



**Keisler Automation**  
**LFX RX8 Totality Swap**



**WHAT'S  
INSIDE?**



**Manufactured  
Engineered  
Produced  
Tested**

**K**eisler Automation takes great pride in our manufacturing process. Every component was designed and engineered in house to make this OEM quality swap a reality. With the help of our 4 axis vertical machining center, 3D printing technology, and manufacturing partners, we are able to bring you the most complete swap kit on the market.

In this brochure, you will see a breakdown of each assembly's role in bringing this swap kit to life so you can buy with confidence. Each section highlights the attention to detail and quality that goes into each individual part. With the aid of 3d modeling and FEA analysis, engineering the utmost structurally efficient components is our top priority. Over 46 of these parts are CNC'd from 6061-T651 aluminum which results in precise, light-weight, beautiful pieces. We also utilize 3D printing technology for rapid prototyping along with the cost-effective production of numerous brackets that will provide an OEM look and feel. All our wiring harnesses are built with top quality components from Delphi and Molex which we're proud to state are all plug and play. Certain components that we lack the ability to produce are out-sourced to specialty shops that strive for the same level of quality and craftsmanship that we place into our own products. With over 3 years of full-time development, our totality drivetrain swap is guaranteed to exceed your expectations.

- All interior functions work as original except DSC and Cruise Control
- Original location shifter and throttle pedal
- Functioning Mazda security system
- Heat and Air Conditioning
- OEM Instrument Cluster
- Reverse Lights

**OEM Look and Feel**



**Install with Confidence**

- No Welding
- Plug and Play Wiring Harness
- Minimal Specialty Tools Required
- Step by Step Installation Video Included
- Estimated 50 hour first-time Installations

# COMPONENTS

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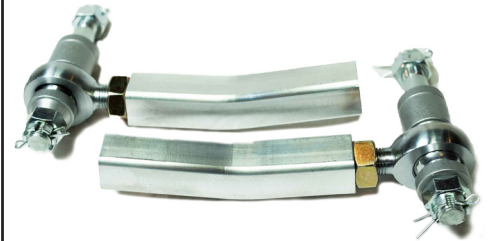
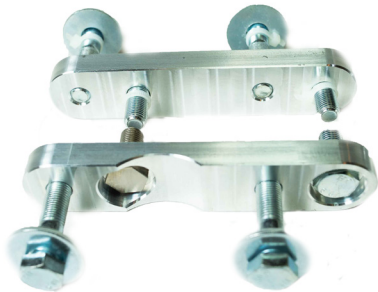
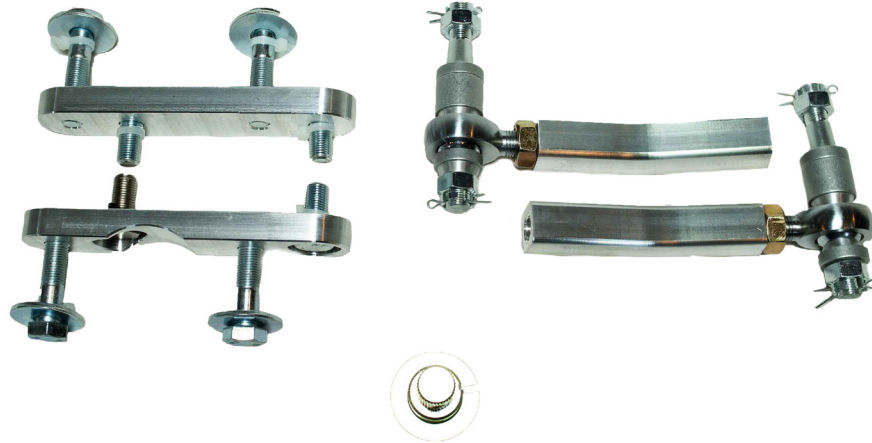




# Intake + ABS Relocation

- CCV Hose
- K & N Filter
- MAF Housing
- Silicone Elbow
- SS Hose Clamps
- OEM MAF Sensor

The intake is a plug and play assembly which features an OEM mass airflow sensor, stainless steel hardware, and a K&N air filter.



