

**DE \$TROKED**



# **CUMMINS CONVERSION OVERVIEW**



# DESTROKED

Thank you for your interest in Destroked. Please read through this overview to get a good idea of what is involved in your Cummins conversion project.

## Circuits that will be run through the Ford PCM and Ford Engine Harness

- Cam Position (for tachometer signal)
- Crank Position (for tachometer signal)
- Engine Coolant Temp (keep the sensor from the Ford motor)
- Oil Psi (keep the sensor from the Ford motor)  
MAP (05 and later trucks, keep this sensor from the Ford motor)
- A/C Compressor clutch power
- A/C Psi switch

## Components that stay in the truck

- Ford Radiator
- Ford Intercooler
- Ford Transmission cooler (except when using Allison)
- Ford Condenser and other body mounted A/C components
- Ford Power Steering reservoir (for 03+ Cummins install)
- Ford Coolant Expansion tank (03 and later fords)
- Ford Power steering pump (**2008+ trucks only**)

## Cummins and Dodge parts used on engine

- Fan and Fan clutch
- Engine Side Fan shroud (03 and later engines)
- Power Steering pump (except in 2008 and newer Ford trucks)
- A/C compressor
- Alternator (03 and later)
- Engine Control Module and engine harnesses (for 98.5-2012)
  - \*\*\*\* 04 and later: requires recovery file programming \*\*\*\*

## Destroked Motor Mounts 99-07

Destroked motor mounts place the engine far enough back to allow the use of the Cummins mechanical fan. The mounts are predrilled. The motor should sit level (side to side) with the radiator support and at a **5 degree** tilt towards the back of the vehicle. Electric fans are not recommended. The mounts come with new engine side isolators and castings.

- The Destroked motor mounts have been tested to over 1000 hp.

- The predrilled mounts move the engine far enough back to run the Dodge mechanical fan.
- The **transmission cross member** will have to be moved back to the rear most set of holes (or half the rear set and drill the other half).
- These mounts are used on every 99-2010 Ford install at the Destroyed shop.
- Driveshaft lengths will have to be changed (two shafts rebuilt and lengths changed should cost between 280 and 350 dollars).
- Shifter hole through the floor on manual transmission will have to be clearanced.
- Best overall fit of any conversion mount.

### **Exhaust Manifold Recommended for installing 89-1998 12V and 98.5-2002 24V**

The A/C evap. box in Ford pickups takes up space in the engine compartment. The factory exhaust manifolds on the 12V and 24V Cummins engines places the turbo in the same spot as the A/C evap. box. Destroyed offers two exhaust manifold solutions, one for the 12V and one for the 24V. These manifolds relocate the turbo down and back between cylinders 4 and 5. Relocating the turbo allows enough room for the turbo to clear the A/C evap. box without any modifications to the truck. On the 03 and newer engines the turbo is already located in this position from the factory, so a manifold change is not required.

### **Trucks with the V10 or 5.4L gas engines**

These trucks make great conversion vehicles because of the lower initial investment. If you are installing an 89-02 12V or 24V engine, you will not have to change the brake master cylinder because these motors are setup to run vacuum brakes. If you are installing a 2003 and newer common rail, upgrading to hydraulic assist style master cylinder is the best choice. The radiator will have to be upgraded to the diesel version. An intercooler will also have to be added along with diesel exhaust. If the front springs have not been changed, then the heavier diesel springs should be installed. An additional battery will need to be added to increase cranking power. For 2008 and newer trucks, the A/C condenser and lines have to be changed to the diesel version along with the coolant tank / battery tray. On the 2008 and newer trucks the filler neck on the fuel tank will need to be changed to the diesel version with the larger vent. If you are installing a common rail (03 and later engine) the A/C high psi switch will have to be upgraded. Most of these items can be found in a salvage yard. Expect to spend 450-500 dollars for the additional parts if you buy used.

- Brake Master Cylinder (when using 2003-2012 Cummins engines)
- Diesel Radiator
- Intercooler
- Diesel Exhaust
- Front Springs
- Second Battery
- A/C Condenser and Lines (2008 and newer trucks)
- Coolant Tank / Battery Tray (2008 and newer trucks)

- Fuel Filler Neck (2008 and newer trucks)
- A/C psi switch (Also required for **7.3L trucks** getting 03+ engines)

### **Cummins and Allison from a School Bus or other Medium Duty Applications**

The accessory brackets commonly used in Dodge trucks are very different than those used in most medium duty applications. Most Destroyed parts are designed around using the Dodge configuration Cummins engines.

