Highlights of this issue:

Get the scoop on ATRA, SEMA, and everything else happening in the world of Genuine GM Parts

Survival of the Toughest - GM Component parts in the spotlight
**PARTS NEWS**  ■

**4 I Viva Las ATRA**
As tradeshow season heats up, GM readys for the 2017 ATRA Powertrain Expo in Las Vegas.

**8 I 2017 SEMA**

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**the technical side**

**20 I 6-Speed Solution**
The reman 6L80 and new 6L90 transmissions are hitting the market.

**INDUSTRY TRENDS**  ■

**16 I GM Parts First**
Two shop owners share their thoughts on why factory parts make the most sense.

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**On the cover:**

2018 Buick Enclave

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**GM ServiceInsights Magazine**

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As 2017 slips into the late summer and fall, the automotive trade show season is in full swing. Whether you’re looking to fine tune your transmission repair skills or get your finger back on the pulse of the repair industry, the 2017 ATRA Powertrain Expo in Las Vegas makes for an ideal stopping place.

GM, of course, will take a prominent place once again as it hosts a variety of training and education opportunities. Among them is a technical seminar on the 9T50 9 Speed Transmission that will include a general overview of the major components, unique operating features and diagnostic procedures. “They can view a video on the 9 Speed for the first time anywhere,” says Michelle Francisco, GM Product Specialist for Transmission & Transfer Case Assemblies.

Attendees also will get a close-up look at the 10R80 RWD 10 speed and the 6L90 and the 4L85 Chevrolet Performance Parts Transmission.

Learn more about hybrid batteries

Helping highlight the company’s foray into the rebuilt hybrid battery market, the GM booth will offer a look into the refurbished battery business. Visitors have the chance to learn one-on-one the benefits of selling and installing these popular, cost-effective parts.

That’s not all. GM is hard at work putting together a full schedule of other exhibits to make your time in the desert as valuable and educational as possible. It’s your chance to make history in Las Vegas by leaving more knowledgeable than you arrived.

The Expo is the largest gathering of transmission professionals in the world, providing numerous technical and management seminars, a full trade show, ATRA member meetings, cocktail reception, luncheon and the opportunity to share knowledge with the industry’s best and brightest minds.

2017 ATRA Powertrain Expo | October 19-22
Paris Hotel and Casino

Reserve your place at www.powertrainexpo.com
Running a business is no easy task. You’ve got expenses to cover. With the BuyPower Business Card™ you get rewarded for each and every purchase — building Earnings toward a future Chevrolet, Buick, GMC or Cadillac vehicle!

Apply for the BuyPower Business Card from September 1 to November 30, 2017. If approved,** come back before December 31 and use the card to get a $125 one-time savings off your qualifying $500 purchase of Genuine GM Parts, Service or Accessories at authorized GM Dealers. The discount will be deducted from your bill at the time of purchase.

Save $125 on your next Parts, Service or Accessories purchase.*

Applying is quick and easy.

Visit buypowerbusinesscard.com/dealershiopoffer and click on APPLY NOW. Get a decision in a few minutes.

Once you’re approved and receive your card, take advantage of this money-saving offer and these hardworking card benefits:

- **5% Earnings** on purchases of GM Parts, Service or Accessories at authorized GM Dealers.
- **3% Earnings** on purchases at gas stations, restaurants and office supply stores.
- **1% Earnings** on all other purchases.
- No annual fee††
- Earnings don’t expire
- No Earnings or redemption limits
- 0% Intro APR for the first 12 months, with a 14.24% variable APR after that††
- Combine Earnings with most current vehicle offers

Capital One, N.A. is the issuer of the BuyPower Business Card. General Motors is responsible for the operation and administration of the Earnings Program.

*The $125 Purchase Offer for new BuyPower Business Card members is available on a qualifying minimum $500 purchase of parts, service and accessories at qualifying GM Dealers. Offer made available to all new Accounts opened 9/1/17–11/30/17. Cardmember must purchase using the BuyPower Business Card to qualify for offer. Service, parts or accessories must be purchased 9/1/17–12/31/17 at an authorized Chevrolet, Buick, GMC or Cadillac Dealership. This offer is not eligible for cash. This offer is nontransferable to another BuyPower Card Account. Only one offer per Account.