# Steering Components

- **Steering Rack Relocation Brackets**
- **Steering Shaft Extension**
- **Steering Geometry correction outer tie rod ends**

Steering rack relocation brackets lower the electronic power steering rack to gain clearance from the engine. The steering shaft extension is placed between the rack and U-joint to compensate for the distance that the rack has been lowered. Geometry correction outer tie-rod ends allow for 5-point adjustment to ensure steering geometry is revised.

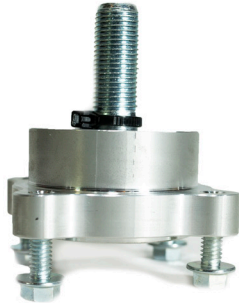
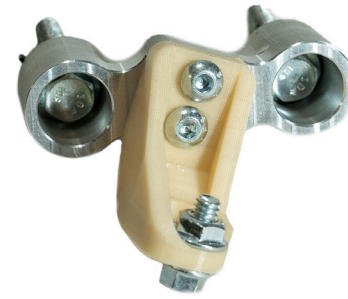
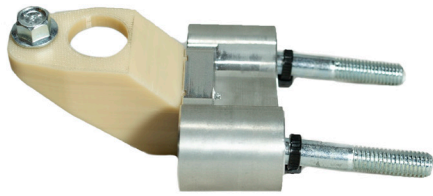


# Swaybar

- Custom Swaybar
- Swaybar Adapter Brackets

The sway bar is custom made to clear the LFX engine with the aid of our adapter brackets. The sway bar is the same diameter and wall thickness of OEM.





# Trigger Wheel + Temp Adapter

- Trigger Wheel Adapter Bracket
- Eccentric Shaft Mounting Bracket
- Engine Temperature Sensor Adapter

The trigger wheel assembly attaches the Mazda rx8's OEM Eccentric shaft sensor and trigger wheel to the LFX engine. This enables the Mazda's ECU to properly manage OEM functions such as fuel, A/C, cooling fans, ABS, and tachometer.

The engine temperature sensor adapter allows the Mazda rx8's OEM coolant sensor to attach to the LFX engine. This enables the Mazda's ECU to monitor engine temperatures and provide OEM operation to the cooling fans and temperature gauge

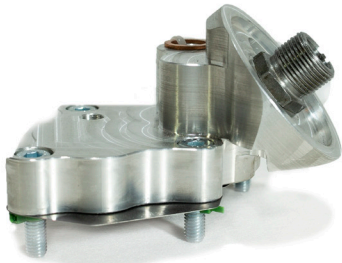
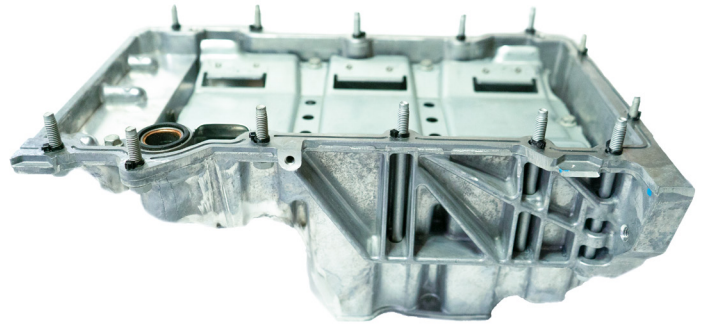
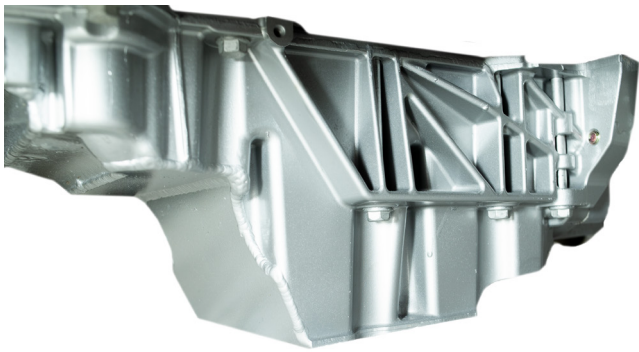


# Idler Pulley + Belt + Bolt Kit

- Bolt Kit
- Idler Pulley
- Serpentine Belt

The RX8 uses a superb electronic power steering system which eliminates the use of the horsepower robbing power steering pump. The idler pulley is designed to allow the serpentine belt to route without the power steering pump. Serpentine belts are provided in two lengths, one for the use of A/C and one without.

