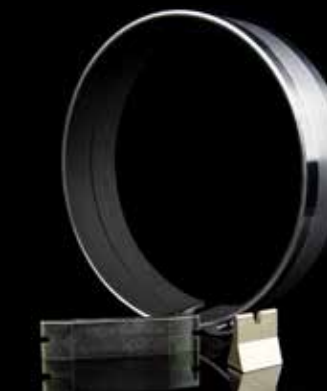
## 618 BILLET BAND



SKU#: 618-BB

The SunCoast Billet Band for your 1989-2007 Dodge 5.9L Cummins replaces the OEM thin Flex Band with weak apply ends. It features a high-energy lining and is a must-have item when building your performance transmission.

## BILLET BAND KIT, STRUT & ANCHOR



SKU#: 61822825HP

Our new billet band has reinforced apply ends, built end and hi-energy lining.

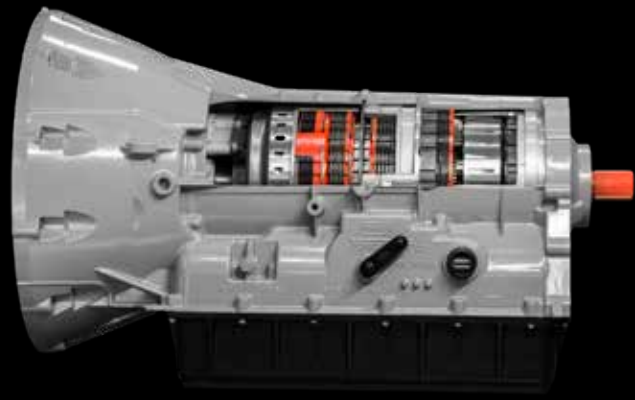
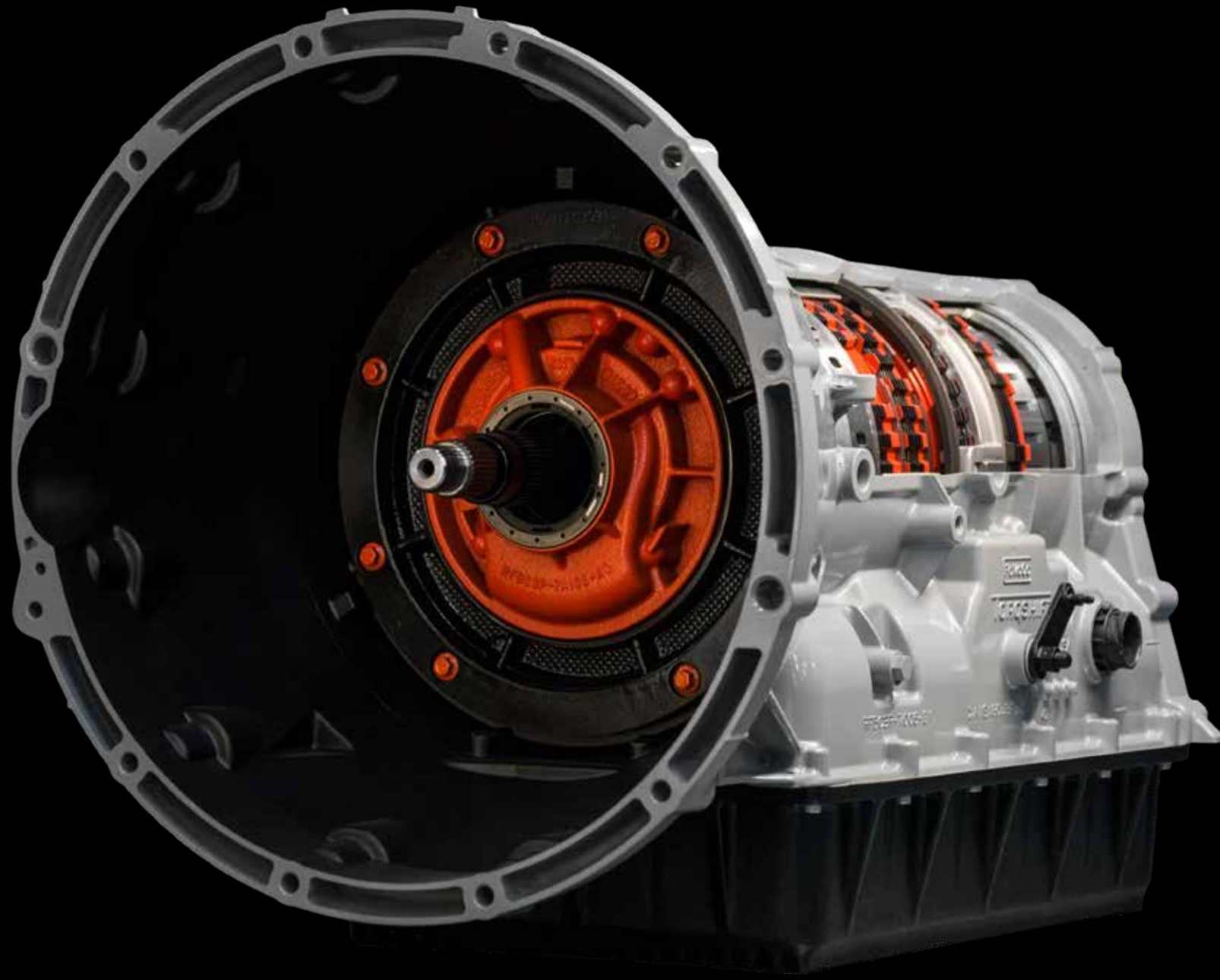
Billet apply strut and steel anchor replaces factory strut and anchor that bends and breaks.

Billet Intermediate band with Hi-Energy lining replaces OEM thin Flex Band with weak apply ends.





# FORD PRODUCTS



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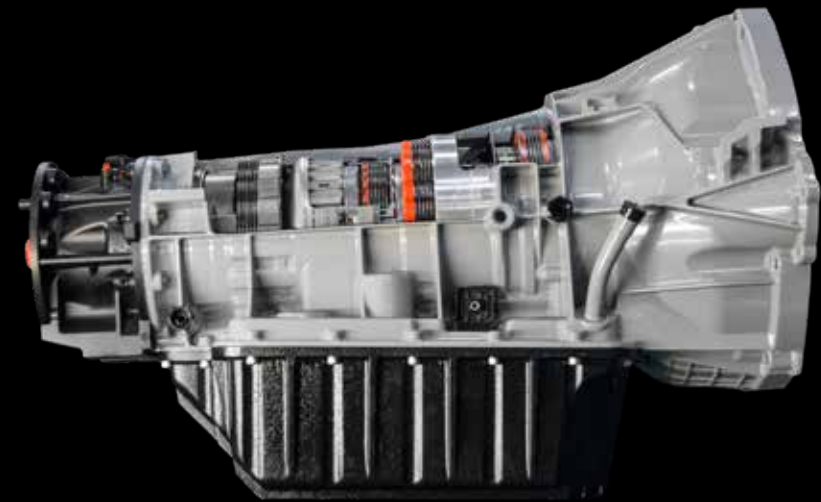
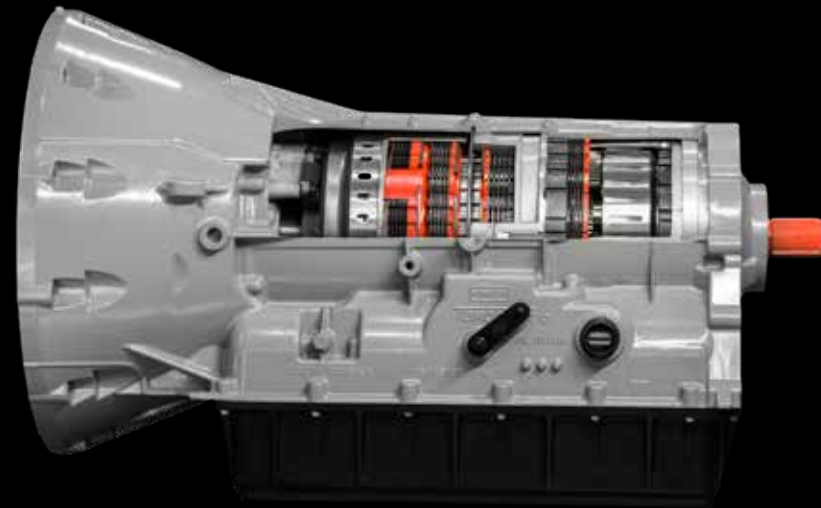
[FORD ACCESSORIES](#)

# FORD TRANSMISSIONS

E4OD | 4R100 | 5R110 | 6R140

OEM Transmission clutches fail in high stress applications due to excessive heat. This heat promotes and accelerates wear and tear that ultimately leads to premature catastrophic failure. SunCoast's Ford transmissions are engineered and built to the highest standards. These transmissions feature proven, better than OEM, aftermarket friction materials, and steel technologies that will hold up in almost any situation. SunCoast's increased clutch quantities are complimented with a TransGo® valve body re-calibration kit that gives the transmission superior shift quality and pressure. Mild to wild, SunCoast can suit any need.

The SunCoast transmission includes increased clutch count with high-energy friction materials of choice (Alto® or Raybestos®), treated steels, and can also feature upgraded parts.



## PART NUMBERS:



<b>1989-1998</b>	
PLSD-E4OD-2X .....	E4OD 2WD TRANS ASSEMBLY
PLSD-E4OD-4X .....	E4OD 4WD TRANS ASSEMBLY
PLSD-E4OD-COMP .....	E4OD COMP TRANS ASSEMBLY



<b>1999-2003</b>	
PLSD-4R100-2X .....	4R100 2WD TRANS ASSEMBLY
PLSD-4R100-4X .....	4R100 4WD TRANS ASSEMBLY
PLSD-4R100-2XPTO .....	4R100 2WD PTO TRANS ASSEMBLY
PLSD-4R100-4XPTO .....	4R100 4WD PTO TRANS ASSEMBLY
PLSD-4R100-COMP .....	4R100 4WD SUPER COMP TRANS ASSEMBLY



<b>2003.5-2010</b>	
SC-5R110CAT0-2WD .....	5R110 CATEGORY 0 350HP 2WD TRANS ASSEMBLY
SC-5R110CAT0-4WD .....	5R110 CATEGORY 0 350HP 4WD TRANS ASSEMBLY
SC-5R110CAT1-4WD .....	5R110 CATEGORY 0 450HP 4WD TRANS ASSEMBLY
SC-5R110CAT2-4WD .....	5R110 CATEGORY 0 500HP 4WD TRANS ASSEMBLY
SC-5R110CAT3-4WD .....	5R110 CATEGORY 0 600HP 4WD TRANS ASSEMBLY
SC-5R110CAT4-4WD .....	5R110 CATEGORY 0 700+HP 4WD TRANS ASSEMBLY
PLSD-5R110-2X-COMP .....	5R110 4WD COMP TRANS ASSEMBLY
PLSD-5R110-4X-COMP .....	5R110 4WD COMP TRANS ASSEMBLY
PLSD-5R110-2X .....	5R110 2WD TRANS ASSEMBLY
PLSD-5R110-4X .....	5R110 4WD TRANS ASSEMBLY
PLSD-5R110-08-2X .....	5R110 '08 4WD TRANS ASSEMBLY
PLSD-5R110-08-4X .....	5R110 '08 4WD TRANS ASSEMBLY
PLSD-5R110-08-COMP2X .....	5R110 '08-UP 4WD COMP TRANS ASSEMBLY
PLSD-5R110-08-COMP4X .....	5R110 '08-UP 4WD COMP TRANS ASSEMBLY



<b>2010-2016</b>	
PLSD-6R140-2X .....	6R140 2WD TRANS ASSEMBLY
PLSD-6R140-4X .....	6R140 4WD TRANS ASSEMBLY
SC-6R140CAT0-4WD .....	6R140 CATEGORY 0 350HP 4WD TRANS ASSEMBLY
SC-6R140CAT1-4WD .....	6R140 CATEGORY 1 400HP 4WD TRANS ASSEMBLY

# CATEGORY 0 SUNCOAST 4WD 350HP 5R110 TRANSMISSION

SKU#: SC-5R110CAT0-2WD

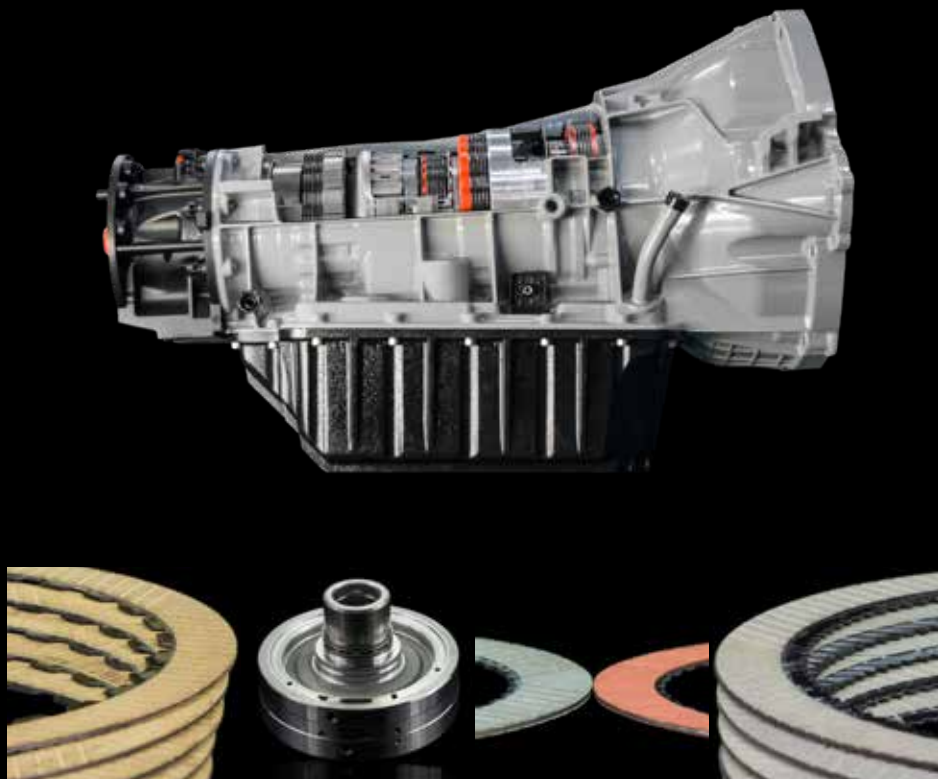
## TRANSMISSION INCLUDES THE FOLLOWING:

- SunCoast Low/Reverse Clutch Pack with 5 Clutches & 5 Kolene Steels
- SunCoast Overdrive Clutch Pack with 5 Clutches & 5 Kolene Steels
- SunCoast Overdrive Piston
- SunCoast Overdrive Pressure Plate
- SunCoast Intermediate Clutch Pack with 5 Clutches & 5 Kolene Steels
- SunCoast Intermediate Pressure Plate
- SunCoast Forward Clutch Pack with 5 Frictions & 5 Steels
- SunCoast Forward Pressure Plate
- SunCoast "Wide Load" Direct Clutch Pack with 5 Frictions & 5 Steels
- SunCoast Direct Pressure Plate
- SunCoast Direct Piston
- SunCoast Direct Snap Ring
- SunCoast "No Walk" Center Support
- SunCoast Overhaul Kit
- SunCoast Valve Body Calibration Kit

The Category 0 SunCoast 5R110 Transmission is our base 5R110 transmission. This is a perfect transmission for a stock vehicle that is used in heavy duty applications. This offers all of the current fixes for the direct clutch circuit, with our Patent Pending "No Walk" center support. This transmission also has the new wide load direct clutch pack. This is the perfect economical solution for our customers looking for a heavy duty towing transmission with no power adders.

