

THE ULTIMATE HEMI CAMSHAFT GUIDE

Many customers have misconceptions of the proper requirements for a Hemi Camshaft Upgrade. You cannot just order and install just the Camshaft for your Hemi. Unfortunately, it does NOT work that way. Any Aftermarket Hemi Camshaft Upgrade requires not just the Camshaft, but a variety of other components as well.

This includes, but is not limited to the following:

- 1) **Non-MDS Lifters**
- 2) **High Pressure Valve Springs & Retainers**
- 3) **Intake & Exhaust Pushrods**
- 4) **VVT Limiter or Lockout**
- 5) **Phaser Tool**
- 6) **Valve Locks**
- 7) **Valve Seals**
- 8) **MDS Delete Plugs (x4)**
- 9) **Computer Tuner**
- 10) **Custom Tune (either locally or remote)**

If you have a manual transmission Challenger, then you will not need Aftermarket Lifters, VVT Limiter / Lockout or the MDS Delete Plugs. That is the ONLY exception. This is because it is one of the only Hemi applications that does not have MDS (Multi Displacement System). MDS essentially deactivates 4 cylinders for fuel economy mode under light throttle conditions ONLY.

For Hemi vehicles with automatic transmissions, all of these components will be required. That is because you have factory equipped MDS on your vehicle.

CAMSHAFT KIT VS. MASTER CAMSHAFT KIT

We get this question a lot. There is only 1 main difference between the 2 kits. A Master Camshaft Kit includes Lifters. That is the ONLY difference. We highly recommend purchasing a Master Camshaft Kit because it generally includes everything needed for the installation (minus the Tuner and the Custom Tuning).

If you have a manual transmission Challenger, you will ONLY need a Camshaft Kit. Again, that is the ONLY vehicle application exception. If you have an automatic transmission Chrysler, Dodge, Jeep or Ram, you will NEED a Master Camshaft Kit. This includes all 5.7L Hemi, 6.1L SRT8 & 6.4L 392 models.

We offer 2 brands of Aftermarket Camshaft Kits & Master Camshaft Kits. This includes Comp Cams & Brian Tooley Racing (BTR). Both are the most reputable Hemi Camshaft Brands in today's aftermarket. They both offer quality components and both provide significant power gains based on the Camshaft chosen (Stage 1 thru Stage 4).

In addition, both brands offer Camshaft & Master Camshaft Kits for both Naturally Aspirated (NA) & Forced Induction (Supercharged) Hemi applications.

COMP CAMS

Comp Cams has been around for many decades. They are a trusted name in the Aftermarket Hemi Camshaft world. Again, reputable and high quality components that have been through rigorous testing and proven on both the street and track.

They offer Camshaft Kits and Master Camshaft Kits for the early (03-08) and later model (09+) 5.7L Hemi models, as well as the 6.1L SRT8 & 6.4L 392. Again, they also offer kits for both NA or Supercharged Applications.

Of the required items needed above, they provide everything EXCEPT the MDS Delete Plugs, Tuner & Tuning. The MDS Delete Plugs would need to be purchased separately. Same with the Tuner and Custom Tune.

We do stock a number of these Camshaft & Master Camshaft Kits by Comp Cams. However, many kits are on backorder with NO ETA. That is because Comp Cams does not manufacture all of the components in-house that are included in their Camshaft Kits. Many of these components are outsourced through various suppliers, thus causing supply chain issues.

Our website shows live inventory of Comp Cam Kits. If you are able to add it to your cart, that means the kit is in stock and ready to ship. If it shows as sold out, be prepared for long lead times; some of which are 6-8 months (yes, you heard that right).

Here is a complete list of Comp Cams Camshaft Kits & Master Kits that we offer-

<https://fasthemis.com/pages/search?query=CAM-KIT-Comp>

BRIAN TOOLEY RACING (BTR)

We cannot say enough good things about Brian Tooley Racing (BTR). Again, reputable and high quality components that have been through rigorous testing and proven on both the street and track.

We began offering this brand about a year ago. This after they brought Matt Brown as one of their sales engineers for the Hemi division. Matt Brown is a highly respected member of the Hemi community. He has done custom Camshafts for his Hemi vehicles and many others. In addition, custom tuning for many of those Camshafts.

Matt Brown & BTR started with Camshafts, Camshaft Kits & Master Camshaft Kits for the 09+ 5.7L Hemi models. Just recently, they released their line for the 6.4L 392 models as well.

We have had such great feedback on their products. In addition, most Camshaft & Master Camshaft Kits ship out within 24-48 hours.

Not only that, but they offer options for the additional components needed. We feature many drop-down options on all BTR Kits. This includes whether or not you want Lifters, Valve Springs, your choice of Intake and Exhaust Pushrod sizes and materials, Phaser Tool, VVT Limiter or Lockout, MDS Delete Plugs, Valve Tip Savers & even complete Gasket Kits to prevent you from having to purchase them individually / separately.

Also unlike Comp Cams, BTR offers a "Truck Norris" Camshaft (& Camshaft Kit) specifically engineered for Ram, Durango & Grand Cherokee owners. This Camshaft is designed for awesome low end torque and towing functionality. We have sold MANY Truck Norris setups and our customers with nothing but awesome feedback.

Finally, we must mention that BTR provides excellent customer service; superior to that of Comp Cams. We highly encourage customers to go with BTR for ALL 09+ 5.7L Hemi & 6.4L 392 applications.