†BuyPower Business Card Earnings may not be used on the purchase of certain vehicles, such as those sold or obtained at auction, or with some other offers and discounted sale programs. See your authorized GM Dealership for eligibility.

**Credit approval required. Terms and conditions apply.

††Purchase APR: 0% Intro for the first 12 months; after that, a variable rate of 14.24%. Cash Advance APR: 25.90% variable. Penalty APR: 25.99% variable. APRs in effect 7/1/17, and will vary with the market. Cash Advance Fee: greater of 3% of the Advance amount or $10. Minimum Interest Charge is $1. Credit approval required. Restrictions and limitations apply. See buypowercard.com/dealerapr for pricing and rewards details.

Dealer Instructions: To process Redemption, dealer must log in at gmglobalconnect.com. Once logged in, open Workbenches > Sales > GM Cardmember Services. Once the offer is redeemed, the customer will receive a confirmation email with an Authorization Code. If you do not currently have access to GlobalConnect, please see your dealership Partner Security Coordinator (PSC).

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SUPERSIZE IT

A KING-SIZED PORTION of performance and power at this year’s SEMA

Is it possible to get too much of a great thing?
Chevrolet Performance will be putting that question to the test as it prepares a plus-size showcase for SEMA 2017. Not only will it be doubling the floor space used last year, Chevrolet Performance plans to significantly increase the assets it brings to the show.

“We were so well received last year that it just made sense to expand... We’re really excited about what we’re going to bring to performance enthusiasts in 2017.”

Curt Collins
Chevrolet Performance Associate Marketing Manager

Of course, exactly what Chevrolet Performance unveils at SEMA will be kept tightly under wraps until the night before the show opens this fall. When the doors open, showgoers will be met by extra space to showcase new crate engines suited up in GM classic vehicles, concept vehicles and in stand-alone displays. There will be Connect and Cruise packages, and a host of hot performance parts hitting the market for the new year. Throw in the usual surprises and hot-ticket events Chevrolet Performance typically rolls out, and there’s more reason than ever to put SEMA on your calendar and to make Chevrolet Performance booth your first stop.

SEMA 2017
October 31 - November 3
Las Vegas Convention Center

www.semashow.com
INDEPENDENT SERVICE CENTER POWERTRAIN INCENTIVE PROGRAM

Genuine GM Parts is proud to announce the 1st Independent Service Center Travel Incentive Program for Independent Service Centers (ISC). From August 1 through December 31, 2017 (Program Period), participants will have the opportunity to compete for a 5-days/4-nights travel award to the Dreams Playa Mujeres Golf & Spa Resort in Cancun, Mexico. The trip will take place Sunday, March 4 – Thursday, March 8, 2018. Winning ISCs will be notified in February, 2018.

Enrollment
• All ISCs are eligible to participate. ISC participation is voluntary. ISC will be automatically enrolled if they are enrolled in Genuine GM Rewards.

Eligible Independent Service Centers
• All ISCs must be enrolled in Genuine GM Rewards in the USA by October 1, 2017 and remain through the Program Period. A trip will be awarded to the winning ISCs per Flight.
• If you are not enrolled in Genuine GM Rewards, contact your local GM Dealer to enroll.

• ISCs who are enrolled in Genuine GM Rewards will continue to earn 50 earnPOWER points for their GM Dealership Engine and Transmission Assemblies purchases.

Reward Criteria
a. Program Flights:
• Flight tiers based on August 1, 2016 through December 31, 2016 Total Powertrain Assembly Purchases (excludes Chevrolet Performance Powertrain Assemblies) from a GM Dealership
  i. Total ISC powertrain assembly purchases from a GM Dealer less any returns

Program period: August 1 - Dec. 31, 2017

Full promotion details are available at http://www.genuinegmparts.com/for-professionals/current-programs-and-rebates
Smart, stylish and connected, the all-new Enclave is more for every moment.

New and versatile functionality, spaciousness and intuitive technologies mark the next evolution of the Buick Enclave. More third-row space, improved towing capability and a thoughtful combination of safety technologies, useful interior features and premium materials are a few highlights included on Buick's all-new seven-passenger midsize luxury SUV.