The bolt kit provides all the needed fasteners to prep your drivetrain. No need for hours of measuring and sourcing your own hardware.



# Modified Oil Pan + Oil Filter Relocation

- Modified OEM Oil Pan
- OEM Oil Filter Relocatoion Block

OEM camaro oil pans are machined and fitted with aluminum sheeting which is TIG welded into place. The modified oil pan provides clearance around the crossmember and steering rack.

The LFXs large oil filter assembly interferes with the RX8s ABS module. The relocation block places the oil filter in a lower position without any chassis constraints. It accepts a conventional oil filter and offers threaded ports for the camaro (m14 1.5) and mazda (1/8 NPT) oil pressure sensors.



# Cooling System

- Radiator nipple
- Heater hose assembly
- Custom coolant routing tube
- Upper and lower radiator hoses
- Coolant recovery tank with custom bracket
- Upper and lower radiator relocation brackets

The cooling assembly incorporates a recovery tank which is located at the highest point of the cooling system. This allows for a more efficient bleeding procedure as opposed to the conventional radiator mount fill port. Radiator relocation brackets position the radiator and fans to allow clearance for the LFX and sway bar.



# Engine Mounts Assemblies

- Engine Towers
- Lower Adapter Brackets
- Energy Suspension Polyurethane Mounts

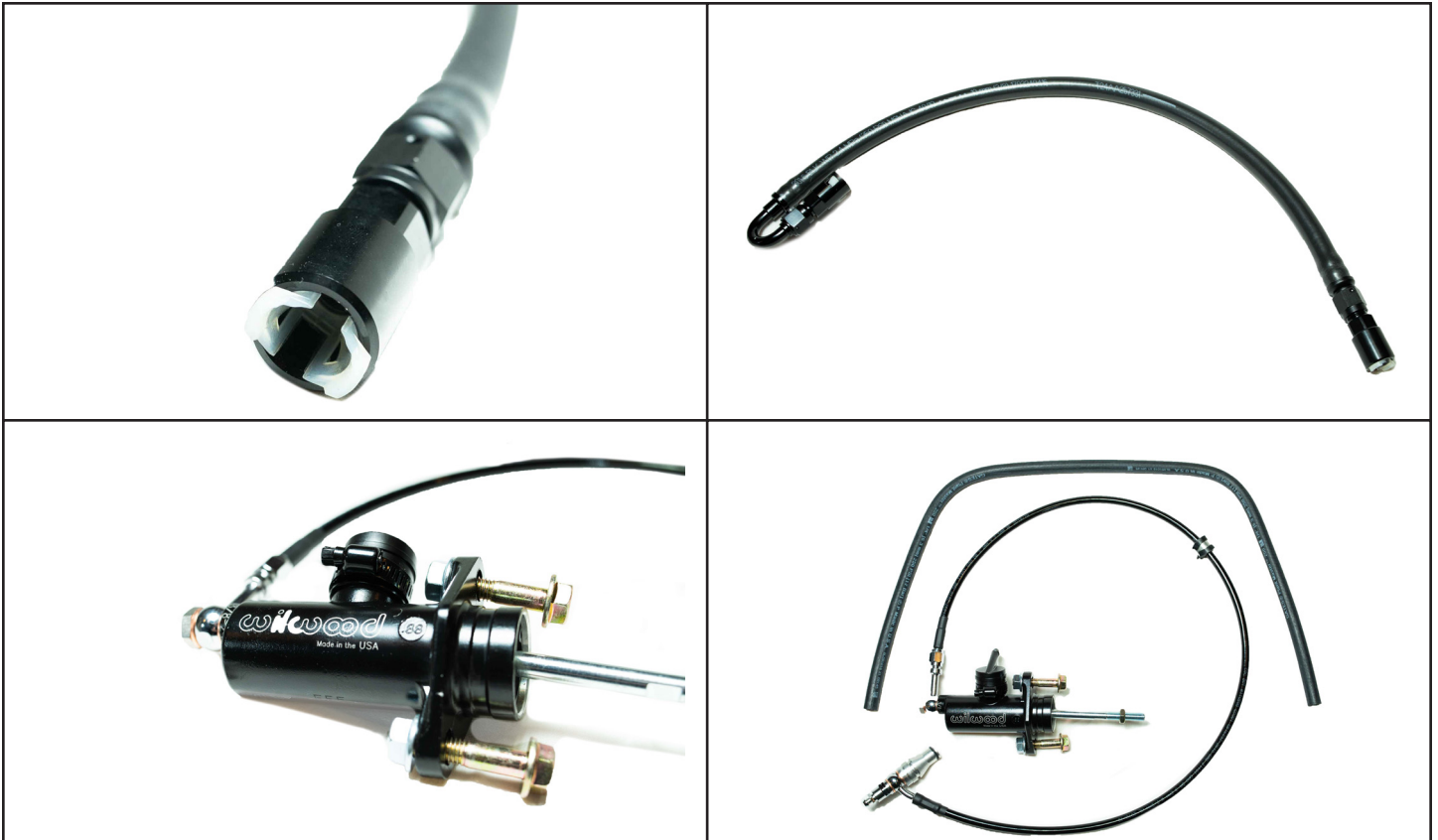
The engine mount assemblies are lightweight and incorporate energy suspension polyurethane mounts which reduce driveline movement. With help from the modified oil pan, these assemblies position the LFX into the RX8 without the need for a proprietary tubular cross member. These tubular units are usually poorly designed, expensive, and can class your car in a different racing sanction.