## TALES FROM THE 5R110

The TorqShift 5-speed 5R110 transmission replaces the old faithful 4-speed 4R100 in the 2003 model year with the introduction of the new 6.0L diesel engine. The TorqShift design, in fact, has a total of



six forward gears ratios; however, only five are advertised, with the "hidden gear" only being used in very cold weather. The five forward ratios are: 3.11, 2.22, 1.55, 1.00, and—finally—overdrive is 0.71. The TorqShift also utilizes an optional 4th gear at 1.10, which is used in cold start conditions to aid in engine and transmission warm up.

With the TorqShift, once the Tow/Haul mode is activated, it can help increase driver control when towing large loads up and down steep grades. It will also minimize shifts and maximize the available torque.

Upon descent, the tow/haul feature utilizes engine braking to help extend the life of the transmission and improves driver control.

The TorqShift was also Ford's first attempt at adaptive control. The adaptive control shift function monitors the performance over its lifetime and adjusts shift times in real time to ensure consistency and compensate for wear. The TorqShift was also used with the 6.4L. This particular transmission was later replaced with the much larger and more robust 6R140 when the 6.7L PowerStroke was released by Ford.

## WALKING AWAY FROM THE CENTER SUPPORT

The center support on a transmission is a critical component that could make the difference between success or failure. The center support acts as a stabilizer, just as our lower back and abdominal muscles support us. With the TorqShift being such a long unit, over time, the torsional flexing distorts the case, and the center support can sag and become displaced. The TorqShift relies on the center support to also apply fluid feed to the direct and forward clutches. When this distortion occurs, the fluid feed holes for direct and forward can become misaligned. This is especially true when towing heavy loads or under moderate-to-hard acceleration. This will also lead to premature failure and burnt clutches.

SunCoast has developed a new "No Walk" Center Support to correct this issue, which we include in this kit. We also go a step further with this and make a new Mag-Hytec pan standard to increase the rigidity of the case and reduce torsional flexing.

With this now being corrected, the need for the direct solid modification is no longer needed. We originally created this modification before learning about the torsional effect.

## THE "WIDE LOAD" DIRECT CLUTCH

The direct clutch pack has been a problem child for some time now. With the center support now being corrected, we move your attention to the most problematic area of the 5R110: the direct clutch. In the

5R110, the direct clutch pack has been the topic of so many discussions. In the beginning, we modified the direct clutch solenoid as a result of the fluid flow issues we were seeing and trying to compensate for what we would later find out was the center support walking. Today, many companies still sell these altered solenoids to try to correct a direct clutch issue. We have alleviated this with our new no walk center support.

The direct clutch pack is still one of the most abused clutch packs within the transmission. The direct clutch pack is constantly subjected to conditions that can prematurely wear. To alleviate this, SunCoast has developed our new "wide load" direct clutch pack. These new clutches are not only made from our SunCoast SCZ carbon graphitic material, but also a larger, wider clutch.

Making the clutch wider effectively increases the mean radius of a clutch, which in turn increases the torque capacity of said clutch. What this means is the larger the mean effective radius, the more torque load capacity the friction plate can handle.

This new wider clutch is also combined with the new wider steel and new wider apply plate. This combination, along with the new and improved "No Walk" center support, makes this the most loudly engineered kit on the market today.



# CATEGORY 1 SUNCOAST 4WD 450HP 5R110 TRANSMISSION

SKU#: SC-5R110CAT1-4WD

## TRANSMISSION INCLUDES THE FOLLOWING:

- SunCoast Low/Reverse Clutch Pack with 5 Clutches & 5 Kolene Steels
- SunCoast Overdrive Clutch Pack with 5 Clutches & 5 Kolene Steels
- SunCoast Overdrive Piston
- SunCoast Overdrive Pressure Plate
- SunCoast Intermediate Clutch Pack with 5 Clutches & 5 Kolene Steels
- SunCoast Intermediate Pressure Plate
- SunCoast Forward Clutch Pack with 5 Frictions & 5 Steels
- SunCoast Forward Pressure Plate
- SunCoast "Wide Load" Direct Clutch Pack with 5 Frictions & 5 Steels
- SunCoast Direct Pressure Plate
- SunCoast Direct Piston
- SunCoast Direct Snap Ring
- SunCoast "No Walk" Center Support
- SunCoast Overhaul Kit
- SunCoast Valve Body Calibration Kit
- Billet Vascomax Input Shaft
- Mag-Hytec Deep Pan

The SunCoast Category 1 transmission is our entry level heavy duty transmission. We use our custom clutch power packs to improve both reliability and performance. In this 5R110 transmission, we perform all of our valve body modifications to ensure clean, accurate shifting. This receives a host of other improvements explained as well, most notably a new 5R110 billet input shaft. This is a perfect build for a mildly modified daily driver that doubles as a tow rig, as well.

## TALES FROM THE 5R110

The TorqShift 5-speed 5R110 transmission replaces the old faithful 4-speed 4R100 in the 2003 model year with the introduction of the



new 6.0L diesel engine. The TorqShift design, in fact, has a total of six forward gears ratios; however, only five are advertised, with the "hidden gear" only being used in very cold weather. The five forward ratios are: 3.11, 2.22, 1.55, 1.00, and—finally—overdrive is 0.71. The TorqShift also utilizes an optional 4th gear at 1.10, which is used in cold start conditions to aid in engine and transmission warm up.

With the TorqShift, once the Tow/Haul mode is activated, it can help increase driver control when towing large loads up and down steep grades. It will also minimize shifts and maximize the available torque. Upon descent, the tow/haul feature utilizes engine braking to help extend the life of the transmission and improves driver control.

The TorqShift was also Ford's first attempt at adaptive control. The

adaptive control shift function monitors the performance over its lifetime and adjusts shift times in real time to ensure consistency and compensate for wear. The TorqShift was also used with the 6.4L. This particular transmission was later replaced with the much larger and more robust 6R140 when the 6.7L PowerStroke was released by Ford.

## UPDATED LOW/REVERSE SNAP RING

On both really and late model 5R110 transmissions a common failure is that the low/reverse retaining ring pops out of the case groove. This causes clutch slippage in reverse and due to radial movement in the pressure plate the retaining ring will walk right out of its groove.

SunCoast replaces this retaining ring with an updated one that is much wider and thicker. The updated retaining ring provides increased outward tension which increases rigidity helping keep the ring seated securely in the case groove.

## WALKING AWAY FROM THE CENTER SUPPORT

The center support on a transmission is a critical component that could make the difference between success or failure. The center support acts as a stabilizer, just as our lower back and abdominal muscles support us. With the TorqShift being such a long unit, over time, the torsional flexing distorts the case, and the center support can sag and become displaced. The TorqShift relies on the center support to also apply fluid feed to the direct and forward clutches. When this distortion occurs, the fluid feed holes for direct and forward can become misaligned. This is especially true when towing heavy loads or under moderate-to-hard acceleration. This will also lead to premature failure and burnt clutches. SunCoast has developed a new "No Walk" Center Support to correct this issue, which we include in this kit. We also go a step further with this and make a new Mag-Hytec pan standard to increase the rigidity of the case and reduce torsional flexing. With this now being corrected, the need for the direct solid modification is no longer needed. We originally created this modification before learning about the torsional effect.

## THE "WIDE LOAD" DIRECT CLUTCH

The direct clutch pack has been a problem child for some time now. With the center support now being corrected, we move your attention to the most problematic area of the 5R110: the direct clutch. In the 5R110, the direct clutch pack has been the topic of so many discussions. In the beginning, we modified the direct clutch solenoid as a result of the fluid flow issues we were seeing and trying to compensate for what we would later find out was the center support walking. Today, many companies still sell these altered solenoids to try to correct a direct clutch issue. We have alleviated this with our new no walk center support.

The direct clutch pack is still one of the most abused clutch packs within the transmission. The direct clutch pack is constantly subjected to conditions that can prematurely wear. To alleviate this, SunCoast has developed our new "wide load" direct clutch pack. These new clutches are not only made from our SunCoast SCZ carbon graphitic material, but also a larger, wider clutch. Making the clutch wider effectively increases the mean radius of a clutch, which in turn increases the torque capacity of said clutch. What this means is the larger the mean effective radius, the more torque load capacity the friction plate can handle. This new wider clutch is also combined with the new wider steel and new wider apply plate. This combination, along with the new and improved "No Walk" center support, makes this the most loudly engineered kit on the market today.

## THE INPUT SHAFT

The factory Ford input shaft is one of the smallest input shafts on the market today. Its lack of size makes for a sore subject with many of our customers after a simple programmer has proven to be too much. With factory wheels and tires, this is a standard replacement for all of our builds. With larger wheels and tire combinations, this becomes essential at stock horsepower/torque. SunCoast uses a new billet input shaft that is heat treated and precision ground from 200 maraging steel for maximum held strength. This shaft is a 100% drop in assembly.

## CATEGORY 2 SUNCOAST 4WD 500HP 5R110 TRANSMISSION

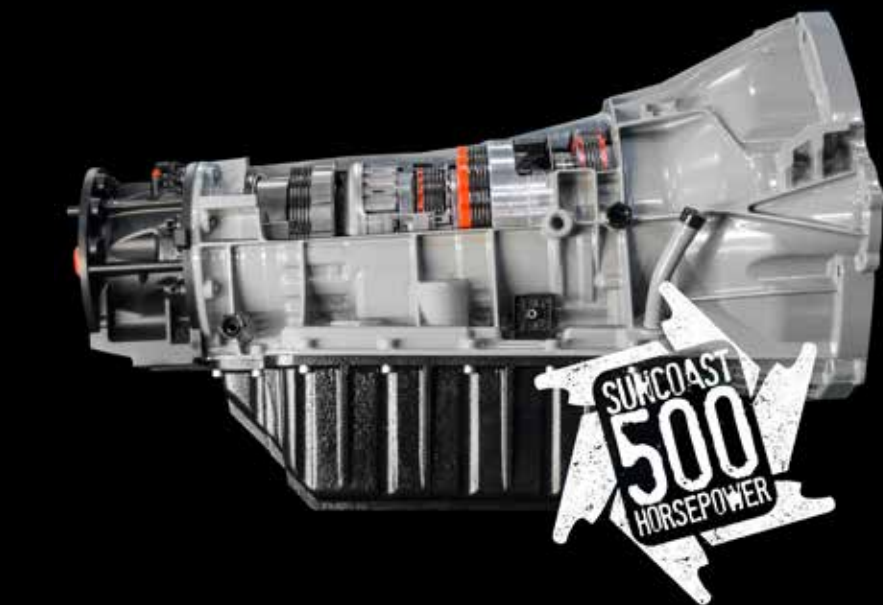
SKU#: SC-5R110CAT2-4WD

### TRANSMISSION INCLUDES THE FOLLOWING:

- SunCoast Low/Reverse Clutch Pack with 5 Clutches & 5 Kolene Steels
- SunCoast Overdrive Clutch Pack with 5 Clutches & 5 Kolene Steels
- SunCoast Overdrive Piston
- SunCoast Overdrive Pressure Plate
- SunCoast Intermediate Clutch Pack with 5 Clutches & 5 Kolene Steels
- SunCoast Intermediate Pressure Plate
- SunCoast Forward Clutch Pack with 5 Frictions & 5 Steels
- SunCoast Forward Pressure Plate
- SunCoast "Wide Load" Direct Clutch Pack with 5 Frictions & 5 Steels
- SunCoast Direct Pressure Plate
- SunCoast Direct Piston
- SunCoast Direct Snap Ring
- SunCoast "No Walk" Center Support
- SunCoast Overhaul Kit
- SunCoast Valve Body Calibration Kit
- Billet Vascomax Input Shaft
- Billet Rear Ring Gear Hub
- Mag-Hytec Deep Pan

The SunCoast Category 2 5R110 transmission takes another step forward in power handling with the addition of the billet rear ring gear hub in conjunction with the billet input shaft. The SunCoast Category 2 5R110 upgraded transmission also gets our proprietary pump and valve body modifications ensuring clean, crisp, and accurate shifts. At this power level a billet flexplate is recommended to ensure reliability.

**THIS REBUILD KIT INCLUDES EVERYTHING FROM SC-5R110CAT1-4WD, IN ADDITION TO THE FOLLOWING:**



### THE BILLET RING GEAR HUB

The Ford factory ring gear hub has many issues, even in stock form. When we start increasing load on the driveline via additional torque, larger wheels and tires, towing heavy loads or aftermarket tuning, this piece becomes very susceptible to catastrophic failure.

This unit comes with a new billet one-piece ring gear hub. This new billet hub is precision machined out of 4140 HTSR steel. This not only withstands the additional torque, but is also perfect for heavy duty towing applications.

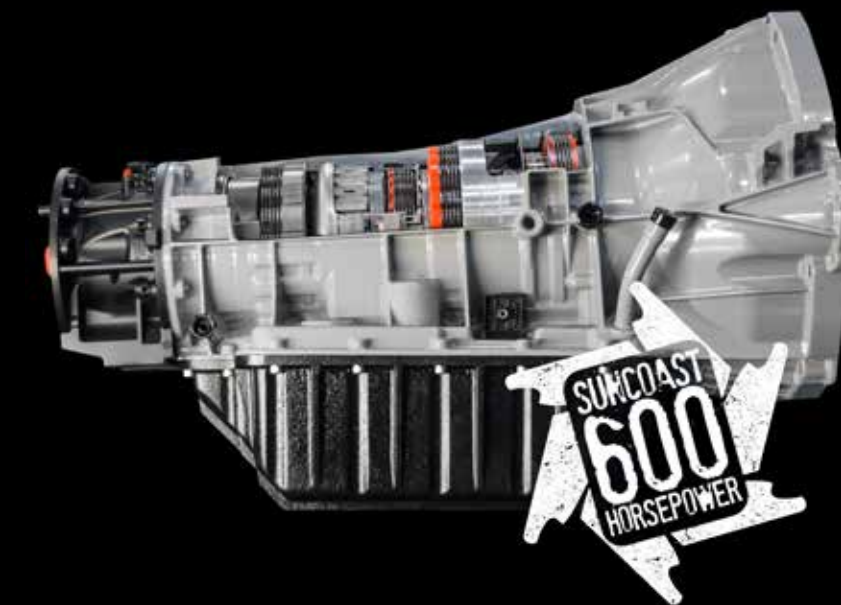
## CATEGORY 3 SUNCOAST 4WD 600HP 5R110 TRANSMISSION

SKU#: SC-5R110CAT3-4WD

### TRANSMISSION INCLUDES THE FOLLOWING:

- SunCoast Low/Reverse Clutch Pack with 5 Clutches & 5 Kolene Steels
- SunCoast Overdrive Clutch Pack with 5 Clutches & 5 Kolene Steels
- SunCoast Overdrive Piston
- SunCoast Overdrive Pressure Plate
- SunCoast Intermediate Clutch Pack with 5 Clutches & 5 Kolene Steels
- SunCoast Intermediate Pressure Plate
- SunCoast Forward Clutch Pack with 5 Frictions & 5 Steels
- SunCoast Forward Pressure Plate
- SunCoast "Wide Load" Direct Clutch Pack with 5 Frictions & 5 Steels
- SunCoast Direct Pressure Plate
- SunCoast Direct Piston
- SunCoast Direct Snap Ring
- SunCoast "No Walk" Center Support
- SunCoast Overhaul Kit
- New Thrust Washer Kit
- New Thrust Bearing Kit
- New Bushing Kit
- SunCoast Valve Body Calibration Kit
- Billet Vascomax Input Shaft
- Billet Rear Ring Gear Hub
- Billet Overdrive Planet
- Mag-Hytec Deep Pan

The SunCoast Category 3 5R110 transmission takes another step forward in power handling with the addition of the billet rear overdrive planet in conjunction with the billet input shaft and billet ring gear hub. The SunCoast Category 3 5R110 upgraded transmission also gets our proprietary pump and valve body modifications ensuring clean, crisp, and accurate shifts. At this power level a billet flexplate is recommended to ensure reliability.



