

# SALES BULLETIN

Part #:	Various	Engine:	Various
Date:	05/01/2020	Part:	Heavy Duty Camshaft—Valve Relief Upgrade

## Heavy Duty Camshaft



**Inline 6 Cylinder  
Upgraded Camshaft &  
Valve Relief**

**V8 Upgraded Camshaft  
& Valve Relief**

- **American made.**
- These cams are designed to take advantage of the lost opportunities the factories cams didn't seize and to remedy any engineering design flaws.
- Quicker spool up for better throttle response - Lower EGT's for durability.
- Stage 1 specifications - Good for towing applications.
- Duramax camshafts have keys that index the cam gear, instead of dowel pins that shear and break.
- Improved airflow for more torque and horsepower - Great for heavy duty use.
- New ductile iron (Cummins) or billet steel (Powerstroke - Duramax) Camshaft. Not a regrind.
- Great durability upgrade for towing and heavy duty use.

CNC machined valve reliefs in most applications put the piston-to-valve clearance specifications back to OE standards. CU-3921953-CUOE requires no valve reliefs.

# SALES BULLETIN

Part #:	Various	Engine:	Various
Date:	05/01/2020	Part:	Head Studs

## Head Studs Upgrade

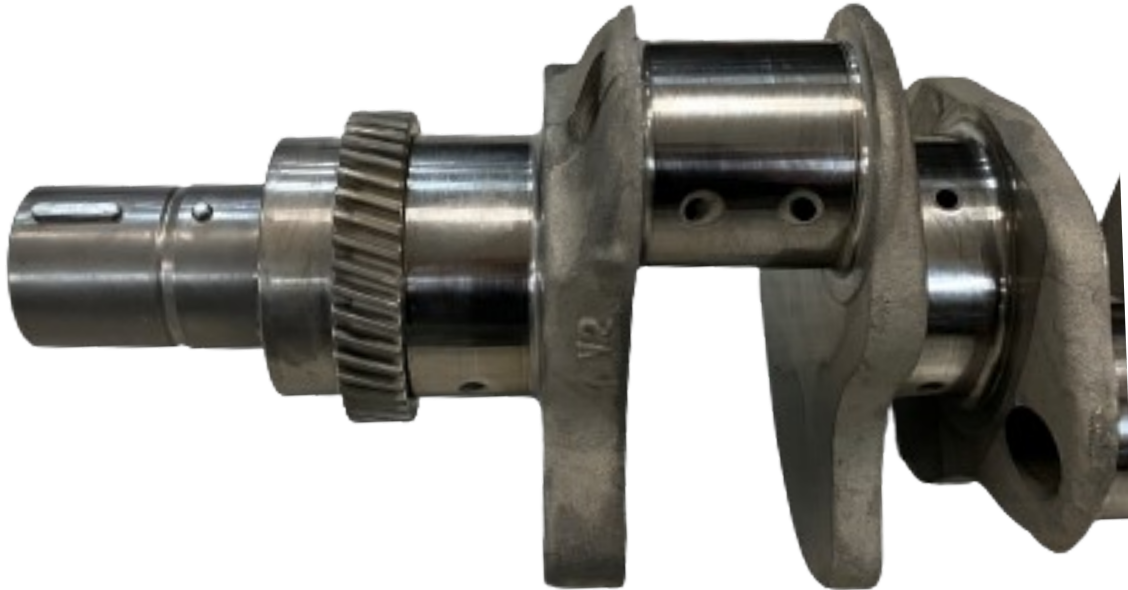


- Head Stud upgrade—This is a durability upgrade and it increases the clamping force of the head to the block by 15% to 20%. We highly recommend the head stud upgrade on all diesel engines if available.
- Now diesel engines make over two to four times as much power as they did 20 yrs. ago, but the OE never upgraded the head bolt to a stud. The head to block fastener is under more stress than any other fastener in the entire truck so a stud is a vast improvement. The stud also puts considerably less stress on the threads in the block & it does not distort the cylinder bore as much as a bolt would, which can help with blow by issues. This upgrade is highly recommended if you do any heavy towing.

## **SALES BULLETIN**

Part #:	KC-97225901	Engine:	6.6L Duramax Engine
Date:	05/01/2020	Part:	Keyed Crankshaft Upgrade

### **Duramax Keyed Crankshaft Upgrade**



- To rule out the possibility of the factory crank dowel pin shearing off, the crankshaft was cut for a keyway and fitted with a steel bar (known as “keying the crankshaft”).
- This is common practice for any Duramax build, as the 5mm dowel pin that holds the harmonic balancer in place is known to shear off the snout of the crankshaft in heavy duty applications. Once this failure occurs the engine self destructs in short order, so “keying the crankshaft” is the ultimate insurance policy to prevent this from occurring.

## **SALES BULLETIN**

Part #:	PU-930036095	Engine:	6.6L Duramax
Date:	05/08/2020	Part:	Mahle Motor Sport Piston Upgrade

### **Duramax Mahle Motor Sport Piston Upgrade**



**Mahle Motor Sport**



**Stock OE**

- The piston on the left represents an optional piston bowl design referred to as a “Delipped Piston”. Note the bowl wall with no negative overhang that would normally be exposed to flame travel and exhaust gas temperatures on three sides. This “Delipped Piston” design reduces piston overheating or breaking.
- The piston on the right represents a stock OE piston bowl design referred to as a “Lipped Piston”. Note the aggressive re-entrant bowl design with negative bowl wall angles, referred to as the “Lip”. This design has been known to fail under severe duty usage. The bowl is exposed to flame travel and exhaust gas temperatures on three sides. This can lead to piston overheating and metal fatigue issues that cause catastrophic engine failure.
- This upgrade adds durability to your diesel engine. Highly recommended for towing, 4WD applications, high turbo boost levels, high exhaust gas temperature applications, or just peace of mind in today’s demanding diesel engine applications.

# SALES BULLETIN

Part #:	Various	Engine:	Various
Date:	05/01/2020	Part:	ARP High Performance Rod Bolts Upgrade

## Rod Bolts Upgrade



- A premium grade chrome-moly steel is used to manufacture ARP High Performance connecting rod bolts. This is heat-treated to provide a tensile strength in the 200,000 psi range, which is substantially stronger than the OEM bolts. Cycle testing shows High Performance rod bolts to be nearly five times more reliable than stock bolts.
- The ARP Rod Bolt Upgrade is less likely to break or stretch in heavy duty applications. A good durability upgrade in all applications for peace of mind!

## SALES BULLETIN

Part #:	Various	Engine:	Various
Date:	05/05/2020	Part:	Upgrade

### Valve Upgrade



- The stainless steel used in the valve upgrade is a higher quality steel than supplied from the OE.
- These valves help prevent burnt and cracked valves.
- This upgrade adds durability to your diesel engine. Highly recommended for towing, 4WD applications, high turbo boost levels, high exhaust gas temperature applications, or just peace of mind in today's demanding diesel engine applications.

# SALES BULLETIN

Part #:	Various	Engine:	Various
Date:	05/05/2020	Part:	Valve Spring Upgrade

## Valve Spring Upgrade



- A 25% to 50% increase in closed valve spring pressure will greatly reduce valve bounce, which is a situation where the valve doesn't close against the valve seat securely and compression is lost. This means lost cylinder pressure, lost HP and the potential for valvetrain damage.
- These springs are given an extra Nitriding surface hardening process that is above and beyond the OE manufacturing process.
- A must with a camshaft upgrade, high boost levels, or heavy duty applications.