# Exhaust Downpipes

- 304ss 2.5" Tubing
- 304ss 2.5" V-Band Assembly
- OEM AC Delco Primary o2 Sensors
- 304ss Investment Casted Down-Pipe Adapters

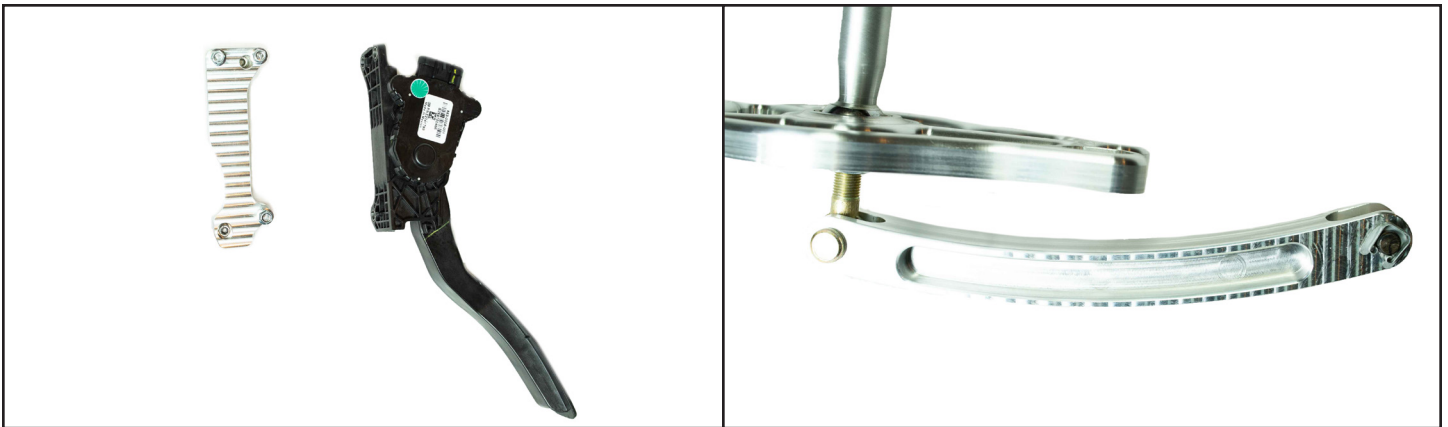
The investment casted down-pipe adapters have countless hours of flow simulation engineering to ensure a perfect, free-flowing shape that will yield the highest possible net power gains from any LFX exhaust. The polished stainless steel tubing hugs the engine tightly to overcome constraints in the rx8 engine bay. 2.5" v band flanges are welded on the opposing end, giving the exhaust a clean slate to build from.



# Clutch Hydraulics+ Fuel Lines

- Willwood Master Cylinder
- Stainless Steel Nylon Lined Clutch Line
- Custom Machined Slave Cylinder Input Adapter
- Plug and Play Quick Detach Custom Fitted Fuel Lines

The 7/8 bore wilwood master cylinder displaces the correct amount of fluid to the OEM concentric slave cylinder. The custom machined slave cylinder input adapter replaces the brittle OEM plastic unit resulting in a lifetime of worry-free service.