**THIS REBUILD KIT INCLUDES EVERYTHING FROM SC-5R110CAT2-4WD, IN ADDITION TO THE FOLLOWING:**

### BILLET PLANET

The overdrive planet on the 5R110W is a definite weak link in the higher horsepower applications. This is especially true when you factor in larger wheels and tires.

The billet overdrive planet housing is used in all of our competition 5R110W transmissions. This overdrive planet is precision machined out of 4140 HTSR billet steel. This eliminates both the spline failures, as well as the housing shattering under heavy loads.

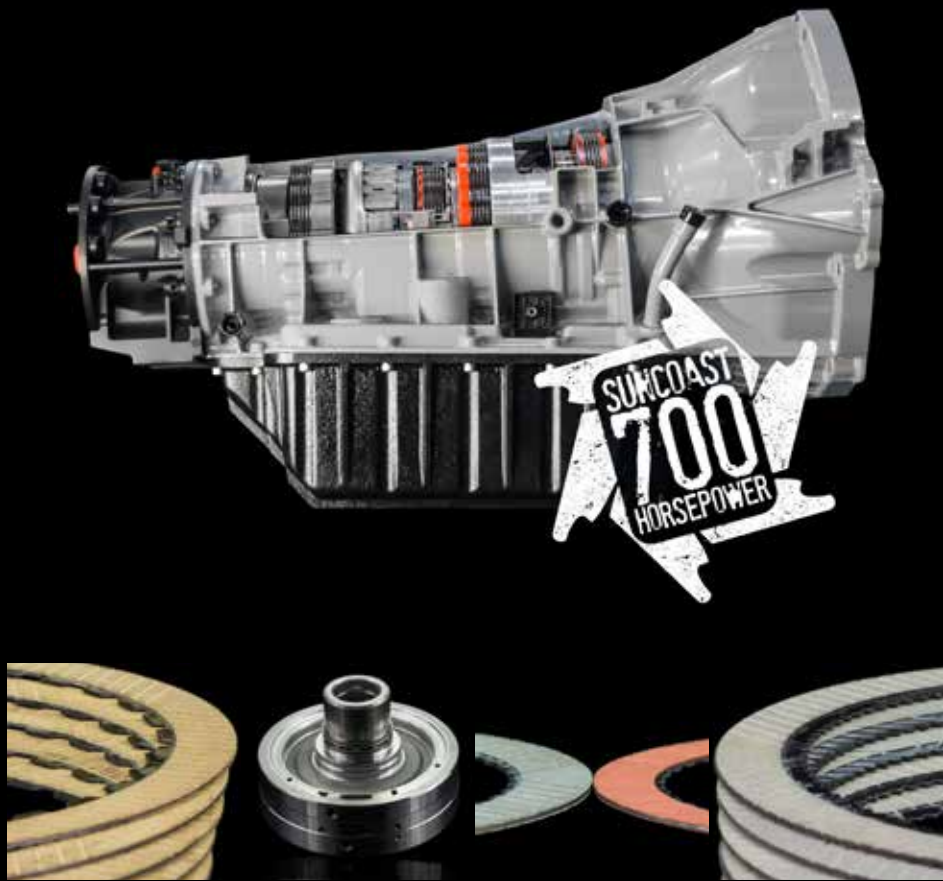
# CATEGORY 4 SUNCOAST 4WD 700HP+ 5R110 TRANSMISSION

SKU#: SC-5R110CAT4-4WD

## TRANSMISSION INCLUDES THE FOLLOWING:

- SunCoast Low/Reverse Clutch Pack with 5 Clutches & 5 Kolene Steels
- SunCoast Overdrive Clutch Pack with 5 Clutches & 5 Kolene Steels
- SunCoast Overdrive Piston
- SunCoast Overdrive Pressure Plate
- SunCoast Intermediate Clutch Pack with 5 Clutches & 5 Kolene Steels
- SunCoast Intermediate Pressure Plate
- SunCoast Forward Clutch Pack with 5 Frictions & 5 Steels
- SunCoast Forward Pressure Plate
- SunCoast "Wide Load" Direct Clutch Pack with 5 Frictions & 5 Steels
- SunCoast Direct Pressure Plate
- SunCoast Direct Piston
- SunCoast Direct Snap Ring
- SunCoast "No Walk" Center Support
- SunCoast Overhaul Kit
- SunCoast Valve Body Calibration Kit
- Mag-Hytec Deep Pan
- Billet Intermediate Shaft
- Billet Aeromet Input Shaft
- Billet Rear Ring Gear Hub
- Billet Overdrive Planet

The SunCoast Category 4 5R110 transmission has it all. With the addition of the billet intermediate shaft and upgrading the shaft to Aeromet, there is not a stronger 5R110 transmission you will find anywhere. SunCoast engineering team has developed each specific piece to work in conjunction with each other.



**THIS REBUILD KIT INCLUDES EVERYTHING FROM SC-5R110CAT3-4WD, IN ADDITION TO THE FOLLOWING:**

## THE AEROMET INPUT SHAFT

In most of our 5R110 transmission rebuild kits, we typically use a 300 Maraging billet steel (Vascomax); however, in this particular SunCoast 5R110 transmission rebuild kit, we upgrade to an Aeromet material for the input shaft.

The Aeromet input shaft is much stronger than the Vascomax material. This added strength helps resist sheer breaking, which incredibly

common in the 5R110 transmission due to the smaller shaft size. A sheer break typically occurs with excessive power or the rapid loading and unloading of the transmission and is common with wheel hop.

Additionally, the Aeromet material is substantially more resistant to torsional fatigue breakage, and are more common in applications that include heavy towing and hauling.

## THE INTERMEDIATE SHAFT

The Ford 5R110 transmission has been known to strip the splines out of the intermediate shaft in even stock applications. It is also a well known fact that the intermediate shaft on these will fracture and shear completely, causing catastrophic failure within the unit. This problem is further agitated by the addition of larger tires, aftermarket performance modifications, and heavy towing/hauling. When these shafts do break, the collateral damage as a result can be very expensive.

In the SunCoast Category 4 5R110 transmission rebuild kit, we upgrade the intermediate shaft to a precision machined billet steel shaft. This shaft is manufactured using 300M steel that has been heat treated for increased strength and reliability. The 5R110 billet intermediate shaft has also had the radius increased in critical load areas to withstand the additional loads.





## FORD REBUILD KITS

E40D | 4R100 | 5R110 | 6R140

SunCoast's Ford series rebuild kits cover all years from 1989-2017 (kit part number dependent upon year). These kits utilize the latest proven friction materials and steel technology from industry leading companies such as Alto®, Exedy®, and Raybestos®. SunCoast works directly with these companies to design and manufacture proprietary exclusive SunCoast product lines, giving the end user uncompromised quality throughout the entire transmission. SunCoast has designed these kits in-house to exact specifications for many intents, including but not limited to towing, sled pulling, racing or having a vehicle to get from point A to point B. Along with these kits, SunCoast has a full line of billet single and triple-disc torque converters ranging from 1800 stall to approximately 3000 RPM (manufactured in-house), billet input/output shaft options, SunCoast designed E-Clutch dampener, billet steel drums, low and reverse hubs (year-dependent), SunCoast 5R110 limit valve, SFI-approved flexplates, SFI-approved transmission jackets and much more.



## CATEGORY 0 SUNCOAST 350HP 5R110 REBUILD KIT

SKU#: SC-5R110SC-0

### KIT CONTAINS THE FOLLOWING:

- SunCoast Low/Reverse Clutch Pack with 5 Clutches & 5 Kolene Steels
- SunCoast Overdrive clutch pack with 5 Clutches & 5 Kolene Steels
- SunCoast Overdrive Piston
- SunCoast Overdrive Pressure Plate
- SunCoast Intermediate Clutch Pack with 5 Clutches & 5 Kolene Steels
- SunCoast Intermediate Pressure Plate
- SunCoast Forward Clutch Pack with 5 Frictions & 5 Steels
- SunCoast Forward Pressure Plate
- SunCoast "Wide Load" Direct Clutch Pack with 5 Frictions & 5 Steels
- SunCoast Direct Pressure Plate
- SunCoast Direct Piston
- SunCoast Direct Snap Ring
- SunCoast "No Walk" Center Support
- SunCoast Overhaul Kit
- SunCoast Valve Body Calibration Kit

The Torqshift 5-speed 5R110 transmission replaces the old faithful 4-speed 4R100 in the 2003 model year with the introduction of the new 6.0L diesel engine. The TorqShift design, in fact, has a total of six forward gears ratios, however only 5 are advertised. The "hidden gear" is only used in very cold weather. The 5 forward ratios are: 3.11, 2.22, 1.55, 1.00, and finally overdrive is .71. The TorqShift also utilizes an optional 4th gear, which is 1.10, that is used in cold start conditions to aid in engine and transmission warm up.



With the TorqShift, once the Tow / Haul mode is activated, it can help increase driver control when towing large loads up and down steep grades. It will also minimize shifts and maximize the available torque. Upon descent, the tow/haul feature utilizes engine braking to help extend the life of the transmission and improves driver control.

The TorqShift was also Ford's first attempt at adaptive control. The adaptive control shift function monitors the performance over its lifetime and adjusts shift times in real time to assure consistency and to compensate for wear. The TorqShift was also used with the 6.4L as well. This transmission was later replaced with the much larger and more robust 6R140 when the 6.7L PowerStroke was released by Ford.

# CATEGORY 1 SUNCOAST 450HP 5R110 REBUILD KIT

SKU#: SC-5R110SC-1

## KIT CONTAINS THE FOLLOWING:

- SunCoast Low/Reverse Clutch Pack with 5 Clutches & 5 Kolene Steels
- SunCoast Overdrive clutch pack with 5 Clutches & 5 Kolene Steels
- SunCoast Overdrive Piston
- SunCoast Overdrive Pressure Plate
- SunCoast Intermediate Clutch Pack with 5 Clutches & 5 Kolene Steels
- SunCoast Intermediate Pressure Plate
- SunCoast Forward Clutch Pack with 5 Frictions & 5 Steels
- SunCoast Forward Pressure Plate
- SunCoast "Wide Load" Direct Clutch Pack with 5 Frictions & 5 Steels
- SunCoast Direct Pressure Plate
- SunCoast Direct Piston
- SunCoast Direct Snap Ring
- SunCoast "No Walk" Center Support
- SunCoast Overhaul Kit
- SunCoast Valve Body Calibration Kit
- Billet Vascomax Input Shaft

This kit is a base rebuild kit using the SunCoast clutch and steel recipes, along with a new pump bearing, which has been an issue for quite some time with the 6R140.

It also includes the filter, overhaul kit, and all the gaskets. This is an ideal kit for someone looking to rebuild a factory stock vehicle with improved frictions and steels to improve longevity in their transmission.

## WALKING AWAY FROM THE CENTER SUPPORT

The center support on a transmission is a critical component that could make the difference between success or failure. The center



support acts as a stabilizer, just as our lower back and abdominal muscles support us. With the TorqShift being such a long unit, over time the torsional flexing distorts the case, and the center support can sag and become displaced. The TorqShift relies on the center support to also apply fluid feed to the direct and forward clutches. When this distortion occurs, the fluid feed holes for direct and forward can become misaligned. This is especially true when towing heavy loads or under moderate to hard acceleration. This will also lead to premature failure and burnt clutches.

SunCoast has developed a new "No Walk" center support to correct this issue, which we include in this kit. We also go a step further with this and make a new Mag-Hytec pan standard to increase the rigidity of the case and reduce torsional flexing.

With this now being corrected the need for the direct solid modification is no longer needed. We originally created this modification before learning about the torsional effect.

## THE "WIDE LOAD" DIRECT CLUTCH

The direct clutch pack has been a problem child for some time now. With the center support now being corrected, we move your attention to the most problematic area of the 5R110, the direct clutch. In the 5R110 the direct clutch pack has been the topic of so many discussions. In the beginning we modified the direct clutch solenoid. We did this as a result of the fluid flow issues we were seeing, trying to compensate for what we would later find out was the center support walking. Today many companies still sell these altered solenoids to try to correct a direct clutch issue. We have alleviated this with our new no walk center support.

Moving forward the direct clutch pack is still one of the most abused clutch packs within the transmission. The direct clutch pack is constantly subjected to conditions that can prematurely wear. To alleviate this SunCoast has developed our new "wide load" direct clutch pack. These new clutches are not only made from our SunCoast SCZ carbon-graphitic material but a larger wider clutch as well.

Making the clutch wider effectively increases the mean radius of a clutch, increasing the mean radius increases the torque capacity of said clutch. What this menaces the larger the mean effective radius, the more torque load capacity the friction plate can handle.

This new wider clutch is also combined with the new wider steel and new wider apply plate. This combination along with the new and improved "No Walk" center support make this the most loudly engineered kit on the market today.

## THE INPUT SHAFT

The factory Ford input shaft is one of the smallest input shafts on the market today. It's lack of size makes for a sore subject with many of our customers after a simple programmer has proven to be too much. With factory wheels and tires this is a standard replacement for all of our builds. With larger wheels and tire combinations this becomes essential at stock horsepower/torque.

SunCoast uses a new billet input shaft that is heat treated and precision ground from 200 managing steel for maximum held strength. This shaft is a 100% drop in assembly.

This is our base recipe less new Ford "9C" transmission pump and all new solenoids that we use on every rebuild. The SunCoast rebuild kit is designed to give the end user an option to build a transmission the SunCoast way using our proven "SunCoast Recipe".





## CATEGORY 2 SUNCOAST 500HP 5R110 REBUILD KIT

SKU#: SC-5R110SC-2

### KIT CONTAINS THE FOLLOWING:

- SunCoast Low/Reverse Clutch Pack with 5 Clutches & 5 Kolene Steels
- SunCoast Overdrive clutch pack with 5 Clutches & 5 Kolene Steels
- SunCoast Overdrive Piston
- SunCoast Overdrive Pressure Plate
- SunCoast Intermediate Clutch Pack with 5 Clutches & 5 Kolene Steels
- SunCoast Intermediate Pressure Plate
- SunCoast Forward Clutch Pack with 5 Frictions & 5 Steels
- SunCoast Forward Pressure Plate
- SunCoast "Wide Load" Direct Clutch Pack with 5 Frictions & 5 Steels
- SunCoast Direct Pressure Plate
- SunCoast Direct Piston
- SunCoast Direct Snap Ring
- SunCoast "No Walk" Center Support
- SunCoast Overhaul Kit
- SunCoast Valve Body Calibration Kit
- Billet Vascomax Input Shaft
- Billet Rear Ring Gear Hub

### THIS REBUILD KIT INCLUDES EVERYTHING FROM SC-5R110-1, IN ADDITION TO THE FOLLOWING:

The Category 2 Rebuild Kit includes the filter, overhaul kit, and all the gaskets. This is an ideal kit for someone looking to rebuild a factory stock vehicle with improved frictions and steels to improve longevity in the transmission.

### THE BILLET RING GEAR HUB

The Ford factory ring gear hub has many issues even in stock form. When we start increasing load on the driveline via additional torque,



larger wheels and tires, towing heavy loads or aftermarket tuning this piece becomes very susceptible to catastrophic failure.

This unit comes with a new billet one piece ring gear hub. This new billet hub is precision machined out of 4140 HTSR steel. This not only withstands the additional torque but is perfect for heavy duty towing applications.

This is our base recipe less new Ford "9C" transmission pump and all new solenoids that we use on every rebuild. The SunCoast rebuild kit is designed to give the end user an option to build a transmission the SunCoast way using our proven "SunCoast Recipe".