Within a visually lower and slimmer body, the Enclave boasts more interior space. The third row alone offers 5.6 more inches of standard legroom than an Acura MDX, 4.5 inches more than an Audi Q7 and nearly three inches more than an Infiniti QX60. The new Enclave also features a longer wheelbase than the previous generation, yet its turning circle is 1.4 feet tighter than before, pairing the space customers need with added maneuverability.

**Premium Comforts**
Meticulously crafted premium materials like leather-appointed seating, warm wood tones, and brushed chrome accents come together to delight all of your senses.

**QuietTuning™**
QuietTuning™ technology helps keep outside noise outside so you’re left with the ideal environment for conversation in your Enclave.

Triple door sealing, acoustic laminated glass, and specific suspension tuning combine to quiet noise from the road, wind and other vehicles to make sure nothing interrupts you and your passengers' time together.

The doors form a sound-blocking shield using inner door sound barriers, thin and light absorbers and triple door seals.

Engine noise and vibrations are blocked from the cabin using hydraulic engine mounts, premium engine-side acoustics and a sound-absorbing dash mat.

**Ambient Lighting**
Moon-white lighting creates a warm, inviting driving experience with soft, ice blue hints that see to it that all the Enclave’s beautiful details leave you with a lasting impression.

Meticulously crafted premium materials...
The Buick Enclave’s new design architecture enables a balanced, athletic appearance. New proportions give it a sleeker look with aerodynamic benefits for efficiency.

**EXTERIOR**

**Winged LED Headlamps**

Winged headlamps provide a dramatic look while LED signature lighting add style to the Enclave’s gracefully sculpted surface.

**Rear Power Liftgate**

The convenience of Enclave’s new hands-free liftgate lets you load, unload and access your cargo area with a simple kick of your foot. And LED illumination marks the spot, making the activation an easy one.

**Towing Capability**

The Enclave offers the confident convenience of 5,000 lbs. available towing capability. So whether you’re taking the boat to the lake or the gear to the campsite, you never have to leave the good stuff at home.

**TECHNOLOGY**

**INTELLIGENT AWD**

And it constantly reads – and instantly responds – to road conditions by delivering optimal power and traction to the wheels with the best grip.

**OnStar 4G LTE Wi-Fi hotspot**

The all-new Enclave offers available powerful Wi-Fi on the road for up to seven devices. Now you and your passengers can stream your favorite movies, music, and more with a strong connection wherever you go.

**Apple® CarPlay**

With intuitive Apple CarPlay compatibility in the all-new Enclave, you can easily bring select iPhone apps along for the ride—and control them with your voice through Siri, steering wheel controls or touchscreen convenience.

* Maximum trailer ratings are calculated assuming a properly equipped base vehicle, plus driver. Cargo and load capacity limited by weight and distribution.
† Requires a compatible mobile device, active OnStar service and data plan. 4G LTE service available in select markets. Visit onstar.com for coverage map, details and system limitations.
‡ Vehicle user interface is a product of Apple and Apple’s terms and privacy statements apply. Requires compatible iPhone and data rate plans apply.
Two Washington–based customers tell us why they use GM Parts first

Mention the Pacific Northwest, and images of lush forests, high mountains and fresh air probably come to mind. But to complete this picture, you need to add lots of Genuine GM Parts.

That’s the environment of two long-time, successful Washington state repairers. When something automotive needs replaced, they turn first to factory parts.

Erich Bockelie is the co-owner of KC Martin Automotive, a two-location, 70-year-old business based in Lynnwood. He heads up KC Martin Transmission where his repair philosophy is simple: “We try to put back on the exact kind of part that came off the vehicle.”

“We always request GM Parts before going to the aftermarket,” he says.

With Genuine GM Parts, Bockelie says his shop gets a “quality part specifically designed for the vehicle — and one we can put our trust in.”

That trust extends to his local GM Parts Dealer whom he can count on in most cases to get all the parts he needs the same day they’re ordered. Further, when it’s time for GM to cover a warrantied repair, Bockelie says he’s compensated quickly and with no hassles.

“When you find someone you’re glad to business with, you stick with them,” he explains. “That’s also how I want customers to feel about my business.”