The Allison transmissions found in medium duty trucks are not the same Allisons found in the Duramax trucks. The Duramax uses the LCT1000 while the medium duty trucks utilize either the 545 or 643. The 545 and 643 are very strong transmissions, but they are non-overdrive and non-lockup. At 65 mph, a truck on 34 inch tires with 3.73 gears will be spinning the engine at 2400 rpm assuming no slip in the torque converter. In reality this truck will only be moving at 55 mph, because of the torque converter slip ratio.

The 545 and 643 are designed for heavy trucks. The same transmission installed in a light duty truck that weighs 1/3 of the intended application will shift uncomfortably firm.

### **FORD C6 transmissions and TH350 / TH400**

These dinosaurs, like the medium duty transmissions discussed above, are non-overdrive, non-lockup transmissions. Be aware, when coupled to a low-revving Cummins, these transmission options produce less than desirable results.

### **FORD 5R110**

The 5R110 requires patience to get the tuning right when using the PCS controller. They can be tuned to work great with a Cummins and we are happy to help our customers anytime with tuning questions.

Destroyed does not support using the factory PCM to control the 5R110.

### **Installing Cummins with a Dodge Transmission**

Dodge Transmissions – Destroyed never installs the Dodge transmissions, nor do we offer any kits to do so. It is installer's responsibility figure out what parts are required and where to get them when choosing a different route than what Destroyed has pursued.

## 99-07 Ford Automatic Trans with Cummins 89-02 12V or 24V “kit”

Destroyed offers:

- Adapter Plate (with hardware) \$795
- Flexplate (use with factory hardware) 625
- Torque Converter (suggest 1600rpm stall) 1205
- Exhaust Manifold 12V (moves turbo back and down) 305
  - with long oil drain tube add 59.80
- Exhaust Manifold 24V (moves turbo back and down) 189
- PCS Transmission Controller and harness 850
  - Base file loaded – over the phone tech support included
- Motor Mounts (with hardware) 295
- New 6.0L Starter (not required for 6.0L trucks) 129
- 1-wire 130A Alternator (internally regulated) 249
  - No special brackets needed: Bolt-on
  - Does not require external regulator
  - Factory Dodge alternator will require external regulator
  - 200A versions available 329
- Lower Radiator hose kit (with clamps) 179
- Tachometer Signal Kit 249
- Oil and Coolant temp sensor adapter fittings 40
- Throttle Cable 89-129
- Fan Shroud (powder coat optional +65) 249
  - 89-93 Cummins Must use Fan Mount 3911660
- Optional barring tool holder (used to turn flywheel though starter hole) 29
- A/C lines (Available now SEND YOUR FORD LINES as cores) 225
  - New Ford lines available for 110 if needed
- Air Dog 150 Fuel Pump 600
- Wire harness preparation (Send both engine harnesses) 12 365-685
  - DO IT YOURSELF kit now available 110 \*\*\*12V only
- Wire harness preparation (Send both engine harnesses) 24 365-685
- Driver Side Dual Yellow Top Optima Battery Tray (optional) 169
  - Approximate Total: 7202
- Items not supplied:
  - Charge tubes \*\*COMING SOON
  - Exhaust downpipe \*\*Dodge 03 and newer are a good start
  - Intake tube and Air filter \*\*COMING SOON

\*\*\*Frequently Asked Question: Do I need everything on this list?

A: The list above contains all of the parts we offer for the conversion process. We have designed them to help you with your install. Order what will help you.