## CATEGORY 3 SUNCOAST 600HP 5R110 REBUILD KIT

SKU#: SC-5R110SC-3

### KIT CONTAINS THE FOLLOWING:

- SunCoast Low/Reverse Clutch Pack with 5 Clutches & 5 Kolene Steels
- SunCoast Overdrive clutch pack with 5 Clutches & 5 Kolene Steels
- SunCoast Overdrive Piston
- SunCoast Overdrive Pressure Plate
- SunCoast Intermediate Clutch Pack with 5 Clutches & 5 Kolene Steels
- SunCoast Intermediate Pressure Plate
- SunCoast Forward Clutch Pack with 5 Frictions & 5 Steels
- SunCoast Forward Pressure Plate
- SunCoast "Wide Load" Direct Clutch Pack with 5 Frictions & 5 Steels
- SunCoast Direct Pressure Plate
- SunCoast Direct Piston
- SunCoast Direct Snap Ring
- SunCoast "No Walk" Center Support
- SunCoast Overhaul Kit
- New Thrust Washer Kit
- New Thrust Bearing Kit
- New Bushing Kit
- SunCoast Valve Body Calibration Kit
- Billet Vascomax Input Shaft
- Billet Rear Ring Gear Hub
- Billet Overdrive Planet

### THIS REBUILD KIT INCLUDES EVERYTHING FROM SC-5R110SC-2, IN ADDITION TO THE FOLLOWING:

This rebuild kit also includes the billet flexplate, SunCoast-patented 4-5-6 hub, new pump bearing, Sonnax SureCure Kit, filter, overhaul kit, and all the gaskets. This is an ideal kit for someone looking to rebuild a



factory stock vehicle with improved frictions and steels to improve longevity in the transmission.

### BILLET PLANET

The overdrive planet on the 5R110W is a definite weak link in the higher horsepower applications. This is especially true when you factor in larger wheels and tires.

The billet overdrive planet housing is used in all of our competition 5R110W transmissions. This overdrive planet is precision machined out of 4140 HTSR billet steel. This eliminates both the spline failures as well as the housing shattering under heavy loads.

## CATEGORY 4 SUNCOAST 700+HP 5R110 REBUILD KIT

SKU#: SC-5R110SC-4

### KIT CONTAINS THE FOLLOWING:

- SunCoast Low/Reverse Clutch Pack with 5 Clutches & 5 Kolene Steels
- SunCoast Overdrive clutch pack with 5 Clutches & 5 Kolene Steels
- SunCoast Overdrive Piston
- SunCoast Overdrive Pressure Plate
- SunCoast Intermediate Clutch Pack with 5 Clutches & 5 Kolene Steels
- SunCoast Intermediate Pressure Plate
- SunCoast Forward Clutch Pack with 5 Frictions & 5 Steels
- SunCoast Forward Pressure Plate
- SunCoast "Wide Load" Direct Clutch Pack with 5 Frictions & 5 Steels
- SunCoast Direct Pressure Plate
- SunCoast Direct Piston
- SunCoast Direct Snap Ring
- SunCoast "No Walk" Center Support
- SunCoast Overhaul Kit
- SunCoast Valve Body Calibration Kit
- Billet Aeromet Input Shaft
- Billet Rear Ring Gear Hub
- Billet Overdrive Planet
- New Thrust Washer Kit
- New Thrust Bearing Kit
- New Bushing Kit

**THIS REBUILD KIT INCLUDES EVERYTHING FROM SC-5R110SC-3, IN ADDITION TO THE FOLLOWING:**

### THE INTERMEDIATE SHAFT

The Ford 5R110 transmission has been known to strip the splines out on the intermediate shaft in even stock applications. It is also a well



known fact that the intermediate shaft on these will fracture and shear completely causing catastrophic failure within the unit. This problem is further agitated by the addition of larger tires, aftermarket performance modifications, and heavy towing/hauling. When these shafts due break the collateral damage as a result can be very expensive.

In the SunCoast Category 4 5R110 transmission rebuild kit we upgrade the intermediate shaft to a precision machined billet steel shaft. This shaft is manufactured using 300m steel that has been heat treated for increased strength and reliability. This 5R110 billet intermediate shaft has also had the radius increased in critical load areas to withstand the additional loads.

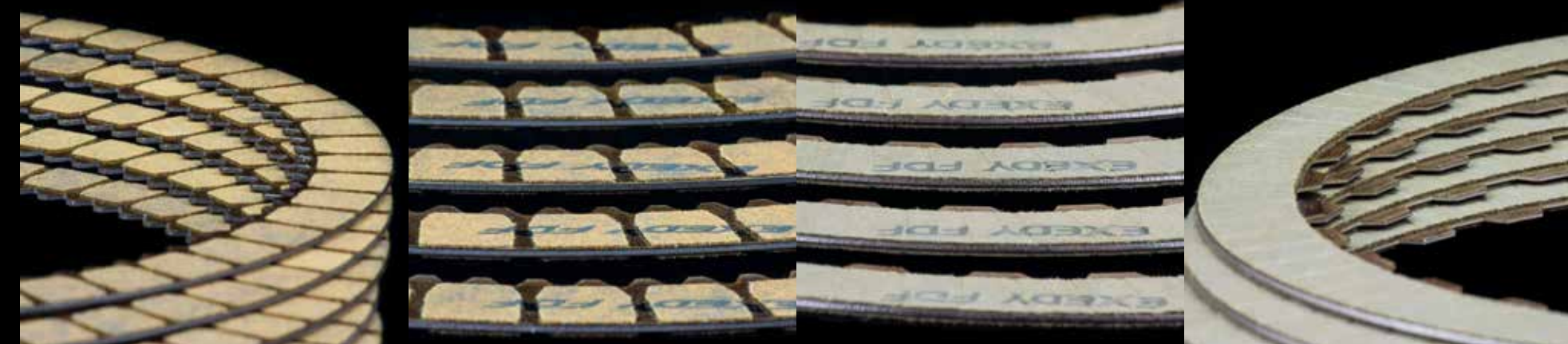
## CATEGORY 0 SUNCOAST 6R140 REBUILD KIT

SKU#: SC-6R140SC-0

### KIT CONTAINS THE FOLLOWING:

- All New Carbon Graphitic clutches
- All New Custom Machined Steels
- Improved Heavy Duty 4-5-6 Overdrive Clutch Pack
- Increased Overdrive Clutch Count
- Custom Machined Overdrive Apply Piston

This kit is a base rebuild kit using the SunCoast clutch and steel recipes. This can be either a refresh kit for a previous SunCoast build or a perfect kit for a stock truck looking to improve the reliability and longevity in their transmission. This is also the base clutch and steel kit for our SunCoast "Tow" line of transmissions.



# CATEGORY 1 SUNCOAST 350HP 6R140 REBUILD KIT

SKU#: SC-6R140SC-1

## KIT CONTAINS THE FOLLOWING:

- All New Carbon Graphitic Clutches
- All New Custom Machined Steels
- Improved Heavy Duty 4-5-6 Overdrive Clutch Pack
- Increased Overdrive Clutch Count
- Custom Machined Overdrive Apply Piston
- New Gasket, Seal, & O-ring Sealing Kit
- New Transmission Filter Kit
- New Pump Bearing

This kit is a base rebuild kit using the SunCoast clutch and steel recipes, along with a new pump bearing, which has been an issue for quite some time with the 6R140.

It also includes the filter, overhaul kit, and all the gaskets. This is an ideal kit for someone looking to rebuild a factory stock vehicle with improved frictions and steels to improve longevity in their transmission.

## INTRODUCING THE 6R140

The new 6R140 from Ford is definitely one of the most exciting drivetrains on the market today. The new 6R140 was released to replace the previous TorqShift unit, which was the 5R110. The 5R110 was previously used in both the 6.0 and 6.4 Ford diesel engines. When Ford released the 6.7 L PowerStroke powerplant, it also released the new, much stronger 6R140 TorqShift transmission.

The new Ford 6R140 TorqShift transmission is the most robust



transmission Ford has yet to build. This unit was designed and manufactured exclusively by Ford Motor Company. First and foremost, Ford opted to incorporate a robust one-piece bell housing design for the all new 6R140 TorqShift transmission. This new one-piece design is not only tough, but also adds a tremendous amount of rigidity to the case, making torsional flex an afterthought. The transmission features a very deep first gear (great for towing and moving mountains) with double overdrive (excellent for fuel economy). This unit has a total of six forward gears with the ratios as follows: 1st gear—3.974:1; 2nd

gear—2.318:1; 3rd gear—1.516:1; 4th gear—1.149:1; 5th gear—0.858:1, 6th gear—0.674:1.

For maximum efficiency, the patented Lepelletier gear train reduces complexities that exist in connecting an automatic transmission's gear sets and clutches. Simply put, the 6R140 uses a simple gearset to drive a Ravigneaux gearset. So the transmission uses just five clutch sets to achieve six forward gears. The 6R140 is further strengthened by the utilization of a powder-metal carrier within the compound Ravigneaux planetary gearset (a double planetary gearset). The carrier is made up of four pressed components, which are sinter-brazed together to form a rigid, dense structure.

The new torque converter in the 6R140 features an exclusive long travel, ultra high capacity turbine dampener designed to soften the extreme force produced by the new 6.7 L PowerStroke. Here at SunCoast we have already improved upon this converter, launching our own line of Torque converters including a variety of stall speeds.

## THE PUMP BEARING

The factory pump on the 6R140 often suffers a loss of lubrication pressure at the converter hub support pump bearing due to failure of the bearing seal. When the bearing itself fails, catastrophic failure can and will occur. This new bearing restores normal operation and integrity back to the pump.



## CATEGORY 2 SUNCOAST 450HP 6R140 REBUILD KIT

SKU#: SC-6R140SC-2

### KIT CONTAINS THE FOLLOWING:

- All New Carbon Graphitic clutches
- All New Custom Machined Steels
- Improved Heavy Duty 4-5-6 Overdrive Clutch Pack
- Increased Overdrive Clutch Count
- Custom machined Overdrive apply piston
- New Gasket, Seal, & O'ring sealing kit
- New Transmission Filter Kit
- New pump bearing
- New SunCoast Patented Dampener

### THIS REBUILD KIT INCLUDES EVERYTHING FROM SC-6R140SC-1, IN ADDITION TO THE FOLLOWING:

The Category 2 Rebuild Kit includes the filter, overhaul kit, and all the gaskets. This is an ideal kit for someone looking to rebuild a factory stock vehicle with improved frictions and steels to improve longevity in the transmission.

### THE ENGINEERING

When SunCoast first took a look at the 6R140 TorqShift transmission, we instantly saw the similarities between the Ford 6R80 and GM 6L80/6L90 platforms. We knew from previous experience the 4-5-6 clutch pack would be the first area that needed to be addressed. The 4-5-6 clutch pack is also known as the "E-CLUTCH" and is one of the smallest clutches in the transmission. As we tested our different friction materials and manufactures, we saw a pattern develop. The



higher the friction coefficient, the more violent the shifts become, especially when adding additional torque is in the equation. Often times this creates the 3-4 "squawk" when shifting into 4th gear.

It became apparent that if we were going to deliver a superior fiction material to our customer, this issue would need to be addressed. We have seen our competitors simply settle for a clutch that has less friction coefficient, allowing slip to occur during the shift. While

settling on an inferior friction material may be acceptable to some, Ron and the SunCoast development team took a different, more scientific approach. And yet another patent hangs on the wall. . .

### THE PATENT AND THE DAMPENER

The 6R140 E-Clutch hub is designed without any dampener. This makes perfect sense due to the fact that Ford designed the 6R140 TorqShift transmission with the thought process that there would be torque management. With torque management in place, we are defueling during shifts, essentially pulling the power between shifts. Ford has also designed this with a certain torque limit in mind that most certainly did not have deletes, larger chargers, and aftermarket tuners involved. Couple this along with the removal of torque management, and you have created a situation where failure is imminent.

SunCoast has designed a completely new 4-5-6 clutch hub that incorporates a dampener assembly that also uses a Sound Reduction/Absorption Technology that eliminates the dreaded squawk and restores shift quality. This new clutch hub dampener allows for clean, crisp, and silent gear exchange. This allows us to use much more sophisticated friction materials with higher friction coefficients, ensuring longevity and reliability. This new Patented SunCoast E-Clutch Hub Dampener has seen over 1,000HP reliably and is only available at SunCoast.

SunCoast has also developed a new 4-5-6 E-Clutch power pack using nine of our custom frictions. This new proprietary SunCoast clutch pack is exclusively designed for our patented clutch hub. This custom SunCoast set-up provides a very clean and crisp shift. The extra capacity in the E-Clutch pack along with the higher friction coefficient provides unmatched performance that cannot be matched by anything else on the planet.



## CATEGORY 3 SUNCOAST 550HP 6R140 REBUILD KIT

SKU#: SC-6R140SC-3

### KIT CONTAINS THE FOLLOWING:

- All New Carbon Graphitic Clutches
- All New Custom Machined Steels
- Improved Heavy Duty 4-5-6 Overdrive Clutch Pack
- Increased Overdrive Clutch Count
- Custom Machined Overdrive Apply Piston
- New Gasket, Seal, & O'ring Sealing Kit
- New Transmission Filter Kit
- New Pump Bearing
- New SunCoast Patented Dampener
- Billet Flexplate
- Sure Cure Valve Body Calibration Kit

### THIS REBUILD KIT INCLUDES EVERYTHING FROM SC-6R140SC-2, IN ADDITION TO THE FOLLOWING:

This rebuild kit also includes the billet flexplate, SunCoast-patented 4-5-6 hub, new pump bearing, Sonnax SureCure Kit, filter, overhaul kit, and all the gaskets. This is an ideal kit for someone looking to rebuild a factory stock vehicle with improved frictions and steels to improve longevity in the transmission.

### BILLET FLEXPLATE

SunCoast custom one-piece flexplate is not only stronger but more durable than any other flexplate out there today. SunCoast's proprietary manufacturing process, utilizing our state-of-the-art machining and hardening techniques, ensures unmatched strength and concentricity.



### NOTE:

THIS KIT COMES WITH THE SUNCOAST-PATENTED DAMPENER WITH STOCK SHAFT AND HUB. IF YOU WOULD LIKE THE SHAFT AND HUB TO BE UPGRADED TO BILLET, PLEASE SEE SC-6R140SC-4.

## CATEGORY 4 SUNCOAST 750+HP 6R140 REBUILD KIT

SKU#: SC-6R140SC-4

### KIT CONTAINS THE FOLLOWING:

- All new Carbon Graphitic clutches
- All New Custom Machined Steels
- Improved Heavy Duty 4-5-6 Overdrive Clutch Pack
- Increased Overdrive Clutch Count
- Custom Machined Overdrive Apply Piston
- New Gasket, Seal, & O'ring Sealing Kit
- New Transmission Filter Kit
- New Pump Bearing
- New SunCoast Patented Dampener
- Billet Flexplate
- Sure Cure Valve Body Calibration Kit
- Billet Intermediate Shaft
- Billet Clutch Hub

### THIS REBUILD KIT INCLUDES EVERYTHING FROM SC-6R140SC-3, IN ADDITION TO THE FOLLOWING:

This rebuild kit also includes the billet flexplate, SunCoast-patented 4-5-6 hub, new pump bearing, Sonnax SureCure Kit, filter, overhaul kit, and all the gaskets. This is an ideal kit for someone looking to rebuild a factory stock vehicle with improved frictions and steels to improve longevity in the transmission.

### THE INTERMEDIATE SHAFT

With vehicles with upgraded performance modifications, larger wheels and tires or heavy towing, it is not uncommon to see the intermediate shaft fail. Now that the overdrive clutches no longer slip during apply,



the intermediate shaft is exposed to a greater amount of torsional fatigue. This fatigue from any one of these circumstances can and will cause shaft failure. SunCoast offers a new billet shaft made from maraging steel (also known as Vascomax).

## CATEGORY 0 SUNCOAST ALTO G3 350HP 6R140 REBUILD KIT

SKU#: SC-6R140AG3-0

### KIT CONTAINS THE FOLLOWING:

- All New Alto G3 Frictions
- All New Custom-cut Steels
- High Performance Intermediate G3 Clutch Pack
- High Performance Direct G3 Clutch Pack
- High Performance Overdrive G3 Clutch Pack
- New Custom-machined 4-5-6 Apply Piston

Carbonite G3 is a (non-asbestos) organic-based friction material with specially designed impregnated carbon graphitic particles. The addition of these carbon graphitic particles adds unmatched lubricity and exceptionally high thermal stability to this new friction material. This new state-of-the-art material allows for a dramatic improvement over stock friction material.