Indeed, Bockelie says his customers have benefited time and again from his close relationship with his GM Parts Dealer.

In one particularly memorable occasion, a vacationing family arrived at his doors needing a new transmission. Bockelie said he was able to do the work the same day thanks to a series of smooth, trouble-free transactions.

“We put in the order and had the old transmission off when the delivery driver got here. We pulled the new transmission from its box (put the old one in its place), installed the new transmission and had these folks back on the road soon after,” Bockelie says. “That’s what it’s like working with GM.”

Eric Stroh, owner of Stroh’s Automotive in nearby Tacoma, has the same regards for GM Parts.

His shop makes using them a “priority” on GM vehicles, which are popular in the area. His shop performs a full range of powertrain services and has installed its share of GM crate engines.

“It comes down to quality,” he says. “We can put a part on a vehicle that we have a lot of confidence in.

“They’ve proven themselves,” he adds.

Stroh also notes that Genuine GM Parts come with warranties that are fair to both the vehicle owner and the installer.

“Genuine GM Parts offer a 36 month/100,000 mile limited warranty (whichever comes first) on engines and automatic transmissions,” he says. “And, the warranty covers both the part and the shops labor. Plus, the warranty is transferable.”

Stroh says the service he gets from his GM Dealer similarly is second to none. “It’s great working with a partner truly interested in catering to the independent shop market,” he says. “We consistently get the right part at the right price at the right time.”

Isn’t it time you got the same deal? Call your Genuine GM Parts dealer today.
Count on durable parts in extreme conditions

It’s a harsh world inside a transmission. The searing heat, high pressure and hardened metal pieces pushing against one another is no place for wimps—or second-rate parts.

Need convincing? Look no further than torque converters.

GM torque converters are constructed to:

- Meet GM original requirements for ATF compatibility, function, and longevity
- Help reduce noise, vibration, and harshness when shifting
- Help optimize fuel economy

Meanwhile, the competition must turn to substitute materials.

Want more proof?

Consider transmission sun shells. GM versions feature a heat-treated collar spline and proprietary hardening process that offers strength and durability, reducing the chance of premature failure. Real world tests showed the teeth on GM sun shells intact and the part still functional after 6 million cycles vs. competitor products that were left worn down and unusable.

GM transmission components also benefit from continually enhanced and updated designs that incorporate updates and upgrades and reflect changes from any Technical Service Bulletins. Plus, they’re warranted.

With GM’s vast experience with its own products, why go elsewhere? Because in the world of transmission repair, brains and brute are the keys to survival.
Rear wheel drive GM vehicles have been popular for decades and for good reason. They’re stylish, come in all kinds of vehicle forms and offer years of driving enjoyment to an ever-growing loyal fan base.

Now GM can help keep these same vehicles rolling down the road by offering two replacement 6-speed transmissions: a 6L80 reman and a 6L90 reman.

The 6L80 is featured in a wide swath of 2007-2016 model year GM vehicles—everything from Corvettes, H2 Hummers, Caprice police cars and Cadillac XLR convertibles to 1/2-ton Tahoes, Avalanches, and Suburbans.

The 6L90 appears in a similarly wide array of 2007-2016 model year GM vehicles, including the Camaro SS and Cadillac CTS, along with ¾ and 1-ton extended cargo vans and Suburbans.

That amounts to millions of some of GM’s top-selling vehicles.

The 6L90 and reman 6L80 meet this demand with OEM quality and performance. Whether customers opt for the new 6L90 or reman 6L80 (tested and fully returned to factory specs with plenty of new components), they receive GM’s 36 month/100,000 mile, whichever comes first, limited warranty covering parts and labor. Plus, the warranty is transferable.

No-Charge 2-Day TIS2Web subscription

If that weren’t enough, both transmissions qualify for GM’s No-Charge 2-Day TIS2Web Service Programming subscription. Buy either the 6L80 or 6L90 by December 31, 2017, and flash it for free for over next 48 hours with the TIS2Web Service.

That’s a complimentary programming subscription and potentially quicker service for customers.

Signing up for the No-Charge 2 Day TIS2Web Service Programming subscription

Offer redemption is easy:

1. Purchase a Genuine GM Parts 6-speed automatic transmission.
2. Call GM PCC at 1-866-453-4123.
3. Provide the transmission part number, serial number and VIN.
4. Receive a PROMO code for your TIS2Web subscription.