## 99-07 Ford Manual Trans with Cummins 89-02 12V or 24V “kit”

Destroyed offers:

- Adapter Plate (with hardware) \$795
- Flywheel spacer (required on ZF6) 99
- Exhaust Manifold 12V (moves turbo back and down) 305
  - with long oil drain tube add 59.80
- Exhaust Manifold 24V (moves turbo back and down) 189
- Oilite pilot bearing 18
- Motor Mounts (with hardware) 325
- New 6.0L Starter (not required for 6.0L trucks) 129
- 1-wire 130A Alternator (internally regulated) 249
  - No special brackets needed: Bolt-on
  - Does not require external regulator
  - Factory Dodge alternator will require external regulator
  - 200A versions available 329
- Lower Radiator hose kit (with clamps) 179
- Tachometer Signal Kit 249
- Oil and Coolant temp sensor adapter fittings 40
- Throttle Cable 89
- Fan Shroud (powder coat optional +65) 249
  - 89-93 Cummins Must use Fan Mount 3911660
- Optional barring tool holder (used to turn flywheel though starter hole) 29
- A/C lines (Available now SEND YOUR FORD LINES as cores) 225
  - New Ford lines available for 110 if needed
- Air Dog 150 Fuel Pump 590
- Wire harness preparation (Send both engine harnesses) 12V 365
  - DO IT YOURSELF kit now available 110 \*\*\*12V only
- Wire harness preparation (Send both engine harnesses) 24V 345
- Driver Side Dual Yellow Top Optima Battery Tray (optional) 169
  - Approximate Total: 3849
- Items not supplied:
  - Clutch kit (contact South Bend Clutch **800-988-4345**)
    - NO CLUTCH available for small block GAS manual
    - Dual Disc Clutches will not work with ZF5 Adapter
  - Charge tubes \*\*COMING SOON
  - Exhaust downpipe \*\* Dodge 03 and newer are a good start
  - Intake tube and Air filter \*\*COMING SOON

\*\*\*Frequently Asked Question: Do I need everything on this list?

A: The list above contains all of the parts we offer for the conversion process. We have designed them to help you with your install. Order what will help you.



## 99-07 Ford Automatic with Cummins 03-2012 Common Rail “kit”

Destroyed offers:

- Adapter Plate (with hardware) \$795
- Flexplate 625
- PCS Transmission Controller and harness 850
  - Base file loaded – over the phone tech support included
- Torque Converter (suggest 1600rpm stall) 1205
- Motor Mounts (with hardware) 295
- New 6.0L Starter (not required for 6.0L trucks) 129
  
- Lower Radiator hose kit 179
- Electronic Tachometer Adapter 199
- Oil and Coolant temp sensor adapter fittings 40
- Throttle Cable (03 and 04 engines only) 75
- TPS pedal (05+ engines only) 129
- TPS Pedal Bracket Adjustable Pedals (05+ engines only) 29
- TPS Pedal Bracket Non-Adjustable pedals (05+ engines only) 85
- Power Steering Reservoir Delete 35
- Fan Shroud kit (powder coated shroud +65) 199
- Weld-on intake sensor mount (two required for 6.7L) 40 ea.
  
- A/C lines (Available now SEND YOUR FORD LINES as cores) 225
  - New Ford lines available for 110 if needed
- Harness build for customer (Send both engine harnesses) 685
  - 6.7L add 43, 03 and 04 add 36
- Barring tool holder (optional) 29
  
- Air Dog 150 Fuel Pump 590
- Smarty (POD) programmer with recovery file preloaded 685
  - Or send in your ECM to be programmed (\$200)
- Driver Side Dual Yellow Top Optima Battery Tray (optional) 169
  - Approximate Total: 6600
  
- Items not supplied by Destroyed
  - Charge tubes \*\*COMING SOON
  - Exhaust downpipe \*\* Dodge 03 and newer are a good start
  - Intake tube and Air filter \*\*COMING SOON

Note: Cummins ECM for 2004-2012 engines require a new program to run outside of the Dodge truck. If you buy a Smarty Tuner from Destroyed, we send the required program in the tuner. You can also send your ECM to Destroyed for programming only for \$200.

**\*\*\*Frequently Asked Question: Do I need everything on this list?**

A: The list above contains all of the parts we offer for the conversion process. We have designed them to help you with your install. Order what will help you.