### THE 6R140

The new Ford 6R140 TorqShift transmission is the most robust transmission Ford has yet to build. First and foremost, Ford opted to incorporate a robust one-piece bell housing design for the all new 6R140 TorqShift transmission. This new one-piece design is not only tough but adds a tremendous amount of rigidity to the case making torsional flex an afterthought. The transmission features a deep first gear (great for towing and moving mountains) with double overdrive (excellent for fuel economy). This unit has a total of six forward gears with the ratios as follows: 1st gear-3.974:1, 2nd gear-2.318:1, 3rd gear-1.516:1, 4th gear-1.149:1, 5th gear-0.858:1, 6th gear-0.674:1.



For maximum efficiency, the patented Lepelletier geartrain reduces complexities that exist in connecting an automatic transmission's gear sets and clutches. Simply put, the 6R140 uses a simple gearset to drive a Ravigneaux gearset; so, the transmission uses just five clutch sets to achieve six forward gears. The 6R140 is further strengthened by the utilization of a powder-metal carrier within the compound Ravigneaux planetary gearset. The carrier is made up of four pressed components, which are sinter-brazed together to form a rigid, dense structure.

The new torque converter in the 6R140 features an exclusive long-travel, ultra-high-capacity turbine damper designed to soften the extreme force produced by the new 6.7 L PowerStroke.

## CATEGORY 1 SUNCOAST ALTO G3 400HP 6R140 REBUILD KIT

SKU#: SC-6R140AG3-1

### KIT CONTAINS THE FOLLOWING:

- All New Alto G3 Frictions
- All New Custom-cut Steels
- High Performance Intermediate G3 Clutch Pack
- High Performance Direct G3 Clutch Pack
- High Performance Overdrive G3 Clutch Pack
- New Custom-machined 4-5-6 Apply Piston
- New Gaskets, Seals, and Filter Kit

### FROM FAILURE TO SUCCESS, A FRICTION STORY.

SunCoast not only has improved the friction material in this clutch but dressed some common downfalls within this unit. By addressing these we have increased clutch capacity in some very specify areas.

The intermediate power pack is upgraded with 15% improvement in friction surface area. The factory set-up uses 6 clutches and 6 steels. We have upgraded this clutch pack to 7 high performance G3 clutches and 7 steels.

The direct clutch power pack is addressed next. We have increased this power packs friction surface are by 20%. This new high performance power pack increases clutch count to 6 G3 friction and 6 custom cut machined steels. This added clutch capacity along with the improvement in friction material dramatically improve the longevity of this clutch pack.

The overdrive clutch pack is addressed as well. This particular power pack is usually the first to go. It is the smallest clutch within the transmission while having least amount of torque multiplication



assistance. The factory utilizes 7 frictions and 7 steels in this clutch pack. We have increased this to 9 clutches and 9 steels boasting an additional 24% friction surface area. The overdrive piston has also been replaced with a newly machined one.

## CATEGORY 2 SUNCOAST ALTO G3 550HP 6R140 REBUILD KIT

SKU#: SC-6R140AG3-2

### KIT CONTAINS THE FOLLOWING:

- All New Alto G3 Frictions
- All New Custom-cut Steels
- High Performance Intermediate G3 Clutch Pack
- High Performance Direct G3 Clutch Pack
- High Performance Overdrive G3 Clutch Pack
- New Custom-machined 4-5-6 Apply Piston
- New Gaskets, Seals, and Filter Kit
- New Patented SunCoast Overdrive Hub and Shaft

**THIS REBUILD KIT INCLUDES EVERYTHING FROM SC-6R140AG3-1, IN ADDITION TO THE FOLLOWING:**

### THE PATENT AND THE DAMPENER

The 6R140 E-Clutch hub is designed without any dampener. This makes perfect sense due to the fact that Ford designed the 6R140 TorqShift transmission with the thought process that there would be torque management. With torque management in place, we are defueling during shifts, essentially pulling the power between shifts. Ford has also designed this with a certain torque limit in mind that most certainly did not have deletes, larger chargers, and aftermarket tuners involved. Couple this along with the removal of torque management, and you have created a situation where failure is imminent.

SunCoast has designed a completely new 4-5-6 clutch hub that incorporates a dampener assembly that also uses a Sound Reduction/Absorption Technology that eliminates the dreaded squawk and restores shift quality. This new clutch hub dampener allows for clean, crisp, and silent gear exchange. This allows us to use much more



sophisticated friction materials with higher friction coefficients, ensuring longevity and reliability. This new Patented SunCoast E-Clutch Hub Dampener has seen over 1,000HP reliably and is only available at SunCoast.

SunCoast has also developed a new 4-5-6 E-Clutch power pack using nine of our custom frictions. This new proprietary SunCoast clutch pack is exclusively designed for our patented clutch hub. This custom SunCoast set-up provides a very clean and crisp shift. The extra capacity in the E-Clutch pack along with the higher friction coefficient provides unmatched performance that cannot be matched by anything else on the planet.

## CATEGORY 3 SUNCOAST ALTO G3 550HP 6R140 REBUILD KIT

SKU#: SC-6R140AG3-2

### KIT CONTAINS THE FOLLOWING:

- All New Alto G3 Frictions
- All New Custom-cut Steels
- High Performance Intermediate G3 Clutch Pack
- High Performance Direct G3 Clutch Pack
- High Performance Overdrive G3 Clutch Pack
- New Custom-machined 4-5-6 Apply Piston
- New Gaskets, Seals, and Filter Kit
- New Patented SunCoast Overdrive Hub and Shaft
- New Sonnax Zip Kit

**THIS REBUILD KIT INCLUDES EVERYTHING FROM SC-6R140AG3-2, IN ADDITION TO THE FOLLOWING:**

### THE SURE CURE

The Sonnax Zip Kit targets the root cause of multiple complaints by sealing critical circuit pressure losses in Ford 6R140 valve bodies. The kit contains specifically designed components to prevent the loss of pressure in a variety of circuits. These circuits include main line, solenoid regulator, reverse, clutch control, tic and solenoid apply circuits with no specials tools or reamers required.

This Zip Kit guide provides clear and easy instructions to get your unit back on the road quickly and reliably. In addition to including general rebuilding tips and technical information, the technical booklet included in this kit contains vacuum testing and additional repair options for higher mileage units or for repairing specific complaints.



This kit also includes a new SunCoast custom overhaul kit and a new filter.

The new 6R140 from Ford is definitely one of the most exciting drivetrains on the market today. The new 6R140 was released to replace the previous TorqShift unit, which was the 5R110. The 5R110 was previously used in both the 6.0 and 6.4 Ford diesel engines. When Ford released the 6.7 L PowerStroke Powerplant it also released the new much stronger 6R140 TorqShift transmission.

## FORD TRIPLE-CLUTCH CONVERTERS

E40D | 4R100 | 5R110 | 6R140

SunCoast's Ford series torque converters use a larger-than-stock, triple-clutch design for more holding power. Its forged billet steel covers provide added strength while also providing better heat distribution than stock type converters. Custom billet stators are available for increased torque multiplication and efficiency. These converters work for stock to high-power applications for higher torque multiplication and better drivability.

### FEATURES

- Designed and manufactured in house
- Tig welding to reinforce furnace brazed fins
- Signature trapezoid clutch teeth (no round tabs)
- Forged billet cover
- Piston and stators machined in house
- Pressure tested welds/spun balanced

PART NUMBER.....	DESCRIPTION
4R100-SD265-3D .....	HIGH STALL GAS/DIESEL CONVERTER
4R100-SD36-3D .....	4R100 LOW STALL CONVERTER
4R100-SD44-3D .....	LOW STALL CUMMINS CONVERTER
5R110-64-3D .....	03-07 LOW STALL CONVERTER
5R110-64-3D-8 .....	08-10 LOW STALL CONVERTER
5R110-65-3D .....	03-07 MEDIUM STALL CONVERTER
BAC-5R110-25-3D-8 .....	08-10 HD 13" RACE/TOW CONVERTER
BAC-5R110-27-3D-6 .....	03-07 HD 13" RACE/TOW CONVERTER
6R140-1 .....	6R140 1700 RPM BILLET QUADRALOCK CONVERTER
6R140-2 .....	6R140 1900 RPM BILLET QUADRALOCK CONVERTER
6R140-3 .....	6R140 2300 RPM BILLET QUADRALOCK CONVERTER
SC-5RC1-6 .....	5R110 CATEGORY 1 BILLET 6-BOLT CONVERTER
SC-5RC1-8 .....	5R110 CATEGORY 1 BILLET 8-BOLT CONVERTER



## FORD 5R110 TRIPLE DISC BILLET CATEGORY 1 TORQUE CONVERTER

AVAILABLE IN 6-BOLT OR 8-BOLT

SKU#: SC-5RC1-6 / SC-5RC1-8

### FEATURES AND BENEFITS:

- 3-YEAR, UNLIMITED-MILEAGE WARRANTY
- Billet Lockup Apply Piston
- CNC-Machined Billet Steel Cover
- Balloon Plate
- 4140 Turbine Splines
- 4140 Hardened Hub
- 3 Carbon-Graphitic Clutch Discs
- Furnaced-Brazed Fins
- Torrington Thrust Bearing Stator Design
- Pressurized "Hot Soak" Leak Testing
- Computer-Balanced to Within .01 Gram
- Precisioned-Assembled by Caring American Workers

### THE CATEGORY 1

This Category 1 SunCoast Torque Converter fits all 5R110 transmissions with 6-bolt or 8-bolt patterns and is engineered to handle all of your everyday duties. Whether you're towing a camper or hauling dirt to a job site, this torque converter is designed to

improved vehicle response and give you years of solid,



reliable performance. It comes with furnace-brazed fins and hardened turbine splines. The clutches in this converter are carbon-graphitic for precise and accurate lock-up.

If you're looking to increase the performance of the factory unit—and looking for a cost-effective solution—this is the converter for you. This converter, while great for heavy duty towing and hauling, is it not intended for racing.





# 6R140 OVERDRIVE DAMPENER ASSEMBLY

SKU#: *SC-6R140-ECD*

## 6R140 “E-CLUTCH” DAMPENER

One of the key problems associated with the Ford 6R140 Transmission is a noticeable substantial squawking noise which occurs during the oncoming 4th gear clutch during the 3-4 gear exchange.

This noise becomes much more prominent when aftermarket friction materials are used inside the transmission for added holding capacity. The aftermarket clutches that are utilizing higher friction coefficients are an absolute must when increasing horsepower and torque or during heavy usage.

The SunCoast patented E-Clutch Dampener is the solution to this problem. Using Sound Reduction Absorption Technology, the E-Clutch dampener dissipates the unwanted squawk allowing for a clean, crisp, and silent gear exchange.

This improved design dampener will also aide in extending the life of the 4-5-6 clutch pack in the 6R140.

*THIS COMES WITH FACTORY INTERMEDIATE SHAFT AND HUB. FOR BILLET UPGRADE, PLEASE USE PART#: SC-6R140-ECD-BSH*

## THE 6R140

The new 6R140 from Ford is definitely one of the most exciting drivetrains on the market today. The new 6R140 was released to replace the previous TorqShift unit, which was the 5R110. The 5R110 was previously used in both the 6.0 and 6.4 Ford diesel engines. When Ford released the 6.7 L PowerStroke powerplant, it also released the new, much stronger 6R140 TorqShift transmission.

The new Ford 6R140 TorqShift transmission is the most robust



transmission Ford has yet to build. This unit was designed and manufactured exclusively by Ford Motor Company. First and foremost, Ford opted to incorporate a robust one-piece bell housing design for the all new 6R140 TorqShift transmission. This new one-piece design is not only tough, but also adds a tremendous amount of rigidity to the case, making torsional flex an afterthought. The transmission features a very deep first gear (great for towing and moving mountains) with

double overdrive (excellent for fuel economy). This unit has a total of six forward gears with the ratios as follows: 1st gear—3.974:1; 2nd gear—2.318:1; 3rd gear—1.516:1; 4th gear—1.149:1; 5th gear—0.858:1, 6th gear—0.674:1.

For maximum efficiency, the patented Lepelletier gear train reduces complexities that exist in connecting an automatic transmission’s gear sets and clutches. Simply put, the 6R140 uses a simple gearset to drive a Ravigneaux gearset. So the transmission uses just five clutch sets to achieve six forward gears. The 6R140 is further strengthened by the utilization of a powder-metal carrier within the compound Ravigneaux planetary gearset (a double planetary gearset). The carrier is made up of four pressed components, which are sinter-brazed together to form a rigid, dense structure.

The new torque converter in the 6R140 features an exclusive long travel, ultra high capacity turbine dampener designed to soften the extreme force produced by the new 6.7 L PowerStroke. Here at SunCoast we have already improved upon this converter, launching our own line of Torque converters including a variety of stall speeds.

## THE ENGINEERING

When SunCoast first took a look at the 6R140 TorqShift transmission, we instantly saw the similarities between the Ford 6R80 and GM 6L80/6L90 platforms. We knew from previous experience the 4-5-6 clutch pack would be the first area that needed to be addressed. The 4-5-6 clutch pack is also known as the “E-CLUTCH” and is one of the smallest clutches in the transmission. As we tested our different friction materials and manufactures, we saw a pattern develop. The higher the friction coefficient, the more violent the shifts become, especially when adding additional torque is in the equation. Often times this creates the 3-4 “squawk” when shifting into 4th gear.

It became apparent that if we were going to deliver a superior fiction material to our customer, this issue would need to be addressed. We have seen our competitors simply settle for a clutch that has

less friction coefficient, allowing slip to occur during the shift. While settling on an inferior friction material may be acceptable to some, Ron and the SunCoast development team took a different, more scientific approach. And yet another patent hangs on the wall. . .

## THE PATENT AND THE DAMPENER

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# 6R140 OVERDRIVE DAMPENER ASSEMBLY WITH BILLET INTERMEDIATE SHAFT AND HUB

SKU#: SC-6R140-ECD-BSH

## 6R140 "E-CLUTCH" DAMPENER

One of the key problems associated with the Ford 6R140 Transmission is a noticeable substantial squawking noise which occurs during the oncoming 4th gear clutch during the 3-4 gear exchange.

This noise becomes much more prominent when aftermarket friction materials are used inside the transmission for added holding capacity. The aftermarket clutches that are utilizing higher friction coefficients are an absolute must when increasing horsepower and torque or during heavy usage.

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This improved design dampener will also aid in extending the life of the 4-5-6 clutch pack in the 6R140.

THIS COMES WITH A CUSTOM BILLET INTERMEDIATE SHAFT AND HUB. FOR A STOCK SHAFT AND HUB, PLEASE USE PART#: SC-6R140-ECD

## THE 6R140

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SunCoast has also developed a new 4-5-6 E-Clutch power pack using nine of our custom frictions. This new proprietary SunCoast clutch pack is exclusively designed for our patented clutch hub. This custom SunCoast set-up provides a very clean and crisp shift. The extra capacity in the E-Clutch pack along with the higher friction coefficient provides unmatched performance that cannot be matched by anything else on the planet.

# 6R140 BILLET FLEXPLATE

SKU#: 6R140-BFP

## FEATURES AND BENEFITS:

- SFI Certified 29.1
- Concentric Machined to less than .005
- Machined to exact tolerances from 4340 round bar
- One piece indestructible design
- Chamfered gear tooth providing exact engagement

SunCoast custom one-piece flexplate is not only stronger but more durable than any other flexplate out there today. SunCoast proprietary manufacturing process utilizing our state-of-the-art machining and hardening techniques, ensures unmatched strength and concentricity.