The shop has 48 hours to redeem the promotion and do this:

- Go to www.acdelcotechconnect.com.
- Select TIS2WEB from the Tools section; click Subscribe to TIS2WEB Now and register.
- Log into the system, choose Service and Programming Information and click Service Programming Only. When it comes time to checkout, enter the PROMO code.
LSA (P/N 19257456 and 192574-60). The LSA 6.2L supercharged crate engine package arrives fully dressed, with a top of the charge-cooled supercharger assembly to the ignition system, water pump, balancer and more. It also comes with a conventional wet-sump lubrication system and makes a great transplant for:

- 1965 and Older: U.S. Manufactured California Certified Vehicles
- 1967 and Older: U.S. Manufactured Federally Certified Vehicles

LS3 (P/N 19257230 and 19257234). Straight from the heart of the Chevrolet Corvette, the LS3 6.2L combines high technology and uncompromising performance churning out a 430 hp and 425 lb-ft of torque. It arrives complete, with everything from the Corvette-specific oil pan to an ignition system. It also includes the EFI intake manifold assembly with injectors and throttle body, exhaust manifolds, water pump, balancer, 58X reluctor wheel and 14-inch automatic transmission flexplate. Two of those, the LS3 and LT1, are being geared to meet FAST requirements, with potentially more on the way should the red-hot replica market demand it.

GM lends a hand to replica vehicle builders

In December 2015, the federal government passed The Fixing America's Surface Transportation Act (FAST), giving low-volume manufacturers the opportunity to build turn-key replica vehicles if they used engines meeting current model year Clean Air Act standards for the model year in which they were produced.

The government opened the door to builders looking to help classic car aficionados re-take the streets with 25+ year old vehicles. To comply, engines must meet applicable California Air Resources Board (CARB) and EPA requirements.

For now, GM is the only manufacturer making a significant effort to heed this call for help. Chevrolet Performance already offers three E-Rod Crate engines that currently are legal to use as retrofits/upgrades in Calif. for 1995 and earlier pollution-controlled motor vehicles.

They include:

LT1 (P/N 12682080). Introduced on the Chevrolet Camaro, the LT1 6.2L belts out 455 hp and 455 lb-ft of torque and is offered with a wet-sump oiling system. It also includes a controller specially designed for retro-fit application.

LSA 556 HP @6100 RPM 551 LB-FT TORQUE

LT1 455 HP @6000 RPM 455 LB-FT TORQUE

LS3 430 HP @5900 RPM 425 LB-FT TORQUE

Check out the full line of Chevrolet Performance Crate Engines at...
Malfunction Indicator Lamp Illuminated

2013–2014 Chevrolet Malibu
2014 Chevrolet Impala (VIN 1)
2013–2014 Cadillac ATS

In models equipped with the 2.5L engine (RPOs LCV or LKW), the Malfunction Indicator Lamp (MIL) may illuminate and Diagnostic Trouble Code (DTC) P0411 may be set. This may be caused by using inferior fuel, creating restrictions in the Secondary Air Injection (SAI) ports in the cylinder head, resulting in higher than expected SAI operating pressures.

1. Air injection ports   2. Galley plugs

If the ports are diagnosed as the cause, they should be cleaned using the recommended GM Upper Engine and Fuel Injector Cleaner (#88861803).

To perform this procedure:

1. Remove the exhaust manifold and discard its gasket.
2. Roll the engine over – closing the exhaust valves – and remove the SAI galley plugs from the injection ports.
3. Using a suitable tool and the Upper Engine and Fuel Injection Cleaner, remove the deposits from the ports and passages.
4. Apply thread locker (#12345382) to the edge of new SAI galley plugs and install them into the cylinder head.
5. Attach a new gasket and reinstall the exhaust manifold.

Battery Update for Traverse, Enclave and Acadia

If the ports are diagnosed as the cause, they should be cleaned using the recommended GM Upper Engine and Fuel Injector Cleaner (#88861803).