## 99-07 Ford Manual with Cummins 03-2012 Common Rail "kit"

Destroyed offers:

- Adapter Plate (with hardware) \$795
- Motor Mounts (with hardware) 295
- New 6.0L Starter (not required for 6.0L trucks) 129
  
- Lower Radiator hose kit 179
- Electronic Tachometer Adapter 199
- Oil and Coolant Temp sensor adapter fittings 40
- Throttle Cable (03 and 04 engines only) 75
- TPS pedal (05+ engines only) 129
- TPS Pedal Bracket Adjustable Pedals (05+ engines only) 29
- TPS Pedal Bracket Non-Adjustable pedals (05+ engines only) 85
- Power Steering Reservoir Delete 35
- Fan Shroud kit (powder coated shroud +65) 199
- Weld-on intake sensor mount (two required for 6.7L) 40 **ea.**
  
- A/C lines (Available now SEND YOUR FORD LINES as cores) 225
  - New Ford lines available for 110 if needed
- Harness build for customer (Send both engine harnesses) 685
  - 6.7L add 43, 03 and 04 add 36
- Barring tool holder (optional) 29
  
- Air Dog 150 Fuel Pump 590
- Smarty (POD) programmer with recovery file preloaded 685
  - Or send in your ECM to be programmed (200)
- Driver Side Dual Yellow Top Optima Battery Tray (optional) 169
  - Approximate Total: 4435
  
- Items not supplied by Destroyed
  - Clutch kit (contact South Bend Clutch **800-988-4345**)
    - NO CLUTCH available for small block GAS manual
    - Dual Disc Clutches will not work with ZF5 Adapter
  - Charge tubes **\*\*COMING SOON**
  - Exhaust downpipe **\*\* Dodge 03 and newer are a good start**
  - Intake tube Air filter **\*\*COMING SOON**

Note: Cummins ECM for 2004-2012 engines require a new program to run outside of the Dodge truck. If you buy a Smarty Tuner from Destroyed, we send the required program in the tuner. You can also send your ECM to Destroyed for programming only for \$200.

**\*\*\*Frequently Asked Question: Do I need everything on this list?**

A: The list above contains all of the parts we offer for the conversion process. We have designed them to help you with your install. Order what will help you.

## 08-2010 Ford Automatic Trans with Cummins 89-02 12V or 24V “kit”

Destroyed offers:

- Adapter Plate (with hardware) \$795
  - Flexplate 625
  - Torque Converter (suggest 1600rpm stall) 1205
  - Exhaust Manifold 12V (moves turbo back and down) 305
    - with long oil drain tube add 59.80
  - Exhaust Manifold 24V (moves turbo back and down) 189
  - PCS Transmission Controller and harness 850
    - Base file loaded – over the phone tech support included
  - Motor Mounts (with hardware) 186
  - New 6.0L Starter (not required for 6.0L trucks) 129
  - 1-wire 130A Alternator (internally regulated) 249
    - No special brackets needed: Bolt-on
    - Does not require external regulator
    - Factory Dodge alternator will require external regulator
    - 200A versions available 329
  - Lower Radiator hose kit (with clamps) 89
  - Tachometer Kit and Tachometer Box – required on 2008+ trucks 450
  - Oil and Coolant temp sensor adapter fittings 40
  - Throttle Cable 89
  - Fan Shroud **08+ COMING SOON** 320
  - Optional barring tool holder (used to turn flywheel though starter hole) 29
  - A/C lines (Available now SEND YOUR FORD LINES as cores) 225
  - Air Dog 150 Fuel Pump 590
  - Wire harness preparation (Send both engine harnesses) 12V 525
  - Wire harness preparation (Send both engine harnesses) 24V 785
- Approximate Total: 5600

- Items not supplied:
  - Charge tubes
  - Exhaust downpipe
  - Intake tube Air filter

**\*\*\*Frequently Asked Question: Do I need everything on this list?**

A: The list above contains all of the parts we offer for the conversion process. We have designed them to help you with your install. Order what will help you.