# 4R100 TRANSGO TUGGER KIT

SKU#: 4R100-HD2-TUGGER



The 4R100 TransGo Tugger Kit doubles low-clutch holding pressure in D1 for downhill use and high-speed pull into D1. Handles exhaust brake. Adjusts shift firmness, more cooling/lubrication, better converter feed & capacity.

NOTE: This kit requires removal of the transmission for installation of the internal parts.

# E4/4R BILLET FORWARD DRUM

SKU#: E4100-BFWD



The SunCoast 4R100 Billet Forward Drum is machined from 4140 heat-treated, stress-relieved steel, which eliminates stripping of the input spline. It also increases the clutch frictions from 4-6.

# E40D/4R100 MAG-HYTEC PAN

SKU#: MAG-E40D-4R100



The Mag-Hytec Ford E40D/4R100 Transmission Pan for your 1990 & Up F-Series provides function and fashion all in one package. Cast from A356-T6 aluminum, this textured, powdercoated transmission pan provides increased fluid capacity for

your hard-working truck. The increased fluid capacity not only helps to cool your temperatures, but also the built-in cooling fins help remove heat. Each pan comes complete with hardware, magnetic drain plug assembly and an o-ring gasket for superior sealing.

Note: Due to the extended depth of the deep sump pan, this transmission pan requires the use of a 4WD filter (sold separately).

## PRODUCT HIGHLIGHTS

- Magnetic Drain Plug
- Deep Sump For Increased Fluid
- Pre-Drilled & Tapped 1/8" NPT Sender Port
- O-Ring Seal Requires No Additional Gaskets Or Seals
- 7.6 Quarts Increased Capacity Over Stock

## E4/4R 300M BILLET OUTPUT SHAFT

SKU#: *E4100-BOS*

The Ford E4/5R 300M Billet Output Shaft is manufactured from a select AeroSpace Alloy to meet the high torque demands of today's performance diesels.



## DUAL-LOAD CENTER SUPPORT

SKU#: *4R36743*

With SunCoast's Dual-Load Center Support, the load is now shared with an added bronze bearing at the front of the hub. This stabilizes the load and stops point loading. It reduces bearing failure, while maintaining improved gear train alignment.



## FORD 5R110 FLEXPLATE 6.0

SKU#: *60-BFP*

The Billet Steel Flexplate for the Ford 5R110 is a solid, one-piece flexplate design that can withstand the stress of your modified diesel engine. This flexplate will only fit the Ford 6.0 PowerStroke engine.



## FORD 5R110 FLEXPLATE 6.4

SKU#: *64-BFP*

The Billet Steel Flexplate for the Ford 5R110 is a solid, one-piece flexplate design that can withstand the stress of your modified diesel engine. This flexplate will only fit the Ford 6.4 PowerStroke engine.



## E40D/4R/5R BILLET 300M SHAFT

SKU#: *5R-BIS*

This 5r110W billet input shaft fits Ford Power Stroke E40D, 5R110, and 4R100 transmissions.

### PRODUCT HIGHLIGHTS

- Made from 300M billet steel
- Heat treated and precision ground
- Comes with a 30/31 spline count
- Shaft is rated to 2000 ft of torque
- For high-torque diesel and off-road applications



## 5R BILLET LOW/REVERSE HUB

SKU#: *5R-LRH*

As you increase your horsepower and torque you quickly find out where you weakest links are. The factory rear ring gear is one of the weakest links and has addressed with this product. Designed out of 4140 HTSR steel for superior strength and longevity. If you are building a performance transmission this is a must buy.



## 03-07 & 08-UP 5R110 MAG-HYTEC PAN

SKU#: *MAG-5R110 / MAG-5R110W*

Deep sump, high capacity for maximum cooling. This pan increases fluid volume by (7) quarts. 1/8 NPT tap for temp. sender. Finned aircraft aluminum construction, drain plug with 303 stainless steel hardware. Increases case rigidity under hi-torque conditions.



### PRODUCT HIGHLIGHTS

- 2003-2007 Ford PowerStroke 6.0L Diesel
- 5-speed Torque Shift
- Holds 8.3 quarts more fluid than stock pan
- Deep high-capacity sump for maximum cooling
- Magnetic drain plug
- 303 hardware except allen head cap screws are zinc plated
- 1/8 NPT temperature sender port
- Finned aircraft aluminum construction
- Requires only 3 allen key wrenches (included) for installation & service
- O-rings require no gaskets or sealants.

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GM TRANSMISSIONS

GM REBUILD KITS

GM CONVERTERS

GM ACCESSORIES



# GM PRODUCTS



# GM TRANSMISSIONS

ALLISON 1000: LB7 | LLY | LBZ | LMM | LML

The Allison 1000 transmission is more than suitable for stock applications, but it does have limitations. Once power exceeds 90-110 horsepower over stock, the OEM clutch packs begin to slip. Once slippage occurs, the transmission control module overrides the Allison and puts it into fail-safe mode, often referred to as "Limp Mode." Once the Allison reaches this state, it begins to limp easier and easier. Luckily, SunCoast has the solution. SunCoast's Allison 1000 series transmissions are designed and engineered to be the most dependable, heavy-duty transmission option on the market. SunCoast's Allison transmissions are proven to be more durable and dependable in any situation: street, sled pulling, towing or drag racing (transmission options may vary). Built with the best possible Allison parts on the market, these units can hold in excess of 1900 RWHP (with correct supporting hard parts).

## STANDARD FEATURES:

- Upgraded BST Valve\*
- Re-calibrated Valve Body\*
- High-energy C1, C2, C3, and C4 Clutches and Steels\*\*

\*TransGo® Valve-body re-calibration kit, lock-up boost valve

\*\*Multiple friction/steel options are available upon request such as Alto® & Raybestos®

## OPTIONAL FEATURES:

- Billet Triple-disc Torque Converter (built in-house)
- Mag-Hytec Deep Transmission Pan
- Billet Input/Output/Intermediate Shafts

The SunCoast transmission includes increased clutch count with high-energy friction materials of choice (Alto® or Raybestos®), treated steels, and can also feature upgraded parts.



# PART NUMBERS:

## ALLISON 1000 5 SPEED: 2001-2005

GMAX02-2X .....	LB7 '01-'02 GMAX 2X TRANS ASSEMBLY
GMAX02-4X .....	LB7/LLY '01-'02 GMAX 4X TRANS ASSEMBLY
GMAX03-2X .....	LB7 '03 GMAX 2X TRANS ASSEMBLY
GMAX03-4X .....	LB7 '03 GMAX 4X TRANS ASSEMBLY
GMAX04-2X .....	LB7 '04 GMAX 2X TRANS ASSEMBLY
GMAX04-4X .....	LB7 '04 GMAX 4X TRANS ASSEMBLY
GMAX05-2X .....	LLY '05 GMAX 2X TRANS ASSEMBLY
GMAX05-4X .....	LLY '05 GMAX 4X TRANS ASSEMBLY
GMAX-CAT1-LB7/LLY-4X .....	LB7/LLY CATEGORY 1 500HP TRANSMISSION W/ CONVERTER
GMAX-CAT2-LB7/LLY-4X .....	LB7/LLY CATEGORY 2 600HP TRANSMISSION W/ CONVERTER
GMAX-CAT3-LB7/LLY-4X .....	LB7/LLY CATEGORY 3 700HP TRANSMISSION W/ CONVERTER
GMAX-CAT4-LB7/LLY-4X .....	LB7/LLY CATEGORY 4 950+HP TRANSMISSION W/ CONVERTER



## ALLISON 1000 6-SPEED: 2006-2017

GMAX06-2X .....	LBZ '06 GMAX 6-SPEED 2X TRANS ASSEMBLY
GMAX06-4X .....	LBZ '06 GMAX 6-SPEED 4X TRANS ASSEMBLY
GMAX07-2X .....	LBZ '07 GMAX 6-SPEED 2X TRANS ASSEMBLY
GMAX07-4X .....	LBZ '07 GMAX 6-SPEED 4X TRANS ASSEMBLY
GMAX08-2X .....	LMM '08 GMAX 6-SPEED 2X TRANS ASSEMBLY
GMAX08-4X .....	LMM '08 GMAX 6-SPEED 4X TRANS ASSEMBLY
GMAX09-2X .....	LMM '09 GMAX 6-SPEED 2X TRANS ASSEMBLY
GMAX09-4X .....	LMM '09 GMAX 6-SPEED 4X TRANS ASSEMBLY
GMAX10-2X .....	LMM '10 GMAX 6-SPEED 2X TRANS ASSEMBLY
GMAX10-4X .....	LMM '10 GMAX 6-SPEED 4X TRANS ASSEMBLY
GMAX11-2X .....	LML '11 GMAX 6-SPEED 2X TRANS ASSEMBLY
GMAX11-4X .....	LML '11 GMAX 6-SPEED 4X TRANS ASSEMBLY
GMAX-CAT1-LBZ/LMM-4X .....	LBZ/LMM CATEGORY 1 500HP TRANSMISSION W/ CONVERTER
GMAX-CAT2-LBZ/LMM-4X .....	LBZ/LMM CATEGORY 2 600HP TRANSMISSION W/ CONVERTER
GMAX-CAT3-LBZ/LMM-4X .....	LBZ/LMM CATEGORY 3 700HP TRANSMISSION W/ CONVERTER
GMAX-CAT4-LBZ/LMM-4X .....	LBZ/LMM CATEGORY 4 950+HP TRANSMISSION W/ CONVERTER



# CATEGORY 1 SUNCOAST ALLISON TRANSMISSION W/ CONVERTER

AVAILABLE FOR LB7/LLY, LBZ/LMM, AND LML.

SKU#: *GMAX-CAT1-LB7/LLY-4X|GMAX-CAT1-LBZ/LMM-4X|GMAX-CAT1-LML-4X*

## TRANSMISSION INCLUDES THE FOLLOWING:

- SunCoast Custom Clutch Packs
- SunCoast Custom Steels
- SunCoast Custom Billet Plates
- SunCoast Custom Overhaul Kit
- SunCoast Custom Re-calibrated Valve Bodies
- SunCoast Gasket Kit
- Pan Filter
- Spin-on filter
- Pan Gasket
- SunCoast Filter Loc
- New Internal Wiring Harness
- All New OE Solenoids
- SunCoast Triple Disc Billet Category 1 Converter

SunCoast Allison 1000 torque converters come in many varieties, from heavy hauling, sled pulling, and drag racing to daily driving. Here at SunCoast, we design and manufacture all of our torque converters in-house.

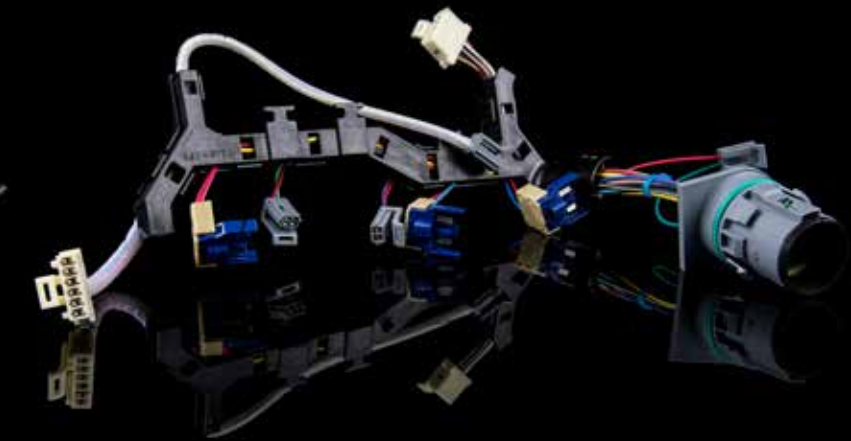
Because of this unique advantage, SunCoast can supply almost any request in regards to stall speed or torque multiplication. All of our SunCoast Allison triple-disc converters are outfitted with a heavy duty forged billet steel cover and give unbeatable lock-up performance.

All of the SunCoast Allison 1000 torque converters come standard with custom pump and turbine modifications (in-house). SunCoast also Tig Welds each individual furnace-brazed fin for improved reinforcement. The SunCoast Allison triple-disc billet converter also comes standard with our proprietary trapezoidal clutch teeth.



## TRANSMISSION EXCLUSIVES

- SunCoast-Proprietary C1, C2, C3, C4 ALTO® Carbonite Frictions & RAYBESTOS® GPZ Frictions, which contain no center slots. These frictions utilize a waffle pattern in the material to help retain oil, helping the clutch cool when not applied.
- Redesigned apply pistons with improved rubber compounds proven to hold more heat. This custom piston allows us to use a thicker spring apply plate, which replaces the thin OEM one and, in turn, causes an uneven apply surface.
- Custom apply plate that redirects fluid to better lubricate frictions from the inside out, which lubes the entire friction rather than the OEM style that lubricates from the center out, leaving the inner half of the clutch burnt.
- Includes exclusive smart trim/clutch control valve.



## CATEGORY 2 SUNCOAST ALLISON TRANSMISSION W/ CONVERTER

AVAILABLE FOR LB7/LLY, LBZ/LMM, AND LML.

SKU#: [GMAX-CAT2-LB7/LLY-4X](#)|[GMAX-CAT2-LBZ/LMM-4X](#)|[GMAX-CAT2-LML-4X](#)

### TRANSMISSION INCLUDES THE FOLLOWING:

- SunCoast Custom Clutch Packs
- SunCoast Custom Steels
- SunCoast Custom Billet Plates
- SunCoast Custom Overhaul Kit
- SunCoast Custom Re-calibrated Valve Bodies
- SunCoast Gasket Kit
- Pan Filter
- Spin-on filter
- Pan Gasket
- SunCoast Filter Loc
- New Internal Wiring Harness
- All New OE Solenoids
- SunCoast Triple Disc Billet Category 1 Converter
- Billet SFI-certified Flexplate
- Billet Input Shaft

### THE TORQUE CONVERTER

SunCoast Allison 1000 torque converters come in many varieties, from heavy hauling, sled pulling, and drag racing to daily driving. Here at SunCoast, we design and manufacture all of our torque converters in-house. Because of this unique advantage, SunCoast can supply almost any request in regards to stall speed or torque multiplication. All of our SunCoast Allison triple-disc converters are outfitted with a heavy duty forged billet steel cover and give unbeatable lock-up performance.

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The SunCoast Allison triple-disc billet converter also comes standard with our proprietary trapezoidal clutch teeth.

### TRANSMISSION EXCLUSIVES

- SunCoast-Proprietary C1, C2, C3, C4 ALTO® Carbonite Frictions & RAYBESTOS® GPZ Frictions, which contain no center slots. These frictions utilize a waffle pattern in the material to help retain oil, helping the clutch cool when not applied.
- Redesigned apply pistons with improved rubber compounds proven to hold more heat. This custom piston allows us to use a thicker spring apply plate, which replaces the thin OEM one and, in turn, causes an uneven apply surface.

- Custom apply plate that redirects fluid to better lubricate frictions from the inside out, which lubes the entire friction rather than the OEM style that lubricates from the center out, leaving the inner half of the clutch burnt.
- Includes exclusive smart trim/clutch control valve.
- Includes all items needed to modify the C2 clutch piston for increased clutch durability.

### THE FLEXPLATE

This SunCoast Allison SFI-certified billet flexplate replaces the factory flex-plate with an improved billet steel one piece design that eliminates the weak factory flexplate. This replacement Allison flexplate is a must with the high torque in conjunction with a better designed torque converter that can transfer torque with no slip. The flexplate is bolted to the crankshaft and then the torque converter to the flexplate. This one-piece billet flexplate is SFI certified to 29.3.

Note: An SFI-certified flexplate is required on drag racing vehicles running 11.99 or quicker in the 1/4 mile and 7.49 or quicker in the 1/8 mile, or any vehicle exceeding 135mph. In 2008, it was changed from the 29.1 SFI specification to the 29.3 specification for automatic transmissions for diesel applications. The new rules for the flexplate require that the material cannot be stamped metal as are many OEM flexplates.