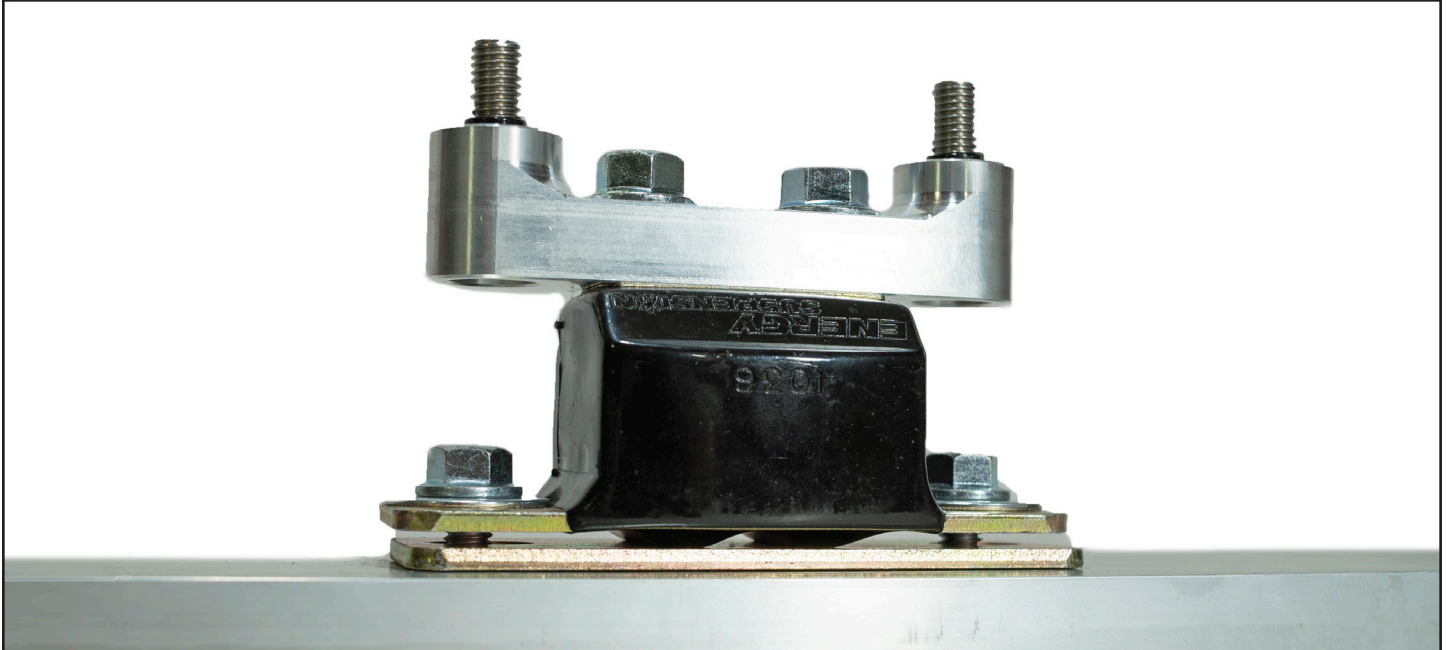
# Accelerator+ Shifter

- Push Rod
- Shift Rod Assembly
- Shifter Mounting Plate
- OEM Electronic Throttle Pedal
- Electronic Throttle Pedal Adapter Bracket

The Shifter mounting plate locates the shift rod in the exact same location as OEM and allows for precise shifting via the spherical bearing pivot. The motion ratio of the shifter rod is adjustable which allows the distance of the shifter's throw to increase or decrease.

The adapter bracket places the pedal in the exact same location as OEM, so there is no need to relearn advanced shifting methods if you're already accustomed to the RX8s pedal placement.





# Transmission Brace

- Frame rail brackets
- CNC machined upper adapter
- Extruded aluminum lateral brace
- Energy Suspension polyurethane mount

This intricate assembly allows for simple installation with the lateral brace remaining easily removable for clutch replacements and other jobs. This complete assembly weighs a mear 6.3 lbs.