## 08-2010 Ford Manual Trans with Cummins 89-02 12V or 24V “kit”

Destroyed offers:

- Adapter Plate (with hardware) \$795
- Flywheel spacer (required on ZF6) 99
- Exhaust Manifold 12V (moves turbo back and down) 305
  - with long oil drain tube add 59.80
- Exhaust Manifold 24V (moves turbo back and down) 189
- Oilite pilot bearing 18
- Motor Mounts (with hardware) 186
- New 6.0L Starter (not required for 6.4L trucks) 129
- 1-wire 130A Alternator (internally regulated) 249
  - No special brackets needed: Bolt-on
  - Does not require external regulator
  - Factory Dodge alternator will require external regulator
  - 200A versions available 329
- Lower Radiator hose kit (with clamps) 110
- Tachometer Kit and Tachometer Box – required on 2008+ trucks 450
- Oil and Coolant temp sensor adapter fittings 40
- Throttle Cable 89
- Fan Shroud (powder coat optional) **08+ COMING SOON** 320
- Optional barring tool holder (used to turn flywheel though starter hole) 29
- A/C lines (Available now SEND YOUR FORD LINES as cores) 225
- Air Dog 150 Fuel Pump 590
- Wire harness preparation (Send both engine harnesses) 12V 385
- Wire harness preparation (Send both engine harnesses) 24V 485
  - Approximate Total: 3400
- Items not supplied:
  - Clutch kit (contact South Bend Clutch **800-988-4345**)
    - NO CLUTCH available for small block GAS manual
  - Charge tubes
  - Exhaust downpipe
  - Intake tube Air filter

**\*\*\*Frequently Asked Question: Do I need everything on this list?**

A: The list above contains all of the parts we offer for the conversion process. We have designed them to help you with your install. Order what will help you.

## 08-2010 Ford Automatic with Cummins 03-2012 Common Rail “kit”

Destroyed offers:

- Adapter Plate (with hardware) \$795
- Flexplate 625
- PCS Transmission Controller and harness 850
  - Base file loaded – over the phone tech support included
- Torque Converter (suggest 1600rpm stall) 1205
- Motor Mounts (with hardware) 185
- New 6.0L Starter (not required for 6.4L trucks) 129
  
- Lower Radiator hose kit 110
- Electronic Tachometer Adapter 199
- Oil, Coolant Temp and MAP Sensor adapter fittings 60
- Throttle Cable (03 and 04 engines only) 75
- TPS pedal (05+ engines only) 129
- TPS Pedal Bracket Adjustable Pedals (05+ engines only) 29
- TPS Pedal Bracket Non-Adjustable pedals (05+ engines only) 85
- Power Steering Pump install kit 289
- Fan Shroud kit (powder coated shroud +65) 320
- Weld-on intake sensor mount (two required for 6.7L) 40 ea.
  
- A/C lines (Available now SEND YOUR FORD LINES as cores) 225
- Harness build for customer (Send both engine harnesses) 685
  - 6.7L add 43, 03 and 04 add 36
- Barring tool holder (optional) 29
  
- Air Dog 150 Fuel Pump 590
- Smarty (POD) programmer with recovery file preloaded 685
  - Or send in your ECM to be programmed (200)
  
- Approximate Total: 6500
  
- Items not supplied by Destroyed
  - Charge tubes
  - Exhaust downpipe
  - Intake tube Air filter

Note: Cummins ECM for 2004-2012 engines require a new program to run outside of the Dodge truck. If you buy a Smarty Tuner from Destroyed, we send the required program in the tuner. You can also send your ECM to Destroyed for programming only for \$200.

**\*\*\*Frequently Asked Question: Do I need everything on this list?**

A: The list above contains all of the parts we offer for the conversion process. We have designed them to help you with your install. Order what will help you.



## 08-2010 Ford Manual with Cummins 03-2012 Common Rail "kit"

Destroyed offers:

- Adapter Plate (with hardware) \$795
- Motor Mounts (with hardware) 186
- New 6.0L Starter (not required for 6.4L trucks) 129
  
- Lower Radiator hose kit 110
- Electronic Tachometer Adapter 199
- Oil, Coolant Temp and MAP Sensor adapter fittings 60
- Throttle Cable (03 and 04 engines only) 75
- TPS pedal (05+ engines only) 129
- TPS Pedal Bracket Adjustable Pedals (05+ engines only) 29
- TPS Pedal Bracket Non-Adjustable pedals (05+ engines only) 85
- Power Steering Pump install kit 289
- Fan Shroud kit (powder coated shroud +65) 320
- Weld-on intake sensor mount (two required for 6.7L) 40 **ea.**
  