### THE INPUT SHAFT

The input shaft is the first thing to go south with the Allison transmission. This Allison billet input shaft is built to withstand everything you can throw at it. This new Allison billet input shaft is manufactured from 9310 Vacumelt steel, which increases torsional fatigue strength by more than 50%. The SunCoast Allison billet input shaft is machined with a larger radius at the turbine spline for added strength. This is a must for vehicles that are lifted with larger wheels and tires, for heavy towing and hauling, and vehicles with aftermarket turbos.

### NEW INTERNAL WIRING HARNESS

Every build here at SunCoast reliability is our number-one priority. Each one of our Category Allison rebuild kits comes with a new internal wiring harness. As the transmission continues to age, the plastic connectors become brittle and will break during disassembly, which often leaves builders scrambling around looking for a last-minute replacement. This is a new GM harness with all new connectors.

### THE CATEGORY KITS

SunCoast Category kits offer our customer the same recipes as our in-house builds that have been proven for years both at the track and on the road. Our Category 1 Allison rebuild kit offers the customer our 500 horsepower Allison rebuild. This rebuild kit includes everything you will need to build your Allison the same we we build here in-house, in addition to detailed instructions that will walk you through each step of the process.





## CATEGORY 3 SUNCOAST ALLISON TRANSMISSION W/ CONVERTER

AVAILABLE FOR LB7/LLY, LBZ/LMM, AND LML.

SKU#: *GMAX-CAT3-LB7/LLY-4X|GMAX-CAT3-LBZ/LMM-4X|GMAX-CAT3-LML-4X*

### TRANSMISSION INCLUDES THE FOLLOWING:

- SunCoast Custom Clutch Packs
- SunCoast Custom Steels
- SunCoast Custom Billet Plates
- SunCoast Custom Overhaul Kit
- SunCoast Custom Re-calibrated Valve Bodies
- SunCoast Gasket Kit
- Pan Filter
- Spin-on filter
- Pan Gasket
- SunCoast Filter Loc
- New Internal Wiring Harness
- All New OE Solenoids
- SunCoast Triple Disc Billet Category 1 Converter
- Billet SFI-certified Flexplate
- Billet Input Shaft
- Billet P2 Planet Assembly
- Billet C2 Clutch Hub

### THE BILLET C2 CLUTCH HUB

The Allison transmission is an incredibly robust unit, however when exposed to conditions outside what it was designed for weak points begin to expose themselves. The factory C2 clutch hub has been known fail prematurely. This issue is most commonly seen in conditions where larger tire/wheel combinations, heavy towing/hauling, sled pulling, drag racing, and larger shock loads.

SunCoast replaces the factory C2 clutch hub with a much stronger billet piece that is manufactured from 4140 heat treated stress relieved steel.



This new Allison billet C2 clutch hub has had the spline lengthened .125 for increased contact area. The spline boss diameter has also been increased .100 for added strength. This Allison billet C2 clutch hub is installed on all SunCoast 700 horsepower category 3 transmissions.

### THE BILLET P2 PLANET

The P2 planet with the Allison transmission can strip or snap as a result of poor tuning, shock load, improperly built transmissions and higher horsepower applications. This failure can and will result in catastrophic failure and ore immobility. The SunCoast P2 planet is the solution to the issue. This item is manufactured here at SunCoast using 4140 billet steel that is then induction hardened. This item is highly recommended for higher horsepower applications, including sled pulling, drag racing, as well as heavy duty towing. This planet comes with a machine SunGear which is required for use of the planetary.

## CATEGORY 4 SUNCOAST ALLISON TRANSMISSION W/ CONVERTER

AVAILABLE FOR LB7/LLY, LBZ/LMM, AND LML.

SKU#: *GMAX-CAT4-LB7/LLY-4X|GMAX-CAT4-LBZ/LMM-4X|GMAX-CAT4-LML-4X*

### TRANSMISSION INCLUDES THE FOLLOWING:

- SunCoast Custom Clutch Packs
- SunCoast Custom Steels
- SunCoast Custom Billet Plates
- SunCoast Custom Overhaul Kit
- SunCoast Custom Re-calibrated Valve Bodies
- SunCoast Gasket Kit
- Pan Filter
- Spin-on filter
- Pan Gasket
- SunCoast Filter Loc
- New Internal Wiring Harness
- All New OE Solenoids
- SunCoast Triple Disc Billet Category 1 Converter
- Billet SFI-certified Flexplate
- Billet Input Shaft
- Billet P2 Planet Assembly
- Billet C2 Clutch Hub
- Billet Intermediate Shaft
- Billet Output Shaft

### BILLET INTERMEDIATE SHAFT

The factory intermediate shaft is one of the last hard parts to break typically on the Allison transmission. SunCoast replaces this shaft on transmissions that will be exposed to power levels above 750 horsepower. This new Allison billet intermediate shaft is made from a much stronger 300M billet material. This new billet intermediate shaft also features an exclusive additional lubrication hole for the P3 sun gear and pilot, increasing the life of that circuit. This SunCoast Allison



intermediate shaft also has been gun drilled to provide a polished interior finish to eliminate any internal stress risers. Finally, this shaft is heat treated for added strength and reliability.

### BILLET OUTPUT SHAFT

The Allison output shaft can be subjected to a tremendous amount of torsional fatigue. This issue can be even more troublesome with heavy towing/hauling or when increasing horsepower and torque. SunCoast replaces the factory Allison output shaft with a billet piece in our Category 4 Allison rebuilds. This new Allison billet output shaft is machined from 300M billet steel and is a direct drop-in replacement.



## GM REBUILD KITS

ALLISON 1000: LB7 | LLY | LBZ | LMM | LML

SunCoast's Allison series rebuild kits cover all years from 2001-2017 (kit part number dependent upon year). These kits utilize the latest proven friction materials and steel technology from industry-leading companies such as Alto®, Exedy®, and Raybestos®. SunCoast works directly with these companies to design and manufacture proprietary exclusive SunCoast product lines, giving the end user uncompromised quality throughout the entire transmission. SunCoast has designed these kits in-house to exact specifications for many intents, including but not limited to, towing, sled pulling, racing or having a vehicle to get from point A to point B. Along with these kits, SunCoast has a full line of billet single and triple-disc torque converters ranging from 1800 stall to approximately 3000 RPM, 300M billet shaft options, custom valve body options ranging from 5-6 speed conversions and trans brake, SFI-approved billet steel, SFI-approved transmission jackets, & much more.

### KIT EXCLUSIVES

- SunCoast-Proprietary C1, C2, C3, C4 ALTO® Carbonite Frictions & RAYBESTOS® GPZ Frictions, which contain no center slots. These frictions utilize a waffle pattern in the material to help retain oil, helping the clutch cool when not applied.
- Redesigned apply pistons with improved rubber compounds proven to hold more heat. This custom piston allows us to use a thicker spring apply plate, which replaces the thin OEM one and, in turn, causes an uneven apply surface.
- Custom apply plate that redirects fluid to better lubricate frictions from the inside out, which lubes the entire friction rather than the OEM style that lubricates from the center out, leaving the inner half of the clutch burnt.

\*C5 clutches are not included but can be added to our kit upon request.

## CATEGORY 0 SUNCOAST ALLISON REBUILD KIT (5 OR 6-SPEED)

AVAILABLE FOR LB7/LLY, LBZ/LMM, AND LML.

SKU#: GMAX-CAT0-LB7/LLY | GMAX-CAT0-LBZ/LMM | GMAX-CAT0-LML

### KIT CONTAINS THE FOLLOWING:

- SunCoast Custom Clutch Packs
- SunCoast Custom Steels
- SunCoast Custom Billet Plates
- SunCoast Custom Overhaul Kit
- SunCoast Gasket Kit
- Pan Filter
- Spin-on filter
- Pan Gasket

The SunCoast Category kits utilize the latest proven friction materials and steel technology from industry leading companies such as Alto and Raybestos. SunCoast works directly with these companies to design and manufacture proprietary SunCoast exclusive product lines, giving the end user uncompromised quality throughout the entire transmission.

SunCoast has designed these kits in house to exact specifications for many in tents, including but not limited to towing, sled pulling, racing or simply having a vehicle to get from point A to point B.

Designed for light commercial vehicles in both on highway and public transport applications, Allison Transmission's 1000 and 2000 Series are rated up to 400 horsepower from the factory. Allison 5-speed transmission started in 2001 with GM equipped Duramax engines.

### KIT EXCLUSIVES

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AVAILABLE FOR LB7/LLY, LBZ/LMM, AND LML.

SKU#: [GMAX-CAT1-LB7/LLY](#) | [GMAX-CAT1-LBZ/LMM](#) | [GMAX-CAT1-LML](#)

### KIT CONTAINS THE FOLLOWING:

- SunCoast Custom Clutch Packs
- SunCoast Custom Steels
- SunCoast Custom Billet Plates
- SunCoast Custom Overhaul Kit
- SunCoast Gasket Kit
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## CATEGORY 2 SUNCOAST ALLISON REBUILD KIT (5 OR 6-SPEED)

AVAILABLE FOR LB7/LLY, LBZ/LMM, AND LML.

SKU#: [GMAX-CAT2-LB7/LLY](#) | [GMAX-CAT2-LBZ/LMM](#) | [GMAX-CAT2-LML](#)

### KIT CONTAINS THE FOLLOWING:

- SunCoast Custom Clutch Packs
- SunCoast Custom Steels
- SunCoast Custom Billet Plates
- SunCoast Custom Overhaul Kit
- SunCoast Gasket Kit
- Pan Filter
- Spin-on filter
- Pan Gasket
- SunCoast Filter Loc
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- Billet SFI-certified Flexplate
- Billet Input Shaft

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*\*C5 clutches are not included but can be added to our kit upon request.*

### THE TORQUE CONVERTER

SunCoast Allison 1000 torque converters come in many varieties, from heavy hauling, sled pulling, and drag racing to daily driving. Here at SunCoast, we design and manufacture all of our torque converters in-house. Because of this unique advantage, SunCoast can supply almost any request in regards to stall speed or torque multiplication. All of our SunCoast Allison triple-disc converters are outfitted with a heavy duty forged billet steel cover and give unbeatable lock-up performance.

All of the SunCoast Allison 1000 torque converters come standard with custom pump and turbine modifications (in-house). SunCoast also Tig Welds each individual furnace-brazed fin for improved reinforcement. The

SunCoast Allison triple-disc billet converter also comes standard with our proprietary trapezoidal clutch teeth.

### THE FLEXPLATE

This SunCoast Allison SFI-certified billet flexplate replaces the factory flex-plate with an improved billet steel one piece design that eliminates the weak factory flexplate. This replacement Allison flexplate is a must with the high torque in conjunction with a better designed torque converter that can transfer torque with no slip. The flexplate is bolted to the crankshaft and then the torque converter to the flexplate. This one-piece billet flexplate is SFI certified to 29.3.

Note: An SFI-certified flexplate is required on drag racing vehicles running 11.99 or quicker in the 1/4 mile and 7.49 or quicker in the 1/8 mile, or any vehicle exceeding 135mph. In 2008, it was changed from the 29.1 SFI specification to the 29.3 specification for automatic transmissions for diesel applications. The new rules for the flexplate require that the material cannot be stamped metal as are many OEM flexplates.

### THE INPUT SHAFT

The input shaft is the first thing to go south with the Allison transmission. This Allison billet input shaft is built to withstand everything you can throw at it. This new Allison billet input shaft is manufactured from 9310 Vacumelt steel, which increases torsional fatigue strength by more than 50%. The SunCoast Allison billet input shaft is machined with a larger radius at the turbine spline for added strength. This a must for vehicles that are lifted with larger wheels and tires, for heavy towing and hauling, and vehicles with aftermarket turbos.

### NEW INTERNAL WIRING HARNESS

Every build here at SunCoast reliability is our number-one priority. Each one of our Category Allison rebuild kits comes with a new internal wiring harness. As the transmission continues to age, the plastic connectors become brittle and will break during disassembly, which often leaves builders scrambling around looking for a last-minute replacement. This is a new GM harness with all new connectors.

## CATEGORY 3 SUNCOAST ALLISON REBUILD KIT (5 OR 6-SPEED)

AVAILABLE FOR LB7/LLY, LBZ/LMM, AND LML.

SKU#: *GMAX-CAT3-LB7/LLY* | *GMAX-CAT3-LBZ/LMM* | *GMAX-CAT3-LML*

### KIT CONTAINS THE FOLLOWING:

- SunCoast Custom Clutch Packs
- SunCoast Custom Steels
- SunCoast Custom Billet Plates
- SunCoast Custom Overhaul Kit
- SunCoast Gasket Kit
- Pan Filter
- Spin-on filter
- Pan Gasket
- SunCoast Filter Loc
- New Internal Wiring Harness
- SunCoast Triple Disc Billet Category 1 Converter
- Billet SFI-certified Flexplate
- Billet Input Shaft
- Billet P2 Planet Assembly
- Billet C2 Clutch Hub

**THIS REBUILD KIT INCLUDES EVERYTHING FROM GMAX-CAT2, IN ADDITION TO THE FOLLOWING:**

### THE BILLET C2 CLUTCH HUB

The Allison transmission is an incredibly robust unit, however when exposed to conditions outside what it was designed for weak points begin to expose themselves. The factory C2 clutch hub has been known fail prematurely. This issue is most commonly seen in conditions where larger tire/wheel combinations, heavy towing/hauling, sled pulling, drag racing, and larger shock loads.

SunCoast replaces the factory C2 clutch hub with a much stronger billet piece that is manufactured from 4140 heat treated stress relieved steel. This new Allison billet C2 clutch hub has had the spline lengthened .125 for increased contact area. The spline boss diameter has also been



increased .100 for added strength. This Allison billet C2 clutch hub is installed on all SunCoast 700 horsepower category 3 transmissions.

### THE BILLET P2 PLANET

The P2 planet with the Allison transmission can strip or snap as a result of poor tuning, shock load, improperly built transmissions and higher horsepower applications. This failure can and will result in catastrophic failure and ore immobility. The SunCoast P2 planet is the solution to the issue. This item is manufactured here at SunCoast using 4140 billet steel that is then induction hardened. This item is highly recommended for higher horsepower applications, including sled pulling, drag racing, as well as heavy duty towing. This planet comes with a machine SunGear which is required for use of the planetary.

## CATEGORY 4 SUNCOAST ALLISON REBUILD KIT (5 OR 6-SPEED)

AVAILABLE FOR LB7/LLY, LBZ/LMM, AND LML.

SKU#: *GMAX-CAT4-LB7/LLY* | *GMAX-CAT4-LBZ/LMM* | *GMAX-CAT4-LML*

### KIT CONTAINS THE FOLLOWING:

- SunCoast Custom Clutch Packs
- SunCoast Custom Steels
- SunCoast Custom Billet Plates
- SunCoast Custom Overhaul Kit
- SunCoast Gasket Kit
- Pan Filter
- Spin-on filter
- Pan Gasket
- SunCoast Filter Loc
- New Internal Wiring Harness
- SunCoast Triple Disc Billet Category 1 Converter
- Billet SFI-certified Flexplate
- Billet Input Shaft
- Billet P2 Planet Assembly
- Billet C2 Clutch Hub
- Billet Intermediate Shaft
- Billet Output Shaft

**THIS REBUILD KIT INCLUDES EVERYTHING FROM GMAX-CAT3, IN ADDITION TO THE FOLLOWING:**

### BILLET INTERMEDIATE SHAFT

The factory intermediate shaft is one of the last hard parts to break typically on the Allison transmission. SunCoast replaces this shaft on transmission that will be exposed to power levels above 750 horsepower. This new Allison billet intermediate shaft is made from a much stronger 300M billet material. This new billet intermediate shaft also feature an exclusive additional lubrication hole for the P3 sun gear and pilot increasing the life of that circuit. This SunCoast Allison



intermediate shaft also has been gun drilled to provide a polished interior finish to eliminate any internal stress risers. This shaft is also heat treated for added strength and reliability.