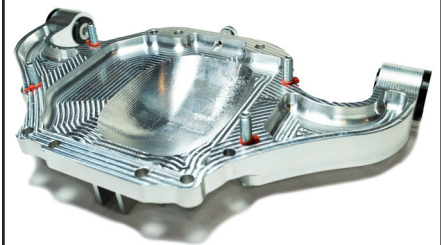
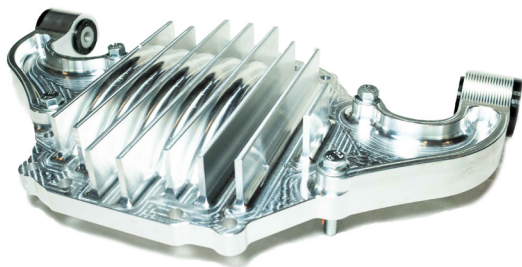
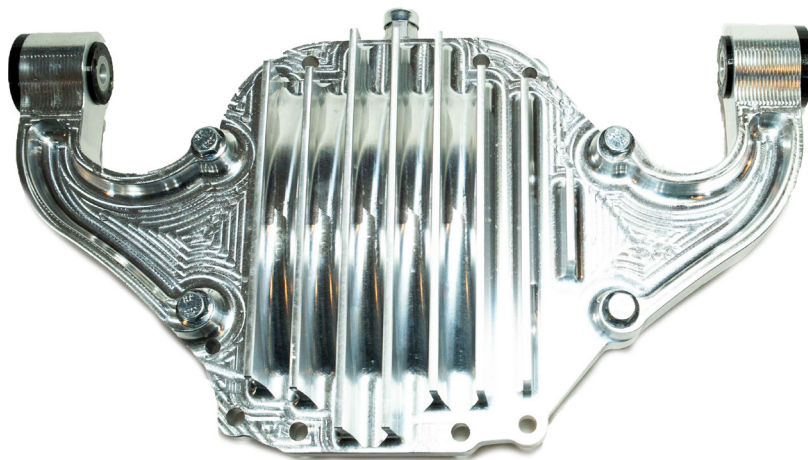


# Axles + Driveshaft

- Driver Side Axle
- Passenger Side Axle
- Driveshaft Shop 1 Piece Driveshaft

These units are custom made using OEM camaro cv axles which are cut and splined to accept RX8 outer cv joints. New boots, stainless steel bands, and high temp grease is used when assembling the CV joints.

Custom built by The Driveshaft Shop, the 1 piece CV-style 4 inch aluminum drive-shaft reduces rotational mass and is built to exceed expectations.



# Differential Mount

- Polyurethane bushings
- Structural differential cover
- 2 piece front mount assembly

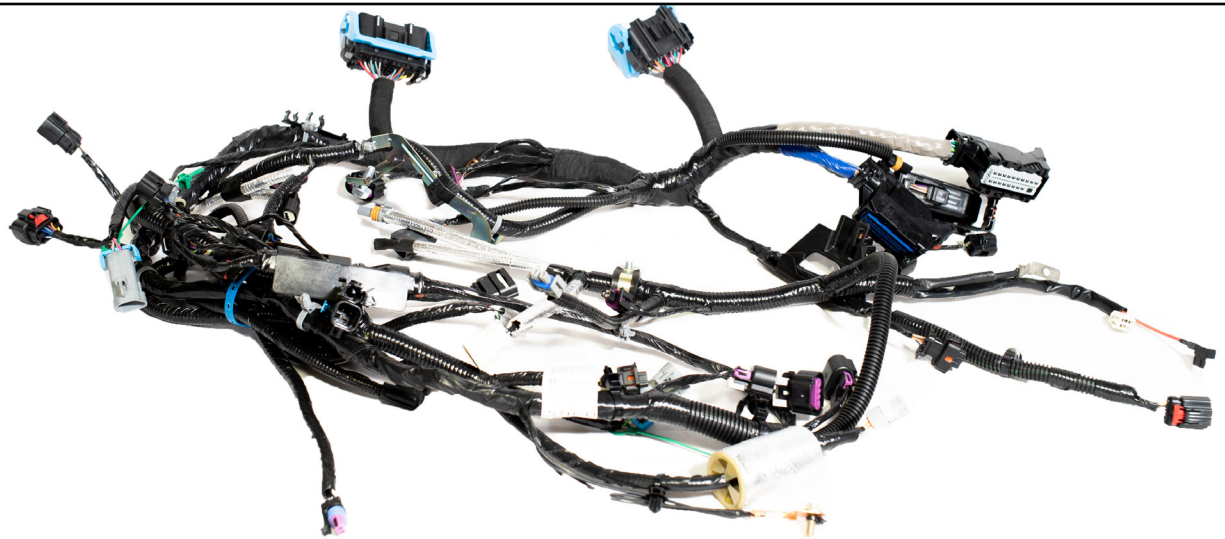
The structural differential cover positions the camaro differential into the RX8's OEM crossmember brackets, therefore no welding or fabrication skills are required. The cover reduces oil temperatures via machined heat sinks and minimizes torsional flex given the wide mounting area. By integrating our alignment system into the 2 piece front mount, this allows for "fool-proof" assembly with no measurements needed. Simply drill 5 holes and this is a complete bolt-in swap. Polyurethane bushings are included for all differential mounting locations to reduce lost motion.