- A/C lines (Available now SEND YOUR FORD LINES as cores) 225
  
- Harness build for customer (Send both engine harnesses) 685
  - 6.7L add 43, 03 and 04 add 36
- Barring tool holder (optional) 29
  
- Air Dog 150 Fuel Pump 590
- Smarty (POD) programmer with recovery file preloaded 685
  - Or send in your ECM to be programmed (200)
  
- Approximate Total: 3800
  
- Items not supplied by Destroyed
  - Clutch kit (contact South Bend Clutch **800-988-4345**)
    - NO CLUTCH available for small block GAS manual
  - Charge tubes
  - Exhaust downpipe
  - Intake tube Air filter

Note: Cummins ECM for 2004-2012 engines require a new program to run outside of the Dodge truck. If you buy a Smarty Tuner from Destroyed, we send the required program in the tuner. You can also send your ECM to Destroyed for programming only for \$200.

**\*\*\*Frequently Asked Question: Do I need everything on this list?**

A: The list above contains all of the parts we offer for the conversion process. We have designed them to help you with your install. Order what will help you.

## Allison Package

- Adapter Plate \$795
  - Available for 7.3L (\$850)
- Flexplate 625
- Stage 5 Allison 5-speed Transmission 5500
  
- Billet Triple Disk Torque Converter (1600 rpm stall) 1205
- Transmission Controller 1600
  - Base file loaded – over the phone tech support included
- T-case Adapter kit – to Ford NP271 or NP273 599
  - Includes machining transmission tail housing for speed sensor
  - YOU MUST SEND IN YOUR TAIL HOUSING
  - 5° version for Dodge trucks
- Dipstick and Mount 118
- Shift Linkage kit 39
- High-Flow Transmission Cooler (required for Dodge install) 249
- Lines and Fittings 149
- TPS kit for 12V motors (included with controller if needed) 110
- OPTIONAL 6-Speed Conversion 1600
- **89-02 Dodge Only:** Used Ford NP271 T-case 385

## Frequently Asked Question: Do I need everything on this list?

A: The list above contains all of the parts we offer for the conversion process. We have designed them to help you with your install. Order what will help you.

All prices are subject to change.

**Return Policy:**

All returns or exchanges must be inspected by us before an exchange item or credit can be issued. Some returns may carry a restock fee from 5% to 25%. We will not accept returns or exchanges after 30 days from the date on the invoice. We cannot accept returns or exchanges on any parts that have been installed. All returns or exchanges must be accompanied by the original invoice. If you receive an order from us that has been damaged during the shipping process, you must file a claim with the freight carrier as soon as possible. Always save the original packing materials for inspection. We are very careful when we ship your products to you and do our best to always ship the correct quantity. But in the event that there is a discrepancy, please notify us within 5 business days by calling us at 720-897-7477 or via email: [info@destroyed.com](mailto:info@destroyed.com). In the event that you need to return or exchange a product you purchased from us, please call our number and we will be happy to assist you.

**Please Phone us before returning any products at 720-897-7477**

\*\*\*\*\*Adapter plates ordered for GM manual or Ford small block manual are non-refundable. In-store credit only, 75-95% of original price based on returned condition. There are **NO** off-the-shelf clutch kits available for these transmissions. \*\*\*\*\*

All returns should be shipped to:  
Destroyed  
7245 W. 116th Place  
Broomfield, CO 80020

**Recommended Ford Transmission Rebuilders**

For the 4R100 or E4OD:  
Call B.T.S. at 870-422-3673  
<http://www.brianstruckshop.com/>

Destroyed Cummins Diesel Conversions  
Truck Info / Order Form

**Customer Info:**

**Customer Name-** \_\_\_\_\_

**Phone Number-** \_\_\_\_\_

**Date Order was Placed-** \_\_\_\_\_

**Shipping Address-** \_\_\_\_\_

**Billing Address (if different)-** \_\_\_\_\_

**Truck info:**

**Truck Make, Model, Year and Engine Type-** \_\_\_\_\_

**Manual or Automatic transmission-** \_\_\_\_\_

**Cummins Motor going in-** \_\_\_\_\_

**Transmission being used-** \_\_\_\_\_

**Parts Being Ordered:**