### BILLET OUTPUT SHAFT

The Allison output shaft can be subjected to a tremendous amount of torsional fatigue. This issue can be even more troublesome with heavy towing/hauling or when increasing horsepower and torque. SunCoast replaces the factory Allison output shaft with a billet piece on our Category 4 Allison rebuilds. This new Allison billet output shaft is machined from 300M billet steel and is a direct drop in replacement.

# GM TRIPLE-CLUTCH CONVERTERS

ALLISON 1000: LB7 | LLY | LBZ | LMM | LML

SunCoast Allison 1000 torque converters come in many varieties, from heavy hauling, sled pulling, drag racing, to daily driving. SunCoast designs and manufactures their torque converters in-house. Because of this, SunCoast can supply most any request in regards to stall or torque multiplication. All SunCoast triple disc converters are outfitted with a heavy-duty forged billet steel cover and give an unbeatable lock-up performance. The company's race series converter should be used in racing/pulling applications that require a higher "stall" RPM than a standard converter. Increased stall is usually needed in applications where a larger turbo or turbos have been installed and more RPM is required to get the turbo on boost while on the brakes (brake boosting). These HD converters feature a billet stator and will resist damage to the stator section from excessive brake stalling (over 5 seconds).

## FEATURES:

- Custom pump and turbine modifications (in-house)
- Tig welding to reinforce furnace brazed fins
- Proprietary converter clutches with trapezoid clutch teeth (no round tabs)
- CNC-machined billet stators (1800-3000 RPM stall)
- 4140 turbine splines (heat treated depending on application)
- Billet steel and aluminum pistons
- Forged billet cover strength (proprietary Raybestos converter clutch plates)
- Pressure rested welds/spun balanced on Stewart Warner Pro-Bal to Ensure highest quality
- 3-year unlimited mileage warranty



PART NUMBER	DESCRIPTION
GM-10531-3D	TRIPLE DISC HIGH STALL
GM-1053-3D	ALLISON 3D 2600 STALL
GM-1054-3D	1900 STALL - VARIABLE- MEDIUM TURBO
GM-1055-3D	2500 STALL BIG TURBOS CONVERTER
GM-1056-3D	2000 STALL - TOW/DAILY DRIVER
GM-1057-3D	1800 LOW STALL VELOCITY CONVERTER
GM-1058-3D	2000-2300 STALL - DAILY DRIVER/RACE

# ALLISON 70 SERIES TORQUE CONVERTERS

SKU#: GM-1071-3D / GM-1072-3D / GM-1073-3D / GM-1074-3D

## FEATURES AND BENEFITS:

- 3-year, Unlimited Mileage Warranty
- Custom Pump and Turbine Modifications (in-house)
- Tig Welding to Reinforce Furnace-brazed Fins
- Proprietary Converter Clutches with Trapezoid Clutch Teeth (no round tabs)
- Forged Billet Cover Strength (Proprietary Raybestos Converter Clutch Plates)

## THE 70 SERIES CONVERTERS

The 70 Series of torque converters are some of the most prolific converters ever manufactured under our roof for the Allison transmission. These converters drive a feel almost stock at part throttle, but once you start leaning on the throttle heavily, watch out! The 70 Series of converters is a dual-purpose converter that can be used for towing moderate loads and also works great with street/strip use. The perfect candidate for this torque converter would be a completely stock truck to a heavily modified one that is looking for that magical "best of both worlds."

GM-1071-3D	3,000 RPM STALL SPEED
GM-1072-3D	3,200 RPM STALL SPEED
GM-1073-3D	2,600 RPM STALL SPEED
GM-1074-3D	2,200/2,300 RPM STALL SPEED
GM-107X-3D	1,800 RPM STALL SPEED



# ALLISON TRIPLE-DISC BILLET CATEGORY 1 TORQUE CONVERTER

SKU#: SC-23618C1-20

## FEATURES AND BENEFITS:

- 3-YEAR, UNLIMITED-MILEAGE WARRANTY
- Billet Lockup Apply Piston
- CNC-Machined Billet Steel Cover
- Balloon Plate
- 4140 Turbine Splines
- 4140 Hardened Hub
- 3 Carbon-Graphitic Clutch Discs
- Furnaced-Brazed Fins
- Torrington Thrust Bearing Stator Design
- Pressurized "Hot Soak" Leak Testing
- Computer-Balanced to Within .01 Gram
- Precisioned-Assembled by Caring American Workers

## THE CATEGORY 1

This Category 1 SunCoast Torque Converter fits all Allison transmissions and is engineered to handle all of your everyday duties. Whether you're towing a camper or hauling dirt to a job site, this torque converter is designed to improved vehicle response and give you years of solid, reliable performance. It comes with furnace-brazed fins and hardened turbine splines. The clutches in



this converter are carbon-graphitic for precise and accurate lock-up.

If you're looking to increase the performance of the factory unit—and looking for a cost-effective solution—this is the converter for you. This converter, while great for heavy duty towing and hauling, is it not intended for racing.

# GM ALLISON FLEXPLATES

SKU#: A1-BFP-ZB / A1-BFP-AZB / A1-BFP-1 / A1-BFP-2 / A1-BFP-3

This replaces the factory flywheel/flex plate with a improved billet steel one piece design and eliminates the heavy cast iron and the weak stamped steel flex plate. This is a must with the high torque in conjunction with a better designed torque converter that can transfer the torque with no slip. The flex plate is bolted to the crankshaft and then the converter is bolted to flex plate. The torque from the motor is transferred to the flex plate, then goes from the flex plate to the torque converter and finally to the input shaft in the transmission. With increased torque from the engine, it can crack and/or rip the center out of a stock flex plate.

**NOTE:** A SFI-certified flywheel flex plate is required on drag racing vehicles running 11.99 and quicker in the 1/4 mile and 7.49 and quicker in the 1/8 mile, or any vehicle exceeding 135 mph. It was changed in 2008 from the 29.1 SFI specification to the SFI specification 29.3 for automatic transmission flex plates for diesel applications. The new rules for the flex plate requires that the material cannot be a stamped metal as are many OEM and after market flex plates. To maintain the SFI specification 29.3 requirements, the flex plate must be replaced every three years.

## SUNCOAST OFFERS THE FOLLOWING FLEXPLATE OPTIONS:

ZERO-BALANCE FLEXPLATE  
SKU#: A1-BFP-ZB



ALUM ZERO-BALANCE FLEXPLATE  
SKU#: A1-BFP-AZB



LB7/LLY FLEXPLATE  
SKU#: A1-BFP-1



LBZ/LMM FLEXPLATE  
SKU#: A1-BFP-2



LML FLEXPLATE  
SKU#: A1-BFP-3



## PRESSURE REGULATOR SPRING



SKU#: *A01-PR*

Allison Pressure Regulator Spring Kit fits the 2001-2010 Allison 1000 series, Duramax Diesel Chevrolet, GMC Diesel/Gas Trucks Heavy Duty, Street, Show & Competition.

### FEATURES:

Allison Transmission line pressure upgrade spring. This is a great upgrade when building your Allison transmission. Especially with over 800HP.

### SPECIAL INSTRUCTIONS:

Requires professional installation and transmission removal.

## ALLISON LB7/LLY T-CASE BRACKET



SKU#: *A1-TCB*

Due to the cantilever effect of the rear trans mount, the transmission rear adapter housing is prone to cracking. The slightest amount of rear drive shaft vibration can result in a very expensive transmission repair. Help your transmission with this easily installed brace. Installs in less than 30 minutes with no special modifications or tools required.

## ALLISON 1000 MAG-HYTEC PAN



SKU#: *68-SCP*

The Mag-Hytec pan is constructed of high quality aircraft aluminum and has a powder-coated finish. The bolts are zinc plated allen head screws and the washers are stainless steel. These components require no maintenance.

### PARTS LIST:

- (1) Mag-Hytec Transmission Pan with O-ring (ARP 568-282) Installed
- (13) 8MM X 25MM Zinc-plated Allen Head Cap Screws (Torque 12-16 ft.)
- (14) 5/16 Stainless AN washers
- (1) Drain Plug Assembly with Magnet & O-ring (ARP 568-910) Installed
- (1) 1/8 Pipe Plug SS (for optional temperature sender not included) 4.5 Quarts Over Stock.

## ALLISON 01-04 L/U BOOST VALVE



SKU#: *68-SCP*

These TransGo automatic transmission fluid control valves are designed to reduce main line pressure to the torque converter clutch. The lower pressure will allow your transmission to operate more efficiently under no-load conditions.

## ALLISON 01-04 L/U BOOST VALVE



SKU#: *618-1CH*

These TransGo automatic transmission fluid control valves are designed to reduce main line pressure to the torque converter clutch. The lower pressure will allow your transmission to operate more efficiently under no-load conditions.

## ALLISON 01-05 SHIFT KIT



SKU#: *ALLISON-SK*

This Allison Valve Body kit is designed for 2001-2005 LB7 and LLY Chevrolet/GMC 1000, 2000, 2400 Heavy Duty, Work, Tow, or Race diesel trucks. This kit corrects, prevents and reduces the Allison transmission from going into neutral

under a load, 3rd to 4th gear slips, C2 or C3 clutch burning, sticking in one gear, and so forth. This kit allows customers to experience short, crisp, and smooth up shifts and downshift. Kit includes all instructions for a trouble-free installation.

### INSTALLATION:

Transmission must removed from vehicle for kit installation.

## ALLISON 06-UP SHIFT KIT



SKU#: *SK-ALLISON-JR*

This Allison Valve Body kit is designed for Chevrolet/GMC 1000, 2000, 2400 Heavy Duty, Work, Tow, or Race diesel trucks. This kit corrects,

prevents and reduces the Allison transmission from going into neutral under a load, 3rd to 4th gear slips, C2 or C3 clutch burning, sticking in one gear, and so forth. This kit allows customers to experience short, crisp, and smooth up shifts and downshift. Kit includes all instructions for a trouble-free installation.

## ALLISON BILLET OUTPUT SHAFT



SKU#: *A1-109100*

### FEATURES:

- Made from 300M Billet steel.
- Ideal for heavy duty service applications.
- Precision-ground for high dimensional accuracy.
- Ideal for those who challenge their vehicles at work or at play.



## ALLISON BILLET INPUT SHAFT

SKU#: *A1-109600*

Built to withstand everything thrown at it. Made from a select grade of super strength steel.

### FEATURES:

- Shaft is 50% stronger than the O.E.M. shaft.
- Made from 9310 Vacumelt steel.
- Precision-ground for high dimensional accuracy.
- Ideal for heavy duty service applications. Input shaft is machined with larger than O.E.M. radius at turbine spline for added strength



## ALLISON INTERMEDIATE SHAFT

SKU#: *A1-109700*

This Shaft is machined from 300M billet steel.

### FEATURES:

- Stronger than the O.E.M. intermediate shaft
- Features an added lubrication hole for the P-3 sun gear and pilot
- CNC machined and precision ground
- Shaft is heat treated for added strength and durability
- The shaft through hole is gun drilled to provide a polished interior finish, eliminating internal stress risers



## ALLISON BILLET OUTPUT SHAFT

SKU#: *A1-109100*

### FEATURES:

- Made from 300M Billet steel.
- Ideal for heavy duty service applications.
- Precision-ground for high dimensional accuracy.
- Ideal for those who challenge their vehicles at work or at play.



## ALLISON 2011-UP BILLET OUTPUT SHAFT

SKU#: *A1-109102*

### FEATURES:

- Made from 300M Billet steel.
- Ideal for heavy duty service applications.
- Precision-ground for high dimensional accuracy.
- Ideal for those who challenge their vehicles at work or at play.



## BILLET P2 PLANET W/O SUNGEAR

SKU#: *A1-P2K / A1-P2K-6*

### FEATURES:

- Available in 5-speed (A1-P2K) or 6-speed (A1-P2K-6)
- 4140 Billet steel
- Induction heat treated
- This does not include a C2 clutch hub



P2 heat-treated Planetary fix kit contains (1) Machined P2 Planetary. The stock Allison 1000 P2 Planetary can strip or snap as a result of poor tuning, shock load, improperly built transmissions or higher horsepower applications and can cause catastrophic failure and/or immobility. The SunCoast P2 Planetary fix is the solution to this issue. This item is highly recommended for higher horsepower applications, including sled pulling, drag racing, as well as heavy duty towing (to accept billet P2 hub, machine work required on the P1 sun gear).

-Planet must be buildable to receive core deposit back.

## ALLISON BILLET C2 HUB

SKU#: *A1-BC2*

This Shaft is machined from 300M billet steel.

### FEATURES:

- Stronger than the O.E.M. intermediate shaft
- Features an added lubrication hole for the P-3 sun gear and pilot
- CNC machined and precision ground
- Shaft is heat treated for added strength and durability
- The shaft through hole is gun drilled to provide a polished interior finish, eliminating internal stress risers

*\*WILL ONLY WORK WITH MODIFIED P1 SUN GEAR.*

*\*\*P2 PLANET NOT INCLUDED*



# SUNCOAST FULL-SYNTHETIC TRANSMISSION FLUID

SKU#: *SC-TYPE-D-ATF*

## FEATURES AND BENEFITS INCLUDE:

- Outstanding low temperature performance and sheer resistance
- Dramatic improvements in thermal stability during endurance environments
- Optimized frictional properties that can provide smoother shifting during low temperature operation, reducing shudder and vibration
- Outstanding resistance against sludge and deposit formation
- Improved anti-wear protection, which directly contributes to extended transmission life
- Unsurpassed low temperature stability
- Resists foaming and thereby promotes outstanding operability

Throughout the years, SunCoast has put enormous effort into the research and development of failure prevention in some of the most extreme environments that exist today. These environments are not limited to hot shot driving, sled pulling, drag racing, and the Texas Mile.

For our own success and growth, it has been imperative that oil analysis be our measuring stick for improvements. We can use this to determine the amount of degradation that transpires during a drive cycle. This is key when we are determining what friction coefficients work best in a particular application. This process has evolved with both the friction material and fluid types.

As technology has evolved, so has transmission fluid. Here at SunCoast, we have been on the leading edge of this development. We have seen the evolution from the original Dexron that was introduced back in



the late 60's, that utilized sperm whale oil as a friction modifier; to the early 70's when Jojoba oil was introduced, along with corrosion inhibitors, making it hygroscopic. Fast forward to today and the evolution continues.

SunCoast has known for quite some time that we have more success with certain fluids than others. There is a science to the madness, and we knew it was in our best interest to ensure we understood this. In 2006, when General Motors released Dexron VI it set a new standard within the industry. Through our independent testing, we were able

to verify that this was an improvement over anything we had seen to date. This is when SunCoast made the decision that this was an area we should definitely become more familiar with, knowing this is how we are protecting our units. Since 2006, SunCoast has spent countless hours reviewing data from oil samples that we have sent in for testing, in an attempt to figure out what works best for our environments.

Today, we are proud to present you with the fruits of our culmination of analysis and research, SunCoast Type-D Full Synthetic transmission fluid. This new full synthetic transmission fluid contains all of the prescribed combination additives that improve the lubricating qualities for your high stress transmission. The specialized additives include anti-wear, rust and corrosion inhibitors, detergents, dispersants, and

surfactants (which protect and clean metal surfaces). In addition, we have also added very specific viscosity modifiers, seal and swell additives, and anti-foam additives. This fluid has yielded us the best test results to date and offers uncompromised performance. We are also proud of the fact that this fluid is full synthetic, not a blended fluid as so many others have attempted to pass off. The SunCoast Type-D Full Synthetic transmission fluid also has a slightly lower viscosity at lower temperatures than the competitors' fluid, decreasing parasitic drag during normal driving conditions. This, of course, requires the use of higher-quality, more sheer stable base oil compounds when manufacturing. Rest assured, with this new full synthetic fluid you are getting the absolute best protection on the market today.