# Battery Relocation Kit

- Power Strap
- Ground Strap
- Battery Mount Kit
- Power Lead Cable
- 200 Amp Breaker
- Firewall Distribution Block

This assembly moves the battery to the trunk which provides adequate room for the LFX while transferring more weight to the rear of the chassis. Beginning at the starter, the power lead cable passes through the innovative firewall distribution block to a 200 amp breaker, located beside the battery.



# Engine Wiring Harness

- **Modified OEM 2012 Camaro LFX Engine Harness**

This harness begins as a OEM 2012 Camaro LFX engine wiring harness. The proprietary chassis harness and fuse block plugs are removed and universal Delphi lever lock connectors are installed that mate to our fuse block and interior harness assemblies. The opposing side of the harness is modified to allow Plug and Play operation of the A/C compressor and starter. Flex fuel wiring can also be installed to take full advantage of ethanol mixturing for increased power. Plug and Play installation.



# Fuse Block Assembly + Interior Harness

- Fuse Block Assembly
- 2 Piece Interior Harness

The fuse block assembly provides efficient circuit protection and distribution to the GM E39 ECU, engine wiring harness, and interior harness. Plug and Play installation.

The 2 piece interior harness allows communication between the GM E39 ECU and the GM electronic throttle pedal, OBD2 communications port, and LED check engine light. Plug and Play installation.



# Mazda Control Harness + E39 ECU

- Mazda Control Harness
- E39 GM ECU

The Mazda Control Harness provides signals from the Rx8 eccentric shaft sensor, coolant temperature sensor, and oil pressure sensor to the Mazda ECU. These signals allow the Mazda ECU to properly manage ABS, electronic power steering, fuel, cooling fans, HVAC, and the instrument cluster properly. A charge cable is inserted in the harness which connects the alternator to the fuse block for proper battery charging. Reverse light functionality is made possible with an integrated relay assembly. Plug and Play installation.

A new AC delco ecu is supplied with LFX manual transmission software. We utilize HP tuners to eliminate the vehicle anti-theft system, remove any unwanted CELs, and provide a custom tune for your upgraded exhaust and intake.