ACDelco has determined that battery part number 48PGHR (GM Part #88865786) must be used for the following applications:

- 2010-2016 Chevrolet Traverse
- 2010-2016 Buick Enclave
- 2010-2016 GMC Acadia

48PGHR will be the only part that can be used in these applications, which includes an original equipment service warranty.

ACDelco technical tips provide repair information about specific conditions on a variety of vehicles. If you have a tough or unusual service repair, the Diagnostic Hotline can help. Call 1-800-825-5886, prompt #2, from 8 a.m. to 8 p.m. ET Monday–Friday, to speak with a technical expert with the latest OEM information.

For free technical assistance and product information regarding specific ACDelco products, contact these toll-free information hotlines staffed by ASE-certified technicians:

- Brakes 1-888-701-6169 (prompt #1)
- Chassis & ReadyStruts 1-800-270-2124
- Lift Supports 1-800-790-5438
- Shocks 1-877-466-7752
- Starters & Alternators (New) 1-800-854-0076
- Starters & Alternators (Reman) 1-800-228-9672
- Steering 1-855-451-1212
- Wiper Blades 1-800-810-7096
New 9-speed Automatic Transmission Debuts

Designed to deliver excellent efficiency, performance and refinement, GM’s all-new 9-speed automatic transmission (9T50 Hydra-Matic) – which debuted on the 2017 Chevrolet Malibu – will become available on more vehicles, including the 2017 Cruze Diesel, 2018 Equinox and 2018 GMC Terrain in the coming months. By the end of this year, up to 10 GM models are expected to offer the refined gearbox.

When paired with the Malibu’s 2.0L Turbo engine, the transmission (RPO M3E on Malibu models) helps the sedan provide an estimated 33 mpg on the highway – a 3 percent increase over the 2016 Malibu with an 8-speed automatic.

The transmission, which was co-developed with Ford Motor Company, employs a wider 7.6:1 overall ratio (compared to the 8-speed transmission) for better acceleration in first gear and lower engine speeds on the highway, which enhances fuel economy and reduces noise.

Selectable One-Way Clutch

Designed for the tight packaging requirements of transverse propulsion systems, the 9T50 features an on-axis layout that keeps the planetary gears in line with the engine crankshaft. The transmission also boasts GM’s first application of a selectable one-way clutch that holds torque or freewheels, depending on the desired operating mode.

The combination of an on-axis design and a one-way clutch (which eliminates the need for an additional clutch pack) helps reduce overall package dimensions, making the compact 9T50 about the same size as a 6-speed transmission.

To ensure smooth, precise shifts, the transmission uses five planetary gearsets, four stationary clutches and three rotating clutches. Gears change from second to ninth ratios with precise clutch-to-clutch shifting, whereby the clutch is engaged in one gear at exactly the same time that it’s released from another.

The 9T50 also utilizes new torque converter technology to ensure refinement and smooth takeoff performance.

The converter includes a hyper-elliptical oval cross section that reduces the converter’s thickness, keeping the overall width of the engine and transmission as narrow as possible for packaging advantages.

In addition, the transmission’s single-plate lockup clutch uses GM’s electronically controlled capacity clutch (ECCC) technology to dampen engine vibrations and ensure smooth operation.

Shift Controls

To help maintain desired vehicle speed when coasting or decelerating on a slope, the transmission utilizes automatic grade braking that can select a lower gear to prevent unwanted acceleration and reduce the need for drivers to apply the brakes during a descent. This feature is managed by a control module that monitors brake pedal usage, vehicle acceleration, grade and other data.

The 9T50’s hydraulic system is controlled electronically to deliver the pressure and volume required at various operating temperatures for optimal efficiency. And because the transmission is filled with Dexron® VI fluid, it does not require changing under normal driving conditions.

Commanding all of the shifting events is a 32-bit transmission control module (TCM) that helps ensure smooth and precise ratio changes. In addition, the TCM monitors transmission performance and compensates for the normal wear of certain components, such as the clutch plates, for greater operating consistency. The module requires only vehicle-specific calibration to be added to the core program.

Finally, a unique accumulator within the 9T50 allows for virtually seamless stop/start transitions for increased refinement. The accumulator stores energy, ensuring almost imperceptible engine restarts, while specific software that’s calibrated for those restarts contributes to smooth takeoffs.