A complete list of BTR Camshaft & Master Camshaft Kits can be found here-

<https://fasthemis.com/pages/search?query=btr-Camshaft-Kit&sort=relevance>

MIXING AND MATCHING OF CAMSHAFTS & VALVETRAIN COMPONENTS

Some customers have decided to do custom builds. This usually includes purchasing the Camshaft separately and then choosing their own components for Lifters, Valve Springs, Pushrods, etc. The percentage of those customers is low compared to customers looking to purchase a complete Camshaft Kit or Master Camshaft Kit.

However, if you are one of those customers, we do sell BOTH Comp Cams and BTR Camshafts individually. Again, for both NA & Supercharged applications.

CAMSHAFT TUNING OPTIONS - HP TUNERS OR DIABLOSPORT

Tuning is HIGHLY recommended (pretty much required) for any Aftermarket Camshaft Upgrade. The most popular tuning options are through DiabloSport & HP Tuners. HP Tuners does not require a handheld or permanently mounted Tuner. This is a software program, where tuning is done via Laptop ONLY.

Depending on whether or not you plan to have the vehicle dyno-tuned locally, you must consider the best option for you. If you have a local dyno-tuner that is familiar with HP Tuners, then you may consider going that route.

However, many of our customers do not have a local dyno-tuner within driving distance. Even if they do, some of those tuners are NOT familiar with Hemi Tuning. If you are one of those customers, we have a great option for you; which is remote tuning done through DiabloSport Tuning Devices, such as the InTune i3 & Trinity T2 Platinum Tuners.

Both Programmers have the same tuning functions and capabilities. The only difference is that the Diablo i3 is a handheld Tuner and the Diablo T2 is a Tuner and In-Dash Monitor. The In-Dash Monitor function allows you to view different vehicle engine parameters while driving and make changes on the fly. Whereas the i3 is intended to upload tunes, retrieve data-logging, make whatever changes are desired and then unplug the unit until further changes are needed.

Most DiabloSport customers prefer the i3 Platinum for affordability and convenience. Most customers who decide to go the T2 route are making consistent changes/tweaks and usually at the track. Again, BOTH Diablo Tuners have the SAME tuning capabilities and functions.

One thing to note is that both Diablo Tuners come with preloaded tunes to choose from. The bad news is that those tunes are NOT setup for Aftermarket Camshafts. Therefore a custom tune is needed.

[Enter Hemi Fever Tuning!](#)

HEMI FEVER TUNING

We have worked with Hemi Fever for almost 2 decades now. They specialize specifically in DiabloSport custom tuning that is done remotely through email!

To use the custom tunes that they offer, you need to purchase a Diablo Tuner (either i3 Platinum or T2 Platinum). We sell both of these, they can be found here-

Diablo i3 InTune Platinum Programmer for Chrysler, Dodge & Ram Vehicles 2005-2014

<https://fasthemis.com/products/diabloSPORT-intune-i3-platinum-programmer-300-challenger-charge-magnum-ram-durango-2005-2014>

Diablo i3 InTune Platinum Programmer for Jeep Vehicles 2005-2014

<https://fasthemis.com/products/diabloSPORT-intune-i3-platinum-programmer-jeep-grand-chokeer-wrangler-commander-2005-2014>

Diablo T2 Trinity Platinum Programmer for Chrysler, Dodge & Ram Vehicles 2005-2014

<https://fasthemis.com/products/diabloSPORT-trinity-2-t2-ex-platinum-programmer-monitor-chrysler-dodge-2005-2014>

Diablo T2 Trinity Platinum Programmer for Jeep Vehicles 2005-2014

<https://fasthemis.com/products/diablo-sport-trinity-2-t2-ex-platinum-programmer-monitor-jeep-vehicles-2005-2014>

Important to note: If you have a 2015+ Chrysler, Dodge, Ram or Jeep, you will need to purchase a Diablo Unlocked PCM Combo Kit. This is because all 2015+ models feature a “locked” OEM PCM. That means it is not compatible with an aftermarket programmer. Therefore, you need both (DiabloSport Unlocked PCM & Programmer). All Diablo PCM Combo Kits (with i3 InTune or T2 Trinity Platinum) can be found here-

<https://fasthemis.com/pages/search?query=Diablo-Combo>

Once you have your Diablo Tuner or Diablo Unlocked PCM & Tuner Combo, you can then reach out to Hemi Fever through email. Once you provide them with your vehicle info and specifically what modifications you have done, including your Camshaft specs; they can provide you a custom tune for your specific setup. When the custom tune is received via email, you need to download it to your Diablo tuner (i3 or T2 Platinum), then upload to your vehicle.

One of the cool things about going this route, is that you have the ability to data-log with your Diablo Tuner. This means if you feel the vehicle needs more or less fuel and/or timing, you can email your Diablo data-log file back to Hemi Fever. They will then, in turn, modify the custom tune as needed for maximum efficiency! Once emailed back to you, you can download that tune to the Diablo Tuner and upload to the vehicle again. This is a very convenient, affordable and super efficient way to maximize the full potential of your Aftermarket Camshaft Upgrade.

Our customers have experienced fantastic results using Hemi Fever and we highly encourage this route if local tuning options are unavailable for you. Be sure to check out Hemi Fever if this works best for you-

<https://www.hemifevertuning.com/Default.asp>

We hope that you enjoyed this article. Please feel free to leave feedback or reach out to us with any questions. FastHemis is always here to help! Email us at sales@fasthemis.com or call us (626) 337-3700.