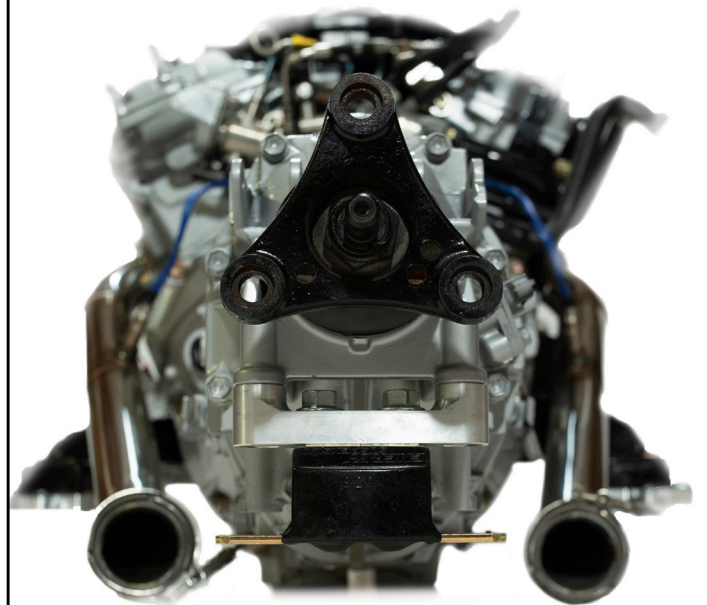
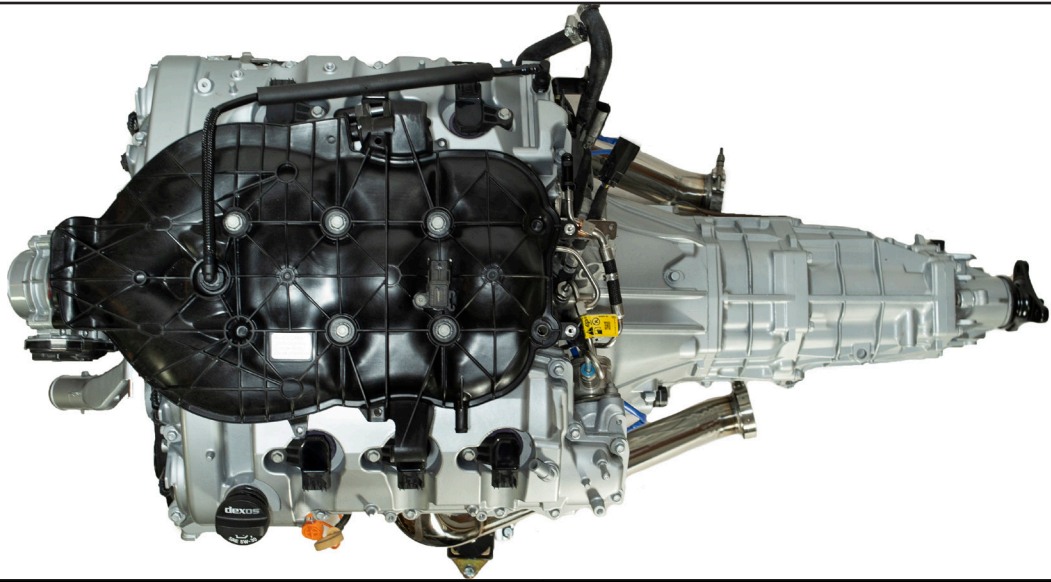
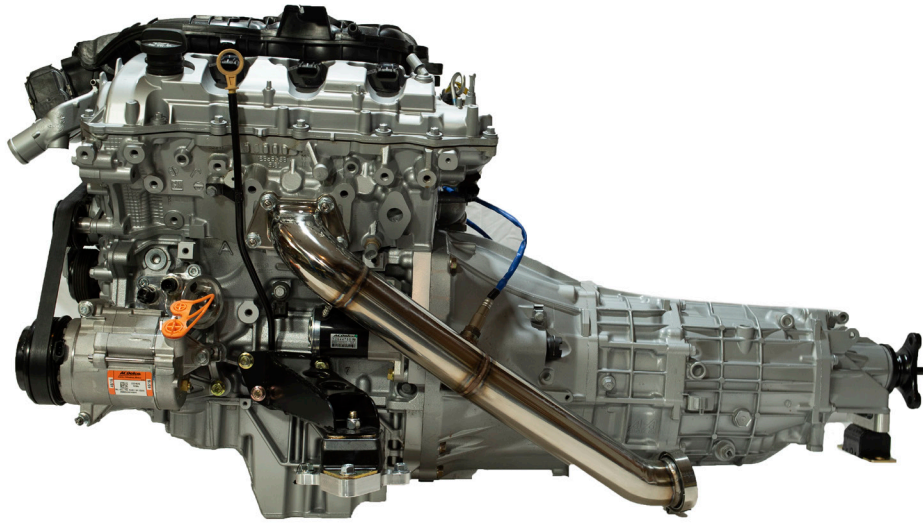


# Electronic Power Steering Harness

- Electronic Power Steering +
- Electronic Power Steering -
- Engine Ground

The Electronic Power Steering cables replace the proprietary connectors located in the Rx8's original wiring. The Power lead has an inline 60 amp J block fuse for circuit protection.







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